

COUNTY OF TULARE

RESOURCE MANAGEMENT AGENCY



5961 South Mooney Boulevard
Visalia, CA 93277

Sequoia Drive-In Business Park Project

Draft Environmental Impact Report

December 2018

Prepared by



Prepared for

County of Tulare Resource Management Agency
Planning Branch
Environmental Planning Division

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Notice of Preparation

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- State Clearinghouse and Planning Unit, January 13, 2017
- Native American Heritage Commission, January 19, 2017
- Table Mountain Rancheria, January 24, 2017
- San Joaquin Valley Air Pollution Control District, January 31, 2017
- Department of Transportation, District 6, February 7, 2017
- City of Visalia, February 8, 2017

Appendix B: Air Quality Analysis Report/AQ Memo

4Creeks, Inc. Air Quality Analysis Report for the Sequoia Drive-In Business Park. Tulare County, CA. 8/15/2016.

Appendix C: Reconnaissance-Level Biological Evaluation

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California Historical Resources Information System. Record Search 16-377 for the Sequoia Drive-In Business Park (Castlewood) Project. September 27, 2016 and the consultation list and Sacred Lands File search for the Sequoia Drive-In Business Park Project. September 8, 2016.

Appendix E: Geological, Hydrological & Sustainability Report

4Creeks, Inc. Geological, Hydrological & Sustainability Report for Sequoia Drive-in Business Park.

Appendix F: Greenhouse Gas Analysis Report

4 Creeks, Inc. Greenhouse Gas Analysis Report for the Sequoia Drive-In Business Park in Visalia, Ca. 08/17/2015.

Appendix G: Traffic Impact Study

4Creeks, Inc., Traffic Impact Study. 7/7/2015.

Executive Summary

This Draft Environmental Impact Report (DEIR) concludes that the proposed Sequoia Drive-In Business Park Project (“Project” or “Proposed Project”) would result in ***No Significant Impact*** on the environment. The proposed Project includes a 358,370 square foot business park over approximately 47 acres in Tulare County.

The EIR has been prepared consistent with the California Environmental Quality Act (CEQA). Its intent is to inform the public and the Tulare County Board of Supervisors of the potential environmental impacts the proposed Project could have on resources as specified in the CEQA Guidelines. This EIR, in its entirety, addresses and discloses potential environmental effects associated with construction and operation of the proposed Project, including direct, indirect, and cumulative impacts in the following resource areas:

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

Although the Mandatory Findings of Significance is not a resource per se, it is required as it essentially provides a summary conclusion of the Project’s potential on Long Term Impacts; Cumulative Impacts; and Impacts to Species, Historical Resources, and on Human Beings. It is at this discussion where the EIR concludes that there would be no significant adverse environmental impacts as a result of this Project.

The California Environmental Quality Act (CEQA) requires that local government agencies, prior to taking action on projects over which they have discretionary approval authority, consider the environmental consequences of such projects. An Environmental Impact Report (EIR) is a public disclosure document designed to provide local and state governmental agency decision makers with an objective analysis of potential environmental consequences to support informed decision-making. This EIR (State of California Clearinghouse # 2016091017) has been prepared by Tulare County in accordance with CEQA Guidelines §15120 through §15131 and §15161 regulating EIRs to evaluate the environmental consequences of the Project, to discuss alternatives to the proposed Project, and to propose mitigation measures that will offset, minimize or avoid identified significant environmental impacts. This document focuses on issues determined to be potentially significant as discussed in the Initial Study and the public scoping process completed for this Project, as well as comments received on the Notice of Preparation

(NOP) that was initially circulated for 30 days by the County of Tulare County beginning January 12, 2017. On February 2, 2017, a Public Scoping Meeting was held during the NOP comment period at Tulare County RMA Main Conference Room at 5961 South Mooney Boulevard, Visalia, CA to solicit input on the scope of the EIR. (see **Appendix “A”** of this DEIR).

PROJECT DESCRIPTION

The proposed Project includes a Tentative Map which details the construction of a 358,370 square foot business park consisting of a total of 30 buildings (46 units), access roads, sewer system and stormwater retention basins.

Proposed Project Phasing and Components

The proposed Project will be developed in four separate phases of development as described below and graphically described in **Figures 2-3** and **2-4**.

- Phase 1: Will include a convenience market with gas pumps and an attached fast-food restaurant, along with five separate commercial buildings for a total combined square footage of 68,340. Direct access into the development will occur on Road 156 and will eventually connect access from Noble Avenue during Phase 3.
- Phase 2: Will include the development of 14 commercial buildings for a total combined square footage of 88,000, leaving a remainder lot to accommodate the existing cellular communications tower. Two access points into the development will occur on Road 156, using a circle drive connection as part of Phase 1 and the entirety of Phases 2 and 4.
- Phase 3: Will include ten separate commercial buildings with a total combined square footage of 104,000. One remaining lot will be developed into a stormwater retention ponding basin with the capacity to store water on-site in the event of extreme rainfall.
- Phase 4: Will include 13 commercial buildings for a total square footage of 98,030. One remaining lot will be utilized as a second stormwater retention pond to ensure all stormwater runoff remains on-site.

Proposed Project components also include the installation of a domestic water system, street lights, an advanced wastewater treatment system, an irrigation system, roadway and sidewalks.

Commercial Owners Association

A Commercial Owners Association (COA) will be established during Phase 1 of development. The COA will be responsible for maintenance of the landscaping, irrigation, domestic water system, roads, hardscape, and lighting after initial construction in each phase. The infrastructural backbone for the proposed Project will be constructed in Phase 1. The remaining phases will be constructed based upon the market for development and may not follow in consecutive order.

Stormwater system

The on-site Stormwater system will consist of drainage inlets and retention ponds and will be a low impact design. The development will be designed to slope towards the retention ponds and the majority of the Stormwater will exist in the form of overland flow. Once the flow reaches the retention ponds, it will be collected by drainage inlets and piped into the retention ponds. The design will minimize the need for large quantities of drainage inlets and piping within the development area. The ponds will be constructed in proportion to the size of the development phasing and market demand and may be temporary basins until the ultimate buildout of the proposed Project facilitates the need for ultimate facility buildout. Construction, maintenance, and operation of the Stormwater conveyance system and retention ponds will be the responsibility of the COA.

Wastewater

The sewer system within the proposed Project will consist of on-site wastewater treatment. The wastewater will be treated with an Orenco AdvanTex® Treatment System (treatment system) or engineer approved equivalent. This system provides secondary wastewater treatment by treating wastewater making it 98% cleaner preparing the effluent for reuse. Effluent from the treatment system will be treated with ultraviolet light to provide further disinfection so it meets the State of California's treatment standards for reuse. Effluent will go to a leaching system or reuse for landscape irrigation, depending on market conditions and economics. The sewer system will provide wastewater service to the entire development and will be maintained and operated by the COA.

While the sewer system will be constructed per the California Water Board Onsite Wastewater Treatment Systems Permit, the discharge permit and regulatory requirements for the sewer system will be based upon measured flow rates. For lower flows (before the Project is completely built-out), Tulare County regulations will govern the sewer system. When the flow rate reaches the maximum threshold for Tulare County regulations, the State Water Board Onsite Wastewater Treatment Systems permit will be obtained, and the system will be under that discharge permit coverage.

Parking

Parking will be provided consistent with the City of Visalia Municipal Code 17.34.020; however, as part of SB 375, the proposed Project will not be over parked as a tool to reduce vehicle miles traveled. This Project contains the following uses with a shared parking agreement:

- Commercial service establishment: One space for each 500 square feet of floor area;
- Storage and warehouse: One space for each 1,000 square feet of floor area.

Roads and Hardscape

The proposed Project will have two roads that run throughout allowing access to all lots within the development. Each road will be 27 feet wide and the northernmost road will connect to the existing Noble Avenue and Road 156, while the southern road will be accessible by Road 156, as depicted on **Figure 2-4**. Sidewalks will run parallel and on both sides of each roadway for pedestrian connectivity. Roads and hardscape will be built and maintained by the COA.

Lighting

All lighting will be maintained by the COA and designed in accordance with the City of Visalia lighting standards. Parking lot lighting will be large scale lights to provide for safety for entry and exit of vehicles located away from the buildings. Maximum height of parking lot lights will be 25 feet.

Landscaping

All landscaping will be in compliance with the California Department of Water Resources Water Efficient Landscape Ordinance (WELO). The landscaping will be representative of the low water demands designated for the development. Trees, shrubs, plants, vines and flowers with bark will be utilized within the landscape plans. Landscape materials will include drought tolerant landscaping with adaptive plants.

PROJECT LOCATION

The proposed Project site is near the center of Tulare County, less than one mile east of the City of Visalia and less than one mile west of the City of Farmersville (see **Figure 2-1**). The proposed Project will be located at the northeast corner of Noble Avenue (Avenue 296) 6th Ave E (Road 156), immediately south of State Route 198. The 46.17-acre site is located on Tulare County Assessor Parcel Numbers 101-090-014, -015 and 101-100-009, -010. The entire site is within the City of Visalia's adopted Planning Area while the northern 27 acres of the proposed Project site are within the City of Visalia's adopted Sphere of Influence. The site lies within the Exeter USGS 7.5 Minute Quadrangle and within the NE ¼ portion of Section 35, Township 18 South, Range 25 East, MDB&M.

PROJECT OBJECTIVES

Objective 1: Development of a Facility That Promotes Economic Development

The proposed Project is intended to implement Castlewood, LLC's strategic business plan by planning, designing, and constructing a facility which is economically, technologically and environmentally feasible.

Objective 2: Compatibility with Surrounding Land Use

Tulare County General Plan Policy LU-4.3 encourages the construction of commercial service businesses where they will not adversely affect surrounding properties, typically in areas serving occasional needs rather than day-to-day needs. The Project as proposed would be in compliance with each of the four criteria outlined within the LU-4.3 Policy.

Objective 3: Development of a Facility That is Near Major Highway(s) and Away From Sensitive Land Uses

Development of a facility that is near major highway(s) and away from sensitive land uses. Tulare County General Plan Policy LU-4.4 encourages that travel-oriented tourist commercial uses (such as fueling stations) to be located in areas where traffic patterns are oriented to major arterials and highways. The proposed Project would be located parallel to State Route 198.

Objective 4: Fulfill a Need for Moderate Sized Commercial/Warehouse Type Facilities in the Area

The Project will provide a development that is compatible with surround land uses and meet the present and future employment and business needs of county residents, the regional community and hamlets.

PROJECT BENEFITS

Project Benefit #1: Job Creation.

The Project is anticipated to create a total of 225 new full-time jobs for Tulare County residents.

Project Benefit # 2: Aid in meeting County and State GHG reduction criteria

The Tulare County Climate Action Plan presents a comprehensive set of actions to reduce the County's direct and indirect GHG emissions, which includes setting forth Best Performance Standards (BPS) that the proposed Project will utilize. By incorporating BPS into proposed Project operations, the Project achieves at least a 9.1% reduction in emissions, which meets both the County emission reduction targets and GHG reduction criteria set forth by AB 32. This Project is consistent with and will result in real GHG reductions as detailed in Chapter 3.7.

Project Benefit #3: Increase Business Operations within Tulare County.

The proposed Project is intended to provide for a mix of service commercial businesses along the State Route 198 corridor. The project will promote economic vitality and the development of commercial uses, which would increase the amount of tax base the County could receive from this project.

Project Benefit # 4: Improve Existing Roadways, Pedestrian and Bicycle Routes

The Project will support the existing road network by making monetary contributions and/or physical improvements to assist in implementing the Complete Streets Program in the County of Tulare. The Project will also contribute to pedestrian pathways and bike routes in the County immediately east of the City of Visalia.

Project Benefit # 5: Implementation of Countywide General Plan Policies.

Tulare County's General Plan Policies that are in with the Project's purpose and objectives are included in each CEQA Checklist Resource chapter contained in Chapters 3-1 thru 3-18. As indicated in Chapter 8 Immitigable Impacts, one hundred thirty-one (131) General Policies apply to this Project.

SUMMARY OF CHAPTERS

Chapter 1 Introduction

The County of Tulare is evaluating the Sequoia Drive-In Business Park Project proposal to allow the phased construction and operation of a service commercial development including 43 buildings and 358,370 square feet of building space. The proposed Project lies within a portion of the NW ¼ of Section 35, Township 18S, Range 25E, M.D.B.&E. The site is currently zoned C-3 (Service Commercial) and is an allowable use within that Zone District.

Local Regulatory Context: The Tulare County General Plan Update 2030 was adopted on August 28, 2012. As part of the General Plan, an EIR and background report were prepared. The General Plan background report contained contextual environmental analysis for the General Plan. The 2015 -2023 Tulare County Housing Element was adopted on November 17, 2015 and certified by State of California Department of Housing and Community Development on December 9, 2015.

Identification of Potentially Significant Impacts: Indicates that the EIR must identify potentially significant impacts consistent with CEQA Guidelines Section 15002 (h).

Consideration of Significant Impacts: Indicates that the EIR must consider significant impacts consistent with CEQA Guidelines Section 15126.2.

Mitigation Measures: Indicates that the EIR is required to contain mitigation measures consistent with CEQA Guidelines Section 15126.4.

Environmental Review Process: Summarizes steps taken prior to release of the draft EIR such as the Notice of Preparation, Scoping Meeting, and comments received from persons and/or agencies in response to the Notice of Preparation.

Chapter 2 Project Description, Objectives, and Environmental Setting

As noted earlier, the development of the Sequoia Drive-In Business Park Project includes the construction and operation of a service commercial development including 43 buildings and 358,370 square feet of building space.

In summary, Chapter 2 contains the following:

- Project Location: The proposed Project site is near the center of Tulare County, less than one mile east of the City of Visalia and less than one mile west of the City of Farmersville (see **Figure 2-1**). The proposed Project will be located at the northeast corner of Noble Avenue (Avenue 296) 6th Ave E (Road 156), immediately south of State Route 198.
- Vicinity of Project Site: The area immediately surrounding the proposed Project site predominantly consists of agricultural land, commercial buildings, and rural residences, while the Cities of Visalia and Farmersville are within a mile to the west and east, respectively.
- Project Description (baseline conditions information pertinent to the proposed Project): Describes the existing land use and the improvements proposed with the business park development.
- Project Objectives and Benefits: See pages ES-5 and ES-6, or Chapter 2, pages 2-9 and 2-10)

Chapter 3 Impact Analysis of Resources

The CEQA Guidelines include a Checklist of resources that must be addressed in an EIR. These resources are listed on page ES-1. There are 18 specific Resources and Mandatory Findings of Significance discussed in detail in Chapter 3. The Resources are discussed in separate sections of Chapter 3 and each section is structured as follows:

- Summary of Findings;
- Introduction, including Thresholds of Significance;
- Environmental Settings;
- Regulatory Settings such as applicable Federal, State, and Local laws, statutes, rules, regulations, and policies;
- Impact Evaluation including Project Impacts, Cumulative Impacts, Mitigation Measures, and Conclusion;
- Definitions and Acronyms; and
- References.

Some resources required expertise to evaluate the Project's potential for impacts. As such, qualified experts prepared studies, evaluations, assessments, modeling, search results, etc. (studies/technical memoranda/search results; i.e.; supporting documents) to quantify and/or qualify potential resource impacts. The supporting documents are contained in Appendices "A" through "G". Among the studies are Notice of Preparation and Public Scoping Meeting, and Agency Comment Letters Received (Appendix "A") "Air Quality Analysis Report" (Appendix "B"); Reconnaissance Level Biological Evaluation (Appendix "C"); cultural (that is, archaeological, historical, cultural, and tribal cultural resources, (Appendix "D"); "Geological, Hydrological & Sustainability Report" (Appendix "E"); "Greenhouse Gas Analysis Report" (Appendix "F"); and a "Traffic Study" (Appendix "G").

Chapter 4 Energy

Per Appendix F of the CEQA Guidelines and Public Resources Code Section 21100(b)(2), an EIR must disclose and discuss the potential for the project to result in impacts on energy conservation and/or consumption. A project may have the potential to cause such impacts if it would result in the inefficient, wasteful, or unnecessary consumption of energy, including electricity, natural gas, or transportation fuel supplies and/or resources.

Based on the analysis contained in Chapter 4, it can be concluded that the demand for energy (total equivalent BTUs for electrical and natural gas usage) as a result of the Project will not result in a significantly considerable wasteful use of energy resources. The Energy Conservation design features incorporated into the Project would have the effect of reducing overall Project consumption of energy and fuel resources during operation of the Project.

When considering the potential for the Project to result in greater conservation of electricity, natural gas, and transportation fuel through the implementation of proposed Project design features and required mitigation measures not quantified above, the proposed Project has a low potential to result in adverse impacts on energy resources and conservation.

Chapter 5 Summary of Cumulative Impacts

A critically important component of an EIR is the Cumulative Impacts discussion. Chapter 4 discusses a Cumulative Impact Analysis under CEQA. Including Past, Present, Probable Future Projects; and a Summary of Cumulative Impacts. Whereas a project in and of itself may not result in an adverse environmental impact, its cumulative effects may. Therefore the CEQA Guidelines require a discussion of cumulative impacts per Section 15130. The Discussion of Cumulative Impacts defines cumulative impacts per Section 15355 - "Cumulative impacts" refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

With the exception of Air Quality, Greenhouse Gas Emissions, Biological, and Hydrological Resources, Chapter 4 defines Tulare County as the geographic extent of the impact analysis. The geographic area is considered the appropriate extent because:

- 1) The proposed Project is geographically located in Tulare County and the County of Tulare is the Lead Agency; and
- 2) Tulare County General Plan and City of Visalia policies apply to the proposed Project.

The basis for the other Resource-specific cumulative impact analyses includes:

- Air Quality and Greenhouse Gas Emissions are based on the San Joaquin Valley Air Basin;
- Biological Resources are based on the San Joaquin Valley, the state of California, and the western United States;
- Hydrology is based on the Tulare County, the Tulare Lake Basin, and, the Tule Lake Sub-basin aquifers;
- Land Use Impacts are based on the County of Tulare 2030 General Plan; and
- Mandatory Findings of Significance are based on the San Joaquin Valley, the state of California, and the western United States

The Summary of Cumulative Impacts section discusses mitigable and unmitigable impacts. Checklist Item criteria that would result in no impacts or less than significant impacts are discussed in the Chapter 3 and are not reiterated in Chapter 4. As noted in Chapter 4, there are no Significant and Unavoidable Impacts; and Less Than Significant Impacts With Mitigation are summarized in **Table 4-3** (Checklist Items with Less than Significant with Mitigation). There are a number of cumulative impacts that do not need mitigation; these impacts are listed in **Table 4-4** (Checklist Items with Less Than Significant Impacts). Chapter 8 contains a complete list of Mitigation Measures to be implemented as part of the proposed Project. Chapter 4 also contains a No Impacts summary in **Table 4-5** (Checklist Items with No Impacts).

Chapter 6 Alternatives

CEQA Guidelines Section 15126.6 requires that a reasonable range of Alternatives to the proposed Project be discussed in the EIR. The proposed Project is the superior alternative. The conclusion contained in Chapter 6 is based on the criteria established for the site and the three reasonable Alternatives. The three Alternatives evaluated are:

- Alternative 1 – No Project
- Alternative 2 – Alternate Site
- Alternative 3 – Reduced (50%) Project

The proposed Alternatives were analyzed based on five evaluation criteria which include each of the objectives of the Project and the assessment of the potential environmental impacts. Each Alternative considered did not meet all the evaluation criteria, as identified in **Table 6-2** (Comparison of Alternatives Attaining Evaluation Criteria), contained in Chapter 6. The following is a summary of the advantages and disadvantages of each Alternative:

Alternative No. 1 Advantages and Disadvantages	
Advantages	Disadvantages
No environmental impacts beyond baseline conditions.	Does not meet any project objectives or project-specific elements.

Alternative No. 2 Advantages and Disadvantages	
Advantages	Disadvantages
Similar impacts to proposed Project.	Does not provide for an efficient business operation that is economically, technologically and environmentally feasible.

Alternative No. 3 Advantages and Disadvantages	
Advantages	Disadvantages
Less air and greenhouse gas emissions, less noise generated, and less vehicle traffic generated.	Does not provide for an efficient business operation that is economically, technologically and environmentally feasible.

As discussed in Alternatives 1 and 2, each of the Alternatives could result in more adverse environmental impacts than the proposed Project as specified on the CEQA resources checklist. Therefore, the proposed Project is the environmentally superior alternative.

Environmental impacts associated with each of the alternatives presented compared to the Preferred Alternative are shown in **Table 6-1** Impacts of Alternatives Compared to the Proposed Project. **Table 6-2** is a matrix comparing each Alternative's and the Preferred Alternative's abilities to achieve the Evaluation Criteria.

Chapter 7 Economic, Social, & Growth Inducing Impacts

This Chapter discusses the Economic, Social, and Growth Inducing effects of the Project. It contains **Table 7-1** which provides the CEQA requirements and a summary of the impact analysis as follows:

- **Economic Effects** - The proposed Project will not result in negative impacts to the region. It may result in an increase in economic benefits to the region, since the proposed Project at full build-out is anticipated to provide up to 225 permanent jobs.
- **Social Impacts** - The proposed Project will not result in a disproportionate effect on minority populations, low income populations, or Native Americans. The proposed Project does not pose any adverse environmental justice issues that would require mitigation.
- **Growth Inducing Effects** - The proposed Project will not result in significant growth inducing impacts. The proposed Project will result in up to 200 permanent jobs which will likely be filled by current Tulare County residents. The Project will not result in new housing. Growth inducing impacts will be less than significant.

The overall conclusion contained in Chapter 7 is implementation of the proposed Project will result in ***Less Than Significant*** environmental impacts, either individually or cumulatively, caused by either economic, social, or growth inducing effects.

Chapter 8 Unmitigable Impacts

This discussion provides determinations consistent with CEQA Guidelines Sections 15126.2 (b) Environmental Effects That Cannot Be Avoided, 15126.2 (c) Irreversible Impacts, and Statement of Overriding Considerations.

This Project will not result in significant and unavoidable impacts. All impacts have been found to be less than significant, or have been mitigated to a level considered less than significant. Based on the analysis contained in the No Environmental Impacts That Cannot Be Avoided and the No Irreversible Impact sections contained in Chapter 8, a Statement of Overriding Considerations is not necessary. The Project's merits and objectives are discussed in the Project Description and are found to be consistent with the intent of the County of Tulare and its 2030 General Plan. As noted earlier, there are one hundred thirty one (131) General Plan Policies that apply to this Project. Chapter 3 of this document provides a complete list of applicable policies for the specific Resource item discussed. Thus, the Project's benefits would outweigh any unavoidable and immitigable impacts to warrant a Statement of Overriding Considerations.

Chapter 9 Mitigation Monitoring and Reporting Program

A summary of the Mitigation Monitoring and Reporting Program is contained at the end of this Executive Summary and in its entirety in Chapter 9. CEQA Section 21081.6 requires adoption of a reporting or monitoring program for those measures placed on a project to mitigate or avoid adverse effects on the environment. The mitigation monitoring and reporting program is required to ensure compliance during a project's implementation. Consistent with CEQA requirements, the Mitigation Monitoring and Reporting Program contained in this EIR include the following elements:

- **Action and Procedure.** The mitigation measures are recorded with the action and procedure necessary to ensure compliance. In some instances, one action may be used to verify implementation of several mitigation measures.
- **Compliance and Verification.** A procedure for compliance and verification has been outlined for each action necessary. This procedure designates who will take action, what action will be taken and when, and to whom and when compliance will be reported.
- **Flexibility.** The program has been designed to be flexible. As monitoring progresses, changes to compliance procedures may be necessary based upon recommendations by those responsible for the Mitigation Monitoring and Reporting Program. As changes are made, new monitoring compliance procedures and records will be developed and incorporated into the program.

Chapter 10 EIR Preparation

Key persons from the County of Tulare and the consulting firms that contributed to preparation of the Draft Environmental Impact Report (Draft EIR) are identified.

The sitting Tulare County Planning Commission, Tulare County Resource Management Agency RMA Director (Reed Schenke), Associate RMA Director (Michael Washam), Interim Assistant Director/Economic Development and Planning Director (Aaron Bock), and Chief Environmental Planner (Hector Guerra) are noted.

Crawford & Bowen Planning, Inc prepared the Draft EIR and relied on the expertise of the consulting firm Kamansky's Ecological Consulting in preparing the Reconnaissance Level Biological Evaluation (Appendix "C" of this DEIR), and 4Creeks, Inc. for preparing the Air Quality Analysis Report, the Greenhouse Gas Analysis Report, the Geological, Hydrological & Sustainability Report, and the Traffic Study (Appendix "B", "E", "F", "G" of this DEIR, respectively).

SUMMARY OF POTENTIAL IMPACTS & MITIGATION MEASURES

Table ES-1 Mitigation Monitoring and Reporting Program							
Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
BIOLOGICAL RESOURCES							
<i>Protection of Swainson's hawks and other raptors and migratory birds (including Loggerhead Shrike)</i>							
4-1. Pre-construction surveys shall be conducted to determine the presence of nesting birds if ground clearing or construction activities will be initiated during the breeding season (February 15 through September 15). Potential nesting areas on the proposed Project site and potential nesting areas within 500 feet of the site should be surveyed prior to June 5th. Surveys shall be performed by a qualified biologist to verify the presence or absence of nesting birds. Construction shall not occur within a 500 foot buffer surrounding active nests of raptors or a 250 foot buffer surrounding active nests of migratory birds. If construction within these buffer areas is required or if nests must be removed to allow continuation of construction, then approval and specific removal methodologies should be obtained from California Department of Fish and Wildlife.	Prior to start of construction.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW	Field survey by a qualified Biologist.			
4-2. All trees which are suitable for Swainson's hawk nesting that are within 2,640 feet [0.5 mile] of construction activities shall be inspected by a qualified biologist.	Prior to construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of	County of Tulare Planning Department and/or CDFW	Qualified biologist.			

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Table ES-1 Mitigation Monitoring and Reporting Program							
Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
		Report of Findings, if applicable					
4-3. If potential Swainson's hawk nests are found during the inspection, then surveys shall be conducted at the following intensities, depending upon dates of initiation of construction: <ul style="list-style-type: none"> If Swainson's hawks are detected to be actively nesting in trees within 2,640 feet of the construction area, construction shall not occur within this zone until after young Swainson's hawks have fledged (this usually occurs by early June). The nest shall be monitored by a qualified biologist to determine fledging date. If other nesting birds (particularly non-raptor species listed on the MTBA) are found actively nesting within 250 feet of the construction area, construction should be postponed until after young have fledged. The date of fledging should be determined by a qualified biologist. If construction cannot be delayed within this zone, the DFW and/or the USFWS shall be consulted and alternative protection measures required by the CDFW and/or the USFWS shall be followed. 	Prior to construction-related activities.	Retention of professional biologist/ongoing monitoring/submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW	Qualified biologist.			

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Table ES-1 Mitigation Monitoring and Reporting Program							
Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
<i>Protection of San Joaquin kit fox</i>							
4-4. A standardized pre-construction/pre-activity survey shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities or any Project activity likely to impact the San Joaquin kit fox. Surveys shall identify kit fox habitat features on the Project site and evaluate use by kit fox and, if possible, assess the potential impacts to the kit fox by the proposed activity. The status of all dens shall be determined and mapped. Written results of pre-construction/pre-activity surveys must be received by the USFWS within five days after survey completion and prior to the start of ground disturbance and/or construction activities.	Prior to construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW	Qualified biologist.			
4-5. Disturbance to all San Joaquin kit fox dens shall be avoided to the maximum extent possible.	Prior to construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW	Qualified biologist.			
4-6. If a natal/pupping den is discovered within the Project area or within 200-feet of the site boundary, USFWS shall be immediately notified and under no circumstances should the den be disturbed or destroyed without prior authorization. If the pre-construction/pre-activity	Prior to construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of Report of	County of Tulare Planning Department and/or CDFW	Qualified biologist.			

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<p style="text-align: center;">Table ES-1 Mitigation Monitoring and Reporting Program</p>							
Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
survey reveals an active natal pupping or new information, the Project applicant shall contact USFWS immediately to obtain the necessary take authorization/permit.		Findings, if applicable					
4-7. Destruction of any den shall be accomplished by careful excavation until it is certain that no kit foxes are inside. The den shall be fully excavated, filled with dirt and compacted to ensure that kit foxes cannot reenter or use the den during the construction period.	Prior to construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW	Qualified biologist.			
4-8. If at any point during excavation, a kit fox is discovered inside the den, the excavation activity shall cease immediately and monitoring of the den as described above shall be resumed. Destruction of the den may be completed when, in the judgment of the qualified biologist, the animal has escaped without further disturbance from the partially destroyed den.	Prior to construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW	Qualified biologist.			
4-9. Project-related vehicles shall observe a daytime speed limit not to exceed 20-mph throughout the site in all proposed Project areas, except on county roads and State and Federal highways; this is particularly important at night when kit foxes are most active. Night-time construction shall be minimized to the extent possible. However if it does occur, then the speed	Prior to and during construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW	Qualified biologist.			

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<p style="text-align: center;">Table ES-1 Mitigation Monitoring and Reporting Program</p>							
Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
limit shall be reduced to 10-mph. Off-road traffic outside of designated project areas shall be prohibited.							
4-10. To prevent inadvertent entrapment of kit fox or other animals during the construction phase of the proposed Project, all excavated, steep-walled holes or trenches more than 2-feet deep shall be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the USFWS and the California Department of Fish and Wildlife shall be contacted as noted under Mitigation Measure 4-17 referenced below.	Prior to and during construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW	Qualified biologist.			
4-11. Kit fox are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods shall be thoroughly inspected for kit fox before the pipe is used or moved, buried, or capped in any way. If a kit fox is discovered inside a pipe, that section of pipe shall not be moved until the CFW has been consulted. If necessary, and under the direct	Prior to and during construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW	Qualified biologist.			

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Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
supervision of a qualified biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped.							
4-12. All food-related trash outside of the enclosed facility such as wrappers, cans, bottles, and food scraps shall be disposed of daily in securely closed containers and removed at least once a week during both construction and operational phases.	Prior to and during construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW	Qualified biologist.			
4-13. No pets, such as dogs or cats, shall be allowed on the Project site in order to prevent harassment, mortality of kit fox, or destruction of dens.	Prior to and during construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW	Qualified biologist.			
4-14. Use of rodenticides and herbicides in Project areas shall be restricted. If rodent control must be used it shall be limited to the use of zinc phosphide because of its demonstrated lower risk to kit fox.	Prior to and during construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW	Qualified biologist.			

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<p style="text-align: center;">Table ES-1 Mitigation Monitoring and Reporting Program</p>							
Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
4-15. A representative shall be appointed by the Project Applicant to serve as the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name, telephone number, or other pertinent contact information shall be provided to the USFWS.	Prior to and during construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW	Qualified biologist.			
4-16. An employee education program shall be conducted to alert employees of potential impacts to kit fox or other species of concern. The program shall consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program shall include the following: A description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the Project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during Project construction and implementation. A fact sheet conveying this information shall be prepared for distribution to the previously referenced people and anyone else who may enter the Project site.	Prior to and during construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW	Qualified biologist.			

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<p style="text-align: center;">Table ES-1 Mitigation Monitoring and Reporting Program</p>							
Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
<p>4-17. Any contractor, employee, or military or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative. The Sacramento Fish and Wildlife Office and CFW shall be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The Sacramento Fish and Wildlife Office contact is:</p> <p style="text-align: center;">Mr. Paul Hoffman 1701 Nimbus Road, Suite A, Rancho Cordova, California 95670 (530) 934-9309</p>	Prior to and during construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW	Qualified biologist.			
<p>4-18. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed shall also be provided to Fish and Wildlife at the address below.</p> <p style="text-align: center;">Endangered Species Division 2800 Cottage Way, Suite W2605 Sacramento, California 95825-1846 (916) 414-6620 or (916) 414-6600</p>	Prior to and during construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW	Qualified biologist.			

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Table ES-1 Mitigation Monitoring and Reporting Program							
Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
<i>Protection of Burrowing Owl</i>							
4-19. In accordance with CDFG’s 2012 <i>Staff Report on Burrowing Owl Mitigation</i> , a qualified biologist shall conduct three surveys for burrowing owls where potential burrowing owl habitat occurs within 500 feet of Project activities. Surveys shall occur during the peak breeding season for this species (15 April through 15 July), and spaced three weeks apart. If active burrowing owl burrows are identified within 500 feet of the Project site, then avoidance, take avoidance surveys, site surveillance, minimization, and buffer mitigation measures shall be implemented, in accordance with the 2012 CDFG <i>Staff Report</i> and direct consultation with CFW.	Prior to construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW	Qualified biologist.			
CULTURAL RESOURCES							
5-1. In the event that historical, archaeological or paleontological resources are discovered during site excavation, the County shall require that grading and construction work on the project site be immediately suspended until the significance of the features can be determined by a qualified archaeologist or paleontologist. In this event, the specialists shall provide recommendations for measures necessary to protect any site determined to contain or constitute an historical resource, a unique archaeological resource, or a unique paleontological resource, or to undertake data recovery, excavation analysis, and curation of archaeological or paleontological materials.	During Construction	Daily or as needed throughout the construction period if suspicious resources are discovered	County of Tulare Planning Department via field evaluation of the resource finds by a qualified archaeologist	A qualified archaeologist shall document the results of field evaluation and shall recommend further actions that shall be taken to mitigate for unique resource or human remains found,			

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Table ES-1 Mitigation Monitoring and Reporting Program							
Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
County staff shall consider such recommendations and implement them where they are feasible in light of Project design as previously approved by the County.				consistent with all applicable laws including CEQA.			
5-2. The project proponent shall avoid and minimize impacts to paleontological resources. If a potentially significant paleontological resource is encountered during ground disturbing activities, all construction within a 100-foot radius of the find shall immediately cease until a qualified paleontologist determines whether the resources requires further study. The project proponent shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The paleontologist shall notify the Tulare County Resource Management Agency and the project proponent of the procedures that must be followed before construction is allowed to resume at the location of the find. If the find is determined to be significant and the Tulare County Resource Management Agency determines avoidance is not feasible, the paleontologist shall design and implement a data recovery plan consistent with applicable standards. The plan shall be submitted to the Tulare County Resource Management Agency for review and approval. Upon approval, the plan shall be incorporated into the project.	During Construction	Daily or as needed throughout the construction period if suspicious resources are discovered	County of Tulare Planning Department via field evaluation of the resource finds by a qualified archaeologist	A qualified archaeologist shall document the results of field evaluation and shall recommend further actions that shall be taken to mitigate for unique resource or human remains found, consistent with all applicable laws including CEQA.			

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Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
<p>5-3. Consistent with Section 7050.5 of the California Health and Safety Code and (CEQA Guidelines) Section 15064.5, if human remains of Native American origin are discovered during project construction, it is necessary to comply with State laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (Public Resources Code Sec. 5097). In the event of the accidental [that is, unanticipated] discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:</p> <ol style="list-style-type: none"> 1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until: <ol style="list-style-type: none"> a. The Tulare County Coroner/Sheriff must be contacted to determine that no investigation of the cause of death is required; and b. If the coroner determines the remains to be Native American: <ol style="list-style-type: none"> i. The coroner shall contact the Native American Heritage Commission within 24 hours. ii. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely 	During Construction	Daily or as needed throughout the construction period if suspicious resources are discovered	County of Tulare Planning Department via field evaluation of the resource finds by a qualified archaeologist	A qualified archaeologist shall document the results of field evaluation and shall recommend further actions that shall be taken to mitigate for unique resource or human remains found, consistent with all applicable laws including CEQA.			

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					Initials	Date	Remarks
<p>descended from the deceased Native American.</p> <p>iii. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code section 5097.98, or</p> <p>2. Where the following conditions occur, the landowner or his/her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.</p> <p>a. The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.</p> <p>b. The descendant fails to make a recommendation; or</p> <p>c. The landowner or his authorized representative rejects the recommendation of the descendent.</p>							

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Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
HYDROLOGY AND WATER QUALITY							
9-1. Once the well is retrofitted for the proposed project, a second round of sampling and analysis shall be conducted. The southern well that was not sampled shall also be sampled with analysis once it is retrofitted for the proposed project. Sampling and analysis shall occur during the initial phases of retrofitting; specifically, during pump testing. If water quality does not meet the State of California standards as discussed above, steps shall be taken during the design of the site such as disinfection, to ensure the water is potable for proposed project use. Once the redesign is completed, the well shall undergo another round of sampling and analysis. This procedure shall continue until the quality of water produced by the well meets the State of California standards.	Prior to and during Construction	Tested water is to State of California standards.	TCEHSD	TCEHSD			
9-2. The project applicant shall prepare a Storm Water Pollution Prevention Plan (SWPPP) according to the latest regulations to be retained onsite. The SWPPP must include best management practices that, when implemented, prevent storm water quality degradation to the extent practical by preventing sediments and other pollutants from leaving the Project site.	Prior to Construction	SWPPP acceptance.	County of Tulare Planning Department	Construction Contractor			
9-3. New sewage disposal systems shall be designed by an Engineer, Registered Environmental Health Specialist, Geologist, or	Prior to Issuance of Building Permit.	Submittal of disposal system design.	TCEHSD	TCEHSD			

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other competent persons, all of whom must be registered and/or licensed professionals knowledgeable and experienced in the field of sewage disposal system and design. The specifications and engineering data for the system shall be submitted to the TCEHSD for review and approval prior to the issuance of a building permit.							
9-4. A tertiary treatment plant shall be constructed on site which will allow sewer effluent to meet the State of California standards set in place for water reuse. Tertiary treated water shall be utilized for landscape irrigation.	During construction.	Verified on submitted site plans.	Tulare County Building Inspector	Tulare County Building Inspector			
9-5. All new construction shall have water conserving fixtures (water closets, low flow showerheads, low flow sinks, etc.) New urinals shall also conserve water through waterless, zero flush, or other water conservation technique and/or technology.	Prior to Issuance of Building Permit.	Verified on submitted site plans.	Tulare County Building Inspector	Tulare County Building Inspector			
9-6. The proposed Project shall conform to the Tulare County Water Efficient Landscaping Ordinance.	Prior to Issuance of Building Permit.	Verified on submitted site plans.	Tulare County Building Inspector	Tulare County Building Inspector			
9-7. No ground water shall be transported off-site for any use.	Prior to Issuance of Building Permit.	Verified on submitted site plans.	Tulare County Building Inspector	Tulare County Building Inspector			

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Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
TRANSPORTATION/TRAFFIC							
16-1. The Project Applicant will be responsible for paying fair share fees as identified in the Project Impact Contribution Percentage analysis (62.8%) for the improvements needed under the 2040 Plus Project scenario at Noble Avenue at SR 198 EB Ramps. The Applicant will work with Tulare County and/or Caltrans to establish timing and fee amounts to ensure implementation of the improvements listed in this analysis. This shall be made a condition of Project approval.	Prior to Issuance of Building Permit.	Payment of Fees	Tulare County Planning Department	Tulare County Planning Department			
TRIBAL CULTURAL RESOURCES							
17-1. In the event that historical, archaeological or paleontological resources are discovered during site excavation, the County shall require that grading and construction work on the Project site be immediately suspended until the significance of the features can be determined by a qualified archaeologist or paleontologist. In this event, the property owner shall retain a qualified archaeologist/ paleontologist to provide recommendations for measures necessary to protect any site determined to contain or constitute an historical resource, a unique archaeological resource, or a unique paleontological resource or to undertake data recover, excavation analysis, and curation of archaeological or paleontological materials. County staff shall consider such recommendations and implement them where they are feasible in light of Project design as previously approved by the County.	During Construction	Daily or as needed throughout the construction period if suspicious resources are discovered	Tulare County Planning Department	A qualified archaeologist shall document the results of field evaluation and shall recommend further actions that shall be taken to mitigate for unique resource or human remains found, consistent with all applicable laws including CEQA.			

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<p style="text-align: center;">Table ES-1 Mitigation Monitoring and Reporting Program</p>							
Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
<p>17-2. Consistent with Section 7050.5 of the California Health and Safety Code and (CEQA Guidelines) Section 15064.5, if human remains of Native American origin are discovered during Project construction, it is necessary to comply with State laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (Public Resources Code Sec. 5097). In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:</p> <ol style="list-style-type: none"> 1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until: <ol style="list-style-type: none"> a. The Tulare County Coroner/Sheriff must be contacted to determine that no investigation of the cause of death is required; and b. If the coroner determines the remains to be Native American: <ol style="list-style-type: none"> i. The coroner shall contact the Native American Heritage Commission within 24 hours. ii. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely iii. The most likely descendent may 	During Construction	Daily or as needed throughout the construction period if suspicious resources are discovered	Tulare County Planning Department	A qualified archaeologist shall document the results of field evaluation and shall recommend further actions that shall be taken to mitigate for unique resource or human remains found, consistent with all applicable laws including CEQA.			

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Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
<p>make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code section 5097.98, or</p> <p>2. Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.</p> <p>a. The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.</p> <p>b. The descendant fails to make a recommendation; or</p> <p>c. The landowner or his authorized representative rejects the recommendation of the descendent.</p>							

Introduction

Chapter 1

PROJECT SUMMARY

The County of Tulare is considering approval of the proposed Sequoia Drive-In Business Park Project to allow the phased construction and operation of a service commercial development. The Project would include 43 buildings and 358,370 square feet of building space. The proposed Project lies within a portion of the NW ¼ of Section 35, Township 18S, Range 25E, M.D.B.&M. The site is currently zoned C-3 (Service Commercial) and is an allowable use within that Zone District.

LOCAL REGULATORY CONTEXT

The Tulare County General Plan Update 2030 was adopted on August 28, 2012. As part of the General Plan, an EIR and an accompanying Background Report were also prepared. The General Plan Background Report contained contextual environmental analysis for the General Plan Update. The Housing Element for 2009-2014 was adopted on May 8, 2012, and certified by State of California Department of Housing and Community Development on June 1, 2012. The Health and Safety Element was amended November 15, 2016, under GPA 16-004.

SCOPE AND METHODOLOGY

The County of Tulare has determined that a project level EIR fulfills the requirements of CEQA and is the appropriate level evaluation to address the potential environmental impacts of the proposed project. A project level EIR is described in Section 15161 of the State CEQA Guidelines as one that examines the environmental impacts of a specific development project. A project level EIR must examine all phases of the project, including planning, construction, and operation.

This document addresses environmental impacts to the level that they can be assessed without undue speculation (CEQA Guidelines Section 15145). This *Draft Environmental Impact Report (DEIR)* acknowledges this uncertainty and incorporates these realities into the methodology to evaluate the environmental effects of the Plan, given its long term planning horizon. The degree of specificity in an EIR corresponds to the degree of specificity of the underlying activity being evaluated (CEQA Guidelines Section 15146). Also, the adequacy of an EIR is determined in terms of what is reasonably feasible, in light of factors such as the magnitude of the project at issue, the severity of its likely environmental impacts, and the geographic scope of the project (CEQA Guidelines Sections 15151 and 15204(a)).

CEQA Guidelines Section 15002 (a) specifies that, “[t]he basic purposes of CEQA are to:

- (1) Inform governmental decision makers and the public about the potential, significant environmental effects of proposed activities.

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- (2) Identify ways that environmental damage can be avoided or significantly reduced.
- (3) Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
- (4) Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.”¹

CEQA Guidelines Section 15002 (f) specifies that, “[a]n environmental impact report (EIR) is the public document used by the governmental agency to analyze the significant environmental effects of a proposed project, to identify alternatives, and to disclose possible ways to reduce or avoid the possible environmental damage... An EIR is prepared when the public agency finds substantial evidence that the project may have a significant effect on the environment... When the agency finds that there is no substantial evidence that a project may have a significant environmental effect, the agency will prepare a “Negative Declaration” instead of an EIR...”²

Pursuant to CEQA Guidelines Section 15021 Duty to Minimize Environmental Damage and Balance Competing Public Objectives:

- “(a) CEQA establishes a duty for public agencies to avoid or minimize environmental damage where feasible.
- (1) In regulating public or private activities, agencies are required to give major consideration to preventing environmental damage.
 - (2) A public agency should not approve a project as proposed if there are feasible alternatives or mitigation measures available that would substantially lessen any significant effects that the project would have on the environment.
- (b) In deciding whether changes in a project are feasible, an agency may consider specific economic, environmental, legal, social, and technological factors.
- (c) The duty to prevent or minimize environmental damage is implemented through the findings required by Section 15091.
- (d) CEQA recognizes that in determining whether and how a project should be approved, a public agency has an obligation to balance a variety of public objectives, including economic, environmental, and social factors and in particular the goal of providing a decent home and satisfying living environment for every Californian. An agency shall prepare a statement of overriding considerations as described in Section 15093 to reflect the ultimate balancing of competing public objectives when the agency decides to approve a project that will cause one or more significant effects on the environment.”³

¹ CEQA Guidelines, Section 15002 (a).

² Ibid. Section 15002 (f).

³ Op. Cit. Section 15021.

IDENTIFICATION OF POTENTIALLY SIGNIFICANT IMPACTS

CEQA Guidelines Section 15002 (h) addresses potentially significant impacts, to wit, “CEQA requires more than merely preparing environmental documents. The EIR by itself does not control the way in which a project can be built or carried out. Rather, when an EIR shows that a project could cause substantial adverse changes in the environment, the governmental agency must respond to the information by one or more of the following methods:

- (1) Changing a proposed project;
- (2) Imposing conditions on the approval of the project;
- (3) Adopting plans or ordinances to control a broader class of projects to avoid the adverse changes;
- (4) Choosing an alternative way of meeting the same need;
- (5) Disapproving the project;
- (6) Finding that changes in, or alterations, the project are not feasible.
- (7) Finding that the unavoidable, significant environmental damage is acceptable as provided in Section 15093.”⁴ (See Chapter 7)

This *Draft EIR* identifies potentially significant impacts that would be anticipated to result from implementation of the proposed Project. Significant impacts are defined as a “substantial or potentially substantial, adverse change in the environment.”⁵ Significant impacts must be determined by applying explicit significance criteria to compare the future plan conditions to the existing environmental setting.⁶

The existing setting is described in detail in each resource section of Chapter 3 of this document and represents the most recent, reliable, and representative data to describe current regional conditions. The criteria for determining significance are also included in each resource section in Chapter 3 of this document.

CONSIDERATION OF SIGNIFICANT IMPACTS

Pursuant to CEQA Guidelines Section 15126.2, “[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical

⁴ Op. Cit. Section 15002 (h).

⁵ Public Resources Code Section 21068.

⁶ CEQA Guidelines, Section 15126.2(a).

changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas.”⁷

MITIGATION MEASURES

CEQA Guidelines Section 15126.4 specifies that:

- “(1) An EIR shall describe feasible measures which could minimize significant adverse impacts, including where relevant, inefficient and unnecessary consumption of energy.
 - (A) The discussion of mitigation measures shall distinguish between the measures which are proposed by project proponents to be included in the project and other measures proposed by the lead, responsible or trustee agency or other persons which are not included but the lead agency determines could reasonably be expected to reduce adverse impacts if required as conditions of approving the project. This discussion shall identify mitigation measures for each significant environmental effect identified in the EIR.
 - (B) Where several measures are available to mitigate an impact, each should be discussed and the basis for selecting a particular measure should be identified. Formulation of mitigation measures should not be deferred until some future time. However, measures may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way.
 - (C) Energy conservation measures, as well as other appropriate mitigation measures, shall be discussed when relevant. Examples of energy conservation measures are provided in Appendix F.
 - (D) If a mitigation measure would cause one or more significant effects in addition to those that would be caused by the project as proposed, the effects of the mitigation measure shall be discussed but in less detail than the significant effects of the project as proposed. (*Stevens v. City of Glendale* (1981) 125 Cal.App.3d 986.)
- (2) Mitigation measures must be fully enforceable through permit conditions, agreements, or other legally-binding instruments. In the case of the adoption of a plan, policy, regulation, or other public project, mitigation measures can be incorporated into the plan, policy, regulation, or project design.
- (3) Mitigation measures are not required for effects which are not found to be significant.
- (4) Mitigation measures must be consistent with all applicable constitutional requirements, including the following:

⁷ Op. Cit. Section 15126.2.

- (A) There must be an essential nexus (i.e., connection) between the mitigation measure and a legitimate governmental interest. *Nollan v. California Coastal Commission*, 483 U.S. 825 (1987); and
 - (B) The mitigation measure must be “roughly proportional” to the impacts of the project. *Dolan v. City of Tigard*, 512 U.S. 374 (1994). Where the mitigation measure is an ad hoc exaction, it must be “roughly proportional” to the impacts of the project. *Ehrlich v. City of Culver City* (1996) 12 Cal.4th 854.
- (5) If the lead agency determines that a mitigation measure cannot be legally imposed, the measure need not be proposed or analyzed. Instead, the EIR may simply reference that fact and briefly explain the reasons underlying the lead agency's determination.”⁸

ORGANIZATION OF THE EIR

Executive Summary

The Executive Summary Chapter summarizes the analysis in this Draft Environmental Impact Report.

CHAPTER 1

Provides a brief introduction to the Environmental Analysis required by the California Environmental Quality Act (CEQA).

CHAPTER 2

Describes the proposed Project. The chapter also includes the objectives of the proposed Project. The environmental setting is described and the regulatory context within which the proposed Project is evaluated is outlined.

CHAPTER 3

Includes the Environmental Analysis in response to each Checklist item. Within each analysis the following is included:

Summary of Findings

Each chapter notes a summary of findings.

Introduction

Each chapter will begin with a summary of impacts, pertinent CEQA requirements, applicable definitions and/or acronyms, and thresholds of significance.

⁸ Op. Cit. Section 15126.4.

Environmental Setting

Each environmental factor analysis in Chapter 3 will outline the environmental setting for each environmental factor. In addition, methodology is explained when complex analysis is required.

Regulatory Setting

Each environmental factor analysis in Chapter 3 will outline the regulatory setting for that resource.

Project Impact Analysis

Each evaluation criteria will be reviewed for potential Project-specific impacts.

Cumulative Impact Analysis

Each evaluation criteria will be reviewed for potential cumulative impacts.

Mitigation Measures

Mitigation Measures will be proposed as deemed applicable.

Conclusion

Each conclusion will outline whether recommended mitigation measures will, based on the impact evaluation criteria, substantially reduce or eliminate potentially significant environmental impacts. If impacts cannot be mitigated, unavoidable significant impacts will be identified.

Definitions/Acronyms

Some sub-chapters of Chapter 3 will have appropriate definitions and/or acronyms.

References

Reference documents used in each chapter are listed at the end of each sub-chapter.

CHAPTER 4

Includes an analysis of the proposed Project's potential energy usage.

CHAPTER 5

Summarizes the cumulative impacts addressed in Chapter 3.

CHAPTER 6

Describes and evaluates alternatives to the proposed Project. The proposed Project is compared to each alternative, and the potential environmental impacts of each are analyzed.

CHAPTER 7

Evaluates or describes CEQA-required subject areas: Economic Effects, Social Effects, and Growth Inducement.

CHAPTER 8

Evaluates or describes CEQA-required subject areas: Environmental Effects That Cannot be Avoided, Irreversible Impacts, and Statement of Overriding Considerations.

CHAPTER 9

Provides a Mitigation Monitoring and Reporting Program that summarizes the environmental issues, the significant mitigation measures, and the agency or agencies responsible for monitoring and reporting on the implementation of the mitigation measures.

CHAPTER 10

Outlines persons preparing the EIR and sources utilized in the Analysis.

APPENDICES

Following the text of this *Draft EIR*, several appendices and technical studies have been included as reference material.

ENVIRONMENTAL REVIEW PROCESS

Pursuant to CEQA Guidelines §15082, the Notice of Preparation (NOP) for the Proposed Project was circulated for review and comment on January 12, 2017 and circulated for a 30-day comment period. Tulare County RMA received five comments on the NOP. Comments were received from the following agencies, individuals, and/or organizations:

- Table Mountain Rancheria, January 24, 2017
- San Joaquin Valley Air Pollution Control District, January 31, 2017
- Department of Transportation, District 6, February 7, 2017
- City of Visalia, February 8, 2017
- Native American Heritage Commission, January 19, 2017

A copy of the NOP is included in **Appendix “A”**, along with copies of letters received in response to the NOP.

Consistent with CEQA Guidelines Section 15103, “Responsible and Trustee Agencies, and the Office of Planning and Research shall provide a response to a Notice of Preparation to the Lead Agency within 30 days after receipt of the notice. If they fail to reply within the 30 days with either a response or a well justified request for additional time, the lead agency may assume that none of those entities have a response to make and may ignore a late response.”⁹

A scoping meeting was duly noticed in a newspaper of general circulation and held on February 2, 2017. No comments were received during this meeting.

Section 15093 of the State CEQA Guidelines requires decision-makers to balance the benefits of a proposed project against any unavoidable adverse environmental effects of the project. If the benefits of the project outweigh the unavoidable adverse environmental effects, then the decision-makers may adopt a statement of overriding considerations, finding that the environmental effects are acceptable in light of the project’s benefits to the public.

As noted in CEQA Guidelines § 15105 (a), a Draft EIR that is submitted to the State Clearinghouse shall have a minimum review period of 45 days. This *Draft EIR* was circulated publicly for comment beginning on December 21, 2018. Following completion of the 45-day public review period ending on February 4, 2019, staff will prepare responses to comments and a *Final EIR* will be prepared. The *Final EIR* will then be forwarded to the County of Tulare Planning Commission for consideration of certification. Notwithstanding an appeal to the County of Tulare Board of Supervisors, a Notice of Determination will then be filed with the County Tulare County Clerk and also forwarded to the State of California, Office of Planning and Research.

ORGANIZATIONS AND PERSONS CONSULTED

- 1) U.S. Fish & Wildlife Service
- 2) California Department of Fish and Wildlife Services - Region #4
- 3) California Department of Transportation (Caltrans) District 6
- 4) Central Valley Regional Water Quality Control Board – Region #5
- 5) City of Visalia
- 6) San Joaquin Valley Unified Air Pollution Control District
- 7) Tulare County Resource Management Agency:
 - a. Planning Branch (Environmental Planning, Project Review, Building and Housing Divisions)
 - b. Public Works Branch
 - c. Tulare County Flood Control
 - d. Tulare County Fire
- 8) Tulare County Environmental Health and Human Services Agency, Environmental Health Division

⁹ CEQA Guidelines, Section 15103.

Project Description & Objectives

Chapter 2

INTRODUCTION

In accordance with the California Environmental Quality Act (CEQA) (Pub. Resources Code, Section 21000 et seq.), the County of Tulare Resource Management Agency (RMA) is preparing this Environmental Impact Report (EIR) to evaluate the environmental effects associated with the Sequoia Gateway Plaza Project (Project).

The Applicant, Castlewood LLC., is proposing to construct a 358,370 square foot business park over approximately 47 acres in Tulare County. To accommodate the proposed development, the existing Development Agreement will need to be updated and a Tentative Subdivision Map will need to be approved.

PROJECT LOCATION

The proposed Project site is near the center of Tulare County, less than one mile east of the City of Visalia and less than one mile west of the City of Farmersville (see **Figure 2-1**). The proposed Project will be located at the northeast corner of Noble Avenue (Avenue 296) 6th Ave E (Road 156), immediately south of State Route 198. The 46.17-acre site is located on Tulare County Assessor Parcel Numbers 101-090-014, -015 and 101-100-009, -010. The entire site is within the City of Visalia's adopted Planning Area while the northern 27 acres of the proposed Project site are within the City of Visalia's adopted Sphere of Influence. The site lies within the Exeter USGS 7.5 Minute Quadrangle and within the NE ¼ portion of Section 35, Township 18 South, Range 25 East, MDB&M.

ZONING AND LAND USE

The site is zoned as PD-C-3-SC (Planned Development, Service Commercial, Scenic Corridor Combining Zone) and is proposed to remain as such pending approval of a Tentative Subdivision Map, which is the subject matter of this EIR.

The proposed Project site is currently fallow and disked regularly for weed control. The site is bisected by the Little Tulare Irrigation Ditch and a wireless communications tower is in the center of the southern portion of the site. Additionally, the southern portion of the site was the location of a drive-in movie theater. The surrounding land is zoned as follows:

- North – C-3-S, C-2-SC, C-3-SC-SR
- South – PD-C-3-SC
- East – AE-20 and PD-C-3-SC
- West – AE-20 and C-3-SC

PROJECT SITE VICINITY

The area immediately surrounding the proposed Project site predominantly consists of agricultural land, commercial buildings, and rural residences, while the Cities of Visalia and Farmersville are within a mile to the west and east, respectively. Immediately west of the site is the Caltrans Visalia Maintenance Station and orchards. South and east of the site are orchards and scattered rural residences and 6th Avenue E (Road 156) borders the eastern edge of the proposed Project site. North of the site is Noble Avenue, Visalia Tire and Wheel, SR 198, and commercial buildings associated with the SR 198 northern corridor (see **Figure 2-2**).

PROJECT DESCRIPTION

The proposed Project includes a Tentative Map which details the construction of a 358,370 square foot business park consisting of a total of 30 buildings (46 units), access roads, sewer system and stormwater retention basins.

Proposed Project Phasing and Components

The proposed Project will be developed in four separate phases of construction as described below and graphically described in **Figures 2-3** and **2-4**.

- Phase 1: Will include a convenience market with gas pumps and an attached fast-food restaurant, along with five separate commercial buildings for a total combined square footage of 68,340. Access into the development will occur on Road 156 and will eventually connect access from Noble Avenue during Phase 3.
- Phase 2: Will include the development of 14 commercial buildings for a total combined square footage of 88,000, leaving a remainder lot to accommodate the existing cellular communications tower. Two access points into the development will occur on Road 156, using a circle drive connection as part of Phase 1 and the entirety of Phases 2 and 4.
- Phase 3: Will include ten separate commercial buildings with a total combined square footage of 104,000. One remaining lot will be developed into a stormwater retention ponding basin with the capacity to store water on-site in the event of extreme rainfall.
- Phase 4: Will include 13 commercial buildings for a total square footage of 98,030. One remaining lot will be utilized as a second stormwater retention pond to ensure all stormwater runoff remains on-site.

Proposed Project components also include the installation of a domestic water system, street lights, an advanced wastewater treatment system, an irrigation system, roadway and sidewalks.

Commercial Owners Association

A Commercial Owners Association (COA) will be established during Phase 1 of development. The COA will be responsible for maintenance of the landscaping, irrigation, domestic water system, roads, hardscape, and lighting after initial construction in each phase. The infrastructural backbone for the proposed Project will be constructed in Phase 1. The remaining phases will be constructed based upon the market for development and may not follow in consecutive order.

Stormwater system

The on-site Stormwater system will consist of drainage inlets and retention ponds and will be a low impact design. The development will be designed to slope towards the retention ponds and the majority of the Stormwater will exist in the form of overland flow. Once the flow reaches the retention ponds, it will be collected by drainage inlets and piped into the retention ponds. The design will minimize the need for large quantities of drainage inlets and piping within the development area. The ponds will be constructed in proportion to the size of the development phasing and market demand and may be temporary basins until the ultimate buildout of the proposed Project facilitates the need for ultimate facility buildout. Construction, maintenance, and operation of the Stormwater conveyance system and retention ponds will be the responsibility of the COA.

Wastewater

The sewer system within the proposed Project will consist of on-site wastewater treatment. The wastewater will be treated with an Orenco AdvanTex® Treatment System (treatment system) or engineer approved equivalent. This system provides secondary wastewater treatment by treating wastewater making it 98% cleaner preparing the effluent for reuse. Effluent from the treatment system will be treated with ultraviolet light to provide further disinfection so it meets the State of California's treatment standards for reuse. Effluent will go to a leaching system or reuse for landscape irrigation, depending on market conditions and economics. The sewer system will provide wastewater service to the entire development and will be maintained and operated by the COA.

While the sewer system will be constructed per the California Water Board Onsite Wastewater Treatment Systems Permit, the discharge permit and regulatory requirements for the sewer system will be based upon measured flow rates. For lower flows (before the Project is completely built-out), Tulare County regulations will govern the sewer system. When the flow rate reaches the maximum threshold for Tulare County regulations, the State Water Board Onsite Wastewater Treatment Systems permit will be obtained, and the system will be under that discharge permit coverage.

Parking

Parking will be provided consistent with the City of Visalia Municipal Code 17.34.020; however, as part of SB 375, the proposed Project will not be over parked as a tool to reduce vehicle miles traveled. This Project contains the following uses with a shared parking agreement:

- Commercial service establishment: One space for each 500 square feet of floor area;
- Storage and warehouse: One space for each 1,000 square feet of floor area.

Roads and Hardscape

The proposed Project will have two roads that run throughout allowing access to all lots within the development. Each road will be 27 feet wide and the northernmost road will connect to the existing Noble Avenue and Road 156 while the southern road will be accessible by Road 156, as depicted on **Figure 2-4**. Sidewalks will run parallel and on both sides of each roadway for pedestrian connectivity. Roads and Hardscape will be built and maintained by the COA.

Lighting

All lighting will be maintained by the COA and designed in accordance with the City of Visalia lighting standards. Parking lot lighting will be large scale lights to provide for safety for entry and exit of vehicles located away from the buildings. Maximum height of parking lot lights will be 25 feet.

Landscaping

All landscaping will be in compliance with the California Department of Water Resources Water Efficient Landscape Ordinance (WELO). The landscaping will be representative of the low water demands designated for the development. Trees, shrubs, plants, vines and flowers with bark will be utilized within the landscape plans. Landscape materials will include drought tolerant landscaping with adaptive plants.

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Figure 2-1
Vicinity Map



Figure 2-2
Site Aerial



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Figure 2-3
Proposed Site Plan

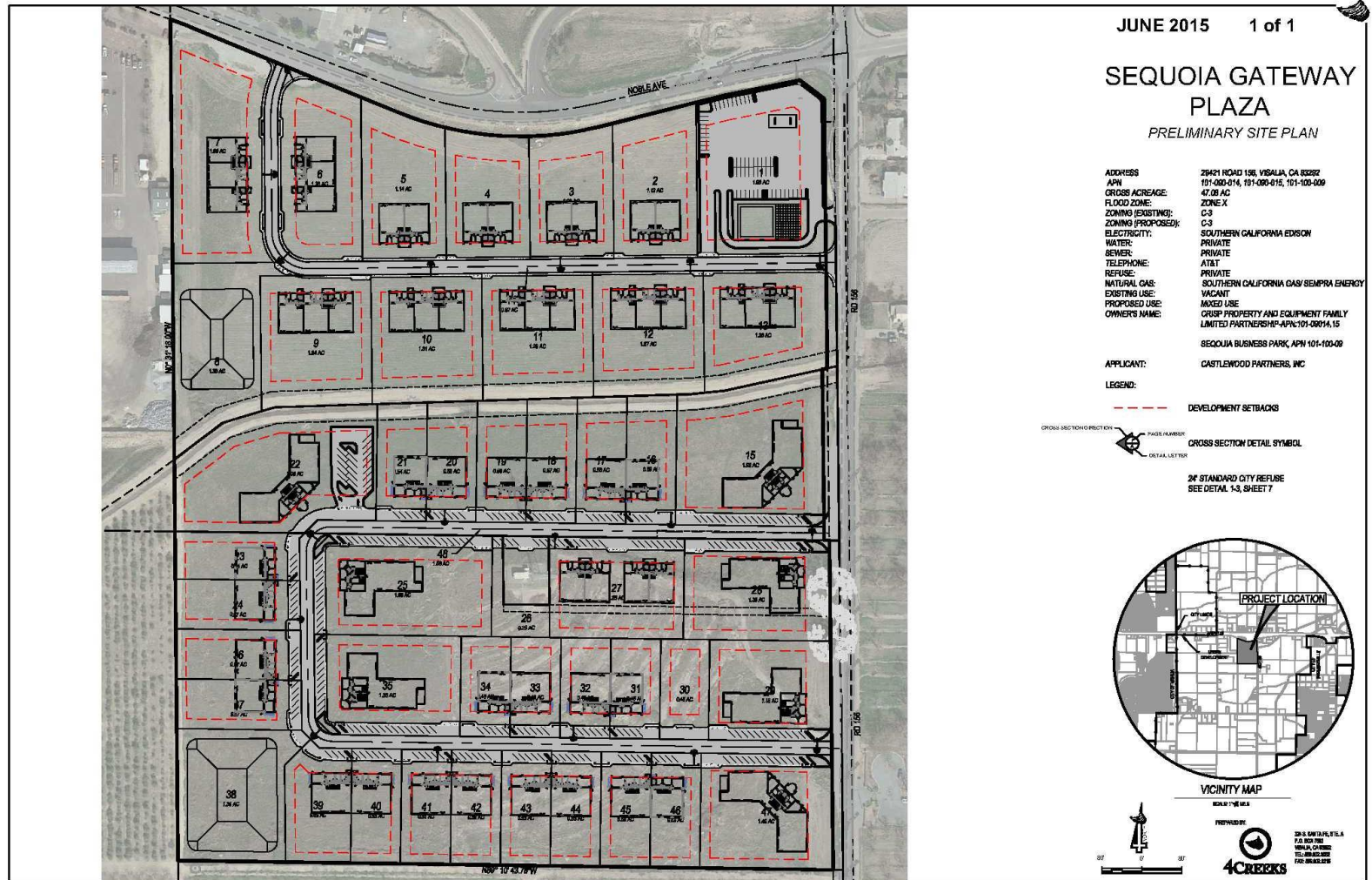
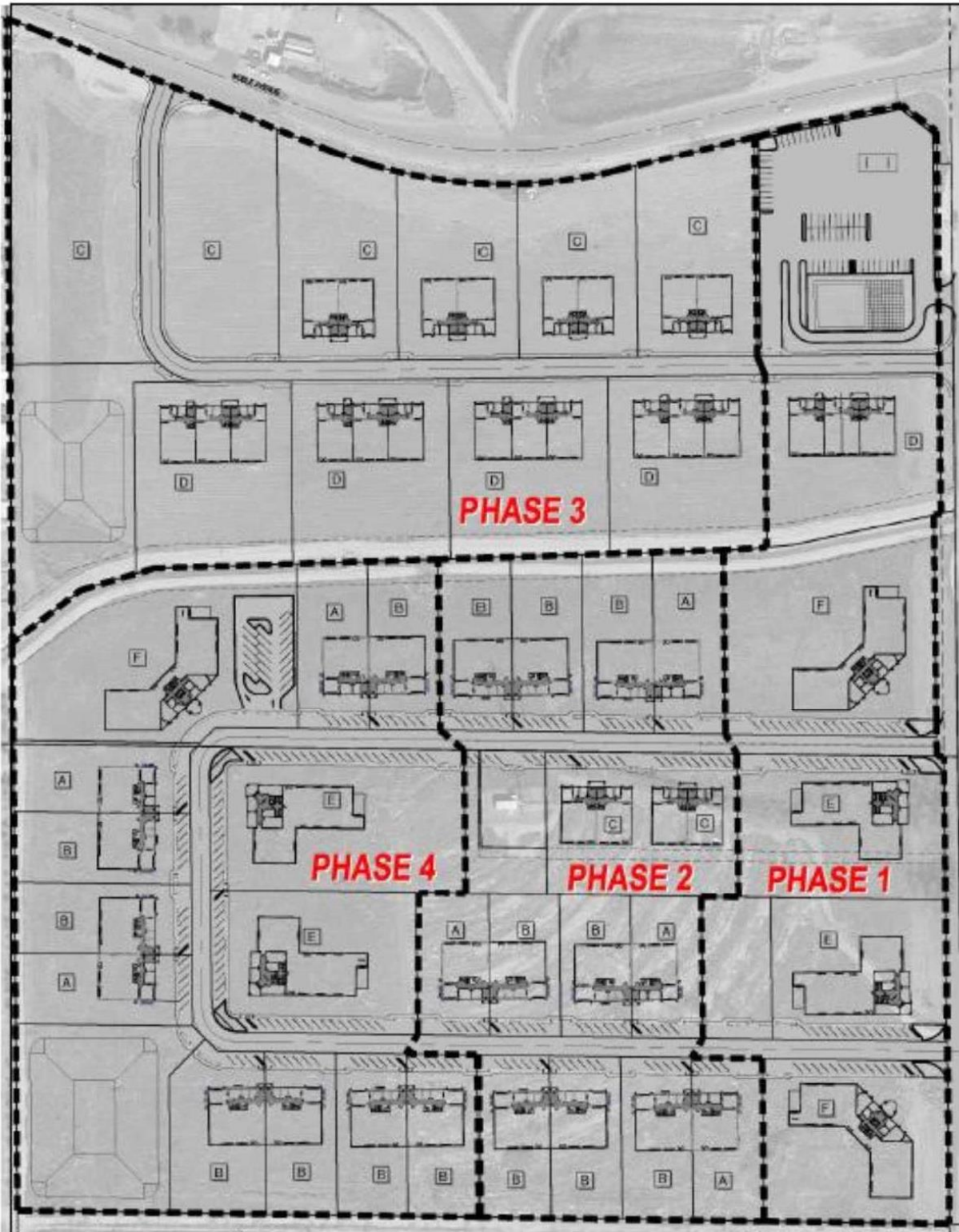


Figure 2-4
Proposed Project Phasing



PROJECT OBJECTIVES

Objective 1: Development of a Facility That Promotes Economic Development

The proposed Project is intended to implement Castlewood, LLC's strategic business plan by planning, designing, and constructing a facility which is economically, technologically and environmentally feasible.

Objective 2: Compatibility with Surrounding Land Use

Tulare County General Plan Policy LU-4.3 encourages the construction of commercial service businesses where they will not adversely affect surrounding properties, typically in areas serving occasional needs rather than day-to-day needs. The Project as proposed would be in compliance with each of the four criteria outlined within the LU-4.3 Policy.

Objective 3: Development of a Facility That is Near Major Highway(s) and Away From Sensitive Land Uses

Development of a facility that is near major highway(s) and away from sensitive land uses. Tulare County General Plan Policy LU-4.4 encourages that travel-oriented tourist commercial uses (such as fueling stations) to be located in areas where traffic patterns are oriented to major arterials and highways. The proposed Project would be located parallel to State Route 198.

Objective 4: Fulfill a Need for Moderate Sized Commercial/Warehouse Type Facilities in the Area

The Project will provide a development that is compatible with surround land uses and meet the present and future employment and business needs of county residents, the regional community and hamlets.

PROJECT BENEFITS

Project Benefit #1: Job Creation.

The Project is anticipated to create a total of 225 new full time jobs for Tulare County residents.

Project Benefit # 2: Aid in meeting County and State GHG reduction criteria

The Tulare County Climate Action Plan presents a comprehensive set of actions to reduce the County's direct and indirect GHG emissions, which includes setting forth Best Performance Standards (BPS) that the proposed Project will utilize. By incorporating BPS into proposed Project operations, the Project achieves at least a 9.1% reduction in emissions, which meets both the County emission reduction targets and GHG reduction criteria set forth by AB 32. This Project is consistent with and will result in real GHG reductions as detailed in Chapter 3.7.

Project Benefit #3: Increase Business Operations within Tulare County.

The proposed Project is intended to provide for a mix of service commercial businesses along the State Route 198 corridor. The project will promote economic vitality and the development of commercial uses, which would increase the amount of tax base the County could receive from this project.

Project Benefit # 4: Improve Existing Roadways, Pedestrian and Bicycle Routes

The Project will support the existing road network by making monetary contributions and/or physical improvements to assist in implementing the Complete Streets Program in the County of Tulare. The Project will also contribute to pedestrian pathways and bike routes in the County immediately east of the City of Visalia.

Project Benefit # 5: Implementation of Countywide General Plan Policies.

Tulare County's General Plan Policies that are in with the Project's purpose and objectives are included in each CEQA Checklist Resource chapter contained in Chapters 3-1 thru 3-18. As indicated in Chapter 8 Immitigable Impacts, one hundred thirty-one (131) General Policies apply to this Project.

Aesthetics

Chapter 3.1

SUMMARY OF FINDINGS

The proposed Project will have a *Less Than Significant Impact* related to Aesthetics. A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

CEQA requires that significant impacts on the environment be identified and, where possible, measures be added to minimize or eliminate impacts (CEQA Guidelines Section 15382). A “[s]ignificant effect on the environment” means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project...” (CEQA Guidelines Section 15382). With respect to aesthetics, potentially significant CEQA impacts include visual impacts to scenic highways, the visual character of the site, and impacts from lighting.

This section describes the existing visual environment in the vicinity of the Project area using accepted methodology to evaluate aesthetic/visual landscape quality and light/glare. Aesthetic considerations tend to be subjective. The methodologies used to evaluate aesthetic impacts to visual character are qualitative in nature and are based on photographic documentation of the site and surrounding area.

The proposed Project site is located in the agricultural (Valley) portion of Tulare County. The Environmental Setting section describes scenic and aesthetic resources in the region, with special emphasis on the proposed Project site and vicinity. The Regulatory Setting provides a description of applicable State and local regulatory policies. A description of the potential impacts of the proposed Project is also provided and includes the identification of feasible mitigation to avoid or lessen the impacts.

The analyses of the existing visual setting and potential visual impacts resulting from the proposed Project are based primarily on information provided by the Project applicant.

Thresholds of Significance:

The threshold of significance for this section will include the following:

- Impact on a scenic vista
- Impact on a scenic highway
- Impact on visual quality
- Creation of glare or impacts on nighttime views

ENVIRONMENTAL SETTING

Visual Character of the Region

“Tulare County is located in a predominately agricultural region of central California. The terrain in the County varies. The western portion of the County includes a portion of the San Joaquin Valley (Valley), and is generally flat, with large agricultural areas with generally compact towns interspersed. In the eastern portion of the County are foothills and the Sierra Nevada mountain range. The Project site is located on the Valley floor, which is very fertile and has been intensively cultivated for many decades. Agriculture and related industries such as agricultural packing and shipping operations and small and medium sized manufacturing plants make up the economic base of the Valley region. Many communities are small and rural, surrounded by agricultural uses such as row crops, orchards, and dairies. From several locations on major roads and highways through out the County, electric towers and telephone poles are noticeable. Mature trees, residential, commercial, and industrial development, utility structures, and other vertical forms are highly visible in the region because of the flat terrain. Where such vertical elements are absent, views are expansive. Most structures are small; usually one story in height, through occasionally two story structures can be seen commercial or industrial agricultural complexes. The County provides a wide range of views from both mobile and stationary locations.”¹

Existing Visual Conditions

The 46-acre proposed Project site is east of the City of Visalia, just south of the State Route 198 corridor. The northern 27 acres of the proposed Project site is within the City of Visalia’s (City) adopted Sphere of Influence, while the southern 20 acres is within the City’s adopted Planning Area. The site is currently fallow; however, the site has historically been wheat farmed for weed management with the southern portion of the site being the location of a former drive-in movie theater.

Approximately half of the proposed Project site is bordered by urban development while the remaining half is bordered by land in active agricultural uses. The Caltrans Visalia Maintenance building is to the west while various commercial buildings are on the northern side of SR 198, north of the proposed Project site. A cluster of approximately 12 residences is immediately east of the site and beyond that is a RV and mini storage facility. The Little Tulare Irrigation Ditch bisects the center of the site while a wireless communications tower is located on the southern portion of the site. Surrounding agricultural lands consist of stone fruit orchards, row crops and other farmed lands. **Figures 3.1-1** and **3.1-2** depict existing site conditions.

¹ Tulare County General Plan 2030 Update: Recirculated Draft EIR (RDEIR). Page 3.1-11.

Figure 3.1-1
View looking northwest toward Project site from Road 156



Figure 3.1-2
View looking southeast toward Project site from Avenue 296



Figure 3.1-3
View looking west along Tulare Irrigation Ditch from Road 156



REGULATORY SETTING

Federal Agencies & Regulations

None that apply to the proposed Project.

State Agencies & Regulations

Title 24 Outdoor Lighting Standards

Title 24 Outdoor Lighting Standards were adopted by the State of California Energy Commission (Commission) (Title 24, Parts 1 and 6, Building Energy Efficiency Standards (Standards) on November 5, 2003 and went into effect on October 1, 2005. The changes included new requirements for outdoor lighting vary according to which “lighting Zone” the equipment is in. The Commission defines rural areas as Lighting Zone 2. Existing outdoor lighting systems are not required to meet these lighting allowances.

Scenic Highway Program

The California Scenic Highway Program was established by the state Legislature in 1963 for the purpose of protecting and enhancing the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have

been officially designated. The state laws governing the scenic highways program are found in The Streets and Highways Code Sections 260-263. In Tulare County, portions of State Routes 190, 198, and 180 are eligible for state scenic highway designation.²

Local Policy & Regulations

“The scenic landscapes in Tulare County will continue to be one of the County’s most visible assets. The Tulare County General Plan emphasizes the enhancement and preservation of these resources as critical to the future of the County. The County will continue to assess the recreational, tourism, quality of life, and economic benefits that scenic landscapes provide and implement programs that preserve and use this resource to the fullest extent.”³

County Scenic Roadways

“Tulare County’s existing General Plan identifies State designated scenic highways and County designated eligible highways. There are three highway segments designated as eligible by the State. These include State Route 198 from Visalia to Three Rivers, State Route 190 from Porterville to Ponderosa, and State Route 180 extending through Federal land in the northern portion of Tulare County. State Route 198 closely follows around Lake Kaweah and the Kaweah River, while State Route 190 follows around Lake Success and the Tule River. Both Scenic Highways travel through agricultural areas of the valley floor to the foothills and the Sierra Nevada Range. Additionally, the General Plan Update identifies preserving the rural agricultural character of SR 99 and SR 65 as valuable to the County and communities.”⁴

Tulare County General Plan Policies

The Tulare County General Plan has several policies that apply to projects within the County of Tulare. General Plan policies that relate to the proposed Project are listed below.

SL-1.1 Natural Landscapes - During review of discretionary approvals, including parcel and subdivision maps, the County shall as appropriate, require new development to not significantly impact or block views of Tulare County’s natural landscapes. To this end, the County may require new development to:

1. Be sited to minimize obstruction of views from public lands and rights-of- ways,
2. Be designed to reduce visual prominence by keeping development below ridge lines, using regionally familiar architectural forms, materials, and colors that blend structures into the landscape,
3. Screen parking areas from view,
4. Include landscaping that screens the development,
5. Limit the impact of new roadways and grading on natural settings, and
6. Include signage that is compatible and in character with the location and building design

² Ibid. Goals and Policies Report Part 1. Page 7-5.

³ Op. Cit. Goals and Policies Report. Page A-2.

⁴ Op. Cit. 7-2.

SL-1.2 Working Landscapes - The County shall require that new non-agricultural structures and infrastructure located in or adjacent to croplands, orchards, vineyards, and open rangelands be sited so as to not obstruct important viewsheds and to be designed to reflect unique relationships with the landscape by:

1. Referencing traditional agricultural building forms and materials,
2. Screening and breaking up parking and paving with landscaping, and
3. Minimizing light pollution and bright signage.

LU-7.2 Integrate Natural Features - The County shall emphasize each community's natural features as the visual framework for new development and redevelopment.

LU-7.4 Streetscape Continuity - The County shall ensure that streetscape elements (e.g., street signs, trees, and furniture) maintain visual continuity and follow a common image for each community.

LU-7.9 Visual Access - The County shall require new development to maintain visual access to views of hillsides, creeks, and other distinctive natural areas by regulating building orientation, height, and bulk.

LU-7.14 Contextual and Compatible Design - The County shall ensure that new development respects Tulare County's heritage by requiring that development respond to its context, be compatible with the traditions and character of each community, and develop in an orderly fashion which is compatible with the scale of surrounding structures.

LU-7.19 Minimize Lighting Impacts - The County shall ensure that lighting in residential areas and along County roadways shall be designed to prevent artificial lighting from reflecting into adjacent natural or open space areas unless required for public safety.

ERM-5.19 Night Sky Protection - Upon demonstrated interest by a community, mountain service center, or hamlet, the County will determine the best means by which to protect the visibility of the night sky.

ERM-1.15 Minimize Lighting Impacts - The County shall ensure that lighting associated with new development or facilities (including street lighting, recreational facilities, and parking) shall be designed to prevent artificial lighting from illuminating adjacent natural areas at a level greater than one foot candle above ambient conditions.

IMPACT EVALUATION

Would the project:

a) **Have a substantial adverse effect on a scenic vista?**

Project Impact Analysis:

No Impact

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The proposed Project site is located in the Valley portion of Tulare County. The site is generally flat with unobstructed views of the surrounding agricultural lands, adjacent residences, and State Route 198, immediately to the north. Neither the proposed Project site nor any of the surrounding land uses contains features typically associated with scenic vistas (e.g. ridgelines, peaks, overlooks). Therefore, little opportunity exists for project development to obscure views of scenic vistas that may be located within the immediate area of the proposed Project site.

The Sierra Nevada Mountains are the only natural and visual resource in the Project area. Views of these distant mountains are afforded only during clear conditions. Due to the impacts of air quality in the Valley, the view of this mountain range can often be limited. Distant views of the Sierra Nevada Mountains would largely be unaffected by the development of the proposed Project because of the distance and limited visibility of these features. Further, the County of Tulare, does not identify views of these features as required to be “protected.”

Although the proposed Project will be visible from State Route 198, Avenue 296 and Road 156, it is anticipated that design features will minimize negative visual impacts to those viewing the site. On-site landscaping and landscaping along Avenue 296 and Road 156 will be in accordance with City of Visalia standards. Any structure developed on the site will not exceed 75 feet in height (per Section 12.5 of the County of Tulare Zoning Ordinance for Service Commercial (C-3) Zone District); therefore, the height will be consistent with those allowed in a commercial zone. Additionally, the proposed Project will not impair unobstructed views of the Sierra Nevada from Road 152 to the west, once the Project is fully built-out. In conclusion, the proposed Project will not include any structures that would exceed a maximum of 75 feet in height. As such, with this design limitation, scenic vistas would not be impacted.

Therefore, the proposed Project will not include any structures that would exceed a maximum of 75 feet in height. As such, with this height design limitation, there would be ***No Impact*** to scenic vistas.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County General Plan 2030 Update, Tulare County General Plan Background Report, and the Tulare County General Plan 2030 Update EIR.

There are no scenic vistas on or near the Project site; as such there will be ***No Cumulative Impacts*** related to this Checklist Item.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted earlier, there are *No Project-specific or Cumulative Impacts* related to this Checklist Item.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Project Impact Analysis: *No Impact*

State Route (SR) 180 is the nearest Officially Designated State Scenic Highway⁵, approximately 27 miles north of the proposed Project site. An approximate 3.12 mile length of SR 180 is within Tulare County. State Route 198, immediately north of the proposed Project site is described as an Eligible State Scenic Highway – Not Officially Designated by Caltrans. The Tulare County General Plan 2030 Update also lists a series of Scenic County Routes, several of which are in agricultural areas; however, none are in the proposed Project vicinity. There will be *No Impact* to this Checklist Item.

Cumulative Impact Analysis: *No Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County General Plan 2030 Update, Tulare County General Plan Background Report, and the Tulare County General Plan 2030 Update EIR.

There will be *No Cumulative Impacts* because the proposed Project will not create visual impacts to State Scenic Highways or Scenic County Routes.

Mitigation Measure(s): *None required.*

Conclusion: *No Impact*

As noted earlier, *No Project-specific or Cumulative Impacts* related to this Checklist Item will occur.

c) Substantially degrade the existing visual character or quality of the site and its surroundings

Project Impact Analysis: *Less Than Significant Impact*

Agricultural landscapes throughout Tulare County are typically considered scenic and visually appealing. While the proposed Project is not located on a Scenic County Road or Eligible State Scenic Highway, the proposed Project site is located in an area with large agricultural fields under cultivation which are generally considered visually pleasing. At full

⁵ California Department of Transportation. Officially Designated State Scenic Highways.
http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/. Accessed March 2017.

build-out, implementation of the proposed Project will alter the visual character of the site from non-productive agricultural land to a commercial development. The proposed Project will be required to comply with the substantial design review and design limitations required by the City of Visalia's adopted design guidelines and zoning regulations, which require setbacks, landscaping and designs to limit impact to neighboring properties. As such, the County does not anticipate that the commercial development of the proposed Project create a visually degraded character or quality to the Project site or to the properties near and around the Project site. Therefore, the Project would result in a ***Less Than Significant Impact*** on the visual character within or adjacent to the Project site.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County General Plan 2030 Update, Tulare County General Plan Background Report, and the Tulare County General Plan 2030 Update EIR.

As the proposed Project would not create any project specific visual impacts, a ***Less Than Significant Cumulative Impact*** on visual character will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

The proposed Project will have ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Project Impact Analysis: ***Less Than Significant Impact***

Lighting impacts are often associated with the use of artificial light during the evening and nighttime hours. Impacts could potentially include light emanating from building interiors (seen through windows) and light from exterior sources, such as security lighting, street lighting, etc. Glare is typically a daytime occurrence caused by light reflecting off highly polished surfaces such as window glass or polished metallic surfaces.

The proposed Project will include new street and commercial lighting within the development and all new lighting will be consistent with current City of Visalia standards, which will minimize light spillage or other negative lighting impacts. Other than typical daylight reflecting from commercial windows, no other sources of glare (such as light reflecting off highly polished surfaces) would occur as a result of the Project. Therefore, a ***Less Than Significant Impact*** to this Checklist Item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County General Plan 2030 Update, Tulare County General Plan Background Report, and the Tulare County General Plan 2030 Update EIR.

Development projects and urbanization typically adds small amounts of light that could incrementally impact the night sky. The proposed Project will be subject to City of Visalia standards which will minimize light spillage or other lighting impacts. As such, the proposed Project's cumulative incremental increase of light and glare will be less than significant. As such, a ***Less Than Significant Cumulative Impact*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item will occur.

DEFINITIONS

Scenic landscapes - Landscapes that include agricultural lands, woodlands, forestlands, watercourses, mountains, meadows, structures, communities, and other types of scenery that contribute to the visual beauty of Tulare County.

Natural Landscapes - An expanse of naturally-formed scenery that contribute to the visual beauty of Tulare County.

Working Landscapes - These are landscapes shaped by human activities that produce economic commodities such as agricultural lands, ranch lands, and timber lands. They may also include picturesque commercial districts in communities, crops, orchards, agricultural structures, stands of timber, and canals.”

Viewshed - An area of land, water, or other environmental features that is visible from a fixed vantage point. Viewsheds tend to be areas of particular scenic or historic value that are deemed worthy of preservation against development or other change. The preservation of viewsheds is typically the goal in the designation of open space areas, green belts, and urban separators.

REFERENCES

California Department of Transportation. Officially Designated State Scenic Highways. http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/. Accessed March 2017.

Tulare County General Plan 2030 Update, Goals and Policies Report Part 1. Pages 7-2, 5, and A-2.

Tulare County General Plan 2030 Update: Recirculated Draft EIR (RDEIR). Page 3.1-11.

Agricultural Land and Forestry Resources

Chapter 3.2

SUMMARY OF FINDINGS

The proposed Project will result in a *Less Than Significant Impact* to Agricultural Land and Forestry Resources. No mitigation measures will be required. A detailed review of potential impacts is provided in the analysis below.

INTRODUCTION

CEQA Requirements for Evaluation of Impacts to Agricultural Land and Forestry Resources

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to agricultural land and forestry resources. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in 15126.2 a), “[a]n EIR shall identify and focus on the significant environmental effects of the proposed Project. In assessing the impact of a proposed Project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the Project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the Project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision will have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas.” The environmental setting provides a description of the Agricultural Lands and Forestry Resources in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, the Tulare County General Plan Background Report and/or the Tulare County General Plan Revised DEIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential

impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

DEFINITIONS

“The California Department of Conservation, Division of Land Resource Protection, maintains the Farmland Mapping and Monitoring Program (FMMP), which monitors the conversion of the state’s farmland to and from agricultural use. The map series identifies eight classifications (discussed below) and uses a minimum mapping unit size of 10 acres. The program also produces a biannual report on the amount of land converted from agricultural to non-agricultural use. The program maintains an inventory of state agricultural land and updates its “Important Farmland Series Maps” every two years¹. Although the program monitors a wide variety of farmland types (more fully described below), Important Farmland consists of lands classified as Prime Farmland, Farmland of Statewide Importance, and Unique Farmland.”²

Prime Farmland (P): *“Prime Farmland is farmland with the best combination of physical and chemical features to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.”*³

Farmland of Statewide Importance (S): *“Farmland of Statewide Importance is similar to Prime Farmland but has minor shortcomings, such as greater slopes or a lesser ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.”*⁴

Unique Farmland (U): *“Unique Farmland has lesser quality soils used for the production of the state’s leading agricultural crops. This land is usually irrigated, but may include nonirrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.”*⁵

Farmland of Local Importance (L): *“Farmland of Local Importance is land important to the local agricultural economy as determined by each county’s board of supervisors and a local advisory committee.”*⁶

Grazing Land (G): *“Grazing Land is land on which the vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen’s Association, the University of California Cooperative*

¹ California Department of Conservation, DLRP, Farmland Mapping and Monitoring Program, downloaded from, <http://www.conservation.ca.gov/dlrp/fmmp/Pages/Index.aspx>

² Tulare County General Plan 2030 Update, Recirculated DEIR (SCH # 2006041162). Page 3.10-4.

³ Ibid.

⁴ Op. Cit.

⁵ Op.Cit.

⁶ Tulare County General Plan 2030 Update, Recirculated DEIR, February 2010 (SCH # 2006041162), Page 3.10-4.

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Extension, and other groups interested in the extent of grazing activities. The minimum mapping unit for Grazing Land is 40 acres.”⁷

Urban and Built-Up Land (D): *“Urban and Built-Up Land is land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.”⁸*

Other Land (X): *“Other Land is land not included in any other mapping category. Common examples include low-density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry, or aquaculture facilities; strip mines and borrow pits; and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.”⁹*

Water (W): *“Water is defined as perennial water bodies with an extent of at least 40 acres. While the number of agricultural lands classified as Important Farmlands (i.e., Prime Farmland, Farmland of Statewide Importance, and Unique Farmland) have been decreasing over the past several years, the total acreage for all categories of farmland (including grazing land) remained relatively stable between the years 1998 and 2006 (see Table 3.10-4). The locations of these farmland types are identified in Figure 3.10-1. The farmlands are concentrated in the Rural Valley/Foothill Planning areas. No important farmlands are located in the Mountain Area.”¹⁰*

CEQA THRESHOLDS OF SIGNIFICANCE

The Department of Conservation identifies the location of prime Agricultural Land resource areas and Williamson Act Contract lands. Thresholds of potential significance will include the following:

- Conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance
- Conflict with Williamson Act Contracts
- Convert Forest Land

⁷ Ibid.

⁸ Op. Cit. 3.10-4 to 3.10-5.

⁹ Op. Cit. 3.10-5.

¹⁰ Tulare County General Plan 2030 Update, Recirculated DEIR, February 2010 (SCH # 2006041162). Page 3.10-5.

ENVIRONMENTAL SETTING

“Tulare County exhibits a diverse ecosystems landscape created through the extensive amount of topographic relief (elevations range from approximately 200 to 14,000 feet above sea level). The County is essentially divided into three eco-regions. The majority of the western portion of the County comprises the Great Valley Section, the majority of the eastern portion of the County is in the Sierra Nevada Section, and a small section between these two sections comprises the Sierra Nevada Foothill Area.”¹¹

State of California

State of California Agricultural Production

“The sales value generated by California agriculture decreased by 16.8% between the 2014 and 2015 crop years. The State’s 77,500 farms and ranches received a record \$47.1 billion for their output, down from the \$56.6 billion received in 2014. California’s revenue was led by the dairy industry, followed by almonds and grapes.

Almond cash receipts decreased to \$5.33 billion. Cash receipts fell by 27.9 percent due to a fall in prices from \$4.00 per pound in 2015. Grape production generated \$4.95 billion in cash receipts in 2015, down 5.4 percent from 2014. Production decreased by 1.3 percent from 2014, and prices received by growers decreased from \$756 per ton of grapes in 2014 to \$724 per ton in 2015. Revenue generated from cattle was \$3.40 billion, a 9.0 percent decrease from the 2014 record high of \$3.73 billion.

The dairy industry, California’s leading commodity in cash receipts, generated \$6.23 billion for milk production in 2015, down 32.8 percent from 2014. Milk production decreased by 3.4 percent, and milk prices received by producers decreased from \$22.12 per hundred pounds of milk sold in 2014 to \$15.40 in 2015. As the leading dairy producing state in the country, California produced nearly 20 percent of the nation’s supply in 2015.

California remained the leading state in cash farm receipts in 2015 with combined commodities representing nearly 13 percent of the U.S. total. California’s leading crops remained fruits, nuts and vegetables.”¹²

State of California Farmland Conversion

Of California’s approximately 100 million acres of land, 43 million acres are used for agriculture. Of this, 16 million acres are grazing land and 27 million acres are cropland. Only about nine million acres of irrigated land are considered to be Prime, Unique or of Statewide Importance.¹³

¹¹ Ibid. 3.11-5.

¹² United States Department of Agriculture. California Agricultural Statistics Review, 2015-2016 Crop Year. https://www.nass.usda.gov/Statistics_by_State/California/Publications/California_Ag_Statistics/Reports/2015cas-all.pdf. Accessed July 2017.

¹³ California Department of Food and Agriculture. AgVision 2030 White Paper. Agricultural Land Loss & Conversion. July 2009. http://www.cdffa.ca.gov/agvision/docs/Agricultural_Loss_and_Conservation.pdf. Accessed June 2017.

“Irrigated farmland in California decreased by more than 91 square miles (58,587 acres) between 2010 and 2012. The highest-quality agricultural soils, known as Prime Farmland, comprised 81 percent of the loss. Urban development, which totaled 29,342 acres, decreased by 34 percent compared with the 2010 update. The 2012 urban land increase was the lowest recorded in the program’s history, reflecting impacts of the recent recession. Of the nearly 46 square miles of new Urban and Build-up Land in the state, 43 percent occurred in the Southern California region.

Land was removed from irrigated categories – to uses aside from urban – at a rate of 41 percent lower than compared with the prior update (252,473 acres in 2010 and 149,577 acres in 2012). Land idling and reversion to dry farming were responsible for the majority of this type of conversion. The southern San Joaquin Valley and counties in the Sacramento-San Joaquin Delta were most impacted by land idling. Three counties had 10,000 or more acres of this conversion type: Fresno, Kern, and Kings.”¹⁴

Tulare County

Tulare County exhibits a diverse ecosystems landscape created through the extensive amount of topographic relief (elevations range from approximately 200 to 14,000 feet above sea level). The County is essentially divided into three eco-regions. The majority of the western portion of the County comprises the Great Valley Section, the majority of the eastern portion of the County is in the Sierra Nevada Section, and a small section between these two sections comprises the Sierra Nevada Foothill Area.¹⁵

Agricultural Productivity

The Project site is located in the San Joaquin Valley portion of Tulare County. This area is characterized by rich, highly productive farmland. Agriculture is the most important sector in Tulare County’s economy, and agriculture and related industries make Tulare County the most productive agricultural county in the United States, according to Tulare County Farm Bureau statistics.¹⁶ “Agricultural lands (crop and commodity production and grazing) also provide the County’s most visible source of open space lands. As such, the protection of agricultural lands and continued growth and production of agriculture industries is essential to all County residents.”¹⁷

The proposed Project site is located in the San Joaquin Valley portion of Tulare County. As indicated in the Tulare County Farm Bureau’s “Facts about Agriculture,” Tulare County leads the nation in dairy production. Milk is the first agricultural commodity worth \$1.7 billion in the 2015 report. Tulare County also ranks again as the #1 largest agricultural producing county in the entire nation. The title of #1 was retained by Tulare County in 2015 in light of our neighbor to the north, Fresno County being severely impacted in their acreage values by the water restrictions and drought conditions the past three years, causing their gross receipts to be lower than Tulare County.

¹⁴ California Department of Conservation. 2015 California Farmland Conversion Report. http://www.conservation.ca.gov/dlrp/fmmp/Pages/FMMP_2010-2012_FCR.aspx. Accessed July 2017.

¹⁵ Op. Cit. 3.11-5.

¹⁶ Tulare County Farm Bureau. Tulare County Agricultural Facts. <http://www.tulcofb.org/index.php?page=agfacts>. Accessed June, 2017.

¹⁷ Tulare County General Plan 2030 Update, August 2012. Page 3-4.

Agriculture is the largest private employer in the county with farm employment accounting for nearly a quarter of all jobs. Processing, manufacturing, and service to the agriculture industry provides many other related jobs. Six of the top fifteen employers in the county are food handling or processing companies, which includes fruit packing houses and dairy processing plants.¹⁸

The *2016 Tulare County Annual Crop and Livestock Report* stated “Tulare County’s total gross production value for 2015 as \$6,084,672,400. This represents an increase of \$1,103,694,600 or 13.7% above 2014’s values of \$8,084,672,400. Milk continues to be the leading agricultural commodity in Tulare County; with a total gross value of \$1,718,001,000, a decrease of \$822,231,000 or 32.4%. Milk produce represents 24.6% of the total crop and livestock value for 2015. Total milk production in Tulare County remained relatively stable. Livestock and Poultry’s gross value of \$1,022,620,000 represents a decrease of 4.89% above 2014, mostly due to lower per unit value for cattle and less poultry production.”¹⁹ “Tulare County’s agricultural strength is based on diversity of the crops produced. The 2015 report covers more than 120 different commodities, 45 of which had a gross value in excess of \$1,000,000. Although individual commodities may experience difficulties from year to year, Tulare County continues to produce high-quality crops that provide food and fiber to more than 90 countries throughout the world.”²⁰

Tulare County Farmland Conversion

The most recent statewide California Farmland Conversion Report (CFCR) from the California Department of Conservation Farmland Mapping and Monitoring Program (FMMP) assesses statewide farmlands from the period 2008-2010. However, Tulare County specific data from the period 2012-2014 indicates that agricultural lands in Tulare County in 2014 included 859,172 acres of important farmland (designated as FMMP Prime, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance) and 439,962 acres of grazing land, for a total of 1,299,134 acres of agricultural land.²¹

Farmlands of Statewide Importance are defined as “lands similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.”²²

¹⁸ Tulare County Farm Bureau Statistics 2016.

¹⁹ 2015 Tulare County Annual Crop and Livestock Report, August 2016. Cover letter from Marilyn Kinoshita, Agricultural Commissioner.

²⁰ Ibid. <http://agcomm.co.tulare.ca.us/default/index.cfm/standards-and-quarantine/crop-reports1/crop-reports-2011-2020/2015-tulare-county-annual-crop-and-livestock-report-pdf/>

²¹ California Department of Conservation, Division of Land Resource Protection. Department of Conservation, Farmland Mapping and Monitoring Program, *Table 2012-2014. Table A-44, Part I.* <http://www.conservation.ca.gov/dlrp/fmmp/Pages/Tulare.aspx>. Accessed September 19, 2017. The California Farmland Conversion Report 2008-2010 can be found at <http://www.conservation.ca.gov/dlrp/fmmp/Documents/fmmp/pubs/2008-2010/fcr/FCR%200810%20complete.pdf>.

²² Ibid.

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The area surrounding the Project site is predominantly rural with agriculturally productive lands (e.g., orchards and row crops). The site is surrounded by Prime Farmland to the south and a portion of the east; and urban and built-up land.²³

As presented in **Table 3.2-1**, the Tulare County Subvention Report (November 21, 2012) notes that 1,096,299 acres of farmland with Tulare County is under California Land Conservation Act (Williamson Act) contracts; a program designed to prevent premature conversion of farmland to residential or other urban uses. As of January 1, 2012, there were 1,096,299 acres of farmland under Williamson Act or Farmland Security Zone contracts in Tulare County divided by the following categories: 571,904 acres of Williamson Act prime, 513,243 acres nonprime, and 11,152 acres of Farmland Security Zone lands (The acreage totals also include 6,040 acres of Williamson Act prime contract land in nonrenewal and 7,513 acres of Williamson Act of nonprime contract land in nonrenewal.)²⁴ **Table 3.2-2** shows FMMP-Designated Land.

Table 3.2-1²⁵:	
2012 Tulare County Lands under Williamson Act or Farmland Security Zone Contracts	
Acres	Category
571,904	*Total prime = Prime active + NR Prime
513,243	*Total Nonprime = Nonprime active + NR Prime
11,152	Farmland Security Zone
1,096,299	TOTAL ACRES in Williamson Act and Farmland Security Zone contracts
<i>*Prime total includes 6039.75 acres in nonrenewal; Nonprime total includes 7512.56 acres in nonrenewal</i>	

Table 3.2-2							
Tulare County FMMP-Designated Land (1998-2012)							
Farmland Category	Total Acres Inventoried						
	1998²⁶	2000	2002	2004	2006	2010²⁷	2012²⁸
Prime Farmland	396,130	393,030	387,620	384,340	379,760	370,249	368,527
Farmland of Statewide Importance	357,220	351,720	345,760	339,580	332,160	323,599	321,296
Unique Farmland	11,790	11,720	12,750	12,530	12,220	11,593	11,474
Important Farmland Subtotal	765,140	756,470	746,130	736,450	724,140	705,441	701,297
Farmland of Local Importance	110,040	124,140	126,820	137,440	143,830	154,550	158,823
Grazing Land	439,960	434,050	440,550	440,620	440,140	440,042	439,940
Total	1,315,140	1,314,660	1,313,500	1,314,560	1,308,110	1,300,033	1,300,060

Table 3.2-3 summarizes Tulare County lands under Williamson Act or Farmland Security Zone Contracts.

²³ California Department of Conservation, Farmland Mapping and Monitoring Program, Tulare South County Map, ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2012/tul12_so.pdf

²⁴ Tulare County Resource Management Agency. Tulare County Subvention Report for Fiscal Year 2012-2013 (submitted to Department of Conservation, November 2012)

²⁵ Ibid.

²⁶ Tulare County General Plan 2030 Update Recirculated Draft EIR Sch#2006041162. Table 3.10-4. Also Years 2000, -02, -04, and -06.

²⁷ California Department of Conservation, Division of Land Resource Protection. Farmland Mapping and Monitoring Program California Farmland Conversion Report 2015. http://www.conservation.ca.gov/dlrp/fmmp/Documents/fmmp/pubs/2010-2012/FCR/FCR%202015_complete.pdf. Accessed July 2017.

²⁸ Ibid.

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Table 3.2-3²⁹:	
2014 Tulare County Lands under Williamson Act or Farmland Security Zone Contracts	
Acres	Category
565,190	*Total prime = Prime active + NR Prime
505,645	*Total Nonprime = Nonprime active + NR Prime
11,101	Farmland Security Zone
1,081,936	Total Acres in Williamson Act and Farmland Security Zone contracts
<i>*Prime total includes 3,838 acres in nonrenewal; Nonprime total includes 7,301 acres in nonrenewal</i>	

Important Farmland Trends

Using data collected by the FMMP, farmland acreage has been consistently decreasing for each two-year period since 1998³⁰. In the 2010 FMMP analysis, Tulare County lost 17,502 acres of important farmland, and 17,748 acres of total farmland between 2008 and 2010; 13,815 acres of important farmland, and 14,216 acres of total farmland between 2010 and 2012; and 17,441 acres of important farmland, and 17,678 acres of total farmland between 2012 and 2014.³¹

“For Tulare County and the surrounding region, the reported major cause of this conversion is the downgrading of important farmlands to other agricultural uses (e.g., such as expanded or new livestock facilities, replacing irrigated farmland with non-irrigated crops, or land that has been fallow for six years or longer).”³²

Forest Lands

“Timberlands that are available for harvesting are located in the eastern portion of Tulare County in the Sequoia National Forest. Hardwoods found in the Sequoia National Forest are occasionally harvested for fuel wood, in addition to use for timber production. Since most of the timberlands are located in Sequoia National Forest, the U.S. Forest Service has principal jurisdiction, which encompasses over 3 million acres. The U.S. Forest Service leases these federal lands for timber harvests.”³³ As the proposed Project is located on the Valley floor, there is no timberland or forest in the Project vicinity.

Proposed Project Site

The 46-acre proposed Project site is currently service commercial land. A mobile communications tower is located in the middle of the site and a Tulare Irrigation District canal runs from east to west through the middle of the site. No agricultural crops are on site; however, the southern boundary of the proposed Project site is shared with an existing tree crop.

²⁹ Ibid.

³⁰ California Department of Conservation, Division of Land Resource Protection, “Williamson Act Status Report (2010)” downloaded from “Williamson Act Reports and Statistics”, at: http://www.conservation.ca.gov/dlrp/lca/stats_reports/Pages/index.aspx

³¹ Tulare County Land Use Conversion Tables 2008-2010, 2010-2012, and 2012-2014. Table A-44, Part III. <http://www.conservation.ca.gov/dlrp/fmmp/Pages/Tulare.aspx>. Accessed September 20, 2017.

³² Tulare County General Plan 2030 Update, Recirculated DEIR (SCH # 2006041162), Feb. 2010. Page 3.10-13.

³³ Tulare County General Plan 2030 Update, Background Report, February 2010. Page 4-17.

REGULATORY SETTING

Federal Agencies & Regulations

Federal Farmland Protection Act (FFPA)

“The FFPA is intended to minimize the impact Federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. It assures that to the extent possible federal programs are administered to be compatible with state, local units of government, and private programs and policies to protect farmland... Projects are subject to FFPA requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed by a Federal agency or with assistance from a Federal agency.”³⁴

U.S. Forest Service

“The U.S. Department of Agriculture Forest Service is a Federal agency that manages public lands in national forests and grasslands. The Forest Service is also the largest forestry research organization in the world, and provides technical and financial assistance to state and private forestry agencies. Gifford Pinchot, the first Chief of the Forest Service, summed up the purpose of the Forest Service—“to provide the greatest amount of good for the greatest amount of people in the long run.””³⁵

State Agencies & Regulations

California Department of Conservation: Farmland Mapping and Monitoring Program

“The California Department of Conservation (DOC), under the Division of Land Resource Protection, has developed the Farmland Mapping and Monitoring Program (FMMP), which monitors the conversion of the state’s farmland to and from agricultural use. Data is collected at the county level to produce a series of maps identifying eight land use classifications using a minimum mapping unit of 10 acres. The program also produces a biannual report on the amount of land converted from agricultural to non-agricultural use. The program maintains an inventory of state agricultural land and updates the “Important Farmland Series Maps” every two years.”³⁶

Williamson Act: California Land Conservation Act of 1965

“The California Land Conservation Act (CLCA) of 1965, Sections 51200 et seq. of the California Government Code, commonly referred to as the “Williamson Act”, enables local governments to restrict the use of specific parcels of land to agricultural or related open space use. Landowners enter into contracts with participating cities and counties and agree to restrict their land to agriculture or open space use for a minimum of ten years. In return, landowners receive property tax assessments that are much lower than normal because they are based upon farming and open space uses as opposed to full market (speculative) value. Local governments

³⁴ United States Department of Agriculture, Natural Resources Conservation Service, https://www.nrcs.usda.gov/wps/portal/nrcs/detail/?cid=nrcs143_008275. Accessed July 2017.

³⁵ U.S. Forest Service, “About Us – Meet the Forest Service”, <http://www.fs.fed.us/aboutus/meetfs.shtml>. Accessed July 2017.

³⁶ Tulare County General Plan 2030 Update, Background Report, February 2010. Page 4-12.

receive an annual subvention of forgone property tax revenues from the state via the Open Space Subvention Act of 1971.”³⁷

California Department of Forestry and Fire Protection (CAL FIRE)

“CAL FIRE manages eight Demonstration State Forests that provide for commercial timber production, public recreation, and research and demonstration of good forest management practices. CAL FIRE foresters can be found in urban areas working to increase the number of trees planted burial ground in the path of a logging operation or fire may be verified and saved due to a CAL FIRE archaeologist's review of the area. And, an improved strain of trees, resistant to disease and in our cities, or preventing the spread of disease by identifying and removing infected trees. A Native American burial ground in the path of a logging operation or fire may be verified and saved due to a CAL FIRE archaeologist's review of the area. And, an improved strain of trees, resistant to disease and pests, may be nurtured and introduced by a CAL FIRE forester.”³⁸

Local Policy & Regulations

Tulare County General Plan Policies

The Tulare County General Plan 2030 Update (TCGP) has policies that apply to projects within Tulare County that serve to protect farmland. General Plan policies that are generally applicable to the proposed Project are listed below:

AG-1.1 - Primary Land Use - The County shall maintain agriculture as the primary land use in the valley region of the County, not only in recognition of the economic importance of agriculture, but also in terms of agriculture’s real contribution to the conservation of open space and natural resources.

AG-1.6 Conservation Easements - The County shall consider developing an Agricultural Conservation Easement Program (ACEP) to help protect and preserve agricultural lands (including “Important Farmlands”), as defined in this Element. This program may require payment of an in-lieu fee sufficient to purchase a farmland conservation easement, farmland deed restriction, or other farmland conservation mechanism as a condition of approval for conservation of important agricultural land to non-agricultural use. If available, the ACEP shall be used for replacement lands determined to be of statewide significance (Prime or other Important Farmlands), or sensitive and necessary for the preservation of agricultural land, including land that may be a part of a community separator as part of a comprehensive program to establish community separators. The in-lieu fee or other conservation mechanism shall recognize the importance of land value and shall require equivalent mitigation..

AG-1.7 Preservation of Agricultural Lands - The County shall promote the preservation of its agricultural economic base and open space resources through the implementation of resource management programs such as the Williamson Act, Rural Valley Lands Plan, Foothill Growth

³⁷ Tulare County General Plan 2030 Update, Background Report, February 2010. Page 4-13.

³⁸ California Department of Forestry and Fire Protection. About Cal Fire, <http://www.fire.ca.gov/about/about.php>. Accessed July 2017.

Management Plan or similar types of strategies and the identification of maximum growth parameters for all urban areas located in the County.

AG-1.14 Right-to-Farm Noticing - The County shall condition discretionary permits for special uses and residential development within or adjacent to agricultural areas upon the recording of a Right-to-Farm Notice (Ordinance Code of Tulare County, Part VII, Chapter 29, Section 07-29-1000 and following), which is an acknowledgement that residents in the area should be prepared to accept the inconveniences and discomfort associated with normal farming activities and that an established agricultural operation shall not be considered a nuisance due to changes in the surrounding area.

AG-1.17 Agricultural Water Resources - The County shall seek to protect and enhance surface water and groundwater resources critical to agriculture.

IMPACT EVALUATION

Tulare County, as a Lead Agency, typically bases a determination of agricultural resources significance on the thresholds established by the California Environmental Quality Act (CEQA) Guidelines. The Environmental Checklist Form of the CEQA Guidelines contains a list of impacts that may be deemed potentially significant. The Lead Agency should address questions from this checklist that are relevant to a project's environmental effects. The following significance thresholds are contained in Appendix G of the CEQA Guidelines.

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to California Dept. of Conservation FMMP in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

- a) **Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the FMMP of the California Resources Agency, to non-agricultural uses?**

Project Impact Analysis:

No Impact

Pursuant to CEQA Statute §21060.1, "Agricultural land" means Prime Farmland, Farmland of Statewide Importance, or Unique Farmland, as defined by the United States Department of Agriculture land inventory and monitoring criteria.

The proposed Project site is fallow, disturbed land. According to the Farmland Mapping and Monitoring Program (FMMP), the 46-acre proposed Project site is mapped as containing 35 acres of Farmland of Local Importance and 11 acres is mapped as vacant or disturbed. The site is surrounded by Prime Farmland to the south and a portion of the east; and urban and

built-up land. As the proposed Project site is not in agricultural production, and is not classified as “agricultural land” by the FMMP, ***No Impact*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is the entire State of California. This cumulative analysis is based on the Statewide FMMP map.

As the proposed Project site is not considered agricultural land, ***No Cumulative Impact*** to this Checklist Item will occur.

Mitigation Measures: ***None Required.***

Conclusion: ***No Impact***

As noted earlier, the Project will have ***No Impact*** to this Checklist Item.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

Project Impact Analysis: ***No Impact***

This impact evaluates the potential for the proposed Project to conflict with any existing Williamson Act Contract on the site or conflict with the existing zone designation. The Project site does not have a Williamson Act contract so there would be no impact to a Williamson Act Contract. Additionally, the proposed Project is an allowable use under the existing Service Commercial (C-3) Zone District. The purpose of the zone is intended for wholesale establishments and establishments engaged in repairing and servicing equipment, materials and products, but which do not involve the manufacturing, assembling, packaging or processing of articles of merchandise for distribution and retail sales.

As such, there would be ***No Impact*** with existing zoning or a Williamson Act Contract.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is the entire State of California. This cumulative analysis is based on provisions of the California Land Conservation Act of 1965 (Williamson Act) and on Tulare County allowed uses in agricultural zones.

The proposed Project site is not under a Williamson Act Contract and will not conflict with the overlaying Zone District. Therefore, ***No Impact*** related to this Checklist Item will occur.

Mitigation Measures: ***None Required.***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** will occur.

- c) **Conflict with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code § 12220(q), timberland (as defined by Public Resources Code § 4526), or timberland zoned Timberland Production (as defined by Government Code § 51104(g))?**

Project Impact Analysis: *No Impact*

This impact evaluates the potential for the proposed Project to conflict with existing Forest Land zoning or result in the loss of forest land or result in the conversion of forest land to non-forest use. There is no forest land zoning on the proposed Project site and there are no forest uses on the site. No loss of forest land would occur and no conflicts would forest land zoning would occur. As such, *No Project-specific Impact* to this Checklist Item will occur.

Cumulative Impact Analysis: *No Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and the Tulare County 2030 General Plan EIR.

The proposed Project is not located within a forestland zone or would require the change of a forestland zone. As such *No Cumulative Impact* to this Checklist Item will occur.

Mitigation Measures: *None Required.*

Conclusion: *No Impact*

As noted earlier, *No Project-specific or Cumulative Impacts* to this Checklist Item will occur.

- d) **Result in the loss of forest land or conversion of forest land to non-forest use?**

Project Impact Analysis: *No Impact*

As noted earlier, the proposed Project is not located within a forest land zone or will require the change of a forest land zone. As such, *No Project specific Impact* to this Checklist Item will occur.

Cumulative Impact Analysis: *No Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and the Tulare County 2030 General Plan EIR.

As noted above, the proposed Project is not located within a forest land zone or will require the change of a forest land zone. As such, *No Cumulative Impact* to this Checklist Item will occur.

Mitigation Measures:

None Required.

Conclusion:

No Impact

As noted earlier ***No Project-specific or Cumulative Impacts*** to this Checklist Item will occur.

- e) **Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of agricultural use or conversion of forest land to non-forest use?**

Project Impact Analysis:

No Impact

The proposed Project does not include a Zone Change as it is an allowable use under the sites existing parameters. The northern portion of the site is within the City of Visalia's adopted Sphere of Influence. The site has been planned for development and as such, there is no potential for the proposed Project to result in the conversion of any surrounding agricultural uses or forest land to non-agricultural uses or non-forest uses; respectively.

As a result, the Project will result in ***No Impact*** to this resource.

Cumulative Impact Analysis:

No Impact

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and the Tulare County 2030 General Plan EIR.

As noted earlier, the proposed Project site has been pre-planned for residential development and will not generate off-site farmland conversion and it is not located within a forest land zone or will require the change of a forest land zone. As such, this there will be ***No Cumulative Impact***.

Mitigation Measures:

None Required.

Conclusion:

No Impact

As noted above, ***No Project-specific Impact or Less Than Significant Cumulative Impacts*** to this Checklist Item will occur.

ABBREVIATIONS

CALFIRE	California Department of Forestry and Fire Protection
CLCA	California Land Conservation Act (Williamson Act)
DOC	California Department of Conservation
FFPA	Federal Farmland Protection Act
FMMP	Farmland Mapping and Monitoring Program
UDB	Urban Development Boundaries

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Air Quality

Chapter 3.3

SUMMARY OF FINDINGS

The proposed Project will result in a *Less Than Significant Impact* to Air Quality. An Air Quality Analysis Report and Air Quality Memo have been prepared for this Project and are included in Appendix “B” of this EIR. The impact analyses and determinations in this chapter are based upon information obtained from the Air Quality Analysis Report along with the references listed at the end of this chapter. A detailed review of potential impacts is provided in the analysis below.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Air Quality. As required in CEQA Guidelines Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2(a), “[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas.”¹

¹ CEQA Guidelines, Section 15126.2 (a)

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The “Environmental Setting” provides a description of the Air Quality in the County. The “Regulatory Setting” provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update Recirculated Draft Environmental Impact Report (RDEIR) incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item questions. The following are potential thresholds for significance.

- Result in an exceedance of criteria pollutants as established in the 1990 Clean Air Act amendments.
- Result in an exceedance of San Joaquin Valley Unified Air Pollution Control District criteria pollutant threshold.
- Result in nuisance odors.
- Result in emissions of toxic air contaminants (TAC) exceeding San Joaquin Valley Unified Air Pollution Control District TAC thresholds.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the San Joaquin Valley Air Basin is non-attainment under an applicable federal or state ambient air quality standard.

ENVIRONMENTAL SETTING

San Joaquin Valley Air Basin

“Tulare County falls within the southern portion of the San Joaquin Valley Air Basin (SJVAB), which is bordered on the east by the Sierra Nevada range, on the west by the Coast Ranges, and on the south by the Tehachapi Mountains. These features restrict air movement through and out of the SJVAB.

The topography of Tulare County significantly varies in elevation from its eastern to western borders, which results in large climatic variations that ultimately affect air quality. The western portion of the County is within the low-lying areas of the SJVAB. This portion of the County is much dryer in comparison to the eastern portion that is located on the slopes of the Sierra Nevada Mountains. The higher elevation contributes to both increased precipitation and a cooler climate.

Wind direction and velocity in the eastern section varies significantly from the western portion of the County. The western side receives northwesterly winds. The eastern side of the County exhibits more variable wind patterns, but the wind direction is typically up-slope

during the day and down-slope in the evening. Generally, the wind direction in the eastern portion of the County is westerly; however terrain differences can create moderate directional changes.”²

Generally, the temperature of air decreases with height, creating a gradient from warmer air near the ground to cooler air at elevation. This gradient of cooler air over warm air is known as the environmental lapse rate. Inversions occur when warm air sits over cooler air, trapping the cooler air near the ground. These inversions trap pollutants from dispersing vertically and the mountains surrounding the San Joaquin Valley trap the pollutants from dispersing horizontally. Strong temperature inversions occur throughout the Basin in the summer, fall, and winter. Daytime temperature inversions occur at elevations of 2,000 to 2,500 feet above the San Joaquin Valley floor during the summer and at 500 to 1,000 feet during the winter. The result is a relatively high concentration of air pollution in the valley during inversion episodes. These inversions cause haziness, which in addition to moisture may include suspended dust, a variety of chemical aerosols emitted from vehicles, particulates from wood stoves, and other pollutants. In the winter, these conditions can lead to carbon monoxide “hotspots” along heavily traveled roads and at busy intersections. During summer’s longer daylight hours, stagnant air, high temperatures, and plentiful sunshine provide the conditions and energy for the photochemical reaction between reactive organic gases (ROG) and oxides of nitrogen (NOx), which results in the formation of ozone.”

Attainment Status

The United States Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) designate air basins where ambient air quality standards are exceeded as “nonattainment” areas. If standards are met, the area is designated as an “attainment” area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered “unclassified.” The federal non-attainment designation is subdivided into five categories (listed in order of increasing severity): marginal, moderate, serious, severe, and extreme. The degree of an area’s non-attainment status reflects the extent of the pollution and the expected time period required in order to achieve attainment.

Designated non-attainment areas are generally subject to more stringent review by CARB and EPA. In the endeavor to improve air quality to achieve the standards, projects are subject to more stringent pollution control strategies and requirements for mitigation measures (such as mobile source reduction measures). If the National Ambient Air Quality Standards (NAAQS) are not achieved within the specified timeframe, federal highway funding penalties (and a federally administered implementation plan incorporating potentially harsh measures to achieve the NAAQS) will result. The current federal and state attainment designations for the San Joaquin Valley Air Basin are shown in **Table 3.3-1. Table 3.3-2** summarizes the current ambient air quality standards and summarizes the common sources, health effects, and methods for prevention and control of criteria pollutant emissions.

² Tulare County General Plan 2030 Update DEIR. Page 3.3-9.

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Table 3.3-1
San Joaquin Valley Air Basin Attainment Status³

Pollutant	Designation	
	National	State
Ozone—1-hour	No Federal Standard	Nonattainment/Severe
Ozone—8-hour	Nonattainment/Extreme	Nonattainment
PM10	Attainment	Nonattainment
PM2.5	Nonattainment	Nonattainment
Carbon monoxide	Attainment/Unclassified	Attainment/Unclassified
Nitrogen dioxide	Attainment/Unclassified	Attainment
Sulfur dioxide	Attainment/Unclassified	Attainment
Lead	No Designation/Classification	Attainment
Hydrogen sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility-reducing particles	No Federal Standard	Unclassified
Vinyl chloride	No Federal Standard	Attainment

Table 3.3-2
State & National Criteria Air Pollutant Standards, Effects, and Sources⁴

Pollutant	Averaging Time	State Standard	National Standard	Pollutant Health and Atmospheric Effects	Major Pollutant Sources
Ozone	1 hour	0.09 ppm	---	(a) Decrease of pulmonary function and localized lung edema in humans and animals; (b) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (c) Increased mortality risk; (d) Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in	Formed when reactive organic gases (ROG) and nitrogen oxides (NO _x) react in the presence of sunlight. Major sources include on-road motor vehicles, solvent evaporation, and commercial / industrial mobile equipment.
	8 hours	0.07 ppm	0.070 ppm		

³ San Joaquin Valley Unified Air Pollution Control District, Ambient Air Quality Standards & Valley Attainment Status. <http://www.valleyair.org/aqinfo/attainment.htm>. Accessed July 2017.

⁴ California Air Resources Board. Ambient Air Quality Standards. Updated 5/4/16. www.arb.ca.gov/research/aaqs/aaqs2.pdf. Accessed July 2017.

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<p style="text-align: center;">Table 3.3-2 State & National Criteria Air Pollutant Standards, Effects, and Sources⁴</p>					
Pollutant	Averaging Time	State Standard	National Standard	Pollutant Health and Atmospheric Effects	Major Pollutant Sources
				chronically exposed humans; (e) Vegetation damage; (f) Property damage.	
Carbon Monoxide	1 hour	20 ppm	35 ppm	(a) Aggravation of angina pectoris (chest pain) and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; (d) Possible increased risk to fetuses.	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9.0 ppm		
Nitrogen Dioxide	1 hour	0.180 ppm	100 ppb	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; (c) Contribution to atmospheric discoloration - Colors atmosphere reddish-brown.	Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads.
	Annual Avg.	0.030	0.053 ppm		
Sulfur Dioxide	1 hour	0.25 ppm	75 ppb	Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient sulfur dioxide levels. It is not clear whether the two pollutants act synergistically or one pollutant alone is the	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	3 hours	---	0.5 ppm		
	24 hours	0.04 ppm	0.14 ppm		
	Annual Avg.	---	0.03 ppm		

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<p style="text-align: center;">Table 3.3-2 State & National Criteria Air Pollutant Standards, Effects, and Sources⁴</p>					
Pollutant	Averaging Time	State Standard	National Standard	Pollutant Health and Atmospheric Effects	Major Pollutant Sources
				predominant factor.	
Respirable Particulate Matter (PM10)	24 hours	50 µg/m ³	150 µg/m ³	(a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) Declines in pulmonary function growth in children; (c) Increased risk of premature death from heart or lung diseases in the elderly. Daily fluctuations in PM2.5 levels have been related to hospital admissions for acute respiratory conditions, school absences, and increased medication use in children and adults with asthma.	Dust and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	Annual Avg.	20 µg/m ³	---		
Fine Particulate Matter (PM2.5)	24 hours	---	35 µg/m ³		Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; Also, formed from photochemical reactions of other pollutants, including NO _x , sulfur oxides, and organics.
	Annual Avg.	12 µg/m ³	12.0 µg/m ³		
Lead	Rolling 3-Month Average NAAQS/ Monthly Avg. State	1.5 µg/m ³	0.15 µg/m ³	Lead accumulates in bones, soft tissue, and blood and can affect the kidneys, liver, and nervous system. It can cause impairment of blood formation and nerve conduction. The more serious effects of lead poisoning include behavior disorders, mental retardation, neurological impairment, learning deficiencies, and low IQs. Lead may also contribute to high blood pressure and heart disease.	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Quarterly	---	1.5 µg/m ³		
	30 Day Avg	1.5 µg/m ³	---		
Hydrogen Sulfide	1 hour	0.03 ppm	No National Standard	High levels of hydrogen sulfide can cause immediate respiratory arrest. It can irritate the eyes and respiratory tract and cause headache, nausea, vomiting, and cough. Long exposure can cause pulmonary edema.	Geothermal Power Plants, Petroleum Production and refining
Sulfates	24 hour	25 µg/m ³	No National Standard	(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-	Produced by the reaction in the air of SO ₂ .

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Table 3.3-2
State & National Criteria Air Pollutant Standards, Effects, and Sources⁴

Pollutant	Averaging Time	State Standard	National Standard	Pollutant Health and Atmospheric Effects	Major Pollutant Sources
				pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; (f) Property damage.	
Vinyl Chloride	24 hour	0.01 ppm	No National Standard	Short-term exposure to high levels of vinyl chloride in the air causes central nervous system effects, such as dizziness, drowsiness, and headaches. Long-term exposure through inhalation and oral exposure has resulted in liver damage. Cancer is a major concern from exposure to vinyl chloride via inhalation, as vinyl chloride exposure has been shown to increase the risk of a rare form of liver cancer in humans.	Discharge of exhaust gases from factories that manufacture or process vinyl chloride, or evaporation from areas where chemical wastes are stored; outgas from new plastic parts.
Visibility Reducing Particles	8 hour	Extinction of 0.23/km; visibility of 10 miles or more	No National Standard	Reduces visibility, reduced airport safety, lower real estate value, and discourages tourism.	See PM2.5.

ppm = parts per million; $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter.

Sources: California Air Resources Board: www.arb.ca.gov/research/aaqs/aaqs2.pdf; <https://www.arb.ca.gov/research/health/fs/fs1/fs1.htm>; <http://www.arb.ca.gov/research/health/fs/fs2/fs2.htm>; <https://www.arb.ca.gov/research/aaqs/caaqs/ozone/ozone.htm>; <https://www.arb.ca.gov/research/aaqs/caaqs/pm/pm.htm>; <https://www.arb.ca.gov/research/aaqs/caaqs/co/co.htm>; <https://www.arb.ca.gov/research/aaqs/caaqs/no2-1/no2-1.htm>; <https://www.arb.ca.gov/research/aaqs/caaqs/so2-1/so2-1.htm>; <https://www.arb.ca.gov/research/aaqs/caaqs/pb-1/pb-1.htm>; <https://www.arb.ca.gov/research/aaqs/caaqs/h2s/h2s.htm>; <https://www.arb.ca.gov/research/aaqs/caaqs/sulf-1/sulf-1.htm>; <https://www.arb.ca.gov/research/aaqs/caaqs/vrp-1/vrp-1.htm>; and <http://www.arb.ca.gov/research/aaqs/caaqs/vc/vc.htm>.

U.S. Environmental Protection Agency: <https://www3.epa.gov/airnow/particle/pm-color.pdf>; <http://www.epa.gov/airnow/ozone-c.pdf>; <https://www.epa.gov/no2-pollution/fact-sheets-and-additional-information-regarding-2010-revision-primary-national>; https://www.epa.gov/sites/production/files/2016-06/documents/20120320factsheet_secondary_standards.pdf; <https://www.epa.gov/indoor-air-quality-iaq/volatile-organic-compounds-impact-indoor-air-quality>; <http://www.epa.gov/tmatw01/hlthef/vinylchl.html> and <https://www.epa.gov/sites/production/files/2016-09/documents/vinyl-chloride.pdf>.

Tulare County

“The SJVAB is highly susceptible to pollutant accumulation over time due to the transport of pollutants into the SJVAB from upwind sources. Stationary emission sources in the County include the use of cleaning and surface coatings and industrial processes, road dust, local burning, construction/demolition activities, and fuel combustion. Mobile emissions are primarily generated from the operation of vehicles. According to air quality monitoring data, the SJVAB has been in violation for exceeding ozone and PM₁₀ emission standards for many years.”⁵ As of January 2018, the SJVAB is in nonattainment for federal and state ozone and PM_{2.5} standards, attainment for federal PM₁₀ standards, and nonattainment for state PM₁₀ standards.

“Unlike other air basins in California, the pollution in the San Joaquin Valley Air Basin (SJVAB) is not produced by large urban areas. Instead, emissions are generated by many moderate sized communities and rural uses. Emission levels in the Central Valley have been decreasing overall since 1990. This can be primarily attributed to motor vehicle emission controls that reduce the amount of vehicle emissions and controls on industrial/stationary sources. In spite of these improvements, the San Joaquin Valley is still identified as having some of the worst air quality in the nation.

The main source of CO and NO_x emissions is motor vehicles. The major contributors to ROG emissions are mobile sources and agriculture. ROG emissions from motor vehicles have been decreasing since 1985 due to stricter standards, even though the vehicle miles have been increasing. Stationary source regulations implemented by the SJVAPCD have also substantially reduced ROG emissions. ROG from natural sources (mainly from trees and plants) is the largest source of this pollutant in Tulare County. Atmospheric modeling accomplished for recent ozone planning efforts has found that controlling NO_x is more effective at reducing ozone concentrations than controlling ROG. However, controls meeting RACT and BACT are still required for SJVAPCD plans.

The SJVAB has been ranked the 2nd worst in the United States for O₃ levels, even though data shows that overall O₃ has decreased between 1982 and 2001.

Direct PM₁₀ emissions have decreased between the years 1975 and 1995 and have remained relatively constant since 2000. The main sources of PM₁₀ in the SJVAB are from vehicles traveling on unpaved roads and agricultural activities. Regional Transportation Planning Agencies must implement BACM for sources of fine particulate matter (PM₁₀) to comply with federal attainment planning requirements for PM₁₀. ”⁶

Local Air Quality

The proposed Project is located in the San Joaquin Valley Air Basin (SJVAB). Air quality issues in the SJVAB are managed by the San Joaquin Valley Air Pollution Control District (Air District or SJVAPCD). The Air District operates an extensive network of air quality

⁵ Tulare County General Plan 2030 Update DEIR. Page 3.3-9

⁶ Tulare County 2030 General Plan 2030 Update, Part 1 Goals and Policies Report. Pages 9-4 to 9-5.

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monitors throughout the SJVAB to support its mission of improving and protecting public health. As part of the District's long-term efforts to improve public health, air monitors collect data that is rigorously analyzed by laboratory technicians and Air District staff. This monitoring data determines the SJVAB's air quality and is fundamental in the Air District's efforts to improve air quality and achieve attainment of state and federal ambient air quality standards.⁷

Existing local air quality conditions can be characterized by reviewing air pollution concentration data near the Project area for comparison with the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) for ozone, particulate matter of 10 microns (PM₁₀), particulate matter of less than 2.5 microns (PM_{2.5}), carbon monoxide (CO), nitrogen dioxide (NO₂), and sulfur dioxide (SO₂). Air samples are collected continuously for some pollutants and periodically for other pollutants depending on the type of monitoring equipment installed. Monitoring sites are usually chosen to be representative of the emissions in a community. There are currently 38 air monitoring stations in the SJVAB; 22 stations are operated by the Air District, 10 stations are operated by the California Air Resources Board (CARB), one (1) station is a joint operation of the Air District and CARB, and five (5) are operated by other agencies. Of these, there are currently five (5) stations in Tulare County: Sequoia National Park–Ash Mountain; Sequoia National Park–Lower Kaweah; Visalia–Church; Visalia–Airport; and Porterville.⁸

As the SJVAB is in attainment with state and national standards for CO, NO₂, SO₂, the primary air pollutants of concern are ozone and particulate matter. The nearest monitoring station that measured these pollutants is the Visalia-N. Church station. **Table 3.3-3** identifies the number of days the monitoring station measured exceedances of the CAAQS and NAAQS during the three-year period between 2014 and 2016.

Table 3.3-3						
Monitoring Station Data – Days Standards Exceeded (2014-2016)						
	State Standard			National Standard		
Standard	2014	2015	2016	2014	2015	2016
1-hour Ozone	1	9	1	0	0	0
8-Hour Ozone	27	52	19	25	49	18
PM₁₀	17	67	95	0	0	0
PM_{2.5}	---	---	---	12	5	7
California Environmental Protection Agency Air Resources Board. Top 4 Summary. https://www.arb.ca.gov/adam/topfour/topfour1.php , Accessed January 24, 2018 (See Appendix “B” of this DEIR).						

⁷ San Joaquin Valley Air Pollution Control District. 2017 Air Monitoring Network Plan. Page 1.
<http://www.valleyair.org/aqinfo/Docs/2017-Air-Monitoring-Network-Plan.pdf>. Accessed January 24, 2018.

⁸ Ibid. 2

REGULATORY SETTING

Federal Agencies & Regulations

Clean Air Act

“The Federal Clean Air Act (CAA), adopted in 1970 and amended twice thereafter (including the 1990 amendments), establishes the framework for modern air pollution control. The act directs the Environmental Protection Agency (EPA) to establish ambient air standards, the National Ambient Air Quality Standards (NAAQS)... for six pollutants: ozone, carbon monoxide, lead, nitrogen dioxide, particulate matter (less than 10 microns in diameter [PM10] and less than 2.5 microns in diameter [PM2.5]), and sulfur dioxide. The standards are divided into primary and secondary standards; the former are set to protect human health with an adequate margin of safety and the latter to protect environmental values, such as plant and animal life.

Areas that do not meet the ambient air quality standards are called “non-attainment areas”. The Federal CAA requires each state to submit a State Implementation Plan (SIP) for non-attainment areas. The SIP, which is reviewed and approved by the EPA, must demonstrate how the federal standards will be achieved. Failing to submit a plan or secure approval could lead to the denial of federal funding and permits for such improvements as highway construction and sewage treatment plants. For cases in which the SIP is submitted by the State but fails to demonstrate achievement of the standards, the EPA is directed to prepare a federal implementation plan or EPA can “bump up” the air basin in question to a classification with a later attainment date that allows time for additional reductions needed to demonstrate attainment, as is the case for the San Joaquin Valley.

SIPs are not single documents. They are a compilation of new and previously submitted plans, programs (such as monitoring, modeling, permitting, etc.), district rules, state regulations and federal controls. The California SIP relies on the same core set of control strategies, including emission standards for cars and heavy trucks, fuel regulations and limits on emissions from consumer products. California State law makes the California Air Resources Board (CARB) the lead agency for all purposes related to the SIP. Local air districts and other agencies, such as the Bureau of Automotive Repair and the Department of Pesticide Regulation, prepare SIP elements and submit them to CARB for review and approval. The CARB forwards SIP revisions to the EPA for approval and publication in the Federal Register.”⁹

State Agencies & Regulations

California Clean Air Act

“The California CAA of 1988 establishes an air quality management process that generally parallels the federal process. The California CAA, however, focuses on attainment of the State ambient air quality standards..., which, for certain pollutants and averaging periods are more stringent than the comparable federal standards. Responsibility for meeting California’s

⁹ Tulare County General Plan 2030 Update DEIR, pages 3.3-1 to 3.3-2

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standards is addressed by the CARB and local air pollution control districts (such as the eight county SJVAPCD, which administers air quality regulations for Tulare County). Compliance strategies are presented in district-level air quality attainment plans.

The California CAA requires that air districts prepare an air quality attainment plan if the district violates State air quality standards for criteria pollutants including carbon monoxide, sulfur dioxide, nitrogen dioxide, PM_{2.5}, or ozone. Locally prepared attainment plans are not required for areas that violate the State PM₁₀ standards. The California CAA requires that the State air quality standards be met as expeditiously as practicable but does not set precise attainment deadlines. Instead, the act established increasingly stringent requirements for areas that will require more time to achieve the standards.”¹⁰ ...

The air quality attainment plan requirements established by the California CAA are based on the severity of air pollution caused by locally generated emissions. Upwind air pollution control districts are required to establish and implement emission control programs commensurate with the extent of pollutant transport to downwind districts.”¹¹

California Air Resources Board

“The CARB is responsible for establishing and reviewing the State ambient air quality standards, compiling the California State Implementation Plan (SIP) and securing approval of that plan from the U.S. EPA. As noted previously, federal clean air laws require areas with unhealthy levels of ozone, inhalable particulate matter, carbon monoxide, nitrogen dioxide, and sulfur dioxide to develop SIPs. SIPs are comprehensive plans that describe how an area will attain NAAQS. The 1990 amendments to the Federal CAA set deadlines for attainment based on the severity of an area’s air pollution problem. State law makes CARB the lead agency for all purposes related to the SIP. The California SIP is periodically modified by the CARB to reflect the latest emission inventories, planning documents, and rules and regulations of various air basins. The CARB produces a major part of the SIP for pollution sources that are statewide in scope; however, it relies on the local air districts to provide emissions inventory data and additional strategies for sources under their jurisdiction. The SIP consists of the emission standards for vehicular sources and consumer products set by the CARB, and attainment plans adopted by the local air agencies as approved by CARB. The EPA reviews the air quality SIPs to verify conformity with CAA mandates and to ensure that they will achieve air quality goals when implemented. If EPA determines that a SIP is inadequate, it may prepare a Federal Implementation Plan for the nonattainment area and may impose additional control measures.

In addition to preparation of the SIP, the CARB also regulates mobile emission sources in California, such as construction equipment, trucks, automobiles, and oversees the activities of air quality management districts and air pollution control districts, which are organized at the county or regional level. The local or regional air districts are primarily responsible for regulating stationary emission sources at industrial and commercial facilities

¹⁰ Tulare County General Plan 2030 Update DEIR, Page 3.3-2 to 3.3-3

¹¹ Ibid. 3.3-5

within their jurisdiction and for preparing the air quality plans that are required under the Federal CAA and California CAA.”¹²

Local Policy & Regulations

San Joaquin Valley Air Pollution Control District

The Air District is made up of eight counties in California’s Central Valley: San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, and Tulare Counties, and the San Joaquin Valley portion of Kern County.

“The Air District is a public health agency whose mission is to improve the health and quality of life for all San Joaquin Valley residents through efficient, effective and entrepreneurial air quality-management strategies.”¹³ The Air District’s 10 core values include: protection of public health; active and effective air pollution control efforts with minimal disruption to the San Joaquin Valley’s economic prosperity; outstanding customer service; ingenuity and innovation; accountability to the public; open and transparent public process; recognition of the uniqueness of the San Joaquin Valley; continuous improvement; effective and efficient use of public funds; and respect for the opinions and interests of all San Joaquin Valley residents. To achieve these core values the Air District has adopted air quality plans pursuant to the California CAA and a comprehensive list of rules to limit air quality impacts. The air plans currently in effect in the SJVAB and specific rules that apply to the Project are listed and described further below.

Ozone Plans¹⁴

“The SJVAB has severe ozone problems. The EPA has required the SJVAPCD to demonstrate in a plan, substantiated with modeling, that the ozone NAAQS could be met by the November 15, 2005 deadline. However, the district could not provide this demonstration for several reasons, including that its achievement would require regulation of certain source categories not currently under the jurisdiction of the district. According to the district, in order to meet the standard the SJVAB must reduce the total emissions inventory by an additional 30 percent (300 tons per day). Because attainment by the deadline could not be demonstrated by the mandated deadlines, the federal sanction clock was started. The clock was to be stopped if the SJVAPCD SIP could demonstrate compliance with specified federal requirements by November 15, 2005. However, the district recognized that it could not achieve demonstration in time. Therefore, the district, through petition by the State on behalf of SJVAPCD, sought a change in the federal nonattainment classification from “severe” to “extreme” nonattainment with the ozone standard. An extreme nonattainment designation would effectively move the compliance deadline to year 2010 before federal sanctions would begin.

On February 23, 2004, EPA publicly announced its intention to grant the request by the State of California to voluntarily reclassify the SJVAB from a “severe” to an “extreme” 1-hour

¹² Op. Cit. 3.3-6 to 3.3-7

¹³ Air District website accessed at: http://www.valleyair.org/General_info/aboutdist.htm#Mission.

¹⁴ The various ozone plans can be found on the Air District’s website at: http://www.valleyair.org/Air_Quality_Plans/Ozone_Plans.htm.

ozone nonattainment area. The EPA stated that, except for a demonstration of attainment of the ozone standard by 2005, the SJVAPCD has submitted all of the required severe area plan requirements and they were deemed complete. The CARB submitted the 2004 Extreme Ozone Attainment Demonstration Plan to EPA on November 15, 2004. On August 21, 2008, the District adopted Clarifications for the 2004 Extreme Ozone Attainment Demonstration Plan for 1-hour Ozone, and on October 16, 2008, EPA proposed to approve the District's 2004 Extreme Ozone Attainment Demonstration Plan for 1-hour Ozone.”¹⁵

The planning requirements for the 1-hour plan remain in effect until replaced by a federal 8-hour ozone attainment plan. The EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan, including revisions to the plan, on March 8, 2010, effective April 7, 2010. However, the Air Basin failed to attain the standard in 2010 and was subject to a \$29-million Clean Air Act penalty. The penalty is being collected through an additional \$12 motor vehicle registration surcharge for each passenger vehicle registered in the Air Basin that will be applied to pollution reduction programs in the region. The District also instituted a more robust ozone episodic program to reduce emissions on days with the potential to exceed the ozone standards.

On May 6, 2014, the District submitted a formal request that the EPA determine that the Valley has attained the federal 1-hour ozone standard and to eliminate the \$29 million Clean Air Act penalty. Per federal requirements, the District's submittal includes a clean data finding (2011-2013) and a finding that attainment is due to permanent and enforceable emissions reductions.

As part of the clean data finding, the District requested EPA concurrence that an exceedance at Fresno-Drummond on August 10, 2012 was due to an exceptional event. Alternatively, the District also provided compelling evidence that the Valley would attain the 1-hour ozone standard but for the influence of international air pollutant transport, allowing nonattainment penalties to be lifted under CAA 179B.

EPA originally classified the Air Basin as serious nonattainment for the 1997 federal 8-hour ozone standard with an attainment date of 2013. On April 30, 2007, the District's Governing Board adopted the 2007 Ozone Plan, which contained analysis showing a 2013 attainment target to be infeasible. The 2007 Ozone Plan details the plan for achieving attainment on schedule with an “extreme nonattainment” deadline of 2024. At its adoption of the 2007 Ozone Plan, the District also requested a reclassification to extreme nonattainment. CARB approved the plan in June 2007, and EPA approved the request for reclassification to extreme nonattainment on April 15, 2010.

The 2007 Ozone Plan contains measures to reduce ozone and particulate matter precursor emissions to bring the Basin into attainment with the federal 8-hour ozone standard. The 2007 Ozone Plan calls for a 75-percent reduction of NO_x and a 25-percent reduction of ROG (SJVAPCD 2007). The plan, with innovative measures and a “dual path” strategy, assures expeditious attainment of the federal 8-hour ozone standard for all Basin residents. The District Governing Board adopted the 2007 Ozone Plan on April 30, 2007. The CARB

¹⁵ Tulare County General Plan 2030 Update RDEIR. Pages 3.3-12 to 3.3-13.

approved the plan on June 14, 2007. The 2007 Ozone Plan requires yet to be determined “Advanced Technology” to achieve additional reductions after 2021 to attain the standard at all monitoring stations in the Basin by 2024 as allowed for areas designated extreme nonattainment by the federal CAA.

“The County continues to evaluate and consider a variety of Federal, State, and Air District programs in order to respond to the non-attainment designation for Ozone that the SJVAB has received, and will continue to adopt resolutions to implement these programs. The Tulare County Board of Supervisor resolutions are described below. These resolutions were adopted in 2002 and 2004, respectively.

Resolution 2002-0157. Resolution 2002-0157, as adopted on March 5, 2002, requires the County to commit to implementing the Reasonably Available Control Measures included in the Resolution. The following Reasonably Available Control Measures were included in the resolution:

- Increasing transit service to the unincorporated communities of Woodville, Poplar and Cotton Center;
- Purchase of three new buses and installation of additional bicycle racks on buses;
- Public outreach to encourage the use of alternative modes of transportation;
- Providing preferential parking for carpools and vanpools;
- Removing on-street parking and providing bus pullouts in curbs to improve traffic flow;
- Supporting the purchase of hybrid vehicles for the County fleet;
- Mandating that the General Plan 2030 Update implement land use policies supporting public transit and vehicle trip reduction; and
- Programming \$13,264,000 of highway widening projects.

Resolution 2004-0067. As part of a follow up effort to Resolution 2002-0157 and to address the federal reclassification to Extreme non-attainment for ozone, the County Board of Supervisors adopted Resolution 2004-067. The resolution contains additional Reasonably Available Control Measures as summarized below:

- Encouraging land use patterns which support public transit and alternative modes of transportation;
- Exploring concepts of Livable Communities as they address housing incentives and transportation;
- Consideration of incentives to encourage developments in unincorporated communities that are sensitive to air quality concerns; and

- Exploring ways to enhance van/carpool incentives, alternative work schedules, and other Transportation Demand Management strategies.”¹⁶

Particulate Matter Plans¹⁷

The SJVAB was designated nonattainment of state and federal health-based air quality standards for PM₁₀. However, as discussed below, the SJVAB has demonstrated attainment of the federal PM₁₀ standards and currently remains in nonattainment only for the state standards. The SJVAB is also designated nonattainment of state and federal standards for PM_{2.5}.

To meet CAA requirements for the PM₁₀ standard, the Air District adopted a PM10 Attainment Demonstration Plan (Amended 2003 PM10 Plan and 2006 PM10 Plan), which had an attainment date of 2010. The Air District adopted the 2007 PM10 Maintenance Plan in September 2007 to assure the San Joaquin Valley’s continued attainment of the EPA’s PM₁₀ standard. The EPA designated the San Joaquin Valley as an attainment/maintenance area for PM₁₀ on September 25, 2008. Although the San Joaquin Valley has exceeded the standard since then, those days were considered exceptional events that are not considered a violation of the standard for attainment purposes.

On April 30, 2008, the Air District adopted the 2008 PM2.5 Plan satisfying federal implementation requirements for the 1997 federal PM_{2.5} standard. However, on the verge of the demonstration of attainment with the standard the SJVAB was plagued with extreme drought, stagnation, strong inversions, and historically dry conditions and could not achieve attainment by the 2015 deadlines. The 2015 Plan for the 1997 PM2.5 Standard (2015 PM2.5 Plan) was adopted by the Air District on April 16, 2015, and is a continuation of the Air District’s strategy to improve the air quality in the SJVAB. The 2015 PM2.5 Plan contains stringent measures, best available control measures, additional enforceable commitments for further reductions in emissions, and ensures attainment of the 1997 federal 24-hour standard (65 µg/m³) by 2018 and the annual standard (15 µg/m³) by 2020.

In December 2012, the Air District adopted the 2012 PM2.5 Plan to bring the San Joaquin Valley into attainment of the EPA’s 2006 24-hour PM_{2.5} standard of 35 µg/m³. The CARB approved the Air District’s 2012 PM2.5 Plan for the 2006 standard at a public hearing on January 24, 2013. This plan seeks to bring the San Joaquin Valley into attainment with the standard by 2019, with the expectation that most areas will achieve attainment before that time. EPA lowered the annual PM_{2.5} standard in 2012 and is in the process of completing attainment designations. The Air District continues to work with EPA on issues surrounding these plans, including EPA implementation updates.

The County continues to evaluate and consider Federal, State, and Air District programs in order to respond to the non-attainment designation for state PM10 standards that the SJVAB has received. “On September 25, 2008, EPA redesignated the San Joaquin Valley to

¹⁶ Ibid. 3.3-13.

¹⁷ The various particulate matter plans can be found on the Air District’s website at: http://www.valleyair.org/Air_Quality_Plans/PM_Plans.htm.

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attainment for the PM₁₀ NAAQS and approved the PM₁₀ Maintenance Plan. However, prior to this redesignation, Tulare County Board of Supervisors adopted the following resolution (Resolution 2002-0812) on October 29, 2002. Although now designated in attainment of the federal PM₁₀ standard, all requirements included in the SJVAPCD PM₁₀ Plan are still in effect. The resolution contains the following Best Available Control Measures (BACMs) to be implemented in order to reduce PM₁₀ emissions in the County:

- Paving or stabilizing of unpaved roads and alleys;
- Paving, vegetating, chemically stabilizing unpaved access points onto paved roads;
- Curbing, paving, or stabilizing shoulders on paved roads;
- Frequent routine sweeping or cleaning of paved roads;
- Intensive street cleaning requirements for industrial paved roads and streets providing access to industrial/ construction sites; and
- Debris removal after wind and rain runoff when blocking roadways.”¹⁸

Criteria Pollutant Emissions

To assess air quality impacts, the Air District has established significance thresholds to assist Lead Agencies in determining whether a project may have a significant air quality impact¹⁹. The Air District’s thresholds of significance for criteria pollutants, which are based on Air District Rule 2201 (New and Modified Stationary Source Review) offset thresholds, are provided in **Table 3.3-4**. As shown in the Table, the Air District has three sets of significance thresholds for each pollutant based on the source of the emissions. According to the Air District’s Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI), “The District identifies thresholds that separate a project’s short-term emissions from its long-term emissions. The short-term emissions are mainly related to the construction phase of a project and are recognized to be short in duration. The long-term emissions are mainly related to the activities that will occur indefinitely as a result of project operations.”²⁰

Table 3.3-4			
Air Quality Thresholds of Significance – Criteria Pollutants			
Pollutant/ Precursor	Construction Emissions	Operational Emissions	
		Permitted Equipment and Activities	Non- Permitted Equipment and Activities
	Emissions (tpy)	Emissions (tpy)	Emissions (tpy)
CO	100	100	100
NO_x	10	10	10

¹⁸ Tulare County General Plan 2030 Update RDEIR. Page 3.3-14.

¹⁹ Air District, Guidance for Assessing and Mitigating Air Quality Impacts. Page 74.

²⁰ Ibid. 75.

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Table 3.3-4 Air Quality Thresholds of Significance – Criteria Pollutants			
ROG	10	10	10
SOx	27	27	27
PM ₁₀	15	15	15
PM _{2.5}	15	15	15
<i>Source: Air District, GAMAQI, Table 2, page 80</i>			

Operational emissions are further separated into permitted and non-permitted equipment and activities. Stationary (permitted) sources that comply or will comply with Air District rules and regulations are generally not considered to have a significant air quality impact. Specifically, the GAMAQI states, “District Regulation II ensures that stationary source emissions will be reduced or mitigated to below the District’s significance thresholds. However, the Lead Agency can, and should, make an exception to this determination if special circumstances suggest that the emissions from any permitted or exempt source may cause a significant air quality impact. For example, if a source may emit objectionable odors, then odor impacts on nearby receptors should be considered a potentially significant air quality impact. District implementation of New Source Review (NSR) ensures that there is no net increase in emissions above specified thresholds from New and Modified Stationary Sources for all nonattainment pollutants and their precursors. Furthermore, in general, permitted sources emitting more than the NSR Offset Thresholds for any criteria pollutant must offset all emission increases in excess of the thresholds. However, under certain circumstances, the District may be precluded by state law or other District rule requirements from requiring a stationary source to offset emissions increases.”²¹

Air District Rules and Regulations²²

The Air District is primarily responsible for regulating stationary source emissions within the SJVAB and preparing the air quality plans (or portions thereof) for its jurisdiction. The Air District’s primary approach of implementing local air quality plans occurs through the adoption of specific rules and regulations. Stationary sources within the jurisdiction are regulated by the Air District’s permit authority over such sources and through its review and planning activities. The following Air District rules and regulations that may apply to this Project include, but are not limited to, the following:

Regulation VIII – Fugitive PM₁₀ Prohibitions. The Air District adopted its Regulation VIII on October 21, 1993 and amended on August 8, 2004 to implement Best Available Control Measures (BACM). This Regulation consists of a series of emission reduction rules consistent with the PM₁₀ Maintenance Plan. These rules are designed to reduce PM₁₀ emissions (predominantly dust/dirt) generated by human activity, including construction and demolition activities, road construction, bulk materials storage, paved and unpaved roads, carryout and track-out, etc. All development projects that involve soil disturbance are subject to at least

²¹ Op. Cit. 76.

²² For a full list of Air District rules and regulations, see their website at: <http://www.valleyair.org/rules/1ruleslist.htm>.

one provision of the Regulation VIII series of rules. Regulation VIII specifically addresses the following activities:

- Rule 8021 (Construction, Demolition, Excavation, Extraction and Other Earthmoving Activities);
- Rule 8031 (Bulk Materials including Handling and Storage);
- 8041 (Carryout and Track-Out (Rule);
- 8051 (Open Areas (Rule);
- 8061 (Paved and Unpaved Roads); and
- Rule 8071 (Unpaved Vehicle/Equipment Parking (including Shipping and Receiving, Transfer, Fueling, and Service Areas)).

Rule 2201 – New and Modified Stationary Source Review. This rule applies to all new stationary sources and all modifications to stationary sources which are subject to Air District Permit Requirements. Rule 2201 requires stationary source projects that exceed certain thresholds to install best available control technology (BACT) and to obtain emission offsets to ensure that growth in stationary sources on a cumulative basis will not result in an increase in emissions. Examples of stationary sources associated with the Project that may require District permits include, but not limited to, potential expansion of the Traver Wastewater Treatment Plant.

Rule 4002 – National Emissions Standards for Hazardous Air Pollutants. The purpose of the rule is to incorporate the National Emission Standards for Hazardous Air Pollutants from Part 61, Chapter I, Subchapter C, Title 40, Code of Federal Regulations and the National Emission Standards for Hazardous Air Pollutants for Source Categories from Part 63, Chapter I, Subchapter C, Title 40, Code of Federal Regulations to protect the health and safety of the public from HAPs, such as asbestos.

Rule 4101 – Visible Emissions. The purpose of this rule is to prohibit the emissions of visible air contaminants to the atmosphere. The provisions of this rule shall apply to any source operation which emits or may emit air contaminants.

Rule 4102 – Nuisance. The purpose of this rule is to protect the health and safety of the public, and applies to any source operation that emits or may emit air contaminants or other materials.

Rule 4202 – Particulate Matter - Emission Rate. The purpose of this rule is to limit particulate matter emissions by establishing allowable emission rates. The calculation methods for determining the emission rate based on process weight are specified.

Rule 4601 – Architectural Coatings. The purpose of this rule is to limit Volatile Organic Compounds (VOC) emissions from architectural coatings. Emissions are reduced by limits on VOC content and providing requirements on coatings storage, cleanup, and labeling.

Rule 4641 – Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations. The purpose of this rule is to limit VOC emissions from asphalt paving and maintenance operations. If asphalt paving will be used, then the paving operations will be subject to Rule 4641.

The Air District has limited authority to regulate transportation sources and indirect sources that attract motor vehicle trips.

Rule 9510 – Indirect Source Review. This rule reduces the impact of NO_x and PM₁₀ emissions from growth on the Air Basin. The rule places application and emission reduction requirements on development projects meeting applicability criteria in order to reduce emissions through on-site mitigation, off-site Air District -administered projects, or a combination of the two. The rule defines a development project as a project, or portion thereof, that results in the construction of a building or facility for the purpose of increasing capacity or activity.²³ The rule also exempts any development project on a facility whose primary functions are subject to Air District permitting requirements.²⁴ The Project includes the installation of infrastructure to provide existing residences without municipal sewage facilities with connection to an existing wastewater treatment plant. As such, the Project does not increase capacity or activity and upon completion will be tied into a facility subject to Air District permitting requirements; therefore, the Project is not subject to Rule 9510.

Air District's CEQA Role

As a public agency, the District takes an active part in the intergovernmental review process under CEQA. In carrying out its duties under CEQA, the District may act as a Lead Agency, a Responsible Agency, or a Trustee/Commenting Agency depending on the approvals required by the District and other land use agencies.

“The District is always the Lead Agency for projects such as the development of District rules and regulations. The District may be Lead Agency for projects subject to District permit requirements. As discussed above, for projects triggering BACT, the District has discretionary approval in deciding how to permit the project. For projects subject to BACT, the District serves as Lead Agency when no other agency has principal responsibility for approving the project.”²⁵

“As a Responsible Agency, the District assists Lead Agencies by providing technical expertise in characterizing project-related impacts on air quality and is available to provide technical assistance in addressing air quality issues in environmental documents. When commenting on a Lead Agency's environmental analysis, the District reviews the air quality section of the analysis and other sections relevant to assessing potential impacts on air quality, i.e. sections assessing public health impacts. At the conclusion of its review the District may submit to the Lead Agency comments regarding the project air quality analysis. Where appropriate, the District will recommend feasible mitigation measures.”²⁶

²³ Air District Rule 9510, Section 3.13

²⁴ Ibid. Section 4.4.3

²⁵ Air District, GAMAQI. Page 50.

²⁶ Ibid. 51.

“As a Trustee Agency, the District assists Lead Agencies by providing technical expertise or tools in characterizing project-related impacts on air quality and identifying potential mitigation measures, and is available to provide technical assistance in addressing air quality issues in environmental documents. At the conclusion of its review the District may submit to the Lead Agency comments regarding the project air quality analysis. Where appropriate, the District will recommend feasible mitigation measures. The process is subject to change due to the District’s continuous improvements efforts.”²⁷

Local Policy & Regulations

Tulare County General Plan Policies

The Tulare County General Plan has a number of policies that apply to projects within County of Tulare. General Plan policies that relate to the proposed Project are listed below.

AQ-1.2 Cooperation with Local Jurisdictions - The County shall participate with cities, surrounding counties, and regional agencies to address cross-jurisdictional transportation and air quality issues.

AQ-1.3 Cumulative Air Quality Impacts - The County shall require development to be located, designed, and constructed in a manner that would minimize cumulative air quality impacts. Applicants shall be required to propose alternatives as part of the State CEQA process that reduce air emissions and enhance, rather than harm, the environment.

AQ-1.4 Air Quality Land Use Compatibility - The County shall evaluate the compatibility of industrial or other developments which are likely to cause undesirable air pollution with regard to proximity to sensitive land uses, and wind direction and circulation in an effort to alleviate effects upon sensitive receptors.

AQ-1.5 California Environmental Quality Act (CEQA) Compliance - The County shall ensure that air quality impacts identified during the CEQA review process are consistently and reasonably mitigated when feasible.

AQ-2.4 Transportation Management Associations - The County shall encourage commercial, retail, and residential developments to participate in or create Transportation Management Associations (TMAs) that may assist in the reduction of pollutants through strategies that support carpooling or other alternative transportation modes.

AQ-2.5 Ridesharing - The County shall continue to encourage ridesharing programs such as employer-based rideshare programs.

AQ-3.4 Landscape - The County shall encourage the use of ecologically based landscape design principles that can improve local air quality by absorbing CO₂, producing oxygen, providing shade that reduces energy required for cooling, and filtering particulates. These

²⁷ Op. Cit. 52.

principles include, but are not limited to, the incorporation of parks, landscaped medians, and landscaping within development.

AQ-3.5 Alternative Energy Design - The County shall encourage all new development, including rehabilitation, renovation, and redevelopment, to incorporate energy conservation and green building practices to maximum extent feasible. Such practices include, but are not limited to: building orientation and shading, landscaping, and the use of active and passive solar heating and water systems.

AQ-4.1 Air Pollution Control Technology - The County shall utilize the BACM and RACM as adopted by the County to support SJVAPCD air quality attainment plans to achieve and maintain healthful air quality and high visibility standards. These measures shall be applied to new development approvals and permit modifications as appropriate.

AQ-4.2 Dust Suppression Measures - The County shall require developers to implement dust suppression measures during excavation, grading, and site preparation activities consistent with SJVAPCD Regulation VIII – Fugitive Dust Prohibitions. Techniques may include, but are not limited to, the following:

1. Site watering or application of dust suppressants,
2. Phasing or extension of grading operations,
3. Covering of stockpiles,
4. Suspension of grading activities during high wind periods (typically winds greater than 25 miles per hour), and
5. Revegetation of graded areas.

AQ-4.3 Paving or Treatment of Roadways for Reduced Air Emissions - The County shall require that all new roads be paved or treated to reduce dust generation where feasible as required by SJVAPCD Regulation VIII, Rule 8061- Paved and Unpaved Roads. For new projects with unpaved roads, funding for roadway maintenance shall be adequately addressed and secured.

AQ-4.6 Asbestos Airborne Toxic Control and Dust Protection - Asbestos is of concern to Tulare County because it occurs naturally in surface deposits of several types of ultramafic materials (materials that contain magnesium and iron and a very small amount of silica). Asbestos emissions can result from the sale or use of asbestos-containing materials, road surfacing with such materials, grading activities, and surface mining.

IMPACT EVALUATION

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

a) **Would the project conflict with or obstruct implementation of the applicable air quality plan?**

Project Impact Analysis:

Less Than Significant Impact

The CEQA Guidelines indicate that a significant impact would occur if the proposed project would conflict with or obstruct implementation of the applicable Air Quality Plan. Air Quality Plans are plans for reaching attainment of air quality standards. The assumptions, inputs, and control measures are analyzed to determine if the Air Basin can reach attainment for the ambient air quality standards. In order to show attainment of the standards, the Air District analyzes the growth projections in the SJVAB, contributing factors in air pollutant emissions and formations, and existing and future emissions controls. The Air District then formulates a control strategy to reach attainment.

The Air District's GAMAQI states, "...the Air District has established thresholds of significance for criteria pollutant emissions, which are based on District New Source Review (NSR) offset requirements for stationary sources. Stationary sources in the District are subject to some of the toughest regulatory requirements in the nation. Emission reductions achieved through implementation of District offset requirements are a major component of the Air District's Air Quality Plans. Thus, projects with emissions below the thresholds of significance for criteria pollutants would be determined to ""Not conflict or obstruct implementation of the District's air quality plan.""²⁸

As previously discussed, the SJVAB is classified by the State as a nonattainment area for PM₁₀, and Regulation VIII requires implementation of Best Available Control Measures (BACM) to address fugitive PM₁₀ emissions. The Project will comply with Regulation VIII during construction of the Project through the following activities which are included in the emissions analysis: watering exposed areas and reducing vehicle speeds on unpaved roads. Water trucks will be used for dust suppression and water sprays throughout the construction process. The construction phases of the Project will be completed with minimal site preparation involving excavation and other earthmoving activities. All construction-related activities will be completed in accordance with Regulation VIII.

Short-term Impacts (Construction)

Construction-related emissions were calculated using the California Emissions Estimator Model (CalEEMod) program and results can be seen in Table 3.3-5. Complete modeling inputs and outputs can be seen in Appendix "B" of this DEIR.

As demonstrated in **Table 3.3-5**, the estimated short-term construction-related emissions do not exceed the Air District's annual threshold of significance for each of the criteria pollutants. As such, short-term construction-related activities would not obstruct

²⁸ San Joaquin Valley Air Pollution Control District. Guidance for Assessing and Mitigating Air Quality Impacts. March 19, 2015. Page 65.

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implementation of any applicable air quality plan. Therefore, a *Less Than Significant Project-specific Impact* related to this Checklist Item would occur.

Table 3.3-5 Emissions from Short-Term Project Construction						
Emission Source	VOC/ROG (tons/yr.)	NOx (tons/yr.)	CO (tons/yr.)	SO2 (tons/yr.)	PM10 (tons/yr.)	PM2.5 (tons/yr.)
Ph 1 Construction (2017)	0.4691	3.7890	3.4057	0.0055	0.4318	0.2914
Ph 1 (2018)	1.2974	0.0260	0.0301	0.0000	0.0000	0.0000
Ph 2 (2019)	0.3427	2.9423	2.8517	0.0049	0.3275	0.2203
Ph 2 (2020)	0.9389	0.0156	0.0205	0.0000	0.0000	0.0000
Ph 3 (2021)	0.3433	2.9494	2.8603	0.0049	0.3268	0.2202
Ph 3 (2022)	0.9586	0.0155	0.0201	0.0000	0.0000	0.0000
Ph 4 (2023)	0.2385	2.0006	2.6814	0.0051	0.2692	0.1543
Ph 4 (2024)	1.1206	0.0155	0.0264	0.0000	0.0000	0.0000
Cumulative	5.7091	11.7539	11.8962	0.02054	2.6779	0.85204
*Total After Rule 9510 Reductions	-	9.4031	-	-	1.4728	-
Air District Significance Threshold	10	10	100	27	15	15
Significant (Yes/No)?	NO	NO	NO	NO	NO	NO
*Rule 9510 (ISR) has a minimum required 20% reduction of NOx emissions and 45% reduction of PM10 emissions for Operational phases of projects. Figure above is cumulative emissions with the minimum reductions calculated, respectively.						
Source: Appendix "B" of this DEIR (See CalEEMod Reports included in Appendix "A" of the Air Quality Analysis Report OR Technical Memo. January 25, 2018. Prepared by Crawford & Bowen.						

Long-term Impacts (Operations)

Long-term impacts include emissions generated from vehicles and other area operations-related emissions. Operations-related emissions were calculated using the (CalEEMod) program and results can be seen in **Table 3.3-6**. Complete modeling inputs and outputs can be found in Appendix "B" of this DEIR.

As demonstrated in **Table 3.3-6**, the estimated long-term operations-related emissions of each Project phase do not exceed the Air District's threshold of significance for each of the criteria pollutants. At full buildout, compliance with Air District Rule 9510 would reduce operations-related NOx emissions to below the significance thresholds. As such, long-term operations-related activities would not obstruct implementation of any applicable air quality plan. Therefore, a *Less Than Significant Project-specific Impact* related to this will occur to this Checklist Item.

Table 3.3-6						
Emissions from Long-Term Project Operations						
Phase	ROG (tons/yr)	NOx (tons/yr)	CO (tons/yr)	SO2 (tons/yr)	PM10 (tons/yr)	PM2.5 (tons/yr)
Ph1 Operational (2018)	4.3734	6.7530	34.4737	0.0334	1.7534	0.5266
Ph2 Operational (2020)	1.1416	1.8874	6.1477	0.0148	0.8157	0.2468
Ph3 Operational (2022)	1.1994	1.8077	6.6507	0.0175	0.9623	0.2901
Ph4 Operational (2024)	1.2282	1.5174	5.7500	0.0165	0.9060	0.2724
Mitigated Totals	7.9426	11.9655	53.0221	0.0822	4.4374	1.3359
Unmitigated Totals	8.0008	12.4289	54.0348	0.0868	4.7137	1.4162
*Total After Rule 9510 Reductions	7.9426	8.3273	53.0221	0.0822	2.3569	1.3359
Air District Significance Threshold	10	10	100	27	15	15
Significant? (Yes/No)	No	No	No	No	No	No
*Rule 9510 (ISR) has a minimum required 33% reduction of NOx emissions and 50% reduction of PM10 emissions for Operational phases of projects. Figure above is cumulative emissions with the minimum reductions calculated, respectively.						
Source: Appendix "B" of this DEIR (See CalEEMod Reports included in Appendix "A" of the Air Quality Analysis Report OR Technical Memo. January 25, 2018 Prepared by Crawford & Bowen)						

Cumulative Impact Analysis:

Less Than Significant Impact

The geographic area of this cumulative analysis is the San Joaquin Valley Air Basin. This cumulative analysis is based on the information provided in the Air Quality Impact Assessment prepared by consultants 4Creeks, Inc. and included in Appendix "B" of this DEIR.

As previously discussed, Project-related criteria pollutant emissions do not exceed the Air District's significance thresholds for any criteria pollutant. As such, the Project is consistent with and would not obstruct implementation of any applicable air quality attainment plan. Furthermore, the Project would comply with all applicable Air District rules and regulations. Therefore, the Project would result in a ***Less Than Significant Cumulative*** Impact related to this Checklist Item.

Mitigation Measure(s):

None Required.

Conclusion:

Less Than Significant Impact

As noted earlier, *Less Than Significant Project-specific or Cumulative Impacts* related to this Checklist Item will occur.

b) Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Project Impact Analysis:

Less Than Significant Impact

Nearly all development projects have the potential to generate pollutants that will worsen air quality so it is necessary to evaluate air quality impacts to comply with California Environmental Quality Act. The Air District's GAMAQI states, "Determination of whether project emissions would violate any ambient air quality standard is largely a function of air quality dispersion modeling. If project emissions would not exceed State and Federal ambient air quality standards at the project's property boundaries, the project would be considered to not violate any air quality standard or contribute substantially to an existing or projected air quality violation. The need to perform an air quality dispersion modeling analysis for any project (urban development, commercial, or industrial projects) is determined on a case-by-case basis depending on the level of emissions associated with the proposed project."²⁹

The Air District's document *Ambient Air Quality Analysis Project Daily Emissions Assessment* provides a procedure to determine the significance of a project's impact on ambient air quality.³⁰ These steps are: (1) determination of applicability to District Rule 9510 (Indirect Source Review, or ISR); (2) quantification of construction and operational emissions; and (3) preparation of ambient air quality analysis (AAQA) modeling. This Project exceeds the ISR applicability thresholds of 2,000 square feet of commercial space, 25,000 square feet of light industrial space, or 39,000 square feet of general office space. As such quantification of Project-related emissions is required. As previously discussed, **Table 3.3-5** and **Table 3.3-6** show that annual emission rates of criteria pollutants for the construction-related and operations-related activities, respectively, resulting from the proposed Project.

As presented in **Table 3.3-5**, the CalEEMod analysis estimated the total construction emissions to be: 5.7091 tons/year ROG, 9.4031 tons/year NOx, 11.8962 tons/year CO, 0.0205 tons/year SO₂, 1.4728 tons/year PM₁₀, and 0.8520 tons/year PM_{2.5}. Given that construction is expected to take 862 days, daily emissions (at 0.0005 tons per 1 lb./day) are estimated to be: 13.24 pounds/day ROG, 21.80 pounds/day NOx, 27.60 pounds/day CO, 0.05 pounds/day SO₂, 3.42 pounds/day PM₁₀, and 1.98 pounds/day PM_{2.5}.

As presented in **Table 3.3-6**, the CalEEMod analysis estimated the total mitigated operational emissions to be: 7.9426 tons/year ROG, 8.3273 tons/year NOx, 53.0221 tons/year CO, 0.0822 tons/year SO₂, 2.3569 tons/year PM₁₀, and 1.3359 tons/year PM_{2.5}. Given that operations will occur 365 days per year, the average daily emissions

²⁹ Ibid.

³⁰ San Joaquin Valley Air Pollution Control District. Ambient Air Quality Analysis Project Daily Emissions Assessment. May 31, 2013. <http://www.valleyair.org/transportation/CEQA%20Rules/Ambient-Air-Quality-Analysis-Project-Daily-Emissions-Assessment.pdf>. Accessed January 2018.

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are estimated to be: 43.52 pounds/day ROG, 6.54 pounds/day NOx, 290.53 pounds/day CO, 0.45 pounds/day SO₂, 12.91 pounds/day PM₁₀, and 7.31 pounds/day PM_{2.5}.

As demonstrated by the emissions analysis presented above, Project construction-related and operations-related emissions will not exceed the Air District's 100 pound/day screening threshold for preparation of an AAQA; therefore, the Project will not violate any air quality standards or contribute substantially to an existing air quality violation. As such, a ***Less Than Significant Project-specific Impact*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is the San Joaquin Valley Air Basin. This cumulative analysis is based on the information provided in the Air Quality Impact Analysis prepared by consultants 4Creeks, Inc. included in Appendix "B" of this DEIR. As Project-related emissions will not exceed the Air District's screening thresholds, the Project will have a less than a significant impact. Therefore, a ***Less Than Significant Cumulative Impact*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

- c) **Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?**

Project Impact Analysis: ***Less Than Significant Impact***

The Air District's GAMAQI states, "By its very nature, air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development. Future attainment of State and Federal ambient air quality standards is a function of successful implementation of the District's attainment plans. Consequently, the District's application of thresholds of significance for criteria pollutants is relevant to the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality. A Lead Agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program, including, but not limited to an air quality attainment or maintenance plan that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located [CCR §15064(h)(3)]. Thus, if project specific emissions exceed the thresholds of significance for criteria pollutants the project would be expected to result in

a cumulatively considerable net increase of any criteria pollutant for which the District is in non-attainment under applicable Federal or State ambient air quality standards. This does not imply that if the project is below all such significance thresholds, it cannot be cumulatively significant.”³¹

As discussed in Checklist Items a) and b), Project-related emissions do not exceed the Air District’s thresholds of significance for any criteria pollutant. As such, the Project is consistent with applicable air quality plans and would not contribute substantially to an existing air quality violation. The proposed Project will be required to receive applicable permits from the Air District and comply with applicable standards and rules/regulations. Therefore, the proposed Project will have a ***Less Than Significant Project-specific Impact*** related this Checklist Item.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is the San Joaquin Valley Air Basin. This cumulative analysis is based on the information provided in the Air Quality Impact Assessment prepared by consultants 4Creeks, Inc. included in Appendix “B” of this DEIR.

As discussed in Checklist Items a) and b), Project-related emissions do not exceed the Air District’s thresholds of significance for any criteria pollutant. As such, the Project is consistent with applicable air quality plans and would not contribute substantially to an existing air quality violation. The Project will also be required to receive applicable permits from the Air District and comply with applicable standards and rules/regulations. Therefore, the Project will have a ***Less Than Significant Cumulative Impact*** related this Checklist Item.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item will occur.

d) Expose sensitive receptors to substantial pollutant concentrations?

Project Impact Analysis: ***Less Than Significant Impact***

Sensitive Receptors are defined as individuals who are sensitive to air pollution and include children, the elderly, and persons with pre-existing respiratory or cardiovascular illness. The Air District considers a sensitive receptor to be a location that houses or attracts children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Examples of sensitive receptors include hospitals,

³¹ San Joaquin Valley Air Pollution Control District. Guidance for Assessing and Mitigating Air Quality Impacts. March 19, 2015. Pages 65 to 66.

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residences, convalescent facilities, and schools.³² There is rural housing within the vicinity of the proposed Project; the next nearest sensitive receptor is approximately one mile southeast (a residential subdivision) and the next is approximately 1.5 miles southeast (a junior high school).

Ambient air quality standards are the levels at which criteria pollutant levels considered safe for the public. The Air District's GAMAQI contains screening thresholds that were established for determining whether a project could potentially violate AAQS. "When assessing the significance of project-related impacts on air quality, it should be noted that the impacts may be significant when on-site emission increases from construction activities or operational activities exceed the 100 pounds per day screening level of any criteria pollutant after implementation of all enforceable mitigation measures."³³ As such, projects that emit less than 100 pounds per day of criteria pollutants would not result in an ambient air quality standard violation or a significant health risk and would not require an Ambient Air Quality Assessment (AAQA).

As discussed in Checklist Item b), daily construction-related and operations-related emissions were calculated pursuant to Air District guidance procedures. Project-related daily criteria pollutant emissions will not exceed the Air District's 100 pound/day screening threshold for preparation of an AAQA. As such, the Project will not expose sensitive receptors to substantial criteria pollutant concentrations; therefore, the Project would have a ***Less Than Significant Project-specific Impact*** related to this Checklist Item.

Hazardous Air Pollutants (HAPS) are those pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects, or birth defects, or adverse environmental effects.³⁴ Specific uses/tenants within the Project are not known at this time; however, it is anticipated that a gas station and a fast-food restaurant would be included. These two uses would be subject to Air District rules and regulations and would undergo a Risk Management Review (RMR) during the Authority to Construct (ATC) permit process. The Air District will not issue permits to stationary sources such as these unless the RMR demonstrates the sources would not pose a significant risk to nearby receptors. The remaining tenants are anticipated to be office-type businesses and hazardous materials, such as cleaning supplies and pest sprays, may be used, stored, and/or sold on site. The Tulare County Environmental Health Services Division requires submittal of a Hazardous Materials Business Plan, if the site ever handles or stores quantities of hazardous materials in excess of 55 gallons of a liquid, 500 pounds of a solid, or 200 cubic feet of a compressed gas or any amount of a hazardous waste. All tenants will be required to comply with all local, state, and federal policies related to emission of hazardous air pollutants. As such, the proposed Project will not expose sensitive receptors to substantial HAP emissions. Therefore, the Project would have a ***Less Than Significant Project-specific Impact*** related to this Checklist Item.

³² Ibid. 10, 39, 44, 66.

³³ Op. Cit. 93.

³⁴ Op. Cit. 8.

Cumulative Impact Analysis: *Less Than Significant Impact*

The geographic area of this cumulative analysis is the San Joaquin Valley Air Basin. This cumulative analysis is based on the information provided in the Air Quality Impact Assessment prepared by consultants 4Creeks, Inc. included in Appendix “B” of this DEIR. With no direct impacts associated with this Project; it will not cumulatively increase the impact to other sensitive receptors. Therefore, the Project will result in *Less Than Significant Project-specific and Cumulative Impacts* related to this Checklist Item.

Mitigation Measure(s): *None Required.*

Conclusion: *Less Than Significant Impact*

As noted earlier, *Less Than Significant Project-specific and Cumulative Impacts* related to this Checklist Item will occur.

e) Create objectionable odors affecting a substantial number of people?

Project Impact Analysis: *Less Than Significant Impact*

According to the Air District’s GAMAQI, analysis of potential odor impacts should be conducted for the following two situations:

- a. Generators: project that would potentially generate odorous emissions proposed to locate near existing sensitive receptors or other land uses where people may congregate, and
- b. Receivers: residential or other sensitive receptor projects or other projects built for the intent of attracting people locating near existing odor sources.

Pursuant to the Air District’s GAMAQI, **Table 3.3-7** can be used as a screening tool to qualitatively assess a project’s potential to adversely affect area receptors.³⁵

Table 3.3-7 Screening Levels for Potential Odor Sources	
Type of Facility	Distance (miles)
Wastewater Treatment Facility	2
Sanitary Landfill	1
Transfer Station	1
Composting Facility	1
Petroleum Refinery	2
Asphalt Batch Plant	1
Chemical Manufacturing	1
Fiberglass Manufacturing	1
Painting/Coating Operations	1

³⁵ Op. Cit. 102 to 103

Table 3.3-7 Screening Levels for Potential Odor Sources	
Food Processing Facility	1
Feed Lot/Dairy	1
Rendering Plant	1
<i>Source: Air District, GAMAQI, Table 6, Page103</i>	

“The proposed Project does not meet the description for a type of facility that would require screening for potential odor sources.”³⁶ As a result, the proposed Project will have a ***Less Than Significant Project-specific Impact*** related to this Checklist Item.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is the San Joaquin Valley Air Basin. This cumulative analysis is based on the information provided in the Air Quality Impact Assessment prepared by consultants 4Creeks, Inc. included in Appendix “B” of this DEIR.

As the Project will result in ***Less Than Significant Project-specific Impacts*** and ***Less Than Significant Cumulative Impacts*** related this Checklist Item will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item will occur.

³⁶ Op Cit. Page 35.

ABBREVIATIONS AND ACRONYMS

ACM	Asbestos Containing Materials
BACM	Best Available Control Measures
CAA	Clean Air Act
CARB	California Air Resources Board
CalEEMod	California Emissions Estimator Model
CO	Carbon Monoxide
EPA	Environmental Protection Agency
GAMAQI	Guide for Assessing and Mitigating Air Quality Impacts
HAP	Hazardous Air Pollutants
HI	Hazard Index
H ₂ S	Hydrogen Sulfide
NAAQS	National Ambient Air Quality Standards
NO ₂	Nitrogen Dioxide
O ₃	Ozone
Pb	Lead
PM _{2.5}	Particulate Matter 2.5 Micrometers
PM ₁₀	Particulate Matter 10 Micrometers
RACM	Reasonable Available Control Measures
ROG	Reactive Organic Gases
SIP	State Implementation Plan
SO ₂	Sulfur Dioxide
Air District	San Joaquin Valley Air Pollution Control District
SJVAPCD	San Joaquin Valley Air Pollution Control District
SJVAB	San Joaquin Valley Air Basin
TAC	Toxic Air Contaminants
TCAG	Tulare County Association of Governments
VOC	Volatile Organic Compound

REFERENCES

Air Quality Analysis Report. Sequoia Drive-In Business Park, Tulare County, Ca. Prepared by 4Creeks, Inc. 08/15/2016. Pages 21, 30, 31, 34, 35. See Appendix "B" of this DEIR.

California Environmental Protection Agency Air Resources Board. Air Quality Data (PST) Query Tool. <http://www.arb.ca.gov/aqmis2/aqdselect.php>. Accessed July 2017.

CEQA Guidelines, Section 15126.2 (a)

San Joaquin Valley Unified Air Pollution Control District, Ambient Air Quality Standards & Valley Attainment Status. <http://www.valleyair.org/aqinfo/attainment.htm>. Accessed July 2017.

San Joaquin Valley Air District, 2012 PM2.5 Plan.
http://www.valleyair.org/air_quality_plans/pm25plans2012_old-122112.htm. Accessed July 2017.

Tulare County General Plan 2030 Update DEIR, pages 3.3-1, 3.3-6, 3.3-7, 3.3-8, 3.3-9

Biological Resources

Chapter 3.4

SUMMARY OF FINDINGS

The proposed Project will result in *Less Than Significant Impacts with Mitigation* to Biological Resources. A detailed review of potential impacts is provided in the following analysis. A Biological Evaluation conducted by Kamansky's Ecological Consulting is included in Appendix "C" of this document which is used as the basis for determining this Project will result in less than significant impacts.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

"Whenever possible, public agencies are required to avoid or minimize environmental impacts by implementing practical alternatives or mitigation measures. According to Section 15382 of the CEQA Guidelines, a significant effect on the environment means a "substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic interest."¹

The California Environmental Quality Act (CEQA; California Public Resources Code §§ 21000-21177) requires that State agencies, local governments, and special districts evaluate and disclose impacts from "projects" in the State. CEQA Guidelines Section 15380 clearly indicates that species of special concern (SSCs) should be included in an analysis of project impacts if they can be shown to meet the criteria of sensitivity.²

CEQA Guidelines Sections 15063 and 15065 address how an impact is identified as significant. These sections are particularly relevant to SSCs. Project-level impacts on listed rare, threatened, or endangered species are generally considered significant, and therefore require lead agencies to prepare an Environmental Impact Report to fully analyze and evaluate the impacts. In determining to assign "impact significance" to populations of non-listed species, factors which are usually considered include population-level effects, proportion of the species' range affected by a project, regional effects, and impacts to habitat features.³

This section of the Draft Environmental Impact Report (DEIR) for the Project meets CEQA requirements by addressing potential impacts to biological resources on the proposed Project site, which is located in a portion of the San Joaquin Valley in Tulare County. The "Environmental Setting" section provides a description of biological resources in the region, with special emphasis on the proposed Project site and vicinity. The "Regulatory Setting" provides a description of applicable State and local regulatory policies. A description of the

¹ California Department of Fish and Wildlife. Wildlife: Nongame: Species of Special Concern. <http://www.dfg.ca.gov/wildlife/nongame/ssc/>. Accessed July 2017.

² Ibid.

³ Ibid.

potential impacts of the proposed project is also provided and includes the identification of feasible mitigation to avoid or lessen the impacts.

Thresholds of Significance

The geographical area may be either statewide or nationwide, depending on the sensitive status of the species. Standards for listing as federal endangered species are determined by the Federal Endangered Species Act, administered by U.S. Department of Fish and Wildlife. Standards for listing of California special status species (Endangered, Threatened, Candidate Endangered, Candidate Threatened, and Sensitive Species) are administered by the California Department of Fish and Wildlife (DFW). These requirements are described in further detail in the “Regulatory” section of this document.

ENVIRONMENTAL SETTING

The proposed Project site is located in central Tulare County, between the Cities of Visalia and Farmersville, immediately south of State Route 198. The topography of the Project site is relatively flat as the site is currently in a fallow state of agricultural use. The Tulare Irrigation District canal bisects the site in an east-west fashion and a mobile communication tower is at the site center.

Kamansky’s Ecological Consulting (KEC) prepared a Biological Evaluation for the proposed Project site in April, 2016, and can be found in Appendix “C” of this DEIR. This evaluation included a reconnaissance-level biological field survey for biotic habitats, the plants and animals occurring in those habitats, and significant habitat values that may be protected by state and federal law.

The Biological Evaluation identified 37 special status species and four native plant communities which are known to occur in the proposed Project vicinity. might occur onsite or in the proposed Project vicinity. Sources of information used in KEC’s research included: (1) the *California Natural Diversity Data Base (CNDDB)*, and (2) manuals, reports, and references related to plants and animals of the San Joaquin Valley region. Species and occurrences can be seen in Appendix “C” in this DEIR.

Site Vegetation

Native Plant Communities

“The land on the subject property is disturbed and does not support historical flora. According to the natural community classification scheme used by Holland (1986), the Sequoia Drive-In Business Park is located in a part of the southern San Joaquin Valley that originally contained components of two natural communities prior to development: Valley Grassland and Valley Oak Riparian Woodland.”⁴

Plant Species Composition

“Because the subject property was farmed and disked, it currently supports relatively low species richness of wild, native plants. There are no substantial (>1/4 -acre) patches of native vegetation

⁴ Reconnaissance-Level Biological Evaluation of Potential Impacts Sensitive and Listed Species on an Approximately 47.17-acre, Land Parcel in Farmersville, Tulare County, California. Page 11. Prepared by Kamansky’s Ecological Consulting. April 28, 2016 and included in Appendix “C” of this DEIR.

on the subject property. Three large (>15" diameter at breast height) and several smaller Valley oaks (*Quercus lobata*) grow on the subject property."⁵

Site Invertebrates

"The site is within close proximity (<1 mile) to row crop fields where there are rich invertebrate species. These animals provide food for many predators, including hawks, which were observed in the area."⁶

Site Vertebrates

"No special status species were recorded on the Sequoia Drive-In Business Park other than red-tailed hawks. Twelve vertebrate, common species were observed at the Sequoia Drive-In Business Park during field surveys. California ground squirrels were observed on the site whose burrows provide habitat for other species, some of which are special status, e.g. burrowing owls."⁷

Common Amphibians

"One amphibian species was observed on the subject property during field work. Bullfrogs (*Ligobates catesbeianus*) were observed along the Tulare Irrigation canal."⁸

Common Reptiles

"No reptiles were observed on the subject property during field work. The site does provide habitat for common species such as western fence lizards (*Sceloporus occidentalis*)."⁹

Common Birds

"Nine bird species were observed on the site during survey times and dates. The grasslands on the site support common species such as doves and the treed areas support winter resident birds, neotropical migrants such as kingbirds (*Tyrannus verticalis*) and raptors such as red-tailed hawks (*Buteo jamacansis*), barn owls (*Tyto alba*, these were observed on the site) and potentially Swainson's hawks (no Swainson's hawks were observed adjacent to the site, but they are known to nest in the vicinity)."¹⁰

Common Mammals

"Mammals such as Botta's pocket gopher (*Thomomys bottae*), California ground squirrel (*Spermophilus beechyi*), and racoon (*Procyon lotor*), occupy the site and were observed during surveys."¹¹

⁵ Reconnaissance-Level Biological Evaluation of Potential Impacts Sensitive and Listed Species on an Approximately 47.17-acre, Land Parcel in Farmersville, Tulare County, California. Prepared by Kamansky's Ecological Consulting. April 28, 2016. See Appendix "C" of the DEIR. Page 11.

⁶ Ibid.

⁷ Ibid.

⁸ Ibid. 12.

⁹ Ibid.

¹⁰ Ibid.

¹¹ Ibid.

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There are two habitat conservation plans that apply in Tulare County: 1) Recovery Plan for Upland Species of the San Joaquin Valley, and 2) the Kern Water Bank Habitat Conservation Plan.

The Recovery Plan for Upland Species of the San Joaquin Valley identifies the following species that are important in the San Joaquin Valley:

- | | |
|---|---|
| ➤ California Jewelflower (<i>Caalanthus cahfornicus</i>), | si/a) |
| ➤ Palmate-Bracted Bird's-Beak (<i>Cordylanthus palmatus</i>) | ➤ San Joaquin Kit Fox (<i>Vu/pes macrotis nmutica</i>) |
| ➤ Kern Mallow (<i>Eremalche kernensis</i>) | ➤ Ciervo Aegialian Scarab Beetle (<i>Aegialia concinna</i>) |
| ➤ Hoover's Woolly-Star (<i>Eriastrumn hoox'eri</i>) | ➤ San Joaquin Dune Beetle (<i>Coelus gracilis</i>) |
| ➤ San Joaquin Woolly-Threads (<i>Lemnbertia congdonii</i>) | ➤ Doyen's Dune Weevil (<i>Trigonoscuta</i> sp.) |
| ➤ Bakersfield Cactus (<i>Opurmtia basilaris</i> var. <i>rreleasei</i>) | ➤ San Joaquin Antelope Squirrel (<i>Antnmospermophilus nelsoni</i>) |
| ➤ Lesser Saltscale (<i>A triplex nminuscula</i>) | ➤ Short-Nosed Kangaroo Rat (<i>Dipodonmys nitratoides brevinasus</i>) |
| ➤ Bakersfield Smallscale (<i>A triplex tularensis</i>) | ➤ Riparian Woodrat (<i>Neotomafuscipes riparia</i>) |
| ➤ Lost Hills Saltbush (<i>Atriplex vallicola</i>) | ➤ Tulare Grasshopper Mouse (<i>Onvchomys torridus tu/arensis</i>) |
| ➤ Vasek's Clarkia (<i>Clarkia tembloriensis</i> ssp. <i>calientensis</i>) | ➤ Buena Vista Lake Shrew (<i>Sorex ormmatus relictus</i>) |
| ➤ Temblor Buckwheat (<i>Eriogonunm tentblorense</i>) | ➤ Riparian Brush Rabbit (<i>Sylvilagus bachmani riparius</i>) |
| ➤ Tejon Poppy (<i>Eschscholzia lenmnionii</i> ssp. <i>kernensis</i>) | ➤ Le Conte's Thrasher (<i>Toxostoma lecontei leconrel</i>) |
| ➤ Diamond-petaled California Poppy (<i>Eschscholzia rhomimbipetala</i>) | |
| ➤ Comanche Point Layia (<i>La via leucopappa</i>) | |
| ➤ Munz's Tidy-tips (<i>Layia rnunzii</i>) | |
| ➤ Jared's Peppergrass (<i>Lepidiummjaredii</i>) | |
| ➤ Merced Monardella (<i>Monardella leucocephala</i>) | |
| ➤ Merced Phacelia (<i>Phacelia ciliata</i> var. <i>opaca</i>) | |
| ➤ Oil Neststraw (<i>Stylocline citroleurn</i>) | |
| ➤ Giant Kangaroo Rat (<i>Dipodomys ingens</i>) | |
| ➤ Fresno Kangaroo Rat (<i>Dipodonmys nitratoides exilis</i>) | |
| ➤ Tipton Kangaroo Rat (<i>Dipodonmy's nitratoides nitratoides</i>) | |
| ➤ Blunt-Nosed Leopard Lizard (<i>Ganmbelia</i> | |

The Kern Water Bank Habitat Conservation Plan also applies to Tulare County; however, the Plan area is restricted to an area in Allensworth.

REGULATORY SETTING

Applicable Federal, State, and local regulations specific to biological resources are described below. The following environmental regulatory settings were summarized, in part, from information contained in the Tulare County General Plan 2010 Background Report.

Federal Agencies & Regulations

Federal Endangered Species Act

“The U.S. Fish and Wildlife Service (USFWS) administers the federal Endangered Species Act (16 USC Section 153 et seq.) and thereby has jurisdiction over federally listed threatened, endangered, and proposed species. Projects that may result in a “take” of a listed species or critical habitat must consult with the USFWS. “Take” is broadly defined as harassment, harm, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collection; any attempt to engage in such conduct; or destruction of habitat that prevents an endangered species from recovering (16 USC 1532, 50 CFR 17.3). Federal agencies that propose, fund, or must issue a permit for a project that may affect a listed species or critical habitat are required to consult with the USFWS under Section 7 of the Federal Endangered Species Act. If it is determined that a federally listed species or critical habitat may be adversely affected by the federal action, the USFWS will issue a “Biological Opinion” to the federal agency that describes minimization and avoidance measures that must be implemented as part of the federal action. Projects that do not have a federal nexus must apply for a take permit under Section 10 of the Act. Section 10 of the act requires that the project applicant prepare a habitat conservation plan as part of the permit application (16 USC 1539).”¹²

“Under Section 4 of the Federal Endangered Species Act, a species can be removed, or delisted, from the list of threatened and endangered species. Delisting is a formal action made by the USFWS and is the result of a determined successful recovery of a species. This action requires posts in the federal registry and a public comment period before a final determination is made by the USFWS.”¹³

Habitat Conservation Plans

“Habitat Conservation Plans (HCPs) are required for a non-federal entity that has requested a take permit of a federal listed species or critical habitat under Section 10 of the Endangered Species Act. HCPs are designed to offset harmful effects of a proposed project on federally listed species. These plans are utilized to achieve long-term biological and regulatory goals. Implementation of HCPs allows development and projects to occur while providing conservation measures that protect federally listed species or their critical habitat and offset the incidental take of a proposed project. HCPs substantially reduce the burden of the Endangered Species Act on small landowners by providing efficient mechanisms for compliance with the ESA, thereby distributing the economic and logistic effects of compliance. A broad range of landowner

¹² Tulare County General Plan 2030 Update Recirculated DEIR, Page 3.11-2

¹³ Ibid.

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activities can be legally protected under these plans.¹⁴ There are generally two types of HCPs, project specific HCPs which typically protect a few species and have a short duration and multi-species HCPs which typically cover the development of a larger area and have a longer duration.”¹⁵

Migratory Bird Treaty and Bald and Golden Eagle Protection Act

“The Migratory Bird Treaty Act (MBTA, 16 USC Section 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668) protect certain species of birds from direct “take”. The MBTA protects migrant bird species from take by setting hunting limits and seasons and protecting occupied nests and eggs. The Bald and Golden Eagle Protection Act (16 USC Sections 668-668d) prohibits the take or commerce of any part of Bald and Golden Eagles. The USFWS administers both acts, and reviews federal agency actions that may affect species protected by the acts.”¹⁶

Clean Water Act - Section 404

“Wetlands and other waters of the U.S. are subject to the jurisdiction of the U.S. Army Corp of Engineers (USACE) and U.S. Environmental Protection Agency (EPA) under Section 404 of the Clean Water Act (33 U.S.C. 1251 et seq., 1972). Together, the EPA and the USACE determine whether they have jurisdiction over the non-navigable tributaries that are not relatively permanent based on a fact-specific analysis to determine if there is a significant nexus. These non-navigable tributaries include wetlands adjacent to non-navigable tributaries that are not relatively permanent and wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary.”¹⁷

“Wet areas that are not regulated by this Act do not have a hydrologic link to other waters of the U.S., either through surface or subsurface flow and include ditches that drain uplands, swales or other erosional features. The USACE has the authority to issue a permit for any discharge, fill, or dredge of wetlands on a case-by-case basis, or by a general permit. General permits are handled through a Nationwide Permit (NWP) process. These permits allow specific activities that generally create minimal environmental effects. Projects that qualify under the NWP program must fulfill several general and specific conditions under each applicable NWP. If a proposed project cannot meet the conditions of each applicable NWP, an individual permit would likely be required from the USACE.”¹⁸

State Agencies & Regulations

California Department of Fish and Wildlife (formerly Dept. of Fish and Game)

The California Department of Fish and Wildlife (DFW) regulates the modification of the bed, bank, or channel of a waterway under Sections 1601-1607 of the California Fish and Game Code. Also included are modifications that divert, obstruct, or change the natural flow of a waterway. Any party who proposes an activity that may modify a feature regulated by the Fish and Game Code must notify DFW before project construction. DFW will then decide whether to

¹⁴ Tulare County General Plan 2030 Update Background Report. Pages 9-6 and 9-7.

¹⁵ Tulare County General Plan 2030 Update Recirculated DEIR. Page 3.11-2.

¹⁶ Ibid. 3.11-3.

¹⁷ Op. Cit. 3.11-1.

¹⁸ Tulare County General Plan 2030 Update Recirculated DEIR. Pages 3.11-1 to 3.11.2.

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enter into a Streambed Alteration Agreement with the project applicant either under Section 1601 (for public entities) or Section 1603 (for private entities) of the Fish and Game Code.

California Endangered Species Act

DFW administers the California Endangered Species Act of 1984 (Fish and Game Code Section 2080), which regulates the listing and “take” of endangered and threatened State-listed species. A “take” may be permitted by California Department of Fish and Game through implementing a management agreement. “Take” is defined by the California Endangered Species Act as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill” a State-listed species (Fish and Game Code Sec. 86). Under State laws, DFW is empowered to review projects for their potential impacts to State-listed species and their habitats.

The DFW maintains lists for Candidate-Endangered Species (SCE) and Candidate-Threatened Species (SCT). California candidate species are afforded the same level of protection as State-listed species. California also designates Species of Special Concern (CSC) that are species of limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. These species do not have the same legal protection as listed species, but may be added to official lists in the future. The CSC list is intended by DFW as a management tool for consideration in future land use decisions (Fish and Game Code Section 2080).¹⁹

All State lead agencies must consult with DFW under the California Endangered Species Act when a proposed project may affect State-listed species. DFW would determine if a project under review would jeopardize or result in taking of a State-listed species, or destroy or adversely modify its essential habitat, also known as a “jeopardy finding” (Fish and Wildlife Code Sec. 2090). For projects where DFW has made a jeopardy finding, DFW must specify reasonable and prudent alternatives to the proposed project to the State lead agency (Fish and Wildlife Code Sec. 2090 et seq.).²⁰

Natural Communities Conservation Planning Act

The Natural Communities Conservation Planning Act allows a process for developing natural community conservation plans (NCCPs) under DFW direction. NCCPs allow for regional protection of wildlife diversity, while allowing compatible development. DFW may permit takings of State-listed species whose conservation and management are provided in a NCCP, once a NCCP is prepared (Fish and Game Code Secs. 2800 et seq.).²¹

Federally and State-Protected Lands

Ownership of California’s wildlands is divided primarily between federal, state, and private entities. State-owned land is managed under the leadership of the Departments of Fish and Wildlife (DFW), Parks and Recreation, and Forestry and Fire Protection (CDF). Tulare County has protected lands in the form of wildlife refuges, national parks, and other lands that have large limitations on appropriate land uses. Some areas are created to protect special status species and their ecosystems.²²

¹⁹ Tulare County General Plan 2030 Update, Background Report. Pages 9-7 and 9-8.

²⁰ Ibid.

²¹ Op. Cit.

²² Op. Cit. 9-9.

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California Wetlands Conservation Policy

The California Wetlands Conservation Policy's goal is to establish a policy framework and strategy that will ensure no overall net loss and achieve a long-term net gain in the quantity, quality, and permanence of wetlands acreage and values in California. Additionally, the policy aims to reduce procedural complexity in the administration of State and federal wetlands conservation programs and to encourage partnerships with a primary focus on landowner incentive programs and cooperative planning efforts. These objectives are achieved through three policy means: statewide policy initiatives, three geographically based regional strategies in which wetland programs can be implemented, and creation of interagency wetlands task force to direct and coordinate administration and implementation of the policy. Leading agencies include the Resources Agency and the California Environmental Protection Agency (Cal/EPA) in cooperation with Business, Transportation and Housing Agency, Department of Flood and Agriculture, Trade and Commerce Agency, Governor's Office of Planning and Research, Department of Fish and Wildlife, Department of Water Resources, and the State Water Resources Control Board.²³

Birds of Prey

Birds of Prey are protected under the California Fish and Wildlife Code Section 3503.5, which states:

"It is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto."

This includes any construction disturbance which could lead to nest abandonment, which is considered a "taking" by the DFW.

Special Status Species

Several species of plants and animals within the state of California have low populations, limited distribution, or both. Such species may be considered "rare" and are vulnerable to extirpation as the state's human population grows and the habitats these species occupy are converted to agricultural and urban uses. State and federal laws have provided the California Department of Fish and Wildlife (CDFW) (previously called the California Department of Fish and Game – CDFG) and the U.S. Fish and Wildlife Service (USFWS) with a mechanism for conserving and protecting the diversity of plant and animal species native to the state. A sizable number of native plants and animals have been formally designated as "threatened" or "endangered" under state and federal endangered species legislation. Others have been designated as candidates for such listing. Still others have been designated as "species of special concern" by the CDFW. The California Native Plant Society (CNPS) has developed its own set of lists of native plants considered rare, threatened, or endangered. Collectively, these plants and animals are referred to as "special status species."²⁴

²³ Tulare County General Plan 2030 Update, *Background Report*. Page 9-9.

²⁴ Reconnaissance-Level Biological Evaluation of Potential Impacts Sensitive and Listed Species on an Approximately 47.17-acre, Land Parcel in Farmersville, Tulare County, California. Page 9. Prepared by Kamansky's Ecological Consulting. April 28, 2016 and included in Appendix "C" of the DEIR.

CEQA and Oak Woodland Protection

CEQA Statute Section 21083.4, “Counties; Conversion of Oak Woodlands; Mitigation Alternatives,” requires that counties determine whether a development will have potential impacts on oak woodlands:

21083.4(a): “For purposes of this section, “oak” means a native tree species in the genus *Quercus*, not designated as Group A or Group B commercial species pursuant to regulations adopted by the State Board of Forestry and Fire Protection pursuant to Section 4526, and that is 5 inches or more in diameter at breast height.”

21083.4(b): “...a county shall determine whether a project within its jurisdiction may result in a conversion of oak woodlands that will have a significant effect on the environment. If a county determines that there may be a significant effect to oak woodlands, the county shall require one or more of the...[listed] oak woodlands mitigation alternatives...”

Local Policy & Regulations

Tulare County General Plan Policies

The Tulare County General Plan has a number of policies that apply to projects within the County of Tulare. General Plan policies that relate to the proposed Project are listed below.

ERM-1.1 Protection of Rare and Endangered Species - The County shall ensure the protection of environmentally sensitive wildlife and plant life, including those species designated as rare, threatened, and/or endangered by State and/or Federal government, through compatible land use development.

ERM-1.2 Development in Environmentally Sensitive Areas - The County shall limit or modify proposed development within areas that contain sensitive habitat for special status species and direct development into less significant habitat areas. Development in natural habitats shall be controlled so as to minimize erosion and maximize beneficial vegetative growth.

ERM-1.15 Minimize Lighting Impacts - The County shall ensure that lighting associated with new development or facilities (including street lighting, recreational facilities, and parking) shall be designed to prevent artificial lighting from illuminating adjacent natural areas at a level greater than one foot candle above ambient conditions.

ERM-1.16 Cooperate with Wildlife Agencies - The County shall cooperate with State and federal wildlife agencies to address linkages between habitat areas.

IMPACT EVALUATION

Would the project:

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or**

regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Project Impact Analysis:

Less Than Significant Impact With Mitigation

The proposed Project site is undeveloped land, bordered by active orchards, the State Route 198 corridor, service commercial, and a Caltrans maintenance yard. The Tulare Irrigation Ditch bisects the proposed Project site.

According to the CNDDDB search and as described in Appendix “C” of this EIR, 13 Special Status plant species, 20 Special Status animal species, and four special habitats are known to occur in the general proposed Project vicinity. A detailed description of these 33 special status species and four special habitats can be found on Pages 12-21 of the biological evaluation included in Appendix “C” of this EIR.

On-site Special Status Plant Species

“The current nature of the site and its long disturbance history does not provide suitable habitat for many of the Special Status plant species that are listed in the CNDDDB. No Special Status plant species were present on the site during the survey.”²⁵

On-site Special Status Animal Species

“Twenty three (23) Special Status animal species are known to occur in the general vicinity of the Sequoia Drive-In Business Park. KEC inspected the site and noted that all lands on the Project site have been disturbed to some degree by leveling, disking, farming, and the site was an outdoor movie theater.

Various large nesting trees border or are present on the site. No raptors or nests were observed on the site, but are present in the general vicinity (see Appendix maps [Appendix C of the Biological Evaluation, which is included as Appendix “C” of this DEIR]). Although the site is sub-optimal kit fox habitat, it is within the range of this species and potential kit fox dens were observed directly adjacent to the site. Dens could also be used by burrowing owls and badgers could be present on the site. New-tropical migratory birds occupied the site at the time of the biological surveys.”²⁶

Significant Impacts to these Special Status species could occur due to proposed Project implementation; however, the incorporation of **Mitigation Measures 4-1** through **4-19** would reduce potential Project-specific impacts related to this Checklist Item to ***Less Than Significant With Mitigation***.

²⁵ Reconnaissance-Level Biological Evaluation of Potential Impacts Sensitive and Listed Species on an Approximately 47.17-acre, Land Parcel in Farmersville, Tulare County, California. Page 25. Prepared by Kamansky’s Ecological Consulting. April 28, 2016 and included in Appendix “C” of the DEIR.

²⁶ Ibid. 26.

Cumulative Impact Analysis

Less Than Significant Impact With Mitigation

The geographic area of this cumulative analysis is the San Joaquin Valley. While the study area is limited to Tulare County, sensitive species with similar habitat requirements may exist in other portions of the San Joaquin Valley, and therefore cumulative impacts would extend beyond Tulare County political boundaries.

The proposed Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As the proposed Project does not result in significant loss of habitat or direct impact to these special status species, a ***Less Than Significant Cumulative Impact With Mitigation*** will occur. Consultants KEC recommended the following Mitigation Measures as contained in the Biological Evaluation (See Appendix “C” of this DEIR). For easier reading, the Mitigation Measures contained in the Biological Evaluation have been sequenced differently and numbered rather than using the format contained in the Biological Evaluation.

Mitigation Measure(s):

See Mitigation Measures 4-1 thru 4-19

“Protection of Swainson’s hawks and other raptors and migratory birds (including Loggerhead Shrike).”

- 4-1. Pre-construction surveys shall be conducted to determine the presence of nesting birds if ground clearing or construction activities will be initiated during the breeding season (February 15 through September 15). Potential nesting areas on the proposed Project site and potential nesting areas within 500 feet of the site should be surveyed prior to June 5th. Surveys shall be performed by a qualified biologist to verify the presence or absence of nesting birds. Construction shall not occur within a 500 foot buffer surrounding active nests of raptors or a 250 foot buffer surrounding active nests of migratory birds. If construction within these buffer areas is required or if nests must be removed to allow continuation of construction, then approval and specific removal methodologies should be obtained from California Department of Fish and Wildlife.**
- 4-2. All trees which are suitable for Swainson’s hawk nesting that are within 2,640 feet [0.5 mile] of construction activities shall be inspected by a qualified biologist.**
- 4-3. If potential Swainson’s hawk nests are found during the inspection, then surveys shall be conducted at the following intensities, depending upon dates of initiation of construction:**
 - If Swainson’s hawks are detected to be actively nesting in trees within 2,640 feet of the construction area, construction shall not occur within this zone until after young Swainson’s hawks have fledged (this usually occurs by early June). The nest shall be monitored by a qualified biologist to determine fledging date.**

- If other nesting birds (particularly non-raptor species listed on the MTBA) are found actively nesting within 250 feet of the construction area, construction should be postponed until after young have fledged. The date of fledging should be determined by a qualified biologist. If construction cannot be delayed within this zone, the DFW and/or the USFWS shall be consulted and alternative protection measures required by the CDFW and/or the USFWS shall be followed.”²⁷

“Protection of San Joaquin kit fox

- 4-4. A standardized pre-construction/ pre-activity shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities or any Project activity likely to impact the San Joaquin kit fox. Surveys shall identify kit fox habitat features on the Project site and evaluate use by kit fox and, if possible, assess the potential impacts to the kit fox by the proposed activity. The status of all dens shall be determined and mapped. Written results of pre-construction/pre-activity surveys must be received by the Service [USFWS] within five days after survey completion and prior to the start of ground disturbance and/or construction activities.
- 4-5. Disturbance to all San Joaquin kit fox dens shall be avoided to the maximum extent possible.
- 4-6. If a natal/pupping den is discovered within the Project area or within 200-feet of the site boundary, USFWS shall be immediately notified and under no circumstances should the den be disturbed or destroyed without prior authorization. If the pre-construction/pre-activity survey reveals an active natal pupping or new information, the Project applicant shall contact USFWS immediately to obtain the necessary take authorization/permit.
- 4-7. Destruction of any den shall be accomplished by careful excavation until it is certain that no kit foxes are inside. The den shall be fully excavated, filled with dirt and compacted to ensure that kit foxes cannot reenter or use the den during the construction period.
- 4-8. If at any point during excavation, a kit fox is discovered inside the den, the excavation activity shall cease immediately and monitoring of the den as described above shall be resumed. Destruction of the den may be completed when, in the judgment of the qualified biologist, the animal has escaped without further disturbance from the partially destroyed den.
- 4-9. Project-related vehicles shall observe a daytime speed limit not to exceed 20-mph throughout the site in all proposed Project areas, except on county roads and State and Federal highways; this is particularly important at night when kit

²⁷ Op.Cit. 28-29.

- foxes are most active. Night-time construction shall be minimized to the extent possible. However if it does occur, then the speed limit shall be reduced to 10-mph. Off-road traffic outside of designated project areas shall be prohibited.
- 4-10. To prevent inadvertent entrapment of kit fox or other animals during the construction phase of the proposed Project, all excavated, steep-walled holes or trenches more than 2-feet deep shall be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the USFWS and the California Department of Fish and Wildlife shall be contacted as noted under Mitigation Measure 4-17 referenced below.
- 4-11. Kit fox are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods shall be thoroughly inspected for kit fox before the pipe is used or moved, buried, or capped in any way. If a kit fox is discovered inside a pipe, that section of pipe shall not be moved until the CFW has been consulted. If necessary, and under the direct supervision of a qualified biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped.
- 4-12. All food-related trash outside of the enclosed facility such as wrappers, cans, bottles, and food scraps shall be disposed of daily in securely closed containers and removed at least once a week during both construction and operational phases.
- 4-13. No pets, such as dogs or cats, shall be allowed on the Project site in order to prevent harassment, mortality of kit fox, or destruction of dens.
- 4-14. Use of rodenticides and herbicides in Project areas shall be restricted. If rodent control must be used it shall be limited to the use of zinc phosphide because of its demonstrated lower risk to kit fox.
- 4-15. A representative shall be appointed by the Project Applicant to serve as the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name, telephone number, or other pertinent contact information shall be provided to Service [USFWS].
- 4-16. An employee education program shall be conducted to alert employees of potential impacts to kit fox or other species of concern. The program shall consist of a brief presentation by persons knowledgeable in kit fox biology and

legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program shall include the following: A description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the Project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during Project construction and implementation. A fact sheet conveying this information shall be prepared for distribution to the previously referenced people and anyone else who may enter the Project site.

- 4-17. Any contractor, employee, or military or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative. The Sacramento Fish and Wildlife Office and CFW shall be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The Sacramento Fish and Wildlife Office contact is:

Mr. Paul Hoffman
1701 Nimbus Road, Suite A,
Rancho Cordova, California 95670
(530) 934-9309

- 4-18. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed shall also be provided to Fish and Wildlife at the address below.

Endangered Species Division
2800 Cottage Way, Suite W2605
Sacramento, California 95825-1846
(916) 414-6620 or (916) 414-6600²⁸

“Protection of burrowing owl

- 4-19. In accordance with CDFG’s 2012 *Staff Report on Burrowing Owl Mitigation*, a qualified biologist shall conduct three surveys for burrowing owls where potential burrowing owl habitat occurs within 500 feet of Project activities. Surveys shall occur during the peak breeding season for this species (15 April through 15 July), and spaced three weeks apart. If active burrowing owl burrows are identified within 500 feet of the Project site, then avoidance, take avoidance surveys, site surveillance, minimization, and buffer mitigation

²⁸ Op. Cit. 29-32.

measures shall be implemented, in accordance with the 2012 CDFG Staff Report and direct consultation with CFW.”²⁹

Conclusion:

Less Than Significant Impact

As noted earlier, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item will occur.

- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game [Wildlife] or U.S. Fish and Wildlife Service?**

Project Impact Analysis:

No Impact

No impacts to this community is anticipated. There are no substantial patches of riparian habitat: only several oak trees. Three of the oak trees are large (>15” diameter at breast height), but are not contiguous with other habitat.³⁰ There are no sensitive riparian or natural habitats in the immediate proposed Project area and as such, ***No Project-specific Impact*** related to this Checklist Item will occur.

Cumulative Impact Analysis:

No Impact

The geographic area of this cumulative analysis is the San Joaquin Valley. While the study area is limited to Tulare County, sensitive species with similar habitat requirements may exist in other portions of the San Joaquin Valley.

The proposed Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As the proposed Project does not result in loss of riparian or otherwise sensitive habitat, ***No Cumulative Impact*** will occur.

Mitigation Measure(s):

None Required.

Conclusion:

No Impact

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

- c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

Project Impact Analysis:

No Impact

²⁹ Op. Cit. 32.

³⁰ Reconnaissance-Level Biological Evaluation of Potential Impacts Sensitive and Listed Species on an approximately 47.17-acre, Land Parcel in Farmersville, Tulare County, California. Page 32. Prepared by Kamansky's Ecological Consulting. April 28, 2016 and included in Appendix “C” of the DEIR.

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No marshes, vernal pools or other wetlands occur on the property (see U.S. Fish and Wildlife Service wetland map in Appendix C of the Biological Evaluation, which is included as Appendix “C” of this DEIR]). However, a Tulare Irrigation Ditch (TID) runs through the property and is not a natural drainage. The TID will not be altered as a part of this Project and as such, ***No Project-specific Impact*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is the San Joaquin Valley. While the study area is limited to Tulare County, sensitive species with similar habitat requirements may exist in other portions of the San Joaquin Valley.

The proposed Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As the proposed Project does not result in the loss of federally protected wetlands, ***No Cumulative Impact*** will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?**

Project Impact Analysis ***Less Than Significant Impact***

“The Kaweah River corridor does lie east of the proposed Project site several miles. However, the subject property is not situated on any known substantial wildlife corridor, and the proposed actions have limited scope and should not obstruct wildlife movement. A considerable amount of open space lands in the vicinity of the subject property will continue to be used by native species for home range and dispersal movements.”³¹ Therefore, the proposed Project will result in a ***Less Than Significant Impact*** on regional wildlife movements.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is the San Joaquin Valley. While the study area is limited to Tulare County, corridors for fish and wildlife species with similar habitat requirements may exist in other portions of the San Joaquin Valley.

³¹ Op. Cit. 33.

The proposed Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As the proposed Project does not impact federally protected wetlands, ***Less Than Significant Cumulative Impacts*** will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impacts***

As noted earlier, ***Less Than Significant Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Project Impact Analysis: ***No Impact***

“The project is consistent with local policies and ordinances. Therefore, as long as the Applicant implements avoidance and protection measures and consults with DFW and any other agencies regarding potential impacts to raptors.”³² ***No Project-specific Impact*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County.

There will be no impacts to policies or ordinances relating to biological resources. Therefore, there will be ***No Cumulative Impact*** related to this Checklist Item.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Project Impact Analysis: ***No Impact***

There are two habitat conservation plans that could apply in Tulare County. The Kern Water Habitat Conservation Plan only applies to an area in Allensworth; therefore, the Project site is not subject to this plan. The Recovery Plan for Upland Species in the San Joaquin Valley outlines a number of species that are important to the San Joaquin Valley. None of these

³² Op.Cit. 34.

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species were identified within the impact areas of the Project. As such, no Project-specific impacts related to this impact area would occur. Further, the proposed Project would not conflict with any approved habitat conservation plans, natural community conservation plans, or regional or state habitat conservation plans. As such, a ***No Project-specific Impact*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is California. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

There would be ***No Impact*** related to any habitat conservation plan. Therefore, ***No Cumulative Impact*** will conflict with local policies or ordinances.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

REFERENCES

California Department of Fish and Wildlife. Wildlife: Nongame: Species of Special Concern. <http://www.dfg.ca.gov/wildlife/nongame/ssc/>. Accessed July 2017.

Reconnaissance-Level Biological Evaluation of Potential Impacts Sensitive and Listed Species on an Approximately 47.17-acre, Land Parcel in Farmersville, Tulare County, California. Prepared by Kamansky's Ecological Consulting. April 28, 2016. Pages 9, 11, 12, 25, 26, 28, 29, 30, 31, 32, 33, 34, and 35. See Appendix "C" of this DEIR.

Tulare County General Plan 2030 Update Background Report, Pages 9-6, 9-7, 9-8, and 9-9.

Tulare County General Plan 2030 Update Recirculated DEIR, Pages 3.11-1, 2, and 3.

Chapter 3.5

Cultural Resources

SUMMARY OF FINDINGS

The Proposed Project would result in impacts to Cultural Resources that are ***Less Than Significant With Mitigation***. Information provided by Southern San Valley Historical Resources Information Center, at California State University, Bakersfield (Center) and the California Native American Heritage Commission Sacred Lands File search (see Appendix “D” of this document) were used as the basis for determining that this Project would result in a less than significant impact with mitigation incorporated.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

Several CEQA statutes and guidelines address requirements for cultural resources, including historic and archaeological resources.¹ If a proposed Project may cause a substantial adverse effect on the significance of a historical resource, then the project may be considered to have a significant effect on the environment, and the impacts must be evaluated under CEQA (Section 21084.1). The definition of “historical resources” is included in Section 15064.5 of CEQA Guidelines, and includes both historical and archaeological resources. “Substantial adverse change” is defined as “physical demolition, destruction, relocation, or alteration of the resource...”

Section 15064.5 also provides guidelines when there is a probable likelihood of Native American remains existing in the project site. Provisions for the accidental discovery of historical or unique archaeological resources accidentally discovered during construction include a recommendation for evaluation by a qualified archaeologist, with follow up as necessary.

Public Resources Code Section 5097.5 prohibits excavation or removal of any “vertebrate paleontological site...or any other archaeological, paleontological or historical feature, situated on public lands, except with express permission of the public agency having jurisdiction over such lands.”

This section of the DEIR for the Project meets the CEQA requirements by addressing potential impacts to cultural resources on the Project site. The “Environmental Setting” section provides a description of cultural resources in the region, with special emphasis on the Project site and vicinity. The “Regulatory Setting” section provides a description of applicable State and local regulatory policies. Results from CHRIS results are included in Appendix “D” of this DEIR. A description of potential impacts is provided, along with feasible mitigation measures to reduce the impacts to less than significant, if necessary.

¹ “CEQA and Historical Resources” CEQA Technical Advice Series, <http://ceres.ca.gov/ceqa/more/tas/page3.html>

CEQA Thresholds of Significance

Under CEQA Guidelines Section 15064.5. (b) “A project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.

- (1) Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.
- (2) The significance of an historical resource is materially impaired when a project:
 - (A) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or
 - (B) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
 - (C) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.
- (3) Generally, a project that follows the Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior’s Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (1995), Weeks and Grimmer, shall be considered as mitigated to a level of less than a significant impact on the historical resource.
- (4) A lead agency shall identify potentially feasible measures to mitigate significant adverse changes in the significance of an historical resource. The lead agency shall ensure that any adopted measures to mitigate or avoid significant adverse changes are fully enforceable through permit conditions, agreements, or other measures.
- (5) When a project will affect state-owned historical resources, as described in Public Resources Code Section 5024, and the lead agency is a state agency, the lead agency shall consult with the State Historic Preservation Officer as provided in Public Resources Code Section 5024.5. Consultation should be coordinated in a timely fashion with the preparation of environmental documents.”²

² CEQA Guidelines. Section 15064.5 (b).

ENVIRONMENTAL SETTING

Cultural Background

“Tulare County lies within a culturally rich province of the San Joaquin Valley. Studies of the prehistory of the area show inhabitants of the San Joaquin Valley maintained fairly dense populations situated along the banks of major waterways, wetlands, and streams. Tulare County was inhabited by aboriginal California Native American groups consisting of the Southern Valley Yokuts, Foothill Yokuts, Monache, and Tubatulabal. Of the main groups inhabiting the Tulare County area, the Southern Valley Yokuts occupied the largest territory.”³

“California’s coast was initially explored by Spanish (and a few Russian) military expeditions during the late 1500s. However, European settlement did not occur until the arrival into southern California of land-based expeditions originating from Spanish Mexico starting in the 1760s. Early settlement in the Tulare County area focused on ranching. In 1872, the Southern Pacific Railroad entered Tulare County, connecting the San Joaquin Valley with markets in the north and east. About the same time, valley settlers constructed a series of water conveyance systems (canals, dams, and ditches) across the valley. With ample water supplies and the assurance of rail transport for commodities such as grain, row crops, and fruit, a number of farming colonies soon appeared throughout the region.”⁴

“The colonies grew to become cities such as Tulare, Visalia, Porterville, and Hanford. Visalia, the County seat, became the service, processing, and distribution center for the growing number of farms, dairies, and cattle ranches. By 1900, Tulare County boasted a population of about 18,000. New transportation links such as SR 99 (completed during the 1950s), affordable housing, light industry, and agricultural commerce brought steady growth to the valley. The California Department of Finance estimated the 2007 Tulare County population to be 430,167.”⁵

Tulare County’s Documented Cultural Resources

Tulare County’s known and recorded cultural resources were identified through historical records, such as those found in the National Register of Historic Places, the Historic American Building Survey/Historic American Engineering Record (HABS/HAER), the California Register of Historic Resources, California Historical Landmarks, and the Tulare County Historical Society list of historic resources. These resources are available to the general public. They have been summarized in the Tulare County General Plan Update 2030 Background Report (2010).⁶

The Southern San Joaquin Valley Historical Resources Information Center, at California State University, Bakersfield (Center) conducted a search for the Sequoia Drive-In Business Park project as requested by Tulare County RMA. In summary, the Center’s search response letter indicated that one recorded resource (P-54-004884, the Tulare Irrigation Canal) is located within the

³ Tulare County 2030 General Plan. Page 8-5.

⁴ Ibid.

⁵ Op. Cit. 8-6.

⁶ Tulare County General Plan Background Report. Pages 9-57 to 9-59.

proposed Project site and six recorded resources are within the one-half mile radius, including a prehistoric era mound, a historic period ranch, barn, single-family residence, canal, and drive-in theater. The Center also recommended that the NAHC be contacted regarding cultural resources that may not be included in the CHRIS inventory (see later dated September 27, 2016, in Appendix “D”). Tulare County RMA also requested a Sacred Lands File (SLF) search from the California Native American Heritage Commission (NAHC). The NAHC provided a letter dated September 8, 2016 showing “negative” results which indicates there are no documented Sacred Lands within the Project area (see letter dated September 8, 2016; also in Appendix “D”).

REGULATORY SETTING

Federal Agencies & Regulations

The National Historic Preservation Act

The National Historic Preservation Act of 1966 (NHPA) established federal regulations for the purpose of protecting significant cultural resources. The legislation established the National Register of Historic Places and the National Historic Landmarks Program. It mandated the establishment of the State Historic Preservation Office (SHPO), responsible for implementing statewide historic preservation programs in each state. A key aspect of SHPO responsibilities include surveying, evaluating and nominating significant historic buildings, sites, structures, districts and objects to the National Register. The NHPA also established requirements federal agencies to consider the effects of proposed federal projects on historic properties (Section 106, NHPA). Federal agencies and recipients of federal funding are required to initiate consultation with the State Historic Preservation Officer (SHPO) as part of the Section 106 review process.⁷

State Agencies & Regulations

California State Office of Historic Preservation (OHP)

The California State Office of Historic Preservation (OHP) is responsible for administering federally and state mandated historic preservation programs to further the identification, evaluation, registration and protection of California's irreplaceable archaeological and historical resources under the direction of the State Historic Preservation Officer (SHPO), appointed by the governor, and the State Historical Resources Commission, a nine-member state review board appointed by the governor.⁸

Among OHP's responsibilities are to identify, evaluate, and register historic properties; and ensuring compliance with federal and state regulations. The OHP administers the State Register of Historical Resources and maintains the California Historical Resources Information System (CHRIS) database. The CHRIS database includes statewide Historical Resources Inventory (HRI)

⁷ Advisory Council on Historic Preservation, National Historic Preservation Program: Overview website: <http://www.achp.gov/overview.html> and National Register Evaluation Criteria website: <http://www.achp.gov/nrcriteria.html>. Accessed September 2017.

⁸ Advisory Council on Historic Preservation, State Historic Preservation Officers, <http://www.achp.gov/shpo.html>. Accessed September 2017.

database. The records are maintained and managed under contract by eleven independent regional Information Centers. Tulare, Fresno, Kern, Kings and Madera counties are served by the Southern San Joaquin Valley Historical Resources Information Center (Center), located in California State University Bakersfield, CA. The Center provides information on known historic and cultural resources to governments, institutions and individuals.⁹

A historical resource may be eligible for inclusion in the California Register of Historical Resources (CRHR) if it:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated with the lives of persons important to our past;
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history.¹⁰

CEQA Guidelines: Historical Resources Definition

CEQA Guidelines Section 15064.5(a) defines a historical resource as:

“(1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code Section 5024.1; Title 14 CCR, Section 4850 et seq.).

(2) A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements Section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

(3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be “historically significant” if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code Section 5024.1; Title 14 CCR, Section 4852) including the following:

⁹ California State Parks, Office of Historic Preservation, *Mission and Responsibilities website*: http://ohp.parks.ca.gov/?page_id=1066. Accessed September, 2017.

¹⁰ California State Parks, Office of Historic Preservation, *California Register: Criteria for Designation*, http://www.ohp.parks.ca.gov/?page_id=21238. Accessed September, 2017.

- (A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
 - (B) Is associated with the lives of persons important in our past;
 - (C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
 - (D) Has yielded, or may be likely to yield, information important in prehistory or history.
- (4) The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to Section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in Section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code Sections 5020.1(j) or 5024.1.”¹¹

CEQA Guidelines: Archaeological Resources

Section 15064.5(c) of CEQA Guidelines provides specific guidance on the treatment of archaeological resources as noted below.

- “(1) When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subdivision (a).
- (2) If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.
- (3) If an archaeological site does not meet the criteria defined in subdivision (a), but does meet the definition of a unique archeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of Section 21083.2. The time and cost limitations described in Public Resources Code Section 21083.2 (c–f) do not apply to surveys and site evaluation activities intended to determine whether the project location contains unique archaeological resources.
- (4) If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and

¹¹ CEQA Guidelines, Section 15064.5(d).

the effect on it are noted in the Initial Study or EIR, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process.”¹²

CEQA Guidelines: Human Remains

Section 15064.5 of CEQA Guidelines provides specific guidance on the treatment of human remains pursuant to Public Resources Code § 5097.98, which provides specific guidance on the disposition of Native American burials (human remains), and fall within the jurisdiction of the Native American Heritage Commission:

“(d) When an initial study identifies the existence of, or the probable likelihood, of Native American human remains within the project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code Section 5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American burials with the appropriate Native Americans as identified by the Native American Heritage Commission. Action implementing such an agreement is exempt from:

- (1) The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (Health and Safety Code Section 7050.5).
- (2) The requirements of CEQA and the Coastal Act.”¹³

“(e) In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:

- (1) There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:
 - (A) The coroner of the county in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required, and
 - (B) If the coroner determines the remains to be Native American:
 1. The coroner shall contact the Native American Heritage Commission within 24 hours.
 2. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.

¹² Ibid. Section 15064.5(c).

¹³ Op. Cit. Section 15064.5(d).

3. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or
- (2) Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.
 - (A) The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.
 - (B) The descendant identified fails to make a recommendation; or
 - (C) The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.”¹⁴
 - (f) As part of the objectives, criteria, and procedures required by Section 21082 of the Public Resources Code, a lead agency should make provisions for historical or unique archaeological resources accidentally discovered during construction. These provisions should include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Work could continue on other parts of the building site while historical or unique archaeological resource mitigation takes place.”¹⁵

Paleontological Resources

Public Resources Code Section 5097.5 prohibits excavation or removal of any “vertebrate paleontological site...or any other archaeological, paleontological or historical feature, situated on public lands, except with express permission of the public agency having jurisdiction over such lands.”¹⁶

Tribal Consultation Requirements: SB 18 (Burton, 2004)¹⁷

On September 29, 2004, Governor Schwarzenegger signed Senate Bill 18, Tribal Consultation Guidelines, into law. This bill amended Section 815.3 of the Civil Code, to amend Sections

¹⁴ Op. Cit. Section 15064.5(e).

¹⁵ Op. Cit. Section 15064.5(f).

¹⁶ Public Resources Code 5097.5(a).

¹⁷ Senate Bill No. 18, Chapter 905, http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200320040SB18, accessed September, 2017.

65040.2, 65092, 65351, 65352, and 65560 of, and to add Sections 65352.3, 65352.4, and 65562.2 to, the Government Code, relating to traditional tribal cultural Places. SB 18, enacted March 1, 2005, creates a mechanism for California Native American Tribes to identify culturally significant sites that are located within public or private lands within the city or county's jurisdiction. SB 18 requires cities and counties to contact, and offer to consult with, California Native American Tribes before adopting or amending a General Plan, a Specific Plan, or when designating land as Open Space, for the purpose of protecting Native American Cultural Places (PRC 5097.9 and 5097.993). The Native American Heritage Commission (NAHC) provides local governments with a consultation list of tribal governments with traditional lands or cultural places located within the Project Area of Potential Effect. Tribes have 90 days from the date on which they receive notification to request consultation, unless a shorter timeframe has been agreed to by the tribe.¹⁸

As this Project is not adopting or amending a General Plan, a Specific Plan, or when designating land as Open Space, for the purpose of protecting Native American Cultural Places (PRC 5097.9 and 5097.993); Tribal Consultation for SB 18 compliance is not required.

Tribal Consultation Requirements: AB 52 (Gatto, 2014)¹⁹

This bill was approved by Governor Brown on September 25, 2014 and became effective July 1, 2015. This bill amended Section 5097.94 of, and to add Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3 to, the Public Resources Code, relating to Native Americans. The bill specifies that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource, as defined, is a project that may have a significant effect on the environment. This bill requires a lead agency to begin consultation with a California Native American tribe that is traditionally and culturally affiliated (can be a tribe anywhere within the State of California) with the geographic area of the proposed project, if the tribe requested to the lead agency, in writing, to be informed by the lead agency of proposed projects in that geographic area and the tribe requests consultation, prior to determining whether a negative declaration, mitigated negative declaration, or environmental impact report is required for a project.

Existing law establishes the NAHC and vests the commission with specified powers and duties. This bill required the NAHC to provide each California Native American tribe, as defined, on or before July 1, 2016, with a list of all public agencies that may be a lead agency within the geographic area in which the tribe is traditionally and culturally affiliated, the contact information of those agencies, and information on how the tribe may request those public agencies to notify the tribe of projects within the jurisdiction of those public agencies for the purposes of requesting consultation.

The NAHC provides protection to Native American burials from vandalism and inadvertent destruction, provides a procedure for the notification of most likely descendants regarding the discovery of Native American human remains and associated grave goods, brings legal action to

¹⁸ Government Code §65352.3

¹⁹ Assembly Bill No. 52 Chapter 532, http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140AB52, accessed September, 2017.

prevent severe and irreparable damage to sacred shrines, ceremonial sites, sanctified cemeteries and place of worship on public property, and maintain an inventory of sacred places.²⁰

Upon written request, the NAHC is required to conduct a Sacred Lands File search for sites located on or near a project site. As discussed in further detail in Chapter 3.17 Tribal Cultural Resources, a Sacred Lands File check indicated negative results (that is, no Sacred Lands were identified) for the Project location (See Appendix “D” of the DEIR at NAHC Sacred Lands File search letter dated September 8, 2018). Also discussed in further detail in Chapter 3.17, an opportunity has been provided to Native American tribes listed by the Native American Heritage Commission during the CEQA process as required by AB 52, and no tribes responded to the consultation requests within the mandatory response time-frames; therefore, this DEIR has been completed consistent and compliant with AB 52 (see Appendix “D” of the DEIR regarding Tribal consultation process).

Local Policy & Regulations

Tulare County General Plan Policies

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that apply to the proposed Project are listed as follows:

ERM-6.1 Evaluation of Cultural and Archaeological Resources - The County shall participate in and support efforts to identify its significant cultural and archaeological resources using appropriate State and Federal standards.

ERM-6.2 Protection of Resources with Potential State or Federal Designations - The County shall protect cultural and archaeological sites with demonstrated potential for placement on the National Register of Historic Places and/or inclusion in the California State Office of Historic Preservation’s California Points of Interest and California Inventory of Historic Resources. Such sites may be of Statewide or local significance and have anthropological, cultural, military, political, architectural, economic, scientific, religious, or other values as determined by a qualified archaeological professional.

ERM-6.3 Alteration of Sites with Identified Cultural Resources - When planning any development or alteration of a site with identified cultural or archaeological resources, consideration should be given to ways of protecting the resources. Development can be permitted in these areas only after a site specific investigation has been conducted pursuant to CEQA to define the extent and value of resource, and mitigation measures proposed for any impacts the development may have on the resource.

ERM-6.4 Mitigation - If preservation of cultural resources is not feasible, every effort shall be made to mitigate impacts, including relocation of structures, adaptive reuse, preservation of facades, and thorough documentation and archival of records.

²⁰ Native American Heritage Commission, About the Native American Heritage Commission, <http://www.nahc.ca.gov/about/>, accessed September, 2017.

PFS-3.4 Alternative Rural Wastewater Systems - The County shall consider alternative rural wastewater systems for areas outside of community UDBs and HDBs that do not have current systems or system capacity. For individual users, such systems include elevated leach fields, sand filtration systems, evapotranspiration beds, osmosis units, and holding tanks. For larger generators or groups of users, alternative systems, including communal septic tank/leach field systems, package treatment plants, lagoon systems, and land treatment, can be considered.

IMPACT EVALUATION

Would the project:

- a) **Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?**

Project Impact Analysis:

Less Than Significant Impact With Mitigation

The Project activity would be located on a previously disturbed vacant site. A search conducted by the Southern San Valley Historical Resources Information Center, at California State University, Bakersfield (Center) in the California Historic Resources Information System (CHRIS) indicated that there is one recorded cultural resource (the Tulare Irrigation Canal) within the project area and six recorded resource within a one-half mile radius. The proposed Project will not disturb the Tulare Irrigation Canal and will maintain a 32-foot buffer to both the north and south sides of the canal bank.

There are no recorded cultural resources within the project area or radius that are listed in the National Register of Historic Places, the California Register of Historical Resources, the California Points of Historical Interest, California Inventory of Historic Resources, or the California State Historic Landmarks. As noted earlier, the CHRIS search results are included in Appendix “D” of this DEIR.

Consistent with the requirements of AB 52, Tulare County requested a records search by the California Native American Heritage Commission (NAHC) of its Sacred Lands File (SLF) The NAHC provided the results of its SLF search (see letter dated September 8, 2016, contained in Appendix “D” of this DEIR) indicating “negative results” (that is, no sacred lands are known to be located in the Project area). The Sacred Lands File Search and Native American tribal consultation that was conducted revealed no existing sacred sites or traditional cultural properties in the vicinity of the Project.

However, there is a possibility that subsurface resources could be uncovered during construction-related activities. In such an event, potentially significant impacts to previously unknown subsurface resources may occur. With the implementation of **Mitigation Measure 5-1**, the Project-specific impacts would be ***Less Than Significant With Mitigation***.

Cumulative Impact Analysis: *Less Than Significant Impact With Mitigation*

The geographic area of this cumulative analysis is Tulare County.

The Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. With implementation of **Mitigation Measure 5-1**, potential Project-specific impacts would be reduced to less than significant levels. Therefore, the Project's cumulative impacts would be *Less Than Significant With Mitigation*.

Mitigation Measure(s):

- 5-1** In the event that historical, archaeological or paleontological resources are discovered during site excavation, the County shall require that grading and construction work on the Project site be immediately suspended until the significance of the features can be determined by a qualified archaeologist or paleontologist. In this event, the specialists shall provide recommendations for measures necessary to protect any site determined to contain or constitute an historical resource, a unique archaeological resource, or a unique paleontological resource or to undertake data recovery, excavation analysis, and curation of archaeological or paleontological materials. County staff shall consider such recommendations and implement them where they are feasible in light of Project design as previously approved by the County.

Conclusion: *Less Than Significant Impact With Mitigation*

With implementation of the **Mitigation Measure 5-1**, potential Project-specific and cumulative impacts related to this Checklist Item would be reduced to *Less Than Significant* levels.

- b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?**

Project Impact Analysis: *Less Than Significant Impact With Mitigation*

The CHRIS and NAHC/SLF searches cultural resources survey report did not identify any archaeological (or cultural) resources. Additionally, the Project site has no natural streams, rivers, or geologic features on or near the site which may suggest the presence of archaeological resources. However unlikely, there is a possibility that subsurface resources could be uncovered during construction-related activities. In such an event, potentially significant impacts to previously unknown subsurface resources may occur. With the implementation of **Mitigation Measure 5-1**, the Project-specific impacts would be *Less Than Significant With Mitigation*.

Cumulative Impact Analysis: *Less Than Significant Impact With Mitigation*

The geographic area of this cumulative analysis is Tulare County.

The Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. With implementation of **Mitigation Measure 5-1**, potential Project-specific impacts would be reduced to less than significant levels. Therefore, the Project's cumulative impacts would be *Less Than Significant With Mitigation*.

Mitigation Measures: **See Mitigation Measure 5-1.**

Conclusion: *Less Than Significant Impact With Mitigation*

With implementation of the **Mitigation Measure 5-1**, Project-specific and cumulative impacts related to this Checklist Item would be reduced to *Less Than Significant*.

c) **Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

Project Impact Analysis: *Less Than Significant Impact With Mitigation*

The CHRIS and NAHC/SLF searches did not identify any paleontological (or cultural) resources. Additionally, no paleontological resources or sites, or unique geologic features have previously been encountered in the Project area. However unlikely, there is a possibility that subsurface resources could be uncovered during construction-related activities. In such an event, potentially significant impacts to previously unknown subsurface resources may occur. With the implementation of **Mitigation Measure 5-2**, Project-specific impacts would be *Less Than Significant*.

Cumulative Impact Analysis: *Less Than Significant Impact With Mitigation*

The geographic area of this cumulative analysis is Tulare County. The Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. With implementation of **Mitigation Measure 5-2**, potential Project-specific impacts would be reduced to less than significant levels. Therefore, the Project's cumulative impacts would be *Less Than Significant With Mitigation*.

Mitigation Measure(s):

- 5-2** **The project proponent shall avoid and minimize impacts to paleontological resources. If a potentially significant paleontological resource is encountered during ground disturbing activities, all construction within a 100-foot radius of the find shall immediately cease until a qualified paleontologist determines whether the resources requires further study. The project proponent shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The paleontologist shall notify the Tulare County Resource Management Agency and the project proponent of the procedures that must be followed before construction is allowed to resume at the location of the find. If the find is determined to be significant and the Tulare County Resource Management Agency determines avoidance is not**

feasible, the paleontologist shall design and implement a data recovery plan consistent with applicable standards. The plan shall be submitted to the Tulare County Resource Management Agency for review and approval. Upon approval, the plan shall be incorporated into the project.

Conclusion: *Less Than Significant Impact With Mitigation*

With implementation of **Mitigation Measure 5-2**, Projects-specific and cumulative impacts related to this Checklist Item would be reduced to *Less Than Significant*.

d) Disturb any human remains, including those interred outside of formal cemeteries?

Project Impact Analysis: *Less Than Significant Impact With Mitigation*

The CHRIS, NAHC/SLF searches, and consultation with Native American tribes did not identify any known remains or formal cemeteries. However unlikely, there is a possibility that subsurface resources could be uncovered during construction-related activities. In such an event, potentially significant impacts to previously unknown subsurface resources may occur. With the implementation of **Mitigation Measure 5-3**, the Project-specific impacts would be *Less Than Significant With Mitigation*.

Cumulative Impact Analysis: *Less Than Significant Impact With Mitigation*

The geographic area of this cumulative analysis is Tulare County.

The Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. With implementation of **Mitigation Measure 5-3**, potential Project-specific impacts would be reduced to less than significant levels. Therefore, the Project's cumulative impacts would be *Less Than Significant With Mitigation*.

Mitigation Measure:

5-3 Consistent with Section 7050.5 of the California Health and Safety Code and (CEQA Guidelines) Section 15064.5, if human remains of Native American origin are discovered during project construction, it is necessary to comply with State laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (Public Resources Code Sec. 5097). In the event of the accidental [that is, unanticipated] discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:

- 1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:**
 - a. The Tulare County Coroner/Sheriff must be contacted to determine that no investigation of the cause of death is required; and**
 - b. If the coroner determines the remains to be Native American:**

- i. The coroner shall contact the Native American Heritage Commission within 24 hours.
 - ii. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.
 - iii. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code section 5097.98, or
2. Where the following conditions occur, the landowner or his/her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.
 - a. The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.
 - b. The descendant fails to make a recommendation; or
 - c. The landowner or his authorized representative rejects the recommendation of the descendent.

Conclusion:

Less Than Significant Impact With Mitigation

With implementation of the **Mitigation Measure 5-3**, Project-specific and cumulative impacts related to this Checklist Item would be reduced to *Less Than Significant With Mitigation*.

DEFINITIONS

Definitions

California Historical Landmarks – The Office of Historic Preservation defines California Historical Landmarks as “buildings, structures, sites, or places that have been determined to have statewide historical significance by meeting at least one of the criteria listed below:

- The first, last, only, or most significant of its type in the state or within a large geographic region (Northern, Central, or Southern California).
- Associated with an individual or group having a profound influence on the history of California.
- A prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in a region of a pioneer architect, designer or master builder.”²¹

California Historical Resources Information System (CHRIS) - The CHRIS consists of the Office of Historic Preservation (OHP), the nine Information Centers (ICs), and the State Historical Resources Commission (SHRC). The OHP administers and coordinates the CHRIS and presents proposed CHRIS policies to the SHRC, which approves these policies in public meetings. The CHRIS Inventory includes the State Historic Resources Inventory maintained by the OHP as defined in California Public Resources Code § 5020.1(p), and the larger number of resource records and research reports managed under contract by the nine ICs. Different parts of the CHRIS Inventory are a combination of paper documents and maps and digital files (whether submitted digitally or converted to that format by the CHRIS). The collective information managed electronically in the CHRIS Inventory is generally referred to as the CHRIS Database.²²

California Register – “The State Historical Resources Commission has designed this program for use by state and local agencies, private groups and citizens to identify, evaluate, register and protect California's historical resources. The Register is the authoritative guide to the state's significant historical and archeological resources. The California Register program encourages public recognition and protection of resources of architectural, historical, archeological and cultural significance, identifies historical resources for state and local planning purposes, determines eligibility for state historic preservation grant funding and affords certain protections under the California Environmental Quality Act.”²³

Historical Resources – As defined in CEQA Guidelines §15064.5(a); see the “CEQA Guidelines: Historical Resources Definition” section of this DEIR. The Office of Historic Preservation defines historical resources as “buildings, structures, objects, historic and archeological sites, landscapes, districts, and all manner of properties associated with past human activities.”²⁴

²¹ Office of Historic Preservation. California Historical Landmarks website http://ohp.parks.ca.gov/?page_id=21387 accessed September, 2017.

²² Office of Historic Preservation. About the CHRIS website http://ohp.parks.ca.gov/?page_id=1068 accessed September, 2017.

²³ Office of Historic Preservation. About the CHRIS website http://www.ohp.parks.ca.gov/?page_id=21238 accessed September, 2017.

²⁴ Office of Historic Preservation. About the CHRIS Inventory website http://ohp.parks.ca.gov/?page_id=28063 accessed September, 2017.

Abbreviations and Acronyms

CEQA	California Environmental Quality Act
CHRIS	California Historical Resources Information System
CRHR	California Register of Historical Resources
DEIR	Draft Environmental Impact Report
HABS/HAER	Historic American Building Survey/Historic American Engineering Record
HRI	Historical Resources Inventory database
NHPA	National Historic Preservation Act of 1966
OHP	Office of Historic Preservation
SHPO	State Historic Preservation Office

REFERENCES

CEQA & Historical Resources, *CEQA Technical Advice Series*, which was accessed at:
<http://ceres.ca.gov/ceqa/more/tas/page3.html>

CEQA Guidelines 15064.5

California Public Resources Code Section 21084.1

Tulare County General Plan 2030 Update Recirculated Draft EIR (SCH # 2006041162).

Advisory Council on Historic Preservation, which were accessed September, 2017 at:
National Historic Preservation Program: Overview: <http://www.achp.gov/overview.html>.
National Register Evaluation Criteria: <http://www.achp.gov/nrcriteria.html>.
State Historic Preservation Officers: <http://www.achp.gov/shpo.html>.

California State Parks, Office of Historic Preservation, which were accessed September, 2017 at:
About the CHRIS: http://ohp.parks.ca.gov/?page_id=1068.
About the CHRIS Inventory: http://ohp.parks.ca.gov/?page_id=28063.
California Historical Landmarks: http://ohp.parks.ca.gov/?page_id=21387.
California Register: http://www.ohp.parks.ca.gov/?page_id=21238.
Mission and Responsibilities: http://ohp.parks.ca.gov/?page_id=1066

Geology and Soils

Chapter 3.6

SUMMARY OF FINDINGS

The proposed Project will result in *Less Than Significant Impact* related to Geology and Soils. Geological, Hydrological & Sustainability Report has been prepared for this Project and is included in Appendix “E” of this DEIR. The impact analyses and determinations in this chapter are based upon information obtained from the Geological, Hydrological & Sustainability Report along with the references listed at the end of this chapter. A detailed review of potential impacts is provided in the analysis as follows.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Geology and Soils. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in 15126.2(a), “[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas.”¹

¹ CEQA Guidelines, Section 15126.2.

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Sequoia Drive-In Business Park Project

The environmental setting provides a description of the Geology and Soils in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, the Tulare County General Plan Background Report and/or the Tulare County General Plan Revised DEIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item.

- Located on a fault line
- Hazard to people or property
- Project subject to landslides
- Located on a liquefaction zone

ENVIRONMENTAL SETTING

“Seismicity varies greatly between the two major geologic provinces represented in Tulare County. The Central Valley is an area of relatively low tectonic activity bordered by mountain ranges on either side. The Sierra Nevada Mountains, partially located within Tulare County, are the result of movement of tectonic plates which resulted in the creation of the mountain range. The Coast Range on the west side of the Central Valley is also a result of these forces, and the continued uplifting of Pacific and North American tectonic plates continues to elevate these ranges. The remaining seismic hazards in Tulare County generally result from movement along faults associated with the creation of these ranges.”²

“Earthquakes are typically measured in terms of magnitude and intensity. The most commonly known measurement is the Richter Scale, a logarithmic scale which measures the strength of a quake. The Modified Mercalli Intensity Scale measures the intensity of an earthquake as a function of the following factors:

- Magnitude and location of the epicenter;
- Geologic characteristics;
- Groundwater characteristics;
- Duration and characteristic of the ground motion;
- Structural characteristics of a building.”³

“Faults are the indications of past seismic activity. It is assumed that those that have been active most recently are the most likely to be active in the future. Recent seismic activity is measured in geologic terms. Geologically recent is defined as having occurred within the last two million

² Tulare County General Plan 2030 Update, *Background Report*. Page 8-5.

³ Ibid.

years (the Quaternary Period). All faults believed to have been active during Quaternary time are considered “potentially active.”⁴

“Settlement can occur in poorly consolidated soils during groundshaking. During settlement, the soil materials are physically rearranged by the shaking and result in reduced stabling alignment of the individual minerals. Settlement of sufficient magnitude to cause significant structural damage is normally associated with rapidly deposited alluvial soils, or improperly founded or poorly compacted fill. These areas are known to undergo extensive settling with the addition of irrigation water, but evidence due to groundshaking is not available. Fluctuating groundwater levels also may have changed the local soil characteristics. Sufficient subsurface data is lacking to conclude that settlement would occur during a large earthquake; however, the data is sufficient to indicate that the potential exists in Tulare County.”⁵

“Liquefaction is a process whereby soil is temporarily transformed to a fluid form during intense and prolonged groundshaking. Areas most prone to liquefaction are those that are water saturated (e.g., where the water table is less than 30 feet below the surface) and consist of relatively uniform sands that are low to medium density. In addition to necessary soil conditions, the ground acceleration and duration of the earthquake must be of sufficient energy to induce liquefaction. Scientific studies have shown that the ground acceleration must approach 0.3g before liquefaction occurs in a sandy soil with relative densities typical of the San Joaquin alluvial deposits. Liquefaction during major earthquakes has caused severe damage to structures on level ground as a result of settling, tilting, or floating. Such damage occurred in San Francisco on bay-filled areas during the 1989 Loma Prieta earthquake, even though the epicenter was several miles away. If liquefaction occurs in or under a sloping soil mass, the entire mass may flow toward a lower elevation, such as that which occurred along the coastline near Seward, Alaska during the 1964 earthquake. Also of particular concern in terms of developed and newly developing areas are fill areas that have been poorly compacted.”⁶

Earthquake Hazards

“Groundshaking is the primary seismic hazard in Tulare County because of the county’s seismic setting and its record of historical activity. Thus, emphasis focuses on the analysis of expected levels of groundshaking, which is directly related to the magnitude of a quake and the distance from a quake’s epicenter. Magnitude is a measure of the amount of energy released in an earthquake, with higher magnitudes causing increased groundshaking over longer periods of time, thereby affecting a larger area. Groundshaking intensity, which is often a more useful measure of earthquake effects than magnitude, is a qualitative measure of the effects felt by population. The valley portion of Tulare County is located on alluvial deposits, which tend to experience greater groundshaking intensities than areas located on hard rock. Therefore, structures located in the valley will tend to suffer greater damage from groundshaking than those located in the foothill and mountain areas. However, existing alluvium valleys and weathered or decomposed zones are scattered throughout the mountainous portions of the county which could also experience stronger intensities than the surrounding solid rock areas. The geologic

⁴ Tulare County General Plan 2030 Update, *Background Report*. Page 8-5.

⁵ Ibid. 8-9.

⁶ Ibid.

characteristics of an area can therefore be a greater hazard than its distance to the epicenter of the quake.”⁷

“There are three faults within the region that have been, and will be, principal sources of potential seismic activity within Tulare County. These faults are described below:

- **San Andreas Fault.** The San Andreas Fault is located approximately 40 miles west of the Tulare County boundary. This fault has a long history of activity, and is thus the primary focus in determining seismic activity within the county. Seismic activity along the fault varies along its span from the Gulf of California to Cape Mendocino. Just west to Tulare County lies the “Central California Active Area,” where many earthquakes have originated.
- **Owens Valley Fault Group.** The Owens Valley Fault Group is a complex system containing both active and potentially active faults, located on the eastern base of the Sierra Nevada Mountains. The Group is located within Tulare and Inyo Counties and has historically been the source of seismic activity within Tulare County.
- **Clovis Fault.** The Clovis Fault is considered to be active within the Quaternary Period (within the past two million years), although there is no historic evidence of its activity, and is therefore classified as “potentially active.” This fault lies approximately six miles south of the Madera County boundary in Fresno County. Activity along this fault could potentially generate more seismic activity in Tulare County than the San Andreas or Owens Valley fault systems. In particular, a strong earthquake on the Fault could affect northern Tulare County. However, because of the lack of historic activity along the Clovis Fault, inadequate evidence exists for assessing maximum earthquake impacts.”⁸ “Older buildings constructed before current building codes were in effect, and even newer buildings constructed before earthquake resistance provisions were included in the current building codes, are most likely to suffer damage in an earthquake. Most of Tulare County’s buildings are no more than one or two stories in height and are of wood frame construction, which is considered the most structurally resistant to earthquake damage. Older masonry buildings (without earthquake-resistance reinforcement) are the most susceptible to structural failure, which causes the greatest loss of life. The State of California has identified unreinforced masonry buildings as a safety issue during earthquakes. In high risk areas (Bay Area) inventories and programs to mitigate this issue are required. Because Tulare County is not a high risk area, state law only recommends that programs to retrofit URM’s are adopted by jurisdictions.”⁹

Soils and Liquefaction

“The San Joaquin Valley portion of Tulare County is located on alluvial deposits, which tend to experience greater groundshaking intensities than areas located on hard rock. Therefore, structures located in the valley will tend to suffer greater damage from groundshaking than those

⁷Tulare County General Plan 2030 Update, *Background Report*. Page 8-7.

⁸ Ibid. 8-6 to 8-7.

⁹ Ibid. 8-8.

located in the foothill and mountain areas. However, existing alluvium valleys and weathered or decomposed zones are scattered throughout the mountainous portions of the county which could also experience stronger intensities than the surrounding solid rock areas. The geologic characteristics of an area can therefore be a greater hazard than its distance to the epicenter of the quake.”¹⁰

“No specific countywide assessments to identify liquefaction hazards have been performed in Tulare County. Areas where groundwater is less than 30 feet below the surface occur primarily in the valley. However, soil types in the area are not conducive to liquefaction because they are either too coarse or too high in clay content. Areas subject to 0.3g acceleration or greater are located in a small section of the Sierra Nevada Mountains along the Tulare-Inyo County boundary. However, the depth to groundwater in such areas is greater than in the valley, which would minimize liquefaction potential as well. Detailed geotechnical engineering investigations would be necessary to more accurately evaluate liquefaction potential in specific areas and to identify and map the areal extent of locations subject to liquefaction.”¹¹

Landslides

“Landslides are a primary geologic hazard and are influenced by four factors:

- Strength of rock and resistance to failure, which is a function of rock type (or geologic formation);
- Geologic structure or orientation of a surface along which slippage could occur;
- Water (can add weight to a potentially unstable mass or influence strength of a potential failure surface); and,
- Topography (amount of slope in combination with gravitation forces).”¹²

Site Specifics

“The site is located within the Central Valley of California, that is a structural trough about 400 miles long, 20 to 70 miles wide, and extends over 20,000 square miles. Older igneous, metamorphic, and sedimentary rocks form the surrounding mountain ranges that bound the Central Valley. The valley is filled with marine and continental sediments, which are the result of inundation by the ocean and erosion from the surrounding mountains. Approximately 5-miles east of the Site, the Sierra Nevada Mountain Range is exposed at its western base above the dissected uplands and alluvial fans that gradationally contact the unconsolidated and consolidated alluvial sediments of the Central Valley.

The Site is located on unconsolidated alluvial and flood plain deposits of major rivers that flow in the valley from the surrounding mountains. These sediments are relatively flat to gently rolling and generally below an elevation of 500-feet (USGS, 1995).

¹⁰ Tulare County General Plan 2030 Update, *Background Report*. Page 8-7.

¹¹ Ibid. 8-9.

¹² Op. Cit. 8-10.

General geologic structures include folds, faults, joints, metamorphic core complexes, basin, domes, and unconformities. Folds, joints, metamorphic core complexes, basins, domes and unconformities are primarily related to deformation of consolidated sedimentary rocks or igneous and metamorphic rocks.”¹³

The proposed Project site is entirely made up of Nord fine sandy loam, 0 to 2 percent slopes. These soils are well drained and have a very low ability to store water.”¹⁴

REGULATORY SETTING

Federal Agencies & Regulations

None that apply to the proposed Project.

State Agencies & Regulations

Seismic Hazards Mapping Act

“Under the Seismic Hazards Mapping Act, the State Geologist is responsible for identifying and mapping seismic hazards zones as part of the California Geologic Survey (CGS). The CGS provides zoning maps of non-surface rupture earthquake hazards (including liquefaction and seismically induced landslides) to local governments for planning purposes. These maps are intended to protect the public from the risks associated with strong ground shaking, liquefaction, landslides or other ground failure, and other hazards caused by earthquakes. For projects within seismic hazard zones, the Seismic Hazards Mapping Act requires developers to conduct geological investigations and incorporate appropriate mitigation measures into project designs before building permits are issued.”¹⁵

California Building Code

“The California Building Code is another name for the body of regulations known as the California Code of Regulations (C.C.R.), Title 24, Part 2, which is a portion of the California Building Standards Code. Title 24 is assigned to the California Building Standards Commission, which, by law, is responsible for coordinating all building standards.”¹⁶

Alquist-Priolo Earthquake Fault Zoning Act

“The Alquist- Priolo Earthquake Fault Zoning Act (formerly the Alquist- Priolo Special Studies Zone Act), signed into law December 1972, requires the delineation of zones along active faults

¹³ Geological, Hydrological & Sustainability Report for Sequoia Drive-in Business Park. Page 4. Prepared by 4Creeks, Inc. and included in Appendix “E” of this DEIR.

¹⁴ Ibid. Appendix A – Natural Resource Conservation Web Soil Survey. Page 12.

¹⁵ Tulare County General Plan 2030 Update, *Background Report*. 8-10.

¹⁶ Ibid.

in California. The purpose of the Alquist-Priolo Act is to regulate development on or near active fault traces to reduce the hazards associated with fault rupture and to prohibit the location of most structures for human occupancy across these traces.”¹⁷

Local Policy & Regulations

Tulare County General Plan Policies

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the proposed Project are listed below.

ERM-7.2 Soil Productivity - The County shall encourage landowners to participate in programs that reduce soil erosion and increase soil productivity. To this end, the County shall promote coordination between the Natural Resources Conservation Service, Resource Conservation Districts, UC Cooperative Extension, and other similar agencies and organizations.

ERM-7.3 Protection of Soils on Slopes - Unless otherwise provided for in this General Plan, building and road construction on slopes of more than 30 percent shall be prohibited, and development proposals on slopes of 15 percent or more shall be accompanied by plans for control or prevention of erosion, alteration of surface water runoff, soil slippage, and wildfire occurrence.

HS-2.1 Continued Evaluation of Earthquake Risks - The County shall continue to evaluate areas to determine levels of earthquake risk.

HS-2.4 Structure Siting - The County shall permit development on soils sensitive to seismic activity permitted only after adequate site analysis, including appropriate siting, design of structure, and foundation integrity.

HS-2.7 Subsidence - The County shall confirm that development is not located in any known areas of active subsidence. If urban development may be located in such an area, a special safety study will be prepared and needed safety measures implemented. The County shall also request that developments provide evidence that its long-term use of ground water resources, where applicable, will not result in notable subsidence attributed to the new extraction of groundwater resources for use by the development.

HS-2.8 Alquist-Priolo Act Compliance - The County shall not permit any structure for human occupancy to be placed within designated Earthquake Fault Zones (pursuant to and as determined by the Alquist-Priolo Earthquake Fault Zoning Act; Public Resource code, Chapter 7.5) unless the specific provision of the Act and Title 14 of the California Code of Regulations have been satisfied.

¹⁷ Ibid. 8-3.

IMPACT EVALUATION

Would the project:

- a. **Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:**
 - i) **Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.**

Project Impact Analysis:

Less Than Significant Impact

“There have been no past or present indications of faults occurring at the Site. The closest fault is the Pond Fault located approximately 40-miles south-southwest of the Site near the Hamlet of Pond, California. Based on California Divisions of Mines and Geology (CDMG), the Pond fault is a 2/3-mile wide zone of northwesterly trending normal faults, downthrown to the southwest and dipping approximately 50 to 70 degrees (Smith, 1983). The CDMG postulates that groundwater withdrawal and subsequent subsidence in the 1970’s and 1980’s initiated creep along the dip-slip fault surface. Six small earthquake epicenters were located within 6 miles of the Pond fault. The CDMG report concluded the Pond fault might be seismically active but could not conclude with certainty.

From the project location there are currently no active faults within 40 to 50 miles based on the Department of Conservation’s Alquist-Priolo (AP) maps. As of January 2010, Tulare County is not affected by Alquist Priolo Earthquake Fault Zones (CDC, 2016). According to the 2012 Tulare County General Plan 2030 Update, there is no presence of active faults within the county where the effects of large earthquakes are felt. Faults with potential seismic activity include the San Andreas, Owens Valley, and Clovis Faults (Tulare County General Plan Background Report, 2010 and Recirculated Draft, 2010). The Owens Valley Fault group located west of the project is said to be the source of seismic activity in the past.”¹⁸

According to the Five County Seismic Safety Element (FCSSE), Tulare County is located in the V-1 zone. This zone includes most of the eastern San Joaquin Valley, and is characterized by a relatively thin section of sedimentary rock overlying a granitic basement. Amplification of shaking that would affect low to medium-rise structures is relatively high, but the distance of the faults that are expected sources of the shaking is sufficiently great that the effects should be minimal. The requirements of Zone II of the Uniform Building Code should be adequate for normal facilities.¹⁹ Therefore, any

¹⁸ Geological, Hydrological & Sustainability Report for Sequoia Drive-in Business Park. Prepared by 4Creeks, Inc. Page 5. See Appendix “E” of this DEIR.

¹⁹ Five County Seismic Safety Element, Summary & Policy Recommendations II. Pages 3 and 15.

impacts resulting from the rupture of a known earthquake fault would be ***Less Than Significant***.

ii) Strong seismic ground shaking?

Project Impact Analysis: ***Less Than Significant Impact***

“The geological hazard features surrounding the proposed property of concern, pertain to the active faults found near the site. From 1950 through 2012, there have been zero (0) state and federal declared earthquake disasters in Tulare County (SHMP, 2013).”²⁰

“...the probability of an earthquake with magnitude > 6.0 within 30 years & 50 kilometers (31 miles) from the site is between 4% and 6%. Based on the distance and probability of magnitude 6.0 or greater at the site, there is a less than significant potential for impact from strong seismic shaking.”²¹

Therefore, seismic ground shaking on the Project would result in a less than ***Less Than Significant Impact***.

iii) Seismic-related ground failure, including liquefaction?

Project Impact Analysis: ***No Impact***

“Liquefaction is a failure mechanism in water-saturated, well sorted fine sands. Liquefaction occurs as a result of rearrangement of sand grains. Shaking or vibration can cause the grains to rearrange to a denser soil thus decreasing porosity leaving excess water in the interstices. The grains no longer support the overburden and the soil behaves as a liquid. If the soil mass is saturated and the water cannot escape, the material turns into a viscous fluid that can damage foundations or generate slope failures. This is normally caused by earthquakes. Liquefaction generally occurs in areas with shallow water tables or near waterbodies. Based on soil types and depth to groundwater beneath the site, liquefaction potential will be very low...”²²

As such, there would be ***No Impact*** caused by seismic-related ground failure, including liquefaction.

iv) Landslides?

Project Impact Analysis: ***No Impact***

²⁰ Geological, Hydrological & Sustainability Report for Sequoia Drive-in Business Park. Page 5. Prepared by 4Creeks, Inc. See Appendix “E” of this DEIR.

²¹ Ibid.

²² Op. Cit. 6.

Topography of the site is relatively flat sloping down to the west less than approximately 0.2%. The nearest naturally formed slopes are foothills located approximately four miles northeast of the site. Potential for slope failure from these nearby hills to affect the site are unlikely. The NRCS Web Soil Survey Report in Appendix “A” of this DEIR indicates the site has a representative slope rating of 1.0. Based on this slope rating, the site is listed as “Nearly Level”. Potential for on or off-site landslides or lateral spreading is very low based on topography of the site.²³

Therefore, there would be ***No Impact*** on the Project site due to landslides.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and the Tulare County 2030 General Plan EIR.

With ***Less Than Significant*** Project-specific impacts, a ***Less Than Significant Cumulative Impact*** will also occur.

Mitigation Measures: ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, implementation of the proposed Project will not cause a significant impact to this Checklist Item. A ***Less Than Significant Cumulative Impact*** is anticipated and no mitigation is required.

b) Result in substantial soil erosion or the loss of topsoil?

Project Impact Analysis: ***Less Than Significant Impact***

“Erosion is the wearing away of soil or rock by natural occurrence and transportation of these materials from one location to another. Common causes of erosion include wind and water. The Natural Resource Conservation Web Soil Survey in Appendix A lists the Nord fine sandy loam as surface soil covering the entire Site. Less dense, finer grained soil particles are more susceptible to erosion than denser, coarser particles. The web soil survey report in Appendix A lists soils at the site as having “slight” susceptibility with little or no potential for erosion.”²⁴

As such, the impact will be ***Less Than Significant***. No mitigation is required.

²³ Geological, Hydrological & Sustainability Report for Sequoia Drive-in Business Park. Page 7. Prepared by 4Creeks, Inc. See Appendix “E” of this DEIR.

²⁴ Ibid.

Cumulative Impact Analysis:

Less Than Significant Impact

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and the Tulare County 2030 General Plan EIR.

The proposed Project site is not located on slope or adjacent to a designated waterway. The proposed Project also does not involve changes that will affect off-site hillsides or designated waterways. Therefore, a *Less Than Significant Impact* related to this Checklist Item will occur.

Mitigation Measures:

None required.

Conclusion:

Less Than Significant Impact

Implementation of the proposed Project will not cause a significant impact, potential Project-specific impacts related to this Checklist Item will be reduced to a level considered *Less Than Significant* and *No Cumulative Impact* related to this Checklist Item will occur.

- c) **Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?**

Project Impact Analysis:

Less Than Significant Impact

“...topography of the site is relatively flat sloping down to the west less than approximately 0.2%. The nearest naturally formed slopes are foothills located approximately four miles north-east of the site. Potential for slope failure from these nearby hills to affect the site are unlikely. The NRCS Web Soil Survey Report in Appendix “A” of this DEIR indicates the site has a representative slope rating of 1.0. Based on this slope rating, the site is listed as “Nearly Level”. Potential for on or off-site landslides or lateral spreading is very low based on topography of the site.

According to NRCS, the site is located on the Nord fine sandy loam. On June 3, 2015, CTL-See’s drilled soils borings with a hollow stem auger drilling rig. Soils were visually classified. Soil types at the site were logged according to the Unified Soil Classification System (USCS) and generally include silty sands, sandy silts, and sands. Borings were conducted to a maximum depth of 51.5’ from the existing ground surface where groundwater was not encountered during the field investigation.”²⁵

Subsidence is characterized as the settling of the ground surface with minimal horizontal change. Often this is caused through the extraction of natural resources found below the surface including water, natural gas, and oil. As of now the Kaweah River Basin is

²⁵ Geological, Hydrological & Sustainability Report for Sequoia Drive-in Business Park. Page 7. Prepared by 4Creeks, Inc. See Appendix “E” of this DEIR.

considered to be in an overdraft. This was based on the findings in the Water Resources Investigation of the Kaweah Delta Water Conservation District report (Fugro, 2003). Based on the site investigations and findings from the Department of Water Resources (DWR), the groundwater surface elevations are decreasing. Regional subsidence throughout the San Joaquin Valley, including the area underneath the site is experiencing subsidence resultant from regional groundwater pumping. This may potentially have an impact on the properties susceptibility to subsidence.

A continuous Global Positioning System (GPS) station (P566) is located on the west border of the site. Subsidence data from station P566 indicate a total subsidence of approximately 120 millimeters (4.7 inches) from November, 2005 through April, 2016. Subsidence affecting the site is regional in scale and is attributed to groundwater overdraft throughout the Central Valley. Although the site may be affected by regional scale subsidence, it is not anticipated that the effects of the subsidence will significantly affect the site in particular.

Compaction of site soil during construction is expected to take place within three to five feet of the surface. It is not anticipated that compactive efforts during construction will contribute to collapse of naturally deposited soils beneath the site.”²⁶

Therefore, the Project would result in a *Less Than Significant Impact*.

Cumulative Impact Analysis: *Less Than Significant Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and the Tulare County 2030 General Plan EIR.

Engineered soil compaction will only occur in areas where development will occur, and as such, a *Less Than Significant Cumulative Impact* related to this Checklist Item will occur.

Mitigation Measures: *None required.*

Conclusion: *Less Than Significant Impact*

As noted earlier, the Project-specific or Cumulative Impacts related to this Checklist Item will be *Less Than Significant Impact*.

- d) **Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?**

Project Impact Analysis: *Less Than Significant Impact*

²⁶ Geological, Hydrological & Sustainability Report for Sequoia Drive-in Business Park. Page 8. Prepared by 4Creeks, Inc. See Appendix “E” of this DEIR.

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“Based on Table 18-1-B of the 1994 Uniform Building Code, soils with an expansion index less than 20 have very low expansion potential. There are no known instances of expansive soils in direct proximity to the site. Soil types encountered during the May 2015 field investigation by CTL-SEE’s included sands and silty sands with the exception of a sandy clay in the northwest corner of the site. Given the soil types at the site and no known instances of expansive soils in the area, significant shrink-swell behavior is not anticipated at the site.”²⁷

Therefore, a ***Less Than Significant Impact*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and the Tulare County 2030 General Plan EIR.

The proposed Project site is not located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994). As such, the proposed Project will not create a risk to life or property related to this Checklist Item throughout any stage of the Project’s life span. Therefore, the Project would result in a ***Less Than Significant Impact***.

Mitigation Measures: ***None required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, any Project Specific or Cumulative Impacts related to this Checklist Item will be considered ***Less Than Significant Impact***.

- e) **Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?**

Project Impact Analysis: ***Less Than Significant Impact***

“Soils at the site such as sands and silty sands have characteristics favorable to septic tank or alternative waste water disposal systems. The site is located in an area with a mix of suburban and rural properties, many of these utilizing septic tanks systems or alternative waste water disposal systems.”²⁸ As such, a ***Less Than Significant Project-specific Impact*** to this Checklist Item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

²⁷ Geological, Hydrological & Sustainability Report for Sequoia Drive-in Business Park. Page 8. Prepared by 4Creeks, Inc. See Appendix “E” of this DEIR.

²⁸ Ibid. 9.

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and the Tulare County 2030 General Plan EIR. ***Less Than Significant Cumulative Impacts*** will occur.

Mitigation Measure

None Required

Conclusion:

Less Than Significant Impact

As noted earlier, ***Less Than Significant Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

DEFINITIONS

Fault - “A fault is a fracture in the Earth’s crust that is accompanied by displacement between the two sides of the fault. An active fault is defined as a fracture that has shifted in the last 10,000 to 12,000 years (Holocene Period). A potentially active fault is one that has been active in the past 1.6 million years (Quaternary Period). A sufficiently active fault is one that shows evidence of Holocene displacement on one or more of its segments or branches (Hart, 1997).”²⁹

Liquefaction - “Liquefaction in soils and sediments occurs during earthquake events, when soil material is transformed from a solid state to a liquid state, generated by an increase in pressure between pore space and soil particles. Earthquake-induced liquefaction typically occurs in low-lying areas with soils or sediments composed of unconsolidated, saturated, clay-free sands and silts, but it can also occur in dry, granular soils or saturated soils with partial clay content.”³⁰

Magnitude - “Earthquake magnitude is measured by the Richter scale, indicated as a series of Arabic numbers with no theoretical maximum magnitude. The greater the energy released from the fault rupture, the higher the magnitude of the earthquake. Magnitude increases logarithmically in the Richter scale; thus, an earthquake of magnitude 7.0 is thirty times stronger than one of magnitude 6.0. Earthquake energy is most intense at the point of fault slippage, the epicenter, which occurs because the energy radiates from that point in a circular wave pattern. Like a pebble thrown in a pond, the increasing distance from an earthquake’s epicenter translates to reduced ground shaking.”³¹

²⁹ Tulare County General Plan 2030 Update, *Background Report*. Page 8-2.

³⁰ Ibid.

³¹ Ibid.

REFERENCES

CEQA Guidelines Section 15126.2

Five County Seismic Safety Element, Summary & Policy Recommendations II, Pages 3 and 15.

Geological, Hydrological & Sustainability Report for Sequoia Drive-in Business Park. Pages 4, 5, 6, 7, 8, and 9. Prepared by 4Creeks, Inc. and included as Appendix “E” of this DEIR.

Geological, Hydrological & Sustainability Report for Sequoia Drive-in Business Park. Prepared by 4Creeks, Inc. Appendix A – Natural Resource Conservation Web Soil Survey, Page 12. See Appendix “E” of this DEIR.

Tulare County General Plan 2030 Update, Background Report, Pages 8-2, 8-3, 8-5, 8-6, 8-7, 8-8, 8-9, and 8-10.

Greenhouse Gas Emissions

Chapter 3.7

SUMMARY OF FINDINGS

The proposed Project will result in a *Less Than Significant Impact* related to Greenhouse Gas (GHG) Emissions. The impact determinations in this chapter are based upon information obtained from the References listed at the end of this chapter, as well as information contained in the Greenhouse Gas Analysis Report, provided in Appendix “F” of this DEIR. A detailed review of potential impacts is provided in the analysis below.

California Environmental Quality Act (CEQA) Requirements

CEQA Guidelines Section 15064.4 Determining the Significance of Impacts from Greenhouse Gas Emissions

- “(a) The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:
- (1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use. The lead agency has discretion to select the model or methodology it considers most appropriate provided it supports its decision with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use; and/or
 - (2) Rely on a qualitative analysis or performance based standards.
- (b) A lead agency should consider the following factors, among others, when assessing the significance of impacts from greenhouse gas emissions on the environment:
- (1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;
 - (2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
 - (3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the projects incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are

still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.”¹

ENVIRONMENTAL SETTING

“Gases that trap heat in the atmosphere are called greenhouse gases (GHGs). The major concern is that increases in GHGs are causing global climate change. Global climate change is a change in the average weather on earth that can be measured by wind patterns, storms, precipitation and temperature. The gases believed to be most responsible for global warming are water vapor, carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydro fluorocarbons (HFCs), per fluorocarbons (PFCs), and sulfur hexafluoride (SF₆).”²

In 2007, Tulare County generated approximately 5.2 million tonnes of Carbon Dioxide Equivalent (CO₂e). The largest portion of these emissions (63 percent) is attributed to dairies/feedlots, while the second largest portion (16 percent) is from mobile sources as seen in **Table 3.7-1**.³

Table 3.7-1		
Emissions by Sector in 2007⁴		
Sector	CO₂e (tonnes/year)	% of Total
Electricity	542,690	11%
Natural Gas	321,020	6%
Mobile Sources	822,230	16%
Dairy/Feedlots	3,294,870	63%
Solid Waste	227,250	4%
Total	5,208,060	100%
Per Capita	36.1	

“Per capita emissions in 2007 were approximately 36 tonnes of CO₂e per resident. In 2030, Tulare County is forecast to generate approximately 6.1 million tonnes of CO₂e. The largest portion of these emissions (59 percent) is attributed to dairies/feedlots, while the second largest portion (20 percent) is from the mobile sources.”⁵

“Climate change is having a profound impact on California water resources, as evidenced by changes in snowpack, sea level and river flows. These changes are expected to continue in the future and more of our precipitation will likely fall as rain instead of snow. This potential change in weather patterns will exacerbate flood risks and add additional challenges for water supply reliability.

¹ CEQA Guidelines, Section 15064.4

² Tulare County General Plan 2030 Update, *Background Report*. Pages 6-19 to 6-20.

³ Ibid. 6-36.

⁴ Op. Cit. 6-38.

⁵ Op. Cit.

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The mountain snowpack provides as much as a third of California's water supply by accumulating snow during our wet winters and releasing it slowly when we need it during our dry springs and summers. Warmer temperatures will cause what snow we do get to melt faster earlier, making it more difficult to store and use. By the end of this century, the Sierra snowpack is projected to experience a 48-65 percent loss from the historical April 1st average. This loss of snowpack means less water will be available for Californians to use."⁶

Thresholds of Significance

"The San Joaquin Valley Air Pollution Control District proposes the following process... for determining the cumulative significance of project specific GHG emissions on global climate change when issuing permits for stationary source projects."⁷

- "Projects complying with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the project is located would be determined to have a less than significant individual and cumulative impact for GHG emissions. Such plans or programs must be specified in law or approved by the lead agency with jurisdiction over the affected resource and supported by a CEQA compliant environmental review document adopted by the lead agency. Projects complying with an approved GHG emission reduction plan or GHG mitigation program would not be required to implement BPS."⁸
- "Projects not implementing Best Performance Standards would require quantification of project specific GHG emissions and demonstration that project specific GHG emissions would be reduced or mitigated by at least 29%, compared to BAU, including GHG emission reductions achieved since the 2002-2004 baseline period, consistent with GHG emission reduction targets established in ARB's AB 32 Scoping Plan. Projects achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG."⁹
- "Projects requiring preparation of an Environmental Impact Report would require quantification of project specific GHG emissions. Projects implementing BPS or achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG."¹⁰

REGULATORY SETTING

Federal Agencies & Regulations

U.S. Environmental Protection Agency

Greenhouse Gas Endangerment Findings: "On December 7, 2009, the Administrator signed two distinct findings regarding GHG emissions under Section 202(a) of the Clean Air Act:

⁶ California Department of Water Resources. Climate Change. <http://www.water.ca.gov/climatechange/>. Accessed July 2017.

⁷ San Joaquin Valley Air Pollution Control District. District Policy, Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as Lead Agency. Page 8.

⁸ Ibid.

⁹ Op. Cit. 9.

¹⁰ Op. Cit.

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- **Endangerment Finding:** The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases – carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆) – in the atmosphere threaten the public health and welfare of current and future generations.
- **Cause or Contribute Finding:** The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare.

These findings do not themselves impose any requirements on industry or other entities. However, this action was a prerequisite for implementing greenhouse gas emissions standards for vehicles.”¹¹

Mandatory Reporting for Greenhouse Gases: “This regulation requires reporting of GHG emissions from large sources and suppliers in the United States. Any facility that emits 25,000 metric tons or more per year of GHG emissions are required to submit annual reports to the EPA.”¹²

State Agencies & Regulations

California Clean Air Act

“The California Clean Air Act (California CAA) of 1988 establishes an air quality management process that generally parallels the federal process. The California CAA, however, focuses on attainment of the State ambient air quality standards, which, for certain pollutants and averaging periods, are more stringent than the comparable federal standards. Responsibility for meeting California’s standards is addressed by the CARB and local air pollution control districts (such as the eight county SJVAPCD, which administers air quality regulations for Tulare County). Compliance strategies are presented in district-level air quality attainment plans.”¹³

Executive Order S-3-05

“In 2005, in recognition of California’s vulnerability to the effects of climate change, Governor Schwarzenegger issued Executive Order S-3-05, which sets forth a series of target dates by which statewide emission of GHGs would be progressively reduced, as follows:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

¹¹ U.S. EPA. Greenhouse Gas Emissions. <https://www.epa.gov/ghgemissions/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a-clean>. Accessed July 2017.

¹² Greenhouse Gas Analysis Report for the Sequoia Drive-In Business Park in Visalia, CA. Page 21. Prepared by 4Creeks, Inc. August 2015 and included in Appendix “F” of this DEIR.

¹³ Tulare County 2030 General Plan DEIR. Pages 3.3-2 to 3.3-3.

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The Executive Order additionally ordered that the Secretary of the California Environmental Protection Agency (Cal EPA) would coordinate oversight of the efforts among state agencies made to meet the targets and report to the Governor and the State Legislature biannually on progress made toward meeting the GHG emission targets. Cal EPA was also directed to report biannually on the impacts to California of global warming, including impacts to water supply, public health, and agriculture, the coastline, and forestry, and prepare and report on mitigation and adaptation plans to combat these impacts.

In response to the Executive Order, the Secretary of Cal EPA created the Climate Action Team (CAT), composed of representatives from the Air Resources Board; Business, Transportation, & Housing; Department of Food and Agriculture; Energy Commission; California Integrated Waste Management Board (CIWMB); Resources Agency; and the Public Utilities Commission (PUC). The CAT prepared a recommended list of strategies for the state to pursue to reduce climate change emission in the state (Climate Action Team, 2006).”¹⁴

Assembly Bill 32: California Global Warming Solutions Act of 2006

“In 2006, California passed the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code Division 25.5, Sections 38500, et seq.), which requires the CARB to design and implement emission limits, regulations, and other measures, such that feasible and cost-effective statewide GHG emissions are reduced to 1990 levels by 2020.”

The bill also requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG emission reductions. The bill authorizes CARB to adopt market-based compliance mechanisms. The bill additionally requires the state board to monitor compliance with and enforce any rule, regulation, order, emission limitation, emissions reduction measure, or market-based compliance mechanism adopted by the state board, pursuant to specified provisions of existing law. The bill also authorizes CARB to adopt a schedule of fees to be paid by regulated sources of GHG emissions. Because the bill requires CARB to establish emissions limits and other requirements, the violation of which would be a crime, this bill would create a state-mandated local program.

Under AB 32, by June 30, 2007, CARB was to identify a list of discrete early action GHG reductions that will be legally enforceable by 2010. By January 1, 2008, CARB was also to adopt regulations that will identify and require selected sectors to report their statewide GHG emissions. By January 1, 2011, CARB must adopt rules and regulations to achieve the maximum technologically feasible and cost-effective reductions in GHG reductions. CARB is authorized to enforce compliance with the program that it develops.”¹⁵

Senate Bill 97

“Governor Schwarzenegger signed Senate Bill (SB) 97 (Sutton), a CEQA and GHG emission bill, into law on August 24, 2007. SB 97 requires the Governor’s Office of Planning and Research (OPR) to prepare CEQA guidelines for the mitigation of GHG emissions, including,

¹⁴ Tulare County General Plan 2030 Update, *Background Report*. Page 6-19.

¹⁵ Ibid. 6-20.

but not limited to, effects associated with transportation or energy consumption. OPR must prepare these guidelines and transmit them to the Resources Agency by July 1, 2009. On April 13, 2009, OPR submitted to the Secretary for Natural Resources its proposed amendments to the state CEQA Guidelines for greenhouse gas emissions. The Resources Agency must then certify and adopt the guidelines by January 1, 2010. OPR and the Resources Agency are required to periodically review the guidelines to incorporate new information or criteria adopted by CARB pursuant to the Global Warming Solutions Act, scheduled for 2012.

The OPR published a Technical Advisory in June of 2008 that is an “informal guidance regarding the steps lead agencies should take to address climate change in their CEQA documents” to serve in the interim until guidelines are established pursuant to SB 97 (OPR, 2008). This Advisory recommends that CEQA documents include quantification of estimated GHG emissions associated with a proposed project and that a determination of significance be made. With regard to significance the Advisory states that “lead agencies must determine what constitutes a significant impact. In the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a “significant impact”, individual lead agencies may undertake a project-by-project analysis, consistent with the available guidance and current CEQA practice.”¹⁶

Climate Change Scoping Plan

“The CARB published a *Climate Change Scoping Plan* in December 2008 that outlines reduction measures to lower the state’s GHG emissions to meet the 2020 limit. The *Scoping Plan* “proposes a comprehensive set of actions designed to reduce overall carbon emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health”. Key elements for reducing California’s GHG emissions to 1990 levels by 2020 include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, including California’s clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State’s long-term commitment to AB 32 implementation.”¹⁷

¹⁶ Op. Cit. 6-23 to 6-24.

¹⁷ Op. Cit. 6-24 to 6-25.

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The Climate Change Scoping Plan was updated in May 2014 and recognizes the same key elements discussed in the original plan. “The Update covers a range of topics:

- An update of the latest scientific findings related to climate change and its impacts, including short-lived climate pollutants.
- A review of progress-to-date, including an update of Scoping Plan measures and other state, federal, and local efforts to reduce GHG emissions in California.
- Potential technologically feasible and cost-effective actions to further reduce GHG emissions by 2020.
- Recommendations for establishing a mid-term emissions limit that aligns with the State’s long-term goal of an emissions limit 80 percent below 1990 levels by 2050.
- Sector-specific discussions covering issues, technologies, needs, and ongoing State activities to significantly reduce emissions throughout California’s economy through 2050.
- Priorities and recommendations for investment to support market and technology development and necessary infrastructure in key areas.
- A discussion of the ongoing work and continuing need for improved methods and tools to assess economic, public health, and environmental justice impacts.

Progressing towards California’s long-term climate goals will require that GHG reduction rates be significantly accelerated. Emissions from 2020 to 2050 will have to decline at more than twice the rate of that which is needed to reach the 2020 statewide emissions limit.”¹⁸

Regional Agency Policy & Regulations

California Air Resources Board

“The Air Resources Board (ARB or Board) has established State ambient air quality standards (State standards) to identify outdoor pollutant levels considered safe for the public. After State standards are established, State law requires ARB to designate each area as attainment, nonattainment, or unclassified for each State standard. The area designations, which are based on the most recent available data, indicate the healthfulness of air quality throughout the State.”¹⁹ The California Air Resources Board has prepared the 2004 Carbon Monoxide State Implementation Plan.

California Association of Air Pollution Control Officers

The California Association of Air Pollution Control Officers (CAPCOA) which represent all thirty-five local air quality agencies throughout California. CAPCOA has been in existence since 1975, and is dedicated to protecting the public health and providing clean air for all our residents and visitors to breathe, and is initiating the Greenhouse Gas Reduction Exchange.

¹⁸ Cal/EPA Air Resources Board. First Update to the Climate Change Scoping Plan. Building on the Framework Pursuant to AB 32. https://www.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf. Accessed July 2017.

¹⁹ Cal/EPA Air Resources Board, <http://www.arb.ca.gov/desig/desig.htm>. Accessed June 2017.

The Greenhouse Gas Reduction Exchange (GHG Rx) is a registry and information exchange for greenhouse gas emissions reduction credits designed specifically to benefit the state of California. The GHG Rx is a trusted source of locally generated credits from projects within California, and facilitates communication between those who create the credits, potential buyers, and funding organizations. Four public workshops have been held throughout the state including in the SJVPACD. The mission is to provide a trusted source of high quality California-based greenhouse gas credits to keep investments, jobs, and benefits in-state, through an Exchange with integrity, transparency, low transaction costs and exceptional customer service²⁰.

San Joaquin Valley Air Pollution Control District (SJVAPCD or Air District)

“The San Joaquin Valley Air District (SVJAPCD) is a public health agency whose mission is to improve the health and quality of life for all Valley residents through efficient, effective and entrepreneurial air quality-management strategies.”²¹ “The San Joaquin Valley Air Pollution Control District is made up of eight counties in California’s Central Valley: San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare and the San Joaquin Valley Air Basin portion of Kern.”²²

On December 17, 2009, the District’s Governing Board adopted the District Policy: *Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency*. The District’s Governing Board also approved the guidance document: *Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New Projects Under CEQA*. In support of the policy and guidance document, District staff prepared a staff report: *Addressing Greenhouse Gas Emissions Under the California Environmental Quality Act*.²³

The SJVAPCD determined that the quantification of GHG Emissions is expected for all projects that require an Environmental Impact Report.²⁴

This Draft EIR is relying on the guidance and expertise of the Air District in addressing GHG emissions. The following is an excerpt contained in the San Joaquin Valley Air Pollution Control District’s Guidance for Assessing and Mitigating Air Quality Impacts.

“By enacting SB 97 in 2007, California’s lawmakers expressly recognized the need to analyze greenhouse gas emissions as a part of the CEQA process. SB 97 required OPR to develop, and the Natural Resources Agency to adopt, amendments to the CEQA Guidelines addressing the analysis and mitigation of greenhouse gas emissions. Those CEQA Guidelines amendments clarified several points, including the following:

²⁰ California Air Pollution Control Officers Association. Greenhouse Gas Reduction Exchange. <http://www.ghgrx.org/>. Accessed July 2017.

²¹ San Joaquin Valley Air Pollution Control District. About the District. http://www.valleyair.org/General_info/aboutdist.htm#Mission. Accessed June 2017.

²² Ibid.

²³ These documents and the supporting staff reports are available at the District’s website: http://www.valleyair.org/Programs/CCAP/CCAP_idx.htm. Accessed July 2017.

²⁴ San Joaquin Valley Air Pollution Control District. District Policy, Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as Lead Agency. Page 6.

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- Lead Agencies must analyze the greenhouse gas emissions of proposed projects, and must reach a conclusion regarding the significance of those emissions. [See CCR §15064.4];
- When a project's greenhouse gas emissions may be significant, lead agencies must consider a range of potential mitigation measures to reduce those emissions. [See CCR §15126.4(c)];
- Lead Agencies must analyze potentially significant impacts associated with placing projects in hazardous locations, including locations potentially affected by climate change. [See CCR §15126.2(a)];
- Lead Agencies may significantly streamline the analysis of greenhouse gases on a project level by using a programmatic greenhouse gas emissions reduction plan meeting certain criteria. [See CCR §15183.5(b)];
- CEQA mandates analysis of a proposed project's potential energy use (including transportation-related energy), sources of energy supply, and ways to reduce energy demand, including through the use of efficient transportation alternatives. (See CEQA Guidelines, Appendix F.)

It is widely recognized that no single project could generate enough GHG emissions to noticeably change the global climate temperature. However, the combination of GHG emissions from past, present and future projects could contribute substantially to global climate change. Thus, project specific GHG emissions should be evaluated in terms of whether or not they would result in a cumulatively significant impact on global climate change. GHG emissions, and their associated contribution to climate change, are inherently a cumulative impact issue. Therefore, project-level impacts of GHG emissions are treated as one-in-the-same as cumulative impacts.

In summary, the staff report evaluates different approaches for assessing significance of GHG emission impacts. As presented in the report, District staff reviewed the relevant scientific information and concluded that the existing science is inadequate to support quantification of the extent to which project specific GHG emissions will impact global climate features such as average air temperature, average rainfall, or average annual snow pack. In other words, the District was not able to determine a specific quantitative level of GHG emissions increase, above which a project will have a significant impact on the environment, and below which will have an insignificant impact. This is readily understood, when one considers that global climate change is the result of the sum total of GHG emissions, both manmade and natural that occurred in the past; that is occurring now; and will occur in the future.

In the absence of scientific evidence supporting establishment of a numerical threshold, the District policy applies performance based standards to assess project specific GHG emission impacts on global climate change. The determination is founded on the principal that projects whose emissions have been reduced or mitigated consistent with the California Global Warming Solutions Act of 2006, commonly referred to as "AB 32", should be considered to have a less than significant impact on global climate change. For a detailed discussion of the District's establishment of thresholds of significance for GHG emissions, and the District's application of

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said thresholds, the reader is referred to the above referenced staff report, District Policy, and District Guidance documents.”²⁵

The Air District’s policy “provides for a tiered approach in assessing significance of project-specific GHG emission increases.

- Projects complying with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the project is located would be determined to have a less than significant individual and cumulative impact for GHG emissions. Such plans or programs must be specified in law or approved by the lead agency with jurisdiction over the affected resource and supported by a CEQA compliant environmental review document adopted by the lead agency. Projects complying with an approved GHG emission reduction plan or GHG mitigation program would not be required to implement Best Performance Standards (BPS).
- Projects implementing BPS would not require quantification of project specific GHG emissions. Consistent with CEQA Guidelines, such projects would be determined to have a less than significant individual and cumulative impact for GHG emissions.
- Projects not implementing BPS would require quantification of project specific GHG emissions and demonstration that project specific GHG emissions would be reduced or mitigated by at least 29%, compared to Business as Usual (BAU), including GHG emission reductions achieved since the 2002-2004 baseline period, consistent with GHG emission reduction targets established in ARB’s AB 32 Scoping Plan. Projects achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG.

The District guidance for development projects also relies on the use of BPS. For development projects, BPS includes project design elements, land use decisions, and technologies that reduce GHG emissions. Projects implementing any combination of BPS, and/or demonstrating a total 29 percent reduction in GHG emissions from BAU would be determined to have a less than cumulatively significant impact on global climate change.”²⁶

Local Policy & Regulations

Tulare County General Plan Policies

The General Plan has a number of policies that apply to projects within Tulare County that support reduction efforts of GHG. General Plan policies that specifically relate to GHG reduction efforts are listed below. A list of General Plan policies that may not specifically target GHG but potentially have GHG-reducing benefits can be found in the Greenhouse Gas Analysis Report prepared for the Project, which can be found in Appendix “F” of this DEIR.²⁷

²⁵ San Joaquin Valley Air Pollution Control District. Guidance for Assessing and Mitigating Air Quality Impacts. Pages 110 to 112.

²⁶ Ibid. 112.

²⁷ Greenhouse Gas Analysis Report for the Sequoia Drive-In Business Park. Prepared by 4Creeks, Inc. August 2015.

AQ-1.7 Support Statewide Climate Change Solutions - The County shall monitor and support the efforts of Cal/EPA, CARB, and the SJVAPCD, under AB 32 (Health and Safety Code §38501 et seq.), to develop a recommended list of emission reduction strategies. As appropriate, the County will evaluate each new project under the updated General Plan to determine its consistency with the emission reduction strategies.

AQ-1.8 Greenhouse Gas Emissions Reduction Plan/Climate Action Plan - The County will develop a Greenhouse Gas Emissions Reduction Plan (Plan) that identifies greenhouse gas emissions within the County as well as ways to reduce those emissions. The Plan will incorporate the requirements adopted by the California Air Resources Board specific to this issue. In addition, the County will work with the Tulare County Association of Governments and other applicable agencies to include the following key items in the regional planning efforts.

1. Inventory all known, or reasonably discoverable, sources of greenhouse gases in the County,
2. Inventory the greenhouse gas emissions in the most current year available, and those projected for year 2020, and
3. Set a target for the reduction of emissions attributable to the County's discretionary land use decisions and its own internal government operations.

AQ-1.9 Support Off-Site Measures to Reduce Greenhouse Gas Emissions - The County will support and encourage the use of off-site measures or the purchase of carbon offsets to reduce greenhouse gas emissions.

Tulare County Climate Action Plan

“The Tulare County Climate Action Plan (CAP) serves as a guiding document for County of Tulare (“County”) actions to reduce greenhouse gas emissions and adapt to the potential effects of climate change. The CAP is an implementation measure of the 2030 General Plan Update. The General Plan provides the supporting framework for development in the County to produce fewer greenhouse gas emissions during Plan build out. The CAP builds on the General Plan’s framework with more specific actions that will be applied to achieve emission reduction targets consistent with California legislation.”²⁸

“The Tulare County General Plan 2030 Update fulfills many sustainability and greenhouse gas reduction objectives at the program level. Individual projects that will implement the General Plan will comply with these policies resulting in long-term benefits to air quality and greenhouse gas reductions that will help Tulare County achieve the CAP reduction targets. Table 15 [of the CAP] lists the policies from the various General Plan elements that promote more efficient development, and reduce travel and energy consumption.”²⁹ “The complete policies listed in Table 15 [of the CAP] have been organized into several sections that help to identify common themes: Land Use and Transportation Strategies; Building Energy Efficiency; Water Conservation Energy Savings; Solid Waste Reduction and Recycling; and, Agricultural Programs and Initiatives.”³⁰

²⁸ Tulare County Climate Action Plan. Page 1.

²⁹ Ibid. 63.

³⁰ Op. Cit. 64.

IMPACT EVALUATION

Would the project:

- a) **Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

Project Impact Analysis:

Less Than Significant Impact

The proposed Project will be evaluated for emissions significance using Tulare County's CAP. To determine the Project's level of significance, business as usual (BAU) activities will first be established, and then emissions that would occur when all when all project-related design features are implemented will be incorporated.³¹ For Tulare County to reach a 26.2% reduction by 2020, new development projects are required to have an average reduction of 6% beyond that required by regulation.

Construction

"Greenhouse gas emissions are generated during construction activities that include site preparation, grading, the construction of the building, paving, etc. These activities are presented in Table 5.1-1 [Table 3.7-2 of this DEIR] in greater detail along with the estimated mitigated onsite and offsite million metric tons of carbon dioxide equivalent (MTCO₂e). The District does not have a recommendation for assessing the significance to construction-related emissions."³²

Table 3.7-2						
Construction Greenhouse Gas Emissions (2017-2024)³³						
	Bio-CO ₂	NBio-CO ₂	Total CO ₂	CH ₄	N ₂ O	CO ₂ e
Year	MT/yr					
2017	0	467.2237	467.2237	0.0834	0	468.9743
2018	0	4.5235	4.5235	0	0	4.5348
2019	0	407.8431	407.8431	0.0793	0	409.5075
2020	0	3.1485	3.1485	0	0	3.1531
2021	0	399.7772	399.7772	0.0773	0	401.401
2022	0	3.0391	3.0391	0	0	3.0429
2023	0	415.1209	415.1209	0.0765	0	416.7281
2024	0	4.1577	4.1577	0	0	4.1667
Total	0	1704.8337	1704.834	0.31787	0	1711.508

Construction-related GHG emissions are temporary and would cease upon completion of the Project. Consistent with Air District policy APR 2015, construction-related emissions were amortized based on an estimated average life of the proposed Project (25 years for

³¹ Greenhouse Gas Analysis Report for the Sequoia Drive-In Business Park. Page 37. Prepared by 4Creeks, Inc. August 2015. Appendix "F" of this EIR.

³² Ibid. 37.

³³ Op. Cit. 38.

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commercial/industrial uses).³⁴ Based on the total construction-related GHG emissions provided in Table 3.7-2, the amortized annual construction-related emissions are 68.46 MTCO₂e. These amortized emissions are below the Air District's 230 MTCO₂e zero equivalency threshold and, therefore, would be considered to have a ***Less Than Significant Project-specific Impact***.

Operation

“Expected operational or long-term emissions over the lifetime of the project include mobile operations, waste generated, water consumed, and energy consumed. Sources of operation CO₂e emissions have been totaled for each phase, represented in Table 5.1-2 [Table 3.7-3 of this DEIR]. As represented in Table 5.1-2 [Table 3.7-3 of this DEIR], mitigation and regulation is required to reduce business as usual emissions beyond 26.2 percent to remain compliant with the County's CAP requirement to reduce GHG emissions to 1990 levels.”³⁵

Table 3.7-3		
Project Operational Greenhouse Gases³⁶		
	Overall Operational (Unmitigated) MTCO₂e per year	Business as Usual (Mitigated) MTCO₂e per year
Phase 1	3145.3512	3004.6153
Phase 2	1679.6119	1617.8659
Phase 3	1965.0381	1893.2215
Phase 4	1835.8061	1769.0615
Total	8625.81	8284.76
Reduction Percentage		4%
Significant Threshold	26.2%	26.2%
<i>Are emission significant after mitigation, project design features and regulations?</i>		YES

“The business as usual emissions represents emissions in terms as if they would have occurred without regulations enacted pursuant to AB32. Operational GHG emissions will be reduced through implementing the following operational practices and design elements as conditions of approval:

- Landscaping: The 53% of the project area will contain water efficient landscape.
- Energy: Energy efficient light-bulbs will be incorporated to the project to reduce electrical use. Along with this the project is a user of Southern California Edison which has 16 percent renewable energy in its portfolio in 2006 (CEC2007). Therefore, to achieve a 33-percent reduction as required by California's Renewable Electricity Standard, 17 percent more renewable energy in the utility's portfolio is needed. In 2020, the utility will achieve 33 percent renewable energy, which would decrease the emissions associated with electricity by 17 percent.

³⁴ Air District, Policy APR 2015, http://www.valleyair.org/policies_per/Policies/REVISEDAP2015.pdf

³⁵ Greenhouse Gas Analysis Report for the Sequoia Drive-In Business Park. Page 38. Prepared by 4Creeks, Inc. August 2015. Appendix “F” of this EIR.

³⁶ Ibid.

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- Waste: The project will participate in the County's recycle and waste reduction program which has seen an average waste reduction of 50%.
- Water: Low flow faucets, toilets and urinals will be incorporated. Along with a water efficient irrigation system for landscaped areas.
- Traffic: The project will increase density, improve walkability, improve destination accessibility through increase transit accessibility and overall improve the pedestrian network. Therefore reducing the number of vehicles used to travel to the project location and reducing GHG emissions.
- Improved Destination Accessibility: The project is located within four miles of downtown Visalia.
- Improved Walkability Design: The project is located in an area that includes multiple stores and other desirable locations.
- Improved Transit Access: The project is located less than 500 yards from an existing transit stop.
- Installation of Low Flow Bathroom Fixtures: Both low flow bathroom faucets and low flow toilets will be installed within the project site to ensure a reduced quantity of water.
- Turf Reduction: Landscape design will incorporating the use of drought resistant plants in place of excess turf. Turf reductions reduces water consumption, saved energy by requiring less lawn maintenance, creates less yard waste, reduces the amount of herbicides commonly used, and enhances biodiversity through varied planting which offers shelter and feeding opportunities for wildlife.
- Use of Low VOC Paint: Low VOC paint will be used on both the non-residential interior and exterior of the project site.
- Water Efficient Landscaping: To ensure a reduction in water used for project landscaping and maintenance a water efficient irrigation system and water efficient landscaping will be incorporated as part of the project.

These above measures are represented in CalEEMod as project design features. Reductions from these measures are calculated by CalEEMod and are based on the methodology presented in the California Air Pollution Control Officer's 2010 report, "Quantifying Greenhouse Gas Mitigation Measures." Table 5.1-3 [Table 3.7-4 of this DEIR] shows the percentage reduction calculated by CalEEMod for the new regulations and standards."³⁷

³⁷ Op. Cit. 39.

Table 3.7-4 Greenhouse Gas Reductions³⁸		
Measures	Category	Percent Reduction
Pavely and Low Carbon Fuel Standards	Mobile Sources	9.1%
Electricity – Renewable Portfolio Standards	Energy: Electricity	0%
Title 24 Standards	Energy: Electricity and Natural Gas	0%
Non-Motorized Improvements	Energy Natural Gas	0%
Land Use Changes	Energy Natural Gas	16%
Reduce Carbon-Intensive Travel Activities	Mobile Sources	13%
Locational and Standard Measures	Mobile Sources	13%

“Collectively these measures together account for a 9.1% reduction in GHG emissions from the projects previous Business As Usual emissions. The project’s design elements previously discussed will fulfill the following GHG Emission Reduction Measures to reach the 6% reduction in GHG emissions required by the Tulare County CAP.”³⁹

The proposed Project has incorporated the following GHG Reduction Measures, in accordance with Appendix J of the Tulare County CAP, and has gained a total of nine GHG Emission Reduction Measure Points:

“Measure 5: Pedestrian Network (1 point reduction) – The project will provide a pedestrian access network that internally links all uses and connects to existing external streets and pedestrian facilities.

Measure 7: Bus shelter for existing transit service (0.5 point reduction) -- Bus service provides headways of one hour or less for stops within ¼ mile; project provides safe and convenient pedestrian access to transit stops. Shelters, route information, benches and lighting are existing amenities.

Measure 12: Parking reduction beyond code (6 point reductions) – The project will provide less than the minimum amount of parking required. This measure recognizes the air quality benefit that results when facilities minimize parking needs.

Measure 13: Pedestrian Pathway Through Parking (0.5 point reduction) – The project will provide a parking lot design that will include clearly marked and shaded pedestrian pathways between transit facilities and building entrances.

Measure 25: Energy Star Roof (0.5 point reduction) – The project will install Energy Star labeled roof materials as a condition of approval.

Measure 28: Solar Orientation (0.5 point reduction) – The project will orient 75 or more percent of buildings to face either north or south (within 30 degrees of North or South).

³⁸ Op. Cit. 44.

³⁹ Op. Cit.

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Building design includes roof overhangs that are sufficient to block the high summer sun, but not the lower winter sun, from penetrating south facing windows. Trees, other landscaping features and other buildings are sited in such a way as to maximize shade in the summer and maximize solar access to walls and windows in the winter.”⁴⁰

The proposed Project is consistent with the goals set forth in County CAP and therefore, is consistent with the emission reduction targets established in AB 32. As such, Project-related GHG emissions would not have a significant impact on the environment. ***Less Than Significant Project-specific Impacts*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is the San Joaquin Air Basin. This cumulative analysis is based on the information provided in the CalEEMod results for Greenhouse Gas (see Appendix “F” of this DEIR).

Therefore, Project related GHG emissions will result in a ***Less Than Significant Cumulative Impact***.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

The proposed Project will have ***Less Than Significant Project-specific or Cumulative Impacts*** related to the GHG resource. No mitigation is required.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Project Impact Analysis: ***Less Than Significant Impact***

“The County of Tulare has implemented their adopted Climate Action Plan (CAP, 2012) which identifies a threshold of 26.2% for GHG emission reductions for new projects in which discretionary entitlements are required. This minimum reduction from the project’s Business As Usual ensures that the project is meeting the CAP requirements.

The California State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. In regards to remaining compliant under the Scoping Plan established under AB 32, which is concurrently the state legislation which requires for GHGs emitted in California to be reduced to 1990 levels by 2020. AB 32 is monitored and regulated by ARB.

In December 2008, CARB adopted the Climate Change Scoping Plan. The AB 32 Scoping Plan contains the main strategies California will use to reduce the GHG that cause climate change. The scoping plan represents a range of GHG reduction actions which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives,

⁴⁰ Op. Cit. 40-41.

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voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 program implementation regulation to fund the program. As stated in the Scoping Plan, the key elements of the strategy for achieving a 29 percent reduction by 2020 include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewable energy mix of 33 percent⁴¹
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures to existing State laws and policies including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standards; and
- Creating target fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long-term commitment to AB32 implementation."⁴¹

"The Scoping Plan established eighteen types of measures to help pave the path toward California's clean energy future. As shown in Table 5.2-1 [Table 3.7-5 of this DEIR], the project is consistent with measures established through the Scoping Plan."⁴²

Table 3.7-5 Scoping Plan Reduction Measures⁴³	
Scoping Plan Reduction Measure	Recommended Action
California Cap – and – Trade Program Linked to Western Climate Initiative Partner Jurisdictions – Implement a broad-based California cap-and-trade program to provide a firm limit on emissions, Link the California cap-and-trade program with other Western Climate Initiative Partner programs to create a regional market system to achieve greater environmental and economic benefits for California.	The projects can generate offsets, verifiable reductions of emissions whose ownership can be transferred to others. Offsets can provide regulated entities a source of low-cost emissions reductions. Reductions from compliance offset projects must be quantified using rigorous measurement and enforcement protocols that provide a basis to determine whether the reductions are also additional, however, this measure is not applicable to the project.
California Light-Duty Vehicle Greenhouse Gas Standards – Implement adopted Pavley standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology	Include reducing greenhouse gas emissions from vehicles, reducing the carbon content of the fuel these vehicles burn, and reducing the miles these vehicles travel. While the project is centrally located and could help reduce mileages, this is

⁴¹ Op. Cit. 41 to 42.

⁴² Op. Cit. 42

⁴³ Op. Cit. 42 to 43.

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Table 3.7-5 Scoping Plan Reduction Measures⁴³	
programs with long-term climate change goals.	not applicable to the project.
Energy Efficiency – Maximize energy efficiency building and appliance standards, and pursue additional efficiency efforts including new technologies, and new policy and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California (including both investor-owned and publicly owned utilities).	This measure would set new targets for statewide annual energy demand reductions; however, the project design features multiple energy efficient products and features.
Renewable Portfolio Standard – Renewables Portfolio Standard Achieve 33 percent renewable energy mix statewide.	The project will work with SCE in its efforts to diversify its power supply.
Low Carbon Fuel Standard – Develop and adopt the Low Carbon Fuel Standard.	This measure is not applicable to the project because it is a state initiative.
Regional Transportation, Related Greenhouse Gas Targets – Develop regional greenhouse gas emissions reduction targets for passenger vehicles.	This measure is not applicable to the project being that they will not be developing any Greenhouse Gas reductions.
Vehicle Efficiency Measures – Implement light-duty vehicle efficiency measures.	Could reduce light-duty greenhouse gas emissions from light-duty vehicles that enter the project site.
Goods Movement – Implement adopted regulations for the use of shore power for ships at berth. Improve efficiency in goods movement activities.	This measure is not applicable to the project being that it does not propose the use of shore power for ships or to improve good movement activities.
Million Solar Roofs Program – Install 3,000 MW of solar-electric capacity under California’s existing solar programs.	This measure is not applicable to the project being that it does not plan to implement any solar power into the design of the project building.
Medium/Heavy-Duty Vehicles – Adopt medium and heavy-duty vehicle efficiency measures.	This measure is not applicable to the project being that it is a statewide measure. However, it would be applicable to vehicles that enter the project site.
Industrial Emissions – Require assessment of large industrial sources to determine whether individual sources within a facility can cost-effectively reduce greenhouse gas emissions and provide other pollution reduction co-benefits. Reduce greenhouse gas emissions from fugitive emissions from oil and gas extraction and gas transmission. A	This measure is not applicable to the project being that this measure would apply to the direct greenhouse gas emissions at major industrial facilities, which the proposed project is not.
High Speed Rail – Support implementation of a high speed rail system.	This measure is not applicable to the project being that it is a statewide measure.
Green Building Strategy – Expand the use of green building practices to reduce the carbon footprint of California’s new and existing inventory of buildings.	The project will be implementing Green Building Strategies into their design along with using water-wise landscape design and a bio swale to inhabit wildlife.
High Global Warming Potential Gases – Adopt measures to reduce high global warming	This measure will be applicable when initiated being that the project will produce Global

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Table 3.7-5 Scoping Plan Reduction Measures⁴³	
potential gases.	Warming Potential Gases through items such as vehicles traveling to and from the project site, air conditioning systems and refrigerant emissions.
Recycling and Waste – Reduce methane emissions at landfills. Increase waste diversion, composting and other beneficial uses of organic materials, and mandate commercial recycling. Move toward zero-waste.	The project will be participating in the Tulare County Recycling program.
Sustainable Forests – Preserve forest sequestration and encourage the use of forest biomass for sustainable energy generation.	This measure is not applicable being that the project is located in a rural area where forests do not pre-exist.
Water – Continue efficiency programs and use cleaner energy sources to move and treat water.	The project meets this measure by installing low flow toilets and water efficient faucets. Along with this they have also incorporated efficient landscape irrigation practices and design.
Agriculture – Encourage investment in manure digesters and at the five-year Scoping Plan update determine if the program should be made mandatory in 2020.	This measure is not applicable being that no agriculture activities will be occurring at or near the project site.

“After examination of all eighteen Scoping Reduction Measures it can be confirmed that the construction of the project will not conflict with or measures are not applicable to the CARB or AB32 requirements.”⁴⁴ Therefore, the Project would have a ***Less Than Significant Project-specific Impact*** related to this Checklist Item.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is the San Joaquin Valley Air Basin. This cumulative analysis is based on the information provided in the analysis above and the result of the CalEEMod emissions estimates included as Appendix “F” of this DEIR.

As the proposed Project is consistent with aforementioned plans, policies, and regulations, ***Less Than Significant Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As the proposed Project is consistent with aforementioned plans, policies, and regulations, ***Less Than Significant Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

⁴⁴ Op. Cit. 44.

ACRONYMS

AB	Assembly Bill
ARB	Air Resources Board (Short for CARB)
BAU	Business As Usual
BPS	Best Performance Standards
CAA	Clean Air Act
Cal EPA	California Environmental Protection Agency
CARB	California Air Resources Board
CH ₄	Methane
CO ₂	Carbon Dioxide
GHG	Greenhouse Gases
HFCs	Hydro fluorocarbons
MRF/TS	Material Recovery Facility/Transfer Station
MSW	Municipal Solid Waste
N ₂ O	Nitrous Oxide
OPR	Governor's Office of Planning and Research
PFCs	Per fluorocarbons
SF ₆	Sulfur Hexafluoride
AIR DISTRICT	San Joaquin Valley Air Pollution Control District
WARM	Waste Reduction Model

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Hazards and Hazardous Materials

Chapter 3.8

SUMMARY OF FINDINGS

The proposed Project will result in a *Less Than Significant Impact* related to Hazards and Hazardous Materials. A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Hazards and Hazardous Materials. As required in Section 15126, all phases of the proposed project will be considered as part of the potential environmental impact.

As noted in Section 15126.2 (a), “[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas.”¹

The environmental setting provides a description of the Hazards and Hazardous Materials in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County

¹CEQA Guidelines, Section 15126.2 (a).

2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

- Create a significant hazard
- Located within one-quarter mile of an existing or proposed school
- Located on a list of hazardous materials sites
- Located within an airport land use plan
- Located within the vicinity of a private airstrip
- Interfere with an adopted emergency response plan or emergency evacuation plan
- Wildland Fire Risk

ENVIRONMENTAL SETTING

“A hazardous material is defined by the California Code of Regulations (CCR) as a substance that, because of physical or chemical properties, quantity, concentration, or other characteristics, may either (1) cause an increase in mortality or an increase in serious, irreversible, or incapacitating, illness; or (2) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of (CCR, Title 22, Division 4.5, Chapter 10, Article 2, Section 66260.10).”²

“Hazardous wastes are hazardous materials that no longer have practical use, such as substances that have been discarded, discharged, spilled, contaminated, or are being stored prior to proper disposal. According to Title 22 of the CCR, hazardous materials and hazardous wastes are classified according to four properties: toxic, ignitable, corrosive, and reactive (CCR, Title 22, Chapter 11, Article 3).”³

Hazardous Waste Shipments Originating Within Tulare County

“In 2007, the DTSC Hazardous Waste Tracking System (HWTS) manifest data reports that approximately 5,925 tons of hazardous waste was transported from all categories of generators in Tulare County. As of November 2008, hazardous waste data available for 2008 indicated that approximately 7,160 tons of hazardous waste was generated in the county (DTSC, 2008a)”⁴ The quantities of hazardous waste transported from facilities located within each zip code in Tulare County are shown in the **Table 3.8-1**.

² Tulare County General Plan 2030 Update Background Report. Page 8-26.

³ Ibid. 8-26.

⁴ Op. Cit. 8-37.

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Table 3.8-1							
Transport of Hazardous Waste⁵							
Zip Code	Total Tons	Zip Code	Total Tons	Zip Code	Total Tons	Zip Code	Total Tons
93219	0.579	93221	19.100	93223	14.73	93227	6.792
93244	4.270	93247	36.370	93256	14.39	93257	155.000
93262	0.459	93271	4.463	93272	17.78	93274	146.700
93275	14.870	93277	407.80	93279	52.01	93286	7.152
93291	321.700	93292	25.600	93615	2.606	93618	139.100
93631	321.700	93647	65.630	93654	4.255	93673	4.915

Environmental Health Department Futures Assessment

“The Environmental Health Department [EHD], of which the CUPA is a part, anticipates a slight increase in the reported volume of hazardous waste generated within Tulare County in year 2003/04. However, EHD does not expect an increase in the actual volume of hazardous waste generated over the same period.”⁶

REGULATORY SETTING

Federal Agencies & Regulations

Hazardous Materials Transportation Act

The Hazardous Materials Transportation Act of 1975 (HMTA) as amended, is the major transportation-related statute affecting DOE. The objective of the HMTA according to the policy stated by Congress is ". . .to improve the regulatory and enforcement authority of the Secretary of Transportation to protect the Nation adequately against risks to life and property which are inherent in the transportation of hazardous materials in commerce." The HMTA empowered the Secretary of Transportation to designate as hazardous material any "particular quantity or form" of a material that "may pose an unreasonable risk to health and safety or property."

Regulations apply to ". . .any person who, under contract with any department, agency, or instrumentality of the executive, legislative, or judicial branch of the Federal Government, transports, transports, or causes to be transported or shipped, a hazardous material or manufactures, fabricates, marks, maintains, reconditions, repairs, or tests a package or container which is represented, marked, certified, or sold by such person as qualified for use in transportation of hazardous materials..."⁷

⁵ Op. Cit. 8-31.

⁶ Op. Cit. 8-32.

⁷ U.S. Federal Motor Carrier Safety Administration. How to Comply with Federal Hazardous Materials Regulations. <https://www.fmcsa.dot.gov/regulations/hazardous-materials/how-comply-federal-hazardous-materials-regulations>. Accessed March 2017.

Superfund

“Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), commonly referred to as “Superfund”, was enacted on December 11, 1980. The purpose of CERCLA was to provide authorities with the ability to respond to uncontrolled releases of hazardous substances from inactive hazardous waste sites that endanger public health and the environment. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at such sites, and established a trust fund to provide for cleanup when no responsible party could be identified. Additionally, CERCLA provided for the revision and republishing of the National Contingency Plan (NCP) that provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The NCP also provides for the National Priorities List, a list of national priorities among releases or threatened releases throughout the United States for the purpose of taking remedial action.”⁸

Superfund Amendments and Reauthorization Act (SARA)

“Superfund Amendments and Reauthorization Act SARA amended CERCLA on October 17, 1986. This amendment increased the size of the Hazardous Response Trust Fund to \$8.5 billion, expanded EPA’s response authority, strengthened enforcement activities at Superfund sites; and broadened the application of the law to include federal facilities. In addition, new provisions were added to the law that dealt with emergency planning and community right to know. SARA also required EPA to revise the Hazard Ranking System to ensure that the system accurately assesses the relative degree of risk to human health and the environment posed by sites and facilities subject to review for listing on the National Priorities List.”⁹

State Agencies & Regulations

Hazardous Substance Account Act (1984), California Health and Safety Code Section 25300 ET SEQ (HSAA)

“This act, known as the California Superfund, has three purposes: 1) to respond to releases of hazardous substances; 2) to compensate for damages caused by such releases; and 3) to pay the state’s 10 percent share in CERCLA cleanups. Contaminated sites that fail to score above a certain threshold level in the EPA’s ranking system may be placed on the California Superfund list of hazardous wastes requiring cleanup.”¹⁰

California Environmental Protection Agency (Cal/EPA) Department of Toxic Substance Control (DTSC)

“Cal/EPA has regulatory responsibility under Title 22 of the California Code of Regulations

⁸ Op. Cit. 8-27.

⁹ Op. Cit.

¹⁰ Op. Cit. 8-28 to 8-29.

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(CCR) for administration of the state and federal Superfund programs for the management and cleanup of hazardous materials. The DTSC is responsible for regulating hazardous waste facilities and overseeing the cleanup of hazardous waste sites in California. The Hazardous Waste Management Program (HWMP) regulates hazardous waste through its permitting, enforcement and Unified Program activities. HWMP maintains the EPA authorization to implement the RCRA program in California, and develops regulations, policies, guidance and technical assistance/ training to assure the safe storage, treatment, transportation and disposal of hazardous wastes. The State Regulatory Programs Division of DTSC oversees the technical implementation of the state's Unified Program, which is a consolidation of six environmental programs at the local level, and conducts triennial reviews of Unified Program agencies to ensure that their programs are consistent statewide and conform to standards.”¹¹

California Occupational Safety and Health Administration (Cal/OSHA)

“Cal/OSHA and the Federal OSHA are the agencies responsible for assuring worker safety in the handling and use of chemicals in the workplace. Pursuant to the Occupational Safety and Health Act of 1970, Federal OSHA has adopted numerous regulations pertaining to worker safety, contained in the Code of Federal Regulations Title 29 (29 CFR). These regulations set standards for safe workplaces and work practices, including standards relating to hazardous material handling. Cal/OSHA assumes primary responsibility for developing and enforcing state workplace safety regulations. Because California has a federally General Plan Background Report December 2007 approved OSHA program, it is required to adopt regulations that are at least as stringent as those identified in 29 CFR. Cal/OSHA standards are generally more stringent than federal regulations.”¹²

Hazardous Materials Transport Regulations

“California law requires that Hazardous Waste (as defined in California Health and Safety Code Division 20, Chapter 6.5) be transported by a California registered hazardous waste transporter that meets specific registration requirements. The requirements include possession of a valid Hazardous Waste Transporter Registration, proof of public liability insurance, which includes coverage for environmental restoration, and compliance with California Vehicle Code registration regulations required for vehicle and driver licensing.”¹³

Cal/EPA Cortese List

“The provisions in Government Code Section 65962.5 are commonly referred to as the "Cortese List" (after the Legislator who authored the legislation that enacted it). The list, or a site's presence on the list, has bearing on the local permitting process as well as on compliance with the California Environmental Quality Act (CEQA).”¹⁴ The Cortese List identifies the following:

- Hazardous Waster and Substance Sites

¹¹ Op. Cit. 8-29.

¹² Op. Cit. 8-30 and 8-31.

¹³ Op. Cit. 8-31.

¹⁴ Cal/EPA Cortese List background, <https://www.calepa.ca.gov/sitecleanup/corteselist/background/>. Accessed March 2017.

- Cease and desist order Sites
- Waste Constituents above Hazardous Waste Levels outside the Waste Management Unit Sites
- Leaking Underground Tank (LUST) Cleanup Sites
- Other Cleanup Sites
- Land Disposal Sites
- Military Sites
- WDR Sites
- Permitted Underground Storage Tank (UST) Facilities Sites
- Monitoring Wells Sites
- DTSC Cleanup Sites
- DTSC Hazardous Waste Permit Sites

Local Policy & Regulations

Tulare County Office of Emergency Services

“The Tulare County Office of Emergency Services (OES) is Tulare County's comprehensive emergency management program. The discipline of emergency management aims to create partnerships, plans, and systems to build capabilities and coordinate the efforts of government, industry, and voluntary organizations in all phases of an emergency.

The activities of Tulare County OES can be categorized under the four phases of the emergency management cycle: Preparedness, Response, Recovery, and Mitigation. The day-to-day activities of the program center around Preparedness and Mitigation phases, in order to combat potential hazards and minimize community impacts during the Response and Recovery phases. The following descriptions offer more detail about the activities in each phase of emergency management.

Preparedness

- Public Education
- Training & Exercise for responders
- Grants for public safety & health agencies

Response

Tulare County OES maintains the Emergency Operations Center (EOC) for the County and Operational Area. Tulare County OES also administers the AlertTC notification system and WebEOC crisis information management system.

Recovery

After the emergency is over, there is still considerable work to be done to help the community return to a pre-disaster state. Recovery often takes several years, perhaps even decades, to fully complete.

Mitigation

Mitigation is the process by which hazards and vulnerabilities are identified, and measures taken to decrease the potential for occurrence of the hazard, the vulnerability to the hazard should it occur, or both. Tulare County Office of Emergency Services implements the 2011 Tulare County Hazard Mitigation Plan.”¹⁵

Tulare County Health and Human Services Agency, Environmental Health Services Division

“Broadly speaking, the purpose of the Tulare County Health and Human Services Agency (HHSA) is to provide a wide array of services that enhance the lives of Tulare County residents’ lives. To quote the Mission Statement, HHSA is “dedicated to protecting and strengthening the well-being of the community through development of effective policies, practices, and services delivered in a culturally and linguistically competent manner.” HHSA is comprised of four branches: Fiscal Operations, Human Services, Mental Health, and Public Health. The four branches work collaboratively to improve, promote, and protect the physical and mental health of residents by preventing diseases, promoting healthy lifestyles, and encouraging self-sufficiency.”¹⁶

Tulare County General Plan Policies

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the proposed Project are listed as follows:

HS-4.1 Hazardous Materials - The County shall strive to ensure hazardous materials are used, stored, transported, and disposed of in a safe manner, in compliance with local, State, and Federal safety standards, including the Hazardous Waste Management Plan, Emergency Operations Plan, and Area Plan.

HS-4.3 Incompatible Land Uses - The County shall prevent incompatible land uses near properties that produce or store hazardous waste.

HS-4.4 Contamination Prevention - The County shall review new development proposals to protect soils, air quality, surface water, and groundwater from hazardous materials contamination.

¹⁵ County of Tulare Office of Emergency Services, What is OES? <http://tularecounty.ca.gov/oes/index.cfm/what-is-oes/> Accessed March 2017.

¹⁶ 2017-18 County of Tulare Recommended Budget Fiscal Year 2017/18 “Purpose” provided by Jason T. Britt, HHSA Director. Page 167. <http://tularecounty.ca.gov/cao/index.cfm/budget/fiscal-year-2017-18/>. Accessed January 2018.

IMPACT EVALUATION

Would the project:

- a) **Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?**

Project Impact Analysis:

Less Than Significant Impact

Construction:

Construction-related activities associated with construction of the commercial development would require the use and transport of hazardous materials, including fuels, oils, and other chemicals (e.g., paints, adhesives, etc.) typically used during construction. It is likely that these hazardous materials and vehicles would be stored by the contractor(s) on-site during construction activities. Improper use and transportation of hazardous materials could result in accidental releases or spills, potentially posing health risks to workers, the public, and the environment. However, a Storm Water Pollution Prevention Plan (SWPPP) is required for the proposed Project and shall include emergency procedures for incidental hazardous materials releases. The SWPPP also includes Best Management Practices which includes requirements for hazardous materials storage. In addition, all use, storage, transport and disposal of hazardous materials during construction shall be performed in accordance with existing local, state and federal hazardous materials regulations.

Operational:

The operational phase of the proposed Project would occur after construction of the structures have been completed. The proposed Project site is currently vacant, but is surrounded by State Route 198 to the north, scattered residential, commercial and agricultural land uses to the east, agricultural land uses to the south, and agricultural land uses and a CalTrans office to the east. None of these land uses routinely transport, use, or dispose of hazardous materials, or present a reasonably foreseeable release of hazardous materials, with the exception of common residential grade hazardous materials such as cleaners, paint, etc. The proposed Project would not create a significant hazard through the routine transport, use, or disposal of hazardous materials, nor would a significant hazard to the public or to the environment through the reasonably foreseeable upset and accidental conditions involving the likely release of hazardous materials into the environment occur.

All businesses transporting, storing, using or disposing of hazardous materials (including wastes) must comply with applicable local, state and federal regulations for hazardous materials management. These include regulations and programs administered by the Tulare County Health & Human Services Agency, Environmental Health Services Division as well as other requirements of state and federal laws and regulations, including compliance with

the Uniform Fire Code for hazardous material storage. This impact will result in a ***Less Than Significant Impact***.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and the Tulare County 2030 General Plan EIR.

With ***Less Than Significant*** Project-specific impacts, a ***Less Than Significant Cumulative Impact*** will also occur.

Mitigation Measure(s): ***None Required.***

Conclusion: Potential Project-specific impacts related to this Checklist Item will be ***Less Than Significant***.

- b) **Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?**

Project Impact Analysis: ***Less Than Significant Impact***

See Response a) above. Any accumulated hazardous construction or operational wastes will be collected and transported away from the site in compliance with all federal, state and local regulations.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and the Tulare County 2030 General Plan EIR.

With ***Less Than Significant*** Project-specific impacts, a ***Less Than Significant Cumulative Impact*** will also occur.

Mitigation Measure(s): ***None Required.***

Conclusion: Project-specific impacts related to this Checklist item will be reduced to a level of ***Less Than Significant***.

- c) **Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?**

Project Impact Analysis: ***Less Than Significant Impact***

The proposed Project site is approximately 0.32 miles north of East Union Elementary School and approximately 1.38 miles east of Mineral King Elementary School.

Based on the current proposed Project description of a commercial/business park development, it is not reasonably foreseeable that the proposed Project will cause a significant impact by emitting hazardous waste or bringing hazardous materials within one-quarter mile of an existing or proposed school. The proposed land uses do not generate, store, or dispose of significant quantities of hazardous materials. Such uses also do not normally involve dangerous activities that could expose persons onsite or in the surrounding areas to large quantities of hazardous materials. See the responses to a) and b) above regarding hazardous material handling. Any impacts would be *Less Than Significant* to this Checklist Item.

Cumulative Impact Analysis: *Less Than Significant Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and the Tulare County 2030 General Plan EIR.

With *Less Than Significant* Project-specific impacts, a *Less Than Significant Cumulative Impact* will also occur.

Mitigation Measure(s): *None Required*

Conclusion: *Less Than Significant Impact*

As noted earlier, *Less Than Significant Project-specific or Cumulative Impacts* to this Checklist Item will occur.

- d) **Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?**

Project Impact Analysis: *No Impact*

The proposed Project site is not located on a Cortese List site. Moreover, the proposed Project will not include elements that will require listing on the Cortese List. Therefore, *No Project-specific Impact* to this Checklist Item will occur.

Cumulative Impact Analysis: *No Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and the Tulare County 2030 General Plan EIR.

The proposed Project site is not located on any Cortese List of hazardous materials. The proposed Project includes the construction and operation of a commercial/business park development and will not cause other properties to be included in the Cortese List. As such ***No Cumulative Impact*** to this Checklist Item will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** to this Checklist Item will occur.

- e) **For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?**

Project Impact Analysis: ***No Impact***

The proposed Project is not located within an airport land use area and is located further than two miles from the nearest public or public use airport (the nearest airport is the Exeter Airport which is approximately 6.6 miles southeast of the Project site). The proposed Project would not create an aircraft safety hazard for people residing or working in the proposed Project area. Implementation of the proposed Project would result in ***No Impact*** relative to this Checklist Item.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and the Tulare County 2030 General Plan EIR.

There are no significant project level impacts and therefore ***No Cumulative Impact*** to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** to this Checklist Item will occur.

- f) **For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?**

Project Impact Analysis: ***No Impact***

There are no private air strips in the proposed Project vicinity and as such, there is ***No Impact*** to this Checklist Item.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and the Tulare County 2030 General Plan EIR.

There are no project level impacts; therefore, ***No Cumulative Impact*** to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Project Impact Analysis: ***No Impact***

“Tulare County has in place an emergency plan to cope with natural disasters that are statewide or happen locally. The County Fire Department and local stationed California Department of Forestry (CDF) are well prepared to fight fires locally as well as statewide. The United States Forest Service (USFS) is in charge of fires that happen in the national parks and Tulare County assists with the fire management process as needed.”¹⁷

“In the event of a disaster, certain facilities are critical to serve as evacuation centers, provide vital services, and provide for emergency response. Existing critical facilities in Tulare County include hospitals, county dispatch facilities, electrical, gas, and telecommunication facilities, water storage and treatment systems, wastewater treatment systems, schools, and other government facilities. This plan also addresses evacuation routes, which include all freeways, highways, and arterials that are located outside of the 100-year flood plain.”¹⁸

The proposed Project does not involve a change to any emergency response plan. There are four entrances into the Project site, three along Road 156 and one along Noble Avenue. ***No Project-specific Impact*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***No Impact***

¹⁷ Tulare County Association of Governments Regional Transportation Plan. Page 1-11.

¹⁸ Tulare County General Plan 2030 Update Background Report. Pages 8-35 to 8-36.

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The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and the Tulare County 2030 General Plan EIR.

The proposed Project does not include alterations to an emergency plan or include reductions of site accessibility by emergency vehicles. ***No Cumulative Impacts*** to this Checklist Item will occur.

Mitigation Measure(s): ***None required.***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Project Impact Analysis: ***No Impact***

The proposed Project site is currently a vacant lot actively maintained for weed control and is completely surrounded by active agriculture or urban uses. With this environmental context, the proposed Project site is not located within a wildlands area. Therefore, the proposed Project will not expose people or structure to wildland fires. ***No Project-specific impact*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and the Tulare County 2030 General Plan EIR.

The Project site is not located in wildlands and will result in ***No Impact*** from urbanized growth on the wildlands. ***No Cumulative Impact*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** to this Checklist Item will occur.

DEFINITIONS AND ACRONYMS

DEFINITIONS

Hazardous Waste Generators - Hazardous waste generators can be classified in three groups depending on the quantity of waste generated in any month. A Conditionally Exempt Small Quantity Generator (CESQG) is defined in regulation as a generator of less than 100 kilograms of hazardous waste in a calendar month. A Small Quantity Generator (SQG) is a generator of greater than 100 kg and less than 1000 kg of hazardous waste in a calendar month. A Large Quantity Generator (LQG) generates greater than 1000 kg of hazardous waste in a calendar month. Determination of whether a facility is a CESQG, SQG, or LQG is the responsibility of the generator. The designation may change during the year, based on the quantity of hazardous waste produced during a particular month. Specific hazardous waste materials may also be exempt from the monthly total quantity. Therefore, the Certified Unified Program Agencies (CUPA) cannot authoritatively designate the number of generators within each of the earlier categories.

Small Quantity Generators - CUPA has designated 58 active and 30 inactive small quantity generators (SQG's). The total estimated quantities of hazardous waste generated within Tulare County by active and inactive SQG's during calendar year 2002 were 121.7 and 56.3 tons, respectively.

Large Hazardous Waste Producers - CUPA has designated 23 active and 3 inactive large quantity generators (LQG's). The total estimated quantities of hazardous waste generated within Tulare County by active and inactive LQG's during calendar year 2002 were 559.7 and 121.6 tons, respectively.

Storage Facilities - According to available information from the agencies (Department of Toxic Substances Control [DTSC] and RWQCB) that oversee treatment, storage and disposal facilities (TSDFs), there are no facilities authorized for the storage of hazardous waste in Tulare County.

Disposal Facilities - According to available information from the agencies (DTSC and RWQCB) that oversee treatment, storage and disposal facilities (TSDFs), there are no facilities authorized for the disposal of hazardous waste in Tulare County.

Planned Treatment, Storage and Disposal Facilities - According to information available to the CUPA, there are no new treatment, storage and disposal facilities proposed in Tulare County.

ACRONYMS

(CDF/CalFire)	California Department of Forestry
CERCLA)	Comprehensive Environmental Response, Compensation and Liability Act
(DOE)	Department of Energy
(DTSC)	Cal/EPA Department of Toxic Substance Control
(HMTA)	Hazardous Materials Transportation Act of 1975

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(HWMP)	Hazardous Waste Management Program
(HWTS)	Hazardous Waste Tracking System
(LUST)	Leaking Underground Tank
(NCP)	National Contingency Plan
(USFS)	United States Forest Service

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2014-15 County of Tulare Recommended Budget Fiscal Year 2014/15 Mission Statement provided by Jason T. Britt, HHSA Director. Page 167.

<http://tularecounty.ca.gov/cao/index.cfm/budget/fiscal-year-2017-18/>. Accessed March 2017.

Hydrology and Water Quality

Chapter 3.9

SUMMARY OF FINDINGS

The proposed Project will result in a *Less Than Significant Impact With Mitigation* related to Hydrology and Water Quality. A Geological, Hydrological & Sustainability Report was prepared by consultant 4Creeks, Inc. A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Hydrology and Water Quality. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in 15126.2 (a), “[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area, as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas.”¹

The environmental setting provides a description of the Hydrology and Water Quality in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, Tulare County General Plan Background Report and/or Tulare

¹ CEQA Guidelines, Section 15126.2 (a).

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County General Plan Revised DEIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA checklist item questions. The following are potential thresholds for significance.

- Project not in compliance with the regulations outlined by the State Water Resources Control Board.
- Project not in compliance with the regulations by the Regional Water Quality Control Board.
- Design of stormwater facilities will not adequately protect surface water quality.
- Project will cause erosion.
- Project will alter watercourse and increase flooding impacts.
- Project's water usage not assessed in the Tulare County 2030 General Plan (General Plan Amendment, Zone Change, etc.).
- Project that will impact service levels of a Water Services District.
- Project includes or requires an expansion of a Water Service District.
- Project in flood zone.
- Project will create a flood safety hazard.
- Project located immediately downstream of a dam.
- Project violate any water quality standards or waste discharge requirements.
- Project will substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).
- Project will substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.
- Project will substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.
- Project will create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

- Project will otherwise substantially degrade water quality; place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.
- Project will place within a 100-year flood hazard area structures which would impede or redirect flood flows.
- Project will expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; and/or be subject to inundation by seiche, tsunami, or mudflow.

ENVIRONMENTAL SETTING

“The Tulare Lake Hydrologic Region covers approximately 10.9 million acres (17,050 square miles) and includes all of Kings and Tulare counties and most of Fresno and Kern counties (Figure TL-1 [of the California Water Plan Update 2013 and **Figure 3.9-1** in this DEIR]). The San Joaquin Valley is divided into the San Joaquin River and the Tulare Lake regions by the San Joaquin River with the Tulare Lake region in the southern portion. Historically, the valley floor in this region had been a complex series of interconnecting natural sloughs, canals, and marshes.

The economic development of the region is closely linked to the surface water and groundwater resources of the Tulare Lake region. Major rivers draining into the Tulare Lake region include the Kings, Kaweah, Tule, and Kern rivers. The original ecological character of the area has been changed dramatically, largely from the taming of local rivers for farming. In the southern portion of the region, significant geographic features include the lakebeds of the former Buena Vista/Kern and Tulare lakes, comprising the southern half of the region; the Coast Ranges to the west; the Tehachapi Mountains to the south; and the southern Sierra Nevada to the east.

The Tulare Lake region is one of the nation’s leading agricultural production areas, growing a wide variety of crops on about 3 million irrigated acres. Agricultural production has been a mainstay of the region since the late 1800s. However, since the mid-1980s, other economic sectors, particularly the service sector, have been growing.”²

Watershed (Surface Water)

“The Tulare Lake region is divided into several main hydrologic subareas: the alluvial fans from the Sierra foothills and the basin subarea (in the vicinity of the Kings, Kaweah, and Tule rivers and their distributaries); the Tulare Lake bed; and the southwestern uplands. The alluvial fan/basin subarea is characterized by southwest to south flowing rivers, creeks, and irrigation canal systems that convey surface water originating from the Sierra Nevada. The dominant hydrologic features in the alluvial fan/basin subarea are the Kings, Kaweah, Tule, and Kern rivers and their major distributaries from the western flanks of the Sierra.”³ “

² Central Valley Regional Water Quality Control Board. Water Quality Control Plan for the Tulare Lake Basin. Page I-1.

³ Department of Water Resources California Water Plan Update 2013 Regional Reports Volume 2, Tulare Lake Hydrologic Region Groundwater Update (California Water Plan Update 2013). Page TL-11.

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Figure 3.9-1 Tulare Lake Hydrologic Region



The largest river in terms of runoff is the Kings River, which originates high in Kings Canyon National Park and generally trends southwest into Pine Flat Lake. Downstream of Pine Flat Dam, the river flows south and west toward Tulare Lake.⁴ The Kaweah River begins in Sequoia National Park, flows west and southwest, and is impounded by Terminus Dam. It subsequently spreads into many distributaries around Visalia and Tulare trending toward Tulare Lake. The Tule River begins in Sequoia National Forest and flows southwest through Lake Success toward Tulare Lake.”⁵

“Groundwater Aquifers and Wells

Groundwater resources in the Tulare Lake region are supplied by both alluvial and fractured rock aquifers. Alluvial aquifers are composed of sand and gravel or finer grained sediments, with groundwater stored within the voids, or pore space, between the alluvial sediments. Fractured-rock aquifers consist of impermeable granitic, metamorphic, volcanic, and hard sedimentary rocks, with groundwater being stored within cracks, fractures, or other void spaces. The distribution and extent of alluvial and fractured-rock aquifers and water wells vary significantly within the region. A brief description of the aquifers for the region is provided below.

Alluvial Aquifers

The Tulare Lake Hydrologic Region contains 12 groundwater basins and 7 subbasins recognized in California Department of Water Resources (DWR) *Bulletin 18-2003* (California Department of Water Resources 2003) and underlie approximately 8,400 square miles, or about 50 percent of the region. The majority of the groundwater in the region is stored in alluvial aquifers. Figure TL-3 [of the California Water Plan Update 2013] shows the location of the alluvial groundwater basins and subbasins and Table TL-1 [of the California Water Plan Update 2013] lists the associated names and numbers. Pumping from the alluvial aquifers in the region accounts for about 38 percent of California’s total average annual groundwater extraction. The most heavily used groundwater basins in the region include Kings, Westside, Kaweah, Tulare Lake, Tule, and Kern County. These basins account for approximately 98 percent of the average 6.3 million acre-feet (maf) of groundwater pumped annually during the 2005-2010 period. Groundwater wells in the San Joaquin Valley extend to depths of more than 1,000 feet (Page 1986). Based on a series of irrigation pump tests, groundwater pumping rates in the various subbasins were determined to range from about 650 gallons per minute (gpm) to about 1,650 gpm (Burt 2011).

The 12 alluvial basins outside the San Joaquin Valley Basin are Panoche Valley and Vallecitos Creek Valley in the Coast Ranges; Kern River Valley and Walker Basin Creek Valley in the Sierra Nevada; and Cummings Valley, Tehachapi Valley West, Castaic Lake Valley, Brite Valley, Cuddy Canyon Valley, Cuddy Ranch Area, Cuddy Valley, and Mil Potrero Area in the Tehachapi Mountains.

⁴ Ibid. TL-12.

⁵ Op. Cit.

Fractured-Rock Aquifers

Fractured-rock aquifers are generally found in the mountain and foothill areas adjacent to alluvial groundwater basins. Due to the highly variable nature of the void spaces within fractured-rock aquifers, wells drawing from fractured-rock aquifers tend to have less capacity and less reliability than wells drawing from alluvial aquifers. On average, wells drawing from fractured-rock aquifers yield 10 gpm or less. Although fractured-rock aquifers are less productive compared to alluvial aquifers, they commonly are the critical sole source of water for many communities. Information related to fractured-rock aquifers in the region was not developed as part of Update 2013.

More detailed information regarding the aquifers in the Tulare Lake Hydrologic Region is available online from Update 2013, Volume 4, *Reference Guide*, the article, “California’s Groundwater Update 2013,” and in DWR *Bulletin 118-2003* (California Department of Water Resources 2003).⁶

Surface Water Quality

“Surface water quality in the Basin is generally good, with excellent quality exhibited by most eastside streams. The Regional Water Board intends to maintain this quality.”⁷ Specific objectives outlined in the Water Quality Control Plan are listed below:⁸

- **Ammonia:** Waters shall not contain un-ionized ammonia in amounts which adversely affect beneficial uses. In no case shall the discharge of wastes cause concentrations of un-ionized ammonia (NH₃) to exceed 0.025 mg/l (as N) in receiving waters.
- **Bacteria:** In waters designated REC-1, the fecal coliform concentration based on a minimum of not less than five samples for any 30-day period shall not exceed a geometric mean of 200/100 ml, nor shall more than ten percent of the total number of samples taken during any 30-day period exceed 400/100 ml.
- **Biostimulatory Substances:** Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
- **Chemical Constituents:** Waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses.
- **Color:** Waters shall be free of discoloration that causes nuisance or adversely affects beneficial uses.
- **Dissolved Oxygen:** Waste discharges shall not cause the monthly median dissolved oxygen concentrations (DO) in the main water mass (at centroid of flow) of streams and above the thermocline in lakes to fall below 85 percent of saturation concentration, and the 95 percentile concentration to fall below 75 percent of saturation concentration.

⁶ Op. Cit. TL-13 thru TL-17.

⁷ Central Valley Regional Water Quality Control Board. Water Quality Control Plan for the Tulare Lake Basin. Page III-3.

⁸ Ibid. III-2 to III-7.

- **Floating Material:** Waters shall not contain floating material, including but not limited to solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.
- **Oil and Grease:** Waters shall not contain oils, greases, waxes, or other materials in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.
- **pH:** The pH of water shall not be depressed below 6.5, raised above 8.3, or changed at any time more than 0.3 units from normal ambient pH.
- **Pesticides:** Waters shall not contain pesticides in concentrations that adversely affect beneficial uses.
- **Radioactivity:** Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life nor which result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life
- **Salinity:** Waters shall be maintained as close to natural concentrations of dissolved matter as is reasonable considering careful use of the water resources.
- **Sediment:** The suspended sediment load and suspended sediment discharge rate of waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.
- **Settleable Material:** Waters shall not contain substances in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.
- **Tastes and Odors:** Waters shall not contain taste- or odor-producing substances in concentrations that cause nuisance, adversely affect beneficial uses, or impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin or to domestic or municipal water supplies.
- **Temperature:** Natural temperatures of waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Water Board that such alteration in temperature does not adversely affect beneficial uses.
- **Toxicity:** All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life...
- **Turbidity:** Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses.

Groundwater Quality

Specific objectives outlined in the Water Quality Control Plan are listed as follows:

- **“Bacteria:** In ground waters designated MUN, the concentration of total coliform organisms over any 7-day period shall be less than 2.2/100 ml.

- **Chemical Constituents:** Ground waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses.
- **Pesticides:** No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses.
- **Radioactivity:** Radionuclides shall not be present in ground waters in concentrations that are deleterious to human, plant, animal, or aquatic life, or that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal or aquatic life.
- **Salinity:** All ground waters shall be maintained as close to natural concentrations of dissolved matter as is reasonable considering careful use and management of water resources.
- **Tastes and Odors:** Ground waters shall not contain taste- or odor producing substances in concentrations that cause nuisance or adversely affect beneficial uses.
- **Toxicity:** Ground waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with designated beneficial use(s).⁹

According to the California Water Plan, the key ground water quality issues include the following.

“Salinity: Salinity is the primary contaminant affecting water quality and habitat in the Tulare Lake region. Because the groundwater basin in the San Joaquin Valley portion of the region is an internally drained and closed basin, salts, much of which are introduced into the basin with imported water supplies, build up in the soil and groundwater. Salt contained in the imported water supply is the primary source of salt circulating in the Tulare Lake region. The California Aqueduct, Friant-Kern Canal, and to a less extent Delta Mendota Canal supply most of the higher quality surface irrigation water in the Tulare Lake region. The quality of this supply may be impaired by the recirculation of salts from the San Joaquin River to the Delta Mendota Canal intake pump, leading to a greater net accumulation of salts in the basin. Delivery data from the two major water projects in California indicate there is a substantial amount of salt being transported from the Delta to other basins throughout the state. Annual import of salt into the Tulare Lake region is estimated to be 1,206 thousand tons of salt. In situ dissolution of salts and pumping from the underlying confined aquifer are important secondary sources.

Sedimentation and Erosion: In the Central Valley, erosion is occurring from the headwaters down to the valley floor. Although naturally occurring, erosion can be accelerated by timber harvest activities, land use conversion, rural development, and grazing. Excessive soil erosion and sediment delivery can impact the beneficial uses of water by (1) silting over fish spawning habitats; (2) clogging drinking water intakes; (3) filling in pools creating shallower, wider, and warmer streams and increasing downstream flooding; (4) creating unstable stream channels; and (5) losing riparian

⁹ Op. Cit. III-7 and III-8.

habitat. Timber harvesting in the riparian zone can adversely affect stream temperatures by removing stream shading, a concern for spawning and rearing habitat for salmonids. Thousands of miles of streams are potentially impacted, and the lack of resources has prevented a systematic evaluation of these impacts.

Nitrates and Groundwater Contaminates: Groundwater is a primary water supply, but in many places it is impaired or threatened because of elevated levels of nitrates and salts that are derived principally from irrigated agriculture, dairies, discharges of wastewater to land, and from disposal of sewage from both community wastewater systems and septic tanks. As population has grown, many cities have struggled to fund improvements in wastewater systems. High TDS content of west-side water is due to recharge of streamflow originating from marine sediments in the Coast Range.

Naturally occurring arsenic and human-made organic chemicals—pesticides and industrial chemicals—in some instances have contaminated groundwater that is used as domestic water supplies in this region. In some cases, nitrates are from natural sources. Agricultural pesticides and herbicides have been detected throughout the valley, but primarily along the east side where soil permeability is higher and depth to groundwater is shallower. The most notable agricultural contaminant is DBCP, a now-banned soil fumigant and known carcinogen once used extensively on grapes.”¹⁰

Surface Water Supply

“Surface water supplies for the Tulare Lake Basin include developed supplies from the Central Valley Project (CVP), the State Water Project (SWP), rivers, and local projects. Surface water also includes the supplies for required environmental flows. Required environmental flows are comprised of undeveloped supplies designated for wild and scenic rivers, supplies used for instream flow requirements, and supplies used for Bay-Delta water quality and outflow requirements. Finally, surface water includes supplies available for reapplication downstream. Urban wastewater discharges and agricultural return flows, if beneficially used downstream, are examples of reapplied surface water.”¹¹

“Along the eastern edge of the valley, the Friant-Kern Canal is used to divert San Joaquin River water from Millerton Lake for delivery to agencies extending into Kern County. All of the Tulare Lake region’s streams are diverted for irrigation or other purposes, except in the wettest years. Historically, they drained into Tulare Lake, Kern Lake, or adjacent Buena Vista Lake. The latter ultimately drained to Tulare Lake, which is about 30 feet lower in elevation.”¹²

“The Kings, Kaweah, Tule, and Kern Rivers, which drain the west face of the Sierra Nevada Mountains, are of excellent quality and provide the bulk of the surface water supply native to the Basin. Imported surface supplies, which are also of good quality, enter the Basin through the San Luis Canal/California Aqueduct System, Friant-Kern Canal, and the Delta- Mendota Canal.

¹⁰ Department of Water Resources California Water Plan Update 2013 Regional Reports Volume 2, Tulare Lake Hydrologic Region Groundwater Update. Pages TL-22 to TL-24.

¹¹ Tulare County General Plan 2030 Update, Background Report. Page 10-7.

¹² Department of Water Resources California Water Plan Update 2013 Regional Reports Volume 2, Tulare Lake Hydrologic Region Groundwater Update. Page TL-5.

Adequate control to protect the quality of these resources is essential, as imported surface water supplies contribute nearly half the increase of salts occurring within the Basin.”¹³

Groundwater Supply

“Surface water supplies tributary to or imported for use within the Basin are inadequate to support the present level of agricultural and other development. Therefore, ground water resources within the valley are being mined to provide additional water to supply demands.”¹⁴

“Tulare Lake region’s groundwater use rises and falls contingent on the availability of both local and imported surface supplies. The management of water resources within this region is a complex activity and critical to the region’s agricultural operations. Local annual surface supplies are determined by the amount of runoff from the Sierra Nevada watersheds, the flows captured in local reservoirs, and carryover storage over a series of years. Imported surface supply availability is contingent not only on runoff in any year or series of years but also by regulations determining the amount of water that can be pumped month to month from the Sacramento-San Joaquin River Delta due to fishery and other concerns. The recent San Joaquin River settlement will reduce the overall volume of water available for diversion into the Friant-Kern Canal. The new biological opinion on the Operating Criteria and Plan (OCAP) for the SWP and CVP will impact surface water supplies to south-of-Delta water users.”¹⁵

“Groundwater in Tulare County occurs in an unconfined state throughout, and in a confined state beneath its western portion. Extensive alluvial fans associated with the Kings, Kaweah, and Tule Rivers provide highly permeable areas in which groundwater in the unconfined aquifer system is readily replenished. Interfan areas between the streams contain less permeable surface soils and subsurface deposits, impeding groundwater recharge and causing well yields to be relatively low. The mineral quality of groundwater in Tulare County is generally satisfactory for all uses.”¹⁶

“Groundwater recharge is primarily from natural streams, other water added to streambeds, from deep percolation of applied irrigation water, and from impoundment of surface water in developed water bank/percolation ponds.”¹⁷

“The Tulare Lake region has experienced water-short conditions for more than 100 years, which has resulted in a water industry that has consciously developed—through careful planning, management and facility design—the possibility of a shortage occurring in any year. Water demand is more or less controlled by available, reliable long-term water supplies. Over the years, agricultural acreage has risen and dropped largely based on water supplies. The region initially developed with surface water supplies; but local water users learned these supplies could widely vary in volume from year to year and drought conditions could quickly develop. The introduction of deep well turbines resulted in a dramatic rise in groundwater use in the early 1900s, subsequently resulting in dropping groundwater levels and land subsidence. Surface water storage and conveyance systems built to alleviate the overuse of groundwater provided an impounded supply of water that could be used during years with deficient surface water. This

¹³ Central Valley Regional Water Quality Control Board. Water Quality Control Plan for the Tulare Lake Basin. Page I-1

¹⁴ Ibid.

¹⁵ Department of Water Resources California Water Plan Update 2013 Regional Reports Volume 2, Tulare Lake Hydrologic Region Groundwater Update. Pages TL-15 to TL-17

¹⁶ Tulare County General Plan 2030 Update Background Report. Page 10-11.

¹⁷ Department of Water Resources California Water Plan Update 2013 Regional Reports Volume 2, Tulare Lake Hydrologic Region Groundwater Update. Page TL-17.

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resulted in a regional reliance on conjunctive water use in the development of the local water economy. Efforts to address Delta environmental issues and the subsequent loss of surface water to the region is increasing groundwater use and creating concern that additional pumping will increase subsidence.”¹⁸

Table 3.9-1 Tulare Lake Hydrologic Water Balance for 2003-2010 (thousand acre-feet)¹⁹								
Tulare Lake Region	Water Year							
	2003	2004	2005	2006	2007	2008	2009	2010
Water Entering the Region								
Precipitation	12,137	11,964	19,939	17,135	7,031	10,724	9,945	16,185
Inflow from Oregon/Mexico	0	0	0	0	0	0	0	0
Inflow from Colorado River	0	0	0	0	0	0	0	0
Imports from Other Regions	3,696	4,239	5,174	5,944	4,434	2,797	2,704	4,456
Total	17,311	16,780	22,848	23,079	11,465	13,521	12,649	20,641
Water Leaving the Region								
Consumptive Use of Applied Water	7,667	8,221	6,953	7,376	8,214	8,592	8,684	7,668
Outflow to Oregon/Nevada/Mexico	0	0	0	0	0	0	0	0
Exports to Other Regions	1,898	1,961	1,724	2,269	2,053	1,215	1,204	1,502
Statutory Required Outflow to Salt Sink	0	0	0	0	0	0	0	0
Additional Outflow to Salt Sink	458	457	300	468	456	514	456	456
Evaporation, Evapotranspiration of Native Vegetation, Groundwater Subsurface Outflows, Natural and Incidental Runoff, Ag Effective Precipitation & Other Outflows	10,090	10,342	13,297	13,241	5,303	8,528	7,667	13,095
Total	20,113	20,981	22,274	23,350	16,026	18,849	18,011	22,721
Storage Changes in Region: [+] Water added to storage, [-] Water removed from storage								
Change in Surface Reservoir Storage	173	-199	680	-108	-473	-59	101	259
Change in Groundwater Storage	-2975	-4,002	-106	163	-4,088	5,269	5,463	2,339
Total	-2,802	-4,201	574	-4,256	-4,088	-5,329	-5,362	-2,080

“Groundwater overdraft is expected to decline statewide by 2020. The reduction in irrigated acreage in drainage problem areas on the west side of the San Joaquin Valley is expected to reduce groundwater demands in the Tulare Lake region by 2020.”²⁰ According to the 2009 California Water Plan Update, it is anticipated that there will be a 550,000 acre-feet reduction in

¹⁸ Ibid. Page TL-19.

¹⁹ Department of Water Resources California Water Plan Update 2013 Regional Reports Volume 2, Tulare Lake Hydrologic Region Groundwater Update. Page TL-19.

²⁰ Ibid. Page TL-54.

the water demand in the Tulare Lake Hydrologic Area under Current Growth trends. Slow & Strategic Growth trends may further decrease water demand, while Expansive Growth trends may increase water demand.

“There are 19 entities in Tulare County with active programs of groundwater management. These management programs include nearly all types of direct recharge of surface water. Groundwater recovery is accomplished primarily through privately owned wells. Among the larger programs of groundwater management are those administered by the Kaweah Delta Water Conservation District, the Kings River Water Conservation District, the Tulare Irrigation District, the Lower Tule Water Users Association, and the Alta Irrigation District, utilizing water from the Friant-Kern Canal and local streams. The Kings River Water Conservation District covers the western county.”²¹

Irrigation Districts in Tulare County

“The Tulare County Resource Management Agency maintains a list of special districts that provide sewer and/or water service that cannot currently meet the demand of new development projects. The list provided by Tulare County RMA (last updated April 30, 2007) indicates that following water and/or sewer districts are either under a temporary cease and desist order by the Regional Water Control Board prohibiting any new connections, or have other limitations for water and sewer connections.”²²

- Alpaugh Joint Powers Authority Water District;
- Cutler Public Utility District;
- Delft Colony Zone of Benefit (County RMA);
- Earlimart Public Utility District;
- El Rancho Zone of Benefit (County RMA);
- Orosi Public Utility District;
- Pixley Public Utility District;
- Pratt Mutual Water Company;
- Richgrove Public Utility District;
- Seville Zone of Benefit (County RMA);
- Seville Water Company;
- Springville Public Utility District;
- Tooleville Zone of Benefit (County RMA);
- Traver Zone of Benefit (County RMA); and
- Well Tract Zone of Benefit (County RMA)”²³

Flooding

“Flooding is a natural occurrence in the Central Valley because it is a natural drainage basin for thousands of watershed acres of Sierra Nevada and Coast Range foothills and mountains. Two kinds of flooding can occur in the Central Valley: general rainfall floods occurring in the late fall and winter in the foothills and on the valley floor; and snowmelt floods occurring in the late

²¹ Op. Cit. TL-10 and 12.

²² Op. Cit. TL-17.

²³ Ibid.

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spring and early summer. Most floods are produced by extended periods of precipitation during the winter months. Floods can also occur when large amounts of water (due to snowmelt) enter storage reservoirs, causing an increase in the amount of water that is released.”²⁴

“Floods in the Tulare Lake Hydrologic Region can be caused by heavy rainfall; by dams, levees, or other engineered structures failing; or by extreme wet-weather patterns. Historically, in the Tulare Lake region flooding originates principally from melting of the Sierra snowpack and from rainfall. Flooding from snowmelt typically occurs in the spring and has a lengthy runoff period. Flooding in the region was intermittent, with severe flooding some years and drought in other years. Flash and slow-rise flooding are the most commonly experienced types of flooding in this hydrologic region. Floods that occur in the Tulare Lake region take a variety of forms and can be classified into flash, alluvial fan, debris flow, stormwater, slow-rise, and engineered structure failure flooding. For a complete record of floods, refer *California Flood Future Report, Attachment C: Flood history of California* technical memorandum (California Department of Water Resources and the U.S. Army Corps of Engineers 2013a).”²⁵

“Official floodplain maps are maintained by the Federal Emergency Management Agency (FEMA). FEMA determines areas subject to flood hazards and designates these areas by relative risk of flooding on a map for each community, known as the Flood Insurance Rate Map (FIRM). A 100-year flood is considered for purposes of land use planning and protection of property and human safety. The boundaries of the 100-year floodplain are delineated by FEMA on the basis of hydrology, topography, and modeling of flow during predicted rainstorms.”²⁶

“The flood carrying capacity in rivers and streams has decreased as trees, vegetation, and structures (e.g., bridges, trestles, buildings) have increased along the Kaweah, Kings, and Tule Rivers. Unsecured and uprooted material can be carried down a river, clogging channels and piling up against trestles and bridge abutments that can, in turn, give way or collapse, increasing blockage and flooding potential. Flooding can force waters out of the river channel and above its ordinary floodplain. Confined floodplains can result in significantly higher water elevations and higher flow rates during high runoff and flood events.”²⁷

“Dam failure can result from numerous natural or human activities, such as earthquakes, erosion, improper siting, rapidly rising flood waters, and structural and design flaws. Flooding due to dam failure can cause loss of life, damage to property, and other ensuing hazards. Damage to electric-generating facilities and transmission lines associated with hydro-electric dams could also affect life support systems in communities outside the immediate hazard area.”²⁸

Existing Site Conditions

The Little Tulare Irrigation Ditch (LTID) bisects the site from east to west. “The parcel south of the LTID was previously used as a drive-in theater. The parcels north of the LTID were used as

²⁴ Tulare County General Plan 2030 Update Background Report. Page 8-13.

²⁵ Department of Water Resources California Water Plan Update 2009, Tulare Lake. Page TL-30.

²⁶ Tulare County General Plan 2030 Update Background Report. Page 8-14.

²⁷ Ibid.

²⁸ Ibid. 8-17.

farm land and have since become vacant. There is no current water demand for the three parcels, as they are vacant, but the southernmost parcel has two existing irrigation wells.”²⁹

“Groundwater from the Kaweah River Basin has been the primary source of water for the subject area in the past. Groundwater will remain the primary source of water for the subject area after development. The Kaweah River Basin is part of the Tulare Lake Basin within the Central Valley. The Kaweah River Basin encompasses an area of about 446,000 acres on the valley floor with an average annual precipitation of 11 inches (DWR, 2004). Located above the valley floor, the Kaweah River Watershed encompasses an area of 630 square miles with an average annual precipitation of 21.71 inches in the foothill area. All rainfall data used in this report were obtained from the Department of Water Resources.

The main freshwater-bearing sediments beneath the Site include flood basin deposits, younger alluvium, older alluvium, the Tulare Formation, and continental deposits undifferentiated. Within the alluvial deposits, groundwater occurs under confined and unconfined conditions (Davis et.al., 1959). These deposits supply nearly all the water pumped from wells in the valley and are the primary source of freshwater. Groundwater moves in response to the hydraulic gradient from areas of recharge to areas of discharge. Under natural conditions, the unconfined and semiconfined groundwater in the San Joaquin Valley moves toward topographically low central areas, where it is discharged at the land surface or consumed by plants.”³⁰

REGULATORY SETTING

Federal Agencies & Regulations

Clean Water Act/NPDES

“The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized and expanded in 1972. "Clean Water Act" became the Act's common name with amendments in 1972... Under the CWA, EPA has implemented pollution control programs such as setting wastewater standards for industry. We have also set water quality standards for all contaminants in surface waters... The CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained. EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters.”³¹

Safe Drinking Water Act

“The Safe Drinking Water Act (SDWA) was established to protect the quality of drinking water

²⁹ 4Creeks. Geological, Hydrological & Sustainability Report for Sequoia Drive-in Business Park. Page 10. Included in Appendix “E” of this EIR.

³⁰ Ibid. 11.

³¹ U.S. Environmental Protection Agency. Summary of the Clean Water Act – <https://www.epa.gov/laws-regulations/summary-clean-water-act>. Accessed May 2017.

in the U.S. This law focuses on all waters actually or potentially designed for drinking use, whether from above ground or underground sources.

The Act authorizes EPA to establish minimum standards to protect tap water and requires all owners or operators of public water systems to comply with these primary (health-related) standards. The 1996 amendments to SDWA require that EPA consider a detailed risk and cost assessment, and best available peer-reviewed science, when developing these standards. State governments, which can be approved to implement these rules for EPA, also encourage attainment of secondary standards (nuisance-related). Under the Act, EPA also establishes minimum standards for state programs to protect underground sources of drinking water from endangerment by underground injection of fluids.”³²

Environmental Protection Agency

The mission of EPA is to protect human health and the environment.

“EPA's purpose is to ensure that:

- all Americans are protected from significant risks to human health and the environment where they live, learn and work;
- national efforts to reduce environmental risk are based on the best available scientific information;
- federal laws protecting human health and the environment are enforced fairly and effectively;
- environmental protection is an integral consideration in U.S. policies concerning natural resources, human health, economic growth, energy, transportation, agriculture, industry, and international trade, and these factors are similarly considered in establishing environmental policy;
- all parts of society -- communities, individuals, businesses, and state, local and tribal governments -- have access to accurate information sufficient to effectively participate in managing human health and environmental risks;
- environmental protection contributes to making our communities and ecosystems diverse, sustainable and economically productive; and
- the United States plays a leadership role in working with other nations to protect the global environment.”³³

Army Corps of Engineers (Corps)

“The Department of the Army Regulatory Program is one of the oldest in the Federal Government. Initially it served a fairly simple, straightforward purpose: to protect and maintain the navigable capacity of the nation's waters. Time, changing public needs, evolving policy, case law, and new statutory mandates have changed the complexion of the program, adding to its breadth, complexity, and authority.

³² U.S. Environmental Protection Agency. Summary of the Safe Drinking Water Act – <https://www.epa.gov/laws-regulations/summary-safe-drinking-water-act>. Accessed May 2017.

³³ U.S. Environmental Protection Agency. What we do. <http://www.epa.gov/aboutepa/whatwedo.html>. Accessed May 2017.

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The Regulatory Program is committed to protecting the Nation's aquatic resources, while allowing reasonable development through fair, flexible and balanced permit decisions. The Corps evaluates permit applications for essentially all construction activities that occur in the Nation's waters, including wetlands.”³⁴

State Agencies & Regulations

The Porter-Cologne Water Quality Control Act

“The Porter-Cologne Act is the principal law governing water quality regulation in California. It establishes a comprehensive program to protect water quality and the beneficial uses of water. The Porter-Cologne Act applies to surface waters, wetlands, and ground water and to both point and nonpoint sources of pollution. Pursuant to the Porter-Cologne Act (California Water Code section 13000 et seq.), the policy of the State is as follows:

- That the quality of all the waters of the State shall be protected,
- That all activities and factors affecting the quality of water shall be regulated to attain the highest water quality within reason, and
- That the State must be prepared to exercise its full power and jurisdiction to protect the quality of water in the State from degradation.

The Porter-Cologne Act established nine Regional Water Boards (based on hydrogeologic barriers) and the State Water Board, which are charged with implementing its provisions and which have primary responsibility for protecting water quality in California. The State Water Board provides program guidance and oversight, allocates funds, and reviews Regional Water Boards decisions. In addition, the State Water Board allocates rights to the use of surface water. The Regional Water Boards have primary responsibility for individual permitting, inspection, and enforcement actions within each of nine hydrologic regions. The State Water Board and Regional Water Boards have numerous NPS-related responsibilities, including monitoring and assessment, planning, financial assistance, and management.”³⁵

State Water Quality Control Board

“The State Water Resources Control Board (State Water Board) was created by the Legislature in 1967. The joint authority of water allocation and water quality protection enables the State Water Board to provide comprehensive protection for California’s waters. The State Water Board consists of five full-time salaried members, each filling a different specialty position. Board members are appointed to four-year terms by the Governor and confirmed by the Senate.”³⁶

Regional Water Quality Control Board

“The primary duty of the Regional Board is to protect the quality of the waters within the Region for all beneficial uses. This duty is implemented by formulating and adopting water quality plans for specific ground or surface water basins and by prescribing and enforcing requirements on all agricultural, domestic and industrial waste discharges. Specific responsibilities and procedures of

³⁴ Army Corps of Engineers <http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits.aspx>. Accessed May 2017.

³⁵ California Environmental Protection Agency. State Water Resources Control Board. OA – Federal, State and Local Laws, Policy and Regulations. http://www.waterboards.ca.gov/water_issues/programs/nps/encyclopedia/0a_laws_policy.shtml. Accessed May 2017.

³⁶ State Water Board, http://www.waterboards.ca.gov/about_us/water_boards_structure/mission.shtml. Accessed May 2017.

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the Regional Boards and the State Water Resources Control Board are contained in the Porter-Cologne Water Quality Control Act.”³⁷

California Department of Water Resources

“In 1956, the Legislature passed a bill creating DWR to plan, design, construct, and oversee the building of the nation's largest state-built water development and conveyance system. Today, DWR protects, conserves, develops, and manages much of California's water supply including the State Water Project which provides water for 25 million residents, farms, and businesses.

Working with other agencies and the public, DWR develops strategic goals, and near-term and long-term actions to conserve, manage, develop, and sustain California's watersheds, water resources, and management systems. DWR also works to prevent and respond to floods, droughts, and catastrophic events that would threaten public safety, water resources and management systems, the environment, and property.

Balancing the State's water needs with environmental protection remains a long-term challenge.”³⁸

SB 610 (Costa) & SB 221 (Kuehl) 2001

“Senate Bills 610 (Chapter 643, Statutes of 2001) and Senate Bill 221 (Chapter 642, Statutes of 2001) amended state law, effective January 1, 2002, to improve the link between information on water supply availability and certain land use decisions made by cities and counties. SB 610 and SB 221 are companion measures which seek to promote more collaborative planning between local water suppliers and cities and counties. Both statutes require detailed information regarding water availability to be provided to the city and county decision-makers prior to approval of specified large development projects. Both statutes also require this detailed information be included in the administrative record that serves as the evidentiary basis for an approval action by the city or county on such projects. Both measures recognize local control and decision making regarding the availability of water for projects and the approval of projects.

Under SB 610, water assessments must be furnished to local governments for inclusion in any environmental documentation for certain projects (as defined in Water Code 10912 [a]) subject to the California Environmental Quality Act. Under SB 221, approval by a city or county of certain residential subdivisions requires an affirmative written verification of sufficient water supply.”³⁹

Local Policy & Regulations

Tulare County Environmental Health Services

³⁷ California Environmental Protection Agency. Central Valley Regional Water Quality Control Board. About Us. http://www.swrcb.ca.gov/centralvalley/about_us/. Accessed May 2017.

³⁸ California Department of Water Resources. About us – Overview. <http://www.water.ca.gov/aboutus.cfm>. Accessed May 2017.

³⁹ California Department of Water Resources. *Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001 to assist water suppliers, cities, and counties in integrating water and land use planning*. Page iii. http://www.water.ca.gov/pubs/use/sb_610_sb_221_guidebook/guidebook.pdf. Accessed May 2017.

“The County Health and Human Services Agency (HHSA), Environmental Health Division has been granted primacy by the DHS, is responsible for the administration and enforcement of the Safe Drinking Water Act involving those systems in Tulare County with less than 200 connections. County Environmental Health staff are also responsible for development review, approval and enforcement related to private wells and septic systems, for properties not served by water or wastewater districts or other public entities.”⁴⁰

Tulare County General Plan Policies

The Tulare County General Plan has a number of policies that apply to projects within County of Tulare. General Plan policies that relate to the proposed Project are listed as follows:

PF-4.14 Compatible Project Design - The County may ensure proposed development within CACUABs is compatible with future sewer and water systems, and circulation networks as shown in city plans.

AG-1.17 Agricultural Water Resources - The County shall seek to protect and enhance surface water and groundwater resources critical to agriculture.

The County shall seek to protect and enhance surface water and groundwater resources critical to agriculture.

HS-4.4 Contamination Prevention - The County shall review new development proposals to protect soils, air quality, surface water, and groundwater from hazardous materials contamination.

HS-5.2 Development in Floodplain Zones - The County shall regulate development in the 100-year floodplain zones as designated on maps prepared by FEMA in accordance with the following:

1. Critical facilities (those facilities which should be open and accessible during emergencies) shall not be permitted.
2. Passive recreational activities (those requiring non-intensive development, such as hiking, horseback riding, picnicking) are permissible.
3. New development and divisions of land, especially residential subdivisions, shall be developed to minimize flood risk to structures, infrastructure, and ensure safe access and evacuation during flood conditions.

HS-5.4 Multi-Purpose Flood Control Measures - The County shall encourage multipurpose flood control projects that incorporate recreation, resource conservation, preservation of natural riparian habitat, and scenic values of the County's streams, creeks, and lakes. Where appropriate, the County shall also encourage the use of flood and/or stormwater retention facilities for use as groundwater recharge facilities.

HS-5.9 Floodplain Development Restrictions - The County shall ensure that riparian areas and drainage areas within 100-year floodplains are free from development that may adversely impact floodway capacity or characteristics of natural/riparian areas or natural groundwater recharge areas.

⁴⁰ Tulare County General Plan 2030 Update RDEIR. Page 3.6-13.

HS-5.11 Natural Design - The County shall encourage flood control designs that respect natural curves and vegetation of natural waterways while retaining dynamic flow and functional integrity.

WR-2.1 Protect Water Quality - All major land use and development plans shall be evaluated as to their potential to create surface and groundwater contamination hazards from point and non-point sources. The County shall confer with other appropriate agencies, as necessary, to assure adequate water quality review to prevent soil erosion; direct discharge of potentially harmful substances; ground leaching from storage of raw materials, petroleum products, or wastes; floating debris; and runoff from the site.

WR-2.2 National Pollutant Discharge Elimination System (NPDES) Enforcement - The County shall continue to support the State in monitoring and enforcing provisions to control non-point source water pollution contained in the U.S. EPA NPDES program as implemented by the Water Quality Control Board.

WR-2.3 Best Management Practices (BMPs) - The County shall continue to require the use of feasible BMPs and other mitigation measures designed to protect surface water and groundwater from the adverse effects of construction activities, agricultural operations requiring a County Permit and urban runoff in coordination with the Water Quality Control Board.

WR-2.4 Construction Site Sediment Control - The County shall continue to enforce provisions to control erosion and sediment from construction sites.

WR-2.5 Major Drainage Management - The County shall continue to promote protection of each individual drainage basin within the County based on the basins unique hydrologic and use characteristics.

WR-2.6 Degraded Water Resources - The County shall encourage and support the identification of degraded surface water and groundwater resources and promote restoration where appropriate.

WR-2.8 Point Source Control - The County shall work with the Regional Water Quality Control Board to ensure that all point source pollutants are adequately mitigated (as part of the California Environmental Quality Act review and project approval process) and monitored to ensure long-term compliance.

WR-3.3 Adequate Water Availability - The County shall review new development proposals to ensure the intensity and timing of growth will be consistent with the availability of adequate water supplies. Projects must submit a Will-Serve letter as part of the application process, and provide evidence of adequate and sustainable water availability prior to approval of the tentative map or other urban development entitlement.

WR-3.5 Use of Native and Drought Tolerant Landscaping - The County shall encourage the use of low water consuming, drought-tolerant and native landscaping and emphasize the importance of utilizing water conserving techniques, such as night watering, mulching, and drip irrigation.

WR-3.6 Water Use Efficiency - The County shall support educational programs targeted at reducing water consumption and enhancing groundwater recharge.

WR-3.10 Diversion of Surface Water - Diversions of surface water or runoff from precipitation should be prevented where such diversions may cause a reduction in water available for groundwater recharge.

IMPACT EVALUATION

Would the project:

a) Violate any water quality standards or waste discharge requirements?

Project Impact Analysis: *Less Than Significant Impact With Mitigation*

Water Quality Standards

“On May 12, 2015, 4Creeks collected one groundwater sample from groundwater the north agriculture well designated as “GW1”. Field measurements of pH, specific conductance, and temperature were recorded with a YSI ProPlus water sensor. The groundwater sample was delivered to BSK laboratories and analyzed for general minerals, metals, E. Coli and Fecal Coliform, and volatile organic compounds (VOCS).”⁴¹ Detected analytes are listed below in Table 3.9-2 – Ground Quality – Well GW1. “The results were compared to California Department of Public Health (CDPH) maximum contaminant levels (MCLs) for drinking water in the state of California. The laboratory analytical report is presented in Appendix C”⁴² of Appendix “E” (of this DEIR).

“This well has not been in use for many years. The well was sampled without being purged or while in operation. However, there are surrounding domestic wells in the near vicinity that serve the public from the same aquifer. This water sample serves as an initial investigation of possible contamination and feasibility for the proposed project. The presence of Coliform may be due to the well not being purged prior to the sample being taken. However, Coliform can be treated. The water produced by this well will need to meet the quality and monitoring requirements of the State Water Board and California Department of Public Health for a Community Water System.”⁴³ If the water produced by this well does not meet the quality and monitoring requirements, potentially significant impacts could occur; however, implementation of **Mitigation Measure 9-1** will be implemented such that water quality impacts would be *Less Than Significant With Mitigation*.

Waste Discharge Requirements

Constituents found in urban runoff may degrade both surface water quality and eventually groundwater quality. Development of urban uses on the proposed Project site would result in alteration in the existing site conditions and the introduction of urban pollutant sources. Urban runoff typically contains oils, grease, fuel, antifreeze, byproducts of combustion (such

⁴¹ 4Creeks. Geological, Hydrological & Sustainability Report for Sequoia Drive-in Business Park. Page 16. Included in Appendix “E” of this DEIR.

⁴² Ibid.

⁴³ Op. Cit.

as lead, cadmium, nickel, and other metals) and other household pollutants. Precipitation early in the rain season displaces these pollutants into storm water resulting in high pollutant concentrations in initial wet weather runoff. This initial runoff with peak pollutant levels can be referred to as the "first flush" of storm events.

A Stormwater Plan was prepared by 4Creeks which analyzed the Project's hydrologic characteristics, stormwater runoff and collection system. The amount of runoff generated by the proposed Project would be greater than the runoff occurring under existing conditions due to a significant increase in impervious surfaces. There would be a corresponding increase in urban runoff pollutants and "first flush" roadway contaminants such as heavy metals, oil, grease, as well as an increase in nutrients (i.e., fertilizers), and other chemicals from landscaped areas. These constituents will result in water quality impacts that have the potential to be significant.

The proposed Project will be served by an onsite storm water system which is subject to the requirements of the NPDES Storm Water Permit adopted by the SWRCB. This permit requires that discharges of pollutants from areas of new development be reduced to the maximum extent practicable. Compliance with this standard requires that control measures be incorporated into the design of new development to reduce pollution discharges in site runoff over the life of the project.

The Central Valley Regional Water Quality Control Board (CVRWQCB) is responsible for administering NPDES permit requirements, such as the use of construction and operational BMPs, to ensure that projects are in compliance with water quality standards as set forth in the CWA. The SWRCB through the creation of a Storm Water Quality Task Force has published the California Storm Water Best Management Practice Construction Handbook, which identifies a listing of acceptable BMPs to be used in meeting water standards as outlined by the CWA.

In addition, the Project will generate typical wastewater (sewer) associated with commercial developments which will be collected and treated with an on-site engineered septic/wastewater treatment system. See Section 3.18 – Utilities for a discussion regarding waste discharge requirements, wastewater characteristics and water quality standards pertaining to Project-related wastewater.

The Project will not result in a violation of any waste discharge requirements with the implementation of **Mitigation Measures 9-2 and 9-3**. As such, any impacts related to Waste Discharge Requirement violation will result in a *Less Than Significant Impact With Mitigation*.

Cumulative Impact Analysis: ***Less Than Significant Impact With Mitigation***

The geographic area of this cumulative analysis is the Tulare Lake Basin. This cumulative analysis is based on information provided in the Water Quality Control Plan for the Tulare Lake Basin and the requirements of Tulare County Environmental Health.

The proposed Project will be required to comply with the all requirements of the Central Valley Water Board and Tulare County Health Services Division (TCHSD). The proposed Project will be required to comply with Central Valley Water Board and TCHSD rules/regulations and permit requirements as a component of project design features, the proposed Project will not contribute to any cumulative impacts related to this Checklist Item.

Mitigation Measure(s):

- 9-1 Once the well is retrofitted for the proposed Project, a second round of sampling and analysis shall be conducted. The southern well that was not sampled shall also be sampled with analysis once it is retrofitted for the proposed Project. Sampling and analysis shall occur during the initial phases of retrofitting; specifically, during pump testing. If water quality does not meet the State of California standards as discussed above, steps shall be taken during the design of the site such as disinfection, to ensure the water is potable for proposed Project use. Once the redesign is completed, the well shall undergo another round of sampling and analysis. This procedure shall continue until the quality of water produced by the well meets the State of California standards.**
- 9-2 The Project applicant shall prepare a Storm Water Pollution Prevention Plan (SWPPP) according to the latest regulations to be retained onsite. The SWPPP must include best management practices that, when implemented, prevent storm water quality degradation to the extent practical by preventing sediments and other pollutants from leaving the Project site.**
- 9-3 New sewage disposal systems shall be designed by an Engineer, Registered Environmental Health Specialist, Geologist, or other competent persons, all of whom must be registered and/or licensed professionals knowledgeable and experienced in the field of sewage disposal system and design. The specifications and engineering data for the system shall be submitted to the TCEHSD for review and approval prior to the issuance of a building permit.**

Conclusion:

Less Than Significant Impact With Mitigation

With implementation of design features and the above mentioned Mitigation Measures, potential Project-specific and cumulative impacts related to this Checklist Item will be reduced to a ***Less Than Significant Impact With Mitigation***.

- b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?**

Project Impact Analysis:

Less Than Significant Impact With Mitigation

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“Groundwater flowing through shallow parts of the aquifer system beneath the site emanates as runoff at higher elevations, specifically from the Sierra Nevada Mountains. The eastern valley margin soils are generally more coarse and permeable, especially along the east side of the Tule Sub basin adjacent to the Sierra Nevada foothills (USGS, 1995). Deep percolation on the valley floor up-gradient from swampy areas and lakes is a significant source of recharge in wetter areas and during wetter years (Williamson, et.al., 1989).

Based on the Central Valley Hydrologic Model (CVHM), the average groundwater recharge from surface water processes throughout the Central Valley is 7.7-million acre-feet per year. The average annual hydrologic budget from the years 1962-2003 net recharge from landscape (surface water processes) from the CVHM within the combined Kaweah/Tule basin “water balance sub regions” was 710,000 acre-feet (Faunt, 2009).

Recharge rates from precipitation have not changed significantly from predevelopment times. Generally, recharge of the Central Valley Aquifer system occurs during the winter months (December through March) and discharge occurs during the summer months which include the growing season (May through September). Large amounts of water are drawn from storage during the pumping period. The shallow portion of the aquifer system receives some recharge during irrigation. In typical years, water levels generally recover during the wet season (December through March) (Faunt, 2009).

In much of the valley, the annual rainfall is so low that little precipitation penetrates deeply, and soil-moisture deficiency is perennial. Infiltration from stream channels, canals, and irrigated fields are the principal sources of groundwater recharge (Davis, et.al., 1964). Precipitation falling on the valley floor during the rainy season provides only a small part of the total recharge (Faunt, 2009).

Based on the Department of Water Resources Groundwater Information Center, depth to groundwater in surrounding monitoring wells averages approximately 70 to 80 feet below ground surface for 2014. On May 12, 2015, 4Creeks personnel sampled and measured depth to groundwater in the northern of the two wells located onsite.”⁴⁴

Table 3.9-2 North Agriculture Well Data							
Well ID	Latitude	Longitude	Total Well Depth Below top of casing (feet)	Depth to Groundwater below top of casing	Groundwater Temperature (C°)	Specific Conductance µs/cm	pH
GW1	36.323174	-119.224834	249.5	84.6	18.3	208.3	7.09

The southern well, located approximately 450-feet south still had the pump installed on the wellhead and power was not supplied or connected to the motor. 4Creeks personnel could not access the well to measure depth to groundwater or collect a representative groundwater

⁴⁴ 4Creeks. Geological, Hydrological & Sustainability Report for Sequoia Drive-in Business Park. Pages 10 and 11. Included in Appendix “E” of this DIER.

sample from the southern well. This well is planned to be used for the project. Upon further project development, the details for this well will be collected and the groundwater will be sampled and analyzed.

The proposed development currently has two agricultural wells located on the southernmost parcel near Road 156. These two wells will be utilized to supply the community domestic water system with potable water. An estimated 168.38 gallons per day is expected to be used per building and there are 43 proposed buildings. The daily water demand is expected to be approximately 7,240.38 gallons per day. The northern existing well was tested by Willits Pump & Electrical Service to ensure that the well was capable of yielding the required volume to meet the water demand for the project. The test results showed that the northern well is capable of yielding 1.224 million gallons per day which is more than sufficient yield to meet the water demand created by the proposed development.”⁴⁵

“Surface-water supplies in the past have been generally inadequate to meet irrigation demands, and overdraft on groundwater supplies has been widespread. As a result, water level fluctuations have occurred in response to the groundwater withdrawals. The water table declines rapidly in late spring and summer and recovers as pumping ceases late in the autumn. In overdrafted areas, a year by-year decline has occurred. Imports of Central Valley Project surface water through the Friant Kern Canal have supplied additional recharge to the groundwater basins locally and helped to reduce pumping overdraft (Davis, et. al., 1959).”⁴⁶

In order to reduce the demand for water from the proposed Project the following Mitigation Measures have been established to reuse landscape irrigation, and to limit flows for human consumption and landscaping. Standard water conservation measures have been added as **Mitigation Measures 9-4 through 9-6**. In addition, per Tulare County Ordinance 3029, water efficient landscaping is required to conserve water. As noted in the Mitigation Measure 9-5, the proposed Project shall conform to this Water Efficient Landscaping Ordinance. With the implementation of these Mitigation Measures, proposed Project impacts related to this Checklist Item will be reduced to a ***Less Than Significant Impact With Mitigation***.

Cumulative Impact Analysis: ***Less Than Significant Impact With Mitigation***

The geographic area of this cumulative analysis is the Tulare Lake Basin. This cumulative analysis is based on the information provided in Appendix “E” Hydrological & Sustainability (Report for Sequoia Drive-in Business Park, prepared by 4Creeks); and the California Water Plan Update 2009 Regional Report 3 Tulare Lake.

As part of the Tulare County General Plan 2030, a number of large projects were identified in the General Plan Draft EIR. After considering these projects, it was noted in the General Plan Draft EIR that a cumulative unavoidable impact to ground water supply would occur.

⁴⁵ Ibid. 11 and 12.

⁴⁶ Op. Cit.

As **Mitigation Measures 9-4 thru 9-7** (including water conservation measures) will be implemented to reduce water use, the cumulative impacts related to this Checklist Item are ***Less Than Significant With Mitigation.***

Mitigation Measure(s):

- 9-4 A tertiary treatment plant shall be constructed on-site which will allow sewer effluent to meet the State of California standards set in place for water reuse. Tertiary treated water shall be utilized for landscape irrigation.**
- 9-5 All new construction shall have water conserving fixtures (water closets, low flow showerheads, low flow sinks, etc.) New urinals shall also conserve water through waterless, zero flush, or other water conservation technique and/or technology.**
- 9-6 The proposed Project shall conform to the Tulare County Water Efficient Landscaping Ordinance.**
- 9-7 No ground water shall be transported off-site for any use.**

Conclusion: ***Less Than Significant Impact***

- c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?**

Project Impact Analysis: ***Less Than Significant Impact***

“The surface topography of the site is relatively flat. The final grading of the site will not affect the drainage pattern of the site or area. The only surface water conveyance on site is the LTID ditch that bisects the property from east to west. The LTID will remain in place and not be relocated. Grading for the site will include an engineered grading design approved and permitted by Tulare County. Site drainage will be controlled by grading and stormwater retention ponds. No site runoff will flow from the site into LTID; therefore, no substantial erosion or siltation will occur.”⁴⁷ As such, a ***Less Than Significant Project-specific Impact*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County.

The proposed Project will not affect the drainage pattern of any off-site parcels, ***No Cumulative Impact*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

⁴⁷ 4Creeks. Geological, Hydrological & Sustainability Report for Sequoia Drive-in Business Park. Page 14. Included in Appendix “E” of this DEIR.

As noted earlier, *No Project-specific or Cumulative Impacts* related to this Checklist Item will occur.

- d) **Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?**

Project Impact Analysis: *Less Than Significant Impact*

As discussed in Impact 3.9 (c) above, engineered grading of the site will not substantially alter the drainage patterns of the site. Drainage across the site will be controlled as part of the site engineered grading plan. A *Less Than Significant Project-specific Impact* related to this Checklist Item will occur.

Cumulative Impact Analysis: *Less Than Significant Impact*

The geographic area of this cumulative analysis is Tulare County. The proposed Project will not affect the drainage pattern of any off-site parcels, a *Less Than Significant Cumulative Impact* related to this Checklist Item will occur.

Mitigation Measure(s): *None Required.*

Conclusion: *Less Than Significant Impact*

As noted earlier, *Less Than Significant Project-specific or Cumulative Impacts* related to this Checklist Item will occur.

- e) **Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?**

Project Impact Analysis: *Less Than Significant Impact*

“All stormwater runoff will be directed toward onsite stormwater ponds engineered to retain the 100-year storm event for the site. The project will not contribute runoff water exceedances or provide substantial additional sources of polluted runoff.”⁴⁸

As such, *Less Than Significant Project-specific Impacts* related to this Checklist Item will occur.

Cumulative Impact Analysis: *Less Than Significant Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the requirements of the Central Valley Regional Water Quality Control Board.

Storm water will be retained on site. As such, a *Less Than Significant Cumulative Impacts* related to this Checklist Item will occur.

Mitigation Measure(s): *None Required.*

Conclusion: *Less Than Significant Impact*

⁴⁸ 4Creeks. Geological, Hydrological & Sustainability Report for Sequoia Drive-in Business Park. Page 21. Included in Appendix “E” of this DEIR.

As noted earlier, *No Project-specific or Cumulative Impacts* related to this Checklist Item will occur.

f) Otherwise substantially degrade water quality?

Project Impact Analysis: *Less Than Significant Impact*

“All infrastructure designed for the site will be constructed to local, state, and/or federal standards. All potential sources of pollution such as gas stations, liquid waste, or solid waste structures built on-site will be designed to retain all sources of pollution and meet regulatory requirements.”⁴⁹ Additionally, the proposed Project does not include elements that could degrade water quality beyond what was discussed in Item 3.9 a). As such, a *Less Than Significant Project-specific Impact* related to this Checklist Item will occur.

Cumulative Impact Analysis: *Less Than Significant Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the requirements of the Central Valley Regional Water Quality Control Board.

As noted earlier, the proposed Project does not include elements that could degrade water quality beyond what was discussed in Item 3.9 a). As such, a *Less Than Significant Cumulative Impacts* related to this Checklist Item will occur.

Mitigation Measure(s): *None Required.*

Conclusion: *Less Than Significant Impact*

As noted earlier, *No Project-specific or Cumulative Impacts* related to this Checklist Item will occur.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

Project Impact Analysis: *No Impact*

“The proposed Project does not contain housing. Additionally, the flood area that the Project lies within is considered Zone X (Shaded), which is a moderate flood hazard area with a 0.2 percent annual chance or a 500 year flood according to the Federal Emergency Management Agency (FEMA) flood zone designation.”⁵⁰ Since the Project area is not located within the 100 year flood hazard area, *No Project-specific Impact* related to this Checklist Item will occur.

Cumulative Impact Analysis: *No Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

⁴⁹ Ibid. 16.

⁵⁰ Op. Cit. 13.

The proposed Project does not include any housing units. Therefore, *No Cumulative Impact* related to this Checklist Item will occur.

Mitigation Measure(s): *None Required.*

Conclusion: *No Impact*

As noted earlier, *No Project-specific or Cumulative Impacts* related to this Checklist Item will occur.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

Project Impact Analysis: *No Impact*

As described earlier, the proposed Project is located in Zone X (0.2 percent chance flood). The proposed Project will not place any structures within a 100-year flood hazard area. Therefore, *No Project-specific Impact* related to this Checklist Item will occur.

Cumulative Impact Analysis: *No Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project will not have off site impacts related to flooding. In addition, the proposed Project will not induce additional flooding hazards. *No Cumulative Impact* related to this Checklist Item will occur.

Conclusion: *No Impact*

As noted earlier, *No Project-specific or Cumulative Impacts* related to this Checklist Item will occur.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Project Impact Analysis: *Less Than Significant Impact*

“As indicated in the Tulare County General Plan Background Report, two major dams could cause substantial flooding in Tulare County in the event of a failure: Terminus Dam on Lake Kaweah and Success Dam on Lake Success. In addition, there are many smaller dams throughout the county that would cause localized flooding in the event of their failing. However, a comprehensive analysis of the potential for dam failure and possible downstream effects for these upstream dams has not been undertaken. The project lies within flood Zone X (Shaded), which is a moderate flood hazard area with a 0.2 percent annual chance or a 500 year flood according to the Federal Emergency Management Agency (FEMA) flood zone designation. This area is not within the flood area and in turn will not be subject to risk in

the event of a levee or dam failure.”⁵¹ As such, a ***Less Than Significant Project-specific Impact*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project will not have any impacts related to this Checklist Item on other off-site parcels. Therefore, a ***Less Than Significant Cumulative Impact*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

j) Inundation by seiche, tsunami, or mudflow?

Project Impact Analysis: ***No Impact***

The proposed “Project site is not located by the ocean, near a lake shore, or in areas of steep slopes.”⁵² As such, the proposed Project is not subject to inundation by seiche, tsunami, or mudflow. ***No Project-specific Impact*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As noted earlier, the proposed Project is not located near a large body of water, the coast or hillsides. The proposed Project will not have any impacts related to this Checklist item on other off-site parcels. ***No Cumulative Impact*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

⁵¹ Op. Cit. 12.

⁵² Op. Cit. 15.

ACRONYMS

BMPs	Best Management Practices
CDPH	California Department of Public Health
CEQA	California Environmental Quality Act
Corps	U.S. Army Corps of Engineers
CVHM	Central Valley Hydrologic Model
CVP	Central Valley Project
CVRWQCB	Central Valley Regional Water Quality Control Board
CWA	Clean Water Act
DBCP	Dibromochloropropane
DEIR	Draft Environmental Impact Report
DHS	California Department of Health Services
DO	Dissolved Oxygen
DWR	California Department of Water Resources
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
HHSA	Tulare County Health and Human Services Agency
LTID	Little Tulare Irrigation District
MUN	Municipal and Domestic Supply
NDPES	National Pollutant Discharge Act
NPS	Non-Point Source
NH3	Unionized Ammonia
OCAP	Operating Criteria and Plan
pH	Potential of Hydrogen
RDEIR	Recirculated Draft Environmental Impact Report
RMA	Resources Management Agency
SDWA	Safe Drinking Water Act
SWP	State Water Project
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TCHSD	Tulare County Health Services Division
TDS	Total Dissolved Solids
VOCs	Volatile Organic Compounds
USGS	U.S. Geological Survey

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4Creeks. Geological, Hydrological & Sustainability Report for Sequoia Drive-in Business Park. Appendix E of this EIR. Pages 10, 11, 12, 13, 14, 15, 16, and 21.

Land Use and Planning

Chapter 3.10

SUMMARY OF FINDINGS

The proposed Project will result in a *Less Than Significant Impact* to Land Use and Planning. A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Land Use and Planning. As required in CEQA Guidelines Section 15126, all phases of the Project would be considered as part of the potential environmental impact.

As noted in Section 15126.2 (a), “[a]n EIR shall identify and focus on the significant environmental effects of the proposed Project. In assessing the impact of a proposed Project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the Project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the Project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision will have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas.”¹

The environmental setting provides a description of the Land Use and Planning setting in the County. The regulatory setting provides a description of applicable federal, state and local regulatory policies that were developed in part from information contained in the Tulare County

¹ CEQA Guidelines, Section 15126.2 (a).

2030 General Plan, Tulare County General Plan Background Report and/or Tulare County General Plan Revised DEIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

- Divide and established community
- Conflict with applicable land use plan policy, or regulation of an agency with jurisdiction over the Project
- Conflict with an applicable habitat conservation plan

ENVIRONMENTAL SETTING

Tulare County is located in a geographically diverse region with the majestic peaks of the Sierra Nevada framing its eastern region, while its western portion includes the San Joaquin Valley floor, which is very fertile and extensively cultivated. In addition to its agricultural production, the County's economic base also includes agricultural packing and shipping operations. Small and medium-sized manufacturing plants are located in the western part of the county and are increasing in number. Tulare County contains portions of Sequoia National Forest, Sequoia National Monument, Inyo National Forest, and Kings Canyon National Park. Sequoia National Park is entirely contained within the county.

The County encompasses approximately 4,840 square miles of classified lands (lands with identified uses) and can be divided into three general topographical zones: a valley region; a foothill region east of the valley area; and a mountain region just east of the foothills. The eastern half of the county generally comprises public lands, including the Mountain Home State Forest, Golden Trout Wilderness area, and portions of the Dome Land and south Sierra Wilderness areas. Federal lands, which include wilderness, national forests, monuments and parks, along with County parks, make up 52 percent of the County, the largest percentage found in the County. Agricultural uses, which include row crops, orchards, dairies, and grazing lands on the Valley floor and in the foothills total over 2,020 square miles or about 43 percent of the entire County. Urban uses such as incorporated cities, communities, hamlets, other unincorporated urban uses, and infrastructure rights-of-way make up the remaining land in the County.

“Land use in Tulare County is predominately agriculture, and the County is committed to retaining the rich agricultural land. The foothill and mountain regions are controlled predominantly by the State and federal governments. However, as population increases, so does the demand for new housing, retail and commercial space. Agricultural land around the cities is being converted into urban uses. Housing, land, employment and economics are balanced to minimize the amount of agricultural land taken by development. Economic principles tend to take precedence over the conservation of land.”

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“Tulare County has been one of the faster growing counties in the state. Since 1950, its annualized growth rate is 1.8% (2.0% since 1980). Population growth has been primarily in the incorporated cities versus the unincorporated county...”²

As indicated in the 2014 Regional Transportation Plan & Sustainable Communities Strategy, Draft Environmental Impact Report (SCH #2012081070); “Tulare County is predominantly rural, and settlement patterns reflect this fact. Approximately 32% of the county’s population of 455,599 people, live outside the county’s eight incorporated areas (California Department of Finance, 2013). There are 21 unincorporated communities in Tulare County. Recent trends have led to housing, jobs, shopping, and recreational opportunities developing in separate locations. As a result of the separated development of jobs and housing, the urban area has grown in a way that forces people to travel from one area to another. The relatively large distances between the county’s population centers require well-maintained rural highways, many of which are the focus of RTP projects.

As of December 2012, about 174,900 people were employed in Tulare County and the unemployment rate was 15.7% (California Employment Development Department, 2013). By comparison, the statewide unemployment rate was 9.7% during that month, while the national rate was only 7.6%.

TCAG Traffic Model projections indicate that population in the Tulare County region is expected to grow from 466,008 people in 2010 to 700,832 by the year 2035 for an increase of approximately 50 percent. Between 2010 and 2035 employment is expected to increase by over 85,000 jobs or by almost 46 percent (TCAG, April 2010).”³

As of May 1, 2017, population estimates produced annually by the Department of Finance calculated Tulare County with a population estimate of 466,563 residents⁴. The State Controller’s Office uses Finance’s estimates to update their population figures for distribution of state subventions to cities and counties, and to comply with various state codes. Additionally, estimates are used for research and planning purposes by federal, state, and local agencies, the academic community, and the private sector.

Existing Site Conditions

The proposed Project site is near the center of Tulare County, less than one mile east of the City of Visalia and less than one mile west of the City of Farmersville. The proposed Project will be located at the northeast corner of Noble Avenue (Avenue 296) and 6th Avenue E (Road 156), immediately south of State Route (SR) 198. The 46.17-acre site is located on Tulare County Assessor Parcel Numbers 101-090-014 and -015 and, 101-100-009 and -010. The entire site is within the City of Visalia’s adopted Planning Area while the northern 27.0 acres of the proposed Project site are within the City of Visalia’s adopted Sphere of Influence.

² 2011 California Department of Finance, <http://www.dof.ca.gov/research/demographic/>

³ 2014 RTR/SCS PEIR. Page 4.10-2.

⁴ California Department of Finance, May 1, 2017 E-1 Population Estimates for Cities, Counties, and the State – January 1, 2016 and 2017 Accessed June 6, 2017. <http://dof.ca.gov/Forecasting/Demographics/Estimates/E-1/>

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The proposed Project site is currently fallow and disked regularly for weed control. The site is bisected by the Little Tulare Irrigation Ditch and a wireless communications tower is in the center of the southern portion of the site. Additionally, the southern portion of the site was the location of a former drive-in movie theater.

The area immediately surrounding the proposed Project site predominantly consists of agricultural land, commercial buildings, and rural residences; while the Cities of Visalia and Farmersville are within a mile to the west and east, respectively. Immediately west of the site is the Caltrans Visalia Maintenance Station and orchards. South and east of the site are orchards and rural residences; 6th Avenue borders the eastern edge of the proposed Project site. North of the site is Noble Avenue, Visalia Tire and Wheel, SR 198, and commercial buildings associated with the SR 198 northern corridor.

Zoning and Land Use

The site is zoned as PD-C-3-SC (Planned Development, Service Commercial, Scenic Corridor Combining Zone) and is proposed to remain as such pending approval of a Tentative Subdivision Map, which is the subject matter of this EIR.

REGULATORY SETTING

Federal Agencies & Regulations – None that apply to the Project.

State Agencies & Regulations – None that apply to the Project.

Local Policy & Regulations

Tulare County Association of Governments

“[The Tulare County Association of Governments] TCAG is committed to improving the quality of life for residents and visitors throughout Tulare County. We prove our commitment by addressing congestion using a preventative approach. We coordinate regional transit programs to make getting around easy and convenient. We have improved air quality and strive to continue to meet national standards. We responsibly use the extra hard earned tax dollars that the people of Tulare County bring in to us from the passage of Measure R under the supervision of the board and citizen’s review committee. We address current and future rail needs and possibilities with a forward thinking approach. We gather important data which is used by the census and the public to properly forecast housing and transit needs. We also manage the abandoned vehicle program for the county, and do a whole lot more. We are thrilled to be a part of one of the largest agricultural centers in the world, and are preparing the region for forecasted growth predicted to make Tulare County the fastest growing region in California.”⁵ TCAG’s 2009 Regional Blueprint includes a goal of a 25% increase in land use densities facilitated with urban growth and expansion of transportation facilities.

⁵ Tulare County Council of Governments (TCAG) Website, <http://www.tularecog.org/aboutus/>. Accessed September 2017.

Tulare County General Plan Policies - The Tulare County General Plan has a number of policies that apply to projects within County of Tulare. General Plan policies that relate to the proposed Project are listed below.

PF-1.2 Location of Urban Development - The County shall ensure that urban development only takes place in the following areas:

1. Within incorporated cities and County Adopted City Urban Development Boundaries (CACUDBs);
2. Within the UDBs of adjacent cities in other counties, unincorporated communities, planned community areas, and HDBs of hamlets;
3. Within foothill development corridors as determined by procedures set forth in Foothill Growth Management Plans;
4. Within areas set aside for urban use in the Mountain Framework Plan and the mountain sub-area plans; and
5. Within other areas suited for non-agricultural development, as determined by the procedures set forth in the in the Rural Valley Lands Plan.

PF-4.1 CACUABs for Cities - The County shall establish CACUABs which define the area where land uses are presumed to have an impact upon the adjacent incorporated city, and within which the cities' concerns may be given consideration as part of the land use review process. The lands within the UAB are considered to be the next logical area in which urban development may occur and the area within which UDBs may ultimately be expanded.

PF-4.13 City Design Standards - Where the Board of Supervisors finds that it is consistent with General Plan objectives to approve development within the UDBs of incorporated cities, the County may require the project to substantiate sufficient water supply and meet the County adopted city development standards of the city in question.

PF-4.14 Compatible Project Design - The County may ensure proposed development within CACUABs is compatible with future sewer and water systems, and circulation networks as shown in city plans.

PF-4.15 Coordination with Cities on Development Proposals - The County shall ensure that urban development only take place in CACUDBs if one of the following has occurred:

1. The adjacent city does not consent to annex the property for development purposes (as evidenced through pre-zoning, development agreements, etc.); it shall be conclusively presumed that a city has not consented if it has not submitted an annexation proposal to LAFCo within six months from the date a request to annex is submitted to the city; or
2. Annexation is not possible under the provisions of State law, but it is determined by the County that development of the site does not constitute incompatible development.

PF-4.17 Cooperation with Individual Cities - The County may use the policies set forth under this goal (PF-4A:Cities:Continued) to work with individual cities to further manage development within that CACUDB or CACUAB to the extent that the financial needs of the County are met and the County's ability to provide facilities and County services used by all of the residents in the County and cities is enhanced. The County and cities will establish a working committee to facilitate the policies identified in this section 4A.

PF- 4.27 Impacts of Development within the County on City Facilities and County Facilities - The County may work with a city to consider the adoption, imposition and collection for payment to the city pursuant to agreement in Development Impact Fees within the CACUDB, as may be proposed by the city from time to time to offset the impacts of development in the County on city facilities. Reciprocally and under the same conditions, the city will consider the collection of Development Impact Fees within the city to offset the impacts of development within the city on County facilities.

LU-3.8 Rural Residential Interface - The County shall minimize potential land use conflicts at the interface between urban development and existing developed rural-residential areas.

LU-4.1 Neighborhood Commercial Uses - The County shall encourage the development of small neighborhood convenience and grocery facilities to meet the everyday shopping and personal needs of immediately surrounding residential land uses in communities and hamlets.

LU-4.3 Commercial Service Locations - The County shall provide for commercial service businesses such as warehouses, repair services, business support services, furniture sales, and building materials sales where they will not adversely affect surrounding properties, typically in areas serving occasional needs rather than day-to-day needs. Criteria to be used in siting commercial service areas are:

1. Provide good access to highways or major collectors;
2. Buffer existing or planned residential areas;
3. Develop in-depth rather than in a strip fashion along access road to provide adequate room for parking, buffering, etc.; and
4. Encourage development as integrated planned areas in conjunction with community commercial areas or with common architectural and site development features.

LU-4.5 Commercial Building Design – The County shall encourage that new commercial development is consistent with the existing design of the surrounding community or neighborhood by encouraging similar facades, proportionate scale, parking, landscaping, and lighting.

LU-4.6 Commercial Storage Facilities – The County shall require that commercial storage facilities, including “mini” storage, indoor and outdoor storage facilities, and contractor's materials storage be screened from view through landscape buffers or other natural landscapes.

LU-7.16 Water Conservation - The County shall encourage the inclusion of “extra-ordinary” water conservation and demand management measures for residential, commercial, and industrial indoor and outdoor water uses in all new urban development.

PFS-1.4 Standards of Approval - The County should not approve any development unless the following conditions are met:

1. The applicant can demonstrate all necessary infrastructure will be installed and adequately financed;
2. Infrastructure improvements are consistent with adopted County infrastructure plans and standards; and
3. Funding mechanisms are provided to maintain, operate, and upgrade the facilities throughout the life of the project.

City of Visalia General Plan

According to the City of Visalia’s General Plan EIR (page 3.1-14), “Within Visalia City limits, Visalia’s General Plan is not required to maintain consistency with the Tulare County General Plan. However, in order to promote effective and orderly management of urban development along growth boundaries at the edges of the city, the two plans should conflict as little as possible. The City’s General Plan is generally consistent with the Tulare County General Plan, and many of its policies are supportive of the County Plan’s goals, particularly:

- Goal 1LU.A Retention of community identity, preservation of the agricultural economic base and control of urban sprawl.
- Goal 1LU.B City-County coordination in controlling fringe development and improving general living environment.
- Goal 1UB.B The designation of realistic planning areas around cities and unincorporated communities which could be used to help determine boundaries for community service districts and County service areas, in areas where differing levels of service area required, and within which corporate annexations may take place.
- Goal 1UB.C The maintenance of consistency among the goals and policies of the Urban Boundaries Element and those contained in other General Plan elements adopted by the County and the cities.”

Other City of Visalia General Plan policies that are relevant to the project include:

- LU-P-26 Continue to follow the referral agreement with Tulare County, and work with the County to strengthen the implementation of the Visalia General Plan within the Visalia Urban Area Boundary.

- LU-P-33 Work with Tulare County to prevent urban development of agricultural land outside of the current Urban Development Boundary and to promote the use of agricultural preserves, where they will promote orderly development.

IMPACT EVALUATION

Would the project:

a) Physically divide an established community?

Project Impact Analysis: ***No Impact***

The proposed Project site is near the center of Tulare County, less than one mile east of the City of Visalia and less than one mile west of the City of Farmersville. The entire site is within the City of Visalia's adopted Planning Area while the northern 27 acres of the proposed Project site are within the City of Visalia's adopted Sphere of Influence. There are no roads that cross the site and no roads are planned for in any adopted planning documents, and currently there is no public access to the site. The site does not currently divide any established communities nor would the proposed project. The site is already zoned PD-C-3-SC (Planned Development, Service Commercial, Scenic Corridor Combining Zone) and will retain that designation if the project is approved. There are no aspects of the site or the proposed project that would result in the division of an established community. As such, ***No Project-specific Impact*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County, and the cities of Visalia and Farmersville. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report and the Tulare County 2030 General Plan EIR.

With ***Less Than Significant*** Project-specific impacts, ***Less Than Significant Cumulative Impacts*** will also occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

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Project Impact Analysis:

Less Than Significant Impact

Tulare County is located in the Central Valley and does not border a coastline. As such, projects located within Tulare County could not possibly impact a local coastal program.

The Project area has been vacant for several years and is proposed for a 358,370 sq. ft. business park with the approval of the following actions:

- Formation of a Commercial Owners Association
- Tulare County approval of a Tentative Map

Table 3.10-1 summarizes the proposed Project's consistency with all applicable objectives, goals, and policies of the Tulare County and City of Visalia General Plans.

Table 3.10-1 General Plan Consistency Analysis			
Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
TULARE COUNTY			
Planning Framework	1.2	Location of Urban Development: The County shall ensure that urban development only takes place in the following areas: <ol style="list-style-type: none">1. Within incorporated cities and County Adopted City Urban Development Boundaries (CACUDBs);2. Within the UDBs of adjacent cities in other counties, unincorporated communities, planned community areas, and HDBs of hamlets;3. Within foothill development corridors as determined by procedures set forth in Foothill Growth Management Plans;4. Within areas set aside for urban use in the Mountain Framework Plan and the mountain sub-area plans; and5. Within other areas suited for non-agricultural development, as determined by the procedures set forth in the in the Rural Valley Lands Plan.	Yes: The proposed Project will be located within the Adopted City of Visalia Sphere of Influence and Planning Area boundary.
Planning Framework	4.1	CACUABs for Cities: The County shall establish CACUABs which define the area where land uses are presumed to have an impact upon the adjacent	Yes: The proposed Project will be located within the Adopted City of Visalia Sphere of Influence and Planning Area

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Table 3.10-1 General Plan Consistency Analysis			
Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
		incorporated city, and within which the cities' concerns may be given consideration as part of the land use review process. The lands within the UAB are considered to be the next logical area in which urban development may occur and the area within which UDBs may ultimately be expanded.	Boundary and as such, potential impacts are analyzed with regards to resources in Tulare County as well as the City of Visalia.
Planning Framework	4.13	City Design Standards: Where the Board of Supervisors finds that it is consistent with General Plan objectives to approve development within the UDBs of incorporated cities, the County may require the project to substantiate sufficient water supply and meet the County adopted city development standards of the city in question.	Yes: The proposed Project applicant will provide a will-serve letter from the City of Visalia to substantiate sufficient water supply and the Project will meet the City of Visalia Development Standards.
Planning Framework	4.14	The County may ensure proposed development within CACUABs is compatible with future sewer and water systems, and circulation networks as shown in city plans.	Yes: The proposed Project will be compatible with future sewer and water systems and circulation networks as shown in the City of Visalia plans.
Planning Framework	4.15	Coordination with Cities on Development Proposals: The County shall ensure that urban development only take place in CACUDBs if one of the following has occurred: <ol style="list-style-type: none"> 1. The adjacent city does not consent to annex the property for development purposes (as evidenced through pre-zoning, development agreements, etc.); it shall be conclusively presumed that a city has not consented if it has not submitted an annexation proposal to LAFCo within six months from the date a request to annex is submitted to the city; or 2. Annexation is not possible under the provisions of State law, but it is determined by the County that development of the site does not constitute incompatible development. 	Yes: The City of Visalia does not consent to annex the proposed Project site for development purposes.
Planning Framework	4.17	Cooperation with Individual Cities: The County may use the policies set	Yes: The City of Visalia and the County will ensure that the

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Table 3.10-1 General Plan Consistency Analysis			
Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
		forth under this goal (PF-4A:Cities:Continued) to work with individual cities to further manage development within that CACUDB or CACUAB to the extent that the financial needs of the County are met and the County’s ability to provide facilities and County services used by all of the residents in the County and cities is enhanced. The County and cities will establish a working committee to facilitate the policies identified in this section 4A.	financial needs of the County are met through the development of a Community Owners Association to maintain and operate the infrastructure of the development.
Planning Framework	4.27	Impacts of Development within the County on City Facilities and County Facilities: The County may work with a city to consider the adoption, imposition and collection for payment to the city pursuant to agreement in Development Impact Fees within the CACUDB, as may be proposed by the city from time to time to offset the impacts of development in the County on city facilities. Reciprocally and under the same conditions, the city will consider the collection of Development Impact Fees within the city to offset the impacts of development within the city on County facilities.	Yes: The County will develop a Commercial Owners Association to financially support the proposed development. Additionally, the developer will be required to pay development impact fees for services such as sewer, water, police, fire, and schools.
Land Use	3.8	Rural Residential Interface: The County shall minimize potential land use conflicts at the interface between urban development and existing developed rural-residential areas.	Yes. The proposed Project is located in an area with minimal residential development. It will be similar in appearance and function to other commercial uses in the area.
Land Use	7.16	Water Conservation: The County shall encourage the inclusion of “extra-ordinary” water conservation and demand management measures for residential, commercial, and industrial indoor and outdoor water uses in all new urban development.	Yes. The proposed Project will implement a “Low Impact Development” design which will conserve water on-site.
Public Facilities and Services	1.4	Standards of Approval: The County should not approve any development unless the following conditions are met: 1. The applicant can demonstrate all necessary infrastructure will be installed and adequately financed;	Yes. All criteria will be met prior to Project approval.

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Table 3.10-1 General Plan Consistency Analysis			
Chapter – Element	No.	Goal/Objective/Policy Text	Consistency Determination
		2. Infrastructure improvements are consistent with adopted County infrastructure plans and standards; and 3. Funding mechanisms are provided to maintain, operate, and upgrade the facilities throughout the life of the project.	
CITY OF VISALIA			
LU	P-26	Continue to follow the referral agreement with Tulare County, and work with the County to strengthen the implementation of the Visalia General Plan within the Visalia Urban Area Boundary.	Yes. The County will follow the referral agreement.
LU	P-33	Work with Tulare County to prevent urban development of agricultural land outside of the current Urban Development Boundary and to promote the use of agricultural preserves, where they will promote orderly development.	Yes. The proposed project site is already zoned for non-agricultural uses and the project will not conflict with any agricultural development or policies.

The proposed Project is an appropriate use for the site, and as demonstrated in Table 3.10-1, the proposed Project will be consistent with applicable objectives, goals and policies outlined in the Tulare County General Plan 2030 Update as well as the City of Visalia General Plan.

As such, a ***Less Than Significant Project-specific Impact*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County and City of Visalia. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, the Tulare County 2030 General Plan EIR, and the City of Visalia General Plan.

As such, a ***Less Than Significant Cumulative Impact*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item will occur.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

Project Impact Analysis: *No Impact*

As noted in Chapter 3.4 Biological Resources, there are two habitat conservation plans that apply in Tulare County. The Kern Water Habitat Conservation Plan only applies to an area near Allensworth (located in southwestern Tulare County), thus the proposed Project site is not subject to this Plan. The Recovery Plan for Upland Species in the San Joaquin Valley outlines a number of species that are important to the San Joaquin Valley. None of these species were identified on the Project site. As such, *No Project-specific Impact* related to this Checklist Item will occur.

Cumulative Impact Analysis: *No Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report and the Tulare County 2030 General Plan EIR.

There are *No Impacts* related to habitat conservation plans, and, therefore, there are *No Cumulative Impacts* that will conflict with local policies or ordinances.

Mitigation Measure(s): *None Required.*

Conclusion: As noted earlier, *No Project-specific or Cumulative Impacts* related to this Checklist Item will occur.

REFERENCES

CEQA Guidelines, Section 15126.2

Tulare County Association of Governments. History. Tulare County Council of Governments (TCAG) Website, <http://www.tularecog.org/aboutus/>. Accessed Sept. 2017.

Tulare County Association of Governments Regional Transportation Plan, 2011. Page 1-4, 11

Tulare County General Plan 2030 Update, Background Report, Page 9-7.

Tulare County General Plan 2030 Update RDEIR, Page 3.1-5, and -6

Mineral Resources

Chapter 3.11

SUMMARY OF FINDINGS

The proposed Project will result in *No Impact* related to Mineral Resources as the proposed Project site is not located near a known mineral resource area. No mitigation measures will be required. A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Mineral Resources. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in 15126.2(a), “[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas.”¹

The “Environmental Setting” provides a description of the Mineral Resources in the County. The “Regulatory Setting” provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare

¹ CEQA Guidelines, Section 15126.2 (a).

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County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update Recirculated Draft EIR (RDEIR) incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

The Tulare County General Plan 2030 Update identifies known Mineral Resource areas.² The threshold of significance for this section will include the following:

- Impact a known Mineral Resource
- Site located in a Mineral Resource Zone area (as noted in the General Plan)

ENVIRONMENTAL SETTING

“There is estimated to be a total of 932 million tons of aggregate resources in Tulare County. This figure includes 219 million tons of reserves available for mining and 200 million tons that are located in the hard rock quarries southeast of Porterville. Of that total, 19 million tons are located in Northern Tulare County, which is expected to be depleted by the year 2010 unless new resources are permitted for mining. Lemon Cove has been the most highly extracted area for PCC quality aggregate supplies.”³

“Economically, the most important minerals that are extracted in Tulare County are sand, gravel, crushed rock and natural gas. Other minerals that could be mined commercially include tungsten, which has been mined to some extent, and relatively small amounts of chromite, copper, gold, lead, manganese, silver, zinc, barite, feldspar, limestone, and silica. Minerals that are present but do not exist in the quantities desired for commercial mining include antimony, asbestos, graphite, iron, molybdenum, nickel, radioactive minerals, phosphate, construction rock, and sulfur... The majority of these activities appear to occur in the Sierra Foothill Area.”⁴

“The following MRZ categories are used by the State Geologist in classifying the State’s lands. The geologic and economic data and the arguments upon which each unit MRZ assignment is based are presented in the mineral land classification report transmitted by the State Geologist to the SMGB...

- A. *MRZ-1*—Areas where adequate geologic information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence. This zone is applied where well developed lines of reasoning, based on economic-geologic principles and adequate data, indicate that the likelihood for occurrence of significant mineral deposits is nil or slight.

² Tulare County General Plan 2030 Update, August 2012. Figure 8-2. Page 8-12.

³ Tulare County General Plan 2030 Update Background Report. Page 10-18.

⁴ Ibid. 10-17.

- B. *MRZ-2a*—Areas underlain by mineral deposits where geologic data show that significant measured or indicated resources are present. As shown on the diagram of the California Mineral Land Classification System, MRZ-2 is divided on the basis of both degree of knowledge and economic factors. Areas classified MRZ-2a contain discovered mineral deposits that are either measured or indicated reserves as determined by such evidence as drilling records, sample analysis, surface exposure, and mine information. Land included in the MRZ-2a category is of prime importance because it contains known economic mineral deposits. A typical MRZ-2a area would include an operating mine, or an area where extensive sampling indicates the presence of a significant mineral deposit.
- C. *MRZ-2b*—Areas underlain by mineral deposits where geologic information indicates that significant inferred resources are present. Areas classified MRZ-2b contain discovered deposits that are either inferred reserves or deposits that are presently sub-economic as determined by limited sample analysis, exposure, and past mining history. Further exploration work and/or changes in technology or economics could result in upgrading areas classified MRZ-2b to MRZ-2a. A typical MRZ-2b area would include sites where there are good geologic reasons to believe that an extension of an operating mine exists or where there is an exposure of mineralization of economic importance.
- D. *MRZ-3a*—Areas containing known mineral deposits that may qualify as mineral resources. Further exploration work within these areas could result in the reclassification of specific localities into the MRZ-2a or MRZ-2b categories. MRZ-3a areas are considered to have a moderate potential for the discovery of economic mineral deposits. As shown on the diagram of the California Mineral Land Classification System, MRZ-3 is divided on the basis of knowledge of economic characteristics of the resources. An example of a MRZ-3a area would be where there is direct evidence of a surface exposure of a geologic unit, such as a limestone body, known to be or to contain a mineral resource elsewhere but has not been sampled or tested at the current location.
- E. *MRZ-3b*—Areas containing inferred mineral deposits that may qualify as mineral resources. Land classified MRZ- 3b represents areas in geologic settings which appear to be favorable environments for the occurrence of specific mineral deposits. Further exploration work could result in the reclassification of all or part of these areas into the MRZ-3a category or specific localities into the MRZ-2a or MRZ-2b categories. MRZ-3b is applied to land where geologic evidence leads to the conclusion that it is plausible that economic mineral deposits are present. An example of a MRZ-3b area would be where there is indirect evidence such as a geophysical or geochemical anomaly along a permissible structure which indicates the possible presence of a mineral deposit or that an ore-forming process was operative.

- F. *MRZ-4*—Areas where geologic information does not rule out either the presence or absence of mineral resources. The distinction between the MRZ-1 and MRZ-4 categories is important for land-use considerations. It must be emphasized that MRZ-4 classification does not imply that there is little likelihood for the presence of mineral resources, but rather there is a lack of knowledge regarding mineral occurrence. Further exploration work could well result in the reclassification of land in MRZ-4 areas to MRZ-3 or MRZ-2 categories.”⁵

REGULATORY SETTING

Federal Agencies & Regulations

None that apply to the proposed Project.

State Agencies & Regulations

Surface Mining and Reclamation Act of 1975 (SMARA)

“The Surface Mining and Reclamation Act (SMARA), Chapter 9, Division 2 of the Public Resources Code, requires the State Mining and Geology Board to adopt State policy for the reclamation of mined lands and the conservation of mineral resources. These policies are prepared in accordance with the Administrative Procedures Act, (Government Code) and are found in California Code of Regulations, Title 14, Division 2, Chapter 8, Subchapter 1.

The Surface Mining and Reclamation Act of 1975 (SMARA, Public Resources Code, Sections 2710-2796) provides a comprehensive surface mining and reclamation policy with the regulation of surface mining operations to assure that adverse environmental impacts are minimized and mined lands are reclaimed to a usable condition. SMARA also encourages the production, conservation, and protection of the state’s mineral resources. Public Resources Code Section 2207 provides annual reporting requirements for all mines in the state, under which the State Mining and Geology Board is also granted authority and obligations.”⁶

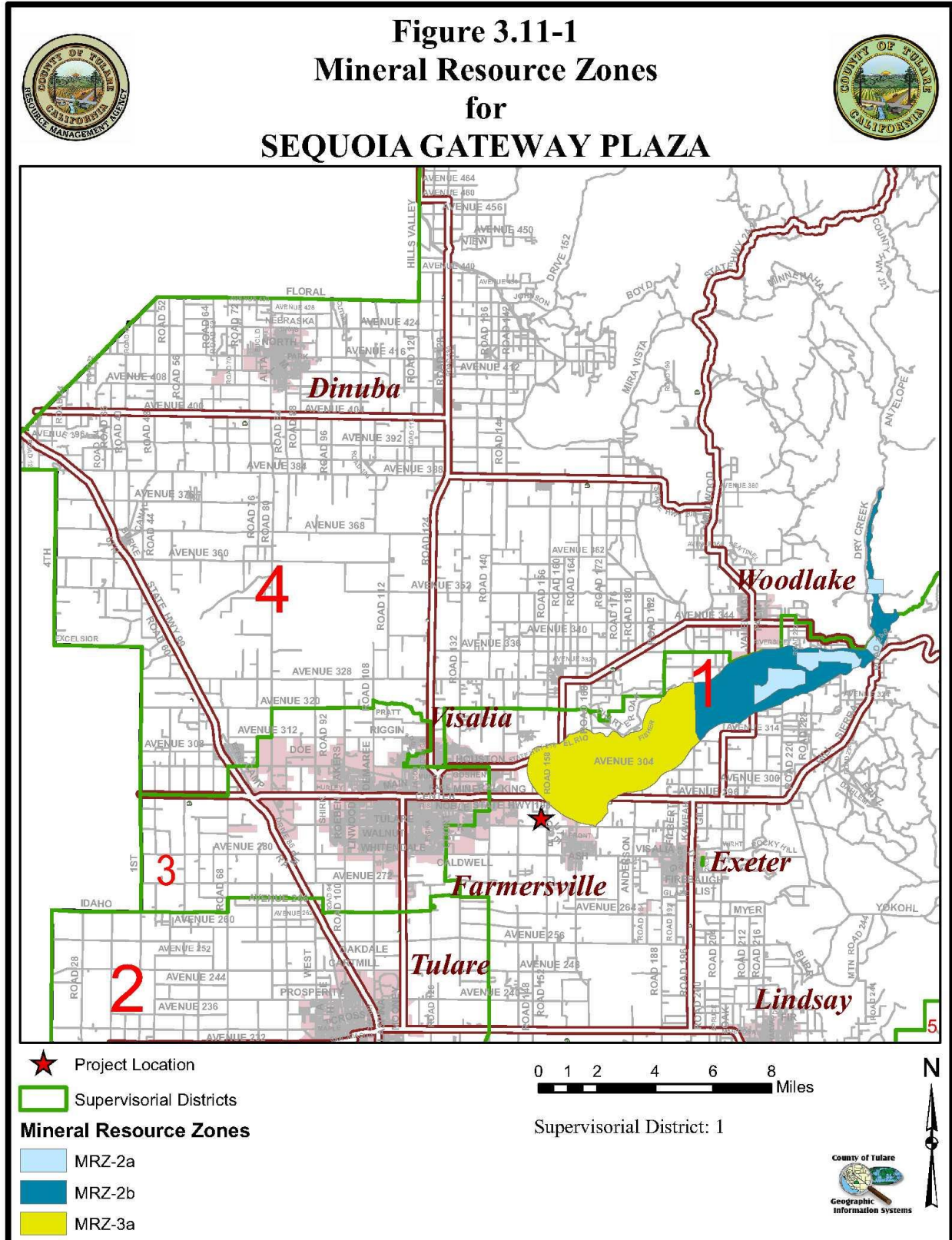
State Mining & Geology Board (SMGB)

“The SMGB serves as a regulatory, policy, and appeals body representing the State's interests in geology, geologic and seismologic hazards, conservation of mineral resources and reclamation of lands following surface mining activities. The SMGB operates within the Department of Conservation, and is granted certain autonomous responsibilities and obligations under several statutes including the Alquist-Priolo Earthquake Fault Zoning Act, the Seismic Hazards Mapping Act, and the Surface Mining and Reclamation Act.”⁷

⁵ California Department of Conservation, Division of Mines and Geology, “Guidelines for Classification and Designation of Mineral Lands”, <http://www.conservation.ca.gov/smgb/Guidelines/Documents/ClassDesig.pdf>. Accessed March 2017.

⁶ California Surface Mining And Reclamation Act Description, <http://www.conservation.ca.gov/smgb/Regulations/Pages/regulations.aspx>. Accessed March 2017.

⁷ California State Mining & Geology Board, <http://www.conservation.ca.gov/smgb/Pages/Index.aspx>. Accessed March 2017.



Division [Office] of Mine Reclamation (OMR)

“In 1991, following significant revisions to the Surface Mining and Reclamation Act of 1975 (SMARA), the Division [Office] of Mine Reclamation was created to provide a measure of oversight for local governments as they administer SMARA within their respective jurisdictions. To accomplish this goal, the Division of Mine Reclamation may provide comments to lead agencies on a mining operation’s reclamation plan and financial assurance and may initiate compliance actions that encourage SMARA compliance. While the primary focus is on existing mining operations and the return of those mined lands to a usable and safe condition, issues relating to abandoned legacy mines are addressed through the Abandoned Mine Lands program.”⁸

Local Policy & Regulations

Tulare County General Plan Policies

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the proposed Project are listed below.

ERM-2.1 Conserve Mineral Deposits - The County will encourage the conservation of identified and/or potential mineral deposits, recognizing the need for identifying, permitting, and maintaining a 50 year supply of locally available PCC grade aggregate.

ERM-2.3 Future Resource Development - The County will provide for the conservation of identified and/or potential mineral deposits within Tulare County as areas for future resource development. Recognize that mineral deposits are significantly limited within Tulare County and that they play an important role in support of the economy of the County.

ERM-2.10 Incompatible Development - Proposed incompatible land uses in the County shall not be on lands containing or adjacent to identified mineral deposits, or along key access roads, unless adequate mitigation measures are adopted or a statement of overriding considerations stating public benefits and overriding reasons for permitting the proposed use are adopted.

IMPACT EVALUATION

Would the project:

- a) **Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?**

Project Impact Analysis:

No Impact

⁸ California Department of Conservation, Division of Mine Reclamation. <http://www.conservation.ca.gov/dmr>. Accessed March 2017.

The proposed Project area is not located in a known mineral resource zone (MRZ)⁹, as depicted in **Figure 3.11-1**. The nearest mining facility, the Lemoncove Plant, is approximately 12.5 miles northeast of the proposed Project site. The nearest MRZ (MRZ-3a) is approximately ½ mile to the east of the proposed Project site. As such, there will be no loss of availability of a known mineral resource due to Project implementation. There will be **No Impact** related to this resource.

Cumulative Impact Analysis: **No Impact**

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and the Tulare County General Plan 2030 RDEIR.

The proposed Project does not include mining operations and is not located within a known mineral resource zone. As such, **No Cumulative Impact** related to this checklist item will occur.

Mitigation Measures: **None Required**

Conclusion: **No Impact**

As noted above, **No Project-specific** or **Cumulative Impacts** related to this resource will occur.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

Project Impact Analysis: **No Impact**

As noted in the analysis contain in Item to 3.11 a), the proposed Project does not include a mining operation and the proposed Project site is not located in a known mineral resource zone. There will be no significant loss of local important mineral resource recovery site. According to U.S. Geological Survey, the nearest active mine and mineral production plant to the proposed Project is the Lemoncove Plant located approximately 12.5 miles northeast of the proposed Project site within Tulare County.¹⁰ The mine facility is located east of State Route 245 and south of State Route 216, near the Sierra Mountains foothills. The Lemoncove Plant site is identified by U.S. Geological Survey Record ID, 4082. Therefore, there will be **No Impact** related to this resource.

Cumulative Impact Analysis: **No Impact**

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County General Plan 2030 Update, Tulare

⁹ Tulare County General Plan 2030 Update, August 2012. Figure 8-2. Page 8-12.

¹⁰ USGS Mineral Resources On-Line Spatial Data, Active mines and mineral plants in the US. <http://mrddata.usgs.gov/mineral-resources/active-mines.html>. Accessed April, 2017.

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County General Plan 2030 Update Background Report, and the Tulare County General Plan 2030 RDEIR.

As noted in the Response to 3.11 a), the proposed Project does not include a mining operation and is not located within a mineral resource zone. As such, ***No Cumulative Impacts*** related to this resource will occur.

Mitigation Measures: ***None Required***

Conclusion: ***No Impact***

As noted above, no Project-specific or cumulative impacts related to this resource will occur.

DEFINITIONS/ACRONYMS

Acronyms

MRZ	Mineral Resource Zone
OMR	Office of Mine Reclamation
SMGB	State Mining & Geology Board
SMARA	Surface Mining and Reclamation Act

REFERENCES

California Department of Conservation, Division of Mines and Geology, “Guidelines for Classification and Designation of Mineral Lands”, which can be accessed at: <http://www.conservation.ca.gov/smgb/Guidelines/Documents/ClassDesig.pdf>. Accessed March 2017.

California Department of Conservation, Division of Mine Reclamation. <http://www.conservation.ca.gov/dmr>. Accessed March 2017.

California State Mining & Geology Board, <http://www.conservation.ca.gov/smgb/Pages/Index.aspx>. Accessed March 2017.

California Surface Mining And Reclamation Act Description, which can be accessed at: <http://www.conservation.ca.gov/smgb/Regulations/Pages/regulations.aspx>. Accessed March 2017.

CEQA Guidelines, Section 15126.2 (a)

Tulare County General Plan 2030 Update, August 2012. Figure 8-2, page 8-12

Tulare County General Plan 2030 Update Background Report, Pages 10-17, 10-18, 10-19. February 2010

Tulare County General Plan 2030 Update Recirculated Draft Environmental Impact Report (RDEIR), February 2010 Page 3.7-25

USGS Mineral Resources On-Line Spatial Data, Active mines and mineral plants in the US. <http://mrdata.usgs.gov/mineral-resources/active-mines.html>. Accessed March 2017.

Noise

Chapter 3.12

SUMMARY OF FINDINGS

The proposed Project will result in a *Less Than Significant Impact* related to Noise. A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts related to Noise. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2 (a), “[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas.”¹

The environmental setting provides a description of the Noise Setting in Tulare County. The regulatory setting provides a description of applicable Federal, State, and Local regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project

¹ CEQA Guidelines, Section 15126.2 (a).

is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

- Exceed Tulare County Standards for Noise Levels
- Expose people of excessive ground-borne vibration
- Expose people to excessive airport/airstrip noise

ENVIRONMENTAL SETTING

“Noise in the community has often been cited as being a health problem, not in terms of actual damage such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities such as sleep, speech, recreation, and tasks demanding concentration or coordination. When community noise interferes with human activities or contributes to stress, public annoyance with the noise source increases, and the acceptability of the environment for people decreases. This decrease in acceptability and the threat to public well-being are the bases for land use planning policies preventing exposure to excessive community noise levels.”²

“Noise sources are commonly grouped into two major categories: transportation and non-transportation noise sources. Transportation noise sources include surface traffic on public roadways, railroad line operations, and aircraft in flight. Non-transportation (or fixed), noise sources, commonly consist of industrial activities, railroad yard activities, small mechanical devices (lawnmowers, leaf blowers, air conditioners, radios, etc.), and other sources not included in the traffic, railroad and aircraft category.”³

“Noise level data collected during continuous monitoring included the hourly Leq and Lmax and the statistical distribution of noise levels over each hour of the sample period. The community noise survey results indicate that typical noise levels in noise-sensitive areas of the unincorporated areas of Tulare County are in the range of 29-65 dB Ldn. As would be expected, the quietest areas are those that are removed from major transportation-related noise sources and industrial or stationary noise sources.”⁴

The 46-acre proposed Project site is east of the City of Visalia, just south of the State Route 198 corridor. Approximately half of the proposed Project site is bordered by urban development while the remaining half is bordered by land in active agriculture. The Caltrans Visalia Maintenance building is to the west while various commercial buildings are on the northern side of SR 198 across from the proposed Project site. A cluster of approximately 12 residences is immediately east of the site and beyond that is a RV and mini storage facility.

Potential sensitive noise receptors in the area include:

² Tulare County Association of Governments 2011 Regional Transportation Plan Draft Subsequent EIR. Page 151.

³ Ibid. 153.

⁴ Tulare County General Plan 2030 Update Background Report. Page 8-77.

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North: None. Visalia Tire and Wheel. State Route 198 and Noble Avenue (Avenue 296).
East: Approximately 12 rural, single-family homes.
South: None. Agricultural fields.
West: Commercial facilities and warehouses.

REGULATORY SETTING

Federal Agencies & Regulations

Federal Highways Administration (FHWA) Highway Traffic Noise Prediction methodology

“In March 1998, the Federal Highway Administration (FHWA) released the Traffic Noise Model, Version 1.0 (FHWA TNM®). It was developed as a means for aiding compliance with policies and procedures under FHWA regulations. Since its release in March 1998, Version 1.0a was released in March 1999, Version 1.0b in August 1999, Version 1.1 in September 2000, Version 2.0 in June 2002, Version 2.1 in March 2003 and the current version, Version 2.5 in April 2004. The FHWA TNM is an entirely new, state-of-the-art computer program used for predicting noise impacts in the vicinity of highways. It uses advances in personal computer hardware and software to improve upon the accuracy and ease of modeling highway noise, including the design of effective, cost-efficient highway noise barriers.”⁵

Federal Aviation Administration (FAA)

“Aircraft operated in the U.S. are subject to certain federal requirements regarding noise emissions levels. These requirements are set forth in Title 14 CFR, Part 36. Part 36 establishes maximum acceptable noise levels for specific aircraft types, taking into account the model year, aircraft weight, and number of engines. Pursuant to the federal Airport Noise and Capacity Act of 1990, the FAA established a schedule for complete transition to Part 36 “Stage 3” standards by year 2000. This transition schedule applies to jet aircraft with a maximum takeoff weight in excess of 75,000 pounds, and thus applies to passenger and cargo airlines, but not to operators of business jets or other general aviation aircraft.”⁶

Federal Railway Administration (FRA) and the Federal Transit Administration (FTA)

“The Federal Railway Administration (FRA) and the Federal Transit Administration (FTA) have published guidance relative to vibration impacts. According to the FRA, fragile buildings can be exposed to groundborne vibration levels of 0.5 PPV without experiencing structural damage. The FTA has identified the human annoyance response to vibration levels as 80 VdB.”⁷

State Agencies & Regulations

California Noise Insulation Standards

“The California Noise Insulation Standards found in the California Code of Regulations, Title 24, set requirements for new multi-family residential units, hotels, and motels that may be subject to relatively high levels of transportation-related noise. For exterior noise, the noise

⁵ U.S. Department of Transportation. Federal Highway Administration website, Traffic Noise Model, http://www.fhwa.dot.gov/environment/noise/traffic_noise_model/. Accessed July 2017.

⁶ Tulare County Association of Governments 2011 Regional Transportation Plan Draft Subsequent EIR. Page 152.

⁷ Ibid.

insulation standard is DNL 45 dB in any habitable room and requires an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard where such units are proposed in areas subject to noise levels greater than DNL 60 dB.”⁸

Local Policy & Regulations

Tulare County General Plan Policies

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the proposed Project as follows and the maximum acceptable ambient noise exposures for various land uses within Tulare County are depicted in **Table 3.12-1**.

HS-8.2 Noise Impacted Areas - The County shall designate areas as noise-impacted if exposed to existing or projected noise levels that exceed 60 dB Ldn (or Community Noise Equivalent Level (CNEL)) at the exterior of buildings.

HS-8.3 Noise Sensitive Land Uses - The County shall not approve new noise sensitive uses unless effective mitigation measures are incorporated into the design of such projects to reduce noise levels to 60 dB Ldn (or CNEL) or less within outdoor activity areas and 45 dB Ldn (or CNEL) or less within interior living spaces.

HS-8.4 Airport Noise Contours - The County shall ensure new noise sensitive land uses are located outside the 60 CNEL contour of all public use airports.

HS-8.6 Noise Level Criteria - The County shall ensure noise level criteria applied to land uses other than residential or other noise-sensitive uses are consistent with the recommendations of the California Office of Noise Control (CONC).

HS-8.11 Peak Noise Generators - The County shall limit noise generating activities, such as construction, to hours of normal business operation (7 a.m. to 7 p.m.). No peak noise generating activities shall be allowed to occur outside of normal business hours without County approval.

HS-8.13 Noise Analysis - The County shall require a detailed noise impact analysis in areas where current or future exterior noise levels from transportation or stationary sources have the potential to exceed the adopted noise policies of the Health and Safety Element, where there is development of new noise sensitive land uses or the development of potential noise generating land uses near existing sensitive land uses. The noise analysis shall be the responsibility of the project applicant and be prepared by a qualified acoustical engineer (i.e., a Registered Professional Engineer in the State of California, etc.). The analysis shall include recommendations and evidence to establish mitigation that will reduce noise exposure to acceptable levels (such as those referenced in Table 10-1 of the Health and Safety Element).

HS-8.14 Sound Attenuation Features - The County shall require sound attenuation features such as walls, berming, heavy landscaping, between commercial, industrial, and residential uses to reduce noise and vibration impacts.

HS-8.16 State Noise Insulation - The County shall enforce the State Noise Insulation Standards (California Administrative Code, Title 24) and Chapter 35 of the Uniform Building Code.

⁸ Tulare County Association of Governments 2011 Regional Transportation Plan Draft Subsequent EIR, Page 153.

HS-8.18 Construction Noise - The County shall seek to limit the potential noise impacts of construction activities by limiting construction activities to the hours of 7 am to 7pm, Monday through Saturday when construction activities are located near sensitive receptors. No construction shall occur on Sundays or national holidays without a permit from the County to minimize noise impacts associated with development near sensitive receptors.

HS-8.19 Construction Noise Control - The County shall ensure that construction contractors implement best practices guidelines (i.e. berms, screens, etc.) as appropriate and feasible to reduce construction-related noise-impacts on surrounding land uses.

Table 3.12-1 Tulare County Maximum Acceptable Ambient Noise Exposure for Various Land Uses⁹	
Land Use	Suggested Maximum Ldn
Residential – low density	60
Residential – high density	65
Transient lodging	65
Schools, libraries, churches, hospitals	65
Playgrounds, parks	65
Commercial	70
Industrial	75

IMPACT EVALUATION

Would the project result in:

- a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?**

Project Impact Analysis:

Less Than Significant Impact

Construction Noise Impacts

Proposed Project construction related activities will involve temporary noise sources and will be periodic in nature due to the phased buildout of the Project. Typical construction related equipment include compressors, nail guns, graders, trenchers, small tractors and excavators. During the proposed Project construction, noise from construction related activities will contribute to the noise environment in the immediate vicinity. Activities involved in construction will generate maximum noise levels, as indicated in **Table 3.12-2**, ranging from 79 to 91 dBA at

⁹ Tulare County 2030 General Plan Update Background Report. Page 8-50.

a distance of 50 feet, without feasible noise control (e.g., mufflers) and ranging from 75 to 80 dBA at a distance of 50 feet, with feasible noise controls.

Table 3.12-2 Typical Construction Noise Levels		
Type of Equipment	dBA at 50 feet	
	Without Feasible Noise Control¹	With Feasible Noise Control
Dozer or Tractor	80	75
Excavator	88	80
Scraper	88	80
Front End Loader	79	75
Backhoe	85	75
Grader	85	75
Truck	91	75

The distinction between short-term construction noise impacts and long-term operational noise impacts is a typical one in both CEQA documents and local noise ordinances, which generally recognize the reality that short-term noise from construction is inevitable and cannot be mitigated beyond a certain level. Thus, local agencies frequently tolerate short-term noise at levels that they would not accept for permanent noise sources. A more severe approach would be impractical and might preclude the kind of construction activities that are to be expected from time to time in urban and semi-urban environments. Most residents of these areas recognize this reality and expect to hear construction activities on occasion.

Although impacts are considered less than significant, the Project will be required to adhere to the County's noise policies to ensure that impacts remain *less than significant*, as follows:

HS-8.11 Peak Noise Generators - The County shall limit noise generating activities, such as construction, to hours of normal business operation (7 a.m. to 7 p.m.). No peak noise generating activities shall be allowed to occur outside of normal business hours without County approval.

HS-8.18 Construction Noise - The County shall seek to limit the potential noise impacts of construction activities by limiting construction activities to the hours of 7 a.m. to 7p.m., Monday through Saturday when construction activities are located near sensitive receptors. No construction shall occur on Sundays or national holidays without a permit from the County to minimize noise impacts associated with development near sensitive receptors.

HS-8.19 Construction Noise Control - The County shall ensure that construction contractors implement best practices guidelines (i.e. berms, screens, etc.) as appropriate and feasible to reduce construction-related noise-impacts on surrounding land uses.

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Operational Noise Impacts

The site is located on the edge of an urban area between the cities of Visalia and Farmersville adjacent to existing development on the north, east and west. Operational noise from the Project will be generated from typical commercial uses such as customer/employee vehicles, delivery trucks, landscape maintenance equipment, air conditioners, and other similar noise sources. However, the primary source of noise will be from Project-related vehicular trips.

Potential sensitive noise receptors in the area include:

- North:** None. Visalia Tire and Wheel (across Noble Avenue). State Route 198 and Noble Avenue (Avenue 296).
East: Approximately 12 rural, single-family homes.
South: None. Agricultural fields.
West: Commercial facilities and warehouses.

When evaluating whether or not a project will result in a potentially significant increase in noise, the County uses a threshold of an increase of 3 dBA if it affects sensitive receptors.¹⁰ Residential units are considered as sensitive receptors .

According to the Tulare County General Plan EIR, most of the parcels adjacent to SR 198 in the vicinity of the Project are included within a Noise Contour.¹¹ The segment of SR 198 between SR 63 and Road 168 (Farmersville Boulevard) noise levels are shown in **Table 3.12-3** (the Project is located immediately south of this segment).

Table 3.12-3 Noise Contours for SR 198 in the Project Vicinity¹²	
Contour Line	Distance in feet from SR 198 Centerline
70 Ldn (dBA)	102
65 Ldn (dBA)	220
60 Ldn (dBA)	473
55 Ldn (dBA)	1,020

The residential units east of the Project site are included within the 65 Ldn (that is, for the units nearest SR 198) and 60 Ldn (for the units furthest in proximity to SR 198) contour lines. The commercial facilities located north and west of the Project site are included within the 65 Ldn (dBA) contour line.

¹⁰ Tulare County General Plan 2030 Update Recirculated EIR. Page 3.5-22.

¹¹ Ibid. 3.5-12.

¹² Op. Cit.

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As shown in **Table 3.12-1**, the County's suggested maximum Ldn for rural residential is 60 Ldn (dBA). As shown in **Table 3.12-2**, the existing Ldn (dBA) for several of those residences is 65 and is therefore already in exceedance of the suggested limits. According to a Caltrans Technical Noise Supplement to the Traffic Noise Analysis Protocol (September 2013), "doubling the traffic on a highway would result in an increase of 3dB."¹³ The County's General Plan shows the average daily trips (ADT) of this segment of approximately 20,000¹⁴. The Project could result in up to 10,221 ADT based on the TIS, not all of which would be dispersed on the highway, nor would be considered new trips solely attributable to the Project. Using a conservative estimate, even if all of the Project trips were considered new trips and were all routed on SR 198, it would not result in a doubling of traffic numbers and, therefore, would not result in an increase of 3dB. In addition, the noise receptors in the Project area are already included within a defined noise contour (therefore, the noise receptor's baseline noise contour currently exceeds above-normal noise levels). Therefore, the Project's traffic noise generation cannot be distinguished from existing noise conditions. As such, the Project would result in a ***Less Than Significant Impact***.

The Project will also generate non-traffic related noise from noises associated with commercial facilities (e.g., air conditioning units, landscape maintenance equipment, car doors shutting, voices, etc.). Nearby receptors will experience a small increase in ambient noise due to the Project, but the noise will be similar to existing conditions and will consist of noise that is typical of other commercial developments in the area. The noise generated from the proposed Project will be similar to and will not likely be distinguishable from existing noise sources. Therefore, operational noise impacts would be ***Less Than Significant***.

<u>Mitigation Measure(s):</u>	<i>None Required.</i>
<u>Conclusion:</u>	<i>Less Than Significant Impact.</i>
<u>Cumulative Impact Analysis:</u>	<i>Less Than Significant Impact</i>

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the *Tulare County 2030 General Plan* (2012), *Tulare County 2030 General Plan Draft Environmental Impact Report* (2010).

As discussed in Item a), implementation of the proposed Project would not contribute to a significant increase in projected future cumulative traffic noise levels along area roadways. In addition, no major off-site stationary sources of noise were identified in the Project area that would adversely affect nearby land uses. As a result, the proposed Project would not result in a cumulative contribution to noise levels that would adversely affect nearby land uses. Therefore, the Project would result in a ***Less Than Significant Impact***.

<u>Conclusion:</u>	<i>Less Than Significant Impact.</i>
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¹³ California Department of Transportation Division of Environmental Analysis. Technical Noise Supplement to the Traffic Noise Analysis Protocol. September 2013. Page 2-15. www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013B.pdf Accessed July 2017.

¹⁴ Tulare County General Plan 2030 Update Recirculated EIR. Page 3.5-12.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Project Impact Analysis:

Less Than Significant Impact

Typical outdoor sources of perceptible ground borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. Construction vibrations can be transient, random, or continuous. Increases in groundborne vibration levels attributable to the proposed Project would be primarily from construction-related activities (e.g., earthmoving operations such as grading, leveling, trenching, etc.). These activities would likely require the use of various off-road equipment, such as tractors, concrete mixers, graders, and haul trucks. The use of major groundborne vibration-generating construction equipment, such as pile drivers, would not be required for this Project. Construction-related vibration would be short-term, temporary, and intermittent. Once operational, the Project will not result in the on-going use of equipment that produces ground-bourne vibration.

Groundborne vibration levels associated with representative off-road equipment are summarized in **Table 3.12-4**. Based on the vibration levels presented in **Table 3.12-4**, ground vibration generated by off-road equipment would not be anticipated to exceed approximately 0.08 inches per second ppv at 25 feet. Predicted vibration levels at the nearest structures would not exceed the minimum recommended criteria for structural damage or human annoyance (0.2 in/sec ppv). As a result, this impact would result in a ***Less Than Significant Impact***.

Table 3.12-4	
Vibration Levels for Varying Construction Equipment¹⁵	
Type of Equipment	Peak Particle Velocity @ 25 Feet (inches/second)
Large Bulldozer	0.089
Loaded Trucks	0.076
Small Bulldozer	0.003
Jackhammer	0.035
Vibratory Hammer	0.070
Vibratory Compactor/roller	0.210

Cumulative Impact Analysis:

Less Than Significant Impact

¹⁵ Op Cit.

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the *Tulare County 2030 General Plan* (2012), *Tulare County 2030 General Plan Draft Environmental Impact Report* (2010).

Project-generated ground-borne vibration levels would not result in a significant impact to nearby land uses. No existing sources of ground-borne vibration or proposed projects that would adversely affect nearby land uses were identified in the Project area. As a result, the proposed Project would not result in a cumulative contribution to ground-borne vibration levels that would adversely affect nearby land uses. The Project would result in a ***Less Than Significant Impact***.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Project Impact Analysis: ***Less Than Significant Impact***

See Response Item a). Potential long-term increases in ambient noise levels within the proposed Project area would be associated with increases in vehicle traffic on area roadways; as well as, on-site operational activities. The Project would result in a ***Less Than Significant Impact***.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

Cumulative Impact Analysis ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the *Tulare County 2030 General Plan* (2012) and the *Tulare County 2030 General Plan Draft Environmental Impact Report* (2010).

As shown in Response Item a), the Project will not result in significant increases in ambient noise levels in near term or in the future scenario. As a result, the proposed Project's cumulative contribution to non-transportation noise sources in the Project area would result in a ***Less Than Significant Impact***.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Project Impact Analysis: *Less Than Significant Impact*

See Response a. Potential long-term increases in ambient noise levels within the proposed Project area would be associated with increases in vehicle traffic on area roadways; as well as, on-site operational activities. The Project area would result in a *Less Than Significant*.

Mitigation Measure(s): *None Required.*

Conclusion: *Less Than Significant Impact*

Cumulative Impact Analysis *Less Than Significant Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the *Tulare County 2030 General Plan* (2012) and the *Tulare County 2030 General Plan Draft Environmental Impact Report* (2010).

As shown in Response Item a), the Project will not result in significant increases in ambient noise levels in near term or in the future scenario. As a result, the proposed Project's cumulative contribution to non-transportation noise sources in the Project area result in a *Less Than Significant Impact*.

Mitigation Measure(s): *None Required*

Conclusion: *Less Than Significant Impact*

- e) **For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?**

Project Impact Analysis: *Less Than Significant Impact*

The Project is not located within an airport land use plan or within two miles of an airport. The nearest domestic airport to the project site is the Visalia Municipal Airport located approximately nine (9) miles west of the Project site. Therefore, there are *No Impacts*.

Mitigation Measure(s): *None Required.*

Conclusion: *No Impact.*

Cumulative Impact Analysis: *No Impact*

No Impacts. The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the *Tulare County 2030 General Plan* (2012), *Tulare County 2030 General Plan Draft Environmental Impact Report* (2010), and the *Tulare County Comprehensive Airport Land Use Plan* (December 2012).

The proposed Project would not subject people to excessive airport related noise. Therefore, ***No Cumulative Impact*** related to this Checklist item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact.***

As noted earlier, ***No Project-specific or Cumulative Impacts*** to this Checklist Item will occur.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

Project Impact Analysis: ***No Impact***

The Project is not located within an airport land use plan or within two miles of an airport. The nearest domestic airport to the project site is the Visalia Municipal Airport located approximately nine (9) miles west of the Project site. Therefore, the Project would result in ***No Impact.***

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact.***

Cumulative Impact Analysis: ***No Impact***

No Impact. The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the *Tulare County 2030 General Plan* (2012), *Tulare County 2030 General Plan Draft Environmental Impact Report* (2010), and the *Tulare County Comprehensive Airport Land Use Plan* (December 2012).

There are no private airstrips within the Project vicinity. Therefore, the Project would result in ***No Cumulative Impact*** related to this Checklist item.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

DEFINITIONS

“Noise is often described as unwanted sound, and thus is a subjective reaction to characteristics of a physical phenomenon. Researchers have generally agreed that A-weighted sound pressure levels (sound levels) are well correlated with subjective reaction to noise. Variations in sound levels over time are represented by statistical descriptors, and by time-weighted composite noise metrics such as the Day/Night Average Level (Ldn).”¹⁶ In addressing noise impacts, the following key terms are outlined and explained below:

Ambient Noise - “The total noise associated with a given environment and usually comprising sounds from many sources, both near and far.”

Attenuation - “Reduction in the level of sound resulting from absorption by the topography, the atmosphere, distance, barriers, and other factors.

A-weighted decibel (dBA) - A unit of measurement for noise based on a frequency weighting system that approximates the frequency response of the human ear.

Community Noise Equivalent Level (CNEL) - Used to characterize average sound levels over a 24-hour period, with weighting factors included for evening and nighttime sound levels. Leq values (equivalent sound levels measured over a 1-hour period - see below) for the evening period (7:00 p.m. to 10:00 p.m.) are increased by 5 dB, while Leq values for the nighttime period (10:00 p.m. to 7:00 a.m.) are increased by 10 dB. For a given set of sound measurements, the CNEL value will usually be about 1 dB higher than the Ldn value (see below). In practice, CNEL and Ldn are often used interchangeably.

Decibel (dBA) - A unit of measurement describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure (which is 20 micronewtons per square meter).

Day-Night Average Sound Level (Ldn) - Average sound exposure over a 24-hour period. Ldn values are calculated from hourly Leq values, with the Leq values for the nighttime period (10:00 p.m. to 7:00 a.m.) increased by 10 dB to reflect the greater disturbance potential from nighttime noises.”

Equivalent Sound Level (Leq). - The level of a steady-state sound that, in a stated time period and at a stated location, has the same sound energy as the time-varying sound (approximately equal to the average sound level). The equivalent sound level measured over a 1-hour period is called the hourly Leq or Leq (h).

Lmax and Lmin - The maximum and minimum sound levels, respectively, recorded during a measurement period. When a sound meter is set to the “slow” response setting, as is typical for most community noise measurements, the Lmax and Lmin values are the maximum and minimum levels recorded typically for 1-second periods.

Percentile-Exceeded Sound Level (Lx) - The sound level exceeded during a given percentage of a measurement period. Examples include L10, L50, and L90. L10 is the A-weighted sound level that is exceeded 10% of the measurement period, L50 is the level exceeded 50% of the

¹⁶ TCAG 2011 Regional Transportation Plan Draft Subsequent EIR. Page 150.

period, and so on. L50 is the median sound level measured during the measurement period. L90, the sound level exceeded 90% of the time, excludes high localized sound levels produced by nearby sources such as single car passages or bird chirps. L90 is often used to represent the background sound level. L50 is also used to provide a less conservative assessment of the background sound level.

Sensitive Receptors - Sensitive receptors are defined to include residential areas, hospitals, convalescent homes and facilities, schools, and other similar land uses.”¹⁷

REFERENCES

California Department of Transportation Division of Environmental Analysis. Technical Noise Supplement to the Traffic Noise Analysis Protocol. September 2013. Page 2-15.
www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013B.pdf Accessed July 2017.

CEQA Guidelines, Section 15126.2 (a)

Tulare County Association of Governments, 2011 Regional Transportation Plan Draft Subsequent EIR. Pages 151, 152, and 153.

Tulare County General Plan 2030 Update Recirculated EIR. Pages 3.5-12 and 3.5-22.

Tulare County General Plan 2030 Update Background Report. Pages 8-46, 8-47, 8-50, and 8-77.

U.S. Department of Transportation. Federal Highway Administration website, Traffic Noise Model, http://www.fhwa.dot.gov/environment/noise/traffic_noise_model/. Accessed July 2017.

¹⁷ Tulare County General Plan 2030 Update Background Report. Pages 8-46 to 8-47.

Population and Housing

Chapter 3.13

SUMMARY OF FINDINGS

The proposed Project will result in a *Less Than Significant Impact* related to Population and Housing and therefore, no mitigation measures are required. A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Population and Housing. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in 15126.2 (a), “[a]n EIR shall identify and focus on the significant environmental effects of the proposed Project. In assessing the impact of a proposed Project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the Project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the Project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision will have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas.”¹

The environmental setting provides a description of the Population and Housing in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County General Plan 2030 Update, Tulare County General Plan Background Report and/or Tulare County General Plan 2030 Update Revised DEIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts

¹ CEQA Guidelines, Section 15126.2 (a).

of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

- Induce Substantial Population Growth
- Displace Housing or People

ENVIRONMENTAL SETTING

Tulare County

“Tulare County, California is one of the largest counties in the great and fertile San Joaquin Valley. Geographically it is situated about midway between San Francisco and Los Angeles, the two principal cities of the Pacific Slope... Within the confines of Tulare County are now 4,863 square miles, or 3,158,400 acres.”²

Tulare County Regional Housing Needs Assessment Plan 2014-2023 (TCAG, June 2014)

State housing element law assigns the responsibility for preparing the Regional Housing Needs Assessment (RHNA) for the Tulare County region to the Tulare County Association of Governments (TCAG). The RHNA is updated prior to each housing element cycle. The current RHNA, adopted on June 30, 2014, covers a 9.75-year projection period (January 1, 2014 to September 30, 2023). The growth projections applied in the Housing Element Update are based upon growth projections developed by the State of California. The RHNA housing allocations for Tulare County were incorporated into **Table 3.13-1**. “A Regional Housing Needs Assessment Plan” provides a general measure of each local jurisdiction’s responsibility in the provision of housing to meet those needs. The Tulare County Association of Governments (TCAG) was responsible for allocating the State’s projections to each local jurisdiction within Tulare County including the County unincorporated area, which is reflected in this Housing Element.

“The Sustainable Communities and Climate Protection Act of 2008 (SB 375) was passed to support the State’s climate action goals...to reduce greenhouse gas (GHG) emissions through coordinated transportation and land use planning. The bill mandates each of California’s Metropolitan Planning Organizations (MPO) prepare a *sustainable communities strategy* as part of its regional transportation plan (RTP). The SCS contains land use, housing and transportation strategies that, if implemented, would allow the region to meet its GHG reduction targets. In the past, the RHNA was undertaken independently from the RTP. SB 375 requires that the RHNA and RTP/SCS processes be undertaken together to better integrate housing, land use, and transportation planning. In addition to the RHNA requirements, SB 375 requires that TCAG address the region’s housing needs in the SCS of the RTP, to include sections on state housing goals (Government Code Section 65080(b)(2)(B)(vi)); identify areas within the region sufficient to house all the population of the region (including all economic segments of the population) over the course of the planning period for the RTP (out to 2040 for the 2040 RTP/SCS); and identify areas within the region sufficient to meet the regional housing needs”³

² Tulare County Association of Governments. Tulare County Regional Blueprint. May 2009. Pages 4-5.
<http://valleyblueprint.org/files/Tulare050109.pdf>. Accessed July, 2017.

³ 2015 Housing Element. Page 3-21.

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According to the Tulare County Regional Housing Needs Plan, the number of household in Tulare County's was 110,356 in 2000. In 2007 the number of households was 125,836. The 2014 household projection was 159,514. **Table 3.13-1** summarizes Tulare County's population between 1980 and 2010 according to the 1980-2010 U.S. Census.

Table 3.13-1 Tulare County Population					
	1980	1990	2000	2008	2010
Tulare County's Population	245,738	311,921	368,021	435,254	442,179
<i>Source: 1980, 1990, 2000 U.S. Census, State of California, Department of Finance, E-1 Population Estimates.</i>					

The RHNA housing results are summarized in **Table 3.13-2**. The Tulare County RHNA Plan recommends that the County provide land use and zoning for approximately 7081 units per year in the unincorporated portions of the County. The County administratively agreed to a housing share of 7,081 units (726 units per year over the 9.75-year RHNA planning period). The RTP allocates 30% of population to the County. The RHNA bases the housing needs assessment on this percentage.

Table 3.13-2 Regional Housing Needs Assessment Plan January 1, 2014 – September 30, 2023					
Income Category					
Jurisdiction	Very Low	Low	Moderate	Above	Total
Dinuba	211	163	121	470	965
Exeter	143	125	85	272	625
Farmersville	74	65	68	259	466
Lindsay	80	80	82	348	590
Porterville	623	576	566	1,431	3,196
Tulare	920	609	613	1,452	3,594
Visalia	2616	1,931	1,802	3,672	10,021
Woodlake	71	41	69	191	372
Unincorporated	1,477	1,065	1,169	3,370	7,081
Total Tulare County	6,215	4,655	4,575	11,465	26,910
<i>Source: Table 1: "2014-2023 Final RHNA Allocations by Income Category," Final Regional Housing Needs Plan for Tulare County 2014-2023, page 19 (TCAG, 2014)</i>					

"Affordability problems occur when housing costs become so high in relation to income that households have to pay an excessive proportion of their income for housing, or are unable to afford any housing and are homeless. A household is considered to be overpaying (or cost

burdened) if it spends more than 30 percent of its gross income on housing. Severe overpayment occurs when a household spends more than 50 percent of income on housing. Housing costs depend upon many variables, including the type, size, value and/or location of the housing units, the intended tenure of the unit (whether it is to be occupied by owners or renters), and the inclusion or exclusion of one or more utilities, services, property taxes, insurance, and maintenance.”⁴

“Housing costs continue to rise significantly. The 2010 Census reports the median rent has increased 10.72% from \$727 in 2000 to \$805 in 2010. The median monthly owner costs for housing units with a mortgage have seen a minor decrease going from \$1,518 to \$1,471 which is a -3.09% decrease. The monthly owner costs for those housing units without a mortgage increased by less than 1%, going from \$330 to \$361.”⁵

REGULATORY SETTING

Federal Agencies & Regulations

US Department of Housing and Urban Development (HUD)

“HUD’s mission is to create strong, sustainable, inclusive communities and quality affordable homes for all... The Department accomplishes its mission through component organizations and offices that administer various programs, which are carried out through a network of regional offices and smaller field offices, as well as through grantees, contractors, and other business partners.”⁶

State Agencies & Regulations

California Department of Housing and Community Development (HCD)

HCD’s mission is to “[p]rovide leadership, policies and programs to preserve and expand safe and affordable housing opportunities and promote strong communities for all Californians.”⁷ “In 1977, the State Department of Housing and Community Development (HCD) adopted regulations under the California Administrative Code, known as the Housing Element Guidelines, which are to be followed by local governments in the preparation of local housing elements. AB 2853, enacted in 1980, further codified housing element requirements. Since that time, new amendments to State Housing Law have been enacted. Each of these amendments has been considered during development of this Housing Element.”⁸

California Relocation Assistance Act

The State of California adopted the California Relocation Assistance Act (*California Government Code* §7260 et seq.) in 1970. This State law, which follows the federal Uniform Relocation Assistance and Real Property Acquisition Act, requires public agencies to provide procedural protections and benefits when they displace businesses, homeowners, and tenants in the process of implementing public programs and projects. This State law calls for fair, uniform,

⁴ 2015 Housing Element. Page 3-21.

⁵ Ibid. 4-18.

⁶ U.S. Department of Housing and Urban Development, Mission, <https://www.performance.gov/agency/departments-housing-and-urban-development>. Accessed June, 2017.

⁷ California Department of Housing and Community Development, Mission, <http://www.hcd.ca.gov/mission.html>. Accessed June, 2017.

⁸ Tulare County Housing Element 2015 Update. Page 1-3.

and equitable treatment of all affected persons through the provision of relocation benefits and assistance to minimize the hardship of displacement on the affected persons.

Local Policy & Regulations

Tulare County 2014 Regional Housing Needs Assessment Plan

It is the responsibility of the Tulare County Association of Governments (TCAG) to determine how to allocate to local jurisdictions the basic housing needs provided by the State Department of Housing and Community Development. The determination of household needs by income category is designed for the equitable distribution of households by income category within the region. The presumptive goal is to promote greater housing opportunities throughout the County. In 2014 the Regional Housing Needs Assessment Plan (RHNA) allocated a disproportionate amount of low and very low housing to the unincorporated area of Tulare County. In 2014, the RHNA plan provides a more equitable distribution of the regional housing needs allocation, as required by Section 65584 of the government Code, thereby providing greater affordable housing opportunities through the entire County including unincorporated areas as well as within the cities’.”⁹

Tulare County Regional Blueprint 2009

This Blueprint includes the following preferred growth scenario principals:

- Increase densities county-wide by 25% over the status quo densities.
- Establish light rail between cities.
- Extend Highway 65 north to Fresno County.
- Expand transit throughout the county.
- Maintain urban separators around cities.
- Growth would be directed toward incorporated cities and communities where urban development exists and where comprehensive services and infrastructure are or will be provided.

Tulare County Housing Authority

“The Housing Authority of the County of Tulare (HATC) has been officially designated as the local public housing agency for the County of Tulare by the Board of Supervisors and was created pursuant to federal and state laws. ...HATC is a unique hybrid: a public sector agency with private sector business practices. Their major source of income is the rents from residents. The HATC mission is “to provide affordable, well-maintained rental housing to qualified low- and very low-income families. Priority shall be given to working families, seniors and the disabled. Tenant self sufficiency and responsibility shall be encouraged. Programs shall be self-supporting to the maximum extent feasible.” HATC provides rental assistance to very low and moderate-income families, seniors and the handicapped throughout the county. HATC offers many different programs, including the conventional public housing program, the housing choice voucher program (Section 8), the farm labor program for families with farm labor income, senior housing programs, and other programs. They also own or manage some individual subsidized rental complexes that do not fall under the previous categories, and can provide information

⁹ Ibid. 3-74.

about other affordable housing that is available in Tulare County. All programs are handicap accessible. Almost all of the complexes have 55-year recorded affordability covenants.”¹⁰

2015-2030 Tulare County Housing Element Policies

Policy 1.11 - Encourage the development of a broad range of housing types to provide an opportunity of choice in the local housing market.

Policy 1.14 - Pursue an equitable distribution of future regional housing needs allocations, thereby providing a greater likelihood of assuring a balance between housing development and the location of employment opportunities.

Policy 1.16 – Review community plans and zoning to ensure they provide for adequate affordable residential development.

Policy 1.61 – Encourage an open exchange of ideas between the County and the private sector, including but not limited to developers, employers, nonprofit organizations, and the general public.

Policy 2.12 – Increase opportunities for technical assistance to public utility districts and community service districts and mutual water companies in an effort to educate and assist them in attaining the necessary public infrastructure.

Policy 2.25 – The County shall encourage special districts, including community service districts and public utility districts to: 1. Institute impact fees and assessment districts to finance improvements, 2. Take on additional responsibilities for services and facilities within their jurisdictional boundaries up to the full extent allowed under State law, and 3. Investigate feasibility of consolidating services with other districts and annexing systems in proximity to promote economies of scale, such as annexation to city systems and regional wastewater treatment systems.

Policy 2.27 – The County shall work with special districts, community service districts, public utility districts, mutual water companies, private water purveyors, sanitary districts, and sewer maintenance districts to provide adequate public facilities and to plan/coordinate, as appropriate, future utility corridors in an effort to minimize future land use conflicts.

Policy 3.13 – Encourage subdivision and housing unit design, which provides for a reasonable level of safety and security.

Policy 3.111 – The County shall require where feasible, the development of parks, open space, sidewalks and walking and biking paths that promote physical activity and discourage automobile dependency in all future communities.

Policy 3.113 – The County shall promote the principles of smart growth and healthy communities in UDBs and HDBs, including:

¹⁰ Ibid. 1-12.

1. Creating walkable neighborhoods,
2. Providing a mix of residential densities,
3. Creating a strong sense of place,
4. Mixing land uses,
5. Directing growth toward existing communities,
6. Building compactly,
7. Discouraging sprawl,
8. Encouraging infill,
9. Preserving open space,
10. Creating a range of housing opportunities and choices,
11. Utilizing planned community zoning to provide for the orderly pre-planning and long term development of large tracks of land which may contain a variety of land uses, but are under unified ownership or development control, and
12. Encouraging connectivity between new and existing development.

Policy 3.114 – The County shall promote flexibility and innovation through the use of planned unit developments, development agreements, specific plans, Mixed Use projects, and other innovative development and planning techniques.

Policy 3.115 – The County shall encourage the development of parks near public facilities such as schools, community halls, libraries, museums, prehistoric sites, and open space areas and shall encourage joint-use agreements whenever possible.

Policy 3.116 – The County shall consider the use of existing entities or the creation of assessment districts, landscape and lighting districts, County service areas, community facilities districts, homeowners associations, or other types of districts to generate funds for the acquisition and development of parkland and/or historical properties as development occurs in the County.

Policy 4.11 – Review residential projects for environmental impacts and impose conditions to reduce those impacts.

Policy 4.13 – Promote energy efficiency and water conservation.

Policy 4.15 – Enforce energy efficiency standards for residential and non-residential properties.

Policy 4.23 – Consider and include information regarding trip generation in to staff reports and/or environmental assessments for development.

IMPACT EVALUATION

Would the project:

- a) **Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?**

Project Impact Analysis: *Less Than Significant Impact*

Approximately 200 temporary, local construction workers and up to 215 permanent employees are anticipated to be utilized for the proposed Project which will not require additional permanent housing. The employees are anticipated to be part of the existing workforce in Tulare County. Therefore, demand for additional housing as a direct result of the proposed Project will be less than significant and will not induce population growth in the area. As such, the Project would result in a *Less Than Significant Project-specific Impact* related to this Checklist Item.

Cumulative Impact Analysis: *Less Than Significant Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and the Tulare County 2030 General Plan EIR.

A *Less Than Significant Cumulative Impact* related to this Checklist Item will occur.

Mitigation Measure(s): *None Required.*

Conclusion: *Less Than Significant Impact*

As noted earlier, *Less Than Significant Project-specific or Cumulative Impacts* related to this Checklist Item will occur.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

Project Impact Analysis: *Less Than Significant Impact*

There are no existing homes on the proposed Project site and no homes in the immediate vicinity would be displaced because of Project implementation. As such, the Project would result in a *Less than Significant Impact* related to this Checklist Item.

Cumulative Impact Analysis: *Less Than Significant Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and the Tulare County 2030 General Plan EIR.

As noted earlier, there are no existing homes on the proposed Project site and the proposed Project will not displace any additional housing units. Therefore, the Project would result in a *Less Than Significant Cumulative Impact* related to this Checklist Item.

Mitigation Measure(s): *None Required.*

Conclusion: *Less Than Significant*

As noted above, *Less Than Significant Project-specific or Cumulative Impacts* related to this Checklist Item will occur.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

Project Impact Analysis: *No Impact*

As noted earlier, there are no existing houses on the proposed Project site and as such, no people will be displaced as a result of Project implementation. Therefore, the Project would result in *No Project-specific Impact* related to this Checklist Item.

Cumulative Impact Analysis: *No Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and the Tulare County 2030 General Plan EIR.

The proposed Project will not result in the conversion of any inhabited housing on-site or off-site. As such, *No Project-specific or Cumulative Impact* related to this Checklist Item will occur.

Mitigation Measure(s): *None Required.*

Conclusion: *No Impact*

As noted above *No Project-specific or Cumulative Impacts* related to this Checklist Item will occur.

REFERENCES

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Final Tulare County 2008 Regional Housing Needs Assessment Plan. Page II-2.

Final Tulare County 2014 Regional Housing Needs Assessment Plan. Table 4. Page 18.
<http://www.tularecog.org/wp-content/uploads/2015/07/Final-Regional-Housing-Needs-Plan-for-Tulare-County-2014-2023.pdf>. Appendix A. Page 1-12. Accessed July, 2017.

Tulare County Association of Governments. Tulare County Regional Blueprint. May 2009. Pages 4-5. <http://valleyblueprint.org/files/Tulare050109.pdf>. Accessed July, 2017.

Tulare County Housing Element 2015 Update. Pages 1-3, 1-17, 3-21, 26, and 7-1.

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2015 U.S. Census, United States QuickFacts, Tulare County, California.
<http://www.census.gov/quickfacts/table/PST045215/06107>. Accessed July, 2017.

U.S. Department of Housing and Urban Development, Mission,
<https://www.performance.gov/agency/departments-housing-and-urban-development>. Accessed June, 2017.

Public Services

Chapter 3.14

SUMMARY OF FINDINGS

The proposed Project will result in a *Less Than Significant Impact* related to Public Services. A detailed review of potential impacts is provided in the analysis below.

INTRODUCTION

California Environmental Quality Act (CEQA)

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Land Use and Recreation. As required in Section 15126, all phases of the proposed Project will be considered was part of the potential environmental impact.

The environmental setting provides a description of the Public Services in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, the Tulare County General Plan Background Report and/or the Tulare County General Plan Revised DEIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item questions. The following are potential thresholds for significance.

- Will the Project Impact Fire Services
- Will the Project Impact Police Services
- Will the Project Impact Schools
- Will the Project Impact Parks
- Will the Project Impact Other Public Facilities

ENVIRONMENTAL SETTING

Fire Protection

Tulare County

The [formerly titled] California Department of Forestry and Fire Protection/Tulare County Fire Department (now CalFire/TCFD) serve 145,128 of Tulare County's population and in 2002,

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averaged 38.4 calls per day.¹ Fire occurrence data generated by the department indicate a direct relationship between high use areas of the county and fire occurrence. The population increase in the mountain areas have caused increased wildland urban interface problems as well. Structures are being built throughout wildland areas wherein vegetation fires can spread rapidly. Providing adequate fire protection to those structures has become a major undertaking.²

Tulare County Fire Station #8, located in the community of Ivanhoe, is the nearest County fire station to the proposed Project area (approximately 4.25 miles northeast of the Project site).

CalFire/TCFD uses an “attack” time protocol of less than 10 minutes to respond to 90 percent of the calls on the valley floor and less than 15 minutes on 75 percent of calls in the foothill and mountain areas. The Project site is in the 15-minute response area. Such response times are feasible from the station mentioned.³

City of Visalia

The City of Visalia Fire Department provides fire services to the City’s planning area. The Fire Department protects the citizens from six stations located throughout the city. Five of these fire stations are staffed 24 hours a day, 365 days a year, by firefighters who are prepared to handle any emergency. Fire suppression efforts are handled by four Pierce fire engines and a 105 foot Pierce aerial truck as the front-line equipment. Each apparatus is staffed with a minimum of three firefighters.⁴

Station #56 is the nearest fire station to the Project site and is located approximately 1.8 miles southwest of the site. The physical address is 1968 S. Lovers Lane. According to the City’s website, the Project site is located in the service area of Station #56.⁵

The City of Visalia’s 2016 Annual Report provides a summary of Incident Reports by major incident type as shown in **Table 3.14-1**.

Table 3.14-1 Major Incidents Types⁶	
Fires	598
Rupture/Explosion	10
Rescue & Emergency Medical	9,322
Hazardous Conditions	202
Service Calls	1,002
Good Intent	2,741
False Alarm	401
Severe Weather	7
Totals	14,283

¹ Tulare County General Plan 2030 Update, *Background Report*. Table 7-6.

² Ibid. 7-73.

³ Op.Cit.

⁴ City of Visalia Fire Department. <http://www.visalia.city/depts/fire/info/default.asp> Accessed September 2017.

⁵ City of Visalia. <http://www.visalia.city/depts/fire/facilities/default.asp>. Accessed September 2017.

⁶ City of Visalia Fire Department’s 2016 Annual Report, page 10, accessed September 2017 and available at: www.visalia.city/civica3/filebank/blobdownload.aspx?BlobID=35691.

As shown in **Table 3.14-1**, the Visalia Fire Department responded to 14,283 calls for service in 2016; a majority of the calls were for rescue and medical emergencies (approximately 65 percent).

Also, the Visalia Fire Department is available to respond to service needs of the proposed Project if necessary. A mutual aid/response agreement⁷ with the City of Visalia for fire-department-related incidents would allow the Visalia Fire Department to respond to such an incident. The nearest City of Visalia Fire Station is No. 56 approximately 1.8 miles from the proposed Project site.

Police Protection

Tulare County

“In 2007, the Tulare County Sheriff’s Department currently had 448 sworn officers serving its unincorporated population (145,128), and generates a level of service ratio of 3.2 officers per 1,000 residents. The ratio is above the accepted standard of 2.0 officers per 1,000 residents set by the Federal Bureau of Investigation. The Sheriff’s Department also has 186 non-sworn clerical and support staff amounting to total Sheriffs Department staff personnel of 633 employees.”⁸

“Law enforcement protection for the unincorporated county is divided into 22 areas with four stations... [T]he Porterville substation serves the largest number of areas with 10 patrols, followed by the headquarters in Visalia with six, and Cutler-Orosi and Pixley, each with three areas.”⁹ The Cutler-Orosi patrol substation is approximately 14 miles to the east of the proposed Project site.

According to the Tulare County Sheriff’s Department 2014-2015 Annual Report (page 6), there are currently 592 allocated sworn officers serving the unincorporated population of 146,651 resulting in a service ratio of 2.47%. This ratio is still above the accepted standard of 2.0 officers per 1,000 residents set by the Federal Bureau of Investigation. The Sheriff’s Department also has allocated 252 non-sworn clerical and support staff amounting to the Sheriff’s Department staff personnel of 844 total employees.¹⁰

City of Visalia

The City of Visalia Police Department has over 200 staff members including 141 sworn officers (as of 2016). In 2016, a total of 9,192 citations were issued with some of the more frequent citations being speeding and other moving violations. A total of 7,050 arrests were made in that same year.¹¹

⁷ City of Visalia, General Plan Update DEIR, page 3.9-31 accessed on January 12, 2014 at:

http://www.visaliageneralplanupdate.com/pdf/eir/Visalia_EIR_3.9_Public_Services_Facilities_Uilities_032414.pdf

⁸ Tulare County General Plan 2030 Update, *Background Report*, Pages 7-71 to 7-72.

⁹ Ibid. 7-72.

¹⁰ Tulare County Sheriff’s Department 2014-2015 Annual Report. Page 6. Accessed on January 31, 2016 and available at: <http://www.tularecounty.ca.gov/sheriff/index.cfm/community/2014-2015-annual-report/>

¹¹ City of Visalia Police Department 2016 Annual Report. Page 24. Accessed September 2017.

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Schools

Tulare County

“A total of 48 school districts provide education throughout Tulare County... Of the 48 school districts, seven are unified districts providing educational services for kindergarten through 12th grade. The remaining 41 districts consist of 36 elementary school districts and four high school districts. Many districts only have one school.”¹²

“Total enrolment in Tulare County public schools has increased from about 80,000 to 88,300 students during a nine-year span from 1993 to 2002. On average, the growth rate has remained steady with annual increases approximating two percent.”¹³

City of Visalia

According to the Visalia Unified School District website: “VUSD is the oldest school district in Tulare County. Our services span 214 square miles with a population base of over 135,000. We govern 25 elementary schools, a newcomer language center, five middle schools, four comprehensive high schools, a continuation high school, an adult school, a charter alternative academy, a charter independent study school, a K-8 charter home school, a charter technical education school, and a school that serves orthopedic handicapped students. Over 32,000 students Pre-K to adult are served through the Visalia Unified School District.”¹⁴

Parks

Tulare County

There are a number of Federal, State, and local parks within Tulare County. There are 13 park and recreational facilities operated by Tulare County. A list of the nearest local park facilities is provided in Table 3.14-2.

Table 3.14-2			
Nearest Recreational Areas to Project Site in Tulare County			
Recreation Area	Location	Acres	Type of Use/Features
Cutler Park	5 miles east of Visalia on Highway 216 to Ivanhoe.	50	Reservations for picnic areas are taken. Entrance fee for vehicles.
Elk Bayou Park	6 miles SE of Tulare on Avenue 200.	60	Reservations for picnic areas are taken. No fee for day use.
Kings River Nature Preserve	2 miles east of Highway 99 on Road 28	85	This park is only for school environmental programs.
Ledbetter Park	1 mile northwest of Cutler on Road 124/Hwy 63	11	Reservations for picnic areas are taken. No fee.

¹² Tulare County General Plan 2030 Update, *Background Report*, Pages 7-75 to 7-76

¹³ Ibid. 7-76.

¹⁴ Visalia Unified School District. <http://www.vusd.org/about.cfm>. Accessed September 2017.

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Table 3.14-2			
Nearest Recreational Areas to Project Site in Tulare County			
Mooney Grove Park	2 Miles south of Caldwell Avenue on Mooney Blvd. In South Visalia.	143	Reservations for picnic areas are taken. Paddle boats, playground, baseball diamonds. Home of the End Trail statue. One of the largest oak woodlands in Tulare County. Location of the Agriculture and Farm Labor Museum.
Tulare County Museum	In Mooney Grove Park, South Visalia.	8.5	Free admission with park fee. Museum is opened Thursday thru Monday (closed Tuesday and Wednesday).
West Main Street Park	2 blocks west of County Courthouse on Main Street in Downtown Visalia.	5	Day use no entrance fee.

A more detailed discussion of Recreational facilities is provided in Chapter 3.15.

City of Visalia

Currently, Visalia has 19 neighborhood parks, as well as 17 pocket parks, dispersed throughout the City. Four community parks provide a fuller range of community amenities or are co-located with community centers and range from approximately 9 to 14 acres. Three larger facilities, Plaza Park, Money Grove Park, and Riverway Sports Park are all located at the periphery. Altogether, there are approximately 678 acres of parkland within the City.¹⁵

Library

Tulare County

“The Tulare County Public Library System comprises of interdependent branches, grouped by services, geography and usage patterns to provide efficient and economical services to the residents of the county. At present, there are 14 regional libraries and one main branch.”¹⁶ The nearest libraries to the Project are identified in **Table 3.14-3**.

Table 3.14-3
Tulare County Libraries

Branch	Address	Service Hours (2018)¹⁷
Farmersville	623 N. Avery Avenue Farmersville, CA 93223	Tuesday through Thursday: 9 a.m. - 1 p.m.; 2 p.m. - 6 p.m.
Ivanhoe	15964 Heather Avenue Ivanhoe, CA 93235	Tuesday and Friday: 9 a.m. – 1 p.m.; 2 p.m. - 6 p.m.
Visalia	Main Branch 200 West Oak Avenue Visalia, CA 93291-4993	Tuesdays through Thursdays: 9 a.m. - 8 p.m.; Fridays: 12 p.m. – 6 p.m. Saturdays: 9 a.m. - 5 p.m.

¹⁵ City of Visalia General Plan EIR (2014). Page 3.9-14.

¹⁶ Tulare County General Plan 2030 Update, *Background Report*. Page 7-96.

¹⁷ Tulare County Library. Library hours as of 2017. Locations: <http://www.tularecountylibrary.org/index.html>. Accessed September 2017.

City of Visalia

The Tulare County Library serves the City of Visalia from its main branch in downtown Visalia at 200 W. Oak Avenue¹⁸.

REGULATORY SETTING

Federal Agencies & Regulations

None that apply to the proposed Project.

State Agencies & Regulations

None that apply to the proposed Project.

Local Policy & Regulations

Tulare County General Plan Policies

The Tulare County General Plan has several policies that apply to projects within County of Tulare. General Plan policies that relate to the proposed Project are listed as follows:

PFS-7.1 Fire Protection - The County shall strive to expand fire protection service in areas that experience growth in order to maintain adequate levels of service.

PFS-7.2 Fire Protection Standards - The County shall require all new development to be adequately served by water supplies, storage, and conveyance facilities supplying adequate volume, pressure, and capacity for fire protection.

PFS-7.3 Visible Signage for Roads and Buildings - The County shall strive to ensure all roads are properly identified by name or number with clearly visible signs.

The County shall strive to ensure all roads are properly identified by name or number with clearly visible signs.

PFS-7.5 Fire Staffing and Response Time Standards - The County shall strive to maintain fire department staffing and response time goals consistent with National Fire Protection Association (NFPA) standards.

¹⁸ City of Visalia General Plan (2014). Page 5-23.

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Table 3.14-4 Fire Staffing and Responses Time Standards ¹⁹			
	Demographics	Staffing/Response Time	% of Calls
Urban	> 1,000 people/sq. mi.	15 FF/9 min.	90
Suburban	500-100 people/sq. mi.	10 FF/10 min.	80
Rural	< 500 people/sq. mi.	6 FF/14 min.	80
Remote*	Travel Dist. > 8 min.	4 FF/no specific response time	90
<i>*Upon assembling the necessary resources at the emergency scene, the fire department should have the capacity to safely commence an initial attack within 2 minutes, 90% of the time. (FF = Fire Fighters)</i>			

PFS-7.6 Provision of Station Facilities and Equipment - The County shall strive to provide sheriff and fire station facilities, equipment (engines and other apparatus), and staffing necessary to maintain the County's service goals. The County shall continue to cooperate with mutual aid providers to provide coverage throughout the County.

PFS-7.8 Law Enforcement Staffing Ratios - The County shall strive to achieve and maintain a staffing ratio of 3 sworn officers per 1,000 residents in unincorporated areas.

PFS-7.9 Sheriff Response Time - The County shall work with the Sheriff's Department to achieve and maintain a response time of:

1. Less than 10 minutes for 90 percent of the calls in the valley region; and
2. 15 minutes for 75 percent of the calls in the foothill and mountain regions.

PFS-7.12 Design Features for Crime Prevention and Reduction - The County shall promote the use of building and site design features as means for crime prevention and reduction.

PFS-8.1 Work with Local School Districts - The County shall work with local school districts to develop solutions for overcrowded schools and financial constraints of constructing new facilities.

PFS-8.4 Library Facilities and Services - The County shall encourage expansion of library facilities and services as necessary to meet the needs (e.g., internet access, meeting rooms, etc.) of future population growth.

IMPACT EVALUATION

- a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:
- Fire protection?**

¹⁹ Tulare County General Plan 2030 Update, Policy PFS – 7.5.

Project Impact Analysis: *Less Than Significant Impact*

The proposed Project is within the service area of the City of Visalia Fire Department.²⁰ The Project consists primarily of service commercial facilities that don't typically require on-going or routine fire service calls. The facility types will likely be similar to other commercial/industrial uses in the area (Auto maintenance/repair, construction-related shops, warehousing/storage, etc.). The proposed Project applicant will be required to pay an impact fee to the City for fire protection services. In addition, the Project will be required to comply with applicable Building, Fire, Mechanical, Electrical and Plumbing Codes, and Fire Department approval.

Project-specific impacts related to this Checklist Item will not likely occur as the proposed Project is not increasing the service area for the Visalia Fire Department and would not require new or expanded facilities that could result in adverse physical impacts. Response times will be similar to the surrounding commercial facilities and are not anticipated to be increased because of the Project.

As such, a *Less Than Significant Project-specific Impact* related to this Checklist Item will occur.

Cumulative Impact Analysis: *Less Than Significant Impact*

The geographic area of this cumulative analysis is the City of Visalia and Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, the Tulare County 2030 General Plan EIR, and the Visalia General Plan (2014).

The proposed Project will not significantly impact the fire department's response times. Therefore, a *Less Than Significant Cumulative Impact* related to this Checklist Item will occur.

Mitigation Measure(s): *None Required.*

Conclusion: *Less Than Significant Impact*

As the proposed Project will be required to comply with applicable Building, Fire, Mechanical, Electrical and Plumbing Codes, and Fire Department approval, the Project-specific impacts related to this Checklist Item will be *Less Than Significant* level. *No Cumulative Impacts* related to this Checklist Item will occur.

Police protection?

Project Impact Analysis: *Less Than Significant Impact*

²⁰ City of Visalia Fire Department. <http://www.visalia.city/depts/fire/facilities/default.asp>. Accessed September 2017.

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The proposed Project is within the service area of the Tulare County Sheriff's Department. The Project consists primarily of service commercial facilities that don't typically require on-going or routine police service calls. The facility types will likely be similar to other commercial/industrial uses in the area (Auto maintenance/repair, construction-related shops, warehousing/storage, etc.). According to the Sheriff Department's online Crime Map from 2016, the areas around the Project site had total of eight crimes/arrests as follows: 4 – malicious mischief, 2 – burglary, and 2 – grand theft auto.²¹ The proposed Project applicant will be required to pay an impact fee to the County for Sheriff services.

Project-specific impacts related to this Checklist Item will not likely occur as the proposed Project is not increasing the service area for the Tulare County Sheriff's Department and would not require new or expanded facilities that could result in adverse physical impacts. Based on crime statistics from 2016, it is not expected that the Project (with similar proposed service commercial uses to facilities around the site) will result in a substantial increase in sheriff calls and response times will be similar to the surrounding commercial facilities.

As such, a ***Less Than Significant Project-specific Impact*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and the Tulare County 2030 General Plan EIR.

The proposed Project will not significantly impact the Sheriff's Department response times. Therefore, a ***Less Than Significant Cumulative Impact*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

Project-specific impacts related to this Checklist Item will be ***Less Than Significant***. As such, a ***Less Than Significant Cumulative Impact*** related to this Checklist Item will occur.

Schools?

Project Impact Analysis: ***Less Than Significant Impact***

The direct increase in demand for schools is normally associated with new residential projects that bring new families with school-aged children to a region. The proposed Project does not contain any residential uses. Although the Project will introduce new jobs, the amount of potential new jobs is not considered sufficient enough where job opportunities

²¹ Tulare County Sheriff Crime Map 2016 Online Database. <http://tularecounty.ca.gov/sheriff/index.cfm/community/statistics-maps/> Accessed September 2017.

could not be filled by the existing population (based on the County unemployment rate and the type of jobs typically associated with service commercial facilities). Thus, the Project is not anticipated to increase local population. As such, a ***Less Than Significant Impact*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, the Tulare County 2030 General Plan EIR and the City of Visalia General Plan (2014).

As noted earlier, the proposed Project will have a less than significant impact on Schools. As such, a ***Less Than Significant Cumulative Impact*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

Parks?

Project Impact Analysis: ***Less Than Significant Impact***

The direct increase in demand for parks is normally associated with new residential projects that bring new residents to a region. The proposed Project does not contain any residential uses. Although the Project will introduce new jobs, the amount of potential new jobs is not considered sufficient enough where job opportunities could not be filled by the existing population (based on the County unemployment rate and the type of jobs typically associated with service commercial facilities). Thus, the Project is not anticipated to increase local population. As such, a ***Less Than Significant Impact*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, the Tulare County 2030 General Plan EIR and the City of Visalia General Plan (2014).

As noted earlier, the proposed Project will have a less than significant impact to Recreational Services. As such, a ***Less Than Significant Cumulative Impact*** related to this Checklist Item will occur.

Mitigation Measure(s): *None Required.*

Conclusion: *Less Than Significant Impact*

As noted earlier, *Less Than Significant Project-specific or Cumulative Impacts* related to this Checklist Item will occur.

Other public facilities?

Project Impact Analysis: *Less Than Significant Impact*

Other public facilities that may be impacted include water treatment plants, libraries, and solid waste disposal facilities. Water and wastewater treatment facilities and solid waste disposal facilities are discussed in Chapter 3.17 – Utilities and Service Systems. The direct increase in use of libraries is normally associated with new residential projects that bring new residents to a region. The proposed Project does not contain any residential uses. Although the Project will introduce new jobs, the amount of potential new jobs is not considered sufficient enough where job opportunities could not be filled by the existing population (based on the County unemployment rate and the type of jobs typically associated with service commercial facilities). Thus, the Project is not anticipated to increase local population.

As such, a *Less Than Significant Project-specific Impact* related to this Checklist Item will occur.

Cumulative Impact Analysis: *Less Than Significant Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, the Tulare County 2030 General Plan EIR and the City of Visalia General Plan (2014).

As noted earlier, the proposed Project will not impact other public facilities. As such, a *Less Than Significant Cumulative Impact* related to this Checklist Item will occur.

Mitigation Measure(s): *None Required.*

Conclusion: *Less Than Significant Impact*

As noted earlier, *Less Than Project-specific or Cumulative Impacts* related to this Checklist Item will occur.

REFERENCES

City of Visalia. <http://www.visalia.city/depts/fire/facilities/default.asp>. Accessed September 2017.

City of Visalia Fire Department. <http://www.visalia.city/depts/fire/info/default.asp> Accessed September 2017.

City of Visalia Fire Department's 2016 Annual Report, page 10, accessed September 2017 and available at: www.visalia.city/civicax/filebank/blobdload.aspx?BlobID=35691.

City of Visalia General Plan (2014). Page 5-23.

City of Visalia General Plan EIR (2014). Page 3.9-14.

City of Visalia Police Department 2016 Annual Report. Page 24. Accessed September 2017.

Tulare County General Plan 2030 Update, *Background Report*. Table 7-6. Pages 7-71, 7-72, 7-73, 7-75, 7-76, and 7-96.

Tulare County General Plan 2030 Update, Policy PFS – 7.5.

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<http://www.tularecountylibrary.org/index.html>. Accessed September 2017.

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<http://tularecounty.ca.gov/sheriff/index.cfm/community/statistics-maps/> Accessed September 2017.

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Recreation

Chapter 3.15

SUMMARY OF FINDINGS

The proposed Project will result in *No Impact* related to Recreation. No mitigation measures will be required. A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Recreation. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2(a), “[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas.”¹ The “Environmental Setting” provides a description of the Recreational Resources in the County. The “Regulatory Setting” provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update Recirculated Draft Environmental Impact Report

¹ CEQA Guidelines, Section 15126.2(a)

(RDEIR) incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist item questions. The following are potential thresholds for significance:

- Increase use of existing recreational facilities
- Include or require additional recreational facilities

ENVIRONMENTAL SETTING

“Tulare County contains several county, state, and federal parks. Aside from parks in the county, there are many open space areas as well. This section will highlight these various parks and open space areas and identify recreational opportunities within them.”² **Table 3-15-1** lists State Parks and Forests, National Parks and National Forests, and trails and recreational areas. **Table 3.15-2** for a list of Recreational areas and facilities in Tulare County including the 13 parks and recreation facilities that are owned and operated by the County of Tulare.

Federal Recreation Areas

Lake Kaweah

“Lake Kaweah was formed after the construction of the Terminus Dam on the Kaweah River in 1962. The lake offers many recreational opportunities including fishing, camping, and boating. Lake Kaweah is located 20 miles east of Visalia on Highway 198 and was constructed by the U.S. Army Corps of Engineers for flood control and water conservation purposes. The lake has a maximum capacity to store 143,000 acre-feet of water. There are a total of 80 campsites at the lake’s Horse Creek Campground, which contains toilets, showers and a playground. Campfire programs are also available. Aside from camping, boat ramps are provided at the Lemon Hill and Kaweah Recreation Areas. Both Kaweah and Horse Creek provide picnic areas, barbecue grills and piped water. Swimming is allowed in designated areas. In addition, there is a one-mile hiking trail between Slick Rock and Cobble Knoll, which is ideal for bird watching.”³

Lake Success

“Lake Success was formed by construction of the Success Dam on the Tule River in 1961. The lake offers many recreational activities including fishing, boating, waterskiing, and picnicking. The U.S. Army Corps of Engineers (USACOE) constructed this reservoir for both flood control and irrigation purposes. The lake has a capacity of 85,000 acre-feet of water. The lake is located

²Tulare County General Plan 2030 Update Background Report, February 2010. Page 4-1.

³Op. Cit. 4-7.

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eight miles east of Porterville in the Sierra Nevada foothills area. Recreational opportunities include ranger programs, camping at the Tule campground, which provides 104 sites, boating, fishing, picnic sites, playgrounds and a softball field. Seasonal hunting is also permitted in the 1,400-acre Wildlife Management Area.”⁴

National Parks and National Forests

“Most of the recreational opportunities in the county are located in Sequoia National Forest, Giant Sequoia National Monument, and in Sequoia and Kings Canyon National Parks (SEKI). Although these parks span adjacent counties, they make a significant contribution to the recreational opportunities that Tulare County has to offer.”⁵ See **Table 3.15-1** for a list of National Park and Forest facilities.

Table 3.15-1 National Park and Forest Facilities⁶		
Recreation Area	Location	Camping Sites
Sequoia National Forest		
Gray’s Meadow	5 miles West of Independence on Onion Valley Road.	52 tent/RV sites
Oak Creek	4 ½ miles NW of Independence off Highway 395.	21 tent/RV sites
Onion Valley	14 miles West of Independence on Onion Valley Road.	29 tent/RV sites
Stony Creek	14 miles SE of Grant Grove on Generals Highway.	49 tent/RV sites
Whitney Portal	13 miles West of Lone Pine on Whitney Portal Road.	43 tent/RV sites
Total		194 sites
Kings Canyon and Sequoia National Park		
Atwell Mill	Sequoia, 19 miles from Highway 198 on Mineral King Road.	21 tent sites
Azalea	Kings Canyon, 3 ½ miles from Kings Canyon Park entrance.	110 tent sites
Buckeye Flat	Sequoia, 11 miles South of Giant Forest of Generals Highway.	28 tent sites
Canyon View	Cedar Grove in Kings Canyon	23 tent sites
Cold Springs	Sequoia, Mineral King Area.	25 tent sites
Crystal Springs	Kings Canyon, ½ mile North of Grant Grove.	67 tent/RV sites
Dorst Creek	Sequoia, 9 miles North of Lodgepole off Generals Highway.	210 tent/RV sites
Lodgepole	Sequoia, 4 miles NE of Cedar Grove.	203 tent/RV sites
Moraine	Kings Canyon, 1 mile East of Cedar Grove.	120 tent/RV sites
Potwisha	Sequoia, 4 miles NE of Ash Mountain entrance off Generals Highway.	42 tent/RV sites
Sentinel	In the Cedar Grove area near the Kings River.	82 tent sites
Sheep Creek	Kings Canyon, 1/2-mile West of Cedar Grove.	111 tent/RV sites
South Fork	Sequoia, 13 miles on South Fork from Highway 198.	10 tent sites
Sunset	In the Grant Grove area 3 miles from Kings Canyon park entrance.	157 tent sites
Total		1,209 sites

Sequoia National Forest

“Sequoia National Forest takes its name from the Giant Sequoia, which is the world’s largest tree. There are more than 30 groves of sequoias in the lower slopes of the park. The park includes over 1,500 miles of maintained roads, 1,000 miles of abandoned roads and 850 miles of

⁴ Op. Cit.

⁵ Op. Cit. 4-8.

⁶ Op. Cit. Table 4-2. Page 4-8.

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trails for hikers, off-highway vehicle users and horseback riders. The Pacific Crest Trail connecting Canada and Mexico, crosses a portion of the forest, 78 miles of the total 2,600 miles of the entire trail. It is estimated that 10 to 13 million people visit the forest each year.”⁷

Giant Sequoia National Monument

“The Giant Sequoia National Monument was created in 2000 by President Clinton in an effort to preserve 34 groves of ancient sequoias located in the Sequoia National Forest. The Monument includes a total of 327,769 acres of federal land, and provides various recreational opportunities, including camping, picnicking, fishing, and whitewater rafting. According to the Giant Sequoia National Monument Management Plan EIS, the Monument includes a total of 21 family campgrounds with 502 campsites and seven group campgrounds. In addition, there are approximately 160 miles of system trails, including 12 miles of the Summit National Recreation Trail.”⁸

Sequoia and Kings Canyon National Parks (SEKI)

“The U.S. Congress created the Kings Canyon National Park in 1940 and Sequoia National Park in 1890. Because they share many miles of common boundaries, they are managed as one park. The extreme large elevation ranges in the parks (from 1,500 to 14,491 feet above sea level), provide for a wide range of vegetative and wildlife habitats. This is witnessed from exploring Mt. Whitney, which rises to an elevation of 14,491 feet, and is the tallest mountain in the contiguous United States. During the summer months, park rangers lead walks through the parks, and tours of Crystal and Boyden Caves. During the winter, visitors explore the higher elevations of the parks via cross country skis or snowshoes, or hike the trails in the foothills. The SEKI also contains visitor lodges, the majority of which are open year round. According to the National Parks Conservation Association, a combined total of approximately 1.4 million people visit the two parks on an annual basis.”⁹

State Parks and Forests

Colonel Allensworth State Park

“The only State Park in Tulare County is Colonel Allensworth State Historic Park discussed in Section 9.3 [of the General Plan Background Report]. The park contains a museum and a visitor center addressing the town’s history, as well as camping facilities. Allensworth is the only California town to be founded, financed and governed by African Americans. The small farming community was founded in 1908 by Colonel Allen Allensworth and a group of others dedicated to improving the economic and social status of African Americans. Uncontrollable circumstances, including a drop in the area’s water table, resulted in the town’s demise. With continuing restoration and special events, the town is coming back to life as a state historic park.

⁷Tulare County General Plan, 2030 Update, Background Report, February 2010. Page 4-9.

⁸ Op. Cit.

⁹ Op. Cit.

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The park's visitor center features a film about the site. A yearly rededication ceremony reaffirms the vision of its pioneers.”¹⁰

Mountain Home State Forest

“The Mountain Home State Forest is a State Forest managed by the California Department of Forestry and Fire Protection (CDF). The Forest consists of 4,807 acres of parkland containing a number of Giant Sequoias, and is located just east of Porterville. The Forest is a Demonstration Forest, which is considered timberland that is managed for forestry education, research, and recreation. Fishing ponds, hiking trails, and campsites are some of the amenities that can be found in the Forest.”¹¹

Other Recreational Facilities

“Other recreational resources available in Tulare County include portions of the Pacific Crest Trail, South Sierra Wilderness Area, Dome Land Wilderness Area, Golden Trout Wilderness Area, International Agri-Center, and the Tulare County Fairgrounds.”¹²

In addition, there are several nature preserves open to the public which are owned and operated by non-profit organizations, including the Kaweah Oaks Preserve and Dry Creek- Homer Ranch preserves, both owned and operated by Sequoia Riverlands Trust.¹³ Incorporated cities in the County also have a number of recreational facilities including neighborhood parks, play lots, pocket parks and other recreation facilities.¹⁴

Recreational areas in Tulare County are shown in **Table 3.15-2**. Also, two new parks were completed and became operational in the unincorporated communities of Plainview (Plainview Community Park) in 2016 and Earlimart (Earlimart Community Park) in 2017.

Table 3.15-2				
Recreational Areas in Tulare County ¹⁵				
ID	Recreation Area	Location	Acres	Type of Use/Features
County				
1	Alpaugh Park	Located in Alpaugh on Road 40.	3	Reservations for picnic areas are taken. No entrance fee.
2	Balch Park Campgrounds	20 miles NE of Springville in the Sierras.	160	71 Campsites. No reservations taken; first come first serve basis. Entrance fee for vehicles.
3	Bartlett Park	8 miles east of Porterville on North Drive.	127.5	Reservations for picnic areas are taken. Entrance fee for vehicles.
4	Camp	Near Ponderosa in	8	County of Tulare Youth Adventure Camp (Camp

¹⁰ Op. Cit. 4-3.

¹¹ Op. Cit. 4-7.

¹² Tulare County General Plan 2030 Update Recirculated DEIR, February 2010. Page 3.9-32.

¹³ Ibid. 4-1.

¹⁴ Op Cit. 3.9-29.

¹⁵ Ibid. Table 4-1. Page 4-4.

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Table 3.15-2 Recreational Areas in Tulare County ¹⁵				
	COTYAC	Eastern Tulare County.		COTYAC). Cabins, lodge with kitchen, restrooms and showers.
5	Cutler Park	5 miles east of Visalia on Highway 216 to Ivanhoe.	50	Reservations for picnic areas are taken. Entrance fee for vehicles.
6	Elk Bayou Park	6 miles SE of Tulare on Avenue 200.	60	Reservations for picnic areas are taken. No fee for day use.
7	Kings River Nature Preserve	2 miles east of Highway 99 on Road 28	85	This park is only for school environmental programs.
8	Ledbetter Park	1 mile northwest of Cutler on Road 124/Hwy 63	11	Reservations for picnic areas are taken. No fee.
9	Mooney Grove Park	2 Miles south of Caldwell Avenue on Mooney Blvd. In South Visalia.	143	Reservations for picnic areas are taken. Paddle boats, playground, baseball diamonds. Home of the End Trail statue. One of the largest oak woodlands in Tulare County. Location of the Agriculture and Farm Labor Museum.
10	Pixley Park	1 mile NE of Pixley on Road 124.	22	Reservations for picnic areas are taken. No fee.
11	Tulare County Museum	In Mooney Grove Park, South Visalia.	8.5	Free admission with park fee. Museum is opened Thursday thru Monday (closed Tuesday and Wednesday).
12	Woodville Park	Located in Avenue 166 in Woodville.	10	Reservations for picnic areas are taken. Day use no entrance fee.
13	West Main Street Park	2 blocks west of County Courthouse on Main Street in Downtown Visalia.	5	Day use no entrance fee.
State				
14	Colonel Allensworth State Historic Park	7 miles west of Earlimart on County Road J22.	3,715	15 campsites, open year round.
15	Mountain Home State Forest	Located in Sequoia National Forest	4,807	No reservations taken for campgrounds.
Federal				
16	Lake Kaweah	25 miles east of Visalia on Highway 198.	2,558	Horse Creek Campground, boat ramps, picnic areas, swimming, and hiking.
17	Lake Success	10 miles SE of Porterville on Highway 198.	2,450	Tule Campground, boating, fishing, picnic areas, playgrounds, and softball field. Hunting is permitted in the Wildlife Management Area.
18	Sequoia National Forest	Southeastern portion of Tulare County.	na	Campgrounds include Gray's Meadow, Oak Creek, Onion Valley, Stony Creek, Sunset, and Whitney Portal with over 300 campsites.
19	Giant Sequoia National Monument	Covers areas north and south of Sequoia and Kings Canyon National	na	

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Table 3.15-2 Recreational Areas in Tulare County ¹⁵				
		Parks.		
20	Sequoia and Kings Canyon National Parks (SEKI)	Northeastern portion of Tulare County.	na	Campgrounds include Atwell Mill Campground, Buckeye Flat, Cold Springs, Crystal Springs, Dorst Campground, Lodgepole, Moraine, Potwisha, Sheep Creek, and South Fork with over 800 campsites.
Total Acres				5,701

REGULATORY SETTING

Federal Agencies & Regulations

United States National Park Service (NPS)

“The National Park Service (NPS) is a bureau of the U.S. Department of the Interior. The NPS manages the 409 parks of the National Park System. The NPS also helps administer dozens of affiliated sites, the National Register of Historic Places, National Heritage Areas, National Wild and Scenic Rivers, National Historic Landmarks, and National Trails.”¹⁶

State Agencies & Regulations

California Department of Parks and Recreation

“California Department of Parks and Recreation manages 280 park units, which contain the finest and most diverse collection of natural, cultural, and recreational resources to be found within California. These treasures are as diverse as California: From the last stands of primeval redwood forests to vast expanses of fragile desert; from the lofty Sierra Nevada to the broad sandy beaches of our southern coast; and from the opulence of Hearst Castle to the vestiges of colonial Russia. California State Parks contains the largest and most diverse natural and cultural heritage holdings of any state agency in the nation. The State Park System includes State Parks, State Natural Reserves, State Historic Parks, State Historic Monuments, State beaches, State Recreation Areas, State Vehicular Recreation Areas, State Seashores and State Marine Parks. Within the system are Natural and Cultural Preserves, lakes and reservoirs, coastal beaches, historic homes, Spanish era adobe buildings, lighthouses, ghost towns, museums, visitor centers, conference centers, and off-highway vehicle recreation areas. Together, State Park System lands protect and preserve an unparalleled collection of culturally and environmentally sensitive structures and habitats, threatened plant and animal species, ancient Native American sites, historic structures and artifacts... the best of California's natural and cultural history.”¹⁷

Local Policy & Regulations

Tulare County General Plan Policies

¹⁶ National Park Service Overview Brochure, Updated July 13, 2015.

¹⁷ California Dept. of Parks and Recreation, http://www.parks.ca.gov/?page_id=91. Accessed March 2017.

ERM-5.3 Park Dedication Requirements - The County shall require the dedication of land and/or payment of fees, in accordance with local authority and State law (for example the Quimby Act), to ensure funding for the acquisition and development of public recreation facilities.

IMPACT EVALUATION

- a) **Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?**

Project Impact Analysis: *No Impact*

Typically, the increased use of parks and recreational facilities result from the addition of new housing and the accompanying growth of persons. The proposed Project includes the construction and operation of a 358,370-square foot business park and does not include a residential element or recreational facilities. Typically, residential growth results in demand for parks and recreational facilities through corresponding increases in populations (i.e., persons residing in new residential dwellings). However, the nature of the Project (a business park) would not result in additional residences nor its corresponding population growth. As such, the Project would not result in the need for additional parks and recreational facilities and would not result in substantial or accelerated physical deterioration of the any facility. Also, the City of Visalia is currently developing the 269 acre East Side Regional Park approximately 0.25 miles northwest of the proposed Project site which will provide regional park amenities within the vicinity of the proposed Project area. Therefore, the proposed Project's land use, (and proximity of the site to planned recreational facilities) would result in *No Impact* to this resource.

Cumulative Impact Analysis: *No Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project does not include housing or the accompanying population growth.

As Tulare County has an average unemployment rate of 12.4% (which is significantly higher than the State and national average), it is anticipated that the jobs created by the Business Park can be filled from the local existing work force.¹⁸ As such, *No Cumulative Impact* related to this Checklist Item will occur.

Mitigation Measures: *None Required*

¹⁸ Bureau of Labor Statistics, May 2014. http://www.calmis.ca.gov/file/lfmonth/lf_geomaps.pdf. Accessed March 2017.

Conclusion: *No Impact*

As noted earlier, *No Significant Project-specific or Cumulative Impacts* related to this Checklist Item will occur.

- b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?**

Project Impact Analysis: *No Impact*

The proposed Project does not include new recreational facilities or the expansion of recreational facilities. As such, *No Project-specific Impact* related to this Checklist Item will occur.

Cumulative Impact Analysis: *No Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As noted earlier, the proposed Project does not include new recreational facilities or the expansion of recreational facilities. As such, *No Cumulative Impact* related to this Checklist Item will occur.

Mitigation Measures: *None Required*

Conclusion: *No Impact*

As noted earlier, *No Project-specific or Cumulative Impacts* related to this Checklist Item will occur.

REFERENCES

Bureau of Labor Statistics, May 2014. http://www.calmis.ca.gov/file/lfmonth/lf_geomaps.pdf. Accessed March 2017.

California Dept. of Parks and Recreation, http://www.parks.ca.gov/?page_id=91. Accessed March 2017.

CEQA Guidelines, Section 15126.2(a).

National Park Service Overview Brochure, Updated July 13, 2015.

Tulare County General Plan 2030 Update, August 2012.

Tulare County General Plan 2030 Update Background Report, February 2010. Pages 4-1, -3, -4, -7, -8, and -9.

Tulare County General Plan 2030 Update Recirculated Draft Environmental Impact Report (DEIR), February 2010. Pages 3.9-29, and -32.

Transportation/Traffic

Chapter 3.16

SUMMARY OF FINDINGS

The proposed Project will result in a *Less Than Significant Impact* with mitigation related to Transportation and Traffic. A Traffic Impact Study report prepared by consultant 4Creeks, Inc. is included as Appendix “G” of this document which is used as the basis for determining this Project will result in Less Than Significant Impacts with mitigation incorporated. A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Transportation and Traffic. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2 (a), “[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas.”¹

The environmental setting provides a description of the Transportation and Traffic in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County 2030

¹ CEQA Guidelines, Section 15126.2 (a).

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General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist item questions. The following are potential thresholds for significance:

- Result in a Level of Service (LOS) less than “D”
- Unsafe roadway/circulation design
- Impact Air Traffic
- Dangerous Site Design
- Inadequate Access
- Need for additional Public Transit
- Need for additional Bike Facilities
- Need for additional Pedestrian Facilities

ENVIRONMENTAL SETTING

The 46-acre proposed Project site is east of the City of Visalia, just south of the State Route 198 corridor. Approximately half of the proposed Project site is bordered by urban development while the remaining half is bordered by land in active agriculture. The Caltrans Visalia Maintenance building is to the west while various commercial buildings are on the northern side of SR 198 across from the proposed Project site. A cluster of approximately 12 residences is immediately east of the site and beyond that is a RV and mini storage facility.

“The purpose of the highway, streets and roads section is to identify the existing regional circulation system and determine both feasible short-term and long-range improvements. Tulare County's planned circulation system consists of an extensive network of regional streets and roads, local streets and State Highways. The system is designed to provide an adequate Level of Service (LOS) that satisfies the transportation needs of County residents. However, Tulare County has experienced a large increase in population and is beginning to outgrow portions of the circulation system. The need for major improvements to the State Highways, streets and roads network is an important issue.

The existing State Highway system was completed in the 1950's and 60's. The average design life of a State Highway is approximately 20 years and many Tulare County's highways were constructed 50 years ago. The agricultural and commercial industry continue to utilize the circulation system to get products to market. With industry intensification and other development, many facilities are beginning to show structural fatigue (e.g., surface cracks, potholes, and broken pavement).”²

² 2014-2040 Regional Transportation Plan & Sustainable Communities Strategy, Tulare County Association of Governments (TCAG) June 2014.
Page 3-54.

“Caltrans and the Tulare County region will be placing more emphasis on corridors as an important element of the transportation system. The analysis of the regional circulation system in this [2014-2040 Regional Transportation Plan & Sustainable Communities Strategy] 2014 RTP emphasizes people movement through transportation corridors. Caltrans defines a corridor as a "broad geographic area that includes various modes of transportation, local roads and State Highways." Corridors may be defined as terms of the number of people or tonnage of freight moved in any particular direction, regardless of the facility.

Caltrans, [Regional Transportation Planning Agencies] RTPAs, local transit agencies and local governments have developed the analysis of corridor needs. Caltrans developed a System Management Plan to reflect individual corridors and the relationship to each other. The emphasis on corridor planning will require open communication between the District and locals in order to develop a common database and consistent planning practices.

The 2014 RTP contains goals aimed at protecting and enhancing various corridors. The objective provides guidance toward coordination of local planning processes along the corridors. The policy supports limitation of direct access along regionally significant corridors. The data to be analyzed will include volume, length, type, destination, and modal split of person trips. Analysis of this data will help TCAG determine transportation corridor conditions and needs. In Tulare County major travel corridors often closely mirror regionally significant roadways. Figures 3-18 and 3-19 (in the RTP) identify major corridors identified by Caltrans and [Tulare County Association of Governments] TCAG:

- SR- 99 (including UP rail line);
- SR-43 (including BNSF rail line);
- City of Visalia to the City of Tulare including Mooney Boulevard, Demaree/Blackstone/Hillman, Akers Road and transit links;
- SR-65 from SR-198 to the City of Lindsay;
- City of Lindsay to City of Porterville, including SR-65 and Orange Belt Dr.;
- SR-65 from the City of Porterville to the Kern County line;
- SR-198/Sequoia National Park/Exeter/Hanford;
- SR-190/Road 152 from the Kings County line to the City of Porterville; and
- SR-137 from the Kings County line to the City of Lindsay.”³

“Tulare County has interregional connections along the SR 198 corridor with Kings County, SR 99 with Kern and Fresno County, and SR 65 with Kern County and Ave 416 with Fresno County. The main corridors are currently running at capacity or near capacity. TCAG has coordinated with surrounding counties to improve these significant corridors. By way of Proposition 1B funds, and other local and state funds, the SR-198 corridor has been widened between the cities of Visalia and Hanford. Segments of SR-99 have begun widening at the north end of Tulare County. TCAG will continue to move forward on these major projects, in close partnership with Caltrans and neighboring jurisdictions.”⁴

³ Ibid. 3-54 and 3-55.

⁴ Op. Cit. 3-55.

As indicated in the 2014 RTP, capacity and level of service are two significant criteria used to measure the ability of a roadway to handle volume and the speed of volume flow; respectively. Following are discussion excerpted from the 2014 RTP:

“Capacity

According to the 2010 Highway Capacity Manual (HCM), capacity is defined as "the maximum sustainable hourly flow rate at which persons or vehicles reasonably can be expected to traverse a point or a uniform section of a lane or roadway during a given time period under prevailing roadway, environmental, traffic and control conditions, usually expressed as vehicles per hour or persons per hour." The ratio of the roadway volume to its capacity, V/C , can be useful in determining the preliminary Level of Service (LOS) of a roadway.

$\frac{\text{Volume}}{\text{Capacity}} =$	Actual number of vehicles. Maximum number of vehicles on a particular segment of roadway during a specific time frame.
---	---

Level of Service

LOS is categorized by two parameters, uninterrupted flow and interrupted flow. Uninterrupted flow facilities have no fixed elements, such as traffic signals, that cause interruptions in traffic flow (e.g., freeways, highways, and controlled access, some rural roads). Interrupted flow facilities have fixed elements that cause an interruption in the flow of traffic such as stop signs and signalized intersections. The definitions and measurements used for determining level of service in interrupted and uninterrupted conditions are shown below:

Uninterrupted Traffic Flow Facilities

LOS A: Describes free-flow operations. Free-Flow Speed (FFS) prevails on the freeway, and vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream. The effects of incidents or point breakdowns are easily absorbed.

LOS B: Represents reasonably free-flow operations, and FFS on the freeway is maintained. The ability to maneuver within the traffic stream is only slightly restricted, and the general level of physical and psychological comfort provided to drivers is still high. The effects of minor incidents and point breakdowns are still easily absorbed.

LOS C: Provides for flow with speeds near the FFS of the freeway. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver. Minor incidents may still be absorbed, but the local deterioration in service quality will be significant. Queues may be expected to form behind any significant blockages.

LOS D: At this level speeds begin to decline with increasing flows, with density increasing more quickly. Freedom to maneuver within the traffic stream is seriously limited and drivers experience

reduced physical and psychological comfort levels. Even minor incidents can be expected to create queuing, because the traffic stream has little space to absorb disruptions.

LOS E: Describes operation at capacity. Operations on the freeway at this level are highly volatile because there are virtually no useable gaps within the traffic stream, leaving little room to maneuver within the traffic stream. Any disruption to the traffic stream, such as vehicles entering from a ramp or changing lanes, can establish a disruption wave that propagates throughout the upstream traffic flow. At capacity, the traffic stream has no ability to dissipate even the most minor disruption, and any incident can be expected to produce a serious breakdown and substantial queuing.[.] The physical and psychological comfort afforded to drivers is poor.

LOS F: Describes breakdown, or unstable flow. Such conditions exist within queues forming behind bottlenecks. Breakdowns occur for a number of reasons:

Traffic incidents can temporarily reduce the capacity of a short segment, so that the number of vehicles arriving at a point is greater than the number of vehicles that can move through it.

Points of recurring congestion, such as merge or weaving segments and lane drops, experience very high demand in which the number of vehicles arriving is greater than the number of vehicles that can be discharged.

In analyses using forecast volumes, the projected flow rate can exceed the estimated capacity of a given location.

Interrupted Traffic Flow Facilities

LOS A: Describes operations with a control delay of 10 s/veh or less and a volume-to- capacity ratio no greater than 1.0. This level is typically assigned when the volume-to- capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.

LOS B: Describes operations with a control delay between 10 and 20 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to- capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A, with reasonably unimpeded travel between intersections.

LOS C: Describes operations with control delay between 20 and 35 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual cycle failures (i.e. one or more queued vehicles are not able to depart as a result of the insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping. May be longer queues and operations between locations may be more restricted.

LOS D: Describes operations with control delay between 35 and 55 s/veh and a volume-to-capacity ratio no greater than 1.0. Travel speeds are about 40 percent below free flow speeds. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.

LOS E: Describes operations with control delay between 55 and 80 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent. Average travel speed is one-third of free flow speeds. The facility is generally at full capacity.

LOS F: Describes operations with control delay exceeding 80 s/veh or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue. Extremely slow speeds with average delay of 80 seconds or more. Frequent stop and go conditions.

Caltrans policy defines LOS D as an acceptable operating condition when planning for future state facilities in urbanized areas. TCAG monitors traffic levels of service on the regional roads. An LOS of D or better is the goal on urban roads, and C on rural roads.”⁵

“Public Transit

An inexpensive and clean alternative to adding additional lanes to highways, streets and roads is to provide mass transit systems. Transit service in the County is currently provided by both local agencies and contracted private operators. Mass transportation is an economical mode of transportation. In Tulare County, all public mass transportation is provided by fixed route buses and dial-a-ride services that meet all reasonable needs in the region. Tulare County is not directly serviced by passenger rail facilities although it is accessible to Hanford’s Amtrak station by bus. Furthermore, inter-agency transfer points are becoming part of Tulare County’s overall circulation system, in an effort to coordinate transit systems between adjacent agencies. TCAG will be leading the development of the first-ever Tulare County Regional Long Range Transit Plan. The plan will begin in late 2014.”⁶

“Mass transportation provides transportation to large numbers of people to designated destinations by bus or train. In Tulare County, buses are the primary mode of public transportation. Amtrak, California’s only operating interregional passenger rail service, doesn’t directly serve Tulare County. The closest Amtrak stations are in the Cities of Hanford and Corcoran in Kings County. However, Amtrak does coordinate with Visalia Transit to provide a feeder bus linking Visalia from the city’s transit center with the Hanford Station in Kings County. Public transportation in Tulare County also takes the form of shared-ride taxis, carpools and vanpools; dial-a-ride and specialized handicapped accessible services. Public transportation

⁵ Op. Cit. 3-1 thru 3-4.

⁶ Op. Cit. 3-52.

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needs are met by either a fixed route or demand responsive (dial-a-ride) transit system. Fixed routes are generally used in the more populated urban areas while demand responsive transit and fixed route deviation are often used in rural areas and communities.

Social service transportation in Tulare County is being guided in a direction consistent with the Social Service Improvement Act of 1979 (AB 120). The law was enacted to promote the consolidation of such transportation services. The Act was established to improve efficient social service transportation by:

- Combining purchasing of necessary equipment
- Insure adequate training of vehicle drivers for reduced insurance rates
- Centralized dispatching of vehicles
- Centralized maintenance of vehicles
- Centralized administration
- Identification and consolidation of all existing sources of funding.

In Tulare County, social service transportation is provided by the following: local transit agencies, demand responsive operators and city/county special programs for senior citizens, and mental health organizations and programs for citizens with disabilities. TCAG reaches out to transportation providers identified in the Coordinated Transportation plan and ensures that calls for projects are communicated with social service providers. Many of these programs are funded and subsidized through state and federal grants, Transportation Development Act (TDA) funds, and local funds including Measure R.”⁷

“Public transportation provides an economical and efficient alternative for getting people to work, school and other chosen destinations. In Tulare County, buses are the primary mode of public transportation. Public transportation also takes the form of shared ride taxi, automobile and vanpools; dial-a-ride, and specialized handicapped accessible services. In Tulare County, social service transportation is provided by the following: local transit agencies, demand responsive operators and city/county special programs for senior citizens, mental health organizations and disabled citizens programs. These programs are funded and subsidized through State and federal grants, Local Transportation Funds (LTF), State Transit Assistance Funds (STAF), and local transportation sales tax revenues.”⁸

“Tulare County has two major regional highways, State Highway 99 and 198. State Highway 99 connects Tulare County to Fresno and Sacramento to the north and Bakersfield to the south. State Highway 198 connects from U.S. Highway 101 on the west and continues eastward to Tulare County, passing through the City of Visalia and into Sequoia National Park. The highway system in the County also includes State highways, County-maintained roads, and local streets within each of the eight cities.”⁹

“Tulare County’s transportation system is composed of several State Routes, including three

⁷ Op. Cit. 3-57 thru 3-58.

⁸ Tulare County General Plan 2030 Update Background Report. Page 1-14.

⁹ Ibid. 13-2.

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freeways, multiple highways, as well as numerous county and city routes. The county's public transit system also includes two common carriers (Greyhound and Orange Belt Stages), the AMTRAK Service Link, other local agency transit and Para transit services, general aviation, limited passenger air service and freight rail service.”¹⁰

“Some prominent county roadways include, but are not limited to, Alta Avenue (Road 80), Caldwell Avenue/Visalia Road (Avenue 280), Demaree Road/Hillman Street (Road 108), Tulare Avenue (Avenue 232), Olive Avenue (Avenue 152), Spruce Road (Road 204), El Monte Way (Avenue 416), Paige Avenue (Avenue 216), Farmersville Boulevard (Road 164), Road 192, and Road 152. Additionally, the highway system includes numerous county-maintained local roads, as well as local streets and highways within each of the eight cities and several unincorporated communities.”¹¹

“Travel within Tulare County is a function of the size and spatial distribution of its population, economic activity, and the relationship to other major activity centers within the Central Valley (such as Fresno and Bakersfield) as well as more distant urban centers such as Los Angeles, Sacramento, and the Bay Area. In addition, there is considerable travel between the northwest portions of Tulare County and southern Fresno County and travel to/from Kings County to the west. Due to the interrelationship between urban and rural activities (employment, housing, services, etc.) and the low average density/ intensity of land uses, the private automobile is the dominant mode of travel for residents in Tulare County.”¹²

“Public transportation provides an economical and efficient alternative for getting people to work, school and other chosen destinations. In Tulare County, buses are the primary mode of public transportation. Public transportation also takes the form of shared ride taxi, automobile and vanpools; dial-a-ride, and specialized handicapped accessible services. In Tulare County, social service transportation is provided by the following: local transit agencies, demand responsive operators and city/county special programs for senior citizens, mental health organizations and disabled citizens programs. These programs are funded and subsidized through State and federal grants, Local Transportation Funds (LTF), State Transit Assistance Funds (STAF), and local transportation sales tax revenues.”¹³

Airport

“There are nine public use airports in Tulare County. These include six publicly owned and operated facilities (Porterville Municipal, Sequoia Field, Tulare Municipal [Mefford Field], Visalia Municipal, Woodlake, and Harmon Field [currently closed]) and three privately owned and operated airports (Alta Airport [currently closed], Thunderhawk Field, and Eckert Field). Badger Field is under consideration for Federal Aviation Administration (FAA) recertification as a restricted private airfield (as of August 2006).”¹⁴

Design for Emergency Access

According to § 21060.3 and § 15359 of the CEQA Guidelines, an “Emergency” means a sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to

¹⁰ Op. Cit. 5-4.

¹¹ Op. Cit. 5-7.

¹² Op. Cit. 5-4.

¹³ Op. Cit. 1-14.

¹⁴ Op. Cit. 13-2.

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prevent or mitigate loss of, or damage to, life, health, property, or essential public services. “Emergency” includes such occurrences as fire, flood, earthquake, or other soil or geologic movements, as well as such occurrences as riot, accident, or sabotage. A Proposed Project could potentially generate impacts through inadequate design for emergency access.

Alternative Transportation/Tulare County Area Transit (TCaT)

“TCAT has been providing rural route service between various cities and towns in Tulare County since 1981. TCAT retains MV Transportation to provide all of its transit services, which includes fixed route and demand responsive services for inter-city and intra-city service in many small communities throughout the County. TCAT is the most extensive transit system in Tulare County and connects with Dinuba Area Regional Transit (DART), Visalia City Coach (VCC), Tulare InterModal Express (TIME), Porterville City Operated Local Transit (COLT), Kings Area Rural Transit (KART), Kern Regional Transit, Orange Belt and Greyhound bus.”¹⁵ “TCaT provides reliable and convenient public transit service between cities and within many small communities throughout Tulare County. Fixed route service is offered every day. Demand-response Dial-A-Ride is offered Monday through Friday...”¹⁶ The nearest fixed route service area is in the unincorporated community of Traver approximately five (5) miles south of the Project site. Traver is part of Route 50 (Dinuba-London-Traver-Delft Colony Route). Although fixed-route service is not available within the proposed Project site, demand responsive (Dial-A-Ride) service is available to transport General fare riders to the nearest route. Also TCaT provides a summary of how their fixed route service is available in their “Catching a Ride” information, to wit; “For your safety we recommend catching the bus at designated bus stops. You may board or leave the bus at any point along the route where the driver can make a safe stop. Wave or flag down the bus at a safe pullout location. For your convenience, you may call a day in advance to let us know you will be waiting for the bus somewhere other than a bus stop.”¹⁷ To provide a reasonable accommodation, TCaT provides Americans Disability Act (ADA)-eligible riders curb-to-curb or door-to-door service when service is requested a day to fourteen days in advance; if scheduling can accommodate, same day service is also available.¹⁸

Traffic Impact Study Requirement

As it was anticipated that the proposed Project would generate more than 100 peak hour trips, it was determined that a traffic impact study was required. “The following criterion is a starting point in determining when a TIS is needed. When a project:

1. Generates over 100 peak hour trips assigned to a State highway facility
2. Generates 50 to 100 peak hour trips assigned to a State highway facility – and, affected State highway facilities are experiencing noticeable delay; approaching unstable traffic flow conditions (LOS “C” or “D”).
3. Generates 1 to 49 peak hour trips assigned to a State highway facility – the following are examples that may require a full TIS or some lesser analysis⁴ :

¹⁵ TCAG Transportation Plan. Page 1-14.

¹⁶ TCaT website which can be accessed at: <http://www.tularecounty.ca.gov/rma/index.cfm/public-works/tulare-county-area-transit-tcat/route-50-dinuba-london-traver/>. Accessed July 2017.

¹⁷ Ibid.

¹⁸ Op. Cit.

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- a. Affected State highway facilities experiencing significant delay; unstable or forced traffic flow conditions (LOS “E” or “F”).
- b. The potential risk for a traffic incident is significantly increased (i.e., congestion related collisions, non-standard sight distance considerations, increase in traffic conflict points, etc.).
- c. Change in local circulation networks that impact a State highway facility (i.e., direct access to State highway facility, a non-standard highway geometric design, etc.).”¹⁹

Study Area

The study locations were chosen based on the locations where the majority of Project-related impacts may occur. Due to the proximity to the SR 198 interchange, the majority of the Project trips are anticipated to travel through the interchange area. Those trips that do not utilize SR 198 disperse along the local County roadways to the nearby small towns of Ivanhoe and Farmersville. The study area and list of intersections studied was determined in consultation with County of Tulare and Caltrans planning staff.²⁰ These are listed as follows:

- Mineral King Avenue at State Route (SR) 198 WB On-ramp
- Mineral King Avenue at Road 156
- Mineral King Avenue at SR 198 WB Off-ramp
- Mineral King Avenue at Road 158
- Noble Avenue at SR 198 EB Ramps
- Noble Avenue at Road 156
- All Project Driveways/Roadways at Noble Avenue and Road 156

REGULATORY SETTING

Federal Agencies & Regulations - None that apply to the proposed Project.

State Agencies & Regulations

Caltrans: Transportation Concept Reports

Caltrans has prepared a number concept reports for State Routes, Interstate Routes, and U.S. Routes. Tulare County is located in Caltrans District 6. According to the Transportation Concept Report (June 2016) for State Route 198, there is one potential Concept Project in the proposed Project area as follows:

Segment 17 located 0.1 mile west of Packwood Creek to Road 164 (Farmersville Boulevard). The 20-25 Year System Operations and Management Concept for this segment is described as follows: “Construct shoulders and upgrade/install guard rails, pavement rehabilitation, repair

¹⁹ Guide for the Preparation of Traffic Impact Studies, California Department of Transportation, December 2002. Page 2.
http://www.dot.ca.gov/hq/tpp/offices/ocp/igr_ceqa_files/tisguide.pdf. Accessed July 2017.

²⁰ Traffic Impact Study. Prepared by 4Creeks, Inc. July 2015. See Page 1 of Appendix “G” of this DEIR.

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bridge girders at Rd 164 OC, vehicle detection system.”²¹ These improvements will be located on and/or adjacent to SR 198 ROW and won’t be impacted from the proposed Project due to distance from SR 198 and the Project boundaries.

Caltrans Guide for the Preparation of Traffic Impact Studies

“The California Department of Transportation (Caltrans) has developed this "Guide for the Preparation of Traffic Impact Studies" in response to a survey of cities and counties in California. The purpose of that survey was to improve the Caltrans local development review process (also known as the Intergovernmental Review/California Environmental Quality Act or IGR/CEQA process). The survey indicated that approximately 30 percent of the respondents were not aware of what Caltrans required in a traffic impact study (TIS).”²² The Project Traffic Impact Study was prepared consistent with Caltrans’ Guidelines.

Local Policy & Regulations

Tulare County Transportation Control Measures (TCM)

“Transportation Control Measures (TCM) are designed to reduce vehicle miles traveled, vehicle idling, and/or traffic congestion in order to reduce vehicle emissions. Currently, Tulare County is a nonattainment region under the Federal Clean Air Act (CAA) and the California Clean Air Act (CCAA). Both of these acts require implementation of TCMs. These TCMs for Tulare County are as follows:

- Rideshare Programs;
- Park and Ride Lots;
- Alternate Work Schedules;
- Bicycle Facilities;
- Public Transit;
- Traffic Flow Improvement; and
- Passenger Rail and Support Facilities.”²³

Tulare County Association of Governments (TCAG)

“... [W]ith the passage of Assembly Bill (AB) 69 State law has required the preparation of Regional Transportation Plans (RTPs) to address transportation issues and assist local and state decision makers in shaping California’s transportation infrastructure.”²⁴ The Tulare County Association of Government has prepared the 2014 Regional Transportation Plan. Specific policies that apply to the Proposed Project are listed as follows:

System Performance - Objective: Develop an efficient regional road and circulation system that

²¹ Caltrans Transportation Concept Report – SR 198 (June 2016). Page 6.

²² Guide for the Preparation of Traffic Impact Studies, California Department of Transportation, December 2002. Page iii.
http://www.dot.ca.gov/hq/tpp/offices/ocp/igr_ceqa_files/tisguide.pdf. Accessed July 2017.

²³ Tulare County General Plan 2030 Update Recirculated Draft Environmental Impact Report. Page 3.2-2.

²⁴ TCAG Transportation Plan. Page 1-11.

provides maximum achievable mobility and accessibility for vehicles, bicycles, pedestrians, and public transportation.

Policy 1 – Maintain a Level of Service C or better on rural roads and Level of Service D or better on urban roads.

Air Quality and Greenhouse Gases - Objective: Encourage coordinated development to achieve an improved jobs-housing balance in the region.

Policy 1 – Encourage mixed-use developments in urbanized areas and existing small communities, both incorporated and unincorporated.

Tulare County General Plan Policies

The Tulare County General Plan has a number of policies that apply to projects within County of Tulare. General Plan policies that relate to the proposed Project are listed below.

LU-7.4 Streetscape Continuity - The County shall ensure that streetscape elements (e.g., street signs, trees, and furniture) maintain visual continuity and follow a common image for each community.

TC-1.13 Land Dedication for Roadways and Other Travel Modes - As required by the adopted County Improvement Standards, the County shall require, where warranted, an irrevocable offer of dedication to the right-of-way for roadways and other travel modes, as part of the development review process.

TC-1.14 Roadway Facilities - As part of the development review process, new development shall be conditioned to fund, through impact fees, tonnage fees, and/or other mechanism, the construction and maintenance of roadway facilities impacted by the project. As projects or locations warrant, construction or payment of pro-rata fees for planned road facilities may also be required as a condition of approval.

TC-1.15 Traffic Impact Study - The County shall require an analysis of traffic impacts for land development projects that may generate increased traffic on County roads. Typically, applicants of projects generating over 100 peak hour trips per day or where LOS “D” or worse occurs, will be required to prepare and submit this study. The traffic impact study will include impacts from all vehicles, including truck traffic.

TC-1.16 County Level Of Service (LOS) Standards - The County shall strive to develop and manage its roadway system (both segments and intersections) to meet a LOS of “D” or better in accordance with the LOS definitions established by the Highway Capacity Manual.

IMPACT EVALUATION

Would the project:

- a) **Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?**

Project Impact Analysis:

Less Than Significant Impact With Mitigation

Project Trip Generation

The proposed Project consists of the following uses and phases:

Phase 1:	10.04 acres - Gas station/Fast-Food/Convenience Store and 68,340 sf Business Park
Phase 2:	8.25 acres – 88,000 sf Business Park
Phase 3:	14.89 acres – 104,000 sf Business Park
Phase 4:	12.72 acres – 98,030 sf Business Park

The site will have 5 access and egress points: One off of Noble Avenue and four along Road 156.

“Vehicle trips generated by the Project are calculated using the industry-standard Trip Generation Manual published by the Institute of Transportation Engineers (ITE). Vehicle trips are calculated using ITE average rates and Project-related independent variables (square footage, fueling stations, etc.). Table 3.16-1 shows the ITE land uses and variables used to calculate the Project’s trip generation.

Based on the current site plan for the Project site, only one building has a clearly defined use. The building on the northwest corner of the site will be a gas station with an attached convenience store and fast-food restaurant with a drive-thru. In order to calculate the trip generation for this parcel, a combination of ITE land uses were used: Convenience Market with Gas Pumps (853) and Fast-Food Restaurant with Drive-Thru (934).

The remainder of the Project site is defined only as Service Commercial. The ITE Trip Generation Manual does not have a land use which meets this diverse mix of uses. The uses cited in the County’s zoning for C-3 may include general retail, office retail, and various light industrial uses. The ITE Shopping Center land use (general retail) is typically higher intensity retail. The ITE Light Industrial includes manufacturing, which C-3 prohibits manufacturing. As such, a more moderately intense ITE land use (Business Park) was chosen to represent the

remainder of the Project site. The sizes of the land uses shown in **Table 3.16-1** include the sum of all similar land use types.”²⁵

Table 3.16-1
Project Land Uses and Units

Phase	Project Land Use	ITE Land Use	Size
1	Convenience Store with Gas Pumps	853	8 fueling positions
1	Fast-Food Restaurant with Drive-Thru	934	3.00 ksf
1	Business Park	770	63.02 ksf
2	Business Park	770	88.00 ksf
3	Business Park	770	104.00 ksf
4	Business Park	770	98.03 ksf

TIS TABLE 5, PAGE 11.

Table 3.16-2 shows the unadjusted raw daily, AM, and PM peak hour trip generation estimates for the Project uses.

Table 3.16-2
Raw Project Trip Generation

Project Land Use	Daily ¹	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Convenience Store with Gas Pumps	4,341	67	66	133	77	76	153
Fast-Food Restaurant with Drive-Thru	1,488	69	67	136	51	47	98
Business Park	4,392	420	74	494	116	329	445
Total Project Trips	10,221	559	206	765	243	452	695

¹ Total Number of one-directional trips

Project Pass-by/Diverted Trips

“Pass-By trips include vehicles that already travel on the adjacent roadways on their primary trip purpose (such as home to work), but choose to access the Project since they are “passing by.” Diverted trips include vehicles that divert from their primary route between the primary origin and destination to access another non-primary use. The *ITE Trip Generation Handbook* shows PM peak hour pass-by rates for the Gas Station and Fast-Food land uses. The remaining uses are assumed to have 0% pass-by for the purposes of this study. The PM Peak Hour pass-by rate is used for the AM Peak Hour as well. **Table 3.16-3** shows the ITE Trip Generation Pass-By rates used in this study.”²⁶

²⁵ Traffic Impact Study. Prepared by 4Creeks, Inc. July 2015. Page 11. Included in Appendix “G” of this DEIR.

²⁶ Ibid. 12.

Table 3.16-3
Pass-by / Diverted Project Trips

Project Land Use	AM Peak Hour			PM Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total
Convenience Store with Gas Pumps	42	42	84	51	50	101
Fast-Food Restaurant with Drive-Thru	34	33	67	25	24	49
Business Park	0	0	0	0	0	0
Total Pass-By/Diverted Project Trips	76	75	151	76	74	150

TIS Table 8, page 12.

“New” Project Trip Generation

The total number of new Project trips is then calculated by subtracting the number of Pass-by / Diverted Trips (**Table 3.16-3**) from the unadjusted ITE Trip Generation Calculation (**Table 3.16-2**). **Table 3.16-4** shows the “New” Project trips that are added to the surrounding roadways during the Plus Project scenarios.²⁷

Table 3.16-4
New Project Trips

Project Land Use	AM Peak Hour			PM Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total
Convenience Store with Gas Pumps	25	24	49	26	26	52
Fast-Food Restaurant with Drive-Thru	35	34	69	26	23	49
Business Park	420	74	494	116	329	445
Total New Project Trips	480	132	612	168	378	546

Project Trip Distribution

The Project trips shown in **Table 3.16-4** are distributed based on the potential locations for customers and employee residences. Since the Project site is located outside of any nearby city, SR 198 will carry a significant portion of the Project generated trips. The remaining trips will use county roads. The Pass-By/Diverted trips shown in **Table 3.16-3** are distributed based on existing traffic patterns and ease of access from SR 198. Figures 3 and 4 of the TIS (see Appendix “G”) show the Project trip distribution percentages and trip assignments (New and Pass-By/Diverted trips) used in this analysis.

Existing Conditions

The existing conditions traffic volumes were counted at the study intersections on weekdays during the week of February 24, 2015. As previously described, the study locations were chosen

²⁷ Op Cit. 13.

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based on the locations where the majority of Project-related impacts may occur. Due to the proximity to the SR 198 interchange, the majority of the Project trips are anticipated to travel through the interchange area. Those trips that do not utilize SR 198 disperse along the local County roadways to the nearby small town [that is, unincorporated community] of Ivanhoe and [the City of] Farmersville. The study area and list of intersections studied was determined in consultation with County of Tulare and Caltrans planning staff.²⁸ These are listed as follows:

- Mineral King Avenue at State Route (SR) 198 WB On-ramp
- Mineral King Avenue at Road 156
- Mineral King Avenue at SR 198 WB Off-ramp
- Mineral King Avenue at Road 158
- Noble Avenue at SR 198 EB Ramps
- Noble Avenue at Road 156
- All Project Driveways/Roadways at Noble Avenue and Road 156

Table 3.16-5 shows the results of the Level of Service (LOS) calculations. As shown in **Table 3.16-5**, none of the study intersections currently operate below the appropriate County of Tulare or Caltrans adopted LOS standards.

Table 3.16-5
Existing Conditions Level of Service Summary

Intersection	LOS Threshold	LOS (AM/PM)	Delay ¹ (AM/PM)
Mineral King Avenue at SR 198 WB On-Ramp	C	A/A	8.2/8.2
Mineral King Avenue at Road 156	D	C/C	25.8/26.7
Mineral King Avenue at SR 198 WB Off-Ramp	C	B/B	12.2/13.8
Mineral King Avenue at Road 158	D	B/B	11.9/13.5
Noble Avenue at West Project Roadway	D	n/a	n/a
Noble Avenue at SR 198 EB Ramps	C	B/B	10.1/12.6
Noble Avenue at Road 156	D	C/C	28.6/34.8
Northeast Project Driveway at Road 156	D	n/a	n/a
North Project Roadway at Road 156	D	n/a	n/a
Middle Project Roadway at Road 156	D	n/a	n/a
South Project Roadway at Road 156	D	n/a	n/a

¹ average seconds of delay per vehicle

n/a = not applicable, does not exist

Summary of Project Impacts

The following analysis scenarios were analyzed based on County of Tulare guidelines and in consultation with Caltrans staff:

²⁸ Op Cit. 1.

- Existing
- Opening Day Plus Approved Projects
- Opening Day Plus Approved Projects Plus Project
- 2040 No Project
- 2040 Plus Project

Table 3.16-6 shows the LOS for the study intersections for the various scenarios. Intersections with movements currently or projected to operate below the County of Tulare or Caltrans adopted level of service standards are shown shaded in **Table 3.16-6**. The LOS and delay are shaded if either the AM or PM peak hour, or both, fall below the appropriate adopted LOS standard. The two-way stop controlled (TWSC) intersection levels of service are representative of the intersection's approach with the worst LOS and delay. The signalized and all-way stop controlled (AWSC) intersection levels of service are representative of the whole intersection. Individual intersection movements or approaches at signalized and AWSC intersections may operate above or below the intersection level of service or delay shown in this analysis.²⁹

Table 3.16-7 shows the results of the Peak Hour Traffic Signal Warrant analysis. The Signal warrant is not prepared for the Project Driveway since it is located too close to adjacent intersections/driveways and is projected to have volumes too low to meet warrants. **Table 3.16-7** lists the time period (analysis scenario) in which the traffic signal warrant is first met at the study intersection. Once an intersection meets the warrant, it is projected to continue to meet warrants for all subsequent scenarios due to overall traffic volume growth.³⁰

²⁹ Op Cit. 3.

³⁰ Op Cit. 5.

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**Table 3.16-6
Level of Service Summary**

Intersection	LOS Threshold	Existing		Existing Plus Approved Projects		Existing Plus Approved Projects Plus Project	
		LOS (AM/PM)	Delay ¹ (AM/PM)	LOS (AM/PM)	Delay ¹ (AM/PM)	LOS (AM/PM)	Delay ¹ (AM/PM)
Mineral King Avenue at SR 198 WB On-Ramp	C	A/A	8.2/8.2	A/A	8.3/8.2	A/A	8.4/8.5
Mineral King Avenue at Road 156	D	C/C	25.8/26.7	C/C	24.9/27.0	D/C	45.9/28.5
Mineral King Avenue at SR 198 WB Off-Ramp	C	B/B	12.2/13.8	B/B	12.5/14.2	C/C	18.6/18.1
Mineral King Avenue at Road 158	D	B/B	11.9/13.5	B/B	12.1/13.8	B/C	13.2/15.5
Noble Avenue at West Project Roadway	D	n/a	n/a	n/a	n/a	A/A	9.6/9.8
Noble Avenue at SR 198 EB Ramps	C	B/B	10.1/12.6	B/B	10.2/12.8	B/C	13.7/20.5
Noble Avenue at Road 156	D	C/C	28.6/34.8	C/C	33.9/34.9	D/D	42.6/38.1
Northeast Project Driveway at Road 156	D	n/a	n/a	n/a	n/a	D/D	29.5/28.5
North Project Roadway at Road 156	D	n/a	n/a	n/a	n/a	C/C	15.1/16.5
Middle Project Roadway at Road 156	D	n/a	n/a	n/a	n/a	C/C	15.6/17.2
South Project Roadway at Road 156	D	n/a	n/a	n/a	n/a	C/C	15.2/15.8
Intersection	LOS Threshold	2040 No Project		2040 Plus Project			
		LOS (AM/PM)	Delay ¹ (AM/PM)	LOS (AM/PM)	Delay ¹ (AM/PM)		
Mineral King Avenue at SR 198 WB On-Ramp	C	A/A	8.5/8.2	A/A	8.7/8.5		
Mineral King Avenue at Road 156	D	C/C	26.8/27.4	D/C	41.9/28.1		
Mineral King Avenue at SR 198 WB Off-Ramp	C	B/B	11.7/13.0	C/C	16.1/15.9		
Mineral King Avenue at Road 158	D	B/C	12.4/16.1	B/C	13.7/19.4		
Noble Avenue at West Project Roadway	D	n/a	n/a	A/B	9.8/10.3		
Noble Avenue at SR 198 EB Ramps	C	B/C	10.5/16.6	B/E	14.8/37.5		
Noble Avenue at Road 156	D	C/D	34.7/38.6	D/D	40.6/40.7		
Northeast Project Driveway at Road 156	D	n/a	n/a	D/C	27.0/24.4		
North Project Roadway at Road 156	D	n/a	n/a	C/C	15.6/17.9		
Middle Project Roadway at Road 156	D	n/a	n/a	C/C	16.3/19.1		
South Project Roadway at Road 156	D	n/a	n/a	C/C	15.8/17.5		

¹ average seconds of delay per vehicle
n/a = not applicable, does not exist

Table 3.16-7
Signal Warrant Summary

Intersection	Analysis Scenario Warranted
Mineral King Avenue at SR 198 WB On-Ramp	n/a
Mineral King Avenue at Road 156	Existing Signal
Mineral King Avenue at SR 198 WB Off-Ramp	2040 Plus Project
Mineral King Avenue at Road 158	Existing Plus Approved
Noble Avenue at West Project Roadway	Does Not Meet
Noble Avenue at SR 198 EB Ramps	Existing Plus Approved Plus Project
Noble Avenue at Road 156	Existing Signal
Northeast Project Driveway at Road 156	n/a
North Project Roadway at Road 156	n/a
Middle Project Roadway at Road 156	Does Not Meet
South Project Roadway at Road 156	Does Not Meet

n/a = not applicable

“The Northeast Project Driveway and North Project Roadway are both too close in proximity to the Noble Avenue at Road 156 traffic signal to be considered for a traffic signal.

Peak-hour signal warrants (Warrant 3, Part B) are prepared for all unsignalized intersections based on the methodology presented in the *California MUTCD 2012 Edition*, pages 833-834. A copy of this warrant analysis is included in Appendix C of Appendix G. According to the MUTCD, “the satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.” Therefore prior to making a final determination on installation of a proposed signal, a thorough engineering investigation, including collision history, should be conducted. Although an intersection may meet the traffic signal warrant, a signal is not recommended unless the intersection also operates (or is projected to operate) below the appropriate adopted LOS standard.

Table 3.16-8 shows the queuing analysis for the Mineral King Avenue at SR 99 WB Off-Ramp and the Noble Avenue at SR 99 EB Off-Ramp. This additional analysis was requested by Caltrans. The 95th percentile queue lengths are calculated based on HCM 2010 methodologies. Queue lengths shown in **Table 3.16-8** are the larger of the AM or PM peak hours and are rounded up to the nearest whole number of vehicles (25 feet per vehicle).”³¹

³¹ Ibid.

Table 3.16-8
Queue Length Summary

Conditions/Scenario	95 th Percentile Queue Length	
	WB Off-Ramp (AM/PM)	EB Off-Ramp (AM/PM)
Existing Off-Ramp Length	1,400 feet	1,275 feet
Existing Conditions	25/25	25/50
Existing Plus Approved Projects	25/25	25/50
Existing Plus Approved Projects Plus Project	75/50	50/100
2040 No Project	25/25	25/75
2040 Plus Project	50/25	75/200

As shown in **Table 3.16-8**, the calculated 95th percentile queue lengths are not projected to exceed the available off-ramp storage.

Mitigation Measure(s):

In order to mitigate the intersections that is projected to operate below the adopted LOS standard(s) and/or meet the Peak Hour Traffic Signal Warrant, the following improvements are required:

- 2040 Plus Project
 - Noble Avenue at SR 198 EB Ramps
 - Alternative 1: Install a three-way stop control
 - Alternative 2: Install a traffic signal

Neither of the above improvements are currently planned by the County of Tulare or Caltrans. Additionally, neither alternative will require significant revisions to the geometry of the existing intersection. **Table 3.16-9** shows the projected LOS for the intersection and time periods projected to operate below the adopted LOS standard. Based on the above improvement alternatives, the following improved LOS is anticipated.

Table 3.16-9
Mitigated Level of Service Summary

Conditions/Scenario	2040 Plus Project	
	LOS (PM)	Delay ¹ (PM)
Noble Avenue at SR 198 EB Ramps		
• Three-Way Stop	C	15.6
• Traffic Signal	B	14.5

¹ average seconds of delay per vehicle

2040 Plus Project – Without Road 148 Interchange

“In the event that the Road 148 interchange is not constructed, additional improvements to the Rd 156 interchange will be required if the City of Visalia continues to develop on the east side of the city. The nearest SR 198 interchange, at Lover’s Lane, is currently operating at deficient levels of service and a major interchange improvement project will be required to increase capacity at that interchange. The City of Visalia is currently collecting funds for this interchange project through the City’s TIF program and developing improvement designs.

The Rd 148 interchange is needed in the near-term to compensate for the Lover’s Lane interchange and to allow capacity for the continued development of East Visalia. This project is not currently funded through a City/County/State funding mechanism, but has been identified by the various agencies as a recommended future improvement.

Project Impact Contribution Percentage

The Project does contribute to the identified LOS deficiencies at the Noble Avenue at SR 198 EB Ramps study intersection. The Project’s proportionate share for the above improvement is calculated based on Caltrans methodologies, as follows:

$$P = \frac{T}{T^{40} - T^E} = \frac{251}{912 - 512} = 62.8\%$$

- P = Project's Proportionate Share
- T = Project PM peak hour trips entering the intersection
- T⁴⁰ = 2040 Plus Project PM peak hour trips entering the intersection
- T^E = Existing PM peak hour trips entering the intersection

Since the impact to the study intersection is only identified in the long-term scenario, the County of Tulare and Caltrans will need to continue to evaluate the intersection for needed improvements. If the Road 148 interchange is not built, then improvements to the Road 156 interchange may be needed much sooner. However, actual traffic volumes in the future will help to determine the necessary and/or appropriate improvements.³²

- 16-1 The Project Applicant will be responsible for paying fair share fees as identified in the Project Impact Contribution Percentage analysis (62.8%) for the improvements needed under the 2040 Plus Project scenario at Noble Avenue at SR 198 EB Ramps. The Applicant will work with Tulare County and/or Caltrans to establish timing and fee amounts to ensure implementation of the improvements listed in this analysis. This shall be made a condition of Project approval.**

³² Op Cit. 8.

Conclusion: *Less Than Significant Impact With Mitigation*

Potential Project-specific impacts related to this Checklist item are *Less Than Significant With Mitigation*.

Cumulative Impact Analysis: *Less Than Significant Impact With Mitigation*

The geographic area of this cumulative analysis is Tulare County. Future traffic volumes were developed by calculating the 2040 background traffic volumes using the TCAG 2014 and 2040 traffic demand models.³³ Investigation was also done in order to determine if any other proposed projects would impact the roadways within the scope of this study. Future peak hour volumes are shown in **Table 3.16-6** and Signal Warrants are shown in **Table 3.16-7**. As shown in these tables, the Project will contribute to impacts at Noble Avenue / SR 198 EB Ramps requiring mitigation in order to maintain acceptable levels of service.

Mitigation Measure(s): *See Mitigation Measure 16-1.*

Conclusion: *Less Than Significant Impact With Mitigation*

Potential Project-specific and cumulative impacts related to this Checklist item are *Less Than Significant With Mitigation*.

- b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?**

Project Impact Analysis: *Less Than Significant Impact*

The County's General Plan Policy: TC-1.16 Tulare County LOS Standards calls for an LOS of "D" or better. Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" on State highway facilities, however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating at less than the appropriate target LOS, the existing MOE should be maintained. As noted in the Traffic study, the Proposed Project would lower the LOS of the intersection of Noble Avenue/SR 198 EB Ramps to level E during PM Peak hours. However, with implementation of **Mitigation Measure 16-1**, the LOS will be reduced to either C or B (depending on the type of intersection improvement), which will result in a less than significant impact. Additionally, the 2014 Regional Transportation Plan & Sustainable Communities Strategy, adopted by the TCAG, notes that; "The Cities of Visalia, Tulare, Dinuba and Lindsay have the most congested corridors (or segments of corridors) in Tulare County and are candidates

³³ Ibid. 24.

for TSM strategies.”³⁴ As the project site is located immediately outside of the City of Visalia, the Proposed Project would not have an immediate impact on high congestion areas of Tulare County. Potential Project-specific impacts related to this Checklist Item will be ***Less Than Significant***.

Cumulative Impact Analysis: ***Less Than Significant Impact With Mitigation***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Traffic Study report, Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, Tulare County General Plan 2030 Update RDEIR, and the TCAG 2014 Regional Transportation Plan and Sustainable Communities Strategy.

As noted in the Response to 3.16 Item a), the Proposed Project is would contribute to a significant cumulative impact in 2040 unless adequately mitigated. As the Project will contribute to the anticipated LOS in 2040, the applicant will contribute a pro rata share of the cost of implementation of **Mitigation Measure 16-1**. As such, ***Less Than Significant Cumulative Impact With Mitigation*** related to this Checklist Item will occur.

Mitigation Measure(s): ***See Mitigation Measure 16-1.***

Conclusion: ***Less Than Significant Impact With Mitigation***

Potential Project-specific and cumulative impacts related to this Checklist Item are ***Less Than Significant Impact With Mitigation***.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?

Project Impact Analysis: ***No Impact***

The nearest domestic airport to the project site is the Visalia Municipal Airport located approximately nine (9) miles west of the Project site. Due to the distance from the airport, the Project will have no impact on air traffic patterns or result in any safety risks. Therefore, the Project will not conflict with Tulare County Airport Land Use Plan (CALUP) policies. ***No Project-specific impact*** will occur as a result of the proposed Project.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

Mitigation Measure(s): ***None Required.***

³⁴ Tulare County Association of Governments 2014-2040 Regional Transportation Plan and Sustainable Communities Strategy. Page 3-51

Conclusion: *No Impact*

As noted earlier, the nearest domestic airport is the Visalia Municipal Airport located approximately nine (9) miles west of the Project site. However, because there are no Project-specific impacts, there will also be *No Project-specific or Cumulative Impacts* related to this Checklist Item.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Project Impact Analysis: *Less Than Significant Impact*

The proposed Project has been designed for ease of access, adequate circulation/movement and is typical of business/commercial parks in Tulare County. On-site circulation patterns do not involve high speeds, sharp curves or dangerous intersections.

Although there will be an increase in the volume of vehicles accessing the site and surrounding areas, the Project will not present a substantial increase in hazards. Therefore, a *Less Than Significant Project-specific Impact* related to this Checklist Item will occur.

Cumulative Impact Analysis: *Less Than Significant Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

As noted earlier, no significant design changes that would result in a hazard are proposed. As such, *Less Than Significant Cumulative Impacts* related to this Checklist Item will occur.

Mitigation Measure(s): *None Required.*

Conclusion: *Less Than Significant Impact*

As noted earlier, *Less Than Significant Project-specific or Cumulative Impacts* related to this Checklist Item will occur.

e) Result in inadequate emergency access?

Project Impact Analysis: *Less Than Significant Impact*

“In the event of a disaster, certain facilities are critical to serve as evacuation centers, provide vital services, and provide for emergency response. Existing critical facilities in Tulare County include hospitals, county dispatch facilities, electrical, gas, and telecommunication

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facilities, water storage and treatment systems, wastewater treatment systems, schools, and other government facilities. This plan also addresses evacuation routes, which include all freeways, highways, and arterials that are located outside of the 100-year flood plain.”³⁵

The proposed Project does not involve a change to any emergency response plan. Multiple access/egress points to and from the Project area will be located along the northern and eastern boundaries. Therefore, emergency access to the site will be adequate. The site is currently and will remain accessible to emergency vehicles of all sizes. Due to the number and size of access points to the Project site, the proposed Project will result in ***Less Than Significant Impact*** related to this Checklist item.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR. The site will have adequate access for emergency vehicles.

As previously noted, multiple access/egress points will be constructed as part of the Project which will allow adequate access/egress for emergency vehicles. The Project will not limit access/egress to any of the surrounding properties. Therefore, ***No Cumulative Impact*** to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Project Impact Analysis: ***Less Than Significant Impact***

Pedestrian and bicycle amenities are available within the vicinity of the Project site. The site is in a semi-rural area but will be accessible to pedestrians and bicycles at all site access points. The Project will ***No Impact*** any public transit services.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Traffic Report, Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and Tulare County

³⁵ Tulare County General Plan 2030 Update Background Report. Page 8-45.

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General Plan 2030 Update RDEIR, and the TCAG 2014-2040 Regional Transportation Plan and Sustainable Communities Strategy.

Mitigation Measure(s): *None Required.*

Conclusion: *Less Than Significant Impact*

Potential Project-specific and cumulative impacts related to this Checklist Item are *Less Than Significant*.

ACRONYMS

AWSC	All-Way Stop-Controlled
HCM	Highway Capacity Manual
LOS	Level of Service
TWSC	Two-Way Stop-Controlled

REFERENCES

CEQA Guidelines, Section 15126.2 (a)

Caltrans. *Guide for the Preparation of Traffic Impact Studies*, California Department of Transportation, December 2002. Page 2.
http://www.dot.ca.gov/hq/tpp/offices/ocp/igr_ceqa_files/tisguide.pdf. Accessed July 2017.

Caltrans Transportation Concept Report – SR 198 (June 2016). Page 6.

TCaT website which can be accessed at: <http://www.tularecounty.ca.gov/rma/index.cfm/public-works/tulare-county-area-transit-tcat/route-50-dinuba-london-traver/>. Accessed July 2017.

Traffic Impact Study. Prepared by 4Creeks, Inc. July 2015. See Appendix “G” of this DEIR. Pages 1, 3, 5, 7, 8, 11, 12, 13, 24.

Tulare County General Plan 2030 Update Background Report. Pages 1-14, 5-4, 5-7, 8-45, 13-2.

Tulare County General Plan 2030 Update Recirculated Draft Environmental Impact Report. Page 3.2-2.

2014-2040 Regional Transportation Plan & Sustainable Communities Strategy, Tulare County Association of Governments (TCAG), June 2014. Pages 1-11, 1-14, 3-1, 3-2, 3-3, 3-4, 3-51, 3-52, 3-54, 3-55, 3-57, and 3-58.

Tribal Cultural Resources

Chapter 3.17

SUMMARY OF FINDINGS

The proposed Project will result in a *Less Than Significant Impact With Mitigation* to Tribal Cultural Resources. The Southern San Joaquin Valley Historical Resources Information Center, Bakersfield (Center) conducted a cultural resources records search on September 27, 2016 at the request of RMA Planning Branch staff, which is included in Appendix “D”. In addition to the Center’s search, the Native American Heritage Commission (NAHC) conducted a Sacred Lands File (SLF) search and provided their results on September 8, 2016 (see Appendix “D”). This information, and additional analysis in the resource discussion item, are used as the basis for determining that this Project will result in Less Than Significant Impact With Mitigation.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

Several CEQA statutes and guidelines address requirements for cultural resources, including historic and archaeological resources.¹ If a proposed Project may cause a substantial adverse effect on the significance of a historical resource, then the Project may be considered to have a significant effect on the environment, and the impacts must be evaluated under CEQA (Section 21084.1). The definition of “historical resources” is included in Section 15064.5 of CEQA Guidelines, and includes both historical and archaeological resources. “Substantial adverse change” is defined as “physical demolition, destruction, relocation, or alteration of the resource...”

Section 15064.5 also provides guidelines when there is a probable likelihood of Native American remains existing in the Project site. Provisions for the accidental discovery of historical or unique archaeological resources encountered during construction include a recommendation for evaluation by a qualified archaeologist, with follow up as necessary.

Public Resources Code Section 5097.5 prohibits excavation or removal of any “vertebrate paleontological site...or any other archaeological, paleontological or historical feature, situated on public lands, except with express permission of the public agency having jurisdiction over such lands.”

This section of the Draft Program/Project Environmental Impact Report (DEIR) for the Project meets CEQA requirements by addressing potential impacts to cultural resources on the proposed Project site. The “Environmental Setting” section provides a description of cultural resources in the region, with special emphasis on the proposed Project site and vicinity. The “Regulatory Setting” section provides a description of applicable State and local regulatory policies. Results

¹ “CEQA and Historical Resources” CEQA Technical Advice Series” http://ohp.parks.ca.gov/?page_id=21721. Accessed September 2017.

of cultural resources reports from CHRIS are included in Appendix “D” of this DEIR. A description of potential impacts is provided, along with feasible mitigation measures to reduce the impacts to less than significant.

CEQA Thresholds of Significance

“Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.”²

ENVIRONMENTAL SETTING

Records Search Results

The California Historical Resources Information Center (CHRIS), Southern San Joaquin Valley Information Center (SSJVIC) located at California State University, Bakersfield conducted a cultural resources records search and provided results dated September 27, 2016 to Tulare County RMA. According to search results, there have been no previous cultural resource studies conducted within the project area. There have been two additional studies conducted within the one-half mile radius. There is one recorded cultural resource with the project area (the Tulare Irrigation Canal) and there are six recorded resources within the one-half mile radius.³

Native American Consultation

The Office of Planning and Research, State Clearinghouse (OPR/SCH), received a submittal from the Tulare County RMA on January 12, 2017, regarding a Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for the Sequoia Drive-In Business Project. The Native American Heritage Commission (NAHC) was included in the list of agencies to be notified by OPR/SCH and provided a response to the NOP on January 19, 2017. The NAHC maintains a contact list of Native American Tribes as having traditional lands located within the County’s jurisdiction. On August 31, 2016, Tulare County RMA submitted a Sacred Lands File Search

² CEQA Guidelines Appendix “G” Item XVII. Tribal Cultural Resources.

³ California Historical Resources Information Center (CHRIS), Southern San Joaquin Valley Information Center (SSJVIC) located at California State University, Bakersfield; September 27, 2016. Included in Appendix “D” of this DEIR.

(SLF) to the NACH and received a reply on September 8, 2016 indicating “negative results” of the SLF and provided a recommended list of 27 Native American Tribes the County should consult with regarding the Project. As such, on September 14, 2016, the County mailed (via certified-mail) tribal consultation letters to the 27 tribes recommended by the NAHC (see Appendix “D”).

REGULATORY SETTING

Federal Agencies & Regulations

The National Historic Preservation Act

The National Historic Preservation Act of 1966 (NHPA) established federal regulations for the purpose of protecting significant cultural resources. The legislation established the National Register of Historic Places and the National Historic Landmarks Program. It mandated the establishment of the State Historic Preservation Office (SHPO), responsible for implementing statewide historic preservation programs in each state. A key aspect of SHPO responsibilities include surveying, evaluating and nominating significant historic buildings, sites, structures, districts and objects to the National Register. The NHPA also established requirements for federal agencies to consider the effects of proposed federal Projects on historic properties (Section 106, NHPA). Federal agencies and recipients of federal funding are required to initiate consultation with the SHPO as part of the Section 106 review process.⁴

State Agencies & Regulations

California State Office of Historic Preservation (OHP)

The California State Office of Historic Preservation (OHP) is responsible for administering federally and state mandated historic preservation programs to further the identification, evaluation, registration and protection of California's irreplaceable archaeological and historical resources under the direction of the State Historic Preservation Officer (SHPO), appointed by the governor, and the State Historical Resources Commission, a nine-member state review board appointed by the governor.⁵

“State Historic Preservation Officers (SHPOs) administer the national historic preservation program at the State level, review National Register of Historic Places nominations, maintain data on historic properties that have been identified but not yet nominated, and consult with Federal agencies during Section 106 review. SHPOs are designated by the governor of their respective State or territory.”⁶

Among OHP's responsibilities are identifying, evaluating, and registering historic properties; and ensuring compliance with federal and state regulations. The OHP administers the State Register of Historical Resources and maintains the California Historical Resources Information System

⁴ Advisory Council on Historic Preservation, <http://www.achp.gov/nrcriteria.html>. Accessed September, 2017.

⁵ Ibid.

⁶ Op Cit.

(CHRIS) database. The CHRIS database includes statewide Historical Resources Inventory (HRI) database. The records are maintained and managed under contract by eleven independent regional Information Centers. Tulare, Fresno, Kern, Kings and Madera counties are served by the Southern San Joaquin Valley Historical Resources Information Center (Center), located in Bakersfield, CA. The Center provides information on known historic and cultural resources to governments, institutions and individuals.⁷

A historical resource may be eligible for inclusion in the California Register of Historical Resources (CRHR) if it:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated with the lives of persons important to our past;
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history.⁸

As indicated in Chapter 3.5 Cultural Resources, The Southern San Joaquin Valley Historical Resources Information Center, Bakersfield (Center) conducted a cultural resources records search in January 19, 2017 at the request of RMA Planning Branch staff. The CHRIS indicated that there are no recorded cultural resources within the project area and one recorded resource within a one-half mile radius (P-54-003608, the Tulare Irrigation Canal) There are no recorded cultural resources within the project area or radius that are listed in the National Register of Historic Places, the California Register of Historical Resources, the California Points of Historical Interest, California Inventory of Historic Resources, or the California State Historic Landmarks. The CHRIS search results are included in Appendix "C" of this DEIR.

Tribal Consultation Requirements: SB 18 (Burton, 2004)

On September 29, 2004, Governor Schwarzenegger signed Senate Bill 18, Tribal Consultation Guidelines, into law. This bill amended Section 815.3 of the Civil Code, to amend Sections 65040.2, 65092, 65351, 65352, and 65560 of, and to add Sections 65352.3, 65352.4, and 65562.2 to, the Government Code, relating to traditional tribal cultural Places. SB 18, enacted March 1, 2005, creates a mechanism for California Native American Tribes to identify culturally significant sites that are located within public or private lands within the city or county's jurisdiction. SB 18 requires cities and counties to contact, and offer to consult with, California Native American Tribes before adopting or amending a General Plan, a Specific Plan, or when designating land as Open Space, for the purpose of protecting Native American Cultural Places (PRC 5097.9 and 5097.993). The Native American Heritage Commission (NAHC) provides local governments with a consultation list of tribal governments with traditional lands or cultural places located within the

⁷ California Office of Historic Preservation, About OHP, http://ohp.parks.ca.gov/?page_id=1066. Accessed September, 2017.

⁸ California Register: Criteria for Designation, http://www.ohp.parks.ca.gov/?page_id=21238. Accessed September, 2017.

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Project Area of Potential Effect. Tribes have 90 days from the date on which they receive notification to request consultation, unless a shorter timeframe has been agreed to by the tribe.⁹

As this Project does not involve adoption of a new or an amendment to an existing general plan, AB 18 does not apply to this case. As such, it was not necessary to seek tribal consultation regarding this Project.

Tribal Consultation Requirements: AB 52 (Gatto, 2014)¹⁰

This bill was approved by Governor Brown on September 25, 2014 and became effective July 1, 2015. This bill amended Section 5097.94 of, and to add Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3 to, the Public Resources Code, relating to Native Americans. The bill specifies that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource, as defined, is a project that may have a significant effect on the environment. This bill requires a lead agency to begin consultation with a California Native American tribe that is traditionally and culturally affiliated (can be a tribe anywhere within the State of California) with the geographic area of the proposed project, if the tribe requested to the lead agency, in writing, to be informed by the lead agency of proposed projects in that geographic area and the tribe requests consultation, prior to determining whether a negative declaration, mitigated negative declaration, or environmental impact report is required for a project.

Existing law establishes the Native American Heritage Commission (NAHC) and vests the commission with specified powers and duties. This bill required the NAHC to provide each California Native American tribe, as defined, on or before July 1, 2016, with a list of all public agencies that may be a lead agency within the geographic area in which the tribe is traditionally and culturally affiliated, the contact information of those agencies, and information on how the tribe may request those public agencies to notify the tribe of projects within the jurisdiction of those public agencies for the purposes of requesting consultation.

The NAHC provides protection to Native American burials from vandalism and inadvertent destruction, provides a procedure for the notification of most likely descendants regarding the discovery of Native American human remains and associated grave goods, brings legal action to prevent severe and irreparable damage to sacred shrines, ceremonial sites, sanctified cemeteries and place of worship on public property, and maintains an inventory of sacred places.¹¹

The NAHC performs a Sacred Lands File search for sites located on or near the Project site upon request. The NAHC also provides local governments with a consultation list of tribal governments with traditional lands or cultural places located within the Project Area of Potential Effect. As indicated on the NAHC's letter of September 8, 2016, a Sacred Lands File check indicated negative results (that is, no Sacred Lands were identified) for the Project location (See Appendix "D" of the

⁹ Government Code §65352.3

¹⁰ Assembly Bill No. 52, Chapter 532, http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140AB52. Accessed September, 2017.

¹¹ Native American Heritage Commission, About the Native American Heritage Commission, <http://nahc.ca.gov/about/>. Accessed September, 2017.

DEIR at NAHC Sacred Lands File search letter dated September 8, 2016). An opportunity has been provided to Native American tribes listed by the Native American Heritage Commission during the CEQA process as required by AB 52, and no tribes responded to the consultation requests within the mandatory response time-frames; therefore, this DEIR has been completed consistent and compliant with AB 52. (See Appendix “D” of the DEIR regarding Tribal consultation process).

CEQA Guidelines: Archaeological Resources

Section 15064.5(c) of CEQA Guidelines provides specific guidance on the treatment of archaeological resources as noted below.

- “(1) When a Project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subdivision (a).
- (2) If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.
- (3) If an archaeological site does not meet the criteria defined in subdivision (a), but does meet the definition of a unique archeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of section 21083.2. The time and cost limitations described in Public Resources Code Section 21083.2 (c–f) do not apply to surveys and site evaluation activities intended to determine whether the Project location contains unique archaeological resources.
- (4) If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the Project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial Study or EIR, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process.”¹²

CEQA Guidelines: Human Remains

Public Resources Code Sections 5097.94 and 5097.98 provide guidance on the disposition of Native American burials (human remains), and fall within the jurisdiction of the Native American Heritage Commission:

- “(d) When an initial study identifies the existence of, or the probable likelihood, of Native American human remains within the Project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code Section 5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any Items associated with Native American burials with the appropriate Native Americans as

¹² CEQA Guidelines. Section 15064.5(c).

identified by the Native American Heritage Commission. Action implementing such an agreement is exempt from:

- (1) The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (Health and Safety Code Section 7050.5).
 - (2) The requirements of CEQA and the Coastal Act.¹³
- “(e) In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:
- (1) There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:
 - (A) The coroner of the county in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required, and
 - (B) If the coroner determines the remains to be Native American:
 1. The coroner shall contact the Native American Heritage Commission within 24 hours.
 2. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.
 3. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or
 - (2) Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.
 - (A) The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.
 - (B) The descendant identified fails to make a recommendation; or
 - (C) The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.¹⁴
- “(f) As part of the objectives, criteria, and procedures required by Section 21082 of the Public Resources Code, a lead agency should make provisions for historical or unique archaeological resources accidentally discovered during construction. These provisions should include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Work could continue on other parts of the building site while historical or unique archaeological resource mitigation takes place.”¹⁵

¹³ Ibid. Section 15064.5(d).

¹⁴ Ibid. Section 15064.5(e).

¹⁵ Ibid. Section 15064.5(f)

Local Policy & Regulations

Tulare County General Plan Policies

The General Plan has a number of policies that apply to Projects within Tulare County.¹⁶ General Plan policies apply to the proposed Project are listed as follows:

ERM-6.1 Evaluation of Cultural and Archaeological Resources - The County shall participate in and support efforts to identify its significant cultural and archaeological resources using appropriate State and Federal standards.

ERM-6.2 Protection of Resources with Potential State or Federal Designations - The County shall protect cultural and archaeological sites with demonstrated potential for placement on the National Register of Historic Places and/or inclusion in the California State Office of Historic Preservation's California Points of Interest and California Inventory of Historic Resources. Such sites may be of Statewide or local significance and have anthropological, cultural, military, political, architectural, economic, scientific, religious, or other values as determined by a qualified archaeological professional.

ERM-6.3 Alteration of Sites with Identified Cultural Resources - When planning any development or alteration of a site with identified cultural or archaeological resources, consideration should be given to ways of protecting the resources. Development can be permitted in these areas only after a site specific investigation has been conducted pursuant to CEQA to define the extent and value of resource, and Mitigation Measures proposed for any impacts the development may have on the resource.

ERM-6.4 Mitigation - If preservation of cultural resources is not feasible, every effort shall be made to mitigate impacts, including relocation of structures, adaptive reuse, preservation of facades, and thorough documentation and archival of records.

ERM-6.9 Confidentiality of Archaeological Sites - The County shall, within its power, maintain confidentiality regarding the locations of archaeological sites in order to preserve and protect these resources from vandalism and the unauthorized removal of artifacts.

ERM-6.10 Grading Cultural Resources Sites - The County shall ensure all grading activities conform to the County's Grading Ordinance and California Code of Regulations, Title 20, § 2501 et. seq.

IMPACT EVALUATION

Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the

¹⁶ Tulare County General Plan 2030 Update, Part 1 – Goals and Policies Report.

landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- a) **Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?**

Project Impact Analysis:

Less Than Significant Impact With Mitigation

Although no historical, cultural, or tribal cultural resources were identified by the CHRIS or Sacred Lands Files (SLF) searches, and all work will be limited to previously disturbed land, it is possible that subsurface discoveries could occur. Also, no responses were received from the tribes that were notified in compliance with AB 52 requirements through a list of potentially affected tribes provided by the NAHC. As such, it is not anticipated that Native American tribal cultural resources or remains will be found at any site within the Project planning area. However, **Mitigation Measures 17-1 and 17-2** are included in the unlikely event that Native American remains or tribal cultural resources are unearthed during any ground disturbance activities. These measure require that all work will immediately halt and the NAHC will be contacted to assess the findings and make appropriate mitigation recommendations. Therefore, there will be a *Less Than Significant Cumulative Impacts With Mitigation* related to this Checklist Item.

Cumulative Impact Analysis:

Less Than Significant Impact With Mitigation

As previously discussed, based on the analysis noted earlier, impacts to Tribal Cultural Resources will be reduced to a level of *Less Than Significant Project-specific and Cumulative Impacts With Mitigation* with the implementation of **Mitigation Measures 17-1 and 17-2**.

Mitigation Measure(s):

See Below

- 17-1** In the event that historical, archaeological or paleontological resources are discovered during site excavation, the County shall require that grading and construction work on the Project site be immediately suspended until the significance of the features can be determined by a qualified archaeologist or paleontologist. In this event, the property owner shall retain a qualified archaeologist/paleontologist to provide recommendations for measures necessary to protect any site determined to contain or constitute an historical resource, a unique archaeological resource, or a unique paleontological resource or to undertake data recover, excavation analysis, and curation of archaeological or paleontological materials. County staff shall consider such recommendations and implement them where they are feasible in light of Project design as previously approved by the County.

17-2 Consistent with Section 7050.5 of the California Health and Safety Code and (CEQA Guidelines) Section 15064.5, if human remains of Native American origin are discovered during Project construction, it is necessary to comply with State laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (Public Resources Code Sec. 5097). In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:

1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:
 - a. The Tulare County Coroner/Sheriff must be contacted to determine that no investigation of the cause of death is required; and
 - b. If the coroner determines the remains to be Native American:
 - i. The coroner shall contact the Native American Heritage Commission within 24 hours.
 - ii. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.
 - iii. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code section 5097.98, or
2. Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.
 - a. The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.
 - b. The descendant fails to make a recommendation; or
 - c. The landowner or his authorized representative rejects the recommendation of the descendent.

Therefore, as noted earlier, in the unlikely event that Tribal Resource are discovered, implementation of **Mitigation Measures 17-1 and 17-2** would result in *Less Than Significant Project-specific With Mitigation* because of this Project.

Conclusion:

Less Than Significant Impact With Mitigation

As previously discussed, based on the analysis noted earlier, impacts to Tribal Cultural Resources will be reduced to a level of ***Less Than Significant Project-specific and Cumulative Impacts With Mitigation*** with the implementation of **Mitigation Measures 17-1 and 17-2**.

- b) **A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe?**

Project Impact Analysis: *Less Than Significant Impact With Mitigation*

See earlier discussion at Item a).

Cumulative Impact Analysis: *Less Than Significant Impact With Mitigation*

See earlier discussion at Item a).

Mitigation Measure(s): *See Mitigation Measures 3.17-1 and 3.17-2*

See earlier discussion at Item a).

Conclusion: *Less Than Significant Impact With Mitigation*

See earlier discussion at Item a).

ACRONYMS

CHRIS	California Historic Resources Information System
CRHR	California Register of Historical Resources
HABS/HAER	Historic American Building Survey/Historic American Engineering Record
NAHC	Native American Heritage Commission
NHPA	National Historic Preservation Act of 1966
OHP	California State Office of Historic Preservation
SHPO	State Historic Preservation Officers

REFERENCES

Advisory Council on Historic Preservation, State Historic Preservation Officers, accessed June 7, 2017 at: <http://www.achp.gov/shpo.html>, Accessed September 2017.

Advisory Council on Historic Preservation, accessed September, 2017 at: <http://www.achp.gov/nrcriteria.html>, updated March 11, 2008.

Assembly Bill No. 52, Chapter 532 accessed September, 2017 at: http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140AB52.

CEQA Guidelines

California Historical Resources Information Center (CHRIS), Southern San Joaquin Valley Information Center (SSJVIC) located at California State University, Bakersfield; September 27, 2016. Included as Appendix “D” of this DEIR.

California Office of Historic Preservation, accessed September, 2017 at: <http://ohp.parks.ca.gov/>.

CEQA and Historical Resources: CEQA Technical Advice Series, accessed September, 2017 at: <http://ceres.ca.gov/ceqa/more/tas/page1.html>.

Native American Heritage Commission, About the Native American Heritage Commission accessed September, 2017 at: <http://nahc.ca.gov/about/>.

Native American Heritage Commission, Sacred Lands File results dated September 8, 2016. (See Appendix “D” of the DEIR at NAHC Sacred Lands File).

National Park Service Program: State Historic Preservation Officers, accessed September, 2017 at: <http://www.cr.nps.gov/nr/shpolist.htm>.

Tulare County 2030 General Plan, August 2012.

Tulare County 2030 General Plan Background Report, February 2010.

Utilities and Service Systems

Chapter 3.18

SUMMARY OF FINDINGS

The proposed Project will result in a *Less Than Significant Impact* to Utilities and Service Systems. A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Utilities and Service Systems. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2 (a), “[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas.”¹

The environmental setting provides a description of the Utilities and Service Systems setting in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or County 2030 General Plan EIR incorporated by reference and summarized below. Additional documents

¹ CEQA Guidelines, Section 15126.2 (a).

Draft Environmental Impact Report
Sequoia Drive-In Business Park Project

utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

- Increase wastewater beyond existing treatment capacity per the RWQCB
- Result in the need for waste water infrastructure that would cause impacts
- Result in the need for waste water infrastructure that would cause impacts
- Result in the need for water supplies or entitlements
- Result in the determination by the wastewater provider that it has adequate capacity
- Served by a landfill with sufficient permitted capacity to Project's needs
- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs

ENVIRONMENTAL SETTING

“Tulare County and special districts provide many important services to County residents and businesses in unincorporated communities and hamlets such as water, wastewater, storm drainage, solid waste removal, utilities, communications, fire protection, law enforcement, and a number of other community facilities and services (schools, community centers, etc.).”²

“Water districts supply water to communities and hamlets throughout the County. Most communities and some hamlets have wastewater treatment systems; however, several communities including Three Rivers, Plainview, Alpaugh, and Ducor rely on individual septic systems. Storm drainage facilities are generally constructed and maintained in conjunction with transportation improvements or new subdivisions in communities. Solid waste collection in the County is divided into service areas, as determined by the Board of Supervisors, with one license for each area. Southern California Edison provides electric service to the south and central areas of Tulare County while PG&E provides electric service in the north. The [Southern California] Gas Company is the primary provider of natural gas throughout the County.”³ The site will be serviced by PG&E.

The existing site is currently served by two agricultural wells that were used for past land uses of farming and a former drive in theatre. There are no other existing utility facilities at the proposed Project site.

REGULATORY SETTING

Federal Agencies & Regulations

Resource Conservation and Recovery Act (RCRA)

The Resource Conservation and Recovery Act (RCRA) gives EPA the authority to control hazardous waste from the “cradle-to-grave.” This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the

² Tulare County General Plan 2030 Update. Page 14-3.

³ Ibid.

management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.”⁴

State Agencies & Regulations

California Global Warming Solutions Act of 2006 (AB 32)

With the passage of AB 32, the State Board Air Resources Board was required to adopt a statewide greenhouse gas emissions limit equivalent to the statewide greenhouse gas emissions levels in 1990 to be achieved by 2020. To achieve this requirement, a scoping plan was adopted in 2008 that includes high recycling and zero waste as a way to reduce greenhouse gas emissions from landfills. “As virgin raw materials are replaced with recyclables, a large reduction in energy consumption should be realized. Implementing programs with a systems approach that focus on consumer demand, manufacturing, and movement of products will result in the reduction of greenhouse gas emissions and other co-benefits.”⁵

State Water Resources Control Board Water Onsite Wastewater Treatment Systems Policy (OWTS)

“The purpose of this Policy is to allow the continued use of OWTS, while protecting water quality and public health. This Policy recognizes that responsible local agencies can provide the most effective means to manage OWTS on a routine basis. Therefore as an important element, it is the intent of this policy to efficiently utilize and improve upon where necessary existing local programs through coordination between the State and local agencies. To accomplish this purpose, this Policy establishes a statewide, risk-based, tiered approach for the regulation and management of OWTS installations and replacements and sets the level of performance and protection expected from OWTS. In particular, the Policy requires actions for water bodies specifically identified as part this Policy where OWTS contribute to water quality degradation that adversely affect beneficial uses.”⁶

Local Policy & Regulations

Tulare County General Plan Policies

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the proposed Project are listed below.

PFS-2.3 Well Testing - The County shall require new development that includes the use of water wells to be accompanied by evidence that the site can produce the required volume of water without impacting the ability of existing wells to meet their needs.

⁴ U.S. Environmental Protection Agency. Laws & Regulations. Summary of the Resource Conservation and Recovery Act. <https://www.epa.gov/laws-regulations/summary-resource-conservation-and-recovery-act>. Accessed July 2017.

⁵ California Air Resources Board Climate Change Scoping Plan. December 2008. Page 62. http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf. Accessed July 2017.

⁶ California State Water Resources Control Board. OWTS Policy. Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems. June 19, 2012. https://www.waterboards.ca.gov/water_issues/programs/owts/docs/owts_policy.pdf. Accessed July 2017.

PFS-3.1 Private Sewage Disposal Standards - The County shall maintain adequate standards for private sewage disposal systems (e.g., septic tanks) to protect water quality and public health.

PFS-3.2 Adequate Capacity - The County shall require development proposals to ensure the intensity and timing of growth is consistent with the availability of adequate wastewater treatment and disposal capacity.

PFS-4.3 Development Requirements - The County shall encourage project designs that minimize drainage concentrations and impervious coverage, avoid floodplain areas, and where feasible, provide a natural watercourse appearance.

PFS-4.4 Stormwater Retention Facilities - The County shall require on-site detention/retention facilities and velocity reducers when necessary to maintain existing (pre-development) storm flows and velocities in natural drainage systems. The County shall encourage the multi-purpose design of these facilities to aid in active groundwater recharge.

PFS-4.5 Detention/Retention Basins Design - The County shall require that stormwater detention/retention basins be visually unobtrusive and provide a secondary use, such as recreation, when feasible.

PFS-4.7 NPDES Enforcement - The County shall continue to monitor and enforce provisions to control non-point source water pollution contained in the U.S. Environmental Protection Agency National Pollution Discharge Elimination System (NPDES) program.

PFS-5.3 Solid Waste Reduction - The County shall promote the maximum feasible use of solid waste reduction, recycling, and composting of waste, strive to reduce commercial and industrial waste on an annual basis, and pursue financing mechanisms for solid waste reduction programs.

PFS-5.4 County Usage of Recycled Materials and Products - The County shall encourage all industries and government agencies in the County to use recycled materials and products where economically feasible.

PFS-5.8 Hazardous Waste Disposal Capabilities - The County shall require the proper disposal and recycling of hazardous materials in accordance with the County's Hazardous Waste Management Plan.

IMPACT EVALUATION

Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Project Impact Analysis:

Less Than Significant Impact

The proposed project will meet the Tulare County on-site septic regulations until the combined flows generated by the proposed Project reaches a level passed the counties maximum thresholds, then the Community Owners Association will apply for a Waste Discharge Permit under the State Onsite Wastewater Treatment Systems General Order. As such, the proposed Project will follow applicable Regional Water Quality Board policies and a ***Less Than Significant Impact*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the requirements of the Central Valley Regional Water Quality Control Board.

The proposed Project will generate a minimal amount of new wastewater to be processed on-site by a septic tank and leach field initially while in the Tulare County Regulations. As part of the proposed Project, after the exceeding the threshold for max daily flow, the State Onsite Wastewater Treatment Systems General Order Permit will be obtained and a secondary treatment unit will be added to the system prior to discharging into the leach field. Any potential impacts are limited to the site. Therefore, a ***Less Than Significant Cumulative Impact*** related to this Checklist Item will occur.

Conclusion: ***Less Than Significant Impact***

A ***Less Than Significant Cumulative Impact*** will occur.

- b) **Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?**

Project Impact Analysis: ***Less Than Significant Impact***

There are currently two water wells on the site. The proposed Project will include the addition of a new septic tank(s) and leach field(s) which will be reviewed by the Tulare County Health and Human Services Agency, Health Services Division, to accommodate wastewater generated by the larger office building. As the construction of the wastewater treatment facility is a part of the Project, any environmental impacts resulting from the construction are discussed in this EIR. As such, a ***Less Than Significant Impact*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the requirements of the Central Valley Regional Water Quality Control Board. Any potential environmental impacts associated with the construction of the new wastewater treatment plant will be confined to the proposed Project site. Therefore, a ***Less Than Significant Cumulative Impact*** will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, *Less Than Significant Project-specific or Cumulative Impacts* related to this Checklist Item will occur.

- c) **Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?**

Project Impact Analysis: *Less Than Significant Impact*

The proposed Project will not result in a new or an expansion of a local public storm water drainage facility. Storm water on the proposed Project site will be directed to an on-site drainage detention basin. This detention basin is sufficient to collect the appropriate amount of stormwater which might collect on the site. As such, no off-site detention basins will be required. As such, a *Less Than Significant Project-specific Impact* related to this Checklist Item will occur.

Cumulative Impact Analysis: *Less Than Significant Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the requirements of Central Valley Regional Water Quality Control Board.

The proposed Project will retain storm water on site. As no offsite storm water impacts will occur, a *Less Than Significant Cumulative Impact* related to this Checklist Item will occur.

Mitigation Measure(s): *None Required.*

Conclusion: *Less Than Significant Impact*

As noted earlier, *Less Than Significant Project-specific or Cumulative Impacts* related to this Checklist Item will occur.

- d) **Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?**

Project Impact Analysis *Less Than Significant Impact*

Water supply for the proposed Project will come from an existing, on-site ground water well. A *Less Than Significant Project-specific Impact* related to this Checklist Item will occur. Also, see Item 3.9 b) which indicates that no new or expansion of water facilities is anticipated.

Cumulative Impact Analysis: *Less Than Significant Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the requirements of the Central Valley Regional Water Quality Control Board.

As noted in Item 3.9 b), the proposed Project will result in a *Less than Significant Impact* related to this Checklist Item.

Mitigation Measure(s): *None Required.*

Conclusion: *Less Than Significant Impact*

As noted earlier, *Less Than Significant Project-specific or Cumulative Impacts* related to this Checklist Item will occur.

- e) **Result in a determination by the wastewater treatment provide near term, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?**

Project Impact Analysis: *No Impact*

The former land use utilized a septic system, but that has since been removed. A proposed community septic system will be designed to be adequate to treat the waste water needs of the proposed use. In addition, as noted in Item b), above, the proposed Project will include the addition of a new septic tank and leach field which will be reviewed by the Tulare County Health and Human Services Agency, Health Services Division, to accommodate wastewater generated by initial lots. Once the flow rate exceeds the threshold for max daily flow, the State Onsite Wastewater Treatment Systems General Order Permit will be obtained and a secondary treatment unit will be added to the system prior to discharging into the leach field. Therefore, *No Project-specific Impact* related to this Checklist Item will occur.

Cumulative Impact Analysis: *No Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the requirements of Tulare County Environmental Health Services Department and Water Board.

No connections to a wastewater treatment provider are proposed. As such, *No Cumulative Impact* related to this Checklist Item will occur.

Mitigation Measure(s): *None Required.*

Conclusion: *No Impact*

As noted earlier, *No Project-specific or Cumulative Impacts* related to this Checklist Item will occur.

- f) **Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?**

Project Impact Analysis: *Less Than Significant Impact*

The proposed Project does not include activities that will result in solid waste generation beyond typical service commercial zone use waste. As such, the proposed Project will have a *Less Than Significant Project-specific Impact* related to this Checklist Item.

Cumulative Impact Analysis: *Less Than Significant Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As noted earlier, Project level solid waste generation will be limited to typical service commercial zone waste which will not result in a substantial increase in the amount of waste sent to landfills. Therefore, the proposed Project will result in ***Less Than Significant Impacts***.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

g) Comply with federal, state, and local statutes and regulations related to solid waste?

Project Impact Analysis: ***No Impact***

The proposed Project does not include the creation or expansion of a solid waste facility. Therefore, ***No Project-specific Impact*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County and the state of California. This cumulative analysis is based on the Federal, State, and Local requirements, including requirements of Cal Recycle, California Air Resources Board, and Tulare County Environmental Health and Human Services Agency (Environmental Health Division).

The proposed Project does not include the creation or expansion of a solid waste facility. Therefore, ***No Cumulative Impact*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

REFERENCES

California Air Resources Board Climate Change Scoping Plan. December, 2008. Page 62. http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf. Accessed July 2017.

California State Water Resources Control Board. OWTS Policy. Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems. June 19, 2012. https://www.waterboards.ca.gov/water_issues/programs/owts/docs/owts_policy.pdf. Accessed July 2017.

CEQA Guidelines, Section 15126.2 (a)

Tulare County General Plan 2030 Update. Page 14-3.

U.S. Environmental Protection Agency. Laws & Regulations. Summary of the Resource Conservation and Recovery Act. <https://www.epa.gov/laws-regulations/summary-resource-conservation-and-recovery-act>. Accessed July 2017.

Mandatory Findings of Significance

Chapter 3.19

SUMMARY OF FINDINGS

None of the conditions stated below under Section 15065(a) (1)-(4) are present due to the impacts from the proposed Project. The impacts to the below resources are therefore ***Less Than Significant With Mitigation***.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

CEQA Guidelines “Mandatory Findings of Significance” (Section 15065(a)) lists the following potential impacts that need to be addressed by a lead agency:

15065(a): *“A lead agency shall find that a project may have a significant effect on the environment and thereby require an EIR to be prepared for the project where there is substantial evidence, in light of the whole record, that any of the following conditions may occur:*

(1) The project has the potential to: substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; substantially reduce the number or restrict the range of an endangered, rare or threatened species; or eliminate important examples of the major periods of California history or prehistory.

(2) The project has the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals.

(3) The project has possible environmental effects that are individually limited but cumulatively considerable. “Cumulatively considerable” means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

(4) The environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly.”

Under the California Environmental Quality Act (CEQA), an EIR must be prepared when certain specified impacts may result from construction or implementation/operation of a project. An EIR has been prepared for the proposed Project, which fully addresses all of the Mandatory Findings of Significance, as described below.

Under Section 15065(a) of the CEQA Guidelines, a finding of significance is required if a project “has the potential to substantially degrade the quality of the environment.” In practice, this is the same standard as a significant effect on the environment, which is defined in Section 15382 of the CEQA Guidelines as “a substantial or potentially substantial adverse change in any

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of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance.” This EIR, in its entirety, addresses and discloses potential environmental affects associated with construction and operation of the proposed Project, including direct, indirect, and cumulative impacts related to the following environmental factors:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards-and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation/Traffic
- Tribal Resources
- Utilities and Service Systems

As summarized in Project Requirements/Mitigation Measures Section, this EIR discusses potential environmental resource impacts, the level of significance prior to mitigation, project requirements that are otherwise required by law or are incorporated as part of the project description, feasible mitigation measures, and the level of significance after the incorporation of mitigation measures.

This section of the Draft Environmental Impact Report (DEIR) meets CEQA requirements by making Mandatory Findings of Significance relative to impacts of the proposed Project site located in the San Joaquin Valley portion of Tulare County. The “Environmental Setting” section summarizes environmental resources in the region with special emphasis on the proposed Project site and vicinity. The “Regulatory Setting” provides a description of applicable State and local regulatory policies. A description of the potential impacts of the proposed Project is also provided and includes the identification of feasible mitigation to avoid or lessen the impacts.

Long Term Impacts

As described in Section 15065(a)(2), a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals. This document addresses the short-term and irretrievable commitment of natural resources to ensure that the consumption is justified on a long-term basis.

Cumulative Impacts

Under Section 15065(a)(1) of the CEQA Guidelines, a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has the potential to (1) substantially reduce the habitat of a fish or wildlife species; (2) cause a fish or wildlife population to drop below self-sustaining levels; or (3) substantially reduce the number or restrict the range of an endangered, rare, or threatened species. Section 4.3 (Biological Resources) of the EIR fully addresses impacts related to the reduction of the fish or wildlife habitat, the reduction of fish or wildlife populations, and the reduction or restriction of the range of special-status species.

Impacts to Species

Section 15065(a)(1) of the CEQA Guidelines states that a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has the potential to eliminate important examples of a major period of California history or prehistory. Section 15065(a)(1) amplifies Public Resources Code 21001(c) requiring that major periods of California history are preserved for future generations. It also reflects the provisions of Public Resource Code Section 21084.1 requiring a finding of significance for substantial adverse changes to historical resources.

Impacts to Historical Resources

Section 15064.5 of the CEQA Guidelines establishes standards for determining the significance of impacts to historical resources and archaeological sites that are an historical resource. Section 3.5 Cultural Resources of this EIR (which is supported by a Cultural Resources Technical Report) fully addresses impacts related to California history and prehistory, historic resources, archaeological resources, and paleontological resources.

Impacts on Human Beings

Consistent with Section 15065(a)(4) of the CEQA Guidelines, a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has the potential to cause substantial adverse effects on human beings, either directly or indirectly. Under this standard, a change to the physical environment that might otherwise be minor must be treated as significant if people will be significantly affected. This factor relates to adverse changes to the environment of human beings generally, and not to effects on particular individuals. While changes to the environment that could indirectly affect human beings will be represented by all of the designated CEQA issue areas, those that could directly affect human beings include air quality, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, population and housing, public services, transportation/traffic, and utilities, which are addressed in this EIR.

Thresholds of Significance

The geographical area may be countywide, statewide, or nationwide, depending on the nature of the impact. Thresholds of Significance for impacts to biological resources are addressed in detail in Chapter 3.4 Biological Resources of this document. Thresholds of Significance for impacts to cultural resources, including impacts to historic and prehistoric resources, are addressed in Chapter 3.5 Cultural Resources of this document.

ENVIRONMENTAL SETTING

“Tulare County... is located in a geographically diverse region with the majestic peaks of the Sierra Nevada framing its eastern region, while its western portion includes the San Joaquin valley floor, which is very fertile and extensively cultivated. Tulare County is the second-leading agricultural-producing county in the U.S. Fresno County is currently (2004) the top producer. In addition to its agricultural production, the county’s economic base also includes agricultural packing and shipping operations.”¹

The approximate 46-acre proposed Project site is located at the southwest corner of Road 156 and Avenue 296 (Noble Avenue) in Tulare County. The Project is south of and adjacent to State Route 198, less than one mile east of the City of Visalia and less than one mile west of the City of Farmersville. The site is currently zoned PD-C-3-SC (Planned Development, Service Commercial, Scenic Corridor Combining Zone) and is located within the Exeter USGS 7.5 Minute Quadrangle.

Native Vegetation

The native vegetation of the Valley is predominately characterized by the purple needlegrass series, valley oak series, vernal pools and wetland communities, and blue oak series. Fauna associated with this section include mule deer (*Odocoileus hemionus*), black-tailed deer (*Odocoileus hemionus columbianus*), coyotes (*Canis latrans*), white-tailed jackrabbits (*Lepus townsendii*), kangaroo rats (*Dipodomys ingens*), kit fox (*Vulpes macrotis*), and muskrats (*Ondatra Zibethicus*). Birds include waterfowl, hawks, golden eagles (*Aquila chrysaetos*), owls, white-tailed kites (*Elanus leucurus*), herons, western meadowlark (*Sturnella neglecta*) and California quail (*Callipepla californica*).²

BIOLOGICAL RESOURCES

As indicated in the Reconnaissance-Level Biological Study (see Appendix “C” of the EIR) prepared by consultants Kamansky Ecological Consulting; “... the site is currently in a fallow state of agricultural use. The Tulare Irrigation District canal runs through the middle of the site. The site was previously a drive-in movie theater (south portion). There is a mobile communication tower on the site now. Annual grassland and ruderal ground occupy the site.”³

CULTURAL RESOURCES

“Tulare County’s known and recorded cultural resources were identified through historical records, such as those found in the National Register of Historic Places, the Historic American Building Survey/Historic American Engineering Record (HABS/HAER), the California Register

¹ Tulare County 2030 Update General Plan Background Report. Page 1-2.

² Ibid. 9-10.

³ Reconnaissance-Level Biological Evaluation of Potential Impacts Sensitive and Listed Species on an Approximately 47.17-acre, Land Parcel in Farmersville, Tulare County, California. Page 8. Prepared by Kamansky’s Ecological Consulting. April 28, 2016 and included in Appendix “C” of this DEIR.

of Historic Resources, California Historical Landmarks, and the Tulare County Historical Society list of historic resources.”⁴

Due to the sensitivity of many prehistoric, ethnohistoric, and historic archaeological sites, locations of these resources are not available to the general public. The Information Center at California State University, Bakersfield houses records associated with reported cultural resources surveys, including the records pertinent to sensitive sites, such as burial grounds, important village sites, and other buried historical resources protected under state and federal laws.

The records search included historic sites listed on the National Register of Historic Places, California Register of Historic Resources, and California Points of Historical Interest, State Historic Landmarks, California Inventory of Historic Resources, and in the Center files of pertinent historical and archaeological data. The Center staff cautioned; however, that despite the absence of documented cultural resource within the proposed Project area, undiscovered potentially significant resources might still exist in the area.

REGULATORY SETTING

Federal Agencies & Regulations

See Chapters 3.4 and 3.5 of this document for federal regulations related to biological and cultural resources; respectively.

State Agencies & Regulations

See Chapters 3.4 Biological Resources, 3.5 Cultural Resources, and 3.17 Tribal Cultural Resources of this document for state regulations related to biological and cultural resources; respectively.

Local Policy & Regulations

See Chapters 3.4, 3.5, and 3.17 of this document for local regulations related to biological and cultural resources; respectively.

IMPACT EVALUATION

Would the project:

- a) **Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?**

⁴ Ibid. 9-56.

Findings: Impacts to Biological Resources

Project Impact Analysis: Less Than Significant Impact with Mitigation

A biological evaluation of the Project site was conducted by consultants Kamansky's Ecological Consulting (KEC) and is included in this DEIR as Appendix "C". Results of the assessment are based upon database and literature searches, as well as a site visit. The biological evaluation determined that:

3.4 a) Less Than Significant Impact With Mitigation:

Based on the field survey and research, KEC concluded that the existing operations had rendered the site unsuitable for all but the most urban-tolerant species. Any native habitats once present on the site were completely transformed by the site's disturbance; however, special-status species are known to forage and inhabit the Project vicinity. Therefore, a ***Less Than Significant Project-specific Impact With Mitigation*** related to this Checklist Item will occur.

3.4 b) No Impact

Based upon the absence of riparian habitat, ***No Impacts*** related to this Checklist Item will occur.

3.4 c) Less Than Significant Impact

There is no wetland habitat for special study species located onsite. As such, ***No Impact*** related to this Checklist Item will occur.

3.4 d) Less Than Significant Impact

The Project site does not serve as a fish or wildlife movement corridor as it is not situated on any known substantial wildlife corridor, and the proposed actions have limited scope and should not obstruct wildlife movement. ***Less Than Significant Impacts*** related to this Checklist Item will occur.

3.4 e) No Impact

The proposed Project will not conflict with any policies or ordinances protecting biological resources. ***No Impacts*** related to this Checklist Item will occur.

3.4 f) No Impact

There are two habitat conservation plans that apply in Tulare County. The proposed Project does not conflict with these plans. ***No Impacts*** related to this Checklist Item will occur.

Cumulative Impact Analysis: Less Than Significant Impact

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The geographic area of this cumulative analysis is the San Joaquin Valley, the State of California, and the Western United States. As noted in Chapter 3.4, cumulative impacts related to biological resources will be ***Less Than Significant***.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

Potential Project-specific and cumulative impacts to biological resources will be ***Less Than Significant***.

Findings: Impacts to examples of the major periods of California history or prehistory

Project Impact Analysis: ***Less Than Significant Impact With Mitigation***

Chapters 3.5 Cultural Resources, and 3.17 Tribal Cultural Resources, discusses impacts to historic, prehistoric, and/or tribal cultural resources in detail. One cultural resource was identified on the proposed Project site as a result of a records search conducted by the Southern San Joaquin Valley Information Center. Mitigation Measures have been included to address the potential of cultural resources being unearthed as a result of proposed Project-related ground excavation. **Mitigation Measures 5-1, 5-2, and 17-1** are included in the unlikely event that archaeological or paleontological resources are unearthed during Project-related ground excavation and **Mitigation Measures 5-3 and 17-2** are included in the event that human remains (e.g., Native American remains) are found.

Cumulative Impact Analysis: ***Less Than Significant Impact With Mitigation***

The geographic area of this cumulative analysis is Tulare County. The proposed Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. The proposed Project will be mitigated to ***Less Than Significant Project-specific Impacts and Less Than Significant Cumulative Impacts With Mitigation***.

Mitigation Measure(s): ***See Mitigation Measures contained in Chapters 3.4, 3.5, and 3.17.***

Conclusion: ***Less Than Significant Impact With Mitigation***

Less Than Significant Project-specific and Cumulative Impacts With Mitigation to biological and cultural resources will occur.

- b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Project Impact Analysis: ***See Chapter 4***

Cumulative impacts are discussed within the analysis of each Checklist Item. In addition, cumulative impacts are summarized in Chapter 4.

Cumulative Impact Analysis: *See Chapter 4*

Cumulative impacts are discussed within the analysis of each Checklist Item. In addition, cumulative impacts are summarized in Chapter 4.

Mitigation Measure(s): *See Mitigation Measures contained in Chapter 4.*

Conclusion: *See Chapter 4*

Cumulative impacts are discussed within the analysis of each Checklist Item. In addition, cumulative impacts are summarized in Chapter 4.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Project Impact Analysis: *Less Than Significant Impact*

The proposed Project would not result in any impacts to human beings beyond what has already been analyzed in Chapters 3.1 to 3.19.

There are no significant environmental adverse effects from this Project to human beings.

Cumulative Impact Analysis: *Less Than Significant Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

There are no significant environmental adverse effects from this Project to human beings.

Mitigation Measure(s): *None Required.*

Conclusion: *Less Than Significant Impact*

There will be *Less Than Significant* environmental effects which will cause substantial adverse effects to impacts to human beings either directly or indirectly.

REFERENCES

Chapter 3.4 Biological Resources, of this DEIR.

Chapter 3.5 Cultural Resources, of this DEIR.

Chapter 3.17 Tribal Cultural Resources, of this DEIR.

Reconnaissance-Level Biological Evaluation of Potential Impacts Sensitive and Listed Species on an Approximately 47.17-acre, Land Parcel in Farmersville, Tulare County, California. Page 8. Prepared by Kamansky's Ecological Consulting. April 28, 2016. See Appendix "C" of this DEIR.

Tulare County 2030 Update General Plan Background Report. Page 1-2, 9-10, and 9-56.

Chapter 4

Energy

INTRODUCTION

As specified in Appendix F of the CEQA Guidelines and Public Resources Code Section 21100(b)(2), an EIR must disclose and discuss the potential for the project to result in impacts on energy conservation and/or consumption. A project may have the potential to cause such impacts if it would result in the inefficient, wasteful, or unnecessary consumption of energy, including electricity, natural gas, or transportation fuel supplies and/or resources.

Energy Conservation

The Project's anticipated energy demand (including fuel consumption), energy conserving features, and required mitigation measures that have an effect on energy conservation are evaluated in this section to determine whether the Project would result in unnecessary or wasteful energy consumption. The discussion of the Project's anticipated energy demands includes natural gas, electricity, and fuel consumption during construction and operations of the Project.

Existing Energy Consumption

A description of existing energy sources, energy consumption in California, existing energy service providers serving the City, and existing energy infrastructure in the Project vicinity is provided in the *Utilities* section of the EIR.

As described in Section 3.13, *Utilities*, electrical and natural gas services for the City and Project area are provided by Pacific Gas and Electric Company (PG&E) and Southern California Gas Company (SoCal Gas), respectively. In 2015, PG&E provided 85,988.75 gigawatt-hours (GWh) of electricity to nearly 16 million customers across a service area of 700,000 square miles (CEC 2017; PG&E 2017). In the same year, SoCal Gas provided a total of 4,946.74 million therms of natural gas to nearly 21.6 million customers across its 20,000 square mile service area (CEC 2017; SoCal Gas 2017). Within the County, total demand for PG&E electrical services was 1,716.97 GWh, and total demand for SoCal Gas natural gas services was 77.7 million therms in 2015. Total state and countywide energy demands, including per capita calculations of energy demands based on 2015 populations, are provided in **Tables 4-1 and 4-2**.

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Table 4-1 2016 County and State Energy Demands (All Users)^{1,2}					
	2016 Population	Total 2016 Energy Demand		2016 Energy Demand Per Capita	
		Natural Gas Demand (therms)	Electricity Demand (MWh)	Natural Gas Demand (therms)	Electricity Demand (MWh)
Tulare County	466,339	151,402,333	4,422,585	324.7	9.5
State	39,144,818	10,054,479,145	282,896,292.3	256.6	7.2

Table 4-2 2016 County and State Energy Demands (Residential Only)					
	2016 Population	Total 2016 Energy Demand		2016 Energy Demand Per Capita	
		Natural Gas Demand (therms)	Electricity Demand (MWh)	Natural Gas Demand (therms)	Electricity Demand (MWh)
Tulare County	466,339	46,531,542	1,258,584	99.78	2.69
State	39,144,818	4,297,510,000	93,702,108	109.78	2.39

The California Department of Transportation (Caltrans) reports that approximately 24.4 million automobiles, 5.6 million trucks, and 880,588 motorcycles were registered in the state in 2016, resulting in a total estimated 334.7 billion vehicles miles traveled (VMT)³ and 15.1 billion gallons of gasoline consumed⁴. Within Tulare County, an estimated 10.73 million vehicle miles were traveled per day in 2016⁵.

The State of California strongly supports production and use of renewable energy sources, including solar photovoltaic (PV), wind, hydrologic, and biomass. For example, in-state operating capacity of renewable resources was 27,500 MW as of June 19, 2017⁶. The state's renewable energy portfolio includes wind (5,600 MW), solar photovoltaic (PV) (14,700 MW), geothermal (2,700 MW), small hydrologic (1,700 MW), solar thermal (1,300 MW) and biomass (1,300 MW).⁷

¹ California Energy Commission. Energy Consumption Database. <http://ecdms.energy.ca.gov/>. Accessed March 2018.

² U.S. Census Bureau. 2015. California QuickFacts from the U.S. Census Bureau. Accessed March 2018.

³ Caltrans. 2016. California Transportation Quick Facts.

⁴ California Energy Commission. Energy Consumption Database. <http://ecdms.energy.ca.gov/>. Accessed March 2018.

⁵ Caltrans. 2016. California Public Road Data. Statistical Information Derived from the Highway Performance Monitoring System. Page 130. <http://www.dot.ca.gov/hq/tsip/hpms/hpmslibrary/prd/prd2016.pdf>. Accessed June 2018.

⁶ California Energy Commission – Tracking Progress. Updated August 2017.

http://www.energy.ca.gov/renewables/tracking_progress/documents/renewable.pdf. Accessed March 2018.

⁷ Op.Cit.

REGULATORY SETTING

Federal Agencies & Regulations

Energy Policy Act of 2005

The Energy Policy Act of 2005 seeks to reduce reliance on non-renewable energy resources and provide incentives to reduce current demand on these resources. For example, under the Act, consumers and businesses can obtain federal tax credits for purchasing fuel efficient appliances and products, including buying hybrid vehicles, building energy-efficient buildings, and improving the energy efficiency of commercial buildings. Additionally, tax credits are available for the installation of qualified fuel cells, stationary microturbine power plants, and solar power equipment.

State Agencies & Regulations

California Energy Commission

The California Energy Commission CEC was created in 1974 to serve as the state's primary energy policy and planning agency. The CEC is tasked with reducing energy costs and environmental impacts of energy use - such as greenhouse gas emissions - while ensuring a safe, resilient, and reliable supply of energy.

State of California Integrated Energy Policy (SB 1389)

In 2002, the Legislature passed Senate Bill 1389, which required the California Energy Commission (CEC) to develop an integrated energy plan every two years for electricity, natural gas, and transportation fuels, for the California Energy Policy Report. The plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for Zero Emission Vehicles and their infrastructure needs, and encouragement of urban designs that reduce vehicles miles traveled and accommodate pedestrian and bicycle access.

The CEC adopted the 2013 Integrated Energy Policy Report on February 20, 2014. The 2013 Integrated Energy Policy Report provides the results of the CEC's assessment of a variety of issues, including:

- Ensuring that the state has sufficient, reliable, and sage energy infrastructure to meet current and future energy demands;
- Monitoring publicly-owned utilities' progress towards achieving 10-year energy efficiency targets; defining and including zero-net-energy goals in state building standards;
- Overcoming challenges to increased use of geothermal heat pump/ground loop technologies and procurement of biomethane;
- Using demand response to meet California's energy needs and integrate renewable technologies;
- Removing barriers to bioenergy development; planning for California's electricity infrastructure needs given potential retirement of power plants and the closure of the San Onofre Nuclear Generating Station;

- Estimating new generation costs for utility-scale renewable and fossil-fueled generation;
- Planning for new or upgraded transmission infrastructure;
- Monitoring utilities' progress in implementing past recommendations related to nuclear power plants;
- Tracking natural gas market trends;
- Implementing the Alternative and Renewable Fuel and Vehicle Technology Program; and,
- Addressing the vulnerability of California's energy supply and demand infrastructure to the effects of climate change; and planning for potential electricity system needs in 2030.

California Global Warming Solutions Act of 2006 (Assembly Bill 32)

Assembly Bill 32 (Health and Safety Code Sections 38500–38599; AB 32), also known as the California Global Warming Solutions Act of 2006, commits the state to achieving year 2000 GHG emission levels by 2010 and year 1990 levels by 2020. To achieve these goals, AB 32 tasked the California Public Utilities Commission and CEC with providing information, analysis, and recommendations to the California Air Resources Board regarding ways to reduce GHG emissions in the electricity and natural gas utility sectors.

California Energy Code (Title 24, Part 6, Building Energy Efficiency Standards)

California Code of Regulations Title 24, Part 6 comprises the California Energy Code, which was adopted to ensure that building construction, system design and installation achieve energy efficiency. The California Energy Code was first established in 1978 by the CEC in response to a legislative mandate to reduce California's energy consumption, and apply to energy consumed for heating, cooling, ventilation, water heating, and lighting in new residential and non-residential buildings. The standards are updated periodically to increase the baseline energy efficiency requirements. The 2013 Building Energy Efficiency Standards focus on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings and include requirements to enable both demand reductions during critical peak periods and future solar electric and thermal system installations. Although it was not originally intended to reduce greenhouse gas (GHG) emissions, electricity production by fossil fuels results in GHG emissions and energy efficient buildings require less electricity. Therefore, increased energy efficiency results in decreased GHG emissions.

California Green Building Standards Code (Title 24, Part II, CALGreen)

The California Building Standards Commission adopted the California Green Buildings Standards Code (CALGreen in Part 11 of the Title 24 Building Standards Code) for all new construction statewide on July 17, 2008. Originally a volunteer measure, the code became mandatory in 2010 and the most recent update (2013) went into effect on January 1, 2014. CALGreen sets targets for energy efficiency, water consumption, dual plumbing systems for potable and recyclable water, diversion of construction waste from landfills, and use of environmentally sensitive materials in construction and design, including eco-friendly flooring, carpeting, paint, coatings, thermal insulation, and acoustical wall and ceiling panels. The 2013 CALGreen Code includes mandatory measures for non-residential development related to site development; water use; weather resistance and moisture management; construction waste reduction, disposal, and recycling; building maintenance and operation; pollutant control; indoor air quality; environmental comfort; and outdoor air quality. Mandatory measures for residential development pertain to green building;

planning and design; energy efficiency; water efficiency and conservation; material conservation and resource efficiency; environmental quality; and installer and special inspector qualifications.

Clean Energy and Pollution Reduction Act (SB 350)

The Clean Energy and Pollution Reduction Act (SB 350) was passed by California Governor Brown on October 7, 2015, and establishes new clean energy, clean air, and greenhouse gas reduction goals for the year 2030 and beyond. SB 350 establishes a greenhouse gas reduction target of 40 percent below 1990 levels for the State of California, further enhancing the ability for the state to meet the goal of reducing greenhouse gas emissions by 80 percent below 1990 levels by the year 2050.

Renewable Portfolio Standard (SB 1078 and SB 107)

Established in 2002 under SB 1078, the state's Renewables Portfolio Standard (RPS) was amended under SB 107 to require accelerated energy reduction goals by requiring that by the year 2010, 20 percent of electricity sales in the state be served by renewable energy resources. In years following its adoption, Executive Order S-14-08 was signed, requiring electricity retail sellers to provide 33 percent of their service loads with renewable energy by the year 2020. In 2011, SB X1-2 was signed, aligning the RPS target with the 33 percent requirement by the year 2020. This new RPS applied to all state electricity retailers, including publicly owned utilities, investor-owned utilities, electrical service providers, and community choice aggregators. All entities included under the RPS were required to adopt the RPS 20 percent by year 2020 reduction goal by the end of 2013, adopt a reduction goal of 25 percent by the end of 2016, and meet the 33 percent reduction goal by the end of 2020. In addition, the Air Resources Board, under Executive Order S-21-09, was required to adopt regulations consistent with these 33 percent renewable energy targets.

PROJECT SPECIFIC ENERGY USAGE

Electricity and Natural Gas

Implementation of the proposed Project would result in the commitment of additional energy resources, including consumption of natural gas and electricity through operation of the Project. As provided in Appendix A, operation of the proposed Project is estimated to result in the demand for 140,546.064 therms per year (therms/yr) of natural gas, and 3,924.03 megawatt-hours per year (MWh/yr) of electricity (**Table 4-3**) based on CalEEMod modeling results.

Table 4-3		
Estimated (mitigated) Project Electricity and Natural Gas Demands⁸		
	Proposed Project¹	
Proposed Land Use	Natural Gas Demand (therms/yr) ²	Electricity Demand (MWh/yr) ³
Phase 1		
Fast Food Restaurant with Drive Thru	3000.6	12.954

⁸ See the CalEEMod output files provided in Appendix "A" of this DEIR.

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Table 4-3 Estimated (mitigated) Project Electricity and Natural Gas Demands⁸		
Office Park	24540	107.61
Other Non-Asphalt Surfaces	0	0
Convenience Market with Gas	67.764	904.337
Phase 1 Total	27608.364	1024.901
Phase 2		
Fast Food Restaurant with Drive Thru	n/a	n/a
Office Park	34267.2	1262.8
Other Non-Asphalt Surfaces	0	0
Convenience Market with Gas	n/a	n/a
Phase 2 Total	34267.2	1262.8
Phase 3		
Fast Food Restaurant with Drive Thru	n/a	n/a
Office Park	40497.6	1492.4
Other Non-Asphalt Surfaces	0	0
Convenience Market with Gas	n/a	n/a
Phase 3 Total	40497.6	1492.4
Phase 4		
Fast Food Restaurant with Drive Thru	n/a	n/a
Office Park	38172.9	1406.73
Other Non-Asphalt Surfaces	0	0
Convenience Market with Gas	n/a	n/a
Phase 4 Total	38172.9	1406.73
Total	140546.064	3924.03
¹ Proposed Project demand includes design features proposed by the Project and characterized as 'mitigation measures' in the CalEEMod runs. ² 1 therm = 100 thousand British Thermal Units (BTU) ³ 1,000 megawatt-hours (MWh) = 1 gigawatt-hours (GWh)		

Construction Diesel Fuel Consumption

The primary energy resource consumed during construction of the Project over a 10-year period would include diesel fuel for the operation of diesel powered construction equipment.

The total construction fuel consumption is calculated below as the sum of specific total fuel consumption calculated for each piece of equipment used in each phase of construction. To calculate total fuel consumption for specific equipment, Section 3.0, *Construction Detail* in the

CalEEMod Worksheets located in Appendix A provides detailed construction phasing, construction equipment used in each phase, total number of days worked, equipment horsepower, equipment load factor, and equipment quantities. Total fuel consumption is then based on a fuel consumption factor of 0.05 gallons per horsepower per hour (gal/hp/hr) for diesel engines as derived from SCAQMD CEQA Handbook Table A9-3E. Calculation of fuel consumption involves the following steps:

Total Fuel Consumption = Fuel Consumption Rate x Duration

Where: Duration = Quantity of Equipment x Hours of Operation of Equipment each Day x Total Number of Days Worked

Where: Fuel Consumption Rate = Equipment Horse Power x Equipment Load Factor x Fuel Consumption Factor

Operational Vehicle Fuel Consumption

Operation of the Project would result in the daily consumption of vehicle fuel as employees or customers would travel to and from the Project site. As provided in **Table 4-4** and Appendix “A” of this DEIR, Project operation is anticipated to result in the generation of an additional 11,101,941 VMT annually, or 30,417 VMT daily, or approximately 0.3 percent of the County’s 2016 annual VMT. Using vehicle fleet mix data provided in Appendix A and average fuel economy information provided by the Bureau of Transportation Statistics, the Project-generated annual VMT would result in the consumption of approximately 3,081,255.2 gallons of fuel per year.

The proposed Project has incorporated the following GHG Reduction Measures, in accordance with Appendix J of the Tulare County CAP, and has gained a total of nine GHG Emission Reduction Measure Points:

“Measure 5: Pedestrian Network (1 point reduction) – The project will provide a pedestrian access network that internally links all uses and connects to existing external streets and pedestrian facilities.

Measure 7: Bus shelter for existing transit service (0.5 point reduction) -- Bus service provides headways of one hour or less for stops within ¼ mile; project provides safe and convenient pedestrian access to transit stops. Shelters, route information, benches and lighting are existing amenities.

Measure 12: Parking reduction beyond code (6 point reductions) – The project will provide less than the minimum amount of parking required. This measure recognizes the air quality benefit that results when facilities minimize parking needs.

Measure 13: Pedestrian Pathway Through Parking (0.5 point reduction) – The project will provide a parking lot design that will include clearly marked and shaded pedestrian pathways between transit facilities and building entrances.

Measure 25: Energy Star Roof (0.5 point reduction) – The project will install Energy Star labeled roof materials as a condition of approval.

Measure 28: Solar Orientation (0.5 point reduction) – The project will orient 75 or more percent of buildings to face either north or south (within 30 degrees of North or South). Building design includes roof overhangs that are sufficient to block the high summer sun, but not the lower winter sun, from penetrating south facing windows. Trees, other landscaping features and other buildings are sited in such a way as to maximize shade in the summer and maximize solar access to walls and windows in the winter.”⁹

Table 4-4
Estimated Operational Fuel Consumption^{10,11}

Vehicle Type	Percent of Vehicle Trips ¹	Mitigated Annual VMT ²	Average Fuel Economy (miles/gallon) ³	Total Annual Fuel Consumption (gallons)
Passenger Cars	41	4,551,795.81	23.3	195,356.04
Light/Medium Duty Vehicles	40	4,440,776.4	17.1	259,694.53
Heavy Duty Vehicles/Other	19	2,109,368.79	7.3	288,954.63
Total	100%	11,101,941	--	3,081,255.2

¹ Percentage of Vehicle Trips and Fleet Mix information provided in Table 4.4, Fleet Mix of Appendix H. Passenger Cars is the sum of the LDA fleet mix trip percentage column; Light/Medium Duty Vehicles is the sum of the LDT1, LDT2, and MDV fleet mix trip percentage columns; Heavy Duty Vehicles/Other is the sum of the LHD1, LHD2, MHD, HHD, OBUS, UBUS, SBUS, MCY and MH fleet mix trip percentage columns.

² Annual VMT calculated from total mitigated VMT, which incorporates Project design features.

³ Average fuel economy based on average 2014 U.S. vehicle fuel efficiency (mpg) from Table 4-12: Average Light Duty Vehicle, Long Wheel Base Fuel Consumption and Travel, and Table 4-13: Single-Unit 2-Axle 6-Tire or More Truck Fuel Consumption and Travel of the National Transportation Statistics.

CEQA REQUIREMENTS AND ENERGY CONSERVATION STANDARDS

In addition to the recommended thresholds for environmental analysis provided in Appendix G of the CEQA Guidelines, Appendix F requires that an EIR disclose and discuss the potential impacts of a project on energy resources and conservation. An EIR’s discussion of impacts on energy resources should provide analysis and discussion of the project’s potential to result in the wasteful, inefficient, or irretrievable commitment of energy resources, with particular attention towards electrical, natural gas, and transportation fuel supplies. While no specific thresholds are provided by the CEQA Guidelines, Appendix F offers several recommendations for inclusion in an analysis of impacts on energy resources to determine whether a project would:

⁹ Op. Cit. 40-41.

¹⁰ See CalEEMod output files in Appendix “A” of this DEIR.

¹¹ U.S. Bureau of Transportation Statistics. National Transportation Statistics.

https://www.rita.dot.gov/bts/sites/rita.dot.gov/bts/files/publications/national_transportation_statistics/index.html#chapter_4. Accessed December 2017.

- a. Use large amounts of fuel or energy in an unnecessary, wasteful, or inefficient manner;
- b. Constrain local or regional energy supplies, affect peak and base periods of electrical or natural gas demand, require or result in the construction of new electrical generation and/or transmission facilities, or necessitate the expansion of existing facilities, the construction of which could cause significant environmental effects; or
- c. Conflict with existing energy standards, including standards for energy conservation.

Operation of the proposed Project would result in the demand for approximately 140,546.064 therms/yr of natural gas, 3,924.03 MWh/yr of electricity, and 3,081,255.2 gallons/yr of vehicle fuel. Based on existing energy demands and capacity of service providers, estimated operational demand for electricity and natural gas as part of the Project would represent approximately 0.23 percent of PG&E's total energy demand and approximately 0.18 percent of SoCal Gas' total energy demands for 2015 in the County. Further, additional vehicle fuel demand under operation of the Project would result in an increase in statewide fuel demand by less than 0.02 percent.

The proposed Project is not expected to result in the use of a large amount of fuel or energy in an unnecessary, wasteful, or inefficient manner, nor would it affect regional supplies or peak/base periods of demand as it would result in a negligible increase in regional energy demands. As such, the proposed Project would not necessitate the expansion of existing facilities or construction of new energy generation or transmission facilities beyond the onsite facilities proposed as part of the Project to serve the new development, as discussed in Section 3.13, *Utilities*.

Further, as described in Section 3.8, *Land Use*, the Project would be required to implement and be consistent with existing energy design standards at the local and state level. The Project would be subject to energy conservation requirements in the California Energy Code and CALGreen. Adherence to state code requirements would ensure that the project would not result in wasteful and inefficient use of non-renewable resources due to building operation.

In addition to standard required energy conservation requirements, the proposed Project includes a range of design features that proactively reduce the Project's energy demand during construction and operation as seen below. These measures would further reduce the Projects potential to result in the wasteful or inefficient use of energy resources, and promote the conservation of energy and fuel.

- Energy efficient light-bulbs will be incorporated to the project to reduce electrical use.
- The project will install Energy Star labeled roof materials as a condition of approval.
- The project will orient 75 or more percent of buildings to face either north or south (within 30 degrees of North or South). Building design includes roof overhangs that are sufficient to block the high summer sun, but not the lower winter sun, from penetrating south facing windows. Trees, other landscaping features and other buildings are sited in such a way as to maximize shade in the summer and maximize solar access to walls and windows in the winter.
- The project will provide a pedestrian access network that internally links all uses and connects to existing external streets and pedestrian facilities.

- The project will provide less than the minimum amount of parking required. This measure recognizes the air quality benefit that results when facilities minimize parking needs.

The Energy Conservation design features incorporated into the Project would have the effect of reducing overall Project consumption of energy and fuel resources during operation of the Project. When considering the potential for the Project to result in greater conservation of electricity, natural gas, and transportation fuel through the implementation of proposed Project design features and required mitigation measures not quantified above, the proposed Project has a low potential to result in adverse impacts on energy resources and conservation. Therefore, the direct impacts to energy resources and conservation are ***Less Than Significant***.

Cumulative Impacts

The proposed Project would incrementally contribute to adverse impacts on energy resource demand and conservation when considering the cumulative impact of concurrently planned projects; however, like the proposed Project, discretionary actions requiring agency approval are required to comply with local, regional, state, and federal policies designed to reduce wasteful energy consumption, and improve overall energy conservation and sustainability. For instance, all local projects involving the development of new buildings must be designed to conform to CALGreen and the 2016 California Energy Code. Therefore, it is not anticipated that the Project's contribution to cumulative impacts generated with projects provided in Table 3.0-1 would result in a significantly considerable wasteful use of energy resources, such that the Project, and other cumulative projects, would have a cumulative effect on energy conservation. Cumulative impacts as of a result of the Project would be ***Less Than Significant***.

Cumulative Impacts Summary

Chapter 5

CUMULATIVE IMPACTS ANALYSIS UNDER CEQA

Section 15355 Cumulative Impacts

““Cumulative impacts” refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

- (a) The individual effects may be changes resulting from a single project or a number of separate projects.
- (b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.”¹

Section 15130 Discussion of Cumulative Impacts

- “(a) An EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in section 15065(a)(3). Where a lead agency is examining a project with an incremental effect that is not “cumulatively considerable,” a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.
 - (1) As defined in Section 15355, a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. An EIR should not discuss impacts which do not result in part from the project evaluated in the EIR.
 - (2) When the combined cumulative impact associated with the project's incremental effect and the effects of other projects is not significant, the EIR shall briefly indicate why the cumulative impact is not significant and is not discussed in further detail in the EIR. A lead agency shall identify facts and analysis supporting the lead agency's conclusion that the cumulative impact is less than significant.
 - (3) An EIR may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant. A project's contribution is less than cumulatively considerable if the

¹ CEQA Guidelines, Section 15355.

project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact. The lead agency shall identify facts and analysis supporting its conclusion that the contribution will be rendered less than cumulatively considerable.

- (b) The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact. The following elements are necessary to an adequate discussion of significant cumulative impacts:
- (1) Either:
 - (A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or
 - (B) A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency.
 - (2) When utilizing a list, as suggested in paragraph (1) of subdivision (b), factors to consider when determining whether to include a related project should include the nature of each environmental resource being examined, the location of the project and its type. Location may be important, for example, when water quality impacts are at issue since projects outside the watershed would probably not contribute to a cumulative effect. Project type may be important, for example, when the impact is specialized, such as a particular air pollutant or mode of traffic.
 - (3) Lead agencies should define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used.
 - (4) A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available, and
 - (5) A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.

- (c) With some projects, the only feasible mitigation for cumulative impacts may involve the adoption of ordinances or regulations rather than the imposition of conditions on a project-by-project basis.
- (d) Previously approved land use documents, including, but not limited to, general plans, specific plans, regional transportation plans, plans for the reduction of greenhouse gas emissions, and local coastal plans may be used in cumulative impact analysis. A pertinent discussion of cumulative impacts contained in one or more previously certified EIRs may be incorporated by reference pursuant to the provisions for tiering and program EIRs. No further cumulative impacts analysis is required when a project is consistent with a general, specific, master or comparable programmatic plan where the lead agency determines that the regional or area wide cumulative impacts of the proposed project have already been adequately addressed, as defined in section 15152(f), in a certified EIR for that plan.
- (e) If a cumulative impact was adequately addressed in a prior EIR for a community plan, zoning action, or general plan, and the project is consistent with that plan or action, then an EIR for such a project should not further analyze that cumulative impact, as provided in Section 15183(j).²

Tulare County is the geographic extent for most impact analysis. This geographic area is the appropriate extent because of the following reasons:

1. The proposed Project is in Tulare County and County of Tulare is the Lead Agency; and
2. Tulare County General Plan policies applies to the proposed Project.

The basis for other resource specific cumulative impact analysis includes:

- For Air Quality and Greenhouse Gas Emissions it is the San Joaquin Valley Air Basin;
- For Biological Resources it is the San Joaquin Valley; and
- For Hydrology it is the Tulare Lake Basin.

PAST, PRESENT, PROBABLE FUTURE PROJECTS

Tulare County Association of Governments (TCAG) Blueprint Scenario

Under the Tulare County Regional Blueprint Preferred Growth Scenario, TCAG suggested a 25% increase over the status quo scenario to overall density by 2050. The preferred growth scenario principles included directing growth towards incorporated cities and communities where urban development exists and where comprehensive services and infrastructure are/or will be provided. Another relevant preferred scenario is the creation of urban separators around cities. The proposed Project location is outside incorporated areas and would be consistent with the goal of separating urban boundaries.³

² CEQA Guidelines, Section 15130.

³ Tulare County Associated of Governments Blueprint 2050, Preferred Scenario (2009).

Draft Environmental Impact Report
Sequoia Drive-In Business Park Project

Tulare County 2030 General Plan

The Cumulative Analysis outlined in the Tulare County General Plan Update 2030 Recirculated Draft EIR notes regional population growth (which in part was developed by TCAG) and a number major projects. Regional population projections are provided in the **Table 5-1**.⁴

Table 5-1 Regional Population Projections and Planning Efforts			
Jurisdiction	General Plan Planning Timeframe	General Plan Buildout Population	Significant Environmental Impacts
City of Dinuba	2006-2026	33,750	Farmland conversion; conflicts with agricultural zoning and Williamson Act contracts; conversion of agricultural soils to non-agricultural use; regional air quality impacts; and climate change-greenhouse gases.
City of Woodlake			Unavailable.
City of Visalia	1991-2020	165,000	Air quality; biological resources; land use conflicts; noise; transportation/traffic; mass transit; agricultural resources; water supply; and visual resources.
City of Tulare	2007-2030	134,910	Farmland conversion; aesthetics; water supply; traffic; air quality; global climate change; noise; flooding from levee or dam failure; biological resources; and cultural resources.
City of Farmersville	2002-2025	12,160	Agricultural resources; agricultural land use conflicts; air quality; and traffic circulation.
City of Exeter			Information unavailable at time of analysis.
City of Lindsay	1990-2010	17,500	Air quality and farmland land conversion.
City of Porterville	2006-2030	107,300	Farmland conversion; air quality; noise; and biological resources.
City of Kingsburg	1992-2012	16,740	Farmland conversion and air quality.
City of Delano	2005-2020	62,850	Air quality; noise; farmland conversion; disruption of agricultural production; and conversion of agricultural soils to non-agricultural use.

⁴ Tulare County General Plan 2030 Update Recirculated Draft EIR. Page 5-5 to 5-5.

Draft Environmental Impact Report
Sequoia Drive-In Business Park Project

<p style="text-align: center;">Table 5-1 Regional Population Projections and Planning Efforts</p>			
Jurisdiction	General Plan Planning Timeframe	General Plan Buildout Population	Significant Environmental Impacts
County of Fresno	2000-2020	1,113,790	Farmland conversion; reduction in agricultural production; cancellation of Williamson Act Contracts; traffic; transit; bicycle facilities; wastewater treatment facilities; storm drainage facilities; flooding; police protection; fire protection; emergency response services; park and recreation facilities; library services; public services; unidentified cultural resources; water supply; groundwater; water quality; biological resources; mineral resources; air quality; hazardous materials; noise; and visual quality.
County of Kern	2004-2020	1,142,000	Air quality; biological resources; noise; farmland conversion; and traffic.
County of Kings*	1993-2005	149,100 (low) 228,000 (high)	Biological resources; wildlife movement; and special status species.
<p><i>* The adopted Kings County General Plan did not identify a projected population for 2005. The General Plan does include population projections for 2010, which is included in this table.</i></p> <p><i>SOURCE: City of Delano, 1999; City of Dinuba, 2008; City of Farmersville, 2003; City of Kingsburg, 1992; City of Lindsay, 1989; City of Porterville, 2007; City of Visalia, 2001, 1991; County of Fresno, 2000; County of Kern, 2004; County of Kings, 2009; DOF, 2007; TCAG, 2008.</i></p>			

In addition to the Regional Growth Projections used for the cumulative impact analysis, the Tulare County General Plan Update 2030 Recirculated Draft EIR noted the following Major Projects

- **Goshen:** Status – Approved. On June 5, 2018, the Tulare County Board of Supervisors (BOS) approved the Goshen Community Plan. The Goshen Community Plan Update was updated to implement the 2030 Tulare County General Plan (2012). The project Study Area Boundary assessed the potential project impacts from the proposed land use changes, for the areas generally north of Riggin Drive and south of Avenue 320, Road 60 to the east, Avenue 304 to the south (including areas between SR 99 and railroad tracks north of the northbound connector from SR 198), and to the City of Visalia’s sphere of influence to the east. The project EIR is based on a projected annual population growth rate of 1.3%. Additional growth beyond the 1.3% annual growth rate will require further growth analysis pursuant to CEQA. The Goshen Community Plan Update is consistent with the General Plan 2030 Update, and includes the following primary goals and objectives: (1) Land use and environmental planning - Promote development within planning areas next to the Regional State Route 99 Corridor; (2) Improvements for a

“disadvantaged community”; and 3) Strengthening the relationship between the RMA the Tulare County Association of Governments (TCAG) which will help to facilitate the funding and implementation of several key transportation programs such as Safe Routes to Schools, Complete Streets, and Bike/Pedestrian Projects. By pursuing these transportation programs through a heightened collaborative process, the likelihood of getting actual projects in the ground will be realized faster than historically achieved. In doing so, these communities and others can become safer and healthier by providing a more efficient transportation network. Some of the major components of the Community Plan Update are based on Caltrans reconstructing the over-crossing at Betty Drive and State Route 99 in the Community of Goshen. There are five additional projects that have been analyzed; three directly and two in relationship to the Project’s impacts to these areas. The County is proposing more than 20 new land use and zoning designations, including a Mixed Use zone. Also in the process is an update to the Zoning Code to include a mixed use zoning district in compliance with the mixed use designation in the 2030 General Plan.

- **Rancho Sierra**: Status – GPA approved. The project site consists of 114.6 acres. The site was a golf course facility located on both sides of Liberty Avenue (Avenue 264), east of Road 124, south of the city of Visalia. There are 30 existing homes within the golf course area but not a part of this application. The intended use is to subdivide the site into 175 single family residential lots. The project has been approved.
- **Earlimart**: Status – GPA approved. On January 28, 2018, the Tulare County Board of Supervisors (BOS) approved the Planning Branch proposal to update the Earlimart Community Plan Update (General Plan Amendment No. 14-005) to implement the Tulare County General Plan 2030 Update (2012). Among the entitlements that were updated are: (1) the General Plan Amendment, (2) changes to Zoning District Boundaries, and (3) changes to the Zoning Code Ordinance creating a New Mixed Use Zoning District only for the Earlimart Community Plan Update. Consistent with the General Plan and the Community Plan Update Study Area Boundary, the land uses and alternative land use patterns were considered based on expansion to the Urban Development Boundary (UDB) and their potential impacts to the environment. In addition, a Complete Streets Program was approved by the Board of Supervisors on December 15, 2015, for inclusion in the Circulation Element of this Community Plan Update. The Earlimart Complete Streets Program thoroughly analyzed the alternative forms of transportation, including transit, bicycle ways, and pedestrian circulation. The three (3) projects that were analyzed at the project level in this DEIR include: (1) the New High School Project, (2) the Northern Earlimart Rezone Project, and (3) the Existing UDB Project. The County adopted six (6) land use and zoning districts, including a Mixed Use zone. Also updated was the Zoning Code to include a mixed use zoning district in compliance with the mixed use designation in the 2030 General Plan. The Community Plan Update is intended to serve residents and business owners in the Project Area by providing necessary public improvements, encouraging rehabilitation and repair of deteriorating infrastructure and fostering economic development of the Project Area.

- **Traver:** Status – GPA approved. On December 16, 2014 the Tulare County Board of Supervisors (BOS) approved an update to the Traver Community Plan. The Traver Community Plan Update is consistent with the recent approval of the General Plan 2030 Update. Among the entitlements that were updated are: adopted the Traver Community Plan 2014 Update and the Complete Streets Policy, which will change some Land Use Designations within the Traver UDB (GPA 14-003); adopted Section 18.9 of Ordinance No. 352, the Zoning Ordinance, and establish a Mixed-Use Overlay Combining Zone; 3) apply said Mixed-Use Overlay Combining Zone to select properties located within the UDB of Traver and approve the rezoning plan for the Community of Traver (PZ 14-002); and 4) amended Section 16 of Ordinance No. 352, the Zoning Ordinance, to allow “by-right” uses within the Traver UDB (14-003).. Boundary Area located in the Community of Traver.
- **Ducor:** Status – GPA approved. On November 3, 2015 the Tulare County Board of Supervisors (BOS) approved an update to the Ducor Community Plan. The Ducor Community Plan Update is consistent with the recent approval of the General Plan 2030 Update. Among the entitlements that were updated are: Adopted One Amendment to the General Plan (GPA 2015-C), Zoning Ordinance Amendments allowing a “Mixed Use Overlay Zone”, added more uses by “right”, a Change of Zone to Properties and Complete Street Programs, for the unincorporated community of Ducor (GPA 15-008, PZ 15-015, PZ 15-016 and PZ 15-017).
- **Terra Bella:** Status – GPA approved. On November 3, 2015 the Tulare County Board of Supervisors (BOS) approved an update to the Terra Bella Community Plan. The Terra Bella Community Plan Update is consistent with the recent approval of the General Plan 2030 Update. Among the entitlements that were updated are: General Plan Amendment No.15-005 to Update the Terra Bella Community Plan; a Zone Ordinance Amendment PZ 15-012 adopting a Mixed-Use Overlay Zone; Community Plan Rezoning PZ 15-013; and PZ 15-014 Amendment to Section 16 of the Zone Code to allow additional “by-right” uses only within the Terra Bella Urban Development Boundary Area; and Adoption of a Complete Streets Policy for the unincorporated community of Terra Bella.
- **Pixley:** Status – GPA approved. On June 16, 2015 the Tulare County Board of Supervisors (BOS) approved an update to the Pixley Community Plan. The Pixley Community Plan Update is consistent with the recent approval of the General Plan 2030 Update. Among the entitlements that were updated are: General Plan Amendment No.14-002 to Update the Pixley Community Plan; a Zone Ordinance Amendment PZ 15-010 adopting a Mixed-Use Overlay Zone; and PZ 15-011 Amendment to Section 16 of the Zone Code to allow additional “by-right” uses only within the Pixley Urban Development Boundary Area.
- **Tipton:** Status – GPA approved. On June 16, 2015 the Tulare County Board of Supervisors (BOS) approved the Tipton Community Plan. The Tipton Community Plan is consistent with the recent approval of the General Plan 2030 Update. Among the entitlements that were updated are: General Plan Amendment No.15-006 to Update the

Tipton Community Plan; a Zone Ordinance Amendment PZ 15-006 adopting a Mixed-Use Overlay Zone; and PZ 15-007 Amendment to Section 16 of the Zone Code to allow additional “by-right” uses only within the Pixley Urban Development Boundary Area; and Adoption of a Complete Streets Policy for the unincorporated community of Tipton.

- **Strathmore:** Status – GPA approved. On June 16, 2015 the Tulare County Board of Supervisors (BOS) approved an update to the Strathmore Community Plan. The Strathmore Community Plan Update is consistent with the recent approval of the General Plan 2030 Update. Among the entitlements that were updated are: General Plan Amendment No.15-007 to Update the Strathmore Community Plan; a Zone Ordinance Amendment PZ 15-004 adopting a Mixed-Use Overlay Zone; and PZ 15-005 Amendment to Section 16 of the Zone Code to allow additional “by-right” uses only within the Strathmore Urban Development Boundary Area; and Adoption of a Complete Streets Policy for the unincorporated community of Strathmore.
- **Three Rivers:** Status – GPA approved. On June 26, 2018, the Tulare County Board of Supervisors (BOS) approved the Three Rivers Community Plan. The Three Rivers Community Plan Update was updated to implement the 2030 Tulare County General Plan (2012). The unincorporated community of Three Rivers is located within an Urban Development Boundary (UDB) consisting of approximately 21,000 acres and is located approximately 30 miles northeast of Visalia and approximately 52 miles southeast of Fresno along State Route 198 in Tulare County, five (5) miles south of the entrance to Sequoia National Park. The nearest incorporated city is Woodlake, located in Tulare County, approximately 16 miles west on State Route 216. The site is within Township 17 South, Range 28 and 29 East, MDB&M. The project EIR is based on a projected annual population growth rate of 1.3%. Additional growth beyond the 1.3% annual growth rate will require further growth analysis pursuant to CEQA. The Goshen Community Plan Update is consistent with the General Plan 2030 Update, and includes the following primary goals and objectives: (1) Land use and environmental planning - Promote the balanced maintenance of a rural atmosphere, protection of natural, visual, cultural and archaeological resources, an appropriate scale of development consistent with the historical rural character of the community, and adequate context sensitive community infrastructure to the Promote development in order to implement the following General Plan goals; 3) Three Rivers Community Plan Vision Statements - The Community Plan will provide appropriate direction to help guide balanced public and private decisions affecting the community including provisions for the overall direction, density, type of growth, and protection of the natural environment that is consistent with the Tulare County General Plan, and the needs and desires of the Three Rivers Community to maintain its rural character; and 4) Strengthening Relationship with TCAG – An important benefit of this community plan process will be the opportunity for RMA to strengthen the County’s relationship with the Tulare County Association of Governments (TCAG) in that this community plan will help to facilitate the funding and implementation of key transportation programs, such as Complete Streets, and major state Transportation Improvement Program (STIP) project. By pursuing these transportation programs through a heightened collaborative process, the likelihood of

getting actual projects in the ground will be realized faster than historically achieved. In doing so, these communities and others can become safer and healthier by providing a more efficient transportation network. The Board also approved an update to the Zoning Code (and Zone Map) to include a mixed use zoning district in compliance with the mixed use designation in the 2030 General Plan.

- **Poplar-Cotton Center:** Status – GPA approved. On December 11, 2018 the Tulare County Board of Supervisors (BOS) approved an update to the Poplar-Cotton Center Community Plan. The Strathmore Community Plan Update is consistent with the recent approval of the General Plan 2030 Update. Among the entitlements that were updated are: General Plan Amendment No.17-001 to Update the Poplar-Cotton Center Community Plan; Change of Zone PZC 18-012 Mixed-Use Combining Zone (Section 18.9); PZC 18-013 By-Right Uses (Section 16); and PZC 18-014 Zoning District Ordinance Map (Rezoning Plan). Amendment to Section 16 of the Zone Code to allow additional “by-right” uses only within the Poplar-Cotton Center Urban Development Boundary Area.

In addition to the Major Projects outlined in the Tulare County General Plan Update 2030 Recirculated Draft EIR, the approved projects listed as follows may produce cumulative impacts:

- **Peña’s:** The project is for Peña’s Material Recovery Facility (MRF) and Transfer Station (TS)’ which currently sits on 18.01 acres that are being rezoned from AE 30 to M1 Light Industrial Zoning, and rezoning 6.7 acres and 11.3 acres from residential and industrial reserve zoning to industrial zoning. The land is currently operated by Peña’s Disposal, Inc. and has a previously permitted peak processing capacity of 500 tons per day (TPD). This existing facility serves the unincorporated northern portions of Tulare County and the unincorporated southern portions of Fresno County, and the City of Orange Cove in Fresno County. Within the County of Tulare, the facility serves the cities of Dinuba and Porterville, the communities of Cutler, Orosi, London, Sultana, Traver, Seville and other smaller communities in the area that may need to utilize the facility for the recycling of source-separated recyclables, commingled recyclables, commercial and industrial rubbish, green material and wood wastes, construction and demolition wastes, and inert debris to assist in reaching the diversion goals of the California Integrated Waste Management Act of 1989 (AB 939).
- **South County Correctional Detention Facility in Porterville:** The project will require a rezoning of the project site, which is half in the County and half in the City of Porterville. The proposed project contains a build-out “footprint” for the proposed facility of approximately 15.0 acres with a new maximum security Type II facility as the primary structure. The project will consist of 250-cell double occupancy units (500 beds) and 14 special use beds for a total of 514 beds. In addition to the main detention facility, the project will also include support service components.

As the site is currently under agricultural production, the project will require new utilities infrastructure (such as electrical, gas, phone, etc.). It will also require streets/roads

improvements, potable water systems, wastewater systems, and storm water drainage infrastructure. These will be constructed or expanded to meet facility demands. Where feasible, the project will be extended to connect with existing potable water, wastewater, and storm water drainage infrastructure provided by City of Porterville. However, possible new construction of the above mentioned infrastructure may be necessary, and as such, will be evaluated.

- **Pixley Biogas:** The project is for development of a biogas facility on 2.75 acre portion of an 8 acre parcel. The digester will extract methane gas, via an anaerobic manure digester. The facility will be used to produce 266 MMBTUS per day of biogas via an anaerobic digestion of manure feedstock from nearby dairies. The biogas produced will be used to fuel the Calgren bio-refinery facility, located adjacent and to the south of the project site, which will reduce the Calgren plant consumption of natural gas.
- **Harvest Power:** The project is for a Composting Expansion and Anaerobic Digester. The project will allow a maximum total tonnage for the composting to increase from 156,000 tons per year to a potential 216,000 tons per year. An additional 60,000 tons will be allowed at the proposed anaerobic digester facility. The facility will produce transportation fuel through a compressed natural gas (CNG) refueling station.
- **Orosi Rock:** The project includes concrete a recycling and surface mining operation on 35.13 acres where concrete from various construction projects around the region are delivered for recycling. The project includes transporting up to 800,000 tons of aggregate via 44,000 trips per year heavy-duty truck trips from the operation on an annual basis.

The amendment to the previous permit allows an increase of 1.9 million tons of rock and 2.1 million tons of imported recycled concrete. The total production of aggregate will be 10.8 million tons over the course of the existing 25 year period of the existing permit. Excavating will be limited to 400' Mean Sea Level (MSL) and the operation will continue blasting by a licensed blaster to break up larger rocks that cannot be moved or broken up by mechanical equipment.

- **Tulare Solar Center:** The project includes the construction of an 80 MW solar photovoltaic facility on up to 800 acres of an approximately 1,144 acre property historically used as agricultural farmland in Tulare County, California. Proposed Project construction generally requires a focus in three major areas. The areas of focus include: (1) The solar field with associated equipment, including solar PV panels/modules, racking systems, inverters, intermediate voltage transformers, access roads, and underground, above-ground, or overhead electrical systems to collect and consolidate power from across the Project; (2) A substation(s) that receives the solar field's electrical production and increases the voltage to match the voltage of the adjacent utility grid via a generator step-up transformer(s), with Project owned gen-tie lines, and (3) Any other electrical interconnection components necessary for the Project's production to reach the utility grid, including disconnect equipment, communications lines (e.g. fiber optics) and a sub-transmission tap line.

- **Deer Creek Mine:** This is a Project amendment to a Surface Mining Permit and Reclamation Plan to allow expanded operations at this site. The Applicant currently operates a rock and gravel surface mining operation on 98 acres. The Project will result in no increase in the maximum depth of the mine, as expansion will occur laterally within the existing mining footprint. The approval includes an increase in production by 450,000 tons per year (from a maximum of 500,000 tons per year to a maximum of 950,000 tons per year). Increase truck hauling by 176 round trips per day (from a maximum of 200 round trips per day to a maximum of 376 round trips per day). The Project will not result in any change to the estimated total rock production of 15,000,000 tons of rock material during the estimated 50 years of operation nor would it result in any change to the approved reclamation plan.’
- **Papich:** The Applicant received a Special Use Permit through Tulare County for the following: 1) Permanent establishment of the asphalt batch plant on the existing site; 2) Expansion of the existing operation from 3,700 tons/day to 8,000 tons/day of asphalt; and 3) To conduct retail/commercial sales of asphalt.
- **Derrel’s Mini Storage** –Project includes a proposed General Plan Amendment (No. GPA 14-007) and proposed Change of Zone (No. PZ 14-001). GPA 14-007 received approval to amend the Tulare County Land Use Element of the General Plan by changing the land use designation on the 19.33-acre parcel from “Agriculture” to “Commercial or Light Industrial”. PZ 14-001 was approved to re-zone the AE-20 (Exclusive Agricultural-20 acre minimum) Zone to C-3 (Service Commercial) Zone on the same 19.33 acres. The zone change allows, as noted in the Tulare County Zoning Ordinance, Mini-Warehouses – “Storage or warehousing service within a building or buildings primarily for individuals to store personal effects”⁵

The site consists of the phased construction of 19.33 acre mini- storage facility. Phase 1 consists of 129,550 square feet; Phase 2 consists of 148,950 square feet, and Phase 3 consists of 96,600 square feet. RV storage will be used on the Phase 2 portion of the site, moving to Phase 3 as the earlier phases are constructed with the eventuality of the entire site constructed as mini storage units (if necessary) to meet market demands. It is possible that Phase 3 will remain as RV storage. The applicant approximates a ten year full build-out of the entire proposed Project site.

- **Hash Farms (Andersen Village) Residential Subdivision:** Status – Approved. The Project will be located at the northwest corner of Road 16 and Avenue 396, partially within the City of Kingsburg, Fresno County, and Tulare County. The Hash Farms Development Specific Plan is an approved plan for development of a 200-unit residential subdivision (160 single-family units and 40 multi-family units) on a total of 54 acres, including a 2.54 acre park and 1.15 acre fenced stormwater basin. The site is approximately one-half mile east of State Route 99 and approximately one-tenth of a mile south of State Route 201. The 54-acre site is located on Tulare County APNs 028-140-

⁵ Tulare County Zoning Ordinance. Page 13.

007, 012, 013, 018 and 022, and Fresno County APNs 396-020-008 and 014. The County of Tulare Board of Supervisors approved a tentative subdivision map and a Specific Plan for this project. The City of Kingsburg, County of Fresno, Fresno County Local Agency Formation Commission, and Selma-Kingsburg-Fowler County Sanitation District will also need to take each agencies' respective actions.

- **Antelope Valley (Redfield):** Status – Approved. The Antelope Valley Subdivision Plan is a 43-unit single-family residential subdivision on a total of approximately 125 acres, with average lot size of 2.14 acres. The Project is located on the north side of Avenue 360 (west side of Road 220), approximately one mile north of the City of Woodlake in Tulare County. The site is approximately five miles west of State Route 198 and twenty-two miles east of State Route 99. The ±125-acre site is located on Tulare County APNs 064-140-17, 18, 19, 24, 25, 26, 27, & 32. The site is currently zoned PD-F-M (Planned Development-Foothill Combining-Special Mobile Home) Zone and is within the Woodlake 7.5 Minute USGS Quadrangle. The Project site lies within Section 18 of Township 17S, Range 27E, M.D.B. & M. The Project approval included Exceptions to the Subdivision Ordinance, Sections 7-01-2230, and 7-01-1245 pertaining to exceeding the maximum access easement length of 660 feet in non-mountainous areas under 10 acres, and interior road widths.
- **Sequoia Gateway:** Status – Approved. The project consists of a Specific Plan/Corridor Plan for the development of a highway commercial/regional commercial center on ±126.9 acres at the southeast quadrant of State Route 99 and Avenue 280 (Caldwell Avenue) in an unincorporated area of Tulare County. The project would be developed in two major phases. Phase 1 consists of 22,950 sf of highway commercial uses (such as fast-food outlets, retail, and gas station fueling pumps with associated convenience store) and a 60,000 sf medical clinic building on approximately 12.4 acres in the northwest corner of the project site. Phase 2, consists of 986,000 sf of mixed-use commercial land uses (including regional retail, hotel, office, restaurant, and fast-food uses) on approximately 101.6 acres. Phase 2 will be developed in at least four incremental sub-phases, including additional highway commercial uses adjacent to Phase 1, hotel and restaurant uses, office uses, and regional retail uses. The remaining 12.9 acres would be used for a planned stormwater basin and wastewater treatment plant, along with roadway rights-of-way. Project development would occur in accordance with the detailed planning and design guidelines and standards set forth in the “Sequoia Gateway Commerce Park Specific Plan.” Phase 1 would commence development in the near-term upon approval of entitlements and permits for that initial phase of development. Phase 2 would commence development at such future time as traffic capacity permits, or after the planned reconstruction of the State Route 99/Caldwell Avenue Interchange is completed, and other pre-requisite criteria are met for moving forward with permitting and entitlements for that latter phase of development.

SUMMARY OF CUMULATIVE IMPACTS

In this summary section, mitigated impacts and immitigable impacts will be discussed. Checklist Item criteria that would result in No Impacts or Less Than Significant Impacts are discussed in Chapter 3 and are not reiterated here.

Unavoidable Impacts

There are no significant and unavoidable impacts. All potentially significant cumulative impacts have been reduced below a level of significance through mitigation.

Less than Significant Impacts with Mitigation

All impacts that can be effectively mitigated are listed in the **Table 5-2**.

Table 5-2 Checklist Items with Less Than Significant Impacts with Mitigation		
Impact Section	Checklist Item No.	Checklist Criteria
Biology	3.4 a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game [Wildlife] or U.S. Fish and Wildlife Service?
Cultural Resources	3.5 a)	Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?
Cultural Resources	3.5 b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?
Cultural Resources	3.5 c)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?
Cultural Resources	3.5 d)	Disturb any human remains, including those interred outside of formal cemeteries?
Hydrology & Water Quality	3.9 a)	Violate any water quality standards or waste discharge requirements?
Hydrology & Water Quality	3.9 b)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?
Transportation	3.16 a)	Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized

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Table 5-2 Checklist Items with Less Than Significant Impacts with Mitigation		
Impact Section	Checklist Item No.	Checklist Criteria
		travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?
Tribal Cultural Resources	3.16 a)	Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?
Tribal Cultural Resources	3.16 b)	A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe?

See Chapter 9 Mitigation Monitoring and Reporting Program for a comprehensive list of Mitigation Measures to be implemented as part of the proposed Project.

Less Than Significant Impact

All impacts that are Less Than Significant are listed in **Table 5-3**.

Table 5-3 Checklist Items with Less Than Significant Impacts		
Impact Section	Checklist Item No.	Checklist Criteria
Aesthetics	3.1 c)	Substantially degrade the existing visual character or quality of the site and its surroundings
Aesthetics	3.1 d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?
Air Quality	3.3 a)	Would the project conflict with or obstruct implementation of the applicable air quality plan?
Air Quality	3.3 b)	Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?
Air Quality	3.3 c)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?
Air Quality	3.3 d)	Expose sensitive receptors to substantial pollutant concentrations?

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Table 5-3 Checklist Items with Less Than Significant Impacts		
Impact Section	Checklist Item No.	Checklist Criteria
Air Quality	3.3 e)	Create objectionable odors affecting a substantial number of people?
Biological Resources	3.4 d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
Geology & Soils	3.6 a)	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: <ul style="list-style-type: none"> i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. ii) Strong seismic ground shaking? iii) Seismic-related ground failure, including liquefaction? iv) Landslides?
Geology & Soils	3.6 b)	Result in substantial soil erosion or the loss of topsoil?
Geology & Soils	3.6 c)	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?
Geology & Soils	3.6 d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?
Geology & Soils	3.6 e)	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?
Greenhouse Gas Emissions	3.7 a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
Greenhouse Gases	3.7 b)	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?
Hazards & Hazardous Materials	3.8 a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

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Table 5-3
Checklist Items with Less Than Significant Impacts

Impact Section	Checklist Item No.	Checklist Criteria
Hazards & Hazardous Materials	3.8 b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
Hazards & Hazardous Materials	3.8 c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
Hydrology & Water Quality	3.9 c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?
Hydrology & Water Quality	3.9 d)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?
Hydrology & Water Quality	3.9 e)	Create or contribute runoff water which will exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?
Hydrology & Water Quality	3.9 f)	Otherwise substantially degrade water quality?
Hydrology & Water Quality	3.9 i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?
Land Use & Planning	3.10 b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?
Noise	3.12 a)	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
Noise	3.12 b)	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?
Noise	3.12 c)	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?
Noise	3.12 d)	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

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Table 5-3 Checklist Items with Less Than Significant Impacts		
Impact Section	Checklist Item No.	Checklist Criteria
Noise	3.12 e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?
Population & Housing	3.13 a)	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?
Population & Housing	3.13 b)	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?
Public Services	3.14 a)	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: Fire protection?
Public Services	3.14 a)	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: Police protection?
Public Services	3.14 a)	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: Schools?

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Table 5-3 Checklist Items with Less Than Significant Impacts		
Impact Section	Checklist Item No.	Checklist Criteria
Public Services	3.14 a)	<p>Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:</p> <p>Parks?</p>
Public Services	3.14 a)	<p>Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:</p> <p>Other Public Facilities?</p>
Transportation	3.16 d)	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
Transportation & Traffic	3.16 e)	Result in inadequate emergency access
Transportation	3.16 f)	Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?
Utilities	3.17 a)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?
Utilities	3.17 b)	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
Utilities	3.17 c)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
Utilities	3.17 d)	Have sufficient water supplies available to serve the project been identified from existing entitlements and resources, or are new or expanded entitlements needed?
Utilities	3.17 f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

No Impact

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Checklist Items with No Impacts are listed in **Table 5-4**.

Table 5-4 Checklist Items with No Impacts		
Impact Section	Checklist Item No.	Checklist Criteria
Aesthetics	3.1 a)	Have a substantial adverse effect on a scenic vista?
Aesthetics	3.1 b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?
Agricultural Lands & Forestry	3.2 a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the FMMP of the California Resources Agency, to non-agricultural uses?
Agricultural Lands & Forestry	3.2 b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?
Agricultural Lands & Forestry	3.2 c)	Conflict with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code § 12220(q), timberland (as defined by Public Resources Code § 4526), or timberland zoned Timberland Production (as defined by Government Code § 51104(g))?
Agricultural Lands & Forestry	3.2 d)	Result in the loss of forest land or conversion of forest land to non-forest use?
Agricultural Lands & Forestry	3.2 e)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of agricultural use or conversion of forest land to non-forest use?
Biological Resources	3.4 b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?
Biological Resources	3.4 c)	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
Biological Resources	3.4 e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
Biological Resources	3.4 f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

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Table 5-4 Checklist Items with No Impacts		
Impact Section	Checklist Item No.	Checklist Criteria
Hazards & Hazardous Materials	3.8 d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?
Hazards & Hazardous Materials	3.8 e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?
Hazards & Hazardous Materials	3.8 f)	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?
Hazards & Hazardous Materials	3.8 g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
Hazards & Hazardous Materials	3.8 h)	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?
Hydrology & Water Quality	3.9 g)	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?
Hydrology & Water Quality	3.9 h)	Place within a 100-year flood hazard structures which will impede or redirect flood flows.
Hydrology & Water Quality	3.9 j)	Inundation by seiche, tsunami, or mudflow?
Land Use & Planning	3.10 a)	Physically divide an established community?
Land Use & Planning	3.10 c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?
Mineral Resources	3.11 a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?
Mineral Resources	3.11 b)	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?
Noise	3.12 f)	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?
Land Use & Planning	3.13 a)	Physically divide an established community?
Land Use & Planning	3.13 c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?
Population & Housing	3.13 c)	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

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Table 5-4 Checklist Items with No Impacts		
Impact Section	Checklist Item No.	Checklist Criteria
Recreation	3.15 a)	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?
Recreation	3.15 b)	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?
Transportation	3.16 c)	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?
Utilities	3.17 e)	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?
Utilities	3.17 g)	Comply with federal, state, and local statutes and regulations related to solid waste?

REFERENCES

CEQA Guidelines, Sections 15130 (e) and 15355

Tulare County General Plan 2030 Update Recirculated Draft Environmental Impact Report (RDEIR)

Tulare County Associated of Governments Blueprint 2050, Preferred Scenario (2009)

Alternatives

Chapter 6

INTRODUCTION

CEQA Guidelines §15126.6 require that a reasonable range of Alternatives to the proposed project be discussed in the EIR. Specific requirements include the following:

CEQA Guidelines §15126.6(a): Alternatives to the proposed Project. An EIR shall describe a range of reasonable 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 and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives which are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason.

CEQA Guidelines §15126.6(b): Purpose. Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

CEQA Guidelines §15126.6(c): Selection of a range of reasonable alternatives. The range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. The EIR should briefly describe the rationale for selecting the alternatives to be discussed. The EIR should also identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination. Additional information explaining the choice of alternatives may be included in the administrative record. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts.

CEQA Guidelines §15126.6(d): Evaluation of alternatives. The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. A matrix displaying the major characteristics and significant environmental effects of each alternative may be used to summarize the comparison. If an

alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed.

CEQA Guidelines §15126.6(e): “No project” alternative.

- (1) The specific alternative of “no project” shall also be evaluated along with its impact. The purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. The no project alternative analysis is not the baseline for determining whether the proposed project's environmental impacts may be significant, unless it is identical to the existing environmental setting analysis which does establish that baseline (see Section 15125).
- (2) The “no project” analysis shall discuss the existing conditions at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the “no project” alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.
- (3) A discussion of the “no project” alternative will usually proceed along one of two lines:
 - (A) When the project is the revision of an existing land use or regulatory plan, policy or ongoing operation, the “no project” alternative will be the continuation of the existing plan, policy or operation into the future. Typically this is a situation where other projects initiated under the existing plan will continue while the new plan is developed. Thus, the projected impacts of the proposed plan or alternative plans would be compared to the impacts that would occur under the existing plan.
 - (B) If the project is other than a land use or regulatory plan, for example a development project on identifiable property, the “no project” alternative is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in its existing state against environmental effects which would occur if the project is approved. If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this “no project” consequence should be discussed. In certain instances, the no project alternative means “no build” wherein the existing environmental setting is maintained. However, where failure to proceed with the project will not result in preservation of existing environmental conditions, the analysis should identify the

practical result of the project's non-approval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment.

- (C) After defining the no project alternative using one of these approaches, the lead agency should proceed to analyze the impacts of the no project alternative by projecting what would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.

CEQA Guidelines §15126.6(f): (f) Rule of reason. The range of alternatives required in an EIR is governed by a “rule of reason” that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project. The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision making.

- (1) Feasibility. Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives.
- (2) Alternative locations.
 - (A) Key question. The key question and first step in analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR.
 - (B) None feasible. If the lead agency concludes that no feasible alternative locations exist, it must disclose the reasons for this conclusion, and should include the reasons in the EIR. For example, in some cases there may be no feasible alternative locations for a geothermal plant or mining project which must be in close proximity to natural resources at a given location.
 - (C) Limited new analysis required. Where a previous document has sufficiently analyzed a range of reasonable alternative locations and environmental impacts for projects with the same basic purpose, the lead agency should review the previous document. The EIR may rely on the previous document to help it assess the feasibility of potential project

alternatives to the extent the circumstances remain substantially the same as they relate to the alternative.

- (3) An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative.

“15021. Duty to minimize environmental damage and balance competing public objectives

- (a) CEQA establishes a duty for public agencies to avoid or minimize environmental damage where feasible.
- (1) In regulating public or private activities, agencies are required to give major consideration to preventing environmental damage.
- (2) A public agency should not approve a project as proposed if there are feasible alternatives or mitigation measures available that would substantially lessen any significant effects that the project would have on the environment.
- (b) In deciding whether changes in a project are feasible, an agency may consider specific economic, environmental, legal, social, and technological factors.
- (c) The duty to prevent or minimize environmental damage is implemented through the findings required by Section 15091.
- (d) CEQA recognizes that in determining whether and how a project should be approved, a public agency has an obligation to balance a variety of public objectives, including economic, environmental, and social factors and in particular the goal of providing a decent home and satisfying living environment for every Californian. An agency shall prepare a statement of overriding considerations as described in Section 15093 to reflect the ultimate balancing of competing public objectives when the agency decides to approve a project that will cause one or more significant effects on the environment.”¹

FACTORS CONSIDERED IN ANALYSIS OF ALTERNATIVES

In this Alternatives analysis, the following criteria will be used:

Evaluation Criteria 1: Project Specific Elements

Chapter Two – Project Description contains the complete list of project elements which are summarized as follows:

- Establishment of a business park with a mix of commercial uses.

Evaluation Criteria 2: Project Objectives

Chapter Two – Project Description contains the complete list of Project Objectives which are summarized as follows:

¹ 2013 CEQA Guidelines, Section 15021

- Development of a facility that promotes economic development.
- Compatibility with surrounding land uses.
- Development of a facility that is near major highways and away from sensitive land uses.
- Conduct an efficient business operation that is economically, technologically and environmentally feasible.
- Fulfill a need for moderate sized commercial / warehouse type facilities in the area.

Evaluation Criteria 3: Minimize Costs

Although there may be a diversity of theoretical alternatives, there are only a few alternatives that could potentially be implemented due to costs involved in the alternative. Considerable increases in costs can result in infeasibility of a project alternative. As the Project site area is currently owned by the applicant, land costs would be minimized through implementing the project on the existing site.

Evaluation Criteria 4: Operational Efficiency

CEQA requires a discussion of the potential energy impacts, with emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy.

Evaluation Criteria 5: Lessen Significant Impacts

According to CEQA, a valid Project alternative should be capable of meeting most of the Project objectives *and* reducing potential significant impacts associated with the Project. Reasonable alternatives are those that may reduce the extent and magnitude of Project, site, and cumulative significant impacts. Each alternative should be analyzed to assess the potential to reduce significant impacts.

Evaluation Criteria 6: Physical Feasibility (Land Size and Configuration Constraints)

Physical feasibility is required because if site for a particular alternative is too small or if the components of the proposed Project cannot be configured on the site, then the alternative would not be feasible and should be eliminated from review.

ALTERNATIVES ANALYSIS

Based on the CEQA Guidelines mentioned herein, this Alternatives analysis contains the following:

1. No-Project
2. Alternate Site
3. Reduced (50%) Project

Alternative 1: No-Project

This section discusses the mandatory “No-Project” alternative. Under this alternative, no business park or commercial facilities will be built and the project site would remain in its present condition (vacant land).

Description. Under the No-Project alternative, the activities and improvements discussed in Chapter 2 of this Draft EIR would not be implemented. The No-Project Alternative would not provide the following:

- Development of a facility that promotes economic development.
- Development of a facility that is near major highways and away from sensitive land uses.
- Conduct an efficient business operation that is economically, technologically and environmentally feasible.
- Fulfill a need for moderate sized commercial / warehouse type facilities in the area.

Environmental Considerations. The No Project Alternative would avoid all potential construction- and operations-related impacts related to air quality, biological resources, cultural resources, greenhouse gas emissions, noise, traffic, water use and infrastructure resulting from the proposed Project and each of the other Alternatives identified earlier. However, the No Project Alternative would not meet any of the Project objectives or project-specific elements. Therefore, the consideration of the No Project Alternative being the environmentally superior alternative would require the judgment of whether in balance, eliminating or avoiding certain impacts is of greater benefit environmentally than avoiding certain other impacts. Therefore, Alternative 1 (the No Project Alternative) would not meet the criteria as the Environmentally Superior Alternative.

Alternative 2: Alternate Site

The environmental considerations associated with Alternative 1 (Alternate Site) would be highly dependent on several variables, including physical site conditions, surrounding land use, site access, and suitability of the local roadway network. Physical site conditions include land, air, water, minerals, flora, fauna, noise, or objectives of historic or aesthetic significance, and would affect the nature and degree of direct impacts, needed environmental control systems, mitigation, and permitting requirements. Surrounding land use and the presence of sensitive receptors would influence neighborhood compatibility issues such as air pollutant emissions and health risk, odor, noise, and traffic. Site access and ability of the local roadway network to accommodate increased truck traffic without excessive and costly off-site mitigation would be an important project feasibility issue.

The constraint on alternative site selection is the lessening or elimination of significant project impacts. The economic viability of the proposed Project is dependent on ability to efficiently and cost effectively purchase or currently possess the land for the business park. To maintain easy highway access and site visibility, as well as adequate land size into the proposed site location, any potentially feasible alternative site needs to be located near major roadways/highways and in a location that is easily accessible to all parts of Tulare County and beyond, in addition to other criteria outlined herein.

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An alternative site was not chosen for evaluation for reasons identified in CEQA Guidelines §15126.6(f): Rule of reason. A review of available sites within the area between Visalia and Farmersville, or other similar location along State Route 198 in Tulare County which conceivably possess all these attributes and none of the critical listed constraints and can otherwise achieve or partially achieve the project objectives, disclosed no feasible alternative locations. The essential site attributes considered in this determination included site size and shape to accommodate the project, availability of infrastructure, and location. The Project proponent has no ownership of or access to any alternative site. In addition, an alternative site would likely result in similar or greater environmental impacts in every environmental impact criteria listed in the CEQA Guidelines Appendix G checklist.

Description. The Alternate Site would not provide the following:

- Conduct an efficient business operation that is economically, technologically and environmentally feasible.

Environmental Considerations. Development of the Alternate Site alternative could theoretically meet most of the Project objectives presented earlier in this chapter. However, construction and operation of an alternate site would not be as cost effective or operationally efficient and thus is not consistent with the Project objectives. In addition, construction and operation at an alternate site would result in environmental impacts that are likely equal to or greater than the proposed project. The majority of project impacts are likely to occur at an alternate site.

Selection of an alternate site would require re-initiation of the environmental review process once the Applicant has prepared sufficient project description information. The time requirements for these activities would reduce the ability of the Applicant to accommodate projected demand for commercial facilities being proposed by the Project in a timely manner compared to the proposed Project. The Alternate Site would be the most complex, costly, and time-consuming alternative to implement. Various engineering and technical studies would then need to be completed to define (and refine) the project and its required control systems. Environmental review and obtaining local and state entitlements would need to be obtained prior to construction-related activities.

Alternative 3: Reduced (50%) Project

Alternative 3 would reduce the size of the proposed Project by reducing the size of the business park from 358,370 square feet (and a total of 30 buildings), to 179,185 square feet (and a total of 15 buildings). A 50 percent reduction in size is a reasonable amount to illustrate the level of impact such an alternative would have on the significant effects of the proposed Project.

Description. The Reduced Project Alternative would not provide the following:

- Conduct an efficient business operation that is economically, technologically and environmentally feasible.

Environmental Considerations. Most of the environmental issues associated with Alternative 3 would be similar or less than those of the proposed Project. As summarized below, Air Quality,

Noise, and Traffic impacts would be less than the proposed Project; however, Alternative 3 would not meet other project objectives as described earlier and in Chapter 2.

Air Quality: According to the Air Quality Impact Analysis and Greenhouse Gas Study prepared for the project (See Appendices “B” and “F” of this document; respectively), the proposed Project will result in annual criteria pollutant emissions which are less than the applicable San Joaquin Valley Air Pollution Control District (SJVAPCD) thresholds of significance, resulting in a less than significant impact. Even though the proposed Project is below existing thresholds of significance, a reduced project would result in a further reduction of air and greenhouse gas emissions. As such, Alternative 3 would result in lower annual emission rates than the proposed Project.

Noise: Alternative 3 would result in a reduced impact as compared to the proposed Project because there would be less vehicle traffic generated from the Project. According to the Noise section of the DEIR, onsite operational activities associated with the proposed Project would not result in an increase in ambient noise levels at the nearest sensitive receptor that would result in a significant impact. Even though the proposed Project is less than significant, Alternative 3 would result in a reduced noise impact when compared to the proposed Project.

Traffic: Consultant 4Creeks Engineering prepared the Traffic Impact Study (TIS) Sequoia Business Park for the proposed Project (See Appendix “G” of this document). The TIS concluded that there are no significant and unavoidable traffic impacts associated with the proposed Project; however, Alternative 3 would result in less vehicle trips per day. Thus, Alternative 3 would result in less traffic impacts than the proposed Project.

Economic Considerations:

Regarding the selection of a potential alternate site, moving to an alternate site would be cost prohibitive. Among the considerations of an alternate site are: land costs (the Applicant already owns the land in question), land availability (that is, a similar site with an owner willing to sell to the Applicant), land use and zoning designations, entitlement process (the Applicant would have to re-initiate this process), and environmental process (which would also have to be re-initiated and new environmental studies would also have to be conducted). As such, re-initiating the entire Project on another site is not economically feasible, nor reasonable.

POTENTIAL IMPACTS OF ALTERNATIVES

Table 6-1 is a generalized comparative assessment of potential impacts of the alternatives versus the proposed Project (Preferred Alternative).

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Table 6-1 Alternatives Potential Impact Analysis			
Environmental Issues	No. 1 No Project	No. 2 Alternate Site	No. 3 Reduced (50%) Project
Aesthetics	Less	Similar	Similar
Agriculture and Forestry Resources	Less	Similar	Similar
Air Quality	Less	Similar	Less
Biological Resources	Less	Similar	Similar
Cultural Resources	Less	Similar	Similar
Geology and Soils	Less	Similar	Similar
Greenhouse Gas Emissions	Less	Similar	Less
Hazards and Hazardous Materials	Less	Similar	Similar
Hydrology and Water Quality	Less	Similar	Similar
Land Use and Planning	Less	Similar	Similar
Mineral Resources	Less	Similar	Similar
Noise	Less	Similar	Less
Population and Housing	Less	Similar	Similar
Public Services	Less	Similar	Similar
Recreation	Less	Similar	Similar
Transportation and Traffic	Less	Similar	Less
Utilities and Service Systems	Less	Similar	Similar
Mandatory Findings of Significance	Less	Similar	Similar
Cumulative Impacts	Less	Similar	Less
Impact Reduction	Yes	Generally No; depends on the site	Yes

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Based on a review of the alternatives evaluated in this chapter, the No Project Alternative would result in the fewest impacts on the environment. However, the No Project Alternative would not meet the applicant's project objectives, as identified in this chapter.

Apart from the No Project Alternative, the Alternative #3 Reduced (50%) Project would be the Environmentally Superior alternative because it would result in less adverse physical impacts to the environment with regard to air, noise, and traffic. However, Alternative 3 does not meet all of the applicant's project objectives, particularly with regard to the economic feasibility of this alternative.

ALTERNATIVES ANALYSIS

The proposed Alternatives were analyzed based on the ten evaluation criteria listed earlier. All the Alternatives considered would not meet all of the objectives of the proposed Project. In addition, each of the Alternatives has other individual deficiencies (See **Table 6-2**).

Table 6-2			
Alternatives Evaluation			
Evaluation Criteria	No. 1 No Project	No. 2 Alternate Site	No. 3 Reduced (50%) Project
1. Project Specific Elements	No	Some	Yes
2. Project Objectives	No	Some	Some
3. Minimize Costs	No	No	Yes
4. Operational Efficiency	No	No	No
5. Lessen Significant Impacts	Yes	Some	Some
6. Physical Feasibility	No	Some	Yes

SUMMARY AND DETERMINATION

Only Alternatives 1 and 3 could potentially result in fewer impacts than the proposed Project's impacts. These Alternatives; however, would not meet the objectives of the proposed Project, nor would they meet most of the six evaluation criteria noted earlier (summarized in **Table 6-2**). After this full, substantial, and deliberate analysis; the proposed Project remains the preferred alternative.

REFERENCES

Air Quality Impact Analysis and Greenhouse Gas Study. Prepared by 4Creeks, Inc. See Appendices "B" and "F" of this DEIR

CEQA Guidelines §15126.6

Traffic Impact Study Sequoia Business Park [July 2015]. Prepared by 4Creeks, Inc., and included as Appendix "G" of this document.

Economic & Social Effects

And Growth Inducing

Chapter 7

INTRODUCTION

This chapter discusses economic, social and growth inducing effects of the Project. **Table 7-1** provides the CEQA requirements and a summary of the impact analysis.

Table 7-1 Summary of Economic, Social and Growth Inducing Impacts		
Topic	Summary of Impact	CEQA Requirement
Economic Impact	The proposed Project will not result in negative impacts to the region. It will likely result in an increase in economic benefits to the region, since the proposed Project at full build-out is anticipated to provide up to 225 permanent jobs.	CEQA does not have specific requirements for evaluating the economic impacts of a proposed Project. Section 15131 of CEQA Guidelines states that “Economic or social information may be included in an EIR or may be presented in whatever form the agency desires.”
Social Impact	The proposed Project will not result in a disproportionate effect on minority populations, low income populations, or Native Americans. The proposed Project does not pose any adverse environmental justice issues that would require mitigation.	The social impacts of a project include environmental justice considerations. California Government Code Section 65040.12 defines Environmental Justice as “the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations and policies.”
Growth Inducing Effect	The proposed Project will not result in significant growth inducing impacts. The proposed Project will result in up to 200 permanent jobs which will likely be filled by current Tulare County residents. The Project will not result in new housing. Growth inducing impacts will be less than significant.	CEQA Guidelines § 15126 (d) makes recommendations for analyzing impacts due to growth inducement, including discussing ways in which the project could foster economic or population growth, the construction of additional housing, or other factors which could remove obstacles to population growth or encourage and facilitate other activities which could impact the environment individually or cumulatively.

Therefore, implementation of the proposed Project will result in ***Less Than Significant*** environmental impacts, either individually or cumulatively, caused by either economic, social, or growth inducing effects. No mitigation measures are required.

DEMOGRAPHICS

“The unemployment rate in the Tulare County was 10.1 percent in December 2017, up from a revised 8.9 percent in November 2017, and below the year-ago [2016] estimate of 11.4 percent.

This compares with an unadjusted unemployment rate of 4.2 percent for California and 3.9 percent for the nation during the same period.”¹ The general demographic information can be found in **Table 7-2**.

Table 7-2 Profile of General Population and Housing Characteristics, 2010²	
Demographic Profile Data	<i>Tulare County</i>
<i>Population</i>	
Total	442,179
% Hispanic or Latino	60.6%
% not Hispanic or Latino	39.4%
White alone	27.5%
Black or African American alone	0.4%
Asian alone	0.2%
Some other race alone	0.1%
Two or more races	1.4%
<i>Housing</i>	
Total housing units	141,696
Occupied Housing Units	130,352
Vacant housing units	11,344
Owner-occupied housing units	76,586 (58.8%)
Renter-occupied housing units	53,766 (41.2%)
Homeowner vacancy rate (%)	2.4%
Renter vacancy rate (%)	5.8%

ECONOMIC IMPACTS

Under CEQA Guidelines 15131, “[e]conomic or social information may be included in an EIR or may be presented in whatever form the agency desires.

- (a) Economic or social effects of a project shall not be treated as significant effects on the environment. An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic or social changes. The intermediate economic or social changes need not be analyzed in any detail greater than necessary to

¹ State of California Employment Development Department. Unemployment Rate and Labor Force, Monthly EDD Press Release. [http://www.labormarketinfo.edd.ca.gov/file/lfmonth/visa\\$pd\\$pdf](http://www.labormarketinfo.edd.ca.gov/file/lfmonth/visapdpdf). Accessed January 2018.

² U.S. Census Bureau, 2010 Demographic Profile Data <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>. Accessed January 2018.

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trace the chain of cause and effect. The focus of the analysis shall be on the physical changes.

- (b) Economic or social effects of a project may be used to determine the significance of physical changes caused by the project. For example, if the construction of a new freeway or rail line divides an existing community, the construction would be the physical change, but the social effect on the community would be the basis for determining that the effect would be significant. As an additional example, if the construction of a road and the resulting increase in noise in an area disturbed existing religious practices in the area, the disturbance of the religious practices could be used to determine that the construction and use of the road and the resulting noise would be significant effects on the environment. The religious practices would need to be analyzed only to the extent to show that the increase in traffic and noise would conflict with the religious practices. Where an EIR uses economic or social effects to determine that a physical change is significant, the EIR shall explain the reason for determining that the effect is significant.
- (c) Economic, social, and particularly housing factors shall be considered by public agencies together with technological and environmental factors in deciding whether changes in a project are feasible to reduce or avoid the significant effects on the environment identified in the EIR. If information on these factors is not contained in the EIR, the information must be added to the record in some other manner to allow the agency to consider the factors in reaching a decision on the project.”³

Economic and Social Benefits of the Proposed Project

The proposed Project will provide multiple economic and social benefits as follows:

- Addition of an anticipated 225 new permanent jobs;
- Increase in output and authorization for retail sales will provide additional tax revenue for the County of Tulare;
- Close vicinity to State Route 198 promotes better coordination of land use for transportation of light trucks which meets the SB 375 guidelines; and
- Showcase a pedestrian friendly environment. Sidewalks will promote connectivity for pedestrians to safely and easily move between the various portions of the proposed project’s commercial development.

SOCIAL EFFECTS

Environmental Justice

“The basis for environmental justice lies in the Equal Protection Clause of the U.S. Constitution. The Fourteenth Amendment expressly provides that the states may not “deny to any person within [their] jurisdiction the equal protection of the laws” (U.S. Constitution, amend. XIV, §1). On February 11, 1994, President Clinton signed Executive Order (E.O.) 12898, titled “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.” The executive order followed a 1992 report by the U.S. Environmental Protection Agency (U.S. EPA) indicating that “[r]acial minority and low-income populations experience

³ CEQA Guidelines Section 15131

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higher than average exposures to selected air pollutants, hazardous waste facilities, and other forms of environmental pollution.” Among other things, E.O. 12898 directed federal agencies to incorporate environmental justice into their missions.”⁴

The proposed Project does not have any negative social effects. All potential environmental impacts were determined to be less than significant with mitigation.

Inappropriateness of Affordable Housing

The Project does not include a land use change from agricultural nor does it propose to add or remove any affordable housing. In addition, the Project site is not suitable for affordable housing. Affordable housing projects require high-densities to maintain economic and financial viability. Low densities typically do not result in enough income volume to pay for the cost of construction.

Appropriateness of location

The Project site is currently zoned as service commercial land immediately adjacent to a major east-west highway. The site is generally surrounded by agricultural uses, with other commercial/industrial uses in the vicinity. This location is a favorable location because it is centrally located in the County, it is away from substantial sensitive land uses, and is proximate to a major State highway.

GROWTH INDUCEMENT

As outlined in the CEQA Guidelines § 15126.2 (d), growth-inducing impact of the proposed Project should “[d]iscuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a waste water treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.”⁵

Generally, growth inducing impacts are a result of very large businesses or very large housing developments. A large influx of jobs or people would require additional services which could potentially induce growth related impacts. The proposed Project involves the development of a business park divided into 48 parcels. Although the proposed Project is estimated to result in approximately 225 new jobs at full build-out, most of these will be low skill jobs and would be available to any able bodied person. As these jobs will not require high skilled labor, it will not be necessary to recruit higher skilled person beyond the region of the Project and it is anticipated that the majority of new employees will be current residents within or near Visalia and/or the

⁴ State of California General Plan Guidelines 2003. Page 22. Governor’s Office of Planning and Research.

⁵ CEQA Guidelines, Section 15126.2

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County. As such, the proposed Project will not significantly induce growth. See summary in **Table 7-3**.

Table 7-3 Growth Impacts	
Potential Growth Inducing Impacts	<i>Discussion</i>
Economic/Population Growth	<i>The proposed Project is anticipated to result in 225 new jobs, which will result in increased economic growth. Although the proposed Project will result in an economic benefit for Tulare County, the proposed Project will not induce substantial growth.</i>
Foster the Construction of Additional Housing	<i>The proposed Project will not result in a need for additional housing.</i>
<i>Other Activities</i>	<i>The proposed Project will not induce other growth-related activities.</i>

As noted in **Table 7-3**, ***Less Than Significant*** growth inducing impacts are anticipated.

REFERENCES

2013 CEQA Guidelines, Section 15131, 15126.2

State of California General Plan Guidelines 2003

State of California Employment Development Department. Unemployment Rate and Labor Force, Monthly EDD Press Release.

[http://www.labormarketinfo.edd.ca.gov/file/1fmonth/visa\\$pd\\$pdf](http://www.labormarketinfo.edd.ca.gov/file/1fmonth/visapdpdf). Accessed January 2018.

U.S. Census Bureau, 2010 Demographic Profile Data

<http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>. Accessed January 2018.

Immitigable Impacts

Chapter 8

NO ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED

Under CEQA Guidelines Section 15126.2 (b), “[w]here there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the Project is being proposed, notwithstanding their effect, should be described.”¹ This analysis should include a description of any significant impacts, including those which can be mitigated but not reduced to a level of insignificance.

The proposed Project will not result in a significant and unavoidable impact. All impacts have been found to be Less Than Significant or have been mitigated to a level considered Less Than Significant.

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

NO IRREVERSIBLE IMPACTS

Under CEQA Guidelines Section 15126.2 (c), “[u]ses of nonrenewable resources during the initial and continued phases of the Project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the Project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified. (See Public Resources Code section 21100.1 and Title 14, California Code of Regulations, section 15127 for limitations to applicability of this requirement.)”²

The resources committed to the proposed Project are standard resources necessary for the construction and operation an administrative office to support the existing asphalt plant. Through “green” development practices including air quality, and greenhouse gas emission reductions through material, product choices and through conservation of electricity and water, this proposed Project will reduce the irreversible life-cycle costs of the proposed Project. The proposed Project will be in compliance with the goals of AB32 and the Climate Change Scoping Plan that outlines GHG reductions to 1990 levels.

¹ CEQA Guidelines, Section 15126.2 (b).

² Ibid, Section 15126.2 (c).

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As contained in CEQA Guidelines Section 15043, “[a] public agency may approve a Project even though the Project would cause a significant effect on the environment, if the agency makes a fully informed and publicly disclosed decision that:

- (a) There is no feasible way to lessen or avoid the significant effect (see Section 15091); and
- (b) Specifically identified expected benefits from the Project outweigh the policy of reducing or avoiding significant environmental impacts of the Project.”³

“An agency may prepare a statement of overriding considerations. As noted in CEQA Guidelines Section 15093, “CEQA requires the decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposed Project against its unavoidable environmental risks when determining whether to approve the Project. If the specific economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposed Project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered acceptable.”⁴

“When the lead agency approves a Project which will result in the occurrence of significant effects which are identified in the final EIR but are not avoided or substantially lessened, the agency shall state in writing the specific reasons to support its action based on the final EIR and/or other information in the record. The statement of overriding considerations shall be supported by substantial evidence in the record.”⁵

“If an agency makes a statement of overriding considerations, the statement should be included in the record of the Project approval and should be mentioned in the notice of determination. This statement does not substitute for, and shall be in addition to, findings required pursuant to Section 15091.”⁶

STATEMENT OF OVERRIDING CONSIDERATIONS

Based on the analysis contained in this EIR, there is No Environmental Impacts That Cannot Be Avoided and there is no irreversible impact; therefore, a Statement of Overriding Considerations is not necessary. The Project’s merits and objectives are discussed in the Project Description and are found to be consistent with the intent of Tulare County 2030 General Plan. In addition, the Project’s merits outweigh any unavoidable and unmitigable impacts warranting a Statement of Overriding Considerations.

PROJECT BENEFIT STATEMENTS

Project Benefit #1: **Jobs Creation.**

The Project is anticipated to create a total of 225 new full-time jobs for Tulare County residents.

³ Ibid. Section 15043.

⁴ Op. Cit. Section 15093 (a).

⁵ Op. Cit. Section 15093 (b).

⁶ Op. Cit. Section 15093 (c).

Project Benefit # 2: Aids in meeting County and State GHG reduction criteria

The Tulare County Climate Action Plan presents a comprehensive set of actions to reduce the County's direct and indirect GHG emissions, which includes setting forth Best Performance Standards (BPS) that the proposed Project will utilize. By incorporating BPS into proposed Project operations, the Project achieves at least a 9.1% reduction in emissions, which meets both the County emission reduction targets and GHG reduction criteria set forth by AB 32. This Project is consistent with and will result in real GHG reductions as detailed in Chapter 3.7.

Project Benefit #3: Increase Business Operations within Tulare County.

The proposed Project is intended to provide for a mix of service commercial businesses along the State Route 198 corridor. The project will promote economic vitality and the development of commercial uses, which would increase the amount of tax base the County could receive from this project.

Project Benefit # 4: Improve Existing Roadways, Pedestrian and Bicycle Routes

The Project will support the existing road network by making monetary contributions and/or physical improvements to assist in implementing the Complete Streets Program in the County of Tulare. The Project will also contribute to pedestrian pathways and bike routes in the County immediately east of the City of Visalia.

Project Benefit # 5: Implementation of Countywide General Plan Policies.

Tulare County's General Plan Policies that are in with the Project's purpose and objectives are included in each CEQA Checklist Resource chapter contained in Chapters 3-1 thru 3-18. One hundred thirty-eight (138) General Policies apply to this Project, as seen below:

I. AESTHETICS – 9 Policies

- SL-1.1 Natural Landscapes
- SL-1.2 Working Landscapes
- ERM-5.19 Night Sky Protection
- ERM-1.15 Minimize Lighting Impacts
- LU-7.2 Integrate Natural Features
- LU-7.4 Streetscape Continuity
- LU-7.9 Visual Access
- LU-7.14 Contextual and Compatible Design
- LU-7.19 Minimize Lighting Impacts

II. AGRICULTURAL LANDS & FORESTRY RESOURCES – 5 Policies

- AG-1.1 Primary Land Use
- AG-1.6 Conservation Easements
- AG-1.7 Preservation of Agricultural Lands
- AG-1.14 Right-to-Farm Noticing

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AG-1.17	Agricultural Water Resources
III.	AIR QUALITY – 10 Policies
AQ-1.2	Cooperation with Local Jurisdictions
AQ-1.3	Cumulative Air Quality Impacts
AQ-1.4	Air Quality Land Use Compatibility
AQ-1.5	California Environmental Quality Act (CEQA) Compliance
AQ-2.4	Transportation Management Associations
AQ-2.5	Ridesharing
AQ-3.4	Landscape
AQ-3.5	Alternative Energy Design
AQ-4.1	Air Pollution Control Technology
AQ-4.2	Dust Suppression Measures
IV.	BIOLOGICAL RESOURCES – 4 Policies
ERM-1.1	Protection of Rare and Endangered Species
ERM-1.2	Development in Environmentally Sensitive Areas
ERM-1.15	Minimize Lighting Impacts
ERM-1.16	Cooperate with Wildlife Agencies
V.	CULTURAL RESOURCES – 5 Policies
ERM-6.1	Evaluation of Cultural and Archaeological Resources
ERM-6.2	Protection of Resources with Potential State or Federal Designations
ERM-6.3	Alteration of Sites with Identified Cultural Resources
ERM-6.4	Mitigation
PFS-3.4	Alternative Rural Wastewater Systems
VI.	GEOLOGY AND SOILS – 6 Policies
ERM-7.2	Soil Productivity
ERM-7.3	Protection of Soils on Slopes
HS-2.1	Continued Evaluation of Earthquake Risks
HS-2.4	Structure Siting
HS-2.7	Subsidence
HS-2.8	Alquist-Priolo Act Compliance
VII.	GREENHOUSE GAS EMISSIONS – 3 Policies
AQ-1.7	Support Statewide Climate Change Solutions
AQ-1.8	Greenhouse Gas Emissions Reduction Plan/Climate Action Plan
AQ-1.9	Support Off-Site Measures to Reduce Greenhouse Gas Emissions

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VIII. HAZARDS AND HAZARDOUS MATERIALS – 3 Policies

- HS-4.1 Hazardous Materials
- HS-4.3 Incompatible Land Uses
- HS-4.4 Contamination Prevention

IX HYDROLOGY AND WATER QUALITY - 18 Policies

- PF-4.14 Compatible Project Design
- AG-1.17 Agricultural Water Resources
- HS-4.4 Contamination Prevention
- HS-5.2 Development in Floodplain Zones
- HS-5.4 Multi-Purpose Flood Control Measures
- HS-5.9 Floodplain Development Restrictions
- HS-5.11 Natural Design
- WR-2.1 Protect Water Quality
- WR-2.2 National Pollutant Discharge Elimination System (NDPES) Enforcement
- WR-2.3 Best Management Practices (BMPs)
- WR-2.4 Construction Site Sediment Control
- WR-2.5 Major Drainage Management
- WR-2.6 Degraded Water Resources
- WR-2.8 Point Source Control
- WR-3.3 Adequate Water Availability
- WR-3.5 Use of Native and Drought Tolerant Landscaping
- WR-3.6 Water Use Efficiency
- WR-3.10 Diversion of Surface Water

X. LAND USE AND PLANNING - 13 Policies

- PF-1.2 Location of Urban Development
- PF-4.1 CACUABs for Cities
- PF-4.13 City Design Standards
- PF-4.15 Coordination with Cities on Development Proposals
- PF-4.17 Cooperation with Individual Cities
- PF-4.27 Impacts of Development within the County on City Facilities and County Facilities
- LU-3.8 Rural Residential Interface
- LU-4.1 Neighborhood Commercial Uses
- LU-4.3 Commercial Service Locations
- LU-4.5 Commercial Building Design
- LU-4.6 Commercial Storage Facilities
- LU-7.16 Water Conservation
- PFS-1.4 Standards of Approval

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XI MINERAL RESOURCES – 3 Policies

- ERM-2.1 Conserve Mineral Deposits
- ERM-2.3 Future Resource Development
- ERM-2.10 Incompatible Development

XII NOISE – 10 Policies

- HS-8.2 Noise Impacted Areas
- HS-8.3 Noise Sensitive Land Uses
- HS-8.4 Airport Noise Contours
- HS-8.6 Noise Level Criteria
- HS-8.11 Peak Noise Generators
- HS-8.13 Noise Analysis
- HS-8.14 Sound Attenuation Features
- HS-8.16 State Noise Insulation
- HS-8.18 Construction Noise
- HS-8.19 Construction Noise Control

XIII. POPULATION AND HOUSING – 17 Policies

Housing Policies 1.11, 1.14, 1.16, 1.61, 2.12, 2.25, 2.27, 3.13, 3.111, 3.113, 3.114, 3.115, 3.116, 4.11, 4.13, 4.15, and 4.23

XIV PUBLIC SERVICES – 10 Policies

- PFS-7.1 Fire Protection
- PFS-7.2 Fire Protection Standards
- PFS-7.3 Visible Signage for Roads and Buildings
- PFS-7.5 Fire Staffing and Response Time Standards
- PFS-7.6 Provision of Station Facilities and Equipment
- PFS-7.8 Law Enforcement Staffing Ratios
- PFS-7.9 Sheriff Response Time
- PFS-7.12 Design Features for Crime Prevention and Reduction
- PFS-8.1 Work with Local School Districts
- PFS-8.4 Library Facilities and Services

XV RECREATION – 1 Policy

- ERM-5.3 Park Dedication Requirements

XVI TRANSPORTATION/TRAFFIC – 5 Policies

- TC-1.13 Land Dedication for Roadways and Other Travel Modes
- TC-1.14 Roadway Facilities
- TC-1.15 Traffic Impact Study

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TC-1.16	County Level Of Service (LOS) Standards
LU-7.4	Streetscape Continuity

XVII. TRIBAL RESOURCES – 6 Policies

EMR-6.1	Evaluation of Cultural and Archaeological Resources
ERM-6.2	Protection of Resources with Potential State or Federal Designations
ERM-6.3	Alteration of Sites with Identified Cultural Resources
ERM-6.4	Mitigation
ERM-6.9	Confidentiality of Archaeological Sites
ERM-6.10	Grading Cultural Resources Sites

XVIII. UTILITIES AND SERVICE SYSTEMS - 10 Policies

PFS-2.3	Well Testing
PFS-3.1	Private Sewage Disposal Standards
PFS-3.2	Adequate Capacity
PFS-4.3	Development Requirements
PFS-4.4	Stormwater Retention Facilities
PFS-4.5	Detention/Retention Basins Design
PFS-4.7	NPDES Enforcement
PFS-5.3	Solid Waste Reduction
PFS-5.4	County Usage of Recycled Materials and Products
PFS-5.8	Hazardous Waste Disposal Capabilities

ACRONYMS

AB	Assembly Bill
CARB or ARB	California Air Resources Board
CAP	Climate Action Plan
CEQA	California Environmental Quality Act
EIR	Environmental Impact Report
GHG	Greenhouse Gases

REFERENCES

CEQA Guidelines Section 15126.2(c), 15043, 15091(a)(3), and 15093 (a)(b)(c)
Pub. Resources Code, §21081(a)(3)

Mitigation Monitoring and Reporting Program

Chapter 9

This Draft Mitigation Monitoring and Reporting Program (MMRP) has been prepared in compliance with State law and based upon the findings of the Draft Environmental Impact Report (EIR) for the proposed Project. The MMRP lists mitigation measures recommended in the draft EIR for the proposed Project and identifies monitoring and reporting requirements.

The CEQA Public Resources Code Section 21081.6 requires the Lead Agency decision making body is going to approve a project and certify the EIR that it also adopt a reporting or monitoring program for those measures recommended to mitigate or avoid significant/adverse effects of the environment identified in the EIR. The law states that the reporting or monitoring program shall be designed to ensure compliance during project implementation. The MMRP is to contain the following elements:

- **Action and Procedure.** The mitigation measures are recorded with the action and procedure necessary to ensure compliance. In some instances, one action may be used to verify implementation of several mitigation measures.
- **Compliance and Verification.** A procedure for compliance and verification has been outlined for each action necessary. This procedure designates who will take action, what action will be taken and when and by whom and compliance will be monitored and reported and to whom it will be report. As necessary the reporting should indicate any follow-up actions that might be necessary if the reporting notes the impact has not been mitigated.
- **Flexibility.** The program has been designed to be flexible. As monitoring progresses, changes to compliance procedures may be necessary based upon the recommendations by those responsible for the MMRP. As changes are made, new monitoring compliance procedures and records will be developed and incorporated into the program

Table 9-1 presents the Mitigation Measures identified for the proposed Project in this EIR. Each Mitigation Measure is identified by the impact number. For example, 4-1 would be the first Mitigation Measure identified in the Biological analysis of the draft EIR.

The first column of **Table 9-1** identifies the Mitigation Measure. The second column, entitled “Monitoring Timing/Occurrence,” identifies the time the Mitigation Measure should be initiated.

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The third column, “Frequency of Monitoring,” identifies the frequency of the monitoring that should take place to assure the mitigation is being or has been implemented to achieve the desired outcome or performance standard... The fourth column, “Agency Responsible for Monitoring,” names the party ultimately responsible for ensuring that the Mitigation Measure is implemented. The fifth column, “Method to Verify Compliance,” identifies the requirements for verification that the Mitigation Measure has been implemented. The last three columns will be used by the Lead Agency (County of Tulare) to ensure that individual Mitigation Measures have been complied with and are monitored.

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Table 9-1 Mitigation Monitoring and Reporting Program							
Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
BIOLOGICAL RESOURCES							
<i>Protection of Swainson's hawks and other raptors and migratory birds (including Loggerhead Shrike)</i>							
4-1. Pre-construction surveys shall be conducted to determine the presence of nesting birds if ground clearing or construction activities will be initiated during the breeding season (February 15 through September 15). Potential nesting areas on the proposed Project site and potential nesting areas within 500 feet of the site should be surveyed prior to June 5 th . Surveys shall be performed by a qualified biologist to verify the presence or absence of nesting birds. Construction shall not occur within a 500 foot buffer surrounding active nests of raptors or a 250 foot buffer surrounding active nests of migratory birds. If construction within these buffer areas is required or if nests must be removed to allow continuation of construction, then approval and specific removal methodologies should be obtained from California Department of Fish and Wildlife.	Prior to start of construction.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW	Field survey by a qualified Biologist.			
4-2. All trees which are suitable for Swainson's hawk nesting that are within 2,640 feet [0.5 mile] of construction activities shall be inspected by a qualified biologist.	Prior to construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW	Qualified biologist.			

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Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
<p>4-3. If potential Swainson's hawk nests are found during the inspection, then surveys shall be conducted at the following intensities, depending upon dates of initiation of construction:</p> <ul style="list-style-type: none"> If Swainson's hawks are detected to be actively nesting in trees within 2,640 feet of the construction area, construction shall not occur within this zone until after young Swainson's hawks have fledged (this usually occurs by early June). The nest shall be monitored by a qualified biologist to determine fledging date. If other nesting birds (particularly non-raptor species listed on the MTBA) are found actively nesting within 250 feet of the construction area, construction should be postponed until after young have fledged. The date of fledging should be determined by a qualified biologist. If construction cannot be delayed within this zone, the DFW and/or the USFWS shall be consulted and alternative protection measures required by the CDFW and/or the USFWS shall be followed. 	Prior to construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW	Qualified biologist.			

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**Table 9-1
Mitigation Monitoring and Reporting Program**

Table 9-1 Mitigation Monitoring and Reporting Program							
Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
<i>Protection of San Joaquin kit fox</i>							
4-4. A standardized pre-construction/pre-activity survey shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities or any Project activity likely to impact the San Joaquin kit fox. Surveys shall identify kit fox habitat features on the Project site and evaluate use by kit fox and, if possible, assess the potential impacts to the kit fox by the proposed activity. The status of all dens shall be determined and mapped. Written results of pre-construction/pre-activity surveys must be received by the USFWS within five days after survey completion and prior to the start of ground disturbance and/or construction activities.	Prior to construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW	Qualified biologist.			
4-5. Disturbance to all San Joaquin kit fox dens shall be avoided to the maximum extent possible.	Prior to construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW	Qualified biologist.			
4-6. If a natal/pupping den is discovered within the Project area or within 200-feet of the site boundary, USFWS shall be immediately notified and under no circumstances should the den be disturbed or destroyed without prior authorization. If the pre-construction/pre-activity	Prior to construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning Department	Qualified biologist.			

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Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
survey reveals an active natal pupping or new information, the Project applicant shall contact USFWS immediately to obtain the necessary take authorization/permit.							
4-7. Destruction of any den shall be accomplished by careful excavation until it is certain that no kit foxes are inside. The den shall be fully excavated, filled with dirt and compacted to ensure that kit foxes cannot reenter or use the den during the construction period.	Prior to construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW	Qualified biologist.			
4-8. If at any point during excavation, a kit fox is discovered inside the den, the excavation activity shall cease immediately and monitoring of the den as described above shall be resumed. Destruction of the den may be completed when, in the judgment of the qualified biologist, the animal has escaped without further disturbance from the partially destroyed den.	Prior to construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW	Qualified biologist.			
4-9. Project-related vehicles shall observe a daytime speed limit not to exceed 20-mph throughout the site in all proposed Project areas, except on county roads and State and Federal highways; this is particularly important at night when kit foxes are most active. Night-time construction shall be minimized to the extent possible. However if it does occur, then the	Prior to and during construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW	Qualified biologist.			

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Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
speed limit shall be reduced to 10-mph. Off-road traffic outside of designated project areas shall be prohibited.							
4-10. To prevent inadvertent entrapment of kit fox or other animals during the construction phase of the proposed Project, all excavated, steep-walled holes or trenches more than 2-feet deep shall be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the USFWS and the California Department of Fish and Wildlife shall be contacted as noted under Mitigation Measure 4-17.	Prior to and during construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW	Qualified biologist.			
4-11. Kit fox are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods shall be thoroughly inspected for kit fox before the pipe is used or moved, buried, or capped in any way. If a kit fox is	Prior to and during construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW	Qualified biologist.			

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Table 9-1
Mitigation Monitoring and Reporting Program

Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
discovered inside a pipe, that section of pipe shall not be moved until the CFW has been consulted. If necessary, and under the direct supervision of a qualified biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped.							
4-12. All food-related trash outside of the enclosed facility such as wrappers, cans, bottles, and food scraps shall be disposed of daily in securely closed containers and removed at least once a week during both construction and operational phases.	Prior to and during construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW	Qualified biologist.			
4-13. No pets, such as dogs or cats, shall be allowed on the Project site in order to prevent harassment, mortality of kit fox, or destruction of dens.	Prior to and during construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW	Qualified biologist.			
4-14. Use of rodenticides and herbicides in Project areas shall be restricted. If rodent control must be used it shall be limited to the use of zinc phosphide because of its demonstrated lower risk to kit fox.	Prior to and during construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW	Qualified biologist.			

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Table 9-1
Mitigation Monitoring and Reporting Program

Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
4-15. A representative shall be appointed by the Project Applicant to serve as the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name, telephone number, or other pertinent contact information shall be provided to the USFWS.	Prior to and during construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW	Qualified biologist.			
4-16. An employee education program shall be conducted to alert employees of potential impacts to kit fox or other species of concern. The program shall consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program shall include the following: A description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the Project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during Project construction and implementation. A fact sheet conveying this information shall be prepared for distribution to the previously referenced people and anyone else who may enter the Project site.	Prior to and during construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW nt	Qualified biologist.			

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Mitigation Monitoring and Reporting Program

Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
<p>4-17. Any contractor, employee, or military or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative. The Sacramento Fish and Wildlife Office and CFW shall be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The Sacramento Fish and Wildlife Office contact is:</p> <p style="text-align: center;">Mr. Paul Hoffman 1701 Nimbus Road, Suite A, Rancho Cordova, California 95670 (530) 934-9309</p>	Prior to and during construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW	Qualified biologist.			
<p>4-18. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed shall also be provided to Fish and Wildlife at the address below.</p> <p style="text-align: center;">Endangered Species Division 2800 Cottage Way, Suite W2605 Sacramento, California 95825-1846 (916) 414-6620 or (916) 414-6600</p>	Prior to and during construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning and/or CDFW Department and/or CDFW	Qualified biologist.			

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**Table 9-1
Mitigation Monitoring and Reporting Program**

Table 9-1 Mitigation Monitoring and Reporting Program							
Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
<i>Protection of Burrowing Owl</i>							
4-19. In accordance with CDFG's 2012 <i>Staff Report on Burrowing Owl Mitigation</i> , a qualified biologist shall conduct three surveys for burrowing owls where potential burrowing owl habitat occurs within 500 feet of Project activities. Surveys shall occur during the peak breeding season for this species (15 April through 15 July), and spaced three weeks apart. If active burrowing owl burrows are identified within 500 feet of the Project site, then avoidance, take avoidance surveys, site surveillance, minimization, and buffer mitigation measures shall be implemented, in accordance with the 2012 CDFG <i>Staff Report</i> and direct consultation with CFW.	Prior to construction-related activities.	Retention of professional biologist/ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Planning Department and/or CDFW	Qualified biologist.			
CULTURAL RESOURCES							
5-1. In the event that historical, archaeological or paleontological resources are discovered during site excavation, the County shall require that grading and construction work on the project site be immediately suspended until the significance of the features can be determined by a qualified archaeologist or paleontologist. In this event, the specialists shall provide recommendations for measures necessary to protect any site determined to contain or constitute an historical resource, a unique archaeological resource, or a unique	During Construction	Daily or as needed throughout the construction period if suspicious resources are discovered	County of Tulare Planning Department via field evaluation of the resource finds by a qualified archaeologist	A qualified archaeologist shall document the results of field evaluation and shall recommend further actions that shall be taken to mitigate for unique resource			

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**Table 9-1
Mitigation Monitoring and Reporting Program**

Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
paleontological resource, or to undertake data recovery, excavation analysis, and curation of archaeological or paleontological materials. County staff shall consider such recommendations and implement them where they are feasible in light of Project design as previously approved by the County.				or human remains found, consistent with all applicable laws including CEQA.			
5-2. The project proponent shall avoid and minimize impacts to paleontological resources. If a potentially significant paleontological resource is encountered during ground disturbing activities, all construction within a 100-foot radius of the find shall immediately cease until a qualified paleontologist determines whether the resources requires further study. The project proponent shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The paleontologist shall notify the Tulare County Resource Management Agency and the project proponent of the procedures that must be followed before construction is allowed to resume at the location of the find. If the find is determined to be significant and the Tulare County Resource Management Agency determines avoidance is not feasible, the paleontologist shall design and implement a data recovery plan consistent with applicable standards. The plan shall be	During Construction	Daily or as needed throughout the construction period if suspicious resources are discovered	County of Tulare Planning Department via field evaluation of the resource finds by a qualified archaeologist	A qualified archaeologist shall document the results of field evaluation and shall recommend further actions that shall be taken to mitigate for unique resource or human remains found, consistent with all applicable laws including CEQA.			

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Table 9-1
Mitigation Monitoring and Reporting Program

Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
submitted to the Tulare County Resource Management Agency for review and approval. Upon approval, the plan shall be incorporated into the project.							
<p>5-3. Consistent with Section 7050.5 of the California Health and Safety Code and (CEQA Guidelines) Section 15064.5, if human remains of Native American origin are discovered during project construction, it is necessary to comply with State laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (Public Resources Code Sec. 5097). In the event of the accidental [that is, unanticipated] discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:</p> <ol style="list-style-type: none"> 1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until: <ol style="list-style-type: none"> a. The Tulare County Coroner/Sheriff must be contacted to determine that no investigation of the cause of death is required; and b. If the coroner determines the remains to be Native American: <ol style="list-style-type: none"> i. The coroner shall contact the 	During Construction	Daily or as needed throughout the construction period if suspicious resources are discovered	County of Tulare Planning Department via field evaluation of the resource finds by a qualified archaeologist	A qualified archaeologist shall document the results of field evaluation and shall recommend further actions that shall be taken to mitigate for unique resource or human remains found, consistent with all applicable laws including CEQA.			

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Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
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<p>Native American Heritage Commission within 24 hours.</p> <p>ii. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.</p> <p>iii. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code section 5097.98, or</p> <p>2. Where the following conditions occur, the landowner or his/her authorized representative shall reburial the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.</p> <p>a. The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after</p>							

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Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
<p>being notified by the commission.</p> <p>b. The descendant fails to make a recommendation; or</p> <p>c. The landowner or his authorized representative rejects the recommendation of the descendent.</p>							
HYDROLOGY AND WATER QUALITY							
<p>9-1. Once the well is retrofitted for the proposed project, a second round of sampling and analysis shall be conducted. The southern well that was not sampled shall also be sampled with analysis once it is retrofitted for the proposed project. Sampling and analysis shall occur during the initial phases of retrofitting; specifically, during pump testing. If water quality does not meet the State of California standards as discussed above, steps shall be taken during the design of the site such as disinfection, to ensure the water is potable for proposed project use. Once the redesign is completed, the well shall undergo another round of sampling and analysis. This procedure shall continue until the quality of water produced by the well meets the State of California standards.</p>	Prior to and during Construction	Tested water is to State of California standards.	TCEHSD	TCEHSD			
<p>9-2. The project applicant shall prepare a Storm Water Pollution Prevention Plan (SWPPP) according to the latest regulations to</p>	Prior to Construction	SWPPP acceptance.	County of Tulare Planning Department	Construction Contractor			

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Mitigation Monitoring and Reporting Program

Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
be retained onsite. The SWPPP must include best management practices that, when implemented, prevent storm water quality degradation to the extent practical by preventing sediments and other pollutants from leaving the Project site.							
9-3. New sewage disposal systems shall be designed by an Engineer, Registered Environmental Health Specialist, Geologist, or other competent persons, all of whom must be registered and/or licensed professionals knowledgeable and experienced in the field of sewage disposal system and design. The specifications and engineering data for the system shall be submitted to the TCEHSD for review and approval prior to the issuance of a building permit.	Prior to Issuance of Building Permit.	Submittal of disposal system design.	TCEHSD	TCEHSD			
9-4. A tertiary treatment plant shall be constructed on site which will allow sewer effluent to meet the State of California standards set in place for water reuse. Tertiary treated water shall be utilized for landscape irrigation.	During construction.	Verified on submitted site plans.	Tulare County Building Inspector	Tulare County Building Inspector			
9-5. All new construction shall have water conserving fixtures (water closets, low flow showerheads, low flow sinks, etc.) New urinals shall also conserve water through waterless, zero flush, or other water conservation technique and/or technology.	Prior to Issuance of Building Permit.	Verified on submitted site plans.	Tulare County Building Inspector	Tulare County Building Inspector			

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Table 9-1
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Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
9-6. The proposed Project shall conform to the Tulare County Water Efficient Landscaping Ordinance.	Prior to Issuance of Building Permit.	Verified on submitted site plans.	Tulare County Building Inspector	Tulare County Building Inspector			
9-7. No ground water shall be transported off-site for any use.	Prior to Issuance of Building Permit.	Verified on submitted site plans.	Tulare County Building Inspector	Tulare County Building Inspector			
TRANSPORTATION/TRAFFIC							
16-1. The Project Applicant will be responsible for paying fair share fees as identified in the Project Impact Contribution Percentage analysis (62.8%) for the improvements needed under the 2040 Plus Project scenario at Noble Avenue at SR 198 EB Ramps. The Applicant will work with Tulare County and/or Caltrans to establish timing and fee amounts to ensure implementation of the improvements listed in this analysis. This shall be made a condition of Project approval.	Prior to Issuance of Building Permit.	Payment of Fees	Tulare County Planning Department & Caltrans	Tulare County Planning Department & Caltrans			
TRIBAL CULTURAL RESOURCES							
17-1. In the event that historical, archaeological or paleontological resources are discovered during site excavation, the County shall require that grading and construction work on the Project site be immediately suspended until the significance of the features can be determined by a qualified archaeologist or	During Construction	Daily or as needed throughout the construction period if suspicious resources are discovered	Tulare County Planning Department	A qualified archaeologist shall document the results of field evaluation and shall recommend			

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**Table 9-1
Mitigation Monitoring and Reporting Program**

Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
paleontologist. In this event, the property owner shall retain a qualified archaeologist/paleontologist to provide recommendations for measures necessary to protect any site determined to contain or constitute an historical resource, a unique archaeological resource, or a unique paleontological resource or to undertake data recover, excavation analysis, and curation of archaeological or paleontological materials. County staff shall consider such recommendations and implement them where they are feasible in light of Project design as previously approved by the County.				further actions that shall be taken to mitigate for unique resource or human remains found, consistent with all applicable laws including CEQA.			
<p>17.-2. Consistent with Section 7050.5 of the California Health and Safety Code and (CEQA Guidelines) Section 15064.5, if human remains of Native American origin are discovered during Project construction, it is necessary to comply with State laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (Public Resources Code Sec. 5097). In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:</p> <p>1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent</p>	During Construction	Daily or as needed throughout the construction period if suspicious resources are discovered	Tulare County Planning Department	A qualified archaeologist shall document the results of field evaluation and shall recommend further actions that shall be taken to mitigate for unique resource or human remains found, consistent with all applicable			

Draft Environmental Impact Report
Sequoia Drive-In Business Park Project

**Table 9-1
Mitigation Monitoring and Reporting Program**

Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
<p>human remains until:</p> <p>a. The Tulare County Coroner/Sheriff must be contacted to determine that no investigation of the cause of death is required; and</p> <p>b. If the coroner determines the remains to be Native American:</p> <p>i. The coroner shall contact the Native American Heritage Commission within 24 hours.</p> <p>ii. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.</p> <p>iii. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code section 5097.98, or</p> <p>2. Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a</p>				laws including CEQA.			

Draft Environmental Impact Report
Sequoia Drive-In Business Park Project

Table 9-1
Mitigation Monitoring and Reporting Program

Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
<p>location not subject to further subsurface disturbance.</p> <p>a. The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.</p> <p>b. The descendant fails to make a recommendation; or</p> <p>c. The landowner or his authorized representative rejects the recommendation of the descendent.</p>							

Report Preparation

Chapter 10

PERSONS WHO PREPARED THIS REPORT

Key persons from the County of Tulare and the consulting firms that contributed to preparation of the Draft Environmental Impact Report (Draft EIR) are identified below:

REPORT PREPARED BY:

CRAWFORD AND BOWEN

113 N. Church St., Suite 302
Visalia, CA 93291



Travis Crawford, AICP, Principal Planner
Emily Bowen, LEED AP, Principal Planner

LEAD AGENCY:

COUNTY OF TULARE

RESOURCE MANAGEMENT AGENCY (RMA)

5961 South Mooney Blvd.
Visalia, CA 93277
(559) 624-7000



Jason Britt,	County Administrative Officer
Reed Schenke	RMA Director/Environmental Assessment Officer
Michael Washam,	Associate Director
Aaron Bock	Interim Assistant Director – Economic Development and Planning Branch
Hector Guerra,	Chief Environmental Planner

RMA STAFF WHO ASSISTED IN PREPARING THIS DOCUMENT:

- Jessica Willis, Planner IV, Environmental Planning Division
- Cheng Chi, Planner I, Environmental Planning Division

TECHNICAL REPORTS PREPARED BY:

4Creeks, Inc. – Air Quality Analysis Report

Air Quality Analysis Report, Sequoia Drive-In Business Park, Tulare County, CA. August 15, 2016. (Appendix “B” of this DEIR)

- Technical Memo dated April 26, 2018, prepared by Emily Bowen of Crawford and Bowen regarding the

4Creeks, Inc. – Geological, Hydrological & Sustainability Report

Geological, Hydrological & Sustainability Report for the Sequoia Drive-in Business Park. 2015. (Appendix “E” of this DEIR)

- Prepared by Craig M. Hartman, P.E.

4Creeks, Inc. –Greenhouse Gas Analysis Report

Greenhouse Gas Analysis Report, Sequoia Drive-In Business Park in Visalia, CA. August 17, 2015. (Appendix “F” of this DEIR)

4Creeks, Inc. – Traffic Impact Study

Traffic Impact Study, Sequoia Drive-In Business Park, July 7, 2015. (Appendix “G” of this DEIR)

Crawford and Bowen –Sequoia Drive-In Business Park Air Quality

Memo Subject: Sequoia Drive-In Business Park Air Quality. April 26, 2018. (Appendix “B” of this DEIR)

- Emily Bowen, LEED AP, Principal Planner

Kamansky’s Ecological Consulting – Reconnaissance Level Biological Evaluation

Reconnaissance-Level Biological Evaluation of Potential Impacts Sensitive and Listed Species on an approximately 47.17-Acre, Land Parcel in Farmersville, Tulare County, California. April 28, 2016. (Appendix “C” of this DEIR)

- Prepared by Bobby Kamansky, Principal Biologist

Appendix A

Notice of Preparation

NOTICE OF PREPARATION AND NOTICE OF SCOPING MEETING FOR AN ENVIRONMENTAL IMPACT REPORT

NOTICE IS HEREBY GIVEN of Tulare County's intent to prepare an Environmental Impact Report (EIR). A public scoping meeting to receive comments concerning the scope of this EIR will be held on Thursday, February 2, 2017, at 1:30 PM, in the Main Conference Room of the Resource Management Agency at 5961 South Mooney Blvd., Visalia, California 93277-9394.

1. **PROJECT:** Sequoia Drive-In Business Park Project
2. **APPLICANT/AGENT:** Castlewood Partners/4 Creeks
3. **PROJECT LOCATION:** 29421 Road 156, the southwest corner of Avenue 296 (Noble Avenue) and Road 156. The project is south of and adjacent to State Route 198, less than one mile east of the City of Visalia and less than one mile west of the City of Farmersville. The entire 46.17-acre site is within the Exeter USGS 7.5 minute quadrangle and is on Tulare County APNs 101-090-014, -015 and 101-100-009, -010. The site is within the NE ¼ portion of Section 35, Township 18 South, Range 25 East, MDB&M.
4. **PROJECT DESCRIPTION:** The Applicant is proposing to construct a 358,370 square foot business park consisting of a total of 30 buildings (46 units), access roads, and stormwater retention basins. The Project will be developed in four (4) separate phases of construction. Phase 1 will include a convenience market with gas pumps and an attached fast-food restaurant, along with five (5) separate commercial buildings for a total combined square footage of 68,340. Access into the development will occur on Road 156, and will eventually connect access from Noble Avenue during Phase 3. Phase 2 will construct 14 commercial buildings for a total combined square footage of 88,000, leaving a remainder lot for the existing cellular tower. Two access points into the development will occur on Road 156, providing a circle drive connecting part of Phase 1, and all of Phase 2 and Phase 4. Phase 3 will include ten (10) separate commercial buildings with one (1) remaining lot for a retention pond. A stormwater retention pond will be installed for on-site water storage in the event of extreme weather. The total square footage buildout for Phase 3 will be 104,000. Phase 4, the final phase, will include 13 commercial buildings and a remaining lot for a second stormwater retention pond for on-site water storage. The total square footage buildout for Phase 4 will be 98,030. To accommodate the proposed development, the following two actions will need to occur: an update to the existing development agreement, and Tulare County approval of a tentative subdivision map.
5. **ENVIRONMENTAL DOCUMENT:** Environmental Impact Report. The NOP is available on the County website at: <http://tularecounty.ca.gov/rma/index.cfm/documents-and-forms/planning-documents/environmental-planning/environmental-impact-reports/>
6. **NOTICE OF PREPARATION COMMENT PERIOD:** January 13, 2017 – February 13, 2017, at 5:00 p.m.

All interested parties are invited to attend and be heard. If you have any questions regarding this environmental document please call Hector Guerra, Chief Environmental Planner, at (559) 624-7121 (**para Español llame Jose Saenz (559) 624-7102**). If you challenge the decision on any of the foregoing matters in court, you may be limited to raising only those issues you or someone else raised at the public hearing described in this notice, or in written correspondence delivered to the Tulare County Resource Management Agency, Economic Development and Planning Branch within the review period described herein. In compliance with the American Disabilities Act, if you need special assistance to participate in meetings call (559) 624-7000 48-hours in advance of the meeting.



RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Michael Washam

Reed Schenke

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

BENJAMIN RUIZ, JR., DIRECTOR

January 12, 2017

State Clearinghouse
1400 Tenth Street, Room 100
Sacramento, CA 95814

Re: Notice of Preparation (NOP) and Notice of Completion (NOC) Submittals for the Sequoia Drive-In Business Park Project

Attn: State Clearinghouse:


Attached are the NOC and 15 copies of the NOP for the above referenced project. Tulare County respectfully request to have the State Clearinghouse distribute the notices to the agencies denoted with an "X" on the attached NOC Reviewing Agencies Checklist.

The NOP will be made available on the County website on Friday, January 12, 2017, at:

<http://tularecounty.ca.gov/rma/index.cfm/documents-and-forms/planning-documents/environmental-planning/environmental-impact-reports/>

If you have questions or need additional materials, please contact me by phone or email. Thank you for your assistance.

Sincerely,



Hector Guerra
Chief Environmental Planner
(559) 624-7122
hguerra@co.tulare.ca.us

Enclosures: Notice of Completion Form (1)
Notice of Preparation (15)

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613

For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #**Project Title:** Sequoia Drive-In Business Park ProjectLead Agency: Tulare County Resource Management AgencyContact Person: Hector Guerra, Chief Env. PlannerMailing Address: 5961 S. Mooney Blvd.Phone: 559-624-7121City: VisaliaZip: 93277-9394County: Tulare County**Project Location:** County: Tulare City/Nearest Community: Visalia / FarmersvilleCross Streets: Ave 296 (Noble Ave) & Rd 156Zip Code: 93292Lat./Long: 36°19'30.84" N / 119°13'37.13" WTotal Acres: 46.17Assessor's Parcel No: APNs 101-090-014, -015 & 101-100-009, -010 Section: 26 Township 16 S, Range 22E, M.D.B. & EWithin 2 Miles: State Hwy: SR 198 Airports: _____ Railways: Burlington Northern Santa FeWaterways: Tulare Irrigation Canal, Cameron Creek, Packwood Creek, Oakes Ditch, Evans Ditch, Mill Creek, Kaweah River, Flemings Ditch, Saint John's River; Deep Creek; various Tulare Irrigation District canalsSchools: J.E. Hester Elementary, Farmersville Jr. High, Farmersville High, George L. Snowden Elementary, Pinkham Elementary, Mineral King Elementary, Golden Oak Elementary, Valley Oak Middle, and Golden West High**CEQA:** ☒ NOP ☐ Draft EIR
☐ Early Cons ☐ Supplement/Subsequent EIR
☐ Neg Dec ☐ Draft EIS
☐ Mit Neg Dec Other: _____**NEPA:** ☐ NOI ☐ Joint Document
☐ EA ☐ Final Document
☐ Other _____
☐ FONSI**Local Action Type:**

<input type="checkbox"/> General Plan Update	<input type="checkbox"/> Specific Plan	<input type="checkbox"/> Rezone	<input type="checkbox"/> Annexation
<input type="checkbox"/> General Plan Amendment	<input type="checkbox"/> Master Plan	<input type="checkbox"/> Prezone	<input type="checkbox"/> Redevelopment
<input type="checkbox"/> General Plan Element	<input type="checkbox"/> Planned Unit Dev.	<input type="checkbox"/> Use Permit	<input type="checkbox"/> Coastal Permit
<input type="checkbox"/> Community Plan	<input type="checkbox"/> Site Plan	<input checked="" type="checkbox"/> Land Division (Sub.)	<input checked="" type="checkbox"/> Other <u>Development Agmnt.</u>

Development Type:

<input type="checkbox"/> Residential: Units _____ Acres _____	<input type="checkbox"/> Water Facilities: _____	Type _____ MGD _____
<input type="checkbox"/> Office: Sq. ft. _____ Acres _____ Employees _____	<input type="checkbox"/> Transportation: _____	Type _____
<input checked="" type="checkbox"/> Commercial: Sq. ft. <u>358,370</u> Acres <u>46.17</u> Employees _____	<input type="checkbox"/> Mining: _____	Mineral _____
<input type="checkbox"/> Industrial: Sq. ft. _____ Acres _____ Employees _____	<input type="checkbox"/> Power: _____	Type _____ MW _____
<input type="checkbox"/> Educational: _____	<input type="checkbox"/> Waste Treatment: _____	Type _____ MGD _____
<input type="checkbox"/> Recreational: _____	<input type="checkbox"/> Hazardous Waste: _____	Type _____
<input type="checkbox"/> Other: _____		

Project Issues Discussed in Document:

<input checked="" type="checkbox"/> Aesthetic/Visual	<input type="checkbox"/> Fiscal	<input checked="" type="checkbox"/> Recreation/Parks	<input checked="" type="checkbox"/> Vegetation
<input checked="" type="checkbox"/> Agricultural Land	<input checked="" type="checkbox"/> Flood Plain/Flooding	<input checked="" type="checkbox"/> Schools/Universities	<input checked="" type="checkbox"/> Water Quality
<input checked="" type="checkbox"/> Air Quality	<input checked="" type="checkbox"/> Forest Land/Fire Hazard	<input type="checkbox"/> Septic Systems	<input checked="" type="checkbox"/> Water Supply/Groundwater
<input checked="" type="checkbox"/> Archaeological/Historical	<input checked="" type="checkbox"/> Geologic/Seismic	<input type="checkbox"/> Sewer Capacity	<input checked="" type="checkbox"/> Wetland/Riparian
<input checked="" type="checkbox"/> Biological Resources	<input checked="" type="checkbox"/> Minerals	<input checked="" type="checkbox"/> Soil Erosion/Compaction/Grading	<input checked="" type="checkbox"/> Growth Inducing
<input type="checkbox"/> Coastal Zone	<input checked="" type="checkbox"/> Noise	<input checked="" type="checkbox"/> Solid/Waste	<input checked="" type="checkbox"/> Land Use
<input checked="" type="checkbox"/> Drainage/Absorption	<input checked="" type="checkbox"/> Population/Housing Balance	<input checked="" type="checkbox"/> Toxic/Hazardous	<input checked="" type="checkbox"/> Cumulative Effects
<input type="checkbox"/> Economic/Jobs	<input checked="" type="checkbox"/> Public Services/Facilities	<input checked="" type="checkbox"/> Traffic/Circulation	<input checked="" type="checkbox"/> Other: <u>Utilities</u>
<input checked="" type="checkbox"/> Other: <u>Tribal Cultural Resources</u>			

Present Land Use/Zoning/General Plan Designation:

The site is currently in a fallow state of agricultural use. The Tulare Irrigation District canal runs through the middle of site. The site was previously a drive-in movie theater (south portion). There is currently a mobile communication tower on the site. Annual grassland and ruderal ground occupy the site.

The entire Project site is zoned PD-C-3-SC (Planned Development, Service Commercial, Scenic Corridor Combining Zone).

The Visalia Area Land Use Plan (a County Adopted City General Plan,) A Component of the Planning Framework, Land Use, and Transportation and Circulation Elements of the Tulare County General Plan designates the site "Agricultural." The Project site is located within the Tulare County East Visalia Urban Development Boundary and the City of Visalia Urban Area Boundary.

Project Description:

The construction of the Sequoia Drive-In Business Park in Tulare County, CA will comprise of four (4) separate phases of construction. A total of 30 buildings (46 units) and 358,370 square feet of building space will be constructed for the complete buildout for all phases of construction.

Phase 1 will include a convenience market with gas pumps and an attached fast-food restaurant, along with five (5) separate commercial buildings for a total combined square footage of 68,340. Access into the development will occur on Road 156, and will eventually connect access from Noble Avenue during Phase 3.

Phase 2 will construct 14 commercial buildings for a total combined square footage of 88,000, leaving a remainder lot for the existing cellular tower. Two access points into the development will occur on Road 156, providing a circle drive connecting part of Phase 1, and all of Phase 2 and Phase 4.

Phase 3 will include ten (10) separate commercial buildings with one (1) remaining lots for a retention pond. A stormwater retention pond will be installed for on-site water storage in the event of extreme weather. The total square footage buildout for phase 3 will be 104,000.

Phase 4, the final phase, will include 13 commercial buildings and a remaining lot for a second stormwater retention pond for on-site water storage. The total square footage buildout for Phase 4 will be 98,030.

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with an "X." If the document has already been sent to the agency, denote that with an "S."

<input checked="" type="checkbox"/> Air Resources Board	<input checked="" type="checkbox"/> Office of Emergency Services
<input type="checkbox"/> Boating & Waterways, Department of	<input checked="" type="checkbox"/> Office of Historic Preservation
<input type="checkbox"/> California Highway Patrol	<input type="checkbox"/> Office of Public School Construction
<input checked="" type="checkbox"/> Caltrans District # 6	<input type="checkbox"/> Parks & Recreation
<input type="checkbox"/> Caltrans Division of Aeronautics	<input type="checkbox"/> Pesticide Regulation, Department of
<input checked="" type="checkbox"/> Caltrans Planning	<input checked="" type="checkbox"/> Public Utilities Commission
<input checked="" type="checkbox"/> Central Valley Flood Protection Board	<input checked="" type="checkbox"/> Regional WQCB # 5 (attn: Doug Patteson)
<input type="checkbox"/> Cochella Valley Mtns. Conservancy	<input checked="" type="checkbox"/> Resources Agency
<input type="checkbox"/> Coastal Commission	<input type="checkbox"/> Resources Recycling and Recovery, Department of
<input type="checkbox"/> Colorado River Board Commission	<input type="checkbox"/> S.F. Bay Conservation & Development Commission
<input checked="" type="checkbox"/> Conservation, Department of	<input type="checkbox"/> San Gabriel & Lower L.A. Rivers and Mtns Conservancy
<input type="checkbox"/> Corrections, Department of	<input type="checkbox"/> San Joaquin River Conservancy
<input type="checkbox"/> Delta Protection Commission	<input type="checkbox"/> Santa Monica Mountains Conservancy
<input type="checkbox"/> Education, Department of (Public School Construction)	<input type="checkbox"/> State Lands Commission
<input type="checkbox"/> Energy Commission	<input type="checkbox"/> SWRCB: Clean Water Grants
<input checked="" type="checkbox"/> Fish & Game Region #4	<input checked="" type="checkbox"/> SWRCB: Water Quality
<input type="checkbox"/> Food & Agriculture, Department of	<input type="checkbox"/> SWRCB: Water Rights
<input type="checkbox"/> Forestry & Fire Protection, Department of	<input type="checkbox"/> Tahoe Regional Planning Agency
<input type="checkbox"/> General Services, Department of	<input checked="" type="checkbox"/> Toxic Substances Control, Department of
<input type="checkbox"/> Health Services, Department of	<input checked="" type="checkbox"/> Water Resources, Department of
<input type="checkbox"/> Housing & Community Development	<input type="checkbox"/> Other: <u>San Joaquin Valley Air Pollution Control District</u>
<input type="checkbox"/> Integrated Waste Management Board	<input type="checkbox"/> Other: <u>City of Visalia</u>
<input checked="" type="checkbox"/> Native American Heritage Commission	<input type="checkbox"/> Other: <u>City of Farmersville</u>
<input type="checkbox"/> Other: <u>U.S. Fish and Wildlife Service</u>	<input type="checkbox"/> Other: <u>Tulare LAFCo</u>
<input type="checkbox"/> Other: <u>U.S. Army Corps of Engineers</u>	<input type="checkbox"/> Other: <u>Tulare County Association of Governments</u>
<input type="checkbox"/> Other: <u>Southern California Edison</u>	<input type="checkbox"/> Other: <u>Tulare County Health & Human Services Agency</u>
<input type="checkbox"/> Other: <u>Southern California Gas Company</u>	<input type="checkbox"/> Other: <u>Tulare County RMA – Planning</u>
<input type="checkbox"/> Other: <u>Tulare County Office of Emergency Services</u>	<input type="checkbox"/> Other: <u>Tulare County RMA – Fire</u>
<input type="checkbox"/> Other: <u>Tulare County Fire Warden</u>	<input type="checkbox"/> Other: <u>Tulare County RMA – Flood Control</u>
<input type="checkbox"/> Other: <u>Tulare County Sheriff's Office</u>	<input type="checkbox"/> Other: <u>Tulare County RMA – Public Works</u>

Local Public Review Period (to be filled in by lead agency)

Starting Date: January 13, 2017

Ending Date: February 13, 2017

Lead Agency (Complete if applicable):

Consulting Firm: 4 Creeks, Inc.
Address: 324 S. Santa Fe Street, Suite A
City/State/Zip: Visalia, CA 93292
Contact: Craig Hartman
Phone: (559) 902-3052

Applicant: Castlewood Partners
Address: P.O. Box 2622
City/State/Zip: Visalia, CA 93279
Phone: (559) 625-0762

Signature of Lead Agency Representative: _____

Hector Guerra, Chief Environmental Planner

Date: 1/12/17

Signature of Lead Agency Representative: _____

Benjamin Ruiz, Jr., RMA Director / Environmental Assessment Officer

Date: 1/12/17

NOTICE OF PREPARATION

To: State Clearinghouse
PO Box 3044/ 1400 Tenth St
Sacramento CA 95814

From: County of Tulare – RMA
5961 S Mooney Blvd
Visalia CA 93277

Date: January 12, 2017

Subject: **Notice of Preparation (NOP) of a Draft Environmental Impact Report (EIR)**

Project Title: Sequoia Drive-In Business Project

Project Applicant: Castlewood Partners

Project Location: The project is located at 29421 Road 156, the southwest corner of Avenue 296 (Noble Avenue) and Road 156. The project is south of and adjacent to State Route 198, less than one mile east of the City of Visalia and less than one mile west of the City of Farmersville. The entire 46.17-acre site is within the Exeter USGS 7.5 minute quadrangle and is on Tulare County APNs 101-090-014, -015 and 101-100-009, -010. The site is within the NE ¼ portion of Section 35, Township 18 South, Range 25 East, MDB&M.

Tulare County Resource Management Agency (RMA) will be the Lead Agency and will prepare an Environmental Impact Report (EIR) for the project identified below. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project.

The project description, location, and the potential environmental effects are contained in the attached materials. The NOP is available on the County website at:

<http://tularecounty.ca.gov/rma/index.cfm/documents-and-forms/planning-documents/environmental-planning/environmental-impact-reports/>

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

A scoping meeting is scheduled for **Thursday, February 2, 2017, at 1:30 p.m.** in the Main Conference Room of the Tulare County Resource Management Agency at the address shown above.

Please direct your response to Hector Guerra, Chief Environmental Planner at the address shown above. He may be contacted by e-mail at hguerra@co.tulare.ca.us or by telephone at 559-624-7121.

Please provide us with the name of a contact person in your agency.

Signature: 

Date: 1/12/17

Title: Chief Environmental Planner

Signature: 

Date: 1/12/17

Title: Resource Management Agency Director/Environmental Assessment Officer

Reference: California Code of Regulations, Title 14, (CEQA Guidelines) Sections 15082(a), 15103, 15375

PROJECT LOCATION AND SETTING

The proposed Sequoia Drive-In Business Park (Project) will be located at the southwest corner of Road 156 and Avenue 296 (Noble Avenue). The project is south of and adjacent to State Route 198, less than one mile east of the City of Visalia and less than one mile west of the City of Farmersville. The 46.17-acre site is located on Tulare County APNs 101-090-014, -015 and 101-100-009, -010. The site is currently zoned PD-C-3-SC (Planned Development, Service Commercial, Scenic Corridor Combining Zone) and is located within the Exeter USGS 7.5 Minute Quadrangle. The proposed Project site lies within the NE ¼ portion of Section 35, Township 18 South, Range 25 East, MDB&M.

PROJECT DESCRIPTION

In accordance with the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.), the County of Tulare Resource Management Agency (RMA) will be preparing an Draft Environmental Impact Report (EIR) to evaluate the environmental effects associated with the development of the proposed Sequoia Drive-In Business Park.

The Applicant is proposing to construct a 358,370 square foot business park consisting of a total of 30 buildings (46 units), access roads, and stormwater retention basins. The Project will be developed in four (4) separate phases of construction.

Phase 1 will include a convenience market with gas pumps and an attached fast-food restaurant, along with five (5) separate commercial buildings for a total combined square footage of 68,340. Access into the development will occur on Road 156, and will eventually connect access from Noble Avenue during Phase 3.

Phase 2 will construct 14 commercial buildings for a total combined square footage of 88,000, leaving a remainder lot for the existing cellular tower. Two access points into the development will occur on Road 156, providing a circle drive connecting part of Phase 1, and all of Phase 2 and Phase 4.

Phase 3 will include ten (10) separate commercial buildings with one (1) remaining lots for a retention pond. A stormwater retention pond will be installed for on-site water storage in the event of extreme weather. The total square footage buildout for phase 3 will be 104,000.

Phase 4, the final phase, will include 13 commercial buildings and a remaining lot for a second stormwater retention pond for on-site water storage. The total square footage buildout for Phase 4 will be 98,030.

The local electricity and gas service provider is Southern California Edison and Southern California Gas; respectively. As such, the Project will likely receive these utilities from Southern California Edison and Southern California Gas. The Applicant proposes receiving water supplied through an on-site domestic well and proposes that sewage be treated with an on-site engineered septic/wastewater treatment system. USA Waste is the franchise solid waste disposal service for the Project area.

To accommodate the proposed development, the following two actions will need to occur: (1) update to the existing Development Agreement and (2) Tulare County approval of a Tentative Subdivision Map.

If you require additional information related to this notice, please contact:

Hector Guerra, Chief Environmental Planner
hguerra@co.tulare.ca.us or at (559) 624-7121

REVIEWING AGENCIES AND POTENTIAL APPROVALS REQUIRED:

The following agencies may have jurisdiction over elements of the proposed Project:

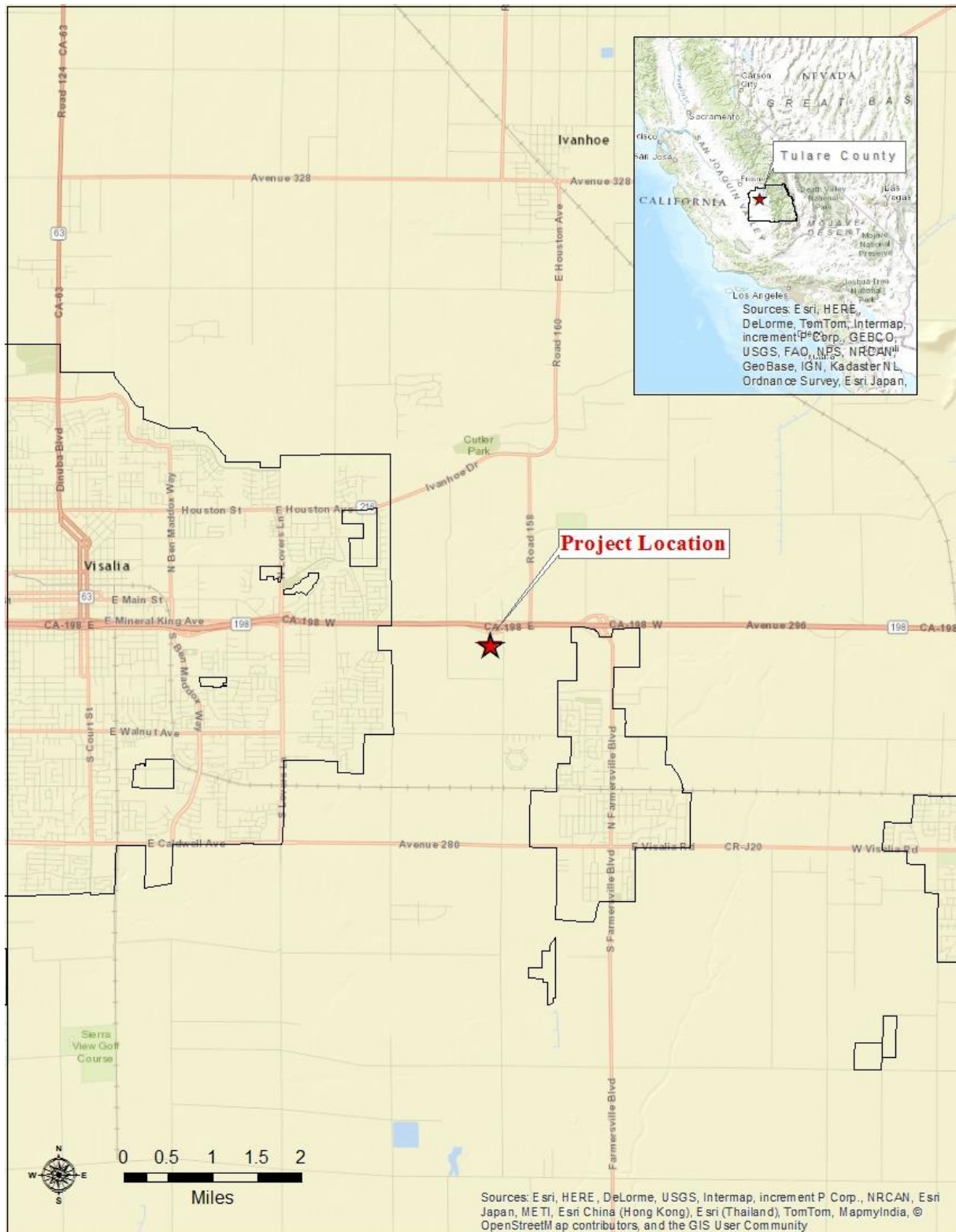
State and Federal:

- California Air Resources Board
- California Department of Conservation
- California Department of Fish and Wildlife
- California Department of Toxic Substances Control
- California Department of Transportation
- California Department of Water Resources
- California Native American Heritage Commission
- California Office of Emergency Services
- California Office of Historic Preservation
- California Public Utilities Commission
- California Resources Agency
- California State Water Resources Control Board
- United States Army Corps of Engineers
- United States Fish and Wildlife Service

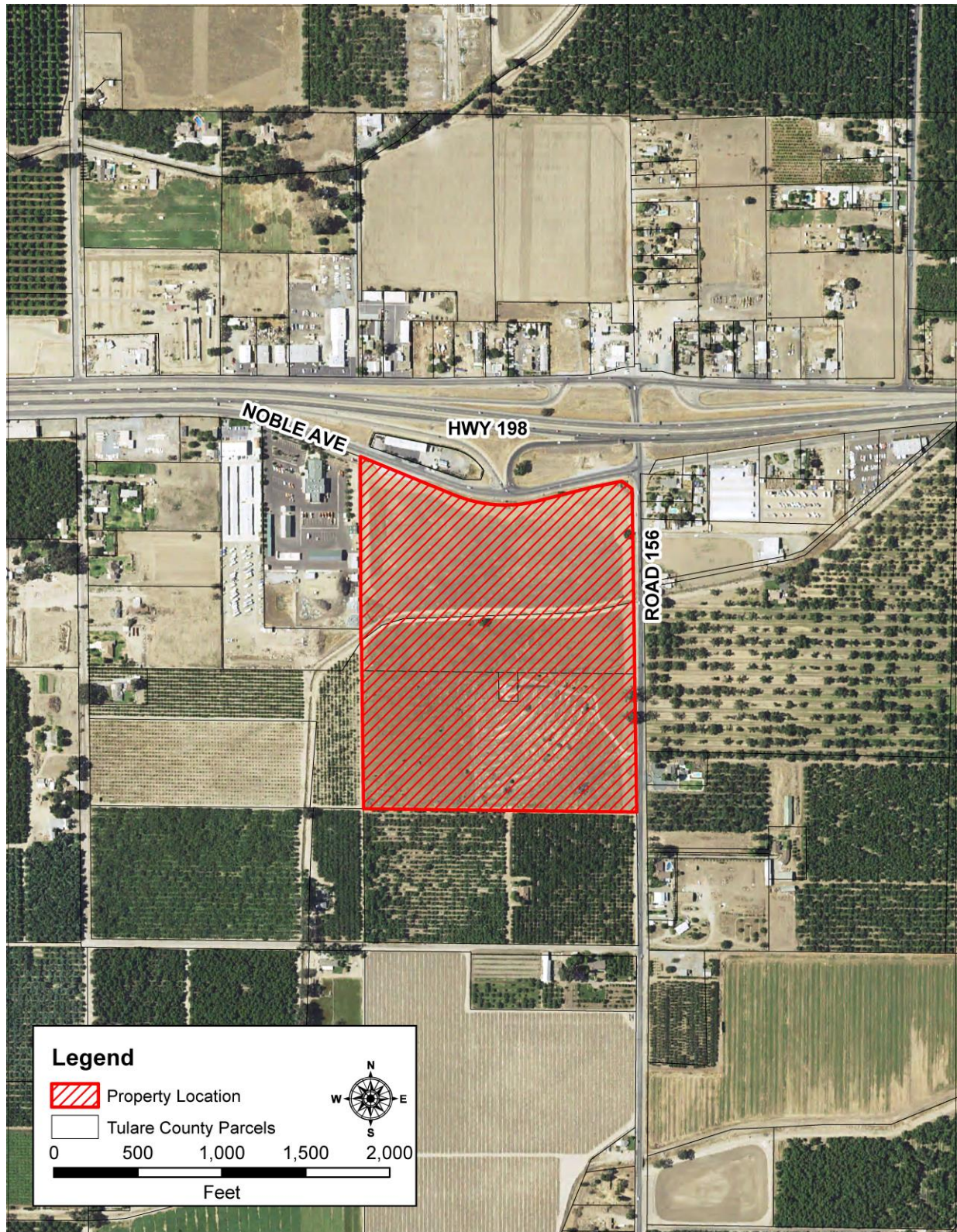
Local and Regional:

- Central Valley Flood Protection Board
- Central Valley Regional Water Quality Control Board
- City of Farmersville
- City of Visalia
- San Joaquin Valley Unified Air Pollution Control District
- Southern California Edison
- Southern California Gas Company
- Tulare County Association of Governments
- Tulare County Fire Warden
- Tulare County Health and Human Services Agency (Environmental Health)
- Tulare County Local Agency Formation Commission
- Tulare County Office of Emergency Services
- Tulare County Resource Management Agency (Fire, Flood Control, Planning, Public Works)
- Tulare County Sheriff's Office

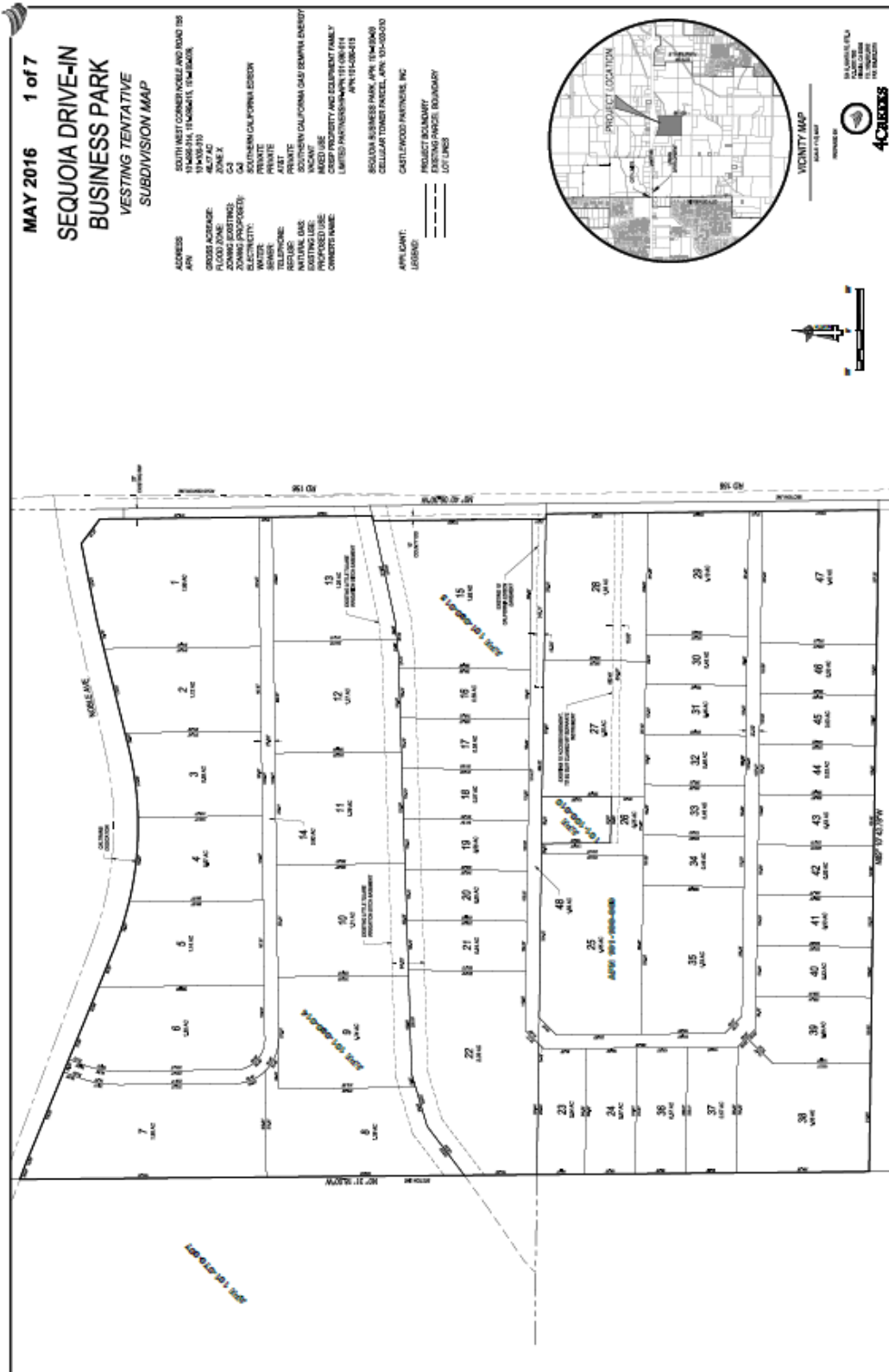
Regional Location Map for the Sequoia Drive-In Business Park Project



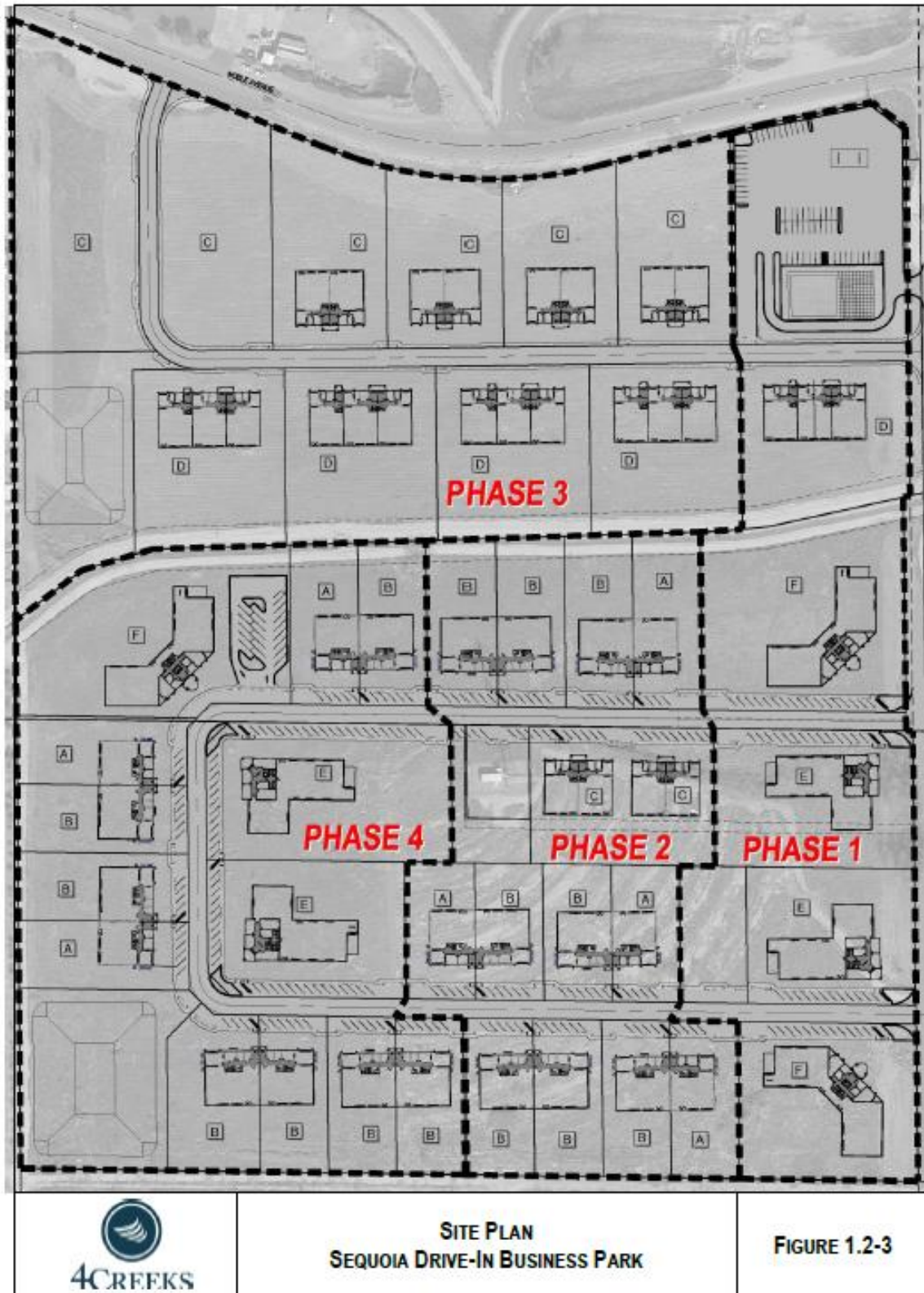
Vicinity Map for the Sequoia Drive-In Business Park Project



Subdivision Map for the Sequoia Drive-In Business Park Project



Site Map for the Sequoia Drive-In Business Park Project



SUMMARY OF POTENTIAL ENVIRONMENTAL EFFECTS

The EIR will address all checklist items contained in Appendix G of the State CEQA Guidelines. The analysis will address the probable direct, indirect, and cumulative environmental impacts associated with construction and operation of the Sequoia Drive-In Business Park (Project). The following is a discussion of the environmental topics to be covered in the EIR:

Aesthetic/ Visual Resources

The Project site can be characterized as vacant land in the “PD-C-3-SC” (Planned Development, Service Commercial, Scenic Corridor Combining) Zone. The Project site is on property that encompasses four parcels directly south of State Route 198 on the southwest corner of Noble Avenue and Road 156. The C-2 (General Commercial) and C-3 (Service Commercial) Zones are located to the north of the Project site along State Route 198. The surrounding properties to the east, west, and south are zoned AE-20 (Exclusive Agriculture, 20-acre minimum) and C-3-SC (Service Commercial, Scenic Corridor Combining Zone). The Project area is bounded on the west by a Caltrans maintenance yard, and is bounded on the south by tree crops. A Tulare Irrigation Canal traverses the Project site in an east-west direction and bisects the Project site. The EIR will provide an assessment of Project related impacts to visual resources, as well as lighting and glare impacts.

Agriculture Resources

According to the Soil Survey of Tulare County, Western Part, the on-site soil is classified Nord Fine Sandy Loam, which is considered Prime Farmland if irrigated and either protected from flooding or not frequently flooded during the growing season. The Department of Conservation California Important Farmland Finder identifies the northern and southwestern portion of the Project property as Farmland of Local Importance and the southeastern portion of the property as Vacant or Disturbed Land. The Project site is located within the Tulare County East Visalia Urban Development Boundary (UDB) of the Visalia Area Land Use Plan and is currently zoned for service commercial land uses. There are commercial uses located directly west, north, and east of the Project site. The southeastern portion of the Project site was previously a drive-in movie theater. There are currently no agricultural operations occurring on the northern and southwestern portions of the Project site which have been agriculturally unproductive for many years. With the exception of the single cellular tower on-site, the entire site remains in undeveloped open space conditions. The Project will not encroach into adjacent agricultural uses and will not require adjacent properties to discontinue any agriculture related operations. The EIR will provide an assessment of potential Project related impacts to agricultural resources.

Air Quality / Greenhouse Gas Emissions

The EIR will describe regional and local air quality in the vicinity of the proposed Project site and evaluate impacts to air quality associated with Project construction and operation. An air quality study will be prepared to establish baseline, project, and cumulative impacts. The Project-related estimated air emissions will be compared to emissions thresholds of the San Joaquin Valley Air Pollution Control District (SJVAPCD). The EIR will describe existing air quality conditions within the San Joaquin Valley Air Basin and will evaluate the proposed Project’s potential air quality impacts. Potential air quality emissions impacts include odor, dust, pathogens, and construction and operations related activities. The EIR will also include a discussion of greenhouse gas emissions and the proposed Project’s contribution to potential cumulative impacts on global climate.

Biological Resources

The proposed Project site has been previously disturbed. Potential habitats within the Project site include an agricultural left in open space conditions, a vacant lot that was formally a drive-in theater, and scattered on-site trees. The Project site is bisected by one hydrological feature, a Tulare Irrigation Canal, which would likely be considered a water of the U.S. based on its connectivity with other known waters of the U.S. A biological evaluation of the proposed Project site will be conducted and the proposed Project's potential to affect biological resources will be analyzed in the EIR.

Cultural Resources / Tribal Cultural Resources

Although the proposed Project will be constructed on previously disturbed land, it cannot be definitively concluded that cultural resources are absent. A search of the Southern San Joaquin Valley Information Center California Historical Resources Information System (CHRIS) was conducted. The search identified one recorded cultural resource, a Tulare Irrigation Canal, within the Project site. The search also identified six recorded resources within a one-half mile radius, including a prehistoric era mound, an historic period ranch, barn, single-family residence, canal, and drive-in theater. There are no recorded cultural resources within the Project site or radius that are listed in the National Register of Historic Places, the California Register of Historical Resources, the California Points of Historical Interest, California Inventory of Historic Resources, or the California State Historic Landmarks. A Sacred Land File (SLF) Search was submitted to the Native American Heritage Commission (NAHC) on August 31, 2016. The NAHC responded on September 8, 2016, stating that the SLF search was completed with "negative" results. The NAHC provided a list of nine (9) tribes that are traditionally and culturally affiliated with the Project area. Pursuant to the requirements of AB 52 and SB 18, on September 14, 2016, the County mailed twenty-seven (27) tribal consultation requests, representing twenty-one (21) tribes, which included the nine (9) tribes listed on the SLF search. Depending upon responses from tribal consultation, a cultural resources evaluation may be prepared for this Project. The EIR will examine the proposed Project's potential to affect cultural resources and Tribal cultural resources.

Geology, Soils, and Mineral Resources,

Initial construction, buildout, and operation of the proposed Project on the Project site could result in impacts related to geotechnical hazards, including seismicity of the area, potential for liquefaction and subsidence, potential for soil erosion, soil stability characteristics, and shrink/swell potential of site soils, as applicable. According to the USDA Natural Resources Conservation Service Web Soil Survey, the entire Project site consists of Nord fine sandy loam, 0 to 2 percent slopes. Nord fine sandy loam is considered to be well drained soil. According to the Tulare County General Plan 2030 Update EIR, there are no known potential mineral resources on or in the vicinity of the Project site. It is currently unknown whether the proposed Project site soils have the potential to contain paleontological resources. If such resources exist on the site, construction, expansion, and continued operational activities could result in potentially significant impacts. A geological evaluation of the proposed Project site will be conducted to establish baseline, project, and cumulative impacts related to geology, soils, mineral resources, and paleontological resources.

Hazards and Hazardous Materials

There are no known hazards or hazardous materials located within the proposed Project site, nor is the proposed Project site located on a Cortese List site. The EIR will evaluate the potential for the proposed Project to result in, or be affected by, impacts associated with hazards and hazardous materials.

Hydrology, Water Quality, and Water Supply

The Project site lies within flood Zone X (Shaded), which is a moderate flood hazard area with a 0.2 percent annual chance or a 500 year flood according to the Federal Emergency Management Agency (FEMA) flood zone designation. Construction of buildings within this flood zone require no specific flood mitigation measures; however, it is recommended that all finished floor levels be elevated one (1) foot above adjacent natural ground. The proposed Project is within the Kaweah River Watershed and over the Kaweah River Groundwater Basin. The Applicant proposes receiving water supplied through an on-site domestic well and proposes that sewage be treated with an on-site engineered septic/wastewater treatment system. The EIR will describe the proposed Project's effect, both directly and cumulatively on the hydrology, water quality, and water supply resources. A hydrological and water sustainability evaluation will be prepared to establish baseline, project, and cumulative impacts.

Land Use and Planning

The EIR will describe the proposed Project's potential effects on existing and planned land uses. The proposed Project is outside of the City of Visalia city limits, but within the Tulare County East Visalia UDB of the Visalia Area Land Use Plan. The Visalia Area Land Use Plan zoning designation is PD-C-3-SC (Planned Development, Service Commercial, Scenic Corridor Combining Zone). The Project is an allowed use "by right" under the current zoning "C-3" zoning; however, when the "SC" zone is combined with other zones, allowed uses in the underlying or base zone are allowed if the project is approved in accordance with the procedures referred to in Chapter 9 of Part VII of the Ordinance Code of Tulare County. As such, the EIR will provide a discussion of relevant local plans and policies because conflicts could potentially result in environmental impacts.

Noise

The EIR will describe the noise levels associated with proposed Project construction and operation and will compare these levels to applicable noise thresholds to determine whether the proposed Project would result in a significant noise impact.

Population and Housing

The EIR will evaluate the Project's effect on population and housing in the local area based on estimations of Project employment and distribution of the employees by place of residence.

Public Services and Recreation

The EIR will evaluate the proposed Project's potential to create an adverse impact to schools, and will also evaluate effects on local police and fire services along with parks and regional recreational facilities.

Transportation/Traffic

The EIR will evaluate the proposed Project's impact on regional and local transportation facilities based on a transportation analysis that will assess both construction-related impacts (heavy truck trips and construction worker trips), as well as operational impacts (employee and visitor trips). The Project site is located at the intersection of Avenue 296 (Noble Avenue) and Road 156. Avenue 296 (Noble Avenue) and Road 156 are County-designated minor collector streets. The Project site is also located adjacent to and south of State Route 198, which is a four-lane divided freeway in the Project area and designated in the General Plan as a Scenic Corridor. The Project includes the construction of two new roadways, with four ingress/egress points within the Project site. The northern road will run through the northern half of the Project site (north of the Tulare Irrigation Canal) and will connect Avenue 296 (Noble Avenue) to

Road 156. The southern road will provide two access points on Road 156, which requires a “U” shaped configuration such that the road is contained fully within the Project site. The Tulare County General Plan 2030 Update considers LOS D as the minimum acceptable LOS standard during peak hours for County roadways and intersections. A traffic impact study will be prepared to establish a baseline, and to evaluate project and cumulative impacts for the proposed Project in consultation with the County of Tulare, the Tulare County Association of Governments, and Caltrans. Similarly, the EIR will examine alternative traffic distribution.

Utilities

The proposed Project site can be characterized as vacant land in the “PD-C-3-SC” (Planned Development, Service Commercial, Scenic Corridor Combining) Zone. The local electricity and gas service provider is Southern California Edison and Southern California Gas; respectively. As such, the Project will likely receive these utilities from Southern California Edison and Southern California Gas. The Applicant proposes receiving water supplied through an on-site domestic well and proposes that sewage be treated with an on-site engineered septic/wastewater treatment system. USA Waste will provide solid waste disposal services. The EIR will analyze the current capacity of the above-mentioned services, as well as the proposed Project’s impact on these systems and the capacity available to support the proposed Project. The EIR will also describe the solid waste facilities that would serve the proposed site.

The applicant would be required to construct infrastructure to urban development standards set forth by Tulare County, including the construction of appropriate Caltrans road improvements to Avenue 296 (Noble Avenue), Road 156, and State Route 198 to the extent that an appropriate nexus to the proposed Project is established. The EIR prepared for the Project will analyze the adequacy of infrastructure services for the Project including road, water and wastewater services, and if appropriate, may require mitigation measures.

Growth Inducement

The EIR will evaluate the proposed Project's potential for growth inducement resulting from the establishment of a new source of employment, as well as new demand for housing, and goods and services. The effect of primary and secondary increases in employment and economic activity will be discussed.

Cumulative Impacts

The EIR will discuss the incremental contribution of the proposed Project to cumulative effects of other past, current, and planned and reasonably foreseeable projects in the vicinity. The summary of projects method will be used where applicable. Also, to the extent feasible, the Cumulative Impacts section will quantify the degree of severity of any cumulative impact.

ALTERNATIVES EVALUATED IN THE EIR

In accordance with the CEQA Guidelines Section 15126.6, the EIR will describe a reasonable range of alternatives to the proposed Project that are capable of meeting most of the proposed Project’s objectives, but would avoid or substantially lessen any of the significant effects of the proposed Project. The EIR will also identify any alternatives that were considered but rejected by the Lead Agency as infeasible and briefly explain the reasons why. The EIR will also provide an analysis of the No Project Alternative.

OPPORTUNITY FOR PUBLIC COMMENT

Interested individuals, groups, and agencies may provide to the County of Tulare Resource Management Agency, Planning Branch, written comments on topics to be addressed in the EIR for the proposed Project. Because of time limits mandated by state law, comments should be provided no later than **5:00 p.m. Monday, February 13, 2017**. Agencies that will need to use the EIR when considering permits or other approvals for the proposed Project should provide the name of a staff contact person. Please send all comments to:

Hector Guerra, Chief Environmental Planner
Tulare County Resource Management Agency
Economic Development and Planning Branch
5961 South Mooney Boulevard
Visalia, CA 93277-9394
or via e-mail at: HGuerra@co.tulare.ca.us
or via facsimile: 559-730-2653
or via phone: 559-624-7121

NOTICE OF PREPARATION – SEQUOIA DRIVE-IN BUSINESS PARK												
AGENCY / ENTITY	DOCUMENTS SENT					DATE SENT	DELIVERY METHOD					COMMENTS RECEIVED
	Hard Copy			CD			Hand Delivered	E-mail	FedEx	Certified US Mail	Return Receipt	
	Cover Letter	NOC	NOP	NOP	Electronic Submittal Form							
AVAILABILITY OF PUBLIC VIEWING												
Tulare County Website: http://tularecounty.ca.gov/rma/index.cfm/documents-and-forms/planning-documents/environmental-planning/environmental-impact-reports/												
Tulare County Resource Management Agency 5961 S. Mooney Blvd. Visalia, CA 93277-9394			X									
STATE CLEARINGHOUSE – 15 COPIES	1	1	15			1/12/17			X			
• Air Resources Board												
• Caltrans District #6												
• Caltrans Planning												
• Central Valley Flood Protection Board												
• Department of Conservation												
• Department of Fish and Wildlife Region #4												
• Department of Water Resources												
• Native American Heritage Commission												
• Office of Emergency Services												
• Office of Historic Preservation												
• Public Utilities Commission												
• Regional Water Quality Control Board District #5												
• Resources Agency												
• State Water Resources Control Board – Water Quality												
• Department of Toxic Substances Control												
FEDERAL AGENCIES												
U.S. Army Corps of Engineers Sacramento District 1325 J Street, Room 1350 Sacramento, CA 95814-2922			X			1/12/17				X	1/17/17	
U.S. Army Corps of Engineers Lake Kaweah / Terminus Dam P.O. Box 44270 Lemon Cove, CA 93244-4270			X			1/12/17				X	1/18/17	
U.S. Fish and Wildlife Service Sacramento Fish & Wildlife Office 2800 Cottage Way, Room W-2605 Sacramento, CA 95825-1846			X			1/12/17				X	1/17/17	

NOTICE OF PREPARATION – SEQUOIA DRIVE-IN BUSINESS PARK												
AGENCY / ENTITY	DOCUMENTS SENT					DATE SENT	DELIVERY METHOD					COMMENTS RECEIVED
	Hard Copy			CD			Hand Delivered	E-mail	FedEx	Certified US Mail	Return Receipt	
	Cover Letter	NOC	NOP	NOP	Electronic Submittal Form							
STATE & REGIONAL AGENCIES												
San Joaquin Valley Unified Air Pollution Control District Permit Services – CEQA Division 1990 E. Gettysburg Ave. Fresno, CA 93726			X			1/12/17				X	1/17/17	
Southern California Edison Attn: Bill Delain, Region Manager 2425 S. Blackstone Tulare, CA 93274			X			1/12/17				X	1/23/17	
Southern California Gas Company 404 N. Tipton Street Visalia, CA 93292			X			1/12/17				X	1/17/17	
LOCAL AGENCIES												
City of Farmersville Attn: John Jansons, City Manager 909 W. Visalia Road Farmersville, CA 93223			X			1/12/17				X	Per USPS could not access the delivery location	
City of Visalia Attn: Mike Olmos, City Manager 220 N. Santa Fe Street Visalia, CA 93292			X			1/12/17				X	1/17/17	
City of Visalia Attn: Josh McDonnell, Asst. Director of Planning 315 E. Acequia Avenue Visalia, CA 93291			X			1/12/17				X	1/17/17	
Tulare County Association of Governments Attn: Ted Smalley, Executive Director 210 N. Church Street, Suite B Visalia, CA 93291			X			1/12/17				X	1/17/17	
Tulare County Fire Warden 907 W. Visalia Road Farmersville, CA 93223			X			1/12/17				X	1/18/17	

NOTICE OF PREPARATION – SEQUOIA DRIVE-IN BUSINESS PARK												
AGENCY / ENTITY	DOCUMENTS SENT					DATE SENT	DELIVERY METHOD					COMMENTS RECEIVED
	Hard Copy			CD			Hand Delivered	E-mail	FedEx	Certified US Mail	Return Receipt	
	Cover Letter	NOC	NOP	NOP	Electronic Submittal Form							
Tulare County Health and Human Services Agency Environmental Health Department 5957 S. Mooney Blvd Visalia, CA 93277			X			1/13/17	X				---	
Tulare County Local Agency Formation Commission 210 N. Church Street, Suite B Visalia, CA 93291			X			1/12/17				X	1/17/17	
Tulare County Office of Emergency Services Office of Emergency Services 5957 S. Mooney Blvd Visalia, CA 93277			X			1/13/17	X				---	
Tulare County Resource Management Agency Tulare County Flood Control Tulare County Fire Economic Development and Planning Public Works			X			1/13/17 1/13/17 --- 1/13/17	X X --- X				--- --- --- ---	
Tulare County Sheriff’s Office Sheriff Headquarters 2404 W. Burrel Avenue Visalia, CA 93277			X			1/12/17				X	1/17/17	
MILITARY												
Mr. David S. Hulse Naval Facilities Engineering Command Community Plans Liaison Officer (CPLO) 1220 Pacific Highway AM-3 San Diego, CA 92132			X			1/12/17				X	Per USPS the package was available for pickup on 1/17/17	
TRIBES												
Dumna Wo-Wah Tribal Government Robert Ledger, Chairperson 2216 East Hammond Street Fresno, CA, 93703	X		X			1/12/17				X	1/14/17	
Kings River Choinumni Farm Tribe Stan Alec, Vice-Chair 3515 East Fedora Avenue Fresno, CA, 93726	X		X			1/12/17				X	1/14/17	

NOTICE OF PREPARATION – SEQUOIA DRIVE-IN BUSINESS PARK												
AGENCY / ENTITY	DOCUMENTS SENT					DATE SENT	DELIVERY METHOD					COMMENTS RECEIVED
	Hard Copy			CD			Hand Delivered	E-mail	FedEx	Certified US Mail	Return Receipt	
	Cover Letter	NOC	NOP	NOP	Electronic Submittal Form							
Kitanemuk & Yowlumne Tejon Indians Delia Dominguez, Chairperson 115 Radio Street Bakersfield, CA, 93305	X		X			1/12/17				X	1/24/17	
Picayune Rancheria of Chukchansi Claudia Gonzales, Chairperson 8080 Palm Ave, Suite 207 Fresno, CA, 93711	X		X			1/12/17				X	1/17/17	
Santa Rosa Rancheria Tachi Yokut Tribe Rueben Barrios Sr., Chairperson P. O. Box 8 Lemoore, CA 93245	X		X			1/12/17				X	1/17/17	
Santa Rosa Rancheria Tachi Yokut Tribe Hector Franco, Cultural Director P. O. Box 8 Lemoore, CA 93245	X		X			1/12/17				X	1/17/17	
Santa Rosa Rancheria Tachi Yokut Tribe Shana Powers, Cultural Specialist P. O. Box 8 Lemoore, CA 93245	X		X			1/12/17				X	1/17/17	
Table Mountain Rancheria Leanne Walker-Grant, Chairperson P.O. Box 410 Friant, CA, 93626	X		X			1/12/17				X	1/17/17	
Traditional Choinumni Tribe David Alvarez, Chairperson 2415 E. Houston Avenue Fresno, CA, 93720	X		X			1/12/17				X	Per USPS the package was in transit on 1/14/17	
Tule River Indian Tribe Neil Peyron, Chairperson P. O. Box 589 Porterville, CA 93258	X		X			1/12/17				X	1/17/17	

[illegible]



Edmund G. Brown Jr.
Governor

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit



Ken Alex
Director

Notice of Preparation

January 13, 2017

Tulare County
Resource Management
Agency

Jan 13 2017

To: Reviewing Agencies

Re: Sequoia Drive-In Business Park Project
SCH# 2017011027

Attached for your review and comment is the Notice of Preparation (NOP) for the Sequoia Drive-In Business Park Project draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Hector Guerra
Tulare County
5961 South Mooney Boulevard
Visalia, CA 93277-9394

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Attachments
cc: Lead Agency

**Document Details Report
State Clearinghouse Data Base**

SCH# 2017011027
Project Title Sequoia Drive-In Business Park Project
Lead Agency Tulare County

Type NOP Notice of Preparation
Description The construction of the Sequoia Drive-In Business Park in Tulare County, CA will comprise of four separate phases of construction. A total of 30 buildings and 358,370 square feet of building space will be constructed for the complete buildout for all phases of construction.

Lead Agency Contact

Name Hector Guerra
Agency Tulare County
Phone 559-624-7121 **Fax**
email
Address 5961 South Mooney Boulevard
City Visalia **State** CA **Zip** 93277-9394

Project Location

County Tulare
City Visalia
Region
Cross Streets Ave 296
Lat / Long 36° 19' 30.84N" N. / 119° 13' 37.13W" W
Parcel No. 101-090-014,-015& 101-100-009,-010
Township 16S **Range** 22E **Section** 26 **Base** MDB&E

Proximity to:

Highways 198
Airports
Railways Burlington Northern Santa Fe
Waterways Tulare Irrigation Canal, Cameron Creek, Packwood Creek, Oakes Ditch, Evans Ditch, Mill Creek, Ka
Schools J.E Hester Elementary, Farmersville Jr. High, Farmersville High,
Land Use The Site is currently an in a fallow state of agricultural use. The Tulare Irrigation District canal runs through the middle of site. The site was previously a drive-in movie theater. There is currently a mobile communication tower on the site. Annual grassland and ruderal ground occupy the site.

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Cumulative Effects; Drainage/Absorption; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Growth Inducing; Housing; Job Generation; Landuse; Minerals; Noise; Other Issues; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Social; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Wildlife

Reviewing Agencies Resources Agency; Department of Conservation; Office of Historic Preservation; Department of Parks and Recreation; Department of Fish and Wildlife, Region 4; Office of Emergency Services, California; California Highway Patrol; Caltrans, District 6; State Water Resources Control Board, Division of Drinking Water, District 12; State Water Resources Control Board, Division of Water Rights; Regional Water Quality Control Bd., Region 5 (Fresno); Native American Heritage Commission

Date Received 01/13/2017 **Start of Review** 01/13/2017 **End of Review** 02/13/2017

Notice of Completion & Environmental Document Transmittal

2017011027

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613

For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #

Project Title: Sequoia Drive-In Business Park ProjectLead Agency: Tulare County Resource Management AgencyContact Person: Hector Guerra, Chief Env. PlannerMailing Address: 5961 S. Mooney Blvd.Phone: 559-624-7121City: VisaliaZip: 93277-9394County: Tulare CountyProject Location: County: TulareCity/Nearest Community: Visalia / FarmersvilleCross Streets: Ave 296 (Noble Ave) & Rd 156Zip Code: 93292Lat./Long: 36°19'30.84" N / 119°13'37.13" WTotal Acres: 46.17Assessor's Parcel No: APNs 101-090-014, -015 & 101-100-009, -010 Section: 26 Township 16 S., Range 22E, M.D.B. & EWithin 2 Miles: State Hwy: SR 198

Airports: _____

Railways: Burlington Northern Santa FeWaterways: Tulare Irrigation Canal, Cameron Creek, Packwood Creek, Oakes Ditch, Evans Ditch, Mill Creek, Kaweah River, Flemings Ditch, Saint John's River, Deep Creek; various Tulare Irrigation District canalsSchools: J.E. Hester Elementary, Farmersville Jr. High, Farmersville High, George L. Snowden Elementary, Pinkham Elementary, Mineral King Elementary, Golden Oak Elementary, Valley Oak Middle, and Golden West HighCEQA: ☒ NOP
☐ Early Cons
☐ Neg Dec
☐ Mit Neg Dec☐ Draft EIR
☐ Supplement/Subsequent EIR
☐ Draft EIS
Other: _____NEPA: ☒ NOP
☐ EA
☐ Other
☐ FONSIOther: ☐ Joint Document
☐ Final Document

Local Action Type:

☐ General Plan Update
☐ General Plan Amendment
☐ General Plan Element
☐ Community Plan☐ Specific Plan
☐ Master Plan
☐ Planned Unit Dev.
☐ Site Plan☐ Rezone
☐ Prezone
☐ Use Permit
☒ Land Division (Sub.)☐ Annexation
☐ Redevelopment
☐ Coastal Permit
☒ Other Development Agmt.

Development Type:

☐ Residential: Units _____ Acres _____
☐ Office: Sq. ft. _____ Acres _____ Employees _____
☒ Commercial: Sq. ft. 358,370 Acres 46.17 Employees _____
☐ Industrial: Sq. ft. _____ Acres _____ Employees _____
☐ Educational: _____
☐ Recreational: _____
☐ Other: _____☐ Water Facilities:
☐ Transportation:
☐ Mining:
☐ Power:
☐ Waste Treatment:
☐ Hazardous Waste:Type _____ MGD
Type _____
Mineral _____
Type _____ MW
Type _____ MGD
Type _____

Project Issues Discussed in Document:

☒ Aesthetic/Visual
☒ Agricultural Land
☒ Air Quality
☒ Archaeological/Historical
☒ Biological Resources
☐ Coastal Zone
☒ Drainage/Absorption
☐ Economic/Jobs
☒ Other: Tribal Cultural Resources☐ Fiscal
☒ Flood Plain/Flooding
☒ Forest Land/Fire Hazard
☒ Geologic/Seismic
☒ Minerals
☒ Noise
☒ Population/Housing Balance
☒ Public Services/Facilities☒ Recreation/Parks
☒ Schools/Universities
☐ Septic Systems
☐ Sewer Capacity
☒ Soil Erosion/Compaction/Grading
☒ Solid/Waste
☒ Toxic/Hazardous
☒ Traffic/Circulation☒ Vegetation
☒ Water Quality
☒ Water Supply/Groundwater
☒ Wetland/Riparian
☒ Growth Inducing
☒ Land Use
☒ Cumulative Effects
☒ Other: Utilities

Present Land Use/Zoning/General Plan Designation:

The site is currently in a fallow state of agricultural use. The Tulare Irrigation District canal runs through the middle of site. The site was previously a drive-in movie theater (south portion). There is currently a mobile communication tower on the site. Annual grassland and ruderal ground occupy the site.

The entire Project site is zoned PD-C-3-SC (Planned Development, Service Commercial, Scenic Corridor Combining Zone).

The Visalia Area Land Use Plan (a County Adopted City General Plan,) A Component of the Planning Framework, Land Use, and Transportation and Circulation Elements of the Tulare County General Plan designates the site "Agricultural." The Project site is located within the Tulare County East Visalia Urban Development Boundary and the City of Visalia Urban Area Boundary.

Project Description:

The construction of the Sequoia Drive-In Business Park in Tulare County, CA will comprise of four (4) separate phases of construction. A total of 30 buildings (46 units) and 358,370 square feet of building space will be constructed for the complete buildout for all phases of construction.

Phase 1 will include a convenience market with gas pumps and an attached fast-food restaurant, along with five (5) separate commercial buildings for a total combined square footage of 68,340. Access into the development will occur on Road 156, and will eventually connect access from Noble Avenue during Phase 3.

Phase 2 will construct 14 commercial buildings for a total combined square footage of 88,000, leaving a remainder lot for the existing cellular tower. Two access points into the development will occur on Road 156, providing a circle drive connecting part of Phase 1, and all of Phase 2 and Phase 4.

Phase 3 will include ten (10) separate commercial buildings with one (1) remaining lots for a retention pond. A stormwater retention pond will be installed for on-site water storage in the event of extreme weather. The total square footage buildout for phase 3 will be 104,000.

Phase 4, the final phase, will include 13 commercial buildings and a remaining lot for a second stormwater retention pond for on-site water storage. The total square footage buildout for Phase 4 will be 98,030.

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with an "X." If the document has already been sent to the agency, denote that with an "s."

<input checked="" type="checkbox"/> Air Resources Board	<input checked="" type="checkbox"/> Office of Emergency Services
<input type="checkbox"/> Boating & Waterways, Department of	<input checked="" type="checkbox"/> Office of Historic Preservation
<input type="checkbox"/> California Highway Patrol	<input type="checkbox"/> Office of Public School Construction
<input checked="" type="checkbox"/> Caltrans District # 6	<input type="checkbox"/> Parks & Recreation
<input type="checkbox"/> Caltrans Division of Aeronautics	<input type="checkbox"/> Pesticide Regulation, Department of
<input checked="" type="checkbox"/> Caltrans Planning	<input checked="" type="checkbox"/> Public Utilities Commission
<input checked="" type="checkbox"/> Central Valley Flood Protection Board	<input checked="" type="checkbox"/> Regional WQCB # 5 (attn: Doug Pattenon)
<input type="checkbox"/> Cochella Valley Mtns. Conservancy	<input checked="" type="checkbox"/> Resources Agency
<input type="checkbox"/> Coastal Commission	<input type="checkbox"/> Resources Recycling and Recovery, Department of
<input type="checkbox"/> Colorado River Board Commission	<input type="checkbox"/> S.F. Bay Conservation & Development Commission
<input checked="" type="checkbox"/> Conservation, Department of	<input type="checkbox"/> San Gabriel & Lower L.A. Rivers and Mtns Conservancy
<input type="checkbox"/> Corrections, Department of	<input type="checkbox"/> San Joaquin River Conservancy
<input type="checkbox"/> Delta Protection Commission	<input type="checkbox"/> Santa Monica Mountains Conservancy
<input type="checkbox"/> Education, Department of (Public School Construction)	<input type="checkbox"/> State Lands Commission
<input type="checkbox"/> Energy Commission	<input type="checkbox"/> SWRCB: Clean Water Grants
<input checked="" type="checkbox"/> Fish & Game Region #4	<input checked="" type="checkbox"/> SWRCB: Water Quality
<input type="checkbox"/> Food & Agriculture, Department of	<input type="checkbox"/> SWRCB: Water Rights
<input type="checkbox"/> Forestry & Fire Protection, Department of	<input type="checkbox"/> Tahoe Regional Planning Agency
<input type="checkbox"/> General Services, Department of	<input checked="" type="checkbox"/> Toxic Substances Control, Department of
<input type="checkbox"/> Health Services, Department of	<input checked="" type="checkbox"/> Water Resources, Department of
<input type="checkbox"/> Housing & Community Development	<input type="checkbox"/> Other: <u>San Joaquin Valley Air Pollution Control District</u>
<input type="checkbox"/> Integrated Waste Management Board	<input type="checkbox"/> Other: <u>City of Visalia</u>
<input checked="" type="checkbox"/> Native American Heritage Commission	<input type="checkbox"/> Other: <u>City of Farmersville</u>
<input type="checkbox"/> Other: <u>U.S. Fish and Wildlife Service</u>	<input type="checkbox"/> Other: <u>Tulare LAFCo</u>
<input type="checkbox"/> Other: <u>U.S. Army Corps of Engineers</u>	<input type="checkbox"/> Other: <u>Tulare County Association of Governments</u>
<input type="checkbox"/> Other: <u>Southern California Edison</u>	<input type="checkbox"/> Other: <u>Tulare County Health & Human Services Agency</u>
<input type="checkbox"/> Other: <u>Southern California Gas Company</u>	<input type="checkbox"/> Other: <u>Tulare County RMA - Planning</u>
<input type="checkbox"/> Other: <u>Tulare County Office of Emergency Services</u>	<input type="checkbox"/> Other: <u>Tulare County RMA - Fire</u>
<input type="checkbox"/> Other: <u>Tulare County Fire Warden</u>	<input type="checkbox"/> Other: <u>Tulare County RMA - Flood Control</u>
<input type="checkbox"/> Other: <u>Tulare County Sheriff's Office</u>	<input type="checkbox"/> Other: <u>Tulare County RMA - Public Works</u>

Local Public Review Period (to be filled in by lead agency)

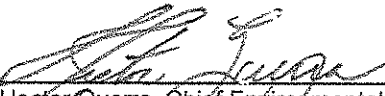
Starting Date: January 13, 2017

Ending Date: February 13, 2017

Lead Agency (Complete if applicable):

Consulting Firm: 4 Creeks, Inc.
Address: 324 S. Santa Fe Street, Suite A
City/State/Zip: Visalia, CA 93292
Contact: Craig Hartman
Phone: (559) 902-3052

Applicant: Castlewood Partners
Address: P.O. Box 2622
City/State/Zip: Visalia, CA 93279
Phone: (559) 625-0762

Signature of Lead Agency Representative: 
Hector Guerra, Chief Environmental Planner

Date: 1/12/17

Signature of Lead Agency Representative: 
Benjamin Ruiz, Jr., RMA Director / Environmental Assessment Officer

Date: 1/12/17

Resources Agency☒ Resources Agency

Nadell Gayou

☐ Dept. of Boating & Waterways
Denise Peterson☐ California Coastal Commission
Elizabeth A. Fuchs☐ Colorado River Board
Lisa Johansen☒ Dept. of Conservation
Elizabeth Carpenter☐ California Energy Commission
Eric Knight☐ Cal Fire
Dan Foster☐ Central Valley Flood Protection Board
James Herota☒ Office of Historic Preservation
Ron Parsons☒ Dept. of Parks & Recreation
Environmental Stewardship Section☐ California Department of Resources, Recycling & Recovery
Sue O'Leary☐ S.F. Bay Conservation & Dev't. Comm.
Steve Goldbeck☐ Dept. of Water Resources
Nadell GayouFish and Game☐ Dept. of Fish & Wildlife
Scott Flint
Environmental Services Division☐ Fish & Wildlife Region 1
Curt Babcock☐ Fish & Wildlife Region 1E
Laurie Harnsberger☐ Fish & Wildlife Region 2
Jeff Drongesen☐ Fish & Wildlife Region 3
Craig Weightman☒ Fish & Wildlife Region 4
Julie Vance☐ Fish & Wildlife Region 5
Leslie Newton-Reed
Habitat Conservation Program☐ Fish & Wildlife Region 6
Tiffany Ellis
Habitat Conservation Program☐ Fish & Wildlife Region 6 IM
Heidi Calvert
Inyo/Mono, Habitat Conservation Program☐ Dept. of Fish & Wildlife M
William Paznokas
Marine RegionOther Departments☐ Food & Agriculture
Sandra Schubert
Dept. of Food and Agriculture☐ Depart. of General Services
Public School Construction☐ Dept. of General Services
Cathy Buck/George Carollo
Environmental Services Section☐ Delta Stewardship Council
Kevan Samsam☐ Housing & Comm. Dev.
CEQA Coordinator
Housing Policy DivisionIndependent Commissions, Boards☐ Delta Protection Commission
Erik Vink☒ OES (Office of Emergency Services)
Monique Wilber☒ Native American Heritage Comm.
Debbie Treadway☐ Public Utilities Commission
Supervisor☐ Santa Monica Bay Restoration
Guangyu Wang☐ State Lands Commission
Jennifer Deleong☐ Tahoe Regional Planning Agency (TRPA)
Cherry JacquesCal State Transportation Agency CalSTA☐ Caltrans - Division of Aeronautics
Philip Cimmmins☐ Caltrans - Planning
HQ LD-IGR
Terri Pencovic☒ California Highway Patrol
Suzann Ikeuchi
Office of Special ProjectsDept. of Transportation☐ Caltrans, District 1
Rex Jackman☐ Caltrans, District 2
Marcelino Gonzalez☐ Caltrans, District 3
Eric Federicks - South
Susan Zanchi - North☐ Caltrans, District 4
Patricia Maurice☐ Caltrans, District 5
Larry Newland☒ Caltrans, District 6
Michael Navairo☐ Caltrans, District 7
Dianna Watson☐ Caltrans, District 8
Mark Roberts☐ Caltrans, District 9
Gayle Rosander☐ Caltrans, District 10
Tom Dumas☐ Caltrans, District 11
Jacob Armstrong☐ Caltrans, District 12
Maureen El HatakeCal EPAAir Resources Board☐ Airport & Freight
Cathi Slaminski☐ Transportation Projects
Nesamani Kalandiyur☐ Industrial/Energy Projects
Mike Tollstrup☐ State Water Resources Control Board
Regional Programs Unit
Division of Financial Assistance☐ State Water Resources Control Board
Cindy Forbes - Asst Deputy
Division of Drinking Water☒ State Water Resources Control Board
Div. Drinking Water # 12☐ State Water Resources Control Board
Student Intern, 401 Water Quality
Certification Unit
Division of Water Quality☒ State Water Resources Control Board
Phil Grader
Division of Water Rights☐ Dept. of Toxic Substances Control
CEQA Tracking Center☐ Department of Pesticide Regulation
CEQA CoordinatorRegional Water Quality Control Board (RWQCB)☐ RWQCB 1
Cathleen Hudson
North Coast Region (1)☐ RWQCB 2
Environmental Document Coordinator
San Francisco Bay Region (2)☐ RWQCB 3
Central Coast Region (3)☐ RWQCB 4
Teresa Rodgers
Los Angeles Region (4)☐ RWQCB 5S
Central Valley Region (5)☒ RWQCB 5F
Central Valley Region (5)
Fresno Branch Office☐ RWQCB 5R
Central Valley Region (5)
Redding Branch Office☐ RWQCB 6
Lahontan Region (6)☐ RWQCB 6V
Lahontan Region (6)
Victorville Branch Office☐ RWQCB 7
Colorado River Basin Region (7)☐ RWQCB 8
Santa Ana Region (8)☐ RWQCB 9
San Diego Region (9)☐ Other _____☐ Conservancy

NATIVE AMERICAN HERITAGE COMMISSION

1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone (916) 373-3710
Fax (916) 373-5471
Email: nahc@nahc.ca.gov
Website: <http://www.nahc.ca.gov>
Twitter: @CA_NAHC



January 19, 2016

Hector Guerra
Tulare County
5961 South Mooney Boulevard
Visalia, CA 93277-9394

sent via e-mail:
hguerra@co.tulare.ca.us

RE: SCH# 2017011027; Sequoia Drive-In Business Park Project, Notice of Preparation for Draft Environmental Impact Report, Tulare County, California

Dear Mr. Guerra:

The Native American Heritage Commission has received the Notice of Preparation (NOP) for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code § 21000 et seq.), specifically Public Resources Code section 21084.1, states that a project that may cause a substantial adverse change in the significance of an 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 Section 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, § 15064 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 with the area of project 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). Please reference California Natural Resources Agency (2016) "Final Text for tribal cultural resources update to Appendix G: Environmental Checklist Form," <http://resources.ca.gov/ceqa/docs/ab52/Clean-final-AB-52-App-G-text-Submitted.pdf>. 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 or a notice of negative declaration or 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 **lead agencies consult with all California Native American tribes** that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments. **Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.**

AB 52

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

1. **Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project:** Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a **lead agency** shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:
 - a. A brief description of the project.
 - b. The lead agency contact information.
 - c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code § 21080.3.1 (d)).

- d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code § 21073).
2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code § 21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or environmental impact report. (Pub. Resources Code § 21080.3.1(b)).
- a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code § 65352.4 (SB 18). (Pub. Resources Code § 21080.3.1 (b)).
3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:
- a. Alternatives to the project.
- b. Recommended mitigation measures.
- c. Significant effects. (Pub. Resources Code § 21080.3.2 (a)).
4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:
- a. Type of environmental review necessary.
- b. Significance of the tribal cultural resources.
- c. Significance of the project's impacts on tribal cultural resources.
- d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code § 21080.3.2 (a)).
5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code sections 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 section 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 section 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 section 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 section 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 nonfederally 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 sections 21080.3.1 and 21080.3.2 and concluded pursuant to Public Resources Code section 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 section 21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code § 21082.3 (d)). *This process should be documented in the Cultural Resources section of your environmental document.*

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

SB 18

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

Some of SB 18's provisions include:

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

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason,

we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: <http://nahc.ca.gov/resources/forms/>

NAHC Recommendations for Cultural Resources Assessments

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

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
 - a. If part or all of the APE has been previously surveyed for cultural resources.
 - b. If any known cultural resources have been 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, section 15064.5(f) (CEQA Guidelines section 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 section 7050.5, Public Resources Code section 5097.98, and Cal. Code Regs., tit. 14, section 15064.5, subdivisions (d) and (e) (CEQA Guidelines section 15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

Please contact me if you need any additional information at gayle.totton@nahc.ca.gov.

Sincerely,



Gayle Totton, M.A., PhD.
Associate Governmental Program Analyst

cc: State Clearinghouse



TABLE MOUNTAIN RANCHERIA

TRIBAL GOVERNMENT OFFICE

January 24, 2017

Hector Guerra, Chief Environmental Planner
Environmental Planning Division
County of Tulare
5961 South Mooney Blvd.
Visalia, Ca. 93277

Leanne Walker-Grant
Tribal Chairperson

Beverly J. Hunter
Tribal Vice-Chairperson

Craig Martinez
Tribal Secretary/Treasurer

Matthew W. Jones
Tribal Council Member

Richard L. Jones
Tribal Council Member

RE: Notice of Preparation of an Environmental Impact report for the
Sequoia Drive-In Business Park Project

To: Hector Guerra

This is in response to your letter dated, January 12, 2017, Notice of
Preparation of an Environmental Impact report for the Sequoia Drive-In
Business Park Project.

We appreciate receiving notice; however, this project site is beyond our area
of interest.

Sincerely,

Robert Pennell
Cultural Resources Director

23736
Sky Harbour Road
Post Office
Box 410
Friant
California
93626
(559) 822-2587
Fax
(559) 822-2693



January 31, 2017

Hector Guerra
County of Tulare
Department
5961 S. Mooney Blvd.
Visalia, CA 93277

Tulare County
Resource Management
Agency
FEB 08 2017

Project: Sequoia Drive-In Business Project

District CEQA Reference No: 20170069

Dear Mr. Guerra:

The San Joaquin Valley Unified Air Pollution Control District (District) has reviewed the Notice of Preparation (NOP) for the Sequoia Drive-In Business Project (Project). The proposed Project is for the construction of a 358,370 square foot business park consisting of a total of 30 buildings, access roads, and stormwater retention basins. The Project will be developed in four phases. The District offers the following comments:

Emissions Analysis

- 1) At the federal level for the National Ambient Air Quality Standards (NAAQS), the District is currently designated as extreme nonattainment for the 8-hour ozone standards; nonattainment for the PM2.5 standards; and attainment for the 1-Hour ozone, PM10 and CO standards. At the state level, the District is currently designated as nonattainment for the 8-hour ozone, PM10, and PM2.5 California Ambient Air Quality Standards (CAAQS). The District recommends that the Air Quality section of the Environmental Impact Report (EIR) include a discussion of the following impacts:
 - a) **Criteria Pollutants:** Project related criteria pollutant emissions should be identified and quantified. The discussion should include existing and post-project emissions.
 - i) **Construction Emissions:** Construction emissions are short-term emissions and should be evaluated separate from operational emissions. The District

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585

recommends preparation of an Environmental Impact Report (EIR) if annual construction emissions cannot be reduced or mitigated to below the following levels of significance: 10 tons per year of oxides of nitrogen (NO_x), 10 tons per year of reactive organic gases (ROG), or 15 tons per year particulate matter of 10 microns or less in size (PM₁₀).

- *Recommended Mitigation:* To reduce impacts from construction related exhaust emissions, the District recommends feasible mitigation for the project to utilize off-road construction fleets that can achieve fleet average emissions equal to or cleaner than the Tier III emission standards, as set forth in §2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 Code of Federal Regulations. This can be achieved through any combination of uncontrolled engines and engines complying with Tier III and above engine standards.
- ii) **Operational Emissions:** Operational Emissions: Permitted (stationary sources) and non-permitted (mobile sources) sources should be analyzed separately. The District recommends preparation of an Environmental Impact Report (EIR) if the sum of annual permitted and the sum of the annual non-permitted emissions each cannot be reduced or mitigated to below the following levels of significance: 10 tons per year of oxides of nitrogen (NO_x), 10 tons per year of reactive organic gases (ROG), or 15 tons per year particulate matter of 10 microns or less in size (PM₁₀).
- *Recommended Mitigation:* Project related impacts on air quality can be reduced through incorporation of design elements, for example, that increase energy efficiency, reduce vehicle miles traveled, and reduce construction exhaust related emissions. However, design elements and compliance with District rules and regulations may not be sufficient to reduce project related impacts on air quality to a less than significant level. Another example of a feasible mitigation measure is the mitigation of project emissions through a Voluntary Emission Reduction Agreement (VERA). The VERA is an instrument by which the project proponent provides monies to the District, which is used by the District to fund emission reduction projects that achieve the reductions required by the lead agency. District staff is available to meet with project proponents to discuss a VERA for specific projects. For more information, or questions concerning this topic, please call District Staff at (559) 230-6000.
- iii) **Recommended Model:** Project related criteria pollutant emissions should be identified and quantified. Emissions analysis should be performed using CalEEMod (**C**alifornia **E**mission **E**stimator **M**odel), which uses the most recent approved version of relevant Air Resources Board (ARB) emissions

models and emission factors. CalEEMod is available to the public and can be downloaded from the CalEEMod website at: www.caleemod.com.

- b) **Nuisance Odors:** The Project should be evaluated to determine the likelihood that the Project would result in nuisance odors. Nuisance odors are subjective, thus the District has not established thresholds of significance for nuisance odors. Nuisance odors may be assessed qualitatively taking into consideration of project design elements and proximity to off-site receptors that potentially would be exposed objectionable odors.
- c) **Health Impacts:** Project related health impacts should be evaluated to determine if emissions of toxic air contaminants (TAC) will pose a significant health risk to nearby sensitive receptors. TACs are defined as air pollutants that which may cause or contribute to an increase in mortality or serious illness, or which may pose a hazard to human health. The most common source of TACs can be attributed to diesel exhaust fumes that are emitted from both stationary and mobile sources. Health impacts may require a detailed health risk assessment (HRA).

Prior to conducting an HRA, an applicant may perform a prioritization on all sources of emissions to determine if it is necessary to conduct an HRA. A prioritization is a screening tool used to identify projects that may have significant health impacts. If the Project has a prioritization score of 10 or more, the Project has the potential to exceed the District's significance threshold for health impacts of 20 in a million and an HRA should be performed.

If an HRA is to be performed, it is recommended that the Project proponent contact the District to review the proposed modeling approach. The Project would be considered to have a significant health risk if the HRA demonstrates that project related health impacts would exceed the District's significance threshold of 20 in a million.

More information on TACs, prioritizations and HRAs can be obtained by:

- E-mailing inquiries to: hramodeler@valleyair.org; or
- Visiting the District's website at:

http://www.valleyair.org/busind/pto/Tox_Resources/AirQualityMonitoring.htm.

- 2) In addition to the discussions on potential impacts identified above, the District recommends the EIR also include the following discussions:

- a) A discussion of the methodology, model assumptions, inputs and results used in characterizing the project's impact on air quality. To comply with CEQA requirements for full disclosure, the District recommends that the modeling outputs be provided as appendices to the EIR. The District further recommends that the District be provided with an electronic copy of all input and output files for all modeling.
- b) A discussion of the components and phases of the Project and the associated emission projections, including ongoing emissions from each previous phase.
- c) A discussion of Project design elements and mitigation measures, including characterization of the effectiveness of each mitigation measure incorporated into the project.
- d) A discussion of whether the Project would result in a cumulatively considerable net increase of any criteria pollutant or precursor for which the San Joaquin Valley Air Basin is in non-attainment. More information on the District's attainment status can be found online by visiting the District's website at:
<http://valleyair.org/aqinfo/attainment.htm>.

District Rules and Regulations

- 3) The proposed Project may be subject to District rules and regulations, including: Regulation VIII (Fugitive PM₁₀ Prohibitions), Rule 4102 (Nuisance), and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). In the event an existing building will be renovated, partially demolished or removed, the project may be subject to District Rule 4002 (National Emission Standards for Hazardous Air Pollutants).
- 4) The gasoline pumps for this Project will be subject to District Rule 2010 (Permits Required) and Rule 2201 (New and Modified Stationary Source Review) and will require District permits. Prior to construction, the project proponent should submit to the District an application for an Authority to Construct (ATC). For further information or assistance, the Project proponent may contact the District's Small Business Assistance (SBA) Office at (559) 230-5888.
- 5) Based on information provided, the proposed Project would exceed the relevant District Rule 9510 (Indirect Source Review) applicability threshold of 2,000 square feet of commercial space. Therefore, the District concludes that the proposed Project is subject to District Rule 9510.

Any applicant subject to District Rule 9510 is required to submit an Air Impact Assessment (AIA) application to the District no later than applying for final discretionary approval, and to pay any applicable off-site mitigation fees. If approval of the subject project constitutes the last discretionary approval by your agency, the District recommends that demonstration of compliance with District Rule 9510, including payment of all applicable fees, be made a condition of project approval. Information about how to comply with District Rule 9510 can be found online at:

<http://www.valleyair.org/ISR/ISRHome.htm>.

- 6) Particulate Matter 2.5 microns or less in size (PM_{2.5}) from under-fired charbroilers (UFCs) pose immediate health risk. Since the cooking of meat can release carcinogenic PM_{2.5} species like polycyclic aromatic hydrocarbons (PAH), controlling emissions from under-fired charbroilers will have a substantial positive impact on public health.

Charbroiling emissions occur in populated areas, near schools and residential neighborhoods, resulting in high exposure levels for sensitive Valley residents. The air quality impacts on neighborhoods near restaurants with UFCs can be significant on days when meteorological conditions are stable, when dispersion is limited and emissions are trapped near the surface within the surrounding neighborhoods. This potential for neighborhood-level concentration of emissions during evening or multi-day stagnation events raises environmental concerns.

In addition, the cooking emissions source category is one of the largest single contributors of directly emitted PM_{2.5} in the Valley. Photochemical modeling conducted for the 2012 PM_{2.5} Plan showed that reducing commercial charbroiling emissions is critical to achieving PM_{2.5} attainment in the Valley.

The District committed to amend Rule 4692 (Commercial Charbroiling) in 2016, with a 2017 compliance date, to add emission control requirements for UFCs, as committed to in the District's 2012 PM_{2.5} Plan. Installing charbroiler emissions control systems during construction of new facilities is likely to result in substantial economic benefit compared to costly retrofitting.

Therefore, the District strongly recommends that your agency require new restaurants that will operate UFCs to install emission control systems during the construction phase. To ease the financial burden for Valley businesses that wish to install control equipment before it is required, the District is offering incentive funding during the time leading up to the amendment to the rule. Restaurants with UFCs

may be eligible to apply for funding to add emission control systems. Please contact the District at (559) 230-5858 for more information.

- 7) The above list of rules is neither exhaustive nor exclusive. To identify other District rules or regulations that apply to this project or to obtain information about District permit requirements, the applicant is strongly encouraged to contact the District's Small Business Assistance (SBA) Office at (559) 230-5888. Current District rules can be found online at the District's website at:

www.valleyair.org/rules/1ruleslist.htm.

The District recommends that a copy of the District's comments be provided to the project proponent. If you have any questions or require further information, please call Michael Corder at (559) 230-5818.

Sincerely,

Arnaud Marjollet
Director of Permit Services

 for:

Brian Clements
Program Manager

AM: mc

DEPARTMENT OF TRANSPORTATION**DISTRICT 6**

1352 WEST OLIVE AVENUE

P.O. BOX 12616

FRESNO, CA 93778-2616

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2135-IGR/CEQA

NOP DEIR

SEQUOIA DRIVE-IN BUSINESS PARK

SCH # 2017011027

Mr. Hector Guerra
Chief Environmental Planner
Tulare County Resource Management Agency
5961 S Mooney Blvd.
Visalia, CA 93277

Dear Mr. Guerra:

Thank you for the opportunity to review the Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for the proposed Sequoia Drive-In Business Park. The 46.17 acre site is located at 29421 Road 156, at the southwest corner of Noble Avenue and Road 156, directly south of the State Route (SR) 198 eastbound off-ramps.

The Applicant is proposing to construct a 358,370 square-foot business park consisting of a total of 30 buildings (46 units), access roads, and stormwater retention basins. The Project will be developed in four (4) separate phases of construction as follows:

- Phase 1 will include a convenience market with gas pumps and an attached fast-food restaurant, along with five (5) separate commercial buildings for a total of 68,340 sq. ft. Access into the development will occur on Road 156, and will eventually connect access from Noble Avenue during Phase 3.
- Phase 2 will construct of 14 commercial buildings for a total of 88,000 sq. ft., leaving a remainder lot for the existing cellular tower. Two access points into the development will occur on Road 156, providing a circle drive connecting part of Phase 1, and all of Phase 2 and Phase 4.
- Phase 3 will include ten (10) separate commercial buildings for a total of 104,000 sq. ft. with one (1) remaining lot for a retention pond. A stormwater retention pond will be installed for on-site water storage in the event of extreme weather.
- Phase 4, the final phase, will include 13 commercial buildings for a total of 98,030 sq. ft. and a remaining lot for a second stormwater retention pond for on-site water storage.

The mission of Caltrans is to provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability. The Local Development -Intergovernmental Review (LD-IGR) Program reviews land use projects and plans through the lenses of our mission and state planning priorities of infill, conservation, and travel-efficient development. To ensure a safe

and efficient transportation system, we encourage early consultation and coordination with local jurisdictions and project proponents on all development projects that utilize the multimodal transportation network.

Caltrans provides the *following comments* consistent with the State's smart mobility goals that support a vibrant economy and sustainable communities:

1. Caltrans anticipates that the proposed project would have an impact to the SR 198/Road 156 interchange. The existing design geometrics of the interchange was originally designed to handle low traffic volumes and may not be able to handle the anticipated traffic generated from the proposed project.
2. Caltrans recommends that a Transportation Impact Study (TIS) be completed for this project. Caltrans has been entrusted to protect the State Highway system to ensure the safe and efficient movement of people and goods throughout the State. Our task is to protect California's transportation system, essential for the continued economic vitality of the State and the safety of the general motoring public. Our recommendation for a TIS is based on our need to fully assess this project's impacts, and to recommend mitigation for any and all project-related impacts to the State Highway System.
3. Given that Caltrans current TIS guidelines are in the process of being updated, a *scoping* meeting with Caltrans staff is highly suggested to discuss the most appropriate methodology for this analysis. At a minimum, the analysis should provide the following:
 - a. The TIS shall evaluate and identify the impacted ramp intersections at the interchange as well as the intersection of Noble (Avenue 296) at Road 156 and Mineral King Avenue at Road 156. The analysis should also include the merge and diverge (ramp junction analysis) for the SR 198 eastbound and westbound mainline and identify improvement if needed. The NOP identifies new accesses (major driveways) for the proposed development which should be included in the network analysis. The TIS should address the impacts to the infrastructure and to provide appropriate mitigation measures for each phase as well as the ultimate build-out.
 - b. Caltrans recommends counts are done at the appropriate time, day and month in the project area adjacent to the state facility. In urban areas, typically peak hours are during mid-week, from 6-8 AM and from 4-6 PM.
 - c. The TIS should include improvements listed in the County's RTP for the SR 198/Road 156 interchange.
 - d. Vicinity maps, regional location map, and a site plan clearly showing project access in relation to nearby roadways and key destinations. Ingress and egress for all project components should be clearly identified. Clearly identify and map: the State right-of-way (ROW), project driveways, the State Highway System and local roads, intersections and interchanges, pedestrian and bicycle routes, car/bike parking, transit routes and transit facilities.

- e. Schematic illustrations of walking, biking and auto traffic conditions at the project site and study area roadways, trip distribution percentages, AM/PM peak periods volumes as well as intersection geometrics (i.e. lane configurations, etc). Operational concerns for all road users that may increase the potential for future collisions should be identified and fully mitigated in a manner that does not further raise VMT.
4. The project applicant and consultant should be advised of the new Traffic Operations Policy Directive (TOPD) #13-02, describing the Intersection Control Evaluation (ICE) process. Any new project that may require employing full control at state highway intersections (i.e. to control all approaching traffic via use of signal, stop or yield control) must consider all three intersection control strategies (stop, roundabout and signal) and the supporting design configurations per the Intersection Control Evaluation (ICE) guidelines. ICE establishes a context and performance based evaluation process to produce engineering recommendations on intersection traffic control strategies and geometric configurations for location specific needs and conditions. The first step of the ICE process will constitute conceptual approval by Caltrans Traffic Operations Office. The project opening day mitigation at an intersection must be evaluated per the ICE procedure. This new policy will affect the engineering process to determine the intersection improvement on State Route (SR) 198. The TOPD #13-02 can be found at <http://www.dot.ca.gov/hq/traffops/policy/13-02.pdf>. The ICE requirements can be found on the Caltrans website: <http://www.dot.ca.gov/hq/traffops/liaisons/ice.html>.
5. Caltrans has "access control" on the south side of Noble Avenue from the intersection with Road 156, west approximately 850 feet along the site's frontage. However, the driveway access proposed on Noble Avenue appears to be outside the access control limits.
6. Alternative transportation policies should be applied to the development. An assessment of multi-modal facilities should be conducted. This assessment should be used to develop an integrated multi-modal transportation system to serve and help alleviate traffic congestion caused by the project and related development in this area of the City. The assessment should include the following:
 - a. Pedestrian walkways should link this office complex to an internal project area walkway, transit facilities, as well as other walkways in the surrounding area.
 - b. The project should develop a Transportation Management Plan (TMP). The TMP should go beyond offering transit options and evaluate car pooling, van pooling, and/or other modal options. The goal of the TMP is to reduce overall trips and the impact of those trips on transportation/air quality.
 - c. A Transportation Management Agency (TMA) and a TMA coordinator should be designated for the entire development area. The responsible TMP coordinator for this project should be assigned and directed to work with the TMA coordinator.
 - d. If transit is not available within ¼-mile of the site, transit should be extended to provide services to what will be a high activity center.

- e. The consideration of bicycles as an alternative mode of transportation needs more attention. The project TMP should offer internal amenities to encourage bicycle use. These include parking, security, lockers and showers. However, internal bicycle paths should be coordinated with local and regional pathways to further encourage the use of bicycles for commuter and recreational purposes.
7. This project's impacts to the transportation/circulation system and to air quality when combined with other development in the area will be cumulatively significant. One possible mechanism for evaluating the cumulative impacts of these land use decisions would be for the lead agency to use the San Joaquin Valley Growth Response Study (GRS) modeling tool, now available for your use. The GRS Tools can provide a cumulative analysis of land use impacts, as opposed to a generalized "snapshot" of growth at 20 years. They can assist in identifying where to place transit stops, how and where to site interrelated uses, and where to locate the more intense land uses, etc. The GRS Tools provide an actual quantitative analysis of alternatives. The model provides the type of information necessary to support "smart growth" land use decisions. This benefits the local, regional, and State transportation network, as well as air quality. The analysis can also include indicators to evaluate economic development and the jobs/housing balance critical to a community's quality of life. With the GRS Tools, public officials and citizens would be provided with the likely impacts of alternative growth policies. The resulting information is available to public officials and citizens in easy-to-understand maps and tables.
8. Dust control measures shall be implemented on the site in a manner to prevent dust from entering the State right-of-way.
9. Stormwater is not allowed to be discharged to the State right-of-way. Since the proposed development/project involves one acre or more of ground disturbance, the applicant needs to be advised by the lead agency to contact the Central Valley Regional Water Quality Control Board office in Fresno at (559) 445-5116 to determine whether a Notice of Construction will be required. The applicant will be required to adhere to Caltrans construction stormwater requirements if there is proposed work within the State right-of-way. Additional information on Caltrans stormwater management requirements may be found at www.dot.ca.gov/hq/env/stormwater/index.

Please send a response to our comments prior to staff's recommendations to the Planning Commission and the Board of Supervisors.

If you have any other questions, please call David Deel, Associate Transportation Planner at (559) 488-7396.

Sincerely,



MICHAEL NAVARRO, Chief
Planning North Branch



February 8, 2017

Hector Guerra, Chief Environmental Planner
Tulare County Resource Management Agency
5961 South Mooney Boulevard
Visalia, CA 93277

RE: Notice of Preparation (NOP) for Sequoia Drive-in Business Park

Mr. Guerra:

Thank you for the opportunity to provide early comments and concerns in response to the NOP for the above referenced project. The project site is partially located within the City's Sphere of Influence. The City's initial environmental comments are as follows:

1. Groundwater Quality: The project description and the summary of environmental concerns contained in the NOP are presently vague concerning how wastewater will be managed, beginning with the project's first phase. Sanitary sewer lines are presently more than two miles from the project site. If the project proposes to use septic for all or part of the project, this should be thoroughly described and analyzed for potential impacts to the area's groundwater quality. Similarly, if a package treatment system is proposed, full disclosure of such a system's capacities, quality of treated discharge, method of disposal, and other technical aspects of the system should be described and analyzed as part of the project description.
2. Transportation: Please note that Road 156 is designated as an Arterial Roadway (deferred) on the City's General Plan Transportation Element Roadway Classifications Map. Further, the project site is currently served by Visalia Transit Route 9. The transportation impacts analysis should include all alternative transportation modes serving the project, in addition to automobile transportation impacts.

The City requests notices of public hearings as well as copies of all CEQA documentation associated with the proposed project. If you have any questions or concerns, please feel free to contact Principal Planner Paul Scheibel at (559) 713-4369.

Sincerely,

A handwritten signature in blue ink, appearing to read "Josh McDonnell".

Josh McDonnell, Assistant Director/City Planner
Community Development Department

cc: Michael Olmos, City Manager
Nick Mascia, Community Development Director

Appendix B

Air Quality Analysis Report

To: Jessica Willis, Tulare County Resources Management Agency
From: Emily Bowen
Date: 4/26/2018
Subject: Sequoia Drive-In Business Park Air Quality

I have cross referenced the emissions provided in Tables 4.1-1 and 4.1-2 of the Air Quality Analysis Report (Report) prepared by 4Creeks, Inc. on 8/15/2016 with the CalEEMod output files provided in Appendix A of the Report and have the following comments:

The emissions from long-term project impacts provided in Table 4.1-2 of the Report and Table 3.3-6 in the administrative draft EIR represent the mitigated emissions, taking reductions from mitigation measures LUT-1 through LUT-5 and SDT-1 within the CalEEMod program. These emissions were incorrectly transcribed from the CalEEMod output files. Also, ISR reduction percentages for operational phases were incorrectly described as 20 and 45 percent for NOx and PM10, respectively. They should be 33 and 50 percent for NOx and PM10, respectively.¹ Additionally, ISR reductions were taken from mitigated values, and they should have been taken from unmitigated values. The correct ISR reduction percentages have been applied to unmitigated values and the recalculated emissions are provided in Table 4.1-2.

Table 4.1-2						
Emissions from Long-Term Project Impacts (Operational Emissions by Phases)²						
Phase	ROG (tons/yr)	NOx (tons/yr)	CO (tons/yr)	SO2 (tons/yr)	PM10 (tons/yr)	PM2.5 (tons/yr)
Ph1 Operational (2018)	4.3734	6.7530	34.4737	0.0334	1.7534	0.5266
Ph2 Operational (2020)	1.1416	1.8874	6.1477	0.0148	0.8157	0.2468
Ph3 Operational (2022)	1.1994	1.8077	6.6507	0.0175	0.9623	0.2901
Ph4 Operational (2024)	1.2282	1.5174	5.7500	0.0165	0.9060	0.2724
Mitigated Totals	7.9426	11.9655	53.0221	0.0822	4.4374	1.3359
Unmitigated Totals	8.0008	12.4289	54.0348	0.0868	4.7137	1.4162
*Total After Rule 9510 Reductions	7.9426	8.3273	53.0221	0.0822	2.3569	1.3359
SJVAPCD Significance	10	10	100	27	15	15

¹ San Joaquin Valley Air Pollution Control District. Rule 9510. Indirect Source Review, in effect March 21, 2018. <http://valleyair.org/rules/currentrules/r9510.pdf>. Accessed April, 2018.

² Air Quality Analysis Report. Sequoia Drive-In Business Park, Tulare County, CA. 8/15/2016. Prepared by 4Creeks, Inc. See Appendix B. Page 31.

Table 4.1-2						
Emissions from Long-Term Project Impacts (Operational Emissions by Phases)²						
Level/year						
Significant? (Yes/No)	No	No	No	No	No	No
*Rule 9510 (ISR) has a minimum required 33% reduction of NOx emissions and 50% reduction of PM10 emissions for Operational phases of projects. Figure above is cumulative emissions with the minimum reductions calculated, respectively.						

Table 4.1-1 in the Report provides emissions from short-term project impacts from year 2017 through the year 2024 and is represented in the administrative draft EIR as Table 3.3-5. A strikethrough version of Table 4.4-1 from the Report is below with the correct values in red from the CalEEMod output files.

Table 4.4-1						
Emissions from Short-Term Project Construction						
Emission Source	VOC/ROG (tons/year)	NOx (tons/year)	CO (tons/year)	SO2 (tons/year)	PM10 (tons/year)	PM2.5 (tons/year)
2017	0.4691	3.7890	3.4057	0.0000 0.0055	0.4318	0.2914
2018	1.2974	0.0260	0.0301	0.0000	0.0000	0.0000
2019	0.3427	2.9423	2.8517	0.0000 0.0049	0.3275	0.2203
2020	0.9389	0.0156	0.0205	0.0000	0.0000	0.0000
2021-2019	0.2792 0.3433	2.4165 2.9494	2.7040 2.8603	0.0000 0.0049	0.2845 0.3268	0.1804 0.2202
2022-2020	0.9582 0.9586	0.0130 0.0155	0.0195 0.0201	0.0000	0.0000	0.0000
2023	0.2385	2.0006	2.6814	0.0000 0.0051	0.2692	0.1543
2024	1.1206	0.0155	0.0264	0.0000	0.0000	0.0000
Cumulative	5.6446 5.7091	11.2185 11.7539	11.7393 11.8962	0.0205	1.3226 2.6779	0.8520
*Total After Rule 9510 Reductions	-	8.9753 9.4031	-	-	1.0581 1.4728	-
SJVAPCD Significance Level/Year	10	10	100	27	15	15
Significant (Yes/No)?	NO	NO	NO	NO	NO	NO



Table 4.4-1

Emissions from Short-Term Project Construction

*Rule 9510 (ISR) has a minimum required 20% reduction of NO_x emissions and 45% reduction of PM₁₀ emissions for Operational phases of projects. Figure above is cumulative emissions with the minimum reductions calculated, respectively.

While the Phase 3 CalEEMod output files describe project operations beginning in 2022, the program calculated construction occurring during the 2019-2020 period.



Air Quality Analysis Report

Sequoia Drive-In Business Park
Tulare County, CA

Prepared for:
Castlewood Partners

Air Quality Analysis Report Preparation Date:
08/15/2016

Estimated Construction Dates:

Construction Start Date: 01/01/2017 Construction Completion Date: 01/25/2024

Prepared By:

4CREEKS, INC.
324 S Santa Fe Street, Suite A
VISALIA, CA 93292
(559) 802-3052



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ACRONYMS AND ABBREVIATIONS

$\mu\text{g}/\text{m}^3$	micrograms per cubic meter
AB	Assembly Bill
CARB	California Air Resources Control Board
CalEEMod	California Emissions Estimator Model
CEQA	California Environmental Quality Act
CO	carbon monoxide
EPA	U.S. Environmental Protection Agency
ITE	Institute of Traffic Engineers
kBTU	thousand British thermal units
NO _x	nitrogen oxides
N ₂ O	nitrogen oxide
PM ₁₀	fine particulate matter less than 10 micrometers in diameter
PM _{2.5}	fine particulate matter less than 2.5 micrometers in diameter
ppm	parts per million
ppt	parts per trillion
SB	Senate Bill
SO _x	oxides of sulfur
SJVAPCD	San Joaquin Valley Air Pollution Control District
SJVAB	San Joaquin Valley Air Basin
sf	square foot, square feet
VOC	Volatile Organic Compound

SECTION 1: EXECUTIVE SUMMARY

1.1 ANALYSIS METHOD

The following Air Quality analysis provides an estimate to quantify the amount of stationary and mobile air emissions generated by human activity associated with the construction of a 46.17 acre Business Park, located on the southwest corner of Noble Avenue and Road 156, within the Urban Development Boundary of Visalia, CA (Tulare County), and determine whether the generated emissions would cause a significant impact on the environment. The project is within the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD) and follows its recommended procedure. The SJVAPCD prepared its Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI) in 2015.

1.2 PROJECT SUMMARY

1.2.1 PROJECT LOCATION

Located in Tulare County, on Noble Avenue and Road 156, less than a mile east of the City of Visalia, Sequoia Drive-In Business Park will be within the San Joaquin Valley Air Basin displayed in Figure 1: Regional Location.

1.2.2 PROJECT DESCRIPTION

Located along Noble Avenue, directly south of Highway 198, the project is approximately located at Latitude 36° 19' 30.84" N and Longitude: 119° 13' 37.13"W and is identified on Figure 2: Local Vicinity Map.

The Construction of The Sequoia Drive-In Business Park in Tulare County, CA will comprise of four separate phases of construction. A total of 30 buildings (46 units) and 358,370 square feet of building space will be constructed for the complete buildout for all phases of construction.

Phase 1 will include a convenience market with gas pumps and an attached fast-food restaurant, along with five (5) separate commercial buildings for a total combined square footage of 68,340. Access into the development will occur on Road 156, and will eventually connect access from Noble Avenue during Phase 3.

Phase 2 will construct 14 commercial buildings for a total combined square footage of 88,000, leaving a remainder lot for the existing cellular tower. Two access points into the development will occur on Road 156, providing a circle drive connecting part of Phase 1, and all of Phases 2 and Phase 4.

Phase 3 will include ten (10) separate commercial buildings with one (1) remaining lots for a retention pond. A stormwater retention pond will be installed for on-site water storage in the event of extreme weather. The total square footage buildout for phase 3 will be 104,000.

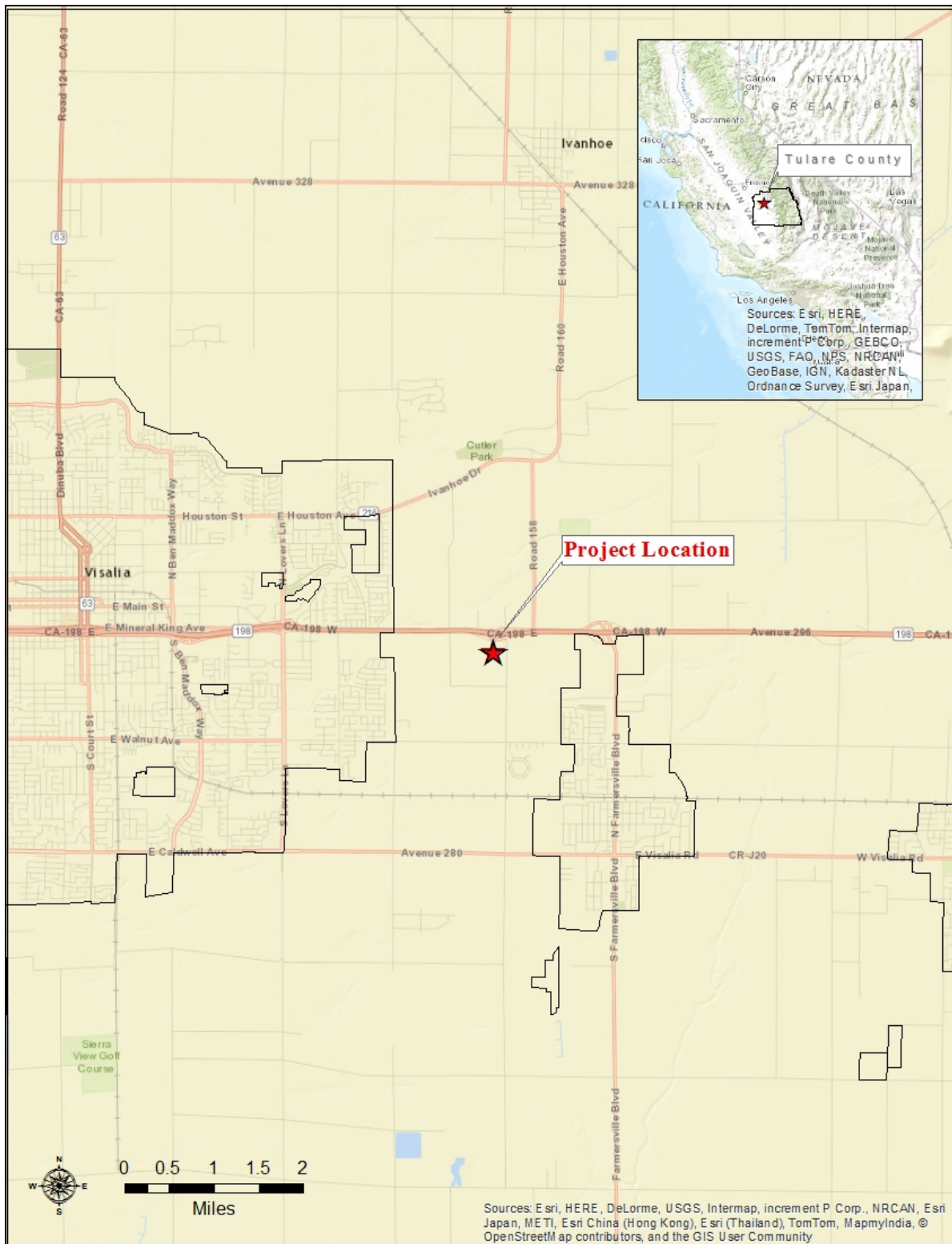
Phase 4, the final phase, will include 13 commercial buildings and a remaining lot for a second stormwater retention pond for on-site water storage. The total square footage buildout for phase 3 will be 98,030.

1.2.3 LAND USE CLASSIFICATION

In compliance with the California Emissions Estimator Model (CALEEMod), all projects must properly define the specific land uses that will occur at the project site. The land use and land use subtypes assist in the proper estimate of criteria pollutants emitted due to the construction and operations of the new facility. CALEEMod uses land use classifications consistent with the Institute of Transportation Engineers (ITE) Trip Generation 8th Edition. The discussed project is classified as the following ITE land use codes:

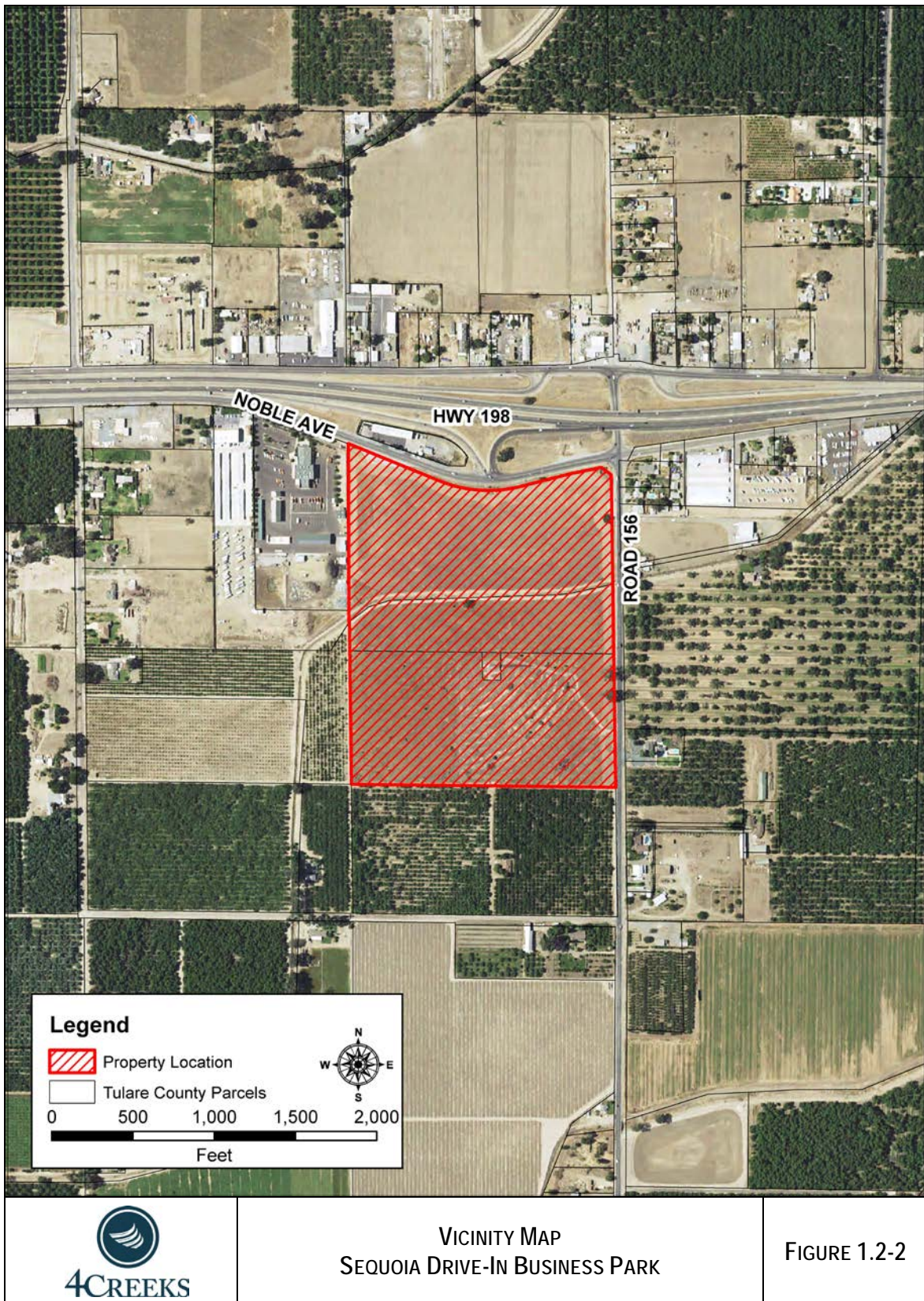
TABLE 1.2-1 ITE LAND CLASSIFICATION USED IN ANALYSIS	
Land Use	ITE Land Use Code
Convenience Market w/ Gas Pumps	853
Fast-Food Restaurant with Drive-Thru	934
Office Park	750

While the ITE Land Classification for Business Park (770) was used in the Traffic Impact Study to project a more conservative level of daily trips (higher than anticipated), the proposed project more accurately reflects the land use subtype "Office Park" (750) in anticipated daily trips. According to the CalEEMod User's Guide, "Office parks are usually suburban subdivisions or planned unit developments containing general office buildings and support services, such as banks, restaurants and service stations, arranged in a park-or campus-like atmosphere." Therefore, land use subtype "Office Park" (750) was used in the CalEEMod analysis for emissions modeling.



REGIONAL LOCATION SEQUOIA DRIVE-IN BUSINESS PARK

FIGURE 1.2-1

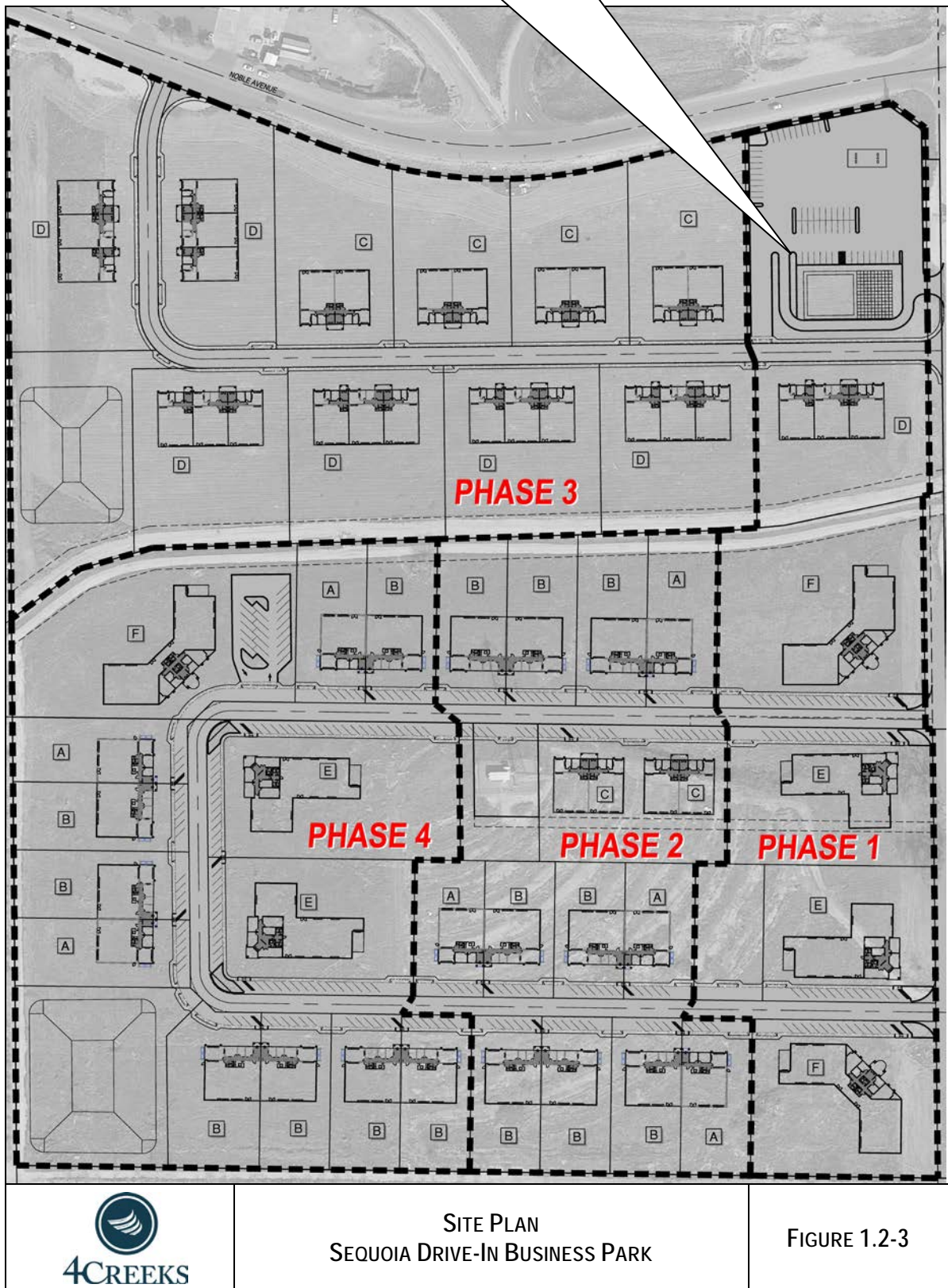


PROPOSED PROJECT

As shown in Figure 1.2-3: Site Plan, the project would result in the construction of a business park within the Service Commercial Zone. The following is a breakdown of the total acreage and square footage of the project site:

TABLE 1.2-2: SITE ACREAGE		
Description	Acres	Square Footage (Building)
Phase 1 – Retail Commercial & Gas Station w/ Mini Mart	10.04	68,340
Phase 2 – Service Commercial	8.25	88,000
Phase 3 – Service Commercial	14.89	104,000
Phase 4 – Service Commercial	12.72	98,030
Total Site Density	46.17	358,370

Proposed Gas Pumps, EV Station,
Convenience Store, and Fast Food
Restaurant.



1.3 ANALYSIS SUMMARY

AQ-1 Impact:	The project would not conflict with or obstruct implementation of any applicable air quality plan and would result in a less than significant impact on the environment.
AQ-2 Impact:	The project would not violate any air quality standard or contribute substantially to an existing violation and would result in a less than significant impact .
AQ-3 Impact	The project would not result in a cumulatively considerable net increase of any criteria air pollutant for which the project region is in non-attainment under and applicable federal or state ambient air quality standard and therefore would result in a less than significant impact .
AQ-4 Impact	The project would only have temporary construction emissions and would not expose sensitive receptors to substantial pollutant concentrations and would result in a less than significant impact .
AQ-5 Impact	The project would not create objectionable odors affecting a substantial number of people and would result in a less than significant impact .

1.4 DESIGN FEATURES APPLIED TO THE PROJECT

The project has incorporated the following design features that reduce criteria pollutants. Criteria pollutants reduction occurs in many variations, including decreasing energy use, reducing vehicle miles traveled, and increasing the presence of vegetation, thus reducing the amount of criteria pollutants in the atmosphere.

Landscaping & Site Design

The project will have onsite landscaping and new street trees will be planted in the business park. The onsite landscaping will assist in counter-balancing the project's contribution of criteria pollutants by reducing the amount of pavement and bare dirt on site, which are sources of criteria pollutants.

The use of internal combustion automobiles is a large contributor to criteria pollutants. The project has incorporated several design features to help reduce the use of automobiles. For instance, the project will provide a parking lot design that includes clearly marked and shaded pedestrian pathways between transit facilities and building entrances, encouraging pedestrian usage within the site. In addition, the project will have two bus stops within a quarter-mile, further encouraging the reduction of personal vehicle trips. Pedestrian access between bus services and major transportation points and to destination points within the project will be provided along with display cases or kiosks displaying transportation information in a prominent area accessible to employees and visitors. Providing the pedestrian connectivity throughout the project design will reduce vehicle miles traveled (VMTs). Kiosks will also include Bus Schedules and any other transportation information such as carpooling and car sharing to further lower VMT for the project. Electric Vehicle recharging stations will be installed in the project site parking lots to encourage electric vehicle use, reducing the criteria pollutants produced from conventional internal combustion automobiles.

These design features will reduce the production of criteria pollutants both on and off site of the business park.

Project Location

The project is in a central location and within close proximity of other commercially classified land and will require less vehicle mileage, in return reduce its net increase of any Criteria Pollutants. The new business park will provide services for residents located in eastern Visalia and the city of Farmersville. This will also reduce the trip length for those traveling from the west to the required services that would previously have to continue westward to alternative commercial centers.

Aside from being located near retail sectors, Sequoia Drive-In Business Park will be located adjacent to Highway 198 allowing the project to be easily accessible for a multitude of parties, including light trucks which meets the SB 375 guidelines.

Recycling

Tulare County has mandated recycling for commercial businesses that generate 4 or more cubic yards of waste weekly as part of the solid waste collection requirements. The reduction in waste leads to fewer Criteria Pollutants generated at landfills.

Environmental Enhancement Features

Unique environmental features are proposed for the subject property. A site survey has been conducted to provide an in-depth analysis of the existing conditions and to utilize all opportunities the subject property holds.

Features

- A. This project area's location offers an opportunity to exhibit a community advanced sewer treatment system. The effluent from the advanced sewer treatment system will be passed through an ultraviolet light to facilitate disinfection of the system effluent. After the effluent is disinfected it can be reclaimed and used to water the low water intensive landscaping onsite.
- B. A low impact stormwater development design will be implemented at the subject property. The stormwater conveyance system will be designed in a fashion that will call for minimal pipes and drain inlets onsite. This will be achieved by sloping the site towards the onsite retention ponds. Most of the stormwater conveyance will exist in the form of overland and gutter flow until it reaches the ponds where it will be collected by a drainage inlet system and piped into the ponds.
- C. The site will showcase a pedestrian friendly environment. Sidewalks will promote connectivity for pedestrians to safely and easily move between the retail and restaurant areas of the development.
- D. The project has an existing bus stop at the northwest corner of the project. This adds an element to the project for meeting the local agencies requirements for the Sustainable Communities and Climate Protection Act. This assists in the reduction target for passenger vehicles along with Criteria Pollutants.

SECTION 2: REGULATORY BACKGROUND

2.1 Federal Regulatory Agency

Environmental Protection Agency

The EPA is responsible for enforcing the many federal environmental and hazardous waste laws, including the federal CAA. California is under the jurisdiction of EPA Region IX, with offices in San Francisco. The CAA, established in 1963, was substantially modified in 1970 and again amended in 1990 to authorize the establishment of national health-based air quality standards, set deadlines for their attainment, and establish actions required of areas in the nation that exceeded these standards. Under the CAA, state and local agencies in areas that exceed the NAAQS are required to develop State Implementation Plans (SIP) to show how they will achieve the NAAQS for ozone and particulate matter by specified dates (42 USC 7409, 7411). The EPA's responsibility to control air pollution in individual states is primarily to review submittals of SIPs that are prepared by each state.

2.2 State of California Regulatory Agency

State of California Regulatory Agency

In California, the CARB is responsible for preparing and enforcing the federally-required SIP in an effort to achieve and maintain NAAQS and CAAQS, which were developed as part of the California Clean Air Act (CCAA) adopted in 1988. CAAQS for criteria pollutants equal or surpass NAAQS, and include other pollutants for which there are no NAAQS. In addition, CARB is responsible for assigning air basin attainment and nonattainment designations in California. Air basins are designated as being in attainment if the levels of a criteria air pollutant meet the NAAQS or CAAQS for the pollutant, and are designated as being in nonattainment if the level of a criteria air pollutant is higher than the corresponding NAAQS or CAAQS.

CARB is the oversight agency responsible for regulating statewide air quality, but implementation and administration of NAAQS and CAAQS is delegated to several regional Air Pollution Control Districts and Air Quality Management Districts.

Title 24

The project is required to comply with Title 24 of the California Code of Regulations established by the Energy Commission regarding energy conservation standards. The project is also required to comply with the California Green Building Standards. California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. All buildings for which an application for a building permit is submitted on or after July 1, 2014 must follow the 2013 standards. The efficiency standards are anticipated to be updated in 2016. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions.

California Green Building Standards

On January 12, 2013, the State Building Standards Commission unanimously adopted updates to the California Green Building Standards Code. The Code is a comprehensive regulatory code to all residential, commercial and school buildings.

The California Green Building Standards Code does not prevent a local jurisdiction from adopting a more stringent code as state law provides methods for local enhancements. The Code recognizes that many jurisdictions have developed existing construction and demolition ordinances, and defers to them as the ruling guidance provided they provide a minimum of 50 percent diversion requirement. The code also provides exemptions for areas not served construction and demolition recycling infrastructure. State building code provides the minimum standard that buildings need to meet in order to be certified for occupancy. Enforcement is generally through the local building official.

The California Green Building Code requirements are stated below and how their requirements are being implemented into the project site.

TABLE 2.1-1: CALIFORNIA GREEN BUILDING CODE REQUIREMENTS			
Code Requirement	Section of Standards Code	Requirements	Project Implementation
Water Efficiency and Conservation (Outdoor)	4.304.1	Automatic irrigation system controllers for landscaping.	The project will implement weather based controllers with a separate wired or wireless rain sensor which connects or communications with the controllers
Construction Waste Reduction of at least 50 percent	4.408.1 – 4.408.5	Recycle and/or salvage for reuse a minimum of 50 percent of the nonhazardous construction and demolition waste	Project will be expected to meet the 50 percent requirement through recycling of excavated soil and land-clearing debris.
Materials Pollution	4.504.1 – 4.504.6	Low-pollutant emitting interior finish materials such as paint, carpet, vinyl flooring and particleboard.	Project will comply will all regulations using low pollutant materials within the interior of the building.
Installer and Special Inspector Qualifications	702.1 – 702.1	Mandatory special installer inspector qualifications for installation and inspection of energy systems.	Tulare County has certified inspectors who will be overseeing the installation of the air conditioner, mechanical equipment, etc.

Source: CalGreen Code

2.3 Regional Regulatory Agency

San Joaquin Valley Air Pollution Control District (SJVAPCD)

The project is required to comply with regulations and standards established by the San Joaquin Valley Air Pollution Control District regarding air pollution. The SJVAPCD (Air District) is made up of eight counties in California's Central Valley: San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare, and the San Joaquin Valley Air Basin portion of Kern County (see Figure 2.2-1). The SJVAPCD has jurisdiction over most air quality matters in the San Joaquin Valley Air Basin(SJVAB). A Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI) has been developed by the Air District to act as an advisory document for addressing air quality in environmental documents.

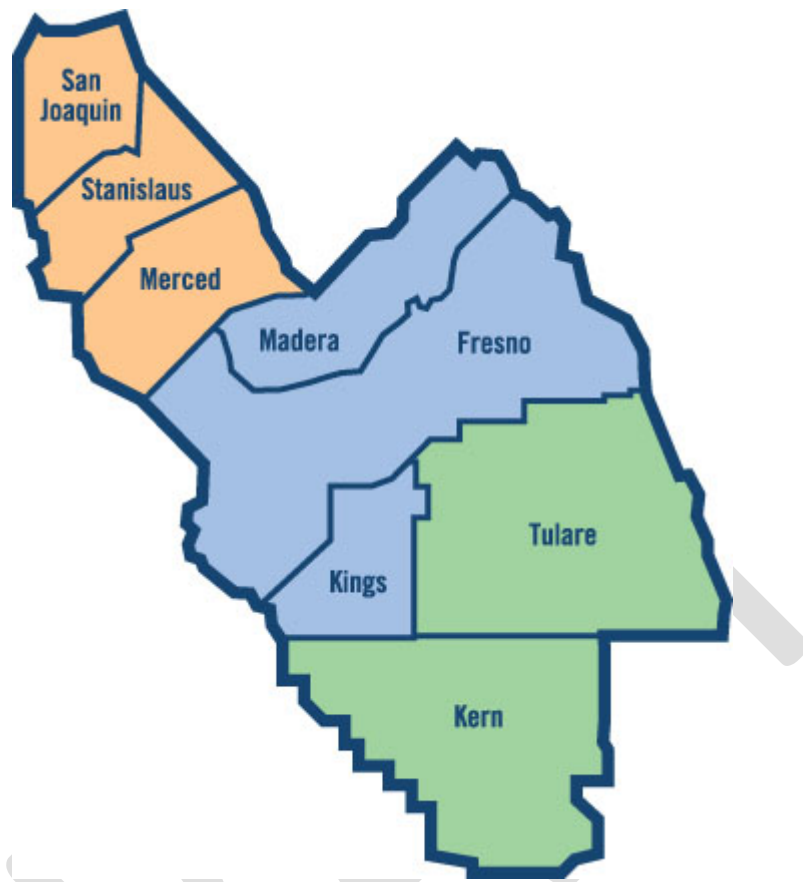


Figure 2.2-1: San Joaquin Valley Air Pollution Control District

The SJVAB has one of the most severe air pollution problems in the State of California and the nation. Air pollution is hazardous to health, reduces visibility, degrades or soils materials, and can damage native vegetation. State and national ambient air quality standards were created to protect the health and welfare, and to minimize other impacts. The ambient air quality standards are outlined in the Regulatory Background section.

The SJVAPCD was formed in 1992 and is the lead air quality regulatory agency for the SJVAB. The SJVAPCD has jurisdiction over all point and area sources of air emissions except for mobile sources (such as motor vehicles), consumer products, and pesticides. The SJVAPCD and California Air Resources Board (CARB) have joint responsibility for attaining and maintaining the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) in the SJVAB.

The SJVAPCD has established a three-tiered approach to determining significance related to a project's quantified ozone precursor emissions. The three levels of analysis include Small Project Analysis Level (SPAL), Cursory Analysis Level (CAL), and Full-Analysis Level (FAL). This project qualifies as a CAL, where the cursory level analysis can include emission quantification, preliminary CO screening if needed, and qualitative analysis of potential construction toxics and odor impacts. The project emissions has been quantitatively analyzed using the emission modeling software, CalEEMod. The CalEEMod analysis (see Appendix A) includes both construction and operation emissions. The traffic impact study prepared for this project indicates that the project will result in a maximum LOS D within the project study area and therefore, will not result in substantial increases in traffic congestion. According to GAMAQI "the project

will result in no potential to create a violation of the CO standard [if] ... a traffic study for the project indicates that the LOS on one or more streets or at one or more intersections in the project vicinity will be reduced to LOS E or F." Therefore since the project is at a lower projected LOS a CO hot spot analysis is not required for this project. (GAMAQI, March 2015, page 98.)

In order to work towards attainment for ozone, PM₁₀, and PM_{2.5}, the EPA Office of Air Quality Planning and Standards requires that each state containing nonattainment areas develop a written SIP for cleaning the air in those areas. Through these plans, the states outline efforts they will make to correct the levels of air pollution and bring the areas back into attainment. Effective June 15, 2005, the EPA revoked the federal 1-hour ozone standard, including associated designations and classifications. EPA had previously classified the SJVAB as extreme nonattainment, including associated designations and classifications. EPA approved the 2013 Plan for the Revoked 1-Hour Ozone Standard, which met the EPA's levels of air pollution standards.

The Air District is primarily responsible for regulating stationary source emissions within Tulare County and preparing the air quality plans (or portions thereof) for its jurisdiction. Air District's primary approach of implementing local air quality plans occurs through the adoption of specific rules and regulations. Stationary sources within the jurisdiction are regulated by the Air District's permit authority over such sources and through its review and planning activities. For example, the Air District adopted its Regulation VIII-(Fugitive PM₁₀ Prohibitions), on October 21, 1993 and amended it on several occasions since then. This Regulation consists of a series of emission reduction rules intended to implement the PM₁₀ Maintenance Plan. The PM₁₀ Maintenance Plan emphasizes reducing fugitive dust as a means of achieving attainment of the federal standards for PM₁₀. Regulation VIII specifically addresses the following activities:

- Construction, demolition, excavation, extraction;
- Handling and storage of bulk materials;
- Landfill disposal sites;
- Paved and unpaved roads; and
- Vehicle and/or equipment parking, shipping and receiving, transfer, fueling, and service areas.

The Air District has limited authority to regulate transportation sources and indirect sources that attract motor vehicle trips.

- The Air District has developed Indirect Source Review Rule 9510 for discretionary development projects and requires an Air Impact Assessment (AIA) to be prepared to analyze emissions of the project if the project is over a certain size. This project is subject to a discretionary approval by Tulare County and exceeds the Rule 9510 commercial space applicability threshold of 2,000 sf. As such, the project is subject to Rule 9510.
- Rule 9510 requires developers to mitigate project emissions through 1) on-site design features that reduce trips and vehicle miles traveled, 2) controls on other emission sources, and 3) with reductions obtained through the payment of a mitigation fee used to fund off-site air quality mitigation projects. Rule 9510 requires construction related NO_x emission reductions of 20 percent and PM₁₀ reductions of 45 percent. Rule 9510 requires a 33 percent reduction in operational NO_x emissions and a 50 percent reduction in PM₁₀. The reductions are calculated by comparing the unmitigated baseline emissions and mitigated emissions from the first year of project operation. The Air district recommends

using the CalEEMod model to quantify project emissions and emission reductions. Rule 9510 was adopted to reduce the impacts of development on Air District's attainment plans.

Other Air District Rules and Regulations that affect development in Tulare County include, but not limited to:

- Rule 2201 (New and Modified Stationary Source Review): This rule requires new and modified stationary emission sources to implement best available control technology and to offset emissions exceeding thresholds contained in the rule. The rule implements the federal Title V permitting program for the San Joaquin Valley Air Basin.
- Rule 4101 (Visible Emissions): The purpose of this rule is to prohibit the emission of visible air contaminants to the atmosphere. The provisions of this rule shall apply to any source operation which emits or may emit air contaminants.
- Rule 4102 (Nuisance): The purpose of this rule is to protect the health and safety of the public, and applies to any source operation that emits or may emit air contaminants or other materials.
- Rule 4601 (Architectural Coatings): The purpose of this rule is to limit Volatile Organic Compounds (VOC) emissions from architectural coatings. Emissions are reduced by limits on VOC content and providing requirements on coatings storage, cleanup, and labeling.
- Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations): The purpose of this rule is to limit VOC emissions from asphalt paving and maintenance operations. If asphalt paving will be used, then the paving operations will be subject to Rule 4641.
- Rule 4202 (Particulate Matter – Emission Rate): The purpose of this rule is to limit particulate matter emissions by establishing allowable emission rates. The calculation methods for determining the emission rate based on process weight are specified.

The Air District has published a Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI), an advisory document that provides lead agencies, consultants, and project applicants with uniform procedures for addressing air quality in environmental documents. A major part of the GAMAQI includes a discussion of air quality control measures that are recommended for use in mitigating construction and operation-related impacts. The Air District has also published Air Quality Guidelines for General Plans (Air District, page 1-1, 2005), which provides guidance to local officials and staff on developing and implementing local policies and programs to be included in local jurisdictions' general plans. (SOURCE: *Tulare County 2030 General Plan DEIR pages 3.3-7 to 3.3-8*)

PM_{2.5} Plan

The Air District's Governing Board adopted the 2008 Plan for the 1997 PM_{2.5} Annual Standard on May 22, 2008. This plan highlights a variety of measures designed to achieve all the PM_{2.5} standards – the 1997 federal standards, the 2006 federal standards, and the state standard – as soon as possible. The plan set out the strategy to attain the federal 1997 Annual PM_{2.5} standard by 2015. The California Air Resources Board (CARB) amended the SJVAPCD 2008 annual PM_{2.5} Plan on April 28, 2011. The revisions updated the rulemaking calendar and transportation conformity budgets, and revised reasonable further progress tables and associated reductions for contingency purposes. With these revisions, U.S. EPA approved the 2008 SJVAPCD PM_{2.5} Plan on November 9, 2011, except for the contingency measures. To resolve the contingency measure disapproval, the Air District adopted an update to the contingency measures on

June 20, 2013, known as the 2012 PM_{2.5} Plan for 24 Hours Standard. CARB approved this update on June 27, 2013.

The *2015 Plan for the 1997 PM_{2.5} Standard* established the District's strategy for attaining the 1997 Annual PM_{2.5} standard and 2006 24 Hour standard as expeditiously as possible, and synthesizes the District's strategies for improving air quality and public health in the Valley. The District has to demonstrate attainment of the newest federal standards for fine particulate matter (PM_{2.5}) as expeditiously as possible. Through this comprehensive attainment strategy, the Valley will achieve attainment of the federal PM_{2.5} standard by 2019 reducing NO_x emissions, the predominant pollutant leading to the formation of PM_{2.5}, by 55% over this period. In addition to these much-needed NO_x reductions, the District's strategy also reduces direct PM_{2.5} emissions that not only assist the Valley in attaining the standard as fast as possible, but also reduce the PM_{2.5} emissions that pose the greatest health impacts to Valley residents. (SOURCE: *San Joaquin Valley Air District, 2015 Plan for 1997 PM_{2.5} Standard.*)

The attainment strategy within the *2015 Plan for the 1997 PM_{2.5} Standard* projects to reduce NO_x emissions by 38% by 2020. The modeling and technical analysis demonstrated in the *2015 Plan* projects that the emissions reductions achieved through the plan's control strategy bring the entire Valley into attainment of the 1997 federal 24-hour PM_{2.5} standard by 2018 and annual PM_{2.5} standard by 2020. (SOURCE: *San Joaquin Valley Air District, 2015 Plan for 1997 PM_{2.5} Standard.*)

San Joaquin Valley Ozone Plan

The CARB approved the SJVAPCD 2007 Ozone Plan on June 14, 2007. The plan sets out the strategy to attain the federal 1997 8-hour ozone standard by 2024. CARB amended the SJVAPCD 2007 8-hour Ozone State Implementation Plan on July 21, 2011. The U.S. EPA approved the revised 2007 SJVAPCD 8-hour Ozone Plan on March 1, 2012. A draft revision of the SJVAPCD 2007 Ozone Plan went to the CARB on October 22, 2015 for a public meeting to consider the Updated Transportation Conformity Budget. The CARB will submit the revised draft of the transportation conformity budgets to the U.S. EPA.

The CARB approved the SJVAPCD 2013 Plan for the 1-hour Ozone Standard. The Plan sets out the strategy to attain the federal 1979 Revoked 1-hour Ozone standard of 0.12 ppm by 2019.

The Air District adopted the 2016 Plan for the 2008 8-Hour Ozone Standard in June 2016. This plan satisfies Clean Air Act requirements and ensures expeditious attainment of the 75 parts per billion 8-hour ozone standard. (www.valleyair.org/Air_Quality_Plans/Ozone_Plans.htm)

2.4 Local Regulatory Agency

Tulare County

The project is also required to comply with General Plan measures implemented by Tulare County. Tulare County has imposed the following measures for all development projects:

AQ-1.3 Cumulative Air Quality Impacts – The County shall require development to be located, designed, and constructed in a manner that would minimize cumulative air quality impacts. Applicants shall be required to propose alternatives as part of the State CEQA process that reduce air emissions and enhance, rather than harm, the environment.

AQ-1.4 Air Quality Land Use Compatibility – The County shall evaluate the compatibility of industrial or other developments which are likely to cause undesirable air pollution with regard to proximity to sensitive land uses, and wind direction and circulation in an effort to alleviate effects upon sensitive receptors.

AQ-1.5 California Environmental Quality Act (CEQA) Compliance – The County shall ensure that air quality impacts identified during the DEQA review process are consistently and reasonably mitigated when feasible.

AQ-1.7 Support Statewide Climate Change Solutions – The County shall monitor and support the efforts of Cal/EPA, CARB, and the SJVAPCD, under AB 32 (Health and Safety Code §38501 et seq.), to develop a recommended list of emission reduction strategies. As appropriate, the County will evaluate each new project under the updated General Plan to determine its consistency with the emission reduction strategies.

AQ-2.3 Transportation and Air Quality – When developing the regional transportation system, the County shall work with TCAG to comprehensively study methods of transportation which may contribute to a reduction in air pollution in Tulare County. Some possible alternatives that should be studied are:

1. Commuter trains (Light Rail, Amtrak, or High Speed Rail) connecting with Sacramento, Los Angeles, and San Francisco, with attractive series scheduled up and down the valley;
2. Public transportation such as buses and light rail, to serve between communities of the Valley, publicly subsidized if feasible;
3. Intermodal public transit such as buses provided with bicycle racks, bicycle parking at bus stations, bus service to train stations and airports, and park and ride facilities; and
4. Community transportation systems supportive of alternative transportation modes, such as cycling or walking trails, with particular attention to high-density areas.

AQ-2.4 Transportation Management Associations – The County shall encourage commercial, retail, and residential developments to participate in or create Transportation Management Associations (TMAs) that may assist in the reduction of pollutants through strategies that support carpooling or other alternative transportation modes.

AQ-2.5 Ridesharing – The County shall continue to encourage ridesharing programs such as employer-based rideshare programs.

AQ-3.4 Landscape – The County shall encourage the use of ecologically based landscape design principles that can improve local air quality by absorbing CO₂, producing oxygen, providing shade that reduces energy required for cooling, and filtering particulates. These principles include, but are not limited to, the incorporation of parks, landscaped medians, and landscaping within development.

AQ-3.5 Alternative Energy Design - The County shall encourage all new development, including rehabilitation, renovation, and redevelopment, to incorporate energy conservation and green building practices to maximum extent feasible. Such practices include, but are not limited to: building orientation and shading, landscaping, and the use of active and passive solar heating and water systems.

AQ-4.1 Air Pollution Control Technology – The County shall utilize the BACM and RACM as adopted by the County to support SJVAPCD air quality attainment plans to achieve and maintain healthful air quality and high visibility standards. These measures shall be applied to new development approvals and permit modifications as appropriate.

AQ-4.2 Dust Suppression Measures – The County shall require developers to implement dust suppression measures during excavation, grading, and site preparation activities consistent with SJVAPCD Regulation VIII – Fugitive Dust Prohibitions. Techniques may include, but are not limited to, the following:

1. Site watering or application of dust suppressants,
2. Phasing or extension of grading operations,
3. Covering of stockpiles,
4. Suspension of grading activities during high wind periods (typically winds greater than 25 miles per hour), and
5. Revegetation of graded areas.

AQ-4.3 Paving or Treatment of Roadways for Reduced Air Emissions – The County shall require that all new roads be paved or treated to reduce dust generation where feasible as required by SJVAPCD Regulation VIII, Rule 8061- Paved and Unpaved Roads. For new projects with unpaved roads, funding for roadway maintenance shall be adequately addressed and secured.

AQ-4.5 Public Awareness – The County shall promote public awareness of the seriousness and extent of the existing air quality problems.

AQ-4.6 Asbestos Airborne Toxic Control and Dust Protection – Asbestos is of concern to Tulare County because it occurs naturally in surface deposits of several types of ultramafic materials (materials that contain magnesium and iron and a very small amount of silica). Asbestos emissions can result from the sale or use of asbestos-containing materials, road surfacing with such materials, grading activities, and surface mining.

Ambient Air Quality

Ambient air quality is described in terms of compliance with state and national standards, and the levels of air pollutant concentrations considered safe to protect the public health and welfare. These standards are designed to protect people most sensitive to respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. The EPA has established national ambient air quality standards (NAAQS) for seven air pollution constituents. As permitted by the Clean Air Act (CAA), California has adopted more stringent air emissions standards (CAAQS), and expanded the number of air constituents regulated. The following table has been prepared to outline the National and State of California ambient air quality standards.

Table 2.2-2 Ambient Air Quality Standards

Ambient Air Quality Standards						
Pollutant	Averaging Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O ₃) ⁸	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)		
Respirable Particulate Matter (PM10) ⁹	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		—		
Fine Particulate Matter (PM2.5) ⁹	24 Hour	—	—	35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	12.0 µg/m ³	15 µg/m ³	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m ³)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m ³)		9 ppm (10 mg/m ³)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		—	—	
Nitrogen Dioxide (NO ₂) ¹⁰	1 Hour	0.18 ppm (339 µg/m ³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m ³)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)		0.053 ppm (100 µg/m ³)	Same as Primary Standard	
Sulfur Dioxide (SO ₂) ¹¹	1 Hour	0.25 ppm (655 µg/m ³)	Ultraviolet Fluorescence	75 ppb (196 µg/m ³)	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m ³)	
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (for certain areas) ¹¹	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas) ¹¹	—	
Lead ^{12,13}	30 Day Average	1.5 µg/m ³	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m ³ (for certain areas) ¹²	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m ³		
Visibility Reducing Particles ¹⁴	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m ³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			
Vinyl Chloride ¹²	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			

Source: California Air Resources Board (5/4/2016)
<https://www.arb.ca.gov/research/aags/aags2.pdf>

Tulare County is located in the SJVAB. Air quality within the county is regulated by the SJVAPCD under both federal and state Clean Air Acts. CARB is required to designate areas of the state as attainment, nonattainment, or unclassified for any state standard. An “attainment” designation for an area signifies that pollutant concentrations do not violate the standard for that pollutant in that area. A “nonattainment” designation indicates that a pollutant concentration violated the standard at least once.

The EPA designates areas for ozone (O₃), carbon monoxide (CO), and nitrogen dioxide (NO₂) as either “Does not meet the primary standards,” “Cannot be classified,” or “Better than national standards.” The area air quality attainment status of the SJVAB and Tulare County is shown in Table 2.1-3

Table 2.2-3 Attainment Status for the San Joaquin Valley Air Basin/Tulare County		
Pollutant	California Attainment Status	Federal Attainment Status
Ozone (1-hour)	Nonattainment/Severe	No Federal Standard
Ozone (8-hour)	Nonattainment	Nonattainment/Extreme
Respirable Particulate Matter (PM ₁₀)	Nonattainment	Attainment
Fine Particulate Matter (PM _{2.5})	Nonattainment	Nonattainment
Carbon Monoxide	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxide	Attainment	Attainment/Unclassified
Lead (Particulate)	Attainment	No Designation/Classification
Sulfur Dioxide	Attainment	Attainment/Unclassified
Sulfates	Attainment	No Federal Standard
Hydrogen Sulfide	Unclassified	No Federal Standard
Visibility Reducing Particles	Unclassified	No Federal Standard
Vinyl Chloride	Attainment	No Federal Standard

Source: SJVAPCD – Ambient Air Quality Standards & Valley Attainment Status

SECTION 3: MODELING METHOD AND ANALYSIS

3.1 MODEL SELECTION

Air pollution emissions can be estimated by using emission factors and examining the level of activity occurring. Emission factors are the emission rate of a pollutant given the activity over time; for example, grams of NO_x per horsepower hour. The CARB has published emission factors for on-road equipment and vehicles in the OFFROAD emission model. An air emissions model (or calculator) combines the emission factors and the various levels of activity and outputs the emissions for the various pieces of equipment.

The California Emissions Estimator (CalEEMod) version 2013.2.2 is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential Criteria Pollutant emissions associated with both construction and operations from a variety of land use projects. The model quantifies direct emissions from construction and operations, including vehicle use, as well as indirect emissions, such as Criteria Pollutants from energy use, solid waste disposal, vegetation planting and/or removal, and water use.

3.2 MODELING INPUTS

Construction-related emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and prevailing weather conditions. Construction-related criteria pollutant emissions result from onsite and offsite activities. Onsite emissions principally consist of exhaust emissions (NO_x, SO_x, CO, VOC, PM₁₀ and PM_{2.5}) from delivery vehicles, worker traffic and road dust (PM₁₀ and PM_{2.5}).

The project is estimated to start construction in January 2017 and to be completed by February 2024. The estimated construction schedule is provided in Table 3.2-1.

TABLE 3.2-1: CONSTRUCTION SCHEDULE (PROJECT PHASE 1)				
Phase Name	Start Date	End Date	Number of Days / Week	Number of Days
Phase 1 - Site Preparation	1/1/2017	1/6/2017	5	5
Phase 1 - Grading	1/7/2017	1/18/2017	5	8
Phase 1 - Building Construction	1/19/2017	12/6/2017	5	230
Phase 1 - Paving	12/7/2017	1/1/2018	5	18
Phase 1 - Architectural Coating	1/2/2018	1/25/2018	5	18
Phase 2 - Site Preparation	1/1/2019	1/7/2019	5	5
Phase 2 - Grading	1/8/2019	1/17/2019	5	8
Phase 2 - Building Construction	1/18/2019	12/5/2019	5	230
Phase 2 - Paving	12/6/2019	12/31/2019	5	18
Phase 2 - Architectural Coating	1/1/2020	1/24/2020	5	18
Phase 3 - Site Preparation	1/1/2021	1/7/2021	5	5
Phase 3 - Grading	1/8/2021	1/19/2021	5	8
Phase 3 - Building Construction	1/20/2021	12/7/2021	5	230
Phase 3 - Paving	12/8/2021	12/31/2021	5	18
Phase 3 - Architectural Coating	1/1/2022	1/26/2022	5	18
Phase 4 - Site Preparation	1/2/2023	1/6/2023	5	5
Phase 4 - Grading	1/9/2023	1/18/2023	5	8
Phase 4 - Building Construction	1/19/2023	12/6/2023	5	230
Phase 4 - Paving	12/7/2023	1/1/2024	5	18
Phase 4 - Architectural Coating	1/2/2024	1/25/2024	5	18

Source: CalEEMod

The construction equipment list is shown in Table 3.2-2 through 3.2-5. The equipment list was generated using the CalEEMod defaults for a project of this size. The activity for construction equipment is based on the horsepower and load factors of the equipment. In general, the horsepower is the power of the engine, the greater the horsepower, the greater the power. The load factor is the average power of a given piece of equipment while in operation compared with its maximum-rated horsepower. The load factor of 1.0 indicates that a piece of equipment continually operates at its maximum operating capacity.

TABLE 3.2-2: PHASE 1 CONSTRUCTION EQUIPMENT ASSUMPTION					
Construction Phase	Equipment	Unit Amount	Usage Hours	Horsepower	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Source: CalEEMod

TABLE 3.2-3: PHASE 2 CONSTRUCTION EQUIPMENT ASSUMPTION					
Construction Phase	Equipment	Unit Amount	Usage Hours	Horsepower	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Source: CalEEMod

TABLE 3.2-4: PHASE 3 CONSTRUCTION EQUIPMENT ASSUMPTION					
Construction Phase	Equipment	Unit Amount	Usage Hours	Horsepower	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Source: CalEEMod

TABLE 3.2-5: PHASE 4 CONSTRUCTION EQUIPMENT ASSUMPTION					
Construction Phase	Equipment	Unit Amount	Usage Hours	Horsepower	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Source: CalEEMod

The construction trip assumptions are shown in Table 3.2-6. The CalEEMod default trip lengths are used in the analysis and are 16.8, 6.60, and 20 miles for worker, vendor and haul trips respectively.

TABLE 3.2-6: CONSTRUCTION TRIPS				
Phase Name	Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number
Phase 1 - Site Preparation	7	18.00	0.00	0.00
Phase 1 - Grading	6	15.00	0.00	0.00
Phase 1 - Building Construction	9	72.00	30.00	0.00
Phase 1 - Paving	8	20.00	0.00	0.00
Phase 1 - Architectural Coating	1	14.00	0.00	0.00
Phase 2 - Site Preparation	7	18.00	0.00	0.00
Phase 2 - Grading	6	15.00	0.00	0.00
Phase 2 - Building Construction	9	48.00	22.00	0.00
Phase 2 - Paving	8	20.00	0.00	0.00
Phase 2 - Architectural Coating	1	10.00	0.00	0.00
Phase 3 - Site Preparation	7	18.00	0.00	0.00
Phase 3 - Grading	6	15.00	0.00	0.00
Phase 3 - Building Construction	9	47.00	23.00	0.00
Phase 3 - Paving	8	20.00	0.00	0.00
Phase 3 - Architectural Coating	1	9.00	0.00	0.00
Phase 4 - Site Preparation	7	18.00	0.00	0.00
Phase 4 - Grading	6	15.00	0.00	0.00
Phase 4 - Building Construction	9	58.00	26.00	0.00
Phase 4 - Paving	8	20.00	0.00	0.00
Phase 4 - Architectural Coating	1	12.00	0.00	0.00

Source: CalEEMod

3.3 OPERATION

AIR QUALITY

The SJVAPCD has recommended the following thresholds of significance for projects. The thresholds are true for operational and construction periods. For this analysis the thresholds are used to determine construction and operational related impacts.

Ozone Precursor Emissions

Oxides of Nitrogen (NOx) 10 tons/year threshold

Reactive Organic Gases (ROG) 10 tons/year threshold

PM₁₀ & PM_{2.5} Emissions

PM₁₀ & PM_{2.5} 15 tons/year threshold

CO Emissions

Carbon Monoxide (CO) 100 tons/year

SOx Emissions

SOx 27 tons/year

Hazardous Air Pollutant Emissions

Based on potential to increase cancer risk for the person with maximum exposure potential by 20 in one million. Non-cancer Hazard Index > 1. Hazardous exposure levels are determined by screening or modeling.

The business as usual emissions represents emission in terms as if they would have occurred without regulations enacted pursuant to AB 32. Operational criteria pollutant emissions will be reduced through implementing the following operational practices and design elements as conditions of approval:

- Landscaping: The 53% of the project area will contain water efficient landscape.
- Energy: Energy efficient light-bulbs will be incorporated to the project to reduce electrical use as a condition of approval. Along with this the project is a user of Southern California Edison which has 16 percent renewable energy in its portfolio in 2006 (CEC 2007). Therefore, to achieve a 33-percent reduction as required by California's Renewable Electricity Standard, 17 percent more renewable energy in the utility's portfolio is needed. In 2020, the utility will achieve 33 percent renewable energy, which would decrease the emissions associated with electricity by 17 percent.
- Waste: The project will participate in the County's recycle and waste reduction program which has seen an average waste reduction of 50%.
- Water: Low flow faucets, toilets and urinals will be incorporated as a condition of approval. Along with a water efficient irrigation system for landscaped areas.
- Traffic: The project will increase density, improve walkability, improve destination accessibility through increase transit accessibility and overall improve the pedestrian network. Therefore reducing the number of vehicles used to travel to the project location and reducing GHG emissions.
- Improved Destination Accessibility: The project is located within four miles of downtown Visalia.
- Improved Walkability Design: The project is located in an area that includes multiple stores and other desirable locations

-
- Improved Transit Access: The project is located less than 500 yards from an existing transit stop.
 - Installation of Low Flow Bathroom Fixtures: Both low flow bathroom faucets and low flow toilets will be installed within the project site to ensure a reduced quantity of water as a condition of approval.
 - Turf Reduction: Landscape design will incorporate the use of drought resistant plants in place of excess turf. Turf reductions reduce water consumption, save energy by requiring less lawn maintenance, create less yard waste, reduce the amount of herbicides commonly used, and enhance biodiversity through varied planting which offers shelter and feeding opportunities for wildlife.
 - Use of Low VOC Paint: Low VOC paint will be used on both the non-residential interior and exterior of the project site.
 - Water Efficient Landscaping: To ensure a reduction in water used for project landscaping and maintenance a water efficient irrigation system and water efficient landscaping will be incorporated as part of the project.

These above measures are represented in CalEEMod as project design features. Reductions from these measures are calculated by CalEEMod and are based on the methodology presented in the California Air Pollution Control Officer's 2010 report, "Quantifying Greenhouse Gas Mitigation Measures." Table 5.1-3 shows the percentage reduction calculated by CalEEMod for the new regulations and standards.

SECTION 4: PROJECT IMPACTS

4.1: IMPACT ANALYSIS

Through the examination of the proposed project we have examined several categories of Criteria Pollutants emissions and developed an understanding of the project and its projected impact on emissions. The impact analysis will provide a detailed explanation of the project's Criteria Pollutants emission by combining all categories and examining any conflicting encounters, in regards to City Plans, State/Federal Policy and Existing Regulations.

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. A significant impact would occur if the project would:

- a) Conflict with or obstruct implementation of the applicable air quality plan;
- b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable national or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- d) Expose sensitive receptors to substantial pollutant concentrations; or
- e) Create objectionable odors affecting a substantial number of people.

<u>Impact AQ-1:</u>	The project would not conflict with or obstruct implementation of the applicable air quality plan.
<u>Mitigation Measures:</u>	<i>None Required</i>
<u>Conclusion:</u>	<i>Less Than Significant Impact</i>

1. Project Impact Analysis:

The SJVAB is classified by the State as a non-attainment area for CAAQS PM₁₀ and a maintenance area for federal NAAQS. The SJVAB is designated nonattainment for PM_{2.5} and ozone for both Federal and State AAQS. As discussed previously, Regulation VIII requires implementation of Best Available Control Measures (BACM) to address fugitive PM₁₀ emissions. The facility utilizes water trucks for dust suppression and water sprays throughout the process. The construction phase of the project will be completed with minimal site preparation involving excavation and other earthmoving activities. All construction activities will be completed in accordance with Regulation VIII. The operational phases will not exceed the SJVAPCD thresholds for all of the criteria pollutants, based on CalEEMod projections.

The project is able to benefit from complying with Regulation VIII during construction of the project through the following activities. These two actions are requirements from the SJVAPCD and not a mitigation measure, and will facilitate in reduction of PM₁₀ emissions.

- Water Exposed Area
- Reduced Vehicle Speed on Unpaved Roads

a. Short-term Impacts (Construction):

Construction emissions were calculated using the California Emissions Estimator Model (CalEEMod) program and results can be seen in Table 4.1-1. Complete modeling inputs and outputs can be seen in Appendix "A". The estimated short term emissions do not exceed the SJVAPCD threshold for each of the criteria pollutants and would therefore not obstruct implementation of any applicable air quality plan. With the implementation of Rule 9510 (Indirect Source Review), the Project's emissions at full operational build-out will not exceed SJVAPCD thresholds for criteria pollutants. Therefore, short-term impacts are ***Less Than Significant***.

Table 4.1-1
Emissions from Short-Term Project Impacts (Construction Phases)

Year	ROG (tons/yr)	NO _x (tons/yr)	CO (tons/yr)	SO ₂ (tons/yr)	PM ₁₀ (tons/yr)	PM _{2.5} (tons/yr)
2017	0.4691	3.7890	3.4057	5.4700e-003	0.4318	0.2914
2018	1.2974	0.0260	0.0301	6.0000e-005	3.4700e-003	2.2000e-003
2019	0.3427	2.9423	2.8517	4.8700e-003	0.3275	0.2203
2020	0.9389	0.0156	0.0205	4.0000e-005	2.1200e-003	1.3000e-003
2021	0.2792	2.4165	2.7040	4.8800e-003	0.2845	0.1804
2022	0.9582	0.0130	0.0195	4.0000e-005	1.7500e-003	1.0100e-003
2023	0.2385	2.0006	2.6814	5.1300e-003	0.2692	0.1543
2024	1.1206	0.0155	0.0264	5.0000e-005	2.2200e-003	1.1300e-003
Total	5.6446	11.2185	11.7393	0.02054	1.32256	0.85204
*Total after Rule 9510 Reductions	-	8.9753	-	-	1.0581	-
SJVAPCD Significance Level / year	10	10	100	27	15	15
Significant? (Yes/No)	No	No	No	No	No	No

*Rule 9510 (ISR) has a minimum required 20% reduction of NO_x emissions and 45% reduction of PM₁₀ emissions for Construction phases of projects. Figure above is cumulative emissions with the minimum reductions calculated, respectively.
Source: CalEEMod

b. Long-term Impacts (Operations):

Operations emissions were calculated using the California Emissions Estimator Model (CalEEMod) program and results can be seen in Table 4.1-2. Complete modeling inputs and outputs can be seen in Appendix "A". The estimated long term emissions do not exceed the SJVAPCD threshold for each of the criteria pollutants and would therefore not obstruct implementation of any applicable air quality plan. Therefore, long-term impacts are ***Less Than Significant***.

Table 4.1-2
Emissions from Long-Term Project Impacts (Operational Emissions by Phases)

Phase	ROG (tons/yr)	NO _x (tons/yr)	CO (tons/yr)	SO ₂ (tons/yr)	PM ₁₀ (tons/yr)	PM _{2.5} (tons/yr)
Ph1 Operational (2018)	4.3734	6.7530	34.4737	0.0334	1.7534	0.5266
Ph2 Operational (2020)	1.1416	1.8874	6.1477	0.0148	0.8157	0.2468
Ph3 Operational (2022)	1.1994	1.8077	6.6507	0.0175	0.9623	0.2901
Ph4 Operational (2024)	1.2282	1.5174	5.7500	0.0165	0.9060	0.2724
Totals	7.9426	11.9655	53.0221	0.0822	4.4374	1.3359
*Total after Rule 9510 Reductions	-	9.5724	-	-	8.8748	-
SJVAPCD Significance Level / year	10	10	100	27	15	15
Significant? (Yes/No)	No	No	No	No	No	No

*Rule 9510 (ISR) has a minimum required 20% reduction of NO_x emissions and 45% reduction of PM₁₀ emissions for Construction phases of projects. Figure above is cumulative emissions with the minimum reductions calculated, respectively. Source: CalEEMod

2. Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is the San Joaquin Valley Air Basin. This cumulative analysis is based on the information provided in the Air Quality Impact Analysis. Long-term construction impacts include emissions generated from permitted equipment and non-permitted equipment and activities. Construction emissions were calculated using the California Emissions Estimator Model (CalEEMod) program and results can be seen in Table 4.1-1. The estimated long-term cumulative emissions do not exceed the SJVAPCD threshold for all of the criteria pollutants and would therefore not obstruct implementation of any applicable air quality plan. Compliance with Rule 9510 would result in all criteria pollution emissions to be below the SJVAPCD thresholds. Therefore, there will be a ***Less than Significant Impact***.

The Criteria Pollutant emissions analysis assessed whether the project would exceed SJVAPCD threshold of significance during project construction and operation. Every criteria pollutant emissions were under their respective thresholds for both Construction and Operational phases. Therefore, the project-related emissions would have a ***Less Than Significant Impact***.

Impact AQ-2: The project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Mitigation Measures: *None Required*

Conclusion: *Less Than Significant Impact*

1. **Project Impact Analysis:** Tables 4.1-1, and 4.1-2 show that annual emission rates of Criteria Pollutants for the construction and operations, respectively, of the proposed project are below the thresholds of significance as established by the SJVAPCD (GAMAQI 7.13 and 8.4.4). As a result, long term air quality impacts are not significant. Therefore, ***Less Than Significant Impacts*** related to this item will occur.
2. **Cumulative Impact Analysis:** The geographic area of this cumulative analysis is the San Joaquin Valley Air Basin. Since the proposed Project emissions will not exceed SJCAPCD thresholds (GAMAQI 7.13 and 8.4.4) based on the determination found in Impact AQ-1, the project will have a less than significant impact. Therefore, ***Less Than Significant Cumulative Impacts*** related to this item will occur.

Impact AQ-3: The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

Mitigation Measures: *None Required*

Conclusion: *Less Than Significant Impact*

1. **Project Impact Analysis:** As discussed in the Cumulative Impact section of Checklist Item AQ-1 and AQ-2, long term air quality impacts will not be significant. Therefore, ***Less Than Significant Impacts*** related to this item will occur.
2. **Cumulative Impact Analysis:** As previously discussed, the proposed Project emissions will not exceed SJVAPCD thresholds, which are thresholds set by NAAQS and CAAQS, the project will have a less than significant impact. Therefore, ***Less Than Significant Cumulative Impacts*** related to this item will occur.

Impact AQ-4: The project would not expose sensitive receptors to substantial pollutant concentrations.

Mitigation Measures: *None Required*

Conclusion: *Less Than Significant Impact*

Impact Analysis: *Sensitive Receptors* – Those individuals who are sensitive to air pollution include children, the elderly, and persons with pre-existing respiratory or cardiovascular illness. The District considers a sensitive receptor to be a location that houses or attracts children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Examples of sensitive receptors include hospitals, residences, convalescent facilities, and schools. There is rural housing within the vicinity of the proposed project; the next nearest sensitive receptor is 1 mile away (residential subdivision) and the next being 1.5 miles away (elementary school). Individual tenants of the proposed business park may be required to acquire their own permits from the Air District.

Hazardous Air Pollutants (HAPS) – According to the SJVAPCD's Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI), HAPS are those pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects, or birth defects, or adverse environmental effects. GAMAQI Section 8.4.4 requires an Ambient Air Quality Analysis if the project exceeds 100 pounds of criteria pollutant emissions during operational phases. Based on the CalEEMod analysis for each phase during Summer and Winter seasons, daily operational emissions have been projected. It is anticipated that the project at full operation will not generate emissions that will be a risk to sensitive receptors within the proximity of the project (CalEEMod, Appendix B). Therefore, the project will have a ***Less Than Significant Cumulative Impact*** related to this item.

Impact AQ-5: The project would not create objectionable odors affecting a substantial number of people.

Mitigation Measures: *None Required*

Conclusion: *Less Than Significant Impact*

According to the SJVAPCD's 2015 GAMAQI, analysis of potential odor impacts should be conducted for the following two situations:

- a. Generators: project that would potentially generate odorous emissions proposed to locate near existing sensitive receptors or other land uses where people may congregate, and
- b. Receivers: residential or other sensitive receptor projects or other projects built for the intent of attracting people locating near existing odor sources.

GAMAQI's *Table 6: Screening Levels for Potential Odor Sources* can be used as a screening tool to qualitatively assess a project's potential to adversely affect area receptors. The proposed project does not meet the description for type of facility that would require screening for potential odor sources. As a result, the project will have a *Less Than Significant Impact* related to this item.

Table 4.1-3: Screening Levels for Potential Odor Sources

Type of Facility	Distance
Wastewater Treatment Facilities	2 miles
Sanitary Landfill	1 mile
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	1 mile
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile
Painting/Coating Operations (e.g. auto body shops)	1 mile
Food Processing Facility	1 mile
Feed Lot/Dairy	1 mile
Rendering Plant	1 mile

SUMMARY

The project is expected to generate Criteria Pollutants in the short-term as a result of the construction of the business park within the City of Visalia Urban Development Boundary and long-term emissions as a result of day-to-day operations of the proposed commercial project in Tulare County, CA. The project incorporates local agency requirements and standard measures that combine to achieve a less than significant impact to the environment. Estimated Criteria Pollutant emissions calculations are contained within the CalEEMod report, Appendix A.

Through the assessment of both short-term and long-term emissions it is our conclusion that the development of the commercial center in Tulare County, CA will not conflict with the applicable plans or hinder the San Joaquin Valley Air Basin's attainment of their ultimate emissions reduction goal.

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The following references were used in the preparation of this analysis and are referenced in the text and/or were used to provide the author with background information necessary for the preparation of thresholds and content.

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APPENDIX A
CALEEMOD REPORTS (ANNUAL)
PHASES 1 - 4

Sequoia Drive-In Business Park (PH 1)
San Joaquin Valley Unified APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Fast Food Restaurant with Drive Thru	3.00	1000sqft	0.07	3,000.00	0
Convenience Market With Gas Pumps	8.00	Pump	0.03	1,129.40	0
Office Park	63.02	1000sqft	1.45	63,020.00	0
Other Non-Asphalt Surfaces	118.90	1000sqft	2.73	118,900.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	45
Climate Zone	7	Operational Year	2018		
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Phase 1 will have 5 buildings with Office Park (ITE "Business Park") land use, ranging in square footage from 12,000 sf to 13,390 sf for a total of 68,340 sf of building gfa.

Phase 1 will also have a gas station with an attached fast food restaurant with drive-thru. Phase 1 will be 10.04 acres out of 46.17 acres of the total Project.

Land Use - "Other Non-Asphalt Surfaces" includes the new roads, on-street parking, and parking lots.

Construction Phase - No demolition required.

Vehicle Trips -

Energy Use -

Mobile Land Use Mitigation - Mobile Land Use Mitigation - LUT-1 - LUT-5 are based on project location. SDT-1: project will incorporate typical standard sidewalks throughout project.

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	OperationalYear	2014	2018
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

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					
2017	0.4691	3.7890	3.4057	5.4700e-003	0.1980	0.2338	0.4318	0.0724	0.2190	0.2914	0.0000	467.2237	467.2237	0.0834	0.0000	468.9743
2018	1.2974	0.0260	0.0301	6.0000e-005	1.6900e-003	1.7800e-003	3.4700e-003	4.5000e-004	1.7500e-003	2.2000e-003	0.0000	4.5235	4.5235	5.4000e-004	0.0000	4.5348
Total	1.7664	3.8150	3.4358	5.5300e-003	0.1997	0.2356	0.4353	0.0728	0.2208	0.2936	0.0000	471.7472	471.7472	0.0839	0.0000	473.5090

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					
2017	0.4691	3.7890	3.4057	5.4700e-003	0.1980	0.2338	0.4318	0.0724	0.2190	0.2914	0.0000	467.2234	467.2234	0.0834	0.0000	468.9739
2018	1.2974	0.0260	0.0301	6.0000e-005	1.6900e-003	1.7800e-003	3.4700e-003	4.5000e-004	1.7500e-003	2.2000e-003	0.0000	4.5235	4.5235	5.4000e-004	0.0000	4.5348

Total	1.7664	3.8150	3.4358	5.5300e-003	0.1997	0.2356	0.4353	0.0728	0.2208	0.2936	0.0000	471.7468	471.7468	0.0839	0.0000	473.5087
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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
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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.8561	2.0000e-005	1.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.4500e-003	3.4500e-003	1.0000e-005	0.0000	3.6500e-003
Energy	0.0149	0.1353	0.1137	8.1000e-004		0.0103	0.0103		0.0103	0.0103	0.0000	445.4842	445.4842	0.0163	5.4900e-003	447.5286
Mobile	3.5282	6.8525	34.8213	0.0344	1.7750	0.0776	1.8526	0.4769	0.0714	0.5483	0.0000	2,650.7842	2,650.7842	0.0970	0.0000	2,652.8217
Waste						0.0000	0.0000		0.0000	0.0000	18.9127	0.0000	18.9127	1.1177	0.0000	42.3845
Water						0.0000	0.0000		0.0000	0.0000	3.8689	26.2977	30.1667	0.3986	9.6300e-003	41.5215
Total	4.3993	6.9878	34.9368	0.0352	1.7750	0.0879	1.8629	0.4769	0.0817	0.5586	22.7816	3,122.5696	3,145.3512	1.6296	0.0151	3,184.2600

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	0.8561	2.0000e-005	1.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.4500e-003	3.4500e-003	1.0000e-005	0.0000	3.6500e-003

Energy	0.0149	0.1353	0.1137	8.1000e-004		0.0103	0.0103		0.0103	0.0103	0.0000	445.4842	445.4842	0.0163	5.4900e-003	447.5286
Mobile	3.5024	6.6177	34.3583	0.0326	1.6694	0.0737	1.7431	0.4485	0.0678	0.5163	0.0000	2,510.0484	2,510.0484	0.0930	0.0000	2,512.0019
Waste						0.0000	0.0000		0.0000	0.0000	18.9127	0.0000	18.9127	1.1177	0.0000	42.3845
Water						0.0000	0.0000		0.0000	0.0000	3.8689	26.2977	30.1667	0.3985	9.6100e-003	41.5153
Total	4.3734	6.7530	34.4737	0.0334	1.6694	0.0840	1.7534	0.4485	0.0781	0.5266	22.7816	2,981.8337	3,004.6153	1.6256	0.0151	3,043.4340

	ROG	NOx	CO	SO2	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	0.59	3.36	1.33	5.14	5.95	4.45	5.88	5.95	4.41	5.73	0.00	4.51	4.47	0.25	0.13	4.42

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2017	1/6/2017	5	5	
2	Grading	Grading	1/7/2017	1/18/2017	5	8	
3	Building Construction	Building Construction	1/19/2017	12/6/2017	5	230	
4	Paving	Paving	12/7/2017	1/1/2018	5	18	
5	Architectural Coating	Architectural Coating	1/2/2018	1/25/2018	5	18	

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: 279,074; Non-Residential Outdoor: 93,025 (Architectural Coating –

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
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	72.00	30.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	14.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

Fugitive Dust					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0121	0.1294	0.0985	1.0000e-004		6.8900e-003	6.8900e-003		6.3300e-003	6.3300e-003	0.0000	9.0788	9.0788	2.7800e-003	0.0000	9.1373
Total	0.0121	0.1294	0.0985	1.0000e-004	0.0452	6.8900e-003	0.0521	0.0248	6.3300e-003	0.0312	0.0000	9.0788	9.0788	2.7800e-003	0.0000	9.1373

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	2.8000e-004	2.7200e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4766	0.4766	2.0000e-005	0.0000	0.4771
Total	1.7000e-004	2.8000e-004	2.7200e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4766	0.4766	2.0000e-005	0.0000	0.4771

3.3 Grading - 2017

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					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0138	0.1439	0.1015	1.2000e-004		8.1600e-003	8.1600e-003		7.5000e-003	7.5000e-003	0.0000	11.0447	11.0447	3.3800e-003	0.0000	11.1157
Total	0.0138	0.1439	0.1015	1.2000e-004	0.0262	8.1600e-003	0.0344	0.0135	7.5000e-003	0.0210	0.0000	11.0447	11.0447	3.3800e-003	0.0000	11.1157

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	2.3000e-004	3.8000e-004	3.6300e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.6355	0.6355	3.0000e-005	0.0000	0.6362
Total	2.3000e-004	3.8000e-004	3.6300e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.6355	0.6355	3.0000e-005	0.0000	0.6362

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0138	0.1439	0.1015	1.2000e-004		8.1600e-003	8.1600e-003		7.5000e-003	7.5000e-003	0.0000	11.0447	11.0447	3.3800e-003	0.0000	11.1157
Total	0.0138	0.1439	0.1015	1.2000e-004	0.0262	8.1600e-003	0.0344	0.0135	7.5000e-003	0.0210	0.0000	11.0447	11.0447	3.3800e-003	0.0000	11.1157

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
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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	2.3000e-004	3.8000e-004	3.6300e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.6355	0.6355	3.0000e-005	0.0000	0.6362
Total	2.3000e-004	3.8000e-004	3.6300e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.6355	0.6355	3.0000e-005	0.0000	0.6362

3.4 Building Construction - 2017

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	0.3568	3.0367	2.0849	3.0800e-003		0.2048	0.2048		0.1924	0.1924	0.0000	275.4010	275.4010	0.0678	0.0000	276.8244
Total	0.3568	3.0367	2.0849	3.0800e-003		0.2048	0.2048		0.1924	0.1924	0.0000	275.4010	275.4010	0.0678	0.0000	276.8244

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0398	0.2822	0.4975	7.5000e-004	0.0203	4.6100e-003	0.0249	5.8200e-003	4.2400e-003	0.0101	0.0000	66.6382	66.6382	5.6000e-004	0.0000	66.6498
Worker	0.0315	0.0523	0.5006	1.2300e-003	0.1029	7.3000e-004	0.1037	0.0274	6.7000e-004	0.0280	0.0000	87.6992	87.6992	4.4000e-003	0.0000	87.7916

Total	0.0713	0.3345	0.9981	1.9800e-003	0.1232	5.3400e-003	0.1286	0.0332	4.9100e-003	0.0381	0.0000	154.3373	154.3373	4.9600e-003	0.0000	154.4414
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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.3568	3.0367	2.0849	3.0800e-003		0.2048	0.2048		0.1924	0.1924	0.0000	275.4007	275.4007	0.0678	0.0000	276.8240
Total	0.3568	3.0367	2.0849	3.0800e-003		0.2048	0.2048		0.1924	0.1924	0.0000	275.4007	275.4007	0.0678	0.0000	276.8240

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	0.0398	0.2822	0.4975	7.5000e-004	0.0203	4.6100e-003	0.0249	5.8200e-003	4.2400e-003	0.0101	0.0000	66.6382	66.6382	5.6000e-004	0.0000	66.6498
Worker	0.0315	0.0523	0.5006	1.2300e-003	0.1029	7.3000e-004	0.1037	0.0274	6.7000e-004	0.0280	0.0000	87.6992	87.6992	4.4000e-003	0.0000	87.7916
Total	0.0713	0.3345	0.9981	1.9800e-003	0.1232	5.3400e-003	0.1286	0.0332	4.9100e-003	0.0381	0.0000	154.3373	154.3373	4.9600e-003	0.0000	154.4414

3.5 Paving - 2017

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	0.0141	0.1428	0.1061	1.6000e-004		8.5500e-003	8.5500e-003		7.8800e-003	7.8800e-003	0.0000	14.4492	14.4492	4.3100e-003	0.0000	14.5397
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0141	0.1428	0.1061	1.6000e-004		8.5500e-003	8.5500e-003		7.8800e-003	7.8800e-003	0.0000	14.4492	14.4492	4.3100e-003	0.0000	14.5397

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	6.5000e-004	1.0700e-003	0.0103	3.0000e-005	2.1100e-003	1.0000e-005	2.1300e-003	5.6000e-004	1.0000e-005	5.8000e-004	0.0000	1.8006	1.8006	9.0000e-005	0.0000	1.8025
Total	6.5000e-004	1.0700e-003	0.0103	3.0000e-005	2.1100e-003	1.0000e-005	2.1300e-003	5.6000e-004	1.0000e-005	5.8000e-004	0.0000	1.8006	1.8006	9.0000e-005	0.0000	1.8025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0141	0.1428	0.1061	1.6000e-004		8.5500e-003	8.5500e-003		7.8800e-003	7.8800e-003	0.0000	14.4492	14.4492	4.3100e-003	0.0000	14.5397
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0141	0.1428	0.1061	1.6000e-004		8.5500e-003	8.5500e-003		7.8800e-003	7.8800e-003	0.0000	14.4492	14.4492	4.3100e-003	0.0000	14.5397

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	6.5000e-004	1.0700e-003	0.0103	3.0000e-005	2.1100e-003	1.0000e-005	2.1300e-003	5.6000e-004	1.0000e-005	5.8000e-004	0.0000	1.8006	1.8006	9.0000e-005	0.0000	1.8025
Total	6.5000e-004	1.0700e-003	0.0103	3.0000e-005	2.1100e-003	1.0000e-005	2.1300e-003	5.6000e-004	1.0000e-005	5.8000e-004	0.0000	1.8006	1.8006	9.0000e-005	0.0000	1.8025

3.5 Paving - 2018

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	7.0000e-004	7.1600e-003	6.1300e-003	1.0000e-005		4.1000e-004	4.1000e-004		3.8000e-004	3.8000e-004	0.0000	0.8369	0.8369	2.5000e-004	0.0000	0.8422
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	7.0000e-004	7.1600e-003	6.1300e-003	1.0000e-005		4.1000e-004	4.1000e-004		3.8000e-004	3.8000e-004	0.0000	0.8369	0.8369	2.5000e-004	0.0000	0.8422

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	6.0000e-005	5.4000e-004	0.0000	1.2000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1021	0.1021	0.0000	0.0000	0.1022
Total	3.0000e-005	6.0000e-005	5.4000e-004	0.0000	1.2000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1021	0.1021	0.0000	0.0000	0.1022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	7.0000e-004	7.1600e-003	6.1300e-003	1.0000e-005		4.1000e-004	4.1000e-004		3.8000e-004	3.8000e-004	0.0000	0.8369	0.8369	2.5000e-004	0.0000	0.8422
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	7.0000e-004	7.1600e-003	6.1300e-003	1.0000e-005		4.1000e-004	4.1000e-004		3.8000e-004	3.8000e-004	0.0000	0.8369	0.8369	2.5000e-004	0.0000	0.8422

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
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Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	6.0000e-005	5.4000e-004	0.0000	1.2000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1021	0.1021	0.0000	0.0000	0.1022
Total	3.0000e-005	6.0000e-005	5.4000e-004	0.0000	1.2000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1021	0.1021	0.0000	0.0000	0.1022

3.6 Architectural Coating - 2018

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	1.2935					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6900e-003	0.0181	0.0167	3.0000e-005		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	2.2979	2.2979	2.2000e-004	0.0000	2.3025
Total	1.2962	0.0181	0.0167	3.0000e-005		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	2.2979	2.2979	2.2000e-004	0.0000	2.3025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	4.2000e-004	7.1000e-004	6.7500e-003	2.0000e-005	1.5700e-003	1.0000e-005	1.5800e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.2865	1.2865	6.0000e-005	0.0000	1.2878

Total	4.2000e-004	7.1000e-004	6.7500e-003	2.0000e-005	1.5700e-003	1.0000e-005	1.5800e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.2865	1.2865	6.0000e-005	0.0000	1.2878
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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.2935					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6900e-003	0.0181	0.0167	3.0000e-005		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	2.2979	2.2979	2.2000e-004	0.0000	2.3025
Total	1.2962	0.0181	0.0167	3.0000e-005		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	2.2979	2.2979	2.2000e-004	0.0000	2.3025

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	4.2000e-004	7.1000e-004	6.7500e-003	2.0000e-005	1.5700e-003	1.0000e-005	1.5800e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.2865	1.2865	6.0000e-005	0.0000	1.2878
Total	4.2000e-004	7.1000e-004	6.7500e-003	2.0000e-005	1.5700e-003	1.0000e-005	1.5800e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.2865	1.2865	6.0000e-005	0.0000	1.2878

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

- Increase Density
- Improve Walkability Design
- Improve Destination Accessibility
- Increase Transit Accessibility
- Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.5024	6.6177	34.3583	0.0326	1.6694	0.0737	1.7431	0.4485	0.0678	0.5163	0.0000	2,510.0484	2,510.0484	0.0930	0.0000	2,512.0019
Unmitigated	3.5282	6.8525	34.8213	0.0344	1.7750	0.0776	1.8526	0.4769	0.0714	0.5483	0.0000	2,650.7842	2,650.7842	0.0970	0.0000	2,652.8217

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market With Gas Pumps	4,340.80	1,635.76	1335.04	1,729,571	1,626,662
Fast Food Restaurant with Drive Thru	1,488.36	2,166.09	1628.16	1,385,627	1,303,182
Office Park	719.69	103.35	47.90	1,551,018	1,458,733
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	6,548.85	3,905.20	3,011.10	4,666,216	4,388,577

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Convenience Market With Gas	14.70	6.60	6.60	0.80	80.20	19.00	14	21	65
Fast Food Restaurant with Drive	14.70	6.60	6.60	2.20	78.80	19.00	29	21	50
Office Park	14.70	6.60	6.60	33.00	48.00	19.00	82	15	3
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.411222	0.062718	0.156221	0.175699	0.050886	0.007831	0.019556	0.102845	0.001787	0.001576	0.006435	0.000923	0.002302

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	298.1555	298.1555	0.0135	2.7900e-003	299.3033
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	298.1555	298.1555	0.0135	2.7900e-003	299.3033
NaturalGas Mitigated	0.0149	0.1353	0.1137	8.1000e-004		0.0103	0.0103		0.0103	0.0103	0.0000	147.3287	147.3287	2.8200e-003	2.7000e-003	148.2253
NaturalGas Unmitigated	0.0149	0.1353	0.1137	8.1000e-004		0.0103	0.0103		0.0103	0.0103	0.0000	147.3287	147.3287	2.8200e-003	2.7000e-003	148.2253

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					
Fast Food Restaurant with Drive-Through	300060	1.6200e-003	0.0147	0.0124	9.0000e-005		1.1200e-003	1.1200e-003		1.1200e-003	1.1200e-003	0.0000	16.0123	16.0123	3.1000e-004	2.9000e-004	16.1098

Office Park	2.454e+006	0.0132	0.1203	0.1011	7.2000e-004		9.1400e-003	9.1400e-003		9.1400e-003	9.1400e-003	0.0000	130.9547	130.9547	2.5100e-003	2.4000e-003	131.7517
Other Non-Asphalt Surfaces	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
Convenience Market With Gas	6776.4	4.0000e-005	3.3000e-004	2.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.3616	0.3616	1.0000e-005	1.0000e-005	0.3638
Total		0.0149	0.1353	0.1137	8.1000e-004		0.0103	0.0103		0.0103	0.0103	0.0000	147.3287	147.3287	2.8300e-003	2.7000e-003	148.2253

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Fast Food Restaurant with Drive Thru	300060	1.6200e-003	0.0147	0.0124	9.0000e-005		1.1200e-003	1.1200e-003		1.1200e-003	1.1200e-003	0.0000	16.0123	16.0123	3.1000e-004	2.9000e-004	16.1098
Office Park	2.454e+006	0.0132	0.1203	0.1011	7.2000e-004		9.1400e-003	9.1400e-003		9.1400e-003	9.1400e-003	0.0000	130.9547	130.9547	2.5100e-003	2.4000e-003	131.7517
Other Non-Asphalt Surfaces	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
Convenience Market With Gas	6776.4	4.0000e-005	3.3000e-004	2.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.3616	0.3616	1.0000e-005	1.0000e-005	0.3638
Total		0.0149	0.1353	0.1137	8.1000e-004		0.0103	0.0103		0.0103	0.0103	0.0000	147.3287	147.3287	2.8300e-003	2.7000e-003	148.2253

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market With Gas	12954.2	3.7685	1.7000e-004	4.0000e-005	3.7830
Fast Food Restaurant with Drive Thru	107610	31.3050	1.4200e-003	2.9000e-004	31.4255

Office Park	904337	263.0820	0.0119	2.4600e-003	264.0948
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		298.1555	0.0135	2.7900e-003	299.3033

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market With Gas	12954.2	3.7685	1.7000e-004	4.0000e-005	3.7830
Fast Food Restaurant with Drive Thru	107610	31.3050	1.4200e-003	2.9000e-004	31.4255
Office Park	904337	263.0820	0.0119	2.4600e-003	264.0948
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		298.1555	0.0135	2.7900e-003	299.3033

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.8561	2.0000e-005	1.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.4500e-003	3.4500e-003	1.0000e-005	0.0000	3.6500e-003
Unmitigated	0.8561	2.0000e-005	1.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.4500e-003	3.4500e-003	1.0000e-005	0.0000	3.6500e-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	tons/yr										MT/yr					
Architectural Coating	0.1294					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7266					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7000e-004	2.0000e-005	1.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.4500e-003	3.4500e-003	1.0000e-005	0.0000	3.6500e-003
Total	0.8561	2.0000e-005	1.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.4500e-003	3.4500e-003	1.0000e-005	0.0000	3.6500e-003

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	0.1294					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7266					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7000e-004	2.0000e-005	1.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.4500e-003	3.4500e-003	1.0000e-005	0.0000	3.6500e-003
Total	0.8561	2.0000e-005	1.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.4500e-003	3.4500e-003	1.0000e-005	0.0000	3.6500e-003

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	30.1667	0.3985	9.6100e-003	41.5153
Unmitigated	30.1667	0.3986	9.6300e-003	41.5215

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market With Gas	0.0836574 / 0.0640700	0.2104	2.7300e-003	7.0000e-005	0.2883
Fast Food Restaurant with Drive Thru	0.910601 / 0.0581235	1.7815	0.0297	7.1000e-004	2.6275
Office Park	11.2008 / 6.86499	28.1748	0.3661	8.8500e-003	38.6056
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		30.1667	0.3986	9.6300e-003	41.5215

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
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Land Use	Mgal	MT/yr			
Convenience Market With Gas	0.0836574 / 0.0545720	0.2104	2.7300e-003	7.0000e-005	0.2883
Fast Food Restaurant with Drive Thru	0.910601 / 0.0581235	1.7815	0.0297	7.1000e-004	2.6271
Office Park	11.2008 / 6.86499	28.1748	0.3660	8.8300e-003	38.6000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		30.1667	0.3985	9.6100e-003	41.5153

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	18.9127	1.1177	0.0000	42.3845
Unmitigated	18.9127	1.1177	0.0000	42.3845

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			

Fast Food Restaurant with Drive-Thru	34.56	7.0154	0.4146	0.0000	15.7219
Office Park	58.61	11.8973	0.7031	0.0000	26.6626
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		18.9127	1.1177	0.0000	42.3845

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant with Drive-Thru	34.56	7.0154	0.4146	0.0000	15.7219
Office Park	58.61	11.8973	0.7031	0.0000	26.6626
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		18.9127	1.1177	0.0000	42.3845

9.0 Operational Offroad

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

Sequoia Drive-In Business Park (PH 2)
San Joaquin Valley Unified APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	88.00	1000sqft	2.02	88,000.00	0
Other Non-Asphalt Surfaces	46.69	1000sqft	1.07	46,690.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	45
Climate Zone	7	Operational Year	2020		
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Phase 2 will have 8 buildings (14 units) with Office Park (ITE "Business Park") land use, ranging in square footage from 5,200 sf to 8,000 sf for a total of 88,000 sf of building gfa.

Phase 2 will be 8.25 acres out of 46.17 acres of the total Project.

Land Use - "Other Non-Asphalt Surfaces" includes the new roads, on-street parking, and parking lots.

Construction Phase - No demolition required.

Vehicle Trips -

Energy Use -

Mobile Land Use Mitigation - Figures taken from ISR: LUT-1 - LUT-5 are based on project location. SDT-1: project will incorporate typical standard sidewalks throughout project.

Table Name	Column Name	Default Value	New Value
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tblProjectCharacteristics	OperationalYear	2014	2020
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.3427	2.9423	2.8517	4.8700e-003	0.1584	0.1690	0.3275	0.0617	0.1585	0.2203	0.0000	407.8435	407.8435	0.0793	0.0000	409.5078
2020	0.9389	0.0156	0.0205	4.0000e-005	1.1200e-003	1.0100e-003	2.1200e-003	3.0000e-004	1.0100e-003	1.3000e-003	0.0000	3.1486	3.1486	2.2000e-004	0.0000	3.1531
Total	1.2815	2.9579	2.8722	4.9100e-003	0.1595	0.1700	0.3296	0.0620	0.1595	0.2216	0.0000	410.9920	410.9920	0.0795	0.0000	412.6609

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.3427	2.9423	2.8517	4.8700e-003	0.1584	0.1690	0.3275	0.0617	0.1585	0.2203	0.0000	407.8431	407.8431	0.0793	0.0000	409.5075
2020	0.9389	0.0156	0.0205	4.0000e-005	1.1200e-003	1.0100e-003	2.1200e-003	3.0000e-004	1.0100e-003	1.3000e-003	0.0000	3.1485	3.1485	2.2000e-004	0.0000	3.1531
Total	1.2815	2.9579	2.8722	4.9100e-003	0.1595	0.1700	0.3296	0.0620	0.1595	0.2216	0.0000	410.9917	410.9917	0.0795	0.0000	412.6606

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

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6198	1.0000e-005	1.2500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4100e-003	2.4100e-003	1.0000e-005	0.0000	2.5400e-003
Energy	0.0185	0.1680	0.1411	1.0100e-003		0.0128	0.0128		0.0128	0.0128	0.0000	550.2258	550.2258	0.0201	6.7900e-003	552.7529
Mobile	0.5140	1.8061	6.1908	0.0147	0.8240	0.0297	0.8537	0.2214	0.0274	0.2487	0.0000	1,073.4281	1,073.4281	0.0310	0.0000	1,074.0787
Waste						0.0000	0.0000		0.0000	0.0000	16.6128	0.0000	16.6128	0.9818	0.0000	37.2303
Water						0.0000	0.0000		0.0000	0.0000	4.9620	34.3807	39.3427	0.5112	0.0124	53.9082
Total	1.1522	1.9741	6.3331	0.0157	0.8240	0.0425	0.8664	0.2214	0.0401	0.2615	21.5748	1,658.0371	1,679.6119	1.5441	0.0192	1,717.9727

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	0.6198	1.0000e-005	1.2500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4100e-003	2.4100e-003	1.0000e-005	0.0000	2.5400e-003
Energy	0.0185	0.1680	0.1411	1.0100e-003		0.0128	0.0128		0.0128	0.0128	0.0000	550.2258	550.2258	0.0201	6.7900e-003	552.7529
Mobile	0.5033	1.7194	6.0054	0.0138	0.7749	0.0280	0.8029	0.2082	0.0258	0.2340	0.0000	1,011.6821	1,011.6821	0.0293	0.0000	1,012.2982
Waste						0.0000	0.0000		0.0000	0.0000	16.6128	0.0000	16.6128	0.9818	0.0000	37.2303

Water						0.0000	0.0000		0.0000	0.0000	4.9620	34.3807	39.3427	0.5111	0.0123	53.9003
Total	1.1416	1.8874	6.1477	0.0148	0.7749	0.0408	0.8157	0.2082	0.0386	0.2468	21.5748	1,596.2911	1,617.8659	1.5424	0.0191	1,656.1843

	ROG	NOx	CO	SO2	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	0.92	4.39	2.93	5.36	5.95	3.96	5.85	5.95	3.86	5.63	0.00	3.72	3.68	0.11	0.10	3.60

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2019	1/7/2019	5	5	
2	Grading	Grading	1/8/2019	1/17/2019	5	8	
3	Building Construction	Building Construction	1/18/2019	12/5/2019	5	230	
4	Paving	Paving	12/6/2019	12/31/2019	5	18	
5	Architectural Coating	Architectural Coating	1/1/2020	1/24/2020	5	18	

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: 202,035; Non-Residential Outdoor: 67,345 (Architectural Coating –

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
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38

Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	48.00	22.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	tons/yr										MT/yr					
Fugitive Dust					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0101	0.1063	0.0870	1.0000e-004		5.3800e-003	5.3800e-003		4.9500e-003	4.9500e-003	0.0000	8.7923	8.7923	2.7800e-003	0.0000	8.8507
Total	0.0101	0.1063	0.0870	1.0000e-004	0.0452	5.3800e-003	0.0506	0.0248	4.9500e-003	0.0298	0.0000	8.7923	8.7923	2.7800e-003	0.0000	8.8507

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	2.3000e-004	2.1800e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4429	0.4429	2.0000e-005	0.0000	0.4433
Total	1.3000e-004	2.3000e-004	2.1800e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4429	0.4429	2.0000e-005	0.0000	0.4433

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0101	0.1063	0.0870	1.0000e-004		5.3800e-003	5.3800e-003		4.9500e-003	4.9500e-003	0.0000	8.7923	8.7923	2.7800e-003	0.0000	8.8507

Total	0.0101	0.1063	0.0870	1.0000e-004	0.0452	5.3800e-003	0.0506	0.0248	4.9500e-003	0.0298	0.0000	8.7923	8.7923	2.7800e-003	0.0000	8.8507
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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	1.3000e-004	2.3000e-004	2.1800e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4429	0.4429	2.0000e-005	0.0000	0.4433
Total	1.3000e-004	2.3000e-004	2.1800e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4429	0.4429	2.0000e-005	0.0000	0.4433

3.3 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0110	0.1135	0.0936	1.2000e-004		6.1300e-003	6.1300e-003		5.6400e-003	5.6400e-003	0.0000	10.6837	10.6837	3.3800e-003	0.0000	10.7547
Total	0.0110	0.1135	0.0936	1.2000e-004	0.0262	6.1300e-003	0.0323	0.0135	5.6400e-003	0.0191	0.0000	10.6837	10.6837	3.3800e-003	0.0000	10.7547

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.8000e-004	3.1000e-004	2.9000e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.5905	0.5905	3.0000e-005	0.0000	0.5911
Total	1.8000e-004	3.1000e-004	2.9000e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.5905	0.5905	3.0000e-005	0.0000	0.5911

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0110	0.1135	0.0936	1.2000e-004		6.1300e-003	6.1300e-003		5.6400e-003	5.6400e-003	0.0000	10.6837	10.6837	3.3800e-003	0.0000	10.7547
Total	0.0110	0.1135	0.0936	1.2000e-004	0.0262	6.1300e-003	0.0323	0.0135	5.6400e-003	0.0191	0.0000	10.6837	10.6837	3.3800e-003	0.0000	10.7547

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	1.8000e-004	3.1000e-004	2.9000e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.5905	0.5905	3.0000e-005	0.0000	0.5911
Total	1.8000e-004	3.1000e-004	2.9000e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.5905	0.5905	3.0000e-005	0.0000	0.5911

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2704	2.4110	1.9688	3.0800e-003		0.1478	0.1478		0.1390	0.1390	0.0000	269.2412	269.2412	0.0655	0.0000	270.6168
Total	0.2704	2.4110	1.9688	3.0800e-003		0.1478	0.1478		0.1390	0.1390	0.0000	269.2412	269.2412	0.0655	0.0000	270.6168

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0226	0.1686	0.3123	5.4000e-004	0.0149	2.8400e-003	0.0177	4.2700e-003	2.6100e-003	6.8800e-003	0.0000	47.1623	47.1623	3.8000e-004	0.0000	47.1704
Worker	0.0164	0.0282	0.2669	8.2000e-004	0.0686	4.7000e-004	0.0691	0.0182	4.3000e-004	0.0187	0.0000	54.3298	54.3298	2.5100e-003	0.0000	54.3826
Total	0.0390	0.1968	0.5792	1.3600e-003	0.0835	3.3100e-003	0.0868	0.0225	3.0400e-003	0.0256	0.0000	101.4922	101.4922	2.8900e-003	0.0000	101.5530

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.2704	2.4110	1.9688	3.0800e-003		0.1478	0.1478		0.1390	0.1390	0.0000	269.2409	269.2409	0.0655	0.0000	270.6165
Total	0.2704	2.4110	1.9688	3.0800e-003		0.1478	0.1478		0.1390	0.1390	0.0000	269.2409	269.2409	0.0655	0.0000	270.6165

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	0.0226	0.1686	0.3123	5.4000e-004	0.0149	2.8400e-003	0.0177	4.2700e-003	2.6100e-003	6.8800e-003	0.0000	47.1623	47.1623	3.8000e-004	0.0000	47.1704
Worker	0.0164	0.0282	0.2669	8.2000e-004	0.0686	4.7000e-004	0.0691	0.0182	4.3000e-004	0.0187	0.0000	54.3298	54.3298	2.5100e-003	0.0000	54.3826
Total	0.0390	0.1968	0.5792	1.3600e-003	0.0835	3.3100e-003	0.0868	0.0225	3.0400e-003	0.0256	0.0000	101.4922	101.4922	2.8900e-003	0.0000	101.5530

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0113	0.1133	0.1093	1.7000e-004		6.4000e-003	6.4000e-003		5.9000e-003	5.9000e-003	0.0000	14.8291	14.8291	4.5600e-003	0.0000	14.9248
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0113	0.1133	0.1093	1.7000e-004		6.4000e-003	6.4000e-003		5.9000e-003	5.9000e-003	0.0000	14.8291	14.8291	4.5600e-003	0.0000	14.9248

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.3000e-004	9.2000e-004	8.7000e-003	3.0000e-005	2.2400e-003	2.0000e-005	2.2500e-003	5.9000e-004	1.0000e-005	6.1000e-004	0.0000	1.7716	1.7716	8.0000e-005	0.0000	1.7734
Total	5.3000e-004	9.2000e-004	8.7000e-003	3.0000e-005	2.2400e-003	2.0000e-005	2.2500e-003	5.9000e-004	1.0000e-005	6.1000e-004	0.0000	1.7716	1.7716	8.0000e-005	0.0000	1.7734

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0113	0.1133	0.1093	1.7000e-004		6.4000e-003	6.4000e-003		5.9000e-003	5.9000e-003	0.0000	14.8290	14.8290	4.5600e-003	0.0000	14.9248

Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0113	0.1133	0.1093	1.7000e-004		6.4000e-003	6.4000e-003		5.9000e-003	5.9000e-003	0.0000	14.8290	14.8290	4.5600e-003	0.0000	14.9248

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	5.3000e-004	9.2000e-004	8.7000e-003	3.0000e-005	2.2400e-003	2.0000e-005	2.2500e-003	5.9000e-004	1.0000e-005	6.1000e-004	0.0000	1.7716	1.7716	8.0000e-005	0.0000	1.7734
Total	5.3000e-004	9.2000e-004	8.7000e-003	3.0000e-005	2.2400e-003	2.0000e-005	2.2500e-003	5.9000e-004	1.0000e-005	6.1000e-004	0.0000	1.7716	1.7716	8.0000e-005	0.0000	1.7734

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.9364					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1800e-003	0.0152	0.0165	3.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	2.2979	2.2979	1.8000e-004	0.0000	2.3017
Total	0.9386	0.0152	0.0165	3.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	2.2979	2.2979	1.8000e-004	0.0000	2.3017

Unmitigated Construction Off-Site

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	4.2000e-004	4.0000e-003	1.0000e-005	1.1200e-003	1.0000e-005	1.1300e-003	3.0000e-004	1.0000e-005	3.0000e-004	0.0000	0.8506	0.8506	4.0000e-005	0.0000	0.8514
Total	2.5000e-004	4.2000e-004	4.0000e-003	1.0000e-005	1.1200e-003	1.0000e-005	1.1300e-003	3.0000e-004	1.0000e-005	3.0000e-004	0.0000	0.8506	0.8506	4.0000e-005	0.0000	0.8514

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

- Increase Density
- Improve Walkability Design
- Improve Destination Accessibility
- Increase Transit Accessibility
- Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5033	1.7194	6.0054	0.0138	0.7749	0.0280	0.8029	0.2082	0.0258	0.2340	0.0000	1,011.6821	1,011.6821	0.0293	0.0000	1,012.2982
Unmitigated	0.5140	1.8061	6.1908	0.0147	0.8240	0.0297	0.8537	0.2214	0.0274	0.2487	0.0000	1,073.4281	1,073.4281	0.0310	0.0000	1,074.0787

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Office Park	1,004.96	144.32	66.88	2,165,814	2,036,948
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	1,004.96	144.32	66.88	2,165,814	2,036,948

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Office Park	14.70	6.60	6.60	33.00	48.00	19.00	82	15	3
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.409687	0.062677	0.156376	0.176111	0.050971	0.007837	0.019872	0.103412	0.001778	0.001574	0.006496	0.000897	0.002312

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	367.3630	367.3630	0.0166	3.4400e-003	368.7772
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	367.3630	367.3630	0.0166	3.4400e-003	368.7772
NaturalGas Mitigated	0.0185	0.1680	0.1411	1.0100e-003		0.0128	0.0128		0.0128	0.0128	0.0000	182.8628	182.8628	3.5000e-003	3.3500e-003	183.9757
NaturalGas Unmitigated	0.0185	0.1680	0.1411	1.0100e-003		0.0128	0.0128		0.0128	0.0128	0.0000	182.8628	182.8628	3.5000e-003	3.3500e-003	183.9757

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					
Other Non-Asphalt Surfaces	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
Office Park	3.42672e+006	0.0185	0.1680	0.1411	1.0100e-003		0.0128	0.0128		0.0128	0.0128	0.0000	182.8628	182.8628	3.5000e-003	3.3500e-003	183.9757
Total		0.0185	0.1680	0.1411	1.0100e-003		0.0128	0.0128		0.0128	0.0128	0.0000	182.8628	182.8628	3.5000e-003	3.3500e-003	183.9757

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Office Park	3.42672e+006	0.0185	0.1680	0.1411	1.0100e-003		0.0128	0.0128		0.0128	0.0128	0.0000	182.8628	182.8628	3.5000e-003	3.3500e-003	183.9757
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0185	0.1680	0.1411	1.0100e-003		0.0128	0.0128		0.0128	0.0128	0.0000	182.8628	182.8628	3.5000e-003	3.3500e-003	183.9757

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Office Park	1.2628e+006	367.3630	0.0166	3.4400e-003	368.7772

Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		367.3630	0.0166	3.4400e-003	368.7772

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Office Park	1.2628e+06	367.3630	0.0166	3.4400e-003	368.7772
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		367.3630	0.0166	3.4400e-003	368.7772

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6198	1.0000e-005	1.2500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4100e-003	2.4100e-003	1.0000e-005	0.0000	2.5400e-003
Unmitigated	0.6198	1.0000e-005	1.2500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4100e-003	2.4100e-003	1.0000e-005	0.0000	2.5400e-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	tons/yr										MT/yr					
Architectural Coating	0.0936					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5260					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2000e-004	1.0000e-005	1.2500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4100e-003	2.4100e-003	1.0000e-005	0.0000	2.5400e-003
Total	0.6198	1.0000e-005	1.2500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4100e-003	2.4100e-003	1.0000e-005	0.0000	2.5400e-003

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	0.0936					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5260					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2000e-004	1.0000e-005	1.2500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4100e-003	2.4100e-003	1.0000e-005	0.0000	2.5400e-003
Total	0.6198	1.0000e-005	1.2500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4100e-003	2.4100e-003	1.0000e-005	0.0000	2.5400e-003

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	39.3427	0.5111	0.0123	53.9003
Unmitigated	39.3427	0.5112	0.0124	53.9082

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Office Park	15.6406 / 9.58616	39.3427	0.5112	0.0124	53.9082
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		39.3427	0.5112	0.0124	53.9082

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Office Park	15.6406 / 9.58616	39.3427	0.5111	0.0123	53.9003
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000

Total		39.3427	0.5111	0.0123	53.9003
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8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	16.6128	0.9818	0.0000	37.2303
Unmitigated	16.6128	0.9818	0.0000	37.2303

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Office Park	81.84	16.6128	0.9818	0.0000	37.2303
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		16.6128	0.9818	0.0000	37.2303

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Office Park	81.84	16.6128	0.9818	0.0000	37.2303
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		16.6128	0.9818	0.0000	37.2303

9.0 Operational Offroad

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

Sequoia Drive-In Business Park (PH 3)
San Joaquin Valley Unified APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	104.00	1000sqft	2.39	104,000.00	0
Other Non-Asphalt Surfaces	33.53	1000sqft	0.77	33,530.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	45
Climate Zone	7			Operational Year	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Phase 3 will have 10 buildings with Office Park (ITE "Business Park") land use, ranging in square footage from 8,000 sf to 12,000 sf for a total of 104,000sf of building gfa.

Phase 3 will be 14.89 acres out of 46.17 acres of the total Project.

Land Use - "Other Non-Asphalt Surfaces" includes the new roads, on-street parking, and parking lots.

Construction Phase - No demolition required.

Vehicle Trips -

Energy Use -

Mobile Land Use Mitigation - Figures taken from ISR: LUT-1 - LUT-5 are based on project location. SDT-1: project will incorporate typical standard sidewalks throughout project.

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	OperationalYear	2014	2022

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6329	1.0000e-005	1.2700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4600e-003	2.4600e-003	1.0000e-005	0.0000	2.5900e-003
Energy	0.0218	0.1985	0.1668	1.1900e-003		0.0151	0.0151		0.0151	0.0151	0.0000	650.2669	650.2669	0.0238	8.0200e-003	653.2535
Mobile	0.5563	1.6877	6.6784	0.0173	0.9738	0.0333	1.0070	0.2616	0.0306	0.2923	0.0000	1,248.6395	1,248.6395	0.0334	0.0000	1,249.3406
Waste						0.0000	0.0000		0.0000	0.0000	19.6333	0.0000	19.6333	1.1603	0.0000	43.9995
Water						0.0000	0.0000		0.0000	0.0000	5.8642	40.6317	46.4960	0.6042	0.0146	63.7097
Total	1.2110	1.8862	6.8464	0.0185	0.9738	0.0483	1.0221	0.2616	0.0457	0.3074	25.4975	1,939.5406	1,965.0381	1.8216	0.0226	2,010.3058

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	0.6329	1.0000e-005	1.2700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4600e-003	2.4600e-003	1.0000e-005	0.0000	2.5900e-003
Energy	0.0218	0.1985	0.1668	1.1900e-003		0.0151	0.0151		0.0151	0.0151	0.0000	650.2669	650.2669	0.0238	8.0200e-003	653.2535
Mobile	0.5447	1.6092	6.4826	0.0163	0.9159	0.0314	0.9472	0.2461	0.0289	0.2750	0.0000	1,176.8229	1,176.8229	0.0316	0.0000	1,177.4867
Waste						0.0000	0.0000		0.0000	0.0000	19.6333	0.0000	19.6333	1.1603	0.0000	43.9995
Water						0.0000	0.0000		0.0000	0.0000	5.8642	40.6317	46.4960	0.6040	0.0146	63.7003

Total	1.1994	1.8077	6.6507	0.0175	0.9159	0.0465	0.9623	0.2461	0.0440	0.2901	25.4975	1,867.7240	1,893.2215	1.8197	0.0226	1,938.4425
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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
Percent Reduction	0.97	4.16	2.86	5.35	5.95	3.87	5.85	5.95	3.78	5.63	0.00	3.70	3.65	0.10	0.09	3.57

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2019	1/7/2019	5	5	
2	Grading	Grading	1/8/2019	1/17/2019	5	8	
3	Building Construction	Building Construction	1/18/2019	12/5/2019	5	230	
4	Paving	Paving	12/6/2019	12/31/2019	5	18	
5	Architectural Coating	Architectural Coating	1/1/2020	1/24/2020	5	18	

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: 206,295; Non-Residential Outdoor: 68,765 (Architectural Coating –

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
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Paving	Pavers	1	8.00	125	0.42

Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	47.00	23.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2019

Unmitigated Construction On-Site

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

Fugitive Dust					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0101	0.1063	0.0870	1.0000e-004		5.3800e-003	5.3800e-003		4.9500e-003	4.9500e-003	0.0000	8.7923	8.7923	2.7800e-003	0.0000	8.8507
Total	0.0101	0.1063	0.0870	1.0000e-004	0.0452	5.3800e-003	0.0506	0.0248	4.9500e-003	0.0298	0.0000	8.7923	8.7923	2.7800e-003	0.0000	8.8507

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	2.3000e-004	2.1800e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4429	0.4429	2.0000e-005	0.0000	0.4433
Total	1.3000e-004	2.3000e-004	2.1800e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4429	0.4429	2.0000e-005	0.0000	0.4433

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0101	0.1063	0.0870	1.0000e-004		5.3800e-003	5.3800e-003		4.9500e-003	4.9500e-003	0.0000	8.7923	8.7923	2.7800e-003	0.0000	8.8507
Total	0.0101	0.1063	0.0870	1.0000e-004	0.0452	5.3800e-003	0.0506	0.0248	4.9500e-003	0.0298	0.0000	8.7923	8.7923	2.7800e-003	0.0000	8.8507

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	1.3000e-004	2.3000e-004	2.1800e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4429	0.4429	2.0000e-005	0.0000	0.4433
Total	1.3000e-004	2.3000e-004	2.1800e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4429	0.4429	2.0000e-005	0.0000	0.4433

3.3 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0110	0.1135	0.0936	1.2000e-004		6.1300e-003	6.1300e-003		5.6400e-003	5.6400e-003	0.0000	10.6837	10.6837	3.3800e-003	0.0000	10.7547
Total	0.0110	0.1135	0.0936	1.2000e-004	0.0262	6.1300e-003	0.0323	0.0135	5.6400e-003	0.0191	0.0000	10.6837	10.6837	3.3800e-003	0.0000	10.7547

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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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	1.8000e-004	3.1000e-004	2.9000e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.5905	0.5905	3.0000e-005	0.0000	0.5911
Total	1.8000e-004	3.1000e-004	2.9000e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.5905	0.5905	3.0000e-005	0.0000	0.5911

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0110	0.1135	0.0936	1.2000e-004		6.1300e-003	6.1300e-003		5.6400e-003	5.6400e-003	0.0000	10.6837	10.6837	3.3800e-003	0.0000	10.7547
Total	0.0110	0.1135	0.0936	1.2000e-004	0.0262	6.1300e-003	0.0323	0.0135	5.6400e-003	0.0191	0.0000	10.6837	10.6837	3.3800e-003	0.0000	10.7547

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	1.8000e-004	3.1000e-004	2.9000e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.5905	0.5905	3.0000e-005	0.0000	0.5911

Total	1.8000e-004	3.1000e-004	2.9000e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.5905	0.5905	3.0000e-005	0.0000	0.5911
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3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2704	2.4110	1.9688	3.0800e-003		0.1478	0.1478		0.1390	0.1390	0.0000	269.2412	269.2412	0.0655	0.0000	270.6168
Total	0.2704	2.4110	1.9688	3.0800e-003		0.1478	0.1478		0.1390	0.1390	0.0000	269.2412	269.2412	0.0655	0.0000	270.6168

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0236	0.1763	0.3265	5.7000e-004	0.0156	2.9700e-003	0.0185	4.4600e-003	2.7300e-003	7.1900e-003	0.0000	49.3061	49.3061	4.0000e-004	0.0000	49.3145
Worker	0.0161	0.0276	0.2614	8.0000e-004	0.0672	4.6000e-004	0.0677	0.0179	4.2000e-004	0.0183	0.0000	53.1980	53.1980	2.4600e-003	0.0000	53.2496
Total	0.0397	0.2039	0.5878	1.3700e-003	0.0828	3.4300e-003	0.0862	0.0223	3.1500e-003	0.0255	0.0000	102.5040	102.5040	2.8600e-003	0.0000	102.5641

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.2704	2.4110	1.9688	3.0800e-003		0.1478	0.1478		0.1390	0.1390	0.0000	269.2409	269.2409	0.0655	0.0000	270.6165
Total	0.2704	2.4110	1.9688	3.0800e-003		0.1478	0.1478		0.1390	0.1390	0.0000	269.2409	269.2409	0.0655	0.0000	270.6165

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	0.0236	0.1763	0.3265	5.7000e-004	0.0156	2.9700e-003	0.0185	4.4600e-003	2.7300e-003	7.1900e-003	0.0000	49.3061	49.3061	4.0000e-004	0.0000	49.3145
Worker	0.0161	0.0276	0.2614	8.0000e-004	0.0672	4.6000e-004	0.0677	0.0179	4.2000e-004	0.0183	0.0000	53.1980	53.1980	2.4600e-003	0.0000	53.2496
Total	0.0397	0.2039	0.5878	1.3700e-003	0.0828	3.4300e-003	0.0862	0.0223	3.1500e-003	0.0255	0.0000	102.5040	102.5040	2.8600e-003	0.0000	102.5641

3.5 Paving - 2019

Unmitigated Construction On-Site

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

Off-Road	0.0113	0.1133	0.1093	1.7000e-004		6.4000e-003	6.4000e-003		5.9000e-003	5.9000e-003	0.0000	14.8291	14.8291	4.5600e-003	0.0000	14.9248
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0113	0.1133	0.1093	1.7000e-004		6.4000e-003	6.4000e-003		5.9000e-003	5.9000e-003	0.0000	14.8291	14.8291	4.5600e-003	0.0000	14.9248

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.3000e-004	9.2000e-004	8.7000e-003	3.0000e-005	2.2400e-003	2.0000e-005	2.2500e-003	5.9000e-004	1.0000e-005	6.1000e-004	0.0000	1.7716	1.7716	8.0000e-005	0.0000	1.7734
Total	5.3000e-004	9.2000e-004	8.7000e-003	3.0000e-005	2.2400e-003	2.0000e-005	2.2500e-003	5.9000e-004	1.0000e-005	6.1000e-004	0.0000	1.7716	1.7716	8.0000e-005	0.0000	1.7734

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0113	0.1133	0.1093	1.7000e-004		6.4000e-003	6.4000e-003		5.9000e-003	5.9000e-003	0.0000	14.8290	14.8290	4.5600e-003	0.0000	14.9248
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0113	0.1133	0.1093	1.7000e-004		6.4000e-003	6.4000e-003		5.9000e-003	5.9000e-003	0.0000	14.8290	14.8290	4.5600e-003	0.0000	14.9248

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	5.3000e-004	9.2000e-004	8.7000e-003	3.0000e-005	2.2400e-003	2.0000e-005	2.2500e-003	5.9000e-004	1.0000e-005	6.1000e-004	0.0000	1.7716	1.7716	8.0000e-005	0.0000	1.7734
Total	5.3000e-004	9.2000e-004	8.7000e-003	3.0000e-005	2.2400e-003	2.0000e-005	2.2500e-003	5.9000e-004	1.0000e-005	6.1000e-004	0.0000	1.7716	1.7716	8.0000e-005	0.0000	1.7734

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.9562					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1800e-003	0.0152	0.0165	3.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	2.2979	2.2979	1.8000e-004	0.0000	2.3017
Total	0.9584	0.0152	0.0165	3.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	2.2979	2.2979	1.8000e-004	0.0000	2.3017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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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	2.2000e-004	3.8000e-004	3.6000e-003	1.0000e-005	1.0100e-003	1.0000e-005	1.0100e-003	2.7000e-004	1.0000e-005	2.7000e-004	0.0000	0.7656	0.7656	3.0000e-005	0.0000	0.7663
Total	2.2000e-004	3.8000e-004	3.6000e-003	1.0000e-005	1.0100e-003	1.0000e-005	1.0100e-003	2.7000e-004	1.0000e-005	2.7000e-004	0.0000	0.7656	0.7656	3.0000e-005	0.0000	0.7663

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.9562					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1800e-003	0.0152	0.0165	3.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	2.2979	2.2979	1.8000e-004	0.0000	2.3017
Total	0.9584	0.0152	0.0165	3.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	2.2979	2.2979	1.8000e-004	0.0000	2.3017

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	2.2000e-004	3.8000e-004	3.6000e-003	1.0000e-005	1.0100e-003	1.0000e-005	1.0100e-003	2.7000e-004	1.0000e-005	2.7000e-004	0.0000	0.7656	0.7656	3.0000e-005	0.0000	0.7663

Total	2.2000e-004	3.8000e-004	3.6000e-003	1.0000e-005	1.0100e-003	1.0000e-005	1.0100e-003	2.7000e-004	1.0000e-005	2.7000e-004	0.0000	0.7656	0.7656	3.0000e-005	0.0000	0.7663
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4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

- Increase Density
- Improve Walkability Design
- Improve Destination Accessibility
- Increase Transit Accessibility
- Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5447	1.6092	6.4826	0.0163	0.9159	0.0314	0.9472	0.2461	0.0289	0.2750	0.0000	1,176.8229	1,176.8229	0.0316	0.0000	1,177.4867
Unmitigated	0.5563	1.6877	6.6784	0.0173	0.9738	0.0333	1.0070	0.2616	0.0306	0.2923	0.0000	1,248.6395	1,248.6395	0.0334	0.0000	1,249.3406

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Office Park	1,187.68	170.56	79.04	2,559,599	2,407,302
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	1,187.68	170.56	79.04	2,559,599	2,407,302

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by

Office Park	14.70	6.60	6.60	33.00	48.00	19.00	82	15	3
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.409215	0.062447	0.156087	0.176599	0.051029	0.007877	0.019913	0.103685	0.001777	0.001585	0.006582	0.000876	0.002327

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	434.1563	434.1563	0.0196	4.0600e-003	435.8276
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	434.1563	434.1563	0.0196	4.0600e-003	435.8276
NaturalGas Mitigated	0.0218	0.1985	0.1668	1.1900e-003		0.0151	0.0151		0.0151	0.0151	0.0000	216.1106	216.1106	4.1400e-003	3.9600e-003	217.4258
NaturalGas Unmitigated	0.0218	0.1985	0.1668	1.1900e-003		0.0151	0.0151		0.0151	0.0151	0.0000	216.1106	216.1106	4.1400e-003	3.9600e-003	217.4258

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
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Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	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
Office Park	4.04976e+006	0.0218	0.1985	0.1668	1.1900e-003		0.0151	0.0151		0.0151	0.0151	0.0000	216.1106	216.1106	4.1400e-003	3.9600e-003	217.4258
Total		0.0218	0.1985	0.1668	1.1900e-003		0.0151	0.0151		0.0151	0.0151	0.0000	216.1106	216.1106	4.1400e-003	3.9600e-003	217.4258

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Office Park	4.04976e+006	0.0218	0.1985	0.1668	1.1900e-003		0.0151	0.0151		0.0151	0.0151	0.0000	216.1106	216.1106	4.1400e-003	3.9600e-003	217.4258
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0218	0.1985	0.1668	1.1900e-003		0.0151	0.0151		0.0151	0.0151	0.0000	216.1106	216.1106	4.1400e-003	3.9600e-003	217.4258

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Office Park	1.4924e+006	434.1563	0.0196	4.0600e-003	435.8276
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		434.1563	0.0196	4.0600e-003	435.8276

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Office Park	1.4924e+006	434.1563	0.0196	4.0600e-003	435.8276
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		434.1563	0.0196	4.0600e-003	435.8276

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6329	1.0000e-005	1.2700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4600e-003	2.4600e-003	1.0000e-005	0.0000	2.5900e-003
Unmitigated	0.6329	1.0000e-005	1.2700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4600e-003	2.4600e-003	1.0000e-005	0.0000	2.5900e-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	tons/yr										MT/yr					
Architectural Coating	0.0956					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5371					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2000e-004	1.0000e-005	1.2700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4600e-003	2.4600e-003	1.0000e-005	0.0000	2.5900e-003
Total	0.6329	1.0000e-005	1.2700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4600e-003	2.4600e-003	1.0000e-005	0.0000	2.5900e-003

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	0.0956					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5371					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2000e-004	1.0000e-005	1.2700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4600e-003	2.4600e-003	1.0000e-005	0.0000	2.5900e-003
Total	0.6329	1.0000e-005	1.2700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4600e-003	2.4600e-003	1.0000e-005	0.0000	2.5900e-003

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			

Mitigated	46.4960	0.6040	0.0146	63.7003
Unmitigated	46.4960	0.6042	0.0146	63.7097

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Office Park	18.4843 / 11.3291	46.4960	0.6042	0.0146	63.7097
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		46.4960	0.6042	0.0146	63.7097

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Office Park	18.4843 / 11.3291	46.4960	0.6040	0.0146	63.7003
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		46.4960	0.6040	0.0146	63.7003

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	19.6333	1.1603	0.0000	43.9995
Unmitigated	19.6333	1.1603	0.0000	43.9995

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Office Park	96.72	19.6333	1.1603	0.0000	43.9995
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		19.6333	1.1603	0.0000	43.9995

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
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Land Use	tons	MT/yr			
Office Park	96.72	19.6333	1.1603	0.0000	43.9995
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		19.6333	1.1603	0.0000	43.9995

9.0 Operational Offroad

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

Sequoia Drive-In Business Park (PH 4)
San Joaquin Valley Unified APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	98.03	1000sqft	2.25	98,030.00	0
Other Non-Asphalt Surfaces	62.82	1000sqft	1.44	62,820.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	45
Climate Zone	7			Operational Year	2024
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Phase 4 will have 8 buildings with Office Park (ITE "Business Park") land use, ranging in square footage from 5,200 sf to 13,390 sf for a total of 98,030 sf of building gfa.

Phase 4 will be 12.72 acres out of 46.17 acres of the total Project.

Land Use - "Other Non-Asphalt Surfaces" includes the new roads, on-street parking, and parking lots.

Construction Phase - No demolition required.

Vehicle Trips -

Energy Use -

Mobile Land Use Mitigation - Figures taken from ISR: LUT-1 - LUT-5 are based on project location. SDT-1: project will incorporate typical standard sidewalks throughout project.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseStartDate	1/7/2023	1/9/2023

tblProjectCharacteristics	OperationalYear	2014	2024
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

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					
2023	0.2385	2.0006	2.6814	5.1300e-003	0.1753	0.0939	0.2692	0.0663	0.0881	0.1543	0.0000	415.1212	415.1212	0.0765	0.0000	416.7285
2024	1.1206	0.0155	0.0264	5.0000e-005	1.4700e-003	7.6000e-004	2.2200e-003	3.9000e-004	7.4000e-004	1.1300e-003	0.0000	4.1577	4.1577	4.3000e-004	0.0000	4.1667
Total	1.3591	2.0161	2.7078	5.1800e-003	0.1768	0.0946	0.2714	0.0667	0.0888	0.1555	0.0000	419.2789	419.2789	0.0770	0.0000	420.8952

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					
2023	0.2385	2.0006	2.6814	5.1300e-003	0.1753	0.0939	0.2692	0.0663	0.0881	0.1543	0.0000	415.1209	415.1209	0.0765	0.0000	416.7281
2024	1.1206	0.0155	0.0264	5.0000e-005	1.4700e-003	7.6000e-004	2.2200e-003	3.9000e-004	7.4000e-004	1.1300e-003	0.0000	4.1577	4.1577	4.3000e-004	0.0000	4.1667
Total	1.3591	2.0161	2.7078	5.1800e-003	0.1768	0.0946	0.2714	0.0667	0.0888	0.1555	0.0000	419.2786	419.2786	0.0770	0.0000	420.8948

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

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7402	1.0000e-005	1.4800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8700e-003	2.8700e-003	1.0000e-005	0.0000	3.0300e-003
Energy	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142	0.0000	612.9391	612.9391	0.0224	7.5600e-003	615.7542
Mobile	0.4776	1.3936	5.7598	0.0163	0.9178	0.0302	0.9480	0.2466	0.0278	0.2744	0.0000	1,160.5306	1,160.5306	0.0291	0.0000	1,161.1407
Waste						0.0000	0.0000		0.0000	0.0000	18.5067	0.0000	18.5067	1.0937	0.0000	41.4747
Water						0.0000	0.0000		0.0000	0.0000	5.5276	38.2993	43.8269	0.5695	0.0138	60.0525
Total	1.2383	1.5808	5.9185	0.0174	0.9178	0.0444	0.9623	0.2466	0.0421	0.2887	24.0343	1,811.7719	1,835.8061	1.7147	0.0213	1,878.4251

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	0.7402	1.0000e-005	1.4800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8700e-003	2.8700e-003	1.0000e-005	0.0000	3.0300e-003
Energy	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142	0.0000	612.9391	612.9391	0.0224	7.5600e-003	615.7542
Mobile	0.4674	1.3303	5.5913	0.0154	0.8632	0.0285	0.8917	0.2319	0.0263	0.2582	0.0000	1,093.7860	1,093.7860	0.0275	0.0000	1,094.3635
Waste						0.0000	0.0000		0.0000	0.0000	18.5067	0.0000	18.5067	1.0937	0.0000	41.4747

Water						0.0000	0.0000		0.0000	0.0000	5.5276	38.2993	43.8269	0.5694	0.0137	60.0437
Total	1.2282	1.5174	5.7500	0.0165	0.8632	0.0427	0.9060	0.2319	0.0405	0.2724	24.0343	1,745.0272	1,769.0615	1.7130	0.0213	1,811.6391

	ROG	NOx	CO	SO2	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	0.82	4.01	2.85	5.40	5.95	3.83	5.85	5.95	3.73	5.63	0.00	3.68	3.64	0.10	0.09	3.56

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/2/2023	1/6/2023	5	5	
2	Grading	Grading	1/9/2023	1/18/2023	5	8	
3	Building Construction	Building Construction	1/19/2023	12/6/2023	5	230	
4	Paving	Paving	12/7/2023	1/1/2024	5	18	
5	Architectural Coating	Architectural Coating	1/2/2024	1/25/2024	5	18	

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: 241,275; Non-Residential Outdoor: 80,425 (Architectural Coating –

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
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38

Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	58.00	26.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	tons/yr										MT/yr					
Fugitive Dust					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.5400e-003	0.0748	0.0721	1.0000e-004		3.4800e-003	3.4800e-003		3.2000e-003	3.2000e-003	0.0000	8.6045	8.6045	2.7800e-003	0.0000	8.6630
Total	7.5400e-003	0.0748	0.0721	1.0000e-004	0.0452	3.4800e-003	0.0487	0.0248	3.2000e-003	0.0280	0.0000	8.6045	8.6045	2.7800e-003	0.0000	8.6630

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.7000e-004	1.6400e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4061	0.4061	2.0000e-005	0.0000	0.4065
Total	1.0000e-004	1.7000e-004	1.6400e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4061	0.4061	2.0000e-005	0.0000	0.4065

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.5400e-003	0.0748	0.0721	1.0000e-004		3.4800e-003	3.4800e-003		3.2000e-003	3.2000e-003	0.0000	8.6045	8.6045	2.7800e-003	0.0000	8.6630

Total	7.5400e-003	0.0748	0.0721	1.0000e-004	0.0452	3.4800e-003	0.0487	0.0248	3.2000e-003	0.0280	0.0000	8.6045	8.6045	2.7800e-003	0.0000	8.6630
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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	1.7000e-004	1.6400e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4061	0.4061	2.0000e-005	0.0000	0.4065
Total	1.0000e-004	1.7000e-004	1.6400e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4061	0.4061	2.0000e-005	0.0000	0.4065

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.7700e-003	0.0744	0.0840	1.2000e-004		3.6500e-003	3.6500e-003		3.3600e-003	3.3600e-003	0.0000	10.4582	10.4582	3.3800e-003	0.0000	10.5293
Total	7.7700e-003	0.0744	0.0840	1.2000e-004	0.0262	3.6500e-003	0.0299	0.0135	3.3600e-003	0.0168	0.0000	10.4582	10.4582	3.3800e-003	0.0000	10.5293

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.4000e-004	2.3000e-004	2.1900e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.5415	0.5415	2.0000e-005	0.0000	0.5420
Total	1.4000e-004	2.3000e-004	2.1900e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.5415	0.5415	2.0000e-005	0.0000	0.5420

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.7700e-003	0.0744	0.0840	1.2000e-004		3.6500e-003	3.6500e-003		3.3600e-003	3.3600e-003	0.0000	10.4582	10.4582	3.3800e-003	0.0000	10.5293
Total	7.7700e-003	0.0744	0.0840	1.2000e-004	0.0262	3.6500e-003	0.0299	0.0135	3.3600e-003	0.0168	0.0000	10.4582	10.4582	3.3800e-003	0.0000	10.5293

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	1.4000e-004	2.3000e-004	2.1900e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.5415	0.5415	2.0000e-005	0.0000	0.5420
Total	1.4000e-004	2.3000e-004	2.1900e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.5415	0.5415	2.0000e-005	0.0000	0.5420

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1801	1.6460	1.8641	3.0900e-003		0.0801	0.0801		0.0754	0.0754	0.0000	265.4713	265.4713	0.0631	0.0000	266.7955
Total	0.1801	1.6460	1.8641	3.0900e-003		0.0801	0.0801		0.0754	0.0754	0.0000	265.4713	265.4713	0.0631	0.0000	266.7955

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0197	0.1051	0.3056	6.4000e-004	0.0176	2.3600e-003	0.0200	5.0400e-003	2.1700e-003	7.2100e-003	0.0000	54.1902	54.1902	4.0000e-004	0.0000	54.1985
Worker	0.0150	0.0255	0.2435	9.9000e-004	0.0829	5.6000e-004	0.0835	0.0220	5.2000e-004	0.0226	0.0000	60.1974	60.1974	2.5000e-003	0.0000	60.2500
Total	0.0347	0.1306	0.5490	1.6300e-003	0.1005	2.9200e-003	0.1034	0.0271	2.6900e-003	0.0298	0.0000	114.3876	114.3876	2.9000e-003	0.0000	114.4485

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.1801	1.6460	1.8641	3.0900e-003		0.0801	0.0801		0.0754	0.0754	0.0000	265.4710	265.4710	0.0631	0.0000	266.7952
Total	0.1801	1.6460	1.8641	3.0900e-003		0.0801	0.0801		0.0754	0.0754	0.0000	265.4710	265.4710	0.0631	0.0000	266.7952

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	0.0197	0.1051	0.3056	6.4000e-004	0.0176	2.3600e-003	0.0200	5.0400e-003	2.1700e-003	7.2100e-003	0.0000	54.1902	54.1902	4.0000e-004	0.0000	54.1985
Worker	0.0150	0.0255	0.2435	9.9000e-004	0.0829	5.6000e-004	0.0835	0.0220	5.2000e-004	0.0226	0.0000	60.1974	60.1974	2.5000e-003	0.0000	60.2500
Total	0.0347	0.1306	0.5490	1.6300e-003	0.1005	2.9200e-003	0.1034	0.0271	2.6900e-003	0.0298	0.0000	114.3876	114.3876	2.9000e-003	0.0000	114.4485

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.7100e-003	0.0738	0.1022	1.6000e-004		3.6600e-003	3.6600e-003		3.3800e-003	3.3800e-003	0.0000	13.7177	13.7177	4.3100e-003	0.0000	13.8081
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	7.7100e-003	0.0738	0.1022	1.6000e-004		3.6600e-003	3.6600e-003		3.3800e-003	3.3800e-003	0.0000	13.7177	13.7177	4.3100e-003	0.0000	13.8081

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	6.5000e-004	6.2100e-003	3.0000e-005	2.1100e-003	1.0000e-005	2.1300e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	1.5343	1.5343	6.0000e-005	0.0000	1.5356
Total	3.8000e-004	6.5000e-004	6.2100e-003	3.0000e-005	2.1100e-003	1.0000e-005	2.1300e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	1.5343	1.5343	6.0000e-005	0.0000	1.5356

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	7.7100e-003	0.0738	0.1022	1.6000e-004		3.6600e-003	3.6600e-003		3.3800e-003	3.3800e-003	0.0000	13.7177	13.7177	4.3100e-003	0.0000	13.8081

Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	7.7100e-003	0.0738	0.1022	1.6000e-004		3.6600e-003	3.6600e-003		3.3800e-003	3.3800e-003	0.0000	13.7177	13.7177	4.3100e-003	0.0000	13.8081

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	6.5000e-004	6.2100e-003	3.0000e-005	2.1100e-003	1.0000e-005	2.1300e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	1.5343	1.5343	6.0000e-005	0.0000	1.5356
Total	3.8000e-004	6.5000e-004	6.2100e-003	3.0000e-005	2.1100e-003	1.0000e-005	2.1300e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	1.5343	1.5343	6.0000e-005	0.0000	1.5356

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.4000e-004	4.0900e-003	6.0300e-003	1.0000e-005		2.0000e-004	2.0000e-004		1.8000e-004	1.8000e-004	0.0000	0.8070	0.8070	2.5000e-004	0.0000	0.8123
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.4000e-004	4.0900e-003	6.0300e-003	1.0000e-005		2.0000e-004	2.0000e-004		1.8000e-004	1.8000e-004	0.0000	0.8070	0.8070	2.5000e-004	0.0000	0.8123

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	4.0000e-005	3.5000e-004	0.0000	1.2000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0892	0.0892	0.0000	0.0000	0.0893
Total	2.0000e-005	4.0000e-005	3.5000e-004	0.0000	1.2000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0892	0.0892	0.0000	0.0000	0.0893

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.4000e-004	4.0900e-003	6.0300e-003	1.0000e-005		2.0000e-004	2.0000e-004		1.8000e-004	1.8000e-004	0.0000	0.8070	0.8070	2.5000e-004	0.0000	0.8123
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.4000e-004	4.0900e-003	6.0300e-003	1.0000e-005		2.0000e-004	2.0000e-004		1.8000e-004	1.8000e-004	0.0000	0.8070	0.8070	2.5000e-004	0.0000	0.8123

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	4.0000e-005	3.5000e-004	0.0000	1.2000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0892	0.0892	0.0000	0.0000	0.0893
Total	2.0000e-005	4.0000e-005	3.5000e-004	0.0000	1.2000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0892	0.0892	0.0000	0.0000	0.0893

3.6 Architectural Coating - 2024

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	1.1183					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6300e-003	0.0110	0.0163	3.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	2.2979	2.2979	1.3000e-004	0.0000	2.3007
Total	1.1199	0.0110	0.0163	3.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	2.2979	2.2979	1.3000e-004	0.0000	2.3007

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	2.3000e-004	3.9000e-004	3.7400e-003	2.0000e-005	1.3400e-003	1.0000e-005	1.3500e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	0.9636	0.9636	4.0000e-005	0.0000	0.9644
Total	2.3000e-004	3.9000e-004	3.7400e-003	2.0000e-005	1.3400e-003	1.0000e-005	1.3500e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	0.9636	0.9636	4.0000e-005	0.0000	0.9644

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.1183					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6300e-003	0.0110	0.0163	3.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	2.2979	2.2979	1.3000e-004	0.0000	2.3006
Total	1.1199	0.0110	0.0163	3.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	2.2979	2.2979	1.3000e-004	0.0000	2.3006

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	2.3000e-004	3.9000e-004	3.7400e-003	2.0000e-005	1.3400e-003	1.0000e-005	1.3500e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	0.9636	0.9636	4.0000e-005	0.0000	0.9644
Total	2.3000e-004	3.9000e-004	3.7400e-003	2.0000e-005	1.3400e-003	1.0000e-005	1.3500e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	0.9636	0.9636	4.0000e-005	0.0000	0.9644

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

- Improve Walkability Design
- Improve Destination Accessibility
- Increase Transit Accessibility
- Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4674	1.3303	5.5913	0.0154	0.8632	0.0285	0.8917	0.2319	0.0263	0.2582	0.0000	1,093.7860	1,093.7860	0.0275	0.0000	1,094.3635
Unmitigated	0.4776	1.3936	5.7598	0.0163	0.9178	0.0302	0.9480	0.2466	0.0278	0.2744	0.0000	1,160.5306	1,160.5306	0.0291	0.0000	1,161.1407

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Office Park	1,119.50	160.77	74.50	2,412,668	2,269,114
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	1,119.50	160.77	74.50	2,412,668	2,269,114

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Office Park	14.70	6.60	6.60	33.00	48.00	19.00	82	15	3
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.409414	0.062437	0.155860	0.176720	0.051185	0.007913	0.019934	0.103301	0.001779	0.001597	0.006667	0.000853	0.002340

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	409.2340	409.2340	0.0185	3.8300e-003	410.8095
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	409.2340	409.2340	0.0185	3.8300e-003	410.8095
NaturalGas Mitigated	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142	0.0000	203.7050	203.7050	3.9000e-003	3.7300e-003	204.9448
NaturalGas Unmitigated	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142	0.0000	203.7050	203.7050	3.9000e-003	3.7300e-003	204.9448

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					
Other Non-Asphalt Surfaces	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
Office Park	3.81729e+006	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142	0.0000	203.7050	203.7050	3.9000e-003	3.7300e-003	204.9448
Total		0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142	0.0000	203.7050	203.7050	3.9000e-003	3.7300e-003	204.9448

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	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
Office Park	3.81729e+006	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142	0.0000	203.7050	203.7050	3.9000e-003	3.7300e-003	204.9448
Total		0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142	0.0000	203.7050	203.7050	3.9000e-003	3.7300e-003	204.9448

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Office Park	1.40673e+006	409.2340	0.0185	3.8300e-003	410.8095
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		409.2340	0.0185	3.8300e-003	410.8095

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			

Office Park	1.40673e+006	409.2340	0.0185	3.8300e-003	410.8095
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		409.2340	0.0185	3.8300e-003	410.8095

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.7402	1.0000e-005	1.4800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8700e-003	2.8700e-003	1.0000e-005	0.0000	3.0300e-003
Unmitigated	0.7402	1.0000e-005	1.4800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8700e-003	2.8700e-003	1.0000e-005	0.0000	3.0300e-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	tons/yr										MT/yr					
Architectural Coating	0.1118					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6282					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.4000e-004	1.0000e-005	1.4800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8700e-003	2.8700e-003	1.0000e-005	0.0000	3.0300e-003

Total	0.7402	1.0000e-005	1.4800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8700e-003	2.8700e-003	1.0000e-005	0.0000	3.0300e-003
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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	0.1118					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6282					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.4000e-004	1.0000e-005	1.4800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8700e-003	2.8700e-003	1.0000e-005	0.0000	3.0300e-003
Total	0.7402	1.0000e-005	1.4800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8700e-003	2.8700e-003	1.0000e-005	0.0000	3.0300e-003

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	43.8269	0.5694	0.0137	60.0437
Unmitigated	43.8269	0.5695	0.0138	60.0525

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Office Park	17.4232 / 10.6788	43.8269	0.5695	0.0138	60.0525
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		43.8269	0.5695	0.0138	60.0525

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Office Park	17.4232 / 10.6788	43.8269	0.5694	0.0137	60.0437
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		43.8269	0.5694	0.0137	60.0437

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
--	-----------	-----	-----	------

	MT/yr			
Mitigated	18.5067	1.0937	0.0000	41.4747
Unmitigated	18.5067	1.0937	0.0000	41.4747

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Office Park	91.17	18.5067	1.0937	0.0000	41.4747
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		18.5067	1.0937	0.0000	41.4747

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Office Park	91.17	18.5067	1.0937	0.0000	41.4747
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		18.5067	1.0937	0.0000	41.4747

9.0 Operational Offroad

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

APPENDIX B
CALEEMOD REPORTS (SEASONAL)
PHASES 1 - 4

DRAFT

Sequoia Drive-In Business Park (PH 1)
San Joaquin Valley Unified APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Fast Food Restaurant with Drive Thru	3.00	1000sqft	0.07	3,000.00	0
Convenience Market With Gas Pumps	8.00	Pump	0.03	1,129.40	0
Office Park	63.02	1000sqft	1.45	63,020.00	0
Other Non-Asphalt Surfaces	118.90	1000sqft	2.73	118,900.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	45
Climate Zone	7	Operational Year	2018		
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Project Characteristics - Phase 1 will have 5 buildings with Office Park (ITE "Business Park") land use, ranging in square footage from 12,000 sf to 13,390 sf for a total of 68,340 sf of building gfa.

Phase 1 will also have a gas station with an attached fast food restaurant with drive-thru. Phase 1 will be 10.04 acres out of 46.17 acres of the total Project.

Land Use - "Other Non-Asphalt Surfaces" includes the new roads, on-street parking, and parking lots.

Construction Phase - No demolition required.

Vehicle Trips -

Energy Use -

Mobile Land Use Mitigation - Figures taken from ISR: LUT-1 - LUT-5 are based on project location. SDT-1: project will incorporate typical standard sidewalks throughout project.

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	OperationalYear	2014	2018
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

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					
2017	4.9186	51.8583	40.6605	0.0450	18.2962	2.7558	21.0520	9.9917	2.5353	12.5270	0.0000	4,233.5977	4,233.5977	1.2371	0.0000	4,259.5765
2018	144.0768	14.4233	13.5138	0.0219	0.2555	0.8290	1.0844	0.0678	0.7644	0.8321	0.0000	2,091.9716	2,091.9716	0.5695	0.0000	2,103.9303
Total	148.9955	66.2816	54.1744	0.0670	18.5516	3.5848	22.1364	10.0594	3.2997	13.3591	0.0000	6,325.5693	6,325.5693	1.8066	0.0000	6,363.5068

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					
2017	4.9186	51.8583	40.6605	0.0450	18.2962	2.7558	21.0520	9.9917	2.5353	12.5270	0.0000	4,233.5977	4,233.5977	1.2371	0.0000	4,259.5765

2018	144.0768	14.4233	13.5138	0.0219	0.2555	0.8290	1.0844	0.0678	0.7644	0.8321	0.0000	2,091.9716	2,091.9716	0.5695	0.0000	2,103.9303
Total	148.9955	66.2816	54.1744	0.0670	18.5516	3.5848	22.1364	10.0594	3.2997	13.3591	0.0000	6,325.5693	6,325.5693	1.8066	0.0000	6,363.5068

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

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	4.6921	1.9000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0422	0.0422	1.2000e-004		0.0447
Energy	0.0816	0.7416	0.6229	4.4500e-003		0.0564	0.0564		0.0564	0.0564		889.8744	889.8744	0.0171	0.0163	895.2900
Mobile	26.3527	46.6989	207.0640	0.2588	13.0556	0.5502	13.6059	3.4996	0.5060	4.0056		21,957.6594	21,957.6594	0.7593		21,973.6048
Total	31.1264	47.4406	207.7069	0.2632	13.0556	0.6067	13.6623	3.4996	0.5624	4.0620		22,847.5760	22,847.5760	0.7765	0.0163	22,868.9394

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	4.6921	1.9000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0422	0.0422	1.2000e-004		0.0447
Energy	0.0816	0.7416	0.6229	4.4500e-003		0.0564	0.0564		0.0564	0.0564		889.8744	889.8744	0.0171	0.0163	895.2900

Mobile	26.1605	45.1080	203.2093	0.2450	12.2788	0.5222	12.8010	3.2914	0.4801	3.7715		20,786.45 96	20,786.459 6	0.7277		20,801.741 3
Total	30.9343	45.8497	203.8522	0.2495	12.2788	0.5786	12.8575	3.2914	0.5366	3.8280		21,676.37 61	21,676.376 1	0.7449	0.0163	21,697.076 0

	ROG	NOx	CO	SO2	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	0.62	3.35	1.86	5.22	5.95	4.62	5.89	5.95	4.59	5.76	0.00	5.13	5.13	4.07	0.00	5.12

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2017	1/6/2017	5	5	
2	Grading	Grading	1/7/2017	1/18/2017	5	8	
3	Building Construction	Building Construction	1/19/2017	12/6/2017	5	230	
4	Paving	Paving	12/7/2017	1/1/2018	5	18	
5	Architectural Coating	Architectural Coating	1/2/2018	1/25/2018	5	18	

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: 279,074; Non-Residential Outdoor: 93,025 (Architectural Coating –

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
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38

Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	72.00	30.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	14.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2017

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
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Category	lb/day										lb/day				
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000		0.0000
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339		4,003.0859	4,003.0859	1.2265	4,028.8432
Total	4.8382	51.7535	39.3970	0.0391	18.0663	2.7542	20.8205	9.9307	2.5339	12.4646		4,003.0859	4,003.0859	1.2265	4,028.8432

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0804	0.1049	1.2635	2.9300e-003	0.2299	1.5900e-003	0.2315	0.0610	1.4600e-003	0.0624		230.5118	230.5118	0.0106		230.7333
Total	0.0804	0.1049	1.2635	2.9300e-003	0.2299	1.5900e-003	0.2315	0.0610	1.4600e-003	0.0624		230.5118	230.5118	0.0106		230.7333

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339	0.0000	4,003.0859	4,003.0859	1.2265		4,028.8432

Total	4.8382	51.7535	39.3970	0.0391	18.0663	2.7542	20.8205	9.9307	2.5339	12.4646	0.0000	4,003.0859	4,003.0859	1.2265		4,028.8432
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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0804	0.1049	1.2635	2.9300e-003	0.2299	1.5900e-003	0.2315	0.0610	1.4600e-003	0.0624		230.5118	230.5118	0.0106		230.7333
Total	0.0804	0.1049	1.2635	2.9300e-003	0.2299	1.5900e-003	0.2315	0.0610	1.4600e-003	0.0624		230.5118	230.5118	0.0106		230.7333

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	3.4555	35.9825	25.3812	0.0297		2.0388	2.0388		1.8757	1.8757		3,043.6667	3,043.6667	0.9326		3,063.2507
Total	3.4555	35.9825	25.3812	0.0297	6.5523	2.0388	8.5912	3.3675	1.8757	5.2432		3,043.6667	3,043.6667	0.9326		3,063.2507

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0670	0.0874	1.0529	2.4400e-003	0.1916	1.3200e-003	0.1929	0.0508	1.2200e-003	0.0520		192.0932	192.0932	8.7900e-003		192.2778
Total	0.0670	0.0874	1.0529	2.4400e-003	0.1916	1.3200e-003	0.1929	0.0508	1.2200e-003	0.0520		192.0932	192.0932	8.7900e-003		192.2778

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	3.4555	35.9825	25.3812	0.0297		2.0388	2.0388		1.8757	1.8757	0.0000	3,043.6667	3,043.6667	0.9326		3,063.2507
Total	3.4555	35.9825	25.3812	0.0297	6.5523	2.0388	8.5912	3.3675	1.8757	5.2432	0.0000	3,043.6667	3,043.6667	0.9326		3,063.2507

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0670	0.0874	1.0529	2.4400e-003	0.1916	1.3200e-003	0.1929	0.0508	1.2200e-003	0.0520		192.0932	192.0932	8.7900e-003		192.2778
Total	0.0670	0.0874	1.0529	2.4400e-003	0.1916	1.3200e-003	0.1929	0.0508	1.2200e-003	0.0520		192.0932	192.0932	8.7900e-003		192.2778

3.4 Building Construction - 2017

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	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490
Total	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3141	2.3596	3.4403	6.5000e-003	0.1806	0.0399	0.2205	0.0516	0.0367	0.0882		641.0072	641.0072	5.2600e-003		641.1176
Worker	0.3216	0.4195	5.0540	0.0117	0.9197	6.3500e-003	0.9260	0.2439	5.8500e-003	0.2497		922.0471	922.0471	0.0422		922.9333
Total	0.6357	2.7791	8.4943	0.0182	1.1003	0.0462	1.1465	0.2955	0.0425	0.3380		1,563.0543	1,563.0543	0.0475		1,564.0509

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490
Total	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3141	2.3596	3.4403	6.5000e-003	0.1806	0.0399	0.2205	0.0516	0.0367	0.0882		641.0072	641.0072	5.2600e-003		641.1176
Worker	0.3216	0.4195	5.0540	0.0117	0.9197	6.3500e-003	0.9260	0.2439	5.8500e-003	0.2497		922.0471	922.0471	0.0422		922.9333
Total	0.6357	2.7791	8.4943	0.0182	1.1003	0.0462	1.1465	0.2955	0.0425	0.3380		1,563.0543	1,563.0543	0.0475		1,564.0509

3.5 Paving - 2017

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	1.6554	16.8035	12.4837	0.0186		1.0056	1.0056		0.9269	0.9269		1,873.8264	1,873.8264	0.5588		1,885.5609
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.6554	16.8035	12.4837	0.0186		1.0056	1.0056		0.9269	0.9269		1,873.8264	1,873.8264	0.5588		1,885.5609

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0893	0.1165	1.4039	3.2600e-003	0.2555	1.7600e-003	0.2572	0.0678	1.6200e-003	0.0694		256.1242	256.1242	0.0117		256.3704
Total	0.0893	0.1165	1.4039	3.2600e-003	0.2555	1.7600e-003	0.2572	0.0678	1.6200e-003	0.0694		256.1242	256.1242	0.0117		256.3704

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.6554	16.8035	12.4837	0.0186		1.0056	1.0056		0.9269	0.9269	0.0000	1,873.8264	1,873.8264	0.5588		1,885.5609

Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.6554	16.8035	12.4837	0.0186		1.0056	1.0056		0.9269	0.9269	0.0000	1,873.8264	1,873.8264	0.5588		1,885.5609

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0893	0.1165	1.4039	3.2600e-003	0.2555	1.7600e-003	0.2572	0.0678	1.6200e-003	0.0694		256.1242	256.1242	0.0117		256.3704
Total	0.0893	0.1165	1.4039	3.2600e-003	0.2555	1.7600e-003	0.2572	0.0678	1.6200e-003	0.0694		256.1242	256.1242	0.0117		256.3704

3.5 Paving - 2018

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	1.4060	14.3192	12.2631	0.0187		0.8272	0.8272		0.7628	0.7628		1,845.0348	1,845.0348	0.5587		1,856.7667
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4060	14.3192	12.2631	0.0187		0.8272	0.8272		0.7628	0.7628		1,845.0348	1,845.0348	0.5587		1,856.7667

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0785	0.1041	1.2508	3.2600e-003	0.2555	1.7200e-003	0.2572	0.0678	1.5900e-003	0.0693		246.9368	246.9368	0.0108		247.1636
Total	0.0785	0.1041	1.2508	3.2600e-003	0.2555	1.7200e-003	0.2572	0.0678	1.5900e-003	0.0693		246.9368	246.9368	0.0108		247.1636

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.4060	14.3192	12.2631	0.0187		0.8272	0.8272		0.7628	0.7628	0.0000	1,845.0348	1,845.0348	0.5587		1,856.7667
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4060	14.3192	12.2631	0.0187		0.8272	0.8272		0.7628	0.7628	0.0000	1,845.0348	1,845.0348	0.5587		1,856.7667

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0785	0.1041	1.2508	3.2600e-003	0.2555	1.7200e-003	0.2572	0.0678	1.5900e-003	0.0693		246.9368	246.9368	0.0108		247.1636
Total	0.0785	0.1041	1.2508	3.2600e-003	0.2555	1.7200e-003	0.2572	0.0678	1.5900e-003	0.0693		246.9368	246.9368	0.0108		247.1636

3.6 Architectural Coating - 2018

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	143.7232					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	144.0219	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0550	0.0729	0.8755	2.2900e-003	0.1788	1.2000e-003	0.1800	0.0474	1.1100e-003	0.0485		172.8557	172.8557	7.5600e-003		173.0145
Total	0.0550	0.0729	0.8755	2.2900e-003	0.1788	1.2000e-003	0.1800	0.0474	1.1100e-003	0.0485		172.8557	172.8557	7.5600e-003		173.0145

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	143.7232					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102
Total	144.0219	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0550	0.0729	0.8755	2.2900e-003	0.1788	1.2000e-003	0.1800	0.0474	1.1100e-003	0.0485		172.8557	172.8557	7.5600e-003		173.0145
Total	0.0550	0.0729	0.8755	2.2900e-003	0.1788	1.2000e-003	0.1800	0.0474	1.1100e-003	0.0485		172.8557	172.8557	7.5600e-003		173.0145

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

- Improve Walkability Design
- Improve Destination Accessibility
- Increase Transit Accessibility
- Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	26.1605	45.1080	203.2093	0.2450	12.2788	0.5222	12.8010	3.2914	0.4801	3.7715		20,786.4596	20,786.4596	0.7277		20,801.7413
Unmitigated	26.3527	46.6989	207.0640	0.2588	13.0556	0.5502	13.6059	3.4996	0.5060	4.0056		21,957.6594	21,957.6594	0.7593		21,973.6048

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market With Gas Pumps	4,340.80	1,635.76	1335.04	1,729,571	1,626,662
Fast Food Restaurant with Drive Thru	1,488.36	2,166.09	1628.16	1,385,627	1,303,182
Office Park	719.69	103.35	47.90	1,551,018	1,458,733
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	6,548.85	3,905.20	3,011.10	4,666,216	4,388,577

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
Convenience Market With Gas	14.70	6.60	6.60	0.80	80.20	19.00	14	21	65
Fast Food Restaurant with Drive	14.70	6.60	6.60	2.20	78.80	19.00	29	21	50
Office Park	14.70	6.60	6.60	33.00	48.00	19.00	82	15	3
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.411222	0.062718	0.156221	0.175699	0.050886	0.007831	0.019556	0.102845	0.001787	0.001576	0.006435	0.000923	0.002302

5.0 Energy Detail

4.4 Fleet Mix

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	0.0816	0.7416	0.6229	4.4500e-003		0.0564	0.0564		0.0564	0.0564		889.8744	889.8744	0.0171	0.0163	895.2900
NaturalGas Unmitigated	0.0816	0.7416	0.6229	4.4500e-003		0.0564	0.0564		0.0564	0.0564		889.8744	889.8744	0.0171	0.0163	895.2900

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					
Fast Food Restaurant with Drive Thru	822.082	8.8700e-003	0.0806	0.0677	4.8000e-004		6.1300e-003	6.1300e-003		6.1300e-003	6.1300e-003		96.7156	96.7156	1.8500e-003	1.7700e-003	97.3042
Office Park	6723.28	0.0725	0.6592	0.5537	3.9500e-003		0.0501	0.0501		0.0501	0.0501		790.9746	790.9746	0.0152	0.0145	795.7884
Other Non-Asphalt Surfaces	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
Convenience Market With Gas	18.5655	2.0000e-004	1.8200e-003	1.5300e-003	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		2.1842	2.1842	4.0000e-005	4.0000e-005	2.1975

Total		0.0816	0.7416	0.6229	4.4400e-003		0.0564	0.0564		0.0564	0.0564		889.8744	889.8744	0.0171	0.0163	895.2900
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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	lb/day										lb/day					
Office Park	6.72328	0.0725	0.6592	0.5537	3.9500e-003		0.0501	0.0501		0.0501	0.0501		790.9746	790.9746	0.0152	0.0145	795.7884
Other Non-Asphalt Surfaces	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
Convenience Market With Gas	0.0185655	2.0000e-004	1.8200e-003	1.5300e-003	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		2.1842	2.1842	4.0000e-005	4.0000e-005	2.1975
Fast Food Restaurant with Drive Thru	0.822082	8.8700e-003	0.0806	0.0677	4.8000e-004		6.1300e-003	6.1300e-003		6.1300e-003	6.1300e-003		96.7156	96.7156	1.8500e-003	1.7700e-003	97.3042
Total		0.0816	0.7416	0.6229	4.4400e-003		0.0564	0.0564		0.0564	0.0564		889.8744	889.8744	0.0171	0.0163	895.2900

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	4.6921	1.9000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0422	0.0422	1.2000e-004		0.0447
Unmitigated	4.6921	1.9000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0422	0.0422	1.2000e-004		0.0447

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	0.7088					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.9815					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.9100e-003	1.9000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0422	0.0422	1.2000e-004		0.0447
Total	4.6921	1.9000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0422	0.0422	1.2000e-004		0.0447

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	0.7088					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.9815					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.9100e-003	1.9000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0422	0.0422	1.2000e-004		0.0447
Total	4.6921	1.9000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0422	0.0422	1.2000e-004		0.0447

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

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
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10.0 Vegetation

Sequoia Drive-In Business Park (PH 1)
San Joaquin Valley Unified APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Fast Food Restaurant with Drive Thru	3.00	1000sqft	0.07	3,000.00	0
Convenience Market With Gas Pumps	8.00	Pump	0.03	1,129.40	0
Office Park	63.02	1000sqft	1.45	63,020.00	0
Other Non-Asphalt Surfaces	118.90	1000sqft	2.73	118,900.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	45
Climate Zone	7	Operational Year	2018		
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Project Characteristics - Phase 1 will have 5 buildings with Office Park (ITE "Business Park") land use, ranging in square footage from 12,000 sf to 13,390 sf for a total of 68,340 sf of building gfa.

Phase 1 will also have a gas station with an attached fast food restaurant with drive-thru. Phase 1 will be 10.04 acres out of 46.17 acres of the total Project.

Land Use - "Other Non-Asphalt Surfaces" includes the new roads, on-street parking, and parking lots.

Construction Phase - No demolition required.

Vehicle Trips -

Energy Use -

Mobile Land Use Mitigation - Figures taken from ISR: LUT-1 - LUT-5 are based on project location. SDT-1: project will incorporate typical standard sidewalks throughout project.

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	OperationalYear	2014	2018
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

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					
2017	4.9186	51.8583	40.6605	0.0450	18.2962	2.7558	21.0520	9.9917	2.5353	12.5270	0.0000	4,233.5977	4,233.5977	1.2371	0.0000	4,259.5765
2018	144.0768	14.4233	13.5138	0.0219	0.2555	0.8290	1.0844	0.0678	0.7644	0.8321	0.0000	2,091.9716	2,091.9716	0.5695	0.0000	2,103.9303
Total	148.9955	66.2816	54.1744	0.0670	18.5516	3.5848	22.1364	10.0594	3.2997	13.3591	0.0000	6,325.5693	6,325.5693	1.8066	0.0000	6,363.5068

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					
2017	4.9186	51.8583	40.6605	0.0450	18.2962	2.7558	21.0520	9.9917	2.5353	12.5270	0.0000	4,233.5977	4,233.5977	1.2371	0.0000	4,259.5765

2018	144.0768	14.4233	13.5138	0.0219	0.2555	0.8290	1.0844	0.0678	0.7644	0.8321	0.0000	2,091.9716	2,091.9716	0.5695	0.0000	2,103.9303
Total	148.9955	66.2816	54.1744	0.0670	18.5516	3.5848	22.1364	10.0594	3.2997	13.3591	0.0000	6,325.5693	6,325.5693	1.8066	0.0000	6,363.5068

	ROG	NOx	CO	SO2	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

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	4.6921	1.9000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0422	0.0422	1.2000e-004		0.0447
Energy	0.0816	0.7416	0.6229	4.4500e-003		0.0564	0.0564		0.0564	0.0564		889.8744	889.8744	0.0171	0.0163	895.2900
Mobile	26.3527	46.6989	207.0640	0.2588	13.0556	0.5502	13.6059	3.4996	0.5060	4.0056		21,957.6594	21,957.6594	0.7593		21,973.6048
Total	31.1264	47.4406	207.7069	0.2632	13.0556	0.6067	13.6623	3.4996	0.5624	4.0620		22,847.5760	22,847.5760	0.7765	0.0163	22,868.9394

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	4.6921	1.9000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0422	0.0422	1.2000e-004		0.0447
Energy	0.0816	0.7416	0.6229	4.4500e-003		0.0564	0.0564		0.0564	0.0564		889.8744	889.8744	0.0171	0.0163	895.2900

Mobile	26.1605	45.1080	203.2093	0.2450	12.2788	0.5222	12.8010	3.2914	0.4801	3.7715		20,786.45 96	20,786.459 6	0.7277		20,801.741 3
Total	30.9343	45.8497	203.8522	0.2495	12.2788	0.5786	12.8575	3.2914	0.5366	3.8280		21,676.37 61	21,676.376 1	0.7449	0.0163	21,697.076 0

	ROG	NOx	CO	SO2	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	0.62	3.35	1.86	5.22	5.95	4.62	5.89	5.95	4.59	5.76	0.00	5.13	5.13	4.07	0.00	5.12

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2017	1/6/2017	5	5	
2	Grading	Grading	1/7/2017	1/18/2017	5	8	
3	Building Construction	Building Construction	1/19/2017	12/6/2017	5	230	
4	Paving	Paving	12/7/2017	1/1/2018	5	18	
5	Architectural Coating	Architectural Coating	1/2/2018	1/25/2018	5	18	

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: 279,074; Non-Residential Outdoor: 93,025 (Architectural Coating –

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
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38

Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	72.00	30.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	14.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2017

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
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Category	lb/day										lb/day				
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000		0.0000
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339		4,003.0859	4,003.0859	1.2265	4,028.8432
Total	4.8382	51.7535	39.3970	0.0391	18.0663	2.7542	20.8205	9.9307	2.5339	12.4646		4,003.0859	4,003.0859	1.2265	4,028.8432

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0804	0.1049	1.2635	2.9300e-003	0.2299	1.5900e-003	0.2315	0.0610	1.4600e-003	0.0624		230.5118	230.5118	0.0106		230.7333
Total	0.0804	0.1049	1.2635	2.9300e-003	0.2299	1.5900e-003	0.2315	0.0610	1.4600e-003	0.0624		230.5118	230.5118	0.0106		230.7333

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339	0.0000	4,003.0859	4,003.0859	1.2265		4,028.8432

Total	4.8382	51.7535	39.3970	0.0391	18.0663	2.7542	20.8205	9.9307	2.5339	12.4646	0.0000	4,003.0859	4,003.0859	1.2265		4,028.8432
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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0804	0.1049	1.2635	2.9300e-003	0.2299	1.5900e-003	0.2315	0.0610	1.4600e-003	0.0624		230.5118	230.5118	0.0106		230.7333
Total	0.0804	0.1049	1.2635	2.9300e-003	0.2299	1.5900e-003	0.2315	0.0610	1.4600e-003	0.0624		230.5118	230.5118	0.0106		230.7333

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	3.4555	35.9825	25.3812	0.0297		2.0388	2.0388		1.8757	1.8757		3,043.6667	3,043.6667	0.9326		3,063.2507
Total	3.4555	35.9825	25.3812	0.0297	6.5523	2.0388	8.5912	3.3675	1.8757	5.2432		3,043.6667	3,043.6667	0.9326		3,063.2507

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0670	0.0874	1.0529	2.4400e-003	0.1916	1.3200e-003	0.1929	0.0508	1.2200e-003	0.0520		192.0932	192.0932	8.7900e-003		192.2778
Total	0.0670	0.0874	1.0529	2.4400e-003	0.1916	1.3200e-003	0.1929	0.0508	1.2200e-003	0.0520		192.0932	192.0932	8.7900e-003		192.2778

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	3.4555	35.9825	25.3812	0.0297		2.0388	2.0388		1.8757	1.8757	0.0000	3,043.6667	3,043.6667	0.9326		3,063.2507
Total	3.4555	35.9825	25.3812	0.0297	6.5523	2.0388	8.5912	3.3675	1.8757	5.2432	0.0000	3,043.6667	3,043.6667	0.9326		3,063.2507

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0670	0.0874	1.0529	2.4400e-003	0.1916	1.3200e-003	0.1929	0.0508	1.2200e-003	0.0520		192.0932	192.0932	8.7900e-003		192.2778
Total	0.0670	0.0874	1.0529	2.4400e-003	0.1916	1.3200e-003	0.1929	0.0508	1.2200e-003	0.0520		192.0932	192.0932	8.7900e-003		192.2778

3.4 Building Construction - 2017

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	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490
Total	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3141	2.3596	3.4403	6.5000e-003	0.1806	0.0399	0.2205	0.0516	0.0367	0.0882		641.0072	641.0072	5.2600e-003		641.1176
Worker	0.3216	0.4195	5.0540	0.0117	0.9197	6.3500e-003	0.9260	0.2439	5.8500e-003	0.2497		922.0471	922.0471	0.0422		922.9333
Total	0.6357	2.7791	8.4943	0.0182	1.1003	0.0462	1.1465	0.2955	0.0425	0.3380		1,563.0543	1,563.0543	0.0475		1,564.0509

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490
Total	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3141	2.3596	3.4403	6.5000e-003	0.1806	0.0399	0.2205	0.0516	0.0367	0.0882		641.0072	641.0072	5.2600e-003		641.1176
Worker	0.3216	0.4195	5.0540	0.0117	0.9197	6.3500e-003	0.9260	0.2439	5.8500e-003	0.2497		922.0471	922.0471	0.0422		922.9333
Total	0.6357	2.7791	8.4943	0.0182	1.1003	0.0462	1.1465	0.2955	0.0425	0.3380		1,563.0543	1,563.0543	0.0475		1,564.0509

3.5 Paving - 2017

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	1.6554	16.8035	12.4837	0.0186		1.0056	1.0056		0.9269	0.9269		1,873.8264	1,873.8264	0.5588		1,885.5609
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.6554	16.8035	12.4837	0.0186		1.0056	1.0056		0.9269	0.9269		1,873.8264	1,873.8264	0.5588		1,885.5609

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0893	0.1165	1.4039	3.2600e-003	0.2555	1.7600e-003	0.2572	0.0678	1.6200e-003	0.0694		256.1242	256.1242	0.0117		256.3704
Total	0.0893	0.1165	1.4039	3.2600e-003	0.2555	1.7600e-003	0.2572	0.0678	1.6200e-003	0.0694		256.1242	256.1242	0.0117		256.3704

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.6554	16.8035	12.4837	0.0186		1.0056	1.0056		0.9269	0.9269	0.0000	1,873.8264	1,873.8264	0.5588		1,885.5609

Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.6554	16.8035	12.4837	0.0186		1.0056	1.0056		0.9269	0.9269	0.0000	1,873.8264	1,873.8264	0.5588		1,885.5609

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0893	0.1165	1.4039	3.2600e-003	0.2555	1.7600e-003	0.2572	0.0678	1.6200e-003	0.0694		256.1242	256.1242	0.0117		256.3704
Total	0.0893	0.1165	1.4039	3.2600e-003	0.2555	1.7600e-003	0.2572	0.0678	1.6200e-003	0.0694		256.1242	256.1242	0.0117		256.3704

3.5 Paving - 2018

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	1.4060	14.3192	12.2631	0.0187		0.8272	0.8272		0.7628	0.7628		1,845.0348	1,845.0348	0.5587		1,856.7667
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4060	14.3192	12.2631	0.0187		0.8272	0.8272		0.7628	0.7628		1,845.0348	1,845.0348	0.5587		1,856.7667

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0785	0.1041	1.2508	3.2600e-003	0.2555	1.7200e-003	0.2572	0.0678	1.5900e-003	0.0693		246.9368	246.9368	0.0108		247.1636
Total	0.0785	0.1041	1.2508	3.2600e-003	0.2555	1.7200e-003	0.2572	0.0678	1.5900e-003	0.0693		246.9368	246.9368	0.0108		247.1636

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.4060	14.3192	12.2631	0.0187		0.8272	0.8272		0.7628	0.7628	0.0000	1,845.0348	1,845.0348	0.5587		1,856.7667
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4060	14.3192	12.2631	0.0187		0.8272	0.8272		0.7628	0.7628	0.0000	1,845.0348	1,845.0348	0.5587		1,856.7667

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0785	0.1041	1.2508	3.2600e-003	0.2555	1.7200e-003	0.2572	0.0678	1.5900e-003	0.0693		246.9368	246.9368	0.0108		247.1636
Total	0.0785	0.1041	1.2508	3.2600e-003	0.2555	1.7200e-003	0.2572	0.0678	1.5900e-003	0.0693		246.9368	246.9368	0.0108		247.1636

3.6 Architectural Coating - 2018

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	143.7232					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	144.0219	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0550	0.0729	0.8755	2.2900e-003	0.1788	1.2000e-003	0.1800	0.0474	1.1100e-003	0.0485		172.8557	172.8557	7.5600e-003		173.0145
Total	0.0550	0.0729	0.8755	2.2900e-003	0.1788	1.2000e-003	0.1800	0.0474	1.1100e-003	0.0485		172.8557	172.8557	7.5600e-003		173.0145

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	143.7232					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102
Total	144.0219	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0550	0.0729	0.8755	2.2900e-003	0.1788	1.2000e-003	0.1800	0.0474	1.1100e-003	0.0485		172.8557	172.8557	7.5600e-003		173.0145
Total	0.0550	0.0729	0.8755	2.2900e-003	0.1788	1.2000e-003	0.1800	0.0474	1.1100e-003	0.0485		172.8557	172.8557	7.5600e-003		173.0145

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

- Improve Walkability Design
- Improve Destination Accessibility
- Increase Transit Accessibility
- Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	26.1605	45.1080	203.2093	0.2450	12.2788	0.5222	12.8010	3.2914	0.4801	3.7715		20,786.4596	20,786.4596	0.7277		20,801.7413
Unmitigated	26.3527	46.6989	207.0640	0.2588	13.0556	0.5502	13.6059	3.4996	0.5060	4.0056		21,957.6594	21,957.6594	0.7593		21,973.6048

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market With Gas Pumps	4,340.80	1,635.76	1335.04	1,729,571	1,626,662
Fast Food Restaurant with Drive Thru	1,488.36	2,166.09	1628.16	1,385,627	1,303,182
Office Park	719.69	103.35	47.90	1,551,018	1,458,733
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	6,548.85	3,905.20	3,011.10	4,666,216	4,388,577

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
Convenience Market With Gas	14.70	6.60	6.60	0.80	80.20	19.00	14	21	65
Fast Food Restaurant with Drive	14.70	6.60	6.60	2.20	78.80	19.00	29	21	50
Office Park	14.70	6.60	6.60	33.00	48.00	19.00	82	15	3
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.411222	0.062718	0.156221	0.175699	0.050886	0.007831	0.019556	0.102845	0.001787	0.001576	0.006435	0.000923	0.002302

5.0 Energy Detail

4.4 Fleet Mix

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	0.0816	0.7416	0.6229	4.4500e-003		0.0564	0.0564		0.0564	0.0564		889.8744	889.8744	0.0171	0.0163	895.2900
NaturalGas Unmitigated	0.0816	0.7416	0.6229	4.4500e-003		0.0564	0.0564		0.0564	0.0564		889.8744	889.8744	0.0171	0.0163	895.2900

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					
Fast Food Restaurant with Drive Thru	822.082	8.8700e-003	0.0806	0.0677	4.8000e-004		6.1300e-003	6.1300e-003		6.1300e-003	6.1300e-003		96.7156	96.7156	1.8500e-003	1.7700e-003	97.3042
Office Park	6723.28	0.0725	0.6592	0.5537	3.9500e-003		0.0501	0.0501		0.0501	0.0501		790.9746	790.9746	0.0152	0.0145	795.7884
Other Non-Asphalt Surfaces	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
Convenience Market With Gas Dispenser	18.5655	2.0000e-004	1.8200e-003	1.5300e-003	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		2.1842	2.1842	4.0000e-005	4.0000e-005	2.1975

Total		0.0816	0.7416	0.6229	4.4400e-003		0.0564	0.0564		0.0564	0.0564		889.8744	889.8744	0.0171	0.0163	895.2900
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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	lb/day										lb/day					
Office Park	6.72328	0.0725	0.6592	0.5537	3.9500e-003		0.0501	0.0501		0.0501	0.0501		790.9746	790.9746	0.0152	0.0145	795.7884
Other Non-Asphalt Surfaces	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
Convenience Market With Gas	0.0185655	2.0000e-004	1.8200e-003	1.5300e-003	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		2.1842	2.1842	4.0000e-005	4.0000e-005	2.1975
Fast Food Restaurant with Drive Thru	0.822082	8.8700e-003	0.0806	0.0677	4.8000e-004		6.1300e-003	6.1300e-003		6.1300e-003	6.1300e-003		96.7156	96.7156	1.8500e-003	1.7700e-003	97.3042
Total		0.0816	0.7416	0.6229	4.4400e-003		0.0564	0.0564		0.0564	0.0564		889.8744	889.8744	0.0171	0.0163	895.2900

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	4.6921	1.9000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0422	0.0422	1.2000e-004		0.0447
Unmitigated	4.6921	1.9000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0422	0.0422	1.2000e-004		0.0447

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	0.7088					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.9815					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.9100e-003	1.9000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0422	0.0422	1.2000e-004		0.0447
Total	4.6921	1.9000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0422	0.0422	1.2000e-004		0.0447

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	0.7088					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.9815					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.9100e-003	1.9000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0422	0.0422	1.2000e-004		0.0447
Total	4.6921	1.9000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0422	0.0422	1.2000e-004		0.0447

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

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
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10.0 Vegetation

Sequoia Drive-In Business Park (PH 2)
San Joaquin Valley Unified APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	88.00	1000sqft	2.02	88,000.00	0
Other Non-Asphalt Surfaces	46.69	1000sqft	1.07	46,690.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	45
Climate Zone	7			Operational Year	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Project Characteristics - Phase 2 will have 8 buildings (14 units) with Office Park (ITE "Business Park") land use, ranging in square footage from 5,200 sf to 8,000 sf for a total of 88,000 sf of building gfa.

Phase 2 will be 8.25 acres out of 46.17 acres of the total Project.

Land Use - "Other Non-Asphalt Surfaces" includes the new roads, on-street parking, and parking lots.

Construction Phase - No demolition required.

Vehicle Trips -

Energy Use -

Mobile Land Use Mitigation - Figures taken from ISR: LUT-1 - LUT-5 are based on project location. SDT-1: project will incorporate typical standard sidewalks throughout project.

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	OperationalYear	2014	2020
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	4.0824	42.5895	35.8281	0.0421	18.2962	2.1520	20.4482	9.9917	1.9798	11.9715	0.0000	4,090.9732	4,090.9732	1.2356	0.0000	4,116.9206
2020	104.3226	1.7272	2.3527	4.6000e-003	0.1277	0.1118	0.2395	0.0339	0.1117	0.1456	0.0000	395.7572	395.7572	0.0265	0.0000	396.3140
Total	108.4050	44.3167	38.1807	0.0467	18.4239	2.2638	20.6877	10.0255	2.0915	12.1171	0.0000	4,486.7304	4,486.7304	1.2621	0.0000	4,513.2345

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	4.0824	42.5895	35.8281	0.0421	18.2962	2.1520	20.4482	9.9917	1.9798	11.9715	0.0000	4,090.9732	4,090.9732	1.2356	0.0000	4,116.9205
2020	104.3226	1.7272	2.3527	4.6000e-003	0.1277	0.1118	0.2395	0.0339	0.1117	0.1456	0.0000	395.7572	395.7572	0.0265	0.0000	396.3140
Total	108.4050	44.3167	38.1807	0.0467	18.4239	2.2638	20.6877	10.0255	2.0915	12.1171	0.0000	4,486.7304	4,486.7304	1.2621	0.0000	4,513.2345

	ROG	NOx	CO	SO2	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

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	3.3968	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0311
Energy	0.1013	0.9204	0.7732	5.5200e-003		0.0700	0.0700		0.0700	0.0700		1,104.5028	1,104.5028	0.0212	0.0203	1,111.2246
Mobile	4.0487	12.6957	43.0611	0.1144	6.2453	0.2190	6.4642	1.6741	0.2017	1.8758		9,191.7830	9,191.7830	0.2520		9,197.0753
Total	7.5467	13.6163	43.8481	0.1199	6.2453	0.2890	6.5342	1.6741	0.2717	1.9458		10,296.3153	10,296.3153	0.2733	0.0203	10,308.3311

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.3968	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0311
Energy	0.1013	0.9204	0.7732	5.5200e-003		0.0700	0.0700		0.0700	0.0700		1,104.5028	1,104.5028	0.0212	0.0203	1,111.2246
Mobile	3.9674	12.0908	41.4700	0.1078	5.8737	0.2065	6.0802	1.5745	0.1902	1.7647		8,662.6951	8,662.6951	0.2386		8,667.7064
Total	7.4654	13.0114	42.2570	0.1133	5.8737	0.2765	6.1502	1.5745	0.2602	1.8347		9,767.2274	9,767.2274	0.2599	0.0203	9,778.9622

	ROG	NOx	CO	SO2	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	1.08	4.44	3.63	5.49	5.95	4.30	5.88	5.95	4.21	5.71	0.00	5.14	5.14	4.90	0.00	5.14

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2019	1/7/2019	5	5	
2	Grading	Grading	1/8/2019	1/17/2019	5	8	
3	Building Construction	Building Construction	1/18/2019	12/5/2019	5	230	
4	Paving	Paving	12/6/2019	12/31/2019	5	18	
5	Architectural Coating	Architectural Coating	1/1/2020	1/24/2020	5	18	

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: 202,035; Non-Residential Outdoor: 67,345 (Architectural Coating –

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
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40

Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	48.00	22.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000

Off-Road	4.0188	42.5046	34.8088	0.0391		2.1505	2.1505		1.9784	1.9784		3,876.723 3	3,876.7233	1.2266		3,902.4810
Total	4.0188	42.5046	34.8088	0.0391	18.0663	2.1505	20.2167	9.9307	1.9784	11.9091		3,876.723 3	3,876.7233	1.2266		3,902.4810

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0636	0.0849	1.0193	2.9400e-003	0.2299	1.5200e-003	0.2314	0.0610	1.4100e-003	0.0624		214.2499	214.2499	9.0300e-003		214.4396
Total	0.0636	0.0849	1.0193	2.9400e-003	0.2299	1.5200e-003	0.2314	0.0610	1.4100e-003	0.0624		214.2499	214.2499	9.0300e-003		214.4396

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0188	42.5046	34.8088	0.0391		2.1505	2.1505		1.9784	1.9784	0.0000	3,876.723 3	3,876.7233	1.2266		3,902.4810
Total	4.0188	42.5046	34.8088	0.0391	18.0663	2.1505	20.2167	9.9307	1.9784	11.9091	0.0000	3,876.723 3	3,876.7233	1.2266		3,902.4810

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0636	0.0849	1.0193	2.9400e-003	0.2299	1.5200e-003	0.2314	0.0610	1.4100e-003	0.0624		214.2499	214.2499	9.0300e-003		214.4396
Total	0.0636	0.0849	1.0193	2.9400e-003	0.2299	1.5200e-003	0.2314	0.0610	1.4100e-003	0.0624		214.2499	214.2499	9.0300e-003		214.4396

3.3 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.7610	28.3800	23.3864	0.0297		1.5329	1.5329		1.4103	1.4103		2,944.1998	2,944.1998	0.9315		2,963.7615
Total	2.7610	28.3800	23.3864	0.0297	6.5523	1.5329	8.0852	3.3675	1.4103	4.7778		2,944.1998	2,944.1998	0.9315		2,963.7615

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0530	0.0708	0.8494	2.4500e-003	0.1916	1.2700e-003	0.1929	0.0508	1.1700e-003	0.0520		178.5416	178.5416	7.5300e-003		178.6997
Total	0.0530	0.0708	0.8494	2.4500e-003	0.1916	1.2700e-003	0.1929	0.0508	1.1700e-003	0.0520		178.5416	178.5416	7.5300e-003		178.6997

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.7610	28.3800	23.3864	0.0297		1.5329	1.5329		1.4103	1.4103	0.0000	2,944.1998	2,944.1998	0.9315		2,963.7615
Total	2.7610	28.3800	23.3864	0.0297	6.5523	1.5329	8.0852	3.3675	1.4103	4.7778	0.0000	2,944.1998	2,944.1998	0.9315		2,963.7615

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0530	0.0708	0.8494	2.4500e-003	0.1916	1.2700e-003	0.1929	0.0508	1.1700e-003	0.0520		178.5416	178.5416	7.5300e-003		178.6997
Total	0.0530	0.0708	0.8494	2.4500e-003	0.1916	1.2700e-003	0.1929	0.0508	1.1700e-003	0.0520		178.5416	178.5416	7.5300e-003		178.6997

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479
Total	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1800	1.4118	2.0786	4.7400e-003	0.1324	0.0246	0.1570	0.0378	0.0226	0.0604		453.6756	453.6756	3.6200e-003		453.7516
Worker	0.1695	0.2265	2.7182	7.8300e-003	0.6131	4.0600e-003	0.6172	0.1626	3.7600e-003	0.1664		571.3331	571.3331	0.0241		571.8389
Total	0.3495	1.6383	4.7968	0.0126	0.7455	0.0286	0.7742	0.2004	0.0264	0.2268		1,025.0087	1,025.0087	0.0277		1,025.5905

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279		2,593.9479
Total	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279		2,593.9479

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1800	1.4118	2.0786	4.7400e-003	0.1324	0.0246	0.1570	0.0378	0.0226	0.0604		453.6756	453.6756	3.6200e-003		453.7516
Worker	0.1695	0.2265	2.7182	7.8300e-003	0.6131	4.0600e-003	0.6172	0.1626	3.7600e-003	0.1664		571.3331	571.3331	0.0241		571.8389
Total	0.3495	1.6383	4.7968	0.0126	0.7455	0.0286	0.7742	0.2004	0.0264	0.2268		1,025.0087	1,025.0087	0.0277		1,025.5905

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2520	12.5889	12.1441	0.0187		0.7111	0.7111		0.6560	0.6560		1,816.2490	1,816.2490	0.5585		1,827.9782

Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2520	12.5889	12.1441	0.0187		0.7111	0.7111		0.6560	0.6560		1,816.2490	1,816.2490	0.5585		1,827.9782

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0706	0.0944	1.1326	3.2600e-003	0.2555	1.6900e-003	0.2572	0.0678	1.5700e-003	0.0693		238.0555	238.0555	0.0100		238.2662
Total	0.0706	0.0944	1.1326	3.2600e-003	0.2555	1.6900e-003	0.2572	0.0678	1.5700e-003	0.0693		238.0555	238.0555	0.0100		238.2662

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.2520	12.5889	12.1441	0.0187		0.7111	0.7111		0.6560	0.6560	0.0000	1,816.2490	1,816.2490	0.5585		1,827.9782
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2520	12.5889	12.1441	0.0187		0.7111	0.7111		0.6560	0.6560	0.0000	1,816.2490	1,816.2490	0.5585		1,827.9782

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0706	0.0944	1.1326	3.2600e-003	0.2555	1.6900e-003	0.2572	0.0678	1.5700e-003	0.0693		238.0555	238.0555	0.0100		238.2662
Total	0.0706	0.0944	1.1326	3.2600e-003	0.2555	1.6900e-003	0.2572	0.0678	1.5700e-003	0.0693		238.0555	238.0555	0.0100		238.2662

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	104.0480					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9057
Total	104.2902	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9057

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0324	0.0433	0.5212	1.6300e-003	0.1277	8.4000e-004	0.1286	0.0339	7.8000e-004	0.0347		114.3091	114.3091	4.7200e-003		114.4083
Total	0.0324	0.0433	0.5212	1.6300e-003	0.1277	8.4000e-004	0.1286	0.0339	7.8000e-004	0.0347		114.3091	114.3091	4.7200e-003		114.4083

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	104.0480					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9057
Total	104.2902	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9057

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0324	0.0433	0.5212	1.6300e-003	0.1277	8.4000e-004	0.1286	0.0339	7.8000e-004	0.0347		114.3091	114.3091	4.7200e-003		114.4083
Total	0.0324	0.0433	0.5212	1.6300e-003	0.1277	8.4000e-004	0.1286	0.0339	7.8000e-004	0.0347		114.3091	114.3091	4.7200e-003		114.4083

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

- Increase Density
- Improve Walkability Design
- Improve Destination Accessibility
- Increase Transit Accessibility
- Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.9674	12.0908	41.4700	0.1078	5.8737	0.2065	6.0802	1.5745	0.1902	1.7647		8,662.6951	8,662.6951	0.2386		8,667.7064
Unmitigated	4.0487	12.6957	43.0611	0.1144	6.2453	0.2190	6.4642	1.6741	0.2017	1.8758		9,191.7830	9,191.7830	0.2520		9,197.0753

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Office Park	1,004.96	144.32	66.88	2,165,814	2,036,948
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	1,004.96	144.32	66.88	2,165,814	2,036,948

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Office Park	14.70	6.60	6.60	33.00	48.00	19.00	82	15	3
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.409687	0.062677	0.156376	0.176111	0.050971	0.007837	0.019872	0.103412	0.001778	0.001574	0.006496	0.000897	0.002312

5.0 Energy Detail

4.4 Fleet Mix

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	0.1013	0.9204	0.7732	5.5200e-003		0.0700	0.0700		0.0700	0.0700		1,104.5028	1,104.5028	0.0212	0.0203	1,111.2246
NaturalGas Unmitigated	0.1013	0.9204	0.7732	5.5200e-003		0.0700	0.0700		0.0700	0.0700		1,104.5028	1,104.5028	0.0212	0.0203	1,111.2246

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					
Other Non-Asphalt Surfaces	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
Office Park	9388.27	0.1013	0.9204	0.7732	5.5200e-003		0.0700	0.0700		0.0700	0.0700		1,104.5028	1,104.5028	0.0212	0.0203	1,111.2246

Total		0.1013	0.9204	0.7732	5.5200e-003		0.0700	0.0700		0.0700	0.0700		1,104.5028	1,104.5028	0.0212	0.0203	1,111.2246
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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					
Office Park	9.38827	0.1013	0.9204	0.7732	5.5200e-003		0.0700	0.0700		0.0700	0.0700		1,104.5028	1,104.5028	0.0212	0.0203	1,111.2246
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.1013	0.9204	0.7732	5.5200e-003		0.0700	0.0700		0.0700	0.0700		1,104.5028	1,104.5028	0.0212	0.0203	1,111.2246

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	3.3968	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0311
Unmitigated	3.3968	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0311

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	0.5131					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.8824					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3000e-003	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0311
Total	3.3968	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0311

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	0.5131					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.8824					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3000e-003	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0311
Total	3.3968	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0311

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

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
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10.0 Vegetation

Sequoia Drive-In Business Park (PH 2)
San Joaquin Valley Unified APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	88.00	1000sqft	2.02	88,000.00	0
Other Non-Asphalt Surfaces	46.69	1000sqft	1.07	46,690.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	45
Climate Zone	7			Operational Year	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Project Characteristics - Phase 2 will have 8 buildings (14 units) with Office Park (ITE "Business Park") land use, ranging in square footage from 5,200 sf to 8,000 sf for a total of 88,000 sf of building gfa.

Phase 2 will be 8.25 acres out of 46.17 acres of the total Project.

Land Use - "Other Non-Asphalt Surfaces" includes the new roads, on-street parking, and parking lots.

Construction Phase - No demolition required.

Vehicle Trips -

Energy Use -

Mobile Land Use Mitigation - Figures taken from ISR: LUT-1 - LUT-5 are based on project location. SDT-1: project will incorporate typical standard sidewalks throughout project.

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	OperationalYear	2014	2020
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	4.0824	42.5895	35.8281	0.0421	18.2962	2.1520	20.4482	9.9917	1.9798	11.9715	0.0000	4,090.9732	4,090.9732	1.2356	0.0000	4,116.9206
2020	104.3226	1.7272	2.3527	4.6000e-003	0.1277	0.1118	0.2395	0.0339	0.1117	0.1456	0.0000	395.7572	395.7572	0.0265	0.0000	396.3140
Total	108.4050	44.3167	38.1807	0.0467	18.4239	2.2638	20.6877	10.0255	2.0915	12.1171	0.0000	4,486.7304	4,486.7304	1.2621	0.0000	4,513.2345

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	4.0824	42.5895	35.8281	0.0421	18.2962	2.1520	20.4482	9.9917	1.9798	11.9715	0.0000	4,090.9732	4,090.9732	1.2356	0.0000	4,116.9205
2020	104.3226	1.7272	2.3527	4.6000e-003	0.1277	0.1118	0.2395	0.0339	0.1117	0.1456	0.0000	395.7572	395.7572	0.0265	0.0000	396.3140
Total	108.4050	44.3167	38.1807	0.0467	18.4239	2.2638	20.6877	10.0255	2.0915	12.1171	0.0000	4,486.7304	4,486.7304	1.2621	0.0000	4,513.2345

	ROG	NOx	CO	SO2	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

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	3.3968	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0311
Energy	0.1013	0.9204	0.7732	5.5200e-003		0.0700	0.0700		0.0700	0.0700		1,104.5028	1,104.5028	0.0212	0.0203	1,111.2246
Mobile	4.0487	12.6957	43.0611	0.1144	6.2453	0.2190	6.4642	1.6741	0.2017	1.8758		9,191.7830	9,191.7830	0.2520		9,197.0753
Total	7.5467	13.6163	43.8481	0.1199	6.2453	0.2890	6.5342	1.6741	0.2717	1.9458		10,296.3153	10,296.3153	0.2733	0.0203	10,308.3311

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.3968	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0311
Energy	0.1013	0.9204	0.7732	5.5200e-003		0.0700	0.0700		0.0700	0.0700		1,104.5028	1,104.5028	0.0212	0.0203	1,111.2246
Mobile	3.9674	12.0908	41.4700	0.1078	5.8737	0.2065	6.0802	1.5745	0.1902	1.7647		8,662.6951	8,662.6951	0.2386		8,667.7064
Total	7.4654	13.0114	42.2570	0.1133	5.8737	0.2765	6.1502	1.5745	0.2602	1.8347		9,767.2274	9,767.2274	0.2599	0.0203	9,778.9622

	ROG	NOx	CO	SO2	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	1.08	4.44	3.63	5.49	5.95	4.30	5.88	5.95	4.21	5.71	0.00	5.14	5.14	4.90	0.00	5.14

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2019	1/7/2019	5	5	
2	Grading	Grading	1/8/2019	1/17/2019	5	8	
3	Building Construction	Building Construction	1/18/2019	12/5/2019	5	230	
4	Paving	Paving	12/6/2019	12/31/2019	5	18	
5	Architectural Coating	Architectural Coating	1/1/2020	1/24/2020	5	18	

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: 202,035; Non-Residential Outdoor: 67,345 (Architectural Coating –

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
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37

Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	48.00	22.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0188	42.5046	34.8088	0.0391		2.1505	2.1505		1.9784	1.9784		3,876.7233	3,876.7233	1.2266		3,902.4810

Total	4.0188	42.5046	34.8088	0.0391	18.0663	2.1505	20.2167	9.9307	1.9784	11.9091		3,876.7233	3,876.7233	1.2266		3,902.4810
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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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0636	0.0849	1.0193	2.9400e-003	0.2299	1.5200e-003	0.2314	0.0610	1.4100e-003	0.0624		214.2499	214.2499	9.0300e-003		214.4396
Total	0.0636	0.0849	1.0193	2.9400e-003	0.2299	1.5200e-003	0.2314	0.0610	1.4100e-003	0.0624		214.2499	214.2499	9.0300e-003		214.4396

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0188	42.5046	34.8088	0.0391		2.1505	2.1505		1.9784	1.9784	0.0000	3,876.7233	3,876.7233	1.2266		3,902.4810
Total	4.0188	42.5046	34.8088	0.0391	18.0663	2.1505	20.2167	9.9307	1.9784	11.9091	0.0000	3,876.7233	3,876.7233	1.2266		3,902.4810

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0636	0.0849	1.0193	2.9400e-003	0.2299	1.5200e-003	0.2314	0.0610	1.4100e-003	0.0624		214.2499	214.2499	9.0300e-003		214.4396
Total	0.0636	0.0849	1.0193	2.9400e-003	0.2299	1.5200e-003	0.2314	0.0610	1.4100e-003	0.0624		214.2499	214.2499	9.0300e-003		214.4396

3.3 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.7610	28.3800	23.3864	0.0297		1.5329	1.5329		1.4103	1.4103		2,944.1998	2,944.1998	0.9315		2,963.7615
Total	2.7610	28.3800	23.3864	0.0297	6.5523	1.5329	8.0852	3.3675	1.4103	4.7778		2,944.1998	2,944.1998	0.9315		2,963.7615

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0530	0.0708	0.8494	2.4500e-003	0.1916	1.2700e-003	0.1929	0.0508	1.1700e-003	0.0520		178.5416	178.5416	7.5300e-003		178.6997
Total	0.0530	0.0708	0.8494	2.4500e-003	0.1916	1.2700e-003	0.1929	0.0508	1.1700e-003	0.0520		178.5416	178.5416	7.5300e-003		178.6997

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.7610	28.3800	23.3864	0.0297		1.5329	1.5329		1.4103	1.4103	0.0000	2,944.1998	2,944.1998	0.9315		2,963.7615
Total	2.7610	28.3800	23.3864	0.0297	6.5523	1.5329	8.0852	3.3675	1.4103	4.7778	0.0000	2,944.1998	2,944.1998	0.9315		2,963.7615

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0530	0.0708	0.8494	2.4500e-003	0.1916	1.2700e-003	0.1929	0.0508	1.1700e-003	0.0520		178.5416	178.5416	7.5300e-003		178.6997
Total	0.0530	0.0708	0.8494	2.4500e-003	0.1916	1.2700e-003	0.1929	0.0508	1.1700e-003	0.0520		178.5416	178.5416	7.5300e-003		178.6997

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479
Total	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1800	1.4118	2.0786	4.7400e-003	0.1324	0.0246	0.1570	0.0378	0.0226	0.0604		453.6756	453.6756	3.6200e-003		453.7516
Worker	0.1695	0.2265	2.7182	7.8300e-003	0.6131	4.0600e-003	0.6172	0.1626	3.7600e-003	0.1664		571.3331	571.3331	0.0241		571.8389
Total	0.3495	1.6383	4.7968	0.0126	0.7455	0.0286	0.7742	0.2004	0.0264	0.2268		1,025.0087	1,025.0087	0.0277		1,025.5905

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279		2,593.9479
Total	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279		2,593.9479

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1800	1.4118	2.0786	4.7400e-003	0.1324	0.0246	0.1570	0.0378	0.0226	0.0604		453.6756	453.6756	3.6200e-003		453.7516
Worker	0.1695	0.2265	2.7182	7.8300e-003	0.6131	4.0600e-003	0.6172	0.1626	3.7600e-003	0.1664		571.3331	571.3331	0.0241		571.8389
Total	0.3495	1.6383	4.7968	0.0126	0.7455	0.0286	0.7742	0.2004	0.0264	0.2268		1,025.0087	1,025.0087	0.0277		1,025.5905

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2520	12.5889	12.1441	0.0187		0.7111	0.7111		0.6560	0.6560		1,816.2490	1,816.2490	0.5585		1,827.9782

Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2520	12.5889	12.1441	0.0187		0.7111	0.7111		0.6560	0.6560		1,816.2490	1,816.2490	0.5585		1,827.9782

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0706	0.0944	1.1326	3.2600e-003	0.2555	1.6900e-003	0.2572	0.0678	1.5700e-003	0.0693		238.0555	238.0555	0.0100		238.2662
Total	0.0706	0.0944	1.1326	3.2600e-003	0.2555	1.6900e-003	0.2572	0.0678	1.5700e-003	0.0693		238.0555	238.0555	0.0100		238.2662

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.2520	12.5889	12.1441	0.0187		0.7111	0.7111		0.6560	0.6560	0.0000	1,816.2490	1,816.2490	0.5585		1,827.9782
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2520	12.5889	12.1441	0.0187		0.7111	0.7111		0.6560	0.6560	0.0000	1,816.2490	1,816.2490	0.5585		1,827.9782

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0706	0.0944	1.1326	3.2600e-003	0.2555	1.6900e-003	0.2572	0.0678	1.5700e-003	0.0693		238.0555	238.0555	0.0100		238.2662
Total	0.0706	0.0944	1.1326	3.2600e-003	0.2555	1.6900e-003	0.2572	0.0678	1.5700e-003	0.0693		238.0555	238.0555	0.0100		238.2662

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	104.0480					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9057
Total	104.2902	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9057

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0324	0.0433	0.5212	1.6300e-003	0.1277	8.4000e-004	0.1286	0.0339	7.8000e-004	0.0347		114.3091	114.3091	4.7200e-003		114.4083
Total	0.0324	0.0433	0.5212	1.6300e-003	0.1277	8.4000e-004	0.1286	0.0339	7.8000e-004	0.0347		114.3091	114.3091	4.7200e-003		114.4083

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	104.0480					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9057
Total	104.2902	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9057

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0324	0.0433	0.5212	1.6300e-003	0.1277	8.4000e-004	0.1286	0.0339	7.8000e-004	0.0347		114.3091	114.3091	4.7200e-003		114.4083
Total	0.0324	0.0433	0.5212	1.6300e-003	0.1277	8.4000e-004	0.1286	0.0339	7.8000e-004	0.0347		114.3091	114.3091	4.7200e-003		114.4083

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

- Increase Density
- Improve Walkability Design
- Improve Destination Accessibility
- Increase Transit Accessibility
- Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.9674	12.0908	41.4700	0.1078	5.8737	0.2065	6.0802	1.5745	0.1902	1.7647		8,662.6951	8,662.6951	0.2386		8,667.7064
Unmitigated	4.0487	12.6957	43.0611	0.1144	6.2453	0.2190	6.4642	1.6741	0.2017	1.8758		9,191.7830	9,191.7830	0.2520		9,197.0753

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Office Park	1,004.96	144.32	66.88	2,165,814	2,036,948
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	1,004.96	144.32	66.88	2,165,814	2,036,948

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Office Park	14.70	6.60	6.60	33.00	48.00	19.00	82	15	3
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.409687	0.062677	0.156376	0.176111	0.050971	0.007837	0.019872	0.103412	0.001778	0.001574	0.006496	0.000897	0.002312

5.0 Energy Detail

4.4 Fleet Mix

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	0.1013	0.9204	0.7732	5.5200e-003		0.0700	0.0700		0.0700	0.0700		1,104.5028	1,104.5028	0.0212	0.0203	1,111.2246
NaturalGas Unmitigated	0.1013	0.9204	0.7732	5.5200e-003		0.0700	0.0700		0.0700	0.0700		1,104.5028	1,104.5028	0.0212	0.0203	1,111.2246

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					
Other Non-Asphalt Surfaces	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
Office Park	9388.27	0.1013	0.9204	0.7732	5.5200e-003		0.0700	0.0700		0.0700	0.0700		1,104.5028	1,104.5028	0.0212	0.0203	1,111.2246

Total		0.1013	0.9204	0.7732	5.5200e-003		0.0700	0.0700		0.0700	0.0700		1,104.5028	1,104.5028	0.0212	0.0203	1,111.2246
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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					
Office Park	9.38827	0.1013	0.9204	0.7732	5.5200e-003		0.0700	0.0700		0.0700	0.0700		1,104.5028	1,104.5028	0.0212	0.0203	1,111.2246
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.1013	0.9204	0.7732	5.5200e-003		0.0700	0.0700		0.0700	0.0700		1,104.5028	1,104.5028	0.0212	0.0203	1,111.2246

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	3.3968	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0311
Unmitigated	3.3968	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0311

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	0.5131					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.8824					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3000e-003	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0311
Total	3.3968	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0311

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	0.5131					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.8824					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3000e-003	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0311
Total	3.3968	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0311

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

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
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10.0 Vegetation

Sequoia Drive-In Business Park (PH 3)
San Joaquin Valley Unified APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	104.00	1000sqft	2.39	104,000.00	0
Other Non-Asphalt Surfaces	33.53	1000sqft	0.77	33,530.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	45
Climate Zone	7			Operational Year	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Project Characteristics - Phase 3 will have 10 buildings with Office Park (ITE "Business Park") land use, ranging in square footage from 8,000 sf to 12,000 sf for a total of 104,000sf of building gfa.

Phase 3 will be 14.89 acres out of 46.17 acres of the total Project.

Land Use - "Other Non-Asphalt Surfaces" includes the new roads, on-street parking, and parking lots.

Construction Phase - No demolition required.

Vehicle Trips -

Energy Use -

Mobile Land Use Mitigation - Figures taken from ISR: LUT-1 - LUT-5 are based on project location. SDT-1: project will incorporate typical standard sidewalks throughout project.

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseStartDate	1/1/2022	1/3/2022
tblProjectCharacteristics	OperationalYear	2014	2022
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

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					
2021	3.4602	35.0776	31.7281	0.0420	18.2962	1.7010	19.9972	9.9917	1.5650	11.5566	0.0000	3,990.9054	3,990.9054	1.2334	0.0000	4,016.8074
2022	106.4721	1.4425	2.2257	4.4400e-003	0.1150	0.0825	0.1974	0.0305	0.0824	0.1129	0.0000	381.0596	381.0596	0.0222	0.0000	381.5258
Total	109.9323	36.5200	33.9538	0.0465	18.4111	1.7835	20.1947	10.0221	1.6474	11.6695	0.0000	4,371.9650	4,371.9650	1.2556	0.0000	4,398.3332

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.4602	35.0776	31.7281	0.0420	18.2962	1.7010	19.9972	9.9917	1.5650	11.5566	0.0000	3,990.9054	3,990.9054	1.2334	0.0000	4,016.8074
2022	106.4721	1.4425	2.2257	4.4400e-003	0.1150	0.0825	0.1974	0.0305	0.0824	0.1129	0.0000	381.0596	381.0596	0.0222	0.0000	381.5258
Total	109.9323	36.5200	33.9538	0.0465	18.4111	1.7835	20.1947	10.0221	1.6474	11.6695	0.0000	4,371.9650	4,371.9650	1.2556	0.0000	4,398.3332

	ROG	NOx	CO	SO2	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

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	3.4684	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0301	0.0301	8.0000e-005		0.0318
Energy	0.1197	1.0878	0.9137	6.5300e-003		0.0827	0.0827		0.0827	0.0827		1,305.3215	1,305.3215	0.0250	0.0239	1,313.2655
Mobile	4.3878	11.8610	46.2554	0.1351	7.3810	0.2452	7.6262	1.9786	0.2259	2.2045		10,685.5332	10,685.5332	0.2715		10,691.2346
Total	7.9759	12.9489	47.1832	0.1417	7.3810	0.3279	7.7089	1.9786	0.3086	2.2872		11,990.8848	11,990.8848	0.2966	0.0239	12,004.5318

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.4684	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0301	0.0301	8.0000e-005		0.0318
Energy	0.1197	1.0878	0.9137	6.5300e-003		0.0827	0.0827		0.0827	0.0827		1,305.3215	1,305.3215	0.0250	0.0239	1,313.2655
Mobile	4.2986	11.3133	44.5765	0.1274	6.9419	0.2313	7.1732	1.8609	0.2131	2.0740		10,070.5518	10,070.5518	0.2570		10,075.9495
Total	7.8867	12.4012	45.5043	0.1339	6.9419	0.3140	7.2559	1.8609	0.2958	2.1567		11,375.9034	11,375.9034	0.2821	0.0239	11,389.2467

	ROG	NOx	CO	SO2	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	1.12	4.23	3.56	5.49	5.95	4.23	5.88	5.95	4.14	5.71	0.00	5.13	5.13	4.88	0.00	5.13

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2021	1/7/2021	5	5	
2	Grading	Grading	1/8/2021	1/19/2021	5	8	
3	Building Construction	Building Construction	1/20/2021	12/7/2021	5	230	
4	Paving	Paving	12/8/2021	12/31/2021	5	18	
5	Architectural Coating	Architectural Coating	1/3/2022	1/26/2022	5	18	

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: 206,295; Non-Residential Outdoor: 68,765 (Architectural Coating –

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
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40

Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	47.00	23.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000

Off-Road	3.4057	35.0050	30.8503	0.0391		1.6995	1.6995		1.5636	1.5636		3,788.6519	3,788.6519	1.2253		3,814.3837
Total	3.4057	35.0050	30.8503	0.0391	18.0663	1.6995	19.7658	9.9307	1.5636	11.4943		3,788.6519	3,788.6519	1.2253		3,814.3837

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0545	0.0726	0.8778	2.9400e-003	0.2299	1.5100e-003	0.2314	0.0610	1.4000e-003	0.0624		202.2536	202.2536	8.1000e-003		202.4237
Total	0.0545	0.0726	0.8778	2.9400e-003	0.2299	1.5100e-003	0.2314	0.0610	1.4000e-003	0.0624		202.2536	202.2536	8.1000e-003		202.4237

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.4057	35.0050	30.8503	0.0391		1.6995	1.6995		1.5636	1.5636	0.0000	3,788.6519	3,788.6519	1.2253		3,814.3837
Total	3.4057	35.0050	30.8503	0.0391	18.0663	1.6995	19.7658	9.9307	1.5636	11.4943	0.0000	3,788.6519	3,788.6519	1.2253		3,814.3837

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0545	0.0726	0.8778	2.9400e-003	0.2299	1.5100e-003	0.2314	0.0610	1.4000e-003	0.0624		202.2536	202.2536	8.1000e-003		202.4237
Total	0.0545	0.0726	0.8778	2.9400e-003	0.2299	1.5100e-003	0.2314	0.0610	1.4000e-003	0.0624		202.2536	202.2536	8.1000e-003		202.4237

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.3182	23.1251	21.8831	0.0297		1.1996	1.1996		1.1036	1.1036		2,879.3348	2,879.3348	0.9312		2,898.8908
Total	2.3182	23.1251	21.8831	0.0297	6.5523	1.1996	7.7519	3.3675	1.1036	4.4711		2,879.3348	2,879.3348	0.9312		2,898.8908

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0454	0.0605	0.7315	2.4500e-003	0.1916	1.2600e-003	0.1929	0.0508	1.1600e-003	0.0520		168.5446	168.5446	6.7500e-003		168.6864
Total	0.0454	0.0605	0.7315	2.4500e-003	0.1916	1.2600e-003	0.1929	0.0508	1.1600e-003	0.0520		168.5446	168.5446	6.7500e-003		168.6864

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.3182	23.1251	21.8831	0.0297		1.1996	1.1996		1.1036	1.1036	0.0000	2,879.3348	2,879.3348	0.9312		2,898.8908
Total	2.3182	23.1251	21.8831	0.0297	6.5523	1.1996	7.7519	3.3675	1.1036	4.4711	0.0000	2,879.3348	2,879.3348	0.9312		2,898.8908

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0454	0.0605	0.7315	2.4500e-003	0.1916	1.2600e-003	0.1929	0.0508	1.1600e-003	0.0520		168.5446	168.5446	6.7500e-003		168.6864
Total	0.0454	0.0605	0.7315	2.4500e-003	0.1916	1.2600e-003	0.1929	0.0508	1.1600e-003	0.0520		168.5446	168.5446	6.7500e-003		168.6864

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979		2,542.7817	2,542.7817	0.6126		2,555.6462
Total	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979		2,542.7817	2,542.7817	0.6126		2,555.6462

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1561	1.0174	1.9023	4.9400e-003	0.1385	0.0198	0.1583	0.0395	0.0182	0.0578		462.5316	462.5316	3.5500e-003		462.6060
Worker	0.1424	0.1895	2.2921	7.6700e-003	0.6003	3.9300e-003	0.6043	0.1592	3.6500e-003	0.1629		528.1065	528.1065	0.0212		528.5507
Total	0.2984	1.2069	4.1943	0.0126	0.7388	0.0238	0.7625	0.1987	0.0219	0.2206		990.6381	990.6381	0.0247		991.1568

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979	0.0000	2,542.7817	2,542.7817	0.6126		2,555.6462
Total	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979	0.0000	2,542.7817	2,542.7817	0.6126		2,555.6462

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1561	1.0174	1.9023	4.9400e-003	0.1385	0.0198	0.1583	0.0395	0.0182	0.0578		462.5316	462.5316	3.5500e-003		462.6060
Worker	0.1424	0.1895	2.2921	7.6700e-003	0.6003	3.9300e-003	0.6043	0.1592	3.6500e-003	0.1629		528.1065	528.1065	0.0212		528.5507
Total	0.2984	1.2069	4.1943	0.0126	0.7388	0.0238	0.7625	0.1987	0.0219	0.2206		990.6381	990.6381	0.0247		991.1568

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0801	10.6960	12.0908	0.0187		0.5718	0.5718		0.5278	0.5278		1,778.0850	1,778.0850	0.5584		1,789.8120

Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.0801	10.6960	12.0908	0.0187		0.5718	0.5718		0.5278	0.5278		1,778.0850	1,778.0850	0.5584		1,789.8120

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0606	0.0806	0.9753	3.2600e-003	0.2555	1.6700e-003	0.2571	0.0678	1.5500e-003	0.0693		224.7262	224.7262	9.0000e-003		224.9152
Total	0.0606	0.0806	0.9753	3.2600e-003	0.2555	1.6700e-003	0.2571	0.0678	1.5500e-003	0.0693		224.7262	224.7262	9.0000e-003		224.9152

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.0801	10.6960	12.0908	0.0187		0.5718	0.5718		0.5278	0.5278	0.0000	1,778.0850	1,778.0850	0.5584		1,789.8120
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.0801	10.6960	12.0908	0.0187		0.5718	0.5718		0.5278	0.5278	0.0000	1,778.0850	1,778.0850	0.5584		1,789.8120

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0606	0.0806	0.9753	3.2600e-003	0.2555	1.6700e-003	0.2571	0.0678	1.5500e-003	0.0693		224.7262	224.7262	9.0000e-003		224.9152
Total	0.0606	0.0806	0.9753	3.2600e-003	0.2555	1.6700e-003	0.2571	0.0678	1.5500e-003	0.0693		224.7262	224.7262	9.0000e-003		224.9152

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	106.2419					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		281.8329
Total	106.4465	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.8329

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0256	0.0340	0.4121	1.4700e-003	0.1150	7.5000e-004	0.1157	0.0305	7.0000e-004	0.0312		99.6116	99.6116	3.8800e-003		99.6930
Total	0.0256	0.0340	0.4121	1.4700e-003	0.1150	7.5000e-004	0.1157	0.0305	7.0000e-004	0.0312		99.6116	99.6116	3.8800e-003		99.6930

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	106.2419					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.8329
Total	106.4465	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.8329

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0256	0.0340	0.4121	1.4700e-003	0.1150	7.5000e-004	0.1157	0.0305	7.0000e-004	0.0312		99.6116	99.6116	3.8800e-003		99.6930
Total	0.0256	0.0340	0.4121	1.4700e-003	0.1150	7.5000e-004	0.1157	0.0305	7.0000e-004	0.0312		99.6116	99.6116	3.8800e-003		99.6930

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

- Increase Density
- Improve Walkability Design
- Improve Destination Accessibility
- Increase Transit Accessibility
- Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.2986	11.3133	44.5765	0.1274	6.9419	0.2313	7.1732	1.8609	0.2131	2.0740		10,070.5518	10,070.5518	0.2570		10,075.9495
Unmitigated	4.3878	11.8610	46.2554	0.1351	7.3810	0.2452	7.6262	1.9786	0.2259	2.2045		10,685.5332	10,685.5332	0.2715		10,691.2346

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Office Park	1,187.68	170.56	79.04	2,559,599	2,407,302
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	1,187.68	170.56	79.04	2,559,599	2,407,302

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Office Park	14.70	6.60	6.60	33.00	48.00	19.00	82	15	3
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.409215	0.062447	0.156087	0.176599	0.051029	0.007877	0.019913	0.103685	0.001777	0.001585	0.006582	0.000876	0.002327

5.0 Energy Detail

4.4 Fleet Mix

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	0.1197	1.0878	0.9137	6.5300e-003		0.0827	0.0827		0.0827	0.0827		1,305.3215	1,305.3215	0.0250	0.0239	1,313.2655
NaturalGas Unmitigated	0.1197	1.0878	0.9137	6.5300e-003		0.0827	0.0827		0.0827	0.0827		1,305.3215	1,305.3215	0.0250	0.0239	1,313.2655

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					
Other Non-Asphalt Surfaces	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
Office Park	11095.2	0.1197	1.0878	0.9137	6.5300e-003		0.0827	0.0827		0.0827	0.0827		1,305.3215	1,305.3215	0.0250	0.0239	1,313.2655

Total		0.1197	1.0878	0.9137	6.5300e-003		0.0827	0.0827		0.0827	0.0827		1,305.3215	1,305.3215	0.0250	0.0239	1,313.2655
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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					
Office Park	11.0952	0.1197	1.0878	0.9137	6.5300e-003		0.0827	0.0827		0.0827	0.0827		1,305.3215	1,305.3215	0.0250	0.0239	1,313.2655
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.1197	1.0878	0.9137	6.5300e-003		0.0827	0.0827		0.0827	0.0827		1,305.3215	1,305.3215	0.0250	0.0239	1,313.2655

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	3.4684	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0301	0.0301	8.0000e-005		0.0318
Unmitigated	3.4684	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0301	0.0301	8.0000e-005		0.0318

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	0.5239					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.9431					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3100e-003	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0301	0.0301	8.0000e-005		0.0318
Total	3.4684	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0301	0.0301	8.0000e-005		0.0318

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	0.5239					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.9431					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3100e-003	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0301	0.0301	8.0000e-005		0.0318
Total	3.4684	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0301	0.0301	8.0000e-005		0.0318

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

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
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10.0 Vegetation

Sequoia Drive-In Business Park (PH 3)
San Joaquin Valley Unified APCD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	104.00	1000sqft	2.39	104,000.00	0
Other Non-Asphalt Surfaces	33.53	1000sqft	0.77	33,530.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	45
Climate Zone	7			Operational Year	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Project Characteristics - Phase 3 will have 10 buildings with Office Park (ITE "Business Park") land use, ranging in square footage from 8,000 sf to 12,000 sf for a total of 104,000sf of building gfa.

Phase 3 will be 14.89 acres out of 46.17 acres of the total Project.

Land Use - "Other Non-Asphalt Surfaces" includes the new roads, on-street parking, and parking lots.

Construction Phase - No demolition required.

Vehicle Trips -

Energy Use -

Mobile Land Use Mitigation - Figures taken from ISR: LUT-1 - LUT-5 are based on project location. SDT-1: project will incorporate typical standard sidewalks throughout project.

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseStartDate	1/1/2022	1/3/2022
tblProjectCharacteristics	OperationalYear	2014	2022
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

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					
2021	3.4518	35.0909	31.5763	0.0417	18.2962	1.7010	19.9972	9.9917	1.5650	11.5566	0.0000	3,966.2502	3,966.2502	1.2334	0.0000	3,992.1521
2022	106.4681	1.4486	2.1531	4.2600e-003	0.1150	0.0825	0.1974	0.0305	0.0824	0.1129	0.0000	368.9057	368.9057	0.0222	0.0000	369.3719
Total	109.9199	36.5395	33.7294	0.0459	18.4111	1.7835	20.1947	10.0221	1.6474	11.6695	0.0000	4,335.1558	4,335.1558	1.2556	0.0000	4,361.5240

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.4518	35.0909	31.5763	0.0417	18.2962	1.7010	19.9972	9.9917	1.5650	11.5566	0.0000	3,966.2502	3,966.2502	1.2334	0.0000	3,992.1521
2022	106.4681	1.4486	2.1531	4.2600e-003	0.1150	0.0825	0.1974	0.0305	0.0824	0.1129	0.0000	368.9057	368.9057	0.0222	0.0000	369.3719
Total	109.9199	36.5395	33.7294	0.0459	18.4111	1.7835	20.1947	10.0221	1.6474	11.6695	0.0000	4,335.1558	4,335.1558	1.2556	0.0000	4,361.5240

	ROG	NOx	CO	SO2	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

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	3.4684	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0301	0.0301	8.0000e-005		0.0318
Energy	0.1197	1.0878	0.9137	6.5300e-003		0.0827	0.0827		0.0827	0.0827		1,305.3215	1,305.3215	0.0250	0.0239	1,313.2655
Mobile	4.2995	12.8949	57.0369	0.1251	7.3810	0.2466	7.6276	1.9786	0.2272	2.2058		9,969.5651	9,969.5651	0.2727		9,975.2907
Total	7.8875	13.9828	57.9647	0.1317	7.3810	0.3293	7.7103	1.9786	0.3099	2.2885		11,274.9167	11,274.9167	0.2978	0.0239	11,288.5879

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.4684	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0301	0.0301	8.0000e-005		0.0318
Energy	0.1197	1.0878	0.9137	6.5300e-003		0.0827	0.0827		0.0827	0.0827		1,305.3215	1,305.3215	0.0250	0.0239	1,313.2655
Mobile	4.2137	12.2931	55.6442	0.1180	6.9419	0.2327	7.1746	1.8609	0.2144	2.0753		9,395.6974	9,395.6974	0.2582		9,401.1193
Total	7.8018	13.3810	56.5720	0.1245	6.9419	0.3154	7.2573	1.8609	0.2971	2.1580		10,701.0490	10,701.0490	0.2833	0.0239	10,714.4165

	ROG	NOx	CO	SO2	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	1.09	4.30	2.40	5.45	5.95	4.21	5.88	5.95	4.12	5.70	0.00	5.09	5.09	4.86	0.00	5.09

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2021	1/7/2021	5	5	
2	Grading	Grading	1/8/2021	1/19/2021	5	8	
3	Building Construction	Building Construction	1/20/2021	12/7/2021	5	230	
4	Paving	Paving	12/8/2021	12/31/2021	5	18	
5	Architectural Coating	Architectural Coating	1/3/2022	1/26/2022	5	18	

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: 206,295; Non-Residential Outdoor: 68,765 (Architectural Coating –

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
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40

Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	47.00	23.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000

Off-Road	3.4057	35.0050	30.8503	0.0391		1.6995	1.6995		1.5636	1.5636		3,788.6519	3,788.6519	1.2253		3,814.3837
Total	3.4057	35.0050	30.8503	0.0391	18.0663	1.6995	19.7658	9.9307	1.5636	11.4943		3,788.6519	3,788.6519	1.2253		3,814.3837

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0461	0.0859	0.7260	2.5700e-003	0.2299	1.5100e-003	0.2314	0.0610	1.4000e-003	0.0624		177.5983	177.5983	8.1000e-003		177.7684
Total	0.0461	0.0859	0.7260	2.5700e-003	0.2299	1.5100e-003	0.2314	0.0610	1.4000e-003	0.0624		177.5983	177.5983	8.1000e-003		177.7684

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.4057	35.0050	30.8503	0.0391		1.6995	1.6995		1.5636	1.5636	0.0000	3,788.6519	3,788.6519	1.2253		3,814.3837
Total	3.4057	35.0050	30.8503	0.0391	18.0663	1.6995	19.7658	9.9307	1.5636	11.4943	0.0000	3,788.6519	3,788.6519	1.2253		3,814.3837

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0461	0.0859	0.7260	2.5700e-003	0.2299	1.5100e-003	0.2314	0.0610	1.4000e-003	0.0624		177.5983	177.5983	8.1000e-003		177.7684
Total	0.0461	0.0859	0.7260	2.5700e-003	0.2299	1.5100e-003	0.2314	0.0610	1.4000e-003	0.0624		177.5983	177.5983	8.1000e-003		177.7684

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.3182	23.1251	21.8831	0.0297		1.1996	1.1996		1.1036	1.1036		2,879.3348	2,879.3348	0.9312		2,898.8908
Total	2.3182	23.1251	21.8831	0.0297	6.5523	1.1996	7.7519	3.3675	1.1036	4.4711		2,879.3348	2,879.3348	0.9312		2,898.8908

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0384	0.0716	0.6050	2.1500e-003	0.1916	1.2600e-003	0.1929	0.0508	1.1600e-003	0.0520		147.9986	147.9986	6.7500e-003		148.1404
Total	0.0384	0.0716	0.6050	2.1500e-003	0.1916	1.2600e-003	0.1929	0.0508	1.1600e-003	0.0520		147.9986	147.9986	6.7500e-003		148.1404

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.3182	23.1251	21.8831	0.0297		1.1996	1.1996		1.1036	1.1036	0.0000	2,879.3348	2,879.3348	0.9312		2,898.8908
Total	2.3182	23.1251	21.8831	0.0297	6.5523	1.1996	7.7519	3.3675	1.1036	4.4711	0.0000	2,879.3348	2,879.3348	0.9312		2,898.8908

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0384	0.0716	0.6050	2.1500e-003	0.1916	1.2600e-003	0.1929	0.0508	1.1600e-003	0.0520		147.9986	147.9986	6.7500e-003		148.1404
Total	0.0384	0.0716	0.6050	2.1500e-003	0.1916	1.2600e-003	0.1929	0.0508	1.1600e-003	0.0520		147.9986	147.9986	6.7500e-003		148.1404

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979		2,542.7817	2,542.7817	0.6126		2,555.6462
Total	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979		2,542.7817	2,542.7817	0.6126		2,555.6462

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1888	1.0695	3.3408	4.9200e-003	0.1385	0.0201	0.1585	0.0395	0.0185	0.0580		458.5986	458.5986	3.6700e-003		458.6758
Worker	0.1204	0.2242	1.8956	6.7200e-003	0.6003	3.9300e-003	0.6043	0.1592	3.6500e-003	0.1629		463.7289	463.7289	0.0212		464.1731
Total	0.3092	1.2938	5.2364	0.0116	0.7388	0.0240	0.7628	0.1987	0.0221	0.2209		922.3275	922.3275	0.0248		922.8488

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979	0.0000	2,542.7817	2,542.7817	0.6126		2,555.6462
Total	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979	0.0000	2,542.7817	2,542.7817	0.6126		2,555.6462

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1888	1.0695	3.3408	4.9200e-003	0.1385	0.0201	0.1585	0.0395	0.0185	0.0580		458.5986	458.5986	3.6700e-003		458.6758
Worker	0.1204	0.2242	1.8956	6.7200e-003	0.6003	3.9300e-003	0.6043	0.1592	3.6500e-003	0.1629		463.7289	463.7289	0.0212		464.1731
Total	0.3092	1.2938	5.2364	0.0116	0.7388	0.0240	0.7628	0.1987	0.0221	0.2209		922.3275	922.3275	0.0248		922.8488

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0801	10.6960	12.0908	0.0187		0.5718	0.5718		0.5278	0.5278		1,778.0850	1,778.0850	0.5584		1,789.8120

Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.0801	10.6960	12.0908	0.0187		0.5718	0.5718		0.5278	0.5278		1,778.0850	1,778.0850	0.5584		1,789.8120

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0512	0.0954	0.8067	2.8600e-003	0.2555	1.6700e-003	0.2571	0.0678	1.5500e-003	0.0693		197.3314	197.3314	9.0000e-003		197.5205
Total	0.0512	0.0954	0.8067	2.8600e-003	0.2555	1.6700e-003	0.2571	0.0678	1.5500e-003	0.0693		197.3314	197.3314	9.0000e-003		197.5205

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.0801	10.6960	12.0908	0.0187		0.5718	0.5718		0.5278	0.5278	0.0000	1,778.0850	1,778.0850	0.5584		1,789.8120
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.0801	10.6960	12.0908	0.0187		0.5718	0.5718		0.5278	0.5278	0.0000	1,778.0850	1,778.0850	0.5584		1,789.8120

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0512	0.0954	0.8067	2.8600e-003	0.2555	1.6700e-003	0.2571	0.0678	1.5500e-003	0.0693		197.3314	197.3314	9.0000e-003		197.5205
Total	0.0512	0.0954	0.8067	2.8600e-003	0.2555	1.6700e-003	0.2571	0.0678	1.5500e-003	0.0693		197.3314	197.3314	9.0000e-003		197.5205

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	106.2419					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		281.8329
Total	106.4465	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.8329

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0217	0.0402	0.3395	1.2900e-003	0.1150	7.5000e-004	0.1157	0.0305	7.0000e-004	0.0312		87.4576	87.4576	3.8800e-003		87.5390
Total	0.0217	0.0402	0.3395	1.2900e-003	0.1150	7.5000e-004	0.1157	0.0305	7.0000e-004	0.0312		87.4576	87.4576	3.8800e-003		87.5390

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	106.2419					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.8329
Total	106.4465	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.8329

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0217	0.0402	0.3395	1.2900e-003	0.1150	7.5000e-004	0.1157	0.0305	7.0000e-004	0.0312		87.4576	87.4576	3.8800e-003		87.5390
Total	0.0217	0.0402	0.3395	1.2900e-003	0.1150	7.5000e-004	0.1157	0.0305	7.0000e-004	0.0312		87.4576	87.4576	3.8800e-003		87.5390

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

- Increase Density
- Improve Walkability Design
- Improve Destination Accessibility
- Increase Transit Accessibility
- Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.2137	12.2931	55.6442	0.1180	6.9419	0.2327	7.1746	1.8609	0.2144	2.0753		9,395.6974	9,395.6974	0.2582		9,401.1193
Unmitigated	4.2995	12.8949	57.0369	0.1251	7.3810	0.2466	7.6276	1.9786	0.2272	2.2058		9,969.5651	9,969.5651	0.2727		9,975.2907

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Office Park	1,187.68	170.56	79.04	2,559,599	2,407,302
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	1,187.68	170.56	79.04	2,559,599	2,407,302

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Office Park	14.70	6.60	6.60	33.00	48.00	19.00	82	15	3
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.409215	0.062447	0.156087	0.176599	0.051029	0.007877	0.019913	0.103685	0.001777	0.001585	0.006582	0.000876	0.002327

5.0 Energy Detail

4.4 Fleet Mix

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	0.1197	1.0878	0.9137	6.5300e-003		0.0827	0.0827		0.0827	0.0827		1,305.3215	1,305.3215	0.0250	0.0239	1,313.2655
NaturalGas Unmitigated	0.1197	1.0878	0.9137	6.5300e-003		0.0827	0.0827		0.0827	0.0827		1,305.3215	1,305.3215	0.0250	0.0239	1,313.2655

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					
Other Non-Asphalt Surfaces	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
Office Park	11095.2	0.1197	1.0878	0.9137	6.5300e-003		0.0827	0.0827		0.0827	0.0827		1,305.3215	1,305.3215	0.0250	0.0239	1,313.2655

Total		0.1197	1.0878	0.9137	6.5300e-003		0.0827	0.0827		0.0827	0.0827		1,305.3215	1,305.3215	0.0250	0.0239	1,313.2655
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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					
Office Park	11.0952	0.1197	1.0878	0.9137	6.5300e-003		0.0827	0.0827		0.0827	0.0827		1,305.3215	1,305.3215	0.0250	0.0239	1,313.2655
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.1197	1.0878	0.9137	6.5300e-003		0.0827	0.0827		0.0827	0.0827		1,305.3215	1,305.3215	0.0250	0.0239	1,313.2655

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	3.4684	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0301	0.0301	8.0000e-005		0.0318
Unmitigated	3.4684	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0301	0.0301	8.0000e-005		0.0318

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	0.5239					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.9431					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3100e-003	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0301	0.0301	8.0000e-005		0.0318
Total	3.4684	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0301	0.0301	8.0000e-005		0.0318

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	0.5239					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.9431					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3100e-003	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0301	0.0301	8.0000e-005		0.0318
Total	3.4684	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0301	0.0301	8.0000e-005		0.0318

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

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
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10.0 Vegetation

Sequoia Drive-In Business Park (PH 4)
San Joaquin Valley Unified APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	98.03	1000sqft	2.25	98,030.00	0
Other Non-Asphalt Surfaces	62.82	1000sqft	1.44	62,820.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	45
Climate Zone	7			Operational Year	2024
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Project Characteristics - Phase 4 will have 8 buildings with Office Park (ITE "Business Park") land use, ranging in square footage from 5,200 sf to 13,390 sf for a total of 98,030 sf of building gfa.

Phase 4 will be 12.72 acres out of 46.17 acres of the total Project.

Land Use - "Other Non-Asphalt Surfaces" includes the new roads, on-street parking, and parking lots.

Construction Phase - No demolition required.

Vehicle Trips -

Energy Use -

Mobile Land Use Mitigation - Figures taken from ISR: LUT-1 - LUT-5 are based on project location. SDT-1: project will incorporate typical standard sidewalks throughout project.

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseStartDate	1/7/2023	1/9/2023
tblProjectCharacteristics	OperationalYear	2014	2024
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

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					
2023	3.0638	29.9981	29.5952	0.0421	18.2962	1.3922	19.6884	9.9917	1.2809	11.2725	0.0000	3,990.4812	3,990.4812	1.2345	0.0000	4,016.4055
2024	124.4677	8.2391	12.8707	0.0219	0.2555	0.3956	0.6510	0.0678	0.3657	0.4334	0.0000	1,995.0408	1,995.0408	0.5668	0.0000	2,006.9433
Total	127.5315	38.2372	42.4659	0.0640	18.5516	1.7878	20.3394	10.0594	1.6465	11.7059	0.0000	5,985.5220	5,985.5220	1.8013	0.0000	6,023.3489

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					
2023	3.0638	29.9981	29.5952	0.0421	18.2962	1.3922	19.6884	9.9917	1.2809	11.2725	0.0000	3,990.4812	3,990.4812	1.2345	0.0000	4,016.4055
2024	124.4677	8.2391	12.8707	0.0219	0.2555	0.3956	0.6510	0.0678	0.3657	0.4334	0.0000	1,995.0408	1,995.0408	0.5668	0.0000	2,006.9433
Total	127.5315	38.2372	42.4659	0.0640	18.5516	1.7878	20.3394	10.0594	1.6465	11.7059	0.0000	5,985.5220	5,985.5220	1.8013	0.0000	6,023.3489

	ROG	NOx	CO	SO2	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

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	4.0565	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0371
Energy	0.1128	1.0253	0.8613	6.1500e-003		0.0779	0.0779		0.0779	0.0779		1,230.3910	1,230.3910	0.0236	0.0226	1,237.8790
Mobile	3.7805	9.8019	40.0411	0.1272	6.9569	0.2229	7.1798	1.8648	0.2054	2.0702		9,927.9024	9,927.9024	0.2362		9,932.8634
Total	7.9497	10.8274	40.9188	0.1334	6.9569	0.3009	7.2577	1.8648	0.2833	2.1482		11,158.3286	11,158.3286	0.2599	0.0226	11,170.7796

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	4.0565	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0371
Energy	0.1128	1.0253	0.8613	6.1500e-003		0.0779	0.0779		0.0779	0.0779		1,230.3910	1,230.3910	0.0236	0.0226	1,237.8790
Mobile	3.7034	9.3601	38.5963	0.1199	6.5429	0.2103	6.7532	1.7539	0.1938	1.9476		9,356.5740	9,356.5740	0.2236		9,361.2698
Total	7.8726	10.3856	39.4740	0.1261	6.5429	0.2883	6.8312	1.7539	0.2717	2.0256		10,587.0003	10,587.0003	0.2473	0.0226	10,599.1859

	ROG	NOx	CO	SO2	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	0.97	4.08	3.53	5.49	5.95	4.18	5.88	5.95	4.09	5.70	0.00	5.12	5.12	4.86	0.00	5.12

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/2/2023	1/6/2023	5	5	
2	Grading	Grading	1/9/2023	1/18/2023	5	8	
3	Building Construction	Building Construction	1/19/2023	12/6/2023	5	230	
4	Paving	Paving	12/7/2023	1/1/2024	5	18	
5	Architectural Coating	Architectural Coating	1/2/2024	1/25/2024	5	18	

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: 241,275; Non-Residential Outdoor: 80,425 (Architectural Coating –

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
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40

Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	58.00	26.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000

Off-Road	3.0157	29.9342	28.8193	0.0392		1.3907	1.3907		1.2795	1.2795		3,793.9535	3,793.9535	1.2270		3,819.7214
Total	3.0157	29.9342	28.8193	0.0392	18.0663	1.3907	19.4570	9.9307	1.2795	11.2102		3,793.9535	3,793.9535	1.2270		3,819.7214

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0482	0.0639	0.7760	2.9400e-003	0.2299	1.5100e-003	0.2314	0.0610	1.4000e-003	0.0624		196.5277	196.5277	7.4500e-003		196.6841
Total	0.0482	0.0639	0.7760	2.9400e-003	0.2299	1.5100e-003	0.2314	0.0610	1.4000e-003	0.0624		196.5277	196.5277	7.4500e-003		196.6841

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.0157	29.9342	28.8193	0.0392		1.3907	1.3907		1.2795	1.2795	0.0000	3,793.9535	3,793.9535	1.2270		3,819.7214
Total	3.0157	29.9342	28.8193	0.0392	18.0663	1.3907	19.4570	9.9307	1.2795	11.2102	0.0000	3,793.9535	3,793.9535	1.2270		3,819.7214

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0482	0.0639	0.7760	2.9400e-003	0.2299	1.5100e-003	0.2314	0.0610	1.4000e-003	0.0624		196.5277	196.5277	7.4500e-003		196.6841
Total	0.0482	0.0639	0.7760	2.9400e-003	0.2299	1.5100e-003	0.2314	0.0610	1.4000e-003	0.0624		196.5277	196.5277	7.4500e-003		196.6841

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.9415	18.5894	21.0065	0.0298		0.9134	0.9134		0.8404	0.8404		2,882.0579	2,882.0579	0.9321		2,901.6323
Total	1.9415	18.5894	21.0065	0.0298	6.5523	0.9134	7.4658	3.3675	0.8404	4.2078		2,882.0579	2,882.0579	0.9321		2,901.6323

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0401	0.0533	0.6466	2.4500e-003	0.1916	1.2500e-003	0.1929	0.0508	1.1600e-003	0.0520		163.7731	163.7731	6.2100e-003		163.9035
Total	0.0401	0.0533	0.6466	2.4500e-003	0.1916	1.2500e-003	0.1929	0.0508	1.1600e-003	0.0520		163.7731	163.7731	6.2100e-003		163.9035

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.9415	18.5894	21.0065	0.0298		0.9134	0.9134		0.8404	0.8404	0.0000	2,882.0579	2,882.0579	0.9321		2,901.6323
Total	1.9415	18.5894	21.0065	0.0298	6.5523	0.9134	7.4658	3.3675	0.8404	4.2078	0.0000	2,882.0579	2,882.0579	0.9321		2,901.6323

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0401	0.0533	0.6466	2.4500e-003	0.1916	1.2500e-003	0.1929	0.0508	1.1600e-003	0.0520		163.7731	163.7731	6.2100e-003		163.9035
Total	0.0401	0.0533	0.6466	2.4500e-003	0.1916	1.2500e-003	0.1929	0.0508	1.1600e-003	0.0520		163.7731	163.7731	6.2100e-003		163.9035

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5661	14.3126	16.2093	0.0268		0.6967	0.6967		0.6557	0.6557		2,544.6262	2,544.6262	0.6044		2,557.3191
Total	1.5661	14.3126	16.2093	0.0268		0.6967	0.6967		0.6557	0.6557		2,544.6262	2,544.6262	0.6044		2,557.3191

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1591	0.8828	2.0003	5.5600e-003	0.1565	0.0204	0.1770	0.0447	0.0188	0.0635		521.3023	521.3023	3.7600e-003		521.3813
Worker	0.1551	0.2059	2.5003	9.4600e-003	0.7408	4.8500e-003	0.7457	0.1965	4.5000e-003	0.2010		633.2558	633.2558	0.0240		633.7600
Total	0.3142	1.0887	4.5006	0.0150	0.8974	0.0253	0.9226	0.2412	0.0233	0.2645		1,154.5581	1,154.5581	0.0278		1,155.1413

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.5661	14.3126	16.2093	0.0268		0.6967	0.6967		0.6557	0.6557	0.0000	2,544.6262	2,544.6262	0.6044		2,557.3191
Total	1.5661	14.3126	16.2093	0.0268		0.6967	0.6967		0.6557	0.6557	0.0000	2,544.6262	2,544.6262	0.6044		2,557.3191

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1591	0.8828	2.0003	5.5600e-003	0.1565	0.0204	0.1770	0.0447	0.0188	0.0635		521.3023	521.3023	3.7600e-003		521.3813
Worker	0.1551	0.2059	2.5003	9.4600e-003	0.7408	4.8500e-003	0.7457	0.1965	4.5000e-003	0.2010		633.2558	633.2558	0.0240		633.7600
Total	0.3142	1.0887	4.5006	0.0150	0.8974	0.0253	0.9226	0.2412	0.0233	0.2645		1,154.5581	1,154.5581	0.0278		1,155.1413

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9068	8.6815	12.0215	0.0187		0.4305	0.4305		0.3978	0.3978		1,778.9569	1,778.9569	0.5587		1,790.6898

Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9068	8.6815	12.0215	0.0187		0.4305	0.4305		0.3978	0.3978		1,778.9569	1,778.9569	0.5587		1,790.6898

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0535	0.0710	0.8622	3.2600e-003	0.2555	1.6700e-003	0.2571	0.0678	1.5500e-003	0.0693		218.3641	218.3641	8.2800e-003		218.5379
Total	0.0535	0.0710	0.8622	3.2600e-003	0.2555	1.6700e-003	0.2571	0.0678	1.5500e-003	0.0693		218.3641	218.3641	8.2800e-003		218.5379

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.9068	8.6815	12.0215	0.0187		0.4305	0.4305		0.3978	0.3978	0.0000	1,778.9569	1,778.9569	0.5587		1,790.6898
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9068	8.6815	12.0215	0.0187		0.4305	0.4305		0.3978	0.3978	0.0000	1,778.9569	1,778.9569	0.5587		1,790.6898

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0535	0.0710	0.8622	3.2600e-003	0.2555	1.6700e-003	0.2571	0.0678	1.5500e-003	0.0693		218.3641	218.3641	8.2800e-003		218.5379
Total	0.0535	0.0710	0.8622	3.2600e-003	0.2555	1.6700e-003	0.2571	0.0678	1.5500e-003	0.0693		218.3641	218.3641	8.2800e-003		218.5379

3.5 Paving - 2024

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	0.8706	8.1720	12.0513	0.0187		0.3939	0.3939		0.3641	0.3641		1,779.1492	1,779.1492	0.5588		1,790.8834
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8706	8.1720	12.0513	0.0187		0.3939	0.3939		0.3641	0.3641		1,779.1492	1,779.1492	0.5588		1,790.8834

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0504	0.0670	0.8194	3.2600e-003	0.2555	1.6800e-003	0.2571	0.0678	1.5600e-003	0.0693		215.8916	215.8916	8.0100e-003		216.0599
Total	0.0504	0.0670	0.8194	3.2600e-003	0.2555	1.6800e-003	0.2571	0.0678	1.5600e-003	0.0693		215.8916	215.8916	8.0100e-003		216.0599

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.8706	8.1720	12.0513	0.0187		0.3939	0.3939		0.3641	0.3641	0.0000	1,779.1492	1,779.1492	0.5588		1,790.8834
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8706	8.1720	12.0513	0.0187		0.3939	0.3939		0.3641	0.3641	0.0000	1,779.1492	1,779.1492	0.5588		1,790.8834

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0504	0.0670	0.8194	3.2600e-003	0.2555	1.6800e-003	0.2571	0.0678	1.5600e-003	0.0693		215.8916	215.8916	8.0100e-003		216.0599
Total	0.0504	0.0670	0.8194	3.2600e-003	0.2555	1.6800e-003	0.2571	0.0678	1.5600e-003	0.0693		215.8916	215.8916	8.0100e-003		216.0599

3.6 Architectural Coating - 2024

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	124.2566					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.7809
Total	124.4374	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.7809

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0303	0.0402	0.4917	1.9600e-003	0.1533	1.0100e-003	0.1543	0.0407	9.4000e-004	0.0416		129.5350	129.5350	4.8100e-003		129.6360
Total	0.0303	0.0402	0.4917	1.9600e-003	0.1533	1.0100e-003	0.1543	0.0407	9.4000e-004	0.0416		129.5350	129.5350	4.8100e-003		129.6360

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	124.2566					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.7809
Total	124.4374	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.7809

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0303	0.0402	0.4917	1.9600e-003	0.1533	1.0100e-003	0.1543	0.0407	9.4000e-004	0.0416		129.5350	129.5350	4.8100e-003		129.6360
Total	0.0303	0.0402	0.4917	1.9600e-003	0.1533	1.0100e-003	0.1543	0.0407	9.4000e-004	0.0416		129.5350	129.5350	4.8100e-003		129.6360

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

- Increase Density
- Improve Walkability Design
- Improve Destination Accessibility
- Increase Transit Accessibility
- Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.7034	9.3601	38.5963	0.1199	6.5429	0.2103	6.7532	1.7539	0.1938	1.9476		9,356.5740	9,356.5740	0.2236		9,361.2698
Unmitigated	3.7805	9.8019	40.0411	0.1272	6.9569	0.2229	7.1798	1.8648	0.2054	2.0702		9,927.9024	9,927.9024	0.2362		9,932.8634

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Office Park	1,119.50	160.77	74.50	2,412,668	2,269,114
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	1,119.50	160.77	74.50	2,412,668	2,269,114

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Office Park	14.70	6.60	6.60	33.00	48.00	19.00	82	15	3
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.409414	0.062437	0.155860	0.176720	0.051185	0.007913	0.019934	0.103301	0.001779	0.001597	0.006667	0.000853	0.002340

5.0 Energy Detail

4.4 Fleet Mix

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	0.1128	1.0253	0.8613	6.1500e-003		0.0779	0.0779		0.0779	0.0779		1,230.3910	1,230.3910	0.0236	0.0226	1,237.8790
NaturalGas Unmitigated	0.1128	1.0253	0.8613	6.1500e-003		0.0779	0.0779		0.0779	0.0779		1,230.3910	1,230.3910	0.0236	0.0226	1,237.8790

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					
Office Park	10458.3	0.1128	1.0253	0.8613	6.1500e-003		0.0779	0.0779		0.0779	0.0779		1,230.3910	1,230.3910	0.0236	0.0226	1,237.8790
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.1128	1.0253	0.8613	6.1500e-003		0.0779	0.0779		0.0779	0.0779		1,230.3910	1,230.3910	0.0236	0.0226	1,237.8790

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					
Office Park	10.4583	0.1128	1.0253	0.8613	6.1500e-003		0.0779	0.0779		0.0779	0.0779		1,230.3910	1,230.3910	0.0236	0.0226	1,237.8790

Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.1128	1.0253	0.8613	6.1500e-003		0.0779	0.0779		0.0779	0.0779		1,230.3910	1,230.3910	0.0236	0.0226	1,237.8790

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	4.0565	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0371
Unmitigated	4.0565	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0371

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	0.6128					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.4422					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.5100e-003	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0371
Total	4.0565	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0371

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	0.6128					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.4422					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.5100e-003	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0371
Total	4.0565	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0371

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

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
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10.0 Vegetation

Sequoia Drive-In Business Park (PH 4)
San Joaquin Valley Unified APCD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	98.03	1000sqft	2.25	98,030.00	0
Other Non-Asphalt Surfaces	62.82	1000sqft	1.44	62,820.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	45
Climate Zone	7			Operational Year	2024
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Project Characteristics - Phase 4 will have 8 buildings with Office Park (ITE "Business Park") land use, ranging in square footage from 5,200 sf to 13,390 sf for a total of 98,030 sf of building gfa.

Phase 4 will be 12.72 acres out of 46.17 acres of the total Project.

Land Use - "Other Non-Asphalt Surfaces" includes the new roads, on-street parking, and parking lots.

Construction Phase - No demolition required.

Vehicle Trips -

Energy Use -

Mobile Land Use Mitigation - Figures taken from ISR: LUT-1 - LUT-5 are based on project location. SDT-1: project will incorporate typical standard sidewalks throughout project.

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseStartDate	1/7/2023	1/9/2023
tblProjectCharacteristics	OperationalYear	2014	2024
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

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					
2023	3.0565	30.0097	29.4560	0.0417	18.2962	1.3922	19.6884	9.9917	1.2809	11.2725	0.0000	3,966.4779	3,966.4779	1.2345	0.0000	3,992.4023
2024	124.4631	8.2511	12.7211	0.0215	0.2555	0.3956	0.6510	0.0678	0.3657	0.4334	0.0000	1,968.6382	1,968.6382	0.5668	0.0000	1,980.5407
Total	127.5195	38.2607	42.1771	0.0633	18.5516	1.7878	20.3394	10.0594	1.6465	11.7059	0.0000	5,935.1162	5,935.1162	1.8013	0.0000	5,972.9430

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					
2023	3.0565	30.0097	29.4560	0.0417	18.2962	1.3922	19.6884	9.9917	1.2809	11.2725	0.0000	3,966.4779	3,966.4779	1.2345	0.0000	3,992.4023
2024	124.4631	8.2511	12.7211	0.0215	0.2555	0.3956	0.6510	0.0678	0.3657	0.4334	0.0000	1,968.6382	1,968.6382	0.5668	0.0000	1,980.5407
Total	127.5195	38.2607	42.1771	0.0633	18.5516	1.7878	20.3394	10.0594	1.6465	11.7059	0.0000	5,935.1162	5,935.1162	1.8013	0.0000	5,972.9430

	ROG	NOx	CO	SO2	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

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	4.0565	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0371
Energy	0.1128	1.0253	0.8613	6.1500e-003		0.0779	0.0779		0.0779	0.0779		1,230.3910	1,230.3910	0.0236	0.0226	1,237.8790
Mobile	3.6730	10.6474	48.9882	0.1178	6.9569	0.2239	7.1808	1.8648	0.2063	2.0711		9,267.2414	9,267.2414	0.2373		9,272.2249
Total	7.8423	11.6728	49.8658	0.1239	6.9569	0.3019	7.2588	1.8648	0.2843	2.1491		10,497.6676	10,497.6676	0.2610	0.0226	10,510.1410

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	4.0565	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0371
Energy	0.1128	1.0253	0.8613	6.1500e-003		0.0779	0.0779		0.0779	0.0779		1,230.3910	1,230.3910	0.0236	0.0226	1,237.8790
Mobile	3.5986	10.1616	47.7889	0.1110	6.5429	0.2113	6.7543	1.7539	0.1947	1.9486		8,733.8236	8,733.8236	0.2247		8,738.5419
Total	7.7678	11.1871	48.6666	0.1172	6.5429	0.2893	6.8322	1.7539	0.2727	2.0266		9,964.2499	9,964.2499	0.2484	0.0226	9,976.4580

	ROG	NOx	CO	SO2	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	0.95	4.16	2.40	5.46	5.95	4.17	5.88	5.95	4.08	5.70	0.00	5.08	5.08	4.84	0.00	5.08

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/2/2023	1/6/2023	5	5	
2	Grading	Grading	1/9/2023	1/18/2023	5	8	
3	Building Construction	Building Construction	1/19/2023	12/6/2023	5	230	
4	Paving	Paving	12/7/2023	1/1/2024	5	18	
5	Architectural Coating	Architectural Coating	1/2/2024	1/25/2024	5	18	

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: 241,275; Non-Residential Outdoor: 80,425 (Architectural Coating –

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
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40

Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	58.00	26.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000

Off-Road	3.0157	29.9342	28.8193	0.0392		1.3907	1.3907		1.2795	1.2795		3,793.9535	3,793.9535	1.2270		3,819.7214
Total	3.0157	29.9342	28.8193	0.0392	18.0663	1.3907	19.4570	9.9307	1.2795	11.2102		3,793.9535	3,793.9535	1.2270		3,819.7214

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0408	0.0754	0.6368	2.5700e-003	0.2299	1.5100e-003	0.2314	0.0610	1.4000e-003	0.0624		172.5244	172.5244	7.4500e-003		172.6809
Total	0.0408	0.0754	0.6368	2.5700e-003	0.2299	1.5100e-003	0.2314	0.0610	1.4000e-003	0.0624		172.5244	172.5244	7.4500e-003		172.6809

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.0157	29.9342	28.8193	0.0392		1.3907	1.3907		1.2795	1.2795	0.0000	3,793.9535	3,793.9535	1.2270		3,819.7214
Total	3.0157	29.9342	28.8193	0.0392	18.0663	1.3907	19.4570	9.9307	1.2795	11.2102	0.0000	3,793.9535	3,793.9535	1.2270		3,819.7214

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0408	0.0754	0.6368	2.5700e-003	0.2299	1.5100e-003	0.2314	0.0610	1.4000e-003	0.0624		172.5244	172.5244	7.4500e-003		172.6809
Total	0.0408	0.0754	0.6368	2.5700e-003	0.2299	1.5100e-003	0.2314	0.0610	1.4000e-003	0.0624		172.5244	172.5244	7.4500e-003		172.6809

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.9415	18.5894	21.0065	0.0298		0.9134	0.9134		0.8404	0.8404		2,882.0579	2,882.0579	0.9321		2,901.6323
Total	1.9415	18.5894	21.0065	0.0298	6.5523	0.9134	7.4658	3.3675	0.8404	4.2078		2,882.0579	2,882.0579	0.9321		2,901.6323

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0340	0.0629	0.5306	2.1500e-003	0.1916	1.2500e-003	0.1929	0.0508	1.1600e-003	0.0520		143.7703	143.7703	6.2100e-003		143.9007
Total	0.0340	0.0629	0.5306	2.1500e-003	0.1916	1.2500e-003	0.1929	0.0508	1.1600e-003	0.0520		143.7703	143.7703	6.2100e-003		143.9007

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.9415	18.5894	21.0065	0.0298		0.9134	0.9134		0.8404	0.8404	0.0000	2,882.0579	2,882.0579	0.9321		2,901.6323
Total	1.9415	18.5894	21.0065	0.0298	6.5523	0.9134	7.4658	3.3675	0.8404	4.2078	0.0000	2,882.0579	2,882.0579	0.9321		2,901.6323

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0340	0.0629	0.5306	2.1500e-003	0.1916	1.2500e-003	0.1929	0.0508	1.1600e-003	0.0520		143.7703	143.7703	6.2100e-003		143.9007
Total	0.0340	0.0629	0.5306	2.1500e-003	0.1916	1.2500e-003	0.1929	0.0508	1.1600e-003	0.0520		143.7703	143.7703	6.2100e-003		143.9007

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5661	14.3126	16.2093	0.0268		0.6967	0.6967		0.6557	0.6557		2,544.6262	2,544.6262	0.6044		2,557.3191
Total	1.5661	14.3126	16.2093	0.0268		0.6967	0.6967		0.6557	0.6557		2,544.6262	2,544.6262	0.6044		2,557.3191

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1896	0.9264	3.4667	5.5400e-003	0.1565	0.0206	0.1771	0.0447	0.0190	0.0637		516.8440	516.8440	3.9100e-003		516.9260
Worker	0.1314	0.2430	2.0518	8.2900e-003	0.7408	4.8500e-003	0.7457	0.1965	4.5000e-003	0.2010		555.9120	555.9120	0.0240		556.4162
Total	0.3210	1.1694	5.5185	0.0138	0.8974	0.0255	0.9228	0.2412	0.0235	0.2646		1,072.7560	1,072.7560	0.0279		1,073.3422

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.5661	14.3126	16.2093	0.0268		0.6967	0.6967		0.6557	0.6557	0.0000	2,544.6262	2,544.6262	0.6044		2,557.3191
Total	1.5661	14.3126	16.2093	0.0268		0.6967	0.6967		0.6557	0.6557	0.0000	2,544.6262	2,544.6262	0.6044		2,557.3191

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1896	0.9264	3.4667	5.5400e-003	0.1565	0.0206	0.1771	0.0447	0.0190	0.0637		516.8440	516.8440	3.9100e-003		516.9260
Worker	0.1314	0.2430	2.0518	8.2900e-003	0.7408	4.8500e-003	0.7457	0.1965	4.5000e-003	0.2010		555.9120	555.9120	0.0240		556.4162
Total	0.3210	1.1694	5.5185	0.0138	0.8974	0.0255	0.9228	0.2412	0.0235	0.2646		1,072.7560	1,072.7560	0.0279		1,073.3422

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9068	8.6815	12.0215	0.0187		0.4305	0.4305		0.3978	0.3978		1,778.9569	1,778.9569	0.5587		1,790.6898

Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9068	8.6815	12.0215	0.0187		0.4305	0.4305		0.3978	0.3978		1,778.9569	1,778.9569	0.5587		1,790.6898

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0453	0.0838	0.7075	2.8600e-003	0.2555	1.6700e-003	0.2571	0.0678	1.5500e-003	0.0693		191.6938	191.6938	8.2800e-003		191.8676
Total	0.0453	0.0838	0.7075	2.8600e-003	0.2555	1.6700e-003	0.2571	0.0678	1.5500e-003	0.0693		191.6938	191.6938	8.2800e-003		191.8676

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.9068	8.6815	12.0215	0.0187		0.4305	0.4305		0.3978	0.3978	0.0000	1,778.9569	1,778.9569	0.5587		1,790.6898
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9068	8.6815	12.0215	0.0187		0.4305	0.4305		0.3978	0.3978	0.0000	1,778.9569	1,778.9569	0.5587		1,790.6898

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0453	0.0838	0.7075	2.8600e-003	0.2555	1.6700e-003	0.2571	0.0678	1.5500e-003	0.0693		191.6938	191.6938	8.2800e-003		191.8676
Total	0.0453	0.0838	0.7075	2.8600e-003	0.2555	1.6700e-003	0.2571	0.0678	1.5500e-003	0.0693		191.6938	191.6938	8.2800e-003		191.8676

3.5 Paving - 2024

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	0.8706	8.1720	12.0513	0.0187		0.3939	0.3939		0.3641	0.3641		1,779.1492	1,779.1492	0.5588		1,790.8834
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8706	8.1720	12.0513	0.0187		0.3939	0.3939		0.3641	0.3641		1,779.1492	1,779.1492	0.5588		1,790.8834

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0428	0.0790	0.6698	2.8600e-003	0.2555	1.6800e-003	0.2571	0.0678	1.5600e-003	0.0693		189.4891	189.4891	8.0100e-003		189.6574
Total	0.0428	0.0790	0.6698	2.8600e-003	0.2555	1.6800e-003	0.2571	0.0678	1.5600e-003	0.0693		189.4891	189.4891	8.0100e-003		189.6574

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.8706	8.1720	12.0513	0.0187		0.3939	0.3939		0.3641	0.3641	0.0000	1,779.1492	1,779.1492	0.5588		1,790.8834
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8706	8.1720	12.0513	0.0187		0.3939	0.3939		0.3641	0.3641	0.0000	1,779.1492	1,779.1492	0.5588		1,790.8834

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0428	0.0790	0.6698	2.8600e-003	0.2555	1.6800e-003	0.2571	0.0678	1.5600e-003	0.0693		189.4891	189.4891	8.0100e-003		189.6574
Total	0.0428	0.0790	0.6698	2.8600e-003	0.2555	1.6800e-003	0.2571	0.0678	1.5600e-003	0.0693		189.4891	189.4891	8.0100e-003		189.6574

3.6 Architectural Coating - 2024

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	124.2566					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.7809
Total	124.4374	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.7809

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0257	0.0474	0.4019	1.7200e-003	0.1533	1.0100e-003	0.1543	0.0407	9.4000e-004	0.0416		113.6934	113.6934	4.8100e-003		113.7944
Total	0.0257	0.0474	0.4019	1.7200e-003	0.1533	1.0100e-003	0.1543	0.0407	9.4000e-004	0.0416		113.6934	113.6934	4.8100e-003		113.7944

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	124.2566					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.7809
Total	124.4374	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.7809

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0257	0.0474	0.4019	1.7200e-003	0.1533	1.0100e-003	0.1543	0.0407	9.4000e-004	0.0416		113.6934	113.6934	4.8100e-003		113.7944
Total	0.0257	0.0474	0.4019	1.7200e-003	0.1533	1.0100e-003	0.1543	0.0407	9.4000e-004	0.0416		113.6934	113.6934	4.8100e-003		113.7944

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

- Increase Density
- Improve Walkability Design
- Improve Destination Accessibility
- Increase Transit Accessibility
- Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.5986	10.1616	47.7889	0.1110	6.5429	0.2113	6.7543	1.7539	0.1947	1.9486		8,733.8236	8,733.8236	0.2247		8,738.5419
Unmitigated	3.6730	10.6474	48.9882	0.1178	6.9569	0.2239	7.1808	1.8648	0.2063	2.0711		9,267.2414	9,267.2414	0.2373		9,272.2249

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Office Park	1,119.50	160.77	74.50	2,412,668	2,269,114
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	1,119.50	160.77	74.50	2,412,668	2,269,114

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Office Park	14.70	6.60	6.60	33.00	48.00	19.00	82	15	3
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.409414	0.062437	0.155860	0.176720	0.051185	0.007913	0.019934	0.103301	0.001779	0.001597	0.006667	0.000853	0.002340

5.0 Energy Detail

4.4 Fleet Mix

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	0.1128	1.0253	0.8613	6.1500e-003		0.0779	0.0779		0.0779	0.0779		1,230.3910	1,230.3910	0.0236	0.0226	1,237.8790
NaturalGas Unmitigated	0.1128	1.0253	0.8613	6.1500e-003		0.0779	0.0779		0.0779	0.0779		1,230.3910	1,230.3910	0.0236	0.0226	1,237.8790

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					
Other Non-Asphalt Surfaces	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
Office Park	10458.3	0.1128	1.0253	0.8613	6.1500e-003		0.0779	0.0779		0.0779	0.0779		1,230.3910	1,230.3910	0.0236	0.0226	1,237.8790
Total		0.1128	1.0253	0.8613	6.1500e-003		0.0779	0.0779		0.0779	0.0779		1,230.3910	1,230.3910	0.0236	0.0226	1,237.8790

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					
Other Non-Asphalt Surfaces	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

Office Park	10.4583	0.1128	1.0253	0.8613	6.1500e-003		0.0779	0.0779		0.0779	0.0779		1,230.3910	1,230.3910	0.0236	0.0226	1,237.8790
Total		0.1128	1.0253	0.8613	6.1500e-003		0.0779	0.0779		0.0779	0.0779		1,230.3910	1,230.3910	0.0236	0.0226	1,237.8790

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	4.0565	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0371
Unmitigated	4.0565	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0371

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	0.6128					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.4422					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.5100e-003	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0371
Total	4.0565	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0371

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	0.6128					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.4422					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.5100e-003	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0371
Total	4.0565	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0371

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

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
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10.0 Vegetation

Appendix C

Biological Evaluation

**RECONNAISSANCE-LEVEL BIOLOGICAL EVALUATION
OF POTENTIAL IMPACTS SENSITIVE AND LISTED
SPECIES
ON AN APPROXIMATELY 47.17-ACRE, LAND PARCEL
IN FARMERSVILLE,
TULARE COUNTY, CALIFORNIA**

**Prepared for:
4 Creeks Engineering and Castlewood Partners**

**Prepared by:
Bobby Kamansky**



April 28, 2016

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EXECUTIVE SUMMARY

Four Creeks Engineering, Inc. contacted Kamansky's Ecological Consulting (KEC) on behalf of Don Fulbright with Castlewood Partners for a biological survey at a 47.17-acre property in Farmersville, Tulare County, California. The project is located along Noble Avenue, directly south of Highway 198. . The subject site is located south of Hwy 198 and south of Avenue 296 in Farmersville, east of Road 156 and north of Avenue 292.

The construction of The Sequoia Drive-In Business Park in Tulare County will comprise of four separate phases of construction. A total of 43 buildings and 358,370 square feet of building space will be constructed for the complete buildout for all phases of construction.

Because the project site is within the range of a variety of sensitive species, Four Creeks and Castlewood Partners requested that KEC conduct a biological evaluation to satisfy California Environmental Quality Act (CEQA) and survey requirements for this site in the County of Tulare. On properties such as this in the Farmersville area, the United States Department of Interior, Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (DFW) routinely recommends that a "trained biologist, familiar with the habitat requirements of listed and proposed species, should determine whether these species or habitats suitable for these species may be affected by the proposed action...prior to the environmental review process." (DFW, 1995, 2012)

The field component of the biological evaluation was conducted on a site visit on January 15, 22 and February 4, 2015. B. Kamansky conducted the site visits.

This investigation evaluates the species composition of the 47.17-acre project site, likelihood of various species and habitats known to occur in the vicinity and examines potential impacts based on the project. This will include species observed by KEC biologists as well as California Natural Diversity Database (CNDDDB) records.

This report is submitted to Tulare County for its use in proceeding with the CEQA process.

At the time of the survey, all the land included or in close proximity to the site included farms, orchards, housing, and included possible habitat for various species of concern. Various large trees are found on and adjacent to the site

that may provide habitat for nesting raptors.

While no Special Status animal or plant species, except raptors were observed on the site, species could move into the site prior to construction. Appropriate avoidance measures are proposed in the event that pre-construction surveys detect species in the area and prescribe compensation in the event that impacts cannot be avoided.

A. DESCRIPTION, BACKGROUND AND AGENCY INVOLVEMENT

A.1 Applicant and Project Description

Craig Hartman of Four Creeks Engineering contacted Bobby Kamansky, Principal Biologist, Kamansky's Ecological Consulting (KEC) for a survey at the 198 Old Theater site in Farmersville, California on behalf of Castlewood Partners.

Kamansky's Ecological Consulting was contracted to provide a biological evaluation of the site. Sensitive species found on and within close proximity to the site were identified and evaluated in regards to future development.

The construction of The Sequoia Drive-In Business Park in Tulare County, CA will comprise of four separate phases of construction. A total of 43 buildings and 358,370 square feet of building space will be constructed for the complete buildout for all phases of construction.

Phase 1 will include a convenience market with gas pumps along with five separate commercial buildings for a total combined square footage of 68,340. Access into the development will occur on Road 156, and will eventually connect access from Noble Avenue during Phase 3.

Phase 2 will construct 14 commercial buildings for a total combined square footage of 88,000, leaving a remainder lot for the existing cellular tower. Two access points into the development will occur on Road 156, providing a circle drive connecting part of Phase 1, and all of Phases 2 and Phase 4.

Phase 3 will include ten separate commercial buildings with one remaining lots for a retention pond. A stormwater retention pond will be installed for on-site water storage in the event of extreme weather. The total square footage buildout for phase 3 will be 104,000.

Phase 4, the final phase, will include 13 commercial buildings and a remaining lot for a second stormwater retention pond for on-site water storage. The total square footage buildout for phase 3 will be 98,030.

A.2 Federal Agency Interaction on Resource Issues

Because the project site is within the range of the Swainson's hawk (*Buteo swainsoni*) and other listed and special status species, Four Creeks requested that KEC conduct a survey of this property in the County of Tulare. On sites such as this in the Farmersville area, the USFWS and DFW routinely recommend that a "trained biologist, familiar with the habitat requirements of listed and proposed species, should determine whether these species or habitats suitable for these species may be affected by the proposed action...prior to the environmental review process" (DFW, 1995, 2012).

In situations where the project has no federal nexus, consultation between the Applicant and USFWS/CDFW pursuant to Section 10 of the Endangered Species Act is required if it is determined that the proposed project may affect a federally listed species.

A.3 State Agency Interaction on Resource Issues

California Department of Fish and Wildlife routinely recommends that applicants conduct a biological assessment for sensitive species and, in particular, a kit fox and raptor survey and avoidance prior to construction. In its role as a trustee agency, DFW works with project applicants to avoid or minimize adverse effects on fish, wildlife (including raptors), or native plants.

A.4 Project-related Mitigation Guidelines

USFWS and DFW work to avoid land use decisions that might restrict the range or reduce the numbers of rare or endangered species. Under the Endangered Species Act, if it is determined that listed species will be adversely affected (or if a project impact is likely to have an adverse effect on listed species), such impacts will need to be mitigated. Under these circumstances, Applicant should initiate informal consultation with USFWS to determine whether a Section 7 consultation is indicated.

Under CEQA, once a threshold for significance has been established (e.g.

significant impacts to a natural community, to special status species, or to common wildlife species), applicant can address a range of mitigation options. In view of CEQA guidelines, DFW encourages project proponents (such as the Applicant) to take the following hierarchical approach to mitigate for any human impacts on natural communities and wildlife:

- 1) Ideally, any proposed project should be designed to avoid impacts to high quality habitat and sensitive species (e.g. San Joaquin kit fox, raptors, or other special status and protected species).
- 2) If avoidance is not possible, DFW encourages project proponent to minimize loss of natural habitat and habitat quality. Habitat improvements, including revegetation with native species or enhancement of degraded habitat (including removal of non-native species), either on-site or off-site may be used as mitigation.
- 3) Another important component of effective mitigation includes efforts aimed at reducing human disturbance by controlling access to sensitive areas or devising plans for coexistence.
- 4) Short-term mitigation may be recommended during construction. Construction and maintenance personnel are instructed on "take" avoidance. Native vegetation may be replanted, and protection recommended on the project site for habitat features critical to endangered and threatened species. Individual plants or animals may be relocated off-site by a qualified biologist.
- 5) Long-term mitigation may include control of alien and wild predators and invasive plant species, or encouraging growth of forage plants for native animal species.

A.5 Project Background

Four Creeks Engineering (FCE) contacted Kamansky's Ecological Consulting (KEC) for a survey in Farmersville, CA (Figure 1).

Kamansky's Ecological Consulting submits this report to the FCE to provide information on the site conditions and lay the foundation for the CEQA analysis.

It is agreed that the report of findings produced upon the conclusion of this reconnaissance level and focused biological survey will be used in the following manner ONLY: for consideration during any necessary

NEPA/CEQA analysis and mitigation requirements or other permitting processes. It is understood that KEC does NOT make recommendations for approval or denial of the Project.

B. LOCATION OF SUBJECT PROPERTY

The subject property covered by this biological investigation is located in central Tulare County, California. The subject site is located south of Hwy 198 and south of Avenue 196 in Farmersville and north of Avenue 292. The property is along the north border of the Farmersville city limits. The property Assessment Parcel Numbers are 101-090-14 and 101-090-15. APN 101-090-07 - that portion of the east half of the northwest quarter of the northeast quarter of Section 35, Township 18 South, Range 25 lying North and west of the Tulare Irrigation Ditch. APN 101-100-09 - that portion of the North half of the Southeast Quarter of the northeast quarter of Section 35.

C. CURRENT LAND USE AND SITE CHARACTERISTICS

The site is currently an in a fallow state of agricultural use. The Tulare Irrigation District canal runs through the middle of site. The site was previously a drive-in movie theater (south portion). There is a mobile communication tower on the site now. Annual grassland and ruderal ground occupy the site.



Figure 1. Project location and relative to Highway 198 and Avenue 296.

D. SURVEY DATES AND SURVEY PERSONNEL

The field component of the biological evaluation was conducted during site visits on January 15, 22 and February 4, 2015 throughout daylight hours and including some evening observations. Weather conditions were clear and sunny, 50-60 degrees F. Bobby Kamansky conducted the site visits.

E. STUDIES REQUIRED TO SATISFY ENDANGERED SPECIES LAWS

Several species of plants and animals within the state of California have low populations, limited distributions, or both. Such species may be considered “rare” and are vulnerable to extirpation as the state’s human population grows and the habitats these species occupy are converted to agricultural and urban uses. State and federal laws have provided DFW and the USFWS with a mechanism for conserving and protecting the diversity of plant and animal species native to the state. Many native plant and animal species have been formally designated as Threatened or Endangered under state and federal endangered species legislation. Others have been designated as “Species of Special Concern” by DFW. The California Native Plant Society (CNPS) has developed its own set of lists of native plants considered rare, threatened or endangered (CNPS 2001). Collectively, these plants and animals are referred to as Special Status Species.

F. STUDY METHODOLOGY

F.1 Literature Review

A review of literature was conducted to provide additional information about the relevant species and habitats.

F.2 Consultation with Experts on Species

Several biologists were consulted on this study to provide additional information. Kamansky’s Ecological Consulting also provided additional species information and records from field notes by Bobby Kamansky to supplement CNDDB information about the area.

F.3 Survey Methods

Survey methods consisted of pedestrian surveys of the site and vehicular surveys on established roads around the site and some of the adjacent sites. Potential raptor nesting trees were identified and surveyed with high-powered optical equipment.

F.4 Consult California Natural Diversity Data Base (CNDDB)

The biological investigation conducted by KEC focused on the status of several Special Status Species within a nine-quad vicinity (Monson, Ivanhoe, Woodlake, Visalia, Exeter, Rocky Hill, Tulare, Cairns Corner, Lindsay). Species and the three habitats listed in the CNDDB are considered Special Status Species and are often treated as if they were listed under Federal or State Endangered Species Acts.

Additional species and records were added from field notes and documented during surveys. The likelihood of the species occurring on the site is categorized as present, absent, possible or unlikely, based on whether they were detected, are known to exist on the site or immediately adjacent (present), were not detected and not expected, owing to lack of habitat (absent), possibly occurring with suitable or suboptimal habitat present but not detected (possible), not likely to occur with no habitat or suboptimal habitat present and not detected (unlikely).

Thirty seven (39) Special Status Species and four habitats tracked by CNDDB are known to occur in the vicinity (see map in Appendix C-2). Twenty three (23) Special Status animal species are known to occur in the general vicinity (the nine quad area) of the Sequoia Drive-In Business Park (the Subject Property). All of these species were found in the CNDDB. Various other species are expected utilize the site; great-horned owls and barn owls are all known to forage and nest in the vicinity.

Twelve (12) Special Status plant species were included in the CNDDB printout for the nine relevant quadrangles. None of these species are known to occur in the immediate vicinity of the site. The site and the surrounding areas generally serve as poor habitat for many Special Status Species.

Four native plant communities, Valley Sacaton Grassland, Northern Hardpan Vernal Pool, Northern Claypan Vernal Pool, Valley Oak Riparian Forest were listed in the CNDDB.

Table 1 (Appendix) summarizes the species and habitats that were listed in the CNDDB and their occurrence summaries.

G. VEGETATION ON THE PROPOSED SEQUOIA DRIVE-IN BUSINESS PARK

G.1 Natural Communities

Associations of plant species that grow in assemblages under similar

ecological conditions are called plant communities (also known as natural communities or biotic communities). Generally, they are named for the dominant species found in the association. Definition of plant communities is important not only because it identifies types of plants that are present, but also because it indicates habitat types and animal species which may be found in the community. In this section, common names and scientific (Latin binomial) names of plants will both be given the first time they are mentioned; thereafter only common names will be used.

G.2 Native Plant Communities

The land on the subject property is disturbed and does not support historical flora. According to the natural community classification scheme used by Holland (1986), the Sequoia Drive-In Business Park is located in a part of the southern San Joaquin Valley that originally contained components of two natural communities prior to development: Valley Grassland and Valley Oak Riparian Woodland.

G.3 Plant Species Composition on the Sequoia Drive-In Business Park

Because subject property was farmed and disked, it currently supports relatively low species richness of wild, native plants. There are no substantial ($> \frac{1}{4}$ -acre) patches of native vegetation on the subject property. Three large ($> 15"$ diameter at breast height) and several smaller Valley oaks (*Quercus lobata*) grow on the subject property (see Appendix C-2).

G.3.a Valley Grassland

Dominant species observed on the subject property during the field survey, aside from cultivated crops, include the following annuals in the grassland: hare barley (*Hordeum murinum*), whitestem filaree (*Erodium moschatum*), redstem filaree (*Erodium cicutarium*), ripgut brome (*Bromus diandrus*) (see Appendix A).

H. INVERTEBRATES ON THE SEQUOIA DRIVE IN BUSINESS PARK

The site is within close proximity (< 1 mile) to row crop fields where there are rich invertebrate species. These animals provide food for many predators, including hawks, which were observed in the area.

I. VERTEBRATE ANIMALS ON THE SEQUOIA DRIVE-IN BUSINESS PARK

No special status species were recorded on the Sequoia Drive-In Business Park other than red-tailed hawks. Twelve vertebrate, common species were observed

at the Sequoia Drive-In Business Park (See Appendix B) during field surveys. California ground squirrels were observed on the site whose burrows provide habitat for other species, some of which are special status, e.g. burrowing owls.

I.1 Common Amphibians

One amphibian species was observed on the subject property during field work. Bullfrogs (*Lithobates catesbeianus*) were observed along the Tulare Irrigation District canal.

I.2 Common Reptiles

No reptiles were observed on the subject property during field work. The site does provide habitat for common species such as western fence lizards (*Sceloporus occidentalis*).

I.3 Common Birds

Nine bird species were observed on the site during survey times and dates. The grasslands on the site support common species such as doves and the treed areas support winter resident birds, neotropical migrants such as kingbirds (*Tyrannus verticalis*) and raptors such as red-tailed hawks (*Buteo jamacansis*), barn owls (*Tyto alba*, these were observed on the site) and potentially Swainson's hawks (no Swainson's hawks were observed adjacent to the site, but they are known to nest in the vicinity).

I.4 Common Mammals

Mammals such as Botta's pocket gopher (*Thomomys bottae*), California ground squirrel (*Spermophilus beechyi*), and racoon (*Procyon lotor*), occupy the site and were observed during surveys.

J. RESULTS OF BIOLOGICAL EVALUATION

J.1 SPECIAL STATUS PLANT SPECIES

J.1.a California jewel-flower (*Caulanthus californica*) Fed Endangered, State Endangered California Native Plant Society (CNPS) 1B.1

There is one quad with records for the California jewel flower: Tulare. This population is considered extirpated.

No California jewel flower was found on the site. Habitat for this species is listed by CNPS as chenopod scrub, valley and foothill grassland, and pinyon-juniper woodland. No habitat of these types and no undisturbed

grassland exist along the site.

J.1.b California satintail (*Imperrata brevifolia*) CNPS 1B.2

This species has records in the Visalia Quad.

No California satintail was found on the site. This species is likely to occur in alkali meadows and seeps which are not found on the site.

J.1.c Recurved larkspur (*Delphinium recurvatum*) CNPS 1B.2

Records for this species are from the Cairns Corner, Ivanhoe and Monson quads.

No recurved larkspur was found on the site. Habitat for this species is saline and alkaline soils. Owing to the highly disturbed nature of the site, this species is not expected to occur.

J.1.d Lesser saltscale (*Atriplex miniscula*) CNPS 1B.1

There are records of this species from the Cairns Corner, Goshen, Ivanhoe and Traver quads.

No lesser saltscale, or any annual saltbush (Atriplex) species, was found on the site. Lesser saltscale grows on Chenopod scrub, playas, sandy soils in alkaline areas, and Valley and foothill grassland often in association with slough systems and river floodplains. None of these plant communities occur undisturbed on the site.

J.1.e San Joaquin Valley Orcutt grass (*Orcuttia inaequalis*) Fed Threatened, State Endangered, CNPS 1B.1

The Ivanhoe and Monson quads contain the record of this plant in the vicinity.

No San Joaquin Orcutt grass was found on the site. This species is a vernal pool obligate. No vernal pools were observed on the on or adjacent to the site.

J.1.f San Joaquin adobe sunburst (*Pseudobahia peirsonii*) Fed Threatened, State Endangered, CNPS 1B.1

The record for the San Joaquin adobe sunburst is in the Tulare Quad.

No San Joaquin adobe sunbursts were found on the site. Habitat for this species is grasslands and woodlands with heavy adobe clay soils, these

elements were not found on the site.

J.1.g Brittlescale (*Atriplex depressa*) CNPS 1B.2

This species was recorded in the Traver and Visalia quads.

No brittlescale was found on the site. Habitat for this species is saline and alkaline soils. Owing to the highly disturbed nature of the site, this species is not expected to occur.

J.1.h Spiny-sepaed button-celery (*Eryngium spinosepalum*) CNPS 1B.2

This species was recorded in the Ivanhoe and Exeter quads.

No spiny-sepaed button-celery was observed on the site. This species is associated with Valley and foothill grassland and vernal pools. These communities do not exist on or near the site.

J.1.i Heartscale (*Atriplex cordulata* var. *cordulata*) 1B.2

This species was recorded in the Goshen Quad.

No heartscale was found on the site. Habitat for this species is saline and alkaline soils. Owing to the highly disturbed nature of the site, this species is not expected to occur.

J.1.j Vernal pool smallscale (*Atriplex persistens*) 1B.2

This species was recorded in the Ivanhoe Quad.

No vernal pool smallscale was found on the site. Habitat for this species is vernal pools and playas. The site is highly disturbed and no wetlands exist on the site.

J.1.k Subtle orache (*Atriplex subtilis*) 1B.2

This species was recorded in the Cairns Corner and Goshen quads.

No subtle orache was found on the site. Habitat for this species is saline and alkaline soils. Owing to the highly disturbed nature of the site, this species is not expected to occur.

J.1.1 Earlimart orache (*Atriplex cordulata* var. *erecticaulis*) 1B.2

This species was recorded in the Cairns Corner and Ivanhoe quads.

No Earlimart orache was found on the site. Habitat for this species is

saline and alkaline soils. Owing to the highly disturbed nature of the site, this species is not expected to occur.

**J.1.m Hoover's spurge (*Euphorbia hooveri*) Fed Threatened
CNPS1B.2**

This species was recorded in the Ivanhoe and Monson quads.

No Hoover's spurge was found on the site. This is a vernal pool obligate species. No vernal pools were observed on the site and no vernal pools are adjacent.

J.2 SPECIAL STATUS PLANT COMMUNITIES

J2.a Northern Claypan Vernal Pool

This community was listed within the Traver Quad.

No Northern Claypan Vernal Pools were found on the site. No wetlands occur on the site.

J2.b Northern Hardpan Vernal Pool

This community was listed within the Monson and Ivanhoe quads.

No Northern Hardpan Vernal Pools were found on the site. No wetlands occur on the site.

J2.c Great Valley Valley Oak Riparian Forest

This community was recorded in the Exeter Quad.

No Great Valley Valley Oak Riparian Forest was found on the site. Only three large oak trees and several small trees exist on the site.

J2.d Valley Sacaton Grassland

This community was recorded in the Exeter and Goshen quads.

The site is heavily disturbed and no perennial, native grasses occur on the site. *No Valley Sacaton Grassland was found on the site.*

J.2 SPECIAL STATUS INVERTEBRATES

J.2.a Vernal pool fairy shrimp (*Branchinecta lynchii*) FT

Four quads with records of this species were found: Goshen, Traver, Ivanhoe and Monson.

No vernal pool fairy shrimp were found on the site. No vernal pools were observed during surveys.

Vernal pool fairy shrimp are entirely dependent on vernal pool habitat associated with particular soils. Vernal pool fairy shrimp are unlikely to occur anywhere on the site because there are no vernal pools located anywhere on or adjacent to the site.

J.2.b Vernal pool tadpole shrimp (*Lepidurus packardii*) Fed Threatened

This species was recorded in the Ivanhoe, Traver and Monson quads.

No vernal pool tadpole shrimp were found on the site. No vernal pools occur were observed during surveys. Vernal pool tadpole shrimp are entirely dependent on vernal pool habitat associated with particular soils. Vernal pool tadpole shrimp are unlikely to occur anywhere on the site because there are no vernal pools located anywhere on or adjacent to the site.

J.2.c Moody's gnaphosid spider (*Talanites moodyae*)

This species was recorded in the Exeter, Rocky Hill and Ivanhoe quads.

This species requires serpentine bedrock or soils. Neither of which occur on the site.

J.2.d An andrenid bee (*Andrena macswaini*) None

This species was recorded in the Tulare Quad.

It is possible this species occurs on or adjacent to the site but it was not observed during surveys. There are abundant sites for burrowing and foraging.

J.2.e Hopping's blister beetle (*Lytta hoppingi*)

This species has been found in the Visalia Quad.

No Hopping's blister beetles were observed on the site. This species is found on native flowers, but little is known of its specific requirements. It has been collected March-June.

J.2.f Molestan blister beetle (*Lytta molensta*)

This species has been found in the Lindsay Quad.

No Molestan blister beetles were observed on the site. This species is

found on native flowers, but little is known of its specific requirements. It has been collected March-June.

J.3 SPECIAL STATUS AMPHIBIANS AND REPTILES

J.3.a Western spadefoot (*Spea Hammondi*) California Department of Fish and Wildlife Species of Special Concern

Neither this species, nor its wetland habitat were observed on the site, outside of the Tulare Irrigation District canal. The site provides little to no habitat for this species. The nine quad CNDDDB printout includes two quads containing occurrences of western spadefoot: the Goshen, Ivanhoe, Monson and Traver quads.

No Western spadefoot toads were found on the site. Western spadefoot toads are found primarily in annual grasslands with vernal pools. No vernal pools occur on the site. Western spadefoot toad is unlikely to occur anywhere on the site because there are no grasslands with vernal pools located anywhere on or adjacent to the site. The Tulare Irrigation Ditch running through the middle of the site does not appear to support this species.

J.3.b California tiger salamander (*Ambystoma californiense*) Fed Threatened, State Threatened, SSC

This species has been recorded in the Ivanhoe and Monson quads.

No California tiger salamanders were observed on the site. Suitable aquatic habitat was not found on or adjacent to the site.

J.3.c Western pond turtle (*Emys marmorata*) SSC

This species has been found in the Wahtoke and Reedley quads.

No western pond turtles were found on the site. Riparian habitats, pools or flowing water were not observed during field surveys. However, a slough channel with possibly suitable hydrological conditions does exist just east of the project area.

J.3.d Northern leopard frog (*Lithobates pipiens*) CDFW SSC

This species' record is from the Monson Quad.

No habitat for this species was found on the site and *no northern leopard frogs were found on the site.*

J.4 SPECIAL STATUS BIRDS

J.4.a Swainson's hawk (*Buteo swainsoni*) (nesting) State Threatened

Swainson's hawk records are found in the Traver, Selma, Conejo, and Malaga quads.

In the adjacent Tulare County and Kings County, more than 33 Swainson's hawk nests have been located in isolated trees or small groves of eucalyptus (18), valley oak (8), Fremont's cottonwood (4), Goodding's black willow (3), and deodar cedar (1). Nest trees stand in (or adjacent to) open agricultural land (16), along riparian corridors or irrigation channels (16), or at the edge of a tailwater pond (1). Foraging habitat surrounding the nest trees is chiefly alfalfa or other row crops (30) but also includes expanses of grassland and scrub habitat (3) (Hansen 2005d).

Swainson's hawks prefer open habitats, including mixed and short grass grasslands with scattered trees or shrubs for perching; dry grasslands; irrigated meadows; and edges between two habitat types.

No Swainson's hawks were observed on the site.

Appropriate avoidance measures should be employed such as pre-construction surveys and construction monitoring for this and other raptors. It may be necessary to consult with DFW to determine if additional avoidance is necessary to protect this species during construction.

J.4.b Western burrowing owl (*Athene cunicularia*) SSC

Records for this species are on the Traver, Burris Park, Conejo, Selma, and Reedley quads. This species prefers short grass prairie and other sparsely-vegetated areas where foraging is optimal. Ground squirrel burrows suitable for burrowing owls were observed directly adjacent to the site.

No western burrowing owls were found on or near the site. It is possible that they could be denning and foraging in the fallow fields and farm edges nearby or could move into the proposed Project area prior to construction.

J.4.c Loggerhead shrike (*Lanius ludovicianus*) SSC

The Traver Quad contains the only record for this species in the area.

No Loggerhead shrikes were observed on the site during the survey. They can typically be seen foraging in fallow fields and grassland habitats and nest in dense vegetation. Small suitable habitat patches exist on and nearby the proposed Project site.

J.4.d Tricolored blackbirds (*Agelaius tricolor*) SSC

The Woodlake Quad contains the only record for this species in the area.

No tricolored blackbirds were observed on the site during the survey. They can typically be seen foraging in fallow fields and grassland habitats and nest in dense wetland vegetation. Small suitable habitat patches exist on and nearby the proposed Project site but the type of wetland and food sources are not abundant.

J.4.e Great blue heron (*Ardea herodias*) SSC

The Woodlake Quad contains the only record for this species in the area.

No great blue heron rookeries were observed on the site during the survey. They can typically be seen foraging in fallow fields and riparian areas locally, but no local rookeries were found near or on the site.

J.5 SPECIAL STATUS MAMMALS

J.5.a Western mastiff bat (*Eumops perotis californicus*) SSC

The Traver and Visalia quads contain records of this species.

No western mastiff bats were observed during the field survey. This species is known to forage in a variety of habitats including agricultural lands, which occur on and adjacent to the site. There are also a few suitable potential roosting sites in the area.

J.5.b San Joaquin kit fox, *Vulpes macrotis mutica* Fed Endangered, State Threatened

Records of San Joaquin kit fox in this part of Tulare County come from seven quads: Visalia, Goshen, Tulare, Ivanhoe, Exeter, Traver, and Monson. These widespread occurrences suggest widespread activity in the area.

The Endangered Species Recovery Program (ESRP) text on San Joaquin

kit fox below, passages most pertinent to the site are highlighted in *italic* type:

San Joaquin kit foxes inhabit grasslands and scrublands, many of which have been extensively modified. Types of modified habitats include...grazed annual grasslands. Oak woodland, alkali sink scrubland, and vernal pool and alkali meadow communities also provide habitat for kit foxes. Dens are scarce in areas with shallow soils because of the proximity to bedrock, high water tables, or impenetrable hardpan [or claypan] layers. Kit foxes are active year-round and are primarily nocturnal. (To view a species profile for San Joaquin kit fox, see the ESRP URL:

<http://esrp.csustan.edu/speciesprofiles/profile.php?sp=vuma>

No San Joaquin kit fox were observed during this field survey. San Joaquin kit fox is a species that is both Federally Endangered and State Threatened. Records of San Joaquin kit fox occurrences are widespread within the proposed Project area. The proposed Project site is sub-optimal kit fox habitat because it does not provide important intrinsic habitat values unique to the area and has an extensive history of disturbance. However, some possible movement corridors are in the area and San Joaquin kit fox may occasionally pass through the site while foraging and it is possible that foxes could den on the site. The site is within the range of this species and potential kit fox dens were observed on and directly adjacent to the site. It should be noted though that no evidence of kit fox tracks or scat was found anywhere on the site.

J.5.c Pallid bat (*Antrozous pallidus*) SSC

The Exeter Quad contains records of this species.

No pallid bats were observed during field study. Pallid bats' habitat includes arid, rocky sites. The site does not contain such habitat.

J.5.d American badger (*Taxidea taxus*) CDFW SSC

The Exeter Quad contains records of this species.

No badgers were observed during field study. The site does contain potential badger habitat. While they were not observed during the field study, they could be present or move into the site prior to construction.

J.5.e Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*) CDFW SSC

The Exeter and Woodlake quads contain records of this species.

No kangaroo rats were observed during field study. The site does not contain habitat for this species because there has been past land disturbance and there are no known remnant populations within the adjacent areas.

K. IMPACT ANALYSIS AND MITIGATION

K.1 SIGNIFICANCE CRITERIA

General plans, area plans, and specific projects are subject to the provisions of the California Environmental Quality Act (CEQA) to assess the impacts of proposed projects on the environment before they are constructed. For example, site development may require the removal of some or all of a site's existing vegetation. Animals associated with this vegetation could be destroyed or displaced. Plants and animals adapted to humans, roads, buildings, pets, etc. may replace those species which formerly occurred on the site. Plants and animals that are state and/or federally listed as threatened or endangered may be destroyed or displaced. Sensitive habitats such as wetlands and riparian woodlands may be altered or destroyed. These impacts may be considered significant or not. According to Guide to the California Environmental Quality Act (Remy *et al.* 1999), "Significant effect on the environment" means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the Project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic interest. Specific project impacts to biological resources may be considered "significant" if they will:

- have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species (including threatened and endangered species) in local or regional plans, policies or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;

- have a substantial adverse effect on federally protected wetlands as defined by Section 404 of The Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery site;
- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
- conflict with the provisions of an adopted Habitat Conservation Plan, or other approved local, regional, or state habitat conservation plan (Remy et al. 1999).

Furthermore, CEQA Guidelines Section 15065 states that a project may trigger the requirement to make a “mandatory findings of significance” if “the Project has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare or threatened species, or eliminate important examples of the major periods of California history or prehistory.”

In a Draft EIS/EIR prepared for a Project in Kings County by the United States Army Corps of Engineers (USACE), the document states,

For this section [Section 4.12 Effects on Endangered Species], any project action which would affect the continued existence of an endangered or threatened species or a species of special concern is considered to be a significant adverse affect [*sic*].

If the lead agency can demonstrate that potential impacts to biological resources will be avoided, then these impacts should be considered less-than-significant for the purpose of a CEQA review.

K.2 RELEVANT GOALS, POLICIES, AND LAWS

K.2.1 Threatened and Endangered Species

State and federal “endangered species” legislation has provided the DFW and the USFWS with a mechanism for conserving and protecting plant and animal species of limited distribution and/or low or declining populations. Species listed as threatened or endangered under provisions of the state and federal endangered species acts, candidate species for such listing, state species of special concern, and some plants listed as endangered by the California Native Plant Society are collectively referred to as “species of special status”. Permits may be required from both the DFW and USFWS if activities associated with a proposed project will result in the “take” of a listed species. “Take” is defined by the state of California as “to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill” (California Fish and Wildlife Code, Section 86). “Take” is more broadly defined by the federal Endangered Species Act to include “harm” (16 USC, Section 1532 (19), 50 CFR, Section 17.3). Furthermore, the DFW and the USFWS are responding agencies under the California Environmental Quality Act (CEQA). Both agencies review CEQA documents in order to determine the adequacy of their treatment of endangered species issues to make project-specific recommendations for their conservation.

K.2.2 Migratory Birds

State and federal laws also protect most birds. The Federal Migratory Bird Treaty Act (FMBTA: 16 U.S.C., sec. 703, Supp. I, 1989) prohibits killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs.

Construction disturbances during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered “taking” by the DFW.

K.2.3 Birds of Prey

Birds of prey are also protected in California under provisions of the State Fish and Wildlife Code, Section 3503.5,(1992), which states that it is “unlawful to take, possess, or destroy any birds in the Order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto”. Construction disturbances during the breeding season could result in the incidental

loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered “taking” by the DFW.

K.2.4 Wetlands and Other “Jurisdictional Waters”

Natural drainage channels and wetlands are considered “Waters of the United States” (hereafter referred to as “jurisdictional waters”). The U.S. Army Corps of Engineers (USACE) regulates the filling or grading of such waters under the authority of Section 404 of The Clean Water Act (Wetland Training Institute, Inc. 1990). The extent of jurisdiction within drainage channels is defined by “ordinary high water marks” on opposing channel banks. Wetlands are habitats with soils that are intermittently or permanently saturated, or inundated. The resulting anaerobic conditions select for plant species known as hydrophytes that show a high degree of fidelity to such soils. Wetlands are identified by the presence of hydrophytic vegetation, hydric soils (soils saturated intermittently or permanently saturated by water), and wetland hydrology according to methodologies outlined in the 1987 Corps of Engineers Wetlands Delineation Manual (USACE 1987).

All activities that involve the discharge of fill into jurisdictional waters are subject to the permit requirements of the USACE (Wetland Training Institute, Inc. 1991). Such permits are typically issued on the condition that the applicant agrees to provide mitigation that results in no net loss of wetland functions or values. No permit can be issued until the Regional Water Quality Control Board (RWQCB) issues a certification (or waiver of such certification) that the proposed activity will meet state water quality standards. The RWQCB is also responsible for enforcing National Pollution Discharge Elimination System (NPDES) permits, including the General Construction Activity Storm Water Permit. All projects requiring federal money must also comply with Executive Order 11990 (Protection of Wetlands).

The California Department of Fish and Wildlife has jurisdiction over the bed and bank of natural drainages according to provisions of Section 1601 and 1603 of the California Fish and Wildlife Code (California Department of Fish and Wildlife, 1995). Activities that would disturb these drainages are regulated by the DFW via a Streambed Alteration Agreement. Such an agreement typically stipulates that certain measures will be implemented which protect the habitat values of the drainage in

question.

K.3 ENVIRONMENTAL IMPACT/MITIGATION

Will the construction or land modification have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

K.3.1 Impacts on Special Status Plant Species?

Impact

The current nature of the site and its long disturbance history does not provide suitable habitat for many of the Special Status plant species that are listed in the CNDDB. No Special Status plant species were present on the site during the survey.

Avoidance

Because no impacts to Special Status plant species are anticipated, no avoidance of plant species is required.

Minimization

Because no impacts to Special Status plant species are anticipated, no minimization is required.

Compensation

No compensation is required.

Monitoring

No monitoring is required.

K.3.2 Impacts on Special Status Animal Species?

Impact

Twenty three (23) Special Status animal species are known to occur in the general vicinity of the Sequoia Drive-In Business Park. KEC inspected the site and noted that all lands on the Project site have been disturbed to some degree by leveling, disking, farming, and the site was an outdoor movie theater.

Various large nesting trees border or are present on the site. No raptors or nests were observed on the site, but are present in the general vicinity (see Appendix maps). Although the site is sub-optimal kit fox habitat, it is within the range of this species and potential kit fox dens were observed directly adjacent to the site. Dens could also be used by burrowing owls and badgers could be present on the site. Neo-tropical migratory birds occupied the site at the time of the biological surveys. To avoid these protected species, preconstruction surveys will be required to identify and avoid any Special Status Species on the Project Site prior to construction.

Avoidance

Take of Special Status Species as a result of any project-related construction or earth-moving work would be considered a significant environmental impact. Thus, impacts to raptors in nest trees located on/near the site would need to be avoided, or compensated for to bring impacts below the level of significance. Impacts to badgers, migratory birds, burrowing owls and kit foxes that might occupy the site must also be avoided. Because habitat for Special Status animal species occurs on and adjacent the subject property, avoidance and minimization measures are warranted.

In order to avoid impacts, the Applicant could construct the project outside of the nesting season for raptors and migratory birds (March - August). Because of the potential kit fox and burrowing owl dens, the migratory birds and the nests and potential foraging habitat on adjacent agricultural land, standardized preconstruction surveys will be required to avoid impacts to this species. (BE mitigation measure #1) Preconstruction surveys should follow the San Joaquin kit fox and burrowing owl standardized recommendations for avoiding impacts during ground disturbance (USFWS 1999).

If preconstruction surveys detect Swainson's hawks or other raptors nesting on the site or adjacent to the site, the Applicant should initiate consultation with DWF and/or USFWS to clarify the avoidance requirements; (BE mitigation measure #2) ½ mile from nest trees is standard avoidance. Preconstruction avian surveys should also identify if any neo-tropical migrants nest on the site (BE mitigation measure #3). If nesting behavior or nests are observed, 500-foot buffer areas will need to be established to protect nests and ensure avoidance.

Because take of raptors or other Special Status Species as a result of any project-related construction or earth-moving work would be considered a significant environmental impact, impacts to raptors in nest trees located on/near the site would need to be avoided, or compensated to bring impacts below the level of significance.

Monitoring

If pre-construction surveys detect species on site or adjacent, (BE mitigation measure #4) a biologist may need to be onsite to educate workers, monitor compliance, best management practices and to identify and protect natural resources while construction occurs. The monitor will be responsible for ensuring that appropriate measures are taken to prevent disturbance of core avoidance areas. Any unauthorized take of Special Status species will be immediately reported to DFW by the monitor. The monitor will also notify the Project Coordinator who will stop work until corrective measures are implemented.

Mitigation

Although San Joaquin kit foxes and badgers have been reported in the CNDDB, the site is not considered optimal kit-fox or badger habitat and kitfoxes have not been confirmed in the vicinity in some time. Swainson's hawks, burrowing owls or other raptors could forage or nest on the site and in the adjacent agriculture fields and DFW should be consulted in order to determine measures for that species. Preconstruction surveys will be conducted before any ground-disturbing activities begin. If the surveys detect the presence of listed species or migratory birds, then the Project will be paused until appropriate measures or consultation with the USFWS/DFW can take place.

If preconstruction surveys find that no special-status species are present on or adjacent to the property, then the potential construction may proceed. The Applicant would implement the following environmental protection measures to reduce environmental consequences associated with construction. Based on this analysis, implementation of mitigation measures would reduce potential Project-specific impacts to less than significant.

Environmental Protection Measures

1. The United States Fish and Wildlife Service (USFWS) approved pre-construction surveys for San Joaquin kit fox shall be conducted no

fewer than 14 days and no more than 30 days prior to the onset of any ground-disturbing activity (USFWS 1999). The Applicant would follow standardized Recommendations for Protection of the San Joaquin kit fox prior to and during ground disturbance (USFWS 1999). These surveys will also detect raptor and migratory songbirds activity in the area and recommend appropriate avoidance and minimization measures.

2. If activities take place during avian nesting season (March 1 - August 1), a qualified biologist will conduct nest surveys within a 500-ft radius of the construction site, with an emphasis on Swainson's hawks (USFWS 1994), burrowing owls and other raptors (BE mitigation measure #4). Appropriate measures shall be determined in consultation with the California Department of Fish and Wildlife (DFW) in the event an active nest is located in an area subject to disturbance (within ½ mile). No restrictions are required for avian species for construction activities that occur during the non-breeding season (August 1 through February 28) or after the young have fledged.

(BE mitigation measures 1-4) Protection of Swainson's hawks and other raptors and migratory birds (including Loggerhead Shrike).

- Pre-construction surveys shall be conducted to determine the presence of nesting birds if ground clearing or construction activities will be initiated during the breeding season (February 15 through September 15). Potential nesting areas on the proposed Project site and potential nesting areas within 500 feet of the site should be surveyed 14 to 30 days prior to the initiation of construction. Surveys shall be performed by a qualified biologist to verify the presence or absence of nesting birds. Construction shall not occur within a 500 foot buffer surrounding active nests of raptors or a 250 foot buffer surrounding active nests of migratory birds. If construction within these buffer areas is required or if nests must be removed to allow continuation of construction, then approval and specific removal methodologies should be obtained in consultation with DFW
- All trees which are suitable for Swainson's hawk nesting that are within 2,640 feet of construction activities shall be inspected by a qualified biologist.

If raptor nests such as Swainson's hawk are found during the inspection, then surveys shall be conducted at the following intensities, depending upon dates of initiation of construction:

If Swainson's hawks are detected to be actively nesting in trees within 2,640 feet of the construction area, construction shall not occur within this zone until after young Swainson's hawks have fledged (this usually occurs by early June). The nest shall be monitored by a qualified biologist to determine fledging date.

If other nesting birds (particularly non-raptor species listed on the MBTA) are found actively nesting within 250 feet of the construction area, construction should be postponed until after young have fledged. The date of fledging should be determined by a qualified biologist. If construction cannot be delayed within this zone, the DFW and/or the USFWS shall be consulted and alternative protection measures required by the CDFW and/or the USFWS shall be followed.

Protection of San Joaquin kit fox

A standardized pre-construction/pre-activity survey shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities or any Project activity likely to impact the San Joaquin kit fox. Surveys shall identify kit fox habitat features on the Project site and evaluate use by kit fox and, if possible, assess the potential impacts to the kit fox by the proposed activity. The status of all dens shall be determined and mapped. Written results of pre-construction/pre-activity surveys must be received by the Service within five days after survey completion and prior to the start of ground disturbance and/or construction activities. Disturbance to all San Joaquin kit fox dens shall be avoided to the maximum extent possible.

If a natal/pupping den is discovered within the Project area or within 200-feet of the site boundary, USFWS shall be immediately notified and under no circumstances should the den be disturbed or destroyed without prior authorization. If the pre-construction/pre-activity survey reveals an active natal pupping or new information, the Project applicant shall contact USFWS immediately to obtain the necessary take authorization/permit.

Destruction of any den shall be accomplished by careful excavation until it is certain that no kit foxes are inside. The den shall be fully excavated, filled with dirt and compacted to ensure that kit foxes cannot reenter or use the den during the construction period.

If at any point during excavation, a kit fox is discovered inside the den, the excavation activity shall cease immediately and monitoring of the den as described above shall be resumed. Destruction of the den may be completed when, in the judgment of the qualified biologist, the animal has escaped without further disturbance from the partially destroyed den.

Project-related vehicles shall observe a daytime speed limit not to exceed 20-mph throughout the site in all proposed Project areas, except on county roads and State and Federal highways; this is particularly important at night when kit foxes are most active. Night-time construction shall be minimized to the extent possible. However if it does occur, then the speed limit shall be reduced to 10-mph. Off-road traffic outside of designated project areas shall be prohibited.

To prevent inadvertent entrapment of kit fox or other animals during the construction phase of the proposed Project, all excavated, steep-walled holes or trenches more than 2-feet deep shall be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the USFWS and the California Department of Fish and Wildlife shall be contacted as noted under Mitigation Measure 4-20 referenced below.

Kit fox are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods shall be thoroughly inspected for kit fox before the pipe is used or moved, buried, or capped in any way. If a kit fox is discovered inside a pipe, that section of pipe shall not be moved until the DFW has been consulted. If necessary, and under the direct supervision of a qualified biologist, the pipe may be moved only once to remove it from the path of construction

activity, until the fox has escaped.

All food-related trash outside of the enclosed facility such as wrappers, cans, bottles, and food scraps shall be disposed of daily in securely closed containers and removed at least once a week during both construction and operational phases.

No pets, such as dogs or cats, shall be allowed on the Project site in order to prevent harassment, mortality of kit fox, or destruction of dens. Use of rodenticides and herbicides in Project areas shall be restricted. If rodent control must be used it shall be limited to the use of zinc phosphide because of its demonstrated lower risk to kit fox.

A representative shall be appointed by the Project Applicant to serve as the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name, telephone number, or other pertinent contact information shall be provided to the Service.

An employee education program shall be conducted to alert employees of potential impacts to kit fox or other species of concern. The program shall consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program shall include the following: A description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the Project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during Project construction and implementation. A fact sheet conveying this information shall be prepared for distribution to the previously referenced people and anyone else who may enter the Project site.

Any contractor, employee, or military or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative. The Sacramento Fish and Wildlife Office and CFW shall be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The Sacramento Fish and Wildlife Office contact

is:

Mr. Paul Hoffman
1701 Nimbus Road, Suite A,
Rancho Cordova, California 95670
(530) 934-9309

New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed shall also be provided to Fish and Wildlife at the address below.

Endangered Species Division
2800 Cottage Way, Suite W2605
Sacramento, California 95825-1846
(916) 414-6620 or (916) 414-6600

Protection of burrowing owl

In accordance with DFW's 2012 Staff Report on Burrowing Owl Mitigation, a qualified biologist shall conduct three surveys for burrowing owls where potential burrowing owl habitat occurs within 500 feet of Project activities. Surveys shall occur during the peak-breeding season for this species (15 April through 15 July), and spaced three weeks apart. If active burrowing owl burrows are identified within 500 feet of the Project site, then avoidance, take avoidance surveys, site surveillance, minimization, and buffer mitigation measures shall be implemented, in accordance with the 2012 DFG Staff Report and direct consultation with DFW.

K.3.3. Adverse Effects on Riparian Habitat or other Sensitive Natural Communities? Will the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Impact

No impact to this community is anticipated. There are no substantial patches of riparian habitat; only several oak trees. Three of the oak trees are large (>15" diameter at breast height), but are not contiguous with other habitat.

Mitigation

None required if oaks are not impacted.

K.3.4. Adverse Effects on Federally Protected Wetlands?

Will the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Impact

No marshes, vernal pools or other wetlands occur on the property (see US Fish and Wildlife Service wetland map in Appendix). However, a Tulare Irrigation Ditch (TID) runs through the property and is not a natural drainage. It is possible that this is a drainage from, or to, a Waters of the US which would mean that consultation with US Army Corps of Engineers and the Regional Water Quality Control Board for permits to construct on or near this potential wetland.

Mitigation

None required assuming no impact or disturbance will occur to the TID canal. If disturbance, encroachment or discharge occurs, consultation, further study such as wetland studies and possibly compensation shall be required.

K.3.5. Interference with Wildlife Movement and Wildlife Corridors?

Will the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery site?

Impact

The Kaweah River corridor does lie east of the project site several miles. However, the subject property is not situated on any known substantial wildlife corridor, and the proposed actions have limited scope and should not obstruct wildlife movement.

A considerable amount of open space lands in the vicinity of the subject property will continue to be used by native species for home range and dispersal movements. Therefore, potential construction will result in a

less than significant effect on regional wildlife movements.

Mitigation

Because this potential Project will result in a less than significant effect on regional wildlife movements, mitigation measures are not considered warranted.

K.3.6. Substantial Reductions in Fish & Wildlife Habitat?

Will the project reduce substantially the habitat of a fish or wildlife species, including causing a fish or wildlife population to drop below self-sustaining levels or threaten to eliminate an animal community?

Impact

The site was previously disturbed. Therefore, potential project construction would not result in substantial reduction in fish or wildlife habitat.

Mitigation

Because construction on the site will have a less than significant effect on habitat for common native wildlife occurring in this portion of Tulare County, mitigation measures for common species are not considered warranted. No fish or wildlife populations are likely to drop below self-sustaining levels because of potential activities. The potential project basin does not threaten to eliminate any animal community, so mitigation measures for animal communities are not warranted.

K.3.7 Conflicts with Local Policies or Ordinances?

Will the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Impact

The project is consistent with local policies and ordinances. Therefore, as long as the Applicant implements avoidance and protection measures and consults with DFW and any other agencies regarding potential impacts to raptors.

Mitigation

Because the potential project is consistent with the General Plan Policies

of Tulare County relevant to natural resource protection, mitigation measures, other than the afore-mentioned avoidance, further protecting biological resources are not considered warranted.

K.3.8 Conflicts with Adopted Conservation Plans?

Will the project conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan?

Impact

Only three HCPs, and no NCCP, or conservation plan have been instituted (or proposed) for Tulare County. It is not clear if the HCPs are geographically broad enough to cover the area of the project or do not cover species relevant to this site. This project will not conflict with any such plan.

Mitigation

None required.

K.3.9 Degradation of Water Quality?

Will the project result in the degradation of water quality in seasonal creeks, reservoirs and downstream waters?

Impact

The excavation of loose soils often creates conditions conducive to erosion and the concomitant deposition of sediment in adjacent drainages. No known water quality risks area associated with the site or potential project if the construction of the project does not encroach or disturb the Tulare Irrigation Ditch canal. If impact occurs to the canal, degradation of water quality could occur.

Mitigation

Because the potential project construction will result in a less than significant impact on water quality in nearby creeks and rivers, mitigation measures are not considered warranted. If impacts to the canal occur, consultation, further study and potentially compensation shall be required.

K.3.10 Disturbance to Active Raptor Nests?

Will construction activities during the project disturb any active raptor nests?

Impact

The site and area immediately adjacent to the property currently does provide nesting and foraging habitat for raptor species such as Swainson's and red-tailed hawks. Surveys may be required to avoid any raptor impacts if construction occurs during breeding season.

Avoidance

The Migratory Bird Treaty Act (MBTA) protects raptors from disturbances. Swainson's hawks are found in the grasslands and agricultural lands of California's Central Valley during the spring and summer. They exhibit a high degree of nest site fidelity and nests are constructed in trees, and include Fremont cottonwood (*Populus fremontia*), willow (*Salix* spp.), Valley oak (*Quercus lobata*), and eucalyptus (*Eucalyptus* spp.) (Bloom 1980). The nesting season for Swainson's hawk occurs from March 1 through September 15. This species spends large amounts of time soaring over grasslands and agricultural fields in the Central Valley and can travel up to 29 kilometers to forage for prey (Estep 1989). Swainson's hawks will forage for prey in row crops (Estep 1989) on small mammals, insects, and birds. Several CNDDDB-recorded occurrences, past observations and present survey observations indicate Swainson's hawk occur within a 10 mile radius of the subject property area (See map in Appendix, CNDDDB 2014 and B. Kamansky field notes) and other raptors occur or forage on the site or nest adjacent to the site.

Preconstruction surveys will be required to identify and avoid raptors and raptor nest as well as other species (see above). During any construction activities, any raptors will need to be designated as an avoidance area that will need to be protected from disturbance or monitored avoided and/or excavated in coordination with DFW. This avoidance area will be clearly defined by erecting exclusionary fences or flagging with orange geo-webbing nor ribbon prior to construction. Any construction-related disturbance within the buffer zone will be minimized and promptly restored to its original condition following construction.

DFW will be provided with a map and written details identifying avoidance areas.

Mitigation

If avoidance measures are implemented appropriately, no mitigation for raptors would be anticipated as a result of a potential project. However, in the event that foraging habitat or nesting areas would be impacted, then mitigation, compensation and consultation will be needed.

K.3.11 Cumulative Impacts?

The geographic area of this cumulative analysis is the San Joaquin Valley. While the study area is limited to Tulare County, sensitive species with similar habitat requirements may exist in other portions of the San Joaquin Valley, and therefore cumulative impacts would extend beyond Tulare County political boundaries.

The proposed Project would only contribute to cumulative impacts related to this item if Project-specific impacts were to occur. As the proposed Project does not result in significant loss of habitat or direct impact to these special status species, cumulative impacts will be less than significant.

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APPENDIX A: Vascular Plants of the Subject Property

Vascular Plants of the Subject Property

Taxonomic nomenclature (except for several common names) and sequence of major taxonomic groups follows Hickman (1993). Within major taxa, Family and Genus names are listed alphabetically rather than in phylogenetic sequence.

Common names are principally those used by Abrams (1923-1947.17), Cooperative Extension (1978), Crampton (1974), Munz and Keck (1968), Niehaus (1976), and Texas A&M University Bioinformatics Working Group Biota of North America Program (1997). * I denotes introduced species.

Common Name	Scientific Name	Class	Plant Family
Barnyard grass (i*)	<i>Echinochloa sp.</i>	monocot	Poaceae
Bermuda Grass (i)	<i>Cynodon dactylon</i>	monocot	Poaceae
Cultivated oat (i)	<i>Avena sativa</i>	monocot	Poaceae
Dallis grass (i)	<i>Paspalum sp.</i>	monocot	Poaceae
Italian ryegrass (i)	<i>Lolium multiflorum</i>	monocot	Poaceae
Hare barley (i)	<i>Hordeum murinum</i>	monocot	Poaceae
Mexican sprangletop	<i>Leptochloa fusca</i>	monocot	Poaceae
Ripgut brome (i)	<i>Bromus diandrus</i>	monocot	Poaceae
Washingtonia palm (i)	<i>Washingtonia robusta</i>	monocot	Arecaceae
Cheeseweed (i)	<i>Malva parviflora</i>	dicot	Malvaceae
Curly Doc (i)	<i>Rumex crispus</i>	dicot	Polygonaceae
Datura	<i>Datura sp.</i>	dicot	Solanaceae
Five-hook bassia (i)	<i>Bassia hyssopifolia</i>	dicot	Amaranthaceae
Filaree (i)	<i>Erodium mochatum, E. cicutarium</i>	dicot	Geraneaceae
Fleabane	<i>Erigeron sp.</i>	dicot	Asteraceae
Lamb's quarters (i)	<i>Chenopodium album</i>	dicot	Chenopodiaceae
Lotus	<i>Lotus sp.</i>	dicot	Fabaceae
Mares tail	<i>Conyza canadensis</i>	dicot	Asteraceae
Pale smartweed	<i>Persicaria lapathifolia</i>	dicot	Polygonaceae
Palmer's amaranth	<i>Amaranthus palmeri</i>	dicot	Amaranthaceae
Prostrate Pigweed (i)	<i>Amaranthus albus</i>	dicot	Amaranthaceae
Puncture vine (i)	<i>Tibulus terrestris</i>	dicot	Zygophyllaceae
Ragweed (i)	<i>Ambrosia sp.</i>	dicot	Asteraceae
Russian thistle (i)	<i>Xanthium strumarium L.</i>	dicot	Asteraceae
Sunflower, annual	<i>Helianthus annuus</i>	dicot	Asteraceae
Telegraph weed	<i>Heterotheca grandiflora</i>	dicot	Asteraceae

Tree of heaven (i)	<i>Ailanthus altissima</i>	dicot	Simaroubaceae
Valley oak	<i>Quercus lobata</i>	dicot	Fagaceae
Wire lettuce	<i>Stephanomeria sp.</i>	dicot	Asteraceae

PLANT SPECIES STATUS

TOTAL Number of NATIVE Species: 11

TOTAL Number of INTRODUCED Species: 19

GRAND TOTAL OF ALL PLANT SPECIES: 30

APPENDIX B: Vertebrate Animals of the Subject Property

Vertebrate Animals of the Subject Property

Species observed includes species which were identified by tracks, dens, vocalizations, and other sign.

CSC = California State Species of Special Concern

I = an Introduced (aka invasive, exotic or non-native) species

Bird families and species are listed in phylogenetic order based on the Check-list of North American Birds: Species of Birds of North America from the Arctic through Panama, Including the West Indies and Hawaiian Islands. 7th ed. (American Ornithologist's Union, 1998).

Class: **AVES. Birds**

Order: **CHARADRIIFORMES. Shorebirds, Gulls, and Alcids**

Family: **CHARADRIIDAE. Plovers**

Charadrius vociferous killdeer

Order: **COLUMBIFORMES**

Family: **COLUMBIDAE. Pigeons and Doves**

Columba livia rock dove
Zenaida macroura Mourning dove

Order: **APODIFORMES**

Family: **TROCHILIDAE. Hummingbirds**

Calypte anna Anna's hummingbird

Order: **PICOFORMES**

Family: **PICINAE. Woodpeckers**

Colaptes auratus northern flicker

Order: **PASSERIFORMES. Perching birds**

Family: **CORVIDAE. Jays, Magpies, and Crows**

Aphelocoma californica western scrub-jay

Family: **MIMIDAE. Mockingbirds and Thrashers**

Mimus polyglottos northern mockingbird

Family: **ICTERIDAE. Blackbirds**

Molothrus ater brown-headed cowbird

Class: **AMPHIBIA**

Order: **ANURA**

Family: **RANIDAE**

Lithobates catesbeianus

Bullfrog

Class: **MAMMALIA. Mammals**

Order: **RODENTIA. Squirrels, Rats, Mice, and Relatives**

Family: **SCIURIDAE. Squirrels**

Thomomys bottae

Botta's pocket gopher

Otospermophilus beecheyi

California ground squirrel

Order: **CARNIVORA.**

Family: **PROCYONIDAE.**

Procyon lotor

raccoon

VERTEBRATE SPECIES OBSERVED ON THE SEQUOIA DRIVE-IN BUSINESS PARK:

AMPHIBIANS: 1
REPTILES: 0
BIRDS: 8
MAMMALS: 3

TOTAL NUMBER OF VERTEBRATE OBSERVED: 12

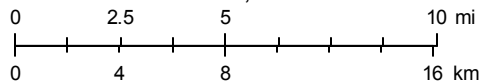
APPENDIX C: MAPS

- 1. California Natural Diversity Database Element Occurrence Map**
- 2. Site Map with Observations**
- 3. National Wetlands Inventory Map**

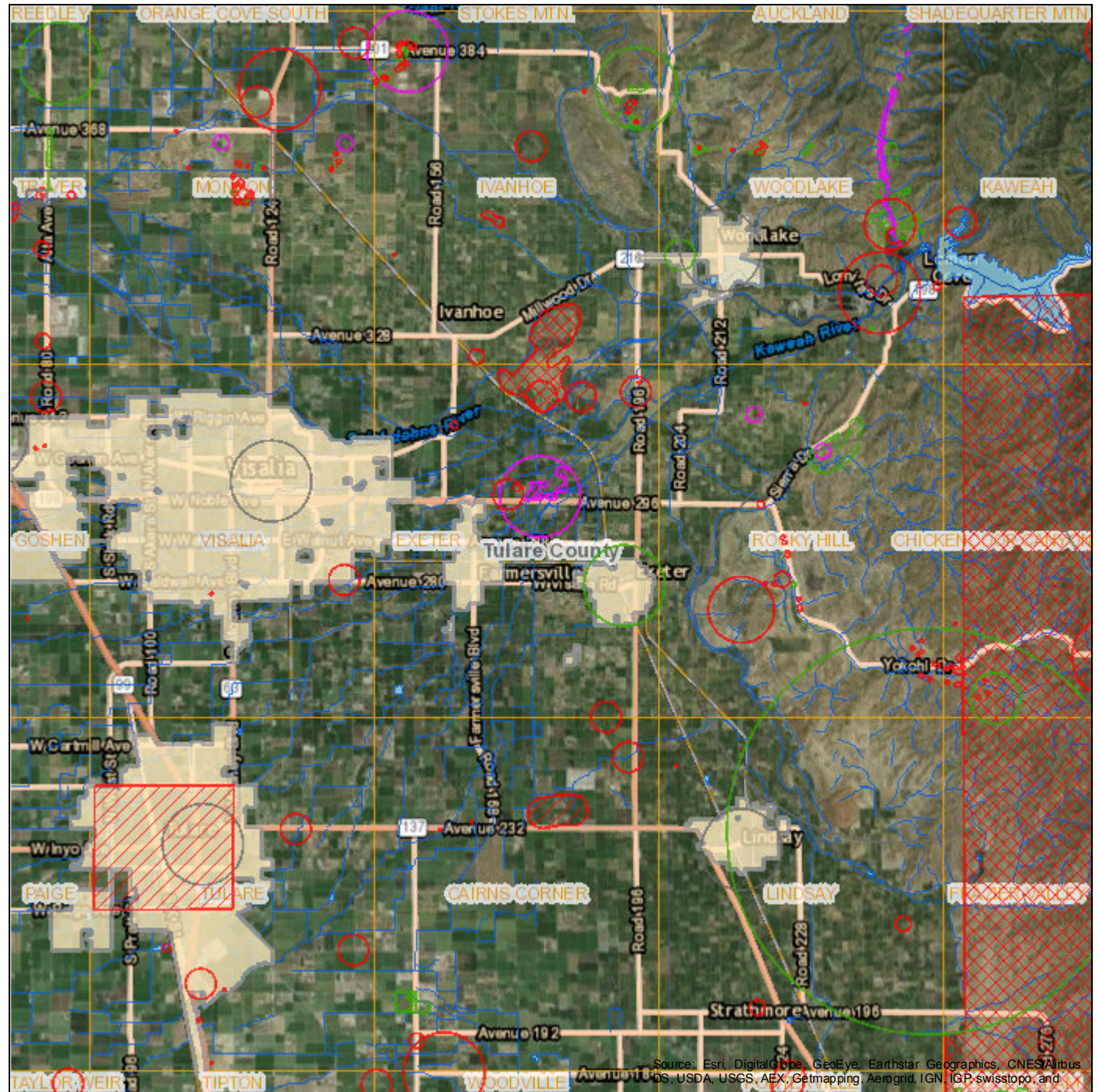
Sequoia Drive-in Business Park

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terrestrial Comm. (80m)
- Terrestrial Comm. (specific)
- Terrestrial Comm. (non-specific)
- Terrestrial Comm. (circular)
- Aquatic Comm. (80m)
- Aquatic Comm. (specific)
- Aquatic Comm. (non-specific)
- Aquatic Comm. (circular)
- Multiple (80m)
- Multiple (specific)
- Multiple (non-specific)
- Multiple (circular)
- Sensitive EO's (Commercial only)

1:288,895



July 22, 2016




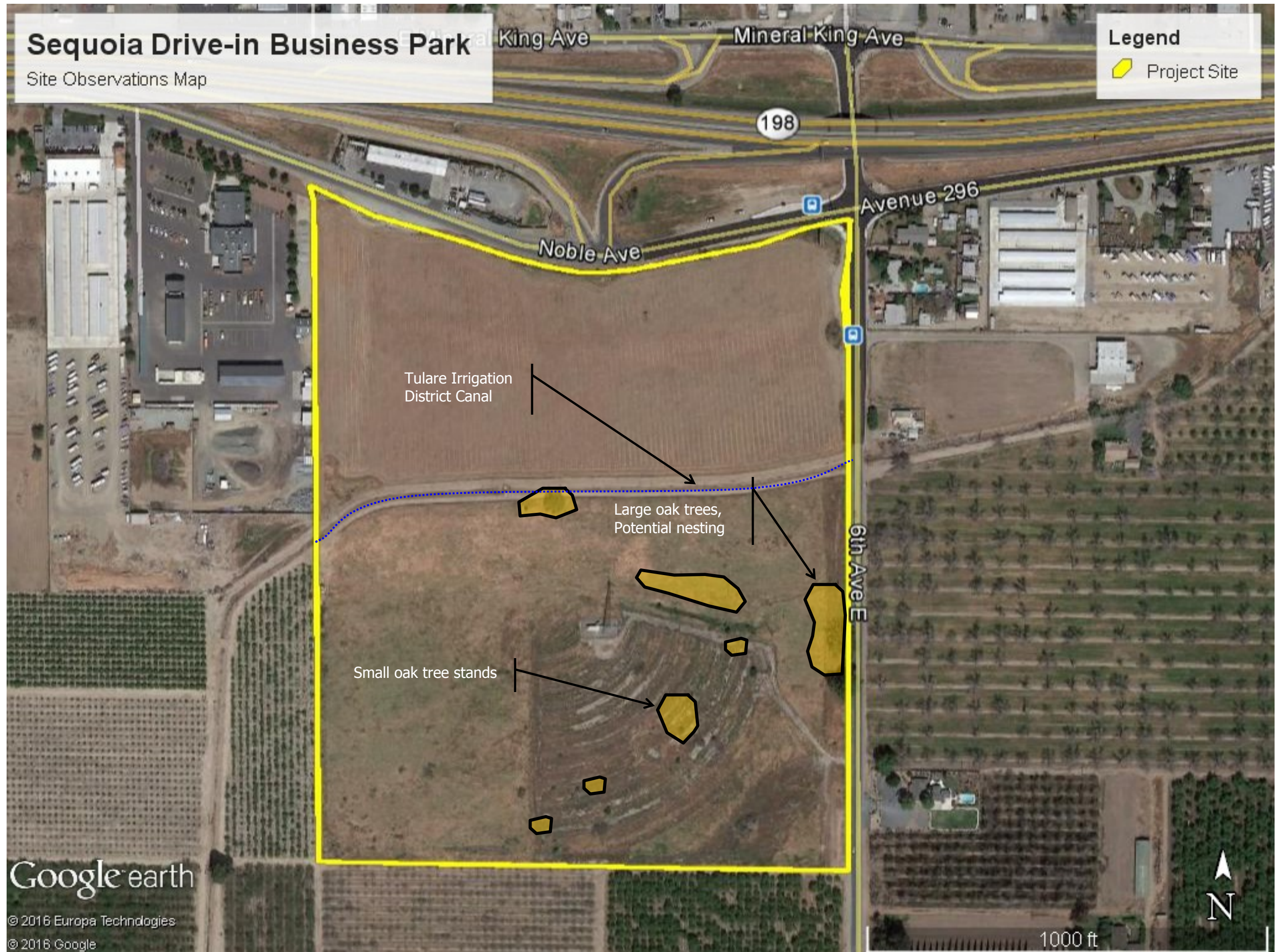
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and others.

Sequoia Drive-in Business Park

Site Observations Map

Legend

 Project Site



Google earth

© 2016 Europa Technologies

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Appendix D: San Joaquin Kit fox Survey Protocol

**U.S. FISH AND WILDLIFE SERVICE
STANDARDIZED RECOMMENDATIONS
FOR PROTECTION OF THE ENDANGERED SAN JOAQUIN KIT FOX
PRIOR TO OR DURING GROUND DISTURBANCE**

Prepared by the Sacramento Fish and Wildlife Office
January 2011

INTRODUCTION

The following document includes many of the San Joaquin kit fox (*Vulpes macrotis mutica*) protection measures typically recommended by the U. S. Fish and Wildlife Service (Service), prior to and during ground disturbance activities. **However, incorporating relevant sections of these guidelines into the proposed project is not the only action required under the Endangered Species Act of 1973, as amended (Act) and does not preclude the need for section 7 consultation or a section 10 incidental take permit for the proposed project.** Project applicants should contact the Service in Sacramento to determine the full range of requirements that apply to your project; the address and telephone number are given at the end of this document. Implementation of the measures presented in this document may be necessary to avoid violating the provisions of the Act, including the prohibition against "take" (defined as killing, harming, or harassing a listed species, including actions that damage or destroy its habitat). These protection measures may also be required under the terms of a biological opinion pursuant to section 7 of the Act resulting in incidental take authorization (authorization), or an incidental take permit (permit) pursuant to section 10 of the Act. The specific measures implemented to protect kit fox for any given project shall be determined by the Service based upon the applicant's consultation with the Service.

The purpose of this document is to make information on kit fox protection strategies readily available and to help standardize the methods and definitions currently employed to achieve kit fox protection. The measures outlined in this document are subject to modification or revision at the discretion of the Service.

IS A PERMIT NECESSARY?

Certain acts need a permit from the Service which includes destruction of any known (occupied or unoccupied) or natal/pupping kit fox dens. Determination of the presence or absence of kit foxes and /or their dens should be made during the environmental review process.

All surveys and monitoring described in this document must be conducted by a qualified biologist and these activities do not require a permit. A qualified biologist (biologist) means any person who has completed at least four years of university training in wildlife biology or a related science and/or has demonstrated field experience in the identification and life history of the San Joaquin kit fox. In addition, the biologist(s) must be able to identify coyote, red fox,

gray fox, and kit fox tracks, and to have seen a kit fox in the wild, at a zoo, or as a museum mount. Resumes of biologists should be submitted to the Service for review and approval prior to any survey or monitoring work occurring.

SMALL PROJECTS

Small projects are considered to be those projects with small foot prints, of approximately one acre or less, such as an individual in-fill oil well, communication tower, or bridge repairs. These projects must stand alone and not be part of, or in any way connected to larger projects (i.e., bridge repair or improvement to serve a future urban development). The Service recommends that on these small projects, the biologist survey the proposed project boundary and a 200-foot area outside of the project footprint to identify habitat features and utilize this information as guidance to situate the project to minimize or avoid impacts. If habitat features cannot be completely avoided, then surveys should be conducted and the Service should be contacted for technical assistance to determine the extent of possible take.

Preconstruction/preactivity surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities or any project activity likely to impact the San Joaquin kit fox. Kit foxes change dens four or five times during the summer months, and change natal dens one or two times per month (Morrell 1972). Surveys should identify kit fox habitat features on the project site and evaluate use by kit fox and, if possible, assess the potential impacts to the kit fox by the proposed activity. The status of all dens should be determined and mapped (see Survey Protocol). Written results of preconstruction/preactivity surveys must be received by the Service within five days after survey completion and prior to the start of ground disturbance and/or construction activities.

If a natal/pupping den is discovered within the project area or within 200-feet of the project boundary, the Service shall be immediately notified and under no circumstances should the den be disturbed or destroyed without prior authorization. If the preconstruction/preactivity survey reveals an active natal pupping or new information, the project applicant should contact the Service immediately to obtain the necessary take authorization/permit.

If the take authorization/permit has already been issued, then the biologist may proceed with den destruction within the project boundary, except natal/pupping den which may not be destroyed while occupied. A take authorization/permit is required to destroy these dens even after they are vacated. Protective exclusion zones can be placed around all known and potential dens which occur outside the project footprint (conversely, the project boundary can be demarcated, see den destruction section).

OTHER PROJECTS

It is likely that all other projects occurring within kit fox habitat will require a take authorization/permit from the Service. This determination would be made by the Service during the early evaluation process (see Survey Protocol). These other projects would include, but are not limited to: Linear projects; projects with large footprints such as urban development; and projects which in themselves may be small but have far reaching impacts (i.e., water storage or conveyance facilities that promote urban growth or agriculture, etc.).

The take authorization/permit issued by the Service may incorporate some or all of the protection measures presented in this document. The take authorization/permit may include measures specific to the needs of the project and those requirements supersede any requirements found in this document.

EXCLUSION ZONES

In order to avoid impacts, construction activities must avoid their dens. The configuration of exclusion zones around the kit fox dens should have a radius measured outward from the entrance or cluster of entrances due to the length of dens underground. The following distances are **minimums**, and if they cannot be followed the Service must be contacted. Adult and pup kit foxes are known to sometimes rest and play near the den entrance in the afternoon, but most above-ground activities begin near sunset and continue sporadically throughout the night. Den definitions are attached as Exhibit A.

Potential den**	50 feet
Atypical den**	50 feet
Known den*	100 feet
Natal/pupping den (occupied <u>and</u> unoccupied)	Service must be contacted

***Known den:** To ensure protection, the exclusion zone should be demarcated by fencing that encircles each den at the appropriate distance and does not prevent access to the den by kit foxes. Acceptable fencing includes untreated wood particle-board, silt fencing, orange construction fencing or other fencing as approved by the Service as long as it has openings for kit fox ingress/egress and keeps humans and equipment out. Exclusion zone fencing should be maintained until all construction related or operational disturbances have been terminated. At that time, all fencing shall be removed to avoid attracting subsequent attention to the dens.

****Potential and Atypical dens:** Placement of 4-5 flagged stakes 50 feet from the den entrance(s) will suffice to identify the den location; fencing will not be required, but the exclusion zone must be observed.

Only essential vehicle operation on existing roads and foot traffic should be permitted. Otherwise, all construction, vehicle operation, material storage, or any other type of surface-disturbing activity should be prohibited or greatly restricted within the exclusion zones.

DESTRUCTION OF DENS

Limited destruction of kit fox dens may be allowed, if avoidance is not a reasonable alternative, provided the following procedures are observed. The value to kit foxes of potential, known, and natal/pupping dens differ and therefore, each den type needs a different level of protection.

Destruction of any known or natal/pupping kit fox den requires take authorization/permit from the Service.

Destruction of the den should be accomplished by careful excavation until it is certain that no kit foxes are inside. The den should be fully excavated, filled with dirt and compacted to ensure that kit foxes cannot reenter or use the den during the construction period. If at any point during excavation, a kit fox is discovered inside the den, the excavation activity shall cease immediately and monitoring of the den as described above should be resumed. Destruction of the den may be completed when in the judgment of the biologist, the animal has escaped, without further disturbance, from the partially destroyed den.

Natal/pupping dens: Natal or pupping dens which are occupied will not be destroyed until the pups and adults have vacated and then only after consultation with the Service. Therefore, project activities at some den sites may have to be postponed.

Known Dens: Known dens occurring within the footprint of the activity must be monitored for three days with tracking medium or an infra-red beam camera to determine the current use. If no kit fox activity is observed during this period, the den should be destroyed immediately to preclude subsequent use.

If kit fox activity is observed at the den during this period, the den should be monitored for at least five consecutive days from the time of the observation to allow any resident animal to move to another den during its normal activity. Use of the den can be discouraged during this period by partially plugging its entrances(s) with soil in such a manner that any resident animal can escape easily. Only when the den is determined to be unoccupied may the den be excavated under the direction of the biologist. If the animal is still present after five or more consecutive days of plugging and monitoring, the den may have to be excavated when, in the judgment of a biologist, it is temporarily vacant, for example during the animal's normal foraging activities.

The Service encourages hand excavation, but realizes that soil conditions may necessitate the use of excavating equipment. However, extreme caution must be exercised.

Potential Dens: If a take authorization/permit has been obtained from the Service, den destruction may proceed without monitoring, unless other restrictions were issued with the take authorization/permit. If no take authorization/permit has been issued, then potential dens should be monitored as if they were known dens. If any den was considered to be a potential den, but is later determined during monitoring or destruction to be currently, or previously used by kit fox (e.g., if kit fox sign is found inside), then all construction activities shall cease and the Service shall be notified immediately.

CONSTRUCTION AND ON-GOING OPERATIONAL REQUIREMENTS

Habitat subject to permanent and temporary construction disturbances and other types of ongoing project-related disturbance activities should be minimized by adhering to the following activities. Project designs should limit or cluster permanent project features to the smallest area possible while still permitting achievement of project goals. To minimize temporary disturbances, all project-related vehicle traffic should be restricted to established roads, construction areas, and other designated areas. These areas should also be included in preconstruction surveys and, to the extent possible, should be established in locations disturbed by previous activities to prevent further impacts.

1. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways; this is particularly important at night when kit foxes are most active. Night-time construction should be minimized to the extent possible. However if it does occur, then the speed limit should be reduced to 10-mph. Off-road traffic outside of designated project areas should be prohibited.
2. To prevent inadvertent entrapment of kit foxes or other animals during the construction phase of a project, all excavated, steep-walled holes or trenches more than 2-feet deep should be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the Service and the California Department of Fish and Game (CDFG) shall be contacted as noted under measure 13 referenced below.
3. Kit foxes are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is

discovered inside a pipe, that section of pipe should not be moved until the Service has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped.

4. All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in securely closed containers and removed at least once a week from a construction or project site.
5. No firearms shall be allowed on the project site.
6. No pets, such as dogs or cats, should be permitted on the project site to prevent harassment, mortality of kit foxes, or destruction of dens.
7. Use of rodenticides and herbicides in project areas should be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the Service. If rodent control must be conducted, zinc phosphide should be used because of a proven lower risk to kit fox.
8. A representative shall be appointed by the project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the Service.
9. An employee education program should be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: A description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site.
10. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be

re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the Service, California Department of Fish and Game (CDFG), and revegetation experts.

11. In the case of trapped animals, escape ramps or structures should be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance.
12. Any contractor, employee, or military or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative. This representative shall contact the CDFG immediately in the case of a dead, injured or entrapped kit fox. The CDFG contact for immediate assistance is State Dispatch at (916)445-0045. They will contact the local warden or Mr. Paul Hoffman, the wildlife biologist, at (530)934-9309. The Service should be contacted at the numbers below.
13. The Sacramento Fish and Wildlife Office and CDFG shall be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The Service contact is the Chief of the Division of Endangered Species, at the addresses and telephone numbers below. The CDFG contact is Mr. Paul Hoffman at 1701 Nimbus Road, Suite A, Rancho Cordova, California 95670, (530) 934-9309.
14. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the Service at the address below.

Any project-related information required by the Service or questions concerning the above conditions or their implementation may be directed in writing to the U.S. Fish and Wildlife Service at:

Endangered Species Division
2800 Cottage Way, Suite W2605
Sacramento, California 95825-1846
(916) 414-6620 or (916) 414-6600

EXHIBIT “A” - DEFINITIONS

"Take" - Section 9 of the Endangered Species Act of 1973, as amended (Act) prohibits the "take" of any federally listed endangered species by any person (an individual, corporation, partnership, trust, association, etc.) subject to the jurisdiction of the United States. As defined in the Act, take means " . . . to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct". Thus, not only is a listed animal protected from activities such as hunting, but also from actions that damage or destroy its habitat.

"Dens" - San Joaquin kit fox dens may be located in areas of low, moderate, or steep topography. Den characteristics are listed below, however, the specific characteristics of individual dens may vary and occupied dens may lack some or all of these features. Therefore, caution must be exercised in determining the status of any den. Typical dens may include the following: (1) one or more entrances that are approximately 5 to 8 inches in diameter; (2) dirt berms adjacent to the entrances; (3) kit fox tracks, scat, or prey remains in the vicinity of the den; (4) matted vegetation adjacent to the den entrances; and (5) manmade features such as culverts, pipes, and canal banks.

"Known den" - Any existing natural den or manmade structure that is used or has been used at any time in the past by a San Joaquin kit fox. Evidence of use may include historical records, past or current radiotelemetry or spotlighting data, kit fox sign such as tracks, scat, and/or prey remains, or other reasonable proof that a given den is being or has been used by a kit fox. The Service discourages use of the terms "active" and "inactive" when referring to any kit fox den because a great percentage of occupied dens show no evidence of use, and because kit foxes change dens often, with the result that the status of a given den may change frequently and abruptly.

"Potential Den" - Any subterranean hole within the species' range that has entrances of appropriate dimensions for which available evidence is insufficient to conclude that it is being used or has been used by a kit fox. Potential dens shall include the following: (1) any suitable subterranean hole; or (2) any den or burrow of another species (e.g., coyote, badger, red fox, or ground squirrel) that otherwise has appropriate characteristics for kit fox use.

"Natal or Pupping Den" - Any den used by kit foxes to whelp and/or rear their pups. Natal/pupping dens may be larger with more numerous entrances than dens occupied exclusively by adults. These dens typically have more kit fox tracks, scat, and prey remains in the vicinity of the den, and may have a broader apron of matted dirt and/or vegetation at one or more entrances. A natal den, defined as a den in which kit fox pups are actually whelped but not necessarily reared, is a more restrictive version of the pupping den. In practice, however, it is difficult to distinguish between the two, therefore, for purposes of this definition either term applies.

"Atypical Den" - Any manmade structure which has been or is being occupied by a San Joaquin kit fox. Atypical dens may include pipes, culverts, and diggings beneath concrete slabs and buildings.

Appendix E: 2012 California Department of Fish and Wildlife Burrowing Owl Staff Report

Staff Report on Burrowing Owl Mitigation

State of California

Natural Resources Agency

Department of Fish and Game

March 7, 2012¹

¹ This document replaces the Department of Fish and Game 1995 Staff Report On Burrowing Owl Mitigation.

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INTRODUCTION AND PURPOSE

Maintaining California's rich biological diversity is dependent on the conservation of species and their habitats. The California Department of Fish and Game (Department) has designated certain species as "species of special concern" when their population viability and survival is adversely affected by risk factors such as precipitous declines or other vulnerability factors (Shuford and Gardali 2008). Preliminary analyses of regional patterns for breeding populations of burrowing owls (*Athene cunicularia*) have detected declines both locally in their central and southern coastal breeding areas, and statewide where the species has experienced modest breeding range retraction (Gervais et al. 2008). In California, threat factors affecting burrowing owl populations include habitat loss, degradation and modification, and eradication of ground squirrels resulting in a loss of suitable burrows required by burrowing owls for nesting, protection from predators, and shelter (See Appendix A).

The Department recognized the need for a comprehensive conservation and mitigation strategy for burrowing owls, and in 1995 directed staff to prepare a report describing mitigation and survey recommendations. This report, "1995 Staff Report on Burrowing Owl Mitigation," (Staff Report) (CDFG 1995), contained Department-recommended burrowing owl and burrow survey techniques and mitigation measures intended to offset the loss of habitat and slow or reverse further decline of this species. Notwithstanding these measures, over the past 15+ years, burrowing owls have continued to decline in portions of their range (DeSante et al. 2007, Wilkerson and Siegel, 2010). The Department has determined that reversing declining population and range trends for burrowing owls will require implementation of more effective conservation actions, and evaluating the efficacy of the Department's existing recommended avoidance, minimization and mitigation approaches for burrowing owls.

The Department has identified three main actions that together will facilitate a more viable, coordinated, and concerted approach to conservation and mitigation for burrowing owls in California. These include:

1. Incorporating burrowing owl comprehensive conservation strategies into landscape-based planning efforts such as Natural Community Conservation Plans (NCCPs) and multi-species Habitat Conservation Plans (HCPs) that specifically address burrowing owls.
2. Developing and implementing a statewide conservation strategy (Burkett and Johnson, 2007) and local or regional conservation strategies for burrowing owls, including the development and implementation of a statewide burrowing owl survey and monitoring plan.
3. Developing more rigorous burrowing owl survey methods, working to improve the adequacy of impacts assessments; developing clear and effective avoidance and minimization measures; and developing mitigation measures to ensure impacts to the species are effectively addressed at the project, local, and/or regional level (the focus of this document).

This Report sets forth the Department's recommendations for implementing the third approach identified above by revising the 1995 Staff Report, drawing from the most relevant and current knowledge and expertise, and incorporating the best scientific information

available pertaining to the species. It is designed to provide a compilation of the best available science for Department staff, biologists, planners, land managers, California Environmental Quality Act (CEQA) lead agencies, and the public to consider when assessing impacts of projects or other activities on burrowing owls.

This revised Staff Report takes into account the California Burrowing Owl Consortium's Survey Protocol and Mitigation Guidelines (CBOC 1993, 1997) and supersedes the survey, avoidance, minimization and mitigation recommendations in the 1995 Staff Report. Based on experiences gained from implementing the 1995 Staff Report, the Department believes revising that report is warranted. This document also includes general conservation goals and principles for developing mitigation measures for burrowing owls.

DEPARTMENT ROLE AND LEGAL AUTHORITIES

The mission of the Department is to manage California's diverse fish, wildlife and plant resources, and the habitats upon which they depend, for their ecological values and for their use and enjoyment by the public. The Department has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitats necessary to maintain biologically sustainable populations of those species (Fish and Game Code (FGC) §1802). The Department, as trustee agency pursuant to CEQA (See CEQA Guidelines, §15386), has jurisdiction by law over natural resources, including fish and wildlife, affected by a project, as that term is defined in Section 21065 of the Public Resources Code. The Department exercises this authority by reviewing and commenting on environmental documents and making recommendations to avoid, minimize, and mitigate potential negative impacts to those resources held in trust for the people of California.

Field surveys designed to detect the presence of a particular species, habitat element, or natural community are one of the tools that can assist biologists in determining whether a species or habitat may be significantly impacted by land use changes or disturbance. The Department reviews field survey data as well as site-specific and regional information to evaluate whether a project's impacts may be significant. This document compiles the best available science for conducting habitat assessments and surveys, and includes considerations for developing measures to avoid impacts or mitigate unavoidable impacts.

CEQA

CEQA requires public agencies in California to analyze and disclose potential environmental impacts associated with a project that the agency will carry out, fund, or approve. Any potentially significant impact must be mitigated to the extent feasible. Project-specific CEQA mitigation is important for burrowing owls because most populations exist on privately owned parcels that, when proposed for development or other types of modification, may be subject to the environmental review requirements of CEQA.

Take

Take of individual burrowing owls and their nests is defined by FGC section 86, and prohibited by sections 3503, 3503.5 and 3513. Take is defined in FGC Section 86 as "hunt, pursue, catch, capture or kill, or attempt to hunt, pursue, catch, capture or kill."

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements various treaties and conventions between the United States and Canada, Japan, Mexico, and Russia for the protection of migratory birds, including the burrowing owl (50 C.F.R. § 10). The MBTA protects migratory bird nests from possession, sale, purchase, barter, transport, import and export, and collection. The other prohibitions of the MBTA - capture, pursue, hunt, and kill - are inapplicable to nests. The regulatory definition of take, as defined in Title 50 C.F.R. part 10.12, means to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to hunt, shoot, wound, kill, trap, capture, or collect. Only the verb "collect" applies to nests. It is illegal to collect, possess, and by any means transfer possession of any migratory bird nest. The MBTA prohibits the destruction of a nest when it contains birds or eggs, and no possession shall occur during the destruction (see Fish and Wildlife Service, Migratory Bird Permit Memorandum, April 15, 2003). Certain exceptions to this prohibition are included in 50 C.F.R. section 21. Pursuant to Fish & Game Code section 3513, the Department enforces the Migratory Bird Treaty Act consistent with rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Treaty Act.

Regional Conservation Plans

Regional multiple species conservation plans offer long-term assurances for conservation of covered species at a landscape scale, in exchange for biologically appropriate levels of incidental take and/or habitat loss as defined in the approved plan. California's NCCP Act (FGC §2800 et seq.) governs such plans at the state level, and was designed to conserve species, natural communities, ecosystems, and ecological processes across a jurisdiction or a collection of jurisdictions. Complementary federal HCPs are governed by the Endangered Species Act (7 U.S.C. § 136, 16 U.S.C. § 1531 et seq.) (ESA). Regional conservation plans (and certain other landscape-level conservation and management plans), may provide conservation for unlisted as well as listed species. Because the geographic scope of NCCPs and HCPs may span many hundreds of thousands of acres, these planning tools have the potential to play a significant role in conservation of burrowing owls, and grasslands and other habitats.

Fish and Game Commission Policies

There are a number of Fish and Game Commission policies (see FGC §2008) that can be applied to burrowing owl conservation. These include policies on: Raptors, Cooperation, Endangered and Threatened Species, Land Use Planning, Management and Utilization of Fish and Wildlife on Federal Lands, Management and Utilization of Fish and Wildlife on Private Lands, and Research.

GUIDING PRINCIPLES FOR CONSERVATION

Unless otherwise provided in a statewide, local, or regional conservation strategy, surveying and evaluating impacts to burrowing owls, as well as developing and implementing avoidance, minimization, and mitigation and conservation measures incorporate the following principles. These principles are a summary of Department staff expert opinion and were used to guide the preparation of this document.

1. Use the Precautionary Principle (Noss et al.1997), by which the alternative of increased conservation is deliberately chosen in order to buffer against incomplete knowledge of burrowing owl ecology and uncertainty about the consequences to burrowing owls of potential impacts, including those that are cumulative.
2. Employ basic conservation biology tenets and population-level approaches when determining what constitutes appropriate avoidance, minimization, and mitigation for impacts. Include mitigation effectiveness monitoring and reporting, and use an adaptive management loop to modify measures based on results.
3. Protect and conserve owls in wild, semi-natural, and agricultural habitats (conserve is defined at FGC §1802).
4. Protect and conserve natural nest burrows (or burrow surrogates) previously used by burrowing owls and sufficient foraging habitat and protect auxiliary “satellite” burrows that contribute to burrowing owl survivorship and natural behavior of owls.

CONSERVATION GOALS FOR THE BURROWING OWL IN CALIFORNIA

It is Department staff expert opinion that the following goals guide and contribute to the short and long-term conservation of burrowing owls in California:

1. Maintain size and distribution of extant burrowing owl populations (allowing for natural population fluctuations).
2. Increase geographic distribution of burrowing owls into formerly occupied historical range where burrowing owl habitat still exists, or where it can be created or enhanced, and where the reason for its local disappearance is no longer of concern.
3. Increase size of existing populations where possible and appropriate (for example, considering basic ecological principles such as carrying capacity, predator-prey relationships, and inter-specific relationships with other species at risk).
4. Protect and restore self-sustaining ecosystems or natural communities which can support burrowing owls at a landscape scale, and which will require minimal long-term management.
5. Minimize or prevent unnatural causes of burrowing owl population declines (e.g., nest burrow destruction, chemical control of rodent hosts and prey).
6. Augment/restore natural dynamics of burrowing owl populations including movement and genetic exchange among populations, such that the species does not require future listing and protection under the California Endangered Species Act (CESA) and/or the federal Endangered Species Act (ESA).
7. Engage stakeholders, including ranchers; farmers; military; tribes; local, state, and federal agencies; non-governmental organizations; and scientific research and education communities involved in burrowing owl protection and habitat management.

ACTIVITIES WITH THE POTENTIAL TO TAKE OR IMPACT BURROWING OWLS

The following activities are examples of activities that have the potential to take burrowing owls, their nests or eggs, or destroy or degrade burrowing owl habitat: grading, disking, cultivation, earthmoving, burrow blockage, heavy equipment compacting and crushing burrow tunnels, levee maintenance, flooding, burning and mowing (if burrows are impacted), and operating wind turbine collisions (collectively hereafter referred to as “projects” or “activities”

whether carried out pursuant to CEQA or not). In addition, the following activities may have impacts to burrowing owl populations: eradication of host burrowers; changes in vegetation management (i.e. grazing); use of pesticides and rodenticides; destruction, conversion or degradation of nesting, foraging, over-wintering or other habitats; destruction of natural burrows and burrow surrogates; and disturbance which may result in harassment of owls at occupied burrows.

PROJECT IMPACT EVALUATIONS

The following three progressive steps are effective in evaluating whether projects will result in impacts to burrowing owls. The information gained from these steps will inform any subsequent avoidance, minimization and mitigation measures. The steps for project impact evaluations are: 1) habitat assessment, 2) surveys, and 3) impact assessment. Habitat assessments are conducted to evaluate the likelihood that a site supports burrowing owl. Burrowing owl surveys provide information needed to determine the potential effects of proposed projects and activities on burrowing owls, and to avoid take in accordance with FGC sections 86, 3503, and 3503.5. Impact assessments evaluate the extent to which burrowing owls and their habitat may be impacted, directly or indirectly, on and within a reasonable distance of a proposed CEQA project activity or non-CEQA project. These three site evaluation steps are discussed in detail below.

Biologist Qualifications

The current scientific literature indicates that only individuals meeting the following minimum qualifications should perform burrowing owl habitat assessments, surveys, and impact assessments:

1. Familiarity with the species and its local ecology;
2. Experience conducting habitat assessments and non-breeding and breeding season surveys, or experience with these surveys conducted under the direction of an experienced surveyor;
3. Familiarity with the appropriate state and federal statutes related to burrowing owls, scientific research, and conservation;
4. Experience with analyzing impacts of development on burrowing owls and their habitat.

Habitat Assessment Data Collection and Reporting

A habitat assessment is the first step in the evaluation process and will assist investigators in determining whether or not occupancy surveys are needed. Refer to Appendix B for a definition of burrowing owl habitat. Compile the detailed information described in Appendix C when conducting project scoping, conducting a habitat assessment site visit and preparing a habitat assessment report.

Surveys

Burrowing owl surveys are the second step of the evaluation process and the best available scientific literature recommends that they be conducted whenever burrowing owl habitat or sign (see Appendix B) is encountered on or adjacent to (within 150 meters) a project site

(Thomsen 1971, Martin 1973). Occupancy of burrowing owl habitat is confirmed at a site when at least one burrowing owl, or its sign at or near a burrow entrance, is observed within the last three years (Rich 1984). Burrowing owls are more detectable during the breeding season with detection probabilities being highest during the nestling stage (Conway et al. 2008). In California, the burrowing owl breeding season extends from 1 February to 31 August (Haug et al. 1993, Thompson 1971) with some variances by geographic location and climatic conditions. Several researchers suggest three or more survey visits during daylight hours (Haug and Diduik 1993, CBOC 1997, Conway and Simon 2003) and recommend each visit occur at least three weeks apart during the peak of the breeding season, commonly accepted in California as between 15 April and 15 July (CBOC 1997). Conway and Simon (2003) and Conway et al. (2008) recommended conducting surveys during the day when most burrowing owls in a local area are in the laying and incubation period (so as not to miss early breeding attempts), during the nesting period, and in the late nestling period when most owls are spending time above ground.

Non-breeding season (1 September to 31 January) surveys may provide information on burrowing owl occupancy, but do not substitute for breeding season surveys because results are typically inconclusive. Burrowing owls are more difficult to detect during the non-breeding season and their seasonal residency status is difficult to ascertain. Burrowing owls detected during non-breeding season surveys may be year-round residents, young from the previous breeding season, pre-breeding territorial adults, winter residents, dispersing juveniles, migrants, transients or new colonizers. In addition, the numbers of owls and their pattern of distribution may differ during winter and breeding seasons. However, on rare occasions, non-breeding season surveys may be warranted (i.e., if the site is believed to be a wintering site only based on negative breeding season results). Refer to Appendix D for information on breeding season and non-breeding season survey methodologies.

Survey Reports

Adequate information about burrowing owls present in and adjacent to an area that will be disturbed by a project or activity will enable the Department, reviewing agencies and the public to effectively assess potential impacts and will guide the development of avoidance, minimization, and mitigation measures. The survey report includes but is not limited to a description of the proposed project or proposed activity, including the proposed project start and end dates, as well as a description of disturbances or other activities occurring on-site or nearby. Refer to Appendix D for details included in a survey report.

Impact Assessment

The third step in the evaluation process is the impact assessment. When surveys confirm occupied burrowing owl habitat in or adjoining the project area, there are a number of ways to assess a project's potential significant impacts to burrowing owls and their habitat. Richardson and Miller (1997) recommended monitoring raptor behavior prior to developing management recommendations and buffers to determine the extent to which individuals have been sensitized to human disturbance. Monitoring results will also provide detail necessary for developing site-specific measures. Postovit and Postovit (1987) recommended an analytical approach to mitigation planning: define the problem (impact), set goals (to guide mitigation development), evaluate and select mitigation methods, and monitor the results.

Define the problem. The impact assessment evaluates all factors that could affect burrowing owls. Postovit and Postovit (1987) recommend evaluating the following in assessing impacts to raptors and planning mitigation: type and extent of disturbance, duration and timing of disturbance, visibility of disturbance, sensitivity and ability to habituate, and influence of environmental factors. They suggest identifying and addressing all potential direct and indirect impacts to burrowing owls, regardless of whether or not the impacts will occur during the breeding season. Several examples are given for each impact category below; however, examples are not intended to be used exclusively.

Type and extent of the disturbance. The impact assessment describes the nature (source) and extent (scale) of potential project impacts on occupied, satellite and unoccupied burrows including acreage to be lost (temporary or permanent), fragmentation/edge being created, increased distance to other nesting and foraging habitat, and habitat degradation. Discuss any project activities that impact either breeding and/or non-breeding habitat which could affect owl home range size and spatial configuration, negatively affect onsite and offsite burrowing owl presence, increase energetic costs, lower reproductive success, increase vulnerability to predation, and/or decrease the chance of procuring a mate.

Duration and timing of the impact. The impact assessment describes the amount of time the burrowing owl habitat will be unavailable to burrowing owls (temporary or permanent) on the site and the effect of that loss on essential behaviors or life history requirements of burrowing owls, the overlap of project activities with breeding and/or non-breeding seasons (timing of nesting and/or non-breeding activities may vary with latitude and climatic conditions, which should be considered with the timeline of the project or activity), and any variance of the project activities in intensity, scale and proximity relative to burrowing owl occurrences.

Visibility and sensitivity. Some individual burrowing owls or pairs are more sensitive than others to specific stimuli and may habituate to ongoing visual or audible disturbance. Site-specific monitoring may provide clues to the burrowing owl's sensitivities. This type of assessment addresses the sensitivity of burrowing owls within their nesting area to humans on foot, and vehicular traffic. Other variables are whether the site is primarily in a rural versus urban setting, and whether any prior disturbance (e.g., human development or recreation) is known at the site.

Environmental factors. The impact assessment discusses any environmental factors that could be influenced or changed by the proposed activities including nest site availability, predators, prey availability, burrowing mammal presence and abundance, and threats from other extrinsic factors such as human disturbance, urban interface, feral animals, invasive species, disease or pesticides.

Significance of impacts. The impact assessment evaluates the potential loss of nesting burrows, satellite burrows, foraging habitat, dispersal and migration habitat, wintering habitat, and habitat linkages, including habitat supporting prey and host burrowers and other essential habitat attributes. This assessment determines if impacts to the species will result in significant impacts to the species locally, regionally and range-wide per CEQA Guidelines §15382 and Appendix G. The significance of the impact to habitat depends on the extent of habitat disturbed and length of time the habitat is unavailable (for example: minor – several days, medium – several weeks to months, high - breeding season affecting juvenile survival,

or over winter affecting adult survival).

Cumulative effects. The cumulative effects assessment evaluates two consequences: 1) the project's proportional share of reasonably foreseeable impacts on burrowing owls and habitat caused by the project or in combination with other projects and local influences having impacts on burrowing owls and habitat, and 2) the effects on the regional owl population resulting from the project's impacts to burrowing owls and habitat.

Mitigation goals. Establishing goals will assist in planning mitigation and selecting measures that function at a desired level. Goals also provide a standard by which to measure mitigation success. Unless specifically provided for through other FGC Sections or through specific regulations, take, possession or destruction of individual burrowing owls, their nests and eggs is prohibited under FGC sections 3503, 3503.5 and 3513. Therefore, a required goal for all project activities is to avoid take of burrowing owls. Under CEQA, goals would consist of measures that would avoid, minimize and mitigate impacts to a less than significant level. For individual projects, mitigation must be roughly proportional to the level of impacts, including cumulative impacts, in accordance with the provisions of CEQA (CEQA Guidelines, §§ 15126.4(a)(4)(B), 15064, 15065, and 16355). In order for mitigation measures to be effective, they must be specific, enforceable, and feasible actions that will improve environmental conditions. As set forth in more detail in Appendix A, the current scientific literature supports the conclusion that mitigation for permanent habitat loss necessitates replacement with an equivalent or greater habitat area for breeding, foraging, wintering, dispersal, presence of burrows, burrow surrogates, presence of fossorial mammal dens, well drained soils, and abundant and available prey within close proximity to the burrow.

MITIGATION METHODS

The current scientific literature indicates that any site-specific avoidance or mitigation measures developed should incorporate the best practices presented below or other practices confirmed by experts and the Department. The Department is available to assist in the development of site-specific avoidance and mitigation measures.

Avoiding. A primary goal is to design and implement projects to seasonally and spatially avoid negative impacts and disturbances that could result in take of burrowing owls, nests, or eggs. Other avoidance measures may include but not be limited to:

- Avoid disturbing occupied burrows during the nesting period, from 1 February through 31 August.
- Avoid impacting burrows occupied during the non-breeding season by migratory or non-migratory resident burrowing owls.
- Avoid direct destruction of burrows through chaining (dragging a heavy chain over an area to remove shrubs), disking, cultivation, and urban, industrial, or agricultural development.
- Develop and implement a worker awareness program to increase the on-site worker's recognition of and commitment to burrowing owl protection.
- Place visible markers near burrows to ensure that farm equipment and other machinery does not collapse burrows.
- Do not fumigate, use treated bait or other means of poisoning nuisance animals in areas where burrowing owls are known or suspected to occur (e.g., sites observed with nesting

owls, designated use areas).

- Restrict the use of treated grain to poison mammals to the months of January and February.

Take avoidance (pre-construction) surveys. Take avoidance surveys are intended to detect the presence of burrowing owls on a project site at a fixed period in time and inform necessary take avoidance actions. Take avoidance surveys may detect changes in owl presence such as colonizing owls that have recently moved onto the site, migrating owls, resident burrowing owls changing burrow use, or young of the year that are still present and have not dispersed. Refer to Appendix D for take avoidance survey methodology.

Site surveillance. Burrowing owls may attempt to colonize or re-colonize an area that will be impacted; thus, the current scientific literature indicates a need for ongoing surveillance at the project site during project activities is recommended. The surveillance frequency/effort should be sufficient to detect burrowing owls if they return. Subsequent to their new occupancy or return to the site, take avoidance measures should assure with a high degree of certainty that take of owls will not occur.

Minimizing. If burrowing owls and their habitat can be protected in place on or adjacent to a project site, the use of buffer zones, visual screens or other measures while project activities are occurring can minimize disturbance impacts. Conduct site-specific monitoring to inform development of buffers (see Visibility and sensitivity above). The following general guidelines for implementing buffers should be adjusted to address site-specific conditions using the impact assessment approach described above. The CEQA lead agency and/or project proponent is encouraged to consult with the Department and other burrowing owl experts for assistance in developing site-specific buffer zones and visual screens.

Buffers. Holroyd et al. (2001) identified a need to standardize management and disturbance mitigation guidelines. For instance, guidelines for mitigating impacts by petroleum industries on burrowing owls and other prairie species (Scobie and Faminow, 2000) may be used as a template for future mitigation guidelines (Holroyd et al. 2001). Scobie and Faminow (2000) developed guidelines for activities around occupied burrowing owl nests recommending buffers around low, medium, and high disturbance activities, respectively (see below).

Recommended restricted activity dates and setback distances by level of disturbance for burrowing owls (Scobie and Faminow 2000).

Location	Time of Year	Level of Disturbance		
		Low	Med	High
Nesting sites	April 1-Aug 15	200 m*	500 m	500 m
Nesting sites	Aug 16-Oct 15	200 m	200 m	500 m
Nesting sites	Oct 16-Mar 31	50 m	100 m	500 m

* meters (m)

Based on existing vegetation, human development, and land uses in an area, resource managers may decide to allow human development or resource extraction closer to these area/sites than recommended above. However, if it is decided to allow activities closer than

the setback distances recommended, a broad-scale, long-term, scientifically-rigorous monitoring program ensures that burrowing owls are not detrimentally affected by alternative approaches.

Other minimization measures include eliminating actions that reduce burrowing owl forage and burrowing surrogates (e.g. ground squirrel), or introduce/facilitate burrowing owl predators. Actions that could influence these factors include reducing livestock grazing rates and/or changing the timing or duration of grazing or vegetation management that could result in less suitable habitat.

Burrow exclusion and closure. Burrow exclusion is a technique of installing one-way doors in burrow openings during the non-breeding season to temporarily exclude burrowing owls, or permanently exclude burrowing owls and close burrows after verifying burrows are empty by site monitoring and scoping. Exclusion in and of itself is not a take avoidance, minimization or mitigation method. Eviction of burrowing owls is a potentially significant impact under CEQA.

The long-term demographic consequences of these techniques have not been thoroughly evaluated, and the fate of evicted or excluded burrowing owls has not been systematically studied. Because burrowing owls are dependent on burrows at all times of the year for survival and/or reproduction, evicting them from nesting, roosting, and satellite burrows may lead to indirect impacts or take. Temporary or permanent closure of burrows may result in significant loss of burrows and habitat for reproduction and other life history requirements. Depending on the proximity and availability of alternate habitat, loss of access to burrows will likely result in varying levels of increased stress on burrowing owls and could depress reproduction, increase predation, increase energetic costs, and introduce risks posed by having to find and compete for available burrows. Therefore, exclusion and burrow closure are not recommended where they can be avoided. The current scientific literature indicates consideration of all possible avoidance and minimization measures before temporary or permanent exclusion and closure of burrows is implemented, in order to avoid take.

The results of a study by Trulio (1995) in California showed that burrowing owls passively displaced from their burrows were quickly attracted to adjacent artificial burrows at five of six passive relocation sites. The successful sites were all within 75 meters (m) of the destroyed burrow, a distance generally within a pair's territory. This researcher discouraged using passive relocation to artificial burrows as a mitigation measure for lost burrows without protection of adjacent foraging habitat. The study results indicated artificial burrows were used by evicted burrowing owls when they were approximately 50-100 m from the natural burrow (Thomsen 1971, Haug and Oliphant 1990). Locating artificial or natural burrows more than 100 m from the eviction burrow may greatly reduce the chances that new burrows will be used. Ideally, exclusion and burrow closure is employed only where there are adjacent natural burrows and non-impacted, sufficient habitat for burrowing owls to occupy with permanent protection mechanisms in place. Any new burrowing owl colonizing the project site after the CEQA document has been adopted may constitute changed circumstances that should be addressed in a re-circulated CEQA document.

The current scientific literature indicates that burrow exclusion should only be conducted by qualified biologists (meeting the Biologist's Qualifications above) during the non-breeding

season, before breeding behavior is exhibited and after the burrow is confirmed empty by site surveillance and/or scoping. The literature also indicates that when temporary or permanent burrow exclusion and/or burrow closure is implemented, burrowing owls should not be excluded from burrows unless or until:

- A Burrowing Owl Exclusion Plan (see Appendix E) is developed and approved by the applicable local DFG office;
- Permanent loss of occupied burrow(s) and habitat is mitigated in accordance with the Mitigating Impacts sections below. Temporary exclusion is mitigated in accordance with the item #1 under Mitigating Impacts below.
- Site monitoring is conducted prior to, during, and after exclusion of burrowing owls from their burrows sufficient to ensure take is avoided. Conduct daily monitoring for one week to confirm young of the year have fledged if the exclusion will occur immediately after the end of the breeding season.
- Excluded burrowing owls are documented using artificial or natural burrows on an adjoining mitigation site (if able to confirm by band re-sight).

Translocation (Active relocation offsite >100 meters). At this time, there is little published information regarding the efficacy of translocating burrowing owls, and additional research is needed to determine subsequent survival and breeding success (Klute et al. 2003, Holroyd et al. 2001). Study results for translocation in Florida implied that hatching success may be decreased for populations of burrowing owls that undergo translocation (Nixon 2006). At this time, the Department is unable to authorize the capture and relocation of burrowing owls except within the context of scientific research (FGC §1002) or a NCCP conservation strategy.

Mitigating impacts. Habitat loss and degradation from rapid urbanization of farmland in the core areas of the Central and Imperial valleys is the greatest of many threats to burrowing owls in California (Shuford and Gardali, 2008). At a minimum, if burrowing owls have been documented to occupy burrows (see Definitions, Appendix B) at the project site in recent years, the current scientific literature supports the conclusion that the site should be considered occupied and mitigation should be required by the CEQA lead agency to address project-specific significant and cumulative impacts. Other site-specific and regionally significant and cumulative impacts may warrant mitigation. The current scientific literature indicates the following to be best practices. If these best practices cannot be implemented, the lead agency or lead investigator may consult with the Department to develop effective mitigation alternatives. The Department is also available to assist in the identification of suitable mitigation lands.

1. Where habitat will be temporarily disturbed, restore the disturbed area to pre-project condition including decompacting soil and revegetating. Permanent habitat protection may be warranted if there is the potential that the temporary impacts may render a nesting site (nesting burrow and satellite burrows) unsustainable or unavailable depending on the time frame, resulting in reduced survival or abandonment. For the latter potential impact, see the permanent impact measures below.
2. Mitigate for permanent impacts to nesting, occupied and satellite burrows and/or burrowing owl habitat such that the habitat acreage, number of burrows and burrowing owls impacted are replaced based on the information provided in Appendix A. Note: A

minimum habitat replacement recommendation is not provided here as it has been shown to serve as a default, replacing any site-specific analysis and discounting the wide variation in natal area, home range, foraging area, and other factors influencing burrowing owls and burrowing owl population persistence in a particular area.

3. Mitigate for permanent impacts to nesting, occupied and satellite burrows and burrowing owl habitat with (a) permanent conservation of similar vegetation communities (grassland, scrublands, desert, urban, and agriculture) to provide for burrowing owl nesting, foraging, wintering, and dispersal (i.e., during breeding and non-breeding seasons) comparable to or better than that of the impact area, and (b) sufficiently large acreage, and presence of fossorial mammals. The mitigation lands may require habitat enhancements including enhancement or expansion of burrows for breeding, shelter and dispersal opportunity, and removal or control of population stressors. If the mitigation lands are located adjacent to the impacted burrow site, ensure the nearest neighbor artificial or natural burrow clusters are at least within 210 meters (Fisher et al. 2007).
4. Permanently protect mitigation land through a conservation easement deeded to a non-profit conservation organization or public agency with a conservation mission, for the purpose of conserving burrowing owl habitat and prohibiting activities incompatible with burrowing owl use. If the project is located within the service area of a Department-approved burrowing owl conservation bank, the project proponent may purchase available burrowing owl conservation bank credits.
5. Develop and implement a mitigation land management plan to address long-term ecological sustainability and maintenance of the site for burrowing owls (see Management Plan and Artificial Burrow sections below, if applicable).
6. Fund the maintenance and management of mitigation land through the establishment of a long-term funding mechanism such as an endowment.
7. Habitat should not be altered or destroyed, and burrowing owls should not be excluded from burrows, until mitigation lands have been legally secured, are managed for the benefit of burrowing owls according to Department-approved management, monitoring and reporting plans, and the endowment or other long-term funding mechanism is in place or security is provided until these measures are completed.
8. Mitigation lands should be on, adjacent or proximate to the impact site where possible and where habitat is sufficient to support burrowing owls present.
9. Where there is insufficient habitat on, adjacent to, or near project sites where burrowing owls will be excluded, acquire mitigation lands with burrowing owl habitat away from the project site. The selection of mitigation lands should then focus on consolidating and enlarging conservation areas located outside of urban and planned growth areas, within foraging distance of other conserved lands. If mitigation lands are not available adjacent to other conserved lands, increase the mitigation land acreage requirement to ensure a selected site is of sufficient size. Offsite mitigation may not adequately offset the biological and habitat values impacted on a one to one basis. Consult with the Department when determining offsite mitigation acreages.
10. Evaluate and select suitable mitigation lands based on a comparison of the habitat attributes of the impacted and conserved lands, including but not limited to: type and structure of habitat being impacted or conserved; density of burrowing owls in impacted and conserved habitat; and significance of impacted or conserved habitat to the species range-wide. Mitigate for the highest quality burrowing owl habitat impacted first and foremost when identifying mitigation lands, even if a mitigation site is located outside of

a lead agency's jurisdictional boundary, particularly if the lead agency is a city or special district.

11. Select mitigation lands taking into account the potential human and wildlife conflicts or incompatibility, including but not limited to, human foot and vehicle traffic, and predation by cats, loose dogs and urban-adapted wildlife, and incompatible species management (i.e., snowy plover).
12. Where a burrowing owl population appears to be highly adapted to heavily altered habitats such as golf courses, airports, athletic fields, and business complexes, permanently protecting the land, augmenting the site with artificial burrows, and enhancing and maintaining those areas may enhance sustainability of the burrowing owl population onsite. Maintenance includes keeping lands grazed or mowed with weed-eaters or push mowers, free from trees and shrubs, and preventing excessive human and human-related disturbance (e.g., walking, jogging, off-road activity, dog-walking) and loose and feral pets (chasing and, presumably, preying upon owls) that make the environment uninhabitable for burrowing owls (Wesemann and Rowe 1985, Millsap and Bear 2000, Lincer and Bloom 2007). Items 4, 5 and 6 also still apply to this mitigation approach.
13. If there are no other feasible mitigation options available and a lead agency is willing to establish and oversee a Burrowing Owl Mitigation and Conservation Fund that funds on a competitive basis acquisition and permanent habitat conservation, the project proponent may participate in the lead agency's program.

Artificial burrows. Artificial burrows have been used to replace natural burrows either temporarily or long-term and their long-term success is unclear. Artificial burrows may be an effective addition to in-perpetuity habitat mitigation if they are augmenting natural burrows, the burrows are regularly maintained (i.e., no less than annual, with biennial maintenance recommended), and surrounding habitat patches are carefully maintained. There may be some circumstances, for example at airports, where squirrels will not be allowed to persist and create a dynamic burrow system, where artificial burrows may provide some support to an owl population.

Many variables may contribute to the successful use of artificial burrows by burrowing owls, including pre-existence of burrowing owls in the area, availability of food, predators, surrounding vegetation and proximity, number of natural burrows in proximity, type of materials used to build the burrow, size of the burrow and entrance, direction in which the burrow entrance is facing, slope of the entrance, number of burrow entrances per burrow, depth of the burrow, type and height of perches, and annual maintenance needs (Belthoff and King 2002, Smith et al. 2005, Barclay et al. 2011). Refer to Barclay (2008) and (2011) and to Johnson et al. 2010 (unpublished report) for guidance on installing artificial burrows including recommendations for placement, installation and maintenance.

Any long-term reliance on artificial burrows as natural burrow replacements must include semi-annual to annual cleaning and maintenance and/or replacement (Barclay et al. 2011, Smith and Conway 2005, Alexander et al. 2005) as an ongoing management practice. Alexander et al. (2005), in a study of the use of artificial burrows found that all of 20 artificial burrows needed some annual cleaning and maintenance. Burrows were either excavated by predators, blocked by soil or vegetation, or experienced substrate erosion forming a space beneath the tubing that prevented nestlings from re-entering the burrow.

Mitigation lands management plan. Develop a Mitigation Lands Management Plan for projects that require off-site or on-site mitigation habitat protection to ensure compliance with and effectiveness of identified management actions for the mitigation lands. A suggested outline and related vegetation management goals and monitoring success criteria can be found in Appendix E.

Mitigation Monitoring and Reporting

Verify the compliance with required mitigation measures, the accuracy of predictions, and ensure the effectiveness of all mitigation measures for burrowing owls by conducting follow-up monitoring, and implementing midcourse corrections, if necessary, to protect burrowing owls. Refer to CEQA Guidelines Section 15097 and the CEQA Guidelines for additional guidance on mitigation, monitoring and reporting. Monitoring is qualitatively different from site surveillance; monitoring normally has a specific purpose and its outputs and outcomes will usually allow a comparison with some baseline condition of the site before the mitigation (including avoidance and minimization) was undertaken. Ideally, monitoring should be based on the Before-After Control-Impact (BACI) principle (McDonald et al. 2000) that requires knowledge of the pre-mitigation state to provide a reference point for the state and change in state after the project and mitigation have been implemented.

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Appendix A. Burrowing Owl Natural History and Threats

Diet

Burrowing owl diet includes arthropods, small rodents, birds, amphibians, reptiles, and carrion (Haug et al. 1993).

Breeding

In California, the breeding season for the burrowing owl typically occurs between 1 February and 31 August although breeding in December has been documented (Thompson 1971, Gervais et al. 2008); breeding behavior includes nest site selection by the male, pair formation, copulation, egg laying, hatching, fledging, and post-fledging care of young by the parents. The peak of the breeding season occurs between 15 April and 15 July and is the period when most burrowing owls have active nests (eggs or young). The incubation period lasts 29 days (Coulombe 1971) and young fledge after 44 days (Haug et al. 1993). Note that the timing of nesting activities may vary with latitude and climatic conditions. Burrowing owls may change burrows several times during the breeding season, starting when nestlings are about three weeks old (Haug et al. 1993).

Dispersal

The following discussion is an excerpt from Gervais et al (2008):

“The burrowing owl is often considered a sedentary species (e.g., Thomsen 1971). A large proportion of adults show strong fidelity to their nest site from year to year, especially where resident, as in Florida (74% for females, 83% for males; Millsap and Bear 1997). In California, nest-site fidelity rates were 32%–50% in a large grassland and 57% in an agricultural environment (Ronan 2002, Catlin 2004, Catlin et al. 2005). Differences in these rates among sites may reflect differences in nest predation rates (Catlin 2004, Catlin et al. 2005). Despite the high nest fidelity rates, dispersal distances may be considerable for both juveniles (natal dispersal) and adults (postbreeding dispersal), but this also varied with location (Catlin 2004, Rosier et al. 2006). Distances of 53 km to roughly 150 km have been observed in California for adult and natal dispersal, respectively (D. K. Rosenberg and J. A. Gervais, unpublished data), despite the difficulty in detecting movements beyond the immediate study area (Koenig et al. 1996).”

Habitat

The burrowing owl is a small, long-legged, ground-dwelling bird species, well-adapted to open, relatively flat expanses. In California, preferred habitat is generally typified by short, sparse vegetation with few shrubs, level to gentle topography and well-drained soils (Haug et al. 1993). Grassland, shrub steppe, and desert are naturally occurring habitat types used by the species. In addition, burrowing owls may occur in some agricultural areas, ruderal grassy fields, vacant lots and pastures if the vegetation structure is suitable and there are useable burrows and foraging habitat in proximity (Gervais et al 2008). Unique amongst North

American raptors, the burrowing owl requires underground burrows or other cavities for nesting during the breeding season and for roosting and cover, year round. Burrows used by the owls are usually dug by other species termed host burrowers. In California, California ground squirrel (*Spermophilus beecheyi*) and round-tailed ground squirrel (*Citellus tereticaudus*) burrows are frequently used by burrowing owls but they may use dens or holes dug by other fossorial species including badger (*Taxidea taxus*), coyote (*Canis latrans*), and fox (e.g., San Joaquin kit fox, *Vulpes macrotis mutica*; Ronan 2002). In some instances, owls have been known to excavate their own burrows (Thompson 1971, Barclay 2007). Natural rock cavities, debris piles, culverts, and pipes also are used for nesting and roosting (Rosenberg et al. 1998). Burrowing owls have been documented using artificial burrows for nesting and cover (Smith and Belthoff, 2003).

Foraging habitat. Foraging habitat is essential to burrowing owls. The following discussion is an excerpt from Gervais et al. (2008):

“Useful as a rough guide to evaluating project impacts and appropriate mitigation for burrowing owls, adult male burrowing owls home ranges have been documented (calculated by minimum convex polygon) to comprise anywhere from 280 acres in intensively irrigated agroecosystems in Imperial Valley (Rosenberg and Haley 2004) to 450 acres in mixed agricultural lands at Lemoore Naval Air Station, CA (Gervais et al. 2003), to 600 acres in pasture in Saskatchewan, Canada (Haug and Oliphant 1990). But owl home ranges may be much larger, perhaps by an order of magnitude, in non-irrigated grasslands such as at Carrizo Plain, California (Gervais et al. 2008), based on telemetry studies and distribution of nests. Foraging occurs primarily within 600 m of their nests (within approximately 300 acres, based on a circle with a 600 m radius) during the breeding season.”

Importance of burrows and adjacent habitat. Burrows and the associated surrounding habitat are essential ecological requisites for burrowing owls throughout the year and especially during the breeding season. During the non-breeding season, burrowing owls remain closely associated with burrows, as they continue to use them as refuge from predators, shelter from weather and roost sites. Resident populations will remain near the previous season’s nest burrow at least some of the time (Coulombe 1971, Thomsen 1971, Botelho 1996, LaFever et al. 2008).

In a study by Lutz and Plumpton (1999) adult males and females nested in formerly used sites at similar rates (75% and 63%, respectively) (Lutz and Plumpton 1999). Burrow fidelity has been reported in some areas; however, more frequently, burrowing owls reuse traditional nesting areas without necessarily using the same burrow (Haug et al. 1993, Dechant et al. 1999). Burrow and nest sites are re-used at a higher rate if the burrowing owl has reproduced successfully during the previous year (Haug et al. 1993) and if the number of burrows isn’t limiting nesting opportunity.

Burrowing owls may use “satellite” or non-nesting burrows, moving young at 10-14 days, presumably to reduce risk of predation (Desmond and Savidge 1998) and possibly to avoid nest parasites (Dechant et al. 1999). Successful nests in Nebraska had more active satellite burrows within 75 m of the nest burrow than unsuccessful nests (Desmond and Savidge

1999). Several studies have documented the number of satellite burrows used by young and adult burrowing owls during the breeding season as between one and 11 burrows with an average use of approximately five burrows (Thompson 1984, Haug 1985, Haug and Oliphant 1990). Supporting the notion of selecting for nest sites near potential satellite burrows, Ronan (2002) found burrowing owl families would move away from a nest site if their satellite burrows were experimentally removed through blocking their entrance.

Habitat adjacent to burrows has been documented to be important to burrowing owls. Gervais et al. (2003) found that home range sizes of male burrowing owls during the nesting season were highly variable within but not between years. Their results also suggested that owls concentrate foraging efforts within 600 meters of the nest burrow, as was observed in Canada (Haug and Oliphant 1990) and southern California (Rosenberg and Haley 2004). James et al. (1997), reported habitat modification factors causing local burrowing owl declines included habitat fragmentation and loss of connectivity.

In conclusion, the best available science indicates that essential habitat for the burrowing owl in California must include suitable year-round habitat, primarily for breeding, foraging, wintering and dispersal habitat consisting of short or sparse vegetation (at least at some time of year), presence of burrows, burrow surrogates or presence of fossorial mammal dens, well-drained soils, and abundant and available prey within close proximity to the burrow.

Threats to Burrowing Owls in California

Habitat loss. Habitat loss, degradation, and fragmentation are the greatest threats to burrowing owls in California. According to DeSante et al. (2007), “the vast majority of burrowing owls [now] occur in the wide, flat lowland valleys and basins of the Imperial Valley and Great Central Valley [where] for the most part,...the highest rates of residential and commercial development in California are occurring.” Habitat loss from the State’s long history of urbanization in coastal counties has already resulted in either extirpation or drastic reduction of burrowing owl populations there (Gervais et al. 2008). Further, loss of agricultural and other open lands (such as grazed landscapes) also negatively affect owl populations. Because of their need for open habitat with low vegetation, burrowing owls are unlikely to persist in agricultural lands dominated by vineyards and orchards (Gervais et al. 2008).

Control of burrowing rodents. According to Klute et al. (2003), the elimination of burrowing rodents through control programs is a primary factor in the recent and historical decline of burrowing owl populations nationwide. In California, ground squirrel burrows are most often used by burrowing owls for nesting and cover; thus, ground squirrel control programs may affect owl numbers in local areas by eliminating a necessary resource.

Direct mortality. Burrowing owls suffer direct losses from a number of sources. Vehicle collisions are a significant source of mortality especially in the urban interface and where owls nest alongside roads (Haug et al. 1993, Gervais et al. 2008). Road and ditch maintenance, modification of water conveyance structures (Imperial Valley) and disking to control weeds in fallow fields may destroy burrows (Rosenberg and Haley 2004, Catlin and Rosenberg 2006) which may trap or crush owls. Wind turbines at Altamont Pass Wind Resource Area are known to cause direct burrowing owl mortality (Thelander et al. 2003). Exposure to

pesticides may pose a threat to the species but is poorly understood (Klute et al. 2003, Gervais et al. 2008).

Appendix B. Definitions

Some key terms that appear in this document are defined below.

Adjacent habitat means burrowing owl habitat that abuts the area where habitat and burrows will be impacted and rendered non-suitable for occupancy.

Breeding (nesting) season begins as early as 1 February and continues through 31 August (Thomsen 1971, Zarn 1974). The timing of breeding activities may vary with latitude and climatic conditions. The breeding season includes pairing, egg-laying and incubation, and nestling and fledging stages.

Burrow exclusion is a technique of installing one-way doors in burrow openings during the non-breeding season to temporarily exclude burrowing owls or permanently exclude burrowing owls and excavate and close burrows after confirming burrows are empty.

Burrowing owl habitat generally includes, but is not limited to, short or sparse vegetation (at least at some time of year), presence of burrows, burrow surrogates or presence of fossorial mammal dens, well-drained soils, and abundant and available prey.

Burrow surrogates include culverts, piles of concrete rubble, piles of soil, burrows created along soft banks of ditches and canals, pipes, and similar structures.

Civil twilight - Morning civil twilight begins when the geometric center of the sun is 6 degrees below the horizon (civil dawn) and ends at sunrise. Evening civil twilight begins at sunset and ends when the geometric center of the sun reaches 6 degrees below the horizon (civil dusk). During this period there is enough light from the sun that artificial sources of light may not be needed to carry on outdoor activities. This concept is sometimes enshrined in laws, for example, when drivers of automobiles must turn on their headlights (called lighting-up time in the UK); when pilots may exercise the rights to fly aircraft. Civil twilight can also be described as the limit at which twilight illumination is sufficient, under clear weather conditions, for terrestrial objects to be clearly distinguished; at the beginning of morning civil twilight, or end of evening civil twilight, the horizon is clearly defined and the brightest stars are visible under clear atmospheric conditions.

Conservation for burrowing owls may include but may not be limited to protecting remaining breeding pairs or providing for population expansion, protecting and enhancing breeding and essential habitat, and amending or augmenting land use plans to stabilize populations and other specific actions to avoid the need to list the species pursuant to California or federal Endangered Species Acts.

Contiguous means connected together so as to form an uninterrupted expanse in space.

Essential habitat includes nesting, foraging, wintering, and dispersal habitat.

Foraging habitat is habitat within the estimated home range of an occupied burrow, supports suitable prey base, and allows for effective hunting.

Host burrowers include ground squirrels, badgers, foxes, coyotes, gophers etc.

Locally significant species is a species that is not rare from a statewide perspective but is rare or uncommon in a local context such as within a county or region (CEQA §15125 (c)) or is so designated in local or regional plans, policies, or ordinances (CEQA Guidelines, Appendix G). Examples include a species at the outer limits of its known range or occurring in a unique habitat type.

Non-breeding season is the period of time when nesting activity is not occurring, generally September 1 through January 31, but may vary with latitude and climatic conditions.

Occupied site or occupancy means a site that is assumed occupied if at least one burrowing owl has been observed occupying a burrow within the last three years (Rich 1984). Occupancy of suitable burrowing owl habitat may also be indicated by owl sign including its molted feathers, cast pellets, prey remains, eggshell fragments, or excrement at or near a burrow entrance or perch site.

Other impacting activities may include but may not be limited to agricultural practices, vegetation management and fire control, pest management, conversion of habitat from rangeland or natural lands to more intensive agricultural uses that could result in “take”. These impacting activities may not meet the definition of a project under CEQA.

Passive relocation is a technique of installing one-way doors in burrow openings to temporarily or permanently evict burrowing owls and prevent burrow re-occupation.

Peak of the breeding season is between 15 April and 15 July.

Sign includes its tracks, molted feathers, cast pellets (defined as 1-2” long brown to black regurgitated pellets consisting of non-digestible portions of the owls’ diet, such as fur, bones, claws, beetle elytra, or feathers), prey remains, egg shell fragments, owl white wash, nest burrow decoration materials (e.g., paper, foil, plastic items, livestock or other animal manure, etc.), possible owl perches, or other items.

Appendix C. Habitat Assessment and Reporting Details

Habitat Assessment Data Collection and Reporting

Current scientific literature indicates that it would be most effective to gather the data in the manner described below when conducting project scoping, conducting a habitat assessment site visit and preparing a habitat assessment report:

1. Conduct at least one visit covering the entire potential project/activity area including areas that will be directly or indirectly impacted by the project. Survey adjoining areas within 150 m (Thomsen 1971, Martin 1973), or more where direct or indirect effects could potentially extend offsite. If lawful access cannot be achieved to adjacent areas, surveys can be performed with a spotting scope or other methods.
2. Prior to the site visit, compile relevant biological information for the site and surrounding area to provide a local and regional context.
3. Check all available sources for burrowing owl occurrence information regionally prior to a field inspection. The CNDDDB and BIOS (see References cited) may be consulted for known occurrences of burrowing owls. Other sources of information include, but are not limited to, the Proceedings of the California Burrowing Owl Symposium (Barclay et al. 2007), county bird atlas projects, Breeding Bird Survey records, eBIRD (<http://ebird.org>), Gervais et al. (2008), local reports or experts, museum records, and other site-specific relevant information.
4. Identify vegetation and habitat types potentially supporting burrowing owls in the project area and vicinity.
5. Record and report on the following information:
 - a. A full description of the proposed project, including but not limited to, expected work periods, daily work schedules, equipment used, activities performed (such as drilling, construction, excavation, etc.) and whether the expected activities will vary in location or intensity over the project's timeline;
 - b. A regional setting map, showing the general project location relative to major roads and other recognizable features;
 - c. A detailed map (preferably a USGS topo 7.5' quad base map) of the site and proposed project, including the footprint of proposed land and/or vegetation-altering activities, base map source, identifying topography, landscape features, a north arrow, bar scale, and legend;
 - d. A written description of the biological setting, including location (Section, Township, Range, baseline and meridian), acreage, topography, soils, geographic and hydrologic characteristics, land use and management history on and adjoining the site (i.e., whether it is urban, semi-urban or rural; whether there is any evidence of past or current livestock grazing, mowing, disking, or other vegetation management activities);
 - e. An analysis of any relevant, historical information concerning burrowing owl use or occupancy (breeding, foraging, over-wintering) on site or in the assessment area;
 - f. Vegetation type and structure (using Sawyer et al. 2009), vegetation height, habitat types and features in the surrounding area plus a reasonably sized (as supported with logical justification) assessment area; (Note: use caution in discounting habitat based on grass height as it can be a temporary condition variable by season and conditions (such as current grazing regime) or may be distributed as a mosaic).

- g. The presence of burrowing owl individuals or pairs or sign (see Appendix B);
- h. The presence of suitable burrows and/or burrow surrogates (>11 cm in diameter (height and width) and >150 cm in depth) (Johnson et al. 2010), regardless of a lack of any burrowing owl sign and/or burrow surrogates; and burrowing owls and/or their sign that have recently or historically (within the last 3 years) been identified on or adjacent to the site.

Appendix D. Breeding and Non-breeding Season Surveys and Reports

Current scientific literature indicates that it is most effective to conduct breeding and non-breeding season surveys and report in the manner that follows:

Breeding Season Surveys

Number of visits and timing. Conduct 4 survey visits: 1) at least one site visit between 15 February and 15 April, and 2) a minimum of three survey visits, at least three weeks apart, between 15 April and 15 July, with at least one visit after 15 June. Note: many burrowing owl migrants are still present in southwestern California during mid-March, therefore, exercise caution in assuming breeding occupancy early in the breeding season.

Survey method. Rosenberg et al. (2007) confirmed walking line transects were most effective in smaller habitat patches. Conduct surveys in all portions of the project site that were identified in the Habitat Assessment and fit the description of habitat in Appendix A. Conduct surveys by walking straight-line transects spaced 7 m to 20 m apart, adjusting for vegetation height and density (Rosenberg et al. 2007). At the start of each transect and, at least, every 100 m, scan the entire visible project area for burrowing owls using binoculars. During walking surveys, record all potential burrows used by burrowing owls as determined by the presence of one or more burrowing owls, pellets, prey remains, whitewash, or decoration. Some burrowing owls may be detected by their calls, so observers should also listen for burrowing owls while conducting the survey.

Care should be taken to minimize disturbance near occupied burrows during all seasons and not to “flush” burrowing owls especially if predators are present to reduce any potential for needless energy expenditure or burrowing owl mortality. Burrowing owls may flush if approached by pedestrians within 50 m (Conway et al. 2003). If raptors or other predators are present that may suppress burrowing owl activity, return at another time or later date for a follow-up survey.

Check all burrowing owls detected for bands and/or color bands and report band combinations to the Bird Banding Laboratory (BBL). Some site-specific variations to survey methods discussed below may be developed in coordination with species experts and Department staff.

Weather conditions. Poor weather may affect the surveyor’s ability to detect burrowing owls, therefore, avoid conducting surveys when wind speed is >20 km/hr, and there is precipitation or dense fog. Surveys have greater detection probability if conducted when ambient temperatures are >20° C, <12 km/hr winds, and cloud cover is <75% (Conway et al. 2008).

Time of day. Daily timing of surveys varies according to the literature, latitude, and survey method. However, surveys between morning civil twilight and 10:00 AM and two hours before sunset until evening civil twilight provide the highest detection probabilities (Barclay pers. comm. 2012, Conway et al. 2008).

Alternate methods. If the project site is large enough to warrant an alternate method, consult current literature for generally accepted survey methods and consult with the Department on the proposed survey approach.

Additional breeding season site visits. Additional breeding season site visits may be necessary, especially if non-breeding season exclusion methods are contemplated. Detailed information, such as approximate home ranges of each individual or of family units, as well as foraging areas as related to the proposed project, will be important to document for evaluating impacts, planning avoidance measure implementation and for mitigation measure performance monitoring.

Adverse conditions may prevent investigators from determining presence or occupancy. Disease, predation, drought, high rainfall or site disturbance may preclude presence of burrowing owls in any given year. Any such conditions should be identified and discussed in the survey report. Visits to the site in more than one year may increase the likelihood of detection. Also, visits to adjacent known occupied habitat may help determine appropriate survey timing.

Given the high site fidelity shown by burrowing owls (see Appendix A, Importance of burrows), conducting surveys over several years may be necessary when project activities are ongoing, occur annually, or start and stop seasonally. (See Negative surveys).

Non-breeding Season Surveys

If conducting non-breeding season surveys, follow the methods described above for breeding season surveys, but conduct at least four (4) visits, spread evenly, throughout the non-breeding season. Burrowing owl experts and local Department staff are available to assist with interpreting results.

Negative Surveys

Adverse conditions may prevent investigators from documenting presence or occupancy. Disease, predation, drought, high rainfall or site disturbance may preclude presence of burrowing owl in any given year. Discuss such conditions in the Survey Report. Visits to the site in more than one year increase the likelihood of detection and failure to locate burrowing owls during one field season does not constitute evidence that the site is no longer occupied, particularly if adverse conditions influenced the survey results. Visits to other nearby known occupied sites can affirm whether the survey timing is appropriate.

Take Avoidance Surveys

Field experience from 1995 to present supports the conclusion that it would be effective to complete an initial take avoidance survey no less than 14 days prior to initiating ground disturbance activities using the recommended methods described in the Detection Surveys section above. Implementation of avoidance and minimization measures would be triggered by positive owl presence on the site where project activities will occur. The development of avoidance and minimization approaches would be informed by monitoring the burrowing owls.

Burrowing owls may re-colonize a site after only a few days. Time lapses between project activities trigger subsequent take avoidance surveys including but not limited to a final survey conducted within 24 hours prior to ground disturbance.

Survey Reports

Report on the survey methods used and results including the information described in the Summary Report and include the reports within the CEQA documentation:

1. Date, start and end time of surveys including weather conditions (ambient temperature, wind speed, percent cloud cover, precipitation and visibility);
2. Name(s) of surveyor(s) and qualifications;
3. A discussion of how the timing of the survey affected the comprehensiveness and detection probability;
4. A description of survey methods used including transect spacing, point count dispersal and duration, and any calls used;
5. A description and justification of the area surveyed relative to the project area;
6. A description that includes: number of owls or nesting pairs at each location (by nestlings, juveniles, adults, and those of an unknown age), number of burrows being used by owls, and burrowing owl sign at burrows. Include a description of individual markers, such as bands (numbers and colors), transmitters, or unique natural identifying features. If any owls are banded, request documentation from the BBL and bander to report on the details regarding the known history of the banded burrowing owl(s) (age, sex, origins, whether it was previously relocated) and provide with the report if available;
7. A description of the behavior of burrowing owls during the surveys, including feeding, resting, courtship, alarm, territorial defense, and those indicative of parents or juveniles;
8. A list of possible burrowing owl predators present and documentation of any evidence of predation of owls;
9. A detailed map (1:24,000 or closer to show details) showing locations of all burrowing owls, potential burrows, occupied burrows, areas of concentrated burrows, and burrowing owl sign. Locations documented by use of global positioning system (GPS) coordinates must include the datum in which they were collected. The map should include a title, north arrow, bar scale and legend;
10. Signed field forms, photos, etc., as appendices to the field survey report;
11. Recent color photographs of the proposed project or activity site; and
12. Original CNDDDB Field Survey Forms should be sent directly to the Department's CNDDDB office, and copies should be included in the environmental document as an appendix. (<http://www.dfg.ca.gov/bdb/html/cnddb.html>).

Appendix E. Example Components for Burrowing Owl Artificial Burrow and Exclusion Plans

Whereas the Department does not recommend exclusion and burrow closure, current scientific literature and experience from 1995 to present, indicate that the following example components for burrowing owl artificial burrow and exclusion plans, combined with consultation with the Department to further develop these plans, would be effective.

Artificial Burrow Location

If a burrow is confirmed occupied on-site, artificial burrow locations should be appropriately located and their use should be documented taking into consideration:

1. A brief description of the project and project site pre-construction;
2. The mitigation measures that will be implemented;
3. Potential conflicting site uses or encumbrances;
4. A comparison of the occupied burrow site(s) and the artificial burrow site(s) (e.g., vegetation, habitat types, fossorial species use in the area, and other features);
5. Artificial burrow(s) proximity to the project activities, roads and drainages;
6. Artificial burrow(s) proximity to other burrows and entrance exposure;
7. Photographs of the site of the occupied burrow(s) and the artificial burrows;
8. Map of the project area that identifies the burrow(s) to be excluded as well as the proposed sites for the artificial burrows;
9. A brief description of the artificial burrow design;
10. Description of the monitoring that will take place during and after project implementation including information that will be provided in a monitoring report.
11. A description of the frequency and type of burrow maintenance.

Exclusion Plan

An Exclusion Plan addresses the following including but not limited to:

1. Confirm by site surveillance that the burrow(s) is empty of burrowing owls and other species preceding burrow scoping;
2. Type of scope and appropriate timing of scoping to avoid impacts;
3. Occupancy factors to look for and what will guide determination of vacancy and excavation timing (one-way doors should be left in place 48 hours to ensure burrowing owls have left the burrow before excavation, visited twice daily and monitored for evidence that owls are inside and can't escape i.e., look for sign immediately inside the door).
4. How the burrow(s) will be excavated. Excavation using hand tools with refilling to prevent reoccupation is preferable whenever possible (may include using piping to stabilize the burrow to prevent collapsing until the entire burrow has been excavated and it can be determined that no owls reside inside the burrow);
5. Removal of other potential owl burrow surrogates or refugia on site;
6. Photographing the excavation and closure of the burrow to demonstrate success and sufficiency;

7. Monitoring of the site to evaluate success and, if needed, to implement remedial measures to prevent subsequent owl use to avoid take;
8. How the impacted site will continually be made inhospitable to burrowing owls and fossorial mammals (e.g., by allowing vegetation to grow tall, heavy disking, or immediate and continuous grading) until development is complete.

Appendix F. Mitigation Management Plan and Vegetation Management Goals

Mitigation Management Plan

A mitigation site management plan will help ensure the appropriate implementation and maintenance for the mitigation site and persistence of the burrowing owls on the site. For an example to review, refer to Rosenberg et al. (2009). The current scientific literature and field experience from 1995 to present indicate that an effective management plan includes the following:

1. Mitigation objectives;
2. Site selection factors (including a comparison of the attributes of the impacted and conserved lands) and baseline assessment;
3. Enhancement of the conserved lands (enhancement of reproductive capacity, enhancement of breeding areas and dispersal opportunities, and removal or control of population stressors);
4. Site protection method and prohibited uses;
5. Site manager roles and responsibilities;
6. Habitat management goals and objectives:
 - a. Vegetation management goals,
 - i. Vegetation management tools:
 1. Grazing
 2. Mowing
 3. Burning
 4. Other
 - b. Management of ground squirrels and other fossorial mammals,
 - c. Semi-annual and annual artificial burrow cleaning and maintenance,
 - d. Non-natives control – weeds and wildlife,
 - e. Trash removal;
 - a. Property analysis record or other financial analysis to determine long-term management funding,
 - b. Funding schedule;
7. Financial assurances:
 - a. Property analysis record or other financial analysis to determine long-term management funding,
 - b. Funding schedule;
8. Performance standards and success criteria;
9. Monitoring, surveys and adaptive management;
10. Maps;
11. Annual reports.

Vegetation Management Goals

- Manage vegetation height and density (especially in immediate proximity to burrows). Suitable vegetation structure varies across sites and vegetation types, but should generally be at the average effective vegetation height of 4.7 cm (Green and Anthony 1989) and <13 cm average effective vegetation height (MacCracken et al. 1985a).
- Employ experimental prescribed fires (controlled, at a small scale) to manage vegetation structure;

- Vegetation reduction or ground disturbance timing, extent, and configuration should avoid take. While local ordinances may require fire prevention through vegetation management, activities like disking, mowing, and grading during the breeding season can result in take of burrowing owls and collapse of burrows, causing nest destruction. Consult the take avoidance surveys section above for pre-management avoidance survey recommendations;
- Promote natural prey distribution and abundance, especially in proximity to occupied burrows; and
- Promote self-sustaining populations of host burrowers by limiting or prohibiting lethal rodent control measures and by ensuring food availability for host burrowers through vegetation management.

Refer to Rosenberg et al. (2009) for a good discussion of managing grasslands for burrowing owls.

Mitigation Site Success Criteria

In order to evaluate the success of mitigation and management strategies for burrowing owls, monitoring is required that is specific to the burrowing owl management plan. Given limited resources, Barclay et al. (2011) suggests managers focus on accurately estimating annual adult owl populations rather than devoting time to estimating reproduction, which shows high annual variation and is difficult to accurately estimate. Therefore, the key objective will be to determine accurately the number of adult burrowing owls and pairs, and if the numbers are maintained. A frequency of 5-10 years for surveys to estimate population size may suffice if there are no changes in the management of the nesting and foraging habitat of the owls.

Effective monitoring and evaluation of off-site and on-site mitigation management success for burrowing owls includes (Barclay, pers. comm.):

- Site tenacity;
- Number of adult owls present and reproducing;
- Colonization by burrowing owls from elsewhere (by band re-sight);
- Evidence and causes of mortality;
- Changes in distribution; and
- Trends in stressors.

Appendix F: CNDDB Table

Scientific Name	Common Name	Quad	Presence Summary	Federal Status	State Status	Rare Plant Rank	CDFW Status	Other Status
<i>Agelaius tricolor</i>	tricolored blackbird	Rocky Hill	Unlikely	None	None		SSC	BLM_S; IUCN_EN; NABCI_RWL; USFWS_BCC
<i>Agelaius tricolor</i>	tricolored blackbird	Woodlake		None	None		SSC	BLM_S; IUCN_EN; NABCI_RWL; USFWS_BCC
<i>Ambystoma californiense</i>	California tiger salamander	Ivanhoe		Threatened	Threatened		WL	IUCN_VU
<i>Ambystoma californiense</i>	California tiger salamander	Ivanhoe	Unlikely	Threatened	Threatened		WL	IUCN_VU
<i>Ambystoma californiense</i>	California tiger salamander	Monson		Threatened	Threatened		WL	IUCN_VU
<i>Ambystoma californiense</i>	California tiger salamander	Monson		Threatened	Threatened		WL	IUCN_VU
<i>Ambystoma californiense</i>	California tiger salamander	Monson		Threatened	Threatened		WL	IUCN_VU
<i>Ambystoma californiense</i>	California tiger salamander	Monson		Threatened	Threatened		WL	IUCN_VU
<i>Andrena macswaini</i>	An andrenid bee	Tulare	Possible	None	None			
<i>Antrozous pallidus</i>	pallid bat	Exeter	Unlikely	None	None		SSC	BLM_S; IUCN_LC; USFS_S; WBWG_H
<i>Ardea herodias</i>	great blue heron	Woodlake	Unlikely	None	None			CDF_S; IUCN_LC
<i>Athene cunicularia</i>	burrowing owl	Ivanhoe		None	None		SSC	BLM_S; IUCN_LC; USFWS_BCC
<i>Athene cunicularia</i>	burrowing owl	Monson		None	None		SSC	BLM_S; IUCN_LC; USFWS_BCC
<i>Athene cunicularia</i>	burrowing owl	Monson		None	None		SSC	BLM_S; IUCN_LC; USFWS_BCC
<i>Athene cunicularia</i>	burrowing owl	Monson		None	None		SSC	BLM_S; IUCN_LC; USFWS_BCC

<i>Athene cunicularia</i>	burrowing owl	Monson		None	None		SSC	BLM_S; IUCN_LC; USFWS_BCC
<i>Athene cunicularia</i>	burrowing owl	Monson	Possible	None	None		SSC	BLM_S; IUCN_LC; USFWS_BCC
<i>Atriplex cordulata</i> var. <i>erecticaulis</i>	Earlimart orache	Cairns Corner		None	None	1B.2		BLM_S
<i>Atriplex cordulata</i> var. <i>erecticaulis</i>	Earlimart orache	Ivanhoe	Unlikely	None	None	1B.2		BLM_S
<i>Atriplex depressa</i>	brittlescale	Traver	Unlikely	None	None	1B.2		
<i>Atriplex depressa</i>	brittlescale	Visalia		None	None	1B.2		
<i>Atriplex minuscula</i>	lesser saltscale	Cairns Corner		None	None	1B.1		
<i>Atriplex minuscula</i>	lesser saltscale	Ivanhoe	Unlikely	None	None	1B.1		
<i>Atriplex persistens</i>	vernal pool smallscale	Ivanhoe		None	None	1B.2		
<i>Atriplex persistens</i>	vernal pool smallscale	Ivanhoe	Absent	None	None	1B.2		
<i>Atriplex subtilis</i>	subtle orache	Cairns Corn	Unlikely	None	None	1B.2		BLM_S
<i>Bombus crotchii</i>	Crotch bumble bee	Rocky Hill	Possible	None	None			
<i>Bombus crotchii</i>	Crotch bumble bee	Visalia		None	None			
<i>Bombus crotchii</i>	Crotch bumble bee	Woodlake		None	None			
<i>Bombus crotchii</i>	Crotch bumble bee	Woodlake		None	None			
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	Chickencoop Canyon		Threatened	None			IUCN_VU
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	Ivanhoe		Threatened	None			IUCN_VU
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	Ivanhoe		Threatened	None			IUCN_VU
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	Ivanhoe		Threatened	None			IUCN_VU
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	Ivanhoe		Threatened	None			IUCN_VU
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	Monson		Threatened	None			IUCN_VU

<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	Monson		Threatened	None			IUCN_VU
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	Monson		Threatened	None			IUCN_VU
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	Monson		Threatened	None			IUCN_VU
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	Rocky Hill		Threatened	None			IUCN_VU
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	Rocky Hill		Threatened	None			IUCN_VU
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	Rocky Hill		Threatened	None			IUCN_VU
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	Rocky Hill		Threatened	None			IUCN_VU
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	Rocky Hill		Threatened	None			IUCN_VU
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	Rocky Hill		Threatened	None			IUCN_VU
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	Rocky Hill	Absent	Threatened	None			IUCN_VU
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	Woodlake		Threatened	None			IUCN_VU
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	Woodlake		Threatened	None			IUCN_VU
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	Woodlake		Threatened	None			IUCN_VU
<i>Brodiaea insignis</i>	Kaweah brodiaea	Woodlake	Absent	None	Endangered	1B.2		BLM_S; USFS_S
<i>Buteo swainsoni</i>	Swainson's hawk	Cairns Corner		None	Threatened			BLM_S; IUCN_LC; USFWS_BCC
<i>Buteo swainsoni</i>	Swainson's hawk	Cairns Corn	Possible	None	Threatened			BLM_S; IUCN_LC; USFWS_BCC
<i>Buteo swainsoni</i>	Swainson's hawk	Tulare		None	Threatened			BLM_S; IUCN_LC; USFWS_BCC

<i>Buteo swainsoni</i>	Swainson's hawk	Tulare		None	Threatened			BLM_S; IUCN_LC; USFWS_BCC
<i>Buteo swainsoni</i>	Swainson's hawk	Tulare		None	Threatened			BLM_S; IUCN_LC; USFWS_BCC
<i>Buteo swainsoni</i>	Swainson's hawk	Tulare		None	Threatened			BLM_S; IUCN_LC; USFWS_BCC
<i>Caulanthus californicus</i>	California jewelflower	Tulare	Absent	Endangered	Endangered	1B.1		
<i>Chrysis tularensis</i>	Tulare cuckoo wasp	Woodlake	Unlikely	None	None			
<i>Coccyzus americanus occidentalis</i>	western yellow-billed cuckoo	Visalia	Absent	Threatened	Endangered			BLM_S; NABCI_RWL; USFS_S; USFWS_BCC
<i>Delphinium recurvatum</i>	recurved larkspur	Cairns Corn	Unlikely	None	None	1B.2		BLM_S
<i>Delphinium recurvatum</i>	recurved larkspur	Ivanhoe		None	None	1B.2		BLM_S
<i>Delphinium recurvatum</i>	recurved larkspur	Ivanhoe		None	None	1B.2		BLM_S
<i>Delphinium recurvatum</i>	recurved larkspur	Monson		None	None	1B.2		BLM_S
<i>Delphinium recurvatum</i>	recurved larkspur	Woodlake		None	None	1B.2		BLM_S
<i>Desmocerus californicus dimorphus</i>	valley elderberry longhorn beetle	Exeter	Absent	Threatened	None			
<i>Dipodomys nitratoide nitratoide</i>	Tipton kangaroo rat	Woodville	Absent	Endangered	Endangered			IUCN_VU
<i>Emys marmorata</i>	western pond turtle	Visalia	Absent	None	None		SSC	BLM_S; IUCN_VU; USFS_S
<i>Eryngium spinosepalum</i>	spiny-sepaled button-celery	Exeter		None	None	1B.2		
<i>Eryngium spinosepalum</i>	spiny-sepaled button-celery	Ivanhoe		None	None	1B.2		
<i>Eryngium spinosepalum</i>	spiny-sepaled button-celery	Ivanhoe		None	None	1B.2		
<i>Eryngium spinosepalum</i>	spiny-sepaled button-celery	Ivanhoe		None	None	1B.2		

<i>Eryngium spinosepalum</i>	spiny-sepaled button-celery	Ivanhoe	Absent	None	None	1B.2		
<i>Eryngium spinosepalum</i>	spiny-sepaled button-celery	Monson		None	None	1B.2		
<i>Eryngium spinosepalum</i>	spiny-sepaled button-celery	Rocky Hill	Absent	None	None	1B.2		
<i>Eryngium spinosepalum</i>	spiny-sepaled button-celery	Rocky Hill		None	None	1B.2		
<i>Eryngium spinosepalum</i>	spiny-sepaled button-celery	Woodlake		None	None	1B.2		
<i>Eryngium spinosepalum</i>	spiny-sepaled button-celery	Woodlake		None	None	1B.2		
<i>Eryngium spinosepalum</i>	spiny-sepaled button-celery	Woodlake		None	None	1B.2		
<i>Eryngium spinosepalum</i>	spiny-sepaled button-celery	Woodlake		None	None	1B.2		
<i>Eryngium spinosepalum</i>	spiny-sepaled button-celery	Woodlake		None	None	1B.2		
<i>Eryngium spinosepalum</i>	spiny-sepaled button-celery	Woodlake		None	None	1B.2		
<i>Eryngium spinosepalum</i>	spiny-sepaled button-celery	Woodlake		None	None	1B.2		
<i>Eumops perotis californicus</i>	western mastiff bat	Rocky Hill	Unlikely	None	None		SSC	BLM_S; WBWG_H
<i>Eumops perotis californicus</i>	western mastiff bat	Visalia		None	None		SSC	BLM_S; WBWG_H
<i>Eumops perotis californicus</i>	western mastiff bat	Woodlake		None	None		SSC	BLM_S; WBWG_H
<i>Eumops perotis californicus</i>	western mastiff bat	Woodlake		None	None		SSC	BLM_S; WBWG_H
<i>Euphorbia hooveri</i>	Hoover's spurge	Ivanhoe		Threatened	None	1B.2		
<i>Euphorbia hooveri</i>	Hoover's spurge	Ivanhoe	Absent	Threatened	None	1B.2		
<i>Euphorbia hooveri</i>	Hoover's spurge	Monson		Threatened	None	1B.2		
<i>Euphorbia hooveri</i>	Hoover's spurge	Monson		Threatened	None	1B.2		

<i>Euphorbia hooveri</i>	Hoover's spurge	Monson		Threatened	None	1B.2		
<i>Fritillaria striata</i>	striped adobe-lily	Lindsay	Absent	None	Threatened	1B.1		BLM_S; SB_RSABG; SB_USDA; USFS_S
<i>Great Valley Valley Oak Riparian Forest</i>	Great Valley Valley Oak Riparian Forest	Exeter	Present	None	None			
<i>Imperata brevifolia</i>	California satintail	Visalia	Absent	None	None	2B.1		SB_SBBG; USFS_S
<i>Lepidurus packardi</i>	vernal pool tadpole shrimp	Ivanhoe		Endangered	None			IUCN_EN
<i>Lepidurus packardi</i>	vernal pool tadpole shrimp	Ivanhoe		Endangered	None			IUCN_EN
<i>Lepidurus packardi</i>	vernal pool tadpole shrimp	Monson	Absent	Endangered	None			IUCN_EN
<i>Lithobates pipiens</i>	northern leopard frog	Monson		None	None		SSC	IUCN_LC
<i>Lithobates pipiens</i>	northern leopard frog	Monson	Absent	None	None		SSC	IUCN_LC
<i>Lytta hoppingi</i>	Hopping's blister beetle	Visalia	Unlikely	None	None			
<i>Lytta molesta</i>	molestan blister beetle	Lindsay	Unlikely	None	None			
<i>Mimulus pictus</i>	calico monkeyflower	Lindsay		None	None	1B.2		BLM_S
<i>Mimulus pictus</i>	calico monkeyflower	Rocky Hill	Unlikely	None	None	1B.2		BLM_S
<i>Northern Claypan Vernal Pool</i>	Northern Claypan Vernal Pool	Rocky Hill		None	None			
<i>Northern Claypan Vernal Pool</i>	Northern Claypan Vernal Pool	Rocky Hill	Absent	None	None			
<i>Northern Hardpan Vernal Pool</i>	Northern Hardpan Vernal Pool	Ivanhoe		None	None			
<i>Northern Hardpan Vernal Pool</i>	Northern Hardpan Vernal Pool	Monson		None	None			

<i>Northern Hardpan Vernal Pool</i>	Northern Hardpan Vernal Pool	Monson	Absent	None	None			
<i>Orcuttia inaequalis</i>	San Joaquin Valley Orcutt grass	Ivanhoe		Threatened	Endangered	1B.1		
<i>Orcuttia inaequalis</i>	San Joaquin Valley Orcutt grass	Monson	Absent	Threatened	Endangered	1B.1		
<i>Pseudobahia peirsonii</i>	San Joaquin adobe sunburst	Lindsay		Threatened	Endangered	1B.1		SB_RSABG
<i>Pseudobahia peirsonii</i>	San Joaquin adobe sunburst	Rocky Hill		Threatened	Endangered	1B.1		SB_RSABG
<i>Pseudobahia peirsonii</i>	San Joaquin adobe sunburst	Tulare		Threatened	Endangered	1B.1		SB_RSABG
<i>Pseudobahia peirsonii</i>	San Joaquin adobe sunburst	Woodlake	Absent	Threatened	Endangered	1B.1		SB_RSABG
<i>Puccinellia simplex</i>	California alkali grass	Cairns Corner		None	None	1B.2		
<i>Puccinellia simplex</i>	California alkali grass	Monson	Absent	None	None	1B.2		
<i>Spea hammondii</i>	western spadefoot	Ivanhoe		None	None		SSC	BLM_S; IUCN_NT
<i>Spea hammondii</i>	western spadefoot	Ivanhoe		None	None		SSC	BLM_S; IUCN_NT
<i>Spea hammondii</i>	western spadefoot	Monson		None	None		SSC	BLM_S; IUCN_NT
<i>Spea hammondii</i>	western spadefoot	Monson		None	None		SSC	BLM_S; IUCN_NT
<i>Spea hammondii</i>	western spadefoot	Monson		None	None		SSC	BLM_S; IUCN_NT
<i>Spea hammondii</i>	western spadefoot	Woodlake	Unlikely	None	None		SSC	BLM_S; IUCN_NT
<i>Sycamore Alluvial Woodland</i>	Sycamore Alluvial Woodland	Woodlake	Absent	None	None			
<i>Talanites moodyae</i>	Moody's gnaphosid spider	Exeter		None	None			
<i>Talanites moodyae</i>	Moody's gnaphosid spider	Ivanhoe		None	None			
<i>Talanites moodyae</i>	Moody's gnaphosid spider	Ivanhoe		None	None			
<i>Talanites moodyae</i>	Moody's gnaphosid spider	Rocky Hill	Absent	None	None			

<i>Taxidea taxus</i>	American badger	Exeter	Unlikely	None	None		SSC	IUCN_LC
<i>Tuctoria greenei</i>	Greene's tuctoria	Woodlake	Absent	Endangered	Rare	1B.1		
<i>Valley Sacaton Grassland</i>	Valley Sacaton Grassland	Exeter	Absent	None	None			
<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	Cairns Corner		Endangered	Threatened			
<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	Cairns Corner		Endangered	Threatened			
<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	Cairns Corner		Endangered	Threatened			
<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	Exeter		Endangered	Threatened			
<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	Exeter		Endangered	Threatened			
<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	Exeter		Endangered	Threatened			
<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	Exeter		Endangered	Threatened			
<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	Ivanhoe		Endangered	Threatened			
<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	Ivanhoe		Endangered	Threatened			
<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	Lindsay		Endangered	Threatened			
<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	Lindsay		Endangered	Threatened			
<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	Monson		Endangered	Threatened			
<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	Porterville		Endangered	Threatened			
<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	Tulare		Endangered	Threatened			
<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	Tulare		Endangered	Threatened			
<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	Tulare		Endangered	Threatened			
<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	Visalia		Endangered	Threatened			
<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	Woodlake		Endangered	Threatened			
<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	Woodville	Unlikely	Endangered	Threatened			

**Present – Species observed on the site during the study.

Possible – Species reasonably likely to occur because good habitat exists and/or species observed adjacent to the site.

Absent – No habitat is present on the site and there are no historical records on or near the site.

Unlikely - Species reasonably unlikely to occur because no adequate habitat exists and/or species was not observed adjacent to

Federal status:

State status:

FE Listed as
endangered under
the Federal
Endangered Species
Act

SE Listed as
endangered
under the
California
Endangered

FT Listed as
threatened under the
Federal Endangered
Species Act

~~Species Act~~
ST Listed as
threatened
under the
California
Endangered

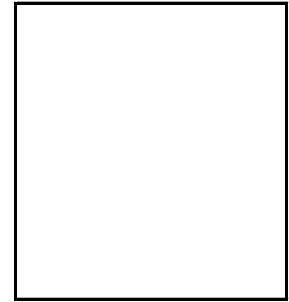
FPT Proposed for
listing as threatened
under the Federal
Endangered Species
Act

~~Species Act~~
CFP Listed as
fully protected
by the
California
Department of
Fish and Game

FSC Species of
concern as identified
by the U.S. Fish and
Wildlife Service

CSC Species of
concern as
identified by
the California
Department of
Fish and Game

1B Plant
species that
are rare,
threatened, or
endangered in
California and
elsewhere.



Appendix D

Tribal Cultural Resources



To: Hector Guerra
Tulare County Resource Management Agency
5961 South Mooney Blvd.
Visalia, CA 93277

Record Search 16-377

Date: September 27, 2016

Re: Sequoia Drive-In Business Park (Castlewood) Project

County: Tulare

Map(s): Exeter 7.5'

CULTURAL RESOURCES RECORDS SEARCH

The California Office of Historic Preservation (OHP) contracts with the California Historical Resources Information System's (CHRIS) regional Information Centers (ICs) to maintain information in the CHRIS inventory and make it available to local, state, and federal agencies, cultural resource professionals, Native American tribes, researchers, and the public. Recommendations made by IC coordinators or their staff regarding the interpretation and application of this information are advisory only. Such recommendations do not necessarily represent the evaluation or opinion of the State Historic Preservation Officer in carrying out the OHP's regulatory authority under federal and state law.

The following are the results of a search of the cultural resource files at the Southern San Joaquin Valley Information Center. These files include known and recorded cultural resources sites, inventory and excavation reports filed with this office, and resources listed on the National Register of Historic Places, Historic Property Directory (3/18/13), California State Historical Landmarks, California Register of Historical Resources, California Inventory of Historic Resources, and California Points of Historical Interest. Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area.

PRIOR CULTURAL RESOURCE STUDIES CONDUCTED WITHIN THE PROJECT AREA AND THE ONE-HALF MILE RADIUS

According to the information in our files, there have been no previous cultural resource studies conducted within the project area. There have been two studies conducted within the one-half mile radius, TU-01020 and TU-01498.

KNOWN/RECORDED CULTURAL RESOURCES WITHIN THE PROJECT AREA AND THE ONE-HALF MILE RADIUS

There is one recorded cultural resource within the project area, P-54-004884. This resource is the Tulare Irrigation Canal. There are six recorded resources within the one-half mile radius, P-54-000016, 003229, 004877, 004880, 004882, and 004883. These resources consist of a prehistoric era mound, an historic period ranch, barn, single-family residence, canal, and drive-in theater.

There are no recorded cultural resources within the project area or radius that are listed in the National Register of Historic Places, the California Register of Historical Resources, the California Points of Historical Interest, California Inventory of Historic Resources, or the California State Historic Landmarks.

COMMENTS AND RECOMMENDATIONS

We understand this project consists of development of a 358,370 square foot business park on vacant land that was previously used for agricultural purposes. Please note that farming does not constitute development, as it does not destroy cultural resources, but merely moves them around within the plow zone. Because this property has not been previously studied for cultural resources, it is unknown if any resources in addition to the canal exist there. Therefore, prior to any future ground disturbance activities, we recommend a qualified, professional archaeologist conduct a field survey to determine if cultural resources are present. A list of professionals is available at www.chrisinfo.org.

We also recommend that you contact the Native American Heritage Commission in Sacramento. They will provide you with a current list of Native American individuals/organizations that can assist you with information regarding cultural resources that may not be included in the CHRIS Inventory and that may be of concern to the Native groups in the area. The Commission can consult their "Sacred Lands Inventory" file in order to determine what sacred resources, if any, exist within this project area and the way in which these resources might be managed. Finally, please consult with the lead agency on this project to determine if any other cultural resource investigation is required. If you need any additional information or have any questions or concerns, please contact our office at (661) 654-2289.

By:



Celeste M. Thomson, Coordinator

Date: September 27, 2016

Please note that invoices for Information Center services will be sent under separate cover from the California State University, Bakersfield Accounting Office.

Southern San Joaquin Valley Information Center
CA Historical Resources Information System
California State University, Bakersfield
Mail Stop: 72 DOB / 4010
9001 Stockdale Highway
Bakersfield, California 93311-1022



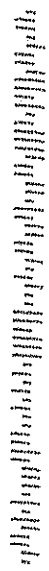
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Tulare County
Resource Management
Agency

SEP 28 2016

95201-453393



NATIVE AMERICAN HERITAGE COMMISSION

1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916) 373-3710
(916) 373-5471 FAX



September 8, 2016

Hector Guerra
Tulare County Resource Management Agency

Sent by E-mail: hguerra@co.tulare.ca.us

RE: Proposed Sequoia Drive-In Business Park Project, City of Visalia; Exeter USGS Quadrangle, Tulare County, California

Dear Mr. Guerra:

Attached is a consultation list of tribes with traditional lands or cultural places located within the boundaries of the above referenced counties. Please note that the intent of the reference codes below is to avoid or mitigate impacts to tribal cultural resources, as defined, for California Environmental Quality Act (CEQA) projects under AB-52.

As of July 1, 2015, Public Resources Code Sections 21080.3.1 and 21080.3.2 **require public agencies** to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose mitigating impacts to tribal cultural resources:

Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section. (Public Resources Code Section 21080.3.1(d))

The law does not preclude agencies from initiating consultation with the tribes that are culturally and traditionally affiliated with their jurisdictions. The NAHC believes that in fact that this is the best practice to ensure that tribes are consulted commensurate with the intent of the law.

In accordance with Public Resources Code Section 21080.3.1(d), formal notification must include a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation. The NAHC believes that agencies should also include with their notification letters information regarding any cultural resources assessment that has been completed on the APE, such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:
 - A listing of any and all known cultural resources have already been recorded on or adjacent to the APE;
 - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
 - If the probability is low, moderate, or high that cultural resources are located in the APE.
 - Whether the records search indicates a low, moderate or high probability that unrecorded cultural resources are located in the potential APE; and
 - If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

- Any report that may contain site forms, site significance, and suggested mitigation measures.

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 in accordance with Government Code Section 6254.10.

3. The results of any Sacred Lands File (SFL) check conducted through Native American Heritage Commission. A search of the SFL was completed for the USGS quadrangle information provided with negative results.

4. Any ethnographic studies conducted for any area including all or part of the potential APE; and

5. Any geotechnical reports regarding all or part of the potential APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS is not exhaustive, and a negative response to these searches does not preclude the existence of a cultural place. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the case that they do, having the information beforehand will help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance we are able to assure that our consultation list contains current information.

If you have any questions, please contact me at my email address: gayle.totton@nahc.ca.gov.

Sincerely,



Gayle Totton, M.A., PhD.
Associate Governmental Program Analyst

**Native American Heritage Commission
Tribal Consultation List
Tulare County
9/8/2016**

***Dumna Wo-Wah Tribal
Government***

Robert Ledger, Chairperson
2216 East Hammond Street
Fresno, CA, 93703
Phone: (559)519-1742
ledgerrobert@ymail.com
Foothill Yokut
Mono

***Kings River Choinumni Farm
Tribe***

Stan Alec,
3515 East Fedora Avenue
Fresno, CA, 93726
Phone: (559) 647-3227
Foothill Yokut

***Kitanemuk & Yowlumne Tejon
Indians***

Delia Dominguez, Chairperson
115 Radio Street
Bakersfield, CA, 93305
Phone: (626)339-6785
deedominguez@juno.com
Kitanemuk
Southern Valley
Yokut

***Picayune Rancheria of
Chukchansi***

Claudia Gonzales, Chairperson
8080 Palm Ave, Suite 207
Fresno, CA, 93711
Phone: (559) 370-4141
Foothill Yokut

***Santa Rosa Rancheria Tachi
Yokut Tribe***

Rueben Barrios, Chairperson
P.O. Box 8
Lemoore, CA, 93245
Phone: (559)924-1278
Fax: (559) 924-3583
Southern Valley
Yokut

Table Mountain Rancheria

Leanne Walker-Grant,
Chairperson
P.O. Box 410
Friant, CA, 93626
Phone: (559)822-2587
Fax: (559) 822-2693
Yokut

Traditional Choinumni Tribe

David Alvarez, Chairperson
2415 E. Houston Avenue
Fresno, CA, 93720
Phone: (559)323-6231
Fax: (559) 292-5057
davealvarez@sbcglobal.net
Foothill Yokut

Tule River Indian Tribe

Neil Peyron, Chairperson
P.O. Box 589
Porterville, CA, 93258
Phone: (559)781-4271
Fax: (559) 781-4610
chairman@tulerivertribe-nsn.gov
Yokut

***Wuksache Indian Tribe/Eshom
Valley Band***

Kenneth Woodrow, Chairperson
1179 Rock Haven Ct.
Salinas, CA, 93906
Phone: (831)443-9702
kwood8934@aol.com
Foothill Yokut
Mono

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 6097.98 of the Public Resources Code and section 5097.98 of the Public Resources Code.

This list is only applicable for consultation with Native American tribes under Public Resources Code Sections 21080.3.1 for the proposed Sequoia Drive-In Business Park, Tulare County.



RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Michael Washam

Benjamin Ruiz, Jr.

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

BENJAMIN RUIZ, JR., INTERIM DIRECTOR

September 14, 2016

Wuksache Tribe
John Sartuche
1028 East "K" Street
Visalia, CA 93292

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Sequoia Drive-In Business Park Project.

Dear Mr. Sartuche,

Pursuant to the provisions of AB 52 and SB 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the CEQA review of the Sequoia Drive-In Business Park Project in order to assist with identifying and/or preserving and/or mitigating project-related impacts to Native American cultural places including:

- Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine; and
- Native American historic, cultural, or sacred site that is listed or may be eligible for listing in the California Register of Historical Resources including historic or prehistoric ruins and any burial ground, archaeological, or historic site.

The County requested a Sacred Lands File (SLF) search through the Native American Heritage Commission (NAHC) on August 31, 2016. The SLF search returned on September 8, 2016, with negative results. However, the NAHC recommended consultation with your Tribe.

The Project is located at 29421 Road 156, the southwest corner of Noble Avenue and Road 156. The Project is adjacent to State Route 198, less than one mile east of the City of Visalia city limits and less than one mile west of the City of Farmersville city limits. The entire 46± acre site is within the Exeter USGS 7.5 minute quadrangle and is located on Assessor Parcel Numbers (APNs) 101-090-014, 101-090-015, 101-100-009 and 101-100-010. The site is located within Section 35, Township 18 South, Range 25 East, MDB&M.

The Applicant proposes to develop the 46.17-acre Project site with a 358,370 square foot business park. The Project includes 48 lots that range from 0.23 to 2.07 acres in size and consists of 43 service commercial lots, two (2) new roadways, stormwater retention basins, an on-site domestic water system, and an existing cellular tower lot. The Tulare Irrigation Canal flows east/west and bisects the Project site. The Project will be developed in four (4) phases. Phase 1 parallels Road 156 north and south of the canal. Phase 2 and Phase 4 will occur south of the canal and, Phase 3 will occur north of the canal and adjacent to Noble Avenue.

The proposed Project site is located on soil classified Nord Fine Sandy Loam, which is considered Prime Farmland if irrigated and either protected from flooding or not frequently flooded during the growing season. The northern and southwestern portions of the Project site are mapped as Farmland of Local Importance while the southeastern portion of the Project site is mapped as Vacant or Disturbed Land by the California Department of Conservation Farmland Mapping and Monitoring Program. The Project site is not enrolled in a Williamson Act Contract. The Project site is located within the East Visalia Urban Development Boundary (UDB) of the Visalia Area Land Use Plan and is currently zoned for service commercial land uses. There are commercial uses located directly west, north, and east of the Project site. The southeastern portion of the Project site was previously a drive-in movie theater. There are currently no agricultural operations occurring on the northern and southwestern portions of the Project site which have been agriculturally unproductive for many years. With the exception of the single cellular tower on-site, the entire site remains in undeveloped open space conditions.

If your Tribe desires to consult with the County on the review of this project, please respond in writing within thirty (30) days of the date of this letter.

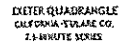
Should the County not receive a response within thirty (30) days, it will be presumed that you have declined consultation. Thank you for your consideration on this matter and please do not hesitate to contact me should you have any questions or need additional information.

Sincerely,



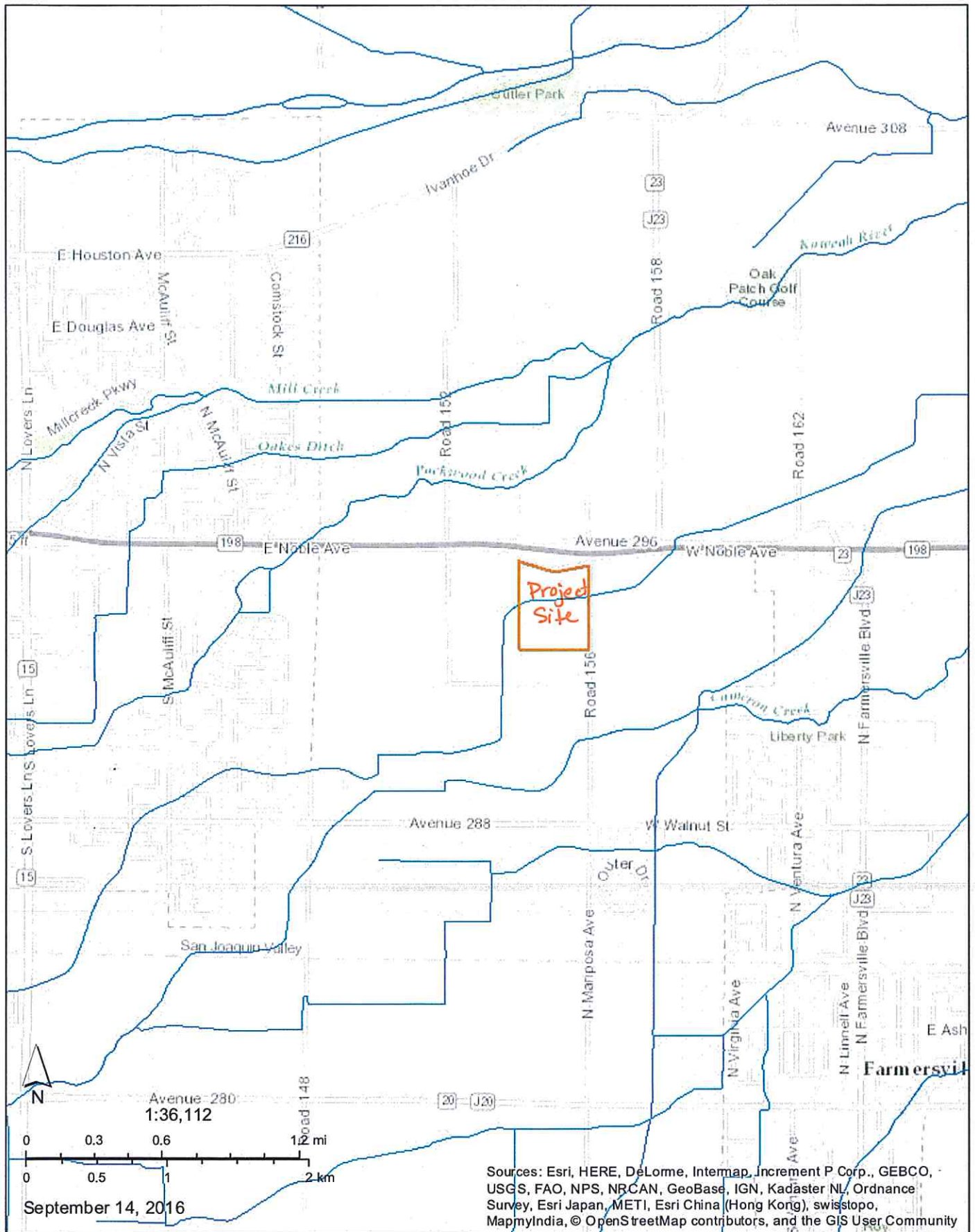
Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

Attachments: US Topo Map (Exeter, 2015)
Project Location Map



EXTER, CA
END

Map of Project Area



Sources: Esri, HERE, DeLorme, Intermap, Increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community



RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD
VISALIA, CA 93277
PHONE (559) 624-7000
FAX (559) 730-2653

Michael Washam	Economic Development and Planning
Benjamin Ruiz, Jr.	Public Works
Sherman Dix	Fiscal Services

BENJAMIN RUIZ, JR., INTERIM DIRECTOR

September 14, 2016

Wuksache Indian Tribe / Eshom Valley Band
Kenneth Woodrow, Chairperson
1179 Rock Haven Ct.
Salinas, CA 93906

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Sequoia Drive-In Business Park Project.

Dear Chairperson Woodrow,

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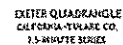
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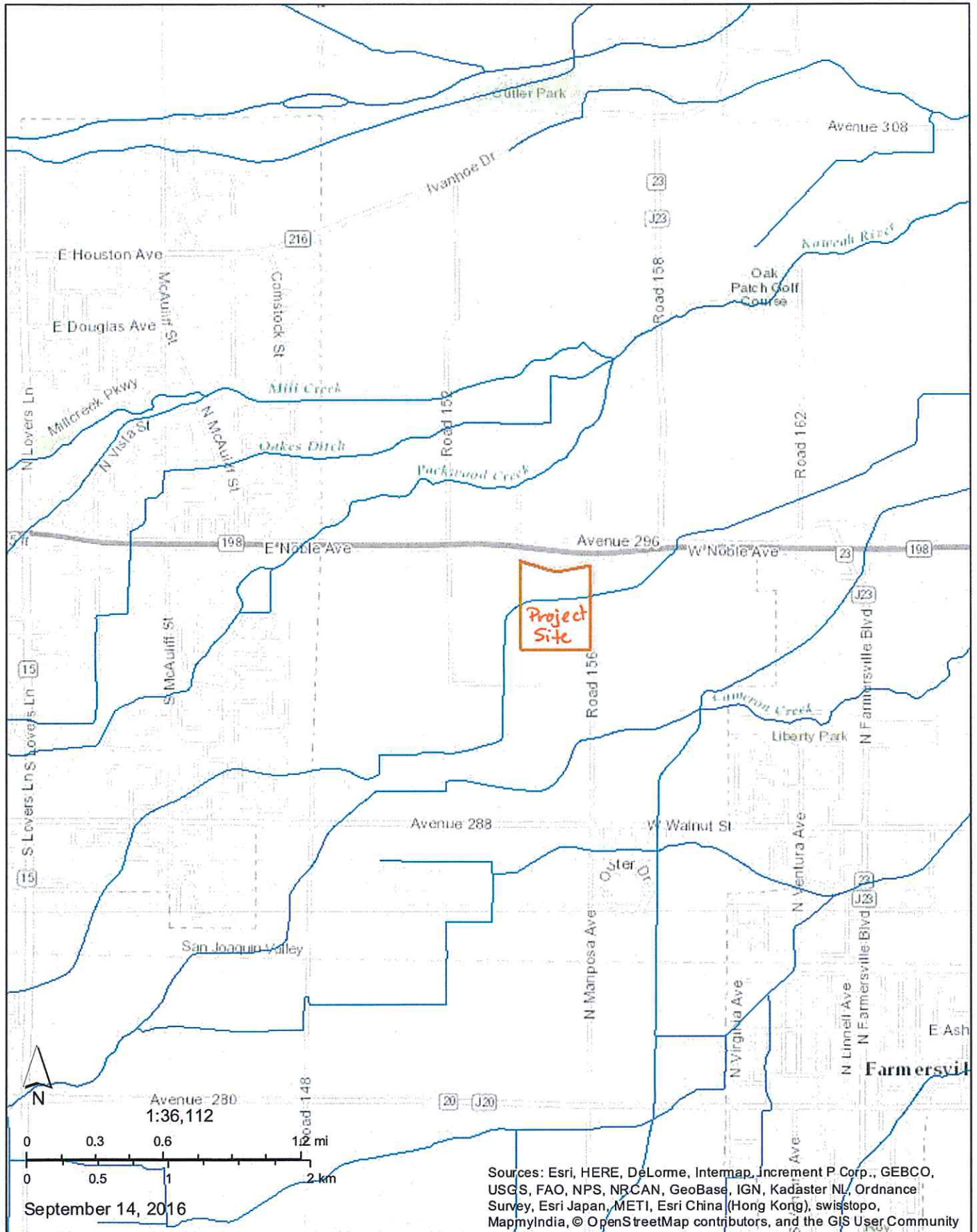


 Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

Attachments: US Topo Map (Exeter, 2015)
Project Location Map



Map of Project Area





RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Michael Washam

Benjamin Ruiz, Jr.

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

BENJAMIN RUIZ, JR., INTERIM DIRECTOR

September 14, 2016

Woodlake Tribe
Jennifer Malone
637 East Lakeview
Woodlake, CA 93286

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Sequoia Drive-In Business Park Project.

Dear Ms. Malone,

Pursuant to the provisions of AB 52 and SB 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the CEQA review of the Sequoia Drive-In Business Park Project in order to assist with identifying and/or preserving and/or mitigating project-related impacts to Native American cultural places including:

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The Applicant proposes to develop the 46.17-acre Project site with a 358,370 square foot business park. The Project includes 48 lots that range from 0.23 to 2.07 acres in size and consists of 43 service commercial lots, two (2) new roadways, stormwater retention basins, an on-site domestic water system, and an existing cellular tower lot. The Tulare Irrigation Canal flows east/west and bisects the Project site. The Project will be developed in four (4) phases. Phase 1 parallels Road 156 north and south of the canal. Phase 2 and Phase 4 will occur south of the canal and, Phase 3 will occur north of the canal and adjacent to Noble Avenue.

The proposed Project site is located on soil classified Nord Fine Sandy Loam, which is considered Prime Farmland if irrigated and either protected from flooding or not frequently flooded during the growing season. The northern and southwestern portions of the Project site are mapped as Farmland of Local Importance while the southeastern portion of the Project site is mapped as Vacant or Disturbed Land by the California Department of Conservation Farmland Mapping and Monitoring Program. The Project site is not enrolled in a Williamson Act Contract. The Project site is located within the East Visalia Urban Development Boundary (UDB) of the Visalia Area Land Use Plan and is currently zoned for service commercial land uses. There are commercial uses located directly west, north, and east of the Project site. The southeastern portion of the Project site was previously a drive-in movie theater. There are currently no agricultural operations occurring on the northern and southwestern portions of the Project site which have been agriculturally unproductive for many years. With the exception of the single cellular tower on-site, the entire site remains in undeveloped open space conditions.

If your Tribe desires to consult with the County on the review of this project, please respond in writing within thirty (30) days of the date of this letter.

Should the County not receive a response within thirty (30) days, it will be presumed that you have declined consultation. Thank you for your consideration on this matter and please do not hesitate to contact me should you have any questions or need additional information.

Sincerely,



for
Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

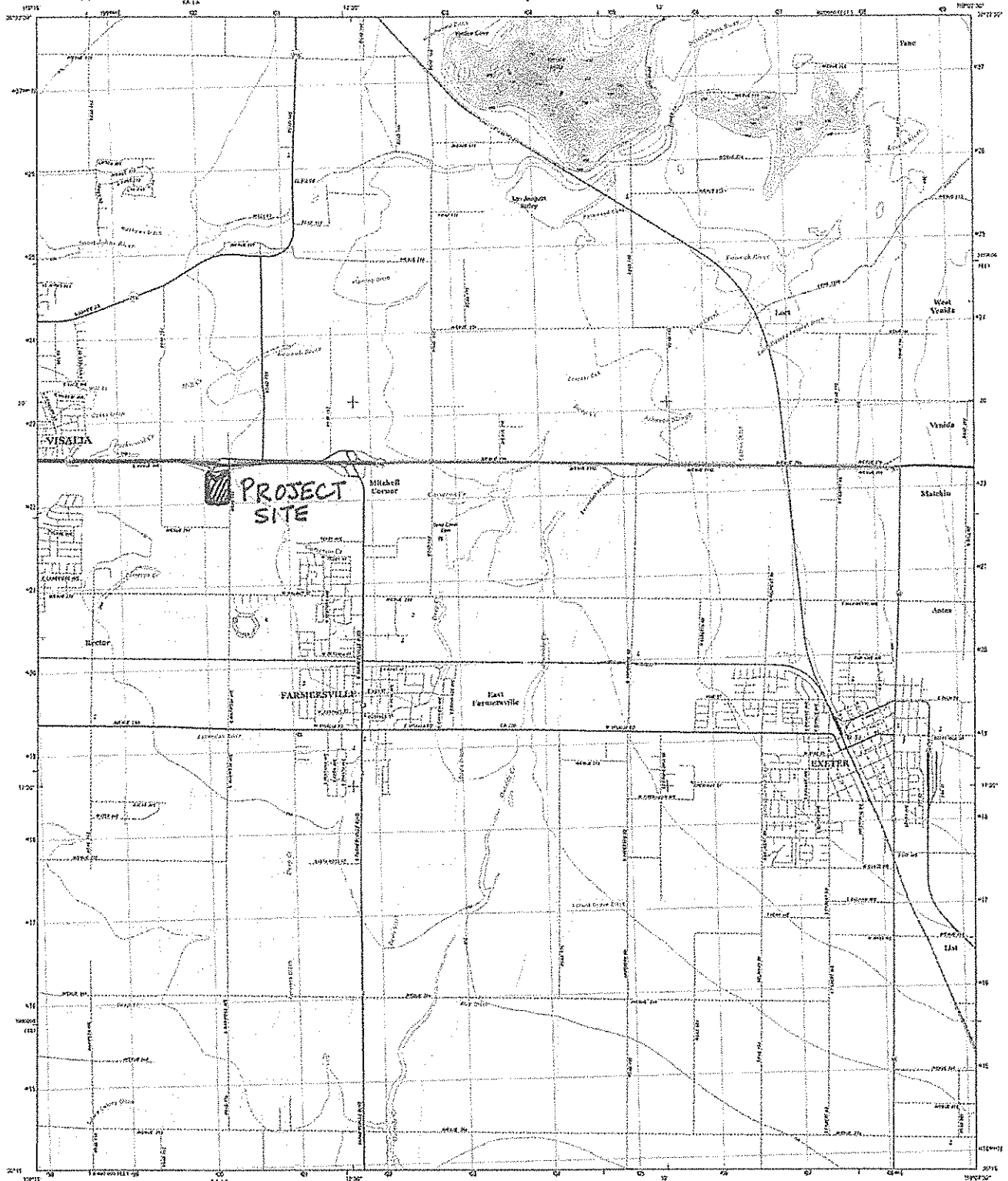
Attachments: US Topo Map (Exeter, 2015)
Project Location Map



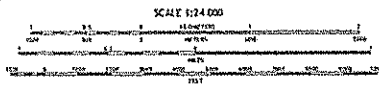
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY



EXETER QUADRANGLE
CALIFORNIA-TULARE CO.
1:50,000 SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
Vertical datum: National Mean Sea Level (MSSL)
Horizontal datum: North American Datum of 1983 (NAD83)
This map is not a legal document. It is intended for informational purposes only. It is not to be used for legal purposes. It is not to be used for legal purposes. It is not to be used for legal purposes.

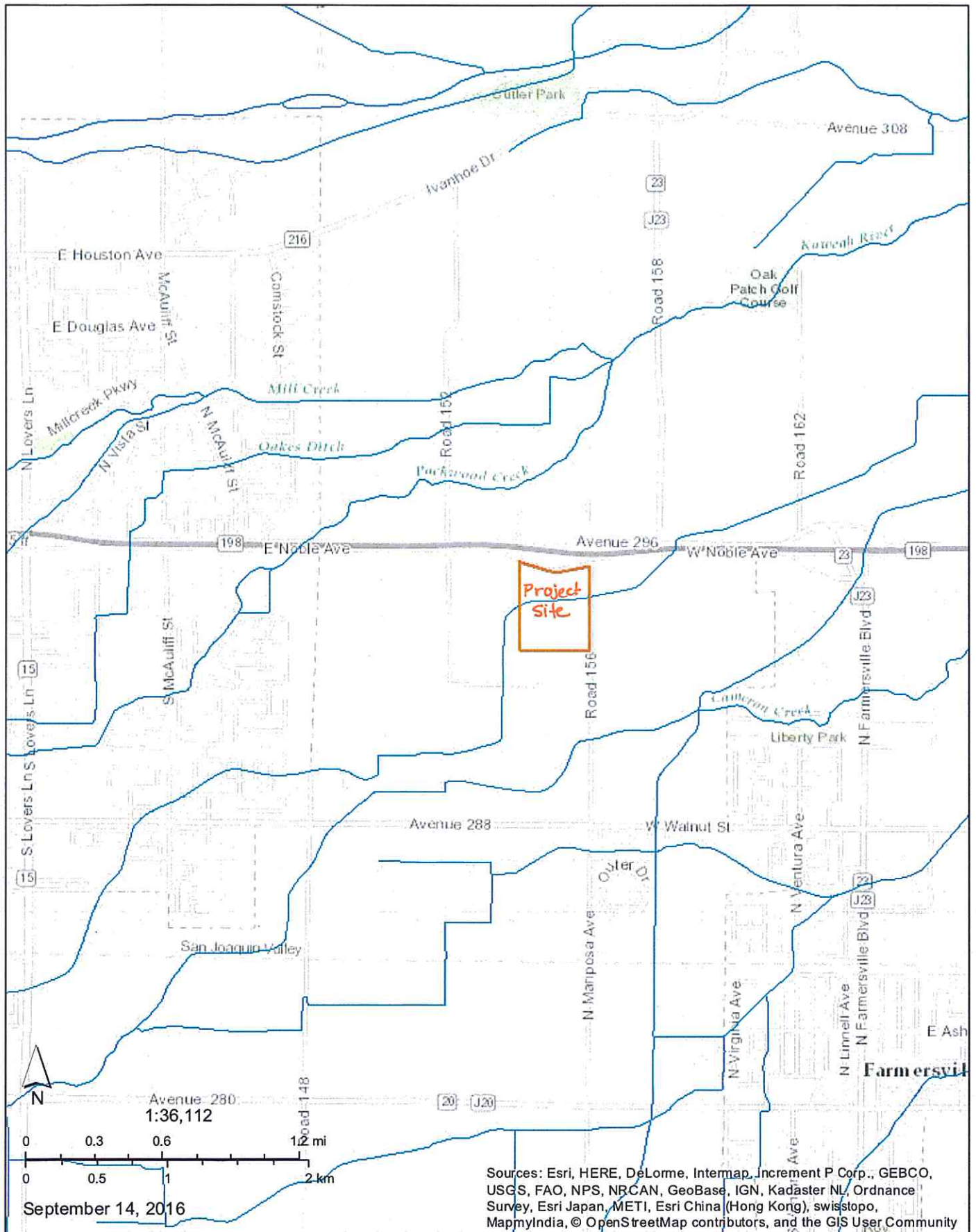


ROAD CLASSIFICATION
Interstate Highway
Federal Highway
State Highway
County Road
Local Road
Trail
Other

1	2	3	4	5	6	7	8	9	10
1	2	3	4	5	6	7	8	9	10
1	2	3	4	5	6	7	8	9	10
1	2	3	4	5	6	7	8	9	10

EXETER, CA
2018

Map of Project Area





RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Michael Washam

Benjamin Ruiz, Jr.

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

BENJAMIN RUIZ, JR., INTERIM DIRECTOR

September 14, 2016

Tule River Indian Tribe
Kerri Vera, Environmental Dept.
P. O. Box 589
Porterville, CA 93258

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Sequoia Drive-In Business Park Project.

Dear Ms. Vera,

Pursuant to the provisions of AB 52 and SB 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the CEQA review of the Sequoia Drive-In Business Park Project in order to assist with identifying and/or preserving and/or mitigating project-related impacts to Native American cultural places including:

- Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine; and
- Native American historic, cultural, or sacred site that is listed or may be eligible for listing in the California Register of Historical Resources including historic or prehistoric ruins and any burial ground, archaeological, or historic site.

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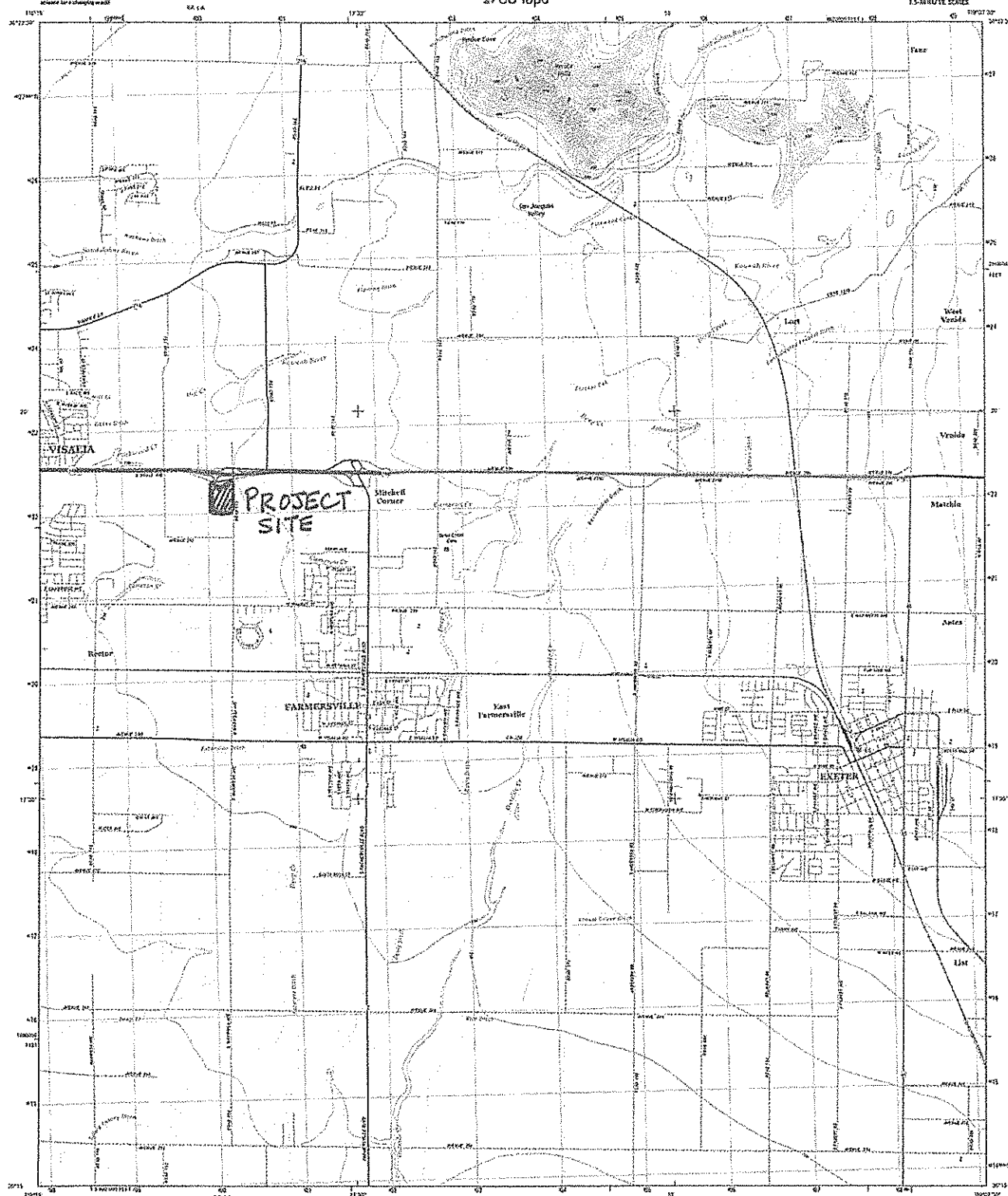
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Sincerely,



por Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

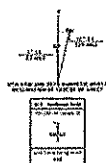
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Project Location Map



Produced by the United States Geological Survey

Proceedings of the American Statistical Association, 1965, 68(324):
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They may be used to signal that a worker's boundaries may be pushed, and that the worker should be aware of the limits. However, they are not intended to be used as a punishment or to signal that a worker is in trouble. They are also not intended to be used as a reward or to signal that a worker is doing well.

[illegible]

SCALE 1:24 000

SCALE 1:24,000

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www.elsevier.com/locate/dbs

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This must not be defined as a transfer to
Grossbritannien (Great Britain) or to the Republic of Ireland.

For more information, contact the author at john@johnmccarthy.com.



REGISTRATION

Category	Item	Value	Unit
Food	Meat	100	kg
Food	Vegetables	50	kg
Food	Fruit	20	kg
Food	Grains	10	kg
Food	Dairy	5	kg
Food	Eggs	10	kg
Food	Seafood	5	kg
Food	Snacks	5	kg
Food	Beverages	5	kg
Food	Condiments	5	kg
Food	Spices	5	kg
Food	Herbs	5	kg
Food	Flowers	5	kg
Food	Seeds	5	kg
Food	Oil	5	kg
Food	Sugar	5	kg
Food	Salt	5	kg
Food	Vinegar	5	kg
Food	Wine	5	kg
Food	Beer	5	kg
Food	Spirits	5	kg
Food	Alcohol	5	kg
Food	Drugs	5	kg
Food	Medicine	5	kg
Food	Herbal	5	kg
Food	Tea	5	kg
Food	Coffee	5	kg
Food	Chocolate	5	kg
Food	Candy	5	kg
Food	Sweets	5	kg
Food	Ice Cream	5	kg
Food	Yogurt	5	kg
Food	Cheese	5	kg
Food	Butter	5	kg
Food	Milk	5	kg
Food	Flour	5	kg
Food	Starch	5	kg
Food	Gluten	5	kg
Food	Protein	5	kg
Food	Fiber	5	kg
Food	Carbohydrate	5	kg
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Food	Vitamin	5	kg
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Food	Enzyme	5	kg
Food	Probiotic	5	kg
Food	Prebiotic	5	kg
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Food	Carotenoid	5	kg
Food	Monoterpene	5	kg
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Food	Diterpene	5	kg
Food	Triterpene	5	kg
Food	Polycyclic	5	kg
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Food	Glycoside	5	kg
Food	Phenol	5	kg
Food	Aldehyde	5	kg
Food	Ketone	5	kg
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Food	Copper	5	kg
Food	Iron	5	kg
Food	Nickel	5	kg
Food	Cobalt	5	kg
Food	Chromium	5	kg

 Solid circle
 Hollow circle
 Circle with cross

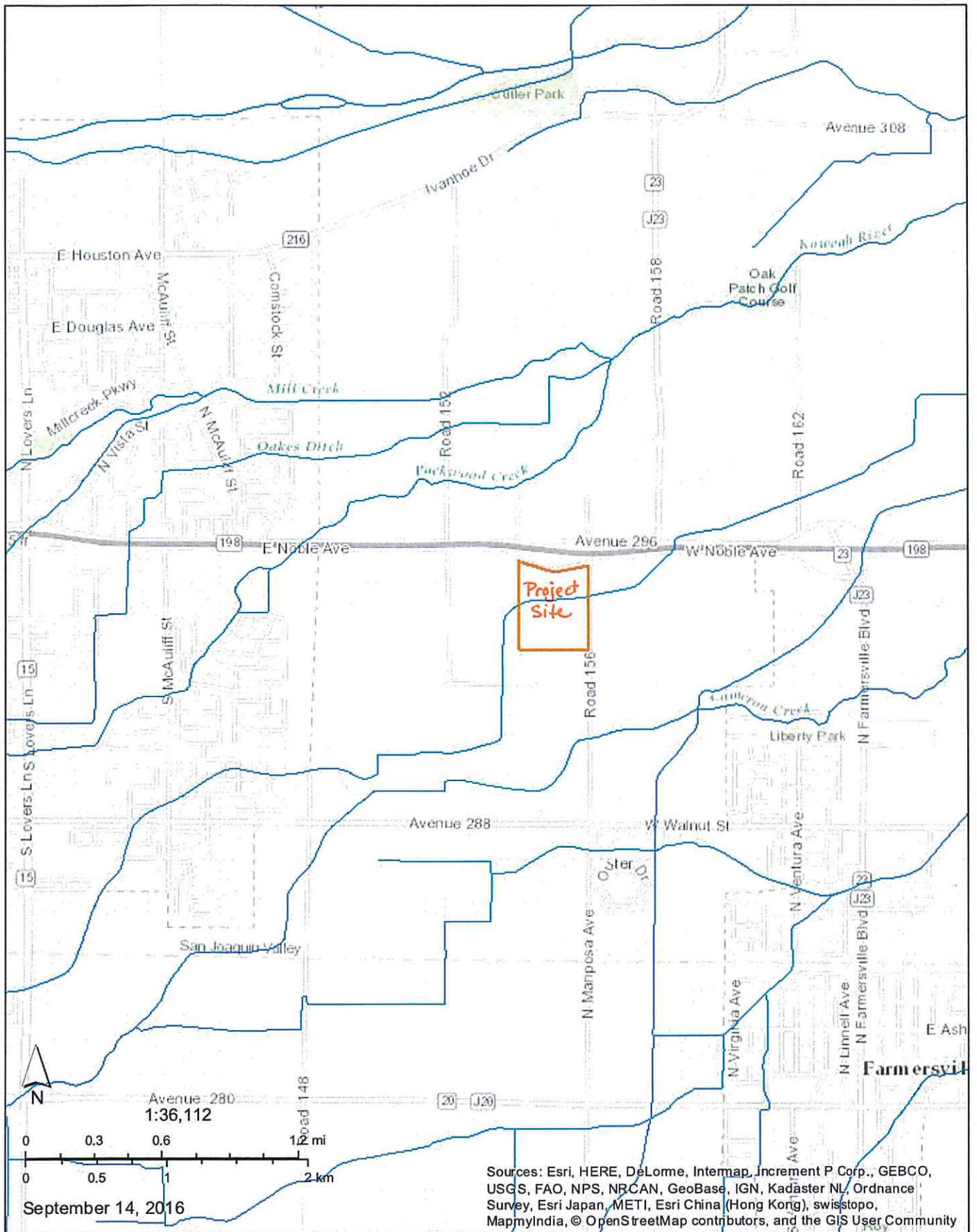
☒ 100% Cotton ☐ 100% Polyester ☐ 100% Nylon

DIXIE, CA

DIER, CA
201

2212

Map of Project Area





RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Michael Washam

Economic Development and Planning

Benjamin Ruiz, Jr.

Public Works

Sherman Dix

Fiscal Services

BENJAMIN RUIZ, JR., INTERIM DIRECTOR

September 14, 2016

Tule River Indian Tribe
Neil Peyron, Chairperson
P. O. Box 589
Porterville, CA 93258

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Sequoia Drive-In Business Park Project.

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If your Tribe desires to consult with the County on the review of this project, please respond in writing within thirty (30) days of the date of this letter.

Should the County not receive a response within thirty (30) days, it will be presumed that you have declined consultation. Thank you for your consideration on this matter and please do not hesitate to contact me should you have any questions or need additional information.

Sincerely,



for Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

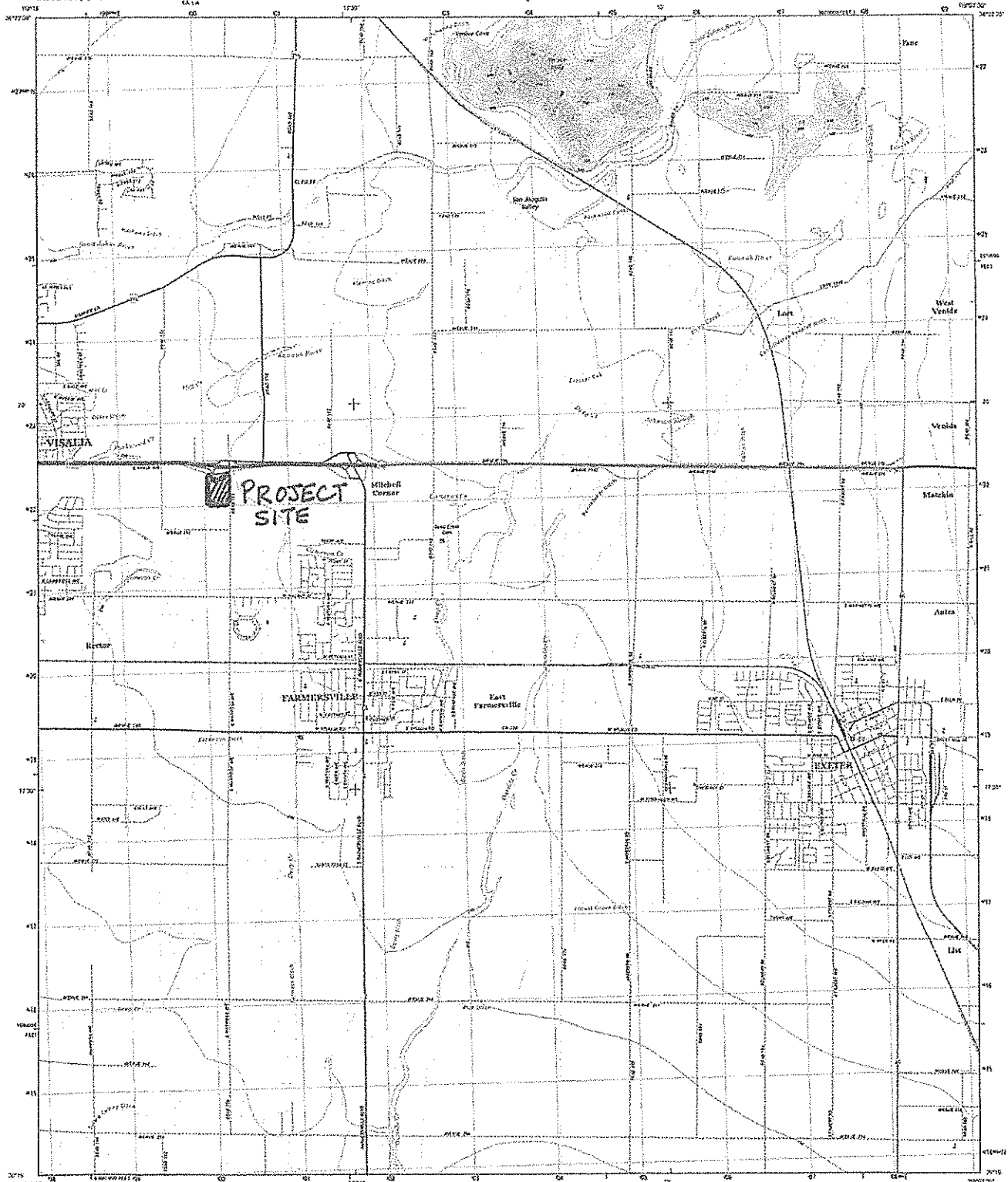
Attachments: US Topo Map (Exeter, 2015)
Project Location Map



U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

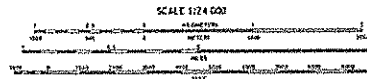
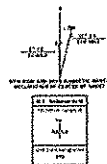


DIETER QUADRANGLE
CALIFORNIA-TULARE CO.
7.5-MINUTE SERIES



Produced by the United States Geological Survey
Map Information System (MIS) Project
Map Information System (MIS) Project
Map Information System (MIS) Project

This map is not a legal document. It is for informational purposes only. It is not to be used for legal purposes. It is not to be used for legal purposes. It is not to be used for legal purposes.

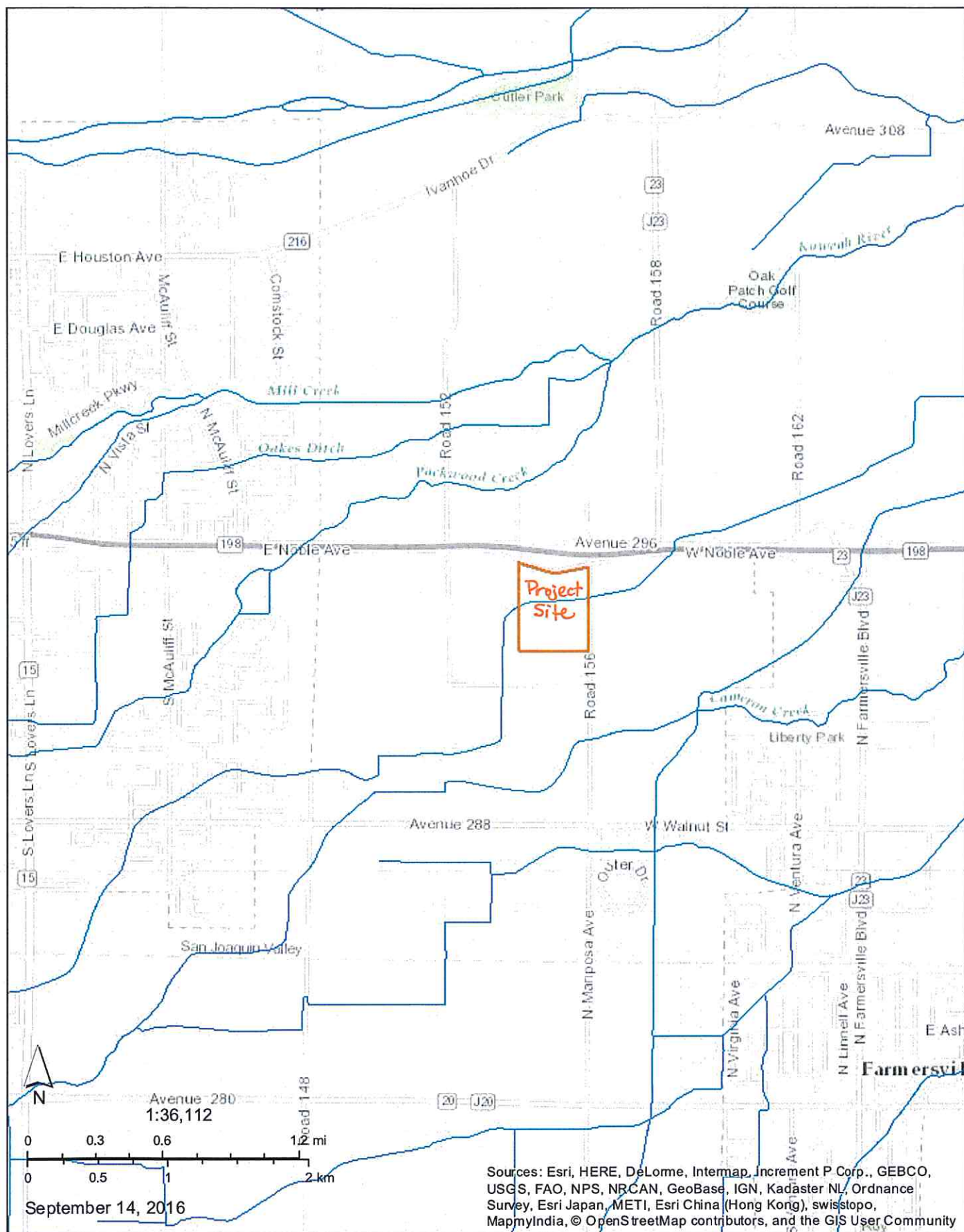


Map Information System (MIS) Project
Map Information System (MIS) Project
Map Information System (MIS) Project

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7	8	9

DIETER, CA
2515

Map of Project Area





RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Michael Washam

Benjamin Ruiz, Jr.

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

BENJAMIN RUIZ, JR., INTERIM DIRECTOR

September 14, 2016

Tule River Indian Tribe
Tribal Archaeological Department
Joseph Garfield, Tribal Archaeologist
P. O. Box 589
Porterville, CA 93258

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Sequoia Drive-In Business Park Project.

Dear Archaeologist Garfield,

Pursuant to the provisions of AB 52 and SB 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the CEQA review of the Sequoia Drive-In Business Park Project in order to assist with identifying and/or preserving and/or mitigating project-related impacts to Native American cultural places including:

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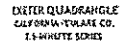
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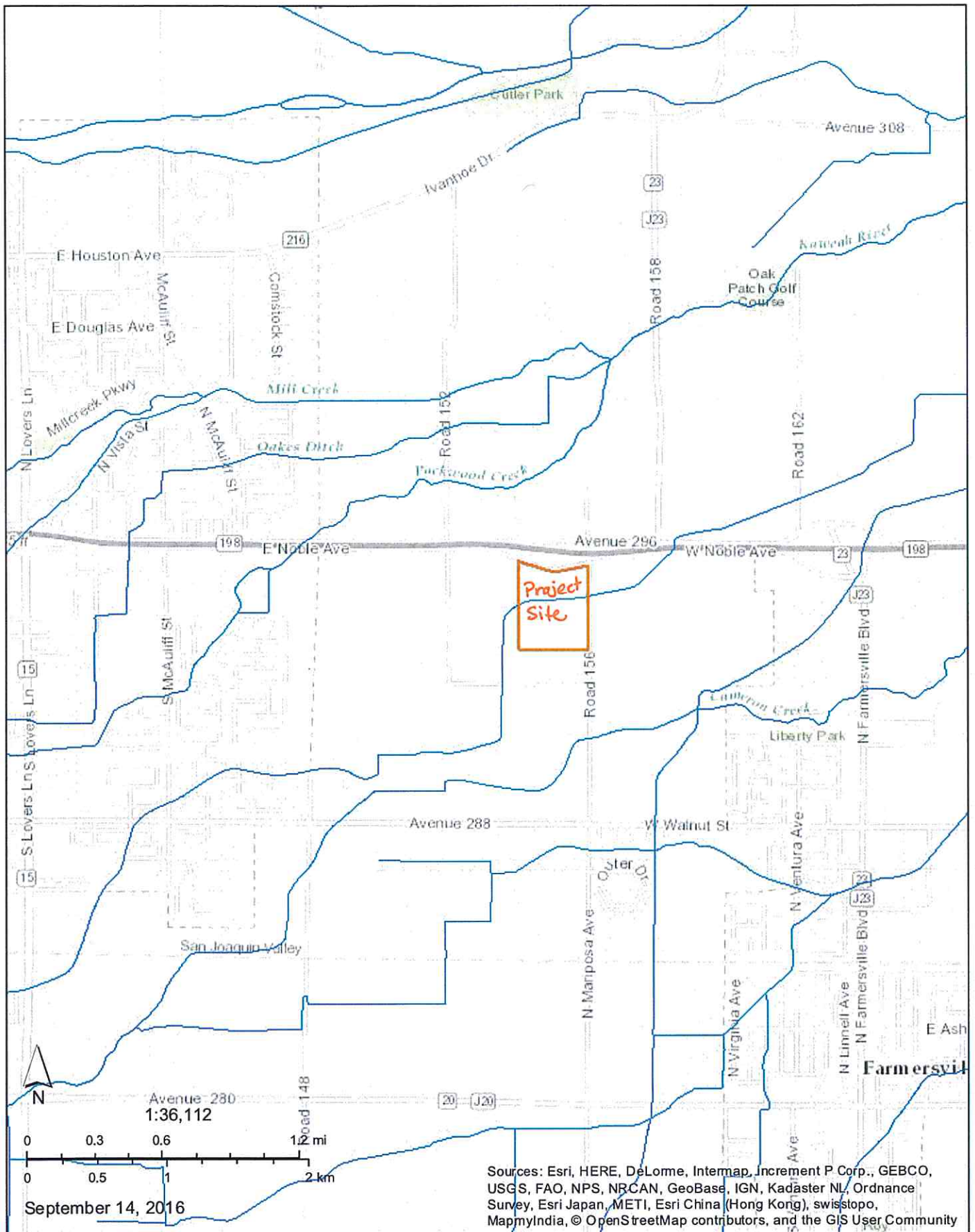


 Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

Attachments: US Topo Map (Exeter, 2015)
Project Location Map



Map of Project Area





RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Michael Washam

Benjamin Ruiz, Jr.

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

BENJAMIN RUIZ, JR., INTERIM DIRECTOR

September 14, 2016

Tubatulabals of Kern Valley
Robert L. Gomez, Jr., Chairperson
P. O. Box 226
Lake Isabella, CA 93240

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Sequoia Drive-In Business Park Project.

Dear Chairperson Gomez,

Pursuant to the provisions of AB 52 and SB 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the CEQA review of the Sequoia Drive-In Business Park Project in order to assist with identifying and/or preserving and/or mitigating project-related impacts to Native American cultural places including:

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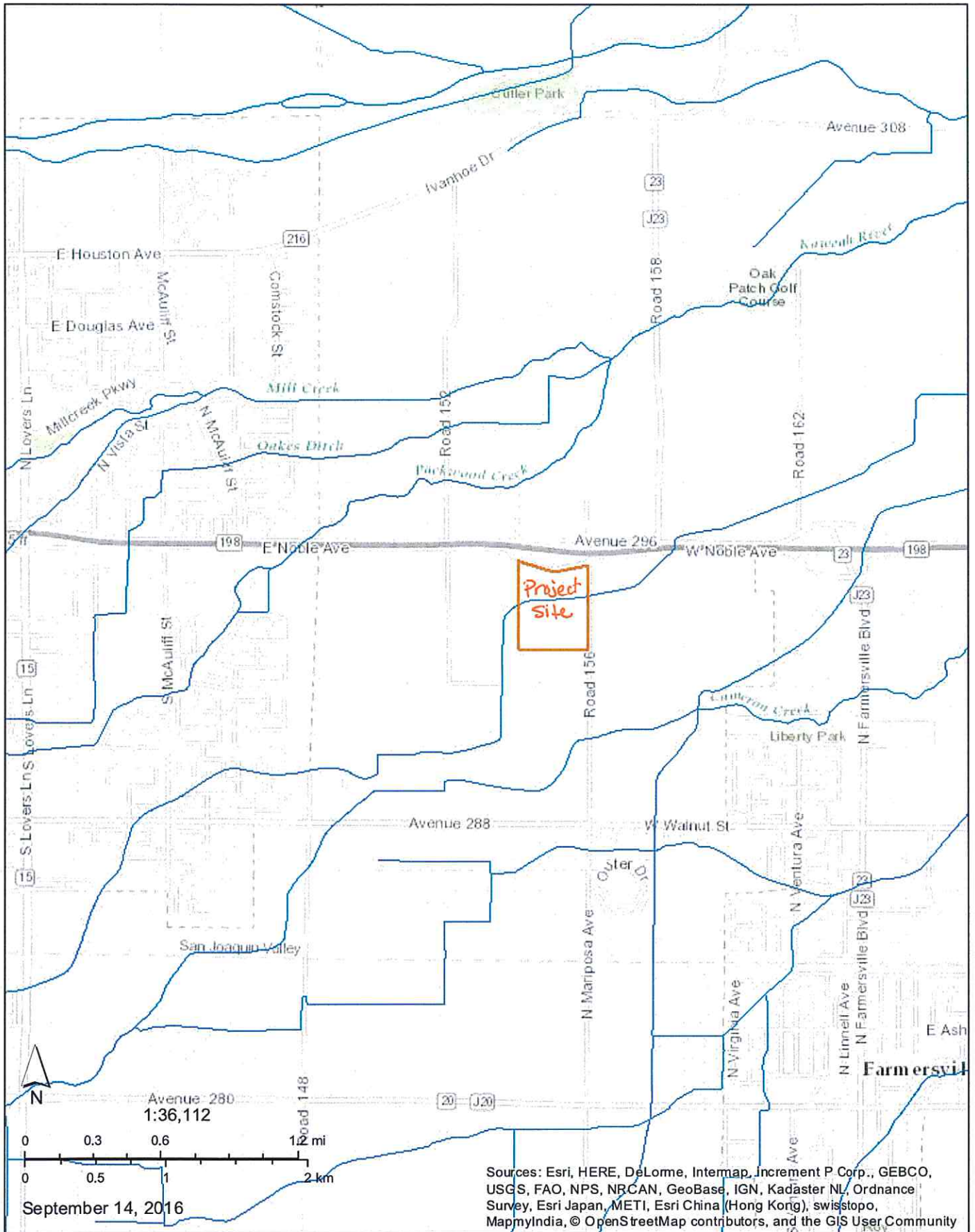


for Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

Attachments: US Topo Map (Exeter, 2015)
Project Location Map



Map of Project Area





RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Michael Washam

Economic Development and Planning

Benjamin Ruiz, Jr.

Public Works

Sherman Dix

Fiscal Services

BENJAMIN RUIZ, JR., INTERIM DIRECTOR

September 14, 2016

Traditional Choinumni Tribe
David Alvarez, Chairperson
2415 E. Houston Avenue
Fresno, CA, 93720

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Sequoia Drive-In Business Park Project.

Dear Chairperson Alvarez,

Pursuant to the provisions of AB 52 and SB 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the CEQA review of the Sequoia Drive-In Business Park Project in order to assist with identifying and/or preserving and/or mitigating project-related impacts to Native American cultural places including:

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for Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

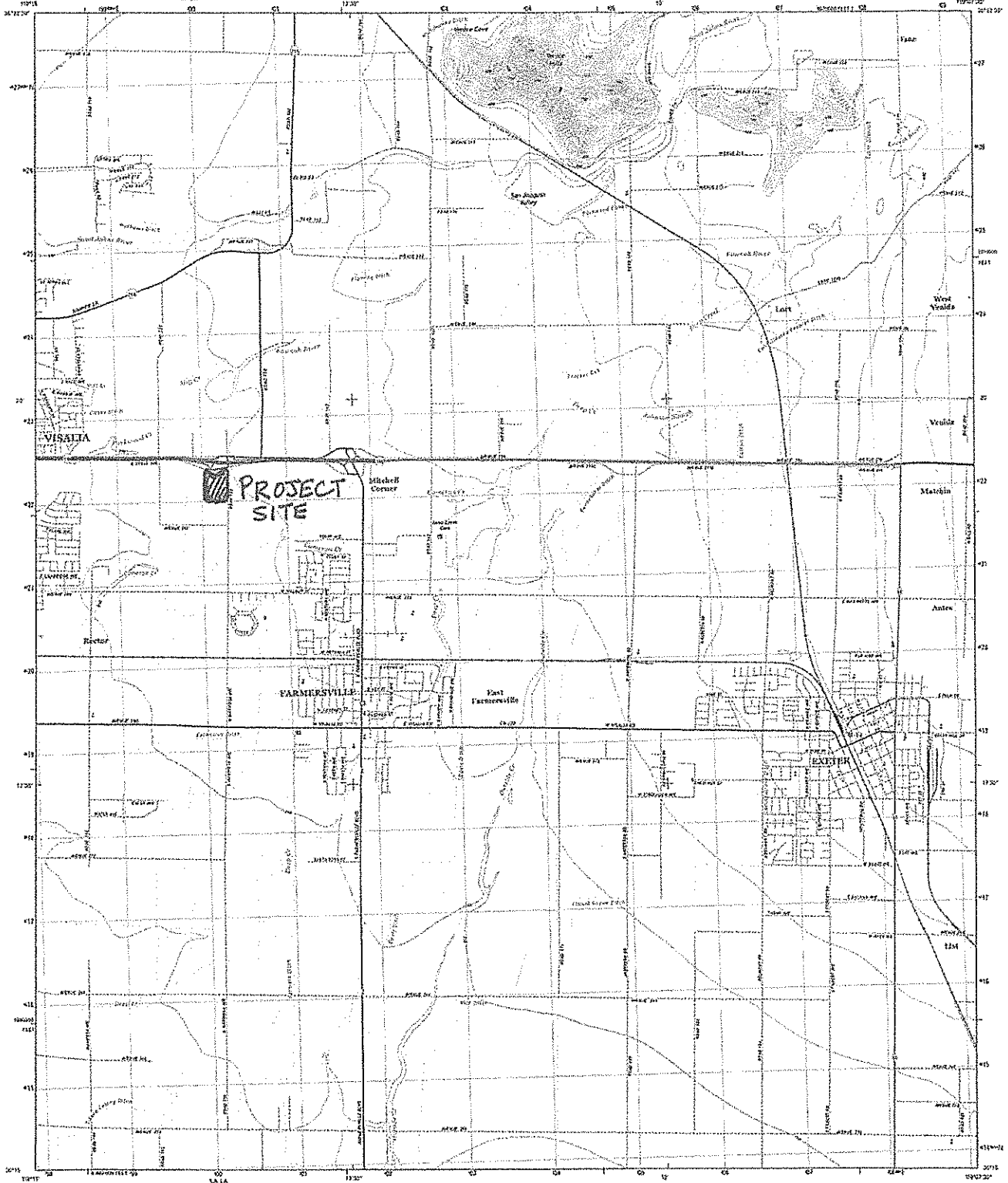
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Project Location Map



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U.S. GEOLOGICAL SURVEY



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7.5-MINUTE SERIES



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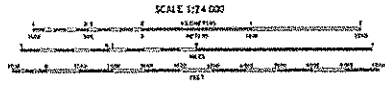
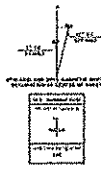
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CALIFORNIA-TULARE CO.



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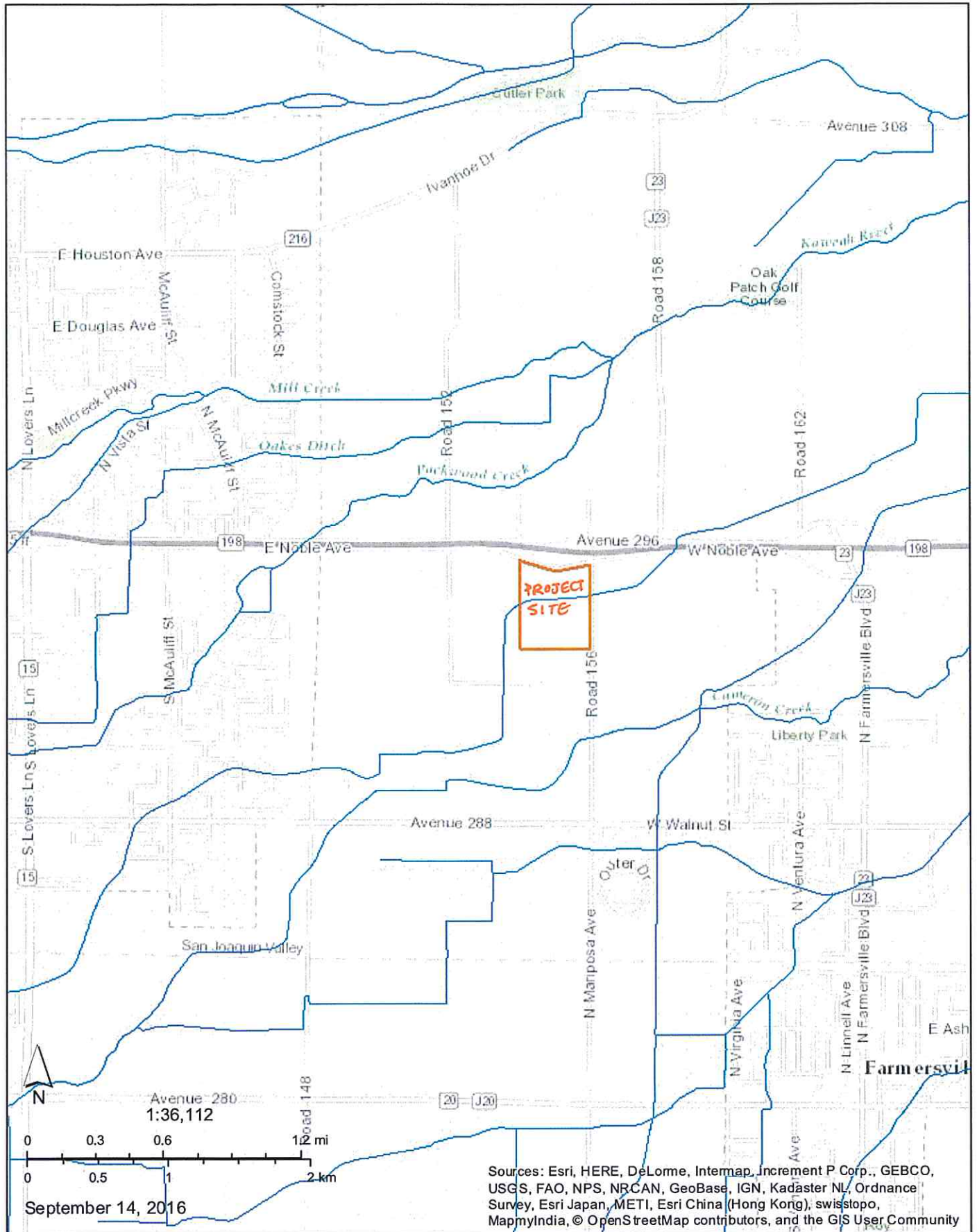


ROAD CLASSIFICATION
Legend for road types and features.

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EXETER, CA
511

Map of Project Area





RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Michael Washam

Benjamin Ruiz, Jr.

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

BENJAMIN RUIZ, JR., INTERIM DIRECTOR

September 14, 2016

Torres Martinez Desert Cahuilla Indians
Michael Mirelez, Cultural Resource Coordinator
P. O. Box 1160
Thermal, CA 92274

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Sequoia Drive-In Business Park Project.

Dear Cultural Resource Coordinator Mirelez,

Pursuant to the provisions of AB 52 and SB 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the CEQA review of the Sequoia Drive-In Business Park Project in order to assist with identifying and/or preserving and/or mitigating project-related impacts to Native American cultural places including:

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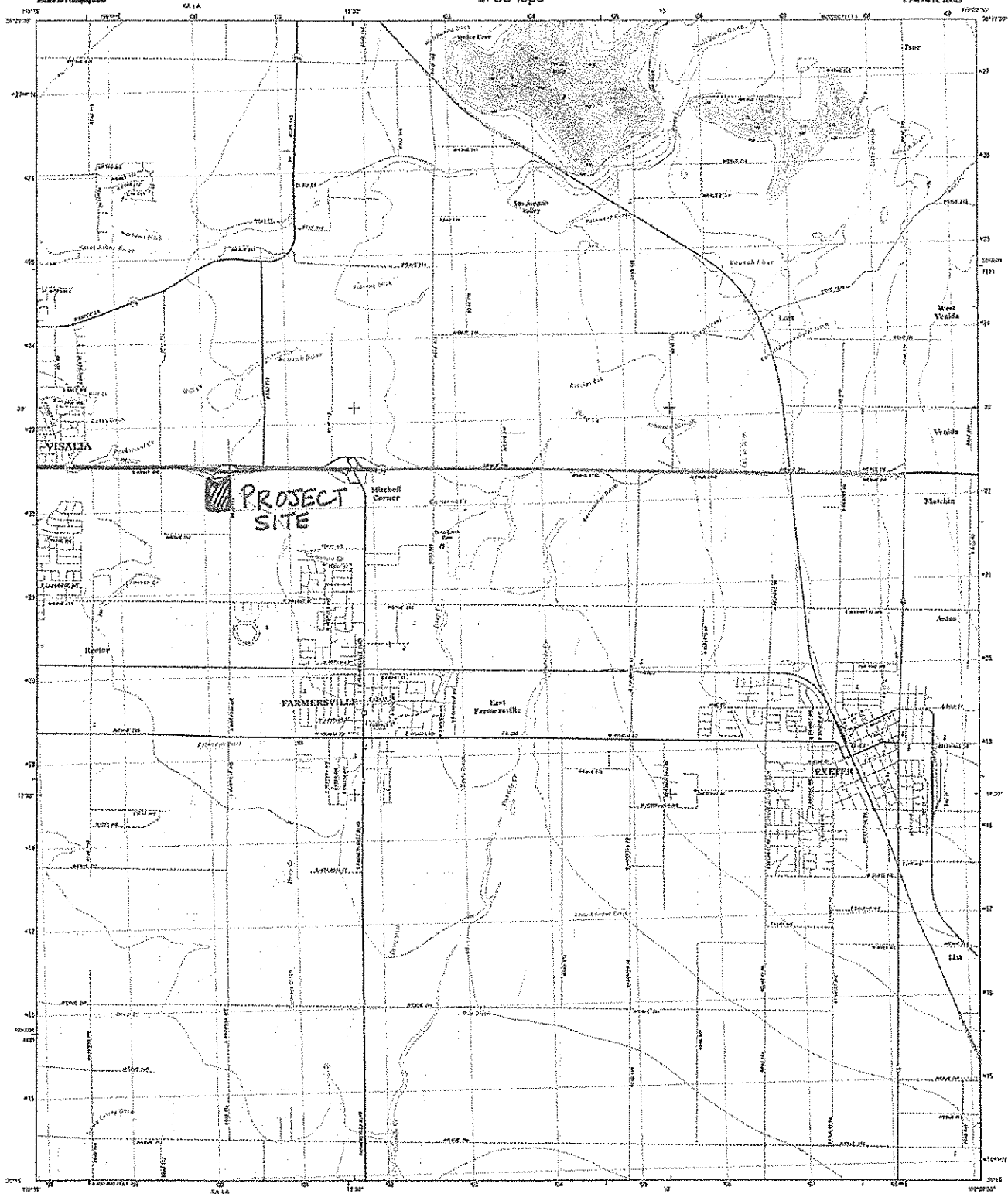
Sincerely,



for

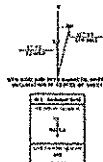
Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

Attachments: US Topo Map (Exeter, 2015)
Project Location Map



Produced by the United States Geological Survey
North American Edition of 1922 (NCE-22)
World Distribution, Edition of 1924 (WDC-24)
© 1922-24 by U.S. Geological Survey, Washington, D.C.

NEW YORK — The U.S. Supreme Court today ruled that the federal government can sue private citizens to force them to pay back taxes.



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Page 9 of 15

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THE UNIVERSITY OF CHICAGO

These were found to be a good

2025.01.10 (Wed) 10:00 ~ 11:00
2025.01.10 (Wed) 11:00 ~ 12:00

REGISTRATION

Express your observations	Learn & grow
Get your way	Learn & grow

Date _____
 Page _____

 Moderate Risk All Levels

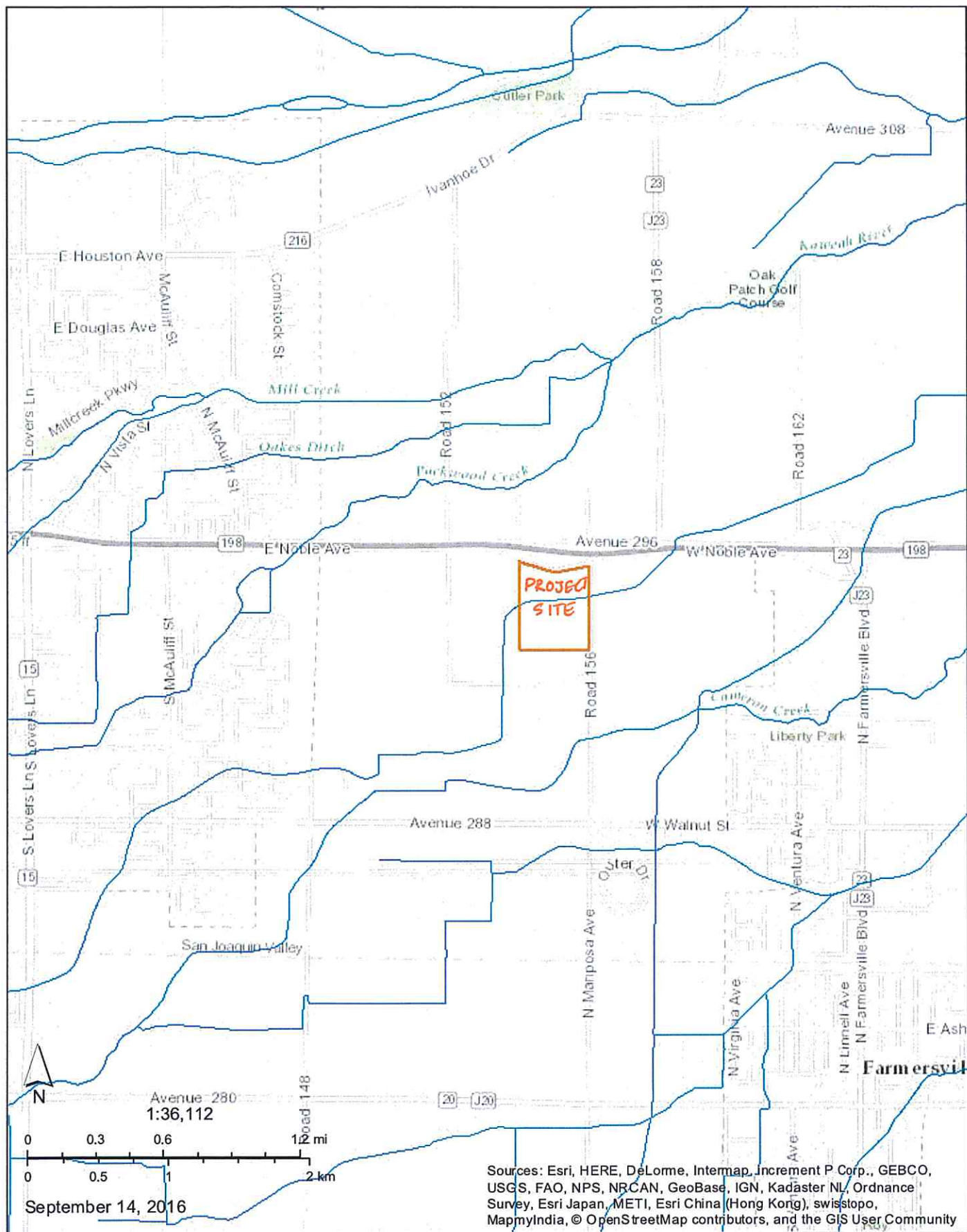
EXETER, CA

2573

EXETER, CA.
2011

2574

Map of Project Area





RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD
VISALIA, CA 93277
PHONE (559) 624-7000
FAX (559) 730-2653

Michael Washam	Economic Development and Planning
Benjamin Ruiz, Jr.	Public Works
Sherman Dix	Fiscal Services

BENJAMIN RUIZ, JR., INTERIM DIRECTOR

September 14, 2016

Table Mountain Rancheria
Leanne Walker-Grant, Chairperson
P.O. Box 410
Friant, CA, 93626

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Sequoia Drive-In Business Park Project.

Dear Chairperson Walker-Grant,

Pursuant to the provisions of AB 52 and SB 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the CEQA review of the Sequoia Drive-In Business Park Project in order to assist with identifying and/or preserving and/or mitigating project-related impacts to Native American cultural places including:

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The Applicant proposes to develop the 46.17-acre Project site with a 358,370 square foot business park. The Project includes 48 lots that range from 0.23 to 2.07 acres in size and consists of 43 service commercial lots, two (2) new roadways, stormwater retention basins, an on-site domestic water system, and an existing cellular tower lot. The Tulare Irrigation Canal flows east/west and bisects the Project site. The Project will be developed in four (4) phases. Phase 1 parallels Road 156 north and south of the canal. Phase 2 and Phase 4 will occur south of the canal and, Phase 3 will occur north of the canal and adjacent to Noble Avenue.

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If your Tribe desires to consult with the County on the review of this project, please respond in writing within thirty (30) days of the date of this letter.

Should the County not receive a response within thirty (30) days, it will be presumed that you have declined consultation. Thank you for your consideration on this matter and please do not hesitate to contact me should you have any questions or need additional information.

Sincerely,



for
Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

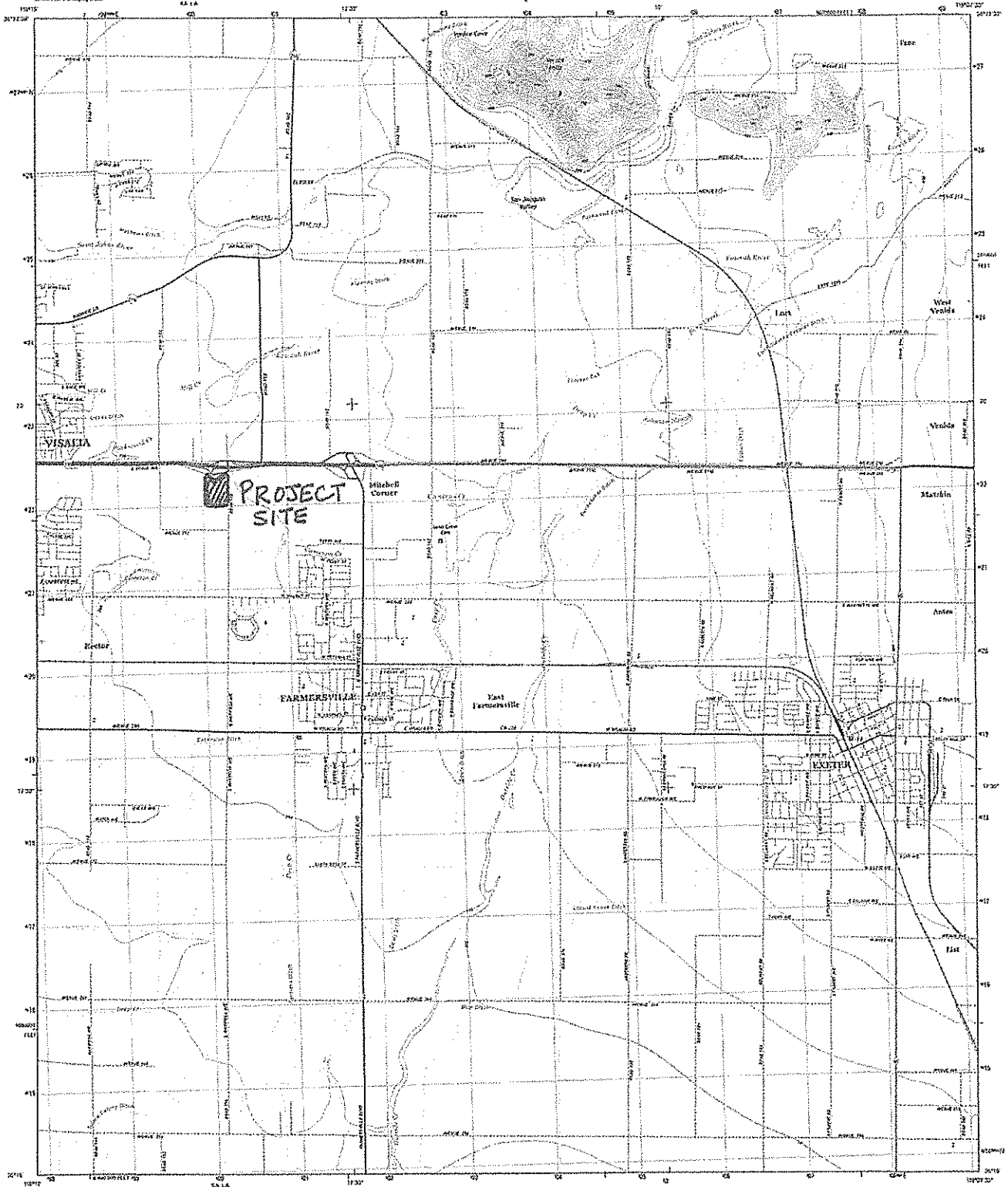
Attachments: US Topo Map (Exeter, 2015)
Project Location Map



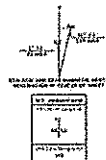
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY



DIETER QUADRANGLE
CALIFORNIA-TULARE CO.
15-MINUTE SERIES



Produced by the United States Geological Survey
Map of the Dieter Quadrangle, California-Tulare County
Scale 1:24,000
This map is a reproduction of the original map of the Dieter Quadrangle, California-Tulare County, 15-minute series, published by the United States Geological Survey in 1961. The map is a reproduction of the original map of the Dieter Quadrangle, California-Tulare County, 15-minute series, published by the United States Geological Survey in 1961.

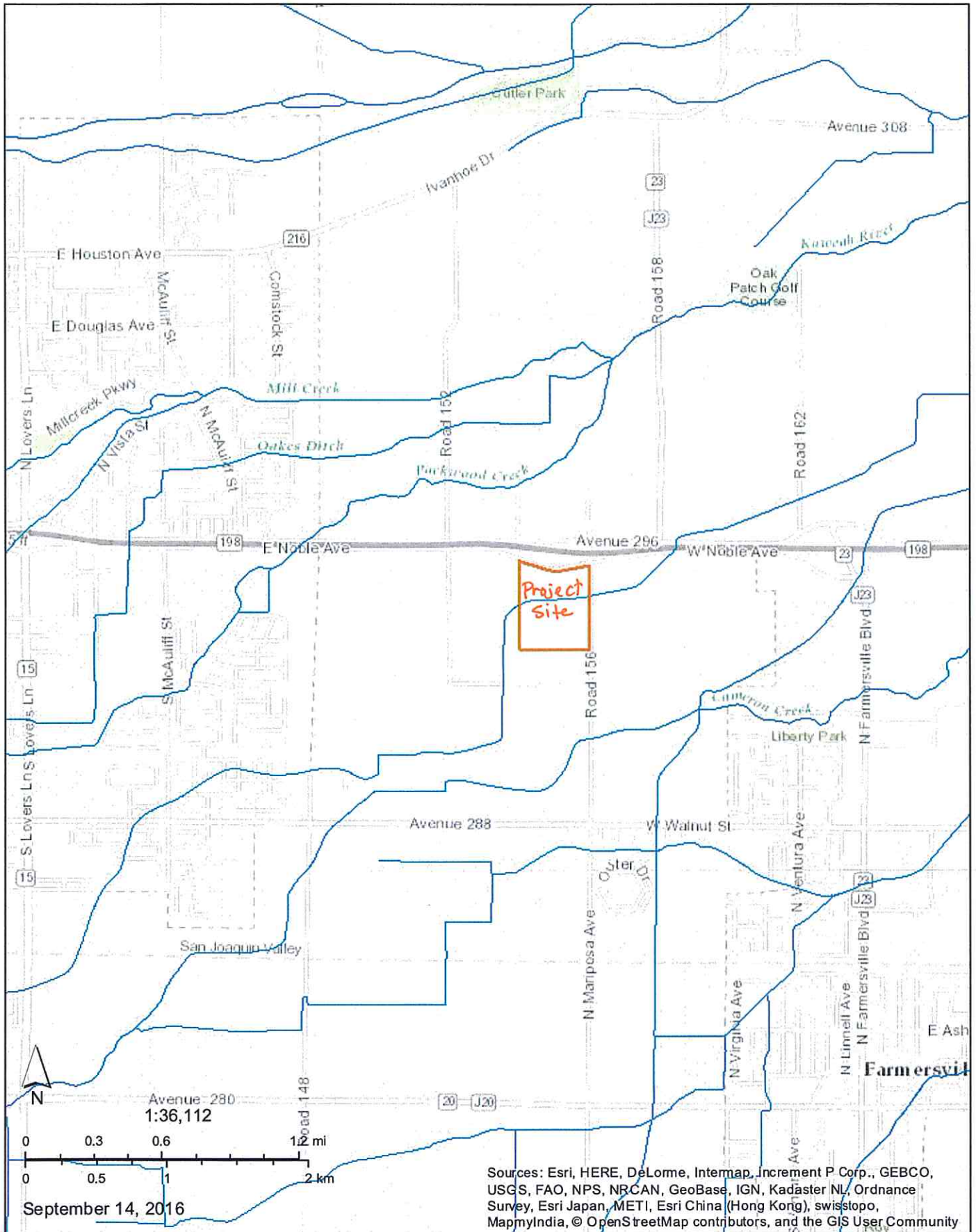


ROAD CLASSIFICATION
Expressway
Primary Road
Secondary Road
Tertiary Road
Quaternary Road
Quinary Road
Sextenary Road
Septenary Road
Octenary Road
Nonary Road
Decenary Road
Undecenary Road
Duodecenary Road
Tridecenary Road
Quadrdecenary Road
Quintdecenary Road
Sextdecenary Road
Septdecenary Road
Octodecenary Road
Nonodecenary Road
Vigintenary Road

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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DIETER, CA
1515

Map of Project Area





RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD
VISALIA, CA 93277
PHONE (559) 624-7000
FAX (559) 730-2653

Michael Washam	Economic Development and Planning
Benjamin Ruiz, Jr.	Public Works
Sherman Dix	Fiscal Services

BENJAMIN RUIZ, JR., INTERIM DIRECTOR

September 14, 2016

Southern Sierra Miwuk Nation
Lois Martin, Chairperson
P.O. Box 186
Mariposa, CA 95338

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Sequoia Drive-In Business Park Project.

Dear Chairperson Martin,

Pursuant to the provisions of AB 52 and SB 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the CEQA review of the Sequoia Drive-In Business Park Project in order to assist with identifying and/or preserving and/or mitigating project-related impacts to Native American cultural places including:

- Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine; and
- Native American historic, cultural, or sacred site that is listed or may be eligible for listing in the California Register of Historical Resources including historic or prehistoric ruins and any burial ground, archaeological, or historic site.

The County requested a Sacred Lands File (SLF) search through the Native American Heritage Commission (NAHC) on August 31, 2016. The SLF search returned on September 8, 2016, with negative results.

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Should the County not receive a response within thirty (30) days, it will be presumed that you have declined consultation. Thank you for your consideration on this matter and please do not hesitate to contact me should you have any questions or need additional information.

Sincerely,



for
Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

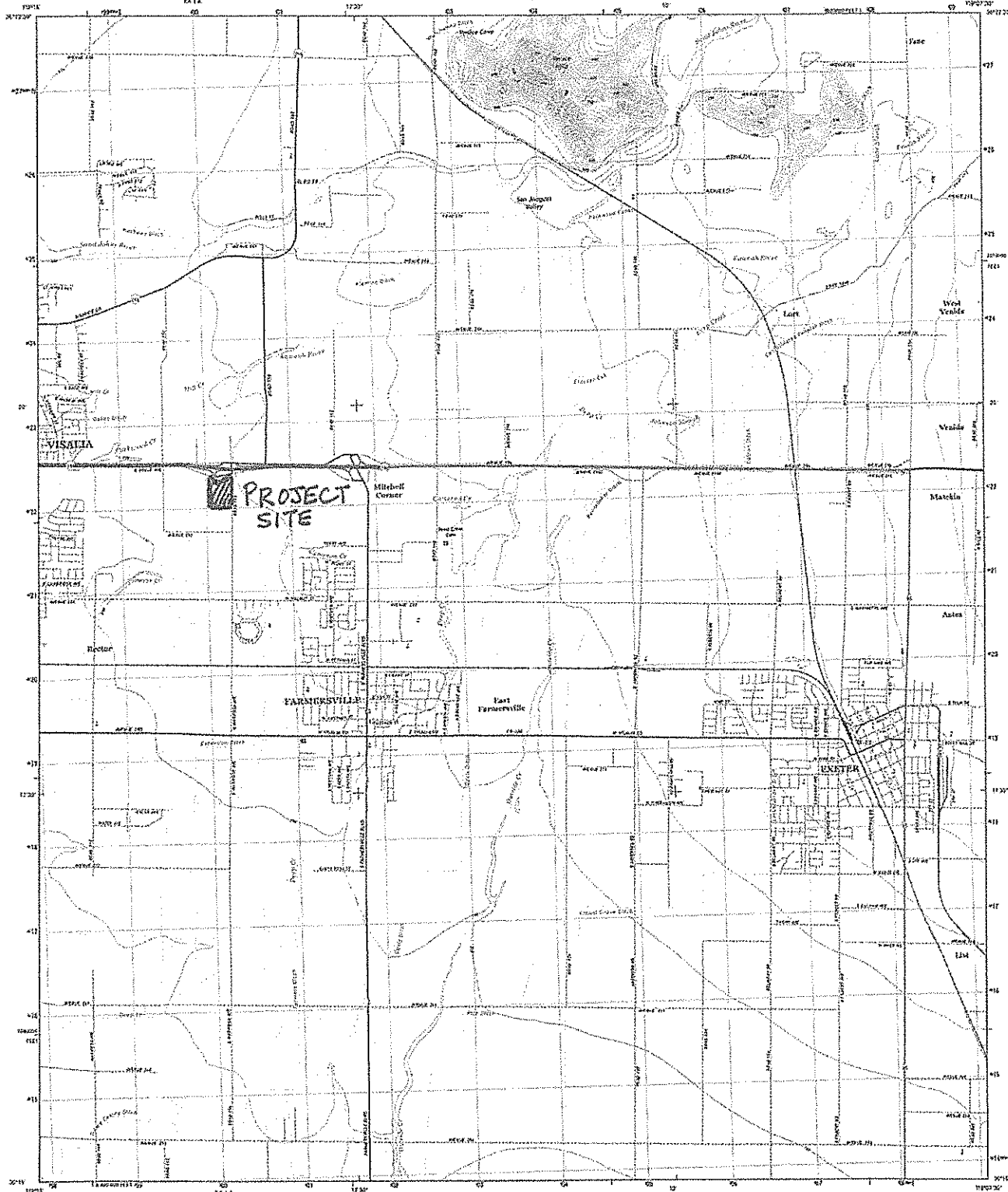
Attachments: US Topo Map (Exeter, 2015)
Project Location Map



U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY



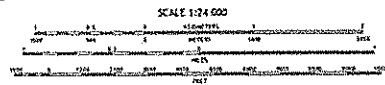
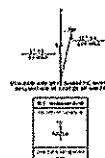
DIETER QUADRANGLE
CALIFORNIA-TULARE CO.
15-MINUTE SERIES



Produced by the United States Geological Survey

Map is a reproduction of the original map. The original map was produced by the United States Geological Survey. The map is a reproduction of the original map. The original map was produced by the United States Geological Survey.

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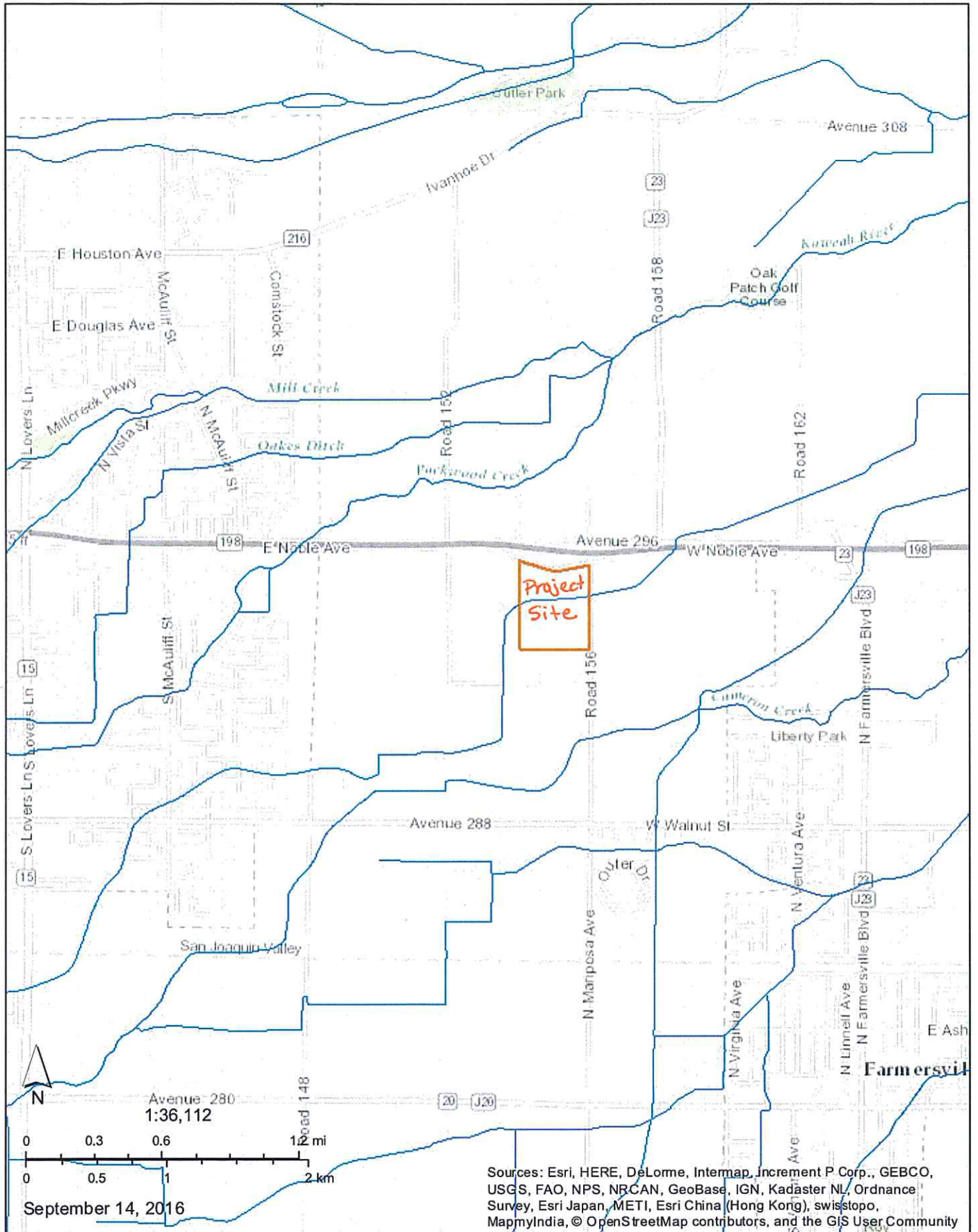


ROAD CLASSIFICATION
1. Primary
2. Secondary
3. Tertiary
4. Quaternary
5. Local Road
6. Private Road
7. State Road
8. Federal Road
9. Interstate
10. Expressway
11. Freeway
12. Turnpike
13. Limited Access Road
14. Controlled Access Road
15. Controlled Access Road
16. Controlled Access Road
17. Controlled Access Road
18. Controlled Access Road
19. Controlled Access Road
20. Controlled Access Road



DIETER, CA
2013

Map of Project Area





RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD
VISALIA, CA 93277
PHONE (559) 624-7000
FAX (559) 730-2653

Michael Washam	Economic Development and Planning
Benjamin Ruiz, Jr.	Public Works
Sherman Dix	Fiscal Services

BENJAMIN RUIZ, JR., INTERIM DIRECTOR

September 14, 2016

Sierra Nevada Native American Coalition
Bill Lawrence, Interim Chairperson
P.O. Box 125
Dunlap, CA 93621

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Sequoia Drive-In Business Park Project.

Dear Chairperson Lawrence,

Pursuant to the provisions of AB 52 and SB 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the CEQA review of the Sequoia Drive-In Business Park Project in order to assist with identifying and/or preserving and/or mitigating project-related impacts to Native American cultural places including:

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Should the County not receive a response within thirty (30) days, it will be presumed that you have declined consultation. Thank you for your consideration on this matter and please do not hesitate to contact me should you have any questions or need additional information.

Sincerely,



 Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

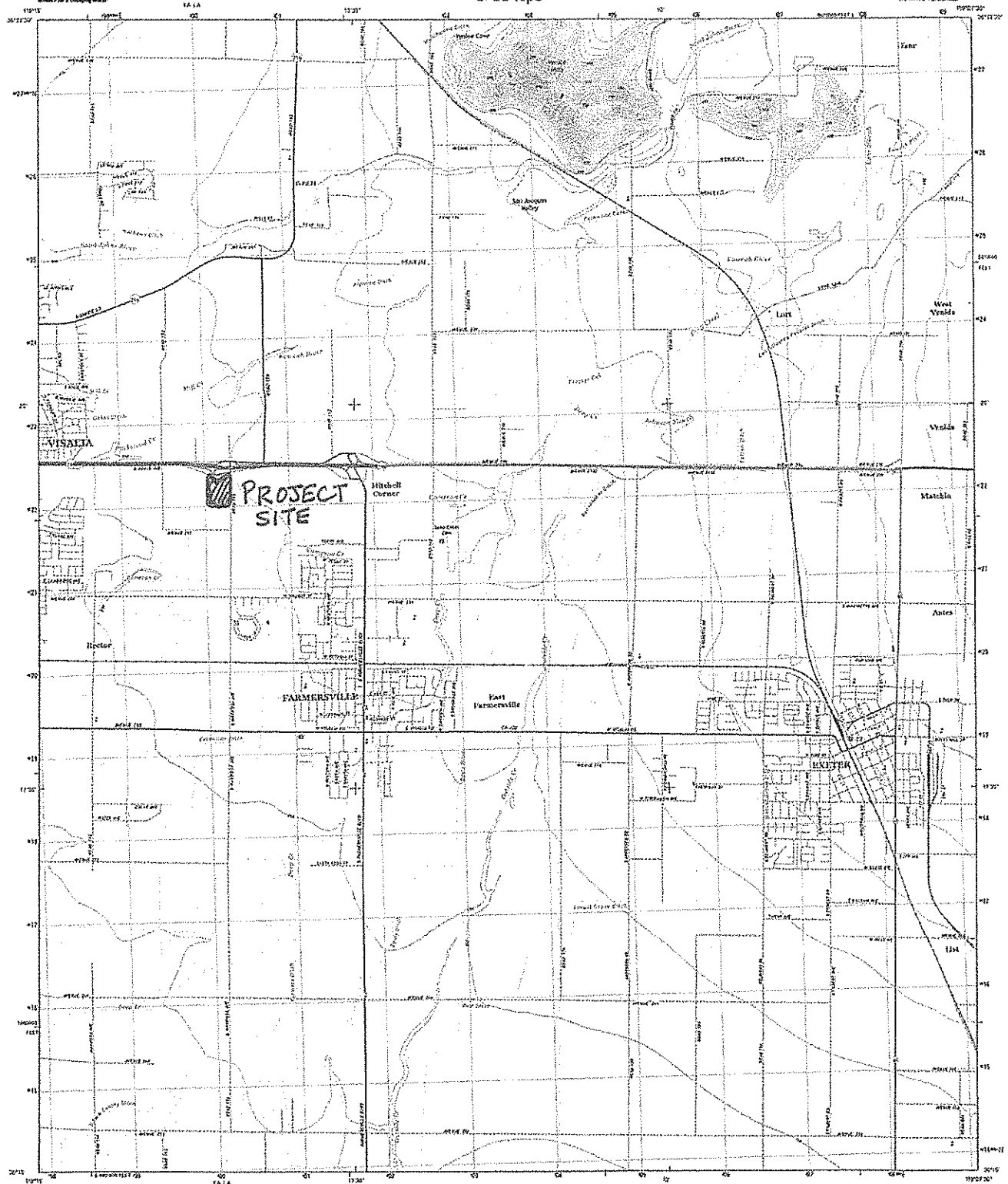
Attachments: US Topo Map (Exeter, 2015)
Project Location Map



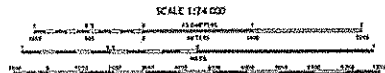
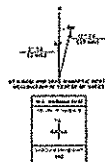
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY



DIETER QUADRANGLE
CALIFORNIA-TULARE CO.
15-MINUTE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
Horizontal datum: North American Datum of 1983 (NAD83)
Vertical datum: Mean Sea Level (MSL)
Scale: 1:50,000
Projection: UTM
Zone: 11N
Datum: NAD83
Units: Meters

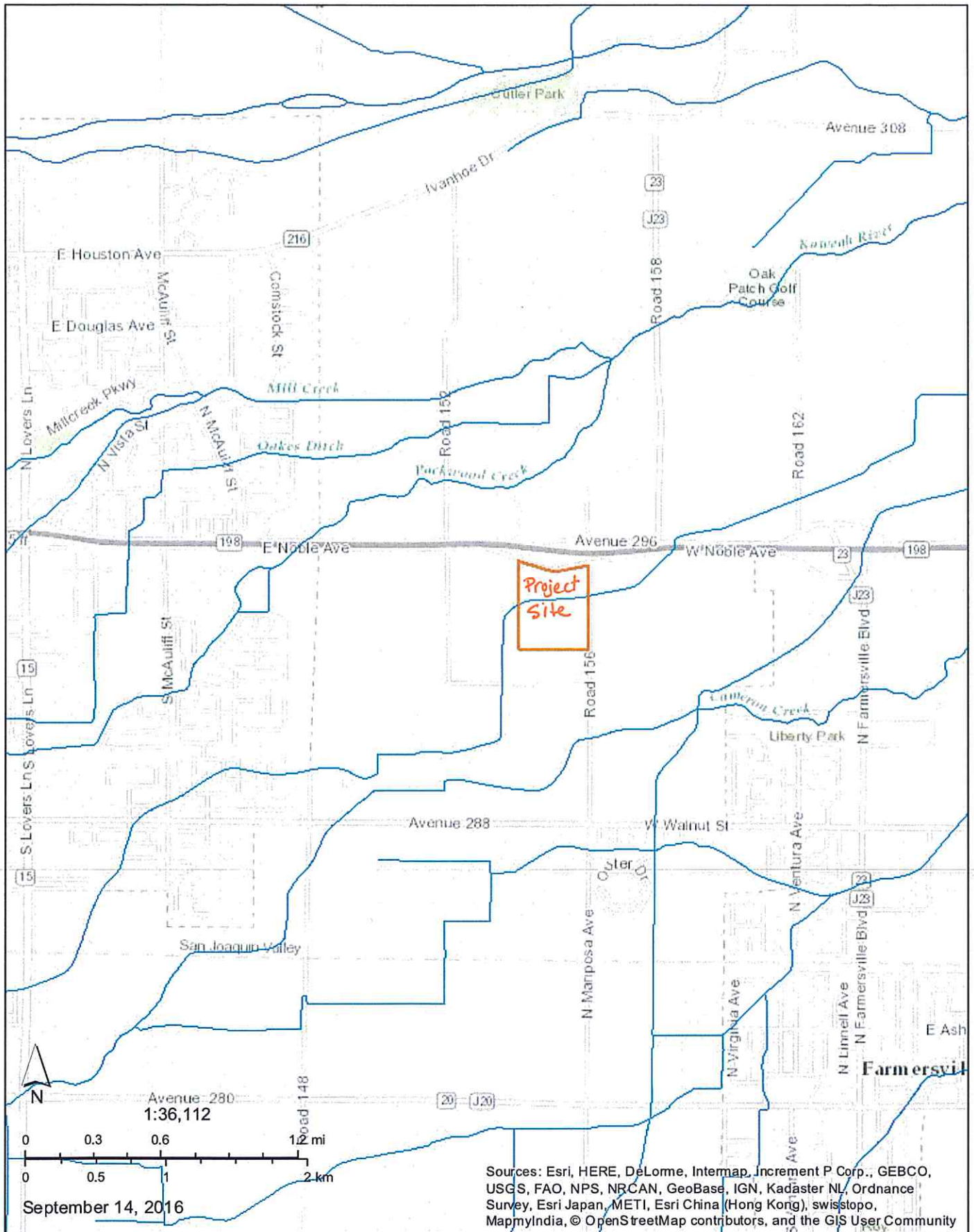


ROAD CLASSIFICATION
Expressway
Freeway
Main Road
Local Road
Trail
Other

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60

EXETER, CA
2011

Map of Project Area





RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Michael Washam

Benjamin Ruiz, Jr.

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

BENJAMIN RUIZ, JR., INTERIM DIRECTOR

September 14, 2016

Santa Rosa Rancheria Tachi Yokut Tribe
Cultural Department
Shana Powers, Cultural Specialist
P. O. Box 8
Lemoore, CA 93245

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Sequoia Drive-In Business Park Project.

Dear Cultural Specialist Powers,

Pursuant to the provisions of AB 52 and SB 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the CEQA review of the Sequoia Drive-In Business Park Project in order to assist with identifying and/or preserving and/or mitigating project-related impacts to Native American cultural places including:

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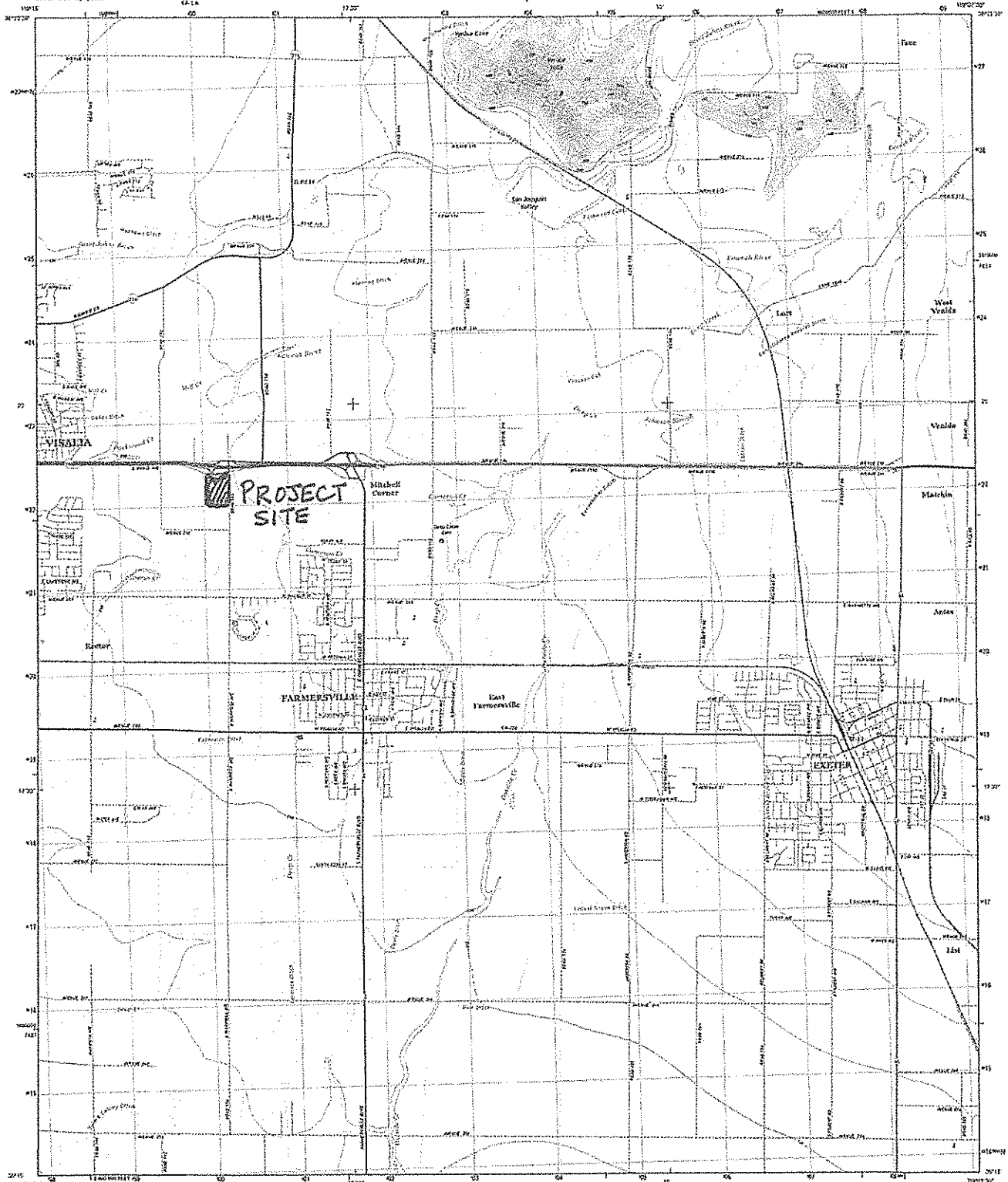
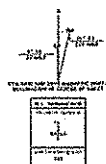
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Sincerely,



for Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us



Attachments: US Topo Map (Exeter, 2015)
Project Location Map

[illegible]

The diagram consists of two horizontal cross-sections. The upper section is a simplified representation with labels like 'ROAD', 'RIVER', and 'HILL'. The lower section is a detailed geological cross-section with numerous layers labeled with numbers (e.g., 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100) and letters (e.g., A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z). The sections are separated by a vertical dashed line.

EXPORTS OF CIGARETTES TO INDIA
AGREEMENT BETWEEN THE GOVERNMENT OF INDIA AND THE
GOVERNMENT OF THE UNITED STATES OF AMERICA

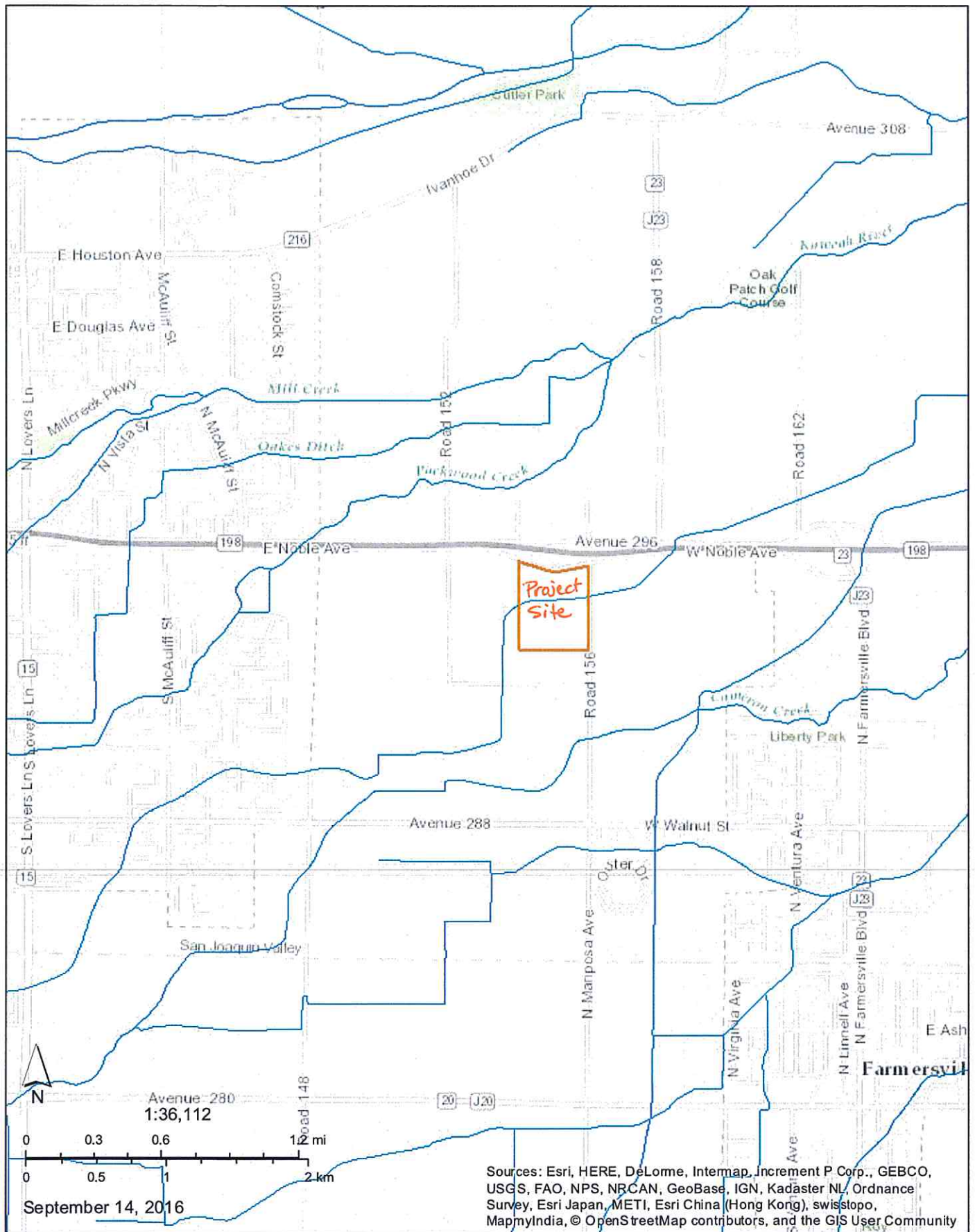


KINDS OF CATEGORIES		
Expresses of	Interpretation	Local Time
Exemplify they	Interpretation	Local Area
Jump	Interpretation	the
 Expressible Area		 Local Area

5	2	2	1. Human
			2. Zoonotic
5		6	3. Microbial
			4. Viral
4	2	2	5. Genetic
			6. Protein
			7. Cell-cell contact
			8. Culture

EXETER, CA
2012

Map of Project Area





RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Michael Washam

Economic Development and Planning

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Public Works

Sherman Dix

Fiscal Services

BENJAMIN RUIZ, JR., INTERIM DIRECTOR

September 14, 2016

Santa Rosa Rancheria Tachi Yokut Tribe
Cultural Department
Hector Franco, Director
P. O. Box 8
Lemoore, CA 93245

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Sequoia Drive-In Business Park Project.

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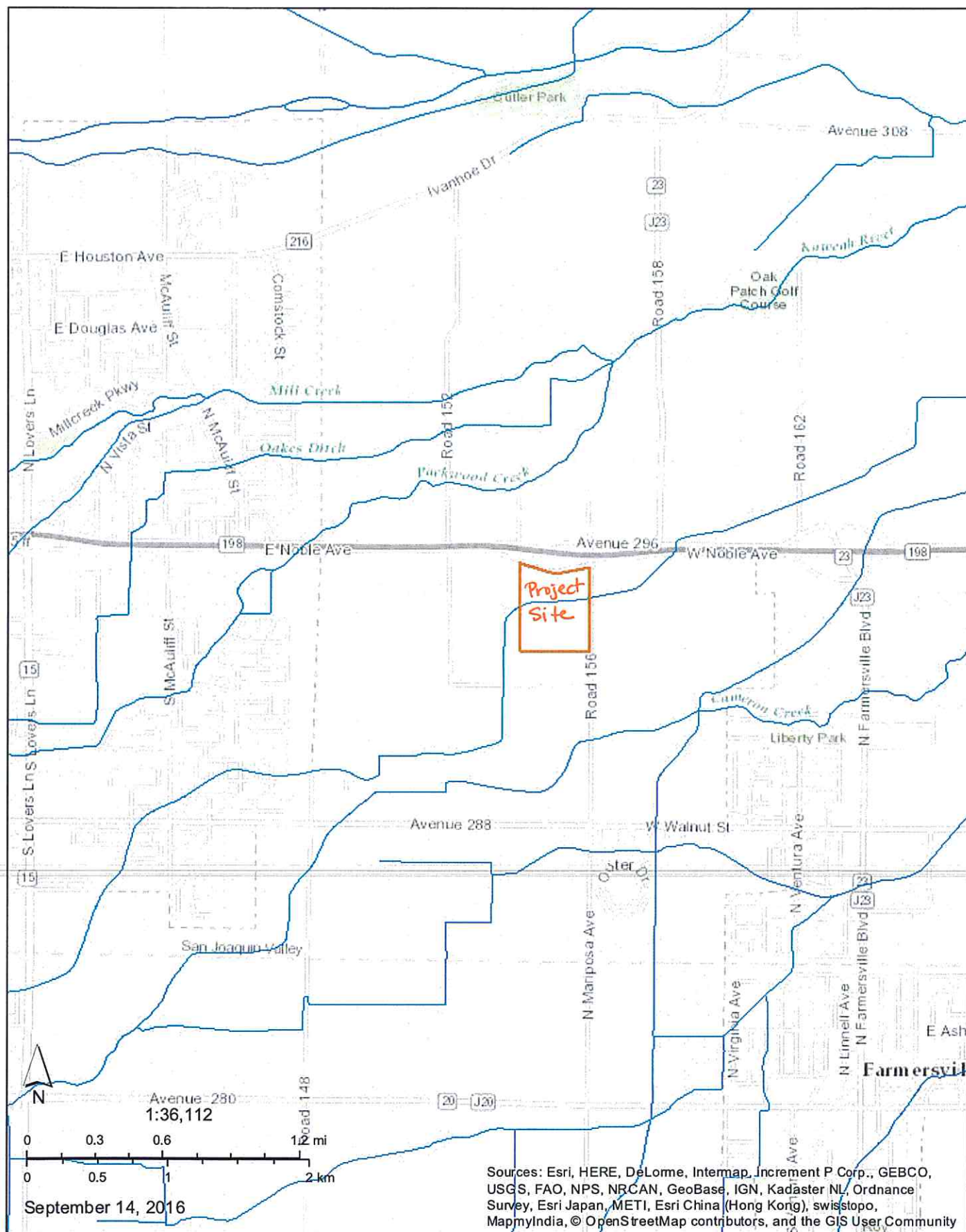
Sincerely, ,



Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

Attachments: US Topo Map (Exeter, 2015)
Project Location Map

Map of Project Area





RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Michael Washam

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Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

BENJAMIN RUIZ, JR., INTERIM DIRECTOR

September 14, 2016

Santa Rosa Rancheria Tachi Yokut Tribe
Rueben Barrios Sr., Chairperson
P. O. Box 8
Lemoore, CA 93245

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Sequoia Drive-In Business Park Project.

Dear Chairperson Barrios,

Pursuant to the provisions of AB 52 and SB 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the CEQA review of the Sequoia Drive-In Business Park Project in order to assist with identifying and/or preserving and/or mitigating project-related impacts to Native American cultural places including:

- Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine; and
- Native American historic, cultural, or sacred site that is listed or may be eligible for listing in the California Register of Historical Resources including historic or prehistoric ruins and any burial ground, archaeological, or historic site.

The County requested a Sacred Lands File (SLF) search through the Native American Heritage Commission (NAHC) on August 31, 2016. The SLF search returned on September 8, 2016, with negative results. However, the NAHC recommended consultation with your Tribe.

The Project is located at 29421 Road 156, the southwest corner of Noble Avenue and Road 156. The Project is adjacent to State Route 198, less than one mile east of the City of Visalia city limits and less than one mile west of the City of Farmersville city limits. The entire 46± acre site is within the Exeter USGS 7.5 minute quadrangle and is located on Assessor Parcel Numbers (APNs) 101-090-014, 101-090-015, 101-100-009 and 101-100-010. The site is located within Section 35, Township 18 South, Range 25 East, MDB&M.

The Applicant proposes to develop the 46.17-acre Project site with a 358,370 square foot business park. The Project includes 48 lots that range from 0.23 to 2.07 acres in size and consists of 43 service commercial lots, two (2) new roadways, stormwater retention basins, an on-site domestic water system, and an existing cellular tower lot. The Tulare Irrigation Canal flows east/west and bisects the Project site. The Project will be developed in four (4) phases. Phase 1 parallels Road 156 north and south of the canal. Phase 2 and Phase 4 will occur south of the canal and, Phase 3 will occur north of the canal and adjacent to Noble Avenue.

The proposed Project site is located on soil classified Nord Fine Sandy Loam, which is considered Prime Farmland if irrigated and either protected from flooding or not frequently flooded during the growing season. The northern and southwestern portions of the Project site are mapped as Farmland of Local Importance while the southeastern portion of the Project site is mapped as Vacant or Disturbed Land by the California Department of Conservation Farmland Mapping and Monitoring Program. The Project site is not enrolled in a Williamson Act Contract. The Project site is located within the East Visalia Urban Development Boundary (UDB) of the Visalia Area Land Use Plan and is currently zoned for service commercial land uses. There are commercial uses located directly west, north, and east of the Project site. The southeastern portion of the Project site was previously a drive-in movie theater. There are currently no agricultural operations occurring on the northern and southwestern portions of the Project site which have been agriculturally unproductive for many years. With the exception of the single cellular tower on-site, the entire site remains in undeveloped open space conditions.

If your Tribe desires to consult with the County on the review of this project, please respond in writing within thirty (30) days of the date of this letter.

Should the County not receive a response within thirty (30) days, it will be presumed that you have declined consultation. Thank you for your consideration on this matter and please do not hesitate to contact me should you have any questions or need additional information.

Sincerely,



for

Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

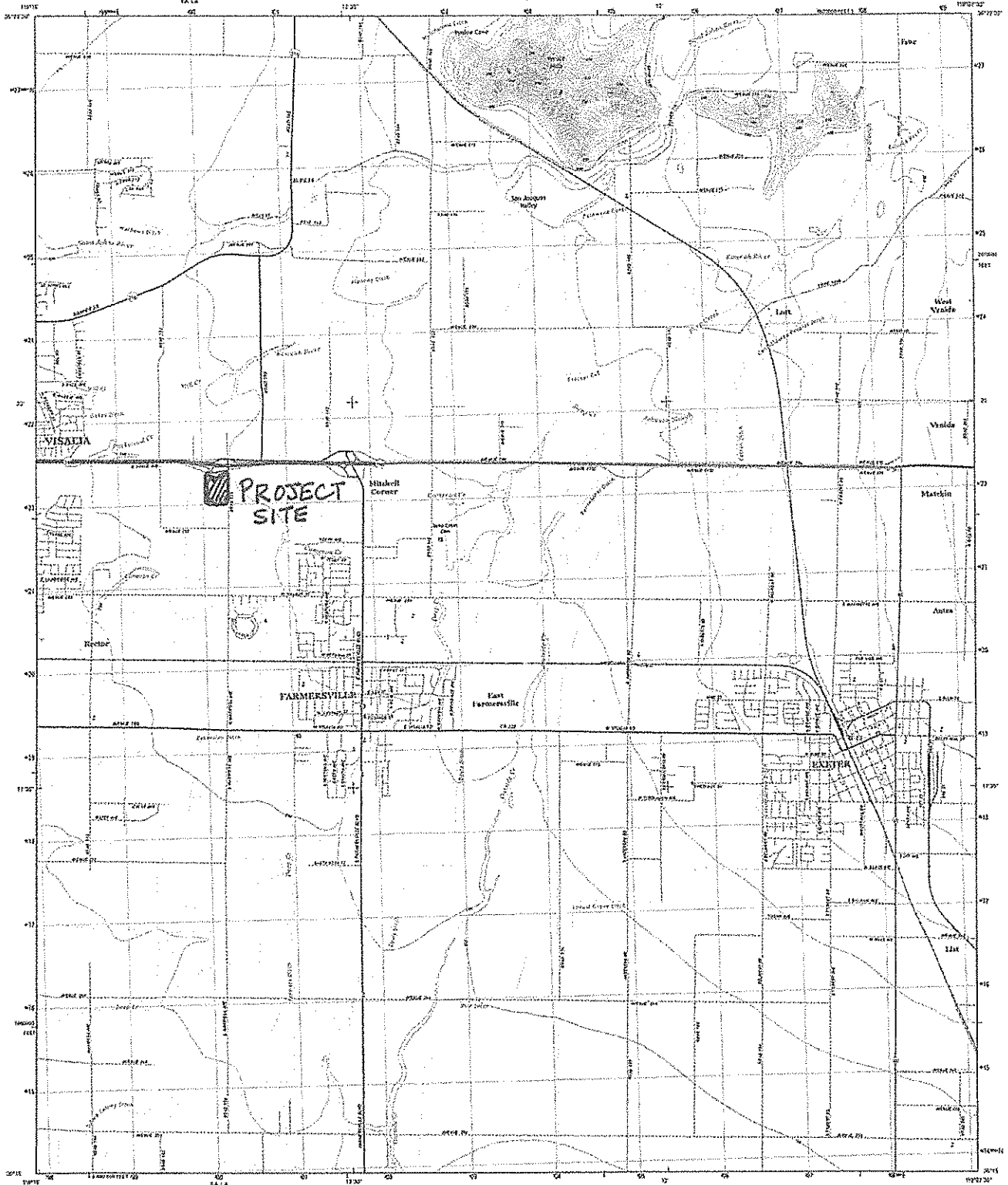
Attachments: US Topo Map (Exeter, 2015)
Project Location Map



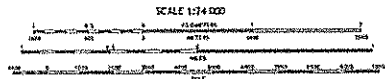
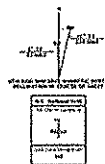
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

US Topo

EXETER QUADRANGLE
CALIFORNIA-TULARE CO.
1:50,000 SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
Horizontal datum: NAD83, Vertical datum: NAVD83
Scale: 1:50,000
Projection: UTM, Zone 11N
Datum: NAD83
Units: Meters
Elevation: Mean Sea Level (MSL)
This map is not a legal document. It is for informational purposes only. It is not to be used for legal or other purposes without the express written permission of the United States Geological Survey.



UTM ZONE 11N
NORTH ARROW INDICATES DIRECTION OF TRUE NORTH
This map was produced in accordance with the
National Map Accuracy Standards (NMAS) for
a map of this scale and was produced in accordance with the
National Map Accuracy Standards (NMAS) for a map of this scale.

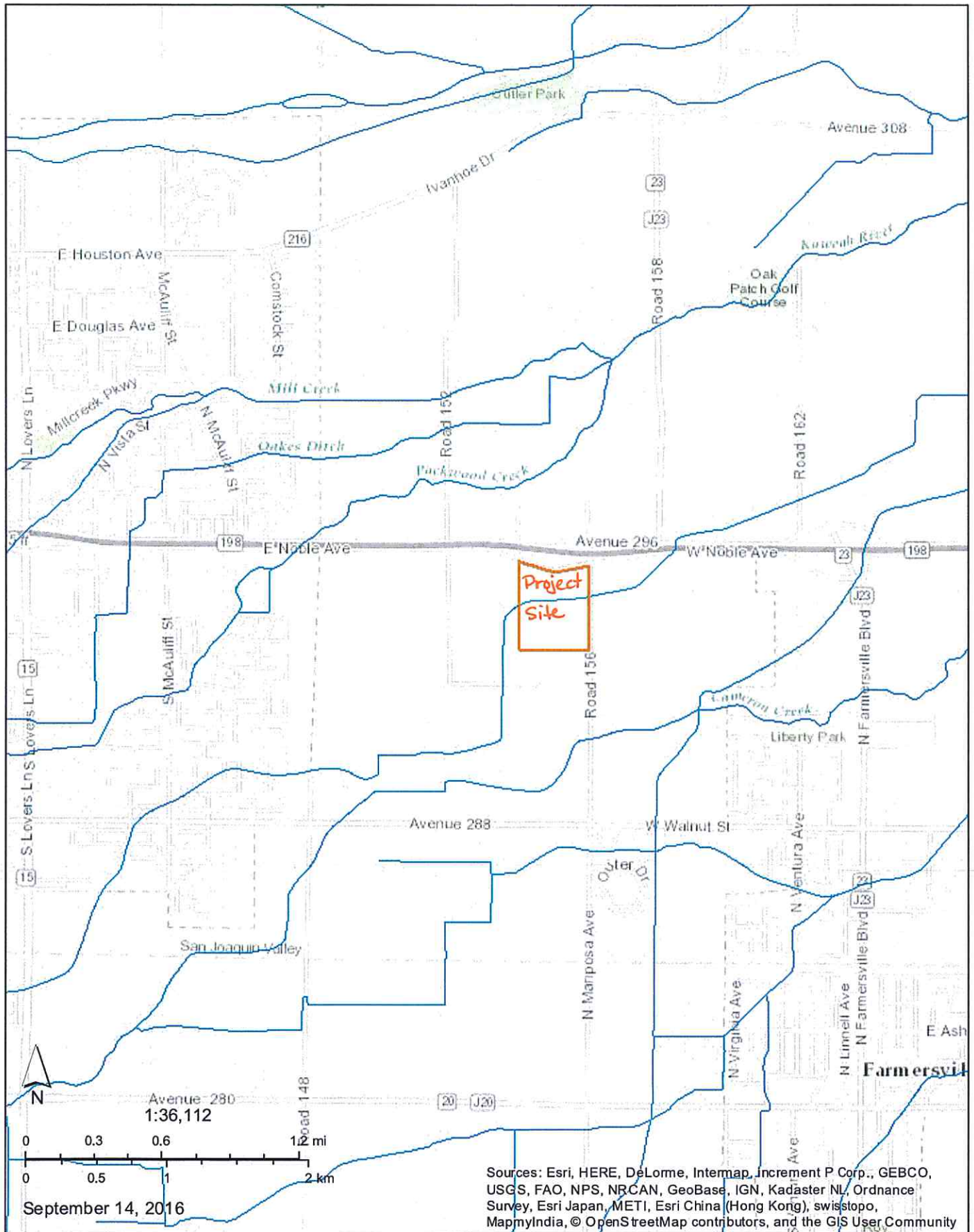


ROAD CLASSIFICATION
Expressway
Major highway
Minor highway
Ramp
Interstate
State
Local
County
Mileage
Scale
North arrow
UTM Zone
Datum
Units
Elevation
Mean Sea Level (MSL)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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EXETER, CA
2013

Map of Project Area





RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD
VISALIA, CA 93277
PHONE (559) 624-7000
FAX (559) 730-2653

Michael Washam	Economic Development and Planning
Benjamin Ruiz, Jr.	Public Works
Sherman Dix	Fiscal Services

BENJAMIN RUIZ, JR., INTERIM DIRECTOR

September 14, 2016

Picayune Rancheria of Chukchansi
Claudia Gonzales, Chairperson
8080 Palm Ave, Suite 207
Fresno, CA, 93711

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Sequoia Drive-In Business Park Project.

Dear Chairperson Gonzales,

Pursuant to the provisions of AB 52 and SB 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the CEQA review of the Sequoia Drive-In Business Park Project in order to assist with identifying and/or preserving and/or mitigating project-related impacts to Native American cultural places including:

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The County requested a Sacred Lands File (SLF) search through the Native American Heritage Commission (NAHC) on August 31, 2016. The SLF search returned on September 8, 2016, with negative results. However, the NAHC recommended consultation with your Tribe.

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Sincerely,



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Chief Environmental Planner
Environmental Planning Division
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hguerra@co.tulare.ca.us

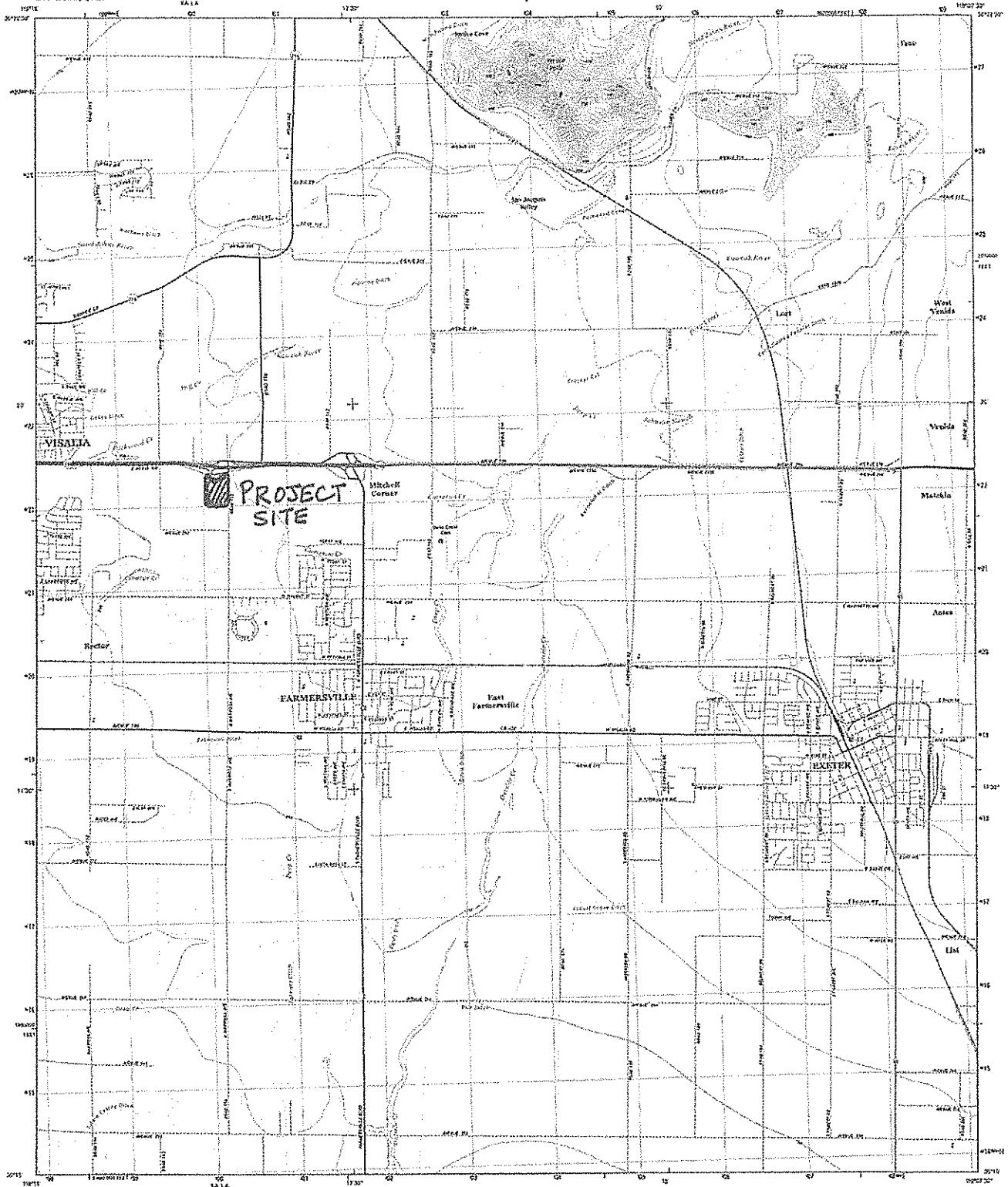
Attachments: US Topo Map (Exeter, 2015)
Project Location Map



U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

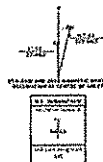
The National Map
US Topo

DIETER QUADRANGLE
CALIFORNIA-TULARE CO.
2.5-MINUTE SERIES



Produced by the United States Geological Survey
using a digital elevation model (DEM) derived from
aerial photography and ground control points. The map
is based on the National Map Accuracy Standards,
1965 Edition, and the National Map Accuracy Standards,
1973 Edition.

This map is not a legal document. It is intended for
general reference only. It is not to be used for
legal purposes. It is not to be used for
engineering or other professional purposes.
It is not to be used for navigation.

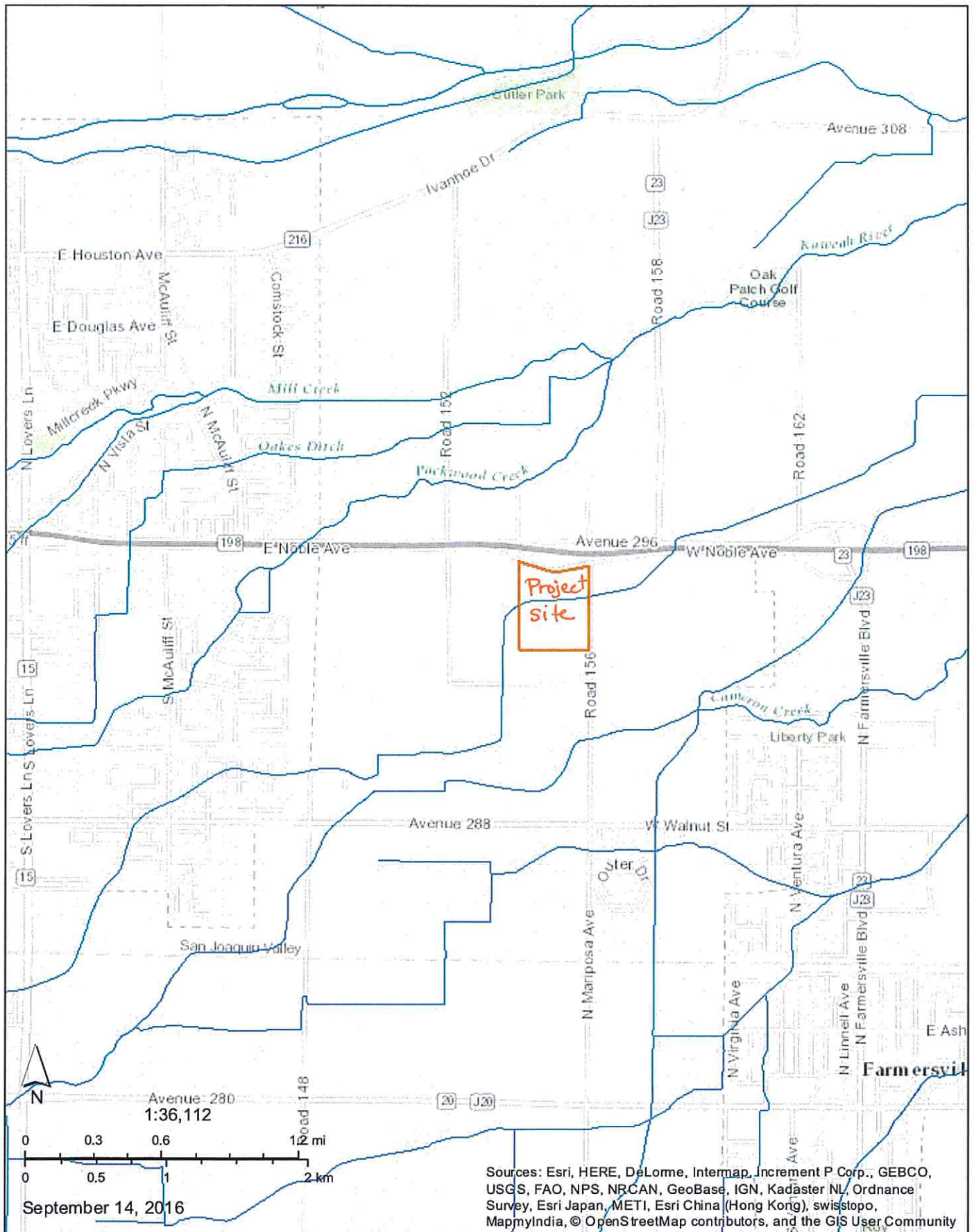


ROAD CLASSIFICATION
Expressway
Interstate
Federal Highway
County Road
Local Road
Bypass
Unimproved Road
Trail
Other

1	2	3	4	5	6	7	8	9	10
1	2	3	4	5	6	7	8	9	10
1	2	3	4	5	6	7	8	9	10
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1	2	3	4	5	6	7	8	9	10
1	2	3	4	5	6	7	8	9	10
1	2	3	4	5	6	7	8	9	10

EXETER, CA
101

Map of Project Area





RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Michael Washam

Benjamin Ruiz, Jr.

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

BENJAMIN RUIZ, JR., INTERIM DIRECTOR

September 14, 2016

North Fork Rancheria of Mono Indians
Judy Elaine Bethel-Fink, Chairperson
P.O. Box 929
North Fork, CA 93643

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Sequoia Drive-In Business Park Project.

Dear Chairperson Bethel-Fink,

Pursuant to the provisions of AB 52 and SB 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the CEQA review of the Sequoia Drive-In Business Park Project in order to assist with identifying and/or preserving and/or mitigating project-related impacts to Native American cultural places including:

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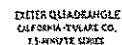
Sincerely,



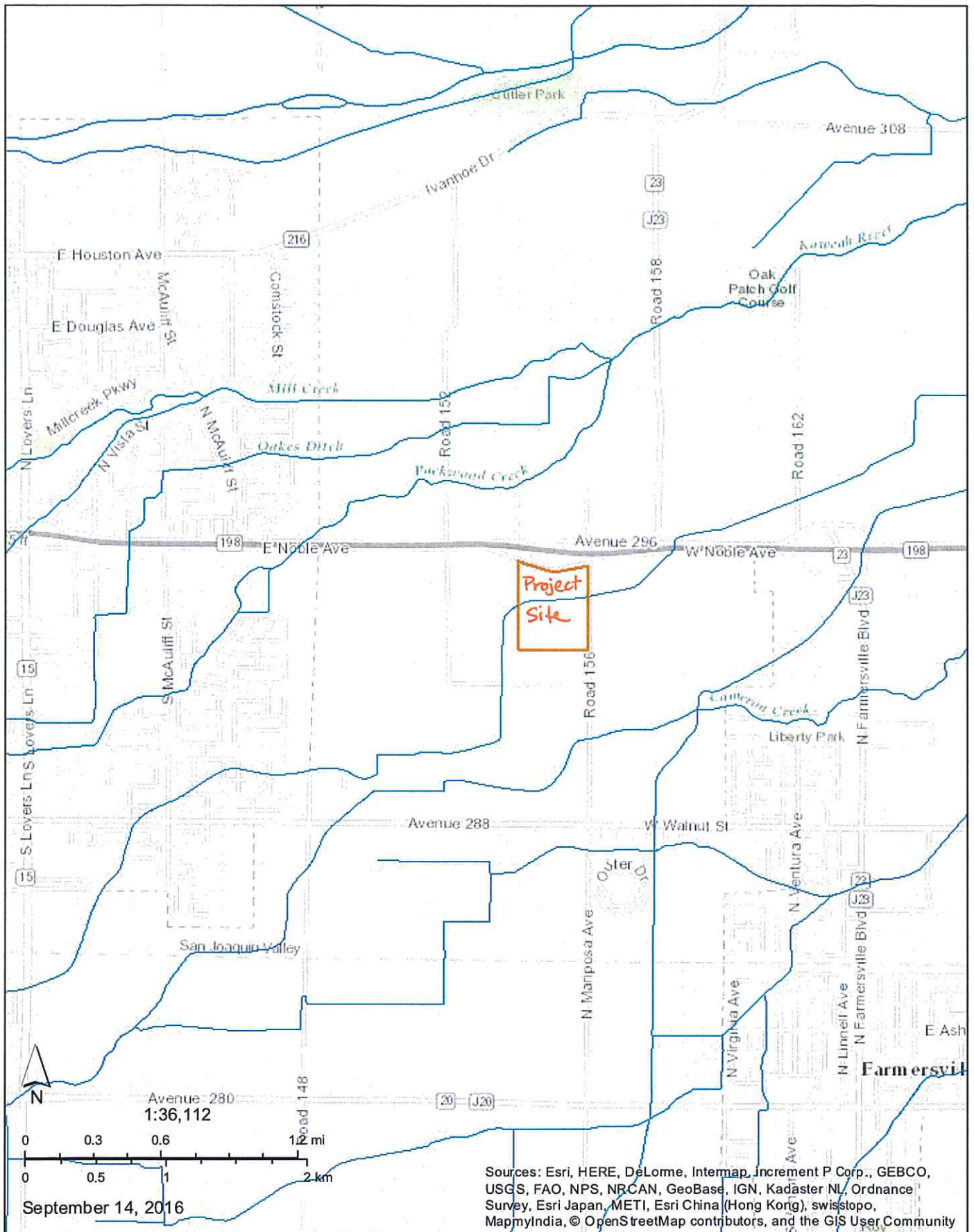
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Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

Attachments: US Topo Map (Exeter, 2015)
Project Location Map

EXETER, CA
2013

Map of Project Area





RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD
VISALIA, CA 93277
PHONE (559) 624-7000
FAX (559) 730-2653

Michael Washam	Economic Development and Planning
Benjamin Ruiz, Jr.	Public Works
Sherman Dix	Fiscal Services

BENJAMIN RUIZ, JR., INTERIM DIRECTOR

September 14, 2016

North Fork Mono Tribe
Ron Goode, Chairperson
13396 Tollhouse Road
Clovis, CA 93619

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Sequoia Drive-In Business Park Project.

Dear Chairperson Goode,

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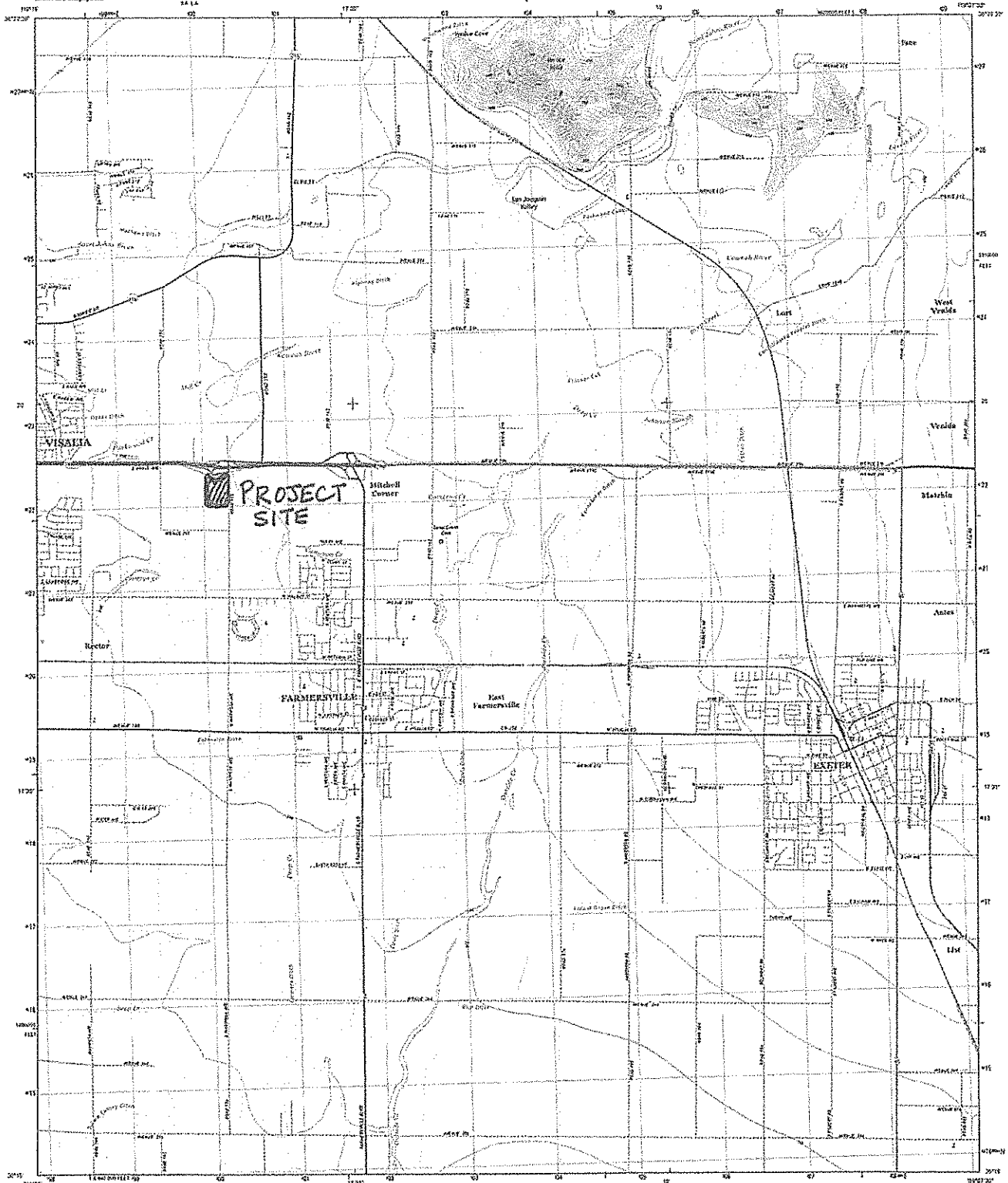
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Project Location Map



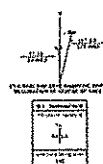
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY



ENTER QUADRANGLE
CALIFORNIA-TULARE CO.
2.5-DEGREE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84)
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CONTROL POINTS
NAD83
This map was produced by the U.S. Geological Survey
National Geographic Society
A map of the United States is shown in the bottom right corner.

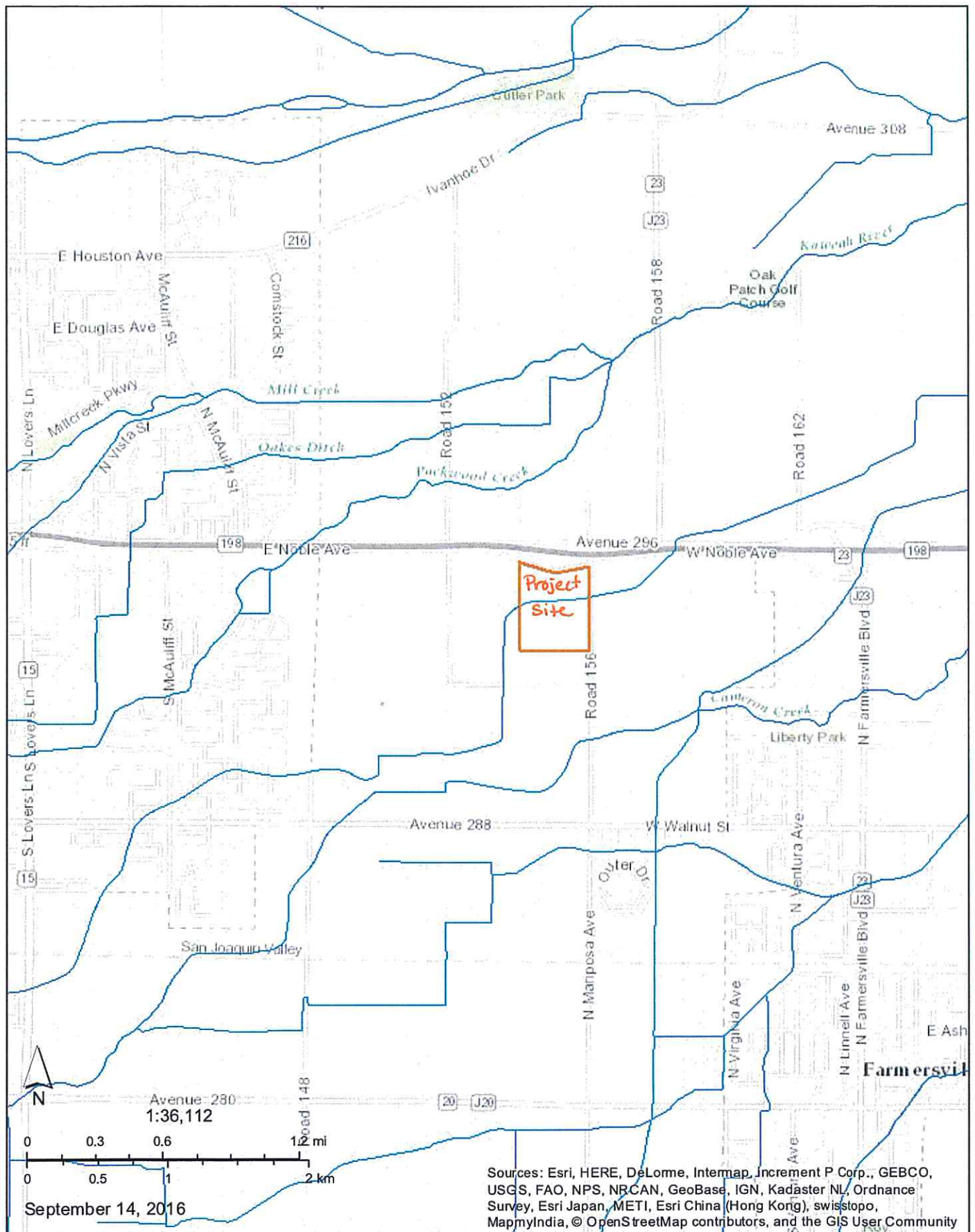


ROAD CLASSIFICATION
Expressway
Primary Road
Secondary Road
Tertiary Road
Unimproved Road
Trail
Fence
Water Feature
Other Feature

1	2	3
4	5	6
7	8	9

ENTER, CA
2013

Map of Project Area





RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Michael Washam

Economic Development and Planning

Benjamin Ruiz, Jr.

Public Works

Sherman Dix

Fiscal Services

BENJAMIN RUIZ, JR., INTERIM DIRECTOR

September 14, 2016

Mono Lake Indian Community
Charlotte Lange, Chairperson
P.O. Box 117
Big Pine, CA 93513

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Sequoia Drive-In Business Park Project.

Dear Chairperson Lange,

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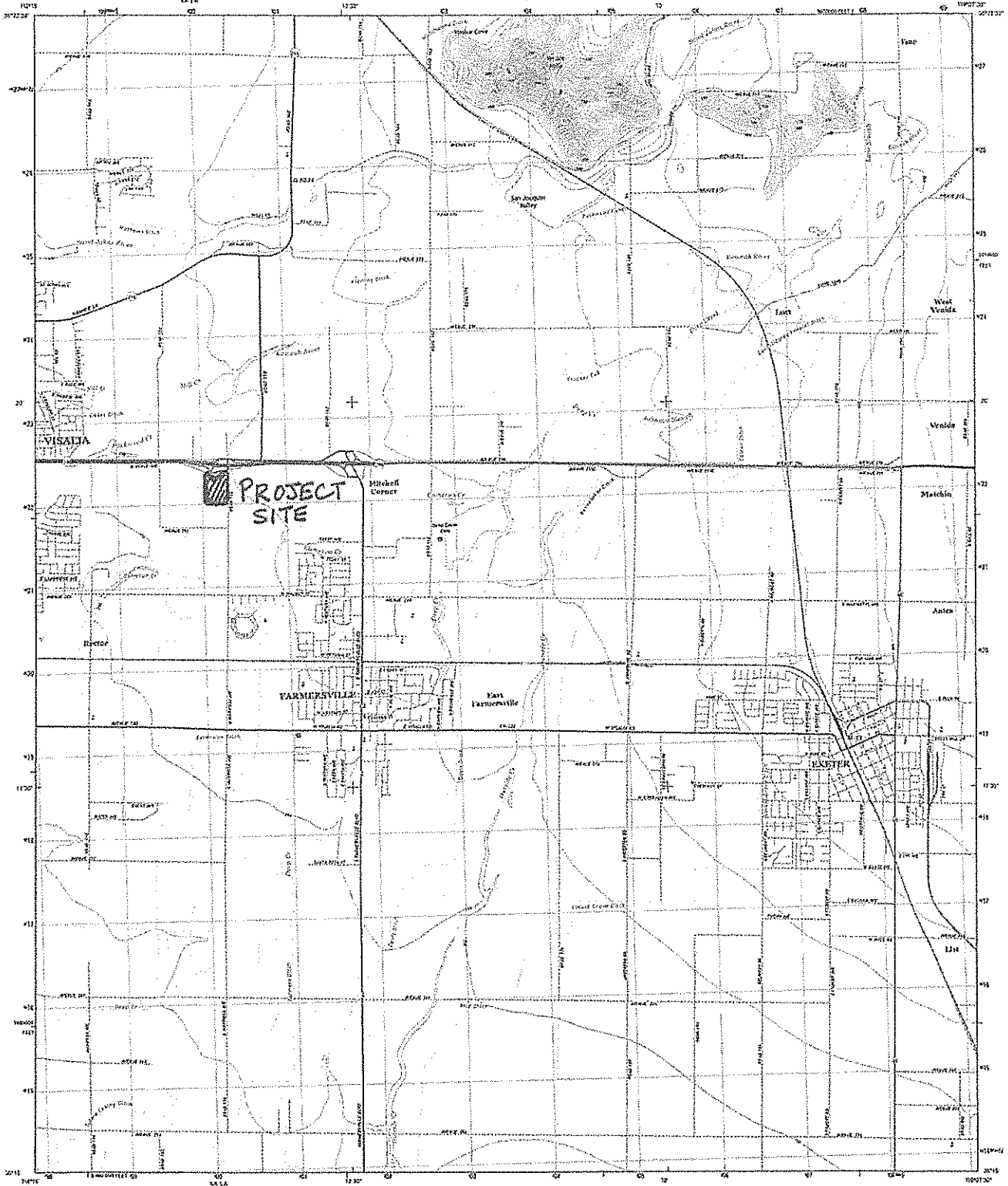
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Project Location Map



U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY



EXETER QUADRANGLE
CALIFORNIA-TULARE CO.
1:50,000 SERIES



Produced by the United States Geological Survey
Map of Exeter, California, 1:50,000
Scale of map is 1:50,000. Horizontal and vertical
scale is the same. Contour interval is 20 feet.
Elevation is in feet above sea level.

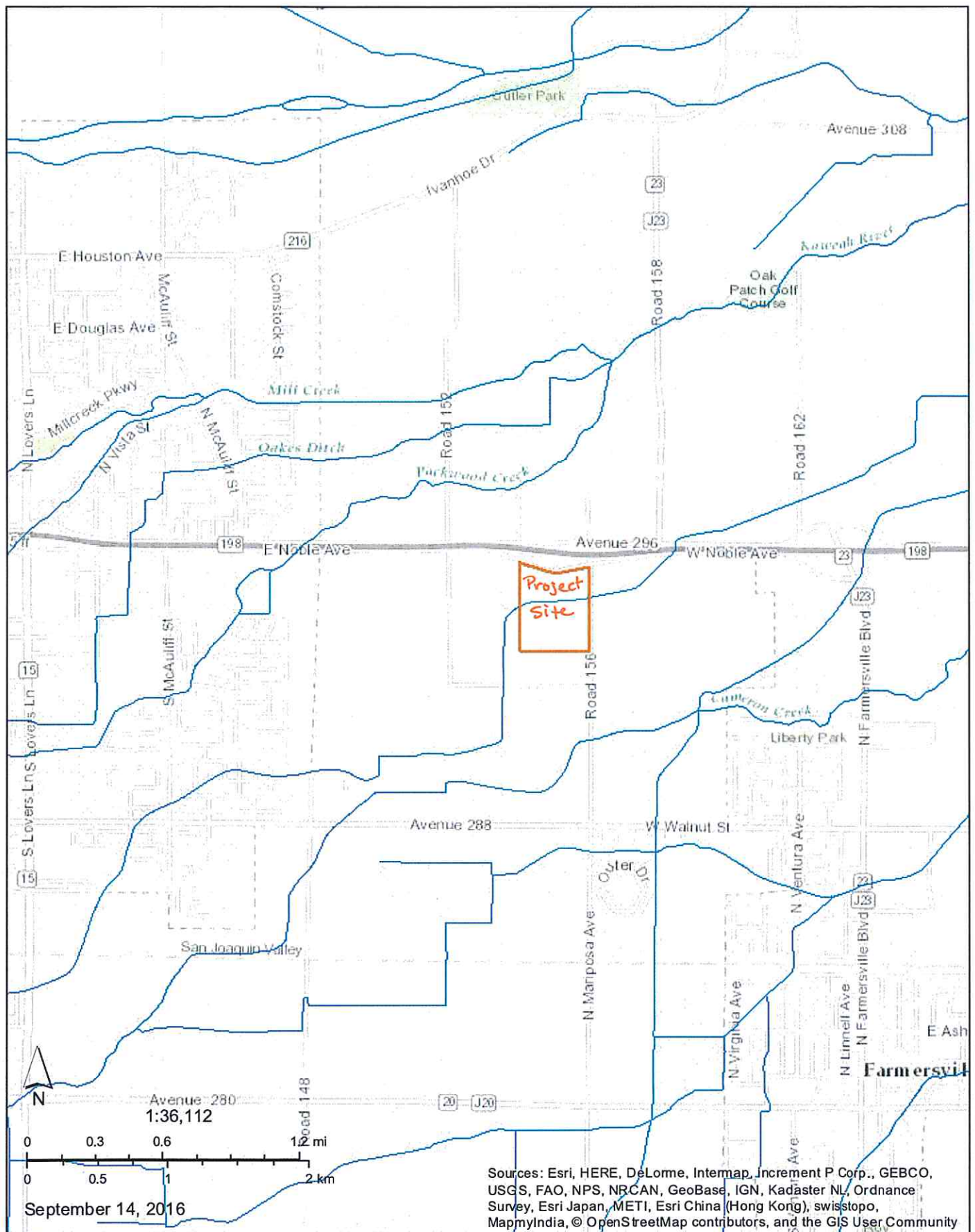


ROAD CLASSIFICATION
Expressway
Primary Road
Secondary Road
Tertiary Road
Local Road
Unimproved Road
Trail
Other

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
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EXETER, CA
2013

Map of Project Area





RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Michael Washam

Economic Development and Planning

Benjamin Ruiz, Jr.

Public Works

Sherman Dix

Fiscal Services

BENJAMIN RUIZ, JR., INTERIM DIRECTOR

September 14, 2016

Kitanemuk & Yowlumne Tejon Indians
Delia Dominguez, Chairperson
115 Radio Street
Bakersfield, CA, 93305

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Sequoia Drive-In Business Park Project.

Dear Chairperson Dominguez,

Pursuant to the provisions of AB 52 and SB 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the CEQA review of the Sequoia Drive-In Business Park Project in order to assist with identifying and/or preserving and/or mitigating project-related impacts to Native American cultural places including:

- Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine; and
- Native American historic, cultural, or sacred site that is listed or may be eligible for listing in the California Register of Historical Resources including historic or prehistoric ruins and any burial ground, archaeological, or historic site.

The County requested a Sacred Lands File (SLF) search through the Native American Heritage Commission (NAHC) on August 31, 2016. The SLF search returned on September 8, 2016, with negative results. However, the NAHC recommended consultation with your Tribe.

The Project is located at 29421 Road 156, the southwest corner of Noble Avenue and Road 156. The Project is adjacent to State Route 198, less than one mile east of the City of Visalia city limits and less than one mile west of the City of Farmersville city limits. The entire 46± acre site is within the Exeter USGS 7.5 minute quadrangle and is located on Assessor Parcel Numbers (APNs) 101-090-014, 101-090-015, 101-100-009 and 101-100-010. The site is located within Section 35, Township 18 South, Range 25 East, MDB&M.

The Applicant proposes to develop the 46.17-acre Project site with a 358,370 square foot business park. The Project includes 48 lots that range from 0.23 to 2.07 acres in size and consists of 43 service commercial lots, two (2) new roadways, stormwater retention basins, an on-site domestic water system, and an existing cellular tower lot. The Tulare Irrigation Canal flows east/west and bisects the Project site. The Project will be developed in four (4) phases. Phase 1 parallels Road 156 north and south of the canal. Phase 2 and Phase 4 will occur south of the canal and, Phase 3 will occur north of the canal and adjacent to Noble Avenue.

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Should the County not receive a response within thirty (30) days, it will be presumed that you have declined consultation. Thank you for your consideration on this matter and please do not hesitate to contact me should you have any questions or need additional information.

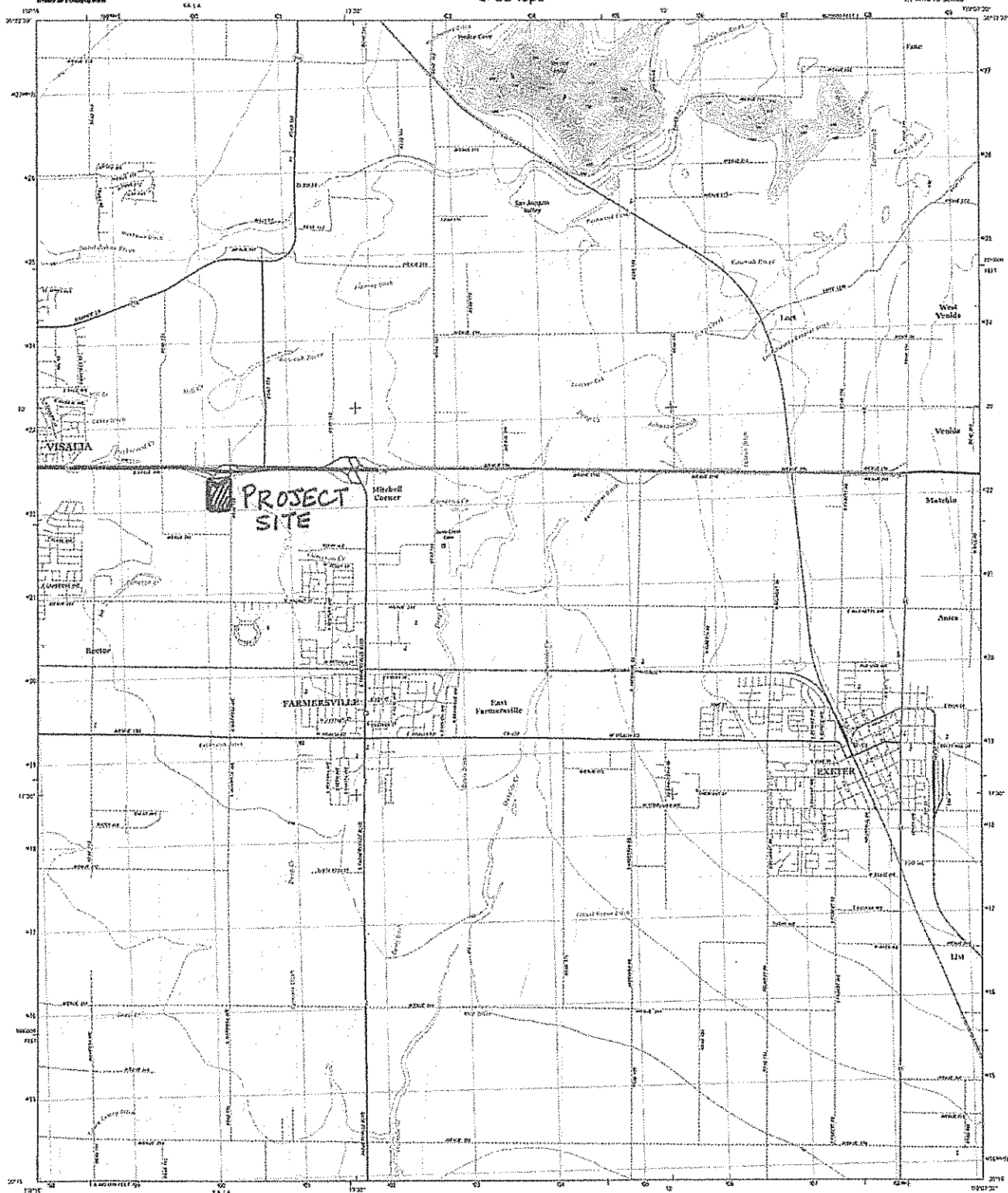
Sincerely,



for

Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

Attachments: US Topo Map (Exeter, 2015)
Project Location Map



Produced by the United States Geological Survey
North American Section of 1925-26
With Canada, pursuant to the 1925-26 Agreement and
the 1925-26 Joint International Commission on the
Geological Survey of the United States and Canada

It is not a good thing, however, to have a large number of people who are not interested in the work of the organization. It is a good thing to have a large number of people who are interested in the work of the organization. It is a good thing to have a large number of people who are interested in the work of the organization.

SCALE 1:74 003

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FINANCIAL OFFICIALS, IN PREP-


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© 2000 Blackwell Science Ltd *Journal of Internal Medicine* 247: 111–117

REGISTRATION

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 In very good shape

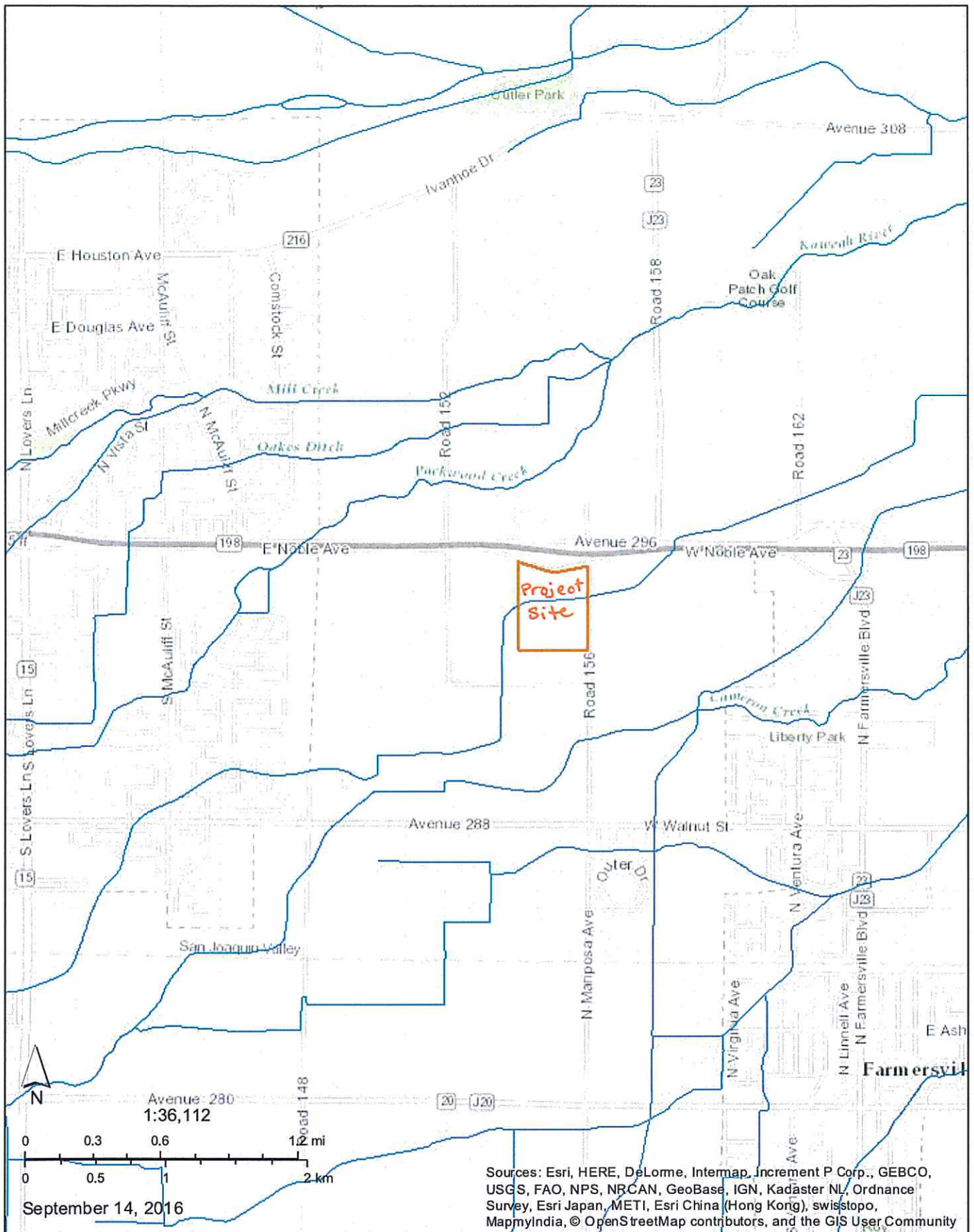
 
 US 10000

DIETER, CA

DIETER, CA

213

Map of Project Area





RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD
VISALIA, CA 93277
PHONE (559) 624-7000
FAX (559) 730-2653

Michael Washam	Economic Development and Planning
Benjamin Ruiz, Jr.	Public Works
Sherman Dix	Fiscal Services

BENJAMIN RUIZ, JR., INTERIM DIRECTOR

September 14, 2016

Kings River Choinumni Farm Tribe
Stan Alec, Vice-Chair
3515 East Fedora Avenue
Fresno, CA, 93726

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Sequoia Drive-In Business Park Project.

Dear Vice-Chair Alec,

Pursuant to the provisions of AB 52 and SB 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the CEQA review of the Sequoia Drive-In Business Park Project in order to assist with identifying and/or preserving and/or mitigating project-related impacts to Native American cultural places including:

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Sincerely,



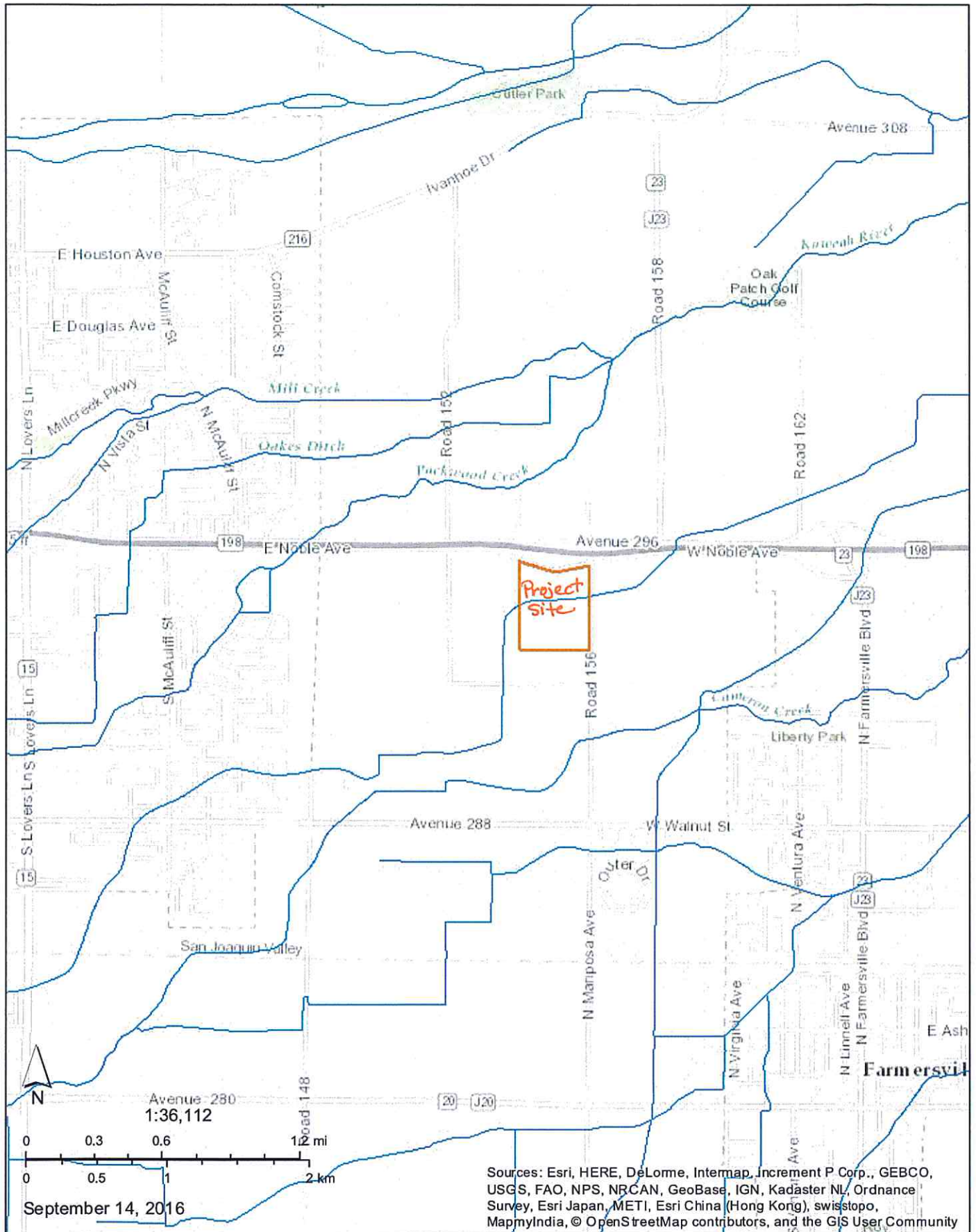
for

Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

Attachments: US Topo Map (Exeter, 2015)
Project Location Map



Map of Project Area





RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Michael Washam

Benjamin Ruiz, Jr.

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

BENJAMIN RUIZ, JR., INTERIM DIRECTOR

September 14, 2016

Kern Valley Indian Council
Julie Turner, Secretary
PO Box 1010
Lake Isabella, CA 93240

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Sequoia Drive-In Business Park Project.

Dear Secretary Turner,

Pursuant to the provisions of AB 52 and SB 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the CEQA review of the Sequoia Drive-In Business Park Project in order to assist with identifying and/or preserving and/or mitigating project-related impacts to Native American cultural places including:

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Sincerely,



for

Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

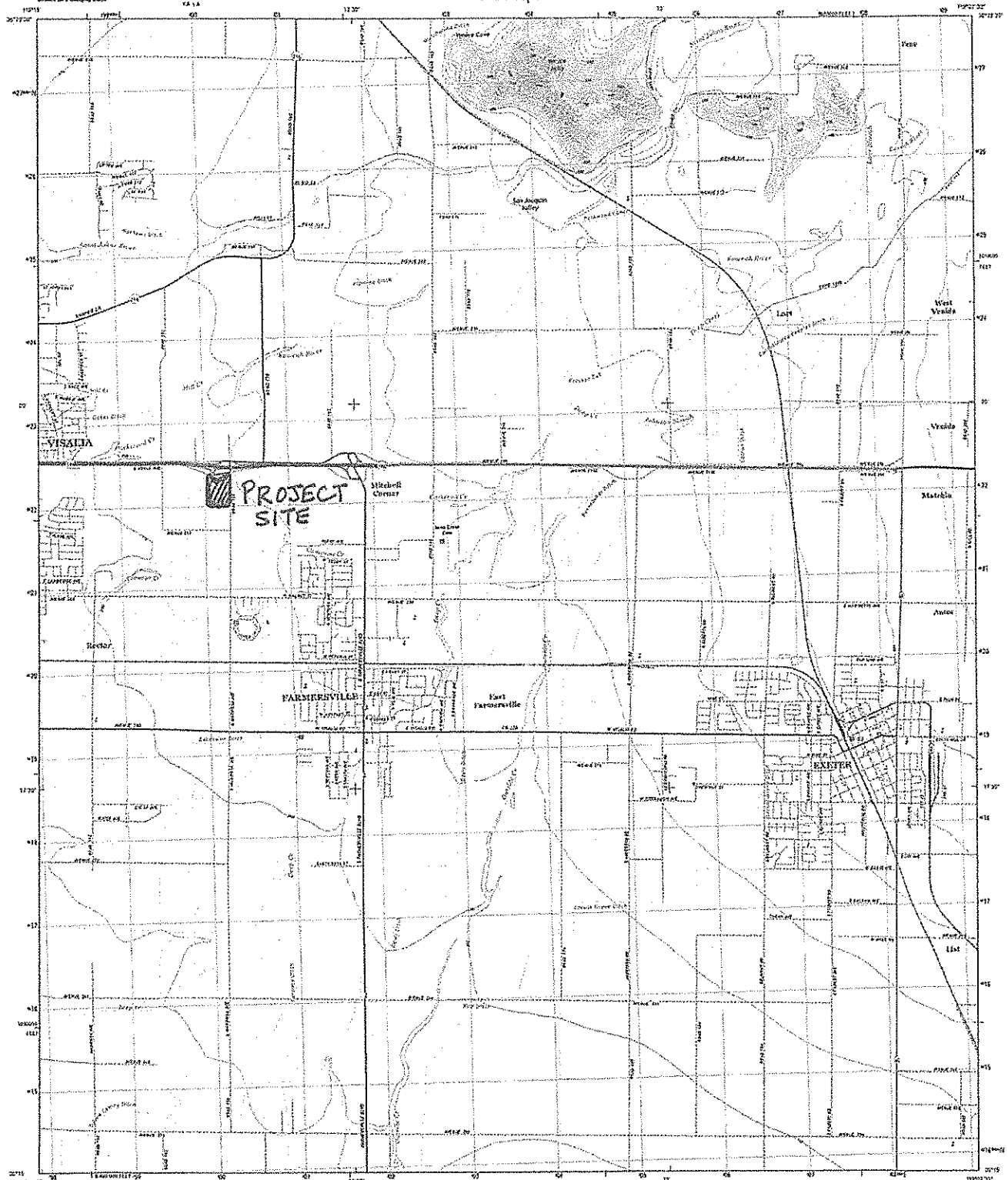
Attachments: US Topo Map (Exeter, 2015)
Project Location Map



U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

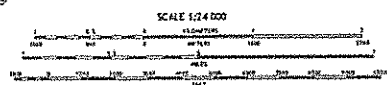
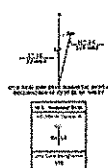
US Topo

EXETER QUADRANGLE
CALIFORNIA-TULARE CO.
1:50,000 SERIES



Produced by the United States Geological Survey
Scale 1:50,000
This map is a digital derivative of the original
topographic map and is not a reproduction of the
original map. It is intended for use as a reference
map only and is not to be used for navigation or
other purposes.

Map of the Exeter, CA area, showing terrain, roads, and urban areas. The map includes a grid with coordinates and a scale bar. A 'PROJECT SITE' is marked with a red square and labeled. The map shows the Kettle River, San Joaquin River, and various towns including Visalia, Farmersville, and Exeter. The map is titled 'EXETER QUADRANGLE' and 'CALIFORNIA-TULARE CO. 1:50,000 SERIES'.

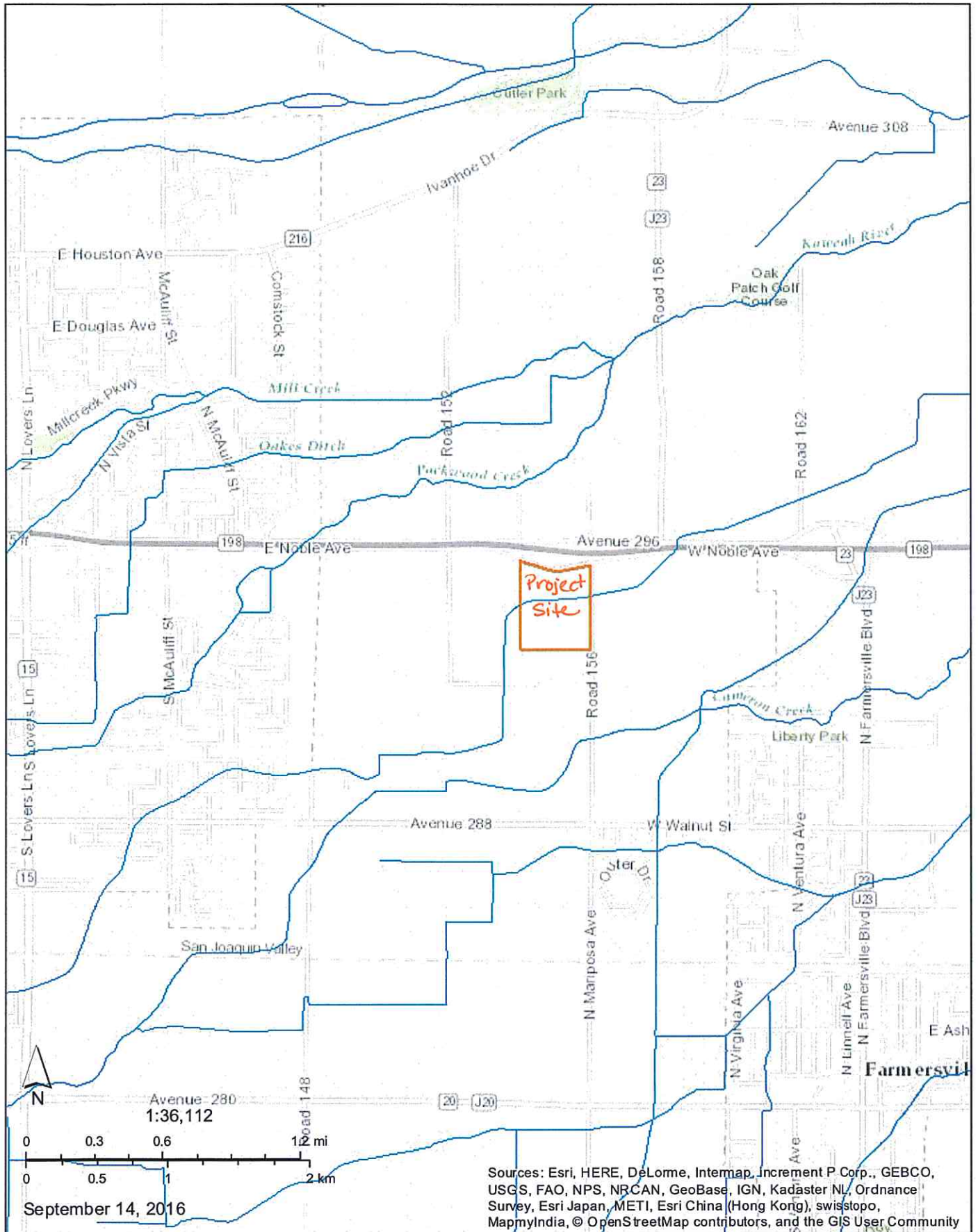


ROAD CLASSIFICATION
Legend for road types: 1. Major Road, 2. Minor Road, 3. Unimproved Road, 4. Private Road, 5. Railroad, 6. Pipeline, 7. Canal, 8. Ditch, 9. Other.

1	2	3	4	5	6	7	8	9
1	2	3	4	5	6	7	8	9
1	2	3	4	5	6	7	8	9

EXETER, CA
2013

Map of Project Area





RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Michael Washam

Benjamin Ruiz, Jr.

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

BENJAMIN RUIZ, JR., INTERIM DIRECTOR

September 14, 2016

Kern Valley Indian Council
Robert Robinson, Co-Chairperson
PO Box 401
Weldon, CA 93283

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Sequoia Drive-In Business Park Project.

Dear Co-Chairperson Robinson,

Pursuant to the provisions of AB 52 and SB 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the CEQA review of the Sequoia Drive-In Business Park Project in order to assist with identifying and/or preserving and/or mitigating project-related impacts to Native American cultural places including:

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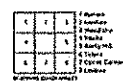
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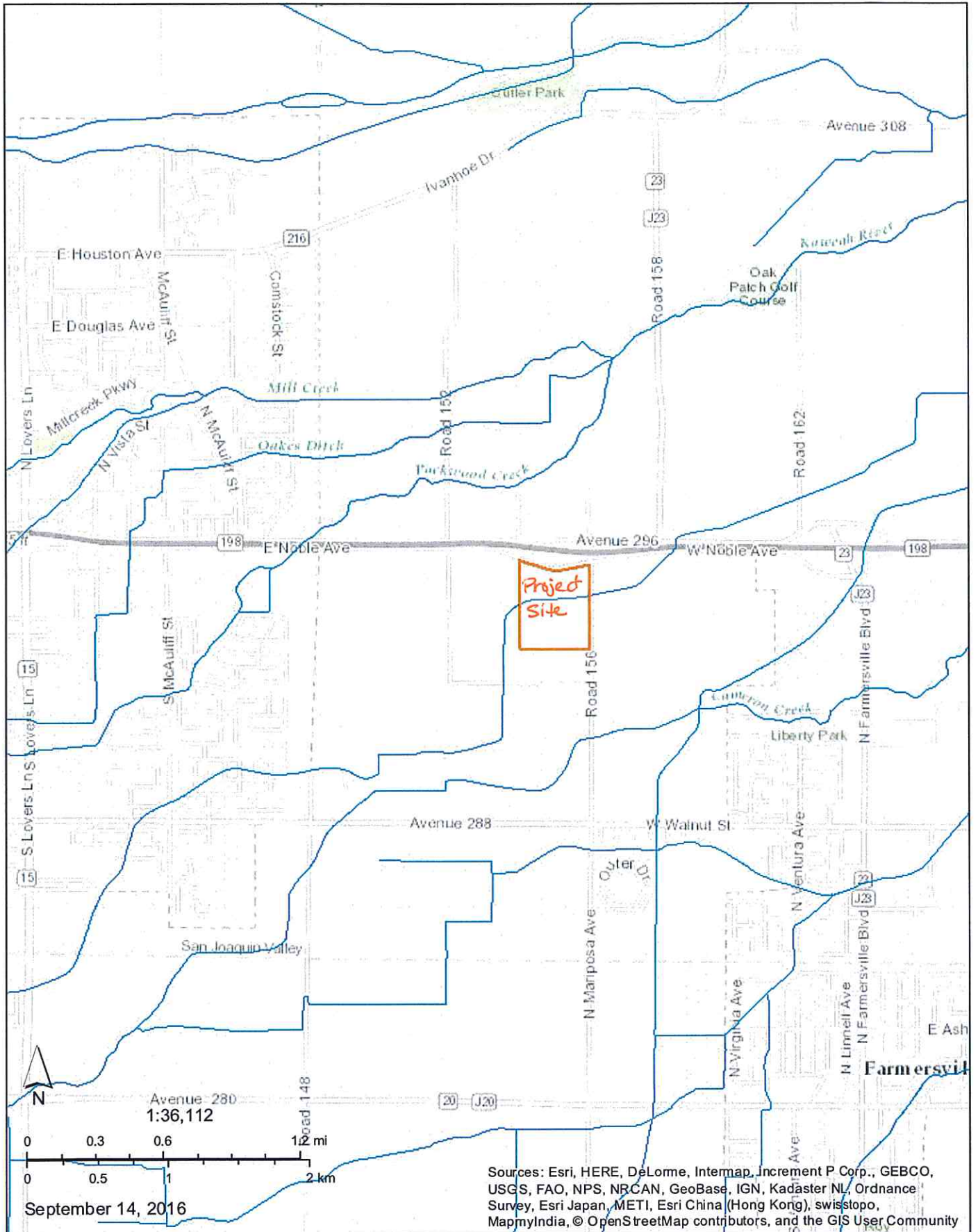


for
Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

Attachments: US Topo Map (Exeter, 2015)
Project Location Map



Map of Project Area





RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD
VISALIA, CA 93277
PHONE (559) 624-7000
FAX (559) 730-2653

Michael Washam	Economic Development and Planning
Benjamin Ruiz, Jr.	Public Works
Sherman Dix	Fiscal Services

BENJAMIN RUIZ, JR., INTERIM DIRECTOR

September 14, 2016

Dunlap Band of Mono Indians
Dunlap Chairperson
Box 44
Dunlap, CA 93621

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Sequoia Drive-In Business Park Project.

Dear Chairperson,

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for Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

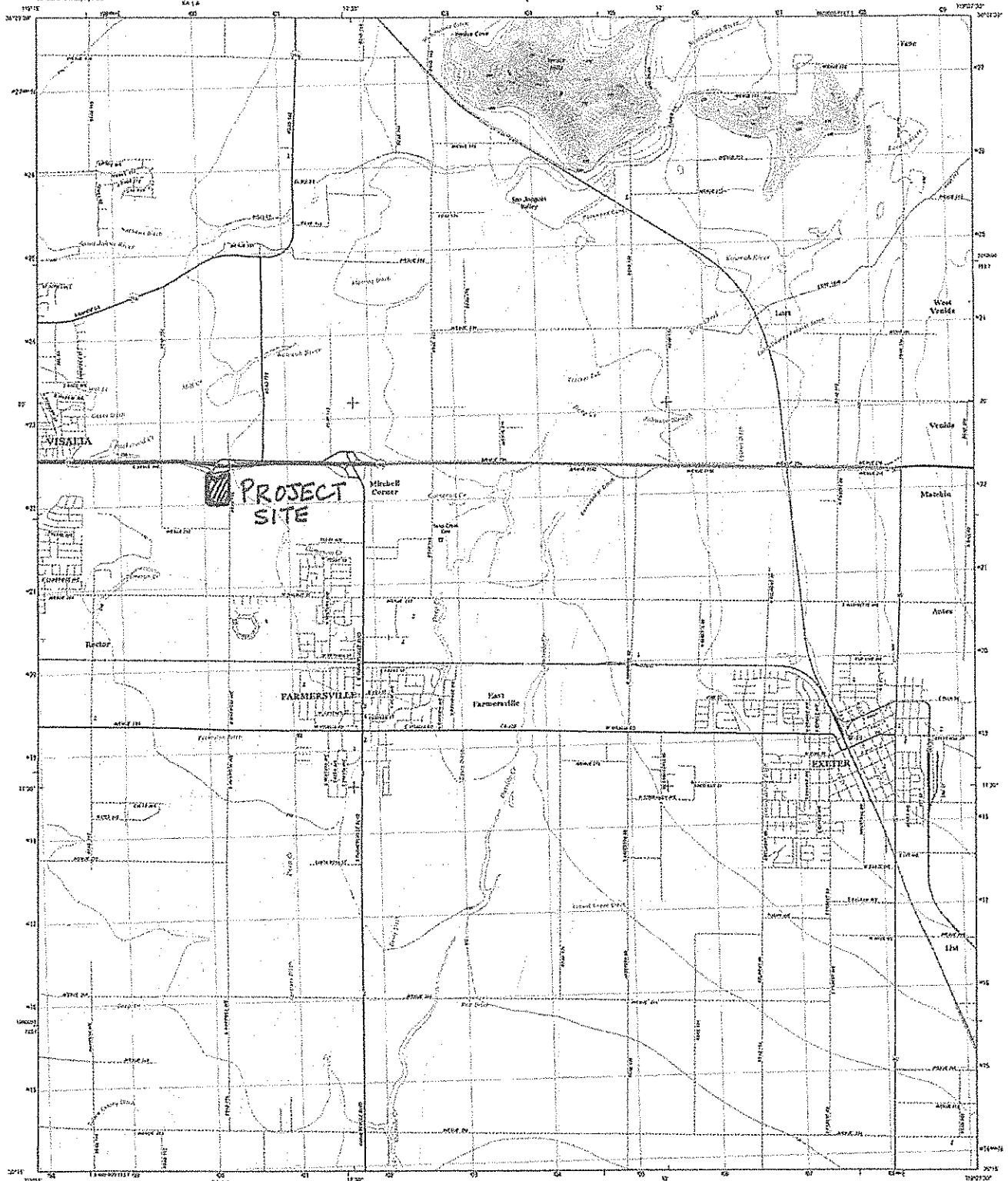
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Project Location Map



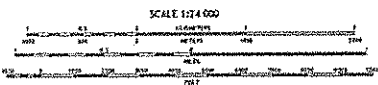
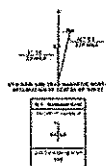
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY



EXETER QUADRANGLE
CALIFORNIA-TULARE CO.
1:50,000 SERIES



Produced by the United States Geological Survey
Scale 1:50,000
This map is not a legal document. It is a representation of the best available information at the time of publication. It is not intended to be used for legal purposes. The map is published by the United States Geological Survey, Department of the Interior, Washington, D.C. 20508.

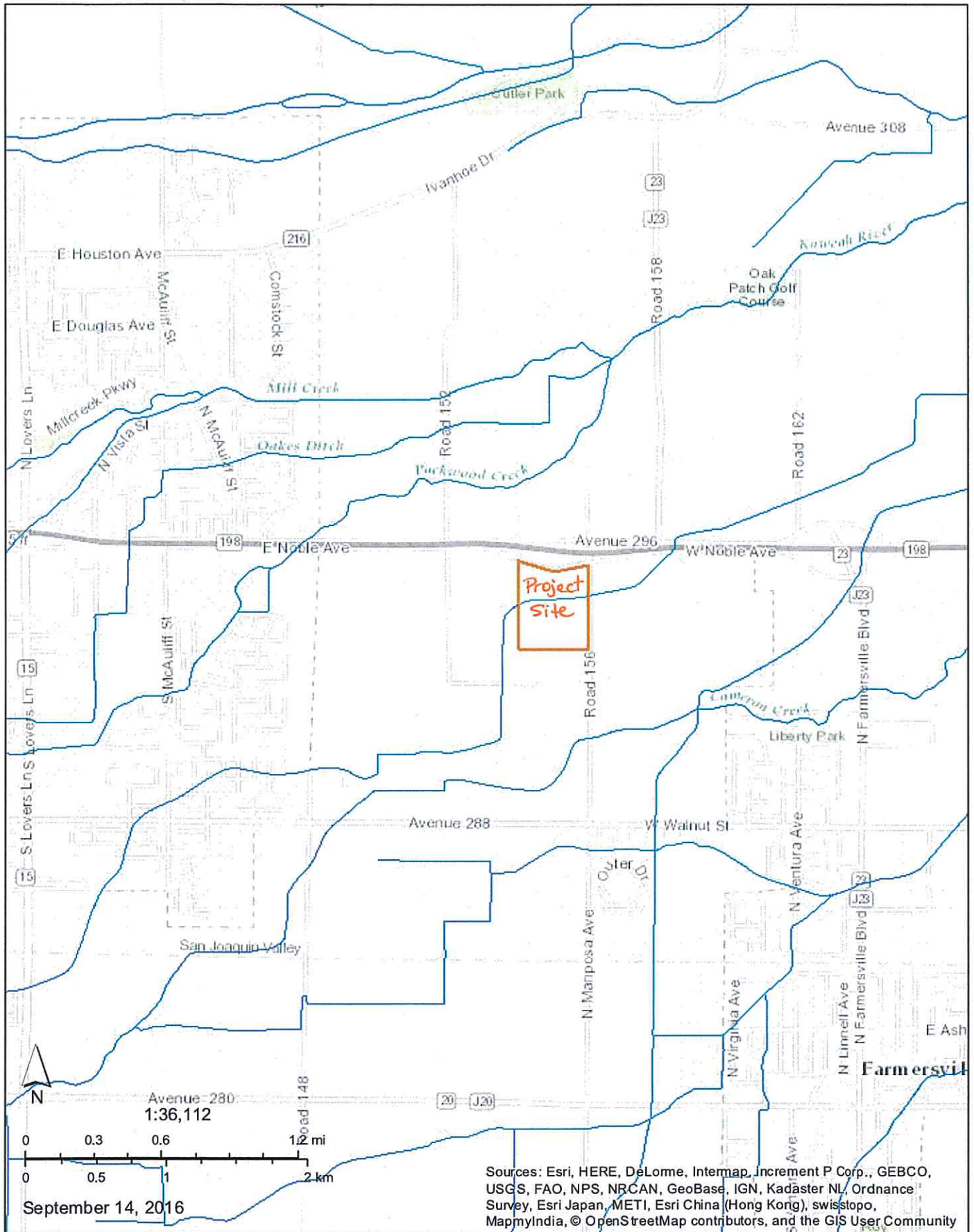


ROAD CLASSIFICATION
Expressway
Primary Road
Secondary Road
Tertiary Road
Quaternary Road
Unimproved Road
Trail
Other

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
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81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

EXETER, CA
215

Map of Project Area





RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Michael Washam

Benjamin Ruiz, Jr.

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

BENJAMIN RUIZ, JR., INTERIM DIRECTOR

September 14, 2016

Dumna Wo-Wah Tribal Government
Robert Ledger, Chairperson
2216 East Hammond Street
Fresno, CA 93703

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Sequoia Drive-In Business Park Project.

Dear Chairperson Ledger,

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The County requested a Sacred Lands File (SLF) search through the Native American Heritage Commission (NAHC) on August 31, 2016. The SLF search returned on September 8, 2016, with negative results. However, the NAHC recommended consultation with your Tribe.

The Project is located at 29421 Road 156, the southwest corner of Noble Avenue and Road 156. The Project is adjacent to State Route 198, less than one mile east of the City of Visalia city limits and less than one mile west of the City of Farmersville city limits. The entire 46± acre site is within the Exeter USGS 7.5 minute quadrangle and is located on Assessor Parcel Numbers (APNs) 101-090-014, 101-090-015, 101-100-009 and 101-100-010. The site is located within Section 35, Township 18 South, Range 25 East, MDB&M.

The Applicant proposes to develop the 46.17-acre Project site with a 358,370 square foot business park. The Project includes 48 lots that range from 0.23 to 2.07 acres in size and consists of 43 service commercial lots, two (2) new roadways, stormwater retention basins, an on-site domestic water system, and an existing cellular tower lot. The Tulare Irrigation Canal flows east/west and bisects the Project site. The Project will be developed in four (4) phases. Phase 1 parallels Road 156 north and south of the canal. Phase 2 and Phase 4 will occur south of the canal and, Phase 3 will occur north of the canal and adjacent to Noble Avenue.

The proposed Project site is located on soil classified Nord Fine Sandy Loam, which is considered Prime Farmland if irrigated and either protected from flooding or not frequently flooded during the growing season. The northern and southwestern portions of the Project site are mapped as Farmland of Local Importance while the southeastern portion of the Project site is mapped as Vacant or Disturbed Land by the California Department of Conservation Farmland Mapping and Monitoring Program. The Project site is not enrolled in a Williamson Act Contract. The Project site is located within the East Visalia Urban Development Boundary (UDB) of the Visalia Area Land Use Plan and is currently zoned for service commercial land uses. There are commercial uses located directly west, north, and east of the Project site. The southeastern portion of the Project site was previously a drive-in movie theater. There are currently no agricultural operations occurring on the northern and southwestern portions of the Project site which have been agriculturally unproductive for many years. With the exception of the single cellular tower on-site, the entire site remains in undeveloped open space conditions.

If your Tribe desires to consult with the County on the review of this project, please respond in writing within thirty (30) days of the date of this letter.

Should the County not receive a response within thirty (30) days, it will be presumed that you have declined consultation. Thank you for your consideration on this matter and please do not hesitate to contact me should you have any questions or need additional information.

Sincerely,



 Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

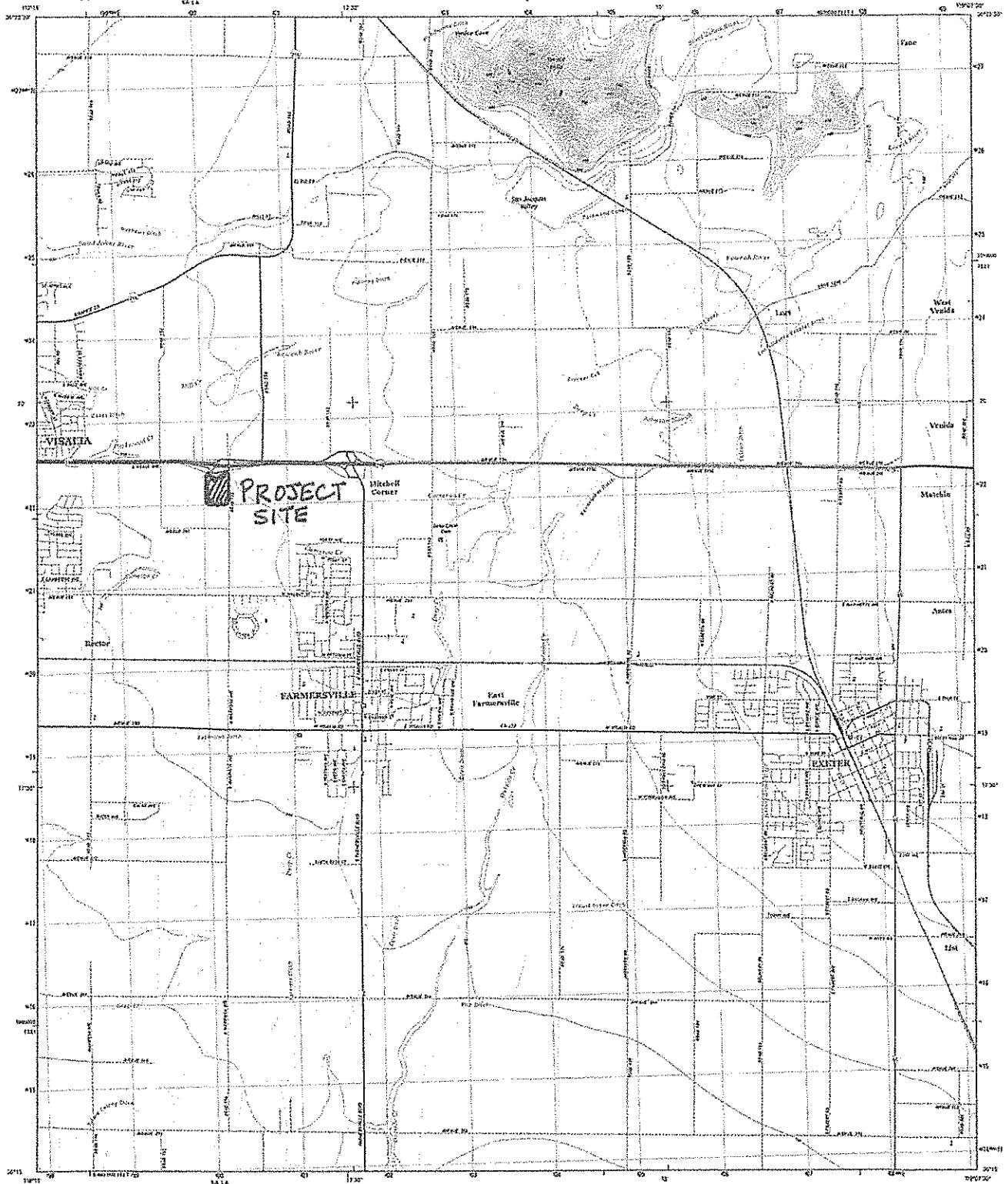
Attachments: US Topo Map (Exeter, 2015)
Project Location Map



U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

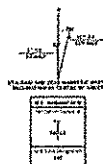
US Topo

EXETER QUADRANGLE
CALIFORNIA-TULARE CO.
1:50,000 SCALE SERIES



Produced by the United States Geological Survey
from a digital edition of 1:50,000 scale
topographic maps of the United States.
World Geodetic System of 1984 (WGS 84) is used
for horizontal coordinates. Vertical coordinates are
in feet above mean sea level (MSL).

This map is not a legal document. It is intended for
general reference only. It is not to be used for
engineering, construction, or other purposes
without the approval of the U.S. Geological Survey.
For more information, contact the U.S. Geological Survey,
Reston, Virginia 20192.



VERTICAL DATUM: 1955
HORIZONTAL DATUM: 1983
The map was produced by the U.S. Geological Survey
from a digital edition of 1:50,000 scale topographic maps
of the United States.

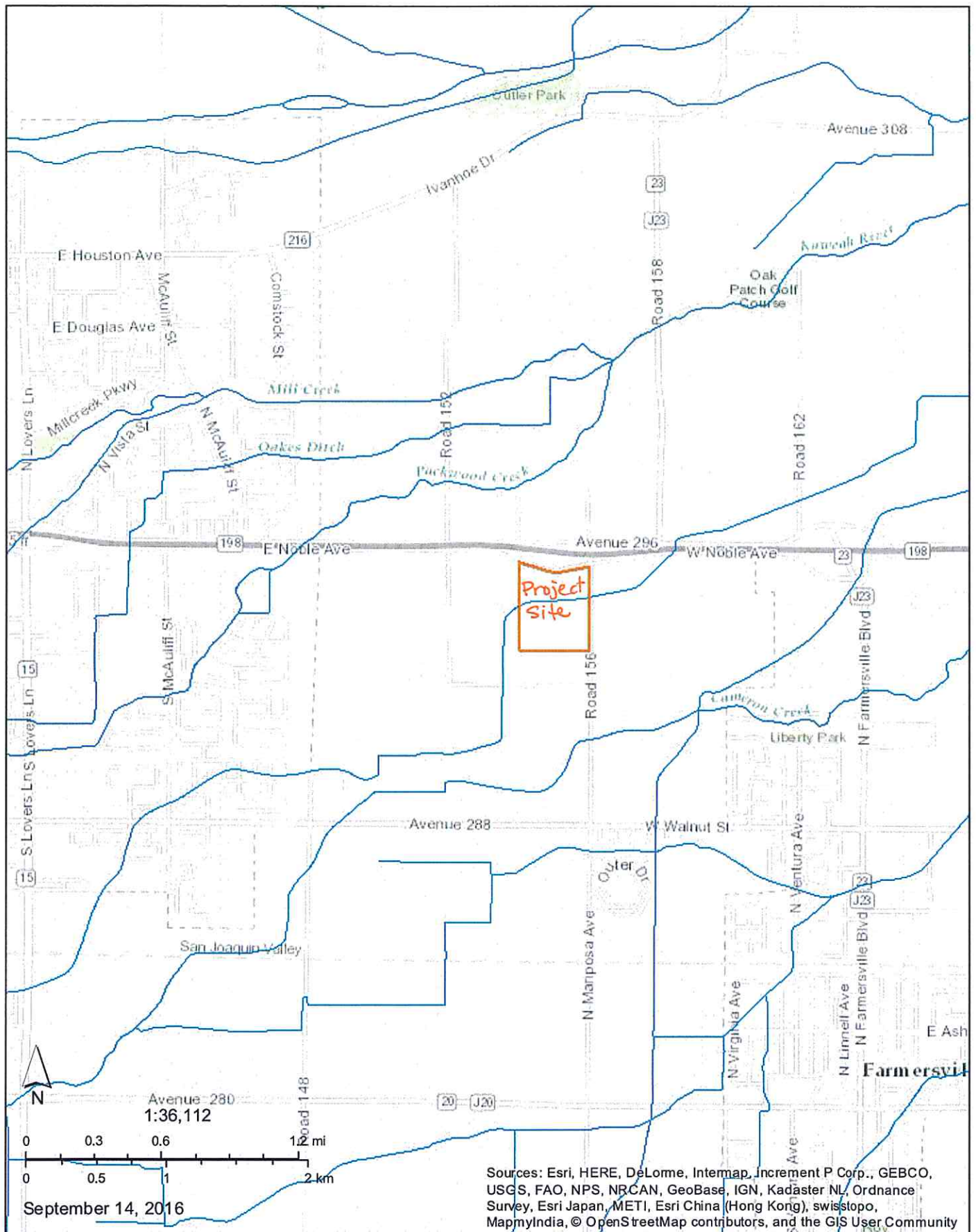


ROAD CLASSIFICATION
Interstate Highway
Federal Highway
County Road
Local Road
Railroad
Other Road

1	2	3	4	5	6	7	8	9	10
1	2	3	4	5	6	7	8	9	10
1	2	3	4	5	6	7	8	9	10
1	2	3	4	5	6	7	8	9	10

EXETER, CA
315

Map of Project Area





RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Michael Washam

Benjamin Ruiz, Jr.

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

BENJAMIN RUIZ, JR., INTERIM DIRECTOR

September 14, 2016

Cold Springs Rancheria of Mono Indians
Carol Bill, Chairperson
P.O. Box 209
Tollhouse, CA 93667

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Sequoia Drive-In Business Park Project.

Dear Chairperson Bill,

Pursuant to the provisions of AB 52 and SB 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the CEQA review of the Sequoia Drive-In Business Park Project in order to assist with identifying and/or preserving and/or mitigating project-related impacts to Native American cultural places including:

- Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine; and
- Native American historic, cultural, or sacred site that is listed or may be eligible for listing in the California Register of Historical Resources including historic or prehistoric ruins and any burial ground, archaeological, or historic site.

The County requested a Sacred Lands File (SLF) search through the Native American Heritage Commission (NAHC) on August 31, 2016. The SLF search returned on September 8, 2016, with negative results.

The Project is located at 29421 Road 156, the southwest corner of Noble Avenue and Road 156. The Project is adjacent to State Route 198, less than one mile east of the City of Visalia city limits and less than one mile west of the City of Farmersville city limits. The entire 46± acre site is within the Exeter USGS 7.5 minute quadrangle and is located on Assessor Parcel Numbers (APNs) 101-090-014, 101-090-015, 101-100-009 and 101-100-010. The site is located within Section 35, Township 18 South, Range 25 East, MDB&M.

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If your Tribe desires to consult with the County on the review of this project, please respond in writing within thirty (30) days of the date of this letter.

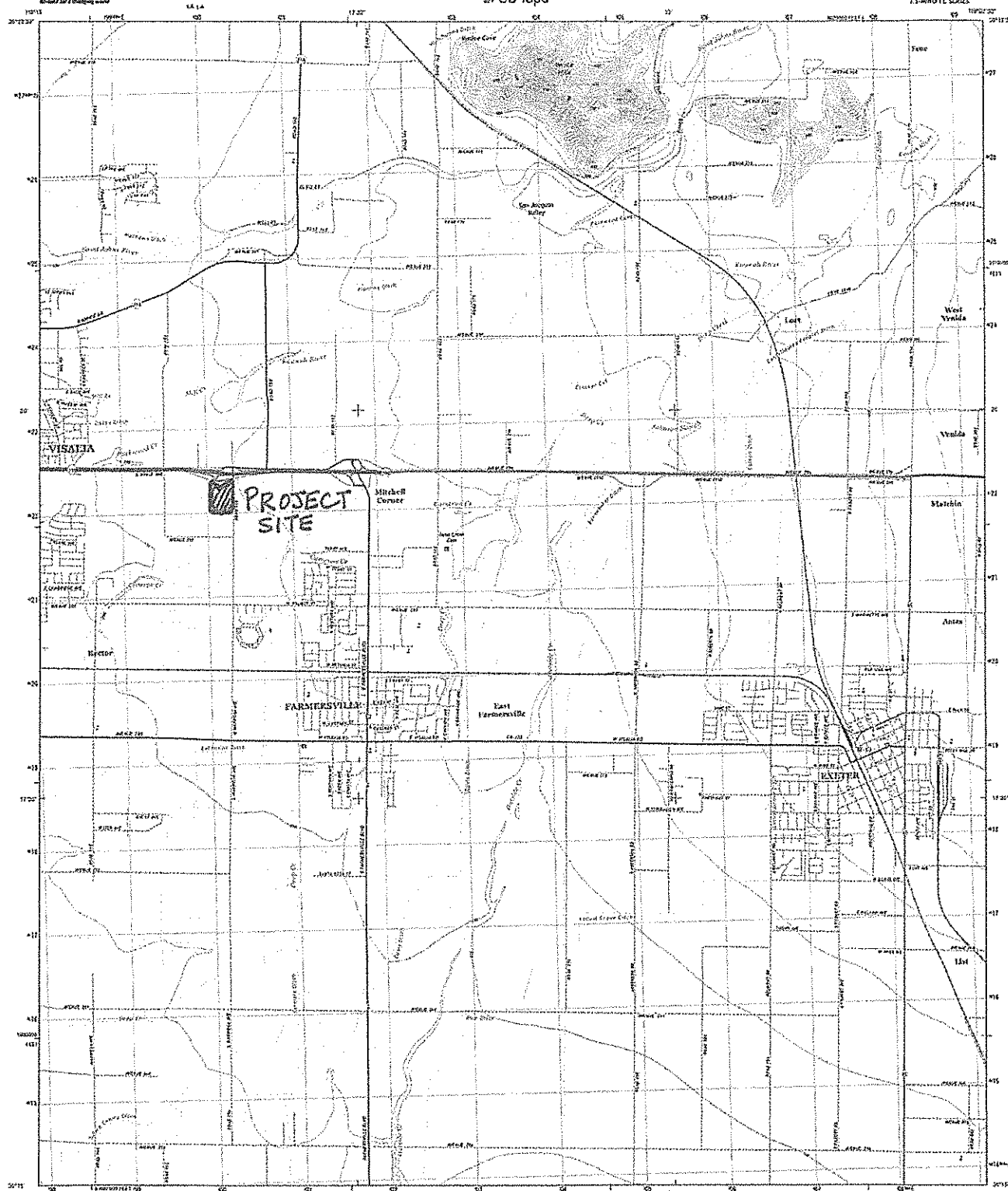
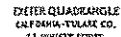
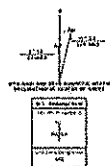
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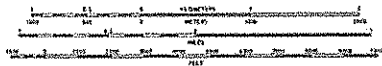


for Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

Attachments: US Topo Map (Exeter, 2015)
Project Location Map




[illegible]

SCALE 1:2-4 DOG



104-00000000

Expenditure by: Social Contribution:
 Investment: Social Benefit:
 Pump:

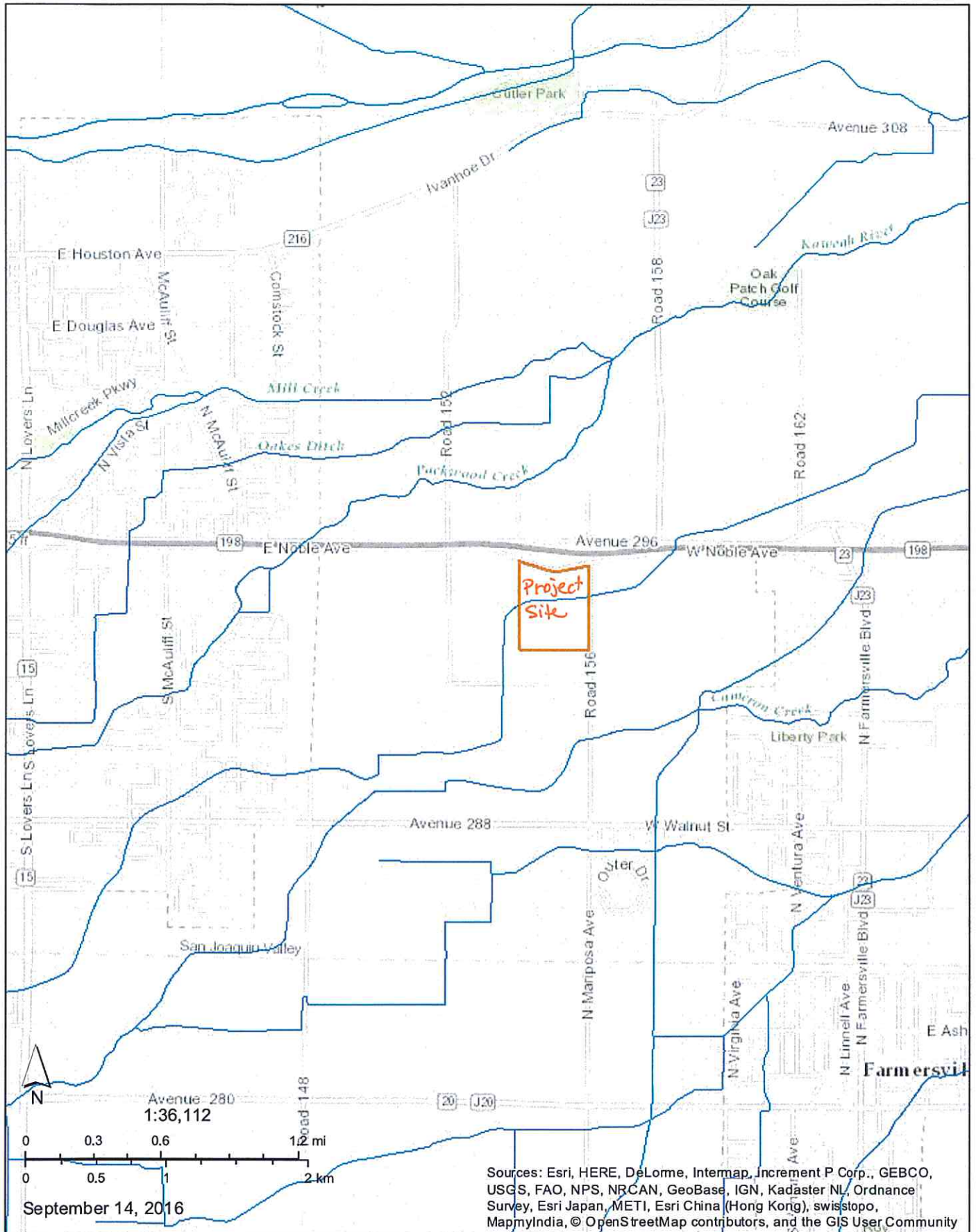
  

THIS MAP WAS PRODUCED IN CONFORMANCE WITH A
DISCLOSURE AGREEMENT DATED 11/11/11 BETWEEN THE
U.S. DEPARTMENT OF JUSTICE AND THE U.S. DEPARTMENT OF
ENERGY.

1	2	3	1. Appraisal
4		5	2. Feedback
6		7	3. Responsibility
			4. Trusting
			5. Quality Work
			6. Timely
			7. Strong Commitment
			8. Learning

DIETER, CA
2115

Map of Project Area





RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Michael Washam

Benjamin Ruiz, Jr.

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

BENJAMIN RUIZ, JR., INTERIM DIRECTOR

September 14, 2016

Big Sandy Rancheria
Elizabeth D. Kipp, Chairperson
P.O. Box 337
Auberry, CA 93602

RE: Project Notification Pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18 for the Sequoia Drive-In Business Park Project.

Dear Chairperson Kipp,

Pursuant to the provisions of AB 52 and SB 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Tulare hereby extends an invitation to consult on the CEQA review of the Sequoia Drive-In Business Park Project in order to assist with identifying and/or preserving and/or mitigating project-related impacts to Native American cultural places including:

- Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine; and
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Should the County not receive a response within thirty (30) days, it will be presumed that you have declined consultation. Thank you for your consideration on this matter and please do not hesitate to contact me should you have any questions or need additional information.

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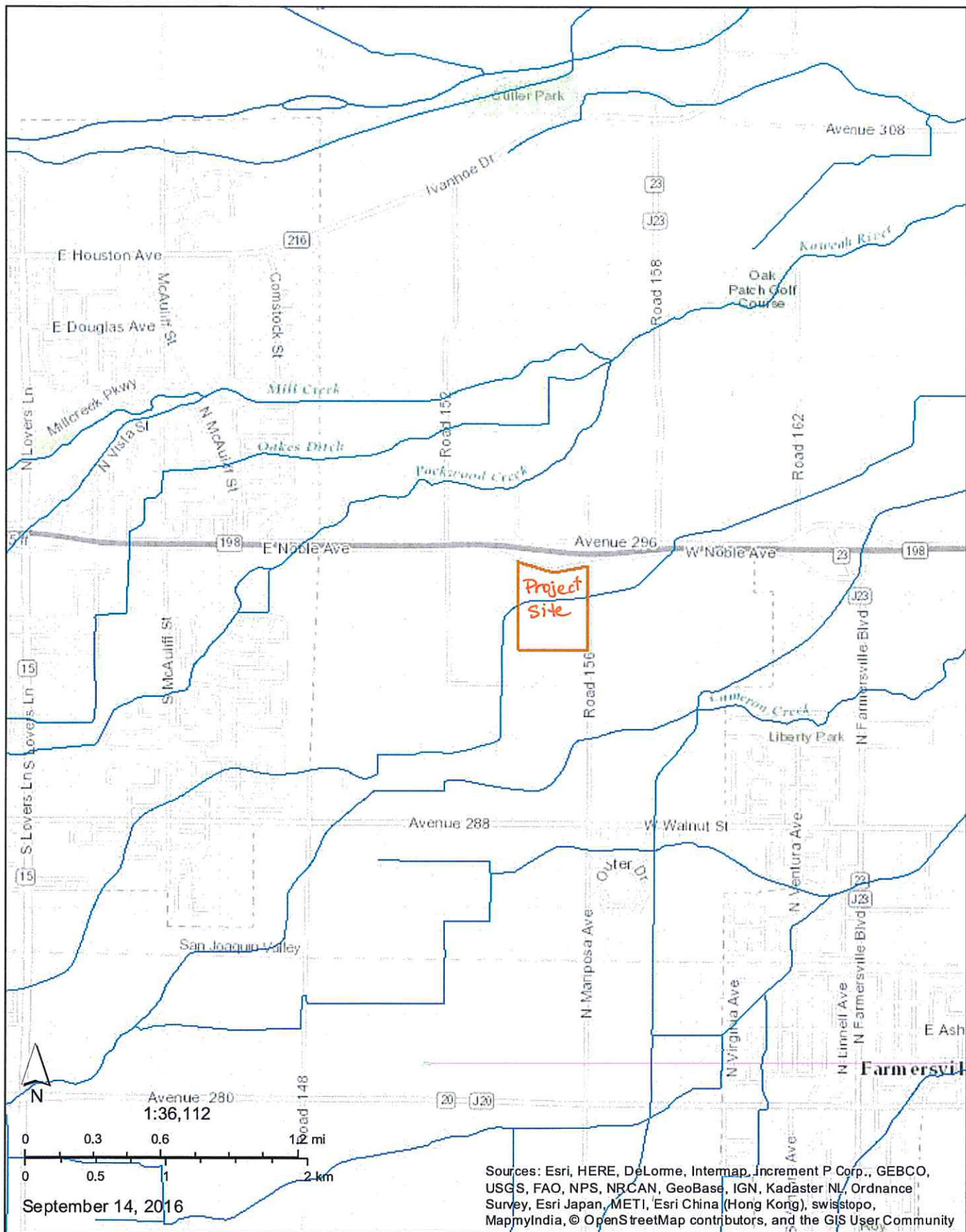


for Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

Attachments: US Topo Map (Exeter, 2015)
Project Location Map



Map of Project Area





RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Michael Washam

Reed Schenke

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

BENJAMIN RUIZ, JR., DIRECTOR

January 12, 2017

Dumna Wo-Wah Tribal Government
Robert Ledger, Chairperson
2216 East Hammond Street
Fresno, CA, 93703

**RE: Notice of Preparation of an Environmental Impact Report for the Sequoia Drive-In
Business Park Project**

Dear Chairperson Ledger,

The County of Tulare (County) provided your tribe with a Project Notification (dated September 14, 2016) requesting consultation with your Tribe pursuant to the provisions of AB 52 and SB 18.

Sacred Lands File Search

A Sacred Lands File (SLF) search through the Native American Heritage Commission (NAHC, returned on September 8, 2016), indicated negative results. Results of the SLF are available to your Tribal Representative(s) if a written request for consultation is submitted to the County within thirty (30) days of receipt of this letter. Otherwise, results of the SLF search will be made available upon the release of the EIR during the public review/comment period.

California Historical Resources Information System Search

The County has received the following information since the previous request for consultation was mailed to your Tribe.

A California Historical Resources Information System (CHRIS) search for the project area was requested through the Southern San Joaquin Valley Information Center (SSJVIC) on September 12, 2016. The CHRIS search results (dated September 27, 2016) identified one (1) recorded cultural resource, a Tulare Irrigation Canal, within the Project site. The search also identified six (6) recorded resources within a one-half mile radius, including a prehistoric era mound, an historic period ranch, barn, single-family residence, canal, and drive-in theater. As no previous cultural resource studies have been conducted within the project site, the SSJVIC recommended that a field survey be conducted to determine if cultural resources are present. As such, the County is requesting consultation with your Tribe to determine whether a Cultural Resources Study will be

required. The results of the CHRIS search will be made available to your Tribal Representatives if a written request for consultation is received.

If your Tribe does not provide a response to this request within thirty (30) days, our environmental record will indicate no response was provided, and, as such, there are no tribal cultural resources of concern and a Cultural Resources Study is not necessary.

Notice of Preparation

In accordance with the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.), the County of Tulare Resource Management Agency (RMA) will be preparing an Environmental Impact Report (EIR) to evaluate the environmental effects associated with the Sequoia Drive-In Business Park project. The Notice of Preparation (NOP) for the EIR is enclosed and will be made available on the County website beginning January 13, 2017, at:

<http://tularecounty.ca.gov/rma/index.cfm/documents-and-forms/planning-documents/environmental-planning/environmental-impact-reports/>

If your Tribe would like the opportunity to consult with the County on this project, please respond in writing within thirty (30) days of receipt of this letter. Written correspondence can be mailed to the address provided above, or to the email address provided below.

If your Tribe opts to decline an opportunity to consult on this project and does not want to receive written notice of the availability of the draft EIR, please provide written correspondence indicating such.

Thank you for your consideration on this matter and please do not hesitate to contact me by phone or e-mail if you have any questions or need additional information. If you need immediate assistance and I am unavailable, please contact Jessica Willis, Planner IV, by phone at (559) 624-7122, or by email at jwillis@co.tulare.ca.us.

Sincerely,



for

Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

Attachment: Notice of Preparation



RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Michael Washam

Reed Schenke

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

BENJAMIN RUIZ, JR., DIRECTOR

January 12, 2017

Kings River Choinumni Farm Tribe
Stan Alec, Vice-Chair
3515 East Fedora Avenue
Fresno, CA, 93726

**RE: Notice of Preparation of an Environmental Impact Report for the Sequoia Drive-In
Business Park Project**

Dear Vice-Chair Alec,

The County of Tulare (County) provided your tribe with a Project Notification (dated September 14, 2016) requesting consultation with your Tribe pursuant to the provisions of AB 52 and SB 18.

Sacred Lands File Search

A Sacred Lands File (SLF) search through the Native American Heritage Commission (NAHC, (returned on September 8, 2016), indicated negative results. Results of the SLF are available to your Tribal Representative(s) if a written request for consultation is submitted to the County within thirty (30) days of receipt of this letter. Otherwise, results of the SLF search will be made available upon the release of the EIR during the public review/comment period.

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required. The results of the CHRIS search will be made available to your Tribal Representatives if a written request for consultation is received.

If your Tribe does not provide a response to this request within thirty (30) days, our environmental record will indicate no response was provided, and, as such, there are no tribal cultural resources of concern and a Cultural Resources Study is not necessary.

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If your Tribe opts to decline an opportunity to consult on this project and does not want to receive written notice of the availability of the draft EIR, please provide written correspondence indicating such.

Thank you for your consideration on this matter and please do not hesitate to contact me by phone or e-mail if you have any questions or need additional information. If you need immediate assistance and I am unavailable, please contact Jessica Willis, Planner IV, by phone at (559) 624-7122, or by email at jwillis@co.tulare.ca.us.

Sincerely,



for Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

Attachment: Notice of Preparation



RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD
VISALIA, CA 93277
PHONE (559) 624-7000
FAX (559) 730-2653

Michael Washam Economic Development and Planning
Reed Schenke Public Works
Sherman Dix Fiscal Services

BENJAMIN RUIZ, JR., DIRECTOR

January 12, 2017

Picayune Rancheria of Chukchansi
Claudia Gonzales, Chairperson
8080 Palm Ave, Suite 207
Fresno, CA, 93711

RE: Notice of Preparation of an Environmental Impact Report for the Sequoia Drive-In Business Park Project

Dear Chairperson Gonzales,

The County of Tulare (County) provided your tribe with a Project Notification (dated September 14, 2016) requesting consultation with your Tribe pursuant to the provisions of AB 52 and SB 18.

Sacred Lands File Search

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Sincerely,



for

Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

Attachment: Notice of Preparation



RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Michael Washam

Reed Schenke

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

BENJAMIN RUIZ, JR., DIRECTOR

January 12, 2017

Santa Rosa Rancheria Tachi Yokut Tribe
Rueben Barrios Sr., Chairperson
P. O. Box 8
Lemoore, CA 93245

RE: Notice of Preparation of an Environmental Impact Report for the Sequoia Drive-In Business Park Project

Dear Chairperson Barrios,

The County of Tulare (County) provided your tribe with a Project Notification (dated September 14, 2016) requesting consultation with your Tribe pursuant to the provisions of AB 52 and SB 18.

Sacred Lands File Search

A Sacred Lands File (SLF) search through the Native American Heritage Commission (NAHC, (returned on September 8, 2016), indicated negative results. Results of the SLF are available to your Tribal Representative(s) if a written request for consultation is submitted to the County within thirty (30) days of receipt of this letter. Otherwise, results of the SLF search will be made available upon the release of the EIR during the public review/comment period.

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If your Tribe opts to decline an opportunity to consult on this project and does not want to receive written notice of the availability of the draft EIR, please provide written correspondence indicating such.

Thank you for your consideration on this matter and please do not hesitate to contact me by phone or e-mail if you have any questions or need additional information. If you need immediate assistance and I am unavailable, please contact Jessica Willis, Planner IV, by phone at (559) 624-7122, or by email at jwillis@co.tulare.ca.us.

Sincerely,



for
Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

Attachment: Notice of Preparation



RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD
VISALIA, CA 93277
PHONE (559) 624-7000
FAX (559) 730-2653

Michael Washam Economic Development and Planning
Reed Schenke Public Works
Sherman Dix Fiscal Services

BENJAMIN RUIZ, JR., DIRECTOR

January 12, 2017

Santa Rosa Rancheria Tachi Yokut Tribe
Hector Franco, Cultural Director
P. O. Box 8
Lemoore, CA 93245

**RE: Notice of Preparation of an Environmental Impact Report for the Sequoia Drive-In
Business Park Project**

Dear Director Franco,

The County of Tulare (County) provided your tribe with a Project Notification (dated September 14, 2016) requesting consultation with your Tribe pursuant to the provisions of AB 52 and SB 18.

Sacred Lands File Search

A Sacred Lands File (SLF) search through the Native American Heritage Commission (NAHC, (returned on September 8, 2016), indicated negative results. Results of the SLF are available to your Tribal Representative(s) if a written request for consultation is submitted to the County within thirty (30) days of receipt of this letter. Otherwise, results of the SLF search will be made available upon the release of the EIR during the public review/comment period.

California Historical Resources Information System Search

The County has received the following information since the previous request for consultation was mailed to your Tribe.

A California Historical Resources Information System (CHRIS) search for the project area was requested through the Southern San Joaquin Valley Information Center (SSJVIC) on September 12, 2016. The CHRIS search results (dated September 27, 2016) identified one (1) recorded cultural resource, a Tulare Irrigation Canal, within the Project site. The search also identified six (6) recorded resources within a one-half mile radius, including a prehistoric era mound, an historic period ranch, barn, single-family residence, canal, and drive-in theater. As no previous cultural resource studies have been conducted within the project site, the SSJVIC recommended that a field survey be conducted to determine if cultural resources are present. As such, the County is requesting consultation with your Tribe to determine whether a Cultural Resources Study will be

required. The results of the CHRIS search will be made available to your Tribal Representatives if a written request for consultation is received.

If your Tribe does not provide a response to this request within thirty (30) days, our environmental record will indicate no response was provided, and, as such, there are no tribal cultural resources of concern and a Cultural Resources Study is not necessary.

Notice of Preparation

In accordance with the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.), the County of Tulare Resource Management Agency (RMA) will be preparing an Environmental Impact Report (EIR) to evaluate the environmental effects associated with the Sequoia Drive-In Business Park project. The Notice of Preparation (NOP) for the EIR is enclosed and will be made available on the County website beginning January 13, 2017, at:
<http://tularecounty.ca.gov/rma/index.cfm/documents-and-forms/planning-documents/environmental-planning/environmental-impact-reports/>

If your Tribe would like the opportunity to consult with the County on this project, please respond in writing within thirty (30) days of receipt of this letter. Written correspondence can be mailed to the address provided above, or to the email address provided below.

If your Tribe opts to decline an opportunity to consult on this project and does not want to receive written notice of the availability of the draft EIR, please provide written correspondence indicating such.

Thank you for your consideration on this matter and please do not hesitate to contact me by phone or e-mail if you have any questions or need additional information. If you need immediate assistance and I am unavailable, please contact Jessica Willis, Planner IV, by phone at (559) 624-7122, or by email at jwillis@co.tulare.ca.us.

Sincerely,



for Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

Attachment: Notice of Preparation



RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD
VISALIA, CA 93277
PHONE (559) 624-7000
FAX (559) 730-2653

Michael Washam	Economic Development and Planning
Reed Schenke	Public Works
Sherman Dix	Fiscal Services

BENJAMIN RUIZ, JR., DIRECTOR

January 12, 2017

Santa Rosa Rancheria Tachi Yokut Tribe
Shana Powers, Cultural Specialist
P. O. Box 8
Lemoore, CA 93245

RE: Notice of Preparation of an Environmental Impact Report for the Sequoia Drive-In Business Park Project

Dear Specialist Powers,

The County of Tulare (County) provided your tribe with a Project Notification (dated September 14, 2016) requesting consultation with your Tribe pursuant to the provisions of AB 52 and SB 18.

Sacred Lands File Search

A Sacred Lands File (SLF) search through the Native American Heritage Commission (NAHC, (returned on September 8, 2016), indicated negative results. Results of the SLF are available to your Tribal Representative(s) if a written request for consultation is submitted to the County within thirty (30) days of receipt of this letter. Otherwise, results of the SLF search will be made available upon the release of the EIR during the public review/comment period.

California Historical Resources Information System Search

The County has received the following information since the previous request for consultation was mailed to your Tribe.

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required. The results of the CHRIS search will be made available to your Tribal Representatives if a written request for consultation is received.

If your Tribe does not provide a response to this request within thirty (30) days, our environmental record will indicate no response was provided, and, as such, there are no tribal cultural resources of concern and a Cultural Resources Study is not necessary.

Notice of Preparation

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Thank you for your consideration on this matter and please do not hesitate to contact me by phone or e-mail if you have any questions or need additional information. If you need immediate assistance and I am unavailable, please contact Jessica Willis, Planner IV, by phone at (559) 624-7122, or by email at jwillis@co.tulare.ca.us.

Sincerely,



for

Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

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RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Michael Washam

Reed Schenke

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

BENJAMIN RUIZ, JR., DIRECTOR

January 12, 2017

Table Mountain Rancheria
Leanne Walker-Grant, Chairperson
P.O. Box 410
Friant, CA, 93626

RE: Notice of Preparation of an Environmental Impact Report for the Sequoia Drive-In Business Park Project

Dear Chairperson Walker-Grant,

The County of Tulare (County) provided your tribe with a Project Notification (dated September 14, 2016) requesting consultation with your Tribe pursuant to the provisions of AB 52 and SB 18.

Sacred Lands File Search

A Sacred Lands File (SLF) search through the Native American Heritage Commission (NAHC, (returned on September 8, 2016), indicated negative results. Results of the SLF are available to your Tribal Representative(s) if a written request for consultation is submitted to the County within thirty (30) days of receipt of this letter. Otherwise, results of the SLF search will be made available upon the release of the EIR during the public review/comment period.

California Historical Resources Information System Search

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required. The results of the CHRIS search will be made available to your Tribal Representatives if a written request for consultation is received.

If your Tribe does not provide a response to this request within thirty (30) days, our environmental record will indicate no response was provided, and, as such, there are no tribal cultural resources of concern and a Cultural Resources Study is not necessary.

Notice of Preparation

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If your Tribe opts to decline an opportunity to consult on this project and does not want to receive written notice of the availability of the draft EIR, please provide written correspondence indicating such.

Thank you for your consideration on this matter and please do not hesitate to contact me by phone or e-mail if you have any questions or need additional information. If you need immediate assistance and I am unavailable, please contact Jessica Willis, Planner IV, by phone at (559) 624-7122, or by email at jwillis@co.tulare.ca.us.

Sincerely,



for
Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

Attachment: Notice of Preparation



RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD
VISALIA, CA 93277
PHONE (559) 624-7000
FAX (559) 730-2653

Michael Washam Economic Development and Planning
Reed Schenke Public Works
Sherman Dix Fiscal Services

BENJAMIN RUIZ, JR., DIRECTOR

January 12, 2017

Tule River Indian Tribe
Neil Peyron, Chairperson
P. O. Box 589
Porterville, CA 93258

RE: Notice of Preparation of an Environmental Impact Report for the Sequoia Drive-In Business Park Project

Dear Chairperson Peyron,

The County of Tulare (County) provided your tribe with a Project Notification (dated September 14, 2016) requesting consultation with your Tribe pursuant to the provisions of AB 52 and SB 18.

Sacred Lands File Search

A Sacred Lands File (SLF) search through the Native American Heritage Commission (NAHC, (returned on September 8, 2016), indicated negative results. Results of the SLF are available to your Tribal Representative(s) if a written request for consultation is submitted to the County within thirty (30) days of receipt of this letter. Otherwise, results of the SLF search will be made available upon the release of the EIR during the public review/comment period.

California Historical Resources Information System Search

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required. The results of the CHRIS search will be made available to your Tribal Representatives if a written request for consultation is received.

If your Tribe does not provide a response to this request within thirty (30) days, our environmental record will indicate no response was provided, and, as such, there are no tribal cultural resources of concern and a Cultural Resources Study is not necessary.

Notice of Preparation

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If your Tribe opts to decline an opportunity to consult on this project and does not want to receive written notice of the availability of the draft EIR, please provide written correspondence indicating such.

Thank you for your consideration on this matter and please do not hesitate to contact me by phone or e-mail if you have any questions or need additional information. If you need immediate assistance and I am unavailable, please contact Jessica Willis, Planner IV, by phone at (559) 624-7122, or by email at jwillis@co.tulare.ca.us.

Sincerely,



for
Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

Attachment: Notice of Preparation



RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Michael Washam

Reed Schenke

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

BENJAMIN RUIZ, JR., DIRECTOR

January 12, 2017

Tule River Indian Tribe
Tribal Archaeological Department
Joseph Garfield, Tribal Archaeologist
P. O. Box 589
Porterville, CA 93258

RE: Notice of Preparation of an Environmental Impact Report for the Sequoia Drive-In Business Park Project

Dear Archaeologist Garfield,

The County of Tulare (County) provided your tribe with a Project Notification (dated September 14, 2016) requesting consultation with your Tribe pursuant to the provisions of AB 52 and SB 18.

Sacred Lands File Search

A Sacred Lands File (SLF) search through the Native American Heritage Commission (NAHC, (returned on September 8, 2016), indicated negative results. Results of the SLF are available to your Tribal Representative(s) if a written request for consultation is submitted to the County within thirty (30) days of receipt of this letter. Otherwise, results of the SLF search will be made available upon the release of the EIR during the public review/comment period.

California Historical Resources Information System Search

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Notice of Preparation

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If your Tribe opts to decline an opportunity to consult on this project and does not want to receive written notice of the availability of the draft EIR, please provide written correspondence indicating such.

Thank you for your consideration on this matter and please do not hesitate to contact me by phone or e-mail if you have any questions or need additional information. If you need immediate assistance and I am unavailable, please contact Jessica Willis, Planner IV, by phone at (559) 624-7122, or by email at jwillis@co.tulare.ca.us.

Sincerely,



for
Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

Attachment: Notice of Preparation



RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD
VISALIA, CA 93277
PHONE (559) 624-7000
FAX (559) 730-2653

Michael Washam	Economic Development and Planning
Reed Schenke	Public Works
Sherman Dix	Fiscal Services

BENJAMIN RUIZ, JR., DIRECTOR

January 12, 2017

Tule River Indian Tribe
Environmental Department
Kerri Vera, Director
P. O. Box 589
Porterville, CA 93258

RE: Notice of Preparation of an Environmental Impact Report for the Sequoia Drive-In Business Park Project

Dear Director Vera,

The County of Tulare (County) provided your tribe with a Project Notification (dated September 14, 2016) requesting consultation with your Tribe pursuant to the provisions of AB 52 and SB 18.

Sacred Lands File Search

A Sacred Lands File (SLF) search through the Native American Heritage Commission (NAHC, (returned on September 8, 2016), indicated negative results. Results of the SLF are available to your Tribal Representative(s) if a written request for consultation is submitted to the County within thirty (30) days of receipt of this letter. Otherwise, results of the SLF search will be made available upon the release of the EIR during the public review/comment period.

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required. The results of the CHRIS search will be made available to your Tribal Representatives if a written request for consultation is received.

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Notice of Preparation

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Thank you for your consideration on this matter and please do not hesitate to contact me by phone or e-mail if you have any questions or need additional information. If you need immediate assistance and I am unavailable, please contact Jessica Willis, Planner IV, by phone at (559) 624-7122, or by email at jwillis@co.tulare.ca.us.

Sincerely,



607 Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

Attachment: Notice of Preparation



RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Michael Washam

Reed Schenke

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

BENJAMIN RUIZ, JR., DIRECTOR

January 12, 2017

Wuksache Indian Tribe/Eshom Valley Band
Kenneth Woodrow, Chairperson
1179 Rock Haven Ct.
Salinas, CA 93906

RE: Notice of Preparation of an Environmental Impact Report for the Sequoia Drive-In Business Park Project

Dear Chairperson Woodrow,

The County of Tulare (County) provided your tribe with a Project Notification (dated September 14, 2016) requesting consultation with your Tribe pursuant to the provisions of AB 52 and SB 18.

Sacred Lands File Search

A Sacred Lands File (SLF) search through the Native American Heritage Commission (NAHC, (returned on September 8, 2016), indicated negative results. Results of the SLF are available to your Tribal Representative(s) if a written request for consultation is submitted to the County within thirty (30) days of receipt of this letter. Otherwise, results of the SLF search will be made available upon the release of the EIR during the public review/comment period.

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The County has received the following information since the previous request for consultation was mailed to your Tribe.

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Notice of Preparation

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Sincerely,



for Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

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RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

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Michael Washam

Reed Schenke

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

BENJAMIN RUIZ, JR., DIRECTOR

January 12, 2017

Kitanemuk & Yowlumne Tejon Indians
Delia Dominguez, Chairperson
115 Radio Street
Bakersfield, CA, 93305

RE: Notice of Preparation of an Environmental Impact Report for the Sequoia Drive-In Business Park Project

Dear Chairperson Dominguez,

The County of Tulare (County) attempted to provide your tribe with a Project Notification requesting consultation with your Tribe (dated September 14, 2016) pursuant to the provisions of AB 52 and SB 18. However, the Project Notification was returned undelivered. As such, the County is providing this letter as the Project Notification and Request for Consultation for the project identified above.

Sacred Lands File Search

A Sacred Lands File (SLF) search through the Native American Heritage Commission (NAHC) (returned on September 8, 2016), indicated negative results. Results of the SLF are available to your Tribal Representative(s) if a written request for consultation is submitted to the County within thirty (30) days of receipt of this letter. Otherwise, results of the SLF search will be made available upon the release of the EIR during the public review/comment period.

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If your Tribe does not provide a response to this request within thirty (30) days, our environmental record will indicate no response was provided, and, as such, there are no tribal cultural resources of concern and a Cultural Resources Study is not necessary.

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Sincerely,



 Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

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RESOURCE MANAGEMENT AGENCY

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PHONE (559) 624-7000

FAX (559) 730-2653

Michael Washam

Reed Schenke

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

BENJAMIN RUIZ, JR., DIRECTOR

January 12, 2017

Traditional Choinumni Tribe
David Alvarez, Chairperson
2415 E. Houston Avenue
Fresno, CA, 93720

RE: Notice of Preparation of an Environmental Impact Report for the Sequoia Drive-In Business Park Project

Dear Chairperson Alvarez,

The County of Tulare (County) attempted to provide your tribe with a Project Notification requesting consultation with your Tribe (dated September 14, 2016) pursuant to the provisions of AB 52 and SB 18. However, the Project Notification was returned undelivered. As such, the County is providing this letter as the Project Notification and Request for Consultation for the project identified above.

Sacred Lands File Search

A Sacred Lands File (SLF) search through the Native American Heritage Commission (NAHC) (returned on September 8, 2016), indicated negative results. Results of the SLF are available to your Tribal Representative(s) if a written request for consultation is submitted to the County within thirty (30) days of receipt of this letter. Otherwise, results of the SLF search will be made available upon the release of the EIR during the public review/comment period.

California Historical Resources Information System Search

A California Historical Resources Information System (CHRIS) search for the project area was requested through the Southern San Joaquin Valley Information Center (SSJVIC) on September 12, 2016. The CHRIS search results (dated September 27, 2016) identified one (1) recorded cultural resource, a Tulare Irrigation Canal, within the Project site. The search also identified six (6) recorded resources within a one-half mile radius, including a prehistoric era mound, an historic period ranch, barn, single-family residence, canal, and drive-in theater. As no previous cultural resource studies have been conducted within the project site, the SSJVIC recommended that a field survey be conducted to determine if cultural resources are present. As such, the County is requesting consultation with your Tribe to determine whether a Cultural Resources Study will be required. The results of the CHRIS search will be made available to your Tribal Representatives if a written request for consultation is received.

If your Tribe does not provide a response to this request within thirty (30) days, our environmental record will indicate no response was provided, and, as such, there are no tribal cultural resources of concern and a Cultural Resources Study is not necessary.

Notice of Preparation

In accordance with the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.), the County of Tulare Resource Management Agency (RMA) will be preparing an Environmental Impact Report (EIR) to evaluate the environmental effects associated with the Sequoia Drive-In Business Park project. The Notice of Preparation (NOP) for the EIR is enclosed and will be made available on the County website beginning January 13, 2017, at:

<http://tularecounty.ca.gov/rma/index.cfm/documents-and-forms/planning-documents/environmental-planning/environmental-impact-reports/>

If your Tribe would like the opportunity to consult with the County on this project, please respond in writing within thirty (30) days of receipt of this letter. Written correspondence can be mailed to the address provided above, or to the email address provided below.

If your Tribe opts to decline an opportunity to consult on this project and does not want to receive written notice of the availability of the draft EIR, please provide written correspondence indicating such.

Thank you for your consideration on this matter and please do not hesitate to contact me by phone or e-mail if you have any questions or need additional information. If you need immediate assistance and I am unavailable, please contact Jessica Willis, Planner IV, by phone at (559) 624-7122, or by email at jwillis@co.tulare.ca.us.

Sincerely,



for

Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

Attachment: Notice of Preparation



RESOURCE MANAGEMENT AGENCY

5961 SOUTH MOONEY BLVD

VISALIA, CA 93277

PHONE (559) 624-7000

FAX (559) 730-2653

Michael Washam

Reed Schenke

Sherman Dix

Economic Development and Planning

Public Works

Fiscal Services

BENJAMIN RUIZ, JR., DIRECTOR

January 12, 2017

Wuksache Indian Tribe
John Sartuche
1028 East "K" Street
Visalia, CA 93292

RE: Notice of Preparation of an Environmental Impact Report for the Sequoia Drive-In Business Park Project

Dear Mr. Sartuche,

The County of Tulare (County) attempted to provide your tribe with a Project Notification requesting consultation with your Tribe (dated September 14, 2016) pursuant to the provisions of AB 52 and SB 18. However, the Project Notification was returned undelivered. As such, the County is providing this letter as the Project Notification and Request for Consultation for the project identified above.

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If your Tribe opts to decline an opportunity to consult on this project and does not want to receive written notice of the availability of the draft EIR, please provide written correspondence indicating such.

Thank you for your consideration on this matter and please do not hesitate to contact me by phone or e-mail if you have any questions or need additional information. If you need immediate assistance and I am unavailable, please contact Jessica Willis, Planner IV, by phone at (559) 624-7122, or by email at jwillis@co.tulare.ca.us.

Sincerely,



for Hector Guerra
Chief Environmental Planner
Environmental Planning Division
(559) 624-7121
hguerra@co.tulare.ca.us

Attachment: Notice of Preparation

Appendix E

Geological, Hydrological & Sustainability Report

GEOLOGICAL, HYDROLOGICAL & SUSTAINABILITY REPORT

FOR

Sequoia Drive-in Business Park

PREPARED FOR:

Castlewood Partners, Inc
PO Box 2622
Visalia, CA 93279

COMPLETED BY:



324 S. SANTA FE ST., STE A
VISALIA, CA 93292
(559) 802-3052

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1 INTRODUCTION

1.1 PURPOSE AND SCOPE

The purpose of this Preliminary Geological, Hydrological, and Sustainability Report is to identify the geological, hydrological, and water sustainability conditions at the proposed Sequoia Drive-In Business Park (Site) as required by Tulare County Code, Chapter 1, Subdivision of Land, Sections 7-01-1610. This report will provide a general analysis of the existing conditions related to soil, seismicity, geologic structures, groundwater, and surface water. Information in this report is based on a Site Geotechnical Investigation and review of readily available geologic and hydrologic information for the Site.

1.2 PROJECT SUMMARY

Sequoia Drive-In Business Park is a proposed development located in Central California in the northwestern portion of the County of Tulare (See Figure 1.1 and 1.2). The Site is located adjacent to Highway 198 less than one mile east of the City of Visalia city limits at the southwest corner of Noble Ave and Road 156. The development area consists of three separate parcels of land where only two parcels will include mixed use service commercial development (Business Park) with 42 developable lots and 43 buildings for a total of 358,370 square feet of building space (See Figure 1.3). The majority of these lots will be composed of office and warehouse space with the exception of one fueling station located in the northeast corner of the proposed development. The northern and southern portion of the development area is separated by the east-west trending Little Tulare Irrigation Ditch (LTID). Currently, the development area is vacant land.



Figure 1.1: Regional Location Map

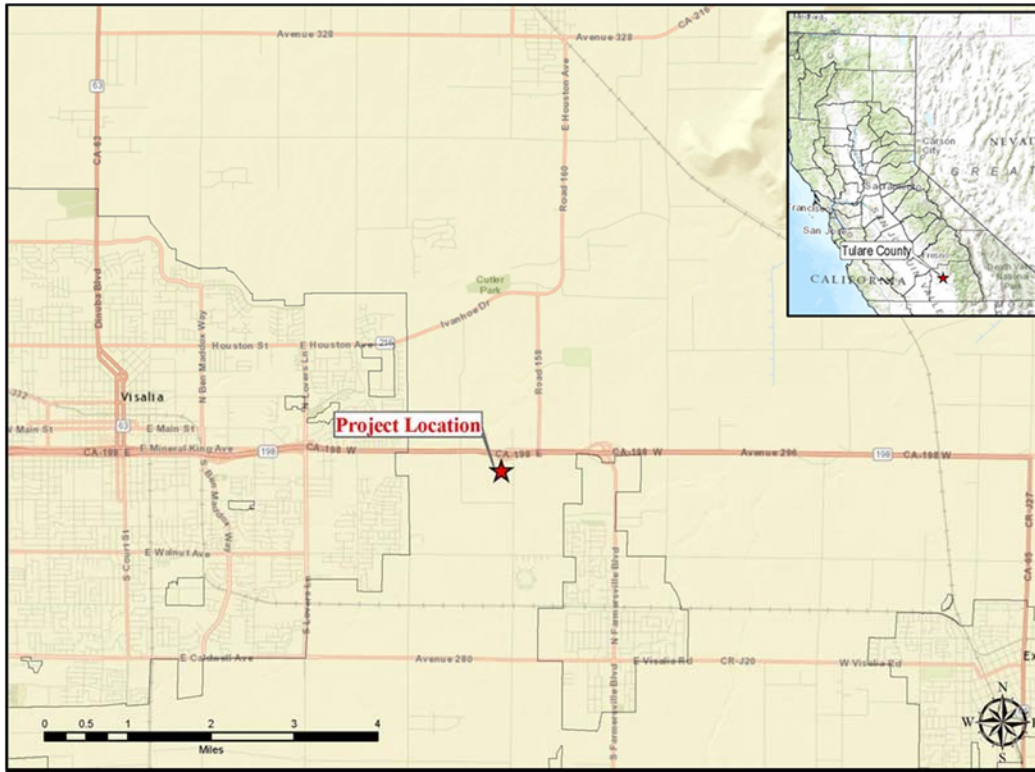
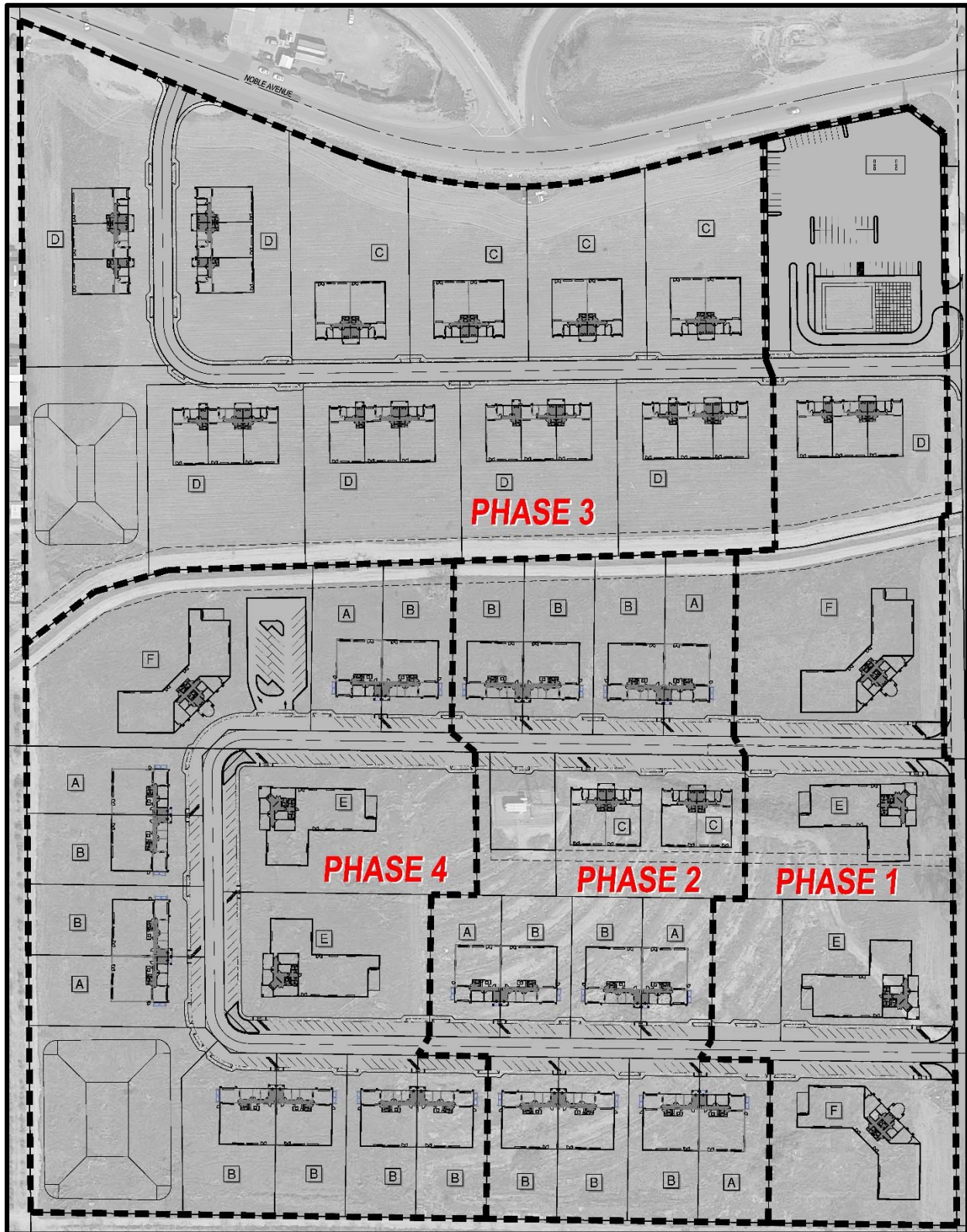


Figure 1.2: Vicinity Map



Figure 1.3: Site Plan



2 GEOLOGY AND SOILS IMPACT ANALYSIS

The site is located within the Central Valley of California, that is a structural trough about 400 miles long, 20 to 70 miles wide, and extends over 20,000 square miles. Older igneous, metamorphic, and sedimentary rocks form the surrounding mountain ranges that bound the Central Valley. The valley is filled with marine and continental sediments, which are the result of inundation by the ocean and erosion from the surrounding mountains. Approximately 5-miles east of the Site, the Sierra Nevada Mountain Range is exposed at its western base above the dissected uplands and alluvial fans that gradationally contact the unconsolidated and consolidated alluvial sediments of the Central Valley.

The Site is located on unconsolidated alluvial and flood plain deposits of major rivers that flow into the valley from the surrounding mountains. These sediments are relatively flat to gently rolling and generally below an elevation of 500-feet (USGS, 1995).

General geologic structures include folds, faults, joints, metamorphic core complexes, basin, domes, and unconformities. Folds, joints, metamorphic core complexes, basins, domes, and unconformities are primarily related to deformation of consolidated sedimentary rocks or igneous and metamorphic rocks. With respect to geology of the site (unconsolidated alluvium), further discussion or analysis of these structures is not warranted and beyond the scope of this report. Since the Site is located on valley fill deposits, fault rupture, liquefaction, subsidence, or ground shaking have the potential to affect the site.

2.1 ENVIRONMENTAL FACTORS

Based on the available information for the site, the following discussion has been presented regarding environmental factors that can potentially affect the site.

2.1.1 SEISMICITY

Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death, involving:

1) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Project Impact Analysis: *Less than significant impact*

There have been no past or present indications of faults occurring at the Site. The closest fault is the Pond Fault located approximately 40-miles south-southwest of the Site near the Hamlet of Pond, California. Based on California Division of Mines and Geology (CDMG), the Pond fault is a 2/3-mile wide zone of northwesterly trending normal faults, downthrown to the southwest and dipping approximately 50 to 70 degrees (Smith, 1983). The CDMG



postulates that groundwater withdrawal and subsequent subsidence in the 1970's and 1980's initiated creep along the dip-slip fault surface. Six small earthquake epicenters were located within 6 miles of the Pond fault. The CDMG report concluded the Pond fault might be seismically active but could not conclude with certainty.

From the project location there are currently no active faults within 40 to 50 miles based on the Department of Conservation's Alquist-Priolo (AP) maps. As of January 2010, Tulare County is not affected by Alquist-Priolo Earthquake Fault Zones, (CDC, 2016). According to the 2012 Tulare County General Plan 2030 Update, there is no presence of active faults within the county where the effects of large earthquakes are felt. Faults with potential seismic activity include the San Andreas, Owens Valley, and Clovis Faults (Tulare County General Plan Background Report, 2010 and Recirculated Draft, 2010). The Owens Valley Fault group located west of the project is said to be the source of seismic activity in the past.

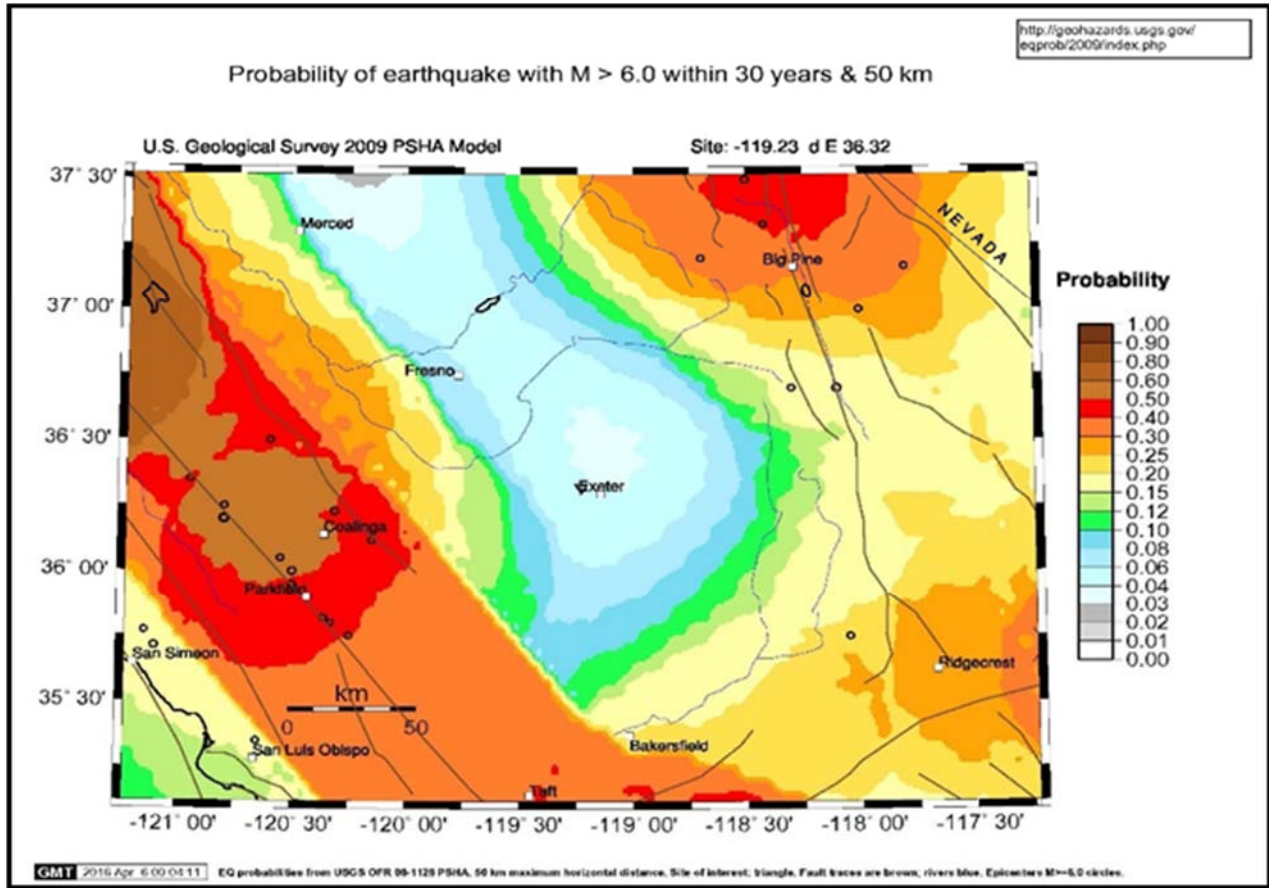
II) Strong seismic ground shaking?

Project Impact Analysis: *Less than significant impact*

The geological hazard features surrounding the proposed property of concern, pertain to the active faults found near the site. From 1950 through 2012, there have been zero (0) state and federal declared earthquake disasters in Tulare County (SHMP, 2013). As indicated in Figure 2.1 below, the probability of an earthquake with magnitude > 6.0 within 30 years & 50 kilometers (31 miles) from the site is between 4% and 6%. Based on the distance and probability of magnitude 6.0 or greater at the site, there is less than significant potential for impact from strong seismic shaking.



Figure 2.1: Earthquake Probability



III) Seismic related ground failure, including liquefaction?

Project Impact Analysis: *Less than significant impact*

Liquefaction is a failure mechanism in water-saturated, well sorted fine sands. Liquefaction occurs as a result of rearrangement of sand grains. Shaking or vibration can cause the grains to rearrange to a denser soil thus decreasing porosity leaving excess water in the interstices. The grains no longer support the overburden and the soil behaves as a liquid. If the soil mass is saturated and the water cannot escape, the material turns into a viscous fluid that can damage foundations or generate slope failures. This is normally caused by earthquakes. Liquefaction generally occurs in areas with shallow water tables or near waterbodies. Based on soil types and depth to groundwater beneath the site, liquefaction potential will be very low with no need for special liquefaction mitigation.



IV) Landslides

Project Impact Analysis: *Less than significant impact to None*

Topography of the site is relatively flat and slopes down to the west less than approximately 0.2%. There are no significant slopes onsite that will require stability analysis or mitigation to potential seismic shaking.

2.1.2 SOIL EROSION

Would the project result in substantial soil erosion or the loss of topsoil?

Project Impact Analysis: *Less than significant impact*

Erosion is the wearing away of soil or rock by natural occurrence and transportation of these materials from one location to another. Common causes of erosion include wind and water. The Natural Resource Conservation Web Soil Survey report in Appendix A lists the Nord fine sandy loam as surface soil covering the entire Site. Less dense, finer grained soil particles are more susceptible to erosion than denser, coarser particles. The web soil survey report in Appendix A lists soils at the site as having "slight" susceptibility with little or no potential for erosion.

2.1.3 LANDSLIDES

Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

Project Impact Analysis: *Less than significant impact*

As stated above, topography of the site is relatively flat sloping down to the west less than approximately 0.2%. The nearest naturally formed slopes are foothills located approximately four miles northeast of the site. Potential for slope failure from these nearby hills to affect the site are unlikely. The NRCS Web Soil Survey Report in Appendix A indicates the site has a representative slope rating of 1.0. Based on this slope rating, the site is listed as "Nearly Level". Potential for on or off-site landslides or lateral spreading is very low based on topography of the site.

According to NRCS, the site is located on the Nord fine sandy loam. On June 3, 2015, CTL-See's drilled soils borings with a hollow stem auger drilling rig. Soils were visually classified. Soil types at the site were logged



according to the Unified Soil Classification System (USCS) and generally include silty sands, sandy silts, and sands. Borings were conducted to a maximum depth of 51.5' from the existing ground surface where groundwater was not encountered during the field investigation. Soil boring logs are provided in Appendix B.

On May 12, 2015, 4Creeks measured depth to water in the existing northern on site well at 84.6 feet below top of casing as indicated in Table 1, §4. Based on soil types and depth to groundwater beneath the site, liquefaction potential will be very low with no need for special liquefaction mitigation.

Subsidence is characterized as the settling of the ground surface with minimal horizontal change. Often this is caused through the extraction of natural resources found below the surface including water, natural gas, and oil. As of now the Kaweah River Basin is considered to be in an overdraft. This was based on the findings in the Water Resources Investigation of the Kaweah Delta Water Conservation District report (Fugro, 2003). Based on the site investigations and findings from the Department of Water Resources (DWR), the groundwater surface elevations are decreasing. Regional subsidence throughout the San Joaquin Valley, including the area underneath the site is experiencing subsidence resultant from regional groundwater pumping. This may potentially have an impact on the properties susceptibility to subsidence.

A continuous Global Positioning System (GPS) station (P566) is located on the west border of the site. Subsidence data from station P566 indicate total subsidence of approximately 120 millimeters (4.7 inches) from November, 2005 through April, 2016. Subsidence affecting the site is regional in scale and is attributed to groundwater overdraft throughout the Central Valley. Although the site may be affected by regional scale subsidence, it is not anticipated that the effects of the subsidence will significantly affect the site in particular.

Compaction of site soil during construction is expected to take place within three to five feet of the surface. It is not anticipated that compactive efforts during construction will contribute to collapse of naturally deposited soils beneath the site.

2.1.4 EXPANSIVE SOILS

Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risk to life or property.

Project Impact Analysis: *Less than significant impact*

Based on Table 18-1-B of the 1994 Uniform Building Code, soils with an expansion index less than 20 have very low expansion potential. There are no known instances of expansive soils in direct proximity to the site. Soil types encountered during the May 2015 field investigation by CTL-SEE's included sands and silty sands with the exception of a sandy clay in the northwest corner of the site. Given the soil types at the site and no known instances of expansive soils in the area, significant shrink-swell behavior is not anticipated at the site.



2.1.5 WASTE DISPOSAL

Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.

Project Impact Analysis: *Less than significant impact*

Soils at the site such as sands and silty sands have characteristics favorable to septic tank or alternative waste water disposal systems. The site is located in an area with a mix of suburban and rural properties, many of these utilizing septic tanks systems or alternative waste water disposal systems.



3 HYDROLOGY AND WATER QUALITY IMPACT ANALYSIS

The parcel south of the LTID was previously used as a drive-in theater. The parcels north of the LTID were used as farm land and have since become vacant. There is no current water demand for the three parcels, as they are vacant, but the southernmost parcel has two existing irrigation wells.

3.1 GROUNDWATER OCCURRENCE

Groundwater from the Kaweah River Basin has been the primary source of water for the subject area in the past. Groundwater will remain the primary source of water for the subject area after development. The Kaweah River Basin is part of the Tulare Lake Basin within the Central Valley. The Kaweah River Basin encompasses an area of about 446,000 acres on the valley floor with an average annual precipitation of 11 inches (DWR, 2004). Located above the valley floor, the Kaweah River Watershed encompasses an area of 630 square miles with an average annual precipitation of 21.71 inches in the foothill area. All rainfall data used in this report were obtained from the Department of Water Resources.

The main freshwater-bearing sediments beneath the Site include flood basin deposits, younger alluvium, older alluvium, the Tulare Formation, and continental deposits undifferentiated. Within the alluvial deposits, groundwater occurs under confined and unconfined conditions (Davis et.al., 1959). These deposits supply nearly all the water pumped from wells in the valley and are the primary source of freshwater. Groundwater moves in response to the hydraulic gradient from areas of recharge to areas of discharge. Under natural conditions, the unconfined and semiconfined groundwater in the San Joaquin Valley moves toward topographically low central areas, where it is discharged at the land surface or consumed by plants.

3.2 ENVIRONMENTAL FACTORS

3.2.1 WATER SUPPLY

Based on the available information for the site, the following discussion has been presented regarding environmental factors that can potentially affect the site.

Would the project substantially deplete the groundwater supplies or interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).

Project Impact Analysis: *Less than significant impact*

Groundwater flowing through shallow parts of the aquifer system beneath the site emanates as runoff at higher elevations, specifically from the Sierra Nevada Mountains. The eastern valley margin soils are generally more



coarse and permeable, especially along the east side of the Tule Sub basin adjacent to the Sierra Nevada foothills (USGS, 1995). Deep percolation on the valley floor up-gradient from swampy areas and lakes is a significant source of recharge in wetter areas and during wetter years (Williamson, et.al., 1989).

Based on the Central Valley Hydrologic Model (CVHM), the average groundwater recharge from surface water processes throughout the Central Valley is 7.7-million acre-feet per year. The average annual hydrologic budget from the years 1962-2003 net recharge from landscape (surface water processes) from the CVHM within the combined Kaweah/Tule basin "water balance sub regions" was 710,000 acre-feet (Faunt, 2009).

Recharge rates from precipitation have not changed significantly from predevelopment times. Generally, recharge of the Central Valley Aquifer system occurs during the winter months (December through March) and discharge occurs during the summer months which include the growing season (May through September). Large amounts of water are drawn from storage during the pumping period. The shallow portion of the aquifer system receives some recharge during irrigation. In typical years, water levels generally recover during the wet season (December through March) (Faunt, 2009).

In much of the valley, the annual rainfall is so low that little precipitation penetrates deeply, and soil-moisture deficiency is perennial. Infiltration from stream channels, canals, and irrigated fields are the principal sources of groundwater recharge (Davis, et.al., 1964). Precipitation falling on the valley floor during the rainy season provides only a small part of the total recharge (Faunt, 2009).

Based on the Department of Water Resources Groundwater Information Center, depth to groundwater in surrounding monitoring wells averages approximately 70 to 80 feet below ground surface for 2014. On May 12, 2015, 4Creeks personnel sampled and measured depth to groundwater in the northern of the two wells located onsite. Table 1: North Agriculture Well Data summarizes the monitoring and sampling event.

Table 1: North Agriculture Well Data

Well ID	Latitude	Longitude	Total Well Depth Below top of casing (Feet)	Depth to Groundwater Below top of Casing (Feet)	Groundwater Temperature (C°)	Specific Conductance µs/cm	pH
GW1	36.323174	-119.224834	249.5	84.6	18.3	208.3	7.09

The southern well, located approximately 450-feet south still had the pump installed on the wellhead and power was not supplied or connected to the motor. 4Creeks personnel could not access the well to measure depth to groundwater or collect a representative groundwater sample from the southern well. This well is planned to be used for the project. Upon further project development, the details for this well will be collected and the groundwater will be sampled and analyzed.

The proposed development currently has two agricultural wells located on the southernmost parcel near Road 156. These two wells will be utilized to supply the community domestic water system with potable water. An estimated 168.38 gallons per day is expected to be used per building and there are 43 proposed buildings. The daily water



demand is expected to be approximately 7,240.38 gallons per day. The northern existing well was tested by Willits Pump & Electrical Service to ensure that the well was capable of yielding the required volume to meet the water demand for the project. The test results showed that the northern well is capable of yielding 1.224 million gallons per day which is more than sufficient yield to meet the water demand created by the proposed development.

3.2.2 OVERDRAFT MITIGATION METHODS

Surface-water supplies in the past have been generally inadequate to meet irrigation demands, and overdraft on groundwater supplies has been widespread. As a result, water level fluctuations have occurred in response to the groundwater withdrawals. The water table declines rapidly in late spring and summer and recovers as pumping ceases late in the autumn. In overdrafted areas, a year by-year decline has occurred. Imports of Central Valley Project surface water through the Friant Kern Canal have supplied additional recharge to the groundwater basins locally and helped to reduce pumping overdraft (Davis, et. al., 1959).

Mitigating groundwater overdraft has become an important objective for the state, counties, and the developer of this project. Since groundwater overdraft mitigation has become a common practice, water usage has become more conservative and alternative methods of reuse and recycling have become realities. Water reuse is a proposed mitigation item for this project, to reduce the water demand on wells by reducing and eliminating the water volumes required for landscape irrigation. Tertiary treatment will allow sewer effluent to meet the State of California standards set in place for water reuse. Water reuse will reduce water demand for Sequoia Drive-In Business Park, taking a step forward in groundwater overdraft mitigation.

3.2.3 FLOODING

Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Project Impact Analysis: *Less than significant impact*

As indicated in the Tulare County General Plan Background Report, two major dams could cause substantial flooding in Tulare County in the event of a failure: Terminus Dam on Lake Kaweah and Success Dam on Lake Success. In addition, there are many smaller dams throughout the county that would cause localized flooding in the event of their failing. However, a comprehensive analysis of the potential for dam failure and possible downstream effects for these upstream dams has not been undertaken. The project lies within flood Zone X (Shaded), which is a moderate flood hazard area with a 0.2 percent annual chance or a 500 year flood according to the Federal Emergency Management Agency (FEMA) flood zone designation. This area is not within the flood area and in turn will not be subject to risk in the event of a levee or dam failure.

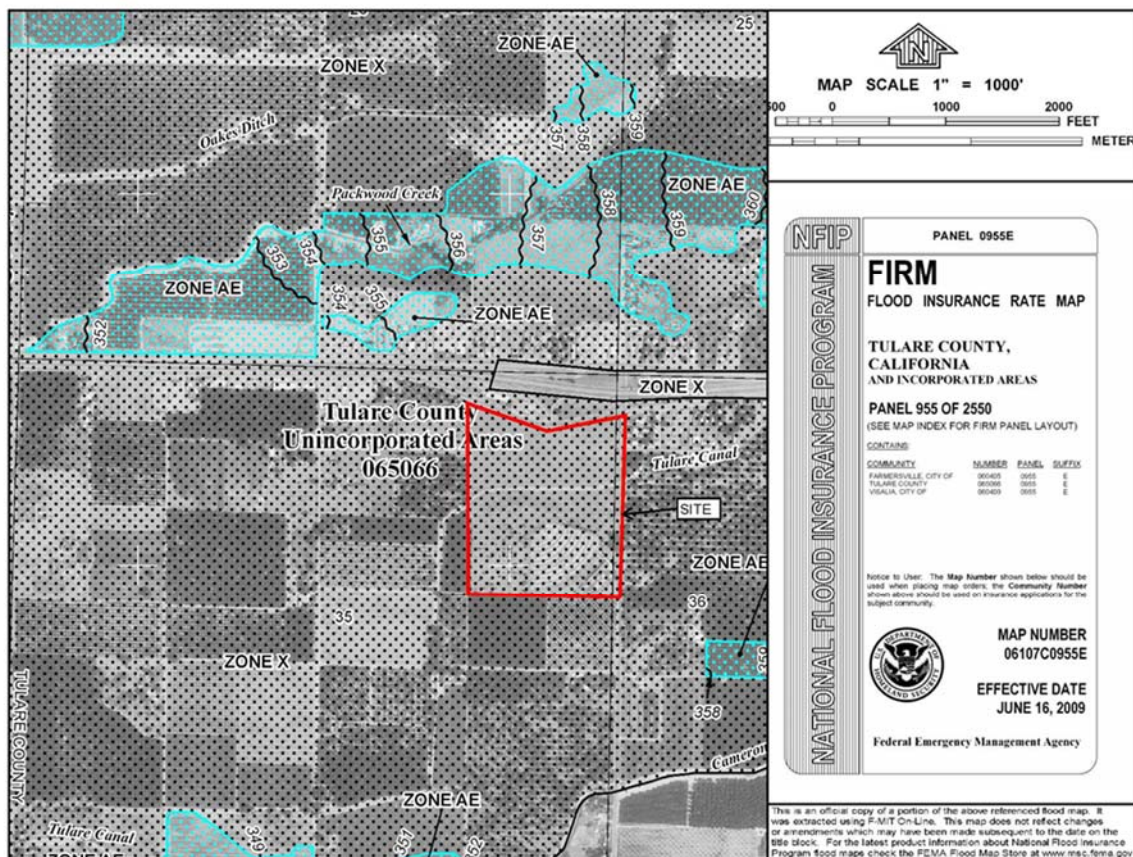


Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

Project Impact Analysis: *No Impact*

The proposed project does not contain housing. Additionally, the flood area that the project lies within is considered Zone X (Shaded), which is a moderate flood hazard area with a 0.2 percent annual chance or a 500 year flood according to the Federal Emergency Management Agency (FEMA) flood zone designation. Since the project area is not located within the 100 year flood hazard area, there is no impact. The FEMA flood map is provided below as Figure 3.1.

Figure 3.1: Flooding Zone Designation



Would the project place within a 100-year flood hazard area structures which would impede or redirect flood flows?

Project Impact Analysis: *No Impact*

The site is not located within the 100-year flood hazard area so there is no impact.

Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

Project Impact Analysis: *Less than significant impact*

The surface topography of the site is relatively flat. The final grading of the site will not affect the drainage pattern of the site or area. The only surface water conveyance on site is the LTID ditch that bisects the property from east to west. The LTID will remain in place and not be relocated. Grading for the site will include an engineered grading design approved and permitted by Tulare County. Site drainage will be controlled by grading and stormwater retention ponds. No site runoff will flow from the site into LTID; therefore, no substantial erosion or siltation will occur.

Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface in a manner which would result in substantial flooding on- or off-site?

Project Impact Analysis: *Less than significant impact*

As discussed above, engineered grading of the site will not substantially alter the drainage patterns of the site. Drainage across the site will be controlled as part of the site engineered grading plan.



Would the project place within a 100-year flood hazard area structures which would impede or redirect flood flows?

Project Impact Analysis: *No Impact*

As discussed above, the project site is not located within the 100-year flood hazard area therefore no impact will occur

Would the project expose people or structures to a significant risk of inundation by seiche, tsunami, or mudflow?

Project Impact Analysis: *No Impact*

Project site is not located by the ocean, near a lake shore, or in areas of steep slopes so a No Impact determination for the project can be reached.

3.2.4 WATER QUALITY

Would the project violate water quality standards or waste discharge requirements?

Project Impact Analysis: *Less than significant impact*

On May 12, 2015, 4Creeks collected one groundwater sample from groundwater the north agriculture well designated as "GW1". Field measurements of pH, specific conductance, and temperature were recorded with a YSI ProPlus water sensor. The groundwater sample was delivered to BSK laboratories and analyzed for general minerals, metals, E. Coli and Fecal Coliform, and volatile organic compounds (VOCS). Detected analytes are listed below in Table 2: Ground Quality – Well GW1. The results were compared to California Department of Public Health (CDPH) maximum contaminant levels (MCLs) for drinking water in the state of California. The laboratory analytical report is presented in Appendix C.

This well has not been in use for many years. The well was sampled without being purged or while in operation. However, there are surrounding domestic wells in the near vicinity that serve the public from the same aquifer. This water sample serves as an initial investigation of possible contamination and feasibility for the proposed project. The presence of Coliform may be due to the well not being purged prior to the sample being taken. However, Coliform



can be treated. The water produced by this well will need to meet the quality and monitoring requirements of the State Water Board and California Department of Public Health for a Community Water System.

Once the well is retrofitted for the project, a second round of sampling and analysis should be conducted. The southern well that was not sampled should also be sampled with analysis once it is retrofitted for the project. Sampling and analysis should occur during the initial phases of retrofitting; specifically, during pump testing. If water quality does not meet the State of California standards as discussed above, steps should be taken during the design of the site such as disinfection, to ensure the water is potable for project use.

Table 2: Groundwater Quality - Well GW1

Well ID	Groundwater Temperature (C°)	Specific Conductance (µs/cm)	pH	Analyte	Results (mg/L)	MCL (mg/L)
GW1	18.3	208.3	7.09	Alkalinity as CaCO ₃	110	NA
				Bicarbonate as CaCO ₃	110	NA
				Chloride	20	NA
				Sulfate as SO ₄	31	NA
				Barium	0.053	1
				Calcium	39	NA
				Magnesium	7.4	NA
				Sodium	16	NA
				E. Coli	Absent	NA
				Total Coliform	Present	NA
				Xylenes	0.00055	1.75

NA – Not Available

Will the project otherwise substantially degrade water quality?

Project Impact Analysis: *Less than significant impact*

All infrastructure designed for the site will be constructed to local, state, and/or federal standards. All potential sources of pollution such as gas stations, liquid waste, or solid waste structures built on-site will be designed to retain all sources of pollution and meet regulatory requirements.



3.3 WATER USE SUMMARY AND SUSTAINABILITY

It is estimated in the State of California that 20% of urban water is used for commercial developments, which is about 1.76 million acre feet or an estimated 48 gallons per capita per day. This was based on an eight-year average found in the 2013 California Water Plan. The California Water Plan also addresses the fact that the commercial sector covers a broad range of commercial facilities which doesn't allow for more accurate estimates based on the type of commercial development. According to the 2013 California Water Plan, the highest water usage comes from restrooms partly due to a possibility for inefficient toilets and faucets. Landscaping is another cause of high water consumption which normally occurs due to poor irrigation design and maintenance. High landscape water consumption can also be attributed to the use of plants that require large volumes of water to thrive. Managing these issues provide a potential for a significant amount of water savings. Additionally, recycling water and planting drought tolerant plants can eliminate the landscape water demand all together.

3.4 INDOOR WATER USE

The California Green Building Standards Code for nonresidential mandatory measure has established a method to determine the baseline water use for nonresidential facilities. Figure 3.2 below, found in Table 5.303.2.2 "Water Efficiency and Conservation" of the California Building Standards Code, provides the necessary information needed to determine the baseline water usage. In order to determine the occupants within the facility it was necessary to refer to Chapter 4 of the California Plumbing Code. Using Figure 3.3, the occupant load factor is determined based on the expected occupancy type and the expected square footage of the building.

Figure 3.2: Table 5.303.2.2 Water Use Baseline 2013 California Building Standard Code

WATER USE BASELINE ³				
FIXTURE TYPE	BASLINE FLOW RATE	DURATION	DAILY USES	OCCUPANTS ²
Showerheads	2.0 gpm @ 80 psi	5 min.	1	X ^{2a}
Lavatory faucets, nonresidential	0.5 gpm @ 60 psi	.25 min.	3	X
Kitchen faucets	2.2 gpm @ 60 psi	4 min.	1	X ^{2b}
Replacement aerators	2.2 gpm @ 60 psi			X
Wash fountains	2.2 [rim space (in.)/20 gpm @ 60 psi]			X
Metering faucets	0.25 gallons/cycle	.25 min.	3	X
Metering faucets for wash fountains	.25 [rim space (in.)/20 gpm @ 60 psi]	.25 min.		X
Gravity tank-type water closets	1.28 gallons/flush	1 flush	1 male ¹ 3 female	X
Flushometer tank water closets	1.28 gallons/flush	1 flush	1 male ¹ 3 female	X
Flushometer valve water closets	1.28 gallons/flush	1 flush	1 male ¹ 3 female	X
Electromechanical hydraulic water closets	1.28 gallons/flush	1 flush	1 male ¹ 3 female	X
Urinals	0.5 gallons/flush	1 flush	2 male	X

Fixture "Water Use" = Flow rate × Duration × Occupants × Daily uses

1. The daily use number shall be increased to three if urinals are not installed in the room.

2. Refer to Table A, Chapter 4, *California Plumbing Code*, for occupant load factors.

a. Shower use by occupants depends on the type of use of a building or portion of a building, e.g., total occupant load for a health club, but only a fraction of the occupants in an office building as determined by the anticipated number of users.

b. Nonresidential kitchen faucet use is determined by the occupant load of the area served by the fixture.

3. Use Worksheet WS-1 to calculate baseline water use.



Figure 3.3: Table A. Occupant Load Factor 2013 Chapter 4 California Plumbing Code

**OCCUPANT LOAD FACTOR:
[BSC, DSA-SS & DSA-SS/CC]**

OCCUPANCY*, **	OCCUPANT LOAD FACTOR (square feet) (CBC 2001, Table A-29A)
Group A	
1. Auditoriums, convention halls, dance floors, lodge rooms, stadiums, and casinos (where no fixed seating is provided) (use ½ "one-half" the number of fixed seating)	15
2. Conference rooms, dining rooms, drinking establishments, exhibit rooms, gymnasiums, lounges, stages, and similar uses, including restaurants classified as Group B occupancies	30
3. Worship places; principal assembly area, educational and activity unit (where no fixed seating is provided) (use ½ "one-half" the number of fixed seating)	30
Group B Office or public buildings (area accessible to the public)	200
Group E Schools for day care, elementary, secondary	50
Educational Facilities Other than Group E Colleges, universities, adult centers, etc.	50
Group F Workshops, foundries and similar establishments	2,000
Group H Hazardous materials fabrication and storage	2,000
Group I Hospital general use area, health care facilities	200
Group M Retail or wholesale stores	200
Group R Congregate residence, Group R-1	200
Group S Warehouse	5,000

* Any uses not specifically listed shall be based on similar uses listed in this table.

** For building or space with mixed occupancies, use appropriate occupancy group for each area (for example, a school may have an "A" occupancy for the gymnasium, a "B" occupancy for the office, an "E" occupancy for the classrooms, etc.)
Accessory areas may be excluded (for example: hallway, restroom, stair enclosure)

The baseline water use is based on occupancy factors which reflect the expected zoning area and the project occupants. The occupancy of the proposed buildings will be based on a conservative outlook towards water use. For this reason, our occupants will consist of groups B, M, and S. The proposed development is expected to use 7 different building layouts which are labeled as A, B, C, D, E, F and G on the site plan. The following Table 3 shows the expected indoor water use per building occupancy type and Table 4 shows the approximate total annual indoor water use. See Appendix E for detailed calculations.



Table 3: Indoor Water Use Per Building Layout

Building Layout	Retail (SF)	Office (SF)	Warehouse (SF)	Total Building Area (SF)	Total Service Commercial Occupants Group B	Total Retail Occupants Group M	Total Warehouse Occupants Group S	Gallons/Year
A		1300	3900	5200	7		1	38,137
B		1600	4800	6400	8		1	46,937
C		2000	6000	8000	10		1	58,672
D		3000	9000	12000	15		2	88,007
E		2800	9320	12120	14		2	82,576
F		2500	10890	13390	13		2	74,947
G	5320			5320		27		148,499

Table 4: Approximate Annual Total Indoor Water Use Per Building Layout

Building Layout	Number of Buildings	Total Building Area (SF)	Gallons per Year
A	7	36,400	266,956
B	15	96,000	704,059
C	6	48,000	352,029
D	7	84,000	616,051
E	4	48,480	330,306
F	3	40,170	224,840
G	1	5,320	148,499
Total	43	358,370	2,642,740

3.5 OUTDOOR WATER USE

The landscape water usage for the proposed development will be based on the utilization of recycled water and drought tolerant plants. According to the Model Water Efficient Landscape Ordinance this irrigated area is considered special landscape area. The method used to estimate the outdoor water use can be found in the California Department of Water Resources' published Model Water Efficient Landscape Ordinance. This ordinance provides the formulas necessary to determine the Maximum Applied Water Allowance (MAWA) and the Estimated Total Water Use (ETWU) which are listed below.



$$MAWA = (ET_o) (0.62) [(0.7 \times LA) + (0.3 \times SLA)]$$

MAWA = Maximum Applied Water Allowance (Gallons per Year)

ET_o = Reference Evapotranspiration (Inches Per Year)

0.62 = Conversion Factor to gallons

0.7 = ET Adjustment Factor (ETAF)

LA = Landscape Area Including SLA (Square Feet)

0.3 = Additional Water Allowance for SLA

SLA = Special Landscape Area (Square Feet)

$$ETWU = (ET_o)(0.62) \left(\frac{PF \times HA}{IE} + SLA \right)$$

ETWU = Estimated Total Water Use per Year (Gallons)

ET_o = Reference Evapotranspiration (Inches)

PF = Plant factor from WUCOLS

HA = Hydrozone Area (Square Feet)

SLA = Special Landscape Area (Square Feet)

0.62 = Conversion Factor

IE = Irrigation Efficiency (Minimum 0.71)

With the use of recycled water the equations will simplify to the following:

$$MAWA = (ET_o)(0.62) [(0.7 \times LA) + (0.3 \times SLA)]$$

$$ETWU = (ET_o)(0.62)(SLA)$$

The Referenced Evapotranspiration utilized for this project was determined to be 50.7, located in the table in Appendix A. The following equation demonstrates the expected water use based on the expected special landscape area.

Given:

Estimated Special Landscape Area = 5000 Square Feet



ET_o = 50.7 (Appendix A, Visalia)

So:

MAWA = (50.7)(0.62) [(0.7 x 5000) + (0.3 x 5000)] = 157,170 Gallons/ Year

ETWU = (50.7 x 0.62 x 5000) = 157,170 Gallons/ Year

Based on the calculation the MAWA is Equal to the ETWU which, complies with the MAWA.

The use of freshwater will not be used for landscaping except for after planting in order to assist with plant development and for any reason the recycling system is down for a period of time.

3.5.1 RUNOFF

Would the project create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Project Impact Analysis: *Less than significant impact*

All stormwater runoff will be directed toward onsite stormwater ponds engineered to retain the 100-year storm event for the site. The project will not contribute runoff water exceedances or provide substantial additional sources of polluted runoff.

3.6 HYDROLOGY AND WATER QUALITY SUMMARY/CONCLUSION

Water resource has become an essential and important aspect for the State of California. With the use of recycled wastewater in landscaping and other potential possibilities, the fresh water consumption can be freed up for utilization elsewhere in the commercial and household areas. Sequoia Drive-In Business Park's proposed plan incorporates an alternative in the support of well water overdraft. This alternative will essentially provide an additional source of water which will satisfy the landscape water demand. The estimated water demand of the proposed landscape will require approximately 157,000 gallons according to Model Water Efficient Landscape Ordinance. By meeting California's standards for water reuse, we will be able to save 157,000 gallons of freshwater with the alternative recycled water system. By essentially eliminating the use of irrigated landscape we will be able to take a step forward in mitigating the groundwater overdraft.

With the current drought conditions there has been an increase in ground water use in agriculture land within the Central Valley. This has also caused farmers to essentially stop growing crops for a season due to the high water demand. With increasing ground water consumption there is also a potential for subsidence which can affect the



infrastructure of the surrounding areas. According to the California Green Building Standards Code for nonresidential mandatory, the proposed project is estimated to use a projected 2,642,740 gallons of fresh water per year. Although the fresh water demands for a Business Park are greater than the current vacant usage of the project area, sustainable design practices will be used to minimize the fresh water demand. Water treatment will be utilized to recycle and treat the water that will be needed to irrigate landscaping which will help reduce the overall water footprint for the site.

The development of The Sequoia Drive-In Business Park will provide an opportunity for a new sustainable development practices of water and savings potential. Recycled water has taken place in California for many years and has provided an alternative source for many uses. By implementing this alternative we are looking to help mitigate California's existing groundwater overdraft.



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APPENDIX A

NATURAL RESOURCE CONSERVATION WEB SOIL SURVEY





United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Tulare County, Western Part, California**

Sequoia Gateway Plaza



June 10, 2015

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<http://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the

individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

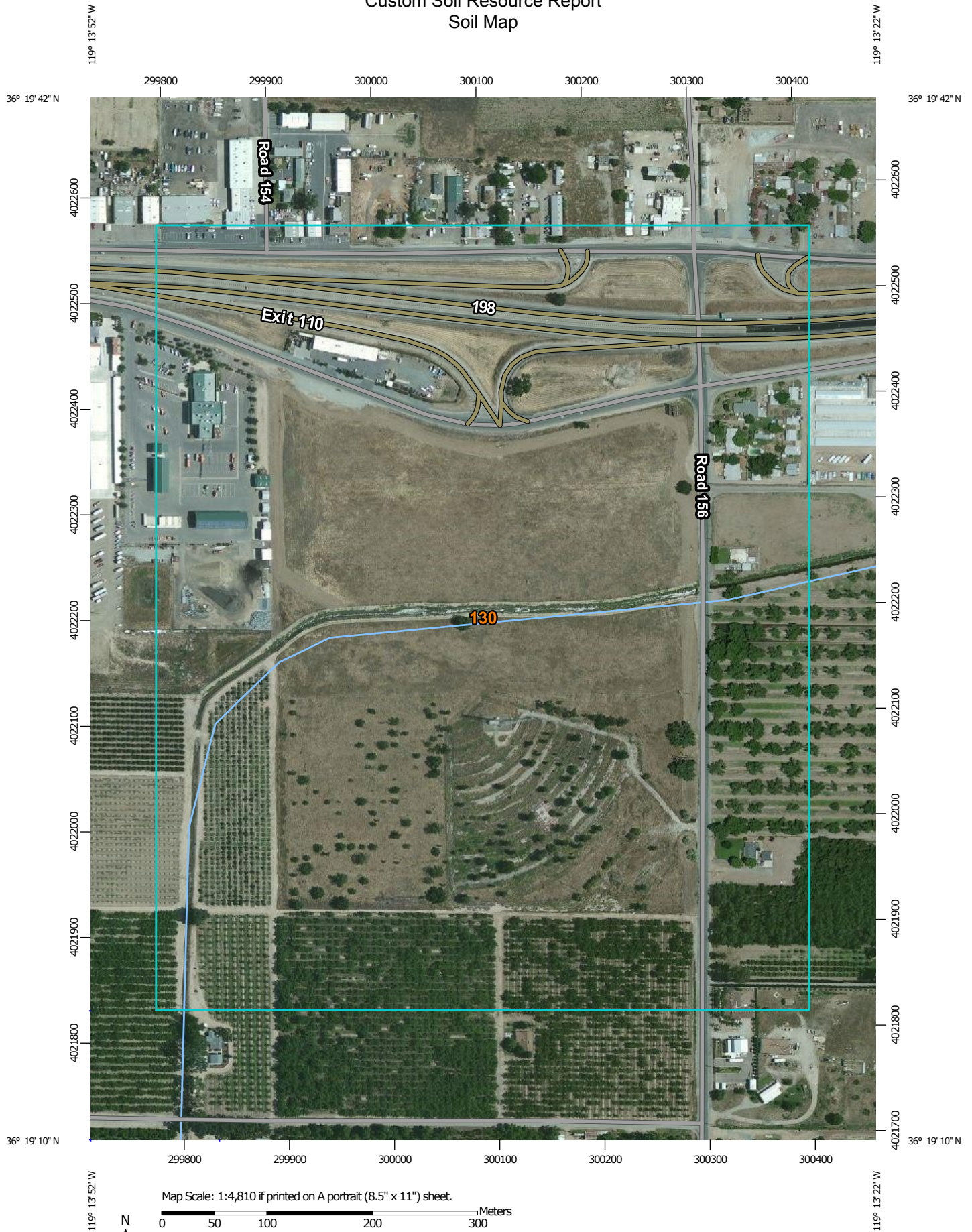
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.


Custom Soil Resource Report Soil Map



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons


 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot


 Closed Depression

 Gravel Pit

 Gravelly Spot


 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry


 Miscellaneous Water


 Perennial Water

 Rock Outcrop


 Saline Spot

 Sandy Spot

 Severely Eroded Spot


 Sinkhole


 Slide or Slip

 Sodic Spot


 Spoil Area

 Stony Spot


 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals


Transportation

 Rails


 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Tulare County, Western Part, California
Survey Area Data: Version 8, Sep 30, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 27, 2010—Jul 3, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Tulare County, Western Part, California (CA659)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
130	Nord fine sandy loam, 0 to 2 percent slopes	114.5	100.0%
Totals for Area of Interest		114.5	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Custom Soil Resource Report

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Tulare County, Western Part, California

130—Nord fine sandy loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: hp51

Elevation: 190 to 520 feet

Mean annual precipitation: 8 to 12 inches

Mean annual air temperature: 61 to 64 degrees F

Frost-free period: 250 to 275 days

Farmland classification: Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

Map Unit Composition

Nord and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nord

Setting

Landform: Alluvial fans, flood plains

Landform position (two-dimensional): Footslope, toeslope

Landform position (three-dimensional): Base slope

Down-slope shape: Linear

Across-slope shape: Convex, linear

Parent material: Alluvium derived from mixed

Typical profile

Ap - 0 to 11 inches: fine sandy loam

C1 - 11 to 38 inches: stratified sandy loam to loam

C2 - 38 to 50 inches: stratified loamy coarse sand to coarse sandy loam

2Btb - 50 to 72 inches: stratified sandy loam to silt loam

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: About 6 inches to

Natural drainage class: Well drained

Runoff class: Negligible

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.60 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: Very rare

Frequency of ponding: None

Calcium carbonate, maximum in profile: 4 percent

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 10.0

Available water storage in profile: Very low (about 0.7 inches)

Interpretive groups

Land capability classification (irrigated): 1

Land capability classification (nonirrigated): 4c

Hydrologic Soil Group: B

Minor Components

Grangeville, saline-sodic

Percent of map unit: 3 percent

Landform: Alluvial fans, flood plains

Hanford

Percent of map unit: 3 percent

Landform: Flood plains, alluvial fans

Tujunga

Percent of map unit: 3 percent

Landform: Flood plains

Tagus

Percent of map unit: 2 percent

Landform: Fan remnants

Akers

Percent of map unit: 2 percent

Landform: Fan remnants

Colpien

Percent of map unit: 2 percent

Landform: Fan remnants

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

Land Management

Land management interpretations are tools designed to guide the user in evaluating existing conditions in planning and predicting the soil response to various land management practices, for a variety of land uses, including cropland, forestland, hayland, pastureland, horticulture, and rangeland. Example interpretations include suitability for a variety of irrigation practices, log landings, haul roads and major skid trails, equipment operability, site preparation, suitability for hand and mechanical planting, potential erosion hazard associated with various practices, and ratings for fencing and waterline installation.

Erosion Hazard (Off-Road, Off-Trail) (Erosion Hazard)

The ratings in this interpretation indicate the hazard of soil loss from off-road and off-trail areas after disturbance activities that expose the soil surface. The ratings are based on slope and soil erosion factor K. The soil loss is caused by sheet or rill erosion in off-road or off-trail areas where 50 to 75 percent of the surface has been exposed by logging, grazing, mining, or other kinds of disturbance.

The ratings are both verbal and numerical. The hazard is described as "slight," "moderate," "severe," or "very severe." A rating of "slight" indicates that erosion is unlikely under ordinary climatic conditions; "moderate" indicates that some erosion is likely and that erosion-control measures may be needed; "severe" indicates that erosion is very likely and that erosion-control measures, including revegetation of bare areas, are advised; and "very severe" indicates that significant erosion is expected, loss of soil productivity and off-site damage are likely, and erosion-control measures are costly and generally impractical.

Custom Soil Resource Report

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified aspect of forestland management (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Custom Soil Resource Report

Map—Erosion Hazard (Off-Road, Off-Trail) (Erosion Hazard)



Map Scale: 1:4,810 if printed on A portrait (8.5" x 11") sheet.


0 50 100 200 300 Meters

0 200 400 800 1200 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84






MAP LEGEND

Area of Interest (AOI)






 Area of Interest (AOI)

Soils






Soil Rating Polygons

 Very severe
 Severe
 Moderate
 Slight
 Not rated or not available


Soil Rating Lines

 Very severe
 Severe
 Moderate
 Slight
 Not rated or not available

Soil Rating Points


 Very severe
 Severe
 Moderate
 Slight
 Not rated or not available

Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways

 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Tulare County, Western Part, California
 Survey Area Data: Version 8, Sep 30, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 27, 2010—Jul 3, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Tables—Erosion Hazard (Off-Road, Off-Trail) (Erosion Hazard)

Erosion Hazard (Off-Road, Off-Trail)— Summary by Map Unit — Tulare County, Western Part, California (CA659)						
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
130	Nord fine sandy loam, 0 to 2 percent slopes	Slight	Nord (85%)		114.5	100.0%
Totals for Area of Interest					114.5	100.0%

Erosion Hazard (Off-Road, Off-Trail)— Summary by Rating Value		
Rating	Acres in AOI	Percent of AOI
Slight	114.5	100.0%
Totals for Area of Interest	114.5	100.0%

Rating Options—Erosion Hazard (Off-Road, Off-Trail) (Erosion Hazard)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Erosion Hazard (Off-Road, Off-Trail)

The ratings in this interpretation indicate the hazard of soil loss from off-road and off-trail areas after disturbance activities that expose the soil surface. The ratings are based on slope and soil erosion factor K. The soil loss is caused by sheet or rill erosion in off-road or off-trail areas where 50 to 75 percent of the surface has been exposed by logging, grazing, mining, or other kinds of disturbance.

The ratings are both verbal and numerical. The hazard is described as "slight," "moderate," "severe," or "very severe." A rating of "slight" indicates that erosion is unlikely under ordinary climatic conditions; "moderate" indicates that some erosion is likely and that erosion-control measures may be needed; "severe" indicates that erosion is very likely and that erosion-control measures, including revegetation of bare areas, are advised; and "very severe" indicates that significant erosion is expected, loss of soil productivity and off-site damage are likely, and erosion-control measures are costly and generally impractical.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified aspect of forestland management (1.00) and the point at which the soil feature is not a limitation (0.00).

Custom Soil Resource Report

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.


Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Custom Soil Resource Report
Map—Erosion Hazard (Off-Road, Off-Trail)








MAP LEGEND

Area of Interest (AOI)






 Area of Interest (AOI)

Soils






Soil Rating Polygons

 Very severe
 Severe
 Moderate
 Slight
 Not rated or not available


Soil Rating Lines

 Very severe
 Severe
 Moderate
 Slight
 Not rated or not available

Soil Rating Points


 Very severe
 Severe
 Moderate
 Slight
 Not rated or not available

Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways

 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: Web Mercator (EPSG:3857)

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Soil Survey Area: Tulare County, Western Part, California
 Survey Area Data: Version 8, Sep 30, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 27, 2010—Jul 3, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Tables—Erosion Hazard (Off-Road, Off-Trail)

Erosion Hazard (Off-Road, Off-Trail)— Summary by Map Unit — Tulare County, Western Part, California (CA659)						
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
130	Nord fine sandy loam, 0 to 2 percent slopes	Slight	Nord (85%)		114.5	100.0%
Totals for Area of Interest					114.5	100.0%

Erosion Hazard (Off-Road, Off-Trail)— Summary by Rating Value		
Rating	Acres in AOI	Percent of AOI
Slight	114.5	100.0%
Totals for Area of Interest	114.5	100.0%

Rating Options—Erosion Hazard (Off-Road, Off-Trail)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Erosion Hazard (Road, Trail)

The ratings in this interpretation indicate the hazard of soil loss from unsurfaced roads and trails. The ratings are based on soil erosion factor K, slope, and content of rock fragments.

The ratings are both verbal and numerical. The hazard is described as "slight," "moderate," or "severe." A rating of "slight" indicates that little or no erosion is likely; "moderate" indicates that some erosion is likely, that the roads or trails may require occasional maintenance, and that simple erosion-control measures are needed; and "severe" indicates that significant erosion is expected, that the roads or trails require frequent maintenance, and that costly erosion-control measures are needed.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified aspect of forestland management (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each

Custom Soil Resource Report

component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.


Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Custom Soil Resource Report
Map—Erosion Hazard (Road, Trail)








MAP LEGEND

Area of Interest (AOI)






 Area of Interest (AOI)

Soils






Soil Rating Polygons

 Very severe
 Severe
 Moderate
 Slight
 Not rated or not available


Soil Rating Lines

 Very severe
 Severe
 Moderate
 Slight
 Not rated or not available

Soil Rating Points


 Very severe
 Severe
 Moderate
 Slight
 Not rated or not available

Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways

 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: Web Mercator (EPSG:3857)

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Soil Survey Area: Tulare County, Western Part, California
 Survey Area Data: Version 8, Sep 30, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 27, 2010—Jul 3, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Tables—Erosion Hazard (Road, Trail)

Erosion Hazard (Road, Trail)— Summary by Map Unit — Tulare County, Western Part, California (CA659)						
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
130	Nord fine sandy loam, 0 to 2 percent slopes	Slight	Nord (85%)		114.5	100.0%
Totals for Area of Interest					114.5	100.0%

Erosion Hazard (Road, Trail)— Summary by Rating Value		
Rating	Acres in AOI	Percent of AOI
Slight	114.5	100.0%
Totals for Area of Interest	114.5	100.0%

Rating Options—Erosion Hazard (Road, Trail)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Map Unit Name


A soil map unit is a collection of soil areas or nonsoil areas (miscellaneous areas) delineated in a soil survey. Each map unit is given a name that uniquely identifies the unit in a particular soil survey area.

Custom Soil Resource Report
Map—Map Unit Name





MAP LEGEND

Area of Interest (AOI)



 Area of Interest (AOI)

Soils



Soil Rating Polygons

 Nord fine sandy loam, 0 to 2 percent slopes
 Not rated or not available


Soil Rating Lines

 Nord fine sandy loam, 0 to 2 percent slopes
 Not rated or not available






Soil Rating Points

 Nord fine sandy loam, 0 to 2 percent slopes
 Not rated or not available

Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: Web Mercator (EPSG:3857)

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Soil Survey Area: Tulare County, Western Part, California
 Survey Area Data: Version 8, Sep 30, 2014

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Date(s) aerial images were photographed: Aug 27, 2010—Jul 3, 2011

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Table—Map Unit Name

Map Unit Name— Summary by Map Unit — Tulare County, Western Part, California (CA659)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
130	Nord fine sandy loam, 0 to 2 percent slopes	Nord fine sandy loam, 0 to 2 percent slopes	114.5	100.0%
Totals for Area of Interest			114.5	100.0%

Rating Options—Map Unit Name

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

Representative Slope

Slope gradient is the difference in elevation between two points, expressed as a percentage of the distance between those points.

The slope gradient is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Custom Soil Resource Report Map—Representative Slope




Map Scale: 1:4,810 if printed on A portrait (8.5" x 11") sheet.

0 50 100 200 300 Meters
0 200 400 800 1200 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge ticks: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)






 Area of Interest (AOI)

Soils







Soil Rating Polygons


 0 - 5
 5 - 15
 15 - 30
 30 - 45
 45 - 60
 60 - 100
 Not rated or not available

Soil Rating Lines


 0 - 5
 5 - 15
 15 - 30
 30 - 45
 45 - 60
 60 - 100
 Not rated or not available

Soil Rating Points






 0 - 5
 5 - 15
 15 - 30
 30 - 45
 45 - 60
 60 - 100

 Not rated or not available


Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: Web Mercator (EPSG:3857)

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Soil Survey Area: Tulare County, Western Part, California
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Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 27, 2010—Jul 3, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Representative Slope

Representative Slope— Summary by Map Unit — Tulare County, Western Part, California (CA659)				
Map unit symbol	Map unit name	Rating (percent)	Acres in AOI	Percent of AOI
130	Nord fine sandy loam, 0 to 2 percent slopes	1.0	114.5	100.0%
Totals for Area of Interest			114.5	100.0%

Rating Options—Representative Slope

Units of Measure: percent

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Interpret Nulls as Zero: No

References

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APPENDIX B

SOIL INVESTIGATION



& Sixth Ave., Farmersville, Ca.

Consolidated Testing & See's Consulting
710 S. Kaweah Avenue, Exeter, Ca
559-592-3555 Fax 559-592-3553

DATE: 06/03/15

BY: S. Bennett

BORING LOG NUMBER B1[illegible]

B1 (See location map)

B-80 mobile drill rig 6 1/4" hollow stem augers with 2.5" O.D. split spoon sampler.

B-80 mobile drill rig 6 1/4" hollow stem augers with 2.5" O.D. split spoon sampler.

PROJECT: Soil investigation for
50 acres site located at Noble Ave.
& Sixth Ave., Farmersville, Ca.

CTL - SEE'S, INC.

Consolidated Testing & See's Consulting
710 S. Kaweah Avenue, Exeter, Ca
559-592-3555 Fax 559-592-3553

JOB NO.: E1197-15

DATE: 06/03/15

BY: S. Bennett

BORING LOG NUMBER **B2**

PAGE: 1 of 2

DEPTH	%REC	BLOW COUNTS	SAMPLE NO.	SOIL GROUP	SOIL DESCRIPTION	PERCENT MOISTURE	DRY DENSITY
0'							
					0-2"		
			2.5"		Straw/Hay		
					2"-3'		
			2.5"	SP	Sand; light yellowish brown, dry, fine to medium grained.		
					3'-6'		
5'			1.5"	SM	Silty sand; dark yellowish brown, dry, very fine to medium grained.		
					6'-10'		
			1.5"	SW	Sand; light yellowish brown, moist, very fine to medium grained sand.		
10'					10'-21'		
			1.5"	SM	Silty sand; dark yellowish brown, moist, very fine to medium grained sand.		
15'					21'-25'		
			1.5"	SP	Sand; light yellowish brown, moist, very fine to fine grained sand.		
20'					25'-35'		
			1.5"	SM	Silty sand; dark yellowish brown, moist, very fine to medium grained sand.		
25'							
30'			1.5"				

B2 (See location map)

LOCATION:
EQUIPMENT:

B-80 mobile drill rig 6 1/4" hollow stem augers with 2.5" O.D. split spoon sampler.

PROJECT: Soil investigation for
50 acres site located at Noble Ave.
& Sixth Ave., Farmersville, Ca.

CTL - SEE'S, INC.
Consolidated Testing & See's Consulting
710 S. Kaweah Avenue, Exeter, Ca
559-592-3555 Fax 559-592-3553

JOB NO.: E1197-15
DATE: 06/03/15
BY: S. Bennett
PAGE: 2 of 2

BORING LOG NUMBER **B2**

DEPTH	% REC	BLOW COUNTS	SAMPLE NO.	SOIL GROUP	SOIL DESCRIPTION	PERCENT MOISTURE	DRY DENSITY
35'							
		4					
		6					
		8					
				ML	35'-45' Sandy silt; dark yellowish brown, moist, very fine to medium grained sand.		
40'		6					
		7					
		14					
				SW	45'-51.5' Sand; yellowish brown, moist, very fine to medium grained sand.		
45'		8					
		18					
		24					
50'		6					
		6					
		8					
55'							
60'							
65'					Terminated drilling at 51.5'. No free standing ground water encountered.		

B2 (See location map)

LOCATION:
EQUIPMENT:

B-80 mobile drill rig 6 1/4" hollow stem augers with 2.5" O.D. split spoon sampler.

BORING LOG NUMBER B3

BY: S. Bennett

B3 (See location map)

EQUIPMENT: B-80 mobile drill rig 6 1/4" hollow stem augers with 2.5" O.D. split spoon sampler.

& Sixth Ave., Farmersville, Ca.

Consolidated Testing & See's Consulting
710 S. Kaweah Avenue, Exeter, Ca
559-592-3555 Fax 559-592-3553

DATE: 06/04/15

BY: S. Bennett

BORING LOG NUMBER B4

DEPTH	%REC BLOW COUNTS	SAMPLE NO.	SOIL GROUP	SOIL DESCRIPTION	PERCENT MOISTURE	DRY DENSITY
0'						
	X 8 18 26	2.5"		0-2" Annual weeds		
	X 10 10 20	2.5"	SP	2"-5.5' <u>Silty sand</u> ; dark yellowish brown, very fine to medium grained sand.		
5'	5 2 3	1.5"				
10'	3 3 5	1.5"	SW	5.5'-11' <u>Sandy silt</u> ; dark brown, moist, very fine to medium grained.		
15'	6 10 12	1.5"	CL	11'-13' <u>Sandy clay</u> ; dark brown, moist, very fine to medium grained, cohesive.		
20'	8 15 17	1.5"	ML	13'-21.5' <u>Sandy silt</u> ; dark brown, moist, very fine to medium grained sand.		
25'						
30'				Terminated drilling at 21.5'. No free standing ground water encountered.		

B4 (See location map)

EQUIPMENT: B-80 mobile drill rig 6 1/4" hollow stem augers with 2.5" O.D. split spoon sampler.

PROJECT: Soil investigation for
50 acres site located at Noble Ave.
& Sixth Ave., Farmersville, Ca.

CTL - SEE'S, INC.
Consolidated Testing & See's Consulting
710 S. Kaweah Avenue, Exeter, Ca
559-592-3555 Fax 559-592-3553

JOB NO.: E1197-15
DATE: 06/04/15
BY: S. Bennett

BORING LOG NUMBER **B5**

DEPTH	% REC	BLOW COUNTS	SAMPLE NO.	SOIL GROUP	SOIL DESCRIPTION	PERCENT MOISTURE	DRY DENSITY
0'					0-3" Asphalt concrete pavement with oiled rock.		
			2.5"	SM	3"-5' Silty sand; dark brown, moist, very fine to medium grained sand.		
5'		5 8 8	1.5"				
				SW	5'-11' Sand; dark yellowish brown, moist, very fine to medium grained sand.		
10'		4 8 11	1.5"				
				SM	11'-21.5' Silty sand; dark yellowish brown, moist, very fine to medium grained sand.		
15'		6 17 24	1.5"				
20'		10 17 21	1.5"				
25'							
30'					Terminated drilling at 21.5'. No free standing ground water encountered.		

B5 (See location map)

LOCATION: B-80 mobile drill rig 6 1/4" hollow stem augers with 2.5" O.D. split spoon sampler.
EQUIPMENT:

PROJECT: Soil investigation for
50 acres site located at Noble Ave.
& Sixth Ave., Farmersville, Ca.

CTL - SEE'S, INC.
Consolidated Testing & See's Consulting
710 S. Kaweah Avenue, Exeter, Ca
559-592-3555 Fax 559-592-3553

JOB NO.: E1197-15
DATE: 06/04/15
BY: S. Bennett

BORING LOG NUMBER B6

DEPTH	%REC	BLOW COUNTS	SAMPLE NO.	SOIL GROUP	SOIL DESCRIPTION	PERCENT MOISTURE	DRY DENSITY
0'					0-2" Asphalt concrete pavement		
					2"-10' SM <u>Silty sand</u> ; dark yellowish brown, moist, very fine to medium grained.		
5'							
10'							
15'							
20'							
25'							
					Terminated drilling at 21.5'. No free standing ground water encountered.		
30'							

B6 (See location map)

LOCATION:
EQUIPMENT:

B-80 mobile drill rig 6 1/4" hollow stem augers with 2.5" O.D. split spoon sampler.

Job Description: Percolation test
at 50 ac. Site located at Noble and Sixth Ave.
Farmerville, Ca

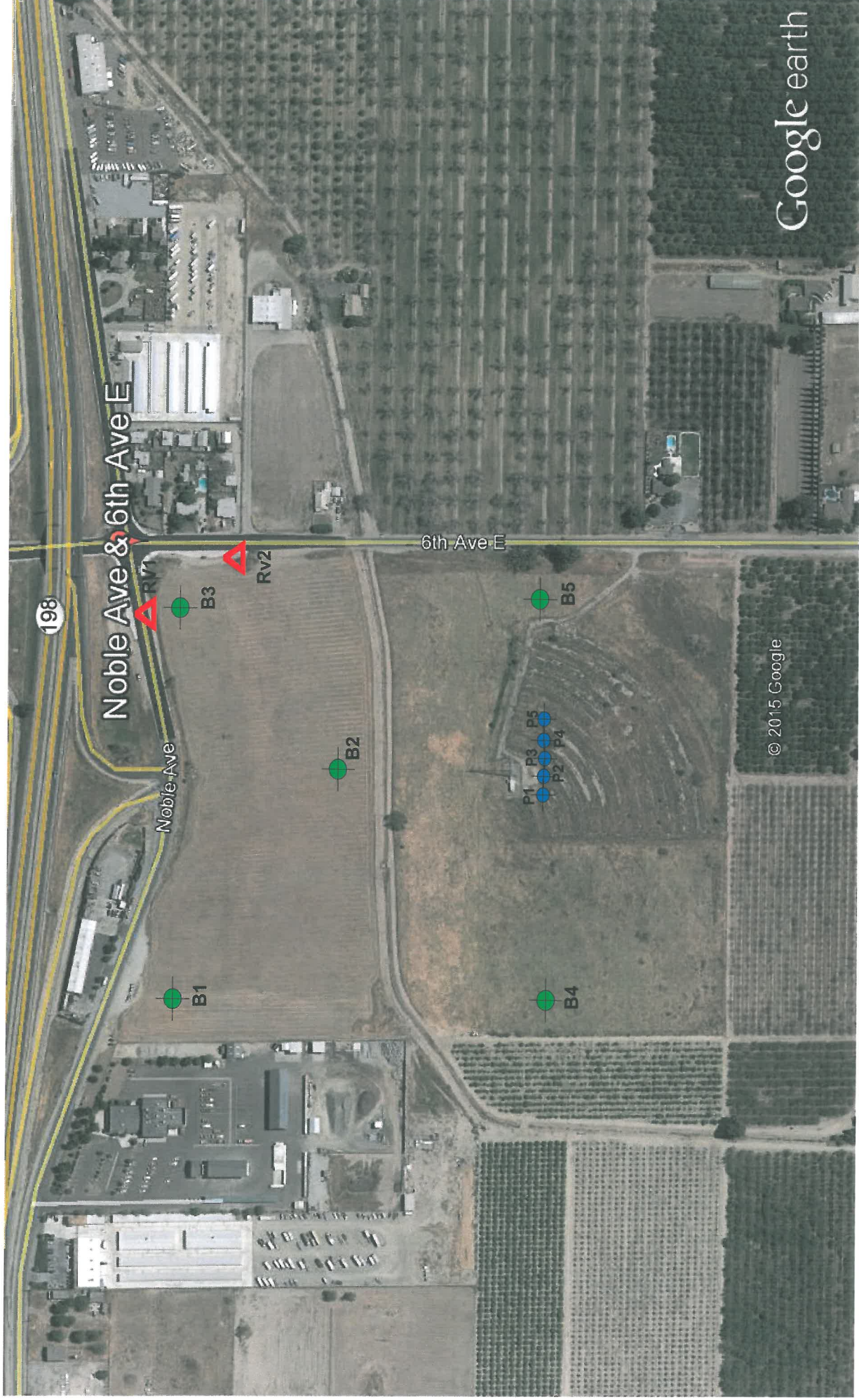
Job No.: E1197-15
Date Performed: 06/3/15
Date of Reading: 06/4/15
Performed By: B. Flanagan

APN#: 101-100-009

TESTHOLE LOCATION (PRIMARY FIELD)	DEPTH OF TEST BELOW EXIST. GRADE	PRE-SOAK TIME USING AUTOMATIC SYPHON	TIMED INTERVAL OF READ OUT	START READING TIME/FEET	FINISH READING TIME/FEET	CHANGE IN H2O ELEV. FEET	PERCOLATION RATE
P1	5'	24 hrs.	30 min.	11:30/4.06	12:00/4.40	.34	7.3
P2	5'	24 hrs.	30 min.	11:31/4.18	12:01/4.58	.40	6.2
P3	5'	24 hrs.	30 min.	11:32/5.60	12:02/5.96	.36	6.9
P4	5'	24 hrs.	30 min.	11:33/4.16	12:03/4.63	.47	5.3
P5	5'	24 hrs.	30 min.	11:34/5.62	12:04/6.38	.76	3.3
P1	5'	24 hrs.	30 min.	12:00/4.40	12:30/4.60	.20	12.5
P2	5'	24 hrs.	30 min.	12:01/4.58	12:31/4.81	.23	10.9
P3	5'	24 hrs.	30 min.	12:02/5.96	12:32/6.21	.25	10.0
P4	5'	24 hrs.	30 min.	12:03/4.62	12:33/4.97	.34	7.3
P5	5'	24 hrs.	30 min.	12:04/6.38	12:34/6.65	.27	9.2
P1	5'	24 hrs.	30 min.	12:30/4.60	1:00/4.83	.23	10.9
P2	5'	24 hrs.	30 min.	12:31/4.81	1:01/5.05	.24	10.4
P3	5'	24 hrs.	30 min.	12:32/6.21	1:02/6.48	.17	14.7
P4	5'	24 hrs.	30 min.	12:33/4.97	1:03/4.63	.55	4.5
P5	5'	24 hrs.	30 min.	12:34/6.65	1:04/6.89	.24	10.4

AVERAGE OF FINAL FIVE READINGS = 10.2 min/inch

- A. TESTHOLE DIAMETER 7"
 B. STANDING WATER HOLE 18"
 C. HOLE DEPTH 5'
 D. PIPE DIAMETER 4"



LEGEND

- Approximate location of testhole borings
- Approximate location of percolation tests
- ▲ Approximate location of r-values

LOCATION MAP

50 acres site
Noble Avenue & 6th Avenue
Farmersville, Ca.

CTL-SEE'S, INC.

APPENDIX C

WATER QUALITY ANALYSIS



Fred Mason, PG
4 Creeks, Inc
324 S. Santa Fe, Suite A
Visalia, CA 93292

RE: Report for A5E0983 Groundwater

Dear Fred Mason, PG,

Thank you for using BSK Associates for your analytical testing needs. In the following pages, you will find the test results for the samples submitted to our laboratory on 5/12/2015. The results have been approved for release by our Laboratory Director as indicated by the authorizing signature below.

The samples were analyzed for the test(s) indicated on the Chain of Custody (see attached) and the results relate only to the samples analyzed. BSK certifies that the testing was performed in accordance with the quality system requirements specified in the 2009 TNI Standard. Any deviations from this standard or from the method requirements for each test procedure performed will be annotated alongside the analytical result or noted in the Case Narrative. Unless otherwise noted, the sample results are reported on an "as received" basis.

If additional clarification of any information is required, please contact your Project Manager, Adam Trevarrow , at (800) 877-8310 or (559) 497-2888 x116.

Thanks again for using BSK Associates. We value your business and appreciate your loyalty.

Sincerely,



Adam Trevarrow, Project Manager



Accredited in Accordance with NELAP
ORELAP #4021

Case Narrative

Project and Report Details	Invoice Details
----------------------------	-----------------

Client: 4 Creeks, Inc
Report To: Fred Mason, PG
Project #: Old Theater
Received: 5/12/2015 - 15:23
Report Due: 5/27/2015

Invoice To: 4 Creeks, Inc
Invoice Attn: Fred Mason, PG
Project PO#: -

Sample Receipt Conditions

Cooler: Default Cooler
Temperature on Receipt °C: 0.0

Containers Intact
COC/Labels Agree
Received On Wet Ice
Sample(s) arrived at lab on same day sampled.
Packing Material - Other
Sample(s) were received in temperature range.
Initial receipt at BSK-Visalia

Data Qualifiers

The following qualifiers have been applied to one or more analytical results:

MC Notify Positive Notification: Fred Mason 5/13/15 1517
MS1.0 Matrix spike recoveries exceed control limits.

Report Distribution

Recipient(s)	Report Format	CC:
Fred Mason, PG	FINAL.RPT	

Certificate of Analysis

Sample ID: A5E0983-01
Sampled By: Client
Sample Description: GW1

Sample Date - Time: 05/12/15 - 08:50

Matrix: Ground Water

Sample Type: Grab

BSK Associates Fresno

General Chemistry

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Alkalinity as CaCO ₃	SM 2320B	110	3.0	mg/L	1	A505260	05/13/15	05/13/15	
Bicarbonate as CaCO ₃	SM 2320B	110	3.0	mg/L	1	A505260	05/13/15	05/13/15	
Carbonate as CaCO ₃	SM 2320B	ND	3.0	mg/L	1	A505260	05/13/15	05/13/15	
Hydroxide as CaCO ₃	SM 2320B	ND	3.0	mg/L	1	A505260	05/13/15	05/13/15	
Chloride	EPA 300.0	20	1.0	mg/L	1	A505239	05/13/15	05/13/15	
Nitrate as NO ₃	EPA 300.0	ND	1.0	mg/L	1	A505239	05/13/15 03:03	05/13/15	
Sulfate as SO ₄	EPA 300.0	31	1.0	mg/L	1	A505239	05/13/15	05/13/15	

Metals

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Aluminum	EPA 200.7	ND	0.050	mg/L	1	A505286	05/13/15	05/18/15	
Arsenic	EPA 200.8	ND	2.0	ug/L	1	A505286	05/13/15	05/22/15	
Barium	EPA 200.8	53	5.0	ug/L	1	A505286	05/13/15	05/22/15	
Calcium	EPA 200.7	39	0.10	mg/L	1	A505286	05/13/15	05/18/15	
Magnesium	EPA 200.7	7.4	0.10	mg/L	1	A505286	05/13/15	05/18/15	
Potassium	EPA 200.7	ND	2.0	mg/L	1	A505286	05/13/15	05/18/15	
Sodium	EPA 200.7	16	1.0	mg/L	1	A505286	05/13/15	05/18/15	
Zinc	EPA 200.8	ND	50	ug/L	1	A505286	05/13/15	05/22/15	

Microbiology

Analyte	Method	Result	Batch	Prepared	Analyzed	Qual
Coliform, Presence/Absence by Colilert						
E. Coli	SM 9223B	Absent	A505229	05/12/15 17:06	05/13/15 13:56	
Total Coliform	SM 9223B	Present	A505229	05/12/15 17:06	05/13/15 13:56	MC Notify

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
<u>DBCP by GC-ECD</u>									
Dibromochloropropane (DBCP)	EPA 504.1	ND	0.010	ug/L	1	A505473	05/18/15	05/19/15	
Surrogate: 1-Br-2-Nitrobenzene	EPA 504.1	114 %	Acceptable range: 70-130 %						
<u>Organohalide Pesticides and PCBs by GC-ECD</u>									
Alachlor	EPA 505	ND	1.0	ug/L	1	A505339	05/14/15	05/15/15	
Atrazine	EPA 505	ND	0.50	ug/L	1	A505339	05/14/15	05/15/15	
Simazine	EPA 505	ND	1.0	ug/L	1	A505339	05/14/15	05/15/15	
Surrogate: 1-Br-2-Nitrobenzene	EPA 505	104 %	Acceptable range: 70-130 %						
<u>Volatile Organics by GC-MS</u>									
1,1,1,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
1,1,1-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	

Certificate of Analysis

Sample ID: A5E0983-01

Sampled By: Client

Sample Description: GW1

Sample Date - Time: 05/12/15 - 08:50

Matrix: Ground Water

Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
<u>Volatile Organics by GC-MS</u>									
1,1,2,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	EPA 524.2	ND	10	ug/L	1	A505313	05/14/15	05/14/15	
1,1,2-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
1,1-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
1,1-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
1,1-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
1,2,3-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
1,2,4-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
1,2,4-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
1,2-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
1,2-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
1,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
1,3,5-Trimethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
1,3-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
1,3-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
1,4-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
2,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
2-Butanone	EPA 524.2	ND	5.0	ug/L	1	A505313	05/14/15	05/14/15	
2-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
2-Hexanone	EPA 524.2	ND	10	ug/L	1	A505313	05/14/15	05/14/15	
4-Chlorotoluene	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
4-Methyl-2-pentanone	EPA 524.2	ND	5.0	ug/L	1	A505313	05/14/15	05/14/15	
Acetone	EPA 524.2	ND	10	ug/L	1	A505313	05/14/15	05/14/15	
Benzene	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
Bromobenzene	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
Bromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
Bromodichloromethane	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
Bromoform	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
Bromomethane	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
Carbon Tetrachloride	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
Chlorobenzene	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
Chloroethane	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
Chloroform	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
Chloromethane	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
cis-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
cis-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
Dibromochloromethane	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
Dibromomethane	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
Dichlorodifluoromethane	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
Dichloromethane	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
Di-isopropyl ether (DIPE)	EPA 524.2	ND	3.0	ug/L	1	A505313	05/14/15	05/14/15	
Ethyl tert-Butyl Ether (ETBE)	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
Ethylbenzene	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
Hexachlorobutadiene	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	

Certificate of Analysis

Sample ID: A5E0983-01

Sampled By: Client

Sample Description: GW1

Sample Date - Time: 05/12/15 - 08:50

Matrix: Ground Water

Sample Type: Grab

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Volatile Organics by GC-MS									
Isopropylbenzene	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
m,p-Xylenes	EPA 524.2	0.55	0.50	ug/L	1	A505313	05/14/15	05/14/15	
Methyl-t-butyl ether	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
Naphthalene	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
n-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
n-Propylbenzene	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
o-Xylene	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
p-Isopropyltoluene	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
sec-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
Styrene	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
tert-Amyl Methyl Ether (TAME)	EPA 524.2	ND	3.0	ug/L	1	A505313	05/14/15	05/14/15	
tert-Butyl alcohol (TBA)	EPA 524.2	ND	2.0	ug/L	1	A505313	05/14/15	05/14/15	
tert-Butylbenzene	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
Tetrachloroethene (PCE)	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
Toluene	EPA 524.2	1.1	0.50	ug/L	1	A505313	05/14/15	05/14/15	
trans-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
trans-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
Trichloroethene (TCE)	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
Trichlorofluoromethane	EPA 524.2	ND	5.0	ug/L	1	A505313	05/14/15	05/14/15	
Vinyl Chloride	EPA 524.2	ND	0.50	ug/L	1	A505313	05/14/15	05/14/15	
Surrogate: 1,2-Dichlorobenzene-d4	EPA 524.2	95 %	Acceptable range: 70-130 %						
Surrogate: Bromofluorobenzene	EPA 524.2	100 %	Acceptable range: 70-130 %						
Total 1,3-Dichloropropene, EPA 524.2		ND	0.50	ug/L					
Total Trihalomethanes, EPA 524.2		ND	0.50	ug/L					
Total Xylenes, EPA 524.2		0.55	0.50	ug/L					

BSK Associates Fresno
General Chemistry Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 300.0 - Quality Control

Batch: A505239

Prepared: 05/13/2015

Prep Method: Method Specific Preparation

Analyst: EMH

Blank (A505239-BLK1)

Chloride	ND	1.0	mg/L							05/13/15	
Nitrate as NO3	ND	1.0	mg/L							05/13/15	
Sulfate as SO4	ND	1.0	mg/L							05/13/15	

Blank Spike (A505239-BS1)

Chloride	100	1.0	mg/L	100		102	90-110			05/13/15	
Nitrate as NO3	100	1.0	mg/L	100		101	90-110			05/13/15	
Sulfate as SO4	100	1.0	mg/L	100		103	90-110			05/13/15	

Blank Spike Dup (A505239-BSD1)

Chloride	100	1.0	mg/L	100		102	90-110	0	20	05/13/15	
Nitrate as NO3	100	1.0	mg/L	100		101	90-110	0	20	05/13/15	
Sulfate as SO4	100	1.0	mg/L	100		103	90-110	0	20	05/13/15	

Matrix Spike (A505239-MS1), Source: A5E0988-01

Chloride	59	1.0	mg/L	50	7.5	102	80-120			05/13/15	
Nitrate as NO3	66	1.0	mg/L	50	15	101	80-120			05/13/15	
Sulfate as SO4	65	1.0	mg/L	50	14	103	80-120			05/13/15	

Matrix Spike (A505239-MS2), Source: A5E0988-03

Chloride	58	1.0	mg/L	50	7.5	101	80-120			05/13/15	
Nitrate as NO3	65	1.0	mg/L	50	15	100	80-120			05/13/15	
Sulfate as SO4	65	1.0	mg/L	50	14	102	80-120			05/13/15	

Matrix Spike Dup (A505239-MSD1), Source: A5E0988-01

Chloride	58	1.0	mg/L	50	7.5	101	80-120	1	20	05/13/15	
Nitrate as NO3	65	1.0	mg/L	50	15	99	80-120	1	20	05/13/15	
Sulfate as SO4	65	1.0	mg/L	50	14	101	80-120	1	20	05/13/15	

Matrix Spike Dup (A505239-MSD2), Source: A5E0988-03

Chloride	59	1.0	mg/L	50	7.5	102	80-120	1	20	05/13/15	
Nitrate as NO3	66	1.0	mg/L	50	15	101	80-120	1	20	05/13/15	
Sulfate as SO4	65	1.0	mg/L	50	14	103	80-120	1	20	05/13/15	

SM 2320B - Quality Control

Batch: A505260

Prepared: 05/13/2015

Prep Method: Method Specific Preparation

Analyst: CEG

Blank (A505260-BLK1)

Alkalinity as CaCO3	ND	3.0	mg/L							05/13/15	
Bicarbonate as CaCO3	ND	3.0	mg/L							05/13/15	
Carbonate as CaCO3	ND	3.0	mg/L							05/13/15	
Hydroxide as CaCO3	ND	3.0	mg/L							05/13/15	

Blank Spike (A505260-BS1)

A5E0983 FINAL 05262015 0845

Printed: 05/26/2015

QA-RP-0001-10 Final.rpt

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BSK Associates Fresno
General Chemistry Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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SM 2320B - Quality Control

Batch: A505260

Prepared: 05/13/2015

Prep Method: Method Specific Preparation

Analyst: CEG

Blank Spike (A505260-BS1)

Alkalinity as CaCO ₃	96	3.0	mg/L	100	96	80-120				05/13/15
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Blank Spike Dup (A505260-BSD1)

Alkalinity as CaCO ₃	94	3.0	mg/L	100	94	80-120	2	20		05/13/15
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Duplicate (A505260-DUP1), Source: A5E0941-01

Alkalinity as CaCO ₃	88	3.0	mg/L		88		0	10		05/13/15
Bicarbonate as CaCO ₃	85	3.0	mg/L		85		1	10		05/13/15
Carbonate as CaCO ₃	3.0	3.0	mg/L		ND		7	10		05/13/15
Hydroxide as CaCO ₃	ND	3.0	mg/L		ND			10		05/13/15

Duplicate (A505260-DUP2), Source: A5E0985-01

Alkalinity as CaCO ₃	230	3.0	mg/L		230		0	10		05/13/15
Bicarbonate as CaCO ₃	210	3.0	mg/L		210		1	10		05/13/15
Carbonate as CaCO ₃	20	3.0	mg/L		18		7	10		05/13/15
Hydroxide as CaCO ₃	ND	3.0	mg/L		ND			10		05/13/15

**BSK Associates Fresno
Metals Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 200.7 - Quality Control

Batch: A505286

Prepared: 05/13/2015

Prep Method: EPA 200.2

Analyst: NYY

Blank (A505286-BLK2)

Aluminum	ND	0.050	mg/L							05/18/15	
Calcium	ND	0.10	mg/L							05/18/15	
Magnesium	ND	0.10	mg/L							05/18/15	
Potassium	ND	2.0	mg/L							05/18/15	
Sodium	ND	1.0	mg/L							05/18/15	

Blank Spike (A505286-BS2)

Aluminum	0.19	0.050	mg/L	0.20		94	85-115			05/18/15	
Calcium	9.8	0.10	mg/L	10		98	85-115			05/18/15	
Magnesium	9.6	0.10	mg/L	10		96	85-115			05/18/15	
Potassium	10	2.0	mg/L	10		100	85-115			05/18/15	
Sodium	10	1.0	mg/L	10		101	85-115			05/18/15	

Blank Spike Dup (A505286-BSD2)

Aluminum	0.19	0.050	mg/L	0.20		95	85-115	1	20	05/18/15	
Calcium	10	0.10	mg/L	10		100	85-115	2	20	05/18/15	
Magnesium	9.9	0.10	mg/L	10		99	85-115	3	20	05/18/15	
Potassium	10	2.0	mg/L	10		100	85-115	0	20	05/18/15	
Sodium	10	1.0	mg/L	10		102	85-115	1	20	05/18/15	

Matrix Spike (A505286-MS3), Source: A5E0941-01

Aluminum	0.21	0.050	mg/L	0.20	ND	106	70-130			05/18/15	
Calcium	37	0.10	mg/L	10	27	97	70-130			05/18/15	
Magnesium	26	0.10	mg/L	10	17	98	70-130			05/18/15	
Potassium	14	2.0	mg/L	10	3.7	99	70-130			05/18/15	
Sodium	80	1.0	mg/L	10	71	90	70-130			05/18/15	

Matrix Spike (A505286-MS4), Source: A5E0942-01

Aluminum	0.21	0.050	mg/L	0.20	ND	106	70-130			05/18/15	
Calcium	36	0.10	mg/L	10	27	87	70-130			05/18/15	
Magnesium	26	0.10	mg/L	10	17	93	70-130			05/18/15	
Potassium	13	2.0	mg/L	10	3.8	97	70-130			05/18/15	
Sodium	78	1.0	mg/L	10	72	64	70-130			05/18/15	MS1.0 Low

Matrix Spike Dup (A505286-MSD3), Source: A5E0941-01

Aluminum	0.24	0.050	mg/L	0.20	ND	121	70-130	14	20	05/18/15	
Calcium	37	0.10	mg/L	10	27	94	70-130	1	20	05/18/15	
Magnesium	27	0.10	mg/L	10	17	99	70-130	0	20	05/18/15	
Potassium	14	2.0	mg/L	10	3.7	100	70-130	0	20	05/18/15	
Sodium	79	1.0	mg/L	10	71	86	70-130	1	20	05/18/15	

Matrix Spike Dup (A505286-MSD4), Source: A5E0942-01

Aluminum	0.23	0.050	mg/L	0.20	ND	114	70-130	7	20	05/18/15	
Calcium	37	0.10	mg/L	10	27	93	70-130	2	20	05/18/15	
Magnesium	27	0.10	mg/L	10	17	97	70-130	2	20	05/18/15	

**BSK Associates Fresno
Metals Quality Control Report**

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 200.7 - Quality Control

Batch: A505286

Prepared: 05/13/2015

Prep Method: EPA 200.2

Analyst: NYY

Matrix Spike Dup (A505286-MSD4), Source: A5E0942-01

Potassium	14	2.0	mg/L	10	3.8	98	70-130	1	20	05/18/15	
Sodium	79	1.0	mg/L	10	72	70	70-130	1	20	05/18/15	

EPA 200.8 - Quality Control

Batch: A505286

Prepared: 05/13/2015

Prep Method: EPA 200.2

Analyst: MAS

Blank (A505286-BLK1)

Arsenic	ND	2.0	ug/L							05/22/15	
Barium	ND	5.0	ug/L							05/22/15	
Zinc	ND	50	ug/L							05/22/15	

Blank Spike (A505286-BS1)

Arsenic	190	2.0	ug/L	200		93	85-115			05/22/15	
Barium	180	5.0	ug/L	200		92	85-115			05/22/15	
Zinc	180	50	ug/L	200		90	85-115			05/22/15	

Blank Spike Dup (A505286-BSD1)

Arsenic	190	2.0	ug/L	200		93	85-115	1	20	05/22/15	
Barium	190	5.0	ug/L	200		96	85-115	4	20	05/22/15	
Zinc	180	50	ug/L	200		90	85-115	0	20	05/22/15	

Matrix Spike (A505286-MS1), Source: A5E0941-01

Arsenic	180	2.0	ug/L	200	2.7	91	70-130			05/22/15	
Barium	220	5.0	ug/L	200	37	94	70-130			05/22/15	
Zinc	170	50	ug/L	200	ND	87	70-130			05/22/15	

Matrix Spike (A505286-MS2), Source: A5E0942-01

Arsenic	190	2.0	ug/L	200	ND	93	70-130			05/22/15	
Barium	230	5.0	ug/L	200	39	94	70-130			05/22/15	
Zinc	180	50	ug/L	200	ND	90	70-130			05/22/15	

Matrix Spike Dup (A505286-MSD1), Source: A5E0941-01

Arsenic	180	2.0	ug/L	200	2.7	90	70-130	1	20	05/22/15	
Barium	220	5.0	ug/L	200	37	91	70-130	2	20	05/22/15	
Zinc	180	50	ug/L	200	ND	89	70-130	2	20	05/22/15	

Matrix Spike Dup (A505286-MSD2), Source: A5E0942-01

Arsenic	190	2.0	ug/L	200	ND	93	70-130	1	20	05/22/15	
Barium	220	5.0	ug/L	200	39	92	70-130	2	20	05/22/15	
Zinc	180	50	ug/L	200	ND	88	70-130	2	20	05/22/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 504.1 - Quality Control

Batch: A505473

Prepared: 05/18/2015

Prep Method: EPA 505

Analyst: AAR

Blank (A505473-BLK1)

Dibromochloropropane (DBCP)	ND	0.010	ug/L							05/19/15	
Surrogate: 1-Br-2-Nitrobenzene	0.49			0.46		107	70-130			05/19/15	

Blank Spike (A505473-BS1)

Dibromochloropropane (DBCP)	0.20	0.010	ug/L	0.20		102	70-130			05/19/15	
Surrogate: 1-Br-2-Nitrobenzene	0.51			0.46		112	70-130			05/19/15	

Blank Spike Dup (A505473-BSD1)

Dibromochloropropane (DBCP)	0.21	0.010	ug/L	0.20		104	70-130	2	20	05/19/15	
Surrogate: 1-Br-2-Nitrobenzene	0.52			0.46		113	70-130			05/19/15	

Matrix Spike (A505473-MS1), Source: A5E0982-02

Dibromochloropropane (DBCP)	0.45	0.010	ug/L	0.20	0.26	96	65-135			05/19/15	
Surrogate: 1-Br-2-Nitrobenzene	0.52			0.46		113	70-130			05/19/15	

Matrix Spike Dup (A505473-MSD1), Source: A5E0982-02

Dibromochloropropane (DBCP)	0.48	0.010	ug/L	0.20	0.26	107	65-135	5	20	05/19/15	
Surrogate: 1-Br-2-Nitrobenzene	0.53			0.47		113	70-130			05/19/15	

EPA 505 - Quality Control

Batch: A505339

Prepared: 05/14/2015

Prep Method: EPA 505

Analyst: AAR

Blank (A505339-BLK1)

Alachlor	ND	1.0	ug/L							05/15/15	
Atrazine	ND	0.50	ug/L							05/15/15	
Simazine	ND	1.0	ug/L							05/15/15	
Surrogate: 1-Br-2-Nitrobenzene	0.46			0.46		101	70-130			05/15/15	

Blank Spike (A505339-BS1)

Alachlor	8.0	1.0	ug/L	8.0		100	70-130			05/15/15	
Atrazine	10	0.50	ug/L	10		103	70-130			05/15/15	
Simazine	20	1.0	ug/L	20		101	70-130			05/15/15	
Surrogate: 1-Br-2-Nitrobenzene	0.48			0.46		104	70-130			05/15/15	

Blank Spike Dup (A505339-BSD1)

Alachlor	8.2	1.0	ug/L	8.0		103	70-130	3	20	05/15/15	
Atrazine	9.7	0.50	ug/L	10		97	70-130	6	20	05/15/15	
Simazine	20	1.0	ug/L	20		101	70-130	0	20	05/15/15	
Surrogate: 1-Br-2-Nitrobenzene	0.48			0.46		104	70-130			05/15/15	

Matrix Spike (A505339-MS2), Source: A5E0337-01

Alachlor	8.3	1.0	ug/L	8.0	ND	104	65-135			05/15/15	
Atrazine	ND	0.50	ug/L	10	ND	0	65-135			05/15/15	MS1.0 Low
Simazine	ND	1.0	ug/L	20	ND	0	65-135			05/15/15	MS1.0 Low

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 505 - Quality Control

Batch: A505339

Prepared: 05/14/2015

Prep Method: EPA 505

Analyst: AAR

Matrix Spike (A505339-MS2), Source: A5E0337-01

Surrogate: 1-Br-2-Nitrobenzene	0.46	0.46	100	70-130	05/15/15
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EPA 524.2 - Quality Control

Batch: A505313

Prepared: 05/14/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A505313-BLK1)

1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	05/14/15
1,1,1-Trichloroethane	ND	0.50	ug/L	05/14/15
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	05/14/15
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	10	ug/L	05/14/15
1,1,2-Trichloroethane	ND	0.50	ug/L	05/14/15
1,1-Dichloroethane	ND	0.50	ug/L	05/14/15
1,1-Dichloroethene	ND	0.50	ug/L	05/14/15
1,1-Dichloropropene	ND	0.50	ug/L	05/14/15
1,2,3-Trichlorobenzene	ND	0.50	ug/L	05/14/15
1,2,4-Trichlorobenzene	ND	0.50	ug/L	05/14/15
1,2,4-Trimethylbenzene	ND	0.50	ug/L	05/14/15
1,2-Dichlorobenzene	ND	0.50	ug/L	05/14/15
1,2-Dichloroethane	ND	0.50	ug/L	05/14/15
1,2-Dichloropropane	ND	0.50	ug/L	05/14/15
1,3,5-Trimethylbenzene	ND	0.50	ug/L	05/14/15
1,3-Dichlorobenzene	ND	0.50	ug/L	05/14/15
1,3-Dichloropropane	ND	0.50	ug/L	05/14/15
1,4-Dichlorobenzene	ND	0.50	ug/L	05/14/15
2,2-Dichloropropane	ND	0.50	ug/L	05/14/15
2-Butanone	ND	5.0	ug/L	05/14/15
2-Chlorotoluene	ND	0.50	ug/L	05/14/15
2-Hexanone	ND	10	ug/L	05/14/15
4-Chlorotoluene	ND	0.50	ug/L	05/14/15
4-Methyl-2-pentanone	ND	5.0	ug/L	05/14/15
Acetone	ND	10	ug/L	05/14/15
Benzene	ND	0.50	ug/L	05/14/15
Bromobenzene	ND	0.50	ug/L	05/14/15
Bromochloromethane	ND	0.50	ug/L	05/14/15
Bromodichloromethane	ND	0.50	ug/L	05/14/15
Bromoform	ND	0.50	ug/L	05/14/15
Bromomethane	ND	0.50	ug/L	05/14/15
Carbon Tetrachloride	ND	0.50	ug/L	05/14/15
Chlorobenzene	ND	0.50	ug/L	05/14/15
Chloroethane	ND	0.50	ug/L	05/14/15
Chloroform	ND	0.50	ug/L	05/14/15
Chloromethane	ND	0.50	ug/L	05/14/15
cis-1,2-Dichloroethene	ND	0.50	ug/L	05/14/15
cis-1,3-Dichloropropene	ND	0.50	ug/L	05/14/15

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A505313

Prepared: 05/14/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank (A505313-BLK1)

Dibromochloromethane	ND	0.50	ug/L							05/14/15	
Dibromomethane	ND	0.50	ug/L							05/14/15	
Dichlorodifluoromethane	ND	0.50	ug/L							05/14/15	
Dichloromethane	ND	0.50	ug/L							05/14/15	
Di-isopropyl ether (DIPE)	ND	3.0	ug/L							05/14/15	
Ethyl tert-Butyl Ether (ETBE)	ND	0.50	ug/L							05/14/15	
Ethylbenzene	ND	0.50	ug/L							05/14/15	
Hexachlorobutadiene	ND	0.50	ug/L							05/14/15	
Isopropylbenzene	ND	0.50	ug/L							05/14/15	
m,p-Xylenes	ND	0.50	ug/L							05/14/15	
Methyl-t-butyl ether	ND	0.50	ug/L							05/14/15	
Naphthalene	ND	0.50	ug/L							05/14/15	
n-Butylbenzene	ND	0.50	ug/L							05/14/15	
n-Propylbenzene	ND	0.50	ug/L							05/14/15	
o-Xylene	ND	0.50	ug/L							05/14/15	
p-Isopropyltoluene	ND	0.50	ug/L							05/14/15	
sec-Butylbenzene	ND	0.50	ug/L							05/14/15	
Styrene	ND	0.50	ug/L							05/14/15	
tert-Amyl Methyl Ether (TAME)	ND	3.0	ug/L							05/14/15	
tert-Butyl alcohol (TBA)	ND	2.0	ug/L							05/14/15	
tert-Butylbenzene	ND	0.50	ug/L							05/14/15	
Tetrachloroethene (PCE)	ND	0.50	ug/L							05/14/15	
Toluene	ND	0.50	ug/L							05/14/15	
trans-1,2-Dichloroethene	ND	0.50	ug/L							05/14/15	
trans-1,3-Dichloropropene	ND	0.50	ug/L							05/14/15	
Trichloroethene (TCE)	ND	0.50	ug/L							05/14/15	
Trichlorofluoromethane	ND	5.0	ug/L							05/14/15	
Vinyl Chloride	ND	0.50	ug/L							05/14/15	
Surrogate: 1,2-Dichlorobenzene-d4	4.8			5.0		95	70-130			05/14/15	
Surrogate: Bromofluorobenzene	50			50		101	70-130			05/14/15	

Blank Spike (A505313-BS1)

1,1,1,2-Tetrachloroethane	10	0.50	ug/L	10		104	70-130			05/14/15	
1,1,1-Trichloroethane	11	0.50	ug/L	10		106	70-130			05/14/15	
1,1,2,2-Tetrachloroethane	11	0.50	ug/L	10		105	70-130			05/14/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	10	10	ug/L	10		102	70-130			05/14/15	
1,1,2-Trichloroethane	11	0.50	ug/L	10		106	70-130			05/14/15	
1,1-Dichloroethane	11	0.50	ug/L	10		108	70-130			05/14/15	
1,1-Dichloroethene	11	0.50	ug/L	10		109	70-130			05/14/15	
1,1-Dichloropropene	11	0.50	ug/L	10		106	70-130			05/14/15	
1,2,3-Trichlorobenzene	11	0.50	ug/L	10		107	70-130			05/14/15	
1,2,4-Trichlorobenzene	10	0.50	ug/L	10		105	70-130			05/14/15	
1,2,4-Trimethylbenzene	10	0.50	ug/L	10		104	70-130			05/14/15	
1,2-Dichlorobenzene	10	0.50	ug/L	10		105	70-130			05/14/15	
1,2-Dichloroethane	11	0.50	ug/L	10		108	70-130			05/14/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A505313

Prepared: 05/14/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike (A505313-BS1)

1,2-Dichloropropane	11	0.50	ug/L	10		107	70-130			05/14/15	
1,3,5-Trimethylbenzene	10	0.50	ug/L	10		104	70-130			05/14/15	
1,3-Dichlorobenzene	11	0.50	ug/L	10		106	70-130			05/14/15	
1,3-Dichloropropane	11	0.50	ug/L	10		107	70-130			05/14/15	
1,4-Dichlorobenzene	11	0.50	ug/L	10		106	70-130			05/14/15	
2,2-Dichloropropane	10	0.50	ug/L	10		103	70-130			05/14/15	
2-Butanone	11	5.0	ug/L	10		105	70-130			05/14/15	
2-Chlorotoluene	11	0.50	ug/L	10		107	70-130			05/14/15	
2-Hexanone	10	10	ug/L	10		103	70-130			05/14/15	
4-Chlorotoluene	11	0.50	ug/L	10		106	70-130			05/14/15	
4-Methyl-2-pentanone	10	5.0	ug/L	10		102	70-130			05/14/15	
Acetone	11	10	ug/L	10		107	70-130			05/14/15	
Benzene	11	0.50	ug/L	10		107	70-130			05/14/15	
Bromobenzene	11	0.50	ug/L	10		106	70-130			05/14/15	
Bromochloromethane	10	0.50	ug/L	10		103	70-130			05/14/15	
Bromodichloromethane	10	0.50	ug/L	10		104	70-130			05/14/15	
Bromoform	9.5	0.50	ug/L	10		95	70-130			05/14/15	
Bromomethane	10	0.50	ug/L	10		100	70-130			05/14/15	
Carbon disulfide	9.7	10	ug/L	10		97	70-130			05/14/15	
Carbon Tetrachloride	10	0.50	ug/L	10		104	70-130			05/14/15	
Chlorobenzene	11	0.50	ug/L	10		106	70-130			05/14/15	
Chloroethane	10	0.50	ug/L	10		101	70-130			05/14/15	
Chloroform	11	0.50	ug/L	10		107	70-130			05/14/15	
Chloromethane	9.2	0.50	ug/L	10		92	70-130			05/14/15	
cis-1,2-Dichloroethene	11	0.50	ug/L	10		107	70-130			05/14/15	
cis-1,3-Dichloropropene	10	0.50	ug/L	10		104	70-130			05/14/15	
Dibromochloromethane	10	0.50	ug/L	10		100	70-130			05/14/15	
Dibromomethane	11	0.50	ug/L	10		108	70-130			05/14/15	
Dichlorodifluoromethane	7.9	0.50	ug/L	10		79	70-130			05/14/15	
Dichloromethane	11	0.50	ug/L	10		106	70-130			05/14/15	
Di-isopropyl ether (DIPE)	11	3.0	ug/L	10		107	70-130			05/14/15	
Ethyl tert-Butyl Ether (ETBE)	11	0.50	ug/L	10		105	70-130			05/14/15	
Ethylbenzene	11	0.50	ug/L	10		106	70-130			05/14/15	
Hexachlorobutadiene	11	0.50	ug/L	10		107	70-130			05/14/15	
Isopropylbenzene	11	0.50	ug/L	10		106	70-130			05/14/15	
m,p-Xylenes	21	0.50	ug/L	20		106	70-130			05/14/15	
Methyl-t-butyl ether	21	0.50	ug/L	20		105	70-130			05/14/15	
Naphthalene	11	0.50	ug/L	10		106	70-130			05/14/15	
n-Butylbenzene	11	0.50	ug/L	10		107	70-130			05/14/15	
n-Propylbenzene	11	0.50	ug/L	10		107	70-130			05/14/15	
o-Xylene	11	0.50	ug/L	10		105	70-130			05/14/15	
p-Isopropyltoluene	11	0.50	ug/L	10		105	70-130			05/14/15	
sec-Butylbenzene	11	0.50	ug/L	10		106	70-130			05/14/15	
Styrene	9.6	0.50	ug/L	10		96	70-130			05/14/15	
tert-Amyl Methyl Ether (TAME)	11	3.0	ug/L	10		110	70-130			05/14/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A505313

Prepared: 05/14/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike (A505313-BS1)

tert-Butyl alcohol (TBA)	11	2.0	ug/L	10	106	70-130				05/14/15	
tert-Butylbenzene	10	0.50	ug/L	10	104	70-130				05/14/15	
Tetrachloroethene (PCE)	11	0.50	ug/L	10	107	70-130				05/14/15	
Toluene	11	0.50	ug/L	10	107	70-130				05/14/15	
trans-1,2-Dichloroethene	11	0.50	ug/L	10	108	70-130				05/14/15	
trans-1,3-Dichloropropene	10	0.50	ug/L	10	102	70-130				05/14/15	
Trichloroethene (TCE)	11	0.50	ug/L	10	107	70-130				05/14/15	
Trichlorofluoromethane	11	5.0	ug/L	10	106	70-130				05/14/15	
Vinyl Chloride	9.2	0.50	ug/L	10	92	70-130				05/14/15	
Surrogate: 1,2-Dichlorobenzene-d4	5.1			5.0	102	70-130				05/14/15	
Surrogate: Bromofluorobenzene	51			50	102	70-130				05/14/15	

Blank Spike Dup (A505313-BSD1)

1,1,1,2-Tetrachloroethane	11	0.50	ug/L	10	109	70-130	5	30		05/14/15	
1,1,1-Trichloroethane	11	0.50	ug/L	10	113	70-130	6	30		05/14/15	
1,1,2,2-Tetrachloroethane	11	0.50	ug/L	10	110	70-130	4	30		05/14/15	
1,1,2-Trichloro-1,2,2-trifluoroethane	11	10	ug/L	10	111	70-130	9	30		05/14/15	
1,1,2-Trichloroethane	11	0.50	ug/L	10	111	70-130	5	30		05/14/15	
1,1-Dichloroethane	11	0.50	ug/L	10	114	70-130	6	30		05/14/15	
1,1-Dichloroethene	11	0.50	ug/L	10	115	70-130	5	30		05/14/15	
1,1-Dichloropropene	11	0.50	ug/L	10	114	70-130	7	30		05/14/15	
1,2,3-Trichlorobenzene	11	0.50	ug/L	10	110	70-130	2	30		05/14/15	
1,2,4-Trichlorobenzene	11	0.50	ug/L	10	108	70-130	3	30		05/14/15	
1,2,4-Trimethylbenzene	11	0.50	ug/L	10	110	70-130	6	30		05/14/15	
1,2-Dichlorobenzene	11	0.50	ug/L	10	109	70-130	4	30		05/14/15	
1,2-Dichloroethane	11	0.50	ug/L	10	113	70-130	5	30		05/14/15	
1,2-Dichloropropane	11	0.50	ug/L	10	112	70-130	5	30		05/14/15	
1,3,5-Trimethylbenzene	11	0.50	ug/L	10	111	70-130	7	30		05/14/15	
1,3-Dichlorobenzene	11	0.50	ug/L	10	111	70-130	5	30		05/14/15	
1,3-Dichloropropane	11	0.50	ug/L	10	112	70-130	5	30		05/14/15	
1,4-Dichlorobenzene	11	0.50	ug/L	10	110	70-130	4	30		05/14/15	
2,2-Dichloropropane	11	0.50	ug/L	10	110	70-130	6	30		05/14/15	
2-Butanone	11	5.0	ug/L	10	111	70-130	5	30		05/14/15	
2-Chlorotoluene	11	0.50	ug/L	10	112	70-130	5	30		05/14/15	
2-Hexanone	11	10	ug/L	10	109	70-130	6	30		05/14/15	
4-Chlorotoluene	11	0.50	ug/L	10	112	70-130	5	30		05/14/15	
4-Methyl-2-pentanone	11	5.0	ug/L	10	108	70-130	5	30		05/14/15	
Acetone	11	10	ug/L	10	114	70-130	6	30		05/14/15	
Benzene	11	0.50	ug/L	10	114	70-130	6	30		05/14/15	
Bromobenzene	11	0.50	ug/L	10	111	70-130	5	30		05/14/15	
Bromochloromethane	11	0.50	ug/L	10	112	70-130	8	30		05/14/15	
Bromodichloromethane	11	0.50	ug/L	10	110	70-130	6	30		05/14/15	
Bromoform	10	0.50	ug/L	10	102	70-130	7	30		05/14/15	
Bromomethane	11	0.50	ug/L	10	110	70-130	9	30		05/14/15	
Carbon disulfide	11	10	ug/L	10	109	70-130	11	30		05/14/15	

BSK Associates Fresno
Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: A505313

Prepared: 05/14/2015

Prep Method: EPA 524.2

Analyst: JGB

Blank Spike Dup (A505313-BSD1)

Carbon Tetrachloride	11	0.50	ug/L	10		111	70-130	7	30	05/14/15	
Chlorobenzene	11	0.50	ug/L	10		112	70-130	6	30	05/14/15	
Chloroethane	11	0.50	ug/L	10		111	70-130	9	30	05/14/15	
Chloroform	11	0.50	ug/L	10		113	70-130	5	30	05/14/15	
Chloromethane	11	0.50	ug/L	10		107	70-130	15	30	05/14/15	
cis-1,2-Dichloroethene	11	0.50	ug/L	10		114	70-130	6	30	05/14/15	
cis-1,3-Dichloropropene	11	0.50	ug/L	10		110	70-130	6	30	05/14/15	
Dibromochloromethane	11	0.50	ug/L	10		106	70-130	6	30	05/14/15	
Dibromomethane	11	0.50	ug/L	10		114	70-130	5	30	05/14/15	
Dichlorodifluoromethane	10	0.50	ug/L	10		101	70-130	24	30	05/14/15	
Dichloromethane	11	0.50	ug/L	10		113	70-130	6	30	05/14/15	
Di-isopropyl ether (DIPE)	11	3.0	ug/L	10		113	70-130	5	30	05/14/15	
Ethyl tert-Butyl Ether (ETBE)	11	0.50	ug/L	10		111	70-130	5	30	05/14/15	
Ethylbenzene	11	0.50	ug/L	10		112	70-130	6	30	05/14/15	
Hexachlorobutadiene	11	0.50	ug/L	10		112	70-130	4	30	05/14/15	
Isopropylbenzene	11	0.50	ug/L	10		111	70-130	5	30	05/14/15	
m,p-Xylenes	22	0.50	ug/L	20		112	70-130	6	30	05/14/15	
Methyl-t-butyl ether	22	0.50	ug/L	20		110	70-130	5	30	05/14/15	
Naphthalene	11	0.50	ug/L	10		108	70-130	2	30	05/14/15	
n-Butylbenzene	11	0.50	ug/L	10		112	70-130	4	30	05/14/15	
n-Propylbenzene	11	0.50	ug/L	10		112	70-130	5	30	05/14/15	
o-Xylene	11	0.50	ug/L	10		111	70-130	6	30	05/14/15	
p-Isopropyltoluene	11	0.50	ug/L	10		111	70-130	5	30	05/14/15	
sec-Butylbenzene	11	0.50	ug/L	10		111	70-130	4	30	05/14/15	
Styrene	11	0.50	ug/L	10		115	70-130	18	30	05/14/15	
tert-Amyl Methyl Ether (TAME)	11	3.0	ug/L	10		115	70-130	4	30	05/14/15	
tert-Butyl alcohol (TBA)	13	2.0	ug/L	10		129	70-130	19	30	05/14/15	
tert-Butylbenzene	11	0.50	ug/L	10		110	70-130	5	30	05/14/15	
Tetrachloroethene (PCE)	11	0.50	ug/L	10		113	70-130	6	30	05/14/15	
Toluene	11	0.50	ug/L	10		113	70-130	6	30	05/14/15	
trans-1,2-Dichloroethene	11	0.50	ug/L	10		115	70-130	7	30	05/14/15	
trans-1,3-Dichloropropene	11	0.50	ug/L	10		108	70-130	5	30	05/14/15	
Trichloroethene (TCE)	11	0.50	ug/L	10		114	70-130	6	30	05/14/15	
Trichlorofluoromethane	11	5.0	ug/L	10		114	70-130	7	30	05/14/15	
Vinyl Chloride	11	0.50	ug/L	10		107	70-130	16	30	05/14/15	
Surrogate: 1,2-Dichlorobenzene-d4	5.4			5.0		109	70-130			05/14/15	
Surrogate: Bromofluorobenzene	55			50		110	70-130			05/14/15	

Certificate of Analysis

Notes:

- The Chain of Custody document and Sample Integrity Sheet are part of the analytical report.
- Any remaining sample(s) for testing will be disposed of according to BSK's sample retention policy unless other arrangements are made in advance.
- All positive results for EPA Methods 504.1 and 524.2 require the analysis of a Field Reagent Blank (FRB) to confirm that the results are not a contamination error from field sampling steps. If Field Reagent Blanks were not submitted with the samples, this method requirement has not been performed.
- Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
- J-value is equivalent to DNQ (Detected, not quantified) which is a trace value. A trace value is an analyte detected between the MDL and the laboratory reporting limit. This result is of an unknown data quality and is only qualitative (estimated). Baseline noise, calibration curve extrapolation below the lowest calibrator, method blank detections, and integration artifacts can all produce apparent DNQ values, which contribute to the un-reliability of these values.
- (1) - Residual chlorine and pH analysis have a 15 minute holding time for both drinking and waste water samples as defined by the EPA and 40 CFR 136. Waste water and ground water (monitoring well) samples must be field filtered to meet the 15 minute holding time for dissolved metals.
- Summations of analytes (i.e. Total Trihalomethanes) may appear to add individual amounts incorrectly, due to rounding of analyte values occurring before or after the total value is calculated, as well as rounding of the total value.
- RL Multiplier is the factor used to adjust the reporting limit (RL) due to variations in sample preparation procedures and dilutions required for matrix interferences.
- Due to the subjective nature of the Threshold Odor Method, all characterizations of the detected odor are the opinion of the panel of analysts. The characterizations can be found in Standard Methods 2170B Figure 2170:1.
- The MCLs provided in this report (if applicable) represent the primary MCLs for that analyte.

Definitions

mg/L:	Milligrams/Liter (ppm)	MDL:	Method Detection Limit	MDA95:	Min. Detected Activity
mg/Kg:	Milligrams/Kilogram (ppm)	RL:	Reporting Limit: DL x Dilution	MPN:	Most Probable Number
µg/L:	Micrograms/Liter (ppb)	ND:	None Detected at RL	CFU:	Colony Forming Unit
µg/Kg:	Micrograms/Kilogram (ppb)	pCi/L:	Picocuries per Liter	Absent:	Less than 1 CFU/100mLs
%:	Percent Recovered (surrogates)	RL Mult:	RL Multiplier	Present:	1 or more CFU/100mLs
NR:	Non-Reportable	MCL:	Maximum Contaminant Limit		

Please see the individual Subcontract Lab's report for applicable certifications.

BSK is not accredited under the NELAC program for the following parameters:

****NA****

Certifications: Please refer to our website for a copy of our Accredited Fields of Testing under each certification.

Fresno

State of California - ELAP	1180	State of Hawaii	4021
State of Nevada	CA000792015-1	State of Oregon - NELAC	4021
EPA - UCMR3	CA00079	State of Washington	C997-15

Sacramento

State of California - ELAP	2435
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Vancouver

State of Oregon - NELAC	WA100008	State of Washington	C824-14a
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A5E0983



05122015

4cree3052

Turnaround: Standard

Due Date: 5/27/2015



4 Creeks, Inc





1414 Stanislaus St., Fresno, CA 93706
(559) 497-2888 Fax (559) 497-2893
www.bskassociates.com

BSK Associates
Engineering Laboratories

Required Fields

Temp:

0.0

A5E0983
4acre3052



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JY

Company/Client Name:

Report Attention:

Invoice To:

Phone:

Fax:

Address:

State:

PO#:

E-mail:

City:

Zip:

Regulatory Carbon Copies

Regulatory Compliance

Project:

Project #

CDPH

Merced Co

Reporting Options:

How would you like your completed results sent?

Merced Co

Tulare Co

Trace (J-Flag)

Swamp

EDT to California DPH

Other:

Sampler Name (Printed/Signature):

TAT

System Number:

Matrix Types: SW=Surface Water BW=Bottled Water GW=Ground Water WW=Waste Water STW=Storm Water DW=Drinking Water SO=Solid

Standard - 10 Business Days

Geotracker #

Comments / Station Code / WTRAX

Sample Description

Sampled

Matrix

Date

Time

Received by (Signature and Printed Name)

Company

Received by (Signature and Printed Name)

Company

#

Sampled

Matrix

Date

Time

Received by (Signature and Printed Name)

Company

Received by (Signature and Printed Name)

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Relinquished by (Signature and Printed Name)

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Received by (Signature and Printed Name)

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Time

Received by (Signature and Printed Name)

Company

Received by (Signature and Printed Name)

Company

Relinquished by (Signature and Printed Name)

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Received by (Signature and Printed Name)

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Received by (Signature and Printed Name)

Company

Relinquished by (Signature and Printed Name)

Company

Date

Time

Received by (Signature and Printed Name)

Company

Received by (Signature and Printed Name)

Company

Payment for services rendered as noted herein are due in full within 30 days from the date invoice. If not so paid, account balances are deemed delinquent. Delinquent balances are subject to monthly service charges and interest specified in BSK's current Standard Terms and Conditions for Laboratory Services. The person signing for the Client/Company acknowledges that they are either the Client or an authorized agent to the Client, that the Client agrees to be responsible for payment for the services on this Chain of Custody, and agrees to BSK's terms and conditions for laboratory services unless contractually bound otherwise. BSK's current terms and conditions can be found at www.bskassociates.com/BSKLabTermsConditions.pdf

SR-FL-0012-05 Analytical Chain of Custody

BSK Associates

Bottle Order Form

A5E0983

05/12/2015

4cree3052

10

Date Needed: 05/11/2015

Client: 4 Creeks Inc.

S

Attention: Fred Mason

Address: 324 S. Santa Fe

City: Visalia

State, Zip: CA, 93292

Email:

Phone:

Requested By:

AJT

Fax:

Date Requested:

05/07/2015

Prepared By:

CPR

Date Shipped:

5/8/15

Ship Via

ONTRAC

Shipping Details

Box with Ice Chest

Blue Ice

Tests	Description	Preservative	Sets	Lot Number
P/A, 1X10, HPC, 3X5	120mL Sterile Plastic	Na2S2O3	1	
Metals (except Silica): Inorganic / Gen Min.	500mL Plastic red lid / label	HNO3	1	
Gen Mineral/Inorganic; BOD, TDS, TSS	1L Plastic white lid / label	None	1	
EPA 524.2 & 1,2,3-TCP - Raw Water	3 X 40mL VOAs	HCl	1	
EPA 504 / 505	3 X 40mL VOAs	Na2S2O3	2	



Sample Integrity

BSK Bottles: Yes NoPage 1 of 1

COC Info	Was temperature within range? Chemistry $\leq 6^{\circ}\text{C}$ Micro $< 10^{\circ}\text{C}$		<u>Yes</u> No NA	Were correct containers and preservatives received for the tests requested?		<u>Yes</u> No NA
	If samples were taken today, is there evidence that chilling has begun?		<u>Yes</u> No NA	Were there bubbles in the VOA vials? (Volatiles Only)		<u>Yes</u> No <u>NA</u>
	Did all bottles arrive unbroken and intact?		<u>Yes</u> No	Was a sufficient amount of sample received?		<u>Yes</u> No
	Did all bottle labels agree with COC?		<u>Yes</u> No	Do samples have a hold time <72 hours?		<u>Yes</u> No
	Was sodium thiosulfate added to CN sample(s) until chlorine was no longer present?		Yes No <u>NA</u>	Was PM notified of discrepancies? PM: _____ By/Time: _____		<u>Yes</u> No <u>NA</u>
Bottles Received <small>"—" means preservation/chlorine checks are either N/A or are performed in the lab</small>	250ml(A) 500ml(B) 1Liter(C) 40ml VOA(V)		Checks	Passed?		
	Bacti $\text{Na}_2\text{S}_2\text{O}_3$		—	—	<u>1</u>	
	None (P) ^{White Cap}		—	—	<u>1C</u>	
	Cr6 (P) ^{Br. Green Label} $\text{NH}_4\text{OH}(\text{NH}_4)_2\text{SO}_4$ DW		Cl, pH > 8	Y N		
	Cr6 (P) ^{Pink Label} Hex Chrome Buffer DW		pH 9-9.5	Y N		
	Cr6 (P) ^{Pink Label} Hex Chrome Buffer WW		pH 9.3-9.7	Y N		
	HNO_3 (P) ^{Red Cap}		—	—	<u>1B</u>	
	H_2SO_4 (P) or (AG) ^{Yellow Cap/Label}		pH < 2	Y N		
	NaOH (P) ^{Green Cap}		Cl, pH > 10	Y N		
	NaOH + ZnAc (P)		pH > 9	Y N		
	Dissolved Oxygen 300ml (g)		—	—		
	None (AG) 608/8081/8082, 625, 632/8321, 8151, 8270		—	—		
	HCl (AG) ^{Lt. Blue Label} O&G, Diesel		—	—		
	$\text{Na}_2\text{O}_3\text{S} + \text{HCl}$ (AG) ^{Lt. Pink Label} 525		—	—		
	$\text{Na}_2\text{S}_2\text{O}_3$ 1 Liter (Brown P) 549		—	—		
	$\text{Na}_2\text{S}_2\text{O}_3$ (AG) ^{Blue Label} 547, 515, 548, THM, 524		—	—		
	$\text{Na}_2\text{S}_2\text{O}_3$ (CG) ^{Blue Label} 504, 505		—	—	<u>6V</u>	
	$\text{Na}_2\text{S}_2\text{O}_3 + \text{MCAA}$ (CG) ^{Orange Label} 531		pH < 3	Y N		
	NH_4Cl (AG) ^{Purple Label} 552		—	—		
	EDA (AG) ^{Brown Label} DBPs		—	—		
	HCL (CG) 524.2, BTEX, Gas, MTBE, 8260/624		—	—	<u>3V</u>	
	Buffer pH 4 (CG)		—	—		
	None (CG)		—	—		
	H_3PO_4 (CG) ^{Salmon Label}		—	—		
	Other:					
	Asbestos 1Liter Plastic w/ Foil		—	—		
	Low Level Hg / Metals Double Baggie		—	—		
	Bottled Water		—	—		
	Clear Glass Jar: 250 / 500 / 1 Liter		—	—		
	Soil Tube Brass / Steel / Plastic		—	—		
Tedlar Bag / Plastic Bag		—	—			
Split	Container	Preservative	Date/Time/Initials	Container	Preservative	Date/Time/Initials
	S P			S P		
	S P			S P		
Comments						

Labeled by: JAS @ 16:45Labels checked by: cew @ 16:53

RUSH Paged by: _____

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APPENDIX D
REFERENCED EVAPOTRANSPIRATION SHEET



Appendix A - Reference Evapotranspiration (ETo) Table*														
County and City	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual ETo	
TRINITY														
Hay Fork	0.5	1.1	2.3	3.5	4.9	5.9	7.0	6.0	4.5	2.8	0.9	0.7	40.1	
Weaverville	0.6	1.1	2.2	3.3	4.9	5.9	7.3	6.0	4.4	2.7	0.9	0.7	40.0	
TULARE														
Alpaugh	0.9	1.7	3.4	4.8	6.6	7.7	8.2	7.3	5.4	3.4	1.4	0.7	51.6	
Badger	1.0	1.3	2.7	4.1	6.0	7.3	7.7	7.0	4.8	3.3	1.4	0.7	47.3	
Delano	1.1	1.9	4.0	4.9	7.2	7.9	8.1	7.3	5.4	3.2	1.5	1.2	53.6	
Dinuba	1.1	1.5	3.2	4.7	6.2	7.7	8.5	7.3	5.3	3.4	1.4	0.7	51.2	
Lindcove	0.9	1.6	3.0	4.8	6.5	7.6	8.1	7.2	5.2	3.4	1.6	0.9	50.6	
Porterville	1.2	1.8	3.4	4.7	6.6	7.7	8.5	7.3	5.3	3.4	1.4	0.7	52.1	
Visalia	0.9	1.7	3.3	5.1	6.8	7.7	7.9	6.9	4.9	3.2	1.5	0.8	50.7	
TUOLUMNE														
Groveland	1.1	1.5	2.8	4.1	5.7	7.2	7.9	6.6	5.1	3.3	1.4	0.7	47.5	
Sonora	1.1	1.5	2.8	4.1	5.8	7.2	7.9	6.7	5.1	3.2	1.4	0.7	47.6	
VENTURA														
Camarillo	2.2	2.5	3.7	4.3	5.0	5.2	5.9	5.4	4.2	3.0	2.5	2.1	46.1	
Oxnard	2.2	2.5	3.2	3.7	4.4	4.6	5.4	4.8	4.0	3.3	2.4	2.0	42.3	
Piru	2.8	2.8	4.1	5.6	6.0	6.8	7.6	7.8	5.8	5.2	3.7	3.2	61.5	
Port Hueneme	2.0	2.3	3.3	4.6	4.9	4.9	4.9	5.0	3.7	3.2	2.5	2.2	43.5	
Thousand Oaks	2.2	2.6	3.4	4.5	5.4	5.9	6.7	6.4	5.4	3.9	2.6	2.0	51.0	
Ventura	2.2	2.6	3.2	3.8	4.6	4.7	5.5	4.9	4.1	3.4	2.5	2.0	43.5	
YOLO														
Bryte	0.9	1.7	3.3	5.0	6.4	7.5	7.9	7.0	5.2	3.5	1.6	1.0	51.0	
Davis	1.0	1.9	3.3	5.0	6.4	7.6	8.2	7.1	5.4	4.0	1.8	1.0	52.5	
Esparto	1.0	1.7	3.4	5.5	6.9	8.1	8.5	7.5	5.8	4.2	2.0	1.2	55.8	
Winters	1.7	1.7	2.9	4.4	5.8	7.1	7.9	6.7	5.3	3.3	1.6	1.0	49.4	
Woodland	1.0	1.8	3.2	4.7	6.1	7.7	8.2	7.2	5.4	3.7	1.7	1.0	51.6	
Zamora	1.1	1.9	3.5	5.2	6.4	7.4	7.8	7.0	5.5	4.0	1.9	1.2	52.8	
YUBA														
Browns Valley	1.0	1.7	3.1	4.7	6.1	7.5	8.5	7.6	5.7	4.1	2.0	1.1	52.9	
Brownsville	1.1	1.4	2.6	4.0	5.7	6.8	7.9	6.8	5.3	3.4	1.5	0.9	47.4	
* The values in this table were derived from:														
1) California Irrigation Management Information System (CIMIS);														
2) Reference EvapoTranspiration Zones Map, UC Dept. of Land, Air & Water Resources and														
California Dept of Water Resources 1999; and														
3) Reference Evapotranspiration for California, University of California, Department of Agriculture														
and Natural Resources (1987) Bulletin 1922 4) Determining Daily Reference Evapotranspiration,														
Cooperative Extension UC Division of Agriculture and Natural Resources (1987),														
Publication Leaflet 21426														

APPENDIX E

ESTIMATED WATER USAGE CALCULATION PER BUILDING LAYOUT





Indoor Water Usage Per Building Layout

Date: 7/19/2016
 Completed By: I. Williams, EIT
 Checked By: C. Hartman, PE

California Green Building Code Table 5.303.22 (Water Use Baseline) Occupancy Type (Group B) PER Occupant

Fixture Type	Baseline Flow	Duration	Daily Uses	Occupants	Total gallons
Lavatory Faucets, Nonresidential	0.5	0.25	3	1	0.375
Kitchen faucets (GPM)	2.2	4	1	1	8.80
Gravity tank type water closets (Gallons/Flush)	1.28	1	4	1	5.12
Urinals (Gallons/Flush)	0.5	1	2	1	1.0
**Assumming Office Spaces for all buildings under lots A, B,C,D, E, and F. Knowing their load factors are the same under Table A of the Chapter 4 plumbing Code					Total Per Day 15.30
					[A] Total Per Year 5,582.68

California Green Building Code Table 5.303.22 (Water Use Baseline) Occupancy Type (Group S) PER Occupant

Fixture Type	Baseline Flow	Duration	Daily Uses	Occupants	Total gallons
Lavatory Faucets, Nonresidential	0.5	0.25	3	1	0.375
Gravity tank type water closets (Gallons/Flush)	1.28	1	4	1	5.12
Urinals (Gallons/Flush)	0.5	1	2	1	1.00
**Warehouse Square footage for all lots					Total Per Day 6.50
					[B] Total Per Year 2,370.68

[California Plumbing Code Chapter 4](#)

Table A Load Factors (SF)		
[C]	Group B	200
	Group M	200
	Group S	5000

Approximate Water Use Per Building Layout

Building Type	[F] Retail (SF)	[G] Office (SF)	[H] Warehouse (SF)	[I] Total Office Occupants Group B [F][C]	[J] Total Retail Occupants Group M [F][D]	[K] Total Warehouse Occupants Group S [G][E]	[L] Gallons/Year [A]*[I]+[B]*[K]
A		1300	3900	7		1	38,137
B		1600	4800	8		1	46,937
C		2000	6000	10		1	58,672
D		3000	9000	15		2	88,007
E		2800	9320	14		2	82,576
F		2500	10890	13		2	74,947
G	5320				27		148,499 [A]*[J]

Appoximate Annual Total Water Use Per Building Layout

Building Type	[M] Number of buildings	Gallons per Year [L]*[M]
A	7	266,956
B	15	704,059
C	6	352,029
D	7	616,051
E	4	330,306
F	3	224,840
G	1	148,499
Total	43	2,642,740

Appendix F

Greenhouse Gas Analysis Report

Greenhouse Gas Analysis Report

Sequoia Drive-In Business Park
in Visalia, CA

Prepared for:
Castlewood Partners

Greenhouse Gas Analysis Preparation Date:
08/17/2015

Estimated Construction Dates:
Construction Start Date January 2017
Construction Completion Date January 2024

Prepared By:
4CREEKS, INC.
324 S Santa Fe Street, Suite A
VISALIA, CA 93291
(559) 802-3052



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ACRONYMS AND ABBREVIATIONS

$\mu\text{g}/\text{m}^3$	micrograms per cubic meter
$^{\circ}\text{C}$	degrees Celsius
AB	Assembly Bill
ARB	California Air Resources Control Board
BPS	Best Performance Standards
CalEEMod	California Emissions Estimator Model
CCAP	Climate Change Action Plan
CEQA	California Environmental Quality Act
CH_4	methane
CO_2	carbon dioxide
$\text{CO}_{2\text{e}}$	carbon dioxide equivalent
EPA	U.S. Environmental Protection Agency
GHG	greenhouse gas
GWP	global warming potential
IPCC	Intergovernmental Panel on Climate Change
ITE	Institute of Traffic Engineers
KBTU	thousand British thermal units
$\text{MTCO}_{2\text{e}}$	metric tons of carbon dioxide equivalent
$\text{MMTCO}_{2\text{e}}$	million metric tons of carbon dioxide equivalent
N_2O	nitrogen oxide
ppm	parts per million
ppt	parts per trillion
SB	Senate Bill
SCE	Southern California Edison
SJVAPCD	San Joaquin Valley Air Pollution Control District
SJVAB	San Joaquin Valley Air Basin
sf	square foot, square feet
VOC	Volatile Organic Compound

SECTION 1: EXECUTIVE SUMMARY

1.1 ANALYSIS METHOD

The following Greenhouse Gas (GHG) analysis provides an estimate of the amount of GHGs emitted to and removed from the atmosphere by human activity associated with the construction of a 46.17 Business Park, located on the Southwest corner of Noble Avenue and Road 156, and determine whether the generated emissions would cause a significant impact on the environment. The project is within the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD) and follows its recommended procedure as identified in their Guidance for Assessing & Mitigating Air Quality Impacts and their Climate Change Action Plan.

1.2 PROJECT SUMMARY

1.2.1 PROJECT LOCATION

Located in Tulare County, on Noble Avenue and Road 156, less than a mile east of the City of Visalia, Sequoia Drive-In Business Park will be within the San Joaquin Valley Air Basin as displayed in Figure 1: Regional Location.

1.2.2 PROJECT DESCRIPTION

Located along Noble Avenue, directly south of Highway 198, the project is approximately located at Latitude 36° 19' 30.84" N and Longitude: 119° 13' 37.13"W and is identified on Figure 2: Local Vicinity Map.

The construction of the Sequoia Drive-In Business Park in Tulare County, CA will comprise of four separate phases of construction. A total of 30 buildings (46 units) and 358,370 square feet of building space will be constructed for the complete buildout for all phases of construction.

Phase 1 will include a convenience market with gas pumps and an attached fast-food restaurant, along with five separate commercial buildings for a total combined square footage of 68,340. Access into the development will occur on Road 156, and will eventually connect access from Noble Avenue during Phase 3.

Phase 2 will construct 14 commercial buildings for a total combined square footage of 88,000, leaving a remainder lot for the existing cellular tower. Two access points into the development will occur on Road 156, providing a circle drive connecting part of Phase 1, and all of Phases 2 and Phase 4.

Phase 3 will include ten separate commercial buildings with one remaining lots for a retention pond. A stormwater retention pond will be installed for on-site water storage in the event of extreme weather. The total square footage buildout for phase 3 will be 104,000.

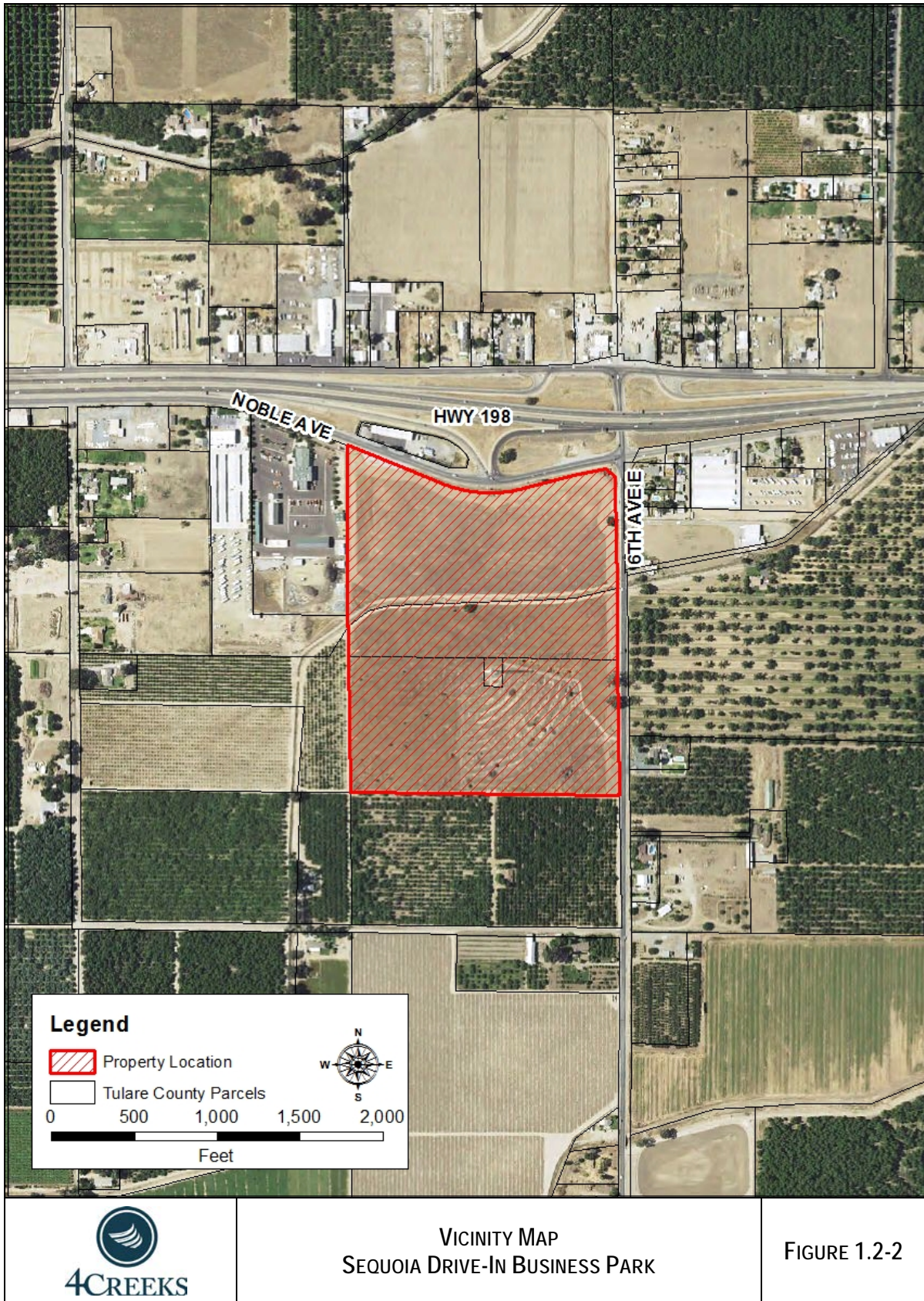
Phase 4, the final phase, will include 13 commercial buildings and a remaining lot for a second stormwater retention pond for on-site water storage. The total square footage buildout for phase 3 will be 98,030.

1.2.3 LAND USE CLASSIFICATION

In compliance with the California Emissions Estimator Model (CALEEMod), all projects must properly define the specific land uses that will occur at the project site. The land use and land use subtypes assist in the proper estimate of GHGs emitted due to the construction and operations of the new facility. CALEEMod uses land use classifications consistent with the Institute of Transportation Engineers (ITE) Trip Generation 8th Edition. The discussed project is classified as the following ITE land use codes:

TABLE 1.2-1 ITE LAND CLASSIFICATION	
Land Use	ITE Land Use Code
Convenience Market w/ Gas Pumps	853
Fast-Food Restaurant with Drive-Thru	934
Office Park	750

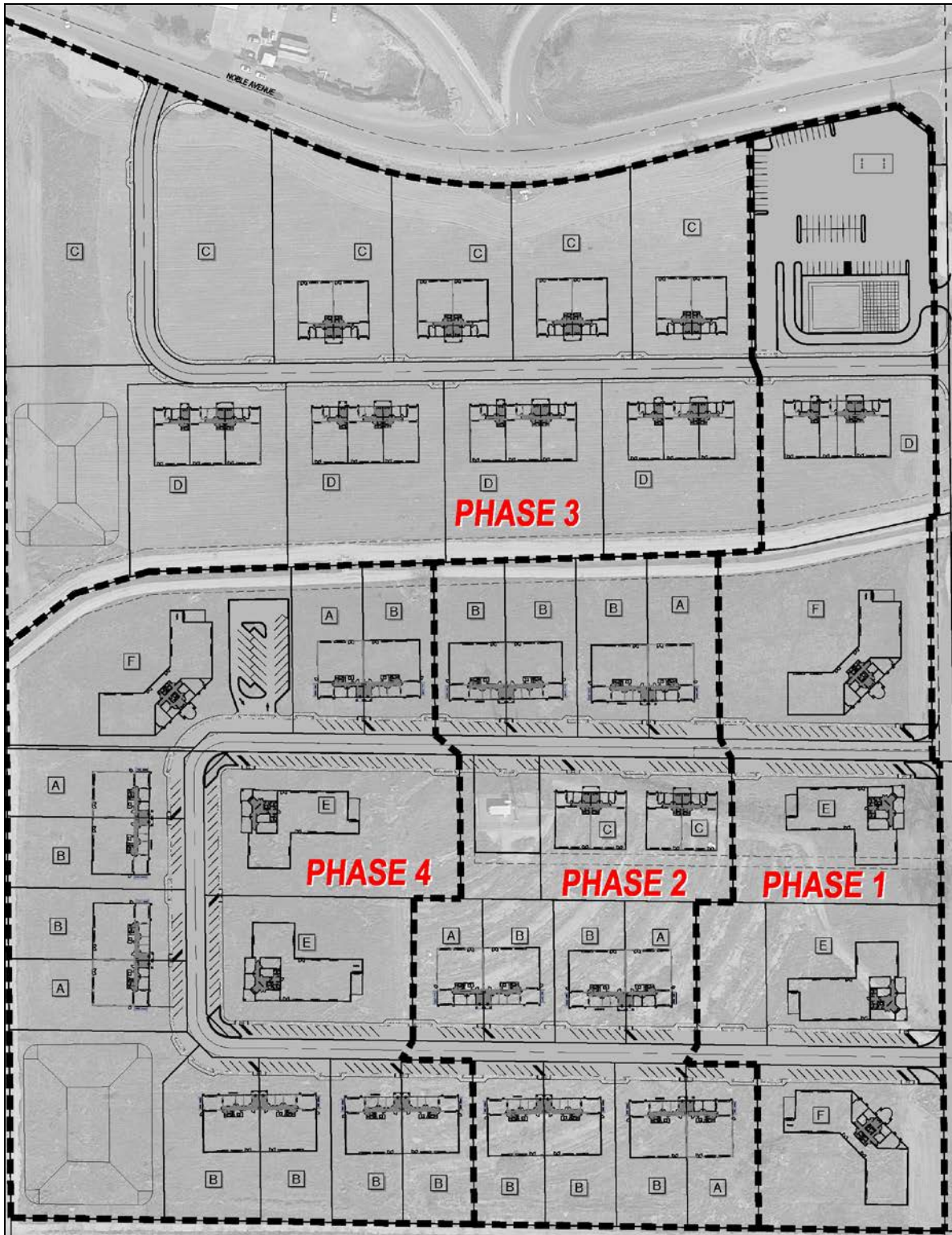
While the ITE Land Classification for Business Park (770) was used in the Traffic Impact Study to project a more conservative level of daily trips (higher than anticipated), the proposed project more accurately reflects the land use subtype "Office Park" (750) in anticipated daily trips. According to the CalEEMod User's Guide, "Office parks are usually suburban subdivisions or planned unit developments containing general office buildings and support services, such as banks, restaurants and service stations, arranged in a park-or campus-like atmosphere." Therefore, land use subtype "Office Park" (750) was used in the CalEEMod analysis for emissions modeling.



PROPOSED PROJECT

The total project area consists of 46.17 acres of commercial development. As showing in Figure 1.2-3: Site Plan, the project would construct a commercial project in the Service Commercial Zone. The following is a breakdown of the total acreage of the project site:

TABLE 1.2-2: SITE ACREAGE		
Description	Acres	Square Footage
Phase 1 – Retail Commercial & Gas Station w/ Mini Mart	10.04	68,340
Phase 2 – Service Commercial	8.25	88,000
Phase 3 – Service Commercial	14.89	104,000
Phase 4 – Service Commercial	12.72	98,030
Total Site Density	46.17	358,370



SITE PLAN
SEQUOIA DRIVE-IN BUSINESS PARK

FIGURE 1.2-3

1.3 ANALYSIS SUMMARY

GHG-1 Impact: The project would generate direct and indirect GHG emissions; however, the proposed project will adopt mitigation measures that will reduce emissions to Tulare County CAP standards, resulting in a **less than significant impact** on the environment.

GHG-2 Impact: The project would not conflict with any applicable plan; policy or regulation of an agency adopted to reduce the emissions of greenhouse gases and would result in a **less than significant impact**.

1.4 GREENHOUSE GAS EMISSIONS REDUCTION

The project has incorporated the following design features that reduce GHG emissions. GHG reduction occurs in many variations, one being carbon storage. Carbon storage is the act of trees and other vegetation, taking on carbon dioxide and storing them. The following subsections discuss methods available to and implemented by the projects to reduce GHG emissions through design and procedural standards.

Landscaping and Site Design

The project will have onsite landscaping and new street trees will be planted in the Office Park. Shade provided would reduce the heat island effect thereby potentially reducing the cooling requirements for the buildings. The onsite landscaping will assist in counter-balancing the project's contribution of GHG by providing onsite carbon storage within the trees and shrubs. The incorporation of trees and other vegetation throughout the project will provide a benefit to the project site both visually and environmentally. The project will also incorporate bio-swales on the site to collect storm water runoff and reduce the irrigation required for these areas by this design.

The project will provide a parking lot design that includes clearly marked and shaded pedestrian pathways between transit facilities and building entrances. Pedestrian access between bus services and major transportation points and to destination points within the project will be provided along with display cases or kiosks displaying transportation information in a prominent area accessible to employees and visitors. Providing the pedestrian connectivity from existing neighborhoods will reduce vehicle miles traveled (VMT's). Kiosks will also include Bus Schedules and any other transportation information such as carpooling and car sharing to further lower the VMT's compared to business as usual.

Electric Vehicle recharging stations with both conductive and inductive charging capabilities will be installed in the project site parking lots.

Project Location

The project is in a central location and within close proximity of other commercially classified land and will require less vehicle mileage, in return reduce its net increase of any GHG emissions. The new commercial center will provide services for residents located in eastern Visalia and the city of Farmersville. This will also reduce the trip length for those traveling from the west to the required services that would previously have to continue westward to alternative commercial centers.

Aside from being located near retail sectors, Sequoia Drive-In Business Park will be located adjacent to Highway 198 allowing the project to be easily accessible for a multitude of parties, including light trucks which meets the SB 375 guidelines.

Recycling

The County of Tulare has mandated recycling for commercial businesses that generate 4 or more cubic yards of waste weekly as part of the solid waste collection requirements. By providing alternative bins for separate classifications of waste the County has been able to achieve a 50 percent diversion rate. The reduction in waste leads to fewer GHG emissions generated at landfills.

Reduce Carbon-Intensive Travel Activities

Incorporating multiple modes of travel options along with a compact land use design would reduce on-road vehicle miles traveled by reducing the need for travel. The Department of Transportation created an analysis of this method in their *Transportation's Role in Reducing U.S. Greenhouse Gas Emissions Volume 1: Synthesis Report, April 2010*. The study included evidence that showed a reduction of greenhouse gas emissions that would range from 5-to-17 percent in 2030, or 6-to-21 percent in 2050. Sequoia Drive-In Business Park will mainly focus on reducing the need for vehicle travel, or otherwise take actions that reduce energy use and GHG emissions associated with personal travel. The collective impact of these strategies on transportation GHG emissions could range from 5 to as high as a 17 percent reduction in 2013 or a 6 to 21 percent reduction in 2050.

This strategy can be broken into two main Improvement Strategies:

1. **Non-Motorized Improvements** – Construction of pedestrian and bicycle transportation networks through dedicated right-of-way as well as enhancements to existing rights-of-way that safely provide for bicycle and pedestrian traffic, have mild potential for GHG reductions with a reduction of 0.2 to 0.6 percent reduction by 2030.
2. **Land Use Changes** – Such as density, diversity of land uses, street connectivity, destination accessibility, and distance to activity centers and proximity to transit will reduce trip lengths and support travel by transit, walking and bicycling. Congress evaluated this strategy in 2009 and concluded that it would yield a reduction of U.S. transportation GHG emissions by 1 to 4 percent in 2030 and 3 to 8 percent in 2050.

The Sequoia Drive-In Business Park will be in close proximity to public transportation and will be a large work center providing over 600 jobs in an otherwise underutilized area, reducing VMT to other job centers further away. The project's proximity and land use design will support the reduction of carbon emissions through reducing carbon-intensive travel activities.

1.5 STANDARD CONDITIONS

State

The project is required to comply with Title 24 of the California Code of Regulations established by the Energy Commission regarding energy conservation standards. The project is also required to comply with the California Green Building Standards.

Title 24

California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. All buildings for which an application for a building permit is submitted on or after July 1, 2014 must follow the revised 2013 standards. The efficiency standards are anticipated to be updated in 2016. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions.

California Green Building Standards

On January 12, 2013, the State Building Standards Commission unanimously adopted updates to the California Green Building Standards Code. The Code is a comprehensive regulatory code to all residential, commercial and school buildings. All buildings for which an application for a building permit is submitted on or after July 1, 2014 must follow the 2013 standards. The upcoming standards are anticipated in 2016.

The California Green Building Standards Code does not prevent a local jurisdiction from adopting a more stringent code as state law provides methods for local enhancements. The Code recognizes that many jurisdictions have developed existing construction and demolition ordinances, and defers to them as the ruling guidance provided they provide a minimum of 50 percent diversion requirement. The code also provides exemptions for areas not served by a construction and demolition recycling infrastructure. State building code provides the minimum standard that buildings need to meet in order to be certified for occupancy. Enforcement is generally through the local building official.

The California Green Building Code requirements are stated below and how their requirements are being implemented into the project site.

TABLE 1.5-1: CALIFORNIA GREEN BUILDING CODE REQUIREMENTS			
Code Requirement	Section of Standards Code	Requirements	Project Implementation
Water Efficiency and Conservation (Indoor)	5.303.1	Separate submeters or metering devices shall be installed for building tenants expected to consume more than 100 gal/day.	The project will incorporate showerheads (≤ 2.0 gpm @80 psi); Nonresidential Lavatory Faucets(≤ 0.5 gpm @60 psi); Kitchen Faucets (2.2 gpm @ 60 psi); Toilets (≤ 1.28 gal/flush); Wash Fountains (≤ 2.2 gpm @60 psi)
Water Efficiency and Conservation (Outdoor)	5.304.1	Automatic irrigation system controllers for landscaping.	The project will implement weather based controllers with a separate wired or wireless rain sensor which connects or communications with the controllers

Material Conservation and Resource Efficiency	5.407 – 5.410	Recycle and/or salvage for reuse a minimum of 50 percent of the nonhazardous construction and demolition waste; Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of non-hazardous materials for recycling.	Project will be except to meet the 50 percent requirement through recycling of excavated soil and land-clearing debris. Project design will include documentation of environmental and sustainability goals.
Environmental Quality	5.504.3	Cover duct openings and protect mechanical equipment during construction	At the time of rough installation and during storage on the construction site until final startup of the HVAC equipment, all duct and other openings shall be covered to reduce the amount of dust, water and debris that may enter the system.
Materials Pollution	5.504.4 – 5.508.2.6	Low-pollutant emitting interior finish materials such as paint, carpet, vinyl flooring and particleboard; Ozone depletion and greenhouse gas reductions	Project will comply will all regulations using low pollutant materials within the interior of the building.

Source: CalGreen Code

Local / Regional

The project is required to comply with regulations and standards established by the SJVAPCD regarding air pollution. The project is within the City of Visalia's Urban Development Boundary but outside the city limits. The project is also required to comply with the County of Tulare GHG emission reduction policies.

Regional: San Joaquin Valley Air Pollution Control District (SJVAPCD)

The SJVAPCD implemented the Climate Change Action Plan (CCAP) in 2008. The CCAP directed the District Air Pollution Control Officer to develop guidance to assist Lead Agencies, project proponents, permit applicants, and interested parties in assessing and reducing the impacts of project specific greenhouse gas (GHG) emissions on global climate change.

On December 17, 2009, the Air District adopted the guidance: Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA and the policy: District Policy – Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency. The guidance and policy rely on the use of performance based standards, otherwise known as Best Performance Standards (BPS), to assess significance of project specific greenhouse gas emissions on global climate change during the environmental review process, as required by CEQA. The guidance recommends using BPS quantifying emissions and demonstrate 29% reduction in GHG emissions, or comply with the adopted CAP.

Use of BPS is a method of streamlining the CEQA process of determining significance and is not a required emission reduction measure. Projects implementing BPS would be determined to have a less

than cumulatively significant impact. Otherwise, demonstration of a 29 percent reduction in GHG emissions, from business-as-usual or compliance with a CEQA-supported, agency adopted-CAP, is required to determine that a project would have a less than cumulatively significant impact. The guidance does not limit a lead agency's authority in establishing its own process and guidance for determining significance of project related impacts on global climate change.

Local: County of Tulare

The Tulare County General Plan 2030 Update fulfills many sustainability and greenhouse gas reduction objectives at the program level. Individual projects that will implement the General Plan will comply with these policies resulting in long-term benefits to air quality and greenhouse gas reductions that will help Tulare County achieve the CAP reduction targets. The following list identifies the policies from the various General Plan elements that promote more efficient development, and reduce travel and energy consumption.

PF-1.1 Maintain Urban Edges
PF-1.2 Location of Urban Development
PF-1.3 Land Uses in UDBs/HDBs
PF-1.4 Available Infrastructure
AG-1.7 Conservation Easements
AG-1.8 Agriculture Within Urban Boundaries
AG-1.11 Agricultural Buffers
AG-1.14 Right to Farm Noticing
AG-2.11 Energy Production
AG-2.6 Biotechnology and Biofuels
AQ-1.6 Purchase of Low Emission/Alternative Fuel Vehicles,
AQ-1.7 Support Statewide Global Warming Solutions,
AQ-1.8 Greenhouse Gas Emissions Reduction Plan
AQ-1.9 Off-Site Measures to Reduce Greenhouse Gas Emissions
AQ-1.10 Alternative Fuel Vehicle Infrastructure
AQ-2.1 Transportation Demand Management Programs,
AQ-2.3 Transportation and Air Quality
AQ-2.4 Transportation Management Associations,
AQ-2.5 Ridesharing,
AQ-3.1 Location of Support Services
AQ-3.2 Infill Near Employment
AQ-3.3 Street Design
AQ-3.5 Alternative Energy Design
AQ-3.6 Mixed Use Development
LU-1.1 Smart Growth and Healthy Communities
LU-1.2 Innovative Development
LU-1.3 Prevent Incompatible Uses
LU-1.4 Compact Development
LU-1.8 Encourage Infill Development
LU-2.1 Agricultural Lands
LU-3.2 Cluster Development
LU-3.3 High-Density Residential Locations
LU-4.1 Neighborhood Commercial Uses
LU-7.1 Distinctive Neighborhoods
LU-7.2 Integrate Natural Features
ERM-1.2 Development in Environmentally Sensitive Areas
ERM-1.3 Encourage Cluster Development
ERM-1.4 Protect Riparian Management Plans and Mining Reclamation Plans
ERM-1.6 Management of Wetlands
ERM-1.7 Planting of Native Vegetation

ERM-1.8 Open Space Buffers
ERM-1.14 Mitigation and Conservation Banking Program
ERM-4.1 Energy Conservation and Efficiency Measures
ERM-4.2 Streetscape and Parking Area Improvements for Energy Conservation
ERM-4.3 Local and State Programs
ERM-4.4 Promote Energy Conservation Awareness
ERM-4.6 Renewable Energy
ERM-4.7 Reduce Energy Use in County Facilities
ERM-4.8 Energy Efficiency Standards
ERM-5.1 Parks as Community Focal Points
ERM-5.6 Location and Size Criteria for Parks
ERM-5.15 Open Space Preservation
HS-1.4 Building and Codes
Chapter 11: Water Resources
TC-2.1 Rail Service
TC-2.4 High Speed Rail (HSR)
TC-2.7 Rail Facilities and Existing Development
TC-4.4 Nodal Land Use Patterns that Support Public Transit
TC-5.1 Bicycle/Pedestrian Trail System
TC-5.2 Consider Non-Motorized Modes in Planning and Development
TC-5.3 Provisions for Bicycle Use
TC-5.4 Design Standards for Bicycle Routes
TC-5.5 Facilities
TC-5.6 Regional Bicycle Plan
TC-5.7 Designated Bike Paths
TC-5.8 Multi-Use Trails
LU-7.3 Friendly Streets
LU-7.15 Energy Conservation
ED-2.3 New Industries
ED-2.8 Jobs/Housing Ratio
ED-5.9 Bikeways
ED-6.1 Revitalization of Community Centers
ED-6.2 Comprehensive Redevelopment Plan
ED-6.3 Entertainment Venues
ED-6.4 Culturally Diverse Business
ED-6.5 Intermodal Hubs for Community and Hamlet Core Areas
ED-6.7 Existing Commercial Centers
SL-3.1 Community Centers and Neighborhoods
ERM-1.1 Protection of Rare and Endangered Species
PFS-1.3 Impact Mitigation
PFS-1.15 Efficient Expansion
PFS-2.1 Water Supply
PFS-2.2 Adequate Systems
PFS-3.3 New Development Requirements
PFS-5.3 Solid Waste Reduction
PFS-5.4 County Usage of Recycled Materials and Products
PFS-5.5 Private Use of Recycled Products
PFS-8.3 Location of School Sites
PFS-8.5 Government Facilities and Services
Part II, Chapter 1: Rural Valley Lands Plan
WR-1.5 Expand Use of Reclaimed Wastewater
WR-1.6 Expand Use of Reclaimed Water
WR-3.5 Use of Native and Drought Tolerant Landscaping

Source: Tulare County Climate Action Plan, Table 15, pg. 63.

SECTION 2: CLIMATE CHANGE

Climate Change is a change in the average weather of the earth that may be measured by alterations in wind patterns, storms, precipitation, and temperatures. These changes are assessed using historical records of temperatures changes occurring in the past, such as during previous ice ages. Many of the concerns regarding climate change use this data to extrapolate a level a statistical significance, specifically focusing on temperature records from the last 150 years, the Industrial Age, that differ from previous climate changes in rate and magnitude.

The United Nations Intergovernmental Panel on Climate Change (IPCC) constructed several emission trajectories of GHG needed to stabilize global temperatures and climate change impacts. The IPCC predicted that global mean temperatures change from 1990 to 2100, given six scenarios, could range from 1.1 degree Celsius (°C) to 6.4°C. Regardless of analytical methodology, global average temperatures and sea levels are expected to rise under all scenarios (IPCC 2007).

In California, climate change may result in consequences such as the following from (CCCC 2006 and Moser et al. 2009).

1. A reduction in the quality and supply of water to the State from the Sierra snowpack.
2. Increased risk of large wildfires.
3. Reduction in the quality and quantity of certain agriculture products.
4. Exacerbation of air quality problems.
5. A rise in sea levels resulting in the displacement of coastal businesses and residence.
6. Damage to marine ecosystems and that natural environment.
7. An increase in infections, disease, asthma, and other health-related problems.
8. A decrease in the health and productivity of California's forest. (CCCC 2006 and Moser et al. 2009)

2.1 GREENHOUSE GASES

Natural processes and human activities emit greenhouse gases. The presence of GHGs in the atmosphere affects the earth's temperature. Without the natural heat-trapping effect of GHGs, the earth's surface would be about 34°C cooler (CAT 2006).

Greenhouse Gases (GHG) are gases that trap heat in the atmosphere are called greenhouse gases. The effect is equivalent to the way a greenhouse retains heat. Common GHGs include water vapor, carbon dioxide, methane, nitrous oxide, ozone, chlorofluorocarbons, hydro chlorofluorocarbons, and hydro fluorocarbons, per fluorocarbons, sulfur hexafluoride. However, it is believed that emissions from human activities, such as electricity production and vehicle use, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations. Some greenhouse gases can remain in the atmosphere for hundreds of years.

Some gases are more effective than other and for each greenhouse gas a global warming potential (GWP) has been calculated to reflect how long it remains in the atmosphere, on average, and how strongly it absorbs energy. Gases with a higher GWP absorb more energy, per pound, than gases with a lower GWP, and thus contribute more to global warming. For example one pound of methane is equivalent to twenty-one pounds of carbon dioxide.

GHGs as defined by AB 32 include the following gases: carbon dioxide, methane, nitrous oxide, hydro fluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride. GHGs as defined by AB 32 and sources are summarized in Table 2.1-1.

TABLE 2.1-1: GREENHOUSE GASES				
Greenhouse Gas	Description and Physical Properties	Lifetime	Global Warming Potential (GWP)	Sources
Methane (CH ₄)	Is a flammable gas and is the main component of natural gas	12 years	21	Emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and by the decay of organic waste in municipal solid waste landfills.
Carbon dioxide (CO ₂)	An odorless, colorless, natural greenhouse gas.	30-95 years	1	Enters the atmosphere through burning fossil fuels (coal, natural gas and oil), solid waste, trees and wood products, and also as a result of certain chemical reactions (e.g., manufacture of cement). Carbon dioxide is removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of the biological carbon cycle.
Nitrogen trifluoride (NF ₃)	A colorless, odorless, nonflammable gas. It finds increasing use as an etchant in microelectronics.	550 years	16,800	High-volume applications such as DRAM computer memory production, the manufacturing of flat panel displays and the large-scale production of thin-film solar cells. NF ₃ has no natural means of sequestration once emitted.
Hydro-fluorocarbons	A man-made greenhouse gas. It was developed to replace ozone-depleting gases found in a variety of appliances. Composed of a group of greenhouse gases containing carbon, chlorine an at least one hydrogen atom.	14 years	140 to 11,700	Powerful greenhouse gases that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for stratospheric ozone-depleting substances. These gases are typically emitted in smaller quantities, but because they are potent greenhouse gases.
Nitrous oxide (N ₂ O)	Commonly known as laughing gas, is a chemical compound with the formula N ₂ O. It is an oxide of nitrogen. At room temperature, it is a colorless, non-flammable gas, with a slightly sweet odor and taste. It is used in surgery and dentistry for its anesthetic and analgesic effect	120 years	310	Emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste.

	S.			
Per-fluorocarbons	Has a stable molecular structure and only breaks down by ultraviolet rays about 60 kilometers above Earth's surface.	50,000 years	6,500 to 9,200	Two main sources of pre-fluorocarbons are primary aluminum production and semiconductor manufacturing.
Sulfur hexafluoride	An inorganic, odorless, colorless, and nontoxic nonflammable gas.	3,200 years	23,900	This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing and as a tracer gas.

Source: Compiled from a variety of sources, primarily Intergovernmental Panel on Climate Change 2007a and 2007b.

Each gas's effect on climate change depends on three main factors. The first being the quantity of these gases are in the atmosphere, followed by how long they stay in the atmosphere and finally how strongly they impact global temperatures.

In regards to the quantity of these gases that are in the atmosphere, we first must establish the amount of particular gas in the air, known as concentration, or abundance, which are measured in parts per million, parts per billion and even parts per trillion. To put these measurements in more relatable terms, one part per million is equivalent to one drop of water diluted into about 13 gallons of water, roughly a full tank of gas in a compact car. Therefore, it can be assumed that larger emissions of greenhouse gases lead to a higher concentration in the atmosphere.

Each of the designated gases described above can reside in the atmosphere for different amounts of time, ranging from a few years to thousands of years. All of these gases remain in the atmosphere long enough to become well mixed, meaning that the amount that is measured in the atmosphere is roughly the same all over the world regardless of the source of the emission.

Emissions Inventories

The development of a complete emission inventory is an important step in an air quality management process. Emission inventories are used to help determine significant sources of air pollutants, establish emission trends over time, target regulatory actions, and estimate air quality through computer dispersion modeling. An emission inventory includes estimates of the emissions from various pollution sources in a specific geographical area. A complete inventory typically contains all regulated pollutants.

The City of Visalia conducted a GHG emissions inventory and developed a Local Climate Action Plan. The GHG emissions inventory for the City of Visalia calculated GHG emissions from both municipal operations and community activities for Visalia for the year 2012. A recommended emissions reduction target and a number of reduction measures that the City can potentially implement to help meet the reduction target has been drafted for the City's Preliminary Action Plan (CAP).

Table 4 shows global greenhouse gas emission in metric ton (MT) of CO₂e generated worldwide, within the United State, within California, and within Visalia, Visalia data coming from the City's Draft Preliminary CAP.

TABLE 2.1-2:

GLOBAL GREENHOUSE GAS EMISSIONS

Locations	Emissions (MMTCO ₂ e)	Population (Millions)	Average Per Capita Emission (MTCO ₂ e)
World	33,712.9	6,055	5.6
United States	7033	281	25.0
California	458.45	33.9	13.5
Visalia Community (Preliminary CAP Inventory)	1.14	0.09	12.5
Visalia Municipal (Preliminary CAP Inventory)	0.0174	N/A	0.19

Source: World emissions from World Resource Institute; U.S. emissions Inventory of U.S. Greenhouse Gas Emissions and Sinks; 1990-2006, USEPA; California Air Resources Board; City of Visalia Draft Preliminary Climate Action Plan; U.S. Census

Tulare County adopted its updated CAP in 2012 for its 2030 General Plan update. Part of the CAP provides a summary of emissions within Tulare County.

Greenhouse gas emissions produced within Tulare County in 2007 were estimated to be 5.2 million metric tons of CO₂ equivalent. Projected emissions for 2030 are 6.1 million metric tons of CO₂e. The 2007 emissions are considered the baseline inventory year. The 2030 emissions are considered a future year "business as usual" inventory that accounts for growth but not planned regulations and mitigation measures that may be applied in the future. In both 2007 and 2030, dairies/feedlots accounted for the largest portion of total emissions, making up 63 percent and 59 percent of total emissions, respectively. Mobile sources (on- and off-road) accounted for the second largest portion of emissions, contributing 16 percent in 2007 and 20 percent in 2030. When normalized by population, total annual emissions equate to 36 metric tons of CO₂e per resident in 2007, and 27 metric tons of CO₂e per resident in 2030. Emissions for the year 2020 were estimated by interpolating the growth between 2007 and 2030 using a straight-line projection. The inventory also identifies separate totals for development related emissions not including dairies and feedlots. The per capita development related emissions in 2007 were 13.3 metric tons per year and decline to 12.0 metric tons per year in 2020, and 11.3 metric tons per year in 2030 (*Tulare County Climate Action Plan, 2012*).

Table 2.1-3:
Tulare County Emissions by Sector in 2007

Sector	CO ₂ e (metric tons/year)	% of Dev. Related	% of Total
Electricity	542,690	28	11
Natural Gas	321,020	17	6
Mobile Sources	822,230	43	16
Solid Waste	227,250	12	4
Subtotal Development Related	1,913,190	100	37
Dairy/Feedlots	3,294,870	—	63
Total	5,208,060	—	100
Per Capita	36.1	13.3	—
Notes: % of Dev. Related = fraction of inventory subject to Tulare County policies, programs, and measures in the CAP. Source: Tulare County 2030 General Plan Update.			

2.2 REGULATORY BACKGROUND

Climate change is a global, national, state and local issue involving greenhouse gas emissions from all around the world; therefore countries around the world, including the United States, have established regulations to assist in the emissions of GHGs. Tables 2.2-1, 2.2-2, 2.2-3, 2.2-4, and 2.2-5 provide international, national, state, regional and local regulations.

TABLE 2.2-1: INTERNATIONAL GREENHOUSE GAS REGULATIONS		
REGULATION	ADOPTED	PROTOCOL
International Regulations		
Intergovernmental Panel on Climate Change	1998	The United Nations and the World Meteorological Organization established the Intergovernmental Panel on Climate Change to assess the scientific, technical and socio-economical information relevant to understanding the scientific basis of risk of human-induced climate change and its potential impacts.
United Nations Framework Convention on Climate Change	March 21, 1994 - A number of countries from around the world joined in signing the Convention	Governments gather and share information on GHG emissions, national policies and best practices; launch national strategies for addressing GHG emissions and adapting to expected impacts.
Kyoto Protocol	Adopted: December 1, 1997 Entered into Force: February 16, 2005	Sets binding targets for 37 industrialized countries and the European community for reducing GHG emissions at an average of 5% against 1990 levels over the five year period of 2008-2012

TABLE 2.2-2: NATIONAL GREENHOUSE GAS REGULATIONS		
REGULATION	ADOPTED	PROTOCOL
National Regulations		
Greenhouse Gas Endangerment	December 7, 2009	<p>The EPA Administrator signed two distinct findings regarding GHG emissions under section 2029(a) of the Clean Air Act.</p> <p>1. Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases — carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆)</p> <p>2. Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare.</p>
Corporate Average Fuel Economy (CAFE)	Adopted: 1975 Revised: July 29, 2011	An agreement with thirteen large automakers to increase fuel economy to 54.5 miles per gallon for cars and light-duty trucks by model year 2025. He was joined by Ford, GM, Chrysler, BMW, Honda, Hyundai, Jaguar/Land Rover, Kia, Mazda, Mitsubishi, Nissan, Toyota, and Volvo, which together account for over 90% of all vehicles sold in the United States, as well as the United Auto Workers (UAW), and the State of California, who were all participants in the deal. The agreement will result in new CAFE regulations for model year 2017-2025 vehicles which were finalized on August 28, 2012. The major increases in stringency and the changes in the structure of CAFE create a need for research that incorporates the demand and supply sides of the new vehicle market in a more detailed manner than was needed with static fuel economy standards
Mandatory Reporting for Greenhouse Gases	September 22, 2009	Requires reporting of GHG emissions from large sources and suppliers in the United States. Any facility that emits 25,000 metric tons or more per year of GHG emissions are required to submit annual reports to the EPA.
New Source Review	May 13, 2013	Tailors the requirements of the Clean Air Act permitting programs to limit which facilities will be required to obtain Prevention of Significant Deterioration and Title V permits.
Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electrical Utility Generating Units	March 27, 2012	The EPA proposed new performance standards for emissions of carbon dioxide for new affected fossil fuel-fired electrical utility generated units. New sources greater than 25 megawatt would be required to meet an output-based standard of 1,000 pound of carbon dioxide per megawatt-hour, based on the performance of widely used natural gas combined cycle technology
Proposed Energy Tax Prevention of 2011	Passed the house of Representatives in 2011 Has yet to pass the Senate	If passed, this bill would amend several core components of the Clean Air Act (CAA). Title III of the CAA would be amended to have the term "greenhouse gas" include: water vapor, carbon dioxide, methane, nitrous oxide, sulfur hexafluoride, hydrofluorocarbons, perfluorocarbons and any other substance subject to, or proposed to be subject to, regulation, action, or consideration under this Act to address climate change.
Cap and Trade	January 1, 2013	An environmental policy tool that delivers results with a mandatory cap on emissions while providing sources flexibility in how they comply. Successful cap and trade programs reward innovation, efficiency, and early action and provide strict environmental accountability without inhibiting economic growth.
Western Climate Initiative Partner	October 28, 2011	Jurisdictions have developed a comprehensive initiative to reduce regional GHG emissions to 15 percent below 2005 levels by 2020. The partners are California, British Columbia, Manitoba, Ontario and Quebec.

TABLE 2.2-3: CALIFORNIA GREENHOUSE GAS REGULATIONS		
REGULATION	ADOPTED	PROTOCOL
California Regulations		
Title 24	Adopted: 1978 2013 Standards Effective July 1, 2014	California's Energy Efficiency Standards for Residential and Non-Residential Buildings. Their standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods
California Green Building Standards	January 12, 2010	A comprehensive and uniform regulatory code for all residential, commercial and K-14 school buildings.
Pavley Regulations	July 22, 2002	Reduce GHG emissions in new passenger vehicles from 2009 through 2016. These amendments are part of California's commitment toward a nation-wide program to reduce new passenger vehicle GHGs from 2012 through 2016. ARB's September amendments will cement California's enforcement of the Pavley rule starting in 2009 while providing vehicle manufacturers with new compliance flexibility.
Low Carbon Fuel Standard- Executive Order S-01-07	January 18, 2007	Calls for a reduction of at least 10 percent in the carbon intensity of California's transportation fuels by 2020. It instructed the California Environmental Protection Agency to develop and propose a draft compliance schedule to meet the 2020 target.
SB 1368	2006	The law limits long-term investments in base load generation by the state's utilities to power plants that meet an emissions performance standard (EPS)..
SB 97	February 16, 2010	The Natural Resources Agency adopted Amendments to the CEQA Guidelines for greenhouse gas emissions..
SB 1368	September 29, 2006	Limits long-term investments in baseload generation by California S utilities to power plants that meet an emissions performance standard jointly established by the CEC and California Public Utilities Commission.
SB 1078	September 12, 2002	Requires investor-owned utilities (IOUs), electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 33% of total procurement by 2020.
AB 32	2006	Set the 2020 greenhouse gas emissions reduction goal into law. It directed the California Air Resources Board to begin developing discrete early actions to reduce greenhouse gases while also preparing a scoping plan to identify how best to reach the 2020 limit. The reduction measures to meet the 2020 target are to be adopted by the start of 2011.
SB 375	August 30, 2008	Enhances California's ability to reach its AB 32 goals by promoting good planning with the goal of more sustainable communities. Sustainable Communities requires ARB to develop regional greenhouse gas emission reduction targets for passenger vehicles. ARB is to establish targets for 2020 and 2035 for each region covered by one of the State's 18 metropolitan planning organizations
Executive Order S-13-08	2009	A comprehensive "Climate Adaptation Strategy" that would identify the state's vulnerabilities and plan accordingly. State agencies will take this report into account, due in December 2010, when planning new infrastructure such as roads, bridges, and water treatment facilities. The executive order noted that the country's longest continuously operating sea level gauge, San Francisco Bay's Fort Point, recorded a seven-inch rise in sea level over the 20th century.
SB 1078, SB 107 and Executive Order S-14-08	September 12, 2002	Requires California to generate 20% of its electricity from renewable energy by 2017. SB 107 then changes the 2017 deadline to 2010. Executive Order S-14-08 required that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020.
CEQA Guidelines Update	Adopted: April 13, 2009 Updated: May 2011	These Thresholds are designed to establish the level at which the District believed air pollution emissions would cause significant environmental impacts under CEQA and were posted on the Air District's website and included in the Air District's updated CEQA Guidelines

TABLE 2.2-4: REGIONAL GREENHOUSE GAS REGULATIONS		
REGULATION	ADOPTED	PROTOCOL
Regional Regulations		
San Joaquin Valley Air Pollution Control District		The SJVAPCD is made up of eight counties in California's Central Valley: San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare and Kern. The Valley Air District is governed by an fifteen member Governing Board consisting of representatives from the Board of Supervisors of all eight counties, one Health and Science member, one Physician, and five Valley city representatives.
SJVAPCD Climate Change Action Plan	August 2008	A climate change action plan lays out a strategy, including specific policy recommendations that a state will use to address climate change and reduce its greenhouse gas emissions. The following states have completed a climate change action plan.
SJVAPCD CEQA Greenhouse Gas Guidance		The SJVAPCD approach is intended to streamline the process of determining if project specific GHG emissions would have a significant effect. Best Performance Standards would be established according to performance-based determinations.
San Joaquin Valley Carbon Exchange	November 2008	Intended to quantify, verify, and track voluntary GHG emissions reductions generated within the San Joaquin Valley
Rule 2301	January 19, 2012	Emission Reduction Credit Banking. Provided an administrative mechanism for sources to bank GHG emissions, mechanism for sources to transfer GHG reductions to other users and defines eligibility standards, quantitative and procedures.
San Joaquin Valley Blueprint Planning Process (2010)	2006	A plan for the future of the San Joaquin valley and is used to guide growth over the next 50 years.
Tulare County Regional Blueprint	May 2009	A plan for the future of the San Joaquin valley and is used to guide growth over the next 50 years with the incorporation of the Tulare County Association of Governments (TCAG) through extensive public outreach to develop Tulare Counties vision statement, guiding principles, goals and objectives.

TABLE 2.2-5: LOCAL GREENHOUSE GAS REGULATIONS		
REGULATION	ADOPTED	PROTOCOL
Local Regulations		
City of Visalia General Plan	October 14, 2014	The City has several goals established within its General Plan which are applicable to GHG reduction. Goals include to the improvement of air quality through proper land use planning in Visalia. Conserve, restore and enhance significant natural, cultural and historical resources to sustain the Visalia planning area's environmental quality.
Preliminary Draft Climate Action Plan	<i>Drafted May 2010</i>	The GHG emissions inventory for Visalia calculated GHG emissions from both municipal operations and community activities for Visalia for the year 2000. SEI conducted this inventory using ICLEI's Clean Air and Climate Protection software and the new standardized Local Government Operations Protocol recently developed by the California Air Resources Board, ICLEI, California Climate Action Registry, and The Climate Registry.
Visalia Climate Change Initiatives	January 2007	The City of Visalia signed the "Cool Cities" pledge, part of the U.S. Mayors Climate Protection Agreement. The City adopted the goal of reducing citywide emissions to 7% below 1990 by 2012. The City is also a member of the Cities for Climate Protection (CCP). The CCP campaign is a global coalition of local governments working to reduce GHG at the community level.
Tulare County Climate Action Plan	August 28, 2012	The County will develop a Greenhouse Gas Emissions Reduction Plan (Plan) that identifies greenhouse gas emissions within the County as well as ways to reduce those emissions. The Plan will incorporate the requirements adopted by the California Air Resources Board specific to this issue.

SECTION 3: MODELING METHOD AND ANALYSIS

3.1 MODEL SELECTION

Air pollution emissions can be estimated by using emission factors and examining the level of activity occurring. Emission factors are the emission rate of a pollutant given the activity over time; for example, grams of NO_x per horsepower hour. The ARB has published emission factors for on-road equipment and vehicles in the OFFROAD emission model. An air emissions model (or calculator) combines the emission factors and the various levels of activity and outputs the emissions for the various pieces of equipment.

The California Emissions Estimator (CalEEMod) version 2013.2.2 is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operations from a variety of land use projects. The model quantifies direct emissions from construction and operations, including vehicle use, as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use.

The model incorporates Pavley standards and Low Carbon Fuel standards into the mobile source emission factors. Further, the model identifies mitigation measures to reduce criteria pollutant and GHG emissions along with calculating the benefits achieved from measures chosen by the user. The GHG mitigation measures were developed and adopted by the California Air Pollution Control Officers Association (CAPCOA).

3.2 CONSTRUCTION

The project would emit GHGs from upstream emission sources and direct sources. An upstream emission source, also known as life cycle emissions, refers to emissions that were generated during the manufacture of products to be used for construction of the project. Upstream emission sources for the project include, but are not limited to the following: emissions from the manufacture of cement; emissions from the manufacture of steel; and/or emissions from the transportation of building materials to the seller. The upstream emissions were not estimated because they were not within the control of the project and to do so would be speculative. Additionally, the California Air Pollution Control Officer Association White Paper on CEQA and Climate change supports the conclusion by stating, "The full life-cycle of GHG emissions from construction activities is not accounted for...and the information needed to characterize [life-cycle emissions] would be speculative at the CEQA analysis level" (CAPCOA 2008). Therefore, pursuant to CEQA Guidelines Section 15144 and 15145, upstream /life cycle emissions are speculative; no further discussion is necessary.

Construction-related emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and prevailing weather conditions. Construction-related GHG emissions result from onsite and offsite activities. Onsite GHG emissions principally consist of exhaust emissions (CO₂, CH₄, and N₂O) from delivery vehicles, worker traffic and construction equipment.

The project will be developed in phases and is estimated to start construction in January 2017 and be completed by January 2024. The estimated construction schedule is provided in Table 3.2-1.

The Construction of The Sequoia Drive-In Business Park in Tulare County, CA will comprise of four separate phases of construction. A total of 43 buildings and 358,370 square feet of building space will be constructed for the complete buildout for all phases of construction.

Phase 1 will include a convenience market with gas pumps and attached fast food restaurant along with five separate commercial buildings for a total combined square footage of 68,340. Access into the development will occur on Road 156, and will eventually connect access from Noble Avenue during Phase 3.

Phase 2 will construct 14 commercial buildings for a total combined square footage of 88,000, leaving a remainder lot for the existing cellular tower. Two access points into the development will occur on Road 156, providing a circle drive connecting part of Phase1, and all of Phases 2 and Phase 4.

Phase 3 will include ten separate commercial buildings with one remaining lots for a retention pond. A stormwater retention pond will be installed for on-site water storage in the event of extreme weather. The total square footage buildout for phase 3 will be 104,000.

Phase 4, the final phase, will include 13 commercial buildings and a remaining lot for a second stormwater retention pond for on-site water storage. The total square footage buildout for phase 3 will be 98,030.

TABLE 3.2-1: CONSTRUCTION SCHEDULE (PROJECT PHASE 1)				
Phase Name	Start Date	End Date	Number of Days / Week	Number of Days
Phase 1 - Site Preparation	1/1/2017	1/6/2017	5	5
Phase 1 - Grading	1/7/2017	1/18/2017	5	8
Phase 1 - Building Construction	1/19/2017	12/6/2017	5	230
Phase 1 - Paving	12/7/2017	1/1/2018	5	18
Phase 1 - Architectural Coating	1/2/2018	1/25/2018	5	18
Phase 2 - Site Preparation	1/1/2019	1/7/2019	5	5
Phase 2 - Grading	1/8/2019	1/17/2019	5	8
Phase 2 - Building Construction	1/18/2019	12/5/2019	5	230
Phase 2 - Paving	12/6/2019	12/31/2019	5	18
Phase 2 - Architectural Coating	1/1/2020	1/24/2020	5	18
Phase 3 - Site Preparation	1/1/2021	1/7/2021	5	5
Phase 3 - Grading	1/8/2021	1/19/2021	5	8
Phase 3 - Building Construction	1/20/2021	12/7/2021	5	230
Phase 3 - Paving	12/8/2021	12/31/2021	5	18
Phase 3 - Architectural Coating	1/1/2022	1/26/2022	5	18
Phase 4 - Site Preparation	1/2/2023	1/6/2023	5	5
Phase 4 - Grading	1/9/2023	1/18/2023	5	8
Phase 4 - Building Construction	1/19/2023	12/6/2023	5	230
Phase 4 - Paving	12/7/2023	1/1/2024	5	18
Phase 4 - Architectural Coating	1/2/2024	1/25/2024	5	18

Source: CalEEMod (Appendix A)

The construction equipment list is shown in Table 3.2-2 through 3.2-5. The equipment list was generated using the CalEEMod defaults for a project of this size. The activity for construction equipment is based on the horsepower and load factors of the equipment. In general, the horsepower is the power of the engine, the greater the horsepower, the greater the power. The load factor is the average power of a given piece of equipment while in operation compared with its maximum-rated horsepower. The load factor of 1.0 indicates that a piece of equipment continually operates at its maximum operating capacity.

TABLE 3.2-2: PHASE 1 CONSTRUCTION EQUIPMENT ASSUMPTION					
Construction Phase	Equipment	Unit Amount	Usage Hours	Horsepower	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Source: Appendix A (CalEEMod Annual)

TABLE 3.2-3: PHASE 2 CONSTRUCTION EQUIPMENT ASSUMPTION					
Construction Phase	Equipment	Unit Amount	Usage Hours	Horsepower	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Source: Appendix A (CalEEMod Annual)

TABLE 3.2-4: PHASE 3 CONSTRUCTION EQUIPMENT ASSUMPTION					
Construction Phase	Equipment	Unit Amount	Usage Hours	Horsepower	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Source: Appendix A (CalEEMod Annual)

TABLE 3.2-5: PHASE 4 CONSTRUCTION EQUIPMENT ASSUMPTION					
Construction Phase	Equipment	Unit Amount	Usage Hours	Horsepower	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Source: Appendix A (CalEEMod Annual)

The construction-related trip assumptions are shown in Table 3.2-6. The CalEEMod default trip lengths are used in the analysis and are 16.8, 6.60, and 20 miles for worker, vendor and haul trips respectively.

TABLE 3.2-6: CONSTRUCTION TRIPS				
Phase Name	Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number
Phase 1 - Site Preparation	7	18.00	0.00	0.00
Phase 1 - Grading	6	15.00	0.00	0.00
Phase 1 - Building Construction	9	72.00	30.00	0.00
Phase 1 - Paving	8	20.00	0.00	0.00
Phase 1 - Architectural Coating	1	14.00	0.00	0.00
Phase 2 - Site Preparation	7	18.00	0.00	0.00
Phase 2 - Grading	6	15.00	0.00	0.00
Phase 2 - Building Construction	9	48.00	22.00	0.00
Phase 2 - Paving	8	20.00	0.00	0.00
Phase 2 - Architectural Coating	1	10.00	0.00	0.00
Phase 3 - Site Preparation	7	18.00	0.00	0.00
Phase 3 - Grading	6	15.00	0.00	0.00
Phase 3 - Building Construction	9	47.00	23.00	0.00
Phase 3 - Paving	8	20.00	0.00	0.00
Phase 3 - Architectural Coating	1	9.00	0.00	0.00
Phase 4 - Site Preparation	7	18.00	0.00	0.00
Phase 4 - Grading	6	15.00	0.00	0.00
Phase 4 - Building Construction	9	58.00	26.00	0.00
Phase 4 - Paving	8	20.00	0.00	0.00
Phase 4 - Architectural Coating	1	12.00	0.00	0.00

Source Appendix A (CalEEMod Annual)

3.3 OPERATION

3.3.1 SCENARIOS

Operational emissions typically represent the majority of a project's air quality impacts. After a project is built, operational emissions are anticipated to occur continuously throughout the project's lifetime. Due to their long-term nature, operational emissions would continually contribute Greenhouse Gas (GHG) emissions inventory for the County of Tulare.

Land use development projects typically include the following sources of operational GHG and precursor emissions:

- Motor vehicle trips generated by the particular land use (i.e., vehicles arriving and leaving the project site), including those by residents, shoppers, workers, and vendors;
- Fuel combustion from landscape maintenance equipment;
- Natural gas combustion emissions used for space and water heating;
- Evaporative emissions of ROG associated with the use of consumer products by inhabitants and employees within various land uses; and
- Evaporative emissions of ROG from application of architectural coatings as part of building maintenance.

3.3.2 GREENHOUSE GASES EVALUATED

The project would generate a variety of greenhouse gases; however, this analysis is restricted to greenhouse gases identified by AB 32, which include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

The project may emit greenhouse gases that are not defined in AB 32. For example, the project may generate aerosols through emissions of diesel particulate matter from the vehicles and trucks that will be accessing the project site. Aerosols are short-lived particles, as they remain in the atmosphere for about one week.

Water vapor could be emitted from evaporated water from the landscaping, but this is not a significant impact because water vapor concentrations in the upper atmosphere are primarily due to climate feedbacks rather than emission from project-related activities.

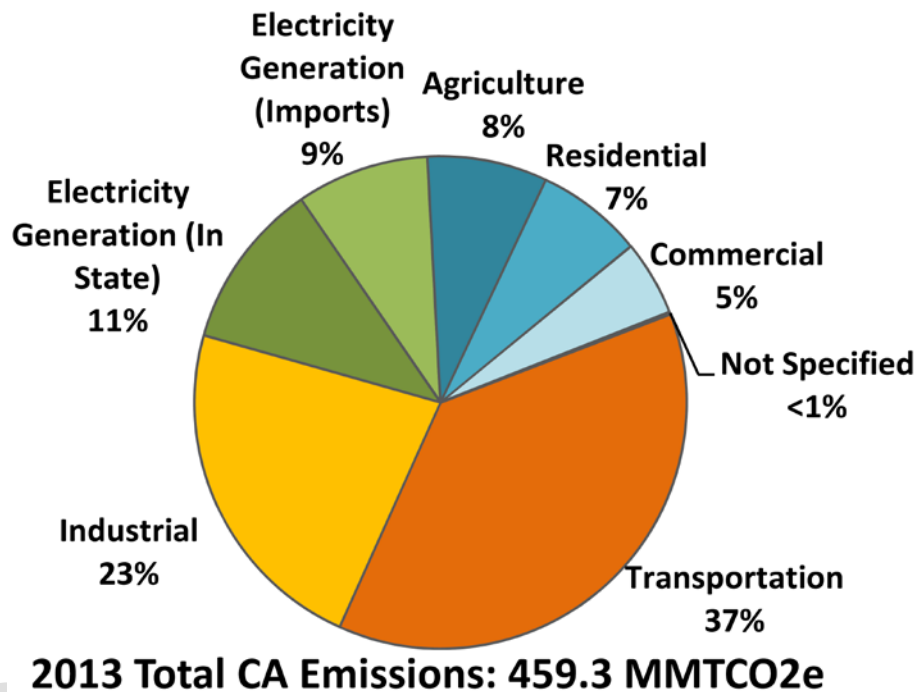
The project would emit nitrogen oxides and volatile organic compounds, which are ozone precursors. Ozone is a greenhouse gas; and found in two regions of the Earth's atmosphere – at ground level and in the upper regions of the atmosphere. Both types of ozone have the same chemical composition (O₃). While upper atmospheric ozone protects the earth from the sun's harmful rays, ground level ozone is the main component of smog.

Tropospheric, or ground level ozone, is not emitted directly into the air, but is created by chemical reactions between oxides of nitrogen (NO_x) and volatile organic compounds (VOC). Ozone is likely to reach unhealthy levels on hot sunny days in urban environments. Ozone can also be transported long distances by wind. For this reason, even rural areas can experience high ozone levels.

3.3.3 SOURCES

California is the fifteenth largest emitter of greenhouse gases on the planet, representing about two percent of the worldwide emissions. Figure 1 shows 2013 emissions and estimates for projected emissions in 2020 without any greenhouse gas reduction measures, business as usual. (Source: *California Greenhouse Gas Emission Inventory – 2015 Edition*)

Figure 3.3-1: California's Greenhouse Gas Emissions (2013)



Motor Vehicles

Motor vehicle emissions refer to exhaust and road dust emissions from the automobiles that would travel to and from the project site. The Transportation sector, largely the cars and trucks that move goods and people, is the largest contributor with 37 percent of the state's total greenhouse gas Emissions (2013). In addition, carbon dioxide, a product of fossil fuel combustion, accounts for 95 percent of transportation Greenhouse Gas emission. New motor vehicle trips associated with the project are calculated using the ITE Trip Generation Manual (as discussed below). The GHG emissions for motor vehicles were estimated using CALEEMod.

Trip Generation Rates

Trips can be classified into three main categories. First being primary trips, those that travel to the project as the primary destination. Second, diverted trips are those that have another primary destination, but detour some small distance (up to a couple blocks) to reach the project on the way to the primary destination. Lastly, pass-by trips are those that have another primary destination and pass directly by the project site, thus requiring no change in travel patterns to patronize the project before continuing on to the primary destination. The projected trips for the project are shown in Table 3.3-1.

TABLE 3.3-1: OPERATIONAL TRIP ASSUMPTIONS			
Land Use	Primary Trip %	Divert Trip %	Pass-By Trip %
Phase 1: Convenience Market (w/ Gas Pump)	14	21	65
Phase 1: Fast Food Restaurant w/ Drivethru	29	21	50
Phase 1: Office Park	82	15	3
Phase 2: Office Park	82	15	3
Phase 3: Office Park	82	15	3
Phase 4: Office Park	82	15	3

Source: Appendix A (CalEEMod Annual)

Trip Lengths

Trip lengths for the project are likely to mainly be primary trips given the nature and location of the project. Most residents will travel to the project site as their primary trip. Although it is reasonable that the project would have reduced trip lengths, the CalEEMod default trip lengths were used to provide a “worst-case” estimate.

Land Use and Site Enhancements

The proposed site location will incorporate numerous project design elements to assist in the reduction of GHG emissions generated at the site. Pertaining to employees, the parking lot will be designed to include clearly marked and shaded pedestrian pathways between transit facilities and building entrances to promote the use of the city’s already existing transportations system. The project will extend sidewalks along the frontage of the interior streets and connect to sidewalks along Mineral King and Road 156 as another method of travel. In addition there are two bus stops within the project area located on the south west corner of Mineral King and Rd 156 that will be connected to the project by sidewalks. The sidewalks will include landscape buffers between the sidewalk and street to further invite a safe and walkable route for the nearby citizens.

Bike racks will be provided around the site near the entry/exits of the buildings to encourage the use of bicycles for travelling to work, visit, or shop.

Electrical Vehicles

Electrical Vehicles (EVs) and Plug in Hybrid Electrical Vehicles (PHEVs) running only on electricity have zero tailpipe emissions, but emissions may be produced by the source of electrical power, such as a power plant. In geographic areas that use relatively low-polluting energy sources for electricity generation, PHEVs and EVs typically have a well-to-wheel* emissions advantage over similar conventional vehicles running on gasoline or diesel. In regions that depend heavily on conventional fossil fuels for electricity generation, PEVs may not demonstrate a well-to-wheel emissions benefit. The project will incorporate an EV charging station (to be made a condition of approval) in Phase 1 at the gas station / fast food restaurant building parking lot. Figure 3.3-2 provides a comparison of CO₂ emissions among different types of vehicles, ranging from conventional gas vehicles to electric vehicles.

*Well-to-wheel is a type of emissions analysis of the life cycle of a vehicle—from the energy and materials used to power a vehicle, to the direct tailpipe emissions.

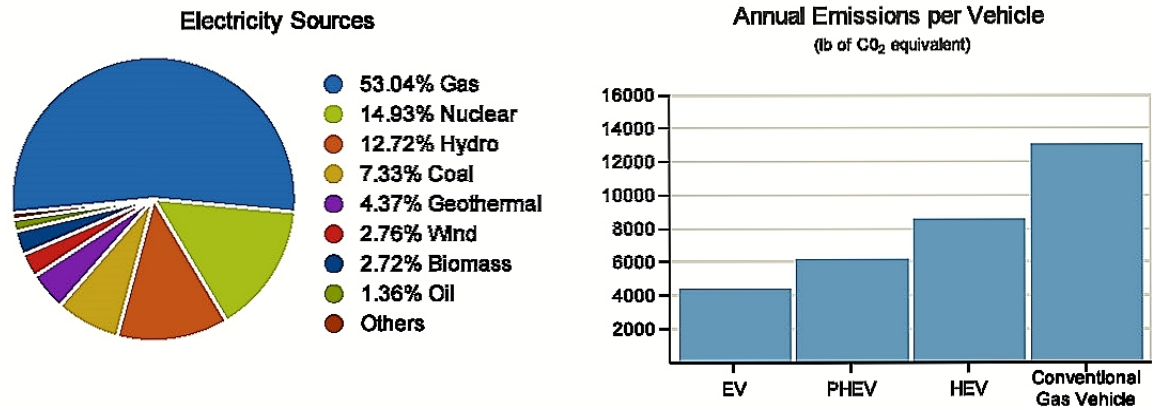
Figure 3.3-2: Annual Emissions Comparison

Compare Electricity Sources and Annual Vehicle Emissions

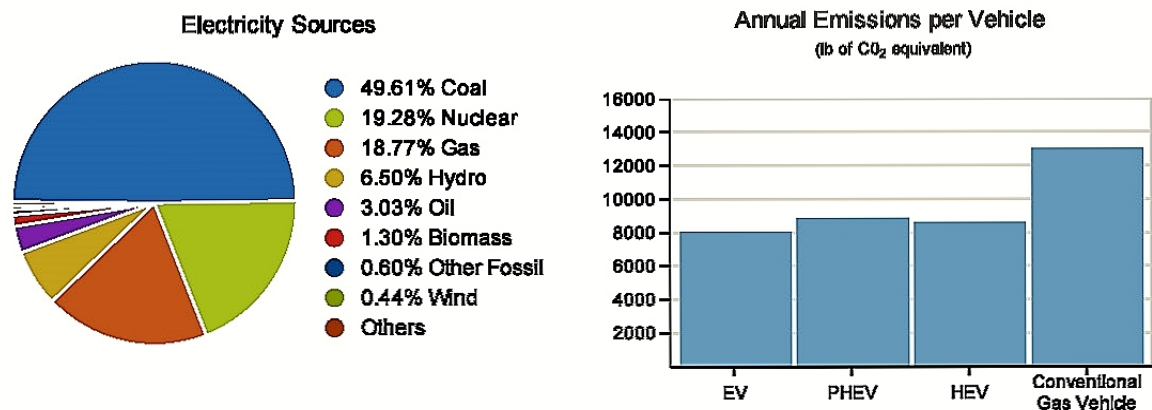
Enter a ZIP code to see a breakdown of the electricity sources used to charge EVs and PHEVs on a local grid and compare the annual emissions generated from vehicles using electricity from the grid, gasoline, or a combination of the two.

ZIP Code Find Data

California - 93292



National Averages



¹ US Department of Energy; Alternative Fuel Data Center

The project will install an electric vehicle recharging station with both conductive and inductive charging capabilities in the Phase 1 parking lot, to be included as a condition of approval, to further promote use of these vehicles over conventional gas vehicles.

Natural Gas

Natural gas emissions refer to the emissions that occur when natural gas is combusted on the project site for heating water, space heating, or other uses. The CalEEMod defaults were used and are represented in Table 3.3-2.

Electricity

Electricity refers to the GHG emissions generated by offsite power plants to supply the electricity required for the project. The Electricity and Commercial/Residential Energy sector is the second largest contributor with over 30 percent of the statewide greenhouse gas emissions. Although electricity imported into California accounts for only about a quarter of our electricity, imports contribute more than half of the greenhouse gas emissions from electricity because much of the imported electricity is generated at coal-fired power plants.

Southern California Edison (SCE) would supply electricity for the project. For the business as usual case, the CalEEMod defaults for electricity emission factors for SCE were used, which represents emission factors in 2002-2004. SCE has 16 percent renewable energy in its portfolio in 2006 (CEC 2007). In 2020, the utility will achieve 33 percent renewable energy, which would decrease the emissions associated with electricity by an additional 17 percent.

The CalEEMod defaults for energy intensity were used for the business as usual emissions estimates:

TABLE 3.3-2: ENERGY INTENSITY FACTORS					
	Title- 24 Electrical Energy Intensity (KWhr/size/year)	NonTitle-24 Electrical Energy Intensity (KBTU/size/year)	Light Energy Intensity (KWhr/size/year)	Title- 24 Natural Gas Energy Intensity (KBTU/size/year)	NonTitle- 24 Natural Gas Energy Intensity (KBTU/size/year)
Convenience Market (w/ Gas Pump)	4.12	2.49	5.50	6.84	0.07
Business Park	0.51	1.31	0.91	19.32	0.12
Total	4.63	3.80	6.41	26.16	0.19

Water Transport & Waste

There would be greenhouse gas emissions generated from the electricity required to transport and treat the water to be used on the project site. The project will install low flow toilets, sinks, showers and washing systems as a condition of approval. There will be greenhouse gas emissions from the commercial waste generated by the project. The default waste generation rates from CalEEMod were used in this analysis.

SECTION 4: THRESHOLDS OF SIGNIFICANCE

4.1 THRESHOLDS

Generally, the evaluation of an impact under CEQA requires measuring data from a project against a “threshold of significance.” The Office of Planning and Research’s amendments to the CEQA Guidelines states that “[w]hen adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence” (*CEQA Guidelines, Section 15064.7, pg. 143*). According to the CEQA Guidelines’ Appendix G Environmental Checklist, to determine whether GHG emission impacts are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

- A) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- B) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

The CEQA Guidelines amendments do not identify a threshold of significance for GHG emissions, nor does it prescribe assessment methodologies or specific mitigation measures. Instead, it calls for a “good faith effort, based on available information, to describe, calculate or estimate the amount of GHG emissions resulting from a project” (*CEQA Guidelines, Section 15064.4a, pg. 139*).

The CEQA Guidelines amendments for GHG emissions state that a lead agency may take into account the following three considerations in assessing the significance of impacts from GHG emissions (*CEQA Guidelines, Section 15064.4b, pg. 139*).

Consideration No. 1: The extent to which the project may increase or reduce GHG emissions compared with the existing environmental setting. This discussion could involve a quantification of GHG emissions to the extent feasible.

Consideration No. 2: Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.

Consideration No. 3: The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project’s incremental contribution of GHG emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, and EIR must be prepared for the project.

4.2 SJVAPCD GUIDANCE FOR EVALUATING THRESHOLDS OF SIGNIFICANCE

In accordance with the Air District's guidance for addressing greenhouse gas emission impact for new projects under CEQA, a project would be considered to have a less than significant individual and cumulative impact on climate change if it were to do at least one of the following (SJVAPCD 2009a):

- Exempt from the requirements of CEQA, or
- Comply with an approved GHG emissions reduction plan or GHG mitigation program, which avoids or substantially reduces GHG emissions within the geographic area in which the project is located. Such plans or program must be specified in law or approved by the lead agency with jurisdiction over the affected resource and supported by a CEQA compliant environmental review document adopted by the lead agency, or
- Implement SJVAPCD-approved best performance standards, or
- Quantify project GHG emissions and reduce those emissions by at least 29 percent compared to business as usual. "Business as usual" is referred in ARB's AB 32 Scoping Plan as emissions occurring in 2020 levels without additional control. Therefore, 2002-2004 emissions factors, on a unit of activity basis, multiplied by the activity expected to occur in 2020, is an appropriate representation of 2020 business as usual. The reductions can be based on any combination of reduction measures, including GHG reductions achieved as a result of changes in building and appliance standards occurring since 2002-2004 baseline period.

After project analysis it has been determined that the Project is not exempt from CEQA and any potential impacts will be evaluated based on the adopted 2012 Tulare County CAP. The Scoping Plan prepared pursuant to AB 32 demonstrates how California would reduce GHG emissions to 1990 levels by the year 2020. However, most of the measures in the Scoping Plan are not applicable to the project. There are no SJVAPCD-approved best performance standards that would apply to the project because SJVAPCD has not yet established BPS for development projects. Therefore, the approach used in this analysis is to quantify GHG emissions and reduce the emissions to meet the Tulare County CAP standards.

SECTION 5: IMPACT ANALYSIS

Through the examination of the proposed project we have examined several categories of GHG emissions and developed an understanding of the project and its projected impact on GHG emissions. The impact analysis will provide a detailed explanation of the project-related GHG Emission, by combining all categories and examine any conflicting encounters, in regards to City Plans, State/Federal Policy and Existing Regulations.

5.1 IMPACT 1: GREENHOUSE GAS EMISSIONS

Impact GHG-1:	The project would generate greenhouse gas emissions, and the emissions will not have a significant impact on the environment
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The project will generate greenhouse gas emissions, and the emissions would have a significant impact on the environment. The Project will be evaluated according to Tulare County's CAP which established GHG emission reduction measures (*Tulare County CAP, Appendix J*) to determine the appropriate mitigation required.

The project will be evaluated for emissions significance using Tulare County's CAP. To determine the Project's level of significance, the report will first establish business as usual activities and then incorporate emissions that would occur when all project-related design features are implemented. For Tulare County to reach a 26.2% reduction by 2020, new development projects are required to have an average reduction of 6% beyond that required by regulation (*Tulare County CAP, pg. 59*).

Construction

Greenhouse gas emissions are generated during construction activities that include site preparation, grading, the construction of the building, paving, etc. These activities are presented in Table 5.1-1 in greater detail along with the estimated mitigated onsite and offsite million metric tons of carbon dioxide equivalent (MTCO₂e). The District does not have a recommendation for assessing the significance of construction-related emissions.

TABLE 5.1-1:

CONSTRUCTION-RELATED GREENHOUSE GAS EMISSIONS (2017-2024)

	Bio-CO ₂	NBio- CO ₂	Total CO ₂	CH ₄	N ₂ O	CO ₂ e
Year	MT/yr					
2017	0	467.2237	467.2237	0.0834	0	468.9743
2018	0	4.5235	4.5235	5.40E-04	0	4.5348
2019	0	407.8431	407.8431	0.0793	0	409.5075
2020	0	3.1485	3.1485	2.20E-04	0	3.1531
2021	0	399.7772	399.7772	0.0773	0	401.401
2022	0	3.0391	3.0391	1.80E-04	0	3.0429
2023	0	415.1209	415.1209	0.0765	0	416.7281
2024	0	4.1577	4.1577	4.30E-04	0	4.1667
TOTAL	0	1704.8337	1704.834	0.31787	0	1711.508

Source: Appendix A (CalEEMod Annual)

Operation

Expected operational or long-term emissions over the lifetime of the project include mobile operations, waste generated, water consumed, and energy consumed. Sources of operation-related CO_{2e} emissions have been totaled for each phase, represented in Table 5.1-2. As presented in Table 5.1-2, mitigation and regulation is required to reduce business as usual emissions beyond 26.2 percent to remain compliant with the County's CAP requirement to reduce GHG emissions to 1990 levels.

TABLE 5.1-2: PROJECT OPERATIONAL GREENHOUSE GASES		
PHASE	Overall Operational (Unmitigated) MTCO_{2e} per year	Business as Usual (Mitigated) MTCO_{2e} per year
Phase 1	3,145.3512	3,004.6153
Phase 2	1,679.6119	1,617.8659
Phase 3	1,965.0381	1,893.2215
Phase 4	1,835.8061	1,769.0615
Total	8,625.81	8,284.76
Reduction Percentage		4%
Significant Threshold	26.2%	26.2%
Are emissions significant after mitigation, project design features and regulations?		Yes

Source: Appendix A (CalEEMod Annual)

The business as usual emissions represents emission in terms as if they would have occurred without regulations enacted pursuant to AB 32. Operational GHG emissions will be reduced through implementing the following operational practices and design elements as conditions of approval:

- Landscaping: The 53% of the project area will contain water efficient landscape.
- Energy: Energy efficient light-bulbs will be incorporated to the project to reduce electrical use as a condition of approval. Along with this the project is a user of Southern California Edison which has 16 percent renewable energy in its portfolio in 2006 (CEC 2007). Therefore, to achieve a 33-percent reduction as required by California's Renewable Electricity Standard, 17 percent more renewable energy in the utility's portfolio is needed. In 2020, the utility will achieve 33 percent renewable energy, which would decrease the emissions associated with electricity by 17 percent.
- Waste: The project will participate in the County's recycle and waste reduction program which has seen an average waste reduction of 50%.
- Water: Low flow faucets, toilets and urinals will be incorporated as a condition of approval. Along with a water efficient irrigation system for landscaped areas.
- Traffic: The project will increase density, improve walkability, improve destination accessibility through increase transit accessibility and overall improve the pedestrian network. Therefore reducing the number of vehicles used to travel to the project location and reducing GHG emissions.
- Improved Destination Accessibility: The project is located within four miles of downtown Visalia.
- Improved Walkability Design: The project is located in an area that includes multiple stores and other desirable locations
- Improved Transit Access: The project is located less than 500 yards from an existing transit stop.
- Installation of Low Flow Bathroom Fixtures: Both low flow bathroom faucets and low flow toilets will be installed within the project site to ensure a reduced quantity of water as a condition of approval.
- Turf Reduction: Landscape design will incorporating the use of drought resistant plants in place of excess turf. Turf reductions reduces water consumption, saved energy by requiring less lawn maintenance, creates less yard waste, reduces the amount of herbicides commonly used, and enhances biodiversity through varied planting which offers shelter and feeding opportunities for wildlife.
- Use of Low VOC Paint- Low VOC paint will be used on both the non-residential interior and exterior of the project site.
- Water Efficient Landscaping: To ensure a reduction in water used for project landscaping and maintenance a water efficient irrigation system and water efficient landscaping will be incorporated as part of the project.

These above measures are represented in CalEEMod as project design features. Reductions from these measures are calculated by CalEEMod and are based on the methodology presented in the California Air Pollution Control Officer's 2010 report, "Quantifying Greenhouse Gas Mitigation Measure's." Table 5.1-3 shows the percentage reduction calculated by CalEEMod for the new regulations and standards.

TABLE 5.1-3: GREENHOUSE GAS REDUCTIONS		
Measures	Category	Percent reduction
Pavely and Low Carbon Fuel Standards	Mobile Sources	9.1%
Electricity – Renewable Portfolio Standards	Energy: Electricity	0%
Title 24 Standards	Energy: Electricity and Natural Gas	0%
Non-Motorized Improvements	Energy Natural Gas	0%
Land Use Changes	Energy Natural Gas	16%
Reduce Carbon-Intensive Travel Activities	Mobile Sources	13%
Locational and Standard Measures	Mobile Sources	13%

Source: Appendix A (CalEEMod Annual)

Collectively these measures together accounts for a 9.1% reduction in GHG emissions from the projects previous Business As Usual emissions. The project's design elements previously discussed will fulfill the following GHG Emission Reduction Measures to reach the 6% reduction in GHG emissions required by the Tulare County CAP.

Tulare County CAP (Appendix J) GHG Emission Reduction Measures:

Measure 5: Pedestrian Network (1 point reduction) – The project will provide a pedestrian access network that internally links all uses and connects to existing external streets and pedestrian facilities.

Measure 7: Bus shelter for existing transit service (0.5 point reduction) -- Bus service provides headways of one hour or less for stops within ¼ mile; project provides safe and convenient pedestrian access to transit stops. Shelters, route information, benches and lighting are existing amenities.

Measure 12: Parking reduction beyond code (6 point reductions) – The project will provide less than the minimum amount of parking required. This measure recognizes the air quality benefit that results when facilities minimize parking needs.

Measure 13: Pedestrian Pathway Through Parking (0.5 point reduction) – The project will provide a parking lot design that will include clearly marked and shaded pedestrian pathways between transit facilities and building entrances.

Measure 25: Energy Star Roof (0.5 point reduction) – The project will install Energy Star labeled roof materials as a condition of approval.

Measure 28: Solar Orientation (0.5 point reduction) – The project will orient 75 or more percent of buildings to face either north or south (within 30 degrees of North or South). Building design includes roof overhangs that are sufficient to block the high summer sun, but not the lower winter sun, from penetrating south facing windows. Trees, other landscaping features and other buildings are sited in such a way as to maximize shade in the summer and maximize solar access to walls and windows in the winter.

Additional GHG Emission Reduction Measures Requiring Additional Investigation:

Measure 25: Zero Emission Infrastructure (point reduction to be determined) – The project will provide zero-emission vehicle charging station infrastructure in Phase 1 parking lot.

Total GHG Emission Reduction Measure Points: 9+ points

5.2 IMPACT 2: CONFLICT WITH THE CITY PLAN, STATE/FEDERAL POLICY AND EXISTING REGULATION

Impact GHG-2:	The project will not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.
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The County of Tulare has implemented their adopted Climate Action Plan (CAP, 2012) which identifies a threshold of 26.2% for GHG emission reductions for new projects in which discretionary entitlements are required. This minimum reduction from the project's Business As Usual ensures that the project is meeting the CAP requirements.

The California State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. In regards to remaining compliant under the Scoping Plan established under AB 32, which is concurrently the state legislation which requires for GHGs emitted in California to be reduced to 1990 levels by 2020. AB 32 is monitored and regulated by ARB.

In December 2008, CARB adopted the Climate Change Scoping Plan. The AB 32 Scoping Plan contains the main strategies California will use to reduce the GHG that cause climate change. The scoping plan represents a range of GHG reduction actions which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 program implementation regulation to fund the program. As stated in the Scoping Plan, the key elements of the strategy for achieving a 29 percent reduction by 2020 include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewable energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets;

- Adopting and implementing measures to existing State laws and policies including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standards; and
- Creating target fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.

The Scoping Plan established eighteen types of measures to help pave the path toward California's clean energy future. As shown in Table 5.2-1 the project is consistent with applicable measures established through the Scoping Plan.

TABLE 5.2-1: SCOPING PLAN REDUCTION MEASURES	
Scoping Plan Reduction Measure	Recommended Action
1. California Cap-and-Trade Program Linked to Trade Program Linked to Western Climate Initiative Partner Jurisdictions Implement a broad-based California cap-and-trade program to provide a firm limit on emissions. Link the California cap-and-trade program with other Western Climate Initiative Partner programs to create a regional market system to achieve greater environmental and economic benefits for California.	The projects can generate offsets, verifiable reductions of emissions whose ownership can be transferred to others. Offsets can provide regulated entities a source of low-cost emissions reductions. Reductions from compliance offset projects must be quantified using rigorous measurement and enforcement protocols that provide a basis to determine whether the reductions are also additional, however, this measure is not applicable to the project.
2. California Light-Duty Vehicle Greenhouse Gas Standards. Implement adopted Pavley standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.	Include reducing greenhouse gas emissions from vehicles, reducing the carbon content of the fuel these vehicles burn, and reducing the miles these vehicles travel. While the project is centrally located and could help reduce mileages, this is not applicable to the project.
3. Energy Efficiency Maximize energy efficiency building and appliance standards, and pursue additional efficiency efforts including new technologies, and new policy and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California (including both investor-owned and publicly owned utilities).	This measure would set new targets for statewide annual energy demand reductions; however the project design features multiple energy efficient products and features.
4. Renewables Portfolio Standard 4. Renewables Portfolio Standard Achieve 33 percent renewable energy mix statewide.	The project will work with SCE in its efforts to diversify its power supply by making covered parking stalls "solar ready".
5. Low Carbon Fuel Standard Develop and adopt the Low Carbon Fuel Standard	This measure is applicable to the project because it is a state initiative.
6. Regional Transportation-Related Greenhouse Gas Targets. Develop regional greenhouse gas emissions reduction targets for passenger vehicles.	This measure is not applicable to the project being that the development of regional Greenhouse Gas reductions is the responsibility of the State.
7. Vehicle Efficiency Measures. Implement light-duty vehicle efficiency measures.	This measure is applicable being that an EV charging station will be installed in Phase 1, reducing light-duty greenhouse gas emissions from light-duty vehicles that enter the project site

8. Goods Movement. Implement adopted regulations for the use of shore power for ships at berth. Improve efficiency in goods movement activities.	This measure is not applicable to the project being that it does not propose the use of shore power for ships or to improve good movement activities.
9. Million Solar Roofs Program. Install 3,000 MW of solar-electric capacity under California's existing solar programs.	This measure is not applicable to the project being that this is the responsibility of the State and the project does not plan to implement any solar power into the design of the project building, only designing roofs and covers to be "solar-ready".
10. Medium/Heavy-Duty Vehicles. Adopt medium and heavy-duty vehicle efficiency measures.	This measure is not applicable to the project being that it is a statewide measure. However, it would be applicable to vehicles that enter the project site.
11. Industrial Emissions. Require assessment of large industrial sources to determine whether individual sources within a facility can cost-effectively reduce greenhouse gas emissions and provide other pollution reduction co-benefits. Reduce greenhouse gas emissions from fugitive emissions from oil and gas extraction and gas transmission. Adopt and implement regulations to control fugitive methane emissions and reduce flaring at refineries.	This measure is not applicable to the project being that this measure would apply to the direct greenhouse gas emissions at major industrial facilities, which the proposed project is not.
12. High Speed rail. Support implementation of a high speed rail system.	This measure is not applicable to the project being that it is a statewide measure.
13. Green Building Strategy. Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings	The project will be implementing Green Building Strategies into their design along with using water-wise landscape design and a bioswale to inhabit wildlife.
14. High Global Warming Potential Gases. Adopt measures to reduce high global warming potential gases.	This measure will be applicable when initiated being that the project will produce Global Warming Potential Gases through items such as Motor Vehicles traveling to and from their homes, Air Conditioning system, and Refrigerant Emissions.
15. Recycling and Waste Reduce methane emissions at landfills. Increase waste diversion, composting and other beneficial uses of organic materials, and mandate commercial recycling. Move toward zero-waste.	The project will be participating in the Tulare County Recycling program.
16. Sustainable Forests Preserve forest sequestration and encourage the use of forest biomass for sustainable energy generation	This measure is not applicable being that the project is located in a rural area where forests do not pre-exist.
17. Water. Continue efficiency programs and use cleaner energy sources to move and treat water.	The project meets this measure by installing low flow toilets and water efficient faucets. Along with this they have also incorporated efficient landscape irrigation practices and design.
18. Agriculture. Encourage investment in manure digesters and at the five-year Scoping Plan update determine if the program should be made mandatory by 2020.	This measure is not applicable being that no agriculture activities will be occurring at or near the project site.

Source of ARB Scoping Plan Reduction Measures: California Air Board 2008

After examination of all eighteen Scoping Reduction Measures it can be confirmed that the construction and operation of this project will not neglect or conflict with any of the CARB or AB 32 requirements. Therefore, no mitigation measure are required.

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SUMMARY

The project is expected to generate GHG emissions in the short-term as a result of the construction of the project and long-term emissions as a result of day-to-day operations of the proposed business park within the County of Tulare. The project incorporates local agency requirements, standard measures, with additional design features aimed at reducing GHG emissions. Estimated GHG emissions calculations are contained within the CalEEMod report, Appendix A.

Taking into account proposed project's emissions, project design features, standard measures and the progress being made by the State towards reducing emissions in key sectors such as transportation, industry, and electricity, the project is consistent with the Tulare County CAP goal of reducing greenhouse gas emissions by the required 6% for discretionary projects. Through the assessment of both short-term and long-term emissions it is our conclusion that the development of the commercial center in the County of Tulare, CA will not conflict in the State's efforts to reduce GHG emissions.

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APPENDIX A
CALEEMOD REPORTS (ANNUAL)
PHASES 1 - 4

DRAFT

Sequoia Drive-In Business Park (PH 1)
San Joaquin Valley Unified APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Fast Food Restaurant with Drive Thru	3.00	1000sqft	0.07	3,000.00	0
Convenience Market With Gas Pumps	8.00	Pump	0.03	1,129.40	0
Office Park	63.02	1000sqft	1.45	63,020.00	0
Other Non-Asphalt Surfaces	118.90	1000sqft	2.73	118,900.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	45
Climate Zone	7	Operational Year	2018		
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Phase 1 will have 5 buildings with Office Park (ITE "Business Park") land use, ranging in square footage from 12,000 sf to 13,390 sf for a total of 68,340 sf of building gfa.

Phase 1 will also have a gas station with an attached fast food restaurant with drive-thru. Phase 1 will be 10.04 acres out of 46.17 acres of the total Project.

Land Use - "Other Non-Asphalt Surfaces" includes the new roads, on-street parking, and parking lots.

Construction Phase - No demolition required.

Vehicle Trips -

Energy Use -

Mobile Land Use Mitigation - Mobile Land Use Mitigation - LUT-1 - LUT-5 are based on project location. SDT-1: project will incorporate typical standard sidewalks throughout project.

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	OperationalYear	2014	2018
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

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					
2017	0.4691	3.7890	3.4057	5.4700e-003	0.1980	0.2338	0.4318	0.0724	0.2190	0.2914	0.0000	467.2237	467.2237	0.0834	0.0000	468.9743
2018	1.2974	0.0260	0.0301	6.0000e-005	1.6900e-003	1.7800e-003	3.4700e-003	4.5000e-004	1.7500e-003	2.2000e-003	0.0000	4.5235	4.5235	5.4000e-004	0.0000	4.5348
Total	1.7664	3.8150	3.4358	5.5300e-003	0.1997	0.2356	0.4353	0.0728	0.2208	0.2936	0.0000	471.7472	471.7472	0.0839	0.0000	473.5090

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					
2017	0.4691	3.7890	3.4057	5.4700e-003	0.1980	0.2338	0.4318	0.0724	0.2190	0.2914	0.0000	467.2234	467.2234	0.0834	0.0000	468.9739
2018	1.2974	0.0260	0.0301	6.0000e-005	1.6900e-003	1.7800e-003	3.4700e-003	4.5000e-004	1.7500e-003	2.2000e-003	0.0000	4.5235	4.5235	5.4000e-004	0.0000	4.5348

Total	1.7664	3.8150	3.4358	5.5300e-003	0.1997	0.2356	0.4353	0.0728	0.2208	0.2936	0.0000	471.7468	471.7468	0.0839	0.0000	473.5087
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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
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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.8561	2.0000e-005	1.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.4500e-003	3.4500e-003	1.0000e-005	0.0000	3.6500e-003
Energy	0.0149	0.1353	0.1137	8.1000e-004		0.0103	0.0103		0.0103	0.0103	0.0000	445.4842	445.4842	0.0163	5.4900e-003	447.5286
Mobile	3.5282	6.8525	34.8213	0.0344	1.7750	0.0776	1.8526	0.4769	0.0714	0.5483	0.0000	2,650.7842	2,650.7842	0.0970	0.0000	2,652.8217
Waste						0.0000	0.0000		0.0000	0.0000	18.9127	0.0000	18.9127	1.1177	0.0000	42.3845
Water						0.0000	0.0000		0.0000	0.0000	3.8689	26.2977	30.1667	0.3986	9.6300e-003	41.5215
Total	4.3993	6.9878	34.9368	0.0352	1.7750	0.0879	1.8629	0.4769	0.0817	0.5586	22.7816	3,122.5696	3,145.3512	1.6296	0.0151	3,184.2600

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	0.8561	2.0000e-005	1.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.4500e-003	3.4500e-003	1.0000e-005	0.0000	3.6500e-003

Energy	0.0149	0.1353	0.1137	8.1000e-004		0.0103	0.0103		0.0103	0.0103	0.0000	445.4842	445.4842	0.0163	5.4900e-003	447.5286
Mobile	3.5024	6.6177	34.3583	0.0326	1.6694	0.0737	1.7431	0.4485	0.0678	0.5163	0.0000	2,510.0484	2,510.0484	0.0930	0.0000	2,512.0019
Waste						0.0000	0.0000		0.0000	0.0000	18.9127	0.0000	18.9127	1.1177	0.0000	42.3845
Water						0.0000	0.0000		0.0000	0.0000	3.8689	26.2977	30.1667	0.3985	9.6100e-003	41.5153
Total	4.3734	6.7530	34.4737	0.0334	1.6694	0.0840	1.7534	0.4485	0.0781	0.5266	22.7816	2,981.8337	3,004.6153	1.6256	0.0151	3,043.4340

	ROG	NOx	CO	SO2	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	0.59	3.36	1.33	5.14	5.95	4.45	5.88	5.95	4.41	5.73	0.00	4.51	4.47	0.25	0.13	4.42

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2017	1/6/2017	5	5	
2	Grading	Grading	1/7/2017	1/18/2017	5	8	
3	Building Construction	Building Construction	1/19/2017	12/6/2017	5	230	
4	Paving	Paving	12/7/2017	1/1/2018	5	18	
5	Architectural Coating	Architectural Coating	1/2/2018	1/25/2018	5	18	

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: 279,074; Non-Residential Outdoor: 93,025 (Architectural Coating –

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
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	72.00	30.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	14.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

Fugitive Dust					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0121	0.1294	0.0985	1.0000e-004		6.8900e-003	6.8900e-003		6.3300e-003	6.3300e-003	0.0000	9.0788	9.0788	2.7800e-003	0.0000	9.1373
Total	0.0121	0.1294	0.0985	1.0000e-004	0.0452	6.8900e-003	0.0521	0.0248	6.3300e-003	0.0312	0.0000	9.0788	9.0788	2.7800e-003	0.0000	9.1373

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	2.8000e-004	2.7200e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4766	0.4766	2.0000e-005	0.0000	0.4771
Total	1.7000e-004	2.8000e-004	2.7200e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4766	0.4766	2.0000e-005	0.0000	0.4771

3.3 Grading - 2017

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					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0138	0.1439	0.1015	1.2000e-004		8.1600e-003	8.1600e-003		7.5000e-003	7.5000e-003	0.0000	11.0447	11.0447	3.3800e-003	0.0000	11.1157
Total	0.0138	0.1439	0.1015	1.2000e-004	0.0262	8.1600e-003	0.0344	0.0135	7.5000e-003	0.0210	0.0000	11.0447	11.0447	3.3800e-003	0.0000	11.1157

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	2.3000e-004	3.8000e-004	3.6300e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.6355	0.6355	3.0000e-005	0.0000	0.6362
Total	2.3000e-004	3.8000e-004	3.6300e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.6355	0.6355	3.0000e-005	0.0000	0.6362

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0138	0.1439	0.1015	1.2000e-004		8.1600e-003	8.1600e-003		7.5000e-003	7.5000e-003	0.0000	11.0447	11.0447	3.3800e-003	0.0000	11.1157
Total	0.0138	0.1439	0.1015	1.2000e-004	0.0262	8.1600e-003	0.0344	0.0135	7.5000e-003	0.0210	0.0000	11.0447	11.0447	3.3800e-003	0.0000	11.1157

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
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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	2.3000e-004	3.8000e-004	3.6300e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.6355	0.6355	3.0000e-005	0.0000	0.6362
Total	2.3000e-004	3.8000e-004	3.6300e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.6355	0.6355	3.0000e-005	0.0000	0.6362

3.4 Building Construction - 2017

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	0.3568	3.0367	2.0849	3.0800e-003		0.2048	0.2048		0.1924	0.1924	0.0000	275.4010	275.4010	0.0678	0.0000	276.8244
Total	0.3568	3.0367	2.0849	3.0800e-003		0.2048	0.2048		0.1924	0.1924	0.0000	275.4010	275.4010	0.0678	0.0000	276.8244

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0398	0.2822	0.4975	7.5000e-004	0.0203	4.6100e-003	0.0249	5.8200e-003	4.2400e-003	0.0101	0.0000	66.6382	66.6382	5.6000e-004	0.0000	66.6498
Worker	0.0315	0.0523	0.5006	1.2300e-003	0.1029	7.3000e-004	0.1037	0.0274	6.7000e-004	0.0280	0.0000	87.6992	87.6992	4.4000e-003	0.0000	87.7916

Total	0.0713	0.3345	0.9981	1.9800e-003	0.1232	5.3400e-003	0.1286	0.0332	4.9100e-003	0.0381	0.0000	154.3373	154.3373	4.9600e-003	0.0000	154.4414
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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.3568	3.0367	2.0849	3.0800e-003		0.2048	0.2048		0.1924	0.1924	0.0000	275.4007	275.4007	0.0678	0.0000	276.8240
Total	0.3568	3.0367	2.0849	3.0800e-003		0.2048	0.2048		0.1924	0.1924	0.0000	275.4007	275.4007	0.0678	0.0000	276.8240

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	0.0398	0.2822	0.4975	7.5000e-004	0.0203	4.6100e-003	0.0249	5.8200e-003	4.2400e-003	0.0101	0.0000	66.6382	66.6382	5.6000e-004	0.0000	66.6498
Worker	0.0315	0.0523	0.5006	1.2300e-003	0.1029	7.3000e-004	0.1037	0.0274	6.7000e-004	0.0280	0.0000	87.6992	87.6992	4.4000e-003	0.0000	87.7916
Total	0.0713	0.3345	0.9981	1.9800e-003	0.1232	5.3400e-003	0.1286	0.0332	4.9100e-003	0.0381	0.0000	154.3373	154.3373	4.9600e-003	0.0000	154.4414

3.5 Paving - 2017

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	0.0141	0.1428	0.1061	1.6000e-004		8.5500e-003	8.5500e-003		7.8800e-003	7.8800e-003	0.0000	14.4492	14.4492	4.3100e-003	0.0000	14.5397
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0141	0.1428	0.1061	1.6000e-004		8.5500e-003	8.5500e-003		7.8800e-003	7.8800e-003	0.0000	14.4492	14.4492	4.3100e-003	0.0000	14.5397

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	6.5000e-004	1.0700e-003	0.0103	3.0000e-005	2.1100e-003	1.0000e-005	2.1300e-003	5.6000e-004	1.0000e-005	5.8000e-004	0.0000	1.8006	1.8006	9.0000e-005	0.0000	1.8025
Total	6.5000e-004	1.0700e-003	0.0103	3.0000e-005	2.1100e-003	1.0000e-005	2.1300e-003	5.6000e-004	1.0000e-005	5.8000e-004	0.0000	1.8006	1.8006	9.0000e-005	0.0000	1.8025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0141	0.1428	0.1061	1.6000e-004		8.5500e-003	8.5500e-003		7.8800e-003	7.8800e-003	0.0000	14.4492	14.4492	4.3100e-003	0.0000	14.5397
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0141	0.1428	0.1061	1.6000e-004		8.5500e-003	8.5500e-003		7.8800e-003	7.8800e-003	0.0000	14.4492	14.4492	4.3100e-003	0.0000	14.5397

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	6.5000e-004	1.0700e-003	0.0103	3.0000e-005	2.1100e-003	1.0000e-005	2.1300e-003	5.6000e-004	1.0000e-005	5.8000e-004	0.0000	1.8006	1.8006	9.0000e-005	0.0000	1.8025
Total	6.5000e-004	1.0700e-003	0.0103	3.0000e-005	2.1100e-003	1.0000e-005	2.1300e-003	5.6000e-004	1.0000e-005	5.8000e-004	0.0000	1.8006	1.8006	9.0000e-005	0.0000	1.8025

3.5 Paving - 2018

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	7.0000e-004	7.1600e-003	6.1300e-003	1.0000e-005		4.1000e-004	4.1000e-004		3.8000e-004	3.8000e-004	0.0000	0.8369	0.8369	2.5000e-004	0.0000	0.8422
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	7.0000e-004	7.1600e-003	6.1300e-003	1.0000e-005		4.1000e-004	4.1000e-004		3.8000e-004	3.8000e-004	0.0000	0.8369	0.8369	2.5000e-004	0.0000	0.8422

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	6.0000e-005	5.4000e-004	0.0000	1.2000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1021	0.1021	0.0000	0.0000	0.1022
Total	3.0000e-005	6.0000e-005	5.4000e-004	0.0000	1.2000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1021	0.1021	0.0000	0.0000	0.1022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	7.0000e-004	7.1600e-003	6.1300e-003	1.0000e-005		4.1000e-004	4.1000e-004		3.8000e-004	3.8000e-004	0.0000	0.8369	0.8369	2.5000e-004	0.0000	0.8422
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	7.0000e-004	7.1600e-003	6.1300e-003	1.0000e-005		4.1000e-004	4.1000e-004		3.8000e-004	3.8000e-004	0.0000	0.8369	0.8369	2.5000e-004	0.0000	0.8422

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
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Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	6.0000e-005	5.4000e-004	0.0000	1.2000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1021	0.1021	0.0000	0.0000	0.1022
Total	3.0000e-005	6.0000e-005	5.4000e-004	0.0000	1.2000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1021	0.1021	0.0000	0.0000	0.1022

3.6 Architectural Coating - 2018

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	1.2935					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6900e-003	0.0181	0.0167	3.0000e-005		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	2.2979	2.2979	2.2000e-004	0.0000	2.3025
Total	1.2962	0.0181	0.0167	3.0000e-005		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	2.2979	2.2979	2.2000e-004	0.0000	2.3025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	4.2000e-004	7.1000e-004	6.7500e-003	2.0000e-005	1.5700e-003	1.0000e-005	1.5800e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.2865	1.2865	6.0000e-005	0.0000	1.2878

Total	4.2000e-004	7.1000e-004	6.7500e-003	2.0000e-005	1.5700e-003	1.0000e-005	1.5800e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.2865	1.2865	6.0000e-005	0.0000	1.2878
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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.2935					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6900e-003	0.0181	0.0167	3.0000e-005		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	2.2979	2.2979	2.2000e-004	0.0000	2.3025
Total	1.2962	0.0181	0.0167	3.0000e-005		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	2.2979	2.2979	2.2000e-004	0.0000	2.3025

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	4.2000e-004	7.1000e-004	6.7500e-003	2.0000e-005	1.5700e-003	1.0000e-005	1.5800e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.2865	1.2865	6.0000e-005	0.0000	1.2878
Total	4.2000e-004	7.1000e-004	6.7500e-003	2.0000e-005	1.5700e-003	1.0000e-005	1.5800e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.2865	1.2865	6.0000e-005	0.0000	1.2878

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

- Increase Density
- Improve Walkability Design
- Improve Destination Accessibility
- Increase Transit Accessibility
- Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.5024	6.6177	34.3583	0.0326	1.6694	0.0737	1.7431	0.4485	0.0678	0.5163	0.0000	2,510.0484	2,510.0484	0.0930	0.0000	2,512.0019
Unmitigated	3.5282	6.8525	34.8213	0.0344	1.7750	0.0776	1.8526	0.4769	0.0714	0.5483	0.0000	2,650.7842	2,650.7842	0.0970	0.0000	2,652.8217

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market With Gas Pumps	4,340.80	1,635.76	1335.04	1,729,571	1,626,662
Fast Food Restaurant with Drive Thru	1,488.36	2,166.09	1628.16	1,385,627	1,303,182
Office Park	719.69	103.35	47.90	1,551,018	1,458,733
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	6,548.85	3,905.20	3,011.10	4,666,216	4,388,577

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Convenience Market With Gas	14.70	6.60	6.60	0.80	80.20	19.00	14	21	65
Fast Food Restaurant with Drive	14.70	6.60	6.60	2.20	78.80	19.00	29	21	50
Office Park	14.70	6.60	6.60	33.00	48.00	19.00	82	15	3
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.411222	0.062718	0.156221	0.175699	0.050886	0.007831	0.019556	0.102845	0.001787	0.001576	0.006435	0.000923	0.002302

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	298.1555	298.1555	0.0135	2.7900e-003	299.3033
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	298.1555	298.1555	0.0135	2.7900e-003	299.3033
NaturalGas Mitigated	0.0149	0.1353	0.1137	8.1000e-004		0.0103	0.0103		0.0103	0.0103	0.0000	147.3287	147.3287	2.8200e-003	2.7000e-003	148.2253
NaturalGas Unmitigated	0.0149	0.1353	0.1137	8.1000e-004		0.0103	0.0103		0.0103	0.0103	0.0000	147.3287	147.3287	2.8200e-003	2.7000e-003	148.2253

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					
Fast Food Restaurant with Drive-Through	300060	1.6200e-003	0.0147	0.0124	9.0000e-005		1.1200e-003	1.1200e-003		1.1200e-003	1.1200e-003	0.0000	16.0123	16.0123	3.1000e-004	2.9000e-004	16.1098

Office Park	2.454e+006	0.0132	0.1203	0.1011	7.2000e-004		9.1400e-003	9.1400e-003		9.1400e-003	9.1400e-003	0.0000	130.9547	130.9547	2.5100e-003	2.4000e-003	131.7517
Other Non-Asphalt Surfaces	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
Convenience Market With Gas	6776.4	4.0000e-005	3.3000e-004	2.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.3616	0.3616	1.0000e-005	1.0000e-005	0.3638
Total		0.0149	0.1353	0.1137	8.1000e-004		0.0103	0.0103		0.0103	0.0103	0.0000	147.3287	147.3287	2.8300e-003	2.7000e-003	148.2253

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Fast Food Restaurant with Drive Thru	300060	1.6200e-003	0.0147	0.0124	9.0000e-005		1.1200e-003	1.1200e-003		1.1200e-003	1.1200e-003	0.0000	16.0123	16.0123	3.1000e-004	2.9000e-004	16.1098
Office Park	2.454e+006	0.0132	0.1203	0.1011	7.2000e-004		9.1400e-003	9.1400e-003		9.1400e-003	9.1400e-003	0.0000	130.9547	130.9547	2.5100e-003	2.4000e-003	131.7517
Other Non-Asphalt Surfaces	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
Convenience Market With Gas	6776.4	4.0000e-005	3.3000e-004	2.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.3616	0.3616	1.0000e-005	1.0000e-005	0.3638
Total		0.0149	0.1353	0.1137	8.1000e-004		0.0103	0.0103		0.0103	0.0103	0.0000	147.3287	147.3287	2.8300e-003	2.7000e-003	148.2253

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market With Gas	12954.2	3.7685	1.7000e-004	4.0000e-005	3.7830
Fast Food Restaurant with Drive Thru	107610	31.3050	1.4200e-003	2.9000e-004	31.4255

Office Park	904337	263.0820	0.0119	2.4600e-003	264.0948
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		298.1555	0.0135	2.7900e-003	299.3033

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market With Gas	12954.2	3.7685	1.7000e-004	4.0000e-005	3.7830
Fast Food Restaurant with Drive Thru	107610	31.3050	1.4200e-003	2.9000e-004	31.4255
Office Park	904337	263.0820	0.0119	2.4600e-003	264.0948
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		298.1555	0.0135	2.7900e-003	299.3033

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.8561	2.0000e-005	1.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.4500e-003	3.4500e-003	1.0000e-005	0.0000	3.6500e-003
Unmitigated	0.8561	2.0000e-005	1.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.4500e-003	3.4500e-003	1.0000e-005	0.0000	3.6500e-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	tons/yr										MT/yr					
Architectural Coating	0.1294					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7266					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7000e-004	2.0000e-005	1.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.4500e-003	3.4500e-003	1.0000e-005	0.0000	3.6500e-003
Total	0.8561	2.0000e-005	1.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.4500e-003	3.4500e-003	1.0000e-005	0.0000	3.6500e-003

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	0.1294					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7266					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7000e-004	2.0000e-005	1.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.4500e-003	3.4500e-003	1.0000e-005	0.0000	3.6500e-003
Total	0.8561	2.0000e-005	1.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.4500e-003	3.4500e-003	1.0000e-005	0.0000	3.6500e-003

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	30.1667	0.3985	9.6100e-003	41.5153
Unmitigated	30.1667	0.3986	9.6300e-003	41.5215

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market With Gas	0.0836574 / 0.0640700	0.2104	2.7300e-003	7.0000e-005	0.2883
Fast Food Restaurant with Drive Thru	0.910601 / 0.0581235	1.7815	0.0297	7.1000e-004	2.6275
Office Park	11.2008 / 6.86499	28.1748	0.3661	8.8500e-003	38.6056
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		30.1667	0.3986	9.6300e-003	41.5215

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
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Land Use	Mgal	MT/yr			
Convenience Market With Gas	0.0836574 / 0.0545720	0.2104	2.7300e-003	7.0000e-005	0.2883
Fast Food Restaurant with Drive Thru	0.910601 / 0.0581235	1.7815	0.0297	7.1000e-004	2.6271
Office Park	11.2008 / 6.86499	28.1748	0.3660	8.8300e-003	38.6000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		30.1667	0.3985	9.6100e-003	41.5153

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	18.9127	1.1177	0.0000	42.3845
Unmitigated	18.9127	1.1177	0.0000	42.3845

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			

Fast Food Restaurant with Drive-Thru	34.56	7.0154	0.4146	0.0000	15.7219
Office Park	58.61	11.8973	0.7031	0.0000	26.6626
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		18.9127	1.1177	0.0000	42.3845

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Fast Food Restaurant with Drive-Thru	34.56	7.0154	0.4146	0.0000	15.7219
Office Park	58.61	11.8973	0.7031	0.0000	26.6626
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		18.9127	1.1177	0.0000	42.3845

9.0 Operational Offroad

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

Sequoia Drive-In Business Park (PH 2)
San Joaquin Valley Unified APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	88.00	1000sqft	2.02	88,000.00	0
Other Non-Asphalt Surfaces	46.69	1000sqft	1.07	46,690.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	45
Climate Zone	7	Operational Year	2020		
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Phase 2 will have 8 buildings (14 units) with Office Park (ITE "Business Park") land use, ranging in square footage from 5,200 sf to 8,000 sf for a total of 88,000 sf of building gfa.

Phase 2 will be 8.25 acres out of 46.17 acres of the total Project.

Land Use - "Other Non-Asphalt Surfaces" includes the new roads, on-street parking, and parking lots.

Construction Phase - No demolition required.

Vehicle Trips -

Energy Use -

Mobile Land Use Mitigation - Figures taken from ISR: LUT-1 - LUT-5 are based on project location. SDT-1: project will incorporate typical standard sidewalks throughout project.

Table Name	Column Name	Default Value	New Value
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tblProjectCharacteristics	OperationalYear	2014	2020
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.3427	2.9423	2.8517	4.8700e-003	0.1584	0.1690	0.3275	0.0617	0.1585	0.2203	0.0000	407.8435	407.8435	0.0793	0.0000	409.5078
2020	0.9389	0.0156	0.0205	4.0000e-005	1.1200e-003	1.0100e-003	2.1200e-003	3.0000e-004	1.0100e-003	1.3000e-003	0.0000	3.1486	3.1486	2.2000e-004	0.0000	3.1531
Total	1.2815	2.9579	2.8722	4.9100e-003	0.1595	0.1700	0.3296	0.0620	0.1595	0.2216	0.0000	410.9920	410.9920	0.0795	0.0000	412.6609

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.3427	2.9423	2.8517	4.8700e-003	0.1584	0.1690	0.3275	0.0617	0.1585	0.2203	0.0000	407.8431	407.8431	0.0793	0.0000	409.5075
2020	0.9389	0.0156	0.0205	4.0000e-005	1.1200e-003	1.0100e-003	2.1200e-003	3.0000e-004	1.0100e-003	1.3000e-003	0.0000	3.1485	3.1485	2.2000e-004	0.0000	3.1531
Total	1.2815	2.9579	2.8722	4.9100e-003	0.1595	0.1700	0.3296	0.0620	0.1595	0.2216	0.0000	410.9917	410.9917	0.0795	0.0000	412.6606

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

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6198	1.0000e-005	1.2500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4100e-003	2.4100e-003	1.0000e-005	0.0000	2.5400e-003
Energy	0.0185	0.1680	0.1411	1.0100e-003		0.0128	0.0128		0.0128	0.0128	0.0000	550.2258	550.2258	0.0201	6.7900e-003	552.7529
Mobile	0.5140	1.8061	6.1908	0.0147	0.8240	0.0297	0.8537	0.2214	0.0274	0.2487	0.0000	1,073.4281	1,073.4281	0.0310	0.0000	1,074.0787
Waste						0.0000	0.0000		0.0000	0.0000	16.6128	0.0000	16.6128	0.9818	0.0000	37.2303
Water						0.0000	0.0000		0.0000	0.0000	4.9620	34.3807	39.3427	0.5112	0.0124	53.9082
Total	1.1522	1.9741	6.3331	0.0157	0.8240	0.0425	0.8664	0.2214	0.0401	0.2615	21.5748	1,658.0371	1,679.6119	1.5441	0.0192	1,717.9727

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	0.6198	1.0000e-005	1.2500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4100e-003	2.4100e-003	1.0000e-005	0.0000	2.5400e-003
Energy	0.0185	0.1680	0.1411	1.0100e-003		0.0128	0.0128		0.0128	0.0128	0.0000	550.2258	550.2258	0.0201	6.7900e-003	552.7529
Mobile	0.5033	1.7194	6.0054	0.0138	0.7749	0.0280	0.8029	0.2082	0.0258	0.2340	0.0000	1,011.6821	1,011.6821	0.0293	0.0000	1,012.2982
Waste						0.0000	0.0000		0.0000	0.0000	16.6128	0.0000	16.6128	0.9818	0.0000	37.2303

Water						0.0000	0.0000		0.0000	0.0000	4.9620	34.3807	39.3427	0.5111	0.0123	53.9003
Total	1.1416	1.8874	6.1477	0.0148	0.7749	0.0408	0.8157	0.2082	0.0386	0.2468	21.5748	1,596.2911	1,617.8659	1.5424	0.0191	1,656.1843

	ROG	NOx	CO	SO2	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	0.92	4.39	2.93	5.36	5.95	3.96	5.85	5.95	3.86	5.63	0.00	3.72	3.68	0.11	0.10	3.60

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2019	1/7/2019	5	5	
2	Grading	Grading	1/8/2019	1/17/2019	5	8	
3	Building Construction	Building Construction	1/18/2019	12/5/2019	5	230	
4	Paving	Paving	12/6/2019	12/31/2019	5	18	
5	Architectural Coating	Architectural Coating	1/1/2020	1/24/2020	5	18	

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: 202,035; Non-Residential Outdoor: 67,345 (Architectural Coating –

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
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38

Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	48.00	22.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	tons/yr										MT/yr					
Fugitive Dust					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0101	0.1063	0.0870	1.0000e-004		5.3800e-003	5.3800e-003		4.9500e-003	4.9500e-003	0.0000	8.7923	8.7923	2.7800e-003	0.0000	8.8507
Total	0.0101	0.1063	0.0870	1.0000e-004	0.0452	5.3800e-003	0.0506	0.0248	4.9500e-003	0.0298	0.0000	8.7923	8.7923	2.7800e-003	0.0000	8.8507

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	2.3000e-004	2.1800e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4429	0.4429	2.0000e-005	0.0000	0.4433
Total	1.3000e-004	2.3000e-004	2.1800e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4429	0.4429	2.0000e-005	0.0000	0.4433

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0101	0.1063	0.0870	1.0000e-004		5.3800e-003	5.3800e-003		4.9500e-003	4.9500e-003	0.0000	8.7923	8.7923	2.7800e-003	0.0000	8.8507

Total	0.0101	0.1063	0.0870	1.0000e-004	0.0452	5.3800e-003	0.0506	0.0248	4.9500e-003	0.0298	0.0000	8.7923	8.7923	2.7800e-003	0.0000	8.8507
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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	1.3000e-004	2.3000e-004	2.1800e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4429	0.4429	2.0000e-005	0.0000	0.4433
Total	1.3000e-004	2.3000e-004	2.1800e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4429	0.4429	2.0000e-005	0.0000	0.4433

3.3 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0110	0.1135	0.0936	1.2000e-004		6.1300e-003	6.1300e-003		5.6400e-003	5.6400e-003	0.0000	10.6837	10.6837	3.3800e-003	0.0000	10.7547
Total	0.0110	0.1135	0.0936	1.2000e-004	0.0262	6.1300e-003	0.0323	0.0135	5.6400e-003	0.0191	0.0000	10.6837	10.6837	3.3800e-003	0.0000	10.7547

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.8000e-004	3.1000e-004	2.9000e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.5905	0.5905	3.0000e-005	0.0000	0.5911
Total	1.8000e-004	3.1000e-004	2.9000e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.5905	0.5905	3.0000e-005	0.0000	0.5911

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0110	0.1135	0.0936	1.2000e-004		6.1300e-003	6.1300e-003		5.6400e-003	5.6400e-003	0.0000	10.6837	10.6837	3.3800e-003	0.0000	10.7547
Total	0.0110	0.1135	0.0936	1.2000e-004	0.0262	6.1300e-003	0.0323	0.0135	5.6400e-003	0.0191	0.0000	10.6837	10.6837	3.3800e-003	0.0000	10.7547

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	1.8000e-004	3.1000e-004	2.9000e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.5905	0.5905	3.0000e-005	0.0000	0.5911
Total	1.8000e-004	3.1000e-004	2.9000e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.5905	0.5905	3.0000e-005	0.0000	0.5911

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2704	2.4110	1.9688	3.0800e-003		0.1478	0.1478		0.1390	0.1390	0.0000	269.2412	269.2412	0.0655	0.0000	270.6168
Total	0.2704	2.4110	1.9688	3.0800e-003		0.1478	0.1478		0.1390	0.1390	0.0000	269.2412	269.2412	0.0655	0.0000	270.6168

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0226	0.1686	0.3123	5.4000e-004	0.0149	2.8400e-003	0.0177	4.2700e-003	2.6100e-003	6.8800e-003	0.0000	47.1623	47.1623	3.8000e-004	0.0000	47.1704
Worker	0.0164	0.0282	0.2669	8.2000e-004	0.0686	4.7000e-004	0.0691	0.0182	4.3000e-004	0.0187	0.0000	54.3298	54.3298	2.5100e-003	0.0000	54.3826
Total	0.0390	0.1968	0.5792	1.3600e-003	0.0835	3.3100e-003	0.0868	0.0225	3.0400e-003	0.0256	0.0000	101.4922	101.4922	2.8900e-003	0.0000	101.5530

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.2704	2.4110	1.9688	3.0800e-003		0.1478	0.1478		0.1390	0.1390	0.0000	269.2409	269.2409	0.0655	0.0000	270.6165
Total	0.2704	2.4110	1.9688	3.0800e-003		0.1478	0.1478		0.1390	0.1390	0.0000	269.2409	269.2409	0.0655	0.0000	270.6165

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	0.0226	0.1686	0.3123	5.4000e-004	0.0149	2.8400e-003	0.0177	4.2700e-003	2.6100e-003	6.8800e-003	0.0000	47.1623	47.1623	3.8000e-004	0.0000	47.1704
Worker	0.0164	0.0282	0.2669	8.2000e-004	0.0686	4.7000e-004	0.0691	0.0182	4.3000e-004	0.0187	0.0000	54.3298	54.3298	2.5100e-003	0.0000	54.3826
Total	0.0390	0.1968	0.5792	1.3600e-003	0.0835	3.3100e-003	0.0868	0.0225	3.0400e-003	0.0256	0.0000	101.4922	101.4922	2.8900e-003	0.0000	101.5530

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0113	0.1133	0.1093	1.7000e-004		6.4000e-003	6.4000e-003		5.9000e-003	5.9000e-003	0.0000	14.8291	14.8291	4.5600e-003	0.0000	14.9248
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0113	0.1133	0.1093	1.7000e-004		6.4000e-003	6.4000e-003		5.9000e-003	5.9000e-003	0.0000	14.8291	14.8291	4.5600e-003	0.0000	14.9248

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.3000e-004	9.2000e-004	8.7000e-003	3.0000e-005	2.2400e-003	2.0000e-005	2.2500e-003	5.9000e-004	1.0000e-005	6.1000e-004	0.0000	1.7716	1.7716	8.0000e-005	0.0000	1.7734
Total	5.3000e-004	9.2000e-004	8.7000e-003	3.0000e-005	2.2400e-003	2.0000e-005	2.2500e-003	5.9000e-004	1.0000e-005	6.1000e-004	0.0000	1.7716	1.7716	8.0000e-005	0.0000	1.7734

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0113	0.1133	0.1093	1.7000e-004		6.4000e-003	6.4000e-003		5.9000e-003	5.9000e-003	0.0000	14.8290	14.8290	4.5600e-003	0.0000	14.9248

Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0113	0.1133	0.1093	1.7000e-004		6.4000e-003	6.4000e-003		5.9000e-003	5.9000e-003	0.0000	14.8290	14.8290	4.5600e-003	0.0000	14.9248

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	5.3000e-004	9.2000e-004	8.7000e-003	3.0000e-005	2.2400e-003	2.0000e-005	2.2500e-003	5.9000e-004	1.0000e-005	6.1000e-004	0.0000	1.7716	1.7716	8.0000e-005	0.0000	1.7734
Total	5.3000e-004	9.2000e-004	8.7000e-003	3.0000e-005	2.2400e-003	2.0000e-005	2.2500e-003	5.9000e-004	1.0000e-005	6.1000e-004	0.0000	1.7716	1.7716	8.0000e-005	0.0000	1.7734

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.9364					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1800e-003	0.0152	0.0165	3.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	2.2979	2.2979	1.8000e-004	0.0000	2.3017
Total	0.9386	0.0152	0.0165	3.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	2.2979	2.2979	1.8000e-004	0.0000	2.3017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	2.5000e-004	4.2000e-004	4.0000e-003	1.0000e-005	1.1200e-003	1.0000e-005	1.1300e-003	3.0000e-004	1.0000e-005	3.0000e-004	0.0000	0.8506	0.8506	4.0000e-005	0.0000	0.8514
Total	2.5000e-004	4.2000e-004	4.0000e-003	1.0000e-005	1.1200e-003	1.0000e-005	1.1300e-003	3.0000e-004	1.0000e-005	3.0000e-004	0.0000	0.8506	0.8506	4.0000e-005	0.0000	0.8514

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.9364					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1800e-003	0.0152	0.0165	3.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	2.2979	2.2979	1.8000e-004	0.0000	2.3017
Total	0.9386	0.0152	0.0165	3.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	2.2979	2.2979	1.8000e-004	0.0000	2.3017

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	2.5000e-004	4.2000e-004	4.0000e-003	1.0000e-005	1.1200e-003	1.0000e-005	1.1300e-003	3.0000e-004	1.0000e-005	3.0000e-004	0.0000	0.8506	0.8506	4.0000e-005	0.0000	0.8514
Total	2.5000e-004	4.2000e-004	4.0000e-003	1.0000e-005	1.1200e-003	1.0000e-005	1.1300e-003	3.0000e-004	1.0000e-005	3.0000e-004	0.0000	0.8506	0.8506	4.0000e-005	0.0000	0.8514

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

- Increase Density
- Improve Walkability Design
- Improve Destination Accessibility
- Increase Transit Accessibility
- Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5033	1.7194	6.0054	0.0138	0.7749	0.0280	0.8029	0.2082	0.0258	0.2340	0.0000	1,011.6821	1,011.6821	0.0293	0.0000	1,012.2982
Unmitigated	0.5140	1.8061	6.1908	0.0147	0.8240	0.0297	0.8537	0.2214	0.0274	0.2487	0.0000	1,073.4281	1,073.4281	0.0310	0.0000	1,074.0787

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Office Park	1,004.96	144.32	66.88	2,165,814	2,036,948
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	1,004.96	144.32	66.88	2,165,814	2,036,948

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Office Park	14.70	6.60	6.60	33.00	48.00	19.00	82	15	3
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.409687	0.062677	0.156376	0.176111	0.050971	0.007837	0.019872	0.103412	0.001778	0.001574	0.006496	0.000897	0.002312

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	367.3630	367.3630	0.0166	3.4400e-003	368.7772
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	367.3630	367.3630	0.0166	3.4400e-003	368.7772
NaturalGas Mitigated	0.0185	0.1680	0.1411	1.0100e-003		0.0128	0.0128		0.0128	0.0128	0.0000	182.8628	182.8628	3.5000e-003	3.3500e-003	183.9757
NaturalGas Unmitigated	0.0185	0.1680	0.1411	1.0100e-003		0.0128	0.0128		0.0128	0.0128	0.0000	182.8628	182.8628	3.5000e-003	3.3500e-003	183.9757

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					
Other Non-Asphalt Surfaces	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
Office Park	3.42672e+006	0.0185	0.1680	0.1411	1.0100e-003		0.0128	0.0128		0.0128	0.0128	0.0000	182.8628	182.8628	3.5000e-003	3.3500e-003	183.9757
Total		0.0185	0.1680	0.1411	1.0100e-003		0.0128	0.0128		0.0128	0.0128	0.0000	182.8628	182.8628	3.5000e-003	3.3500e-003	183.9757

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Office Park	3.42672e+006	0.0185	0.1680	0.1411	1.0100e-003		0.0128	0.0128		0.0128	0.0128	0.0000	182.8628	182.8628	3.5000e-003	3.3500e-003	183.9757
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0185	0.1680	0.1411	1.0100e-003		0.0128	0.0128		0.0128	0.0128	0.0000	182.8628	182.8628	3.5000e-003	3.3500e-003	183.9757

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Office Park	1.2628e+006	367.3630	0.0166	3.4400e-003	368.7772

Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		367.3630	0.0166	3.4400e-003	368.7772

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Office Park	1.2628e+06	367.3630	0.0166	3.4400e-003	368.7772
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		367.3630	0.0166	3.4400e-003	368.7772

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6198	1.0000e-005	1.2500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4100e-003	2.4100e-003	1.0000e-005	0.0000	2.5400e-003
Unmitigated	0.6198	1.0000e-005	1.2500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4100e-003	2.4100e-003	1.0000e-005	0.0000	2.5400e-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	tons/yr										MT/yr					
Architectural Coating	0.0936					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5260					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2000e-004	1.0000e-005	1.2500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4100e-003	2.4100e-003	1.0000e-005	0.0000	2.5400e-003
Total	0.6198	1.0000e-005	1.2500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4100e-003	2.4100e-003	1.0000e-005	0.0000	2.5400e-003

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	0.0936					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5260					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2000e-004	1.0000e-005	1.2500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4100e-003	2.4100e-003	1.0000e-005	0.0000	2.5400e-003
Total	0.6198	1.0000e-005	1.2500e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4100e-003	2.4100e-003	1.0000e-005	0.0000	2.5400e-003

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	39.3427	0.5111	0.0123	53.9003
Unmitigated	39.3427	0.5112	0.0124	53.9082

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Office Park	15.6406 / 9.58616	39.3427	0.5112	0.0124	53.9082
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		39.3427	0.5112	0.0124	53.9082

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Office Park	15.6406 / 9.58616	39.3427	0.5111	0.0123	53.9003
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000

Total		39.3427	0.5111	0.0123	53.9003
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8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	16.6128	0.9818	0.0000	37.2303
Unmitigated	16.6128	0.9818	0.0000	37.2303

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Office Park	81.84	16.6128	0.9818	0.0000	37.2303
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		16.6128	0.9818	0.0000	37.2303

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Office Park	81.84	16.6128	0.9818	0.0000	37.2303
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		16.6128	0.9818	0.0000	37.2303

9.0 Operational Offroad

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

Sequoia Drive-In Business Park (PH 3)
San Joaquin Valley Unified APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	104.00	1000sqft	2.39	104,000.00	0
Other Non-Asphalt Surfaces	33.53	1000sqft	0.77	33,530.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	45
Climate Zone	7			Operational Year	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Phase 3 will have 10 buildings with Office Park (ITE "Business Park") land use, ranging in square footage from 8,000 sf to 12,000 sf for a total of 104,000sf of building gfa.

Phase 3 will be 14.89 acres out of 46.17 acres of the total Project.

Land Use - "Other Non-Asphalt Surfaces" includes the new roads, on-street parking, and parking lots.

Construction Phase - No demolition required.

Vehicle Trips -

Energy Use -

Mobile Land Use Mitigation - Figures taken from ISR: LUT-1 - LUT-5 are based on project location. SDT-1: project will incorporate typical standard sidewalks throughout project.

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	OperationalYear	2014	2022

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6329	1.0000e-005	1.2700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4600e-003	2.4600e-003	1.0000e-005	0.0000	2.5900e-003
Energy	0.0218	0.1985	0.1668	1.1900e-003		0.0151	0.0151		0.0151	0.0151	0.0000	650.2669	650.2669	0.0238	8.0200e-003	653.2535
Mobile	0.5563	1.6877	6.6784	0.0173	0.9738	0.0333	1.0070	0.2616	0.0306	0.2923	0.0000	1,248.6395	1,248.6395	0.0334	0.0000	1,249.3406
Waste						0.0000	0.0000		0.0000	0.0000	19.6333	0.0000	19.6333	1.1603	0.0000	43.9995
Water						0.0000	0.0000		0.0000	0.0000	5.8642	40.6317	46.4960	0.6042	0.0146	63.7097
Total	1.2110	1.8862	6.8464	0.0185	0.9738	0.0483	1.0221	0.2616	0.0457	0.3074	25.4975	1,939.5406	1,965.0381	1.8216	0.0226	2,010.3058

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	0.6329	1.0000e-005	1.2700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4600e-003	2.4600e-003	1.0000e-005	0.0000	2.5900e-003
Energy	0.0218	0.1985	0.1668	1.1900e-003		0.0151	0.0151		0.0151	0.0151	0.0000	650.2669	650.2669	0.0238	8.0200e-003	653.2535
Mobile	0.5447	1.6092	6.4826	0.0163	0.9159	0.0314	0.9472	0.2461	0.0289	0.2750	0.0000	1,176.8229	1,176.8229	0.0316	0.0000	1,177.4867
Waste						0.0000	0.0000		0.0000	0.0000	19.6333	0.0000	19.6333	1.1603	0.0000	43.9995
Water						0.0000	0.0000		0.0000	0.0000	5.8642	40.6317	46.4960	0.6040	0.0146	63.7003

Total	1.1994	1.8077	6.6507	0.0175	0.9159	0.0465	0.9623	0.2461	0.0440	0.2901	25.4975	1,867.7240	1,893.2215	1.8197	0.0226	1,938.4425
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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
Percent Reduction	0.97	4.16	2.86	5.35	5.95	3.87	5.85	5.95	3.78	5.63	0.00	3.70	3.65	0.10	0.09	3.57

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2019	1/7/2019	5	5	
2	Grading	Grading	1/8/2019	1/17/2019	5	8	
3	Building Construction	Building Construction	1/18/2019	12/5/2019	5	230	
4	Paving	Paving	12/6/2019	12/31/2019	5	18	
5	Architectural Coating	Architectural Coating	1/1/2020	1/24/2020	5	18	

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: 206,295; Non-Residential Outdoor: 68,765 (Architectural Coating –

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
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Paving	Pavers	1	8.00	125	0.42

Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	47.00	23.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2019

Unmitigated Construction On-Site

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

Fugitive Dust					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0101	0.1063	0.0870	1.0000e-004		5.3800e-003	5.3800e-003		4.9500e-003	4.9500e-003	0.0000	8.7923	8.7923	2.7800e-003	0.0000	8.8507
Total	0.0101	0.1063	0.0870	1.0000e-004	0.0452	5.3800e-003	0.0506	0.0248	4.9500e-003	0.0298	0.0000	8.7923	8.7923	2.7800e-003	0.0000	8.8507

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	2.3000e-004	2.1800e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4429	0.4429	2.0000e-005	0.0000	0.4433
Total	1.3000e-004	2.3000e-004	2.1800e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4429	0.4429	2.0000e-005	0.0000	0.4433

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0101	0.1063	0.0870	1.0000e-004		5.3800e-003	5.3800e-003		4.9500e-003	4.9500e-003	0.0000	8.7923	8.7923	2.7800e-003	0.0000	8.8507
Total	0.0101	0.1063	0.0870	1.0000e-004	0.0452	5.3800e-003	0.0506	0.0248	4.9500e-003	0.0298	0.0000	8.7923	8.7923	2.7800e-003	0.0000	8.8507

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	1.3000e-004	2.3000e-004	2.1800e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4429	0.4429	2.0000e-005	0.0000	0.4433
Total	1.3000e-004	2.3000e-004	2.1800e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4429	0.4429	2.0000e-005	0.0000	0.4433

3.3 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0110	0.1135	0.0936	1.2000e-004		6.1300e-003	6.1300e-003		5.6400e-003	5.6400e-003	0.0000	10.6837	10.6837	3.3800e-003	0.0000	10.7547
Total	0.0110	0.1135	0.0936	1.2000e-004	0.0262	6.1300e-003	0.0323	0.0135	5.6400e-003	0.0191	0.0000	10.6837	10.6837	3.3800e-003	0.0000	10.7547

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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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	1.8000e-004	3.1000e-004	2.9000e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.5905	0.5905	3.0000e-005	0.0000	0.5911
Total	1.8000e-004	3.1000e-004	2.9000e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.5905	0.5905	3.0000e-005	0.0000	0.5911

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0110	0.1135	0.0936	1.2000e-004		6.1300e-003	6.1300e-003		5.6400e-003	5.6400e-003	0.0000	10.6837	10.6837	3.3800e-003	0.0000	10.7547
Total	0.0110	0.1135	0.0936	1.2000e-004	0.0262	6.1300e-003	0.0323	0.0135	5.6400e-003	0.0191	0.0000	10.6837	10.6837	3.3800e-003	0.0000	10.7547

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	1.8000e-004	3.1000e-004	2.9000e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.5905	0.5905	3.0000e-005	0.0000	0.5911

Total	1.8000e-004	3.1000e-004	2.9000e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.5905	0.5905	3.0000e-005	0.0000	0.5911
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3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2704	2.4110	1.9688	3.0800e-003		0.1478	0.1478		0.1390	0.1390	0.0000	269.2412	269.2412	0.0655	0.0000	270.6168
Total	0.2704	2.4110	1.9688	3.0800e-003		0.1478	0.1478		0.1390	0.1390	0.0000	269.2412	269.2412	0.0655	0.0000	270.6168

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0236	0.1763	0.3265	5.7000e-004	0.0156	2.9700e-003	0.0185	4.4600e-003	2.7300e-003	7.1900e-003	0.0000	49.3061	49.3061	4.0000e-004	0.0000	49.3145
Worker	0.0161	0.0276	0.2614	8.0000e-004	0.0672	4.6000e-004	0.0677	0.0179	4.2000e-004	0.0183	0.0000	53.1980	53.1980	2.4600e-003	0.0000	53.2496
Total	0.0397	0.2039	0.5878	1.3700e-003	0.0828	3.4300e-003	0.0862	0.0223	3.1500e-003	0.0255	0.0000	102.5040	102.5040	2.8600e-003	0.0000	102.5641

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.2704	2.4110	1.9688	3.0800e-003		0.1478	0.1478		0.1390	0.1390	0.0000	269.2409	269.2409	0.0655	0.0000	270.6165
Total	0.2704	2.4110	1.9688	3.0800e-003		0.1478	0.1478		0.1390	0.1390	0.0000	269.2409	269.2409	0.0655	0.0000	270.6165

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	0.0236	0.1763	0.3265	5.7000e-004	0.0156	2.9700e-003	0.0185	4.4600e-003	2.7300e-003	7.1900e-003	0.0000	49.3061	49.3061	4.0000e-004	0.0000	49.3145
Worker	0.0161	0.0276	0.2614	8.0000e-004	0.0672	4.6000e-004	0.0677	0.0179	4.2000e-004	0.0183	0.0000	53.1980	53.1980	2.4600e-003	0.0000	53.2496
Total	0.0397	0.2039	0.5878	1.3700e-003	0.0828	3.4300e-003	0.0862	0.0223	3.1500e-003	0.0255	0.0000	102.5040	102.5040	2.8600e-003	0.0000	102.5641

3.5 Paving - 2019

Unmitigated Construction On-Site

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

Off-Road	0.0113	0.1133	0.1093	1.7000e-004		6.4000e-003	6.4000e-003		5.9000e-003	5.9000e-003	0.0000	14.8291	14.8291	4.5600e-003	0.0000	14.9248
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0113	0.1133	0.1093	1.7000e-004		6.4000e-003	6.4000e-003		5.9000e-003	5.9000e-003	0.0000	14.8291	14.8291	4.5600e-003	0.0000	14.9248

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.3000e-004	9.2000e-004	8.7000e-003	3.0000e-005	2.2400e-003	2.0000e-005	2.2500e-003	5.9000e-004	1.0000e-005	6.1000e-004	0.0000	1.7716	1.7716	8.0000e-005	0.0000	1.7734
Total	5.3000e-004	9.2000e-004	8.7000e-003	3.0000e-005	2.2400e-003	2.0000e-005	2.2500e-003	5.9000e-004	1.0000e-005	6.1000e-004	0.0000	1.7716	1.7716	8.0000e-005	0.0000	1.7734

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0113	0.1133	0.1093	1.7000e-004		6.4000e-003	6.4000e-003		5.9000e-003	5.9000e-003	0.0000	14.8290	14.8290	4.5600e-003	0.0000	14.9248
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0113	0.1133	0.1093	1.7000e-004		6.4000e-003	6.4000e-003		5.9000e-003	5.9000e-003	0.0000	14.8290	14.8290	4.5600e-003	0.0000	14.9248

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	5.3000e-004	9.2000e-004	8.7000e-003	3.0000e-005	2.2400e-003	2.0000e-005	2.2500e-003	5.9000e-004	1.0000e-005	6.1000e-004	0.0000	1.7716	1.7716	8.0000e-005	0.0000	1.7734
Total	5.3000e-004	9.2000e-004	8.7000e-003	3.0000e-005	2.2400e-003	2.0000e-005	2.2500e-003	5.9000e-004	1.0000e-005	6.1000e-004	0.0000	1.7716	1.7716	8.0000e-005	0.0000	1.7734

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.9562					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1800e-003	0.0152	0.0165	3.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	2.2979	2.2979	1.8000e-004	0.0000	2.3017
Total	0.9584	0.0152	0.0165	3.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	2.2979	2.2979	1.8000e-004	0.0000	2.3017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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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	2.2000e-004	3.8000e-004	3.6000e-003	1.0000e-005	1.0100e-003	1.0000e-005	1.0100e-003	2.7000e-004	1.0000e-005	2.7000e-004	0.0000	0.7656	0.7656	3.0000e-005	0.0000	0.7663
Total	2.2000e-004	3.8000e-004	3.6000e-003	1.0000e-005	1.0100e-003	1.0000e-005	1.0100e-003	2.7000e-004	1.0000e-005	2.7000e-004	0.0000	0.7656	0.7656	3.0000e-005	0.0000	0.7663

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.9562					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1800e-003	0.0152	0.0165	3.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	2.2979	2.2979	1.8000e-004	0.0000	2.3017
Total	0.9584	0.0152	0.0165	3.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	2.2979	2.2979	1.8000e-004	0.0000	2.3017

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	2.2000e-004	3.8000e-004	3.6000e-003	1.0000e-005	1.0100e-003	1.0000e-005	1.0100e-003	2.7000e-004	1.0000e-005	2.7000e-004	0.0000	0.7656	0.7656	3.0000e-005	0.0000	0.7663

Total	2.2000e-004	3.8000e-004	3.6000e-003	1.0000e-005	1.0100e-003	1.0000e-005	1.0100e-003	2.7000e-004	1.0000e-005	2.7000e-004	0.0000	0.7656	0.7656	3.0000e-005	0.0000	0.7663
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4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

- Increase Density
- Improve Walkability Design
- Improve Destination Accessibility
- Increase Transit Accessibility
- Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5447	1.6092	6.4826	0.0163	0.9159	0.0314	0.9472	0.2461	0.0289	0.2750	0.0000	1,176.8229	1,176.8229	0.0316	0.0000	1,177.4867
Unmitigated	0.5563	1.6877	6.6784	0.0173	0.9738	0.0333	1.0070	0.2616	0.0306	0.2923	0.0000	1,248.6395	1,248.6395	0.0334	0.0000	1,249.3406

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Office Park	1,187.68	170.56	79.04	2,559,599	2,407,302
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	1,187.68	170.56	79.04	2,559,599	2,407,302

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by

Office Park	14.70	6.60	6.60	33.00	48.00	19.00	82	15	3
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.409215	0.062447	0.156087	0.176599	0.051029	0.007877	0.019913	0.103685	0.001777	0.001585	0.006582	0.000876	0.002327

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	434.1563	434.1563	0.0196	4.0600e-003	435.8276
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	434.1563	434.1563	0.0196	4.0600e-003	435.8276
NaturalGas Mitigated	0.0218	0.1985	0.1668	1.1900e-003		0.0151	0.0151		0.0151	0.0151	0.0000	216.1106	216.1106	4.1400e-003	3.9600e-003	217.4258
NaturalGas Unmitigated	0.0218	0.1985	0.1668	1.1900e-003		0.0151	0.0151		0.0151	0.0151	0.0000	216.1106	216.1106	4.1400e-003	3.9600e-003	217.4258

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
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Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	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
Office Park	4.04976e+006	0.0218	0.1985	0.1668	1.1900e-003		0.0151	0.0151		0.0151	0.0151	0.0000	216.1106	216.1106	4.1400e-003	3.9600e-003	217.4258
Total		0.0218	0.1985	0.1668	1.1900e-003		0.0151	0.0151		0.0151	0.0151	0.0000	216.1106	216.1106	4.1400e-003	3.9600e-003	217.4258

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Office Park	4.04976e+006	0.0218	0.1985	0.1668	1.1900e-003		0.0151	0.0151		0.0151	0.0151	0.0000	216.1106	216.1106	4.1400e-003	3.9600e-003	217.4258
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0218	0.1985	0.1668	1.1900e-003		0.0151	0.0151		0.0151	0.0151	0.0000	216.1106	216.1106	4.1400e-003	3.9600e-003	217.4258

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Office Park	1.4924e+006	434.1563	0.0196	4.0600e-003	435.8276
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		434.1563	0.0196	4.0600e-003	435.8276

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Office Park	1.4924e+006	434.1563	0.0196	4.0600e-003	435.8276
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		434.1563	0.0196	4.0600e-003	435.8276

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6329	1.0000e-005	1.2700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4600e-003	2.4600e-003	1.0000e-005	0.0000	2.5900e-003
Unmitigated	0.6329	1.0000e-005	1.2700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4600e-003	2.4600e-003	1.0000e-005	0.0000	2.5900e-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	tons/yr										MT/yr					
Architectural Coating	0.0956					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5371					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2000e-004	1.0000e-005	1.2700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4600e-003	2.4600e-003	1.0000e-005	0.0000	2.5900e-003
Total	0.6329	1.0000e-005	1.2700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4600e-003	2.4600e-003	1.0000e-005	0.0000	2.5900e-003

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	0.0956					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5371					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2000e-004	1.0000e-005	1.2700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4600e-003	2.4600e-003	1.0000e-005	0.0000	2.5900e-003
Total	0.6329	1.0000e-005	1.2700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.4600e-003	2.4600e-003	1.0000e-005	0.0000	2.5900e-003

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			

Mitigated	46.4960	0.6040	0.0146	63.7003
Unmitigated	46.4960	0.6042	0.0146	63.7097

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Office Park	18.4843 / 11.3291	46.4960	0.6042	0.0146	63.7097
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		46.4960	0.6042	0.0146	63.7097

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Office Park	18.4843 / 11.3291	46.4960	0.6040	0.0146	63.7003
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		46.4960	0.6040	0.0146	63.7003

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	19.6333	1.1603	0.0000	43.9995
Unmitigated	19.6333	1.1603	0.0000	43.9995

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Office Park	96.72	19.6333	1.1603	0.0000	43.9995
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		19.6333	1.1603	0.0000	43.9995

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
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Land Use	tons	MT/yr			
Office Park	96.72	19.6333	1.1603	0.0000	43.9995
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		19.6333	1.1603	0.0000	43.9995

9.0 Operational Offroad

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

Sequoia Drive-In Business Park (PH 4)
San Joaquin Valley Unified APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	98.03	1000sqft	2.25	98,030.00	0
Other Non-Asphalt Surfaces	62.82	1000sqft	1.44	62,820.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	45
Climate Zone	7			Operational Year	2024
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Phase 4 will have 8 buildings with Office Park (ITE "Business Park") land use, ranging in square footage from 5,200 sf to 13,390 sf for a total of 98,030 sf of building gfa.

Phase 4 will be 12.72 acres out of 46.17 acres of the total Project.

Land Use - "Other Non-Asphalt Surfaces" includes the new roads, on-street parking, and parking lots.

Construction Phase - No demolition required.

Vehicle Trips -

Energy Use -

Mobile Land Use Mitigation - Figures taken from ISR: LUT-1 - LUT-5 are based on project location. SDT-1: project will incorporate typical standard sidewalks throughout project.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseStartDate	1/7/2023	1/9/2023

tblProjectCharacteristics	OperationalYear	2014	2024
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

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					
2023	0.2385	2.0006	2.6814	5.1300e-003	0.1753	0.0939	0.2692	0.0663	0.0881	0.1543	0.0000	415.1212	415.1212	0.0765	0.0000	416.7285
2024	1.1206	0.0155	0.0264	5.0000e-005	1.4700e-003	7.6000e-004	2.2200e-003	3.9000e-004	7.4000e-004	1.1300e-003	0.0000	4.1577	4.1577	4.3000e-004	0.0000	4.1667
Total	1.3591	2.0161	2.7078	5.1800e-003	0.1768	0.0946	0.2714	0.0667	0.0888	0.1555	0.0000	419.2789	419.2789	0.0770	0.0000	420.8952

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					
2023	0.2385	2.0006	2.6814	5.1300e-003	0.1753	0.0939	0.2692	0.0663	0.0881	0.1543	0.0000	415.1209	415.1209	0.0765	0.0000	416.7281
2024	1.1206	0.0155	0.0264	5.0000e-005	1.4700e-003	7.6000e-004	2.2200e-003	3.9000e-004	7.4000e-004	1.1300e-003	0.0000	4.1577	4.1577	4.3000e-004	0.0000	4.1667
Total	1.3591	2.0161	2.7078	5.1800e-003	0.1768	0.0946	0.2714	0.0667	0.0888	0.1555	0.0000	419.2786	419.2786	0.0770	0.0000	420.8948

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

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7402	1.0000e-005	1.4800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8700e-003	2.8700e-003	1.0000e-005	0.0000	3.0300e-003
Energy	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142	0.0000	612.9391	612.9391	0.0224	7.5600e-003	615.7542
Mobile	0.4776	1.3936	5.7598	0.0163	0.9178	0.0302	0.9480	0.2466	0.0278	0.2744	0.0000	1,160.5306	1,160.5306	0.0291	0.0000	1,161.1407
Waste						0.0000	0.0000		0.0000	0.0000	18.5067	0.0000	18.5067	1.0937	0.0000	41.4747
Water						0.0000	0.0000		0.0000	0.0000	5.5276	38.2993	43.8269	0.5695	0.0138	60.0525
Total	1.2383	1.5808	5.9185	0.0174	0.9178	0.0444	0.9623	0.2466	0.0421	0.2887	24.0343	1,811.7719	1,835.8061	1.7147	0.0213	1,878.4251

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	0.7402	1.0000e-005	1.4800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8700e-003	2.8700e-003	1.0000e-005	0.0000	3.0300e-003
Energy	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142	0.0000	612.9391	612.9391	0.0224	7.5600e-003	615.7542
Mobile	0.4674	1.3303	5.5913	0.0154	0.8632	0.0285	0.8917	0.2319	0.0263	0.2582	0.0000	1,093.7860	1,093.7860	0.0275	0.0000	1,094.3635
Waste						0.0000	0.0000		0.0000	0.0000	18.5067	0.0000	18.5067	1.0937	0.0000	41.4747

Water						0.0000	0.0000		0.0000	0.0000	5.5276	38.2993	43.8269	0.5694	0.0137	60.0437
Total	1.2282	1.5174	5.7500	0.0165	0.8632	0.0427	0.9060	0.2319	0.0405	0.2724	24.0343	1,745.0272	1,769.0615	1.7130	0.0213	1,811.6391

	ROG	NOx	CO	SO2	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	0.82	4.01	2.85	5.40	5.95	3.83	5.85	5.95	3.73	5.63	0.00	3.68	3.64	0.10	0.09	3.56

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/2/2023	1/6/2023	5	5	
2	Grading	Grading	1/9/2023	1/18/2023	5	8	
3	Building Construction	Building Construction	1/19/2023	12/6/2023	5	230	
4	Paving	Paving	12/7/2023	1/1/2024	5	18	
5	Architectural Coating	Architectural Coating	1/2/2024	1/25/2024	5	18	

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: 241,275; Non-Residential Outdoor: 80,425 (Architectural Coating –

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
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38

Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	58.00	26.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	tons/yr										MT/yr					
Fugitive Dust					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.5400e-003	0.0748	0.0721	1.0000e-004		3.4800e-003	3.4800e-003		3.2000e-003	3.2000e-003	0.0000	8.6045	8.6045	2.7800e-003	0.0000	8.6630
Total	7.5400e-003	0.0748	0.0721	1.0000e-004	0.0452	3.4800e-003	0.0487	0.0248	3.2000e-003	0.0280	0.0000	8.6045	8.6045	2.7800e-003	0.0000	8.6630

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.7000e-004	1.6400e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4061	0.4061	2.0000e-005	0.0000	0.4065
Total	1.0000e-004	1.7000e-004	1.6400e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4061	0.4061	2.0000e-005	0.0000	0.4065

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.5400e-003	0.0748	0.0721	1.0000e-004		3.4800e-003	3.4800e-003		3.2000e-003	3.2000e-003	0.0000	8.6045	8.6045	2.7800e-003	0.0000	8.6630

Total	7.5400e-003	0.0748	0.0721	1.0000e-004	0.0452	3.4800e-003	0.0487	0.0248	3.2000e-003	0.0280	0.0000	8.6045	8.6045	2.7800e-003	0.0000	8.6630
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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	1.7000e-004	1.6400e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4061	0.4061	2.0000e-005	0.0000	0.4065
Total	1.0000e-004	1.7000e-004	1.6400e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4061	0.4061	2.0000e-005	0.0000	0.4065

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.7700e-003	0.0744	0.0840	1.2000e-004		3.6500e-003	3.6500e-003		3.3600e-003	3.3600e-003	0.0000	10.4582	10.4582	3.3800e-003	0.0000	10.5293
Total	7.7700e-003	0.0744	0.0840	1.2000e-004	0.0262	3.6500e-003	0.0299	0.0135	3.3600e-003	0.0168	0.0000	10.4582	10.4582	3.3800e-003	0.0000	10.5293

Unmitigated Construction Off-Site

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	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	2.3000e-004	2.1900e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.5415	0.5415	2.0000e-005	0.0000	0.5420
Total	1.4000e-004	2.3000e-004	2.1900e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.5415	0.5415	2.0000e-005	0.0000	0.5420

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1801	1.6460	1.8641	3.0900e-003		0.0801	0.0801		0.0754	0.0754	0.0000	265.4713	265.4713	0.0631	0.0000	266.7955
Total	0.1801	1.6460	1.8641	3.0900e-003		0.0801	0.0801		0.0754	0.0754	0.0000	265.4713	265.4713	0.0631	0.0000	266.7955

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0197	0.1051	0.3056	6.4000e-004	0.0176	2.3600e-003	0.0200	5.0400e-003	2.1700e-003	7.2100e-003	0.0000	54.1902	54.1902	4.0000e-004	0.0000	54.1985
Worker	0.0150	0.0255	0.2435	9.9000e-004	0.0829	5.6000e-004	0.0835	0.0220	5.2000e-004	0.0226	0.0000	60.1974	60.1974	2.5000e-003	0.0000	60.2500
Total	0.0347	0.1306	0.5490	1.6300e-003	0.1005	2.9200e-003	0.1034	0.0271	2.6900e-003	0.0298	0.0000	114.3876	114.3876	2.9000e-003	0.0000	114.4485

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.1801	1.6460	1.8641	3.0900e-003		0.0801	0.0801		0.0754	0.0754	0.0000	265.4710	265.4710	0.0631	0.0000	266.7952
Total	0.1801	1.6460	1.8641	3.0900e-003		0.0801	0.0801		0.0754	0.0754	0.0000	265.4710	265.4710	0.0631	0.0000	266.7952

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	0.0197	0.1051	0.3056	6.4000e-004	0.0176	2.3600e-003	0.0200	5.0400e-003	2.1700e-003	7.2100e-003	0.0000	54.1902	54.1902	4.0000e-004	0.0000	54.1985
Worker	0.0150	0.0255	0.2435	9.9000e-004	0.0829	5.6000e-004	0.0835	0.0220	5.2000e-004	0.0226	0.0000	60.1974	60.1974	2.5000e-003	0.0000	60.2500
Total	0.0347	0.1306	0.5490	1.6300e-003	0.1005	2.9200e-003	0.1034	0.0271	2.6900e-003	0.0298	0.0000	114.3876	114.3876	2.9000e-003	0.0000	114.4485

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.7100e-003	0.0738	0.1022	1.6000e-004		3.6600e-003	3.6600e-003		3.3800e-003	3.3800e-003	0.0000	13.7177	13.7177	4.3100e-003	0.0000	13.8081
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	7.7100e-003	0.0738	0.1022	1.6000e-004		3.6600e-003	3.6600e-003		3.3800e-003	3.3800e-003	0.0000	13.7177	13.7177	4.3100e-003	0.0000	13.8081

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	6.5000e-004	6.2100e-003	3.0000e-005	2.1100e-003	1.0000e-005	2.1300e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	1.5343	1.5343	6.0000e-005	0.0000	1.5356
Total	3.8000e-004	6.5000e-004	6.2100e-003	3.0000e-005	2.1100e-003	1.0000e-005	2.1300e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	1.5343	1.5343	6.0000e-005	0.0000	1.5356

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	7.7100e-003	0.0738	0.1022	1.6000e-004		3.6600e-003	3.6600e-003		3.3800e-003	3.3800e-003	0.0000	13.7177	13.7177	4.3100e-003	0.0000	13.8081

Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	7.7100e-003	0.0738	0.1022	1.6000e-004		3.6600e-003	3.6600e-003		3.3800e-003	3.3800e-003	0.0000	13.7177	13.7177	4.3100e-003	0.0000	13.8081

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	6.5000e-004	6.2100e-003	3.0000e-005	2.1100e-003	1.0000e-005	2.1300e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	1.5343	1.5343	6.0000e-005	0.0000	1.5356
Total	3.8000e-004	6.5000e-004	6.2100e-003	3.0000e-005	2.1100e-003	1.0000e-005	2.1300e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	1.5343	1.5343	6.0000e-005	0.0000	1.5356

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.4000e-004	4.0900e-003	6.0300e-003	1.0000e-005		2.0000e-004	2.0000e-004		1.8000e-004	1.8000e-004	0.0000	0.8070	0.8070	2.5000e-004	0.0000	0.8123
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.4000e-004	4.0900e-003	6.0300e-003	1.0000e-005		2.0000e-004	2.0000e-004		1.8000e-004	1.8000e-004	0.0000	0.8070	0.8070	2.5000e-004	0.0000	0.8123

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	4.0000e-005	3.5000e-004	0.0000	1.2000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0892	0.0892	0.0000	0.0000	0.0893
Total	2.0000e-005	4.0000e-005	3.5000e-004	0.0000	1.2000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0892	0.0892	0.0000	0.0000	0.0893

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.4000e-004	4.0900e-003	6.0300e-003	1.0000e-005		2.0000e-004	2.0000e-004		1.8000e-004	1.8000e-004	0.0000	0.8070	0.8070	2.5000e-004	0.0000	0.8123
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.4000e-004	4.0900e-003	6.0300e-003	1.0000e-005		2.0000e-004	2.0000e-004		1.8000e-004	1.8000e-004	0.0000	0.8070	0.8070	2.5000e-004	0.0000	0.8123

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	4.0000e-005	3.5000e-004	0.0000	1.2000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0892	0.0892	0.0000	0.0000	0.0893
Total	2.0000e-005	4.0000e-005	3.5000e-004	0.0000	1.2000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0892	0.0892	0.0000	0.0000	0.0893

3.6 Architectural Coating - 2024

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	1.1183					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6300e-003	0.0110	0.0163	3.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	2.2979	2.2979	1.3000e-004	0.0000	2.3007
Total	1.1199	0.0110	0.0163	3.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	2.2979	2.2979	1.3000e-004	0.0000	2.3007

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	2.3000e-004	3.9000e-004	3.7400e-003	2.0000e-005	1.3400e-003	1.0000e-005	1.3500e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	0.9636	0.9636	4.0000e-005	0.0000	0.9644
Total	2.3000e-004	3.9000e-004	3.7400e-003	2.0000e-005	1.3400e-003	1.0000e-005	1.3500e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	0.9636	0.9636	4.0000e-005	0.0000	0.9644

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.1183					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6300e-003	0.0110	0.0163	3.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	2.2979	2.2979	1.3000e-004	0.0000	2.3006
Total	1.1199	0.0110	0.0163	3.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	2.2979	2.2979	1.3000e-004	0.0000	2.3006

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	2.3000e-004	3.9000e-004	3.7400e-003	2.0000e-005	1.3400e-003	1.0000e-005	1.3500e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	0.9636	0.9636	4.0000e-005	0.0000	0.9644
Total	2.3000e-004	3.9000e-004	3.7400e-003	2.0000e-005	1.3400e-003	1.0000e-005	1.3500e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	0.9636	0.9636	4.0000e-005	0.0000	0.9644

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

- Improve Walkability Design
- Improve Destination Accessibility
- Increase Transit Accessibility
- Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4674	1.3303	5.5913	0.0154	0.8632	0.0285	0.8917	0.2319	0.0263	0.2582	0.0000	1,093.7860	1,093.7860	0.0275	0.0000	1,094.3635
Unmitigated	0.4776	1.3936	5.7598	0.0163	0.9178	0.0302	0.9480	0.2466	0.0278	0.2744	0.0000	1,160.5306	1,160.5306	0.0291	0.0000	1,161.1407

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Office Park	1,119.50	160.77	74.50	2,412,668	2,269,114
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	1,119.50	160.77	74.50	2,412,668	2,269,114

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Office Park	14.70	6.60	6.60	33.00	48.00	19.00	82	15	3
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.409414	0.062437	0.155860	0.176720	0.051185	0.007913	0.019934	0.103301	0.001779	0.001597	0.006667	0.000853	0.002340

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	409.2340	409.2340	0.0185	3.8300e-003	410.8095
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	409.2340	409.2340	0.0185	3.8300e-003	410.8095
NaturalGas Mitigated	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142	0.0000	203.7050	203.7050	3.9000e-003	3.7300e-003	204.9448
NaturalGas Unmitigated	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142	0.0000	203.7050	203.7050	3.9000e-003	3.7300e-003	204.9448

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					
Other Non-Asphalt Surfaces	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
Office Park	3.81729e+006	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142	0.0000	203.7050	203.7050	3.9000e-003	3.7300e-003	204.9448
Total		0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142	0.0000	203.7050	203.7050	3.9000e-003	3.7300e-003	204.9448

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	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
Office Park	3.81729e+006	0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142	0.0000	203.7050	203.7050	3.9000e-003	3.7300e-003	204.9448
Total		0.0206	0.1871	0.1572	1.1200e-003		0.0142	0.0142		0.0142	0.0142	0.0000	203.7050	203.7050	3.9000e-003	3.7300e-003	204.9448

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Office Park	1.40673e+006	409.2340	0.0185	3.8300e-003	410.8095
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		409.2340	0.0185	3.8300e-003	410.8095

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			

Office Park	1.40673e+006	409.2340	0.0185	3.8300e-003	410.8095
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		409.2340	0.0185	3.8300e-003	410.8095

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.7402	1.0000e-005	1.4800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8700e-003	2.8700e-003	1.0000e-005	0.0000	3.0300e-003
Unmitigated	0.7402	1.0000e-005	1.4800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8700e-003	2.8700e-003	1.0000e-005	0.0000	3.0300e-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	tons/yr										MT/yr					
Architectural Coating	0.1118					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6282					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.4000e-004	1.0000e-005	1.4800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8700e-003	2.8700e-003	1.0000e-005	0.0000	3.0300e-003

Total	0.7402	1.0000e-005	1.4800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8700e-003	2.8700e-003	1.0000e-005	0.0000	3.0300e-003
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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	0.1118					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6282					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.4000e-004	1.0000e-005	1.4800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8700e-003	2.8700e-003	1.0000e-005	0.0000	3.0300e-003
Total	0.7402	1.0000e-005	1.4800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8700e-003	2.8700e-003	1.0000e-005	0.0000	3.0300e-003

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	43.8269	0.5694	0.0137	60.0437
Unmitigated	43.8269	0.5695	0.0138	60.0525

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Office Park	17.4232 / 10.6788	43.8269	0.5695	0.0138	60.0525
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		43.8269	0.5695	0.0138	60.0525

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Office Park	17.4232 / 10.6788	43.8269	0.5694	0.0137	60.0437
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		43.8269	0.5694	0.0137	60.0437

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
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	MT/yr			
Mitigated	18.5067	1.0937	0.0000	41.4747
Unmitigated	18.5067	1.0937	0.0000	41.4747

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Office Park	91.17	18.5067	1.0937	0.0000	41.4747
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		18.5067	1.0937	0.0000	41.4747

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Office Park	91.17	18.5067	1.0937	0.0000	41.4747
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		18.5067	1.0937	0.0000	41.4747

9.0 Operational Offroad

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

APPENDIX B
CALEEMOD REPORTS (SEASONAL)
PHASES 1 - 4

DRAFT

Sequoia Drive-In Business Park (PH 1)
San Joaquin Valley Unified APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Fast Food Restaurant with Drive Thru	3.00	1000sqft	0.07	3,000.00	0
Convenience Market With Gas Pumps	8.00	Pump	0.03	1,129.40	0
Office Park	63.02	1000sqft	1.45	63,020.00	0
Other Non-Asphalt Surfaces	118.90	1000sqft	2.73	118,900.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	45
Climate Zone	7	Operational Year	2018		
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Project Characteristics - Phase 1 will have 5 buildings with Office Park (ITE "Business Park") land use, ranging in square footage from 12,000 sf to 13,390 sf for a total of 68,340 sf of building gfa.

Phase 1 will also have a gas station with an attached fast food restaurant with drive-thru. Phase 1 will be 10.04 acres out of 46.17 acres of the total Project.

Land Use - "Other Non-Asphalt Surfaces" includes the new roads, on-street parking, and parking lots.

Construction Phase - No demolition required.

Vehicle Trips -

Energy Use -

Mobile Land Use Mitigation - Figures taken from ISR: LUT-1 - LUT-5 are based on project location. SDT-1: project will incorporate typical standard sidewalks throughout project.

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	OperationalYear	2014	2018
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

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					
2017	4.9186	51.8583	40.6605	0.0450	18.2962	2.7558	21.0520	9.9917	2.5353	12.5270	0.0000	4,233.5977	4,233.5977	1.2371	0.0000	4,259.5765
2018	144.0768	14.4233	13.5138	0.0219	0.2555	0.8290	1.0844	0.0678	0.7644	0.8321	0.0000	2,091.9716	2,091.9716	0.5695	0.0000	2,103.9303
Total	148.9955	66.2816	54.1744	0.0670	18.5516	3.5848	22.1364	10.0594	3.2997	13.3591	0.0000	6,325.5693	6,325.5693	1.8066	0.0000	6,363.5068

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					
2017	4.9186	51.8583	40.6605	0.0450	18.2962	2.7558	21.0520	9.9917	2.5353	12.5270	0.0000	4,233.5977	4,233.5977	1.2371	0.0000	4,259.5765

2018	144.0768	14.4233	13.5138	0.0219	0.2555	0.8290	1.0844	0.0678	0.7644	0.8321	0.0000	2,091.9716	2,091.9716	0.5695	0.0000	2,103.9303
Total	148.9955	66.2816	54.1744	0.0670	18.5516	3.5848	22.1364	10.0594	3.2997	13.3591	0.0000	6,325.5693	6,325.5693	1.8066	0.0000	6,363.5068

	ROG	NOx	CO	SO2	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

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	4.6921	1.9000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0422	0.0422	1.2000e-004		0.0447
Energy	0.0816	0.7416	0.6229	4.4500e-003		0.0564	0.0564		0.0564	0.0564		889.8744	889.8744	0.0171	0.0163	895.2900
Mobile	26.3527	46.6989	207.0640	0.2588	13.0556	0.5502	13.6059	3.4996	0.5060	4.0056		21,957.6594	21,957.6594	0.7593		21,973.6048
Total	31.1264	47.4406	207.7069	0.2632	13.0556	0.6067	13.6623	3.4996	0.5624	4.0620		22,847.5760	22,847.5760	0.7765	0.0163	22,868.9394

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	4.6921	1.9000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0422	0.0422	1.2000e-004		0.0447
Energy	0.0816	0.7416	0.6229	4.4500e-003		0.0564	0.0564		0.0564	0.0564		889.8744	889.8744	0.0171	0.0163	895.2900

Mobile	26.1605	45.1080	203.2093	0.2450	12.2788	0.5222	12.8010	3.2914	0.4801	3.7715		20,786.45 96	20,786.459 6	0.7277		20,801.741 3
Total	30.9343	45.8497	203.8522	0.2495	12.2788	0.5786	12.8575	3.2914	0.5366	3.8280		21,676.37 61	21,676.376 1	0.7449	0.0163	21,697.076 0

	ROG	NOx	CO	SO2	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	0.62	3.35	1.86	5.22	5.95	4.62	5.89	5.95	4.59	5.76	0.00	5.13	5.13	4.07	0.00	5.12

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2017	1/6/2017	5	5	
2	Grading	Grading	1/7/2017	1/18/2017	5	8	
3	Building Construction	Building Construction	1/19/2017	12/6/2017	5	230	
4	Paving	Paving	12/7/2017	1/1/2018	5	18	
5	Architectural Coating	Architectural Coating	1/2/2018	1/25/2018	5	18	

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: 279,074; Non-Residential Outdoor: 93,025 (Architectural Coating –

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
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38

Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	72.00	30.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	14.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2017

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
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Category	lb/day										lb/day				
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000		0.0000
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339		4,003.0859	4,003.0859	1.2265	4,028.8432
Total	4.8382	51.7535	39.3970	0.0391	18.0663	2.7542	20.8205	9.9307	2.5339	12.4646		4,003.0859	4,003.0859	1.2265	4,028.8432

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0804	0.1049	1.2635	2.9300e-003	0.2299	1.5900e-003	0.2315	0.0610	1.4600e-003	0.0624		230.5118	230.5118	0.0106		230.7333
Total	0.0804	0.1049	1.2635	2.9300e-003	0.2299	1.5900e-003	0.2315	0.0610	1.4600e-003	0.0624		230.5118	230.5118	0.0106		230.7333

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339	0.0000	4,003.0859	4,003.0859	1.2265		4,028.8432

Total	4.8382	51.7535	39.3970	0.0391	18.0663	2.7542	20.8205	9.9307	2.5339	12.4646	0.0000	4,003.0859	4,003.0859	1.2265		4,028.8432
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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0804	0.1049	1.2635	2.9300e-003	0.2299	1.5900e-003	0.2315	0.0610	1.4600e-003	0.0624		230.5118	230.5118	0.0106		230.7333
Total	0.0804	0.1049	1.2635	2.9300e-003	0.2299	1.5900e-003	0.2315	0.0610	1.4600e-003	0.0624		230.5118	230.5118	0.0106		230.7333

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	3.4555	35.9825	25.3812	0.0297		2.0388	2.0388		1.8757	1.8757		3,043.6667	3,043.6667	0.9326		3,063.2507
Total	3.4555	35.9825	25.3812	0.0297	6.5523	2.0388	8.5912	3.3675	1.8757	5.2432		3,043.6667	3,043.6667	0.9326		3,063.2507

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0670	0.0874	1.0529	2.4400e-003	0.1916	1.3200e-003	0.1929	0.0508	1.2200e-003	0.0520		192.0932	192.0932	8.7900e-003		192.2778
Total	0.0670	0.0874	1.0529	2.4400e-003	0.1916	1.3200e-003	0.1929	0.0508	1.2200e-003	0.0520		192.0932	192.0932	8.7900e-003		192.2778

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	3.4555	35.9825	25.3812	0.0297		2.0388	2.0388		1.8757	1.8757	0.0000	3,043.6667	3,043.6667	0.9326		3,063.2507
Total	3.4555	35.9825	25.3812	0.0297	6.5523	2.0388	8.5912	3.3675	1.8757	5.2432	0.0000	3,043.6667	3,043.6667	0.9326		3,063.2507

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0670	0.0874	1.0529	2.4400e-003	0.1916	1.3200e-003	0.1929	0.0508	1.2200e-003	0.0520		192.0932	192.0932	8.7900e-003		192.2778
Total	0.0670	0.0874	1.0529	2.4400e-003	0.1916	1.3200e-003	0.1929	0.0508	1.2200e-003	0.0520		192.0932	192.0932	8.7900e-003		192.2778

3.4 Building Construction - 2017

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	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490
Total	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3141	2.3596	3.4403	6.5000e-003	0.1806	0.0399	0.2205	0.0516	0.0367	0.0882		641.0072	641.0072	5.2600e-003		641.1176
Worker	0.3216	0.4195	5.0540	0.0117	0.9197	6.3500e-003	0.9260	0.2439	5.8500e-003	0.2497		922.0471	922.0471	0.0422		922.9333
Total	0.6357	2.7791	8.4943	0.0182	1.1003	0.0462	1.1465	0.2955	0.0425	0.3380		1,563.0543	1,563.0543	0.0475		1,564.0509

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490
Total	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3141	2.3596	3.4403	6.5000e-003	0.1806	0.0399	0.2205	0.0516	0.0367	0.0882		641.0072	641.0072	5.2600e-003		641.1176
Worker	0.3216	0.4195	5.0540	0.0117	0.9197	6.3500e-003	0.9260	0.2439	5.8500e-003	0.2497		922.0471	922.0471	0.0422		922.9333
Total	0.6357	2.7791	8.4943	0.0182	1.1003	0.0462	1.1465	0.2955	0.0425	0.3380		1,563.0543	1,563.0543	0.0475		1,564.0509

3.5 Paving - 2017

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	1.6554	16.8035	12.4837	0.0186		1.0056	1.0056		0.9269	0.9269		1,873.8264	1,873.8264	0.5588		1,885.5609
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.6554	16.8035	12.4837	0.0186		1.0056	1.0056		0.9269	0.9269		1,873.8264	1,873.8264	0.5588		1,885.5609

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0893	0.1165	1.4039	3.2600e-003	0.2555	1.7600e-003	0.2572	0.0678	1.6200e-003	0.0694		256.1242	256.1242	0.0117		256.3704
Total	0.0893	0.1165	1.4039	3.2600e-003	0.2555	1.7600e-003	0.2572	0.0678	1.6200e-003	0.0694		256.1242	256.1242	0.0117		256.3704

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.6554	16.8035	12.4837	0.0186		1.0056	1.0056		0.9269	0.9269	0.0000	1,873.8264	1,873.8264	0.5588		1,885.5609

Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.6554	16.8035	12.4837	0.0186		1.0056	1.0056		0.9269	0.9269	0.0000	1,873.8264	1,873.8264	0.5588		1,885.5609

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0893	0.1165	1.4039	3.2600e-003	0.2555	1.7600e-003	0.2572	0.0678	1.6200e-003	0.0694		256.1242	256.1242	0.0117		256.3704
Total	0.0893	0.1165	1.4039	3.2600e-003	0.2555	1.7600e-003	0.2572	0.0678	1.6200e-003	0.0694		256.1242	256.1242	0.0117		256.3704

3.5 Paving - 2018

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	1.4060	14.3192	12.2631	0.0187		0.8272	0.8272		0.7628	0.7628		1,845.0348	1,845.0348	0.5587		1,856.7667
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4060	14.3192	12.2631	0.0187		0.8272	0.8272		0.7628	0.7628		1,845.0348	1,845.0348	0.5587		1,856.7667

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0785	0.1041	1.2508	3.2600e-003	0.2555	1.7200e-003	0.2572	0.0678	1.5900e-003	0.0693		246.9368	246.9368	0.0108		247.1636
Total	0.0785	0.1041	1.2508	3.2600e-003	0.2555	1.7200e-003	0.2572	0.0678	1.5900e-003	0.0693		246.9368	246.9368	0.0108		247.1636

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.4060	14.3192	12.2631	0.0187		0.8272	0.8272		0.7628	0.7628	0.0000	1,845.0348	1,845.0348	0.5587		1,856.7667
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4060	14.3192	12.2631	0.0187		0.8272	0.8272		0.7628	0.7628	0.0000	1,845.0348	1,845.0348	0.5587		1,856.7667

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0785	0.1041	1.2508	3.2600e-003	0.2555	1.7200e-003	0.2572	0.0678	1.5900e-003	0.0693		246.9368	246.9368	0.0108		247.1636
Total	0.0785	0.1041	1.2508	3.2600e-003	0.2555	1.7200e-003	0.2572	0.0678	1.5900e-003	0.0693		246.9368	246.9368	0.0108		247.1636

3.6 Architectural Coating - 2018

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	143.7232					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	144.0219	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0550	0.0729	0.8755	2.2900e-003	0.1788	1.2000e-003	0.1800	0.0474	1.1100e-003	0.0485		172.8557	172.8557	7.5600e-003		173.0145
Total	0.0550	0.0729	0.8755	2.2900e-003	0.1788	1.2000e-003	0.1800	0.0474	1.1100e-003	0.0485		172.8557	172.8557	7.5600e-003		173.0145

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	143.7232					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102
Total	144.0219	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0550	0.0729	0.8755	2.2900e-003	0.1788	1.2000e-003	0.1800	0.0474	1.1100e-003	0.0485		172.8557	172.8557	7.5600e-003		173.0145
Total	0.0550	0.0729	0.8755	2.2900e-003	0.1788	1.2000e-003	0.1800	0.0474	1.1100e-003	0.0485		172.8557	172.8557	7.5600e-003		173.0145

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

- Improve Walkability Design
- Improve Destination Accessibility
- Increase Transit Accessibility
- Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	26.1605	45.1080	203.2093	0.2450	12.2788	0.5222	12.8010	3.2914	0.4801	3.7715		20,786.4596	20,786.4596	0.7277		20,801.7413
Unmitigated	26.3527	46.6989	207.0640	0.2588	13.0556	0.5502	13.6059	3.4996	0.5060	4.0056		21,957.6594	21,957.6594	0.7593		21,973.6048

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market With Gas Pumps	4,340.80	1,635.76	1335.04	1,729,571	1,626,662
Fast Food Restaurant with Drive Thru	1,488.36	2,166.09	1628.16	1,385,627	1,303,182
Office Park	719.69	103.35	47.90	1,551,018	1,458,733
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	6,548.85	3,905.20	3,011.10	4,666,216	4,388,577

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
Convenience Market With Gas	14.70	6.60	6.60	0.80	80.20	19.00	14	21	65
Fast Food Restaurant with Drive	14.70	6.60	6.60	2.20	78.80	19.00	29	21	50
Office Park	14.70	6.60	6.60	33.00	48.00	19.00	82	15	3
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.411222	0.062718	0.156221	0.175699	0.050886	0.007831	0.019556	0.102845	0.001787	0.001576	0.006435	0.000923	0.002302

5.0 Energy Detail

4.4 Fleet Mix

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	0.0816	0.7416	0.6229	4.4500e-003		0.0564	0.0564		0.0564	0.0564		889.8744	889.8744	0.0171	0.0163	895.2900
NaturalGas Unmitigated	0.0816	0.7416	0.6229	4.4500e-003		0.0564	0.0564		0.0564	0.0564		889.8744	889.8744	0.0171	0.0163	895.2900

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					
Fast Food Restaurant with Drive Thru	822.082	8.8700e-003	0.0806	0.0677	4.8000e-004		6.1300e-003	6.1300e-003		6.1300e-003	6.1300e-003		96.7156	96.7156	1.8500e-003	1.7700e-003	97.3042
Office Park	6723.28	0.0725	0.6592	0.5537	3.9500e-003		0.0501	0.0501		0.0501	0.0501		790.9746	790.9746	0.0152	0.0145	795.7884
Other Non-Asphalt Surfaces	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
Convenience Market With Gas	18.5655	2.0000e-004	1.8200e-003	1.5300e-003	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		2.1842	2.1842	4.0000e-005	4.0000e-005	2.1975

Total		0.0816	0.7416	0.6229	4.4400e-003		0.0564	0.0564		0.0564	0.0564		889.8744	889.8744	0.0171	0.0163	895.2900
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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	lb/day										lb/day					
Office Park	6.72328	0.0725	0.6592	0.5537	3.9500e-003		0.0501	0.0501		0.0501	0.0501		790.9746	790.9746	0.0152	0.0145	795.7884
Other Non-Asphalt Surfaces	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
Convenience Market With Gas	0.0185655	2.0000e-004	1.8200e-003	1.5300e-003	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		2.1842	2.1842	4.0000e-005	4.0000e-005	2.1975
Fast Food Restaurant with Drive Thru	0.822082	8.8700e-003	0.0806	0.0677	4.8000e-004		6.1300e-003	6.1300e-003		6.1300e-003	6.1300e-003		96.7156	96.7156	1.8500e-003	1.7700e-003	97.3042
Total		0.0816	0.7416	0.6229	4.4400e-003		0.0564	0.0564		0.0564	0.0564		889.8744	889.8744	0.0171	0.0163	895.2900

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	4.6921	1.9000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0422	0.0422	1.2000e-004		0.0447
Unmitigated	4.6921	1.9000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0422	0.0422	1.2000e-004		0.0447

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	0.7088					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.9815					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.9100e-003	1.9000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0422	0.0422	1.2000e-004		0.0447
Total	4.6921	1.9000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0422	0.0422	1.2000e-004		0.0447

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	0.7088					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.9815					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.9100e-003	1.9000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0422	0.0422	1.2000e-004		0.0447
Total	4.6921	1.9000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0422	0.0422	1.2000e-004		0.0447

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

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
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10.0 Vegetation

Sequoia Drive-In Business Park (PH 1)
San Joaquin Valley Unified APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Fast Food Restaurant with Drive Thru	3.00	1000sqft	0.07	3,000.00	0
Convenience Market With Gas Pumps	8.00	Pump	0.03	1,129.40	0
Office Park	63.02	1000sqft	1.45	63,020.00	0
Other Non-Asphalt Surfaces	118.90	1000sqft	2.73	118,900.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	45
Climate Zone	7			Operational Year	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Project Characteristics - Phase 1 will have 5 buildings with Office Park (ITE "Business Park") land use, ranging in square footage from 12,000 sf to 13,390 sf for a total of 68,340 sf of building gfa.

Phase 1 will also have a gas station with an attached fast food restaurant with drive-thru. Phase 1 will be 10.04 acres out of 46.17 acres of the total Project.

Land Use - "Other Non-Asphalt Surfaces" includes the new roads, on-street parking, and parking lots.

Construction Phase - No demolition required.

Vehicle Trips -

Energy Use -

Mobile Land Use Mitigation - Figures taken from ISR: LUT-1 - LUT-5 are based on project location. SDT-1: project will incorporate typical standard sidewalks throughout project.

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	OperationalYear	2014	2018
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

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					
2017	4.9186	51.8583	40.6605	0.0450	18.2962	2.7558	21.0520	9.9917	2.5353	12.5270	0.0000	4,233.5977	4,233.5977	1.2371	0.0000	4,259.5765
2018	144.0768	14.4233	13.5138	0.0219	0.2555	0.8290	1.0844	0.0678	0.7644	0.8321	0.0000	2,091.9716	2,091.9716	0.5695	0.0000	2,103.9303
Total	148.9955	66.2816	54.1744	0.0670	18.5516	3.5848	22.1364	10.0594	3.2997	13.3591	0.0000	6,325.5693	6,325.5693	1.8066	0.0000	6,363.5068

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					
2017	4.9186	51.8583	40.6605	0.0450	18.2962	2.7558	21.0520	9.9917	2.5353	12.5270	0.0000	4,233.5977	4,233.5977	1.2371	0.0000	4,259.5765

2018	144.0768	14.4233	13.5138	0.0219	0.2555	0.8290	1.0844	0.0678	0.7644	0.8321	0.0000	2,091.9716	2,091.9716	0.5695	0.0000	2,103.9303
Total	148.9955	66.2816	54.1744	0.0670	18.5516	3.5848	22.1364	10.0594	3.2997	13.3591	0.0000	6,325.5693	6,325.5693	1.8066	0.0000	6,363.5068

	ROG	NOx	CO	SO2	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

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	4.6921	1.9000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0422	0.0422	1.2000e-004		0.0447
Energy	0.0816	0.7416	0.6229	4.4500e-003		0.0564	0.0564		0.0564	0.0564		889.8744	889.8744	0.0171	0.0163	895.2900
Mobile	26.3527	46.6989	207.0640	0.2588	13.0556	0.5502	13.6059	3.4996	0.5060	4.0056		21,957.6594	21,957.6594	0.7593		21,973.6048
Total	31.1264	47.4406	207.7069	0.2632	13.0556	0.6067	13.6623	3.4996	0.5624	4.0620		22,847.5760	22,847.5760	0.7765	0.0163	22,868.9394

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	4.6921	1.9000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0422	0.0422	1.2000e-004		0.0447
Energy	0.0816	0.7416	0.6229	4.4500e-003		0.0564	0.0564		0.0564	0.0564		889.8744	889.8744	0.0171	0.0163	895.2900

Mobile	26.1605	45.1080	203.2093	0.2450	12.2788	0.5222	12.8010	3.2914	0.4801	3.7715		20,786.45 96	20,786.459 6	0.7277		20,801.741 3
Total	30.9343	45.8497	203.8522	0.2495	12.2788	0.5786	12.8575	3.2914	0.5366	3.8280		21,676.37 61	21,676.376 1	0.7449	0.0163	21,697.076 0

	ROG	NOx	CO	SO2	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	0.62	3.35	1.86	5.22	5.95	4.62	5.89	5.95	4.59	5.76	0.00	5.13	5.13	4.07	0.00	5.12

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2017	1/6/2017	5	5	
2	Grading	Grading	1/7/2017	1/18/2017	5	8	
3	Building Construction	Building Construction	1/19/2017	12/6/2017	5	230	
4	Paving	Paving	12/7/2017	1/1/2018	5	18	
5	Architectural Coating	Architectural Coating	1/2/2018	1/25/2018	5	18	

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: 279,074; Non-Residential Outdoor: 93,025 (Architectural Coating –

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
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38

Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	72.00	30.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	14.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2017

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
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Category	lb/day										lb/day				
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000		0.0000
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339		4,003.0859	4,003.0859	1.2265	4,028.8432
Total	4.8382	51.7535	39.3970	0.0391	18.0663	2.7542	20.8205	9.9307	2.5339	12.4646		4,003.0859	4,003.0859	1.2265	4,028.8432

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0804	0.1049	1.2635	2.9300e-003	0.2299	1.5900e-003	0.2315	0.0610	1.4600e-003	0.0624		230.5118	230.5118	0.0106		230.7333
Total	0.0804	0.1049	1.2635	2.9300e-003	0.2299	1.5900e-003	0.2315	0.0610	1.4600e-003	0.0624		230.5118	230.5118	0.0106		230.7333

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.8382	51.7535	39.3970	0.0391		2.7542	2.7542		2.5339	2.5339	0.0000	4,003.0859	4,003.0859	1.2265		4,028.8432

Total	4.8382	51.7535	39.3970	0.0391	18.0663	2.7542	20.8205	9.9307	2.5339	12.4646	0.0000	4,003.0859	4,003.0859	1.2265		4,028.8432
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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0804	0.1049	1.2635	2.9300e-003	0.2299	1.5900e-003	0.2315	0.0610	1.4600e-003	0.0624		230.5118	230.5118	0.0106		230.7333
Total	0.0804	0.1049	1.2635	2.9300e-003	0.2299	1.5900e-003	0.2315	0.0610	1.4600e-003	0.0624		230.5118	230.5118	0.0106		230.7333

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	3.4555	35.9825	25.3812	0.0297		2.0388	2.0388		1.8757	1.8757		3,043.6667	3,043.6667	0.9326		3,063.2507
Total	3.4555	35.9825	25.3812	0.0297	6.5523	2.0388	8.5912	3.3675	1.8757	5.2432		3,043.6667	3,043.6667	0.9326		3,063.2507

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0670	0.0874	1.0529	2.4400e-003	0.1916	1.3200e-003	0.1929	0.0508	1.2200e-003	0.0520		192.0932	192.0932	8.7900e-003		192.2778
Total	0.0670	0.0874	1.0529	2.4400e-003	0.1916	1.3200e-003	0.1929	0.0508	1.2200e-003	0.0520		192.0932	192.0932	8.7900e-003		192.2778

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	3.4555	35.9825	25.3812	0.0297		2.0388	2.0388		1.8757	1.8757	0.0000	3,043.6667	3,043.6667	0.9326		3,063.2507
Total	3.4555	35.9825	25.3812	0.0297	6.5523	2.0388	8.5912	3.3675	1.8757	5.2432	0.0000	3,043.6667	3,043.6667	0.9326		3,063.2507

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0670	0.0874	1.0529	2.4400e-003	0.1916	1.3200e-003	0.1929	0.0508	1.2200e-003	0.0520		192.0932	192.0932	8.7900e-003		192.2778
Total	0.0670	0.0874	1.0529	2.4400e-003	0.1916	1.3200e-003	0.1929	0.0508	1.2200e-003	0.0520		192.0932	192.0932	8.7900e-003		192.2778

3.4 Building Construction - 2017

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	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490
Total	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3141	2.3596	3.4403	6.5000e-003	0.1806	0.0399	0.2205	0.0516	0.0367	0.0882		641.0072	641.0072	5.2600e-003		641.1176
Worker	0.3216	0.4195	5.0540	0.0117	0.9197	6.3500e-003	0.9260	0.2439	5.8500e-003	0.2497		922.0471	922.0471	0.0422		922.9333
Total	0.6357	2.7791	8.4943	0.0182	1.1003	0.0462	1.1465	0.2955	0.0425	0.3380		1,563.0543	1,563.0543	0.0475		1,564.0509

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490
Total	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3141	2.3596	3.4403	6.5000e-003	0.1806	0.0399	0.2205	0.0516	0.0367	0.0882		641.0072	641.0072	5.2600e-003		641.1176
Worker	0.3216	0.4195	5.0540	0.0117	0.9197	6.3500e-003	0.9260	0.2439	5.8500e-003	0.2497		922.0471	922.0471	0.0422		922.9333
Total	0.6357	2.7791	8.4943	0.0182	1.1003	0.0462	1.1465	0.2955	0.0425	0.3380		1,563.0543	1,563.0543	0.0475		1,564.0509

3.5 Paving - 2017

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	1.6554	16.8035	12.4837	0.0186		1.0056	1.0056		0.9269	0.9269		1,873.8264	1,873.8264	0.5588		1,885.5609
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.6554	16.8035	12.4837	0.0186		1.0056	1.0056		0.9269	0.9269		1,873.8264	1,873.8264	0.5588		1,885.5609

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0893	0.1165	1.4039	3.2600e-003	0.2555	1.7600e-003	0.2572	0.0678	1.6200e-003	0.0694		256.1242	256.1242	0.0117		256.3704
Total	0.0893	0.1165	1.4039	3.2600e-003	0.2555	1.7600e-003	0.2572	0.0678	1.6200e-003	0.0694		256.1242	256.1242	0.0117		256.3704

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.6554	16.8035	12.4837	0.0186		1.0056	1.0056		0.9269	0.9269	0.0000	1,873.8264	1,873.8264	0.5588		1,885.5609

Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.6554	16.8035	12.4837	0.0186		1.0056	1.0056		0.9269	0.9269	0.0000	1,873.8264	1,873.8264	0.5588		1,885.5609

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0893	0.1165	1.4039	3.2600e-003	0.2555	1.7600e-003	0.2572	0.0678	1.6200e-003	0.0694		256.1242	256.1242	0.0117		256.3704
Total	0.0893	0.1165	1.4039	3.2600e-003	0.2555	1.7600e-003	0.2572	0.0678	1.6200e-003	0.0694		256.1242	256.1242	0.0117		256.3704

3.5 Paving - 2018

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	1.4060	14.3192	12.2631	0.0187		0.8272	0.8272		0.7628	0.7628		1,845.0348	1,845.0348	0.5587		1,856.7667
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4060	14.3192	12.2631	0.0187		0.8272	0.8272		0.7628	0.7628		1,845.0348	1,845.0348	0.5587		1,856.7667

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0785	0.1041	1.2508	3.2600e-003	0.2555	1.7200e-003	0.2572	0.0678	1.5900e-003	0.0693		246.9368	246.9368	0.0108		247.1636
Total	0.0785	0.1041	1.2508	3.2600e-003	0.2555	1.7200e-003	0.2572	0.0678	1.5900e-003	0.0693		246.9368	246.9368	0.0108		247.1636

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.4060	14.3192	12.2631	0.0187		0.8272	0.8272		0.7628	0.7628	0.0000	1,845.0348	1,845.0348	0.5587		1,856.7667
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4060	14.3192	12.2631	0.0187		0.8272	0.8272		0.7628	0.7628	0.0000	1,845.0348	1,845.0348	0.5587		1,856.7667

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0785	0.1041	1.2508	3.2600e-003	0.2555	1.7200e-003	0.2572	0.0678	1.5900e-003	0.0693		246.9368	246.9368	0.0108		247.1636
Total	0.0785	0.1041	1.2508	3.2600e-003	0.2555	1.7200e-003	0.2572	0.0678	1.5900e-003	0.0693		246.9368	246.9368	0.0108		247.1636

3.6 Architectural Coating - 2018

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	143.7232					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	144.0219	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0550	0.0729	0.8755	2.2900e-003	0.1788	1.2000e-003	0.1800	0.0474	1.1100e-003	0.0485		172.8557	172.8557	7.5600e-003		173.0145
Total	0.0550	0.0729	0.8755	2.2900e-003	0.1788	1.2000e-003	0.1800	0.0474	1.1100e-003	0.0485		172.8557	172.8557	7.5600e-003		173.0145

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	143.7232					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102
Total	144.0219	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0550	0.0729	0.8755	2.2900e-003	0.1788	1.2000e-003	0.1800	0.0474	1.1100e-003	0.0485		172.8557	172.8557	7.5600e-003		173.0145
Total	0.0550	0.0729	0.8755	2.2900e-003	0.1788	1.2000e-003	0.1800	0.0474	1.1100e-003	0.0485		172.8557	172.8557	7.5600e-003		173.0145

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

- Improve Walkability Design
- Improve Destination Accessibility
- Increase Transit Accessibility
- Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	26.1605	45.1080	203.2093	0.2450	12.2788	0.5222	12.8010	3.2914	0.4801	3.7715		20,786.4596	20,786.4596	0.7277		20,801.7413
Unmitigated	26.3527	46.6989	207.0640	0.2588	13.0556	0.5502	13.6059	3.4996	0.5060	4.0056		21,957.6594	21,957.6594	0.7593		21,973.6048

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market With Gas Pumps	4,340.80	1,635.76	1335.04	1,729,571	1,626,662
Fast Food Restaurant with Drive Thru	1,488.36	2,166.09	1628.16	1,385,627	1,303,182
Office Park	719.69	103.35	47.90	1,551,018	1,458,733
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	6,548.85	3,905.20	3,011.10	4,666,216	4,388,577

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
Convenience Market With Gas	14.70	6.60	6.60	0.80	80.20	19.00	14	21	65
Fast Food Restaurant with Drive	14.70	6.60	6.60	2.20	78.80	19.00	29	21	50
Office Park	14.70	6.60	6.60	33.00	48.00	19.00	82	15	3
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.411222	0.062718	0.156221	0.175699	0.050886	0.007831	0.019556	0.102845	0.001787	0.001576	0.006435	0.000923	0.002302

5.0 Energy Detail

4.4 Fleet Mix

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	0.0816	0.7416	0.6229	4.4500e-003		0.0564	0.0564		0.0564	0.0564		889.8744	889.8744	0.0171	0.0163	895.2900
NaturalGas Unmitigated	0.0816	0.7416	0.6229	4.4500e-003		0.0564	0.0564		0.0564	0.0564		889.8744	889.8744	0.0171	0.0163	895.2900

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					
Fast Food Restaurant with Drive Thru	822.082	8.8700e-003	0.0806	0.0677	4.8000e-004		6.1300e-003	6.1300e-003		6.1300e-003	6.1300e-003		96.7156	96.7156	1.8500e-003	1.7700e-003	97.3042
Office Park	6723.28	0.0725	0.6592	0.5537	3.9500e-003		0.0501	0.0501		0.0501	0.0501		790.9746	790.9746	0.0152	0.0145	795.7884
Other Non-Asphalt Surfaces	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
Convenience Market With Gas	18.5655	2.0000e-004	1.8200e-003	1.5300e-003	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		2.1842	2.1842	4.0000e-005	4.0000e-005	2.1975

Total		0.0816	0.7416	0.6229	4.4400e-003		0.0564	0.0564		0.0564	0.0564		889.8744	889.8744	0.0171	0.0163	895.2900
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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					
Office Park	6.72328	0.0725	0.6592	0.5537	3.9500e-003		0.0501	0.0501		0.0501	0.0501		790.9746	790.9746	0.0152	0.0145	795.7884
Other Non-Asphalt Surfaces	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
Convenience Market With Gas	0.0185655	2.0000e-004	1.8200e-003	1.5300e-003	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004		2.1842	2.1842	4.0000e-005	4.0000e-005	2.1975
Fast Food Restaurant with Drive Thru	0.822082	8.8700e-003	0.0806	0.0677	4.8000e-004		6.1300e-003	6.1300e-003		6.1300e-003	6.1300e-003		96.7156	96.7156	1.8500e-003	1.7700e-003	97.3042
Total		0.0816	0.7416	0.6229	4.4400e-003		0.0564	0.0564		0.0564	0.0564		889.8744	889.8744	0.0171	0.0163	895.2900

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	4.6921	1.9000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0422	0.0422	1.2000e-004		0.0447
Unmitigated	4.6921	1.9000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0422	0.0422	1.2000e-004		0.0447

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	0.7088					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.9815					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.9100e-003	1.9000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0422	0.0422	1.2000e-004		0.0447
Total	4.6921	1.9000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0422	0.0422	1.2000e-004		0.0447

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	0.7088					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.9815					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.9100e-003	1.9000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0422	0.0422	1.2000e-004		0.0447
Total	4.6921	1.9000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0422	0.0422	1.2000e-004		0.0447

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

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
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10.0 Vegetation

Sequoia Drive-In Business Park (PH 2)
San Joaquin Valley Unified APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	88.00	1000sqft	2.02	88,000.00	0
Other Non-Asphalt Surfaces	46.69	1000sqft	1.07	46,690.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	45
Climate Zone	7			Operational Year	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Project Characteristics - Phase 2 will have 8 buildings (14 units) with Office Park (ITE "Business Park") land use, ranging in square footage from 5,200 sf to 8,000 sf for a total of 88,000 sf of building gfa.

Phase 2 will be 8.25 acres out of 46.17 acres of the total Project.

Land Use - "Other Non-Asphalt Surfaces" includes the new roads, on-street parking, and parking lots.

Construction Phase - No demolition required.

Vehicle Trips -

Energy Use -

Mobile Land Use Mitigation - Figures taken from ISR: LUT-1 - LUT-5 are based on project location. SDT-1: project will incorporate typical standard sidewalks throughout project.

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	OperationalYear	2014	2020
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	4.0824	42.5895	35.8281	0.0421	18.2962	2.1520	20.4482	9.9917	1.9798	11.9715	0.0000	4,090.9732	4,090.9732	1.2356	0.0000	4,116.9206
2020	104.3226	1.7272	2.3527	4.6000e-003	0.1277	0.1118	0.2395	0.0339	0.1117	0.1456	0.0000	395.7572	395.7572	0.0265	0.0000	396.3140
Total	108.4050	44.3167	38.1807	0.0467	18.4239	2.2638	20.6877	10.0255	2.0915	12.1171	0.0000	4,486.7304	4,486.7304	1.2621	0.0000	4,513.2345

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	4.0824	42.5895	35.8281	0.0421	18.2962	2.1520	20.4482	9.9917	1.9798	11.9715	0.0000	4,090.9732	4,090.9732	1.2356	0.0000	4,116.9205
2020	104.3226	1.7272	2.3527	4.6000e-003	0.1277	0.1118	0.2395	0.0339	0.1117	0.1456	0.0000	395.7572	395.7572	0.0265	0.0000	396.3140
Total	108.4050	44.3167	38.1807	0.0467	18.4239	2.2638	20.6877	10.0255	2.0915	12.1171	0.0000	4,486.7304	4,486.7304	1.2621	0.0000	4,513.2345

	ROG	NOx	CO	SO2	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

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	3.3968	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0311
Energy	0.1013	0.9204	0.7732	5.5200e-003		0.0700	0.0700		0.0700	0.0700		1,104.5028	1,104.5028	0.0212	0.0203	1,111.2246
Mobile	4.0487	12.6957	43.0611	0.1144	6.2453	0.2190	6.4642	1.6741	0.2017	1.8758		9,191.7830	9,191.7830	0.2520		9,197.0753
Total	7.5467	13.6163	43.8481	0.1199	6.2453	0.2890	6.5342	1.6741	0.2717	1.9458		10,296.3153	10,296.3153	0.2733	0.0203	10,308.3311

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.3968	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0311
Energy	0.1013	0.9204	0.7732	5.5200e-003		0.0700	0.0700		0.0700	0.0700		1,104.5028	1,104.5028	0.0212	0.0203	1,111.2246
Mobile	3.9674	12.0908	41.4700	0.1078	5.8737	0.2065	6.0802	1.5745	0.1902	1.7647		8,662.6951	8,662.6951	0.2386		8,667.7064
Total	7.4654	13.0114	42.2570	0.1133	5.8737	0.2765	6.1502	1.5745	0.2602	1.8347		9,767.2274	9,767.2274	0.2599	0.0203	9,778.9622

	ROG	NOx	CO	SO2	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	1.08	4.44	3.63	5.49	5.95	4.30	5.88	5.95	4.21	5.71	0.00	5.14	5.14	4.90	0.00	5.14

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2019	1/7/2019	5	5	
2	Grading	Grading	1/8/2019	1/17/2019	5	8	
3	Building Construction	Building Construction	1/18/2019	12/5/2019	5	230	
4	Paving	Paving	12/6/2019	12/31/2019	5	18	
5	Architectural Coating	Architectural Coating	1/1/2020	1/24/2020	5	18	

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: 202,035; Non-Residential Outdoor: 67,345 (Architectural Coating –

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
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40

Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	48.00	22.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000

Off-Road	4.0188	42.5046	34.8088	0.0391		2.1505	2.1505		1.9784	1.9784		3,876.7233	3,876.7233	1.2266		3,902.4810
Total	4.0188	42.5046	34.8088	0.0391	18.0663	2.1505	20.2167	9.9307	1.9784	11.9091		3,876.7233	3,876.7233	1.2266		3,902.4810

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0636	0.0849	1.0193	2.9400e-003	0.2299	1.5200e-003	0.2314	0.0610	1.4100e-003	0.0624		214.2499	214.2499	9.0300e-003		214.4396
Total	0.0636	0.0849	1.0193	2.9400e-003	0.2299	1.5200e-003	0.2314	0.0610	1.4100e-003	0.0624		214.2499	214.2499	9.0300e-003		214.4396

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0188	42.5046	34.8088	0.0391		2.1505	2.1505		1.9784	1.9784	0.0000	3,876.7233	3,876.7233	1.2266		3,902.4810
Total	4.0188	42.5046	34.8088	0.0391	18.0663	2.1505	20.2167	9.9307	1.9784	11.9091	0.0000	3,876.7233	3,876.7233	1.2266		3,902.4810

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0636	0.0849	1.0193	2.9400e-003	0.2299	1.5200e-003	0.2314	0.0610	1.4100e-003	0.0624		214.2499	214.2499	9.0300e-003		214.4396
Total	0.0636	0.0849	1.0193	2.9400e-003	0.2299	1.5200e-003	0.2314	0.0610	1.4100e-003	0.0624		214.2499	214.2499	9.0300e-003		214.4396

3.3 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.7610	28.3800	23.3864	0.0297		1.5329	1.5329		1.4103	1.4103		2,944.1998	2,944.1998	0.9315		2,963.7615
Total	2.7610	28.3800	23.3864	0.0297	6.5523	1.5329	8.0852	3.3675	1.4103	4.7778		2,944.1998	2,944.1998	0.9315		2,963.7615

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0530	0.0708	0.8494	2.4500e-003	0.1916	1.2700e-003	0.1929	0.0508	1.1700e-003	0.0520		178.5416	178.5416	7.5300e-003		178.6997
Total	0.0530	0.0708	0.8494	2.4500e-003	0.1916	1.2700e-003	0.1929	0.0508	1.1700e-003	0.0520		178.5416	178.5416	7.5300e-003		178.6997

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.7610	28.3800	23.3864	0.0297		1.5329	1.5329		1.4103	1.4103	0.0000	2,944.1998	2,944.1998	0.9315		2,963.7615
Total	2.7610	28.3800	23.3864	0.0297	6.5523	1.5329	8.0852	3.3675	1.4103	4.7778	0.0000	2,944.1998	2,944.1998	0.9315		2,963.7615

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0530	0.0708	0.8494	2.4500e-003	0.1916	1.2700e-003	0.1929	0.0508	1.1700e-003	0.0520		178.5416	178.5416	7.5300e-003		178.6997
Total	0.0530	0.0708	0.8494	2.4500e-003	0.1916	1.2700e-003	0.1929	0.0508	1.1700e-003	0.0520		178.5416	178.5416	7.5300e-003		178.6997

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479
Total	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1800	1.4118	2.0786	4.7400e-003	0.1324	0.0246	0.1570	0.0378	0.0226	0.0604		453.6756	453.6756	3.6200e-003		453.7516
Worker	0.1695	0.2265	2.7182	7.8300e-003	0.6131	4.0600e-003	0.6172	0.1626	3.7600e-003	0.1664		571.3331	571.3331	0.0241		571.8389
Total	0.3495	1.6383	4.7968	0.0126	0.7455	0.0286	0.7742	0.2004	0.0264	0.2268		1,025.0087	1,025.0087	0.0277		1,025.5905

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279		2,593.9479
Total	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279		2,593.9479

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1800	1.4118	2.0786	4.7400e-003	0.1324	0.0246	0.1570	0.0378	0.0226	0.0604		453.6756	453.6756	3.6200e-003		453.7516
Worker	0.1695	0.2265	2.7182	7.8300e-003	0.6131	4.0600e-003	0.6172	0.1626	3.7600e-003	0.1664		571.3331	571.3331	0.0241		571.8389
Total	0.3495	1.6383	4.7968	0.0126	0.7455	0.0286	0.7742	0.2004	0.0264	0.2268		1,025.0087	1,025.0087	0.0277		1,025.5905

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2520	12.5889	12.1441	0.0187		0.7111	0.7111		0.6560	0.6560		1,816.2490	1,816.2490	0.5585		1,827.9782

Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2520	12.5889	12.1441	0.0187		0.7111	0.7111		0.6560	0.6560		1,816.2490	1,816.2490	0.5585		1,827.9782

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0706	0.0944	1.1326	3.2600e-003	0.2555	1.6900e-003	0.2572	0.0678	1.5700e-003	0.0693		238.0555	238.0555	0.0100		238.2662
Total	0.0706	0.0944	1.1326	3.2600e-003	0.2555	1.6900e-003	0.2572	0.0678	1.5700e-003	0.0693		238.0555	238.0555	0.0100		238.2662

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.2520	12.5889	12.1441	0.0187		0.7111	0.7111		0.6560	0.6560	0.0000	1,816.2490	1,816.2490	0.5585		1,827.9782
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2520	12.5889	12.1441	0.0187		0.7111	0.7111		0.6560	0.6560	0.0000	1,816.2490	1,816.2490	0.5585		1,827.9782

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0706	0.0944	1.1326	3.2600e-003	0.2555	1.6900e-003	0.2572	0.0678	1.5700e-003	0.0693		238.0555	238.0555	0.0100		238.2662
Total	0.0706	0.0944	1.1326	3.2600e-003	0.2555	1.6900e-003	0.2572	0.0678	1.5700e-003	0.0693		238.0555	238.0555	0.0100		238.2662

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	104.0480					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9057
Total	104.2902	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9057

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0324	0.0433	0.5212	1.6300e-003	0.1277	8.4000e-004	0.1286	0.0339	7.8000e-004	0.0347		114.3091	114.3091	4.7200e-003		114.4083
Total	0.0324	0.0433	0.5212	1.6300e-003	0.1277	8.4000e-004	0.1286	0.0339	7.8000e-004	0.0347		114.3091	114.3091	4.7200e-003		114.4083

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	104.0480					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9057
Total	104.2902	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9057

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0324	0.0433	0.5212	1.6300e-003	0.1277	8.4000e-004	0.1286	0.0339	7.8000e-004	0.0347		114.3091	114.3091	4.7200e-003		114.4083
Total	0.0324	0.0433	0.5212	1.6300e-003	0.1277	8.4000e-004	0.1286	0.0339	7.8000e-004	0.0347		114.3091	114.3091	4.7200e-003		114.4083

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

- Increase Density
- Improve Walkability Design
- Improve Destination Accessibility
- Increase Transit Accessibility
- Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.9674	12.0908	41.4700	0.1078	5.8737	0.2065	6.0802	1.5745	0.1902	1.7647		8,662.6951	8,662.6951	0.2386		8,667.7064
Unmitigated	4.0487	12.6957	43.0611	0.1144	6.2453	0.2190	6.4642	1.6741	0.2017	1.8758		9,191.7830	9,191.7830	0.2520		9,197.0753

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Office Park	1,004.96	144.32	66.88	2,165,814	2,036,948
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	1,004.96	144.32	66.88	2,165,814	2,036,948

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Office Park	14.70	6.60	6.60	33.00	48.00	19.00	82	15	3
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.409687	0.062677	0.156376	0.176111	0.050971	0.007837	0.019872	0.103412	0.001778	0.001574	0.006496	0.000897	0.002312

5.0 Energy Detail

4.4 Fleet Mix

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	0.1013	0.9204	0.7732	5.5200e-003		0.0700	0.0700		0.0700	0.0700		1,104.5028	1,104.5028	0.0212	0.0203	1,111.2246
NaturalGas Unmitigated	0.1013	0.9204	0.7732	5.5200e-003		0.0700	0.0700		0.0700	0.0700		1,104.5028	1,104.5028	0.0212	0.0203	1,111.2246

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					
Other Non-Asphalt Surfaces	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
Office Park	9388.27	0.1013	0.9204	0.7732	5.5200e-003		0.0700	0.0700		0.0700	0.0700		1,104.5028	1,104.5028	0.0212	0.0203	1,111.2246

Total		0.1013	0.9204	0.7732	5.5200e-003		0.0700	0.0700		0.0700	0.0700		1,104.5028	1,104.5028	0.0212	0.0203	1,111.2246
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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					
Office Park	9.38827	0.1013	0.9204	0.7732	5.5200e-003		0.0700	0.0700		0.0700	0.0700		1,104.5028	1,104.5028	0.0212	0.0203	1,111.2246
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.1013	0.9204	0.7732	5.5200e-003		0.0700	0.0700		0.0700	0.0700		1,104.5028	1,104.5028	0.0212	0.0203	1,111.2246

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	3.3968	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0311
Unmitigated	3.3968	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0311

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	0.5131					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.8824					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3000e-003	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0311
Total	3.3968	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0311

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	0.5131					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.8824					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3000e-003	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0311
Total	3.3968	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0311

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

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
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10.0 Vegetation

Sequoia Drive-In Business Park (PH 2)
San Joaquin Valley Unified APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	88.00	1000sqft	2.02	88,000.00	0
Other Non-Asphalt Surfaces	46.69	1000sqft	1.07	46,690.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	45
Climate Zone	7			Operational Year	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Project Characteristics - Phase 2 will have 8 buildings (14 units) with Office Park (ITE "Business Park") land use, ranging in square footage from 5,200 sf to 8,000 sf for a total of 88,000 sf of building gfa.

Phase 2 will be 8.25 acres out of 46.17 acres of the total Project.

Land Use - "Other Non-Asphalt Surfaces" includes the new roads, on-street parking, and parking lots.

Construction Phase - No demolition required.

Vehicle Trips -

Energy Use -

Mobile Land Use Mitigation - Figures taken from ISR: LUT-1 - LUT-5 are based on project location. SDT-1: project will incorporate typical standard sidewalks throughout project.

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	OperationalYear	2014	2020
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	4.0824	42.5895	35.8281	0.0421	18.2962	2.1520	20.4482	9.9917	1.9798	11.9715	0.0000	4,090.9732	4,090.9732	1.2356	0.0000	4,116.9206
2020	104.3226	1.7272	2.3527	4.6000e-003	0.1277	0.1118	0.2395	0.0339	0.1117	0.1456	0.0000	395.7572	395.7572	0.0265	0.0000	396.3140
Total	108.4050	44.3167	38.1807	0.0467	18.4239	2.2638	20.6877	10.0255	2.0915	12.1171	0.0000	4,486.7304	4,486.7304	1.2621	0.0000	4,513.2345

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	4.0824	42.5895	35.8281	0.0421	18.2962	2.1520	20.4482	9.9917	1.9798	11.9715	0.0000	4,090.9732	4,090.9732	1.2356	0.0000	4,116.9206
2020	104.3226	1.7272	2.3527	4.6000e-003	0.1277	0.1118	0.2395	0.0339	0.1117	0.1456	0.0000	395.7572	395.7572	0.0265	0.0000	396.3140
Total	108.4050	44.3167	38.1807	0.0467	18.4239	2.2638	20.6877	10.0255	2.0915	12.1171	0.0000	4,486.7304	4,486.7304	1.2621	0.0000	4,513.2345

	ROG	NOx	CO	SO2	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

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	3.3968	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0311
Energy	0.1013	0.9204	0.7732	5.5200e-003		0.0700	0.0700		0.0700	0.0700		1,104.5028	1,104.5028	0.0212	0.0203	1,111.2246
Mobile	4.0487	12.6957	43.0611	0.1144	6.2453	0.2190	6.4642	1.6741	0.2017	1.8758		9,191.7830	9,191.7830	0.2520		9,197.0753
Total	7.5467	13.6163	43.8481	0.1199	6.2453	0.2890	6.5342	1.6741	0.2717	1.9458		10,296.3153	10,296.3153	0.2733	0.0203	10,308.3311

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.3968	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0311
Energy	0.1013	0.9204	0.7732	5.5200e-003		0.0700	0.0700		0.0700	0.0700		1,104.5028	1,104.5028	0.0212	0.0203	1,111.2246
Mobile	3.9674	12.0908	41.4700	0.1078	5.8737	0.2065	6.0802	1.5745	0.1902	1.7647		8,662.6951	8,662.6951	0.2386		8,667.7064
Total	7.4654	13.0114	42.2570	0.1133	5.8737	0.2765	6.1502	1.5745	0.2602	1.8347		9,767.2274	9,767.2274	0.2599	0.0203	9,778.9622

	ROG	NOx	CO	SO2	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	1.08	4.44	3.63	5.49	5.95	4.30	5.88	5.95	4.21	5.71	0.00	5.14	5.14	4.90	0.00	5.14

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2019	1/7/2019	5	5	
2	Grading	Grading	1/8/2019	1/17/2019	5	8	
3	Building Construction	Building Construction	1/18/2019	12/5/2019	5	230	
4	Paving	Paving	12/6/2019	12/31/2019	5	18	
5	Architectural Coating	Architectural Coating	1/1/2020	1/24/2020	5	18	

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: 202,035; Non-Residential Outdoor: 67,345 (Architectural Coating –

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
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37

Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	48.00	22.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0188	42.5046	34.8088	0.0391		2.1505	2.1505		1.9784	1.9784		3,876.7233	3,876.7233	1.2266		3,902.4810

Total	4.0188	42.5046	34.8088	0.0391	18.0663	2.1505	20.2167	9.9307	1.9784	11.9091		3,876.7233	3,876.7233	1.2266		3,902.4810
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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	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0636	0.0849	1.0193	2.9400e-003	0.2299	1.5200e-003	0.2314	0.0610	1.4100e-003	0.0624		214.2499	214.2499	9.0300e-003		214.4396
Total	0.0636	0.0849	1.0193	2.9400e-003	0.2299	1.5200e-003	0.2314	0.0610	1.4100e-003	0.0624		214.2499	214.2499	9.0300e-003		214.4396

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0188	42.5046	34.8088	0.0391		2.1505	2.1505		1.9784	1.9784	0.0000	3,876.7233	3,876.7233	1.2266		3,902.4810
Total	4.0188	42.5046	34.8088	0.0391	18.0663	2.1505	20.2167	9.9307	1.9784	11.9091	0.0000	3,876.7233	3,876.7233	1.2266		3,902.4810

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0636	0.0849	1.0193	2.9400e-003	0.2299	1.5200e-003	0.2314	0.0610	1.4100e-003	0.0624		214.2499	214.2499	9.0300e-003		214.4396
Total	0.0636	0.0849	1.0193	2.9400e-003	0.2299	1.5200e-003	0.2314	0.0610	1.4100e-003	0.0624		214.2499	214.2499	9.0300e-003		214.4396

3.3 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.7610	28.3800	23.3864	0.0297		1.5329	1.5329		1.4103	1.4103		2,944.1998	2,944.1998	0.9315		2,963.7615
Total	2.7610	28.3800	23.3864	0.0297	6.5523	1.5329	8.0852	3.3675	1.4103	4.7778		2,944.1998	2,944.1998	0.9315		2,963.7615

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0530	0.0708	0.8494	2.4500e-003	0.1916	1.2700e-003	0.1929	0.0508	1.1700e-003	0.0520		178.5416	178.5416	7.5300e-003		178.6997
Total	0.0530	0.0708	0.8494	2.4500e-003	0.1916	1.2700e-003	0.1929	0.0508	1.1700e-003	0.0520		178.5416	178.5416	7.5300e-003		178.6997

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.7610	28.3800	23.3864	0.0297		1.5329	1.5329		1.4103	1.4103	0.0000	2,944.1998	2,944.1998	0.9315		2,963.7615
Total	2.7610	28.3800	23.3864	0.0297	6.5523	1.5329	8.0852	3.3675	1.4103	4.7778	0.0000	2,944.1998	2,944.1998	0.9315		2,963.7615

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0530	0.0708	0.8494	2.4500e-003	0.1916	1.2700e-003	0.1929	0.0508	1.1700e-003	0.0520		178.5416	178.5416	7.5300e-003		178.6997
Total	0.0530	0.0708	0.8494	2.4500e-003	0.1916	1.2700e-003	0.1929	0.0508	1.1700e-003	0.0520		178.5416	178.5416	7.5300e-003		178.6997

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479
Total	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083		2,580.7618	2,580.7618	0.6279		2,593.9479

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1800	1.4118	2.0786	4.7400e-003	0.1324	0.0246	0.1570	0.0378	0.0226	0.0604		453.6756	453.6756	3.6200e-003		453.7516
Worker	0.1695	0.2265	2.7182	7.8300e-003	0.6131	4.0600e-003	0.6172	0.1626	3.7600e-003	0.1664		571.3331	571.3331	0.0241		571.8389
Total	0.3495	1.6383	4.7968	0.0126	0.7455	0.0286	0.7742	0.2004	0.0264	0.2268		1,025.0087	1,025.0087	0.0277		1,025.5905

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279		2,593.9479
Total	2.3516	20.9650	17.1204	0.0268		1.2850	1.2850		1.2083	1.2083	0.0000	2,580.7618	2,580.7618	0.6279		2,593.9479

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1800	1.4118	2.0786	4.7400e-003	0.1324	0.0246	0.1570	0.0378	0.0226	0.0604		453.6756	453.6756	3.6200e-003		453.7516
Worker	0.1695	0.2265	2.7182	7.8300e-003	0.6131	4.0600e-003	0.6172	0.1626	3.7600e-003	0.1664		571.3331	571.3331	0.0241		571.8389
Total	0.3495	1.6383	4.7968	0.0126	0.7455	0.0286	0.7742	0.2004	0.0264	0.2268		1,025.0087	1,025.0087	0.0277		1,025.5905

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2520	12.5889	12.1441	0.0187		0.7111	0.7111		0.6560	0.6560		1,816.2490	1,816.2490	0.5585		1,827.9782

Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2520	12.5889	12.1441	0.0187		0.7111	0.7111		0.6560	0.6560		1,816.2490	1,816.2490	0.5585		1,827.9782

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0706	0.0944	1.1326	3.2600e-003	0.2555	1.6900e-003	0.2572	0.0678	1.5700e-003	0.0693		238.0555	238.0555	0.0100		238.2662
Total	0.0706	0.0944	1.1326	3.2600e-003	0.2555	1.6900e-003	0.2572	0.0678	1.5700e-003	0.0693		238.0555	238.0555	0.0100		238.2662

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.2520	12.5889	12.1441	0.0187		0.7111	0.7111		0.6560	0.6560	0.0000	1,816.2490	1,816.2490	0.5585		1,827.9782
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2520	12.5889	12.1441	0.0187		0.7111	0.7111		0.6560	0.6560	0.0000	1,816.2490	1,816.2490	0.5585		1,827.9782

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0706	0.0944	1.1326	3.2600e-003	0.2555	1.6900e-003	0.2572	0.0678	1.5700e-003	0.0693		238.0555	238.0555	0.0100		238.2662
Total	0.0706	0.0944	1.1326	3.2600e-003	0.2555	1.6900e-003	0.2572	0.0678	1.5700e-003	0.0693		238.0555	238.0555	0.0100		238.2662

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	104.0480					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9057
Total	104.2902	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9057

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0324	0.0433	0.5212	1.6300e-003	0.1277	8.4000e-004	0.1286	0.0339	7.8000e-004	0.0347		114.3091	114.3091	4.7200e-003		114.4083
Total	0.0324	0.0433	0.5212	1.6300e-003	0.1277	8.4000e-004	0.1286	0.0339	7.8000e-004	0.0347		114.3091	114.3091	4.7200e-003		114.4083

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	104.0480					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9057
Total	104.2902	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9057

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0324	0.0433	0.5212	1.6300e-003	0.1277	8.4000e-004	0.1286	0.0339	7.8000e-004	0.0347		114.3091	114.3091	4.7200e-003		114.4083
Total	0.0324	0.0433	0.5212	1.6300e-003	0.1277	8.4000e-004	0.1286	0.0339	7.8000e-004	0.0347		114.3091	114.3091	4.7200e-003		114.4083

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

- Increase Density
- Improve Walkability Design
- Improve Destination Accessibility
- Increase Transit Accessibility
- Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.9674	12.0908	41.4700	0.1078	5.8737	0.2065	6.0802	1.5745	0.1902	1.7647		8,662.6951	8,662.6951	0.2386		8,667.7064
Unmitigated	4.0487	12.6957	43.0611	0.1144	6.2453	0.2190	6.4642	1.6741	0.2017	1.8758		9,191.7830	9,191.7830	0.2520		9,197.0753

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Office Park	1,004.96	144.32	66.88	2,165,814	2,036,948
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	1,004.96	144.32	66.88	2,165,814	2,036,948

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Office Park	14.70	6.60	6.60	33.00	48.00	19.00	82	15	3
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.409687	0.062677	0.156376	0.176111	0.050971	0.007837	0.019872	0.103412	0.001778	0.001574	0.006496	0.000897	0.002312

5.0 Energy Detail

4.4 Fleet Mix

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	0.1013	0.9204	0.7732	5.5200e-003		0.0700	0.0700		0.0700	0.0700		1,104.5028	1,104.5028	0.0212	0.0203	1,111.2246
NaturalGas Unmitigated	0.1013	0.9204	0.7732	5.5200e-003		0.0700	0.0700		0.0700	0.0700		1,104.5028	1,104.5028	0.0212	0.0203	1,111.2246

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					
Other Non-Asphalt Surfaces	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
Office Park	9388.27	0.1013	0.9204	0.7732	5.5200e-003		0.0700	0.0700		0.0700	0.0700		1,104.5028	1,104.5028	0.0212	0.0203	1,111.2246

Total		0.1013	0.9204	0.7732	5.5200e-003		0.0700	0.0700		0.0700	0.0700		1,104.5028	1,104.5028	0.0212	0.0203	1,111.2246
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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					
Office Park	9.38827	0.1013	0.9204	0.7732	5.5200e-003		0.0700	0.0700		0.0700	0.0700		1,104.5028	1,104.5028	0.0212	0.0203	1,111.2246
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.1013	0.9204	0.7732	5.5200e-003		0.0700	0.0700		0.0700	0.0700		1,104.5028	1,104.5028	0.0212	0.0203	1,111.2246

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	3.3968	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0311
Unmitigated	3.3968	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0311

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	0.5131					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.8824					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3000e-003	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0311
Total	3.3968	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0311

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	0.5131					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.8824					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3000e-003	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0311
Total	3.3968	1.3000e-004	0.0138	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0295	0.0295	8.0000e-005		0.0311

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

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
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10.0 Vegetation

Sequoia Drive-In Business Park (PH 3)
San Joaquin Valley Unified APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	104.00	1000sqft	2.39	104,000.00	0
Other Non-Asphalt Surfaces	33.53	1000sqft	0.77	33,530.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	45
Climate Zone	7			Operational Year	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Project Characteristics - Phase 3 will have 10 buildings with Office Park (ITE "Business Park") land use, ranging in square footage from 8,000 sf to 12,000 sf for a total of 104,000sf of building gfa.

Phase 3 will be 14.89 acres out of 46.17 acres of the total Project.

Land Use - "Other Non-Asphalt Surfaces" includes the new roads, on-street parking, and parking lots.

Construction Phase - No demolition required.

Vehicle Trips -

Energy Use -

Mobile Land Use Mitigation - Figures taken from ISR: LUT-1 - LUT-5 are based on project location. SDT-1: project will incorporate typical standard sidewalks throughout project.

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseStartDate	1/1/2022	1/3/2022
tblProjectCharacteristics	OperationalYear	2014	2022
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

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					
2021	3.4602	35.0776	31.7281	0.0420	18.2962	1.7010	19.9972	9.9917	1.5650	11.5566	0.0000	3,990.9054	3,990.9054	1.2334	0.0000	4,016.8074
2022	106.4721	1.4425	2.2257	4.4400e-003	0.1150	0.0825	0.1974	0.0305	0.0824	0.1129	0.0000	381.0596	381.0596	0.0222	0.0000	381.5258
Total	109.9323	36.5200	33.9538	0.0465	18.4111	1.7835	20.1947	10.0221	1.6474	11.6695	0.0000	4,371.9650	4,371.9650	1.2556	0.0000	4,398.3332

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.4602	35.0776	31.7281	0.0420	18.2962	1.7010	19.9972	9.9917	1.5650	11.5566	0.0000	3,990.9054	3,990.9054	1.2334	0.0000	4,016.8074
2022	106.4721	1.4425	2.2257	4.4400e-003	0.1150	0.0825	0.1974	0.0305	0.0824	0.1129	0.0000	381.0596	381.0596	0.0222	0.0000	381.5258
Total	109.9323	36.5200	33.9538	0.0465	18.4111	1.7835	20.1947	10.0221	1.6474	11.6695	0.0000	4,371.9650	4,371.9650	1.2556	0.0000	4,398.3332

	ROG	NOx	CO	SO2	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

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	3.4684	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0301	0.0301	8.0000e-005		0.0318
Energy	0.1197	1.0878	0.9137	6.5300e-003		0.0827	0.0827		0.0827	0.0827		1,305.3215	1,305.3215	0.0250	0.0239	1,313.2655
Mobile	4.3878	11.8610	46.2554	0.1351	7.3810	0.2452	7.6262	1.9786	0.2259	2.2045		10,685.5332	10,685.5332	0.2715		10,691.2346
Total	7.9759	12.9489	47.1832	0.1417	7.3810	0.3279	7.7089	1.9786	0.3086	2.2872		11,990.8848	11,990.8848	0.2966	0.0239	12,004.5318

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.4684	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0301	0.0301	8.0000e-005		0.0318
Energy	0.1197	1.0878	0.9137	6.5300e-003		0.0827	0.0827		0.0827	0.0827		1,305.3215	1,305.3215	0.0250	0.0239	1,313.2655
Mobile	4.2986	11.3133	44.5765	0.1274	6.9419	0.2313	7.1732	1.8609	0.2131	2.0740		10,070.5518	10,070.5518	0.2570		10,075.9495
Total	7.8867	12.4012	45.5043	0.1339	6.9419	0.3140	7.2559	1.8609	0.2958	2.1567		11,375.9034	11,375.9034	0.2821	0.0239	11,389.2467

	ROG	NOx	CO	SO2	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	1.12	4.23	3.56	5.49	5.95	4.23	5.88	5.95	4.14	5.71	0.00	5.13	5.13	4.88	0.00	5.13

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2021	1/7/2021	5	5	
2	Grading	Grading	1/8/2021	1/19/2021	5	8	
3	Building Construction	Building Construction	1/20/2021	12/7/2021	5	230	
4	Paving	Paving	12/8/2021	12/31/2021	5	18	
5	Architectural Coating	Architectural Coating	1/3/2022	1/26/2022	5	18	

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: 206,295; Non-Residential Outdoor: 68,765 (Architectural Coating –

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
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40

Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	47.00	23.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000

Off-Road	3.4057	35.0050	30.8503	0.0391		1.6995	1.6995		1.5636	1.5636		3,788.6519	3,788.6519	1.2253		3,814.3837
Total	3.4057	35.0050	30.8503	0.0391	18.0663	1.6995	19.7658	9.9307	1.5636	11.4943		3,788.6519	3,788.6519	1.2253		3,814.3837

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0545	0.0726	0.8778	2.9400e-003	0.2299	1.5100e-003	0.2314	0.0610	1.4000e-003	0.0624		202.2536	202.2536	8.1000e-003		202.4237
Total	0.0545	0.0726	0.8778	2.9400e-003	0.2299	1.5100e-003	0.2314	0.0610	1.4000e-003	0.0624		202.2536	202.2536	8.1000e-003		202.4237

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.4057	35.0050	30.8503	0.0391		1.6995	1.6995		1.5636	1.5636	0.0000	3,788.6519	3,788.6519	1.2253		3,814.3837
Total	3.4057	35.0050	30.8503	0.0391	18.0663	1.6995	19.7658	9.9307	1.5636	11.4943	0.0000	3,788.6519	3,788.6519	1.2253		3,814.3837

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0545	0.0726	0.8778	2.9400e-003	0.2299	1.5100e-003	0.2314	0.0610	1.4000e-003	0.0624		202.2536	202.2536	8.1000e-003		202.4237
Total	0.0545	0.0726	0.8778	2.9400e-003	0.2299	1.5100e-003	0.2314	0.0610	1.4000e-003	0.0624		202.2536	202.2536	8.1000e-003		202.4237

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.3182	23.1251	21.8831	0.0297		1.1996	1.1996		1.1036	1.1036		2,879.3348	2,879.3348	0.9312		2,898.8908
Total	2.3182	23.1251	21.8831	0.0297	6.5523	1.1996	7.7519	3.3675	1.1036	4.4711		2,879.3348	2,879.3348	0.9312		2,898.8908

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0454	0.0605	0.7315	2.4500e-003	0.1916	1.2600e-003	0.1929	0.0508	1.1600e-003	0.0520		168.5446	168.5446	6.7500e-003		168.6864
Total	0.0454	0.0605	0.7315	2.4500e-003	0.1916	1.2600e-003	0.1929	0.0508	1.1600e-003	0.0520		168.5446	168.5446	6.7500e-003		168.6864

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.3182	23.1251	21.8831	0.0297		1.1996	1.1996		1.1036	1.1036	0.0000	2,879.3348	2,879.3348	0.9312		2,898.8908
Total	2.3182	23.1251	21.8831	0.0297	6.5523	1.1996	7.7519	3.3675	1.1036	4.4711	0.0000	2,879.3348	2,879.3348	0.9312		2,898.8908

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0454	0.0605	0.7315	2.4500e-003	0.1916	1.2600e-003	0.1929	0.0508	1.1600e-003	0.0520		168.5446	168.5446	6.7500e-003		168.6864
Total	0.0454	0.0605	0.7315	2.4500e-003	0.1916	1.2600e-003	0.1929	0.0508	1.1600e-003	0.0520		168.5446	168.5446	6.7500e-003		168.6864

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979		2,542.7817	2,542.7817	0.6126		2,555.6462
Total	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979		2,542.7817	2,542.7817	0.6126		2,555.6462

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1561	1.0174	1.9023	4.9400e-003	0.1385	0.0198	0.1583	0.0395	0.0182	0.0578		462.5316	462.5316	3.5500e-003		462.6060
Worker	0.1424	0.1895	2.2921	7.6700e-003	0.6003	3.9300e-003	0.6043	0.1592	3.6500e-003	0.1629		528.1065	528.1065	0.0212		528.5507
Total	0.2984	1.2069	4.1943	0.0126	0.7388	0.0238	0.7625	0.1987	0.0219	0.2206		990.6381	990.6381	0.0247		991.1568

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979	0.0000	2,542.7817	2,542.7817	0.6126		2,555.6462
Total	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979	0.0000	2,542.7817	2,542.7817	0.6126		2,555.6462

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1561	1.0174	1.9023	4.9400e-003	0.1385	0.0198	0.1583	0.0395	0.0182	0.0578		462.5316	462.5316	3.5500e-003		462.6060
Worker	0.1424	0.1895	2.2921	7.6700e-003	0.6003	3.9300e-003	0.6043	0.1592	3.6500e-003	0.1629		528.1065	528.1065	0.0212		528.5507
Total	0.2984	1.2069	4.1943	0.0126	0.7388	0.0238	0.7625	0.1987	0.0219	0.2206		990.6381	990.6381	0.0247		991.1568

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0801	10.6960	12.0908	0.0187		0.5718	0.5718		0.5278	0.5278		1,778.0850	1,778.0850	0.5584		1,789.8120

Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.0801	10.6960	12.0908	0.0187		0.5718	0.5718		0.5278	0.5278		1,778.0850	1,778.0850	0.5584		1,789.8120

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0606	0.0806	0.9753	3.2600e-003	0.2555	1.6700e-003	0.2571	0.0678	1.5500e-003	0.0693		224.7262	224.7262	9.0000e-003		224.9152
Total	0.0606	0.0806	0.9753	3.2600e-003	0.2555	1.6700e-003	0.2571	0.0678	1.5500e-003	0.0693		224.7262	224.7262	9.0000e-003		224.9152

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.0801	10.6960	12.0908	0.0187		0.5718	0.5718		0.5278	0.5278	0.0000	1,778.0850	1,778.0850	0.5584		1,789.8120
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.0801	10.6960	12.0908	0.0187		0.5718	0.5718		0.5278	0.5278	0.0000	1,778.0850	1,778.0850	0.5584		1,789.8120

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0606	0.0806	0.9753	3.2600e-003	0.2555	1.6700e-003	0.2571	0.0678	1.5500e-003	0.0693		224.7262	224.7262	9.0000e-003		224.9152
Total	0.0606	0.0806	0.9753	3.2600e-003	0.2555	1.6700e-003	0.2571	0.0678	1.5500e-003	0.0693		224.7262	224.7262	9.0000e-003		224.9152

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	106.2419					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		281.8329
Total	106.4465	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.8329

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0256	0.0340	0.4121	1.4700e-003	0.1150	7.5000e-004	0.1157	0.0305	7.0000e-004	0.0312		99.6116	99.6116	3.8800e-003		99.6930
Total	0.0256	0.0340	0.4121	1.4700e-003	0.1150	7.5000e-004	0.1157	0.0305	7.0000e-004	0.0312		99.6116	99.6116	3.8800e-003		99.6930

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	106.2419					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.8329
Total	106.4465	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.8329

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0256	0.0340	0.4121	1.4700e-003	0.1150	7.5000e-004	0.1157	0.0305	7.0000e-004	0.0312		99.6116	99.6116	3.8800e-003		99.6930
Total	0.0256	0.0340	0.4121	1.4700e-003	0.1150	7.5000e-004	0.1157	0.0305	7.0000e-004	0.0312		99.6116	99.6116	3.8800e-003		99.6930

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

- Increase Density
- Improve Walkability Design
- Improve Destination Accessibility
- Increase Transit Accessibility
- Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.2986	11.3133	44.5765	0.1274	6.9419	0.2313	7.1732	1.8609	0.2131	2.0740		10,070.5518	10,070.5518	0.2570		10,075.9495
Unmitigated	4.3878	11.8610	46.2554	0.1351	7.3810	0.2452	7.6262	1.9786	0.2259	2.2045		10,685.5332	10,685.5332	0.2715		10,691.2346

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Office Park	1,187.68	170.56	79.04	2,559,599	2,407,302
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	1,187.68	170.56	79.04	2,559,599	2,407,302

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Office Park	14.70	6.60	6.60	33.00	48.00	19.00	82	15	3
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.409215	0.062447	0.156087	0.176599	0.051029	0.007877	0.019913	0.103685	0.001777	0.001585	0.006582	0.000876	0.002327

5.0 Energy Detail

4.4 Fleet Mix

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	0.1197	1.0878	0.9137	6.5300e-003		0.0827	0.0827		0.0827	0.0827		1,305.3215	1,305.3215	0.0250	0.0239	1,313.2655
NaturalGas Unmitigated	0.1197	1.0878	0.9137	6.5300e-003		0.0827	0.0827		0.0827	0.0827		1,305.3215	1,305.3215	0.0250	0.0239	1,313.2655

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					
Other Non-Asphalt Surfaces	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
Office Park	11095.2	0.1197	1.0878	0.9137	6.5300e-003		0.0827	0.0827		0.0827	0.0827		1,305.3215	1,305.3215	0.0250	0.0239	1,313.2655

Total		0.1197	1.0878	0.9137	6.5300e-003		0.0827	0.0827		0.0827	0.0827		1,305.3215	1,305.3215	0.0250	0.0239	1,313.2655
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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					
Office Park	11.0952	0.1197	1.0878	0.9137	6.5300e-003		0.0827	0.0827		0.0827	0.0827		1,305.3215	1,305.3215	0.0250	0.0239	1,313.2655
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.1197	1.0878	0.9137	6.5300e-003		0.0827	0.0827		0.0827	0.0827		1,305.3215	1,305.3215	0.0250	0.0239	1,313.2655

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	3.4684	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0301	0.0301	8.0000e-005		0.0318
Unmitigated	3.4684	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0301	0.0301	8.0000e-005		0.0318

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	0.5239					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.9431					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3100e-003	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0301	0.0301	8.0000e-005		0.0318
Total	3.4684	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0301	0.0301	8.0000e-005		0.0318

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	0.5239					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.9431					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3100e-003	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0301	0.0301	8.0000e-005		0.0318
Total	3.4684	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0301	0.0301	8.0000e-005		0.0318

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

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
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10.0 Vegetation

Sequoia Drive-In Business Park (PH 3)
San Joaquin Valley Unified APCD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	104.00	1000sqft	2.39	104,000.00	0
Other Non-Asphalt Surfaces	33.53	1000sqft	0.77	33,530.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	45
Climate Zone	7			Operational Year	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Project Characteristics - Phase 3 will have 10 buildings with Office Park (ITE "Business Park") land use, ranging in square footage from 8,000 sf to 12,000 sf for a total of 104,000sf of building gfa.

Phase 3 will be 14.89 acres out of 46.17 acres of the total Project.

Land Use - "Other Non-Asphalt Surfaces" includes the new roads, on-street parking, and parking lots.

Construction Phase - No demolition required.

Vehicle Trips -

Energy Use -

Mobile Land Use Mitigation - Figures taken from ISR: LUT-1 - LUT-5 are based on project location. SDT-1: project will incorporate typical standard sidewalks throughout project.

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseStartDate	1/1/2022	1/3/2022
tblProjectCharacteristics	OperationalYear	2014	2022
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

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					
2021	3.4518	35.0909	31.5763	0.0417	18.2962	1.7010	19.9972	9.9917	1.5650	11.5566	0.0000	3,966.2502	3,966.2502	1.2334	0.0000	3,992.1521
2022	106.4681	1.4486	2.1531	4.2600e-003	0.1150	0.0825	0.1974	0.0305	0.0824	0.1129	0.0000	368.9057	368.9057	0.0222	0.0000	369.3719
Total	109.9199	36.5395	33.7294	0.0459	18.4111	1.7835	20.1947	10.0221	1.6474	11.6695	0.0000	4,335.1558	4,335.1558	1.2556	0.0000	4,361.5240

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.4518	35.0909	31.5763	0.0417	18.2962	1.7010	19.9972	9.9917	1.5650	11.5566	0.0000	3,966.2502	3,966.2502	1.2334	0.0000	3,992.1521
2022	106.4681	1.4486	2.1531	4.2600e-003	0.1150	0.0825	0.1974	0.0305	0.0824	0.1129	0.0000	368.9057	368.9057	0.0222	0.0000	369.3719
Total	109.9199	36.5395	33.7294	0.0459	18.4111	1.7835	20.1947	10.0221	1.6474	11.6695	0.0000	4,335.1558	4,335.1558	1.2556	0.0000	4,361.5240

	ROG	NOx	CO	SO2	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

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	3.4684	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0301	0.0301	8.0000e-005		0.0318
Energy	0.1197	1.0878	0.9137	6.5300e-003		0.0827	0.0827		0.0827	0.0827		1,305.3215	1,305.3215	0.0250	0.0239	1,313.2655
Mobile	4.2995	12.8949	57.0369	0.1251	7.3810	0.2466	7.6276	1.9786	0.2272	2.2058		9,969.5651	9,969.5651	0.2727		9,975.2907
Total	7.8875	13.9828	57.9647	0.1317	7.3810	0.3293	7.7103	1.9786	0.3099	2.2885		11,274.9167	11,274.9167	0.2978	0.0239	11,288.5879

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.4684	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0301	0.0301	8.0000e-005		0.0318
Energy	0.1197	1.0878	0.9137	6.5300e-003		0.0827	0.0827		0.0827	0.0827		1,305.3215	1,305.3215	0.0250	0.0239	1,313.2655
Mobile	4.2137	12.2931	55.6442	0.1180	6.9419	0.2327	7.1746	1.8609	0.2144	2.0753		9,395.6974	9,395.6974	0.2582		9,401.1193
Total	7.8018	13.3810	56.5720	0.1245	6.9419	0.3154	7.2573	1.8609	0.2971	2.1580		10,701.0490	10,701.0490	0.2833	0.0239	10,714.4165

	ROG	NOx	CO	SO2	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	1.09	4.30	2.40	5.45	5.95	4.21	5.88	5.95	4.12	5.70	0.00	5.09	5.09	4.86	0.00	5.09

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2021	1/7/2021	5	5	
2	Grading	Grading	1/8/2021	1/19/2021	5	8	
3	Building Construction	Building Construction	1/20/2021	12/7/2021	5	230	
4	Paving	Paving	12/8/2021	12/31/2021	5	18	
5	Architectural Coating	Architectural Coating	1/3/2022	1/26/2022	5	18	

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: 206,295; Non-Residential Outdoor: 68,765 (Architectural Coating –

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
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40

Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	47.00	23.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000

Off-Road	3.4057	35.0050	30.8503	0.0391		1.6995	1.6995		1.5636	1.5636		3,788.6519	3,788.6519	1.2253		3,814.3837
Total	3.4057	35.0050	30.8503	0.0391	18.0663	1.6995	19.7658	9.9307	1.5636	11.4943		3,788.6519	3,788.6519	1.2253		3,814.3837

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0461	0.0859	0.7260	2.5700e-003	0.2299	1.5100e-003	0.2314	0.0610	1.4000e-003	0.0624		177.5983	177.5983	8.1000e-003		177.7684
Total	0.0461	0.0859	0.7260	2.5700e-003	0.2299	1.5100e-003	0.2314	0.0610	1.4000e-003	0.0624		177.5983	177.5983	8.1000e-003		177.7684

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.4057	35.0050	30.8503	0.0391		1.6995	1.6995		1.5636	1.5636	0.0000	3,788.6519	3,788.6519	1.2253		3,814.3837
Total	3.4057	35.0050	30.8503	0.0391	18.0663	1.6995	19.7658	9.9307	1.5636	11.4943	0.0000	3,788.6519	3,788.6519	1.2253		3,814.3837

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0461	0.0859	0.7260	2.5700e-003	0.2299	1.5100e-003	0.2314	0.0610	1.4000e-003	0.0624		177.5983	177.5983	8.1000e-003		177.7684
Total	0.0461	0.0859	0.7260	2.5700e-003	0.2299	1.5100e-003	0.2314	0.0610	1.4000e-003	0.0624		177.5983	177.5983	8.1000e-003		177.7684

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.3182	23.1251	21.8831	0.0297		1.1996	1.1996		1.1036	1.1036		2,879.3348	2,879.3348	0.9312		2,898.8908
Total	2.3182	23.1251	21.8831	0.0297	6.5523	1.1996	7.7519	3.3675	1.1036	4.4711		2,879.3348	2,879.3348	0.9312		2,898.8908

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0384	0.0716	0.6050	2.1500e-003	0.1916	1.2600e-003	0.1929	0.0508	1.1600e-003	0.0520		147.9986	147.9986	6.7500e-003		148.1404
Total	0.0384	0.0716	0.6050	2.1500e-003	0.1916	1.2600e-003	0.1929	0.0508	1.1600e-003	0.0520		147.9986	147.9986	6.7500e-003		148.1404

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.3182	23.1251	21.8831	0.0297		1.1996	1.1996		1.1036	1.1036	0.0000	2,879.3348	2,879.3348	0.9312		2,898.8908
Total	2.3182	23.1251	21.8831	0.0297	6.5523	1.1996	7.7519	3.3675	1.1036	4.4711	0.0000	2,879.3348	2,879.3348	0.9312		2,898.8908

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0384	0.0716	0.6050	2.1500e-003	0.1916	1.2600e-003	0.1929	0.0508	1.1600e-003	0.0520		147.9986	147.9986	6.7500e-003		148.1404
Total	0.0384	0.0716	0.6050	2.1500e-003	0.1916	1.2600e-003	0.1929	0.0508	1.1600e-003	0.0520		147.9986	147.9986	6.7500e-003		148.1404

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979		2,542.7817	2,542.7817	0.6126		2,555.6462
Total	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979		2,542.7817	2,542.7817	0.6126		2,555.6462

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1888	1.0695	3.3408	4.9200e-003	0.1385	0.0201	0.1585	0.0395	0.0185	0.0580		458.5986	458.5986	3.6700e-003		458.6758
Worker	0.1204	0.2242	1.8956	6.7200e-003	0.6003	3.9300e-003	0.6043	0.1592	3.6500e-003	0.1629		463.7289	463.7289	0.0212		464.1731
Total	0.3092	1.2938	5.2364	0.0116	0.7388	0.0240	0.7628	0.1987	0.0221	0.2209		922.3275	922.3275	0.0248		922.8488

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979	0.0000	2,542.7817	2,542.7817	0.6126		2,555.6462
Total	1.8931	17.3403	16.5376	0.0268		0.9549	0.9549		0.8979	0.8979	0.0000	2,542.7817	2,542.7817	0.6126		2,555.6462

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1888	1.0695	3.3408	4.9200e-003	0.1385	0.0201	0.1585	0.0395	0.0185	0.0580		458.5986	458.5986	3.6700e-003		458.6758
Worker	0.1204	0.2242	1.8956	6.7200e-003	0.6003	3.9300e-003	0.6043	0.1592	3.6500e-003	0.1629		463.7289	463.7289	0.0212		464.1731
Total	0.3092	1.2938	5.2364	0.0116	0.7388	0.0240	0.7628	0.1987	0.0221	0.2209		922.3275	922.3275	0.0248		922.8488

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0801	10.6960	12.0908	0.0187		0.5718	0.5718		0.5278	0.5278		1,778.0850	1,778.0850	0.5584		1,789.8120

Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.0801	10.6960	12.0908	0.0187		0.5718	0.5718		0.5278	0.5278		1,778.0850	1,778.0850	0.5584		1,789.8120

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0512	0.0954	0.8067	2.8600e-003	0.2555	1.6700e-003	0.2571	0.0678	1.5500e-003	0.0693		197.3314	197.3314	9.0000e-003		197.5205
Total	0.0512	0.0954	0.8067	2.8600e-003	0.2555	1.6700e-003	0.2571	0.0678	1.5500e-003	0.0693		197.3314	197.3314	9.0000e-003		197.5205

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.0801	10.6960	12.0908	0.0187		0.5718	0.5718		0.5278	0.5278	0.0000	1,778.0850	1,778.0850	0.5584		1,789.8120
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.0801	10.6960	12.0908	0.0187		0.5718	0.5718		0.5278	0.5278	0.0000	1,778.0850	1,778.0850	0.5584		1,789.8120

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0512	0.0954	0.8067	2.8600e-003	0.2555	1.6700e-003	0.2571	0.0678	1.5500e-003	0.0693		197.3314	197.3314	9.0000e-003		197.5205
Total	0.0512	0.0954	0.8067	2.8600e-003	0.2555	1.6700e-003	0.2571	0.0678	1.5500e-003	0.0693		197.3314	197.3314	9.0000e-003		197.5205

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	106.2419					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		281.8329
Total	106.4465	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.8329

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0217	0.0402	0.3395	1.2900e-003	0.1150	7.5000e-004	0.1157	0.0305	7.0000e-004	0.0312		87.4576	87.4576	3.8800e-003		87.5390
Total	0.0217	0.0402	0.3395	1.2900e-003	0.1150	7.5000e-004	0.1157	0.0305	7.0000e-004	0.0312		87.4576	87.4576	3.8800e-003		87.5390

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	106.2419					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.8329
Total	106.4465	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.8329

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0217	0.0402	0.3395	1.2900e-003	0.1150	7.5000e-004	0.1157	0.0305	7.0000e-004	0.0312		87.4576	87.4576	3.8800e-003		87.5390
Total	0.0217	0.0402	0.3395	1.2900e-003	0.1150	7.5000e-004	0.1157	0.0305	7.0000e-004	0.0312		87.4576	87.4576	3.8800e-003		87.5390

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

- Increase Density
- Improve Walkability Design
- Improve Destination Accessibility
- Increase Transit Accessibility
- Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.2137	12.2931	55.6442	0.1180	6.9419	0.2327	7.1746	1.8609	0.2144	2.0753		9,395.6974	9,395.6974	0.2582		9,401.1193
Unmitigated	4.2995	12.8949	57.0369	0.1251	7.3810	0.2466	7.6276	1.9786	0.2272	2.2058		9,969.5651	9,969.5651	0.2727		9,975.2907

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Office Park	1,187.68	170.56	79.04	2,559,599	2,407,302
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	1,187.68	170.56	79.04	2,559,599	2,407,302

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Office Park	14.70	6.60	6.60	33.00	48.00	19.00	82	15	3
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.409215	0.062447	0.156087	0.176599	0.051029	0.007877	0.019913	0.103685	0.001777	0.001585	0.006582	0.000876	0.002327

5.0 Energy Detail

4.4 Fleet Mix

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	0.1197	1.0878	0.9137	6.5300e-003		0.0827	0.0827		0.0827	0.0827		1,305.3215	1,305.3215	0.0250	0.0239	1,313.2655
NaturalGas Unmitigated	0.1197	1.0878	0.9137	6.5300e-003		0.0827	0.0827		0.0827	0.0827		1,305.3215	1,305.3215	0.0250	0.0239	1,313.2655

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					
Other Non-Asphalt Surfaces	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
Office Park	11095.2	0.1197	1.0878	0.9137	6.5300e-003		0.0827	0.0827		0.0827	0.0827		1,305.3215	1,305.3215	0.0250	0.0239	1,313.2655

Total		0.1197	1.0878	0.9137	6.5300e-003		0.0827	0.0827		0.0827	0.0827		1,305.3215	1,305.3215	0.0250	0.0239	1,313.2655
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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					
Office Park	11.0952	0.1197	1.0878	0.9137	6.5300e-003		0.0827	0.0827		0.0827	0.0827		1,305.3215	1,305.3215	0.0250	0.0239	1,313.2655
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.1197	1.0878	0.9137	6.5300e-003		0.0827	0.0827		0.0827	0.0827		1,305.3215	1,305.3215	0.0250	0.0239	1,313.2655

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	3.4684	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0301	0.0301	8.0000e-005		0.0318
Unmitigated	3.4684	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0301	0.0301	8.0000e-005		0.0318

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	0.5239					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.9431					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3100e-003	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0301	0.0301	8.0000e-005		0.0318
Total	3.4684	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0301	0.0301	8.0000e-005		0.0318

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	0.5239					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.9431					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3100e-003	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0301	0.0301	8.0000e-005		0.0318
Total	3.4684	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0301	0.0301	8.0000e-005		0.0318

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

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
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10.0 Vegetation

Sequoia Drive-In Business Park (PH 4)
San Joaquin Valley Unified APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	98.03	1000sqft	2.25	98,030.00	0
Other Non-Asphalt Surfaces	62.82	1000sqft	1.44	62,820.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	45
Climate Zone	7			Operational Year	2024
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Project Characteristics - Phase 4 will have 8 buildings with Office Park (ITE "Business Park") land use, ranging in square footage from 5,200 sf to 13,390 sf for a total of 98,030 sf of building gfa.

Phase 4 will be 12.72 acres out of 46.17 acres of the total Project.

Land Use - "Other Non-Asphalt Surfaces" includes the new roads, on-street parking, and parking lots.

Construction Phase - No demolition required.

Vehicle Trips -

Energy Use -

Mobile Land Use Mitigation - Figures taken from ISR: LUT-1 - LUT-5 are based on project location. SDT-1: project will incorporate typical standard sidewalks throughout project.

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseStartDate	1/7/2023	1/9/2023
tblProjectCharacteristics	OperationalYear	2014	2024
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

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					
2023	3.0638	29.9981	29.5952	0.0421	18.2962	1.3922	19.6884	9.9917	1.2809	11.2725	0.0000	3,990.4812	3,990.4812	1.2345	0.0000	4,016.4055
2024	124.4677	8.2391	12.8707	0.0219	0.2555	0.3956	0.6510	0.0678	0.3657	0.4334	0.0000	1,995.0408	1,995.0408	0.5668	0.0000	2,006.9433
Total	127.5315	38.2372	42.4659	0.0640	18.5516	1.7878	20.3394	10.0594	1.6465	11.7059	0.0000	5,985.5220	5,985.5220	1.8013	0.0000	6,023.3489

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					
2023	3.0638	29.9981	29.5952	0.0421	18.2962	1.3922	19.6884	9.9917	1.2809	11.2725	0.0000	3,990.4812	3,990.4812	1.2345	0.0000	4,016.4055
2024	124.4677	8.2391	12.8707	0.0219	0.2555	0.3956	0.6510	0.0678	0.3657	0.4334	0.0000	1,995.0408	1,995.0408	0.5668	0.0000	2,006.9433
Total	127.5315	38.2372	42.4659	0.0640	18.5516	1.7878	20.3394	10.0594	1.6465	11.7059	0.0000	5,985.5220	5,985.5220	1.8013	0.0000	6,023.3489

	ROG	NOx	CO	SO2	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

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	4.0565	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0371
Energy	0.1128	1.0253	0.8613	6.1500e-003		0.0779	0.0779		0.0779	0.0779		1,230.3910	1,230.3910	0.0236	0.0226	1,237.8790
Mobile	3.7805	9.8019	40.0411	0.1272	6.9569	0.2229	7.1798	1.8648	0.2054	2.0702		9,927.9024	9,927.9024	0.2362		9,932.8634
Total	7.9497	10.8274	40.9188	0.1334	6.9569	0.3009	7.2577	1.8648	0.2833	2.1482		11,158.3286	11,158.3286	0.2599	0.0226	11,170.7796

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	4.0565	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0371
Energy	0.1128	1.0253	0.8613	6.1500e-003		0.0779	0.0779		0.0779	0.0779		1,230.3910	1,230.3910	0.0236	0.0226	1,237.8790
Mobile	3.7034	9.3601	38.5963	0.1199	6.5429	0.2103	6.7532	1.7539	0.1938	1.9476		9,356.5740	9,356.5740	0.2236		9,361.2698
Total	7.8726	10.3856	39.4740	0.1261	6.5429	0.2883	6.8312	1.7539	0.2717	2.0256		10,587.0003	10,587.0003	0.2473	0.0226	10,599.1859

	ROG	NOx	CO	SO2	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	0.97	4.08	3.53	5.49	5.95	4.18	5.88	5.95	4.09	5.70	0.00	5.12	5.12	4.86	0.00	5.12

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/2/2023	1/6/2023	5	5	
2	Grading	Grading	1/9/2023	1/18/2023	5	8	
3	Building Construction	Building Construction	1/19/2023	12/6/2023	5	230	
4	Paving	Paving	12/7/2023	1/1/2024	5	18	
5	Architectural Coating	Architectural Coating	1/2/2024	1/25/2024	5	18	

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: 241,275; Non-Residential Outdoor: 80,425 (Architectural Coating –

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
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40

Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	58.00	26.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000

Off-Road	3.0157	29.9342	28.8193	0.0392		1.3907	1.3907		1.2795	1.2795		3,793.9535	3,793.9535	1.2270		3,819.7214
Total	3.0157	29.9342	28.8193	0.0392	18.0663	1.3907	19.4570	9.9307	1.2795	11.2102		3,793.9535	3,793.9535	1.2270		3,819.7214

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0482	0.0639	0.7760	2.9400e-003	0.2299	1.5100e-003	0.2314	0.0610	1.4000e-003	0.0624		196.5277	196.5277	7.4500e-003		196.6841
Total	0.0482	0.0639	0.7760	2.9400e-003	0.2299	1.5100e-003	0.2314	0.0610	1.4000e-003	0.0624		196.5277	196.5277	7.4500e-003		196.6841

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.0157	29.9342	28.8193	0.0392		1.3907	1.3907		1.2795	1.2795	0.0000	3,793.9535	3,793.9535	1.2270		3,819.7214
Total	3.0157	29.9342	28.8193	0.0392	18.0663	1.3907	19.4570	9.9307	1.2795	11.2102	0.0000	3,793.9535	3,793.9535	1.2270		3,819.7214

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0482	0.0639	0.7760	2.9400e-003	0.2299	1.5100e-003	0.2314	0.0610	1.4000e-003	0.0624		196.5277	196.5277	7.4500e-003		196.6841
Total	0.0482	0.0639	0.7760	2.9400e-003	0.2299	1.5100e-003	0.2314	0.0610	1.4000e-003	0.0624		196.5277	196.5277	7.4500e-003		196.6841

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.9415	18.5894	21.0065	0.0298		0.9134	0.9134		0.8404	0.8404		2,882.0579	2,882.0579	0.9321		2,901.6323
Total	1.9415	18.5894	21.0065	0.0298	6.5523	0.9134	7.4658	3.3675	0.8404	4.2078		2,882.0579	2,882.0579	0.9321		2,901.6323

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0401	0.0533	0.6466	2.4500e-003	0.1916	1.2500e-003	0.1929	0.0508	1.1600e-003	0.0520		163.7731	163.7731	6.2100e-003		163.9035
Total	0.0401	0.0533	0.6466	2.4500e-003	0.1916	1.2500e-003	0.1929	0.0508	1.1600e-003	0.0520		163.7731	163.7731	6.2100e-003		163.9035

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.9415	18.5894	21.0065	0.0298		0.9134	0.9134		0.8404	0.8404	0.0000	2,882.0579	2,882.0579	0.9321		2,901.6323
Total	1.9415	18.5894	21.0065	0.0298	6.5523	0.9134	7.4658	3.3675	0.8404	4.2078	0.0000	2,882.0579	2,882.0579	0.9321		2,901.6323

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0401	0.0533	0.6466	2.4500e-003	0.1916	1.2500e-003	0.1929	0.0508	1.1600e-003	0.0520		163.7731	163.7731	6.2100e-003		163.9035
Total	0.0401	0.0533	0.6466	2.4500e-003	0.1916	1.2500e-003	0.1929	0.0508	1.1600e-003	0.0520		163.7731	163.7731	6.2100e-003		163.9035

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5661	14.3126	16.2093	0.0268		0.6967	0.6967		0.6557	0.6557		2,544.6262	2,544.6262	0.6044		2,557.3191
Total	1.5661	14.3126	16.2093	0.0268		0.6967	0.6967		0.6557	0.6557		2,544.6262	2,544.6262	0.6044		2,557.3191

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1591	0.8828	2.0003	5.5600e-003	0.1565	0.0204	0.1770	0.0447	0.0188	0.0635		521.3023	521.3023	3.7600e-003		521.3813
Worker	0.1551	0.2059	2.5003	9.4600e-003	0.7408	4.8500e-003	0.7457	0.1965	4.5000e-003	0.2010		633.2558	633.2558	0.0240		633.7600
Total	0.3142	1.0887	4.5006	0.0150	0.8974	0.0253	0.9226	0.2412	0.0233	0.2645		1,154.5581	1,154.5581	0.0278		1,155.1413

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.5661	14.3126	16.2093	0.0268		0.6967	0.6967		0.6557	0.6557	0.0000	2,544.6262	2,544.6262	0.6044		2,557.3191
Total	1.5661	14.3126	16.2093	0.0268		0.6967	0.6967		0.6557	0.6557	0.0000	2,544.6262	2,544.6262	0.6044		2,557.3191

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1591	0.8828	2.0003	5.5600e-003	0.1565	0.0204	0.1770	0.0447	0.0188	0.0635		521.3023	521.3023	3.7600e-003		521.3813
Worker	0.1551	0.2059	2.5003	9.4600e-003	0.7408	4.8500e-003	0.7457	0.1965	4.5000e-003	0.2010		633.2558	633.2558	0.0240		633.7600
Total	0.3142	1.0887	4.5006	0.0150	0.8974	0.0253	0.9226	0.2412	0.0233	0.2645		1,154.5581	1,154.5581	0.0278		1,155.1413

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9068	8.6815	12.0215	0.0187		0.4305	0.4305		0.3978	0.3978		1,778.9569	1,778.9569	0.5587		1,790.6898

Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9068	8.6815	12.0215	0.0187		0.4305	0.4305		0.3978	0.3978		1,778.9569	1,778.9569	0.5587		1,790.6898

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0535	0.0710	0.8622	3.2600e-003	0.2555	1.6700e-003	0.2571	0.0678	1.5500e-003	0.0693		218.3641	218.3641	8.2800e-003		218.5379
Total	0.0535	0.0710	0.8622	3.2600e-003	0.2555	1.6700e-003	0.2571	0.0678	1.5500e-003	0.0693		218.3641	218.3641	8.2800e-003		218.5379

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.9068	8.6815	12.0215	0.0187		0.4305	0.4305		0.3978	0.3978	0.0000	1,778.9569	1,778.9569	0.5587		1,790.6898
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9068	8.6815	12.0215	0.0187		0.4305	0.4305		0.3978	0.3978	0.0000	1,778.9569	1,778.9569	0.5587		1,790.6898

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0535	0.0710	0.8622	3.2600e-003	0.2555	1.6700e-003	0.2571	0.0678	1.5500e-003	0.0693		218.3641	218.3641	8.2800e-003		218.5379
Total	0.0535	0.0710	0.8622	3.2600e-003	0.2555	1.6700e-003	0.2571	0.0678	1.5500e-003	0.0693		218.3641	218.3641	8.2800e-003		218.5379

3.5 Paving - 2024

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	0.8706	8.1720	12.0513	0.0187		0.3939	0.3939		0.3641	0.3641		1,779.1492	1,779.1492	0.5588		1,790.8834
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8706	8.1720	12.0513	0.0187		0.3939	0.3939		0.3641	0.3641		1,779.1492	1,779.1492	0.5588		1,790.8834

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0504	0.0670	0.8194	3.2600e-003	0.2555	1.6800e-003	0.2571	0.0678	1.5600e-003	0.0693		215.8916	215.8916	8.0100e-003		216.0599
Total	0.0504	0.0670	0.8194	3.2600e-003	0.2555	1.6800e-003	0.2571	0.0678	1.5600e-003	0.0693		215.8916	215.8916	8.0100e-003		216.0599

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.8706	8.1720	12.0513	0.0187		0.3939	0.3939		0.3641	0.3641	0.0000	1,779.1492	1,779.1492	0.5588		1,790.8834
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8706	8.1720	12.0513	0.0187		0.3939	0.3939		0.3641	0.3641	0.0000	1,779.1492	1,779.1492	0.5588		1,790.8834

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0504	0.0670	0.8194	3.2600e-003	0.2555	1.6800e-003	0.2571	0.0678	1.5600e-003	0.0693		215.8916	215.8916	8.0100e-003		216.0599
Total	0.0504	0.0670	0.8194	3.2600e-003	0.2555	1.6800e-003	0.2571	0.0678	1.5600e-003	0.0693		215.8916	215.8916	8.0100e-003		216.0599

3.6 Architectural Coating - 2024

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	124.2566					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.7809
Total	124.4374	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.7809

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0303	0.0402	0.4917	1.9600e-003	0.1533	1.0100e-003	0.1543	0.0407	9.4000e-004	0.0416		129.5350	129.5350	4.8100e-003		129.6360
Total	0.0303	0.0402	0.4917	1.9600e-003	0.1533	1.0100e-003	0.1543	0.0407	9.4000e-004	0.0416		129.5350	129.5350	4.8100e-003		129.6360

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	124.2566					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.7809
Total	124.4374	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.7809

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0303	0.0402	0.4917	1.9600e-003	0.1533	1.0100e-003	0.1543	0.0407	9.4000e-004	0.0416		129.5350	129.5350	4.8100e-003		129.6360
Total	0.0303	0.0402	0.4917	1.9600e-003	0.1533	1.0100e-003	0.1543	0.0407	9.4000e-004	0.0416		129.5350	129.5350	4.8100e-003		129.6360

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

- Increase Density
- Improve Walkability Design
- Improve Destination Accessibility
- Increase Transit Accessibility
- Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.7034	9.3601	38.5963	0.1199	6.5429	0.2103	6.7532	1.7539	0.1938	1.9476		9,356.5740	9,356.5740	0.2236		9,361.2698
Unmitigated	3.7805	9.8019	40.0411	0.1272	6.9569	0.2229	7.1798	1.8648	0.2054	2.0702		9,927.9024	9,927.9024	0.2362		9,932.8634

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Office Park	1,119.50	160.77	74.50	2,412,668	2,269,114
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	1,119.50	160.77	74.50	2,412,668	2,269,114

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Office Park	14.70	6.60	6.60	33.00	48.00	19.00	82	15	3
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.409414	0.062437	0.155860	0.176720	0.051185	0.007913	0.019934	0.103301	0.001779	0.001597	0.006667	0.000853	0.002340

5.0 Energy Detail

4.4 Fleet Mix

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	0.1128	1.0253	0.8613	6.1500e-003		0.0779	0.0779		0.0779	0.0779		1,230.3910	1,230.3910	0.0236	0.0226	1,237.8790
NaturalGas Unmitigated	0.1128	1.0253	0.8613	6.1500e-003		0.0779	0.0779		0.0779	0.0779		1,230.3910	1,230.3910	0.0236	0.0226	1,237.8790

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					
Office Park	10458.3	0.1128	1.0253	0.8613	6.1500e-003		0.0779	0.0779		0.0779	0.0779		1,230.3910	1,230.3910	0.0236	0.0226	1,237.8790
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.1128	1.0253	0.8613	6.1500e-003		0.0779	0.0779		0.0779	0.0779		1,230.3910	1,230.3910	0.0236	0.0226	1,237.8790

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					
Office Park	10.4583	0.1128	1.0253	0.8613	6.1500e-003		0.0779	0.0779		0.0779	0.0779		1,230.3910	1,230.3910	0.0236	0.0226	1,237.8790

Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.1128	1.0253	0.8613	6.1500e-003		0.0779	0.0779		0.0779	0.0779		1,230.3910	1,230.3910	0.0236	0.0226	1,237.8790

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	4.0565	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0371
Unmitigated	4.0565	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0371

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	0.6128					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.4422					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.5100e-003	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0371
Total	4.0565	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0371

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	0.6128					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.4422					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.5100e-003	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0371
Total	4.0565	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0371

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

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
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10.0 Vegetation

Sequoia Drive-In Business Park (PH 4)
San Joaquin Valley Unified APCD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	98.03	1000sqft	2.25	98,030.00	0
Other Non-Asphalt Surfaces	62.82	1000sqft	1.44	62,820.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	45
Climate Zone	7			Operational Year	2024
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Project Characteristics - Phase 4 will have 8 buildings with Office Park (ITE "Business Park") land use, ranging in square footage from 5,200 sf to 13,390 sf for a total of 98,030 sf of building gfa.

Phase 4 will be 12.72 acres out of 46.17 acres of the total Project.

Land Use - "Other Non-Asphalt Surfaces" includes the new roads, on-street parking, and parking lots.

Construction Phase - No demolition required.

Vehicle Trips -

Energy Use -

Mobile Land Use Mitigation - Figures taken from ISR: LUT-1 - LUT-5 are based on project location. SDT-1: project will incorporate typical standard sidewalks throughout project.

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseStartDate	1/7/2023	1/9/2023
tblProjectCharacteristics	OperationalYear	2014	2024
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

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					
2023	3.0565	30.0097	29.4560	0.0417	18.2962	1.3922	19.6884	9.9917	1.2809	11.2725	0.0000	3,966.4779	3,966.4779	1.2345	0.0000	3,992.4023
2024	124.4631	8.2511	12.7211	0.0215	0.2555	0.3956	0.6510	0.0678	0.3657	0.4334	0.0000	1,968.6382	1,968.6382	0.5668	0.0000	1,980.5407
Total	127.5195	38.2607	42.1771	0.0633	18.5516	1.7878	20.3394	10.0594	1.6465	11.7059	0.0000	5,935.1162	5,935.1162	1.8013	0.0000	5,972.9430

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					
2023	3.0565	30.0097	29.4560	0.0417	18.2962	1.3922	19.6884	9.9917	1.2809	11.2725	0.0000	3,966.4779	3,966.4779	1.2345	0.0000	3,992.4023
2024	124.4631	8.2511	12.7211	0.0215	0.2555	0.3956	0.6510	0.0678	0.3657	0.4334	0.0000	1,968.6382	1,968.6382	0.5668	0.0000	1,980.5407
Total	127.5195	38.2607	42.1771	0.0633	18.5516	1.7878	20.3394	10.0594	1.6465	11.7059	0.0000	5,935.1162	5,935.1162	1.8013	0.0000	5,972.9430

	ROG	NOx	CO	SO2	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

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	4.0565	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0371
Energy	0.1128	1.0253	0.8613	6.1500e-003		0.0779	0.0779		0.0779	0.0779		1,230.3910	1,230.3910	0.0236	0.0226	1,237.8790
Mobile	3.6730	10.6474	48.9882	0.1178	6.9569	0.2239	7.1808	1.8648	0.2063	2.0711		9,267.2414	9,267.2414	0.2373		9,272.2249
Total	7.8423	11.6728	49.8658	0.1239	6.9569	0.3019	7.2588	1.8648	0.2843	2.1491		10,497.6676	10,497.6676	0.2610	0.0226	10,510.1410

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	4.0565	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0371
Energy	0.1128	1.0253	0.8613	6.1500e-003		0.0779	0.0779		0.0779	0.0779		1,230.3910	1,230.3910	0.0236	0.0226	1,237.8790
Mobile	3.5986	10.1616	47.7889	0.1110	6.5429	0.2113	6.7543	1.7539	0.1947	1.9486		8,733.8236	8,733.8236	0.2247		8,738.5419
Total	7.7678	11.1871	48.6666	0.1172	6.5429	0.2893	6.8322	1.7539	0.2727	2.0266		9,964.2499	9,964.2499	0.2484	0.0226	9,976.4580

	ROG	NOx	CO	SO2	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	0.95	4.16	2.40	5.46	5.95	4.17	5.88	5.95	4.08	5.70	0.00	5.08	5.08	4.84	0.00	5.08

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/2/2023	1/6/2023	5	5	
2	Grading	Grading	1/9/2023	1/18/2023	5	8	
3	Building Construction	Building Construction	1/19/2023	12/6/2023	5	230	
4	Paving	Paving	12/7/2023	1/1/2024	5	18	
5	Architectural Coating	Architectural Coating	1/2/2024	1/25/2024	5	18	

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: 241,275; Non-Residential Outdoor: 80,425 (Architectural Coating –

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
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	162	0.38
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	6.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40

Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	6.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	58.00	26.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000

Off-Road	3.0157	29.9342	28.8193	0.0392		1.3907	1.3907		1.2795	1.2795		3,793.9535	3,793.9535	1.2270		3,819.7214
Total	3.0157	29.9342	28.8193	0.0392	18.0663	1.3907	19.4570	9.9307	1.2795	11.2102		3,793.9535	3,793.9535	1.2270		3,819.7214

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0408	0.0754	0.6368	2.5700e-003	0.2299	1.5100e-003	0.2314	0.0610	1.4000e-003	0.0624		172.5244	172.5244	7.4500e-003		172.6809
Total	0.0408	0.0754	0.6368	2.5700e-003	0.2299	1.5100e-003	0.2314	0.0610	1.4000e-003	0.0624		172.5244	172.5244	7.4500e-003		172.6809

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.0157	29.9342	28.8193	0.0392		1.3907	1.3907		1.2795	1.2795	0.0000	3,793.9535	3,793.9535	1.2270		3,819.7214
Total	3.0157	29.9342	28.8193	0.0392	18.0663	1.3907	19.4570	9.9307	1.2795	11.2102	0.0000	3,793.9535	3,793.9535	1.2270		3,819.7214

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0408	0.0754	0.6368	2.5700e-003	0.2299	1.5100e-003	0.2314	0.0610	1.4000e-003	0.0624		172.5244	172.5244	7.4500e-003		172.6809
Total	0.0408	0.0754	0.6368	2.5700e-003	0.2299	1.5100e-003	0.2314	0.0610	1.4000e-003	0.0624		172.5244	172.5244	7.4500e-003		172.6809

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.9415	18.5894	21.0065	0.0298		0.9134	0.9134		0.8404	0.8404		2,882.0579	2,882.0579	0.9321		2,901.6323
Total	1.9415	18.5894	21.0065	0.0298	6.5523	0.9134	7.4658	3.3675	0.8404	4.2078		2,882.0579	2,882.0579	0.9321		2,901.6323

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0340	0.0629	0.5306	2.1500e-003	0.1916	1.2500e-003	0.1929	0.0508	1.1600e-003	0.0520		143.7703	143.7703	6.2100e-003		143.9007
Total	0.0340	0.0629	0.5306	2.1500e-003	0.1916	1.2500e-003	0.1929	0.0508	1.1600e-003	0.0520		143.7703	143.7703	6.2100e-003		143.9007

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.9415	18.5894	21.0065	0.0298		0.9134	0.9134		0.8404	0.8404	0.0000	2,882.0579	2,882.0579	0.9321		2,901.6323
Total	1.9415	18.5894	21.0065	0.0298	6.5523	0.9134	7.4658	3.3675	0.8404	4.2078	0.0000	2,882.0579	2,882.0579	0.9321		2,901.6323

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0340	0.0629	0.5306	2.1500e-003	0.1916	1.2500e-003	0.1929	0.0508	1.1600e-003	0.0520		143.7703	143.7703	6.2100e-003		143.9007
Total	0.0340	0.0629	0.5306	2.1500e-003	0.1916	1.2500e-003	0.1929	0.0508	1.1600e-003	0.0520		143.7703	143.7703	6.2100e-003		143.9007

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5661	14.3126	16.2093	0.0268		0.6967	0.6967		0.6557	0.6557		2,544.6262	2,544.6262	0.6044		2,557.3191
Total	1.5661	14.3126	16.2093	0.0268		0.6967	0.6967		0.6557	0.6557		2,544.6262	2,544.6262	0.6044		2,557.3191

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1896	0.9264	3.4667	5.5400e-003	0.1565	0.0206	0.1771	0.0447	0.0190	0.0637		516.8440	516.8440	3.9100e-003		516.9260
Worker	0.1314	0.2430	2.0518	8.2900e-003	0.7408	4.8500e-003	0.7457	0.1965	4.5000e-003	0.2010		555.9120	555.9120	0.0240		556.4162
Total	0.3210	1.1694	5.5185	0.0138	0.8974	0.0255	0.9228	0.2412	0.0235	0.2646		1,072.7560	1,072.7560	0.0279		1,073.3422

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.5661	14.3126	16.2093	0.0268		0.6967	0.6967		0.6557	0.6557	0.0000	2,544.6262	2,544.6262	0.6044		2,557.3191
Total	1.5661	14.3126	16.2093	0.0268		0.6967	0.6967		0.6557	0.6557	0.0000	2,544.6262	2,544.6262	0.6044		2,557.3191

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1896	0.9264	3.4667	5.5400e-003	0.1565	0.0206	0.1771	0.0447	0.0190	0.0637		516.8440	516.8440	3.9100e-003		516.9260
Worker	0.1314	0.2430	2.0518	8.2900e-003	0.7408	4.8500e-003	0.7457	0.1965	4.5000e-003	0.2010		555.9120	555.9120	0.0240		556.4162
Total	0.3210	1.1694	5.5185	0.0138	0.8974	0.0255	0.9228	0.2412	0.0235	0.2646		1,072.7560	1,072.7560	0.0279		1,073.3422

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9068	8.6815	12.0215	0.0187		0.4305	0.4305		0.3978	0.3978		1,778.9569	1,778.9569	0.5587		1,790.6898

Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9068	8.6815	12.0215	0.0187		0.4305	0.4305		0.3978	0.3978		1,778.9569	1,778.9569	0.5587		1,790.6898

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0453	0.0838	0.7075	2.8600e-003	0.2555	1.6700e-003	0.2571	0.0678	1.5500e-003	0.0693		191.6938	191.6938	8.2800e-003		191.8676
Total	0.0453	0.0838	0.7075	2.8600e-003	0.2555	1.6700e-003	0.2571	0.0678	1.5500e-003	0.0693		191.6938	191.6938	8.2800e-003		191.8676

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.9068	8.6815	12.0215	0.0187		0.4305	0.4305		0.3978	0.3978	0.0000	1,778.9569	1,778.9569	0.5587		1,790.6898
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9068	8.6815	12.0215	0.0187		0.4305	0.4305		0.3978	0.3978	0.0000	1,778.9569	1,778.9569	0.5587		1,790.6898

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0453	0.0838	0.7075	2.8600e-003	0.2555	1.6700e-003	0.2571	0.0678	1.5500e-003	0.0693		191.6938	191.6938	8.2800e-003		191.8676
Total	0.0453	0.0838	0.7075	2.8600e-003	0.2555	1.6700e-003	0.2571	0.0678	1.5500e-003	0.0693		191.6938	191.6938	8.2800e-003		191.8676

3.5 Paving - 2024

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	0.8706	8.1720	12.0513	0.0187		0.3939	0.3939		0.3641	0.3641		1,779.1492	1,779.1492	0.5588		1,790.8834
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8706	8.1720	12.0513	0.0187		0.3939	0.3939		0.3641	0.3641		1,779.1492	1,779.1492	0.5588		1,790.8834

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0428	0.0790	0.6698	2.8600e-003	0.2555	1.6800e-003	0.2571	0.0678	1.5600e-003	0.0693		189.4891	189.4891	8.0100e-003		189.6574
Total	0.0428	0.0790	0.6698	2.8600e-003	0.2555	1.6800e-003	0.2571	0.0678	1.5600e-003	0.0693		189.4891	189.4891	8.0100e-003		189.6574

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.8706	8.1720	12.0513	0.0187		0.3939	0.3939		0.3641	0.3641	0.0000	1,779.1492	1,779.1492	0.5588		1,790.8834
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8706	8.1720	12.0513	0.0187		0.3939	0.3939		0.3641	0.3641	0.0000	1,779.1492	1,779.1492	0.5588		1,790.8834

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0428	0.0790	0.6698	2.8600e-003	0.2555	1.6800e-003	0.2571	0.0678	1.5600e-003	0.0693		189.4891	189.4891	8.0100e-003		189.6574
Total	0.0428	0.0790	0.6698	2.8600e-003	0.2555	1.6800e-003	0.2571	0.0678	1.5600e-003	0.0693		189.4891	189.4891	8.0100e-003		189.6574

3.6 Architectural Coating - 2024

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	124.2566					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.7809
Total	124.4374	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.7809

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0257	0.0474	0.4019	1.7200e-003	0.1533	1.0100e-003	0.1543	0.0407	9.4000e-004	0.0416		113.6934	113.6934	4.8100e-003		113.7944
Total	0.0257	0.0474	0.4019	1.7200e-003	0.1533	1.0100e-003	0.1543	0.0407	9.4000e-004	0.0416		113.6934	113.6934	4.8100e-003		113.7944

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	124.2566					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.7809
Total	124.4374	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.7809

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0257	0.0474	0.4019	1.7200e-003	0.1533	1.0100e-003	0.1543	0.0407	9.4000e-004	0.0416		113.6934	113.6934	4.8100e-003		113.7944
Total	0.0257	0.0474	0.4019	1.7200e-003	0.1533	1.0100e-003	0.1543	0.0407	9.4000e-004	0.0416		113.6934	113.6934	4.8100e-003		113.7944

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

- Increase Density
- Improve Walkability Design
- Improve Destination Accessibility
- Increase Transit Accessibility
- Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.5986	10.1616	47.7889	0.1110	6.5429	0.2113	6.7543	1.7539	0.1947	1.9486		8,733.8236	8,733.8236	0.2247		8,738.5419
Unmitigated	3.6730	10.6474	48.9882	0.1178	6.9569	0.2239	7.1808	1.8648	0.2063	2.0711		9,267.2414	9,267.2414	0.2373		9,272.2249

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Office Park	1,119.50	160.77	74.50	2,412,668	2,269,114
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	1,119.50	160.77	74.50	2,412,668	2,269,114

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Office Park	14.70	6.60	6.60	33.00	48.00	19.00	82	15	3
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.409414	0.062437	0.155860	0.176720	0.051185	0.007913	0.019934	0.103301	0.001779	0.001597	0.006667	0.000853	0.002340

5.0 Energy Detail

4.4 Fleet Mix

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	0.1128	1.0253	0.8613	6.1500e-003		0.0779	0.0779		0.0779	0.0779		1,230.3910	1,230.3910	0.0236	0.0226	1,237.8790
NaturalGas Unmitigated	0.1128	1.0253	0.8613	6.1500e-003		0.0779	0.0779		0.0779	0.0779		1,230.3910	1,230.3910	0.0236	0.0226	1,237.8790

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					
Other Non-Asphalt Surfaces	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
Office Park	10458.3	0.1128	1.0253	0.8613	6.1500e-003		0.0779	0.0779		0.0779	0.0779		1,230.3910	1,230.3910	0.0236	0.0226	1,237.8790
Total		0.1128	1.0253	0.8613	6.1500e-003		0.0779	0.0779		0.0779	0.0779		1,230.3910	1,230.3910	0.0236	0.0226	1,237.8790

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					
Other Non-Asphalt Surfaces	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

Office Park	10.4583	0.1128	1.0253	0.8613	6.1500e-003		0.0779	0.0779		0.0779	0.0779		1,230.3910	1,230.3910	0.0236	0.0226	1,237.8790
Total		0.1128	1.0253	0.8613	6.1500e-003		0.0779	0.0779		0.0779	0.0779		1,230.3910	1,230.3910	0.0236	0.0226	1,237.8790

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	4.0565	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0371
Unmitigated	4.0565	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0371

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	0.6128					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.4422					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.5100e-003	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0371
Total	4.0565	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0371

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	0.6128					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.4422					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.5100e-003	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0371
Total	4.0565	1.5000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0352	0.0352	9.0000e-005		0.0371

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

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
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10.0 Vegetation

Appendix G

Traffic Impact Study

Owner

Sequoia Drive-In Business Park

Traffic Impact Study Preparation Date:

7/7/2015

Prepared By:

4CREEKS, INC.
324 S. SANTA FE ST., Suite A
VISALIA, CA 93292
(559) 802-3052



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ACRONYMS AND ABBREVIATIONS

Caltrans	California Department of Transportation
EB	eastbound
HCM2010	Highway Capacity Manual 2010
LOS	level of service
NB	northbound
MUTCD	California Manual on Uniform Traffic Control Devices for Streets and Highways
RTP	Regional Transportation Plan
SB	southbound
sf	square feet
SR	State Route
T	tons
TCAG	Tulare County Association of Governments
TIF	Transportation Impact Fee
TIS	Traffic Impact Study
WB	westbound
vph	vehicles per hour

SECTION 1: EXECUTIVE SUMMARY

1.1 ANALYSIS METHODOLOGY

This Traffic Impact Study (TIS) provides an analysis of the surrounding roadway system and the effects of the proposed Sequoia Drive-In Business Park (Project) on the existing and planned infrastructure. The Project site is currently vacant. The Project is located on a 46.17-acre site, on the southwest corner of Noble Avenue at Road 156, in the County of Tulare, CA. Figure 1 shows the Project area. This TIS has been prepared in consultation with County of Tulare and Caltrans planning staff. All of the analysis methodologies and assumptions are discussed further in Appendix A.

1.1.1 ANALYSIS LOCATIONS

The following study intersections have been identified for analysis in this TIS:

1. Mineral King Avenue at State Route (SR) 198 Westbound (WB) On-Ramp
2. Mineral King Avenue at Road 156
3. Mineral King Avenue at SR 198 WB Off-Ramp
4. Mineral King Avenue at Road 158
5. Noble Avenue at SR 198 Eastbound (EB) Ramps
6. Noble Avenue at Road 156
7. All Project Driveways/Roadways at Noble Avenue and Road 156

The study locations are chosen based on the locations where the majority of Project-related impacts may occur. Due to the proximity to the SR 198 interchange, the majority of the Project trips are anticipated to travel through the interchange area. Those trips that do not utilize SR 198 disperse along the local County roadways to the nearby small towns (Ivanhoe and Farmersville).

Significant roadway improvement projects are planned for the study area, as follows:

- SR 198 at Road 148 alignment – construct freeway interchange with SR 198
 - Timeline for the construction of the interchange is unknown, but is assumed to be constructed by the 2040 analysis year for the purposes of this TIS.

No other improvements to the study area roadways are currently planned.

1.1.2 ANALYSIS TIME PERIODS AND SCENARIOS

The following study time periods are included in this analysis:

- AM Peak Hour (between 7-9 AM)
- PM Peak Hour (between 4-6 PM)



The following analysis scenarios are analyzed based on County of Tulare guidelines and in consultation with Caltrans staff:

- Existing
- Opening Day Plus Approved Projects
- Opening Day Plus Approved Projects Plus Project
- 2040 No Project
- 2040 Plus Project

The County of Tulare and Caltrans have agreed upon the above study scenarios consisting of the Existing/Opening Day and the cumulative 2040 time frames.

1.1.3 THRESHOLDS OF SIGNIFICANCE

Tulare County General Plan Policy TC-1.16: "The County shall strive to develop and manage its roadway system (both segments and intersections) to meet a LOS of "D" or better in accordance with the LOS definitions established by the Highway Capacity Manual."¹

"Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" (see Appendix "C-3") on State highway facilities, however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating at less than the appropriate target LOS, the existing MOE should be maintained."²

All intersections involving SR 198 (ramp end intersections) will be evaluated against the Caltrans thresholds of significance due to their inclusion on a state roadway. All other intersections will be evaluated against the County of Tulare threshold.

1.2 ANALYSIS SUMMARY

Table 1 shows the levels of service (LOS) for the study intersections for the various scenarios. Intersections with movements currently or projected to operate below the County of Tulare or Caltrans adopted level of service standards are shown shaded in Table 1. The LOS and delay are shaded if either the AM or PM peak hour, or both, fall below the appropriate adopted LOS standard. The two-way stop controlled (TWSC) intersection levels of service are representative of the intersection's approach with the worst LOS and delay. The signalized and all-way stop controlled (AWSC) intersection levels of service are representative of the whole intersection. Individual intersection movements or approaches at signalized and AWSC intersections may operate above or below the intersection level of service or delay shown in this report.

¹ *Tulare County General Plan 2030 Update*, Tulare County RMA, August 2012, Page 13-4.

² *Guide for the Preparation of Traffic Impact Studies*, Caltrans, December 2002, page 1.

TABLE 1: LEVEL OF SERVICE SUMMARY

Intersection	LOS Threshold	Existing		Existing Plus Approved Projects		Existing Plus Approved Projects Plus Project	
		LOS (AM/PM)	Delay ¹ (AM/PM)	LOS (AM/PM)	Delay ¹ (AM/PM)	LOS (AM/PM)	Delay ¹ (AM/PM)
Mineral King Avenue at SR 198 WB On-Ramp	C	A/A	8.2/8.2	A/A	8.3/8.2	A/A	8.4/8.5
Mineral King Avenue at Road 156	D	C/C	25.8/26.7	C/C	24.9/27.0	D/C	45.9/28.5
Mineral King Avenue at SR 198 WB Off-Ramp	C	B/B	12.2/13.8	B/B	12.5/14.2	C/C	18.6/18.1
Mineral King Avenue at Road 158	D	B/B	11.9/13.5	B/B	12.1/13.8	B/C	13.2/15.5
Noble Avenue at West Project Roadway	D	n/a	n/a	n/a	n/a	A/A	9.6/9.8
Noble Avenue at SR 198 EB Ramps	C	B/B	10.1/12.6	B/B	10.2/12.8	B/C	13.7/20.5
Noble Avenue at Road 156	D	C/C	28.6/34.8	C/C	33.9/34.9	D/D	42.6/38.1
Northeast Project Driveway at Road 156	D	n/a	n/a	n/a	n/a	D/D	29.5/28.5
North Project Roadway at Road 156	D	n/a	n/a	n/a	n/a	C/C	15.1/16.5
Middle Project Roadway at Road 156	D	n/a	n/a	n/a	n/a	C/C	15.6/17.2
South Project Roadway at Road 156	D	n/a	n/a	n/a	n/a	C/C	15.2/15.8
Intersection	LOS Threshold	2040 No Project		2040 Plus Project			
		LOS (AM/PM)	Delay ¹ (AM/PM)	LOS (AM/PM)	Delay ¹ (AM/PM)		
Mineral King Avenue at SR 198 WB On-Ramp	C	A/A	8.5/8.2	A/A	8.7/8.5		
Mineral King Avenue at Road 156	D	C/C	26.8/27.4	D/C	41.9/28.1		
Mineral King Avenue at SR 198 WB Off-Ramp	C	B/B	11.7/13.0	C/C	16.1/15.9		
Mineral King Avenue at Road 158	D	B/C	12.4/16.1	B/C	13.7/19.4		
Noble Avenue at West Project Roadway	D	n/a	n/a	A/B	9.8/10.3		
Noble Avenue at SR 198 EB Ramps	C	B/C	10.5/16.6	B/E	14.8/37.5		
Noble Avenue at Road 156	D	C/D	34.7/38.6	D/D	40.6/40.7		
Northeast Project Driveway at Road 156	D	n/a	n/a	D/C	27.0/24.4		
North Project Roadway at Road 156	D	n/a	n/a	C/C	15.6/17.9		
Middle Project Roadway at Road 156	D	n/a	n/a	C/C	16.3/19.1		
South Project Roadway at Road 156	D	n/a	n/a	C/C	15.8/17.5		

¹ average seconds of delay per vehicle
n/a = not applicable, does not exist

Table 2 shows the results of the Peak Hour Traffic Signal Warrant analysis. The Signal warrant is not prepared for the Project Driveway since it is located too close to adjacent intersections/driveways and is projected to have volumes too low to meet warrants. Table 2 lists the time period (analysis scenario) in which the traffic signal warrant is first met at the study intersection. Once an intersection meets the warrant, it is projected to continue to meet warrants for all subsequent scenarios due to overall traffic volume growth.

TABLE 2: SIGNAL WARRANT SUMMARY

Intersection	Analysis Scenario Warranted
Mineral King Avenue at SR 198 WB On-Ramp	n/a
Mineral King Avenue at Road 156	Existing Signal
Mineral King Avenue at SR 198 WB Off-Ramp	2040 Plus Project
Mineral King Avenue at Road 158	Existing Plus Approved
Noble Avenue at West Project Roadway	Does Not Meet
Noble Avenue at SR 198 EB Ramps	Existing Plus Approved Plus Project
Noble Avenue at Road 156	Existing Signal
Northeast Project Driveway at Road 156	n/a
North Project Roadway at Road 156	n/a
Middle Project Roadway at Road 156	Does Not Meet
South Project Roadway at Road 156	Does Not Meet

n/a = not applicable

The Northeast Project Driveway and North Project Roadway are both too close in proximity to the Noble Avenue at Road 156 traffic signal to be considered for a traffic signal.

Peak-hour signal warrants (Warrant 3, Part B) are prepared for all unsignalized intersections based on the methodology presented in the California MUTCD 2012 Edition, pages 833-834. A copy of this warrant analysis is included in Appendix C. According to the MUTCD, "the satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal." Therefore prior to making a final determination on installation of a proposed signal, a thorough engineering investigation, including collision history, should be conducted. Although an intersection may meet the traffic signal warrant, a signal is not recommended unless the intersection also operates (or is projected to operate) below the appropriate adopted LOS standard.

Table 3 shows the queuing analysis for the Mineral King Avenue at SR 99 WB Off-Ramp and the Noble Avenue at SR 99 EB Off-Ramp. This additional analysis was requested by Caltrans. The 95th percentile queue lengths are calculated based on HCM 2010 methodologies. Queue lengths shown in Table 3 are the larger of the AM or PM peak hours and are rounded up to the nearest whole number of vehicles (25 feet per vehicle).

TABLE 3: QUEUE LENGTH SUMMARY

Conditions/Scenario	95 th Percentile Queue Length	
	WB Off-Ramp (AM/PM)	EB Off-Ramp (AM/PM)
Existing Off-Ramp Length	1,400 feet	1,275 feet
Existing Conditions	25/25	25/50
Existing Plus Approved Projects	25/25	25/50
Existing Plus Approved Projects Plus Project	75/50	50/100
2040 No Project	25/25	25/75
2040 Plus Project	50/25	75/200

As shown in Table 3, the calculated 95th percentile queue lengths are not projected to exceed the available off-ramp storage.

1.3 RECOMMENDED IMPROVEMENTS

In order to mitigate the intersections currently operating or are projected to operate below the adopted LOS standard(s) and/or meet the Peak Hour Traffic Signal Warrant, the following improvements are recommended:

2040 Plus Project

- Noble Avenue at SR 198 EB Ramps
 - Alternative 1: Install a three-way stop control:
 - Alternative 2: Install a traffic signal

Neither of the above improvements are currently planned by the County of Tulare or Caltrans. Additionally, neither alternative will require significant revisions to the geometry of the existing intersection. Table 4 shows the projected LOS for the intersection and time periods projected to operate below the adopted LOS standard. Based on the above improvement alternatives, the following improved LOS is anticipated.

TABLE 4: MITIGATED LEVEL OF SERVICE SUMMARY

Conditions/Scenario	2040 Plus Project	
	LOS (PM)	Delay ¹ (PM)
Noble Avenue at SR 198 EB Ramps		
• Three-Way Stop	C	15.6
• Traffic Signal	B	14.5

¹ average seconds of delay per vehicle

2040 Plus Project – without Rd 148 Interchange

In the event that the Road 148 interchange is not constructed, additional improvements to the Rd 156 interchange will be required if the City of Visalia continues to develop on the east side of the city. The nearest SR 198 interchange, at Lover's Lane, is currently operating at deficient levels of service and a major interchange improvement project will be required to increase capacity at that interchange. The City of Visalia is currently collecting funds for this interchange project through the City's TIF program and developing improvement designs.

The Rd 148 interchange is needed in the near-term to compensate for the Lover's Lane interchange and to allow capacity for the continued development of East Visalia. This project is not currently funded through a City/County/State funding mechanism, but has been identified by the various agencies as a recommended future improvement.

Without the construction of the Rd 148 interchange, and continued development in East Visalia, the Rd 156 interchange would increase in traffic demand by XX%. The current TCAG 2040 traffic model estimates XX,XXX vehicle trips per day using the Rd 148 interchange. Without this interchange, the current geometry and traffic control at the Rd 156 interchange will not accommodate the projected traffic demand increase. The current Rd 156 interchange does not have sufficient space to convert to a traditional interchange design due to development at 3 of the 4 quadrants and the proximity of the frontage roads (Mineral King and Noble). The spacing and ramp design also does not meet current design standards. These geometric

challenges are the same as those faces at the current Lover Lane interchange. Therefore, a significant improvement project for the Rd 156 interchange would require right-of-way acquisition from the properties in all of the quadrants. A complete renovation of the current interchange would cost up to \$X,xxx,xxx. Based on the potential added traffic without the Rd 148 interchange the Project's proportionate fair share will be approximately XX%.

1.4 PROJECT REQUIREMENTS

The proposed Sequoia Drive-In Business Park Project does contribute to the identified LOS deficiencies at the Noble Avenue at SR 198 EB Ramps study intersection. The Project's proportionate share for the above improvement is calculated based on Caltrans methodologies, as follows:

$$P = \frac{T}{T^{40} - T^E} = \frac{251}{912 - 512} = 62.8\%$$

- P = Project's Proportionate Share
- T = Project PM peak hour trips entering the intersection
- T⁴⁰ = 2040 Plus Project PM peak hour trips entering the intersection
- T^E = Existing PM peak hour trips entering the intersection

Since the impact to the study intersection is only identified in the long-term scenario, the County of Tulare and Caltrans will need to continue to evaluate the intersection for needed improvements. If the Road 148 interchange is not built, then improvements to the Road 156 interchange may be needed much sooner. However, actual traffic volumes in the future will help to determine the necessary and/or appropriate improvements.

SECTION 2: PROJECT INFORMATION

2.1 PROJECT SUMMARY

The proposed Project is commercial site, with existing and proposed C-3 (Service Commercial) zoning. The Project consists of the following uses and phases:

- Phase 1: 10.04 acres – a Gas Station/Fast-Food/Convenience Store and 68,340 sf Business Park
- Phase 2: 8.25 acres – 88,000 sf Business Park
- Phase 3: 14.89 acres – 104,000 sf Business Park
- Phase 4: 12.72 acres – 98,030 sf Business Park

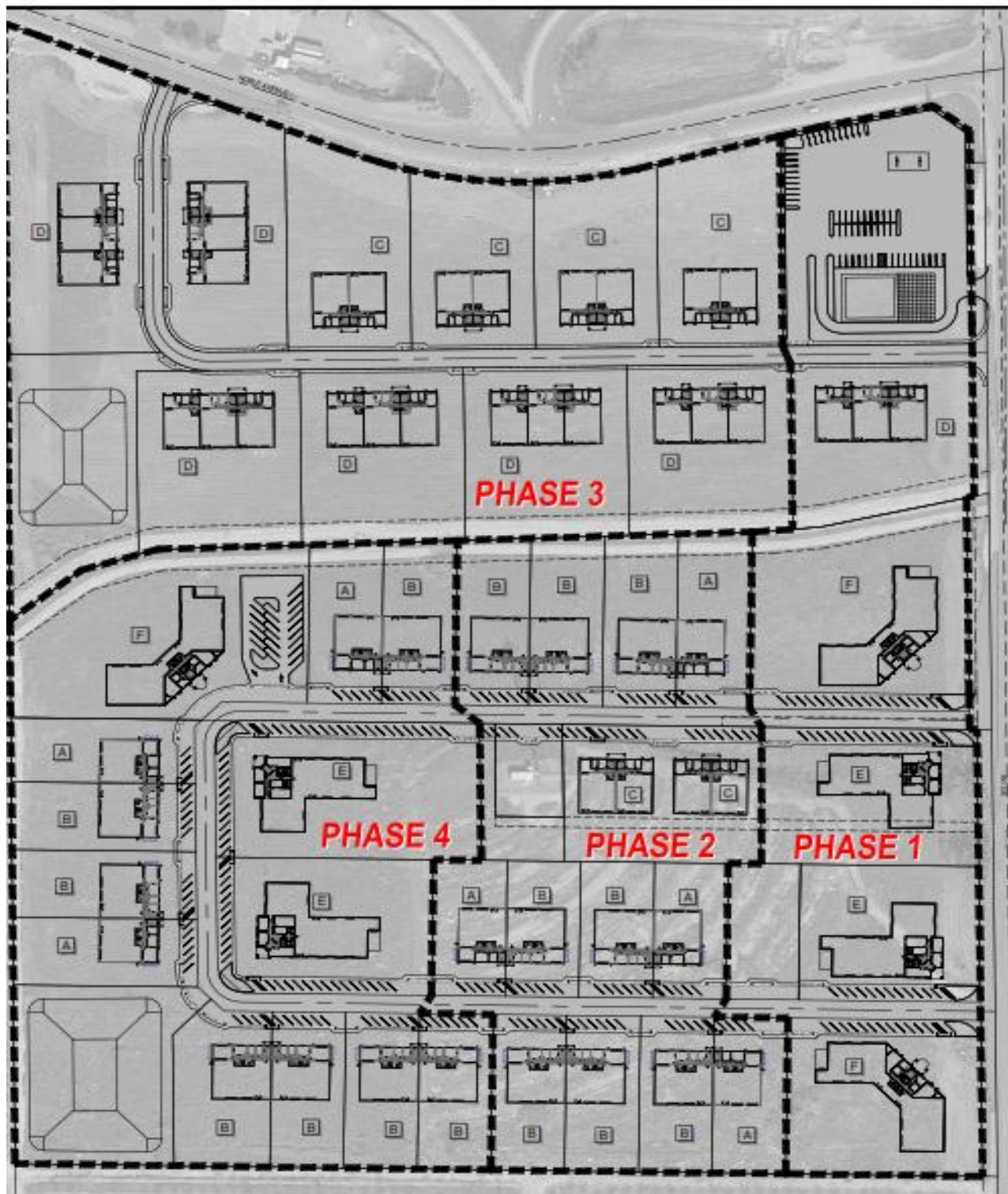
2.1.1 PROJECT LOCATION

The Project Site is located on the southwest corner of Noble Avenue at Road 156. Vehicular access to the Project is available from Noble Avenue and Road 156 only. The Project Site Plan is shown in Figure 2.

2.1.2 PROJECT ACCESS

The Project is proposing 5 access points:

- Noble Avenue at West Project Driveway
 - Located approximately 1,200 feet west of Road 156
 - Full-access movements
 - Will access Phase 3 and portions of Phase 1, connecting to the North Project Roadway
- Northeast Project Driveway at Road 156
 - Located approximately 350 feet south of Noble Avenue
 - Full-access movements
 - Will access only the Gas Station/Fast-Food site of Phase 1
- North Project Roadway at Road 156
 - Located approximately 425 feet south of Noble Avenue
 - Full-access movements
 - Will access Phase 3 and portions of Phase 1, connecting to the West Project Roadway
- Middle Project Roadway at Road 156
 - Located approximately 950 feet south of Noble Avenue
 - Full-access movements
 - Will access Phases 1, 2, and 4, connecting to the South Project Roadway
- South Project Roadway at Road 156
 - Located approximately 1,375 feet south of Noble Avenue
 - Full-access movements
 - Will access Phases 1, 2, and 4, connecting to the Middle Project Roadway



Sequoia **Drive-In Business Park**
Project Site Plan

Figure 2

2.1.3 PROJECT TRIP GENERATION

Vehicle trips generated by the Project are calculated using the industry-standard Trip Generation Manual published by the Institute of Transportation Engineers (ITE). Vehicle trips are calculated using ITE average rates and Project-related independent variables (square footage, fueling stations, etc.). Table 5 shows the ITE land uses and variables used to calculate the Project's trip generation.

Based on the current site plan for the Project site, only one building has a clearly defined use. The building on the northwest corner of the site will be a gas station with an attached convenience store and fast-food restaurant with a drive-thru. In order to calculate the trip generation for this parcel, a combination of ITE land uses were used: Convenience Market with Gas Pumps (853) and Fast-Food Restaurant with Drive-Thru (934).

The remainder of the Project site is defined only as Service Commercial. The ITE Trip Generation Manual does not have a land use which meets this diverse mix of uses. The uses cited in the County's zoning for C-3 may include general retail, office retail, and various light industrial uses. The ITE Shopping Center land use (general retail) is typically higher intensity retail. The ITE Light Industrial includes manufacturing, which C-3 prohibits manufacturing. As such, a more moderately intense ITE land use (Business Park) was chosen to represent the remainder of the Project site. The sizes of the land uses shown in Table 5 include the sum of all similar land use types as described and noted above in section 2.1.

TABLE 5: PROJECT LAND USES AND UNITS

Phase	Project Land Use	ITE Land Use	Size
1	Convenience Store with Gas Pumps	853	8 fueling positions
1	Fast-Food Restaurant with Drive-Thru	934	3.00 ksf
1	Business Park	770	63.02 ksf
2	Business Park	770	88.00 ksf
3	Business Park	770	104.00 ksf
4	Business Park	770	98.03 ksf

Table 6 shows the unadjusted raw daily, AM, and PM peak hour trip generation estimates for the Project uses.

TABLE 6: RAW PROJECT TRIP GENERATION

Project Land Use	Daily ¹	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Convenience Store with Gas Pumps	4,341	67	66	133	77	76	153
Fast-Food Restaurant with Drive-Thru	1,488	69	67	136	51	47	98
Business Park	4,392	420	74	494	116	329	445
Total Project Trips	10,221	559	206	765	243	452	695

¹ Total Number of one-directional trips

2.1.4 PROJECT TRIP CAPTURE

Captured trips involve vehicles that enter the Project site and utilize more than one of the proposed uses. These trips are effectively captured within the Project site and do not create multiple trips on the adjacent roadways. The *ITE Trip Generation Handbook* describes the methodology to calculate on-site trip capture.

However, since the majority of the site trip generation is calculated using one land use type, then on-site capture is already accounted for. While there may be additional capture between the gas station/fast-food and the rest of the site, there is only minimal connection between these uses. As such, no on-site trip capture is calculated.

2.1.5 PROJECT PASS-BY AND DIVERTED TRIPS

Pass-By trips include vehicles that already travel on the adjacent roadways on their primary trip purpose (such as home to work), but choose to access the Project since they are “passing by.” Diverted trips include vehicles that divert from their primary route between the primary origin and destination to access another non-primary use. The *ITE Trip Generation Handbook* shows PM peak hour pass-by rates for the Gas Station and Fast-Food land uses. The remaining uses are assumed to have 0% pass-by for the purposes of this study. The PM Peak Hour pass-by rate is used for the AM Peak Hour as well. Table 7 shows the ITE Trip Generation Pass-By rates used in this study.

TABLE 7: PASS-BY RATES

Project Land Use	ITE Pass-By Rate
Convenience Store with Gas Pumps	66%
Fast-Food Restaurant with Drive-Thru	50%

Pass-by rates, where applicable, are applied to the volumes shown in Table 6 to calculate the total trip reductions for Pass-By/Diverted trips. Pass-By trips are calculated based on the Total AM or PM Peak Hour trips, then distributed 50% entering and 50% exiting. Table 8 shows the calculated Pass-By/Diverted trips.

TABLE 8: PASS-BY/DIVERTED PROJECT TRIPS

Project Land Use	AM Peak Hour			PM Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total
Convenience Store with Gas Pumps	42	42	84	51	50	101
Fast-Food Restaurant with Drive-Thru	34	33	67	25	24	49
Business Park	0	0	0	0	0	0
Total Pass-By/Diverted Project Trips	76	75	151	76	74	150

2.1.6 “NEW” PROJECT TRIP GENERATION

The total number of New Project Trips is then calculated by subtracting the number of Pass-By/Diverted Trips (Table 8) from the Unadjusted ITE Trip Generation Calculation (Table 6). Table 9 shows the New Project trips that are added to the surrounding roadways during the Plus Project scenarios in this TIS.

TABLE 9: NEW PROJECT TRIPS

Project Land Use	AM Peak Hour			PM Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total
Convenience Store with Gas Pumps	25	24	49	26	26	52
Fast-Food Restaurant with Drive-Thru	35	34	69	26	23	49
Business Park	420	74	494	116	329	445
Total New Project Trips	480	132	612	168	378	546

2.1.7 PROJECT TRIP DISTRIBUTION

The Project trips shown in Table 9 are distributed based on the potential locations for customers and employee residences. Since the Project site is located outside of any nearby city, SR 198 will carry a significant portion of the Project generated trips. The remaining trips will use county roads. The Pass-By/Diverted trips shown in Table 8 are distributed based on existing traffic patterns and ease of access from SR 198. Figures 3 and 4 show the Project trip distribution percentages and trip assignment (New and Pass-By/Diverted trips) used in this TIS.



Legend

- Project Site
- Study Intersection
- xx (xx) AM (PM) Project Trips

- Stop Sign
- Traffic Signal
- Movement Direction

1 Mineral King Avenue at SR 198 WB On-Ramp	2 Mineral King Avenue at Road 156	3 Mineral King Avenue at SR 198 WB Off-Ramp
4 Mineral King Avenue at Road 158	5 Noble Avenue at West Project Driveway	6 Noble Avenue at SR 198 EB Ramps
7 Noble Avenue at Road 156	8 Northeast Project Driveway at Road 156	9 North Project Road at Road 156
10 Middle Project Road at Road 156	11 South Project Road at Road 156	



SECTION 3: EXISTING CONDITIONS

3.1 TRAFFIC VOLUMES

The Existing conditions traffic volumes were counted at the study intersections on weekdays during the week of February 24, 2015. Counts were not taken on Wednesdays, when the Visalia Sales Yard is open.

3.2 OPERATIONAL ANALYSIS

The study intersection lane configurations and intersection controls are shown on Figure 5. Using the Existing traffic volumes and the roadway geometry from Figure 5, the Existing conditions LOS are calculated. Table 10 shows the results of the LOS calculations. The LOS calculation worksheets are included in Appendix B.

TABLE 10: EXISTING CONDITIONS LEVEL OF SERVICE SUMMARY

Intersection	LOS Threshold	LOS (AM/PM)	Delay ¹ (AM/PM)
Mineral King Avenue at SR 198 WB On-Ramp	C	A/A	8.2/8.2
Mineral King Avenue at Road 156	D	C/C	25.8/26.7
Mineral King Avenue at SR 198 WB Off-Ramp	C	B/B	12.2/13.8
Mineral King Avenue at Road 158	D	B/B	11.9/13.5
Noble Avenue at West Project Roadway	D	n/a	n/a
Noble Avenue at SR 198 EB Ramps	C	B/B	10.1/12.6
Noble Avenue at Road 156	D	C/C	28.6/34.8
Northeast Project Driveway at Road 156	D	n/a	n/a
North Project Roadway at Road 156	D	n/a	n/a
Middle Project Roadway at Road 156	D	n/a	n/a
South Project Roadway at Road 156	D	n/a	n/a

¹ average seconds of delay per vehicle

n/a = not applicable, does not exist

As shown in Table 10, none of the study intersections currently operate below the appropriate (County of Tulare or Caltrans) adopted LOS standard.

3.3 TRAFFIC SIGNAL WARRANTS

Peak-hour traffic signal warrants are prepared for the unsignalized study intersections. Based on the warrant analysis, a traffic signal is not warranted at any of the unsignalized study intersections. The signal warrant analysis is included in Appendix C.

3.4 PEDESTRIAN AND BICYCLE NETWORK

Pedestrian and bicycle amenities are largely unavailable within the vicinity of the Project site. Sidewalk has been constructed at the intersections of Noble and Mineral King Avenues at Road 156 with the recent signalization project. However, these sidewalks do not connect to a larger pedestrian network or nearby

residential areas. The Project will not significantly impact pedestrian and bicycle operations except as they relate to an incremental increase in roadway traffic volumes.

3.5 TRANSIT NETWORK

Transit service is provided by Visalia Transit with bus stops on Noble Avenue and Road 156. Route 9 travels along the project frontage, connecting Exeter, Farmersville and downtown Visalia. Immediate proximity to transit will draw ridership from the Project, although no trip reductions were assumed on the TIS for transit usage.



Legend



Project Site



Study Intersection

xx (xx)

AM (PM) Project Trips



Stop Sign

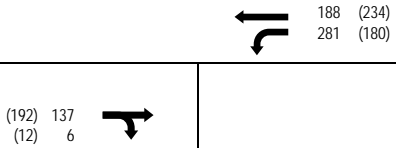


Traffic Signal

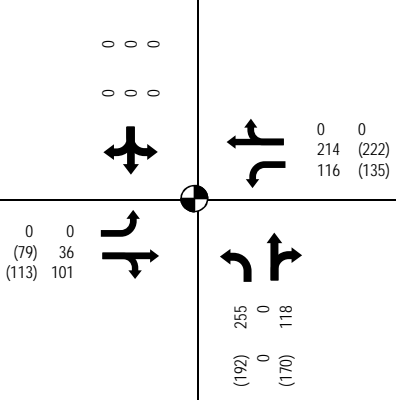


Movement Direction

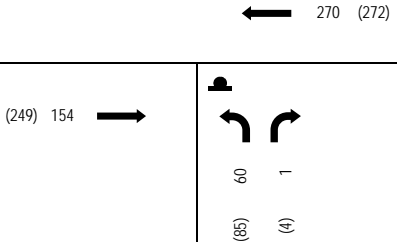
1 Mineral King Avenue at SR 198 WB On-Ramp



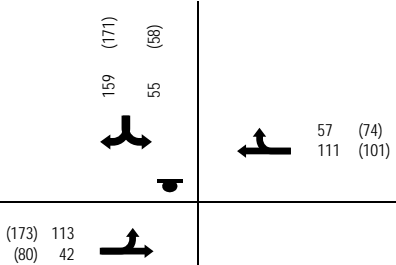
2 Mineral King Avenue at Road 156



3 Mineral King Avenue at SR 198 WB Off-Ramp



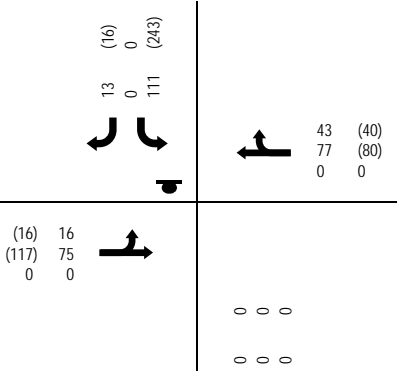
4 Mineral King Avenue at Road 158



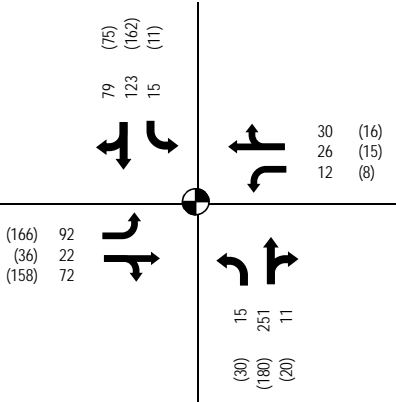
5 Noble Avenue at West Project Driveway

Intersection Does Not Exist

6 Noble Avenue at SR 198 EB Ramps



7 Noble Avenue at Road 156



8 Northeast Project Driveway at Road 156

Intersection Does Not Exist

9 North Project Road at Road 156

Intersection Does Not Exist

10 Middle Project Road at Road 156

Intersection Does Not Exist

11 South Project Road at Road 156

Intersection Does Not Exist

SECTION 4: EXISTING PLUS APPROVED PROJECTS CONDITIONS

4.1 TRAFFIC VOLUMES

The Existing Plus Approved Projects traffic volumes are developed by calculating vehicle trips for Approved Projects identified by the County of Tulare and City of Visalia. The Projects identified by the County of Tulare include changes to the Visalia Sales Yard, located across SR 198 from the Project site. The list of projects supplied by the City of Visalia includes all development projects approved in the past 2 years. Trip generation was then calculated for those Approved Projects using ITE methodology and distributed to the study intersections based on their traffic evaluations or knowledge of the surrounding area. The Approved Projects included in this study include:

- Visalia Sales Yard – Relocation of parking at existing sales yard (TIS completed)
- Visalia Regional Park – 248 acre regional park located north of Mineral King Avenue between Road 152 and Road 148 (no TIS prepared)
- Chandi Group Retail Development – 12 acre retail development located southeast of Noble Avenue at Lovers Lane (TIS completed)

The Existing Plus Approved Projects traffic volumes are developed by adding the Approved Project trips to the Existing traffic (Figure 5). The Existing Plus Approved Projects traffic volumes are shown in Figure 6.

4.2 OPERATIONAL ANALYSIS

Using the Existing Plus Approved Projects traffic volumes and the roadway geometry from Figure 6, the Existing Plus Approved Projects conditions LOS are calculated. Table 11 shows the results of the LOS calculations. The LOS calculation worksheets are included in Appendix D.

TABLE 11: EXISTING PLUS APPROVED PROJECTS CONDITIONS LEVEL OF SERVICE SUMMARY

Intersection	LOS Threshold	LOS (AM/PM)	Delay ¹ (AM/PM)
Mineral King Avenue at SR 198 WB On-Ramp	C	A/A	8.3/8.2
Mineral King Avenue at Road 156	D	C/C	24.9/27.0
Mineral King Avenue at SR 198 WB Off-Ramp	C	B/B	12.5/14.2
Mineral King Avenue at Road 158	D	B/B	12.1/13.8
Noble Avenue at West Project Roadway	D	n/a	n/a
Noble Avenue at SR 198 EB Ramps	C	B/B	10.2/12.8
Noble Avenue at Road 156	D	C/C	33.9/34.9
Northeast Project Driveway at Road 156	D	n/a	n/a
North Project Roadway at Road 156	D	n/a	n/a
Middle Project Roadway at Road 156	D	n/a	n/a
South Project Roadway at Road 156	D	n/a	n/a

¹ average seconds of delay per vehicle

n/a = not applicable, does not exist

As shown in Table 11, none of the study intersections are projected to operate below the appropriate (County of Tulare or Caltrans) adopted LOS standard.

4.3 TRAFFIC SIGNAL WARRANTS

Peak-hour traffic signal warrants are again prepared for the unsignalized study intersections. Based on the warrant analysis, a traffic signal is warranted at the unsignalized study intersection of Mineral King Avenue at Road 158. The signal warrant analysis is included in Appendix C.



Legend



Project Site



Study Intersection

xx (xx)

AM (PM) Project Trips



Stop Sign



Traffic Signal

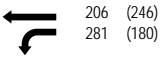


Movement Direction

1 Mineral King Avenue at SR 198 WB On-Ramp

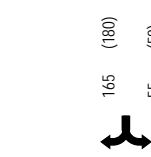


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(16) 8

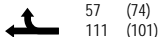


206 (246)
281 (180)

4 Mineral King Avenue at Road 158

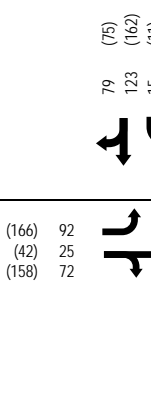


(181) 118
(80) 42

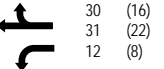


57 (74)
111 (101)

7 Noble Avenue at Road 156



(166) 92
(42) 25
(158) 72

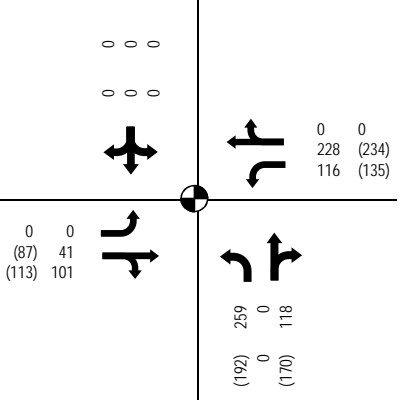


30 (16)
31 (22)
12 (8)

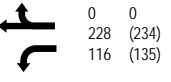
10 Middle Project Road at Road 156

Intersection Does Not Exist

2 Mineral King Avenue at Road 156



0 0
(87) 41
(113) 101



0 0
228 (234)
116 (135)

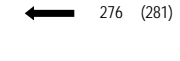
5 Noble Avenue at West Project Driveway

Intersection Does Not Exist

3 Mineral King Avenue at SR 198 WB Off-Ramp

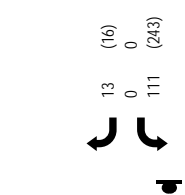


(257) 159

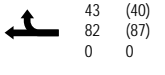


276 (281)

6 Noble Avenue at SR 198 EB Ramps



(16) 16
(123) 78
0 0



43 (40)
82 (87)
0 0

8 Northeast Project Driveway at Road 156

Intersection Does Not Exist

9 North Project Road at Road 156

Intersection Does Not Exist

11 South Project Road at Road 156

Intersection Does Not Exist

SECTION 5: EXISTING PLUS APPROVED PROJECTS PLUS PROJECT CONDITIONS

5.1 TRAFFIC VOLUMES

The Existing Plus Approved Projects Plus Project traffic volumes are developed by adding the incremental increase in Project trips (Figure 5 minus Figure 4) to the Existing Plus Approved Project volumes (Figure 8). The Existing Plus Approved Projects traffic volumes are shown in Figure 9.

5.2 OPERATIONAL ANALYSIS

Using the Existing Plus Approved Projects traffic volumes and the roadway geometry from Figure 7, the Existing Plus Approved Projects conditions LOS are calculated. Table 12 shows the results of the LOS calculations. The LOS calculation worksheets are included in Appendix E.

TABLE 12: EXISTING PLUS APPROVED PROJECTS PLUS PROJECT CONDITIONS LEVEL OF SERVICE SUMMARY

Intersection	LOS Threshold	LOS (AM/PM)	Delay ¹ (AM/PM)
Mineral King Avenue at SR 198 WB On-Ramp	C	A/A	8.4/8.5
Mineral King Avenue at Road 156	D	D/C	45.9/28.5
Mineral King Avenue at SR 198 WB Off-Ramp	C	C/C	18.6/18.1
Mineral King Avenue at Road 158	D	B/C	13.2/15.5
Noble Avenue at West Project Roadway	D	A/A	9.6/9.8
Noble Avenue at SR 198 EB Ramps	C	B/C	13.7/20.5
Noble Avenue at Road 156	D	D/D	42.6/38.1
Northeast Project Driveway at Road 156	D	D/D	29.5/28.5
North Project Roadway at Road 156	D	C/C	15.1/16.5
Middle Project Roadway at Road 156	D	C/C	15.6/17.2
South Project Roadway at Road 156	D	C/C	15.2/15.8

¹ average seconds of delay per vehicle

As shown in Table 12, none of the study intersections are projected to operate below the appropriate (County of Tulare or Caltrans) adopted LOS standard.

5.3 TRAFFIC SIGNAL WARRANTS

Peak-hour traffic signal warrants are again prepared for the unsignalized study intersections. Based on the warrant analysis, a traffic signal is warranted at the unsignalized study intersection of Noble Avenue at SR 198 EB Ramps. The warrant previously met at the intersection of Mineral King Avenue at Road 158 continues to be met. The signal warrant analysis is included in Appendix C.

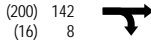


Legend

- Project Site
- Study Intersection
- xx (xx) AM (PM) Project Trips

- Stop Sign
- Traffic Signal
- Movement Direction

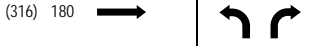
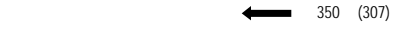
1 Mineral King Avenue at SR 198 WB On-Ramp



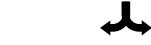
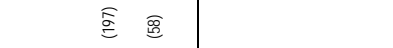
2 Mineral King Avenue at Road 156



3 Mineral King Avenue at SR 198 WB Off-Ramp



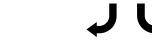
4 Mineral King Avenue at Road 158



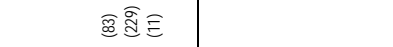
5 Noble Avenue at West Project Driveway



6 Noble Avenue at SR 198 EB Ramps



7 Noble Avenue at Road 156



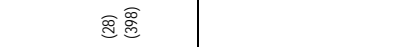
8 Northeast Project Driveway at Road 156



9 North Project Road at Road 156



10 Middle Project Road at Road 156



11 South Project Road at Road 156



SECTION 6: 2040 CONDITIONS

6.1 TRAFFIC VOLUMES

The 2040 No Project traffic volumes are developed by calculating the 2040 background traffic volumes using the TCAG 2014 and 2040 traffic demand models. Of significant note, the model predicts reductions in vehicle trips (from Existing) for some movements on the study roadways. This negative growth is due to the addition of the proposed Road 148 interchange with SR 198. These negative growth assumptions appear valid and were included in this analysis for the following reasons:

- Existing traffic patterns at the Road 156 at SR 198 interchange indicate that a significant amount of traffic from the residential developments east of Lovers Lane, north and south of SR 198, use the interchange. The addition of the SR 148 interchange will provide a more convenient alternative to cross or access SR 198.
- Movements not associated with the travel patterns described above show additional growth based on the TCAG model projections.
- The only other developed area that is primarily served by the Road 156 at SR 198 interchange is Linnell Camp, which is not likely to experience significant growth.

The 2040 Plus Project traffic volumes are developed by adding the Project trips (Figure 4) to the 2040 No Project traffic volumes. The 2040 No Project and 2040 Plus Project traffic volumes are shown in Figures 8 and 9, respectively.

6.2 OPERATIONAL ANALYSIS

Using the 2040 No Project and 2040 Plus Project traffic volumes and the roadway geometry from Figures 8 and 9, the 2040 No Project and 2040 Plus Project conditions LOS are calculated. Table 13 shows the results of the LOS calculations. The LOS calculation worksheets are included in Appendices F & G.

TABLE 13: 2040 CONDITIONS LEVEL OF SERVICE SUMMARY

Intersection	LOS Threshold	2040 No Project		2040 Plus Project	
		LOS (AM/PM)	Delay ¹ (AM/PM)	LOS (AM/PM)	Delay ¹ (AM/PM)
Mineral King Avenue at SR 198 WB On-Ramp	C	A/A	8.5/8.2	A/A	8.7/8.5
Mineral King Avenue at Road 156	D	C/C	26.8/27.4	D/C	41.9/28.1
Mineral King Avenue at SR 198 WB Off-Ramp	C	B/B	11.7/13.0	C/C	16.1/15.9
Mineral King Avenue at Road 158	D	B/C	12.4/16.1	B/C	13.7/19.4
Noble Avenue at West Project Roadway	D	n/a	n/a	A/B	9.8/10.3
Noble Avenue at SR 198 EB Ramps	C	B/C	10.5/16.6	B/E	14.8/37.5
Noble Avenue at Road 156	D	C/D	34.7/38.6	D/D	40.6/40.7
Northeast Project Driveway at Road 156	D	n/a	n/a	D/C	27.0/24.4
North Project Roadway at Road 156	D	n/a	n/a	C/C	15.6/17.9
Middle Project Roadway at Road 156	D	n/a	n/a	C/C	16.3/19.1
South Project Roadway at Road 156	D	n/a	n/a	C/C	15.8/17.5

¹ average seconds of delay per vehicle

n/a = not applicable.

As shown in Table 13, one of the study intersections is projected to operate below the Caltrans adopted LOS standard. The intersection of Noble Avenue at SR 198 EB Ramps is projected to operate at LOS "E" during the PM peak hour. The remaining study intersections are projected to continue to operate at or above the appropriate adopted LOS standard.

6.3 TRAFFIC SIGNAL WARRANTS

Peak-hour traffic signal warrants are again prepared for the unsignalized study intersections. Based on the warrant analysis, a traffic signal is warranted at the unsignalized study intersection of Mineral King Avenue at SR 198 WB Ramps. The warrants previously met at the intersections of Noble Avenue at SR 198 EB Ramps and Mineral King Avenue at Road 158 continue to be met. The signal warrant analysis is included in Appendix C.

6.4 RECOMMENDED IMPROVEMENTS

In order to mitigate the intersections currently operating or are projected to operate below the adopted LOS standard(s) and/or meet the Peak Hour Traffic Signal Warrant, the following improvements are recommended:

2040 Plus Project

- Noble Avenue at SR 198 EB Ramps
 - Alternative 1: Install a three-way stop control:
 - Alternative 2: Install a traffic signal

Neither of the above improvements are currently planned by the County of Tulare or Caltrans. Additionally, neither alternative will require significant revisions to the geometry of the existing intersection. Table 14 shows the projected LOS for the intersection and time periods projected to operate below the adopted LOS standard. Based on the above improvement alternatives, the following improved LOS is anticipated.

TABLE 14: MITIGATED LEVEL OF SERVICE SUMMARY

Conditions/Scenario	2040 Plus Project	
	LOS (PM)	Delay ¹ (PM)
Noble Avenue at SR 198 EB Ramps		
• Three-Way Stop	C	15.6
• Traffic Signal	B	14.5

¹ average seconds of delay per vehicle



Legend



Project Site



Study Intersection

xx (xx)

AM (PM) Project Trips



Stop Sign

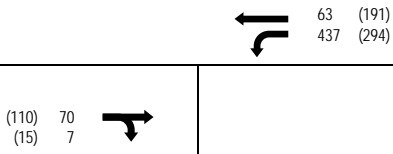


Traffic Signal

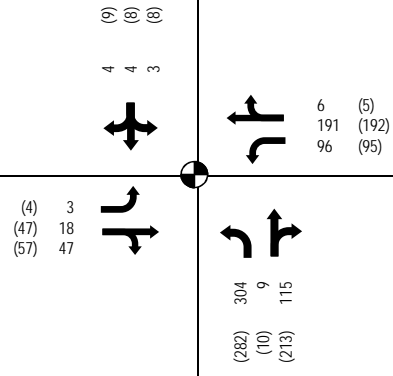


Movement Direction

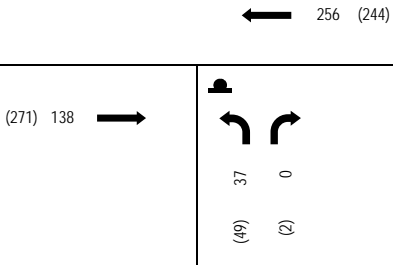
1 Mineral King Avenue at SR 198 WB On-Ramp



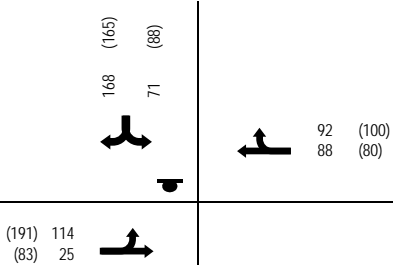
2 Mineral King Avenue at Road 156



3 Mineral King Avenue at SR 198 WB Off-Ramp



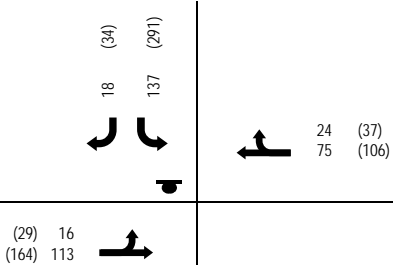
4 Mineral King Avenue at Road 158



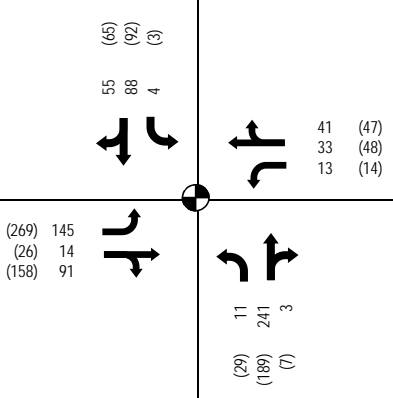
5 Noble Avenue at West Project Driveway

Intersection Does Not Exist

6 Noble Avenue at SR 198 EB Ramps



7 Noble Avenue at Road 156



8 Northeast Project Driveway at Road 156

Intersection Does Not Exist

9 North Project Road at Road 156

Intersection Does Not Exist

10 Middle Project Road at Road 156

Intersection Does Not Exist

11 South Project Road at Road 156

Intersection Does Not Exist

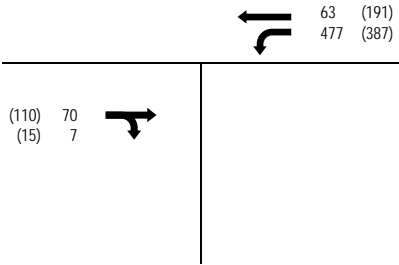


- Project Site
- Study Intersection
- xx (xx) AM (PM) Project Trips

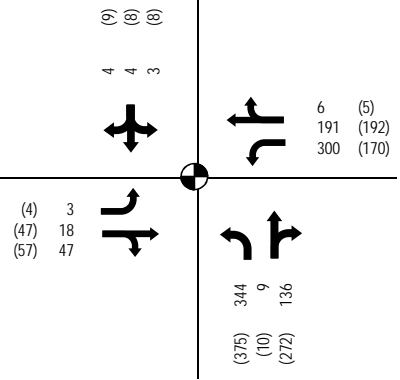
Legend

- Stop Sign
- Traffic Signal
- Movement Direction

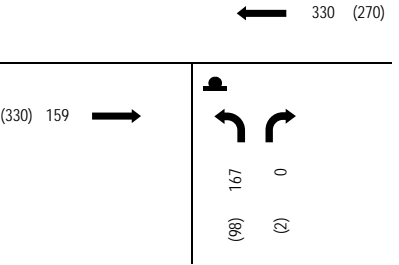
1 Mineral King Avenue at SR 198 WB On-Ramp



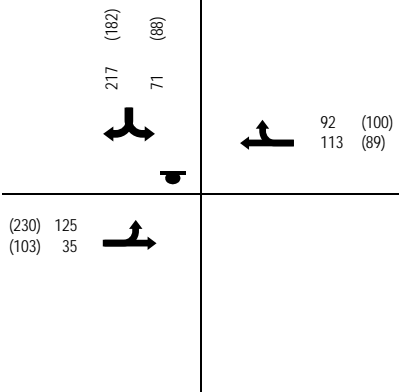
2 Mineral King Avenue at Road 156



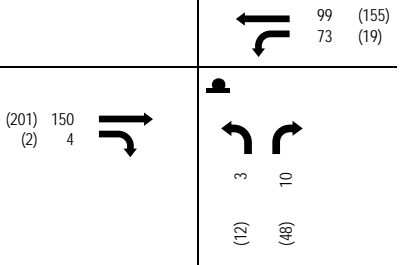
3 Mineral King Avenue at SR 198 WB Off-Ramp



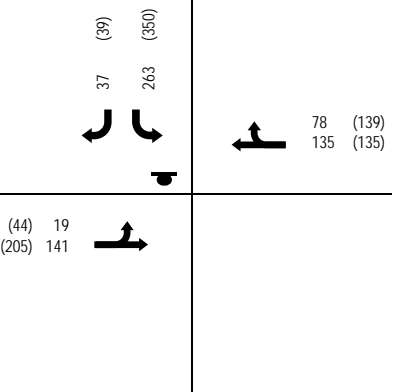
4 Mineral King Avenue at Road 158



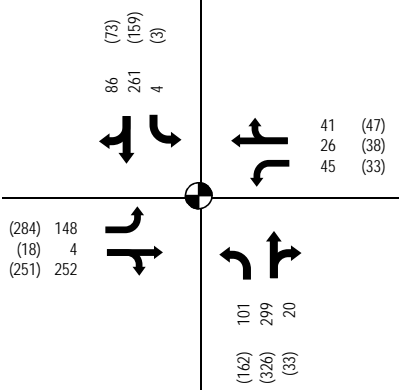
5 Noble Avenue at West Project Driveway



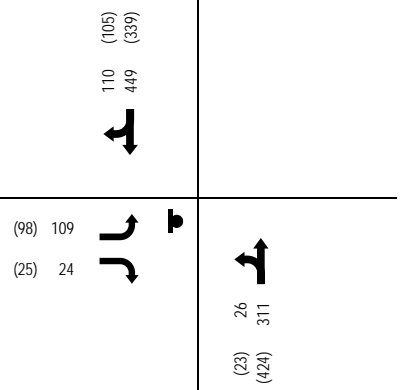
6 Noble Avenue at SR 198 EB Ramps



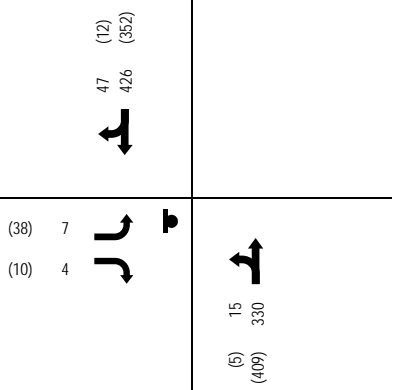
7 Noble Avenue at Road 156



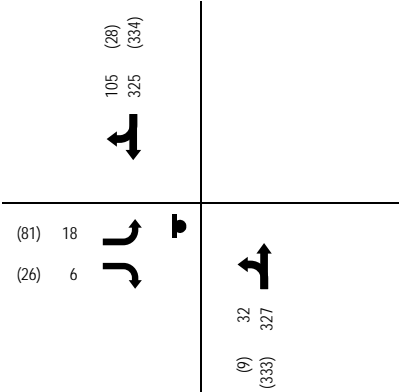
8 Northeast Project Driveway at Road 156



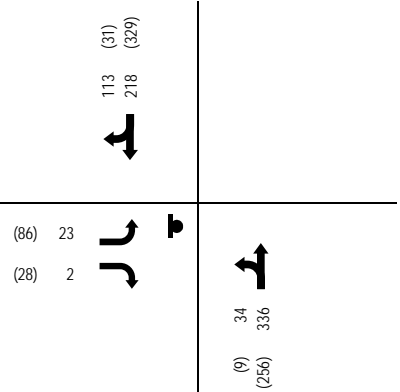
9 North Project Road at Road 156



10 Middle Project Road at Road 156



11 South Project Road at Road 156



SECTION 7: CONCLUSIONS AND RECOMMENDATIONS

7.1 ANALYSIS SUMMARY

As previously discussed, the following LOS impacts to the study area roadways and signal warrant results have been identified:

Existing Plus Approved Projects

- Mineral King Avenue at Road 158 – peak hour traffic signal warrant met

Existing Plus Approved Projects Plus Project

- Mineral King Avenue at Road 158 – peak hour traffic signal warrant met
- Noble Avenue at SR 198 EB Ramps – peak hour traffic signal warrant met

2040 No Project

- Mineral King Avenue at Road 158 – peak hour traffic signal warrant met
- Noble Avenue at SR 198 EB Ramps – peak hour traffic signal warrant met

2040 Plus Project

- Mineral King Avenue at SR 198 WB Off-Ramp – peak hour traffic signal warrant met
- Mineral King Avenue at Road 158 – peak hour traffic signal warrant met
- Noble Avenue at SR 198 EB Ramps – LOS “E” exceeds Caltrans threshold
- Noble Avenue at SR 198 EB Ramps – peak hour traffic signal warrant met

7.2 RECOMMENDED IMPROVEMENTS

In order to mitigate the intersections currently operating or are projected to operate below the adopted LOS standard(s) and/or meet the Peak Hour Traffic Signal Warrant, the following improvements are recommended:

2040 Plus Project

- Noble Avenue at SR 198 EB Ramps
 - Alternative 1: Install a three-way stop control:
 - Alternative 2: Install a traffic signal

Neither of the above improvements are currently planned by the County of Tulare or Caltrans. Additionally, neither alternative will require significant revisions to the geometry of the existing intersection. Table 4 shows the projected LOS for the intersection and time periods projected to operate below the adopted LOS standard. Based on the above improvement alternatives, the following improved LOS is anticipated.

7.3 PROJECT REQUIREMENTS

The proposed Sequoia Drive-In Business Park Project does contribute to the identified LOS deficiencies at the Noble Avenue at SR 198 EB Ramps study intersection. The Project's proportionate share for the above improvement is calculated based on Caltrans methodologies, as follows:

$$P = \frac{T}{T^{40} - T^E} = \frac{251}{912 - 512} = 62.8\%$$

- P = Project's Proportionate Share
- T = Project PM peak hour trips entering the intersection
- T⁴⁰ = 2040 Plus Project PM peak hour trips entering the intersection
- T^E = Existing PM peak hour trips entering the intersection

It is anticipated that an improvement project of this type would generate costs between \$75,000 and \$100,000. This cost estimate is a rough estimate and will need to be finalized when the required improvements are determined for the project.

Since the impact to the study intersection is only identified in the long-term scenario, the County of Tulare and Caltrans will need to continue to evaluate the intersection for needed improvements. The Road 148 at SR 198 interchange improvement is not currently funded. TCAG's Measure R Expenditure Plan lists the interchange as a Potential Phase 2 project, with an estimated cost of \$25M. The City of Visalia lists the interchange as a future improvement in the most recent Circulation Element, but does not define funding other than future long-range capital improvement planning. Finally, TCAG has included the interchange in the adopted 2040 traffic model. While these sources do not guarantee that the interchange will be constructed, they do ensure that the interchange will be thoroughly analyzed and included in future funding opportunities. If the interchange is not constructed, then significant improvements will be needed at the Lovers Lane at SR 198 interchange, along with the Road 156 at SR 198 interchange. The City of Visalia will not be able to continue to expand to the east without improvements at both of these interchanges or construction of the Road 148 interchange. If the Road 148 interchange is not built, then improvements to the Road 156 interchange may be needed much sooner. However, actual traffic volumes in the future will help to determine the necessary and/or appropriate improvements.

APPENDIX A

ANALYSIS METHODOLOGY

APPENDIX A: ANALYSIS METHODOLOGY

A variety of data and technical assumptions were developed for this TIS and are defined in this appendix.

A.1 SOURCES

This report is prepared using information taken from the following sources:

- 2010 Highway Capacity Manual, Transportation Research Board, 2010.
- Aaron Bock, Chief Planner, Tulare County, email conversations, March 2015.
- California Manual on Uniform Traffic Control Devices for Streets and Highway, 2012 Edition, California Department of Transportation, Division of Traffic Operations, January 13, 2012.
- David Deel, Associate Planner, Caltrans, phone and email conversations, March 2015.
- Doug Damko, Community Development Department, Engineering Division, City of Visalia, email conversations, March 2015.
- Guide for the Preparation of Traffic Impact Studies, State of California Department of Transportation, December, 2002.
- Roberto Brady, Associate Planner, TCAG, in-person and email conversations, April 2015.
- TCAG Traffic Model, Tulare County Association of Governments, Updated: April 2015.
- Trip Generation Handbook, 2nd Edition, Institute of Transportation Engineers, 2003.
- Trip Generation Manual, 9th Edition, Institute of Transportation Engineers, 2012.
- Tulare County General Plan, 2030 Update, Tulare County Resource Management Agency, August 2012.
- TurnsW32, Dowling Associates, Inc., 2002.
- Synchro 8.0, Trafficware, 2013.

A.2 ANALYSIS TIME PERIODS

According to Traffic Impact Analyses for Site Development, the overall purpose of a traffic impact study is to determine the project impacts that are likely to occur to the surrounding street system. In order to accomplish this purpose you need to determine what occurs when the peak of the project generated traffic overlays the peak of the street traffic. Traffic Impact Analyses for Site Development states “the peak periods [of the adjacent street and highway system] are generally the weekday morning (7-9 a.m.) and evening (4-6 p.m.) peak hours, although local area characteristics occasionally result in other peaks (e.g., at major shopping or recreational centers)”. The peak hours analyzed in this study are:

- 7:00 to 9:00 AM
- 4:00 to 6:00 PM

These are the standard AM and PM peak hours of the street typically used for study in the County of Tulare.

A.3 TRAFFIC COUNTS

According to the Caltrans Guide for the Preparation of Traffic Impact Studies, one of the common rules for counting vehicular traffic is:

“Vehicle counts should be conducted on Tuesdays, Wednesdays, or Thursdays during weeks not containing a holiday and conducted in favorable weather conditions.”¹

Table A1 shows the date and day the Existing intersection counts were taken for this Project. Prior to conducting these counts it was verified that these were non-holiday weeks.

Table A1: Existing Intersection Counts		
Intersections	Day	Date
Mineral King Avenue at SR 198 WB On-Ramp	Tuesday	2/24/15
Mineral King Avenue at Road 156	Tuesday	2/24/15
Mineral King Avenue at SR 198 WB Off-Ramp	Tuesday	2/24/15
Mineral King Avenue at Road 158	Thursday	2/26/15
Noble Avenue at SR 198 EB Ramps	Thursday	2/26/15
Noble Avenue at Road 156	Thursday	2/26/15

As shown in Table A1, all intersection counts were conducted on days that were appropriate to count.

A.4 CUMULATIVE PROJECTS

The 2014-2023 analysis scenarios include incremental development of all future growth built into the TCAG traffic model, according to the County's General Plan and other approved planning documents. Near-Term approved projects supplied by the County of Tulare and City of Visalia include:

- Visalia Sales Yard – Relocation of parking at existing sales yard (TIS completed)
- Visalia Regional Park – 248 acre regional park located north of Mineral King Avenue between Road 152 and Road 148 (no TIS prepared)
- Chandi Group Retail Development – 12 acre retail development located southeast of Noble Avenue at Lovers Lane (TIS completed)

A.5 INTERSECTION ANALYSIS AND VOLUME ADJUSTMENTS

Heavy vehicle percentages used in the analysis 4% for all locations. The peak hour factor of 0.92 is used at all intersection locations in all scenarios. Existing traffic signal coordination timing and phases were measured in the field and used in all scenarios.

¹ *Guide for the Preparation of Traffic Impact Studies*, State of California Department of Transportation, December 2002, page 4.

A.6 NETWORK IMPROVEMENTS

Significant roadway improvement projects are planned for the study area, as follows:

- SR 198 at Road 148 alignment – construct freeway interchange with SR 198
 - Timeline for the construction of the interchange is unknown, but is assumed to be constructed by the 2040 analysis year for the purposes of this TIS.

A.7 SIGNAL WARRANT ANALYSIS

Peak-hour signal warrants (Warrant 3, Part B) are prepared for all unsignalized intersections based on the methodology presented in the *California MUTCD 2012 Edition*, pages 833-834. A copy of this warrant analysis is included in Appendix C. According to the MUTCD, “the satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.” Therefore prior to making a final determination on installation of a proposed signal, a thorough engineering investigation, including collision history, should be conducted. Although an intersection may meet the traffic signal warrant, a signal is not recommended unless the intersection also operates (or is projected to operate) below the appropriate adopted LOS standard.

A.8 LEVEL OF SERVICE ANALYSIS METHODS

Unsignalized and signalized intersection analyses are completed using Synchro 8.0, which incorporates the HCM 2010 methodologies. Synchro 8.0 allows for optimization of signals to provide for the greatest reduction in overall intersection delay. This optimization process can result in different signal cycle lengths across all scenarios. The changing of the signal cycle length somewhat reflects the agency process whereby the agency will adjust intersection signal cycle lengths for differing traffic conditions based on current count data.

Table A2 shows the six levels of service and their corresponding ranges of average control delay for both signalized and unsignalized intersections. Table A2 also contains a brief traffic flow description for signalized intersections for each level of service category. The level of service diagrams provided throughout the report show the levels of service for the study intersections. The levels of service shown for signalized intersections are representative of the overall level of service for that intersection. For TWSC intersections, the level of service shown on the maps is the level of service for the worst operating movement at that intersection as opposed to the overall intersection level of service.

Table A2: Intersection Level Of Service Description			Intersections	
			Signalized	Unsignalized ¹
Level of Service	Conditions	Signalized Intersection Description	Delay (sec/veh)	Delay (sec/veh)
"A"	Free Flow	Users experience very low delay. Progression is favorable and most vehicles do not stop at all.	<10.0	<10.0
"B"	Stable Operations	Vehicles travel with good progression. Some vehicles stop, causing slight delay.	>10.0 – 20.0	>10.0 – 15.0
"C"	Stable Operations	Higher delays result from fair progression. A significant number of vehicles stop, although many continue to pass through the intersection without stopping.	>20.0 to 35.0	>15.0 – 25.0
"D"	Approaching Unstable	Congestion is noticeable. Progression is unfavorable, with more vehicles stopping rather than passing through the intersection.	>35.0 – 55.0	>25.0 – 35.0
"E"	Unstable Operations	Traffic volumes are at capacity. Users experience poor progression and long delays.	>55.0 – 80.0	>35.0 – 50.0
"F"	Forced Flow	Intersection's capacity is oversaturated, causing poor progression and unusually long delays.	>80.0 or v/c > 1.0	>50.0

APPENDIX B

EXISTING CONDITIONS LOS CALCULATIONS

Existing Conditions AM Peak Hour
1: SR 198 WB On-Ramp & Mineral King Avenue

Intersection

Int Delay, s/veh 3.8




















Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	137	6	281	188	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	149	7	305	204	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	155	0	967	152
Stage 1	-	-	-	-	152	-
Stage 2	-	-	-	-	815	-
Critical Hdwy	-	-	4.14	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.236	-	3.536	3.336
Pot Cap-1 Maneuver	-	-	1413	-	280	889
Stage 1	-	-	-	-	871	-
Stage 2	-	-	-	-	432	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1413	-	220	889
Mov Cap-2 Maneuver	-	-	-	-	220	-
Stage 1	-	-	-	-	871	-
Stage 2	-	-	-	-	339	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4.9	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1413	-
HCM Lane V/C Ratio	-	-	-	0.216	-
HCM Control Delay (s)	0	-	-	8.2	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0.8	-

Existing Conditions AM Peak Hour
2: Road 156 & Mineral King Avenue

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	36	101	116	214	0	255	0	118	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1731	1731	1800	1731	1731	1800	1731	1731	1800	1800	1731	1800
Adj Flow Rate, veh/h	0	39	110	126	233	0	277	0	128	0	0	0
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	2	48	135	168	485	0	992	0	885	0	2	0
Arrive On Green	0.00	0.12	0.12	0.10	0.28	0.00	0.60	0.00	0.60	0.00	0.00	0.00
Sat Flow, veh/h	1648	401	1130	1648	1731	0	1648	0	1471	0	1731	0
Grp Volume(v), veh/h	0	0	149	126	233	0	277	0	128	0	0	0
Grp Sat Flow(s),veh/h/ln	1648	0	1531	1648	1731	0	1648	0	1471	0	1731	0
Q Serve(g_s), s	0.0	0.0	8.5	6.7	10.1	0.0	7.2	0.0	3.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	8.5	6.7	10.1	0.0	7.2	0.0	3.4	0.0	0.0	0.0
Prop In Lane	1.00		0.74	1.00		0.00	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	2	0	183	168	485	0	992	0	885	0	2	0
V/C Ratio(X)	0.00	0.00	0.81	0.75	0.48	0.00	0.28	0.00	0.14	0.00	0.00	0.00
Avail Cap(c_a), veh/h	49	0	250	288	533	0	992	0	885	0	52	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	1.00	0.00	0.96	0.00	0.96	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	38.6	39.3	26.9	0.0	8.6	0.0	7.8	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	13.5	6.6	0.7	0.0	0.7	0.0	0.3	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	4.3	3.4	4.9	0.0	3.4	0.0	1.5	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	52.1	45.9	27.7	0.0	9.2	0.0	8.1	0.0	0.0	0.0
LnGrp LOS			D	D	C		A		A			
Approach Vol, veh/h		149			359			405			0	
Approach Delay, s/veh		52.1			34.1			8.9			0.0	
Approach LOS		D			C			A				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		59.5	14.5	16.1		0.0	0.0	30.5				
Change Period (Y+Rc), s		5.3	5.3	5.3		5.3	5.3	5.3				
Max Green Setting (Gmax), s		35.7	15.7	14.7		2.7	2.7	27.7				
Max Q Clear Time (g_c+I1), s		9.2	8.7	10.5		0.0	0.0	12.1				
Green Ext Time (p_c), s		1.6	0.9	0.2		0.0	0.0	1.3				
Intersection Summary												
HCM 2010 Ctrl Delay			25.8									
HCM 2010 LOS			C									
Notes												
User approved pedestrian interval to be less than phase max green.												

Existing Conditions AM Peak Hour
2: Road 156 & Mineral King Avenue

Two Way Analysis cannot be performed on Signalized Intersection.

Existing Conditions AM Peak Hour

3: SR 198 WB Off-Ramp & Mineral King Avenue

Intersection

Int Delay, s/veh 1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	154	0	0	270	60	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	167	0	0	293	65	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	167	0	460	167
Stage 1	-	-	-	-	167	-
Stage 2	-	-	-	-	293	-
Critical Hdwy	-	-	4.14	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.236	-	3.536	3.336
Pot Cap-1 Maneuver	-	-	1399	-	556	872
Stage 1	-	-	-	-	858	-
Stage 2	-	-	-	-	752	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1399	-	556	872
Mov Cap-2 Maneuver	-	-	-	-	556	-
Stage 1	-	-	-	-	858	-
Stage 2	-	-	-	-	752	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	12.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	565	-	-	1399	-
HCM Lane V/C Ratio	0.117	-	-	-	-
HCM Control Delay (s)	12.2	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Existing Conditions AM Peak Hour
4: Mineral King Avenue & Road 158

Intersection

Int Delay, s/veh 6.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	113	42	111	57	55	159
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	123	46	121	62	60	173

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	183	0	443
Stage 1	-	-	152
Stage 2	-	-	291
Critical Hdwy	4.14	-	6.44
Critical Hdwy Stg 1	-	-	5.44
Critical Hdwy Stg 2	-	-	5.44
Follow-up Hdwy	2.236	-	3.536
Pot Cap-1 Maneuver	1380	-	568
Stage 1	-	-	871
Stage 2	-	-	754
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1380	-	516
Mov Cap-2 Maneuver	-	-	516
Stage 1	-	-	871
Stage 2	-	-	685

Approach	EB	WB	SB
HCM Control Delay, s	5.7	0	11.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1380	-	-	-	750
HCM Lane V/C Ratio	0.089	-	-	-	0.31
HCM Control Delay (s)	7.9	0	-	-	11.9
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	1.3

Existing Conditions AM Peak Hour

5: West Project Driveway & Noble Avenue

Intersection

Int Delay, s/veh 0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	91	0	0	90	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	99	0	0	98	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	99	197
Stage 1	-	-	99
Stage 2	-	-	98
Critical Hdwy	-	4.14	6.44
Critical Hdwy Stg 1	-	-	5.44
Critical Hdwy Stg 2	-	-	5.44
Follow-up Hdwy	-	2.236	3.536
Pot Cap-1 Maneuver	-	1481	787
Stage 1	-	-	920
Stage 2	-	-	921
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1481	787
Mov Cap-2 Maneuver	-	-	787
Stage 1	-	-	920
Stage 2	-	-	921

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1481	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Existing Conditions AM Peak Hour
6: Noble Avenue & SR 198 EB Ramps

Intersection

Int Delay, s/veh 4.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	16	75	77	43	111	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	17	82	84	47	121	14





















Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	130	0	223
Stage 1	-	-	107
Stage 2	-	-	116
Critical Hdwy	4.14	-	6.44
Critical Hdwy Stg 1	-	-	5.44
Critical Hdwy Stg 2	-	-	5.44
Follow-up Hdwy	2.236	-	3.536
Pot Cap-1 Maneuver	1443	-	761
Stage 1	-	-	912
Stage 2	-	-	904
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1443	-	752
Mov Cap-2 Maneuver	-	-	752
Stage 1	-	-	912
Stage 2	-	-	893

Approach	EB	WB	SB
HCM Control Delay, s	1.3	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1443	-	-	-	840
HCM Lane V/C Ratio	0.012	-	-	-	0.16
HCM Control Delay (s)	7.5	0	-	-	10.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.6

Existing Conditions AM Peak Hour

7: Road 156 & Noble Avenue

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	92	22	72	12	26	30	15	251	11	15	123	79
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1731	1731	1800	1731	1731	1800	1731	1731	1800	1731	1731	1800
Adj Flow Rate, veh/h	100	24	78	13	28	33	16	273	12	16	134	86
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	125	48	155	14	47	56	410	1008	44	17	369	237
Arrive On Green	0.08	0.13	0.13	0.01	0.07	0.07	0.25	0.61	0.61	0.01	0.37	0.37
Sat Flow, veh/h	1648	359	1166	1648	725	855	1648	1646	72	1648	986	633
Grp Volume(v), veh/h	100	0	102	13	0	61	16	0	285	16	0	220
Grp Sat Flow(s),veh/h/ln	1648	0	1525	1648	0	1580	1648	0	1718	1648	0	1619
Q Serve(g_s), s	5.4	0.0	5.6	0.7	0.0	3.4	0.7	0.0	6.9	0.9	0.0	8.9
Cycle Q Clear(g_c), s	5.4	0.0	5.6	0.7	0.0	3.4	0.7	0.0	6.9	0.9	0.0	8.9
Prop In Lane	1.00		0.76	1.00		0.54	1.00		0.04	1.00		0.39
Lane Grp Cap(c), veh/h	125	0	203	14	0	103	410	0	1053	17	0	606
V/C Ratio(X)	0.80	0.00	0.50	0.94	0.00	0.59	0.04	0.00	0.27	0.92	0.00	0.36
Avail Cap(c_a), veh/h	251	0	486	49	0	311	410	0	1053	68	0	606
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.80	0.00	0.80
Uniform Delay (d), s/veh	40.9	0.0	36.3	44.6	0.0	40.9	25.6	0.0	8.1	44.5	0.0	20.4
Incr Delay (d2), s/veh	10.9	0.0	1.9	97.7	0.0	5.4	0.0	0.0	0.6	70.3	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	2.5	0.7	0.0	1.6	0.3	0.0	3.4	0.7	0.0	4.1
LnGrp Delay(d),s/veh	51.8	0.0	38.2	142.3	0.0	46.3	25.7	0.0	8.7	114.8	0.0	21.7
LnGrp LOS	D		D	F		D	C		A	F		C
Approach Vol, veh/h		202			74			301			236	
Approach Delay, s/veh		44.9			63.2			9.6			28.0	
Approach LOS		D			E			A			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.2	60.4	6.1	17.3	27.7	39.0	12.2	11.2				
Change Period (Y+Rc), s	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3				
Max Green Setting (Gmax), s	3.7	33.7	2.7	28.7	3.7	33.7	13.7	17.7				
Max Q Clear Time (g_c+I1), s	2.9	8.9	2.7	7.6	2.7	10.9	7.4	5.4				
Green Ext Time (p_c), s	0.0	1.5	0.0	0.7	0.2	1.2	0.1	0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			28.6									
HCM 2010 LOS			C									

Existing Conditions AM Peak Hour
7: Road 156 & Noble Avenue

Two Way Analysis cannot be performed on Signalized Intersection.

Existing Conditions AM Peak Hour
8: Road 156 & Northeast Project Driveway

Intersection

Int Delay, s/veh 0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	0	0	277	207	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	0	0	0	301	225	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	526	225	225	0	-	0
Stage 1	225	-	-	-	-	-
Stage 2	301	-	-	-	-	-
Critical Hdwy	6.44	6.24	4.14	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	2.236	-	-	-
Pot Cap-1 Maneuver	509	809	1332	-	-	-
Stage 1	808	-	-	-	-	-
Stage 2	746	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	509	809	1332	-	-	-
Mov Cap-2 Maneuver	509	-	-	-	-	-
Stage 1	808	-	-	-	-	-
Stage 2	746	-	-	-	-	-

Approach	EB		NB		SB
HCM Control Delay, s	0		0		0
HCM LOS	A				

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1332	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Existing Conditions PM Peak Hour
1: SR 198 WB On-Ramp & Mineral King Avenue

Intersection

Int Delay, s/veh 2.3




















Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	192	12	180	234	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	209	13	196	254	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	222	0	861	215
Stage 1	-	-	-	-	215	-
Stage 2	-	-	-	-	646	-
Critical Hdwy	-	-	4.14	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.236	-	3.536	3.336
Pot Cap-1 Maneuver	-	-	1335	-	323	820
Stage 1	-	-	-	-	816	-
Stage 2	-	-	-	-	518	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1335	-	276	820
Mov Cap-2 Maneuver	-	-	-	-	276	-
Stage 1	-	-	-	-	816	-
Stage 2	-	-	-	-	442	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.5	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1335	-
HCM Lane V/C Ratio	-	-	-	0.147	-
HCM Control Delay (s)	0	-	-	8.2	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0.5	-

Existing Conditions PM Peak Hour
2: Road 156 & Mineral King Avenue

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	79	113	135	222	0	192	0	170	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1731	1731	1800	1731	1731	1800	1731	1731	1800	1800	1731	1800
Adj Flow Rate, veh/h	0	86	123	147	241	0	209	0	185	0	0	0
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	2	102	146	193	579	0	903	0	806	0	2	0
Arrive On Green	0.00	0.16	0.16	0.12	0.33	0.00	0.55	0.00	0.55	0.00	0.00	0.00
Sat Flow, veh/h	1648	645	923	1648	1731	0	1648	0	1471	0	1731	0
Grp Volume(v), veh/h	0	0	209	147	241	0	209	0	185	0	0	0
Grp Sat Flow(s),veh/h/ln	1648	0	1568	1648	1731	0	1648	0	1471	0	1731	0
Q Serve(g_s), s	0.0	0.0	11.6	7.8	9.7	0.0	5.9	0.0	5.9	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	11.6	7.8	9.7	0.0	5.9	0.0	5.9	0.0	0.0	0.0
Prop In Lane	1.00		0.59	1.00		0.00	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	2	0	249	193	579	0	903	0	806	0	2	0
V/C Ratio(X)	0.00	0.00	0.84	0.76	0.42	0.00	0.23	0.00	0.23	0.00	0.00	0.00
Avail Cap(c_a), veh/h	49	0	378	324	706	0	903	0	806	0	52	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	1.00	0.00	0.91	0.00	0.91	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	36.8	38.5	23.2	0.0	10.5	0.0	10.5	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	10.0	6.1	0.5	0.0	0.5	0.0	0.6	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	5.7	3.9	4.7	0.0	2.8	0.0	2.5	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	46.8	44.6	23.6	0.0	11.1	0.0	11.1	0.0	0.0	0.0
LnGrp LOS			D	D	C		B		B			
Approach Vol, veh/h		209			388			394			0	
Approach Delay, s/veh		46.8			31.6			11.1			0.0	
Approach LOS		D			C			B				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		54.6	15.8	19.6		0.0	0.0	35.4				
Change Period (Y+Rc), s		5.3	5.3	5.3		5.3	5.3	5.3				
Max Green Setting (Gmax), s		26.7	17.7	21.7		2.7	2.7	36.7				
Max Q Clear Time (g_c+I1), s		7.9	9.8	13.6		0.0	0.0	11.7				
Green Ext Time (p_c), s		1.6	1.0	0.6		0.0	0.0	1.6				
Intersection Summary												
HCM 2010 Ctrl Delay			26.7									
HCM 2010 LOS			C									
Notes												
User approved pedestrian interval to be less than phase max green.												

Existing Conditions PM Peak Hour
2: Road 156 & Mineral King Avenue

Two Way Analysis cannot be performed on Signalized Intersection.

Existing Conditions PM Peak Hour

3: SR 198 WB Off-Ramp & Mineral King Avenue

Intersection

Int Delay, s/veh 2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	249	0	0	272	85	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	271	0	0	296	92	4

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	271
Stage 1	-	-	271
Stage 2	-	-	296
Critical Hdwy	-	4.14	6.44
Critical Hdwy Stg 1	-	-	5.44
Critical Hdwy Stg 2	-	-	5.44
Follow-up Hdwy	-	2.236	3.536
Pot Cap-1 Maneuver	-	1281	482
Stage 1	-	-	770
Stage 2	-	-	750
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1281	482
Mov Cap-2 Maneuver	-	-	482
Stage 1	-	-	770
Stage 2	-	-	750

Approach	EB	WB	NB
HCM Control Delay, s	0	0	13.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	505	-	-	1281	-
HCM Lane V/C Ratio	0.192	-	-	-	-
HCM Control Delay (s)	13.8	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.7	-	-	0	-

Existing Conditions PM Peak Hour
4: Mineral King Avenue & Road 158

Intersection

Int Delay, s/veh 6.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	173	80	101	74	58	171
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	188	87	110	80	63	186

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	190	0	613
Stage 1	-	-	150
Stage 2	-	-	463
Critical Hdwy	4.14	-	6.44
Critical Hdwy Stg 1	-	-	5.44
Critical Hdwy Stg 2	-	-	5.44
Follow-up Hdwy	2.236	-	3.536
Pot Cap-1 Maneuver	1372	-	453
Stage 1	-	-	873
Stage 2	-	-	629
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1372	-	388
Mov Cap-2 Maneuver	-	-	388
Stage 1	-	-	873
Stage 2	-	-	538

Approach	EB	WB	SB
HCM Control Delay, s	5.5	0	13.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1372	-	-	-	671
HCM Lane V/C Ratio	0.137	-	-	-	0.371
HCM Control Delay (s)	8	0	-	-	13.5
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.5	-	-	-	1.7

Existing Conditions PM Peak Hour
5: West Project Driveway & Noble Avenue

Intersection

Int Delay, s/veh 0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	133	0	0	96	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	145	0	0	104	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	145	0	249	145
Stage 1	-	-	-	-	145	-
Stage 2	-	-	-	-	104	-
Critical Hdwy	-	-	4.14	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.236	-	3.536	3.336
Pot Cap-1 Maneuver	-	-	1425	-	735	897
Stage 1	-	-	-	-	877	-
Stage 2	-	-	-	-	915	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1425	-	735	897
Mov Cap-2 Maneuver	-	-	-	-	735	-
Stage 1	-	-	-	-	877	-
Stage 2	-	-	-	-	915	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1425	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Existing Conditions PM Peak Hour
6: Noble Avenue & SR 198 EB Ramps

Intersection

Int Delay, s/veh 6.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	16	117	80	40	243	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	17	127	87	43	264	17





















Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	130	0	271
Stage 1	-	-	109
Stage 2	-	-	162
Critical Hdwy	4.14	-	6.44
Critical Hdwy Stg 1	-	-	5.44
Critical Hdwy Stg 2	-	-	5.44
Follow-up Hdwy	2.236	-	3.536
Pot Cap-1 Maneuver	1443	-	714
Stage 1	-	-	911
Stage 2	-	-	862
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1443	-	705
Mov Cap-2 Maneuver	-	-	705
Stage 1	-	-	911
Stage 2	-	-	851

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	12.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1443	-	-	-	751
HCM Lane V/C Ratio	0.012	-	-	-	0.375
HCM Control Delay (s)	7.5	0	-	-	12.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	1.7

Existing Conditions PM Peak Hour

7: Road 156 & Noble Avenue

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	166	36	158	8	15	16	30	180	20	11	162	75
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1731	1731	1800	1731	1731	1800	1731	1731	1800	1731	1731	1800
Adj Flow Rate, veh/h	180	39	172	9	16	17	33	196	22	12	176	82
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	215	49	218	10	41	43	426	515	58	403	361	168
Arrive On Green	0.13	0.18	0.18	0.01	0.05	0.05	0.26	0.34	0.34	0.24	0.32	0.32
Sat Flow, veh/h	1648	280	1233	1648	769	817	1648	1529	172	1648	1118	521
Grp Volume(v), veh/h	180	0	211	9	0	33	33	0	218	12	0	258
Grp Sat Flow(s), veh/h/ln	1648	0	1513	1648	0	1587	1648	0	1700	1648	0	1639
Q Serve(g_s), s	9.6	0.0	12.0	0.5	0.0	1.8	1.4	0.0	8.8	0.5	0.0	11.4
Cycle Q Clear(g_c), s	9.6	0.0	12.0	0.5	0.0	1.8	1.4	0.0	8.8	0.5	0.0	11.4
Prop In Lane	1.00		0.82	1.00		0.52	1.00		0.10	1.00		0.32
Lane Grp Cap(c), veh/h	215	0	268	10	0	84	426	0	572	403	0	529
V/C Ratio(X)	0.84	0.00	0.79	0.90	0.00	0.39	0.08	0.00	0.38	0.03	0.00	0.49
Avail Cap(c_a), veh/h	361	0	556	49	0	284	426	0	572	403	0	529
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.76	0.00	0.76
Uniform Delay (d), s/veh	38.2	0.0	35.4	44.7	0.0	41.2	25.3	0.0	22.7	25.9	0.0	24.5
Incr Delay (d2), s/veh	8.4	0.0	5.1	106.1	0.0	3.0	0.1	0.0	1.9	0.0	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	0.0	5.4	0.5	0.0	0.9	0.6	0.0	4.4	0.2	0.0	5.5
LnGrp Delay(d),s/veh	46.6	0.0	40.5	150.8	0.0	44.2	25.3	0.0	24.6	25.9	0.0	26.9
LnGrp LOS	D		D	F		D	C		C	C		C
Approach Vol, veh/h		391			42			251			270	
Approach Delay, s/veh		43.3			67.1			24.7			26.9	
Approach LOS		D			E			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	27.3	35.6	5.8	21.2	28.6	34.4	17.0	10.0				
Change Period (Y+Rc), s	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3				
Max Green Setting (Gmax), s	2.7	30.3	2.7	33.1	5.7	27.3	19.7	16.1				
Max Q Clear Time (g_c+I1), s	2.5	10.8	2.5	14.0	3.4	13.4	11.6	3.8				
Green Ext Time (p_c), s	0.0	1.0	0.0	1.2	0.0	1.2	0.3	0.9				
Intersection Summary												
HCM 2010 Ctrl Delay			34.8									
HCM 2010 LOS			C									

Existing Conditions PM Peak Hour
7: Road 156 & Noble Avenue

Two Way Analysis cannot be performed on Signalized Intersection.

Existing Conditions PM Peak Hour
8: Road 156 & Northeast Project Driveway

Intersection

Int Delay, s/veh 0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	0	0	230	328	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	0	0	0	250	357	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	607	357	357	0	-	0
Stage 1	357	-	-	-	-	-
Stage 2	250	-	-	-	-	-
Critical Hdwy	6.44	6.24	4.14	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	2.236	-	-	-
Pot Cap-1 Maneuver	456	683	1191	-	-	-
Stage 1	704	-	-	-	-	-
Stage 2	787	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	456	683	1191	-	-	-
Mov Cap-2 Maneuver	456	-	-	-	-	-
Stage 1	704	-	-	-	-	-
Stage 2	787	-	-	-	-	-

Approach	EB		NB		SB
HCM Control Delay, s	0		0		0
HCM LOS	A				

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1191	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

APPENDIX C

TRAFFIC SIGNAL WARRANT ANALYSIS

Peak Hour Traffic Signal Warrants MUTCD Warrant 3, Part B

Intersections	Approach Lanes		Approach Speed	
	N-S	E-W	N-S	E-W
Mineral King Avenue at SR 198 WB On-Ramp AM PM	1	1	n/a	45
Mineral King Avenue at Road 156 AM PM	1	1	35	45
Mineral King Avenue at SR 198 WB Off-Ramp AM PM	1	1	NPS	45
Mineral King Avenue at Road 158 AM PM	1	1	55	45
Noble Avenue at West Project Driveway AM PM	1	1	NPS	55
Noble Avenue at SR 198 EB Ramps AM PM	1	1	NPS	55
Noble Avenue at Road 156 AM PM	1	1	45	55
Northeast Project Driveway at Road 156 AM PM	1	1	45	NPS
North Project Road at Road 156 AM PM	1	1	45	NPS
Middle Project Road at Road 156 AM PM	1	1	45	NPS
South Project Road at Road 156 AM PM	1	1	45	NPS

Existing		
Major Street	Minor Street	Warrant Met?
No Side Street Traffic		
Signalized		
424 - E/W	61 - N/S	N
521 - E/W	89 - N/S	N
323 - E/W	214 - N/S	N
428 - E/W	229 - N/S	N
Does not Exist		
211 - E/W	124 - N/S	N
259 - N/S	133 - E/W	N
Signalized		
Does not Exist		
Does not Exist		
Does not Exist		
Does not Exist		

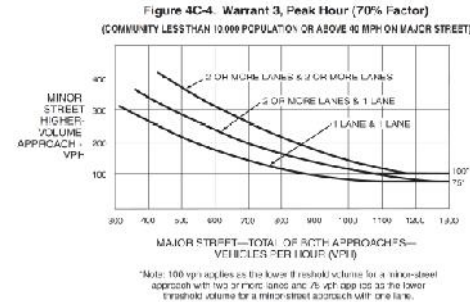
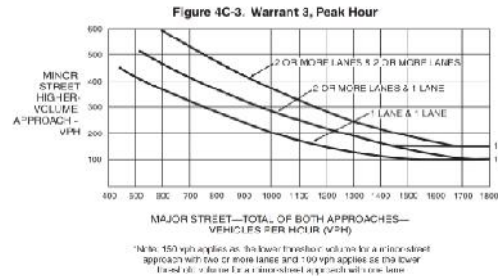
Existing Plus Approved		
Major Street	Minor Street	Warrant Met?
No Side Street Traffic		
Signalized		
435 - E/W	69 - N/S	N
538 - E/W	92 - N/S	N
328 - E/W	220 - N/S	N
436 - E/W	238 - N/S	Y
Does not Exist		
219 - E/W	124 - N/S	N
266 - E/W	259 - N/S	N
Signalized		
Does not Exist		
Does not Exist		
Does not Exist		
Does not Exist		

Existing Plus Approved Plus Project		
Major Street	Minor Street	Warrant Met?
No Side Street Traffic		
Signalized		
530 - E/W	199 - N/S	N
623 - E/W	141 - N/S	N
374 - E/W	269 - N/S	Y
504 - E/W	255 - N/S	Y
293 - E/W	13 - N/S	N
286 - E/W	60 - N/S	N
364 - E/W	269 - N/S	N
453 - E/W	323 - N/S	Y
Signalized		
937 - N/S	133 - E/W	n/a
960 - N/S	123 - E/W	n/a
859 - N/S	11 - E/W	n/a
847 - N/S	48 - E/W	n/a
830 - N/S	24 - E/W	N
773 - N/S	107 - E/W	N
742 - N/S	25 - E/W	N
694 - N/S	114 - E/W	N

Intersections	Approach Lanes		Approach Speed	
	N-S	E-W	N-S	E-W
Mineral King Avenue at SR 198 WB On-Ramp AM PM	1	1		45
Mineral King Avenue at Road 156 AM PM	1	1	35	45
Mineral King Avenue at SR 198 WB Off-Ramp AM PM	1	1		45
Mineral King Avenue at Road 158 AM PM	1	1	55	45
Noble Avenue at West Project Driveway AM PM	1	1		55
Noble Avenue at SR 198 EB Ramps AM PM	1	1		55
Noble Avenue at Road 156 AM PM	1	1	45	55
Northeast Project Driveway at Road 156 AM PM	1	1	45	
North Project Road at Road 156 AM PM	1	1	45	
Middle Project Road at Road 156 AM PM	1	1	45	
South Project Road at Road 156 AM PM	1	1	45	

2040 No Project		
Major Street	Minor Street	Warrant Met?
No Side Street Traffic		
Signalized		
394 - E/W	37 - N/S	N
515 - E/W	51 - N/S	N
319 - E/W	239 - N/S	N
454 - E/W	253 - N/S	Y
Does not Exist		
228 - E/W	155 - N/S	N
336 - E/W	325 - N/S	Y
Signalized		
Does not Exist		
Does not Exist		
Does not Exist		
Does not Exist		

2040 Plus Project		
Major Street	Minor Street	Warrant Met?
No Side Street Traffic		
Signalized		
489 - E/W	167 - N/S	Y
600 - E/W	100 - N/S	Y
365 - E/W	288 - N/S	Y
522 - E/W	270 - N/S	Y
326 - E/W	13 - N/S	N
377 - E/W	60 - N/S	N
373 - E/W	300 - N/S	Y
523 - E/W	389 - N/S	Y
Signalized		
896 - N/S	133 - E/W	n/a
891 - N/S	123 - E/W	n/a
818 - N/S	11 - E/W	n/a
778 - N/S	48 - E/W	n/a
789 - N/S	24 - E/W	N
704 - N/S	107 - E/W	N
701 - N/S	25 - E/W	N
625 - N/S	114 - E/W	N



APPENDIX D

EXISTING PLUS APPROVED PROJECTS LOS CALCULATIONS

Existing Plus Approved Projects AM Peak Hour
1: SR 198 WB On-Ramp & Mineral King Avenue

Intersection

Int Delay, s/veh 3.7




















Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	142	8	281	206	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	154	9	305	224	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	163	994
Stage 1	-	-	159
Stage 2	-	-	835
Critical Hdwy	-	4.14	6.44
Critical Hdwy Stg 1	-	-	5.44
Critical Hdwy Stg 2	-	-	5.44
Follow-up Hdwy	-	2.236	3.536
Pot Cap-1 Maneuver	-	1404	269
Stage 1	-	-	865
Stage 2	-	-	422
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1404	211
Mov Cap-2 Maneuver	-	-	211
Stage 1	-	-	865
Stage 2	-	-	330

Approach	EB	WB	NB
HCM Control Delay, s	0	4.8	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1404	-
HCM Lane V/C Ratio	-	-	-	0.218	-
HCM Control Delay (s)	0	-	-	8.3	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0.8	-

Existing Plus Approved Projects AM Peak Hour
2: Road 156 & Mineral King Avenue

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	41	101	116	228	0	259	0	118	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1731	1731	1800	1731	1731	1800	1731	1731	1800	1800	1731	1800
Adj Flow Rate, veh/h	0	45	110	126	248	0	282	0	128	0	0	0
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	2	56	137	171	500	0	978	0	873	0	2	0
Arrive On Green	0.00	0.13	0.13	0.10	0.29	0.00	0.59	0.00	0.59	0.00	0.00	0.00
Sat Flow, veh/h	1648	447	1092	1648	1731	0	1648	0	1471	0	1731	0
Grp Volume(v), veh/h	0	0	155	126	248	0	282	0	128	0	0	0
Grp Sat Flow(s),veh/h/ln	1648	0	1538	1648	1731	0	1648	0	1471	0	1731	0
Q Serve(g_s), s	0.0	0.0	8.8	6.7	10.7	0.0	7.5	0.0	3.5	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	8.8	6.7	10.7	0.0	7.5	0.0	3.5	0.0	0.0	0.0
Prop In Lane	1.00		0.71	1.00		0.00	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	2	0	194	171	500	0	978	0	873	0	2	0
V/C Ratio(X)	0.00	0.00	0.80	0.74	0.50	0.00	0.29	0.00	0.15	0.00	0.00	0.00
Avail Cap(c_a), veh/h	49	0	371	324	706	0	978	0	873	0	52	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	1.00	0.00	0.96	0.00	0.96	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	38.2	39.1	26.6	0.0	9.0	0.0	8.1	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	7.4	6.0	0.8	0.0	0.7	0.0	0.3	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	4.1	3.3	5.2	0.0	3.6	0.0	1.5	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	45.7	45.2	27.3	0.0	9.7	0.0	8.5	0.0	0.0	0.0
LnGrp LOS			D	D	C		A		A			
Approach Vol, veh/h		155			374			410			0	
Approach Delay, s/veh		45.7			33.4			9.3			0.0	
Approach LOS		D			C			A				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		58.7	14.6	16.6		0.0	0.0	31.3				
Change Period (Y+Rc), s		5.3	5.3	5.3		5.3	5.3	5.3				
Max Green Setting (Gmax), s		26.7	17.7	21.7		2.7	2.7	36.7				
Max Q Clear Time (g_c+I1), s		9.5	8.7	10.8		0.0	0.0	12.7				
Green Ext Time (p_c), s		1.5	1.1	0.5		0.0	0.0	1.6				
Intersection Summary												
HCM 2010 Ctrl Delay			24.9									
HCM 2010 LOS			C									
Notes												
User approved pedestrian interval to be less than phase max green.												

Existing Plus Approved Projects AM Peak Hour
2: Road 156 & Mineral King Avenue

Two Way Analysis cannot be performed on Signalized Intersection.

Existing Plus Approved Projects AM Peak Hour
3: SR 198 WB Off-Ramp & Mineral King Avenue

Intersection

Int Delay, s/veh 1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	159	0	0	276	68	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	173	0	0	300	74	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	173	0	473	173
Stage 1	-	-	-	-	173	-
Stage 2	-	-	-	-	300	-
Critical Hdwy	-	-	4.14	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.236	-	3.536	3.336
Pot Cap-1 Maneuver	-	-	1392	-	546	865
Stage 1	-	-	-	-	852	-
Stage 2	-	-	-	-	747	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1392	-	546	865
Mov Cap-2 Maneuver	-	-	-	-	546	-
Stage 1	-	-	-	-	852	-
Stage 2	-	-	-	-	747	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	12.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	554	-	-	1392	-
HCM Lane V/C Ratio	0.135	-	-	-	-
HCM Control Delay (s)	12.5	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.5	-	-	0	-

Existing Plus Approved Projects AM Peak Hour
4: Mineral King Avenue & Road 158

Intersection

Int Delay, s/veh 6.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	118	42	111	57	55	165
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	128	46	121	62	60	179

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	183	0	454
Stage 1	-	-	152
Stage 2	-	-	302
Critical Hdwy	4.14	-	6.44
Critical Hdwy Stg 1	-	-	5.44
Critical Hdwy Stg 2	-	-	5.44
Follow-up Hdwy	2.236	-	3.536
Pot Cap-1 Maneuver	1380	-	560
Stage 1	-	-	871
Stage 2	-	-	745
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1380	-	507
Mov Cap-2 Maneuver	-	-	507
Stage 1	-	-	871
Stage 2	-	-	674

Approach	EB	WB	SB
HCM Control Delay, s	5.8	0	12.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1380	-	-	-	748
HCM Lane V/C Ratio	0.093	-	-	-	0.32
HCM Control Delay (s)	7.9	0	-	-	12.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	1.4

Existing Plus Approved Projects AM Peak Hour
5: West Project Driveway & Noble Avenue

Intersection

Int Delay, s/veh 0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	94	0	0	95	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	102	0	0	103	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	102	0	205	102
Stage 1	-	-	-	-	102	-
Stage 2	-	-	-	-	103	-
Critical Hdwy	-	-	4.14	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.236	-	3.536	3.336
Pot Cap-1 Maneuver	-	-	1478	-	779	948
Stage 1	-	-	-	-	917	-
Stage 2	-	-	-	-	916	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1478	-	779	948
Mov Cap-2 Maneuver	-	-	-	-	779	-
Stage 1	-	-	-	-	917	-
Stage 2	-	-	-	-	916	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1478	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Existing Plus Approved Projects AM Peak Hour
6: Noble Avenue & SR 198 EB Ramps

Intersection

Int Delay, s/veh 4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	16	78	82	43	111	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	17	85	89	47	121	14





















Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	136	0	233
Stage 1	-	-	113
Stage 2	-	-	120
Critical Hdwy	4.14	-	6.44
Critical Hdwy Stg 1	-	-	5.44
Critical Hdwy Stg 2	-	-	5.44
Follow-up Hdwy	2.236	-	3.536
Pot Cap-1 Maneuver	1436	-	751
Stage 1	-	-	907
Stage 2	-	-	900
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1436	-	742
Mov Cap-2 Maneuver	-	-	742
Stage 1	-	-	907
Stage 2	-	-	889

Approach	EB	WB	SB
HCM Control Delay, s	1.3	0	10.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1436	-	-	-	829
HCM Lane V/C Ratio	0.012	-	-	-	0.163
HCM Control Delay (s)	7.5	0	-	-	10.2
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.6

Existing Plus Approved Projects AM Peak Hour

7: Road 156 & Noble Avenue

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	92	25	72	12	31	30	15	255	11	15	123	79
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1731	1731	1800	1731	1731	1800	1731	1731	1800	1731	1731	1800
Adj Flow Rate, veh/h	100	27	78	13	34	33	16	277	12	16	134	86
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	126	54	155	14	55	54	466	554	24	466	332	213
Arrive On Green	0.08	0.14	0.14	0.01	0.07	0.07	0.28	0.34	0.34	0.28	0.34	0.34
Sat Flow, veh/h	1648	393	1137	1648	808	784	1648	1647	71	1648	986	633
Grp Volume(v), veh/h	100	0	105	13	0	67	16	0	289	16	0	220
Grp Sat Flow(s),veh/h/ln	1648	0	1530	1648	0	1592	1648	0	1718	1648	0	1619
Q Serve(g_s), s	5.4	0.0	5.7	0.7	0.0	3.7	0.6	0.0	12.1	0.6	0.0	9.4
Cycle Q Clear(g_c), s	5.4	0.0	5.7	0.7	0.0	3.7	0.6	0.0	12.1	0.6	0.0	9.4
Prop In Lane	1.00		0.74	1.00		0.49	1.00		0.04	1.00		0.39
Lane Grp Cap(c), veh/h	126	0	209	14	0	109	466	0	578	466	0	545
V/C Ratio(X)	0.79	0.00	0.50	0.94	0.00	0.62	0.03	0.00	0.50	0.03	0.00	0.40
Avail Cap(c_a), veh/h	361	0	563	49	0	285	466	0	578	466	0	545
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.80	0.00	0.80
Uniform Delay (d), s/veh	40.8	0.0	36.0	44.6	0.0	40.8	23.4	0.0	23.8	23.4	0.0	22.9
Incr Delay (d2), s/veh	10.5	0.0	1.9	97.7	0.0	5.6	0.0	0.0	3.1	0.0	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	2.5	0.7	0.0	1.8	0.3	0.0	6.2	0.3	0.0	4.5
LnGrp Delay(d),s/veh	51.3	0.0	37.9	142.3	0.0	46.3	23.4	0.0	26.9	23.4	0.0	24.7
LnGrp LOS	D		D	F		D	C		C	C		C
Approach Vol, veh/h		205			80			305			236	
Approach Delay, s/veh		44.4			61.9			26.7			24.6	
Approach LOS		D			E			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	30.7	35.6	6.1	17.6	30.8	35.6	12.2	11.4				
Change Period (Y+Rc), s	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3				
Max Green Setting (Gmax), s	2.7	30.3	2.7	33.1	5.7	27.3	19.7	16.1				
Max Q Clear Time (g_c+I1), s	2.6	14.1	2.7	7.7	2.6	11.4	7.4	5.7				
Green Ext Time (p_c), s	0.0	1.3	0.0	0.8	0.0	1.1	0.2	0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			33.9									
HCM 2010 LOS			C									

Existing Plus Approved Projects AM Peak Hour
7: Road 156 & Noble Avenue

Two Way Analysis cannot be performed on Signalized Intersection.

Existing Plus Approved Projects AM Peak Hour
8: Road 156 & Northeast Project Driveway

Intersection

Int Delay, s/veh 0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	0	0	281	207	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	0	0	0	305	225	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	530	225	225	0	-	0
Stage 1	225	-	-	-	-	-
Stage 2	305	-	-	-	-	-
Critical Hdwy	6.44	6.24	4.14	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	2.236	-	-	-
Pot Cap-1 Maneuver	506	809	1332	-	-	-
Stage 1	808	-	-	-	-	-
Stage 2	743	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	506	809	1332	-	-	-
Mov Cap-2 Maneuver	506	-	-	-	-	-
Stage 1	808	-	-	-	-	-
Stage 2	743	-	-	-	-	-

Approach	EB		NB		SB
HCM Control Delay, s	0		0		0
HCM LOS	A				

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1332	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Existing Plus Approved Projects PM Peak Hour
1: SR 198 WB On-Ramp & Mineral King Avenue

Intersection

Int Delay, s/veh 2.3




















Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	200	16	180	246	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	217	17	196	267	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	235	0	885	226
Stage 1	-	-	-	-	226	-
Stage 2	-	-	-	-	659	-
Critical Hdwy	-	-	4.14	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.236	-	3.536	3.336
Pot Cap-1 Maneuver	-	-	1321	-	313	808
Stage 1	-	-	-	-	807	-
Stage 2	-	-	-	-	511	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1321	-	267	808
Mov Cap-2 Maneuver	-	-	-	-	267	-
Stage 1	-	-	-	-	807	-
Stage 2	-	-	-	-	435	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.5	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1321	-
HCM Lane V/C Ratio	-	-	-	0.148	-
HCM Control Delay (s)	0	-	-	8.2	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0.5	-

Existing Plus Approved Projects PM Peak Hour
2: Road 156 & Mineral King Avenue

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	87	113	135	234	0	192	0	170	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1731	1731	1800	1731	1731	1800	1731	1731	1800	1800	1731	1800
Adj Flow Rate, veh/h	0	95	123	147	254	0	209	0	185	0	0	0
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	2	112	145	194	589	0	894	0	798	0	2	0
Arrive On Green	0.00	0.16	0.16	0.12	0.34	0.00	0.54	0.00	0.54	0.00	0.00	0.00
Sat Flow, veh/h	1648	686	888	1648	1731	0	1648	0	1471	0	1731	0
Grp Volume(v), veh/h	0	0	218	147	254	0	209	0	185	0	0	0
Grp Sat Flow(s),veh/h/ln	1648	0	1574	1648	1731	0	1648	0	1471	0	1731	0
Q Serve(g_s), s	0.0	0.0	12.1	7.8	10.2	0.0	6.0	0.0	5.9	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	12.1	7.8	10.2	0.0	6.0	0.0	5.9	0.0	0.0	0.0
Prop In Lane	1.00		0.56	1.00		0.00	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	2	0	258	194	589	0	894	0	798	0	2	0
V/C Ratio(X)	0.00	0.00	0.85	0.76	0.43	0.00	0.23	0.00	0.23	0.00	0.00	0.00
Avail Cap(c_a), veh/h	49	0	380	324	706	0	894	0	798	0	52	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	1.00	0.00	0.91	0.00	0.91	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	36.5	38.5	23.0	0.0	10.8	0.0	10.8	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	11.0	6.0	0.5	0.0	0.6	0.0	0.6	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	6.1	3.9	5.0	0.0	2.9	0.0	2.6	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	47.6	44.5	23.5	0.0	11.4	0.0	11.4	0.0	0.0	0.0
LnGrp LOS			D	D	C		B		B			
Approach Vol, veh/h		218			401			394			0	
Approach Delay, s/veh		47.6			31.2			11.4			0.0	
Approach LOS		D			C			B				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		54.1	15.9	20.0		0.0	0.0	35.9				
Change Period (Y+Rc), s		5.3	5.3	5.3		5.3	5.3	5.3				
Max Green Setting (Gmax), s		26.7	17.7	21.7		2.7	2.7	36.7				
Max Q Clear Time (g_c+I1), s		8.0	9.8	14.1		0.0	0.0	12.2				
Green Ext Time (p_c), s		1.6	1.1	0.6		0.0	0.0	1.7				
Intersection Summary												
HCM 2010 Ctrl Delay			27.0									
HCM 2010 LOS			C									
Notes												
User approved pedestrian interval to be less than phase max green.												

Existing Plus Approved Projects PM Peak Hour
2: Road 156 & Mineral King Avenue

Two Way Analysis cannot be performed on Signalized Intersection.

Existing Plus Approved Projects PM Peak Hour

3: SR 198 WB Off-Ramp & Mineral King Avenue

Intersection

Int Delay, s/veh 2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	257	0	0	281	88	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	279	0	0	305	96	4

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	279	584
Stage 1	-	-	279
Stage 2	-	-	305
Critical Hdwy	-	4.14	6.44
Critical Hdwy Stg 1	-	-	5.44
Critical Hdwy Stg 2	-	-	5.44
Follow-up Hdwy	-	2.236	3.536
Pot Cap-1 Maneuver	-	1272	471
Stage 1	-	-	764
Stage 2	-	-	743
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1272	471
Mov Cap-2 Maneuver	-	-	471
Stage 1	-	-	764
Stage 2	-	-	743

Approach	EB	WB	NB
HCM Control Delay, s	0	0	14.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	492	-	-	1272	-
HCM Lane V/C Ratio	0.203	-	-	-	-
HCM Control Delay (s)	14.2	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.8	-	-	0	-

Existing Plus Approved Projects PM Peak Hour
4: Mineral King Avenue & Road 158

Intersection

Int Delay, s/veh 7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	181	80	101	74	58	180
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	197	87	110	80	63	196

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	190	0	630
Stage 1	-	-	150
Stage 2	-	-	480
Critical Hdwy	4.14	-	6.44
Critical Hdwy Stg 1	-	-	5.44
Critical Hdwy Stg 2	-	-	5.44
Follow-up Hdwy	2.236	-	3.536
Pot Cap-1 Maneuver	1372	-	442
Stage 1	-	-	873
Stage 2	-	-	618
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1372	-	375
Mov Cap-2 Maneuver	-	-	375
Stage 1	-	-	873
Stage 2	-	-	525

Approach	EB	WB	SB
HCM Control Delay, s	5.6	0	13.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1372	-	-	-	667
HCM Lane V/C Ratio	0.143	-	-	-	0.388
HCM Control Delay (s)	8.1	0	-	-	13.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.5	-	-	-	1.8

Existing Plus Approved Projects PM Peak Hour
5: West Project Driveway & Noble Avenue

Intersection

Int Delay, s/veh 0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	139	0	0	103	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	151	0	0	112	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	151	0	263	151
Stage 1	-	-	-	-	151	-
Stage 2	-	-	-	-	112	-
Critical Hdwy	-	-	4.14	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.236	-	3.536	3.336
Pot Cap-1 Maneuver	-	-	1418	-	722	890
Stage 1	-	-	-	-	872	-
Stage 2	-	-	-	-	908	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1418	-	722	890
Mov Cap-2 Maneuver	-	-	-	-	722	-
Stage 1	-	-	-	-	872	-
Stage 2	-	-	-	-	908	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1418	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Existing Plus Approved Projects PM Peak Hour
6: Noble Avenue & SR 198 EB Ramps

Intersection

Int Delay, s/veh 6.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	16	123	87	40	243	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	17	134	95	43	264	17





















Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	138	0	284
Stage 1	-	-	116
Stage 2	-	-	168
Critical Hdwy	4.14	-	6.44
Critical Hdwy Stg 1	-	-	5.44
Critical Hdwy Stg 2	-	-	5.44
Follow-up Hdwy	2.236	-	3.536
Pot Cap-1 Maneuver	1433	-	702
Stage 1	-	-	904
Stage 2	-	-	857
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1433	-	693
Mov Cap-2 Maneuver	-	-	693
Stage 1	-	-	904
Stage 2	-	-	846

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	12.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1433	-	-	-	739
HCM Lane V/C Ratio	0.012	-	-	-	0.381
HCM Control Delay (s)	7.5	0	-	-	12.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	1.8

Existing Plus Approved Projects PM Peak Hour

7: Road 156 & Noble Avenue

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	166	42	158	8	22	16	30	180	20	11	162	75
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1731	1731	1800	1731	1731	1800	1731	1731	1800	1731	1731	1800
Adj Flow Rate, veh/h	180	46	172	9	24	17	33	196	22	12	176	82
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	215	58	218	10	54	39	418	515	58	395	361	168
Arrive On Green	0.13	0.18	0.18	0.01	0.06	0.06	0.25	0.34	0.34	0.24	0.32	0.32
Sat Flow, veh/h	1648	321	1199	1648	944	669	1648	1529	172	1648	1118	521
Grp Volume(v), veh/h	180	0	218	9	0	41	33	0	218	12	0	258
Grp Sat Flow(s), veh/h/ln	1648	0	1519	1648	0	1613	1648	0	1700	1648	0	1639
Q Serve(g_s), s	9.6	0.0	12.3	0.5	0.0	2.2	1.4	0.0	8.8	0.5	0.0	11.4
Cycle Q Clear(g_c), s	9.6	0.0	12.3	0.5	0.0	2.2	1.4	0.0	8.8	0.5	0.0	11.4
Prop In Lane	1.00		0.79	1.00		0.41	1.00		0.10	1.00		0.32
Lane Grp Cap(c), veh/h	215	0	276	10	0	93	418	0	572	395	0	529
V/C Ratio(X)	0.84	0.00	0.79	0.90	0.00	0.44	0.08	0.00	0.38	0.03	0.00	0.49
Avail Cap(c_a), veh/h	361	0	559	49	0	289	418	0	572	395	0	529
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.76	0.00	0.76
Uniform Delay (d), s/veh	38.2	0.0	35.2	44.7	0.0	41.0	25.6	0.0	22.7	26.2	0.0	24.5
Incr Delay (d2), s/veh	8.4	0.0	5.0	106.1	0.0	3.3	0.1	0.0	1.9	0.0	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	0.0	5.5	0.5	0.0	1.1	0.6	0.0	4.4	0.2	0.0	5.5
LnGrp Delay(d),s/veh	46.6	0.0	40.1	150.8	0.0	44.2	25.7	0.0	24.6	26.2	0.0	26.9
LnGrp LOS	D		D	F		D	C		C	C		C
Approach Vol, veh/h		398			50			251			270	
Approach Delay, s/veh		43.1			63.4			24.8			26.9	
Approach LOS		D			E			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	26.9	35.6	5.8	21.7	28.1	34.4	17.0	10.5				
Change Period (Y+Rc), s	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3				
Max Green Setting (Gmax), s	2.7	30.3	2.7	33.1	5.7	27.3	19.7	16.1				
Max Q Clear Time (g_c+I1), s	2.5	10.8	2.5	14.3	3.4	13.4	11.6	4.2				
Green Ext Time (p_c), s	0.0	1.0	0.0	1.2	0.0	1.2	0.3	1.0				
Intersection Summary												
HCM 2010 Ctrl Delay			34.9									
HCM 2010 LOS			C									

Existing Plus Approved Projects PM Peak Hour
7: Road 156 & Noble Avenue

Two Way Analysis cannot be performed on Signalized Intersection.

Existing Plus Approved Projects PM Peak Hour
8: Road 156 & Northeast Project Driveway

Intersection

Int Delay, s/veh 0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	0	0	230	328	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	0	0	0	250	357	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	607	357	357	0	-	0
Stage 1	357	-	-	-	-	-
Stage 2	250	-	-	-	-	-
Critical Hdwy	6.44	6.24	4.14	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	2.236	-	-	-
Pot Cap-1 Maneuver	456	683	1191	-	-	-
Stage 1	704	-	-	-	-	-
Stage 2	787	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	456	683	1191	-	-	-
Mov Cap-2 Maneuver	456	-	-	-	-	-
Stage 1	704	-	-	-	-	-
Stage 2	787	-	-	-	-	-

Approach	EB		NB		SB
HCM Control Delay, s	0		0		0
HCM LOS	A				

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1191	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

APPENDIX E

EXISTING PLUS APPROVED PROJECTS PLUS PROJECT CONDITIONS LOS CALCULATIONS

Existing Plus Approved Projects Plus Project AM Peak Hour
1: SR 198 WB On-Ramp & Mineral King Avenue

Intersection

Int Delay, s/veh 4




















Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	142	8	321	206	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	154	9	349	224	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	163	0	1081	159
Stage 1	-	-	-	-	159	-
Stage 2	-	-	-	-	922	-
Critical Hdwy	-	-	4.14	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.236	-	3.536	3.336
Pot Cap-1 Maneuver	-	-	1404	-	239	881
Stage 1	-	-	-	-	865	-
Stage 2	-	-	-	-	384	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1404	-	180	881
Mov Cap-2 Maneuver	-	-	-	-	180	-
Stage 1	-	-	-	-	865	-
Stage 2	-	-	-	-	289	-

Approach	EB	WB	NB
HCM Control Delay, s	0	5.1	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1404	-
HCM Lane V/C Ratio	-	-	-	0.249	-
HCM Control Delay (s)	0	-	-	8.4	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	1	-

Existing Plus Approved Projects Plus Project AM Peak Hour
2: Road 156 & Mineral King Avenue

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	41	101	320	228	0	299	0	139	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1731	1731	1800	1731	1731	1800	1731	1731	1800	1800	1731	1800
Adj Flow Rate, veh/h	0	45	110	348	248	0	325	0	151	0	0	0
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	2	56	137	324	660	0	825	0	737	0	2	0
Arrive On Green	0.00	0.13	0.13	0.20	0.38	0.00	0.50	0.00	0.50	0.00	0.00	0.00
Sat Flow, veh/h	1648	447	1092	1648	1731	0	1648	0	1471	0	1731	0
Grp Volume(v), veh/h	0	0	155	348	248	0	325	0	151	0	0	0
Grp Sat Flow(s),veh/h/ln	1648	0	1538	1648	1731	0	1648	0	1471	0	1731	0
Q Serve(g_s), s	0.0	0.0	8.8	17.7	9.3	0.0	11.0	0.0	5.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	8.8	17.7	9.3	0.0	11.0	0.0	5.1	0.0	0.0	0.0
Prop In Lane	1.00		0.71	1.00		0.00	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	2	0	194	324	660	0	825	0	737	0	2	0
V/C Ratio(X)	0.00	0.00	0.80	1.07	0.38	0.00	0.39	0.00	0.20	0.00	0.00	0.00
Avail Cap(c_a), veh/h	49	0	371	324	706	0	825	0	737	0	52	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	1.00	0.00	0.92	0.00	0.92	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	38.2	36.1	20.1	0.0	14.0	0.0	12.5	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	7.4	70.9	0.4	0.0	1.3	0.0	0.6	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	4.1	14.4	4.5	0.0	5.3	0.0	2.2	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	45.7	107.1	20.4	0.0	15.3	0.0	13.1	0.0	0.0	0.0
LnGrp LOS			D	F	C		B		B			
Approach Vol, veh/h		155			596			476			0	
Approach Delay, s/veh		45.7			71.0			14.6			0.0	
Approach LOS		D			E			B				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		50.4	23.0	16.6		0.0	0.0	39.6				
Change Period (Y+Rc), s		5.3	5.3	5.3		5.3	5.3	5.3				
Max Green Setting (Gmax), s		26.7	17.7	21.7		2.7	2.7	36.7				
Max Q Clear Time (g_c+I1), s		13.0	19.7	10.8		0.0	0.0	11.3				
Green Ext Time (p_c), s		1.6	0.0	0.5		0.0	0.0	2.3				
Intersection Summary												
HCM 2010 Ctrl Delay			45.9									
HCM 2010 LOS			D									
Notes												
User approved pedestrian interval to be less than phase max green.												

Existing Plus Approved Projects Plus Project AM Peak Hour
2: Road 156 & Mineral King Avenue

Two Way Analysis cannot be performed on Signalized Intersection.

Existing Plus Approved Projects Plus Project AM Peak Hour
3: SR 198 WB Off-Ramp & Mineral King Avenue

Intersection

Int Delay, s/veh 5.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	180	0	0	350	198	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	196	0	0	380	215	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	196	0	576	196
Stage 1	-	-	-	-	196	-
Stage 2	-	-	-	-	380	-
Critical Hdwy	-	-	4.14	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.236	-	3.536	3.336
Pot Cap-1 Maneuver	-	-	1365	-	476	840
Stage 1	-	-	-	-	832	-
Stage 2	-	-	-	-	687	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1365	-	476	840
Mov Cap-2 Maneuver	-	-	-	-	476	-
Stage 1	-	-	-	-	832	-
Stage 2	-	-	-	-	687	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	18.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	478	-	-	1365	-
HCM Lane V/C Ratio	0.453	-	-	-	-
HCM Control Delay (s)	18.6	-	-	0	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	2.3	-	-	0	-

Existing Plus Approved Projects Plus Project AM Peak Hour
4: Mineral King Avenue & Road 158

Intersection

Int Delay, s/veh 7.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	129	52	136	57	55	214
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	140	57	148	62	60	233

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	210	0	516
Stage 1	-	-	179
Stage 2	-	-	337
Critical Hdwy	4.14	-	6.44
Critical Hdwy Stg 1	-	-	5.44
Critical Hdwy Stg 2	-	-	5.44
Follow-up Hdwy	2.236	-	3.536
Pot Cap-1 Maneuver	1349	-	516
Stage 1	-	-	847
Stage 2	-	-	719
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1349	-	461
Mov Cap-2 Maneuver	-	-	461
Stage 1	-	-	847
Stage 2	-	-	642

Approach	EB	WB	SB
HCM Control Delay, s	5.7	0	13.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1349	-	-	-	730
HCM Lane V/C Ratio	0.104	-	-	-	0.401
HCM Control Delay (s)	8	0	-	-	13.2
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	1.9

Existing Plus Approved Projects Plus Project AM Peak Hour
5: West Project Driveway & Noble Avenue

Intersection

Int Delay, s/veh 2.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	115	4	73	101	3	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	125	4	79	110	3	11

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	129	395
Stage 1	-	-	127
Stage 2	-	-	268
Critical Hdwy	-	4.14	6.44
Critical Hdwy Stg 1	-	-	5.44
Critical Hdwy Stg 2	-	-	5.44
Follow-up Hdwy	-	2.236	3.536
Pot Cap-1 Maneuver	-	1444	606
Stage 1	-	-	894
Stage 2	-	-	772
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1444	571
Mov Cap-2 Maneuver	-	-	571
Stage 1	-	-	894
Stage 2	-	-	727

Approach	EB	WB	NB
HCM Control Delay, s	0	3.2	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	805	-	-	1444	-
HCM Lane V/C Ratio	0.018	-	-	0.055	-
HCM Control Delay (s)	9.6	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.2	-

Existing Plus Approved Projects Plus Project AM Peak Hour
6: Noble Avenue & SR 198 EB Ramps

Intersection

Int Delay, s/veh 6.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	19	106	142	97	237	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	21	115	154	105	258	35





















Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	260	0	364
Stage 1	-	-	207
Stage 2	-	-	157
Critical Hdwy	4.14	-	6.44
Critical Hdwy Stg 1	-	-	5.44
Critical Hdwy Stg 2	-	-	5.44
Follow-up Hdwy	2.236	-	3.536
Pot Cap-1 Maneuver	1293	-	631
Stage 1	-	-	823
Stage 2	-	-	867
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1293	-	620
Mov Cap-2 Maneuver	-	-	620
Stage 1	-	-	823
Stage 2	-	-	852

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	13.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1293	-	-	-	704
HCM Lane V/C Ratio	0.016	-	-	-	0.415
HCM Control Delay (s)	7.8	0	-	-	13.7
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	2

Existing Plus Approved Projects Plus Project AM Peak Hour

7: Road 156 & Noble Avenue

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	95	15	233	44	24	30	105	313	28	15	296	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1731	1731	1800	1731	1731	1800	1731	1731	1800	1731	1731	1800
Adj Flow Rate, veh/h	103	16	253	48	26	33	114	340	30	16	322	120
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	130	19	298	49	114	145	359	528	47	304	365	136
Arrive On Green	0.08	0.21	0.21	0.03	0.16	0.16	0.22	0.34	0.34	0.18	0.30	0.30
Sat Flow, veh/h	1648	88	1396	1648	694	881	1648	1568	138	1648	1203	448
Grp Volume(v), veh/h	103	0	269	48	0	59	114	0	370	16	0	442
Grp Sat Flow(s),veh/h/ln	1648	0	1484	1648	0	1575	1648	0	1706	1648	0	1652
Q Serve(g_s), s	5.5	0.0	15.7	2.6	0.0	2.9	5.2	0.0	16.5	0.7	0.0	22.9
Cycle Q Clear(g_c), s	5.5	0.0	15.7	2.6	0.0	2.9	5.2	0.0	16.5	0.7	0.0	22.9
Prop In Lane	1.00		0.94	1.00		0.56	1.00		0.08	1.00		0.27
Lane Grp Cap(c), veh/h	130	0	317	49	0	259	359	0	574	304	0	501
V/C Ratio(X)	0.79	0.00	0.85	0.97	0.00	0.23	0.32	0.00	0.64	0.05	0.00	0.88
Avail Cap(c_a), veh/h	361	0	546	49	0	282	359	0	574	304	0	501
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.67	0.00	0.67
Uniform Delay (d), s/veh	40.7	0.0	34.0	43.6	0.0	32.6	29.6	0.0	25.3	30.2	0.0	29.8
Incr Delay (d2), s/veh	10.3	0.0	6.3	116.7	0.0	0.4	0.5	0.0	5.5	0.0	0.0	14.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	7.0	2.8	0.0	1.3	2.4	0.0	8.6	0.3	0.0	12.4
LnGrp Delay(d),s/veh	51.0	0.0	40.4	160.3	0.0	33.1	30.1	0.0	30.8	30.3	0.0	44.0
LnGrp LOS	D		D	F		C	C		C	C		D
Approach Vol, veh/h		372			107			484			458	
Approach Delay, s/veh		43.3			90.2			30.6			43.5	
Approach LOS		D			F			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.9	35.6	8.0	24.5	24.9	32.6	12.4	20.1				
Change Period (Y+Rc), s	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3				
Max Green Setting (Gmax), s	2.7	30.3	2.7	33.1	5.7	27.3	19.7	16.1				
Max Q Clear Time (g_c+I1), s	2.7	18.5	4.6	17.7	7.2	24.9	7.5	4.9				
Green Ext Time (p_c), s	0.0	1.5	0.0	1.5	0.0	0.7	0.2	1.3				
Intersection Summary												
HCM 2010 Ctrl Delay			42.6									
HCM 2010 LOS			D									

Existing Plus Approved Projects Plus Project AM Peak Hour
7: Road 156 & Noble Avenue

Two Way Analysis cannot be performed on Signalized Intersection.

Existing Plus Approved Projects Plus Project AM Peak Hour
8: Road 156 & Northeast Project Driveway

Intersection

Int Delay, s/veh 3.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	109	24	26	337	464	110
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	118	26	28	366	504	120

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	987	564	624	0	-	0
Stage 1	564	-	-	-	-	-
Stage 2	423	-	-	-	-	-
Critical Hdwy	6.44	6.24	4.14	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	2.236	-	-	-
Pot Cap-1 Maneuver	272	521	948	-	-	-
Stage 1	565	-	-	-	-	-
Stage 2	657	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	262	521	948	-	-	-
Mov Cap-2 Maneuver	262	-	-	-	-	-
Stage 1	565	-	-	-	-	-
Stage 2	633	-	-	-	-	-

Approach	EB		NB		SB
HCM Control Delay, s	29.5		0.6		0
HCM LOS	D				

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	948	-	288	-	-
HCM Lane V/C Ratio	0.03	-	0.502	-	-
HCM Control Delay (s)	8.9	0	29.5	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.1	-	2.6	-	-

Existing Plus Approved Projects Plus Project AM Peak Hour
2: Road 156 & Mineral King Avenue

Two Way Analysis cannot be performed on Signalized Intersection.

Existing Plus Approved Projects Plus Project AM Peak Hour
7: Road 156 & Noble Avenue

Two Way Analysis cannot be performed on Signalized Intersection.

Existing Plus Approved Projects Plus Project AM Peak Hour
9: Road 156 & North Project Roadway

Intersection

Int Delay, s/veh 0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	7	4	15	356	441	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	8	4	16	387	479	51

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	925	505	530	0	-	0
Stage 1	505	-	-	-	-	-
Stage 2	420	-	-	-	-	-
Critical Hdwy	6.45	6.25	4.15	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.245	-	-	-
Pot Cap-1 Maneuver	295	561	1022	-	-	-
Stage 1	600	-	-	-	-	-
Stage 2	657	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	289	561	1022	-	-	-
Mov Cap-2 Maneuver	289	-	-	-	-	-
Stage 1	600	-	-	-	-	-
Stage 2	644	-	-	-	-	-

Approach	EB		NB		SB
HCM Control Delay, s	15.6		0.3		0
HCM LOS	C				

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1022	-	351	-	-
HCM Lane V/C Ratio	0.016	-	0.034	-	-
HCM Control Delay (s)	8.6	0	15.6	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Existing Plus Approved Projects Plus Project AM Peak Hour
10: Road 156 & Middle Project Roadway

Intersection

Int Delay, s/veh 0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	18	6	32	353	340	105
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	20	7	35	384	370	114

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	880	427	484	0	-	0
Stage 1	427	-	-	-	-	-
Stage 2	453	-	-	-	-	-
Critical Hdwy	6.45	6.25	4.15	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.245	-	-	-
Pot Cap-1 Maneuver	314	621	1063	-	-	-
Stage 1	652	-	-	-	-	-
Stage 2	634	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	301	621	1063	-	-	-
Mov Cap-2 Maneuver	301	-	-	-	-	-
Stage 1	652	-	-	-	-	-
Stage 2	607	-	-	-	-	-

Approach	EB		NB		SB
HCM Control Delay, s	16.3		0.7		0
HCM LOS	C				

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1063	-	346	-	-
HCM Lane V/C Ratio	0.033	-	0.075	-	-
HCM Control Delay (s)	8.5	0	16.3	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Existing Plus Approved Projects Plus Project AM Peak Hour
11: Road 156 & South Project Roadway

Intersection

Int Delay, s/veh 0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	23	2	34	362	233	113
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	25	2	37	393	253	123

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	782	315	376	0	-	0
Stage 1	315	-	-	-	-	-
Stage 2	467	-	-	-	-	-
Critical Hdwy	6.45	6.25	4.15	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.245	-	-	-
Pot Cap-1 Maneuver	359	718	1166	-	-	-
Stage 1	733	-	-	-	-	-
Stage 2	625	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	344	718	1166	-	-	-
Mov Cap-2 Maneuver	344	-	-	-	-	-
Stage 1	733	-	-	-	-	-
Stage 2	599	-	-	-	-	-

Approach	EB		NB		SB
HCM Control Delay, s	15.8		0.7		0
HCM LOS	C				

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1166	-	359	-	-
HCM Lane V/C Ratio	0.032	-	0.076	-	-
HCM Control Delay (s)	8.2	0	15.8	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Existing Plus Approved Projects Plus Project PM Peak Hour
1: SR 198 WB On-Ramp & Mineral King Avenue

Intersection

Int Delay, s/veh 3.2




















Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	200	16	273	246	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	217	17	297	267	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	235	0	1087	226
Stage 1	-	-	-	-	226	-
Stage 2	-	-	-	-	861	-
Critical Hdwy	-	-	4.14	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.236	-	3.536	3.336
Pot Cap-1 Maneuver	-	-	1321	-	237	808
Stage 1	-	-	-	-	807	-
Stage 2	-	-	-	-	411	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1321	-	184	808
Mov Cap-2 Maneuver	-	-	-	-	184	-
Stage 1	-	-	-	-	807	-
Stage 2	-	-	-	-	319	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4.5	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1321	-
HCM Lane V/C Ratio	-	-	-	0.225	-
HCM Control Delay (s)	0	-	-	8.5	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0.9	-

Existing Plus Approved Projects Plus Project PM Peak Hour
2: Road 156 & Mineral King Avenue

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	87	113	210	234	0	285	0	229	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1731	1731	1800	1731	1731	1800	1731	1731	1800	1800	1731	1800
Adj Flow Rate, veh/h	0	95	123	228	254	0	310	0	249	0	0	0
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	2	112	145	270	669	0	817	0	729	0	2	0
Arrive On Green	0.00	0.16	0.16	0.16	0.39	0.00	0.50	0.00	0.50	0.00	0.00	0.00
Sat Flow, veh/h	1648	686	888	1648	1731	0	1648	0	1471	0	1731	0
Grp Volume(v), veh/h	0	0	218	228	254	0	310	0	249	0	0	0
Grp Sat Flow(s),veh/h/ln	1648	0	1574	1648	1731	0	1648	0	1471	0	1731	0
Q Serve(g_s), s	0.0	0.0	12.1	12.1	9.5	0.0	10.5	0.0	9.2	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	12.1	12.1	9.5	0.0	10.5	0.0	9.2	0.0	0.0	0.0
Prop In Lane	1.00		0.56	1.00		0.00	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	2	0	258	270	669	0	817	0	729	0	2	0
V/C Ratio(X)	0.00	0.00	0.85	0.84	0.38	0.00	0.38	0.00	0.34	0.00	0.00	0.00
Avail Cap(c_a), veh/h	49	0	380	324	706	0	817	0	729	0	52	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	1.00	0.00	0.87	0.00	0.87	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	36.5	36.5	19.8	0.0	14.1	0.0	13.8	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	11.0	15.7	0.4	0.0	1.2	0.0	1.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	6.1	6.7	4.6	0.0	5.0	0.0	4.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	47.6	52.2	20.2	0.0	15.3	0.0	14.9	0.0	0.0	0.0
LnGrp LOS			D	D	C		B		B			
Approach Vol, veh/h		218			482			559			0	
Approach Delay, s/veh		47.6			35.3			15.1			0.0	
Approach LOS		D			D			B				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		49.9	20.1	20.0		0.0	0.0	40.1				
Change Period (Y+Rc), s		5.3	5.3	5.3		5.3	5.3	5.3				
Max Green Setting (Gmax), s		26.7	17.7	21.7		2.7	2.7	36.7				
Max Q Clear Time (g_c+I1), s		12.5	14.1	14.1		0.0	0.0	11.5				
Green Ext Time (p_c), s		2.2	0.7	0.6		0.0	0.0	2.0				
Intersection Summary												
HCM 2010 Ctrl Delay			28.5									
HCM 2010 LOS			C									
Notes												
User approved pedestrian interval to be less than phase max green.												

Existing Plus Approved Projects Plus Project PM Peak Hour
2: Road 156 & Mineral King Avenue

Two Way Analysis cannot be performed on Signalized Intersection.

Existing Plus Approved Projects Plus Project PM Peak Hour
3: SR 198 WB Off-Ramp & Mineral King Avenue

Intersection

Int Delay, s/veh 3.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	316	0	0	307	137	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	343	0	0	334	149	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	343	0	677	343
Stage 1	-	-	-	-	343	-
Stage 2	-	-	-	-	334	-
Critical Hdwy	-	-	4.14	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.236	-	3.536	3.336
Pot Cap-1 Maneuver	-	-	1205	-	415	695
Stage 1	-	-	-	-	714	-
Stage 2	-	-	-	-	721	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1205	-	415	695
Mov Cap-2 Maneuver	-	-	-	-	415	-
Stage 1	-	-	-	-	714	-
Stage 2	-	-	-	-	721	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	18.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	427	-	-	1205	-
HCM Lane V/C Ratio	0.359	-	-	-	-
HCM Control Delay (s)	18.1	-	-	0	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	1.6	-	-	0	-

Existing Plus Approved Projects Plus Project PM Peak Hour
4: Mineral King Avenue & Road 158

Intersection

Int Delay, s/veh 7.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	220	100	110	74	58	197
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	239	109	120	80	63	214

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	200	0	747
Stage 1	-	-	160
Stage 2	-	-	587
Critical Hdwy	4.14	-	6.44
Critical Hdwy Stg 1	-	-	5.44
Critical Hdwy Stg 2	-	-	5.44
Follow-up Hdwy	2.236	-	3.536
Pot Cap-1 Maneuver	1360	-	378
Stage 1	-	-	864
Stage 2	-	-	552
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1360	-	307
Mov Cap-2 Maneuver	-	-	307
Stage 1	-	-	864
Stage 2	-	-	449

Approach	EB	WB	SB
HCM Control Delay, s	5.6	0	15.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1360	-	-	-	618
HCM Lane V/C Ratio	0.176	-	-	-	0.449
HCM Control Delay (s)	8.2	0	-	-	15.5
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.6	-	-	-	2.3

Existing Plus Approved Projects Plus Project PM Peak Hour
5: West Project Driveway & Noble Avenue

Intersection

Int Delay, s/veh 2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	147	2	19	118	12	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	160	2	21	128	13	52

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	162	0	331	161
Stage 1	-	-	-	-	161	-
Stage 2	-	-	-	-	170	-
Critical Hdwy	-	-	4.14	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.236	-	3.536	3.336
Pot Cap-1 Maneuver	-	-	1405	-	660	879
Stage 1	-	-	-	-	863	-
Stage 2	-	-	-	-	855	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1405	-	649	879
Mov Cap-2 Maneuver	-	-	-	-	649	-
Stage 1	-	-	-	-	863	-
Stage 2	-	-	-	-	841	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	9.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	821	-	-	1405	-
HCM Lane V/C Ratio	0.079	-	-	0.015	-
HCM Control Delay (s)	9.8	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Existing Plus Approved Projects Plus Project PM Peak Hour
6: Noble Avenue & SR 198 EB Ramps

Intersection

Int Delay, s/veh 8.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	31	164	116	142	302	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	34	178	126	154	328	23





















Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	280	0	449
Stage 1	-	-	203
Stage 2	-	-	246
Critical Hdwy	4.14	-	6.44
Critical Hdwy Stg 1	-	-	5.44
Critical Hdwy Stg 2	-	-	5.44
Follow-up Hdwy	2.236	-	3.536
Pot Cap-1 Maneuver	1271	-	564
Stage 1	-	-	826
Stage 2	-	-	790
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1271	-	547
Mov Cap-2 Maneuver	-	-	547
Stage 1	-	-	826
Stage 2	-	-	766

Approach	EB	WB	SB
HCM Control Delay, s	1.3	0	20.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1271	-	-	-	576
HCM Lane V/C Ratio	0.027	-	-	-	0.61
HCM Control Delay (s)	7.9	0	-	-	20.5
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	4.1

Existing Plus Approved Projects Plus Project PM Peak Hour

7: Road 156 & Noble Avenue

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	181	34	251	27	12	16	163	317	46	11	229	83
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1731	1731	1800	1731	1731	1800	1731	1731	1800	1731	1731	1800
Adj Flow Rate, veh/h	197	37	273	29	13	17	177	345	50	12	249	90
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	232	43	314	34	80	105	334	498	72	279	368	133
Arrive On Green	0.14	0.24	0.24	0.02	0.12	0.12	0.20	0.34	0.34	0.17	0.30	0.30
Sat Flow, veh/h	1648	179	1319	1648	682	892	1648	1479	214	1648	1214	439
Grp Volume(v), veh/h	197	0	310	29	0	30	177	0	395	12	0	339
Grp Sat Flow(s),veh/h/ln	1648	0	1498	1648	0	1573	1648	0	1693	1648	0	1653
Q Serve(g_s), s	10.5	0.0	17.9	1.6	0.0	1.5	8.6	0.0	18.2	0.5	0.0	16.2
Cycle Q Clear(g_c), s	10.5	0.0	17.9	1.6	0.0	1.5	8.6	0.0	18.2	0.5	0.0	16.2
Prop In Lane	1.00		0.88	1.00		0.57	1.00		0.13	1.00		0.27
Lane Grp Cap(c), veh/h	232	0	356	34	0	185	334	0	570	279	0	502
V/C Ratio(X)	0.85	0.00	0.87	0.86	0.00	0.16	0.53	0.00	0.69	0.04	0.00	0.68
Avail Cap(c_a), veh/h	361	0	551	49	0	281	334	0	570	279	0	502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.58	0.00	0.58
Uniform Delay (d), s/veh	37.7	0.0	33.0	43.9	0.0	35.7	32.0	0.0	25.8	31.3	0.0	27.5
Incr Delay (d2), s/veh	10.8	0.0	9.2	58.9	0.0	0.4	1.6	0.0	6.8	0.0	0.0	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	0.0	8.3	1.3	0.0	0.7	4.1	0.0	9.5	0.3	0.0	7.9
LnGrp Delay(d),s/veh	48.5	0.0	42.2	102.8	0.0	36.1	33.6	0.0	32.6	31.3	0.0	31.7
LnGrp LOS	D		D	F		D	C		C	C		C
Approach Vol, veh/h		507			59			572			351	
Approach Delay, s/veh		44.6			68.9			32.9			31.7	
Approach LOS		D			E			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.6	35.6	7.1	26.7	23.6	32.6	18.0	15.9				
Change Period (Y+Rc), s	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3				
Max Green Setting (Gmax), s	2.7	30.3	2.7	33.1	5.7	27.3	19.7	16.1				
Max Q Clear Time (g_c+I1), s	2.5	20.2	3.6	19.9	10.6	18.2	12.5	3.5				
Green Ext Time (p_c), s	0.0	1.5	0.0	1.5	0.0	1.3	0.3	1.5				
Intersection Summary												
HCM 2010 Ctrl Delay			38.1									
HCM 2010 LOS			D									

Existing Plus Approved Projects Plus Project PM Peak Hour
7: Road 156 & Noble Avenue

Two Way Analysis cannot be performed on Signalized Intersection.

Existing Plus Approved Projects Plus Project PM Peak Hour
8: Road 156 & Northeast Project Driveway

Intersection

Int Delay, s/veh 3.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	98	25	23	429	403	105
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	107	27	25	466	438	114

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1011	495	552	0	-	0
Stage 1	495	-	-	-	-	-
Stage 2	516	-	-	-	-	-
Critical Hdwy	6.44	6.24	4.14	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	2.236	-	-	-
Pot Cap-1 Maneuver	263	571	1008	-	-	-
Stage 1	608	-	-	-	-	-
Stage 2	595	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	254	571	1008	-	-	-
Mov Cap-2 Maneuver	254	-	-	-	-	-
Stage 1	608	-	-	-	-	-
Stage 2	575	-	-	-	-	-

Approach	EB		NB		SB
HCM Control Delay, s	28.2		0.4		0
HCM LOS	D				

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1008	-	286	-	-
HCM Lane V/C Ratio	0.025	-	0.467	-	-
HCM Control Delay (s)	8.7	0	28.2	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.1	-	2.3	-	-

Existing Plus Approved Projects Plus Project PM Peak Hour
2: Road 156 & Mineral King Avenue

Two Way Analysis cannot be performed on Signalized Intersection.

Existing Plus Approved Projects Plus Project PM Peak Hour
7: Road 156 & Noble Avenue

Two Way Analysis cannot be performed on Signalized Intersection.

Existing Plus Approved Projects Plus Project PM Peak Hour
9: Road 156 & North Project Roadway

Intersection

Int Delay, s/veh 1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	38	10	5	414	416	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	41	11	5	450	452	13

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	920	459	465	0	-	0
Stage 1	459	-	-	-	-	-
Stage 2	461	-	-	-	-	-
Critical Hdwy	6.45	6.25	4.15	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.245	-	-	-
Pot Cap-1 Maneuver	297	596	1081	-	-	-
Stage 1	630	-	-	-	-	-
Stage 2	629	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	295	596	1081	-	-	-
Mov Cap-2 Maneuver	295	-	-	-	-	-
Stage 1	630	-	-	-	-	-
Stage 2	625	-	-	-	-	-

Approach	EB		NB		SB
HCM Control Delay, s	17.9		0.1		0
HCM LOS	C				

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1081	-	330	-	-
HCM Lane V/C Ratio	0.005	-	0.158	-	-
HCM Control Delay (s)	8.3	0	17.9	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.6	-	-

Existing Plus Approved Projects Plus Project PM Peak Hour
10: Road 156 & Middle Project Roadway

Intersection

Int Delay, s/veh 2.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	81	26	9	338	398	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	88	28	10	367	433	30

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	835	448	463	0	-	0
Stage 1	448	-	-	-	-	-
Stage 2	387	-	-	-	-	-
Critical Hdwy	6.45	6.25	4.15	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.245	-	-	-
Pot Cap-1 Maneuver	334	604	1083	-	-	-
Stage 1	637	-	-	-	-	-
Stage 2	680	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	330	604	1083	-	-	-
Mov Cap-2 Maneuver	330	-	-	-	-	-
Stage 1	637	-	-	-	-	-
Stage 2	672	-	-	-	-	-

Approach	EB		NB		SB
HCM Control Delay, s	19.1		0.2		0
HCM LOS	C				

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1083	-	371	-	-
HCM Lane V/C Ratio	0.009	-	0.313	-	-
HCM Control Delay (s)	8.4	0	19.1	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	1.3	-	-

Existing Plus Approved Projects Plus Project PM Peak Hour
11: Road 156 & South Project Roadway

Intersection

Int Delay, s/veh 2.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	86	28	9	261	393	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	93	30	10	284	427	34

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	747	444	461	0	-	0
Stage 1	444	-	-	-	-	-
Stage 2	303	-	-	-	-	-
Critical Hdwy	6.45	6.25	4.15	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.245	-	-	-
Pot Cap-1 Maneuver	376	608	1084	-	-	-
Stage 1	640	-	-	-	-	-
Stage 2	742	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	372	608	1084	-	-	-
Mov Cap-2 Maneuver	372	-	-	-	-	-
Stage 1	640	-	-	-	-	-
Stage 2	734	-	-	-	-	-

Approach	EB		NB		SB
HCM Control Delay, s	17.5		0.3		0
HCM LOS	C				

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1084	-	411	-	-
HCM Lane V/C Ratio	0.009	-	0.301	-	-
HCM Control Delay (s)	8.4	0	17.5	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	1.3	-	-

APPENDIX F

2040 NO PROJECT CONDITIONS LOS CALCULATIONS

2040 No Project AM Peak Hour
1: SR 198 WB On-Ramp & Mineral King Avenue

Intersection

Int Delay, s/veh 6.4




















Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	70	7	437	63	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	76	8	475	68	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	84	1098
Stage 1	-	-	80
Stage 2	-	-	1018
Critical Hdwy	-	4.14	6.44
Critical Hdwy Stg 1	-	-	5.44
Critical Hdwy Stg 2	-	-	5.44
Follow-up Hdwy	-	2.236	3.536
Pot Cap-1 Maneuver	-	1500	233
Stage 1	-	-	938
Stage 2	-	-	346
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1500	159
Mov Cap-2 Maneuver	-	-	159
Stage 1	-	-	938
Stage 2	-	-	236

Approach	EB	WB	NB
HCM Control Delay, s	0	7.4	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1500	-
HCM Lane V/C Ratio	-	-	-	0.317	-
HCM Control Delay (s)	0	-	-	8.5	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	1.4	-

2040 No Project AM Peak Hour
2: Road 156 & Mineral King Avenue

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	3	18	47	96	191	6	304	9	115	3	4	4
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1731	1731	1800	1731	1731	1800	1731	1731	1800	1800	1731	1800
Adj Flow Rate, veh/h	3	20	51	104	208	7	330	10	125	3	4	4
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	4	30	77	148	262	9	948	63	792	13	18	18
Arrive On Green	0.00	0.07	0.07	0.09	0.16	0.16	0.57	0.57	0.57	0.03	0.03	0.03
Sat Flow, veh/h	1648	433	1103	1648	1665	56	1648	110	1377	438	584	584
Grp Volume(v), veh/h	3	0	71	104	0	215	330	0	135	11	0	0
Grp Sat Flow(s),veh/h/ln	1648	0	1536	1648	0	1721	1648	0	1488	1606	0	0
Q Serve(g_s), s	0.2	0.0	4.1	5.5	0.0	10.8	9.6	0.0	3.8	0.6	0.0	0.0
Cycle Q Clear(g_c), s	0.2	0.0	4.1	5.5	0.0	10.8	9.6	0.0	3.8	0.6	0.0	0.0
Prop In Lane	1.00		0.72	1.00		0.03	1.00		0.93	0.27		0.36
Lane Grp Cap(c), veh/h	4	0	107	148	0	271	948	0	855	48	0	0
V/C Ratio(X)	0.84	0.00	0.66	0.70	0.00	0.79	0.35	0.00	0.16	0.23	0.00	0.00
Avail Cap(c_a), veh/h	49	0	370	324	0	702	948	0	855	48	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.92	0.00	0.92	1.00	0.00	0.00
Uniform Delay (d), s/veh	44.9	0.0	40.8	39.8	0.0	36.5	10.2	0.0	8.9	42.6	0.0	0.0
Incr Delay (d2), s/veh	169.9	0.0	6.8	5.9	0.0	5.2	0.9	0.0	0.4	10.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	1.9	2.8	0.0	5.5	4.6	0.0	1.7	0.4	0.0	0.0
LnGrp Delay(d),s/veh	214.8	0.0	47.7	45.7	0.0	41.7	11.1	0.0	9.3	53.4	0.0	0.0
LnGrp LOS	F		D	D		D	B		A	D		
Approach Vol, veh/h		74			319			465			11	
Approach Delay, s/veh		54.4			43.0			10.6			53.4	
Approach LOS		D			D			B			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		57.0	13.4	11.6		8.0	5.5	19.5				
Change Period (Y+Rc), s		5.3	5.3	5.3		5.3	5.3	5.3				
Max Green Setting (Gmax), s		26.7	17.7	21.7		2.7	2.7	36.7				
Max Q Clear Time (g_c+I1), s		11.6	7.5	6.1		2.6	2.2	12.8				
Green Ext Time (p_c), s		1.6	1.0	0.2		0.0	0.0	1.3				
Intersection Summary												
HCM 2010 Ctrl Delay			26.8									
HCM 2010 LOS			C									
Notes												
User approved pedestrian interval to be less than phase max green.												

2040 No Project AM Peak Hour
2: Road 156 & Mineral King Avenue

Two Way Analysis cannot be performed on Signalized Intersection.

2040 No Project AM Peak Hour
3: SR 198 WB Off-Ramp & Mineral King Avenue

Intersection

Int Delay, s/veh 1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	138	0	0	256	37	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	150	0	0	278	40	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	150	0	428	150
Stage 1	-	-	-	-	150	-
Stage 2	-	-	-	-	278	-
Critical Hdwy	-	-	4.14	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.236	-	3.536	3.336
Pot Cap-1 Maneuver	-	-	1419	-	580	891
Stage 1	-	-	-	-	873	-
Stage 2	-	-	-	-	764	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1419	-	580	891
Mov Cap-2 Maneuver	-	-	-	-	580	-
Stage 1	-	-	-	-	873	-
Stage 2	-	-	-	-	764	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	11.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	580	-	-	1419	-
HCM Lane V/C Ratio	0.069	-	-	-	-
HCM Control Delay (s)	11.7	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

2040 No Project AM Peak Hour
4: Mineral King Avenue & Road 158

Intersection

Int Delay, s/veh 6.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	114	25	88	92	71	168
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	124	27	96	100	77	183

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	196	0	421
Stage 1	-	-	146
Stage 2	-	-	275
Critical Hdwy	4.14	-	6.44
Critical Hdwy Stg 1	-	-	5.44
Critical Hdwy Stg 2	-	-	5.44
Follow-up Hdwy	2.236	-	3.536
Pot Cap-1 Maneuver	1365	-	585
Stage 1	-	-	876
Stage 2	-	-	767
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1365	-	531
Mov Cap-2 Maneuver	-	-	531
Stage 1	-	-	876
Stage 2	-	-	696

Approach	EB	WB	SB
HCM Control Delay, s	6.5	0	12.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1365	-	-	-	744
HCM Lane V/C Ratio	0.091	-	-	-	0.349
HCM Control Delay (s)	7.9	0	-	-	12.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	1.6

2040 No Project AM Peak Hour
5: West Project Driveway & Noble Avenue

Intersection

Int Delay, s/veh 0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	129	0	0	93	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	140	0	0	101	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	140	0	241	140
Stage 1	-	-	-	-	140	-
Stage 2	-	-	-	-	101	-
Critical Hdwy	-	-	4.14	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.236	-	3.536	3.336
Pot Cap-1 Maneuver	-	-	1431	-	743	903
Stage 1	-	-	-	-	882	-
Stage 2	-	-	-	-	918	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1431	-	743	903
Mov Cap-2 Maneuver	-	-	-	-	743	-
Stage 1	-	-	-	-	882	-
Stage 2	-	-	-	-	918	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1431	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

2040 No Project AM Peak Hour
6: Noble Avenue & SR 198 EB Ramps

Intersection

Int Delay, s/veh 4.6





















Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	16	113	75	24	137	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	17	123	82	26	149	20

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	108	0	253
Stage 1	-	-	95
Stage 2	-	-	158
Critical Hdwy	4.14	-	6.44
Critical Hdwy Stg 1	-	-	5.44
Critical Hdwy Stg 2	-	-	5.44
Follow-up Hdwy	2.236	-	3.536
Pot Cap-1 Maneuver	1470	-	731
Stage 1	-	-	924
Stage 2	-	-	866
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1470	-	722
Mov Cap-2 Maneuver	-	-	722
Stage 1	-	-	924
Stage 2	-	-	856

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	10.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1470	-	-	-	817
HCM Lane V/C Ratio	0.012	-	-	-	0.206
HCM Control Delay (s)	7.5	0	-	-	10.5
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.8

2040 No Project AM Peak Hour
7: Road 156 & Noble Avenue

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	145	14	91	13	33	41	11	241	3	4	88	55
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1731	1731	1800	1731	1731	1800	1731	1731	1800	1731	1731	1800
Adj Flow Rate, veh/h	158	15	99	14	36	45	12	262	3	4	96	60
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	192	37	242	15	55	69	393	575	7	384	330	207
Arrive On Green	0.12	0.19	0.19	0.01	0.08	0.08	0.24	0.34	0.34	0.23	0.33	0.33
Sat Flow, veh/h	1648	197	1303	1648	701	876	1648	1708	20	1648	997	623
Grp Volume(v), veh/h	158	0	114	14	0	81	12	0	265	4	0	156
Grp Sat Flow(s),veh/h/ln	1648	0	1501	1648	0	1576	1648	0	1727	1648	0	1621
Q Serve(g_s), s	8.4	0.0	6.0	0.8	0.0	4.5	0.5	0.0	10.8	0.2	0.0	6.4
Cycle Q Clear(g_c), s	8.4	0.0	6.0	0.8	0.0	4.5	0.5	0.0	10.8	0.2	0.0	6.4
Prop In Lane	1.00		0.87	1.00		0.56	1.00		0.01	1.00		0.38
Lane Grp Cap(c), veh/h	192	0	279	15	0	123	393	0	582	384	0	537
V/C Ratio(X)	0.82	0.00	0.41	0.94	0.00	0.66	0.03	0.00	0.46	0.01	0.00	0.29
Avail Cap(c_a), veh/h	361	0	552	49	0	282	393	0	582	384	0	537
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.86	0.00	0.86
Uniform Delay (d), s/veh	38.9	0.0	32.3	44.6	0.0	40.3	26.3	0.0	23.4	26.5	0.0	22.3
Incr Delay (d2), s/veh	8.6	0.0	1.0	91.4	0.0	5.8	0.0	0.0	2.6	0.0	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	0.0	2.6	0.7	0.0	2.2	0.2	0.0	5.6	0.1	0.0	3.0
LnGrp Delay(d),s/veh	47.4	0.0	33.3	136.0	0.0	46.1	26.3	0.0	26.0	26.5	0.0	23.4
LnGrp LOS	D		C	F		D	C		C	C		C
Approach Vol, veh/h		272			95			277			160	
Approach Delay, s/veh		41.5			59.3			26.0			23.5	
Approach LOS		D			E			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	26.3	35.6	6.1	22.0	26.8	35.1	15.8	12.4				
Change Period (Y+Rc), s	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3				
Max Green Setting (Gmax), s	2.7	30.3	2.7	33.1	5.7	27.3	19.7	16.1				
Max Q Clear Time (g_c+I1), s	2.2	12.8	2.8	8.0	2.5	8.4	10.4	6.5				
Green Ext Time (p_c), s	0.0	1.2	0.0	0.9	0.0	0.7	0.2	0.6				
Intersection Summary												
HCM 2010 Ctrl Delay			34.7									
HCM 2010 LOS			C									

2040 No Project AM Peak Hour
7: Road 156 & Noble Avenue

Two Way Analysis cannot be performed on Signalized Intersection.

14304 Sequoia Drive-In Business Park

2040 No Project AM Peak Hour
8: Road 156 & Northeast Project Driveway

Intersection

Int Delay, s/veh 0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	0	0	255	192	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	0	0	0	277	209	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	486	209	209	0	-	0
Stage 1	209	-	-	-	-	-
Stage 2	277	-	-	-	-	-
Critical Hdwy	6.44	6.24	4.14	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	2.236	-	-	-
Pot Cap-1 Maneuver	537	826	1350	-	-	-
Stage 1	821	-	-	-	-	-
Stage 2	765	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	537	826	1350	-	-	-
Mov Cap-2 Maneuver	537	-	-	-	-	-
Stage 1	821	-	-	-	-	-
Stage 2	765	-	-	-	-	-

Approach	EB		NB		SB
HCM Control Delay, s	0		0		0
HCM LOS	A				

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1350	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

2040 No Project PM Peak Hour
1: SR 198 WB On-Ramp & Mineral King Avenue

Intersection

Int Delay, s/veh 4




















Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	110	15	294	191	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	120	16	320	208	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	136	0	975	128
Stage 1	-	-	-	-	128	-
Stage 2	-	-	-	-	847	-
Critical Hdwy	-	-	4.14	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.236	-	3.536	3.336
Pot Cap-1 Maneuver	-	-	1436	-	277	917
Stage 1	-	-	-	-	893	-
Stage 2	-	-	-	-	417	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1436	-	215	917
Mov Cap-2 Maneuver	-	-	-	-	215	-
Stage 1	-	-	-	-	893	-
Stage 2	-	-	-	-	324	-

Approach	EB	WB	NB
HCM Control Delay, s	0	5	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1436	-
HCM Lane V/C Ratio	-	-	-	0.223	-
HCM Control Delay (s)	0	-	-	8.2	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0.9	-

2040 No Project PM Peak Hour
2: Road 156 & Mineral King Avenue

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	47	57	95	192	5	282	10	213	8	8	9
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1731	1731	1800	1731	1731	1800	1731	1731	1800	1800	1731	1800
Adj Flow Rate, veh/h	4	51	62	103	209	5	307	11	232	9	9	10
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	5	68	83	143	303	7	909	37	780	15	15	17
Arrive On Green	0.00	0.10	0.10	0.09	0.18	0.18	0.55	0.55	0.55	0.03	0.03	0.03
Sat Flow, veh/h	1648	712	866	1648	1683	40	1648	67	1414	516	516	573
Grp Volume(v), veh/h	4	0	113	103	0	214	307	0	243	28	0	0
Grp Sat Flow(s),veh/h/ln	1648	0	1578	1648	0	1724	1648	0	1481	1604	0	0
Q Serve(g_s), s	0.2	0.0	6.3	5.5	0.0	10.5	9.2	0.0	7.9	1.6	0.0	0.0
Cycle Q Clear(g_c), s	0.2	0.0	6.3	5.5	0.0	10.5	9.2	0.0	7.9	1.6	0.0	0.0
Prop In Lane	1.00		0.55	1.00		0.02	1.00		0.95	0.32		0.36
Lane Grp Cap(c), veh/h	5	0	152	143	0	310	909	0	817	48	0	0
V/C Ratio(X)	0.85	0.00	0.75	0.72	0.00	0.69	0.34	0.00	0.30	0.58	0.00	0.00
Avail Cap(c_a), veh/h	49	0	380	324	0	703	909	0	817	48	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.77	0.00	0.77	1.00	0.00	0.00
Uniform Delay (d), s/veh	44.9	0.0	39.6	40.0	0.0	34.6	11.1	0.0	10.8	43.1	0.0	0.0
Incr Delay (d2), s/veh	147.2	0.0	7.1	6.7	0.0	2.7	0.8	0.0	0.7	42.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	3.0	2.8	0.0	5.2	4.4	0.0	3.4	1.3	0.0	0.0
LnGrp Delay(d),s/veh	192.1	0.0	46.7	46.7	0.0	37.3	11.9	0.0	11.5	85.6	0.0	0.0
LnGrp LOS	F		D	D		D	B		B	F		
Approach Vol, veh/h		117			317			550			28	
Approach Delay, s/veh		51.6			40.4			11.7			85.6	
Approach LOS		D			D			B			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		55.0	13.1	13.9		8.0	5.6	21.5				
Change Period (Y+Rc), s		5.3	5.3	5.3		5.3	5.3	5.3				
Max Green Setting (Gmax), s		26.7	17.7	21.7		2.7	2.7	36.7				
Max Q Clear Time (g_c+I1), s		11.2	7.5	8.3		3.6	2.2	12.5				
Green Ext Time (p_c), s		2.2	1.0	0.4		0.0	0.0	1.3				
Intersection Summary												
HCM 2010 Ctrl Delay			27.4									
HCM 2010 LOS			C									

Notes

User approved pedestrian interval to be less than phase max green.

2040 No Project PM Peak Hour
2: Road 156 & Mineral King Avenue

Two Way Analysis cannot be performed on Signalized Intersection.

2040 No Project PM Peak Hour
3: SR 198 WB Off-Ramp & Mineral King Avenue

Intersection

Int Delay, s/veh 1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	271	0	0	244	49	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	295	0	0	265	53	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	295	0	560	295
Stage 1	-	-	-	-	295	-
Stage 2	-	-	-	-	265	-
Critical Hdwy	-	-	4.14	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.236	-	3.536	3.336
Pot Cap-1 Maneuver	-	-	1255	-	486	740
Stage 1	-	-	-	-	751	-
Stage 2	-	-	-	-	775	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1255	-	486	740
Mov Cap-2 Maneuver	-	-	-	-	486	-
Stage 1	-	-	-	-	751	-
Stage 2	-	-	-	-	775	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	13
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	506	-	-	1255	-
HCM Lane V/C Ratio	0.11	-	-	-	-
HCM Control Delay (s)	13	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0	-

2040 No Project PM Peak Hour
4: Mineral King Avenue & Road 158

Intersection

Int Delay, s/veh 8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	191	83	80	100	88	165
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	208	90	87	109	96	179

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	196	0	646
Stage 1	-	-	141
Stage 2	-	-	505
Critical Hdwy	4.14	-	6.44
Critical Hdwy Stg 1	-	-	5.44
Critical Hdwy Stg 2	-	-	5.44
Follow-up Hdwy	2.236	-	3.536
Pot Cap-1 Maneuver	1365	-	433
Stage 1	-	-	881
Stage 2	-	-	602
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1365	-	364
Mov Cap-2 Maneuver	-	-	364
Stage 1	-	-	881
Stage 2	-	-	506

Approach	EB	WB	SB
HCM Control Delay, s	5.7	0	16.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1365	-	-	-	596
HCM Lane V/C Ratio	0.152	-	-	-	0.461
HCM Control Delay (s)	8.1	0	-	-	16.1
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.5	-	-	-	2.4

2040 No Project PM Peak Hour
5: West Project Driveway & Noble Avenue

Intersection

Int Delay, s/veh 0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	193	0	0	140	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	210	0	0	152	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	210	0	362	210
Stage 1	-	-	-	-	210	-
Stage 2	-	-	-	-	152	-
Critical Hdwy	-	-	4.14	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.236	-	3.536	3.336
Pot Cap-1 Maneuver	-	-	1349	-	633	825
Stage 1	-	-	-	-	820	-
Stage 2	-	-	-	-	871	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1349	-	633	825
Mov Cap-2 Maneuver	-	-	-	-	633	-
Stage 1	-	-	-	-	820	-
Stage 2	-	-	-	-	871	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1349	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

2040 No Project PM Peak Hour
6: Noble Avenue & SR 198 EB Ramps

Intersection

Int Delay, s/veh 8.5





















Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	29	164	106	37	291	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	32	178	115	40	316	37

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	155	0	376
Stage 1	-	-	135
Stage 2	-	-	241
Critical Hdwy	4.14	-	6.44
Critical Hdwy Stg 1	-	-	5.44
Critical Hdwy Stg 2	-	-	5.44
Follow-up Hdwy	2.236	-	3.536
Pot Cap-1 Maneuver	1413	-	621
Stage 1	-	-	886
Stage 2	-	-	794
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1413	-	605
Mov Cap-2 Maneuver	-	-	605
Stage 1	-	-	886
Stage 2	-	-	774

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	16.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1413	-	-	-	660
HCM Lane V/C Ratio	0.022	-	-	-	0.535
HCM Control Delay (s)	7.6	0	-	-	16.6
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	3.2

2040 No Project PM Peak Hour
7: Road 156 & Noble Avenue

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	269	26	158	14	48	47	29	189	7	3	92	65
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1731	1731	1800	1731	1731	1800	1731	1731	1800	1731	1731	1800
Adj Flow Rate, veh/h	292	28	172	15	52	51	32	205	8	3	100	71
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	325	59	365	16	77	75	256	557	22	223	299	212
Arrive On Green	0.20	0.28	0.28	0.01	0.10	0.10	0.16	0.34	0.34	0.14	0.32	0.32
Sat Flow, veh/h	1648	210	1292	1648	804	788	1648	1655	65	1648	943	670
Grp Volume(v), veh/h	292	0	200	15	0	103	32	0	213	3	0	171
Grp Sat Flow(s),veh/h/ln	1648	0	1503	1648	0	1592	1648	0	1719	1648	0	1613
Q Serve(g_s), s	15.6	0.0	9.9	0.8	0.0	5.6	1.5	0.0	8.4	0.1	0.0	7.3
Cycle Q Clear(g_c), s	15.6	0.0	9.9	0.8	0.0	5.6	1.5	0.0	8.4	0.1	0.0	7.3
Prop In Lane	1.00		0.86	1.00		0.50	1.00		0.04	1.00		0.42
Lane Grp Cap(c), veh/h	325	0	425	16	0	152	256	0	579	223	0	511
V/C Ratio(X)	0.90	0.00	0.47	0.93	0.00	0.68	0.13	0.00	0.37	0.01	0.00	0.33
Avail Cap(c_a), veh/h	361	0	553	49	0	285	256	0	579	223	0	511
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.85	0.00	0.85
Uniform Delay (d), s/veh	35.3	0.0	26.7	44.5	0.0	39.4	32.8	0.0	22.6	33.7	0.0	23.5
Incr Delay (d2), s/veh	23.0	0.0	0.8	85.7	0.0	5.2	0.2	0.0	1.8	0.0	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	0.0	4.2	0.8	0.0	2.7	0.7	0.0	4.3	0.1	0.0	3.4
LnGrp Delay(d),s/veh	58.2	0.0	27.5	130.2	0.0	44.5	33.0	0.0	24.4	33.7	0.0	25.0
LnGrp LOS	E		C	F		D	C		C	C		C
Approach Vol, veh/h		492			118			245			174	
Approach Delay, s/veh		45.7			55.4			25.5			25.1	
Approach LOS		D			E			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.5	35.6	6.2	30.7	19.3	33.8	23.0	13.9				
Change Period (Y+Rc), s	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3				
Max Green Setting (Gmax), s	2.7	30.3	2.7	33.1	5.7	27.3	19.7	16.1				
Max Q Clear Time (g_c+I1), s	2.1	10.4	2.8	11.9	3.5	9.3	17.6	7.6				
Green Ext Time (p_c), s	0.0	1.0	0.0	1.5	0.0	0.8	0.2	1.0				
Intersection Summary												
HCM 2010 Ctrl Delay			38.6									
HCM 2010 LOS			D									

2040 No Project PM Peak Hour
7: Road 156 & Noble Avenue

Two Way Analysis cannot be performed on Signalized Intersection.

2040 No Project PM Peak Hour
8: Road 156 & Northeast Project Driveway

Intersection

Int Delay, s/veh 0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	0	0	225	264	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	0	0	0	245	287	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	532	287	287	0	-	0
Stage 1	287	-	-	-	-	-
Stage 2	245	-	-	-	-	-
Critical Hdwy	6.44	6.24	4.14	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	2.236	-	-	-
Pot Cap-1 Maneuver	505	747	1264	-	-	-
Stage 1	757	-	-	-	-	-
Stage 2	791	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	505	747	1264	-	-	-
Mov Cap-2 Maneuver	505	-	-	-	-	-
Stage 1	757	-	-	-	-	-
Stage 2	791	-	-	-	-	-

Approach	EB		NB		SB
HCM Control Delay, s	0		0		0
HCM LOS	A				

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1264	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

APPENDIX G

2040 PLUS PROJECT CONDITIONS LOS CALCULATIONS

2040 Plus Project AM Peak Hour
1: SR 198 WB On-Ramp & Mineral King Avenue

Intersection

Int Delay, s/veh 6.7




















Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	70	7	477	63	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	76	8	518	68	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	84	0	1185	80
Stage 1	-	-	-	-	80	-
Stage 2	-	-	-	-	1105	-
Critical Hdwy	-	-	4.14	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.236	-	3.536	3.336
Pot Cap-1 Maneuver	-	-	1500	-	207	975
Stage 1	-	-	-	-	938	-
Stage 2	-	-	-	-	314	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1500	-	136	975
Mov Cap-2 Maneuver	-	-	-	-	136	-
Stage 1	-	-	-	-	938	-
Stage 2	-	-	-	-	206	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.7	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1500	-
HCM Lane V/C Ratio	-	-	-	0.346	-
HCM Control Delay (s)	0	-	-	8.7	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	1.6	-

2040 Plus Project AM Peak Hour
2: Road 156 & Mineral King Avenue

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	3	18	47	300	191	6	344	9	136	3	4	4
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1731	1731	1800	1731	1731	1800	1731	1731	1800	1800	1731	1800
Adj Flow Rate, veh/h	3	20	51	326	208	7	374	10	148	3	4	4
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	4	30	77	324	440	15	772	44	651	13	18	18
Arrive On Green	0.00	0.07	0.07	0.20	0.26	0.26	0.47	0.47	0.47	0.03	0.03	0.03
Sat Flow, veh/h	1648	433	1103	1648	1665	56	1648	94	1391	438	584	584
Grp Volume(v), veh/h	3	0	71	326	0	215	374	0	158	11	0	0
Grp Sat Flow(s),veh/h/ln	1648	0	1536	1648	0	1721	1648	0	1485	1606	0	0
Q Serve(g_s), s	0.2	0.0	4.1	17.7	0.0	9.5	14.1	0.0	5.7	0.6	0.0	0.0
Cycle Q Clear(g_c), s	0.2	0.0	4.1	17.7	0.0	9.5	14.1	0.0	5.7	0.6	0.0	0.0
Prop In Lane	1.00		0.72	1.00		0.03	1.00		0.94	0.27		0.36
Lane Grp Cap(c), veh/h	4	0	107	324	0	455	772	0	695	48	0	0
V/C Ratio(X)	0.84	0.00	0.66	1.01	0.00	0.47	0.48	0.00	0.23	0.23	0.00	0.00
Avail Cap(c_a), veh/h	49	0	370	324	0	702	772	0	695	48	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.91	0.00	0.91	1.00	0.00	0.00
Uniform Delay (d), s/veh	44.9	0.0	40.8	36.1	0.0	27.8	16.5	0.0	14.2	42.6	0.0	0.0
Incr Delay (d2), s/veh	169.9	0.0	6.8	51.4	0.0	0.8	2.0	0.0	0.7	10.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	1.9	12.6	0.0	4.6	6.8	0.0	2.5	0.4	0.0	0.0
LnGrp Delay(d),s/veh	214.8	0.0	47.7	87.6	0.0	28.6	18.4	0.0	14.9	53.4	0.0	0.0
LnGrp LOS	F		D	F		C	B		B	D		
Approach Vol, veh/h		74			541			532			11	
Approach Delay, s/veh		54.4			64.1			17.4			53.4	
Approach LOS		D			E			B			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		47.4	23.0	11.6		8.0	5.5	29.1				
Change Period (Y+Rc), s		5.3	5.3	5.3		5.3	5.3	5.3				
Max Green Setting (Gmax), s		26.7	17.7	21.7		2.7	2.7	36.7				
Max Q Clear Time (g_c+I1), s		16.1	19.7	6.1		2.6	2.2	11.5				
Green Ext Time (p_c), s		1.6	0.0	0.2		0.0	0.0	2.1				
Intersection Summary												
HCM 2010 Ctrl Delay			41.9									
HCM 2010 LOS			D									
Notes												
User approved pedestrian interval to be less than phase max green.												

2040 Plus Project AM Peak Hour
2: Road 156 & Mineral King Avenue

Two Way Analysis cannot be performed on Signalized Intersection.

2040 Plus Project AM Peak Hour
3: SR 198 WB Off-Ramp & Mineral King Avenue

Intersection

Int Delay, s/veh 4.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	159	0	0	330	167	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	173	0	0	359	182	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	173	0	532	173
Stage 1	-	-	-	-	173	-
Stage 2	-	-	-	-	359	-
Critical Hdwy	-	-	4.14	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.236	-	3.536	3.336
Pot Cap-1 Maneuver	-	-	1392	-	505	865
Stage 1	-	-	-	-	852	-
Stage 2	-	-	-	-	702	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1392	-	505	865
Mov Cap-2 Maneuver	-	-	-	-	505	-
Stage 1	-	-	-	-	852	-
Stage 2	-	-	-	-	702	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	16.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	505	-	-	1392	-
HCM Lane V/C Ratio	0.359	-	-	-	-
HCM Control Delay (s)	16.1	-	-	0	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	1.6	-	-	0	-

2040 Plus Project AM Peak Hour
4: Mineral King Avenue & Road 158

Intersection

Int Delay, s/veh 7.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	125	35	113	92	71	217
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	136	38	123	100	77	236

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	223	0	483
Stage 1	-	-	173
Stage 2	-	-	310
Critical Hdwy	4.14	-	6.44
Critical Hdwy Stg 1	-	-	5.44
Critical Hdwy Stg 2	-	-	5.44
Follow-up Hdwy	2.236	-	3.536
Pot Cap-1 Maneuver	1334	-	539
Stage 1	-	-	852
Stage 2	-	-	739
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1334	-	483
Mov Cap-2 Maneuver	-	-	483
Stage 1	-	-	852
Stage 2	-	-	662

Approach	EB	WB	SB
HCM Control Delay, s	6.3	0	13.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1334	-	-	-	724
HCM Lane V/C Ratio	0.102	-	-	-	0.432
HCM Control Delay (s)	8	0	-	-	13.7
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	2.2

2040 Plus Project AM Peak Hour
5: West Project Driveway & Noble Avenue

Intersection

Int Delay, s/veh 2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	150	4	73	99	3	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	163	4	79	108	3	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	167	0	431	165
Stage 1	-	-	-	-	165	-
Stage 2	-	-	-	-	266	-
Critical Hdwy	-	-	4.14	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.236	-	3.536	3.336
Pot Cap-1 Maneuver	-	-	1399	-	578	874
Stage 1	-	-	-	-	859	-
Stage 2	-	-	-	-	774	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1399	-	543	874
Mov Cap-2 Maneuver	-	-	-	-	543	-
Stage 1	-	-	-	-	859	-
Stage 2	-	-	-	-	728	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.3	9.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	766	-	-	1399	-
HCM Lane V/C Ratio	0.018	-	-	0.057	-
HCM Control Delay (s)	9.8	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.2	-

2040 Plus Project AM Peak Hour
6: Noble Avenue & SR 198 EB Ramps

Intersection

Int Delay, s/veh 6.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	19	141	135	78	263	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	21	153	147	85	286	40





















Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	232	0	384
Stage 1	-	-	189
Stage 2	-	-	195
Critical Hdwy	4.14	-	6.44
Critical Hdwy Stg 1	-	-	5.44
Critical Hdwy Stg 2	-	-	5.44
Follow-up Hdwy	2.236	-	3.536
Pot Cap-1 Maneuver	1324	-	615
Stage 1	-	-	838
Stage 2	-	-	833
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1324	-	605
Mov Cap-2 Maneuver	-	-	605
Stage 1	-	-	838
Stage 2	-	-	819

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	14.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1324	-	-	-	690
HCM Lane V/C Ratio	0.016	-	-	-	0.473
HCM Control Delay (s)	7.8	0	-	-	14.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	2.5

2040 Plus Project AM Peak Hour

7: Road 156 & Noble Avenue

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	148	4	252	45	26	41	101	299	20	4	261	86
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1731	1731	1800	1731	1731	1800	1731	1731	1800	1731	1731	1800
Adj Flow Rate, veh/h	161	4	274	49	28	45	110	325	22	4	284	93
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	195	5	322	49	80	128	346	540	37	291	379	124
Arrive On Green	0.12	0.22	0.22	0.03	0.13	0.13	0.21	0.34	0.34	0.18	0.30	0.30
Sat Flow, veh/h	1648	21	1453	1648	599	962	1648	1603	109	1648	1249	409
Grp Volume(v), veh/h	161	0	278	49	0	73	110	0	347	4	0	377
Grp Sat Flow(s),veh/h/ln	1648	0	1474	1648	0	1561	1648	0	1712	1648	0	1659
Q Serve(g_s), s	8.6	0.0	16.3	2.7	0.0	3.8	5.1	0.0	15.2	0.2	0.0	18.4
Cycle Q Clear(g_c), s	8.6	0.0	16.3	2.7	0.0	3.8	5.1	0.0	15.2	0.2	0.0	18.4
Prop In Lane	1.00		0.99	1.00		0.62	1.00		0.06	1.00		0.25
Lane Grp Cap(c), veh/h	195	0	326	49	0	208	346	0	576	291	0	503
V/C Ratio(X)	0.83	0.00	0.85	0.99	0.00	0.35	0.32	0.00	0.60	0.01	0.00	0.75
Avail Cap(c_a), veh/h	361	0	542	49	0	279	346	0	576	291	0	503
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.69	0.00	0.69
Uniform Delay (d), s/veh	38.8	0.0	33.6	43.6	0.0	35.5	30.1	0.0	24.8	30.6	0.0	28.3
Incr Delay (d2), s/veh	8.5	0.0	6.8	124.5	0.0	1.0	0.5	0.0	4.6	0.0	0.0	6.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	0.0	7.3	2.9	0.0	1.7	2.4	0.0	7.9	0.1	0.0	9.3
LnGrp Delay(d),s/veh	47.3	0.0	40.4	168.1	0.0	36.5	30.6	0.0	29.4	30.6	0.0	35.2
LnGrp LOS	D		D	F		D	C		C	C		D
Approach Vol, veh/h		439			122			457			381	
Approach Delay, s/veh		43.0			89.3			29.7			35.2	
Approach LOS		D			F			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.2	35.6	8.0	25.2	24.2	32.6	15.9	17.3				
Change Period (Y+Rc), s	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3				
Max Green Setting (Gmax), s	2.7	30.3	2.7	33.1	5.7	27.3	19.7	16.1				
Max Q Clear Time (g_c+I1), s	2.2	17.2	4.7	18.3	7.1	20.4	10.6	5.8				
Green Ext Time (p_c), s	0.1	1.5	0.0	1.6	0.0	1.2	0.2	1.4				
Intersection Summary												
HCM 2010 Ctrl Delay			40.6									
HCM 2010 LOS			D									

2040 Plus Project AM Peak Hour
7: Road 156 & Noble Avenue

Two Way Analysis cannot be performed on Signalized Intersection.

2040 Plus Project AM Peak Hour
8: Road 156 & Northeast Project Driveway

Intersection

Int Delay, s/veh 3.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	109	24	26	311	449	110
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	118	26	28	338	488	120

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	943	548	608	0	-	0
Stage 1	548	-	-	-	-	-
Stage 2	395	-	-	-	-	-
Critical Hdwy	6.44	6.24	4.14	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	2.236	-	-	-
Pot Cap-1 Maneuver	289	532	961	-	-	-
Stage 1	575	-	-	-	-	-
Stage 2	676	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	279	532	961	-	-	-
Mov Cap-2 Maneuver	279	-	-	-	-	-
Stage 1	575	-	-	-	-	-
Stage 2	652	-	-	-	-	-

Approach	EB		NB		SB
HCM Control Delay, s	27		0.7		0
HCM LOS	D				

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	961	-	305	-	-
HCM Lane V/C Ratio	0.029	-	0.474	-	-
HCM Control Delay (s)	8.9	0	27	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.1	-	2.4	-	-

2040 Plus Project AM Peak Hour
2: Road 156 & Mineral King Avenue

Two Way Analysis cannot be performed on Signalized Intersection.

2040 Plus Project AM Peak Hour
7: Road 156 & Noble Avenue

Two Way Analysis cannot be performed on Signalized Intersection.

2040 Plus Project AM Peak Hour
9: Road 156 & North Project Roadway

Intersection

Int Delay, s/veh 0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	7	4	15	330	426	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	8	4	16	359	463	51

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	880	489	514	0	-	0
Stage 1	489	-	-	-	-	-
Stage 2	391	-	-	-	-	-
Critical Hdwy	6.45	6.25	4.15	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.245	-	-	-
Pot Cap-1 Maneuver	314	573	1036	-	-	-
Stage 1	610	-	-	-	-	-
Stage 2	677	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	308	573	1036	-	-	-
Mov Cap-2 Maneuver	308	-	-	-	-	-
Stage 1	610	-	-	-	-	-
Stage 2	664	-	-	-	-	-

Approach	EB		NB		SB
HCM Control Delay, s	15.1		0.4		0
HCM LOS	C				

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1036	-	370	-	-
HCM Lane V/C Ratio	0.016	-	0.032	-	-
HCM Control Delay (s)	8.5	0	15.1	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

2040 Plus Project AM Peak Hour
10: Road 156 & Middle Project Roadway

Intersection

Int Delay, s/veh 0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	18	6	32	327	325	105
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	20	7	35	355	353	114

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	835	410	467	0	-	0
Stage 1	410	-	-	-	-	-
Stage 2	425	-	-	-	-	-
Critical Hdwy	6.45	6.25	4.15	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.245	-	-	-
Pot Cap-1 Maneuver	334	635	1079	-	-	-
Stage 1	664	-	-	-	-	-
Stage 2	653	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	321	635	1079	-	-	-
Mov Cap-2 Maneuver	321	-	-	-	-	-
Stage 1	664	-	-	-	-	-
Stage 2	627	-	-	-	-	-

Approach	EB		NB		SB
HCM Control Delay, s	15.6		0.8		0
HCM LOS	C				

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1079	-	366	-	-
HCM Lane V/C Ratio	0.032	-	0.071	-	-
HCM Control Delay (s)	8.4	0	15.6	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

2040 Plus Project AM Peak Hour
11: Road 156 & South Project Roadway

Intersection

Int Delay, s/veh 0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	23	2	34	336	218	113
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	25	2	37	365	237	123

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	737	298	360	0	-	0
Stage 1	298	-	-	-	-	-
Stage 2	439	-	-	-	-	-
Critical Hdwy	6.45	6.25	4.15	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.245	-	-	-
Pot Cap-1 Maneuver	381	734	1182	-	-	-
Stage 1	746	-	-	-	-	-
Stage 2	644	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	366	734	1182	-	-	-
Mov Cap-2 Maneuver	366	-	-	-	-	-
Stage 1	746	-	-	-	-	-
Stage 2	619	-	-	-	-	-

Approach	EB		NB		SB
HCM Control Delay, s	15.2		0.7		0
HCM LOS	C				

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1182	-	381	-	-
HCM Lane V/C Ratio	0.031	-	0.071	-	-
HCM Control Delay (s)	8.1	0	15.2	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

2040 Plus Project PM Peak Hour
1: SR 198 WB On-Ramp & Mineral King Avenue

Intersection

Int Delay, s/veh 4.7




















Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	110	15	387	191	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	120	16	421	208	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	136	0	1177	128
Stage 1	-	-	-	-	128	-
Stage 2	-	-	-	-	1049	-
Critical Hdwy	-	-	4.14	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.236	-	3.536	3.336
Pot Cap-1 Maneuver	-	-	1436	-	209	917
Stage 1	-	-	-	-	893	-
Stage 2	-	-	-	-	334	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1436	-	148	917
Mov Cap-2 Maneuver	-	-	-	-	148	-
Stage 1	-	-	-	-	893	-
Stage 2	-	-	-	-	236	-

Approach	EB	WB	NB
HCM Control Delay, s	0	5.7	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1436	-
HCM Lane V/C Ratio	-	-	-	0.293	-
HCM Control Delay (s)	0	-	-	8.5	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	1.2	-

2040 Plus Project PM Peak Hour
2: Road 156 & Mineral King Avenue

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	47	57	170	192	5	375	10	272	8	8	9
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1731	1731	1800	1731	1731	1800	1731	1731	1800	1800	1731	1800
Adj Flow Rate, veh/h	4	51	62	185	209	5	408	11	296	9	9	10
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	5	68	83	229	391	9	823	26	712	15	15	17
Arrive On Green	0.00	0.10	0.10	0.14	0.23	0.23	0.50	0.50	0.50	0.03	0.03	0.03
Sat Flow, veh/h	1648	712	866	1648	1683	40	1648	53	1426	516	516	573
Grp Volume(v), veh/h	4	0	113	185	0	214	408	0	307	28	0	0
Grp Sat Flow(s),veh/h/ln	1648	0	1578	1648	0	1724	1648	0	1479	1604	0	0
Q Serve(g_s), s	0.2	0.0	6.3	9.8	0.0	9.8	14.8	0.0	11.8	1.6	0.0	0.0
Cycle Q Clear(g_c), s	0.2	0.0	6.3	9.8	0.0	9.8	14.8	0.0	11.8	1.6	0.0	0.0
Prop In Lane	1.00		0.55	1.00		0.02	1.00		0.96	0.32		0.36
Lane Grp Cap(c), veh/h	5	0	152	229	0	400	823	0	739	48	0	0
V/C Ratio(X)	0.85	0.00	0.75	0.81	0.00	0.53	0.50	0.00	0.42	0.58	0.00	0.00
Avail Cap(c_a), veh/h	49	0	380	324	0	703	823	0	739	48	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.73	0.00	0.73	1.00	0.00	0.00
Uniform Delay (d), s/veh	44.9	0.0	39.6	37.6	0.0	30.3	15.0	0.0	14.2	43.1	0.0	0.0
Incr Delay (d2), s/veh	147.2	0.0	7.1	9.7	0.0	1.1	1.6	0.0	1.3	42.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	3.0	5.1	0.0	4.8	7.0	0.0	5.0	1.3	0.0	0.0
LnGrp Delay(d),s/veh	192.1	0.0	46.7	47.3	0.0	31.4	16.5	0.0	15.5	85.6	0.0	0.0
LnGrp LOS	F		D	D		C	B		B	F		
Approach Vol, veh/h		117			399			715			28	
Approach Delay, s/veh		51.6			38.7			16.1			85.6	
Approach LOS		D			D			B			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		50.2	17.8	13.9		8.0	5.6	26.2				
Change Period (Y+Rc), s		5.3	5.3	5.3		5.3	5.3	5.3				
Max Green Setting (Gmax), s		26.7	17.7	21.7		2.7	2.7	36.7				
Max Q Clear Time (g_c+I1), s		16.8	11.8	8.3		3.6	2.2	11.8				
Green Ext Time (p_c), s		2.4	0.8	0.4		0.0	0.0	1.6				
Intersection Summary												
HCM 2010 Ctrl Delay			28.1									
HCM 2010 LOS			C									
Notes												
User approved pedestrian interval to be less than phase max green.												

2040 Plus Project PM Peak Hour
2: Road 156 & Mineral King Avenue

Two Way Analysis cannot be performed on Signalized Intersection.

2040 Plus Project PM Peak Hour
3: SR 198 WB Off-Ramp & Mineral King Avenue

Intersection

Int Delay, s/veh 2.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	330	0	0	270	98	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	359	0	0	293	107	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	359	0	652	359
Stage 1	-	-	-	-	359	-
Stage 2	-	-	-	-	293	-
Critical Hdwy	-	-	4.14	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.236	-	3.536	3.336
Pot Cap-1 Maneuver	-	-	1189	-	429	681
Stage 1	-	-	-	-	702	-
Stage 2	-	-	-	-	752	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1189	-	429	681
Mov Cap-2 Maneuver	-	-	-	-	429	-
Stage 1	-	-	-	-	702	-
Stage 2	-	-	-	-	752	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	15.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	438	-	-	1189	-
HCM Lane V/C Ratio	0.248	-	-	-	-
HCM Control Delay (s)	15.9	-	-	0	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	1	-	-	0	-

2040 Plus Project PM Peak Hour
4: Mineral King Avenue & Road 158

Intersection

Int Delay, s/veh 9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	230	103	89	100	88	182
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	250	112	97	109	96	198

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	205	0	763
Stage 1	-	-	151
Stage 2	-	-	612
Critical Hdwy	4.14	-	6.44
Critical Hdwy Stg 1	-	-	5.44
Critical Hdwy Stg 2	-	-	5.44
Follow-up Hdwy	2.236	-	3.536
Pot Cap-1 Maneuver	1355	-	370
Stage 1	-	-	872
Stage 2	-	-	537
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1355	-	297
Mov Cap-2 Maneuver	-	-	297
Stage 1	-	-	872
Stage 2	-	-	431

Approach	EB	WB	SB
HCM Control Delay, s	5.7	0	19.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1355	-	-	-	539
HCM Lane V/C Ratio	0.185	-	-	-	0.544
HCM Control Delay (s)	8.3	0	-	-	19.4
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.7	-	-	-	3.2

2040 Plus Project PM Peak Hour
5: West Project Driveway & Noble Avenue

Intersection

Int Delay, s/veh 1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	201	2	19	155	12	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	218	2	21	168	13	52

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	221	0	430	220
Stage 1	-	-	-	-	220	-
Stage 2	-	-	-	-	210	-
Critical Hdwy	-	-	4.14	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	-	-	2.236	-	3.536	3.336
Pot Cap-1 Maneuver	-	-	1336	-	578	815
Stage 1	-	-	-	-	812	-
Stage 2	-	-	-	-	820	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1336	-	568	815
Mov Cap-2 Maneuver	-	-	-	-	568	-
Stage 1	-	-	-	-	812	-
Stage 2	-	-	-	-	806	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	10.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	750	-	-	1336	-
HCM Lane V/C Ratio	0.087	-	-	0.015	-
HCM Control Delay (s)	10.3	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

2040 Plus Project PM Peak Hour
6: Noble Avenue & SR 198 EB Ramps

Intersection

Int Delay, s/veh 16.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	44	205	135	139	350	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	48	223	147	151	380	42





















Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	298	0	540
Stage 1	-	-	222
Stage 2	-	-	318
Critical Hdwy	4.14	-	6.44
Critical Hdwy Stg 1	-	-	5.44
Critical Hdwy Stg 2	-	-	5.44
Follow-up Hdwy	2.236	-	3.536
Pot Cap-1 Maneuver	1252	-	499
Stage 1	-	-	810
Stage 2	-	-	733
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1252	-	477
Mov Cap-2 Maneuver	-	-	477
Stage 1	-	-	810
Stage 2	-	-	701

Approach	EB	WB	SB
HCM Control Delay, s	1.4	0	37.5
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1252	-	-	-	511
HCM Lane V/C Ratio	0.038	-	-	-	0.827
HCM Control Delay (s)	8	0	-	-	37.5
HCM Lane LOS	A	A	-	-	E
HCM 95th %tile Q(veh)	0.1	-	-	-	8.2

2040 Plus Project PM Peak Hour

7: Road 156 & Noble Avenue

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	284	18	251	33	38	47	162	326	33	3	159	73
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1731	1731	1800	1731	1731	1800	1731	1731	1800	1731	1731	1800
Adj Flow Rate, veh/h	309	20	273	36	41	51	176	354	36	3	173	79
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	340	28	380	43	66	82	265	520	53	210	342	156
Arrive On Green	0.21	0.27	0.27	0.03	0.09	0.09	0.16	0.34	0.34	0.13	0.30	0.30
Sat Flow, veh/h	1648	101	1385	1648	703	874	1648	1546	157	1648	1126	514
Grp Volume(v), veh/h	309	0	293	36	0	92	176	0	390	3	0	252
Grp Sat Flow(s),veh/h/ln	1648	0	1486	1648	0	1577	1648	0	1703	1648	0	1640
Q Serve(g_s), s	16.5	0.0	16.0	2.0	0.0	5.1	9.0	0.0	17.7	0.1	0.0	11.4
Cycle Q Clear(g_c), s	16.5	0.0	16.0	2.0	0.0	5.1	9.0	0.0	17.7	0.1	0.0	11.4
Prop In Lane	1.00		0.93	1.00		0.55	1.00		0.09	1.00		0.31
Lane Grp Cap(c), veh/h	340	0	408	43	0	148	265	0	573	210	0	497
V/C Ratio(X)	0.91	0.00	0.72	0.84	0.00	0.62	0.66	0.00	0.68	0.01	0.00	0.51
Avail Cap(c_a), veh/h	361	0	547	49	0	282	265	0	573	210	0	497
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.73	0.00	0.73
Uniform Delay (d), s/veh	34.9	0.0	29.5	43.6	0.0	39.2	35.5	0.0	25.7	34.3	0.0	25.8
Incr Delay (d2), s/veh	25.1	0.0	3.0	65.2	0.0	4.2	6.1	0.0	6.4	0.0	0.0	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.8	0.0	6.9	1.7	0.0	2.4	4.6	0.0	9.4	0.1	0.0	5.5
LnGrp Delay(d),s/veh	60.0	0.0	32.5	108.9	0.0	43.5	41.6	0.0	32.1	34.3	0.0	28.5
LnGrp LOS	E		C	F		D	D		C	C		C
Approach Vol, veh/h		602			128			566			255	
Approach Delay, s/veh		46.6			61.9			35.0			28.5	
Approach LOS		D			E			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.8	35.6	7.6	30.0	19.8	32.6	23.9	13.7				
Change Period (Y+Rc), s	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3				
Max Green Setting (Gmax), s	2.7	30.3	2.7	33.1	5.7	27.3	19.7	16.1				
Max Q Clear Time (g_c+I1), s	2.1	19.7	4.0	18.0	11.0	13.4	18.5	7.1				
Green Ext Time (p_c), s	0.1	1.6	0.0	1.8	0.0	1.2	0.1	1.4				
Intersection Summary												
HCM 2010 Ctrl Delay			40.7									
HCM 2010 LOS			D									

2040 Plus Project PM Peak Hour
7: Road 156 & Noble Avenue

Two Way Analysis cannot be performed on Signalized Intersection.

2040 Plus Project PM Peak Hour
8: Road 156 & Northeast Project Driveway

Intersection

Int Delay, s/veh 3.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	98	25	23	424	339	105
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	107	27	25	461	368	114

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	937	426	483	0	-	0
Stage 1	426	-	-	-	-	-
Stage 2	511	-	-	-	-	-
Critical Hdwy	6.44	6.24	4.14	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	2.236	-	-	-
Pot Cap-1 Maneuver	291	624	1069	-	-	-
Stage 1	655	-	-	-	-	-
Stage 2	598	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	282	624	1069	-	-	-
Mov Cap-2 Maneuver	282	-	-	-	-	-
Stage 1	655	-	-	-	-	-
Stage 2	579	-	-	-	-	-

Approach	EB		NB		SB
HCM Control Delay, s	24.4		0.4		0
HCM LOS	C				

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1069	-	317	-	-
HCM Lane V/C Ratio	0.023	-	0.422	-	-
HCM Control Delay (s)	8.4	0	24.4	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	2	-	-

2040 Plus Project PM Peak Hour
2: Road 156 & Mineral King Avenue

Two Way Analysis cannot be performed on Signalized Intersection.

2040 Plus Project PM Peak Hour
7: Road 156 & Noble Avenue

Two Way Analysis cannot be performed on Signalized Intersection.

2040 Plus Project PM Peak Hour
9: Road 156 & North Project Roadway

Intersection

Int Delay, s/veh 1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	38	10	5	409	352	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	41	11	5	445	383	13

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	844	389	396	0	-	0
Stage 1	389	-	-	-	-	-
Stage 2	455	-	-	-	-	-
Critical Hdwy	6.45	6.25	4.15	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.245	-	-	-
Pot Cap-1 Maneuver	330	653	1146	-	-	-
Stage 1	678	-	-	-	-	-
Stage 2	633	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	328	653	1146	-	-	-
Mov Cap-2 Maneuver	328	-	-	-	-	-
Stage 1	678	-	-	-	-	-
Stage 2	629	-	-	-	-	-

Approach	EB		NB		SB
HCM Control Delay, s	16.5		0.1		0
HCM LOS	C				

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1146	-	366	-	-
HCM Lane V/C Ratio	0.005	-	0.143	-	-
HCM Control Delay (s)	8.2	0	16.5	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.5	-	-

2040 Plus Project PM Peak Hour
10: Road 156 & Middle Project Roadway

Intersection

Int Delay, s/veh 2.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	81	26	9	333	334	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	88	28	10	362	363	30

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	760	378	393	0	-	0
Stage 1	378	-	-	-	-	-
Stage 2	382	-	-	-	-	-
Critical Hdwy	6.45	6.25	4.15	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.245	-	-	-
Pot Cap-1 Maneuver	370	662	1149	-	-	-
Stage 1	686	-	-	-	-	-
Stage 2	683	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	366	662	1149	-	-	-
Mov Cap-2 Maneuver	366	-	-	-	-	-
Stage 1	686	-	-	-	-	-
Stage 2	675	-	-	-	-	-

Approach	EB		NB		SB
HCM Control Delay, s	17.2		0.2		0
HCM LOS	C				

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1149	-	411	-	-
HCM Lane V/C Ratio	0.009	-	0.283	-	-
HCM Control Delay (s)	8.2	0	17.2	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	1.1	-	-

2040 Plus Project PM Peak Hour
11: Road 156 & South Project Roadway

Intersection

Int Delay, s/veh 2.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	86	28	9	256	329	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	93	30	10	278	358	34

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	672	374	391	0	-	0
Stage 1	374	-	-	-	-	-
Stage 2	298	-	-	-	-	-
Critical Hdwy	6.45	6.25	4.15	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.245	-	-	-
Pot Cap-1 Maneuver	416	666	1151	-	-	-
Stage 1	689	-	-	-	-	-
Stage 2	746	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	412	666	1151	-	-	-
Mov Cap-2 Maneuver	412	-	-	-	-	-
Stage 1	689	-	-	-	-	-
Stage 2	739	-	-	-	-	-

Approach	EB		NB		SB
HCM Control Delay, s	15.8		0.3		0
HCM LOS	C				

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1151	-	455	-	-
HCM Lane V/C Ratio	0.008	-	0.272	-	-
HCM Control Delay (s)	8.2	0	15.8	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	1.1	-	-

APPENDIX H

MITIGATED 2040 PLUS PROJECT CONDITIONS LOS CALCULATIONS

Mitigated 2040 Plus Project v1 PM Peak Hour
6: Noble Avenue & SR 198 EB Ramps










Intersection

Intersection Delay, s/veh	15.6								
Intersection LOS	C								
Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Vol, veh/h	0	44	205	0	135	139	0	350	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4
Mvmt Flow	0	48	223	0	147	151	0	380	42
Number of Lanes	0	0	1	0	1	0	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	13.2	12.8	19
HCM LOS	B	B	C

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	18%	0%	90%
Vol Thru, %	82%	49%	0%
Vol Right, %	0%	51%	10%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	249	274	389
LT Vol	44	0	350
Through Vol	205	135	0
RT Vol	0	139	39
Lane Flow Rate	271	298	423
Geometry Grp	1	1	1
Degree of Util (X)	0.433	0.446	0.661
Departure Headway (Hd)	5.753	5.393	5.632
Convergence, Y/N	Yes	Yes	Yes
Cap	625	664	643
Service Time	3.806	3.446	3.675
HCM Lane V/C Ratio	0.434	0.449	0.658
HCM Control Delay	13.2	12.8	19
HCM Lane LOS	B	B	C
HCM 95th-tile Q	2.2	2.3	4.9

2040 Plus Project v2 PM Peak Hour
6: Noble Avenue & SR 198 EB Ramps

								
Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Volume (veh/h)	44	205	135	139	350	39		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1800	1731	1731	1800	1731	1800		
Adj Flow Rate, veh/h	48	223	147	151	380	42		
Adj No. of Lanes	0	1	1	0	0	0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	4	4	4	4	0	0		
Cap, veh/h	159	561	299	307	545	60		
Arrive On Green	0.38	0.38	0.38	0.38	0.37	0.37		
Sat Flow, veh/h	159	1471	784	805	1463	162		
Grp Volume(v), veh/h	271	0	0	298	423	0		
Grp Sat Flow(s),veh/h/ln	1629	0	0	1589	1629	0		
Q Serve(g_s), s	0.0	0.0	0.0	6.1	9.5	0.0		
Cycle Q Clear(g_c), s	4.9	0.0	0.0	6.1	9.5	0.0		
Prop In Lane	0.18			0.51	0.90	0.10		
Lane Grp Cap(c), veh/h	720	0	0	606	606	0		
V/C Ratio(X)	0.38	0.00	0.00	0.49	0.70	0.00		
Avail Cap(c_a), veh/h	720	0	0	606	606	0		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	0.00	0.00	0.82	1.00	0.00		
Uniform Delay (d), s/veh	9.8	0.0	0.0	10.1	11.4	0.0		
Incr Delay (d2), s/veh	1.5	0.0	0.0	2.3	6.5	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.6	0.0	0.0	3.0	5.3	0.0		
LnGrp Delay(d),s/veh	11.3	0.0	0.0	12.4	18.0	0.0		
LnGrp LOS	B			B	B			
Approach Vol, veh/h		271	298		423			
Approach Delay, s/veh		11.3	12.4		18.0			
Approach LOS		B	B		B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				21.7		21.3		21.7
Change Period (Y+Rc), s				5.3		5.3		5.3
Max Green Setting (Gmax), s				16.0		16.0		16.0
Max Q Clear Time (g_c+I1), s				6.9		11.5		8.1
Green Ext Time (p_c), s				2.1		0.6		1.9
Intersection Summary								
HCM 2010 Ctrl Delay			14.5					
HCM 2010 LOS			B					
Notes								
User approved volume balancing among the lanes for turning movement.								