



STONEHAVEN SUBDIVISION

ADMINISTRATIVE DRAFT INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

MAY 2023

PREPARED FOR:

City of Hanford
Community Development Department
317 N. Douty Street
Hanford, CA 93230

PREPARED BY:

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TABLE OF CONTENTS

Chapter 1 Introduction	1-1
1.1 Regulatory Information.....	1-1
1.2 Document Format.....	1-1
Chapter 2 Project Description.....	2-1
2.1 Project Background.....	2-1
2.1.1 Project Title	2-1
2.1.2 Lead Agency Name and Address.....	2-1
2.1.3 Contact Person and Phone Number	2-1
2.1.4 Project Location	2-1
2.1.5 General Plan Designation and Zoning.....	2-1
2.1.6 Description of Project	2-2
2.1.7 Prezone.....	2-2
2.1.8 Annexation	2-2
2.1.9 Williamson Act Contract Termination	2-2
2.1.10 Subdivision	2-2
2.1.11 Public Facilities and Infrastructure	2-3
2.1.12 Residential Construction	2-3
2.1.13 Construction Phasing	2-3
2.1.14 Operation and Maintenance.....	2-3
2.1.15 Other Public Agencies Whose Approval May Be Required	2-3
2.1.16 Consultation with California Native American Tribes.....	2-3
Chapter 3 Determination	3-1
3.1 Potential Environmental Impacts	3-1
3.2 Determination	3-2
Chapter 4 Environmental Impact Analysis.....	4-3
4.1 Aesthetics.....	4-3
4.1.1 Baseline Conditions.....	4-3
4.1.2 Applicable Regulations.....	4-4
4.1.3 Impact Analysis.....	4-4
4.2 Agriculture and Forestry Resources	4-6
4.2.1 Baseline Conditions.....	4-6
4.2.2 Applicable Regulations.....	4-6
4.2.3 Impact Analysis.....	4-9

4.2.4	Mitigation	4-10
4.3	Air Quality.....	4-12
4.3.1	Baseline Conditions.....	4-12
4.3.2	Applicable Regulations.....	4-13
4.3.3	Thresholds.....	4-17
4.3.4	Methodology.....	4-18
4.3.5	Impact Analysis.....	4-19
4.4	Biological Resources	4-25
4.4.1	Baseline Conditions.....	4-25
4.4.2	Applicable Regulations.....	4-32
4.4.3	Impact Analysis.....	4-36
4.4.4	Mitigation	4-38
4.5	Cultural Resources	4-39
4.5.1	Baseline Conditions.....	4-39
4.5.2	Applicable Regulations.....	4-40
4.5.3	Impact Analysis.....	4-43
4.5.4	Mitigation	4-44
4.6	Energy	4-45
4.6.1	Baseline Conditions.....	4-45
4.6.2	Applicable Regulations.....	4-45
4.6.3	Impact Analysis.....	4-49
4.7	Geology and Soils.....	4-51
4.7.1	Baseline Conditions.....	4-51
4.7.2	Applicable Regulations.....	4-52
4.7.3	Impact Analysis.....	4-54
4.7.4	Mitigation	4-56
4.8	Greenhouse Gas Emissions.....	4-57
4.8.1	Baseline Conditions.....	4-57
4.8.2	Applicable Regulations.....	4-57
4.8.3	Thresholds.....	4-62
4.8.4	Methodology.....	4-62
4.8.5	Impact Analysis.....	4-62
4.9	Hazards and Hazardous Materials	4-69
4.9.1	Baseline Conditions.....	4-69
4.9.2	Applicable Regulations.....	4-70

4.9.3	Impact Analysis.....	4-72
4.10	Hydrology and Water Quality	4-74
4.10.1	Baseline Conditions.....	4-74
4.10.2	Applicable Regulations.....	4-75
4.10.3	Impact Analysis.....	4-78
4.11	Land Use and Planning.....	4-81
4.11.1	Baseline Conditions.....	4-81
4.11.2	Applicable Regulations.....	4-81
4.11.3	Impact Analysis.....	4-82
4.12	Mineral Resources	4-83
4.12.1	Baseline Conditions.....	4-83
4.12.2	Applicable Regulations.....	4-83
4.12.3	Impact Analysis.....	4-84
4.13	Noise	4-85
4.13.1	Baseline Conditions.....	4-85
4.13.2	Applicable Regulations.....	4-85
4.13.3	Impact Analysis.....	4-86
4.14	Population and Housing.....	4-88
4.14.1	Baseline Conditions.....	4-88
4.14.2	Impact Analysis.....	4-88
4.15	Public Services.....	4-90
4.15.1	Baseline Conditions.....	4-90
4.15.2	Applicable Regulations.....	4-91
4.15.3	Impact Analysis.....	4-91
4.16	Recreation	4-93
4.16.1	Baseline Conditions.....	4-93
4.16.2	Applicable Regulations.....	4-93
4.16.3	Impact Analysis.....	4-95
4.17	Transportation	4-96
4.17.1	Baseline Conditions.....	4-96
4.17.2	Applicable Regulations.....	4-96
4.17.3	Thresholds.....	4-97
4.17.4	Impact Analysis.....	4-97
4.18	Tribal Cultural Resources	4-98
4.18.1	Baseline Conditions.....	4-98

4.18.2	Applicable Regulations	4-100
4.18.3	Impact Assessment	4-101
4.18.4	Mitigation	4-102
4.19	Utilities and Service Systems	4-103
4.19.1	Baseline Conditions	4-103
4.19.2	Applicable Regulations	4-104
4.19.3	Impact Analysis	4-107
4.20	Wildfire	4-108
4.20.1	Baseline Conditions	4-108
4.20.2	Impact Analysis	4-108
4.21	CEQA Mandatory Findings of Significance	4-110
4.21.1	Statement of Findings	4-110
Chapter 5	Mitigation, Monitoring, and Reporting Program	5-1
Chapter 6	References	6-1

LIST OF APPENDICES

Appendix A: Air Quality Report	A-1
Appendix B: Biological Evaluation	B-1
Appendix C: Phase I Cultural Resources Survey	C-1
Appendix D: Design Plans	D-1
Appendix E: VMT Memo	E-1

LIST OF FIGURES

Figure 2-1: Regional Location Map	2-5
Figure 2-2: Aerial Map	2-6
Figure 2-3: Topo Quad Map	2-7
Figure 2-4: General Plan Land Use Designation Map	2-8
Figure 2-5: Zone District Map	2-9
Figure 4-1: Farmland Map	4-11
Figure 4-2: FEMA Map	4-80

LIST OF TABLES

Table 2-1: Surrounding Land Uses	2-2
Table 4-1: Aesthetics Impacts	4-3
Table 4-2: Agriculture and Forest Impacts	4-6

Table 4-3: Air Quality Impacts.....	4-12
Table 4-4: Thresholds of Significance for Criteria Air Pollutants.....	4-17
Table 4-5: Screening Levels for Potential Odor Sources	4-17
Table 4-6: Thresholds of Significance for Toxic Air Contaminants	4-17
Table 4-7: Summary of Ambient Air Quality Standards and Attainment Designation.....	4-18
Table 4-8: Construction Emission Summary, Criteria Air Pollutants	4-20
Table 4-9: Operational Emissions Summary, Criteria Air Pollutants	4-21
Table 4-10: Maximum Daily Construction and Operational Emissions, Criteria Air Pollutants	4-22
Table 4-11: Biological Resources Impacts.....	4-25
Table 4-12: List of Soils Located Onsite and Their Basic Properties.....	4-26
Table 4-13: List of Special Status Animals with Potential to Occur in the APE and/or Vicinity.	4-28
Table 4-14: List of Special Status Plants with Potential to Occur Onsite and/or in the Vicinity.	4-30
Table 4-15: Cultural Resources Impacts	4-39
Table 4-16: Energy Impacts.....	4-45
Table 4-17: Geology and Soils Impacts	4-51
Table 4-18: Greenhouse Gas Emissions Impacts.....	4-57
Table 4-19: Construction Emissions, Greenhouse Gases	4-63
Table 4-20: Operational Emissions, Greenhouse Gases.....	4-63
Table 4-21: AB 32 Consistency Table.....	4-64
Table 4-22: SB 32 Consistency Table	4-66
Table 4-23: AB 1279 Consistency Table.....	4-68
Table 4-24: Hazards and Hazardous Materials Impacts	4-69
Table 4-25: Hydrology and Water Quality Impacts	4-74
Table 4-26: Land Use and Planning Impacts.....	4-81
Table 4-27: Mineral Resources Impacts	4-83
Table 4-28: Noise Impacts.....	4-85
Table 4-29: Population and Housing Impacts.....	4-88
Table 4-30: Public Services.....	4-90
Table 4-31: Recreation Impacts	4-93
Table 4-32: Transportation Impacts	4-96
Table 4-33: Tribal Cultural Resources Impacts	4-98
Table 4-34: Utilities and Service Systems Impacts	4-103
Table 4-35: Wildfire Impacts.....	4-108
Table 4-36: CEQA Mandatory Findings of Significance	4-110
Table 5-1: Mitigation, Monitoring, and Reporting Program	5-2

ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
APCD.....	air pollution control districts
APE	Area of Potential Effect
AQMDs	air quality management districts
ASM	ASM Affiliates
BMP	Best Management Practices
CAA	Clean Air Act
CAAQS.....	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Modeling (software)
CARB.....	California Air Resources Board
CCAA.....	California Clean Air Act
CDFW.....	California Fish and Wildlife
CEQA.....	California Environmental Quality Act
CGP	Construction General Permit
CGS	California Geological Survey
CH ₄	Methane
CHRIS	California Historical Resources Information System
City	City of Hanford
CHRIS	California Natural Diversity Database
CNPS	California Native Plant Society
CO	Carbone Monoxide
CO ₂	Carbon dioxide
County	Kings County
CRHR.....	California Register of Historical Resources
CWA	Clean Water Act
dBA	A-weighted decibels
DOC	Department of Conservation
DPM	Diesel Particulate Matter
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
EPA	Environmental Protection Agency

ESA	Environmental Site Assessment
FEMA	Federal Emergency Management Agency
FMMP	Farmland Mapping and Monitoring Program
FPPA	Farmland Protection Policy Act
GAMAQI.....	Guidelines for Assessing and Mitigating Air Quality Impacts
GC	Government Code
GHG	Greenhouse Gas
GIS	Geographic Information System
GSP	Groundwater Sustainability Plan
HUC	Hydrologic Unit Code
IDDE	illicit discharge detection and elimination
IPaC	U.S. Fish and Wildlife Service’s Information for Planning and Consultation system
IS	Initial Study
IS/MND	Initial Study/Mitigated Negative Declaration
km	kilometers
KWRA.....	Kings Waste Recycling Authority
MBTA.....	Migratory Bird Act
MGD	million gallons per day
MMRP.....	Mitigation Monitoring and Reporting Program
MND	Mitigated Negative Declaration
MRZ	Mineral Resource Zones
MS4	Municipal Separate Storm Systems
NAAQS	National Ambient Air Quality Standards
NAGPRA.....	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
ND	Negative Declaration
NEPA.....	National Environmental Policy Act
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxides
NPDES.....	National Pollution Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
O ₃	Ozone

Pb	Lead
PM ₁₀	particulate matter 10 microns in size
PM _{2.5}	particulate matter 2.5 microns in size
ppb	parts per billion
ppm	parts per million
PRC	Public Resource Code
Project	Stonehaven Subdivision Project
Reclamation	United States Bureau of Reclamation
ROG	Reactive Organic Gases
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SGMA	Sustainable Groundwater Management Act
SIP	State Implementation Plan
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SLF	Sacred Lands File
SO ₂	Sulfur Dioxide
SSJVIC	Southern San Joaquin Valley Information Center
SR	State Route
SRA	State Responsibility Area
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
USACE	United States Army Corps of Engineers
USC	United States Code
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
µg/m ³	micrograms per cubic meter
VMT	vehicle miles traveled
WDR	Waste Discharge Requirements
WWTP	Wastewater Treatment Plant

CHAPTER 1 INTRODUCTION

Provost & Pritchard Consulting Group (Provost & Pritchard) has prepared this Initial Study/Mitigated Negative Declaration (IS/MND) on behalf of DR Horton to address the environmental effects of the Stonehaven Subdivision (Project). This document has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et seq. The City of Hanford is the CEQA lead agency for this Project.

The site and the Project are described in detail in [Chapter 2 Project Description](#).

1.1 REGULATORY INFORMATION

An Initial Study (IS) is a document prepared by a lead agency to determine whether a project may have a significant effect on the environment. In accordance with California Code of Regulations Title 14 (Chapter 3, Section 15000, *et seq.*)-- also known as the CEQA Guidelines--Section 15064 (a)(1) states that an environmental impact report (EIR) must be prepared if there is substantial evidence in light of the whole record that the Project under review may have a significant effect on the environment and should be further analyzed to determine mitigation measures or project alternatives that might avoid or reduce project impacts to less than significant levels. A negative declaration (ND) may be prepared instead if the lead agency finds that there is no substantial evidence in light of the whole record that the project may have a significant effect on the environment. An ND is a written statement describing the reasons why a proposed Project, not otherwise exempt from CEQA, would not have a significant effect on the environment and, therefore, why it would not require the preparation of an EIR (CEQA Guidelines Section 15371). According to CEQA Guidelines Section 15070, a ND or *mitigated* ND shall be prepared for a project subject to CEQA when either:

- a. The IS shows there is no substantial evidence, in light of the whole record before the agency, that the proposed Project may have a significant effect on the environment, or
- b. The IS identified potentially significant effects, but:
 1. Revisions in the project plans or proposals made by or agreed to by the applicant before the proposed MND and IS is released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur is prepared, and
 2. There is no substantial evidence, in light of the whole record before the agency, that the proposed Project as *revised* may have a significant effect on the environment.

1.2 DOCUMENT FORMAT

This IS/MND contains six chapters. [Chapter 1 Introduction](#), provides an overview of the Project and the CEQA process. [Chapter 2 Project Description](#), provides a detailed description of proposed Project components and objectives. [Chapter 3 Determination](#), the Lead Agency's determination based upon this initial evaluation. [Chapter 4 Environmental Impact Analysis](#) presents the CEQA checklist and environmental analysis for all impact areas, mandatory findings of significance, and feasible mitigation measures. If the Project does not have the potential to significantly impact a given issue area, the relevant section provides a brief discussion of the reasons why no impacts are expected. If the Project could have a potentially significant impact on a resource, the issue area discussion provides a description of potential impacts, and appropriate mitigation measures and/or permit requirements that would reduce those impacts to a less than significant level. [Chapter 5 Mitigation, Monitoring, and Reporting Program](#) (MMRP), provides the

proposed mitigation measures, implementation timelines, and the entity/agency responsible for ensuring implementation. **Chapter 6 References** details the documents and reports this document relies upon to provide its analysis.

The Air Quality Report, Biological Evaluation, Phase I Cultural Resources Survey, Design Plans, and Vehicle Miles Travelled Memo are provided as technical **Appendix A, Appendix B, Appendix C, Appendix D, and Appendix E**, respectively, at the end of this document.

CHAPTER 2 PROJECT DESCRIPTION

2.1 PROJECT BACKGROUND

2.1.1 Project Title

Stonehaven Subdivision

2.1.2 Lead Agency Name and Address

City of Hanford
Community Development Department, Planning Division
317 N. Douty Street
Hanford, CA 9230

2.1.3 Contact Person and Phone Number

Lead Agency Contact

Gabrielle de Silva Myers, Senior Planner
(559)585-2578
gmyers@cityofhanfordca.com

CEQA Consultant

Provost & Pritchard Consulting Group
Jarred Olsen, Environmental Project Manager
(559) 636-1166

2.1.4 Project Location

The Project is located outside the City of Hanford, California, approximately 185 miles southeast of Sacramento and 75 miles northwest of Bakersfield, south of the south side of Hanford-Armona Road between 12th and 13th Avenues (see **Figure 2-1** and **Figure 2-2**). The proposed site of the Project is located on Assessor's Parcel Number 011-040-030-000. The Project is located within the City's Sphere of Influence and is located adjacent to City limits.

As shown on **Figure 2-3**, the Project site comprises approximately 12.17 acres situated in the southwest area of the City and is generally bounded agricultural and rural residential, with residential subdivisions constructed to the west.

2.1.5 General Plan Designation and Zoning

The Project site is in a rural residential area marked by other rural residences and agricultural plots ranging from approximately 9 to 20 acres in area. The San Joaquin Valley, like most of California, experiences a Mediterranean climate with warm, dry summers and cool, moist winters. **Table 2-1** below summarizes the surrounding land uses of the Project site.

Table 2-1: Surrounding Land Uses

Direction	Existing Land Use	General Plan	Zoning
North	Rural Residential	Corridor Mixed Use	MX-C (<i>Corridor Mixed Use</i>)
South	Rural Residential	Medium Density Residential ¹	AL-10 (County: <i>AL-10 Limited Agricultural-10 District</i>)
East	Farmland	Low Density Residential ¹	R-L-5 (<i>Low Density Residential—Five thousand (5,000) square foot minimum site area</i>)
West	Farmland	Medium Density Residential ¹	R-M (<i>Medium Density Residential</i>) AL-10 (County)

¹These areas also carry a “floating” designation of Education facilities.

2.1.6 Description of Project

The Project proposes to subdivide the site to allow for construction of 82 single-family dwellings and ancillary public facilities and infrastructure on an approximately 12.17-acre parcel. The Project’s Area of Potential Effect (APE) identified for biological surveys is approximately 16 acres, which includes the approximately 12.17-acre Project site and a 50-foot buffer surrounding the Project site. The APE contains a residential house and a ruderal agricultural field that is currently a grass cover crop which will be removed. The Project includes a 5.4-acre, on-site basin that can hold up to 51.23 acre-feet of stormwater. The primary components of the Project are described in more detail below.

2.1.7 Prezone

The Project will amend the Official Zoning Map of the City of Hanford to change the subject property to R-L-5 Zone District. [Figure 2-5](#) depicts the existing zone districts.

2.1.8 Annexation

The Property would be annexed into the City of Hanford. The City would either initiate annexation by resolution of application or the Project proponent would initiate directly with the Kings County Local Agency Formation Commission (LAFCo) by landowner petition.

2.1.9 Williamson Act Contract Termination

The Project site is subject to a Williamson Act Contract (Ag Preserve No. 670-1741, previously known as No. 670-76). This contract was protested by the City and confirmed by LAFCo on January 27, 1977. This contract would be terminated at time of annexation as permitted by Government Code Section 51243.5 subdivision (h).

2.1.10 Subdivision

The Project will subdivide the 12.17-acre property into a 82-lot conventional single-family residential development at a density of approximately 6.73 dwelling units per gross acre. This density is consistent with the applicable General Plan land use designation of Low Density Residential, which allows for densities

between 2 and 10 dwelling units per acre. Outlots will be dedicated to the City for major street landscaping purposes. The subdivision would comply with applicable subdivision and improvement standards of the City Subdivision Ordinance. [Appendix D](#) depicts the Tentative Subdivision Map.

2.1.11 Public Facilities and Infrastructure

The Project will construct public facilities and infrastructure in accordance with the standards, specifications, and policies of the City. Facilities include roadways, water delivery, stormwater, and wastewater conveyance infrastructure, water and sewer mains, curb, gutter, sidewalks, signs, fire hydrants, and street lighting internally within the subdivision. Utilities would connect to the utility mains located along the Project site's W. Spring Crest Drive frontage to the Billingsley Ranch subdivision. The Project includes two points of access to the Billingsley Ranch subdivision by way of W. Spring Crest Drive and "A" Street. Stormwater runoff would be directed to the stormwater retention basin located in the approved Billingsley Ranch subdivision which is adequately sized to accommodate the Stonehaven Project's runoff.

2.1.12 Residential Construction

82 detached single-family dwelling units would be constructed in accordance with the applicable development standards of the R-L-5 Zone District. A Planned Unit Development permit would be obtained to allow for garages to exceed 50% of the building width.

2.1.13 Construction Phasing

Project construction will occur in one phase over approximately 16 months. Construction hours would be limited to 7:00 am to 8:00 pm pursuant to Hanford Municipal Code (HMC) Section 9.10.060 subdivision (A)(10).

2.1.14 Operation and Maintenance

In order to provide for maintenance of rights-of-way and open space, City Council may need to take action to annex the Project site into the City's Community Facilities District or other maintenance finance mechanism. Maintenance of public infrastructure will occur as needed through collection of property taxes, property assessments, or services fees. Solid waste vehicles are expected to service the Project's solid waste, recycling, and green waste needs weekly.

2.1.15 Other Public Agencies Whose Approval May Be Required

- County of Kings
- Kings County LAFCO

2.1.16 Consultation with California Native American Tribes

Public Resources Code Section 21080.3.1, *et seq.* (*codification of AB 52, 2013-14*)) requires that a lead agency, within 14 days of determining that it will undertake a project, must notify in writing any California Native American Tribe traditionally and culturally affiliated with the geographic area of the project if that Tribe has previously requested notification about projects in that geographic area. The notice must briefly describe the project and inquire whether the Tribe wishes to initiate request formal consultation. Tribes have 30 days from receipt of notification to request formal consultation. The lead agency then has 30 days

to initiate the consultation, which then continues until the parties come to an agreement regarding necessary mitigation or agree that no mitigation is needed, or one or both parties determine that negotiation occurred in good faith, but no agreement will be made.

The City of Hanford has received written correspondence from the Santa Rosa Rancheria Tachi Yokut Tribe pursuant to Public Resources Code Section 21080.3.1 requesting notification of the Project.



Figure 2-1: Regional Location Map



Figure 2-2: Aerial Map

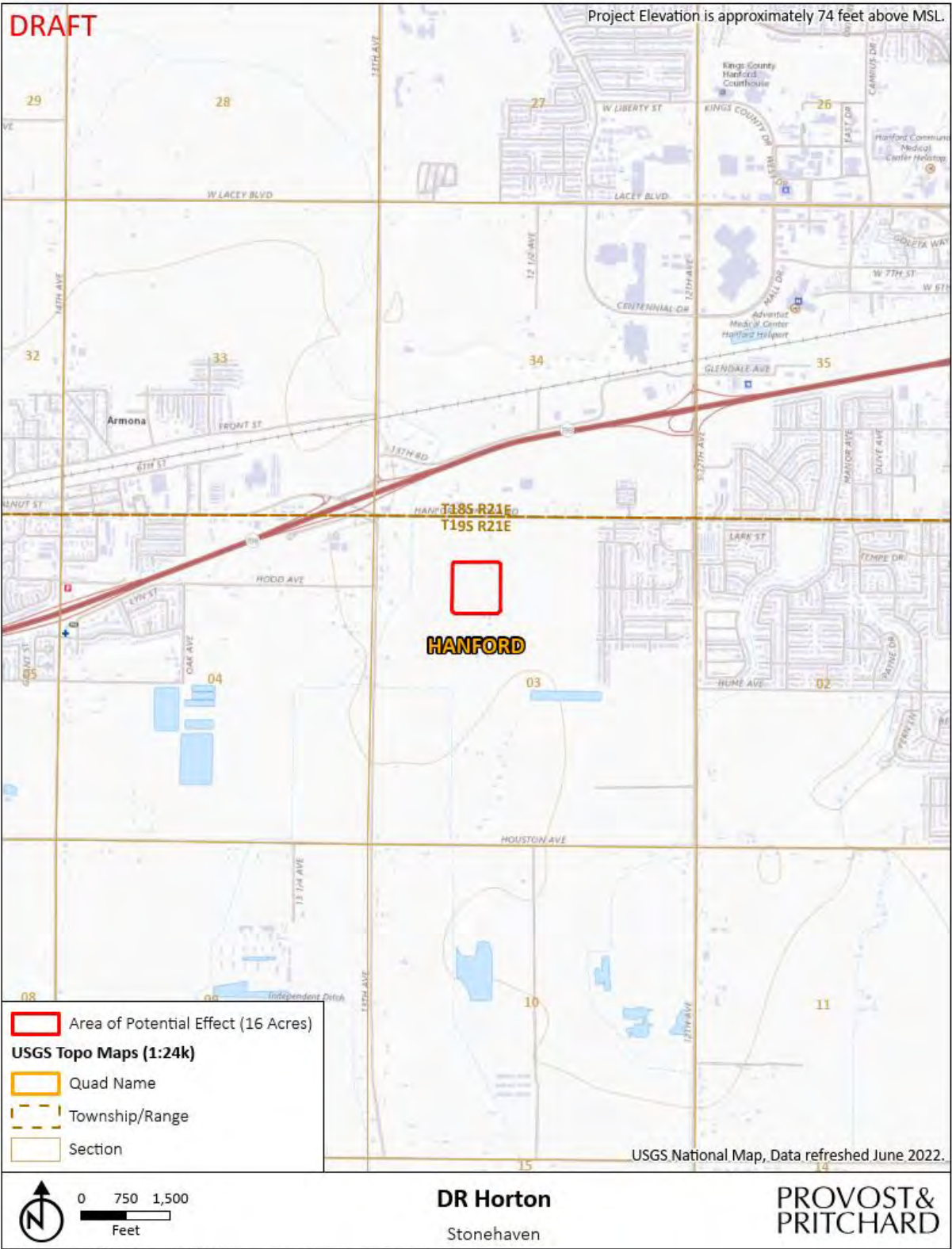


Figure 2-3: Topo Quad Map

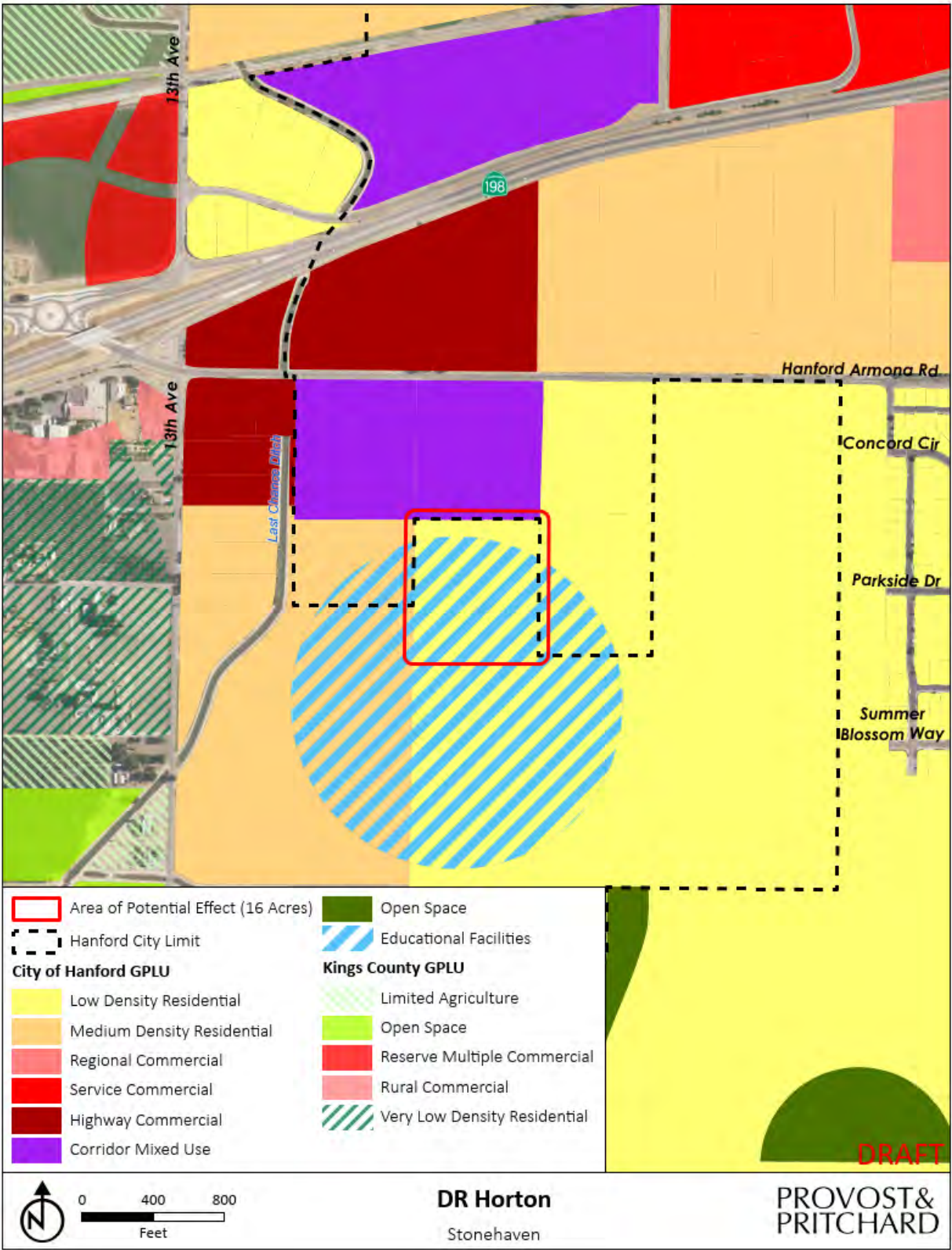


Figure 2-4: General Plan Land Use Designation Map

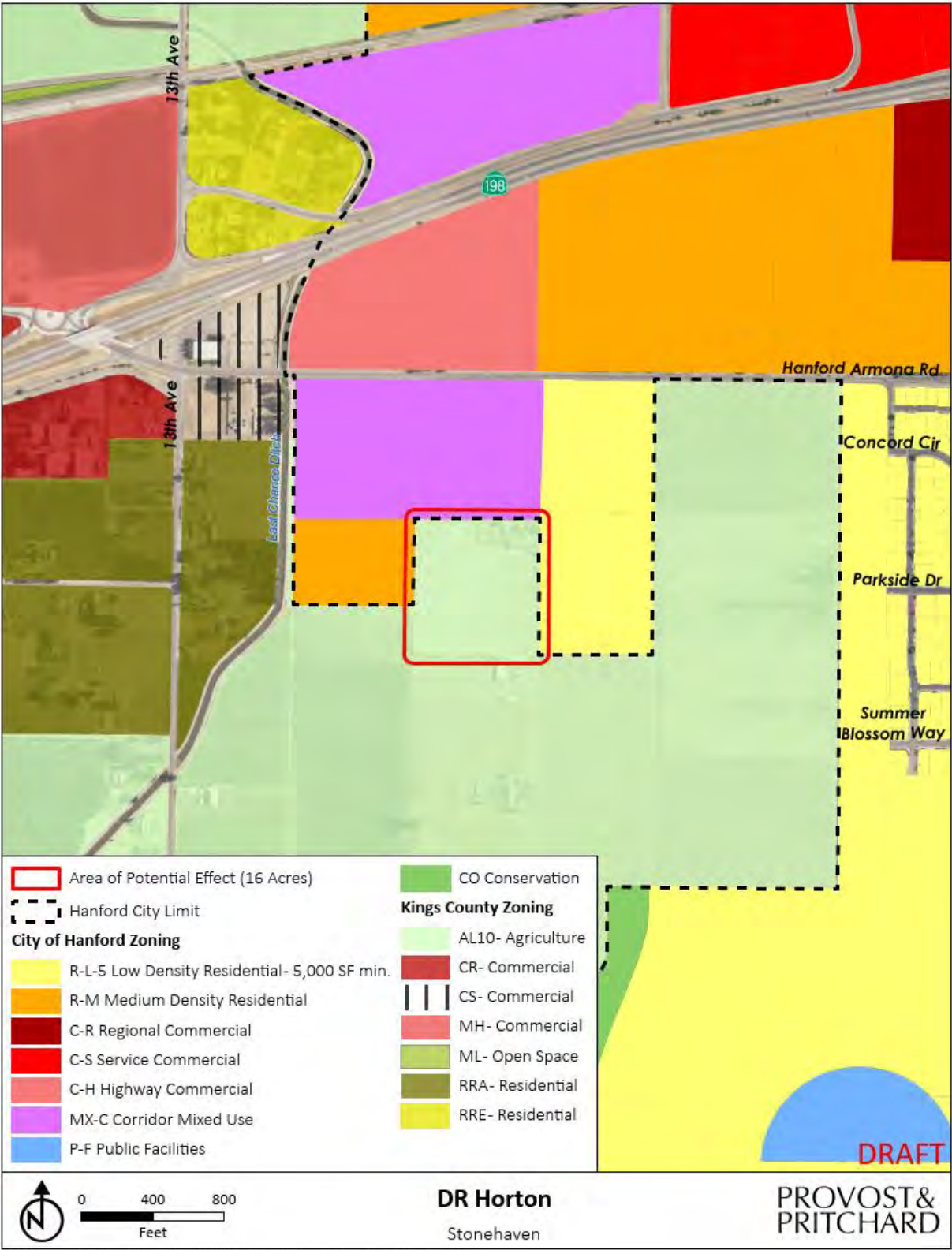


Figure 2-5: Zone District Map

CHAPTER 3 DETERMINATION

3.1 POTENTIAL ENVIRONMENTAL IMPACTS

As indicated by the discussions of existing and baseline conditions, and impact analyses that follow in this Chapter, environmental factors not checked below would have no impacts or less than significant impacts resulting from the project. Environmental factors that are checked below would have potentially significant impacts resulting from the project. Mitigation measures are recommended for each of the potentially significant impacts that would reduce the impact to less than significant.

- | | | |
|--|--|--|
| <input type="checkbox"/> Aesthetics | <input checked="" type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Energy |
| <input checked="" type="checkbox"/> Geology/Soils | <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards and Hazardous Materials |
| <input type="checkbox"/> Hydrology / Water Quality | <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Mineral Resources |
| <input type="checkbox"/> Noise | <input type="checkbox"/> Population/Housing | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation | <input checked="" type="checkbox"/> Tribal Cultural Resources |
| <input type="checkbox"/> Utilities and Service Systems | <input type="checkbox"/> Wildfire | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

The analyses of environmental impacts in **Chapter 4 Impact Analysis** result in an impact statement, which shall have the following meanings.

Potentially Significant Impact. This category is applicable if there is substantial evidence that an effect may be significant, and no feasible mitigation measures can be identified to reduce impacts to a less than significant level. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.

Less than Significant with Mitigation Incorporated. This category applies where the incorporation of mitigation measures would reduce an effect from a “Potentially Significant Impact” to a “Less than Significant Impact.” The lead agency must describe the mitigation measure(s), and briefly explain how they would reduce the effect to a less than significant level (mitigation measures from earlier analyses may be cross-referenced).

Less than Significant Impact. This category is identified when the proposed Project would result in impacts below the threshold of significance, and no mitigation measures are required.

No Impact. This category applies when a project would not create an impact in the specific environmental issue area. “No Impact” answers do not require a detailed explanation if they are adequately supported by the information sources cited by the lead agency, which show that the impact does not apply to the specific project (e.g. the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g. the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

3.2 DETERMINATION

On the basis of this initial evaluation (to be completed by the Lead Agency):

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

Date

Printed Name/Position

CHAPTER 4 ENVIRONMENTAL IMPACT ANALYSIS

4.1 AESTHETICS

Table 4-1: Aesthetics Impacts

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

4.1.1 Baseline Conditions

The city of Hanford is located within Kings County in the San Joaquin Valley in central California in an area that can be characterized as urban agricultural. The city topography is predominantly flat with minimal natural watercourses; no scenic vistas are identified by the Hanford General Plan. The Project site is situated to the south of Hanford-Armona Road between 12th and 13th Avenues approximately 0.35 miles south of SR-198. According to the California Scenic Highway Mapping System, there are no adopted or eligible state scenic highways within the city of Hanford. The nearest eligible state scenic highway is a portion of State Route (SR) 198, which is approximately 15.5-miles northeast of the Project site.¹ The Project site is adjacent to the Hanford city limits and will be annexed into the City as part of the Project.

¹ (California Department of Transportation 2023)

4.1.2 Applicable Regulations

Federal

There are no federal regulations pertaining to aesthetics that are relevant to the Project.

State

California Environmental Quality Act

CEQA establishes that it is the policy of the State to take all action necessary to provide the people of the state “with...enjoyment of aesthetic, natural, scenic, and historic environmental qualities.” [California Public Resources Code Section 21001(b)].

California Scenic Highways Program

Recognizing the value of scenic areas and the value of views from roads in such areas, the State Legislature established the California Scenic Highway Program in 1963. Under this program, State highway segments are designated as eligible for inclusion as scenic routes. Once the local jurisdictions through which a roadway passes have established a corridor protection program, the State may officially designate a roadway as a scenic route. Projects must then be evaluated for their impact on the scenic qualities of the corridor. Each designated corridor is monitored by the State and its designation may be revoked if a local government fails to enforce the provisions of the corridor protection program.

Local

City of Hanford General Plan

- **Policy T41:** Strive to improve the visual character of roadway corridors by improving streetscapes with amenities such as street trees, pedestrian-scaled lighting, underground utilities, water-efficient landscaping, and streetscape furniture.
- **Policy P47:** Facilitate public safety through the placement of outdoor lighting, while respecting the privacy of surrounding properties.

City of Hanford Municipal Code

Section 17.50.140.D(1) – General Lighting Standards: All lights and light fixtures, except public streetlights, shall be located, aimed or shielded so as to minimize light trespassing across property boundaries or skyward.

4.1.3 Impact Analysis

a) Have substantial adverse effect on a scenic vista?

No Impact. The Hanford General Plan does not identify or designate any scenic vistas within the City or Sphere of Influence. In addition, the Project site does not contain any visual features or historic resources as identified in the General Plan. As a result, the Project would not adversely affect scenic vistas and no impact would occur as a result of the Project.

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

No Impact. There are no scenic resources onsite. The Project would not impact a State Scenic Highway as one does not exist in the vicinity of the Project site. There would be no impact.

- c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less than Significant Impact. The existing visual character of the Project site is farmed agricultural land surrounded by urban development. A subdivision exists to the east of the Project site. To the west, the Project is surrounded by vacant agricultural land. Agricultural lands and rural residential development exist to the north and south. Furthermore, the subdivision development will offer attractive landscaping and architectural design to reduce any visual effect to the surrounding properties and conform with the existing character of the neighboring community. As the Project is located in an urbanized area, the Project will be required to comply with the development standards of the applicable zone district. Any impacts would be less than significant.

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

Less than Significant Impact. Development of the Project would create new sources of light typical of urban development found near the Project site. Nighttime lighting levels would increase over current levels, as sources of new and nighttime lighting and illumination would include, but are not necessarily limited to, lighting from the new residential use, lights associated with vehicular travel (i.e., car headlights), and street lighting. Increased nighttime lighting and illumination could result in adverse effects to adjacent land uses through the “spilling over” of light into these areas and “sky glow” conditions. However, all future development under the Project would have to comply with Section 17.50.140 of the Hanford Municipal Code, which ensures that exterior lighting shall be directed away from abutting properties to not cause annoying glare. This would assist in reducing potential impacts associated with daytime glare and nighttime light. As such, any potential light and glare impacts would be reduced to a less than significant impact.

4.2 AGRICULTURE AND FORESTRY RESOURCES

Table 4-2: Agriculture and Forest Impacts

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4.2.1 Baseline Conditions

An important facet of Hanford's economy is agriculture. A wide variety of vegetables, stone fruits and nuts thrive in the area's fertile soil and are packed, stored and shipped to areas throughout the country. The City's climate, water availability and proximity to transcontinental transportation routes have made it a premier location for agricultural land for over a century. As such, preserving the productivity of agricultural lands is integral to maintaining the City's cultural and economic viability. The Project site is designated as Farmland of Statewide Importance under the Farmland Mapping & Monitoring Program (FMMP) but is not currently under agricultural use.

4.2.2 Applicable Regulations

Federal

Federal Farmland Protection Policy Act

The Natural Resources Conservation Service (NRCS) oversees the Farmland Protection Policy Act (FPPA) (7 U.S. Code Section 4201, et seq.; see also 7 Code of Federal Regulations [CFR] 658). The FPPA (a subtitle of the 1981 Farm Bill) is national legislation designed to protect farmland. The FPPA states its purpose is to "minimize the extent to which federal programs contribute to the unnecessary conversion of farmland to

nonagricultural uses.” The FPPA applies to projects and programs that are sponsored or financed in whole or in part by the federal government. The FPPA does not apply to private construction projects subject to federal permitting and licensing, projects planned and completed without assistance from a federal agency, federal projects related to national defense during a national emergency, or projects proposed on land already committed to urban development. The FPPA spells out requirements to ensure federal programs to the extent practical are compatible with State, local, and private programs and policies to protect farmland and calls for the use of the Land Evaluation and Site Assessment system to aid in analysis. Because the City may ultimately seek some federal funding for transportation or other capital improvements related to this Project, this document addresses the FPPA as an applicable regulation.

State

California Department of Conservation, Division of Land Resource Protection

As part of the FMMP, the California Department of Conservation (DOC) applies the NRCS soil classifications to identify agricultural lands, and these agricultural designations are used in planning for the present and future of California’s agricultural land resources. These designated agricultural lands are included in the Important Farmland Maps. The FMMP was established in 1982 to assess the location, quality, and quantity of agricultural lands and the conversion of these lands. The FMMP provides analysis of agricultural land use and land use changes throughout California. The DOC has a minimum mapping unit of 10 acres, with parcels that are smaller than 10 acres being absorbed into the surrounding classifications.

The list below provides a comprehensive description of all the categories mapped by the DOC.

- **Prime Farmland.** Farmland that has the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
- **Farmland of Statewide Importance.** Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
- **Unique Farmland.** Farmland of lesser quality soils used for the production of the State’s leading agricultural crops. This land is usually irrigated but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.
- **Farmland of Local Importance.** Land of importance to the local agricultural economy as determined by each county’s board of supervisors and a local advisory committee.
- **Grazing Land.** Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities. The minimum mapping unit for Grazing Land is 40 acres.
- **Urban and Built-up Land.** Land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, institutional, public administrative purposes, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.
- **Other Land.** Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock

grazing; confined livestock, poultry or aquaculture facilities; strip mines and borrow pits; and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

As shown in [Figure 4-1](#), the Project site is designated Farmland of Statewide Importance.

California Land Conservation Act (Williamson Act)

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, is promulgated in California Government Code (GC) Sections 51200-51297.4. The Williamson Act enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space uses in return for reduced property tax assessments. Private land within locally designated agricultural preserve areas are eligible for enrollment under Williamson Act contracts. However, an agricultural preserve must consist of no less than 100 acres. In order to meet this requirement two or more parcels may be combined if they are contiguous or if they are in common ownership.

The Williamson Act program is administered by the DOC in conjunction with local governments, which administer the individual contract arrangements with landowners. The landowner commits the parcel to a 10-year period, or a 20-year period for property restricted by a Farmland Security Zone Contract, wherein no conversion to a non-agricultural use is permitted. Each year the contract automatically renews unless a notice of non-renewal is filed. In return, the land is taxed at a rate based on the actual use of the land for agricultural purposes as opposed to its unrestricted market value. A landowner may also submit an application for immediate cancellation, provided that the cancellation is consistent with the criteria stated in the California Land Conservation Act and those adopted by the affected county or city. Non-renewal or immediate cancellation does not change the zoning of the property. Participation in the Williamson Act program is dependent on city or county adoption and implementation of the program and is voluntary for landowners.²

The Project site is subject to a Williamson Act contract.

Local

City of Hanford General Plan

The Open Space, Conservation & Recreation Element of the City's General Plan includes the following agricultural resource goals and policies that are potentially applicable to the Project:

- [Goal 01](#). Conservation and long-term protection of agricultural resources and soils located outside of the Planned Area Boundary
- [Policy 01. Boundary between Urban and Agricultural Uses](#). Utilize the Planned Area Boundary line between urban uses and agricultural uses and prohibit non-agricultural development outside of the Planned Area Boundary.
- [Policy 02. Kings County Preservation Efforts](#). Support the Kings County efforts to preserve and protect farmlands outside of the Planned Area Boundary.
- [Policy 08. Annexation of Williamson Act Lands](#). Consider annexation of Williamson Act lands only if the land is within the 2035 Growth Boundary and only if such annexation is necessary to provide for logical urban development, job creation, or the provision of municipal services.

² (California Department of Conservation 2022)

4.2.3 Impact Analysis

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

- a) **Less than Significant Impact.** The Project site is located on County land that has been historically used for agriculture, which would be annexed into the City of Hanford as a part of this Project. The Project site is designated as Farmland of Statewide Importance by the DOC's FMMP. The Project would convert approximately 12.17 acres of Farmland of Statewide Importance to residential uses. The conversion of this Project would be minimal in comparison to the total amount of agricultural land in the county. Additionally, the Project is within the City's sphere of influence, and is planned for residential uses. Therefore, the City has already anticipated the conversion of the Project site to a non-agricultural use, which was previously analyzed in the General Plan Environmental Impact Report. In accordance with the General Plan EIR, development would have to adhere to Hanford Municipal Code Chapter 16.40.110 (Right to Farm) and proposed goals and policies of the General Plan related to agriculture.

AGR-1: That a right-to farm provision be recorded with the recording of the final subdivision map to ensure that future residents of the homes in the project area are aware of the adjacent agricultural uses and their right to continue to operate.

This will mitigate potentially significant impacts to a less than significant level.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? **Less than Significant Impact with Mitigation Incorporated.** Less than Significant Impact with Mitigation Incorporated. The Project would result in the conversion of farmland currently under a Williamson Act Contract into a residential subdivision. The Project would result in the cancellation of the existing Williamson Act Contract, creating a significant impact. The City of Hanford, within its 2035 General Plan EIR, recognizes that future development, such as that under the current proposal, would result in future conflicts with land participating in Williamson Act contracts. In consideration of the importance of preserving agricultural land, while also needing to provide housing and growth potential for the City, the City determined that providing land for future development outweighs the need to conserve farmland under existing Williamson Act contracts. The City made a statement of overriding considerations indicating that no feasible mitigation measures exist which would diminish potential impacts to land being converted and which are under Williamson Act contracts, affirming this at the time of adoption of the City of Hanford 2035 General Plan and certification of its associated EIR. As a result, the Project falls in line with the analysis provided within the City's General Plan EIR and no mitigation would be necessary resulting from a conflict with an existing Williamson Act Contract. Alternatively, and pursuant to State law, the City may exercise its right to not succeed to the Williamson Act Contract, terminating the contract in the event the annexation associated with the Project is completed. In the event that the Project does result in a cancellation of the contract, and in order to mitigate impacts resulting from the cancellation of the existing Williamson Act Contract, the applicant will implement mitigation measure **AGR-2**. This will mitigate potentially significant impacts to a less than significant level.

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

No Impact. The Project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. The Project would result in the annexation of the Project site from Kings County into the City of Hanford, rezoning the site for residential use. The Hanford General Plan has not designated the Project site or surrounding areas as Forest Land, Timberland, or timberland zoned for Timberland Production. The Project site has historically been utilized for agricultural use. Therefore, there would be no impact.

No Impact. The Project would not result in the loss of forest land or conversion of forest land to non-forest use. The Project would result in the construction of a new subdivision on land that would be annexed into the City of Hanford, which has historically been utilized for agriculture. This would not require the loss or conversion of a forest to a non-forest use. Therefore, there would be no impact.

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

Less than Significant Impact. The Project would result in the conversion of approximately 12.17 acres of predominantly vacant land designated as Farmland of Statewide Importance into a new residential subdivision. While the Project would convert farmland into another use, the Project site is surrounded by urban uses. Under this Project, the site would be subject to a General Plan Amendment and rezoning that would be consistent with residential use and the construction of a new subdivision. Therefore, impacts would be less than significant.

4.2.4 Mitigation

AGR-1 That a right-to farm provision be recorded with the recording of the final subdivision map to ensure that future residents of the homes in the project area are aware of the adjacent agricultural uses and their right to continue to operate.

AGR-2 Prior to development, the Williamson Act Contract shall be cancelled, and applicable cancellation fees shall be paid to the County Treasure in accordance with Government Code Section 51283(b). In the event that the City exercises the option of not succeeding to the Contract pursuant to Government Code Section 51243.5(d), and such action is approved by the Local Agency Formation Commission, the Contract will be terminated, no cancellation is required, and no cancellation fees are required to be paid.

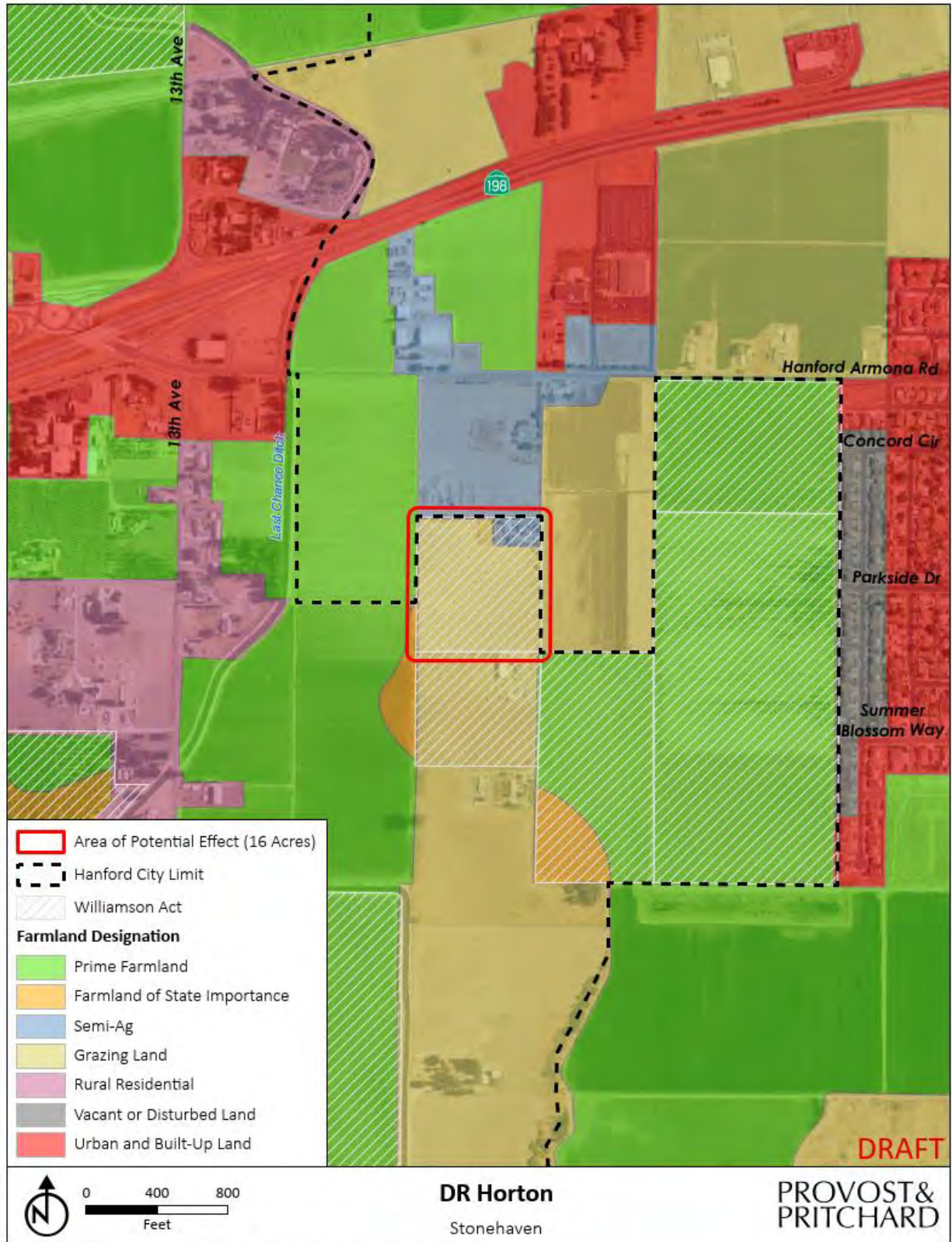


Figure 4-1: Farmland Map

4.3 AIR QUALITY

Table 4-3: Air Quality Impacts

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4.3.1 Baseline Conditions

Air quality impacts are both local and regional. Regional and local air quality is impacted by topography, dominant airflows, atmospheric inversions, location, and season. The Project is located in the San Joaquin Valley Air Basin (SJVAB), which experiences some of the most challenging environmental conditions for air quality in the nation. The following section describes these conditions as they pertain to the Air Basin. The information in this section is primarily from the San Joaquin Valley Air Pollution Control District's (SJVAPCD) Guidelines for Assessing and Mitigating Air Quality Impacts (GAMAQI).³

Climate Meteorology, Topography

The SJVAB, in which the City of Hanford is situated, has an inland Mediterranean climate characterized by warm, dry summers and cooler winters. Summer temperatures often exceed 100 degrees Fahrenheit (°F) and can vary as much as 30°F. Winters are for the most part mild and humid, with average high in the 50s, while the average daily low temperature is approximately 45°F.

The vertical dispersion of air pollutants in the Valley is limited by the presence of persistent temperature inversions. Air temperature usually decreases as altitude increases. A reversal of this atmospheric state, where the air temperature increases with height, is termed an inversion. Air above and below an inversion does not mix because of differences in air density thereby restricting air pollutant dispersal.

Wind speed and direction play an important role in the dispersion and transport of air pollutants. During summer periods, winds typically originate from the northern San Joaquin Valley and flow in a south-southeasterly direction through the Valley, down through the Tehachapi Pass and into the neighboring Southeast Desert Air Basin. During winter months, winds occasionally originate in the opposite direction, from the south end of the Valley and flow in a north-northwesterly direction. Also, during winter months, the Valley experiences light, variable winds, less than 10 miles per hour. Low wind speeds, combined with

³ (San Joaquin Valley Air Pollution Control District, 2015)

low inversion layers in the winter, create a climate conducive to high concentrations of certain air pollutants.

The SJVAB is basically a flat area bordered on the east by the Sierra Nevada Mountains; on the west by the Coast Ranges; and to the south by the Tehachapi Mountains. Airflow in the SJVAB is primarily influenced by marine air that enters through the Carquinez Straits where the San Joaquin-Sacramento Delta empties into the San Francisco Bay. The region's topographic features restrict air movement through and out of the basin. As a result, the SJVAB is highly susceptible to pollutant accumulation over time. Frequent transport of pollutants into the SJVAB from upwind sources also contributes to poor air quality.

4.3.2 Applicable Regulations

Federal

At the federal level, the United States Environmental Protection Agency (EPA) has been charged with implementing national air quality programs. The EPA's air quality mandates are drawn primarily from the federal Clean Air Act (CAA). The federal CAA was first signed into law in 1963. Congress substantially amended the federal CAA in 1970, 1977, and 1990.

The EPA deals with global, international, national, and interstate air pollution issues. Their primary role at the state level is one of oversight of state air quality programs. The EPA sets federal standards for vehicle and stationary sources and provides research and guidance in air pollution programs.

The federal CAA required the EPA to set National Ambient Air Quality Standards (NAAQS) for several problem air pollutants on the basis of human health and welfare criteria. Two types of NAAQS have been established: primary standards, which protect public health, and secondary standards, which protect public welfare (e.g., crops, forests, materials, visibility, etc.). Primary NAAQS have been established for the following criteria air pollutants:

- Carbon monoxide (CO)
- Ozone (O₃)
- Respirable particulate matter (PM₁₀)
- Fine particulate matter (PM_{2.5})
- Nitrogen dioxide (NO₂)
- Sulfur dioxide (SO₂)
- Lead (Pb)

All of the above, except CO, also have some form of secondary standard. The primary NAAQS standards are intended to protect, within an adequate margin of safety, those persons most susceptible to respiratory distress, such as people suffering from asthma or other illness, the elderly, very young children, or others engaged in strenuous work or exercise.

The EPA designates areas with air quality not meeting federal standards as "nonattainment." The federal CAA further classifies nonattainment areas based on the severity of the nonattainment problem, with marginal, moderate, serious, severe, and extreme nonattainment classifications for ozone. Nonattainment classifications for PM range from marginal to serious.

The federal CAA requires areas with air quality violating the NAAQS to prepare an air quality control plan referred to as the State Implementation Plan (SIP). The SIP contains the strategies and control measures that states such as California will use to attain the NAAQS. The federal CAA amendments of 1990 require states containing areas that violate the NAAQS to revise their SIP to incorporate additional control

measures to reduce air pollution. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, planning documents, rules, and regulations of Air Basins as reported by the agencies with jurisdiction over them. The EPA reviews SIPs to determine if they conform to the mandates of the federal CAA amendments and will achieve air quality goals when implemented. If the EPA determines a SIP to be inadequate, it may prepare a Federal Implementation Plan for the nonattainment area and impose additional control measures.

In addition to setting health-based standards for air pollutants, the EPA also oversees state and local actions to improve air quality. The following list provides a brief explanation of important regulations set forth by EPA:

Federal Clean Air Act (CAA)

- Requires air quality plans to include measures necessary to achieve NAAQS.
- Requires all plans, programs, and projects that require federal approval, including transportation plans, to conform to air quality plans.
- Requires sanctions if all feasible measures are not expeditiously adopted.

State

States are required to develop and implement air pollution control plans designed to achieve and maintain the NAAQS established by the EPA. States may also establish their own standards, provided the state standards are at least as stringent as the NAAQS. California has established California Ambient Air Quality Standards (CAAQS) pursuant to Health and Safety Code Section 39606(b) and its predecessor statutes.

The California Legislature established the Air Resources Board (CARB) in 1967. The CARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA) of 1988. The CCAA provides a planning framework for attainment of the CAAQS for O₃, CO, SO₂, and NO₂. The CCAA classifies ozone nonattainment areas as moderate, serious, severe, and extreme based on severity of violation of state ambient air quality standards. For each class, the CCAA specifies air quality management strategies that must be adopted. For all nonattainment categories, attainment plans are required to demonstrate a five percent-per-year reduction in nonattainment air pollutants or their precursors, averaged every consecutive three-year period, unless an approved alternative measure of progress is developed. Air districts responsible for air basins with air quality that is in violation of CAAQS for O₃, CO, SO₂, and NO₂ are required to prepare an air quality attainment plan that lays out a program to attain the CCAA mandates.

Other CARB duties include monitoring air quality in conjunction with air monitoring networks maintained by air pollution control districts (APCDs) and air quality management districts (AQMDs), establishing CAAQS (which are more stringent than the NAAQS in many cases), setting emissions standards for new motor vehicles, and reviewing district input for the SIP required by the federal CAA amendments. The SIP consists of the emissions standards for vehicular sources set by the CARB as well as attainment plans adopted by the APCD or AQMD and approved by the CARB.

The State of California, through the CARB and Bureau of Automotive Repair, develops programs to reduce pollution from vehicles and consumer products. The following list provides a brief explanation of important regulations set forth by the State of California:

California Clean Air Act (CCAA)

- Requires all feasible control measures, including transportation control measures, to reduce emissions.
- Provides for indirect source programs in attainment plans.

- Contains targets for emission reductions, vehicle miles traveled, and average vehicle ridership.

AB (Assembly Bill) 170

- Requires cities and counties in the Valley to incorporate strategies to improve air quality in their general planning efforts.

SB (Senate Bill) 709

- Gave the Air District more responsibility in terms of permitting, fee implementation, and agricultural assistance, but also gives the Air District the authority to require the use of best available control technology (BACT) for existing sources, promote cleaner-burning alternative fuels, and encourage and facilitate ridesharing.
- Allows the Air District to adopt a surcharge on motor vehicle registration fees in counties within the Air District.

California Government Code Section 65089

- Requires trip reduction and travel demand management in Congestion Management Programs.

Regional

Air pollution does not respect political boundaries. Therefore, many air quality problems are best managed on a regional basis. In 1991 the State Legislature determined that management of an air basin by a single agency would be more effective than management through each county within that basin. Air basins are geographic areas sharing a common "air-shed." Most major metropolitan areas in California now fall under the authority of multi-county APCDs or AQMDs.

Air districts have the primary responsibility for control of air pollution from all sources other than direct motor vehicle emissions, which are the responsibility of the CARB and EPA. Air districts adopt and enforce rules and regulations to achieve state and federal ambient air quality standards and enforce applicable state and federal law.

The SJVAPCD, formed in 1991, has jurisdiction over air quality matters in the SJVAB, spanning the counties of Fresno, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare, and the western portion of Kern.

Until the passage of the CCAA, the primary role of county APCDs was controlling stationary sources of pollution, such as industrial processes and equipment. With the passage of the CCAA and federal CAA amendments, air districts were required to implement transportation control measures and were encouraged to adopt indirect source control programs to reduce mobile source emissions. These mandates created the necessity for air districts to work closely with cities, counties, and regional transportation planning agencies to develop new programs.

The Air District entered into a memorandum of understanding with the eight San Joaquin Valley County transportation planning agencies in 1992. This memorandum of understanding ensures a coordinated approach in the development and implementation of transportation plans throughout the Valley. This action has helped the Regional Transportation Planning Agencies comply with pertinent provisions of the federal and state Clean Air Acts as well as related transportation legislation (such as the Intermodal Surface Transportation Efficiency Act).

The Air District develops plans and implements control measures in an effort to advance Valley attainment of CAAQS and NAAQS. The Air District has developed plans to attain state and federal standards for ozone and particulate matter. The Air District's air quality plans include emissions inventories to measure the sources of air pollutants, to evaluate how well different control methods have worked, and to show how

air pollution will be reduced. The plans also use computer modeling to estimate future levels of pollution and make sure that the Valley will meet air quality goals on time.

Control measures applicable to this Project are as follows:

Regulation VIII—Fugitive PM₁₀ Prohibitions

Regulation VIII is a control measure that is one main strategies from the 2006 PM₁₀ Plan for reducing the PM₁₀ emissions that are part of fugitive dust. Projects over 10 acres are required to file a Dust Control Plan (DCP) containing dust control practices sufficient to comply with Regulation VIII. The Project is required to prepare a DCP to comply with Regulation VIII.

Rule 4002—National Emissions Standards for Hazardous Air Pollutants

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

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. Agricultural activities are exempt from the nuisance rule.

Rule 9510 – Indirect Source Review

The purpose of this rule is to ensure that land use development projects reduce their construction/operational NO_x and PM₁₀ emissions by 20%/40% and 33.3%/50%, respectively. Operational emissions are required to be reduced over a period of 10 years. Emission reductions can be obtained either by implementing on-site improvements, such as using more efficient construction equipment, improved land use design, electrical vehicle chargers, photovoltaic panels, or by simply paying an in-lieu fee that goes towards emission-reducing projects elsewhere in the Air District's region. This project is required to submit an Air Impact Assessment and address its emissions prior to commencement of both construction and operation.

Other Measures

Other control measures that apply to the Project are Rule 4641—Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operation that requires reductions in volatile organic compound (VOC) emissions during paving and Rule 4601—Architectural Coatings that limits the VOC content of all types of paints and coatings sold in the San Joaquin Valley. These measures apply at the point of sale of the asphalt and coatings, so Project compliance is ensured.

Local

The City of Hanford adopted its General Plan Update in April 2017.⁴ The applicable air quality goals and policies from the Transportation and Circulation Element are listed below.

Policy T50: Carpool Programs. Encourage the use of carpooling, vanpooling and flexible employment hours.

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

⁴ (City of Hanford, 2017)

4.3.3 Thresholds

The District's annual emission significance thresholds used for the Project define the substantial contribution for both operational and construction emissions as follows:

Table 4-4: Thresholds of Significance for Criteria Air Pollutants

Criteria Pollutant	Emissions (in tons per year)	
	Construction	Operations
ROG	10	10
CO	100	100
NO _x	10	10
SO _x	27	27
PM ₁₀	15	15
PM _{2.5}	15	15

Odor impacts on residential areas and other sensitive receptors, such as hospitals, day-care centers, schools, etc. warrant the closest scrutiny, but consideration should also be given to other land uses where people may congregate, such as recreational facilities, worksites, and commercial areas. The District has determined the common land use types that are known to produce odors in the Air Basin. These types are shown in [Table 4-5](#).

Table 4-5: Screening Levels for Potential Odor Sources

Odor Generator	Screening Distance
Wastewater Treatment Facilities	2 miles
Sanitary Landfills	1 mile
Transfer Stations	1 mile
Composting Facilities	1 mile
Petroleum Refineries	2 miles
Asphalt Batch Plants	1 mile
Chemical Manufacturers	1 mile
Fiberglass Manufacturers	1 mile
Painting/Coating Operations	1 mile
Food Processors	1 mile
Feed Lots and Dairies	1 mile
Rendering Plants	1 mile

The District's current thresholds of significance for toxic air contaminant emissions from the operations of both permitted and non-permitted sources are combined and presented in [Table 4-6](#) below.

Table 4-6: Thresholds of Significance for Toxic Air Contaminants

Toxic Air Contaminant Type	Threshold
Carcinogens	Maximally Exposed Individual risk equals or exceeds 20 in one million
Non-Carcinogen, Acute Effects	Hazard Index equals or exceeds 1 for the Maximally Exposed Individual
Non-Carcinogen, Chronic Effects	Hazard Index equals or exceeds 1 for the Maximally Exposed Individual

Table 4-7: Summary of Ambient Air Quality Standards and Attainment Designation

Pollutant	Averaging Time	California Standards*		National Standards*	
		Concentration*	Attainment Status	Primary	Attainment Status
Ozone (O ₃)	1-hour	0.09 ppm	Nonattainment/ Severe	–	No Federal Standard
	8-hour	0.070 ppm	Nonattainment	0.075 ppm	Nonattainment (Extreme)**
Particulate Matter (PM ₁₀)	AAM	20 µg/m ³	Nonattainment	–	Attainment
	24-hour	50 µg/m ³		150 µg/m ³	
Fine Particulate Matter (PM _{2.5})	AAM	12 µg/m ³	Nonattainment	12 µg/m ³	Nonattainment
	24-hour	No Standard		35 µg/m ³	
Carbon Monoxide (CO)	1-hour	20 ppm	Attainment/ Unclassified	35 ppm	Attainment/ Unclassified
	8-hour	9 ppm		9 ppm	
	8-hour (Lake Tahoe)	6 ppm		–	
Nitrogen Dioxide (NO ₂)	AAM	0.030 ppm	Attainment	53 ppb	Attainment/ Unclassified
	1-hour	0.18 ppm		100 ppb	
Sulfur Dioxide (SO ₂)	AAM	–	Attainment	--	Attainment/ Unclassified
	24-hour	0.04 ppm		--	
	3-hour	–		0.5 ppm	
	1-hour	0.25 ppm		75 ppb	
Lead (Pb)	30-day Average	1.5 µg/m ³	Attainment	–	No Designation/ Classification
	Calendar Quarter	–		--	
	Rolling 3-Month Average	–		0.15 µg/m ³	
Sulfates (SO ₄)	24-hour	25 µg/m ³	Attainment	No Federal Standards	
Hydrogen Sulfide (H ₂ S)	1-hour	0.03 ppm (42 µg/m ³)	Unclassified		
Vinyl Chloride (C ₂ H ₃ Cl)	24-hour	0.01 ppm (26 µg/m ³)	Attainment		
Visibility-Reducing Particle Matter	8-hour	Extinction coefficient: 0.23/km-visibility of 10 miles or more due to particles when the relative humidity is less than 70%.	Unclassified		

* For more information on standards visit: <https://ww3.arb.ca.gov/research/aags/aags2.pdf>

** No Federal 1-hour standard. Reclassified extreme nonattainment for the Federal 8-hour standard 4/13/23.

***Secondary Standard

Source: CARB 2015; SJVAPCD 2015

4.3.4 Methodology

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. 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.

Short-Term Construction-Generated Emissions

Short-term construction emissions associated with the Project were calculated with the California Emissions Estimator Model (CalEEMod), Version 2022.1. These output files can be found in [Appendix A](#). The sections below detail the methodology of the air quality emissions analysis and its conclusions.

The emissions modeling includes emissions generated by off-road equipment, haul trucks, and worker commute trips. Emissions were quantified based on CalEEMod default assumptions.

Long-Term Operational Emissions

Operational emissions occur over the lifetime of the Project and are from three main sources: area sources, energy usage, and motor vehicles usage known as mobile sources. Area source emissions include emissions from natural gas, landscape, and painting. Operations are expected to commence in March 2025. Modeling assumptions and output files are included in [Appendix A](#). The unmitigated long-term operational emissions for the Project are listed in [Table 4-9](#).

4.3.5 Impact Analysis

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

Less than Significant Impact. The CEQA Guidelines indicate that a significant impact would occur if the Project would conflict with or obstruct implementation of the applicable air quality plan. The GAMAQI indicates that projects that do not exceed SJVAPCD regional criteria pollutant emissions quantitative thresholds would not conflict with or obstruct the applicable air quality plan (AQP).

As discussed in Impact b below, emissions of ROG, NO_x, PM₁₀, and PM_{2.5} associated with the construction and operation of the Project would not exceed the District's significance thresholds. Therefore, the Project would not contribute to air quality violations.

The Project's emissions would be less than significant for all criteria pollutants and would not result in inconsistency with the AQP for this criterion. The Project complies with all applicable control measures from the AQP therefore, the Project is consistent with the AQP, and the impact would be less than significant.

- b) 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. Project-generated emissions are below the SJVAPCD's regional significance thresholds and the Project is consistent with current air quality attainment plans including control measures and regulations, as depicted below in **Table 4-8** and **Table 4-9**.

With respect to cumulative health impacts, the air basin is in non-attainment for O₃, PM_{2.5}, and PM₁₀ (state only), which means that the background levels of those pollutants are at times higher than the ambient air quality standards. The air quality standards were set to protect public health, including the health of sensitive individuals (such as children, the elderly, and persons with pre-existing respiratory or cardiovascular illnesses (the infirm)). Therefore, when the concentration of those pollutants exceeds the standard, it is likely that some sensitive individuals in the population would experience adverse health effects. Since the air basin is already in non-attainment, it is considered to have an existing significant cumulative health impact without the Project. The issue is whether the Project's contribution to the existing violation of air quality standards is cumulatively considerable.

The SJVAPCD through its GAMAQI has determined that projects that exceed regional thresholds would have a cumulatively considerable health impact. As demonstrated in **Table 4-8** and **Table 4-9** the Project would not exceed the SJVAPCD's significance thresholds and its cumulatively considerable impacts would be less than significant.

Construction Emissions

The results of the modeling are presented in **Table 4-8**. The emissions that would occur during construction activities were compared with the significance threshold for each pollutant. For assumptions in estimating the emissions, please refer to **Appendix A**. As shown in **Table 4-8**, the emissions are below the significance thresholds. Therefore, the emissions would be less than significant on a Project basis.

Table 4-8: Construction Emission Summary, Criteria Air Pollutants

	Emissions (in tons per year)					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Maximum Annual Emissions	0.42	1.51	1.90	<0.005	0.30	0.16
Significance Threshold	10	10	100	27	15	15
Significant Impact?	No	No	No	No	No	No
Source: Appendix A						

Operational Emissions

Operational emissions occur over the lifetime of the Project and are from two main sources: area sources and motor vehicles, or mobile sources. Operations are expected to commence in March 2025. The SJVAPCD considers construction and operational emissions separately when making significance determinations.

As shown in **Table 4-9**, the emissions are below the SJVAPCD significance thresholds prior to application of mitigation measures or taking credit for Project design features that would reduce Project emissions and, therefore, would result in a less than significant impact.

Table 4-9: Operational Emissions Summary, Criteria Air Pollutants

	Emissions (in tons per year)					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Maximum Annual Emissions	1.18	0.73	4.38	0.01	0.38	0.17
Significance Threshold	10	10	100	27	15	15
Significant Impact?	No	No	No	No	No	No
Source: Appendix A						

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

Less than Significant Impact.

Sensitive Receptors

Those who are sensitive to air pollution include children, the elderly, and persons with pre-existing respiratory or cardiovascular illness. The District considers a sensitive receptor a location that houses or attracts children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Examples of sensitive receptors include hospitals, residences, convalescent facilities, and schools. The closest off-site sensitive receptors are existing residences north and south of the Project site, in addition to a residential subdivision approximately 0.32 miles east of the Project site. For criteria pollutants, impacts to receptors are based on emissions during the highest daily emissions during construction and operations. As shown in **Table 4-10**, emissions generated from construction and operation of the Project are less than SJVAPCD screening criteria. Therefore, this impact would be less than significant.

Localized Pollutant Screening Analysis

Emissions occurring at or near the Project have the potential to create a localized impact, also referred to as an air pollutant hotspot. Localized emissions are considered significant if, when combined with background emissions, they would result in exceedance of any health-based air quality standard. The impact from localized pollutants is based on the impact to the nearest sensitive receptor.

The SJVAPCD's GAMAQI includes screening thresholds for identifying projects that need detailed analysis for localized impacts. Projects with on-site emission increases from construction activities or operational activities that exceed the 100 pounds per day screening level of any criteria pollutant after compliance with applicable rules and regulations and implementation of all enforceable mitigation measures would require preparation of an ambient air quality analysis. The criteria pollutants of concern for localized impact in the Air Basin are PM₁₀, PM_{2.5}, NO_x, and CO.

The highest daily emissions occur during Project grading activities except for reactive organic gas (ROG) emissions, which are highest during application of architectural coatings. The results of the construction screening analysis are presented in **Table 4-10**.

Table 4-10: Maximum Daily Construction and Operational Emissions, Criteria Air Pollutants

Source	Daily Emissions (in Pounds)					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Construction – Summer	4.04	39.8	36.5	0.06	21.6	11.8
Construction – Winter	40.7	37.4	32.3	0.06	10.9	5.16
Operations – Summer	8.71	4.64	43.7	0.12	4.19	2.95
Operations – Winter	7.88	4.99	37	0.11	4.19	2.94
SJVAPCD Significance Thresholds	100	100	100	100	100	100
Exceed Thresholds?	No	No	No	No	No	No

Maximum Daily Operational Emissions

An analysis of maximum daily emissions during operation was conducted to determine if emissions would exceed 100 pounds per day for any pollutant of concern. Operational emissions include emissions generated on-site by area sources such as natural gas combustion and landscape maintenance, an emergency generator, and off-site by motor vehicles accessing the Project. Most motor vehicle emissions would occur distant from the site and would not contribute to a violation of ambient air quality standards; therefore, operational emissions reflect a conservative assumption. The results of the screening analysis are presented in [Table 4-10](#).

The Project would not exceed SJVAPCD screening thresholds for localized operational criteria pollutant impacts; therefore, the Project's localized criteria pollutant impacts would be less than significant.

Valley Fever

Valley fever, or coccidioidomycosis, is an infection caused by inhalation of the spores of the fungus, *Coccidioides immitis* (*C. immitis*). The spores live in soil and can live for an extended time in harsh environmental conditions. Activities or conditions that increase the amount of fugitive dust contribute to greater exposure, and they include dust storms, grading, and recreational off-road activities.

The Centers for Disease Control and Prevention indicates that 752 of the 8,657 persons (8.7 percent) hospitalized in California between 2000 and 2007 for Valley fever died.⁵ California experienced a record number of Valley Fever cases in 2017 with 7,466 new cases. The San Joaquin Valley is considered an endemic area for Valley fever. Within the region, Kings County reported an infection risk of greater than 10 per 100,000.⁶

The distribution of *C. immitis* within endemic areas is not uniform and growth sites are commonly small (a few tens of meters) and widely scattered. Known sites appear to have some ecological factors in common suggesting that certain physical, chemical, and biological conditions are more favorable for *C. immitis* growth. Avoidance, when possible, of sites favorable for the occurrence of *C. immitis* is a prudent risk management strategy. Listed below are ecologic factors and sites favorable for the occurrence of *C. immitis*:

- 1) Rodent burrows (often a favorable site for *C. immitis*, perhaps because temperatures are more moderate and humidity higher than on the ground surface)
- 2) Old (prehistoric) Indian campsites near fire pits

⁵ (Centers for Disease Control and Prevention, 2009)

⁶ (Kings County Department of Public Health, 2014)

- 3) Areas with sparse vegetation and alkaline soils
- 4) Areas with high salinity soils
- 5) Areas adjacent to arroyos (where residual moisture may be available)
- 6) Packrat middens
- 7) Upper 30 centimeters of the soil horizon, especially in virgin undisturbed soils
- 8) Sandy, well-aerated soil with relatively high water-holding capacities

Sites within endemic areas less favorable for the occurrence of *C. immitis* include:

- 1) Cultivated fields
- 2) Heavily vegetated areas (e.g. grassy lawns)
- 3) Higher elevations (above 7,000 feet)
- 4) Areas where commercial fertilizers (e.g. ammonium sulfate) have been applied
- 5) Areas that are continually wet
- 6) Paved (asphalt or concrete) or oiled areas
- 7) Soils containing abundant microorganisms
- 8) Heavily urbanized areas where there is little undisturbed virgin soil (USGS 2000)

The Project site is situated in an urban infill area. Therefore, implementation of the Project would have a low probability of the site having *C. immitis* growth sites and exposure to the spores from disturbed soil, however exposure to blowing dust should be minimized.

Construction activities would generate fugitive dust that could contain *C. immitis* spores. The size of the Project would require the preparation and compliance with a Dust Control Plan, which would minimize the generation of fugitive dust during construction activities. Therefore, due to Project size, combined with the relatively low probability of the presence of *C. immitis* spores, would reduce Valley fever impacts to less than significant.

During operations, dust emissions are anticipated to be negligible, because most of the Project area would be occupied by buildings, pavement, and landscaped areas. This condition would preclude the possibility of the Project from providing habitat suitable for *C. immitis* spores and for generating fugitive dust that may contribute to Valley fever exposure. Impacts would be less than significant.

Diesel Particulate Matter (DPM)

DPM can be of particular concern as Project construction occurs as it is emitted from the combustion of diesel fuel. Because construction equipment is often used for lengths of time within close proximity to existing sensitive receptors, there is a concern that the increase in DPM emissions could cause a localized health risk.

A construction Health Risk Assessment was prepared using Hotspots Analysis and Reporting Program Air Dispersion Modeling and Risk Assessment Tool version 21081 was prepared for the Project, using the emissions found in [Appendix A](#). Receptors were placed at existing homes and the subdivision found to the east. The maximum impact was found to be 9.46 in a million. Impacts would therefore be less than significant.

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

Less than Significant Impact. Construction of the Project would require the use of diesel-powered off-road construction equipment, however these emissions would not occur continuously and would cease after construction concludes. The Project would not engage in any of the activities listed in **Table 4-5**. Land uses that are typically identified as sources of objectionable odors include landfills, transfer stations, sewage treatment plants, wastewater pump stations, composting facilities, feed lots, coffee roaster, asphalt batch plants, and rendering plants, among other uses. The Project does not include any of these activities or land uses. The Project would therefore have a less than significant impact with respect to generation of emissions leading to odors or other adverse or objectionable emissions.

4.4 BIOLOGICAL RESOURCES

Table 4-11: Biological Resources Impacts

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.4.1 Baseline Conditions

The proposed Project is currently located in unincorporated Kings County, within the San Joaquin Valley, but would be annexed into the City of Hanford, which is adjacent to the Project site. The Project's Area of Potential Effect (APE) is approximately 16 acres, which includes the Project site and a 50-foot buffer surrounding the Project site (see [Figure 4-2](#)). The Biological Evaluation prepared for the Project is presented in [Appendix B](#). The topography is relatively flat with elevations at approximately 243 feet above mean sea level. The APE contains a residential house and a ruderal agricultural field that is currently a grass cover crop.

Like most of California, the APE experiences a Mediterranean climate. Warm, dry summers are followed by cool, moist winters. Summer temperatures often reach above 90 degrees Fahrenheit (°F), and the humidity

is generally low. Winter temperatures are often below 60 °F during the day and rarely exceed 70 °F. On average, the City of Hanford receives approximately 12 inches of precipitation in the form of rainfall yearly, most of which occurs between October and March⁷ and the APE would be expected to receive similar amounts of precipitation.

Hydrology

The nearest surface waters are the Last Chance Ditch, which is 0.14 miles to the west of the APE. The canal receives water from the Kings River, which is approximately 8 miles north of the APE. A watershed is the topographic region of water that drains into a stream, river, or lake and can consist of many smaller subwatersheds. The APE lies within the Jacobs Slough-Frontal Tulare Lakebed watershed; Hydrologic Unit Code (HUC): 1803001220 and a single subwatershed: Jacobs Slough subwatershed; HUC: 180300122004.

The Jacobs Slough-Frontal Tulare Lakebed watershed is fed by stormwater runoff and snowmelt collected in upland areas which flow down into the Middle Fork Kings River and the South Fork Kings River, which combine to become the Kings River. The Kings River then flows into an unnamed canal which flows into multiple unnamed canals before it reaches the Last Chance Ditch. The Last Chance Ditch flows into other unnamed canals, which connects with the Tule River. The Tule River eventually terminates in the historic Tulare Lakebed⁸. The APE is isolated from these waterways and Last Chance Ditch would not be impacted by Project activities.

Soil

Two soil mapping units representing two soil types were identified within the APE and are listed in **Table 4-12** (see **Appendix B** for the complete Web Soil Survey report). The soils are displayed with their core properties in the table below⁹. Both soils are primarily used for cultivation and watershed areas.

Table 4-12: List of Soils Located Onsite and Their Basic Properties

Soil	Soil Map Unit	Percent of APE	Hydric Unit	Hydric Minor Units	Drainage	Permeability	Runoff
Cajon sandy loam	0 to 1 percent slopes	57.7%	No	Yes	Somewhat excessively drained	Rapid permeability	Very low runoff
Nord complex	0 to 2 percent slopes	42.3%	No	Yes	Well drained	Moderate permeability	Low runoff

While none of the major soil mapping units were identified as hydric, some of the minor soil mapping units were identified as hydric, which means the soils of the APE are predominantly nonhydric. Hydric soils are defined as soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions such that under sufficiently wet conditions, hydrophytic vegetation can be supported.

⁷ (Weatherspark 2023)

⁸ (United States Environmental Protection Agency 2023)

⁹ (United States Department of Agriculture Natural Resource Conservation 2022)

Biotic Habitats

Residential

The APE contained a residence that had ornamental vegetation. Vegetation observed consisted of oleander (*Nerium oleander*), red pine (*Pinus resinosa*), olive trees (*Olea europaea*), an avocado tree (*Persea americana*), orange trees (*Citrus × sinensis*), silver dollar gum eucalyptus (*Eucalyptus globulus*), and blue gum eucalyptus (*Eucalyptus polyanthemus*).

A domestic cat (*Felis catus*) was observed near the house/garage. Signs of species observed within the residential habitat included California ground squirrel (*Otospermophilus beecheyi*) tracks.

The residential habitat within the APE was highly disturbed by anthropogenic activities but provided habitat for foraging birds, including raptors, during the day, as well as potentially bats, coyotes, and other nocturnal animals at night. The residential habitat contained suitable habitat for tree and ground nesting avian species.

Ruderal/Agricultural

The APE contained a ruderal/agricultural field that was a grass cover crop with sparse herbaceous vegetation at the time of the field survey. Vegetation observed consisted of mustard (*Brassica* spp.), cheese weed mallow (*Malva parviflora*), wild radish, (*Raphanus raphanistrum*), common fiddleneck (*Amsinckia intermedia*), common pea (*Pisum sativum*), and big sheath mushroom (*Volvopluteus gloiocephalus*).

The survey of the agricultural/ruderal habitat resulted in the identification of bird species including Killdeer (*Charadrius vociferus*), White-crowned Sparrow (*Zonotrichia leucophrys*), and Common Raven (*Corvus corax*). Signs of species observed within the APE included Botta's pocket gopher burrows (*Thomomys bottae*), and other small mammal burrows. A nest box was located to the south of the APE near a residence.

The ruderal habitat within the APE was highly disturbed by agricultural activities but provided habitat for foraging birds, including raptors, during the day, as well as potentially bats, coyotes, and other nocturnal animals at night. The ruderal habitat contained suitable habitat ground nesting avian species.

Wildlife and Plant Species

A query of the California Department of Fish and Wildlife (CDFW), California Natural Diversity Database (CNDDDB), and the United States Fish and Wildlife Service (USFWS), Information for Planning and Consultation (IPaC), was conducted for the *Hanford* 7.5-minute U.S. Geological Survey (USGS) quadrangle that contains the APE in its entirety, and for the eight surrounding USGS quadrangles: *Burris Park*, *Guernsey*, *Laton*, *Lemoore*, *Remnoy*, *Riverdale*, *Stratford*, and *Waukena*. These species, and their potential to occur within the APE, are listed in [Table 4-13](#) and [Table 4-14](#) on the following pages. Other species that have the potential to occur within the APE that did not show up in the CNDDDB query are also included in [Table 4-13](#). Species lists obtained from CNDDDB and IPaC are presented in [Appendix B](#). All relevant sources of information, as well as field observations, were used to determine if any special status species may occur within the APE.

Table 4-13: List of Special Status Animals with Potential to Occur in the APE and/or Vicinity.

Species	Status*	Habitat	Occurrence within APE
Blunt-nosed leopard lizard <i>(Gambelia sila)</i>	FE, CE, CFP	Inhabits semi-arid grasslands, alkali flats, low foothills, canyon floors, large washes, and arroyos, usually on sandy, gravelly, or loamy substrate, sometimes on hardpan. Often found where there are abundant rodent burrows in dense vegetation or tall grass. Cannot survive on lands under cultivation. Known to bask on kangaroo rat mounds and often seeks shelter at the base of shrubs, in small mammal burrows, or in rock piles. Adults may excavate shallow burrows but rely on deeper pre-existing rodent burrows for hibernation and reproduction.	Absent. Suitable habitat for this species was absent within the APE and surrounding lands. The APE and surrounding areas are frequently cultivated agricultural lands that are unsuitable for this species. The only recorded observation of this species within the vicinity was approximately 7 miles south of the APE, in 1990.
Burrowing Owl <i>(Athene cunicularia)</i>	CSC	Resides in open, dry annual or perennial grasslands, deserts, and scrublands with low growing vegetation. Nests underground in existing burrows created by mammals, most often ground squirrels.	Unlikely. While California ground squirrel burrows were observed in the APE, the APE and surrounding areas are frequently cultivated agricultural lands that are generally unsuitable for this species. No sign of this species was observed during the field survey. The nearest recorded observation of this species was approximately 11 miles northeast of the APE in 2017.
California glossy snake <i>(Arizona elegans occidentalis)</i>	CSC	Inhabits arid scrub, rocky washes, grasslands, and chaparral. Prefers open areas with loose soil for easy burrowing.	Unlikely. The APE and surrounding areas are frequently cultivated agricultural lands that are unsuitable for this species. No sign of this species was observed during the field survey. The only recorded observation of this species within the vicinity was approximately 14 miles northwest of the APE in 1939.
California tiger salamander <i>(Ambystoma californiense)</i>	FT, CT, CWL	Requires vernal pools or seasonal ponds for breeding and small mammal burrows for aestivation. Generally found in grassland and oak savannah plant communities in central California from sea level to 1500 feet in elevation. Has been known to migrate up to 1.3 miles to breed.	Absent. Vernal pools and seasonal pools appear to be absent within the APE and up to 1.3 miles from the APE. Surrounding land consists of agricultural fields and orchards which are unsuitable for this species. The nearest recorded observation of this species was approximately 11 miles northeast of the APE in 1999.
Delta smelt <i>(Hypomesus transpacificus)</i>	FT, CE	This pelagic and euryhaline species is Endemic to the Sacramento-San Joaquin River Delta, upstream through Contra Costa, Sacramento, San Joaquin, and Solano Counties.	Absent. The APE is outside the known range for this species and aquatic habitat required by this species is absent from the APE.
Fresno kangaroo rat <i>(Dipodomys nitratoides exilis)</i>	FE, CE	An inhabitant of alkali sinks open grassland environments in western Fresno County. Prefers bare, alkaline, clay-based soils subject to seasonal inundation with more friable soil mounds around shrubs and grasses. The most recent recorded observation of this species in California was in 1992 in Fresno County.	Absent. Suitable habitats required by this species are absent from the APE. There are no recorded observations of this species on CNDDDB within the regional vicinity of the Project.

Species	Status*	Habitat	Occurrence within APE
Monarch Butterfly (<i>Danaus plexippus</i>)	FC	Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby. Larval host plants consist of milkweeds (<i>Asclepias</i> sp.). Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico.	Absent. Foraging and roosting habitat was absent within the APE. The APE contained minimal vegetation with no nectar, milkweeds or groves of trees observed during the biological survey. The most recent recorded observation of this species was approximately 7 miles south of the APE in 2022.
Pallid bat (<i>Antrozous pallidus</i>)	CSC	Found in grasslands, chaparral, and woodlands, where it feeds on ground- and vegetation-dwelling arthropods, and occasionally takes insects in flight. Prefers to roost in rock crevices, but may also use tree cavities, caves, bridges, and other man-made structures.	Possible. While marginal, foraging, and roosting habitat was present within the APE. The APE contains buildings where this species could roost. There are no recorded observations of this species on CNDDB within the vicinity of the Project.
San Joaquin kit fox (<i>Vulpes macrotis mutica</i>)	FE, CT	Underground dens with multiple entrances in alkali sink, valley grassland, and woodland in valleys and adjacent foothills.	Unlikely. There were no suitable dens, tracks, or scat observed during the biological survey. It is unlikely this species would reside within the APE due to agricultural disturbance. The nearest recorded observation of this species was approximately 1.5 mile southeast of the APE in 2000.
Swainson's Hawk (<i>Buteo swainsoni</i>)	CT	Nests in large trees in open areas adjacent to grasslands, grain or alfalfa fields, or livestock pastures suitable for supporting rodent populations.	Possible. There were eucalyptus trees large enough to support nesting raptors within the APE and surrounding area, and this species could forage over the agricultural habitat of the APE. The nearest recorded observation of this species was approximately 5 miles east of the APE in 2016.
Tipton kangaroo rat (<i>Dipodomys nitratoide</i> <i>nitratoide</i>)	FE, CE	Burrows in soil. Often found in grassland and shrubland. Historical range was in Tulare and Kern Counties, generally east of where the California aqueduct occurs today.	Absent. The APE is outside of the historical range of this species.
Tricolored Blackbird (<i>Agelaius tricolor</i>)	CT, CSC	Nests colonially near fresh water in dense cattails or tules, or in thickets of riparian shrubs. Forages in grassland and cropland. Large colonies are often found on dairy farm forage fields.	Unlikely. No riparian vegetation or nesting habitat was observed during the biological survey. This species could potentially fly through or forage in the APE. The only recorded observation of this species within the vicinity was approximately 10.4 miles southeast of the APE in 2014.
Valley elderberry longhorn beetle (<i>Desmocerus californicus dimorphus</i>)	FT	Lives in mature elderberry shrubs of the Central Valley and foothills. Adults are active from March to June.	Absent. No elderberry shrubs were found within the APE or surrounding areas. The only recorded observation of this species within the vicinity was approximately 7 miles northwest of the APE in 1991.
Vernal pool fairy shrimp (<i>Branchinecta lynchi</i>)	FT	Occupies vernal pools, clear to tea-colored water, in grass or mud-bottomed swales, and basalt depression pools.	Absent. Vernal pool habitat was absent from the APE and surrounding lands. The nearest recorded observation of this species was approximately 11 miles northeast of the APE in 2017.
Vernal pool tadpole shrimp (<i>Lepidurus packardii</i>)	FE	Occurs in vernal pools, clear to tea-colored water, in grass or mud-bottomed swales, and basalt depression pools.	Absent. Vernal pool habitat was absent from the APE and surrounding lands. The nearest recorded observation of this species was approximately 11 miles northeast of the APE in 2017.

Species	Status*	Habitat	Occurrence within APE
Western pond turtle (<i>Emys marmorata</i>)	CSC	An aquatic turtle of ponds, marshes, slow-moving rivers, streams, and irrigation ditches with riparian vegetation. Requires adequate basking sites and sandy banks or grassy open fields to deposit eggs.	Unlikely. Aquatic habitat was absent within the APE. This species is often found in agricultural ditches and canals. Last Chance Ditch is 0.14 miles west of the APE but the APE and surrounding areas are frequently cultivated agricultural lands that are unsuitable for this species. The nearest recorded observation of this species was approximately 6 miles southwest of the APE in 1998. The most recent recorded observation of this species was in the Kings River, approximately 6.5 miles north of the APE in 2022.
Western Snowy Plover (<i>Charadrius alexandrinus nivosus</i>)	FT, CSC	Typically found on sandy beaches, salt pond levees, and shores of large alkali lakes.	Absent. The APE and surrounding areas are frequently cultivated agricultural lands that are unsuitable for this species. The only recorded observation of this species within the vicinity was approximately 9 miles southwest of the APE in 1987.
Western spadefoot (<i>Spea hammondi</i>)	CSC	The majority of the time this species is terrestrial and occurs in small mammal burrows and soil cracks, sometimes in the bottom of dried pools. Prefers open areas with sandy or gravelly soils, in a variety of habitats including mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Vernal pools or temporary wetlands, lasting a minimum of three weeks, which do not contain bullfrogs, fish, or crayfish are necessary for breeding.	Unlikely. Breeding habitat was absent from the APE and surrounding areas. The only recorded observation of this species within the vicinity was approximately 11 miles northeast of the APE in 2017.
Yellow-headed Blackbird (<i>Xanthocephalus xanthocephalus</i>)	CSC	Nests in freshwater emergent wetlands with dense vegetation and deep water. Often along borders of lakes or ponds.	Absent. Suitable habitats required by this species were absent from the APE. The only recorded observation of this species within the vicinity was approximately 12.5 miles southwest of the APE in 2016.

Table 4-14: List of Special Status Plants with Potential to Occur Onsite and/or in the Vicinity.

Species	Status	Habitat	Occurrence within APE
Alkali-sink goldfields (<i>Lasthenia chrysantha</i>)	CNPS 1B	Found in vernal pool and wet saline flat habitats. Occurrences documented in the San Joaquin and Sacramento Valleys at elevations below 656 feet. Blooms February - April.	Absent. Aquatic habitat was absent within the APE and surrounding area. The nearest recorded observation of this species was approximately 6.5 miles east of the APE in 1958.
Brittlescale (<i>Atriplex depressa</i>)	CNPS 1B	Found in the San Joaquin Valley and Sacramento Valley in alkaline or clay soils, typically in meadows or annual grassland in at elevations below 1050 feet. Sometimes associated with vernal pools. Blooms June–October.	Absent. Vernal pool habitat was absent from within the APE and surrounding areas. The only recorded observation of this species within the vicinity was approximately 7.5 miles north of the APE in an unknown year.
California alkali grass (<i>Puccinellia simplex</i>)	CNPS 1B	Found in the San Joaquin Valley and other parts of California in saline flats and mineral springs within valley grassland and wetland-riparian communities at elevations below 3000 feet. Blooms March–May.	Absent. Suitable habitat was absent from the APE and surrounding areas. The nearest recorded observation of this species was approximately 3 miles south of the APE in 1942.

Species	Status	Habitat	Occurrence within APE
Earlimart orache (<i>Atriplex cordulata</i> <i>var. erecticaulis</i>)	CNPS 1B	Found in the San Joaquin Valley in saline or alkaline soils, typically within valley and foothill grassland at elevations below 375 feet. Blooms August–September.	Absent. Suitable habitat was absent from the APE and surrounding areas. The nearest recorded observation of this species was approximately 9.5 miles southeast of the APE in 2002.
Lesser saltscale (<i>Atriplex minuscula</i>)	CNPS 1B	Found in the San Joaquin Valley in sandy, alkaline soils in alkali scrub, valley and foothill grassland, and alkali sink communities at elevations below 750 feet. Blooms April–October.	Absent. Required habitat and alkaline soils were absent within the APE and surrounding lands. The nearest recorded observation of this species was approximately 11 miles northeast of the APE in 2016.
Mud nama (<i>Nama stenocarpa</i>)	CNPS 2B.2	Found in marshes, swamps, wetlands, sometimes along lake shores, riverbanks, and intermittently wet areas. 15-815 m.	Absent. Aquatic habitat was absent from the APE and surrounding lands. The only recorded observation of this species within the vicinity was approximately 7 miles south of the APE in 1999.
Panoche pepper-grass (<i>Lepidium jaredii</i> ssp. <i>album</i>)	CNPS 1B	Found on steep slopes, washes, alluvial-fans, and clay, sometimes alkaline, within Valley and Foothill Grassland communities in western Fresno County at elevations between 600–2400 feet. Blooms February–June.	Absent. Required habitat and clay soils were absent within the APE and surrounding lands. The only recorded observation of this species within the vicinity was approximately 12.5 miles northwest of the APE in 1893 and is listed as possibly extirpated.
Recurved larkspur (<i>Delphinium recurvatum</i>)	CNPS 1B	Occurs in poorly drained, fine, alkaline soils in grassland and alkali scrub communities at elevations between 100 feet and 2600 feet. Blooms March–June.	Absent. Suitable habitat was absent from the APE and surrounding areas. The only recorded observation of this species within the vicinity was approximately 6 miles south of the APE in 1914.
Sanford’s arrowhead (<i>Sagittaria sanfordii</i>)	CNPS 1B	Found in the San Joaquin Valley and other parts of California in freshwater-marsh, primarily ponds and ditches, at elevations below 1000 feet. Blooms May–October.	Absent. Required aquatic habitats were absent within the APE and surrounding lands. The only recorded observation of this species within the vicinity was approximately 6 miles southeast of the APE in 1980.
Subtle orache (<i>Atriplex subtilis</i>)	CNPS 1B	Found in the San Joaquin Valley in saline depressions in alkaline soils within valley and foothill grassland communities at elevations below 330 feet. Blooms June–October.	Absent. Suitable habitat was absent from the APE and surrounding areas. The most recent recorded observation of this species was approximately 13 miles southeast of the APE in 2011.

***EXPLANATION OF OCCURRENCE DESIGNATIONS AND STATUS CODES**

Present:	Species observed on the APE at time of field surveys or during recent past.
Likely:	Species not observed on the APE, but it may reasonably be expected to occur there on a regular basis.
Possible:	Species not observed on the APE, but it could occur there from time to time.
Unlikely:	Species not observed on the APE, and would not be expected to occur there except, perhaps, as a transient.
Absent:	Species not observed on the APE and precluded from occurring there due to absence of suitable habitat.

STATUS CODES

FE	Federally Endangered	CE	California Endangered
FT	Federally Threatened	CT	California Threatened
FC	Federal Candidate	CFP	California Fully Protected
		CSC	California Species of Concern
		CWL	California Watch List

CNPS LISTING

1B	Plants Rare, Threatened, or Endangered in California and elsewhere.	2B	Plants Rare, Threatened, or Endangered in California, but more common elsewhere.
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4.4.2 Applicable Regulations

Threatened and Endangered Species

Permits may be required from the USFWS and/or CDFW if activities associated with a project have the potential to result in the “take” of a species listed as threatened or endangered under the federal and/or state Endangered Species Acts. Take is defined by the State of California as “to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill” (California Fish and Game Code, Section 86). Take is more broadly defined by the federal Endangered Species Act to include “harm” (16 USC, Section 1532(19), 50 CFR, Section 17.3). CDFW and USFWS are responsible agencies under CEQA and National Environmental Policy Act (NEPA), respectively. Both agencies review CEQA and NEPA documents, respectively, in order to determine the adequacy of their treatment of endangered species issues and to make project-specific recommendations for their conservation.

Designated Critical Habitat

When species are listed as threatened or endangered, the USFWS often designates areas of “Critical Habitat” as defined by section 3(5)(A) of the federal Endangered Species Act (ESA). Critical Habitat is a term defined in the ESA as a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. Critical Habitat is a tool that supports the continued conservation of imperiled species by guiding cooperation with the federal government. Designations only affect federal agency actions or federally funded or permitted activities. Critical Habitat does not prevent activities that occur within the designated area. Only activities that involve a federal permit, license, or funding and are likely to destroy or adversely modify Critical Habitat will be affected.

Migratory Birds

The federal Migratory Bird Treaty Act (MBTA: 16 USC 703-712) prohibits killing, possessing, or trading in any bird species covered in one of four international conventions to which the United States is a party, except in accordance with regulations prescribed by the Secretary of the Interior. The name of the act is misleading, as it actually covers almost all bird’s native to the United States, even those that are non-migratory. The MBTA encompasses whole birds, parts of birds, and bird nests and eggs. Additionally, the California Fish and Game Code has made it unlawful to take or possess any non-game birds covered by the MBTA (Section 3513), as well as any other native non-game birds (Section 3800).

Birds of Prey

Birds of prey are protected under provisions of California Fish and Game Code (Section 3503.5), which states that it is unlawful to take, possess, or destroy any birds in the order Falconiformes (hawks and eagles) or Strigiformes (owls), as well as their nests and eggs. The bald eagle and golden eagle are afforded additional protection under the federal Bald and Golden Eagle Protection Act (16 USC 668), which makes it unlawful to kill birds or their eggs.

Nesting Birds

In California, protection is afforded to the nests and eggs of all birds. California Fish and Game Code (Section 3503) states that it is “unlawful to take, possess, or needlessly destroy the nest or eggs of any bird except as otherwise provided by this code or any regulation adopted pursuant thereto.” Breeding-season disturbance that causes nest abandonment and/or loss of reproductive effort is considered a form of “take” by the CDFW.

Wetlands and other “Jurisdictional Waters”

Natural drainage channels and adjacent wetlands may be considered “waters of the United States” or “jurisdictional waters” subject to the jurisdiction of the USACE. The extent of jurisdiction has been defined in the Code of Federal Regulations but has also been subject to interpretation of the federal courts. Jurisdictional waters generally include:

- All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- All interstate waters including interstate wetlands;
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce;
- All impoundments of waters otherwise defined as waters of the United States under the definition;
- Tributaries of waters identified in paragraphs (a)(1)-(4) (i.e., the bulleted items above).

As determined by the United States Supreme Court in its 2001 Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers (SWANCC) decision, channels and wetlands isolated from other jurisdictional waters cannot be considered jurisdictional on the basis of their use, hypothetical or observed, by migratory birds. Similarly, in its 2006 consolidated Carabell/Rapanos decision, the Supreme Court ruled that a significant nexus between a wetland and other navigable waters must exist for the wetland itself to be considered a navigable and therefore jurisdictional water. Furthermore, the Supreme Court clarified that the United States Environmental Protection Agency (USEPA) and the USACE will not assert jurisdiction over ditches excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

The USACE regulates the filling or grading of waters of the United States under the authority of Section 404 of the Clean Water Act (CWA). The extent of jurisdiction within drainage channels is defined by “ordinary high-water marks” on opposing channel banks. All activities that involve the discharge of dredge or fill material into Waters of the United States are subject to the permit requirements of the USACE. Such permits are typically issued on the condition that the applicant agrees to provide mitigation that results in no net loss of wetland functions or values. No permit can be issued until the RWQCB issues a Section 401

Water Quality Certification (or waiver of such certification) verifying that the proposed activity will meet State water quality standards.

Under the Porter-Cologne Water Quality Control Act of 1969, the SWRCB has regulatory authority to protect the water quality of all surface water and groundwater in the State of California (“Waters of the State”). Nine RWQCBs oversee water quality at the local and regional level. The RWQCB for a given region regulates discharges of fill or pollutants into Waters of the State through the issuance of various permits and orders. Discharges into Waters of the State that are also Waters of the United States require a Section 401 Water Quality Certification from the RWQCB as a prerequisite to obtaining certain federal permits, such as a Section 404 Clean Water Act permit. Discharges into all Waters of the State, even those that are not also Waters of the United States, require Waste Discharge Requirements (WDRs), or waivers of WDRs, from the RWQCB. The RWQCB also administers the Construction Storm Water Program and the federal National Pollution Discharge Elimination System (NPDES) program. Projects that disturb one acre or more of soil must obtain a Construction General Permit under the Construction Storm Water Program. A prerequisite for this permit is the development of a Storm Water Pollution Prevention Plan (SWPPP) by a certified Qualified SWPPP Developer. Projects that discharge wastewater, storm water, or other pollutants into a Water of the United States may require an National Pollutant Discharge Elimination System (NPDES) permit.

CDFW has jurisdiction over the bed and bank of natural drainages and lakes according to provisions of Sections 1601 and 1602 of the California Fish and Game Code. Activities that may substantially modify such waters through the diversion or obstruction of their natural flow, change or use of any material from their bed or bank, or the deposition of debris require a notification of a Lake or Streambed Alteration. If CDFW determines that the activity may adversely affect fish and wildlife resources, a Lake or Streambed Alteration Agreement will be prepared. Such an agreement typically stipulates that certain measures will be implemented to protect the habitat values of the lake or drainage in question.

Kings County General Plan

The Kings County General Plan (County of Kings 2010) contains the following goals and resource conservation policies (RC), related to the Project:

Water Resources

RC GOAL A1: Beneficially use, efficiently manage, and protect water resources while developing strategies to capture additional water sources that may become available to ensure long term sustainable water supplies for the region.

RC Policy A1.1.6: Support expansion of joint management of surface water and groundwater supplies that contributes to the protection, reliability, and sustainability of local and regional water supplies.

RC Policy A1.5.1: Cooperate with local agencies in the preservation and purchase of natural sloughs for use as water recharge and drainage basins.

Natural Plant and Animal Habitats

RC GOAL D1: Preserve land that contains important natural plant and animal habitats.

RC Policy D1.1.1: Evaluate all discretionary land use applications in accordance with the screening procedures contained in the Biological Resources Survey. If the results of the project screening indicates the potential for important biological resources to exist on the site a biological evaluation shall be performed by a qualified biologist. If the evaluation indicates

that the Project could have a significant adverse impact, mitigation shall be required, or the Project will be redesigned to avoid such impacts. Mitigation shall be provided consistent with the California Environmental Quality Act (CEQA), and applicable state and federal guidelines as appropriate. Mitigation may include habitat improvement or protection, acquisition of other habitat, or payment to an appropriate agency to purchase, improve, or protect such habitat.

RC Policy D1.1.2: Require project applicants to consult with the California Department of Fish and Game and the United States Fish and Wildlife Service and to obtain appropriate authority for any such take pursuant to Endangered Species Act requirements if new development or other actions are likely to result in incidental take of any threatened or endangered species.

RC Policy D2.1.1: Follow state and federal guidelines for the protection of natural wetlands. Require developers to obtain authorization from the appropriate local, state, or federal agency prior to commencement of any wetland fill activities.

RC GOAL E1: Balance the protection of the County's diverse plant and animal communities with the County's economic needs.

RC Policy E1.1.2: Require as a primary objective in the review of development projects the preservation of healthy native oaks and other healthy native trees.

RC Policy E1.1.3: Maintain to the maximum extent practical the natural plant communities utilized as habitat by threatened and endangered species.

City of Hanford General Plan

The City of Hanford General Plan (City of Hanford 2017) contains the following goals and conservation policies, related to the Project:

Water Resources

GOAL 03: A reduced per capita use of water used by residential and non-residential uses through water conservation measures.

Policy 029: Water Conservation Measures for New Development. Encourage new development projects to include water conservation measures, including use of graywater, reclaimed, or recycled water for landscaping, water-conserving plumbing fixtures and appliances, and water-efficient landscapes.

Biological Resources

GOAL 04: Protection of natural habitat and other biological resources.

Policy 035: Impacts from Development. Ensure that potential impacts to biological resources and sensitive habitat are carefully evaluated when considering development projects.

Policy 037: Mature Trees. Promote the preservation of existing mature trees and encourage the planting of appropriate shade trees in new developments.

Policy 038: Native Tree Species and Drought Tolerant Vegetation. Encourage the planting of native tree species and drought-tolerant vegetation.

Policy 039: Endangered Wildlife and Habitat. Establish programs in connection with environmental review processes to protect endangered wildlife and their habitats.

Policy 040: Sensitive Wildlife. Work with state, federal, and local agencies on the preservation of sensitive wildlife species in the City.

4.4.3 Impact Analysis

- a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Less than Significant Impact with Mitigation Incorporated. Of the 19 regionally occurring special status animal species, 17 are considered absent from or unlikely to occur within the APE due to past or ongoing disturbance and/or the absence of suitable habitat. As explained in **Table 4-13**, these species include: blunt-nosed leopard lizard, Burrowing Owl, California glossy snake, California tiger salamander, Delta smelt, Fresno kangaroo rat, monarch butterfly, San Joaquin kit fox, Tipton kangaroo rat, Tricolored Blackbird, valley elderberry longhorn beetle, vernal pool fairy shrimp, vernal pool tadpole shrimp, western pond turtle, Western Snowy Plover, western spadefoot, and Yellow-headed Blackbird. Since it is unlikely these species would occur onsite, implementation of the Project would have no impact on these special status species through construction mortality, disturbance, or loss of habitat. Mitigation measures are not warranted.

Species identified as candidate, sensitive, or special status species in local or regional plans, policies, or regulations by CDFW or USFWS that have the potential to be impacted by the Project are ground and tree nesting avian species including the Swainson's hawk and pallid bat. Discussion and corresponding mitigation measures are provided below.

Project-Related Mortality and/or Disturbance of Nesting Raptors, Migratory Birds, and Special Status Birds

The APE contains suitable nesting and foraging habitat for a variety of bird species. It is anticipated that during the nesting bird season, birds could nest on the ground or in shrubs, trees, and forage within the APE. Swainson's hawks could nest in the eucalyptus trees within the APE and forage over the agricultural field. Swainson's hawks could also nest in trees within the vicinity of the APE. Migratory birds nesting within the APE during construction have the potential to be injured or killed by Project-related activities. In addition to the direct "take" of migratory nesting birds, nesting birds within the APE or adjacent areas could be disturbed by Project-related activities resulting in nest abandonment. Projects that adversely affect the nesting success of raptors and migratory birds or result in the mortality of individual birds would be considered a violation of state and federal laws and considered a potentially significant impact under CEQA. In addition, projects that adversely affect the nesting success of Swainson's hawk or result in the mortality of this species would violate the California Endangered Species Act.

While foraging habitat for migratory birds and raptors, including Swainson's hawk, is present on the site, suitable foraging habitat is located adjacent to the APE and within the vicinity of the APE and loss of the foraging habitat from implementation of the Project is not considered a significant impact.

Mitigation measures are warranted and are identified in **Section 0** below. Implementation of mitigation measures **BIO-1**, **BIO-2**, **BIO-3**, and **BIO-4** will reduce potential impacts to nesting migratory birds and raptors, including Swainson's Hawk, to a less than significant level under CEQA and will ensure compliance with state and federal laws protecting these avian species.

Project-Related Mortality and/or Disturbance of Roosting Bats, Including the Pallid Bat

Pallid bats and other roosting bats have the potential to occur within the APE. Buildings and trees within the APE could be used for roosting sites and since they will be removed during Project activities these bats could be impacted. Roosting habitat becomes especially sensitive to bat populations during the maternity season (approximately March 1 to August 31) while pups are maturing and when bats are overwintering (approximately December 1 to March 1). Impacts to roosting bats, including the pallid bat, would be considered a significant impact under CEQA.

Mitigation measures are warranted and are identified in **Section 0** below. Implementation of mitigation measures **BIO-5**, **BIO-6**, and **BIO-7** will reduce potential impacts to roosting bats, including the pallid bat, to a less than significant impact under CEQA, and will ensure compliance with state and federal laws protecting these species.

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

No Impact. The USFWS often designates areas of “Critical Habitat” when it lists species as threatened or endangered. Critical Habitat is a specific geographic area that contains features essential for the conservation of a threatened or endangered species, which may require special management and protection. According to the CNDDDB and IPaC, designated critical habitat is absent from the APE and vicinity.

Riparian habitat is absent from the APE and adjacent lands. There are no CNDDDB-designated “natural communities of special concern” recorded within the APE¹⁰. In addition, no natural communities of special concern were observed within the APE during the biological survey. There are two natural communities of species concern in the region: Valley Sacaton Grassland and Valley Sink Scrub. None of these communities would be impacted as they are outside of the reach of the Project. Therefore, there would be no impact and mitigation measures are not warranted.

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

No Impact. The APE does not contain natural aquatic features or potential waters of the United States such as; riparian habitat, typical wetlands, vernal pools, lakes, or streams, or other sensitive natural community (**Error! Reference source not found.**). The nearest surface waters are the Last Chance Ditch, which is 0.14 miles to the west of the APE. The canal receives water from the Kings River, which is approximately eight miles north of the APE. Implementation of the Project would have no impact on jurisdictional waters, wetlands, navigable waters, wild and scenic rivers, riparian habitat or other water features. Therefore, the Project would not require jurisdictional permits from regulatory compliance agencies. Therefore, there would be no impact and mitigation measures are not warranted.

¹⁰ (California Natural Diversity Database 2023)

4.4.4 Mitigation

Nesting Migratory Raptors and Birds, Including the Swainson's Hawk:

- BIO-1** **(Avoidance):** The Project's construction activities will occur, if feasible, between September 16 and January 31 (outside of the nesting bird season) to avoid impacts to nesting birds.
- BIO-2** **(Pre-construction Survey):** If activities must occur within the nesting bird season (February 1 to September 15), a qualified biologist will conduct a pre-construction survey for Swainson's Hawk nests onsite and within a 0.5-mile radius. The pre-construction survey would also provide a presence/absence survey for all other nesting birds within the APE, no more than seven (7) days prior to the start of construction. All raptor nests would be considered "active" upon the nest-building stage.
- BIO-3** **(Establish Buffers):** On discovery of any active nests near work areas, the biologist will determine appropriate construction setback distances based on applicable CDFW and/or USFWS guidelines and/or the biology of the species in question. If necessary, construction buffers will be identified with flagging, fencing, or other easily visible means, and will be maintained until the biologist has determined that the nestlings have fledged.
- BIO-4** **(Consultation with CDFW):** In the event an active Swainson's Hawk nest, or other nest is detected during surveys and could be impacted by the Project, consultation with CDFW will be warranted to discuss how to implement the Project and avoid impacts to the nest.

Roosting Bats, Including the Pallid Bat:

- BIO-5** **(Pre-Construction Survey):** A pre-construction survey will be performed within five days of building and tree removal. A qualified biologist will inspect the buildings and trees for active roosts. If the building or trees are determined to be clear of bats, they will be removed within five days.
- BIO-6** **(Establish Buffers):** On discovery of any roosts in the APE, a qualified biologist will determine appropriate construction setback distances. Buffers will be removed once a qualified biologist had determined the bat roosts are no longer occupied.
- BIO-7** **(Passive Relocation):** On discovery of any bat roosts outside of the maternity roosting season or overwintering season (September 1 to November 30), bats may be passively relocated from the roosts by a qualified biologist in accordance with a bat relocation plan prepared for the Project site by a qualified biologist. The bat relocation plan shall include the methods to be used to safely exclude bats from the roost and prevent reentry.

4.5 CULTURAL RESOURCES

Table 4-15: Cultural Resources Impacts

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to in § 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.5.1 Baseline Conditions

In 1877, what is now Kings County received its first Southern Pacific Railroad (SPRR) stop in what would become the town of Hanford. This was named after James Madison Hanford, a rail executive, at what was originally a sheep camp. The rail-stop, with the SPRR tracks running east-west, quickly developed into a small community. A post office opened in 1887. That same year also marked the opening of Hanford's and Kings County's oldest business, the Lacey Milling Company. This was established by Horatio G. Lacey at the corner of West Fifth and Redington Streets, across the street from the original SPRR sidings, and thus at an important local trans-shipment point.

Due to a series of fires and the resulting need for fire protection, Hanford was incorporated in 1891. That same year H.G. Lacey built the first electrical generating plant in Hanford, providing electrical lights for the growing town. It was made the county seat when Kings County was separated from Tulare County in 1893. The town's regional significance was emphasized a few years later, in 1897, when the Atchison, Topeka and Santa Fe rail company (now Burlington Northern and the Santa Fe) routed a second rail line north-south through Hanford.

Armona developed as a small agricultural community and rail stop at about this same time. John Yoakum laid out the town along the rail tracks for the Pacific Improvement Company in 1877, where a rail switch called "Armona" was located. Within a decade a small town had developed and was officially named Armona when the post office opened in 1887. MacGregor's Hotel and Samuel Young's Blacksmith Shop were two of the early prominent commercial concerns.

The San Joaquin Valley in general was dominated by agricultural pursuits until the oil boom of the early 1900s, which saw a shift in the region, as some reclaimed lands previously used for farming were leased to oil companies. Nonetheless, the shift of the San Joaquin Valley towards oil production did not halt the continued growth of agriculture. The Great Depression of the 1930s brought with it the arrival of great number of migrants from the drought-affected Dust Bowl region, looking for agricultural labor. These migrants established temporary camps in the valley, staying on long past the end of the drought and the Great Depression, eventually settling in local towns where their descendants live today. Hanford developed during the twentieth century as a governmental, market and services town closely tied to the agricultural development of the San Joaquin Valley. (See [Appendix C](#)).

Records Search

A records search from the Southern San Joaquin Valley Information Center (SSJVIC) of the California Historical Resources Information System (CHRIS), located at California State University, Bakersfield was conducted in February 2023. The SSJVIC records search includes a review of all recorded archaeological and built-environment resources as well as a review of cultural resource reports on file. In addition, the California Points of Historical Interest, the California Historical Landmarks, the California Register of Historical Resources, the National Register of Historic Places (NRHP), and the California State Built Environment Resources Directory listings were reviewed for the above referenced APE and an additional ½-mile radius. Due to the sensitive nature of cultural resources, archaeological site locations are not released. The search results indicated the study area had not been previously surveyed and no cultural resources had been previously documented within it. The search also indicated that eight previous studies had been conducted within the 0.5-mi records search radius and that two cultural resources had been documented within that search radius: an isolated prehistoric artifact (P-16-000310) and the Last Chance Ditch (P-16-000128), a historic water conveyance structure.

Additional sources included the State Office of Historic Preservation Historic Properties Directory, Archaeological Determinations of Eligibility, and the California Inventory of Historic Resources. (See [Appendix C](#))

Class III Inventory/Phase I Survey

A Phase I Survey of the Project APE was conducted by ASM Associates in February 2023. The field methods employed included intensive pedestrian examination of the ground surface for evidence of archaeological sites in the form of artifacts, surface features (such as bedrock mortars, historical mining equipment), and archaeological indicators (e.g., organically enriched midden soil, burnt animal bone); the identification and location of any discovered sites, should they be present; tabulation and recording of surface diagnostic artifacts; site sketch mapping; preliminary evaluation of site integrity; and site recording, following the California Office of Historic Preservation Instructions for Recording Historic Resources and the BLM 8100 Manual, using DPR 523 forms.

The survey fieldwork conducted in June 2022, used parallel transects spaced at 15-meter intervals walked across the Project APE. No cultural resources of any kind were identified within the study area. (See [Appendix C](#))

Native American Outreach

A Sacred Lands File Search (SLF) was requested from Native American Heritage Commission (NAHC) in Sacramento in February 2023. The NAHC was provided with a brief description of the Project and a map showing its location with a request that the NAHC perform a search of the Sacred Lands File to determine if any Native American resources have been recorded in the immediate APE. The NAHC identifies, catalogs, and protects Native American cultural resources -- ancient places of special religious or social significance to Native Americans and known ancient graves and cemeteries of Native Americans on private and public lands in California. The NAHC is also charged with ensuring California Native American tribes' accessibility to ancient Native American cultural resources on public lands, overseeing the treatment and disposition of inadvertently discovered Native American human remains and burial items, and administering the California Native American Graves Protection and Repatriation Act, among many other powers and duties. NAHC provide a current list of Native American Tribal contacts to notify of the Project. ASM sent outreach letters to the tribes provided on the NAHC contact list. (See [Appendix C](#))

4.5.2 Applicable Regulations

Federal

National Register of Historic Places

The NHPA authorizes the Secretary of the Interior to establish a NRHP, an inventory of districts, sites, buildings, structures, and objects significant on a national, state, or local level in American history, architecture, archeology, engineering, and culture. The National Register is maintained by the National Park Service, the Advisory Council on Historic Preservation, State Historic Preservation Office (SHPO), and grants-in-aid programs.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (NAGPRA) strives to ensure that all Indian human remains, and cultural items are treated with dignity and respect. It encourages voluntary disclosure and return of remains and cultural items by publicly funded agencies and museums. It also states the intent for states to provide mechanisms for aiding Indian tribes, including non-federally recognized tribes, in filing repatriation claims and getting responses to those claims.

State

Office of Historic Preservation

The mission of the Office of Historic Preservation and the State Historical Resources Commission is to preserve and enhance California's irreplaceable historic heritage as a matter of public interest so that its vital legacy of cultural, educational, recreational, aesthetic, economic, social, and environmental benefits will be maintained and enriched for present and future generations. Public Resource Code (PRC) Section 5024 requires consultation with SHPO when a project may impact historical resources located on State-owned land.

California Register of Historic Resources

The SHPO maintains the California Register of Historic Resources (CRHR). Historic properties listed, or formally designated for eligibility to be listed, on the National Register are automatically listed on the CRHR (PRC Section 5024.1). State Landmarks and Points of Interest are also automatically listed. The California Register can also include properties designated under local preservation ordinances or identified through local historic resource surveys.

For a historic resource to be eligible for listing on the California Register, it must be significant at the local, state, or national level under one or more of the following four criteria:

- It is associated with events that have made a significant contribution to the broad patterns of local and regional history, or the cultural heritage of California or the United States;
- It is associated with the lives of persons important to local, California, or national history;
- It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or
- It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation (California Public Resources Code).

California Environmental Quality Act

PRC Section 21083.2 Archaeological Resources: CEQA directs the lead agency to include in its environmental assessment for the project a determination of the project effects on unique archeological resources; defines unique archeological resource; enables a lead agency to require an applicant to make a reasonable effort to preserve or mitigate impacts to any affected unique archeological resource; sets requirements for the applicant to provide payment to cover costs of mitigation; and restricts excavation as a mitigation measure.

PRC Section 21084.1 Historic Resources: CEQA establishes that adverse effects on a historic resource qualifies as a significant effect on the environment; and defines historical resource.

CEQA Guidelines Section 15064.5: This section defines three ways that a property can qualify as a significant historical resource for the purposes of CEQA review:

If the resource is listed in or determined eligible for listing in the California Register of Historical Resources;

If the resource is included in a local register of historical resources, as defined in PRC Section 5020.1(k), or is identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g) unless a preponderance of evidence demonstrates that it is not historically or culturally significant; or

If the lead agency determines the resource to be significant as supported by substantial evidence (CEQA Guidelines Section 15064.5)

In addition to determining the significance under CEQA and eligibility of any identified historical resource for the California Register, historic properties must be evaluated under the criteria for the National Register should federal funding or permitting become involved in any undertaking subject to this document.

CEQA Guidelines on Mitigation of Cultural Resources Impacts

CEQA Guidelines Section 15126.4 states that “public agencies should, whenever feasible, seek to avoid damaging effects on any historical resources of an archeological nature.” The Guidelines further state that preservation-in-place is the preferred approach to mitigate impacts on archaeological resources. However, according to Section 15126.4, if data recovery through excavation is “the only feasible mitigation,” then a “data recovery plan, which makes provision for adequately recovering the scientifically consequential information from and about the historical resources, shall be prepared and adopted prior to any excavation being undertaken.” Data recovery is not required for a resource of an archaeological nature if “the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the archaeological or historical resource.” The section further states that its provisions apply to those archaeological resources that also qualify as historic resources.

Native American Heritage Act

Also relevant to the evaluation and mitigation of impacts to cultural resources is the Native American Heritage Act of 1976 which established the NAHC and protects Native American religious values on state property (see PRC Section 5097.9).

Public Notice to California Native American Indian Tribes

Government Code (GC) Section 65092 includes California Native American tribes that are on the contact list maintained by the NAHC in the definition of “person” to whom notice of public hearings shall be sent by local governments.

Disposition of Human Remains (Health and Safety Code Section 7050.5)

When an initial study identifies the existence, or the probable likelihood, of Native American human remains within the project, a lead agency shall work with the appropriate Native American groups or individuals as identified by the NAHC as provided in PRC Section 5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains, and any items associated with Native American burials. Furthermore, HSC Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the county coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the NAHC.

California Native American Graves Protection and Repatriation Act of 2001

Health and Safety Code Sections 8010-8011 establish a State repatriation policy intent that is consistent with and facilitates implementation of NAGPRA. The Act strives to ensure that all California Indian human remains, and cultural items are treated with dignity and respect. It encourages voluntary disclosure and return of remains and cultural items by publicly funded agencies and museums in California. It also states the intent for the state to provide mechanisms for aiding California Indian tribes, including non-federally recognized tribes, in filing repatriation claims and getting responses to those claims.

Local

City of Hanford General Plan

The 2035 General Plan contains the following goals and policies regarding Cultural Resources:

Goal O5: Protect and enhance historical and cultural resources that preserve Hanford's unique sense of place and promote an understanding of Hanford's history.

Policy O46. Archeological Site Consultation: Consult with appropriate Native American associations about potential archaeological sites in the beginning stages of the development review process.

Policy O47. Archeological Site Study: Require archaeological studies by a certified archeologist in areas of archeological potential significance prior to approval of development projects.

Policy O48. Cultural Site Consultation: Consult with the California Archaeological Inventory Southern San Joaquin Valley at California State University, Bakersfield about potential cultural sites on projects that could have an impact on cultural resources.

Policy O49. Cultural Site Discovery: Halt construction at a development site if cultural resources are encountered unexpectedly during construction.

Consultation Meeting: On January 10, 2017, the City of Hanford met with the Tachi Yokut Tribe, on a different project in order to establish conditions, which would apply to all projects in the City of Hanford, which required an initial study.

In order to address the concerns of the Tachi Yokut Tribe, the City is requiring the following as mitigation measures:

CUL-1: That a Burial Treatment Plan be entered to by the applicant/property owner prior to any earth disturbing activities. (This condition applies as a mitigation measure to all projects that require an initial study).

4.5.3 Impact Analysis

a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to in § 15064.5?

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

a and b) Less than Significant Impact with Mitigation Incorporated. As described above, there are no recorded cultural resources on the subject property. It is unlikely that the Project has the potential to result in significant impacts or adverse effects to any known unknown cultural or historical resources, such as archaeological remains, artifacts or historic properties or structures. However, in the improbable

event that cultural resources are encountered during Project grading and construction, implementation of mitigation measure **CUL-2** outlined below, would reduce impacts to any historical or archaeological resource to less than significant.

c) Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

Less than Significant Impact with Mitigation Incorporated. There is no evidence in the record searches that indicates the Project has the potential to be an unknown burial site or the site of buried human remains. In the unlikely event of such a discovery, mitigation shall be implemented. With incorporation of mitigation measure **CUL-3** outlined below, impacts resulting from the discovery of remains interred on the Project site would be reduced to less than significant.

4.5.4 Mitigation

- CUL-1** That a Burial Treatment Plan be entered to by the applicant/property owner prior to any earth disturbing activities. (*This condition applies as a mitigation measure to all projects that require an initial study*).
- CUL-2** Should archaeological remains or artifacts be unearthed during any stage of project activities, work in the area of discovery shall cease until the area is evaluated by a qualified archaeologist. If mitigation is warranted, the project proponent shall abide by recommendations of the archaeologist.
- CUL-3** In the event that any human remains are discovered on the Project site, the Tulare County Coroner must be notified of the discovery (California Health and Safety Code, Section 7050.5) and all activities in the immediate area of the find or in any nearby area reasonably suspected to overlie adjacent human remains must cease until appropriate and lawful measures have been implemented. If the Coroner determines that the remains are not recent, but rather of Native American origin, the Coroner shall notify the Native American Heritage Commission (NAHC) in Sacramento within 24 hours to permit the NAHC to determine the Most Likely Descendent of the deceased Native American.

4.6 ENERGY

Table 4-16: Energy Impacts

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4.6.1 Baseline Conditions

The Project site is located to the west of the existing City of Hanford city limits and would be annexed into the City as a part of the Project. The Project would be located on land that has historically been used for agricultural use and currently contains one single family residential home. Southern California Edison is the energy provider within the City and Hanford and would be the energy provider for the Project.

4.6.2 Applicable Regulations

Federal

Energy Independence and Security Act of 2007

The Energy Independence and Security Act, enacted by Congress in 2007, is designed to improve vehicle fuel economy and help reduce the United States' dependence on foreign oil. It expands the production of renewable fuels, reducing dependence on oil and confronting climate change. Specifically, it does the following:

- Increases the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard that requires fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Reduces United States demand for oil by setting a national fuel economy standard of 35 miles per gallon by 2020, an increase in fuel economy standards of 40 percent as compared to 2007 levels.

The Energy Independence and Security Act of 2007 also set energy efficiency standards for lighting (specifically light bulbs) and appliances. Development would also be required to install photosensors and energy-efficient lighting fixtures consistent with the requirements of 42 United States Code Section 17001 et seq.

Energy Policy and Conservation Act

Enacted in 1975, this legislation established fuel economy standards for new light-duty vehicles sold in the United States. The law placed responsibility on the National Highway Traffic and Safety Administration for establishing and regularly updating vehicle standards. The United States EPA administers the Corporate Average Fuel Economy program, which determines vehicle manufacturers' compliance with existing fuel economy standards. Since the inception of the Corporate Average Fuel Economy program, the average fuel economy for new light-duty vehicles steadily increased from 13.1 miles per gallon for the 1975 model year

to 30.7 miles per gallon for the 2014 model year and is proposed to increase to 54.5 by 2025. Light-duty vehicles include autos, pickups, vans, and sport-utility vehicles.

Energy Star Program

Energy Star is a voluntary labeling program introduced by EPA to identify and promote energy-efficient products to reduce GHG emissions. The program applies to major household appliances, lighting, computers, and building components such as windows, doors, roofs, and heating and cooling systems. Under this program, appliances that meet specifications for maximum energy use established under the program are certified to display the Energy Star label. In 1996, the EPA joined with the Energy Department to expand the program, which now also includes certifying commercial and industrial buildings as well as homes.

Construction Equipment Fuel Efficiency Standard

The EPA sets emission standards for construction equipment. The current iteration of emissions standards for construction equipment are the Tier 4 efficiency requirements contained in 40 Code of Federal Regulations Parts 1039, 1065, and 1068. Emissions requirements for new off-road Tier 4 vehicles were completely phased in by the end of 2015.

State

California Energy Action Plan

The California Energy Commission (CEC) is responsible for preparing the California Energy Action Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The 2008 California Energy Action Plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies several strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero-emission vehicles and addressing their infrastructure needs, as well as encouragement of urban designs that reduce vehicle miles traveled (VMT) and accommodate pedestrian and bicycle access.

Assembly Bill 2076: Reducing Dependence on Petroleum

Pursuant to Assembly Bill (AB) 2076 (Chapter 936, Statutes of 2000), the CEC and California Air Resources Board (CARB) prepared and adopted a joint-agency report, Reducing California's Petroleum Dependence, in 2003. Included in this report are recommendations to increase the use of alternative fuels to 20 percent of on-road transportation fuel use by 2020 and 30 percent by 2030, significantly increase the efficiency of motor vehicles, and reduce per capita VMT. One of the performance-based goals of AB 2076 is to reduce petroleum demand to 15 percent below 2003 demand. In response to the CEC's 2003 and 2005 Integrated Energy Policy Reports, the Governor directed the CEC to take the lead in developing a long-term plan to increase alternative fuel use.

Integrated Energy Policy Report

SB 1389 requires the CEC to conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. The CEC uses these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety. The most recent assessment, the 2018 Integrated Energy Policy Report, contains two volumes. Volume I highlights the implementation of California's innovative policies and the role they have played in establishing a clean energy economy. Volume II provides more detail on several key energy policies, including decarbonizing buildings, increasing energy efficiency savings, and integrating more renewable energy into the electricity system.

Senate Bill (SB) 350

The Clean Energy and Pollution Reduction Act of 2015 (SB 350) requires a doubling of the energy efficiency savings in electricity and natural gas for retail customers through energy efficiency and conservation by December 31, 2030.

California Renewable Portfolio Standard and Senate Bill 100

Approved by former Governor Brown on September 10, 2018, SB 100 accelerates the state's Renewable Portfolio Standard program, which was last updated by SB 350 in 2015. SB 100 requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.

Assembly Bill 1493: Reduction of Greenhouse Gas Emissions

AB 1493 (2002), California's Advanced Clean Cars program (referred to as "Pavley"), requires CARB to develop and adopt regulations to achieve "the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles." Implementation of new regulations prescribed by AB 1493 required that the state of California apply for a waiver under the federal Clean Air Act. Although the EPA initially denied the waiver in 2008, EPA approved a waiver in June 2009, and in September 2009, CARB approved amendments to its initially adopted regulations to apply the Pavley standards that reduce GHG emissions to new passenger vehicles in model years 2009 through 2016. According to CARB, implementation of the Pavley regulations is expected to reduce fuel consumption while also reducing GHG emissions.

On September 19, 2019, the EPA withdrew California's Clean Air Act preemption waiver and issued the One National Program Rule, which prohibits states from establishing their own separate fuel economy standards or passing laws that substantially affect fuel economy standards. As a result, California may no longer promulgate and enforce its tailpipe GHG emission standard and zero emission vehicle mandate.

Energy Action Plan

In 2003, the CEC and California Public Utilities Commission set forth their energy policy vision in the Energy Action Plan (EAP). The CEC adopted an update to the EAP in February 2008 (EAP II) that supplements the earlier EAP and examines the state's ongoing actions in the context of global climate change. The nine major action areas in the EAP include energy efficiency, demand response, renewable energy, electricity adequacy/reliability/infrastructure, electricity market structure, natural gas supply/demand/infrastructure, transportation fuels supply/demand/infrastructure, research/development/demonstration, and climate change.

Assembly Bill 1007: State Alternative Fuels Plan

AB 1007 (Chapter 371, Statutes of 2005) required the CEC to prepare a plan to increase the use of alternative fuels in California. The CEC prepared the State Alternative Fuels Plan in partnership with CARB and in consultation with other federal, state, and local agencies. The State Alternative Fuels Plan presents strategies and actions California must take to increase the use of alternative non-petroleum fuels in a manner that minimizes costs to California and maximizes the economic benefits of in-state production. The State Alternative Fuels Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

Bioenergy Action Plan (EO S-06-06)

EO S-06-06 establishes targets for the use and production of biofuels and biopower and directs state agencies to work together to advance biomass programs in California while providing environmental protection and mitigation. The EO establishes the following in-state production targets to increase the production and use of bioenergy, including ethanol and biodiesel fuels made from renewable resources:

- Produce 20 percent of biofuels used in California by 2010;
- Produce 40 percent of biofuels used in California by 2020; and,
- Produce 75 percent of biofuels used in California by 2050.

EO S-06-06 also calls for the state to meet a target for use of biomass electricity. The 2011 Bioenergy Action Plan identifies potential barriers and recommends actions to address them so the state can meet its clean energy, waste reduction, and climate protection goals. The 2012 Bioenergy Action Plan updates the 2011 Plan and provides a more detailed action plan to achieve the following goals:

- Increase environmentally and economically sustainable energy production from organic waste
- Encourage development of diverse bioenergy technologies that increase local electricity generation, combined heat and power facilities, renewable natural gas, and renewable liquid fuels for transportation and fuel cell applications
- Create jobs and stimulate economic development, especially in rural regions of the state
- Reduce fire danger, improve air and water quality, and reduce waste.

Title 24, California Code of Regulations

California Code of Regulations, Title 24, Part 6, is California's Energy Efficiency Standards for Residential and Non-residential Buildings. The CEC established Title 24 in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption and provide energy efficiency standards for residential and nonresidential buildings. The standards are updated on an approximately three-year cycle to allow consideration and possible incorporation of new efficient technologies and methods. In 2019, the CEC updated Title 24 standards with more stringent requirements effective January 1, 2020. All buildings for which an application for a building permit is submitted on or after January 1, 2020, must follow the 2019 standards. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions.

California Green Building Standards Code (2019), California Code of Regulations Title 24, Part 11

California's Green Building Code, referred to as CalGreen, was developed to provide a consistent approach to green building in the State. Having taken effect in January 2020, the most recent version of CalGreen lays out the minimum requirements for newly constructed residential and nonresidential buildings to reduce GHG emissions through improved energy efficiency and process improvements. It also includes voluntary tiers to further encourage building practices that improve public health, safety, and general welfare by promoting a more sustainable design.

2017 Climate Change Scoping Plan

On December 14, 2017, the CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the State's 2030 GHG emissions reduction target of 40 percent below 1990 levels. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, and implementation of recently adopted policies and legislation. The 2017 Scoping Plan includes a wide variety of goals related to energy efficiency and renewable energy that are intended to help meet the State's 2030 target, including goals specifically targeted at the water sector.

Local

The City of Hanford General Plan contains the following policies related to energy.¹¹

¹¹ (City of Hanford 2017)

Policy O13: Solar Power Generation. Support and encourage solar generation facilities that support residential, commercial, and industrial uses.

Policy O14: Alternative Fuels and Renewable Energy. Promote and encourage the use of alternative fuels and renewable energy.

Policy O15: Energy Efficient Design Features. 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: Vegetation to Conserve Energy. Encourage the use of native and drought tolerant shade trees and vines on southern and western exposure building walls as an energy conservation technique.

4.6.3 Impact Analysis

a) 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 Impact. Fuel consumed by construction equipment would be the primary energy resource expended over the approximately 16-month course of construction of the Project. For heavy-duty construction equipment, horsepower and load factor were assumed using default data from the CalEEMod model. Fuel use associated with construction vehicle trips generated by the construction of the Project was also estimated; trips include construction worker trips, haul trucks trips for material transport, and vendor trips for construction material deliveries. Fuel use from these vehicles traveling to the Project site was based on (1) the projected number of trips the construction associated with the Project would generate (CalEEMod default values), (2) default average trip distance by land use in CalEEMod, and (3) fuel efficiencies estimated in the ARB 2017 Emissions Factors model (EMFAC2017) mobile source emission model.

Construction of the Project is estimated to consume a total of 55,329.58 gallons of diesel fuel and 3,928.40 gallons of gasoline fuel.¹² California Code of Regulations Title 13, Motor Vehicles, Section 2449(d)(2), Idling, limits idling times of construction vehicles to no more than 5 minutes, thereby precluding unnecessary and wasteful consumption of fuel because of unproductive idling of construction equipment. In addition, the energy consumption for construction activities would not be ongoing as they would be limited to the duration of construction associated with the Project.

The Project's anticipated annual energy consumption is approximately 728,690 kilowatt-hours and 29,939.02 therms of natural gas.¹³ The Project would be required to comply with the California Energy Code regulating energy efficiency of homes. Therefore, the Project would have a less than significant impact.

b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less than Significant Impact. State and local authorities regulate energy use and consumption. These regulations at the State level intended to reduce energy use and greenhouse gas (GHG) emissions. These include, among others, Assembly Bill (AB) 1493 – Light-Duty Vehicle Standards; California Code of

¹² Emissions for the Project were quantified using CalEEMod Output Files Version 2022.1. Refer to **Appendix A** for modeling results and assumptions.

¹³ Ibid.

Regulations Title 24, Part 6 – Energy Efficiency Standards; and California Code of Regulations Title 24, Parts 6 and 11 – California Energy Code and Green Building Standards. The Project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Therefore, the Project would have a less than significant impact.

4.7 GEOLOGY AND SOILS

Table 4-17: Geology and Soils Impacts

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994) creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.7.1 Baseline Conditions

Geology and Soils

Surface soils exhibit various characteristics dependent on location, slope, parent rock, climate, and drainage. The Project site contains Nord complex and Cajon sandy loam, 0 to 2 percent slope.¹⁴ The properties of the soil are described briefly below:

- **Nord Complex:** The Nord series consists of very deep, well drained soils that formed in mixed alluvium dominantly from granitic and sedimentary rocks. Nord soils occur on alluvial fans and flood

¹⁴ (United States Department of Agriculture 2022)

plains. Slopes are 0 to 2 percent. They are well drained, have negligible to low runoff, moderate permeability but have moderately slow permeability in saline-sodic phases.

- **Cajon Sandy Loam:** The Cajon series consists of very deep, somewhat excessively drained soils that formed in sandy alluvium from dominantly granitic rocks. Cajon soils are on alluvial fans, fan aprons, fan skirts, inset fans and river terraces. Slopes are 0 to 15 percent. Somewhat excessively drained; negligible to low runoff; rapid permeability. Cajon soils with sandy loam surface textures have moderately rapid permeability. Flooding is rare.

Faults and Seismicity

Neither the City of Hanford nor Kings County have any known major faults systems within their boundaries. There are small faults in the Southern San Joaquin Valley, approximately 30 south, though none of them are known to be active. The nearest major fault is the San Andreas Fault, located approximately 50 miles southwest of the Project site.¹⁵ The San Andreas fault is the dominant active tectonic feature of the Coast Ranges and represents the boundary of the North American and Pacific plates.

Liquefaction

Liquefaction is a phenomenon whereby unconsolidated and/or near saturated soils lose cohesion and are converted to a fluid state as a result of severe vibratory motion. The relatively rapid loss of soil shear strength during strong earthquake shaking results in temporary, fluid-like behavior of the soil, which can result in landslides and lateral spreading. Soil liquefaction causes ground failure that can damage roads, pipelines, underground cables, and buildings with shallow foundations. Liquefaction hazards may exist in and around wetland areas and creeks, though soil types in Hanford are generally too coarse or too high in clay content. The Hanford General Plan states that there is minimal liquification potential due to a stable geological formation. Further, the Seismic Safety Map from the 2035 Kings County General Plan states that liquification is rare in the County due to the nature of the underlying soils, relatively deep-water table, and a history of low ground shaking potential.

Soil Subsidence

Subsidence refers to the vertical sinking of land when a large land settles due to over-saturation or extensive withdrawal of groundwater, oil, or natural gas. These areas are typically composed of open-textured soils, high in silt or clay content, that become saturated. Although some areas in Kings County have experienced subsidence due to groundwater overdraft, the City of Hanford's elevation has remained relatively unchanged. According to the Kings County Multi-Jurisdictional Hazard Mitigation Plan, land subsidence in the region rarely occurs and its impacts are not significant.

4.7.2 Applicable Regulations

Federal

There are no federal regulations pertaining to geology and soils that are applicable to the Project.

State

Alquist-Priolo Earthquake Fault Zoning Act (1972)

The Alquist-Priolo Earthquake Fault Zoning Act (formerly the Alquist-Priolo Special Studies Zone Act) requires the delineation of zones along active faults in California. The purpose of the Alquist-Priolo Act is

¹⁵ (California Department of Conservation 2021)

to regulate development on or near active fault traces to reduce the hazard of fault rupture; however, surface fault rupture is not necessarily restricted to the area within the Alquist-Priolo Zone. The Alquist-Priolo Act prohibits the location of most structures for human occupancy across active fault traces. Within these zones, cities and counties must regulate certain development, which includes withholding permits until geologic investigations demonstrate that development sites are not threatened by future surface displacement. There are no designated Alquist-Priolo zones in the Project area. The risk of surface fault rupture is not necessarily restricted to the area within a Fault Rupture Hazard Zone, as designated under the Alquist-Priolo Act.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act was developed to protect the public from the effects of strong ground shaking, liquefaction, landslides, or other ground failure, and from other hazards caused by earthquakes. This act requires the State Geologist to delineate various seismic hazard zones and requires cities, counties, and other local permitting agencies to regulate certain development projects within these zones. Before a development permit is granted for a site within a Seismic Hazard Zone, a geotechnical investigation of the site must be conducted, and appropriate mitigation measures incorporated into the project design. Geotechnical investigations conducted within Seismic Hazard Zones must incorporate standards specified by CGS Special Publication 117, Guidelines for Evaluating and Mitigating Seismic Hazards.¹⁶ The purpose of the Seismic Hazard Mapping Act is to identify where special provisions, beyond those contained in the California Building Code (CBC), are necessary to ensure public safety. This need has not been recognized for the hazard of ground shaking.

Design provisions contained in the CBC are believed to be representative of current knowledge and capability in earthquake-resistant design.¹⁷ No portion of County has been mapped under the Seismic Hazards Zoning Program.

California Building Standards Code

The CBC, codified in Title 24 Part 2 of the California Code of Regulations (CCR), is administered by the California Building Standards Commission which by law is responsible for coordinating all building standards. The purpose of the CBC is to establish minimum standards to safeguard the public health, safety and general welfare through structural strength, means of egress facilities, and general stability by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all building and structures within its jurisdiction. The current version took effect January 1, 2020, and contains necessary California amendments based on the American Society of Civil Engineers (ASCE) Minimum Design Standards 7-05. ASCE 7-05 provides requirements for general structural design and includes means for determining earthquake loads as well as other loads (flood, snow, wind, etc.) for inclusion into building codes. The provisions apply to the construction, alteration, movement, replacement, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California.

The earthquake design requirements take into account the occupancy category of the structure, site class, soil classifications, and various seismic coefficients which are used to determine a Seismic Design Category (SDC) for a project. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at the site and ranges from SDC A (very small seismic vulnerability) to SDC E/F (very high seismic vulnerability and near a major fault). Design specifications are then determined according to the SDC.

¹⁶ (California Department of Conservation 2008)

¹⁷ (International Code Council ICC 2019).

California Department of Transportation

Caltrans jurisdiction includes State and interstate routes within California. Any work within the right-of-way of a federal or State transportation corridor is subject to Caltrans regulations governing allowable actions and modifications to the right-of-way. Caltrans standards incorporate the CBC and contain numerous rules and regulations to protect the public from seismic hazards such as surface fault rupture and ground shaking. In addition, Caltrans standards require that projects be constructed to minimize potential hazards associated with cut and fill operations, grading, slope instability, and expansive or corrosive soils, as described in the Caltrans Highway Design Manual.

Local

City of Hanford General Plan

- **Objective H15. Building Codes and Standards for Earthquakes:** Maintain and enforce current building codes and standards to reduce the potential for structural failure caused by ground shaking and other geologic hazards.
- **Policy H17. Geologic and Soils Studies:** Require geologic and soils studies to identify potential hazards as part of the approval process for all new development prior to grading activities where questionable conditions exist.

4.7.3 Impact Analysis

a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

- i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.
- ii. Seismic-related ground failure, including liquefaction?

i-ii) Less than Significant Impact. The Project site is located in an area traditionally characterized by relatively low seismic activity. The site is not located in an Alquist-Priolo Earthquake Fault Zone as established by the Alquist-Priolo Fault Zoning Act (Section 2622 of Chapter 7.5, Division 2 of the California Public Resources Code). The nearest major fault is the San Andreas Fault, located approximately 50 miles southwest of the Project site. Construction of the proposed residential structures will comply with the most recent seismic standards as set forth in the California Building Standards Code. Compliance with these standards would ensure potential impacts related to strong seismic ground shaking would be less than significant.

iii. Seismic-related ground failure, including liquefaction?

Less than Significant Impact. Liquefaction occurs when loose, water-saturated sediments lose strength and fail during strong ground shaking. Although no specific liquefaction hazard areas have been identified in Kings County and the City of Hanford, this potential is recognized throughout the San Joaquin Valley where unconsolidated sediments and a high-water table coincide. Using the United States Department of Agriculture NRCS soil survey, an analysis of the soils onsite was performed. Soils in the area consists of Nord Complex and Cajon Sandy Loam, which are well-drained and coarse-textured, representing a low risk for liquefaction or seismic-related ground failure. In addition, using California Department of Water Resources Live Groundwater Levels map, the groundwater levels measured at a location approximately two miles to the north of the Project site was approximately 134 feet below ground surface as of October 11, 2022; this further reduces potential for liquefaction. Furthermore, as mentioned above in Impact Assessments -a-i and a-ii, strong seismic ground shaking is unlikely to occur. Any impacts related to seismic-related ground failure, including liquefaction, would be less than significant.

iv. Landslides?

No Impact. Landslides usually occur in locations with steep slopes and unstable soils. The Project is located on the Valley floor where no major geologic landforms exist, and the topography is essentially flat and level. Therefore, the Project site has minimal-to-no landslide susceptibility, and there will be no impact.

b) Would the project result in substantial soil erosion or the loss of topsoil?

Less than Significant Impact. Because the Project site is relatively flat, the potential for erosion is low. However, construction-related activities and increased impermeable surfaces can increase the probability for erosion to occur. Construction-related impacts related to erosion will be temporary and subject to best management practices (BMPs) required by SWPPP, which are developed to prevent significant impacts related to erosion from construction. Because impacts related to erosion would be temporary and limited to construction, and because required best management practices would prevent significant impacts related to erosion, the impact will remain less than significant.

c) Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

No Impact. The soils associated with the Project site are considered stable and have a low capacity for landslides, lateral spreading, subsidence, liquefaction, or collapse. Because the Project site is stable, and this Project would not result in a substantial grade change to the topography to the point that it would increase the risk of landslides, lateral spreading, subsidence, liquefaction or collapse, there is no impact.

d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

No Impact. The Project site is not in an area with expansive soils. Because the soils associated with the Project do not exhibit shrink swell behavior, implementation of the Project will pose no risk to life or property caused by expansive soils and there is no impact.

e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. Septic installation or alternative wastewater disposal systems are not necessary for the Project. The Project would be required to connect to the City of Hanford's wastewater system. There would be no impact.

f) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?

Less than Significant Impact with Mitigation. There are no unique geologic features and no known paleontological resources located within the Project site. However, there is always the possibility that paleontological resources may exist below the ground surface. Implementation of Mitigation Measure **GEO-1** will ensure that any impacts resulting from project implementation remain less than significant with mitigation incorporation.

4.7.4 Mitigation

GEO-1 Should paleontological resources be encountered on the Project site, all ground disturbing activities in the area shall stop. A qualified paleontologist shall be contacted to assess the discovery. Mitigation may include monitoring, recording the fossil locality, data recovery and analysis, and a final report. Public educational outreach may also be appropriate. Upon completion of the assessment, a report documenting methods, findings, and recommendations shall be prepared and submitted to the City of Hanford for review, and (if paleontological materials are recovered) a paleontological repository, such as the University of California Museum of Paleontology.

4.8 GREENHOUSE GAS EMISSIONS

Table 4-18: Greenhouse Gas Emissions Impacts

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4.8.1 Baseline Conditions

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 six scenarios, could range from 1.1 degrees Celsius (°C) to 6.4°C. Regardless of analytical methodology, global average temperatures and sea levels are expected to rise under all scenarios.¹⁸ The report also concluded that “[w]arming of the climate system is unequivocal,” and that “[m]ost of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations.”

An individual project cannot generate enough GHG emissions to cause a discernible change in global climate. However, the Project participates in the potential for global climate change by its incremental contribution of GHGs—and when combined with the cumulative increase of all other sources of GHGs—constitute potential influences on global climate change.

4.8.2 Applicable Regulations

Federal

Federal Clean Air Act

The EPA is the federal agency responsible for executing the federal Clean Air Act (CAA) and its amendments. In 2007, the U.S. Supreme Court ruled that carbon dioxide (CO₂) is an air pollutant, as defined under the CAA, and thus the EPA has the authority to regulate GHG emissions. The ruling resulted in the EPA taking

¹⁸ (Intergovernmental Panel on Climate Change, 2007)

steps to regulate GHG emissions and lend support for State and local agency in their efforts to reduce GHG emissions.

Federal Regulations for Vehicle Fuel Economy Standards

The EPA and the National Highway Traffic Safety Administration (NHTSA) in 2012 issued final rules to reduce GHG emissions and improve the Corporate Average Fuel Economy (CAFE) standards for light-duty vehicles of model years 2017 and beyond. These CAFE standards have been enacted since 1978 under the Energy Policy and Conservation Act. This program requires automobile manufacturers to build a single nation light-duty fleet that meets both the requirements under federal programs and those of California and other states. This program would improve fuel economy to 54.5 miles per gallon-equivalent limiting vehicle emissions to 153 grams of CO₂ per mile for the fleet of cars and light-duty trucks by model year 2025, which represents five percent annual increases in fuel economy.

The EPA and NHTSA jointly published in 2018 a notice of proposed rulemaking entitled “The Safer Affordable Fuel-Efficient Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks” (SAFE Rule), which proposed:

- (1) new and amended CO₂ and CAFE standards for passenger cars and light trucks;
- (2) to withdraw the waiver EPA had previously provided to California for that State’s GHG and zero emission vehicle (ZEV) programs under Section 209 of the Clean Air Act, and;
- (3) regulatory text to implement NHTSA’s statutory authority to set nationally applicable fuel economy standards to explicitly preempt California’s GHG and ZEV programs.

In 2019, Part One of the SAFE Rule (One National Program) became effective, which withdrew California’s waiver from EPA and finalized NHTSA’s regulatory text related to preemption of State regulations. In 2020, EPA and NHTSA announced Part Two of the SAFE Rule, which would establish amended fuel economy and CO₂ standards for passenger cars and light trucks of model years 2021-2026. These revised standards would increase in stringency by 1.5 percent per year from model year 2020 over model years 2021-2026.

State

Executive Order (EO) S-3-05

In 2005, Governor Schwarzenegger issued EO S-3-05, proclaiming that California is vulnerable to the impacts of climate change. The EO declares that increasing temperatures could reduce the Sierra Nevada snowpack, further exacerbate California’s air quality problems, and potentially cause a rise in sea levels. To address those concerns, the EO established GHG emission targets for the State and identified responsibilities for State agencies in meeting the targets. Specifically, statewide emissions are to be reduced to 2000 levels by 2010, 1990 levels by 2020, and to 80 percent below 1990 levels by 2050.

AB 32

In 2006, AB 32, the California Global Warming Solutions Act of 2006, was signed into law. AB 32 establishes regulations, reporting requirements, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. AB 32 also requires that:

“(a) the statewide greenhouse gas emissions limit shall remain in effect unless otherwise amended or repealed.

(b) It is the intent of the Legislature that the statewide greenhouse gas emissions limit continue in existence and be used to maintain and continue reductions in emissions of greenhouse gases beyond 2020.

(c) The [CARB] shall make recommendations to the Governor and the Legislature on how to continue reductions of greenhouse gas emissions beyond 2020.” [California Health and Safety Code, Division 25.5, Part 3, Section 38551]

EO B-30-15

In 2015, Governor Brown issued EO B-30-15 which established a California GHG reduction target of 40 percent below 1990 levels by 2030. This emission reduction target of 40 percent below 1990 levels by 2030 set the next interim step in the State’s continuing efforts to pursue the long-term target previously established under EO S-3-05 to reach the goal of reducing emissions 80 percent below 1990 levels by 2050. This is consistent with scientifically established levels needed in the U.S. to limit global warming below 2 degrees Celsius, the threshold at which major climate disruptions are projected, such as super droughts and rising sea levels.

SB 32

In 2016, SB 32 was signed into law and serve to extend California’s GHG reduction programs beyond 2020. SB 32 amended existing regulations to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030, codifying the 2030 target established by EO B-30-15.

AB (AB) 1493 (Pavley)

AB 1493, enacted in 2002, requires the reduction of GHGs from automobiles and light-duty trucks to the maximum extent feasible and cost-effective. In 2004, CARB approved the “Pavley I” regulations that applied to new passenger vehicles beginning with model year 2009 through 2016. Pavley I was anticipated to reduce GHG emissions from regulated vehicles by 30 percent from 2002 levels by 2016. Pavley II was incorporated into Amendments to the Low-Emission Vehicle Program referred to as LEV III. The amendments, which took effect in 2012, apply to vehicles for model years 2017 through 2025. The regulation will reduce GHGs from new cars by 34 percent from 2016 levels by 2025.

Advanced Clean Cars Program

Also in 2012, CARB approved the Advanced Clean Cars program which sought to combine the control of GHG emissions and criteria air pollutants, as well as requirements for greater numbers of zero-emission vehicles, into a single package of regulatory standards for vehicle model years 2017 through 2025. These regulations strengthen the GHG standard for 2017 models and beyond and would be achieved through existing and more efficient technologies. The program’s ZEV regulation would require battery, fuel cell, and/or plug-in hybrid electric vehicles to comprise up to 15 percent of California’s new vehicle sales by 2025. The program also included a clean fuels outlet regulation designed to support the development of zero-emission hydrogen fuel cell vehicles by requiring increased numbers of hydrogen fueling stations throughout the state. By 2025, when it was assumed, the rules would be fully implemented, the statewide fleet of new cars and light trucks would emit 34 percent fewer GHGs and 75 percent fewer smog-forming emissions than the statewide fleet in 2016.

SB 100

In 2018, SB 100 increased California’s Renewable Energy Portfolio targets for utility companies to 52 percent renewables by 2027 and 60 percent renewables by 2030. It also established a new zero-carbon electricity mandate by 2040.

California Building Energy Efficiency Standards (Title 24, Part 6)

California Code of Regulations (CCR), Title 24, Part 6, is California’s Energy Efficiency Standards for Residential and Non-Residential Buildings. Title 24 Part 6 was established by California Energy Commission (CEC) in 1978 in response to a legislative mandate to create uniform building codes to reduce California’s energy consumption and provide energy-efficiency standards for residential and nonresidential buildings.

These standards are updated triennially and have resulted in substantial gains in energy efficiency in new construction with each code update cycle.

The 2022 Title 24 Part 6 Building Energy Efficiency Standards were adopted by CEC in 2021 and took effect in 2023. The standards are designed to move the State closer to its zero net energy goals for new residential development. It does so by requiring all new residences to install enough renewable energy to offset all the site electricity needs of each residential unit. CEC estimates that the 2022 Energy Code would provide \$1.5 billion in consumer benefits and reduce 10 million metric tons of GHGs.¹⁹

The Title 24 Building Energy Efficiency Standards are enforced through the local plan check and building permit process. Local government agencies may adopt and enforce additional energy standards for new buildings as reasonably necessary in response to local climatologic, geologic, or topographic conditions, provided that these standards are demonstrated to be cost effective and exceed the energy performance required by Title 24 Part 6.

California Green Building Standards (Title 24, Part 11)

In 2008, the California Building Standards Commission adopted Part 11 of CCR Title 24, titled the California Green Building Standards Code (CALGreen Code) which became effective in 2009 as a voluntary code. The 2010 CALGreen Code was the first mandatory edition and took effect in 2011 and is now a part of the triennial code update cycle. The CALGreen Code establishes mandatory measures for residential and non-residential building construction and encourages sustainable construction practices in the following five categories: (1) planning and design, (2) energy efficiency, (3) water efficiency and conservation, (4) material conservation and resource efficiency, and (5) indoor environmental quality. Although the CALGreen Code was adopted as part of the State's efforts to reduce GHG emissions, the CALGreen Code standards have co-benefits of reducing energy consumption from residential and non-residential buildings subject to the standard.

SB 97

SB 97, enacted in 2007, amended the CEQA statute to clearly establish that GHG emissions and the effects of GHG emissions are appropriate subjects for CEQA analysis. The legislation directed the California Office of Planning and Research to develop draft CEQA Guidelines "for the mitigation of GHG emissions or the effects of GHG emissions" and directed the California Natural Resources Agency to certify and adopt the State CEQA Guidelines. CEQA Guidelines Section 15183.5, Tiering and Streamlining the Analysis of GHG Emissions, was added as part of the CEQA Guideline amendments that became effective in 2010 and describes the criteria needed in a GHG reduction plan that would allow for the tiering and streamlining of CEQA analysis for development projects.

SB X7-7

SB X7-7 requires water suppliers to reduce urban per capita water consumption 20 percent from a baseline level by 2020. The production and treatment of water, as well as the treatment of wastewater, requires substantial amount of electricity, and thus there this a direct relationship between water and greenhouse gases.

California Integrated Waste Management Act

To minimize the amount of solid waste that must be disposed of in landfills, the State Legislature passed the California Integrated Waste Management Act of 1989 (AB 939), effective January 1990. According to AB 939, all cities and counties were required to divert 25 percent of all solid waste from landfill facilities by 1995, and 50 percent by 2000. Through other statutes and regulations, this 50 percent diversion rate also

¹⁹ (California Energy Commission, 2021)

applies to State agencies. In order of priority, waste reduction efforts must promote source reduction, recycling and composting, and environmentally safe transformation and land disposal.

In 2011, AB 341 modified the California Integrated Waste Management Act and directed the California Department of Resources Recycling and Recovery to develop and adopt regulations for mandatory commercial recycling. The resulting Mandatory Commercial Recycling Regulation (2012) requires that after 2012, certain businesses that generate four cubic yards or more of commercial solid waste per week shall arrange recycling services. To comply with this requirement, businesses may either separate recyclables and self-haul them or subscribe to a recycling service that includes mixed waste processing. AB 341 also established a statewide recycling goal of 75 percent; the 50 percent disposal reduction mandate still applies for cities and counties under AB 939, the Integrated Waste Management Act.

Climate Change Scoping Plan

In 2022, the CARB adopted the 2022 Scoping Plan, which provides a framework for achieving the State's 2030 GHG emissions reduction target of 40 percent below 1990 levels and substantially advance toward our 2045 climate goal to reduce GHG emissions by 85 percent below 1990 levels. The 2022 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, and implementation of recently adopted policies and legislation. The 2022 Scoping Plan includes a wide variety of goals related to energy efficiency and renewable energy that are intended to help meet the State's targets.²⁰

Cap-and-Trade Program

The Cap-and-Trade program was developed to reduce GHG emissions from major emissions sources (covered entities) by setting a firm cap on statewide GHG emissions that is gradually reduced over time while employing market mechanisms to cost-effectively achieve the State's emission-reduction goals. It sets a statewide limit on sources responsible for 85 percent of California's GHG emissions, including electricity generators, large industrial facilities emitting a specified amount of annual emissions, and distributors of transportation, natural gas, and other fuels, 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 the approximately 450 entities covered by the program with the flexibility to seek out and implement the lowest cost options to reduce emissions. All covered entities are required to demonstrate compliance with the cap-and-trade program by implementing GHG reduction activities on-site or through use of free or purchased allowances, or purchase of offsets.

Local

The City of Hanford adopted its Air Quality Element of its General Plan in April 2017 and its portion of the Regional Climate Action Plan in May of 2014.^{21, 22} The applicable greenhouse gas goals and policies are listed below.

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 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

²⁰ (California Air Resources Board, 2017)

²¹ (City of Hanford, 2017)

²² (City of Hanford, 2014)

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 AQ 10.4: The City will participate in the Sustainable Communities Strategy/Regional Blueprint Planning effort and will ensure that local plans are consistent with the Regional Plan.

4.8.3 Thresholds

The City of Hanford has not adopted its own GHG thresholds or prepared a Greenhouse Gas Reduction Plan that can be used as a basis for determining project significance. In accordance with SJVAPCD's *CEQA Greenhouse Gas Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects*,²³ proposed projects complying with Best Performance Standards (BPS) would be determined to have a less-than-significant impact. The SJVAPCD does not have an adopted threshold for GHGs; however, the South Coast Air Quality Management District (SCAQMD) has set a threshold of 10,000 MTCO_{2e}.²⁴ This threshold has been applied to this Project. Compliance with BPS and projects generating less than 10,000 MTCO_{2e} per year would result in less than significant impacts. In addition, project-generated emissions complying with an approved plan or mitigation program would also be determined to have a less-than-significant impact.

4.8.4 Methodology

Short-Term Construction-Generated Emissions

Short-term construction emissions associated with the Project were calculated CalEEMod, Version 2022.1. These output files can be found in **Appendix A**. The sections below detail the methodology of the air quality emissions analysis and its conclusions. The emissions modeling includes emissions generated by off-road equipment, haul trucks, and worker commute trips.

Long-Term Operational Emissions

Operational emissions occur over the lifetime of the Project and are from three main sources: area sources, energy usage, and motor vehicles usage known as mobile sources. Area source emissions include emissions from natural gas, landscape, and painting. First occupancy of the Project is expected as early as March 2025 and was used as the Project buildout modeling year for the subdivision as a conservative assumption. Modeling assumptions and output files are included in **Appendix A**.

4.8.5 Impact Analysis

a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less than Significant Impact.

Construction

Total GHG emissions generated during all phases of construction were combined and are presented in **Table 4-19**. The SJVAPCD does not recommend assessing the significance of construction-related emissions. However, other jurisdictions, such as the SCAQMD, have concluded that construction

²³ (San Joaquin Valley Air Pollution Control District, 2009)

²⁴ (South Coast Air Quality Management District, 2008)

emissions should be included since they may remain in the atmosphere for years after construction is complete. In order to account for the construction emissions, amortization of the total emissions generated during construction were based on the life of the development (residential—30 years) and added to the operational emissions.

Table 4-19: Construction Emissions, Greenhouse Gases

	MTCO ₂ e
Total Construction Emissions	327
Amortized over 30 years	10.9
Notes: Calculation totals use unrounded numbers from CalEEMod output. Source: Appendix A	

Operations

Total GHG emissions generated during operations are presented in [Table 4-20](#). The amortized construction emissions have been added to the operational emissions generated by the Project. The Project would result in approximately 1,168 MTCO₂e resulting from operational activities. This falls below the SCAQMD's threshold of 10,000 MTCO₂e, resulting in a less than significant impact.

Table 4-20: Operational Emissions, Greenhouse Gases

	MTCO ₂ e
Operational Emissions	1,184
Amortized Construction Emissions	10.9
Total Operational Emissions plus Amortized Construction Emissions	1,194.9
Notes: Calculation totals use unrounded numbers from CalEEMod output. Source: Appendix A	

- b) Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less than Significant Impact. The City of Hanford has not adopted a GHG reduction plan. In addition, the City has not completed the GHG inventory, benchmarking, or goal- setting process required to identify a reduction target and take advantage of the streamlining provisions contained in the CEQA Guidelines amendments adopted for SB 97 and clarifications provided in the CEQA Guidelines amendments adopted on December 28, 2018.

The SJVAPCD has adopted a Climate Action Plan, but it does not contain measures that are applicable to development projects. Therefore, the SJVAPCD Climate Action Plan cannot be applied to the project. Since no other local or regional Climate Action Plan is in place, the project is assessed for its consistency with ARB's adopted Scoping Plans. This would be achieved with an assessment of the project's compliance with Scoping Plan measures contained in the 2008 Scoping Plan and the 2017 Scoping Plan Update.

AB 32 Scoping Plan

The Scoping Plan contains a variety of strategies to reduce the State's emissions. As shown in [Table 4-21](#), the project is consistent with most of the strategies, while others are not applicable to the project. As discussed earlier, the 2017 Scoping Plan Update strategies primarily rely on increasing the stringency of

existing regulations with which the project would continue to comply, support through the project's design, and implementation of the General Plan goals and policies.

Table 4-21: AB 32 Consistency Table

Scoping Plan Strategy	Consistency Finding
Regulation for the California Cap on Greenhouse Gas Emissions and Market- Based Compliance Mechanism October 20, 2015 (CCR 95800)	Consistent. The Cap-and-Trade Program applies to large industrial sources such as power plants, refineries, and cement manufacturers. However, the regulation indirectly affects people who use the products and services produced by these industrial sources when increased cost of products or services (such as electricity and fuel) are transferred to the consumers. The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the Program's first compliance period.
Pavley I 2005 Regulations to Control GHG Emissions from Motor Vehicles 2012 LEV III Amendments to the California Greenhouse Gas and Criteria Pollutant Exhaust and Evaporative Emission Standards	Consistent. This measure applies to all new vehicles starting with model year 2012. The Project would not conflict with its implementation as it would apply to all new passenger vehicles purchased in California. Passenger vehicles, model year 2012 and later, associated with construction and operation of the Project would be required to comply with the Pavley emissions standards.
2009 readopted in 2015. Regulations to Achieve Greenhouse Gas Emission Reductions Subarticle 7. Low Carbon Fuel Standard CCR 95480	Consistent. This measure applies to transportation fuels utilized by vehicles in California. The Project would not conflict with implementation of this measure. Motor vehicles associated with construction and operation of the project would utilize low carbon transportation fuels as required under this measure.
Regional Transportation-Related Greenhouse Gas Targets of SB 375	Consistent. The Project will provide a public service facility in the region that is consistent with the land uses assessed in the 2018 Regional Transportation Plan/Sustainable Communities Strategy (SCS). The Project is not within an SCS priority area and so is not subject to requirements applicable to those areas.
Goods Movement Action Plan of January 2007	Not applicable. The Project does not propose any changes to maritime, rail, or intermodal facilities or forms of transportation.
2010 Amendments to the Truck and Bus Regulation, the Drayage Truck Regulation and the Tractor-Trailer Greenhouse Gas Regulation	Consistent. This measure applies to medium- and heavy- duty vehicles that operate in the State. The Project would not conflict with implementation of this measure. Medium- and heavy-duty vehicles associated with construction of the project would be required to comply with the requirements of this regulation.
High Speed Rail	Not applicable. This is statewide measure cannot be implemented by a project applicant or lead agency.

Scoping Plan Strategy	Consistency Finding
<p>Title 20 Appliance Efficiency Regulation</p> <p>Title 24 Part 6 Energy Efficiency Standards for Residential Buildings</p> <p>Title 24 Part 11 California Green Building Code Standards</p>	<p>Consistent. The Project would not conflict with implementation of this measure. The Project will comply with the latest energy efficiency standards and incorporate applicable energy efficiency features designed to reduce project energy consumption.</p>
<p>2010 Regulation to Implement the Renewable Electricity Standard (33% 2020)</p> <p>SB 350 Clean Energy and Pollution Reduction Act of 2015 (50% 2030)</p>	<p>Consistent. Pacific Gas & Electric obtained 33 percent of its power supply from renewable sources such as solar and geothermal in 2017, and about 70 percent of the electricity it delivers is carbon-free, including nuclear and large hydroelectric facilities. The owner of the Project would purchase power that consists of a greater percentage of renewable sources and could install renewable solar power systems that will assist the utility in achieving exceeding the renewable mandate.</p>
<p>Million Solar Roofs Program</p>	<p>Consistent. This measure is intended to increase solar throughout California by means of a variety of electricity providers and existing solar programs. Projects within the plan area will be able to take advantage of incentives that are in place at the time of construction. The Project design does not preclude the future installation of solar panels.</p>
<p>Title 24 Part 11 California Green Building Code Standards</p> <p>SBX 7-7—The Water Conservation Act of 2009</p> <p>Model Water Efficient Landscape Ordinance</p>	<p>Consistent. The Project will comply with the California Green Building Standards Code, which requires a 20 percent reduction in indoor water use. The Project will also comply with the MWELO as required by the City's development code and water ordinance.</p>
<p>Title 24 Part 11 California Green Building Code Standards</p>	<p>Consistent. The State will increase the use of green building practices. The Project would implement required green building strategies through existing regulations that requires the project to comply with various CALGreen requirements. The Project includes sustainability design features that support the Green Building Strategy.</p>
<p>2010 ARB Mandatory Reporting of Industrial Emissions Regulation</p>	<p>Not applicable. The Project is not an industrial land use.</p>
<p>Title 24 Part 11 California Green Building Code Standards</p> <p>AB 341 Statewide 75 Percent Diversion Goal</p>	<p>Consistent. The Project would not conflict with implementation of these measures. The Project is required to achieve the recycling mandates via compliance with the CALGreen code. The Project would utilize City of Hanford recycling services.</p>
<p>Cap-and-Trade Offset Projects for Sustainable Forests</p>	<p>Not applicable. The Project site is in an area designated for urban uses. No forested lands exist on-site.</p>
<p>ARB Refrigerant Management Program CCR 95380</p>	<p>Not applicable. The regulations are applicable to refrigerants used by large air conditioning systems and large commercial and</p>

Scoping Plan Strategy	Consistency Finding
	industrial refrigerators and cold storage system. The Project is not expected to use large systems subject to the refrigerant management regulations adopted by ARB.
Cap-and-Trade Offset Projects for Livestock and Rice Cultivation	Not applicable. The Project site is proposed for urban development. No grazing, feedlot, or other agricultural activities that generate manure occur currently exist on-site or are proposed to be implemented by the project.

SB 32 Scoping Plan

The 2017 Climate Change Scoping Plan Update (2017 Scoping Plan) includes the strategy that the State intends to pursue to achieve the 2030 targets of Executive Order S-3-05 and SB 32. The 2017 Scoping Plan includes the following summary of its overall strategy for reaching the 2030 target:

- SB 350, which seeks to achieve a 50 percent Renewables Portfolio Standard by 2030, as well as doubling of energy efficiency savings by 2030.
- Low Carbon Fuel Standard, which proposed increased stringency (reducing carbon intensity 18 percent by 2030, up from 10 percent in 2020).
- Mobile Source Strategy (Cleaner Technology and Fuels Scenario), which sought to maintain existing GHG standards for light- and heavy-duty vehicles, as well as put 4.2 million ZEVs on the roads.
- 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.
- Short-Lived Climate Pollutant (SLCP) Reduction Strategy sought to reduce emissions of methane and hydrofluorocarbons, as well as black carbon, by 40 percent and 50 percent below 2013 levels by 2030, respectively.

Table 4-22 provides an analysis of the project's consistency with the 2017 Scoping Plan Update measures.

Table 4-22: SB 32 Consistency Table

Scoping Plan Strategy	Consistency Finding
SB 350 50% Renewable Mandate Utilities subject to the legislation will be required to increase their renewable energy mix from 33% in 2020 to 50% in 2030.	Consistent. The Project will purchase electricity from a utility subject to the SB 350 Renewable Mandate.
SB 350 Double Building Energy Efficiency by 2030 This is equivalent to a 20 percent reduction from 2014 building energy usage compared to current projected 2030 levels	Not Applicable. This measure applies to existing buildings. New structures are required to comply with Title 24 Energy Efficiency Standards that are expected to increase in stringency until nonresidential buildings achieve zero net energy.
Low Carbon Fuel Standard This measure requires fuel providers to meet an 18 percent reduction in carbon content by 2030.	Consistent. Vehicles accessing the Project site will use fuel containing lower carbon content as the fuel standard is implemented. Mobile Source Strategy (Cleaner Technology and Fuels Scenario) Vehicle manufacturers will be required to meet existing regulations mandated by the LEV III program. The strategy includes a goal of

Scoping Plan Strategy	Consistency Finding
	having 4.2 million ZEVs on the road by 2030. Project residents can be expected to purchase increasing numbers of more fuel efficient and zero emission cars and trucks each year. The 2019 CALGreen Code requires electrical service in residential projects to be EV charger- ready.
Sustainable Freight Action Plan The plan's target is to improve freight system efficiency 25 percent by increasing the value of goods and services produced from the freight sector, relative to the amount of carbon that it produces by 2030. This would be achieved by deploying over 100,000 freight vehicles and equipment capable of zero emission operation and maximize near-zero emission freight vehicles and equipment powered by renewable energy by 2030.	Not Applicable. The measure applies to owners and operators of trucks and freight operations. However, trucks accessing the Project site are expected to be made by increasing number of ZEV delivery trucks.
SLCP Reduction Strategy The strategy requires the reduction of SLCPs by 40 percent from 2013 levels by 2030 and the reduction of black carbon by 50 percent from 2013 levels by 2030.	Consistent. The Project will be accessed by vehicles meeting increasingly stringent particulate matter standards that reduce black carbon compared to older trucks.
SB 375 Sustainable Communities Strategies Requires Regional Transportation Plans to include a sustainable communities strategy for reduction of per capita vehicle miles traveled.	Consistent. The Project will be located in a low VMT area as depicted in the City's VMT Guidelines.
Post-2020 Cap-and-Trade Program The Post 2020 Cap-and-Trade Program continues the existing program for another 10 years. The Cap-and-Trade Program applies to large industrial sources such as power plants, refineries, and cement manufacturers.	Consistent. The post-2020 Cap-and-Trade Program indirectly affects people who use the products and services produced by the regulated industrial sources when increased cost of products or services (such as electricity and fuel) are transferred to the consumers. The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap- and-Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the program's first compliance period.
Natural and Working Lands Action Plan ARB is working in coordination with several other agencies at the federal, state, and local levels, stakeholders, and with the public, to develop measures as outlined in the Scoping Plan Update and	Not Applicable. The Project is a residential development and will not be considered natural or working lands.

Scoping Plan Strategy	Consistency Finding
the governor’s Executive Order B-30-15 to reduce GHG emissions and to cultivate net carbon sequestration potential for California’s natural and working land.	

Accordingly, taking into account the proposed Project’s emissions, Project design features, and the progress being made by the State towards reducing emissions in key sectors such as transportation, industry, and electricity, the project would be consistent with State GHG Plans and would further the State’s goals of reducing GHG emissions to 1990 levels by 2020, 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050, and does not obstruct their attainment. Impacts would be less than significant.

AB 1279 Scoping Plan

The Climate Crisis Act (2022), or AB 1279, seeks to achieve net zero greenhouse gas emissions by no later than 2045 and achieve and maintain net negative greenhouse gas emissions after 2045. The bill seeks to ensure that statewide anthropogenic greenhouse gas emissions are reduced to at least 85% below 1990 levels.

Table 4-23 provides an analysis of the project’s consistency with the 2022 Scoping Plan Update measures.

Table 4-23: AB 1279 Consistency Table

Scoping Plan Strategy	Consistency Finding
Reduction in per capita vehicle miles traveled of 30 percent by 2045	Consistent. The Project is located in a Low VMT zone in the City’s adopted VMT Guidelines.
100% adoption of light-duty ZEVs by 2034	Consistent. The Project is not of such intensity or magnitude such that approval could prevent the State achieving this goal.
Carbon sequestration on majority of petroleum refineries by 2030	Consistent. The Project would not preclude attainment of this goal as it does not propose to modify a petroleum refinery.
100% sales of electric HVAC and water heaters for existing buildings	Consistent. The Project would comply with all applicable building codes. Appliances would be replaced at end-of-life with regulations in-place at that time.
Reduction in dairy emissions	Consistent. The Project would not preclude attainment of this goal because it does not propose to construct or modify dairies.
Carbon Dioxide Removal	Consistent. The Project does not preclude the construction of carbon removal systems.

In summary, the Project would comply with existing State regulations adopted to achieve the overall GHG emissions reduction goals identified in AB 32, SB 32, AB 1279, and would be consistent with applicable plans and programs designed to reduce GHG emissions. Therefore, the Project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs. The impact would be less than significant.

4.9 HAZARDS AND HAZARDOUS MATERIALS

Table 4-24: Hazards and Hazardous Materials Impacts

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.9.1 Baseline Conditions

Hazardous Materials

The Hazardous Waste and Substances Sites (Cortese) List is a planning document used by the State, local agencies, and developers to comply with CEQA requirements in providing information about the location of hazardous materials release sites. Government Code (GC) Section 65962.5 requires the California Environmental Protection Agency to develop at least annually an updated Cortese List. The Department of Toxic Substances Control (DTSC) is responsible for a portion of the information contained in the Cortese List. Other State and local government agencies are required to provide additional hazardous material release information for the Cortese List. DTSC's EnviroStor database provides DTSC's component of Cortese List data (DTSC, 2010). In addition to the EnviroStor database, the State Water Resources Control Board

(SWRCB) GeoTracker database provides information on regulated hazardous waste facilities in California, including underground storage tank (UST) cases and non-UST cleanup programs, including Spills-Leaks-Investigations-Cleanups sites, Department of Defense sites, and Land Disposal program. A search of the DTSC EnviroStor²⁵ database and the SWRCB GeoTracker²⁶ performed on April 11, 2023 determined that there are no known active hazardous waste generators or hazardous material spill sites within the Project site or immediate surrounding vicinity.

Airports

The Project site is located approximately 3.2 miles east of the Hanford Municipal Airport. The Project would not be located within an Airport Influence Area as per the Kings County Airport Land Use Compatibility Plan (ALUCP).²⁷

Emergency Response Plan

Kings County has an Emergency Operations Plan that was adopted in 2015.²⁸ The plan lays out the planned procedures that the City would follow in the event of an emergency.

Sensitive Receptors

Sensitive Receptors are groups that would be more affected by air, noise, and light pollution, pesticides, and other toxic chemicals than others. This includes infants, children under 16, elderly over 65, athletes, and people with cardiovascular and respiratory diseases. High concentrations of these groups would include daycares, residential areas, hospitals, elder care facilities, schools and parks. The nearest sensitive receptors consist of rural residences surrounding the Project site. Also, Future Hope Preschool is located approximately .2 miles northeast of the Project site.

4.9.2 Applicable Regulations

Federal

Occupational Health and Safety Administration

The Occupational Health and Safety Administration published standard 1910.120, addressing dangers that hazardous materials pose in the workplace. The standard requires that employers evaluate the potential health hazard that hazardous materials pose in the workplace and communicate information concerning hazards and appropriate protective measures to employees.

State

Department of Toxic Substances Control

The EPA has delegated much of its regulatory authority to the individual states. The DTSC of CalEPA enforces hazardous materials and waste regulations in California in conjunction with the EPA. The DTSC is responsible for regulating the management of hazardous substances, including remediation of sites contaminated by hazardous substances. California hazardous materials laws incorporate federal standards but are often more strict than federal laws.

²⁵ (California Department of Toxic Substances Control Envirostor 2022)

²⁶ (State of California Water Resources Control Board 2022)

²⁷ (County of Kings 1994)

²⁸ (Kings County Office of Emergency Services 2015)

Porter-Cologne Water Quality Control Act

The RWQCB is authorized by the SWRCB to enforce provisions of the Porter-Cologne Water Quality Control Act of 1969. This act gives the RWQCB authority to require groundwater investigations when the quality of groundwater or surface waters of the state are threatened and to remediate the site, if necessary.

State Underground Storage Tank Program

State laws also regulate Underground Storage Tanks (USTs) and Aboveground Storage Tanks (ASTs) containing hazardous substances. These laws are primarily found in the Health and Safety Code, and, combined with CCR Title 23, establish the requirements of the State UST program. The laws contain requirements for UST permitting, construction, installation, leak detection monitoring, repairs and corrective actions and closures. In accordance with State laws, the County Department of Health Services Environmental Health Division implements UST and AST regulations in County.

Hazardous Materials Worker Safety Requirements

The Federal Occupational Safety and Health Administration (OSHA) and the California Occupational Safety and Health Administration (Cal/OSHA) are the agencies responsible for assuring worker safety in the handling and use of chemicals in the workplace. The federal regulations pertaining to worker safety are contained in the Code of Federal Regulations, Title 29 (29 CFR) as authorized in the Occupational Safety and Health Act of 1970. They provide standards for safe workplaces and work practices, including standards relating to hazardous materials handling. In California, Cal/OSHA assumes primary responsibility for developing and enforcing workplace safety regulations; Cal/OSHA standards are generally more stringent than federal regulations.

The State regulations concerning the use of hazardous materials in the workplace are included in Title 8 of the CCR, and contain requirements for safety training, availability of safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation. Cal/OSHA also enforces hazard communication program regulations, which contain worker safety training and hazard information requirements, such as procedures for identifying and labeling hazardous substances, communicating hazard information relating to hazardous substances and their handling, and preparation of health and safety plans to protect workers and employees at hazardous waste sites.

Local

City of Hanford General Plan

The 2035 General Plan includes policies related to hazards and hazardous materials that correlate to the Project:

- **Policy H30. Industrial Hazardous Materials:** Require industrial uses that rely extensively on the use of hazardous materials to adopt an acceptable use, storage, disposal, and emergency response program that has been approved by appropriate agencies.
- **Policy H31. Adequate Separation from Sensitive Uses:** Require adequate separation between industrial areas where hazardous materials are present and sensitive uses such as schools, residential areas, parks, and public facilities.
- **Policy H32. Project Review Evaluation:** Evaluate the risks involving the disposal, transport, manufacture, storage, and handling of hazardous material in Hanford in the project review process.
- **Policy H34. Sensitive Receptors:** Avoid siting uses with new sensitive receptors near existing industrial facilities that use or produce hazardous material or may emit toxic air contaminants.

4.9.3 Impact Analysis

- a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less than Significant Impact. Project construction activities may involve the use, storage, and transport of hazardous materials. During construction, the contractor will use fuel trucks to refuel onsite equipment and may use paints and solvents to a limited degree. The storage, transport, and use of these materials will comply with Local, State, and Federal regulatory requirements. There is the potential for small leaks due to refueling of construction equipment, however standard construction Best Management Practices (BMPs) included in the SWPPP will reduce the potential for the release of construction related fuels and other hazardous materials by controlling runoff from the site and requiring proper disposal or recycling of hazardous materials. In operation, the Project will consist of residential uses. The type of hazardous materials that would be associated with the Project are those typical of residential developments: household cleaners, landscape maintenance, soaps, pesticides for pest control, etc. Because of the use, it is not expected that the Project would routinely transport, use, or dispose of hazardous materials other than those typical of residential uses and such materials would not be of the type or quantity that would pose a significant hazard to the public. The impact is less than significant.

- b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less than Significant Impact. There is no reasonably foreseeable condition or incident involving the project that could result in release of hazardous materials into the environment, other than any potential accidental releases of standard fuels, solvents, or chemicals encountered during typical construction of a residential subdivision. Should an accidental hazardous release occur or should the Project encounter hazardous soils, existing regulations for handling hazardous materials require coordination with the California Department of Toxic Substances Control for an appropriate plan of action, which can include studies or testing to determine the nature and extent of contamination, as well as handling and proper disposal. Therefore, potential impacts are less than significant.

- c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less than Significant Impact. At its nearest point the Project site is located approximately 0.2 miles southwest from Future Hope Preschool. The Project does not involve the use or storage of hazardous substances other than small amounts of pesticides, fertilizers, and cleaning agents required for normal maintenance of structures and landscaping. The Project would not emit hazardous emissions or involve the handling of acutely hazardous materials or waste. Therefore, there would be a less than significant impact.

- d) Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact. The Project site is not listed as a hazardous materials site pursuant to Government Code Section 65962.5 and is not included on a list compiled by the Department of Toxic Substances Control. There would be no impact.

- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact. The Project is located approximately 3.2 miles west of the nearest public airport (Hanford Municipal Airport) and is not located within an Airport Land Use Plan. Therefore, there would be no impact.

- f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than Significant Impact. The Project would comply with the City's design and environmental review procedures which ensure compliance with emergency response and evacuation plans. In addition, the site plan will be reviewed by the Fire Department per standard City procedure to ensure consistency with emergency response and evacuation needs. Therefore, any impact would be less than significant on emergency evacuation.

- g) Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

No Impact. The land surrounding the Project site is developed with urban uses and farmlands which are not considered to be wildlands. As discussed more thoroughly in [Section 4.20](#), the Project site is not located in an area that has been designated as being a State Responsibility Area (SRA) or as being a very high fire hazard severity zone. The Project site would be annexed to the City of Hanford as a part of the Project and is surrounded by urban uses. Therefore, there would be no impact.

4.10 HYDROLOGY AND WATER QUALITY

Table 4-25: Hydrology and Water Quality Impacts

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i. result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv. impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4.10.1 Baseline Conditions

Surface Water: Hanford is in the Tulare Lake Hydrologic Study Area (TLHSA). Most surface water in the TLHSA originates from the Sierra Nevada Mountain Range. There are no significant surface water features in Hanford outside of natural and manmade drainage ways and canals. The Kings River is located approximately four miles North of Hanford. No surface water is used in Hanford's Water System.

Groundwater: Hanford is located in the Tulare Lake Hydrologic Region and is within the Tulare Lake Groundwater Subbasin which transmits, filters, and stores water from the main San Joaquin Valley Groundwater Basin. Groundwater is recharged by rain and snowfall in addition to percolation from storm water basins, local waterways, and agricultural irrigation. The City of Hanford also recharges the

groundwater table through the disposal of treated disinfected wastewater from its wastewater treatment facility. Each day approximately 5 million gallons of water is processed through the facility.

Stormwater Drainage: The existing drainage infrastructure within the City of Hanford's Stormwater Management Program include natural drainage channels, retention basins, natural vegetation, piping, and pump stations. There are some areas where storm drainage is controlled by drainage inlets and underground structures. The system consists of 30 pump stations, 56 miles of pipeline, and 181 acres of drainage basins and drainage ditches.²⁹ Additionally, the City is planning to add approximately 317 acre-feet of additional drainage basins. The Project would connect to a stormwater basin in the Billingsley Ranch subdivision adjacent to the Project site.

4.10.2 Applicable Regulations

Federal

Federal Clean Water Act

The CWA requires the EPA to develop, publish, and periodically update ambient water quality criteria for the protection of human health. In 1980, the EPA published water quality criteria for 64 pollutants and pollutant classes and considered non-cancer, cancer, and taste and odor effects. Over the years, these criteria have evolved and have included additional pollutants and pollutant classes.

During the last decade, policy has shifted from a program-by-program, source-by-source, pollutant-by-pollutant approach to more watershed-based strategies. Ultimately, these criteria are used by states for establishing water quality standards under Section 303 (c) of the CWA and provide a basis for controlling discharges or releases of pollutants.

National Pollutant Discharge Elimination System Waste Discharge Regulations

The 1972 amendments to the Federal Water Pollution Control Act established the NPDES permit program to control discharges of pollutants from point sources (CWA 402). The 1987 amendments to CWA created a new section of CWA devoted to stormwater permitting (CWA 402[p]). The EPA has granted California primacy in administering and enforcing the provisions of CWA and the NPDES permit program, which is the primary federal program that regulates point-source and nonpoint-source discharges to waters of the United States. SWRCB issues both general and individual permits for certain activities. Relevant general and individual NPDES permits are discussed below.

Phase II MS4 Permit

The SWRCB, in response to the EPA, issued Water Quality Order No. 2013-001-DWQ NPDES General Permit No. CAS000004, Waste Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm Systems (MS4s) in February 2013 which went into effect July 2013. The MS4 Permit requires urban municipalities with predetermined inclusion requirements to file an application and comply with prescriptive tasks over the 5-year permit term. The prescriptive tasks include, but are not limited to, public outreach and involvement, illicit discharge detection and elimination (IDDE), construction site runoff control, post-construction storm water management, municipality facility and operation good housekeeping, water quality monitoring, and municipality assessment and reporting.

Construction Stormwater NPDES Permit

A Construction NPDES General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit (CGP), Water Quality Order No. 2009-0009-DWQ) is required for dischargers or projects who disturb one acre or more of soil or whose project disturbs less than one acre, but which is

²⁹ (City of Hanford 2023)

part of a larger common plan of development that in total disturbs one acre or more. This CGP was adopted in September 2009 and went into effect July 2010.

The CGP requires the development of Permit Registration Documents (PRDs) which include the development and implementation of a SWPPP. The SWPPP must contain a site map(s) which shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project. The SWPPP must list/describe BMPs the discharger would use to prevent polluted stormwater runoff and show the placement of those BMPs. Additionally, the SWPPP must contain a visual monitoring program, a chemical monitoring program for “non-visible” pollutants, and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Attachment B of the CGP describes the elements that must be contained in a SWPPP. Additional PRD requirements are described in Attachments C-E in the CGP.

State

Porter-Cologne Water Quality Control Act of 1969

The Porter-Cologne Water Quality Control Act established the SWRCB and divided the state into nine regional basins, each with a RWQCB. The SWRCB is the primary state agency responsible for protecting the quality of the States surface and groundwater supplies, while the regional boards are responsible for developing and enforcing water quality objectives and implementation plans. The Project would be within the jurisdiction of Central Valley RWQCB.

The act authorizes the SWRCB to enact State policies regarding water quality in accordance with the CWA Section 303. In addition, the act authorizes the SWRCB to issue WDRs for projects that would discharge to state waters. The Porter-Cologne Water Quality Control Act requires that the SWRCB or the Central Valley RWQCB adopt water quality control plans (basin plans) for the protection of water quality. A basin plan must:

- Identify beneficial uses of water to be protected;
- Establish water quality objectives for the reasonable protection of the beneficial uses; and
- Establish a program of implementation for achieving the water quality objectives.

Basin plans also provide the technical basis for determining waste discharge requirements, taking enforcement actions, and evaluating clean water grant proposals. Basin plans are updated and reviewed every 3 years in accordance with Article 3 of Porter-Cologne Water Quality Control Act and CWA 303(c) (Central Valley RWQCB 2004 with approved amendments).

California Regional Water Quality Control Board, Central Valley Region – Basin Plan

Water quality in streams and aquifers of the region is guided and regulated by the Central Valley RWQCB Tulare Lake Basin Plan.³⁰ State policy for water quality control is directed at achieving the highest water quality consistent with the maximum benefit to the people of the state. To develop water quality standards consistent with the uses of a water body, the Central Valley RWQCB classifies historical, present, and potential future beneficial uses as part of its basin plan. The Central Valley RWQCB Basin Plan identifies the beneficial uses of the Tulare Lake basin.

³⁰ (State of California Water Boards-Central Valley Region 5 2022)

The Basin Plan lists the Valley Floor Creeks are listed for agriculture, industrial, process water, recreation, warm water habitat, wild habitat, rare species habitat, and groundwater recharge. A detailed discussion of beneficial uses and water quality objectives can be found in the Basin Plan.

The Central Valley RWQCB Basin Plan has also established the water quality objectives for dissolved oxygen in various habitats. The objective for warm water beneficial use habitats is 5mg/L minimum; and for cold water habitats is 7mg/L minimum.³¹

The Central Valley RWQCB Basin Plan also states that turbidity shall not be increased by more than 1 Nephelometric Turbidity Unit (NTU) when ambient turbidity is between 0 and 5 NTU. Turbidity shall not be increased by more than 20 percent when ambient turbidity is between 5 and 50 NTU. Finally, when ambient turbidity is greater than 100 NTU, turbidity shall not be increased by more than 10 percent.³²

Sustainable Groundwater Management Act

In September 2014, the California Legislature enacted a three-bill law (AB 1739, SB 1168, and SB 1319), known as the Sustainable Groundwater Management Act (SGMA). SGMA was created to provide a framework for the sustainable management of groundwater supplies and intended to empower local agencies to adopt groundwater management plans that are tailored to the resources and needs of their communities, such that sustainable management would provide a buffer against drought and climate change and ensure reliable water supplies regardless of weather patterns. SGMA is considered part of the statewide, comprehensive California Water Action Plan that includes water conservation, water recycling, expanded water storage, safe drinking water, and wetlands and watershed restoration. It protects existing surface water and groundwater rights and does not affect current drought response measures.

Local

City of Hanford General Plan

Policy O25. Recharge Basins. Protect existing groundwater recharge basins and natural and manmade sloughs and seek the establishment of new basins within and around Hanford.

Policy O29. Water Conservation Measures for New Development. Encourage new development projects to include water conservation measures, including use of graywater, reclaimed, or recycled water for landscaping, water-conserving plumbing fixtures and appliances, and water-efficient landscapes.

Policy O30. Storm Water Pollution Prevention. Implement the NPDES Stormwater Permit and for those properties exempt from the Permit, require a storm water pollution prevention plan, including use of best management practices, to control erosion and sedimentation during construction.

Policy P3. Water Supply and Fire Flow Availability. Conditional approval of new development projects and water service extensions on the availability of adequate water supply and the ability to meet domestic and fire flow needs of the area.

³¹ (California Regional Water Quality Control Board, Central Valley Region 2018)

³² Ibid.

4.10.3 Impact Analysis

- a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less than Significant Impact. The Project will result in less than significant impacts to water quality due to potentially polluted runoff generated during construction activities. Construction may include excavation, grading, and other types of earthworks across the 12.17-acre Project site. During storm events, exposed construction areas across the Project site may cause runoff to carry pollutants, such as chemicals, oils, sediment, and debris. Because the Project site is greater than 1 acre in size, implementation of a Stormwater Pollution Prevention Plan (SWPPP) will be required for the Project. A SWPPP identifies all potential sources of pollution that could affect stormwater discharges from the Project site and identifies best management practices (BMPs) related to stormwater runoff. In addition, runoff resulting from the Project would be managed by the City in compliance with the Storm Drainage Master Plan in addition to approved grading and drainage plans. As such, any impact would be less than significant.

- b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less than Significant Impact. The Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin. According to the City of Hanford 2020 Urban Water Management Plan (UWMP) the demand for water in 2020 was 11,714 acre feet. In 2020, single family uses used 6,903 AF, which accounted for 59 percent of the total water used.³³

The Project consists of 82 dwelling units and the average household size in Hanford is 3.09 people; therefore, the Project would house approximately 247 people.³⁴ According to the UWMP, the amount of groundwater predicted to be pumped in 2020 was 11,714 acre feet or 10.4 million gallons per day.

The 82-lot subdivision would be expected to use approximately 42,237 gallons of water per day (people (247) x 2020 average gallons per day per person (171)) under normal operation, including domestic and landscape irrigation. This equates to approximately 47.3 acre feet per year. Although the Project would utilize groundwater for domestic purposes, the amount of water used is not considered significant and would not substantially lower the groundwater table of the aquifer or interfere substantially with the recharge of the underground aquifer. Additionally, the Project would pay its fair share of installation of improvements and pay all development fees related to water service. Therefore, impacts would be less than significant.

³³ (City of Hanford 2021)

³⁴ (United States Census Bureau 2022)

c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

- i. result in substantial erosion or siltation on- or off-site;
- ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
or
- iv. impede or redirect flood flows?

Less than Significant Impact. The Project would result in some soil erosion and the loss of topsoil due to Project related construction activities. The drainage pattern of the new subdivision would be altered to flow to the stormwater basin located within the future Billingsley Ranch subdivision immediately to the east. The stormwater basin would be constructed prior to the Stonehaven subdivision being constructed. Through the completion of a SWPPP and the implementation of the applicable best management practices, any potential impacts from the altering of drainage patterns would be limited to less than significant.

d) Would the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundations?

Less than Significant Impact. There are no streams or rivers onsite or in the immediate vicinity of the Project. The nearest 100-year flood zone is 1.7 miles northeast from the site. In order to minimize erosion and run-off during construction activities, a SWPPP would be implemented, and the contractor would comply with all Cal/OSHA regulations regarding regular maintenance and inspection of equipment, spill prevention, and spill remediation in order to reduce the potential for incidental release of pollutants or hazardous substances onsite. There is no potential for inundation by seiche, tsunami, or mudflow. Any impacts would be less than significant.

e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

No Impact. The project would not conflict with or obstruct the implementation of a water quality control plan or sustainable groundwater management plan. The proposed project is consistent with the Central Valley RWQCB. The project will comply with all applicable rules and regulations regarding water quality and groundwater management and there is no impact.



Figure 4-2: FEMA Map

4.11 LAND USE AND PLANNING

Table 4-26: Land Use and Planning Impacts

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
f) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.11.1 Baseline Conditions

The proposed project site is in the Southwest corner of the City of Hanford. The site is approximately 2 miles Southwest of downtown Hanford. The site is currently zoned AL-10 by the County of Kings. Additionally, the site is designated as Low Density Residential by the City of Hanford 2035 General Plan.

The site is topographically flat and is bounded by agricultural uses to the east and west, and rural residential uses to the north and south.

4.11.2 Applicable Regulations

Federal

There are no federal land use regulations that apply to the Project.

State

There are no State land use regulations that apply to the Project.

Local

City of Hanford General Plan

The following goals and policies in the City of Hanford General Plan are applicable to the Project site's residential land use designation:

Policy L10. Residential / Industrial Separation. Discourage designation of land for new residential uses south of Houston Avenue.

Policy L13. Development Boundary at 13th Avenue. Locate the 2035 Growth Boundary at 13th Avenue to maintain a rural agricultural land use buffer between Hanford and the communities of Grangeville and Armona.

Policy L24. Availability of Infrastructure. Ensure that new residential developments have sufficient urban infrastructure and public facilities to accommodate the number and type of development being proposed.

Policy L25. *Maintenance Districts.* 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.

Policy L28. *Street Trees and Landscaping.* Encourage all new residential developments to include shade trees along the street and install landscaping and irrigation systems that meet State requirements for low water use.

Policy L29. *Agriculture.* Recognize the right of agriculture to exist and continue to operate in proximity to the new residential development on the fringes of the City. Deed restrictions may be required which inform future residents of the right of agriculture to continue within the limits of the law without interference or protest from nearby property owners.

Policy L31. *Purpose of the Low Density Residential Land Use Designation.* Establish the Low Density Residential land use designation to provide mainly single family development on lot sizes typically found in urban setting.

4.11.3 Impact Analysis

a) Would the project physically divide an established community?

No Impact. The Project site is located in the southwest portion of the City and within its sphere of influence. There is existing residential development 0.3 miles to the east, and rural residential uses to the north and south, while west of the site consists of agricultural land. The Project will not physically divide any of these established communities and uses. The Project proposes to construct streets that are publicly accessible and would connect to Hanford Armona Road to the north. There would be no impact.

b) Would the project cause a significant environmental conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Less than Significant Impact. The Project would not conflict with or cause a significant environmental conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. The Project is proposing to subdivide and develop 82 single family low density residential subdivision in the approximately 12.17-acre Project site. The City of Hanford General Plan land use diagram designates the Project site as Low Density Residential. The Project will not conflict with any City of Hanford General Plan policies, therefore, the Project would not cause a significant environmental conflict with any land use plan, policy, or regulation since it would be consistent with land use designation standards. Therefore, any impacts would be less than significant.

4.12 MINERAL RESOURCES

Table 4-27: Mineral Resources Impacts

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.12.1 Baseline Conditions

The California Geological Survey (CGS) classifies and designates areas within California that contain or potentially contain significant mineral resources. Lands are classified into Aggregate and Mineral Resource Zones (MRZs), which identify known or inferred significant mineral resources. According to the California Department of Conservation, CGS's Surface Mining and Reclamation Act (SMARA) Mineral Lands Classification (MLC) data portal, the City of Hanford is not within a mineral resource study area. In addition, according to the General Plan, the City of Hanford is not within a Division of Oil, Gas, and Geothermal Resources recognized oil field. Rather, the General Plan identifies sand and gravel for road and building construction as the only likely mineral resources in the area. Lastly, according to the Kings County General Plan, there are no oil fields or areas designated for mineral recovery in the vicinity of the Project site.

4.12.2 Applicable Regulations

State

California Surface Mining and Reclamation Act of 1975

Enacted by the State Legislature in 1975, the Surface Mining and Reclamation Act (SMARA), Public Resources Code Section 2710, et seq., ensures a continuing supply of mineral resources for California. The Act creates surface mining and reclamation policy to ensure that:

- Production and conservation of minerals is encouraged;
- Environmental effects are prevented or minimized;
- Consideration is given to recreational activities, watersheds, wildlife, range and forage, and aesthetic enjoyment;
- Mined lands are reclaimed to a useable condition once mining is completed; and
- Hazards to public safety both now and in the future are eliminated.

Areas in the State (i.e., a city or county) that do not have their own regulations for mining and reclamation activities rely on the Department of Conservation Division of Mine Reclamation to enforce this law. SMARA contains provisions for the inventory of mineral lands in the State of California. The State Geologist, in accordance with the SWRCB Guidelines for Classification and Designation of Mineral Lands, must classify Mineral Resource Zones as designated below:

MRZ-1. Areas where available geologic information indicates that there is minimal likelihood of significant resources.

MRZ-2. Areas underlain by mineral deposits where geologic data indicate that significant mineral deposits are located or likely to be located.

MRZ-2a. Areas containing mineral deposits that have geologic data to confirm that significant measured or indicated resources are present.

MRZ-2b. Areas containing mineral deposits where geologic information indicates that inferred resources are present.

MRZ-3. Areas where mineral deposits are found but the significance of the deposits cannot be evaluated without further exploration.

MRZ-3a. Areas considered having a moderate potential for mineral deposits of economic value.

MRZ-3b. Areas that include inferred mineral deposits that could possibly qualify as mineral resources.

MRZ-4. Areas where there is not enough information to assess the zone. These are areas that have unknown mineral resource significance.

SMARA only covers mining activities that impact or disturb the surface of the land. Deep mining (tunnel) or petroleum and gas production is not covered by SMARA.

4.12.3 Impact Analysis

a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact. The Project site has no known mineral resources that would be of value to the region and the residents of the state, therefore the Project would not result in the loss of or impede the mining of regionally or locally important mineral resources. There is no impact.

b) Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No Impact. There are no known mineral resources of importance to the region and the Project site is not designated under the City's or County's General Plan as an important mineral resource recovery site. For that reason, the Project would not result in the loss of availability of known regionally or locally important mineral resources. There is no impact.

4.13 NOISE

Table 4-28: Noise Impacts

Would the project result in:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive ground borne vibration or ground borne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.13.1 Baseline Conditions

The Project site is surrounded by rural residential homes to the south and north, and agricultural crops to the east and west. The site is located approximately 3.2 miles west of the Hanford Municipal Airport, but it is located outside of all of the identified airport protection zones within the Kings County, Airport Land Use Compatibility Plan (ALUCP). State Route (SR) 198, located approximately 0.35 miles north is identified as a significant transportation noise source.

4.13.2 Applicable Regulations

Federal

There are no federal regulations, plans, programs, and guidelines associated with noise that are applicable to the Project.

State

State of California General Plan Guidelines

The State of California General Plan Guidelines (OPR 2003) identify guidelines for the noise elements of local GPs, including a sound level/land use compatibility chart that categorizes, by land use, outdoor Ldn ranges in up to four categories (normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable). For many land uses, the chart shows overlapping Ldn ranges for two or more compatibility categories. The noise element guideline chart identifies the normally acceptable range of Ldn values for low-density residential uses as less than 60 dB and the conditionally acceptable range as 55–70 dB. The normally acceptable range for high-density residential uses is identified as Ldn values below 65 dB, and the conditionally acceptable range is identified as 60–70 dB. For educational and medical facilities, Ldn values below 70 dB are considered normally acceptable, and Ldn values of 60–70 dB is considered

conditionally acceptable. For office and commercial land uses, Ldn values below 70 dB are considered normally acceptable, and Ldn values of 67.5–77.5 are categorized as conditionally acceptable. When noise levels are in the conditionally acceptable range new construction should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation requirements are included in the design. These overlapping Ldn ranges are intended to indicate that local conditions (existing sound levels and community attitudes toward dominant sound sources) should be considered in evaluating land use compatibility at specific locations.

Local

City of Hanford General Plan

Goal H7. Protection from the harmful and annoying effect of excessive noise.

Policy H42. Noise Evaluation for New Development. Evaluate proposed development proposals against existing and future noise levels from ground transportation noise sources.

Policy H43. Non-Transportation Noise. Mitigate noise created by non-transportation noise sources as not to exceed the maximum allowable interior and exterior noise level standards.

Policy H46. Noise Ordinance. Adopt ordinances that limit noise-generating sources to acceptable, safe levels.

Policy H48. Noise Mitigation for Construction Activities. Require all development projects to mitigate noise impacts associated with construction activities.

Noise Ordinance

Chapter 9.10 of the City's Municipal Code contains the City's noise ordinance, which establishes exterior noise level standards. Applicable regulations are as follows:

Construction or Repair of Buildings, Excavation of Streets and Highways. The construction, demolition, alteration or repair of any building or the excavation of streets and highways other than between the hours of 7:00 a.m. and 8:00 p.m. In cases of emergency, construction or repair noises are exempt from this provision. In non-emergency situations, the city manager, or designee, may issue a permit, upon application, if the city manager, or designee, determines that the public health and safety, is affected by loud and raucous noise caused by construction or repair of buildings or excavation of streets and highways between the hours of 8:00 p.m. and 7:00 a.m. will not be impaired, and if the city manager, or designee, further determines that loss or inconvenience would otherwise result. The permit shall grant permission in non-emergency cases for a period of not more than three (3) days. The permit may be renewed once for a period of three (3) days or less.

4.13.3 Impact Analysis

a) Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less than Significant Impact. Construction of the Project will create a temporary increase in ambient noise levels in the vicinity of the Project in excess of the standards established in the local general plan, noise ordinance, or applicable standards of other agencies for approximately 16 months. Construction-related noise would be temporary and would cease upon completion of the Project. The construction required for the completion of this Project is exempt from the above noise regulations. In addition, according to

the inverse square law, noise diminishes from its source by six dBA with each doubling of distance from origin. As a result, any noise generated from the proposed Project would have a diminished effect when heard from people in the surrounding area. Therefore, impacts would be less than significant.

b) Would the project result in generation of excessive ground borne vibration or ground borne noise levels?

Less than Significant Impact. Construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. Construction and agricultural activities can result in varying degrees of ground vibration, depending on the equipment and methods used, distance to the affected structures, and soil type. The generation of vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight damage at the highest levels. Ground-borne vibration or ground-borne noise levels from construction would be temporary in nature and further buffered from surrounding residences by the subdivision wall and landscape wall. In addition, vibration levels subside with increased distance from the source, diminishing the effect the Project would have. Therefore, impacts would be less than significant.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The Project is not located in the vicinity of a private airstrip or within an airport land use plan. The nearest airport or airstrip to the Project site Hanford Municipal Airport approximately 3.2 miles east of the Project site. Therefore, there would be no impact.

4.14 POPULATION AND HOUSING

Table 4-29: Population and Housing Impacts

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.14.1 Baseline Conditions

The United States Census Bureau stated the population in the City of Hanford to be 57,990 as of April 2020. This is an increase of 4,023 from the 2010 census, which counted the population in the City of Hanford to be 53,967.³⁵ Factors that influence population growth in Hanford include job availability, housing availability, and the capacity of proposed and existing infrastructure.

4.14.2 Impact Analysis

a) Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Less than Significant Impact. The Project would not induce substantial unplanned population growth in an area, either directly or indirectly. The Project would result in the construction of 82 houses on land that would be annexed into the City as a part of the Project and remove one existing single family residence. At 3.09 residents per household, the Project could potentially add 247 new people to the City's population. While the Project would induce population growth through the construction of 82 houses, the construction of homes on this land aligns with the City's General Plan Land Use designation of low density residential. Therefore, impacts would be less than significant.

b) Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. The Project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. The Project would result in the new construction of 82 homes on land within the City of Hanford. The Project site currently contains one residence on the northeastern end of the property. This residence would be demolished to facilitate the

³⁵ (United States Census Bureau 2022)

Project. The owner of the residence is also the property owner and is vacating the site voluntarily. As a result, no person would be displaced as a result of the Project. Therefore, there would be no impact.

4.15 PUBLIC SERVICES

Table 4-30: Public Services

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv. Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
v. Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4.15.1 Baseline Conditions

Fire Protection: Hanford and the Project site is served by the Hanford Fire Department (HFD), which operates three fire stations within the City of Hanford. HFD would continue to provide fire protection services to the Project site following project implementation. The nearest fire station to the site is Hanford Fire Station 3 which is located approximately 0.7 miles to the east.

Police Protection: Law enforcement services are provided to the Project site via the Hanford Police Department (HPD). HPD would continue to provide police protection services to the Project site following project implementation. HPD headquarters are located approximately 3.7 miles Northeast of the Project site.

Schools: The project site is located near Roosevelt Elementary School District and Hanford Joint Union High School District (HJUHS). HJUHS has three high schools, with the Project site zoned for Sierra Pacific High School. Hanford also contains four private schools. The Project site is located along Hanford Armona Road, about one-quarter mile south from the nearest school (Future Hope Preschool).

Parks: There are 26 park facilities totaling 299.70 acres within the City of Hanford. The City of Hanford provides different types of parks and open space facilities, or park types, to meet park and open space recreation needs of the community. The nearest park to the Project site is Centennial Park located approximately 0.90 miles east.

4.15.2 Applicable Regulations

Local

City of Hanford General Plan

Policy P37. Impact Fees for Police Facilities: Require new development to provide funding to meet the cost of providing vehicles, equipment, and structures, to meet the needs of new population growth.

Policy P47. Lighting for Safety: Facilitate public safety through the placement and design of outdoor lighting, while respecting the privacy of surrounding properties.

Policy P48. CPTED Principles for Safety: Create building and neighborhood design standards that are consistent with Crime Prevention through Environmental Design (CPTED) principles.

Policy P52. Impact Fees for Fire Facilities: Require developers to contribute impact fees to fund the cost of providing fire facilities needed to support new population growth and development.

Policy P59. Fire and Building Codes: Continue to enforce the California Fire Code, California Building Code, and Hanford Municipal Code to mitigate threats to safety and property.

Policy O65. Development Impact Fee for Parks: Adopt and periodically update a park development impact fee to fund new neighborhood and community parks needed to serve new growth.

Policy P79. Impact Fees for General Government Facilities: Require developers to contribute impact fees to fund the cost of providing expanded general government facilities needed to support new population growth and development.

4.15.3 Impact Analysis

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

i. Fire Protection:

Less than Significant Impact. The HFD will provide fire protection services to the proposed Project. The nearest fire station to the site is approximately 0.7 miles to the east. The Project's proximity to existing stations would support adequate service ratios, response times, and other objectives for fire protection services. There would not be a need for additional facilities for the proposed project. In addition, the HFD will review the Project for requirements related to water supply, fire hydrants, and fire apparatus access to the building(s) on site. However, to further reduce potential Project impacts, the Project shall be subject to Fire Protection Department Impact Fees. As a result, any impact would be less than significant.

ii. Police Protection:

Less than Significant Impact. The Project site is currently within the city sphere of influence and will be annexed into the city limits and therefore would be served by the HPD. The nearest police station to the proposed Project is located approximately 3.7-miles northeast from the site. While the Project may result in the need for additional police staff, the police facility is adequate in size to support additional officers, and within a distance that would allow the Department to maintain acceptable response times. Therefore, the Project would have a less than significant impact on police facilities and will not warrant the need for new or physically altered police facilities to maintain acceptable service ratios and meet performance objectives. Additionally, to further reduce potential Project impacts, the Project shall be subject to Police Protection Development Impact Fee.

iii. Schools:

Less than Significant Impact. Educational services needed for the development of the Project will be provided by the Hanford Elementary School District (HESD) and Hanford Joint Union High School District (HJUHSD). Payment of fees to a school district is considered mitigation for project impacts on school facilities (Government Code Section 65996(a)). Therefore, the project applicant would be required to pay the statutory fees to accommodate the impact of project-generated students, reducing impacts to a less than significant level.

iv. Parks:

Less than Significant Impact. The Project proposes a residential use and thus, would result in a net increase in the area population. As a new subdivision, the Project is subject to the Park Facilities Impact Fee in addition to the Quimby Act. Thus, to offset any potential impacts, the Project shall be subject to Park Facilities Impact Fees and the Quimby Act, whose funding goes towards the acquisition and development of parks space. The Project's impacts would be less than significant.

v. Other public facilities:

Less than Significant Impact. The City provides a wide range of public services to the public in addition to those services mentioned above. The City also provides animal control services, refuse pick-up, library facilities, and drainage management. These services are generally funded through the general fund, usage fees, fines and penalties or impact fee collection. The City of Hanford collects planning and building fees as well as impact fees for new development. Since the demand for other public facilities is driven by population, the proposed Project would be required to pay fees to offset the increase in the demand for that service. With those fees, any impacts would be less than significant.

4.16 RECREATION

Table 4-31: Recreation Impacts

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4.16.1 Baseline Conditions

Park and Recreation Facilities are overseen by the Hanford Parks and Community Services Department. According to the 2020 Parks and Recreation Master Plan, the City currently offers 299.70 acres of park land which equates to a total of 5.06 acres of park land per 1,000 residents based on the City's 2018 population.³⁶ The 2035 General Plan includes a standard goal of 3.5 acres per 1,000 residents for future growth. Similar to other public services, the City had established the Park Facilities Impact Fee pursuant to Chapter 15.44 of the HMC, which requires developers to pay for parks and recreational facilities improvements. The Project may also be subject to requirements of the Quimby Act, including park land dedication and/or payment of fees in-lieu thereof (or a combination of both). The nearest park to the Project site is Centennial Park located 0.9 miles east.

4.16.2 Applicable Regulations

Federal

There are no federal regulations pertaining to recreation that apply to the Project.

State

State Open Space Standards

State planning law (GC Section 65560) provides a structure for the preservation of open space by requiring every city and county in the state to prepare, adopt, and submit to the Secretary of the Resources Agency a "local open-space plan for the comprehensive and long-range preservation and conservation of open-space land within its jurisdiction." The following open space categories are identified for preservation:

- Open space for public health and safety, including, but not limited to, areas that require special management or regulation due to hazardous or special conditions.

³⁶ (City of Hanford 2020)

- Open space for the preservation of natural resources, including, but not limited to, natural vegetation, fish and wildlife, and water resources.
- Open space for resource management and production, including, but not limited to, agricultural and mineral resources, forests, rangeland, and areas required for the recharge of groundwater basins.
- Open space for outdoor recreation, including, but not limited to, parks and recreational facilities, areas that serve as links between major recreation and open space reservations (such as trails, easements, and scenic roadways), and areas of outstanding scenic and cultural value.
- Open space for the protection of Native American sites, including, but not limited to, places, features, and objects of historical, cultural, or sacred significance such as Native American sanctified cemeteries, places of worship, religious or ceremonial sites, or sacred shrines located on public property (further defined in PRC Sections 5097.9 and 5097.993).

Quimby Act

The 1975 Quimby Act (GC Section 66477) authorizes cities and counties to pass ordinances requiring that developers set aside land, donate conservation easements, or pay fees for park improvements. The Act states that the dedication requirement of parkland can be a minimum of three acres per thousand residents or more and up to five acres per thousand residents if the existing ratio is greater than the minimum standard. Revenues generated through in-lieu fees collected and the Quimby Act cannot be used for the operation and maintenance of park facilities. In 1982, the Act was substantially amended. The amendments further defined acceptable uses of, or restrictions on Quimby funds, provided acreage/ population standards and formulas for determining the exaction, and indicated that the exactions must be closely tied (i.e. via nexus) to project impacts as identified through studies required by CEQA.

Local

City of Hanford General Plan

Goal 08. A high-quality public park system that provides a variety of recreational opportunities

Goal 09. Parks provided at a combined ratio of 3.5 acres per 1,000 residents.

Policy 050. Parks, Recreation, and Open Space Master Plan. Prepare and periodically update a Parks, Recreation, and Open Space Master Plan to plan for new growth identified in the land use element

Policy 053. Parkland Ratio Calculation. When determining the parkland ratio of acres per 1,000 population, include the acreage of city-owned mini, neighborhood, community, regional, special use, and storm water basin parks, along with 50% of the acreage of school playgrounds and play areas within the Planned Area Boundary

Policy 061. Community Parks Service Area. Community parks shall have a general service area of approximately two mile radius, and situated to provide adequate access to arterial and/or collector streets.

Policy 065. Development Impact Fee for Parks. Adopt and periodically update a park development impact fee to fund new neighborhood and community parks needed to serve new growth.

4.16.3 Impact Analysis

- a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Less than Significant Impact. The Project proposes a residential use and thus, would result in a net increase in the area population. As a new subdivision, the Project is subject to the Park Facilities Impact Fee in addition to the Quimby Act. Compliance with these requirements would offset any impacts that would result in the need for new or physically altered parks. For these reasons, the Project would have a less than significant impact.

- b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Less than Significant Impact. The Project does not propose recreational facilities. As stated under criterion a) above, the Project is subject to the Park Facilities Impact Fee in addition to the Quimby Act. Through compliance with these requirements, the Project is paying its “fair share” for the future construction of facilities and/or to reimburse the City for such facilities. For these reasons, a less than significant impact would occur as a result of the Project.

4.17 TRANSPORTATION

Table 4-32: Transportation Impacts

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)??	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4.17.1 Baseline Conditions

The Project site would be located on an approximately 12.17-acre parcel along Hanford-Armona Road, between 12th Avenue and 13th Avenue. Hanford-Armona Road is an existing arterial roadway as designated by the City of Hanford General Plan Transportation & Circulation Element. There is one SR within the vicinity of the Project site, SR 198, located .32 miles north of the Project site.

4.17.2 Applicable Regulations

The Governor's Office of Planning and Research Technical Advisory³⁷ provide details on appropriate "screening thresholds" that can be used to identify when a proposed land use project is anticipated to result in a less-than-significant impact without conducting a more detailed VMT analysis. Screening thresholds include:

1. Residential and office projects within a Transit Priority Area
2. Locally serving retail projects up to 50,000 square feet
3. Residential, office, or mixed-use projects within low-VMT generating areas
4. 100 percent affordable housing projects
5. Projects that generate fewer than 110 daily trips

A land use project need only meet one of the above screening thresholds to result in a less than significant impact.

³⁷ (Governor's Office of Planning and Research 2018)

4.17.3 Thresholds

Aligning with the aforementioned Technical Advisory, a Project that meets any of the screening thresholds above are considered less than less than significant. Should a Project be unable to screen out, the Project must demonstrate a vehicle miles per capita equal to less than 15% of the regionwide average.

4.17.4 Impact Analysis

a) Would the project conflict with a plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less than Significant Impact. The Project would not conflict with a plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. The Project would not be in conflict with the standards and goals set forth in the City of Hanford General Plan Transportation & Circulation Element. The Project is required to submit improvement plans, including roadway improvements, for review and approval by the City Engineer to ensure improvements will be consistent with City standards. Therefore, there would be no impact.

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3 subdivision (b)?

Less than Significant Impact. The Project would result in the addition of 82 new homes to the City of Hanford, resulting in a population increase for the City. A rise in population for the area would result in an increased amount of VMT. The City of Hanford has identified the area as being located within a Low VMT-generating area as illustrated in **Appendix E**. As a result, the Project meets one of the five screening thresholds identified above. Therefore, impacts would be less than significant.

c) 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 Project would not increase hazards due to a geometric design feature or incompatible use. The Project would result in a point of access from two points from the Billingsley Ranch subdivision to the immediate east. Roadway design and width would be required to be approved by the City Engineer before construction could commence. Compliance with all applicable safety standards would be required and confirmed during the review of improvement plans. Therefore, impacts would be less than significant.

d) Would the project result in inadequate emergency access?

Less than Significant Impact. The Project would not result in inadequate emergency access as it proposes two points of access. While the construction for the Project would result in truck deliveries, hauling of materials, and construction crews, and improvement plans, any work completed in existing roadways would be required to be approved by the City Engineer before they could occur. Therefore, impacts would be less than significant.

4.18 TRIBAL CULTURAL RESOURCES

Table 4-33: Tribal Cultural Resources Impacts

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i. Listed or eligible for listing in the California Register of Historical Resources, or in the local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.18.1 Baseline Conditions

Penutian-speaking Yokuts tribal groups occupied the southern San Joaquin Valley region and much of the nearby Sierra Nevada. For a variety of historical reasons, existing research information emphasizes the central Yokuts tribes who occupied both the valley and particularly the foothills of the Sierra. The northernmost tribes suffered from the influx of Euro-Americans during the Gold Rush and their populations were in substantial decline by the time ethnographic studies began in the early twentieth century. In contrast, the southernmost tribes were partially removed by the Spanish to missions and eventually absorbed into multi-tribal communities on the Sebastian Indian Reservation (on Tejon Ranch), and later the Tule River Reservation and Santa Rosa Rancheria to the north. The result is an unfortunate scarcity of ethnographic detail on southern Valley tribes, especially in relation to the rich information collected from the central foothills tribes where native speakers of the Yokuts dialects are still found. Regardless, the general details of indigenous lifeways were similar across the broad expanse of Yokuts territory, particularly in terms of environmentally influenced subsistence and adaptation and with regard to religion and belief, which were similar everywhere.

Although population estimates vary and population size was greatly affected by the introduction of Euro-American diseases and social disruption, the Yokuts were one of the largest, most successful groups in Native California. It is estimated that the Yokuts region contained 27 percent of the aboriginal population in the state at the time of contact; other estimates are even higher. Many Yokuts people continue to reside in the southern San Joaquin Valley today, including at the nearby Santa Rosa Rancheria.

Records Search

A records search from the SSJVIC of CHRIS, located at California State University, Bakersfield was conducted in February 2023. The SSJVIC records search includes a review of all recorded archaeological and built-environment resources as well as a review of cultural resource reports on file. In addition, the California Points of Historical Interest, the California Historical Landmarks, the California Register of Historical Resources, the National Register of Historic Places, and the California State Built Environment Resources Directory listings were reviewed for the above referenced APE and an additional ½ mile radius. Due to the sensitive nature of cultural resources, archaeological site locations are not released. (Appendix C).

Additional sources included the State Office of Historic Preservation Historic Properties Directory, Archaeological Determinations of Eligibility, and the California Inventory of Historic Resources.

Native American Outreach

An SLF was requested from Native American Heritage Commission (NAHC) in Sacramento in February 2023. The NAHC was provided with a brief description of the Project and a map showing its location with a request that the NAHC perform a search of the Sacred Lands File to determine if any Native American resources have been recorded in the immediate APE. The NAHC identifies, catalogs, and protects Native American cultural resources -- ancient places of special religious or social significance to Native Americans and known ancient graves and cemeteries of Native Americans on private and public lands in California. The NAHC is also charged with ensuring California Native American tribes' accessibility to ancient Native American cultural resources on public lands, overseeing the treatment and disposition of inadvertently discovered Native American human remains and burial items, and administering the California Native American Graves Protection and Repatriation Act, among many other powers and duties. NAHC provide a current list of Native American Tribal contacts to notify of the project. ASM sent outreach letters to the tribes provided on the NAHC contact list on February 16, 2023, with follow-up emails sent to the tribes on 17 March 2023. The only response received was from the Santa Rosa Indian Community of the Santa Rosa Rancheria and who requested the following:

- The results of the archaeological survey;
- To be retained for a Cultural Presentation;
- To have a monitor onsite for all ground disturbance related to the project;
- To have a Burial Treatment Plan put in place; and,
- To have a Curation Agreement put in place.

(See Appendix C)

4.18.2 Applicable Regulations

State

California Environmental Quality Act

PRC Section 21083.2 Archaeological Resources: CEQA directs the lead agency to include in its environmental assessment for the project a determination of the project effects on unique archeological resources; defines unique archeological resource; enables a lead agency to require an applicant to make a reasonable effort to preserve or mitigate impacts to any affected unique archeological resource; sets requirements for the applicant to provide payment to cover costs of mitigation; and restricts excavation as a mitigation measure.

PRC Section 21084.1 Historic Resources: CEQA establishes that adverse effects on a historic resource qualifies as a significant effect on the environment; and defines historical resource.

CEQA Guidelines Section 15064.5: This section defines three ways that a property can qualify as a significant historical resource for the purposes of CEQA review:

- If the resource is listed in or determined eligible for listing in the California Register of Historical Resources;
- If the resource is included in a local register of historical resources, as defined in PRC Section 5020.1(k), or is identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g) unless a preponderance of evidence demonstrates that it is not historically or culturally significant; or
- If the lead agency determines the resource to be significant as supported by substantial evidence (CEQA Guidelines Section 15064.5)

In addition to determining the significance under CEQA and eligibility of any identified historical resource for the California Register, historic properties must be evaluated under the criteria for the National Register should federal funding or permitting become involved in any undertaking subject to this document.

CEQA Guidelines on Mitigation of Cultural Resources Impacts

CEQA Guidelines Section 15126.4 states that “public agencies should, whenever feasible, seek to avoid damaging effects on any historical resources of an archeological nature.” The Guidelines further state that preservation-in-place is the preferred approach to mitigate impacts on archaeological resources. However, according to Section 15126.4, if data recovery through excavation is “the only feasible mitigation,” then a “data recovery plan, which makes provision for adequately recovering the scientifically consequential information from and about the historical resources, shall be prepared and adopted prior to any excavation being undertaken.” Data recovery is not required for a resource of an archaeological nature if “the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the archaeological or historical resource.” The section further states that its provisions apply to those archaeological resources that also qualify as historic resources.

Native American Heritage Act

Also relevant to the evaluation and mitigation of impacts to cultural resources is the Native American Heritage Act of 1976 which established the NAHC and protects Native American religious values on state property (see PRC Section 5097.9).

Public Notice to California Native American Indian Tribes

GC Section 65092 includes California Native American tribes that are on the contact list maintained by the NAHC in the definition of “person” to whom notice of public hearings shall be sent by local governments.

Disposition of Human Remains (Health and Safety Code Section 7050.5)

When an initial study identifies the existence, or the probable likelihood, of Native American human remains within the project, a lead agency shall work with the appropriate Native American groups or individuals as identified by the NAHC as provided in PRC Section 5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains, and any items associated with Native American burials. Furthermore, HSC Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the county coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the NAHC.

California Native American Graves Protection and Repatriation Act of 2001

HSC Sections 8010-8011 establish a State repatriation policy intent that is consistent with and facilitates implementation of NAGPRA. The Act strives to ensure that all California Indian human remains, and cultural items are treated with dignity and respect. It encourages voluntary disclosure and return of remains and cultural items by publicly funded agencies and museums in California. It also states the intent for the state to provide mechanisms for aiding California Indian tribes, including non-federally recognized tribes, in filing repatriation claims and getting responses to those claims.

4.18.3 Impact Assessment

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- i. Listed or eligible for listing in the California Register of Historical Resources, or in the local register of historical resources as defined in Public Resources Code section 5020.1(k), or

Less than Significant Impact with Mitigation Incorporated. A record search of the NAHC Sacred Lands File was completed for the Project area and the results were negative for the presence of Native American tribal cultural resources. A records search from CHRIS at SSJVIC also confirmed that there are no recorded cultural or historical resources within the Project area. Less than significant impacts, with mitigation incorporated, to tribal resources are expected. Mitigation Measures **CUL-1**, **CUL-2** and **CUL-3**, described above in **Cultural Resources**, as well as **TCR-1** and **TCR-2** are recommended in the event tribal cultural materials or human remains are unearthed during excavation or construction.

- ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less than Significant Impact with Mitigation Incorporated. The City of Hanford, as the public lead agency, received a letter from the Santa Rosa Indian Community of the Santa Rosa Rancheria pursuant to PRC § 21080.3.1 (AB 52) officially requesting notification of Projects within the Santa Rosa Rancheria’s geographic area of traditional and cultural affiliation. On **May 18, 2023** the City sent the Tribe a formal

letter including a Project description. In accordance with the law, the letter provided 30 days from receipt of the letter to request consultation in writing. One request for tribal consultation was made for the Project. The requests from the Tribe have been incorporated into this document as mitigation measures **TCR-1, TCR-2, and TCR-3**. Implementation of **TCR-1, TCR-2, and TCR-3** mitigation measures outlined below will reduce any impacts to Tribal Cultural Resources will be less than significant.

In addition, although there is little chance the Project would cause a substantial adverse change to the significance of a tribal cultural resource as defined. Mitigation Measure **CUL-1, CUL-2 and CUL-3**, described in **Cultural Resources** is recommended in the event cultural materials or human remains are unearthed during excavation or construction.

4.18.4 Mitigation

See **CUL-1, CUL-2, & CUL-3** identified in **Cultural Resources**

- | | |
|--------------|--|
| TCR-1 | (Tribal Cultural Resource Presentation): Due to Tribal history and knowledge of the project area, the Santa Rosa Rancheria Tachi Yokut Tribe has concerns and is requesting to be retained for a cultural sensitivity awareness presentation to all construction staff of the Project, prior to start of construction activities. |
| TCR-2 | (Tribal Cultural Monitoring): An approved Tribal Monitor shall be retained to be on site to monitor during all project-related ground-disturbing construction activities within the Cultural APE (i.e., grading, excavation, etc.). |
| TCR-3 | (Curation of Archaeological Collections): A curation agreement shall be entered into with the Santa Rosa Rancheria Tachi Yokut Tribe, materials and documents would be professionally curated as outlined in agreement and made available to other archaeologists or researchers for further study. The collections and associated records shall be transferred, to an appropriate curation facility as outlined in agreement with Santa Rosa Rancheria Tachi Yokut Tribe, to be accompanied by payment. |

4.19 UTILITIES AND SERVICE SYSTEMS

Table 4-34: Utilities and Service Systems Impacts

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

4.19.1 Baseline Conditions

The City of Hanford provides water, sewer and garbage services to residential, commercial, industrial, and institutional customers located within the City.

Wastewater

The City of Hanford wastewater system provides for treatment, disposal, and reuse of effluent, which meets all of the state's discharge requirements for the City. The wastewater system consists of a treatment plant and 21 sanitary sewer lift stations located throughout the City. The treatment facility has a capacity of 8 million gallons per day and is located south of Houston Avenue and East of 11th Avenue. The City's wastewater system also pursues water conservation strategies to ensure long-term reuse of treated disinfected wastewater to reduce the need for groundwater.

Solid Waste and Recycling

Solid waste in the City is collected by Kings Waste Recycling Authority (KWRA). Refuse is sorted at the KWRA facility to recover recyclable materials before being hauled to the landfill in Kettleman Hills. For single-family residential customers, the City has instituted a green waste collection mixed recycle collection program to aid in achieving the California-enacted legislation bill AB 939.

Water Service Company

The City of Hanford's water supply system is a groundwater system. The City is located within the Tulare Lake Hydrologic Region and is within the Tulare Lake Groundwater Subbasin which transmits, filters, and stores water from the main San Joaquin Valley Groundwater Basin. The system consists of 14 groundwater wells, three storage reservoirs, distribution mains, and fire hydrants. The system does not use surface water. Groundwater is recharged by rain and snowfall in addition to percolation from storm water basins, local waterways, and agricultural irrigation.

Natural Gas & Electricity

PG&E and Southern California Edison Company are the natural gas and electric service providers for the area, incrementally expands and updates its service system as needed to serve its users.

4.19.2 Applicable Regulations

State

State Water Resources Control Board – Waste Discharge Requirements Program

State regulations pertaining to the treatment, storage, processing, or disposal of solid waste are found in Title 27, CCR, Section 20005 et seq. (hereafter Title 27). In general, the WDR Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g. sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDR Program also includes the discharge of wastes classified as inert, pursuant to Section 20230 of Title 27³⁸. Several programs are administered under the WDR Program, including the Sanitary Sewer Order and recycled water programs.

Department of Resources Recycling and Recovery (CalRecycle)

The Department of Resources Recycling and Recovery (CalRecycle) is the State agency designated to oversee, manage, and track wastes generated in California. In 2015, statewide disposal was 33.2 million tons of solid waste. CalRecycle develops laws and regulations to control and manage waste, for which enforcement authority is typically delegated to the local government. The board works jointly with local government to implement regulations and fund programs.

The Integrated Waste Management Act of 1989 (PRC 40000, et seq.) or AB 939, administered by CalRecycle, requires all local and county governments to adopt a Source Reduction and Recycling Element to identify means of reducing the amount of solid waste sent to landfills. This law set reduction targets at 25 percent by the year 1995 and 50 percent by the year 2000. To assist local jurisdictions in achieving these targets, the California Solid Waste Reuse and Recycling Access Act of 1991 requires all new developments to include adequate, accessible, and convenient areas for collecting and loading recyclable and green waste materials.

³⁸ (State of California Water Resources Control Board 2022)

National Pollutant Discharge Elimination System Permit

As authorized by the CWA, the NPDES Permit Program controls water pollution by regulating point sources that discharge pollutants into water of the United States. In California, it is the responsibility of SWRCB and RWQCBs to preserve and enhance the quality of the States waters through the development of water quality control plans and the issuance of WDR. WDRs for discharges to surface waters also serve as NPDES permits.³⁹ NPDES permits also regulate the requirements of the MS4 discharges to surface waters.

California Department of Water Resources

DWR is responsible for the management and regulation of water usage in the State of California.

Water Conservation Act of 2009 (SB X7-7)

This State legislative package mandates a 20 percent statewide reduction of urban per capita water use by the year 2020. Its provisions require urban water suppliers to adopt reduction targets according to baseline water use determinations, and agricultural water suppliers to prepare agricultural water management plans. Following SB X7-7, urban water management plans must include baseline water use and reduction targets, and report on target compliance. In addition to adopting agricultural water management plans, agricultural water suppliers must measure the volume of water delivered according to methodology adopted by DWR and adopt specified efficient water management practices. Non-compliance would be penalized by disqualification for State water grants and loans. Failure to meet targets after the 2020 deadline would be considered a violation of the law.

State Water Quality Certification Program

The RWQCBs also facilitates the State Water Quality Certification Program or Section 401 Certification of the CWA. Under Section 401, states have the authority to review any permit or license that would result in a discharge or disruption to wetlands and other waters under state jurisdiction, to ensure that the actions would be consistent with the state water quality requirements. This program is most often associated with the CWA Section 404, which obligates the USACE to issue permits for the movement of dredge and fill material into and from the “waters of the United States.” Additionally, Section 404 requires permits for activities affecting wetlands. Prospective alterations of hydrologic features such as wetlands, rivers, and ephemeral creek beds resulting from construction require Section 404 NWP.

Construction Stormwater NPDES Permit

A CGP for Discharges of Storm Water Associated with Construction Activity (CGP, Water Quality Order No. 2009-0009-DWQ) is required for dischargers or projects who disturb one acre or more of soil or whose project disturbs less than one acre, but which is part of a larger common plan of development that in total disturbs one acre or more. The SWRCB established the CGP program to reduce surface water impacts from construction activities. This CGP was adopted in September 2009 and went into effect July 2010.

The CGP requires the development of PRDs which include the development and implementation of a SWPPP. The SWPPP must contain a site map(s) which shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project. The SWPPP must list/describe BMPs the discharger would use to prevent polluted stormwater runoff and show the placement of those BMPs. Additionally, the SWPPP must contain a visual monitoring program, a chemical monitoring program for “non-visible” pollutants, and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Attachment B of the CGP describes the elements that must be contained in a SWPPP. Additional PRD requirements are described in Attachments C-E in the CGP.

³⁹ (State of California Water Resources Control Board 2022)

Phase II MS4 Permit

The Municipal Storm Water Permitting Program established under NPDES regulates storm water discharges from MS4s. In the first phase, the SWRCB issued permits to medium and large municipalities, typically grouped as co-permittees in a metropolitan region. In the second phase, the SWRCB adopted a General Permit for the Discharge of Storm Water from Small MS4s. In 2013, SWRCB, in response to the EPA, issued Water Quality Order No. 2013-001-DWQ NPDES General Permit No. CAS000004, Waste Discharge Requirements for Storm Water Discharges from Small MS4s in February 2013 which went into effect July 2013. The MS4 Permit requires urban municipalities with predetermined inclusion reequipments to file an application and comply with prescriptive tasks over the 5-year permit term. The prescriptive tasks include, but are not limited to, public outreach and involvement, IDDE, construction site runoff control, post-construction storm water management, municipality facility and operation good housekeeping, water quality monitoring, and municipality assessment and reporting.

The City applied with the SWRCB under the Phase II MS4 Permit in July 2013, covering the City itself, and the Storm Water Management Program for County, which covers all unincorporated parts of the County, including areas within the Study Area. The City is currently in the process of adopting a Storm Water Ordinance. The City, under previous permit issuances, developed and adopted Stormwater Management Plans in 2005 and 2008, respectively. The City is currently developing a revision, under the current MS4 Permit, to its Stormwater Management Plan.

Central Valley Regional Water Quality Control Board

The primary responsibility for the protection of water quality in California rests with the SWRCB and nine RWQCB. The SWRCB sets statewide policy for the implementation of state and federal laws and regulations. The RWQCBs adopt and implement Water Quality Control Plans (Basin Plans) which recognize regional differences in natural water quality, actual and potential beneficial uses, and water quality problems associated with human activities.

The City is located within the jurisdiction of the Central Valley RWQCB in an area identified as the Tulare Lake Basin, which comprises the drainage area of the San Joaquin Valley south of the San Joaquin River. This basin consists of approximately 10.5 million acres, and includes the metropolitan areas of Bakersfield, Fresno, Porterville, Hanford, Tulare, and Visalia.⁴⁰ The Regional Board has set water quality objectives for both surface and ground water, which it achieves through an implementation plan. The RWQCB efforts emphasize the importance of controlling toxic discharges and address ground water salinity, which is identified as the greatest long-term problem facing the basin.⁴¹

The Regional Board identifies the elimination of groundwater overdraft as an important tool to use to combat the increasing salinity of the basin, as continued overdraft would deplete good quality water supplies and introduce salts from poorer quality aquifers. Groundwater recharge is recommended as a major mechanism to prevent further groundwater overdraft.⁴²

⁴⁰ (State of California Water Boards-Central Valley Region 5 2022)

⁴¹ Ibid.

⁴² (State of California Water Boards-Central Valley Region 5 2022)

4.19.3 Impact Analysis

- a) Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less than Significant Impact. The proposed project will be within City limits after annexation, and will be required to connect to water, stormwater, solid waste, and wastewater services. The project would not require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation which could cause significant environmental effects. Therefore, there is a less than significant impact.

- b) Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Less than Significant Impact. The Project site is not located in an adjudicated subbasin, and the 2020 UWMP indicates that CalWater has no issue meeting demands of this project or future projects during normal, dry, and multiple dry years. Impacts would be less than significant.

- c) Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less than Significant Impact. The City of Hanford operates and maintains a sewer system that covers the majority of the area within the City limits. The existing sewer collection conveys flows to the City's Wastewater Treatment Plant. The Hanford Wastewater Treatment Plant (WWTP) is an 8.0 MGD secondary treatment facility that currently operates at an average flow of 4.7 MGD.⁴³ The WWTP has adequate capacity to serve the Project in addition to its existing commitments, therefore the Project would have a less than significant impact on wastewater capacity.

- d) Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less than Significant Impact. KWRA provides solid waste services to the Project site. Because the City's existing infrastructure has the capacity to accommodate the solid waste currently planned in the General Plan for expanded population, it can be inferred that the existing solid waste infrastructure has adequate capacity to serve the Project. Although, the Project would be subject to refuse impact fees. The Project would not generate solid waste in excess of State or Local Standards and the impact is less than significant.

- e) Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less than Significant Impact. The Project will be required to comply with all regulations applicable to solid waste generation for residential projects. In order for the Project to comply with local regulations, the Project would be provided with basic container service. Each property owner will receive a container for solid waste, green waste, and recyclable materials. Impacts would be considered less than significant.

⁴³ (City of Hanford 2017)

4.20 WILDFIRE

Table 4-35: Wildfire Impacts

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

4.20.1 Baseline Conditions

The Project site is located in an area that is not designated as being a very high fire hazard severity zone.⁴⁴ The Project site is also not located in an area that has been designated as an SRA by the California Board of Forestry and Fire Protection's State Responsibility Area Viewer.⁴⁵ The site is considered a local responsibility area and is served by City of Hanford Fire Department.

4.20.2 Impact Analysis

- a) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?
- b) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project due to slope, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?
- c) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure (such as roads,

⁴⁴ (California Department of Forestry and Fire Protection 2023)

⁴⁵ (California Department of Forestry and Fire Protection 2023)

fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

- d) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

a-d) No Impact. The Project would not be located within or near an area that has been designated as a very-high fire hazard severity zone, nor has it been designated as an SRA. The Project would result in the construction of a new 82 home small-lot subdivision on land within the City of Hanford. The lot is mostly vacant, with an existing house that would be demolished as part of the Project. Therefore, there would be no impact.

4.21 CEQA MANDATORY FINDINGS OF SIGNIFICANCE

Table 4-36: CEQA Mandatory Findings of Significance

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

4.21.1 Statement of Findings

- a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less than Significant Impact with Mitigated Incorporated. The analysis conducted in this Initial Study/Mitigated Negative Declaration results in a determination that the Project, with incorporation of mitigation measures, will have a less than significant effect on the environment. The potential for impacts to agriculture, biological resources, cultural resources, geology, and tribal cultural resources from the implementation of the proposed Project will be less than significant with the incorporation of the mitigation measures discussed in this analysis. Accordingly, the proposed Project will involve no potential for significant impacts through the degradation of the quality of the environment, the reduction in the habitat or population of fish or wildlife, including endangered plants or animals, the elimination of a plant or animal community or example of a major period of California history or prehistory.

- b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Less than Significant Impact. CEQA Guidelines Section 15064(i) states that a Lead Agency shall consider whether the cumulative impact of a project is significant and whether the effects of the project are cumulatively considerable. The assessment of the significance of the cumulative effects of a project must, therefore, be conducted in connection with the effects of past projects, other current projects, and probable future projects. The Project would include the development of a new residential subdivision and associated infrastructure to connect the subdivision to the City of Hanford. The Project site was anticipated for urbanization with the development of the City’s General Plan. Therefore, implementation of the Project would not result in significant cumulative impacts and all potential impacts would be reduced to less than significant through the implementation of mitigation measures and basic regulatory requirements incorporated into Project design.

- c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less than Significant Impact. The analysis conducted in this Initial Study results in a determination that the Project would have a less than a substantial adverse effect on human beings, either directly or indirectly.

CHAPTER 5 MITIGATION, MONITORING, AND REPORTING PROGRAM

This Mitigation Monitoring and Reporting Program (MMRP) has been formulated based upon the findings of the Initial Study/Mitigated Negative Declaration (IS/MND) for the Project in the City of Hanford. The MMRP lists mitigation measures recommended in the IS/MND for the Project and identifies monitoring and reporting requirements.

Table 5-1: Mitigation, Monitoring, and Reporting Program presents the mitigation measures identified for the Project. Each mitigation measure is numbered with a symbol indicating the topical section to which it pertains, a hyphen, and the impact number. For example, AIR-2 would be the second mitigation measure identified in the Air Quality analysis of the IS/MND.

The first column of **Table 5-1: Mitigation, Monitoring, and Reporting** Program identifies the mitigation measure. The second column, entitled “When Monitoring is to Occur,” identifies the time the mitigation measure should be initiated. The third column, “Frequency of Monitoring,” identifies the frequency of the monitoring of the mitigation measure. The fourth column, “Agency Responsible for Monitoring,” names the party ultimately responsible for ensuring that the mitigation measure is implemented. The last columns will be used by the Lead and Responsible Agencies to ensure that individual mitigation measures have been complied with and monitored.

Table 5-1: Mitigation, Monitoring, and Reporting Program

Mitigation, Monitoring, and Reporting Program						
Item	Mitigation Measure	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance
Agricultural and Forestry Resources						
AG-1	That a right-to farm provision be recorded with the recording of the final subdivision map to ensure that future residents of the homes in the project area are aware of the adjacent agricultural uses and their right to continue to operate.	With the recording of the final subdivision map	Once	City of Hanford	Recorded Disclosure Agreement	
AG-2	Prior to development, the Williamson Act Contract shall be cancelled and applicable cancellation fees shall be paid to the County Treasure in accordance with Government Code Section 51283(b). In the event that the City exercises the option of not succeeding to the Contract pursuant to Government Code Section 51243.5(d), and such action is approved by the Local Agency Formation Commission, the Contract will be terminated, no cancellation is required, and no cancellation fees are required to be paid.	Prior to construction	Once	City of Hanford	Contract Termination Documents	
Biological Resources						
BIO-1	(Avoidance): The Project's construction activities will occur, if feasible, between September 16 and January 31 (outside of the	Prior to the start of construction activities	Once	City of Hanford	Construction Schedule	

Mitigation, Monitoring, and Reporting Program						
Item	Mitigation Measure	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance
	nesting bird season) to avoid impacts to nesting birds.					
BIO-2	(Pre-construction Survey): If activities must occur within the nesting bird season (February 1 to September 15), a qualified biologist will conduct a pre-construction survey for Swainson's Hawk nests onsite and within a 0.5-mile radius. The pre-construction survey would also provide a presence/absence survey for all other nesting birds within the APE, no more than seven (7) days prior to the start of construction. All raptor nests would be considered "active" upon the nest-building stage.	Prior to the start of construction activities	Once	City of Hanford	Submittal of Pre-Construction Survey	
BIO-3	(Establish Buffers): On discovery of any active nests near work areas, the biologist will determine appropriate construction setback distances based on applicable CDFW and/or USFWS guidelines and/or the biology of the species in question. If necessary, construction buffers will be identified with flagging, fencing, or other easily visible means, and will be maintained until the biologist has determined that the nestlings have fledged.	Prior to the start of construction activities	Once	City of Hanford	Report from Biologist	
BIO-4	(Consultation with CDFW): In the event an active Swainson's Hawk nest, or other nest is detected during surveys and could be impacted by the Project, consultation with CDFW will be warranted to discuss how to implement the Project and avoid impacts to the nest.	Prior to the start of construction activities	Once	City of Hanford	Report from Biologist	

Mitigation, Monitoring, and Reporting Program						
Item	Mitigation Measure	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance
BIO-5	(Pre-Construction Survey): A pre-construction survey will be performed within five days of building and tree removal. A qualified biologist will inspect the buildings and trees for active roosts. If the building or trees are determined to be clear of bats, they will be removed within five days.	Prior to the start of construction activities	Once	City of Hanford	Report from Biologist	
BIO-6	(Establish Buffers): On discovery of any roosts in the APE, a qualified biologist will determine appropriate construction setback distances. Buffer will be removed once a qualified biologist had determined the bat roosts are no longer occupied.	Prior to the start of construction activities	Once	City of Hanford	Report from Biologist	
BIO-7	(Passive Relocation): On discovery of any bat roosts outside of the maternity roosting season or overwintering season (September 1 to November 30), bats may be passively relocated from the roosts by a qualified biologist in accordance with a bat relocation plan prepared for the Project site by a qualified biologist. The bat relocation plan shall include the methods to be used to safely exclude bats from the roost and prevent reentry.	Prior to the start of construction activities	Once	City of Hanford	Report from Biologist	
Cultural Resources						
CUL-1	That a Burial Treatment Plan be entered to by the applicant/property owner prior to any earth disturbing activities.	Prior to earth-disturbing activities	Once	City of Hanford	Executed Plan	
CUL-2	Should archaeological remains or artifacts be unearthed during any stage of project activities, work in the area of discovery shall cease until the area is evaluated by a qualified archaeologist. If mitigation is warranted, the	During construction activities	Continuously	City of Hanford	Qualified Archaeologist Report	

Mitigation, Monitoring, and Reporting Program						
Item	Mitigation Measure	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance
	project proponent shall abide by recommendations of the archaeologist.					
CUL-3	In the event that any human remains are discovered on the Project site, the Kings County Coroner must be notified of the discovery (California Health and Safety Code, Section 7050.5) and all activities in the immediate area of the find or in any nearby area reasonably suspected to overlie adjacent human remains must cease until appropriate and lawful measures have been implemented. If the Coroner determines that the remains are not recent, but rather of Native American origin, the Coroner shall notify the Native American Heritage Commission (NAHC) in Sacramento within 24 hours to permit the NAHC to determine the Most Likely Descendent of the deceased Native American.	During construction activities	Continuously	City of Hanford	City of Hanford with assistance of County Coroner	
Geology and Soils						
GEO-1	Should paleontological resources be encountered on the Project site, all ground disturbing activities in the area shall stop. A qualified paleontologist shall be contacted to assess the discovery. Mitigation may include monitoring, recording the fossil locality, data recovery and analysis, a final report. Public educational outreach may also be appropriate. Upon completion of the assessment, a report documenting methods, findings, and recommendations shall be prepared and submitted to the City of Hanford for review, and (if paleontological materials are recovered) a paleontological repository, such	During construction activities	Continuously	City of Hanford	Qualified Paleontologist Report	

Mitigation, Monitoring, and Reporting Program						
Item	Mitigation Measure	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance
	as the University of California Museum of Paleontology.					
Tribal Cultural Resources						
TRC-1	(Tribal Cultural Resource Presentation): Due to Tribal history and knowledge of the project area, the Santa Rosa Rancheria Tachi Yokut Tribe has concerns and is requesting to be retained for a cultural sensitivity awareness presentation to all construction staff of the Project, prior to start of construction activities.	Prior to the start of construction activities	Continuously	City of Hanford	City of Hanford Presentation	
TRC-2	(Tribal Cultural Monitoring): An approved Tribal Monitor shall be retained to be on site to monitor during all project-related ground-disturbing construction activities within the Cultural APE (i.e., grading, excavation, etc.).	Prior to the start of construction activities	Continuously	City of Hanford	City of Hanford	
TRC-3	(Curation of Archaeological Collections): A curation agreement shall be entered into with the Santa Rosa Rancheria Tachi Yokut Tribe, materials and documents would be professionally curated as outlined in agreement and made available to other archaeologists or researchers for further study. The collections and associated records shall be transferred, to an appropriate curation facility as outlined in agreement with Santa Rosa Rancheria Tachi Yokut Tribe, to be accompanied by payment.	Prior to the start of construction activities	Continuously	City of Hanford	City of Hanford	

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Appendix A: Air Quality Report

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Stonehaven Subdivision

Hanford, California

April 2023

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Table of Contents

1	Executive Summary	1-1
1.1	Purpose and Methods of Analysis	1-1
1.2	Project Description	1-1
1.3	Summary of Analysis Results	1-1
2	Air Quality	2-2
2.1	Regulatory Setting	2-2
2.1.1	Federal	2-2
2.1.2	State	2-2
2.1.3	Regional	2-3
2.1.4	Local	2-4
2.2	Environmental Setting	2-5
2.2.1	Climate Meteorology, Topography	2-5
2.2.2	Attainment Status	2-5
2.2.3	Ambient Air Quality Levels	2-6
2.3	Threshold of Significance	2-7
2.4	Methodology	2-8
2.4.1	Short-Term Construction-Generated Emissions	2-8
2.4.2	Long-Term Operational Emissions	2-8
2.5	Impact Analysis	2-8
2.5.1	Consistency with Air Quality Plan	2-9
2.5.2	Cumulative Criteria Pollutant Impacts	2-9
2.5.3	Sensitive Receptors	2-11
2.5.4	Objectionable Odors	2-2
3	Greenhouse Gases	3-3
3.1	Regulatory Setting	3-3
3.1.1	Federal	3-3
3.1.2	State	3-4
3.1.3	Local	3-7
3.2	Threshold of Significance	3-7
3.3	Methodology	3-8
3.3.1	Short-Term Construction-Generated Emissions	3-8
3.3.2	Long-Term Operational Emissions	3-8

3.4	Impact Analysis	3-8
3.4.1	Greenhouse Gas Inventory	3-8
3.4.2	Greenhouse Gas Reduction Plans.....	3-9
4	References	4-15
5	Air Quality Output Files	5-16

List of Tables

Table 1-1	Impact Summary.....	1-1
Table 2-1:	Ambient Air Quality Attainment Designation	2-6
Table 2-2:	Summary of Annual Data on Ambient Air Quality (2018-2020)	2-7
Table 2-3:	Thresholds of Significance for Criteria Air Pollutants.....	2-7
Table 2-4:	Screening Levels for Potential Odor Sources.....	2-7
Table 2-5:	Thresholds of Significance for Toxic Air Contaminants.....	2-8
Table 2-6	Construction Emission Summary, Criteria Air Pollutants	2-10
Table 2-7	Operational Emissions Summary, Criteria Air Pollutants	2-10
Table 2-8	Maximum Daily Construction and Operational Emissions, Criteria Air Pollutants.....	2-11
Table 3-1	Construction Emissions, Greenhouse Gases	3-8
Table 3-2	Operational Emissions, Greenhouse Gases	3-9
Table 3-3	AB 32 Consistency Table	3-9
Table 3-4	SB 32 Consistency Table	3-12
Table 3-5	AB 1279 Consistency Table	3-14

Abbreviations

AB.....	Assembly Bill
APCD	Air Pollution Control District
AQ.....	Air Quality
AQMD.....	Air Quality Management District
AQP	Air Quality Plan
BPS.....	Best Performance Standards
CAFE.....	Corporate Average Fuel Economy
CARB.....	California Air Resources Board
CAAQS.....	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CalGreen Code.....	California Green Building Standards Code
CCA.....	Clean Air Act
CCAA	California Clean Air Act
CCR.....	California Code of Regulations
CEC.....	California Energy Commission
CEQA.....	California Environmental Quality Act
City	City of Hanford
CO	Carbon monoxide
DCP.....	Dust Control Plan
District.....	San Joaquin Valley Air Pollution Control District
DPM.....	Diesel particulate matter
EMFAC	ARB Emission Factor
EO	Executive Order
EPA.....	United States Environmental Protection Agency
GAMAQI.....	<i>Guideline for Assessing and Mitigating Air Quality Impacts</i>
GHG	Greenhouse Gas
IPCC.....	United Nations Intergovernmental Panel on Climate Change
Lead Agency	City of Hanford
MTCO _{2e}	Metric Tons Carbon Dioxide Equivalent
NAAQS.....	National Ambient Air Quality Standards
NHTSA	National Highway Traffic Safety Administration
NO _x	Oxides of Nitrogen

PM ₁₀	Particulate matter 10 microns or less
PM _{2.5}	Particulate matter 2.5 microns or less
Project	Stonehaven Subdivision
ROG	Reactive organic gases
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SIP	State Implementation Plan
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SLCP	Short-Lived Climate Pollutant
SO ₂	Sulfur dioxide
TAC	Toxic Air Contaminant
VOC	Volatile Organic Compounds
ZEV	Zero Emission Vehicles

1 Executive Summary

1.1 Purpose and Methods of Analysis

The following air quality (AQ) and greenhouse gas (GHG) analysis was prepared to evaluate whether the estimated criteria air pollutants, toxic air contaminants (TACs), and GHG emissions generated from the construction and operation of the Stonehaven Subdivision (Project) would cause significant impacts to air resources in the Project area. 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 (SJVAPCD or District) for quantification of emissions and evaluation of potential impacts to air resources¹ and the SJVAPCD's *Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA*.²

1.2 Project Description

The Project proposes to develop a 82-dwelling unit detached single-family residential subdivision. The Project site is approximately 11.81 acres. Project construction is expected to begin in August 2023 and end in March 2025. One single-family dwelling of approximately 2,000 square feet in floor area, would be demolished.

1.3 Summary of Analysis Results

The following is a summary of the analysis results. As shown below, the Project would result in less than significant impacts for all air quality impact criteria, and all GHG impact criteria analyzed.

Table 1-1 Impact Summary

Impact	Appendix G Question	Result
AIR-1	The project would not conflict with or obstruct implementation of the applicable air quality plan.	Less than Significant Impact.
AIR-2	The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors).	Less than Significant Impact.
AIR-3	The project would not expose sensitive receptors to substantial pollutant concentrations.	Less than Significant Impact.
AIR-4	The project would not create objectionable odors affecting a substantial number of people.	Less than Significant Impact.
GHG-1	The project would not generate direct or indirect greenhouse gas emissions that would result in a significant impact on the environment.	Less than Significant Impact.
GHG-2	The project would not conflict with any applicable plan, policy or regulation of an agency adopted to reduce the emissions of greenhouse gases.	Less than Significant Impact.

¹ (San Joaquin Valley Air Pollution Control District, 2015)

² (San Joaquin Valley Air Pollution Control District, 2009)

2 Air Quality

2.1 Regulatory Setting

2.1.1 Federal

At the federal level, the United States Environmental Protection Agency (EPA) has been charged with implementing national air quality programs. The EPA's air quality mandates are drawn primarily from the federal Clean Air Act (CAA). The federal CAA was first signed into law in 1963. Congress substantially amended the federal CAA in 1970, 1977, and 1990.

The EPA deals with global, international, national, and interstate air pollution issues. Their primary role at the state level is one of oversight of state air quality programs. The EPA sets federal standards for vehicle and stationary sources and provides research and guidance in air pollution programs.

The federal CAA required the EPA to set National Ambient Air Quality Standards (NAAQS) for several problem air pollutants on the basis of human health and welfare criteria. Two types of NAAQS have been established: primary standards, which protect public health, and secondary standards, which protect public welfare (e.g., crops, forests, materials, visibility, etc.). Primary NAAQS have been established for the following criteria air pollutants:

- Carbon monoxide (CO)
- Ozone (O₃)
- Respirable particulate matter (PM₁₀)
- Fine particulate matter (PM_{2.5})
- Nitrogen dioxide (NO₂)
- Sulfur dioxide (SO₂)
- Lead (Pb)

All of the above, except CO, also have some form of secondary standard. The primary NAAQS standards are intended to protect, within an adequate margin of safety, those persons most susceptible to respiratory distress, such as people suffering from asthma or other illness, the elderly, very young children, or others engaged in strenuous work or exercise.

The EPA designates areas with air quality not meeting federal standards as “nonattainment.” The federal CAA further classifies nonattainment areas based on the severity of the nonattainment problem, with marginal, moderate, serious, severe, and extreme nonattainment classifications for ozone. Nonattainment classifications for PM range from marginal to serious.

The federal CAA requires areas with air quality violating the NAAQS to prepare an air quality control plan referred to as the State Implementation Plan (SIP). The SIP contains the strategies and control measures that states such as California will use to attain the NAAQS. The federal CAA amendments of 1990 require states containing areas that violate the NAAQS to revise their SIP to incorporate additional control measures to reduce air pollution. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, planning documents, rules, and regulations of Air Basins as reported by the agencies with jurisdiction over them. The EPA reviews SIPs to determine if they conform to the mandates of the federal CAA amendments and will achieve air quality goals when implemented. If the EPA determines a SIP to be inadequate, it may prepare a Federal Implementation Plan for the nonattainment area and impose additional control measures.

In addition to setting health-based standards for air pollutants, the EPA also oversees state and local actions to improve air quality. The following list provides a brief explanation of important regulations set forth by EPA:

Federal Clean Air Act (CAA)

- Requires air quality plans to include measures necessary to achieve NAAQS.
- Requires all plans, programs, and projects that require federal approval, including transportation plans, to conform to air quality plans.
- Requires sanctions if all feasible measures are not expeditiously adopted.

2.1.2 State

States are required to develop and implement air pollution control plans designed to achieve and maintain the NAAQS established by the EPA. States may also establish their own standards, provided the state standards are at least as stringent as the NAAQS. California has established California Ambient Air Quality Standards (CAAQS) pursuant to Health and Safety Code Section 39606(b) and its predecessor statutes.

The California Legislature established the Air Resources Board (CARB) in 1967. The CARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA) of 1988. The CCAA provides a planning framework for attainment of the CAAQS for O₃, CO, SO₂, and NO₂. The CCAA classifies ozone nonattainment areas as moderate, serious, severe, and extreme based on severity of violation of state ambient air quality standards. For each class, the CCAA specifies air quality management strategies that must be adopted. For all nonattainment categories, attainment plans are required to demonstrate a five-percent-per-year reduction in nonattainment air pollutants or their precursors, averaged every consecutive three-year period, unless an approved alternative measure of progress is developed. Air districts responsible for air basins with air quality that is in violation of CAAQS for O₃, CO, SO₂, and NO₂ are required to prepare an air quality attainment plan that lays out a program to attain the CCAA mandates.

Other CARB duties include monitoring air quality in conjunction with air monitoring networks maintained by air pollution control districts (APCDs) and air quality management districts (AQMDs), establishing CAAQS (which are more stringent than the NAAQS in many cases), setting emissions standards for new motor vehicles, and reviewing district input for the SIP required by the federal CAA amendments. The SIP consists of the emissions standards for vehicular sources set by the CARB as well as attainment plans adopted by the APCD or AQMD and approved by the CARB.

The State of California, through the CARB and Bureau of Automotive Repair, develops programs to reduce pollution from vehicles and consumer products. The following list provides a brief explanation of important regulations set forth by the State of California:

California Clean Air Act (CCAA)

- Requires all feasible control measures, including transportation control measures, to reduce emissions.
- Provides for indirect source programs in attainment plans.
- Contains targets for emission reductions, vehicle miles traveled, and average vehicle ridership.

AB (Assembly Bill) 170

- Requires cities and counties in the Valley to incorporate strategies to improve air quality in their general planning efforts.

SB (Senate Bill) 709

- Gave the Air District more responsibility in terms of permitting, fee implementation, and agricultural assistance, but also gives the Air District the authority to require the use of best available control

technology (BACT) for existing sources, promote cleaner-burning alternative fuels, and encourage and facilitate ridesharing.

- Allows the Air District to adopt a surcharge on motor vehicle registration fees in counties within the Air District.

California Government Code Section 65089

- Requires trip reduction and travel demand management in Congestion Management Programs.

2.1.3 Regional

Air pollution does not respect political boundaries. Therefore, many air quality problems are best managed on a regional basis. In 1991 the State Legislature determined that management of an air basin by a single agency would be more effective than management through each county within that basin. Air basins are geographic areas sharing a common "air-shed." Most major metropolitan areas in California now fall under the authority of multi-county APCDs or AQMDs.

Air districts have the primary responsibility for control of air pollution from all sources other than direct motor vehicle emissions, which are the responsibility of the CARB and EPA. Air districts adopt and enforce rules and regulations to achieve state and federal ambient air quality standards and enforce applicable state and federal law.

The San Joaquin Valley Air Pollution Control District (SJVAPCD), formed in 1991, has jurisdiction over air quality matters in the San Joaquin Valley Air Basin (SJVAB), spanning the counties of Fresno, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare, and the western portion of Kern.

Until the passage of the CCAA, the primary role of county APCDs was controlling stationary sources of pollution, such as industrial processes and equipment. With the passage of the CCAA and federal CAA amendments, air districts were required to implement transportation control measures and were encouraged to adopt indirect source control programs to reduce mobile source emissions. These mandates created the necessity for air districts to work closely with cities, counties, and regional transportation planning agencies to develop new programs.

The Air District entered into a memorandum of understanding with the eight San Joaquin Valley County transportation planning agencies in 1992. This memorandum of understanding ensures a coordinated approach in the development and implementation of transportation plans throughout the Valley. This action has helped the Regional Transportation Planning Agencies comply with pertinent provisions of the federal and state Clean Air Acts as well as related transportation legislation (such as the Intermodal Surface Transportation Efficiency Act).

The Air District develops plans and implements control measures in an effort to advance Valley attainment of CAAQS and NAAQS. The Air District has developed plans to attain state and federal standards for ozone and particulate matter. The Air District's air quality plans include emissions inventories to measure the sources of air pollutants, to evaluate how well different control methods have worked, and to show how air pollution will be reduced. The plans also use computer modeling to estimate future levels of pollution and make sure that the Valley will meet air quality goals on time.

Control measures applicable to this Project are as follows:

Regulation VIII—Fugitive PM₁₀ Prohibitions

Regulation VIII is a control measure that is one main strategies from the 2006 PM₁₀ Plan for reducing the PM₁₀ emissions that are part of fugitive dust. Projects over 10 acres are required to file a Dust Control Plan (DCP) containing dust control practices sufficient to comply with Regulation VIII. The Project is required to prepare a DCP to comply with Regulation VIII.

Rule 4002—National Emissions Standards for Hazardous Air Pollutants

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

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. Agricultural activities are exempt from the nuisance rule.

Rule 9510 – Indirect Source Review

The purpose of this rule is to ensure that land use development projects reduce their construction/operational NO_x and PM₁₀ emissions by 20%/40% and 33.3%/50%, respectively. Operational emissions are required to be reduced over a period of 10 years. Emission reductions can be obtained either by implementing on-site improvements, such as using more efficient construction equipment, improved land use design, electrical vehicle chargers, photovoltaic panels, or by simply paying an in-lieu fee that goes towards emission-reducing projects elsewhere in the Air District's region. This project is required to submit an Air Impact Assessment and address its emissions prior to commencement of both construction and operation.

Other Measures

Other control measures that apply to the Project are Rule 4641—Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operation that requires reductions in volatile organic compound (VOC) emissions during paving and Rule 4601—Architectural Coatings that limits the VOC content of all types of paints and coatings sold in the San Joaquin Valley. These measures apply at the point of sale of the asphalt and coatings, so Project compliance is ensured.

2.1.4 Local

The City of Hanford adopted its General Plan Update in April 2017.³ The applicable air quality goals and policies from the Transportation and Circulation Element are listed below.

Policy T50: Carpool Programs. Encourage the use of carpooling, vanpooling and flexible employment hours.

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

³ (City of Hanford, 2017)

2.2 Environmental Setting

Air quality impacts are both local and regional. Regional and local air quality is impacted by topography, dominant airflows, atmospheric inversions, location, and season. The Project is located in the SJVAB, which experiences some of the most challenging environmental conditions for air quality in the nation. The following section describes these conditions as they pertain to the Air Basin. The information in this section is primarily from the SJVAPCD's GAMAQI.⁴

2.2.1 Climate Meteorology, Topography

The SJVAB, in which the City of Hanford is situated, has an inland Mediterranean climate characterized by warm, dry summers and cooler winters. Summer temperatures often exceed 100 degrees Fahrenheit (°F) and can vary as much as 30°F. Winters are for the most part mild and humid, with average high in the 50s, while the average daily low temperature is approximately 45°F.

The vertical dispersion of air pollutants in the Valley is limited by the presence of persistent temperature inversions. Air temperature usually decreases as altitude increases. A reversal of this atmospheric state, where the air temperature increases with height, is termed an inversion. Air above and below an inversion does not mix because of differences in air density thereby restricting air pollutant dispersal.

Wind speed and direction play an important role in the dispersion and transport of air pollutants. During summer periods, winds typically originate from the northern San Joaquin Valley and flow in a south-southeasterly direction through the Valley, down through the Tehachapi Pass and into the neighboring Southeast Desert Air Basin. During winter months, winds occasionally originate in the opposite direction, from the south end of the Valley and flow in a north-northwesterly direction. Also, during winter months, the Valley experiences light, variable winds, less than 10 miles per hour. Low wind speeds, combined with low inversion layers in the winter, create a climate conducive to high concentrations of certain air pollutants.

The SJVAB is basically a flat area bordered on the east by the Sierra Nevada Mountains; on the west by the Coast Ranges; and to the south by the Tehachapi Mountains. Airflow in the SJVAB is primarily influenced by marine air that enters through the Carquinez Straits where the San Joaquin-Sacramento Delta empties into the San Francisco Bay. The region's topographic features restrict air movement through and out of the basin. As a result, the SJVAB is highly susceptible to pollutant accumulation over time. Frequent transport of pollutants into the SJVAB from upwind sources also contributes to poor air quality.

2.2.2 Attainment Status

The EPA and the CARB designate air basins where ambient air quality standards are exceeded as “nonattainment” areas. If standards are met, the area is designated 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 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 2-1**. The Air Basin is designated nonattainment for ozone, PM₁₀, and PM_{2.5}.

⁴ (San Joaquin Valley Air Pollution Control District, 2015)

Table 2-1: Ambient Air Quality Attainment Designation

Ambient Air Quality Standards & Attainment Designation			
Pollutant	Averaging Time	California Standards	National Standards
Ozone (O ₃)	1-hour	Nonattainment/Severe	No Federal Standard
	8-hour	Nonattainment	Nonattainment (Extreme)
Particulate Matter (PM ₁₀)	AAM ⁵	Nonattainment	Attainment
	24-hour		
Fine Particulate Matter (PM _{2.5})	AAM	Nonattainment	Nonattainment
	24-hour		
Carbon Monoxide (CO)	1-hour	Attainment/Unclassified	Attainment/Unclassified
	8-hour		
	8-hour (Lake Tahoe)		
Nitrogen Dioxide (NO ₂)	AAM	Attainment	Attainment/Unclassified
	1-hour		
Sulfur Dioxide (SO ₂)	AAM	Attainment	Attainment/Unclassified
	24-hour		
	3-hour		
	1-hour		
Lead (Pb)	30-day Average	Attainment	No Designation/Classification
	Calendar Quarter		
	Rolling 3-Month Average		
Sulfates (SO ₄)	24-hour	Attainment	No Federal Standards
Hydrogen Sulfide (H ₂ S)	1-hour	Unclassified	No Federal Standards
Vinyl Chloride (C ₂ H ₃ Cl)	24-hour	Attainment	No Federal Standards
Visibility-Reducing Particle Matter	8-hour	Unclassified	No Federal Standards

Source: California Air Resources Board (CARB)

2.2.3 Ambient Air Quality Levels

Criteria air pollutant concentrations are measured at several monitoring stations in the surrounding area. **Table 2-2** summarizes the air quality data measured at monitoring stations near the project site during the last three available years (2018-2020). The Hanford-S Irwin Street station is the closest station to the project site with recent data for ozone, PM_{2.5}, and PM₁₀. Both CARB and EPA use monitoring data to designate areas according to their attainment status for criteria air pollutants (attainment designations are summarized above in **Table 2-1**).

⁵ Annual Arithmetic Mean

Table 2-2: Summary of Annual Data on Ambient Air Quality (2018-2020)

	2018	2019	2020
Ozone (O₃)			
Maximum concentration (1-hr/8-hr avg, ppm)	0.108/0.082	0.093/0.076	0.103/0.088
Number of days state standard exceeded (1-hr/8-hr)	1/30	0/13	6/27
Number of days national standard exceeded (8-hr)	29	13	26
Fine Particulate Matter (PM_{2.5})			
Maximum concentration (24-hour µg/m ³)	107.8	48.2	147.0
Number of days national standard exceeded (24-hour measured)	31	20	52
Respirable Particulate Matter (PM₁₀)			
Maximum concentration (µg/m ³)	174.2	211.7	180.4
Number of days state standard exceeded	19	17	22
Number of days national standard exceeded	1	1	3
Notes: µg/m ³ = micrograms per cubic meter; ppm = parts per million Source: CARB 2020			

2.3 Threshold of Significance

The District's annual emission significance thresholds used for the Project define the substantial contribution for both operational and construction emissions as follows:

Table 2-3: Thresholds of Significance for Criteria Air Pollutants

Criteria Pollutant	Emissions (in tons per year)	
	Construction	Operations
ROG	10	10
CO	100	100
NO_x	10	10
SO_x	27	27
PM₁₀	15	15
PM_{2.5}	15	15

Odor impacts on residential areas and other sensitive receptors, such as hospitals, day-care centers, schools, etc. warrant the closest scrutiny, but consideration should also be given to other land uses where people may congregate, such as recreational facilities, worksites, and commercial areas. The District has determined the common land use types that are known to produce odors in the Air Basin. These types are shown in **Table 2-4**.

Table 2-4: Screening Levels for Potential Odor Sources

Odor Generator	Screening Distance
Wastewater Treatment Facilities	2 miles
Sanitary Landfills	1 mile
Transfer Stations	1 mile
Composting Facilities	1 mile
Petroleum Refineries	2 miles
Asphalt Batch Plants	1 mile
Chemical Manufacturers	1 mile
Fiberglass Manufacturers	1 mile

Odor Generator	Screening Distance
Painting/Coating Operations	1 mile
Food Processors	1 mile
Feed Lots and Dairies	1 mile
Rendering Plants	1 mile

The District’s current thresholds of significance for toxic air contaminant (TAC) emissions from the operations of both permitted and non-permitted sources are combined and presented in **Table 2-5** below.

Table 2-5: Thresholds of Significance for Toxic Air Contaminants

Toxic Air Contaminant Type	Threshold
Carcinogens	Maximally Exposed Individual risk equals or exceeds 20 in one million
Non-Carcinogen, Acute Effects	Hazard Index equals or exceeds 1 for the Maximally Exposed Individual
Non-Carcinogen, Chronic Effects	Hazard Index equals or exceeds 1 for the Maximally Exposed Individual

2.4 Methodology

2.4.1 Short-Term Construction-Generated Emissions

Short-term construction emissions associated with the Project were calculated with the California Emissions Estimator Model (CalEEMod), Version 2022.1. These output files can be found in **Chapter 5**. The sections below detail the methodology of the air quality emissions analysis and its conclusions.

The emissions modeling includes emissions generated by off-road equipment, haul trucks, and worker commute trips. Emissions were quantified based on CalEEMod default assumptions.

2.4.2 Long-Term Operational Emissions

Operational emissions occur over the lifetime of the Project and are from three main sources: area sources, energy usage, and motor vehicles usage known as mobile sources. Area source emissions include emissions from natural gas, landscape, and painting. Operations are expected to commence in March 2025. Modeling assumptions and output files are included in **Chapter 5**. The unmitigated long-term operational emissions for the Project are listed in **Table 2-7**.

2.5 Impact Analysis

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. A significant impact would occur if the Project would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- 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;
- 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.

2.5.1 Consistency with Air Quality Plan

Impact AIR-1: The project would not conflict with or obstruct implementation of the applicable air quality plan.

Impact Analysis

The CEQA Guidelines indicate that a significant impact would occur if the Project would conflict with or obstruct implementation of the applicable air quality plan. The GAMAQI indicates that projects that do not exceed SJVAPCD regional criteria pollutant emissions quantitative thresholds would not conflict with or obstruct the applicable air quality plan (AQP).

As discussed in Impact AIR-2 below, emissions of ROG, NO_x, PM₁₀, and PM_{2.5} associated with the construction and operation of the Project would not exceed the District's significance thresholds. Therefore, the Project would not contribute to air quality violations.

The Project's emissions would be less than significant for all criteria pollutants and would not result in inconsistency with the AQP for this criterion. The Project complies with all applicable control measures from the AQP therefore, the Project is consistent with the AQP, and the impact would be less than significant.

2.5.2 Cumulative Criteria Pollutant Impacts

Impact AIR-2: The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.

Impact Analysis

To result in a less than significant impact, the following criteria must be true:

- a) Regional analysis: emissions of nonattainment pollutants must be below the District's regional significance thresholds. This is an approach recommended by the District in its GAMAQI.
- b) Summary of projections: the project must be consistent with current air quality attainment plans including control measures and regulations. This is an approach consistent with Section 15130(b) of the CEQA Guidelines.
- c) Cumulative health impacts: the project must result in less than significant cumulative health effects from the nonattainment pollutants.

Project-generated emissions are below the SJVAPCD's regional significance thresholds and the Project is consistent with current air quality attainment plans including control measures and regulations, as depicted below in **Table 2-6** and **Table 2-7**.

With respect to cumulative health impacts, the air basin is in non-attainment for O₃, PM_{2.5}, and PM₁₀ (state only), which means that the background levels of those pollutants are at times higher than the ambient air quality standards. The air quality standards were set to protect public health, including the health of sensitive individuals (such as children, the elderly, and persons with pre-existing respiratory or cardiovascular illnesses (the infirm)). Therefore, when the concentration of those pollutants exceeds the standard, it is likely that some sensitive individuals in the population would experience adverse health effects. Since the air basin is already in non-attainment, it is considered to have an existing significant cumulative health impact without the Project. The issue is whether the Project's contribution to the existing violation of air quality standards is cumulatively considerable.

The SJVAPCD through its GAMAQI has determined that projects that exceed regional thresholds would have a cumulatively considerable health impact. As demonstrated in **Table 2-6** and **Table 2-7** the Project would not exceed the SJVAPCD's significance thresholds and its cumulatively considerable impacts would be less than significant.

Construction Emissions

The results of the modeling are presented in **Table 2-6**. The emissions that would occur during construction activities were compared with the significance threshold for each pollutant. For assumptions in estimating the emissions, please refer to **Section 0**. As shown in **Table 2-6**, the emissions are below the significance thresholds. Therefore, the emissions would be less than significant on a Project basis.

Table 2-6 Construction Emission Summary, Criteria Air Pollutants

	Emissions (in tons per year)					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Maximum Annual Emissions	0.42	1.51	1.90	<0.005	0.30	0.16
Significance Threshold	10	10	100	27	15	15
Significant Impact?	No	No	No	No	No	No
Source: Chapter 5						

Operational Emissions

Operational emissions occur over the lifetime of the Project and are from two main sources: area sources and motor vehicles, or mobile sources. Operations are expected to commence in March 2025. The SJVAPCD considers construction and operational emissions separately when making significance determinations.

As shown in **Table 2-7**, the emissions are below the SJVAPCD significance thresholds prior to application of mitigation measures or taking credit for Project design features that would reduce Project emissions and, therefore, would result in a less than significant impact.

Table 2-7 Operational Emissions Summary, Criteria Air Pollutants

	Emissions (in tons per year)					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Maximum Annual Emissions	1.18	0.73	4.38	0.01	0.38	0.17
Significance Threshold	10	10	100	27	15	15
Significant Impact?	No	No	No	No	No	No
Source: Chapter 5						

2.5.3 Sensitive Receptors

Impact AIR-3: The project would not expose sensitive receptors to substantial pollutant concentrations.

Impact Analysis

Sensitive Receptors

Those who are sensitive to air pollution include children, the elderly, and persons with pre-existing respiratory or cardiovascular illness. The District considers a sensitive receptor a location that houses or attracts children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Examples of sensitive receptors include hospitals, residences, convalescent facilities, and schools. The closest off-site sensitive receptors are existing residences north and south of the Project site, in addition to a residential subdivision approximately 0.32 miles east of the Project site. For criteria pollutants, impacts to receptors are based on emissions during the highest daily emissions during construction and operations. As shown in **Table 2-8**, emissions generated from construction and operation of the Project are less than SJVAPCD screening criteria. Therefore, this impact would be less than significant.

Localized Pollutant Screening Analysis

Emissions occurring at or near the Project have the potential to create a localized impact, also referred to as an air pollutant hotspot. Localized emissions are considered significant if, when combined with background emissions, they would result in exceedance of any health-based air quality standard. The impact from localized pollutants is based on the impact to the nearest sensitive receptor.

The SJVAPCD's GAMAQI includes screening thresholds for identifying projects that need detailed analysis for localized impacts. Projects with on-site emission increases from construction activities or operational activities that exceed the 100 pounds per day screening level of any criteria pollutant after compliance with applicable rules and regulations and implementation of all enforceable mitigation measures would require preparation of an ambient air quality analysis. The criteria pollutants of concern for localized impact in the Air Basin are PM₁₀, PM_{2.5}, NO_x, and CO.

The highest daily emissions occur during Project grading activities except for reactive organic gas (ROG) emissions, which are highest during application of architectural coatings. The results of the construction screening analysis are presented in **Table 2-8**.

Table 2-8 Maximum Daily Construction and Operational Emissions, Criteria Air Pollutants

Source	Daily Emissions (in Pounds)					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Construction – Summer	4.04	39.8	36.5	0.06	21.6	11.8
Construction – Winter	40.7	37.4	32.3	0.06	10.9	5.16
Operations - Summer	8.71	4.64	43.7	0.12	4.19	2.95
Operations – Winter	7.88	4.99	37	0.11	4.19	2.94
SJVAPCD Significance Thresholds	100	100	100	100	100	100
Exceed Thresholds?	No	No	No	No	No	No

Maximum Daily Operational Emissions

An analysis of maximum daily emissions during operation was conducted to determine if emissions would exceed 100 pounds per day for any pollutant of concern. Operational emissions include emissions generated on-site by area sources such as natural gas combustion and landscape maintenance, an emergency generator, and off-site by motor vehicles accessing the Project. Most motor vehicle emissions would occur distant from

the site and would not contribute to a violation of ambient air quality standards; therefore, operational emissions reflect a conservative assumption. The results of the screening analysis are presented in **Table 2-8**.

The Project would not exceed SJVAPCD screening thresholds for localized operational criteria pollutant impacts; therefore, the Project's localized criteria pollutant impacts would be less than significant.

Valley Fever

Valley fever, or coccidioidomycosis, is an infection caused by inhalation of the spores of the fungus, *Coccidioides immitis* (*C. immitis*). The spores live in soil and can live for an extended time in harsh environmental conditions. Activities or conditions that increase the amount of fugitive dust contribute to greater exposure, and they include dust storms, grading, and recreational off-road activities.

The Centers for Disease Control and Prevention indicates that 752 of the 8,657 persons (8.7 percent) hospitalized in California between 2000 and 2007 for Valley fever died.⁶ California experienced a record number of Valley Fever cases in 2017 with 7,466 new cases. The San Joaquin Valley is considered an endemic area for Valley fever. Within the region, Kings County reported an infection risk of greater than 10 per 100,000.⁷

The distribution of *C. immitis* within endemic areas is not uniform and growth sites are commonly small (a few tens of meters) and widely scattered. Known sites appear to have some ecological factors in common suggesting that certain physical, chemical, and biological conditions are more favorable for *C. immitis* growth. Avoidance, when possible, of sites favorable for the occurrence of *C. immitis* is a prudent risk management strategy. Listed below are ecologic factors and sites favorable for the occurrence of *C. immitis*:

- | | |
|--|---|
| 1) Rodent burrows (often a favorable site for <i>C. immitis</i> , perhaps because temperatures are more moderate and humidity higher than on the ground surface) | 5) Areas adjacent to arroyos (where residual moisture may be available) |
| 2) Old (prehistoric) Indian campsites near fire pits | 6) Packrat middens |
| 3) Areas with sparse vegetation and alkaline soils | 7) Upper 30 centimeters of the soil horizon, especially in virgin undisturbed soils |
| 4) Areas with high salinity soils | 8) Sandy, well-aerated soil with relatively high water-holding capacities |

Sites within endemic areas less favorable for the occurrence of *C. immitis* include:

- | | |
|---|---|
| 1) Cultivated fields | 5) Areas that are continually wet |
| 2) Heavily vegetated areas (e.g. grassy lawns) | 6) Paved (asphalt or concrete) or oiled areas |
| 3) Higher elevations (above 7,000 feet) | 7) Soils containing abundant microorganisms |
| 4) Areas where commercial fertilizers (e.g. ammonium sulfate) have been applied | 8) Heavily urbanized areas where there is little undisturbed virgin soil (USGS 2000). |

The Project site is situated in an urban infill area. Therefore, implementation of the Project would have a low probability of the site having *C. immitis* growth sites and exposure to the spores from disturbed soil, however exposure to blowing dust should be minimized.

Construction activities would generate fugitive dust that could contain *C. immitis* spores. The size of the Project would require the preparation and compliance with a Dust Control Plan, which would minimize the generation of fugitive dust during construction activities. Therefore, due to Project size, combined with the relatively low probability of the presence of *C. immitis* spores, would reduce Valley fever impacts to less than significant.

⁶ (Centers for Disease Control and Prevention, 2009)

⁷ (Kings County Department of Public Health, 2014)

During operations, dust emissions are anticipated to be negligible, because most of the Project area would be occupied by buildings, pavement, and landscaped areas. This condition would preclude the possibility of the Project from providing habitat suitable for *C. immitis* spores and for generating fugitive dust that may contribute to Valley fever exposure. Impacts would be less than significant.

Diesel Particulate Matter (DPM)

DPM can be of particular concern as Project construction occurs as it is emitted from the combustion of diesel fuel. Because construction equipment is often used for lengths of time within close proximity to existing sensitive receptors, there is a concern that the increase in DPM emissions could cause a localized health risk.

A construction Health Risk Assessment was prepared using Hotspots Analysis and Reporting Program Air Dispersion Modeling and Risk Assessment Tool version 21081 was prepared for the Project, using the emissions found in **Chapter 5**. Receptors were placed at existing homes and the subdivision found to the east. The maximum impact was found to be 9.46 in a million. Impacts would therefore be less than significant.

2.5.4 Objectionable Odors

Impact AIR-4: The project would not create objectionable odors affecting a substantial number of people.

Impact Analysis

Construction of the Project would require the use of diesel-powered off-road construction equipment, however these emissions would not occur continuously and would cease after construction concludes. The Project would not engage in any of the activities listed in **Table 2-4**. Land uses that are typically identified as sources of objectionable odors include landfills, transfer stations, sewage treatment plants, wastewater pump stations, composting facilities, feed lots, coffee roaster, asphalt batch plants, and rendering plants, among other uses. The Project does not include any of these activities or land uses. The Project would therefore have a less than significant impact with respect to generation of emissions leading to odors or other adverse or objectionable emissions.

3 Greenhouse Gases

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 six scenarios, could range from 1.1 degrees Celsius (°C) to 6.4°C. Regardless of analytical methodology, global average temperatures and sea levels are expected to rise under all scenarios.⁸ The report also concluded that “[w]arming of the climate system is unequivocal,” and that “[m]ost of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations.”

An individual project cannot generate enough GHG emissions to cause a discernible change in global climate. However, the Project participates in the potential for global climate change by its incremental contribution of GHGs—and when combined with the cumulative increase of all other sources of GHGs—constitute potential influences on global climate change.

3.1 Regulatory Setting

3.1.1 Federal

Federal Clean Air Act

The EPA is the federal agency responsible for executing the federal Clean Air Act (CAA) and its amendments. In 2007, the U.S. Supreme Court ruled that carbon dioxide (CO₂) is an air pollutant, as defined under the CAA, and thus the EPA has the authority to regulate GHG emissions. The ruling resulted in the EPA taking steps to regulate GHG emissions and lend support for State and local agency in their efforts to reduce GHG emissions.

Federal Regulations for Vehicle Fuel Economy Standards

The EPA and the National Highway Traffic Safety Administration (NHTSA) in 2012 issued final rules to reduce GHG emissions and improve the Corporate Average Fuel Economy (CAFE) standards for light-duty vehicles of model years 2017 and beyond. These CAFE standards have been enacted since 1978 under the Energy Policy and Conservation Act. This program requires automobile manufacturers to build a single nation light-duty fleet that meets both the requirements under federal programs and those of California and other states. This program would improve fuel economy to 54.5 miles per gallon-equivalent limiting vehicle emissions to 153 grams of CO₂ per mile for the fleet of cars and light-duty trucks by model year 2025, which represents five percent annual increases in fuel economy.

The EPA and NHTSA jointly published in 2018 a notice of proposed rulemaking entitled “The Safer Affordable Fuel-Efficient Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks” (SAFE Rule), which proposed:

- (1) new and amended CO₂ and CAFE standards for passenger cars and light trucks;

⁸ (Intergovernmental Panel on Climate Change, 2007)

- (2) to withdraw the waiver EPA had previously provided to California for that State's GHG and zero emission vehicle (ZEV) programs under Section 209 of the Clean Air Act, and;
- (3) regulatory text to implement NHTSA's statutory authority to set nationally applicable fuel economy standards to explicitly preempt California's GHG and ZEV programs.

In 2019, Part One of the SAFE Rule (One National Program) became effective, which withdrew California's waiver from EPA and finalized NHTSA's regulatory text related to preemption of State regulations. In 2020, EPA and NHTSA announced Part Two of the SAFE Rule, which would establish amended fuel economy and CO₂ standards for passenger cars and light trucks of model years 2021-2026. These revised standards would increase in stringency by 1.5 percent per year from model year 2020 over model years 2021-2026.

3.1.2 State

Executive Order (EO) S-3-05

In 2005, Governor Schwarzenegger issued EO S-3-05, proclaiming that California is vulnerable to the impacts of climate change. The EO declares that increasing temperatures could reduce the Sierra Nevada snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To address those concerns, the EO established GHG emission targets for the State and identified responsibilities for State agencies in meeting the targets. Specifically, statewide emissions are to be reduced to 2000 levels by 2010, 1990 levels by 2020, and to 80 percent below 1990 levels by 2050.

AB 32

In 2006, AB 32, the California Global Warming Solutions Act of 2006, was signed into law. AB 32 establishes regulations, reporting requirements, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. AB 32 also requires that:

- “(a) the statewide greenhouse gas emissions limit shall remain in effect unless otherwise amended or repealed.
- (b) It is the intent of the Legislature that the statewide greenhouse gas emissions limit continue in existence and be used to maintain and continue reductions in emissions of greenhouse gases beyond 2020.
- (c) The [CARB] shall make recommendations to the Governor and the Legislature on how to continue reductions of greenhouse gas emissions beyond 2020.” [California Health and Safety Code, Division 25.5, Part 3, Section 38551]

EO B-30-15

In 2015, Governor Brown issued EO B-30-15 which established a California GHG reduction target of 40 percent below 1990 levels by 2030. This emission reduction target of 40 percent below 1990 levels by 2030 set the next interim step in the State's continuing efforts to pursue the long-term target previously established under EO S-3-05 to reach the goal of reducing emissions 80 percent below 1990 levels by 2050. This is consistent with scientifically established levels needed in the U.S. to limit global warming below 2 degrees Celsius, the threshold at which major climate disruptions are projected, such as super droughts and rising sea levels.

SB 32

In 2016, SB 32 was signed into law and serve to extend California's GHG reduction programs beyond 2020. SB 32 amended existing regulations to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030, codifying the 2030 target established by EO B-30-15.

AB (AB) 1493 (Pavley)

AB 1493, enacted in 2002, requires the reduction of GHGs from automobiles and light-duty trucks to the maximum extent feasible and cost-effective. In 2004, CARB approved the “Pavley I” regulations that applied to new passenger vehicles beginning with model year 2009 through 2016. Pavley I was anticipated to reduce GHG emissions from regulated vehicles by 30 percent from 2002 levels by 2016. Pavley II was incorporated into Amendments to the Low-Emission Vehicle Program referred to as LEV III. The amendments, which took effect in 2012, apply to vehicles for model years 2017 through 2025. The regulation will reduce GHGs from new cars by 34 percent from 2016 levels by 2025.

Advanced Clean Cars Program

Also in 2012, CARB approved the Advanced Clean Cars program which sought to combine the control of GHG emissions and criteria air pollutants, as well as requirements for greater numbers of zero-emission vehicles, into a single package of regulatory standards for vehicle model years 2017 through 2025. These regulations strengthen the GHG standard for 2017 models and beyond and would be achieved through existing and more efficient technologies. The program’s ZEV regulation would require battery, fuel cell, and/or plug-in hybrid electric vehicles to comprise up to 15 percent of California’s new vehicle sales by 2025. The program also included a clean fuels outlet regulation designed to support the development of zero-emission hydrogen fuel cell vehicles by requiring increased numbers of hydrogen fueling stations throughout the state. By 2025, when it was assumed, the rules would be fully implemented, the statewide fleet of new cars and light trucks would emit 34 percent fewer GHGs and 75 percent fewer smog-forming emissions than the statewide fleet in 2016.

SB 100

In 2018, SB 100 increased California’s Renewable Energy Portfolio targets for utility companies to 52 percent renewables by 2027 and 60 percent renewables by 2030. It also established a new zero-carbon electricity mandate by 2040.

California Building Energy Efficiency Standards (Title 24, Part 6)

California Code of Regulations (CCR), Title 24, Part 6, is California’s Energy Efficiency Standards for Residential and Non-Residential Buildings. Title 24 Part 6 was established by California Energy Commission (CEC) in 1978 in response to a legislative mandate to create uniform building codes to reduce California’s energy consumption and provide energy-efficiency standards for residential and nonresidential buildings. These standards are updated triennially and have resulted in substantial gains in energy efficiency in new construction with each code update cycle.

The 2022 Title 24 Part 6 Building Energy Efficiency Standards were adopted by CEC in 2021 and took effect in 2023. The standards are designed to move the State closer to its zero net energy goals for new residential development. It does so by requiring all new residences to install enough renewable energy to offset all the site electricity needs of each residential unit. CEC estimates that the 2022 Energy Code would provide \$1.5 billion in consumer benefits and reduce 10 million metric tons of GHGs.⁹

The Title 24 Building Energy Efficiency Standards are enforced through the local plan check and building permit process. Local government agencies may adopt and enforce additional energy standards for new buildings as reasonably necessary in response to local climatologic, geologic, or topographic conditions, provided that these standards are demonstrated to be cost effective and exceed the energy performance required by Title 24 Part 6.

⁹ (California Energy Commission, 2021)

California Green Building Standards (Title 24, Part 11)

In 2008, the California Building Standards Commission adopted Part 11 of CCR Title 24, titled the California Green Building Standards Code (CALGreen Code) which became effective in 2009 as a voluntary code. The 2010 CALGreen Code was the first mandatory edition and took effect in 2011 and is now a part of the triennial code update cycle. The CALGreen Code establishes mandatory measures for residential and non-residential building construction and encourages sustainable construction practices in the following five categories: (1) planning and design, (2) energy efficiency, (3) water efficiency and conservation, (4) material conservation and resource efficiency, and (5) indoor environmental quality. Although the CALGreen Code was adopted as part of the State's efforts to reduce GHG emissions, the CALGreen Code standards have co-benefits of reducing energy consumption from residential and non-residential buildings subject to the standard.

SB 97

SB 97, enacted in 2007, amended the CEQA statute to clearly establish that GHG emissions and the effects of GHG emissions are appropriate subjects for CEQA analysis. The legislation directed the California Office of Planning and Research to develop draft CEQA Guidelines "for the mitigation of GHG emissions or the effects of GHG emissions" and directed the California Natural Resources Agency to certify and adopt the State CEQA Guidelines. CEQA Guidelines Section 15183.5, Tiering and Streamlining the Analysis of GHG Emissions, was added as part of the CEQA Guideline amendments that became effective in 2010 and describes the criteria needed in a GHG reduction plan that would allow for the tiering and streamlining of CEQA analysis for development projects.

SB X7-7

SB X7-7 requires water suppliers to reduce urban per capita water consumption 20 percent from a baseline level by 2020. The production and treatment of water, as well as the treatment of wastewater, requires substantial amount of electricity, and thus there this a direct relationship between water and greenhouse gases.

California Integrated Waste Management Act

To minimize the amount of solid waste that must be disposed of in landfills, the State Legislature passed the California Integrated Waste Management Act of 1989 (AB 939), effective January 1990. According to AB 939, all cities and counties were required to divert 25 percent of all solid waste from landfill facilities by 1995, and 50 percent by 2000. Through other statutes and regulations, this 50 percent diversion rate also applies to State agencies. In order of priority, waste reduction efforts must promote source reduction, recycling and composting, and environmentally safe transformation and land disposal.

In 2011, AB 341 modified the California Integrated Waste Management Act and directed the California Department of Resources Recycling and Recovery to develop and adopt regulations for mandatory commercial recycling. The resulting Mandatory Commercial Recycling Regulation (2012) requires that after 2012, certain businesses that generate four cubic yards or more of commercial solid waste per week shall arrange recycling services. To comply with this requirement, businesses may either separate recyclables and self-haul them or subscribe to a recycling service that includes mixed waste processing. AB 341 also established a statewide recycling goal of 75 percent; the 50 percent disposal reduction mandate still applies for cities and counties under AB 939, the Integrated Waste Management Act.

Climate Change Scoping Plan

In 2022, the CARB adopted the 2022 Scoping Plan, which provides a framework for achieving the State's 2030 GHG emissions reduction target of 40 percent below 1990 levels and substantially advance toward our 2045 climate goal to reduce GHG emissions by 85 percent below 1990 levels. The 2022 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, and

implementation of recently adopted policies and legislation. The 2022 Scoping Plan includes a wide variety of goals related to energy efficiency and renewable energy that are intended to help meet the State's targets.¹⁰

Cap-and-Trade Program

The Cap-and-Trade program was developed to reduce GHG emissions from major emissions sources (covered entities) by setting a firm cap on statewide GHG emissions that is gradually reduced over time while employing market mechanisms to cost-effectively achieve the State's emission-reduction goals. It sets a statewide limit on sources responsible for 85 percent of California's GHG emissions, including electricity generators, large industrial facilities emitting a specified amount of annual emissions, and distributors of transportation, natural gas, and other fuels, 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 the approximately 450 entities covered by the program with the flexibility to seek out and implement the lowest cost options to reduce emissions. All covered entities are required to demonstrate compliance with the cap-and-trade program by implementing GHG reduction activities on-site or through use of free or purchased allowances, or purchase of offsets.

3.1.3 Local

The City of Hanford adopted its Air Quality Element of its General Plan in April 2017 and its portion of the Regional Climate Action Plan in May of 2014.^{11,12} The applicable greenhouse gas goals and policies are listed below.

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 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 AQ 10.4: The City will participate in the Sustainable Communities Strategy/Regional Blueprint Planning effort and will ensure that local plans are consistent with the Regional Plan.

3.2 Threshold of Significance

The City of Hanford has not adopted its own GHG thresholds or prepared a Greenhouse Gas Reduction Plan that can be used as a basis for determining project significance. In accordance with SJVAPCD's *CEQA Greenhouse Gas Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects*,¹³ proposed projects complying with Best Performance Standards (BPS) would be determined to have a less-than-significant impact. The SJVAPCD does not have an adopted threshold for GHGs; however, the South Coast Air Quality Management District (SCAQMD) has set a threshold of 10,000 MTCO_{2e}.¹⁴ This threshold has been applied to this Project. Compliance with BPS and projects generating less than 10,000 MTCO_{2e} per year would result in

¹⁰ (California Air Resources Board, 2017)

¹¹ (City of Hanford, 2017)

¹² (City of Hanford, 2014)

¹³ (San Joaquin Valley Air Pollution Control District, 2009)

¹⁴ (South Coast Air Quality Management District, 2008)

less than significant impacts. In addition, project-generated emissions complying with an approved plan or mitigation program would also be determined to have a less-than-significant impact.

3.3 Methodology

3.3.1 Short-Term Construction-Generated Emissions

Short-term construction emissions associated with the Project were calculated CalEEMod, Version 2022.1. These output files can be found in [Chapter 5](#). The sections below detail the methodology of the air quality emissions analysis and its conclusions. The emissions modeling includes emissions generated by off-road equipment, haul trucks, and worker commute trips.

3.3.2 Long-Term Operational Emissions

Operational emissions occur over the lifetime of the Project and are from three main sources: area sources, energy usage, and motor vehicles usage known as mobile sources. Area source emissions include emissions from natural gas, landscape, and painting. First occupancy of the Project is expected as early as March 2025 and was used as the Project buildout modeling year for the subdivision as a conservative assumption. Modeling assumptions and output files are included in [Chapter 5](#).

3.4 Impact Analysis

3.4.1 Greenhouse Gas Inventory

Impact GHG-1: The project would generate direct and indirect greenhouse gas emissions; however, these emissions would not result in a significant impact on the environment.

Impact Analysis

Construction

Total GHG emissions generated during all phases of construction were combined and are presented in [Table 3-1](#). The SJVAPCD does not recommend assessing the significance of construction-related emissions. However, other jurisdictions, such as the SCAQMD, have concluded that construction emissions should be included since they may remain in the atmosphere for years after construction is complete. In order to account for the construction emissions, amortization of the total emissions generated during construction were based on the life of the development (residential—30 years) and added to the operational emissions.

Table 3-1 Construction Emissions, Greenhouse Gases

MTCO ₂ e	
Total Construction Emissions	327
Amortized over 30 years	10.9
Notes: Calculation totals use unrounded numbers from CalEEMod output. Source: Chapter 5	

Operations

Total GHG emissions generated during operations are presented in **Table 3-2**. The amortized construction emissions have been added to the operational emissions generated by the Project. The Project would result in approximately 1,168 MTCO₂e resulting from operational activities. This falls below the SCAQMD's threshold of 10,000 MTCO₂e, resulting in a less than significant impact.

Table 3-2 Operational Emissions, Greenhouse Gases

	MTCO ₂ e
Operational Emissions	1,184
Amortized Construction Emissions	10.9
Total Operational Emissions plus Amortized Construction Emissions	1,194.9
Notes: Calculation totals use unrounded numbers from CalEEMod output. Source: Chapter 5	

3.4.2 Greenhouse Gas Reduction Plans

Impact GHG-2: The project would not conflict with any applicable plan, policy, or regulation of an agency adopted to reduce the emissions of greenhouse gases.

Impact Analysis

The City of Hanford has not adopted a GHG reduction plan. In addition, the City has not completed the GHG inventory, benchmarking, or goal- setting process required to identify a reduction target and take advantage of the streamlining provisions contained in the CEQA Guidelines amendments adopted for SB 97 and clarifications provided in the CEQA Guidelines amendments adopted on December 28, 2018.

The SJVAPCD has adopted a Climate Action Plan, but it does not contain measures that are applicable to development projects. Therefore, the SJVAPCD Climate Action Plan cannot be applied to the project. Since no other local or regional Climate Action Plan is in place, the project is assessed for its consistency with ARB's adopted Scoping Plans. This would be achieved with an assessment of the project's compliance with Scoping Plan measures contained in the 2008 Scoping Plan and the 2017 Scoping Plan Update.

AB 32 Scoping Plan

The Scoping Plan contains a variety of strategies to reduce the State's emissions. As shown in **Table 3-3**, the project is consistent with most of the strategies, while others are not applicable to the project. As discussed earlier, the 2017 Scoping Plan Update strategies primarily rely on increasing the stringency of existing regulations with which the project would continue to comply, support through the project's design, and implementation of the General Plan goals and policies.

Table 3-3 AB 32 Consistency Table

Scoping Plan Strategy	Consistency Finding
Regulation for the California Cap on Greenhouse Gas Emissions and Market- Based Compliance Mechanism October 20, 2015 (CCR 95800)	Consistent. The Cap-and-Trade Program applies to large industrial sources such as power plants, refineries, and cement manufacturers. However, the regulation indirectly affects people who use the products and services produced by these industrial sources when increased cost of products or services (such as electricity and fuel) are transferred to the consumers. The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-Trade Program. The Cap-and-Trade

Scoping Plan Strategy	Consistency Finding
	Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the Program's first compliance period.
Pavley I 2005 Regulations to Control GHG Emissions from Motor Vehicles 2012 LEV III Amendments to the California Greenhouse Gas and Criteria Pollutant Exhaust and Evaporative Emission Standards	Consistent. This measure applies to all new vehicles starting with model year 2012. The Project would not conflict with its implementation as it would apply to all new passenger vehicles purchased in California. Passenger vehicles, model year 2012 and later, associated with construction and operation of the Project would be required to comply with the Pavley emissions standards.
2009 readopted in 2015. Regulations to Achieve Greenhouse Gas Emission Reductions Subarticle 7. Low Carbon Fuel Standard CCR 95480	Consistent. This measure applies to transportation fuels utilized by vehicles in California. The Project would not conflict with implementation of this measure. Motor vehicles associated with construction and operation of the project would utilize low carbon transportation fuels as required under this measure.
Regional Transportation-Related Greenhouse Gas Targets of SB 375	Consistent. The Project will provide a public service facility in the region that is consistent with the land uses assessed in the 2018 Regional Transportation Plan/Sustainable Communities Strategy (SCS). The Project is not within an SCS priority area and so is not subject to requirements applicable to those areas.
Goods Movement Action Plan of January 2007	Not applicable. The Project does not propose any changes to maritime, rail, or intermodal facilities or forms of transportation.
2010 Amendments to the Truck and Bus Regulation, the Drayage Truck Regulation and the Tractor-Trailer Greenhouse Gas Regulation	Consistent. This measure applies to medium- and heavy- duty vehicles that operate in the State. The Project would not conflict with implementation of this measure. Medium- and heavy-duty vehicles associated with construction of the project would be required to comply with the requirements of this regulation.
High Speed Rail	Not applicable. This is statewide measure cannot be implemented by a project applicant or lead agency.
Title 20 Appliance Efficiency Regulation Title 24 Part 6 Energy Efficiency Standards for Residential Buildings Title 24 Part 11 California Green Building Code Standards	Consistent. The Project would not conflict with implementation of this measure. The Project will comply with the latest energy efficiency standards and incorporate applicable energy efficiency features designed to reduce project energy consumption.
2010 Regulation to Implement the Renewable Electricity Standard (33% 2020) SB 350 Clean Energy and Pollution Reduction Act of 2015 (50% 2030)	Consistent. Pacific Gas & Electric obtained 33 percent of its power supply from renewable sources such as solar and geothermal in 2017, and about 70 percent of the electricity it delivers is carbon-free, including nuclear and large hydroelectric facilities. The owner of the Project would purchase power that consists of a greater percentage of renewable sources and could install renewable solar power systems that will assist the utility in achieving exceeding the renewable mandate.

Scoping Plan Strategy	Consistency Finding
Million Solar Roofs Program	Consistent. This measure is intended to increase solar throughout California by means of a variety of electricity providers and existing solar programs. Projects within the plan area will be able to take advantage of incentives that are in place at the time of construction. The Project design does not preclude the future installation of solar panels.
Title 24 Part 11 California Green Building Code Standards SBX 7-7—The Water Conservation Act of 2009 Model Water Efficient Landscape Ordinance	Consistent. The Project will comply with the California Green Building Standards Code, which requires a 20 percent reduction in indoor water use. The Project will also comply with the MWELO as required by the City's development code and water ordinance.
Title 24 Part 11 California Green Building Code Standards	Consistent. The State will increase the use of green building practices. The Project would implement required green building strategies through existing regulation that requires the project to comply with various CALGreen requirements. The Project includes sustainability design features that support the Green Building Strategy.
2010 ARB Mandatory Reporting of Industrial Emissions Regulation	Not applicable. The Project is not an industrial land use.
Title 24 Part 11 California Green Building Code Standards AB 341 Statewide 75 Percent Diversion Goal	Consistent. The Project would not conflict with implementation of these measures. The Project is required to achieve the recycling mandates via compliance with the CALGreen code. The Project would utilize City of Hanford recycling services.
Cap-and-Trade Offset Projects for Sustainable Forests	Not applicable. The Project site is in an area designated for urban uses. No forested lands exist on-site.
ARB Refrigerant Management Program CCR 95380	Not applicable. The regulations are applicable to refrigerants used by large air conditioning systems and large commercial and industrial refrigerators and cold storage system. The Project is not expected to use large systems subject to the refrigerant management regulations adopted by ARB.
Cap-and-Trade Offset Projects for Livestock and Rice Cultivation	Not applicable. The Project site is proposed for urban development. No grazing, feedlot, or other agricultural activities that generate manure occur currently exist on-site or are proposed to be implemented by the project.

SB 32 Scoping Plan

The 2017 Climate Change Scoping Plan Update (2017 Scoping Plan) includes the strategy that the State intends to pursue to achieve the 2030 targets of Executive Order S-3-05 and SB 32. The 2017 Scoping Plan includes the following summary of its overall strategy for reaching the 2030 target:

- SB 350, which seeks to achieve a 50 percent Renewables Portfolio Standard by 2030, as well as doubling of energy efficiency savings by 2030.
- Low Carbon Fuel Standard, which proposed increased stringency (reducing carbon intensity 18 percent by 2030, up from 10 percent in 2020).

- Mobile Source Strategy (Cleaner Technology and Fuels Scenario), which sought to maintain existing GHG standards for light- and heavy-duty vehicles, as well as put 4.2 million ZEVs on the roads.
- 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.
- Short-Lived Climate Pollutant (SLCP) Reduction Strategy sought to reduce emissions of methane and hydrofluorocarbons, as well as black carbon, by 40 percent and 50 percent below 2013 levels by 2030, respectively.

Table 3-4 provides an analysis of the project's consistency with the 2017 Scoping Plan Update measures.

Table 3-4 SB 32 Consistency Table

Scoping Plan Strategy	Consistency Finding
SB 350 50% Renewable Mandate Utilities subject to the legislation will be required to increase their renewable energy mix from 33% in 2020 to 50% in 2030.	Consistent. The Project will purchase electricity from a utility subject to the SB 350 Renewable Mandate.
SB 350 Double Building Energy Efficiency by 2030 This is equivalent to a 20 percent reduction from 2014 building energy usage compared to current projected 2030 levels	Not Applicable. This measure applies to existing buildings. New structures are required to comply with Title 24 Energy Efficiency Standards that are expected to increase in stringency until nonresidential buildings achieve zero net energy.
Low Carbon Fuel Standard This measure requires fuel providers to meet an 18 percent reduction in carbon content by 2030.	Consistent. Vehicles accessing the Project site will use fuel containing lower carbon content as the fuel standard is implemented. Mobile Source Strategy (Cleaner Technology and Fuels Scenario) Vehicle manufacturers will be required to meet existing regulations mandated by the LEV III program. The strategy includes a goal of having 4.2 million ZEVs on the road by 2030. Project residents can be expected to purchase increasing numbers of more fuel efficient and zero emission cars and trucks each year. The 2019 CALGreen Code requires electrical service in residential projects to be EV charger- ready.
Sustainable Freight Action Plan The plan's target is to improve freight system efficiency 25 percent by increasing the value of goods and services produced from the freight sector, relative to the amount of carbon that it produces by 2030. This would be achieved by deploying over 100,000 freight vehicles and equipment capable of zero emission operation and maximize near-zero emission freight vehicles and equipment powered by renewable energy by 2030.	Not Applicable. The measure applies to owners and operators of trucks and freight operations. However, trucks accessing the Project site are expected to be made by increasing number of ZEV delivery trucks.
SLCP Reduction Strategy The strategy requires the reduction of SLCPs by 40 percent from 2013 levels by 2030 and the reduction of black carbon by 50 percent from 2013 levels by 2030.	Consistent. The Project will be accessed by vehicles meeting increasingly stringent particulate matter standards that reduce black carbon compared to older trucks.

Scoping Plan Strategy	Consistency Finding
SB 375 Sustainable Communities Strategies Requires Regional Transportation Plans to include a sustainable communities strategy for reduction of per capita vehicle miles traveled.	Consistent. The Project will be located in a low VMT area as depicted in the City's VMT Guidelines..
Post-2020 Cap-and-Trade Program The Post 2020 Cap-and-Trade Program continues the existing program for another 10 years. The Cap-and-Trade Program applies to large industrial sources such as power plants, refineries, and cement manufacturers.	Consistent. The post-2020 Cap-and-Trade Program indirectly affects people who use the products and services produced by the regulated industrial sources when increased cost of products or services (such as electricity and fuel) are transferred to the consumers. The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap- and-Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the program's first compliance period.
Natural and Working Lands Action Plan ARB is working in coordination with several other agencies at the federal, state, and local levels, stakeholders, and with the public, to develop measures as outlined in the Scoping Plan Update and the governor's Executive Order B-30-15 to reduce GHG emissions and to cultivate net carbon sequestration potential for California's natural and working land.	Not Applicable. The Project is a residential development and will not be considered natural or working lands.

Accordingly, taking into account the proposed Project's emissions, Project design features, and the progress being made by the State towards reducing emissions in key sectors such as transportation, industry, and electricity, the project would be consistent with State GHG Plans and would further the State's goals of reducing GHG emissions to 1990 levels by 2020, 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050, and does not obstruct their attainment. Impacts would be less than significant.

AB 1279 Scoping Plan

The Climate Crisis Act (2022), or AB 1279, seeks to achieve net zero greenhouse gas emissions by no later than 2045 and achieve and maintain net negative greenhouse gas emissions after 2045. The bill seeks to ensure that statewide anthropogenic greenhouse gas emissions are reduced to at least 85% below 1990 levels.

Table 3-5 provides an analysis of the project's consistency with the 2022 Scoping Plan Update measures.

Table 3-5 AB 1279 Consistency Table

Scoping Plan Strategy	Consistency Finding
Reduction in per capita vehicle miles traveled of 30 percent by 2045	Consistent. The Project is located in a Low VMT zone in the City's adopted VMT Guidelines.
100% adoption of light-duty ZEVs by 2034	Consistent. The Project is not of such intensity or magnitude such that approval could prevent the State achieving this goal.
Carbon sequestration on majority of petroleum refineries by 2030	Consistent. The Project would not preclude attainment of this goal as it does not propose to modify a petroleum refinery.
100% sales of electric HVAC and water heaters for existing buildings	Consistent. The Project would comply with all applicable building codes. Appliances would be replaced at end-of-life with regulations in-place at that time.
Reduction in dairy emissions	Consistent. The Project would not preclude attainment of this goal because it does not propose to construct or modify dairies.
Carbon Dioxide Removal	Consistent. The Project does not preclude the construction of carbon removal systems.

In summary, the Project would comply with existing State regulations adopted to achieve the overall GHG emissions reduction goals identified in AB 32, SB 32, AB 1279, and would be consistent with applicable plans and programs designed to reduce GHG emissions. Therefore, the Project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs. The impact would be less than significant.

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5 Air Quality Output Files

Stonehaven Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

2.2. Construction Emissions by Year, Unmitigated

2.4. Operations Emissions Compared Against Thresholds

2.5. Operations Emissions by Sector, Unmitigated

3. Construction Emissions Details

3.1. Demolition (2023) - Unmitigated

3.3. Site Preparation (2023) - Unmitigated

3.5. Grading (2023) - Unmitigated

3.7. Building Construction (2023) - Unmitigated

3.9. Building Construction (2024) - Unmitigated

3.11. Building Construction (2025) - Unmitigated

3.13. Paving (2025) - Unmitigated

3.15. Architectural Coating (2025) - Unmitigated

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

4.3. Area Emissions by Source

4.3.2. Unmitigated

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Stonehaven
Construction Start Date	8/15/2023
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.40
Precipitation (days)	23.0
Location	36.31040917411529, -119.6853951843739
County	Kings
City	Unincorporated
Air District	San Joaquin Valley APCD
Air Basin	San Joaquin Valley
TAZ	2612
EDFZ	9
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.8

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
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Single Family Housing	82.0	Dwelling Unit	11.8	129,478	960,454	—	254	—
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1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.80	4.04	39.8	36.5	0.06	1.81	19.8	21.6	1.66	10.1	11.8	—	6,777	6,777	0.28	0.06	1.25	6,803
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.53	40.7	37.4	32.3	0.06	1.59	9.35	10.9	1.47	3.69	5.16	—	6,757	6,757	0.28	0.06	0.03	6,781
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.14	2.28	8.26	10.4	0.02	0.36	1.34	1.64	0.33	0.59	0.87	—	1,962	1,962	0.08	0.03	0.39	1,974
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.21	0.42	1.51	1.90	< 0.005	0.07	0.24	0.30	0.06	0.11	0.16	—	325	325	0.01	0.01	0.06	327

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
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Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	4.80	4.04	39.8	36.5	0.06	1.81	19.8	21.6	1.66	10.1	11.8	—	6,777	6,777	0.28	0.06	0.74	6,803
2024	1.61	1.36	11.5	14.8	0.02	0.50	0.24	0.74	0.46	0.06	0.52	—	2,761	2,761	0.11	0.04	1.25	2,778
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	4.53	3.82	37.4	32.3	0.06	1.59	9.35	10.9	1.47	3.69	5.16	—	6,757	6,757	0.28	0.06	0.03	6,781
2024	1.59	1.34	11.5	14.5	0.02	0.50	0.24	0.74	0.46	0.06	0.52	—	2,731	2,731	0.11	0.04	0.03	2,747
2025	1.49	40.7	10.8	14.3	0.02	0.43	0.24	0.67	0.40	0.06	0.46	—	2,725	2,725	0.11	0.04	0.03	2,740
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.87	0.73	6.90	6.48	0.01	0.30	1.34	1.64	0.28	0.59	0.87	—	1,179	1,179	0.05	0.01	0.11	1,184
2024	1.14	0.96	8.26	10.4	0.02	0.36	0.17	0.53	0.33	0.04	0.37	—	1,962	1,962	0.08	0.03	0.39	1,974
2025	0.07	2.28	0.52	0.74	< 0.005	0.02	0.01	0.03	0.02	< 0.005	0.02	—	115	115	< 0.005	< 0.005	0.02	116
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.16	0.13	1.26	1.18	< 0.005	0.06	0.24	0.30	0.05	0.11	0.16	—	195	195	0.01	< 0.005	0.02	196
2024	0.21	0.18	1.51	1.90	< 0.005	0.07	0.03	0.10	0.06	0.01	0.07	—	325	325	0.01	0.01	0.06	327
2025	0.01	0.42	0.10	0.14	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	19.1	19.1	< 0.005	< 0.005	< 0.005	19.2

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	8.10	8.71	4.64	43.7	0.12	2.80	1.39	4.19	2.70	0.24	2.95	489	7,837	8,326	6.83	0.29	18.0	8,601

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.26	7.88	4.99	37.0	0.11	2.80	1.39	4.19	2.70	0.24	2.94	489	7,440	7,929	6.87	0.31	1.37	8,194
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.21	6.47	3.99	24.0	0.06	0.71	1.36	2.07	0.69	0.24	0.92	144	6,784	6,928	5.21	0.29	8.14	7,153
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.77	1.18	0.73	4.38	0.01	0.13	0.25	0.38	0.13	0.04	0.17	23.8	1,123	1,147	0.86	0.05	1.35	1,184

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.36	3.17	2.86	19.9	0.05	0.04	1.39	1.43	0.04	0.24	0.28	—	4,855	4,855	0.20	0.26	17.1	4,955
Area	4.65	5.50	1.03	23.4	0.06	2.70	—	2.70	2.60	—	2.60	446	876	1,321	2.10	< 0.005	—	1,375
Energy	0.09	0.04	0.76	0.32	< 0.005	0.06	—	0.06	0.06	—	0.06	—	2,022	2,022	0.15	0.01	—	2,028
Water	—	—	—	—	—	—	—	—	—	—	—	6.13	84.8	90.9	0.63	0.02	—	111
Waste	—	—	—	—	—	—	—	—	—	—	—	37.4	0.00	37.4	3.74	0.00	—	131
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.93	0.93
Total	8.10	8.71	4.64	43.7	0.12	2.80	1.39	4.19	2.70	0.24	2.95	489	7,837	8,326	6.83	0.29	18.0	8,601
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.97	2.77	3.25	17.9	0.04	0.04	1.39	1.43	0.04	0.24	0.29	—	4,470	4,470	0.24	0.28	0.44	4,560
Area	4.20	5.07	0.98	18.8	0.06	2.70	—	2.70	2.60	—	2.60	446	863	1,309	2.10	< 0.005	—	1,362

Energy	0.09	0.04	0.76	0.32	< 0.005	0.06	—	0.06	0.06	—	0.06	—	2,022	2,022	0.15	0.01	—	2,028
Water	—	—	—	—	—	—	—	—	—	—	—	6.13	84.8	90.9	0.63	0.02	—	111
Waste	—	—	—	—	—	—	—	—	—	—	—	37.4	0.00	37.4	3.74	0.00	—	131
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.93	0.93
Total	7.26	7.88	4.99	37.0	0.11	2.80	1.39	4.19	2.70	0.24	2.94	489	7,440	7,929	6.87	0.31	1.37	8,194
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.95	2.76	2.99	17.2	0.04	0.04	1.36	1.40	0.04	0.24	0.28	—	4,478	4,478	0.22	0.26	7.22	4,569
Area	1.16	3.67	0.24	6.51	0.01	0.61	—	0.61	0.59	—	0.59	100	200	300	0.47	< 0.005	—	312
Energy	0.09	0.04	0.76	0.32	< 0.005	0.06	—	0.06	0.06	—	0.06	—	2,022	2,022	0.15	0.01	—	2,028
Water	—	—	—	—	—	—	—	—	—	—	—	6.13	84.8	90.9	0.63	0.02	—	111
Waste	—	—	—	—	—	—	—	—	—	—	—	37.4	0.00	37.4	3.74	0.00	—	131
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.93	0.93
Total	4.21	6.47	3.99	24.0	0.06	0.71	1.36	2.07	0.69	0.24	0.92	144	6,784	6,928	5.21	0.29	8.14	7,153
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.54	0.50	0.55	3.13	0.01	0.01	0.25	0.26	0.01	0.04	0.05	—	741	741	0.04	0.04	1.19	756
Area	0.21	0.67	0.04	1.19	< 0.005	0.11	—	0.11	0.11	—	0.11	16.6	33.1	49.7	0.08	< 0.005	—	51.7
Energy	0.02	0.01	0.14	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	335	335	0.02	< 0.005	—	336
Water	—	—	—	—	—	—	—	—	—	—	—	1.02	14.0	15.0	0.11	< 0.005	—	18.4
Waste	—	—	—	—	—	—	—	—	—	—	—	6.20	0.00	6.20	0.62	0.00	—	21.7
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.15	0.15
Total	0.77	1.18	0.73	4.38	0.01	0.13	0.25	0.38	0.13	0.04	0.17	23.8	1,123	1,147	0.86	0.05	1.35	1,184

3. Construction Emissions Details

3.1. Demolition (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.39	2.84	27.3	23.5	0.03	1.20	—	1.20	1.10	—	1.10	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.50	1.29	< 0.005	0.07	—	0.07	0.06	—	0.06	—	188	188	0.01	< 0.005	—	188
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.27	0.23	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.1	31.1	< 0.005	< 0.005	—	31.2
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.09	0.08	0.06	0.91	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	134	134	0.01	< 0.005	0.55	136
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.75	6.75	< 0.005	< 0.005	0.01	6.85
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.12	1.12	< 0.005	< 0.005	< 0.005	1.13
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Site Preparation (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.70	3.95	39.7	35.5	0.05	1.81	—	1.81	1.66	—	1.66	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	1.09	0.97	< 0.005	0.05	—	0.05	0.05	—	0.05	—	145	145	0.01	< 0.005	—	146
Dust From Material Movement	—	—	—	—	—	—	0.54	0.54	—	0.28	0.28	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.20	0.18	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.0	24.0	< 0.005	< 0.005	—	24.1
Dust From Material Movement	—	—	—	—	—	—	0.10	0.10	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.07	1.06	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	157	157	0.01	0.01	0.64	159
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.94	3.94	< 0.005	< 0.005	0.01	4.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.65	0.65	< 0.005	< 0.005	< 0.005	0.66
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.43	3.72	37.3	31.4	0.06	1.59	—	1.59	1.47	—	1.47	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.43	3.72	37.3	31.4	0.06	1.59	—	1.59	1.47	—	1.47	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	0.31	3.07	2.58	0.01	0.13	—	0.13	0.12	—	0.12	—	542	542	0.02	< 0.005	—	544
Dust From Material Movement	—	—	—	—	—	—	0.76	0.76	—	0.30	0.30	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.56	0.47	< 0.005	0.02	—	0.02	0.02	—	0.02	—	89.8	89.8	< 0.005	< 0.005	—	90.1
Dust From Material Movement	—	—	—	—	—	—	0.14	0.14	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.08	1.21	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	179	179	0.01	0.01	0.74	182
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.10	0.10	0.93	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	158	158	0.01	0.01	0.02	161
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.5	13.5	< 0.005	< 0.005	0.03	13.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.23	2.23	< 0.005	< 0.005	< 0.005	2.27
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.50	1.26	11.8	13.2	0.02	0.55	—	0.55	0.51	—	0.51	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.20	1.34	< 0.005	0.06	—	0.06	0.05	—	0.05	—	244	244	0.01	< 0.005	—	245
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.22	0.24	< 0.005	0.01	—	0.01	0.01	—	0.01	—	40.4	40.4	< 0.005	< 0.005	—	40.5
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.14	0.15	1.37	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	234	234	0.02	0.01	0.03	237
Vendor	0.01	0.01	0.20	0.10	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	106	106	< 0.005	0.02	0.01	111
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.15	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	24.7	24.7	< 0.005	< 0.005	0.05	25.0
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.8	10.8	< 0.005	< 0.005	0.01	11.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.08	4.08	< 0.005	< 0.005	0.01	4.15
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.79	1.79	< 0.005	< 0.005	< 0.005	1.87
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03	0.86	8.04	9.39	0.02	0.36	—	0.36	0.33	—	0.33	—	1,717	1,717	0.07	0.01	—	1,723
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.47	1.71	< 0.005	0.07	—	0.07	0.06	—	0.06	—	284	284	0.01	< 0.005	—	285
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.15	0.11	1.63	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	259	259	0.01	0.01	0.99	263
Vendor	0.01	0.01	0.18	0.09	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	105	105	< 0.005	0.02	0.26	109
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.14	0.13	0.13	1.25	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	229	229	0.01	0.01	0.03	232
Vendor	0.01	0.01	0.19	0.09	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	105	105	< 0.005	0.02	0.01	109
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.09	0.93	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	170	170	0.01	0.01	0.31	173
Vendor	0.01	0.01	0.13	0.07	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	74.9	74.9	< 0.005	0.01	0.08	78.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.17	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.1	28.1	< 0.005	< 0.005	0.05	28.6
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.4	12.4	< 0.005	< 0.005	0.01	13.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.1	14.1	< 0.005	< 0.005	—	14.1
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.33	2.33	< 0.005	< 0.005	—	2.34
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.12	0.12	1.15	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	224	224	0.01	0.01	0.02	227
Vendor	0.01	0.01	0.19	0.09	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	103	103	< 0.005	0.01	0.01	107
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.36	1.36	< 0.005	< 0.005	< 0.005	1.38
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.60	0.60	< 0.005	< 0.005	< 0.005	0.63
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.23	0.23	< 0.005	< 0.005	< 0.005	0.23
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.10	0.10	< 0.005	< 0.005	< 0.005	0.10
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.41	0.55	< 0.005	0.02	—	0.02	0.02	—	0.02	—	82.8	82.8	< 0.005	< 0.005	—	83.1
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.7	13.7	< 0.005	< 0.005	—	13.8
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.06	0.58	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	114	114	0.01	< 0.005	0.01	115
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.47	6.47	< 0.005	< 0.005	0.01	6.57
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.07	1.07	< 0.005	< 0.005	< 0.005	1.09
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architect ural Coatings	—	40.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.32	7.32	< 0.005	< 0.005	—	7.34
Architectural Coatings	—	2.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.21	1.21	< 0.005	< 0.005	—	1.22
Architectural Coatings	—	0.41	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.02	0.23	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	44.8	44.8	< 0.005	< 0.005	< 0.005	45.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.55	2.55	< 0.005	< 0.005	< 0.005	2.58
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.42	0.42	< 0.005	< 0.005	< 0.005	0.43
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	3.36	3.17	2.86	19.9	0.05	0.04	1.39	1.43	0.04	0.24	0.28	—	4,855	4,855	0.20	0.26	17.1	4,955
Total	3.36	3.17	2.86	19.9	0.05	0.04	1.39	1.43	0.04	0.24	0.28	—	4,855	4,855	0.20	0.26	17.1	4,955
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	2.97	2.77	3.25	17.9	0.04	0.04	1.39	1.43	0.04	0.24	0.29	—	4,470	4,470	0.24	0.28	0.44	4,560
Total	2.97	2.77	3.25	17.9	0.04	0.04	1.39	1.43	0.04	0.24	0.29	—	4,470	4,470	0.24	0.28	0.44	4,560
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.54	0.50	0.55	3.13	0.01	0.01	0.25	0.26	0.01	0.04	0.05	—	741	741	0.04	0.04	1.19	756

Total	0.54	0.50	0.55	3.13	0.01	0.01	0.25	0.26	0.01	0.04	0.05	—	741	741	0.04	0.04	1.19	756
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4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	1,062	1,062	0.07	0.01	—	1,066
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,062	1,062	0.07	0.01	—	1,066
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	1,062	1,062	0.07	0.01	—	1,066
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,062	1,062	0.07	0.01	—	1,066
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	176	176	0.01	< 0.005	—	177
Total	—	—	—	—	—	—	—	—	—	—	—	—	176	176	0.01	< 0.005	—	177

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
----------	-----	-----	-----	----	-----	-------	-------	-------	--------	--------	--------	------	-------	------	-----	-----	---	------

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.09	0.04	0.76	0.32	< 0.005	0.06	—	0.06	0.06	—	0.06	—	960	960	0.08	< 0.005	—	962
Total	0.09	0.04	0.76	0.32	< 0.005	0.06	—	0.06	0.06	—	0.06	—	960	960	0.08	< 0.005	—	962
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.09	0.04	0.76	0.32	< 0.005	0.06	—	0.06	0.06	—	0.06	—	960	960	0.08	< 0.005	—	962
Total	0.09	0.04	0.76	0.32	< 0.005	0.06	—	0.06	0.06	—	0.06	—	960	960	0.08	< 0.005	—	962
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.02	0.01	0.14	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	159	159	0.01	< 0.005	—	159
Total	0.02	0.01	0.14	0.06	< 0.005	0.01	—	0.01	0.01	—	0.01	—	159	159	0.01	< 0.005	—	159

4.3. Area Emissions by Source

4.3.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	4.20	2.08	0.98	18.8	0.06	2.70	—	2.70	2.60	—	2.60	446	863	1,309	2.10	< 0.005	—	1,362
Consumer Products	—	2.77	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural	—	0.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.45	0.43	0.05	4.63	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.4	12.4	< 0.005	< 0.005	—	12.8
Total	4.65	5.50	1.03	23.4	0.06	2.70	—	2.70	2.60	—	2.60	446	876	1,321	2.10	< 0.005	—	1,375
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	4.20	2.08	0.98	18.8	0.06	2.70	—	2.70	2.60	—	2.60	446	863	1,309	2.10	< 0.005	—	1,362
Consumer Products	—	2.77	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	4.20	5.07	0.98	18.8	0.06	2.70	—	2.70	2.60	—	2.60	446	863	1,309	2.10	< 0.005	—	1,362
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.17	0.09	0.04	0.77	< 0.005	0.11	—	0.11	0.11	—	0.11	16.6	32.1	48.7	0.08	< 0.005	—	50.7
Consumer Products	—	0.51	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.04	0.04	< 0.005	0.42	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.02	1.02	< 0.005	< 0.005	—	1.04
Total	0.21	0.67	0.04	1.19	< 0.005	0.11	—	0.11	0.11	—	0.11	16.6	33.1	49.7	0.08	< 0.005	—	51.7

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	6.13	84.8	90.9	0.63	0.02	—	111
Total	—	—	—	—	—	—	—	—	—	—	—	6.13	84.8	90.9	0.63	0.02	—	111
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	6.13	84.8	90.9	0.63	0.02	—	111
Total	—	—	—	—	—	—	—	—	—	—	—	6.13	84.8	90.9	0.63	0.02	—	111
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1.02	14.0	15.0	0.11	< 0.005	—	18.4
Total	—	—	—	—	—	—	—	—	—	—	—	1.02	14.0	15.0	0.11	< 0.005	—	18.4

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
----------	-----	-----	-----	----	-----	-------	-------	-------	--------	--------	--------	------	-------	------	-----	-----	---	------

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	37.4	0.00	37.4	3.74	0.00	—	131
Total	—	—	—	—	—	—	—	—	—	—	—	37.4	0.00	37.4	3.74	0.00	—	131
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	37.4	0.00	37.4	3.74	0.00	—	131
Total	—	—	—	—	—	—	—	—	—	—	—	37.4	0.00	37.4	3.74	0.00	—	131
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	6.20	0.00	6.20	0.62	0.00	—	21.7
Total	—	—	—	—	—	—	—	—	—	—	—	6.20	0.00	6.20	0.62	0.00	—	21.7

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.93	0.93
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.93	0.93

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.93	0.93
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.93	0.93
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.15	0.15
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.15	0.15

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequest ered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	8/15/2023	9/12/2023	5.00	20.0	—
Site Preparation	Site Preparation	9/13/2023	9/27/2023	5.00	10.0	—
Grading	Grading	9/28/2023	11/9/2023	5.00	30.0	—
Building Construction	Building Construction	11/10/2023	1/3/2025	5.00	300	—
Paving	Paving	1/4/2025	2/1/2025	5.00	20.0	—
Architectural Coating	Architectural Coating	2/2/2025	3/2/2025	5.00	20.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	10.6	LDA,LDT1,LDT2
Demolition	Vendor	—	3.50	HHDT,MHDT
Demolition	Hauling	0.00	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	10.6	LDA,LDT1,LDT2
Site Preparation	Vendor	—	3.50	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	10.6	LDA,LDT1,LDT2
Grading	Vendor	—	3.50	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	29.5	10.6	LDA,LDT1,LDT2
Building Construction	Vendor	8.77	3.50	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	10.6	LDA,LDT1,LDT2
Paving	Vendor	—	3.50	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT

Architectural Coating	—	—	—	—
Architectural Coating	Worker	5.90	10.6	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	3.50	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	262,193	87,398	0.00	0.00	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	—	—
Site Preparation	—	—	15.0	0.00	—
Grading	—	—	90.0	0.00	—
Paving	0.00	0.00	0.00	0.00	0.90

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Single Family Housing	0.90	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	532	0.03	< 0.005
2024	0.00	532	0.03	< 0.005
2025	0.00	532	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Single Family Housing	774	782	701	279,161	4,968	5,021	4,500	1,791,692

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	41

Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	41
Conventional Wood Stoves	0
Catalytic Wood Stoves	4
Non-Catalytic Wood Stoves	4
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
262192.95	87,398	0.00	0.00	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO₂ and CH₄ and N₂O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO ₂	CH ₄	N ₂ O	Natural Gas (kBTU/yr)
Single Family Housing	728,690	532	0.0330	0.0040	2,993,902

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	3,201,014	18,820,360

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	69.47	0.00

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
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5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
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5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)
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5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	29.7	annual days of extreme heat
Extreme Precipitation	0.60	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about $\frac{3}{4}$ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	0	0	N/A
Flooding	0	0	0	N/A
Drought	0	0	0	N/A

Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	1	1	2
Flooding	1	1	1	2
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
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Exposure Indicators	—
AQ-Ozone	82.5
AQ-PM	99.0
AQ-DPM	38.2
Drinking Water	60.8
Lead Risk Housing	35.5
Pesticides	71.3
Toxic Releases	41.2
Traffic	5.86
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	81.9
Haz Waste Facilities/Generators	16.6
Impaired Water Bodies	0.00
Solid Waste	42.3
Sensitive Population	—
Asthma	94.6
Cardio-vascular	98.6
Low Birth Weights	44.5
Socioeconomic Factor Indicators	—
Education	82.8
Housing	56.0
Linguistic	71.2
Poverty	81.8
Unemployment	98.5

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	24.04722187
Employed	13.29398178
Median HI	47.9917875
Education	—
Bachelor's or higher	17.50288721
High school enrollment	22.72552291
Preschool enrollment	40.52354677
Transportation	—
Auto Access	53.75336841
Active commuting	5.402284101
Social	—
2-parent households	60.6698319
Voting	10.40677531
Neighborhood	—
Alcohol availability	68.07391249
Park access	2.194276915
Retail density	9.572693443
Supermarket access	33.77389965
Tree canopy	11.97228282
Housing	—
Homeownership	61.88887463
Housing habitability	46.93956114
Low-inc homeowner severe housing cost burden	51.76440395
Low-inc renter severe housing cost burden	35.8013602
Uncrowded housing	25.1764404

Health Outcomes	—
Insured adults	28.7950725
Arthritis	0.0
Asthma ER Admissions	1.9
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	5.1
Cognitively Disabled	44.8
Physically Disabled	37.2
Heart Attack ER Admissions	31.4
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	19.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0

Children	37.8
Elderly	80.0
English Speaking	24.1
Foreign-born	46.5
Outdoor Workers	13.3
Climate Change Adaptive Capacity	—
Impervious Surface Cover	63.8
Traffic Density	6.0
Traffic Access	0.0
Other Indices	—
Hardship	77.1
Other Decision Support	—
2016 Voting	13.7

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	82.0
Healthy Places Index Score for Project Location (b)	20.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Changes based on reductions needed to represent plans

GLCs loaded successfully
Pollutants loaded successfully
Pathway receptors loaded successfully

RISK SCENARIO SETTINGS

Receptor Type: Resident
Scenario: All
Calculation Method: Derived

EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: -0.25
Total Exposure Duration: 2

Exposure Duration Bin Distribution
3rd Trimester Bin: 0.25
0<2 Years Bin: 2
2<9 Years Bin: 0
2<16 Years Bin: 0
16<30 Years Bin: 0
16 to 70 Years Bin: 0

PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: True
Dermal: True
Mother's milk: True
Water: False
Fish: False
Homegrown crops: False
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

***** INHALATION

Daily breathing rate: LongTerm24HR

Worker Adjustment Factors
Worker adjustment factors enabled: NO

Fraction at time at home

3rd Trimester to 16 years: OFF
16 years to 70 years: ON

SOIL & DERMAL PATHWAY SETTINGS

Deposition rate (m/s): 0.02
Soil mixing depth (m): 0.01
Dermal climate: Mixed

TIER 2 SETTINGS

Tier2 adjustments were used in this assessment. Please see the input file for details.

Tier2 - What was changed: ED or start age changed|

Calculating cancer risk

Cancer risk breakdown by pollutant and receptor saved to: \\ppeng.com\pzdata\clients\DR Horton - 1594\159422003-Stonehaven\200 Technical\215 Env Planning\Appendices\Air Quality and GHG\STONEHAVEN\hra\STONE_CancerRisk.csv
Cancer risk total by receptor saved to: \\ppeng.com\pzdata\clients\DR Horton - 1594\159422003-Stonehaven\200 Technical\215 Env Planning\Appendices\Air Quality and GHG\STONEHAVEN\hra\STONE_CancerRiskSumByRec.csv
Calculating chronic risk
Chronic risk breakdown by pollutant and receptor saved to: \\ppeng.com\pzdata\clients\DR Horton - 1594\159422003-Stonehaven\200 Technical\215 Env Planning\Appendices\Air Quality and GHG\STONEHAVEN\hra\STONE_NCChronicRisk.csv
Chronic risk total by receptor saved to: \\ppeng.com\pzdata\clients\DR Horton - 1594\159422003-Stonehaven\200 Technical\215 Env Planning\Appendices\Air Quality and GHG\STONEHAVEN\hra\STONE_NCChronicRiskSumByRec.csv
Calculating acute risk

Acute risk breakdown by pollutant and receptor saved to: \\ppeng.com\pzdata\clients\DR Horton - 1594\159422003-Stonehaven\200 Technical\215 Env Planning\Appendices\Air Quality and GHG\STONEHAVEN\hra\STONE_NCAcuteRisk.csv
Acute risk total by receptor saved to: \\ppeng.com\pzdata\clients\DR Horton - 1594\159422003-Stonehaven\200 Technical\215 Env Planning\Appendices\Air Quality and GHG\STONEHAVEN\hra\STONE_NCAcuteRiskSumByRec.csv

HRA ran successfully

Appendix B: Biological Evaluation

Biological Evaluation

DR HORTON

STONEHAVEN SUBDIVISION PROJECT

MARCH 2023

Shaylea Stark, Biologist

PROVOST & PRITCHARD CONSULTING GROUP | 455 W. FIR AVE, CLOVIS CA 93611



Table of Contents

I.	Introduction.....	1
	Project Description	1
	Report Objectives.....	1
	Study Methodology	5
II.	Existing Conditions	6
	Regional Setting.....	6
	Topography.....	6
	Climate.....	6
	Hydrology	6
	Soils	6
	Biotic Habitats	7
	Residential.....	7
	Ruderal/Agricultural	7
	Riparian Habitat and Natural Communities of Special Concern.....	7
	Designated Critical Habitat.....	8
	Wildlife Movement Corridors and Native Wildlife Nursery Sites.....	8
	Special Status Plants and Animals	8
III.	Impacts and Mitigation	14
	Significance Criteria	14
	CEQA.....	14
	Relevant Goals, Policies, and Laws	15
	Kings County General Plan	15
	City of Hanford General Plan	15
	Threatened and Endangered Species.....	16
	Designated Critical Habitat	16
	Migratory Birds	16
	Birds of Prey.....	17
	Nesting Birds.....	17
	Wetlands and other “Jurisdictional Waters”	17
	Potentially Significant Project-Related Impacts and Mitigation	18
	Project-Related Mortality and/or Disturbance of Nesting Migratory Raptors and Birds, Including the Swainson’s Hawk	18

Project-Related Mortality and/or Disturbance of Roosting Bats, Including the Pallid Bat	19
Less Than Significant Project-Related Impacts.....	20
Project-Related Impacts to Special Status Animal Species Absent From, or Unlikely to Occur on, the Project Site	20
Project-Related Impacts to Special Status Plant Species Absent From, or Unlikely to Occur on, the Project Site	20
Project-Related Impacts to Special Status Fishes Absent From, or Unlikely to Occur on, the Project Site	20
Project-Related Impacts to Riparian Habitat and Natural Communities of Special Concern	20
Project-Related Impacts to Regulated Waters, Wetlands, and Water Quality	21
Project-Related Impacts to Wildlife Movement Corridors and Native Wildlife Nursery Sites	21
Project-Related Impacts to Critical Habitat.....	21
Local Policies or Habitat Conservation Plans.....	21
IV. References	22

List of Figures

Figure 1. Regional Location Map	2
Figure 2. Topographic Quadrangle Map.....	3
Figure 3. Area of Potential Effect Map.....	4

List of Tables

Table 1. List of Soils Located Onsite and Their Basic Properties	6
Table 2. List of Special Status Animals with Potential to Occur Onsite and/or in the Vicinity.	9
Table 3. List of Special Status Plants with Potential to Occur Onsite and/or in the Vicinity.	12

List of Appendices

Appendix A: Photos of the Project Area	
Appendix B: NRCS Soils Report	
Appendix C: CNDDB 9-Quad Search	
Appendix D: IPaC Search	

I. Introduction

The following technical report, prepared by Provost & Pritchard Consulting Group, in compliance with the California Environmental Quality Act (CEQA), includes a description of the biological resources present or with potential to occur within the proposed Stonehaven Subdivision Project (Project) and surrounding areas, and evaluates potential Project-related impacts to those resources.

Project Description

We understand that DR Horton is in the process of acquiring a roughly 11.81-acre parcel (APN 011-040-030-000) located South of Hanford-Armona Road between 12th Avenue and 13th Avenue, in Hanford, California (see **Figure 1** and **Figure 2**). The Project is currently located in Unincorporated Kings County, within the San Joaquin Valley, but would be annexed into the City of Hanford, which is adjacent to the Project site. The Project's Area of Potential Effect (APE) is approximately 16 acres, which includes the approximately 11.81 acre Project site and a 50-foot buffer surrounding the Project site (see **Figure 3**). The Project proposes to subdivide approximately 11.81 assessed acres of land currently used for residential and agricultural purposes into approximately 79 single-family residential lots. The sizes of the lots would range from 3,600 square feet and up.

Report Objectives

Construction activities such as that proposed by the Project could potentially damage biological resources or modify habitats that are crucial for sensitive plant and wildlife species. In cases such as these, development may be regulated by State or federal agencies, and/or addressed by local regulatory agencies.

This report addresses issues related to the following:

1. The presence of sensitive biological resources onsite, or with the potential to occur onsite.
2. The federal, state, and local regulations regarding these resources.
3. Mitigation measures that may be required to reduce the magnitude of anticipated impacts and/or comply with permit requirements of state and federal resource agencies.

Therefore, the objectives of this report are:

1. Summarize all site-specific information related to existing biological resources.
2. Make reasonable inferences about the biological resources that could occur onsite based on habitat suitability and the proximity of the site to a species' known range.
3. Summarize all state and federal natural resource protection laws that may be relevant to the APE.
4. Identify and discuss Project impacts and effects to biological resources likely to occur onsite within the context of the CEQA, and/or state or federal laws.
5. Identify and publish a set of avoidance and mitigation measures that would reduce impacts to a less-than-significant level (as identified by CEQA) and are generally consistent with recommendations of the resource agencies for sensitive biological resources.

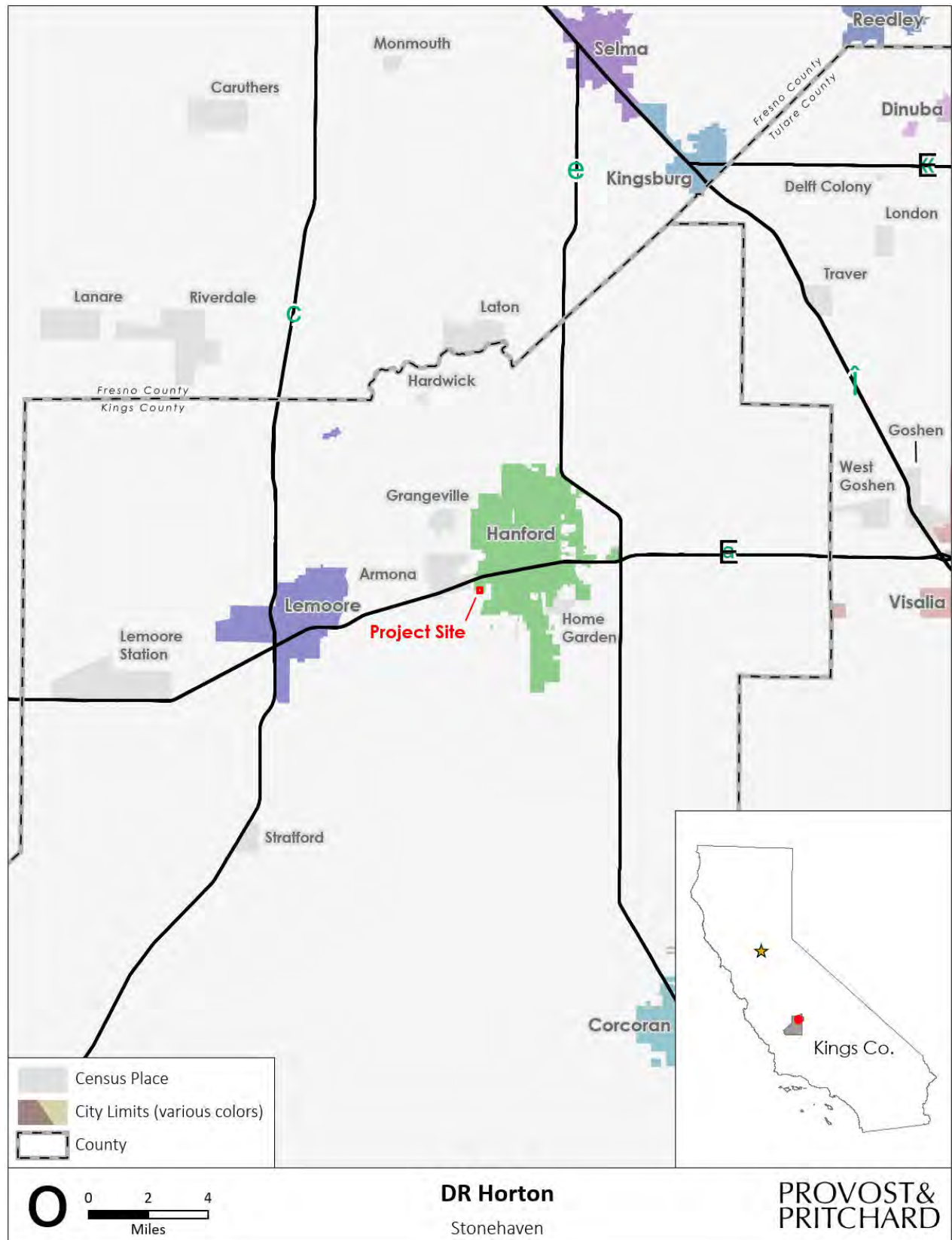


Figure 1. Regional Location Map

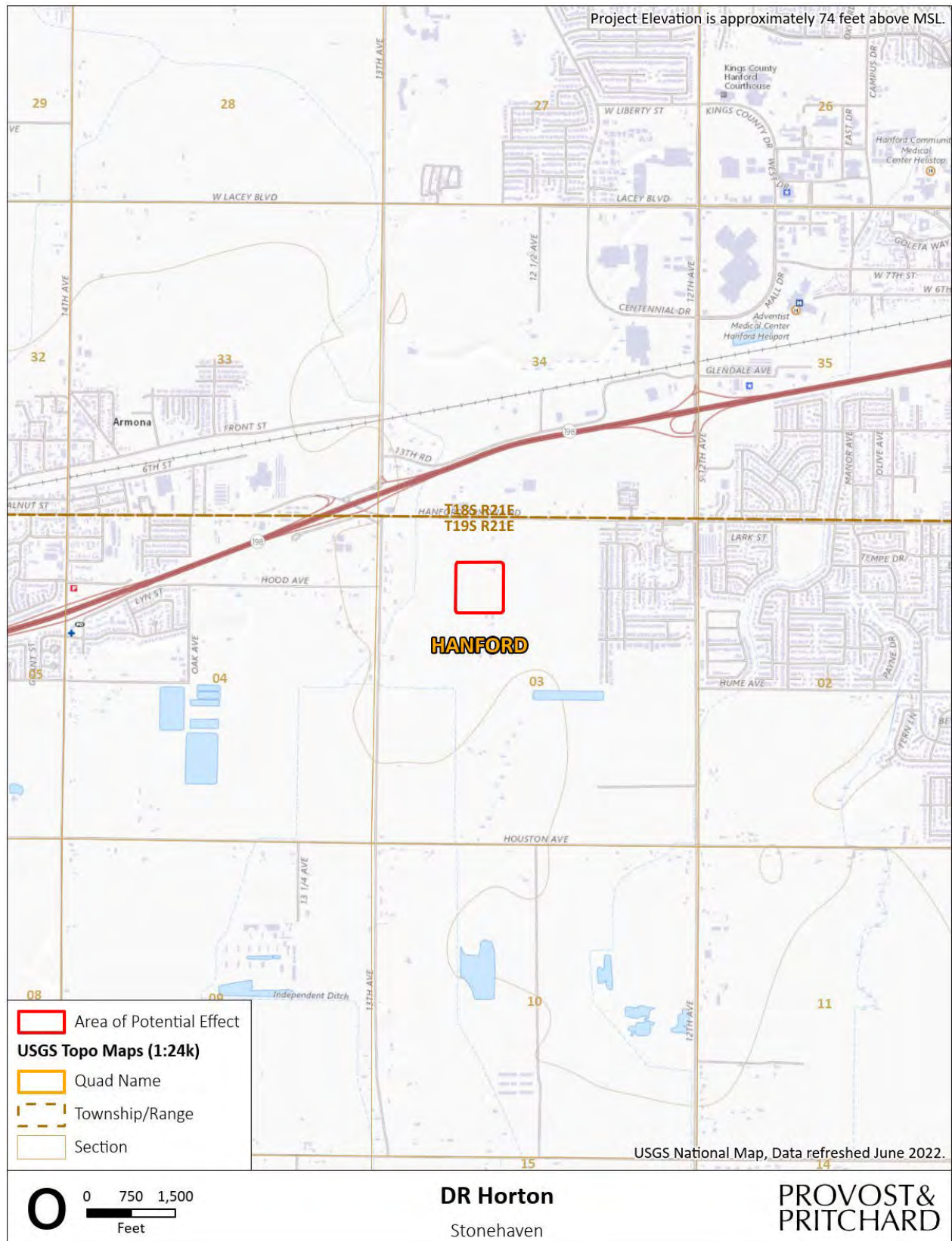


Figure 2. Topographic Quadrangle Map



Figure 3. Area of Potential Effect Map

Study Methodology

A reconnaissance-level field survey of the APE (**Figure 3**) was conducted on February 14, 2023, by Provost & Pritchard Consulting Group biologist, Shaylea Stark. The survey consisted of walking throughout the Project site, and binoculars were used to survey the 50-foot buffer while identifying and noting land uses, biological habitats and communities, plant and animal species encountered, and assessing suitable habitats that could be utilized by various special status plant and animal species. Representative photographs of the site were taken and are presented in **Appendix A**.

Ms. Stark conducted an analysis of potential Project-related impacts to biological resources based on the resources known to exist or with potential to exist within the APE. Sources of information used in preparation of this analysis included: the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB) and California Wildlife Habitat Relationships (CWHR) database; California Native Plant Society's (CNPS) Online Inventory of Rare and Endangered Vascular Plants of California; CalFlora's online database of California native plants; Jepson Herbarium's online database (i.e., Jepson eFlora); United States Fish and Wildlife Service's (USFWS) Environmental Conservation Online System (ECOS) Information for Planning and Consultation (IPaC) system, and National Wetlands Inventory (NWI); iNaturalist; NatureServe Explorer's online database; United States Department of Agriculture (USDA) Natural Resources Conservation Service's (NRCS); the California Herps website; and various manuals, reports, and references related to plants and animals of the San Joaquin Valley region.

The field survey did not include focused surveys for special status species. The field survey conducted included the appropriate level of detail to assess the significance of potential impacts to sensitive biological resources resulting from implementing the Project. Furthermore, the field survey was sufficient to generally describe those features of the Project that could be subject to the jurisdiction of federal and/or state agencies, such as the United States Army Corps of Engineers (USACE), CDFW, Regional Water Quality Control Board (RWQCB) and the State Water Resources Control Board (SWRCB).

II. Existing Conditions

Regional Setting

Topography

The APE is located in Kings County within the San Joaquin Valley, directly west of the City of Hanford and east of the City of Lemoore, California (see **Figure 1** and **Figure 2**). The topography is relatively flat with elevations at approximately 243 feet above mean sea level.

Climate

Like most of California, the APE experiences a Mediterranean climate. Warm, dry summers are followed by cool, moist winters. Summer temperatures often reach above 90 degrees Fahrenheit (°F), and the humidity is generally low. Winter temperatures are often below 60 °F during the day and rarely exceed 70 °F. On average, the City of Hanford receives approximately 12 inches of precipitation in the form of rainfall yearly, most of which occurs between October and March (Weatherspark 2023), and the APE would be expected to receive similar amounts of precipitation.

Hydrology

Watersheds are made up of many smaller subwatersheds that drain into a particular stream, river, or lake. The APE lies within the Jacobs Slough-Frontal Tulare Lakebed watershed; Hydrologic Unit Code (HUC): 1803001220 and a single subwatershed: Jacobs Slough subwatershed; HUC: 180300122004. The Jacobs Slough-Frontal Tulare Lakebed watershed is fed by stormwater runoff and snowmelt collected in upland areas which flow down into the Middle Fork Kings River and the South Fork Kings River, which combine to become the Kings River. The Kings River then flows into an unnamed canal which flows into multiple unnamed canals before it reaches the Last Chance Ditch, which is 0.14 miles to the west of the APE. The Last Chance Ditch flows into other unnamed canals, which connects with the Tule River. The Tule River eventually terminates in the historic Tulare Lakebed (United States Environmental Protection Agency 2023). The APE is isolated from these waterways and Last Chance Ditch would not be impacted by Project activities.

Soils

Two soil mapping units representing two soil types were identified within the APE are listed in **Table 1** (see **Appendix B** for the complete Web Soil Survey report). The soils are displayed with their core properties in the table below, according to the Major Land Resource Area of California (MLRA) 19 map area. Both soils are primarily used for cultivation and watershed areas.

Table 1. List of Soils Located Onsite and Their Basic Properties

Soil	Soil Map Unit	Percent of APE	Hydric Unit	Hydric Minor Units	Drainage	Permeability	Runoff
<i>Cajon sandy loam</i>	0 to 1 percent slopes	57.7%	No	Yes	Somewhat excessively drained	Rapid permeability	Very low runoff
<i>Nord complex</i>	0 to 2 percent slopes	42.3%	No	Yes	Well drained	Moderate permeability	Low runoff

While none of the major soil mapping units were identified as hydric, some of the minor soil mapping units were identified as hydric, which means the soils of the APE are predominantly nonhydric. Hydric soils are defined as soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions such that under sufficiently wet conditions, hydrophytic vegetation can be supported.

Biotic Habitats

Residential

The APE contains a residential house that has ornamental vegetation. Vegetation observed consisted of oleander (*Nerium oleander*), red pine (*Pinus resinosa*), olive trees (*Olea europaea*), an avocado tree (*Persea americana*), orange trees (*Citrus × sinensis*), silver dollar gum eucalyptus (*Eucalyptus globulus*), and blue gum eucalyptus (*Eucalyptus polyanthemos*).

A domestic cat (*Felis catus*) was observed near the house/garage. Signs of species observed within the residential habitat included California ground squirrel (*Otospermophilus beecheyi*) tracks.

The residential habitat within the APE was highly disturbed by anthropogenic activities but provides habitat for foraging birds, including raptors, during the day, as well as potentially bats, coyotes, and other nocturnal animals at night. The residential habitat contains suitable habitat for tree and ground nesting avian species.

Ruderal/Agricultural

The APE contains a ruderal agricultural field that is currently a grass cover crop with sparse herbaceous vegetation. Vegetation observed consisted of mustard (*Brassica* spp.), cheese weed mallow (*Malva parviflora*), wild radish, (*Raphanus raphanistrum*), common fiddleneck (*Amsinckia intermedia*), common pea (*Pisum sativum*), and big sheath mushroom (*Volvopluteus gloiocephalus*).

The survey of the ruderal habitat resulted in the identification of bird species including Killdeer (*Charadrius vociferus*), White-crowned Sparrow (*Zonotrichia leucophrys*), and Common Raven (*Corvus corax*). Signs of species observed within the APE included Botta's pocket gopher burrows (*Thomomys bottae*), and other small mammal burrows. A nest box is located to the south of the APE near a residential house.

The ruderal habitat within the APE was highly disturbed by agricultural activities but provides habitat for foraging birds, including raptors, during the day, as well as potentially bats, coyotes, and other nocturnal animals at night. The ruderal habitat contains suitable habitat ground nesting avian species.

Representative photographs of the site at the time of the survey are available in **Appendix A** at the end of this document.

Riparian Habitat and Natural Communities of Special Concern

Riparian habitat are lands that occur along the edges of rivers, streams, lakes, and other water bodies. Riparian habitats can be found within the NWI. Natural communities of special concern are those that are of limited distribution, distinguished by significant biological diversity, or home to special status species. CDFW is responsible for the classification and mapping of all-natural communities in California. Just as the special status plant and animal species, these natural communities of special concern can be found within the CNDDB.

Riparian habitat is absent from the APE and adjacent lands. According to CNDDB there are two recorded observations of natural communities within the vicinity of the APE: Valley Sacaton Grassland is located 10.5 miles northeast of the APE and Valley Sink Scrub is located 8 miles southwest of the APE. No natural communities of special concern have been documented within the APE, and during the biological survey none were observed.

Designated Critical Habitat

The USFWS often designates areas of “Critical Habitat” when it lists species as threatened or endangered. Critical Habitat is a specific geographic area that contains features essential for the conservation of a threatened or endangered species, which may require special management and protection. According to the CNDDDB and IPaC, designated critical habitat is absent from the APE and vicinity.

Wildlife Movement Corridors and Native Wildlife Nursery Sites

Wildlife movement corridors are routes that animals regularly and predictably follow during seasonal migration, dispersal from native ranges, daily travel within home ranges, and inter-population movements. Movement corridors in California are typically associated with valleys, ridgelines, and rivers and creeks supporting riparian vegetation. Native Wildlife Nursery Sites are important for the reproduction and young of wildlife species.

The APE does not contain features that would be likely to function as wildlife movement corridors. The APE is located in an area where it is possible to be used by species more tolerant of consistent human activities, such as some birds and gophers, but is not ideal due to the heavy disturbance caused by human and agricultural activities.

The APE has suitable features (buildings and trees) that could be used by maternity roosting bats, which are considered native wildlife nursery sites.

Special Status Plants and Animals

California contains several rare plant and animal species. In this context, “rare” is defined as a species known to have low populations or limited distributions. As the human population grows, urban expansion encroaches on the already-limited suitable habitat for rare species. This results in sensitive species becoming increasingly more vulnerable to extirpation. State and federal regulations have provided the CDFW and the USFWS with a mechanism for conserving and protecting the diversity of plant and animal species native to California. Numerous native plants and animals have been formally designated as “threatened” or “endangered” under State and federal endangered species legislation. Other formal designations include “candidate” for listing or “species of special concern” by CDFW. The CNPS has its list of native plants considered rare, threatened, or endangered. Collectively these plants and animals are referred to as “special status species.”

A query of the CNDDDB for occurrences of special status plant and animal species was conducted for the *Hanford* 7.5-minute U.S. Geological Survey (USGS) quadrangle that contains the APE in its entirety, and for the eight surrounding USGS quadrangles: *Burris Park*, *Guernsey*, *Laton*, *Lemoore*, *Remmoy*, *Riverdale*, *Stratford*, and *Waukena*. These species, and their potential to occur within the APE, are listed in **Table 2** and **Table 3** on the following pages. Other species that have the potential to occur within the APE that did not show up in the CNDDDB query are also included in Table 2. Species lists obtained from CNDDDB and IPaC are available in **Appendix C** and **Appendix D** at the end of this document. All relevant sources of information, as discussed in the *Study Methodology* section of this report, as well as field observations, were used to determine if any special status species may occur within the APE.

Table 2. List of Special Status Animals with Potential to Occur Onsite and/or in the Vicinity.

Species	Status*	Habitat	Occurrence within APE
Blunt-nosed leopard lizard (<i>Gambelia sila</i>)	FE, CE, CFP	Inhabits semi-arid grasslands, alkali flats, low foothills, canyon floors, large washes, and arroyos, usually on sandy, gravelly, or loamy substrate, sometimes on hardpan. Often found where there are abundant rodent burrows in dense vegetation or tall grass. Cannot survive on lands under cultivation. Known to bask on kangaroo rat mounds and often seeks shelter at the base of shrubs, in small mammal burrows, or in rock piles. Adults may excavate shallow burrows but rely on deeper pre-existing rodent burrows for hibernation and reproduction.	Absent. Suitable habitat for this species is absent within the APE and surrounding lands. The APE and surrounding areas are frequently cultivated agricultural lands that are unsuitable for this species. The only recorded observation of this species within the vicinity was approximately 7 miles south of the APE, in 1990.
Burrowing Owl (<i>Athene cunicularia</i>)	CSC	Resides in open, dry annual or perennial grasslands, deserts, and scrublands with low growing vegetation. Nests underground in existing burrows created by mammals, most often ground squirrels.	Unlikely. While California ground squirrel burrows were observed in the APE, the APE and surrounding areas are frequently cultivated agricultural lands that are generally unsuitable for this species. No sign of this species was observed during the field survey. The nearest recorded observation of this species was approximately 11 miles northeast of the APE in 2017.
California glossy snake (<i>Arizona elegans occidentalis</i>)	CSC	Inhabits arid scrub, rocky washes, grasslands, and chaparral. Prefers open areas with loose soil for easy burrowing.	Unlikely. The APE and surrounding areas are frequently cultivated agricultural lands that are unsuitable for this species. No sign of this species was observed during the field survey. The only recorded observation of this species within the vicinity was approximately 14 miles northwest of the APE in 1939.
California tiger salamander (<i>Ambystoma californiense</i>)	FT, CT, CWL	Requires vernal pools or seasonal ponds for breeding and small mammal burrows for aestivation. Generally found in grassland and oak savannah plant communities in central California from sea level to 1500 feet in elevation. Has been known to migrate up to 1.3 miles to breed.	Absent. Vernal pools and seasonal pools appear to be absent within the APE and up to 1.3 miles from the APE. Surrounding land consists of agricultural fields and orchards which are unsuitable for this species. The nearest recorded observation of this species was approximately 11 miles northeast of the APE in 1999.
Delta smelt (<i>Hypomesus transpacificus</i>)	FT, CE	This pelagic and euryhaline species is Endemic to the Sacramento-San Joaquin River Delta, upstream through Contra Costa, Sacramento, San Joaquin, and Solano Counties.	Absent. The APE is outside the known range for this species and aquatic habitat required by this species is absent from the APE.
Fresno kangaroo rat (<i>Dipodomys nigratoides exilis</i>)	FE, CE	An inhabitant of alkali sinks open grassland environments in western Fresno County. Prefers bare, alkaline, clay-based soils subject to seasonal inundation with more friable soil	Absent. Suitable habitats required by this species are absent from the APE. There are no recorded observations of this species on CNDDDB within the regional vicinity of the Project.

Species	Status*	Habitat	Occurrence within APE
		mounds around shrubs and grasses. The most recent recorded observation of this species in California was in 1992 in Fresno County.	
Monarch Butterfly (<i>Danaus plexippus</i>)	FC	Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby. Larval host plants consist of milkweeds (<i>Asclepias</i> sp.). Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico.	Absent. Foraging and roosting habitat is absent within the APE. The APE contained minimal vegetation with no nectar, milkweeds or groves of trees observed during the biological survey. The most recent recorded observation of this species was approximately 7 miles south of the APE in 2022.
Pallid bat (<i>Antrozous pallidus</i>)	CSC	Found in grasslands, chaparral, and woodlands, where it feeds on ground- and vegetation-dwelling arthropods, and occasionally takes insects in flight. Prefers to roost in rock crevices, but may also use tree cavities, caves, bridges, and other man-made structures.	Possible. While marginal, foraging, and roosting habitat is present within the APE. The APE contains buildings where this species could roost. There are no recorded observations of this species on CNDDDB within the vicinity of the Project.
San Joaquin kit fox (<i>Vulpes macrotis mutica</i>)	FE, CT	Underground dens with multiple entrances in alkali sink, valley grassland, and woodland in valleys and adjacent foothills.	Unlikely. There were no suitable dens, tracks, or scat observed during the biological survey. It is unlikely this species would reside within the APE due to agricultural disturbance. The nearest recorded observation of this species was approximately 1.5 mile southeast of the APE in 2000.
Swainson's Hawk (<i>Buteo swainsoni</i>)	CT	Nests in large trees in open areas adjacent to grasslands, grain or alfalfa fields, or livestock pastures suitable for supporting rodent populations.	Possible. There are eucalyptus trees large enough to support nesting raptors within the APE and surrounding area, and this species could forage over the agricultural habitat of the APE. The nearest recorded observation of this species was approximately 5 miles east of the APE in 2016.
Tipton kangaroo rat (<i>Dipodomys nitratoide nitratoide</i>)	FE, CE	Burrows in soil. Often found in grassland and shrubland. Historical range was in Tulare and Kern Counties, generally east of where the California aqueduct occurs today.	Absent. The APE is outside of the historical range of this species.
Tricolored Blackbird (<i>Agelaius tricolor</i>)	CT, CSC	Nests colonially near fresh water in dense cattails or tules, or in thickets of riparian shrubs. Forages in grassland and cropland. Large colonies are often found on dairy farm forage fields.	Unlikely. No riparian vegetation or nesting habitat was observed during the biological survey. This species could potentially fly through or forage in the APE. The only recorded observation of this species within the vicinity was approximately 10.4 miles southeast of the APE in 2014.
Valley elderberry longhorn beetle (<i>Desmocerus californicus dimorphus</i>)	FT	Lives in mature elderberry shrubs of the Central Valley and foothills. Adults are active from March to June.	Absent. No elderberry shrubs were found within the APE or surrounding areas. The only recorded observation of this species within the vicinity was approximately 7 miles northwest of the APE in 1991.

Species	Status*	Habitat	Occurrence within APE
Vernal pool fairy shrimp (<i>Branchinecta lynchi</i>)	FT	Occupies vernal pools, clear to tea-colored water, in grass or mud-bottomed swales, and basalt depression pools.	Absent. Vernal pool habitat is absent from the APE and surrounding lands. The nearest recorded observation of this species was approximately 11 miles northeast of the APE in 2017.
Vernal pool tadpole shrimp (<i>Lepidurus packardii</i>)	FE	Occurs in vernal pools, clear to tea-colored water, in grass or mud-bottomed swales, and basalt depression pools.	Absent. Vernal pool habitat is absent from the APE and surrounding lands. The nearest recorded observation of this species was approximately 11 miles northeast of the APE in 2017.
Western pond turtle (<i>Emys marmorata</i>)	CSC	An aquatic turtle of ponds, marshes, slow-moving rivers, streams, and irrigation ditches with riparian vegetation. Requires adequate basking sites and sandy banks or grassy open fields to deposit eggs.	Unlikely. Aquatic habitat is absent within the APE. This species is often found in agricultural ditches and canals. Last Chance Ditch is 0.14 miles west of the APE but the APE and surrounding areas are frequently cultivated agricultural lands that are unsuitable for this species. The nearest recorded observation of this species was approximately 6 miles southwest of the APE in 1998. The most recent recorded observation of this species was in the Kings River, approximately 6.5 miles north of the APE in 2022.
Western Snowy Plover (<i>Charadrius alexandrinus nivosus</i>)	FT, CSC	Typically found on sandy beaches, salt pond levees, and shores of large alkali lakes.	Absent. The APE and surrounding areas are frequently cultivated agricultural lands that are unsuitable for this species. The only recorded observation of this species within the vicinity was approximately 9 miles southwest of the APE in 1987.
Western spadefoot (<i>Spea hammondi</i>)	CSC	The majority of the time this species is terrestrial and occurs in small mammal burrows and soil cracks, sometimes in the bottom of dried pools. Prefers open areas with sandy or gravelly soils, in a variety of habitats including mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Vernal pools or temporary wetlands, lasting a minimum of three weeks, which do not contain bullfrogs, fish, or crayfish are necessary for breeding.	Unlikely. Breeding habitat is absent from the APE and surrounding areas. The only recorded observation of this species within the vicinity was approximately 11 miles northeast of the APE in 2017.
Yellow-headed Blackbird (<i>Xanthocephalus xanthocephalus</i>)	CSC	Nests in freshwater emergent wetlands with dense vegetation and deep water. Often along borders of lakes or ponds.	Absent. Suitable habitats required by this species are absent from the APE. The only recorded observation of this species within the vicinity was approximately 12.5 miles southwest of the APE in 2016.

Table 3. List of Special Status Plants with Potential to Occur Onsite and/or in the Vicinity.

Species	Status	Habitat	Occurrence within APE
Alkali-sink goldfields (<i>Lasthenia chrysantha</i>)	CNPS 1B	Found in vernal pool and wet saline flat habitats. Occurrences documented in the San Joaquin and Sacramento Valleys at elevations below 656 feet. Blooms February - April.	Absent. Aquatic habitat is absent within the APE and surrounding area. The nearest recorded observation of this species was approximately 6.5 miles east of the APE in 1958.
Brittlescale (<i>Atriplex depressa</i>)	CNPS 1B	Found in the San Joaquin Valley and Sacramento Valley in alkaline or clay soils, typically in meadows or annual grassland in at elevations below 1050 feet. Sometimes associated with vernal pools. Blooms June–October.	Absent. Vernal pool habitat is absent from within the APE and surrounding areas. The only recorded observation of this species within the vicinity was approximately 7.5 miles north of the APE in an unknown year.
California alkali grass (<i>Puccinellia simplex</i>)	CNPS 1B	Found in the San Joaquin Valley and other parts of California in saline flats and mineral springs within valley grassland and wetland-riparian communities at elevations below 3000 feet. Blooms March–May.	Absent. Suitable habitat is absent from the APE and surrounding areas. The nearest recorded observation of this species was approximately 3 miles south of the APE in 1942.
Earlimart orache (<i>Atriplex cordulata</i> var. <i>erecticaulis</i>)	CNPS 1B	Found in the San Joaquin Valley in saline or alkaline soils, typically within valley and foothill grassland at elevations below 375 feet. Blooms August–September.	Absent. Suitable habitat is absent from the APE and surrounding areas. The nearest recorded observation of this species was approximately 9.5 miles southeast of the APE in 2002.
Lesser saltscale (<i>Atriplex minuscula</i>)	CNPS 1B	Found in the San Joaquin Valley in sandy, alkaline soils in alkali scrub, valley and foothill grassland, and alkali sink communities at elevations below 750 feet. Blooms April–October.	Absent. Required habitat and alkaline soils are absent within the APE and surrounding lands. The nearest recorded observation of this species was approximately 11 miles northeast of the APE in 2016.
Mud nama (<i>Nama stenocarpa</i>)	CNPS 2B.2	Found in marshes, swamps, wetlands, sometimes along lake shores, riverbanks, and intermittently wet areas. 15-815 m.	Absent. Aquatic habitat is absent from the APE and surrounding lands. The only recorded observation of this species within the vicinity was approximately 7 miles south of the APE in 1999.
Panoche pepper-grass (<i>Lepidium jaredii</i> ssp. <i>album</i>)	CNPS 1B	Found on steep slopes, washes, alluvial-fans, and clay, sometimes alkaline, within Valley and Foothill Grassland communities in western Fresno County at elevations between 600–2400 feet. Blooms February–June.	Absent. Required habitat and clay soils are absent within the APE and surrounding lands. The only recorded observation of this species within the vicinity was approximately 12.5 miles northwest of the APE in 1893 and is listed as possibly extirpated.
Recurved larkspur (<i>Delphinium recurvatum</i>)	CNPS 1B	Occurs in poorly drained, fine, alkaline soils in grassland and alkali scrub communities at elevations between 100 feet and 2600 feet. Blooms March–June.	Absent. Suitable habitat is absent from the APE and surrounding areas. The only recorded observation of this species within the vicinity was approximately 6 miles south of the APE in 1914.
Sanford's arrowhead (<i>Sagittaria sanfordii</i>)	CNPS 1B	Found in the San Joaquin Valley and other parts of California in freshwater-marsh, primarily ponds and ditches, at elevations below 1000 feet. Blooms May–October.	Absent. Required aquatic habitats are absent within the APE and surrounding lands. The only recorded observation of this species within the vicinity was approximately 6 miles southeast of the APE in 1980.

Species	Status	Habitat	Occurrence within APE
Subtle orache <i>(Atriplex subtilis)</i>	CNPS 1B	Found in the San Joaquin Valley in saline depressions in alkaline soils within valley and foothill grassland communities at elevations below 330 feet. Blooms June–October.	Absent. Suitable habitat is absent from the APE and surrounding areas. The most recent recorded observation of this species was approximately 13 miles southeast of the APE in 2011.

***EXPLANATION OF OCCURRENCE DESIGNATIONS AND STATUS CODES**

Present:	Species observed on the site at time of field surveys or during recent past.
Likely:	Species not observed on the site, but it may reasonably be expected to occur there on a regular basis.
Possible:	Species not observed on the site, but it could occur there from time to time.
Unlikely:	Species not observed on the site, and would not be expected to occur there except, perhaps, as a transient.
Absent:	Species not observed on the site and precluded from occurring there due to absence of suitable habitat.

STATUS CODES

FE	Federally Endangered	CE	California Endangered
FT	Federally Threatened	CT	California Threatened
FC	Federal Candidate	CFP	California Fully Protected
		CSC	California Species of Concern
		CWL	California Watch List

CNPS LISTING

1B	Plants Rare, Threatened, or Endangered in California and elsewhere.	2B	Plants Rare, Threatened, or Endangered in California, but more common elsewhere.
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III. Impacts and Mitigation

Significance Criteria

CEQA

General plans, area plans, and specific projects are subject to the provisions of CEQA. The purpose of CEQA is to assess the impacts of proposed projects on the environment prior to project implementation. Impacts to biological resources are just one type of environmental impact assessed under CEQA and vary from project to project in terms of scope and magnitude. Projects requiring removal of vegetation may result in the mortality or displacement of animals associated with this vegetation. Animals adapted to humans, roads, buildings, and pets may replace those species formerly occurring on a site. Plants and animals that are State and/or federally listed as threatened or endangered may be destroyed or displaced. Sensitive habitats such as wetlands and riparian woodlands may be altered or destroyed. Such impacts may be considered either “significant” or “less than significant” under CEQA. According to CEQA, Statute and Guidelines (AEP 2022), “significant effect on the environment” means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic interest. Specific project impacts to biological resources may be considered “significant” if they would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (CWA) (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

Furthermore, CEQA Guidelines Section 15065(a) states that a project may trigger the requirement to make a “mandatory finding of significance” if the project has the potential to:

“Substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare or threatened species, or eliminate important examples of the major periods of California history or prehistory.”

Relevant Goals, Policies, and Laws

Kings County General Plan

The Kings County General Plan Document (County of Kings 2010) contains the following goals and resource conservation policies (RC), related to the Project:

Water Resources

RC GOAL A1: Beneficially use, efficiently manage, and protect water resources while developing strategies to capture additional water sources that may become available to ensure long term sustainable water supplies for the region.

RC Policy A1.1.6: Support expansion of joint management of surface water and groundwater supplies that contributes to the protection, reliability, and sustainability of local and regional water supplies.

RC Policy A1.5.1: Cooperate with local agencies in the preservation and purchase of natural sloughs for use as water recharge and drainage basins.

Natural Plant and Animal Habitats

RC GOAL D1: Preserve land that contains important natural plant and animal habitats.

RC Policy D1.1.1: Evaluate all discretionary land use applications in accordance with the screening procedures contained in the Biological Resources Survey. If the results of the project screening indicates the potential for important biological resources to exist on the site a biological evaluation shall be performed by a qualified biologist. If the evaluation indicates that the project could have a significant adverse impact, mitigation shall be required, or the project will be redesigned to avoid such impacts. Mitigation shall be provided consistent with the California Environmental Quality Act (CEQA), and applicable state and federal guidelines as appropriate. Mitigation may include habitat improvement or protection, acquisition of other habitat, or payment to an appropriate agency to purchase, improve, or protect such habitat.

RC Policy D1.1.2: Require project applicants to consult with the California Department of Fish and Game and the United States Fish and Wildlife Service and to obtain appropriate authority for any such take pursuant to Endangered Species Act requirements if new development or other actions are likely to result in incidental take of any threatened or endangered species.

RC Policy D2.1.1: Follow state and federal guidelines for the protection of natural wetlands. Require developers to obtain authorization from the appropriate local, state, or federal agency prior to commencement of any wetland fill activities.

RC GOAL E1: Balance the protection of the County's diverse plant and animal communities with the County's economic needs.

RC Policy E1.1.2: Require as a primary objective in the review of development projects the preservation of healthy native oaks and other healthy native trees.

RC Policy E1.1.3: Maintain to the maximum extent practical the natural plant communities utilized as habitat by threatened and endangered species.

City of Hanford General Plan

The City of Hanford General Plan Document (City of Hanford 2017) contains the following goals and conservation policies, related to the Project:

Water Resources

GOAL 03: A reduced per capita use of water used by residential and non-residential uses through water conservation measures.

Policy 029: Water Conservation Measures for New Development. Encourage new development projects to include water conservation measures, including use of graywater, reclaimed, or recycled water for landscaping, water-conserving plumbing fixtures and appliances, and water-efficient landscapes.

Biological Resources

GOAL 04: Protection of natural habitat and other biological resources.

Policy 035: Impacts from Development. Ensure that potential impacts to biological resources and sensitive habitat are carefully evaluated when considering development projects.

Policy 037: Mature Trees. Promote the preservation of existing mature trees and encourage the planting of appropriate shade trees in new developments.

Policy 038: Native Tree Species and Drought Tolerant Vegetation. Encourage the planting of native tree species and drought-tolerant vegetation.

Policy 039: Endangered Wildlife and Habitat. Establish programs in connection with environmental review processes to protect endangered wildlife and their habitats

Policy 040: Sensitive Wildlife. Work with state, federal, and local agencies on the preservation of sensitive wildlife species in the City.

Threatened and Endangered Species

Permits may be required from the USFWS and/or CDFW if activities associated with a project have the potential to result in the “take” of a species listed as threatened or endangered under the federal and/or state Endangered Species Acts. Take is defined by the State of California as “to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill” (California Fish and Game Code, Section 86). Take is more broadly defined by the federal Endangered Species Act to include “harm” (16 USC, Section 1532(19), 50 CFR, Section 17.3). CDFW and USFWS are responsible agencies under CEQA and National Environmental Policy Act (NEPA). Both agencies review CEQA and NEPA documents in order to determine the adequacy of their treatment of endangered species issues and to make project-specific recommendations for their conservation.

Designated Critical Habitat

When species are listed as threatened or endangered, the USFWS often designates areas of “Critical Habitat” as defined by section 3(5)(A) of the federal Endangered Species Act (ESA). Critical Habitat is a term defined in the ESA as a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. Critical Habitat is a tool that supports the continued conservation of imperiled species by guiding cooperation with the federal government. Designations only affect federal agency actions or federally funded or permitted activities. Critical Habitat does not prevent activities that occur within the designated area. Only activities that involve a federal permit, license, or funding and are likely to destroy or adversely modify Critical Habitat will be affected.

Migratory Birds

The Federal Migratory Bird Treaty Act (MBTA: 16 USC 703-712) prohibits killing, possessing, or trading in any bird species covered in one of four international conventions to which the United States is a party, except

in accordance with regulations prescribed by the Secretary of the Interior. The name of the act is misleading, as it actually covers almost all bird's native to the United States, even those that are non-migratory. The MBTA encompasses whole birds, parts of birds, and bird nests and eggs. Additionally, the California Fish and Game Code makes it unlawful to take or possess any non-game bird covered by the MBTA (Section 3513), as well as any other native non-game bird (Section 3800).

Birds of Prey

Birds of prey are protected in California under provisions of Fish and Game Code (Section 3503.5), which states that it is unlawful to take, possess, or destroy any birds in the order Falconiformes (hawks and eagles) or Strigiformes (owls), as well as their nests and eggs. The bald eagle and golden eagle are afforded additional protection under the federal Bald and Golden Eagle Protection Act (16 USC 668), which makes it unlawful to kill birds or their eggs.

Nesting Birds

In California, protection is afforded to the nests and eggs of all birds. California Fish and Game Code (Section 3503) states that it is "unlawful to take, possess, or needlessly destroy the nest or eggs of any bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Breeding-season disturbance that causes nest abandonment and/or loss of reproductive effort is considered a form of "take" by the CDFW.

Wetlands and other "Jurisdictional Waters"

Natural drainage channels and adjacent wetlands may be considered "waters of the United States" or "jurisdictional waters" subject to the jurisdiction of the USACE. The extent of jurisdiction has been defined in the Code of Federal Regulations but has also been subject to interpretation of the federal courts. Jurisdictional waters generally include:

- All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- All interstate waters including interstate wetlands;
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce;
- All impoundments of waters otherwise defined as waters of the United States under the definition;
- Tributaries of waters identified in paragraphs (a)(1)-(4) (i.e., the bulleted items above).

As determined by the United States Supreme Court in its 2001 Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers (SWANCC) decision, channels and wetlands isolated from other jurisdictional waters cannot be considered jurisdictional on the basis of their use, hypothetical or observed, by migratory birds. Similarly, in its 2006 consolidated Carabell/Rapanos decision, the Supreme Court ruled that a significant nexus between a wetland and other navigable waters must exist for the wetland itself to be considered a navigable and therefore jurisdictional water. Furthermore, the Supreme Court clarified that the United States Environmental Protection Agency (USEPA) and the USACE will not assert jurisdiction over ditches excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

The USACE regulates the filling or grading of waters of the United States. under the authority of Section 404 of the CWA. The extent of jurisdiction within drainage channels is defined by "ordinary high-water marks" on opposing channel banks. All activities that involve the discharge of dredge or fill material into Waters of the United States are subject to the permit requirements of the USACE. Such permits are typically issued on the

condition that the applicant agrees to provide mitigation that results in no net loss of wetland functions or values. No permit can be issued until the RWQCB issues a Section 401 Water Quality Certification (or waiver of such certification) verifying that the proposed activity will meet State water quality standards.

Under the Porter-Cologne Water Quality Control Act of 1969, the SWRCB has regulatory authority to protect the water quality of all surface water and groundwater in the State of California (“Waters of the State”). Nine RWQCBs oversee water quality at the local and regional level. The RWQCB for a given region regulates discharges of fill or pollutants into Waters of the State through the issuance of various permits and orders. Discharges into Waters of the State that are also Waters of the United States require a Section 401 Water Quality Certification from the RWQCB as a prerequisite to obtaining certain federal permits, such as a Section 404 Clean Water Act permit. Discharges into all Waters of the State, even those that are not also Waters of the United States, require Waste Discharge Requirements (WDRs), or waivers of WDRs, from the RWQCB. The RWQCB also administers the Construction Storm Water Program and the federal National Pollution Discharge Elimination System (NPDES) program. Projects that disturb one acre or more of soil must obtain a Construction General Permit under the Construction Storm Water Program. A prerequisite for this permit is the development of a Storm Water Pollution Prevention Plan (SWPPP) by a certified Qualified SWPPP Developer. Projects that discharge wastewater, storm water, or other pollutants into a Water of the United States may require an NPDES permit.

CDFW has jurisdiction over the bed and bank of natural drainages and lakes according to provisions of Section 1601 and 1602 of the California Fish and Game Code. Activities that may substantially modify such waters through the diversion or obstruction of their natural flow, change or use of any material from their bed or bank, or the deposition of debris require a notification of a Lake or Streambed Alteration. If CDFW determines that the activity may adversely affect fish and wildlife resources, a Lake or Streambed Alteration Agreement will be prepared. Such an agreement typically stipulates that certain measures will be implemented to protect the habitat values of the lake or drainage in question.

Potentially Significant Project-Related Impacts and Mitigation

Species identified as candidate, sensitive, or special status species by CDFW or USFWS that have the potential to be impacted by Project include Swainson’s Hawk and pallid bat. In addition, the project may impact nesting birds, raptors, and roosting bats. Corresponding mitigation measures can be found below.

Project-Related Mortality and/or Disturbance of Nesting Migratory Raptors and Birds, Including the Swainson’s Hawk

The APE contains suitable nesting and foraging habitat for a variety of bird species. It is anticipated that during the nesting bird season, birds could nest on the ground or in shrubs, trees, or structures within the APE and forage within the APE. Swainson’s Hawks could nest in the eucalyptus trees within the APE and forage over the agricultural field. Swainson’s hawks could also nest in trees within the vicinity of the APE. Migratory birds nesting within the APE during construction have the potential to be injured or killed by Project-related activities. In addition to the direct “take” of migratory nesting birds, nesting birds within the APE or adjacent areas could be disturbed by Project-related activities resulting in nest abandonment. Projects that adversely affect the nesting success of raptors and migratory birds or result in the mortality of individual birds are considered a violation of state and federal laws and are considered a potentially significant impact under CEQA. In addition, projects that adversely affect the nesting success of Swainson’s hawk or result in the mortality of this species would violate the California Endangered Species Act.

While foraging habitat for migratory birds and raptors, including Swainson’s hawk, is present on the site, suitable foraging habitat is located adjacent to the APE and within the vicinity of the APE and loss of the foraging habitat from implementation of the Project is not considered a significant impact.

Mitigation. Implementation of the following measures will reduce potential impacts to nesting migratory birds and raptors, including Swainson's Hawk, to a less than significant level under CEQA and will ensure compliance with state and federal laws protecting these avian species:

Mitigation Measure BIO-1a (*Avoidance*): The Project's construction activities will occur, if feasible, between September 16 and January 31 (outside of the nesting bird season) to avoid impacts to nesting birds.

Mitigation Measure BIO-1b (*Pre-construction Surveys*):

If activities must occur within the nesting bird season (February 1 to September 15), a qualified biologist will conduct a pre-construction survey for Swainson's Hawk nests onsite and within a 0.5-mile radius. This survey will be conducted in accordance with the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (Swainson's Hawk Technical Advisory Committee 2000), or current guidance. The pre-construction survey would also provide a presence/absence survey for all other nesting birds within the APE, no more than seven (7) days prior to the start of construction. All raptor nests would be considered "active" upon the nest-building stage.

Mitigation Measure BIO-1c (*Establish Buffers*): On discovery of any active nests near work areas, the biologist will determine appropriate construction setback distances based on applicable CDFW and/or USFWS guidelines and/or the biology of the species in question. If necessary, construction buffers will be identified with flagging, fencing, or other easily visible means, and will be maintained until the biologist has determined that the nestlings have fledged.

Mitigation Measure BIO-1d (*Consultation with CDFW*): In the event an active Swainson's Hawk nest, or other nest is detected during surveys and could be impacted by the Project, consultation with CDFW will be warranted to discuss how to implement the Project and avoid impacts to the nest.

Project-Related Mortality and/or Disturbance of Roosting Bats, Including the Pallid Bat

Pallid bats and other roosting bats have the potential to occur within the APE. Buildings and trees within the APE could be used for roosting sites and since they will be removed during Project activities these bats could be affected. Roosting habitat becomes especially sensitive to bat populations during the maternity season (approximately March 1 to August 31) while pups are maturing and when bats are overwintering (approximately December 1 to March 1). Impacts to roosting bats, including the pallid bat, would be considered a significant impact under CEQA.

Mitigation. Implementation of the following measures will reduce potential impacts to roosting bats, including the pallid bat, to a less than significant impact under CEQA, and will ensure compliance with state and federal laws protecting these species.

Mitigation Measure BIO-2a (*Pre-Construction Survey*): A pre-construction survey will be performed within five days of building and tree removal. A qualified biologist will inspect the buildings and trees for active roosts. If the building or trees are determined to be clear of bats, they will be removed within five days.

Mitigation Measure BIO-2b (*Establish Buffers*): On discovery of any roosts in the APE, a qualified biologist will determine appropriate construction setback distances. Buffer will be removed once a qualified biologist had determined the bat roosts are no longer occupied.

Mitigation Measure BIO-2c (*Passive Relocation*): On discovery of any bat roosts outside of the maternity roosting season or overwintering season (September 1 to November 30), bats may be passively relocated from the roosts by a qualified biologist in accordance with a bat relocation plan prepared for the Project site by a qualified biologist. The bat relocation plan shall include the methods to be used to safely exclude bats from the roost and prevent reentry.

Less Than Significant Project-Related Impacts

Project-Related Impacts to Special Status Animal Species Absent From, or Unlikely to Occur on, the Project Site

Of the 19 regionally occurring special status animal species, 17 are considered absent from or unlikely to occur within the APE due to past or ongoing disturbance and/or the absence of suitable habitat. These species include: blunt-nosed leopard lizard, Burrowing Owl, California glossy snake, California tiger salamander, Delta smelt, Fresno kangaroo rat, monarch butterfly, San Joaquin kit fox, Tipton kangaroo rat, Tricolored Blackbird, valley elderberry longhorn beetle, vernal pool fairy shrimp, vernal pool tadpole shrimp, western pond turtle, Western Snowy Plover, western spadefoot, and Yellow-headed Blackbird.

Since it is unlikely that these species would occur onsite, implementation of the Project should have no impact on these 17 special status species through construction mortality, disturbance, or loss of habitat. Mitigation measures are not warranted.

Project-Related Impacts to Special Status Plant Species Absent From, or Unlikely to Occur on, the Project Site

Of the 10 regionally occurring special status plant species, all 10 are considered absent from or unlikely to occur within the APE due to past or ongoing disturbance and/or the absence of suitable habitat. These species include: alkali-sink goldfields, brittlescale, California alkali grass, Earlimart orache, lesser saltscare, mud nama, Panoche pepper-grass, recurved larkspur, Sanford's arrowhead, and subtle orache.

Since it is unlikely that these species would occur onsite, implementation of the Project should have no impact on these 10 special status species through construction mortality, disturbance, or loss of habitat. Mitigation measures are not warranted.

Project-Related Impacts to Special Status Fishes Absent From, or Unlikely to Occur on, the Project Site

At the time of the survey, special status fishes are not considered present or likely to occur within the APE. No aquatic habitat is present within the APE or directly adjacent to the APE. Mitigation measures are not warranted.

Project-Related Impacts to Riparian Habitat and Natural Communities of Special Concern

Riparian habitat is absent from the APE and adjacent lands. There are no CNDDDB-designated "natural communities of special concern" recorded within the APE (California Natural Diversity Database (CNDDDB) 2023). In addition, no natural communities of special concern were observed within the APE during the biological survey. There are two natural communities of species concern in the region: Valley Sacaton Grassland and Valley Sink Scrub. None of these communities would be impacted as they are outside of the reach of the Project. Mitigation is not warranted.

Project-Related Impacts to Regulated Waters, Wetlands, and Water Quality

Typical wetlands, vernal pools, and other waters were not observed onsite at the time of the biological survey. The nearest water source is Last Chance Ditch, which would not be impacted by Project activities and no permits would be required.

Since construction would involve ground disturbance over an area greater than one acre, the Project would be required to obtain a Construction General Permit under the Construction Storm Water Program administered by the RWQCB. A prerequisite for this permit is the development of a Storm Water Pollution Prevention Plan (SWPPP) to ensure construction activities do not adversely affect water quality.

Project-Related Impacts to Wildlife Movement Corridors and Native Wildlife Nursery Sites

The APE does not contain features that would be likely to function as wildlife movement corridors. The APE and surrounding lands are agricultural fields with sparse residential housing. The APE is located in an area regularly disturbed by humans which would discourage dispersal and migration. Therefore, the Project would have no impact on wildlife movement corridors.

The APE has suitable features (buildings and trees) that could be used by maternity roosting bats, which are considered native wildlife nursery sites. The potential impacts to maternity roosting bats have been addressed in Mitigation Measures BIO-3a, BIO-3b, and BIO-3c. It is unlikely other native species would utilize any features of the APE as a wildlife nursery site. Further mitigation measures are not warranted.

Project-Related Impacts to Critical Habitat

Designated critical habitat is absent from the APE and surrounding lands. Therefore, there would be no impact to critical habitat, and mitigation is not warranted.

Local Policies or Habitat Conservation Plans

The Project appears to be consistent with the goals and policies of the Kings County General Plan. There are no known Habitat Conservation Plans or Natural Community Conservation Plans in the Project vicinity. Mitigation measures are not warranted.

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Appendix A: Photos of the Project Area

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Photograph 3

Overview of the residential house/structures located within the APE. These structures will be removed.



Photograph 4

Overview of the residential house/structures and pine tree located within the APE. The structures and tree will be removed.



Photograph 5

Overview of the garage located within the APE. The garage will be removed.



Photograph 6

Overview of the fencing located within the APE. The fencing will be removed.



Photograph 7

Northern boundary of the APE. The residential house and a large eucalyptus tree within the APE can be seen near the northeast corner.



Photograph 8

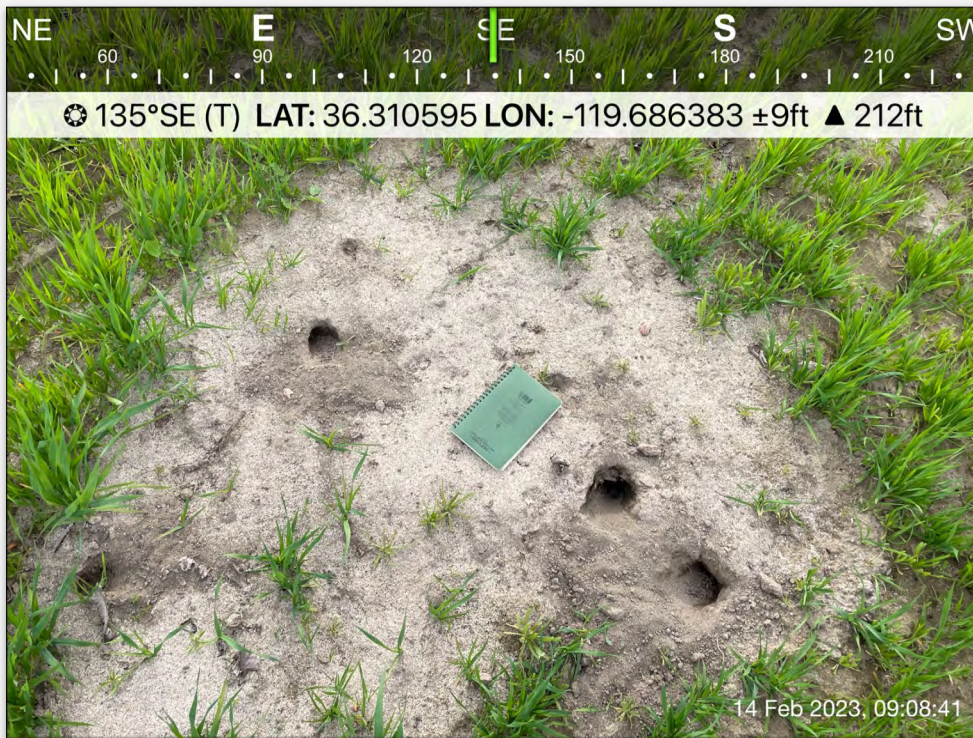
Western boundary of the APE.



Photograph 9
Southern boundary of the
APE.



Photograph 10
Eastern boundary of the
APE.



Photograph 11
Small burrows within the
APE.



Photograph 12
Ground squirrel tracks found
near the house within the
APE.



Photograph 13

Surrounding land to the north of the APE.



Photograph 14

Surrounding land to the west of the APE. Large eucalyptus trees can be seen in the background.



Photograph 15

Another photo of surrounding land to the west of the APE.



Photograph 16

Surrounding land to the south of the APE. Large eucalyptus trees can be seen in the background.



Photograph 17

Surrounding land to the south of the APE. A nest box can be seen near the residential house which is located outside of the Project site/ APE.



Photograph 18

Surrounding land to the east of the APE.

Appendix B: NRCS Soils Report

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United States
Department of
Agriculture

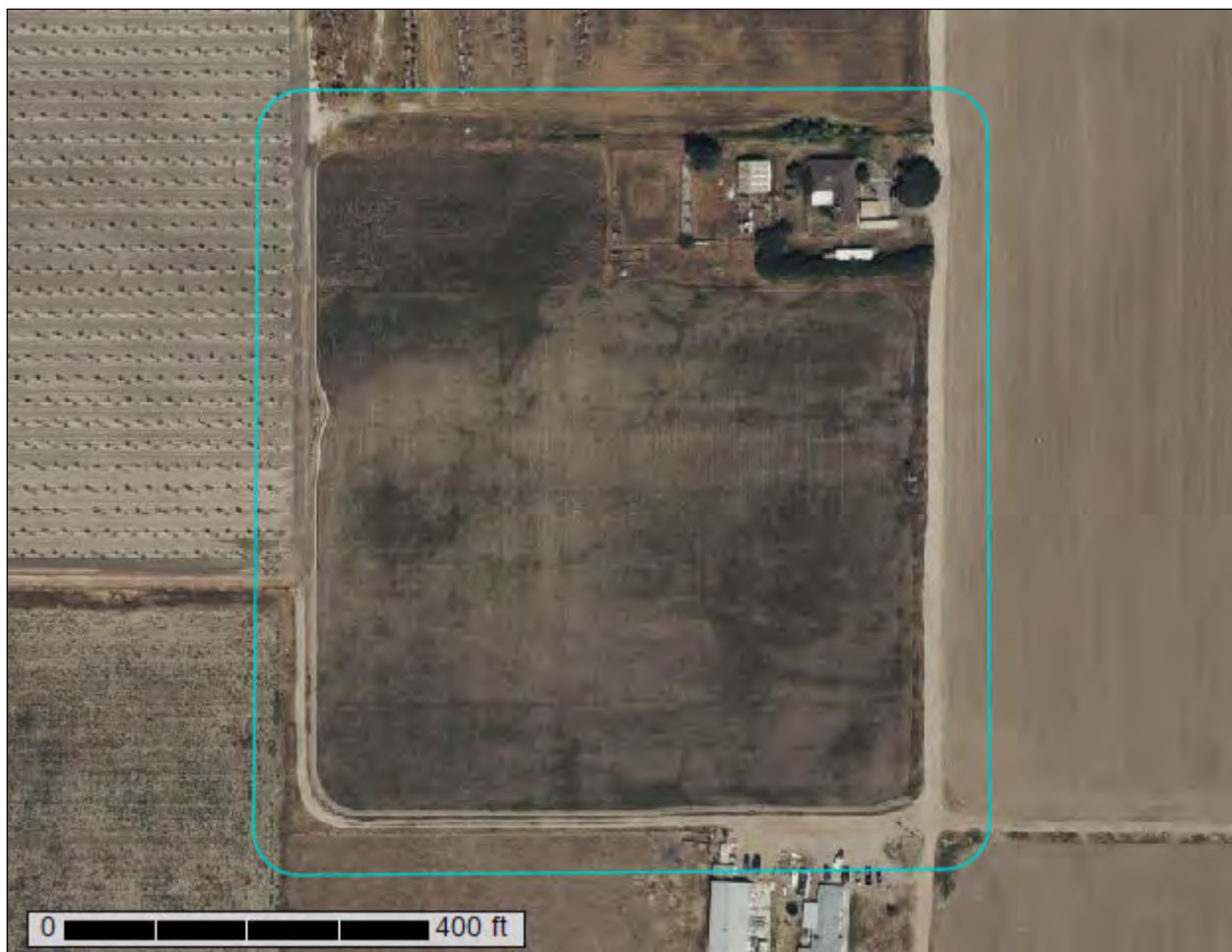
NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Kings County, California**

Stonehaven Subdivision Project



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

Preface	2
How Soil Surveys Are Made	5
Soil Map	8
Soil Map.....	9
Legend.....	10
Map Unit Legend.....	11
Map Unit Descriptions.....	11
Kings County, California.....	13
104—Cajon sandy loam.....	13
149—Nord complex.....	14
References	17

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Custom Soil Resource Report


MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Kings County, California
Survey Area Data: Version 18, Aug 31, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 16, 2022—May 30, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
104	Cajon sandy loam	9.1	57.7%
149	Nord complex	6.7	42.3%
Totals for Area of Interest		15.9	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Kings County, California

104—Cajon sandy loam

Map Unit Setting

National map unit symbol: hhhn

Elevation: 320 to 400 feet

Mean annual precipitation: 5 to 7 inches

Mean annual air temperature: 61 to 70 degrees F

Frost-free period: 240 to 300 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Cajon and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cajon

Setting

Landform: Alluvial fans

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Alluvium derived from igneous and sedimentary rock

Typical profile

Ap - 0 to 11 inches: sandy loam

C - 11 to 60 inches: loamy sand

2C - 60 to 70 inches: stratified sand to loamy fine sand

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat excessively drained

Runoff class: Very low

Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): 3s

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: A

Ecological site: R017XY906CA - Non-Alkali San Joaquin Valley Desert

Hydric soil rating: No

Minor Components

Cajon, calcareous

Percent of map unit: 4 percent

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Hydric soil rating: No

Kimberlina

Percent of map unit: 4 percent

Hydric soil rating: No

Nord

Percent of map unit: 3 percent

Hydric soil rating: No

Unnamed, rare flooding

Percent of map unit: 1 percent

Hydric soil rating: No

Unnamed, rare flooding

Percent of map unit: 1 percent

Landform: Sloughs

Hydric soil rating: Yes

Lemoore

Percent of map unit: 1 percent

Landform: Alluvial fans

Hydric soil rating: Yes

Wasco

Percent of map unit: 1 percent

Hydric soil rating: No

149—Nord complex

Map Unit Setting

National map unit symbol: hhk3

Elevation: 190 to 600 feet

Mean annual precipitation: 8 to 12 inches

Mean annual air temperature: 61 to 64 degrees F

Frost-free period: 250 to 275 days

Farmland classification: Prime farmland if irrigated

Map Unit Composition

Nord and similar soils: 50 percent

Nord and similar soils: 40 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nord

Setting

Landform: Alluvial fans

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Custom Soil Resource Report

Parent material: Alluvium derived from igneous rock

Typical profile

A - 0 to 18 inches: fine sandy loam

C - 18 to 72 inches: stratified sandy loam to loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 1.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 5 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Moderate (about 7.6 inches)

Interpretive groups

Land capability classification (irrigated): 2s

Land capability classification (nonirrigated): 4s

Hydrologic Soil Group: B

Ecological site: R017XY906CA - Non-Alkali San Joaquin Valley Desert

Hydric soil rating: No

Description of Nord

Setting

Landform: Alluvial fans

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Alluvium derived from igneous rock

Typical profile

A - 0 to 18 inches: fine sandy loam

C - 18 to 72 inches: stratified sandy loam to loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20
to 0.57 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 5 percent

Maximum salinity: Slightly saline to moderately saline (4.0 to 8.0 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 5.8 inches)

Interpretive groups

Land capability classification (irrigated): 2s

Land capability classification (nonirrigated): 4s

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Hydrologic Soil Group: C

Ecological site: R017XY906CA - Non-Alkali San Joaquin Valley Desert

Hydric soil rating: No

Minor Components

Grangeville

Percent of map unit: 2 percent

Landform: Alluvial fans

Ecological site: R017XY907CA - Aridic Alkali Desert

Hydric soil rating: Yes

Lakeside

Percent of map unit: 2 percent

Landform: Rims

Ecological site: R017XY907CA - Aridic Alkali Desert

Hydric soil rating: Yes

Kimberlina

Percent of map unit: 2 percent

Ecological site: R017XY907CA - Aridic Alkali Desert

Hydric soil rating: No

Whitewolf

Percent of map unit: 1 percent

Ecological site: R017XY907CA - Aridic Alkali Desert

Hydric soil rating: No

Unnamed, rare flooding

Percent of map unit: 1 percent

Ecological site: R017XY907CA - Aridic Alkali Desert

Hydric soil rating: No

Cajon

Percent of map unit: 1 percent

Ecological site: R017XY907CA - Aridic Alkali Desert

Hydric soil rating: No

Unnamed, rare flooding

Percent of map unit: 1 percent

Landform: Sloughs

Ecological site: R017XY907CA - Aridic Alkali Desert

Hydric soil rating: Yes

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Appendix C: CNDDDB 9- Quad Search

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STONEHAVEN SUBDIVISON PROJECT



Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad IS (Hanford (3611936) OR Riverdale (3611947) OR Laton (3611946) OR Burris Park (3611945) OR Waukena (3611925) OR Remnoy (3611935) OR Guernsey (3611926) OR Stratford (3611927) OR Lemoore (3611937))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
alkali-sink goldfields <i>Lasthenia chrysanthra</i>	PDAST5L030	None	None	G2	S2	1B.1
blunt-nosed leopard lizard <i>Gambelia sila</i>	ARACF07010	Endangered	Endangered	G1	S1	FP
brittlescale <i>Atriplex depressa</i>	PDCHE042L0	None	None	G2	S2	1B.2
burrowing owl <i>Athene cunicularia</i>	ABNSB10010	None	None	G4	S3	SSC
California alkali grass <i>Puccinellia simplex</i>	PMPOA53110	None	None	G2	S2	1B.2
California glossy snake <i>Arizona elegans occidentalis</i>	ARADB01017	None	None	G5T2	S2	SSC
California linderiella <i>Linderiella occidentalis</i>	ICBRA06010	None	None	G2G3	S2S3	
California tiger salamander - central California DPS <i>Ambystoma californiense pop. 1</i>	AAAAA01181	Threatened	Threatened	G2G3T3	S3	WL
Earlimart orache <i>Atriplex cordulata var. erecticaulis</i>	PDCHE042V0	None	None	G3T1	S1	1B.2
hoary bat <i>Lasiurus cinereus</i>	AMACC05032	None	None	G3G4	S4	
lesser saltscale <i>Atriplex minuscula</i>	PDCHE042M0	None	None	G2	S2	1B.1
mud nama <i>Nama stenocarpa</i>	PDHYD0A0H0	None	None	G4G5	S1S2	2B.2
Panoche pepper-grass <i>Lepidium jaredii ssp. album</i>	PDBRA1M0G2	None	None	G2G3T2T3	S2S3	1B.2
recurved larkspur <i>Delphinium recurvatum</i>	PDRAN0B1J0	None	None	G2?	S2?	1B.2
San Joaquin kit fox <i>Vulpes macrotis mutica</i>	AMAJA03041	Endangered	Threatened	G4T2	S2	
San Joaquin tiger beetle <i>Cicindela tranquebarica joaquinensis</i>	IICOL0220E	None	None	G5T1	S1	
Sanford's arrowhead <i>Sagittaria sanfordii</i>	PMALI040Q0	None	None	G3	S3	1B.2
subtle orache <i>Atriplex subtilis</i>	PDCHE042T0	None	None	G1	S1	1B.2
Swainson's hawk <i>Buteo swainsoni</i>	ABNKC19070	None	Threatened	G5	S3	



Selected Elements by Common Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Tipton kangaroo rat <i>Dipodomys nitratoide nitratoide</i>	AMAFD03152	Endangered	Endangered	G3T1T2	S1S2	
tricolored blackbird <i>Agelaius tricolor</i>	ABPBXB0020	None	Threatened	G1G2	S1S2	SSC
valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	IICOL48011	Threatened	None	G3T2T3	S3	
Valley Sacaton Grassland <i>Valley Sacaton Grassland</i>	CTT42120CA	None	None	G1	S1.1	
Valley Sink Scrub <i>Valley Sink Scrub</i>	CTT36210CA	None	None	G1	S1.1	
vernal pool fairy shrimp <i>Branchinecta lynchi</i>	ICBRA03030	Threatened	None	G3	S3	
vernal pool tadpole shrimp <i>Lepidurus packardii</i>	ICBRA10010	Endangered	None	G4	S3	
western pond turtle <i>Emys marmorata</i>	ARAAD02030	None	None	G3G4	S3	SSC
western ridged mussel <i>Gonidea angulata</i>	IMBIV19010	None	None	G3	S1S2	
western snowy plover <i>Charadrius nivosus nivosus</i>	ABNNB03031	Threatened	None	G3T3	S3	SSC
western spadefoot <i>Spea hammondi</i>	AAABF02020	None	None	G2G3	S3S4	SSC
yellow-headed blackbird <i>Xanthocephalus xanthocephalus</i>	ABPBXB3010	None	None	G5	S3	SSC

Record Count: 31

Appendix D: IPaC Search

DR HORTON

STONEHAVEN SUBDIVISION PROJECT



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Sacramento Fish And Wildlife Office

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

Phone: (916) 414-6600 Fax: (916) 414-6713



In Reply Refer To:

February 16, 2023

Project Code: 2022-0078501

Project Name: Stonehaven Subdivision Project

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

(916) 414-6600

Project Summary

Project Code: 2022-0078501

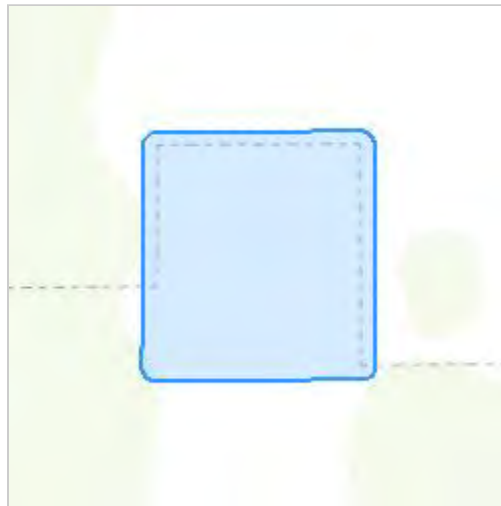
Project Name: Stonehaven Subdivision Project

Project Type: Residential Construction

Project Description: DR Horton is in the process of acquiring a roughly 11.81-acre parcel (APN 011-040-030-000) located South of Hanford-Armona Road between 12th Avenue and 13th Avenue, in Hanford, California. The Project is currently located in Unincorporated Kings County but would be annexed into the City of Hanford. The Project's Area of Potential Effect (APE) includes approximately 11.81 acres with an additional a 50-foot buffer surrounding the APE. The Project proposes to subdivide approximately 11.81 assessed acres of land currently used for residential and agricultural purposes into approximately 79 single-family residential lots. The size of lots would range from 3,600 square feet and up.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@36.31024935,-119.68531391202148,14z>



Counties: Kings County, California

Endangered Species Act Species

There is a total of 7 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Fresno Kangaroo Rat <i>Dipodomys nitratoide exilis</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5150	Endangered
San Joaquin Kit Fox <i>Vulpes macrotis mutica</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2873	Endangered
Tipton Kangaroo Rat <i>Dipodomys nitratoide nitratoide</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7247	Endangered

Reptiles

NAME	STATUS
Blunt-nosed Leopard Lizard <i>Gambelia silus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/625	Endangered

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp <i>Lepidurus packardii</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2246	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

IPaC User Contact Information

Agency: Provost & Pritchard Consulting

Name: Shaylea Stark

Address: 455 W Fir Ave

City: Clovis

State: CA

Zip: 93612

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Phone: 5594492700

Appendix C: Phase I Cultural Resources Survey

**PHASE I SURVEY,
STONEHAVEN DEVELOPMENT PROJECT,
KINGS COUNTY, CALIFORNIA**

Prepared for:

Jarred Olsen
Provost & Pritchard Consulting Group
206 West Cromwell Avenue
Fresno, California 93711-2715

Prepared by:

Peter A. Carey, M.A., RPA

Robert Azpitarte, B.A.

and

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4800 Stockdale Highway, Suite 405
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April 2023

PN 36510.33

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TABLE OF CONTENTS

<u>Chapter</u>	<u>Page</u>
MANAGEMENT SUMMARY	iii
1. INTRODUCTION AND REGULATORY CONTEXT	1
1.1 PROJECT LOCATION	1
1.2 PROJECT AND STUDY AREA DESCRIPTION	1
1.3 REGULATORY CONTEXT	2
1.3.1 California Environmental Quality Act	2
2. ENVIRONMENTAL AND CULTURAL BACKGROUND	5
2.1 ENVIRONMENTAL BACKGROUND AND GEOARCHAEOLOGICAL SENSITIVITY	5
2.2 ETHNOGRAPHIC BACKGROUND	5
2.3 PRE-CONTACT ARCHAEOLOGICAL BACKGROUND	7
2.4 HISTORICAL BACKGROUND	10
3. ARCHIVAL RECORDS SEARCH AND TRIBAL CORRESPONDENCE..	13
3.1 ARCHIVAL RECORDS SEARCH	13
3.2 TRIBAL CORRESPONDENCE	14
4. METHODS AND RESULTS	15
4.1 FIELD METHODS	15
4.2 SURVEY RESULTS	15
5. SUMMARY AND RECOMMENDATIONS	17
5.1 RECOMMENDATIONS	17
REFERENCES	19
CONFIDENTIAL APPENDIX A	23
<i>Confidential Appendix A: Records Search and Native American Heritage Commission Outreach Materials</i>	

LIST OF FIGURES

	<u>Page</u>
Figure 1. Location of the Stonehaven Development Project, Kings County, California.	3
Figure 2. Overview of Project area, looking southeast	16
Figure 3. Overview of Project area showing dirt road on the east boundary, looking north	16

LIST OF TABLES

	<u>Page</u>
Table 1. Survey Reports within 0.5 Mi. of the Project Area.....	13
Table 2. Resources within 0.5 Mi. of the Project Area.	14

MANAGEMENT SUMMARY

A Phase I cultural resources survey was conducted for the Stonehaven Development Project (Project). The Project study area totals approximately 12-acres (ac) and consists of undeveloped agricultural land located on the western edge of Hanford, Kings County, California. Specifically, the proposed Project is located in Section 30, Township 19 South, Range 21 East, Mount Diablo Base and Meridian (MDBM). The Phase I survey included background research and an intensive pedestrian survey of the entire Project study area. ASM Affiliates (ASM) conducted this study, with Peter A. Carey, M.A., RPA, serving as Principal Investigator. The study was undertaken to assist with compliance with the California Environmental Quality Act (CEQA). The lead agency for the proposed Project is Kings County.

A records search of site files and maps related to the Project study area and a 0.5-mile (mi) radius surrounding it was obtained by ASM on 14 February 2023, from the Southern San Joaquin Valley Archaeological Information Center (SSJVIC), California State University, Bakersfield. The search results indicated the study area had not been previously surveyed and no cultural resources had been previously documented within it. The search also indicated that eight previous studies had been conducted within the 0.5-mi records search radius and that two cultural resources had been documented within that search radius: an isolated prehistoric artifact (P-16-000310) and the Last Chance Ditch (P-16-000128), a historic water conveyance structure.

A Sacred Lands File (SLF) search from the Native American Heritage Commission (NAHC) was received in February 2023. The search was negative for sacred sites and tribal cultural resources. ASM sent outreach letters to the tribes listed on the NAHC-provided contact list on 16 February 2023, with follow-up emails sent to any contacts who had not yet responded on 17 March 2023. ASM received one response from the Santa Rosa Indian Community of the Santa Rosa Rancheria who expressed concerns regarding the Project and requested the results of the survey and that a curation agreement and a burial treatment plan be in place; and that a tribal monitor be present for all ground disturbance related to the Project.

The Phase I survey fieldwork was conducted on 15 February 2023. The entire 12-ac study area was surveyed in parallel transects spaced at 15-meter (m) intervals. No cultural resources of any kind were identified within the study area.

Based on these findings, the Stonehaven Development Project will not result in adverse impacts to known significant or unique cultural resources as defined by CEQA. No further archaeological work is recommended for the Project. It is recommended, however, that an archaeologist be contacted in the unlikely event that cultural resources are uncovered during the development or use of the property to evaluate the discovery.

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1. INTRODUCTION AND REGULATORY CONTEXT

ASM Affiliates (ASM) was retained by Provost & Pritchard Consulting Group to conduct a Phase I cultural resources study for the Stonehaven Development Project, located in Kings County, California (Figure 1). Peter A. Carey, M.A., RPA, served as Principal Investigator and ASM Assistant Archaeologist Maria Silva, B.A, conducted the fieldwork. The study was undertaken to assist with compliance with CEQA. The lead agency for the proposed Project is Kings County. The investigation was conducted, specifically, to ensure that significant impacts or adverse effects to historical resources do not occur as a result of project construction.

This current study included:

- A background records search and literature review to determine if any known archaeological sites were present in the project zone and/or whether the study area had been previously and systematically studied by archaeologists;
- A search of the NAHC SLF to determine if any traditional cultural places or cultural landscapes have been identified within the area;
- An on-foot, intensive inventory of the study area to identify and record previously undiscovered cultural resources and to examine known sites; and
- A preliminary assessment of any such resources found within the subject property.

This document constitutes a report on the Phase I survey. Subsequent chapters provide background to the investigation including historic context studies, the findings of the archival records search, Native American correspondence, field methodology, and the fieldwork results. We conclude with management recommendations for CEQA.

1.1 PROJECT LOCATION

The Project is located outside the current city limits of Hanford, Kings County, California. Specifically, the proposed Project is located in Section 30, Township 19 South, Range 21 East, MDBM, as illustrated on the USGS Hanford, California 7.5-minute topographic quadrangle. This places the proposed Project on the open flats of the San Joaquin Valley. Elevation within the Project parcel, which is flat, ranges from 238-feet (ft) to 241-ft above mean sea level (amsl). Currently the parcel is mostly undeveloped and consists of active agricultural fields with an existing residence on the northeast corner of the property.

1.2 PROJECT AND STUDY AREA DESCRIPTION

The Project will involve the development of a single-family residential housing subdivision located on the south side of Hanford-Armona Road between 12th and 13th Avenues. The property is currently outside Hanford city limits; however, it will be annexed by the City of Hanford prior to construction. Various other infrastructure improvements (water, stormwater and wastewater infrastructure, roadway improvements, and related improvements) will be required by the Project (CEQANET 2021). All staging, laydown, excavation, and construction will take place within the 12-ac Project footprint.

1.3 REGULATORY CONTEXT

1.3.1 California Environmental Quality Act

CEQA is applicable to discretionary actions by state or local lead agencies. Under CEQA, lead agencies must analyze impacts to cultural resources. Significant impacts under CEQA occur when “historically significant” or “unique” cultural resources are adversely affected, which occurs when such resources could be altered or destroyed through project implementation. Historically significant cultural resources are defined by eligibility for or by listing in the California Register of Historical Resources (CRHR). In practice, the federal National Register of Historic Places (NRHP) criteria (below) for significance applied under Section 106 are generally (although not entirely) consistent with CRHR criteria (see PRC § 5024.1, Title 14 CCR, Section 4852 and § 15064.5(a)(3)).

Significant cultural resources are those archaeological resources and historical properties that:

- (A) Are associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
- (B) Are associated with the lives of persons important in our past;
- (C) Embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of an important creative individual, or possess high artistic values; or
- (D) Have yielded, or may be likely to yield, information important in prehistory or history.

Unique resources under CEQA, in slight contrast, are those that represent:

An archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- (1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
- (2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- (3) Is directly associated with a scientifically recognized important prehistoric or historic event or person (PRC § 21083.2(g)).

Preservation in place is the preferred approach under CEQA to mitigating adverse impacts to significant or unique cultural resources.

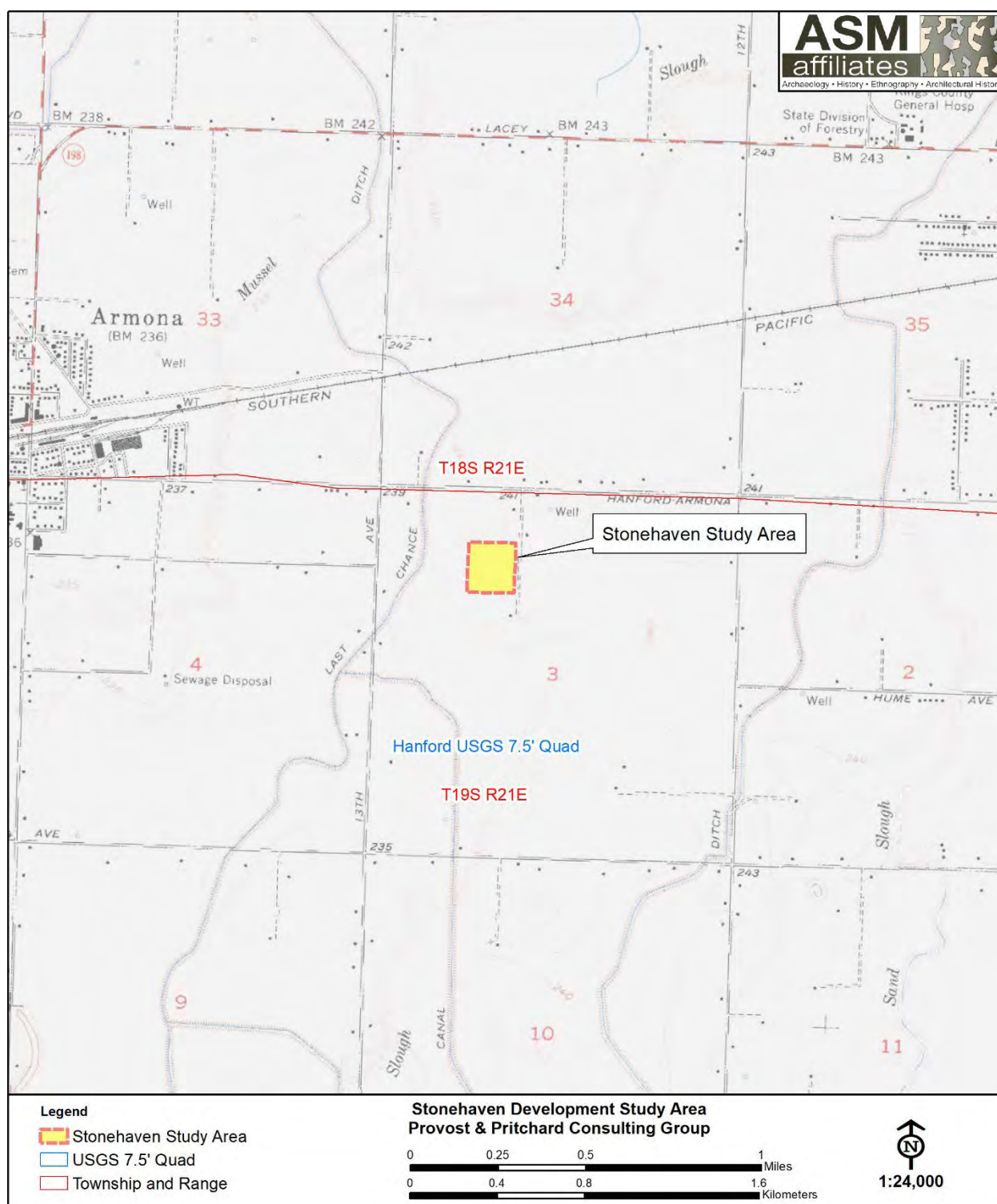


Figure 1. Location of the Stonehaven Development Project, Kings County, California.

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2. ENVIRONMENTAL AND CULTURAL BACKGROUND

2.1 ENVIRONMENTAL BACKGROUND AND GEOARCHAEOLOGICAL SENSITIVITY

The elevation of the Project area ranges between 238-ft and 241-ft amsl on the open flats of the San Joaquin Valley on the west side of Hanford, in Kings County, California. Currently this region can be characterized as a dry open valley bottom now utilized for agriculture. The study area itself has been experienced multiple periods of agricultural cultivation over at least the past four decades. Prior to reclamation and channelization, the region would have been a low-lying, water-rich area characterized by streams, sloughs, marshes, and swamps. Occasionally inundated by floodwaters, in many years portions of this region would have been swampy during the winter rainy season and marsh land during other parts of the year. Historical and recent land-use has changed the vegetation that was once present within and near the Project area. The immediate Project location historically most likely fell within the Valley Grassland community, however, with Riparian Woodlands present along streams and freshwater marshes common in the area (see Schoenherr 1992).

A Caltrans geoarchaeological study that included the Project area classified this location as having Moderate sensitivity for subsurface sites (Meyer et al. 2010). This study involved first determining the location and ages of late Pleistocene (>25,000 years old) landforms in the southern San Joaquin Valley. These were identified by combining a synthesis of 2,400 published paleontological, soils, and archaeological chronometric dates with geoarchaeological field testing. The ages of surface landforms were then mapped to provide an assessment for the potential for buried archaeological deposits. These ages were derived primarily from the Soil Survey Geographic Database (SSURGO) and the State Soils Geographic (STATSGO) database. A series of maps were created from this information that ranked locations in seven ordinal classes for sensitivity for buried soils, from Very Low to Very High. Although the buried site sensitivity model indicates the study area has Moderate sensitivity for buried deposits, disturbance from agricultural use and the distance of the study area from known historic villages suggests the potential for buried sites is low.

2.2 ETHNOGRAPHIC BACKGROUND

Penutian-speaking Yokuts tribal groups occupied the southern San Joaquin Valley region and much of the nearby Sierra Nevada. Ethnographic information about the Yokuts was collected primarily by Powers (1971, 1976 [originally 1877]), Kroeber (1925), Gayton (1930, 1948), Driver (1937), Latta (1977), and Harrington (n.d.). For a variety of historical reasons, existing research information emphasizes the central Yokuts tribes who occupied both the valley and particularly the foothills of the Sierra. The northernmost tribes suffered from the influx of Euro-Americans during the Gold Rush and their populations were in substantial decline by the time ethnographic studies began in the early twentieth century. In contrast, the southernmost tribes were partially removed by the Spanish to missions and eventually absorbed into multi-tribal communities on the Sebastian Indian Reservation (on Tejon Ranch), and later the Tule River Reservation and Santa Rosa Rancheria to the north. The result is an unfortunate scarcity of ethnographic detail on

southern Valley tribes, especially in relation to the rich information collected from the central foothills tribes where native speakers of the Yokuts dialects are still found. Regardless, the general details of indigenous life-ways were similar across the broad expanse of Yokuts territory, particularly in terms of environmentally influenced subsistence and adaptation and with regard to religion and belief, which were similar everywhere.

This scarcity of specific detail is particularly apparent in terms of southern valley tribal group distribution. Kroeber (1925), Gayton (1948) and Latta (1977) place the Project area in *Nutunutu* Yokut territory, with village locations concentrated to the east, in the foothills, or southwest, closer to the Tulare Lake shore. The Yokuts settlement pattern was largely consistent, regardless of specific tribe involved. Winter villages were typically located along lakeshores and major stream courses (as these existed circa AD 1800), with dispersal phase family camps located at elevated spots on the valley floor and near gathering areas in the foothills.

Most Yokuts groups, again regardless of specific tribal affiliation, were organized as a recognized and distinct tribelet; a circumstance that almost certainly pertained to the tribal groups noted above. Tribelets were land-owning groups organized around a central village and linked by shared territory and descent from a common ancestor. The population of most tribelets ranged from about 150 to 500 peoples (Kroeber 1925).

Each tribelet was headed by a chief who was assisted by a variety of assistants, the most important of whom was the *winatum*, a herald or messenger and assistant chief. A shaman also served as religious officer. While shamans did not have any direct political authority, as Gayton (1930) has illustrated, they maintained substantial influence within their tribelet.

Shamanism is a religious system common to most Native American tribes. It involves a direct and personal relationship between the individual and the supernatural world enacted by entering a trance or hallucinatory state (usually based on the ingestion of psychotropic plants, such as jimsonweed or more typically native tobacco). Shamans were considered individuals with an unusual degree of supernatural power, serving as healers or curers, diviners, and controllers of natural phenomena (such as rain or thunder). Shamans also produced the rock art of this region, depicting the visions they experienced in vision quests believed to represent their spirit helpers and events in the supernatural realm (Whitley 1992, 2000).

The centrality of shamanism to the religious and spiritual life of the Yokuts was demonstrated by the role of shamans in the yearly ceremonial round. The ritual round, performed the same each year, started in the spring with the jimsonweed ceremony, followed by rattlesnake dance and (where appropriate) first salmon ceremony. After returning from seed camps, fall rituals began in the late summer with the mourning ceremony, followed by first seed and acorn rites and then bear dance (Gayton 1930:379). In each case, shamans served as ceremonial officials responsible for specific dances involving a display of their supernatural powers (Kroeber 1925).

Subsistence practices varied from tribelet to tribelet based on the environment of residence. Throughout Native California, and Yokuts territory in general, the acorn was a primary dietary component, along with a variety of gathered seeds. Valley tribes augmented this resource with lacustrine and riverine foods, especially fish and wildfowl. As with many Native California tribes,

the settlement and subsistence rounds included the winter aggregation into a few large villages, where stored resources (like acorns) served as staples, followed by dispersal into smaller camps, often occupied by extended families, where seasonally available resources would be gathered and consumed.

Although population estimates vary and population size was greatly affected by the introduction of Euro-American diseases and social disruption, the Yokuts were one of the largest, most successful groups in Native California. Cook (1978) estimates that the Yokuts region contained 27 percent of the aboriginal population in the state at the time of contact; other estimates are even higher. Many Yokuts people continue to reside in the southern San Joaquin Valley today, including at the nearby Santa Rosa Rancheria.

2.3 PRE-CONTACT ARCHAEOLOGICAL BACKGROUND

The southern San Joaquin Valley region has received minimal archaeological attention compared to other areas of the state. In part, this is because the majority of California archaeological work has concentrated in the Sacramento Delta, Santa Barbara Channel, and central Mojave Desert areas (see Moratto 1984). Although knowledge of the region's prehistory is limited, enough is known to determine that the archaeological record is broadly similar to south-central California as a whole (see Gifford and Schenk 1926; Hewes 1941; Wedel 1941; Fenenga 1952; Elsasser 1962; Fredrickson and Grossman 1977; Schiffman and Garfinkel 1981). Based on these sources, the general prehistory of the region can be outlined as follows.

Initial occupation of the region occurred at least as early as the *Paleoindian Period*, or prior to about 10,000 years before present (YBP). Evidence of early use of the region is indicated by characteristic fluted and stemmed points found around the margin of Tulare Lake, in the foothills of the Sierra, and in the Mojave Desert proper.

Both fluted and stemmed points are particularly common around lake margins, suggesting a terminal Pleistocene/early Holocene lakeshore adaptation similar to that found throughout the far west at the same time; little else is known about these earliest peoples. Over 250 fluted points have been recovered from the Witt Site (CA-KIN-32), located along the western shoreline of ancient Tulare Lake west of the Project area, demonstrating the importance of this early occupation in the San Joaquin Valley specifically (see Fenenga 1993). Additional finds consist of a Clovis-like projectile point discovered in a flash-flood cut-bank near White Oak Lodge in 1953 on Tejon Ranch (Glennan 1987a, 1987b). More recently, a similar fluted point was found near Bakersfield (Zimmerman et al. 1989), and a number are known from the Edwards Air Force Base and Boron area of the western Mojave Desert. Although human occupation of the state is well-established during the Late Pleistocene, relatively little can be inferred about the nature and distribution of this occupation with a few exceptions. First, little evidence exists to support the idea that people at that time were big-game hunters, similar to those found on the Great Plains. Second, the western Mojave Desert evidence suggests small, very mobile populations that left a minimal archaeological signature. The evidence from the ancient Tulare Lake shore, in contrast, suggests much more substantial population and settlements which, instead of relying on big game hunting, were tied to the lacustrine lake edge. Variability in subsistence and settlement patterns is thus apparent in California, in contrast to the Great Plains.

Substantial evidence for human occupation across California, however, first occurs during the middle Holocene, roughly 7500 to 4000 YBP. This period is known as the *Early Horizon*, or alternatively as the Early Millingstone along the Santa Barbara Channel. In the south, populations concentrated along the coast with minimal visible use of inland areas. Adaptation emphasized hard seeds and nuts with tool-kits dominated by mullers and grindstones (manos and metates). Additionally, little evidence for Early Horizon occupation exists in most inland portions of the state, partly due to a severe cold and dry paleoclimatic period occurring at this time, although a site deposit dating to this age has been identified along the ancient Buena Vista shoreline in Kern County to the south (Rosenthal et al. 2007). Regardless of specifics, Early Horizon population density was low with a subsistence adaptation more likely tied to plant food gathering than hunting.

Environmental conditions improved dramatically after about 4000 YBP during the *Middle Horizon* (or Intermediate Period). This period is known climatically as the Holocene Maximum (circa 3,800 YBP) and was characterized by significantly warmer and wetter conditions than previously experienced. It was marked archaeologically by large population increase and radiation into new environments along coastal and interior south-central California and the Mojave Desert (Whitley 2000). In the Delta region to the north, this same period of favorable environmental conditions was characterized by the appearance of the Windmill culture which exhibited a high degree of ritual elaboration (especially in burial practices) and perhaps even a rudimentary mound-building tradition (Meighan, personal communication, 1985). Along with ritual elaboration, Middle Horizon times experienced increasing subsistence specialization, perhaps correlating with the appearance of acorn processing technology. Penutian speaking peoples (including the Yokuts) are also posited to have entered the state roughly at the beginning of this period and, perhaps to have brought this technology with them (cf. Moratto 1984). Likewise, it appears the so-called “Shoshonean Wedge” in southern California, the Takic-speaking groups that include the Gabrielino/Fernandeño, Tataviam, and Kitanemuk, may have moved into the region at that time (Sutton 2009), rather than at about 1500 YBP as first suggested by Kroeber (1925).

Evidence for Middle Horizon occupation of interior south-central California is substantial. For example, in northern Los Angeles County along the upper Santa Clara River, to the south of the San Joaquin Valley, the Agua Dulce village complex indicates occupation extending back to the Intermediate Period, when the population of the village may have been 50 or more people (King et al. n.d.). Similarly, inhabitation of the Hathaway Ranch region near Lake Piru, and the Newhall Ranch near Valencia, appears to date to the Intermediate Period (W&S Consultants 1994). To the west, little or no evidence exists for pre-Middle Horizon occupation in the upper Sisquoc and Cuyama River drainages; populations first appear there at roughly 3500 YBP (Horne 1981). The Carrizo Plain, the valley immediately west of the San Joaquin, experienced a major population expansion during the Middle Horizon (W&S Consultants 2004; Whitley et al. 2007), and recently collected data indicates the Tehachapi Mountains region was first significantly occupied during the Middle Horizon (W&S Consultants 2006). A parallel can be drawn to the inland Ventura County region where a similar pattern has been identified (Whitley and Beaudry 1991), as well as the western Mojave Desert (Sutton 1988a, 1988b), the southern Sierra Nevada (W&S Consultants 1999), and the Coso Range region (Whitley et al. 1988). In all of these areas a major expansion in settlement, the establishment of large site complexes and an increase in the range of environments exploited appear to have occurred sometime roughly around 4,000 years ago. Although most

efforts to explain this expansion have focused on local circumstances and events, it is increasingly apparent this was a major southern California-wide occurrence, and any explanation must be sought at a larger level of analysis (Whitley 2000). Additionally, evidence from the Carrizo Plain suggests the origins of the tribelet level of political organization developed during this period (W&S Consultants 2004; Whitley et al. 2007). Whether this same demographic process holds for the southern San Joaquin Valley, including the Project area, is yet to be determined.

The beginning of the *Late Horizon* is set variously at 1500 and 800 YBP, with a growing archaeological consensus for the shorter chronology. Increasing evidence suggests the importance of the Middle-Late Horizons transition (AD 800 to 1200) in the understanding of south-central California prehistory. This corresponds to the so-called Medieval Climatic Anomaly, followed by the Little Ice Age, and this general period of climatic instability extended to about A.D. 1860. It included major droughts matched by intermittent “mega-floods,” and resulted in demographic disturbances across much of the west (Jones et al. 1999). It is believed to have resulted in major population decline and abandonments across south-central California, involving as much as 90 percent of the interior populations in some regions, including the Carrizo Plain (Whitley et al. 2007). It is not clear whether site abandonment was accompanied by a true reduction in population or an agglomeration of the same numbers of peoples into fewer but larger villages in more favorable locations. Population along the Santa Barbara coast appears to have spiked at about the same time that it collapsed on the Carrizo Plain (Whitley et al. 2007). Along Buena Vista Lake, in Kern County, population appears to have been increasingly concentrated towards the later end of the Medieval Climatic Anomaly (Culleton 2006), and population intensification also appears to have occurred in the well-watered Tehachapi Mountains during this same period (W&S Consultants 2006).

What is then clear is that Middle Period villages and settlements were widely dispersed across the south-central California landscape, including in the Sierras and the Mojave Desert. Many of these sites are found at locations that lack existing or known historical fresh water sources. Late Horizon sites, in contrast, are typically concentrated in areas where fresh water was available during the historical period, if not currently.

One extensively studied site that shows evidence of intensive occupation during the Middle-Late Horizons transition (~1500 to 500 YBP) is the Redtfeldt Mound (CA-KIN-66/H), located west of the current Project area, near the north shore of ancient Tulare Lake. There, Siefkin (1999) reported on human burials and a host of artifacts and ecofacts excavated from a modest-sized mound. He found that both Middle Horizon and Middle-Late Horizons transition occupations were more intensive than Late Horizon occupations, which were sporadic and less intensive (Siefkin 1999:110-111).

The Late Horizon can then be understood as a period of recovery from a major demographic collapse. One result is the development of regional archaeological cultures as the precursors to ethnographic Native California, suggesting that ethnographic life-ways recorded by anthropologists extend roughly 800 years into the past.

The position of southern San Joaquin Valley prehistory relative to patterns seen in surrounding areas is still somewhat unknown. The presence of large lake systems in the valley bottoms appears

to have mediated some of the desiccation seen elsewhere. But, as the reconstruction of Soda Lake in the nearby Carrizo Plain demonstrates (see Whitley et al. 2007), environmental perturbations had serious impacts on lake systems too. Identifying certain of the prehistoric demographic trends for the southern San Joaquin Valley and determining how these trends (if present) correlate with those seen elsewhere is a current important research objective.

2.4 HISTORICAL BACKGROUND

Spanish explorers first visited the San Joaquin Valley in 1772, but its lengthy distance from the missions and presidios along the Pacific Coast delayed permanent settlement for many years, including during the Mexican period of control over the Californian region. In the 1840s, Mexican rancho owners along the Pacific Coast allowed their cattle to wander and graze in the San Joaquin Valley (JRP Historical Consulting 2009). The Mexican government granted the first ranchos in the southern part of the San Joaquin Valley in the early 1840s, but these did not result in permanent settlement. It was not until the annexation of California in 1848 that the exploitation of the southern San Joaquin Valley began (Pacific Legacy 2006).

In the 1840s, Mexican rancho owners along the Pacific Coast allowed their cattle to wander and graze in the San Joaquin Valley (JRP Historical Consulting 2009). But the Mexican government did not grant ranchos in the San Joaquin Valley until the early 1840s, and even then these did not result in significant permanent settlement. The *Laguna de Tache Rancho* was granted by Governor Pio Pico in 1846 to Manuel de Jesus Castro, a former captain in the Mexican army. The rancho extended for 26 mi. down the north bank of the Kings River from modern Kingsburg to approximately Riverdale. It was sometimes called the “River Ranch.” Castro’s ownership of the Laguna de Tache Rancho grant was confirmed by the U.S. Public Land Commission in 1866, at which point it was sold to Jeremiah Clark.

The discovery of gold in northern California in 1848 resulted in a dramatic increase of population, consisting in good part of fortune seekers and gold miners, who began to scour other parts of the state. After 1851, when gold was discovered in the Sierra Nevada Mountains in eastern Kern County, the population of the area grew rapidly. Some new immigrants began ranching in the San Joaquin Valley to supply the miners and mining towns. Ranchers grazed cattle and sheep, and farmers dry-farmed or used limited irrigation to grow grain crops, leading to the creation of small agricultural communities throughout the valley (JRP Historical Consulting 2009).

After the American annexation of California, the southern San Joaquin Valley became significant as a center of food production for this new influx of people in California. The expansive unfenced and principally public foothill spaces were well suited for grazing both sheep and cattle (Boyd 1997). As the Sierra Nevada gold rush presented extensive financial opportunities, ranchers introduced new breeds of livestock, consisting of cattle, sheep, and pigs (Boyd 1997).

With the increase of ranching in the southern San Joaquin came the dramatic change in the landscape, as non-native grasses more beneficial for grazing and pasture replaced native flora (Preston 1981). After the passing of the Arkansas Act in 1850, efforts were made to reclaim small tracts of land in order to create more usable spaces for ranching. Eventually, as farming supplanted

ranching as a more profitable enterprise, large tracts of land began to be reclaimed for agricultural use, aided in part by the extension of the railroad in the 1870s (Pacific Legacy 2006).

Following the passage of statewide ‘No-Fence’ laws in 1874, ranching practices began to decline, while farming expanded in the San Joaquin Valley in both large land holdings and smaller, subdivided properties. As the farming population grew, so did the demand for irrigation. Settlers began reclamation of swampland in 1866, and built small dams across the Kern River to divert water into the fields. By 1880, 86 different groups were taking water from the Kern River. Ten years later, 15 major canals provided water to thousands of acres in Kern County.

During the period of reclaiming unproductive land in the southern San Joaquin Valley, grants were given to individuals who had both the resources and the finances to undertake the operation alone. One small agricultural settlement, founded by Colonel Thomas Baker in 1861 after procuring one such grant, took advantage of reclaimed swampland along the Kern River. This settlement became the City of Bakersfield in 1869, and quickly became the center of activity in the southern San Joaquin Valley, and in the newly formed Kern County. Located on the main stage road through the San Joaquin Valley, the town became a primary market and transportation hub for stock and crops, as well as a popular stopping point for travelers on the Los Angeles and Stockton Road. The Southern Pacific Railroad (SPRR) reached the Bakersfield area in 1873, connecting it with important market towns elsewhere in the state, dramatically impacting both agriculture and oil production (Pacific Legacy 2006).

Three competing partnerships developed during this period which had a great impact on control of water, land reclamation and ultimately agricultural development in the San Joaquin Valley: Livermore and Chester, Haggin and Carr, and Miller and Lux, perhaps the most famous of the enterprises. Livermore and Chester were responsible, among other things, for developing the large Hollister plow (3 ft. wide by 2 ft. deep), pulled by a 40-mule team, which was used for ditch digging. Haggin and Carr were largely responsible for reclaiming the beds of the Buena Vista and Kern lakes, and for creating the Calloway Canal, which drained through the Rosedale area in Bakersfield to Goose Lake (Morgan 1914). Miller and Lux ultimately became one of the biggest private property holders in the country, controlling the rights to over 22,000 square miles. Miller and Lux’s impact extended beyond Kern County, however. They recognized early-on that control of water would have important economic implications, and they played a major role in the water development of the state. They controlled, for example, over 100 mi. of the San Joaquin River with the San Joaquin and Kings River Canal and Irrigation System. They were also embroiled for many years in litigation against Haggin and Carr over control of the water rights to the Kern River.

In 1877, what is now Kings County received its first SPRR stop in what would become the town of Hanford. This was named after James Madison Hanford, a rail executive, at what was originally a sheep camp. The rail-stop, with the SPRR tracks running east-west, quickly developed into a small community. A post office opened in 1887. That same year also marked the opening of Hanford’s and Kings County’s oldest business, the Lacey Milling Company. This was established by Horatio G. Lacey at the corner of West Fifth and Ridington Streets, across the street from the original SPRR sidings, and thus at an important local trans-shipment point. The mill originally processed locally-grown wheat and other grains for flour and livestock feed. It transitioned over

the decades so that, in 2016, it is now primarily producing flour for tortillas. It is still family owned and operated.

Due to a series of fires and the resulting need for fire protection, Hanford was incorporated in 1891. That same year H.G. Lacey built the first electrical generating plant in Hanford, providing electrical lights for the growing town. It was made the county seat when Kings County was separated from Tulare County in 1893. The town's regional significance was emphasized a few years later, in 1897, when the Atchison, Topeka and Santa Fe rail company (now Burlington Northern and the Santa Fe) routed a second rail line north-south through Hanford.

Armona developed as a small agricultural community and rail stop at about this same time. John Yoakum laid out the town along the rail tracks for the Pacific Improvement Company in 1877, where a rail switch called "Armona" was located. Within a decade a small town had developed and was officially named Armona when the post office opened in 1887. MacGregor's Hotel and Samuel Young's Blacksmith Shop were two of the early prominent commercial concerns (Roberts 2008).

The San Joaquin Valley in general was dominated by agricultural pursuits until the oil boom of the early 1900s, which saw a shift in the region, as some reclaimed lands previously used for farming were leased to oil companies. Nonetheless, the shift of the San Joaquin Valley towards oil production did not halt the continued growth of agriculture (Pacific Legacy 2006). The Great Depression of the 1930s brought with it the arrival of great number of migrants from the drought-affected Dust Bowl region, looking for agricultural labor. These migrants established temporary camps in the valley, staying on long past the end of the drought and the Great Depression, eventually settling in local towns where their descendants live today (Boyd 1997). Hanford developed during the twentieth century as a governmental, market and services town closely tied to the agricultural development of the San Joaquin Valley.

3. ARCHIVAL RECORDS SEARCH AND TRIBAL CORRESPONDENCE

3.1 ARCHIVAL RECORDS SEARCH

The project began with an archival records search conducted by the staff of the Southern San Joaquin Valley Information Center (IC), California State University Bakersfield, on February 14, 2023. The records search was completed to determine: (i) if prehistoric or historical archaeological sites had previously been recorded within the Project area; (ii) if the project area had been systematically surveyed by archaeologists prior to the initiation of this field study; and/or (iii) whether the general area within which the project lies was known to contain archaeological sites and to thereby be archaeologically sensitive. Records examined included archaeological site files and maps, the NRHP, Historic Property Data File, California Inventory of Historic Resources, and the California Points of Historic Interest.

According to the IC records search (Confidential Appendix A), no studies have previously been conducted within Project area, and no cultural resources of any kind are known to exist within it. Eight previous studies have been conducted within 0.5-mi of the Project area (Table 1) and two cultural resources were recorded within the search radius (Table 2).

Table 1. Survey Reports within 0.5-Mile of the Project Area

Report No	Year	Author (s)/Affiliation	Title
KI-00028	1995	Hatoff, Brian, Voss, Barb, Waechter, Sharon, Benté, Vance, and Wee, Stephen / Woodward-Clyde Consultants	Cultural Resources Inventory Report for the Proposed Mojave Northward Expansion Project
KI-00042	1981	O'Connor, Denise and Clayton, A.B. / Caltrans	Archaeological Survey Report for an Interchange at 12th Avenue on Route 198, Kings County 06-KIN-198, R16.4/R17.4 06100-178200
KI-00192	2007	Lanner, David and Wohlgemuth, Eric / Far Western Anthropological Research Group, Inc.	Archaeological Survey Report for the 12th Avenue Interchange on State Route 198, Hanford, Kings County, California
KI-00203	2011	Parr, Robert E. / Cal Heritage	Cultural Resource Assessment for the Replacement of Three Deteriorated Power Poles on the Southern California Edison Company Round Valley, Delta, and Lemoore 12kV Circuits, Kings and Tulare Counties, California.
KI-00310	2017	Jones, Jessica / Applied EarthWorks, Inc.	Cultural Resources Constraints Report Kingsburg-Lemoore Reconnector, Kings County, California
KI-00320	2018	Hudlow, Scott M. / Hudlow Cultural Resource Associates	Phase I Cultural Resource Survey For Self-Help Enterprises, Hanford-Single Family Infill City of Hanford, California
KI-00327	2019	Whitley, David S. and Azpitarte, Robert / ASM Affiliates, Inc.	Phase I Survey/Class III Inventory, Armona CSD Water Meter Project, Armona, Kings County, California
KI-00338	2019	Hudlow, Scott M. / Hudlow Cultural Resource Associates	A Phase I Cultural Resource Survey for Holloway Construction Hanford, Kings County, California

Table 2. Resources within 0.5-Mile of the Project Area

Primary #	Type	Description
P-16-000128	Structure	Last Chance Ditch
P-16-000310	Other	Isolate basalt flake

Historical maps that included the Project area were consulted to identify potential historical structures or resources. According to USGS topographic quadrangles, historical aeriels, and Google Earth imagery, the Project area has undergone minimal development since at least the early twentieth century. The 1926 USGS Hanford 1:31,680 topographical quadrangle shows both a dirt road on the eastern Project boundary and one unknown structure on the south side of the Project area. Also in place by this time is Last Chance Ditch, appearing outside of the Project area to the west. The 1954 (HTMC, 1957 ed.) USGS Hanford 1:24,000 topographical quadrangle shows no changes to existing development in the immediate area. Historic aeriels suggest that an unknown structure – at the location of an existing home on the northeast corner of the Project area - was in place by 1980; however, no historic components were observed during the current study. No additional development appears within the Project area.

3.2 TRIBAL CORRESPONDENCE

An SLF search from the NAHC was received in February 2023. The search was negative for sacred sites and tribal cultural resources. ASM sent outreach letters to the tribes provided on the NAHC contact list on February 16, 2023, with follow-up emails sent to the tribes on 17 March 2023. The only response received to date was from the Santa Rosa Indian Community of the Santa Rosa Rancheria and who requested the following:

- The results of the archaeological survey;
- To be retained for a Cultural Presentation;
- To have a monitor onsite for all ground disturbance related to the project;
- To have a Burial Treatment Plan put in place; and,
- To have a Curation Agreement put in place.

4. METHODS AND RESULTS

4.1 FIELD METHODS

An intensive Phase I cultural resources survey for the Project study area was conducted by ASM Archaeologist Maria Silva, B.A. The Project area was examined by walking parallel transects spaced 15 meters (m) apart. The survey was conducted on 15 February, 2023.

The field methods employed included intensive pedestrian examination of the ground surface for evidence of archaeological sites in the form of artifacts, surface features (e.g., bedrock mortars, historical mining equipment), and archaeological indicators (e.g., organically enriched midden soil, burnt animal bone). Special attention was paid to any exposed ground surface areas, rodent burrow spoils piles, cut-banks, cleared edges of disturbed areas, and other spots with better ground surface visibility. The survey methodology was designed to include the identification and location of any discovered sites, should they have been present; tabulation and recording of surface diagnostic artifacts; site sketch mapping; preliminary evaluation of site integrity; and site recording, following the California Office of Historic Preservation Instructions for Recording Historic Resources, using DPR 523 forms.

4.2 SURVEY RESULTS

The approximately 12-ac Project area consists mostly of undeveloped land that previously served as an agricultural field (Figure 2). The Project study area is bordered and bisected by multiple dirt roads (Figure 3). An existing and occupied residential property at the northeast corner of the property also accommodates contemporary farming features (i.e., wind break, dilapidated corral). Surface visibility within the Project area was excellent for Phase I survey. Soils consist of brown alluvium with dispersed Quaternary deposits.

No cultural resources were identified within the study area as a result of the intensive pedestrian survey.



Figure 2. Overview of Project area, looking southeast.



Figure 3. Overview of Project area showing dirt road on the east boundary, looking north.

5. SUMMARY AND RECOMMENDATIONS

An intensive Phase I cultural resources survey was conducted for the Stonehaven Development Project, Kings County, California. A records search conducted by staff at the SSJVIC, California State University, Bakersfield in February 2023. The record search indicated that the study area had not been previously surveyed and that no cultural resources had been previously documented within it.

The intensive Phase I pedestrian survey was conducted on 15 February 2023, with parallel transects spaced at 15-m intervals walked across the entire study area. No cultural resources were identified within the study area.

5.1 RECOMMENDATIONS

No cultural resources of any kind were identified during a Phase I study of the study area. The proposed Stonehaven Development Project therefore does not have the potential to result in adverse impacts to known historical properties.

The Santa Rosa Rancheria – Tachi Yokuts, however, consider the study area to be potentially sensitive. The Santa Rosa Rancheria – Tachi Yokuts request the following:

- The results of the archaeological survey;
- To be retained for a Cultural Presentation;
- To have a monitor onsite for all ground disturbance related to the project;
- To have a Burial Treatment Plan put in place; and,
- To have a Curation Agreement put in place.

No further archaeological work is recommended for the Project study area. It is further recommended that an archaeologist be contacted in the unlikely event that cultural resources are uncovered during the development or use of the property, to evaluate the discovery.

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Appendix D: Design Plans

DR HORTON HOMES
HANFORD, CA
STONEHAVEN
TENTATIVE SUBDIVISON MAP



GENERAL NOTES

- APN: 011-040-030
- SITE AREA: 12.17 AC
- SITE DRAINAGE: COLLECTED IN BILLINGSLEY BASIN VIA CURB INLETS
- TRASH COLLECTION: CITY OF HANFORD
- SEWERAGE: CITY OF HANFORD
- WATER: CITY OF HANFORD
- NATURAL GAS: THE GAS COMPANY
- TELEPHONE: SBC
- POWER: SOUTHERN CALIFORNIA EDISON
- CABLE TV: CHARTER
- FIRE PROTECTION: CITY OF HANFORD FIRE DEPARTMENT
- FLOOD ZONE: X
- ZONING SETBACKS FOR R-L-5:
 - FRONT: 12 FEET FOR LIVING SPACE, AND 18 FEET FOR GARAGES
 - CORNER: 10 FEET
 - REAR: 10 FEET TO FIRST STORY; 15 FEET TO UPPER STORIES
 - INTERIOR SIDE: 5 FEET

SUBDIVIDER STATEMENT

- GENERAL PLAN: LOW DENSITY RESIDENTIAL
- CURRENT ZONING: AE-20 (KINGS COUNTY TO BE ANNEXED INTO HANFORD)
- PROPOSED ZONING: R-L-5
- EXISTING USE: AGRICULTURE
- PROPOSED USE: LOW DENSITY RESIDENTIAL
- TOTAL LOTS: 82
- LOT AREA: 3,600 MIN/ 7,330 MAX
- DENSITY: 6.73 UNITS/GROSS AC
- STREET LIGHTING TO BE INSTALLED PER CITY OF HANFORD STANDARDS
- GROSS AREA: 12.17 ACRES.

LEGAL DESCRIPTION

THE SOUTH 11.81 ACRES OF THE WEST 25.08 ACRES OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 3, TOWNSHIP 19 SOUTH, RANGE 21 EAST, MOUNT DIABLO BASE AND MERIDIAN.

FLOOD ZONE INFORMATION

AS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP, PANEL NUMBER 06031C0195C, FOR COMMUNITY NO. 060086, KINGS COUNTY UNINCORPORATED AREAS, EFFECTIVE JUNE 16, 2009. THE PROPERTY LIES IN THE ZONE X AREA (UNSHADED).

SURVEY NOTES

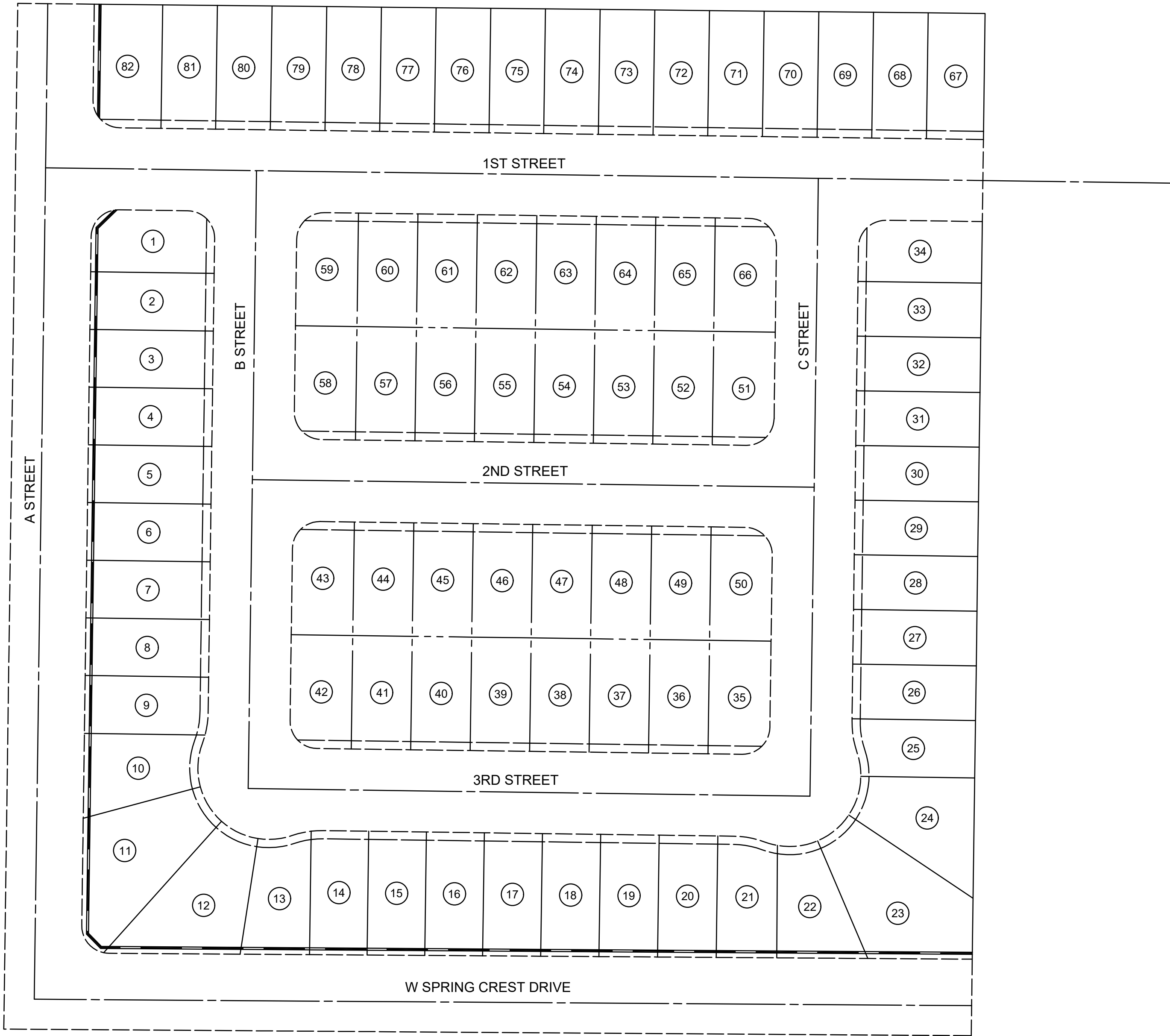
- TOPOGRAPHY SHOWN WAS COLLECTED BY PROVOST & PRITCHARD CONSULTING GROUP DURING A FIELD SURVEY CONDUCTED IN OCTOBER OF 2021.
- THE HISTORIC DEEDS FOR THE SUBJECT PROPERTY AND OTHER PROPERTIES IN THE NORTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 3, T. 19 S., R. 21 E., M.D.B.&M., HAVE USED ACREAGE AND DIMENSION TOGETHER AND INTERCHANGEABLY FOR THE DESCRIPTION OF THE DIVISIONS OF THIS 1/4-1/4 SECTION, WITH DIMENSIONS APPEARING TO ALIGN WITH USE AND OCCUPATION AND REMAINING CONSISTENT IN DEEDS AND EASEMENTS BY AND BETWEEN THE LANDOWNERS, WHILE ACREAGE OF PARCELS IN LEGAL DESCRIPTIONS APPEAR TO BE APPROXIMATE ONLY.

BASIS OF BEARING

THE NORTH LINE OF THE NORTHWEST QUARTER OF SECTION 3 - 19/21, M.D.B.&M., TAKEN AS SOUTH 89°24'13" EAST, AS MEASURED BY RTK GPS OBSERVATIONS TIED TO LEICA SMARTNET REAL TIME NETWORK.

PROJECT BENCHMARK

CITY OF HANFORD BENCHMARK #173, A BRASS CAP 1 FOOT EAST OF EAST CURB RETURN AT SOUTHEAST RETURN OF THE INTERSECTION OF HANFORD-ARMONA ROAD AND GREENBRIER DRIVE.
ELEVATION = 230.476' CITY OF HANFORD DATUM (2021)



SITE MAP

1" = 60'

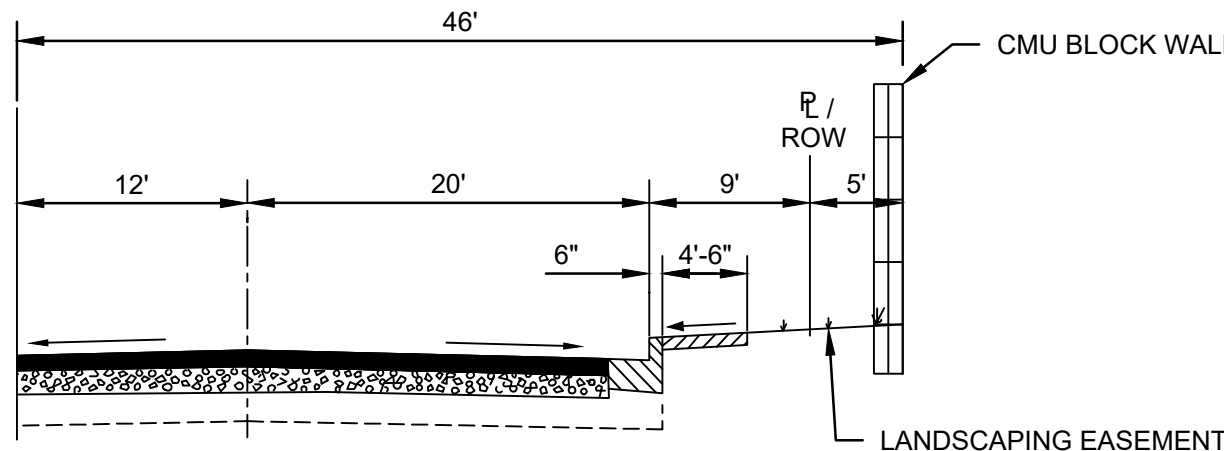
PROPERTY DIVISION CERTIFICATE

I HEREBY APPLY FOR APPROVAL OF THE DIVISION OF THE REAL PROPERTY SHOWN IN THIS PLAT AND CERTIFY THAT I AM THE LEGAL OWNER (OR AUTHORIZED AGENT OF THE LEGAL OWNER) OF THE PROPERTY AND THAT THE INFORMATION SHOWN HEREON IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF".

SIGNATURE

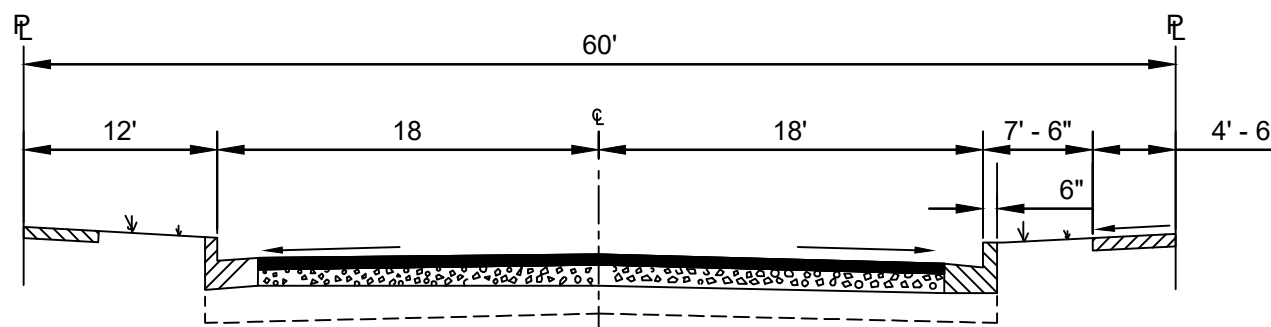
ADDRESS

CAPACITY



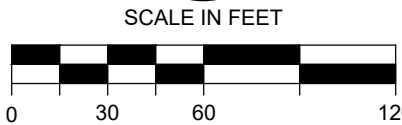
NOT TO SCALE
PER CITY STD ST-26

SECTION 1 - MINOR COLLECTOR SECTION



NOT TO SCALE
PER CITY STD ST-23

SECTION 2 - TYPICAL RESIDENTIAL SECTION



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No.	REVISION	BY	DATE

FOR
REVIEW
ONLY

STONEHAVEN
TENTATIVE SUBDIVISION MAP
DR HORTON HOMES
HANFORD, CA

TTM
COVER SHEET

EST. 1968
PROVOST & PRITCHARD
CONSULTING GROUP
An Employee Owned Company
455 W FRAVILE AVENUE
CLOVIS, CALIFORNIA 93611
5584462700 FAX 55844692715
https://provostpritchard.com

DESIGN ENGINEER:
ADAM OJEDA
LICENSE NO:
C79842

DRAFTED BY:
NJL

CHECKED BY:
AAO

DATE: 5/9/2023

JOB NO: 159422003

PROJECT NO: 159422003

PHASE:

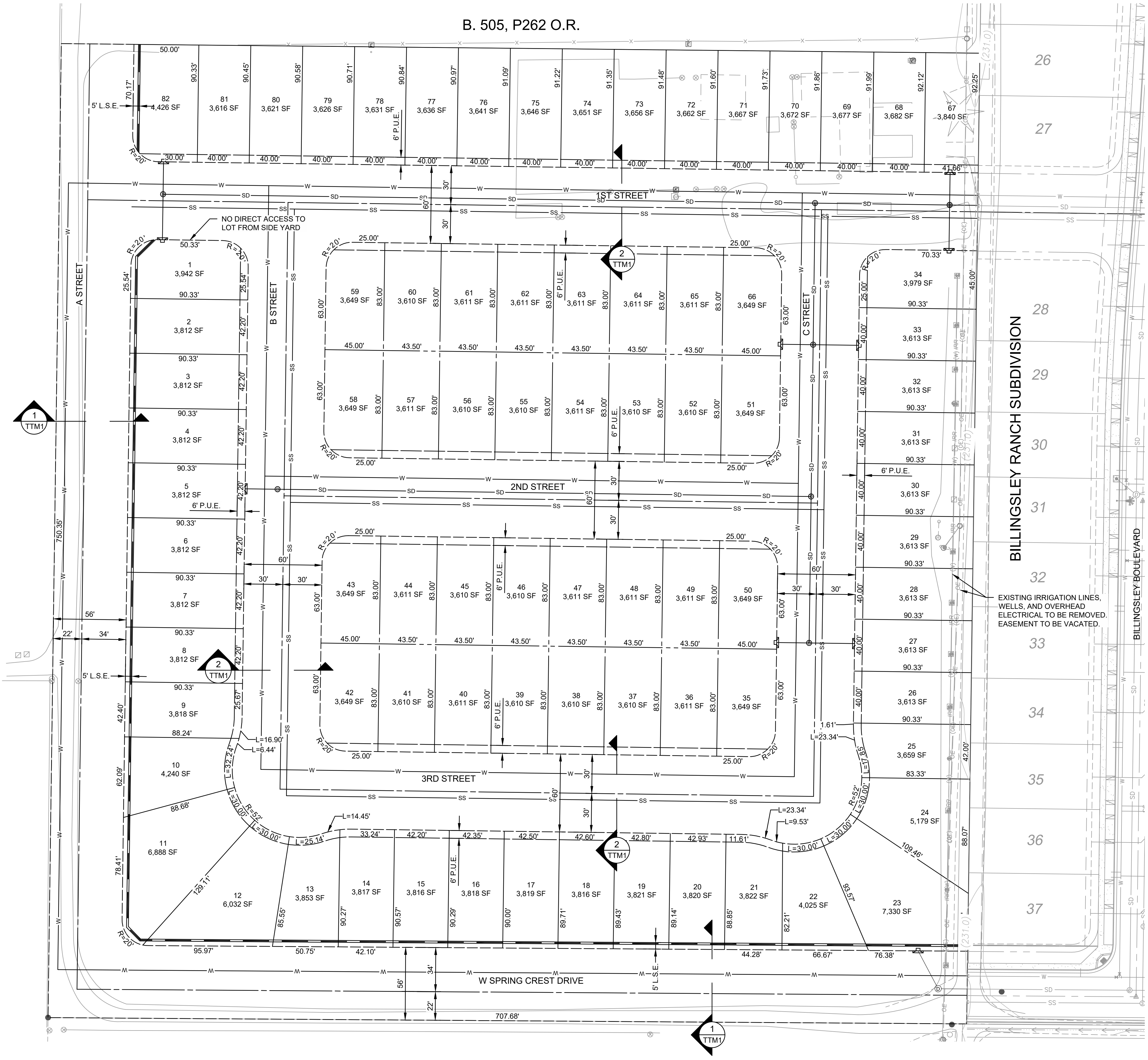
0 1"

ORIGINAL SCALE SHOWN IS ONE
INCH. ADJUST SCALE FOR
REDUCED OR ENLARGED PLANS.

SHEET
TTM1

1 OF 2

APN: 011-040-004



EST. 1968

PROVOST & PRITCHARD

CONSULTING GROUP

An Employee Owned Company

DESIGN ENGINEER:

ADAM OJEDA

LICENSE NO:

C79842

DRAFTED BY:

NJL

CHECKED BY:

AAO

DATE:

5/9/2023

JOB NO:

159422003

PROJECT NO:

159422003

PHASE:

0

ORIGINAL SCALE SHOWN IS ONE

INCH, ADJUST SCALE FOR

REDUCED OR ENLARGED PLANS.

SHEET

TTM2

2

OF

2

STONEHAVEN

TENTATIVE SUBDIVISION MAP

DR HORTON HOMES

HANFORD, CA

TTM

TENTATIVE TRACT MAP

FOR REVIEW ONLY

REVISION

BY

DATE

No.

5/12/2023 7:47 AM G:\DR-Horton - 15941194-22003-Stonehaven\300 CAD\340 Sheet Set\08_TTM\TTM2.Tentative Tract Map.dwg - Nrc Lowell

Appendix E: VMT Memo

April 5, 2023

Matthew Chavez
DR Horton
419 West Murray Avenue
Visalia, CA 93291

RE: Stonehaven Vehicle Miles Traveled (VMT) Assessment

Dear Mr. Chavez,

The following Vehicle Miles Travelled (VMT) Assessment has been prepared for the Stonehaven single-family residential development located south of the south side of Hanford-Armona Road between 12th and 13th Avenues— Assessor's Parcel Number 011-040-030.

BACKGROUND

In December 2018, modifications to the California Environmental Quality Act (CEQA) Guidelines were adopted by the Governor's Office of Planning and Research (OPR), which requires all lead agencies to adopt VMT as a replacement for automobile delay-based level of service (LOS) as the new measure for identifying transportation impacts for land use projects. This statewide mandate, enacted by the State Legislature through Senate Bill 743, took effect July 1, 2020. This analysis relies on the *City of Hanford VMT Thresholds and Implementation Guidelines*, adopted on December 20, 2022. If the guidelines do not apply, the analysis will rely on information prepared by OPR as part of their December 2018 publication entitled *Technical Advisory on Evaluating Transportation Impacts in CEQA* (Technical Advisory), which provides guidance for evaluating transportation impacts based on VMT.¹

PROJECT SCREENING

The City of Hanford guidelines provide details on appropriate "screening thresholds" that can be used to identify when a proposed land use project is anticipated to result in a less-than-significant impact without conducting a more detailed VMT analysis. Screening thresholds include:

1. Residential and office projects within a Transit Priority Area
2. Locally serving retail projects up to 55,000 square feet
3. Residential, office, or mixed-use projects within low-VMT generating areas
4. 100 percent affordable housing projects
5. Projects that are consistent with the City's General Plan and generating fewer than 1,000 daily trips.
6. Projects that are inconsistent with the City's General Plan and generating fewer than 500 daily trips.

¹ (Governor's Office of Planning and Research (OPR) December 2018)

A land use project need only meet one of the above screening thresholds to result in a less than significant impact.

1. Transit Priority Area Screening

The City of Hanford identified the Transit Priority Area as illustrated on Attachment A. The project is not located within the Transit Priority Area.

Transit Priority Area screening threshold is not met.

2. Retail Screening

As the project is residential, this screening is not applicable.

Retail screening threshold is not met.

3. Low VMT-generating Area Screening

The City of Hanford identified the Low VMT-generating Area as illustrated on Attachment A. The project is located within the Low VMT-generating Area.

Low VMT-generating Area screening threshold is met.

4. Affordable Housing Screening

The Technical Advisory asserts that “a project consisting of a high percentage of affordable housing may be a basis for the lead agency to find a less-than-significant impact on VMT. Evidence supports a presumption of less than significant impact for a 100 percent affordable residential development (or the residential component of a mixed-use development) in infill locations. Lead agencies may develop their own presumption of less than significant impact for residential projects (or residential portions of mixed-use projects) containing a particular amount of affordable housing, based on local circumstances and evidence.”

The Project would not meet Affordable Housing screening as the Project does not provide 100 percent affordable housing in an infill area.

Affordable Housing screening threshold is not met.

5. Trip Generation Screening

The project proposes 79 single-family dwelling units. Per trip generation rates taken from the Institute of Traffic Engineer’s *Trip Generation, 11th Edition* (9.30 average daily trips per dwelling unit), the project is expected to generate 745 daily trips. As the project is consistent with the City’s General Plan, this trip generation is under the 1,000 daily trip threshold.

Trip Generation screening threshold is met.

CONCLUSION

Two of the five screening criteria were met, specifically No. 3 – Low VMT-generating Area and No. 5 – Trip Generation Screening. Because of this, the project is eligible to be screened out

based on City of Hanford guidelines, would result in a less than significant impact, and no further VMT analysis or potential mitigation measures are necessary.

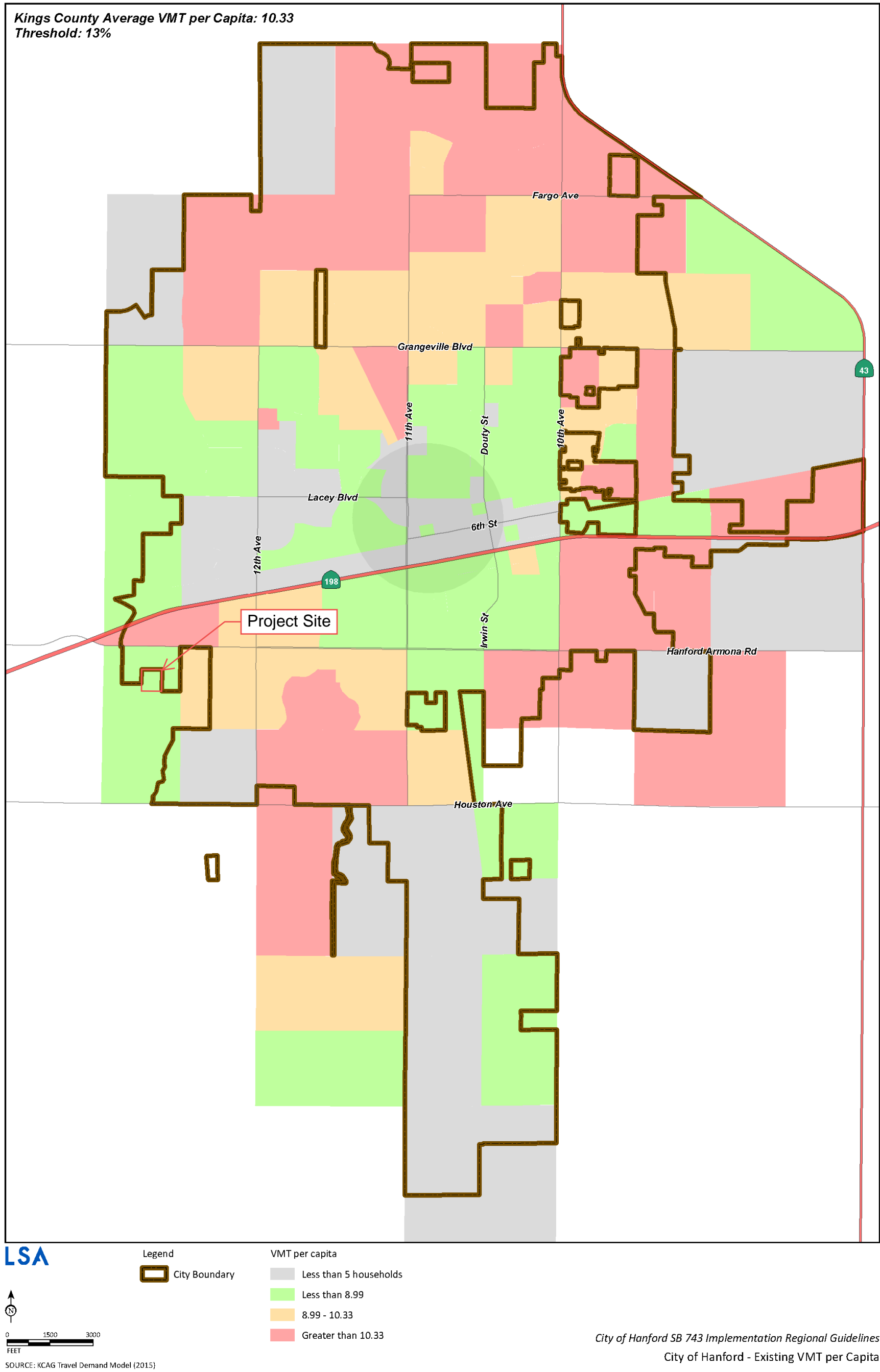
Respectfully,



Jarred Olsen, AICP
Associate Planner
jo

Attachments: One

Figure 4: VMT per Capita Screening Map for City of Hanford



RESPONSE TO EARLY CONSULTATION

Early Consultation

Early consultation to agencies outside of the City of Hanford (pursuant to CEQA Guidelines Section 15082) was conducted for the project.

Early consultation was received from:

- Pacific Gas and Electric Company – Received July 27, 2023, July 28, 2023
- AT&T – Received July 28, 2023
- Hanford Joint Union High School District – Received July 31, 2023
- Southern California Edison – Received July 31, 2023
- Department of Transportation, Caltrans – August 7, 2023

Responses to comments are as follows:

1. PG&E – Not in PG&E territory. Not applicable.
2. AT&T – Improvement plans will be submitted as required during the Final Map / Improvement Plan processing stage
3. HJUHSD – SB 50 (codified as GC 65996) provides that, despite CEQA, the payment of school development impact fees as the exclusive method “of considering and mitigating impacts on school facilities that occur or might occur as a result of any legislative or adjudicative act, or both, by any state or local agency involving, but not limited to, the planning, use, or development of real property or any change of governmental organization or reorganization”. As the Project would be required to pay development impact fees at time of building permit issuance or certificate of occupancy, the Project’s impact to schools is less than significant. This was stated as such in the IS/MND, thus no changes are necessary.
4. SCE – Standard requirements, no response required
5. CalTrans - The project is in a low VMT zone; no mitigation is warranted. Project will pay all applicable development impact fees as required by the City.

July 27, 2023

Gabrielle Myers
City of Hanford
317 N Douty Street
Hanford, CA 93230

Ref: Gas and Electric Transmission and Distribution

Dear Gabrielle Myers,

Thank you for submitting the ANX0001-23 plans for our review. PG&E will review the submitted plans in relationship to any existing Gas and Electric facilities within the project area. If the proposed project is adjacent/or within PG&E owned property and/or easements, we will be working with you to ensure compatible uses and activities near our facilities.

Attached you will find information and requirements as it relates to Gas facilities (Attachment 1) and Electric facilities (Attachment 2). Please review these in detail, as it is critical to ensure your safety and to protect PG&E's facilities and its existing rights.

Below is additional information for your review:

1. This plan review process does not replace the application process for PG&E gas or electric service your project may require. For these requests, please continue to work with PG&E Service Planning: https://www.pge.com/en_US/business/services/building-and-renovation/overview/overview.page.
2. If the project being submitted is part of a larger project, please include the entire scope of your project, and not just a portion of it. PG&E's facilities are to be incorporated within any CEQA document. PG&E needs to verify that the CEQA document will identify any required future PG&E services.
3. An engineering deposit may be required to review plans for a project depending on the size, scope, and location of the project and as it relates to any rearrangement or new installation of PG&E facilities.

Any proposed uses within the PG&E fee strip and/or easement, may include a California Public Utility Commission (CPUC) Section 851 filing. This requires the CPUC to render approval for a conveyance of rights for specific uses on PG&E's fee strip or easement. PG&E will advise if the necessity to incorporate a CPUC Section 851 filing is required.

This letter does not constitute PG&E's consent to use any portion of its easement for any purpose not previously conveyed. PG&E will provide a project specific response as required.

Sincerely,

Plan Review Team
Land Management

Attachment 1 – Gas Facilities

There could be gas transmission pipelines in this area which would be considered critical facilities for PG&E and a high priority subsurface installation under California law. Care must be taken to ensure safety and accessibility. So, please ensure that if PG&E approves work near gas transmission pipelines it is done in adherence with the below stipulations. Additionally, the following link provides additional information regarding legal requirements under California excavation laws: <https://www.usanorth811.org/images/pdfs/CA-LAW-2018.pdf>

1. **Standby Inspection:** A PG&E Gas Transmission Standby Inspector must be present during any demolition or construction activity that comes within 10 feet of the gas pipeline. This includes all grading, trenching, substructure depth verifications (potholes), asphalt or concrete demolition/removal, removal of trees, signs, light poles, etc. This inspection can be coordinated through the Underground Service Alert (USA) service at 811. A minimum notice of 48 hours is required. Ensure the USA markings and notifications are maintained throughout the duration of your work.
2. **Access:** At any time, PG&E may need to access, excavate, and perform work on the gas pipeline. Any construction equipment, materials, or spoils may need to be removed upon notice. Any temporary construction fencing installed within PG&E's easement would also need to be capable of being removed at any time upon notice. Any plans to cut temporary slopes exceeding a 1:4 grade within 10 feet of a gas transmission pipeline need to be approved by PG&E Pipeline Services in writing PRIOR to performing the work.
3. **Wheel Loads:** To prevent damage to the buried gas pipeline, there are weight limits that must be enforced whenever any equipment gets within 10 feet of traversing the pipe.

Ensure a list of the axle weights of all equipment being used is available for PG&E's Standby Inspector. To confirm the depth of cover, the pipeline may need to be potholed by hand in a few areas.

Due to the complex variability of tracked equipment, vibratory compaction equipment, and cranes, PG&E must evaluate those items on a case-by-case basis prior to use over the gas pipeline (provide a list of any proposed equipment of this type noting model numbers and specific attachments).

No equipment may be set up over the gas pipeline while operating. Ensure crane outriggers are at least 10 feet from the centerline of the gas pipeline. Transport trucks must not be parked over the gas pipeline while being loaded or unloaded.

4. **Grading:** PG&E requires a minimum of 36 inches of cover over gas pipelines (or existing grade if less) and a maximum of 7 feet of cover at all locations. The graded surface cannot exceed a cross slope of 1:4.
5. **Excavating:** Any digging within 2 feet of a gas pipeline must be dug by hand. Note that while the minimum clearance is only 24 inches, any excavation work within 24 inches of the edge of a pipeline must be done with hand tools. So to avoid having to dig a trench entirely with hand tools, the edge of the trench must be over 24 inches away. (Doing the math for a 24 inch

wide trench being dug along a 36 inch pipeline, the centerline of the trench would need to be at least 54 inches [$24/2 + 24 + 36/2 = 54$] away, or be entirely dug by hand.)

Water jetting to assist vacuum excavating must be limited to 1000 psig and directed at a 40° angle to the pipe. All pile driving must be kept a minimum of 3 feet away.

Any plans to expose and support a PG&E gas transmission pipeline across an open excavation need to be approved by PG&E Pipeline Services in writing PRIOR to performing the work.

6. Boring/Trenchless Installations: PG&E Pipeline Services must review and approve all plans to bore across or parallel to (within 10 feet) a gas transmission pipeline. There are stringent criteria to pothole the gas transmission facility at regular intervals for all parallel bore installations.

For bore paths that cross gas transmission pipelines perpendicularly, the pipeline must be potholed a minimum of 2 feet in the horizontal direction of the bore path and a minimum of 24 inches in the vertical direction from the bottom of the pipe with minimum clearances measured from the edge of the pipe in both directions. Standby personnel must watch the locator trace (and every ream pass) the path of the bore as it approaches the pipeline and visually monitor the pothole (with the exposed transmission pipe) as the bore traverses the pipeline to ensure adequate clearance with the pipeline. The pothole width must account for the inaccuracy of the locating equipment.

7. Substructures: All utility crossings of a gas pipeline should be made as close to perpendicular as feasible ($90^\circ \pm 15^\circ$). All utility lines crossing the gas pipeline must have a minimum of 24 inches of separation from the gas pipeline. Parallel utilities, pole bases, water line 'kicker blocks', storm drain inlets, water meters, valves, back pressure devices or other utility substructures are not allowed in the PG&E gas pipeline easement.

If previously retired PG&E facilities are in conflict with proposed substructures, PG&E must verify they are safe prior to removal. This includes verification testing of the contents of the facilities, as well as environmental testing of the coating and internal surfaces. Timelines for PG&E completion of this verification will vary depending on the type and location of facilities in conflict.

8. Structures: No structures are to be built within the PG&E gas pipeline easement. This includes buildings, retaining walls, fences, decks, patios, carports, septic tanks, storage sheds, tanks, loading ramps, or any structure that could limit PG&E's ability to access its facilities.

9. Fencing: Permanent fencing is not allowed within PG&E easements except for perpendicular crossings which must include a 16 foot wide gate for vehicular access. Gates will be secured with PG&E corporation locks.

10. Landscaping: Landscaping must be designed to allow PG&E to access the pipeline for maintenance and not interfere with pipeline coatings or other cathodic protection systems. No trees, shrubs, brush, vines, and other vegetation may be planted within the easement area. Only those plants, ground covers, grasses, flowers, and low-growing plants that grow unsupported to a maximum of four feet (4') in height at maturity may be planted within the easement area.

11. Cathodic Protection: PG&E pipelines are protected from corrosion with an “Impressed Current” cathodic protection system. Any proposed facilities, such as metal conduit, pipes, service lines, ground rods, anodes, wires, etc. that might affect the pipeline cathodic protection system must be reviewed and approved by PG&E Corrosion Engineering.

12. Pipeline Marker Signs: PG&E needs to maintain pipeline marker signs for gas transmission pipelines in order to ensure public awareness of the presence of the pipelines. With prior written approval from PG&E Pipeline Services, an existing PG&E pipeline marker sign that is in direct conflict with proposed developments may be temporarily relocated to accommodate construction work. The pipeline marker must be moved back once construction is complete.

13. PG&E is also the provider of distribution facilities throughout many of the areas within the state of California. Therefore, any plans that impact PG&E’s facilities must be reviewed and approved by PG&E to ensure that no impact occurs which may endanger the safe operation of its facilities.

Attachment 2 – Electric Facilities

It is PG&E's policy to permit certain uses on a case by case basis within its electric transmission fee strip(s) and/or easement(s) provided such uses and manner in which they are exercised, will not interfere with PG&E's rights or endanger its facilities. Some examples/restrictions are as follows:

1. **Buildings and Other Structures:** No buildings or other structures including the foot print and eave of any buildings, swimming pools, wells or similar structures will be permitted within fee strip(s) and/or easement(s) areas. PG&E's transmission easement shall be designated on subdivision/parcel maps as **"RESTRICTED USE AREA – NO BUILDING."**
2. **Grading:** Cuts, trenches or excavations may not be made within 25 feet of our towers. Developers must submit grading plans and site development plans (including geotechnical reports if applicable), signed and dated, for PG&E's review. PG&E engineers must review grade changes in the vicinity of our towers. No fills will be allowed which would impair ground-to-conductor clearances. Towers shall not be left on mounds without adequate road access to base of tower or structure.
3. **Fences:** Walls, fences, and other structures must be installed at locations that do not affect the safe operation of PG&E's facilities. Heavy equipment access to our facilities must be maintained at all times. Metal fences are to be grounded to PG&E specifications. No wall, fence or other like structure is to be installed within 10 feet of tower footings and unrestricted access must be maintained from a tower structure to the nearest street. Walls, fences and other structures proposed along or within the fee strip(s) and/or easement(s) will require PG&E review; submit plans to PG&E Centralized Review Team for review and comment.
4. **Landscaping:** Vegetation may be allowed; subject to review of plans. On overhead electric transmission fee strip(s) and/or easement(s), trees and shrubs are limited to those varieties that do not exceed 10 feet in height at maturity. PG&E must have access to its facilities at all times, including access by heavy equipment. No planting is to occur within the footprint of the tower legs. Greenbelts are encouraged.
5. **Reservoirs, Sumps, Drainage Basins, and Ponds:** Prohibited within PG&E's fee strip(s) and/or easement(s) for electric transmission lines.
6. **Automobile Parking:** Short term parking of movable passenger vehicles and light trucks (pickups, vans, etc.) is allowed. The lighting within these parking areas will need to be reviewed by PG&E; approval will be on a case by case basis. Heavy equipment access to PG&E facilities is to be maintained at all times. Parking is to clear PG&E structures by at least 10 feet. Protection of PG&E facilities from vehicular traffic is to be provided at developer's expense AND to PG&E specifications. Blocked-up vehicles are not allowed. Carports, canopies, or awnings are not allowed.
7. **Storage of Flammable, Explosive or Corrosive Materials:** There shall be no storage of fuel or combustibles and no fueling of vehicles within PG&E's easement. No trash bins or incinerators are allowed.

8. Streets and Roads: Access to facilities must be maintained at all times. Street lights may be allowed in the fee strip(s) and/or easement(s) but in all cases must be reviewed by PG&E for proper clearance. Roads and utilities should cross the transmission easement as nearly at right angles as possible. Road intersections will not be allowed within the transmission easement.

9. Pipelines: Pipelines may be allowed provided crossings are held to a minimum and to be as nearly perpendicular as possible. Pipelines within 25 feet of PG&E structures require review by PG&E. Sprinklers systems may be allowed; subject to review. Leach fields and septic tanks are not allowed. Construction plans must be submitted to PG&E for review and approval prior to the commencement of any construction.

10. Signs: Signs are not allowed except in rare cases subject to individual review by PG&E.

11. Recreation Areas: Playgrounds, parks, tennis courts, basketball courts, barbecue and light trucks (pickups, vans, etc.) may be allowed; subject to review of plans. Heavy equipment access to PG&E facilities is to be maintained at all times. Parking is to clear PG&E structures by at least 10 feet. Protection of PG&E facilities from vehicular traffic is to be provided at developer's expense AND to PG&E specifications.

12. Construction Activity: Since construction activity will take place near PG&E's overhead electric lines, please be advised it is the contractor's responsibility to be aware of, and observe the minimum clearances for both workers and equipment operating near high voltage electric lines set out in the High-Voltage Electrical Safety Orders of the California Division of Industrial Safety (<https://www.dir.ca.gov/Title8/sb5g2.html>), as well as any other safety regulations. Contractors shall comply with California Public Utilities Commission General Order 95 (http://www.cpuc.ca.gov/gos/GO95/go_95_startup_page.html) and all other safety rules. No construction may occur within 25 feet of PG&E's towers. All excavation activities may only commence after 811 protocols has been followed.

Contractor shall ensure the protection of PG&E's towers and poles from vehicular damage by (installing protective barriers) Plans for protection barriers must be approved by PG&E prior to construction.

13. PG&E is also the owner of distribution facilities throughout many of the areas within the state of California. Therefore, any plans that impact PG&E's facilities must be reviewed and approved by PG&E to ensure that no impact occurs that may endanger the safe and reliable operation of its facilities.

July 28, 2023

Gabrielle Myers
City of Hanford
317 N Douty Street
Hanford, CA 93230

Re: Consultation Notice- ANX0001-23, PZ0001-23, TSM0002-23, CUP0012-23
Stonehaven Tentative Subdivision Map

Dear Gabrielle:

Thank you for giving us the opportunity to review the proposed Stonehaven Tentative Subdivision Map. The installation of new gas and electric facilities and/or relocation of existing PG&E facilities will be performed in accordance with common law or Rules and Tariffs as authorized by the California Public Utilities Commission.

Following our review, PG&E recommends the following language be expressly stated for the offer to dedicate Public Utility Easements (PUE):

I/We the undersigned, as Owner(s) of the land shown hereon, do hereby state that I/we am/are the only person(s) whose consent is necessary to pass clear title to said land and do hereby consent to the preparation and recordation of this map and offer for dedication and do hereby dedicate for public uses the Public Utility Easements (PUEs) shown on this map for public utility purposes including electric, gas, communication facilities and all other public utility purposes; together with any and all appurtenances thereto, including the right from time to time to trim and to cut down and clear away or otherwise control any trees or brush. The PUEs hereby offered for dedication are to be kept open and free of buildings, structures and wells of any kind.

The final map must contain a statement setting forth dedications and offers to dedicate interests in real property for public utility purposes. If the offer of dedication has terminated, or the local agency declines to accept it, the applicant maybe required to provide an easement in gross satisfactory to PG&E. Please note that this is our preliminary review and PG&E reserves the right for future review as needed.

Please work with PG&E's Service Planning department at www.pge.com/cco for additional services you may require, or for any modification and/or relocation requests.

Sincerely,



***Pacific Gas and
Electric Company***

A handwritten signature in blue ink that reads 'J Newell'.

Justin Newell
Land Management
916-594-4068

City of HANFORD

CALIFORNIA 93230
CITY OFFICES 317 NORTH DOUTY STREET



MAYOR
TRAVIS PADEN

VICE-MAYOR
MARK KAIRIS

COUNCIL MEMBERS

LOU MARTINEZ

KALISH MORROW

DIANE SHARP

CITY MANAGER
MARIO CIFUENTEZ II

CITY ATTORNEY
ROBERT M. DOWD

July 13, 2023

PROJECT REVIEW – Early Consultation Notice

For: Stonehaven – Annexation 162 (ANX0001-23), Prezone No. 0001-23,
Tentative Tract 940 (TSM0002-23), and Planned Unit Development (CUP0012-23)

The Community Development Department of the City of Hanford is requesting your comments regarding the following:

Project Description:

- **Annexation 162:** A request to annex 12.17 acres into the City of Hanford from the Kings County jurisdiction.
- **Prezone No. 0001-23:** A request to prezone the land proposed to be annexed as R-L-5 Low-Density Residential, in accordance with the General Plan designation for the territory, Low-Density Residential.
- **Tentative Tract 940:** A request to subdivide the 12.17 acres proposed to be prezoned R-L-5 Low-Density Residential into 86 single-family residential lots.
- **Planned Unit Development No. 13-23:** A request to deviate from the standards of the Hanford Municipal Code, in order to utilize the small lot provisions of Section 17.10.100 to allow:
 - Reduced lot sizes between 3,600 – 4,999 square feet
 - Reduced lot widths
 - Reduced lot depths
 - Reduced setbacks
 - Exception: No limitation on the width of the garage (standard regulation limits garage width to no more than 50% of the residence's frontage)

Project Location

The project is located south of Hanford Armona Road, between 12th and 13th Avenues (APN011-040-030) See project location in Figure 1.

The proposal is being forwarded to the responsible and interested agencies and individuals for early consultation. The City is in the process of preparing an Initial Study to identify what, if any, significant impacts need to be analyzed in conjunction with this project. Any assistance you can give in this effort would be appreciated.

It is requested that your comments, if any, be transmitted to this office by Friday, August 4, 2023 at 5:00 p.m. Comments can be mailed to 317 N. Douty Street, Hanford, CA 93230 or emailed to gmyers@hanford.city. If you have any questions or concerns regarding this project, please email Gabrielle at the email address listed above.

Sincerely,

Gabrielle Myers

Gabrielle Myers

I ☒ do ☐ do not have comments regarding this Project

Steven Castaneto

AT&T

7.28.23

Signature

Agency

Date

Please provide street improvement plans and any R20 plans to determine any ATT conflicts needing to relocate/underground.

Also need developer to provide tract maps/r15/16 designs as ATT is interested in serving development with fiber facilities.

Please forward all new/upcoming projects to new ATT SPOC: SC961N@ATT.COM

City of HANFORD

CALIFORNIA 93230
CITY OFFICES 317 NORTH DOUTY STREET



MAYOR
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VICE MAYOR
MARK KAIRIS
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Sincerely,

Gabrielle Myers

Gabrielle Myers

I ☒ do ☐ do not have comments regarding this Project

This area is within our most impacted school boundary.

Ronald Smith

Signature

HJHSD

Agency

7/31/2023

Date

From: [Misael Ibarra](#)
To: [Manuel Sandoval Reynoso](#); [Jason Waters](#); [Gabrielle Myers](#); [Steve Coodey](#)
Subject: RE: (External):SCE Jurisdiction Verification - Hanford
Date: Monday, July 31, 2023 3:06:29 PM
Attachments: [image002.png](#)
[image003.png](#)

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Good Afternoon,

When SCE creates the required infrastructure design, we will also request an easement over the required infrastructure.

Please feel free to refer the developer over to me.

My contact information is below.

Thanks.

Misael Ibarra

Tract Project Management | Project Manager

Tulare Service Center / 2425 S Blackstone St / Tulare, CA 93274

Monday - Thursday: 559.684.3532 | C: 559.801.1272 | Pax: 73532



From: Manuel Sandoval Reynoso <manuel.sandovalreynoso@sce.com>

Sent: Monday, July 31, 2023 2:34 PM

To: Misael Ibarra <Misael.Ibarra@sce.com>

Cc: Jason Waters <jwaters@hanford.city>; Gabrielle Myers <GMyers@hanford.city>; Steve Coodey <scoodey@hanford.city>

Subject: FW: (External):SCE Jurisdiction Verification - Hanford

Good Afternoon Jason.

That is correct. The proposed location is in Edison territory. I looped in Misael who is the project manager for new development tracts.

Thanks



Manuel Reynoso
Planning Department
San Joaquin Service Center
2425 S Blackstone Ave
Tulare, CA 93274
Office: (559) 685-3216
Cell: (559) 385-6580
manuel.sandovalreynoso@sce.com

<http://www.sce.com/regulatory/distribution-manuals/electrical-service-requirements>

From: Jason Waters <jwaters@hanford.city>

Sent: Monday, July 31, 2023 1:34 PM

To: Manuel Sandoval Reynoso <manuel.sandovalreynoso@sce.com>

Cc: Gabrielle Myers <GMyers@hanford.city>; Steve Coodey <scoodey@hanford.city>

Subject: (External):SCE Jurisdiction Verification - Hanford

Hi Manuel,

There is a proposed residential development in Hanford at APN: 011-040-030 (<https://goo.gl/maps/rjnjrXrZTJANgeVs7>). PGE supplied the attached letter indicating they would need PUEs to supply utilities. From what I can tell the project might be in SCE territory and those PUEs would need to be dedicated to SCE. Can you confirm that is correct? Thanks!

Jason Waters

Deputy City Manager/Community Development Director

City of Hanford

317 N. Douty Street

Hanford, CA 93230

(559) 585-2500

From: Xiong.Christopher@DOT
To: [Gabrielle Myers](#)
Cc: Padilla.Dave@DOT
Subject: RE: Consultation Notice- ANX0001-23, PZ0001-23, TSM0002-23, CUP0012-23
Date: Friday, August 4, 2023 3:34:11 PM

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Hi Gabrielle,

Thank you for the opportunity to review the project applications (ANX0001-23, PZ0001-23, TSM0002-23, CUP0012-23), we have no comments on the applications.

The project's proposed use is generally consistent with the City's General Plan, we do want to encourage the project proponents consider vehicle miles traveled (VMT) reduction strategies. Noted in the City of Hanford's Pedestrian and Bicycle Master Plan (2016), Hanford Armona Road, directly north of the project location, is planned to be a bikeway/walking corridor further extended west from 12th Avenue connecting the project to the existing network. This presents opportunities for VMT strategies to be coordinated for the project. The project is also recommended to pay into applicable development impact fee programs to contribute to any improvement needs on the local road infrastructure.

Best regards,

Christopher Xiong

Associate Transportation Planner
Caltrans District 6
1352 W. Olive Avenue
Fresno, CA 93778
Christopher.Xiong@dot.ca.gov
(559) 908-7064