Initial Study and Mitigated Negative Declaration for Barr-Wood Subdivision

April 2023

Prepared By:

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Prepared For:

City of Visalia
315 E Acequia Ave
Visalia, CA 93291

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City of Visalia
315 E Acequia Ave
Visalia, CA 93291

SECTION 1
CEQA Review Process

Project Title: Barr-Wood Subdivision

1.1 California Environmental Quality Act Guidelines

Section 15063 of the California Environmental Quality Act (CEQA) Guidelines requires that the Lead Agency prepare an Initial Study to determine whether a discretionary project will have a significant effect on the environment. All phases of the project planning, implementation, and operation must be considered in the Initial Study. The purposes of an Initial Study, as listed under Section 15063(c) of the CEQA Guidelines, include:

(1) Provide the lead agency with information to use as the basis for deciding whether to prepare an EIR or negative declaration;
(2) Enable an applicant or lead agency to modify a project, mitigating adverse impacts before an EIR is prepared, thereby enabling the project to qualify for a negative declaration;
(3) Assist the preparation of an EIR, if one is required, by:
    (a) Focusing the EIR on the effects determined to be significant,
    (b) Identifying the effects determined not to be significant,
    (c) Explaining the reasons for determining that potentially significant effects would not be significant, and
    (d) Identifying whether a program EIR, tiering, or another appropriate process can be used for analysis of the project's environmental effects.
(4) Facilitate environmental assessment early in the design of a project;
(5) Provide documentation of the factual basis for the finding in a negative declaration that a project will not have a significant effect on the environment
(6) Eliminate unnecessary EIRs;
(7) Determine whether a previously prepared EIR could be used with the project.

1.2 Initial Study

The Initial Study provided herein covers the potential environmental effects of the construction and operation of 136 low density residential dwelling units on approximately 69.35 gross acres. The proposed project site is prezoned for R-1-20, and the General Plan designation is Very Low Density Residential. The City of Visalia will act as the Lead Agency for processing the Initial Study/Mitigated Negative Declaration pursuant to the CEQA Guidelines.

1.3 Environmental Checklist

The Lead Agency may use the CEQA Environmental Checklist Form [CEQA Guidelines, Section 15063(d)(3) and (f)] in preparation of an Initial Study to provide information for determination if there are significant effects of the project on the environment. A copy of the completed Environmental Checklist is set forth in **Section Three**.

1.4 Notice of Intent to Adopt a Negative Declaration

The Lead Agency shall provide a Notice of Intent to Adopt a Negative Declaration (CEQA Guidelines, Section 15072) to the public, responsible agencies, trustee agencies and the County Clerk within which the project is located, sufficiently prior to adoption by the Lead Agency of the Negative Declaration to allow the public and agencies the review period. The public review period (CEQA Guidelines, Section 15105) shall not be less than 30 days when the Initial Study/Negative Declaration is submitted to the State Clearinghouse unless a shorter period, not less than 20 days, is approved by the State Clearinghouse.

Prior to approving the project, the Lead Agency shall consider the proposed Negative Declaration together with any comments received during the public review process, and shall adopt the proposed Negative Declaration only if it finds on the basis of the whole record before it, that there is no substantial evidence that the project will have a significant effect on the environment and that the Negative Declaration reflects the Lead Agency's independent judgment and analysis.

The written and oral comments received during the public review period will be considered by The City of Visalia prior to adopting the Negative Declaration. Regardless of the type of CEQA document that must be prepared, the overall purpose of the CEQA process is to:

1) Assure that the environment and public health and safety are protected in the face of discretionary projects initiated by public agencies or private concerns;
2) Provide for full disclosure of the project's environmental effects to the public, the agency decision-makers who will approve or deny the project, and the responsible trustee agencies charged with managing resources (e.g. wildlife, air quality) that may be affected by the project; and
3) Provide a forum for public participation in the decision-making process pertaining to potential environmental effects.

According to Section 15070(a) a public agency shall prepare or have prepared a proposed negative declaration for a project subject to CEQA when:

> ***The initial study shows that there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment. Less than significant impacts with mitigation measures have been identified.***

The Environmental Checklist Discussion contained in Section Three of this document has determined that the environmental impacts of the project are less than significant with mitigation measures and that a Mitigated Negative Declaration is adequate for adoption by the Lead Agency.

1.5 Negative Declaration or Mitigated Negative Declaration

The Lead Agency shall prepare or have prepared a proposed Negative Declaration or Mitigated Negative Declaration (CEQA Guidelines Section 15070) for a project subject to CEQA when the Initial Study shows that there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment. The proposed Negative Declaration or Mitigated Negative Declaration circulated for public review shall include the following:

(a) A brief description of the project, including a commonly used name for the project.
(b) The location of the project, preferably shown on a map.
(c) A proposed finding that the project will not have a significant effect on the environment.
(d) An attached copy of the Initial Study documenting reasons to support the finding.
(e) Mitigation measures, if any.

1.6 Intended Uses of Initial Study/Negative Declaration documents

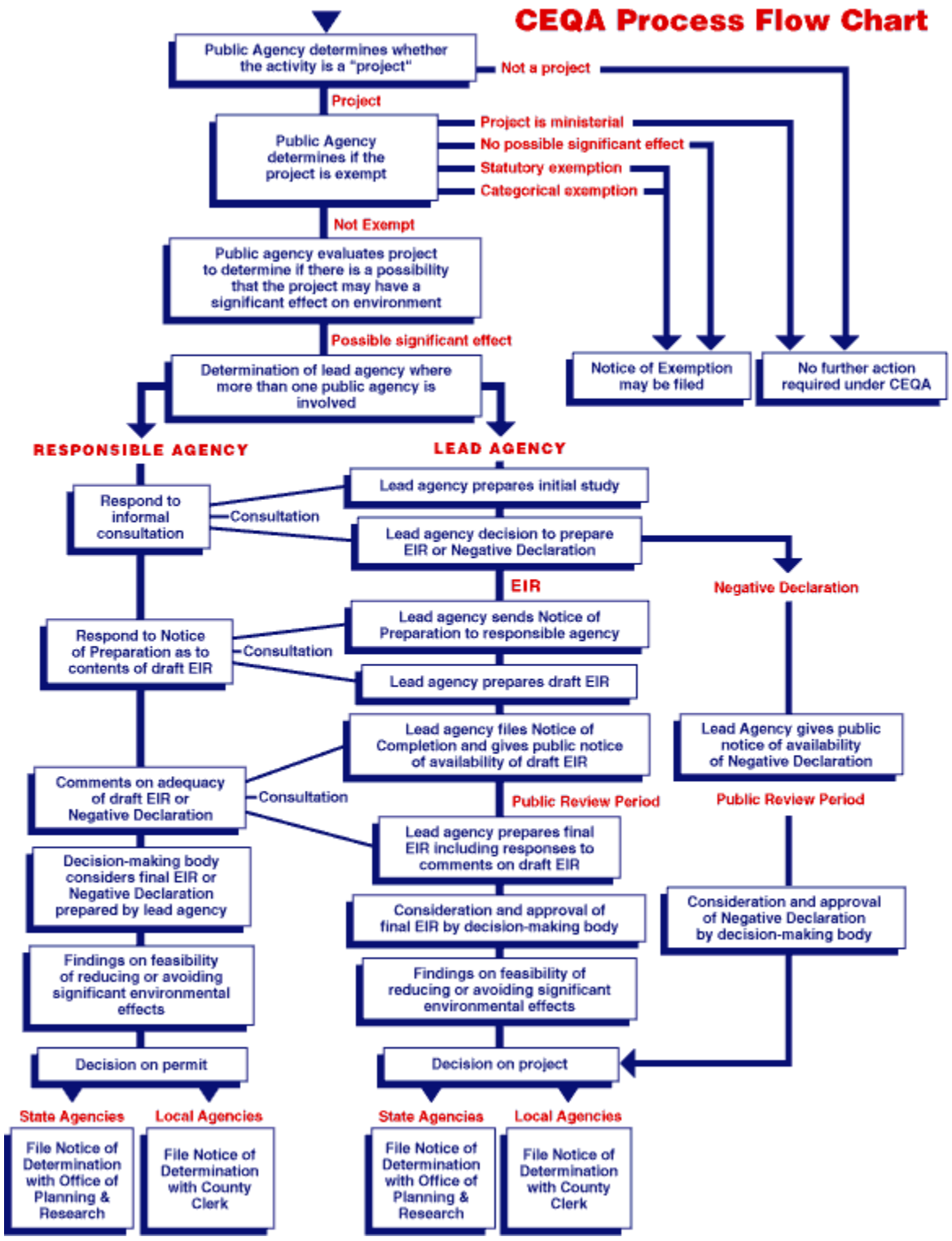
The Initial Study/Negative Declaration document is an informational document that is intended to inform decision-makers, other responsible or interested agencies, and the general public of potential environmental effects of the proposed project. The environmental review process has been established to enable the public agencies to evaluate environmental consequences and to examine and implement methods of eliminating or reducing any adverse impacts. While CEQA requires that consideration be given to avoiding environmental damage, the Lead Agency must balance any potential environmental effects against other public objectives, including economic and social goals. The City of Visalia, as Lead Agency, will make a determination, based on the environmental review for the Environmental Study, Initial Study and comments from the general public, if there are less than significant impacts from the proposed project and the requirements of CEQA can be met by adoption of a Mitigated Negative Declaration.

1.7 Notice of Determination (NOD)

The Lead Agency shall file a Notice of Determination within five working days after deciding to approve the project. The Notice of Determination (CEQA Guidelines, Section 15075) shall include the following:

(1) An identification of the project including the project title as identified on the proposed negative declaration, its location, and the State Clearinghouse identification number for the proposed negative declaration if the notice of determination is filed with the State Clearinghouse.
(2) A brief description of the project.
(3) The agency's name and the date on which the agency approved the project.
(4) The determination of the agency that the project will not have a significant effect on the environment.
(5) A statement that a negative declaration or a mitigated negative declaration was adopted pursuant to the provisions of CEQA.
(6) A statement indicating whether mitigation measures were made a condition of the approval of the project, and whether a mitigation monitoring plan/program was adopted.
(7) The address where a copy of the negative declaration or mitigated negative declaration may be examined.
(8) The identity of the person undertaking a project which is supported, in whole or in part, through contracts, grants, subsidies, loans, or other forms of assistance from one or more public agencies or the identity of the person receiving a lease, permit, license, certificate, or other entitlement for use from one or more public agencies.

1.8 CEQA Process Flow Chart



Section 2

Project Description

City of Visalia
315 E Acequia Ave
Visalia, CA 93291

SECTION 2
Project Description

Project Title: Barr-Wood Subdivision

2.1 Project Description and Purpose

The Project proposes a 136-unit, low-density single-family development with a central park and walking trails on 69.35 gross acres within the City of Visalia Planning Area. The Project site's existing General Plan land use designation is Residential Very Low Density, which corresponds to a prezone of R-1-20 (single-family residential, 20,000 square feet minimum lot size). The project includes 136 homes, averaging 11,592 square feet per lot, a 3.7-acre recessed park with walking trails, and a drainage pond.

The Project would result in onsite and offsite infrastructure improvements including new and relocated utilities, new residential streets, improvements of South Roeben Street and South Shirk Road, and the continuation and improvement of West Whitendale Avenue. The Project would require no demolition. The construction of the Project will be in three phases (Figure 3-5). Phase one will include 45 homes and the eastern site entrance, as well as a temporary emergency access road and storm drainage basin. The second phase will include 44 homes, the western site entrance, the stormwater drainage pond, and the central park. Phase three will include the remaining 47 homes.

The Project will require annexation into the City of Visalia; however, it is within the Visalia Planning Area and borders existing single-family homes within City Limits. Along with the annexation, the Project plans on splitting the existing parcel into three parcels to coincide with the phased development of the Project (Figure 3-3).

The Project requires a conditional use permit for three reasons. First, the Project is planning for a minimum lot size of 11,592 square feet rather than the 20,000 square feet R-1-20 zone requires. The second reason is reduced front and side yard setbacks. The R-1-20 zone requires a minimum setback of 35 feet in the front and 10 feet on the sides. The Project is planning for setbacks of 30 feet and 5 feet, respectively. The third reason is the minimum width of the lots. The R-1-20 zone requires a minimum width of 100 feet on interior lots and 110 feet on corner lots. The Project plans for a minimum width of 85 feet, ranging to a maximum of 206 feet.

2.2 Project Location

The proposed project site is located within in the City of Visalia Planning Area within Tulare County. The site is West of South Roeben Street and East of South Shirk Road. The site is approximately 4 miles Southwest of the Visalia downtown. The Project involves construction on approximately 69.35 acres on APN 119-022-041. The site is topographically flat and is bounded by agricultural uses (Including a Dairy Farm) to the South and East, and single-family housing to the North and West. The site is zoned AE-20 (Exclusive Agriculture, 20 Acre Minimum Site Area) by Tulare County but is prezoned for R-1-20 (Single Family Residential, 20,000 Square Foot Minimum Site Area) by the City of Visalia pending annexation. The

General Plan Designation is Very Low Density Residential. The site currently contains agricultural uses and vacant land.

2.3 Other Permits and Approvals

The following discretionary approvals are required from the City of Visalia for the proposed project:

- Tentative Subdivision Map
- Tentative Parcel Map
- Conditional Use Permit for Lot Sizes, Lot Widths, and Lot Setbacks
- Tulare County Local Agency Formation Commission Annexation
- San Joaquin Valley Air Pollution Control District (SJVAPCD). The proposed project is within the jurisdiction of the SJVAPCD and will be required to comply with Rule VIII, 3135, 4101, and 9510.
- Central Valley Regional Water Quality Control Board, SWPPP. The proposed project site is within the jurisdiction of the Central Valley Regional Water Quality Control Board (RWQCB). The Central Valley RWQCB will require a Storm Water Pollution Prevention Plan (SWPPP) to prevent impacts related to stormwater because of project construction.

The following ministerial approvals are required from the City of Visalia for the proposed project:

- City of Visalia Building and Encroachment Permits
- Roadway Dedication of Shirk Road, Roeben Street, and Whitendale Avenue

Figure 2-1. Regional Location Map

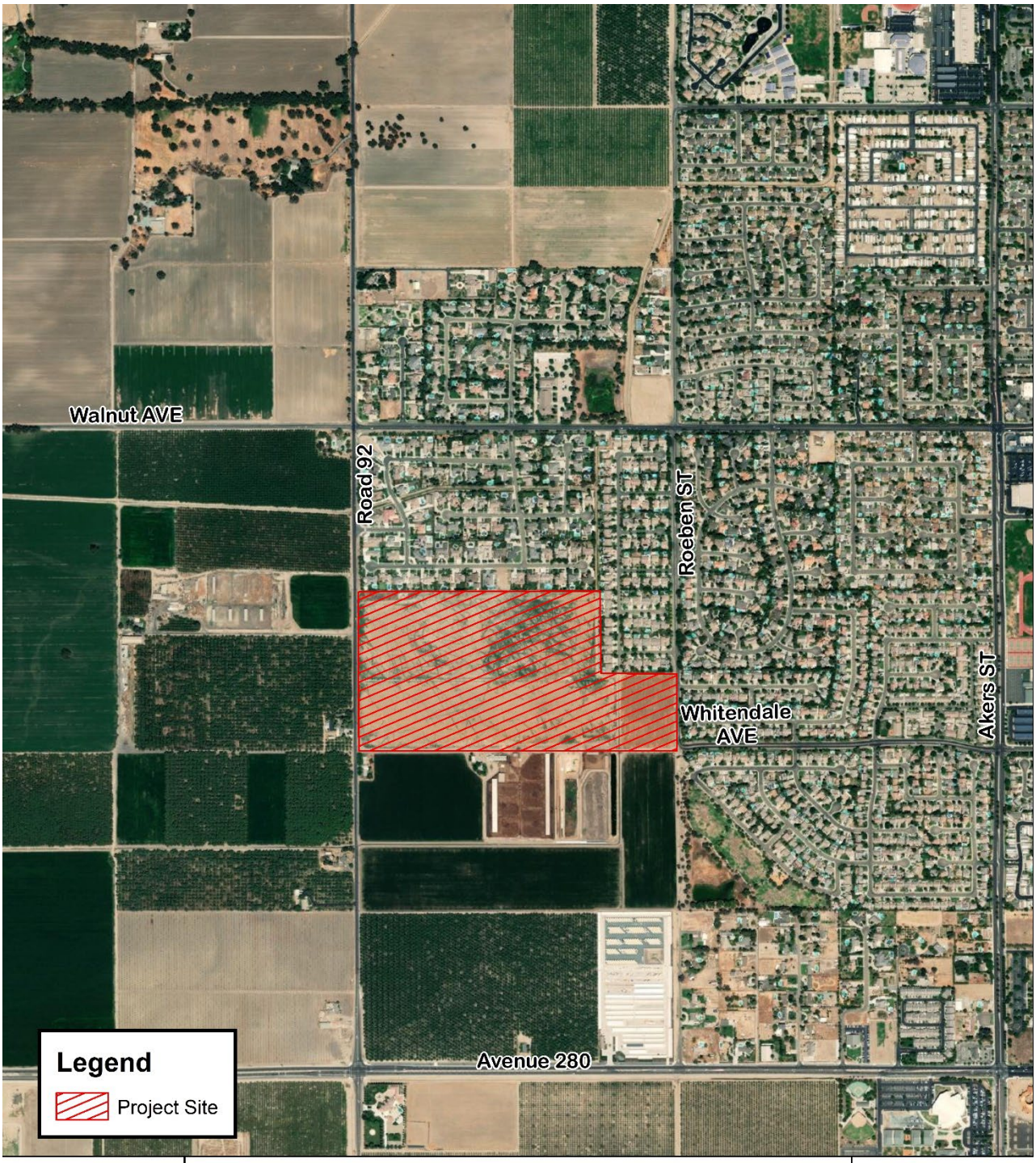


Figure 2-2. Vicinity Map

Section 3

Evaluation of Environmental Impacts

City of Visalia
315 E Acequia Ave
Visalia, CA 93291

SECTION 3
Evaluation of Environmental Impacts

Project Title: Barr-Wood Subdivision

This document is the Initial Study/Mitigated Negative Declaration for the proposed construction and operation of 136-unit, low-density single-family development with a central park and walking trails on 69.35 gross acres within the City of Visalia. The City of Visalia will act as Lead Agency for this project pursuant to the California Environmental Quality Act (CEQA) and the CEQA Guidelines.

3.1 PURPOSE

The purpose of this environmental document is to implement the California Environmental Quality Act (CEQA). Section 15002(a) of the CEQA Guidelines describes the basic purposes of CEQA as follows.

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

This Initial Study of environmental impacts has been prepared to conform to the requirements of the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations Section 15000 et seq.). According to Section 15070, a public agency shall prepare or have prepared a proposed negative declaration or mitigated negative declaration for a project subject to CEQA when:

(a) The initial study shows that there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment, or
(b) The initial study identifies potentially significant effects, but:
  (1) Revisions in the project plans or proposals made by, or agreed to by the applicant before a proposed mitigated negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and
  (2) There is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment.

3.2 INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

1. **Project Title:** Barr-Wood Subdivision

2. **Lead Agency:** City of Visalia, Planning and Development Department
   Contact Person: Cristobal Carrillo, Planning Division
   315 E Acequia Ave
   Visalia, CA 93291
   Phone Number: (559) 713-4443

3. **Applicant:** Woodside Homes
   9 River Park Place East, Suite 430
   Fresno, CA 93720
   Phone Number: (559)-437-5010

4. **Project Location:** The proposed project site is located within in the City of Visalia Planning Area within Tulare County. The site is West of South Roeben Street and East of South Shirk Road. The site is approximately 4 miles Southwest of the Visalia downtown. The Project involves construction on approximately 69.35 acres on APN 119-022-041. The site is topographically flat and is bounded by agricultural uses (Including a Dairy Farm) to the South and East, and single-family housing to the North and West. The site is zoned AE-20 (Exclusive Agriculture, 20 Acre Minimum Site Area) by Tulare County but is prezoned for R-1-20 (Single Family Residential, 20,000 Square Foot Minimum Site Area) by the City of Visalia pending annexation. The General Plan Designation is Very Low Density Residential. The site currently contains agricultural uses and vacant land.

5. **General Plan Designation:** The proposed project site is designated as Very Low Density Residential by the Visalia General Plan.

6. **Zoning Designation:** The site is zoned AE-20 by Tulare County but is prezoned for R-1-20 by the City of Visalia.

7. **Project Description:** The Project proposes a 136-unit, low-density single-family development with a central park and walking trails on 69.35 gross acres within the City of Visalia Planning Area. The Project site's existing General Plan land use designation is Residential Very Low Density, which corresponds to a prezone of R-1-20 (single-family residential, 20,000 square feet minimum lot size). The project includes 136 homes, averaging 11,592 square feet per lot, a 3.7-acre recessed park with walking trails, and a drainage pond.

   The Project would result in onsite and offsite infrastructure improvements including new and relocated utilities, new residential streets, improvements of South Roeben Street and South Shirk Road, and the continuation and improvement of West Whitendale Avenue. The Project will require no demolition. The construction of the Project will be in three phases (Figure 3-4). Phase one will include 45 homes and the eastern site entrance, as well as a temporary emergency access road and storm drainage basin. The second phase will include 44 homes, the western site entrance, the stormwater drainage pond, and the central park. Phase three will include the remaining 47 homes.

The Project will require annexation into the City of Visalia; however, it is within the Visalia Planning Area and borders existing single-family homes within City Limits. Along with the annexation, the Project plans on splitting the existing parcel into three parcels to coincide with the phased development of the Project (Figure 3-3).

The Project requires a conditional use permit for three reasons. First, the Project is planning for a minimum lot size of 11,592 square feet rather than the 20,000 square feet R-1-20 zone requires. The second reason is reduced front and side yard setbacks. The R-1-20 zone requires a minimum setback of 35 feet in the front and 10 feet on the sides. The Project is planning for setbacks of 30 feet and 5 feet, respectively. The third reason is the minimum width of the lots. The R-1-20 zone requires a minimum width of 100 feet on interior lots and 110 feet on corner lots. The Project plans for a minimum width of 85 feet, ranging to a maximum of 206 feet.

8. **Surrounding Land Uses and Settings:**
   North: Very Low Density Residential (Visalia General Plan, Visalia Planning Area), currently Single-Family Housing.
   South: Agricultural Use (Tulare County General Plan) currently agricultural use, including a dairy.
   East: Low Density Residential (Visalia General Plan, Visalia Planning Area) currently Single-Family Housing.
   West: Agriculture Use (Tulare County General Plan) currently agricultural use.

9. **Required Approvals:** The following discretionary approvals are required from the City of Visalia for the proposed project:
   - Tentative Subdivision Map
   - Tentative Parcel Map
   - Conditional Use Permit for Lot Sizes, Lot Widths, and Lot Setbacks
   - Tulare County Local Agency Formation Commission Annexation
   - San Joaquin Valley Air Pollution Control District (SJVAPCD). The proposed project is within the jurisdiction of the SJVAPCD and will be required to comply with Rule VIII, 3135, 4101, and 9510.
   - Central Valley Regional Water Quality Control Board, SWPPP. The proposed project site is within the jurisdiction of the Central Valley Regional Water Quality Control Board (RWQCB). The Central Valley RWQCB will require a Storm Water Pollution Prevention Plan (SWPPP) to prevent impacts related to stormwater because of project construction.

The following ministerial approvals are required from the City of Visalia for the proposed project:

- City of Visalia Building and Encroachment Permits
- Roadway Dedication of Shirk Road, Roeben Street, and Whitendale Avenue

10. **Native American Consultation:** The State requires lead agencies to consider the potential effects of proposed projects and consult with California Native American tribes during the local planning process for the purpose of protecting Traditional Tribal Cultural Resources through the California Environmental Quality Act (CEQA) Guidelines. Pursuant to PRC Section 21080.3.1, the lead agency shall begin consultation with the California Native American tribe that is traditionally and culturally affiliated with the geographical area of the proposed project. Such significant cultural resources are either sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a tribe which is either on or eligible for inclusion in the California Historic Register or local historic

register, or, the lead agency, at its discretion, and support by substantial evidence, choose to treat the resources as a Tribal Cultural Resources (PRC Section 21074(a)(1-2)). According to the most recent census data, California is home to 109 currently recognized Native American tribes. Tribes in California currently have nearly 100 separate reservations or Rancherias. Tulare County has several Rancherias. The tribes that were formally noticed of this Project were the Big Sandy Rancheria of Western Mono Indians, Santa Rosa Rancheria Tachi Yokut Tribe, Dunlap Band of Mono Indians, Tubatulabals of Kern Valley, Tule River Indian Tribe, Kern Valley Indian Community, North Fork Mono Tribe, and the Wuksache Indian Tribe/Eshom Valley Band. These Rancherias are not located within the City limits.

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See PRC Section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per PRC Section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that PRC Section 21082.3(c) contains provisions specific to confidentiality.

The Santa Rosa Rancheria Tachi Yokut Tribe responded on behalf of the Tribe requesting an archaeological firm be hired to conduct a pre-construction survey, a records search with NAHC and CHRIS center, and monitoring of any ground disturbing activities due to concerns with the Project. Additionally, the Tachi Yokut Tribe request to be put in contact with the archaeological firm hired so they can maintain updates about the Project.

11. **Parking and access:** Vehicular access to the project is available via S Shirk Road and S Roeben Street. The project includes new streets and courts that provide full access to the project site. During construction, workers will utilize existing parking areas and/or temporary construction staging areas for parking of vehicles and equipment. Additionally, a temporary emergency access will be added during early construction.

12. **Landscaping and Design:** The landscape and design plans will be required during building permit and final map submittal for any areas maintained by a landscape and lighting district.

13. **Utilities and Electrical Services:** The Project would result in onsite and offsite infrastructure improvements including new and relocated utilities. Water will be provided by Cal Water and sewer services will be provided by the City of Visalia via existing lines. A stormwater pond will be located in the Southwest corner of the site. During construction, a temporary stormwater basin will be utilized.

    The Project would include improvement to the surrounding streets. The Right of Way (ROW) of S. Roeben Street will be widened to 84' and include a new center median. The Project will build out the western half of Roeben Street to include a sidewalk, bike lane, and landscaping. The ROW of S. Shirk Road will be widened to 110', with the Project providing the eastern half of improvements. The eastern half of Shirk Street will include two lanes of traffic, a bike lane, a sidewalk, and landscaping. W. Whitendale Avenue, currently a dirt road, will be widened to an 84' ROW, with the Project providing the northern half of improvements. The northern half of Whitendale will include new pavement for a travel lane, bike lane, and on-street parking. Additionally, the Project will add a sidewalk and landscaping.

Acronyms

BMP	Best Management Practices
BAU	Business as Usual
CAA	Clean Air Act
CBC	California Building Code
CCAP	Climate Change Action Plan
CCR	California Code of Regulation
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CRHR	California Register of Historic Places
CWA	California Water Act
DHS	Department of Health Services
FEIR	Final Environmental Impact Report
FMMP	Important Farmland Mapping and Monitoring Program
ISMND	Initial Study Mitigated Negative Declaration
ISR	Indirect Source Review
MCL	Maximum Contaminant Level
MEIR	Master Environmental Impact Report
NOI	Notice of Intent
ND	Negative Declaration
NAC	Noise Abatement Criteria
RCRA	Resource Conservation and Recovery Act of 1976
ROW	Right-of-Way
RWQCB	Regional Water Quality Control Board
SCE	Southern California Edison
SHPO	State Historic Preservation Office
SJVAPCD	San Joaquin Valley Air Pollution Control District
SSJVIC	Southern San Joaquin Information Center
SWPPP	Storm Water Pollution Prevention Plan
TCR	Tribal Cultural Resource
UWMP	Urban Water Management Plan

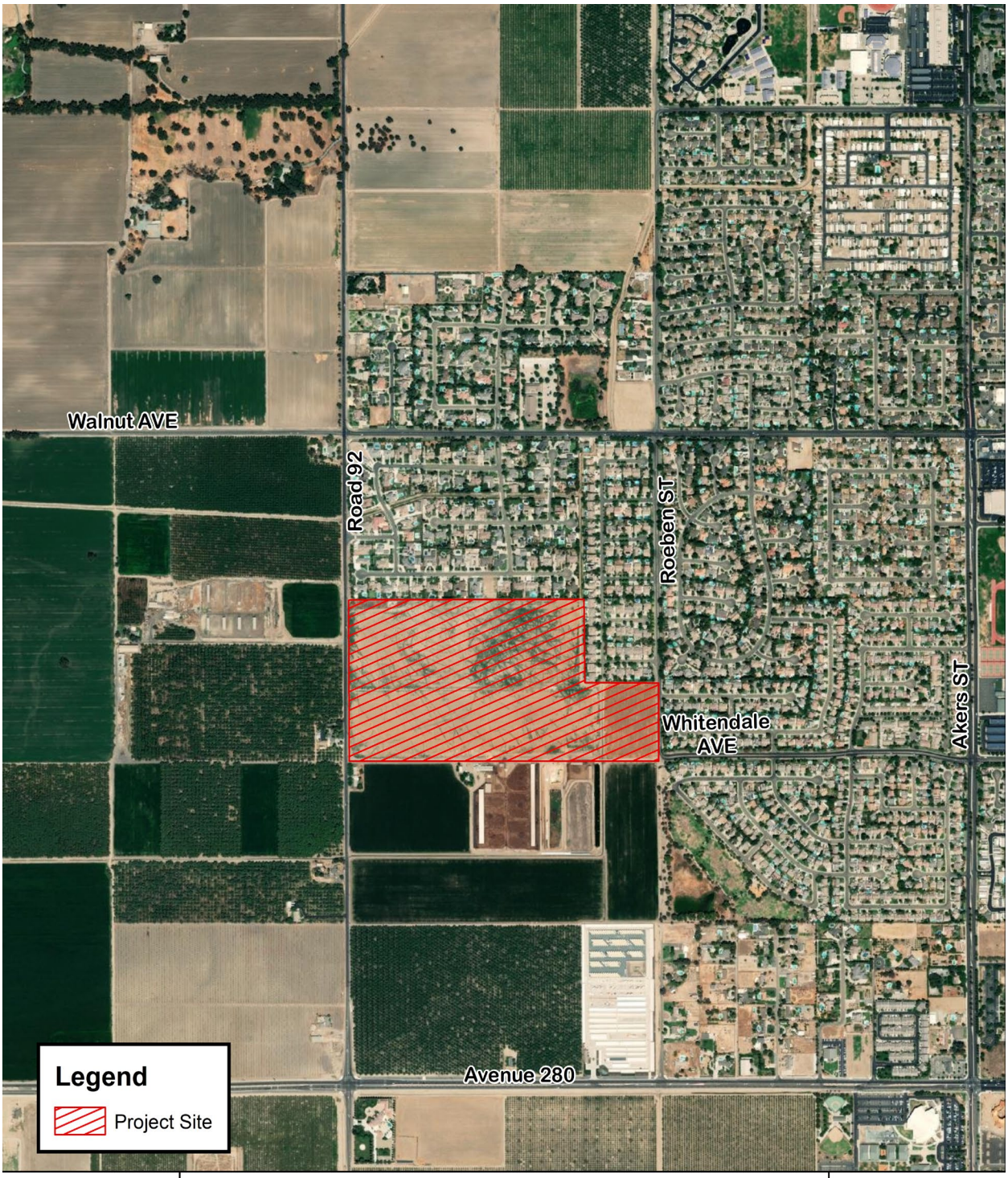


Figure 3-1. Vicinity Map

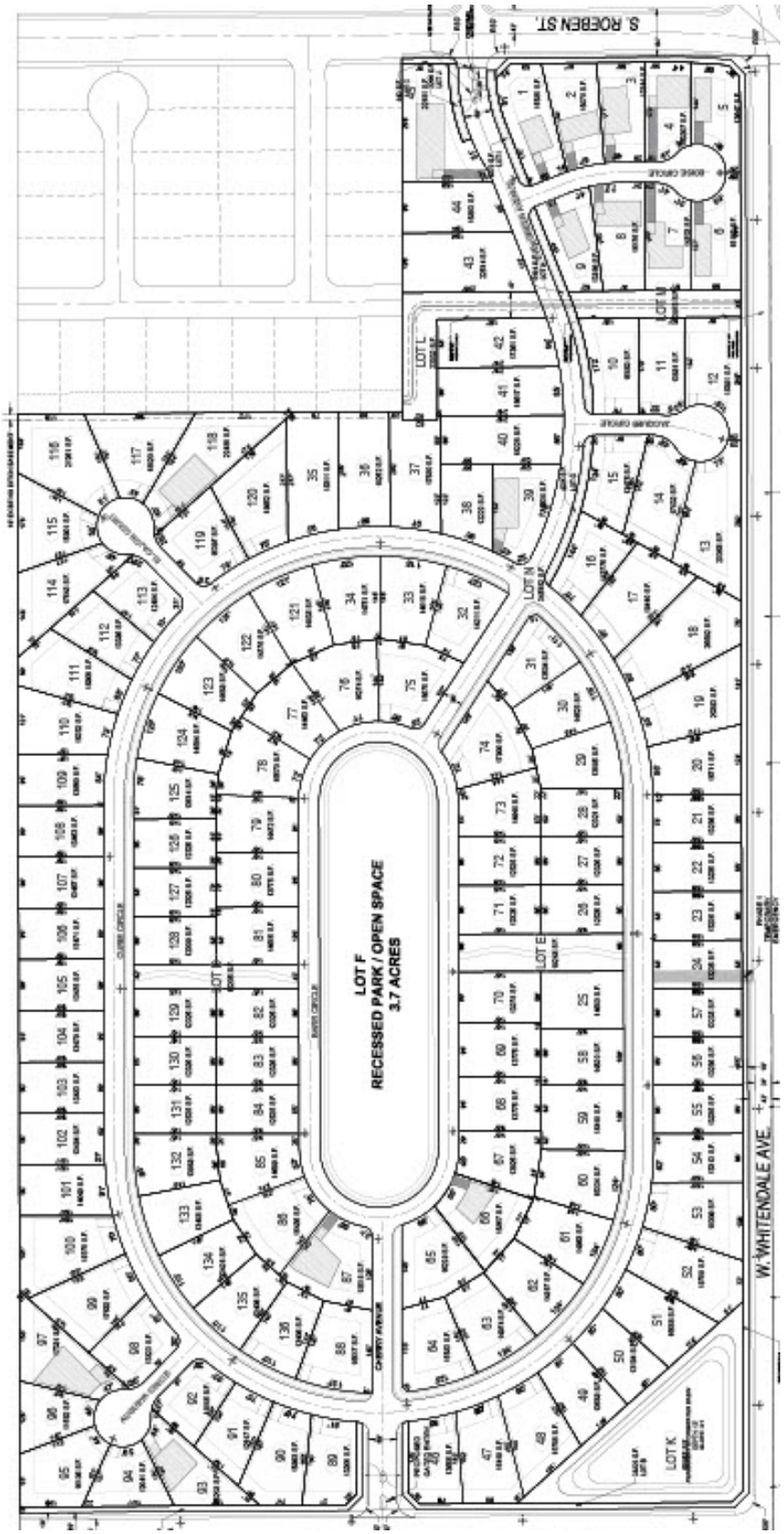


Figure 3-2: Site Plan

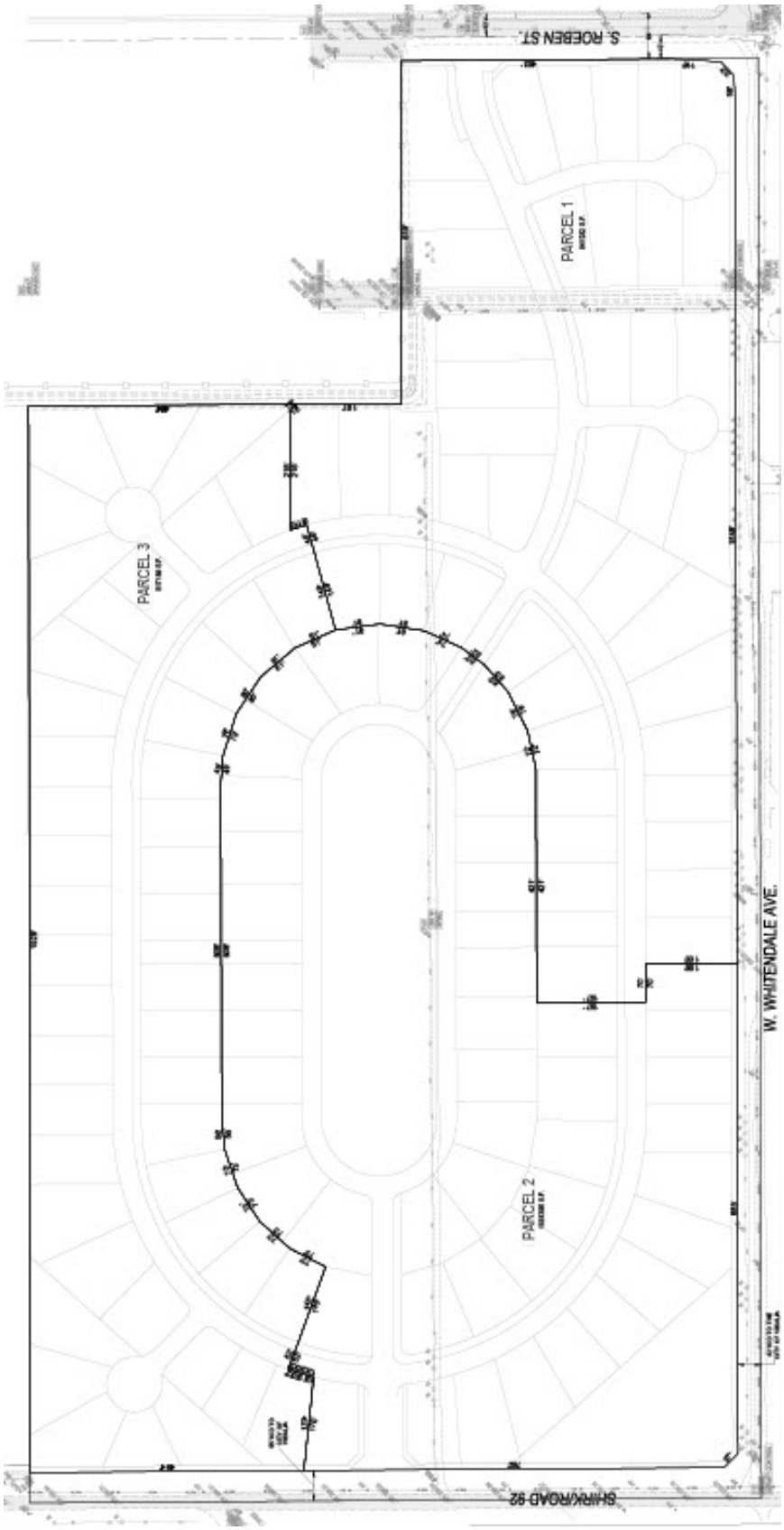


Figure 3-3: Tentative Parcel Map

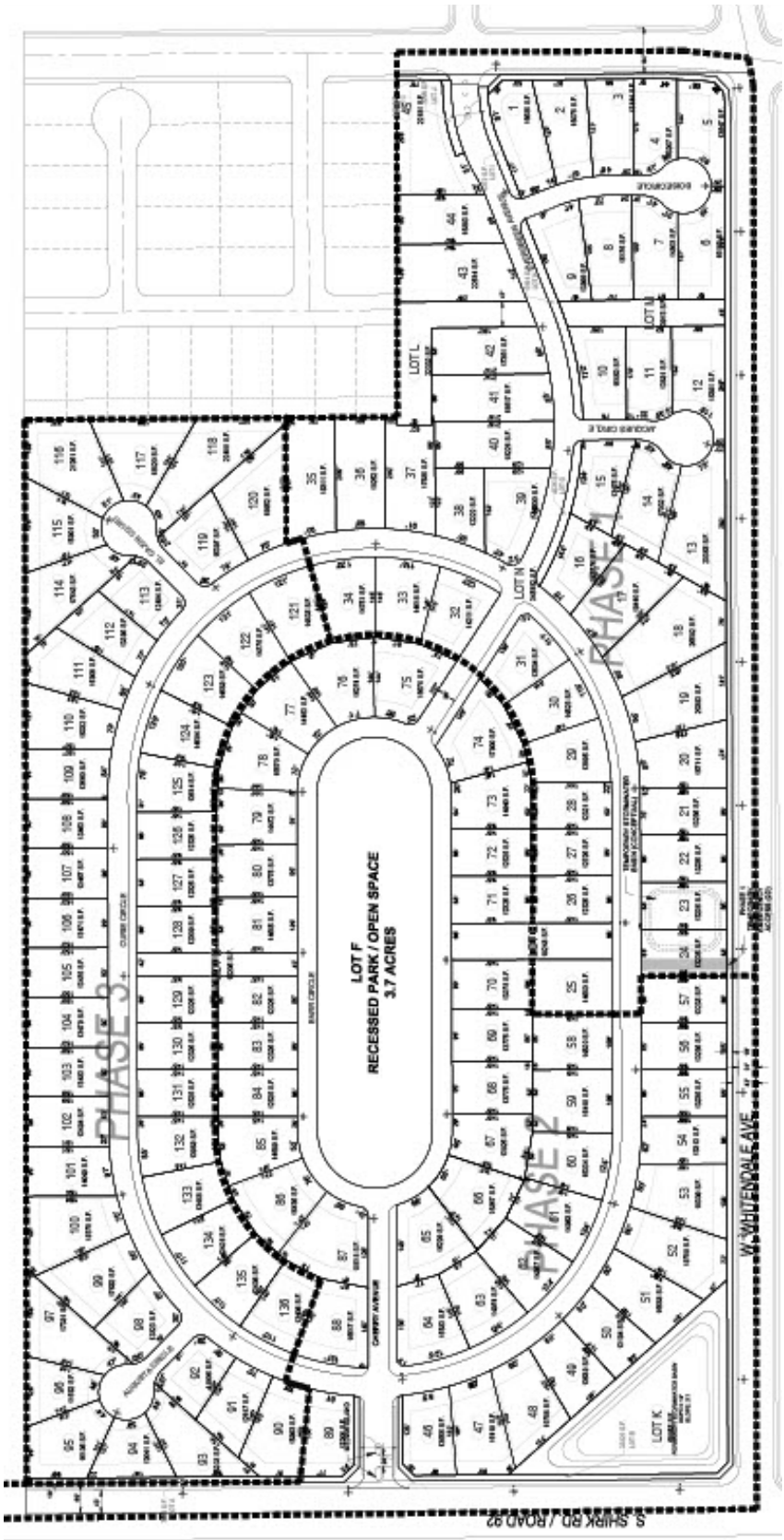


Figure 3-5: Phasing Plan

3.3 EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "no Impact" answers that are adequately supported by the information sources a lead agency cites, in the parentheses following each question. A "No Impact" answer is adequately supported if the reference information sources show that the impact simply does not apply to projects like the one involved (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).

2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR if required.

4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c) (3)(D). In this case, a brief discussion should identify the following.

    - Earlier Analysis Used. Identify and state where they are available for review.
    - Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
    - Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated." Describe and mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

3.4 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

☐ Aesthetics	☐ Greenhouse Gas Emissions	☐ Public Services
☐ Agriculture and Forest Resources	☐ Hazards & Hazardous Materials	☐ Recreation
☐ Air Quality	☑ Hydrology and Water Quality	☐ Transportation
☐ Biological Resources	☐ Land Use and Planning	☑ Tribal Cultural Resources
☑ Cultural Resources	☐ Mineral Resources	☐ Utilities and Service System
☐ Energy	☐ Noise	☐ Wildfire
☑ Geology and soils	☐ Population	☐ Mandatory Findings of Significance

DETERMINATION: (To be completed by the Lead Agency) Where potential impacts are anticipated to be significant, mitigation measures will be required, so that impacts may be avoided or reduced to insignificant levels.

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION WILL BE PREPARED.

☑ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because 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. A Negative Declaration 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 requested.

5/31/2023
DATE

SIGNATURE

Brandon Smith
PRINTED NAME

City of Visalia
AGENCY

3.5 ENVIRONMENTAL ANALYSIS

The following section provides an evaluation of the impact categories and questions contained in the checklist and identify mitigation measures, if applicable.

I. AESTHETICS

Except as provided in Public Resource Code Section 210999, would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☑	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within state scenic highway?	☐	☐	☐	☑
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 a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☐	☑
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☑	☐

Environmental Setting

Scenic Resources

Scenic resources include landscapes and features that are visually or aesthetically pleasing. They contribute positively to a distinct community or region. These resources produce a visual benefit upon communities. The City of Visalia has a visual character of a mix of rural and built environments. Visalia is surrounded by natural open space agricultural land, characterized by uses such as grazing, open space, and cultivated agriculture. Downtown Visalia is the physical, cultural, and economic center, with historical homes surrounding the downtown. St. John's river flows along the North side of Visalia's city limits, along with smaller creeks and ditches throughout the city. Valley Oak trees, both individually and in groves, also provide an important scenic feature and link to the natural setting of the San Joaquin Valley. The goal of Visalia's General Plan regarding visual resources is to preserve and re-establish the city's natural waterway system and Valley Oak tree groves with parks, conservation areas, and trailways.

Scenic Vistas

The Visalia General Plan identifies the Sierra Nevada mountains to the East and agricultural lands surrounding the city as scenic vistas surrounding Visalia.

Existing Visual Character

The following photos demonstrate the aesthetic character of the project area. As shown, the proposed project site area is in a relatively flat area characterized by agricultural uses.

Photo 1: Northwest Site Boundary (View Southeast) Source: Google Maps 2021

Photo 2: Southwest Site Boundary (View Northeast) Source: Google Maps 2021

Photo 3: Southeast Site Boundary (View Northwest) Source: Google Maps 2011

Regulatory Setting

Scenic Roadways

The California Scenic Highway Program was established in 1963 by the State Legislature for the purpose of protecting and enhancing the natural beauty of California highways and adjacent corridors through conservation strategies. The State Scenic Highway System includes a list of highways that have either been officially designated or are eligible for designation. State laws affiliated with governing the scenic highway program can be found in Sections 260-263 in The Street and Highways Code.

State Scenic Highways

According to the California Department of Transportation mapping of State Scenic Highways, the City of Visalia does not have officially designated State Scenic Highways, however the City has one eligible State Scenic Highway, a 44-mile stretch of State Route 198 from State Route 99 to Sequoia National Park. This is designated as a scenic corridor in the City's General Plan This portion of the highway is approximately 1.3 miles North from the proposed site.

City of Visalia General Plan

The 2030 General Plan includes the policies related to aesthetic resources that correlate to the proposed project:

LU-P-28: Continue to use natural and man-made edges, such as major roadways and waterways within the City's Urban Area Boundary, as urban development limit and growth phasing lines.

LU-P-34: Work with Tulare County to prevent urban development of agricultural land outside of the current growth boundaries and to promote the of use agricultural preserves, where they will promote orderly development.

LU-P-42: Develop scenic corridor and gateway guidelines that will maintain the agricultural character of Visalia at its urban fringe.

LU-P-72: Ensure that noise, traffic, and other potential conflicts that may arise in a mix of commercial and residential uses are mitigated through good site planning, building design, and/or appropriate operational measures.

OSC-P-13: In new neighborhoods that include waterways, improvement of the waterway corridor, including preservation and/or enhancement of natural features and development of a continuous waterway trail on at least one side, shall be required.

OSC-P-17: Require that new development along waterways maintain a visual orientation and active interface with waterways. Develop design guidelines to be used for review and approval of subdivision and development proposals to illustrate how this can be accomplished for different land uses in various geographic settings.

OSC-P-34: Enhance views and public access to Planning Area waterways and other significant features such as Valley Oak groves consistent with flood protection, irrigation water conveyance, habitat preservation and recreation planning policies.

Tulare County General Plan

The 2030 Tulare County General Plan contains following goals and policies related to aesthetic resources that correlate to the proposed project:

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

1. Be sited to minimize obstruction of views from public lands and rights-of-ways,
3. Screen parking areas from view,
4. Include landscaping that screens the development,
5. Limit the impact of new roadways and grading on natural settings, and
6. Include signage that is compatible and in character with the location and building design

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

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

SL-3.2 Urban Expansion–Edges: The County shall design and plan the edges and interface of communities with working and natural landscapes to protect their scenic qualities by:

1. Maintaining urban separators between cities and communities,
2. Encouraging cities to master plan mixed-density neighborhoods at their edges, locating compatible lower density uses adjacent to working and natural landscapes, and
3. 3. Protecting important natural, cultural, and scenic resources located within areas that may be urbanized in the future

City of Visalia Zoning Ordinance

The Visalia Zoning Ordinance governs the distribution and intensity of land uses, sets the principles for evaluating development and guides the development and growth of the City. The Zoning Ordinance establishes specific development criteria for each zoning district (i.e., parking requirements, walls, fencing, setbacks, building height, etc.).

Discussion

a) Would the project have a substantial adverse effect on a scenic vista?

Less than Significant Impact: A scenic vista is defined as a viewpoint that provides expansive views of highly valued landscape for the benefit of the general public. The Sierra Nevada mountains to the East and agricultural lands surrounding the city are the primary scenic vista within this region. The site is surrounded by agricultural uses and single-family homes, while the Sierra Nevada foothills are approximately 10 miles east of the project site. The project would obstruct some

views of agricultural uses. However, the project would not significantly alter views overall from the surrounding community. There is *a less than significant impact.*

b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within state scenic highway?

No Impact: There are no officially designated State Scenic Highways located in the City of Visalia or nearby the site. The proposed project would not damage any scenic resources within a state scenic highway and there is *no impact.*

c) In non-urbanized areas, would the project substantially degrade the existing visual character or quality of the site and its surroundings? (Public views are those that are experienced from a 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?

No Impact: The proposed project site is in an urbanized area within the City of Visalia. The materials, signage, fencing, landscaping, and building materials used in the construction of the project will be selected based on their ability to improve the overall visual character of the area. The proposed project will comply with all applicable zoning and other regulations governing scenic quality. There is *no impact.*

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

Less than Significant Impact: The proposed project would result in new lighting sources on the project site consistent with adjacent residential development. New lighting sources would include interior lighting from residences, street lighting, and security lighting. All street and landscape lighting will be consistent with the City's lighting standards, which are developed to minimize impacts related to excessive light and glare. Although the project will introduce new light sources to the area, all lighting will be consistent with adjacent residential land uses and the City's lighting standards. The impacts are *less than significant.*

II. AGRICULTURE AND FOREST RESOURCES:

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in the Forest Protocols adopted by the California Air Resources Board. Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	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?	☐	☐	☑	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act Contract?	☐	☐	☑	☐
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)?	☐	☐	☐	☑
d) Result in the loss of forestland or conversion of forest land to non-forest use?	☐	☐	☐	☑
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forestland to non-forest use?	☐	☐	☑	☐

Environmental Setting

Central California is one of the world's premier growing regions. Agriculture is an important economic resource for Visalia and the surrounding areas. 39,518 acres, or 65 percent, of the Visalia Planning Area is farmland, producing fruit and nut crops, vegetables, nursery products (trees), apiary products (honey), seed crops (cotton), industrial crops (timber), field crops (alfalfa, barley, corn), and livestock.

The proposed project site is located within the Visalia Planning Area. The proposed project site is not under Williamson Act Contract or a Farmland Security Zone contract. The proposed site is designated as Farmland of Local Importance under the Important Farmland Mapping and Monitoring Program (FMMP). The Site is within the Tier 2 Development Boundary and is designated for Very Low-Density Housing. Nearby to the South and West are Prime Farmland and Confined Animal Enclosures. To the North and East are Urban and Built-up land.

Regulatory Setting

California Land Conservation Act of 1965

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, allows local governments to enter into contracts with private landowners to restrict the activities on specific parcels of land to agricultural or open space uses. The landowners benefit from the contract by receiving greatly reduced property tax assessments. The California Land Conservation Act is overseen by the California Department of Conservation; however local governments are responsible for determining specific allowed uses and enforcing the contract.

Right to Farm Ordinance

Tulare County adopted a "Right to Farm Ordinance," to protect the rights of commercial farming operations, while promoting a "good neighbor policy" between these uses. Under this ordinance, property owners and residents are made aware that they may experience inconveniences due to commercial agricultural operations.

California Farmland Mapping and Monitoring Program (FMMP)

The FMMP is implemented by the California Department of Conservation (DOC) to conserve and protect agricultural lands within the State. Land is included in this program based on soil type, annual crop yields, and other factors that influence the quality of farmland. The FMMP mapping categories for the most important statewide farmland are as follows:

- ***Prime Farmland*** has the ideal physical and chemical composition for crop production. It has been used for irrigated production in the four years prior to classification and can produce sustained yields. 51% of the Visalia Planning Area is classified as Prime Farmland.
- ***Farmland of Statewide Importance*** has also been used for irrigated production in the four years prior to classification and is only slightly poorer quality than Prime Farmland. 11% of the Visalia Planning Area is classified as Farmland of Statewide Importance.
- ***Unique Farmland*** has been cropped in the four years prior to classification and does not meet the criteria for Prime Farmland or Farmland of Statewide Importance but has produced specific crops with high economic value. Less than 1% of the Visalia Planning Area is classified as Unique Farmland.
- ***Farmland of Local Importance*** encompasses farmland that does not meet the criteria for the previous three categories. These may lack irrigation, produce major crops, be zoned as

agricultural, and/or support dairy. 2% of the Visalia Planning Area is classified as Farmland of Local Importance.

City of Visalia General Plan

The 2030 General Plan includes the policies related to agricultural resources that correlate to the proposed project:

- *LU-P-19:* Ensure that growth occurs in a compact and concentric fashion by implementing the General Plan's phased growth strategy.
- *LU-P-21*: Allow annexation and development of residential, commercial, and industrial land to occur within the Tier II UDB and the Tier III Urban Growth Boundary consistent with the City's Land Use Diagram, according to the stated phasing thresholds.
- *OSC-P-28:* Require new development to implement measures, as appropriate, to minimize soil erosion related to grading, site preparation, landscaping, and construction.

Tulare County General Plan

The 2030 Tulare County General Plan contains following goals related to agricultural resources that correlate to the proposed project:

- Promote the long-term preservation of productive and potentially productive agricultural lands and to accommodate agricultural-support services and agriculturally related activities that support the viability of agriculture and further the County's economic development goals;
- Support increased viability of agriculture production and promote high-value, employment-intensive, and diverse agricultural production, and processing in Tulare County;
- Support the reasonable development and economic viability of animal confinement facilities.

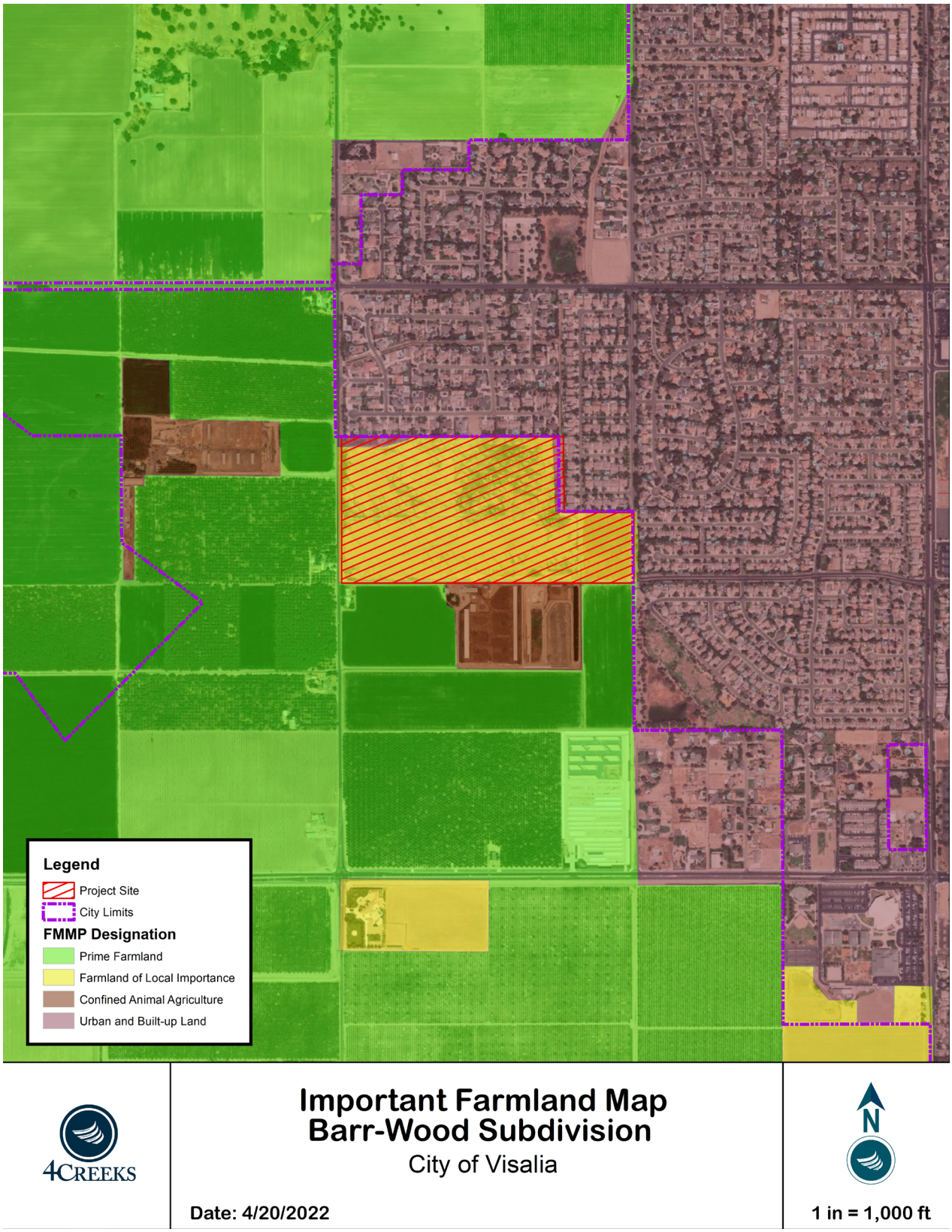


Figure 3-5: Important Farmlands Map

Discussion

a) Would the project 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?

Less Than Significant Impact: The project site is currently occupied by agricultural land with field crops. Implementation of the proposed Project would result in the permanent conversion of approximately 69.35 acres of Farmland of Local Importance to non-agricultural uses.

The loss of Farmland of Local Importance on the Project site would result in the decrease of Important Farmland inventory in Visalia Planning Area. Visalia Planning Area currently has an Important Farmland inventory of 43,155 acres, 1,630 acres of which were categorized as Farmland of Local Importance. Implementation of the Project would convert 69.35 acres of Farmland of Local Importance, which would result in a .16 percent decrease in the total Important Farmland inventory of Visalia Planning Area and a 4.25 percent decrease in the Farmland of Local Importance inventory.

As shown in Table 3-1, the Visalia 2030 General Plan at full buildout plans to develop on 14,265 total acres of Important Farmland, of which 1,630 acres are Farmland of Local Importance. Most of the growth is planned to be adjacent to urbanized areas, which is much less disruptive to other agricultural uses countywide because it discourages the development of new rural neighborhoods or communities that would require the extension of infrastructure that would create growth-inducing impacts and potentially greater impacts to agricultural resources.

FMMP Designation	Existing Planning Area Total (Acres)	Planning Area Total at General Plan Buildout (Acres)	Change
Prime Farmland	33,991	21,501	-12,490 (-37%)
Farmland of Statewide Importance	7,353	6,954	-399 (-5%)
Unique Farmland	181	137	-44 (-24%)
Farmland of Local Importance	1,630	298	-1,333 (-82%)
Important Farmland Total	**43,155**	**28,890**	**-14,265 (-33%)**

Table 3-1: Important Farmland Developed Under 2030 General Plan. Source: Visalia Planning Area General Plan EIR

Although the proposed site is located on Farmland of Local Importance, the development is in accordance with the 2030 General Plan. The Site is within the Tier 2 Development Boundary and is designated as Very Low Density Residential by the General Plan. It is not designated as Prime Farmland or Farmland of Statewide Importance. The Project will follow all existing and proposed 2030 General Plan policies to reduce potential impacts. There is a *less than significant impact.*

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act Contract?

Less Than Significant Impact: The site is currently zoned for agriculture by Tulare County. However, it is within the Visalia Planning Area, Tier 2 Development Boundary and is expected to be annexed by the city. It currently has a General Plan designation of Very Low Density Residential that would suit the proposed project. The project site is not under a Williamson Act Contract. There is *a less than significant impact.*

c) Would the project 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 site is not zoned for forest or timberland production. Therefore, *no impacts* would occur.

d) Would the project result in the loss of forestland or conversion of forest land to non-forest use?

No Impact: No conversion of forestland, as defined under Public Resource Code or General Code, will occur as a result of the project and there would be *no impacts*.

e) Would the project 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 forestland to non-forest use?

Less Than Significant Impact: As discussed above, new development including the project site would be focused in and around existing communities. This would prevent new infrastructure from interfering with surrounding farmland. The project does not include any features which could result in the conversion of forestland to non-forest use. There is a *less than significant impact.*

III. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
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 non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☑	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☑	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☑	☐

Environmental Setting

Air pollution is directly related to regional topography. Topographic features can either stimulate the movement of air or restrict air movement. California is divided into regional air basins based on topographic air drainage features. The proposed project site is within the San Joaquin Valley Air Basin, which is bordered by the Sierra Nevada Mountains to the East, Coastal Ranges to the West, and the Tehachapi Mountains to the South.

The mountain ranges surrounding the San Joaquin Valley Air Basin (SJVAB) serve to restrict air movement and prevent the dispersal of pollution. As a result, the SJVAB is highly susceptible to pollution accumulation over time. As shown in the Table 3-2, the SJVAB is in nonattainment for several pollutant standards. The primary pollutants of concern in the San Joaquin Valley are ozone (O3) and PM10.

Pollutant	Designation/Classification	
	Federal Standards	State Standards
Ozone – One hour	No Federal Standard[f]	Nonattainment/Severe
Ozone – Eight hour	Nonattainment/Extreme[e]	Nonattainment
PM 10	Attainment[c]	Nonattainment
PM 2.5	Nonattainment[d]	Nonattainment
Carbon Monoxide	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxide	Attainment/Unclassified	Attainment
Sulfur Dioxide	Attainment/Unclassified	Attainment
Lead (Particulate)	No Designation/Classification	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified
Vinyl Chloride	No Federal Standard	Attainment

[a] See 40 CFR Part 81
[b] See CCR Title 17 Sections 60200-60210
[c] On September 25, 2008, EPA redesignated the San Joaquin Valley to attainment for the PM10 National Ambient Air Quality Standard (NAAQS) and approved the PM10 Maintenance Plan.

[d] The Valley is designated nonattainment for the 1997 PM2.5 NAAQS. EPA designated the Valley as nonattainment for the 2006 PM2.5 NAAQS on November 13, 2009 (effective December 14, 2009).
[e] Though the Valley was initially classified as serious nonattainment for the 1997 8-hour ozone standard, EPA approved Valley reclassification to extreme nonattainment in the Federal Register on May 5, 2010 (effective June 4, 2010).
[f] Effective June 15, 2005, the U.S. Environmental Protection Agency (EPA) revoked the federal 1-hour ozone standard, including associated designations and classifications. EPA had previously classified the SJVAB as extreme nonattainment for this standard. EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan on March 8, 2010 (effective April 7, 2010). Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB.

Table 3-2. San Joaquin Valley Attainment Status; Source: SJVAPCD

Valley Fever

Valley Fever is an illness caused by a fungus (*Coccidioides immitis* and *C. posadasii*) that grows in soils under certain conditions. Favorable conditions for the Valley Fever fungus include low rainfall, high summer temperatures, and moderate winter temperatures. In California, the counties with the highest incident of Valley Fever are Fresno, Kern and Kings counties. When soils are disturbed by wind or activities like construction and farming, Valley Fever fungal spores can become airborne. The spores present a potential health hazard when inhaled. Individuals in occupations such as construction, agriculture, and archaeology have a higher risk of exposure due to working in areas of disturbed soils which may have the Valley Fever fungus.

Regulatory Setting

City of Visalia General Plan

The 2030 General Plan includes the policies related to air quality that correlate to the proposed project:

- *AQ-P-2:* Require use of Best Management Practices (BMPs) to reduce particulate emission as a condition of approval for all subdivisions, development plans and grading permits, in conformance with the San Joaquin Valley Air Pollution Control District Fugitive Dust Rule.
- *AQ-P-9:* Continue to mitigate short-term construction impacts and long-term stationary source impacts on air quality on a case-by-case basis and continue to assess air quality impacts through environmental review. Require developers to implement Best Management Practices (BMPs) to reduce air pollutant emissions associated with the construction and operation of development projects

Federal Clean Air Act

The 1977 Federal Clean Air Act (CAA) authorized the establishment of the National Ambient Air Quality Standards (NAAQS) and set deadlines for their attainment. The Clean Air Act identifies specific emission reduction goals, requires both a demonstration of reasonable further progress and an attainment demonstration, and incorporates more stringent sanctions for failure to meet interim milestones. The U.S. EPA is the federal agency charged with administering the Act and other air quality-related legislation. EPA's principal functions include setting NAAQS; establishing minimum national emission limits for major sources of pollution; and promulgating regulations. Under CAA, the NCCAB is identified as an attainment area for all pollutants.

California Clean Air Act

California Air Resources Board coordinates and oversees both state and federal air pollution control programs in California. As part of this responsibility, California Air Resources Board monitors existing air quality, establishes California Ambient Air Quality Standards, and limits allowable emissions from

vehicular sources. Regulatory authority within established air basins is provided by air pollution control and management districts, which control stationary-source and most categories of area-source emissions and develop regional air quality plans. The project is located within the jurisdiction of the San Joaquin Valley Air Pollution Control District.

The state and federal standards for the criteria pollutants are presented in Section 8.4 of The San Joaquin Valley Unified Air Pollution Control District's 2015 "Guidance for Assessing and Mitigating Air Quality Impacts". These standards are designed to protect public health and welfare. The "primary" standards have been established to protect the public health. The "secondary" standards are intended to protect the nation's welfare and account for air pollutant effects on soils, water, visibility, materials, vegetation, and other aspects of general welfare. The U.S. EPA revoked the national 1-hour ozone standard on June 15, 2005, and the annual PM_{10} standard on September 21, 2006, when a new $PM_{2.5}$ 24-hour standard was established.

Pollutant	Averaging Time	California Standards[1]		National Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone (03)	1 Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	--	Same as Primary Standard	Ultraviolet 8 Hour Photometry
	8 Hour	0.070 ppm (137 µg/m³)		0.075 ppm (147 µg/m³)		
Respirable Particulate Matter (PM_{10})	24 Hour	50 µg/m	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Annual Analysis
	Annual Arithmetic Mean	20 µg/m3		--		
Fine Particulate Matter ($PM_{2.5}$)	24 Hour		Gravimetric or Beta Attenuation	35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Annual Analysis
	Annual Arithmetic Mean	12 µg/m³		15 µg/m³		
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m³)	--	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m³)		9 ppm (10 mg/m³)	--	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m³)		--	--	
Nitrogen Dioxide (NO_2) [8]	1 Hour	0.18 ppm (339 µg/m³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m³)	--	Gas Phase Annual Chemiluminescence
	Arithmetic Mean	0.030 ppm (57 µg/m³)		53 ppb (100 µg/m³)	Same as Primary Standard	
Sulfur Dioxide	1 Hour	0.25 ppm (655 µg/m³)	Ultraviolet Fluorescence	75 ppb (196 µg/m³)	--	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	--		--	0.5 ppm (1300 µg/m³)	
	24 Hour	0.04 ppm (105 µg/m³)		0.14 ppm (for	--	

Pollutant	Averaging Time	California Standards[1]		National Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
				certain areas)9		
	Annual Arithmetic Mean	--		0.030 ppm (for certain areas)9	--	
Lead[10,11]	30 Day Average	1.5 µg/m^3	Atomic Absorption	--	--	High Volume Sampler and Atomic Absorption
	Calendar Quarter	--		1.5 µg/m3 (for certain areas)11	Same as Primary Standard	
	Rolling 3-Month Average	--		0.15 µg/m^3		
Visibility Reducing Particles[12]	8 Hour	See footnote 12	Beta Attenuation and Transmittance through Filter Tape	No National Standard		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[10]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m3 is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
8. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national standards are in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national standards to the California standards the units can be converted from ppb to ppm. In this case, the national standards of 53 ppb and 100 ppb are identical to 0.053 ppm and 0.100 ppm, respectively.
9. On June 2, 2010, a new 1-hour SO2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved. Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
10. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
11. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
12. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Table 3-3. Ambient Air Quality Standards; Source: SJVAPCD

San Joaquin Valley Air Pollution Control District (SJVAPCD)

The SJVAPCD is responsible for enforcing air quality standards in the project area. To meet state and federal air quality objectives, the SJVAPCD adopted the following thresholds of significance for projects:

Pollutant/Precursor	Construction Emissions	Operational Emissions	
		Permitted Equipment and Activities	Non-Permitted Equipment and Activities
	Emissions (tpy)	Emissions (tpy)	Emissions (tpy)
CO	100	100	100
Nox	10	10	10
ROG	10	10	10
SOx	27	27	27
PM10	15	15	15
PM2.5	15	15	15

Table 3-4. SJVAPCD Thresholds of Significance for Criteria Pollutants; Source: SJVAPCD

The following SJVAPCD rules and regulations may apply to the proposed project:

- **Rule 3135:** Dust Control Plan Fee. All projects which include construction, demolition, excavation, extraction, and/or other earth moving activities as defined by Regulation VIII (Described below) are required to submit a Dust Control Plan and required fees to mitigate impacts related to dust.
- **Rule 4101:** Visible Emissions. District Rule 4101 prohibits visible emissions of air contaminants that are dark in color and/or have the potential to obstruct visibility.
- **Rule 9510:** Indirect Source Review (ISR). This rule reduces the impact PM10 and NOX emissions from growth on the SJVB. This rule places application and emission reduction requirements on applicable development projects in order to reduce emissions through onsite mitigation, offsite SJVAPCD administered projects, or a combination of the two. This project will submit an Air Impact Assessment (AIA) application in accordance with Rule 9510's requirements.
- **Regulation VIII:** Fugitive PM10 Prohibitions. Regulation VIII is composed of eight rules which together aim to limit PM10 emissions by reducing fugitive dust. These rules contain required management practices to limit PM10 emissions during construction, demolition, excavation, extraction, and/or other earth moving activities.

Discussion

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

No Impact: The proposed project is located within the boundaries of the San Joaquin Valley Air Pollution Control District (SJVAPCD) and would result in air pollutant emissions that are regulated by the air district during both its construction and operational phases. The SJVAPCD is responsible for bringing air quality in the Visalia Planning Area into compliance with federal and state air

quality standards. The Air District has Particulate Matter (PM) plans, Ozone Plans, and Carbon Monoxide Plans that serve as the clean air plan for the basin.

Together, these plans quantify the required emission reductions to meet federal and state air quality standards and provide strategies to meet these standards. The SJVAPCD adopted the Indirect Source Review (ISR) Rule in order to fulfill the District's emission reduction commitments in its PM10 and Ozone (NOx) attainment plans and has since determined that implementation and compliance with ISR would reduce the cumulative PM10 and NOx impacts anticipated in the air quality plans to a less than significant level.

Construction Phase. Project construction would generate pollutant emissions from the following construction activities: demolition, site preparation, grading, building construction, application of architectural coatings, and paving. The construction related emissions from these activities were calculated using CalEEMod. The full CalEEMod Report can be found in Appendix A. As shown in Table 3-5 below, project construction related emissions do not exceed the thresholds established by the SJVAPCD.

	CO (tpy)	ROG (tpy)	SOx (tpy)*	Nox (tpy)	PM10 (tpy)	PM2.5 (tpy)
Emissions Generated from Project Construction	**2.9256**	**2.3192**	**.00611**	**3.2874**	**1.0805**	**.5454**
SJVAPCD Air Quality Thresholds of Significance	**100**	**10**	**27**	**10**	**15**	**15**
*Threshold established by SJVAPCD for SOx, however emissions are reported as SO2 by CalEEMod.						

Table 3-5. Projected Project Emissions Compared to SJVAPCD Thresholds of Significance for Criteria Pollutants related to Construction; Source: SJVAPCD, CalEEMod (v. 2020.4.0) Analysis (Appendix A)

Operational Phase. Implementation of the proposed project would result in long-term emissions associated with area sources, such as natural gas consumption, landscaping, applications of architectural coatings, and consumer products, as well as mobile emissions. Operational emissions from these factors were calculated using CalEEMod. The full CalEEMod report can be found in Appendix A. As shown in Table 3-6 below, the project's operational emissions do not exceed the thresholds established by the SJVAPCD.

	CO (tpy)	ROG (tpy)	SOx (tpy)*	Nox (tpy)	PM10 (tpy)	PM2.5 (tpy)
Operational Emissions (Dry Years)	**13.2531**	**9.8945**	**.0242**	**.7699**	**2.3256**	**1.5697**
SJVAPCD Air Quality Thresholds of Significance	**100**	**10**	**27**	**10**	**15**	**15**
*Threshold established by SJVAPCD for SOx, however emissions are reported as SO2 by CalEEMod.						

Table 3-6. Projected Project Emissions Compared to SJVAPCD Thresholds of Significance for Criteria Pollutants related to Operations; Source: SJVAPCD, CalEEMod (v. 2020.4.0) Analysis (Appendix A)

Because the emissions from both construction and operation of the proposed project would be below the thresholds of significance established by the SJVAPCD, the project would not conflict with or obstruct implementation of an applicable air quality plan and there is *no impact.*

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: The SJVAPCD is responsible for bringing air quality in the Visalia Planning Area into compliance with federal and state air quality standards. The significance thresholds and rules developed by the SJVAPCD are designed to prevent projects from violating air quality standards or significantly contributing to existing air quality violations. As discussed above, neither construction-related emissions nor operation-related emissions will exceed thresholds established by the SJVAPCD. The project will comply with all applicable SJVAPCD rules and regulations, which will further reduce the potential for any significant impacts related to air quality as a result of project implementation. Because these thresholds and regulations are designed to achieve and/or maintain federal and state air quality standards, and the project is compliant with these thresholds and regulations, the project will not violate an air quality standard or significantly contribute to an existing air quality violation. The impact is *less than significant.*

c) Would the project expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact: The single-family residences located to the North are the closest sensitive receptors. The project does not include any project components identified by the California Air Resources Board that could potentially impact any sensitive receptors. These include heavily traveled roads, distribution centers, fueling stations, and dry-cleaning operations. The project would not expose sensitive receptors to substantial pollutant concentrations. The impact would be *less than significant.*

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

Less Than Significant Impact: The project will create temporary localized odors during project construction. The proposed project will not introduce a conflicting land use (surrounding land includes residential neighborhoods) to the area and will not have any component that would typically emit odors. The project would not create objectionable odors affecting a substantial number of people. Therefore, impacts would be *less than significant.*

IV. BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	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 & Game or U.S. fish and Wildlife Service?	☐	☐	☑	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☐	☑
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through director removal, filling, hydrological interruption, or other means?	☐	☐	☑	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☑	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☑
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☑

Discussion for this section originates from the Biological Resource Assessment that was prepared for this project by Soar Environmental Consulting to identify biological resources present or potentially present on the project site and assess the significance of project impacts on such resources per provisions of the California Environmental Quality Act (CEQA), the Federal Clean Water Act (CWA), the state and federal endangered species acts (FESA and CESA respectively), California Fish and Game Code, and California Water Code. The research included the California Natural Diversity Database (CNDDB), the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC), and the California Native Plant Society (CNPS) Online Rare Plant Inventory. The full document can be found in Appendix B.

Environmental Setting

The Project site is in the western portion of the Visalia Planning Area within the lower San Joaquin Valley, in the Central Valley of California. The Central Valley is bordered by the Sierra Nevada Mountain Ranges

to the east and the Coast Ranges to the west. Like most of California, Visalia is considered a Mediterranean climate. Warm, dry summers are followed by cool, moist winters. Summer temperatures often reach above 90 degrees Fahrenheit, and the humidity is relatively low. Winter temperatures are often below 60 degrees Fahrenheit during the day and rarely exceed 70 degrees. On average, the Central Valley receives approximately 10 inches of precipitation in the form of rainfall yearly, most of which occurs between October and March.

The topography of the area is completely flat at approximately 300 feet elevation, vegetative ground cover was recently mowed. The proposed Project site is in a residential and agricultural interface environment just outside the western boundary of the City of Visalia. The proposed Project site is bounded by agricultural fields to the south and west, and single-family homes to the north and east. A canal runs north and south on the eastern portion of the site. The canal is surrounded by agricultural fields. No other natural water features occur in the vicinity of the proposed Project site. There were no signs of pooling water or vernal pool habitat within the Project site. There are no structures on the property, no trees or bushes that would provide adequate habitat for nesting birds, and there were no small mammal Burrows that would provide adequate refuge for San Joaquin kitfox. The soil on the proposed Project site is highly compacted. Few trees exist in the surrounding area. Powerlines run north and south along the western boundary of the site.

Prior to performing the habitat assessment, Soar Environmental conducted a records search for threatened or endangered species that could potentially occur in the vicinity of the Project area. The records search included a review of the California Natural Diversity Database (CNDDB), the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC), and California Native Plant Society (CNPS) Online Rare Plant Inventory. A full list of special-status species with the potential to occur on the project site can be seen in Table 3-7.

No special-status plant or wildlife species were observed during the site reconnaissance. However, several bird species were observed flying and perched on trees in the area, although there is no suitable area for the birds to nest in the project area. While no special status species were observed, the Project Site contains potentially suitable habitat for the following species:

Species Name	Species Observed on Project Site	Potential for Occurrence on Project Site
Amphibians		
California red-legged frog (Rana draytonii)	No	**None:** Species is not known to occur in the vicinity of the site and there is no suitable habitat for the species on the site.
California tiger salamander (Ambystoma californiense)	No	**None:** Species is not known to occur in the vicinity of the site and there is no suitable habitat for the species on the site.
Birds		
Swainson's hawk (Buteo swainsoni)	No	**Low:** Species known to occur in the vicinity of the site, and there is marginal habitat onsite.

Tricolored blackbird (Agelaius tricolor)	No	**None:** Species is not known to occur in the vicinity of the site and there is no suitable habitat for the species on the site.
Western yellow-billed cuckoo (Coccyzus americanus occidentalis)	No	**None:** Species is not known to occur in the vicinity of the site and there is no suitable habitat for the species on the site.
Fish		
Delta smelt (Hypomesus transpacificus)	No	**None:** Species is not known to occur in the vicinity of the site and there is no suitable habitat for the species on the site.
Invertebrates		
Conservancy fairy shrimp (Branchinecta conservatio)	No	**None:** Species is not known to occur in the vicinity of the site and there is no suitable habitat for the species on the site.
Monarch butterfly (Danaus plexippus)	No	**None:** Species is not known to occur in the vicinity of the site and there is no suitable habitat for the species on the site.
Valley elderberry longhorn beetle (Desmocerus californicus dimorphus)	No	**None:** Species is not known to occur in the vicinity of the site and there is no suitable habitat for the species on the site.
Vernal pool fairy shrimp (Branchinecta lynchi)	No	**None:** Species is not known to occur in the vicinity of the site and there is no suitable habitat for the species on the site.
Vernal pool tadpole shrimp (Lepidurus packardi)	No	**None:** Species is not known to occur in the vicinity of the site and there is no suitable habitat for the species on the site.
Mammals		
Fisher (Pekania pennanti)	No	**None:** Species is not known to occur in the vicinity of the site and there is no suitable habitat for the species on the site.
Fresno kangaroo rat (Dipodomys nitratoides exilis)	No	**None:** Species is not known to occur in the vicinity of the site and there is no suitable habitat for the species on the site.
San Joaquin kit fox (Vulpes macrotis mutica)	No	**None:** Species is not known to occur in the vicinity of the site and there is no suitable habitat for the species on the site.
Tipton kangaroo rat (Dipodomys nitratoides nitratoides)	No	**None:** Species is not known to occur in the vicinity of the site and there is no suitable habitat for the species on the site.
Reptiles		
Blunt-nosed leopard lizard (Gambelia sila)	No	**None:** Species is not known to occur in the vicinity of the site and there is no suitable habitat for the species on the site.
Giant garter snake (Thamnophis gigas)	No	**None:** Species is not known to occur in the vicinity of the site and there is no suitable habitat for the species on the site.

Plants	Species Observed on Project Site	Suitable Habitat on Project Site
California jewelflower (Caulanthus californicus)	No	**Absent**
Greene's tuctoria (Tuctoria greenei)	No	**Absent**
Hoover's spurge (Euphorbia hooveri)	No	**Absent**
San Joaquin adobe sunburst (Pseudobahia peirsonii)	No	**Absent**
San Joaquin Valley Orcutt grass (Orcuttia inaequalis)	No	**Absent**
Succulent owl's-clover (Castilleja campestris ssp. Succulenta)	No	**Absent**

Table 3-7: Special Status Species Potentially on Project Site

Regulatory Setting

Federal Endangered Species Act (FESA): defines an *endangered species* as "any species or subspecies that is in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as "any species or subspecies that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range."

The Federal Migratory Bird Treaty Act (FMBTA: 16 USC 703-712): FMBTA 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 birds native to the United States, even those that are non-migratory. The FMBTA encompasses whole birds, parts of birds, and bird nests and eggs. Although the USFWS and its parent administration, the U.S. Department of the Interior, have traditionally interpreted the FMBTA as prohibiting incidental as well as intentional "take" of birds, a January 2018 legal opinion issued by the Department of the Interior now states that incidental take of migratory birds while engaging in otherwise lawful activities is permissible under the FMBTA. However, California Fish and Game Code makes it unlawful to take or possess any non-game bird covered by the FMBTA (Section 3513), as well as any other native non-game bird (Section 3800), even if incidental to lawful activities.

Birds of Prey (CA Fish and Game Code Section 3503.5): Birds of prey are protected in California under provisions of the 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.

Clean Water Act: Section 404 of the Clean Water Act of (1972) is to maintain, restore, and enhance the physical, chemical, and biological integrity of the nation's waters. Under Section 404 of the Clean Water Act, the US Army Corps of Engineers (USACE) regulates discharges of dredged and fill materials into "waters of the United States" (jurisdictional waters). Waters of the US including navigable waters of the

United States, interstate waters, tidally influenced waters, and all other waters where the use, degradation, or destruction of the waters could affect interstate or foreign commerce, tributaries to any of these waters, and wetlands that meet any of these criteria or that are adjacent to any of these waters or their tributaries.

California Endangered Species Act (CESA): prohibits the take of any state-listed threatened and endangered species. CESA defines *take* as "any action or attempt to hunt, pursue, catch, capture, or kill any listed species." If the proposed project results in a take of a listed species, a permit pursuant to Section 2080 of CESA is required from the CDFG.

City of Visalia Oak Tree Ordinance: The City of Visalia has an oak tree ordinance that protects valley oak trees with a diameter at breast height (dbh) of 2 inches or greater. Under this ordinance, removal, or encroachment within the drip-line of or damage to valley oak trees is prohibited. Removal requires a permit from the city manager and mitigation either by replacement in-kind or payment of an in-lieu fee to be used for oak tree planting.

Visalia Planning Area General Plan: The Visalia Planning Area General Plan contains the following policies related to the preservation of biological resources that may be considered relevant to the proposed Project's environmental review:

- OSC-P-8 Protect, restore, and enhance a continuous corridor of native riparian vegetation along Planning Area waterways, including the St. Johns River; Mill, Packwood, and Cameron Creeks; and segments of other creeks and ditches where feasible, in conformance with the Parks and Open Space diagram of this General Plan.
- OSC-P-19 Establish easements or require dedication of land along waterways to protect natural habitat areas, allow maintenance operations and promote trails and bike paths.
- OSC-P-26 Establish Best Management Practices (BMPs) for control of invasive plant species where such plants could adversely impact wildlife habitat.
- OSC-P-27 Establish a "no net loss" standard for sensitive habitat acreage, including wetlands and vernal pools potentially affected by development.
- OSC-P-30 Require assessments of biological resources prior to approval of any discretionary development projects involving riparian habitat, wetlands, or special status species habitat. Early in the development review process, consult with California Department of Fish and Game, U.S. Fish and Wildlife Service, and other agencies.
- OSC-P-31 Protect and enhance habitat for special status species, designated under state and federal law. Require protection of sensitive habitat areas and special status species in new development in the following order: 1) avoidance; 2) onsite mitigation, and 3) offsite mitigation.

Discussion

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 & Game or U.S. fish and Wildlife Service?

Less Than Significant Impact: The Biological Resource Assessment conducted for the proposed Project found that the San Joaquin kit fox, Swainson's hawk, Vernal pool fairy shrimp, and the Western yellow-billed cuckoo are special-status species with historical observations within five miles of the proposed Project site. Suitable habitat for these special status species is poor on and near the proposed Project site due to agricultural activity. CNDDB records indicate that the nearest and most recent occurrence of San Joaquin kit fox was approximately 4.1 miles northwest of the proposed Project site, the Swainsons's hawk approximately 3 miles east, the Vernal pool fairy shrimp approximately 3 miles northwest, and the Western yellow-billed cuckoo approximately 4.3 miles northeast. However, due to habitat quality and proximity of historical occurrences, all of these species were found to be unlikely to occur within the vicinity of the Project site. Based on the findings of this assessment, the proposed development of this property is unlikely to adversely affect any special-status species and is likely to have no effect for CEQA considerations. Soar Environmental Consulting does not recommend any mitigation measures, however, if any of the special status species are observed during construction, they recommend stopping work immediately and contacting CDFW. Impacts would be *less than significant.*

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 Game or US Fish and Wildlife Service?

No Impact: There are no CNDDB-designated "natural communities of special concern" recorded within the proposed Project area or surrounding lands. The Visalia General Plan identifies Grasslands, Valley Oak Riparian Woodland, Valley Oak Woodland, Vernal Pools, and Wetlands as vegetation communities to protect. The nearest community is a Valley Oak Woodland approximately 0.3 miles north. The proposed Project site consists of agricultural fields. There would be *no impact.*

c) Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through director removal, filling, hydrological interruption, or other means?

Less than Significant Impact: A canal runs through the eastern portion of the site. However, the project will not affect the canal and leave a buffer surrounding the canal. There is *less than significant impact*.

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?

Less than Significant Impact: The proposed Project area is surrounded by cultivated agricultural lands, residential development, and paved roads. Therefore, the proposed Project area does not contain features that would be likely to function as a wildlife movement corridor. The San Joaquin kit fox,

Swainson's hawk, Vernal pool fairy shrimp, and the Western yellow-billed cuckoo are the special status species with potential to exist within 5 miles of the site. Due to the level of agricultural activity, residential development of the surrounding area, lack of suitable habitat, and distance of other known occurrences from the site, occurrence of special status species within the vicinity of the proposed Project site is unlikely. Impacts would be *less than significant.*

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

No Impact: The proposed Project would comply with the goals and policies of the Visalia General Plan. There are few trees on the site, but the project will follow the Visalia Tree Ordinance. There would be *no impact.*

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?

No Impact: There are no known habitat conservation plans or Natural Community Conservation Plans (NCCP) in the proposed Project area. There would be *no impact.*

V. CULTURAL RESOURCES

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

A Phase 1 cultural resources assessment for the Barr-Wood Subdivision was conducted by Taylored Archaeology (Appendix C). The Project proposes to construct 136 single family units and a 3.7-acre park. The Project is subject to the California Environmental Quality Act (CEQA).

Environmental Setting

The Project area is in the Southern Valley Yokuts ethnographic territory of the San Joaquin Valley and located between the Kings River and the north shore of Tulare Lake. The Yokuts were generally divided into three major groups, the Northern Valley Yokuts, the Southern Valley Yokuts, and the Foothill Yokuts. The Project area is likely within the Telamni Yokuts territory. The main village for this area was Waitatshuulul, which was approximately 3 miles east of the Project site along Packwood Creek.

The San Joaquin Valley did not experience contact with Europeans until the late 1700s. The earliest exploration of the San Joaquin Valley by Europeans was likely by the Spaniards when in the fall of 1772 a group known as the Catalonian Volunteers entered the valley through Tejon Pass in search of deserters from the Southern California Missions. However, the group only made it as far north as Buena Vista Lake in modern day Kern County before turning around due to the extensive swamps. Initial settlement within the valley by Europeans in the 1830s was largely either by trappers or horse thieves. With the end of the Mexican American War and the beginning of the gold rush in 1848, the San Joaquin Valley became more populated with ranchers and prospectors. By 1850, California became a state, and Tulare County was established in 1853. Visalia, founded in 1852, is one of the oldest cities in the Southern San Joaquin Valley. During the first few decades, Visalia was a supply center for nearby gold rushes, and had an agricultural economy based on livestock and some agriculture.

Cultural Records Search

On May 20, 2022, Taylored Archaeology requested a cultural resource records search from the SSJVIC of the CHRIS at California State University in Bakersfield, California. The purpose of this request was to identify any prehistoric or historical resources on or near the Project site that had been previously recorded within the Project boundary and a 0.5-mile radius of the Project area and identify and review prior cultural resource investigations completed in or near the Project boundary. SSJVIC staff researched historical USGS topographic maps, reports of previous cultural resource investigations, archaeological site and survey base maps, cultural resource records (DPR forms) as well as listings of the Historic Properties Directory of the Office of Historic Preservation, General Land Office Maps, Archaeological Determinations

of Eligibility, and the California Inventory of Historic Resources. According to the SSJVIC records search, there has been two previous cultural resource investigations within the Project area. One is a literature review of the Project region and the second is a book on conflicts between Native Americans and California gold miners during the 1850s Gold Rush in Mariposa. Neither of these reports included archaeological surveys. There have been five cultural resource studies conducted within a 0.5-mile radius of the project. There have been no cultural resources were previously recorded within the Project area. or within the 0.5-mile radius. Additionally, no recorded cultural resources are recorded within the Project There is two cultural resources within a 0.5-mile radius of the project site. Both are historic-era, rural, single-family residences. In addition to the SSJVIC research, Taylored Archaeology further reviewed the cultural resources 0.5-miles from the Project boundary. Using Google Earth aerial maps, one of the historic homes was determined to have been demolished in 2021.

AB 52 Native American Consultation

Following AB 52, Native American Tribes that could potentially be impacted by the Project were contacted. The Tribes that were formally noticed of this Project were the Big Sandy Rancheria of Western Mono Indians, Santa Rosa Rancheria Tachi Yokut Tribe, Dunlap Band of Mono Indians, Tubatulabals of Kern Valley, Tule River Indian Tribe, Kern Valley Indian Community, North Fork Mono Tribe, and the Wuksache Indian Tribe/Eshom Valley Band.

The Santa Rosa Rancheria Tachi-Yokut Tribe responded regarding their concerns. A representative of the Tribe stated “Due to Tribal history and knowledge of the project area, the Tribe has concerns and is requesting that an archaeological firm be hired to conduct a pre-construction survey, a records search with the NAHC and CHRIS center, and monitoring of any ground disturbing activities. We request to be put in contact with the archaeological firm hired so we can maintain updates about the project.”

Regulatory Setting

In this report “cultural resources” are defined as prehistoric or historical archaeological sites as well as historical objects, buildings, or structures. In accordance with 30 Code of Federal Regulations (CFR) §60.4, “historical” in this report applies to cultural resources which are at least 50 years old. The significance or importance of a cultural resource is dependent upon whether the resource qualifies for inclusion at the local or state level in the California Register of Historical Resources (CRHR), or at the federal level in the National Register of Historic Places (NRHP). Cultural resources that are determined to be eligible for inclusion in the CRHR are called “historical resources” (California Code of Regulations [CCR] 15064.5[a]). Under this statue the determination of eligibility is partially based on the consideration of the criteria of significance as defined in 14 CCR 15064.5(a)(3). Cultural resources eligible for inclusion in the NRHP are deemed “historic properties.”

National Historic Preservation Act

The National Historic Preservation Act was adopted in 1966 to preserve historic and archeological sites in the United States. The Act created the National Register of Historic Places, the list of National Historic Landmarks, and the State Historic Preservation offices.

California Historic Register

The California Historic Register was developed as a program to identify, evaluate, register, and protect Historical Resources in California. Historical resources may include, but are not limited to, “any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically or archaeologically significant” (PRC §5020.1[j]). In addition, a resource included in a local

register of historical resources or identified as significant in a local survey conducted in accordance with the state guidelines are also considered historic resources under California Public Resources Code (PRC) Section 5020.1.

According to CEQA guidelines §15064.5 (a)(3), criteria for listing on the California Register of Historical Resources includes the following:

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

Protection of cultural resources within California is additionally regulated by PRC §5097.5, which prohibits destruction, defacing, or removal of any historic or prehistoric cultural features on land under the jurisdiction of State or local authorities.

City of Visalia General Plan

The 2030 General Plan includes the policies related to cultural resources that correlate to the proposed project:

- *LU-P-48:* Preserve established and distinctive neighborhoods throughout the City by maintaining appropriate zoning and development standards to achieve land use compatibility in terms of height, massing, and other characteristics; providing design guidelines for high-quality new development; supporting housing rehabilitation programs; and other means.
- *OSC-P-42:* Establish requirements to avoid potential impacts to sites suspected of being archeologically, paleontologically, or historically significant or of concern, by:
    - Requiring a records review for development proposed in areas that are considered archaeologically or paleontologically sensitive;
    - Determining the potential effects of development and construction on archaeological or paleontological resources (as required by CEQA);
    - Requiring pre-construction surveys and monitoring during any ground disturbance for all development in areas of historical and archaeological sensitivity (defined as areas identified according to the National Historic Preservation Act as part of the Section 106 process); and
    - Implementing appropriate measures to avoid the identified impacts, as conditions of project approval.

Discussion

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

Less Than Significant Impact with Mitigation: A records search was conducted on behalf of the Applicant from the SSJVIC of the CHRIS at California State University in Bakersfield, California, to determine if historical or archaeological sites had previously been recorded within the study area, if the project area had been systematically surveyed by archaeologists prior to the initial study, and/or

whether the region of the field project was known to contain archaeological sites and to thereby be archaeologically sensitive.

According to the SSJVIC records search, there has been two previous cultural resource investigations within the Project area. One is a literature review of the Project region and the second is a book on conflicts between Native Americans and California gold miners during the 1850s Gold Rush in Mariposa. Neither of these reports included archaeological surveys. There have been five cultural resource studies conducted within a 0.5-mile radius of the project. There have been no cultural resources were previously recorded within the Project area. or within the 0.5-mile radius. Additionally, no recorded cultural resources are recorded within the Project There is two cultural resources within a 0.5-mile radius of the project site. Both are historic-era, rural, single-family residences. In addition to the SSJVIC research, Taylored Archaeology further reviewed the cultural resources 0.5-miles from the Project boundary. Using Google Earth aerial maps, one of the historic homes was determined to have been demolished in 2021.

Although no cultural resources were identified on the site, the presence of remains or unanticipated cultural resources under the ground surface is possible. Implementation of Mitigation Measures CUL-1 and CUL-2 will ensure that impacts to this checklist item will be *less than significant with mitigation* incorporation.

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

Less Than Significant Impact with Mitigation: There are no known archaeological resources located within the project area. Implementation of Mitigation Measures CUL-1 and CUL-2 will ensure that potential impact to unknown archeological resources will be *less than significant with mitigation* incorporation.

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

Less Than Significant Impact with Mitigation: There are no known human remains buried in the project vicinity. If human remains are unearthed during project construction, there is a potential for a significant impact. As such, implementation of Mitigation Measure CUL-2 will ensure that impacts remain *less than significant with mitigation incorporation.*

Mitigation Measures for Impacts to Cultural Resources

Mitigation Measure CUL-1: If previously unknown resources are encountered before or during grading activities, construction shall stop in the immediate vicinity of the find and a qualified historical resources specialist shall be consulted to determine whether the resource requires further study. The qualified historical resources specialist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines and the City's Historic Preservation Ordinance.

If the resources are determined to be unique historical resources as defined under Section 15064.5 of the CEQA Guidelines, measures shall be identified by the monitor and recommended to the Lead

Agency. Appropriate measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any historical artifacts recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study.

Mitigation Measure CUL-2: In the event that human remains are unearthed during excavation and grading activities of any future development project, all activity shall cease immediately. Pursuant to Health and Safety Code (HSC) Section 7050.5, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98(a). If the remains are determined to be of Native American descent, the coroner shall within 24 hours notify the Native American Heritage Commission (NAHC). The NAHC shall then contact the most likely descendent of the deceased Native American, who shall then serve as the consultant on how to proceed with the remains. Pursuant to PRC Section 5097.98(b), upon the discovery of Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment.

Mitigation Measure CUL-3: Prior to the start of construction, an archaeological firm shall be hired to conduct a pre-construction survey and submit a comprehensive report to the lead agency for review and approval prior to the start of construction. This report should document the findings of the pre-construction survey and include an assessment of the potential impacts of the proposed project on any identified archaeological resources. The plan should outline specific measures that will be implemented, such as construction phasing, site buffering, and artifact preservation, to protect the cultural resources, if any are discovered. To ensure compliance, the project approval should require that the archaeological survey report and the associated plan be prepared by a qualified archaeologist and that the survey and monitoring activities be conducted in accordance with relevant state and federal regulations and best practices. By requiring a comprehensive archaeological survey report and a detailed mitigation plan, the lead agency can ensure that any impacts to archaeological resources are avoided or minimized to the fullest extent possible.

Mitigation Measure CUL-4: During any ground disturbing activities, an archaeological firm shall be hired to monitor the Project Site. The monitoring should be conducted by a qualified archaeologist with experience in the region and in compliance with relevant state and federal regulations and best practices. The monitoring should include regular site inspections to identify any archaeological resources that may have been uncovered during ground-disturbing activities. If any resources are identified, the monitoring should also include documentation, mapping, and analysis of the resources, as well as the development of a mitigation plan to address any potential impacts to the resources.

VI. ENERGY

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	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?	☐	☐	☑	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☑

Environmental Setting

Southern California Edison (SCE) provides electricity services to the City of Visalia. SCE serves approximately 15 million people in a 50,000 square-mile area of Central, Coastal, and Southern California. SCE supplies electricity to its customers through a variety of renewable and nonrenewable sources. Table 3-8 below shows the proportion of each energy resource sold to California consumers by SCE in 2019 as compared to the statewide average.

Fuel Type		SCE Power Mix	California Power Mix
Coal		0%	2.7%
Large Hydroelectric		7.9%	12.2%
Natural Gas		16.1%	37%
Nuclear		8.2%	9.3%
Other (Oil/Petroleum Coke/Waste Heat)		0.1%	0.2%
Unspecified Sources of Power[1]		32.6%	5.4%
Eligible Renewables	Biomass	0.6%	2.5%
	Geothermal	5.9%	4.9%
	Small Hydro	1%	1.4%
	Solar	16%	13.2%
	Wind	11.5%	11.1%
	Total Eligible Renewable	**35.1%**	**33.1%**
1. "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources.			

Table 3-8. 2019 SCE and 2020 State power resources; Source: SCE; California Energy Commission

SCE also offers Green Rate Options, which allow consumers to indirectly purchase up to 100% of their energy from renewable sources. To accomplish this, SCE purchases the renewable energy necessary to meet the needs of Green Rate participants from solar renewable developers.

Southern California Gas (SoCalGas) Company provides natural gas services to the project area. Natural gas is an energy source developed from fossil fuels composed primarily of methane (CH4). Approximately 45% of the natural gas burned in California is used for electricity generation, while 21% is consumed by the residential sector, 25% is consumed by the industrial sector, and 9% is consumed by the commercial sector.

Regulatory Setting

California Code of Regulations, Title 20

Title 20 of the California Code of Regulations establishes standards and requirements for appliance energy efficiency. The standards apply to a broad range of appliances sold in California.

California Code of Regulations, Title 24

Title 24 of the California Code of Regulations is a broad set of standards designed to address the energy efficiency of new and altered homes and commercial buildings. These standards regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. Title 24 requirements are enforced locally by the City of Selma Building Department.

California Green Building Standards Code (CALGreen)

CalGreen is a mandatory green building code that sets minimum environmental standards for new buildings. It includes standards for volatile organic compound (VOC) emitting materials, water conservation, and construction waste recycling.

SB 100

SB 100, passed in 2018, set a deadline in 2045 for 100% of energy to be renewable. Additionally, by 2030, 60% of all energy must be renewable. California is targeting this goal through solar and other renewable sources.

AB 178

For California to meet its renewable goals, AB 178 was passed in 2018. AB 178 states that starting in 2020 all new low rise residential buildings must be built with solar power.

City of Visalia General Plan

The 2030 General Plan includes the policies related to energy use that correlate to the proposed project:

- *T-P-41:* Integrate the bicycle transportation system into new development and infill redevelopment. Development shall provide short term bicycle parking and long-term bicycle storage facilities, such as bicycle racks, stocks, and rental bicycle lockers. Development also shall provide safe and convenient bicycle and pedestrian access to high activity land uses such as schools, parks, shopping, employment, and entertainment centers.
- *T-P-53:* Develop flexible parking requirements in the zoning ordinance for development proposals based on “best practices” and the proven potential to reduce parking demand.

Discussion

a) 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: The proposed project includes the construction and operation of single-family housing. During project construction there would be an increase in energy consumption related to worker trips and operation of construction equipment. This increase in energy use would be temporary and limited to the greatest extent possible through compliance with local, state, and federal regulations. Vehicle fuel consumption during project construction was estimated based on the assumed construction schedule, vehicle trip lengths, and the number of workers per construction phase as provided by CalEEMod, and Year 2023 gasoline/diesel MPG factors provided by the EMFAC2017. To simplify the estimation process, it was assumed that all worker vehicles used gasoline as a fuel source and all vendor vehicles used diesel as a fuel source. Table 3-9, below, provides gasoline and diesel fuel used by construction and on-road sources during each phase of project construction.

Construction Phase	# of Days	Daily Worker Trips[1]	Daily Vendor Trips[1]	Daily Hauling Trips[1]	Total Gasoline Fuel Use (gallons)[2]	Total Diesel Fuel Use (gallons)[2]
Site Preparation	40	18	0	0	7,799	0
Grading	110	20	0	0	33,871	0
Building Construction	1110	49	15	0	164,425	14,418
Paving	75	15	0	0	8,836	0
Architectural Coating	75	10	0	0	1,244	0
Total	**1410**	**N/A**	**N/A**	**N/A**	**315,935**	**14,418**

1. Data provided by CalEEMod (Appendix A)
2. See Appendix D

Table 3-9. On-Road Mobile Fuel Use Generated by Construction Activities. Source: CalEEMod(v. 2020.4.0); EMFAC2014

While construction of the proposed project will result in additional energy consumption, this energy use is not unnecessary or inefficient. This energy use is justified by the energy-efficient nature of the proposed project and would be limited to the greatest extent possible through compliance with local, state, and federal regulations. Once construction is complete, the project is expected to achieve net zero energy consumption. The proposed project is subject to the California New Residential Zero Net Energy Action Plan 2015-2020. This plan establishes a goal for all residential buildings built after January 1, 2020, to be zero net energy. The California Energy Commission is responsible for the development and enforcement of specific strategies to achieve this goal. These strategies are implemented through Title 24, Part 6 of the California Building Code, which requires developers to include certain measures (including solar panels on all new residential buildings) to achieve required building efficiency standards.

Total Annual Operational VMT[1]	Annual Fuel Use (Gasoline)	Annual Fuel Use (Diesel)	Average MPG
2,771,614 Miles	**106,191 Gallons**	**11,918 Gallons**	**23.5**

1. Data Provided by CalEEMod
2. See Appendix D

Table 3-10. On-Road Mobile Fuel Use Generated by Operational Activities. Source CalEEMod (v. 2020.4.0); EMFAC2014

During project operations, the proposed project is not anticipated to result in wasteful fuel consumption. This is due to the distance of the project site to the commercial, recreational, and denser residential uses, resulting in less of a reliance on personal vehicles.

Because construction-related energy use would be temporary and limited to the greatest extent feasible through consistency with Federal, State, and local policies related to energy conservation, and operation of the project will comply with all energy efficiency standards required under Title 24, Section 6, and these standards were specifically developed to achieve net zero energy for residential projects, it can be presumed that the project will achieve net zero energy. The project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources. The impact is *less than significant.*

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

No Impact: The proposed project will not conflict with or obstruct any state or local plans for renewable energy or energy efficiency. The proposed project will comply with all state and local policies related to energy efficiency and there is *no impact*.

VII. GEOLOGY AND SOILS

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

Environmental Setting

Geologic Stability and Seismic Activity

- **Seismicity**

  The Visalia Planning Area has no known major fault systems within its boundaries. There are small faults in the Southern San Joaquin Valley, approximately 30 miles away, though none of them are known to be active. The greatest potential for seismic activity in Visalia Planning Area is posed by the San Andreas Fault, approximately 75 miles away from the site, or the Owens Valley Fault Group, which is located approximately 125 miles away from the project site.

- **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 are generally too coarse or too high in clay content, and not likely to be subject to sufficient acceleration to cause liquefaction.

- **Landslides**

  Landslides refer to a wide variety of processes that result in the downward and outward movement of soil, rock, and vegetation under gravitational influence. Landslides are caused by both natural and human-induced changes in slope stability and often accompany other natural hazard events, such as floods, wildfire, or earthquake. Due little elevation changes throughout the planning area, including the proposed project site, it is considered a low landslide hazard area.

- **Subsidence**

  Land Subsidence refers to the vertical sinking of land because of either manmade or natural underground voids. Subsidence has occurred throughout the Central Valley because of groundwater, oil, and gas withdrawal. The Kaweah Subbasin that underlies the Planning Area is in an overdraft condition on an average long-term basis. According to the most recent Urban Water Management Plan (UWMP), groundwater elevations have declined up to 50 feet between 1990 and 2010. While groundwater recharge efforts are in progress, groundwater levels will continue to decline unless recharge is increased.

Soils Involved in Project

The proposed project involves construction on two soil types. The properties of the soil are described briefly below:

- **Tagus loam:** The Tagus series consists of very deep, well drained soils formed in alluvium derived from granitic rock sources and has slopes of 0 to 2 percent. It is well drained; has negligible to low runoff; and has moderate permeability.

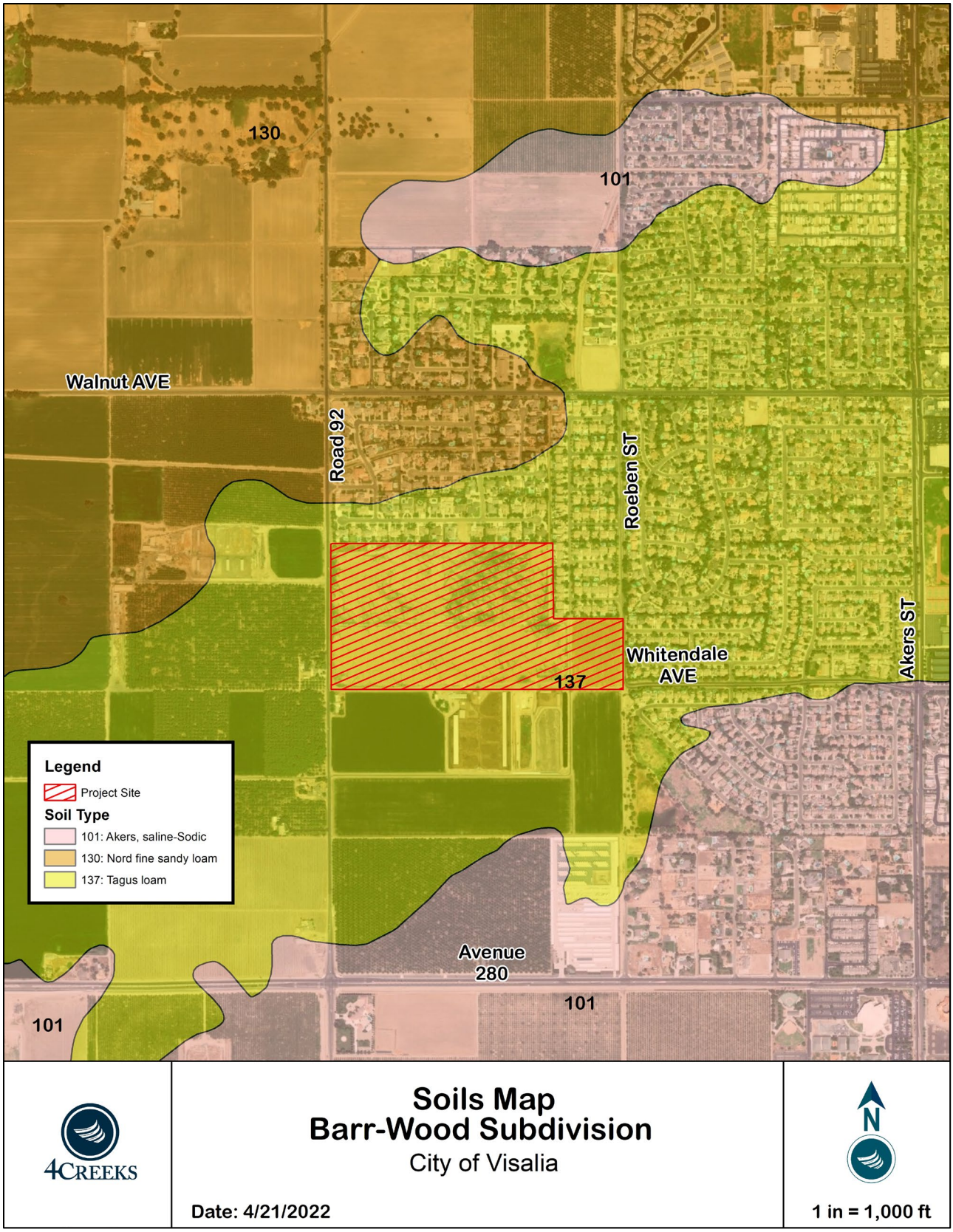


Figure 3-6: Soils Map

Regulatory Setting

California Building Code

The California Building Code (CBC) contains general building design and construction requirements relating to fire and life safety, structural safety, and access compliance. CBC provisions provide minimum standards to safeguard life or limb, health, property, and public welfare by regulating and controlling the design, construction, quality of materials, use and occupancy, location and maintenance of all buildings and structures and certain equipment.

City of Visalia Municipal Code (California Building Code)

The City of Visalia Municipal Code has incorporated and adopted the CBC, 2013 Edition, as promulgated by the California Building Standards Commission, which incorporates the adoption of the 2012 edition of the of the International Building Code, as amended with necessary California amendments and the 2012 International Building Code of the International Code Council.

City of Visalia General Plan

The 2030 General Plan includes the policies related to geology and soils that correlate to the proposed project:

- *OSC-P-28:* Require new development to implement measures, as appropriate, to minimize soil erosion related to grading, site preparation, landscaping, and construction.

Discussion

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.

No Impact: Although the project is located in an area of relatively low seismic activity, the project site has a low chance of being affected by ground shaking from distant faults. The potential for strong seismic ground shaking on the project site is not a significant environmental concern due to the infrequent seismic activity of the area and distance to the faults. The project does not propose any components which could cause substantial adverse effects in the event of an earthquake. Additionally, the project has no potential to indirectly or directly cause the rupture of an earthquake fault. Therefore, there is *no impact* related to the risk of loss, injury or death involving a rupture of a known earthquake fault.

ii. Strong seismic ground shaking?

No Impact: The project site is in an area of low seismic activity. The proposed project does not include any activities or components which could feasibly cause strong seismic ground shaking, either directly or indirectly. There is *no impact.*

iii. Seismic-related ground failure, including liquefaction?

No Impact: The risk of liquification within the planning area outside of wetland areas is low because the soil types are generally unsuitable for liquefaction. The area's low potential for seismic activity would further reduce the likelihood of liquefaction occurrence. Because the project site is within an area of low seismic activity, and the soils associated with the project area not suitable for liquefaction, there are *no impacts.*

iv. Landslides?

No Impact: The Planning Area of Visalia is considered at insignificant risk of small landslides. Additionally, the project site is generally flat and there are no hill slopes in the area. No geologic landforms exist on or near the site that would result in a landslide event. As a result, there is very low potential for landslides. There would 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 area 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 proposed 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 waste water?

No Impact: The proposed project would not include the use of septic tanks or any other alternative wastewater disposal systems. The proposed buildings will tie into the Visalia's existing sewer services. Therefore, there would be *no impact.*

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

Less Than Significant Impact with Mitigation: There are no unique geologic features and no known paleontological resources located within the project area. However, there is always the possibility that paleontological resources may exist below the ground surface. Implementation of Mitigation Measures CUL-1 and CUL-2 will ensure that any impacts resulting from project implementation remain less than significant with mitigation incorporation.

Mitigation Measures for Impacts to Geological Resources

Mitigation Measure CUL-1: If previously unknown resources are encountered before or during grading activities, construction shall stop in the immediate vicinity of the find and a qualified historical resources specialist shall be consulted to determine whether the resource requires further study. The qualified historical resources specialist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines and the City's Historic Preservation Ordinance.

If the resources are determined to be unique historical resources as defined under Section 15064.5 of the CEQA Guidelines, measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any historical artifacts recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study.

Mitigation Measure CUL-2: In the event that human remains are unearthed during excavation and grading activities of any future development project, all activity shall cease immediately. Pursuant to Health and Safety Code (HSC) Section 7050.5, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98(a). If the remains are determined to be of Native American descent, the coroner shall within 24 hours notify the Native American Heritage Commission (NAHC). The NAHC shall then contact the most likely descendent of the deceased Native American, who shall then serve as the consultant on how to proceed with the remains. Pursuant to PRC Section 5097.98(b), upon the discovery of Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment.

VIII. GREENHOUSE GAS EMISSIONS

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

Environmental Setting

Natural processes and human activities emit greenhouse gases. The presence of GHGs in the atmosphere affects the earth's temperature. Without the natural heat-trapping effect of GHGs, the earth's surface would be about 34ºC cooler. However, it is believed that emissions from human activities, such as electricity production and vehicle use, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations.

The effect of greenhouse gasses on earth's temperature is equivalent to the way a greenhouse retains heat. Common GHGs include water vapor, carbon dioxide, methane, nitrous oxide, ozone, chlorofluorocarbons, hydro chlorofluorocarbons, and hydro fluorocarbons, per fluorocarbons, sulfur, and hexafluoride. Some gases are more effective than others. The Global Warming Potential (GWP) has been calculated for each greenhouse gas to reflect how long it remains in the atmosphere, on average, and how strongly it absorbs energy. Gases with a higher GWP absorb more energy, per pound, than gases with a lower GWP, and thus contribute more to global warming. For example, one pound of methane is equivalent to twenty-one pounds of carbon dioxide.

GHGs as defined by AB 32 include the following gases: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. GHGs as defined by AB 32 are summarized in Table 3-11. Each gas's effect on climate change depends on three main factors. The first being the quantity of these gases are in the atmosphere, followed by how long they stay in the atmosphere and finally how strongly they impact global temperatures.

Greenhouse Gas	Description and Physical Properties	Lifetime	GWP	Sources
Methane (CH4)	Is a flammable gas and is the main component of natural gas	12 years	21	Emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and by the decay of organic waste in municipal solid waste landfills.

Greenhouse Gas	Description and Physical Properties	Lifetime	GWP	Sources
Carbon dioxide (CO2)	An odorless, colorless, natural greenhouse gas.	30-95 years	1	Enters the atmosphere through burning fossil fuels (coal, natural gas, and oil), solid waste, trees and wood products, and also as a result of certain chemical reactions (e.g., manufacture of cement). Carbon dioxide is removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of the biological carbon cycle.
Chloro-fluorocarbons	Gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. They are non-toxic nonflammable, insoluble and chemically unreactive in the troposphere (the level of air at the earth's surface).	55-140 years	3,800 to 8,100	Were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone.
Hydro-fluorocarbons	A man-made greenhouse gas. It was developed to replace ozone-depleting gases found in a variety of appliances. Composed of a group of greenhouse gases containing carbon, chlorine an at least one hydrogen atom.	14 years	140 to 11,700	Powerful greenhouse gases that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for stratospheric ozone-depleting substances. These gases are typically emitted in smaller quantities, but because they are potent greenhouse gases.
Nitrous oxide (N2O)	Commonly known as laughing gas, is a chemical compound with the formula N2O. It is an oxide of nitrogen. At room temperature, it is a colorless, non-flammable gas, with a slightly sweet odor and taste. It is used in surgery and dentistry for its anesthetic and analgesic effects.	120 years	310	Emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste.
Pre-fluorocarbons	Has a stable molecular structure and only breaks down by ultraviolet rays about 60 kilometers above Earth's surface.	50,000 years	6,500 to 9,200	Two main sources of pre-fluorocarbons are primary aluminum production and semiconductor manufacturing.
Sulfur hexafluoride	An inorganic, odorless, colorless, and nontoxic nonflammable gas.	3,200 years	23,900	This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing and as a tracer gas.

Table 3-11. Greenhouse Gasses; Source: EPA, Intergovernmental Panel on Climate Change

Regarding the quantity of these gases are in the atmosphere, we first must establish the amount of the particular gas in the air, known as Concentration, or abundance, which are measured in parts per million, parts per billion and even parts per trillion**.** To put these measurements in more relatable terms, one part per million is equivalent to one drop of water diluted into about 13 gallons of water, roughly a full tank of gas in a compact car. Therefore, it can be assumed larger emission of greenhouse gases lead to a higher concentration in the atmosphere.

Each of the designated gases described above can reside in the atmosphere for different amounts of time, ranging from a few years to thousands of years. All these gases remain in the atmosphere long enough to become well mixed, meaning that the amount that is measured in the atmosphere is roughly the same all over the world regardless of the source of the emission.

Regulatory Setting

AB 32

AB 32 set the 2020 greenhouse gas emissions reduction goal into law. It directed the California Air Resources Board to begin developing discrete early actions to reduce greenhouse gases while also preparing a scoping plan to identify how best to reach the 2020 limit. The reduction measures to meet the 2020 target are to be adopted by the start of 2011.

SB 1078, SB 107, and Executive Order S-14-08

SB 1078, SB 107, and Executive Order S-14-08 require California to generate 20% of its electricity from renewable energy by 2017. SB 107 then changes the 2017 deadline to 2010. Executive Order S-14-08 required that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020.

San Joaquin Valley Air Pollution Control District

SJVAPCD adopted a Climate Change Action Plan (CCAP) in August 2008. While the plan does not have regulatory powers, it directs SJVAPCD to develop guidance to assist District staff, valley businesses, land-use agencies, and other permitting agencies in addressing GHG emissions as part of the CEQA process.

City of Visalia Climate Action Plan (CAP)

Visalia's draft 2013 CAP includes a baseline GHG emissions inventory of municipal and community emissions, identification, and analysis of existing and proposed GHG reduction measures, and reduction targets to help Visalia work toward the State's goal of an 80 percent reduction below baseline emissions by 2050. The plan sets 2020 and 2030 reduction targets, and includes reduction actions for energy, transportation, and waste and resource conservation.

City of Visalia Climate Change Initiatives

In January 2007, Visalia's mayor signed the "Cool Cities" pledge, part of the U.S. Mayors Climate Protection Agreement. By entering into this agreement, the City has adopted the goal of reducing citywide GHG emissions to 7% below 1990 levels by 2012. As detailed in the CAP, this goal was subsequently expanded in response to ARB's recommended reduction target of 15% below the 2005 baseline, and the City added a 2030 mitigation target to correlate with the 2030 General Plan Update and the goal of achieving an 80% reduction by 2050.

Discussion

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: The SJVAPCD does not provide numeric thresholds to assess the significance of greenhouse gas emissions. Instead, the SJVAPCD "Guidance for Valley Land Use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA" states that projects which achieve a 29% GHG emission reduction compared to Business as Usual (BAU) would be determined to have a less than significant individual and cumulative impact for GHG. "Business as usual" (BAU) conditions are defined based on the year 2005 building energy efficiency, average vehicle emissions, and electricity energy conditions. The BAU conditions assume no improvements in energy efficiency, fuel efficiency, or renewable energy generation beyond that existing today. The 2005 BAU conditions were estimated using CalEEMod.

Implementation of the proposed project would result in long-term greenhouse gas emissions associated with area sources, such as natural gas consumption, landscaping, applications of architectural coatings, and consumer products, as well as mobile emissions. The GHG emissions were estimated using CalEEMod (Appendix A).

	C02 (MT/Year)	CH4 (MT/Year)	N20 (MT/Year)	CO2e (MT/Year)
Operational Emissions	1,393	2.04	0.06	1,461
2005 BAU	2,131	2.17	0.16	2,378
% Reduction From BAU				**39%**

Table 3-12: Projected Project Operational GHG Emissions Compared to 2005 BAU; Source: (CalEEMod, V.2020.4.0)

The project's operational GHG are estimated to be 917 CO2e MT lower than the 2005 BAU. This is a reduction of 39%, more than the 29% threshold. Therefore, the impact is considered *less than significant.*

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

No Impact: The SJVAPCD states that individual and cumulative GHG emissions are considered less than significant if a project complies with an approved GHG emission reduction plan or GHG mitigation program with within the geographic area in which the project is located. The City of Visalia Climate Action Plan meets the requirements for a Qualified Greenhouse Gas Reduction Strategy. Therefore, the proposed project's GHG emissions would not be considered a significant impact if the proposed Project would be consistent with the City's GHG Reduction Strategy. Table 3-13, below, evaluates the proposed project's consistency with the applicable measures, both existing and proposed, in the GHG reduction plan.

Climate Action Plan Measures	Project Consistency with Strategy
2. Increase in Solar Photovoltaic (PV) Installations:	**Consistent.** The proposed project would involve solar panels on the new homes.
7. Urban Forestry: Requirement for all new development to have street trees, require shade over at least 25% of area in city pocket parks.	**Consistent.** The proposed project plans to provide trees on all local roads and included in the improvements on existing roads.
10. Bicycle Path Plan:	**Consistent.** The proposed project includes improvements with bike paths or parkways on Roeben St., Whitendale Ave., and Shirk Rd.
11. Infill and High-Density Development	**Consistent.** The proposed project has denser residential housing consistent with the 2030 General Plan.

Table 3-13. Project Consistency with Climate Action Plan Strategies.

As discussed above, the proposed project is consistent with the City of Visalia Climate Action Plan. The proposed project will comply with all Federal, State, and Local rules pertaining to the regulation of greenhouse gas emissions and the project will implement Best Performance Standards developed by the SJVAPCD. The project will not conflict with any plan, policy, or regulation developed to reduce GHG emissions. There is *no impact.*

IX. HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	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?	☐	☐	☑	☐
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?	☐	☐	☑	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☑
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard or excessive noise to the public or the environment?	☐	☐	☐	☑
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☑	☐
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☑
g) Expose people or structures, either directly or indirectly, to significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☑

Environmental Setting

The proposed project site is located approximately .63 miles West of the nearest school (El Diamante High School) and approximately 0.97 miles southeast of the nearest public airport (Visalia Municipal Airport). The terminal of Airport is approximately 1.77 miles away; however, the runway is 0.97 miles from the Project Site.

The Department of Toxic Substances Control's (DTSC's) Envirostor was used to identify any sites known to be associated with releases of hazardous materials or wastes within the project area. This research confirmed that the project would not be located on or nearby a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

Regulatory Setting

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S. Code [U.S.C.] §9601 et seq.).

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, or the Superfund Act) authorizes the President to respond to releases or threatened releases of hazardous substances into the environment.

Occupational Safety and Health Administration

The Occupational Safety and Health Administration (OSHA) sets and enforces Occupational Safety and Health Standards to assure safe working conditions. OSHA provides training, outreach, education, and compliance assistance to promote safe workplaces. The proposed Project would be subject to OSHA requirements during construction, operation, and maintenance.

Toxic Substances Control Act of 1976 (15 U.S.C. §2601 et seq.).

The Toxic Substance Control Act was enacted by Congress in 1976 and authorizes the EPA to regulate any chemical substances determined to cause an unreasonable risk to public health or the environment.

Hazardous Waste Control Law, Title 26.

The Hazardous Waste Control Law creates hazardous waste management program requirements. The law is implemented by regulations contained in Title 26 of the California Code of Regulations (CCR), which contains requirements for the following aspects of hazardous waste management:

- Identification and classification;
- Generation and transportation;
- Design and permitting of recycling, treatment, storage, and disposal facilities;
- Treatment standards;
- Operation of facilities and staff training; and
- Closure of facilities and liability requirements.

California Code of Regulations, Title 22, Chapter 11.

Title 22 of the California Code of Regulations contains regulations for the identification and classification of hazardous wastes. The CCR defines a waste as hazardous if it has any of the following characteristics: ignitability, corrosivity, reactivity, and/or toxicity.

California Emergency Services Act

The California Emergency Services Act created a multi-agency emergency response plan for the state of California. The Act coordinates various agencies, including CalEPA, Caltrans, the California Highway Patrol, regional water quality control boards, air quality management districts, and county disaster response offices.

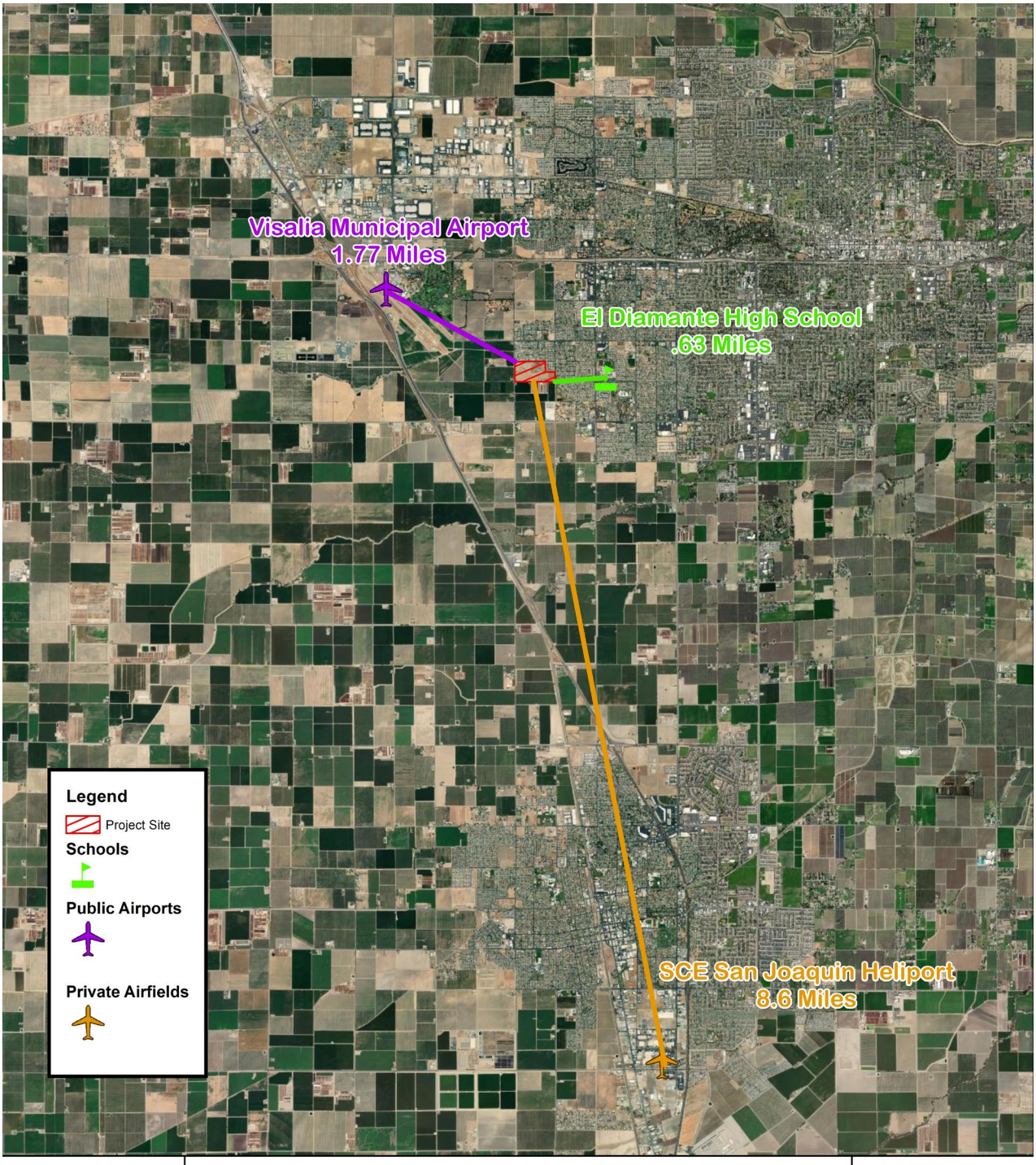


Figure 3-7: Distance to Schools and Airports

Discussion

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. 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?

No Impact: The project is located approximately .63 miles from an existing middle school. The project does not involve the use or storage of hazardous substances other than insignificant 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 *no 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?

Less Than Significant Impact: The proposed project is located approximately 1.77 miles Southeast of the nearest public airport (Visalia Municipal Airport). However, according to the Airport Master plan, the project site would not be impacted by the airport. Noise contours developed for 2019 show that the airport would produce less than 65 dB. All land uses located outside of the 65 dB contours are considered less than significant. Implementation of the proposed project would not result in a safety hazard for people residing or working in the project area. There is *a less than significant impact.*

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

No Impact: The City's design and environmental review procedures shall 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, the proposed project would have *no impact* on emergency evacuation.

g) Would the project expose people or structures, either directly or indirectly, to 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. Additionally, the City of Visalia General Plan finds that fire hazards within the Planning Area, including the proposed project site, have low frequency, limited extent, limited magnitude, and low significance. The proposed project would not expose people or structures to significant risk of loss, injury or death involving wildland fires and there is *no impact.*

X. HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise sustainably degrade surface or ground water quality?	☐	☑	☐	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☑	☐
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?	☐	☑	☐	☐
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?	☐	☑	☐	☐
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☑	☐	☐
(iv) impede or redirect flood flows?	☐	☑	☐	☐
d) In flood hazard, tsunami, or seiche zones risk the release of pollutants due to project inundation?	☐	☐	☐	☑
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater movement plan?	☐	☐	☐	☑

Environmental Setting

Surface Water

Visalia is in the center of the Kaweah River Delta System, resulting in many rivers and creeks flowing through the city. The St. Johns River is the City's primary surface water feature. Other significant surface water features include Modoc Ditch, Mill Creek Ditch, Mill Creek, Tulare Irrigation District (TID) Canal, Packwood Creek, Cameron Creek, Deep Creek, Evans Creek, Persian Ditch, and several other local ditches. These receive a significant amount of water during the rainy season and help drain stormwater.

Groundwater

Groundwater in Tulare County is present in valley deposits of alluvium that are several thousand feet thick and occurs in both confined and unconfined conditions. The creeks in Visalia are tied to the groundwater system. The creeks lose water in the winter while they feed the groundwater, and gain water in the summer when the groundwater feeds the creeks. The depth to groundwater varies significantly throughout the valley floor area of Tulare County. In the area around Visalia, depth to

groundwater varies from about 120 feet below ground surface along the western portion of the city to approximately 100 feet below ground surface to the east, as measured in spring 2010. Groundwater levels measured in the city have declined since the 1940s, from approximately 30 feet below ground surface in 1940 to 120 feet below ground surface in 2010. Water quality of the groundwater that underlies the Planning Area is excellent for domestic and agricultural uses. This is most likely due to the abundant snowmelt that originates in the Sierra Nevada. Groundwater is the primary source of drinking water for the planning area residents.

Stormwater Drainage

The City, in conjunction with Kaweah Delta Water Conservation District and Tulare Irrigation District, operates and maintains a vast municipal storm drainage system that consists of drainage channels, 23 detention and retention basins, 33 pump stations and 250 miles of pipe. Stormwater from the project site will be collected and conveyed to an on-site stormwater basin.

Regulatory Setting

Clean Water Act

The Clean Water Act (CWA) is enforced by the U.S. EPA and was developed in 1972 to regulate discharges of pollutants into the waters of the United States. The Act made it unlawful to discharge any pollutant from a point source into navigable waters unless a National Pollution Discharge Elimination System (NPDES) Permit is obtained.

National Flood Insurance Act

The Federal Emergency Management Agency (FEMA) is tasked with responding to, planning for, recovering from, and mitigating against disasters. The Federal Insurance and Mitigation Administration within FEMA is responsible for administering the National Flood Insurance Program (NFIP) and administering programs that aid with mitigating future damages from natural hazards.

California Water Quality Porter-Cologne Act

California's primary statute leading water quality and water pollution concerns with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Porter-Cologne Act). The Porter-Cologne Act grants the State Water Resource Control Board (SWRCB) and each of the nine Regional Water Quality Boards (RWQCB) power to protect water quality and further develop the Clean Water Act within California. The applicable RWQCB for the proposed project is the Central Valley RWQCB.

Central Valley RWQCB

The proposed project site is within the jurisdiction of the Central Valley Regional Water Quality Control Board (RWQCB). The Central Valley RWQCB requires a National Pollution Discharge Elimination System (NPDES) Permit and Stormwater Pollution Prevention Plan (SWPPP) for projects disturbing more than one acre of total land area. Because the project is greater than one acre, a NPDES Permit and SWPPP will be required.

City of Visalia General Plan

The 2030 General Plan includes the policies related to hydrology and water quality that correlate to the proposed project:

- *PSCU-P-59:* Require new developments to incorporate floodwater detention basins into project designs where consistent with the Stormwater Master Plan and the Groundwater Recharge Plan.
- *PSCU-P-60:* Control urban and stormwater runoff and point and non-point discharge of pollutants. As part of the City's Stormwater Management Program, adopt and implement a Stormwater Management Ordinance to minimize stormwater runoff rates and volumes, control water pollution, and maximize groundwater recharge. New development will be required to include Low Impact Development features that reduce impermeable surface areas and increase infiltration. Such features may include, but are not limited to:
    - Canopy trees or shrubs to absorb rainwater;
    - Grading that lengthens flow paths over permeable surfaces and increases runoff travel time to reduce the peak hour flow rate;
    - Partially removing curbs and gutters from parking areas where appropriate to allow stormwater sheet flow into vegetated areas;
    - Use of permeable paving in parking lots and other areas characterized by significant impervious surfaces;
    - On-site stormwater detention, use of bioswales and bioretention basins to facilitate infiltration; and
    - Integrated or subsurface water retention facilities to capture rainwater for use in landscape irrigation and other non-potable uses.
- *PSCU-P-46:* Adopt and implement a Water Efficient Landscaping Ordinance for new and/or refurbished development that exceeds mandated sizes, and ensure that all new City parks, streetscapes, and landscaped areas conform to the Ordinance's requirements. The Ordinance should include provisions to optimize outdoor water use by:
    - Promoting appropriate use of plants and landscaping;
    - Establishing limitations on use of turf including size of turf areas and use of cool-season turf such as Fescue grasses, with exceptions for specified uses (e.g., recreation playing fields, golf courses, and parks);
    - Establishing water budgets and penalties for exceeding them;
    - Requiring automatic irrigation systems and schedules, including controllers that incorporate weather-based or other self-adjusting technology;
    - Promoting the use of recycled water; and
    - Minimizing overspray and runoff.

Discussion

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 with Mitigation: 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 earthwork across most of the 69.35-acre project site. During storm events, exposed construction areas across the project site may cause runoff to carry pollutants,

such a chemicals, oils, sediment, and debris. 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. As such, implementation of Mitigation Measures HYD-1 and HYD-2 will ensure impacts remain *less than significant with mitigation.*

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

Less than Significant Impact: Water services will be provided by the Cal Water, Visalia District, upon development. The District currently produces about 27 million gallons of local groundwater per day from 75 active wells and delivers it to customers through more than 519 miles of pipeline. The District delivers water to residential, commercial, industrial, and governmental customers. Residential customers account for most of the District's service connections and 69 percent of its water uses. Non-residential water uses account for 28 percent of total demand, while distribution system losses account for 3 percent. The system produced 30,152 acre-feet (AF) of groundwater in 2020. The available water supply is expected to supply the projected population. The system has a capacity to pump 100,829 acre-feet per year (afy), all from groundwater. The projected demand is expected to 35,276 AF in 2030, 38,310 AF in 2035, and 41,258 AF in 2040.

Using average per-person water use in Visalia (183 gallons; 2020 Urban Water Management Plan) and the average household size in Visalia (2.99 persons; US Census Bureau), water demand for the proposed 136-unit residential development is estimated to be approximately 74,415 gallons of water daily, or about 83-acre feet per year. With an expected increase of 5,124 AF from 2020 to 2030, there will be enough water supply for the proposed project. The most water-intensive aspect of the Project (Very Low-Density Residential homes) is consistent with the City's General Plan land use designation. As such, the Project would not affect groundwater supplies beyond what has already been analyzed in the most current General Plan EIR or Urban Water Management Plan.

The project would result in nearly full development of the site, which would convert approximately 69.35 acres from pervious surfaces to impervious surfaces. However, this would not significantly interfere with groundwater recharge because all stormwaters would be collected and diverted to a new stormwater basin located on the Southwest area of the project site for groundwater recharge. Because the addition of impervious surfaces would not interfere substantially with groundwater recharge and the project would not utilize groundwater resources beyond what has been previously analyzed in the Visalia Planning Area General Plan EIR or the Urban Water Management Plan, the impact would be *less than significant.*

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?

Less than Significant with Mitigation: The proposed project would result in the addition of impervious surfaces and alter existing drainage patterns on the 69.35-acre project site which would have the potential to result in erosion or siltation on- or off-site. The disturbance of soils during construction could cause erosion, resulting in temporary construction impacts. However, this impact would be appropriately mitigated through implementation of a Stormwater Pollution Prevention Plan (SWPPP) which include mandated erosion control measures, which are developed to prevent significant impacts related to erosion caused by runoff during construction (Mitigation Measure HYD-1). The Project proponent will also be required to prepare drainage plans (Mitigation Measure HYD-2) and a Development Maintenance Manual (Mitigation Measure HYD-3) to ensure that existing drainage patterns are maintained during project operations and that that the project would not result in substantial erosion or siltation on- or off-site. The impact is *less than significant with implementation of these mitigation measures.*

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

Less than Significant with Mitigation: The proposed project would result in the addition of impervious surfaces on the 69.35-acre project site which would have the potential to increase surface runoff resulting in flooding on- or off-site. This impact would be appropriately mitigated through implementation of Mitigation Measure HYD-2, which requires the project to submit drainage plans to the City Engineer prior to the issuance of grading permits. The drainage plans will include BMPs to ensure runoff from the project will not result in flooding on- or off-site. Therefore, impacts are *less than significant with mitigation.*

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?

Less than Significant with Mitigation: The proposed project would result in the addition of impervious surfaces and alter existing drainage patterns on the 69.35-acre project site which would have the potential to impact existing stormwater drainage systems or provide additional sources of polluted runoff. The proposed project would contain a storm drainage basin to collect all runoff from the site. The disturbance of soils during construction could cause erosion, resulting in temporary construction impacts. However, this impact would be appropriately mitigated through implementation of a Stormwater Pollution Prevention Plan (SWPPP) which include mandated erosion control measures, which are developed to prevent significant impacts related to erosion caused by runoff during construction (Mitigation Measure HYD-1). During project operations, the proposed impervious surfaces, including roads, building pads, and parking areas, would collect automobile derived pollutants such as oils, greases, rubber, and heavy metals. This could contribute to point source and non-point source pollution if these pollutants were transported into waterways during storm events. The Project proponent will be required to prepare drainage plans (Mitigation Measure HYD-2) and a Development Maintenance Manual (Mitigation Measure HYD-3) to ensure that the project would not

overwhelm the planned stormwater drainage basin or result in discharges of polluted runoff into local waterways. The impact is *less than significant with implementation of these mitigation measures.*

iv. Impede or redirect flood flows?

Less than Significant with Mitigation: The Project site is generally flat and no significant grading or leveling will be required. The proposed project site is not in proximity to a stream or river and will not alter the course of a stream or river. According to National Flood Hazard mapping by the Federal Emergency Management Agency, the proposed project is in an X flood zone, which has a 0.2% chance of flooding every year.

The proposed project would result in the addition of impervious surfaces on the 69.35-acre project site which could affect drainage and flood patterns. This impact would be appropriately mitigated through implementation of Mitigation Measure HYD-2, which requires the project to submit drainage plans to the City Engineer prior to the issuance of grading permits. The drainage plans will include BMPs to ensure the project would not impede or redirect flood flows. Therefore, impacts are *less than significant with mitigation.*

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

No Impact: The proposed project is located inland and not near an ocean or large body of water, therefore, would not be affected by a tsunami. The proposed project is in a relatively flat area and would not be impacted by inundation related to mudflow. Since the project is in an area that is not susceptible to inundation, the project would not risk release of pollutants due to project inundation. As such, there is *no impact.*

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.*

Mitigation Measures for Hydrology and Water Quality

Mitigation Measure HYD-1: Prior to the issuance of any construction/grading permit and/or the commencement of any clearing, grading, or excavation, the Applicant shall submit a Notice of Intent (NOI) for discharge from the Project site to the California SWRCB Storm Water Permit Unit.

- Prior to issuance of grading permits for Phase 1 the Applicant shall submit a copy of the NOI to the City.
- The City shall review noticing documentation prior to approval of the grading permit. City monitoring staff will inspect the site during construction for compliance.

Mitigation Measure HYD-2: The Applicant shall require the building contractor to prepare and submit a Storm Water Pollution Prevention Plan (SWPPP) to the City 45 days prior to the start of

work for approval. The contractor is responsible for understanding the State General Permit and instituting the SWPPP during construction. A SWPPP for site construction shall be developed prior to the initiation of grading and implemented for all construction activity on the Project site in excess of one (1) acre, or where the area of disturbance is less than one acre but is part of the Project's plan of development that in total disturbs one or more acres. The SWPPP shall identify potential pollutant sources that may affect the quality of discharges to storm water and shall include specific BMPs to control the discharge of material from the site. The following BMP methods shall include, but would not be limited to:

- Dust control measures will be implemented to ensure success of all onsite activities to control fugitive dust;
- A routine monitoring plan will be implemented to ensure success of all onsite erosion and sedimentation control measures;
- Provisional detention basins, straw bales, erosion control blankets, mulching, silt fencing, sand bagging, and soil stabilizers will be used;
- Soil stockpiles and graded slopes will be covered after two weeks of inactivity and 24 hours prior to and during extreme weather conditions; and,
- BMPs will be strictly followed to prevent spills and discharges of pollutants onsite, such as material storage, trash disposal, construction entrances, etc.

Mitigation Measure HYD-3: A Development Maintenance Manual for the Project shall include comprehensive procedures for maintenance and operations of any stormwater facilities to ensure long-term operation and maintenance of post-construction stormwater controls. The maintenance manual shall require that stormwater BMP devices be inspected, cleaned, and maintained in accordance with the manufacturer's maintenance conditions. The manual shall require that devices be cleaned prior to the onset of the rainy season (i.e., mid-October) and immediately after the end of the rainy season (i.e., mid-May). The manual shall also require that all devices be checked after major storm events. The Development Maintenance Manual shall include the following:

- Runoff shall be directed away from trash and loading dock areas;
- Bins shall be lined or otherwise constructed to reduce leaking of liquid wastes;
- Trash and loading dock areas shall be screened or walled to minimize offsite transport of trash; and,
- Impervious berms, trench catch basin, drop inlets, or overflow containment structures nearby docks and trash areas shall be installed to minimize the potential for leaks, spills, or wash down water to enter the drainage system.

XI. LAND USE AND PLANNING

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

Environmental Setting

The proposed project site is in the Visalia Planning Area, just outside of the city limits. The site is approximately 4 miles Southwest of the Visalia downtown. The site is currently zoned as AE-20 by the County of Tulare but is prezoned for R-1-20 by the City of Visalia after annexation. The site is designated as Very Low Density Residential by the Visalia General Plan. The Project does not need rezoning or General Plan Amendments.

The site currently contains agriculture uses. The site is topographically flat and is bounded by agricultural uses (Including a dairy) to the South and West, and single-family residential to the North and East.

Regulatory Setting

Visalia General Plan

The proposed project site is designated as Very Low Density Residential.

- The Very Low-Density Residential designation provides single family detached housing on large lots. Residential densities are typical of rural residential environments. The typical residential density for this designation ranges from 0.1 to two housing units per gross acre. Buildout is assumed at two units per gross acre.

The 2030 General Plan includes the policies related to land use that correlate to the proposed project:

- *LU-P-19:* Ensure that growth occurs in a compact and concentric fashion by implementing the General Plan's phased growth strategy.
- *LU-P-20:* Allow annexation and development of residential, commercial, and industrial land to occur within the Tier I Urban Development Boundary (UDB) at any time, consistent with the City's Land Use Diagram.
- *LU-P-28:* Continue to use natural and man-made edges, such as major roadways and waterways within the city's Urban Area Boundary, as urban development limit and growth phasing lines.
- *LU-P-71:* Ensure that noise, traffic, and other potential conflicts that may arise in a mix of commercial and residential uses are mitigated through good site planning, building design, and/or appropriate operational measures.

- *LU-P-47:* Establish criteria and standards for pedestrian, bicycle, and vehicle circulation networks within new subdivisions and non-residential development.

City of Visalia Zoning Ordinance

The proposed project site is prezoned for R-1-20. The Project will not comply with the R-1-20 zoning code for three reasons and will require a requires a conditional use permit. First, the Project is planning for a minimum lot size of 11,592 square feet rather than the 20,000 square feet R-1-20 zone requires. The second reason is reduced front and side yard setbacks. The R-1-20 zone requires a minimum setback of 35 feet in the front and 10 feet on the sides. The Project is planning for setbacks of 30 feet and 5 feet, respectively. The third reason is the minimum width of the lots. The R-1-20 zone requires a minimum width of 100 feet on interior lots and 110 feet on corner lots, as measured from the middle of the lot. The Project plans for a minimum width of 85 feet, ranging to a maximum of 206 feet.

R-1 zoning is intended to provide living area within the city where development is limited to low density concentrations of one-family dwellings where regulations are designed to accomplish the following:

- to promote and encourage a suitable environment for family life;
- to provide space for community facilities needed to compliment urban residential areas and for institutions that require a residential environment;
- to minimize traffic congestion and to avoid an overload of utilities designed to service only low-density residential use.

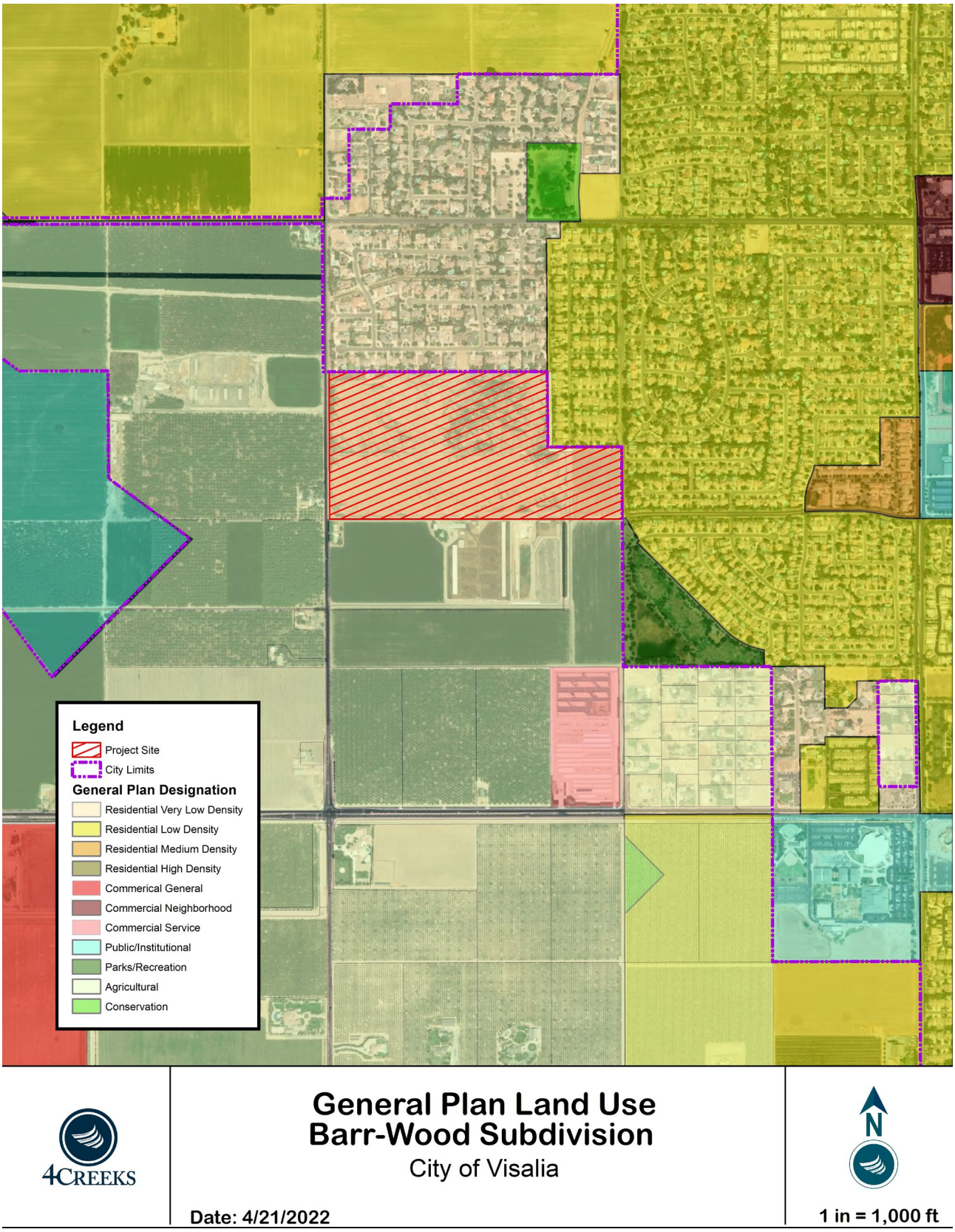


Figure 3-8: General Plan Land Use Designation

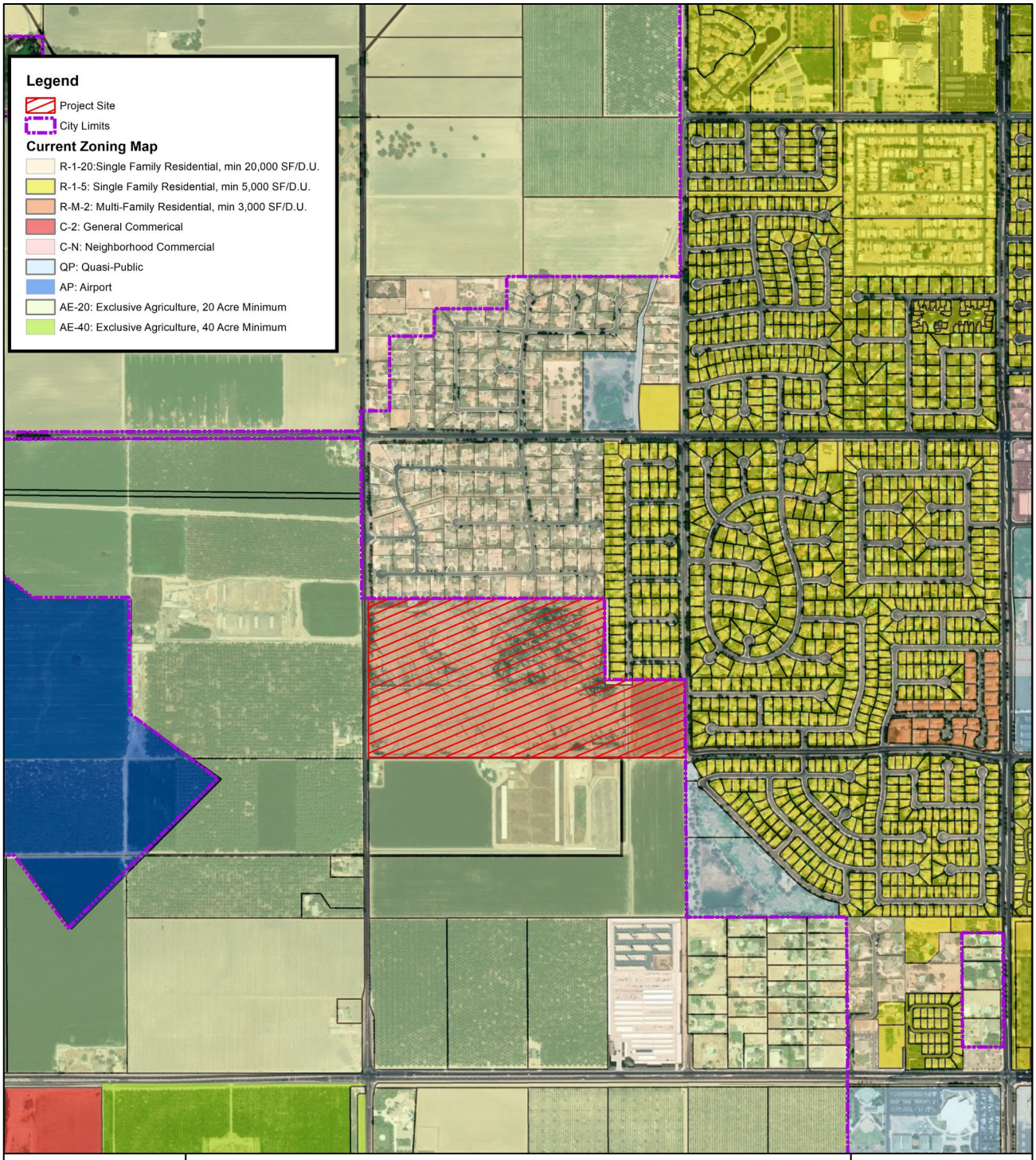


Figure 3-9: Zoning Map

Discussion

a) Would the project physically divide an established community?

No Impact: The proposed project will not physically divide an established community. The proposed project site is designated for Very Low Density Residential by the Visalia General Plan and the project is consistent with this land use designation. The project would continue to operate as the same designation following project implementation. There is *no impact.*

b) Would the project 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?

No Impact: The project site is located on land designated for residential use. The proposed project does not conflict with this land use, or any other policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect. There is *no impact.*

XII. MINERAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	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?	☐	☐	☐	☑
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 lands use plan?	☐	☐	☐	☑

Environmental Setting

Tulare County contains mineral resources of sand, gravel, and crushed stone, found in alluvial deposits and hard rock quarries. Most of this mining takes place along rivers and at the base of the Sierra foothills. However, the Visalia Planning Area currently contains three former sand and gravel mines, but no currently operating mines and no designated Mineral Resource Zones.

Regulatory Setting

California State Surface Mining and Reclamation Act

The California State Surface Mining and Reclamation Act was adopted in 1975 to regulate surface mining to prevent adverse environmental impacts and to preserve the state's mineral resources. The Act is enforced by the California Department of Conservation's Division of Mine Reclamation.

Discussion

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 a value to the region and the residents of the state, therefore the proposed project would not result in the loss of 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 lands 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 proposed project would not result in the loss of availability of known regionally or locally important mineral resources. There is *no impact.*

XIII. NOISE

Would the project result in:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Generation of a substantial temporary or permeant increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☑	☐
b) Generation of excessive ground-borne vibration or groundborne noise levels?	☐	☐	☑	☐
c) For a project located within the vicinity of a private airstrip or, an airport land use plan or, where such a plan has not been adopted, within two miles of public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☑	☐

Environmental Setting

Noise is often described as unwanted sound. Sound is the variation in air pressure that the human ear can detect. If the pressure variations occur at least 20 times per second, they can be detected by the human ear. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second, called Hertz (Hz).

Ambient noise is the "background" noise of an environment. Ambient noise levels on the proposed project site are primarily due to agricultural activities and traffic. Construction activities usually result in an increase in sound above ambient noise levels.

Vibration is seismic waves that radiate along the surface of the earth and downward into the earth. Operation of heavy construction equipment, particularly pile driving and other impacts devices such as pavement breakers create this vibration.

Sensitive Receptors

Noise level allowances for various types of land uses reflect the varying noise sensitivities associated with those uses. Residences, hotels/motels, hospitals, schools, and libraries are some of the most sensitive land uses to noise intrusion and therefore have more stringent noise level allowances than most commercial or agricultural uses that are not subject to impacts such as sleep disturbance. The nearest sensitive receptor is the Wildhorse Subdivision that borders the Southeast border of the site.

Regulatory Setting

City of Visalia Noise Ordinance

The City of Visalia Noise Ordinance provides noise level standards for land use compatibility. Exterior and interior noise levels may not exceed any of the categorical noise level standards shown in Table

3-14. The standards are shown in A-weighted decibels (dBA). For Single Family Residential, the exterior noise during the daytime is to be below 70 dBA, and the indoor noise during the daytime is to be below 55 dBA.

Category	*Cumulative number of minutes in any one hour time period*	*Evening and daytime (6:00 a.m. to 7:00 p.m.)*	*Nighttime (7:00 p.m. to 6:00 a.m.)*
Exterior Levels			
1	30	50	45
2	15	55	50
3	5	60	55
4	1	65	60
5	0	70	65
Interior Levels			
1	5	45	35
2	1	50	40
3	0	55	45

Table 3-14: City of Visalia Noise Standards. Source: City of Visalia Noise Ordinance

City of Visalia General Plan

The current noise element of the City's General Plan establishes goals and policies intended to limit community exposure to excessive noise levels. Visalia's current General Plan identifies noise sources such as roadways, rails, and airports within the city and includes land use compatibility guidelines.

- *N-P-3:* Establish performance standards for noise reduction for new housing that may be exposed to community noise levels above 65 dB DNL/CNEL, as shown on the Noise Contour Maps, based on the target acceptable noise levels for outdoor activity levels and interior spaces in Tables 8-2 and 8-3. Noise mitigation measures that may be considered to achieve these noise level targets include but are not limited to the following:
    - Construct façades with substantial weight and insulation;
    - Use sound-rated windows for primary sleeping and activity areas;
    - Use sound-rated doors for all exterior entries at primary sleeping and activity areas;
    - Use minimum setbacks and exterior barriers;
    - Use acoustic baffling of vents for chimneys, attics, and gable ends;
    - Install a mechanical ventilation system that provides fresh air under closed window conditions.

Discussion

a) Would the project result in generation of a substantial temporary or permeant 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: Project construction is anticipated to last approximately 66 months and will involve temporary noise sources in the vicinity of the project. The average noise levels generated by construction equipment that will likely be used in the proposed project are provided in Table 3-15.

The nearest residence and sensitive receptor are the single-family homes surrounding the site. The City requires that mitigation measures be implemented if noise levels exceed 70 dB in sensitive outdoor areas or if interior noise levels exceed 55 dB. As shown in Figure 3-10, it was found that a residence must be at least 250 feet from construction in the exterior and 100 feet from construction in the interior to avoid noise levels exceeding these thresholds.

With the project bordering another residential community, a noise disturbance is unavoidable. However, the construction would comply with Visalia Municipal Code Chapter 8.36 to ensure that the construction noise impacts would be less than significant. Measures such as maintaining minimum setback distances between construction equipment and receptors, only having construction during weekday daytime hours, and noise barriers would be implemented to avoid significant construction noise impacts.

Long term noise levels resulting from the project would be produced by single family residential homes, which are not normally associated with high operational noise levels. Because noise generated during project construction would be intermittent, short term, and would not exceed the thresholds established by the Visalia Noise Ordinance for sensitive receptors and the project does not propose uses that would typically generate high noise levels, the impact is *less than significant*.

Type of Equipment	Exterior Lmax at 50 feet (dBA)
Tractors	84
Loaders	80
Backhoes	80
Excavators	85
Generator Sets	82
Air Compressors	80
Rubber Tired Dozers	85
Forklifts	75
Welders	73
Graders	85
Scrapers	85
Cranes	85
Paving Equipment	85
Rollers	85

Table 3-15. Noise levels of noise-generating construction equipment at various distances. Source: FHA Construction Noise Handbook (dBA at 50 feet). Noise levels beyond 50 feet were estimated using the inverse square law based on given values for dBA at 50 feet

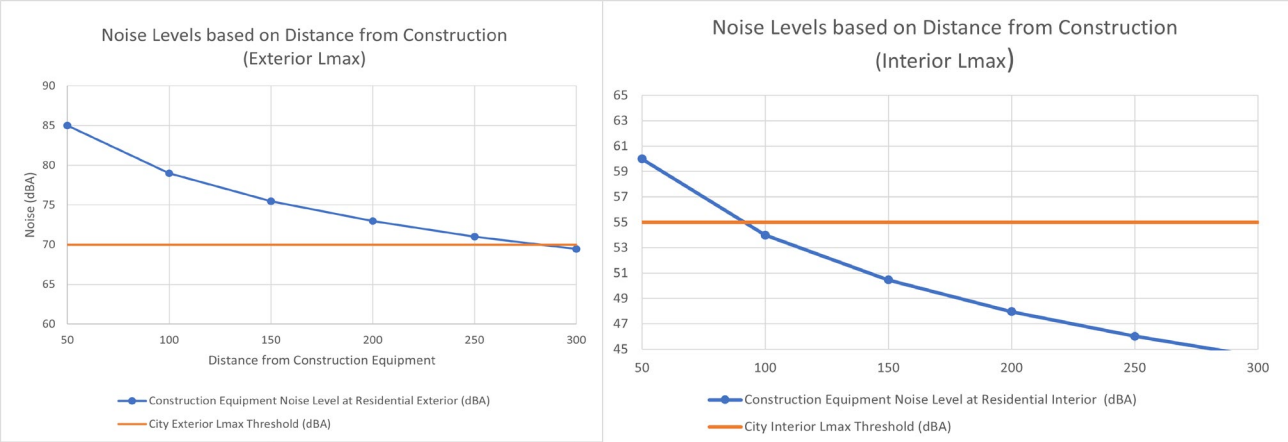


Figure 3-10: Construction Related Noise Levels Based on Distance from Construction Equipment. Interior Noise=Assume 25 dB Exterior to Interior Noise Reduction

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

Less than Significant Impact: Although project operations would not include uses or activities that typically generate excessive groundborne vibration or groundborne noise levels, project construction could introduce temporary groundborne vibration to the project site and the surrounding area. Sources that may produce perceptible vibrations are provided in Table 3-16.

Equipment	Peak Particle Velocity (inches/second) at 25 feet	Approximate Vibration Level (LV) at 25 feet
Pile driver (impact)	1.518 (upper range) 0.644 (typical)	112 104
Pile driver (sonic)	0.734 upper range 0.170 typical	105 93
Clam shovel drop (slurry wall)	0.202	94
Hydromill (slurry wall)	0.008 in soil 0.017 in rock	66 75
Vibratory Roller	0.210	94
Hoe Ram	0.089	87
Large bulldozer	0.089	87
Caisson drill	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

Table 3-16. Vibration Levels Generated by Construction Equipment. Source: Transit Noise and Vibration Impact Assessment, Federal Transit Administration, September 2018.

The primary source of vibration during project construction would likely be from a bulldozer (tractor), which would generate 0.089 inch per second PPV at 25 feet with an approximate vibration level of 87 VdB. Vibration from the bulldozer would be intermittent and not a source of continual vibration. There are no adopted City standards or thresholds of significance for vibration. The evaluation of potential impacts related to construction vibration levels is based on the published data in the 2018

FTA Guidelines. At 25 feet, the buildings most susceptible to vibration could be impacted at .12 inch/second. Because vibrations generated by project construction would not exceed 0.12 inch/second, the impact is *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 public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Less than Significant Impact: The proposed project is located approximately 1.77 miles Southeast of the nearest public airport (Visalia Municipal Airport). However, according to the Airport Master plan, the project site would not be impacted by the airport. Noise contours developed for 2019 show that the airport would produce less than 65 dB. All land uses located outside of the 65 dB contours are considered less than significant. Implementation of the proposed project would not result in a safety hazard for people residing or working in the project area. There is a *less than significant impact.*

XIV. POPULATION AND HOUSING

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

Environmental Setting

The United States Census Bureau stated the population in the City of Visalia to be 141,214 as of April 2020. This is an increase from the 2010 census, which counted the population in the City of Visalia to be 124,442. Factors that influence population growth in Visalia include job availability, housing availability, and the capacity of proposed and existing infrastructure.

Regulatory Setting

The City of Visalia population size is controlled by the development code and Housing Element of the General Plan. These documents regulate the number of dwelling units per acre allowed on various land uses and establish minimum and maximum lot sizes, which has a direct impact on the City's population size.

City of Visalia 2003 General Plan Housing Element

The 2030 General Plan includes the policies related to population and housing that correlate to the proposed project:

- *LU-P-50:* Provide development standards to ensure residential development is not negatively affected by adjacent non-residential land uses.
- *U-P-71:* Ensure that noise, traffic, and other potential conflicts that may arise in a mix of commercial and residential uses are mitigated through good site planning, building design, and/or appropriate operational measures.

Discussion

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

No Impact: The United States Census Bureau stated the population in the City of Visalia to be 141,214 as of April 2020. The project proposes to construct 136 new single family residential units. The US

Census Bureau states that the City's average household size is 2.99 persons. Based on this average household size, the anticipated population increase because of the proposed project is 407 persons. The construction of housing at this location would not be unplanned, as the Visalia General Plan designated the proposed project site for very low density residential. Additionally, the city is planning for more businesses, services, and infrastructure to accommodate the new population. Overall, the project will not constitute an unplanned increase in growth and population. There is *no impact.*

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

No Impact: There project would not displace any existing housing. There is one existing house on the site which will be removed. Overall, this will increase the amount of available housing in the community. There is *No Impact*.

XV. PUBLIC SERVICES

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
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 serve ratios, response times of other performance objectives for any of the public services:				
a. Fire protection?	☐	☐	☑	☐
b. Police protection?	☐	☐	☑	☐
c. Schools?	☐	☐	☑	☐
d. Parks?	☐	☐	☑	☐
e. Other public facilities?	☐	☐	☑	☐

Environmental Setting

Fire

Visalia and project site is served by The Visalia Fire Department (VFD), which operates 5 fire stations within the City of Visalia. The VFD will continue to provide fire protection services to the proposed project site following project implementation. VFD Fire Station #53 is the nearest fire station to the site, approximately .77 miles to the Northeast.

Police

Law enforcement services are provided to the project site via The Visalia Police Department (VPD). The VPD will continue to provide police protection services to the proposed project site following project implementation. The VPD headquarters are located approximately 3.6 miles Northeast of the proposed project site. VPD Substation District 2 is located approximately 2.3 miles Southeast of the project site.

Schools

The proposed project site is located within the Visalia Unified School District (VUSD) from Kindergarten through 12th Grade. The District includes 25 elementary schools, four middle schools, four traditional high schools, and alternative education programs. The nearest school is located approximately .63 miles West (El Diamante High School).

Regulatory Setting

California Fire Code

The California Fire Code (Title 24, Part 9 of the California Code of Regulations) establishes regulations to safeguard against hazards of fire, explosion, or dangerous conditions in new and existing buildings,

structures, and premises. The provisions of the Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure throughout the State of California. The Fire Code includes regulations regarding fire-resistance-rated construction, fire protection systems such as alarm and sprinkler systems, fire services features such as fire apparatus access roads, means of egress, fire safety during construction and demolition, and wildland-urban interface areas.

City of Visalia Fire Department Plan Check and Hydrant Ordinance

Visalia's requirements for new construction include provisions for the Fire Department to review building and site plans prior to the issuance of any permit. The Fire Department ensures that proposed projects will be adequately served by water, and accessible to emergency vehicles. The Department also enforces the City's Hydrant Ordinance, which states that subdividers are responsible for the installation of water mains and hydrants and determines the minimum spacing for fire hydrants. Street dimensions are scrutinized to ensure that space will be preserved for ladder trucks to be stabilized, and for emergency vehicles to turn around. Basic requirements in the City's subdivision ordinance include 52-foot minimum right-of-way widths and a 53-foot turning radius for cul-de-sacs.

City of Visalia General Plan

The 2030 General Plan includes the policies related to public services that correlate to the proposed project:

- *PSCU-P-33:* Coordinate land use and development with school location and site design, working with the Visalia Unified School District and other districts to ensure that adequate facilities are available and integrated with neighborhoods.

Discussion

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 serve ratios, response times of other performance objectives for any of the public services:

a. Fire protection?

Less than Significant Impact: The VFD will provide fire protection services to the proposed development. The closest fire station is Station #53, located .77 miles Northeast of the project site at 5025 W Walnut Ave. The Fire Department uses the National Fire Protection Association (NFPA) standard for fire protection services, which requires 1 responder per 1,000 residents. The addition of 136 residential units will increase the demand for fire protection services. The city currently has .48 responders per 1,000 residents. By 2030, the city expects growth up to a total of 210,000 residents. This would result in .32 responders per 1,000 residents. This will require an additional 85 on-duty responders by 2030 to meet 1 responder per 1,000 residents, or 41 new responders to meet the current ratio. The existing fire stations are placed to provide optimum service, however new stations will be needed to support the expanding city. To support the expansion of fire services, a development impact fee of $2,002 per gross acre will be paid for fire services. The total development impact fee for fire services would be $138,839.

The timing of when new fire service facilities would be required or details about size and location cannot be known until such facilities are planned and proposed, and any attempt to analyze impacts to a potential future facility would be speculative. As new or expanded fire service facilities become necessary, construction or expansion projects would be subject to their own separate CEQA review in order to identify and mitigate any potential environmental impacts. Therefore, the impact is *less than significant.*

b. Police protection?

Less than Significant Impact: The VPD will provide services to the proposed development. The VPD headquarters are located approximately 3.6 miles Northeast of the proposed project site. VPD Substation District 2 is located approximately 2.3 miles Southeast of the project site. The development would increase the demand for police service with the addition of 136 residential units. The VPD does not establish service standards either in terms of officers per thousand residents or in incident response time but plans to maintain the current ratio of 1.7 officers per 1,000 residents. The Department has 143 sworn officers working out of two districts, as well as seven reserve sworn officers, 64 civilian officers, and 65 volunteers. The demand for additional officers and equipment will be compensated by the development impact fee of $ 1,832 per acre of Low-Density Housing. The total development impact fee for police protection services would be $127,049.

The timing of when new police service facilities would be required or details about size and location cannot be known until such facilities are planned and proposed, and any attempt to analyze impacts to a potential future facility would be speculative. As new or expanded police service facilities become necessary, construction or expansion projects would be subject to their own separate CEQA review in order to identify and mitigate any potential environmental impacts. Therefore, the impact is *less than significant*.

c. Schools?

Less than Significant Impact: The proposed project is within the (VUSD) from Kindergarten through 12th Grade. The District includes 25 elementary schools, four middle schools, four traditional high schools, and alternative education programs. The City of Visalia predicts the generation rates shown below in Table 3-17.

School Type	Single Family Generation Rate	Number of Students
Elementary School	0.448	61
Middle School	.092	13
High School	.156	21

Table 3-17: Student Generation Rates, City of Visalia General Plan

Since the proposed project includes the addition of 136 single family homes, the number of students will increase by approximately 95. The proposed project site is located within the Planning Area's limits and therefore, growth associated with the Project has been planned and expected. In addition to the goals and policies of the City's General Plan, future development is required to pay development impact fees to the school districts at the time of building permit issuance. The City of Visalia charges $4.41 per square foot of residential development. This would total up to $1,079,568. These impact fees are used by the school districts to maintain existing and develop new facilities, as needed. Therefore, the impact is *less than significant.*

d. Parks?

Less than Significant Impact: The addition of 136 new residential units would result in more use of the existing parks. Parks within a half-mile to one-mile radius that would service the proposed development include Sunset Park and John Combs Park. The project plans to include 3.7 acres of parkland with walking trails. Since the project would not lower the existing level of services for parks, and the proposed project would contribute its fair share to parks facilities through in-lieu fees, the impact is *less than significant.*

e. Other public facilities?

Less than Significant Impact: The proposed project would be required to pay a development impact fee for Public Facilities, including for the Civic Center, Corporation Yard, and Libraries. The fees for these are $602 per single family unit. This is a total of $81,872 for Public Facilitates. Additional development fees will be paid to offset the increased demand for public services related to transportation, water, wastewater, groundwater recharge, storm drainage, and general governmental services. Fees for transportation, water, wastewater, and general government are based on building square footage and will be calculated prior to the issuance of building permits. Fees for groundwater recharge and storm drainage are based on site acreage.

While the payment of development fees could result in the construction of new or altered public service facilities, no specific projects have been identified at this time. As new or expanded public service facilities become necessary, construction or expansion projects would be subject to their own separate CEQA review in order to identify and mitigate any potential environmental impacts. Therefore, the impact is *less than significant*.

XVI. PARKS AND RECREATION

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
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?	☐	☐	☑	☐
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?	☐	☐	☐	☑

Environmental Setting

There are 40 park facilities totaling 678 acres within the Visalia Planning Area. The City of Visalia provides diverse types of parks and open space facilities, or park types, to meet park and open space recreation needs of the community. Park types include:

- Pocket Parks: A park typically between one-half and two acres in size intended to serve the needs of a specific neighborhood within a half-mile radius. There are currently 17 pocket parks in Visalia.
- Neighborhood Parks: A park typically 2 to 5 acres in size that provides basic recreation activities for one or more neighborhoods. There are currently 19 neighborhood parks in Visalia.
- Community Parks: A park typically ranging from 5 to 12 acres in size or larger, which are intended to serve the recreational needs of a larger area of the city. There are currently 4 community parks in Visalia.
- Large City Parks: A park generally larger than 40 acres in size intended to serve the recreational needs of all city residents and to create opportunities for contact with the natural environment. These parks may include a concentration of sports fields, golf courses, and areas for picnicking and passive enjoyment of open space. There are currently 2 large city parks in Visalia.
- Natural Corridors and Greenways: A network of greenways of varying size intended to serve the recreational needs of city residents. These parks may include facilities such as bikeways, walkways, and riding trails, and are primarily developed along the city's waterways. There is a total of 196 acres of natural corridors and greenways.

The Visalia Planning Area additionally contains two county parks and a public golf course. The golf course is not counted to the total amount of parkland. The Visalia General Plan states a total parkland standard of five acres of city parkland per 1,000 residents.

Regulatory Setting

Quimby Act

The 1975 Quimby Act (California Government Code section 66477) authorized 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 (nexus) to a project's impacts as identified through studies required by the California Environmental Quality Act (CEQA).

City of Visalia General Plan

The 2030 General Plan includes the policies related to parks and recreation that correlate to the proposed project:

- *PSCU-P-2:* Strive to achieve and maintain a citywide standard of at least five acres of neighborhood and community parks per 1,000 residents.
- *PSCU-P-7:* Promote development of small pocket parks or play lots dispersed throughout new neighborhoods and in existing neighborhoods, where needed, on a voluntary basis in coordination with new infill development, consistent with the following planning guidelines:
    - Size: 0.5 to 2 acres; and
    - Facilities: the specific features of pocket parks should address the anticipated needs of nearby residents and/or workers. In a residential environment, the needs of small children and seniors should be emphasized. In mixed-use or commercial areas, lunchtime use by office workers and shoppers should be facilitated.
- *PSCU-P-10:* Adopt and implement parkland dedication requirements for all subdivisions, consistent with the Quimby Act and Policy PSCU-P-2. This requirement will be integrated with the City's Park Acquisition Development Fee Program.

Discussion

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 proposed project is anticipated to increase the Visalia population by approximately 407 residents. Based on the desired parkland ratio of five acres per 1000 residents identified in the Visalia General Plan, the Project would need to provide approximately 2.03 acres of parkland/open space. The project has 3.7 acres of parkland, more than the required amount. The impact is *less than significant.*

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?

No Impact: The proposed project does not include any recreational facilities or require the construction or expansion of any recreational facilities that would have an adverse physical effect on the environment. There is *no impact.*

XVII. TRANSPORTATION

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	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?	☐	☐	☑	☐
b) Conflict or be inconsistent with the CEQA guidelines Section 15064.3, Subdivision (b)?	☐	☐	☑	☐
d) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☑
e) Result in inadequate emergency access?	☐	☐	☐	☑

Environmental Setting

Vehicular Access

Vehicular access to the project is available via South Roeben Street on the East side of the site, and South Shirk Road (Road 92) on the West side of the site. The project includes a network of local streets that provide full access to the project site.

Parking

Each Single-Family home will contain at least a two-car garage, as well as room for two more cars in the driveway. Street parking will be limited due to reduced street widths. During construction, workers will utilize existing parking areas and/or temporary construction staging areas for parking of vehicles and equipment.

Regulatory Setting

CEQA Guidelines Section 15064.3, Subdivision (b): Criteria for Analyzing Transportation Impacts

(1) Land Use Projects. Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be considered to have a less than significant transportation impact.

(2) Transportation Projects. Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, a lead agency may tier from that analysis as provided in Section 15152.

(3) Qualitative Analysis. If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the

availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.

(4) Methodology. A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project. The standard of adequacy in Section 15151 shall apply to the analysis described in this section.

City of Visalia Standard Specifications

The City of Visalia Standard Specifications are developed and enforced by the City of Visalia Public Works Department to guide the development and maintenance of streets within the City. The cross-section drawings contained in the City's Standard Specifications dictate the development of roads within the City.

City of Visalia General Plan:

The 2030 General Plan includes the policies related to transportation that correlate to the proposed project:

- *T-P-3:* Design and build future roadways that complement and enhance the existing network, as shown on the General Plan Circulation Diagram, to ensure that each new and existing roadway continues to function as intended.
- *T-P-5:* Take advantage of opportunities to consolidate driveways, access points, and curb cuts along existing arterials when a change in development or a change in intensity occurs or when traffic operation or safety warrants.
- *T-P-10:* Manage local residential streets to limit average daily vehicle volumes to 1,500 or less and maintain average vehicle speeds between 15 and 25 miles per hour.
- *T-P-22:* Require all residential subdivisions to be designed to discourage use of local streets as a bypass to congested arterials, and when feasible, require access to residential development to be from collector streets.
- *T-P-23:* Require that all new developments provide right-of-way, which may be dedicated or purchased, and improvements (including necessary grading, installation of curbs, gutters, sidewalks, parkway/landscape strips, bike, and parking lanes) other city street design standards. Design standards will be updated following General Plan adoption.
- *T-P-24:* Require that proposed developments make necessary off-site improvements if the location and traffic generation of a proposed development will result in congestion on major streets or failure to meet LOS D during peak periods or if it creates safety hazards.
- *T-P-26:* Require that future commercial developments or modifications to existing developments be designed with limited points of automobile ingress and egress, including shared access, onto major streets.
- *T-P-40:* Develop a community-wide trail system along selected planning area waterways, consistent with the Waterways and Trails Master Plan and General Plan diagrams.

Discussion

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

Less than Significant Impact: The existing General Plan established LOS "D" as the minimum acceptable LOS standard on city facilities. A traffic study prepared for the project (Appendix E) concluded that the project would not result in a significant increase in vehicle or truck trips.

Table 3-18 shows the estimated vehicle trips generated for the proposed project. The proposed project is expected to generate approximately 1,339 daily trips, including 99 AM peak hour trips (26 inbound, 73 outbound) and 133 PM peak hour trips (84 inbound, 49 outbound).

Single-Family Detached Housing (ITE Code 210) -Project Phase	Total Units	Daily*	AM Peak Hour*				PM Peak Hour*			
		Trips	% In: Out	In	Out	Total	% In: Out	In	Out	Total
Phase 1	43	464	26:74	9	26	35	63:37	28	17	45
Phase 2 (add 46 units)	89	906	26:74	17	50	67	63:37	56	33	89
Phase 3 (add 47 units)	136	1,339	26:74	26	73	99	63:37	84	49	133
Total Project	**136**	**1,339**	**26:74**	**26**	**73**	**99**	**63:37**	**84**	**49**	**133**

**Regression equations used based on procedure in Trip Generation Handbook, 3rd Edition, September 2017*

TABLE 3-18: PROPOSED PROJECT TRIP GENERATION

According to the *City of Visalia's Procedures for Traffic Impact Analysis* (TIA), March 2021, residential developments generating less than 200 peak hour trips do not require a TIA. Therefore, as per the City's TIA guidelines, it is anticipated the project will not require a TIA.

Whitendale Avenue does not currently exist between Shirk Road and Roeben Street. Phase 1 of the project is expected to generate approximately 464 daily trips, including 35 AM peak hour trips (9 inbound, 26 outbound) and 45 PM peak hour trips (28 inbound, 17 outbound). The number of trips generated during both the AM and PM peak hours for Phase 1 are significantly less than the total project and less than the City's TIA guidelines that would require additional analysis.

Given that Whitendale Avenue does not currently exist, that few trips will be generated during Phase 1, and that the City's TIA guidelines do not require analysis for residential projects generating less than 200 peak hour trips, it is not anticipated that there will be any significant impact to adjacent intersections during Phase 1 or that additional analysis should be required. The City of Visalia Traffic Impact Fee facilities list includes traffic signal projects which are not individually identified. The project will pay its fair share of traffic impact fees to support payment of the signals. There is *a less than significant impact.*

b) Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b)?

Less than Significant Impact: The City of Visalia's *VMT Thresholds and Implementation Guidelines* (Guidelines) document, prepared by LSA and adopted on March 15, 2021, provides guidance for determining a project's transportation impacts based on vehicle miles traveled (VMT). The Guidelines

acknowledge that certain activities and projects may result in a reduction in VMT and GHG emissions and, therefore, a less than significant impact to transportation and circulation. A variety of projects may be screened out of a complicated VMT analysis due to the presumption described in the TA regarding the occurrence of less than significant impacts.

The Guidelines state: *"Residential, office, or mixed-use projects that are consistent with the City's General Plan and located within green-colored VMT zones, as shown in Figures 6, 7, and 8, respectively, are presumed to have similar low VMT profiles and could be screened out from further VMT analysis."*

The State of California Governor's Office of Planning and Research document entitled Technical Advisory on Evaluating Transportation Impacts in CEQA dated December 2018 (OPR Guidelines) provides the reasoning for the screen out. The OPR Guidelines state: *"Residential and office projects that are located in areas with low VMT, and that incorporate similar features (i.e., density, mix of uses, transit accessibility), will tend to exhibit similarly low VMT. Maps created with VMT data, for example from a travel survey or a travel demand model, can illustrate areas that are currently below threshold VMT. Because new development in such locations would likely result in a similar level of VMT, such maps may be used to screen out residential and office projects from needing to prepare a detailed VMT analysis."*

The Project is consistent with Visalia's General Plan land use, and the Project is within a green-colored VMT zone, shown in Figure 3-11. Therefore, the Project can be screened out will not need a VMT analysis. There is a *less than significant impact.*

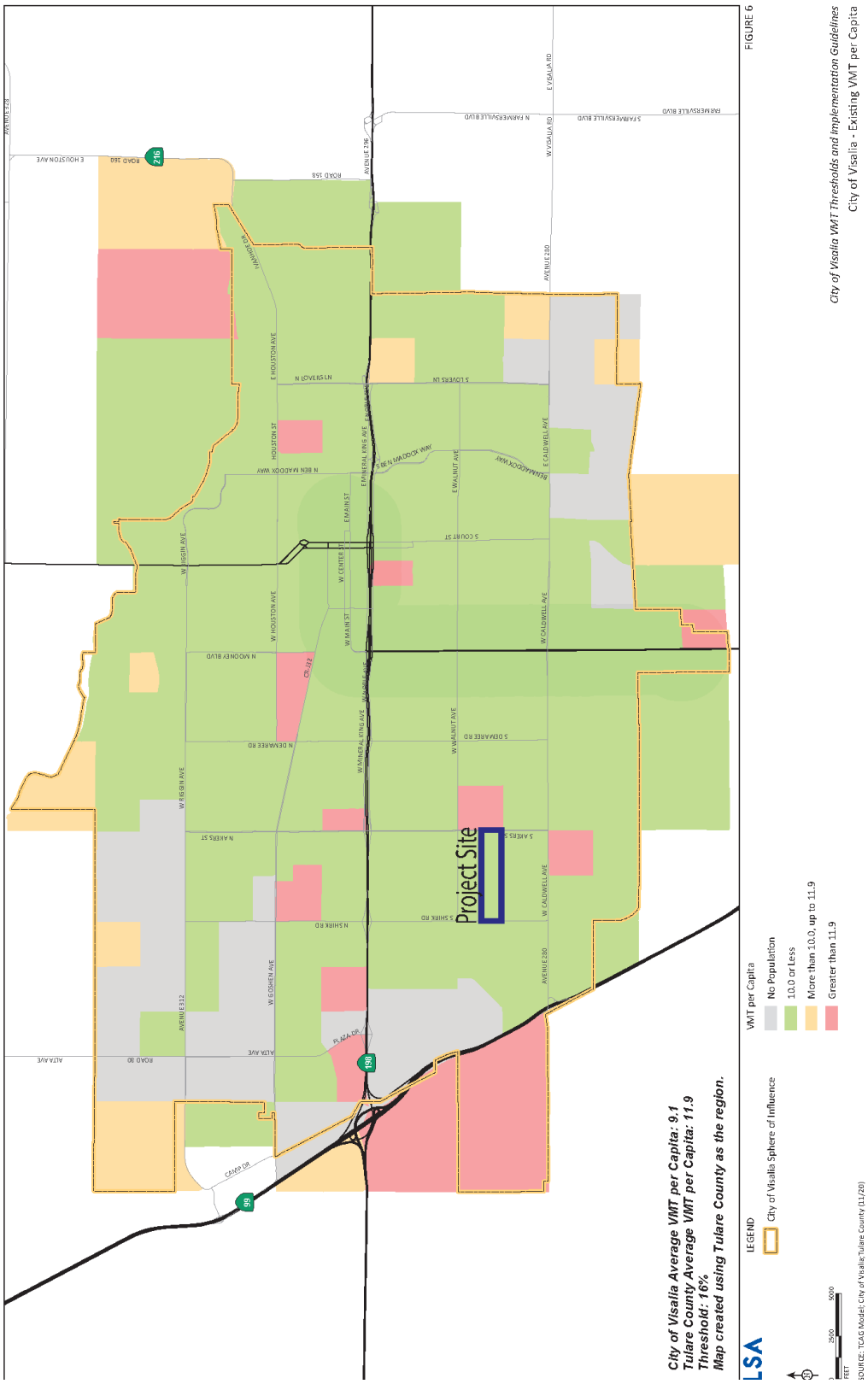


Figure 3-11: Visalia Existing VMT per Capita

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)?

No Impact: The project does not propose any incompatible uses or include any design features that could increase traffic hazards. The project does include two new vehicle access points on S Roeben Street and S Shirk Road. This improvement will be subject to review by the City's engineer to ensure the new access point does not pose any safety risks due to project design. The proposed project would not substantially increase hazards in or around the project area there is *no impact.*

d) Would the project result in inadequate emergency access?

No Impact: This project would not result in inadequate emergency access. Emergency access to the site would be via S Roeben Street and S Shirk Road. During the first phase of construction, the access on S Shirk Road would not be built yet. However, a temporary emergency access will connect to W Whitendale Avenue. A network of local roads within the proposed project property provides full access to all buildings within the development. The Project would have no impact on emergency access.

XVIII. TRIBAL CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
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 a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☑	☐	☐
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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☑	☐	☐

Environmental Setting

The Project area is in the Southern Valley Yokuts ethnographic territory of the San Joaquin Valley. The Yokuts are a sub-group of the Penutian language that covers much of coastal and central California and Oregon. The Yokuts were generally divided into three major groups, the Northern Valley Yokuts, the Southern Valley Yokuts, and the Foothill Yokuts. The Project area is likely within the Telamni Yokuts territory. The main village for this area was Waitatshuulul, which was approximately 3 miles east of the Project site along Packwood Creek Primary Yokuts villages were typically located along lakeshores and major stream courses, with scattered secondary or temporary camps and settlements located near gathering areas in the foothills. Prior to Euro-American contact, the Yokuts were one of the densest populations of Native Americans in western North America due to the substantial natural resources surrounding Tulare Lake. According to the Native American Heritage Commission, eight Native American tribal groups can be associated with the Project area, including the Big Sandy Rancheria of Western Mono Indians, the Dunlap Band of Mono Indians, the Tubatulabals of Kern Valley, the Wukasache Indian Tribe/Eshom Valley Band, the Kern Valley Indian Community, the Santa Rosa Rancheria Tachi Yokut Tribe, the North Fork Mono Tribe and the Tule River Indian Tribe.

Cultural Resources Record Search

On May 20, 2022, Taylored Archaeology requested a cultural resource records search from the SSJVIC of the CHRIS at California State University in Bakersfield, California. The purpose of this request was

to identify any prehistoric or historical resources on or near the Project site that had been previously recorded within the Project boundary and a 0.5-mile radius of the Project area and identify and review prior cultural resource investigations completed in or near the Project boundary. SSJVIC staff researched historical USGS topographic maps, reports of previous cultural resource investigations, archaeological site and survey base maps, cultural resource records (DPR forms) as well as listings of the Historic Properties Directory of the Office of Historic Preservation, General Land Office Maps, Archaeological Determinations of Eligibility, and the California Inventory of Historic Resources. According to the SSJVIC records search, there has been two previous cultural resource investigations within the Project area. One is a literature review of the Project region and the second is a book on conflicts between Native Americans and California gold miners during the 1850s Gold Rush in Mariposa. Neither of these reports included archaeological surveys. There have been five cultural resource studies conducted within a 0.5-mile radius of the project. There have been no cultural resources were previously recorded within the Project area. or within the 0.5-mile radius. Additionally, no recorded cultural resources are recorded within the Project There is two cultural resources within a 0.5-mile radius of the project site. Both are historic-era, rural, single-family residences. In addition to the SSJVIC research, Taylored Archaeology further reviewed the cultural resources 0.5-miles from the Project boundary. Using Google Earth aerial maps, one of the historic homes was determined to have been demolished in 2021.

Native American Consultation

The State requires lead agencies to consider the potential effects of proposed projects and consult with California Native American tribes during the local planning process for the purpose of protecting Traditional Tribal Cultural Resources through the California Environmental Quality Act (CEQA) Guidelines. Pursuant to PRC Section 21080.3.1, the lead agency shall begin consultation with the California Native American tribe that is traditionally and culturally affiliated with the geographical area of the proposed project. Such significant cultural resources are either sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a tribe which is either on or eligible for inclusion in the California Historic Register or local historic register, or, the lead agency, at its discretion, and support by substantial evidence, choose to treat the resources as a Tribal Cultural Resources (PRC Section 21074(a)(1-2)).

Additional information may also be available from the California Native American Heritage Commission's Sacred Lands File per PRC Section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that PRC Section 21082.3(c) contains provisions specific to confidentiality.

The site is currently vacant and has been routinely disturbed as part of the agricultural operations. If any artifacts are inadvertently discovered during ground-disturbing activities, existing federal, State, and local laws, and regulations as well as the mitigation measures will require construction activities to cease until such artifacts are properly examined and determined not to be of significance by a qualified cultural resource professional.

On May 20, 2022, Taylored Archaeology sent an email to the NAHC requesting a Sacred Lands File (SLF) search to identify places in or near the Project area that may be tribal cultural resources, including sacred sites or other resources of importance. The results of this search were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area.

Following AB 52, Native American Tribes that could potentially be impacted by the Project were contacted. The Tribes that were formally noticed of this Project were the Big Sandy Rancheria of Western Mono Indians, Santa Rosa Rancheria Tachi Yokut Tribe, Dunlap Band of Mono Indians, Tubatulabals of Kern Valley, Tule River Indian Tribe, Kern Valley Indian Community, North Fork Mono Tribe, and the Wuksache Indian Tribe/Eshom Valley Band.

The Santa Rosa Rancheria Tachi-Yokut Tribe responded regarding their concerns. A representative of the Tribe stated "Due to Tribal history and knowledge of the project area, the Tribe has concerns and is requesting that an archaeological firm be hired to conduct a pre-construction survey, a records search with the NAHC and CHRIS center, and monitoring of any ground disturbing activities. We request to be put in contact with the archaeological firm hired so we can maintain updates about the project."

Regulatory Setting

Historical Resources

Historical resources are defined by CEQA as resources that are listed in or eligible for the California Register of Historical Resources, resources that are listed in a local historical resource register, or resources that are otherwise determined to be historical under California Public Resources Code Section 21084.1 or California Code of Regulations Section 15064.5. Under these definitions Historical Resources can include archaeological resources, Tribal cultural resources, and Paleontological Resources.

Archaeological Resources

As stated above, archaeological resources may be considered historical resources. If they do not meet the qualifications under the California Public Resources Code 21084.1 or California Code of Regulations Section 15064.5, they are instead determined to be "unique" as defined by the CEQA Statute Section 21083.2. A unique archaeological resource is an artifact, object, or site that: (1) contains information (for which there is a demonstrable public interest) needed to answer important scientific research questions; (2) has a special and particular quality, such as being the oldest of its type or the best available example of its type; or (3) is directly associated with a scientifically recognized important prehistoric or historic event or person.

Tribal Cultural Resource (TCR)

Tribal Cultural Resources can include site features, places, cultural landscapes, sacred places, or objects, which are of cultural value to a Tribe. It is either listed on or eligible for the CA Historic Register or a local historic register or determined by the lead agency to be treated as TCR.

Paleontological Resources

For the purposes of this section, "paleontological resources" refers to the fossilized plant and animal remains of prehistoric species. Paleontological Resources are a limited scientific and educational resource and are valued for the information they yield about the history of the earth and its ecology. Fossilized remains, such as bones, teeth, shells, and leaves, are found in geologic deposits (i.e., rock formations). Paleontological resources generally include the geologic formations and localities in which the fossils are collected.

Native American Reserve (NAR)

This designation recognizes tribal trust and reservation lands managed by a Native American Tribe under the United States Department of the Interior's Bureau of Indian Affairs over which the County

has no land use jurisdiction. The County encourages adoption of tribal management plans for these areas that consider compatibility and impacts upon adjacent area facilities and plans.

National Historic Preservation Act

The National Historic Preservation Act was adopted in 1966 to preserve historic and archeological sites in the United States. The Act created the National Register of Historic Places, the list of National Historic Landmarks, and the State Historic Preservation offices.

California Historic Register

The California Historic Register was developed as a program to identify, evaluate, register, and protect Historical Resources in California. Historical resources may include, but are not limited to, "any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically or archaeologically significant" (PRC §5020.1[j]). In addition, a resource included in a local register of historical resources or identified as significant in a local survey conducted in accordance with the state guidelines are also considered historic resources under California Public Resources Code (PRC) Section 5020.1.

According to CEQA guidelines §15064.5 (a)(3), criteria for listing on the California Register of Historical Resources includes the following:

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

According to CEQA guidelines §21074 (a)(1), criteria for tribal cultural resources includes the following:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
    - Included or determined to be eligible for inclusion in the California Register of Historical Resources.
    - Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

Protection of cultural resources within California is additionally regulated by PRC §5097.5, which prohibits destruction, defacing, or removal of any historic or prehistoric cultural features on land under the jurisdiction of State or local authorities.

City of Visalia General Plan

The 2030 General Plan includes the policies related to tribal resources that correlate to the proposed project:

OSC-P-42: Establish requirements to avoid potential impacts to sites suspected of being archeologically, paleontologically, or historically significant or of concern, by:

- Requiring a records review for development proposed in areas that are considered archaeologically or paleontologically sensitive;
- Determining the potential effects of development and construction on archaeological or paleontological resources (as required by CEQA);
- Requiring pre-construction surveys and monitoring during any ground disturbance for all development in areas of historical and archaeological sensitivity (defined as areas identified according to the National Historic Preservation Act as part of the Section 106 process); and
- Implementing appropriate measures to avoid the identified impacts, as conditions of project approval.

Discussion

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 a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

Less Than Significant Impact with Mitigation: The project would not cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources. Based on the results of the records search, no previously recorded tribal cultural resources are located within the project site. Although no cultural resources were identified, the presence of remains or unanticipated cultural resources under the ground surface is possible. Therefore, Tribes that can potentially be impacted were consulted. The Santa Rosa Rancheria Tachi-Yokut Tribe responded regarding their concerns. A representative of the Tribe stated "Due to Tribal history and knowledge of the project area, the Tribe has concerns and is requesting that an archaeological firm be hired to conduct a pre-construction survey, a records search with the NAHC and CHRIS center, and monitoring of any ground disturbing activities. We request to be put in contact with the archaeological firm hired so we can maintain updates about the project." Implementation of Mitigation Measures CUL-1, CUL-2, CUL-3, and CUL-4 will ensure that impacts to this checklist item will be *less than significant with mitigation* incorporation.

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 Resource 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: The lead agency has not determined there to be any known tribal cultural resources located within the project area. Additionally, there are not believed to be any paleontological resources or human remains buried within the project area's vicinity. However, if resources were found to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resources to a California Native American Tribe. Implementation of Mitigation

Measures CUL-1 and CUL-2 will ensure that any impacts resulting from project implementation remain *less than significant with mitigation* incorporation.

Mitigation Measures for Impacts to Cultural Resources:

Mitigation Measure CUL-1: If previously unknown resources are encountered before or during grading activities, construction shall stop in the immediate vicinity of the find and a qualified historical resources specialist shall be consulted to determine whether the resource requires further study. The qualified historical resources specialist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines and the City's Historic Preservation Ordinance.

If the resources are determined to be unique historical resources as defined under Section 15064.5 of the CEQA Guidelines, measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any historical artifacts recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study.

Mitigation Measure CUL-2: In the event that human remains are unearthed during excavation and grading activities of any future development project, all activity shall cease immediately. Pursuant to Health and Safety Code (HSC) Section 7050.5, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98(a). If the remains are determined to be of Native American descent, the coroner shall within 24 hours notify the Native American Heritage Commission (NAHC). The NAHC shall then contact the most likely descendent of the deceased Native American, who shall then serve as the consultant on how to proceed with the remains. Pursuant to PRC Section 5097.98(b), upon the discovery of Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment.

Mitigation Measure CUL-3: Prior to the start of construction, an archaeological firm shall be hired to conduct a pre-construction survey and submit a comprehensive report to the lead agency for review and approval prior to the start of construction. This report should document the findings of the pre-construction survey and include an assessment of the potential impacts of the proposed project on any identified archaeological resources. The plan should outline specific measures that will be implemented, such as construction phasing, site buffering, and artifact preservation, to protect the cultural resources, if any are discovered. To ensure compliance, the project approval should require that the archaeological survey report and the associated plan be prepared by a qualified archaeologist and that the survey and monitoring activities be conducted in accordance with relevant state and federal regulations and best practices. By requiring a comprehensive archaeological survey report and

a detailed mitigation plan, the lead agency can ensure that any impacts to archaeological resources are avoided or minimized to the fullest extent possible.

Mitigation Measure CUL-4: During any ground disturbing activities, an archaeological firm shall be hired to monitor the Project Site. The monitoring should be conducted by a qualified archaeologist with experience in the region and in compliance with relevant state and federal regulations and best practices. The monitoring should include regular site inspections to identify any archaeological resources that may have been uncovered during ground-disturbing activities. If any resources are identified, the monitoring should also include documentation, mapping, and analysis of the resources, as well as the development of a mitigation plan to address any potential impacts to the resources.

XIX. UTILITIES AND SERVICE SYSTEMS

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

Environmental Setting

Wastewater

Sewer services are provided to the site by the City of Visalia. The City owns a Water Conservation Plant (WCP) to treat wastewater. Presently, the WCP's permitted capacity as established by the Regional Water Quality Control Board (RWQCB) is 20 million gallons per day (mgd). A planned upgrade will increase the capacity to 26 mgd. The WCP has a daily flow of 13 mgd. The City of Visalia operates a sewer system divided into eight service areas. The system currently has over 468 miles of sewer pipe.

Solid Waste

The City of Visalia provides residential waste pickup but has contracts with companies for other aspects. Sunset Waste Systems provides waste collection for commercial uses and processes recyclable material. Tulare County Compost and Biomass processes green waste.

The Tulare County Resource Management Agency manages some solid waste disposal. Programs include household hazardous waste disposal, electronics recycling, tire recovery, yard waste recycling, metal recycling and appliance recovery programs. The county landfills approximately 300,000 tons of waste per year, which is equivalent to about 5 pounds per person per day or one ton per county

resident per year. The County operates three disposal sites: the Visalia Disposal Site, northwest of Visalia; the Woodville Disposal Site, southeast of Tulare; and the Teapot Dome Disposal Site, southwest of Porterville. These sites have a remaining capacity of 24,258,052 cubic yards, with a total capacity of 37,101,523 cubic yards.

Water

The California Water Service Company (Cal Water) distribute groundwater supply. Cal Water's Visalia District supply wells extract groundwater from the Kaweah Groundwater Subbasin. The Cal Water system includes 75 operational groundwater wells, about one third of which have auxiliary power for backup. There are 519 miles of main pipeline in the system. The system includes two elevated 300,000-gallon storage tanks, an ion exchange treatment plant, four granular activated carbon filter plants and one nitrate blending facility.

The system currently has the capacity to pump 100,829 acre-feet per year (afy), all from groundwater. This will be able to supply a growing population, as in 2010, 31,762 AF was needed. By 2030, the city is expected to use 43,002 afy.

Regulatory Setting

CalRecycle

California Code of Regulations, Title 14, Natural Resources – Division 7 contains all current CalRecycle regulations regarding nonhazardous waste management in the state. These regulations include standards for the handling of solid waste, standards for the handling of compostable materials, design standards for disposal facilities, and disposal standards for specific types of waste.

Central Valley RWQCB

The Central Valley RWQCB requires a Stormwater Pollution Prevention Plan (SWPPP) for projects disturbing more than one acre of total land area. Because the project is greater than one acre, a SWPPP to manage stormwater generated during project construction will be required.

The Central Valley RWQCB regulates Wastewater Discharges to Land by establishing thresholds for discharged pollutants and implementing monitoring programs to evaluate program compliance. This program regulates approximately 1500 dischargers in the region.

The Central Valley RWQCB is also responsible for implementing the federal program, the National Pollutant Discharge Elimination System (NPDES). The NPDES Program is the federal permitting program that regulates discharges of pollutants to surface waters of the U.S. Under this program, a NPDES permit is required to discharge pollutants into Waters of the U.S. There are 350 permitted facilities within the Central Valley Region.

Cal Water Urban Water Management Plan (UWMP) – Visalia District

The UWMP describes the Visalia District service area, system demand and usage, available water resources, reliability of the water supply, and contingency planning for water shortage. It also contains a conservation section in compliance with SB X7-7 describing water usage reduction targets and implementation measures. The UWMP identifies five core programs for water conservation in the District that involve promotion of high-efficiency fixtures in residential settings, promotion of high-efficiency irrigation systems, and public information and education.

City of Visalia General Plan

The 2030 General Plan includes the objectives and policies related to utilities and service systems that correlate to the proposed project:

- *PSCU-O-14*: Provide for long-range community water needs by adopting best management practices for water use, conservation, groundwater recharge and wastewater and stormwater management.
- *PSCU-P-46:* Adopt and implement a Water Efficient Landscaping Ordinance for new and/or refurbished development that exceeds mandated sizes, and ensure that all new City parks, streetscapes, and landscaped areas conform to the Ordinance's requirements. The Ordinance should include provisions to optimize outdoor water use by:
    - Promoting appropriate use of plants and landscaping;
    - Establishing limitations on use of turf including size of turf areas and use of cool-season turf such as Fescue grasses, with exceptions for specified uses (e.g., recreation playing fields, golf courses, and parks);
    - Establishing water budgets and penalties for exceeding them;
    - Requiring automatic irrigation systems and schedules, including controllers that incorporate weather-based or other self-adjusting technology;
    - Promoting the use of recycled water; and
    - Minimizing overspray and runoff.
- *PSCU-P-59:* Require new developments to incorporate floodwater detention basins into project designs where consistent with the Stormwater Master Plan and the Groundwater Recharge Plan.
- *PSCU-P-60:* Control urban and stormwater runoff and point and non-point discharge of pollutants. As part of the City's Stormwater Management Program, adopt and implement a Stormwater Management Ordinance to minimize stormwater runoff rates and volumes, control water pollution, and maximize groundwater recharge. New development will be required to include Low Impact Development features that reduce impermeable surface areas and increase infiltration. Such features may include, but are not limited to:
    - Canopy trees or shrubs to absorb rainwater;
    - Grading that lengthens flow paths over permeable surfaces and increases runoff travel time to reduce the peak hour flow rate;
    - Partially removing curbs and gutters from parking areas where appropriate to allow stormwater sheet flow into vegetated areas;
    - Use of permeable paving in parking lots and other areas characterized by significant impervious surfaces;
    - On-site stormwater detention, use of bioswales and bioretention basins to facilitate infiltration; and
    - Integrated or subsurface water retention facilities to capture rainwater for use in landscape irrigation and other non-potable uses.

Discussion

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

Less than Significant Impact: The proposed project would result in new water services. However, the proposed site has no change of use proposal. Visalia's current system for water and wastewater have the capacity to manage the projected growth expected in the General Plan. To compensate for these services, new development will be required to pay impact fees. It is not anticipated that implementation of the proposed project would result in increased demand for any utility services beyond the planned conditions. 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: Cal Water will provide water services. The City's water supply source is comprised of 75 operational groundwater wells. The system currently has the capacity to pump 100,829 acre-feet per year (afy), all from groundwater. This will be able to supply a growing population, as in 2010, 31,762 AF was needed. By 2030, the city is expected to use 43,002 afy. Using average per-person water use in Visalia (183 gallons; 2020 Urban Water Management Plan) and the average household size in Visalia (2.99 persons; US Census Bureau), water demand for the proposed 136-unit residential development is estimated to be approximately 74,415 gallons of water daily, or about 83-acre feet per year. With the system capacity at 100,829 afy, there will be enough water supply for the proposed project. The project does not propose any new or expanded uses against the Visalia General Plan. The available water supply is expected to supply the projected population. In 2030, the projected demand is expected to 35,276 AF of groundwater, in 2035, there is expected to be 38,310 AF of groundwater, and in 2040 there is expected to be 41,258 AF of groundwater. To compensate for these services, new development will be required to pay impact fees for new water services, along with the reduced water use implementations from the polices set forth in the Visalia General Plan. Therefore, the impact is *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 project does not propose any new or expanded uses and is therefore not anticipated to result in increased demand for wastewater treatment services beyond existing conditions in the Visalia General Plan. Additionally, the City's MEIR has evaluated the site's current and future wastewater service demand. The current capacity of the wastewater system is approximately 20 mgd. It currently receives 13 mgd, leaving an available 7 mgd. In addition, a future upgrade plans to increase the capacity to 26 mgd. Based on the average per-acre daily wastewater use (1,300 gallons; City of Visalia General Plan), the 69.35-acre project would produce approximately 90,155 mgd of wastewater.

Because the City's sewer system has the capacity to meet the project site's expected demand for wastewater treatment, and it is not anticipated that the project will increase the site's demand for wastewater treatment, it can be inferred that the existing wastewater treatment system has adequate capacity to serve the proposed project. There is a *less than significant impact.*

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?

No Impact: Sunset Waste Systems provides solid waste services to the proposed project site. The project does not propose any new or expanded uses and is therefore not anticipated to result in increased generation of solid waste beyond existing conditions. Additionally, the disposal sites are at less than half capacity. 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 proposed project. The project would not generate solid waste more than State or Local Standards and there is *no impact.*

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

No Impact: This proposed project conforms to all applicable statutes and regulations related to solid waste disposal. The proposed project will comply with the adopted policies related to solid waste, and will comply with all applicable federal, state, and local statutes and regulations pertaining to disposal of solid waste, including recycling. Therefore, the proposed project would have *no impact* on solid waste regulations.

XX. WILDFIRE

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 Incorporation	Less than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☑
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☑
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☑	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☑

Environmental Setting

There are no State Responsibility Areas (SRAs) within the vicinity of the project site, and the project site is not categorized as a "Very High" Fire Hazard Severity Zone (FHSZ) by CalFire. This CEQA topic only applies to areas within an SRA or a Very High FHSZ.

Regulatory Setting

Fire Hazard Severity Zones: geographical areas designated pursuant to California Public Resources Codes Sections 4201 through 4204 and classified as Very High, High, or Moderate in State Responsibility Areas or as Local Agency Very High Fire Hazard Severity Zones designated pursuant to California Government Code, Sections 51175 through 51189.

Discussion

a) Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

No Impact: The project would not substantially impair an adopted emergency response plan or emergency evacuation plan. The Visalia Fire Department will review the project to ensure the project does not impair emergency response or emergency evacuation. Additionally, the proposed project site is not located within an SRA or a Very High FHSZ. There is *no impact.*

b) Due to slope, prevailing winds, and other factors, would the project exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

No Impact: The project is located on a flat area of agricultural and urban land which is considered to be at little risk of fire. Additionally, the proposed project site is not located within an SRA or a Very High FHSZ. There is *no impact.*

c) Would the project 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?

Less than Significant Impact: The construction of the project involves adding new local residential streets, and new and relocated utilities. Utilities such as emergency water sources and power lines would be included as part of the proposed development, however all improvements would be subject to City standards and Fire Chief approval. The proposed project would not exacerbate fire risk and the impact would be *less than significant.*

d) Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire instability, or drainage changes?

No Impact: The project site is not located in an area designated as a Fire Hazard Severity Zone and lands associated with the Project site are relatively flat. Therefore, the project would not be susceptible to downslope or downstream flooding or landslides as a result of post-fire instability or drainage changes. There is *no impact.*

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Does the project have the potential substantially to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☑	☐	☐
b) 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)?	☐	☐	☑	☐
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☑	☐

Discussion

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

Less than Significant Impact with Mitigation: This initial study/mitigated negative declaration found the project could have significant impacts on biological resources, hydrology and water quality, historical, and Tribal cultural resources. However, implementation of the identified mitigation measures for each respective section would ensure that impacts are *less than significant with mitigation incorporation.*

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(h) 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. Due to the nature of the project and consistency with environmental policies, incremental contributions to impacts are considered less than cumulatively considerable. The proposed project would not contribute substantially to adverse cumulative conditions, or create any substantial indirect impacts (i.e., increase in population could lead to an increased need for housing, increase in traffic, air pollutants, etc). Impacts would be *less than significant*.

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 analyses of environmental issues contained in this Initial Study indicate that the project is not expected to have substantial impact on human beings, either directly or indirectly. Mitigation measures have been incorporated in the project design to reduce all potentially significant impacts to less than significant, which results in a *less than significant* impact to this checklist item.

3.6 MITIGATION MONITORING AND REPORTING PROGRAM

As required by Public Resources Code Section 21081.6, subd. (a)(1), a Mitigation Monitoring and Reporting Program (MMRP) has been prepared for the project in order to monitor the implementation of the mitigation measures that have been adopted for the project. This Mitigation Monitoring and Reporting Program (MMRP) has been created based upon the findings of the Initial Study/Mitigated Negative Declaration (IS/MND) for the Barr-Wood Subdivision Project in the City of Visalia.

The first column of the table identifies the mitigation measure. The second column names the party responsible for carrying out the required action. The third column, "Timing of Mitigation Measure" identifies the time the mitigation measure should be initiated. The fourth column, "Responsible Party for Monitoring," names the party ensuring that the mitigation measure is implemented. The last column will be used by the City to ensure that the individual mitigation measures have been monitored.

Plan checking and verification of mitigation compliance shall be the responsibility of the City of Visalia.

Mitigation Measure	Responsible Party for Implementation	Implementation Timing	Responsible Party for Monitoring	Verification
Mitigation Measure CUL-1: If previously unknown resources are encountered before or during grading activities, construction shall stop in the immediate vicinity of the find and a qualified historical resources specialist shall be consulted to determine whether the resource requires further study. The qualified historical resources specialist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines and the City's Historic Preservation Ordinance. If the resources are determined to be unique historical resources as defined under Section 15064.5 of the CEQA Guidelines, measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any historical artifacts recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study.	Project Applicant	Ongoing during construction	Contractor/ Lead Agency	
Mitigation Measure CUL-2: In the event that human remains are unearthed during excavation and grading activities of any future development project, all activity shall cease immediately. Pursuant to Health and Safety Code (HSC) Section 7050.5, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98(a). If the remains are determined to be of Native American descent, the coroner shall within 24 hours notify the Native American Heritage Commission (NAHC). The NAHC shall then contact the most likely descendent of the deceased Native American, who shall then serve as the consultant on how to proceed with the remains. Pursuant to PRC Section 5097.98(b), upon the discovery of Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment.	Project Applicant	Ongoing during construction	Contractor/ Lead Agency	

Mitigation Measure	Responsible Party for Implementation	Implementation Timing	Responsible Party for Monitoring	Verification
Mitigation Measure CUL-3: Prior to the start of construction, an archaeological firm shall be hired to conduct a pre-construction survey and submit a comprehensive report to the lead agency for review and approval prior to the start of construction. This report should document the findings of the pre-construction survey and include an assessment of the potential impacts of the proposed project on any identified archaeological resources. The plan should outline specific measures that will be implemented, such as construction phasing, site buffering, and artifact preservation, to protect the cultural resources, if any are discovered. To ensure compliance, the project approval should require that the archaeological survey report and the associated plan be prepared by a qualified archaeologist and that the survey and monitoring activities be conducted in accordance with relevant state and federal regulations and best practices. By requiring a comprehensive archaeological survey report and a detailed mitigation plan, the lead agency can ensure that any impacts to archaeological resources are avoided or minimized to the fullest extent possible.	Project Applicant	Prior to the Start of Construction	Contractor/ Lead Agency	
Mitigation Measure CUL-4: During any ground disturbing activities, an archaeological firm shall be hired to monitor the Project Site. The monitoring should be conducted by a qualified archaeologist with experience in the region and in compliance with relevant state and federal regulations and best practices. The monitoring should include regular site inspections to identify any archaeological resources that may have been uncovered during ground-disturbing activities. If any resources are identified, the monitoring should also include documentation, mapping, and analysis of the resources, as well as the development of a mitigation plan to address any potential impacts to the resources.	Project Applicant	Ongoing during construction	Contractor/ Lead Agency	
Mitigation Measure HYD-1: Prior to the issuance of any construction/grading permit and/or the commencement of any clearing, grading, or excavation, the Applicant shall submit a Notice of Intent (NOI) for discharge from the Project site to the California SWRCB Storm Water Permit Unit. • Prior to issuance of grading permits for Phase 1 the Applicant shall submit a copy of the NOI to the City. • The City shall review noticing documentation prior to approval of the grading permit. City monitoring staff will inspect the site during construction for compliance.	Project Applicant	Prior to the Start of Construction	Contractor/ Lead Agency	

Mitigation Measure	Responsible Party for Implementation	Implementation Timing	Responsible Party for Monitoring	Verification
Mitigation Measure HYD-2: The Applicant shall require the building contractor to prepare and submit a Storm Water Pollution Prevention Plan (SWPPP) to the City 45 days prior to the start of work for approval. The contractor is responsible for understanding the State General Permit and instituting the SWPPP during construction. A SWPPP for site construction shall be developed prior to the initiation of grading and implemented for all construction activity on the Project site in excess of one (1) acre, or where the area of disturbance is less than one acre but is part of the Project's plan of development that in total disturbs one or more acres. The SWPPP shall identify potential pollutant sources that may affect the quality of discharges to storm water and shall include specific BMPs to control the discharge of material from the site. The following BMP methods shall include, but would not be limited to: • Dust control measures will be implemented to ensure success of all onsite activities to control fugitive dust; • A routine monitoring plan will be implemented to ensure success of all onsite erosion and sedimentation control measures; • Provisional detention basins, straw bales, erosion control blankets, mulching, silt fencing, sand bagging, and soil stabilizers will be used; • Soil stockpiles and graded slopes will be covered after two weeks of inactivity and 24 hours prior to and during extreme weather conditions; and, • BMPs will be strictly followed to prevent spills and discharges of pollutants onsite, such as material storage, trash disposal, construction entrances, etc.	Project Applicant	45 Days Prior to the Start of Construction	Contractor/ Lead Agency	

Mitigation Measure	Responsible Party for Implementation	Implementation Timing	Responsible Party for Monitoring	Verification
Mitigation Measure HYD-3: A Development Maintenance Manual for the Project shall include comprehensive procedures for maintenance and operations of any stormwater facilities to ensure long-term operation and maintenance of post-construction stormwater controls. The maintenance manual shall require that stormwater BMP devices be inspected, cleaned, and maintained in accordance with the manufacturer's maintenance conditions. The manual shall require that devices be cleaned prior to the onset of the rainy season (i.e., mid-October) and immediately after the end of the rainy season (i.e., mid-May). The manual shall also require that all devices be checked after major storm events. The Development Maintenance Manual shall include the following: • Runoff shall be directed away from trash and loading dock areas; • Bins shall be lined or otherwise constructed to reduce leaking of liquid wastes; • Trash and loading dock areas shall be screened or walled to minimize offsite transport of trash; and • Impervious berms, trench catch basin, drop inlets, or overflow containment structures nearby docks and trash areas shall be installed to minimize the potential for leaks, spills or wash down water to enter the drainage system.	Project Applicant	Prior to the Start of Construction	Contractor/ Lead Agency	

3.7 Supporting Information and Sources

1. AB 3098 List
2. EMFAC2014
3. Tulare County General Plan
4. City of Visalia General Plan
5. City of Visalia General Plan MEIR
6. City of Visalia Greenhouse Gas Reduction Plan
7. City of Visalia Zoning Ordinance
8. Engineering Standards, City of Visalia
9. SJVAPCD Regulations and Guidelines
10. FEMA Flood Maps
11. California Air Resources Board's (CARB's) Air Quality and Land Use Handbook
12. 2019 California Environmental Quality Act CEQA Guidelines
13. California Building Code
14. California Stormwater Pollution Prevention Program (SWPPP)
15. "Construction Noise Handbook." U.S. Department of Transportation/Federal Highway Administration.
16. Government Code Section 65962.5
17. California Environmental Protection Agency (CEPA) San Joaquin Valley Air Pollution Control District Mitigation Measures (http://www.valleyair.org/transportation/Mitigation-Measures.pdf
18. Southern California Edison 2019 Power Content Label
19. Transit Noise and Vibration Impact Assessment, Federal Transit Administration, September 2018.
20. 2020 U.S. Census
21. California Department of Transportation Scenic Roadways
22. EPA, Intergovernmental Panel on Climate Change
23. 2020 Cal Water Urban Water Management Plan (UWMP) – Visalia District
24. State of California Governor's Office of Planning and Research
25. Phase I Cultural Resource Assessment - Consuelo Y. Sauls, Taylored Archaeology
26. Biological Resource Assessment – Soar Environmental Consulting

Section 4

List of Preparers

City of Visalia
315 E Acequia Ave
Visalia, CA 93291

SECTION 4
List of Preparers

Project Title: Barr-Wood Subdivision

List of Preparers

4-Creeks Inc.

- David Duda, AICP, GISP
- Steve Macias, Civil Engineer
- Molly McDonnel, Associate Planner
- Lisa M. Wallis-Dutra, Sr. Traffic Engineer

Persons and Agencies Consulted

The following individuals and agencies contributed to this Initial Study/Mitigated Negative Declaration:

City of Visalia

- Cristobal Carrillo, Planning Division
- Brandon Smith, Planning Division
- Leslie Blair, Senior Civil Engineer
- Adrian Rubalcaba, Associate Engineer

Taylored Archaeology

- Consuelo Y. Sauls, Archaeologist

California Historic Resources Information System

- Celeste Thomson, Coordinator

SOAR Environmental Consulting

- Ben Arax, Biologist

Appendix A

CalEEMod Report

Part 1

Projected Emissions from CalEEMod

Barr-Wood Subdivision - Tulare County, Annual

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

Barr-Wood Subdivision

Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	136.00	Dwelling Unit	69.35	244,800.00	389

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	51
Climate Zone	7			**Operational Year**	2030
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot Acerage Established

Construction Phase -

Off-road Equipment -

Trips and VMT -

Grading -

Fleet Mix - District Accepted Fleet Mix for Residential Projects

Woodstoves -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

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

Table Name	Column Name	Default Value	New Value
tblFleetMix	HHD	0.02	0.02
tblFleetMix	LDA	0.55	0.51
tblFleetMix	LDT1	0.05	0.22
tblFleetMix	LDT2	0.17	0.17
tblFleetMix	LHD1	0.02	8.0000e-004
tblFleetMix	LHD2	6.6100e-003	1.0000e-003
tblFleetMix	MCY	0.02	2.5000e-003
tblFleetMix	MDV	0.14	0.06
tblFleetMix	MH	2.8150e-003	3.0000e-003
tblFleetMix	MHD	0.01	7.4000e-003
tblFleetMix	OBUS	6.1700e-004	0.00
tblFleetMix	SBUS	1.2780e-003	1.2000e-003
tblFleetMix	UBUS	4.6500e-004	4.4000e-003
tblLandUse	LotAcreage	44.16	69.35

2.0 Emissions Summary

Barr-Wood Subdivision - Tulare County, Annual

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

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.3378	3.2874	2.9256	6.1100e-003	0.9379	0.1426	1.0805	0.4134	0.1320	0.5454	0.0000	536.9894	536.9894	0.1500	3.2600e-003	541.7105
2024	0.2155	1.8635	2.3049	4.3500e-003	0.0641	0.0812	0.1453	0.0174	0.0764	0.0937	0.0000	381.3573	381.3573	0.0732	6.8600e-003	385.2317
2025	0.1995	1.7273	2.2724	4.3100e-003	0.0639	0.0697	0.1335	0.0173	0.0655	0.0828	0.0000	378.3617	378.3617	0.0724	6.6300e-003	382.1490
2026	0.1980	1.7254	2.2622	4.2900e-003	0.0639	0.0696	0.1335	0.0173	0.0655	0.0828	0.0000	376.6949	376.6949	0.0723	6.4500e-003	380.4235
2027	0.1843	1.6200	2.1993	4.0700e-003	0.0556	0.0670	0.1226	0.0150	0.0629	0.0779	0.0000	357.4469	357.4469	0.0744	5.2400e-003	360.8672
2028	2.3192	0.1725	0.2979	4.9000e-004	4.7800e-003	8.2300e-003	0.0130	1.2700e-003	7.7200e-003	8.9900e-003	0.0000	43.0118	43.0118	0.0103	9.0000e-005	43.2953
Maximum	**2.3192**	**3.2874**	**2.9256**	**6.1100e-003**	**0.9379**	**0.1426**	**1.0805**	**0.4134**	**0.1320**	**0.5454**	**0.0000**	**536.9894**	**536.9894**	**0.1500**	**6.8600e-003**	**541.7105**

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

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.3378	3.2874	2.9256	6.1100e-003	0.9379	0.1426	1.0805	0.4134	0.1320	0.5454	0.0000	536.9888	536.9888	0.1500	3.2600e-003	541.7099
2024	0.2155	1.8635	2.3049	4.3500e-003	0.0641	0.0812	0.1453	0.0174	0.0764	0.0937	0.0000	381.3569	381.3569	0.0732	6.8600e-003	385.2314
2025	0.1995	1.7273	2.2724	4.3100e-003	0.0639	0.0697	0.1335	0.0173	0.0655	0.0828	0.0000	378.3614	378.3614	0.0724	6.6300e-003	382.1486
2026	0.1980	1.7254	2.2622	4.2900e-003	0.0639	0.0696	0.1335	0.0173	0.0655	0.0828	0.0000	376.6945	376.6945	0.0723	6.4500e-003	380.4232
2027	0.1843	1.6200	2.1993	4.0700e-003	0.0556	0.0670	0.1226	0.0150	0.0629	0.0779	0.0000	357.4465	357.4465	0.0744	5.2400e-003	360.8668
2028	2.3192	0.1725	0.2979	4.9000e-004	4.7800e-003	8.2300e-003	0.0130	1.2700e-003	7.7200e-003	8.9900e-003	0.0000	43.0117	43.0117	0.0103	9.0000e-005	43.2952
Maximum	**2.3192**	**3.2874**	**2.9256**	**6.1100e-003**	**0.9379**	**0.1426**	**1.0805**	**0.4134**	**0.1320**	**0.5454**	**0.0000**	**536.9888**	**536.9888**	**0.1500**	**6.8600e-003**	**541.7099**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-1-2023**	**3-31-2023**	1.0696	1.0696
2	**4-1-2023**	**6-30-2023**	1.2339	1.2339
3	**7-1-2023**	**9-30-2023**	0.7667	0.7667
4	**10-1-2023**	**12-31-2023**	0.5577	0.5577
5	**1-1-2024**	**3-31-2024**	0.5167	0.5167

Barr-Wood Subdivision - Tulare County, Annual

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

6	**4-1-2024**	**6-30-2024**	0.5154	0.5154
7	**7-1-2024**	**9-30-2024**	0.5211	0.5211
8	**10-1-2024**	**12-31-2024**	0.5224	0.5224
9	**1-1-2025**	**3-31-2025**	0.4755	0.4755
10	**4-1-2025**	**6-30-2025**	0.4795	0.4795
11	**7-1-2025**	**9-30-2025**	0.4847	0.4847
12	**10-1-2025**	**12-31-2025**	0.4860	0.4860
13	**1-1-2026**	**3-31-2026**	0.4746	0.4746
14	**4-1-2026**	**6-30-2026**	0.4786	0.4786
15	**7-1-2026**	**9-30-2026**	0.4839	0.4839
16	**10-1-2026**	**12-31-2026**	0.4852	0.4852
17	**1-1-2027**	**3-31-2027**	0.4738	0.4738
18	**4-1-2027**	**6-30-2027**	0.4778	0.4778
19	**7-1-2027**	**9-30-2027**	0.4831	0.4831
20	**10-1-2027**	**12-31-2027**	0.3678	0.3678
21	**1-1-2028**	**3-31-2028**	1.2393	1.2393
22	**4-1-2028**	**6-30-2028**	1.2526	1.2526
		Highest	1.2526	1.2526

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	9.6109	0.1577	10.2823	0.0150		1.2772	1.2772		1.2772	1.2772	112.9917	60.5657	173.5575	2.7000e-003	0.0111	176.9179
Energy	0.0174	0.1489	0.0634	9.5000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	363.9391	363.9391	0.0195	5.1200e-003	365.9517
Mobile	0.2770	0.5508	3.4586	0.0105	1.3295	7.1700e-003	1.3367	0.3549	6.6900e-003	0.3616	0.0000	1,037.9700	1,037.9700	0.0520	0.0449	1,052.6486
Waste						0.0000	0.0000		0.0000	0.0000	28.4269	0.0000	28.4269	1.6800	0.0000	70.4263
Water						0.0000	0.0000		0.0000	0.0000	2.8112	11.9706	14.7817	0.2897	6.9400e-003	24.0935
Total	**9.9053**	**0.8574**	**13.8043**	**0.0265**	**1.3295**	**1.2964**	**2.6259**	**0.3549**	**1.2959**	**1.6509**	**144.2298**	**1,474.4453**	**1,618.6751**	**2.0439**	**0.0680**	**1,690.0380**

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

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	9.6109	0.1577	10.2823	0.0150		1.2772	1.2772		1.2772	1.2772	112.9917	60.5657	173.5575	2.7000e-003	0.0111	176.9179
Energy	0.0174	0.1489	0.0634	9.5000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	363.9391	363.9391	0.0195	5.1200e-003	365.9517
Mobile	0.2663	0.4632	2.9075	8.2300e-003	1.0306	5.7200e-003	1.0363	0.2751	5.3400e-003	0.2805	0.0000	811.8840	811.8840	0.0442	0.0373	824.1087
Waste						0.0000	0.0000		0.0000	0.0000	28.4269	0.0000	28.4269	1.6800	0.0000	70.4263
Water						0.0000	0.0000		0.0000	0.0000	2.8112	11.9706	14.7817	0.2897	6.9400e-003	24.0935
Total	**9.8945**	**0.7699**	**13.2531**	**0.0242**	**1.0306**	**1.2950**	**2.3256**	**0.2751**	**1.2946**	**1.5697**	**144.2298**	**1,248.3594**	**1,392.5891**	**2.0360**	**0.0604**	**1,461.4981**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.11**	**10.21**	**3.99**	**8.64**	**22.48**	**0.11**	**11.44**	**22.49**	**0.10**	**4.92**	**0.00**	**15.33**	**13.97**	**0.38**	**11.15**	**13.52**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2023	2/24/2023	5	40	
2	Grading	Grading	2/25/2023	7/28/2023	5	110	
3	Building Construction	Building Construction	7/29/2023	10/29/2027	5	1110	

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

4	Paving	Paving	10/30/2027	2/11/2028	5	75	
5	Architectural Coating	Architectural Coating	2/12/2028	5/26/2028	5	75	

Acres of Grading (Site Preparation Phase): 60

Acres of Grading (Grading Phase): 330

Acres of Paving: 0

Residential Indoor: 495,720; Residential Outdoor: 165,240; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

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

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	49.00	15.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3931	0.0000	0.3931	0.2021	0.0000	0.2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0532	0.5505	0.3649	7.6000e-004		0.0253	0.0253		0.0233	0.0233	0.0000	66.9014	66.9014	0.0216	0.0000	67.4423
Total	**0.0532**	**0.5505**	**0.3649**	**7.6000e-004**	**0.3931**	**0.0253**	**0.4185**	**0.2021**	**0.0233**	**0.2253**	**0.0000**	**66.9014**	**66.9014**	**0.0216**	**0.0000**	**67.4423**

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

3.2 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2600e-003	8.8000e-004	9.8200e-003	2.0000e-005	2.8700e-003	1.0000e-005	2.8800e-003	7.6000e-004	1.0000e-005	7.8000e-004	0.0000	2.3060	2.3060	8.0000e-005	7.0000e-005	2.3299
Total	**1.2600e-003**	**8.8000e-004**	**9.8200e-003**	**2.0000e-005**	**2.8700e-003**	**1.0000e-005**	**2.8800e-003**	**7.6000e-004**	**1.0000e-005**	**7.8000e-004**	**0.0000**	**2.3060**	**2.3060**	**8.0000e-005**	**7.0000e-005**	**2.3299**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3931	0.0000	0.3931	0.2021	0.0000	0.2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0532	0.5505	0.3649	7.6000e-004		0.0253	0.0253		0.0233	0.0233	0.0000	66.9013	66.9013	0.0216	0.0000	67.4422
Total	**0.0532**	**0.5505**	**0.3649**	**7.6000e-004**	**0.3931**	**0.0253**	**0.4185**	**0.2021**	**0.0233**	**0.2253**	**0.0000**	**66.9013**	**66.9013**	**0.0216**	**0.0000**	**67.4422**

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

3.2 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2600e-003	8.8000e-004	9.8200e-003	2.0000e-005	2.8700e-003	1.0000e-005	2.8800e-003	7.6000e-004	1.0000e-005	7.8000e-004	0.0000	2.3060	2.3060	8.0000e-005	7.0000e-005	2.3299
Total	**1.2600e-003**	**8.8000e-004**	**9.8200e-003**	**2.0000e-005**	**2.8700e-003**	**1.0000e-005**	**2.8800e-003**	**7.6000e-004**	**1.0000e-005**	**7.8000e-004**	**0.0000**	**2.3060**	**2.3060**	**8.0000e-005**	**7.0000e-005**	**2.3299**

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5062	0.0000	0.5062	0.2010	0.0000	0.2010	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1827	1.8984	1.5428	3.4100e-003		0.0784	0.0784		0.0721	0.0721	0.0000	299.9437	299.9437	0.0970	0.0000	302.3688
Total	**0.1827**	**1.8984**	**1.5428**	**3.4100e-003**	**0.5062**	**0.0784**	**0.5846**	**0.2010**	**0.0721**	**0.2730**	**0.0000**	**299.9437**	**299.9437**	**0.0970**	**0.0000**	**302.3688**

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

3.3 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8400e-003	2.7000e-003	0.0300	8.0000e-005	8.7600e-003	5.0000e-005	8.8100e-003	2.3300e-003	4.0000e-005	2.3700e-003	0.0000	7.0461	7.0461	2.4000e-004	2.3000e-004	7.1192
Total	**3.8400e-003**	**2.7000e-003**	**0.0300**	**8.0000e-005**	**8.7600e-003**	**5.0000e-005**	**8.8100e-003**	**2.3300e-003**	**4.0000e-005**	**2.3700e-003**	**0.0000**	**7.0461**	**7.0461**	**2.4000e-004**	**2.3000e-004**	**7.1192**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5062	0.0000	0.5062	0.2010	0.0000	0.2010	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1827	1.8984	1.5428	3.4100e-003		0.0784	0.0784		0.0721	0.0721	0.0000	299.9433	299.9433	0.0970	0.0000	302.3685
Total	**0.1827**	**1.8984**	**1.5428**	**3.4100e-003**	**0.5062**	**0.0784**	**0.5846**	**0.2010**	**0.0721**	**0.2730**	**0.0000**	**299.9433**	**299.9433**	**0.0970**	**0.0000**	**302.3685**

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

3.3 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8400e-003	2.7000e-003	0.0300	8.0000e-005	8.7600e-003	5.0000e-005	8.8100e-003	2.3300e-003	4.0000e-005	2.3700e-003	0.0000	7.0461	7.0461	2.4000e-004	2.3000e-004	7.1192
Total	**3.8400e-003**	**2.7000e-003**	**0.0300**	**8.0000e-005**	**8.7600e-003**	**5.0000e-005**	**8.8100e-003**	**2.3300e-003**	**4.0000e-005**	**2.3700e-003**	**0.0000**	**7.0461**	**7.0461**	**2.4000e-004**	**2.3000e-004**	**7.1192**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0865	0.7912	0.8934	1.4800e-003		0.0385	0.0385		0.0362	0.0362	0.0000	127.4926	127.4926	0.0303	0.0000	128.2508
Total	**0.0865**	**0.7912**	**0.8934**	**1.4800e-003**		**0.0385**	**0.0385**		**0.0362**	**0.0362**	**0.0000**	**127.4926**	**127.4926**	**0.0303**	**0.0000**	**128.2508**

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

3.4 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.3000e-004	0.0372	0.0112	1.7000e-004	5.4500e-003	2.4000e-004	5.6900e-003	1.5800e-003	2.3000e-004	1.8000e-003	0.0000	16.0366	16.0366	7.0000e-005	2.4100e-003	16.7572
Worker	9.4200e-003	6.6100e-003	0.0735	1.9000e-004	0.0215	1.1000e-004	0.0216	5.7100e-003	1.0000e-004	5.8100e-003	0.0000	17.2630	17.2630	5.9000e-004	5.5000e-004	17.4421
Total	**0.0104**	**0.0438**	**0.0847**	**3.6000e-004**	**0.0269**	**3.5000e-004**	**0.0273**	**7.2900e-003**	**3.3000e-004**	**7.6100e-003**	**0.0000**	**33.2996**	**33.2996**	**6.6000e-004**	**2.9600e-003**	**34.1993**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0865	0.7912	0.8934	1.4800e-003		0.0385	0.0385		0.0362	0.0362	0.0000	127.4925	127.4925	0.0303	0.0000	128.2507
Total	**0.0865**	**0.7912**	**0.8934**	**1.4800e-003**		**0.0385**	**0.0385**		**0.0362**	**0.0362**	**0.0000**	**127.4925**	**127.4925**	**0.0303**	**0.0000**	**128.2507**

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

3.4 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.3000e-004	0.0372	0.0112	1.7000e-004	5.4500e-003	2.4000e-004	5.6900e-003	1.5800e-003	2.3000e-004	1.8000e-003	0.0000	16.0366	16.0366	7.0000e-005	2.4100e-003	16.7572
Worker	9.4200e-003	6.6100e-003	0.0735	1.9000e-004	0.0215	1.1000e-004	0.0216	5.7100e-003	1.0000e-004	5.8100e-003	0.0000	17.2630	17.2630	5.9000e-004	5.5000e-004	17.4421
Total	**0.0104**	**0.0438**	**0.0847**	**3.6000e-004**	**0.0269**	**3.5000e-004**	**0.0273**	**7.2900e-003**	**3.3000e-004**	**7.6100e-003**	**0.0000**	**33.2996**	**33.2996**	**6.6000e-004**	**2.9600e-003**	**34.1993**

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1928	1.7611	2.1179	3.5300e-003		0.0803	0.0803		0.0756	0.0756	0.0000	303.7223	303.7223	0.0718	0.0000	305.5179
Total	**0.1928**	**1.7611**	**2.1179**	**3.5300e-003**		**0.0803**	**0.0803**		**0.0756**	**0.0756**	**0.0000**	**303.7223**	**303.7223**	**0.0718**	**0.0000**	**305.5179**

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

3.4 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1500e-003	0.0885	0.0261	3.9000e-004	0.0130	5.7000e-004	0.0136	3.7600e-003	5.4000e-004	4.3000e-003	0.0000	37.6071	37.6071	1.7000e-004	5.6500e-003	39.2950
Worker	0.0206	0.0138	0.1609	4.3000e-004	0.0511	2.5000e-004	0.0514	0.0136	2.3000e-004	0.0138	0.0000	40.0278	40.0278	1.2500e-003	1.2100e-003	40.4189
Total	**0.0227**	**0.1023**	**0.1870**	**8.2000e-004**	**0.0641**	**8.2000e-004**	**0.0649**	**0.0174**	**7.7000e-004**	**0.0181**	**0.0000**	**77.6350**	**77.6350**	**1.4200e-003**	**6.8600e-003**	**79.7139**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1928	1.7611	2.1179	3.5300e-003		0.0803	0.0803		0.0756	0.0756	0.0000	303.7220	303.7220	0.0718	0.0000	305.5175
Total	**0.1928**	**1.7611**	**2.1179**	**3.5300e-003**		**0.0803**	**0.0803**		**0.0756**	**0.0756**	**0.0000**	**303.7220**	**303.7220**	**0.0718**	**0.0000**	**305.5175**

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

3.4 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1500e-003	0.0885	0.0261	3.9000e-004	0.0130	5.7000e-004	0.0136	3.7600e-003	5.4000e-004	4.3000e-003	0.0000	37.6071	37.6071	1.7000e-004	5.6500e-003	39.2950
Worker	0.0206	0.0138	0.1609	4.3000e-004	0.0511	2.5000e-004	0.0514	0.0136	2.3000e-004	0.0138	0.0000	40.0278	40.0278	1.2500e-003	1.2100e-003	40.4189
Total	**0.0227**	**0.1023**	**0.1870**	**8.2000e-004**	**0.0641**	**8.2000e-004**	**0.0649**	**0.0174**	**7.7000e-004**	**0.0181**	**0.0000**	**77.6350**	**77.6350**	**1.4200e-003**	**6.8600e-003**	**79.7139**

3.4 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

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

3.4 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1000e-003	0.0878	0.0255	3.8000e-004	0.0129	5.7000e-004	0.0135	3.7400e-003	5.4000e-004	4.2800e-003	0.0000	36.8016	36.8016	1.6000e-004	5.5200e-003	38.4509
Worker	0.0189	0.0122	0.1479	4.1000e-004	0.0509	2.4000e-004	0.0512	0.0135	2.2000e-004	0.0138	0.0000	38.9052	38.9052	1.1200e-003	1.1100e-003	39.2646
Total	**0.0210**	**0.1000**	**0.1734**	**7.9000e-004**	**0.0639**	**8.1000e-004**	**0.0647**	**0.0173**	**7.6000e-004**	**0.0180**	**0.0000**	**75.7068**	**75.7068**	**1.2800e-003**	**6.6300e-003**	**77.7155**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

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

3.4 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1000e-003	0.0878	0.0255	3.8000e-004	0.0129	5.7000e-004	0.0135	3.7400e-003	5.4000e-004	4.2800e-003	0.0000	36.8016	36.8016	1.6000e-004	5.5200e-003	38.4509
Worker	0.0189	0.0122	0.1479	4.1000e-004	0.0509	2.4000e-004	0.0512	0.0135	2.2000e-004	0.0138	0.0000	38.9052	38.9052	1.1200e-003	1.1100e-003	39.2646
Total	**0.0210**	**0.1000**	**0.1734**	**7.9000e-004**	**0.0639**	**8.1000e-004**	**0.0647**	**0.0173**	**7.6000e-004**	**0.0180**	**0.0000**	**75.7068**	**75.7068**	**1.2800e-003**	**6.6300e-003**	**77.7155**

3.4 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

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

3.4 Building Construction - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0500e-003	0.0872	0.0251	3.8000e-004	0.0129	5.6000e-004	0.0135	3.7400e-003	5.4000e-004	4.2800e-003	0.0000	36.1232	36.1232	1.6000e-004	5.4100e-003	37.7395
Worker	0.0175	0.0109	0.1380	4.0000e-004	0.0509	2.2000e-004	0.0512	0.0135	2.1000e-004	0.0138	0.0000	37.9168	37.9168	1.0100e-003	1.0400e-003	38.2505
Total	**0.0196**	**0.0981**	**0.1631**	**7.8000e-004**	**0.0639**	**7.8000e-004**	**0.0647**	**0.0173**	**7.5000e-004**	**0.0180**	**0.0000**	**74.0400**	**74.0400**	**1.1700e-003**	**6.4500e-003**	**75.9900**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

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

3.4 Building Construction - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0500e-003	0.0872	0.0251	3.8000e-004	0.0129	5.6000e-004	0.0135	3.7400e-003	5.4000e-004	4.2800e-003	0.0000	36.1232	36.1232	1.6000e-004	5.4100e-003	37.7395
Worker	0.0175	0.0109	0.1380	4.0000e-004	0.0509	2.2000e-004	0.0512	0.0135	2.1000e-004	0.0138	0.0000	37.9168	37.9168	1.0100e-003	1.0400e-003	38.2505
Total	**0.0196**	**0.0981**	**0.1631**	**7.8000e-004**	**0.0639**	**7.8000e-004**	**0.0647**	**0.0173**	**7.5000e-004**	**0.0180**	**0.0000**	**74.0400**	**74.0400**	**1.1700e-003**	**6.4500e-003**	**75.9900**

3.4 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1477	1.3467	1.7371	2.9100e-003		0.0570	0.0570		0.0536	0.0536	0.0000	250.4730	250.4730	0.0589	0.0000	251.9450
Total	**0.1477**	**1.3467**	**1.7371**	**2.9100e-003**		**0.0570**	**0.0570**		**0.0536**	**0.0536**	**0.0000**	**250.4730**	**250.4730**	**0.0589**	**0.0000**	**251.9450**

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

3.4 Building Construction - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.6700e-003	0.0716	0.0205	3.1000e-004	0.0107	4.6000e-004	0.0112	3.1000e-003	4.4000e-004	3.5400e-003	0.0000	29.2923	29.2923	1.3000e-004	4.3800e-003	30.6012
Worker	0.0135	8.0800e-003	0.1069	3.2000e-004	0.0422	1.7000e-004	0.0423	0.0112	1.6000e-004	0.0114	0.0000	30.6816	30.6816	7.6000e-004	8.0000e-004	30.9403
Total	**0.0152**	**0.0797**	**0.1273**	**6.3000e-004**	**0.0529**	**6.3000e-004**	**0.0535**	**0.0143**	**6.0000e-004**	**0.0149**	**0.0000**	**59.9738**	**59.9738**	**8.9000e-004**	**5.1800e-003**	**61.5414**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1477	1.3467	1.7371	2.9100e-003		0.0570	0.0570		0.0536	0.0536	0.0000	250.4727	250.4727	0.0589	0.0000	251.9447
Total	**0.1477**	**1.3467**	**1.7371**	**2.9100e-003**		**0.0570**	**0.0570**		**0.0536**	**0.0536**	**0.0000**	**250.4727**	**250.4727**	**0.0589**	**0.0000**	**251.9447**

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

3.4 Building Construction - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.6700e-003	0.0716	0.0205	3.1000e-004	0.0107	4.6000e-004	0.0112	3.1000e-003	4.4000e-004	3.5400e-003	0.0000	29.2923	29.2923	1.3000e-004	4.3800e-003	30.6012
Worker	0.0135	8.0800e-003	0.1069	3.2000e-004	0.0422	1.7000e-004	0.0423	0.0112	1.6000e-004	0.0114	0.0000	30.6816	30.6816	7.6000e-004	8.0000e-004	30.9403
Total	**0.0152**	**0.0797**	**0.1273**	**6.3000e-004**	**0.0529**	**6.3000e-004**	**0.0535**	**0.0143**	**6.0000e-004**	**0.0149**	**0.0000**	**59.9738**	**59.9738**	**8.9000e-004**	**5.1800e-003**	**61.5414**

3.5 Paving - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0206	0.1931	0.3280	5.1000e-004		9.4200e-003	9.4200e-003		8.6600e-003	8.6600e-003	0.0000	45.0433	45.0433	0.0146	0.0000	45.4075
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0206**	**0.1931**	**0.3280**	**5.1000e-004**		**9.4200e-003**	**9.4200e-003**		**8.6600e-003**	**8.6600e-003**	**0.0000**	**45.0433**	**45.0433**	**0.0146**	**0.0000**	**45.4075**

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

3.5 Paving - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.6000e-004	5.2000e-004	6.8100e-003	2.0000e-005	2.6900e-003	1.0000e-005	2.7000e-003	7.1000e-004	1.0000e-005	7.2000e-004	0.0000	1.9567	1.9567	5.0000e-005	5.0000e-005	1.9732
Total	**8.6000e-004**	**5.2000e-004**	**6.8100e-003**	**2.0000e-005**	**2.6900e-003**	**1.0000e-005**	**2.7000e-003**	**7.1000e-004**	**1.0000e-005**	**7.2000e-004**	**0.0000**	**1.9567**	**1.9567**	**5.0000e-005**	**5.0000e-005**	**1.9732**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0206	0.1931	0.3280	5.1000e-004		9.4200e-003	9.4200e-003		8.6600e-003	8.6600e-003	0.0000	45.0433	45.0433	0.0146	0.0000	45.4075
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0206**	**0.1931**	**0.3280**	**5.1000e-004**		**9.4200e-003**	**9.4200e-003**		**8.6600e-003**	**8.6600e-003**	**0.0000**	**45.0433**	**45.0433**	**0.0146**	**0.0000**	**45.4075**

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

3.5 Paving - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.6000e-004	5.2000e-004	6.8100e-003	2.0000e-005	2.6900e-003	1.0000e-005	2.7000e-003	7.1000e-004	1.0000e-005	7.2000e-004	0.0000	1.9567	1.9567	5.0000e-005	5.0000e-005	1.9732
Total	**8.6000e-004**	**5.2000e-004**	**6.8100e-003**	**2.0000e-005**	**2.6900e-003**	**1.0000e-005**	**2.7000e-003**	**7.1000e-004**	**1.0000e-005**	**7.2000e-004**	**0.0000**	**1.9567**	**1.9567**	**5.0000e-005**	**5.0000e-005**	**1.9732**

3.5 Paving - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0137	0.1287	0.2187	3.4000e-004		6.2800e-003	6.2800e-003		5.7800e-003	5.7800e-003	0.0000	30.0289	30.0289	9.7100e-003	0.0000	30.2717
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0137**	**0.1287**	**0.2187**	**3.4000e-004**		**6.2800e-003**	**6.2800e-003**		**5.7800e-003**	**5.7800e-003**	**0.0000**	**30.0289**	**30.0289**	**9.7100e-003**	**0.0000**	**30.2717**

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

3.5 Paving - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.3000e-004	3.1000e-004	4.2800e-003	1.0000e-005	1.7900e-003	1.0000e-005	1.8000e-003	4.8000e-004	1.0000e-005	4.8000e-004	0.0000	1.2781	1.2781	3.0000e-005	3.0000e-005	1.2884
Total	**5.3000e-004**	**3.1000e-004**	**4.2800e-003**	**1.0000e-005**	**1.7900e-003**	**1.0000e-005**	**1.8000e-003**	**4.8000e-004**	**1.0000e-005**	**4.8000e-004**	**0.0000**	**1.2781**	**1.2781**	**3.0000e-005**	**3.0000e-005**	**1.2884**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0137	0.1287	0.2187	3.4000e-004		6.2800e-003	6.2800e-003		5.7800e-003	5.7800e-003	0.0000	30.0289	30.0289	9.7100e-003	0.0000	30.2717
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0137**	**0.1287**	**0.2187**	**3.4000e-004**		**6.2800e-003**	**6.2800e-003**		**5.7800e-003**	**5.7800e-003**	**0.0000**	**30.0289**	**30.0289**	**9.7100e-003**	**0.0000**	**30.2717**

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

3.5 Paving - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.3000e-004	3.1000e-004	4.2800e-003	1.0000e-005	1.7900e-003	1.0000e-005	1.8000e-003	4.8000e-004	1.0000e-005	4.8000e-004	0.0000	1.2781	1.2781	3.0000e-005	3.0000e-005	1.2884
Total	**5.3000e-004**	**3.1000e-004**	**4.2800e-003**	**1.0000e-005**	**1.7900e-003**	**1.0000e-005**	**1.8000e-003**	**4.8000e-004**	**1.0000e-005**	**4.8000e-004**	**0.0000**	**1.2781**	**1.2781**	**3.0000e-005**	**3.0000e-005**	**1.2884**

3.6 Architectural Coating - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.2977					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.4100e-003	0.0430	0.0678	1.1000e-004		1.9300e-003	1.9300e-003		1.9300e-003	1.9300e-003	0.0000	9.5747	9.5747	5.2000e-004	0.0000	9.5878
Total	**2.3041**	**0.0430**	**0.0678**	**1.1000e-004**		**1.9300e-003**	**1.9300e-003**		**1.9300e-003**	**1.9300e-003**	**0.0000**	**9.5747**	**9.5747**	**5.2000e-004**	**0.0000**	**9.5878**

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

3.6 Architectural Coating - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.9000e-004	5.2000e-004	7.1400e-003	2.0000e-005	2.9900e-003	1.0000e-005	3.0000e-003	7.9000e-004	1.0000e-005	8.0000e-004	0.0000	2.1301	2.1301	5.0000e-005	5.0000e-005	2.1474
Total	**8.9000e-004**	**5.2000e-004**	**7.1400e-003**	**2.0000e-005**	**2.9900e-003**	**1.0000e-005**	**3.0000e-003**	**7.9000e-004**	**1.0000e-005**	**8.0000e-004**	**0.0000**	**2.1301**	**2.1301**	**5.0000e-005**	**5.0000e-005**	**2.1474**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.2977					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.4100e-003	0.0430	0.0678	1.1000e-004		1.9300e-003	1.9300e-003		1.9300e-003	1.9300e-003	0.0000	9.5747	9.5747	5.2000e-004	0.0000	9.5878
Total	**2.3041**	**0.0430**	**0.0678**	**1.1000e-004**		**1.9300e-003**	**1.9300e-003**		**1.9300e-003**	**1.9300e-003**	**0.0000**	**9.5747**	**9.5747**	**5.2000e-004**	**0.0000**	**9.5878**

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

3.6 Architectural Coating - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.9000e-004	5.2000e-004	7.1400e-003	2.0000e-005	2.9900e-003	1.0000e-005	3.0000e-003	7.9000e-004	1.0000e-005	8.0000e-004	0.0000	2.1301	2.1301	5.0000e-005	5.0000e-005	2.1474
Total	**8.9000e-004**	**5.2000e-004**	**7.1400e-003**	**2.0000e-005**	**2.9900e-003**	**1.0000e-005**	**3.0000e-003**	**7.9000e-004**	**1.0000e-005**	**8.0000e-004**	**0.0000**	**2.1301**	**2.1301**	**5.0000e-005**	**5.0000e-005**	**2.1474**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Walkability Design

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

Provide Traffic Calming Measures

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2663	0.4632	2.9075	8.2300e-003	1.0306	5.7200e-003	1.0363	0.2751	5.3400e-003	0.2805	0.0000	811.8840	811.8840	0.0442	0.0373	824.1087
Unmitigated	0.2770	0.5508	3.4586	0.0105	1.3295	7.1700e-003	1.3367	0.3549	6.6900e-003	0.3616	0.0000	1,037.9700	1,037.9700	0.0520	0.0449	1,052.6486

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	1,283.84	1,297.44	1162.80	3,575,540	2,771,614
Total	1,283.84	1,297.44	1,162.80	3,575,540	2,771,614

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	38.40	22.60	39.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.511000	0.223100	0.169000	0.059300	0.000800	0.001000	0.007400	0.017300	0.000000	0.004400	0.002500	0.001200	0.003000

5.0 Energy Detail

Historical Energy Use: N

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

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	191.4795	191.4795	0.0162	1.9600e-003	192.4673
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	191.4795	191.4795	0.0162	1.9600e-003	192.4673
NaturalGas Mitigated	0.0174	0.1489	0.0634	9.5000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	172.4596	172.4596	3.3100e-003	3.1600e-003	173.4844
NaturalGas Unmitigated	0.0174	0.1489	0.0634	9.5000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	172.4596	172.4596	3.3100e-003	3.1600e-003	173.4844

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	3.23177e+006	0.0174	0.1489	0.0634	9.5000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	172.4596	172.4596	3.3100e-003	3.1600e-003	173.4844
Total		**0.0174**	**0.1489**	**0.0634**	**9.5000e-004**		**0.0120**	**0.0120**		**0.0120**	**0.0120**	**0.0000**	**172.4596**	**172.4596**	**3.3100e-003**	**3.1600e-003**	**173.4844**

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

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	3.23177e+006	0.0174	0.1489	0.0634	9.5000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	172.4596	172.4596	3.3100e-003	3.1600e-003	173.4844
Total		**0.0174**	**0.1489**	**0.0634**	**9.5000e-004**		**0.0120**	**0.0120**		**0.0120**	**0.0120**	**0.0000**	**172.4596**	**172.4596**	**3.3100e-003**	**3.1600e-003**	**173.4844**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	1.0797e+006	191.4795	0.0162	1.9600e-003	192.4673
Total		**191.4795**	**0.0162**	**1.9600e-003**	**192.4673**

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

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	1.0797e+006	191.4795	0.0162	1.9600e-003	192.4673
Total		**191.4795**	**0.0162**	**1.9600e-003**	**192.4673**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	9.6109	0.1577	10.2823	0.0150		1.2772	1.2772		1.2772	1.2772	112.9917	60.5657	173.5575	2.7000e-003	0.0111	176.9179
Unmitigated	9.6109	0.1577	10.2823	0.0150		1.2772	1.2772		1.2772	1.2772	112.9917	60.5657	173.5575	2.7000e-003	0.0111	176.9179

Barr-Wood Subdivision - Tulare County, Annual

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

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2298					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.9561					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	8.3949	0.1461	9.2751	0.0150		1.2716	1.2716		1.2716	1.2716	112.9917	58.9162	171.9079	1.1300e-003	0.0111	175.2291
Landscaping	0.0301	0.0116	1.0072	5.0000e-005		5.6000e-003	5.6000e-003		5.6000e-003	5.6000e-003	0.0000	1.6495	1.6495	1.5700e-003	0.0000	1.6888
Total	**9.6109**	**0.1577**	**10.2823**	**0.0150**		**1.2772**	**1.2772**		**1.2772**	**1.2772**	**112.9917**	**60.5657**	**173.5575**	**2.7000e-003**	**0.0111**	**176.9179**

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

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2298					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.9561					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	8.3949	0.1461	9.2751	0.0150		1.2716	1.2716		1.2716	1.2716	112.9917	58.9162	171.9079	1.1300e-003	0.0111	175.2291
Landscaping	0.0301	0.0116	1.0072	5.0000e-005		5.6000e-003	5.6000e-003		5.6000e-003	5.6000e-003	0.0000	1.6495	1.6495	1.5700e-003	0.0000	1.6888
Total	**9.6109**	**0.1577**	**10.2823**	**0.0150**		**1.2772**	**1.2772**		**1.2772**	**1.2772**	**112.9917**	**60.5657**	**173.5575**	**2.7000e-003**	**0.0111**	**176.9179**

7.0 Water Detail

7.1 Mitigation Measures Water

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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	14.7817	0.2897	6.9400e-003	24.0935
Unmitigated	14.7817	0.2897	6.9400e-003	24.0935

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	8.86095 / 5.58625	14.7817	0.2897	6.9400e-003	24.0935
Total		**14.7817**	**0.2897**	**6.9400e-003**	**24.0935**

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

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	8.86095 / 5.58625	14.7817	0.2897	6.9400e-003	24.0935
Total		**14.7817**	**0.2897**	**6.9400e-003**	**24.0935**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	28.4269	1.6800	0.0000	70.4263
Unmitigated	28.4269	1.6800	0.0000	70.4263

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	140.04	28.4269	1.6800	0.0000	70.4263
Total		**28.4269**	**1.6800**	**0.0000**	**70.4263**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	140.04	28.4269	1.6800	0.0000	70.4263
Total		**28.4269**	**1.6800**	**0.0000**	**70.4263**

9.0 Operational Offroad

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

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Part 2

2005 BAU from CalEEMod

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

Barr-Wood Subdivision, 2005 BAU

Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	136.00	Dwelling Unit	69.35	244,800.00	389

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	51
Climate Zone	7			**Operational Year**	2012
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot Acerage Established

Construction Phase -

Off-road Equipment -

Trips and VMT -

Grading -

Fleet Mix -

Woodstoves -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Vehicle Trips -

Vehicle Emission Factors -

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

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use -

Water And Wastewater -

Solid Waste -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	150.00
tblLandUse	LotAcreage	44.16	69.35

2.0 Emissions Summary

Barr-Wood Subdivision, 2005 BAU - Tulare County, Annual

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

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2005	1.3594	9.6618	5.0153	0.0656	0.9379	0.5754	1.5133	0.4134	0.5749	0.9883	0.0000	641.5487	641.5487	0.1099	7.6600e-003	646.5791
2006	1.1453	6.0687	4.0026	0.0444	0.0636	0.4748	0.5385	0.0172	0.4738	0.4910	0.0000	445.9211	445.9211	0.0913	0.0143	452.4573
2007	1.1497	6.0920	4.0180	0.0446	0.0639	0.4766	0.5405	0.0173	0.4756	0.4929	0.0000	447.6361	447.6361	0.0917	0.0143	454.1975
2008	1.1541	6.1154	4.0334	0.0448	0.0641	0.4785	0.5426	0.0174	0.4775	0.4948	0.0000	449.3512	449.3512	0.0920	0.0144	455.9377
2009	1.0890	5.9890	3.7955	0.0431	0.0557	0.4544	0.5101	0.0151	0.4536	0.4686	0.0000	428.1256	428.1256	0.0871	0.0123	433.9616
2010	2.3717	0.6243	0.3891	5.2000e-004	4.8400e-003	0.0392	0.0441	1.2900e-003	0.0371	0.0384	0.0000	49.3211	49.3211	0.0125	4.7000e-004	49.7720
Maximum	**2.3717**	**9.6618**	**5.0153**	**0.0656**	**0.9379**	**0.5754**	**1.5133**	**0.4134**	**0.5749**	**0.9883**	**0.0000**	**641.5487**	**641.5487**	**0.1099**	**0.0144**	**646.5791**

Barr-Wood Subdivision, 2005 BAU - Tulare County, Annual

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

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2005	1.3594	9.6618	5.0153	0.0656	0.9379	0.5754	1.5133	0.4134	0.5749	0.9883	0.0000	641.5480	641.5480	0.1099	7.6600e-003	646.5784
2006	1.1453	6.0687	4.0026	0.0444	0.0636	0.4748	0.5384	0.0172	0.4738	0.4910	0.0000	445.9207	445.9207	0.0913	0.0143	452.4569
2007	1.1497	6.0920	4.0180	0.0446	0.0639	0.4766	0.5405	0.0173	0.4756	0.4929	0.0000	447.6357	447.6357	0.0917	0.0143	454.1971
2008	1.1541	6.1153	4.0334	0.0448	0.0641	0.4785	0.5426	0.0174	0.4775	0.4948	0.0000	449.3508	449.3508	0.0920	0.0144	455.9373
2009	1.0890	5.9890	3.7955	0.0431	0.0557	0.4544	0.5101	0.0151	0.4536	0.4686	0.0000	428.1252	428.1252	0.0871	0.0123	433.9612
2010	2.3717	0.6243	0.3891	5.2000e-004	4.8400e-003	0.0392	0.0441	1.2900e-003	0.0371	0.0384	0.0000	49.3211	49.3211	0.0125	4.7000e-004	49.7720
Maximum	**2.3717**	**9.6618**	**5.0153**	**0.0656**	**0.9379**	**0.5754**	**1.5133**	**0.4134**	**0.5749**	**0.9883**	**0.0000**	**641.5480**	**641.5480**	**0.1099**	**0.0144**	**646.5784**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-1-2005**	**3-31-2005**	3.0074	3.0074
2	**4-1-2005**	**6-30-2005**	3.7643	3.7643
3	**7-1-2005**	**9-30-2005**	2.4449	2.4449
4	**10-1-2005**	**12-31-2005**	1.8300	1.8300
5	**1-1-2006**	**3-31-2006**	1.7902	1.7902

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

6	**4-1-2006**	**6-30-2006**	1.7988	1.7988
7	**7-1-2006**	**9-30-2006**	1.8185	1.8185
8	**10-1-2006**	**12-31-2006**	1.8300	1.8300
9	**1-1-2007**	**3-31-2007**	1.7902	1.7902
10	**4-1-2007**	**6-30-2007**	1.7988	1.7988
11	**7-1-2007**	**9-30-2007**	1.8185	1.8185
12	**10-1-2007**	**12-31-2007**	1.8300	1.8300
13	**1-1-2008**	**3-31-2008**	1.8101	1.8101
14	**4-1-2008**	**6-30-2008**	1.7988	1.7988
15	**7-1-2008**	**9-30-2008**	1.8185	1.8185
16	**10-1-2008**	**12-31-2008**	1.8300	1.8300
17	**1-1-2009**	**3-31-2009**	1.7902	1.7902
18	**4-1-2009**	**6-30-2009**	1.7988	1.7988
19	**7-1-2009**	**9-30-2009**	1.8185	1.8185
20	**10-1-2009**	**12-31-2009**	1.6617	1.6617
21	**1-1-2010**	**3-31-2010**	1.6308	1.6308
22	**4-1-2010**	**6-30-2010**	1.3611	1.3611
		Highest	3.7643	3.7643

Barr-Wood Subdivision, 2005 BAU - Tulare County, Annual

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	9.6165	0.1587	10.3244	0.0150		1.2771	1.2771		1.2771	1.2771	112.9917	60.5657	173.5575	2.9900e-003	0.0111	176.9252
Energy	0.0174	0.1489	0.0634	9.5000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	363.9391	363.9391	0.0195	5.1200e-003	365.9517
Mobile	1.6791	3.7858	17.4555	0.0183	1.3399	0.0717	1.4116	0.3594	0.0682	0.4276	0.0000	1,694.5871	1,694.5871	0.1784	0.1397	1,740.6767
Waste						0.0000	0.0000		0.0000	0.0000	28.4269	0.0000	28.4269	1.6800	0.0000	70.4263
Water						0.0000	0.0000		0.0000	0.0000	2.8112	11.9706	14.7817	0.2897	6.9400e-003	24.0935
Total	**11.3130**	**4.0934**	**27.8434**	**0.0343**	**1.3399**	**1.3608**	**2.7007**	**0.3594**	**1.3573**	**1.7167**	**144.2298**	**2,131.0624**	**2,275.2922**	**2.1706**	**0.1628**	**2,378.0734**

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

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	9.6165	0.1587	10.3244	0.0150		1.2771	1.2771		1.2771	1.2771	112.9917	60.5657	173.5575	2.9900e-003	0.0111	176.9252
Energy	0.0174	0.1489	0.0634	9.5000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	363.9391	363.9391	0.0195	5.1200e-003	365.9517
Mobile	1.6791	3.7858	17.4555	0.0183	1.3399	0.0717	1.4116	0.3594	0.0682	0.4276	0.0000	1,694.5871	1,694.5871	0.1784	0.1397	1,740.6767
Waste						0.0000	0.0000		0.0000	0.0000	28.4269	0.0000	28.4269	1.6800	0.0000	70.4263
Water						0.0000	0.0000		0.0000	0.0000	2.8112	11.9706	14.7817	0.2897	6.9400e-003	24.0935
Total	**11.3130**	**4.0934**	**27.8434**	**0.0343**	**1.3399**	**1.3608**	**2.7007**	**0.3594**	**1.3573**	**1.7167**	**144.2298**	**2,131.0624**	**2,275.2922**	**2.1706**	**0.1628**	**2,378.0734**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2005	2/25/2005	5	40	
2	Grading	Grading	2/26/2005	7/29/2005	5	110	
3	Building Construction	Building Construction	7/30/2005	10/30/2009	5	1110	

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

4	Paving	Paving	10/31/2009	2/12/2010	5	75	
5	Architectural Coating	Architectural Coating	2/13/2010	5/28/2010	5	75	

Acres of Grading (Site Preparation Phase): 60

Acres of Grading (Grading Phase): 330

Acres of Paving: 0

Residential Indoor: 495,720; Residential Outdoor: 165,240; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

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

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	49.00	15.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2005

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3931	0.0000	0.3931	0.2021	0.0000	0.2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1866	1.3985	0.5263	9.0000e-003		0.0863	0.0863		0.0863	0.0863	0.0000	80.0092	80.0092	0.0152	0.0000	80.3895
Total	**0.1866**	**1.3985**	**0.5263**	**9.0000e-003**	**0.3931**	**0.0863**	**0.4794**	**0.2021**	**0.0863**	**0.2884**	**0.0000**	**80.0092**	**80.0092**	**0.0152**	**0.0000**	**80.3895**

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

3.2 Site Preparation - 2005

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3200e-003	8.0700e-003	0.0643	3.0000e-005	2.8700e-003	8.0000e-005	2.9400e-003	7.6000e-004	7.0000e-005	8.3000e-004	0.0000	3.2008	3.2008	5.1000e-004	4.0000e-004	3.3329
Total	**6.3200e-003**	**8.0700e-003**	**0.0643**	**3.0000e-005**	**2.8700e-003**	**8.0000e-005**	**2.9400e-003**	**7.6000e-004**	**7.0000e-005**	**8.3000e-004**	**0.0000**	**3.2008**	**3.2008**	**5.1000e-004**	**4.0000e-004**	**3.3329**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3931	0.0000	0.3931	0.2021	0.0000	0.2021	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1866	1.3985	0.5263	9.0000e-003		0.0863	0.0863		0.0863	0.0863	0.0000	80.0091	80.0091	0.0152	0.0000	80.3894
Total	**0.1866**	**1.3985**	**0.5263**	**9.0000e-003**	**0.3931**	**0.0863**	**0.4794**	**0.2021**	**0.0863**	**0.2884**	**0.0000**	**80.0091**	**80.0091**	**0.0152**	**0.0000**	**80.3894**

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

3.2 Site Preparation - 2005

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3200e-003	8.0700e-003	0.0643	3.0000e-005	2.8700e-003	8.0000e-005	2.9400e-003	7.6000e-004	7.0000e-005	8.3000e-004	0.0000	3.2008	3.2008	5.1000e-004	4.0000e-004	3.3329
Total	**6.3200e-003**	**8.0700e-003**	**0.0643**	**3.0000e-005**	**2.8700e-003**	**8.0000e-005**	**2.9400e-003**	**7.6000e-004**	**7.0000e-005**	**8.3000e-004**	**0.0000**	**3.2008**	**3.2008**	**5.1000e-004**	**4.0000e-004**	**3.3329**

3.3 Grading - 2005

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5062	0.0000	0.5062	0.2010	0.0000	0.2010	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.6626	5.6630	2.5349	0.0376		0.2879	0.2879		0.2879	0.2879	0.0000	359.8995	359.8995	0.0540	0.0000	361.2488
Total	**0.6626**	**5.6630**	**2.5349**	**0.0376**	**0.5062**	**0.2879**	**0.7941**	**0.2010**	**0.2879**	**0.4889**	**0.0000**	**359.8995**	**359.8995**	**0.0540**	**0.0000**	**361.2488**

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

3.3 Grading - 2005

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0193	0.0247	0.1965	1.1000e-004	8.7600e-003	2.3000e-004	8.9900e-003	2.3300e-003	2.1000e-004	2.5400e-003	0.0000	9.7802	9.7802	1.5500e-003	1.2200e-003	10.1837
Total	**0.0193**	**0.0247**	**0.1965**	**1.1000e-004**	**8.7600e-003**	**2.3000e-004**	**8.9900e-003**	**2.3300e-003**	**2.1000e-004**	**2.5400e-003**	**0.0000**	**9.7802**	**9.7802**	**1.5500e-003**	**1.2200e-003**	**10.1837**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5062	0.0000	0.5062	0.2010	0.0000	0.2010	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.6626	5.6630	2.5349	0.0376		0.2879	0.2879		0.2879	0.2879	0.0000	359.8991	359.8991	0.0540	0.0000	361.2484
Total	**0.6626**	**5.6630**	**2.5349**	**0.0376**	**0.5062**	**0.2879**	**0.7941**	**0.2010**	**0.2879**	**0.4889**	**0.0000**	**359.8991**	**359.8991**	**0.0540**	**0.0000**	**361.2484**

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

3.3 Grading - 2005

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0193	0.0247	0.1965	1.1000e-004	8.7600e-003	2.3000e-004	8.9900e-003	2.3300e-003	2.1000e-004	2.5400e-003	0.0000	9.7802	9.7802	1.5500e-003	1.2200e-003	10.1837
Total	**0.0193**	**0.0247**	**0.1965**	**1.1000e-004**	**8.7600e-003**	**2.3000e-004**	**8.9900e-003**	**2.3300e-003**	**2.1000e-004**	**2.5400e-003**	**0.0000**	**9.7802**	**9.7802**	**1.5500e-003**	**1.2200e-003**	**10.1837**

3.4 Building Construction - 2005

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4134	2.2795	1.1214	0.0167		0.1914	0.1914		0.1914	0.1914	0.0000	144.5736	144.5736	0.0337	0.0000	145.4170
Total	**0.4134**	**2.2795**	**1.1214**	**0.0167**		**0.1914**	**0.1914**		**0.1914**	**0.1914**	**0.0000**	**144.5736**	**144.5736**	**0.0337**	**0.0000**	**145.4170**

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

3.4 Building Construction - 2005

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0239	0.2277	0.0908	1.8200e-003	5.4500e-003	8.9400e-003	0.0144	1.5800e-003	8.5500e-003	0.0101	0.0000	20.1238	20.1238	1.1000e-003	3.0400e-003	21.0571
Worker	0.0473	0.0604	0.4813	2.6000e-004	0.0215	5.7000e-004	0.0220	5.7100e-003	5.3000e-004	6.2300e-003	0.0000	23.9615	23.9615	3.8000e-003	3.0000e-003	24.9501
Total	**0.0712**	**0.2880**	**0.5721**	**2.0800e-003**	**0.0269**	**9.5100e-003**	**0.0364**	**7.2900e-003**	**9.0800e-003**	**0.0164**	**0.0000**	**44.0854**	**44.0854**	**4.9000e-003**	**6.0400e-003**	**46.0073**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4134	2.2795	1.1214	0.0167		0.1914	0.1914		0.1914	0.1914	0.0000	144.5734	144.5734	0.0337	0.0000	145.4168
Total	**0.4134**	**2.2795**	**1.1214**	**0.0167**		**0.1914**	**0.1914**		**0.1914**	**0.1914**	**0.0000**	**144.5734**	**144.5734**	**0.0337**	**0.0000**	**145.4168**

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

3.4 Building Construction - 2005

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0239	0.2277	0.0908	1.8200e-003	5.4500e-003	8.9400e-003	0.0144	1.5800e-003	8.5500e-003	0.0101	0.0000	20.1238	20.1238	1.1000e-003	3.0400e-003	21.0571
Worker	0.0473	0.0604	0.4813	2.6000e-004	0.0215	5.7000e-004	0.0220	5.7100e-003	5.3000e-004	6.2300e-003	0.0000	23.9615	23.9615	3.8000e-003	3.0000e-003	24.9501
Total	**0.0712**	**0.2880**	**0.5721**	**2.0800e-003**	**0.0269**	**9.5100e-003**	**0.0364**	**7.2900e-003**	**9.0800e-003**	**0.0164**	**0.0000**	**44.0854**	**44.0854**	**4.9000e-003**	**6.0400e-003**	**46.0073**

3.4 Building Construction - 2006

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.9770	5.3879	2.6505	0.0395		0.4524	0.4524		0.4524	0.4524	0.0000	341.7193	341.7193	0.0797	0.0000	343.7129
Total	**0.9770**	**5.3879**	**2.6505**	**0.0395**		**0.4524**	**0.4524**		**0.4524**	**0.4524**	**0.0000**	**341.7193**	**341.7193**	**0.0797**	**0.0000**	**343.7129**

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

3.4 Building Construction - 2006

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0565	0.5381	0.2145	4.2900e-003	0.0129	0.0211	0.0340	3.7300e-003	0.0202	0.0239	0.0000	47.5654	47.5654	2.5900e-003	7.1900e-003	49.7714
Worker	0.1118	0.1427	1.1376	6.2000e-004	0.0507	1.3400e-003	0.0521	0.0135	1.2400e-003	0.0147	0.0000	56.6364	56.6364	8.9800e-003	7.0900e-003	58.9731
Total	**0.1683**	**0.6808**	**1.3522**	**4.9100e-003**	**0.0636**	**0.0225**	**0.0861**	**0.0172**	**0.0215**	**0.0387**	**0.0000**	**104.2017**	**104.2017**	**0.0116**	**0.0143**	**108.7444**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.9770	5.3878	2.6505	0.0395		0.4524	0.4524		0.4524	0.4524	0.0000	341.7189	341.7189	0.0797	0.0000	343.7124
Total	**0.9770**	**5.3878**	**2.6505**	**0.0395**		**0.4524**	**0.4524**		**0.4524**	**0.4524**	**0.0000**	**341.7189**	**341.7189**	**0.0797**	**0.0000**	**343.7124**

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

3.4 Building Construction - 2006

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0565	0.5381	0.2145	4.2900e-003	0.0129	0.0211	0.0340	3.7300e-003	0.0202	0.0239	0.0000	47.5654	47.5654	2.5900e-003	7.1900e-003	49.7714
Worker	0.1118	0.1427	1.1376	6.2000e-004	0.0507	1.3400e-003	0.0521	0.0135	1.2400e-003	0.0147	0.0000	56.6364	56.6364	8.9800e-003	7.0900e-003	58.9731
Total	**0.1683**	**0.6808**	**1.3522**	**4.9100e-003**	**0.0636**	**0.0225**	**0.0861**	**0.0172**	**0.0215**	**0.0387**	**0.0000**	**104.2017**	**104.2017**	**0.0116**	**0.0143**	**108.7444**

3.4 Building Construction - 2007

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.9808	5.4086	2.6607	0.0397		0.4541	0.4541		0.4541	0.4541	0.0000	343.0336	343.0336	0.0801	0.0000	345.0348
Total	**0.9808**	**5.4086**	**2.6607**	**0.0397**		**0.4541**	**0.4541**		**0.4541**	**0.4541**	**0.0000**	**343.0336**	**343.0336**	**0.0801**	**0.0000**	**345.0348**

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

3.4 Building Construction - 2007

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0567	0.5402	0.2154	4.3100e-003	0.0129	0.0212	0.0341	3.7400e-003	0.0203	0.0240	0.0000	47.7483	47.7483	2.6000e-003	7.2100e-003	49.9628
Worker	0.1122	0.1433	1.1420	6.2000e-004	0.0509	1.3500e-003	0.0523	0.0135	1.2500e-003	0.0148	0.0000	56.8542	56.8542	9.0100e-003	7.1200e-003	59.1999
Total	**0.1689**	**0.6834**	**1.3574**	**4.9300e-003**	**0.0639**	**0.0226**	**0.0864**	**0.0173**	**0.0215**	**0.0388**	**0.0000**	**104.6025**	**104.6025**	**0.0116**	**0.0143**	**109.1627**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.9808	5.4086	2.6607	0.0397		0.4541	0.4541		0.4541	0.4541	0.0000	343.0332	343.0332	0.0801	0.0000	345.0344
Total	**0.9808**	**5.4086**	**2.6607**	**0.0397**		**0.4541**	**0.4541**		**0.4541**	**0.4541**	**0.0000**	**343.0332**	**343.0332**	**0.0801**	**0.0000**	**345.0344**

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

3.4 Building Construction - 2007

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0567	0.5402	0.2154	4.3100e-003	0.0129	0.0212	0.0341	3.7400e-003	0.0203	0.0240	0.0000	47.7483	47.7483	2.6000e-003	7.2100e-003	49.9628
Worker	0.1122	0.1433	1.1420	6.2000e-004	0.0509	1.3500e-003	0.0523	0.0135	1.2500e-003	0.0148	0.0000	56.8542	56.8542	9.0100e-003	7.1200e-003	59.1999
Total	**0.1689**	**0.6834**	**1.3574**	**4.9300e-003**	**0.0639**	**0.0226**	**0.0864**	**0.0173**	**0.0215**	**0.0388**	**0.0000**	**104.6025**	**104.6025**	**0.0116**	**0.0143**	**109.1627**

3.4 Building Construction - 2008

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.9846	5.4293	2.6709	0.0398		0.4558	0.4558		0.4558	0.4558	0.0000	344.3479	344.3479	0.0804	0.0000	346.3568
Total	**0.9846**	**5.4293**	**2.6709**	**0.0398**		**0.4558**	**0.4558**		**0.4558**	**0.4558**	**0.0000**	**344.3479**	**344.3479**	**0.0804**	**0.0000**	**346.3568**

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

3.4 Building Construction - 2008

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0569	0.5422	0.2162	4.3300e-003	0.0130	0.0213	0.0343	3.7500e-003	0.0204	0.0241	0.0000	47.9313	47.9313	2.6100e-003	7.2400e-003	50.1542
Worker	0.1127	0.1438	1.1464	6.2000e-004	0.0511	1.3500e-003	0.0525	0.0136	1.2500e-003	0.0149	0.0000	57.0720	57.0720	9.0500e-003	7.1400e-003	59.4267
Total	**0.1696**	**0.6861**	**1.3626**	**4.9500e-003**	**0.0641**	**0.0226**	**0.0868**	**0.0173**	**0.0216**	**0.0390**	**0.0000**	**105.0033**	**105.0033**	**0.0117**	**0.0144**	**109.5809**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.9846	5.4293	2.6709	0.0398		0.4558	0.4558		0.4558	0.4558	0.0000	344.3475	344.3475	0.0804	0.0000	346.3564
Total	**0.9846**	**5.4293**	**2.6709**	**0.0398**		**0.4558**	**0.4558**		**0.4558**	**0.4558**	**0.0000**	**344.3475**	**344.3475**	**0.0804**	**0.0000**	**346.3564**

Barr-Wood Subdivision, 2005 BAU - Tulare County, Annual

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

3.4 Building Construction - 2008

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0569	0.5422	0.2162	4.3300e-003	0.0130	0.0213	0.0343	3.7500e-003	0.0204	0.0241	0.0000	47.9313	47.9313	2.6100e-003	7.2400e-003	50.1542
Worker	0.1127	0.1438	1.1464	6.2000e-004	0.0511	1.3500e-003	0.0525	0.0136	1.2500e-003	0.0149	0.0000	57.0720	57.0720	9.0500e-003	7.1400e-003	59.4267
Total	**0.1696**	**0.6861**	**1.3626**	**4.9500e-003**	**0.0641**	**0.0226**	**0.0868**	**0.0173**	**0.0216**	**0.0390**	**0.0000**	**105.0033**	**105.0033**	**0.0117**	**0.0144**	**109.5809**

3.4 Building Construction - 2009

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.8155	4.4968	2.2121	0.0330		0.3775	0.3775		0.3775	0.3775	0.0000	285.2042	285.2042	0.0666	0.0000	286.8680
Total	**0.8155**	**4.4968**	**2.2121**	**0.0330**		**0.3775**	**0.3775**		**0.3775**	**0.3775**	**0.0000**	**285.2042**	**285.2042**	**0.0666**	**0.0000**	**286.8680**

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

3.4 Building Construction - 2009

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0471	0.4491	0.1791	3.5800e-003	0.0108	0.0176	0.0284	3.1100e-003	0.0169	0.0200	0.0000	39.6988	39.6988	2.1700e-003	6.0000e-003	41.5400
Worker	0.0933	0.1191	0.9495	5.2000e-004	0.0424	1.1200e-003	0.0435	0.0113	1.0400e-003	0.0123	0.0000	47.2696	47.2696	7.4900e-003	5.9200e-003	49.2198
Total	**0.1404**	**0.5682**	**1.1285**	**4.1000e-003**	**0.0531**	**0.0188**	**0.0719**	**0.0144**	**0.0179**	**0.0323**	**0.0000**	**86.9684**	**86.9684**	**9.6600e-003**	**0.0119**	**90.7598**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.8155	4.4968	2.2121	0.0330		0.3775	0.3775		0.3775	0.3775	0.0000	285.2039	285.2039	0.0666	0.0000	286.8677
Total	**0.8155**	**4.4968**	**2.2121**	**0.0330**		**0.3775**	**0.3775**		**0.3775**	**0.3775**	**0.0000**	**285.2039**	**285.2039**	**0.0666**	**0.0000**	**286.8677**

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

3.4 Building Construction - 2009

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0471	0.4491	0.1791	3.5800e-003	0.0108	0.0176	0.0284	3.1100e-003	0.0169	0.0200	0.0000	39.6988	39.6988	2.1700e-003	6.0000e-003	41.5400
Worker	0.0933	0.1191	0.9495	5.2000e-004	0.0424	1.1200e-003	0.0435	0.0113	1.0400e-003	0.0123	0.0000	47.2696	47.2696	7.4900e-003	5.9200e-003	49.2198
Total	**0.1404**	**0.5682**	**1.1285**	**4.1000e-003**	**0.0531**	**0.0188**	**0.0719**	**0.0144**	**0.0179**	**0.0323**	**0.0000**	**86.9684**	**86.9684**	**9.6600e-003**	**0.0119**	**90.7598**

3.5 Paving - 2009

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1273	0.9167	0.3959	5.9300e-003		0.0580	0.0580		0.0580	0.0580	0.0000	53.0189	53.0189	0.0104	0.0000	53.2787
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1273**	**0.9167**	**0.3959**	**5.9300e-003**		**0.0580**	**0.0580**		**0.0580**	**0.0580**	**0.0000**	**53.0189**	**53.0189**	**0.0104**	**0.0000**	**53.2787**

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

3.5 Paving - 2009

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.7900e-003	7.3900e-003	0.0589	3.0000e-005	2.6300e-003	7.0000e-005	2.7000e-003	7.0000e-004	6.0000e-005	7.6000e-004	0.0000	2.9341	2.9341	4.7000e-004	3.7000e-004	3.0551
Total	**5.7900e-003**	**7.3900e-003**	**0.0589**	**3.0000e-005**	**2.6300e-003**	**7.0000e-005**	**2.7000e-003**	**7.0000e-004**	**6.0000e-005**	**7.6000e-004**	**0.0000**	**2.9341**	**2.9341**	**4.7000e-004**	**3.7000e-004**	**3.0551**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1273	0.9167	0.3959	5.9300e-003		0.0580	0.0580		0.0580	0.0580	0.0000	53.0189	53.0189	0.0104	0.0000	53.2786
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1273**	**0.9167**	**0.3959**	**5.9300e-003**		**0.0580**	**0.0580**		**0.0580**	**0.0580**	**0.0000**	**53.0189**	**53.0189**	**0.0104**	**0.0000**	**53.2786**

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

3.5 Paving - 2009

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.7900e-003	7.3900e-003	0.0589	3.0000e-005	2.6300e-003	7.0000e-005	2.7000e-003	7.0000e-004	6.0000e-005	7.6000e-004	0.0000	2.9341	2.9341	4.7000e-004	3.7000e-004	3.0551
Total	**5.7900e-003**	**7.3900e-003**	**0.0589**	**3.0000e-005**	**2.6300e-003**	**7.0000e-005**	**2.7000e-003**	**7.0000e-004**	**6.0000e-005**	**7.6000e-004**	**0.0000**	**2.9341**	**2.9341**	**4.7000e-004**	**3.7000e-004**	**3.0551**

3.5 Paving - 2010

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0437	0.4821	0.2393	3.5000e-004		0.0270	0.0270		0.0249	0.0249	0.0000	34.5192	34.5192	0.0101	0.0000	34.7704
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0437**	**0.4821**	**0.2393**	**3.5000e-004**		**0.0270**	**0.0270**		**0.0249**	**0.0249**	**0.0000**	**34.5192**	**34.5192**	**0.0101**	**0.0000**	**34.7704**

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

3.5 Paving - 2010

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9900e-003	3.3700e-003	0.0286	2.0000e-005	1.8500e-003	3.0000e-005	1.8800e-003	4.9000e-004	3.0000e-005	5.2000e-004	0.0000	2.0006	2.0006	2.3000e-004	1.8000e-004	2.0594
Total	**2.9900e-003**	**3.3700e-003**	**0.0286**	**2.0000e-005**	**1.8500e-003**	**3.0000e-005**	**1.8800e-003**	**4.9000e-004**	**3.0000e-005**	**5.2000e-004**	**0.0000**	**2.0006**	**2.0006**	**2.3000e-004**	**1.8000e-004**	**2.0594**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0437	0.4821	0.2393	3.5000e-004		0.0270	0.0270		0.0249	0.0249	0.0000	34.5191	34.5191	0.0101	0.0000	34.7703
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0437**	**0.4821**	**0.2393**	**3.5000e-004**		**0.0270**	**0.0270**		**0.0249**	**0.0249**	**0.0000**	**34.5191**	**34.5191**	**0.0101**	**0.0000**	**34.7703**

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

3.5 Paving - 2010

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9900e-003	3.3700e-003	0.0286	2.0000e-005	1.8500e-003	3.0000e-005	1.8800e-003	4.9000e-004	3.0000e-005	5.2000e-004	0.0000	2.0006	2.0006	2.3000e-004	1.8000e-004	2.0594
Total	**2.9900e-003**	**3.3700e-003**	**0.0286**	**2.0000e-005**	**1.8500e-003**	**3.0000e-005**	**1.8800e-003**	**4.9000e-004**	**3.0000e-005**	**5.2000e-004**	**0.0000**	**2.0006**	**2.0006**	**2.3000e-004**	**1.8000e-004**	**2.0594**

3.6 Architectural Coating - 2010

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.2977					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0225	0.1334	0.0751	1.1000e-004		0.0121	0.0121		0.0121	0.0121	0.0000	9.5747	9.5747	1.8400e-003	0.0000	9.6206
Total	**2.3202**	**0.1334**	**0.0751**	**1.1000e-004**		**0.0121**	**0.0121**		**0.0121**	**0.0121**	**0.0000**	**9.5747**	**9.5747**	**1.8400e-003**	**0.0000**	**9.6206**

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

3.6 Architectural Coating - 2010

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8200e-003	5.4400e-003	0.0461	4.0000e-005	2.9900e-003	5.0000e-005	3.0300e-003	7.9000e-004	4.0000e-005	8.4000e-004	0.0000	3.2267	3.2267	3.7000e-004	2.9000e-004	3.3216
Total	**4.8200e-003**	**5.4400e-003**	**0.0461**	**4.0000e-005**	**2.9900e-003**	**5.0000e-005**	**3.0300e-003**	**7.9000e-004**	**4.0000e-005**	**8.4000e-004**	**0.0000**	**3.2267**	**3.2267**	**3.7000e-004**	**2.9000e-004**	**3.3216**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.2977					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0225	0.1334	0.0751	1.1000e-004		0.0121	0.0121		0.0121	0.0121	0.0000	9.5747	9.5747	1.8400e-003	0.0000	9.6206
Total	**2.3202**	**0.1334**	**0.0751**	**1.1000e-004**		**0.0121**	**0.0121**		**0.0121**	**0.0121**	**0.0000**	**9.5747**	**9.5747**	**1.8400e-003**	**0.0000**	**9.6206**

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

3.6 Architectural Coating - 2010

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8200e-003	5.4400e-003	0.0461	4.0000e-005	2.9900e-003	5.0000e-005	3.0300e-003	7.9000e-004	4.0000e-005	8.4000e-004	0.0000	3.2267	3.2267	3.7000e-004	2.9000e-004	3.3216
Total	**4.8200e-003**	**5.4400e-003**	**0.0461**	**4.0000e-005**	**2.9900e-003**	**5.0000e-005**	**3.0300e-003**	**7.9000e-004**	**4.0000e-005**	**8.4000e-004**	**0.0000**	**3.2267**	**3.2267**	**3.7000e-004**	**2.9000e-004**	**3.3216**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.6791	3.7858	17.4555	0.0183	1.3399	0.0717	1.4116	0.3594	0.0682	0.4276	0.0000	1,694.5871	1,694.5871	0.1784	0.1397	1,740.6767
Unmitigated	1.6791	3.7858	17.4555	0.0183	1.3399	0.0717	1.4116	0.3594	0.0682	0.4276	0.0000	1,694.5871	1,694.5871	0.1784	0.1397	1,740.6767

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	1,283.84	1,297.44	1162.80	3,575,540	3,575,540
Total	1,283.84	1,297.44	1,162.80	3,575,540	3,575,540

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	38.40	22.60	39.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.429507	0.063665	0.169256	0.220737	0.045775	0.009077	0.012800	0.013008	0.000941	0.000466	0.026281	0.002075	0.006413

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

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	191.4795	191.4795	0.0162	1.9600e-003	192.4673
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	191.4795	191.4795	0.0162	1.9600e-003	192.4673
NaturalGas Mitigated	0.0174	0.1489	0.0634	9.5000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	172.4596	172.4596	3.3100e-003	3.1600e-003	173.4844
NaturalGas Unmitigated	0.0174	0.1489	0.0634	9.5000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	172.4596	172.4596	3.3100e-003	3.1600e-003	173.4844

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	3.23177e+006	0.0174	0.1489	0.0634	9.5000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	172.4596	172.4596	3.3100e-003	3.1600e-003	173.4844
Total		**0.0174**	**0.1489**	**0.0634**	**9.5000e-004**		**0.0120**	**0.0120**		**0.0120**	**0.0120**	**0.0000**	**172.4596**	**172.4596**	**3.3100e-003**	**3.1600e-003**	**173.4844**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	3.23177e+006	0.0174	0.1489	0.0634	9.5000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	172.4596	172.4596	3.3100e-003	3.1600e-003	173.4844
Total		**0.0174**	**0.1489**	**0.0634**	**9.5000e-004**		**0.0120**	**0.0120**		**0.0120**	**0.0120**	**0.0000**	**172.4596**	**172.4596**	**3.3100e-003**	**3.1600e-003**	**173.4844**

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	1.0797e+006	191.4795	0.0162	1.9600e-003	192.4673
Total		**191.4795**	**0.0162**	**1.9600e-003**	**192.4673**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	1.0797e+006	191.4795	0.0162	1.9600e-003	192.4673
Total		**191.4795**	**0.0162**	**1.9600e-003**	**192.4673**

6.0 Area Detail

6.1 Mitigation Measures Area

Barr-Wood Subdivision, 2005 BAU - Tulare County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	9.6165	0.1587	10.3244	0.0150		1.2771	1.2771		1.2771	1.2771	112.9917	60.5657	173.5575	2.9900e-003	0.0111	176.9252
Unmitigated	9.6165	0.1587	10.3244	0.0150		1.2771	1.2771		1.2771	1.2771	112.9917	60.5657	173.5575	2.9900e-003	0.0111	176.9252

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2298					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.9561					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	8.3949	0.1461	9.2751	0.0150		1.2716	1.2716		1.2716	1.2716	112.9917	58.9162	171.9079	1.1300e-003	0.0111	175.2291
Landscaping	0.0358	0.0126	1.0493	5.0000e-005		5.4400e-003	5.4400e-003		5.4400e-003	5.4400e-003	0.0000	1.6495	1.6495	1.8600e-003	0.0000	1.6961
Total	**9.6165**	**0.1587**	**10.3244**	**0.0150**		**1.2771**	**1.2771**		**1.2771**	**1.2771**	**112.9917**	**60.5657**	**173.5575**	**2.9900e-003**	**0.0111**	**176.9252**

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

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2298					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.9561					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	8.3949	0.1461	9.2751	0.0150		1.2716	1.2716		1.2716	1.2716	112.9917	58.9162	171.9079	1.1300e-003	0.0111	175.2291
Landscaping	0.0358	0.0126	1.0493	5.0000e-005		5.4400e-003	5.4400e-003		5.4400e-003	5.4400e-003	0.0000	1.6495	1.6495	1.8600e-003	0.0000	1.6961
Total	**9.6165**	**0.1587**	**10.3244**	**0.0150**		**1.2771**	**1.2771**		**1.2771**	**1.2771**	**112.9917**	**60.5657**	**173.5575**	**2.9900e-003**	**0.0111**	**176.9252**

7.0 Water Detail

7.1 Mitigation Measures Water

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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	14.7817	0.2897	6.9400e-003	24.0935
Unmitigated	14.7817	0.2897	6.9400e-003	24.0935

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	8.86095 / 5.58625	14.7817	0.2897	6.9400e-003	24.0935
Total		**14.7817**	**0.2897**	**6.9400e-003**	**24.0935**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	8.86095 / 5.58625	14.7817	0.2897	6.9400e-003	24.0935
Total		**14.7817**	**0.2897**	**6.9400e-003**	**24.0935**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	28.4269	1.6800	0.0000	70.4263
Unmitigated	28.4269	1.6800	0.0000	70.4263

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	140.04	28.4269	1.6800	0.0000	70.4263
Total		**28.4269**	**1.6800**	**0.0000**	**70.4263**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	140.04	28.4269	1.6800	0.0000	70.4263
Total		**28.4269**	**1.6800**	**0.0000**	**70.4263**

9.0 Operational Offroad

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

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix B

Biological Evaluation

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Biological Resource Assessment

Barr-Wood Subdivision Development Project
Assessor Parcel Number 119-022-041
Visalia, CA

Prepared for

4CREEKS

324 South Santa Fe Street, Suite A
Visalia, CA 93292

Prepared by

SOAR ENVIRONMENTAL CONSULTING

1401 Fulton St, Suite 918
Fresno, CA 93721

July 1, 2022

Executive Summary

The developer 4Creeks, Inc. (4Creeks) seeks to construct the Barr-Wood Housing Subdivision (Project) on the corner of Roeben Street and West Whitendale Avenue in Visalia, California. Currently, the project site is 69.35 acres of farmland on APN 119-022-041. 4Creeks has tasked Soar Environmental Consulting Inc. (Soar Environmental) to provide a Biological Resources Assessment (BRA) in accordance with the California Environmental Quality Act (CEQA), prior to implementation of the proposed Project.

The objectives of this Assessment were to: 1) provide a general characterization of biological resources for the property; 2) inventory plant and wildlife species; 3) evaluate the potential for federal or state listed plants and animals species afforded other special regulatory protection; and 4) describe the property's sensitive biological resources and applicable federal, state, and local land use policies.

This BRA provides information about the biological resources within the Project footprint. Prior to conducting a habitat assessment (i.e., site visit for biological resources), Soar Environmental researched the California Natural Diversity Database (CNDDB) and the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC), and California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California, to compile a list of special-status species that could potentially be present in the vicinity of the Project area. Soar Environmental researched specific species and habitat requirements for the species noted in the CNDDB, IPaC and CNPS databases and included species listing status, and proximal species observations in this report.

No special-status plant or wildlife species were observed in the Project area during the field survey on June 27, 2022. Based on the Literature Review (**Section 2.1** of this report) special-status species that have the potential to occur in the Project area based on documented occurrences in the vicinity include:

- San Joaquin kit fox
- Swainson's hawk
- vernal pool fairy shrimp
- yellow-billed cuckoo

All other special-status species identified in the record search are unlikely to occur in the Project area, due to lack of suitable habitat, proximity, and time since historical occurrences. No listed species were observed during the habitat assessment of the Project site, and no suitable habitat features, or conditions were observed that would be conducive for any of the special status species identified in this report.

Contents

List of Figures

List of Tables

1. Introduction

The proposed Project is a housing subdivision to be constructed on 69.35 acres of fallow farmland in the city of Visalia, Visalia County, California. Soar Environmental Consulting, Inc. (Soar Environmental) has prepared this Biological Resource Assessment (BRA) for 4Creeks, Inc. (4Creeks) in accordance with California Environmental Quality Act (CEQA) requirements.

A review of California Natural Diversity Database (CNDDB) and the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) was conducted to identify sensitive wildlife species. Results indicated a habitat assessment would be necessary to search for potential suitable habitat or presence for the 17 following sensitive wildlife species: Two amphibian species include: California red-legged frog, and California tiger salamander. Three bird species: Swainson's hawk, tricolored blackbird, and western yellow-billed cuckoo. One fish species: delta smelt. Five invertebrates: vernal pool fairy shrimp, conservancy fairy shrimp, monarch butterfly, valley elderberry longhorn beetle, and vernal pool tadpole shrimp. Four mammals: Fresno kangaroo rat, Tipton kangaroo rat, fisher, and San Joaquin kit fox. Two reptiles were identified: blunt-nosed leopard lizard, and giant garter snake.

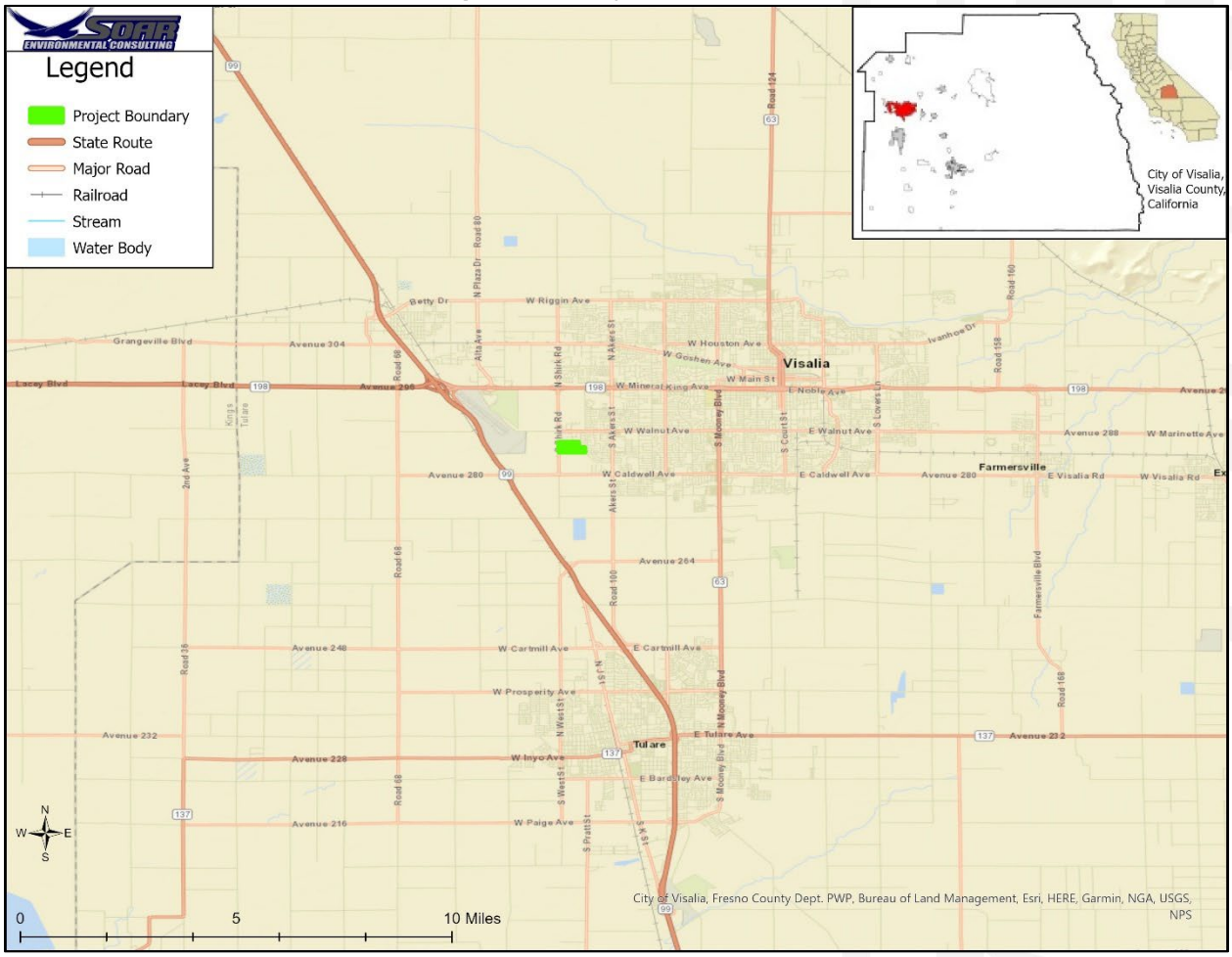
Potential sensitive plant species were reviewed using the CNPS Inventory of Rare and Endangered Plants of California and CNDDB records. The data records search identified the following 6 sensitive plant species historically occurring in the vicinity of the Project site: California jewelflower, Hoover's Spurge, San Joaquin Valley Orcutt grass, San Joaquin adobe sunburst, and Greene's tuctoria.

A habitat assessment was conducted in the Project area on June 27, 2022, by Soar Environmental biologist Ben Arax. The purpose of the Habitat Assessment Survey was to search for the presence of special-status species or suitable habitats that have historically been observed within, or surrounding, the Project area. No special-status species were observed during the site visit, and no suitable habitat was observed for any of the sensitive species identified in this report.

1.1 Project Location

The Project site is located on the northwest corner of Roeben Street and West Whitendale Avenue in Visalia, California. It is on the western edge of the City, in an agricultural and residential interface environment, approximately 1.25 miles east of State Route (SR) 99 and 1.4 miles south of State Route (SR) 198. It is comprised of Assessor Parcel Number (APN) 119-022-041. In the USGS 7.5-minute Quadrangle of Visalia, it can be found in Township 19 South, Range 24 East, section 3, NW ¼ section, South 1/8. A map to the Project site location is depicted in **Figure 1**.

Figure 1. Project Location



1.2 Environmental Setting

Land use in the area is agricultural and residential. The Project site is approximately 1.25 miles east of State Route (SR) 99, and 1.4 miles south of SR 198. Agricultural land becomes more prevalent to the west while land use to the east is largely urbanized. The project area is rectangular with a Panhandle extending from the southeast corner. The Panhandle is divided by an irrigation canal running north and south, and the rest of the project area is divided by a natural surface road that runs east to west through the center of the property. The project site is bounded by residential neighborhoods to the north and east, separated by a wooden fence. Agricultural land borders west and southern boundaries with orchard trees to the west and a cattle ranch to the South.

The topography of the area is completely flat at approximately 300 feet elevation, vegetative ground cover was recently mowed. There are no structures on the property, no trees or bushes that would provide adequate habitat for nesting birds, and there were no small mammal Burrows that would provide adequate refuge for San Joaquin kitfox. Powerline poles exist along the main roads, but not on the

property itself, and did not appear to harbor any raptor nests. The irrigation canal on the east side of the property has dirt roads on both sides of the canal with little to no vegetation. There were no signs of pooling water or vernal pool habitat within the Project site.

Figure 1 – Project Site Boundary

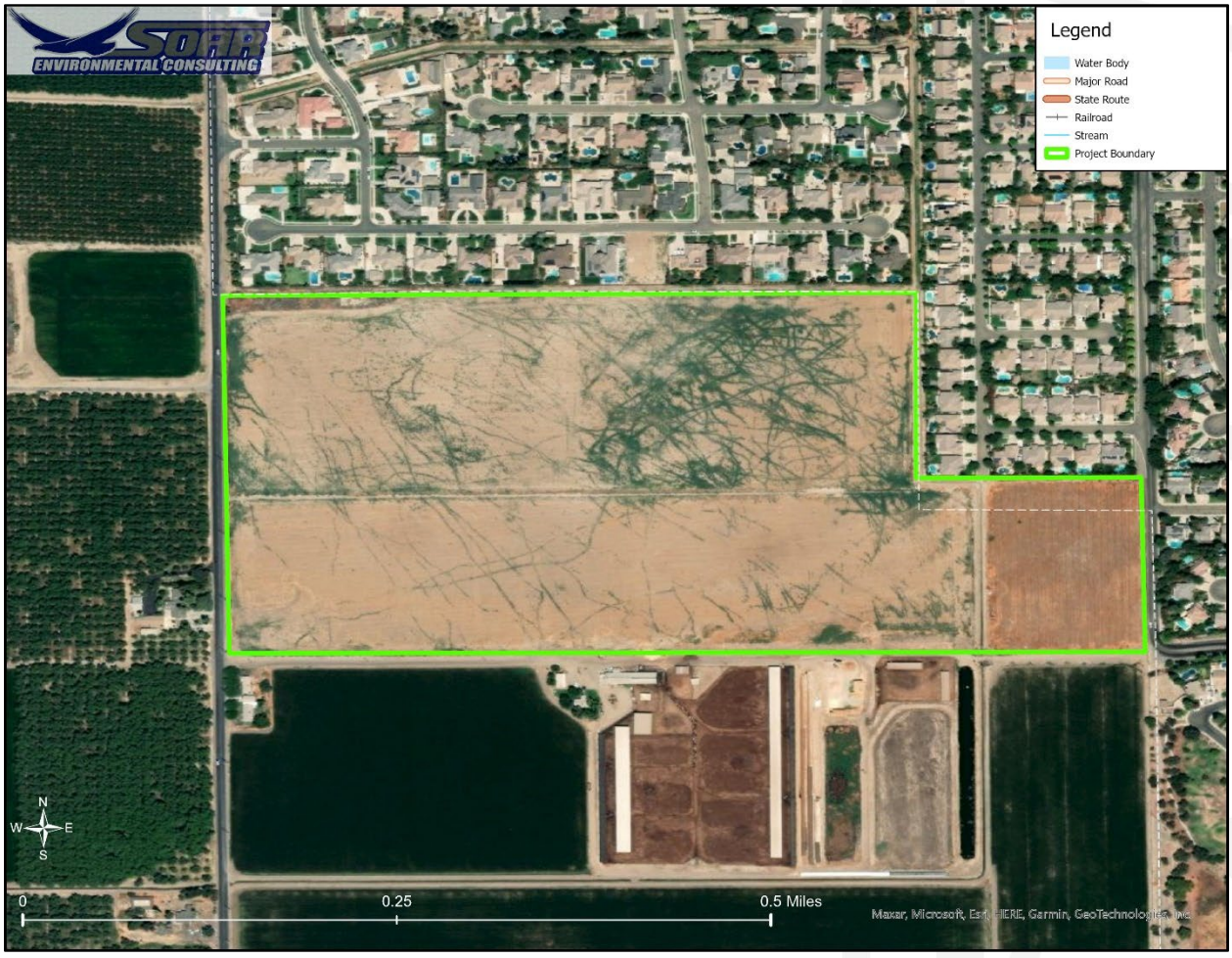
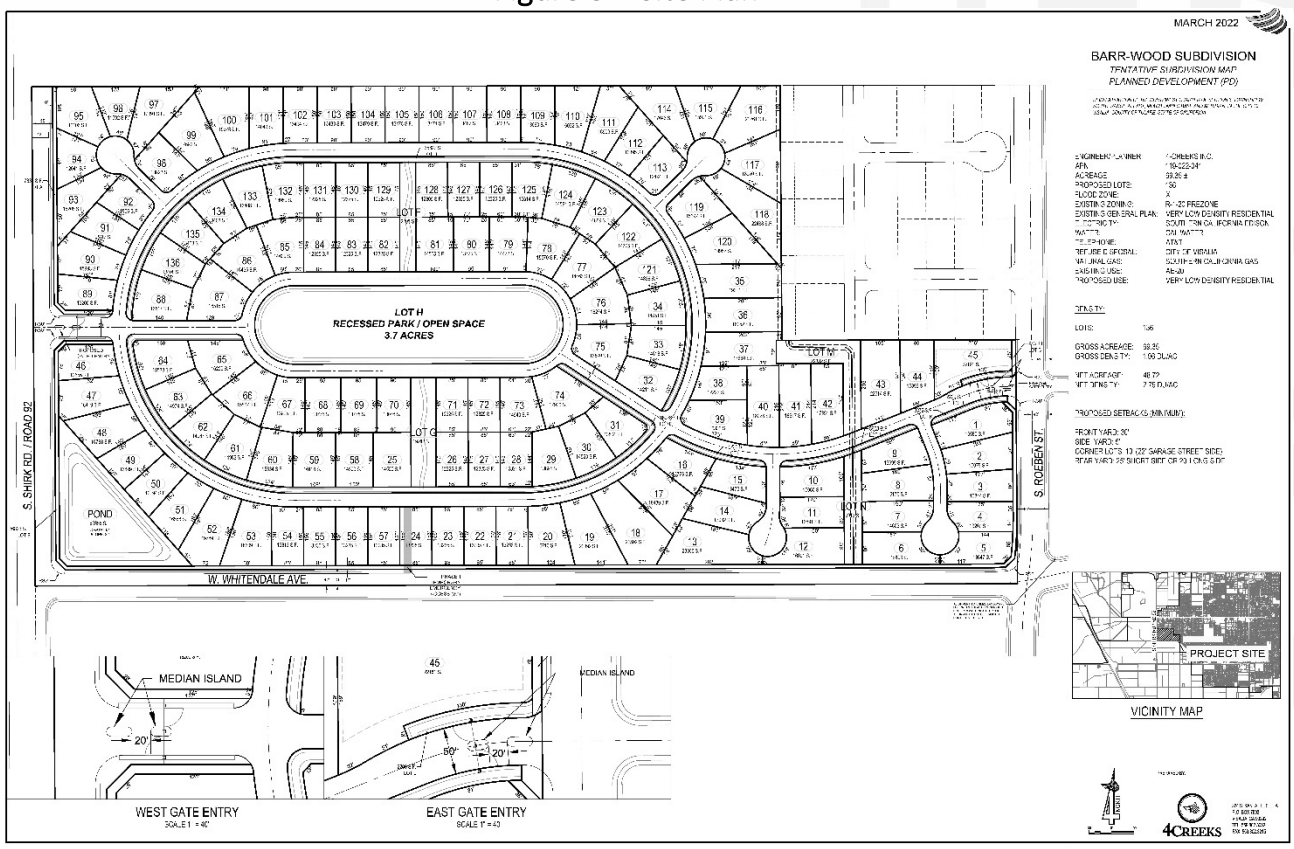


Figure 3 – Site Plan



2. Methods

2.1 Literature Review

Prior to performing the habitat assessment, Soar Environmental conducted a records search for threatened or endangered species that could potentially occur in the vicinity of the Project area. The records search included a review of the California Natural Diversity Database (CNDDB), the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC), and California Native Plant Society (CNPS) Online Rare Plant Inventory. The area covered by the data records search included USGS 7.5 minute quadrangles of *Visalia, Cairns Corner, Exeter, Goshen, Ivanhoe, Monson, Paige, Traver,* and *Tulare* 7.5-minute USGS quadrangles. From these sources a list of special-status plant and animal species was generated. Proximal locations of special-status plant and animal species located within 5 miles of the Project site are shown in (**Figure 4**).

Based on a review of CNDDB records (conducted April 7, 2022) it was determined there was potential for 13 State listed special-status species to occur within or in the vicinity of the Project site (listed below).

- California tiger salamander (*Ambystoma californiense*)
- San Joaquin kit fox (*Vulpes macrotis mutica*)

- Swainson's hawk
- Tipton kangaroo rat (Dipodomys nitratoides nitratoides)
- Tricolored blackbird
- Valley elderberry longhorn beetle
- Vernal pool fairy shrimp (Branchinecta lynchi)
- Vernal pool tadpole shrimp (Lepidurus packardi)
- Western yellow-billed cuckoo (Coccyzus americanus occidentalis)
- California Jewelflower
- Hoover's spurge (Euphorbia hooveri)
- San Joaquin adobe sunburst (Pseudobahia peirsonii)
- San Joaquin Valley Orcutt grass (Orcuttia inaequalis)

A search of the IPaC database indicated 11 additional Federally listed sensitive wildlife and plant species likely to occur within or near the Project site include:

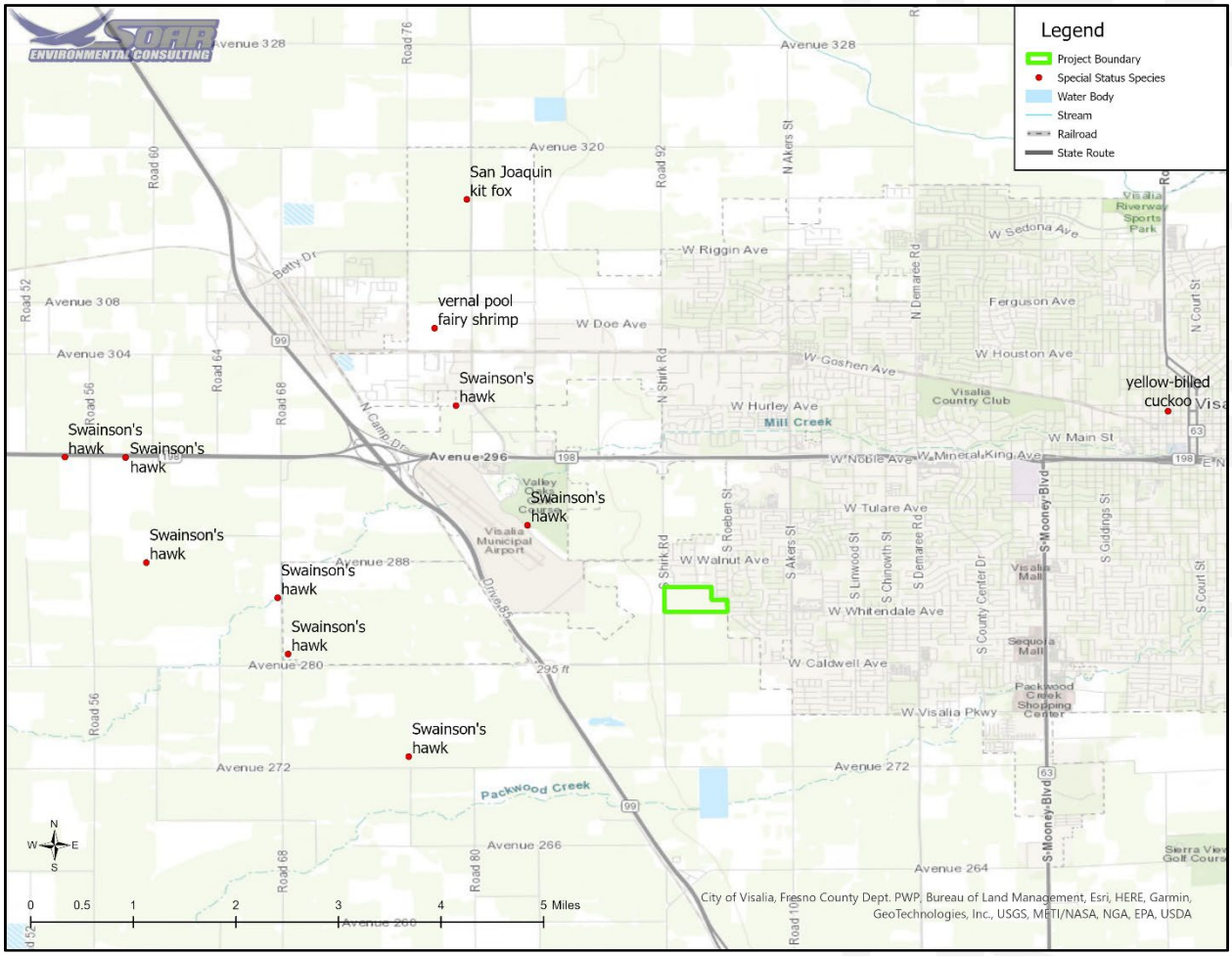
- Blunt-nosed leopard lizard (Gambelia silus)
- California red-legged frog (Rana draytonii)
- Conservancy fairy shrimp (Branchinecta conservatio)
- Delta smelt (Hypomesus transpacificus)
- Fisher (Pekania pennanti)
- Fresno kangaroo rat (Dipodomys nitratoides exilis)
- Giant garter snake (Thamnophis gigas)
- Monarch butterfly (Danuas plexippus)
- Greene's tuctoria (Tuctoria greenei)
- Succulent owl's-clover (Castilleja campestris ssp. Succulenta)

A search of the California Native Plant Society (CNPS) Online Rare Plant Inventory did not identify any additional plant species that were not identified in the CNDDB or IPaC records search.

No special-status plant or wildlife species were observed in the Project area during the habitat assessment on June 27, 2022. However, based on a review of CNDDB, IPaC, and CNPS, and analysis of proximal historic occurrences, records indicated potential presence of the following special-status species.

- San Joaquin kit fox
- Swainson's hawk
- vernal pool fairy shrimp
- yellow-billed cuckoo

Figure 4 – Historical Special-status Species Locations Proximate to the Project Site



This map shows the closest and most recent special-status species locations from the CNDDB, IPaC, and CNPS Online Rare Plant Inventory

2.2 Field Reconnaissance Methodology

On June 27, 2022, Soar Environmental biologist Ben Arax conducted a habitat assessment on the property for the above mentioned species. Walking the perimeter of the property, and meandering transects throughout the Project area, the surveyor searched for bird nests, possible small mammal dens, identified vegetation, and looked for vernal pools or other signs of wildlife occupancy. Survey efforts emphasized the search for special-status species and associated suitable habitats, that had documented occurrences in the data records search of the CNDDB, IPaC, and CNPS databases. The surrounding area was also surveyed by vehicle in accessible areas within 0.5 miles of the Project site, to look for biological resources and features that may be conducive for suitable habitat of the identified special-status species. Photos were taken of the Project boundaries, center of the Project site in 4 cardinal directions, and other points of interest depicting the habitat and potential biological resources (**Appendix A**).

3. Habitat Assessment Results

During the habitat assessment, there were no observations of special-status plant or wildlife species. The Project site is an inactive agricultural field on the western edge of the City, with active agricultural land to the west and an urbanized residential environment to the east. A red tailed hawk and several other bird species were observed during the site visit, however there are no trees or bushes that would provide adequate refugia for the nesting bird species identified in this report, and no raptor nests were observed on any of the power line poles within the vicinity of the Project site. There were no signs of pooling water or vernal pools that would provide suitable habitat for vernal pool fairy shrimp. The ground was highly visible from recent mowing, and no small mammal burrows were observed anywhere on the property that would provide adequate refugia for San Joaquin kit fox.

Although no special-status plant or wildlife species were observed during the site visit, Soar Environmental biologists observed some common reptile and bird species flying around the area, listed in (**Table 1**) below, along with plant species observed onsite. No other wildlife species were observed during the habitat assessment.

Table 1– Wildlife and Plant Species Observed On Project Site

Wildlife Species Observed	Listing Status
American crow (*Corvus brachyrhynchos*)	MTBA
Brown-headed cowbird (*Molothrus ater*)	MTBA
Great egret (*Ardea alba*)	MTBA
House finch (*Haemorhous mexicanus*)	MTBA
House sparrow (*Passer domesticus*)	MTBA
Killdeer (*Charadrius vociferus*)	MTBA
Lesser goldfinch (*Spinus psaltria*)	MTBA
Mourning dove (*Zenaida macroura*)	None
Northern mockingbird (*Mimus polyglottos*)	MTBA
Red-tailed hawk (*Buteo jamaicensis*)	MTBA

Plant Species Observed	Listing Status
Common wild oat (*Avena fatua*)	None
Cutleaf geranium (*Geranium dissectum*)	None
Field bindweed (*Convolvulus arvensis*)	None
Great brome (*Bromus diandrus*)	None
Mediterranean barley (*Hordeum marinum*)	None
Narrowleaf plantain (*Plantago lanceolata*)	None
Ripgut brome (*Bromus diandrus*)	None
Russian thistle (*Salsola tragus*)	None
Poison hemlock (*Conium maculatum*)	None
Prickly lettuce (*Lactuca serriola*)	None

Rock pigeon (*Columba livia*)	None
Western kingbird (*Tyrannus verticalis*)	MTBA
Common side-blotched lizard (*Uta stansiburana*)	None
Western fence lizard (*Sceloporus occidentalis*)	None

Seaside barley (*Hordeum marinum*)	None
Wall barley (*Hordeum murinum*)	None
Wild oat (*Avena fatua*)	None
Yellow star-thistle (*Centaurea solstitialis*)	None

4. Special-Status Species

Special-status plants and animals that have a reasonable possibility to occur in the Project area based on habitat suitability and requirements, elevation and geographic range, soils, topography, surrounding land uses, and proximity of known occurrences in the CNDDB, IPaC, and CNPS databases to the Project area are listed in **Tables 2 and 3**. The likelihood for occurrence of special-status species was assessed using information from the various listed sources, wildlife and botanical surveys. Narratives are provided for species for which there are land use planning and regulatory implications. Special-status species for which there are no habitat features are excluded from consideration due to the lack of suitable habitat and distance from the subject property.

Based upon a review of the resources and databases listed in Section 2.1 (Literature Review) for the *Visalia, Cairns Corner, Exeter, Goshen, Ivanhoe, Monson, Paige, Traver,* and *Tulare* USGS 7.5-minute quadrangles; it was determined that 19 special-status plant species have been documented in the vicinity of the Project area. Of these 19 special-status species, 3 were determined to have a moderate potential for occurrence, and 4 species was determined to have potential for occurrence.

Species with Potential for Occurrence:

- San Joaquin kit fox (*Vulpes macrotis mutica*)
- Swainson's hawk (*Buteo swainsoni*)
- Vernal pool fairy shrimp (*Branchinecta lynchi*)
- Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)

Special-status species and sensitive habitats include plant and wildlife taxa, or other unique biological features that are afforded special protection by local land use policies, state and federal regulations. Special-status plant and animal species are those that are listed as rare, threatened, or endangered under the state or federal Endangered Species Acts. Vegetation communities may warrant special-status if they are of limited distribution, have high wildlife value, or are particularly vulnerable to disturbance. Listed and special-status species are defined as:

- Listed or proposed for listing under the state or Federal Endangered Species acts.
- Protected under other regulations (e.g., Migratory Bird Treaty Act).
- CDFG Species of Special Concern.
- Listed as species of concern by CNPS or USFWS; or

- Receive consideration during environmental review under CEQA.

Special-status species considered for this analysis are based on field survey results, review of the CNDDB occurrence records of species, review of the USFWS lists for special-status species occurring in the region, and CNPS literature (**Tables 2 and 3**).

- **Present**: Species known to occur on the site, based on CNDDB records, and/or was observed on the site during the field survey.
- **High**: Species known to occur on or near the site (based on CNDDB records within 8 km or 5 mi) and there is suitable habitat on the site.
- **Low**: Species known to occur in the vicinity of the site, and there is marginal habitat onsite. -**OR**- Species is not known to occur in the vicinity of the site, however there is suitable habitat on the site.
- **None**: Species is not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site. -**OR**- Species was surveyed for during the appropriate season with negative results.

Table 2 – Potentially Occurring Listed Wildlife Species

Common/ Scientific Name	Listing Status*	Habitat Requirements	Potential for Occurrence
Amphibians			
California red-legged frog (*Rana draytonii*)	FT, SSC	Standing waters, freshwater wetland. Forest, scrub, woodland riparian areas. Requires a breeding pond, slow-flowing stream. Will use small mammal burrows.	**None**: Species is not known to occur in the vicinity of the site and there is no suitable habitat for the species on the site.
California tiger salamander (*Ambystoma californiense*)	FT, ST	Grasslands, oak savannah riparian woodlands, lower elevations of coniferous forests, ditches, vernal pools, and wetlands.	**None**: Species is not known to occur in the vicinity of the site and there is no suitable habitat for the species on the site.
Birds			
Swainson's hawk (*Buteo swainsoni*)	ST, MBTA	Nests in isolated trees or riparian woodlands adjacent to suitable foraging habitat (agricultural fields, grasslands, etc.).	**Low**: Species known to occur in the vicinity of the site, and there is marginal habitat onsite.
Tricolored blackbird (*Agelaius tricolor*)	ST, BCC, MBTA	Found in areas near water, such as marshes, grasslands, and wetlands. They require some sort of	**None**: Species is not known to occur on or in the vicinity of the site and there is no suitable habitat

		substrate nearby to build nests.	for the species on the site.
Western yellow-billed cuckoo (Coccyzus americanus occidentalis)	FT, SE, MBTA	Woodlands near streams or lakes, abandoned farmland, old fruit orchards, successional shrubland and dense thickets.	**None**: Species is not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site.
Fish			
Delta smelt (*Hypomesus transpacificus*)	FT	Shallow, fresh, or slightly brackish backwater sloughs and edge waters, and substrate for spawning.	**None**: Species is not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site.
Invertebrates			
Conservancy fairy shrimp (*Branchinecta conservatio*)	FE	Inhabit large, cool-water vernal pools from early November to early April, which fill with water in the rainy season, then slowly dry up.	**None**: Species is not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site.
Monarch butterfly (*Danaus plexippus*)	FC	Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	**None**: Species is not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site.
Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)	FT	Occurs only in the Central Valley of California, in association with blue elderberry (Sambucus mexicana), in riparian scrub	**None**: Species is not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site.
Vernal pool fairy shrimp (*Branchinecta lynchi*)	FT	Coastal mountains, in valley foothills grasslands, vernal pools, and wetlands.	**None**: Species is not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site.
Vernal pool tadpole shrimp (*Lepidurus packardi*)	FE	Vernal pools, (hardpan, duripan, or claypan), grassland. Pools commonly found in grass-bottomed or mud-bottomed swales.	**None**: Species is not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site.
Mammals			

Fisher (*Pekania pennanti*)	FE	Occurs in intermediate to large-tree stages of coniferous forests and deciduous-riparian habitats with a high percent canopy closure.	**None**: Species is not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site.
Fresno kangaroo rat (*Dipodomys nitratoides exilis*)	FE, SE	Arid and alkaline plains under shrub and grass vegetation, coastal scrub, open stages of chaparral, and desert scrub habitats, and in conifer woodlands.	**None**: Species is not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site.
San Joaquin kit fox (*Vulpes macrotis mutica*)	FE, SE	Arid flat grasslands, scrublands, and alkali meadows with short vegetation.	**None**: Species is not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site.
Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*)	FE, SE	Arid and alkaline plains under shrub and grass vegetation, coastal scrub, open stages of chaparral, and desert scrub habitats, and in conifer woodlands.	**None**: Species is not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site.
Reptiles			
Blunt-nosed leopard lizard (*Gambelia sila*)	FE, SE	Semi-arid grasslands, alkali flats, and washes, utilize shrubs and small mammal burrows.	**None**: Species is not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site.
Giant garter snake (*Thamnophis gigas*)	FT	Marshes, sloughs, drainage canals, irrigation ditches, and prefers locations with vegetation close to water for basking.	**None**: Species is not known to occur on or in the vicinity of the site and there is no suitable habitat for the species on the site.

*Listing Status Notes:

Federal: FE – Federally listed Endangered
FT – Federally listed Threatened
FC – Federal Candidate Species
WL – USFWS Watch list
BCC – USFWS Bird of Conservation Concern
MTBA – Migratory Bird Treaty Act

State: SE – State listed Endangered
ST – State listed Threatened
SC – State Candidate Species
SR – State Rare Species
SA – State Special Animal
FP – CDFW Fully Protected Species
SSC – CDFW Species of Special Concern
WL – CDFW Watch List

Table 3 – Potentially Occurring Listed Plant Species

Common/ Scientific Name	*Status Fed/CA/CNPS / Bloom Period	Habitat Description	Habitat Present/ Absent
California jewelflower (*Caulanthus californicus*)	FE/CE/1B.1/ Feb-May	Chenopod scrub, pinyon-Juniper woodland, valley and foothill grassland	Absent
Greene's tuctoria (*Tuctoria greenei*)	FE/SR/1B.1/ May-Jul	Vernal pools, hardpan, tuffaceous alluvium, or claypan	Absent
Hoover's spurge (*Euphorbia hooveri*)	1B.2/ June-Oct	Vernal pools/<800 ft elevaiton	Absent
San Joaquin adobe sunburst (*Pseudobahia peirsonii*)	FT/CE/1B.1/ Feb-Apr	Cismontane woodland, valley and foothill grassland, adobe clay	Absent
San Joaquin Valley Orcutt grass (*Orcuttia inaequalis*)	FT/CE/1B.1/ Apr-Sep	Vernal pools	Absent
Succulent owl's-clover (Castilleja campestris ssp. Succulenta)	1B.2 (Mar) Apr-May	Vernal pools (50 – 750 m; 165-2460 ft)	Absent

*Listing Status Notes:

Federal: FE – Federally listed Endangered
FT – Federally listed Threatened
FC – Federal Candidate Species

State: SE – State listed Endangered
ST – State listed Threatened
SC – State Candidate Species
SR – State Rare Species

CRPR: California Native Plant Society Rare Plant Rank
CBR – Considered but Rejected
1B – Rare, threatened, or endangered in CA and elsewhere
2 – Rare, threatened, or endangered in CA but common elsewhere
4 – Limited distribution (Watch-list)
CBR – Considered but Rejected

CRPR Extensions 0.1 – Seriously endangered in California
0.2 – Fairly endangered in California
0.3 – Not very endangered in California

4.1 Special-Status Wildlife Species Descriptions

4.1.1 San Joaquin Kit Fox (Vulpes macrotis mutica)

The San Joaquin kit fox is listed as Threatened at the Federal level and Endangered at the State level. They are petite, light-colored canids, approximately 50 centimeters (20 inches) in length, with bushy, black-tipped tails, large ears, and pointed snouts.

San Joaquin kit fox is a desert-adapted species which occurs mainly in arid, flat grasslands, scrublands, and alkali meadows where the vegetation structure is relatively short. This species uses dens year-round and needs loose-textured soils suitable for burrowing. They primarily prey on kangaroo rats and other small rodents, as well as large insects and occasionally rabbits. A typical kit fox den is anywhere from four to 10 inches in diameter, and is taller than it is wide, often with a keyhole shape. Dens usually have dirt berms and matted vegetation adjacent to the entrances, and tracks and prey remains will normally be detected nearby. SJKF may also utilize man-made structures such as pipes and culverts as dens.

4.1.2 Swainson's Hawk (Buteo swainsonii)

Swainson's hawk is listed as Threatened on the State level. favoring open habitat for foraging such as agricultural fields, pastures, and row crops. They nest in scattered stands of eucalyptus, willow, oak, cottonwood, and conifers. On occasion, Swainson's hawk will nest on a power pole or transmission tower. Nests are constructed with loose bundles of sticks and debris items. Incubation period is approximately 35 days and nesting period is 17-22 days. The breeding season for this species begins in March and ends in September.

4.1.3 Vernal Pool Fairy Shrimp (Brachinecta lynchi)

Vernal pool fairy shrimp is listed as Threatened on the Federal level and has no listing on the State level. Measuring 2.5 centimeters (one inch) long, translucent crustaceans with 11 pairs of appendages. Thy are limited to vernal pool habitats in Oregon and California and do not occur in riverine, marine, or other permanent bodies of water where fish are present. During the wet season, the females produce hardy resting eggs, called cysts, which survive the dry season and hatch when the rains come again.

4.1.4. Western yellow-billed cuckoo (Coccyzus americanus occidentalis)

Yellow-billed cuckoos have uniform grayish-brown plumage on their head and back, and dull white underparts. Their tails are long with two rows of four to six large white circles on the underside. The bill of yellow-billed cuckoos is short to medium in length and curved downward with a black upper mandible and a yellow or orange lower mandible. Yellow-billed cuckoos have zygodactylous feet, meaning that of the four toes, the middle two point forward and the outer two point backward.

Yellow-billed cuckoos prefer open woodlands with clearings and a dense shrub layer. They are often found in woodlands near streams, rivers or lakes. In North America, their preferred habitats include abandoned farmland, old fruit orchards, successional shrubland and dense thickets. In winter, yellow-billed cuckoos can be found in tropical habitats with similar structure, such as scrub forest and mangroves.

5. Findings

During the Habitat Assessment, Soar Environmental did not observe any of the referenced special-status species within the Project site or environmental footprint. From the information gathered in the data records search and analysis of the habitat on site, the following 4 special-status species were found to have the highest potential for occurrence in the vicinity of the Project site: 1) San Joaquin kit fox, 2) Swainson's hawk, 3) vernal pool fairy shrimp, and 4) western yellow-billed cuckoo. However, due to habitat quality and proximity of historical occurrences, all of these species were found to be unlikely to occur within the vicinity of the Project site. Based on the findings of this assessment, the proposed development of this property is unlikely to adversely affect any special-status species and is likely to have no effect for CEQA considerations.

The Project site consists of 69.35 acres of an inactive agricultural field. The ground is highly disturbed and compacted from previous agricultural activities. Land use in the surrounding area is urban and residential to the east, becoming orchards and agricultural land to the west. There is an irrigation ditch on the eastern side of the property with little to no vegetation around it. There are no vernal pools or wetlands in the area that would provide suitable habitat for vernal pool fairy shrimp, or any other aquatic special-status species identified in this report.

Although a red-tailed hawk And several other common bird species were observed flying through the area, there were no raptor nests observed within a 0.5 miles search around the Project footprint. Due to agricultural activities, the orchard trees in the area do not provide suitable refugia for nesting birds. There are no trees or bushes in the area that would provide adequate nesting habitat for red-tailed hawk, western yellow-billed cuckoo, or any of the special-status bird species identified in this report.

No signs of San Joaquin kit fox were observed during the habitat assessment, and suitable habitat for this species is poor within the surrounding areas. The ground was highly visible from recent mowing, and no small mammal burrows were observed anywhere on the property that would provide adequate refugia for San Joaquin kit fox.

6. Recommendations

No listed species were observed during the Habitat Assessment of the Project site, and no suitable habitat features, or conditions were observed that would be conducive for any of the aforementioned species. The proposed development of this parcel is unlikely to adversely affect any special-status species. Soar Environmental Consulting, Inc. recommends that if any special status species are observed during construction activities, work be stopped immediately and CDFW is contacted.

7. Study Limitations

This Report has been prepared in accordance with generally accepted environmental methodologies and contains all the limitations inherent in these methodologies. The Report documents site conditions that were observed during field reconnaissance and do not apply to future conditions. No other warranties, expressed or implied, are made as to the professional services provided under the terms of our contract and included in this Report.

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APPENDIX A

SITE PHOTOGRAPHS

Project Area

Photo 1 – Northern Boundary (View East)

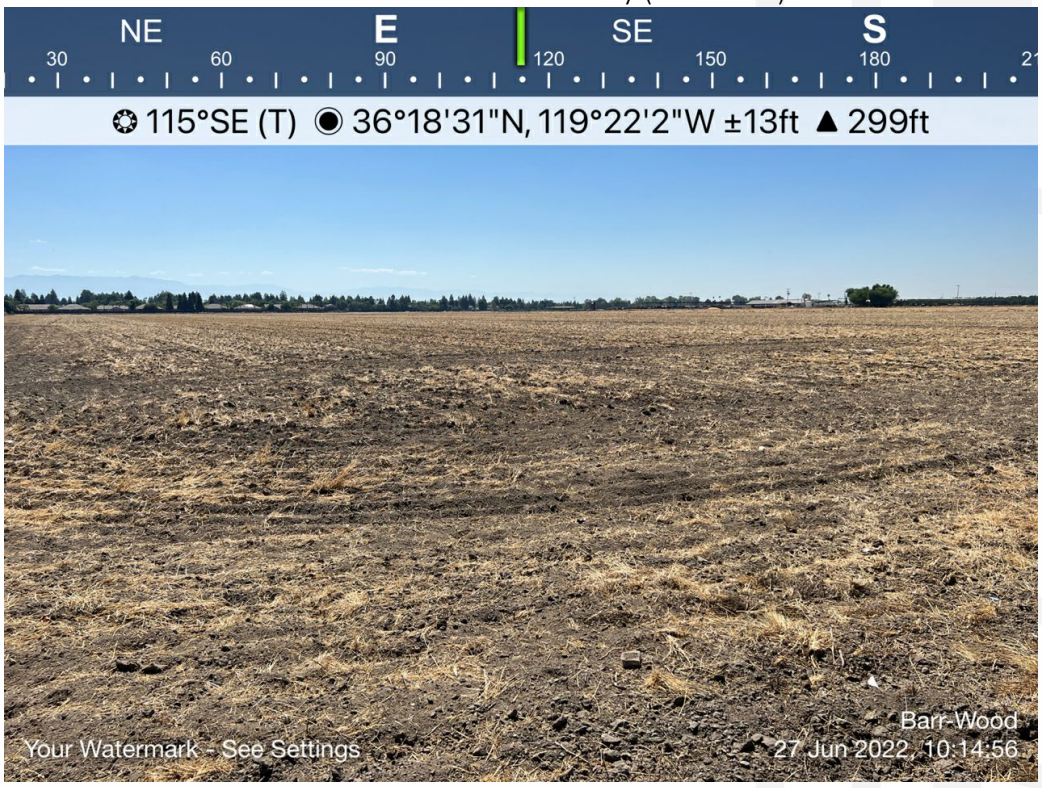

Photo 2 – Eastern Boundary (View South)

Photo 3 – Southern Boundary (View West)

Photo 4 – Western Boundary (View North)

Photo 5 – Center of Project Site (North to South)

Photo 6 – Center of Project Site (South to North)

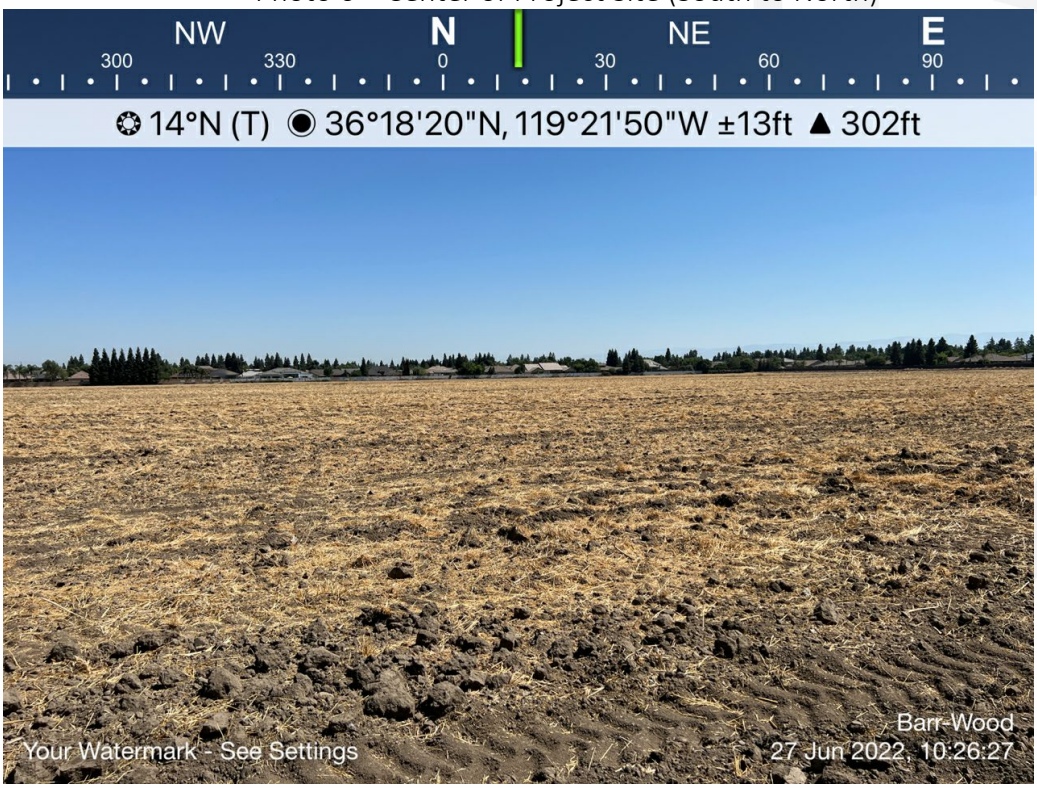

Photo 7 – Center of Project Site (East to West)

Photo 8 – Center of Project Site (West to East)

Photo 9 – Southeast Panhandle of Project Boundary (View East)

Photo 10 – Canal Dividing Panhandle from the Rest of the Project Site

Appendix C

Cultural Records Search Results

Phase I Cultural Resource Assessment for the Barr and Wood Tentative Subdivision Map Project, Tulare County, California

Consuelo Y. Sauls

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July 2022

USGS Visalia 7.5' topographic quadrangle
69.35-acre project boundary; intensive pedestrian survey
Keywords: South Fork Persian Ditch

MANAGEMENT SUMMARY

Taylored Archaeology completed a Phase I cultural resource assessment for the Barr and Wood Tentative Subdivision Map Project (Project). Barr and Wood is an unincorporated property southwest of the City of Visalia in Tulare County, California. The Project proposes to construct a single-family residential development comprised of approximately 136 residential lots with park strip landscaping, streets, streetlights, sidewalks and a pond. In order to obtain development approval from the City of Visalia, the Project is subject to the California Environmental Quality Act (CEQA). The City of Visalia is the Lead Agency under CEQA for this Project.

To assess for cultural resources in conjunction with CEQA, Taylored Archaeology conducted a cultural resource study under contract with 4Creeks, Inc. to assess whether cultural resources are present with the Project boundary. This investigation included: (1) a records search from the Southern San Joaquin Information Center (SSJVIC) of the California Historical Resources Information System (CHRIS), at California State University, Bakersfield; (2) a Sacred Lands File Search from the Native American Heritage Commission (NAHC); (3) archival research; (4) an archaeological pedestrian survey and (5) preparing California Department of Parks and Recreation (DPR) 523 forms.

The SSJVIC reported that two previous cultural resource investigations have been conducted within the Project area and no cultural resources were recorded within the Project area. Taylored Archaeology reviewed the two cultural resource investigations (TU-00041 and TU-01190) and determined both are literature reviews and not surveys of the Project area. The SSJVIC identified five previous investigations and two recorded historical resources within a 0.5-mile radius of the Project boundary: 3431 South Shirk Street, a rural residential home (P-54-005058) and 6440 West Cadwell Avenue, a rural residential home (P-54-005059).

The NAHC stated a search of its Sacred Lands File was negative. Local tribes were previously contacted by the City of Visalia under Assembly Bill 52. The pedestrian survey of the Project site did not identify any prehistoric resources on the ground surface. However, a segment of the South Fork Persian Ditch was identified and recorded on California Department of Parks and Recreation forms but was not formally evaluated for significance and eligibility for listing in the National Register of Historic Places or California Register of Historical Resources. According to the Project description, the ditch will remain open in its present condition with only a single bridge crossing the ditch within the Project boundary. Because the Project proposes no substantial change to the ditch, there is no expected adverse change to this historical resource.

Taylored Archaeology makes the following management recommendations:

In the event that previously unidentified archaeological remains are encountered during development or ground-moving activities in the Project area, all work should be halted until a qualified archaeologist can identify the discovery and assess its significance. In the event of accidental discovery of unidentified archaeological remains during development or ground-

moving activities in the Project area, all work shall be halted in the immediate vicinity (within a 100-foot radius) until a qualified archaeologist can identify the discovery and assess its significance.

If human remains are uncovered during construction, the Tulare County Coroner is to be notified to investigate the remains and arrange proper treatment and disposition. If the remains are identified on the basis of archaeological context, age, cultural associations, or biological traits to be those of a Native American, California Health and Safety Code 7050.5 and PRC 5097.98 require that the coroner notify the NAHC within 24 hours of discovery. The NAHC will then identify the Most Likely Descendent who will be afforded an opportunity to make recommendations regarding the treatment and disposition of the remains. A copy of this report will be provided to the SSJVIC for inclusion in the CHRIS statewide database.

CONTENTS

APPENDICIES

FIGURES

TABLES

1
INTRODUCTION

Taylored Archaeology performed a Phase I cultural resource assessment for the Barr and Wood Tentative Subdivision Map Project (Project) near the city of Visalia, California in unincorporated Tulare County, California. As part of development approval process, the City of Visalia as lead agency must comply with the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] 21000 [g] mandate that government agencies consider the impacts of a project on the environment, including cultural resources.

1.1 PROJECT DESCRIPTION AND LOCATION

The proposed Project involves constructing a single-family residential development consisting of approximately 136 lots, a 3.7-acre park, a 1.6-acre stormwater retention basin, and associated paved streets, sidewalks, streetlights, and landscaping. Local streets within the subdivision will be connected to South Shirk Road/ Road 92 to the west, and South Roeben Street to the east. Local streets will additionally cross over the on-site ditch in a single bridge, and the ditch will remain open in its present condition. The planned maximum excavation of the Project will be the stormwater retention basin at 12 feet below ground surface (bgs). The Project site will also be annexed into the City of Visalia.

The current Project site consists of 69.35-acres of agricultural land within Tulare County Assessor's Parcel Number 119-022-041. The Project area is in unincorporated Tulare County near the City of Visalia, California (Figure 1-1). The Project area is visible on the U.S Geological Survey (USGS) 7.5-minute Visalia, California, topographic quadrangle in Section 3 of Township 19 South, Range 24 East, Mount Diablo Base and Meridian (Figure 1-2).

1.2 REGULATORY SETTING

In this report "cultural resources" are defined as prehistoric or historical archaeological sites as well as historical objects, buildings, or structures. In accordance with 30 Code of Federal Regulations (CFR) §60.4, "historical" in this report applies to cultural resources which are at least 50 years old. The significance or importance of a cultural resource is dependent upon whether the resource qualifies for inclusion at the local or state level in the California Register of Historical Resources (CRHR), or at the federal level in the National Register of Historic Places (NRHP). Cultural resources that are determined to be eligible for inclusion in the CRHR are called "historical resources" (California Code of Regulations [CCR] 15064.5[a]). Under this statue the determination of eligibility is partially based on the consideration of the criteria of significance as defined in 14 CCR 15064.5(a)(3). Cultural resources eligible for inclusion in the NRHP are deemed "historic properties".

1.2.1 CALIFORNIA ENVIRONMENTAL QUALITY ACT

Pursuant to CEQA, a historical resource is a resource listed in, or determined to be eligible for listing in, the CRHR. Historical resources may include, but are not limited to, "any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically or archaeologically significant" (PRC §5020.1[j]). In addition, a resource included in a local register of historical resources or identified as significant in a local survey conducted in accordance with the state guidelines are also considered historic resources under California Public Resources Code (PRC) Section 5020.1.

CEQA details appropriate measures for the evaluation and protection of cultural resources in §15064.5 of the CEQA Guidelines. According to CEQA guidelines §15064.5 (a)(3), criteria for listing on the CRHR includes the following:

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

According to CEQA guidelines §21074 (a)(1), criteria for tribal cultural resources includes the following:

> *(1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:*
> *(A) included or determined to be eligible for inclusion in the California Register of Historical Resources.*
> *(B) included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.*

Protection of cultural resources within California is additionally regulated by PRC §5097.5, which prohibits destruction, defacing, or removal of any historic or prehistoric cultural features on land under the jurisdiction of State or local authorities.

1.3 PROFESSIONAL QUALIFICATIONS

Archaeologist Consuelo Y. Sauls (M.A.), a Registered Professional Archaeologist (RPA 41591505), managed the assessment and compiled this report for the Project. Ms. Sauls also conducted the records search, literature review, requested Sacred Lands File and performed the pedestrian field survey of the Project site. Ms. Sauls meets the Secretary of the Interior's Standards for Professional Qualifications in Archaeology. Statement of Qualifications for key personnel is provided in Appendix A.

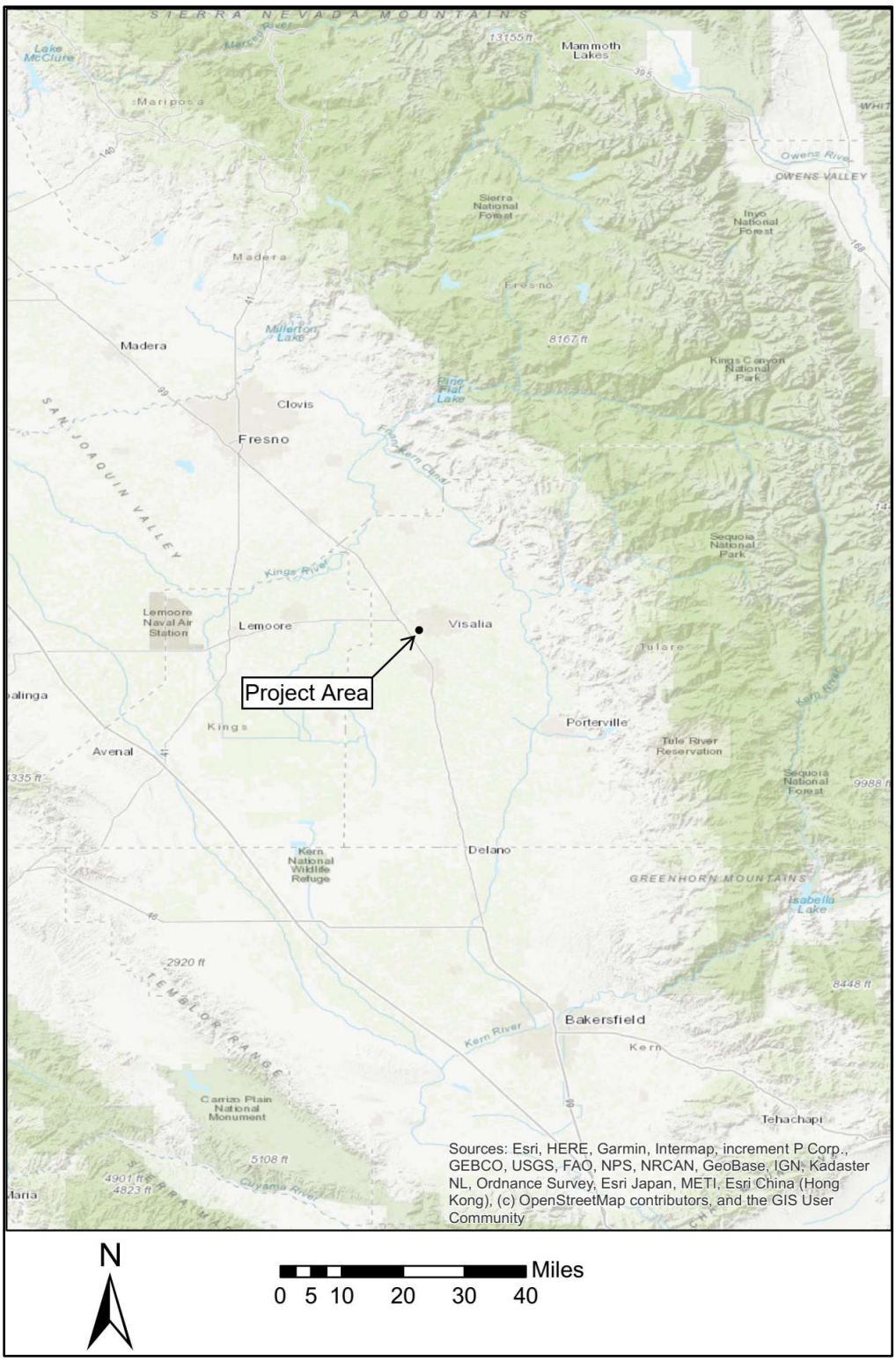

Figure 1-1 Project vicinity in Tulare County, California.

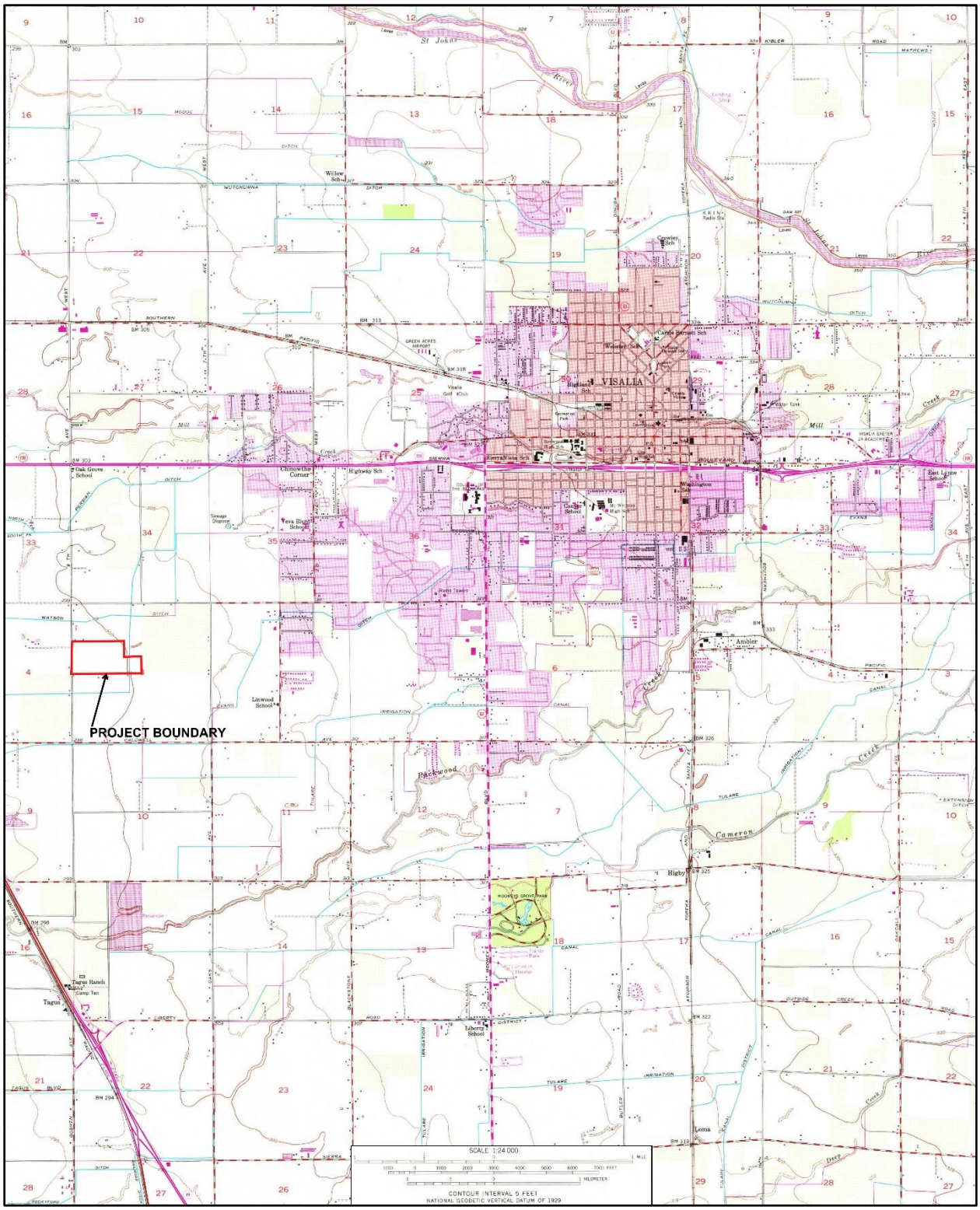

Figure 1-2 Project location on the USGS Visalia, CA 7.5-minute quadrangle.

Figure 1-3 Aerial view of the Project boundary showing survey coverage.

1.4 REPORT STRUCTURE

This report documents the results of a cultural resource assessment of the proposed Project area. In order to assess potential project impacts to archaeological and historical resources pursuant to CCR §15064.5, the following specific tasks were completed: (1) requesting a records search from the Southern San Joaquin Information Center (SSJVIC) of the California Historical Resources Information System (CHRIS), at California State University, Bakersfield; (2) requesting a Sacred Lands File Search from the Native American Heritage Commission (NAHC); (3) archival research (background research); (4) conducting archaeological pedestrian survey and (5) preparing California Department of Parks and Recreation (DPR) 523 forms.

Taylored Archaeology prepared this report following the California Office of Historic Preservation standards in the 1990 Archaeological Resources Management Report Recommended Contents and Format. Chapter 1 describes the introduction of the Project and its location, and identifies the key personnel involved in this report. Chapter 2 summarizes the Project setting, including the natural, prehistoric, historic, and ethnohistoric background for the Project area and surrounding area. Chapters 3 details the methods used for cultural records search, archival research, local Native American outreach, and archaeological pedestrian survey. Chapter 4 summarizes the results of the cultural resource investigation. Chapter 5 discusses the Project findings and offers management recommendations. Chapter 6 is a bibliography of references cited within this report. The report also contains the following appendices: Qualifications of key personnel (Appendix A), the CHRIS records search results (Appendix B), and the NAHC letter of the SLF results (Appendix C) and DPR 523 series record forms for recorded cultural resources (Appendix D).

2
PROJECT SETTING

2.1 NATURAL ENVIRONMENT

The Project site lies in the Central Valley of California, which is approximately 450 miles from north to south, and ranges in width east to west from 40 to 60 miles (Prothero 2017). The Central Valley is divided into two subunits, the Sacramento Valley in the north and the San Joaquin Valley in the south, which are each named after the primary rivers within each valley (Madden 2020). The Project is located approximately 294 feet above sea level on the open flat plains of the Southern San Joaquin Valley. Climate within the San Joaquin valley is classified as a 'hot Mediterranean climate', with hot and dry summers, and cool damp winters characterized by periods of dense fog known as 'tule fog' (Prothero 2017).

The San Joaquin Valley is a comprised of a structural trough created approximately 65 million years ago and is filled with nearly six miles of sediment (Bull 1964). The San Joaquin Valley ranges from Stockton and the San Joaquin-Sacramento River Delta in the north to Wheeler Ridge to the south, ranging nearly 60 miles wide at its widest (Zack 2017). It is split by late Pleistocene alluvial fans between the San Joaquin River hydrologic area in the north and the Tulare Lake Drainage Basin in the south (Rosenthal et al 2007). The Project site is located within the latter of the two hydrologic units. The Kaweah, Tule, Kern, and Kings rivers flowed into large inland lakes with no outflow except in high flood events, in which the lakes would flow through the Fresno Slough into the San Joaquin River. The largest of these inland lakes was the Tulare Lake, which occupied a vast area of Tulare and Kings Counties and was the largest freshwater lake west of the Mississippi. These four rivers in the Tulare Lake Drainage Basin accounted for more than 95 percent of water discharged into Tulare Lake, with the remaining five percent sourced from small drainages originating in the Coast Ranges to the west (Adams et al. 2015).

The Project is in central western Tulare County on the valley floor of the San Joaquin Valley within the greater Kaweah River Delta alluvial fan. Specifically, the Project is located 1.8 miles north of Packwood Creek, which is a distributary of the Kaweah River (Thompson 1892). Distributaries form when debris-laden river waters meet abrupt changes in channel and slope confinement, resulting in unstable channel networks that change with time (Wagner et al. 2013). Before the appearance of agriculture in the nineteenth century, the Project location would have been comprised of prairie grasslands with scatter oak tree savannas near the foothills, and along the various streams and drainages (Preston 1981). Riparian environments would also have been present along various waterways, including drainages and marshes. Native vegetation likely would have consisted of needle grasses and other perennial bunchgrasses before the introduction of non-native species in the 1800s.

The valley floor of the region was largely dominated by marshlands, lakes, and annual grasslands. Historically, these habitats provided a lush environment for large animals, including various migratory birds and other waterfowl, grizzly bear (*Ursus arctos californicus*), tule elk (*Cervus* sp.), pronghorn (*Antilocapra americana*), mule deer (*Odocoileus hemionus*), black bear (*Ursus*

americanus), and mountain lion (*Puma concolor*) (Preston 1981). Native trees and plants observed in the Project vicinity include various blue, live, and white oaks (*Quercus* sp.), cottonwood (*Populus aegiros*), and willow (*Salix* sp.). The introduction of agriculture to the region resulted in large animals being forced out of their habitat. Common land mammals now include valley coyote (*Canis latrans*), bobcat (*Lynx rufus*), gray fox, kit fox (*Vulpes macrotis*), and rabbits (Leporidae). Rivers and lakes throughout the valley provide habitat for freshwater fish, including rainbow trout (*Oncorhynchus mykiss*), Sacramento sucker (*Catostomidae* sp.), and Sacramento perch (*Archoplites interruptus*), (Preston 1981).

The Project site is presently characterized as agricultural utilized for winter wheat cultivation, surrounded by single-family residential development to the north and east, a dairy farm and row crops to the south, and rural residences and orchards to the east. The immediate region is located at the southwest of the City of Visalia suburban footprint and is rapidly transitioning from agricultural to suburban residential use.

2.2 PREHISTORIC SETTING

Research into San Joaquin Valley prehistory began in the early 1900s with several archaeological investigations (Rosenthal et al. 2007). The Southern San Joaquin Valley is of one of the least understood areas within California due to a lack of well-grounded chronologies for large segments of the valley (Rosenthal et al. 2007). This is largely due to the valley floor being filled with thick alluvial deposits, and from human activity largely disturbing much of the valley floor due to a century and a half of agricultural use (Dillon 2002; Siefken 1999). Mound sites may have occurred as frequently as one every two or three miles along major waterways but studying such mounded occupations sites is difficult as most surface sites have been destroyed (Schenck and Dawson 1929). Much of the early to middle Holocene archaeological sites may be buried as deep as 10 meters due to millennia of erosion and alluvial deposits from the western Sierras (Moratto 1984).

Mass agricultural development has heavily disturbed and changed the landscape of the Southern San Joaquin Valley, from the draining of marshes and the vanishing of the extensive Tulare Lake, to grading nearly the entire valley for agricultural operations (Garone 2011). These activities have impacted or scattered much of the shallow surface deposits and mounds throughout the valley (Rosenthal et al 2007). Some researchers have suggested that potentially as much as 90 percent of all Central California archaeological sites have been destroyed from these activities (Riddell 2002).

The cultural traits and chronologies which are summarized below are largely based upon information discussed in multiple sources, including Bennyhoff and Fredrickson (1973, 1974), Garfinkel (2015), McGuire and Garfinkel (1980), Moratto (1984), and Rosenthal et al. (2007). The most recent comprehensive approach to compiling a chronology of the Southern San Joaquin Valley prehistory is by Garfinkel in 2015, which builds off Rosenthal's 2007 previous work. Both Garfinkel's and Rosenthal's chronologies are calculated in years B.C. In the interest of maintaining

cohesiveness with modern anthropological research, the dates of these chronologies have been adapted into years before present (B.P.).

The Paleo-Indian Period (13,500-10,600 cal B.P.) was largely represented by ephemeral lake sites which were characterized by atlatl and spear projectile points. Around 14,000 years ago, California was largely a cooler and wetter place, but with the retreat of continental Pleistocene glaciers, California largely experienced a warming and drying period. Lakes filled with glacial meltwater were located in the valley floor and used by populations of now extinct large game animals. A few prehistoric sites were discovered near the southwestern shore of Tulare Lake (Garfinkel 2015). Foragers appear to have operated in small groups which migrated on a regular basis.

During the Lower Archaic Period (10,500-7450 cal B.P.), climate change created a largely different environment which led to the creation of larger alluvial fans and flood plains. Most of the archaeological records of the prior period wound up being buried by geological processes. During this time, cultural patterns appear to have emerged between the foothill and valley populations of the local people. The foothill sites were often categorized by dense flaked and ground stone assemblages, while the valley sites were instead characterized by a predominance of crescents and stemmed projectile points. Occupation within the area is represented mostly by isolated discoveries and along the former shoreline of Tulare Lake. Archaeological finds are typically characterized by chipped stone crescents, stemmed points, and other distinctive flakes stone artifacts (Rosenthal et al. 2007). Variations in consumption patterns emerged as well, with the valley sites more marked by consumption of waterfowl, mussels, and freshwater fish, while the foothills sites saw an increase in nuts, seeds, and a more narrowly focused diet than the valley sites.

The Middle Archaic (7450-2500 cal B.P.) saw an increase in semi-permanent villages along river and creek settings, with more permanent sites located along lakes with a more stable supply of water and wildlife. Due to the warmer and drier weather of this period, many lakes within the valley dramatically reduced in size, while some vanished completely (Garone 2011). Cultural patterns during this time saw an increase in stone tools, while a growth in shell beads, ornaments, and obsidian evidence an extensive and ever-growing long-distance trade network. Little is known of cultural patterns in the valley during the Upper Archaic (2500-850 B.P.), but large village structures appeared to be more common around local rivers. An overall reduction of projectile point size suggests changing bow and arrow technologies. Finally, the Emergent Period (850 cal B.P. - Historic Era) was generally marked by an ever-increasing specialization in tools, and the bow and arrow generally replaced the dominance of the dart and atlatl. Cultural traditions ancestral to those recorded during ethnographic research in the early 1900s are identifiable.

2.3 ETHNOGRAPHY

The Project area is in the Southern Valley Yokuts ethnographic territory of the San Joaquin Valley. The Yokuts were generally divided into three major groups, the Northern Valley Yokuts, the Southern Valley Yokuts, and the Foothill Yokuts. The Yokuts are a sub-group of the Penutian language that covers much of coastal and central California and Oregon (Callaghan 1958). The

Yokuts language contained multiple dialects spoken throughout the region, though many of them were mutually understandable (Merriam 1904).

The Yokuts have been extensively researched and recorded by ethnographers, including Powers (1877), Kroeber (1925), Gifford and Schenck (1926, 1929), Gayton (1930, 1945), Driver (1937), Harrington (1957), Latta (1977), and Wallace (1978). Much of the research from these ethnographers focuses on the central Yokuts tribes due to the northernmost tribes being impacted by Euro-Americans during the California Gold Rush of the mid 1800s, and by the southernmost tribes often being removed and relocated by the Spanish to various Bay Area or coastal missions. The central Yokuts tribes, and especially the western Sierra Nevada foothill tribes, were the most intact at the time of ethnographic study.

The most detailed ethnographic information gathered regarding Native American group territories in Central California is located within maps prepared by Kroeber. The information presented in Kroeber's map of Southern and Central Yokuts shows the Project area within the Telamni Yokuts territory (1925: Plate 47). The main village for this area was *Waitatshuulul*, which was approximately 3 miles east of the Project site along Packwood Creek (Kroeber 1925). Primary Yokuts villages were typically located along lakeshores and major stream courses, with scattered secondary or temporary camps and settlements located near gathering areas in the foothills. Yokuts were organized into local tribes, with one or more linked villages and smaller settlements within a territory (Kroeber 1925).

Each local tribe was a land-owning group that was organized around a central village, and shared common territory and ancestry. Most local tribe populations ranged from 150 to 500 people (Kroeber 1925). These local tribes were often led by a chief, who was often advised by a variety of assistants including the winatum, who served as a messenger and assistant chief (Gayton 1930). Early studies by Kroeber (1925), Gifford and Schenck (1926), and Gayton (1930) concluded that social and political authority within local tribes was derived from male lineage and patriarchy. However, more recent reexaminations (Dick-Bissonnette 1998) argue that this assumption of patriarchal organization was based on male bias by early 20th century researchers, and instead Yokuts sociopolitical authority was matriarchal in nature and centered around matrilineal use-rights and women's work groups.

Prior to Euro-American contact, there was abundance of natural resources within the greater Tulare Lake area. Due to these resources, Yokuts maintained some of the largest populations in North America west of the continental divide (Cook 1955a).

2.4 HISTORIC SETTING

2.4.1 California History

European contact in modern-day California first occurred in 1542 with the arrival of a Spanish expedition lead by Juan Rodríguez Cabrillo into San Diego Bay (Engstrand 1997). Expeditions along the California coast continued throughout the sixteenth century and primarily focused on

finding favorable harbors for further expansion and trade across the Pacific. However, rocky shorelines, unfavorable currents, and wind conditions made traveling north from New Spain to the upper California coast a difficult and time-consuming journey (Eifler 2017). The topography of California, with high mountains, large deserts, and few natural harbors lead to European expansion into California only starting in the 1760s. As British and Russian expansion through fur trading encroached on California from the north, Spain established a system of presidios, pueblos, and missions along the California coast to defend its claim, starting with Mission San Diego de Alcalá in 1769 (Engstrand 1997).

2.4.2 Central California History

The San Joaquin Valley did not experience contact with Europeans until the late 1700s (Starr 2007). Life at the California missions was hard and brutal for Native Americans, with many dying of disease, poor conditions, and many fleeing to areas not under direct Spanish control (Jackson and Castillo 1995). The earliest exploration of the San Joaquin Valley by Europeans was likely by the Spaniards when in the fall of 1772 a group known as the Catalonian Volunteers entered the valley through Tejon Pass in search of deserters from the Southern California Missions (Zack 2017). However, the group only made it as far north as Buena Vista Lake in modern day Kern County before turning around due to the extensive swamps. Additional excursions to the valley were for exploration such as those led by Lieutenant Bariel Moraga in 1806, but also to find sites for suitable mission sites and to track down Native Americans fleeing the coastal missions (Cook 1958).

Subsequent expeditions were also sent to pursue outlaws from the coast who would often flee to the valley for safety. One of the subsequent explorations was an expedition in 1814 to 1815 with Sargent Juan Ortega and Father Juan Cabot, who left the Mission San Miguel with a company of approximately 30 Spanish soldiers and explored the San Joaquin Valley (Smith 2004). This expedition passed through the Kaweah Delta and modern-day Visalia and made a recommendation to establish a mission near modern-day Visalia. However, with European contact also came European disease. Malaria and other new diseases were brought by Europeans, and in 1833 an epidemic of unknown origin traveled throughout the Central Valley. Some estimates place the Native American mortality of the epidemic as high as 75 percent (Cook 1955b). Combined with the rapid expansion of Americans into California in 1848 during the Gold Rush, Native American populations within the valley never fully recovered (Eifler 2017).

Initial settlement within the valley by Europeans in the 1830s was largely either by trappers like Jedediah Smith or horse thieves like Pegleg Smith (Clough and Secrest 1984). In fact, horse and other livestock theft was so rampant that ranching operations on the Rancho Laguna de Tache by the Kings River and Rancho del San Joaquin Rancho along the San Joaquin River could not be properly established (Cook 1962). With the end of the Mexican American War and the beginning of the gold rush in 1848, the San Joaquin Valley became more populated with ranchers and prospectors. Most prospectors traveled by sea to San Francisco and used rivers ranging from the Sacramento River to the San Joaquin River to access the California interior (Eifler 2017). Most areas south of the San Joaquin River were less settled simply because those rivers did not connect

to the San Francisco Bay area except in wet flood years. By 1850, California became a state and Tulare County was established in 1853.

2.4.3 Local History

The City of Visalia is one of the oldest cities within the Southern San Joaquin Valley and was founded in 1852. By the late 1850s the town of Visalia was a major station along the Butterfield Overland Mail stage route as it traveled north from Los Angeles to Stockton (Helmich 2008). During the first few decades, Visalia was a supply center for nearby gold rushes, served as the regional population center of Tulare County, and had an agricultural economy based on livestock and some agriculture (Dyett and Bhatia 2014). During the 1850s and 1860s roughly made earthen ditches and dams diverted stream water for irrigation, with the earliest ditches in the San Joaquin Valley being constructed in Visalia between 1852 to 1853 (Caltrans 2000). The Southern Pacific Railroad was extended from Fresno into Tulare County in the early 1870s but bypassed the City of Visalia as it was located six miles to the east of the rail line (Small 1926).

The construction of the rail line also brought an increase in agriculture and farms, which clashed with existing ranching operations in the local area. Escalating conflicts and livestock disputes between ranchers and farmers lead to the "No Fence Law" in 1874, which forced ranchers to pay for crop and property damage caused by their cattle (Ludeke 1980). With the passage of this law and the expansion of irrigation systems, predominant land use in the 1870s switched from grazing to farming (Mitchell 1974). This led to the beginning of the vast change of the San Joaquin Valley from native vegetation and grasslands to irrigated crops (Varner and Stuart 1975).

Water rights within California originally arose from the 'first come first serve' policy of the Gold Rush era. Diverting surface water to farms became big business but was a convoluted mess of customs, traditions, and conflicting claims (Zack 2017). Fed up with the situation, small farmers gathered behind Modesto lawyer C.C. Wright, who was elected to the California legislature in 1887 on the platform of taking water rights from large estates and putting it in the power of community-controlled irrigation districts (Hundley 1992). To solve this mess, the Wright Act of 1887 was passed that allowed residents to petition a local county board of supervisors to create irrigation districts that had the power to issues bonds, and tax land within the district boundaries to pay for the creation and maintenance of canals and ditches for irrigation purposes.

One of the first three districts created under the new act was the Tulare Irrigation District (TID), which was organized on September 21, 1889 (Caltrans 2000). The TID originally covered 219,000 acres from the foothills of the Sierra Nevada to the eastern boundary of Tulare Lake but was ultimately reduced to approximately 32,000 acres (Zack 2017).

At the same time as the Wright Act, an important step forward was made in ditch-digging technology that allowed irrigation systems to be built at a faster pace. From the 1840s to 1890s, farm ditches and canals were largely constructed through the use of buckboards and slip-scoops, which involved the use of a board pulled by horses in an uprights position in order to level ground (Bulls 2010). Between 1883 and 1885, Scottish immigrant James Porteous had moved to Fresno and made significant improvements to the buckboard style scraper that allowed the new scraper

to be pulled by two horses and scrape and move soil while dumping it at a controlled depth. This new design was patented and sold as the “Fresno Scraper”, which lead to an explosion of ditch digging efforts within the San Joaquin Valley (Zack 2017).

With the passage of a $500,000 bond approved by residents of the newly formed TID, construction of the Tulare Irrigation Canal started in 1891 (Small 1926). Starting at the St. John’s River, the main canal was sixty-four feet wide and six feet deep, with a capacity of 500 cubic feet per second, and supplied water to farms as far south as the City of Tulare.

3
METHODS

3.1 RECORDS SEARCH

On May 20, 2022, Taylored Archaeology requested a cultural resource records search from the SSJVIC of the CHRIS at California State University in Bakersfield, California. The purpose of this request was to identify any prehistoric or historical resources on or near the Project site that had been previously recorded within the Project boundary and a 0.5-mile radius of the Project area and identify and review prior cultural resource investigations completed in or near the Project boundary. SSJVIC staff researched historical USGS topographic maps, reports of previous cultural resource investigations, archaeological site and survey base maps, cultural resource records (DPR forms) as well as listings of the Historic Properties Directory of the Office of Historic Preservation, General Land Office Maps, Archaeological Determinations of Eligibility, and the California Inventory of Historic Resources (Appendix B).

3.2 ARCHIVAL RESEARCH

Archival research was conducted to investigate the historical background for any potential historic structures, buildings and historical deposits that may exist and land use within the Project boundary. Historical maps, historical aerial photographs, historical US Geological Survey (USGS) topographic maps, Google Earth aerial photographs, Google Street View photos, books, scholarly articles, and other records were used to better understand the prehistory and history of the Project area. The results of this research are presented in Chapter 4.

3.3 NATIVE AMERICAN OUTREACH

On May 20, 2022, Taylored Archaeology sent an email to the NAHC requesting a Sacred Lands File (SLF) search to identify places in or near the Project area that may be tribal cultural resources, including sacred sites or other resources of importance. No outreach to local Native American representatives was conducted, as they were previously contacted through Assembly Bill 52 (AB 52) consultation by the City of Visalia as the CEQA lead agency for the Project. The result of the SLF search is in Chapter 4.

3.4 ARCHAEOLOGICAL PEDESTRIAN SURVEY

On June 4, 2022, Archaeologist Consuelo Sauls conducted a Phase I archaeological pedestrian survey of the 69.35-acre Project site using systematic transects spaced 15 meters apart within the Project boundary. The entire Project site was accessible and surveyed to identify any prehistoric deposits and potential historical features, structures, and artifacts more than 50 years old that may be present on the ground surface. Ms. Sauls used a plan map, visible landmarks, and Gaia GPS application for navigation to locate and survey the Project area. She also photographed the survey area using an iPhone 11 Pro digital camera.

4
RESULTS

4.1 RECORDS SEARCH

The SSJVIC provided the records search results in a letter dated June 1, 2022 (Records Search File No. 22-214; Appendix B). The results of this search indicate that there are no recorded cultural resources within the Project area. However, there are two cultural resources previously recorded within a 0.5-mile radius of the Project area (Table 4-1). Both are historic-era and built-environment resources: P-54-005058 and P-54-0055059 are both rural single-family residences.

Table 4-1 Previous Recorded Cultural Resources within 0.5-miles radius of the Project Area

Resource Number	Age Association	Resource Type	Distance from Project Boundary
P-54-005058	Historic	Building; Single Family Residence	0.48 miles south of project boundary
P-54-005059	Historic	Building; Single Family Residence	0.48 miles south of project boundary

According to the results, two previous cultural resource study reports were conducted within the Project area (Table 4-2). Further review revealed that TU-00041 is only a literature review of the Project region and TU-01190 is a book on conflicts between Native Americans and California gold miners during the 1850s Gold Rush in Mariposa. Neither of these reports included archaeological surveys.

Table 4-2 Previous Cultural Resource Investigation Reports within the Project Area

Report Number	Author(s)	Date	Report Title	Study
TU-00041	Self, William	1995	Class I Overview Santa Fe Pacific Pipeline Partners, L.P. Proposed Concord to Colton Pipeline Project	Literature Review; No survey of Project area
TU-01190	Mitchell, Annie R.	1957	Jim Savage and the Tulareño Indians	Book; No survey of Project area

Five previous cultural resource studies were conducted within a 0.5-mile radius of the Project area as shown in Table 4-3.

Table 4-3 Previous Cultural Resource Investigation Reports within 0.5-mile radius of the Project Area

Report Number	Author(s)	Date	Report Title	Study
TU-00246	Cantwell, R.J.	1979	Archaeological and Historical Survey Report for the Walnut Avenue Extension from Watson Ditch Near Shirk Road to the Termination of Road 86, Visalia, California	Archaeological and Architectural/Historical Field Survey
TU-00247	Cantwell, R.J.	1979	Historic Property Survey Report for the Extension of Walnut Avenue, Road A288 and Road 86, Approximately Two and a Half Miles of New Road, from Watson Ditch to Southern Terminus of Akers Road	Architectural/Historical Filed Study
TU-01395	Schmidt, James J.	2009	Deteriorated Pole Replacement Project Twin Butte, Seville, Tarusa, St. Johns, Wells, Shinkle, Gopher, Caratan, Higby, Chinowith, Oval, Lowry, and Harrell 12 kV Distribution Lines, Tulare County, California	Archaeological Field Survey
TU-01546	Orfila, Rebecca S.	2011	Archaeological Survey of Project Area for the Southern California Edison Company: Infrastructure Improvement and Maintenance (IIM) Project - Diamante 12kV Project (IO#315323, TD 397679; RSOC Consultant Work Authorization CWA 104)	Archaeological Field Survey
TU-01659	Haley, Kathryn	2009	Historic Property Survey Report for Avenue 280 Road Widening Project, Tulare County, California	Architectural/Historical Filed Survey

In addition to the SSJVIC research, Taylored Archaeology further reviewed the cultural resources 0.5-miles from the Project boundary. Using Google Earth aerial maps, P-54-005058 was determined to have been demolished circa 2021 (Google Earth 2022).

4.2 ARCHIVAL RESEARCH

Historic map coverage of the Project site began in 1885. A review of an 1885 irrigation map of Fresno to Porterville shows all of Section 3, including the Project site, as owned by a "Coughran" (Figure 4-1), with no canals, ditches, or natural waterways depicted on, or adjacent to, the Project site (Hammond 1885).

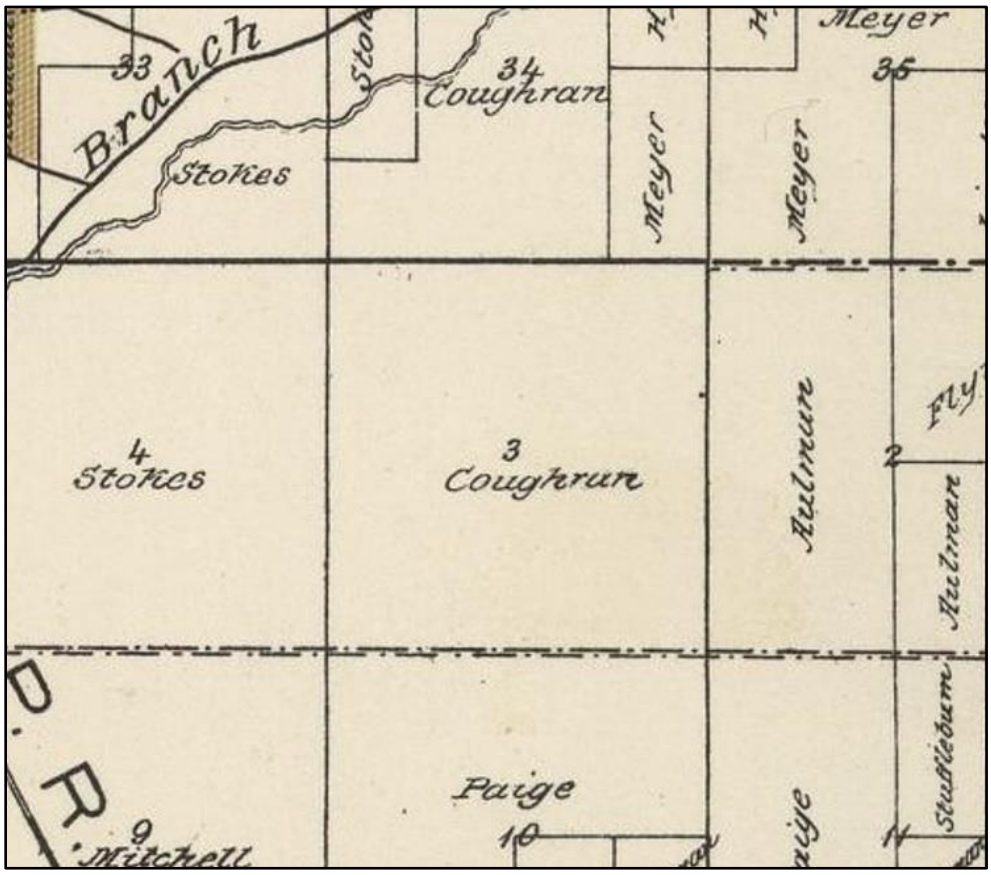

Figure 4-1 1885 Irrigation Map, Project site in Section 3 (Hammond 1885)

An 1892 survey map of Tulare County similarly shows all of Section 3, including the Project site, as owned by a "W. Coughran" (Figure 4-2) with no artificial or natural waterways depicted on, or adjacent to, the Project site (Thompson 1892). No structures are depicted within Section 3 but the Evans Ditch is depicted as running along the southern boundary of Section 3, approximately 0.5 miles south of the Project site.

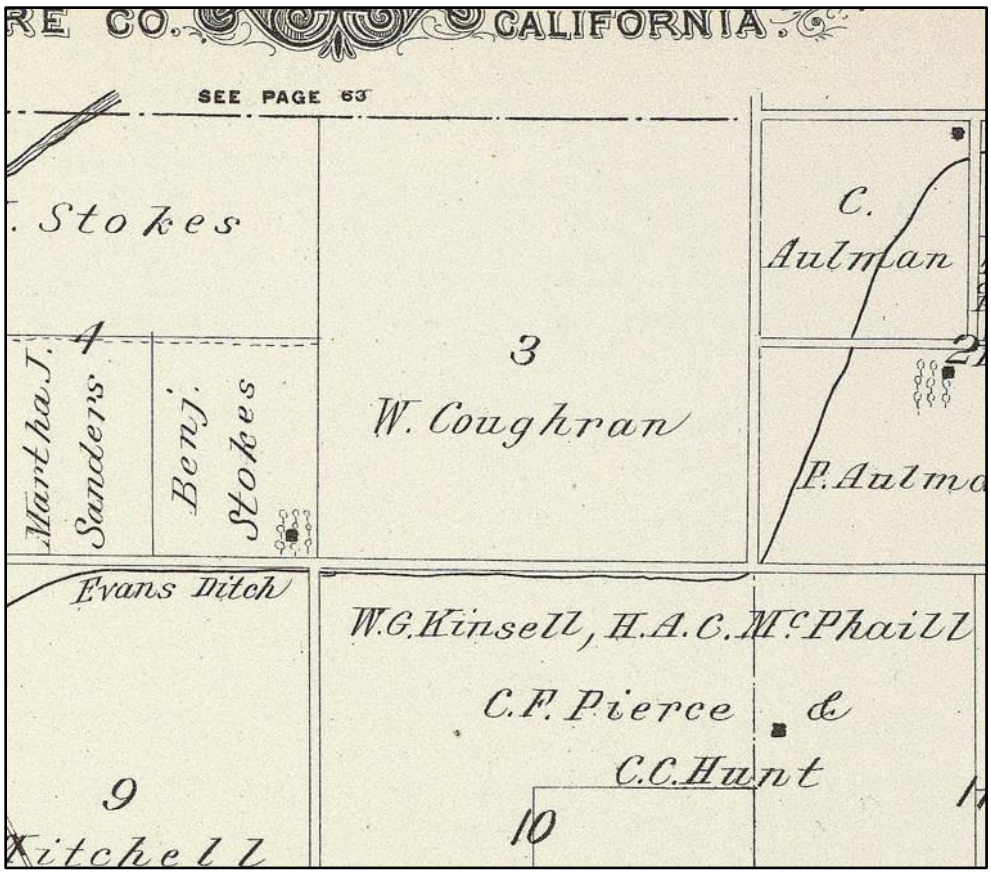

Figure 4-2 1892 Atlas, Project site in Section 3 (Thompson 1892)

Available topographic map coverage of the Project site begins in 1927. The USGS topographic map of the Project site in 1927 depicts an unnamed irrigation ditch, likely the South Fork Persian Ditch, crossing the Project site from the northeast to southwest, and an unnamed natural watercourse crossing the northern portion of the Project site from east to west (Figure 4-3; USGS 1927).

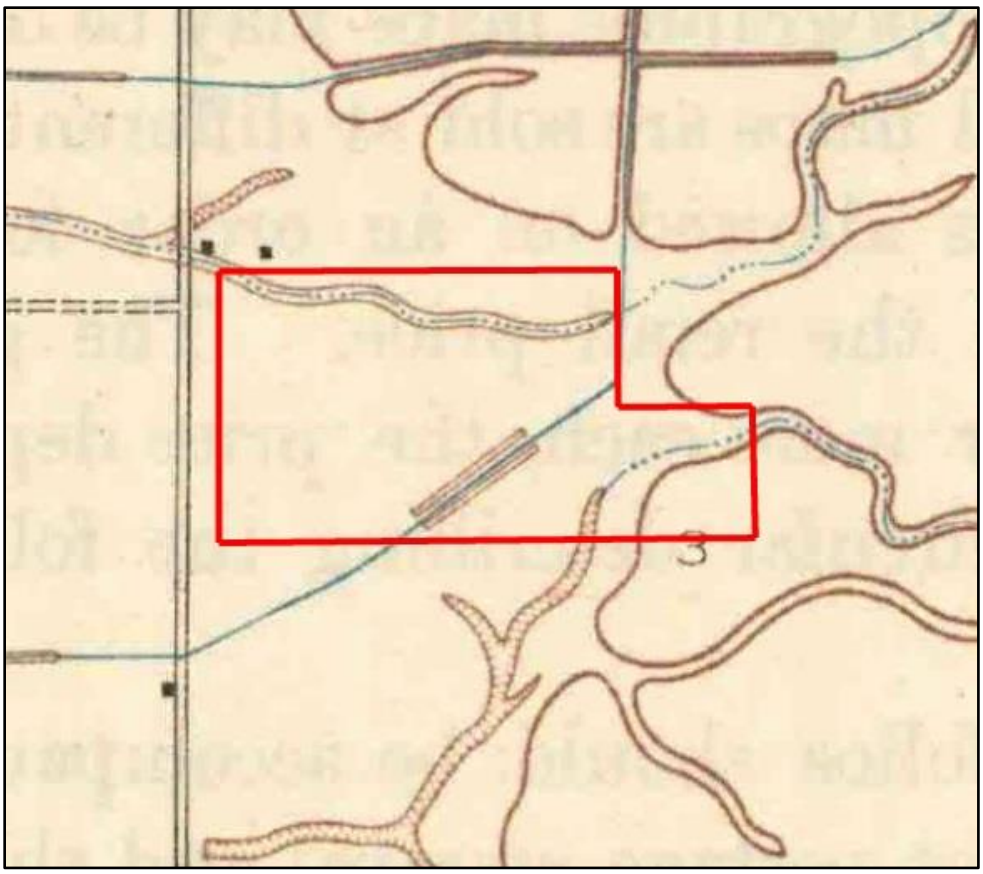

Figure 4-3 1927 topographic map, Project site in red (USGS 1927)

The next available historical map of the Project site is the USGS topographic map from 1950 (USGS 1950). This map depicts the unnamed ditch, likely the South Fork Persian Ditch, as modified from the original 1927 map. By 1950, the ditch had been reoriented to cross the project site from directly north to south, and the natural watercourse in the 1927 map is now depicted at completely gone (Figure 4-4). Additionally, two structures are depicted at the northwestern portion of the Project site.

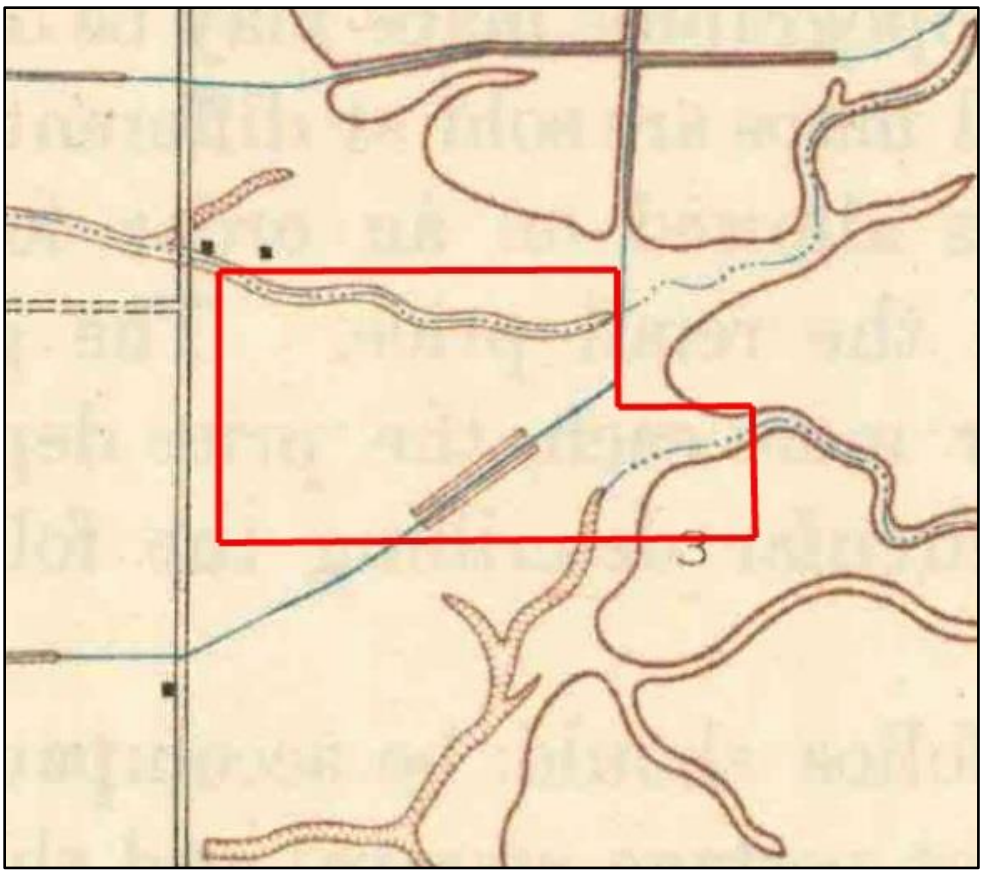

Figure 4-4 1950 topographic map, Project site in red (USGS 1950)

Finally, the 1969 topographic map depicts the Project site similar to the 1950 topographic map, with no discernable change (USGS 1969).

A review of available Project site specific environmental reports revealed a Phase I Environmental Site Assessment (Phase I ESA) for the Project site conducted by Salem Engineering Group in 2020 (Lodge 2020). The 2020 Phase I ESA conducted an intensive review of available historical aerial imagery of the Project site to determine past development history of the site. Below is a reproduction of the results of the review by Salem Engineering (Lodge 2020):

- *1937 Aerial Photograph*
  The northwest portion of the subject property appears to be developed with a single-family dwelling and several out buildings. A dirt road traverses the southeast corner of the subject property. Undeveloped land adjoins the subject property to the north, south, east, and west. A dirt road (South Shirk Road) adjoins the subject property to the west, beyond which is undeveloped land.

- *1952 Aerial Photograph*
  Several of the structures previously observed on the northwest corner of the subject property appear to have been demolished. The subject property and all adjoining properties appear to be utilized for agricultural purposes. A small set of

rural residences or barn structures are observed adjoining the subject property on the agricultural land to the south.

- *1969 Aerial Photograph*
  The northwest corner of the subject property is occupied by what appears to be a single-family dwelling and associated agricultural-use out buildings. The remainder of the subject property appears to be utilized for agricultural purposes as orchard. An east-west trending dirt road traverses the middle of the subject property. Direct access roads adjoining the subject property to the north and south. The conditions on the adjoining properties are similar to the 1952 aerial photograph.

- *1972 Aerial Photograph*
  The conditions on the subject property and adjoining properties are similar to the 1969 aerial photograph with the exception of the adjoining property to the south, which appears to have long rectangular-shaped structures which appear to be cattle shade structures.

- *1977 Aerial Photograph*
  The conditions on the subject property and adjoining properties are similar to the 1972 aerial photograph.

- *1984 Aerial Photograph*
  The conditions of the subject property and adjoining properties are similar to the 1977 aerial photograph, with the exception that an irrigation water retention basin is now visible on the adjoining property to the northwest.

- *1994 Aerial Photograph*
  The structures on the northwest corner on the subject property appear to have been demolished. The remainder of the subject property appears to be utilized for agricultural purposes as an orchard. The adjoining properties to the east and northeast have been developed with residential tracts. The conditions on the adjoining properties to the north, south, and west are similar to the 1984 aerial photograph.

- *2006 Aerial Photograph*
  The conditions on the subject property and adjoining properties to the south and west are similar to the 1994 aerial photograph. An increase in residential development is observed on the properties to the north, northeast, and east. The irrigation water retention basin previously observed to the west of the subject property no longer appears to be in use.

Further review of historic aerial imagery available in the 2020 Phase I ESA and at the Fresno State Map and Aerial Locator Tool (MALT) shows the northeast to southwest alignment of the ditch on the Project site appears to have been modified to a north to south alignment between 1937 and 1946 (Lodge 2020; USAAA 1946). Finally, the north to south alignment of the ditch was changed to its present-day alignment with a 90 degree turn to the west between 2003 and 2004 to accommodate the development of a single-family residential neighborhood adjacent to the northeast of the Project site (Google Earth 2022).

A review of the City of Visalia Planning Information Map confirmed the name of the ditch on the Project site as the South Fork Persian Ditch (Visalia 2022). On July 8, 2022, Taylored Archaeology placed a call to the Persian Ditch Company who confirmed that they manage the South Fork Persian Ditch. No information regarding the date of the ditch construction or the history of the ditch was provided because the Persian Ditch Company stated they are a privately held company which only shares information with company stockholders.

4.3 NATIVE AMERICAN OUTREACH

The NAHC responded on July 6, 2022, via letter regarding Taylored Archaeology's request. The letter stated a search of the SLF was negative. The NAHC supplied a list of Native American representatives to contact for information or knowledge of cultural resources in the Project area (Appendix C).

Prior to the commencement of this cultural resources assessment by Taylored Archeology for the Project, the City of Visalia conducted AB 52 consultation with local Native American tribes. Paige Berggren, a Cultural Specialist Monitor for the Santa Rosa Rancheria Tachi Yokut Tribe responded on behalf of the Tribe requesting an archaeological firm be hired to conduct a pre-construction survey, a records search with NAHC and CHRIS center, and monitoring of any ground disturbing activities. Additionally, the Tachi Yokut Tribe request to be put in contact with the archaeological firm hired so they can maintain updates about the Project (Appendix C).

4.4 ARCHAEOLOGICAL PEDESTRIAN SURVEY RESULTS

The landscape on the Project site consisted of a harvest wheat field (Figure 4-5). As discussed in Section 4.2 of this report, the natural topography of the area has been altered by historical and modern agricultural practices and much of the land on the Project site had been graded, plowed, planted and/or harvested, which has caused additional disturbance to the soil. The soil was gray to light brown sandy silt. During the survey, ground visibility was good (80 percent) due to vegetation in the wheat field and other short grasses. However, the ground visibility in the northwestern portion of the Project site was poor (0 to 5 percent) due to annual grasses and the remnants of a concrete pad, former barn, and wood piles (Figure 4-6). Rodent burrows and related soil piles were closely examined for soil type and lithic scatters.

An irrigation water pump was observed in the eastern portion of the Project site adjacent to the South Fork Persian Ditch (Figure 4-7). The South Fork Persian Ditch is an unlined earthen irrigation ditch that is owned and operated by the Persian Ditch Company (Figure 4-8). The ditch was

observed transecting the southeast portion of the Project site. Two potential historic resources were assessed during the survey and recorded. No prehistoric or tribal resources were discovered during the field survey.

Figure 4-5 Northern portion of the Project site, facing east.

Figure 4-6 Structure pad on the Project site, facing southeast.

Figure 4-7 Water pump on the Project site, facing south.

Figure 4-8 South Fork Persian Ditch on the Project site, facing east.

5
SUMMARY AND RECOMMENDATION

The Phase I cultural resource assessment for the Barr and Wood Tentative Subdivision Map Project was completed. The purpose of this assessment is to identify potential cultural resources within the 69.35-acre Project boundary in Tulare County, California. The Project proposes to construct a single-family residential development comprised of approximately 136 residential lots with park strip landscaping, streets, streetlights and sidewalks and a pond. The Project site will also be annexed into the City of Visalia.

The SSJVIC reported that two previous cultural resource investigations have been conducted within the Project area and no cultural resources were recorded within the Project area. Taylored Archaeology reviewed the two cultural resource investigations (TU-00041 and TU-01190) - both are literature reviews and are not surveys of the Project area. The SSJVIC identified five previous investigations and two recorded historical resources within a 0.5-mile radius of the Project boundary: 3431 S. Shirk Street, a rural residential home (P-54-005058) and 6440 W. Cadwell Avenue, a rural residential home (P-54-005059).

The NAHC stated a search of its Sacred Lands File was negative. Local tribes were previously contacted by the City of Visalia under AB 52. The pedestrian survey of the Project site did not identify any prehistoric resources on the ground surface. However, a segment of the South Fork Persian Ditch was identified and recorded on DPR forms but was not formally evaluated for significance and eligibility for listing in the National Register of Historic Places or California Register of Historical Resources. According to the Project description, the ditch will remain open in its present condition with only a single bridge crossing the ditch within the Project boundary. Because the Project proposes no substantial change to the ditch, there is no expected adverse change to this historical resource.

In the event that previously unidentified archaeological remains are encountered during development or ground-moving activities in the Project area, all work should be halted until a qualified archaeologist can identify the discovery and assess its significance. In the event of accidental discovery of unidentified archaeological remains during development or ground-moving activities in the Project area, all work shall be halted in the immediate vicinity (within a 100-foot radius) until a qualified archaeologist can identify the discovery and assess its significance.

If human remains are uncovered during construction, the Tulare County Coroner is to be notified to investigate the remains and arrange proper treatment and disposition. If the remains are identified on the basis of archaeological context, age, cultural associations, or biological traits to be those of a Native American, California Health and Safety Code 7050.5 and PRC 5097.98 require that the coroner notify the NAHC within 24 hours of discovery. The NAHC will then identify the Most Likely Descendent who will be afforded an opportunity to make recommendations regarding the treatment and disposition of the remains.

6
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APPENDIX A

Personnel Qualifications

Consuelo Sauls, M.A., RPA 41591505
Archaeologist
csaulsarchaeo@gmail.com
559.797.1572

Areas of Expertise

- Prehistoric archaeology
- Rock art recordation and analysis
- Laboratory management

Years of Experience

- 12

Education

- M.A., Archaeology, University of Durham, 2014
- B.A., Anthropology, California State University, Fresno, 2009

Registrations/Certifications

- Registered Professional Archaeologist 41591505

Professional Affiliations

- Coalition for Diversity in California Archaeology
- Society for American Archaeology
- Society for California Archaeology
- Society of Black Archaeologists

Professional Experience

2019 – 2022	Principal Investigator, Taylored Archaeology, Fresno, California
2018 – 2019	Staff Archaeologist, Applied EarthWorks, Inc., Fresno, California
2016 – 2018	Principal Investigator, Soar Environmental Consulting, Inc., Fresno, California
2015	Archivist/Database Technician, Development and Conservation Management, Inc., Laguna Beach, California
2013	Laboratory Research Assistant, Durham University Archaeology Department and Archaeology Museum, Durham, England, UK
2011 – 2012	Laboratory Technician (volunteer), University of Pennsylvania Museum of Archaeology and Anthropology, Philadelphia, Pennsylvania
2008 – 2009	Laboratory Technician (intern), California State University, Fresno
2008	Field School, California State University, Fresno

Technical Qualifications

Ms. Sauls meets the Secretary of the Interior's Professional Qualification Standards as an archaeologist. She has conducted pedestrian surveys, supervised Extended Phase I survey, authored technical reports, and completed the Section 106 process with the State Historic Preservation Officer and Tribal Historic Preservation Officer. Her experience includes data recovery excavation at Western Mono sites and processing recovered artifacts in the laboratory as well as conducting archival research about prehistory and ethnography of Central California. Ms. Sauls has authored and contributed to technical and letter reports in compliance with of the National Historical Preservation Act (NHPA) Section 106 and the California Environmental Quality Act (CEQA). She also has supported NHPA tribal consultation and responded to Assembly Bill 52 tribal comments. Ms. Sauls also has an extensive background supervising laboratory processing, cataloging, and conservation of prehistoric and historical archaeological collections. In addition, she worked with the Rock Art Heritage Group in the management, preservation, and presentation of rock art in museums throughout England, including a thorough analysis of the British Museum's rock art collections. At Durham University Archaeology Museum, Ms. Sauls processed the excavated skeletal remains of 30 individuals from the seventeenth century

APPENDIX B

Records Search Results

California Historical Resources Information System

Fresno
Kern
Kings
Madera
Tulare

Southern San Joaquin Valley Information Center
California State University, Bakersfield
Mail Stop: 72 DOB
9001 Stockdale Highway
Bakersfield, California 93311-1022
(661) 654-2289
E-mail: ssjvic@csub.edu
Website: www.csub.edu/ssjvic

6/1/2022

Consuelo Sauls
Taylored Archaeology
6083 N. Figarden Drive, Suite 616
Fresno, CA 93722

Re: Barr-Wood Project
Records Search File No.: 22-214

The Southern San Joaquin Valley Information Center received your record search request for the project area referenced above, located on the Visalia USGS 7.5' quad. The following reflects the results of the records search for the project area and the 0.5 mile radius:

As indicated on the data request form, the locations of resources and reports are provided in the following format: ☒ custom GIS maps ☐ GIS data

Resources within project area:	None
Resources within 0.5 mile radius:	P-54-005058, 005059
Reports within project area:	TU-00041, 01190
Reports within 0.5 mile radius:	TU-00246, 00247, 01395, 01546, 01659

Resource Database Printout (list):	☒ enclosed	☐ not requested	☐ nothing listed
Resource Database Printout (details):	☒ enclosed	☐ not requested	☐ nothing listed
Resource Digital Database Records:	☒ enclosed	☐ not requested	☐ nothing listed
Report Database Printout (list):	☒ enclosed	☐ not requested	☐ nothing listed
Report Database Printout (details):	☒ enclosed	☐ not requested	☐ nothing listed
Report Digital Database Records:	☒ enclosed	☐ not requested	☐ nothing listed
Resource Record Copies:	☒ enclosed	☐ not requested	☐ nothing listed
Report Copies:	☒ enclosed	☐ not requested	☐ nothing listed
OHP Built Environment Resources Directory:	☐ enclosed	☐ not requested	☒ nothing listed
Archaeological Determinations of Eligibility:	☐ enclosed	☐ not requested	☒ nothing listed
CA Inventory of Historic Resources (1976):	☐ enclosed	☐ not requested	☒ nothing listed

Caltrans Bridge Survey: Not available at SSJVIC; please see https://dot.ca.gov/programs/environmental-analysis/cultural-studies/california-historical-bridges-tunnels

Ethnographic Information: Not available at SSJVIC

Historical Literature: Not available at SSJVIC

Historical Maps: Not available at SSJVIC; please see http://historicalmaps.arcgis.com/usgs/

Local Inventories: Not available at SSJVIC

GLO and/or Rancho Plat Maps: Not available at SSJVIC; please see http://www.glorecords.blm.gov/search/default.aspx#searchTabIndex=0&searchByTypeIndex=1 and/or http://www.oac.cdlib.org/view?docId=hb8489p15p;developer=local;style=oac4;doc.view=items

Shipwreck Inventory: Not available at SSJVIC; please see https://www.slc.ca.gov/shipwrecks/

Soil Survey Maps: Not available at SSJVIC; please see http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Invoices for Information Center services will be sent under separate cover from the California State University, Bakersfield Accounting Office.

Thank you for using the California Historical Resources Information System (CHRIS).

Sincerely,

Celeste M. Thomson
Coordinator

APPENDIX C

Native American Outreach

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710

July 6, 2022

Consuelo Sauls
Taylored Archeology

Via Email to: csaulsarchaeo@gmail.com

Re: Barr-Wood Tentative Subdivision Map Project, Tulare County

Dear Mr. Sauls:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

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

Sincerely,

Cameron Vela

Cameron Vela
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Tulare County
7/6/2022

Big Sandy Rancheria of Western Mono Indians
Elizabeth Kipp, Chairperson
P.O. Box 337
Auberry, CA, 93602
Phone: (559) 374 - 0066
Fax: (559) 374-0055
lkipp@bsrnation.com
Western Mono

Dunlap Band of Mono Indians
Benjamin Charley, Chairman
P. O. Box 14
Dunlap, CA, 93621
Phone: (559) 338 - 2545
ben.charley@yahoo.com
Mono

Dunlap Band of Mono Indians
Dirk Charley, Tribal Secretary
5509 E. Mckenzie Avenue
Fresno, CA, 93727
Phone: (559) 554 - 5433
dcharley2016@gmail.com
Mono

Kern Valley Indian Community
Robert Robinson, Chairperson
P.O. Box 1010
Lake Isabella, CA, 93240
Phone: (760) 378 - 2915
bbutterbredt@gmail.com
Kawaiisu
Tubatulabal
Koso

Kern Valley Indian Community
Julie Turner, Secretary
P.O. Box 1010
Lake Isabella, CA, 93240
Phone: (661) 340 - 0032
Kawaiisu
Tubatulabal
Koso

Kern Valley Indian Community
Brandy Kendricks,
30741 Foxridge Court
Tehachapi, CA, 93561
Phone: (661) 821 - 1733
krazykendricks@hotmail.com
Kawaiisu
Tubatulabal
Koso

North Fork Mono Tribe
Ron Goode, Chairperson
13396 Tollhouse Road
Clovis, CA, 93619
Phone: (559) 299 - 3729
rwgoode911@hotmail.com
Mono

Santa Rosa Rancheria Tachi Yokut Tribe
Leo Sisco, Chairperson
P.O. Box 8
Lemoore, CA, 93245
Phone: (559) 924 - 1278
Fax: (559) 924-3583
Southern Valley Yokut

Tubatulabals of Kern Valley
Robert Gomez, Chairperson
P.O. Box 226
Lake Isabella, CA, 93240
Phone: (760) 379 - 4590
Fax: (760) 379-4592
Tubatulabal

Tule River Indian Tribe
Kerri Vera, Environmental Department
P. O. Box 589
Porterville, CA, 93258
Phone: (559) 783 - 8892
Fax: (559) 783-8932
kerri.vera@tulerivertribe-nsn.gov
Yokut

Tule River Indian Tribe
Joey Garfield, Tribal Archaeologist
P. O. Box 589
Porterville, CA, 93258
Phone: (559) 783 - 8892
Fax: (559) 783-8932
joey.garfield@tulerivertribe-nsn.gov
Yokut

Tule River Indian Tribe
Neil Peyron, Chairperson
P.O. Box 589
Porterville, CA, 93258
Phone: (559) 781 - 4271
Fax: (559) 781-4610
neil.peyron@tulerivertribe-nsn.gov
Yokut

Wuksache Indian Tribe/Eshom Valley Band
Kenneth Woodrow, Chairperson
1179 Rock Haven Ct.
Salinas, CA, 93906
Phone: (831) 443 - 9702
kwood8934@aol.com
Foothill Yokut
Mono

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Barr-Wood Tentative Subdivision Map Project, Tulare County.

Appendix D

Energy Calculations

Construction Equipment Energy Use

Phase Name	Off Road Equipment Type	Off Road Equipment Unit Amount[1]	Usage Hours Per Day[1]	Horse Power (lbs/sec)[1]	Load Factor[1]	Total Operational Hours	BSFC[2]	Fuel Used (gallons)[3]	MBTU[4]	
Demolition	Rubber Tired Dozers	0	8	247	0.4	0	0.367	0.00	0	
Demolition	Concrete/Industrial Saws	0	8	81	0.73	0	0.408	0.00	0	
Demolition	Excavators	0	8	158	0.38	0	0.408	0.00	0	
Site Preparation	Rubber Tired Dozers	3	8	247	0.4	960	0.367	4896.50	680.6135	
Site Preparation	Graders	0	8	187	0.41	0	0.367	0.00	0	
Site Preparation	Tractors/Loaders/Backhoes	4	8	97	0.37	1280	0.408	2636.54	366.4797	7533.04
Grading	Excavators	2	8	158	0.38	1760	0.367	5455.20	758.2732	
Grading	Graders	1	8	187	0.41	880	0.367	3483.10	484.1506	33057.81
Grading	Rubber Tired Dozers	1	8	247	0.4	880	0.367	4488.46	623.8957	
Grading	Scrapers	2	8	367	0.48	1760	0.367	16005.80	2224.807	
Grading	Tractors/Loaders/Backhoes	2	8	97	0.37	1760	0.408	3625.25	503.9095	
Building Construction	Cranes	1	7	231	0.29	7770	0.367	26871.29	3735.11	144328.96
Building Construction	Forklifts	3	8	89	0.2	26640	0.408	27214.85	3782.864	
Building Construction	Generator Sets	1	8	84	0.74	8880	0.408	31679.30	4403.423	
Building Construction	Tractors/Loaders/Backhoes	3	7	97	0.37	23310	0.408	48013.94	6673.938	
Building Construction	Welders	1	8	46	0.45	8880	0.408	10549.57	1466.391	
Paving	Pavers	2	8	130	0.42	1200	0.367	3382.45	470.1606	8419.96
Paving	Paving Equipment	2	8	132	0.36	1200	0.367	2943.85	409.1947	
Paving	Rollers	2	8	80	0.38	1200	0.408	2093.66	291.019	
Paving	Cement and Mortar Mixers	0	8	9	0.56	0	0.408	0.00	0	
Paving	Tractors/Loaders/Backhoes	0	8	97	0.37	0	0.408	0.00	0	
Architectural Coating	Air Compressors	1	6	78	0.48	450	0.408	966.94	134.4048	
Total								194306.72	27008.63	

Construction Phases

PhaseNumber	Phase Name	Phase Type	Phase Start Date	Phase End Date	Num Days Week	Total Number of Days
1	**Demolition**	**Demolition**			5	
2	Site Preparation	Site Preparation	1/1/2023	2/24/2023	5	40
3	Grading	Grading	2/25/2023	7/28/2023	5	110
4	Building Construction	Building Construction	7/29/2023	10/29/2027	5	1110
5	Paving	Paving	10/30/2027	2/11/2028	5	75
6	Architectural Coating	Architectural Coating	2/12/2028	5/26/2028	5	75

Notes

1. CalEEMod Default Values Used
2. BSFC - Brake Specific Fuel Consumption (pounds per horsepower-hour) – If less than 100 Horsepower = 0.408, if greater than 100 Horsepower = 0.367
3. Fuel Used = Load Factor x Horsepower x Total Operational Hours x BSFC / Unit Conversion
4. MBTU calculated for comparison purposes. Assumed 1 gallon of diesel = 0.139 MBTU

Mobile Energy Use (Construction)

Worker Trips

	Daily Worker Trips[1]	Worker Trip Length[1]	VMT/Day	MPG Factor (EMFAC2017)	Gallons of Gas/Day	# of Days	Total Gallons of Gas	MBTU	Total Gallons in Construction
Demolition	0	10.8	0	29.23	0.0	0	0.0	0	0
Site Preparation	18	10.8	194.4	29.23	6.7	40	266.0	30.8832	7799
Grading	20	10.8	216	29.23	7.4	110	812.9	94.36532	33871
Building Construction	49	10.8	529.2	29.23	18.1	1110	20096.2	2332.968	164425
Paving	15	10.8	162	29.23	5.5	75	415.7	48.25499	8836
Architectural Coating	10	10.8	108	29.23	3.7	75	277.1	32.17	1244
Total	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**1410**	**21867.9**	**2538.642**	**216175**

Vendor Trips

	Daily Vendor Trips	Vendor Trip Length	VMT/Day	MPG Factor	Gallons of Diesel/Day	# of Days	Total Gallons of Diesel	MBTU
Building Construction	15	7.3	109.5	8.43	13.0	1110	14418.14947	2004.123

Hauling Trips

	Daily Hauling Trips	Hauling Trip Length	VMT/Day	MPG Factor	Gallons of Gas/Day	# of Days	Total Gallons of Diesel	MBTU
Demolition	0	7.3	0	8.43	0.0	0	0	0

Fleet Characteristics

14418.14947

	Vehicle Class	Fleet Mix	2024 MPG Factor (EMFAC2017)	Average MPG Factor
Assumed Vehicle Fleet for Workers	LDA	33%	33.24	
	LDT1	33%	28.07	
	LDT2	33%	26.38	29.23
Assumed Vehicle Fleet for Vendor Trips	MHD	50%	9.74	
	HHD	50%	7.12	8.43

Notes
1. CalEEMod Default values used
2. MBTU calculated for comparison purposes. Assumed 1 gallon of gasoline = 0.11609 MBTU

Mobile Energy Use (Operations)

Total Annual VMT from Project (CalEEMod)	2,771,614

Fleet Mix & Fuel Calculations

Vehicle Class	Proportion of Fleet Mix[1]	Annual VMT by Vehicle Class	Proportion of vehicle class using gas or diesel (EMFAC2021)[2]		Annual VMT by Vehicle Class and Fuel Type		Fuel Efficiency (MPG) by Vehicle Class and Fuel Type (EMFAC2021)		Annual Fuel Use from Project (gallons)		MBTU/Year[3]
			Gas	Diesel	Gas	Diesel	Gas	Diesel	Gas	Diesel	
LDA	52.16%	1445673.9	100%	0%	1443022.73	2651.13	28.92	42.70	49890.6	62.1	5800.4
LDT1	21.00%	582038.9	100%	0%	581823.73	215.21	23.79	24.66	24461.6	8.7	2841.0
LDT2	17.00%	471174.4	100%	0%	469654.18	1520.20	23.27	32.65	20186.9	46.6	2350.0
MDV	6.00%	166296.8	98%	2%	163666.19	2630.65	18.87	23.72	8674.5	110.9	1022.4
LHD1	0.08%	2217.3	50%	50%	1106.38	1110.91	9.67	15.77	114.4	70.4	23.1
LHD2	0.09%	2494.5	27%	73%	675.23	1819.22	8.58	13.15	78.7	138.4	28.4
MHD	0.76%	21064.3	18%	82%	3760.23	17304.03	4.80	8.78	783.4	1970.6	364.9
HHD	2.00%	55432.3	0%	100%	12.18	55420.10	3.37	6.22	3.6	8914.8	1239.6
OBUS	0.00%	0.0	63%	37%	0.00	0.00	4.79	6.96	0.0	0.0	0.0
UBUS	0.43%	11917.9	64%	36%	7682.51	4235.43	8.41	12.12	913.6	349.3	154.6
MCY	0.25%	6929.0	100%	0%	6929.04	0.00	40.47	NA	171.2	0.0	19.9
SBUS	0.01%	277.2	38%	62%	105.21	171.95	9.83	8.13	10.7	21.2	4.2
MH	0.22%	6097.6	65%	35%	3982.07	2115.48	4.41	9.39	902.2	225.2	136.0
Total	**100.00%**	**2771614.0**			**2682419.69**	**89194.31**	**14.55**		**106191**	**11918**	**13984.4**

Fleet Characteristics

23.5

Source: EMFAC 2021 (v1.0.1) Emissions Inventory
Region Type: County
Region: Tulare County
Calendar Year: 2028
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/year for VMT, trips/year for Trips, tons/year for Emissions, 1000 gallons/year for Fuel Consumption

GASOLINE

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	VMT (Annual)	Trips (Annual)	Fuel Consumption (1000 gal/year)	Annual Fuel Consumption (gallons)	MPG
Tulare County	2025	HHDT	Aggregated	Aggregated	GAS	2	164	36	0.0486	49	3.37
Tulare County	2025	LDA	Aggregated	Aggregated	GAS	62800	2580000	292000	89.2	89200	28.92
Tulare County	2025	LDT1	Aggregated	Aggregated	GAS	5590	186000	24100	7.82	7820	23.79
Tulare County	2025	LDT2	Aggregated	Aggregated	GAS	29000	1140000	135000	49	49000	23.27
Tulare County	2025	LHDT1	Aggregated	Aggregated	GAS	2670	97700	39800	10.1	10100	9.67
Tulare County	2025	LHDT2	Aggregated	Aggregated	GAS	336	12100	5010	1.41	1410	8.58
Tulare County	2025	MCY	Aggregated	Aggregated	GAS	3370	19100	6750	0.472	472	40.47
Tulare County	2025	MDV	Aggregated	Aggregated	GAS	27500	983000	125000	52.1	52100	18.87
Tulare County	2025	MH	Aggregated	Aggregated	GAS	356	3200	36	0.725	725	4.41
Tulare County	2025	MHDT	Aggregated	Aggregated	GAS	176	10800	3520	2.25	2250	4.80
Tulare County	2025	OBUS	Aggregated	Aggregated	GAS	73	3870	1460	0.808	808	4.79
Tulare County	2025	SBUS	Aggregated	Aggregated	GAS	28	1750	110	0.178	178	9.83
Tulare County	2025	UBUS	Aggregated	Aggregated	GAS	12	497	47	0.0591	59	8.41

DIESEL

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	VMT	Trips	Fuel Consumption (1000 gal/year)	Annual Fuel Consumption (gallons)	MPG
Tulare County	2025	HHDT	Aggregated	Aggregated	DSL	4890	746000	88700	120	120000	6.22
Tulare County	2025	LDA	Aggregated	Aggregated	DSL	159	4740	658	0.111	111	42.70
Tulare County	2025	LDT1	Aggregated	Aggregated	DSL	4	69	12	0.00279	3	24.66
Tulare County	2025	LDT2	Aggregated	Aggregated	DSL	88	3690	422	0.113	113	32.65
Tulare County	2025	LHDT1	Aggregated	Aggregated	DSL	2760	98100	34700	6.22	6220	15.77
Tulare County	2025	LHDT2	Aggregated	Aggregated	DSL	871	32600	11000	2.48	2480	13.15
Tulare County	2025	MDV	Aggregated	Aggregated	DSL	424	15800	1950	0.666	666	23.72
Tulare County	2025	MH	Aggregated	Aggregated	DSL	196	1700	20	0.181	181	9.39
Tulare County	2025	MHDT	Aggregated	Aggregated	DSL	1060	49700	12400	5.66	5660	8.78
Tulare County	2025	OBUS	Aggregated	Aggregated	DSL	32	2240	390	0.322	322	6.96
Tulare County	2025	SBUS	Aggregated	Aggregated	DSL	135	2860	1950	0.352	352	8.13
Tulare County	2025	UBUS	Aggregated	Aggregated	DSL	3	274	14	0.0226	23	12.12

Notes

1. Used project-specific vehicle fleet mix for residential
2. Proportion of diesel vs. gasoline vehicles calculated based on total annual VMT for each vehicle class

3. MBTU Calculated for comparison purposes. Assumed 1 gallon of gasoline = 0.116090 MBTU and 1 gallong of diesel = 0.139 MBTU

Appendix E

VMT Analysis Results

August 31, 2022

Ms. Leslie Blair, PE
City of Visalia
315 E. Acequia Avenue
Visalia, CA 93291

Subject: Response to City Comments to Trip Generation Estimate and Phasing Analysis for Barr & Wood Subdivision, dated May 10, 2022

Dear Ms. Blair,

The letter is in response to City comments to the Trip Generation Estimate and Phasing Analysis for Barr & Wood Subdivision, dated May 10, 2022. The City commented:

> *The information provided shall address intersection impacts (ex. Roeben at Walnut), circulation impacts, and justify the proposed phasing of off-site improvements.*
>
> *4Creeks provided trip generation information and construction phasing. They are proposing not to connect Whitendale to Shirk for Phase I. They plan for the development to obtain access off of Roeben; hence, no need to build out Whitendale to connect to Shirk for Phase I. The City had requested that intersection impacts (ex. Roeben and Walnut), circulation impacts, etc. created from this phased approach be addressed. The City wants to know what the traffic impacts will be on the surrounding network caused by not connecting Whitendale between Shirk and Roeben. This traffic information was not included, and needs to be provided.*

Per Table 1 below and as provided in the original May 10, 2022 letter, the project will generate approximately 1,339 daily trips, including 99 AM peak hour trips (26 inbound, 73 outbound) and 133 PM peak hour trips (84 inbound, 49 outbound). The City of Visalia's Procedures for Traffic Impact Analysis (TIA), March 2021, indicates residential developments generating less than 200 peak hour trips do not require a TIA. Therefore, as per the City's TIA guidelines, it is anticipated the project will not require a TIA.

TABLE 1: PROPOSED PROJECT TRIP GENERATION

Single-Family Detached Housing (ITE Code 210) - Project Phase	Total Units	Daily*	AM Peak Hour*				PM Peak Hour*			
		Trips	% In:Out	In	Out	Total	% In:Out	In	Out	Total
Phase 1	43	464	26:74	9	26	35	63:37	28	17	45
Phase 2 (add 46 units)	89	906	26:74	17	50	67	63:37	56	33	89
Phase 3 (add 47 units)	136	1,339	26:74	26	73	99	63:37	84	49	133
Total Project	**136**	**1,339**	**26:74**	**26**	**73**	**99**	**63:37**	**84**	**49**	**133**

*Regression equations used based on procedure in Trip Generation Handbook, 3rd Edition, September 2017

Whitendale Avenue does not currently exist between Shirk Road and Roeben Street. Phase 1 of the project is expected to generate approximately 464 daily trips, including 35 AM peak hour trips (9 inbound, 26 outbound) and 45 PM peak hour trips (28 inbound, 17 outbound). The number of trips generated

during both the AM and PM peak hours for Phase 1 are significantly less than the total project and less than the City's TIA guidelines that would require additional analysis.

Given that Whitendale Avenue does not currently exist, that few trips will be generated during Phase 1, and that the City's TIA guidelines do not require analysis for residential projects generating less than 200 peak hour trips, it is not anticipated that there will be any significant impact to adjacent intersections during Phase 1 or that additional analysis should be required.

Should you have any questions or if 4Creeks can be of further assistance, please do not hesitate to call me or David Duda at (559) 802-3052.

Sincerely,

Lisa M. Wallis-Dutra, PE, TE, PTOE, RSP_1
Sr. Traffic Engineer

Cc: David Duda, AICP

May 10, 2022

Ms. Leslie Blair, PE
City of Visalia
315 E. Acequia Avenue
Visalia, CA 93291

Subject: Trip Generation Estimate and Phasing Analysis for Barr & Wood Subdivision

Dear Mr. Smith,

4Creeks, Inc. is pleased to provide this trip generation estimate and phasing analysis for the proposed Barr & Wood Subdivision in Visalia, California. The project area is approximately 69.35 acres of vacant land between Shirk Road (Road 92) and Roeben Street north of the Whitendale Avenue alignment on APN 119-022-041. The property is zoned as R-1-20 Prezone, Very Low Density Residential, and is planned as a 136-lot residential subdivision.

The project is proposed to be constructed in three (3) phases, as shown on the attached Phasing Plan. Phase 1 consists of 45 lots located at the southeast section of the property. Two (2) of the 45 lots will be used as a temporary stormwater basin during Phase 1; therefore, 43 single-family homes will be constructed in Phase 1. Phase 2 consists of 44 lots located at the southwest section of the property. The two (2) lots that were used as a temporary stormwater basin during Phase 1 will be used to construct residences during Phase 2. Therefore, an additional 45 single-family homes will be constructed during Phase 2. Phase 3 will construct an additional 47 single-family residences located on the northern section of the property.

Trip Generation

Estimated trip generation was determined for daily, AM peak hour, and PM peak hour for the proposed project, as well as those generated at the completion of each phase of the project. The estimated trip generation for each was based on published trip generation rates from the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition, 2021. 4Creeks used trip generation rates for the ITE land use Single-Family Detached Housing (ITE Code 210). Regression equations to determine trip estimates were used instead of the average rates based on procedures established in the ITE Trip Generation Handbook, 3rd Edition, September 2017.

Table 1 shows the estimated trips generated for the proposed project, as well as the trips generated at the completion of each phase of the project. Phase 1 is expected to generate approximately 464 daily trips, including 35 AM peak hour trips (9 inbound, 26 outbound) and 45 PM peak hour trips (28 inbound, 17 outbound). The completion of Phase 2 is expected to generate approximately 906 daily trips, including 67 AM peak hour trips (17 inbound, 50 outbound) and 89 PM peak hour trips (56 inbound, 33 outbound). Phase 3 completes the project and is expected to generate approximately 1,339 daily trips, including 99 AM peak hour trips (26 inbound, 73 outbound) and 133 PM peak hour trips (84 inbound, 49 outbound).

TABLE 1: PROPOSED PROJECT TRIP GENERATION

Single-Family Detached Housing (ITE Code 210) - Project Phase	Total Units	Daily*	AM Peak Hour*				PM Peak Hour*			
		Trips	% In:Out	In	Out	Total	% In:Out	In	Out	Total
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Phase 3 (add 47 units)	136	1,339	26:74	26	73	99	63:37	84	49	133
Total Project	**136**	**1,339**	**26:74**	**26**	**73**	**99**	**63:37**	**84**	**49**	**133**

*Regression equations used based on procedure in Trip Generation Handbook, 3rd Edition, September 2017

The City of Visalia's Procedures for Traffic Impact Analysis (TIA), March 2021, indicates residential developments generating less than 200 peak hour trips do not require a TIA. Therefore, as per the City's TIA guidelines, it is anticipated the project will not require a TIA.

Construction Phasing

As previously indicated, the project will be constructed in three (3) phases as shown on the attached Phasing Plan. Phase 1 is the southeast section of the property on the west side of Roeben Street north of Whitendale Avenue. During Phase 1, Roeben Street will be constructed to its full width north along the property's frontage. Whitendale Avenue will also be constructed to the two-third roadway width requirements along the project's frontage to the west property line of lot 24 (approximately 1,625-feet west of Roeben Street) during Phase 1. These improvements will allow access into Phase 1 of the subdivision from Roeben Street at Evergreen Court. Temporary emergency access will also be provided from Whitendale Avenue through lot 24 as shown on the Phasing Plan.

There will be 89 total residences constructed through Phase 2 which covers the southern portion of the property. The two (2) lots used as a temporary stormwater basin during Phase 1 will be used to construct residences during Phase 2. The remaining roadway requirements for the project will be constructed during Phase 2. These include constructing the two-third roadway width requirements along the project's Shirk Road frontage. It also includes constructing the continuation of the two-third roadway width requirement on Whitendale Avenue to Shirk Road. Therefore, all 89 residences will have access from both Roeben Street and Shirk Road with Phase 2.

Phase 1 provides access for the initial 43 residences from Roeben Street with temporary emergency access from Whitendale Avenue. Phase 2 provides access to 89 residences from Shirk Road and Roeben Street. Phase 2 completes the adjacent roadway requirements; therefore, the same access will be used during Phase 3. No access will be provided from Whitendale Avenue during Phases 2 or 3.

Should you have any questions or if 4Creeks can be of further assistance, please do not hesitate to call me or David Duda at (559) 802-3052.

Sincerely,

Lisa M. Wallis-Dutra, PE, TE, PTOE, RSP$_1$
Sr. Traffic Engineer

Cc: David Duda, AICP