DRAFT ENVIRONMENTAL IMPACT REPORT

Neves Residential Project

September 2025

PREPARED FOR:

City of Hanford - Community Development Department

317 N. Douty Street
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Draft Environmental Impact Report

Neves Residential Project

Prepared for:

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September 2025

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Introduction

This Draft Environmental Impact Report (Draft EIR or EIR) has been prepared consistent with the California Environmental Quality Act (CEQA) for the proposed Hanford Neves Project (Project). Its intent is to inform the public, regulatory agencies and the City of Hanford (City) decision makers of the potential environmental impacts the proposed Project would have on environmental factors as specified in the CEQA Guidelines. This Draft 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 to the environmental resources identified in the CEQA Guidelines environmental checklist. The City of Hanford is the "Lead Agency" pursuant to CEQA and is responsible for the preparation and distribution of the Draft EIR.

CEQA Process

The City of Hanford circulated a Notice of Preparation (NOP) of an EIR for the proposed project from December 16, 2024 through January 14, 2025 to trustee and responsible agencies, the State Clearinghouse (SCH #2024120645), and the public. A scoping meeting (conducted virtually via a "Zoom" meeting) was held on December 18, 2024.

The next step in the process is circulation of this Draft EIR which will be distributed to the public for review and comment for at least 45 days. This Draft EIR is organized as follows:

Executive Summary: Summarizes the analysis contained in the Draft EIR.

Chapter 1 – Introduction: Provides a brief introduction to CEQA and the scope/contents of the Draft EIR.

Chapter 2 – Project Description: Describes the Project in detail. Includes Project location, objectives, environmental setting and regulatory context.

Chapter 3 – Environmental Analysis: Contains the CEQA checklist. Each topic discusses environmental/regulatory setting, Project impact analysis, mitigation measures and conclusions.

Chapter 4 – Alternatives: Describes and evaluates alternatives to the Project. The proposed Project is compared to each alternatives and potential environmental impacts are analyzed.

Chapter 5 – Other CEQA Sections: Describes other required sections such as environmental effects that cannot be avoided, social effects, growth inducement, etc.

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

Project Location

The proposed Project site is located within the City of Hanford limits, near the northern City limit boundary. The proposed development is located on an approximately 135.28-acre site on Assessor's Parcel Numbers 009-020-021, -047, -023 and -046, at the northwest corner of 12th Avenue and Fargo Avenue. Refer to Figures 2-1 and 2-2.

Project Description Summary

The Project Applicant intends to develop up to 615 single-family residential units on an approximately 135.28-acre site. The development will also include a 5.87-acre storm basin and a seven-acre park along with access roads, lighting, landscaping and other associated improvements, per City Standards (see Figures 2-3 and 2-4). The site is currently designated as low, medium and high density residential and is zoned R-L-5 (Low Density Residential), R-M (Medium Density Residential), and R-H (High Density Residential). Entitlements needed to accommodate the proposed Project include a Tentative Subdivision Map and a Planned Unit Development to accommodate smaller lot sizes and reduced setbacks.

Site Circulation

Access to and from the Project site will be from four full access points at buildout. The site will be accessed to the south along Fargo Avenue, to the east along 12th Avenue, and to the north and west along unnamed streets.

Construction Phasing

The Project will be developed in four phases and is broken down below:

- Phase I (44.63 acres)

  - Construction of 140 lots
  - Construction of a 7-acre park
  - Construction of 5,87-acre storm basin
- Phase 2 (44.49 acres)
  - Construction of 229 lots
- Phase 3 (34.57 acres)
  - Construction of 185 lots
- Phase 4 (11.59 acres)
  - Construction of 57 lots

Infrastructure

The Project will require connection to various City-operated utility and infrastructure systems. These include City-provided services such as sewer/wastewater, water and stormwater facilities. Non-City-provided infrastructure includes natural gas (to be provided by The Gas Company) and electrical services (to be provided by Southern California Edison). The Project will be responsible for construction of connection points to the City's existing infrastructure.

The stormwater drainage system for the Project will be designed in compliance with City standards to ensure adequate facilities to serve the Project. The Project will discharge stormwater runoff through a proposed storm drain system that drains into a proposed drainage basin onsite.

Project Objectives

In accordance with CEQA Guidelines Section 15124(b), the following are the City of Hanford's Project objectives:

- To provide housing opportunities with a range of densities, styles, sizes and values that will be designed to satisfy existing and future demand for quality housing in the area.
- To provide a sense of community and walkability within the development through the use of street patterns, a park, landscaping and other project amenities.
- To provide a residential development that is compatible with surrounding land uses and is near major services.
- To provide an economically feasible residential development that assists the City in meeting its General Plan and Housing Element requirements and objectives.

Summary of Environmental Impacts

As described in Chapter 3, it was determined that all impacts were either less than significant, or could be mitigated to a less than significant level with the exception of the following:

- **Greenhouse Gases** – Generate GHG and Conflict with Plan/Program (project and cumulative level)
- **Transportation** – Conflict with CEQA Guidelines 15064.3 (project and cumulative level)

Even with the mitigation measures described in Chapter 3, Environmental Setting, Impacts, and Mitigation Measures, of this Draft EIR, impacts in these issue areas would be significant and unavoidable.

Summary of Project Alternatives

CEQA Guidelines Section 15126.6 requires the consideration of a range of reasonable alternatives to the proposed Project that could feasibly attain most of the objectives of the proposed Project. This Draft EIR analyzed the following alternatives:

- **No Project Alternative:** Under this Alternative, the Project would not be constructed and the site would remain in agricultural production.
- **Alternate Locations Alternative:** Under this Alternative, the Project would be developed on a different site of similar size and scale.
- **Reduced (50%) Project Alternative:** Under this Alternative, the Project would be reduced by 50% (overall site acreage, residential units, commercial acreage, and recreational facilities).

See Chapter 4 – Alternatives for a full description of potential environmental impacts associated with each alternative.

Mitigation Monitoring and Reporting Program

State law requires that a public agency adopt a monitoring program for mitigation measures that have been incorporated into the approved Project to reduce or avoid significant effects on the environment. The purpose of the monitoring program is to ensure compliance with environmental mitigation during Project implementation and operation. Since there are potentially significant impacts requiring mitigation associated with the Project, a Mitigation Monitoring and Reporting Program will be included in the Project's Final EIR, a draft of which is included herein on the following pages.

Mitigation Measure	Party responsible for Implementing Mitigation	Timing	Party responsible for Monitoring	Verification (name/ date)
Biological Resources				
BIO – 1: **1.** To the extent practicable, construction shall be scheduled to avoid the Swainson's hawk nesting season, which extends from March through August. **2.** If it is not possible to schedule construction between September and February, a qualified biologist shall conduct surveys for Swainson's hawk in accordance with the Swainson's Hawk Technical Advisory Committee's Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley. These methods require six surveys, three in each of the two survey periods, prior to project initiation. Surveys shall be conducted within a minimum 0.5-mile radius around the Project site. **3.** If an active Swainson's hawk nest is found within 0.5 miles of the Project site, and the qualified biologist determines that Project activities would disrupt the nesting birds, a construction-free buffer or limited operating period shall be implemented in consultation with the CDFW.	Project Developer	Prior to construction	City of Hanford	
BIO-2: 1. To the extent practicable, construction shall be scheduled to avoid the nesting season, which extends from February through August. 2. If it is not possible to schedule construction between September and January, pre-construction surveys for nesting birds shall be conducted by a qualified biologist to ensure that no active nests will be disturbed during the implementation of the Project. A pre-construction survey shall be conducted no more than 14 days prior to the initiation of construction	Project Developer	Prior to construction	City of Hanford	

Mitigation Measure	Party responsible for Implementing Mitigation	Timing	Party responsible for Monitoring	Verification (name/ date)
activities. During this survey, the qualified biologist shall inspect all potential nest substrates in and immediately adjacent to the impact areas. If an active nest is found close enough to the construction area to be disturbed by these activities, the qualified biologist shall determine the extent of a construction-free buffer to be established around the nest. If work cannot proceed without disturbing the nesting birds, work may need to be halted or redirected to other areas until nesting and fledging are completed or the nest has otherwise failed for non-construction related reasons.				
Air Quality				
AIR-1: Consistent with San Joaquin Valley Air Pollution Control District (SJVAPCD) Regulation VIII (Fugitive PM_{10} Prohibitions), the following controls are required to be included as specifications for the proposed Project and implemented at the construction site: 1. All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant or covered with a tarp or other suitable cover or vegetative ground cover.	Project Applicant	During construction	City of Hanford	

Mitigation Measure	Party responsible for Implementing Mitigation	Timing	Party responsible for Monitoring	Verification (name/ date)
2. All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant. 3. All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking. 4. When materials are transported off site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least 6 inches of freeboard space from the top of the container shall be maintained. 5. All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.) 6. Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust				

Mitigation Measure	Party responsible for Implementing Mitigation	Timing	Party responsible for Monitoring	Verification (name/ date)
emissions utilizing sufficient water or chemical stabilizer/ suppressant.				
Cultural Resources				
CUL – 1: In order to ensure that the proposed project does not impact buried human remains during construction, the project proponent shall be responsible for on-going monitoring of project construction. Prior to the issuance of any grading permit, the project proponent shall provide the City of Hanford with documentation identifying construction personnel that will be responsible for onsite monitoring. If buried human remains are encountered during construction, further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall be halted until the Kings County coroner is contacted and the coroner has made the determinations and notifications required pursuant to Health and Safety Code Section 7050.5. If the coroner determines that Health and Safety Code Section 7050.5(c) require that he give notice to the Native American Heritage Commission, then such notice shall be given within 24 hours, as required by Health and Safety Code Section 7050.5(c). In that event, the NAHC will conduct the notifications required by Public Resources Code Section 5097.98. Until the consultations described below have been completed, the landowner shall further ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices where Native American human remains are located, is not disturbed by further development activity until the landowner has discussed and	Project Developer	During construction	City of Hanford	

	Mitigation Measure	Party responsible for Implementing Mitigation	Timing	Party responsible for Monitoring	Verification (name/ date)
	conferred with the Most Likely Descendants on all reasonable options regarding the descendants' preferences and treatments, as prescribed by Public Resources Code Section 5097.98(b). The NAHC will mediate any disputes regarding treatment of remains in accordance with Public Resources Code Section 5097.94(k). The landowner shall be entitled to exercise rights established by Public Resources Code Section 5097.98(e) if any of the circumstances established by that provision become applicable.				
CUL – 2:	In order to ensure that the proposed Project does not impact buried human remains during Project construction, the Project proponent shall be responsible for on-going monitoring of Project construction. Prior to the issuance of any grading permit, the Project proponent shall provide the City with documentation identifying construction personnel that will be responsible for on-site monitoring. If buried human remains are encountered during construction, further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall be halted until the Tulare County coroner is contacted and the coroner has made the determinations and notifications required pursuant to Health and Safety Code Section 7050.5. If the coroner determines that Health and Safety Code Section 7050.5(c) require that he give notice to the Native American Heritage Commission, then such notice shall be given within 24 hours, as required by Health and Safety Code Section 7050.5(c). In that event, the NAHC will conduct the notifications required by Public Resources Code Section 5097.98. Until the consultations described below have been completed, the	Project Applicant	Prior to issuance of any grading permit and ongoing during construction	City of Hanford	

Mitigation Measure	Party responsible for Implementing Mitigation	Timing	Party responsible for Monitoring	Verification (name/ date)
landowner shall further ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices where Native American human remains are located, is not disturbed by further development activity until the landowner has discussed and conferred with the Most Likely Descendants on all reasonable options regarding the descendants' preferences and treatments, as prescribed by Public Resources Code Section 5097.98(b). The NAHC will mediate any disputes regarding treatment of remains in accordance with Public Resources Code Section 5097.94(k). The landowner shall be entitled to exercise rights established by Public Resources Code Section 5097.98(e) if any of the circumstances established by that provision become applicable.				
Transportation				
TRA-1: Prior to the issuance of construction or building permits, the Project will be responsible for paying its fair share cost percentages and/or constructing the recommended improvements identified in Tables 3.4-10 subject to reimbursement for the costs that are in excess of the Project's equitable responsibility as determined by the City. This will be itemized and enforced through conditions of approval or a development agreement, at the discretion of the City, prior to Project implementation.	Project Developer	Prior to issuance of building permits	City of Hanford	
TRA-2: Prior to the issuance of construction or building permits, the Project developer shall:	Project Applicant	Prior to issuance of building permits	City of Hanford	

Mitigation Measure	Party responsible for Implementing Mitigation	Timing	Party responsible for Monitoring	Verification (name/ date)
1. Prepare and submit a Construction Traffic Control Plan to City of Hanford for approval. Implement the approved Construction Traffic Control Plan during construction. The Construction Traffic Control Plan shall be prepared in accordance with both the California Department of Transportation Manual on Uniform Traffic Control Devices and Work Area Traffic Control Handbook and shall include, but not be limited to, the following issues: a. Timing of deliveries of heavy equipment and building materials; b. Directing construction traffic with a flag person; c. Placing temporary signing, lighting, and traffic control devices if required, including, but not limited to, appropriate signage along access routes to indicate the presence of heavy vehicles and construction traffic; d. Ensuring access for emergency vehicles to the project site; e. Temporarily closing travel lanes or delaying traffic during materials delivery, transmission line stringing activities, or any other utility connections; f. Maintaining access to adjacent property; and, g. Specifying both construction-related vehicle travel and oversize load haul routes, minimizing construction traffic during the AM and PM peak hour, distributing construction traffic flow across alternative routes to access the project sites, and avoiding residential neighborhoods to the maximum extent feasible.				

Mitigation Measure	Party responsible for Implementing Mitigation	Timing	Party responsible for Monitoring	Verification (name/ date)
Tribal Cultural Resources				
TRI-1: Prior to any ground disturbance, the Santa Rosa Rancheria Tachi Yokut Tribe shall be offered the opportunity to provide a Cultural Presentation to all construction personnel.	Project Developer	Prior to ground disturbance	City of Hanford	
TRI-2: Prior to any ground disturbance, a surface inspection of the site shall be conducted by a Tribal and Archaeological Monitor. The Tribal Cultural Staff shall monitor the site during grading activities. The Tribal Staff shall provide pre-project-related information to supervisory personnel and any excavation contractor, which will include information on potential cultural material finds and on the procedures to be enacted if resources are found. Prior to any ground disturbance, the applicant shall offer the Santa Rosa Indian Community of the Santa Rosa Rancheria the opportunity to provide a Native American Monitor during ground-disturbing activities. Should any discoveries be found, the Tribe shall be notified. Tribal participation would be dependent upon the availability and interest of the tribe.	Project Developer	Prior to ground disturbance	City of Hanford	

1.0 INTRODUCTION

This Environmental Impact Report (EIR or Draft EIR) has been prepared on behalf of the City of Hanford (City) in accordance with the California Environmental Quality Act (CEQA). This chapter outlines the purpose of and overall approach to the preparation of the EIR for the proposed Project. The Project Applicant is proposing residential development over four construction phases. The proposal features approximately 615 residential units over approximately 135 acres. The proposed Project is in the northern area of the City of Hanford, California and is generally bound by 12th Avenue to the east and Fargo Avenue to the south. Refer to Chapter Two – Project Description for the full description of the Project.

An EIR responds to the requirements of CEQA as set forth in Sections 15126, 15175, and 15176 of the CEQA Guidelines. The Planning Commission and City Council will use the EIR during the public review process in order to understand the potential environmental implications associated with implementing the Project.

1.1 Purpose of EIR

This document is an Environmental Impact Report (EIR) prepared in accordance with the California Environmental Quality Act CEQA of 1970 and CEQA Guidelines, as amended. This EIR has been prepared by the City of Hanford as the "Lead Agency," in consultation with the appropriate local, regional and state agencies.

The purpose of the EIR is to inform the public generally of the significant environmental effects of the project, identify possible ways to minimize the significant effects, and describe reasonable alternatives that support the objectives of the project. As defined by the CEQA Guidelines, Section 15382, a "significant effect on the environment" is as follows:

> *"... 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 significance."*

An Initial Study was prepared by the City of Hanford (City) for the Neves Project (Project). The Initial Study determined the Project could have potentially significant impacts in the areas of air quality, energy, greenhouse gas emissions and transportation. The City, therefore, determined that an EIR would be required for the project. This EIR concentrates on the potentially significant impacts of the project on four environmental issue areas: air quality, energy, greenhouse gas emissions and transportation. All other impact areas were determined to either have no impact

or have a less than significant impact (with or without mitigation). This EIR references the Initial Study prepared for the project for all other areas of impact analysis not provided in this EIR (see Appendix A).

1.2 Type of EIR

The State CEQA Guidelines identify several types of EIRs, each applicable to different project circumstances. This EIR has been prepared as a Project-level EIR pursuant to CEQA Guidelines Section 15161. A Project-level EIR is described in State CEQA Guidelines § 15161 as: "The most common type of EIR (which) examines the environmental impacts of a specific development project. This type of EIR should focus primarily on the changes in the environment that would result from the development project. The EIR shall examine all phases of the project including planning, construction, and operation. The project-level analysis considers the broad environmental effects of a proposed project.

1.3 Intended Uses of the EIR

The City of Hanford, as the Lead Agency, has prepared this EIR to provide the public and responsible and trustee agencies with an objective analysis of the potential environmental impacts resulting from implementation of the proposed Project. The environmental review process enables interested parties to evaluate the proposed project in terms of its environmental consequences, to examine and recommend methods to eliminate or reduce potential adverse impacts, and to consider a reasonable range of alternatives to the project. While CEQA requires that consideration be given to avoiding adverse environmental effects, the lead agency must balance adverse environmental effects against other public objectives, including the economic and social benefits of a project, in determining whether a project should be approved.

This EIR will be used as the primary environmental document to evaluate all subsequent planning and permitting actions associated with the Project. This EIR may also be used by other agencies within the area, including the Air District, which may use this EIR during the permitting process.

1.4 Known Responsible and Trustee Agencies

The term "Responsible Agency" includes all public agencies other than the Lead Agency that have discretionary approval power over the project or an aspect of the project (CEQA Guidelines

Section 15381). For the purpose of CEQA, a "Trustee" agency has jurisdiction by law over natural resources that are held in trust for the people of the State of California (CEQA Guidelines Section 15386). The Project may require permits and approvals from Trustee and Responsible Agencies, which may include, but not be limited, to the following:

- San Joaquin Valley Air Pollution Control District – approval of construction air quality permits
- Regional Water Quality Control Board (Storm Water Pollution Control Plan)

1.5 Environmental Review Process

The review and certification process for the EIR has involved, or will involve, the following general procedural steps:

Notice of Preparation

The City of Hanford circulated a Notice of Preparation (NOP) of an EIR for the proposed project from December 16, 2024 through January 14, 2025 to trustee and responsible agencies, the State Clearinghouse (SCH #2024120645), and the public.

Three agency comments on the NOP related to the EIR analysis were presented or submitted during the public review period. The NOP and written comments provided to the City during the 30-day public review period for the NOP are presented in Appendix A. NOP comment letters are summarized as follows:

- **CA Department of Fish & Wildlife** (January 14, 2025): Identified potential species in the project area and provided recommendations on handling of such species.

- **CA Department of Toxic Substances Control** (January 7, 2025): Identified potential hazardous due to historical agricultural uses. Provided suggestions for testing and possible mitigation for the hazardous impact.

- **Native American Heritage Commission** (December 31, 2024): Identified the applicable tribal consultation guidelines and requirements associated with the Project.

Draft EIR

This document constitutes the Draft EIR. The Draft EIR contains a description of the project, description of the environmental setting, identification of the project's direct and indirect impacts on the environment, and mitigation measures for impacts found to be significant, as well as an analysis of project alternatives, identification of significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. This Draft EIR identifies issues determined to have no impact or a less than significant impact, and provides detailed analysis of potentially significant and significant impacts. Comments received in response to the NOP were considered in preparing the analysis in this EIR. Upon completion of the Draft EIR, the City of Hanford will file the Notice of Completion (NOC) with the State Clearinghouse of the Governor's Office of Planning and Research to begin the public review period.

Public Notice/Public Review

Concurrent with the NOC, the City of Hanford will provide a public notice of availability for the Draft EIR, and invite comment from the general public, agencies, organizations, and other interested parties. Consistent with CEQA requirements, the review period for this Draft EIR is forty-five (45) days. Public comment on the Draft EIR will be accepted in written form. All comments or questions regarding the Draft EIR should be addressed to:

Gabrielle Myers
City of Hanford
317 Douty Street
Hanford, CA 93230
Gmyers@hanfordca.gov

Responses to Comments/Final EIR

Following the public review period, a Final EIR will be prepared. The Final EIR will respond to written comments received during the public review period and to oral comments during such review period.

Entitlement Procedures / Certification of the EIR / Project Consideration

The City of Hanford will be the Lead Agency for the proposed Project, pursuant to the California Environmental Quality Act (CEQA). The Project will require the following approvals from the City of Hanford:

- Approval of a Tentative Subdivision Map by the City of Hanford
- Approval of a Planned Unit Development by the City of Hanford
- Approval of Building Permits by the City of Hanford
- Certification of an Environmental Impact Report by the City of Hanford

Prior to taking action to approve the project, the City of Hanford will review and consider the Final EIR. If the City finds that the Final EIR is "adequate and complete," the City Council may certify the Final EIR in accordance with CEQA. As set forth by CEQA Guidelines Section 15151, the standards of adequacy require an EIR to provide a sufficient degree of analysis to allow decisions to be made regarding the proposed project that intelligently take account of environmental consequences.

Upon review and consideration of the Final EIR, the City Council may take action to approve, revise, or reject the project. A decision to approve the proposed project, for which this EIR identifies significant environmental effects, must be accompanied by written findings in accordance with State CEQA Guidelines Sections 15091 and 15093. A Mitigation Monitoring and Reporting Program (MMRP) would also be adopted in accordance with Public Resources Code Section 21081.6(a) and CEQA Guidelines Section 15097 for mitigation measures that have been incorporated into or imposed upon the project to reduce or avoid significant effects on the environment. The Mitigation Monitoring and Reporting Program will be designed to ensure that these measures are carried out during project implementation, in a manner that is consistent with the EIR.

1.6 Organization and Scope

Sections 15122 through 15132 of the State CEQA Guidelines identify the content requirements for Draft and Final EIRs. An EIR must include a description of the environmental setting, an environmental impact analysis, mitigation measures, alternatives, significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. Discussion of the environmental issues addressed in the Draft EIR was established through review of

environmental and planning documentation developed for the project, environmental and planning documentation prepared for recent projects located within the City of Hanford, and responses to the NOP. This Draft EIR is organized in the following manner:

Executive Summary

The Executive Summary summarizes the characteristics of the proposed project, known areas of controversy and issues to be resolved, and provides a concise summary matrix of the project's environmental impacts and possible mitigation measures. This chapter identifies alternatives that reduce or avoid at least one significant environmental effect of the proposed project.

Chapter 1.0 – Introduction

Chapter 1.0 briefly describes the proposed project, the purpose of the environmental evaluation, identifies the lead, trustee, and responsible agencies, summarizes the process associated with preparation and certification of an EIR, identifies the scope and organization of the Draft EIR, and summarizes comments received on the NOP.

Chapter 2.0 – Project Description

Chapter 2.0 provides a detailed description of the proposed project, including the location, intended objectives, background information, the physical and technical characteristics, including the decisions subject to CEQA, subsequent projects and activities, and a list of related agency action requirements.

Chapter 3.0 – Environmental Setting, Impacts and Mitigation Measures

Chapter 3.0 contains an analysis of environmental topic areas as identified below. Each subchapter addressing a topical area is organized as follows:

Environmental Setting. A description of the existing environment as it pertains to the topical area.

Regulatory Setting. A description of the regulatory environment that may be applicable to the project.

Impacts and Mitigation Measures. Identification of the thresholds of significance by which impacts are determined, a description of project-related impacts associated with the environmental topic, identification of appropriate mitigation measures, and a conclusion as to the significance of each impact.

The following environmental topics were not scoped out in the Initial Study and are addressed in this Draft EIR:

- Air Quality
- Energy
- Greenhouse Gas Emissions
- Transportation and Traffic

Chapter 4.0 – Project Alternatives

Chapter 4.0 provides a comparative analysis between the merits of the proposed project and the selected alternatives. State CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to the project, which could feasibly attain the basic objectives of the project and avoid and/or lessen any significant environmental effects of the project.

Chapter 5.0 – Other CEQA-Required Topics

Chapter 5.0 evaluates and describes the following CEQA required topics: growth-inducing effects, significant and irreversible effects, significant and unavoidable impacts, substantial adverse effects on protected fish, wildlife, and plant species, substantial adverse effects on human beings, and effects not found to be significant.

Appendices

This section includes the NOP and responses to the NOP in addition to the air quality/GHG and traffic technical studies.

Incorporation by Reference

In compliance with CEQA Guidelines Section 15150, this Draft EIR has incorporated by reference the *Hanford General Plan Update - Environmental Impact Report*, certified April 24, 2017 (State

Clearinghouse #2015041024). That document is available for review at the City of Hanford, 317 N. Douty Street, Hanford, CA 93230.

Project Description

2.1 Project Location and Surrounding Land Use

The City of Hanford lies in the Central San Joaquin Valley region, in the eastern portion of Kings County (see Figure 1). State Route (SR) 198 runs east-west through the southern portion of the City and SR 43 runs north-south around the eastern boundary. The proposed Project site is located within the City of Hanford limits, near the northern City limit boundary. The proposed development is located on an approximately 135.28-acre site on Assessor's Parcel Numbers 009-020-021, -047, -023 and -046, at the northwest corner of 12th Avenue and Fargo Avenue. Refer to Figures 2-1 and 2-2.

The Project site currently supports an active orchard. Lands surrounding the proposed Project are described as follows:

- North: Orchards, Ponding basin, Unnamed and unpaved road and Rural residences
- South: Fargo Avenue, Rural residences, Housing development
- East: 12th Avenue, Agricultural row crops
- West: Unnamed and unpaved road, Rural residence, Orchards and Drainage ditch

2.2 Project Description

The Project Applicant intends to develop up to 615 single-family residential units on an approximately 135.28-acre site. The development will also include a 5.87-acre storm basin and a seven-acre park along with access roads, lighting, landscaping and other associated improvements, per City Standards (see Figures 2-3 and 2-4). The site is currently designated as low, medium and high density residential and is zoned R-L-5 (Low Density Residential), R-M (Medium Density Residential), and R-H (High Density Residential). Entitlements needed to accommodate the proposed Project include a Tentative Subdivision Map and a Planned Unit Development to accommodate smaller lot sizes and reduced setbacks.

Site Circulation

Access to and from the Project site will be from four full access points at buildout. The site will be accessed to the south along Fargo Avenue, to the east along 12th Avenue, and to the north and west along unnamed streets.

Figure 2-1
Location Map

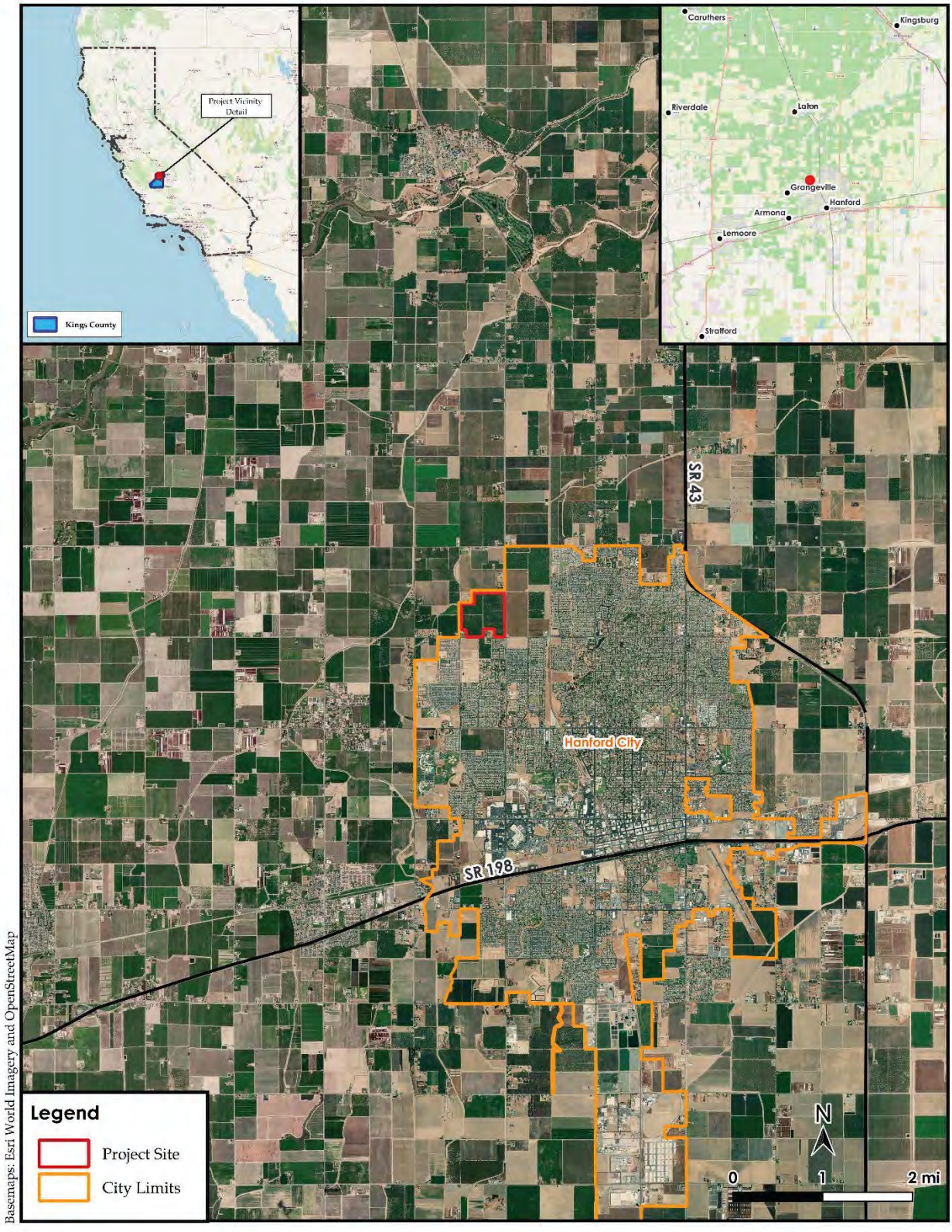


Figure 2-2
Site Aerial

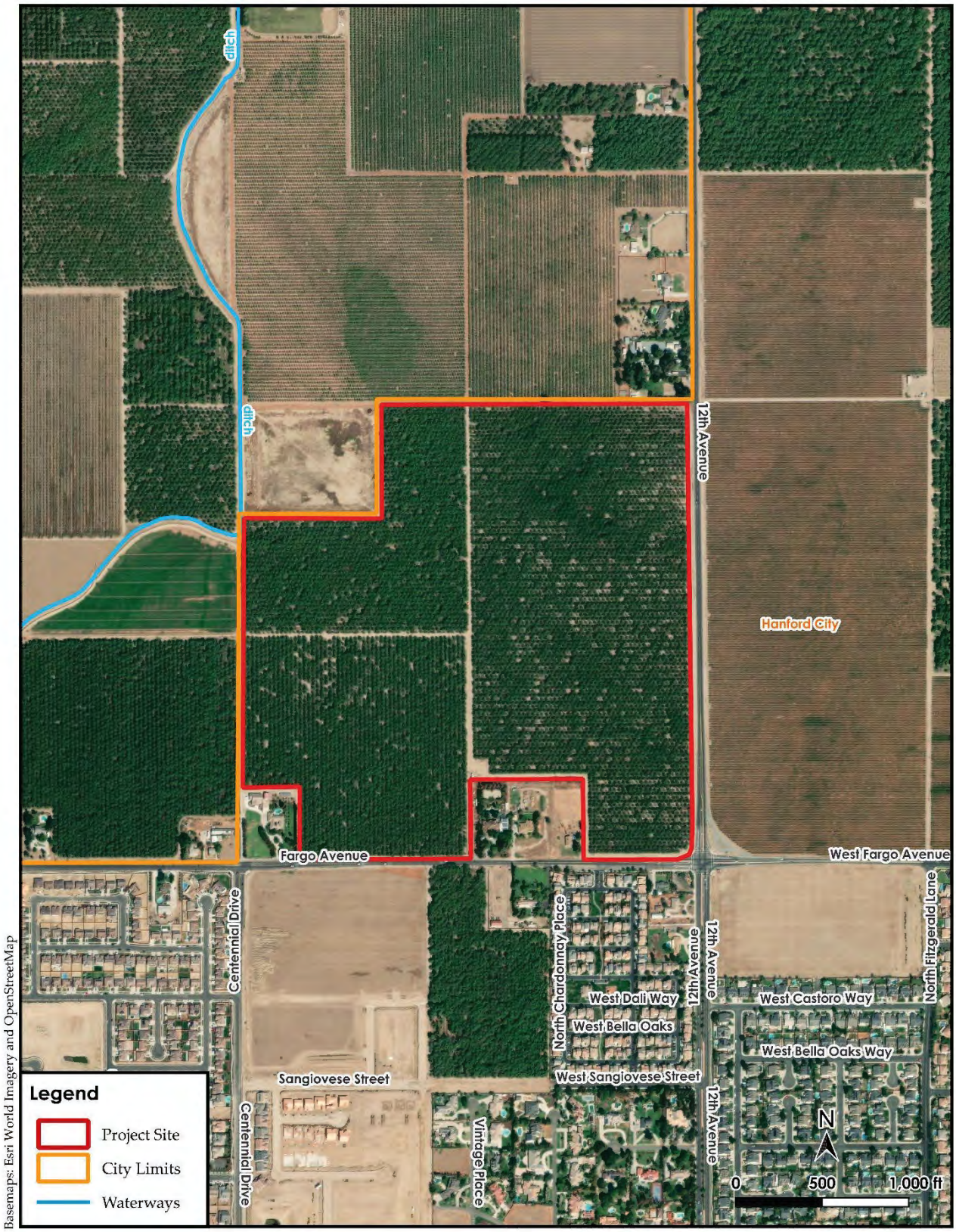


Figure 2-3
Site Plan Over Aerial

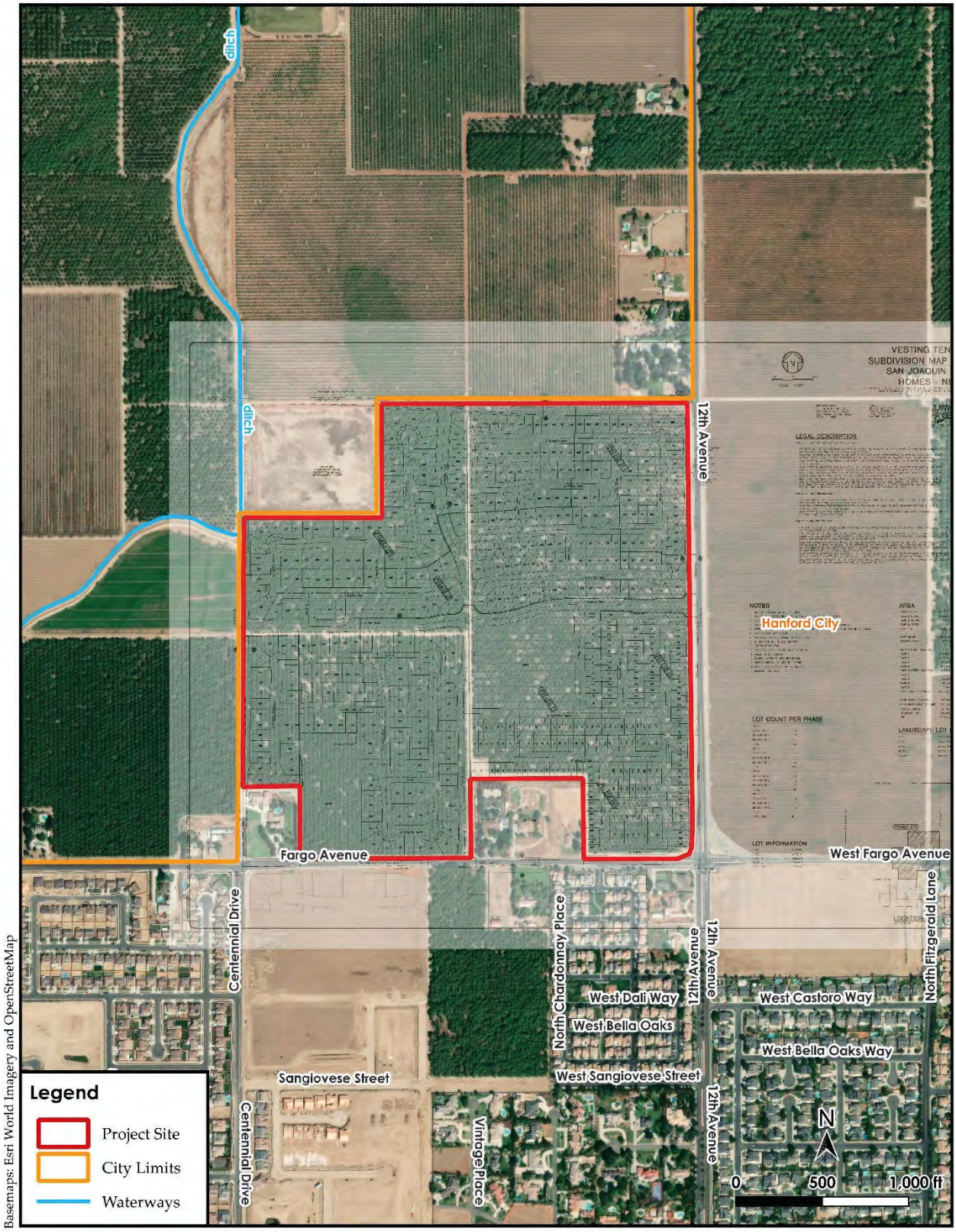
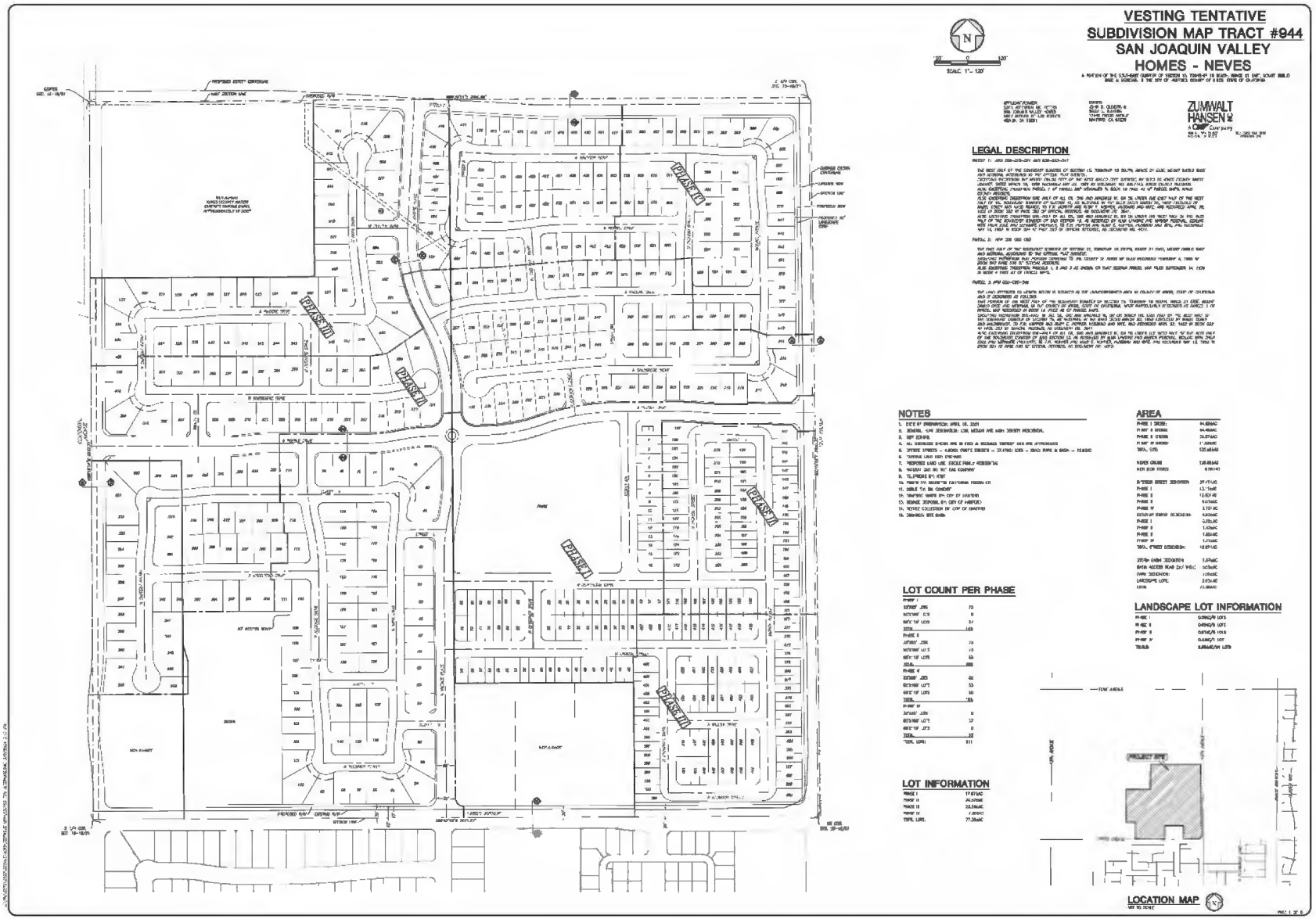


Figure 2-4
Site Plan



Construction Phasing

The Project will be developed in four phases and is broken down below:

- Phase I (44.63 acres)
    - Construction of 140 lots
    - Construction of a 7-acre park
    - Construction of 5,87-acre storm basin
- Phase 2 (44.49 acres)
    - Construction of 229 lots
- Phase 3 (34.57 acres)
    - Construction of 185 lots
- Phase 4 (11.59 acres)
    - Construction of 57 lots

Infrastructure

The Project will require connection to various City-operated utility and infrastructure systems. These include City-provided services such as sewer/wastewater, water and stormwater facilities. Non-City-provided infrastructure includes natural gas (to be provided by The Gas Company) and electrical services (to be provided by Southern California Edison). The Project will be responsible for construction of connection points to the City's existing infrastructure.

The stormwater drainage system for the Project will be designed in compliance with City standards to ensure adequate facilities to serve the Project. The Project will discharge stormwater runoff through a proposed storm drain system that drains into a proposed drainage basin onsite.

2.3 Project Objectives

In accordance with CEQA Guidelines Section 15124(b), the following are the City of Hanford's Project objectives:

- To provide housing opportunities with a range of densities, styles, sizes and values that will be designed to satisfy existing and future demand for quality housing in the area.
- To provide a sense of community and walkability within the development through the use of street patterns, a park, landscaping and other project amenities.

- To provide a residential development that is compatible with surrounding land uses and is near major services.
- To provide an economically feasible residential development that assists the City in meeting its General Plan and Housing Element requirements and objectives.

2.4 Required Approvals

- Approval of a Tentative Subdivision Map by the City of Hanford
- Approval of a Planned Unit Development by the City of Hanford
- Approval of Building Permits by the City of Hanford
- Certification of an Environmental Impact Report by the City of Hanford
- Compliance with Rule 9510 by the San Joaquin Valley Air Pollution Control District
- Storm Water Pollution Prevention Plan by the Central Valley Regional Water Quality Control Board
- Compliance with other federal, state and local requirements

3.1 Air Quality

This section of the DEIR evaluates the potential air quality impacts associated with the implementation of the proposed Project. This assessment was conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000, et seq.). The methodology follows the Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI) prepared by the San Joaquin Valley Air Pollution Control District (District or SJVAPCD) for quantification of emissions and evaluation of potential impacts to air resources. The information and analysis presented in this Section are based on the Air Quality, Health Risk, Greenhouse Gas and Energy Impact Report (AQHRAGGE) prepared for this Project by LSA Consulting, report date December 2024. The full AQHRAGGE can be reviewed in Appendix B. No Air Quality related letters were received during the NOP comment period.

Environmental Setting

San Joaquin Valley Air Basin

Topography

The topography of a region is important for air quality because mountains can block airflow that would help disperse pollutants and can channel air from upwind areas that transports pollutants to downwind areas. The San Joaquin Valley Air Basin (Air Basin) is generally shaped like a bowl. It is open in the north and is surrounded by mountain ranges on all other sides. The Sierra Nevada mountains are along the eastern boundary (8,000 to 14,000 feet in elevation), the Coast Ranges are along the western boundary (3,000 feet in elevation), and the Tehachapi Mountains are along the southern boundary (6,000 to 8,000 feet in elevation).

Climate

The climate is important for air quality because of differences in the atmosphere's ability to trap pollutants close to the ground, which creates adverse air quality; inversely, the atmosphere's ability to rapidly disperse pollutants over a wide area prevents high concentrations from accumulating under different climatic conditions. The Air Basin has an "inland Mediterranean" climate and is characterized by long, hot, dry summers and short, foggy winters. Sunlight can be

a catalyst in the formation of some air pollutants (such as ozone); the Air Basin averages over 260 sunny days per year.[1]

Inversion layers are significant in determining pollutant concentrations. Concentration levels can be related to the amount of mixing space below the inversion. Temperature inversions that occur on the summer days are usually encountered 2,000 to 2,500 feet above the valley floor. In winter months, overnight inversions occur 500 to 1,500 feet above the valley floor.

Dominant airflows provide the driving mechanism for transport and dispersion of air pollution. The mountains surrounding the Air Basin form natural horizontal barriers to the dispersion of air contaminants. The wind generally flows south-southeast through the valley, through the Tehachapi Pass and into the Mojave Desert Air Basin portion of Kern County. As the wind moves through the Air Basin, it mixes with the air pollution generated locally, generally transporting air pollutants from the north to the south in the summer and in a reverse flow in the winter.

The winds and unstable air conditions experienced during the passage of winter storms result in periods of low pollutant concentrations and excellent visibility. Between winter storms, high pressure and light winds allow cold moist air to pool on the San Joaquin Valley floor. This creates strong, low-level temperature inversions and very stable air conditions, which can lead to Tule fog. Wintertime conditions favorable to fog formation are also conditions favorable to high concentrations of $PM_{2.5}$ and PM_{10}.

Air Pollutants and Health Effects

Both State and federal governments have established health-based ambient air quality standards (California Ambient Air Quality Standards [CAAQS] and National Ambient Air Quality Standards [NAAQS], respectively) for six criteria air pollutants:5 carbon monoxide (CO), ozone (O3), nitrogen dioxide (NO2), sulfur dioxide (SO2), lead (Pb), and suspended particulate matter (PM). In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. Long-term exposure to elevated levels of criteria pollutants may result in adverse health effects. However, emission thresholds established by an air district are used to manage total regional emissions within an air basin based ont eh air basin's attainment status for criteria pollutants. These emission thresholds were established for

[1] San Joaquin Valley Air Pollution Control District (SJVAPCD). 2015. Guidance for Assessing and Mitigating Air Quality Impacts. Revised March 19, 2015. https://www.valleyair.org/transportation/GAMAQI.pdf. Accessed December 2024.

individual projects that would contribute to regional emissions and pollutant concentrations and could adversely affect or delay the projected attainment target year for certain criteria pollutants.

Because of the conservative nature of the thresholds and the basin-wide context of individual project emissions, there is no known direct correlation between a single project and localized air quality-related health effects. One individual project that generates emissions exceeding a threshold does not necessarily result in adverse health effects for residents in the project vicinity. This condition is especially true when the criteria pollutants exceeding thresholds are those with regional effects, such as ozone precursors like nitrogen oxides (NOX) and volatile organic compounds (VOCs).

Occupants of facilities such as schools, daycare centers, parks and playgrounds, hospitals, and nursing and convalescent homes are considered to be more sensitive than the general public to air pollutants because these population groups have increased susceptibility to respiratory disease. Persons engaged in strenuous outdoor work or exercise also have increased sensitivity to poor air quality. Residential areas are considered more sensitive to air quality conditions, compared to commercial and industrial areas, because people generally spend longer periods of time at their residences, with greater associated exposure to ambient air quality conditions. Recreational uses are also considered sensitive compared to commercial and industrial uses due to greater exposure to ambient air quality conditions associated with exercise.

Ozone (O3): Rather than being directly emitted, O3 (smog) is formed by photochemical reactions between NOX and VOCs. O3 is a pungent, colorless gas. Elevated ozone concentrations result in reduced lung function, particularly during vigorous physical activity. This health problem is particularly acute in sensitive receptors such as the sick, elderly, and young children. O3 levels peak during the summer and early fall months.

Carbon Monoxide (CO): CO is formed by the incomplete combustion of fossil fuels, almost entirely from automobiles. It is a colorless, odorless gas that can cause dizziness, fatigue, and impairments to central nervous system functions. CO passes through the lungs into the bloodstream, where it interferes with the transfer of oxygen to body tissues.

Particulate Matter (PM): PM is the term used for a mixture of solid particles and liquid droplets found in the air. Coarse particles are those that are 10 microns or less in diameter (PM10). Fine, suspended particulate matter with an aerodynamic diameter of 2.5 microns or less (PM2.5), is not readily filtered out by the lungs. Nitrates, sulfates, dust, and combustion particulates are major components of PM10 and PM2.5. These small particles can be directly emitted into the atmosphere as byproducts of fuel combustion; through abrasion, such as tire or brake lining wear;

or through fugitive dust (wind or mechanical erosion of soil). They can also be formed in the atmosphere through chemical reactions. Particulates may transport carcinogens and other toxic compounds that adhere to the particle surfaces and can enter the human body through the lungs.

Nitrogen Dioxide (NO2): NO2 is a reddish-brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO2. Aside from its contribution to ozone formation, NO2 also contributes to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition. NO2 may be visible as a coloring component on high pollution days, especially in conjunction with high ozone levels. NO2 decreases lung function and may reduce resistance to infection.

Sulfur Dioxide (SO2): SO2 is a colorless, irritating gas formed primarily from incomplete combustion of fuels containing sulfur. Industrial facilities also contribute to gaseous SO2 levels in the region. SO2 irritates the respiratory tract, can injure lung tissue when combined with fine particulate matter, and reduces visibility and the level of sunlight.

Lead: Leaded gasoline (phased out in the United States beginning in 1973), paint (on older houses and cars), smelters (metal refineries), and the manufacture of lead storage batteries have been the primary sources of lead released into the atmosphere. Lead has multiple adverse neurotoxic health effects, and children are at special risk. Some lead-containing chemicals cause cancer in animals. Lead levels in the air have decreased substantially since leaded gasoline was eliminated. Ambient lead concentrations are only monitored on an as-warranted, site-specific basis in California. On October 15, 2008, the United States Environmental Protection Agency (USEPA) strengthened the NAAQS for lead by lowering it from 1.5 to 0.15 micrograms per cubic meter (μg/m3). The USEPA revised the monitoring requirements for lead in December 2010. These requirements focus on airports and large urban areas, resulting in an increase in 76 monitors nationally.

Volatile Organic Compounds (VOC): VOCs (also known as reactive organic gases [ROGs] and reactive organic compounds [ROCs]) are formed from the combustion of fuels and the evaporation of organic solvents. VOCs are not defined as criteria pollutants, however, because VOCs accumulate in the atmosphere more quickly during the winter, when sunlight is limited and photochemical reactions are slower, they are a prime component of the photochemical smog reaction. There are no attainment designations for VOCs.

Toxic Air Contaminants (TAC): In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are injurious in small quantities and are regulated by the USEPA and the CARB. Some examples of TACs include

benzene, butadiene, formaldehyde, and hydrogen sulfide. The identification, regulation, and monitoring of TACs is relatively recent compared to that for criteria pollutants.

TACs do not have ambient air quality standards (AAQS), but are regulated by the USEPA, the CARB, and the SJVAPCD. In 1998, the CARB identified particulate matter from diesel-fueled engines as a TAC. The CARB has completed a risk management process that identified potential cancer risks for a range of activities using diesel-fueled engines.6 High-volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic (e.g., distribution centers and truck stops) were identified as posing the highest risk to adjacent receptors. Other facilities associated with increased risk include warehouse distribution centers, large retail or industrial facilities, high volume transit centers, and schools with a high volume of bus traffic. Health risks from TACs are a function of both concentration and duration of exposure.

Unlike TACs emitted from industrial and other stationary sources noted above, most diesel particulate matter (DPM) is emitted from mobile sources – primarily "off-road" sources such as construction and mining equipment, agricultural equipment, and truck-mounted refrigeration units, as well as "on-road" sources such as trucks and buses traveling on freeways and local roadways.

Although not specifically monitored, recent studies indicate that exposure to DPM may contribute significantly to a cancer risk (a risk of approximately 500 to 700 in 1,000,000) that is greater than all other measured TACs combined.7 The technology for reducing DPM emissions from heavy-duty trucks is well established, and both State and federal agencies are moving aggressively to regulate engines and emission control systems to reduce and remediate diesel emissions. The CARB anticipated that by 2020, average statewide DPM concentrations will decrease by 85 percent from levels in 2000 with full implementation of the CARB's Diesel Risk Reduction Plan, meaning that the statewide health risk from DPM is expected to decrease from 540 cancer cases in 1,000,000 to 21.5 cancer cases in 1,000,000. The CARB 2000 Diesel Risk Reduction Plan is still the most recent version and has not been updated.

Attainment Status

The US Environmental Protection Agency (EPA) and the California Air Resources Board (ARB) 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." National nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards.

Each standard has a different definition, or "form" of what constitutes attainment, based on specific air quality statistics. For example, the federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring values exceeds the threshold per year. In contrast, the federal annual $PM_{2.5}$ standard is met if the three-year average of the annual average $PM_{2.5}$ concentration is less than or equal to the standard.

The current attainment designations for the Air Basin are shown in Table 3.1-1. The Air Basin is designated as nonattainment for ozone, PM_{10}, and $PM_{2.5}$.

Table 3.1-1
San Joaquin Valley Air Basin Attainment Status

Pollutant	State Status	National Status
Ozone—One Hour	Nonattainment/Severe	No Standard
Ozone—Eight Hour	Nonattainment	Nonattainment/Extreme
Carbon monoxide	Attainment/Unclassified	Merced, Madera, and Kings Counties are unclassified; others are in Attainment
Nitrogen dioxide	Attainment	Attainment/Unclassified
Sulfur dioxide	Attainment	Attainment/Unclassified
PM_{10}	Nonattainment	Attainment
$PM_{2.5}$	Nonattainment	Nonattainment
Lead	Attainment	No Designation/Classification

Source of State status: California Air Resources Board (ARB). 2013c. Area Designation Maps/State and National. 2012 State Area Designations. Page last reviewed October 18, 2017. Website: https://ww2.arb.ca.gov /resources/documents/maps-state-and-federal-area-designations. Accessed December 2024.
Source of National status: U.S. Environmental Protection Agency (EPA). 2021a. Green Book Nonattainment Areas for Criteria Pollutants as of September 30, 2021. Website: https://www.epa.gov/green-book. Accessed December 2024.
Source of additional status information: San Joaquin Valley Air Pollution Control District (SJVAPCD). 2017a. Ambient Air Quality Standards & Valley Attainment Status. Website: https://www.valleyair.org/aqinfo/attainment.htm. Accessed December 2024.

Regulatory Setting

Federal Regulations

Clean Air Act

Congress established much of the basic structure of the Clean Air Act (CAA) in 1970, and made major revisions in 1977 and 1990. Six common air pollutants (also known as criteria pollutants) are addressed in the CAA: particulate matter, ground-level ozone, carbon monoxide (CO), sulfur oxides (SO_X), nitrogen oxides (NO_X), and lead. The U.S. Environmental Protection Agency (EPA) labels these pollutants as criteria air pollutants because they are regulated by developing human health-based and/or environmentally based criteria (science-based guidelines), which sets permissible levels. The set of limits based on human health are called primary standards. Another set of limits intended to prevent environmental and property damage are called secondary standards.[2] The federal standards are called National Ambient Air Quality Standards (NAAQS). The air quality standards provide benchmarks for determining whether air quality is healthy at specific locations and whether development activities will cause or contribute to a violation of the standards. The criteria pollutants are:

- Ozone
- Nitrogen dioxide (NO_2)
- Lead
- Particulate matter (PM_{10} and $PM_{2.5}$)
- Carbon monoxide (CO)
- Sulfur dioxide

The federal standards were set to protect public health, including that of sensitive individuals; thus, the EPA is tasked with updating the standards as more medical research is available regarding the health effects of the criteria pollutants. Primary federal standards are the levels of air quality necessary, with an adequate margin of safety, to protect the public health.[3]

State of California Regulations

California Clean Air Act

The California Legislature enacted the California Clean Air Act (CCAA) in 1988 to address air quality issues of concern not adequately addressed by the federal CAA at the time. California's air quality problems were and continue to be some of the most severe in the nation, and required additional actions beyond the federal mandates. The California Air Resources Board (ARB) administers California Ambient Air Quality Standards (CAAQS) for the 10 air pollutants designated in the CCAA. The 10 state air pollutants are the six federal standards listed above as well visibility-reducing particulates, hydrogen sulfide, sulfates, and vinyl chloride. The EPA authorized California to adopt its own regulations for motor vehicles and other sources that are

[2] U.S. Environmental Protection Agency (EPA). 2014. Clean Air Act Requirements and History. https://www.epa.gov/clean-air-act-overview/clean-air-act-requirements-and-history. Accessed December 2024.

[3] California Air Resources Board (ARB), National Ambient Air Quality Standards. https://ww2.arb.ca.gov/resources/national-ambient-air-quality-standards. Accessed December 2024.

more stringent than similar federal regulations implementing the CAA. The federal and state ambient air quality standards are summarized in Table B of Appendix B.

Air Quality Plans and Regulations

Air pollutants are regulated at the national, state, and air basin or county level, and each agency has a different level of regulatory responsibility: the EPA regulates at the national level, the ARB at the state level, and the District at the air basin level.

The EPA is responsible for national and interstate air pollution issues and policies. The EPA sets national vehicle and stationary source emission standards, oversees approval of all State Implementation Plans, provides research and guidance for air pollution programs, and sets National Ambient Air Quality Standards—also known as the federal standards described earlier.

A State Implementation Plan (SIP) is a document prepared by each state describing existing air quality conditions and measures that will be followed to attain and maintain federal standards. The SIP for the State of California is administered by the ARB, which has overall responsibility for statewide air quality maintenance and air pollution prevention. California's SIP incorporates individual federal attainment plans for regional air districts; specifically, an air district prepares their federal attainment plan, which is sent to ARB to be approved and incorporated into the California State Implementation Plan. Federal attainment plans include the technical foundation for understanding air quality (e.g., emission inventories and air quality monitoring), control measures and strategies, and enforcement mechanisms. The ARB then submits the SIP to the EPA for approval. After reviewing submitted SIPs, the EPA proposes to approve or disapprove all or part of each plan. The public has an opportunity to comment on the EPA's proposed action. The EPA considers public input before taking final action on a state's plan. If the EPA approves all or part of a SIP, those control measures are enforceable in federal court. If a state fails to submit an approvable plan or if the EPA disapproves a plan, the EPA is required to develop a federal implementation plan (FIP). The SIP approval process often takes several years.

The most recent federally approved attainment plans for the SJVAPCD are the 2007 8-hour Ozone Attainment Plan and the 2012 $PM_{2.5}$ Plan for the 2006 $PM_{2.5}$ standard. The Air Basin is designated as an extreme ozone nonattainment area for the EPA's 2008 8-hour ozone standard of 75 ppb. The plan to address this standard was adopted by the SJVAPCD on June 16, 2016. The ARB approved the attainment demonstration plan for the San Joaquin Valley on July 21, 2016 and transmitted the plan to EPA on August 24, 2016. The plan for areas designated extreme nonattainment must demonstrate attainment of the new ozone standard by December 31, 2031. The 2016 Ozone Plan predicts attainment of the 2008 standard by 2031. On June 30, 2020, US EPA approved portions

of the 2018 Plan for the 1997, 2006, and 2012 $PM_{2.5}$ Standards and the San Joaquin Valley Supplement to the 2016 State Strategy for the State Implementation Plan related to the 2006 24-hour PM2.5 National Ambient Air Quality Standard (NAAQS) of 35 μg/m³. Additionally, EPA granted an extension of the Serious area attainment date for the 2006 $PM_{2.5}$ NAAQS from December 31, 2019, to December 31, 2024. The EPA Administrator signed the Final Rule revising the 8-hour ozone standard to 70 ppm on October 1, 2015. EPA designated the San Joaquin Valley as Extreme nonattainment for this standard in August 2018, with an attainment deadline of 2037. The SJVAPCD is mandated under federal Clean Air Act requirements to develop a new attainment plan for the revised ozone standard by 2022, which was adopted on December 15, 2022. The attainment plan satisfies the Clean Air Act requirement and ensures expeditious attainment of the 70 parts per billion 8-hour ozone standard.[4]

Areas designated nonattainment must develop air quality plans and regulations to achieve standards by specified dates, depending on the severity of the exceedances. For much of the country, implementation of federal motor vehicle standards and compliance with federal permitting requirements for industrial sources are adequate to attain air quality standards on schedule. For many areas of California, however, additional state and local regulation is required to achieve the standards. Regulations adopted by California are described below.

Low-Emission Vehicle Program. The ARB first adopted Low-Emission Vehicle (LEV) program standards in 1990. These first LEV standards ran from 1994 through 2003. LEV II regulations, running from 2004 through 2010, represent continuing progress in emission reductions. As the State's passenger vehicle fleet continues to grow and more sport utility vehicles and pickup trucks are used as passenger cars rather than work vehicles, the more stringent LEV II standards were adopted to provide reductions necessary for California to meet federally mandated clean air goals outlined in the 1994 State Implementation Plan. In 2012, ARB adopted the LEV III amendments to California's LEV regulations. These amendments, also known as the Advanced Clean Car Program (adopted in 2012), include more stringent emission standards for model years 2017 through 2025 for both criteria pollutants and greenhouse gas (GHG) for new passenger vehicles. Advanced Clean Cars II was adopted in 2022, which introduced regulations to rapidly scale down emissions of light-duty passenger cars, pickup trucks and SUVs and require an increased number of zero-emission vehicles to meet air quality and climate change emissions goals. In October 2023, ARB staff launched a new effort to consider potential amendments to the Advance Clean Cars II

[4] San Joaquin Valley Air Pollution Control District. 2022 Ozone Plan for the San Joaquin Valley. https://ww2.valleyair.org/rules-and-planning/air-quality-plans/ozone-plans/2022-ozone-plan-for-the-san-joaquin-valley/. Accessed December 2024.

regulations, including updates to the tailpipe greenhouse gas emission standard and limited revisions to the Low-emission Vehicle and Zero-emission Vehicle regulations.[5]

On-Road Heavy-Duty Vehicle Program. The ARB has adopted standards for emissions from various types of new on-road heavy-duty vehicles. Section 1956.8, Title 13, California Code of Regulations contains California's emission standards for on-road heavy-duty engines and vehicles, as well as test procedures. ARB has also adopted programs to reduce emissions from in-use heavy-duty vehicles including the Heavy-Duty Diesel Vehicle Idling Reduction Program, the Heavy-Duty Diesel In-Use Compliance Program, the Public Bus Fleet Rule and Engine Standards, and the School Bus Program and others.[6]

ARB Truck and Bus Regulation. The Truck and Bus Regulation is necessary to meet federal attainment standards. This regulation requires heavy-duty diesel vehicles that operate in California to reduce toxic air contaminants (TACs) emissions from their exhaust. Diesel exhaust is responsible for 70% of the cancer risk from airborne toxics. Therefore, by January 1, 2023, nearly all trucks and buses will be required to have 2010 or newer model year engines to reduce particulate matter (PM) and oxides of nitrogen (NOx) emissions. To help ensure that the benefits of this regulation are achieved, starting in 2020, only vehicles compliant with this regulation will be registered by the California Department of Motor Vehicles (DMV).

As heavy-duty on-road vehicles are such a significant source of pollutants, the Truck and Bus Regulation is one of the most far-reaching and important tools to reduce smog-forming and toxic emissions and protect public health in disadvantaged communities. It is a key element in CARB's Diesel Risk reduction plan and the State Implementation Plan, both of which are designed to provide clean air for Californians by helping to meet state and federal health-protective standards. Starting January 1, 2020, Senate Bill 1 only allows vehicles compliant with this regulation to be registered by the DMV.[7]

Advanced Clean Truck Regulation. The Advanced Clean Trucks regulation was approved on June 25, 2020 and has two main components, a manufacturers ZEV sales requirement and a one-time reporting requirement for large entities and fleets. Promoting the development and use of advanced clean trucks will help CARB achieve its emission reduction strategies as outlined in the

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[5] California Air Resources Board. Advanced Clean Cars Program. https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program. Accessed December 2024.
[6] California Air Resources Board. On-Road Heavy-Duty Vehicle Programs. https://ww2.arb.ca.gov/road-heavy-duty-vehicle-programs. Accessed December 2024.
[7] California Air Resources Board. Truck and Bus Regulation. https://ww2.arb.ca.gov/our-work/programs/truck-and-bus-regulation/about. Accessed December 2024.

State Implementation Plan (SIP), Sustainable Freight Action Plan, Senate Bill (SB) 350, and Assembly Bill (AB) 32.

The egulation has two components including a manufacturer sales requirement, and a reporting requirement:

- Zero-emission truck sales: Manufacturers who certify Class 2b-8 chassis or complete vehicles with combustion engines would be required to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035. By 2035, zero-emission truck/chassis sales would need to be 55% of Class 2b – 3 truck sales, 75% of Class 4 –8 straight truck sales, and 40% of truck tractor sales.
- Company and fleet reporting: Large employers including retailers, manufacturers, brokers and others would be required to report information about shipments and shuttle services. Fleet owners, with 50 or more trucks, would be required to report about their existing fleet operations. This information would help identify future strategies to ensure that fleets purchase available zero-emission trucks and place them in service where suitable to meet their needs.[8]

ARB Regulation for In-Use Off-Road Diesel Vehicles. On July 26, 2007, the ARB adopted a regulation to reduce DPM and nitrous oxide (NO_x) emissions from in-use (existing) off-road heavy-duty diesel vehicles in California. Such vehicles are used in construction, mining, and industrial operations. The regulation limits idling to no more than five consecutive minutes, requires reporting and labeling, and requires disclosure of the regulation upon vehicle sale. The ARB is enforcing that part of the rule with fines up to $10,000 per day for each vehicle in violation. Performance requirements of the rule are based on a fleet's average NO_x emissions, which can be met by replacing older vehicles with newer, cleaner vehicles or by applying exhaust retrofits. The regulation was amended in 2010 to delay the original timeline of the performance requirements, making the first compliance deadline January 1, 2014 for large fleets (over 5,000 horsepower), 2017 for medium fleets (2,501–5,000 horsepower), and 2019 for small fleets (2,500 horsepower or less).[9]

ARB Regulation for Consumer Products. The ARB Consumer Products Regulation was last amended in January 2015. The ARB regulates the VOC content of a wide variety of consumer

[8] California Air Resources Board. Advanced Clean Trucks. https://ww2.arb.ca.gov/our-work/programs/advanced-clean-trucks. Accessed December 2024.

[9] California Air Resources Board. In-Use Off-Road Deisel-Fueled Fleets Regulations. https://ww2.arb.ca.gov/our-work/programs/use-road-diesel-fueled-fleets-regulation. Accessed December 2024.

products sold and manufactured in California. The purpose of the regulation is to reduce the emission of ozone precursors, TACs, and GHG emissions in products that are used by homes and businesses. The regulated products include but are not limited to solvents, adhesives, air fresheners, soaps, aromatic compounds, windshield cleaners, charcoal lighter, dry cleaning fluids, floor polishes, and general cleaners and degreasers.[10]

ARB Airborne Toxic Control Measure for Asbestos. In July 2001, the ARB approved an Air Toxic Control Measure for construction, grading, quarrying, and surface mining operations to minimize emissions of naturally occurring asbestos. The regulation requires application of best management practices to control fugitive dust in areas known to have naturally occurring asbestos and requires notification to the local air district prior to commencement of ground-disturbing activities. The measure establishes specific testing, notification and engineering controls prior to grading, quarrying, or surface mining in construction zones where naturally occurring asbestos is located on projects of any size. There are additional notification and engineering controls at work sites larger than 1 acre in size. These projects require the submittal of a Dust Mitigation Plan and approval by the air district prior to the start of a project.

Construction sometimes requires the demolition of existing buildings where construction occurs. Buildings often include materials containing asbestos. Asbestos is also found in a natural state, known as naturally occurring asbestos. Exposure and disturbance of rock and soil that naturally contain asbestos can result in the release of fibers into the air and consequent exposure to the public. Asbestos most commonly occurs in ultramafic rock that has undergone partial or complete alteration to serpentine rock (serpentinite) and often contains chrysotile asbestos. In addition, another form of asbestos, tremolite, can be found associated with ultramafic rock, particularly near faults. Sources of asbestos emissions include unpaved roads or driveways surfaced with ultramafic rock, construction activities in ultramafic rock deposits, or rock quarrying activities where ultramafic rock is present.

The ARB has an Air Toxic Control Measure for construction, grading, quarrying, and surface mining operations, requiring the implementation of mitigation measures to minimize emissions of asbestos-laden dust. The measure applies to road construction and maintenance, construction and grading operations, and quarries and surface mines when the activity occurs in an area where naturally occurring asbestos is likely to be found. Areas are subject to the regulation if they are identified on maps published by the Department of Conservation as ultramafic rock units or if

[10] California Air Resources Board. Consumer Products Program. https://ww2.arb.ca.gov/our-work/programs/consumer-products-program/about. Accessed December 2024.

the Air Pollution Control Officer or owner/operator has knowledge of the presence of ultramafic rock, serpentine, or naturally occurring asbestos on the site. The measure also applies if ultramafic rock, serpentine, or asbestos is discovered during any operation or activity. [11]

Diesel Risk Reduction Plan. The ARB's Diesel Risk Reduction Plan has led to the adoption of state regulatory standards for all new on-road, off-road, and stationary diesel-fueled engines and vehicles to reduce DPM emissions by about 90 percent overall from year 2000 levels. The projected emission benefits associated with the full implementation of this plan, including federal measures, are reductions in DPM emissions and associated cancer risks of 75 percent by 2010, and 85 percent by 2020.[12]

San Joaquin Valley Air Pollution Control District Regulations

The San Joaquin Valley Air Pollution Control District (District or SJVAPCD) is responsible for controlling emissions primarily from stationary sources. The District, in coordination with eight countywide transportation agencies, is also responsible for developing, updating, and implementing air quality plans for the Air District.

Ozone Plans

The Air Basin is designated nonattainment of state and federal health-based air quality standards for ozone. To meet Clean Air Act requirements for the one-hour ozone standard, the District adopted an Extreme Ozone Attainment Demonstration Plan in 2004, with an attainment date of 2010. Although the EPA revoked the federal 1-hour ozone standard effective June 15, 2005 and replaced it with an 8-hour standard, the requirement to submit a plan for that standard remained in effect for the San Joaquin Valley.

The planning requirements for the 1-hour plan remain in effect until replaced by a federal 8-hour ozone attainment plan. On March 8, 2010, the EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan, including revisions to the plan, 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

[11] California Air Resources Board. Naturally Occurring Asbestos. https://ww2.arb.ca.gov/our-work/programs/naturally-occurring-asbestos. Accessed December 2024.

[12] California Air Resources Board. Diesel Risk Reduction Plan. https://ww2.arb.ca.gov/our-work/programs/diesel-risk-reduction-plan. Accessed December 2024.

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 July 18, 2016, the EPA published in the Federal Register a final action determining that the San Joaquin Valley has attained the 1-hour ozone national ambient air quality standard. This determination is based on the most recent three-year period (2012-2014) of sufficient, quality-assured, and certified data. The penalty fees remain in place pending submittal of a demonstration that the San Joaquin Valley will maintain the 1-hour standard for 10 years.

The 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. ARB approved the plan in June 2007, and the 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 reactive organic gases (ROG). Figure 1 of the Air Quality and Greenhouse Gas/Energy Analysis Report included in Appendix B displays the anticipated NO_x reductions attributed in the 2007 Ozone Plan (Source: 2007 Ozone Plan). The plan, with innovative measures and a "dual path" strategy, assures expeditious attainment of the federal 8-hour ozone standard for all Air Basin residents. The District Governing Board adopted the 2007 Ozone Plan on April 30, 2007 and the ARB approved the plan on June 14, 2007. The 2007 Ozone Plan requires yet to be determined "Advanced Technology" to achieve additional reductions after 2021, in order to attain the standard at all monitoring stations in the Air Basin by 2024 as allowed for areas designated extreme nonattainment by the federal Clean Air Act. The Environmental Protection Agency (EPA) is proposing to determine that the San Joaquin Valley failed to attain the 8-hour ozone national ambient air quality standard by its June 15, 2024 "Extreme" area attainment date. The proposed determination is based on quality-assured and certified ambient air quality monitoring data from 2021 through 2023.

The Air Basin is designated as an extreme ozone nonattainment area for the EPA's 2008 8-hour ozone standard of 75 ppb. The District's Governing Board approved the 2016 Plan for the 2008 8-Hour Ozone Standard on June 16, 2016. The ARB approved the attainment demonstration plan for the San Joaquin Valley on July 21, 2016 and transmitted the plan to EPA on August 24, 2016.

The comprehensive strategy in this plan will reduce NO_x emissions by over 60 percent between 2012 and 2031 and will bring the San Joaquin Valley into attainment of the EPA's 2008 8-hour ozone standard as expeditiously as practicable, no later than December 31, 2031. The 2016 Ozone Plan predicts attainment of the 2008 standard by 2031.[13] To ensure that the plan is approvable with the necessary contingencies, the plan includes a "Black Box" that will require implementation of new advanced technologies and controls prior to the 2031 deadline.

The EPA Administrator signed the Final Rule revising the 8-hour ozone standard to 70 ppm on October 1, 2015. The new standard will require the District to prepare a new attainment to achieve the more stringent emission level within 20 years from the effective date of designation.[14]

State ozone standards do not have an attainment deadline but require implementation of all feasible measures to achieve attainment at the earliest date possible. This is achieved through compliance with the federal deadlines and control measure requirements.

Particulate Matter Plans

The Air Basin was designated nonattainment of state and federal health-based air quality standards for PM_{10}. The Air Basin is also designated nonattainment of state and federal standards for $PM_{2.5}$.

To meet Clean Air Act requirements for the PM_{10} standard, the District adopted a PM_{10} Attainment Demonstration Plan (Amended 2003 PM_{10} Plan and 2006 PM_{10} Plan), which has an attainment date of 2010. The District adopted the 2007 PM_{10} Maintenance Plan in September 2007 to assure the San Joaquin Valley's continued attainment of the EPA's PM_{10} standard. The EPA designated the valley as an attainment/maintenance area for PM_{10} 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.

The EPA established the 2012 $PM_{2.5}$ annual standard of 12 $\mu g/m^3$ on January 13, 2013. The CAA mandates the District to develop and submit an attainment plan for the 2012 annual PM2.5 standard to EPA.

[13] California Air Resources Board. 2016 San Joaquin Valley 8-hour Ozone Plan. https://ww2.arb.ca.gov/resources/documents/2016-san-joaquin-valley-8-hour-ozone-plan. Accessed December 2024.
[14] Ibid.

EPA initially designated the District as Moderate nonattainment for the 2012 $PM_{2.5}$ standard in 2015. The District submitted the *2016 $PM_{2.5}$ Plan* to address Moderate area requirements for the 2012 $PM_{2.5}$ standard and to request to be reclassified to Serious nonattainment. EPA approved the Moderate Plan and reclassified the District to Serious nonattainment, effective December 2021.

The District adopted the *Initial State Implementation Plan (SIP) Requirements for the 2012 Annual $PM_{2.5}$ Standard* on October 19, 2023, to fulfill the first portion of SIP elements required by the CAA for Serious $PM_{2.5}$ nonattainment areas, including an updated emissions inventory, precursor demonstration, and the demonstration that BACM requirements continue to be satisfied in the Valley. Additionally, the District fulfilled Nonattainment New Source Review (NNSR) requirements through amendments to District Rule 2201 (New and Modified Stationary Source Review Rule) in April 2023.

The District adopted the *2024 Plan for the 2012 Annual $PM_{2.5}$ Standard* on June 20, 2024, to fulfill the remaining CAA requirements, including the final modeling analysis, attainment strategy and emission reduction commitments, reasonable further progress/quantitative milestones, and contingency measures. This Plan demonstrates expeditious attainment of the 2012 $PM_{2.5}$ standard by 2030.[15]

District Rules and Regulations

The District rules and regulations that may apply to the Project include, but are not limited to the following:

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. This rule is enforced on a complaint basis.

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. Only compliant components are available for purchase in the San Joaquin Valley.

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

[15] San Joaquin Valley Air Pollution Control District. 2024 Plan for the 2012 PM2.5 Standard. https://ww2.valleyair.org/rules-and-planning/air-quality-plans/particulate-matter-plans/2024-plan-for-the-2012-pm25-standard/. Accessed December 2024.

maintenance operations. If asphalt paving will be used, then the paving operations will be subject to Rule 4641. This regulation is enforced on the asphalt provider.

Rule 4901—Wood-Burning Fireplaces and Wood-Burning Heaters. The purposes of this rule are to limit emissions of carbon monoxide and particulate matter from wood-burning fireplaces, wood-burning heaters, and outdoor wood-burning devices, and to establish a public education program to reduce wood-burning emissions. All development that includes wood-burning devices are subject to this rule.

Rule 4902—Residential Water Heaters. In 2009, the District amended Rule 4902 to strengthen the rule by lowering the limit to 10 nanograms per joule (ng/J) for new or replacement water heaters, and to a limit of 14 ng/J for instantaneous water heaters. Retailer compliance dates ranged from 2010 to 2012, depending on the unit type.

Regulation VIII—Fugitive PM_{10} Prohibitions. Rules 8011–8081 are designed to reduce PM_{10} emissions (predominantly dust/dirt) generated by human activity, including construction and demolition activities, road construction, bulk materials storage, paved and unpaved roads, carryout and trackout, etc. All development projects that involve soil disturbance are subject to at least one provision of the Regulation VIII series of rules.

Rule 9510—Indirect Source Review. This rule reduces the impact of NO_X and PM_{10} emissions from growth within 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 District-administered projects, or a combination of the two. The Project is subject to Rule 9510.

Local Regulations

2035 Hanford General Plan Air Quality Objectives and Policies

The 2035 Hanford General Plan was adopted April 24, 2017. Hanford's Air Quality Element was adopted in 2010. The Air Quality Element provides goals, policies, and action items that work to meet or exceed State and federal air quality standards and air quality-related legislative requirements. Applicable air quality goals, policies and action items from the General Plan are listed below.

Objective AQ 4: Accurately assess and mitigate potentially significant local and regional air quality and climate change impacts from proposed projects within the City. Where possible and financially feasible, retrofit existing uses and activities to reduce emissions and climate change impacts.

Program AQ 4.1: The City will advise consultants to use San Joaquin Valley Air Pollution Control District Guidelines for preparing air and climate change assessments and will refer California Environmental Quality Act documents to the San Joaquin Valley Air Pollution Control District for review and comment on potential air quality and greenhouse gas impacts and for recommendations regarding air quality mitigation measures and greenhouse gas Best Performance Standards.

Policy AQ 4.1: Assess and mitigate project air quality impacts using analysis methods and significance thresholds recommended by the San Joaquin Valley Air Pollution Control District.

Policy AQ 4.3: Ensure that air quality and climate change impacts identified during California Environmental Quality Act review are minimized and consistently and fairly mitigated to the greatest extent feasible.

Policy AQ 4.5: Encourage and support the development of innovative and effective mitigation measures and programs to reduce air quality and climate change impacts through proactive coordination with the San Joaquin Valley Air Pollution Control District project applicants, and other knowledgeable and interested parties.

Policy AQ 4.7: Work with the San Joaquin Valley Air Pollution Control District to ensure implementation of particulate emission controls required by Regulation VIII – Fugitive PM10 for construction and grading activities.

Policy AQ 6.1: Project sponsors shall demonstrate that all feasible Transportation Control Measures and other measures have been incorporated into project designs which increase the effective capacity of the existing road network prior to seeking approval to construct additional roadway capacity, such as additional lanes or new highways.

Policy AQ 8.1: Locate residential development projects and projects categorized as sensitive receptors an adequate distance from existing and potential sources of hazardous emissions such as major transportation corridors, industrial sites, and hazardous material locations.

Policy AQ T70: Pedestrian Connections. Increase connectivity through direct and safe pedestrian connections to public amenities, neighborhoods, village centers and other destinations throughout the City.

Methodology

Construction Emissions

Construction activities can generate a substantial amount of air pollution. Construction activities are considered temporary; however, short-term impacts can contribute to exceedances of air quality standards. Construction activities include site preparation, earthmoving, and general construction. The emissions generated from these common construction activities include fugitive dust from soil disturbance; fuel combustion from mobile, heavy-duty, diesel- and gasoline-powered equipment; portable auxiliary equipment; and worker commute trips.

The California Emissions Estimator Model (CalEEMod) Version 2022.1 computer program was used to calculate emissions from on-site construction equipment and emissions from worker and vehicle trips to the site. Construction of the proposed project is anticipated to begin in February 2025 and is anticipated to occur over 5 years, which was included in CalEEMod. The proposed project would not require the import or export of soil but would require the demolition of approximately 2,000 square feet of existing buildings, which was also included in CalEEMod. This analysis also assumes the use of Tier 2 construction equipment and that the proposed project would comply with the requirements of SJVAPCD Regulation VIII for fugitive dust control.53 Other detailed construction information is currently unavailable; therefore, this analysis utilizes CalEEMod default assumptions.

Construction Health Risk Assessment

A construction Health Risk Assessment (HRA), which evaluates construction-period health risk to offsite receptors, was performed for the proposed project, and the analysis is presented below. To estimate the potential cancer risk associated with construction of the proposed project from

equipment exhaust (including DPM), a dispersion model was used to translate an emission rate from the source location to a concentration at the receptor location of interest (i.e., a nearby residence and worksites). Dispersion modeling varies from a simpler, more conservative screening-level analysis to a more complex and refined detailed analysis. This refined assessment was conducted using the CARB exposure methodology with the air dispersion modeling performed using the e provides a detailed estimate of exhaust concentrations based on site and

source geometry, source emissions strength, distance from the source to the receptor, and meteorological data.

Operational Emissions

The air quality analysis includes estimating emissions associated with long-term operation of the proposed project. Consistent with the SJVAPCD guidance for estimating emissions associated with land use development projects, the CalEEMod computer program was used to calculate the longterm operational emissions associated with the project.

As discussed in the Project Description section, the proposed Project would include the construction of 615 single-family residential units along with park space, interior and exterior streets, and storm basins. The proposed Project analysis was conducted using land use codes Single Family Housing, Parking Lot and City Park. Trip generation rates used in CalEEMod for the Project were based on the Project's traffic study, which identified that the proposed Project would generate approximately 5,366 average daily trips. The proposed Project would not include natural gas. In addition, consistent with SJVAPCD Rule 4901, this analysis assumes that the proposed Project would not include any wood burning (or natural gas) fireplaces. Where project-specific data were not available, default assumptions (e.g., energy usage, water usage, and solid waste generation) from CalEEMod were used to estimate project emissions. CalEEMod output sheets are included in Appendix A of Appendix B.

Thresholds of Significance

The CEQA Guidelines define a significant effect on the environment as "a substantial, or potentially substantial, adverse change in the environment." To determine if a project would have a significant impact on air quality, the type, level, and impact of emissions generated by the project must be evaluated.

The following air quality significance thresholds are contained in Appendix G of the CEQA Guidelines. A significant impact would occur if the project would:

a) Conflict with or obstruct implementation of the applicable air quality plan;

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable national or state ambient air quality standard;

c) Expose sensitive receptors to substantial pollutant concentrations; or

d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people).

While the final determination of whether a project is significant is within the purview of the lead agency pursuant to Section 15064(b) of the CEQA Guidelines, the District recommends that its quantitative air pollution thresholds be used to determine the significance of project emissions. If the lead agency finds that the project has the potential to exceed these air pollution thresholds, the project should be considered to have significant air quality impacts. The applicable District thresholds and methodologies are contained under each impact statement below.

Impacts and Mitigation Measures

Impact 3.1-1: *Would the project conflict with or obstruct implementation of the applicable air quality plan?*

Less Than Significant Impact with Mitigation Incorporation. An air quality plan describes air pollution control strategies to be implemented by a city, county, or region classified as a nonattainment area. As discussed above, the SJVAB is designated as nonattainment for O_3 and $PM_{2.5}$ for federal standards and non-attainment for O_3, PM_{10}, and $PM_{2.5}$ for State standards. The main purpose of the air quality plan is to bring the area into compliance with the requirements of the federal and State air quality standards. To bring the San Joaquin Valley into attainment, the SJVAPCD adopted the 2022 Plan for the 2015 8-Hour Ozone Standard in December 2022 to satisfy Clean Air Act requirements and ensure attainment of the 70 parts per billion (ppb) 8-hour ozone standard.

To ensure the SJBAB's continued attainment of the USEPA PM_{10} standard, the SJVAPCD adopted the 2007 PM_{10} Maintenance Plan in September 2007. The SJVAPCD adopted the *2018 Plan for the 1997, 2006, and 2012 $PM_{2.5}$ Standards* in November 2018, to address the USEPA 1997 annual $PM_{2.5}$ standard of 15 $\mu g/m^3$ and 24-hour $PM_{2.5}$ standard of 65 $\mu g/m^3$, the 2006 24-hour $PM_{2.5}$ standard of 35 $\mu g/m^3$, and the 2012 annual $PM_{2.5}$ standard of 12 $\mu g/m^3$.

For a project to be consistent with SJVAPCD air quality plans, the pollutants emitted from a project should not exceed the SJVAPCD emission thresholds or cause a significant impact on air quality. In addition, emission reductions achieved through implementation of offset requirements are a major component of the SJVAPCD air quality plans. As discussed below, construction of the proposed Project would not result in the generation of criteria air pollutants that would exceed SJVAPCD thresholds of significance. In addition to the construction period

thresholds of significance, the SJVAPCD has implemented Regulation VIII measures for dust control during construction. These control measures are intended to reduce the amount of PM_{10} emissions during the construction period. Implementation of the fugitive dust control measures outlined in Mitigation Measure AIR-1, would ensure that the proposed Project complies with Regulation VIII, further reduces the short-term construction period air quality impacts, and ensures compliance with air quality plans. In addition, as discussed below, long-term operational emissions associated with the proposed Project, including area, energy, and mobile source emissions, would also not exceed SJVAPCD established significance thresholds. Therefore, with the implementation of MM AIR-1, the proposed Project would not conflict with or obstruct implementation of SJVAPCD air quality plans and the impacts would be considered ***less than significant.***

Mitigation Measures:

Implement MM AIR-1 (See below).

Impact 3.1-2: *Would the project 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?*

Less Than Significant Impact with Mitigation. The SJVAB is currently designated as nonattainment for the federal and State standards for O_3 and $PM_{2.5}$. In addition, the SJVAB is in nonattainment for the PM_{10} standard. The SJVAB's nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of an ambient air quality standard. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, the SJVAPCD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in adverse air quality impacts to the region's existing air quality conditions. The following analysis assesses the potential construction- and operation-related air quality impacts.

Criteria Pollutant Emission Estimates

Construction Emissions (Regional)

During construction, short-term degradation of air quality may occur due to the release of particulate emissions generated by demolition, grading, paving, building, and other activities. Emissions from construction equipment are also anticipated and would include CO, NOx, ROG, directly emitted particulate matter ($PM_{2.5}$ and PM_{10}), and TACs (e.g., DPM).

Construction activities associated with the proposed Project would include site preparation, grading, paving, and building activities. Construction-related effects on air quality from the proposed Project would be greatest during the site preparation phase due to the disturbance of soils. If not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils at the construction site. Unless properly controlled, vehicles leaving the site would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of operating equipment. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Water or other soil stabilizers can be used to control dust, resulting in emission reductions of 50 percent or more. The SJVAPCD has implemented Regulation VIII measures for reducing fugitive dust emissions (PM10). With the implementation of Regulation VIII measures, fugitive dust emissions from construction activities would not result in adverse air quality impacts.

In addition to dust-related PM_{10} emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO_2, NOx, ROG, and some soot particulate ($PM_{2.5}$ and PM_{10}) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles idle in traffic. These emissions would be temporary in nature and limited to the immediate area surrounding the construction site.

Construction emissions were estimated for the project using CalEEMod and are summarized in Table 3.1-2. Appendix B provides CalEEMod output sheets.

Table 3.1-2

Short-Term Regional Construction Emissions[16]

Construction Year	Pollutant Emissions (Tons/Year)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
2025	0.2	1.7	1.6	<0.01	0.4	0.2
2026	0.2	1.7	1.8	<0.01	0.3	0.2
2027	0.3	1.9	2.9	<0.01	0.3	0.1
2028	0.2	1.4	2.7	<0.01	0.3	0.1
2029	4.2	1.0	1.8	<0.01	0.1	<0.01
2030	0.1	0.5	0.8	<0.01	<0.1	0.2
Maximum Annual Emissions	**4.2**	**1.9**	**2.9**	**<0.01**	**0.4**	**0.2**
SJVAPCD Threshold[17]	**10**	**10**	**100**	**27**	**15**	**15**
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

Notes:
Source: Compiled by LSA (November 2024).
CO = carbon monoxide
NOx = nitrogen oxides
PM2.5 = particulate matter less than 2.5 microns in size
PM10 = particulate matter less than 10 microns in size
ROG = reactive organic gas
SJVAPCD = San Joaquin Valley Air Pollution Control District
SOx = sulfur oxides

As shown in Table 3.1-2 above, construction emissions associated with the proposed Project would not exceed the SJVAPCD's thresholds for ROG, NOx, CO, SOx, PM_{10}, and $PM_{2.5}$ emissions. In addition to the construction period thresholds of significance, the SJVAPCD has implemented Regulation VIII measures for dust control during construction. Implementation of Mitigation Measure AIR-1 would ensure that the proposed Project complies with Regulation VIII.

Construction emissions associated with the proposed Project would be less than significant with implementation of MM AIR-1. Therefore, construction of the proposed Project would not result

[16] *Air Quality, Health Risk, Greenhouse Gas and Energy Impact Report (AQHRAGGE),* LSA Consulting. December 2024. Page 57. Appendix B.

[17] San Joaquin Valley Air Pollution Control District. Air Quality Thresholds of Significance – Criteria Pollutants. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.valleyair.org/media/m2ecyxiw/1-cms-format-ceqa-air-quality-thresholds-of-significance-criteria-pollutants.pdf. Accessed August 2025.

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.

Operational Emissions (Regional)

Long-term air pollutant emission impacts associated with the proposed Project are those related to mobile sources (e.g., vehicle trips), energy sources (e.g., natural gas), and area sources (e.g., architectural coatings and the use of landscape maintenance equipment).

Mobile source emissions include ROG and NOX emissions that contribute to the formation of ozone. Additionally, PM_{10} emissions result from running exhaust, tire and brake wear, and the entrainment of dust into the atmosphere from vehicles traveling on paved roadways.

Energy source emissions result from activities in buildings for which natural gas is used. The quantity of emissions is the product of usage intensity (i.e., the amount of natural gas) and the emission factor of the fuel source. However, the proposed Project would not include natural gas, and no natural gas demand is anticipated during operation of the proposed Project.

Typically, area source emissions consist of direct sources of air emissions located at the Project site, including architectural coatings and the use of landscape maintenance equipment. Area source emissions associated with the Project would include emissions from the use of landscaping equipment and the use of consumer products.

Long-term operational emissions associated with the proposed Project were calculated using CalEEMod. Table 3.1-3 provides the proposed Project's estimated operational emissions. Appendix B provides CalEEMod output sheets.

Table 3.1-3
Project Operational Emissions[18]

Source	Emissions (tons/year)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Mobile Sources	2.78	3.14	17.98	0.05	4.8	1.25
Area Sources	5.45	0.03	3.15	0.00	0.00	0.00
Energy Sources	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Project Emissions	**8.22**	**3.26**	**21.12**	**0.06**	**4.80**	**1.25**

[18] *Air Quality, Health Risk, Greenhouse Gas and Energy Impact Report (AQHRAGGE),* LSA Consulting. December 2024. Page 59. Appendix B.

Source	Emissions (tons/year)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
SJVAPCD Thresholds[19]	**10**	**10**	**100**	**27**	**15**	**15**
Exceed Significance Thresholds?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Compiled by LSA (November 2024).
Note: Some values may not appear to add correctly due to rounding.
CO = carbon monoxide
NOx = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
ROG = reactive organic gas
SJVAPCD = San Joaquin Valley Air Pollution Control District
SO_X = sulfur oxides

The results shown in Table 3.1-3 indicate the proposed Project would not exceed the significance criteria for ROG, NO_X, CO, sulfur oxides (SO_X), PM_{10}, or $PM_{2.5}$ emissions. Therefore, operation of the proposed Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in nonattainment under an applicable federal or State AAQS.

Conclusion

As shown in Table 3.1-2, the Project's regional emissions would not exceed the applicable regional criteria pollutant emissions quantitative thresholds during Project construction. During operations, the Project would not exceed the applicable regional criteria pollutant emissions quantitative thresholds after incorporation of mitigation measures AIR-1 (See Table 3.1-3). Therefore, the impact would be ***less than significant with incorporation of mitigation***.

Mitigation Measures:

AIR – 1 Consistent with San Joaquin Valley Air Pollution Control District (SJVAPCD) Regulation VIII (Fugitive PM_{10} Prohibitions), the following controls are required

[19] San Joaquin Valley Air Pollution Control District. Air Quality Thresholds of Significance – Criteria Pollutants. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.valleyair.org/media/m2ecyxiw/1-cms-format-ceqa-air-quality-thresholds-of-significance-criteria-pollutants.pdf

to be included as specifications for the proposed Project and implemented at the construction site:

1. All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant or covered with a tarp or other suitable cover or vegetative ground cover.

2. All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.

3. All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.

4. When materials are transported off site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least 6 inches of freeboard space from the top of the container shall be maintained.

5. All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.)

6. Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/ suppressant.

Impact 3.1-3: *Would the project expose sensitive receptors to substantial pollutant concentrations?*

Less Than Significant Impact.

Long-Term Microscale (CO Hot Spot) Analysis

Vehicular trips associated with the proposed Project would contribute to congestion at intersections and along roadway segments in the vicinity of the proposed Project site. Localized

air quality impacts would occur when emissions from vehicular traffic increase as a result of the proposed Project. The primary mobile-source pollutant of local concern is CO, a direct function of vehicle idling time and, thus, of traffic flow conditions. CO transport is extremely limited; under normal meteorological conditions, it disperses rapidly with distance from the source. However, under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels, affecting local sensitive receptors (e.g., residents, schoolchildren, the elderly, and hospital patients).

Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service or with extremely high traffic volumes. In areas with high ambient background CO concentrations, modeling is recommended to determine the Project's effect on local CO levels.

An assessment of Project-related impacts on localized ambient air quality requires that future ambient air quality levels be projected. Ambient CO levels monitored at the Fresno-Garland air quality monitoring station, the closest station to the Project site monitoring this emission, showed no federal exceedances for both 1-hour and 8-hour standards.

The highest CO concentrations would normally occur during peak traffic hours; hence, CO impacts calculated under peak traffic conditions represent a worst-case analysis.

Based on the Project's traffic study, the proposed Project would result in 389 a.m. and 503 p.m. peak-hour trips (See Appendix C). The evaluation of the study area intersections shows that the addition of traffic associated with the proposed Project is not expected to create a significant level of service changes. Therefore, given the extremely low level of CO concentrations in the Project area and the lack of project-related traffic impacts at any intersections, Project-related vehicles are not expected to result in CO concentrations exceeding the State or federal CO standards. No CO hot spots would occur, and the Project would not result in any Project-related impacts on CO concentrations.

Health Risk on Nearby Sensitive Receptors

Sensitive receptors are defined as residential uses, schools, daycare centers, nursing homes, and medical centers. Individuals particularly vulnerable to DPM are children, whose lung tissue is still developing, and the elderly, who may have serious health problems that can be aggravated by exposure to diesel particulate matter. The Project site is surrounded primarily by agricultural uses with some residential and commercial uses. The closest sensitive receptors to the Project site include single-family residences located approximately 65 feet east and 80 feet south of the Project boundaries.

A construction HRA, which evaluates construction-period health risk to off-site receptors, was performed for the proposed Project. Table 3.1-4, below, identifies the results of the analysis assuming the use of Tier 2 construction equipment as a minimum requirement for the proposed Project. Model snapshots of the sources are shown in Appendix B.

Table 3.1-4
Health Risks from Project Construction to Off-Site Receptors[20]

Location	Carcinogenic Inhalation Health Risk in One Million	Chronic Inhalation Hazard Index	Acute Inhalation Hazard Index
Residential Receptor Risk	4.91	0.010	0.000
Worker Receptor Risk	0.23	<0.01	0.000
School Receptor	0.16	<0.01	0.000
SJVAPCD Significance Thresholds[21]	**20.0 in one million**	**1.0**	**1.0**
Exceed Significance Thresholds?	**No**	**No**	**No**

Source: LSA (June 2024).
SJVAPCD = San Joaquin Valley Air Pollution Control District

As shown in Table 3.1-4, the maximum cancer risk for the residential receptor MEI would be 4.91 in one million, which would not exceed the SJVAPCD cancer risk threshold of 20 in one million. The worker receptor risk would be lower at 0.23 in one million and the school receptor risk would be 0.16 in one million, which would also not exceed the SJVAPCD cancer risk thresholds. The total chronic HI would be 0.010 for the residential receptor MEI and less than 0.01 for the worker and school receptor MEIs, which are all below the SJVAPCD threshold of 1.0. In addition, the total acute HI would be nominal (0.000), which would also not exceed the threshold of 1.0. Therefore, construction of the proposed Project would not exceed SJVAPCD thresholds and

[20] *Air Quality, Health Risk, Greenhouse Gas and Energy Impact Report (AQHRAGGE),* LSA Consulting. December 2024. Page 60. Appendix B.

[21] San Joaquin Valley Air Pollution Control District. Air Quality Thresholds of Significance – Criteria Pollutants. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.valleyair.org/media/m2ecyxiw/1-cms-format-ceqa-air-quality-thresholds-of-significance-criteria-pollutants.pdf

would not expose nearby sensitive receptors to substantial pollutant concentrations. No significant health risk would occur from Project construction emissions.

The proposed Project would include the construction of a 615-unit, single-family residential development. As identified in Table 3.1-3, Project operational emissions of criteria pollutants would be below SJVAPCD significance thresholds; thus, they are not likely to have a significant impact on sensitive receptors. In addition, the proposed Project would be required to implement District Rule 9510, Indirect Source Review (ISR). Implementation of Rule 9510 would reduce operational emissions of NOX and PM10 by 33.3 percent and 50 percent, respectively. Compliance with SJVAPCD rules would further limit doses and exposures, reducing potential health risk related to vehicle and equipment emissions to a level that is not significant. Once the proposed Project is constructed, it would not be a source of substantial emissions. Therefore, implementation of the proposed Project would not result in new sources of TACs. Therefore, the Project would not expose sensitive receptors to substantial levels of TACs.

Since the Project does not exceed the applicable SJVAPCD thresholds for cancer risk, acute risk, or chronic risk, the impact related to the Project's potential to expose sensitive receptors to substantial pollutant concentrations would be ***less than significant.***

Valley Fever

The closest sensitive receptors to the project site include single-family residences located approximately 65 feet east and 80 feet south of the Project boundaries. During Project construction, it is possible that nearby residents and workers could be exposed to Valley fever through fugitive dust. Dust control measures, as required with SJVAPCD Regulation VIII, would reduce the exposure to the workers and sensitive receptors. Therefore, dust from the construction of the Project is not anticipated to significantly add to the existing exposure of people to Valley fever. Impacts would be ***less than significant***.

Naturally Occurring Asbestos

The Project is in Kings County, which is among the counties found to have serpentine and ultramafic rock in their soils. However, according to the California Geological Survey, no such rock has been identified in the Project vicinity. In addition, demolition activities may expose asbestos used in building materials; however, the proposed Project does not include demolition. Therefore, the potential risk for naturally occurring asbestos (NOA) during Project construction is small and would not be significant. It should be noted that projects in the Basin are required to comply with the SJVAPCD's rules related to demolition, including SJVAPCD Rule 3050: Asbestos

Removal Fees and Rule 4002: National Emission Standards for Hazardous Air Pollutants, which help to further reduce the risk of asbestos exposure. Impacts would be ***less than significant.***

Impact Analysis Summary

In summary, the proposed Project would not exceed SJVAPCD localized emission daily screening levels for any criteria pollutant. The Project is not a significant source of TAC emissions during construction or operation. The Project is not in an area with suitable habitat for Valley fever spores and is not in an area known to have naturally occurring asbestos. Therefore, the Project would result in ***less than significant impacts*** to sensitive receptors.

Mitigation Measures:

None Required.

Impact 3.1-4: *Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?*

Less Than Significant. The SJVAPCD addresses odor criteria within the GAMAQI. The SJVAPCD has not established a rule or standard regarding odor emissions, rather, the district has a nuisance rule: "Any project with the potential to frequently expose members of the public to objectionable odors should be deemed to have a significant impact."

During Project construction, some odors may be present due to diesel exhaust. However, these odors would be temporary and limited to the construction period. The proposed uses are not anticipated to emit any objectionable odors. Any odors in general would be confined mainly to the Project site and would readily dissipate. Therefore, the proposed Project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. As such, impacts would be ***less than significant***.

Mitigation Measures:

None Required.

Cumulative Impacts

In analyzing cumulative impacts from the proposed Project, the analysis must specifically evaluate a project's contribution to the cumulative increase in pollutants of concern for the San

Joaquin Valley Air Basin (Air Basin). A project would be considered to have a significant cumulative impact if its contribution accounts for a significant proportion of the cumulative total emissions (i.e., it represents a "cumulatively considerable contribution" to the cumulative air quality impact). The geographic context for the analysis of cumulative impacts related to air quality is the Air Basin. The SJVAPCD's attainment statuses are a result of cumulative emissions from all sources of these air pollutants and their precursors within the Air Basin. For pollutants that the Air Basin is designated as non-attainment for the California Ambient Air Quality Standards and National Ambient Air Quality Standards, a cumulative impact exists regardless of the project's incremental contribution. Significance thresholds established by the SJVAPCD are used to manage total regional and local emissions within the Air Basin based on the Air Basin's attainment status for criteria pollutants.

Cumulative impacts from the proposed Project are as follows:

- As identified in Impact 3.1-1, the Project would not conflict with the applicable air quality plans with the incorporation of Mitigation Measures AIR – 1. Because the Project-level impacts were determined to be less than significant after mitigation incorporation, the cumulative contribution is determined to be ***less than cumulatively considerable.***

- Cumulative criteria pollutant impacts are discussed in Impact 3.1-2 and, within that analysis, the Project's contribution to cumulative impacts were demonstrated to be less than significant with the incorporation of Mitigation Measures AIR 1. As such, after mitigation incorporation, impacts are considered ***less than cumulatively considerable.***

- As identified in Impact 3.1-3, Project implementation will not expose sensitive receptors to substantial concentrations of TACs from construction and/or operations of the Project and will not expose sensitive receptors to substantial levels of CO during Project operations. As such, cumulative impacts are considered ***less than cumulatively considerable***.

- As identified in Impact 3.1-4, the Project would not result in other emissions such as odors. Therefore, evaluation of the information supports a finding that the Project's contribution would be ***less than cumulatively considerable*** under this impact because the proposed Project's local impact would be ***less than significant***.

3.2 Energy

This section of the DEIR analyzes the Project's potential impacts on energy resources. The information and analysis presented in this Section are based on the Air Quality, Health Risk, Greenhouse Gas and Energy Impact Report (AQHRAGGE) prepared for this Project by LSA Consulting, report date December 2024. The full AQHRAGGE can be reviewed in Appendix B. No NOP comment letters were received pertaining to this topic.

Environmental Setting

Electricity

Electricity, a consumptive utility, is a man-made resource. The production of electricity requires the consumption or conversion of energy resources, including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources, into energy. The delivery of electricity involves a number of system components, including substations and transformers that lower transmission line power (voltage) to a level appropriate for on-site distribution and use. The electricity generated is distributed through a network of transmission and distribution lines commonly called a power grid. Conveyance of electricity through transmission lines is typically responsive to market demands.

Energy Usage

Energy usage is typically quantified using the British Thermal Unit (BTU). Total energy consumption in California was 6,882 trillion BTU in 2022 (the most recent year for which this specific data is available), which equates to an average of 176 million BTU per capita.[1] Of California's total energy usage, the breakdown by sector is 42.4 percent transportation, 22.4 percent industrial, 17.3 percent commercial, and 17.5 percent residential.[2] Electricity and natural gas in California are generally consumed by stationary users such as residences and commercial and industrial facilities, whereas petroleum consumption is generally accounted for by transportation-related energy use.

While BTUs measure total energy usage, electricity is generally measured in kilowatt-hours (kWh) which is the standard billing unit for energy delivered to consumers by electrical utilities.

[1] U.S. Energy Information Administration, California State Energy Profile. https://www.eia.gov/state/print.php?sid=CA. Accessed December 2024.
[2] Ibid.

The electricity consumption attributable to Kings County from 2012 to 2022 is shown in Table 3.2-1. As indicated, energy consumption in Kings County varied approximately 19.85 percent over the last 10 years.

Table 3.2-1

Electricity Consumption in Kings County 2012 – 2022[3]

Year	Electricity Consumption (in millions of kilowatt hours)
2012	1,683
2013	1,788
2014	1,811
2015	1,769
2016	1,785
2017	1,511
2018	1,771
2019	1,618
2020	1,875
2021	1,999
2022	2,017

Natural Gas

Natural gas is a combustible mixture of simple hydrocarbon compounds (primarily methane) that is used as a fuel source. Natural gas consumed in California is obtained from naturally occurring reservoirs, mainly located outside the State, and delivered through high-pressure transmission pipelines. The natural gas transportation system is a nationwide network, and, therefore, resource availability is typically not an issue. Natural gas provides almost one-third of the state's total energy requirements and is used in electricity generation, space heating, cooking, water heating, industrial processes, and as a transportation fuel.

[3] California Energy Commission. Energy Reports. Electricity Consumption by County. https://ecdms.energy.ca.gov/elecbycounty.aspx. Accessed December 2024.

Natural gas is provided to the Project area by Pacific Gas and Electric. The natural gas consumption attributable to Kings County from 2012 to 2022 is provided in Table 3.2-2. Natural gas consumption in Kings County varied approximately 5.8 percent over the 10-year span.

Table 3.2-2

Natural Gas Consumption in Kings County 2012 – 2022[4]

Year	Natural Gas Consumption (in millions of Therms)
2012	68
2013	70
2014	66
2015	67
2016	67
2017	64
2018	70
2019	69
2020	64
2021	64
2022	64

Transportation Energy

According to the U.S. Energy Administration, transportation accounts for the largest share of the state's energy consumption. Californians have more registered motor vehicles and travel more vehicle miles than residents in any other state. California accounts for one-tenth of U.S. motor gasoline consumption and about one-seventh of the nation's jet fuel consumption. Overall, the state's transportation sector accounts for nearly two-fifths of California's total energy consumption.[5]

California has led the states in the most electric vehicles (EVs) and EV charging locations every year since 2016. California is part of the West Coast Green Highway, an extensive network of electric vehicle DC fast charging locations located along Interstate 5. The state has about 15,300

[4] California Energy Commission. Energy Reports. Gas Consumption by County. http://www.ecdms.energy.ca.gov/gasbycounty.aspx Accessed December 2024.

[5] U.S. Energy Information Administration. California Profile Analysis. Updated May 2024. https://www.eia.gov/state/analysis.php?sid=CA. Accessed December 2024

public charging locations. In 2022, California had about 783,000 registered battery electric vehicles, the most of any state. California also requires all public transit agencies to gradually transition to 100% zero-emission bus (ZEB) fleets. Beginning in 2029, all transit agency new bus purchases must be ZEBs.[6]

According to the Board of Equalization (BOE), statewide taxable sales figures estimate a total of 55 million gallons of gasoline and 7 million gallons of diesel fuel were sold in Kings County in 2023.[7]

Regulatory Setting

Federal Regulations

In 1975, Congress enacted the Energy Policy and Conservation Act, which established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the act, the National Highway Traffic Safety Administration (NHTSA) is responsible for establishing additional vehicle standards.

Energy Independence and Security Act (EISA) of 2007

This Act set increased Corporate Average Fuel Economy (CAFE) standards for motor vehicles and includes the following provisions related to energy efficiency:

- Renewable fuel standards (RFS)
- Appliance and lighting efficiency standards
- Building energy efficiency

This Act requires increasing levels of renewable fuels to replace petroleum. The U.S. EPA is responsible for developing and implementing regulations to ensure transportation fuel sold into the US contains a minimum volume of renewable fuel.

The RFS programs regulations were developed in collaboration with refiners, renewable fuel products, and other stakeholders and were created under the Energy Policy Act of 2005. The RFS program established the first renewable fuel volume mandate in the US. As required under the

[6] U.S. Energy Information Administration. California State Energy Profile. https://www.eia.gov/state/print.php?sid=CA. Accessed December 2024.

[7] California Energy Commission. California Retail Fuel Outlet Annual Reporting (CEC-A15) Results, 2010-2023. https://www.energy.ca.gov/media/3874 Accessed December 2024.

act, the original RFS program required 7.5 billion gallons of renewable fuel to be blended into gasoline by 2012. Under the Act, the RFS program was expanded in several key ways that laid the foundation for achieving significant reductions of GHG emissions through the use of renewable fuels, for reducing imported petroleum, and for encouraging the development and expansion of the nation's renewable fuels sector. The updated program is referred to as RFS2 and includes the following:

- EISA expanded the RFS program to include diesel, in addition to gasoline;
- EISA increase the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022;
- EISA established new categories of renewable fuel and set separate volume requirements for each one; and
- EISA required by the U.S. EPA to apply lifecycle GHG performance threshold standards to ensure that each category of renewable fuel emits fewer GHGs than the petroleum fuel it replaces.[8]

Additional provisions of the EISA address energy savings in government and public institutions, promoting research for alternate energy, additional research in carbon capture, international energy programs, and the creation of "green jobs."

Federal Vehicle Standards

The CAFE law, first introduced in 1975, has become more stringent over time. In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011; and, in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, President Obama issued a memorandum directing the Department of Transportation, Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of carbon dioxide (CO2) in model year 2025, on an average industry fleetwide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely

[8] U.S. EPA. Renewable Fuel Standard Program. Overview for Renewable Fuel Standard Program. https://www.epa.gov/renewable-fuel-standard-program/overview-renewable-fuel-standard. Accessed December 2024.

through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021, and NHTSA set standards for model years 2022–2025 in March 2022.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014 – 2018. The standards for CO2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the EPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baselines.

In August 2016, the EPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018-2027 for certain trailers, and model years 2021-2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. The final standards are expected to lower CO2 emissions by approximately 1.1 billion MT and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program.[9]

In August 2018, the USEPA and NHTSA released a notice of proposed rulemaking called Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks (SAFE Vehicles Rule). This rule would modify the existing CAFE standards and tailpipe carbon dioxide emissions standards for passenger cars and light trucks, and establish new standards covering model years 2021-2026. SAFE standards are expected to uphold model year 2020 standards through 2026.[10]

State of California Regulations

Integrated Energy Policy Report

Senate Bill 138 (Bowen Chapter 568, Statutes of 2002) requires the California Energy Commission (CEC) to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and

[9] U.S. Department of Transportation. Briefing Room. EPA and DOT Finalize Greenhouse Gas and Fuel Efficiency Standards for Heavy-Duty Trucks. https://www.transportation.gov/briefing-room/epa-and-dot-finalize-greenhouse-gas-and-fuel-efficiency-standards-heavy-duty-trucks. Accessed December 2024.

[10] U.S. Department of Transportation. SAFE. The Safer Affordable Fuel-Efficient 'SAFE' Vehicles Rule. https://www.nhtsa.gov/corporate-average-fuel-economy/safe. Accessed December 2024.

diverse energy supplies; enhance the state's economy; and protect public and safety (Public Resources Code §25301(a)).

The 2021 Integrated Energy Policy Report (IEPR) was adopted in March 2022, and continues to work towards improving electricity, natural gas, and transportation fuel energy use in California.[11] The IEPR provides the results of the CEC's assessments of energy issues facing the state. The IEPR discusses building decarbonization, energy reliability, decarbonizing California's gas system, and the state's energy demand forecast.

State of California Energy Plan

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. 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 end energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators and encouragement of urban designs that reduce vehicle miles traveled and accommodate pedestrian and bicycle access.

California's Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24)

Part 6 of the Title 24 refers to California's Energy Efficiency Standards for Residential and Nonresidential Buildings which was first adopted in 1978 in response to a legislative mandate to reduce energy consumption in California. Although not originally intended to reduce GHG emissions, increased energy efficiency and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods. The 2019 Building Energy Efficiency Standards went into effect on January 1, 2020. The 2022 Standards went into effect January 1, 2023, replacing the 2019 standards.

Part 11 of the Title 24 Building Standards Code is referred to as the California Green Building Standards Code (CALGreen Code). The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through

[11] California Energy Commission. 2021 Integrated Energy Policy Report Update. https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2021-integrated-energy-policy-report. Accessed December 2024.

the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) planning and design; (2) energy efficiency; (3) water efficiency and conservation; (4) material conservation and resource efficiency; and (5) environmental air quality." The CALGreen Code is not intended to substitute or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission (CBSC).

CALGreen contains both mandatory and voluntary measures. For nonresidential land uses, there are 39 mandatory measures including, but not limited to, exterior light pollution reduction, wastewater reduction by 20 percent, and commissioning of projects over 10,000 square feet. Two tiers of voluntary measures apply to nonresidential land uses, for a total of 36 additional elective measures.

Executive Order B-30-15

Executive Order B-30-15, 2030 Carbon Target and Adaptation, issued by Governor Brown in April 2015, set a target of reducing GHG emissions by 40 percent below 1990 levels in 2030. To achieve this ambitious target, Governor Brown identified five key goals for reducing GHG emissions in California through 2030:

- Increase the amount of renewable electricity provided state-wide to 50 percent;
- Double energy efficiency savings achieved in existing buildings and make heating fuels cleaner;
- Reduce petroleum use in cars and trucks by up to 50 percent;
- Reduce emissions of short-lived climate pollutants; and
- Manage farms, rangelands, forests, and wetlands to increasingly store carbon.

Executive Order B-55-18

In 2018, Governor Brown signed EO B-55-18 to achieve carbon neutrality by moving California to 100 percent clean energy by 2045. This Executive Order also includes specific measures to reduce GHG emissions via clean transportation, energy efficient buildings, directing cap-and-trade funds to disadvantaged communities, and better management of the state's forest land.

Senate Bill (SB) 375 (Sustainable Communities and Climate Protection Act)

In January 2009, California SB 375, known as the Sustainable Communities and Climate Protection Act, went into effect. The objective of SB 375 is to better integrate regional planning of transportation, land use, and housing to reduce sprawl and ultimately reduce GHG emissions and other air pollutants. SB 375 tasks CARB to set GHG reduction targets for each of California's

18 regional Metropolitan Planning Organizations (MPOs). Each MPO is required to prepare a Sustainable Communities Strategy (SCS) as part of their Regional Transportation Plan (RTP). The SCS is a growth strategy in combination with transportation policies that will show how the MPO will meet its GHG reduction target. If the SCS cannot meet the reduction goal, an Alternative Planning Strategy may be adopted that meets the goal through alternative development, infrastructure, and transportation measures or policies.

In 2010, CARB released the proposed GHG reduction targets for the MPOs and is tasked to update the regional targets every eight years. The proposed reduction targets for the Kings CAG region were 5 percent by year 2020 and 13 percent by year 2035 beginning in October of 2018.[12]

Renewables Portfolio Standard Program

In 2002, California established its Renewables Portfolio Standard (RPS) Program, with the goal of increasing the percentage of renewable energy in the state's electricity mix to 20 percent of retail sales by 2017. The 2003 Integrated Energy Policy Report recommended accelerating that goal to 20 percent by 2010, and the 2004 Energy Report Update further recommended increasing the target to 33 percent by 2020. The state's Energy Action Plan also supported this goal. In 2006 under Senate Bill 107, California's 20 percent by 2010 RPS goal was codified. The legislation required retail sellers of electricity to increase renewable energy purchases by at least one percent each year with a target of 20 percent renewables by 2010. Publicly owned utilities set their own RPS goals, recognizing the intent of the legislature to attain the 20 percent by 2010 target.

In 2008, Governor Schwarzenegger signed Executive Order S-14-08 requiring that "all retail sellers of electricity shall serve 33 percent of their load with renewable energy by 2020." The following year, Executive Order S-21-09 directed CARB to enact regulations to achieve the goal of 33 percent renewables by 2020.

In 2015, Governor Brown signed Senate Bill 350 to codify ambitious climate and clean energy goals. One key provision of SB 350 is for retail sellers and publicly owned utilities to procure "half of the state's electricity from renewable sources by 2030."

The State's RPS program was further strengthened by SB 100 in 2018. SB 100 revised the State's RPS Program to require retail sellers of electricity to serve 50 percent and 60 percent of the total kilowatt-hours sold to retail end-use customers be served by renewable energy sources by 2026

[12] California Air Resources Board. SB 375 Regional Targets. https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-program/regional-plan-targets. Accessed December 2024.

and 2030, respectively, and to require that 100 percent of all electricity supplied come from renewable sources by 2045.

Executive Order S-01-07 Low Carbon Fuel Standard Regulation

CARB initially adopted the Low Carbon Fuel Standard (LCFS) regulation in 2009, identifying it as one of the nine discrete early action measures in the 2008 Scoping Plan to reduce California's GHG emissions. The LCFS regulation defines a Carbon Intensity, or "CI," reduction target (or standard) for each year, which the rule refers to as the "compliance schedule." The LCFS regulation requires a reduction of at least 10 percent in the CI of California's transportation fuels by 2020 and maintains that target for all subsequent years.

CARB has begun the rulemaking process for strengthening the compliance target of the LCFS through the year 2030. For a new LCFS target, the preferred scenario in the 2017 Scoping Plan Update identifies an 18 percent reduction in average transportation fuel carbon intensity, compared to a 2010 baseline, by 2030 as one of the primary measures for achieving the state's GHG 2030 target. Achieving the SB 32 reduction goals will require the use of a low carbon transportation fuels portfolio beyond the amount expected to result from the current compliance schedule.[13]

Advanced Clean Cars Program

In 2012, CARB approved the Advanced Clean Cars (ACC) Program (formerly known as Pavley II) for model years 2017-2025. The components of the ACC program are the Low-Emission Vehicle (LEV) regulations and the Zero-Emission Vehicle (ZEV) regulation. The program combines the control of smog, soot, and global warming gases with requirements for greater numbers of zero-emission vehicles into a single package of standards. By 2025, new automobiles under California's Advanced Clean Car program will emit 34 percent less global warming gases and 75 percent less smog-forming emissions.

EO B-48-18, issued by Governor Brown in 2018, establishes a target to have five million ZEVs on the road in California by 2030. This Executive Order is supported by the State's 2018 ZEV Action Plan Priorities Update, which expands upon the State's 2016 ZEV Action Plan. While the 2016

[13] California Air Resources Board. CARB amends Low Carbon Fuel Standard for wider impact. https://ww2.arb.ca.gov/index.php/news/carb-amends-low-carbon-fuel-standard-wider-impact. Accessed December 2024.

plan remains in effect, the 2018 update functions as an addendum, highlighting the most important actions State agencies took in 2018 to implement the directives of EO B-48-18.

Thresholds of Significance

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact related to energy if it will:

- Result in a wasteful, inefficient or unnecessary consumption of energy resources, during project construction or operation; or
- Conflict with or obstruct state or local plans for renewable energy or energy efficiency.

Methodology

The analysis of electricity/natural gas usage is based on the CalEEMod modeling conducted by LSA, which quantifies energy use for project operations. CalEEMod 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. CalEEMod utilizes widely accepted methodologies for estimating emissions combined with default data that can be used when site-specific information is not available, including data from the CEC. CalEEMod contains default values for estimating utility consumption (e.g., water, electricity, natural gas) that may be used in preparation of energy analyses. Additionally, it should also be noted that the energy use factors included in CalEEMod, which was used to estimate energy for the Project, are based on the CEC-sponsored California Commercial End Use Survey (CEUS) and Residential Appliance Saturation Survey (RASS) studies, which provide a more conservative assumption based on actual use surveys and are the best available information for purposes of this assessment. As such, CalEEMod is appropriate for use in energy analyses. In addition, fuel consumption (diesel fuel and gasoline) from vehicle trips during operation was estimated for the opening year (2030) of the proposed Project based on trip estimates from the CalEEMod model and fuel efficiencies from the CARB EMFAC2021 model. Estimates of fuel consumption (diesel fuel and gasoline) from construction trucks and construction worker vehicles were based on trip estimates from the CalEEMod model and fuel efficiencies from the CARB EMFAC2021 model.

The analysis focuses on the sources of energy that are relevant to the proposed Project: electricity, the equipment fuel necessary for Project construction, and vehicle fuel necessary for Project operations. For the purposes of this analysis, the amount of electricity, construction fuel, and fuel use from operations are quantified and compared to that consumed in Kings County. The electricity use of the proposed Project is analyzed as a whole on an annual basis. Electricity use was estimated for the project using default energy intensities by land use type in CalEEMod.

Impacts and Mitigation Measures

Impact 3.2-1: *Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*

Less Than Significant. The proposed Project would increase the demand for energy through day-to-day operations and fuel consumption associated with Project construction. This section discusses energy use resulting from implementation of the proposed Project and evaluates whether the proposed Project would result in the wasteful, inefficient, or unnecessary consumption of energy resources or conflict with any applicable plans for renewable energy and energy efficiency.

Short-Term Construction

The anticipated construction schedule assumes that the proposed Project would be built in approximately 60 months. Construction-specific phases were assessed for their energy consumption under each construction sub-phase: grading, site preparation, building construction, paving, and architectural coating activities.

Construction would require energy for the manufacture and transportation of construction materials, preparation of the site for grading and building activities, and construction of the building.

All or most of this energy would be derived from nonrenewable resources. Petroleum fuels (e.g., diesel and gasoline) would be the primary sources of energy for these activities. However, construction activities are not anticipated to result in an inefficient use of energy as gasoline and diesel fuel would be supplied by construction contractors who would conserve the use of their supplies to minimize their costs on the Project. Energy (i.e., fuel) usage on the Project site during construction would be temporary in nature and would be relatively small in comparison to the State's available energy sources.

Long-Term Operations

Transportation Energy Demand

Energy use associated with the proposed Project would consist of electricity, and vehicle fuel use associated with project operations. The proposed Project would include the development of 615 single-family residences, along with parks, storm basins, and interior and exterior streets. Table 3.2-3 shows the estimated potential increased electricity, gasoline, and diesel demand associated with the proposed Project. The electricity and natural gas rates are from the CalEEMod analysis, and the gasoline and diesel rates are based on the traffic analysis in conjunction with USDOT fuel efficiency data, using the USEPA's fuel economy estimates for 2020 and the California diesel fuel economy estimates for 2021.

Table 3.2-3
Estimated Annual Energy Use of the Proposed Project[14]

	Electricity Use (kWh per year)	Natural Gas Use (kBTU per year)	Gasoline (gallons per year)	Diesel (gallons per year)
Proposed Project	7,268,929	0	470,786	359,039

Source: Compiled by LSA (November 2024).
kBTU = thousand British thermal units
kWh = kilowatt hours

As shown in Table 3.2-3, the estimated increase in electricity demand associated with the operation of the proposed Project would be 7,268,929 kWh per year. Total electricity consumption in Kings County in 2022 was 451,216,891 kWh; therefore, operation of the proposed Project would negligibly increase the annual electricity consumption in Kings County by approximately less than 2 percent.

In addition, the Project would result in energy usage associated with motor vehicle gasoline to fuel project-related trips. As shown above in Table 3.2-3, the proposed Project would result in the estimated consumption of 470,786 gallons of gasoline and 359,039 gallons of

[14] *Air Quality, Health Risk, Greenhouse Gas and Energy Impact Report (AQHRAGGE),* LSA Consulting. December 2024. Page 63. Appendix B.

diesel per year. Based on fuel consumption obtained from EMFAC2021, approximately 67 million gallons of gasoline and approximately 42 million gallons of diesel will be consumed from vehicle trips in Kings County in 2030. Therefore, vehicle trips associated with the proposed Project would increase the annual fuel use in Kings County by approximately 0.7 percent for gasoline fuel usage and approximately 0.85 percent for diesel fuel usage. The proposed Project would result in fuel usage that is a small fraction of current annual fuel use in Kings County, and fuel consumption associated with vehicle trips generated by Project operations would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region. Therefore, gasoline and diesel demand generated by vehicle trips associated with the proposed Project would be a minimal fraction of gasoline and diesel fuel consumption in California.

Furthermore, the proposed Project would be constructed using energy efficient modern building materials and construction practices, and the proposed Project also would use new modern appliances and equipment, in accordance with the Appliance Efficiency Regulations (Title 20, CCR Sections 1601 through 1608). The expected energy consumption during construction and operation of the proposed Project would be consistent with typical usage rates for residential uses; however, energy consumption is largely a function of personal choice and the physical structure and layout of buildings. The proposed Project would be all-electric, with no natural gas connections proposed. As such, the proposed Project would not result in a potential significant impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation. Thus, any impacts would be considered ***less than significant***.

Mitigation Measures

None Required.

Impact 3.2-2: *Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

Less Than Significant. The CEC recently adopted the 2023 Integrated Energy Policy Report. The 2023 Integrated Energy Policy Report provides the results of the CEC's assessments of a variety of energy issues facing California. Many of these issues will require action if the State is to meet its climate, energy, air quality, and other environmental goals while maintaining energy reliability and controlling costs. The 2023 Integrated Energy Policy Report covers a broad range of topics, including decarbonizing buildings, integrating renewables, energy efficiency, energy

equity, integrating renewable energy, updates on Southern California electricity reliability, climate adaptation activities for the energy sector, natural gas assessment, transportation energy demand forecasts, and the California Energy Demand Forecast.

As indicated above, energy usage on the Project site during construction would be temporary in nature and would be relatively small in comparison to the State's available energy sources. In addition, energy usage associated with operation of the proposed Project would be relatively small in comparison to the region's available energy sources, and energy impacts would be negligible at the regional level, and because the Project's total impact on regional energy supplies would be minor, the proposed Project would not conflict with or obstruct California's energy conservation plans as described in the CEC's 2023 Integrated Energy Policy Report. The impact is considered ***less than significant.***

Mitigation Measures

None Required.

Cumulative Impacts

Less Than Cumulatively Considerable. Potential cumulative impacts on energy would result if the proposed Project, in combination with past, present, and future projects, would result in the wasteful or inefficient use of energy. This could result from development that would not incorporate sufficient building energy efficiency features, would not achieve building energy efficiency standards, or would result in the unnecessary use of energy during construction and/or operation. The cumulative projects within the areas serviced by the energy service providers would be applicable to this analysis; this includes existing aging structures that are energy inefficient. Projects that include development that would have the potential to consume energy in an inefficient manner would have the potential to contribute to a cumulative impact.

As previously described, the proposed Project would not result in significant environmental impacts due to wasteful, inefficient, or unnecessary use of energy due to various design features, including installation of solar, EV charging equipment, bicycle parking, as well as following standards that promote energy efficiency, water efficiency and conservation, and material conservation and resource efficiency. Similar to the proposed Project, newly constructed cumulative projects would be subject to CALGreen, which provides energy efficiency standards for commercial and residential buildings. Over time, CALGreen would implement increasingly stringent energy efficiency standards that would require the proposed Project and newly

constructed cumulative projects to minimize the wasteful and inefficient use of energy. Furthermore, various federal and state regulations - including the Low Carbon Fuel Standard, Pavley Clean Car Standards, and Low Emission Vehicle Program -would serve to reduce the transportation fuel demand of cumulative projects.

Development associated with build-out of the proposed Project would be required to accommodate growth. As discussed above, new development and land use turnover would be required to comply with statewide mandatory energy requirements outlined in Title 24, Part 6, of the California Code of Regulations (the CALGreen Code), which could decrease estimated electricity and natural gas consumption compared to the existing land use. Furthermore, energy consumed by development in the Project area would continue to be subject to the regulations described in the Regulatory Setting of this Section. For these reasons, energy that would be consumed by the Project is not considered unnecessary, inefficient, or wasteful. Considering the information provided above, the proposed Project, in conjunction with other cumulative development, would not result in a significant cumulative impact to energy resources. Impacts are ***less than cumulatively considerable.***

3.3 Greenhouse Gas Emissions

This section discusses regional greenhouse gas (GHG) emissions and climate change impacts that could result from implementation of the proposed Project. The information and analysis presented in this Section are based on the Air Quality, Health Risk, Greenhouse Gas and Energy Impact Report (AQHRAGGE) prepared for this Project by LSA Consulting, report date December 2024. The full AQHRAGGE can be reviewed in Appendix B. No NOP comment letters were received pertaining to this topic.

Environmental Setting

Climate Change

Climate change is a change in the average weather of the earth that is measured by alterations in wind patterns, storms, precipitation, and temperature. These changes are assessed using historical records of temperature 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 of 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 GHGs needed to stabilize global temperatures and climate change impacts. In its Fourth Assessment Report, the IPCC predicted that the global mean temperature change from 1990 to 2100, given by the full set of Special Report on Emissions (SRES) scenarios, could range from 1.4 degrees Celsius (°C) to 5.8°C.[1] The report states, "Changes in the atmosphere, cryosphere and ocean show unequivocally that the world is warming,"[2] and that "It is very likely that anthropogenic greenhouse gas increases caused most of the observed increase in global average temperatures since the mid-20th century."[3]

[1] Intergovernmental Panel on Climate Change (IPCC), Fourth Assessment Report (AR4). Global Climate Projections. Chapter 10, 10.5.3 – Global Mean Responses from Different Scenarios. Page 802. https://www.ipcc.ch/site/assets/uploads/2018/02/ar4-wg1-chapter10-1.pdf. Accessed December 2024.

[2] Ibid. Technical Summary, page 51.

[3] Ibid. Page 60.

Climate Change Impacts in California

California is already experiencing the impacts of a changing climate, including observable shifts in the frequency and severity of extreme weather events, such as more frequent and severe heat waves and wildfires, more variable precipitation, and a succession of droughts that have increased as temperatures warm. Statewide trends are elaborated below[4]:

- **Temperature.** Annual temperature increases experienced over most of California have already exceeded 1°F, with some areas exceeding 2°F. The daily maximum average temperature, an indicator of extreme temperature shifts, is expected to rise 4.4°F–5.8°F by mid-century and 5.6°F–8.8°F by late century. Heat-Health Events (HHEs), which better predict risk to populations vulnerable to heat, will worsen drastically throughout the state. By midcentury, the Central Valley is projected to experience average HHEs that are two weeks longer, and HHEs could occur four to ten times more often in the Northern Sierra region.

- **Precipitation.** California is known for its highly variable precipitation and has the highest variability of year-to-year precipitation in the contiguous United States. California's variable precipitation is also characterized by multi-year wet or dry periods. As a result, future average precipitation is difficult to predict, but may likely not change substantially when measured by annual precipitation. However, there is high confidence in projections that even if precipitation remains stable or increases, drought severity and the number of dry years will increase, even as more extreme precipitation events may occur. Warming air temperatures will increase moisture loss from soils, which will lead to drier seasonal conditions even if precipitation increases. The snowpack in California's mountains is a key source of surface and groundwater in the state, and rising temperatures will cause a decline in snowpack by more than a third by 2050 and more than half by 2100, even if precipitation levels remain stable.

- **Wildfire.** Wildfires are driven by multiple, complex, and interacting factors such as the environment, land use, and human activity, all of which make future wildfires difficult to predict. In recent years, the area burned by wildfire in California has dramatically increased and unprecedented fires are occurring in sensitive ecosystems like higher elevations and along the coast. In addition, many of California's wildfires are burning

[4] Summary of Projected Climate Change Impacts on California. California Climate Adaption Strategy. https://climateresilience.ca.gov/overview/impacts.html. Accessed December 2024.

hotter and more intensely than observed in recent history. Fires are concentrating in upper watersheds, further compounding crises like drought. The 2020 wildfires resulted in the largest wildfire season recorded in California's modern history, with nearly 10,000 fires that burned over four million acres in total. However, fewer than 40 fires accounted for the vast majority of the area burned, pointing to the accelerating severity and frequency of extreme fires. In 2021, California experienced 4 of the 20 largest wildfires in our history, with 8,000 wildfires burning over 2.5 million acres across the state. The 2021 fire season also marks the first time that fire crossed the granite crest of the Sierra, California's largest natural fuel break. A model developed for California's Fourth Climate Change Assessment projected up to a 77 percent increase in average area burned and a 50 percent increase in the frequency of fires exceeding 25,000 acres by 2100.

- **Sea-level rise, coastal flooding, and erosion.** Sea-level rise is already accelerating along the California coast and will continue to rise substantially over the 21st century, threatening coastal communities, natural resources, cultural sites, and infrastructure. The current best available science predicts that the state's coastline could experience between 1.1–1.9 feet of sea-level rise by 2050 (with a low-probability, but high impact extreme of 2.7 feet) and between 2.4–6.9 feet by 2100 (with a low-probability, but high impact extreme of 10.2 feet). Though we may be uncertain the exact amount of sea-level rise for a certain location at a certain year, we know that water levels are rising and communities need to be prepared. Coastal wave events and king tides, in combination with current and rising sea levels, will increase flood impacts on land, which will exacerbate the impact on coastal assets. Rising sea levels may also salinate coastal groundwater aquifers and raise groundwater tables, causing increased flooding leading to impacts that will further damage buried and low-lying infrastructure. Finally, rising water levels and increased storm activity will increase coastal erosion, impacting beaches and cliffs throughout the state. For example, a projected 31–67 percent of Southern California beaches are projected to be lost by the end of the century if adaptation actions are not implemented.

- **Ocean warming, hypoxia, and acidification.** The world's oceans absorb excess heat (~90%) and CO_2 (~30%) from greenhouse gas emissions, the former contributing to ocean warming and the latter to ocean acidification. Both warming and acidification can be catastrophic to marine ecosystems (e.g. disease, degradation, bleaching) and the coastal communities and industries that rely on them. Relatedly, deoxygenation or hypoxia of surface waters can lead to dead zones that further challenge marine habitats and species and cause cascading impacts for our coastal economies and communities.

- **Human health.** Climate change is considered the greatest global public health threat of the 21st century and affects virtually all aspects of health and well-being, including access to clean air, food, water, shelter, and physical safety. Communities across California are experiencing health impacts associated with the climate crisis today. Examples include injury, illness, and death from wildfires and wildfire smoke, extreme heat, drought, landslides, extreme weather events, vector-borne diseases, and associated mental health impacts. Climate-driven disasters directly result in injuries, deaths, and displacement, but also loss of livelihoods, businesses, crops, and homes - contributing to unemployment, poverty, and the housing crisis. Direct impacts and subsequent cascading effects increase chronic diseases, infectious diseases, mental health challenges, and heat- and smoke-related illnesses. Climate change affects every Californian, but the most climate vulnerable communities and populations experience worse health impacts from the crisis than others.

Greenhouse Gases

Gases that trap heat in the atmosphere are called greenhouse gases. This section provides information on specific types of emissions.[5]

- **Carbon dioxide (CO_2)**: Carbon dioxide enters the atmosphere through burning fossil fuels (coal, natural gas, and oil), solid waste, trees and other biological materials, and also as a result of certain chemical reactions (e.g., cement production). Carbon dioxide is removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of the biological carbon cycle.

- **Methane (CH_4)**: Methane is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices, land use, and by the decay of organic waste in municipal solid waste landfills.

- **Nitrous oxide (N_2O)**: Nitrous oxide is emitted during agricultural, land use, and industrial activities; combustion of fossil fuels and solid waste; as well as during treatment of wastewater.

- **Fluorinated gases**: Hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride are synthetic, powerful greenhouse gases that are emitted from a variety of

[5] Environmental Protection Agency. Greenhouse Gas Emissions, Overview of Greenhouse Gases. https://www.epa.gov/ghgemissions/overview-greenhouse-gases. Accessed December 2024.

household, commercial, and industrial applications and processes. Fluorinated gases (especially hydrofluorocarbons) are sometimes used as substitutes for stratospheric ozone-depleting substances (e.g., chlorofluorocarbons, hydrochlorofluorocarbons, and halons). Fluorinated gases are typically emitted in smaller quantities than other greenhouse gases, but they are potent greenhouse gases. With global warming potentials that typically range from thousands to tens of thousands, they are sometimes referred to as high-GWP gases because, for a given amount of mass, they trap substantially more heat than CO_2.

Each gas' effect on climate change depends on concentration, how long the greenhouse gases stay in the atmosphere and how strongly each greenhouse gas impacts the atmosphere. For each greenhouse gas, a Global Warming Potential (GWP) was developed to allow comparisons of the global warming impacts of different gases. Specifically, it is a measure of how much energy the emissions of 1 ton of a gas will absorb over a given period of time, typically a 100-year time horizon, relative to the emissions of 1 ton of carbon dioxide (CO_2). Gases with a higher GWP absorb more energy, per ton emitted, than gases with a lower GWP, and thus contribute more to warming Earth. [6]

Emissions Inventories and Trends

According to the CARB's recent GHG inventory for the State, released 2021, California produced 418.2 million metric tons of carbon dioxide equivalent ($MMTCO_2e$) in 2019. The major source of GHGs in California is transportation, contributing approximately 39.7 percent of the state's total GHG emissions in 2019.[7] This puts total emissions at 12.8 $MMTCO_2e$ below the 2020 target of 431 million metric tons. California statewide GHG emissions dropped below the 2020 GHG limit in 2016 and have remained below the 2020 GHG limit since then.

Regulatory Setting

International Regulations

Intergovernmental Panel on Climate Change

Created in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP), the objective of the IPCC is to provide governments at all levels

[6] Ibid.

[7] California Air Resources Board (CARB). 2021. California Greenhouse Gas Emissions for 2000 to 2019. https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2019/ghg_inventory_trends_00-19.pdf. Accessed December 2024.

with scientific information that they can use to develop climate policies. IPCC reports are also a key input into international climate change negotiations. For the assessment reports, experts volunteer their time as IPCC authors to assess the thousands of scientific papers published each year to provide a comprehensive summary of what is known about the drivers of climate change, its impacts and future risks, and how adaptation and mitigation can reduce those risks.[8]

United Nations Framework Convention on Climate Change (Convention)

On March 21, 1994, the United States joined 197 other countries around the world in signing the Convention. The ultimate objective of the Convention is to stabilize greenhouse gas concentrations "at a level that would prevent dangerous anthropogenic (human induced) interference with the climate system." It states that "such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened, and to enable economic development to proceed in a sustainable manner." The Conventions bounds its member states to act in the interest of human safety even in the face of scientific uncertainty.[9]

Kyoto Protocol

The Kyoto Protocol was adopted on 11 December 1997. Owing to a complex ratification process, it entered into force on 16 February 2005. The Kyoto Protocol operationalizes the United Nations Framework Convention on Climate Change by committing industrialized countries and economies in transition to limit and reduce greenhouse gas emissions in accordance with agreed individual targets. The Convention itself only asks those countries to adopt policies and measures on mitigation and to report periodically. Currently, there are 192 Parties to the Kyoto Protocol.[10]

Paris Agreement

Parties to the United Nations Framework Convention on Climate Change (UNFCCC) reached a landmark agreement on December 12, 2015 in Paris, which was a binding agreement bringing all nations together to combat climate change and adapt to its effects. Its overarching goal is to hold "the increase in the global average temperature to well below 2°C above pre-industrial levels" and pursue efforts "to limit the temperature increase to 1.5°C above pre-industrial levels." However, in recent

[8] Intergovernmental Panel on Climate Change (IPCC), About the IPCC. https://www.ipcc.ch/about/. Accessed December 2024.

[9] United Nations Climate Change. What is the United Nations Framework Convention on Climate Change? https://unfccc.int/process-and-meetings/what-is-the-united-nations-framework-convention-on-climate-change. Accessed December 2024.

[10] United Nations Climate Change. What is the Kyoto Protocol? https://unfccc.int/kyoto_protocol. Accessed December 2024.

years, world leaders have stressed the need to limit global warming to 1.5°C by the end of this century.[11]

Implementation of the Paris Agreement requires economic and social transformation, based on the best available science. The Paris Agreement works on a five-year cycle of increasingly ambitious climate action carried out by countries. Since 2020, countries have been submitting their national climate action plans, known as nationally determined contributions (NDCs). Each successive NDC is meant to reflect an increasingly higher degree of ambition compared to the previous version.[12]

Federal Regulations

Prior to the last decade, there were no concrete federal regulations of GHGs or major planning for climate change adaptation. Since then, federal activity has increased. The following are actions regarding the federal government, GHGs, and fuel efficiency.

Greenhouse Gas Endangerment

Massachusetts v. EPA (Supreme Court Case 05-1120) was argued before the United States Supreme Court on November 29, 2006, in which it was petitioned that the U.S. Environmental Protection Agency (EPA) regulate four GHGs, including CO_2, under Section 202(a)(1) of the Clean Air Act. A decision was made on April 2, 2007, in which the Supreme Court found that GHGs are air pollutants covered by the Clean Air Act.[13] The Court held that the Administrator must determine whether emissions of GHGs from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. On December 7, 2009, the EPA Administrator signed two distinct findings regarding GHGs under section 202(a) of the Clean Air Act:[14]

- Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases—carbon dioxide, methane, nitrous

[11] United Nations Climate Change. What is the Paris Agreement? https://unfccc.int/process-and-meetings/the-paris-agreement. Accessed December 2024.

[12] Ibid.

[13] Environmental Protection Agency, Endangerment and Cause or Contribution Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act. Background. https://www.epa.gov/climate-change/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a#background. Accessed December 2024.

[14] Environmental Protection Agency, Endangerment and Cause or Contribution Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act. Action. https://www.epa.gov/climate-change/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a. Accessed December 2024.

oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride—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 impose requirements on industry or other entities. However, this was a prerequisite for implementing GHG emissions standards for vehicles, as discussed in the section "Clean Vehicles" below. After a lengthy legal challenge, the United States Supreme Court declined to review an Appeals Court ruling upholding the EPA Administrator findings.

Clean Vehicles

First enacted by Congress in 1975, the purpose of CAFE (Corporate Average Fuel Economy) is to reduce energy consumption by increasing the fuel economy of cars and light trucks. The CAFE standards are fleet-wide averages that must be achieved by each automaker for its car and truck fleet, each year, since 1978. When these standards are raised, automakers respond by creating a more fuel-efficient fleet, which improves the nation's energy security and saves consumers money at the pump, while also reducing greenhouse gas (GHG) emissions.

CAFE standards are regulated by DOT's National Highway Traffic and Safety Administration (NHTSA). NHTSA sets and enforces the CAFE standards, while the Environmental Protection Agency (EPA) calculates average fuel economy levels for manufacturers, and also sets related GHG standards. NHTSA establishes CAFE standards under the Energy Policy and Conservation Act (EPCA) of 1975, as amended by the Energy Independence and Security Act (EISA) of 2007, while EPA establishes GHG emissions standards under the Clean Air Act. Following the direction set by President Obama on May 21, 2010, NHTSA and EPA have issued joint Final Rules for Corporate Average Fuel Economy and Greenhouse Gas emissions regulations for passenger cars and light trucks built in model years 2017 and beyond, and have also developed fuel efficiency and GHG emissions regulations for medium- and heavy-duty vehicles built in model years 2014 through 2018.

In 2012, NHTSA established final passenger car and light truck CAFE standards for model years 2017-2021, which the agency projects will require in model year 2021, on average, a combined fleet-wide fuel economy of 40.3-41.0 mpg. As part of the same rulemaking action, EPA issued GHG standards, which are harmonized with NHTSA's fuel economy standards that are projected to require 163 grams/mile of carbon dioxide (CO_2) in model year 2025.

President Obama directed NHTSA and EPA to develop and issue the next phase ("Phase 2") of medium- and heavy-duty vehicle fuel efficiency standards and greenhouse gas (GHG) standards

which were finalized in August 2016. This second round of fuel efficiency standards builds on the first-ever standards for medium- and heavy-duty vehicles (model years 2014 through 2018).

NHTSA has also proposed to require badges, labels and owner's manual information for new passenger cars, low-speed vehicles (LSVs) and light-duty trucks rated at not more than 8,500 pounds gross vehicle weight, in order to increase consumer awareness regarding the use and benefits of alternative fuels.

This proposed rule would implement specific statutory mandates that manufacturers be required to: identify each vehicle capable of running on an alternative fuel by means of a permanent and prominent display affixed to the exterior of the vehicle; add proposed text describing the capabilities and benefits of using alternative fuels to the owners' manuals provided for alternative fuel vehicles; and identify each vehicle that is capable of running on an alternative fuel by means of a label in the fuel filler compartment.[15]

Mandatory Reporting of Greenhouse Gases

The Consolidated Appropriations Act of 2008, passed in December 2007, requires the establishment of mandatory GHG reporting requirements. On September 22, 2009, the EPA issued the Final Mandatory Reporting of Greenhouse Gases Rule, which became effective January 1, 2010. The rule requires reporting of GHG emissions from large sources and suppliers in the United States, and is intended to collect accurate and timely emissions data to inform future policy decisions[16]. Under the rule, suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of GHG emissions are required to submit annual reports to the EPA.

New Source Review

The EPA issued a final rule on May 13, 2010 that establishes thresholds for GHGs, which will define when permits under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities.[17] This final rule "tailors" the requirements of these Clean Air Act permitting programs to limit which facilities will be

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[15] United State Department of Transportation. Corporate Average Fuel Economy (CAFÉ) Standards. https://www.transportation.gov/mission/sustainability/corporate-average-fuel-economy-cafe-standards. Accessed December 2024.

[16] Environmental Protection Agency. What is the Greenhouse Gas Reporting Program (GHGRP)? https://www.epa.gov/ghgreporting/what-ghgrp. Accessed December 2024.

[17] Environmental Protection Agency, Final Rule: Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule. https://www.epa.gov/sites/default/files/2015-12/documents/20100413fs.pdf. Accessed December 2024.

required to obtain Prevention of Significant Deterioration and Title V permits. In the preamble to the revisions to the federal code of regulations, the EPA states:

> This rulemaking is necessary because without it the Prevention of Significant Deterioration and Title V requirements would apply, as of January 2, 2011, at the 100 or 250 tons per year levels provided under the Clean Air Act, greatly increasing the number of required permits, imposing undue costs on small sources, overwhelming the resources of permitting authorities, and severely impairing the functioning of the programs. EPA is relieving these resource burdens by phasing in the applicability of these programs to greenhouse gas sources, starting with the largest greenhouse gas emitters. This rule establishes two initial steps of the phase-in. The rule also commits the agency to take certain actions on future steps addressing smaller sources, but excludes certain smaller sources from Prevention of Significant Deterioration and Title V permitting for greenhouse gas emissions until at least April 30, 2016.[18]

The EPA estimates that facilities responsible for nearly 70 percent of the national GHG emissions from stationary sources will be subject to permitting requirements under this rule. This includes the nation's largest GHG emitters—power plants, refineries, and cement production facilities.

Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units.

As required by a settlement agreement, the EPA proposed new performance standards for emissions of carbon dioxide for new, affected, fossil fuel-fired electric utility generating units on March 27, 2012. These carbon pollution standards set power plants and set carbon dioxide (CO2) limits for new gas-fired combustion turbines and CO2 emission guidelines for existing coal, oil and gas-fired steam generating units, securing important climate benefits and protecting public health.[19] President Trump signed the Executive Order on Energy Independence (E.O. 13783), which calls for a review of the Clean Power Plan.[20] On October 16, 2017, the EPA issued the proposed rule Repeal of Carbon

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[18] Ibid.

[19] Environmental Protection Agency, Greenhouse Gas Standards and Guidelines for Fossil Ful-Fired Power Plants. https://www.epa.gov/stationary-sources-air-pollution/greenhouse-gas-standards-and-guidelines-fossil-fuel-fired-power. Accessed December 2024.

[20] Environmental Protection Agency, Complying with President Trump's Executive Order on Energy Independence. https://19january2021snapshot.epa.gov/energy-independence_.html. Accessed December 2024.

Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units an Energy Independence.

Cap-and-Trade

Emissions trading, sometimes referred to as "cap and trade" or "allowance trading," is an approach to reducing pollution that has been used successfully to protect human health and the environment. Emissions trading programs have two key components: a limit (or cap) on pollution, and tradable allowances equal to the limit that authorize allowance holders to emit a specific quantity (e.g., one ton) of the pollutant. This limit ensures that the environmental goal is met and the tradable allowances provide flexibility for individual emissions sources to set their own compliance path. Because allowances can be bought and sold in an allowance market, these programs are often referred to as "market-based."[21]

The Regional Greenhouse Gas Initiative is an effort to reduce GHGs among the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont.[22] Each state caps carbon dioxide emissions from power plants, auctions carbon dioxide emission allowances, and invests the proceeds in strategic energy programs that further reduce emissions, save consumers money, create jobs, and build a clean energy economy. The Initiative began in 2008.

The Western Climate Initiative partner 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. Currently, only California and Quebec are participating in the Cap-and-Trade program.[23]

State of California Regulations

The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation such as the landmark Assembly Bill (AB) 32 California Global Warming Solutions Act of 2006 was specifically enacted to address GHG emissions. Other legislation such as Title 24 and Title 20 energy standards were originally

[21] Environmental Protection Agency, What is Emission Trading? https://www.epa.gov/emissions-trading-resources/what-emissions-trading. Accessed December 2024.

[22] The Regional Greenhouse Gas Initiative. https://www.rggi.org/. Accessed December 2024.

[23] Design for the WCI Regional Program, Design Summary. Page 1. https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2010/capandtrade10/capv3appi.pdf. Accessed December 2024.

adopted for other purposes such as energy and water conservation, but also provide GHG reductions. This section describes the major provisions of the legislation.

AB 32. The California State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires that GHGs emitted in California be reduced to 1990 levels by the year 2020.[24] "Greenhouse gases" as defined under AB 32 include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride. The ARB is the state agency charged with monitoring and regulating sources of GHGs. AB 32 states the following:

> Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.[25]

The ARB approved the 1990 GHG emissions level of 427 $MMTCO_2e$ on December 6, 2007. Therefore, to meet the State's target, emissions generated in California in 2020 are required to be equal to or less than 427 $MMTCO_2e$. Emissions in 2020 in a BAU scenario were estimated to be 596 $MMTCO_2e$, which do not account for reductions from AB 32 regulations (ARB 2008a). At that rate, a 28 percent reduction was required to achieve the 427 $MMTCO_2e$ 1990 inventory. In October 2010, ARB prepared an updated 2020 forecast to account for the effects of the 2008 recession and slower forecasted growth. The 2020 inventory without the benefits of adopted regulation is now estimated at 545 $MMTCO_2e$. Therefore, under the updated forecast, a 21.7 percent reduction from BAU is required to achieve 1990 levels.

Calculation of the original 1990 limit approved in 2007 was revised in 2014 using the scientifically updated IPCC AR4 global warming potential values, to 431 $MMTCO_2e$. ARB approved 431

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[24] California Air Resources Board, AB 32 Global Warming Solutions Act of 2006. https://ww2.arb.ca.gov/resources/fact-sheets/ab-32-global-warming-solutions-act-2006. Accessed December 2024.

[25] California Legislative Information. AB-32 Air Pollution: Greenhouse Gases: California Global Warming Solutions Act of 2006. https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=200520060AB32. Accessed December 2024.

MMTCO$_2$e as the 2020 emission limit with the approval of the First Update to the Scoping Plan on May 22, 2014.[26]

ARB 2008 Scoping Plan. The ARB's Climate Change Scoping Plan (Scoping Plan) contains measures designed to reduce the State's emissions to 1990 levels by the year 2020 to comply with AB 32.[27] The Scoping Plan identifies recommended measures for multiple GHG emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors. As stated in the Scoping Plan, the key elements of the strategy for achieving the 2020 GHG target 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.

The 2013 update measured progress and fine-tuned programs toward the 2020 goal and highlighted the need to focus on short-lived climate pollutants. The 2017 update shifted focus to the SB 32 goal of a 40 percent reduction below 1990 levels by 2030 by laying out a detailed cost-effective and technologically feasible path to this target and assessed progress towards achieving the AB 32 goal of returning to 1990 GHG levels by 2020. The 2020 goal was ultimately reached in 2016–four years ahead of the schedule called for under AB 32. The 2022 update both assesses progress towards achieving the State's 2030 emissions reduction goal and draws on a decade and a half of proven regulations,

[26] California Air Resources Board. GHG 1990 Emissions Level & 2020 Limit. https://ww2.arb.ca.gov/ghg-2020-limit. Accessed December 2024.

[27] California Air Resources Board. AB 32 Climate Change Scoping Plan. https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/about. Accessed December 2024.

incentives, and carbon pricing policies alongside new approaches to outline a balanced and aggressive course of effective actions to achieve carbon neutrality by 2045 or sooner. This includes an unprecedented pace of actions to develop the clean energy foundation on which to build the low-carbon economy.[28]

Cap-and-Trade Program. The Cap-and-Trade Program is a key element of the Scoping Plan. It sets a statewide limit on sources responsible for 85 percent of California's greenhouse gas emissions, and establishes a price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy. The program is designed to provide covered entities the flexibility to seek out and implement the lowest cost options to reduce emissions. The program conducted its first auction in November 2012. Compliance obligations began for power plants and large industrial sources in January 2013. [29]

AB 398. The Governor signed AB 398 on July 25, 2017 to extend the Cap-and-Trade Program to 2030. Cap and trade is a key part of California's plan to reduce greenhouse gas emissions 40 percent below 1990 levels by 2030. The enacted bill makes design changes to the post-2020 carbon market, such as including a price ceiling, price containment points, additional limits to the number and location of offset credits, limits on who can set greenhouse gas emission requirements, and specifics on industry assistance factors. AB 398 also prevents Air Districts from adopting or implementing emission reduction rules from stationary sources that are also subject to the Cap-and-Trade Program.[30]

SB 32 and 2017 Scoping Plan. The Governor signed SB 32 on September 8, 2016. SB 32 gives ARB the statutory responsibility to include the 2030 target previously contained in Executive Order B-30-15 in the next Scoping Plan update. SB 32 states that "In adopting rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions authorized by this division, the state [air resources] board shall ensure that statewide greenhouse gas emissions are reduced to at least 40 percent below the statewide greenhouse gas emissions limit no later than December 31, 2030." [31]The 2017 Climate Change Scoping Plan Update addressing the SB 32

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[28] California Air Resources Board. California's 2022 Climate Change Scoping Plan Fact Sheet. https://ww2.arb.ca.gov/resources/fact-sheets/californias-2022-climate-change-scoping-plan-fact-sheet. Accessed December 2024.

[29] California Environmental Protection Agency, Air Resources Board. Overview of ARB Emissions Trading Program. https://ww2.arb.ca.gov/sites/default/files/cap-and-trade/guidance/cap_trade_overview.pdf. Accessed December 2024.

[30] Center for Climate and Energy Solutions. Summary of California's Extension of its Cap-and-Trade Program. August 2017. https://www.c2es.org/wp-content/uploads/2017/09/summary-californias-extension-its-cap-trade-program.pdf. Accessed December 2024.

[31] California Legislative Information. SB-32 California Global Warming Solution Act of 2006: emissions limit. 2015-2016. https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201520160SB32. Accessed December 2024.

targets was adopted on December 14, 2017. The major elements of the framework proposed to achieve the 2030 target are as follows:

1. SB 350

    - Achieve 50 percent Renewables Portfolio Standard (RPS) by 2030.
    - Doubling of energy efficiency savings by 2030.

2. Low Carbon Fuel Standard (LCFS)

    - Increased stringency (reducing carbon intensity 18 percent by 2030, up from 10 percent in 2020).

3. Mobile Source Strategy (Cleaner Technology and Fuels Scenario)

    - Maintaining existing GHG standards for light- and heavy-duty vehicles.
    - Put 4.2 million zero-emission vehicles (ZEVs) on the roads.
    - Increase ZEV buses, delivery and other trucks.

4. Sustainable Freight Action Plan

    - Improve freight system efficiency.
    - Maximize use of near-zero emission vehicles and equipment powered by renewable energy.
    - Deploy over 100,000 zero-emission trucks and equipment by 2030.

5. Short-Lived Climate Pollutant (SLCP) Reduction Strategy

    - Reduce emissions of methane and hydrofluorocarbons 40 percent below 2013 levels by 2030.
    - Reduce emissions of black carbon 50 percent below 2013 levels by 2030.

6. SB 375 Sustainable Communities Strategies

    - Increased stringency of 2035 targets.

7. Post-2020 Cap-and-Trade Program

    - Declining caps, continued linkage with Québec, and linkage to Ontario, Canada.
    - ARB will look for opportunities to strengthen the program to support more air quality co-benefits, including specific program design elements. In Fall 2016, ARB staff described potential future amendments including reducing the offset usage limit, redesigning the

allocation strategy to reduce free allocation to support increased technology and energy investment at covered entities and reducing allocation if the covered entity increases criteria or toxics emissions over some baseline.

8. 20 percent reduction in greenhouse gas emissions from the refinery sector.
9. By 2018, develop Integrated Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

2022 Scoping Plan and AB 1279. ARB adopted the 2022 Scoping Plan on December 16, 2022 that addresses long-term GHG goals set forth by AB 1279.[32] The 2022 Scoping Plan outlines the State's pathway to achieve carbon neutrality and an 85 percent reduction in 1990 emissions goal by 2045. Unlike the 2017 Scoping Plan Update, ARB no longer includes a numeric per capita threshold and instead advocates for compliance with a local GHG reduction strategy consistent with CEQA Guidelines section 15183.5.

The key elements of ARB's 2022 Scoping Plan focus on the transportation sector, where reductions are primarily influenced by regulations at the state level. Under the 2022 Scoping Plan, the State will lead efforts to meet the 2045 carbon neutrality goal through implementation of the following objectives:[33]

- Reimagine roadway projects that increase VMT in a way that meets community needs and reduces the need to drive.
- Double local transit capacity and service frequencies by 2030.
- Complete the High-Speed Rail (HSR) System and other elements of the intercity rail network by 2040.
- Double local transit capacity and service frequencies by 2030.
- Expand and complete planned networks of high-quality active transportation infrastructure.

[32] California Air Resources Board. Final 2022 Scoping Plan Update – Achieving Carbon Neutrality by 2045. https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan#:~:text=The%202022%20Scoping%20Plan%20for%20Achieving%20Carbon%20Neutrality,than%202045%2C%20as%20directed%20by%20Assembly%20Bill%201279. Accessed December 2024.
[33] California Air Resources Board, 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan). https://ww2.arb.ca.gov/resources/documents/2022-scoping-plan-documents. Accessed December 2024.

- Increase availability and affordability of bikes, e-bikes, scooters, and other alternatives to light-duty vehicles, prioritizing needs of underserved communities.
- Shift revenue generation for transportation projects away from the gas tax into more durable sources by 2030.
- Authorize and implement roadway pricing strategies and reallocate revenues to equitably improve transit, bicycling, and other sustainable transportation choices.
- Prioritize addressing key transit bottlenecks and other infrastructure investments to improve transit operational efficiency over investments that increase VMT.
- Develop and implement a statewide transportation demand management (TDM) framework with VMT mitigation requirements for large employers and large developments.
- Prevent uncontrolled growth of autonomous vehicle (AV) VMT, particularly zero-passenger miles.
- Channel new mobility services towards pooled use models, transit complementarity, and lower VMT outcomes.
- Establish an integrated statewide system for trip planning, booking, payment, and user accounts that enables efficient and equitable multimodal systems.
- Provide financial support for low-income and disadvantaged Californians' use of transit and new mobility services.
- Expand universal design features for new mobility services.
- Accelerate infill development in existing transportation-efficient places and deploy strategic resources to create more transportation-efficient locations.
- Encourage alignment in land use, housing, transportation, and conservation planning in adopted regional plans (RTP/SCS and RHNA) and local plans (e.g., general plans, zoning, and local transportation plans).
- Accelerate production of affordable housing in forms and locations that reduce VMT and affirmatively further fair housing policy objectives.
- Reduce or eliminate parking requirements (and/or enact parking maximums, as appropriate) and promote redevelopment of excess parking, especially in infill locations.

- Preserve and protect existing affordable housing stock and protect existing residents and businesses from displacement and climate risk.

Included in the 2022 Scoping Plan is a set of Local Actions (Appendix D to the 2022 Scoping Plan) aimed at providing local jurisdictions with tools to reduce GHGs and assist the state in meeting the ambitious targets set forth in the 2022 Scoping Plan. Appendix D to the 2022 Scoping Plan includes a section on evaluating plan-level and project-level alignment with the State's Climate Goals in CEQA GHG analyses. In this section, ARB identifies several recommendations and strategies that should be considered for new development to determine consistency with the 2022 Scoping Plan. Notably, this section is focused on residential and mixed-use projects. Specifically, ARB states:

> "The recommendations outlined in this section apply only to residential and mixed-use development project types. California currently faces both a housing crisis and a climate crisis, which necessitates prioritizing recommendations for residential projects to address the housing crisis in a manner that simultaneously supports the State's GHG and regional air quality goals. CARB plans to continue to explore new approaches for other land use types in the future." (Page 21 of Appendix D to the 2022 Scoping Plan).

Considering the information summarized above, it would be inappropriate to apply the requirements contained in Appendix D of the 2022 Scoping Plan to any land use types other than residential or mixed-use residential development.

SB 375—The Sustainable Communities and Climate Protection Act of 2008. SB 375 was signed into law on September 30, 2008. It supports the State's climate goals by helping reduce greenhouse gas emissions through coordinated transportation, housing, and land use planning.[34] Under the Sustainable Communities Act, the California Air Resources Board (CARB) sets regional targets for greenhouse gas emissions reductions from passenger vehicle use. CARB set targets for 2020 and 2035 for each of the 18 metropolitan planning organization regions in 2010, and updated them in 2018.

SB 375 states, "Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32." SB 375 does the following: (1) requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for

[34] California Air Resources Board. Sustainable Communities & Climate Protection Program. https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-climate-protection-program/about. Accessed December 2024.

reducing GHG emissions, (2) aligns planning for transportation and housing, and (3) creates specified incentives for the implementation of the strategies.

AB 1493 Pavley Regulations and Fuel Efficiency Standards. California AB 1493, enacted on July 22, 2002, required the ARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light-duty trucks. The bill directed the Air Resources Board (CARB) to adopt regulations that achieve the maximum feasible and cost-effective reduction of greenhouse gas emissions from passenger vehicles, beginning with the 2009 model year.[35] Many federal and court proceedings were significantly delayed due to challenges from motor vehicle manufacturers, automobiles dealer and their trade associations. The EPA subsequently granted the requested waiver in July of 2009, which was upheld by the by the U.S. District Court for the District of Columbia in 2011.

These initial standards were adopted for passenger vehicles and were intended to be used as continuing standards for future automobile models in the years to come. The standards are to be phased in during the 2009 through 2016 model years.[36]

The second phase of the implementation for the Pavley bill was incorporated into Amendments to the Low-Emission Vehicle Program referred to as LEV III or the Advanced Clean Cars program. The Advanced Clean Car program combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for model years 2017 through 2025.[37] The regulation will reduce GHGs from new cars by 34 percent from 2016 levels by 2025. A midterm review of the Advanced Clean Cars Program was performed by CARB in 2017, where it was concluded that:[38]

- Adopted greenhouse gas standards remain appropriate for 2022 through 2025 model years,
- Continue with existing zero-emission vehicle requirements to develop the market,
- Direct staff to immediately begin rule development for 2026 and subsequent model years,
- Continue and expand complementary policies to help support an expanding zero-emission vehicle market, and

[35] California Air Resources Board. California's Greenhouse Gas Vehicle Emission Standards under Assembly Bill 1493 of 2022 (Pavley). https://ww2.arb.ca.gov/californias-greenhouse-gas-vehicle-emission-standards-under-assembly-bill-1493-2002-pavley. Accessed December 2024.

[36] Ibid.

[37] California Air Resources Board. Advanced Clean Cars Program. https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program. Accessed December 2024.

[38] Ibid.

- The particulate matter standard is feasible but further action is needed to ensure robust control.

SB 1368—Emission Performance Standards. In 2006, the State Legislature adopted SB 1368, which was subsequently signed into law by the governor. SB 1368 limits long-term investments in baseload generation by the state's utilities for power plants based on greenhouse gas emissions.[39] SB 1368 seeks to limit carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than 5 years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant[40]. Because of the carbon content of its fuel source, a coal-fired plant cannot meet this standard because such plants emit roughly twice as much carbon as natural gas, combined cycle plants. Accordingly, the new law effectively prevents California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the State. The California Public Utilities Commission adopted the regulations required by SB 1368 on August 29, 2007.

SB 1078, SB 350 and SB 100 —Renewable Electricity Standards. On September 12, 2002, Governor Gray Davis signed SB 1078, requiring California to generate 20 percent of its electricity from renewable energy by 2017. SB 107 changed the due date to 2010 instead of 2017[41]. SB 2 (1X) increased the mandate to 33 percent RPS by 2020, in April of 2011. In 2015, SB 350 mandated a 50 percent RPS by December 31, 2030. SB 350 also includes interim annual RPS targets with multi-year compliance periods and requires that 65 percent of RPS procurement must be derived from long-term contracts of 10 or more years. In 2018, SB 100 increased the RPS to 60 percent by 2030 and established a goal for 100 percent of the State's electricity to come from renewable and carbon-free resources by 2045.

Executive Orders Related to GHG Emissions

California's Executive Branch has taken several actions to reduce GHGs through the use of executive orders. Although not regulatory, they set the tone for the State and guide the actions of state agencies.

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[39] California Energy Commission. Emission Performance Standard- SB 1368. https://www.energy.ca.gov/rules-and-regulations/energy-suppliers-reporting/emission-performance-standard-sb-1368. Accessed December 2024.

[40] Natural Resources Defense Council, Climate Facts. California Takes on Power Plant Emissions. https://www.nrdc.org/sites/default/files/sb1368.pdf#:~:text=Senate%20Bill%20%28SB%29%201368%20%28Perata%29%2C%20sponsored%20by%20NRDC,California%20customers%20must%20be%20in%20clean%20energy%20sources. Accessed December 2024.

[41] California Public Utilities Commission, 60% RPS Procurement Rules. https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-power-procurement/rps/rps-compliance-rules-and-process/60-percent-rps-procurement-rules. Accessed December 2024.

Executive Order S-3-05. On June 1, 2005, former California Governor Arnold Schwarzenegger announced through Executive Order S-3-05, the following reduction targets for GHG emissions: [42]

- By 2010, reduce greenhouse gas emissions to 2000 levels.
- By 2020, reduce greenhouse gas emissions to 1990 levels.
- By 2050, reduce greenhouse gas emissions to 80 percent below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an executive order, the goals are not legally enforceable for local governments or the private sector.

Executive Order B-30-15. On April 29, 2015, Governor Edmund G. Brown Jr. issued an executive order to establish a California GHG reduction target of 40 percent below 1990 levels by 2030.[43] The Governor's executive order aligns California's GHG reduction targets with those of leading international governments ahead of the United Nations Climate Change Conference in Paris late 2015. The executive order sets a new interim statewide GHG emission reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050 and directs the ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of $MMCO_2e$. The executive order also requires the State's climate adaptation plan to be updated every three years and for the State to continue its climate change research program, among other provisions. As with Executive Order S-3-05, this executive order is not legally enforceable against local governments and the private sector. Legislation that would update AB 32 to make post 2020 targets and requirements a mandate is in process in the State Legislature.

Executive Order S-01-07—Low Carbon Fuel Standard. The governor signed Executive Order S 01-07 on January 18, 2007. The order mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuel pool and provide an increasing range of low-carbon and renewable alternatives, which reduce petroleum dependency and achieve air quality benefits.[44] In particular, the executive order established a Low Carbon Fuel Standard (LCFS) and directed the Secretary for Environmental Protection to coordinate the actions of the California Energy

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[42] Executive Order S-3-05. California Gov. Arnold Schwarzeneggar (text). https://www.californiaenvironmentallawblog.com/wp-content/uploads/sites/449/2013/01/Exec.-Order-S-3-05-Jun.-2005.pdf. Accessed December 2024.

[43] Executive Order B-30-15. California Gov. Edmund G. Brown Jr. (text). https://www.library.ca.gov/wp-content/uploads/GovernmentPublications/executive-order-proclamation/39-B-30-15.pdf. Accessed December 2024.

[44] California Air Resources Board. Low Carbon Fuel Standard. https://ww2.arb.ca.gov/our-work/programs/low-carbon-fuel-standard. Accessed December 2024.

Commission, the ARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. This analysis supporting development of the protocols was included in the State Implementation Plan for alternative fuels (State Alternative Fuels Plan adopted by California Energy Commission on December 24, 2007) and was submitted to ARB for consideration as an "early action" item under AB 32. The ARB adopted the Low Carbon Fuel Standard on April 23, 2009.

Executive Order S-13-08. Executive Order S-13-08 states that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California's economy, to the health and welfare of its population and to its natural resources."[45] Pursuant to the requirements in the order, the 2009 California Climate Adaptation Strategy (California Natural Resources Agency 2009) was adopted, which is the ". . . first statewide, multi-sector, region-specific, and information-based climate change adaptation strategy in the United States." Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

Executive Orders B-55-18 Carbon Neutrality by 2045 (2018). To further ensure California is combatting global warming beyond the electric sector, which represents 16 percent of the state's greenhouse gas emissions, the Governor issued an executive order directing the state to achieve carbon neutrality by 2045 and net negative greenhouse gas emissions after that. This will ensure California removes as much carbon dioxide from the atmosphere as it emits – the first step to reversing the potentially disastrous impacts of climate change. The executive order directs ARB to work with relevant state agencies to develop a framework for implementation and accounting that tracks progress toward this goal. This goal is in addition to the statewide targets of reducing greenhouse gas emissions.[46]

California Building Codes

[45] Office of the Governor, Arnold Schwarzenegger. Executive Order S-13-08. November 11, 2008. https://www.library.ca.gov/wp-content/uploads/GovernmentPublications/executive-order-proclamation/38-S-13-08.pdf. Accessed December 2024.

[46] Office of Governor, Edmund G. Brown Jr. Governor Brown Signs 100 Percent Clean Electricity Bill, Issues Order Setting New Carbon Neutrality Goal. September 10, 2018. https://archive.gov.ca.gov/archive/gov39/2018/09/10/governor-brown-signs-100-percent-clean-electricity-bill-issues-order-setting-new-carbon-neutrality-goal/index.html. Accessed December 2024.

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California's energy consumption relatively flat even with rapid population growth.

Title 20 Appliance Efficiency Regulations. California Code of Regulations, Title 20: Division 2, Chapter 4, Article 4, Sections 1601–1608: Appliance Efficiency Regulations regulates the sale of appliances in California. The Appliance Efficiency Regulations include standards for both federally regulated appliances and non-federally regulated appliances. Twenty-three categories of appliances are included in the scope of these regulations. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the State and those designed and sold exclusively for use in recreational vehicles or other mobile equipment.

Title 24 Energy Efficiency 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. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The CEC adopted the 2022 Energy Code, effective January 1, 2023.

Title 24 California Green Building Standards Code (California Code of Regulations Title 24, Part 11 code) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect January 1, 2011. The code is updated on a regular basis, with the most recent update consisting of the 2016 California Green Building Code Standards that became effective January 1, 2017. Local jurisdictions are permitted to adopt more stringent requirements, 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 the ordinances include a minimum 50-percent diversion requirement. The code also provides exemptions for areas not served by construction and demolition recycling infrastructure. State building code provides the minimum standard that buildings need to meet in order to be certified for occupancy, which is generally enforced by the local building official.

The California Green Building Standards Code (California Code of Regulations Title 24, Part 11 code) requires:

- **Short-term bicycle parking**. If a commercial project is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily

visible to passers-by, for five percent of visitor motorized vehicle parking capacity, with a minimum of one two-bike capacity rack (5.106.4.1.1).

- **Long-term bicycle parking**. For buildings with over 10 tenant-occupants, provide secure bicycle parking for five percent of tenant-occupied motorized vehicle parking capacity, with a minimum of one space (5.106.4.1.2).
- **Designated parking**. Provide designated parking in commercial projects for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).
- **Recycling by Occupants**. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of nonhazardous materials for recycling. (5.410.1).
- **Construction waste**. A minimum 50-percent diversion of construction and demolition waste from landfills, increasing voluntarily to 65 and 80 percent for new homes and 80-percent for commercial projects. (5.408.1, A5.408.3.1 [nonresidential], A5.408.3.1 [residential]). All (100 percent) of trees, stumps, rocks and associated vegetation and soils resulting from land clearing shall be reused or recycled (5.408.3).
- **Wastewater reduction**. Each building shall reduce the generation of wastewater by one of the following methods:
    - The installation of water-conserving fixtures or
    - Using nonpotable water systems (5.303.4).
- **Water use savings**. Twenty percent mandatory reduction in indoor water use with voluntary goal standards for 30, 35, and 40 percent reductions (5.303.2, A5303.2.3 [nonresidential]).
- **Water meters**. Separate water meters for buildings in excess of 50,000 square feet or buildings projected to consume more than 1,000 gallons per day (5.303.1).
- **Irrigation efficiency**. Moisture-sensing irrigation systems for larger landscaped areas (5.304.3).
- **Materials pollution control**. Low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring, and particleboard (5.404).
- **Building commissioning**. Mandatory inspections of energy systems (i.e., heat furnace, air conditioner, mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity according to their design efficiencies (5.410.2).

Model Water Efficient Landscape Ordinance. The Model Water Efficient Landscape Ordinance (Ordinance) was required by AB 1881 Water Conservation Act. The bill required local agencies to adopt a local landscape ordinance at least as effective in conserving water as the Model Ordinance by

January 1, 2010. Reductions in water use of 20 percent consistent with (SBX-7-7) 2020 mandate are expected for the ordinance. Governor Brown's Drought Executive Order of April 1, 2015 (EO B-29-15) directed DWR to update the ordinance through expedited regulation. The California Water Commission approved the revised ordinance on July 15, 2015, which became effective on December 15, 2015. New development projects that include landscaped areas of 500 square feet or more are subject to the ordinance. The update requires:

- More efficient irrigation systems
- Incentives for graywater usage
- Improvements in on-site stormwater capture
- Limiting the portion of landscapes that can be planted with high water use plants
- Reporting requirements for local agencies.

CEQA Guidelines.

Section 15064.4(b) of the CEQA Guidelines provides direction for lead agencies for assessing the significance of impacts of GHG emissions:

- The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; or
- 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 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 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. In determining the significance of impacts, the lead agency may consider a project's consistency with the State's long-term climate goals or strategies, provided that substantial evidence supports the agency's analysis of how those goals or strategies address the project's incremental contribution to climate change and its conclusion that the project's incremental contribution is not cumulatively considerable.

Section 15064.4(c) states that a lead agency may use a model or methodology to estimate greenhouse gas emissions resulting from a project. The lead agency has discretion to select the model or methodology it considers most appropriate to enable decision makers to intelligently take into

account the project's incremental contribution to climate change. The lead agency must support its selection of a model or methodology with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use.

Section 15064.7 of the CEQA Guidelines includes the following discussion regarding thresholds of significance.

> (d) Using environmental standards as thresholds of significance promotes consistency in significance determinations and integrates environmental review with other environmental program planning and regulation. Any public agency may adopt or use an environmental standard as a threshold of significance. In adopting or using an environmental standard as a threshold of significance, a public agency shall explain how the particular requirements of that environmental standard reduce project impacts, including cumulative impacts, to a level that is less than significant, and why the environmental standard is relevant to the analysis of the project under consideration. For the purposes of this subdivision, an "environmental standard" is a rule of general application that is adopted by a public agency through a public review process and that is all of the following:
>
> (1) a quantitative, qualitative or performance requirement found in an ordinance, resolution, rule, regulation, order, plan or other environmental requirement;
>
> (2) adopted for the purpose of environmental protection;
>
> (3) addresses the environmental effect caused by the project; and,
>
> (4) applies to the project under review.

CEQA emphasizes that the effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impacts analysis (see CEQA Guidelines Section 15130(f)).

California Supreme Court GHG Ruling

In a November 30, 2015 ruling, the *California Supreme Court in Center for Biological Diversity (CBD) v. California Department of Fish and Wildlife (CDFW)* on the Newhall Ranch project, concluded that whether the project was consistent with meeting statewide emission reduction goals is a legally permissible criterion of significance, but the significance finding for the project was not supported by a reasoned explanation based on substantial evidence. The Court offered potential solutions to address this issue summarized below.

Specifically, the Court advised that:

- **Substantiation of Project Reductions from BAU**. A lead agency may use a BAU comparison based on the Scoping Plan's methodology if it also substantiates the reduction a particular project must achieve to comply with statewide goals. The Court suggested a lead agency could examine the "data behind the Scoping Plan's business-as-usual model" to determine the necessary project-level reductions from new land use development at the proposed location.
- **Compliance with Regulatory Programs or Performance Based Standards**. "A lead agency might assess consistency with A.B. 32's goal in whole or part by looking to compliance with regulatory programs designed to reduce greenhouse gas emissions from particular activities. (See Final Statement of Reasons, supra, at p. 64 [greenhouse gas emissions 'may be best analyzed and mitigated at a programmatic level.'].) To the extent a project's design features comply with or exceed the regulations outlined in the Scoping Plan and adopted by the Air Resources Board or other state agencies, a lead agency could appropriately rely on their use as showing compliance with 'performance based standards' adopted to fulfill 'a statewide . . . plan for the reduction or mitigation of greenhouse gas emissions.' (CEQA Guidelines § 15064.4(a)(2), (b)(3); see also id., § 15064(h)(3) [determination that impact is not cumulatively considerable may rest on compliance with previously adopted plans or regulations, including 'plans or regulations for the reduction of greenhouse gas emissions'].)"
- **Compliance with GHG Reduction Plans or Climate Action Plans (CAPs)**. A lead agency may utilize "geographically specific GHG emission reduction plans" such as climate action plans or greenhouse gas emission reduction plans to provide a basis for the tiering or streamlining of project-level CEQA analysis.
- **Compliance with Local Air District Thresholds**. A lead agency may rely on "existing numerical thresholds of significance for greenhouse gas emissions" adopted by, for example, local air districts.

<u>San Joaquin Valley Air Pollution Control District Regulations</u>

Climate Change Action Plan

On August 21, 2008, the SJVAPCD Governing Board approved a proposal called the Climate Change Action Plan (CCAP). The CCAP began with a public process bringing together stakeholders, land use agencies, environmental groups, and business groups to conduct public workshops to develop comprehensive policies for CEQA guidelines, a carbon exchange bank, and voluntary GHG emissions mitigation agreements for the Board's consideration. The CCAP contains the following goals and actions:

- Develop GHG significance thresholds to address CEQA projects with GHG emission increases.
- Develop the San Joaquin Valley Carbon Exchange for banking and trading GHG reductions.
- Authorize use of the SJVAPCD's existing inventory reporting system to allow use for GHG reporting required by AB 32 regulations.
- Develop and administer GHG reduction agreements to mitigate proposed emission increases from new projects.
- Support climate protection measures that reduce greenhouse gas emissions as well as toxic and criteria pollutants. Oppose measures that result in a significant increase in toxic or criteria pollutant emissions in already impacted areas.

On December 17, 2009, the SJVAPCD Governing Board adopted "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 SJVAPCD concluded that the existing science is inadequate to support quantification of the impacts that project-specific GHG emissions have on global climatic change. The SJVAPCD found the effects of project-specific emissions to be cumulative, and without mitigation, their incremental contribution to global climatic change could be considered cumulatively considerable. The SJVAPCD found that this cumulative impact is best addressed by requiring all projects to reduce their GHG emissions, whether through project design elements or mitigation.[47]

The SJVAPCD's approach is intended to streamline the process of determining if project-specific GHG emissions would have a significant effect. Projects exempt from the requirements of CEQA, and projects complying with an approved plan or mitigation program, would be determined to have a less than significant cumulative impact. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources, and must have a certified final CEQA document.

For non-exempt projects, those projects for which there is no applicable approved plan or program, or those projects not complying with an approved plan or program, the lead agency must evaluate the project against performance-based standards and would require the adoption of design elements, known as Best Performance Standards (BPS), to reduce GHG emissions. The BPS have not yet fully

[47] San Joaquin Valley Air Pollution Control District. Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA. December 17, 2009. https://files.ceqanet.opr.ca.gov/266135-4/attachment/5EbiYUzPctSBvAz2o1Fo2-nBol4qzhrIz68B0H3TrwkfjSmB33khgXXhWT1x4CBG5jpV9DQlDxYrGZGc0. Accessed December 2024.

been established, though they must be designed to achieve a 29 percent reduction when compared with the BAU projections identified in ARB's AB 32 2008 Scoping Plan.

The SJVAPCD has not yet adopted BPS for development projects, so quantification of Project emissions is required. The SJVAPCD has not updated its guidance to address SB 32 2030 targets.

San Joaquin Valley Carbon Exchange

The SJVAPCD initiated work on the San Joaquin Valley Carbon Exchange in November 2008. The program would be a voluntary GHG emission reduction registry which would allow the SJVAPCD to quantify, verify, and track emissions and reductions generated within the San Joaquin Valley.[48] The program would promote early local GHG and criteria pollutant emission reductions.

Local Regulations

Regional Transportation Plan

The Kings County Association of Governments (KCAG) Regional Transportation Plan (RTP) establishes regional goals, identifies present and future needs, deficiencies and constraints, and fiscally constrained infrastructure improvements related to regional transportation. The RTP discusses the major transportation issues in the Kings County region including state highways, transportation systems management, and transportation control measures. This RTP represents an accumulation of all the plans and programs adopted by the local agencies, including the cities of Avenal, Corcoran, Hanford, and Lemoore in addition to the unincorporated communities of Kings County.

The Regional Transportation Plan (RTP) is a long-range plan that every MPO is required to complete. The plan is meant to provide a long-range, fiscally constrained guide for the future of Kings County's transportation system. The 2022 RTP plan extends to the year 2046 in its scope. As required by the Sustainable Communities and Climate Protection Act of 2008 (Senate Bill 375), the 2022 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS) contains a Sustainable Communities Strategy that considers both land use and transportation together in a single, integrated planning process that accommodates regional housing needs and projected growth. The 2022

[48] San Joaquin Valley Air Pollution Control District. San Joaquin Valley Carbon Exchange Program, March 4, 2009. e. Accessed December 2024.

RTP/SCS meets the requirements of SB 375 and demonstrates how the integrated land use and transportation plan achieves the region's mandated GHG emission targets for passenger vehicles.[49]

City of Hanford 2035 General Plan

The City's General Plan contains policies that work to promote alternative means of transportation, reduce VMT, and conserve energy also serve to reduce GHG emissions. The 2035 General Plan includes the following applicable goals and policies related to reducing GHG emissions and climate change impacts:

- **Objective AQ 4:** Accurately assess and mitigate potentially significant local and regional air quality and climate change impacts from proposed projects within the City. Where possible and financially feasible, retrofit existing uses and activities to reduce emissions and climate change impacts
- **Objective AQ 10:** Identify and achieve greenhouse gas emission reduction targets consistent with the City's proportionate fair share as may be allocated by the California Air Resources Board and Kings County Association of Governments.
- **Policy AQ 4.2:** Assess and mitigate project greenhouse gas/climate change impacts using analysis methods and significance thresholds as defined or recommended by the San Joaquin Valley Air Pollution Control District.
- **Policy AQ 4.3:** Ensure that air quality and climate change impacts identified during California Environmental Quality Act review are minimized and consistently and fairly mitigated to the greatest extent feasible.
- **Policy AQ 4.**5: Encourage and support the development of innovative and effective mitigation measures and programs to reduce air quality and climate change impacts through proactive coordination with the San Joaquin Valley Air Pollution Control District project applicants, and other knowledgeable and interested parties.
- **Policy AQ 6.**1: Project sponsors shall demonstrate that all feasible Transportation Control Measures and other measures have been incorporated into project designs which increase the effective capacity of the existing road network prior to seeking approval to construct additional roadway capacity, such as additional lanes or new highways.
- **Policy AQ 7.6:** Encourage the use of solar-ready roofs into residential and commercial development. New residential development should include proper solar orientation (south facing roof area sloped at 20° to 55° from the horizontal), clear access on the south sloped roof

[49] Kings County Association of Governments. 2022 Regional Transportation Plan. https://www.kingscog.org/2022rtp_adopted. Accessed December 2024.

(no chimneys, heating vents, plumbing vents, etc.), electrical conduit installed for solar electric system wiring, plumbing installed for solar hot water systems, and space provided for a solar hot water storage tank. Roofs for commercial development should be designed to maximize potential area available for solar panels and provide electrical conduit to support future installation.

- **Policy AQ 10.**1: As recommended in the San Joaquin Valley Air Pollution Control District's Guidance for Valley Land-USE Agencies in Addressing GHG Emission Impacts for New Projects under CEQA (December 2009), the City establishes an initial goal of reducing greenhouse gas emissions from development projects within its authority by 29 percent below year 2020 business as usual emissions. The City will also work with Kings County Association of Governments to ensure that it achieves its proportionate fair share reduction in greenhouse gas emissions as may be identified under the provisions of SB 375 (2008 Chapter 728) for any projects or activities requiring approval of Kings County Association of Governments.
- **Policy T70:** Pedestrian Connections. Increase connectivity through direct and safe pedestrian connections to public amenities, neighborhoods, village centers and other destinations throughout the City.
- **Policy T95:** Promote and encourage the installation and use of electric vehicle (EV) charging stations and remove obstacles to their use as well as minimizing costs of permitting.
- **Policy O14:** Promote and encourage the use of alternative fuels and renewable energy**.**
- **Policy O15:** Require that new development incorporate energy-efficient design features for HVAC, lighting systems, and insulation that meet or exceed California Code of Regulations Title 24.
- **Policy O16:** Encourage the use of native and drought tolerant shade trees and vines on southern and western exposure building walls as an energy conservation technique.

Regional Climate Change Action Plan

The City of Hanford participated in the preparation of a Regional Climate Action Plan (CAP),in association with KCAG and the City of Avenal, in 2014. The Regional CAP is a long-range policy document that identifies cost-effective measures to reduce GHG emissions from activities within Kings County consistent with California State AB 32. The plan includes an emission inventory, goals and policies, a reduction target, and implementation actions. Goals and policies relevant for new development are provided below.

- **E-4.1:** Encourage local homebuilders to participate in the New Solar Homes Partnership to install solar PV systems on qualifying new homes.

- **E-4.2:** Work with the building industry to incorporate designs improving solar readiness into building plans through voluntary green building guidelines.
- **E-5.2:** Provide project applicants with green building resources, including SJVAPCD's Best Performance Standards list for GHG reductions, and promote workshops offered by community organizations.
- **TL-1.1:** Support and encourage mixed-use and medium- and high-density land use categories located within ¼ mile of a transit stop, park and ride facility, or existing developed areas, by allowing flexible zoning and/or density bonuses for applicable projects.
- **TL-1.3**: Allow live/work developments that permit residents to live at their place of work and thereby reduce VMT and associated GHG emissions.
- **TL-2.3:** Establish minimum design criteria for bicycle and pedestrian circulation and implement through the design review process.
- **TL-2.4:** Encourage the installation of adequate and secure bicycle parking at all multi-family residential, commercial, governmental, and recreational locations throughout the region.
- **TL-2.5:** Support land use planning that will promote pedestrian and bicyclist access to and from new development by encouraging land use and subdivision designs that provide safe bicycle and pedestrian circulation, including bicycle parking facilities and internal bicycle and pedestrian routes, where feasible.
- **TL-3.4:** Support and encourage new development that provides safe routes to adjacent transit stops, where applicable.
- **TL-4.2:** Work with employers and developers to provide affordable transportation alternatives and telecommuting options to serve both new and existing land uses.
- **TL-1.1:** Provide tree planting guidelines that address the types of trees appropriate to plant in the region, with emphasis placed on native, drought-tolerant trees.

Thresholds of Significance

The CEQA Guidelines define a significant effect on the environment as "a substantial, or potentially substantial, adverse change in the environment."

The following GHG significance thresholds are contained in Appendix G of the CEQA Guidelines, which were amendments adopted into the Guidelines on March 18, 2010, pursuant to SB 97 and most recently amended December 28, 2019. A significant impact would occur if the project would:

(a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or

(b) Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

Approach to Analysis

Section 15064.4(b) of the CEQA Guidelines states that a lead agency may take into account the following three considerations in assessing the significance of impacts from GHG emissions.

- Consideration #1: The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting.
- Consideration #2: Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- Consideration #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 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 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. In determining the significance of impacts, the lead agency may consider a project's consistency with the State's long-term climate goals or strategies, provided that substantial evidence supports the agency's analysis of how those goals or strategies address the project's incremental contribution to climate change and its conclusion that the project's incremental contribution is not cumulatively considerable.

The SJVAPCD's *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA* provides guidance for preparing a BAU analysis. Under the SJVAPCD guidance, projects meeting one of the following would have a less than significant impact on climate change:

- Exempt from CEQA;
- Complies with an approved GHG emission reduction plan or GHG mitigation program;

- Project achieves 29 percent GHG reductions by using approved Best Performance Standards; and
- Project achieves AB 32 targeted 29 percent GHG reductions compared with "business as usual."

The SJVAPCD has not yet adopted BPS for development projects that could be used to streamline the GHG analysis. For development projects, BPS means, "[a]ny combination of identified GHG emission reduction measures, including project design elements and land use decisions that reduce project-specific GHG emission reductions by at least 29 percent compared with business as usual."

The 29 percent GHG reduction level is based on the target established by CARB's AB 32 Scoping Plan, approved in 2008. The GHG reduction level for the State to reach 1990 emission levels by 2020 was reduced to 21.7 percent from BAU in 2020 in the 2014 First Update to the Scoping Plan to account for slower than projected growth after the 2008 recession. First occupancy at the Project site is expected to occur in 2024, which is after the AB 32 target year. The SJVAPCD has not updated its guidance to address SB 32 2030 targets or AB 1279 2045 targets. Therefore, whether the Project's GHG emissions would result in a significant impact on the environment is determined by assessing consistency with relevant GHG reduction plans.

Quantification of Greenhouse Gas Emissions for Informational Purposes

Construction

Construction activities associated with the construction of residential and nonresidential development capacity would cause short-term GHG emissions. Construction activities with the proposed Project would produce combustion emissions from various sources. During construction, GHGs would be emitted through the operation of construction equipment and from worker and builder supply vendor vehicles, each of which typically use fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO2, CH4, and N2O. Furthermore, CH4 is emitted during the fueling of heavy equipment. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change.

The SJVAPCD does not have an adopted threshold of significance for construction-related GHG emissions. However, lead agencies are encouraged to quantify and disclose GHG emissions that would occur during construction. Using CalEEMod, it is estimated that the emissions associated with construction of the proposed Project would be approximately 2,259.17 metric tons of CO2e.

Construction GHG emissions were amortized over the life of the Project (assumed to be 30 years) and added to the operational emissions. When amortized over the life of the Project, amortized construction emissions would be approximately 75.31 MT CO2e per year.

Operations

Long-term GHG emissions are typically generated from mobile sources (e.g., vehicle and truck trips), area sources (e.g., maintenance activities and landscaping), indirect emissions from sources associated with energy consumption, waste sources (land filling and waste disposal), and water sources (water supply and conveyance, treatment, and distribution). Mobile-source GHG emissions would include project-generated vehicle trips to and from the Project. Area-source emissions would be associated with activities such as landscaping and maintenance on the Project site. Energy source emissions would be generated at off-site utility providers as a result of increased electricity demand generated by the Project. Waste source emissions generated by the proposed Project include energy generated by land filling and other methods of disposal related to transporting and managing Project generated waste. In addition, water source emissions associated with the proposed Project are generated by water supply and conveyance, water treatment, water distribution, and wastewater treatment.

Following guidance from the SJVAPCD, GHG emissions for operation of the Project were calculated using CalEEMod. Based on the analysis results, summarized in Table 3.3-1, the proposed Project would result in emissions of approximately 7,265 MT CO2e per year. These estimated emissions are provided for informational purposes, and the significance of the proposed Project is further analyzed below. CalEEMod output sheets are provided in Appendix B.

Table 3.3-1
Project Greenhouse Gas Emissions[50]

Emission Type	Operational Emissions (Metric Tons per Year)			
	CO_2	CH_4	N_2O	CO_2e
Mobile Sources	5,086.7	0.2	0.3	5,182.3
Area Sources	7.6	0.0	0.0	7.6
Energy Sources	672.6	0.1	0.0	1,760.6
Water Sources	52.5	0.8	0.0	150.1
Waste Sources	46.6	4.7	0.0	163.1
Refrigerants	-	-	-	1.4
Amortized Construction Emissions				75.31
Total Operational Emissions				**7,265.1**

Source: Compiled by LSA (2024).
CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
N_2O = nitrous oxide

Impacts and Mitigation Measures

Impact 3.3-1: *Would the project generate direct or indirect greenhouse emissions that would result in a significant impact on the environment?*

Significant and Unavoidable Impact. The SJVAPCD has not established a numeric threshold for GHG emissions. The significance of GHG emissions may be evaluated based on locally adopted quantitative thresholds or consistency with a regional GHG reduction plan (e.g., a CAP). Neither the City nor the SJVAPCD has developed or adopted numeric GHG significance thresholds. Therefore, the proposed Project was analyzed for consistency with the 2022 Scoping Plan.

The 2022 Scoping Plan includes key project attributes that reduce operational GHG emissions in Appendix D, Local Actions, of the 2022 Scoping Plan. As discussed in Appendix D of the 2022 Scoping Plan, absent consistency with an adequate, geographically specific GHG reduction plan such as a CEQA-qualified CAP, the first approach the State recommends for determining whether a proposed residential or mixed-use residential development would align with the State's climate goals is to examine whether the Project includes key project attributes that reduce operational GHG emissions. The Project's consistency with key project attributes from the 2022 Scoping Plan that would be applicable to residential and mixed-use development is shown in Table 3.3-2.

[50] *Air Quality, Health Risk, Greenhouse Gas and Energy Impact Report (AQHRAGGE),* LSA Consulting. December 2024. Page 66. Appendix B.

Table 3.3-2
Project Consistency with the 2022 Scoping Plan Key Residential and Mixed-Use Project Attributes that Reduce GHGs[51]

Priority Areas	Key Project Attribute	Project Consistency
Transportation Electrification	Provides EV charging infrastructure that, at minimum, meets the most ambitious voluntary standard in the CALGreen Code at the time of project approval	***Consistent.*** CALGreen Code requires provision of infrastructure to accommodate EV chargers. The proposed project would install a breaker and wiring for EVs at each residence, consistent with CALGreen requirements. Therefore, the proposed project would be consistent with this key project attribute.
VMT Reduction	Is located on infill sites that are surrounded by existing urban uses and reuses or redevelops previously undeveloped or underutilized land that is presently served by existing utilities and essential public services (e.g., transit, streets, water, sewer)	***Not consistent.*** The project site is surrounded primarily by agricultural uses, with some rural residential uses to the north and medium density residential developments to the south of the project site. As described in the TIA, the project's VMT was calculated to be 10.41 VMT per capita, which is 13.6 percent higher than the City's 8.99 VMT per capita threshold. As further discussed in the TIA, potential mitigation measures to reduce the proposed project's impacts related to transportation were analyzed but found to be infeasible. As such, the proposed project would not be consistent with this key project attribute.
	Does not result in the loss or conversion of natural and working lands	***Not consistent.*** The project site is currently being used for residential and agricultural uses, including an active orchard. The proposed site is designated as *Unique Farmland* and *Confined Animal Agriculture* by the State FMMP. No land under Williamson Act contracts occur in the proposed project area. No mitigation measures are proposed related to the conversion of the agricultural lands. Therefore, the proposed project would not be consistent with this key project attribute.
	Consists of transit-supportive densities (minimum of 20 residential dwelling units per acre) or is in proximity to existing transit stops (within a half mile) or satisfies more detailed and stringent criteria specified in the region's SCS	***Not consistent.*** The proposed project would include the construction of 615 single-family units on a 135-acre project site. Therefore, the proposed project would result in less than 20 residential dwelling units per acre. In addition, the project site is not located within 0.5 mile of a transit stop, with the nearest transit stops being located on 11th or Granville Avenues, over 1 mile away. As such, the proposed project would not be consistent with this key project attribute.
	Reduces parking requirements by eliminating parking requirements or including maximum allowable parking ratios (i.e., the ratio of parking spaces to residential units or square feet); or providing residential parking supply at a ratio of less than one parking space per dwelling unit; or for multifamily residential development, requiring parking costs to be unbundled from costs to rent or own a residential unit	***Consistent.*** The proposed project would consist of 615 single-family units and would be consistent with the City's parking requirements for single family homes. Thus, the project would be consistent with the intent of this key project attribute.

[51] Ibid.

Priority Areas	Key Project Attribute	Project Consistency
	At least 20 percent of units included are affordable to lower-income residents	***Consistent.*** The proposed project would not include affordable residential units. Although the proposed project would not include affordable housing, the proposed project would provide needed single-family housing. Therefore, the proposed project would be consistent with this key project attribute.
	Results in no net loss of existing affordable units	***Consistent.*** The proposed project would demolish two existing residential uses; however, the proposed project would not result in the removal of any existing affordable units. As such, the proposed project would be consistent with this key project attribute.
Building Decarbonization	Uses all-electric appliances without any natural gas connections and does not use propane or other fossil fuels for space heating, water heating, or indoor cooking	***Consistent.*** The proposed project would be all-electric, which is consistent with this key project attribute.

Source: Compiled by LSA (November 2024).
CALGreen Code = California Green Building Standards Code
DOC = California Department of Conservation
EV = electric vehicle
FMMP = Farmland Mapping and Monitoring Program
GHG = greenhouse gas
GPA = General Plan Amendment
LESA = Land Evaluation and Site Assessment
SCS = Sustainable Communities Strategy
VMT = vehicle miles traveled

Residential and mixed-use projects that have all of the key project attributes as outlined in Table 3.3-2 would be considered to accommodate growth in a manner consistent with State GHG reduction and equity prioritization goals as outlined in the 2022 Scoping Plan. As demonstrated in Table 3.3-2, the proposed Project would not be consistent with the 2022 Scoping Plan key residential and mixed-use project attributes related to VMT reduction, working lands conversion, or transit supportive densities.

The Project intends to implement the following design features that could help reduce Project VMT: improved street connectivity, bicycle infrastructure, pedestrian connectivity, and providing electric vehicle charging capabilities. However, while these design features would promote overall mobility and support the reduction of GHG emissions, they would not reduce the impact to a less than significant level. There are no additional feasible mitigation measures that would reduce this impact. As such, the proposed Project would not be consistent with all project attributes in the 2022 Scoping Plan GHG emission thresholds.

Therefore, the Project's generation of GHG emissions would result in a ***significant and unavoidable impact*** on the environment.

Mitigation Measures:

None Required.

Impact 3.3-2: *Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

Significant and Unavoidable Impact. The following analysis evaluates the proposed Project's consistency with adopted plans to reduce GHG emissions. An evaluation of the proposed Project's consistency with the Regional CAP and the 20242050 RTP/SCS is provided below.

Regional CAP

The City of Hanford adopted the Regional CAP in 2014. The CAP includes a GHG inventory, a benchmarking/goal-setting process, and identifies a reduction target for 2020. This allowed the City to take advantage of the streamlining provisions contained in the State CEQA Guidelines amendments adopted for SB 97 and clarifications provided in the State CEQA Guidelines amendments adopted on December 28, 2018. Although the CAP does not include a target for 2030, the measures in the plan will continue to provide reductions after the milestone year and help demonstrate continued progress toward achieving the SB 32 2030 target. The CAP includes a number of policies that support emission reductions from new development. The applicable policies and a discussion of the Project's consistency with the policies are provided in Table 3.3-3. The Project is consistent with all applicable policies.

Table 3.3-3
Consistency with the Regional Climate Action Plan[52]

Climate Action Plan Policy	Project Consistency
E-4.1 Encourage local homebuilders to participate in the New Solar Homes Partnership to install solar PV systems on qualifying new homes. (Community)	**Consistent.** The proposed project would comply with the latest CALGreen solar readiness and installation requirements.
E-4.2 Work with the building industry to incorporate designs improving solar readiness into building plans through voluntary green building guidelines. (Community)	**Consistent.** The proposed project would comply with the latest CALGreen solar readiness and installation requirements.
E-5.2 Provide project applicants with green building resources, including the SJVAPCD's Best Performance Standards list for GHG reductions, and promote workshops offered by community organizations. (Community)	**Consistent.** The proposed project would include sustainability features in the project design in accordance with SJVAPCD requirements, CALGreen, and City of Hanford standards.
TL-1.1 Support and encourage mixed-use and medium- and high-density land use categories located within ¼ mile of a transit stop, park and ride facility, or existing developed areas, by allowing flexible zoning and/or density bonuses for applicable projects. (Community)	**Consistent.** The proposed project would include medium density housing within 0.25 mile of a developed area, where there are single family residential developments to the south of the proposed project across Fargo Avenue.
TL-1.2 Prioritize infill development by publicly providing the location and zoning of infill sites on the local jurisdiction's website and working with developers to expedite applications. (Community)	**Not applicable.** The proposed project is not an infill project; however, the project is located in an area that has increasing residential developments.
TL-1.3 Allow live/work developments that permit residents to live at their place of work and thereby reduce VMT and associated GHG emissions. (Community)	**Not applicable.** The proposed project is not designated as a live/work development; however, the use of the residences for work would not be prohibited.
TL-2.3 Establish minimum design criteria for bicycle and pedestrian circulation and implement through the design review process. (Community)	**Consistent.** The proposed project would provide pedestrian infrastructure connecting to neighboring uses. The roads serving the project are designed for low speed and would be conducive to bicycle use.

[52] *Air Quality, Health Risk, Greenhouse Gas and Energy Impact Report (AQHRAGGE),* LSA Consulting. December 2024. Page 69. Appendix B.

Climate Action Plan Policy	Project Consistency
TL-2.4 Encourage the installation of adequate and secure bicycle parking at all multi-family residential, commercial, governmental, and recreational locations throughout the region. (Community)	**Consistent.** The proposed project would comply with CALGreen Code requirements for bicycle parking.
TL-2.5 Support land use planning that will promote pedestrian and bicyclist access to and from new development by encouraging land use and subdivision designs that provide safe bicycle and pedestrian circulation, including bicycle parking facilities and internal bicycle and pedestrian routes, where feasible. (Community)	**Consistent.** The proposed project would comply with all applicable City design standards related to safe bicycle and pedestrian circulation.
TL-3.4 Support and encourage new development that provides safe routes to adjacent transit stops, where applicable. (Community)	**Consistent.** The proposed project would comply with City design standards that provide a safe route to a nearby transit stop.
TL-4.2 Work with employers and developers to provide affordable transportation alternatives and telecommuting options to serve both new and existing land uses. (Community)	**Consistent. The proposed project's tenants would be** able to participate in commute services offered by the Kings County Association of Governments and the City.
TL-4.3 Support compliance with SJVAPCD Rule 9410 by providing guidance and resources to employers required to comply with the eTRIP Rule. The eTRIP Rule requires employers with over 100 eligible employees to establish an Employer Trip Reduction Implementation Plan (eTRIP) to encourage employees to reduce single-occupancy vehicle trips by providing end of trip facilities such as preferential parking for vanpools and rideshare, bicycle parking, and other facilities suitable for the type of business. (Community)	**Not applicable.** The proposed project does not include employers as it is a residential development with no retail or commercial uses proposed.
TL-5.2 Allow the joint use of parking facilities for both private businesses and public agencies. (Community)	**Not applicable.** The proposed project would not include designated parking facilities beyond those developed for use by the single-family residences included in the proposed project.

Source: Kings County Association of Governments (2014) and LSA (July 2024).
CALGreen = California Green Building Standards Code
SJVAPCD = San Joaquin Valley Air Pollution Control District

KCAG 2022 RTP/SCS

The KCAG RTP/SCS reflects transportation planning for Kings County through 2046. The vision, goals, and policies in the 2022 RTP are intended to serve as the foundation for both short- and long-term planning and guide implementation activities. As a predominantly rural county through which vital arterial routes between San Francisco and Los Angeles, as well as routes linking the San Joaquin Valley run, most travel in Kings County is done by personal vehicle. KCAG developed the RTP/SCS with a goal to create a "robust transportation system that serves all residents of Kings County, balanced against regional and Statewide goals." This includes investments in future transit service and improved bicycle and pedestrian connections. Kings County is also preparing for a future with low-emissions vehicles, including the planned development of a zero-emission transit vehicle fleet, and preparing for interim high-speed rail service slated to begin in the San Joaquin Valley by the end of the decade. The 2022 RTP contains

transportation projects to help more efficiently distribute population, housing, and employment growth, as well as forecast development that is generally consistent with regional-level general plan data. The 2022 RTP does not require that local General Plans, Specific Plans, or zoning be consistent with the 2022 RTP, but provides incentives for consistency for governments and developers.

The proposed Project would not interfere with KCAG's ability to achieve the region's GHG reductions. Furthermore, the proposed Project is not regionally significant per State CEQA Guidelines Section 15206, and it would not conflict with the 2022 RTP targets because those targets were established and are applicable on a regional level. The proposed Project would include the construction of 615 single-family residential units. As such, the increase in population associated with the proposed Project would be consistent with the population growth assumptions for Kings County used in the 2022 RTP. Therefore, it is anticipated that implementation of the proposed Project would not interfere with KCAG's ability to implement the regional strategies outlined in the 2022 RTP.

As described above, the proposed Project would generally comply with existing State regulations adopted to achieve the overall GHG emissions reduction goals identified in the 2022 RTP. However, as described above, the proposed Project would not be consistent with the 2022 Scoping Plan key residential and mixed-use project attributes related to VMT reduction, working lands conversion, or with transit densities. As such, the proposed Project would not contribute to its "fair share" of emission reductions required to support achieving long-term State GHG reduction goals due to Project's significant and unavoidable VMT impacts. Therefore, the proposed Project would conflict with the plans and policies adopted for the purpose of reducing the emissions of GHGs, including the CARB 2022 Scoping Plan, EO B-30-15, SB 32, and AB 1279. This impact is considered ***significant and unavoidable.***

Mitigation Measures:

None Required.

Cumulative Impacts

Significant and Cumulatively Considerable. The State of California, through AB 32, has acknowledged that GHG emissions are a statewide impact. Emissions generated by the proposed Project combined with past, present, and reasonably probable future projects could contribute to this impact. The CEQA Guidelines emphasize that effects of GHG emissions are cumulative in

nature and should be analyzed in the context of CEQA's existing cumulative impacts analysis. The California Governor's Office of Planning and Research acknowledges that although climate change is cumulative in nature, not every individual project that emits GHGs must necessarily be found to contribute to a significant cumulative impact on the environment.

As discussed above, the proposed Project would generally comply with existing State regulations adopted to achieve the overall GHG emissions reduction goals. However, the proposed Project would not be consistent with the 2022 Scoping Plan key residential and mixed-use project attributes related to VMT reduction, working lands conversion, or with transit densities. As such, the proposed Project would not contribute to its "fair share" of emission reductions required to support achieving long-term State GHG reduction goals due to the Project's significant and unavoidable VMT impact. Therefore, the proposed Project would conflict with the plans and policies adopted for the purpose of reducing the emissions of GHGs, including the CARB 2022 Scoping Plan, EO B-30-15, SB 32, and AB 1279. Therefore, the proposed Project's incremental contribution would be ***significant and cumulatively considerable.***

3.4 Transportation/Traffic

This section of the DEIR identifies potential impacts of the proposed Project pertaining to transportation and traffic in and around the Project vicinity. The analysis presented in this EIR section is based, in part, on the Traffic Study prepared for the Project by Ruettgers & Schuler Civil Engineers, which is included as Appendix C.

Environmental Setting

The proposed Project is located on approximately 135.28 acres in the eastern portion of Kings County. The proposed Project site is located entirely within the City of Hanford limits, near the northern City limit boundary, on the northwest corner of 12th Avenue and Fargo Avenue. The proposed development is located Assessor's Parcel Numbers 009-020-021, -047, -023 and -046 and is currently being utilized for agricultural purposes.

Area Roadways

10th Avenue is an arterial that extends south from State Route 43 and intersects Fargo Avenue approximately one mile east of 11th Avenue. Within the study area, it operates as a divided four-lane roadway and provides access to residential and commercial land uses. It also has a grade crossing of the San Joaquin Valley Railroad between 5th and 6th Streets and connects to State Route 198 via 3rd and 4th Streets.

11th Avenue is a north-south arterial located midway between 10th Avenue and 12th Avenue. It operates within the study area primarily as a divided four-lane roadway with grade crossings of the BNSF Railway and San Joaquin Valley Railroad. It provides access to residential and commercial land uses and State Route 198 via 3rd and 4th Streets.

12th Avenue is a north-south arterial that intersects Fargo Avenue approximately one mile west of 11th Avenue. It operates as a divided four-lane roadway north of Lacey Boulevard and as a divided six-lane roadway south of Lacey Boulevard with a grade crossing of the San Joaquin Valley Railroad and an interchange connection to State Route 198. It provides access to residential, commercial, and agricultural land uses.

Centennial Drive is a collector that extends west from 12th Avenue to Mall Drive. It turns northwesterly and then northerly before intersecting Lacey Boulevard approximately 0.4 miles west of 12th Avenue. South of Lacey Boulevard, Centennial Drive operates as a divided four-lane roadway and provides access to commercial land uses. North of Lacey Boulevard, it exists as a two-lane roadway and provides access to residential and agricultural land uses.

Cortner Street is an east-west collector that intersects 11th Avenue approximately 0.4 miles south of Fargo Avenue. It operates as a two-lane roadway at various stages of widening and improvement and provides access to residential land uses.

Fargo Avenue is an east-west arterial located midway between Grangeville Boulevard and Flint Avenue. It operates within the study area as a two-to-four-lane roadway with a grade crossing of the BNSF Railway. Fargo Avenue provides access to residential and agricultural land uses.

Flint Avenue is an east-west major arterial aligned approximately one mile north of Fargo Avenue. It operates primarily as a two-lane roadway with graded shoulders and a grade crossing of the BNSF Railway. Flint Avenue provides access to residential and agricultural land uses.

Grangeville Boulevard is an east-west arterial located midway between Lacey Boulevard and Fargo Avenue. It operates as a divided four-lane roadway with a grade crossing of the BNSF Railway. Grangeville Boulevard provides access to residential and commercial land uses within the study area.

Greenfield Avenue is an east-west collector that intersects 12th Avenue approximately 0.4 miles south of Grangeville Boulevard. It operates as a divided two-lane roadway and provides access to residential and commercial land uses.

Lacey Boulevard is an east-west arterial that intersects 11th Avenue approximately one mile south of Grangeville Boulevard. It operates primarily as a divided four-lane roadway and is classified as an arterial west of 11th Avenue and as a collector east of 11th Avenue. Lacey Boulevard provides access to commercial, residential, and agricultural land uses.

Liberty Street is a collector that extends east from Centennial Drive approximately 0.3 miles north of Lacey Boulevard. It continues east of 12th Avenue as Kings County Drive where it turns southeasterly and then southerly before intersecting Lacey Boulevard at Mall Drive approximately 0.2 miles east of 12th Avenue. West of 12th Avenue, Liberty Street operates with two lanes and provides access to residential and agricultural land uses. East of 12th Avenue, it exists as a divided two-lane roadway and provides access to commercial land uses.

State Route 198 is an east-west state highway that extends from the California Central Coast, through the Central Valley to Sequoia National Park. It functions as a major regional and interregional corridor and operates within the study area as a four-lane expressway.

Airports

The nearest public airport is the Hanford Municipal Airport, approximately 3.6 miles southeast of the Project site.

Regulatory Setting

Federal Regulations

Several federal regulations govern transportation issues. They include:

- Title 49, CFR, Sections 171-177 (49 CFR 171-177), governs the transportation of hazardous materials, the types of materials defined as hazardous, and the marking of the transportation vehicles.
- 49 CFR 350-399, and Appendices A-G, Federal Motor Carrier Safety Regulations, address safety considerations for the transport of goods, materials, and substances over public highways.
- 49 CFR 397.9, the Hazardous Materials Transportation Act of 1974, directs the U.S. Department of Transportation to establish criteria and regulations for the safe transportation of hazardous materials.

State of California Regulations

California Department of Transportation

The California State Department of Transportation (Caltrans) has jurisdiction over state highways and sets maximum load limits for trucks and safety requirements for oversized vehicles that operate on California highways. The City of Hanford and Kings County are under the jurisdiction of Caltrans District 6. The following Caltrans regulations apply to the potential transportation impacts of the Project:

- California Vehicle Code, Division 15, Chapters 1 through 5 (Size, Weight, and Load). Includes regulations pertaining to licensing, size, weight, and load of vehicles operated on highways.
- California Street and Highway Code, Sections 660-711 Requires permits from Caltrans for any roadway encroachment during truck transportation and delivery, includes regulations for the care and protection of state and county highways and provisions for

the issuance of written permits, and requires permits for any load that exceeds Caltrans weight, length, or width standards for public roadways.

Senate Bill 743

Senate Bill (SB) 743 was approved by then Governor Brown on September 27, 2013. SB 743 created a path to revise the definition of transportation impacts according to California Environmental Quality Act (CEQA). The revised CEQA Guidelines requiring a vehicle miles traveled (VMT) analysis became effective December 28, 2018; however, agencies had until July 1, 2020 to finalize their local guidelines on VMT analysis. The intent of SB 743 is to align CEQA transportation study methodology with and promote the statewide goals and policies of reducing VMT and greenhouse gases (GHG). Three objectives of SB 743 related to development are to reduce GHG, diversify land uses, and focus on creating a multimodal environment.

Local Regulations

City of Hanford General Plan

The City of Hanford 2035 General Plan's Transportation & Circulation Chapter focuses on improving mobility for all forms of transportation in existing transportation networks as well as identifying new routes and systems to support future growth during the Planning period. The Land Use & Community Design Chapter provides additional guidance pertaining to future growth of Hanford. The following policies are applicable to the Project.

Land Use

L11 Support, encourage, and incentivize, to the extent possible, infill development projects that can effectively utilize existing transportation and utility infrastructure.

L18 Ensure that new development is compatible with existing and surrounding neighborhoods.

L25 Require new residential subdivisions to form maintenance districts to maintain shared public improvements, such as landscaping, lighting, walls, streets, and other improvements as determined by the City Council.

L26 Residential developments shall provide adequate on-site parking for the specific use.

Transportation and Circulation Policies

T1 Develop a circulation network that reinforces the desired land use pattern for Hanford, as identified in the land use element.

T2 Designate a functional street classification system that includes Highways, Major Arterials, Arterials, Collectors, Minor Collectors, and Local streets.

T3 Identify the locations of existing and future Highways, Major Arterials, Arterials, Collectors, and Minor Collectors with the Planned Area Boundary on the Circulation Map. Locations shown shall be fixed, with allowance for slight variation from the depicted alignments of new Collectors and Minor Collectors.

T10 Major Arterials shall provide through traffic movement around the edge of Hanford on continuous routes with very limited access to abutting property and local streets.

T11 Major Arterials shall be designated on Flint Avenue between 13th Avenue and SR 43, on 13th Avenue between Flint Avenue and Houston Avenue, and on Houston Avenue between 13th Avenue and SR 43.

T12 New access to Major Arterials shall be limited to new intersections with Arterials and Collectors, and where the Major Arterial is a property's only legal access to a public right of way.

T13 Arterials shall provide for through traffic movement on continuous routes through Hanford with limited access to abutting property.

T14 Arterials shall be designated generally on the one-mile grid of streets within the Planned Area Boundary. The specific streets designated are Flint Avenue, Fargo Avenue, Grangeville Boulevard, Lacey Boulevard, Hanford-Armona Road, Houston Avenue, Iona Avenue, Idaho Avenue, 7th Avenue, 9th Avenue, 10th Avenue, 11th Avenue, 12th Avenue, and 13th Avenue.

T15 New access to Arterials from new local streets and new driveways shall be limited to maximize through traffic movements.

T16 Encourage the consolidation or elimination of driveways, access points and curb cuts along existing Arterials.

T17 Collectors shall provide traffic movement within a limited area and connect local roads to the Arterial street system.

T18 Collectors shall be designated generally at ½ mile intervals between Arterials in new growth areas and on selected existing through streets that connect to two or more Arterials.

T19 New access to Collectors from new local streets and abutting property is generally permitted, but may be limited in some cases depending on planned roadway capacity and adjacent land use development patterns.

T20 Minor Collectors shall provide internal traffic movement within a neighborhood and connect local roads to Collectors and/or Arterials. T-2.7 Maintain a pedestrian-friendly environment.

T21 Minor Collectors shall be designated in developed areas without a ½ mile Collector interval and/or where the street is not wide enough to be designated a Collector.

T22 Minor collectors shall have no access limitations.

T23 Local streets shall provide internal traffic movement within a neighborhood and direct access to abutting property.

T24 Adopt standards for block lengths for new local streets to promote ease of movement and connectivity.

T25 Construct cul-de-sacs on all permanent dead-end streets. New cul-de-sacs shall be discouraged in commercial and industrial developments. Adopt maximum lengths of new local streets with cul-de-sacs.

T26 Encourage sidewalks and breaks in perimeter walls to allow pedestrian, bicycle, and visual access from cul de-sac streets to other nearby streets.

T27 Adopt policies that incorporate the use of maintenance districts to fund local street maintenance.

T29 Maintain a peak hour Level of Service E on streets and intersections within the area bounded by Highway 198, 10th Avenue, 11th Avenue, and Florinda Avenue, inclusive of these streets. Maintain a peak hour Level of Service D on all other streets and intersections with the Planned Growth Boundary.

T31 Coordinate additions and modifications to the roadway system with land development approvals.

T32 Acquire control of land within ultimate right-of-way of Arterial and Collector streets during early stages of development.

T33 Prioritize street improvements with emphasis on current and forecasted service levels.

T34 Local circulation system improvements shall be consistent with the goals and objectives stated in the Kings County Regional Transportation Plan.

T36 Periodically review and update the traffic impact fee program to ensure new development contributes its fair share of funding for new street, intersection, and highway improvements.

T39 Plan, design, and construct new transportation improvement projects to safely accommodate the needs of pedestrians, bicyclists, transit riders, motorists and persons of all abilities.

T40 Promote pedestrian and bicycle improvements that improve connectivity between neighborhoods, provide opportunities for distinctive neighborhood features, and foster a greater sense of community.

T49 Design subdivisions to maximize connectivity both internally and with other surrounding development.

T51 Consider alternative roadway design standards for new residential and mixed use development for future streets that may include:

- Narrower street widths on local roadways.
- Smaller turning radii geometrics on street intersections to improve safety for pedestrians.
- Tree lined streets in parkways between the curb and sidewalk.
- Roundabouts in lieu of traffic signals where appropriate conditions exist to maximize intersection efficiency, maintain continuous traffic flow, and reduce accident severity.

City of Hanford Active Transportation Plan

The City of Hanford's Active Transportation Plan (ATP) is a comprehensive strategy for improving and expanding options for walking, bicycling, accessing public transit, and utilizing other non-automobile forms of transportation within the community. This plan was developed with a grant from the California Department of Transportation's (Caltrans) Sustainable Transportation Planning Grant Program.

The ATP aims to achieve several key goals:

- Improve Safety: Increase the safety of pedestrians and bicyclists.
- Enhance Access & Connectivity: Create a connected network of pedestrian and bicycle routes linking homes, jobs, schools, parks, and other destinations.
- Support Public Health: Encourage active modes of transportation, contributing to improved public health and well-being.
- Address Environmental Concerns: Advance the efforts to reduce greenhouse gas emissions through increased reliance on active and sustainable transportation.
- Prioritize Disadvantaged Communities: Focus on improving safety, access, and quality of life in historically disadvantaged communities within Hanford.
- Facilitate Multi-Modal Transportation: Integrate active transportation with other modes of transportation, including connections to the future High-Speed Rail station and Cross Valley Corridor.

Thresholds of Significance

In accordance with the CEQA Guidelines, a project impact would be considered significant if the project would:

- Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities
- Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)
- Result in inadequate emergency access

Impacts and Mitigation Measures

Impact 3.4-1: *Would the project conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?*

Less Than Significant Impact. Ruettgers & Schuler Civil Engineers, Inc. (R&S) prepared a Traffic Study (see Appendix C) analyzing potential impacts the proposed Project would have on the existing roadway and transportation system. The Traffic Study and the analysis it contains is consistent with City guidelines and includes analyses of intersection level of service, roadway capacity, traffic signal warrants, and vehicle miles traveled. The scope of the study was developed in coordination with City and Caltrans staff and includes 22 intersections (15 signalized, seven unsignalized) and adjoining roadway segments. Study results are summarized in the text below. For the full text, graphics, and traffic counts, please refer to Appendix C.

Intersection Analysis

Study Intersections:

- 13th Ave & Flint Ave
- 12th Ave & Flint Ave
- 13th Ave & Fargo Ave
- Centennial Dr & Fargo Ave
- 12th Ave & Fargo Ave
- 11th Ave & Fargo Ave
- 10th Ave & Fargo Ave
- SR 43 & Fargo Ave
- 11th Ave & Cortner St
- 13th Ave & Grangeville Blvd
- Centennial Dr & Grangeville Blvd
- 12th Ave & Grangeville Blvd
- 11th Ave & Grangeville Blvd
- 12th Ave & Greenfield Ave

- 12th Ave & Liberty St/Kings County Dr
- 12th Ave & Lacey Blvd
- 11th Ave & Lacey Blvd
- 12th Ave & Centennial Dr
- 12th Ave & SR 198 WB Ramps
- 12th Ave & SR 198 EB Ramps
- 12th Ave & Project Entrance
- Fargo Ave & Project Entrance
- 12th Ave & Singh Dev. Project Entrance

Trip Generation

The Project trip generation volumes shown in Table 3.4-1 were estimated using the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition. Trip rates and peak hour directional splits for ITE Land Use Code 210 (Single-Family Detached Housing) were used to estimate Project trips for weekday peak hour of adjacent street traffic based on information provided by the project applicant. As shown in Table 3.4-1, the proposed Project is estimated to generate 5,366 average daily trips, 389 AM peak hour trips and 548 PM peak hour trips.

Table 3.4-1
Proposed Project Trip Generation

General Information			Daily Trips		AM Peak Hour Trips			PM Peak Hour Trips		
ITE Code	Development Type	Variable	ADT RATE	ADT	Rate	In % Split/ Trips	Out % Split/ Trips	Rate	In % Split/ Trips	Out % Split/ Trips
210	Single-Family detached Housing	615 Dwelling Units	eq	5366	eq	25% 97	75% 292	eq	63% 345	37% 203

Project Trip Distribution and Assignment

The distribution of Project peak hour trips is shown below and represents the movement of traffic accessing the Project site by direction. The project trip distribution was developed based on site location and travel patterns anticipated for the proposed land use.

Project Trip Distribution

Direction	Percent
North	10
East	30
South	50
West	10

Intersection Analysis

Analysis Scenarios

A capacity analysis of the study intersections was conducted using Synchro software from Trafficware (see Appendix C for output). This software utilizes the capacity analysis methodology in the Transportation Research Board's Highway Capacity Manual (HCM). The analysis was performed for each of the following traffic scenarios.

- Existing (2024)
- Existing Year (2024) + Project
- Future Year Cumulative Projects (2044)
- Future Year Cumulative Projects (2044) + Project

Level of service (LOS) criteria for unsignalized and signalized intersections, as defined in HCM, are presented in the tables below.

Level of Service Criteria
Unsignalized Intersections

Level of Service	Average Control Delay (sec/veh)	Expected Delay to Minor Street Traffic
A	< 10	Little or no delay
B	> 10 and < 15	Short delays
C	> 15 and < 25	Average delays
D	> 25 and < 35	Long delays
E	> 35 and < 50	Very long delays
F	> 50	Extreme delays

Level of Service Criteria
Signalized Intersections

Level of Service	Average Control Delay (sec/veh)	Volume-to-Capacity Ratio
A	< 10	< 0.60
B	> 10 and < 20	0.61 - 0.70
C	> 20 and < 35	0.71 - 0.80
D	> 35 and < 55	0.81 - 0.90
E	> 55 and < 80	0.91 - 1.00
F	> 80	> 1.00

Peak hour level of service for the study intersections in all scenarios is presented in Tables 3.4-2 (Weekday PM Peak Hour) and 3.4-3 (Weekday AM Peak Hour). The City of Hanford has set an intersection level of service standard of LOS C or better.

Table 3.4-2
Intersection Level of Service – Weekday PM Peak Hour

#	Intersection	Control Type	2024	2024+ Project	2044	2044+ Project	2044+ Project w/ Improvements[1]
1	13th Ave & Flint Ave	AWSC	A	A	A	A	-
2	12th Ave & Flint Ave	AWSC	B	B	B	C	-
3	13th Ave & Fargo Ave	AWSC	A	A	A	A	-
4	Centennial Dr & Fargo Ave	NB SB	B A	B A	B A	B A	-
5	12th Ave & Fargo Ave	Signal	B	C	C	C	C[3]
6	11th Ave & Fargo Ave	Signal	B	B	C	C	-
7	10th Ave & Fargo Ave	Signal	B	C	B	C	-
8	SR 43 & Fargo Ave	EB WB	B C	B C	D (30.1) D (28.3)	E (42.0) D (32.2)	-
		AWSC	-	-	-	-	B
9	11th Ave & Cortner St	Signal	C	C	C	C	-
10	13th Ave & Grangeville Blvd	Signal	B	B	B	B	-
11	Centennial Dr & Grangeville Blvd	Signal	B	C	C	C	-
12	12th Ave & Grangeville Blvd	Signal	B	C	C	C	-
13	11th Ave & Grangeville Blvd	Signal	C	C	C	C	-
14	12th Ave & Greenfield Ave	Signal	B	B	B	B	-
15	12th Ave & Liberty St/Kings County Dr	Signal	B	B	C	C	-
16	12th Ave & Lacey Blvd	Signal	C	C	C	C	-
17	11th Ave & Lacey Blvd	Signal	D (42.3)	D[2] (44.5)	D (44.7)	D[2] (42.8)	-
18	12th Ave & Centennial Dr	Signal	C	C	C	C	-
19	12th Ave & SR 198 WB Ramps	Signal	C	C	C	C	-
20	12th Ave & SR 198 EB Ramps	Signal	B	B	B	B	-
21	12th Ave & Project Entrance	EB	-	B	-	B	-
22	Fargo Ave & Project Entrance	SB	-	B	-	C	-
23	12th Ave & Singh Dev. Project Entrance	Signal	-	A	A	A	-

Table 3.4-3
Intersection Level of Service – Weekday AM Peak Hour

#	Intersection	Control Type	2024	2024+ Project	2044	2044+ Project	2044+ Project w/ Improvements[1]
1	13th Ave & Flint Ave	AWSC	A	A	A	A	–
2	12th Ave & Flint Ave	AWSC	B	B	C	C	–
3	13th Ave & Fargo Ave	AWSC	A	A	B	B	–
4	Centennial Dr & Fargo Ave	NB SB	B A	B A	B A	C A	–
5	12th Ave & Fargo Ave	Signal	B	B	D (41.8)	E (55.1)	C
6	11th Ave & Fargo Ave	Signal	B	C	C	C	–
7	10th Ave & Fargo Ave	Signal	B	B	B	B	–
8	SR 43 & Fargo Ave	EB WB	B C	B C	D (29.5) C	E (36.6) C	–
		AWSC	-	–	–	-	B
9	11th Ave & Cortner St	Signal	B	B	B	B	–
10	13th Ave & Grangeville Blvd	Signal	B	B	B	B	–
11	Centennial Dr & Grangeville Blvd	Signal	B	B	B	B	–
12	12th Ave & Grangeville Blvd	Signal	B	B	C	C	–
13	11th Ave & Grangeville Blvd	Signal	C	C	C	C	–
14	12th Ave & Greenfield Ave	Signal	B	B	B	B	–
15	12th Ave & Liberty St/Kings County Dr	Signal	B	B	B	B	–
16	12th Ave & Lacey Blvd	Signal	B	B	B	B	–
17	11th Ave & Lacey Blvd	Signal	B	C	C	C	–
18	12th Ave & Centennial Dr	Signal	B	B	B	B	–
19	12th Ave & SR 198 WB Ramps	Signal	B	B	B	B	–
20	12th Ave & SR 198 EB Ramps	Signal	A	A	A	A	–
21	12th Ave & Project Entrance	EB	-	B	–	B	–
22	Fargo Ave & Project Entrance	SB	-	C	–	C	–
23	12th Ave & Singh Dev. Project Entrance	Signal	–	A	A	B	–

As shown in the tables above, with mitigation, the Project will result in LOS C or better at all intersections except SR 43 & Fargo Avenue, 11th & Lacey Boulevard, and 12th Avenue & Fargo Avenue. Refer to the end of this section for a discussion of mitigation measures.

Traffic Signal Warrant Analysis

Peak hour signal warrants were evaluated for the three unsignalized intersections within the study based on the 2014 *California Manual on Uniform Traffic Control Devices* (2014 CA MUTCD). Peak hour signal warrants assess delay to traffic on minor street approaches when entering or crossing a major street. Signal warrant analysis results are shown in Tables 3.4-4 and 3.4-5.

Table 3.4-4
Traffic Signal Warrants – Weekday PM Peak Hour

		2024			2024+Project			2044			2044+Project		
#	Intersection	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met
1	13th Ave at Flint Ave	142	45	NO	147	54	NO	174	63	NO	179	92	NO
2	12th Ave at Flint Ave	519	97	NO	555	97	NO	690	134	NO	726	134	NO
3	13th Ave at Fargo Ave	195	107	NO	223	124	NO	277	151	NO	294	179	NO
4	Centennial Dr at Fargo Ave	327	118	NO	381	133	NO	415	130	NO	469	145	NO
8	SR 43 at Fargo Ave	622	111	NO	631	124	NO	804	187	YES	813	200	YES
21	12th Ave at Project Entrance	495	-	NO	677	108	NO	1261	-	NO	1443	194	YES
22	Fargo Ave at Project Entrance	428	-	NO	591	95	NO	538	-	NO	701	95	NO

Table 3.4-5
Traffic Signal Warrants – Weekday AM Peak Hour

		2024			2024+Project			2044			2044+Project		
#	Intersection	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met	Major Street Total Approach Vol	Minor Street High Approach Vol	Warrant Met
1	13th Ave at Flint Ave	164	105	NO	186	85	NO	265	106	NO	288	106	NO
2	12th Ave at Flint Ave	478	165	NO	515	165	NO	657	226	YES	694	226	YES
3	13th Ave at Fargo Ave	338	103	NO	362	110	NO	468	129	NO	490	137	NO
4	Centennial Dr at Fargo Ave	455	186	NO	500	190	NO	586	205	NO	631	209	NO
8	SR 43 at Fargo Ave	532	167	NO	534	186	NO	700	266	YES	702	285	YES
21	12th Ave at Project Entrance	498	-	NO	550	156	NO	625	-	NO	677	156	YES
22	Fargo Ave at Project Entrance	615	-	NO	661	136	NO	773	-	NO	819	136	YES

It is important to note that a signal warrant defines the minimum condition under which signalization of an intersection might be warranted. Meeting this threshold does not suggest traffic signals are required, but rather, that other traffic factors and conditions be considered in order to determine whether signals are truly justified.

It is also noted that signal warrants do not necessarily correlate with level of service. An intersection may satisfy a signal warrant condition and operate at or above an acceptable level of service or operate below an acceptable level of service and not meet signal warrant criteria. As identified in the tables above, the Project would require traffic signals to be installed at certain intersections. Refer to the end of this section for a discussion of mitigation measures.

Roadway Analysis

A capacity analysis of the study roadways was conducted using Table 4 in the State of Florida Department of Transportation *Quality/Level of Service Handbook* dated June 2020 (see Appendix C). The City of Hanford has a minimum level of service standard of LOS C for roadways. PM Roadway Level of Service is provided in Table 3.4-6 and AM Roadway Level of Service is provided in Table 3.4-7. The analysis was performed for the following AM and PM traffic scenarios:

- Existing (2024)
- Existing (2024) + Project
- Future Year Cumulative Projects (2044)
- Future Year Cumulative Projects (2044) + Project

Table 3.4-6
PM Roadway Level of Service

Roadway Segments	2024 Two-Way LOS		2024+Project Two-Way LOS		2044 Two-Way LOS		2044+Project Two-Way LOS	
	VOL	LOS	VOL	LOS	VOL	LOS	VOL	LOS
Flint Ave: 13th Ave and 12th Ave	107	C	144	C	148	C	185	C
13th Ave: Flint Ave and Fargo Ave	154	C	154	C	192	C	192	C
13th Ave: Fargo Ave and Grangeville Blvd	287	C	332	C	351	C	396	C
Fargo Ave: 13th Ave and Centennial Dr	264	C	309	C	328	C	373	C
Fargo Ave: Centennial Dr and 12th Ave	470	C	620	C	575	C	725	C
Fargo Ave: 12th Ave and 11th Ave	888	C	1104	C	1102	C	1318	C
Fargo Ave: 11th Ave and 10th Ave	864	C	988	C	1070	C	1194	C
Fargo Ave: 10th Ave and SR43	595	C	630	C	736	C	771	C
Centennial Dr: Fargo Ave and Grangeville Blvd	492	C	505	C	555	C	568	C
Grangeville Blvd: 13th Ave and Centennial Dr	625	C	630	C	777	C	782	C
Grangeville Blvd: Centennial Dr and 12th Ave	796	C	809	C	1084	C	1097	C
Grangeville Blvd: 12th Ave and 11th Ave	1098	C	1115	C	1399	C	1416	C
12th Ave: Flint Ave and Fargo Ave	495	C	719	C	1092	C	1316	C
12th Ave: Fargo Ave and Grangeville Blvd	1072	C	1229	C	2127	C	2284	C
12th: Grangeville Blvd and Greenfield Ave	1508	C	1635	C	2564	C	2691	C
12th Ave: Greenfield Ave and Liberty Dr	1496	C	1610	C	2434	C	2548	C
12th Ave: Liberty Dr and Lacey Blvd	1433	C	1536	C	2094	C	2197	C
12th Ave: Lacey Blvd and Centennial Dr	1688	C	1749	C	2351	C	2412	C
12th Ave: Centennial Dr and SR198 WB Ramps	2919	C	2961	C	3726	C	3768	C
12th Ave: SR198 WB Ramps and SR198 EB Ramps	2198	C	2218	C	2725	C	2745	C
Lacey Blvd: 12th Ave and 11th Ave	1266	C	1296	C	1698	C	1728	C
11th Ave: Fargo Ave and Cortner St	957	C	1042	C	1197	C	1282	C
11th Ave: Cortner St and Grangeville Blvd	1221	C	1289	C	1482	C	1550	C
11th Ave: Grangeville Blvd and Lacey Blvd	1357	C	1417	C	1636	C	1696	C

Table 3.4-7
AM Roadway Level of Service

Roadway Segments	2024 Two-Way LOS		2024+Project Two-Way LOS		2044 Two-Way LOS		2044+Project Two-Way LOS	
	VOL	LOS	VOL	LOS	VOL	LOS	VOL	LOS
Flint Ave: 13th Ave and 12th Ave	191	C	219	C	262	C	290	C
13th Ave: Flint Ave and Fargo Ave	191	C	191	C	232	C	232	C
13th Ave: Fargo Ave and Grangeville Blvd	330	C	363	C	405	C	438	C
Fargo Ave: 13th Ave and Centennial Dr	380	C	412	C	471	C	503	C
Fargo Ave: Centennial Dr and 12th Ave	650	C	756	C	793	C	899	C
Fargo Ave: 12th Ave and 11th Ave	850	C	1002	C	1053	C	1205	C
Fargo Ave: 11th Ave and 10th Ave	825	C	913	C	1025	C	1113	C
Fargo Ave: 10th Ave and SR43	463	C	488	C	575	C	600	C
Centennial Dr: Fargo Ave and Grangeville Blvd	450	C	459	C	507	C	516	C
Grangeville Blvd: 13th Ave and Centennial Dr	680	C	689	C	846	C	855	C
Grangeville Blvd: Centennial Dr and 12th Ave	802	C	811	C	1103	C	1112	C
Grangeville Blvd: 12th Ave and 11th Ave	977	C	989	C	1265	C	1277	C
12th Ave: Flint Ave and Fargo Ave	495	C	650	C	667	C	822	C
12th Ave: Fargo Ave and Grangeville Blvd	790	C	900	C	1409	C	1519	C
12th: Grangeville Blvd and Greenfield Ave	975	C	1064	C	1804	C	1893	C
12th Ave: Greenfield Ave and Liberty Dr	924	C	1005	C	1623	C	1704	C
12th Ave: Liberty Dr and Lacey Blvd	742	C	814	C	1373	C	1445	C
12th Ave: Lacey Blvd and Centennial Dr	913	C	956	C	1321	C	1364	C
12th Ave: Centennial Dr and SR198 WB Ramps	1884	C	1914	C	2402	C	2432	C
12th Ave: SR198 WB Ramps and SR198 EB Ramps	1517	C	1531	C	1927	C	1941	C
Lacey Blvd: 12th Ave and 11th Ave	710	C	731	C	889	C	910	C
11th Ave: Fargo Ave and Cortner St	887	C	947	C	1134	C	1194	C
11th Ave: Cortner St and Grangeville Blvd	991	C	1039	C	1157	C	1205	C
11th Ave: Grangeville Blvd and Lacey Blvd	1160	C	1202	C	1373	C	1415	C

As shown in the tables above, with mitigation, the Project will result in LOS C or better at all roadways. Refer to the end of this section for a discussion of mitigation measures.

Queue Length Analysis

Existing volumes and future volumes, both with and without Project traffic were used to analyze turn movements at State Route 198 Westbound Ramps & 12th Avenue and State Route 198 Eastbound Ramps & 12th Avenue. Queue length analysis was conducted using SimTraffic software. The results of the queue length analysis are shown in Tables 3.4-8 and 3.4-9 below.

Table 3.4-8
PM Queue Length Analysis

Intersection	12th Ave & SR 198 WB Ramps		12th Ave & SR 198 EB Ramps	
Movement	WBL	WBR	EBL	EBR
Storage Length	1000	1000	1000	1000
2024	189	266	181	92
2024+Project	163	260	186	62
2044	227	358	207	131
2044+Project	274	366	195	81

Table 3.4-9
AM Queue Length Analysis

Intersection	12th Ave & SR 198 WB Ramps		12th Ave & SR 198 EB Ramps	
Movement	WBL	WBR	EBL	EBR
Storage Length	1000	1000	1000	1000
2024	57	188	125	43
2024+Project	104	178	121	55
2044	92	255	164	78
2044+Project	189	280	156	62

Traffic does not currently exceed the storage length for either of the ramps and is not expected to with the addition of project traffic through 2044. Therefore, the Project is not expected to have a significant impact on queue length.

Mitigation Measures:

All study intersections are expected to operate with minimal delay (at or above LOS C) during peak hours through the year 2024, both with and without Project traffic, with the exception of the intersection of 11th Avenue & Lacey Boulevard, which currently operates at LOS D. In 2044, prior to the addition of Project, the intersections of 12th Avenue & Fargo Avenue and State Route 43 & Fargo Avenue are expected to operate below an acceptable level of service. Proposed improvement measures for 12th Avenue & Fargo Avenue and State Route 43 & Fargo Avenue are shown below. Since the intersection of 11th Avenue & Lacey Boulevard does not degrade in LOS with the addition of Project traffic, no improvement measures are recommended.

Table 3.4-10
Project Percent Share

#	Intersection	Total Improvements Required by 2044	Project Share
5	12th Ave & Fargo Ave	Add: Northbound Through, Southbound Through, Eastbound Through, Westbound Through	54.04%
8	SR 43 & Fargo Ave	AWSC	11.48%

Project percent share is calculated using the following formula:

$$\% \text{ Share} = \frac{\text{Project Traffic}}{(\text{Future+Project Traffic}) - \text{Existing Traffic}} \times 100\%$$

Based on the tables above, mitigation measure TRA-1 will be implemented.

TRA-1 The Project will be responsible for paying its fair share cost percentages and/or constructing the recommended improvements identified in Tables 3.4-10 subject to reimbursement for the costs that are in excess of the Project's equitable responsibility as determined by the City. This will be itemized and enforced through conditions of approval or a development agreement, at the discretion of the City, prior to Project implementation.

Therefore, after implementation of Mitigation Measure TRA-1, the Project's impacts are considered ***less than significant.***

Impact 3.4-2: *Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?*

Significant and Unavoidable Impact. An analysis of Project VMT (vehicle miles traveled) was conducted in accordance with the VMT Thresholds and Implementation Guidelines, City of Hanford, dated November 2022 (VMT Guidelines). The analysis involved comparing an estimate of VMT attributable to the Project to a threshold VMT and assessing whether project VMT would result in a significant transportation impact under the California Environmental Quality Act (CEQA).

The detailed VMT analysis was conducted by LSA Associates, Inc. (Riverside, California) using the KCAG travel demand model. The VMT analysis results are presented in Table 3.4-11 (see Appendix C).

Table 3.4-11
VMT Analysis Results

Land Use	Daily Vehicle Miles Traveled (VMT)			Significant Impact	Reduction Needed
	Metric	Threshold	Project		
Residential	VMT per Capita	8.99	10.41	YES	13.6%

Source: LSA Associates, Inc. memorandum, dated July 11, 2024

Since the Project's VMT per capita of 10.41 is greater than the significance threshold of 8.9, the Project will have a significant transportation impact under CEQA.

Potential Mitigation

For land development projects, VMT mitigation focuses on measures that reduce the number and/or length of single-occupant vehicle trips generated by a project. According to the VMT Guidelines, proposed mitigation to reduce project VMT "must be supported by substantial evidence illustrating that the measure(s) will mitigate VMT impacts to less than significant."

The VMT Guidelines cite the Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health Equity: Designed for Local Governments, Communities, and Project Developers, California Air Pollution Control Officers Association, December 2021 (CAPCOA Handbook) as a source for mitigation measures with quantitative methods for estimating VMT reduction. Below are quantitative measures contained in the CAPCOA Handbook for residential projects in suburban areas. Measure identifiers are shown within parentheses and italicized text addresses the applicability of each measure to the Project.

- Increase residential density to a level higher than the national average (T-1)

  Applicable, but not feasible. The residential density for the project is 7.1 dwelling units/acre (615 single-family homes/87 acres of developable land). As stated in the CAPCOA Handbook, the national average is 9.1 dwelling units/acre and includes apartments, townhomes, and condominiums in addition to detached single-family housing.

  Below is the VMT reduction formula in the CAPCOA Handbook for this measure (-0.22 = VMT elasticity factor).

  VMT reduction = [(project du/acre – 9.1 du/acre) / 9.1 du/acre] x (-0.22)

Assuming no change in the amount of developable land, the Project would need at least 792 dwelling units to reach the national average and be credited for any reduction in project VMT. Moreover, the Project would require a total of 1,279 dwelling units to mitigate the impact of project VMT to a less than significant level. Such an increase in Project residential density (more than doubling) would not be feasible. The Project developer specializes in single-family residential development and does not have the expertise or business model to develop multi-family residences such as apartments, townhomes or condominiums, which would be required to meet this housing density.

- Provide easy access to high-quality public transit (T-3)

  Not applicable because the Project does not meet implementation requirements. Project must be located within 0.5 miles of a high frequency transit station (either rail or bus rapid transit with headways of less than 15 minutes).

- Integrate affordable and below market rate housing (T-4)

  Not applicable because the Project does not meet implementation requirements. Project must be a multifamily residential development permanently dedicated as affordable housing for lower income families.

- Provide electric vehicle charging infrastructure (T-14)

  Not applicable to single-family residential projects. Mitigation potential available only to developments with buildings that have designated parking areas (e.g., commercial, educational, retail, and multifamily housing).

- Limit residential parking supply (T-15)

  Not applicable because the measure is ineffective in locations where unrestricted street parking or other off-street parking is available and has adequate capacity to accommodate project-related vehicle parking demand.

- Unbundle residential parking costs from property costs (T-16)

  Not applicable since there are no residential parking costs associated with the Project.

The Project's VMT is greater than the City's significance threshold and as such, the Project will create a significant and unavoidable transportation impact. It was determined that potential mitigation measures contained in the CAPCOA Handbook are either not applicable or infeasible. As such, the proposed Project will be inconsistent with CEQA Guidelines section 15064.3 and will create ***significant and unavoidable*** impacts.

Impact 3.4-3: *Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

Less Than Significant Impact. The overall layout of the proposed Project is block form with numerous points of ingress and egress. All proposed internal roadways will be constructed to meet local and State standards and requirements. No sharp roadway curves currently exist in the proposed Project area, nor would such curves be created by the proposed Project. No roadway design features associated with this proposed Project would result in an increase in hazards due to a design feature or be an incompatible use. The final design will be subject to City review. There are no agricultural uses (such as farm equipment) associated with the Project. Any impacts would be ***less than significant.***

Mitigation Measures

None are required.

Impact 3.4-4: *Would the project result in inadequate emergency access?*

Less Than Significant Impact With Mitigation. Project construction activities could result in potential vehicular access issues due to potential temporary road detours and/or closures to accommodate Project construction. A construction-traffic management plan (Plan) will be required prior to construction of the proposed Project, as identified in Mitigation Measure TRA – 3. The Plan would delineate all road closure provisions to maintain access to adjacent properties at all times, prior notices, adequate sign-postings, detours, provisions for pedestrian and bicycle transportation and permitted hours of construction activity. Proper detours and warning signs would be established along the Project perimeter to ensure public safety. The Plan shall be devised so that construction would not interfere with emergency response or evacuation plans. With implementation of the Plan, less than significant impacts are anticipated. Therefore, no significant impacts to vehicular and emergency access would occur during construction activities.

Once constructed, the proposed Project includes multiple access roads allowing adequate egress and ingress to the residential development in the event of an emergency. Additionally, as part of the proposed Project, internal access roadways would be constructed to City standards. The City has reviewed the site layout and determined that the Project provides adequate emergency access. Therefore, there is a ***less than significant impact with Mitigation incorporation.***

Mitigation Measures

TRA-3 Prior to the issuance of construction or building permits, the Project developer shall:

1. Prepare and submit a Construction Traffic Control Plan to City of Hanford for approval. Implement the approved Construction Traffic Control Plan during construction. The Construction Traffic Control Plan shall be prepared in accordance with both the California Department of Transportation Manual on Uniform Traffic Control Devices and Work Area Traffic Control Handbook and shall include, but not be limited to, the following issues:

    a. Timing of deliveries of heavy equipment and building materials;

    b. Directing construction traffic with a flag person;

    c. Placing temporary signing, lighting, and traffic control devices if required, including, but not limited to, appropriate signage along access routes to indicate the presence of heavy vehicles and construction traffic;

    d. Ensuring access for emergency vehicles to the project site;

    e. Temporarily closing travel lanes or delaying traffic during materials delivery, transmission line stringing activities, or any other utility connections;

    f. Maintaining access to adjacent property; and,

    g. Specifying both construction-related vehicle travel and oversize load haul routes, minimizing construction traffic during the AM and PM peak hour, distributing construction traffic flow across alternative routes to access the project sites, and avoiding residential neighborhoods to the maximum extent feasible.

After implementation of Mitigation Measure TRA - 3 the Project's impacts would be reduced to a ***less than significant*** level**.**

Cumulative Impacts

The potential for cumulative transportation impacts exists where there are multiple projects proposed in an area that have overlapping operational phases that could affect similar resources. Projects with overlapping schedules for operations could result in a substantial contribution to increased traffic levels throughout the surrounding roadway network. The Project, when

considered with nearby, reasonably foreseeable planned projects, would result in a cumulatively considerable and unavoidable impact as described below.

Impact 3.4-1: Less Than Cumulatively Considerable. As discussed previously, all study intersections are expected to operate with minimal delay (at or above LOS C) during peak hours through the year 2044, or can be mitigated to operate at an acceptable LOS. Therefore, the proposed Project will not conflict with the City's adopted General Plan and Circulation Element. After implementation of all feasible mitigation (TRA – 1), the impact will be ***less than significant***.

Impact 3.4-2: Cumulatively Considerable and Unavoidable. VMT is generally evaluated on a project by project basis (rather than in a cumulative manner) because each individual project is evaluated relative to its proximity to other land uses when calculating VMT. Construction of the individual development projects allowed under the land use designations of the City General Plan may result in the generation of traffic increases and may contribute incrementally to Citywide VMTs. Because the Project's calculated VMT is greater than the City's significance threshold, the Project would be expected to result in a significant transportation impact under CEQA. It was determined that potential mitigation measures contained in the CAPCOA Handbook are either not applicable or infeasible. As such, impacts remain ***cumulatively considerable and unavoidable***.

Impact 3.4-3: Less Than Cumulatively Considerable. As previously discussed, the Project does not include any hazardous geometric design features or incompatible uses. Other potential projects that could occur in the area would be subject to review by the City or County to determine potential geometric hazards on a project by project basis. As such, implementation of the proposed Project would not make a cumulatively considerable contribution to any significant impact to hazardous layout/road design. Cumulative impacts are ***less than significant.***

Impact 3.4-4: Less Than Cumulatively Considerable. The City will require the developer/construction contractor to develop a construction traffic management plan that will ensure emergency vehicle access during construction (TRA-3). As discussed previously, once constructed, the proposed Project includes multiple access roads allowing adequate egress and ingress to the development in the event of an emergency. Additionally, as part of the proposed Project, internal access roadways would be constructed to City standards. The City has reviewed the site layout and determined that the Project provides adequate emergency access. In addition, a construction traffic management plan will be devised so that construction would not interfere with emergency response or evacuation plans. Other projects in the area may be constructed simultaneously. However, those projects would also be subject to a construction traffic management plan and site plan review to ensure that adequate emergency vehicle access is maintained. Therefore, the implementation of the proposed Project would not make a

cumulatively considerable contribution to any significant impact to inadequate emergency access. Cumulative impacts are ***less than significant.***

PROJECT ALTERNATIVES

4.1 Introduction

CEQA Guidelines Section 15126.6 requires the consideration of a range of reasonable alternatives to the proposed project that could feasibly attain most of the objectives of the proposed project. The Guidelines further require that the discussion focus on alternatives capable of eliminating significant adverse impacts of the project or reducing them to a less-than significant level, even if the alternative would not fully attain the project objectives or would be more costly. According to CEQA Guidelines, the range of alternatives required in an EIR is governed by the "rule of reason" that requires an EIR to evaluate only those alternatives necessary to permit a reasoned choice. An EIR need not consider alternatives that have effects that cannot be reasonably ascertained and/or are remote and speculative.

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) identifies the requirements for the "No Project" alternative. 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).

Alternative locations can also be evaluated if there are feasible locations available. Each alternative is evaluated against the Project objectives and criteria established by the Lead Agency.

The proposed Project has the potential to have significant adverse effects on:

- Greenhouse Gas Emissions – Generate GHG Emissions (project and cumulative level) and Conflict with Plan (project and cumulative level)

- Transportation – Conflict with CEQA Guidelines 15064.3 (project and cumulative level)

Even with the mitigation measures described in Chapter 3, Environmental Setting, Impacts, and Mitigation Measures, of this EIR, impacts in these issue areas would be significant and unavoidable. Therefore, per the State CEQA Guidelines, this section discusses alternatives that are capable of avoiding or substantially lessening effects on these resources. The significant and unavoidable impacts of the proposed project are discussed below.

4.2 Project Objectives

In accordance with CEQA Guidelines Section 15124(b), the following are the City of Hanford's Project objectives:

- To provide housing opportunities with a range of densities, styles, sizes and values that will be designed to satisfy existing and future demand for quality housing in the area.
- To provide a sense of community and walkability within the development through the use of street patterns, a park, landscaping and other project amenities.
- To provide a residential development that is compatible with surrounding land uses and is near major services.
- To provide an economically feasible residential development that assists the City in meeting its General Plan and Housing Element requirements and objectives.

4.3 Alternatives Considered in this EIR

- No Project
- Alternate Locations
- Reduced (50%) Project

4.4 Analysis Format

In accordance with CEQA Guidelines Section 15126.6(d), each alternative is evaluated in sufficient detail to determine whether the overall environmental impacts would be less, similar, or greater than the corresponding impacts of the project. Furthermore, each alternative is evaluated to determine whether the project objectives identified in Chapter 2 - Project Description, of this Draft EIR would be mostly attained by the alternative. The Project's impacts that form the basis of comparison in the alternatives analysis are those impacts which represent

a conservative assessment of project impacts. The evaluation of each of the alternatives follows the process described below:

a) The net environmental impacts of the alternative after implementation of reasonable mitigation measures are determined for each environmental issue area analyzed in this EIR.
b) Post-mitigation significant and less than significant environmental impacts of the alternative and the project are compared for each environmental issue area as follows:
    - Less: Where the impact of the alternative after feasible mitigation would be clearly less adverse than the impact of the project, the comparative impact is said to be "less."
    - Greater: Where the impact of the alternative after feasible mitigation would be clearly more adverse than the impact of the project, the comparative impact is said to be "greater."
    - Similar: Where the impacts of the alternative after feasible mitigation and the project would be roughly equivalent, the comparative impact is said to be "similar."
c) The comparative analysis of the impacts is followed by a general discussion of whether the underlying purpose for the project, as well as the project's basic objectives would be substantially attained by the alternative.

4.5 Project Alternatives Impact Analysis

No Project Alternative

CEQA Section 15126.6(e) requires the discussion of the No Project Alternative "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 scenario in this case consists of retaining the property in its original configuration, with no construction or operation of the proposed Neves Project. Under this alternative, the site remains in agricultural production and no new urban development would occur on the site.

Description

This alternative would avoid both the adverse and beneficial effects of the Project. This alternative would avoid ground disturbance and construction-related impacts associated with

construction of the proposed Project. No new development would occur on the site. The No Project Alternative would avoid the generation of any environmental impacts beyond existing conditions.

Environmental Considerations

Continuation of the site in agricultural production would result in all environmental impacts being less than the proposed Project. There would be no changes to any of the existing conditions and there would be no impact to each of the 20 CEQA Checklist evaluation topics. Impacts from the No Project Alternative, as compared to the Project, are summarized as follows:

- **Aesthetics** – With no development, the site would remain primarily as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.
- **Agriculture and Forestry Resources** - With no development, the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.
- **Air Quality** - With no development, the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.
- **Biological Resources** - With no development, the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.
- **Cultural Resources** - With no development, the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.
- **Energy** - With no development, the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.
- **Geology/Soils** - With no development, the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.
- **Greenhouse Gas Emissions** - With no development, the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project. This Alternative would also eliminate the significant and unavoidable impacts (project and cumulative) associated with this topic from the proposed Project.
- **Hazards & Hazardous Materials** - With no development, the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.
- **Hydrology & Water Quality** - With no development, the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.
- **Land Use / Planning** - With no development, the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.

- **Mineral Resources** - With no development, the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.
- **Noise** - With no development, the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.
- **Population & Housing** - With no development, the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.
- **Public Services** - With no development, the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.
- **Recreation** - With no development, the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.
- **Transportation** - With no development, the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project. This Alternative would also eliminate the significant and unavoidable impacts (project level and cumulative level) associated with this topic from the proposed Project.
- **Tribal Cultural Resources** - With no development, the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.
- **Utilities & Service Systems** - With no development, the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.
- **Wildfire** - With no development, the site would remain as farmland and no new impacts would occur. Therefore, impacts are less than the proposed Project.

Refer to Table 4-1 for a comparison of each environmental topic for the No Project Alternative versus the proposed Project.

Project Objectives

The No-Project Alternative by definition would not meet any of the objectives of the proposed Project that were outlined in Section 4.2, herein.

Alternate Locations Alternative

The environmental considerations associated with an alternative 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 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 viability of the proposed project is dependent on ability to effectively develop a residential project in the Hanford area. To maintain most of the project objectives, any potentially feasible alternative site needs to be of adequate size and in a location that is accessible and serviceable (utilities) by the City of Hanford.

Description

There are relatively few sites within the City of Hanford that provide adequately sized lands suitable for the proposed Project. The criteria for selection included whether or not the alternate site would substantially reduce environmental impacts, availability of land, adequately sized parcels, efficiency of access, and acceptable land use designations/zoning. There are areas of agricultural land of similar size located south of the proposed Project. These areas could conceivably support the proposed Project and are depicted in Figure A-1 (Location of Alternative Sites in Relation to Proposed Project Site), A-2 (Alternative Site #1: Approximately 141 Acres) and A-3 (Alternative Site #2: Approximately 135 Acres). The areas are within the City limits and are zoned and designated for residential development; however, site #2 also has areas zoned and designated for Regional Commercial. In addition, these areas would allow for contiguous growth adjacent to existing urban development in the City.

Alternative Site #1 is located south of the proposed Project and would be generally bound by Houston Avenue to the south, 12th Avenue to the east, and Hume Avenue to the north. Alternative Site #2 would be generally bound by 12th Avenue to the east and State Route 198 to the north.

Figure A-1
Location of Alternative Sites in Relation to Proposed Project Site

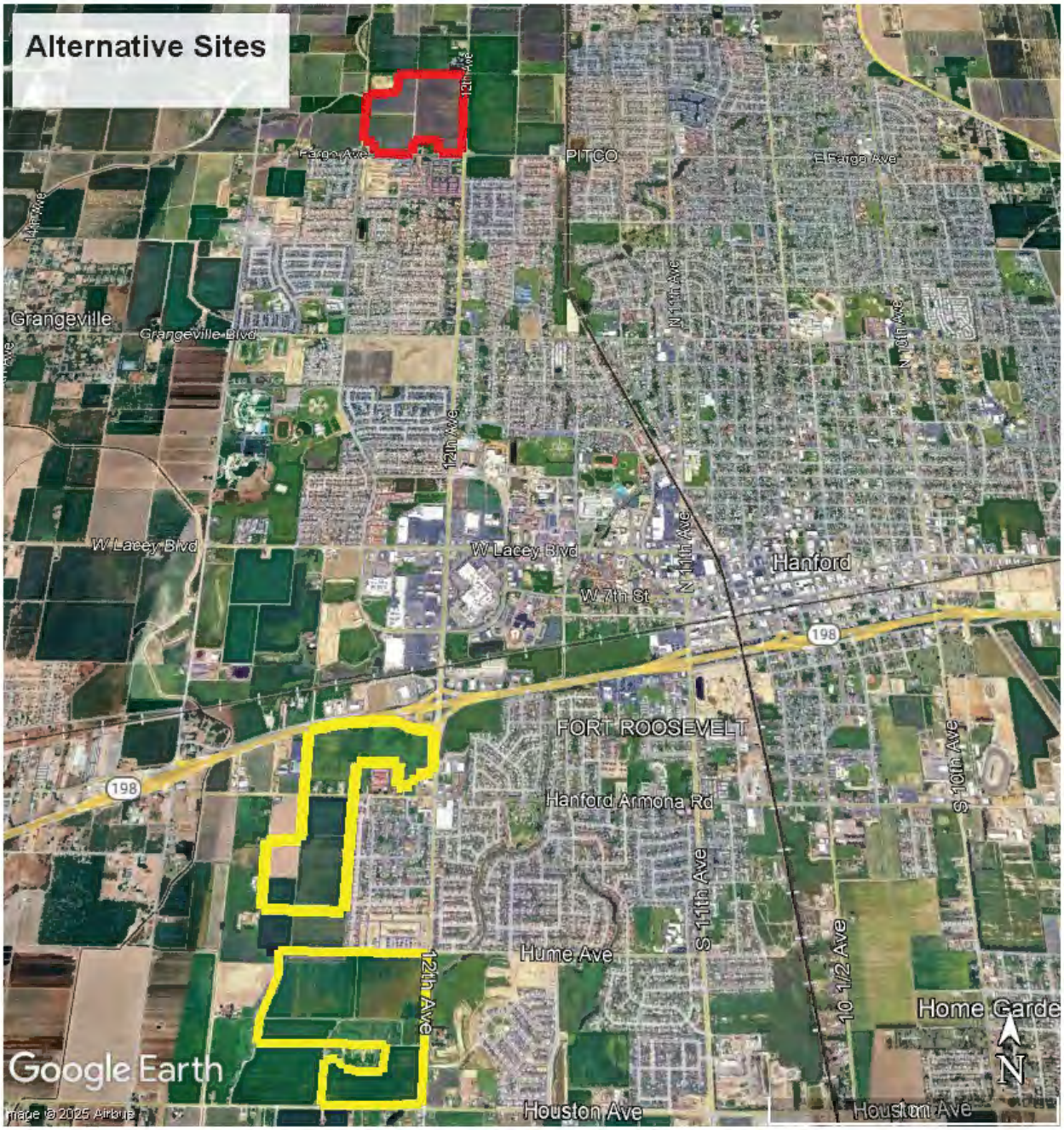

Figure A-2
Alternative Location #1: Approximately 141 Acres

Figure A-3
Alternative Location #2: Approximately 135 Acres

Perhaps the greatest obstacle in selecting an alternative site for the proposed Project is that the Project Applicant does not already own land at these locations and/or does not have control of land at these locations. However, for purposes of environmental evaluation, a description of potential environmental impacts is provided below.

Environmental Considerations

Development of an alternate site could theoretically meet most of the Project objectives presented earlier in this chapter. However, construction and operation at an alternate site would result in environmental impacts that are likely equal to or in some cases could be greater than the proposed project. The majority, if not all, of project impacts are likely to occur at an alternate site.

Either of the alternative sites would require environmental review 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 residential demand in a timely manner compared to the proposed Project. This alternative would be the most complex, costly, and time-consuming alternative to implement. Various engineering and technical studies would then be completed to define the project and its components. Environmental review and obtaining entitlements would follow prior to construction activities. The sites identified herein appear to have conditions that are not as favorable as the proposed Project site, such as less acreage and lack of control over the land.

Impacts from the Alternate Locations Alternative, as compared to the Project, are summarized as follows:

- **Aesthetics** – With development of a similar project on an alternate site, aesthetic impacts would occur through the conversion of farmland to urban uses, introduction of light/glare, and construction of residential units on vacant land. Since this Alternative would be of similar size and scale to the Project, impacts are determined to be similar to the proposed Project.
- **Agriculture and Forestry Resources** – Both alternative sites are designated for urban uses in the Hanford General Plan. As such, similar to the proposed Project, no significant impacts would occur with site development.
- **Air Quality** - With development of a similar project on an alternate site, air quality impacts would occur from construction activities (construction vehicles and equipment, dust and other emissions) and from operational activities (vehicle trip emissions and other emissions from the development). Since this Alternative would be of similar size and scale to the Project, impacts are determined to be similar to the proposed Project.

- **Biological Resources** - With development of a similar project on an alternate site, biological impacts could occur from development of a previously agricultural site to urban uses. Therefore, impacts are similar to the proposed Project.
- **Cultural Resources** - With development of a similar project on an alternate site, cultural resource impacts could occur from development of a previously agricultural site to urban uses. Since this Alternative would be of similar size and scale to the Project, impacts are determined to be similar to the proposed Project.
- **Energy** - With development of a similar project on an alternate site, energy impacts would occur from construction activities (electricity, fuel) and operational activities (electricity, natural gas, fuel). Since this Alternative would be of similar size and scale to the Project, impacts are determined to be similar to the proposed Project.
- **Geology/Soils** - With development of a similar project on an alternate site, impacts to geology and soils would occur from construction activities (grading and land disturbing activities) and operational activities. Since this Alternative would be of similar size and scale to the Project, impacts are determined to be similar to the proposed Project.
- **Greenhouse Gas Emissions** - With development of a similar project on an alternate site, greenhouse gas emission impacts would occur from construction activities (construction equipment emissions and vehicle emissions) and operational activities (vehicle emissions). Since this Alternative would be of similar size and scale to the Project, and is approximately the same distance as the Project to urbanized areas of Hanford, impacts are determined to be similar to the proposed Project (significant and unavoidable).
- **Hazards & Hazardous Materials** - With development of a similar project on an alternate site, hazardous impacts would occur from construction activities (use and storage of hazardous substances) and operational activities (use and storage of hazardous substances). A database search of the DTSC Envirostor[1] and the State Water Resources Control Board's Geotracker[2] was conducted for the Alternate sites. The searches indicated that no known hazardous waste sites existing on the Alternative sites. Since this Alternative would be of similar size and scale to the Project, impacts are determined to be similar to the proposed Project.
- **Hydrology & Water Quality** - With development of a similar project on an alternate site, hydrology and water quality impacts would occur from construction activities (water for dust control, requirement for preparation of a SWPPP, drainage control) and operational

[1] California Department of Toxic Substances Control. Envirostor Database. https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=Hanford+ca. Accessed March 2024.

[2] California Water Resource Control Board. GeoTracker Database. https://geotracker.waterboards.ca.gov/map/. Accessed March 2024.

activities (water demand associated with the development, drainage control). Since this Alternative would be of similar size and scale to the Project, impacts are determined to be similar to the proposed Project.

- **Land Use / Planning** - With development of a similar project on an alternate site, land use and planning impacts would occur from development of existing agricultural lands to urban uses. The Alternative would not divide an established community. Since this Alternative would be of similar size and scale to the Project (and contains similar pre-zoning and land use designations), impacts are determined to be similar to the proposed Project.
- **Mineral Resources** - With development of a similar project on an alternate site, mineral resource impacts could occur from construction activities (grading and ground-disturbing activities) and operational activities (conversion of land to urban uses). Since this Alternative would be of similar size and scale to the Project, impacts are determined to be similar to the proposed Project.
- **Noise** - With development of a similar project on an alternate site, noise impacts would occur from construction activities (construction equipment and vehicles) and operational activities (vehicles, air conditioners, televisions, radios, lawn mowers, etc.). The Alternative locations are similarly proximate to existing urban uses (as compared to the proposed Project). Since this Alternative would be of similar size and scale to the Project, impacts are determined to be similar to the proposed Project.
- **Population & Housing** - With development of a similar project on an alternate site, population and housing impacts would occur from development of these sites. Since this Alternative would be of similar size and scale to the Project, impacts are determined to be similar to the proposed Project.
- **Public Services** - With development of a similar project on an alternate site, public service impacts would occur from development of these sites (need for police, fire, schools and other public facilities). Since this Alternative would be of similar size and scale to the Project, impacts are determined to be similar to the proposed Project.
- **Recreation** - With development of a similar project on an alternate site, recreation impacts would occur from development of these. Since this Alternative would be of similar size and scale to the Project, impacts are determined to be similar to the proposed Project.
- **Transportation** - With development of a similar project on an alternate site, transportation impacts would occur from construction (vehicles and equipment, which would require a Traffic Control Plan) and operation (vehicles associated with the residential development). Since this Alternative would be of similar size and scale to the Project, impacts are determined to be similar to the proposed Project. This Alternative would not

eliminate the significant and unavoidable impacts (VMT impacts at the project and cumulative level) associated with this topic from the proposed Project.

- **Tribal Cultural Resources** - With development of a similar project on an alternate site, tribal cultural resource impacts could occur from development of these sites (conversion of agricultural lands to urban uses). Since this Alternative would be of similar size and scale to the Project, impacts are determined to be similar to the proposed Project.
- **Utilities & Service Systems** - With development of a similar project on an alternate site, utility and service system impacts would occur from construction activities (water for dust control, solid waste disposal) and operational activities (water demand associated with the development, wastewater disposal, solid waste disposal). Since this Alternative would be of similar size and scale to the Project, impacts are determined to be similar to the proposed Project.
- **Wildfire** - With development of a similar project on an alternate site, wildfire impacts could occur from development of these. Since this Alternative would be of similar size and scale to the Project, impacts are determined to be similar to the proposed Project.

Refer to Table 4-1 for a comparison of each environmental topic for the Alternate Locations Alternative versus the proposed Project.

Project Objectives

The Alternative Sites Alternative would meet most of the Project Objectives outlines in Section 4.2 herein. However, this Alternative would not be as feasible as compared to the proposed Project. The Alternative sites have different land owners and the land owner for Alternative Site #2 has not expressed a desire to develop a residential community on the entirety of their properties, thus the sites would likely not be developed in a unified manner or at a rate of development that would produce housing as quickly as the proposed Project. Thus, this Alternative would result in slower development of housing units (than the proposed Project) that would assist the City in meeting its General Plan and Housing Element requirements and objectives, and would not be fully consistent with this objective.

Reduced (50%) Project Alternative

A reduction of 50% in the Project's size and scope is a reasonable amount to illustrate what impact such an alternative would have on the significant effects of the proposed Project.

Description

This alternative would reduce the Project components by 50% as follows:

- Reduction in acreage from 135 to 67.5
- Reduction in residential units from 615 to 308
- Reduction in parks/recreational acreage from 7 to 3.5
- Corresponding reductions in infrastructure, etc.

The Project would remain a residential development with a variety of housing types, with the 50% reduction.

Environmental Considerations

Most of the environmental issues associated with this alternative would be less or similar to those of the proposed Project. Impacts from the Reduced (50%) Alternative, as compared to the Project, are summarized as follows:

- **Aesthetics** – With development of the 50% of the site, aesthetic impacts would occur through the conversion of farmland to urban uses, introduction of light/glare, and construction of residential units on non-urbanized land. Since this Alternative would occur on less acreage as compared to the Project, impacts are determined to be less than the proposed Project.
- **Agriculture and Forestry Resources** - With development of 50% of the site, since the site is designated and zoned for residential development, no agricultural impacts would occur. Since this Alternative would occur on less acreage as compared to the Project, impacts are determined to be less than the proposed Project.
- **Air Quality** - With development of 50% of the site, air quality impacts would occur from construction activities (construction vehicles and equipment, dust and other emissions) and from operational activities (vehicle trip emissions and other emissions from the development). Due to the reduction in residential units (and corresponding reduction in vehicle trips), this alternative would have lower annual emission rates than the proposed Project for the following criteria pollutants: CO, NOx, VOC, SOx, PM10 and PM2.5. Air pollutant emission rates associated with this alternative are thus lower than the proposed project due to the reduced number of residential units (and associated reduction in vehicle trips).
- **Biological Resources** - With development of the Project site with 50% of the site, biological impacts could occur from development of a previously agricultural site to urban uses. Since this Alternative would occur on less acreage as compared to the Project, impacts are determined to be less than the proposed Project.
- **Cultural Resources** - With development of 50% of the site, cultural resource impacts could occur from development of a previously agricultural site to urban uses. Since this

Alternative would occur on less acreage as compared to the Project, impacts are determined to be less than the proposed Project.

- **Energy** - With development of 50% of the site, energy impacts would occur from construction activities (electricity, fuel) and operational activities (electricity, natural gas, fuel). However, since this Alternative would have 50% less residential components as compared to the proposed Project, energy impacts would be less than the proposed Project.
- **Geology/Soils** - With development of 50% of the site, impacts to geology and soils would occur from construction activities (grading and land disturbing activities) and operational activities. Since this Alternative would occur on less acreage as compared to the Project, impacts are determined to be less than the proposed Project.
- **Greenhouse Gas Emissions** - With development of 50% of the site, greenhouse gas emission impacts would occur from construction activities (construction equipment emissions and vehicle emissions) and operational activities (vehicle emissions). However, since this Alternative would have 50% less residential components as compared to the proposed Project, greenhouse gas emissions would be less than the proposed Project. This Alternative would not eliminate the significant and unavoidable impacts associated with conflicting with an established plan (at the project and cumulative level).
- **Hazards & Hazardous Materials** - With development of 50% of the site, hazardous impacts would occur from construction activities (use and storage of hazardous substances) and operational activities (use and storage of hazardous substances). Since this Alternative would have less residential units as compared to the Project, impacts are determined to be less than the proposed Project.
- **Hydrology & Water Quality** - With development of 50% of the site, hydrology and water quality impacts would occur from construction activities (water for dust control, requirement for preparation of a SWPPP, drainage control) and operational activities (water demand associated with the development, drainage control). However, since this Alternative would have 50% less residential acreage as compared to the proposed Project, hydrology and water quality impacts would be less than the proposed Project.
- **Land Use / Planning** - With development of 50% of the site, land use and planning impacts would occur from development of existing agricultural lands to urban uses. The Alternative would not divide an established community. Since this Alternative would occur on less acreage as compared to the Project, impacts are determined to be less than the proposed Project.
- **Mineral Resources** - With development of 50% of the site, mineral resource impacts could occur from construction activities (grading and ground-disturbing activities) and

operational activities (conversion of land to urban uses). Since this Alternative would occur on less acreage as compared to the Project, impacts are determined to be less than the proposed Project.

- **Noise** - With development of 50% of the site, noise impacts would occur from construction activities (construction equipment and vehicles) and operational activities (vehicles, air conditioners, televisions, radios, lawn mowers, etc.). However, since this Alternative would have 50% less residential units as compared to the proposed Project, noise impacts would be less than the proposed Project.
- **Population & Housing** - With development of 50% of the site, population and housing impacts would occur from development of these sites. However, since this Alternative would have 50% less residential units as compared to the proposed Project, population and housing impacts would be less than the proposed Project.
- **Public Services** - With development of 50% of the site, public service impacts would occur from development of these sites (need for police, fire, schools and other public facilities). However, since this Alternative would have 50% less residential units as compared to the proposed Project, public service impacts would be less than the proposed Project.
- **Recreation** - With development of 50% of the site, recreation impacts would occur from development of the site. However, since this Alternative would have 50% less residential units as compared to the proposed Project, recreation impacts would be less than the proposed Project.
- **Transportation** - With development of 50% of the site, transportation impacts would occur from construction (vehicles and equipment, which would require a Traffic Control Plan) and operation (vehicles associated with the residential development). However, since this Alternative would have 50% less residential units as compared to the proposed Project, transportation impacts would be less than the proposed Project. This Alternative would not eliminate the significant and unavoidable impacts associated with conflicting with CEQA Guidelines section 15064.3 from the proposed Project (at the project and cumulative level).
- **Tribal Cultural Resources** - With development of 50% of the site, tribal cultural resource impacts could occur from development of these sites (conversion of agricultural lands to urban uses). Since this Alternative would occur on less acreage as compared to the Project, impacts are determined to be less than the proposed Project.
- **Utilities & Service Systems** - With development of 50% of the site, utility and service system impacts would occur from construction activities (water for dust control, solid waste disposal) and operational activities (water demand associated with the

development, wastewater disposal, solid waste disposal). However, since this Alternative would have 50% less residential units as compared to the proposed Project, utility and service system impacts would be less than the proposed Project.

- **Wildfire** - With development of 50% of the site, wildfire impacts could occur from development of these sites. Since this Alternative would occur on less acreage as compared to the Project, impacts are determined to be less than the proposed Project.

Refer to Table 4-1 for a comparison of each environmental topic for the Reduced (50%) Project Alternative versus the proposed Project.

Project Objectives

The Reduced (50%) Alternative would meet some of the Project Objectives outlines in Section 4.2 herein. However, this Alternative would not be fully consistent with the objective to provide residential development that assists the City in meetings its Housing Element requirements (the City currently has a deficit in meeting its Regional Housing Needs Allocation goals). A 50% reduction in units would result in a larger Regional Housing Needs Allocation deficit than the proposed Project.

4.6 Summary of Potential Impacts of Alternatives

Table 4-1 provides a summary and side-by-side comparison of the proposed project with the impacts of each of the alternatives analyzed. Please note that under "No Project", "Alternate Sites" and "Reduced (50%) Project" columns in Table 4-1, the references to "less, similar, or greater," refer to the impact of the alternative compared to the proposed project, and the impacts "no impact, less than significant, or significant and unavoidable," in the parentheses refer to the significant impact of the specific alternative.

Table 4-1
Alternatives Potential Impact Analysis

Environmental Issues	Proposed Project	No Project	Alternate Locations	Reduced (50%) Project
Aesthetics	Less than Signifcant	Less	Similar	Less
Agriculture / Forest Resources	Less than Significant	Less	Similar	Similar
Air Quality	Less than Significant	Less	Similar	Less
Biological Resources	Less than Signifcant	Less	Similar	Less
Cultural Resources	Less than Signifcant	Less	Similar	Less
Geology and Soils	Less than Signifcant	Less	Similar	Less
Greenhouse Gas Emissions	Significant and Unavoidable	Less	Similar	Less / Still Significant and Unavoidable
Hazards and Hazardous Materials	Less than Signifcant	Less	Similar	Less
Hydrology and Water Quality	Less than Significant	Less	Similar	Less
Land Use / Planning	Less than Signifcant	Less	Similar	Less
Noise	Less than Signifcant	Less	Similar	Less
Population / Housing	Less than Signifcant	Less	Similar	Less
Public Services	Less than Signifcant	Less	Similar	Less
Recreation	Less than Signifcant	Less	Similar	Less
Transportation and Traffic	Significant and unavoidable – Vehicle Miles Travelled (project and cumulative)	Less	Similar	Less / Still Significant and Unavoidable

Environmental Issues	Proposed Project	No Project	Alternate Locations	Reduced (50%) Project
Tribal Cultural Resources	Less than Signifcant	Less	Similar	Less
Utilities and Service Systems	Less than Significant	Less	Similar	Less
Cumulative Impacts	Significant and unavoidable for Greenhouse Gases and Transportation	Less	Similar	Less / Still Cumulatively Considerable
Impact Reduction		Yes	No	Yes

Environmentally Superior Alternative

As presented in the comparative analysis above, and as shown in Table 4-1, there are a number of factors in selecting the environmentally superior alternative. An EIR must identify the environmentally superior alternative to the project. The No Project Alternative would be environmentally superior to the Project on the basis of its minimization or avoidance of physical environmental impacts. However, CEQA Guidelines Section 15126.6(e)(2) states:

> *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.*

Because the No Project Alternative cannot be the Environmentally Superior Alternative under CEQA, the Reduced (50%) Project Alternative would be the Environmentally Superior alternative because it would result in less adverse physical impacts to the environment with regard to air, water, noise, public services, population/housing, utilities and traffic. However, the Reduced (50%) Project Alternative does not eliminate the proposed Project's significant and unavoidable impacts associated with Greenhouse Gas Emissions (project and cumulative) and Transportation - VMT (project and cumulative). Furthermore, the Reduced (50%) Project Altenative does not meet all of the Project objectives, particularly with regard to quantity and diversity of housing.

Summary and Determination

Only the No Project and Reduced (50%) Project Alternatives could potentially result in fewer impacts than the proposed Project's impacts. These Alternatives however, would not fully meet the objectives of the proposed Project. After this full, substantial, and deliberate analysis, the proposed Project remains the preferred alternative.

CEQA CONSIDERATIONS

5.1 Growth-Inducing Impacts

CEQA Sections 15126 (d) and 15126.2(e) require that any growth-inducing aspect of a project be addressed in an EIR. This discussion includes consideration of ways in which the proposed Project could directly (e.g. construction of residential units) or indirectly (e.g. construction of oversized public utilities) result in physical impacts on the environment if the Project's construction or operation induces economic or population growth in the surrounding area, including an analysis of the infrastructure and planning changes necessary to accommodate any induced growth.

The proposed Project involves the establishment of a residential development that is being proposed in response to the demand for housing in the area. The Project is consistent with the City of Hanford's General Plan and Zoning Ordinance and will connect to all existing City utility services. The anticipated population and housing unit increase associated with the proposed Project are within the growth projections of the City's General Plan. There are no other indirect aspects of the Project (such as creation of oversized public utility lines, etc.) that would induce further growth in the area. The proposed Project would not result in significant growth-inducing impacts.

Conclusion: The project would have ***less than significant*** growth-inducing impacts.

5.2 Irreversible Environmental Changes

Section 15126(c) of the CEQA Guidelines requires that an EIR include a discussion of significant irreversible environmental changes that would result from project implementation. CEQA Section 15126.2(d) identifies irreversible environmental changes as those involving a large commitment of nonrenewable resources or irreversible damage resulting from environmental accidents.

Irreversible changes associated with the project include the use of nonrenewable resources during construction, including concrete, plastic, and petroleum products and renewable resources such as timber. To the extent nonrenewable uses are used during construction, the Project is being created to meet existing demand for housing and services in the City, which would lead to the consumption of these resources elsewhere if the Project were not built. Therefore, the Project would not result in a new impact to nonrenewable resources. During the operational phase of the proposed Project, energy would be used for lighting, heating, cooling, and other requirements and petroleum products would be used by vehicles associated with the residents of the proposed development. The use of these resources would not be substantial, would not be inefficiently

used, and would not constitute a significant effect. Refer to Section 3.2 – Energy for more information pertaining to the proposed Project's energy use.

In the future, the site could be rezoned or redeveloped for a different use also allowed in the existing General Plan or Zoning Ordinance designations, in which case, at the end of the useful life of the Project, the use could change. Therefore, the Project would not commit future generations to a significant change in land use. This is in contrast to a large industrial use, where reuse for non-industrial uses likely would require extensive remediation, making such reuse difficult, or large infrastructure projects that are rarely moved or dismantled once constructed.

The proposed Project would not result in irreversible damage resulting from environmental accidents. The Project consists of a residential development. This land does not routinely transport, use, or dispose of hazardous materials, or present a reasonably foreseeable release of hazardous materials, with the exception of common residential hazardous materials such as cleaners, paint, petroleum products, etc. Handling and use of hazardous materials and the disposal of the resulting hazardous wastes would be required to follow the applicable laws and regulations, as described in Section 3.9 – Hazards & Hazardous Materials of the IS/NOP in Appendix A. As such, irreversible environmental accidents are unlikely.

Conclusion: The project would have ***less than significant*** irreversible environmental changes.