DRAFT Initial Study/Mitigated Negative Declaration for Riggin Avenue Widening (Mooney to Conyer)

March 2022



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Section 1

Initial Study/Negative Declaration Process

City of Visalia
315 East Acequia Avenue
Visalia, CA 93291

SECTION 1
CEQA Review Process

Project Title: Riggin Avenue Widening (Mooney to Conyer)

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 proposed reconstruction of approximately 0.75 mile of existing roadway to accommodate a 4-lane arterial street. 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

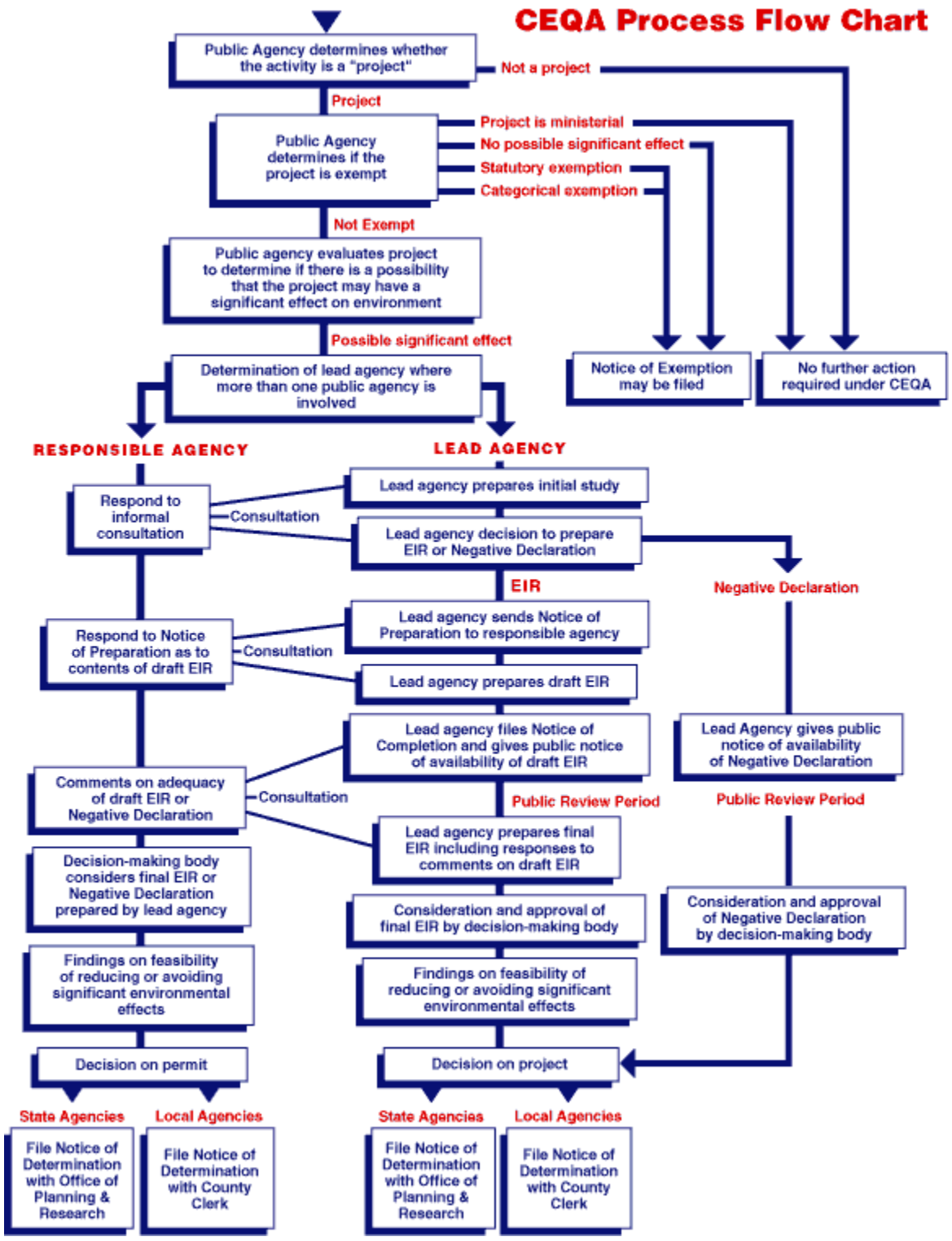
The Initial Study/Negative Declaration document is an informational document that is intended to inform decision-makers, other responsible or interested agencies, and the general public of potential environmental effects of the proposed project. The environmental review process has been established to 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 East Acequia Avenue
Visalia, CA 93291

SECTION 2
Project Description

Project Title: Riggin Avenue Widening (Mooney to Conyer)

2.1 Project Description & Purpose

The proposed project involves the reconstruction of 0.75 miles of existing roadway between N Mooney Blvd and Conyer Street to accommodate a 4-lane arterial street with 110' total ROW. Improvements would include new 12' vehicular travel lanes (4 lanes total), a new Class IV bike lane along the north side of Riggin Avenue, new street lighting, new landscaped medians, four new bus turnouts, new fire hydrants, and curb returns at all involved intersections. A typical cross section detail is provided below (Figure 2-1). Construction would require demolition of existing asphalt between Mooney and Conyer, removal of two trees on the north side of Riggin, removal/replacement of one drive approach, and relocation of 11 power poles. Construction is proposed to begin July 2023 and continue through August 2024. Maps showing project layout and regional location are provided in Figures 2-2 and 2-3. Detailed improvement plans are provided in Appendix D.

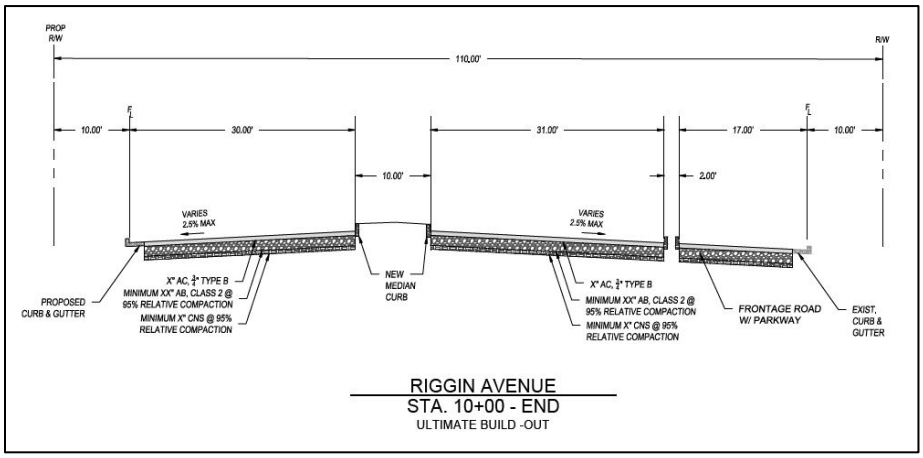


Figure 2-1. Typical Cross Section Detail.

Southern California Edison Scope of Work

Southern California Edison Company (SCE) will relocate approximately 2,500 feet of the existing Rector-Riverway 66kV subtransmission line and associated 12kV distribution line and telecommunications fiber comprising a total of 10 poles. The westernmost pole requiring relocation is located approximately 650 feet east of Mooney Boulevard and the easternmost pole for relocation is located approximately 130 feet east of Giddings Street. The existing alignment is located within franchise right (8 poles) and within a joint-use agreement (2 poles) along Riggin Avenue, primarily on the north side of the street. The rights will remain the same once the poles are relocated.

The scope of work includes SCE or SCE-contracted crews:

- Relocating a total of 10 existing wood poles ranging in total pole height from 55 to 75 feet (above ground height range is from 47 to 65 feet) and replacing them with 10 new wood poles ranging in total pole height between 75 and 80 feet (above ground height range is from 65 to 70 feet).
- Removing two existing 35-foot guy stub pole and anchors.
- Removing one 40-foot distribution pole.
- Removing and replacing along the 2,500-foot alignment 653 aluminum conductor steel reinforced (ASCR) subtransmission conductor with new 653 ASCR conductor.
- Either transferring existing 12kV distribution lines to the new poles or removing and reinstalling new 12kV distribution conductor.
- Transfer of existing telecommunications lines to the new poles.

Ground disturbance will include excavation by machine-mounted auger measuring approximately 2-3 feet in diameter and 8-11 feet deep to both remove the existing poles and anchors and to install the new relocated poles. The 66kV subtransmission conductor, and if not transferred, the 12kV distribution conductor will be removed and installed with stringing equipment (cable puller) on the new, relocated pole alignment. For transfer of the telecommunications fiber and if the 12kV distribution will be transferred, transfer includes smaller wire stringing equipment. Work activities will generally take place within a 50-foot buffer around the existing poles and new pole relocation areas and downline, parallel along the alignment with trucks and equipment on the north side of the alignment and south of the alignment on Riggin Road. Ground disturbance will be minimal and not exceed one (1) acre. Minimal trimming of trees using hand tools may be required for a few pole relocations. The construction duration of SCE's scope of work is expected to take approximately three months.

The following equipment will be used for SCE's scope of work:

Activity and Number of Personnel	Equipment Type	Estimated Horsepower	Fuel Type	Quantity	Estimated Number of Work Days	Duration of Use (Hours/Day)
Civil Construction (4 people)	Tool Truck	180	Gas	2	3	8
	Pickup Truck	180	Gas	2	3	8
	Backhoe	75	Diesel	1	3	8
Pole Relocation and Conductor/ Fiber Removal and/or Transfer (20-25 people)	Heavy Truck	300	Diesel	2	28	8
	Bucket Truck	200	Diesel	2	28	8
	Cable Puller	75	Diesel	1	12	8
	Pickup Truck	180	Diesel	4	28	8

2.2 Project Location

The proposed project site is located within the northern part of the City of Visalia. The project would affect approximately 10 acres within City ROW along Riggin Avenue from Mooney Blvd to Conyer Street. The site is bordered by residential uses to the south, and by residential, commercial, and vacant land uses to the north.

2.3 Existing Setting

The segment of Riggin Avenue that the Project proposes to widen is currently a two-lane road with a center turn lane. Existing pavement is approximately 40’ wide and increases in width as it approaches Conyer Street and Mooney Blvd. The existing ROW along this segment of Riggin Avenue is 110’. This road is located in a residential area. Properties to the south have been built out with single-family residences. Properties to the north are designated Low Density Residential, Medium Density Residential, and Commercial Mixed Use by the City of Visalia General Plan. These properties are mostly undeveloped, however some commercial development has occurred along the northeast corner of Riggin Avenue and Mooney Blvd.

2.4 Other Permits and Approvals

Other permits and approvals required for the Riggin Avenue Widening (Mooney to Conyer) Project are listed below. It should be noted that this list is not exhaustive and additional permits and approvals may also be required.

- *City of Visalia Building and Encroachment Permits*
- *City of Visalia Grading Permits*
- *City of Visalia approved Landscape and Design Plans*
- *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 as a result of project construction.

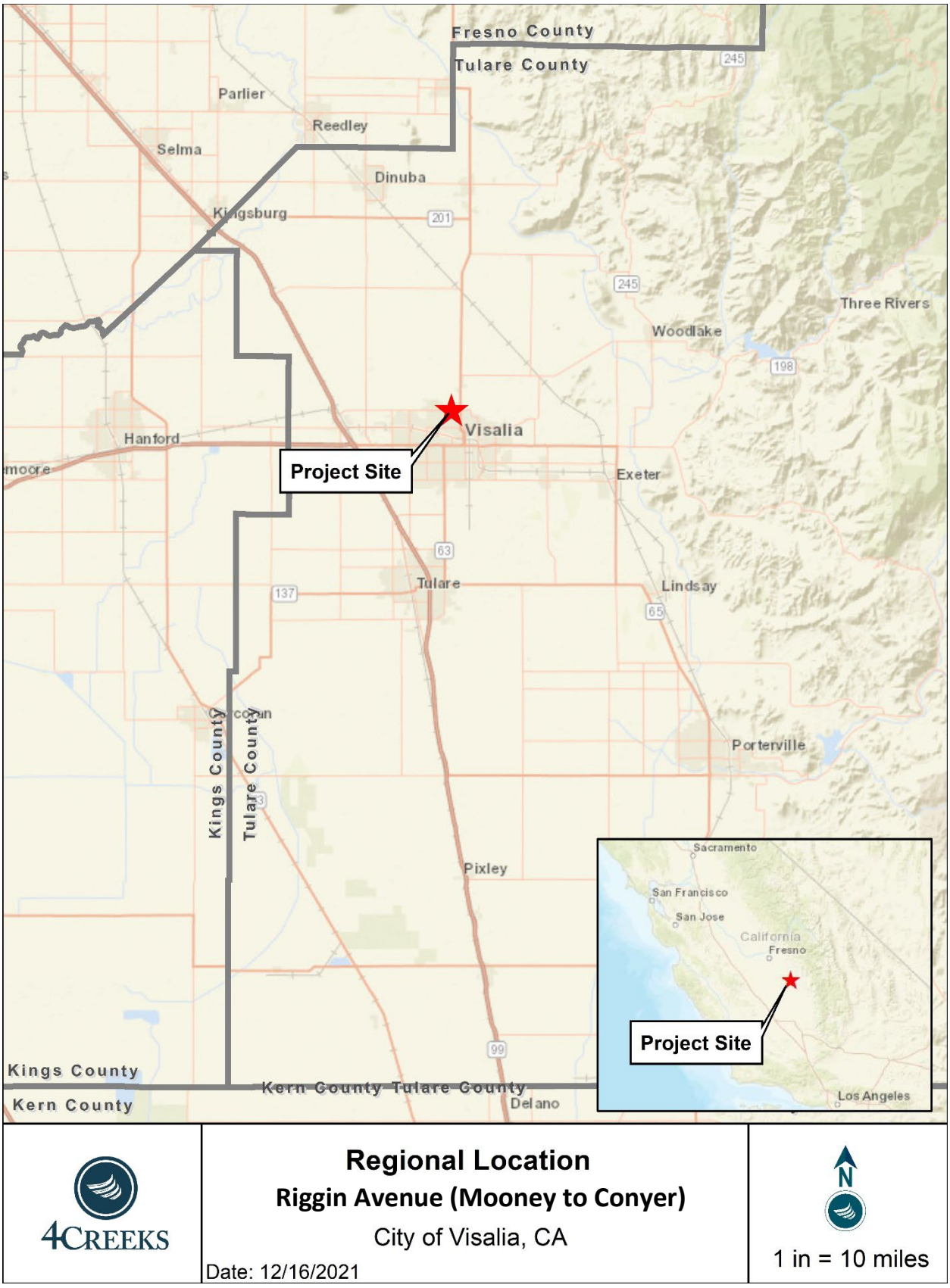


Figure 2-2. Regional Location Map



Figure 2-3. Vicinity Map

Section 3

Evaluation of Environmental Impacts

City of Visalia
315 East Acequia Avenue
Visalia, CA 93291

SECTION 3
Evaluation of Environmental Impacts

Project Title: Riggin Avenue Widening (Mooney to Conyer)

This document is the Initial Study/Mitigated Negative Declaration for the proposed reconstruction of approximately 0.75 miles of existing roadway to accommodate a 4-lane arterial street. The proposed project site is located within the City of Visalia. The City of Visalia will act as the 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), a Negative Declaration is appropriate if it is determined that:

(1) 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.

3.2 INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

1. **Project Title:** Riggin Avenue Widening (Mooney to Conyer)

2. **Lead Agency:** City of Visalia
315 East Acequia Avenue
Visalia, CA 93291
(559) 713-4359

3. **Applicant:** City of Visalia
Contact Person: Diego Corvera
315 East Acequia Avenue
Visalia, CA 93291
(559) 713-4209

4. **Project Location:** The proposed project site is located partially within the northern part of the City of Visalia. The project would affect approximately 14 acres within City ROW along Riggin Avenue from Mooney Blvd to Conyer Street. The site is bordered by residential land uses to the south, and residential and commercial land uses to the north.

5. **General Plan Designation**: This segment of Riggin Avenue is designated as a future arterial (Year 1-10) in the Circulation Element of the City of Visalia General Plan.

6. **Zoning Designation:** The project will take place within ROW, outside of zoning designations.

7. **Project Description:** The proposed project involves the reconstruction of 0.75 mile of existing roadway between N Mooney Blvd and Conyer Street to accommodate a 4-lane arterial street with 110' total ROW. Improvements would include new 12' vehicular travel lanes (4 lanes total),), a new Class IV bike lane along the north side of Riggin Avenue, new street lighting, new landscaped medians, four new bus turnouts, new fire hydrants, and curb returns at all involved intersections. A typical cross section detail is provided in Figure 2-1. Construction would require demolition of existing asphalt between Mooney and Conyer, removal of two trees on the north side of Riggin, removal/replacement of one drive approach, and relocation of 11 power poles by SCE. SCE scope of work for power pole relocation is described in detail in Section 2.1. Construction is proposed to begin July 2023 and continue through August 2024. The proposed Project layout and Vicinity Map are provided in Figures 3-1 and 3-2, respectively. Detailed improvement plans are provided in Appendix E.

8. **Surrounding Land Use Designations and Settings:**

   North Commercial/ Medium Density Residential/Low Density Residential; Currently developed with commercial and residential uses, vacant land.

   South Residential Low Density; Developed with single-family residential

   West Commercial/Residential High Density, Developed commercial and multi-family residential.

   East Commercial/Residential Low Density, currently developed with commercial uses

9. **Required Approvals:** No discretionary approvals are required from The City of Visalia for the proposed project.

10. **Native American Consultation:** A letter requesting a search of the Sacred Lands File (SLF) and a list of Native American individuals and organizations that may have knowledge of, or concerns regarding, cultural resources in the Project area were sent to the NAHC on November 8, 2021. Andrew Green, Cultural Resource Analyst, from the NAHC, responded in an email dated December 21, 2021 that a search of their records failed to identify any known sacred lands or cultural resources in the "immediate project area". On December 30, 2021, initial consultation letters were sent to the Native American individuals on the list provided by the NAHC. The letter provided a summary of the Project and requested information regarding comments or concerns the Native American community might have about the Project. For those individuals that did not reply to the letter, emails were sent on February 1, 2022.

10. **Parking and access:** During construction, workers will utilize a temporary construction easement located adjacent to the project site for parking and equipment staging.

11. **Landscaping and Design:** The landscape and design plans will be required at time the project submits for building permit on the project and will be subject to the City of Visalia's Model Water Efficient Landscape Ordinance (MWELO).

12. **Utilities and Electrical Services:** The proposed project will maintain the existing water and sewer mains on Riggin Avenue. The Project will provide two new 6" sewer laterals to connect to the existing sewer main. Stormwater will be collected and conveyed to the existing stormwater mains at Mooney and Giddings. Electrical services are provided by SCE and the project will involve relocation of 11 existing power poles located on the north side of the street.

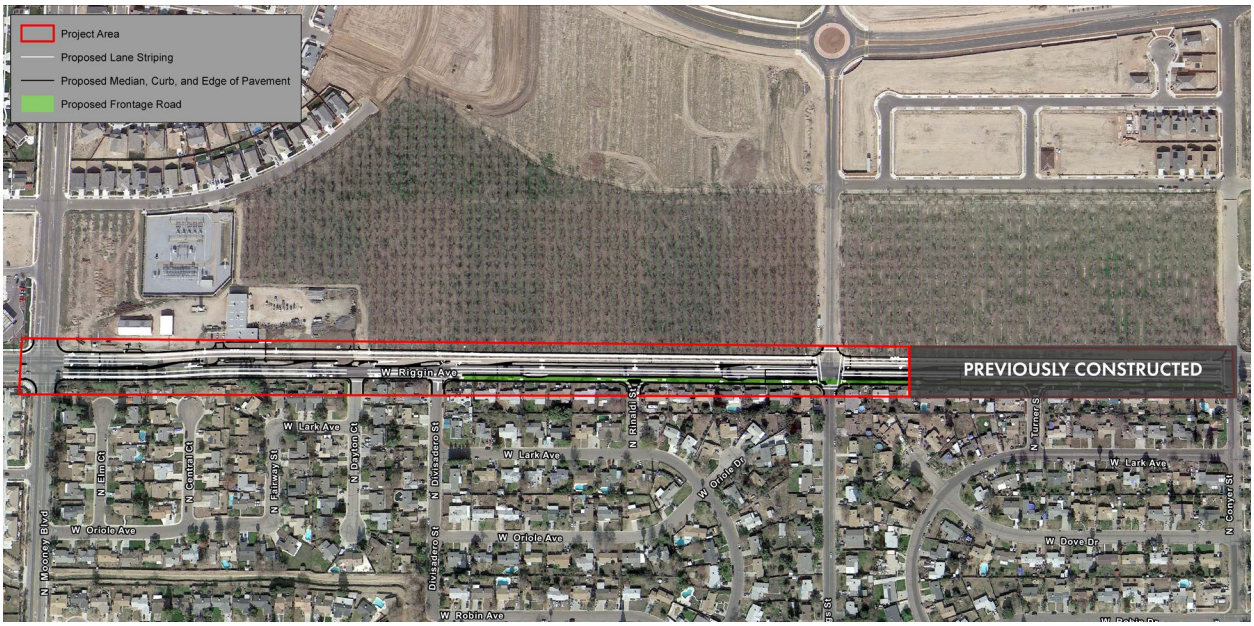


Figure 3-1. Site Plan



Figure 3-2. Vicinity Map

Acronyms

BMP	Best Management Practices
CAA	Clean Air Act
CCR	California Code of Regulation
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CWA	California Water Act
DHS	Department of Health Services
FEIR	Final Environmental Impact Report
FPPA	Farmland Protection Policy Act
ISMND	Initial Study Mitigated Negative Declaration
MCL	Maximum Contaminant Level
ND	Negative Declaration
NAC	Noise Abatement Criteria
RCRA	Resource Conservation and Recovery Act of 1976
RWQCB	Regional Water Quality Control Board
SHPO	State Historic Preservation Office
SJVAPCD	San Joaquin Valley Air Pollution Control District
SWPPP	Storm Water Pollution Prevention Plan

3.3 EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately support 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 adequate analyzed in an earlier EIR or negative declaration. Section 15063(c) (3)(D). In this case, a brief discussion should identify the following.

    a) Earlier Analysis Used. Identify and state where they are available for review.
    b) 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.
    c) 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 and Hazardous Materials	☐ Recreation
☐ Air Quality	☐ Hydrology and Water Quality	☐ Transportation
☐ Biological Resources	☐ Land Use and Planning	☐Utilities and Service System
☐ Cultural Resources	☐ Mineral Resources	☐ Wildfire
☐ Energy	☐ Noise	☐ Mandatory Findings of Significance
☐ Geology and soils	☐ Population	

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.

Brandon Smith — March 15,2022

SIGNATURE — DATE

Brandon Smith, Environmental Coordinator — City of Visalia

PRINTED NAME — 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

There are no aesthetic resources identified in the City of Visalia General Plan; however, the views of the Sierra Nevada Mountains are considered to be an important scenic vista in Tulare County.

Sierra Nevada Mountains: The Sierra Nevada mountain range and its foothills stretch along the east area of the county and are a valuable aesthetic resource. Additionally, Sequoia National Park is located within the stretch of the Sierra Nevada Mountains located in Tulare County. Sequoia National Forest is a U.S. National Forest known for its mountain scenery and natural resources. Located directly north of Sequoia National Park is Kings Canyon National Park, a U.S. National Park also known for its towering sequoia trees and scenic vistas. The Sierra Nevada Mountains are approximately 17 miles east of the proposed project site but views of the mountains are not visible on most days due to poor air quality.

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



Photo 1: Eastern boundary of the project site on Riggin Ave. Source: Live Oak Associates, January 2022



Photo 2: Seven hackcherry trees to be removed within the project site. Source: Live Oak Associates, January 2022



Photo 3: Pecan tree (foreground) and hackcherry (background) to be removed within the project site. Source: Live Oak Associates, January 2022



Photo 4: Western boundary of project site on Riggin Avenue and North Mooney Avenue.

Regulatory Setting

State Scenic Highways: The State Scenic Highway Program is implemented by Caltrans and was developed to preserve the aesthetic quality of certain highway corridors. Highways included in this program are designated as scenic highways. A highway is designated as scenic based on how much of the natural landscape is visible to travelers, the quality of that landscape, and the extent to which development obstructs views of the landscape. The 44-mile stretch of State Route 198 between State Route 99 and Sequoia National Park is classified as eligible for State Scenic Highway status, but is not officially designated. There are no designated State Scenic Highways within the City of Visalia.

City of Visalia General Plan: The City of Visalia General Plan includes the following goals and policies that are intended to protect the City's aesthetic resources that are applicable to the proposed project:

- LU-O-15 Maintain and enhance Visalia's physical diversity, visual qualities and small-town characteristics.
- LU-P-37 Adopt specific development standards for scenic entryways (gateways) and roadway corridors into the City, including special setback and landscape standards, open space and park

development, and/or land use designations. These standards will apply to the west and east entries into Visalia along Highway 198 and to the "gateway boulevards" identified in the Transportation Element: Caldwell and Riggin Avenues; Shirk Road; and Lovers Lane

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

Discussion

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

No 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 are the primary scenic vista within this region and the Land Use Element of the City's General Plan states that view corridors to the mountains should be preserved. The foothills of the Sierra Nevada Mountains are approximately 17 miles east of the proposed project site, however views of the mountains are not visible on most days due to poor air quality. The proposed project would not result in any vertical construction that could effect views of the Sierra Nevada Mountains or any other scenic vista. There is *no 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 within the City of Visalia. Highway 198 is the nearest Eligible State Scenic Highway and is located approximately 2 miles south of the project site. Significant urban development between the project site and Highway 198 completely eliminates visibility of the project site from the highway. 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 located in an urbanized area characterized by residential and commercial development. The Project is consistent with the City's General Plan, which classifies the road as a future arterial. All proposed improvements will be done in accordance with City development standards and will not affect the surrounding visual character. 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 street lighting consistent with the City's development standards, which are developed to minimize impacts related to excessive light and glare. The impacts are *less than significant.*

Mitigation Measures for Aesthetic Resources

None Required

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

Agriculture is a vital component of the City of Visalia's economy and is a significant source of the City's cultural identity. As such, preserving the productivity of agricultural lands is integral to maintaining the City's culture and economic viability.

The proposed project site is designated as Prime Farmland and Confined Animal Agriculture under the Important Farmland Mapping and Monitoring Program, however the site is located within the public Right-of-Way and would not impact farming activities.

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.

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 is capable of producing sustained yields.
- ***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.
- ***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.
- ***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.
- ***Grazing Land*** has vegetation that is suitable for grazing livestock.

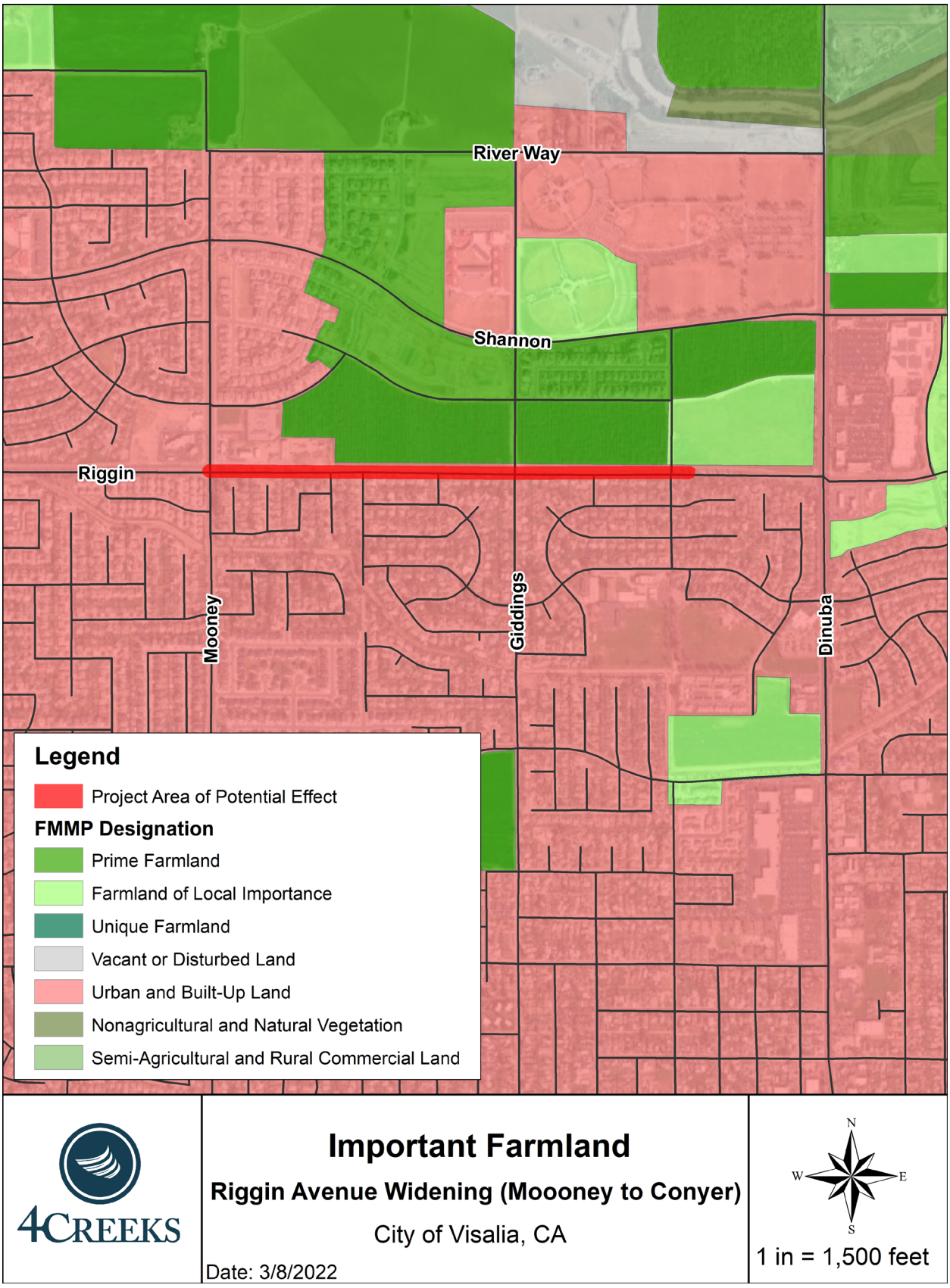


Figure 3-3. Important Farmland Map

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?

No Impact: The proposed project site is designated as Urban and Built-Up land by the California Department of Conservation Farmland Mapping and Monitoring Program. While areas to the north of the site are designated as Prime Farmland, these have been previously approved for residential development so the Project would not be the cause of these lands being converted to non-agricultural use. There is *no impact.*

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

No Impact: The proposed project site is within the public ROW and is therefore not zoned for agricultural use or under a Williamson Act Contract. There is *no 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 located within the public ROW and is therefore not zoned for forest or timberland production. There is n*o impact.*

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

No Impact: The proposed project site is located within the public ROW and would not convert forestland to non-forest use. There is *no impact.*

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?

No Impact: As discussed above, the proposed project site is located within the public ROW. The Project is adjacent to existing farmlands, however these lands have been previously approved for residential development and the project would not cause them to convert to non-agricultural uses. There is *no impact.*

Mitigation Measures for Agricultural and Forest Resources

None Required

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 shown in the Table 3-1, the SJVAB is in nonattainment for several pollutant standards.

Pollutant	Designation/Classification	
	Federal Standards	State Standards
Ozone – One hour	No Federal Standard[D]	Nonattainment/Severe
Ozone – Eight hour	Nonattainment/Extreme[C]	Nonattainment
PM 10	Attainment[A]	Nonattainment
PM 2.5	Nonattainment[B]	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. 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.
B. 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).
C. 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).
D. 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 3-1. San Joaquin Valley Attainment Status; Source: SJVAPCD

Regulatory Setting

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	1 Hour	0.18 ppm (339 µg/m³)		100 ppb (188 µg/m³)	--	Gas Phase Annual

Pollutant	Averaging Time	California Standards[1]		National Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
(NO_2)[8]	Arithmetic Mean	0.030 ppm (57 µg/m³)	Gas Phase Chemiluminescence	53 ppb (100 µg/m³)	Same as Primary Standard	Chemiluminescence
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 certain areas)9	--	
	Annual Arithmetic Mean	--		0.030 ppm (for certain areas)9	--	
Lead[10,11]	30 Day Average	1.5 µg/m³	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/m³		
Visibility Reducing Particles[12]	8 Hour	See footnote 12	Beta Attenuation and Transmittance through Filter Tape	No National Standard		
Sulfates	24 Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride[10]	24 Hour	0.01 ppm (26 µg/m³)	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 3-2. 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 (Table 3-3). Additionally, 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.
- **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.

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

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 Tulare County 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.

Construction Phase. Project construction would generate pollutant emissions from the following construction activities: SCE civil construction, SCE pole relocation and conductor/fiber removal and/or transfer, grubbing/land clearing, grading/excavation, drainage/utilities/sub-grade, and paving. The construction related emissions from these activities were calculated using Road Construction Emissions Model, Version 9.0.0 and CalEEMod. The full Emissions Model results are available in

Appendix A. As shown in Table 3-4 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	4.27	0.44	0.01	4.37	3.56	0.87
Emissions Generated from SCE Activities	0.1881	0.0279	0.00064	0.1879	0.0137	0.00892
Total Emissions	**4.4581**	**0.4679**	**0.01064**	**4.5579**	**3.5737**	**0.87892**
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 the Road Construction Emissions Model.						

Table 3-4. Projected Project Emissions Compared to SJVAPCD Thresholds of Significance for Criteria Pollutants related to Construction; Source: SJVAPCD, Road Construction Emissions Model, Version 9.0.0 (Appendix A), CalEEMod Version 2020.4.0 (Appendix A)

Operational Phase. The proposed project is being implemented in response to existing and planned growth in the area. Riggin Avenue is identified in the City's General Plan as a future arterial. Arterials collect and distribute traffic from freeways and expressways to collector streets. The Project will improve local roadway conditions to accommodate traffic that has already been planned for and analyzed in the City's General Plan EIR. The project itself would not generate any additional vehicle trips and there will be no stationary source emissions resulting from the Project.

Because the emissions from Project construction would not exceed the thresholds of significance established by the SJVAPCD, and the Project would result in operational emissions beyond the mobile source emissions that have been previously analyzed in the City's General Plan EIR, 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 accounts for cumulative impacts to air quality in Section 1.8 "Thresholds of Significance – Cumulative Impacts" in its 2015 Guide for Assessing and Mitigating Air Quality Impacts. The SJVAPCD considered basin-wide cumulative impacts to air quality when developing its significance thresholds. Because Project emissions are below the significance thresholds adopted by the air district, and compliance with SJVAPCD rules will address any cumulative impacts regarding operational emissions, impacts regarding cumulative emissions would be *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 south of the proposed Project site are the closest sensitive receptors. The Project would not exceed emissions thresholds established by the SJVAPCD and would not result in operational emissions beyond the mobile source emissions that were previously analyzed in the City's General Plan EIR. 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. These odors are not likely to be noticeable for extended periods of time beyond the perimeter of the Project site. Once constructed, the project will not create any new sources of odor that result directly from the project. The project would not create objectionable odors affecting a substantial number of people and the impacts would be *less than significant.*

Mitigation Measures for Air Quality

None Required

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 Evaluation that was prepared for this project by Live Oak Associates, Inc. in January 2022 to identify sensitive biological resources, provide project impact analysis, and suggest mitigation measures. The full document can be found in Appendix B of this Initial Study.

Environmental Setting

At the time of the field survey, the project site consisted of an existing paved road and adjoining disturbed lands within the 110-foot ROW. The project site is relatively level, with an average elevation of approximately 330 feet. The project site contains three soil mapping units: Grangeville sandy loam, drained, 0 to 2 percent slopes; Nord fine sandy loam, 0 to 2 percent slopes; and Tagus loam, 0 to 2 percent slopes. Soils of the site have been significantly disturbed from urban development and agricultural

activities. As a result, the soils of the project site have no particular significance to biological resources potentially occurring on the site.

One land use/biotic habitat has been identified on the project site, ruderal/developed (Figure 5 of Appendix B). This land use/biotic habitat has experienced a high level of human disturbance and modification. A list of the vascular plant species observed on the project site and a list of the terrestrial vertebrates using, or potentially using, the site is presented in Appendices A and B of Appendix B, respectively. Selected photographs of the project site are presented in Appendix C of Appendix B.

Ruderal/Developed: The project site consists entirely of ruderal/developed lands heavily influenced by human activities. At the time of LOA's field survey, this land use was mostly made up of a paved existing road (Riggin Avenue) and its associated infrastructure including sidewalks, drains, street trees, landscaped borders, electrical poles, traffic lights, and streetlights. Street trees mainly comprised American basswood (*Tilia americana*), while landscaped borders included crapemyrtle (*Lagerstroemia indica*) and bearberry (*Arctostaphylos uva-ursi*). The northern portion of the project site, where the existing paved road will be extended, was characterized by graded and compacted soil and weedy growth of non-native grasses and forbs including foxtail brome (*Bromus madritensis*), foxtail barley (*Hordeum murinum*), common fiddleneck (*Amsinckia intermedia*), Russian thistle (*Salsola tragus*), whitestem filaree (*Erodium moschatum*), and London rocket (*Sisymbrium irio*), among others.

Although the wildlife habitat value of ruderal/developed lands within the project site is relatively low, these lands can support some wildlife species. Common reptiles such as the western fence lizard (*Sceloporus occidentalis*) and Pacific gopher snake (*Pituophis catenifer catenifer*) could potentially use ruderal/developed areas of the project site. Resident avian species observed within or adjacent to the project site included mourning doves (*Zenaida macroura*), northern mockingbirds (*Mimus polyglottos*), house finches (*Haemorhous mexicanus*), California scrub jays (*Aphelocoma californica*), and killdeer (*Charadrius vociferus*). Wintering birds observed included yellow-rumped warblers (*Setophaga coronata*), white-crowned sparrows (*Zonotrichia leucophrys*), and California gulls (*Larus californicus*). Other bird species expected at the project site include raptors such as the red-tailed hawk (*Buteo jamaicensis*) and American kestrel (*Falco sparverius*), and other perching birds such as Brewer's blackbird (*Euphagus cyanocephalus*), western kingbird (*Tyrannus verticalis*), and American crow (*Corvus brachyrhynchos*).

Small mammals that would be expected to occur on ruderal/developed lands of the site include Botta's pocket gophers (*Thomomys bottae*), California voles (*Microtus californicus*), house mice (*Mus musculus*), and deer mice (*Peromyscus maniculatus*). Mammalian predators with the potential to occur on ruderal lands of the project site include disturbance-tolerant species such as the raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), and coyote (*Canis latrans*).

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 Valley Oak Tree Ordinance: The City's Valley Oak Ordinance establishes policies for the care, trimming and removal of Valley Oaks. The ordinance also establishes an in-kind mitigation program and mitigation fee program for the removal of oak trees.

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 with Mitigation: The project site contains some suitable nesting habitat for a number of avian species protected under the federal Migratory Bird Treaty Act and related state laws. During the site survey, small stick nests (inactive) were observed in trees adjacent to the project site. Trees and shrubs are few within the project boundary, but do offer additional nesting habitat for some bird species adapted to urban environments. If birds were to be nesting on or adjacent to the project site at the time of construction, project-related activities could result in the abandonment of active nests or direct mortality to these birds. Construction activities that adversely affect the nesting

success of migratory birds or raptors, or result in mortality of individual birds constitute a violation of state and federal laws (see Sections 3.5, 3.6, and 3.7 of Appendix B) and would be considered a significant impact under CEQA. Implementation of Mitigation Measures BIO-1a, BIO-1b, and BIO-1c will minimize construction disturbance to nesting birds and raptors. The impact is *less than significant with mitigation.*

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: Sensitive natural communities are absent from the project site. The only habitat present within the project site is ruderal/developed. Development of the proposed project would not impact any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife (CDFW), or United States Fish and Wildlife Service (USFWS). There is *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?

No Impact: Wetlands and jurisdictional waters are absent from the project site. Therefore, no impacts to state or federally protected wetlands would occur due to the proposed project. There is *no 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: As discussed, this project site is surrounded by urban development that is expanding just north of the project area. There are no physical features (riparian corridors, valleys, etc.) at the project site that would support regular or predicted wildlife movement. Therefore, the project will result in a less than significant effect on wildlife movement corridors. The impact is *less than significant.*

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

No Impact: No valley oak trees are located within the project site. There are five crapemyrtle trees (< 4 in. Diameter at Breast Height (DBH)), a pecan tree (26 in. DBH), and a hackcherry tree (22 in. DBH) that are expected to be removed from the project site to expand the existing road. These trees are not protected by City of Visalia's Oak Tree Mitigation Policy (2007), which was developed pursuant to Visalia Municipal Code, and therefore no mitigation is required. The project appears to be consistent with the City of Visalia General Plan. There is *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: No known Habitat Conservation Plans are in effect for the area. The project appears to be consistent with the City of Visalia General Plan. There is *no impact.*

Mitigation Measures for Biological Resources

Mitigation Measure BIO-1a: Avoidance. In order to avoid impacts to nesting migratory birds and raptors, construction will occur, where possible, outside the nesting season, or between September 1 and January 31.

Mitigation Measure BIO-1b: Pre-construction Surveys. If construction must occur during the nesting season (February 1-August 31), a qualified biologist will conduct pre-construction surveys for active migratory bird and raptor nests within 10 days of the onset of these activities. Nest surveys will include all areas on and within 250 feet of the project site. If no active nests are found within the survey area, no further mitigation is required.

Mitigation Measure BIO-1c: Establish Buffers. Should any active nests be identified, the biologist will establish suitable disturbance-free buffers around the nests. Buffers will be identified on the ground with flagging or fencing, and will be maintained until the biologist has determined that the young have fledged and the nests are no longer active.

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?	☐	☑	☐	☐

Environmental Setting

A Historical Property Survey Report and Archaeological Survey Report was prepared by the California Department of Transportation in January 2022. The Assessment included a Cultural Resources Records Search, archival research, Native American outreach, and a pedestrian survey.

Archaeological Survey Report

The records search results indicated that there are no cultural resources (prehistoric or historic) recorded within the Project APE, however there are two recorded resources within 1 mile of the project boundary. These resources include a historic-era railway and historic-era bridge. The Southern San Joaquin Valley Information Center staff also reported that eight surveys have taken place within 1 mile of the Project site, including one within the Project APE.

A review of historic USGS topographic maps (1927, 1942, 1950, 1954, 1963, 1971, and 1980), aerials (1956, 1969, 1994, and 2005), and the 1855 and 1914 GLO maps of Township 18S Range 25E was conducted. In the 1855 GLO, the Project alignment is bounded by swamp to the north but appears revised in the 1914 plat to reflect the entire Project area in swamp designation. By 1927, the roadway alignment for Riggin Avenue appears in the topographic map with a cluster of homes present east of the intersection with Mooney Boulevard where the road terminates. The area remains unchanged through the 1950s, when the roadway becomes extended west. The cluster of structures at the west end of the Project is reduced by the 1969 aerial and the housing development to the south of Riggin Avenue also appears at this time. Agriculture was practiced north of the road up through 2020 and is currently graded for development.

A pedestrian survey was conducted by Michelle Campbell, M.A. (Archaeologist) on November 30, 2021, for the purpose of identifying and recording cultural and archaeological resources. No archaeological or cultural resources were identified within or adjacent to the APE.

The Historical Property Survey Report and Archaeological Survey Report also included Native American Outreach, which will be discussed in greater depth in the Tribal Cultural Resources section of this Initial Study. The full Historical Property Survey Report and Archaeological Survey Report is available in Appendix C.

Regulatory Setting

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. California Historical Landmarks are sites, buildings, features, or events that are of statewide significance and have anthropological, cultural, military, political, architectural, economic, scientific, religious, experimental, or other value. In order for a resource to be designated as a historical landmark, it must meet the following criteria:

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

City of Visalia General Plan: The Open Space and Conservation Element of the City of Visalia General Plan includes the following objectives and policies pertaining to cultural and historic resources:

Objective OSC-O-11 Preserve and protect historic features and archaeological resources of the Visalia planning area including its agricultural surrounding for aesthetic, scientific, educational and cultural values.

OSC-P-39 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; and
- Implementing appropriate measures to avoid the identified impacts, as conditions of 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 Historical Property Survey Report and Archaeological Survey Report was prepared by the California Department of Transportation in January 2022. The Assessment included a Cultural Resources Records Search, archival research, Native American outreach, and a pedestrian survey. The Historical Property Survey Report and Archaeological Survey

Report did not identify any historical or cultural resources within the project APE.

Based on the results of this Historical Property Survey Report and Archaeological Survey Report, no known historic resources are located within the project site. Although no historic resources were identified, 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 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 development, 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 cultural resources are encountered during ground-disturbing activities, work in the immediate area must halt and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (NPS 1983) should be contacted immediately to evaluate the find. If the discovery proves to be significant under CEQA, additional work such as data recovery excavation and Native American consultation may be warranted to mitigate any adverse effects.

Mitigation Measure CUL-2: The discovery of human remains is always a possibility during ground disturbing activities. If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately. If the human remains are determined to be prehistoric, the coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a most likely descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

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 region. SCE serves approximately 15 million people throughout a 50,000 square-mile service area in central, coastal, and southern California. SCE supplies electricity to its customers through a variety of renewable and nonrenewable sources. The Table 3-5 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%	3%
Large Hydroelectric		7.9%	14.6%
Natural Gas		16.1%	34.2%
Nuclear		8.2%	9%
Other (Oil/Petroleum Coke/Waste Heat)		0.1%	0.2%
Unspecified Sources of Power[1]		32.6%	7.3%
Eligible Renewables	Biomass	0.6%	2.4%
	Geothermal	5.9%	4.8%
	Small Hydro	1%	2.0%
	Solar	16%	12.3%
	Wind	11.5%	10.2%
	Total Eligible Renewable	**35.1%**	**31.7%**

1. "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources.

Table 3-5. 2019 SCE and State average power resources; Source: 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 and Title 24: 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. 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 Visalia 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

Discussion

a) Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less Than Significant Impact: The proposed Project involves widening of an existing road and SCE power pole relocation. During construction, energy use would be primarily attributed the electricity and fuel energy consumed by construction vehicles and equipment. Energy use associated with project construction was estimated using the Road Construction Emissions Model Version 9.0 (Appendix A) and EMFAC data. Energy use calculations are provided in Appendix D and summarized in Table 3-6, below.

Source	Energy Use	
	Gallons	MBTU
Off-Road Equipment Fuel (Diesel)	122058	16966
On-Road Vehicle Fuel (Gasoline)	9457	1098
On-Road Vehicle Fuel (Diesel)	2062	287
Total Construction Energy Use		**18,351**
Average Annual Construction Energy Use		**18,351**

Table 3-6. Construction Related Energy Use. Source: Road Construction Emissions Model & EMFAC (See Appendix D)

Title 24 Building Energy Efficiency Standards would provide guidance on construction techniques to maximize energy conservation. As such, it is anticipated that construction vehicle fuel energy would not involve the wasteful, inefficient, or unnecessary consumption of energy.

During project operations, energy consumption would be minimal. Street lighting is proposed along the length of the proposed improvement area, which would result in some energy use. However, the City of Visalia Engineering Standards require new streetlights to utilize energy efficient LED luminaires. Therefore, it is not anticipated that project operations would result in wasteful, inefficient, or unnecessary consumption of energy.

Because the proposed project will comply with all energy efficiency standards required under Title 24 of the California Building Code and City of Visalia Engineering Standards, it is presumed that the

project will not result in wasteful, inefficient, or unnecessary consumption of energy. 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 project will be designed to meet Title 24 and City of Visalia energy efficiency standards. Compliance with these standards will be enforced by the City of Visalia Building Division. There is *no impact*

Mitigation Measures for Energy

None Required

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**: Tulare County is considered to be a low to moderate earthquake hazard area. The San Andreas Fault is the longest and most significant fault zone in California and is approximately 40 miles west of the Tulare County Boundary. Owens Valley fault zone is the only active fault located within Tulare County. Section 5 of the 2017 Tulare Multi-Jurisdictional Local Hazard Mitigation Plan identifies the project site as likely to experience low to moderate shaking from earthquakes, and may experience higher levels if an earthquake were to occur in or near the County. Ground

shaking can result in other geological impacts, including liquefaction, landslides, lateral spreading, subsidence, or collapse.

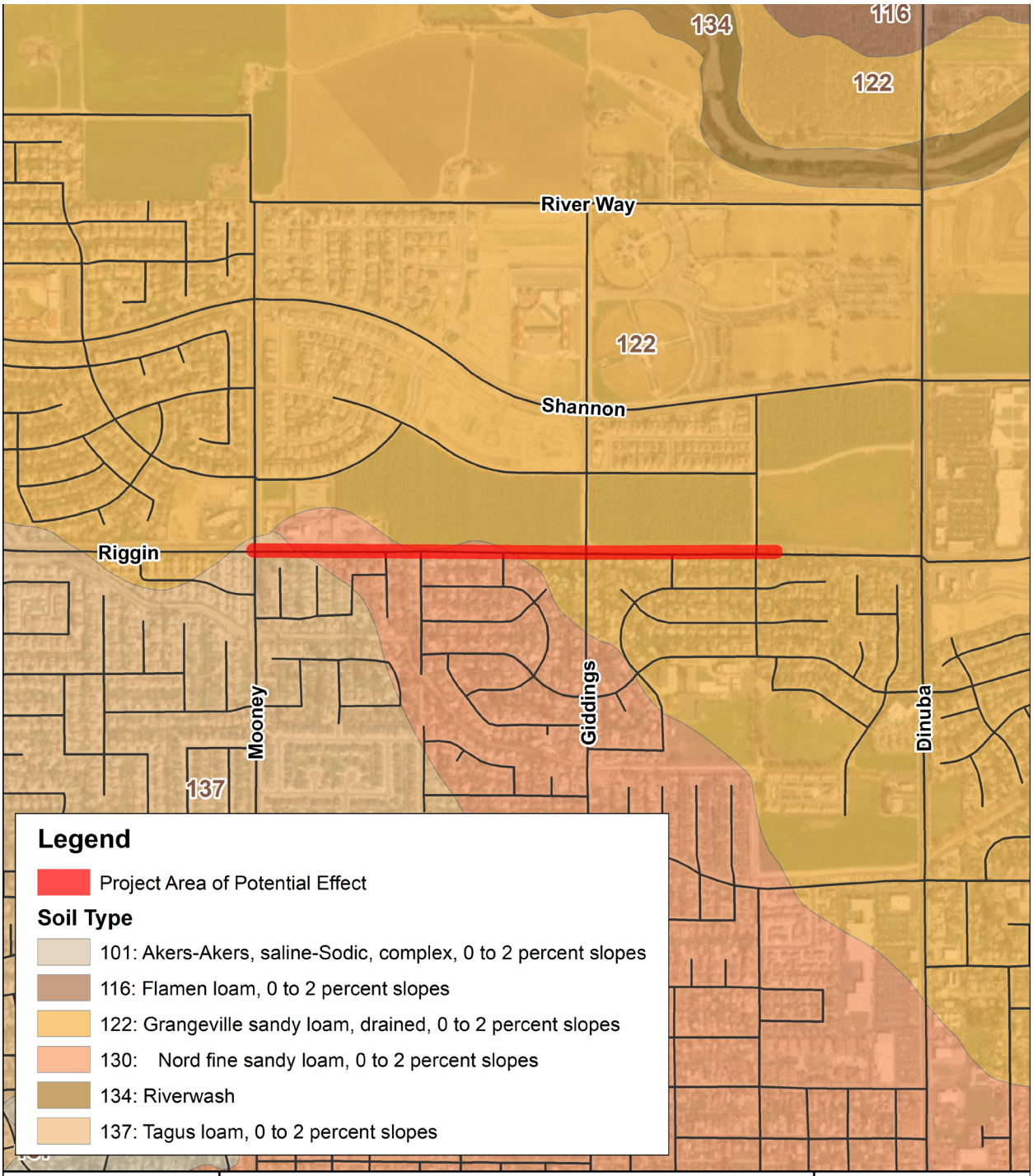
- **Liquefaction**: Liquefaction is a phenomenon whereby unconsolidated and/or near-saturated soils lose cohesion and are converted to a fluid state as a result of severe vibratory motion. The relatively rapid loss of soil shear strength during strong earthquake shaking results in temporary, fluid-like behavior of the soil, which can result in landslides and lateral spreading. No specific countywide assessment of liquefaction has been performed; however the 2017 Tulare Multi-Jurisdictional Local Hazard Mitigation Plan identifies the risk of liquefaction within the county as low because the soil types in the area either too coarse or too high in clay content to be suitable for 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 can be caused by both natural and human-induced changes in slope stability and often accompany other natural hazard events, such as floods, wildfire, or earthquake. Eastern portions of the County are considered to be at a higher risk of landslides where steep slopes are present. However, the majority of the County, including the proposed project site, is considered to be at low risk of landslides and mudslides because of its flat topography. The 2017 Tulare Multi-Jurisdictional Local Hazard Mitigation Plan states that occurrence of landslide events within populated areas of Tulare County is unlikely.

- **Subsidence**: Land Subsidence refers to the vertical sinking of land as a result of either manmade or natural underground voids. Subsidence has occurred throughout the Central Valley at differing rates since the 1920's as a result of groundwater, oil, and gas withdrawal. During drought years, Tulare County is prone to accelerated subsidence, with some areas sinking up to 28 feet. Although western portions of the County show signs of deep and shallow subsidence, the majority of the County, including the proposed project site, is not considered to be at risk of subsidence related hazards.

Soils Involved in Project: The proposed project involves construction on one soil type. The properties of this soil is described below:

- **Grangeville Sandy Loam, drained, 0 to 2 percent slopes:** The Grangeville series consists of very deep, somewhat poorly drained soils that formed in moderate coarse textured alluvium dominantly from granitic rock sources. These soils are somewhat poorly drained, negligible to very low runoff, and moderate to moderately rapid permeability.
- **Nord Fine Sandy Loam, 0 to 2 percent slopes:** The Nord series consists of very deep, well drained soils that formed in mixed alluvium dominantly from granitic and sedimentary rocks. Nord soils exhibit negligible to low runoff and moderate permeability. Permeability can be moderately slow in saline-sodic phases.
- **Tagus Loamy Sand, 0 to 2 percent slopes:** The Tagus series consists of very deep, well drained soils formed in alluvium derived from granitic rock. These soils have negligible to low runoff and exhibit moderate permeability.


134
116
122
River Way
122
Shannon
Riggin
Mooney
Giddings
Dinuba
137
Legend
Project Area of Potential Effect
Soil Type
101: Akers-Akers, saline-Sodic, complex, 0 to 2 percent slopes
116: Flamen loam, 0 to 2 percent slopes
122: Grangeville sandy loam, drained, 0 to 2 percent slopes
130: Nord fine sandy loam, 0 to 2 percent slopes
134: Riverwash
137: Tagus loam, 0 to 2 percent slopes
4CREEKS
Soils Map
Riggin Avenue Widening (Moooney to Conyer)
City of Visalia, CA
Date: 3/8/2022
N
W
E
S
1 in = 1,500 feet

Regulatory Setting

California Building Code: The California Building Code 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 General Plan: The Safety and Noise Element of the City of Visalia General Plan includes the following objectives and policies regarding soils and geology that may be applicable to the proposed project.

Objective S-O-1 Minimize risks of property damage and personal injury posed by geologic and seismic hazards.

S-P-2 Seismically retrofit or replace public works and/or emergency response facilities that are necessary during and/or immediately after a disaster or emergency.

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: According to the Tulare Multi-Jurisdictional Local Hazard Mitigation Plan, no active faults underlay the project site. Although the project is located in an area of relatively low seismic activity, the project could be affected by ground shaking from nearby 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 has no potential to indirectly or directly cause the rupture of an earthquake fault. Therefore, the risk of loss, injury or death involving a rupture of a known earthquake fault is negligible. There is *no impact.*

ii. Strong seismic ground shaking?

No Impact: According to the Tulare Multi-Jurisdictional Local Hazard Mitigation Plan, the project site is located in an area of relatively 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: No specific countywide assessment of liquefaction has been performed; however the Tulare Multi-Jurisdictional Local Hazard Mitigation Plan identifies the risk of liquefaction within the county as low because the soil types are unsuitable for liquefaction. There is *no impact.*

iv. Landslides?

No Impact: The proposed project site is generally flat and there are no hill slopes in the area. As a result, there is almost no potential for landslides. No geologic landforms exist on or near the site that would result in a landslide event. There is *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. Stormwater from the project site will be collected and conveyed to existing stormwater mains at Mooney and Giddings. 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 considered to be 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 soils, 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: Expansive soils contain large amounts of clay, which absorb water and cause the soil to increase in volume. Conversely, the soils associated with the proposed project site have relatively low levels of clay. Because the soils associated with the project are not suitable for expansion, implementation of the project will pose no direct or indirect 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 waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact: No wastewater will be generated as a part of the proposed project. There is no *impact.*

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

Less Than Significant Impact: There are no unique geologic features and no known paleontological resources located within the project area and no excavation is proposed in undisturbed soils, particularly to a depth with a potential to unearth paleontological resources. Potential impacts resulting from project implementation would be *less than significant.*

Mitigation Measures for Soils and Geology

None Required

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 3-7. 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 3-7. Greenhouse Gasses; Source: EPA, Intergovernmental Panel on Climate Change

In regards to the quantity of these gases are in the atmosphere, we first must establish the amount of particular gas in the air, known as Concentration, or abundance, which are measured in parts per million, parts per billion and even parts per trillion**.** To put these measurements in more relatable terms, one part per million is equivalent to one drop of water diluted into about 13 gallons of water, roughly a full tank of gas in a compact car. Therefore, it can be assumed 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 of these gases remain in the atmosphere long enough to become well mixed, meaning that the amount that is measured in the atmosphere is roughly the same all over the world regardless of the source of the emission.

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.

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: Greenhouse gas emissions for the construction of the proposed project were modeled using the Road Construction Emissions Model, Version 9.0.0. Emissions associated with SCE power pole relocation activities were estimated using CalEEMod. The CalEEMod and Emissions Model results can be found in Appendix A.

Construction: Greenhouse gasses would be generated during construction from activities including SCE Civil Construction, SCE Pole Relocation and Conductor/Fiber Removal and/or transfer, grubbing/land clearing, grading/excavation, drainage/utilities/sub-grade, and paving.

The emissions models predict that this project will create a maximum of 951.2 MT of CO2e emissions during construction. Because the SJVAPCD does not have numeric thresholds for assessing the significance of construction-related GHG emissions, predicted emissions from project construction were compared to Council of Environmental Quality (CEQ) thresholds for construction related GHG emissions. The CEQ currently has a presumptive threshold of 10,000 metric tons of CO2e per year for construction emissions amortized over a 30-year project lifetime. Because project construction would generate far less GHG emissions than this threshold, impacts related to GHG emissions during project construction would be less than significant.

Operation: As discussed in the Air Quality section of this Initial Study, the Project is being implemented in response to existing and planned growth in the area. Riggin Avenue is identified as a future arterial in the City of Visalia General Plan. The Project itself will improve roadway operations but would not generate additional vehicle trips beyond what was planned for an analyzed in the City's General Plan EIR. Therefore, the project is not considered to be growth inducing and would not increase mobile source greenhouse gas emissions beyond what was previously analyzed in the City's General Plan EIR.

Because construction of the project will result in less than significant increases in GHG emissions, and operation of the project would not increase GHG emissions beyond those already analyzed in the City's General Plan EIR, the impact is *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 proposed project will comply with all Federal, State, and Local rules pertaining to the regulation of greenhouse gas emissions. In addition, the project will implement Best Performance Standards developed by the SJVAPCD. Projects implementing Best Performance Standards are determined to have a less than significant impact on global climate change. The project will not conflict with any plan, policy, or regulation developed to reduce GHG emissions. There is *no impact.*

Mitigation Measures for Greenhouse Gas Emissions

None Required

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 0.20 miles north of the nearest school (Global Learning Charter School), 6.3 miles southwest of the nearest private airstrip (Gilbert Aviation Heliport – CA83), and 5.6 miles northeast of the nearest public airport (Visalia Municipal Airport).

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 a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

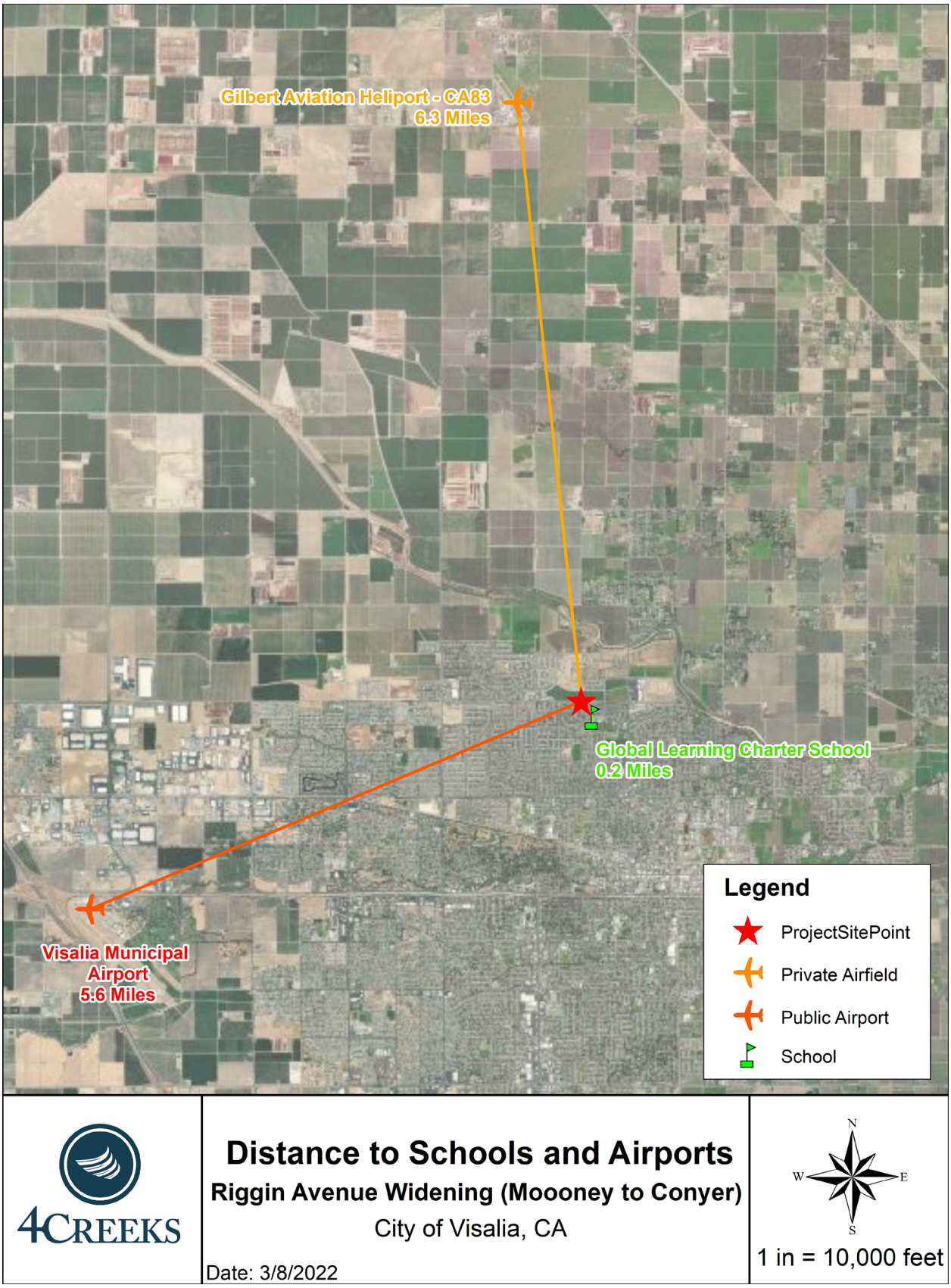


Figure 3-5. Distance to Schools and Airports

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.

Hazardous Materials Release Response Plans and Inventory Law of 1985. Pursuant to the Hazardous Materials Release Response Plans and Inventory Law of 1985, local agencies are required to develop "area plans" for response to releases of hazardous materials and wastes. Tulare County maintains a Hazardous Material Incident Response Plan to coordinate emergency response agencies for incidents and requires the submittal of business plans by persons who handle hazardous materials.

City of Visalia General Plan: The Safety and Noise Element of the City of Visalia General Plan includes the following objectives and policies pertaining to hazards and hazardous materials potentially applicable to the proposed project:

Objective S-O-3: Protect soils, surface water, and groundwater from contamination from hazardous material.

S-P-19 Coordinate with the Tulare County Environmental Health Division and other appropriate regulatory agencies during the review process of all proposals for the use of hazardous materials or those involving properties that may have toxic contamination, such as petroleum hydrocarbons, CAM 17 metals, asbestos, and lead.

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: Once constructed, the Project itself will not contain, use, or produce any hazardous materials. Project construction activities may involve the use and transport of hazardous materials, such as fuels, oils, and other chemicals (e.g., pains, lead, adhesives, etc.) typically used during construction. Improper use, transportation, and storage of hazardous materials could result in accidental releases or spills that could pose health risks to workers, the public, and the environment. However, all materials used during construction would be contained, stored, and handled in compliance with all applicable standards and regulations established by DTSC, the EPA, and the Occupational Safety and Health Administration (OSHA). In addition, a Storm Water Pollution Prevention Plan (SWPPP) is required for the project and will include emergency procedures for incidental hazardous materials releases. The SWPPP also includes Best Management Practices which include requirements for hazardous materials storage.

Riggin Avenue is an arterial street and may be used to facilitate the transport of hazardous materials once construction is complete, however risks associated with transport of hazardous materials would not be increased as a result of the proposed project. The route itself is existing and the Project would have no impact on the frequency at which hazardous materials are transported along the corridor. The proposed Project would not substantially increase risks associated with the routine transport, use, or disposal 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. 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 considered to be *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 0.2 miles from the nearest school. Once constructed, the Project itself will not contain, use, or produce any hazardous materials. Project construction activities may involve the use and transport of hazardous materials, such as fuels, oils, and other chemicals (e.g., pains, lead, adhesives, etc.) typically used during construction. Improper use, transportation, and storage of hazardous materials could result in accidental releases or spills that could pose health risks to workers, the public, and the environment. However, all materials used during construction would be contained, stored, and handled in compliance with all applicable standards and regulations established by DTSC, the EPA, and the Occupational Safety and Health Administration (OSHA). In addition, a Storm Water Pollution Prevention Plan (SWPPP) is required for the project and will include emergency procedures for incidental hazardous materials releases. The SWPPP also includes Best Management Practices which include requirements for hazardous materials storage.

Riggin Avenue is an arterial street and may be used to facilitate the transport of hazardous materials once construction is complete, however risks associated with transport of hazardous materials would not be increased as a result of the proposed project. The route itself is existing and the Project would have no impact on the frequency at which hazardous materials are transported along the corridor. The proposed Project would not substantially increase risks associated with hazardous materials within one-quarter of an existing or proposed school. The impact is *less than significant.*

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 (DTSC). The project would not create a significant hazard to the public or the environment and there is *no impact.*

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

No Impact: The proposed project is not located within an airport land use plan and is not within two miles of a public airport. Visalia Municipal Airport is the nearest public airport to the project site and is located approximately 5.6 miles away. Implementation of the proposed project would not result in a safety hazard or excessive noise for people residing or working in the project area. There is *no 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 site plan review procedures 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, suburban, and agricultural uses and are not considered to be wildlands. Additionally, the 2017 Tulare County Multi-Jurisdictional Local Hazard Mitigation Plan finds that fire hazards within the City of Visalia, 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.*

Mitigation Measures for Hazards and Hazardous Materials

None Required

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

Hydrologic System: The proposed project site is located in the Tulare Lake Hydrologic Region, which covers 10.9 million acres south of the San Joaquin River. The proposed project site lies within the San Joaquin Valley Groundwater Basin. The San Joaquin Valley Groundwater Basin is divided into seven sub-basins. The proposed project site is located within the Kaweah Subbasin. The subbasin lies between the Kings Groundwater Subbasin on the north, the Tule Groundwater Subbasin on the south, the Tulare Lake subbasin on the west, and crystalline bedrock of the Sierra Nevada foothills on the east. The area is comprised mostly of lands in the Kaweah Delta Water Conservation District. Major rivers in the subbasin include the St. Johns and lower Kaweah Rivers; although the Kaweah River is considered the primary surface water source for groundwater recharge.

Groundwater: California Water Service Visalia District provides water services within the City of Visalia. The Visalia District also serves the communities of Goshen, Mullen and Tulco. California Water Service operates 72 wells to meet the water demands of Visalia and Goshen customers.

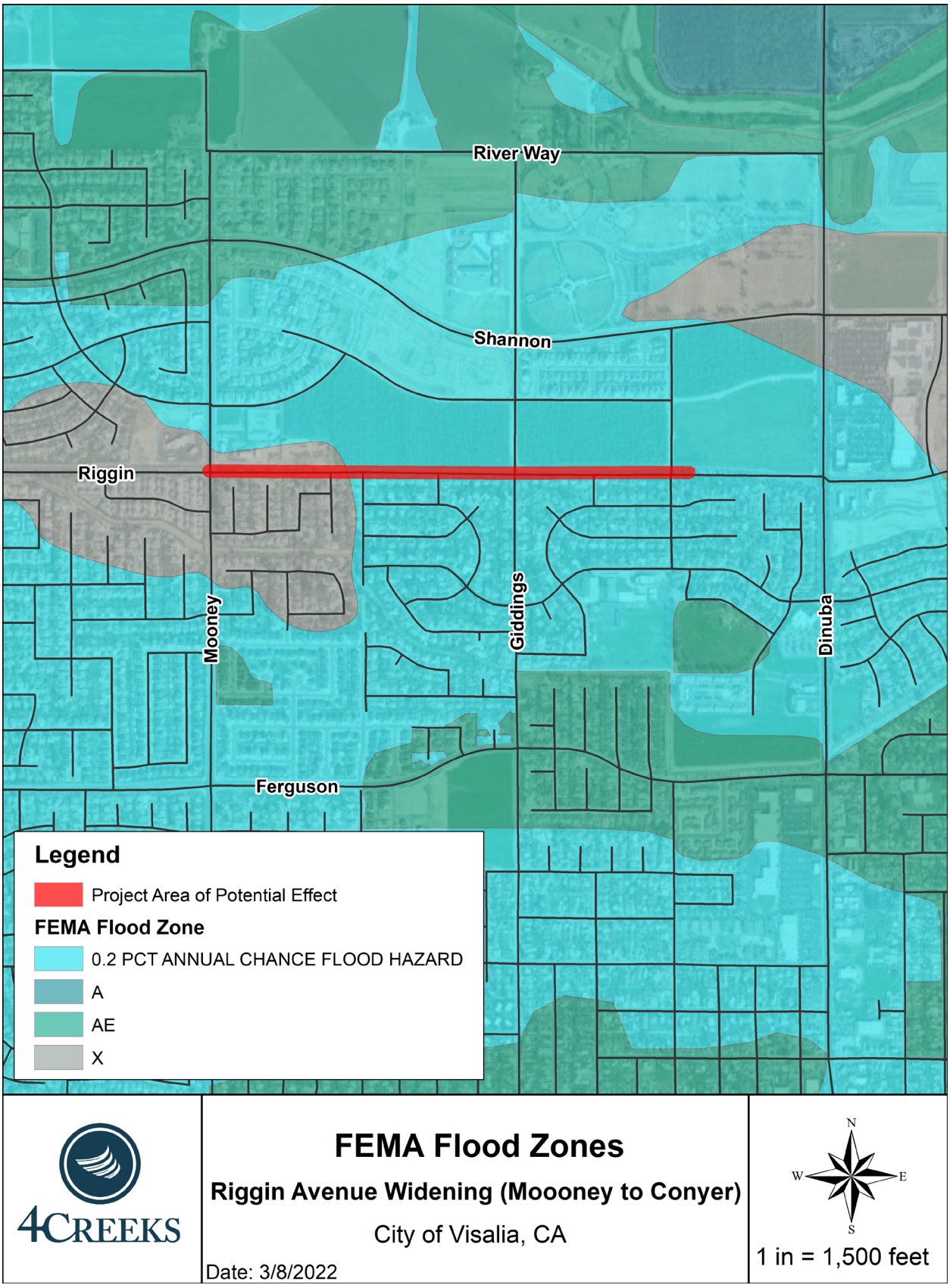


Figure 3-6. Flood Zone Map

Surface Waters: The Planning Area is located in the heart of the Kaweah River's delta system, so many rivers and creeks flow through the city. Surface runoff generally flows from east to west and terminates in the Tulare Lake Basin. Major surface water resources in the area include St. Johns River, Mill Creek, Packwood Creek, Cameron Creek, Deep Creek, Evans Creek, Modoc Ditch, Mill Creek Ditch, Persian Ditch, Tulare Irrigation District (TID) Canal, and some other local Ditches. None of the City's potable water is supplied through surface water.

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.

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 Open Space and Conservation Element of the City of Visalia General Plan contains the following goals and policies related to water resources that may be applicable to the proposed project:

Objective OSC-O-6: Protect water resources vital to the health of the community's residents and important to the Planning Area's ecological and economic stability

Objective OSC-O-7: Preserve and enhance Planning Area waterways and adjacent corridors as valuable community resources which serve as plant and wildlife habitats, as groundwater recharge facilities, as flood control and irrigation components, and as connections between open space areas.

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 Impact: The project will result in less than significant impacts to water quality due to potentially polluted runoff generated during construction activities. Construction would include excavation, grading, and other earthwork that may occur across most of the 14.0-acre project site. During storm events, exposed construction areas across the project site may cause runoff to carry pollutants, such as chemicals, oils, sediment, and debris. However, 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. Therefore, the impacts would be *less than significant.*

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

No Impact: The proposed Project, once operational, will not require on-going use of water and therefore would not affect an aquifer or local water table. Therefore, the Project will have *no impact.*

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river 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 Impact: The proposed Project includes installation of additional impervious surfaces that may be considered an alteration of existing drainage patterns, however, this would not result in substantial erosion or siltation on- or off-site. A Stormwater Pollution Prevention Plan (SWPPP) will be implemented during project construction. SWPPPs include mandated erosion control measures, which are developed to prevent significant impacts related to erosion caused by runoff during construction. During project operations, stormwater on the existing and proposed impervious surfaces would be collected and conveyed to existing stormwater mains at Mooney and Giddings. The impact is *less than significant.*

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

Less than Significant Impact: Because the project would result in an increase of impervious surfaces, an increase in surface runoff may occur. After construction, stormwater will be conveyed to existing stormwater mains at Mooney and Giddings. The project has been reviewed by the City of Visalia Public Works Director and the City's Engineer who have determined that the implementation of the proposed Project will not result in substantial flooding on- or off-site. The project will have a *less than significant impact.*

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 Impact: The Project proposes to widen an existing road, which will add new impervious surfaces to the project area. After construction, stormwater will be conveyed to existing stormwater mains at Mooney and Giddings. The project has been reviewed by the City of Visalia Public Works Director and the City's Engineer who have determined that the existing stormwater drainage system has adequate capacity to serve the Project. The impact is *less than significant.*

iv. Impede or redirect flood flows?

No Impact: 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 site is not located within a 100-year flood hazard area. There would be *no impact* with regard to impeding or redirecting flood flows.

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, and therefore, would not be affected by a tsunami. The proposed project is located in a relatively flat area and would not be impacted by inundation related to mudflow. Since the project is located 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 proposed project will not conflict with or obstruct implementation of a water quality control plan. The proposed project will be subject to the requirements of the NPDES Stormwater Program and will be required to comply with a SWPPP, which will identify all potential sources of pollution that could affect stormwater discharges from the project site and identify BMPs to prevent significant impacts related to stormwater runoff.

The proposed project site is within the jurisdiction of the Mid-Kaweah Groundwater Sustainability Agency (GSA). The Groundwater Sustainability Plan (GSP) was adopted by the Mid-Kaweah GSA in December 2019. The plan was reviewed for consistency with the proposed project and it was determined that the proposed project does not conflict with and would not obstruct implementation of the GSP. There is *no impact.*

Mitigation Measures for Hydrology and Water Quality

None Required

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 located with the northern portion of the City of Visalia and would effect approximately 10 acres within the City Right of Way. This segment of Riggin Avenue is in an area designated for commercial and residential uses by the City's General Plan. Properties south of the project are designated Residential Low Density by the City's General Plan and zoned Single Family Residential by the City's zoning code. Properties to the north of the Project are designated Commercial, Medium Density Residential, and Low Density Residential by the City's General Plan and are zoned Commercial Mixed Use, Multi-Family Residential, and Single Family Residential by the City's zoning code. Properties to the east are designated Commercial and Residential Low Density by the City's General Plan and are zoned Mixed Use Commercial by the City's Zoning Code. Properties to the west are designated Commercial and Residential High Density by the City's General Plan and are zoned Mixed Use Commercial and Multi-Family Residential by the City's Zoning Code. Zoning and General Plan Land Use maps are shown in Figures 3-7 and 3-8.

Regulatory Setting

City of Visalia General Plan: The Circulation element designates this segment of Riggin Avenue as a future arterial.

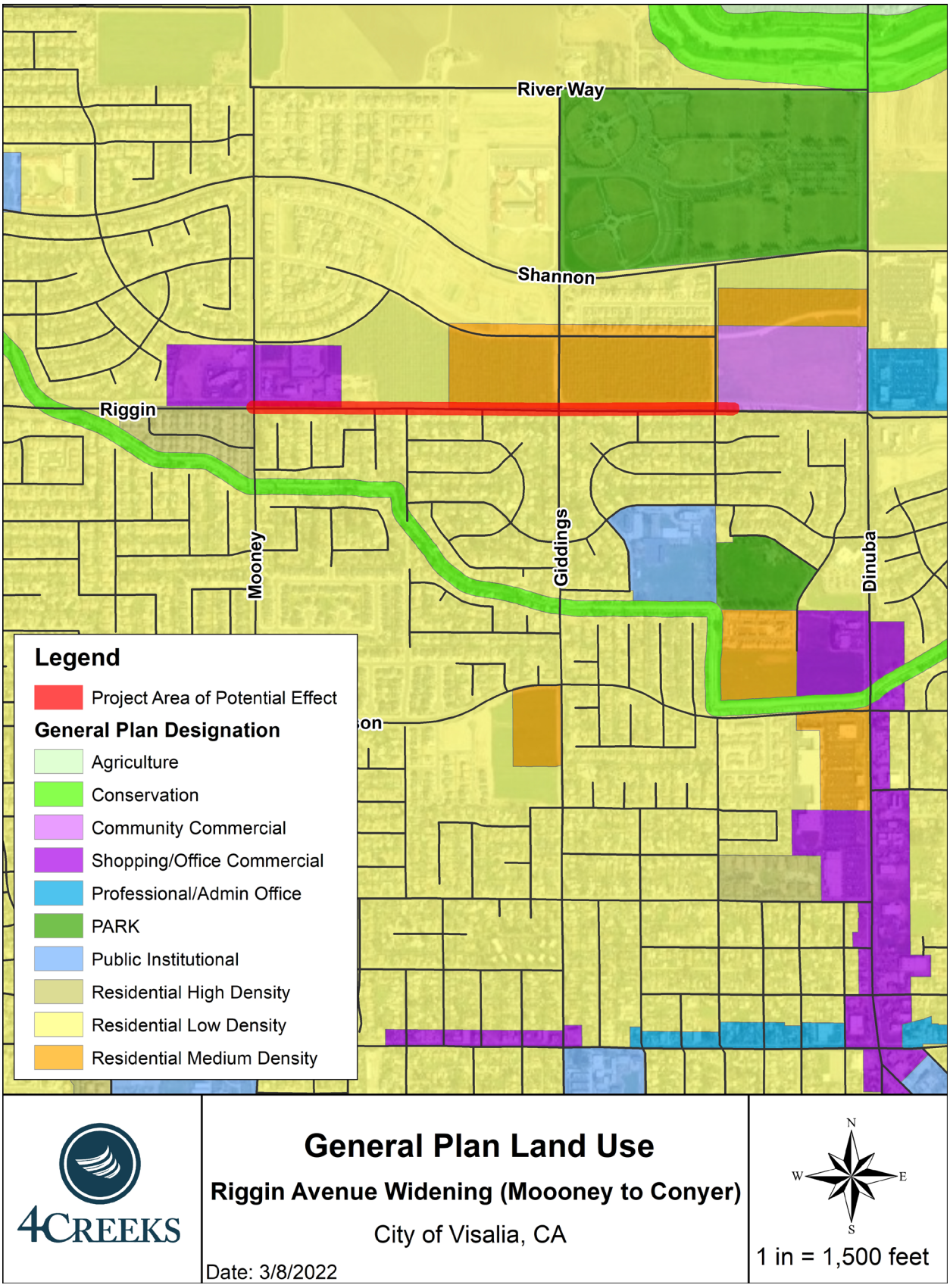


Figure 3-7. General Plan Land Use Map

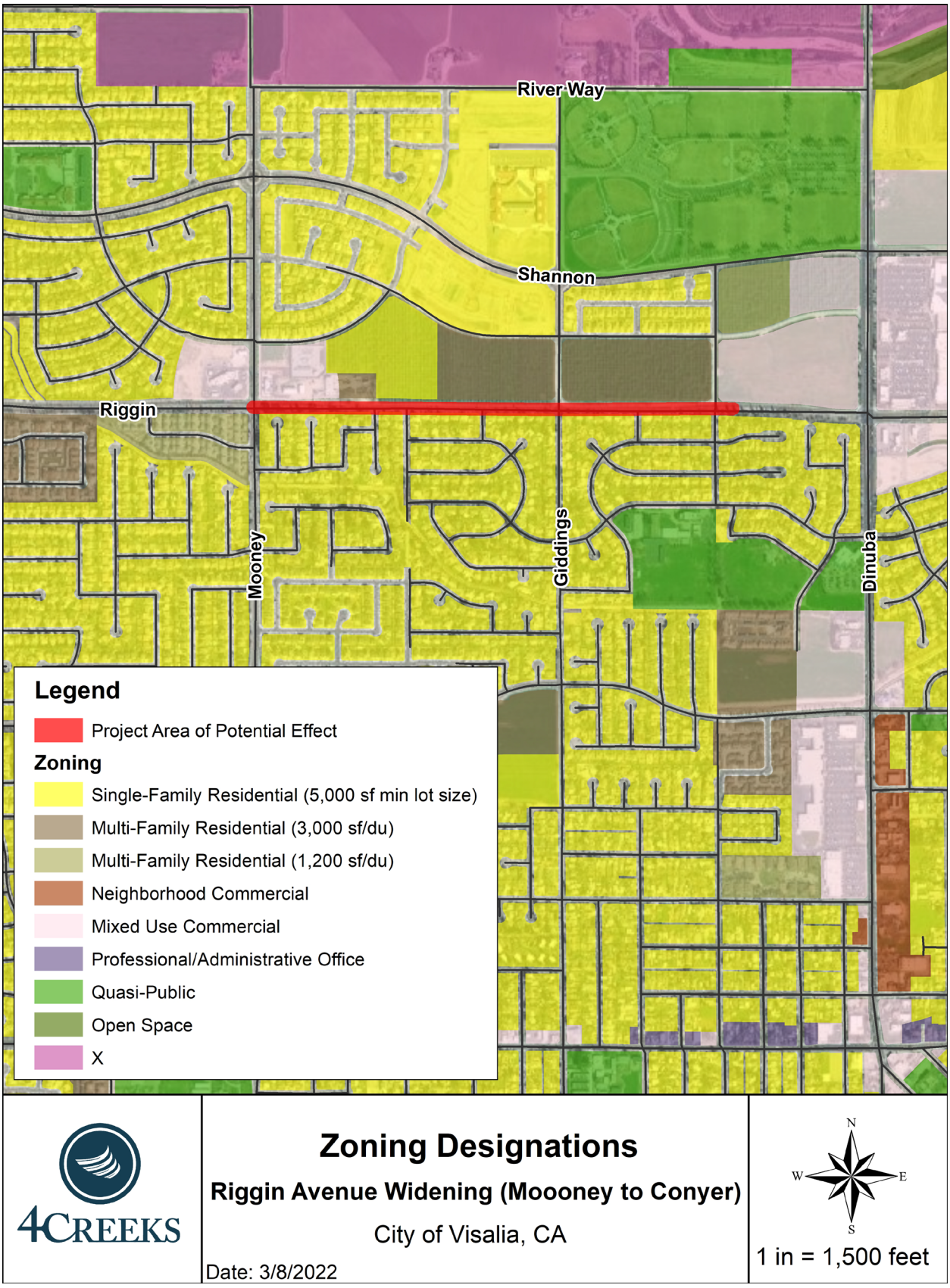


Figure 3-8. Zoning Map

Discussion

a) Would the project physically divide an established community?

No Impact: The project proposes the reconstruction of 0.75 mile of existing roadway between Mooney Blvd and Conyer Street to accommodate a 4-lane arterial street with 110' total ROW. The project would not act as a physical barrier within a community. 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 proposed project does not conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. There is *no impact.*

Mitigation Measures for Land Use and Planning

None Required

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

There are no mineral resource zones in Tulare County and there is no mineral extraction occurring on or adjacent to the proposed project site. Historical mines within the County include mineral deposits of tungsten, copper, gold, magnesium and lead, however most of these mines are now closed – leaving only 37 active mining operations. There are no active mining operations within the City of Visalia.

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.

City of Visalia General Plan: The following objectives and policies in the Open Space and Conservation Element of the City of Visalia General Plan are intended to protect mineral resources within the City.

Objective OSC-O-9 Protect agricultural land from premature urban development.

OSC-P-24 To allow efficient cultivation, pest control and harvesting methods, require buffers and transition areas between urban development and adjoining or nearby agricultural land.

OSC-P-25 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 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)

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.*

c) 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.*

Mitigation Measures for Mineral Resources

None Required

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.

Regulatory Setting

City of Visalia General Plan: The Safety and Noise Element of the City of Visalia General Plan is responsible for establishing noise standards within the City and includes the following objectives and policies related to noise that may be applicable to the project.

Objective N-O-1: Strive to achieve an acceptable noise environment for present and future residents of Visalia.

Objective N-O-3: Protect noise sensitive land uses such as schools, hospitals, and senior care facilities from encroachment of and exposure to excessive levels of noise.

N-P-4 Where new development of industrial, commercial or other noise generating land uses (including roadways, railroads, and airports) may result in noise levels that exceed the noise level exposure criteria established by Tables 8-2 and 8-3, require a noise study to determine impacts, and require developers to mitigate these impacts in conformance with Tables 8-2 and 8-3 as a condition

of permit approval through appropriate means. Noise mitigation measures may include but are not limited to:

- ***Screen and control noise sources, such as parking and loading facilities, outdoor activities, and mechanical equipment;***
- ***Increase setbacks for noise sources from adjacent dwellings;***
- ***Retain fences, walls, and landscaping that serve as noise buffers;***
- ***Use soundproofing materials and doubleglazed windows;***
- ***Use open space, building orientation and design, landscaping and running water to mask sounds; and***
- ***Control hours of operation, including deliveries and trash pickup, to minimize noise impacts.***
- ***Alternative acoustical designs that achieve the prescribed noise level reduction may be approved, provided a qualified Acoustical Consultant submits information demonstrating that the alternative designs will achieve and maintain the specific targets for outdoor activity areas and interior spaces. As a last resort, developers may propose to construct noise walls along state highways and arterials when compatible with aesthetic concerns and neighborhood char - acter. This would be a developer responsibility, with no City funding.***

City of Visalia Noise Ordinance: Section 8.36.050 establishes the following language that applies to operation of construction equipment:

"It is unlawful to operate construction equipment including jackhammers, portable generators, pneumatic equipment, trenchers, or other such equipment, except for emergency repair purposes as provided in Section 8.36.070, on public or private property abutting noise sensitive land uses between the weekday hours of seven p.m. and six a.m., and between the weekend hours of seven p.m. and nine a.m. "

Noise-Sensitive Land Use	Outdoor Activity Areas[1]	Interior Spaces	
	DNL/CNEL[2], Db	DNL/CNEL[2], Db	L_{EQ} Db[3]
Residential	**65**	**45**	**-**
Transient Lodging	65	45	-
Hospitals, Nursing Homes	65	45	-
Theaters, Auditoriums, Music Halls	-	-	35
Churches, Meeting Halls	65	-	45
Office Buildings	-	-	45
Schools, Libraries, Museums	-	-	45

Source: City of Visalia General Plan Safety and Noise Element
Notes:
(1) Outdoor activity areas generally include backyards of single-family residences and outdoor patios, decks or common recreation areas of multi-family developments
(2) the CNEL is used for quantification of aircraft noise exposure as required by CAC Title 21.
(3) As determined for a typical worse-case hour during periods of use.

Table 3-8. Transportation Noise Sources

As noise-sensitive land uses within the project area is primarily consisted of residences, exterior noise levels to residences within the Project area shall be subject to a 65 dB CNEL exterior noise threshold and 45 dB CNEL interior noise threshold.

AFFECTED ENVIRONMENT

The existing noise environment within the project study area was quantified through short-term noise level measurements conducted at three (3) locations on November 30th, 2021. The table below summarizes the results of the short-term noise level measurements.

Position	Location	Land Uses	Start Time	Duration (minutes)	Measured L_{eq} (dB)	Modelled L_{eq} (dB)	Measured minus Predicted (dB)
NM-1	N Elm Ct at the circle	Residential	1:43 p.m.	15	57.5	56.8	0.7
NM-2	1038 W Lark Ave Along N Turner St	Residential	2:18 p.m.	15	58.7	56.8	1.9
NM-3	Near Starbucks at N Mooney Blvd and W Riggin Ave	Commercial	2:50 p.m.	15	62.1	63.3	-1.2

Table 3-9. Summary of Short-Term Measurements

TNM 2.5 was used to compare measured short-term traffic noise levels with modelled noise results at the same locations, also shown in Table 3-9 above. As the predicted sound levels are within 3 dB of the measured sound levels, the noise model is considered validated for use to predict existing and future traffic noise levels.

A traffic noise analysis was conducted using TNM 2.5 to determine the future traffic noise impacts at sensitive receivers near the proposed Riggin Avenue widening. Potential long-term noise impacts associated with project operations arise solely from traffic noise. The CNEL (Community Noise Equivalent Level), the average sound level over a 24-hour period, was evaluated for future scenarios design year 2040 No Build, and future design year 2040 build for forty-one (43) receiver locations.

The predicted future average daily traffic noise levels for the Build Alternative were extrapolated from traffic data provided by the City of Visalia General Plan – Final Environmental Impact Report (FEIR) (City of Visalia 2014). Since the Final Environmental Impact Report only includes traffic volume projections up to 2030, a projected annual growth rate of 2.6% was applied to estimate peak hour traffic in the existing baseline year 2021 and design year 2040.

Table 3-10 shows the estimated existing and future exterior and interior noise levels in the Project area. For interior noise, it was assumed that standard residential design (with windows closed) would provide no more than 25 dBA of attenuation. Table 3-10 also lists the location and type of development for each modeled receiver location. The locations of the analyzed noise receivers are shown in Appendix F.

Receiver ID	Location	Type of Land Use	Number of Dwelling Units	Exterior Noise, DNL, Db				Interior Noise, DNL, Db				Existing to 2040 No Build Noise Change	Existing to 2040 Build Noise Change	2040 No Build to 2040 Build Noise Change
				Noise Threshold	Existing Noise Level	2040 No Build Noise Level	2040 Build Noise Level	Noise Threshold	Existing Noise Level	2040 No Build Noise Level	2040 Build Noise Level			
R1	2937 N Elm Ct	SFR	1	65	42	45	47	45	17	20	22	3	5	2
R2	2936 N Elm Ct	SFR	1	65	59	63	64	45	34	38	39	4	5	1
R3	2935 N Central Ct	SFR	1	65	59	62	63	45	34	37	38	3	4	1
R4	2934 N Central Ct	SFR	1	65	61	64	65	45	36	39	40	3	4	1
R5	1836 W Lark Ave	SFR	1	65	62	65	65	45	37	40	40	3	3	0
R6	1828 W Lark Ave	SFR	1	65	64	**67**	**67**	45	39	42	42	3	3	0
R7	1820 W Lark Ave	SFR	1	65	65	**68**	**68**	45	40	43	43	3	3	0
R8	1810 W Lark Ave	SFR	1	65	65	**68**	**68**	45	40	43	43	3	3	0
R9	1800 W Lark Ave	SFR	1	65	65	**68**	**68**	45	40	43	43	3	3	0
R10	2936 N Dayton St	SFR	1	65	61	65	65	45	36	40	40	4	4	0
R11	2937 N Divisadero St	SFR	1	65	60	64	64	45	35	39	39	4	4	0
R12	1639 W Riggin Ave	SFR	1	65	50	53	54	45	25	28	29	3	4	1
R13	1627 W Riggin Ave	SFR	1	65	49	53	53	45	24	28	28	4	4	0
R14	1613 W Riggin Ave	SFR	1	65	49	53	53	45	24	28	28	4	4	0
R15	1549 W Riggin Ave	SFR	1	65	50	53	54	45	25	28	29	3	4	1
R16	1537 W Riggin Ave	SFR	1	65	50	53	54	45	25	28	29	3	4	1
R17	1525 W Riggin Ave	SFR	1	65	50	53	54	45	25	28	29	3	4	1
R18	1513 W Riggin Ave	SFR	1	65	52	56	56	45	27	31	31	4	4	0
R19	1441 W Riggin Ave	SFR	1	65	50	54	54	45	25	29	29	4	4	0
R20	1429 W Riggin Ave	SFR	1	65	49	53	54	45	24	28	29	4	5	1
R21	1415 W Riggin Ave	SFR	1	65	49	53	54	45	24	28	29	4	5	1
R22	1401 W Riggin Ave	SFR	1	65	49	53	54	45	24	28	29	4	5	1
R23	1339 W Riggin Ave	SFR	1	65	49	52	53	45	24	27	28	3	4	1
R24	1327 W Riggin Ave	SFR	1	65	50	53	54	45	25	28	29	3	4	1
R25	2935 N Giddings St	SFR	1	65	56	60	61	45	31	35	36	4	5	1
R26	2936 N Giddings St	SFR	1	65	61	64	65	45	36	39	40	3	4	1
R27	1223 W Riggin Ave	SFR	1	65	50	54	55	45	25	29	30	4	5	1

Receiver ID	Location	Type of Land Use	Number of Dwelling Units	Exterior Noise, DNL, Db				Interior Noise, DNL, Db				Existing to 2040 No Build Noise Change	Existing to 2040 Build Noise Change	2040 No Build to 2040 Build Noise Change
				Noise Threshold	Existing Noise Level	2040 No Build Noise Level	2040 Build Noise Level	Noise Threshold	Existing Noise Level	2040 No Build Noise Level	2040 Build Noise Level			
R28	1211 W Riggin Ave	SFR	1	65	50	54	55	45	25	29	30	4	5	1
R29	1147 W Riggin Ave	SFR	1	65	51	54	55	45	26	29	30	3	4	1
R30	1137 W Riggin Ave	SFR	1	65	50	54	55	45	25	29	30	4	5	1
R31	1125 W Riggin Ave	SFR	1	65	50	54	55	45	25	29	30	4	5	1
R32	1109 W Riggin Ave	SFR	1	65	50	54	55	45	25	29	30	4	5	1
R33	1037 W Riggin Ave	SFR	1	65	50	54	55	45	25	29	30	4	5	1
R34	1025 W Riggin Ave	SFR	1	65	50	53	55	45	25	28	30	3	5	2
R35	1013 W Riggin Ave	SFR	1	65	49	53	54	45	24	28	29	4	5	1
R36	1001 W Riggin Ave	SFR	1	65	49	53	54	45	24	28	29	4	5	1
R37	937 W Riggin Ave	SFR	1	65	49	53	54	45	24	28	29	4	5	1
R38	925 W Riggin Ave	SFR	1	65	49	53	54	45	24	28	29	4	5	1
R39	2936 N Conyer St	SFR	1	65	49	52	54	45	24	27	29	3	5	2
R40	Future Residences north of Riggin Ave	SFR	-	65	-	**67**	**70**	45	-	42	45	-	-	3
R41	Agricultural field north of Riggin Ave	OS	0	-	64	67	69	-	39	42	44	3	5	2
R42	Future Residences north of Riggin Ave	SFR	-	65	-	**65**	**68**	45	-	40	43	-	-	3
R43	3010 N Mooney Blvd	RS	0	-	66	70	71	-	41	45	46	4	5	0

Source: FHWA TNM 2.5, Dokken Engineering, February 2022
BOLD Indicates noise levels exceeding City of Visalia General Plan Noise Threshold
Receivers R40 and R42 represent multiple future residences adjacent north of Riggin Avenue.

Table 3-10. Comparison of Modeled Existing and Future Nosie Levels

As shown in Table 3-10, exterior noise levels at R6 through R9 along Riggin Avenue are currently exposed to noise levels exceeding the City of Visalia Exterior Noise Standards. R40 and R42 represents multiple undeveloped residences, and the final location of their future outdoor use areas, as well as soundwall heights, are unknown. Based on information provided by the City, a minimum 6-foot soundwall was assumed in the traffic noise model to be built at future residences. These receivers were included in the noise analysis to provide information that will allow the local community to avoid noise-incompatible future land development.

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:

Permanent Increase in Ambient Noise Levels (Operational Noise)

The future 2040 traffic noise modeling results are summarized in Tables 3. As shown in Table 3, noise levels would increase by up to 3 to 5 dB over the next twenty years in the Project area due to traffic growth. Noise levels at R6 through R9 along Riggin Avenue would continue to be exposed to noise levels exceeding the City of Visalia Exterior Noise Standards, even without the proposed Project. Additionally, the comparison of noise levels between the 2040 No Build and Build condition show that construction of the proposed project would not cause any further substantial permanent increase in noise levels where they are already exceeding exterior noise standards. No other sensitive receivers would be exposed to a substantial increase in noise levels that would lead to an exceedance of exterior noise standards for their respective land use category. Therefore, impacts would be Less than Significant.

Temporary Increase in Ambient Noise Levels (Construction Noise)

Project construction is anticipated to last approximately 12 months and will involve temporary noise sources. The average noise levels generated by construction equipment that will be used in the proposed project are shown below.

Type of Equipment	dBA at 50 feet
Air Compressors	81
Excavators	81
Concrete/Industrial Saws	76
Cranes	83
Forklifts	75
Generators	81
Pavers	89
Rollers	74
Dozers	85
Tractors	84
Loaders	85
Backhoes	80
Graders	85
Scrapers	89
Welders	74

Table 3-11. Noise levels of noise-generating construction equipment. Source: Federal Highway Administration Construction Noise Handbook.

The City of Visalia General Plan and Noise Ordinance does not identify noise thresholds for noise sources related to construction, however the City's Noise Ordinance does limit noise generating activities related to construction to daytime hours Monday through Friday. The project will comply with these regulations and construction will only occur Monday through Frida between 6:00 AM and 7:00 PM. Because noise generated from construction activities would be temporary in nature and conducted in compliance with the City's Noise Ordinance, temporary construction noise impacts would be Less than Significant.

The project itself will not generate long term noise levels. The Project is being implemented in response to existing and planned growth in the area. The project itself will improve local roadway operations, but will not generate additional vehicle trips on Riggin Avenue beyond what was already planned for and analyzed in the City's General Plan EIR. The Project is therefore not considered to be growth inducing and will not result in noise impacts beyond what was previously analyzed in the City's General Plan EIR.

According to the City's General Plan, major noise sources in Visalia are related to roadways, vehicle traffic, and railroad noises. According to the City's General Plan EIR, Riggin Avenue (from Mooney Blvd to Court Street) is projected to produce traffic noise levels of 68.7 Ldn (day-night average sound level) at 50 feet at full buildout of the General Plan in Year 2030. As such, the Project site is included in the City's Future Noise Contours. When future development projects are proposed in areas within the City's Noise Contours, such developments may require sound attenuation measures such as noise barriers.

Because noise generated from construction would be temporary, construction activities would comply with all measures established by the City to limit construction related noise impacts, and operational noise would be consistent with what was previously analyzed in the City's General Plan EIR, the impact is *less than significant.*

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

Less than Significant Impact: Ground-borne vibration or ground-borne noise levels may occur as part of construction activities associated with the project. Construction activities will be temporary and will not expose persons to such vibration or noise levels for an extended period of time. Therefore, impacts are *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?

No Impact: The project site is located approximately 5.6 miles from Visalia Municipal Airport and is not within an Airport Land Use Plan. There is *no impact*.

Mitigation Measures for Noise

None Required

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 estimated the population in the City of Visalia to be 132,104 in 2019. This is an increase from the 2010 census, which counted the population in the City of Visalia to be 124,867. Factors that influence population growth include job availability, housing availability, and the capacity of existing infrastructure.

Regulatory Setting

The size of the population in the City of Visalia is controlled by the development code and Land Use 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. These factors have a direct impact on the City's population size. The project site is located entirely within the public ROW. Therefore, no residences are permitted within the project area.

Discussion

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

No Impact: The project does not propose any new homes and there are no residential structures currently on-site. The Project is being implemented in response to existing and planned growth in the Area. The Project itself will improve local roadway operations but would not generate additional vehicle trips on Riggin Avenue beyond what was already planned for and analyzed in the City's General Plan EIR. The Project is therefore not considered to be growth inducing. The proposed Project will not affect any regional population, housing, or employment projections anticipated by City of Visalia policy documents. Therefore, 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 does not involve the removal of existing residences and would not displace any people. There is *no impact.*

Mitigation Measures for Population and Housing

None Required

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: The project site is served by the City of Visalia Fire Department. The City of Visalia Fire Department will continue to provide fire protection services to the proposed project site upon development.

Police: Law enforcement services are provided to the project site via the Visalia Police Department. The City of Visalia will continue to provide police protection services to the proposed project site upon development.

Schools: The proposed project site is located within Visalia Unified School District.

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?

No Impact: The City of Visalia Fire Department will continue to provide fire protection services within the project site. No additional fire personnel or equipment is anticipated, as the site is already served by the Fire Station. There is *no impact.*

b. Police protection?

No Impact: The proposed Project will continue to be served by the City's Police Department. No additional police personnel or equipment is anticipated. There is *no impact.*

c. Schools?

No Impact: The proposed project does not contain any residential uses, which are typically associated with an increased demand for schools. The project would not increase the population within the City of Visalia and would therefore not result in increased demand upon School District resources. There is *no impact*

d. Parks?

No Impact: The proposed Project would not result in an increase in demand for parks or other recreation facilities because it would not cause an increase in population. There is *no impact.*

e. Other public facilities?

No Impact: The proposed Project is not growth inducing and is within the land use and growth projections identified in the City's General Plan. The Project would not result in increased demand for, or impacts on, other public facilities. There is *no impact.*

Mitigation Measures for Public Services

None Required

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

The City of Visalia owns and operates 23 parks within the City limits. Riverway Sports Park is the closest recreational area to the project site and is located approximately 0.2 miles north of the project site.

Regulatory Setting

City of Visalia General Plan: The Parks, Schools, Community Facilities, and Utilities Element of the City of Visalia General Plan identifies existing and planned parks, trails and recreation facilities within the City's planning area. No existing or planned recreational facilities are present within the Project site.

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?

No Impact: The proposed project does not contain any features that would increase the use of existing neighborhood parks, regional parks, or other recreational facilities. There is *no impact.*

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

No Impact: The proposed project does not include any recreational facilities and would not necessitate the construction or expansion of additional recreational facilities. There is *no impact*

Mitigation Measures for Parks and Recreation

None Required

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)?	☐	☐	☑	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☑	☐
d) Result in inadequate emergency access?	☐	☐	☑	☐

Discussion for this section originates from the VMT Technical Memorandum prepared for this project by TJKM. The full Technical Memorandum can be found in Appendix C of this Initial Study.

Environmental Setting

Vehicular Access: The proposed project involves the reconstruction of 0.75 miles of existing roadway on Riggin Avenue between Mooney Blvd and Conyer Street. Vehicular access to the project is available from Mooney Blvd, N Giddings Street, and Conyer Street to the north and south of the project site, and from Riggin Avenue to the east and west of the project site.

Parking: During construction, workers will utilize a temporary construction easement located adjacent to the project site for parking and equipment staging. During project operations, there will be no permanent personnel on-site and no additional parking facilities will be required.

Pedestrian and Cyclist Connectivity: The project will install Class 4 protected bicycle lanes along the north side of Riggin Avenue e as part of the proposed improvements. The project will also maintain Class 3 shared use lanes along the south side of Riggin Avenue. These bicycle lanes will connect to existing and planned Class 2 bicycle lanes along Riggin Avenue on either side of the proposed project site.

Regulatory Setting

City of Visalia Improvement Standards: The City of Visalia's Improvement Standards are developed and enforced by the City of Visalia's Engineering Division to guide the development and maintenance of City Roads. The cross section drawings contained in the City Improvement Standards dictate the development of roads within the City.

City of Visalia General Plan: Riggin Avenue is classified as a future arterial in the Circulation Element of the City of Visalia General Plan.

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 proposed project involves the reconstruction of 0.75 mile of existing roadway between N Mooney Blvd and Conyer Street to accommodate a 4-lane arterial street with 110' total ROW. Improvements would include new 12' vehicular travel lanes (4 lanes total), new Class IV bike lanes along the north side of Riggin Avenue, new street lighting, new landscaped medians, four new bus turnouts, new fire hydrants, and curb returns at all involved intersections. The proposed project is consistent with the Visalia General Plan, and is not anticipated to conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. A project's effect on automobile delay, typically measured based on "level of service" (LOS) would not constitute a significant environmental impact under the CEQA Guidelines effective July 1, 2020. This impact is *less than significant.*

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

Less than Significant Impact: TJKM utilized the Tulare Council of Governments (Tulare COG) Travel Demand Model to forecast the net change in total VMT for Tulare County, with and without the proposed project. An additional lane was added on Riggin Avenue in both directions from Mooney Blvd to Conyer Blvd and the model was re-ran with the base year and forecast year conditions. Tables 3-9 and 3-10 summarize the VMT results from the model.

Scenario	Total VMT (Tulare County Model Area)
Existing Conditions	15,164,825
Existing plus Project Conditions	15,164,825
Net VMT with Proposed Project	0
VMT Impact Finding (Existing plus Project Conditions)	**Less Than Significant**

Table 3-12: VMT Forecast: Existing plus Project Conditions

Scenario	Total VMT (Tulare County Model Area)
2042 Model Forecast Year (without Riggin Avenue widening)	17,164,139
2042 Model Forecast Year (with Riggin Avenue widening)	17,164,139
Net VMT with Proposed Project	**0**
VMT Impact Finding (Cumulative Conditions)	**Less Than Significant**

Table 3-13: VMT Forecast: Cumulative Conditions

Based on the TCAG model, the proposed project is not anticipated to results in a net increase in total VMT. In addition, TJKM analyzed the total number of trips from the model with and without project for both the base and forecast years. The number of trips did not increase between the base and cumulative conditions.

The City of Visalia's VMT guidelines stipulated a study on induced demand for roadway expansion projects. The following are from the guidelines on how to estimate induced VMT impacts from roadway expansion projects (UC Davis Induced Travel Calculator NCST Method):

1. *Determine total lane-miles over an area that fully captures travel behavior changes resulting from the project (generally the region, but for projects affecting interregional travel look at all affected regions).*
2. *Determine the percentage change in total lane miles that will result from the project.*
3. *Determine the total existing VMT over that same area.*
4. *Multiply the percentage increase n lane miles by the existing VMT, and then multiply that by the elasticity from the induced travel literature:*

[% increase in lane miles] x [existing VMT] x [elasticity] = [VMT resulting from the project]

While the travel demand model forecasted no growth in VMT, TJKM used the above formula to calculate induced VMT from the Riggins project.

% increase in lane miles = 0.75 / 10,756 = **0.009%** (The project widens 0.75 mile of Riggins avenue, and 10,756 miles are the total lane miles in Tulare County from the TCAG model).

Existing VMT = ***15,164,825*** (The existing VMT of the region pulled from the TCAG Model)

Elasticity = 1 (The elasticity value was pulled from the transportation analysis guidelines).

Putting the three values together generates an induced daily VMT of **1,410** for the Riggins Widening. As a percentage of the existing VMT, this value is statistically insignificant (1,410/15,164,825 =**0.009%**).

As described in CEQA Section 15064.3: "Vehicle miles traveled" refers to the amount and distance of automobile travel "attributable to a project." As described separately in the Technical Advisory on Evaluating Transportation Impacts in CEQA (Governor's Office of Planning & Research, December 2018), VMT re-routed from other origins or destinations as the result of a project would not be attributable to a project except to the extent that the re-routing results in a net increase in VMT. A roadway widening could result in a net increase in total VMT if the roadway is currently operating at capacity, in which case the added capacity provided by a road widening could result in added VMT due to latent demand. However, this is not the case for the proposed project. The Visalia General Plan EIR (2010) noted that Riggin Avenue served approximately 7,800 daily vehicles, well below the estimated capacity of more than 15,000 daily vehicles for the existing 2-lane configuration. Additionally, excess capacity is also currently provided on parallel routes such as State Route 198, further reducing the likelihood that the proposed project would result in a net increase in total VMT. Riggin Avenue also provides a direct connection to Highway 99 via Betty Drive, which could reduce VMT for some trips that would otherwise travel on State Route 198.

Even though the calculation resulted in an increase of 1,410 VMT, it is highly unlikely there will be increased demand from a 0.75 mile widening due to excess capacity available from the routes mentioned in the previous paragraph.

In addition, the guidelines states the induced VMT growth stems from induced land use; the Visalia general plan does not include any additional residential or commercial land uses in the Riggins / Mooney and Conyer area for the project lifespan. It is highly unlikely the widening will induce demand since additional capacity exists and no additional land uses are planned for the area.

According to the TCAG model, the project is not anticipated to increase VMT. In addition, the induced VMT for this project is statistically 0. Therefore, the impact is *less than significant.*

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

Less than Significant Impact: The proposed project is not anticipated to substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). Improvements would include new 12' vehicular travel lanes (4 lanes total), new Class IV bike lanes along the north side of Riggin Avenue, new street lighting, new landscaped medians, four new bus turnouts, new fire hydrants, and curb returns at all involved intersections. Construction would require demolition of existing asphalt between Mooney and Conyer, removal of two trees on the north side of Riggin, removal/replacement of one drive approach, and relocation of 11 power poles. The proposed project design will be subject to review and permitting by the City of Visalia and other agencies (as described in the Project Description) to ensure the design and construction is consistent with applicable standards. This impact is *less than significant.*

d) Would the project result in inadequate emergency access?

Less Than Significant Impact: The proposed project would widen Riggin Avenue from two to four lanes between Mooney Blvd and Conyer Street, thus providing additional travel lanes that could be utilized by emergency vehicles on a 0.75-mile segment of Riggin Avenue. Therefore, the proposed project is anticipated to enhance emergency access, and would not result in inadequate emergency access. This impact is l*ess than significant*

Mitigation Measures for Transportation

None Required

XVIII. TRIBAL CULTURAL RESOURCES

Would the project: 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:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☑	☐	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. 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

A Historical Property Survey Report and Archaeological Survey Report was prepared by the California Department of Transportation in January 2022. The Assessment included a Cultural Resources Records Search, archival research, Native American outreach, and a pedestrian survey.

Native American Heritage Commission: A letter requesting a search of the Sacred Lands File (SLF) and a list of Native American individuals and organizations that may have knowledge of, or concerns regarding, cultural resources in the Project area were sent to the NAHC on November 8, 2021. Andrew Green, Cultural Resource Analyst, from the NAHC, responded in an email dated December 21, 2021 that a search of their records failed to identify any known sacred lands or cultural resources in the "immediate project area".

Native American Consultation: On December 30, 2021, initial consultation letters were sent to the Native American individuals on the list provided by the NAHC. The letter provided a summary of the Project and requested information regarding comments or concerns the Native American community might have about the Project. For those individuals that did not reply to the letter, emails were sent on February 1, 2022. The following discussion presents a summary of consultation efforts for each individual on the list provided by the NAHC.

- Elizabeth Kipp, Chairperson, Big Sandy Rancheria of Western Mono Indians. No response was received concerning the December 30, 2021 letter. A follow-up email was sent on February 1, 2022. No response has been received to date.

- Leo Sisco, Chairperson, Santa Rosa Rancheria Tachi Yokut Tribe. No response was received concerning the December 30, 2021 letter. A follow-up call was placed on February 1, 2022 in which the Cultural Department staff member, Paige Berggren, indicated that the project is in an area of concern and monitoring will be requested in a response letter being drafted by the Tribe. An email was subsequently received on February 2, 2022 from the tribe requesting monitoring.
- Keri Vera, Environmental Department Tule River Indian Tribe. No response was received concerning the December 30, 2021 letter. A follow-up email was sent on February 1, 2022. No response has been received to date.
- Joey Garfield, Tribal Archaeologist, Tule River Indian Tribe. No response was received concerning the December 30, 2021 letter. A follow-up email was sent on February 1, 2022. No response has been received to date.
- Neil Peyron, Chairperson, Tule River Indian Tribe. No response was received concerning the December 30, 2021 letter. A follow-up email was sent on February 1, 2022. No response has been received to date.
- Kenneth Woodrow, Chairperson, Wuksache Indian Tribe/Eshom Valley Band. No response was received concerning the December 30, 2021 letter. A follow-up email was sent on February 1, 2022. No response has been received to date.

Definitions

- **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.

Regulatory Setting

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. California Historical Landmarks are sites, buildings, features, or events that are of statewide significance and have anthropological, cultural, military, political, architectural, economic, scientific, religious, experimental, or other value. In order for a resource to be designated as a historical landmark, it must meet the following criteria:

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

City of Visalia General Plan: The City of Visalia General Plan includes the following goals and policies pertaining to tribal cultural resources:

OSC-P-39 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; and
- Implementing appropriate measures to avoid the identified impacts, as conditions of project approval

Discussion

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:

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

Less Than Significant Impact with Mitigation: A Historical Property Survey Report and Archaeological Survey Report was prepared by the California Department of Transportation in January 2022. The Assessment included a Cultural Resources Records Search, archival research, Native American outreach, and a pedestrian survey. The Cultural Resources Records Search, NAHC Sacred Lands File search, archival research, Native American Outreach, and pedestrian survey did not identify any resources that are listed or eligible for listing in the California Register of Historic Resources, or in a local register of historical resources.

Although no tribal cultural resources were identified, 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) 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: Based on the findings of the Historical Property Survey Report and Archaeological Survey Report, which included a Cultural Resources Records Search, Native American Heritage Commission (NAHC) Sacred Lands File Search, Archival Research, Native American Outreach, and a Pedestrian Survey, there are no known tribal cultural resources within the project area.

Although no tribal cultural resources were identified, 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*.

Mitigation Measures for Impacts to Cultural Resources:

Mitigation Measure CUL-1: If cultural resources are encountered during ground-disturbing activities, work in the immediate area must halt and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (NPS 1983) should be contacted immediately to evaluate the find. If the discovery proves to be significant under CEQA, additional work such as data recovery excavation and Native American consultation may be warranted to mitigate any adverse effects.

Mitigation Measure CUL-2: The discovery of human remains is always a possibility during ground disturbing activities. If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately. If the human remains are determined to be prehistoric, the coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a most likely descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

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: An existing 24" sewer main runs along the south side of Riggin Avenue. Two new 6" laterals are proposed as part of the proposed Project.

Solid Waste: The proposed project will not generate solid waste and will not require solid waste collection services.

Water: Existing water mains rainging from 8" to 12" run along the south side of Riggin Avenue. The project includes construction of fire hydrants along the length of the improvement area. Other than emergency fire hydrant use, the project would not utilize any water resources.

Storm Drainage: Stormwater will be collected and conveyed to existing stormwater mains at Mooney Blvd and Giddings Street.

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 Water's of the U.S. There are 350 permitted facilities within the Central Valley Region.

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 will extend sewer and stormwater lines through the project area and relocate 11 existing power poles as part of improvements to Riggin Avenue.

Although the project would result in the construction of new wastewater collection facilities (two new lateral connections to the existing sewer main), the project itself will not generate wastewater, so it does not have to potential to exceed wastewater treatment capacities.

The proposed improvements would result in new impervious surfaces that could increase the amount of stormwater runoff. However, stormwater would be collected and conveyed to existing stormwater mains at Mooney Blvd and Giddings Street. The City Engineer and Public Works Director have reviewed the project and determined that the City's stormwater system has sufficient capacity to accommodate the proposed Project. The project will also incorporate appropriate pollution prevention and MBPs in accordance with the City design standards and RWQCB requirements.

The existing power poles along the north side of Riggin Avenue will need to be relocated to accommodate the proposed street improvements. Relocation of these poles will not necessitate new power generation facilities to be constructed that would have a significant impact on the environment.

Because the improvements to Riggin Avenue, including sewer lines and power pole relocation, would not require the construction of any additional water, wastewater treatment, storage drainage, electric power, natural gas, or telecommunications facilities beyond those analyzed in this IS/MND, the impact is *less than significant.*

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

Less than Significant Impact: The only water used by the proposed project would be from fire hydrants that are proposed as part of improvements on Riggin Avenue. These fire hydrants would only be utilized in emergency situations. As such, existing water supplies are sufficient to serve the project during normal, dry, and multiple dry years. 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?

No Impact: The project itself will not generate wastewater. There is *no 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: The project itself will not generate solid waste and would therefore not impair the attainment of solid waste reduction goals. 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: The project itself will not generate solid waste and would therefore not conflict with any federal, state, or local management and reduction statutes or regulations related to solid waste. There is *no impact.*

Mitigation Measures for Utilities and Service Systems

None Required

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?	☐	☐	☐	☑

Regulatory Setting

Definitions:
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.

Tulare County Disaster Preparedness Guide (2011): The Tulare County Preparedness Guide provides guidelines regarding disaster preparedness and evacuation planning for Tulare County residents.

Tulare County Multi-Jurisdictional Hazard Mitigation Plan (2018): The 2018 Tulare County Multi-Jurisdictional Hazard Mitigation Plan assesses the natural, technological, and human-caused risks to Communities within Tulare County. The proposed project site is not located in an area designated as a Fire Hazard Severity Zone by the Tulare County Multi-Jurisdictional Hazard Mitigation Plan.

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. 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 land with little risk of fire. The Tulare County Multi-Jurisdictional Local Hazard Mitigation Plan identifies the risk of fire within the City of Visalia as having unlikely frequency, limited extent, limited magnitude, and low significance. The project would not exacerbate wildfire risks and expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire. 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?

No Impact: The proposed project involves the installation of fire hydrants as part of proposed street improvements. If anything, installation of these features would reduce fire risks within the vicinity of the project site. There is *no impact.*

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 located on land with relatively flat topography. 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.*

Mitigation Measures for Wildfire

None Required

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
b) 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, cultural, 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(i) states that a Lead Agency shall consider whether the cumulative impact of a project is significant and whether the effects of the

project are cumulatively considerable. The assessment of the significance of the cumulative effects of a project must, therefore, be conducted in connection with the effects of past projects, other current projects, and probable future projects. 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 increase 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 Riggin Avenue Widening 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 of Visalia 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 BIO-1a: Avoidance. In order to avoid impacts to nesting migratory birds and raptors, construction will occur, where possible, outside the nesting season, or between September 1 and January 31.	Project Sponsor	Ongoing during construction.	City of Visalia	
Mitigation Measure BIO-1b: Pre-construction Surveys. If construction must occur during the nesting season (February 1-August 31), a qualified biologist will conduct pre-construction surveys for active migratory bird and raptor nests within 10 days of the onset of these activities. Nest surveys will include all areas on and within 250 feet of the project site. If no active nests are found within the survey area, no further mitigation is required.	Project Sponsor	Within 10 days prior to the start of Construction	City of Visalia	
Mitigation Measure BIO-1c: Establish Buffers. Should any active nests be identified, the biologist will establish suitable disturbance-free buffers around the nests. Buffers will be identified on the ground with flagging or fencing, and will be maintained until the biologist has determined that the young have fledged and the nests are no longer active.	Project Sponsor	Ongoing during construction.	City of Visalia	
Mitigation Measure CUL-1: If cultural resources are encountered during ground-disturbing activities, work in the immediate area must halt and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (NPS 1983) should be contacted immediately to evaluate the find. If the discovery proves to be significant under CEQA, additional work such as data recovery excavation and Native American consultation	Project Sponsor & Construction Contractor	Ongoing during construction.	City of Visalia	

Mitigation Measure	Responsible Party for Implementation	Implementation Timing	Responsible Party for Monitoring	Verification
may be warranted to mitigate any adverse effects.				
Mitigation Measure CUL-2: The discovery of human remains is always a possibility during ground disturbing activities. If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately. If the human remains are determined to be prehistoric, the coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a most likely descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.	Project Sponsor & Construction Contractor	Ongoing during construction.	City of Visalia	

3.7 Supporting Information and Sources

1. AB 3098 List
2. City of Visalia General Plan
3. City of Visalia General Plan EIR
4. City of Visalia Climate Action Plan
5. City of Visalia 2015 Urban Water Management Plan
6. City of Visalia Zoning Ordinance
7. Engineering Standards, City of Visalia
8. SJVAPCD Regulations and Guidelines
9. Flood Insurance Rate Maps
10. California Air Resources Board's (CARB's) Air Quality and Land Use Handbook
11. 2008 (California Environmental Quality Act CEQA Guidelines
12. California Building Code
13. California Stormwater Pollution Prevention Program (SWPPP)
14. "Construction Noise Handbook." U.S. Department of Transportation/Federal Highway Administration.
15. Government Code Section 65962.5
16. California Environmental Protection Agency (CEPA)
17. Cypher, Brian, Et Al. Conservation of Endangered Tipton Kangaroo Rats (Dipodomys Nitratoides Nitratoides): Status Surveys, Habitat Suitability, And Conservation Strategies. California Department Of Fish And Wildlife, 2016.
18. California Energy Efficiency Strategic Plan: New Residential Zero Net Energy Action Plan 2015-2020, June 2015
19. San Joaquin Valley Air Pollution Control District Mitigation Measures (http://www.valleyair.org/transportation/Mitigation-Measures.pdf)
20. "Residential Water Use Trends and Implications for Conservation Policy." Legislative Analyst's Office/The California Legislature's Nonpartisan Fiscal and Policy Advisor. March 2017.
21. US Census (2014-2018). QuickFacts Visalia city, California. https://www.census.gov/quickfacts/visaliacitycalifornia

Section 4

List of Preparers

City of Visalia
315 East Acequia Avenue
Visalia, CA 93291

SECTION 4
List of Preparers

Project Title: Riggin Avenue Widening (Mooney to Conyer)

List of Preparers

4-Creeks Inc.

- David Duda, AICP, GISP
- Molly McDonnel, Associate Planner
- Kyle McDonald, PE
- Macy Hernandez, Asst. Engineering Designer

Persons and Agencies Consulted

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

City of Visalia

- Paul Bernal, City Planner
- Diego Corvera, PE
- Devon Jones, Economic Development Manager

Dokken Engineering

- Michelle Campbell, MA, RPA

TJKM

- Authur Chen, Transportation Planner

Live Oak Associates, Inc.

- Austin Pearson, Vice President
- Colleen Del Vecchio, Project Manager/Staff Ecologist and Arborist

Appendix A

Road Construction Emissions Model Results

Road Construction Emissions Model, Version 9.0.0

Daily Emission Estimates for -> Riggin Avenue Widening (Mooney to Conyer)

Project Phases (Pounds)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Grubbing/Land Clearing	0.98	10.05	9.36	30.42	0.42	30.00	6.61	0.37	6.24	0.02	2,207.58	0.58	0.05	2,235.77
Grading/Excavation	4.78	44.49	48.91	32.07	2.07	30.00	8.10	1.86	6.24	0.10	9,674.45	2.87	0.12	9,781.94
Drainage/Utilities/Sub-Grade	2.87	28.86	27.59	31.21	1.21	30.00	7.35	1.11	6.24	0.06	5,680.94	1.19	0.08	5,733.84
Paving	1.31	17.59	12.45	0.66	0.66	0.00	0.58	0.58	0.00	0.03	2,852.64	0.75	0.05	2,887.37
Maximum (pounds/day)	4.78	44.49	48.91	32.07	2.07	30.00	8.10	1.86	6.24	0.10	9,674.45	2.87	0.12	9,781.94
Total (tons/construction project)	0.44	4.27	4.37	3.56	0.19	3.37	0.87	0.17	0.70	0.01	885.25	0.24	0.01	894.79

Notes:

Project Start Year ->	2023
Project Length (months) ->	12
Total Project Area (acres) ->	10
Maximum Area Disturbed/Day (acres) ->	3
Water Truck Used? ->	Yes

	Total Material Imported/Exported Volume (yd^3/day)		Daily VMT (miles/day)			
Phase	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	0	0	0	0	280	40
Grading/Excavation	0	0	0	0	880	40
Drainage/Utilities/Sub-Grade	0	0	0	0	600	40
Paving	0	0	0	0	480	40

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

Total Emission Estimates by Phase for -> Riggin Avenue Widening (Mooney to Conyer)

Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.01	0.13	0.12	0.40	0.01	0.40	0.09	0.00	0.08	0.00	29.14	0.01	0.00	26.77
Grading/Excavation	0.28	2.64	2.91	1.91	0.12	1.78	0.48	0.11	0.37	0.01	574.66	0.17	0.01	527.12
Drainage/Utilities/Sub-Grade	0.11	1.14	1.09	1.24	0.05	1.19	0.29	0.04	0.25	0.00	224.97	0.05	0.00	205.99
Paving	0.03	0.35	0.25	0.01	0.01	0.00	0.01	0.01	0.00	0.00	56.48	0.01	0.00	51.86
Maximum (tons/phase)	0.28	2.64	2.91	1.91	0.12	1.78	0.48	0.11	0.37	0.01	574.66	0.17	0.01	527.12
Total (tons/construction project)	0.44	4.27	4.37	3.56	0.19	3.37	0.87	0.17	0.70	0.01	885.25	0.24	0.01	811.75

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

The CO2e emissions are reported as metric tons per phase.

SCE Pole Relocation - Construction Emissions - Tulare County, Annual

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

SCE Pole Relocation - Construction Emissions

Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	43,560.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	51
Climate Zone	3			**Operational Year**	2024
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 - Disturbance area will be less than 1 acre

Construction Phase - Construction for SCE scope of work is anticipated to last 3 months. 28 days is max number of work days for each piece of equipment

Off-road Equipment - c

Off-road Equipment - Trucks include 2 heavy truck (300 hp), 2 bucket truck (200 hp), and 4 pickup trucks (180 hp)
Other construction equipment includes 1 Cable Puller (75 hp)

Off-road Equipment - Trucks include 2 tool truck and 2 pickup truck

Trips and VMT - 4 workers estimated for civil construction, 20-25 workers estimated for pole relocation and Conductor/ Fiber Removal and/or Transfer.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	3.00
tblConstructionPhase	NumDays	100.00	28.00
tblConstructionPhase	PhaseEndDate	11/6/2023	8/9/2023

SCE Pole Relocation - Construction Emissions - Tulare County, Annual

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

tblConstructionPhase	PhaseStartDate	6/20/2023	7/1/2023
tblLandUse	LandUseSquareFeet	0.00	43,560.00
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	HorsePower	402.00	200.00
tblOffRoadEquipment	HorsePower	402.00	180.00
tblOffRoadEquipment	HorsePower	402.00	300.00
tblOffRoadEquipment	HorsePower	402.00	180.00
tblOffRoadEquipment	HorsePower	97.00	75.00
tblOffRoadEquipment	HorsePower	172.00	75.00
tblOffRoadEquipment	LoadFactor	0.38	0.29
tblOffRoadEquipment	LoadFactor	0.38	0.29
tblOffRoadEquipment	LoadFactor	0.38	0.29
tblOffRoadEquipment	LoadFactor	0.38	0.20
tblOffRoadEquipment	LoadFactor	0.42	0.37
tblOffRoadEquipment	OffRoadEquipmentType	Cranes	Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType	Cranes	Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType	Cranes	Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType	Forklifts	Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType	Tractors/Loaders/Backhoes	Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblTripsAndVMT	VendorTripNumber	7.00	0.00
tblTripsAndVMT	VendorTripNumber	7.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	8.00
tblTripsAndVMT	WorkerTripNumber	18.00	50.00

2.0 Emissions Summary

SCE Pole Relocation - Construction Emissions - 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					
2023	0.0279	0.1879	0.1881	6.4000e-004	5.6700e-003	8.0600e-003	0.0137	1.5100e-003	7.4200e-003	8.9200e-003	0.0000	55.9640	55.9640	0.0168	1.5000e-004	56.4274
Maximum	**0.0279**	**0.1879**	**0.1881**	**6.4000e-004**	**5.6700e-003**	**8.0600e-003**	**0.0137**	**1.5100e-003**	**7.4200e-003**	**8.9200e-003**	**0.0000**	**55.9640**	**55.9640**	**0.0168**	**1.5000e-004**	**56.4274**

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	0.0279	0.1879	0.1881	6.4000e-004	5.6700e-003	8.0600e-003	0.0137	1.5100e-003	7.4200e-003	8.9200e-003	0.0000	55.9640	55.9640	0.0168	1.5000e-004	56.4274
Maximum	**0.0279**	**0.1879**	**0.1881**	**6.4000e-004**	**5.6700e-003**	**8.0600e-003**	**0.0137**	**1.5100e-003**	**7.4200e-003**	**8.9200e-003**	**0.0000**	**55.9640**	**55.9640**	**0.0168**	**1.5000e-004**	**56.4274**

	ROG	NOx	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**

SCE Pole Relocation - Construction Emissions - Tulare County, Annual

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2023	8-31-2023	0.2171	0.2171
		Highest	0.2171	0.2171

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2004	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.2004**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

SCE Pole Relocation - Construction Emissions - 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

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2004	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.2004**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

	ROG	NOx	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	Pole Relocation and Conductor/ Fiber Removal and/or Transfer	Building Construction	7/1/2023	8/9/2023	5	28	
2	Civil Construction	Building Construction	7/3/2023	7/5/2023	5	3	

SCE Pole Relocation - Construction Emissions - Tulare County, Annual

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

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; 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
Pole Relocation and Conductor/ Fiber Removal and/or Transfer	Off-Highway Trucks	2	8.00	200	0.29
Civil Construction	Off-Highway Trucks	4	8.00	180	0.29
Pole Relocation and Conductor/ Fiber Removal and/or Transfer	Off-Highway Trucks	2	8.00	300	0.29
Pole Relocation and Conductor/ Fiber Removal and/or Transfer	Off-Highway Trucks	4	8.00	180	0.20
Civil Construction	Tractors/Loaders/Backhoes	1	8.00	75	0.37
Pole Relocation and Conductor/ Fiber Removal and/or Transfer	Other Construction Equipment	1	8.00	75	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Civil Construction	5	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pole Relocation and Conductor/ Fiber Rem	9	50.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

SCE Pole Relocation - Construction Emissions - Tulare County, Annual

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

3.2 Pole Relocation and Conductor/ Fiber Removal and/or Transfer - 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	0.0241	0.1763	0.1591	5.6000e-004		7.6200e-003	7.6200e-003		7.0100e-003	7.0100e-003	0.0000	48.7900	48.7900	0.0158	0.0000	49.1844
Total	**0.0241**	**0.1763**	**0.1591**	**5.6000e-004**		**7.6200e-003**	**7.6200e-003**		**7.0100e-003**	**7.0100e-003**	**0.0000**	**48.7900**	**48.7900**	**0.0158**	**0.0000**	**49.1844**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	2.4400e-003	1.7200e-003	0.0190	5.0000e-005	5.5800e-003	3.0000e-005	5.6000e-003	1.4800e-003	3.0000e-005	1.5100e-003	0.0000	4.4284	4.4284	1.5000e-004	1.4000e-004	4.4749
Total	**2.4400e-003**	**1.7200e-003**	**0.0190**	**5.0000e-005**	**5.5800e-003**	**3.0000e-005**	**5.6000e-003**	**1.4800e-003**	**3.0000e-005**	**1.5100e-003**	**0.0000**	**4.4284**	**4.4284**	**1.5000e-004**	**1.4000e-004**	**4.4749**

SCE Pole Relocation - Construction Emissions - Tulare County, Annual

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

3.2 Pole Relocation and Conductor/ Fiber Removal and/or Transfer - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0241	0.1763	0.1591	5.6000e-004		7.6200e-003	7.6200e-003		7.0100e-003	7.0100e-003	0.0000	48.7899	48.7899	0.0158	0.0000	49.1844
Total	**0.0241**	**0.1763**	**0.1591**	**5.6000e-004**		**7.6200e-003**	**7.6200e-003**		**7.0100e-003**	**7.0100e-003**	**0.0000**	**48.7899**	**48.7899**	**0.0158**	**0.0000**	**49.1844**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	2.4400e-003	1.7200e-003	0.0190	5.0000e-005	5.5800e-003	3.0000e-005	5.6000e-003	1.4800e-003	3.0000e-005	1.5100e-003	0.0000	4.4284	4.4284	1.5000e-004	1.4000e-004	4.4749
Total	**2.4400e-003**	**1.7200e-003**	**0.0190**	**5.0000e-005**	**5.5800e-003**	**3.0000e-005**	**5.6000e-003**	**1.4800e-003**	**3.0000e-005**	**1.5100e-003**	**0.0000**	**4.4284**	**4.4284**	**1.5000e-004**	**1.4000e-004**	**4.4749**

SCE Pole Relocation - Construction Emissions - Tulare County, Annual

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

3.3 Civil 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	1.3200e-003	9.8200e-003	9.6200e-003	3.0000e-005		4.1000e-004	4.1000e-004		3.8000e-004	3.8000e-004	0.0000	2.6698	2.6698	8.6000e-004	0.0000	2.6914
Total	**1.3200e-003**	**9.8200e-003**	**9.6200e-003**	**3.0000e-005**		**4.1000e-004**	**4.1000e-004**		**3.8000e-004**	**3.8000e-004**	**0.0000**	**2.6698**	**2.6698**	**8.6000e-004**	**0.0000**	**2.6914**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	4.0000e-005	3.0000e-005	3.3000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0759	0.0759	0.0000	0.0000	0.0767
Total	**4.0000e-005**	**3.0000e-005**	**3.3000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0759**	**0.0759**	**0.0000**	**0.0000**	**0.0767**

SCE Pole Relocation - Construction Emissions - Tulare County, Annual

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

3.3 Civil Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.3200e-003	9.8200e-003	9.6200e-003	3.0000e-005		4.1000e-004	4.1000e-004		3.8000e-004	3.8000e-004	0.0000	2.6698	2.6698	8.6000e-004	0.0000	2.6914
Total	**1.3200e-003**	**9.8200e-003**	**9.6200e-003**	**3.0000e-005**		**4.1000e-004**	**4.1000e-004**		**3.8000e-004**	**3.8000e-004**	**0.0000**	**2.6698**	**2.6698**	**8.6000e-004**	**0.0000**	**2.6914**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	4.0000e-005	3.0000e-005	3.3000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0759	0.0759	0.0000	0.0000	0.0767
Total	**4.0000e-005**	**3.0000e-005**	**3.3000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0759**	**0.0759**	**0.0000**	**0.0000**	**0.0767**

SCE Pole Relocation - Construction Emissions - Tulare County, Annual

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.509869	0.051139	0.167106	0.174849	0.031609	0.007996	0.012006	0.015707	0.000636	0.000471	0.023554	0.001465	0.003592

SCE Pole Relocation - Construction Emissions - Tulare County, Annual

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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

SCE Pole Relocation - Construction Emissions - Tulare County, Annual

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					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

SCE Pole Relocation - Construction Emissions - Tulare County, Annual

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			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

SCE Pole Relocation - Construction Emissions - 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	0.2004	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.2004	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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	0.0303					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1701					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.2004**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

SCE Pole Relocation - Construction Emissions - Tulare County, Annual

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	0.0303					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1701					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.2004**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

SCE Pole Relocation - Construction Emissions - Tulare County, Annual

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	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

SCE Pole Relocation - Construction Emissions - Tulare County, Annual

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

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

SCE Pole Relocation - Construction Emissions - Tulare County, Annual

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

SCE Pole Relocation - Construction Emissions - Tulare County, Annual

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

10.0 Stationary Equipment

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

LIVE OAK ASSOCIATES, INC.

an Ecological Consulting Firm

BIOLOGICAL EVALUATION
RIGGIN AVENUE WIDENING
VISALIA, CALIFORNIA

Prepared by:

LIVE OAK ASSOCIATES, INC.

Austin Pearson, Vice President
Colleen Del Vecchio, Project Manager/Staff Ecologist and Arborist

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January 26, 2022 PN 2651-01

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EXECUTIVE SUMMARY

Pursuant to the California Environmental Quality Act (CEQA), Live Oak Associates, Inc. (LOA) investigated the biological resources of an approximately 11-acre area in the City of Visalia ("project site") that may be disturbed by proposed development of the Riggin Avenue Widening Project ("project") and evaluated potential impacts to those resources associated with project development. The proposed project entails reconstruction of 1 mile of existing roadway (Riggin Avenue) to accommodate a four-lane arterial street with a total right-of-way width of 110 feet.

On January 7, 2022, LOA ecologist Colleen Del Vecchio surveyed the project site for its biotic habitats, the plants and animals occurring in those habitats, and significant habitat values that may be protected by state and federal law. At the time of the field survey, the project site consisted of ruderal/developed lands including a paved existing road (Riggin Avenue), associated infrastructure including sidewalks, drains, street trees, landscaped borders, electrical poles, traffic lights, and streetlights, and adjoining areas of graded and compacted soil within the footprint of the proposed road expansion. Lands within the vicinity of the project site are utilized primarily for commercial and residential purposes, with new residential development on the northern border of the project site.

The developed nature of the site and adjacent lands have created habitat conditions that are unsuitable for most native plants and wildlife. However, the project has the potential to result in construction-related mortality or disturbance of urban-adapted, native nesting birds that are protected under the Federal Migratory Bird Treaty Act, California Migratory Bird Protection Act, and California Fish and Game Code. This potential impact would be considered significant under CEQA. Project construction outside the nesting season and avoidance of active nests identified during preconstruction surveys will reduce the magnitude of potential impacts to nesting birds to a less than significant level.

No other biological resources would be significantly affected by the project as defined by CEQA. The project will have no effect on all locally occurring special status plant species, an insignificant effect, or no effect, on 24 locally occurring special status animal species, and no effect on sensitive natural communities, wildlife movement corridors, and waters of the U.S. or California. The project also appears to be consistent with local plans and ordinances. No Habitat Conservation Plans or Natural Community Conservation Plans are known to apply to the project.

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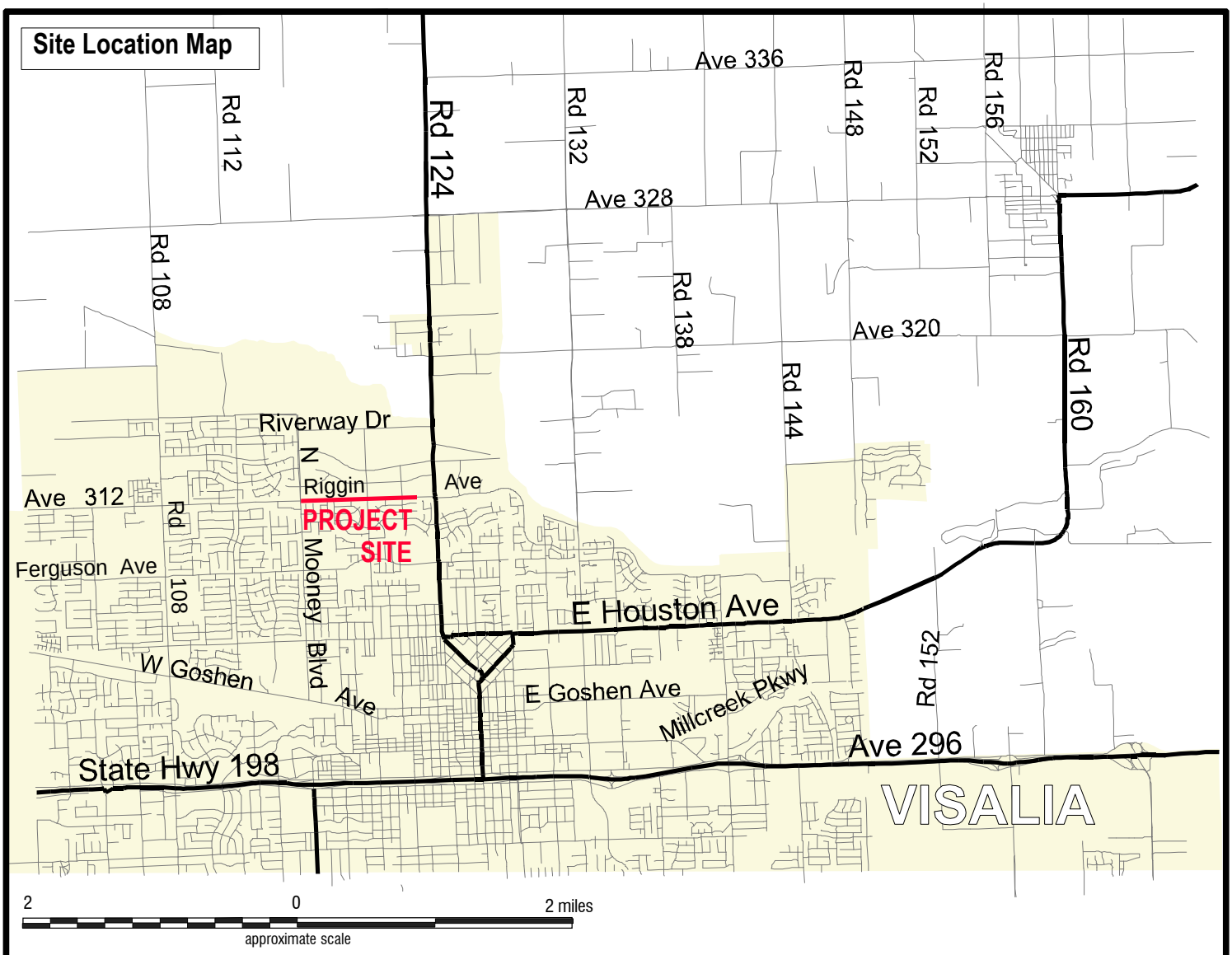
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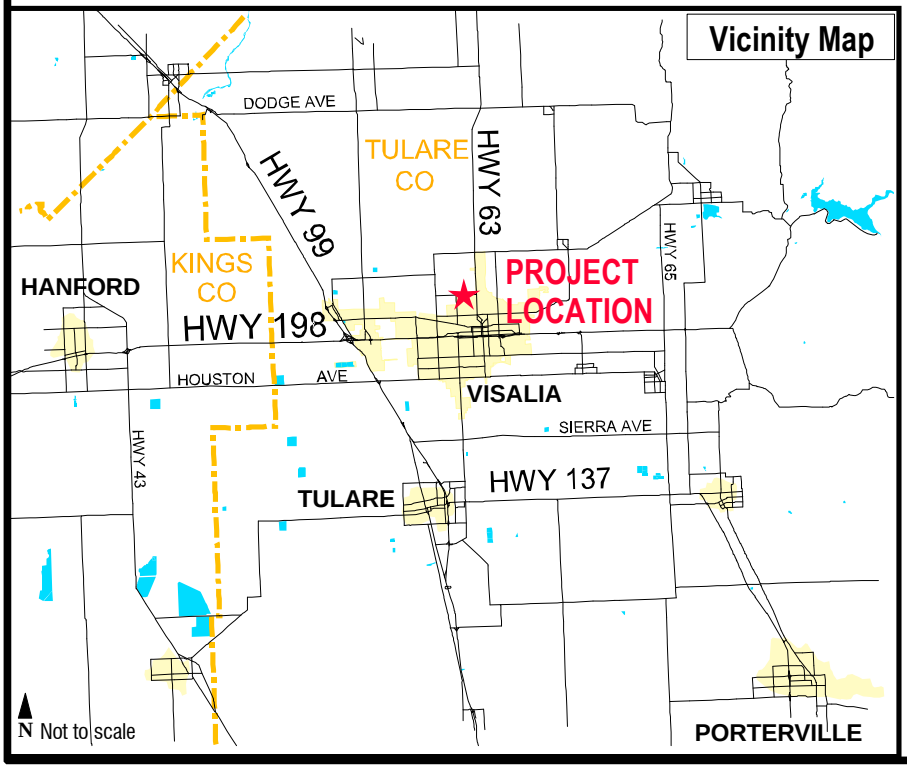
1.0 INTRODUCTION

The technical report that follows describes the biotic resources of an approximately 11-acre site ("project site" or "site") that will be impacted by the Riggin Avenue Widening Project ("project") and evaluates possible impacts to sensitive or protected biological resources that could result from project implementation. The project site is located along the existing Riggin Avenue between North Mooney Boulevard and North Dinuba Boulevard in the City of Visalia (Figure 1). The project site can be found on the *Visalia* U.S. Geological Survey (USGS) quadrangle along the shared boundary of Sections 18 and 19 of Township 18 south, Range 25 east, Mount Diablo Base and Meridian (Figure 2).

1.1 PROJECT DESCRIPTION

The City of Visalia proposes to reconstruct 1 mile of existing roadway between North Mooney Boulevard and North Dinuba Boulevard to accommodate a four-lane arterial street with a total right-of-way (ROW) width of 110 feet. Improvements would include new 12-foot vehicular travel lanes (four lanes total), new Class IV bike lanes, new street lighting, new landscaped medians, four new bus turnouts, new fire hydrants, and curb returns at all involved intersections. Construction would require demolition of existing asphalt between North Mooney Boulevard and North Conyer Street, removal of several trees (seven total) on the north side of Riggin Avenue, removal and replacement of one drive approach, and relocation of 11 power poles. The project would affect approximately 11 acres within the City ROW along Riggin Avenue.



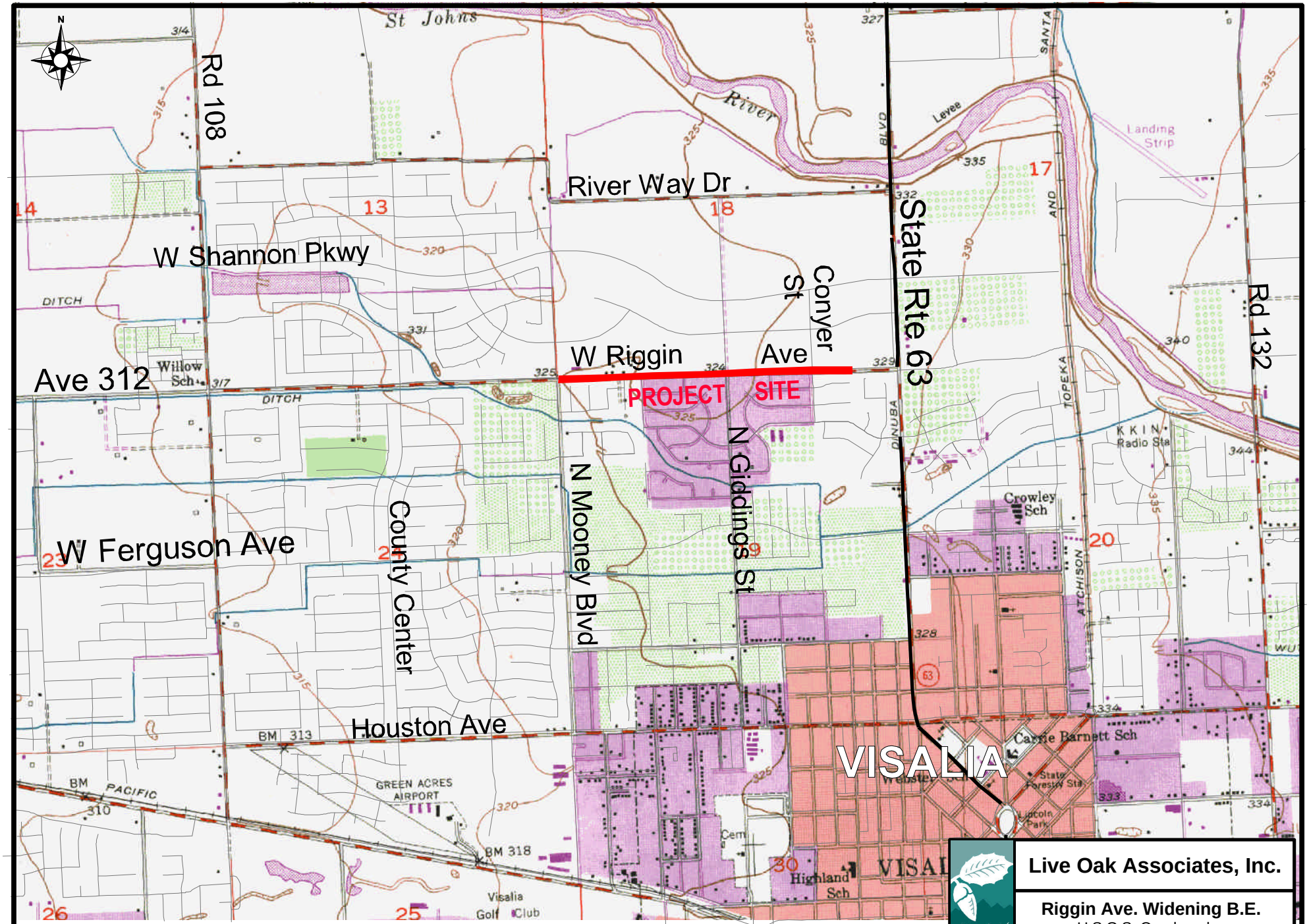




Live Oak Associates, Inc.

Riggin Ave. Widening B.E.
Site / Vicinity Map

Date	Project #	Figure #
1/12/2022	2561-01	1



From USGS
Visalia 7.5' Quadrangle 1969

Live Oak Associates, Inc.

Riggin Ave. Widening B.E.
U.S.G.S. Quadrangle

Date	Project #	Figure #
1/12/2022	2561-01	2

1.2 REPORT OBJECTIVES

This report addresses issues related to, 1) sensitive biotic resources occurring on the project site, 2) the federal, state, and local laws regulating such resources, and 3) mitigation measures that may be required to reduce the magnitude of anticipated project-related impacts and/or comply with permit requirements of state and federal resource agencies. As such, the objectives of this report are to:

- Summarize all site-specific information related to existing biological resources.
- Make reasonable inferences about the biological resources that could occur on site based on habitat suitability and the proximity of the site to a species' known range.
- Summarize all state and federal natural resource protection laws that may be relevant to future site development.
- Identify and discuss project impacts to biological resources likely to occur on the site within the context of CEQA and state or federal laws.
- Identify avoidance, minimization, and/or mitigation measures that would reduce the magnitude of project impacts in a manner consistent with the requirements of CEQA and that are generally consistent with the requirements of the resource agencies regulating affected biological resources.

1.3 STUDY METHODOLOGY

The analysis of impacts, as discussed in Section 3.0 of this report, is based on the known and potential biotic resources of the project site discussed in Section 2.0. Sources of information used in the preparation of this analysis included: (1) the *California Natural Diversity Data Base* (CDFW 2021), (2) the *Online Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2021), and (3) manuals, reports, and references related to plants and animals of the San Joaquin Valley region. The field survey of the project site was conducted on January 7, 2022 by LOA ecologist Colleen Del Vecchio. These surveys consisted of walking the project site while identifying the principal land uses and associated plant and animal species, and mapping habitat suitable for special status species and other sensitive biological resources.

LOA's field investigation did not include a wetland delineation or focused surveys for special status species. The surveys were sufficient to generally describe those features of the site that could be subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE), California

Department of Fish and Wildlife (CDFW), and/or the Regional Water Quality Control Board (RWQCB), and to assess the significance of possible biological impacts associated with development of the site.

2.0 EXISTING CONDITIONS

2.1 REGIONAL SETTING

The project site is located in a portion of the southwestern San Joaquin Valley that has, for decades, experienced intensive agricultural and urban growth. The region's ecosystem is best classified as a semi-arid, steppe climate. Warm dry summers are followed by cool moist winters. Summer temperatures commonly exceed 90 degrees Fahrenheit, and the relative humidity is generally very low. Winter high temperatures rarely rise much above 60 degrees Fahrenheit, with daytime averages below 60 degrees Fahrenheit. Annual precipitation within the project site is about 11 inches, almost 75% of which falls between the months of December and April. Nearly all precipitation falls in the form of rain.

The project site is situated in the northern portion of the City of Visalia, within a densely-populated urban area that comprises mostly residential housing tracts, with some businesses. At the time of LOA's field survey, lands adjoining the project site to the north were being developed for additional residential tract housing.

Native plant and animal species once abundant in the region have become locally extirpated or have experienced large reductions in their populations due to conversion of native habitats to agricultural and urban uses. Remaining native habitats are particularly valuable to native wildlife species including special status species that still persist in the region.

2.2 PROJECT SITE

At the time of the field survey, the project site consisted of an existing paved road and adjoining disturbed lands within the 110-foot ROW. The project site is relatively level, with an average elevation of approximately 330 feet (USGS 2022).

The project site contains three soil mapping units: Grangeville sandy loam, drained, 0 to 2 percent slopes; Nord fine sandy loam, 0 to 2 percent slopes; and Tagus loam, 0 to 2 percent slopes. Soils of the site have been significantly disturbed from urban development and agricultural activities.

As a result, the soils of the project site have no particular significance to biological resources potentially occurring on the site.

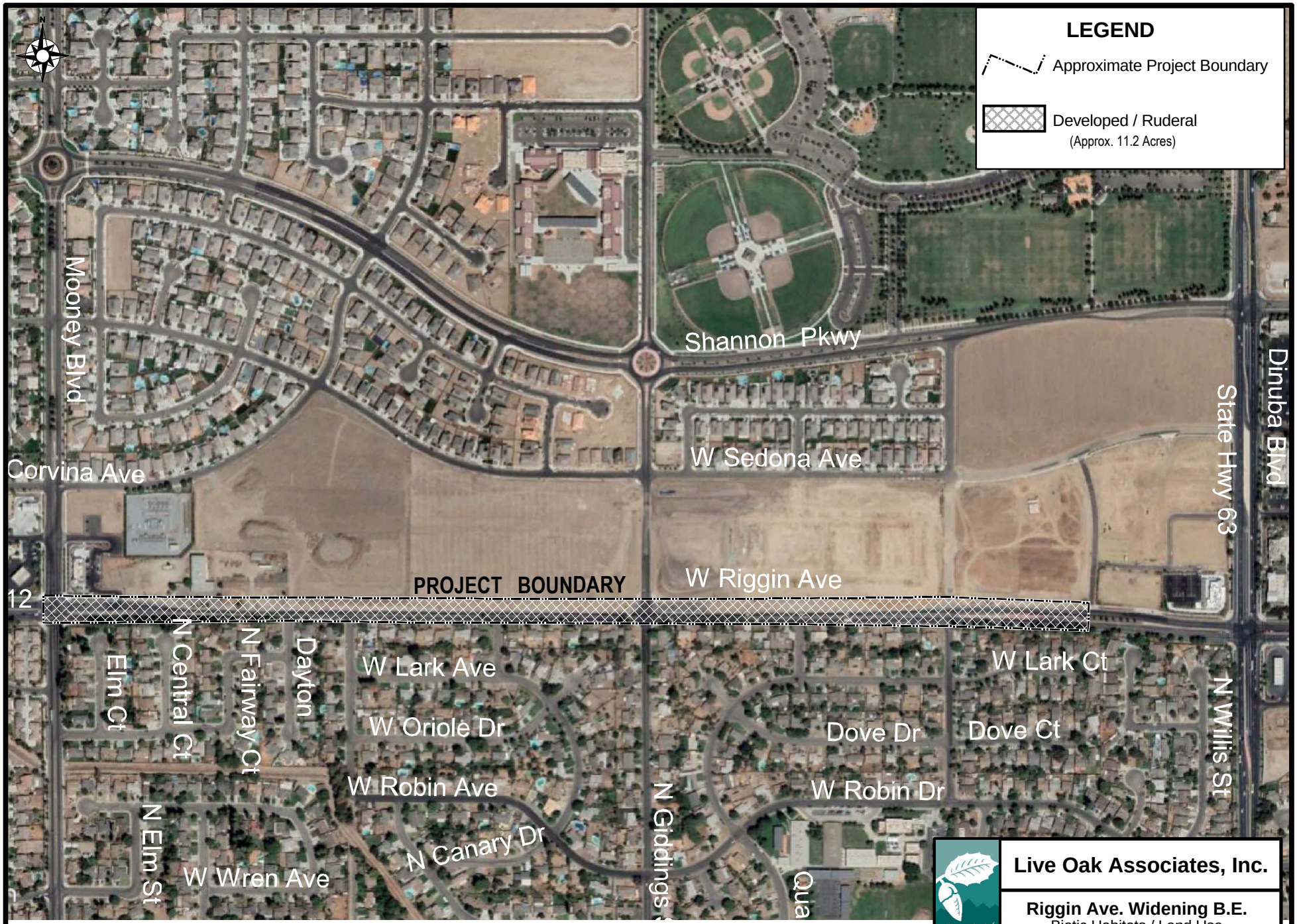
2.3 LAND USES/BIOTIC HABITATS

One land use/biotic habitat has been identified on the project site, ruderal/developed (Figure 5). This land use/biotic habitat has experienced a high level of human disturbance and modification. A list of the vascular plant species observed on the project site and a list of the terrestrial vertebrates using, or potentially using, the site is presented in Appendices A and B, respectively. Selected photographs of the project site are presented in Appendix C.

2.3.1 Ruderal/Developed

The project site consists entirely of ruderal/developed lands heavily influenced by human activities. At the time of LOA's field survey, this land use was mostly made up of a paved existing road (Riggin Avenue) and its associated infrastructure including sidewalks, drains, street trees, landscaped borders, electrical poles, traffic lights, and streetlights. Street trees mainly comprised American basswood (*Tilia americana*), while landscaped borders included crapemyrtle (*Lagerstroemia indica*) and bearberry (*Arctostaphylos uva-ursi*). The northern portion of the project site, where the existing paved road will be extended, was characterized by graded and compacted soil and weedy growth of non-native grasses and forbs including foxtail brome (*Bromus madritensis*), foxtail barley (*Hordeum murinum*), common fiddleneck (*Amsinckia intermedia*), Russian thistle (*Salsola tragus*), whitestem filaree (*Erodium moschatum*), and London rocket (*Sisymbrium irio*), among others.

Although the wildlife habitat value of ruderal/developed lands within the project site is relatively low, these lands can support some wildlife species. Common reptiles such as the western fence lizard (*Sceloporus occidentalis*) and Pacific gopher snake (*Pituophis catenifer catenifer*) could potentially use ruderal/developed areas of the project site. Resident avian species observed



SOURCES:
Aerial Photo Courtesy of Google Earth 9/2021

1,000' 0 500' 1,000 feet
approximate scale

Live Oak Associates, Inc.

Riggin Ave. Widening B.E.
Biotic Habitats / Land Use

Date	Project #	Figure #
1/12/2022	2561-01	3

within or adjacent to the project site included mourning doves (*Zenaida macroura*), northern mockingbirds (*Mimus polyglottos*), house finches (*Haemorhous mexicanus*), California scrub jays (*Aphelocoma californica*), and killdeer (*Charadrius vociferus*). Wintering birds observed included yellow-rumped warblers (*Setophaga coronata*), white-crowned sparrows (*Zonotrichia leucophrys*), and California gulls (*Larus californicus*). Other bird species expected at the project site include raptors such as the red-tailed hawk (*Buteo jamaicensis*) and American kestrel (*Falco sparverius*), and other perching birds such as Brewer's blackbird (*Euphagus cyanocephalus*), western kingbird (*Tyrannus verticalis*), and American crow (*Corvus brachyrhynchos*).

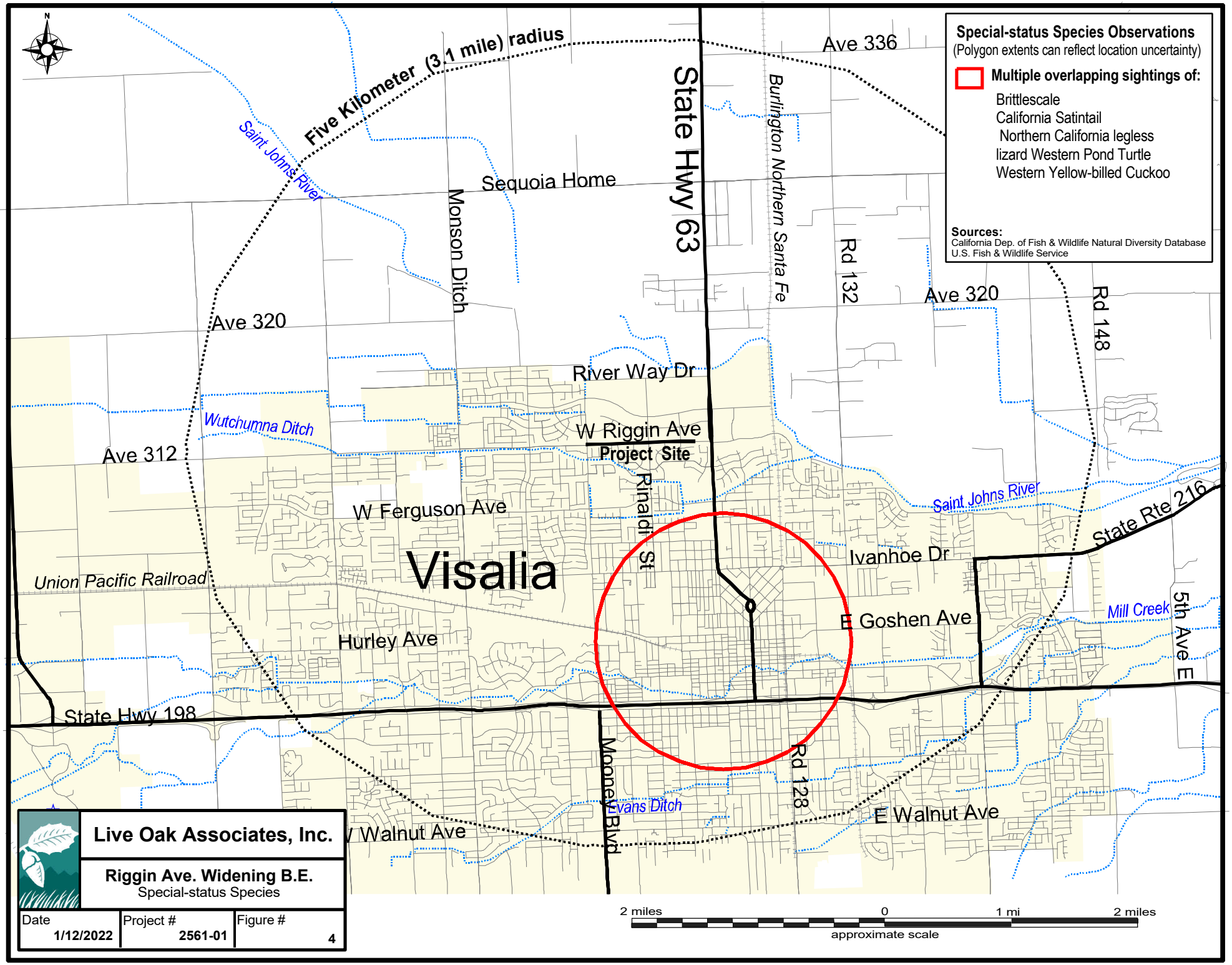
Small mammals that would be expected to occur on ruderal/developed lands of the site include Botta's pocket gophers (*Thomomys bottae*), California voles (*Microtus californicus*), house mice (*Mus musculus*), and deer mice (*Peromyscus maniculatus*). Mammalian predators with the potential to occur on ruderal lands of the project site include disturbance-tolerant species such as the raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), and coyote (*Canis latrans*).

2.4 SPECIAL STATUS PLANTS AND ANIMALS

Many species of plants and animals within the state of California have low populations and/or limited distributions. Such species may be considered "rare" and are vulnerable to extirpation as the state's human population grows and the habitats these species occupy are converted to agricultural and urban uses. As described more fully in Section 3.2, state and federal laws have provided CDFW and the U.S. Fish and Wildlife Service (USFWS) with a mechanism for conserving and protecting the diversity of plant and animal species native to the state. A sizable number of native plants and animals have been formally designated as "threatened" or "endangered" under state and federal endangered species legislation. Others have been designated as candidates for such listing. Still others have been designated as "species of special concern" by the CDFW. The California Native Plant Society (CNPS) has developed its own set of lists (i.e., California Rare Plant Ranks, or CRPR) of native plants considered rare, threatened, or endangered (CNPS 2021). Collectively, these plants and animals are referred to as "special status species."

The California Natural Diversity Data Base (CDFW 2022) was queried for special status species occurrences in the nine USGS 7.5-minute quadrangles containing and immediately surrounding the project site (*Cairns Corner, Exeter, Goshen, Ivanhoe, Monson, Paige, Traver, Tulare, and Visalia*). These species, and their potential to occur on the project site, are listed in Table 1 on the following pages. Sources of information for this table included *California's Wildlife, Volumes I, II, and III* (Zeiner et. al 1988-1990), *The Jepson Manual: Vascular Plants of California, second edition* (Baldwin et al 2012), and *The California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2021), Calflora.org, and eBird.org.

Special status species occurrences within 3.1 miles of the project site are depicted in Figure 4 and San Joaquin kit fox occurrences within a 10-mile radius of the site are presented in Figure 5.


Special-status Species Observations
(Polygon extents can reflect location uncertainty)
Multiple overlapping sightings of:
Brittlescale
California Satintail
Northern California legless lizard
Western Pond Turtle
Western Yellow-billed Cuckoo
Sources:
California Dep. of Fish & Wildlife Natural Diversity Database
U.S. Fish & Wildlife Service
Five Kilometer (3.1 mile) radius
Project Site
Visalia
State Hwy 63
Burlington Northern Santa Fe
Monson Ditch
Saint Johns River
Wutchumna Ditch
Union Pacific Railroad
Evans Ditch
Mooney Blvd
Rinaldi St
Rd 132
Rd 148
Rd 128
5th Ave E
Mill Creek
State Rte 216
State Hwy 198
Ave 336
Ave 320
Ave 312
Sequoia Home
River Way Dr
W Riggin Ave
W Ferguson Ave
Ivanhoe Dr
E Goshen Ave
Hurley Ave
E Walnut Ave
W Walnut Ave
2 miles
0
1 mi
2 miles
approximate scale
Live Oak Associates, Inc.
Riggin Ave. Widening B.E.
Special-status Species
Date 1/12/2022
Project # 2561-01
Figure # 4

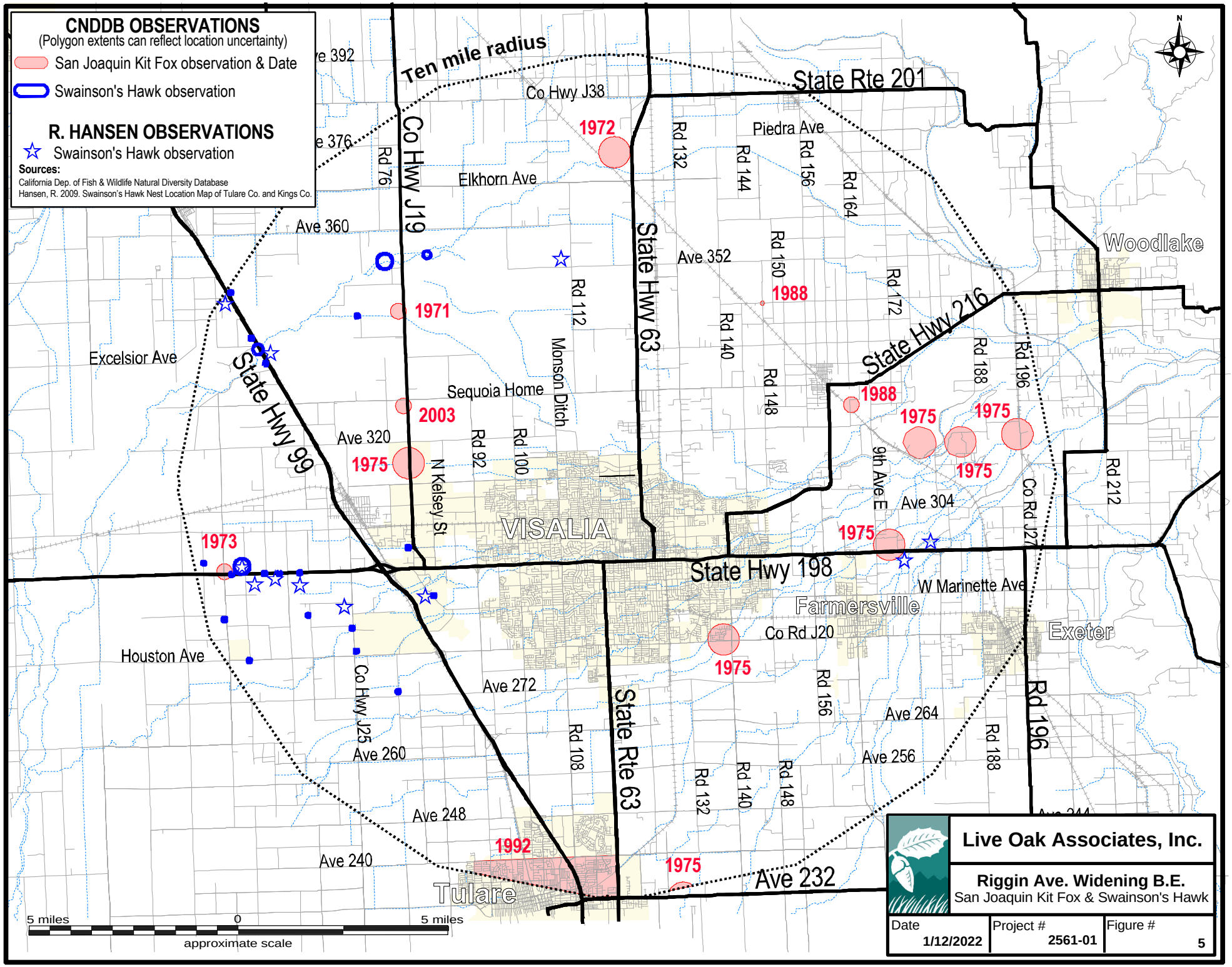

CNDDB OBSERVATIONS
(Polygon extents can reflect location uncertainty)
San Joaquin Kit Fox observation & Date
Swainson's Hawk observation
R. HANSEN OBSERVATIONS
Swainson's Hawk observation
Sources:
California Dep. of Fish & Wildlife Natural Diversity Database
Hansen, R. 2009. Swainson's Hawk Nest Location Map of Tulare Co. and Kings Co.
Ten mile radius
State Rte 201
Co Hwy J38
Co Hwy J19
State Hwy 63
State Hwy 99
State Hwy 216
State Hwy 198
State Rte 63
Rd 196
Elkhorn Ave
Ave 360
Ave 352
Excelsior Ave
Sequoia Home
Ave 320
Monson Ditch
N Kelsey St
VISALIA
9th Ave E
Ave 304
W Marinette Ave
Farmersville
Exeter
Co Rd J20
Co Rd J27
Houston Ave
Co Hwy J25
Ave 272
Ave 264
Ave 260
Ave 256
Ave 248
Ave 240
Ave 232
Tulare
Woodlake
Piedra Ave
1972
1971
1988
2003
1975
1973
1992
Rd 76
Rd 92
Rd 100
Rd 108
Rd 112
Rd 132
Rd 140
Rd 144
Rd 148
Rd 150
Rd 156
Rd 164
Rd 172
Rd 188
Rd 212
5 miles
0
5 miles
approximate scale
Live Oak Associates, Inc.
Riggin Ave. Widening B.E.
San Joaquin Kit Fox & Swainson's Hawk
Date
1/12/2022
Project #
2561-01
Figure #
5

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY

PLANTS (adapted from CDFW 2021 and CNPS 2021)

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act

Species	Status	Habitat	Occurrence on the Project Site
California Jewel-flower (*Caulanthus californicus*)	FE, CE, CRPR 1B	Occurs in chenopod scrub, pinyon and juniper woodland, and sandy valley and foothill grassland. Blooms February–May; elevations 250- 3,300 ft.	**Absent.** The project site is unsuitable for California jewel-flower due to the absence of this species' habitat associations and existing urban development.
Hoover's Spurge (*Euphorbia hooveri*)	FT, CRPR 1B	Occurs in vernal pools of California's Central Valley; blooms July-September; elevation 80-820 ft.	**Absent.** The project site is unsuitable for Hoover's spurge due to its developed nature and the absence of vernal pools.
San Joaquin Valley Orcutt Grass (*Orcuttia inaequalis*)	FT, CE, CRPR 1B	Occurs in vernal pools of the Central Valley; requires deep pools with prolonged periods of inundation. Blooms April- September; elevations 100- 2,480 ft.	**Absent.** The project site is unsuitable for San Joaquin Valley orcutt grass due to its developed nature and the absence of vernal pools.
San Joaquin Adobe Sunburst (*Pseudobahia peirsonii*)	FT, CE, CRPR 1B	Occurs in grasslands of the Sierra Nevada foothills in heavy clay soils of the Porterville and Centerville series. Blooms March-April; elevation 300-2,625 ft.	**Absent.** The project site is unsuitable for San Joaquin adobe sunburst due to its developed nature and absence of heavy clay soils.

PLANTS

CNPS-Listed Plants

Heartscale (*Atriplex cordulata* var. *cordulata*)	CRPR 1B	Occurs on saline or alkaline soils in chenopod scrub, meadows, seeps, and grasslands. Blooms April- October; elevations below 1,230 ft.	**Absent.** The project site is unsuitable for heartscale due to the absence of this species' habitat associations and existing urban development.
Earlimart Orache (*Atriplex cordulata* var. *erecticaulis*)	CRPR 1B	Occurs in valley and foothill grasslands. Blooms August-September; elevations 130 – 330 ft.	**Absent.** The project site is unsuitable for Earlimart orache due to its developed nature and the absence of grassland habitat and alkaline soils**.**
Brittlescale (*Atriplex depressa*)	CRPR 1B	Occurs in chenopod scrub, valley and foothill grassland, and wetland habitats. Blooms April- October; elevations below 1,050 ft.	**Absent.** The project site is unsuitable for brittlescale due to the lack of this species' habitat associations and existing urban development
Lesser Saltscale (*Atriplex minuscula*)	CRPR 1B	Occurs in cismontane woodland and valley and foothill grasslands of the San Joaquin Valley with alkaline/sandy soils. Blooms May- October; elevation 50- 660 ft.	**Absent.** The project site is unsuitable for lesser saltscale due to its developed nature and the absence of this species' habitat and soil associations.
Vernal Pool Smallscale (*Atriplex persistens*)	CRPR 1B	Occurs in alkaline vernal pools. Blooms July- October; elevations below 400 ft.	**Absent.** The project site is unsuitable for vernal pool smallscale due to its developed nature and the absence of vernal pools.
Subtle Orache (*Atriplex subtilis*)	CRPR 1B	Occurs in valley and foothill grasslands of the San Joaquin Valley. Blooms August- October; elevations 130- 330 ft.	**Absent.** The project site is unsuitable for subtle orache due to the absence of this species' habitat associations and existing urban development.
Recurved Larkspur (*Delphinium recurvatum*)	CRPR 1B	Occurs in cismontane woodland and valley and foothill grasslands with alkaline soils. Blooms March- June; elevations below 2,500 ft.	**Absent.** The project site is unsuitable for recurved larkspur due to its disturbed nature and the absence of this species' habitat and soil associations.

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY

PLANTS (cont'd)

CNPS-Listed Plants

Species	Status	Habitat	Occurrence on the Project Site
Spiny-Sepaled Button Celery (*Eryngium spinosepalum)*	CRPR 1B	Occurs in vernal pools and valley and foothill grasslands of the San Joaquin Valley and the Tulare Basin; blooms April- May; elevations 330- 840 ft.	**Absent.** The project site is unsuitable for spiny-sepaled button celery due to its developed nature and the absence of vernal pools and associated habitat.
Winter's Sunflower (*Helianthus winteri*)	CRPR 1B	Occurs in openings on relatively steep south-facing slopes, cismontane woodland, valley and foothill grassland, granitic, often rocky, often roadsides; blooms January- December; elevations 400- 1,500 ft.	**Absent.** The project site is unsuitable for Winter's sunflower due to its developed nature and the absence of this species' required habitats, soils, and topographical characteristics.
California Satintail (*Imperata brevifolia*)	CRPR 2B	This perennial grass is found in scrubland and chaparral habitats where water is available. Blooms September-May; elevations 9- 4,904 ft.	**Absent.** The project site is unsuitable for California satintail due to the absence of this species' habitat associations and existing urban development.
Alkali-sink Goldfields (*Lasthenia chrysantha*)	CRPR 1B	Occurs in vernal pools or wet saline flats of valley grassland, alkali sink, or wetland-riparian habitats. Blooms February – April; elevations below 330 ft.	**Absent.** The project site is unsuitable for alkali-sink goldfields due to its developed nature and the absence of vernal pools or alkali features.
Coulter's Goldfields (*Lasthenia glabrata spp. coulteri*)	CRPR 1B	Occurs in alkaline soils of playas and vernal pools. Blooms February- June; elevations below 4,000 ft.	**Absent.** The project site is unsuitable for Coulter's goldfields due to its developed nature and the absence of vernal pools or playa habitat.
California Alkali-Grass (*Puccinellia simplex*)	CRPR 1B	Occurs in saline flats and mineral springs in the Central Valley, San Francisco Bay area, and western Mojave Desert. Blooms March- May; elevations less than 2,955 ft.	**Absent.** The project site is unsuitable for California alkali-grass due to its developed nature and the lack of saline flats and mineral springs.
Sanford's Arrowhead (*Sagittaria sanfordii*)	CRPR 1B	Occurs in freshwater emergent marsh habitat in drainage ditches and canals of California's Central Valley. Blooms May- October; elevations less than 1,985 ft.	**Absent.** The project site is unsuitable for Sanford's arrowhead due to the lack of freshwater wetland or drainage ditches.

ANIMALS (adapted from CDFW 2021 and USFWS 2021)

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act, and/or as California Fully Protected

Species	Status	Habitat	Occurrence on the Project Site
Vernal Pool Fairy Shrimp (*Branchinecta lynchi*)	FT	Occurs in vernal pools, clear to tea-colored water in grass or mud-bottomed swales, and basalt depression pools.	**Absent.** The project site is unsuitable for vernal pool fairy shrimp due to its developed nature and the absence of vernal pools.
Vernal Pool Tadpole Shrimp (*Lepidurus packardi*)	FE	Primarily found in vernal pools, but may use other seasonal wetlands in mesic valley and foothill grasslands.	**Absent.** The project site is unsuitable for vernal pool tadpole shrimp due to its developed nature and the absence of vernal pools.
Valley Elderberry Longhorn Beetle (VELB) (*Desmocerus californicus dimorphus*)	FT	Lives in mature elderberry shrubs of California's Central Valley and Sierra Foothills.	**Absent.** The USFWS has determined that the range of this species does not include Tulare County.

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY

ANIMALS (cont'd)

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act, and/or as California Fully Protected

Species	Status	Habitat	Occurrence on the Project Site
California Tiger Salamander (*Ambystoma californiense*)	FT, CT	Found primarily in annual grasslands; requires vernal pools for breeding and rodent burrows for aestivation. Although most California tiger salamanders aestivate within 0.4 mile of their breeding pond, outliers may aestivate up to 1.3 miles away (Orloff 2011).	**Absent.** Vernal pool or seasonal wetland habitat suitable for breeding by this species is absent from the project site and surrounding lands. Furthermore, the site is south of the known range of this species and is situated in an urban landscape within which individuals of this species would not persist.
California Red-Legged Frog (*Rana draytonii*)	FT, CSC	Rivers, creeks and stock ponds of the Sierra foothills and coast range, preferring pools with overhanging vegetation.	**Absent.** The California red-legged frog has been extirpated from the southern Sierra Nevada region and the floor of the Central Valley (USFWS 2002). Moreover, suitable habitat for this species is absent from the site and surrounding lands.
Tricolored Blackbird (*Agelaius tricolor*)	CT	Breeds near fresh water, primarily emergent wetlands, with tall thickets. Forages in many open habitats.	**Absent.** The project site does not contain suitable foraging or breeding habitat for the tricolored blackbird, and is located within an urban landscape that would not support this species.
Swainson's Hawk (*Buteo swainsonii*)	CT	Breeds in stands with few trees in juniper-sage flats, riparian areas, and in oak savannah. Requires adjacent suitable foraging areas such as grasslands or alfalfa fields supporting rodent populations.	**Absent.** The project site does not contain suitable foraging or breeding habitat for the Swainson's hawk. Moreover, this species is not usually associated with urban landscapes.
Western Yellow-Billed Cuckoo (*Coccyzus americanus occidentalis*)	FT, CE	Occurs in valley foothill and desert riparian habitats in scattered locations in California. Requires extensive gallery riparian forests for nesting.	**Absent.** This species has been extirpated from most of its former range in California, and today breeds consistently in only two localities statewide: along the Sacramento and South Fork Kern Rivers. Moreover, the project site does not contain suitable breeding or foraging habitat for this species.
Southwester Willow Flycatcher (*Empidonax traillii extimus*)	FE, CE	Breeds in relatively dense riparian tree and shrub communities near bodies of standing or flowing water (streams, rivers, lakes, reservoirs).	**Absent.** The project site is unsuitable for the southwestern willow flycatcher due to its urban setting and the absence of riparian habitat and water features.
Tipton Kangaroo Rat (*Dipodomys nitratoides nitratoides*)	FE, CE	Occurs in chenopod scrub and alkali grasslands in isolated portions of Kings, Tulare, and Kern Counties.	**Absent.** The project site does not contain suitable habitat for the Tipton kangaroo rat, and is located within an urban landscape that would not support this species. There are no CNDDB occurrences within 10 miles (CDFW 2022).

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY

ANIMALS (cont'd)

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act, and/or as California Fully Protected

Species	Status	Habitat	Occurrence on the Project Site
San Joaquin Kit Fox (SJKF) (*Vulpes macrotis mutica*)	FE, CT	Found in desert alkali scrub and annual grasslands; may forage in adjacent agricultural habitats. Use underground dens for thermoregulation, cover, and reproduction. Dens are either self-dug or modified rodent burrows.	**Absent.** The project site does not contain suitable habitat for the San Joaquin kit fox. Although this species has adapted to urban environments in some San Joaquin Valley municipalities, this has not been documented in Visalia. The closest CNDDB occurrences are approximately 5 miles from the project site and historical in nature (1975; CDFW 2022).

ANIMALS

Animal Species Considered State Species of Special Concern or Fully Protected

Species	Status	Habitat	Occurrence on the Project Site
Western Spadefoot (*Spea hammondii*)	CSC	Mainly occurs in grasslands of San Joaquin Valley. Vernal pools or other temporary wetlands are required for breeding. Aestivates in underground refugia such as rodent burrows, typically within 1,200 ft. of aquatic habitat.	**Absent.** The project site is unsuitable for western spadefoot due to ongoing human disturbances and the absence of potential breeding and aestivation habitat from the site and surrounding lands.
Northern California Legless Lizard (*Anniella pulchra*)	CSC	Occurs in sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks.	**Absent.** The project site is unsuitable for this species due to ongoing human disturbance. One historic (1934) CNDDB occurrence exists for this species within 1 mile of the project site (CDFW 2022).
Western Pond Turtle (*Emys marmorata*)	CSC	Occurs in open slow-moving water or ponds with rocks and logs for basking. Typically requires perennial waters. Nesting occurs in open areas, on a variety of soil types, and up to ¼ mile away from water. This species is almost extinct in the southern San Joaquin Valley.	**Absent.** The project site is unsuitable for the western pond turtle due to its urban setting and the absence of aquatic features from the project site and adjacent lands.
Coast Horned Lizard (*Phrynosoma coronatum*)	CSC	Grasslands, scrublands, oak woodlands, etc. of central California. Common in sandy washes with scattered shrubs.	**Absent.** The project site does not contain suitable habitat for the coast horned lizard and is located within an urban landscape that would not support this species.

ANIMALS

State Species of Special Concern

Species	Status	Habitat	Occurrence in the Project Site
Burrowing Owl (*Athene cunicularia*)	CSC	Frequents open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Dependent upon burrowing mammals, most notably the California ground squirrel, for nest burrows.	**Absent.** The project site does not contain suitable habitat for the burrowing owl and is located within an urban landscape that would not support this species.

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY

ANIMALS (cont'd)

State Species of Special Concern

Species	Status	Habitat	Occurrence in the Project Site
Golden Eagle (*Aquila chrysaetos*)	CFP	Typically frequents rolling foothills, mountain areas, sage-juniper flats, and desert. Usually nests on cliffs.	**Absent.** Suitable golden eagle nesting and foraging habitat is absent from the project vicinity.
White-Tailed Kite (*Elanus caeruleus*)	CSC, CFP	Open grasslands and agricultural areas throughout central California.	**Absent.** The project site does not contain suitable foraging or breeding habitat for the white-tailed kite. Moreover, this species is not usually associated with urban landscapes.
Loggerhead Shrike (*Lanius ludovicianus*)	CSC	Frequents open habitats with sparse shrubs and trees, other suitable perches, bare ground, and low herbaceous cover. Can often be found in cropland.	**Absent.** This species does not frequent urban environments and suitable perching and nesting habitat is absent. No known breeding sites occur within 10 miles of the project site (CDFW 2022; eBird 2022).
Pallid Bat (*Antrozous pallidus*)	CSC	Found in grasslands, chaparral, and woodlands, where it feeds on ground- and vegetation-dwelling arthropods. Prefers to roost in rock crevices, but may also use tree cavities, caves, bridges, and buildings.	**Possible.** Suitable roosting habitat is absent from the project site; however, this species may be transient in the project site at night during foraging. Pallid bats are known to use man-made structures in urban areas for roosting which are adjacent to the project site (Glassy 2021).
Spotted Bat (*Euderma maculatum*)	CSC	Found in a variety of habitats (arid to grassland) where it feeds over water and along washes, almost entirely on moths. Needs rock crevices in cliffs or caves for roosting.	**Absent.** Suitable foraging and roosting habitats for this species are absent from the project site.
Western Mastiff Bat (*Eumops perotis californicus*)	CSC	Found in open, arid to semi-arid habitats. Roosts most commonly in crevices in cliff faces, but may also use high buildings and tunnels.	**Absent.** There are no features on the project site that could support roosting by this species. Moreover, the western mastiff bat is sensitive to disturbance and not associated with urban environments.
Western Red Bat (*Lasiurus blossevillii*)	CSC	Roosts in tree or shrub foliage, although will occasionally use caves.	**Absent.** Although the project site contains street trees that may be structurally suitable for this foliage-roosting species, the western red bat is not associated with urban environments.
American Badger (*Taxidea taxus*)	CSC	Uncommon resident statewide; most abundant in drier open stages of most shrub, forest, and herbaceous habitats.	**Absent.** The project site and surrounding lands are unsuitable for the American badger due to their developed nature, high levels of ongoing human disturbance, and the absence of this species' habitat associations.

OCCURRENCE TERMINOLOGY

Present: Species observed on the site at time of field surveys or during recent past.

Likely: Species not observed on the site, but it may reasonably be expected to occur there on a regular basis.

Possible: Species not observed on the site, but it could occur there from time to time.

Unlikely: Species not observed on the site, and would not be expected to occur there except, perhaps, as a transient.

Absent: Species not observed on the site and precluded from occurring there because habitat requirements not met.

STATUS CODES

FE	Federally Endangered	CE	California Endangered
FT	Federally Threatened	CT	California Threatened
FPE	Federally Endangered (Proposed)	CFP	California Fully Protected
FPT	Federally Threatened (Proposed)	CSC	California Species of Special Concern
FC	Federal Candidate	CC	California Candidate

CRPR	California Rare Plant Rank		
1A	Plants Presumed Extinct in California	2	Plants Rare, Threatened, or Endangered in California, but more common elsewhere
1B	Plants Rare, Threatened, or Endangered in California and elsewhere		

2.5 JURISDICTIONAL WATERS

Jurisdictional waters include rivers, creeks, and drainages that have a defined bed and bank and which, at the very least, carry ephemeral flows. Jurisdictional waters also include lakes, ponds, reservoirs, and wetlands. Such waters may be subject to the regulatory authority of the USACE, the CDFW, and the RWQCB. See Section 3.8 of this report for additional information.

The project site does not contain jurisdictional waters or any other type of aquatic resource.

2.6 SENSITIVE NATURAL COMMUNITIES

Sensitive natural communities are those that are of limited distribution, distinguished by significant biological diversity, home to special status plant and animal species, of importance in maintaining water quality or sustaining flows, etc. Examples of sensitive natural communities include various types of wetlands, riparian habitat, and valley scrub habitats. CDFW has assigned State Ranks to California's natural communities that reflect the condition and imperilment of that community throughout its range within the state. State Ranks are represented with a letter and number score. Older ranks, which need to be updated in the CNDDB, may still contain a decimal "threat" rank of .1, .2, or .3, where .1 indicates very threatened status, .2 indicates moderate threat, and .3 indicates few or no current known threats.

The project site supports no sensitive natural communities.

2.7 WILDLIFE MOVEMENT CORRIDORS

Wildlife movement corridors are routes that animals regularly and predictably follow during seasonal migration, dispersal from native ranges, daily travel within home ranges, and inter-

population movements. Movement corridors in California are typically associated with valleys, ridgelines, and rivers and creeks supporting riparian vegetation.

The project supports no regular or predictable wildlife movement corridors.

3.0 RELEVANT GOALS, POLICIES, AND LAWS

In California, any project carried out or approved by a public agency that will result in a direct or reasonably foreseeable indirect physical change in the environment must comply with CEQA. The purpose of CEQA is to ensure that a project's potential impacts on the environment are evaluated, and methods for avoiding or reducing these impacts are considered before the project is allowed to move forward. A secondary aim of CEQA is to provide justification to the public for the approval of any projects involving significant impacts on the environment.

According to Section 15382 of the CEQA Guidelines, a significant effect on the environment means a "substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic interest." Although the lead agency may set its own CEQA significance thresholds, project impacts to biological resources are generally considered to be significant if they would meet any of the following criteria established in Appendix G of the CEQA Guidelines:

- 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 CDFW or USFWS.

- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFW or USFWS.

- Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery site.

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

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

Furthermore, CEQA Guidelines Section 15065(a) requires the lead agency to make "mandatory findings of significance" if there is substantial evidence that a project may:

- Substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or substantially reduce the number or restrict the range of an endangered, rare or threatened species.

- Achieve short-term environmental goals to the detriment of long-term environmental goals.

- Produce environmental effects that are individually limited but cumulatively considerable, meaning that the incremental effects of the project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects.

3.1 GENERAL PLAN POLICIES OF CITY OF VISALIA

In compliance with CEQA, the lead agency must consider conformance with applicable goals and policies of the General Plan of the City of Visalia. The General Plan has a single objective for the conservation of biological resources: "Protect and enhance natural vegetation throughout the Planning Area, especially types that are considered sensitive natural communities by the Department of Fish and Game." The General Plan identifies a number of policies to be implemented to meet this objective.

Additionally, the City of Visalia has an oak tree preservation ordinance that was established pursuant to Visalia Municipal Code Chapter 12.24. This ordinance is for the preservation and protection of native valley oak trees (*Quercus lobata*) and landmark trees.

3.2 HABITAT CONSERVATION PLANS AND NATURAL COMMUNITY CONSERVATION PLANS

Section 10 of the federal Endangered Species Act establishes a process by which non-federal projects can obtain authorization to incidentally take listed species, provided take is minimized and thoroughly mitigated. A Habitat Conservation Plan (HCP) developed by the project applicant in collaboration with the USFWS and/or NMFS, ensures that such minimization and mitigation

will occur, and is a prerequisite to the issuance of a federal incidental take permit. Similarly, a Natural Community Conservation Plan (NCCP) developed by the project applicant in collaboration with CDFW, provides for the conservation of biodiversity within a project area, and permits limited incidental take of state-listed species.

3.3 THREATENED AND ENDANGERED SPECIES

In California, imperiled plants and animals may be afforded special legal protections under the California Endangered Species Act (CESA) and/or Federal Endangered Species Act (FESA). Species may be listed as "threatened" or "endangered" under one or both Acts, and/or as "rare" under CESA. Under both Acts, "endangered" means a species is in danger of extinction throughout all or a significant portion of its range, and "threatened" means a species is likely to become endangered within the foreseeable future. Under CESA, "rare" means a species may become endangered if their present environment worsens. Both Acts prohibit "take" of listed species, defined under CESA as "to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill" (California Fish and Game Code, Section 86), and more broadly defined under FESA to include "harm" (16 USC, Section 1532(19), 50 CFR, Section 17.3).

When state and federally listed species have the potential to be impacted by a project, the USFWS and CDFW must be included in the CEQA process. These agencies review the environmental document to determine the adequacy of its treatment of endangered species issues and to make project-specific recommendations for the protection of listed species. Projects that may result in the "take" of listed species must generally enter into consultation with the USFWS and/or CDFW pursuant to FESA and CESA, respectively. In some cases, incidental take authorization(s) from these agencies may be required before the project can be implemented.

3.4 CALIFORNIA FULLY PROTECTED SPECIES

The classification of certain animal species as "fully protected" was the State of California's initial effort in the 1960s, prior to the passage of the California Endangered Species Act, to identify and provide additional protection to those species that were rare or faced possible extinction. Following CESA enactment in 1970, many fully protected species were also listed as California

threatened or endangered. The list of fully protected species are identified, and their protections stipulated, in California Fish and Game Code Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and fish (5515). Fully protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take, except in conjunction with necessary scientific research and protection of livestock.

3.5 MIGRATORY BIRDS

The Federal Migratory Bird Treaty Act (FMBTA: 16 USC 703-712) prohibits killing, possessing, or trading in any bird species covered in one of four international conventions to which the United States is a party, except in accordance with regulations prescribed by the Secretary of the Interior. The name of the act is misleading, as it actually covers almost all 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.

Native birds are also protected under California state law. The 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. Moreover, the California Migratory Bird Protection Act, enacted in September 2019, clarifies native bird protection and increases protections where California law previously deferred to federal law.

3.6 BIRDS OF PREY

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.

3.7 NESTING BIRDS

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

3.8 WETLANDS AND OTHER JURISDICTIONAL WATERS

Section 404 of the federal Clean Water Act (CWA) regulates the discharge of dredged or fill material into "navigable waters" (33 U.S.C. §1344), defined in the CWA as "the waters of the United States, including the territorial seas" (33 U.S.C. §1362(7)). The CWA does not supply a definition for waters of the U.S., and that has been the subject of considerable debate since the CWA's passage in 1972. A variety of regulatory definitions have been promulgated by the two federal agencies responsible for implementing the CWA, the Environmental Protection Agency (EPA) and USACE. These definitions have been interpreted, and in some cases, invalidated, by federal courts.

Most recently, waters of the U.S. were defined by the Navigable Waters Protection Rule (NWPR). The new rule was published in the Federal Register on April 21, 2020 and took effect on June 22, 2020. However, on August 30, 2021, in the case of *Pascua Yaqui Tribe v. U.S. Environmental Protection Agency*, the U.S. District Court for the District of Arizona vacated and remanded the NWPR. In light of this order, the EPA and USACE have halted implementation of the NWPR and, until further notice, are interpreting "waters of the United States" consistent with the pre-2015 regulatory regime.

The interpretation of waters of the U.S. prior to 2015 generally included:

- All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.
- All interstate waters including interstate wetlands.

- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce.

- All impoundments of waters otherwise defined as waters of the United States under the definition.

- Tributaries of waters identified in the bulleted items above.

As determined by the United States Supreme Court in its 2001 *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (SWANCC) decision, channels and wetlands isolated from other jurisdictional waters cannot be considered jurisdictional on the basis of their use, hypothetical or observed, by migratory birds. Similarly, in its 2006 consolidated *Carabell/Rapanos* decision, the U.S. Supreme Court ruled that a significant nexus between a wetland and other navigable waters must exist for the wetland itself to be considered a jurisdictional water.

All activities that involve the discharge of dredge or fill material into waters of the U.S. are subject to the permit requirements of the USACE. Such permits are typically issued on the condition that the applicant agrees to provide mitigation that result in no net loss of wetland functions or values. No permit can be issued until the RWQCB issues a Section 401 Water Quality Certification (or waiver of such certification) verifying that the proposed activity will meet state water quality standards.

Under the Porter-Cologne Water Quality Control Act of 1969, the State Water Resources Control Board has regulatory authority to protect the water quality of all surface water and groundwater in the State of California ("waters of the State"). Nine RWQCBs oversee water quality at the local and regional level. The RWQCB for a given region regulates discharges of fill or pollutants into waters of the State through the issuance of various permits and orders. Discharges into waters of the State that are also waters of the U.S. require a Section 401 Water Quality Certification from the RWQCB as a prerequisite to obtaining certain federal permits, such as a Section 404 Clean Water Act permit. Discharges into all waters of the State, even those that are not also waters of the U.S., require Waste Discharge Requirements (WDRs), or waivers of WDRs, from the

RWQCB. The RWQCB also administers the Construction Storm Water Program and the federal National Pollution Discharge Elimination System (NPDES) program. Projects that disturb one or more acres of soil must obtain a Construction General Permit under the Construction Storm Water Program. A prerequisite for this permit is the development of a Storm Water Pollution Prevention Plan (SWPPP) by a certified Qualified SWPPP Developer. Projects that discharge wastewater, storm water, or other pollutants into a water of the U.S. may require a NPDES permit.

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

4.0 IMPACTS AND MITIGATIONS

As discussed, the project is reconstruction of 1 mile of existing roadway to accommodate a four-lane arterial street within an approximately 11-acre project site. Potential project impacts to biological resources and mitigations are discussed below.

4.1 POTENTIALLY SIGNIFICANT PROJECT IMPACTS/MITIGATION

4.1.1 Project Impacts to Nesting Birds

Potential Impacts. The project site contains some suitable nesting habitat for a number of avian species protected under the federal Migratory Bird Treaty Act and related state laws. During the site survey, small stick nests (inactive) were observed in trees adjacent to the project site. Trees and shrubs are few within the project boundary, but do offer additional nesting habitat for some bird species adapted to urban environments. If birds were to be nesting on or adjacent to the project site at the time of construction, project-related activities could result in the abandonment of active nests or direct mortality to these birds. Construction activities that adversely affect the nesting success of migratory birds or raptors, or result in mortality of individual birds constitute a violation of state and federal laws (see Sections 3.5, 3.6, and 3.7) and would be considered a significant impact under CEQA.

Mitigation. In order to minimize construction disturbance to nesting birds and raptors, the applicant will implement the following measure(s), as necessary, prior to project construction:

> ***Mitigation 4.1.1a* (*Avoidance*).** In order to avoid impacts to nesting migratory birds and raptors, construction will occur, where possible, outside the nesting season, or between September 1 and January 31.
>
> ***Mitigation 4.1.1b* (*Pre-construction Surveys*).** If construction must occur during the nesting season (February 1-August 31), a qualified biologist will conduct pre-construction surveys for active migratory bird and raptor nests within 10 days of the onset of these activities. Nest surveys will include all areas on and within 250 feet of the project site. If no active nests are found within the survey area, no further mitigation is required.
>
> ***Mitigation 4.1.1d* (*Establish Buffers*).** Should any active nests be identified, the biologist will establish suitable disturbance-free buffers around the nests. Buffers will be identified on the ground with flagging or fencing, and will be maintained until the biologist has determined that the young have fledged and the nests are no longer active.

Compliance with the above mitigation measures would reduce impacts to nesting raptors and migratory birds to a less than significant level under CEQA and ensure compliance with state and federal law.

4.2 LESS THAN SIGNIFICANT PROJECT IMPACTS

4.2.1 Special Status Plants

Potential Impacts. Eighteen special status vascular plant species are known to occur in the region (see Table 1). Due to habitat loss or degradation associated with the high level of human disturbance of the project site, the absence of any present or historically suitable habitat, and/or the site being situated outside the species' range, none of these species are expected to occur within the project site. Therefore, the proposed project would not affect these species or their habitats, and impacts would be less than significant.

Mitigation. Mitigation measures are not warranted.

4.2.2 Special Status Animal Species Absent from, or Unlikely to Occur on the Project Site

Potential Impacts. Of the 24 special status animal species that potentially occur in the project vicinity, all but one species, the pallid bat (*Antrozous pallidus*), are considered absent or unlikely to occur within the project site due to past and ongoing disturbance of the site and surrounding lands, the absence of suitable habitat, and/or the site being situated outside of the species' known distribution (see Table 1). The project does not have the potential to significantly impact these species through construction mortality or loss of habitat because there is little or no likelihood that they are present.

Mitigation. Mitigation is not warranted.

4.2.3 Special Status Animal Species that May Occur on the Project Site as Occasional or Regular Foragers but Breed Elsewhere

Potential Impacts. One special status animal, the pallid bat, has the potential to forage on the site from time to time but would not breed or roost on the site (see Table 1). Potential foraging habitat on the project site is not uniquely important for these species and similar or higher quality foraging

habitat is relatively abundant in the region. This species would not be vulnerable to construction-related injury or mortality because they are nocturnal, and their active period of foraging is expected to be at night when construction has ceased. Even if one or more individuals were to occur on the site during construction, their high level of mobility would allow them to easily evade any danger. For these reasons, project impacts to the pallid bat are considered less than significant under CEQA.

Mitigation. Mitigation is not warranted.

4.2.4 Wildlife Movement Corridors

Potential Impacts. As discussed, this project site is surrounded by urban development that is expanding just north of the project area. There are no physical features (riparian corridors, valleys, etc.) at the project site that would support regular or predicted wildlife movement. Therefore, the project will result in a less than significant effect on wildlife movement corridors.

Mitigation. No mitigation is warranted.

4.2.5 Sensitive Natural Communities

Potential Impacts. Sensitive natural communities are absent from the project site. The only habitat present within the project site is ruderal/developed.

Mitigation. No mitigation is warranted.

4.2.6 Waters of the State and the United States

Potential Impacts. Wetlands and jurisdictional waters are absent from the project site.

Mitigation. No mitigation is warranted.

4.2.7 Local Policies or Habitat Conservation Plans

Potential Impacts. No valley oak trees are located within the project site. There are five crapemyrtle trees (< 4 in. Diameter at Breast Height (DBH)), a pecan tree (26 in. DBH), and a hackcherry tree (22 in. DBH) that are expected to be removed from the project site to expand the existing road. These trees are not protected by City of Visalia's Oak Tree Mitigation Policy (2007),

which was developed pursuant to Visalia Municipal Code, and therefore no mitigation is required. No known Habitat Conservation Plans are in effect for the area. The project appears to be consistent with the City of Visalia General Plan.

Mitigation. No mitigation is warranted.

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APPENDIX A: VASCULAR PLANTS OF THE PROJECT SITE

APPENDIX A: VASCULAR PLANTS OF THE PROJECT SITE

The vascular plant species listed below were observed on the project site during the site survey conducted by Live Oak Associates, Inc. on January 7, 2022. The U.S. Fish and Wildlife Service wetland indicator status of each plant has been shown following its common name.

OBL - Obligate
FACW - Facultative Wetland
FAC - Facultative
FACU - Facultative Upland
UPL - Upland
NR - No review
NA - No agreement
NI - No investigation

ARECACEAE – Palm Family		
Washingtonia robusta	Mexican fan palm	**FACW**
ASTERACEAE – Sunflower Family		
Senecio vulgaris	Common groundsel	**FACU**
Sonchus oleraceus	Sow thistle	**UPL**
BORAGINACEAE – Borage Family		
Amsinckia intermedia	Common fiddleneck	**NI**
BRASSICACEAE - Mustard Family		
Brassica nigra	Black mustard	**NI**
Capsella bursa-pastoris	Shepherd's purse	**FACU**
Sisymbrium irio	London rocket	**NI**
CHENOPODIACEAE—Goosefoot Family		
Salsola tragus	Russian thistle	**FAC**
ERICACEAE–Heather Family		
Arctostaphylos uva-ursi	Bearberry	**FACU**
FABACEAE –Pea Family		
Acacia stenophylla	Shoestring acacia	**NI**
Medicago polymorpha	Bur clover	**FACU**
GERANIACEAE – Geranium Family		
Erodium moschatum	Whitestem filaree	**NI**
JUGLANDACEAE – Walnut Family		
Carya illinoinensis	Pecan	**FAC**
LAMIACEAE – Mint Family		
Rosmarinus officinalis	Rosemary	**NI**
LYTHRACEAE – Loosestrifes Family		
Lagerstroemia indica	Crapemyrtle	**NI**
MALVACEAE – Mallow Family		
Malva parviflora	Cheeseweed	**NI**
OXIDACEAE — Wood Sorrel Family		
Oxalis pes-caprae	Sourgrass	**NR**

POACEAE — Grass Family		
Bromus madritensis	Foxtail brome	**UPL**
Cynodon dactylon	Bermuda grass	**FACU**
Hordeum murinum	Foxtail barley	**FACU**
ROSACEAE — Rose Family		
Prunus virginiana	Chokecherry	**FAC**
TILACEAE — Basswood Family		
Tilia americana	American basswood	**NR**
ULMACEAE – Elm Family		
Ulmus pumila	Siberian elm	**UPL**
URTICACEAE – Nettle Family		
Urtica urens	Annual stinging nettle	**NR**

APPENDIX B: TERRESTRIAL VERTEBRATE SPECIES THAT POTENTIALLY OCCUR ON THE PROJECT SITE

APPENDIX B: TERRESTRIAL VERTEBRATE SPECIES THAT POTENTIALLY OCCUR ON THE PROJECT SITE

The species listed below are those that may reasonably be expected to use the habitats of the project site routinely or from time to time. The list was not intended to include birds that are vagrants or occasional transients. Terrestrial vertebrate species observed in or adjacent to the project site during the survey conducted by Live Oak Associates, Inc. on January 7, 2022 have been noted with an asterisk.

CLASS: REPTILIA (Reptiles)
ORDER: SQUAMATA (Lizards and Snakes)
SUBORDER: SAURIA (Lizards)
FAMILY: PHRYNOSOMATIDAE
San Joaquin Fence Lizard (*Sceloporus occidentalis biseriatus*)
Western Side-blotched Lizard (*Uta stansburiana elegans*)
SUBORDER: SERPENTES (Snakes)
FAMILY: COLUBRIDAE (Colubrids)
Pacific Gopher Snake (*Pituophis catenifer catenifer*)
FAMILY: VIPERIDAE (Vipers)
Northern Pacific Rattlesnake (*Crotalus oreganus oreganus*)

CLASS: AVES (Birds)
ORDER: CHARADRIIFORMES (Shorebirds and Allies)
FAMILY: LARIDAE (Gulls, Terns, and Skimmers)
*****California Gull (*Larus californicus*)
ORDER: CATHARTIFORMES (New World Vultures)
FAMILY: CATHARTIDAE (New World Vultures)
Turkey Vulture (*Cathartes aura*)
ORDER: ACCIPITRIFORMES (Hawks, Eagles, Kites, and Allies)
FAMILY: ACCIPITRIDAE (Hawks, Eagles, and Kites)
Red-tailed Hawk (*Buteo jamaicensis*)
ORDER: FALCONIFORMES (Falcons and Caracaras)
FAMILY: FALCONIDAE (Falcons and Caracaras)
American Kestrel (*Falco sparverius*)
ORDER: COLUMBIFORMES (Pigeons and Doves)
FAMILY: COLUMBIDAE (Pigeons and Doves)
*Rock Dove (*Columba livia*)
Eurasian Collared Dove (*Streptopelia decaocto*)
*Mourning Dove (*Zenaida macroura*)
ORDER: STRIGIFORMES (Owls)
FAMILY: TYTONIDAE (Barn Owls)
Barn Owl (*Tyto alba*)
FAMILY: STRIGIDAE (Typical Owls)
Great Horned Owl (*Bubo virginianus*)
ORDER: APODIFORMES (Swifts and Hummingbirds)

FAMILY: TROCHILIDAE (Hummingbirds)
*Anna's Hummingbird (*Calypte anna*)
Rufous Hummingbird (*Selasphorus rufus*)
Black-chinned Hummingbird (*Archilochus alexandri*)
ORDER: PICIFORMES (Woodpeckers and relatives)
FAMILY: PICIDAE (Woodpecker and Wrynecks)
Acorn Woodpecker (*Melanerpes formicivorus*)
ORDER: PASSERIFORMES (Perching Birds)
FAMILY: TYRANNIDAE (Tyrant Flycatchers)
Black Phoebe (*Sayornis nigricans*)
Western Kingbird (*Tyrannus verticalis*)
FAMILY: CORVIDAE (Jays, Magpies, and Crows)
*California Scrub Jay (*Aphelocoma californica*)
American Crow (*Corvus brachyrhynchos*)
*Common Raven (*Corvus corax*)
FAMILY: PARIDAE (Titmice and Relatives)
Oak Titmouse (*Baeolophus inornatus*)
FAMILY: AEGITHALIDAE (Bushtit)
Bushtit (*Psaltriparus minimus*)
FAMILY: TROGLODYTIDAE (Wrens)
House Wren (*Troglodytes aedon*)
FAMILY: REGULIDAE (Kinglets)
*Ruby-Crowned Kinglet (*Regulus calendula*)
FAMILY: TURDIDAE (Thrushes)
Western Bluebird (*Sialia mexicana*)
American Robin (*Turdus migratorius*)
FAMILY: MIMIDAE (Mockingbirds and Thrashers)
* Northern Mockingbird (*Mimus polyglottos*)
FAMILY: STURNIDAE (Starlings)
* European Starling (*Sturnus vulgaris*)
FAMILY: PARULIDAE (Wood Warblers and Relatives)
*Yellow-Rumped Warbler (*Dendroica coronata*)
FAMILY: EMBERIZIDAE (Emberizines)
*White-Crowned Sparrow (*Zonotrichia leucophrys*)
Dark-Eyed Junco (*Junco hyemalis*)
FAMILY: ICTERIDAE (Blackbirds, Orioles and Allies)
Great-Tailed Grackle (*Quiscalus mexicanus*)
Brewer's Blackbird (*Euphagus cyanocephalus*)
Brown-headed Cowbird (*Molothrus ater*)
FAMILY: FRINGILLIDAE (Finches)
*House Finch (*Haemorhous mexicanus*)
Lesser Goldfinch (*Carduelis psaltria*)
FAMILY: PASSERIDAE (Old World Sparrows)
*House Sparrow (*Passer domesticus*)

CLASS: MAMMALIA (Mammals)

ORDER: DIDELPHIMORPHIA (Marsupials)

FAMILY: DIDELPHIDAE (Opossums)

Virginia Opossum (*Didelphis virginiana*)

ORDER: EULIPOTYPHLA (Shrews, Moles, Hedgehogs, and Allies)

FAMILY: TALPIDAE (Moles)

Northern Broad-Footed Mole (*Scapanus latimanus*)

ORDER: CHIROPTERA (Bats)

FAMILY: VESPERTILIONIDAE (Evening Bats)

Yuma Myotis (*Myotis yumanensis*)
California Myotis (*Myotis californicus*)
Big Brown Bat (*Eptesicus fuscus*)
Pallid Bat (*Antrozous pallidus*)

FAMILY: MOLOSSIDAE (Free-tailed Bat)

Brazilian Free-tailed Bat (*Tadarida brasiliensis*)

ORDER: LAGOMORPHA (Rabbits, Hares, and Pikas)

FAMILY: LEPORIDAE (Rabbits and Hares)

Audubon Cottontail Rabbit (*Sylvilagus audubonii*)

ORDER: RODENTIA (Rodents)

FAMILY: GEOMYIDAE (Pocket Gophers)

Botta's Pocket Gopher (*Thomomys bottae*)

FAMILY: MURIDAE (Old World Rats and Mice)

Norway Rat (*Rattus norvegicus*)
House Mouse (*Mus musculus*)
California Vole (*Microtus californicus*)

ORDER: CARNIVORA (Carnivores)

FAMILY: CANIDAE (Foxes, Wolves, and relatives)

Coyote (*Canis latrans*)
Feral Dog (*Canis lupus familiaris*)

FAMILY: PROCYONIDAE (Raccoons and relatives)

Raccoon (*Procyon lotor*)

FAMILY: MEPHITIDAE (Skunks)

Striped Skunk (*Mephitis mephitis*)

FAMILY: FELIDAE (Cats)

Feral Cat (*Felis domesticus*)

APPENDIX C: SELECTED PHOTOGRAPHS OF THE PROJECT SITE



Photo 1: Eastern boundary of the project site on Riggin Avenue.



Photo 2: Seven crapemyrtle trees to be removed within the project site.



Photo 3: Pecan tree (foreground) and hackcherry (background) to be removed within the project site.



Photo 4: Western boundary of project site on Riggin Avenue and North Mooney Avenue.



Photo 5: Central portion of the project site on Riggin Avenue. Orange fence is boundary of new residential development.

Appendix C

VMT Technical Memo

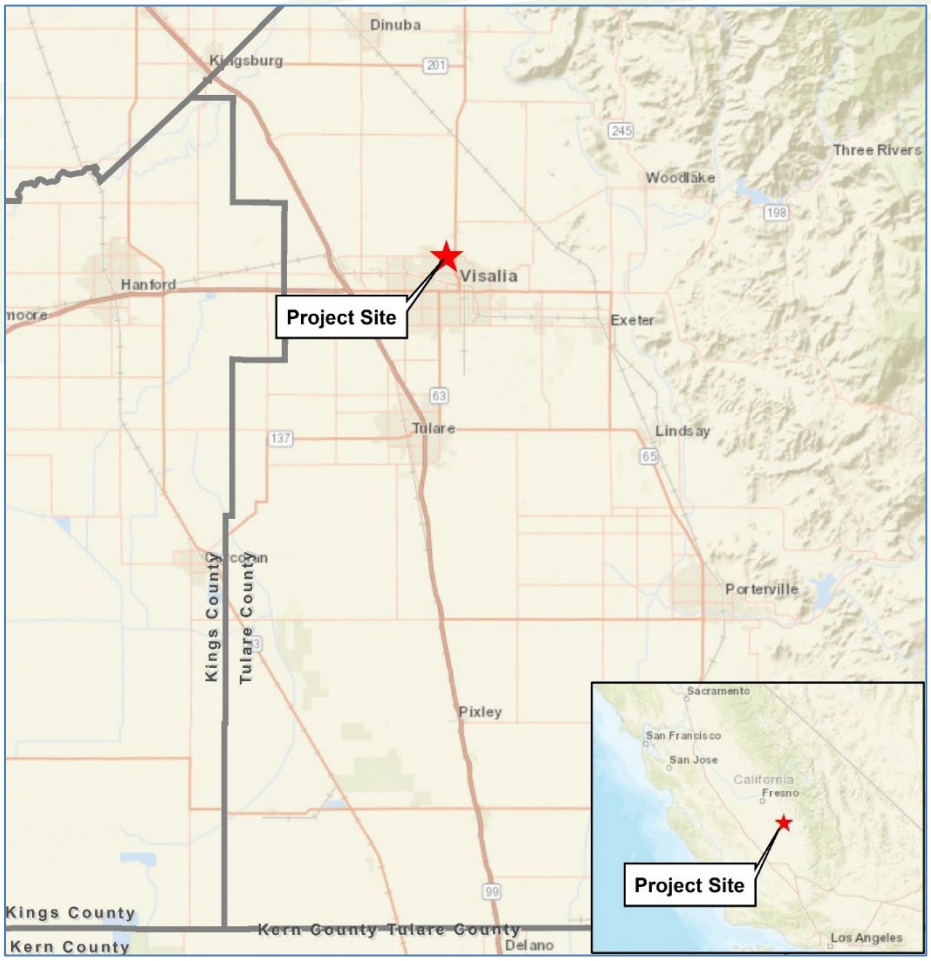
TECHNICAL MEMORANDUM

Date:	January 12, 2022		
To:	Molly Baumeister, 4Creeks	*Project No.:*	092-X Riggin Widening Mooney to Conyer VMT
From:	Arthur Chen, TJKM	*Jurisdiction:*	Mountain View

Subject: **Riggin Ave Widening Mooney to Conyer VMT Analysis Memorandum (DRAFT)**

TJKM conducted a VMT (Vehicle Miles Traveled) analysis for the proposed Riggin Avenue Widening (Mooney to Conyer) project. The project is located in the city of Visalia and involves the reconstruction of 0.75 mile of existing Riggin Ave between N Mooney Blvd and Conyer Street. The project is located in the northern part of the city. Figure 1 shows the location of the project.

Figure 1 – Project Location Map



For VMT forecasting, the final adopted Visalia VMT guidelines were used. The guidelines state that assessment of a transportation project's VMT should disclose the VMT without the project and the difference in VMT with the project. Any growth in VMT attributable to the transportation project would result in a significant impact. A significant transportation project impact is presumed when the VMT increases over the No Project condition.

TJKM utilized the latest Tulare County Association of Governments (TCAG) Travel Demand Model to forecast the net change in total VMT for Tulare County, with and without the proposed project. An additional lane was added on Riggin Avenue in both directions from Mooney Blvd to Conyer Street and the model was re-ran with the base year and forecast year conditions. Tables 1 and 2 summarize the VMT results from the model.

Table 1: VMT Forecast: Existing plus Project Conditions

Scenario	Total VMT (Tulare County Model Area)
Existing Conditions	15,164,825
Existing plus Project Conditions	15,164,825
Net VMT with Proposed Project	0
VMT Impact Finding (Existing plus Project Conditions)	Less Than Significant

Table 2: VMT Forecast: Cumulative Conditions

Scenario	Total VMT (Tulare County Model Area)
2042 Model Forecast Year (without Riggin Avenue widening)	17,164,139
2042 Model Forecast Year (with Riggin Avenue widening)	17,164,139
Net VMT with Proposed Project	0
VMT Impact Finding (Cumulative Conditions)	Less Than Significant

Based on the TCAG model, the proposed project is not anticipated to results in a net increase in total VMT. In addition, TJKM analyzed the total number of trips from the model with and without project for both the base and forecast years. The number of trips did not increase between the base and cumulative conditions.

The City of Visalia's VMT guidelines stipulated a study on induced demand for roadway expansion projects. The following are from the guidelines on how to estimate induced VMT impacts from roadway expansion projects (UC Davis Induced Travel Calculator NCST Method):

1. *Determine total lane-miles over an area that fully captures travel behavior changes resulting from the project (generally the region, but for projects affecting interregional travel look at all affected regions).*
2. *Determine the percentage change in total lane miles that will result from the project.*
3. *Determine the total existing VMT over that same area.*
4. *Multiply the percentage increase n lane miles by the existing VMT, and then multiply that by the elasticity from the induced travel literature:*

[% increase in lane miles] x [existing VMT] x [elasticity] = [VMT resulting from the project]

While the travel demand model forecasted no growth in VMT, TJKM used the above formula to calculate induced VMT from the Riggins project.

% increase in lane miles = 0.75 / 10,756 = **0.009%** (The project widens 0.75 mile of Riggins avenue, and 10,756 miles are the total lane miles in Tulare County from the TCAG model).

Existing VMT = ***15,164,825*** (The existing VMT of the region pulled from the TCAG Model)

Elasticity = 1 (The elasticity value was pulled from the transportation analysis guidelines).

Putting the three values together generates an induced daily VMT of **1,410** for the Riggins Widening. As a percentage of the existing VMT, this value is statistically insignificant (1,410/15,164,825 =**0.009%**).

As described in CEQA Section 15064.3: "Vehicle miles traveled" refers to the amount and distance of automobile travel "attributable to a project." As described separately in the Technical Advisory on Evaluating Transportation Impacts in CEQA (Governor's Office of Planning & Research, December 2018), VMT re-routed from other origins or destinations as the result of a project would not be attributable to a project except to the extent that the re-routing results in a net increase in VMT. A roadway widening could result in a net increase in total VMT if the roadway is currently operating at capacity, in which case the added capacity provided by a road widening could result in added VMT due to latent demand. However, this is not the case for the proposed project. The *Visalia General Plan EIR* (2010) noted that Riggin Avenue served approximately 7,800 daily vehicles, well below the estimated capacity of more than 15,000 daily vehicles for the existing 2-lane configuration. Additionally, excess capacity is also currently provided on parallel routes such as State Route 198, further reducing the likelihood that the proposed project would result in a net increase in total VMT. Riggin Avenue also provides a direct connection to Highway 99 via Betty Drive, which could reduce VMT for some trips that would otherwise travel on State Route 198.

Even though the calculation resulted in an increase of 1,410 VMT, it is highly unlikely there will be increased demand from a 0.75 mile widening due to excess capacity available from the routes mentioned in the previous paragraph.

In addition, the guidelines states the induced VMT growth stems from induced land use; the Visalia general plan does not include any additional residential or commercial land uses in the Riggins / Mooney

and Dinuba area for the project lifespan. It is highly unlikely the widening will induce demand since additional capacity exists and no additional land uses are planned for the area.

According to the TCAG model, the project is not anticipated to increase VMT. In addition, the induced VMT for this project is statistically 0, so TJKM finds that ***VMT impacts associated with the proposed project are less than significant and no mitigation is required.***

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[5]	Total Operational Hours	BSFC[2]	Fuel Used (gallons)[3]	MBTU[4]
Grubbing/Land Clearing	Excavators	2	8	158	0.38	592	0.367	1834.93	255.05553
Grubbing/Land Clearing	Crawler Tractors	1	8	212	0.43	296	0.367	1393.01	193.6281
Grading/Excavation	Crawler Tractos	1	8	212	0.43	1320	0.367	6212.06	863.47665
Grading/Excavation	Excavators	3	8	158	0.38	3960	0.367	12274.21	1706.1147
Grading/Excavation	Graders	2	8	187	0.41	2640	0.367	10449.29	1452.4518
Grading/Excavation	Rollers	2	8	80	0.38	2640	0.408	4606.06	640.2417
Grading/Excavation	Rubber Tired Loaders	1	8	97	0.37	1320	0.408	2718.94	377.93215
Grading/Excavation	Scrapers	2	8	367	0.48	2640	0.367	24008.71	3337.2103
Grading/Excavation	Tractors/Loaders/Backhoes	2	8	97	0.37	2640	0.408	5437.87	755.8643
Drainage/Utilities/Subgrade	Air Compressors	1	8	78	0.48	880	0.408	1890.91	262.83607
Drainage/Utilities/Subgrade	Generator Sets	1	8	84	0.74	880	0.408	3139.39	436.37527
Drainage/Utilities/Subgrade	Graders	1	8	187	0.41	880	0.367	3483.10	484.15061
Drainage/Utilities/Subgrade	Plate Compactors	1	8	8	0.43	880	0.408	173.74	24.149468
Drainage/Utilities/Subgrade	Pumps	1	8	84	0.74	880	0.408	3139.39	436.37527
Drainage/Utilities/Subgrade	Rough Terrain Forklifts	1	8	100	0.4	880	0.367	1817.19	252.58934
Drainage/Utilities/Subgrade	Scrapers	1	8	367	0.48	880	0.367	8002.90	1112.4034
Drainage/Utilities/Subgrade	Tractors/Loaders/Backhoes	3	8	97	0.37	2640	0.408	5437.87	755.8643
Paving	Pavers	1	8	130	0.48	440	0.367	1417.41	197.01968
Paving	Paving Equipment	1	8	132	0.36	440	0.367	1079.41	150.03807
Paving	Rollers	2	8	80	0.38	880	0.408	1535.35	213.4139
Paving	Tractors/Loaders/Backhoes	5	8	97	0.37	2200	0.408	4531.56	629.88692
SCE Scope - Civil Construction[6]	Tool Truck/Pickup Truck	4	8	180	0.29	1760	0.367	4742.86	659.25817
SCE Scope - Civil Construction[6]	Backhoe	1	8	75	0.37	440	0.408	700.76	97.405193
SCE Scope - Pole Relocation[6]	Heavy Truck	2	8	300	0.29	880	0.367	3952.39	549.38181
SCE Scope - Pole Relocation[6]	Bucket Truck	2	8	200	0.29	880	0.367	2634.92	366.25454
SCE Scope - Pole Relocation[6]	Cable Puller	1	8	75	0.37	440	0.408	700.76	97.405193
SCE Scope - Pole Relocation[6]	Pickup Truck	4	8	180	0.29	1760	0.367	4742.86	659.25817
Total								**122057.85**	**16966.0**

Construction Phases

PhaseNumber	Phase Name	Phase Start Date	Phase End Date	Num Days Week	Total Number of Days
1	Grubbing/Land Clearing	7/2/2023	8/8/2023	5	37
2	Grading/Excavation	8/9/2023	1/14/2024	5	165
3	Drainage/Utilities/Subgrade	1/15/2024	5/10/2024	5	110
4	Paving	5/11/2024	8/1/2024	5	55

SCE Phases

PhaseNumber	Phase Name	Phase Start Date	Phase End Date	Num Days Week	Total Number of Days
1	SCE Scope - Civil Construction	7/3/2023	7/5/2023	5	3
2	SCE Scope - Pole Relocation	7/1/2023	9/29/2023	5	28

Notes

1. Roadway Construction Emissions Model 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
5. CalEEMod Default Values Used
6. Equipment amount and usage provided by SCE

Mobile Energy Use (Construction)

Worker Trips

	Daily Worker Trips[1]	Worker Trip Length[1]	VMT/Day	MPG Factor[3]	Gallons of Gas/Day	# of Days[1]	Total Gallons of Gas	MBTU
Grubbing/Land Clearing	14	20	280	29.23	9.6	37	354.43	41.15
Grading/Excavation	44	20	880	29.23	30.1	165	4967.50	576.68
Drainage/Utilities/Subgrade	30	20	600	29.23	20.5	110	2257.95	262.13
Paving	24	20	480	29.23	16.4	55	903.18	104.85
SCE Scope - Civil Construction[4]	8	20	160	29.23	5.5	3	16.42	1.91
SCE Scope - Pole Relocation4	50	20	1000	29.23	34.2	28	957.92	111.20
Total	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**398**	**9457.41**	**1097.91**

Water Truck

	Daily Vendor Trips[1]	Vendor Trip Length[1]	VMT/Day	MPG Factor[3]	Gallons of Diesel/Day	# of Days[1]	Total Gallons of Diesel	MBTU
Grubbing/Land Clearing	5	8	40	7.12	5.6	37	207.87	28.89
Grading/Excavation	5	8	40	7.12	5.6	165	926.97	128.85
Drainage/Utilities/Subgrade	5	8	40	7.12	5.6	110	617.98	85.90
Paving	5	8	40	7.12	5.6	55	308.99	42.95
Total							2061.80	286.59

Fleet Characteristics

	Vehicle Class	Fleet Mix	2024 MPG Factor (EMFAC2017)	Average MPG Factor
Assumed Vehicle Fleet for Workers	LDA	33%	33.24	29.23
	LDT1	33%	28.07	
	LDT2	33%	26.38	

Notes
1. Road Construction Emissions Model Default values used
2. MBTU calculated for comparison purposes. Assumed 1 gallon of gasoline = 0.11609 MBTU
3. MPG Factor Based on EMFAC2017
4. Worker information provided by SCE

Appendix E

60% Design Plans

Know what's **below.**
Call before you dig.

City of Visalia

County of Tulare — State of California

RIGGIN WIDENING - MOONEY BLVD. TO DINUBA BLVD.

PROJECT NO. 3010-72000/CP0473-999

CITY OF VISALIA CONTACT INFORMATION:

Sanitary Sewer &
Storm Water Collection
Attn: Rick Paradez
City of Visalia
7579 Avenue 288 (WWTP)
Visalia, CA 93277
Phone: (559) 713-4273

Street Department
Attn: Wyndi Ferguson
City of Visalia
336 N. Ben Maddox Way
Visalia, CA 93292
Phone: (559) 713-4186

UTILITY CONTACT INFORMATION:

California Water Service Company
Area Superintendent: Stuart Skoglund
216 N. Valley Oaks Drive
Visalia, CA 93291
Phone: (559) 772-5260
Email: sskoglund@calwater.com

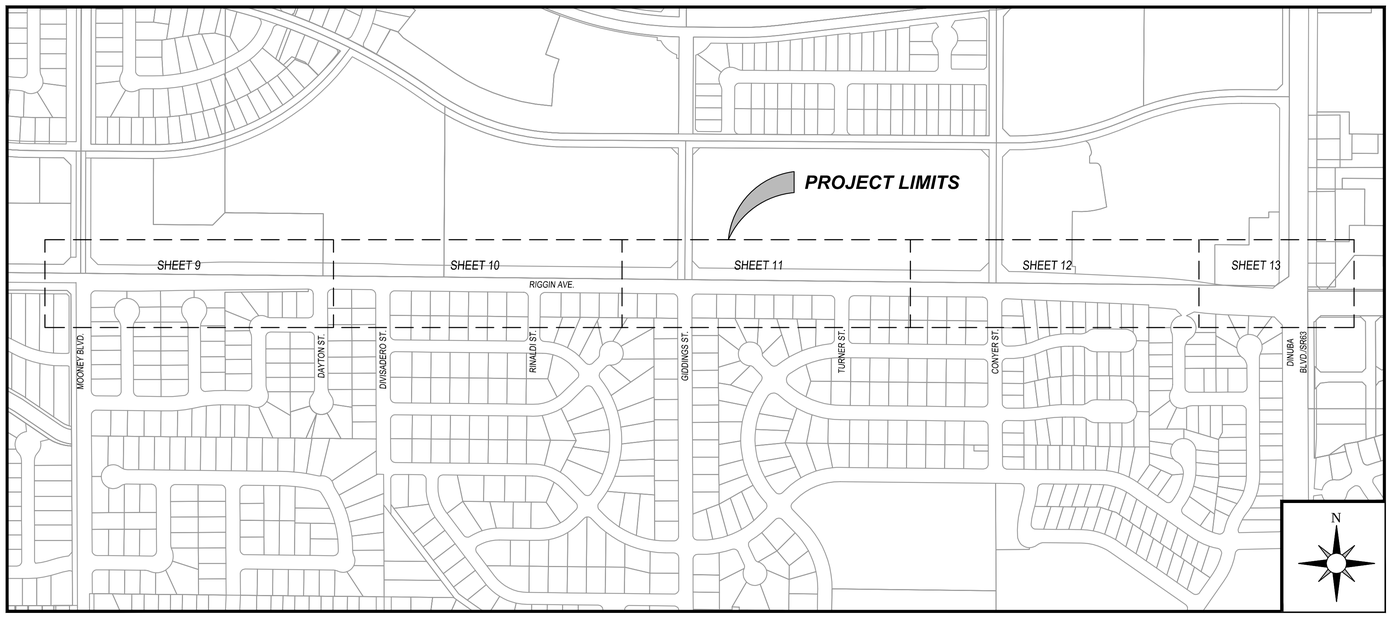
Comcast Cable
Construction Supervisor: Michael Corral
1031 N. Plaza Drive
Visalia, CA 93291
Phone: (559) 735-2104
Email: michael_corral@cable.comcast.com

AT&T California
Project Manager: Erin Pectol
217 W. Acequia Ave.
P.O. Box 2666
Visalia, CA 93291
Phone: (559) 739-6649
Email: EP8545@att.com

Southern California Gas Company
Project Manager: Jeff Goforth
404 N. Tipton St.
Visalia, CA 93292
Fax: (559) 739-2253
Phone: (559) 739-2337
Email: jgoforth@semprautilities.com

Southern California Edison (SCE)
Local Planner: Christian Bright
San Joaquin Valley
Phone: (559) 684-3527
Email: christian.bright@sce.com

Century Link (Previously LEVEL 3)
OSP Engineer Scott Mattingly
Southern California Division CentryLink
818 W. 7th St, Suite 1110
Los Angeles, CA 90017
Office: (213) 986-5587
Mobile: (213) 309-9869
Email: scott.mattingly@centurylink.com



PROJECT MAP

SCALE 1": 300'

NO. DETAILED SHEET INDEX

NO.	DETAILED SHEET INDEX
1	COVER SHEET
2	GENERAL NOTES, LEGEND & ABBREVIATIONS
3	TOPO-DEMO PLANS - RIGGIN AVE. STA: 10+00 - 34+00
4	TOPO-DEMO PLANS - RIGGIN AVE. STA: 34+00 - 58+00
5	UTILITY & POTHOLING PLAN - RIGGIN AVE. STA: 10+00 - 34+00
6	UTILITY & POTHOLING PLAN - RIGGIN AVE. STA: 34+00 - 58+00
7	IMPROVEMENT PLAN & PROFILE - RIGGIN AVE. STA: 10+00 - 22+00
8	IMPROVEMENT PLAN & PROFILE - RIGGIN AVE. STA: 22+00 - 34+00
9	IMPROVEMENT PLAN & PROFILE - RIGGIN AVE. STA: 34+00 - 46+00
10	IMPROVEMENT PLAN & PROFILE - RIGGIN AVE. STA: 46+00 - 58+00
11	CROSS SECTIONS
12	SIGNING, STRIPING & MARKING PLAN - RIGGIN AVE. STA: 10+00 - 32+00
13	SIGNING, STRIPING & MARKING PLAN - RIGGIN AVE. STA: 32+00 - 58+00
14	SIGNING, STRIPING & MARKING PLAN - RIGGIN AVE. STA: 58+00 - END
15	STREET LIGHTING & FIBER INTERCONNECT PLAN - RIGGIN AVE. STA: 10+00 - 34+00
16	STREET LIGHTING & FIBER INTERCONNECT PLAN - RIGGIN AVE. STA: 34+00 - 58+00
17	STREET LIGHTING & FIBER INTERCONNECT PLAN - RIGGIN AVE. STA: 58+00 - END
18	BUS TURNOUT DETAILS
19	RIGGIN AVE RAMP DETAILS
20	RIGGIN AVE RAMP DETAILS
21	RIGGIN AVE RAMP DETAILS
22	DRIVE APPROACH DETAILS
23	DRIVE APPROACH DETAILS
24	CIVIL DETAILS
25	CIVIL DETAILS
26	CIVIL DETAILS
27	CIVIL DETAILS
28	CIVIL DETAILS
29	CIVIL DETAILS

BENCHMARK

CITY OF VISALIA BM #707
PK NAIL IN TOP OF CURB CENTER RADIUS POINT SE CORNER INTERSECTION
LOCATION: PRATT+COUNTY CENTER ELEVATION 317.88 (NGVD - 29)

CITY OF VISALIA

THIS SET OF PLANS HAVE BEEN REVIEWED FOR COMPLIANCE WITH CITY REQUIREMENTS & THE CITY OF VISALIA STANDARD SPECIFICATION & DETAILS. THE CITY DOES NOT ASSUME ANY LIABILITY FOR ERRORS OR OMISSIONS. THIS ACCEPTANCE SHALL NOT PREVENT THE CITY ENGINEER FROM REQUIRING CORRECTION OF ERRORS OR OMISSIONS THAT ARE IN VIOLATION OF ANY LAW OR ORDINANCE.

DIEGO CORVERA, PE — CIVIL ENGNEER, CITY OF VISALIA — Date

KYLE MCDONALD, PE — CIVIL ENGINEER, 4CREEKS, INC. — Date

NO.	DATE	DESCRIPTION

PROFESSIONAL ENGINEER — MICHAEL HOLLOWAY — No. 83918 — STATE OF CALIFORNIA — CIVIL

324 S. SANTA FE, STE. A
P.O. BOX 7593
VISALIA, CA 93292
TEL: 559.802.3052
FAX: 559.802.3215

PREPARED BY: 4CREEKS — DRW BY: MH — CHK BY: KM

VISALIA — Founded 1853

CITY OF VISALIA
315 E. ACEQUIA AVE.
VISALIA, CA 93291

RIGGIN AVENUE
WIDENING & IMPROVEMENTS
COVER SHEET

PROJ. NO. 21097
DATE:9/10/2021
DESIGN BY: MA | DRAWN BY:BA
SCALE: AS SHOWN
SHEET 1 OF 29

60% SUBMITTAL

CITY OF VISALIA GENERAL NOTES:

1. ALL WORK SHALL CONFORM TO THE 2018 EDITION OF CALTRANS' STANDARD PLANS AND SPECIFICATIONS, THE 2014 CA MUTCD, THE CURRENT EDITION OF THE CITY OF VISALIA ENGINEERING STANDARD SPECIFICATIONS AND ENGINEERING DESIGN & IMPROVEMENT STANDARDS, THE PLANS, AND ALL OTHER CONTRACT DOCUMENTS. WHERE CITY STANDARD DETAILS ARE SHOWN AS MODIFIED ON THESE PLANS, THE MODIFIED DETAIL SHALL BE USED.

2. AT LEAST 5 WORKING DAYS PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL VERIFY THE INFORMATION SHOWN ON THESE PLANS WITH THE REFERENCED DOCUMENTS AND NOTIFY THE CITY OF VISALIA OF ANY DISCREPANCIES. NOTIFY THE CITY OF VISALIA OF ANY AND ALL CONFLICTS BETWEEN THIS SET OF PLANS AND THE ACTUAL SITE CONDITIONS. AND NOTIFY THE CITY OF VISALIA CONSTRUCTION MANAGER WHEN CONSTRUCTION WILL COMMENCE. THE PROJECT'S MANAGER WILL BE ASSIGNED AFTER THE AWARD FOR CONSTRUCTION.

3. SHOULD IT APPEAR THAT THE WORK TO BE DONE OR ANY MATTER RELATIVE HERETO IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THESE PLANS, THE CONTRACTOR SHALL CONTACT THE CONSTRUCTION MANAGER FOR SUCH FURTHER EXPLANATIONS AS MAY BE NECESSARY.

4. CITY OF VISALIA, OR DESIGNATED RESPRESENTATIVE SHALL INSPECT ALL WORK PHASES FOR CONFORMANCE TO THE PLANS, SPECIFICATIONS, AND CONTRACT DOCUMENTS. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL ITEMS THAT REQUIRE INSPECTION WITH THE CITY INSPECTOR. REINFORCING SHALL NOT BE ENCASED IN CONCRETE WITHOUT PRIOR CITY OF VISALIA INSPECTIONS. LIKEWISE, CONCRETE AND OTHER IMPROVEMENTS SHALL NOT BE COVERED WITH EARTH PRIOR TO CITY OF VISALIA INSPECTION. ANY INSPECTIONS TO BE PERFORMED BY THE CITY SHALL REQUIRE 2 WORKING DAYS NOTICE. ANY WORK CONCEALED WITHOUT INSPECTION WILL BE SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTORS EXPENSE.

5. CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS DURING CONSTRUCTION, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

6. THE CONTRACTOR SHALL NOTIFY UTILITY COMPANIES AT LEAST 5 WORKING DAYS IN ADVANCE OF CONSTRUCTION TO FIELD LOCATE UTILITIES. CALL "UNDERGROUND SERVICE ALERT" (USA) 1-800-227-2600 OR 811.

7. CONTRACTOR SHALL EXPOSE ALL EXISTING UNDERGROUND PIPELINES OR OTHER UNDERGROUND OBSTRUCTIONS TO VERIFY THAT THERE ARE NO GRADE CONFLICTS PRIOR TO LAYING ANY GRAVITY PIPELINES.

8. MONUMENTS AND BENCHMARKS SHALL NOT BE DISTURBED WITHOUT THE CITY'S CONSENT.

9. CONTRACTOR SHALL NOTIFY THE CITY'S LAND SURVEYOR 5 WORKING DAYS PRIOR TO DISTURBING ANY SURVEY MONUMENTS OR BENCHMARKS. CONTRACTOR WILL BE RESPONSIBLE FOR RECONSTRUCTING SURVEY MONUMENTS / BENCHMARKS IN ACCORDANCE WITH CITY STANDARDS, AT NO ADDITIONAL COST.

10. CONTRACTOR SHALL PRESERVE ALL CONSTRUCTION SURVEY STAKES AND PROPERTY LINE MARKERS. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY CARELESS REMOVALS OR DESTRUCTION.

11. ADJUST MANHOLES, VALVE BOXES AND OTHER UTILITY BOXES TO GRADE WITHIN NEWLY CONSTRUCTED AREAS.

12. CONTRACTOR SHALL PROVIDE PEDESTRIAN, VEHICLE, WORKER, AND TREE PROTECTION AS NECESSARY FOR THE FULL DURATION OF THE PROJECT.

13. CONTRACTOR SHALL INSTALL APPROVED TRAFFIC CONTROL SIGNS PRIOR TO COMMENCEMENT OF ANY WORK.

14. CONTRACTOR SHALL KEEP THE WORK SITE CLEAN AND FREE FROM RUBBISH AND DEBRIS THROUGH ALL PHASES OF CONSTRUCTION.

15. CONTRACTOR SHALL SWEEP ALL STREETS, ALLEYS, AND WALKS PRIOR TO CITY ACCEPTANCE OF PROJECT.

16. ALL EXCESS MATERIAL AND/OR DEBRIS SHALL BE REMOVED UPON COMPLETION OF THIS PROJECT.

17. CONTRACTOR SHALL PROPERLY DISPOSE OF ALL WASTE MATERIALS AND SALVAGE OR RELOCATE OTHER STRUCTURES AS SHOWN ON THE PLANS OR AS DIRECTED BY THE CITY'S REPRESENTATIVE.

18. THE CONTRACTOR SHALL PROVIDE FOR INGRESS AND EGRESS FOR PRIVATE PROPERTY ADJACENT TO WORK THROUGHOUT THE PERIOD OF CONSTRUCTION.

19. THE LIMITS OF WORK ARE ENCOMPASSED BY THE RIGHT-OF-WAY AND TEMPORARY CONSTRUCTION EASEMENTS, AND SHALL INCLUDE ONLY SUCH WORK AS IS SHOWN ON THESE PLANS OR AS SPECIFIED IN THE SPECIFICATIONS OR OTHER CONTRACT DOCUMENTS.

20. PRIOR TO CONSTRUCTING ANY IMPROVEMENTS IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT ALL MATCH EXISTING ELEVATIONS SHOWN ON THE PLANS ARE ACCURATE AND FOR VERIFYING THAT NONE OF THE MAXIMUM ACCESSIBILITY SLOPES ARE VIOLATED. CONTRACTOR SHALL NOTIFY CITY CONSTRUCTION MANAGER IMMEDIATELY IF ANY PROBLEMS EXIST. ANY IMPROVEMENTS THAT REQUIRE REMOVAL AND REPLACEMENT BECAUSE OF THE CONTRACTOR'S FAILURE TO COMPLY WITH THIS NOTE SHALL BE COMPLETED BY THE CONTRACTOR AT HIS OR HER OWN EXPENSE.

21. ANY RELOCATION OF PUBLIC UTILITIES SHALL BE CONDUCTED IN ACCORDANCE WITH ANY AND ALL REQUIREMENTS OF THE UTILITY COMPANY, INCLUDING FEES, BONDS, PERMITS AND WORKING CONDITIONS, ETC.

22. APPROPRIATE APPROVALS SHALL BE OBTAINED PRIOR TO PROCEEDING WITH ANY WORK IN THE VICINITY OF IRRIGATION DITCHES, CREEKS, ASSOCIATED IRRIGATION FACILITIES, AND RAILROADS WHETHER OR NOT SHOWN ON THESE PLANS.

23. ANY LANDSCAPING AND/OR IRRIGATION DISTURBED OR DESTROYED BY CONSTRUCTION ACTIVITIES SHALL BE REPLACED IN-KIND.

24. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTING STABILIZED CONSTRUCTION ENTRANCES IN ORDER TO REDUCE OR ELIMINATE TRACKING OF SEDIMENT ONTO PUBLIC STREETS. ALL DRAINAGE PROTECTIVE DEVICES SUCH AS SWALES, INTERCEPTION DITCHES, PROTECTIVE BERMS, CONCRETE CHANNELS, OR OTHER MEASURES DESIGNED TO PROTECT IMPROVEMENTS FROM RUN-OFF MUST BE CONSTRUCTED PRIOR TO CONSTRUCTION OF ANY IMPROVEMENTS.

25. CONTRACTOR SHALL MAINTAIN DUST CONTROL ABOUT THE SITE OF WORK AS SPECIFIED BY "CALTRANS STANDARD SPECIFICATIONS 2018".

26. CONTRACTOR SHALL PERFORM ALL WORK NECESSARY TO COMPLETE THE CONTRACT IN A SATISFACTORY MANNER PROVIDING ALL MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK UNLESS SPECIFIED OTHERWISE.

27. CONTRACTOR SHALL INDEMNIFY, DEFEND AND HOLD HARMLESS THE CITY, ITS ENGINEER AND CONSULTANTS, THEIR OFFICERS, EMPLOYEES AND AGENTS, FROM ANY AND ALL LIABILITY CLAIMS, LOSSES OR DAMAGES ARISING OR ALLEGED FROM THE PERFORMANCE OF THE WORK DESCRIBED ON THESE PLANS, NOT INCLUDING NEGLIGENCE ON THE PART OF THE CITY.

28. THE LOCATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON THE BEST INFORMATION AVAILABLE; HOWEVER, THE CITY OF VISALIA AND 4CREEKS INC. ASSUME NO RESPONSIBILITY FOR THE ACCURACY OF THE INFORMATION SHOWN, OR FOR THE INADVERTENT OMISSION OF ANY SUCH INFORMATION. THE CONTRACTOR SHALL COOPERATE WITH ALL UTILITY COMPANIES AND OTHER CONTRACTORS WORKING WITHIN THE LIMITS OF THIS PROJECT.

29. THE DEPTH OF THE EXISTING DRY UTILITIES (CABLE, PHONE, AND POWER), WATER MAINS, AND GAS MAINS IS SHOWN AT THE MOST PROBABLE LOCATION, BASED ON INDUSTRY STANDARDS. 4CREEKS INC. AND THE CITY OF VISALIA DO NOT ASSUME RESPONSIBILITY FOR THE ACCURACY OF THE INFORMATION SHOWN. CONTRACTOR SHALL CONFIRM ALL DEPTHS OF EXISTING UTILITIES, AS NECESSARY FOR CONSTRUCTION OF THE PROJECT PRIOR TO CONSTRUCTION. IMMEDIATELY NOTIFY ENGINEER OF ANY DISCREPANCIES/CONFLICTS.

30. INSTALL NEW SIGNS WITH PROJECT. CONTRACTOR SHALL ALSO REPAIR AND REPLACE ALL CURB, GUTTER, PAVEMENT, SIDEWALK, VAULTS, MAILBOXES, AND OTHER STRUCTURE'S DAMAGED DURING THE COURSE OF CONSTRUCTION AT HIS OWN EXPENSE.

31. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING FLOWLINES PROPOSED TO BE CONNECTED TO. PRIOR TO LAYING PIPE. ANY DISCREPANCIES AND/OR CONFLICTS WITH THE APPROVED PLANS SHALL BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE CITY OF VISALIA CONSTRUCTION MANAGER AND DESIGN ENGINEER.

32. CONTRACTOR IS RESPONSIBLE FOR RE-CONNECTING EXISTING UTILITY SERVICES WHERE THE UTILITY MAIN-LINE HAS BEEN RELOCATED DUE TO CONSTRUCTION.

33. PRIOR TO CONSTRUCTION CONTRACTOR SHALL POTHOLE EXISTING UTILITIES AND CONFIRM THAT NO CONFLICTS EXIST WITH NEW IMPROVEMENTS SHOWN ON THESE PLANS INCLUDING PAVEMENT SECTIONS. CONTRACTOR SHALL PROVIDE A SIGNED CERTIFICATION LETTER TO THE CITY PRIOR TO STARTING CONSTRUCTION THAT STATES NO CONFLICTS EXIST OR THAT IDENTIFIES CONFLICTS FOR CITY TO ADDRESS.

34. THE CITY OF VISALIA WILL PROVIDE AN INSPECTOR AND A TESTING LAB FOR THIS PROJECT.

35. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF THE CONTRACTOR'S FAILURE TO VERIFY LOCATIONS OF EXISTING UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION IN THE VICINITY SHALL BE BORNE BY THE CONTRACTOR AND NO ADDITIONAL COMPENSATION SHALL BE PROVIDED.

36. ALL CONCRETE AND ASPHALT IMPROVEMENTS SHALL MEET CURRENT AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. CITY OF VISALIA STANDARD REQUIREMENTS AND THESE DRAWINGS. CONSTRUCTION TOLERANCES SHALL NOT BE CONSTRUED TO ALLOW A CONTRACTOR TO VIOLATE ADA REQUIREMENTS. IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES SHOWN ON THE PLANS, OR THAT BECOME APPARENT IN THE FIELD PRIOR TO CONSTRUCTION.

37. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS, AND FOR COORDINATING WITH THE CITY CONSTRUCTION MANAGER TO SCHEDULE INSPECTIONS AND MATERIAL TESTING

38. PRIOR TO START OF WORK, THE CONTRACTOR SHALL SECURE A CITY OF VISALIA ENCROACHMENT PERMIT PRIOR TO DOING ANY WORK IN THE CITY.

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL ACCEPT THE SITE IN ITS PRESENT CONDITION AND DEMOLISH AND OR REMOVE FROM THE AREA OF DESIGNATED PROJECT EARTHWORK ALL STRUCTURES, BOTH SURFACE AND SUBSURFACE, TREES, BRUSH, ROOTS, DEBRIS, ORGANIC MATTER, AND ALL OTHER MATTER DETERMINED BY THE INSPECTOR TO BE DELETERIOUS, SUCH MATERIAL SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR.

2. ALL RETURN RADII AND CURB DATA ARE TO FACE OF CURB UNLESS SHOWN OR NOTED OTHERWISE.

3. ALL QUANTITIES AND PAY ITEMS ARE AND WILL BE BASED ON HORIZONTAL MEASUREMENTS.

4. LENGTHS OF SANITARY SEWERS AND STORM DRAINS ARE HORIZONTAL DISTANCES FROM CENTER TO CENTER OF STRUCTURES, ROUNDED OFF TO THE NEAREST FOOT.

5. EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON RECORDED INFORMATION AVAILABLE TO THE ENGINEER AT THE TIME OF PREPARATION OF THESE PLANS. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEES MADE AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. THE CONTRACTOR SHALL NOTIFY UTILITY COMPANIES AT LEAST 5 WORKING DAYS IN ADVANCE OF CONSTRUCTION TO FIELD LOCATE UTILITIES. CALL UNDERGROUND SERVICE ALERT (U.S.A.) AT 1-800-227-2600. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND LOCATION OF THOSE UTILITIES SHOWN ON THESE PLANS OR INDICATED IN THE FIELD BY LOCATING SERVICES. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF CONTRACTOR'S FAILURE TO VERIFY LOCATIONS OF EXISTING UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION IN THEIR VICINITY SHALL BE BORNE BY THE CONTRACTOR AND ASSUMED INCLUDED AND MERGED INTO THE CONTRACT UNIT PRICE.

6. ALL EXISTING REMAINING UTILITIES AND REMAINING IMPROVEMENTS THAT BECOME DAMAGED DURING CONSTRUCTION SHALL BE COMPLETELY RESTORED TO THE SATISFACTION OF THE CITY OF VISALIA CONSTRUCTION MANAGER, AT THE CONTRACTOR'S SOLE EXPENSE.

7. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE ENGINEER AND THE CITY HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING THE LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE ENGINEER, OR CITY.

8. NO CONCRETE SHALL BE POURED FOR NEW IMPROVEMENTS UNTIL FORMWORK AND REBAR HAS BEEN INSPECTED AND APPROVED BY THE CITY INSPECTOR. IF THE CONTRACTOR FAILS TO OBTAIN INSPECTIONS PRIOR TO POURING THE CITY HAS THE RIGHT TO REJECT THE CONCRETE AND REQUIRE THE CONTRACTOR TO REMOVE AND REPLACE THE IMPROVEMENTS AT ITS OWN EXPENSE.

9. 4CREEKS, INC DOES NOT SPECIFY NOR RECOMMEND THE USE OR INSTALLATION OF ANY MATERIAL OR EQUIPMENT WHICH IS MADE FROM, OR WHICH CONTAINS ASBESTOS FOR USE IN THE CONSTRUCTION OF THESE IMPROVEMENTS. ANY PARTY INSTALLING OR USING SUCH MATERIALS OR EQUIPMENT SHALL BE SOLELY RESPONSIBLE FOR ALL INJURIES, DAMAGES, OR LIABILITIES, OF ANY KIND, CAUSED BY THE USE OF SUCH MATERIAL OR EQUIPMENT. THE PROVISIONS OF THIS NOTE SHALL APPLY UNLESS THEY ARE EXPRESSLY WAIVED IN WRITING BY 4CREEKS, INC.

PROJECT SPECIFIC NOTES:

1. THE CONTRACTOR SHALL TEST ALL LANDSCAPE IRRIGATION SYSTEMS IN THE PRESENCE OF THE CITY INSPECTOR PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TESTING ALL LANDSCAPING SYSTEMS AT THE END OF CONSTRUCTION IN THE PRESENCE OF THE CITY INSPECTOR AND SHALL MAKE ANY REPAIRS NECESSARY FROM DAMAGE CAUSED DURING CONSTRUCTION.

2. IF CONCRETE CURB AND GUTTER IMPROVEMENTS ARE UNDERMINED OR LOSS OF SUPPORT OCCURS DUE TO CONTRACTOR'S EXCAVATION MEANS AND METHODS THE CONTRACTOR SHALL BE RESPONSIBLE FOR FILLING THE VOIDS WITH A SAND CEMENT SLURRY MEETING CITY OF VISALIA REQUIREMENTS.

3. CONTRACTOR SHALL BE REQUIRED TO SUPPORT EXISTING UNDERGROUND UTILITIES DURING TRENCHING ACTIVITIES IN A MANNER THAT PREVENTS DAMAGE OF THE UTILITY. IF THE UTILITY BECOMES DAMAGED THE CONTRACTOR SHALL MAKE REPAIRS AT HIS OWN EXPENSE.

4. WHERE NEW IMPROVEMENTS ARE BEING INSTALLED NEAR EXISTING UTILITY POLES OR STRUCTURES THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPORTING THE POLES OR STRUCTURES IN PLACE TO PREVENT DAMAGE AT HIS OWN EXPENSE. CONTRACTOR SHALL REPAIR ANY DAMAGED EXISTING INFRASTRUCTURE AT HIS OWN EXPENSE.

5. CONTRACTOR SHALL PROVIDE WRITTEN AND VERBAL NOTIFICATION TO RESIDENTS AND BUSINESSES WITHIN 5 DAYS IN ADVANCE OF CONSTRUCTION.

6. CONTRACTOR SHALL ADJUST MANHOLES, VALVE BOXES, AND OTHER UTILITY BOXES TO GRADE. ADJUST MANHOLES AND VALVE BOXES TO FINISH GRADE AFTER PAVING IS COMPLETE.

7. ALL SALVAGED MATERIALS SHALL BE DELIVERED TO THE CITY CORPORATION YARD LOCATED AT 336 N. BEN MADDOX WAY. THE CONTRACTOR SHALL NOTIFY THE CITY CONSTRUCTION MANAGER AT LEAST 2 WORKING DAYS PRIOR TO DELIVERY FOR COORDINATION. CONTRACTOR SHALL PROVIDE ADEQUATE MEANS FOR SAFELY UNLOADING MATERIAL.

GRADING NOTES:

1. ALL GRADING SHALL BE DONE IN CONFORMANCE WITH THE STATE OF CALIFORNIA BUILDING CODE, LATEST EDITION, THE CITY OF VISALIA IMPROVEMENT STANDARDS, APPLICABLE SECTION OF THE CALTRANS STANDARD SPECIFICATIONS, LATEST EDITION.

2. BACKFILL OR ONSITE UNDERGROUND UTILITIES PLACED ON THE SITE SHALL BE COMPACTED TO A MINIMUM RELATIVE COMPACTION OF 90% IN LANDSCAPE AREAS. ALL BACKFILL IN TRENCHES IN PAVED AND OTHER AREAS TO BE COMPACTED ACCORDING TO THE CITY OF VISALIA STANDARD DETAILS.

3. ALL SPOIL PILES SHALL HAVE SIDE SLOPES AS REQUIRED FOR SAFETY IN ACCORDANCE WITH APPLICABLE CA OSHA REQUIREMENTS.

STREET NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR RAISING ALL VALVES, MANHOLES, AND ANY OTHER VAULTS AND BOXES FOUND IN THE STREET WHETHER OR NOT THEY ARE SHOWN ON THESE PLANS.

2. THE CONTRACTOR SHALL TAKE ALL NECESSARY AND PROPER PRECAUTIONS TO PROTECT ADJACENT PROPERTIES FROM ANY AND ALL DAMAGE THAT MAY OCCUR FROM STORM WATER RUNOFF AND/OR DEPOSITION OF DEBRIS RESULTING FROM ANY AND ALL WORK IN CONNECTION WITH HIS CONSTRUCTION.

TRENCHING NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING ALL TRENCHES. IF TRENCHES OR PIPING BECOME DAMAGED DUE TO WATER INFILTRATION, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR THE TRENCH AND PIPING TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.

WATER SYSTEM NOTES:

1. ALL PIPING WORK WITHIN THE STREET RIGHT OF WAY SHALL BE IN CONFORMANCE WITH THE CITY OF VISALIA IMPROVEMENT STANDARDS.

2. ALL WORK OUTSIDE THE STREET RIGHT OF WAY SHALL BE CLASSIFIED AS ON-SITE WATER PIPING AND SHALL BE IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE AMERICAN WATER WORKS ASSOCIATION (AWWA) STANDARDS, LATEST EDITION. THE REQUIREMENTS BELOW ARE FOR ON-SITE PIPING.

3. FIRE SERVICE LINES AND DOMESTIC WATER SERVICE LINES 4 INCHES AND LARGER SHALL MEET THE FOLLOWING REQUIREMENTS. ALL PIPELINES SHALL MEET THE REQUIREMENTS OF AWWA C900 FOR PVC PIPE DR 18 (235 PSI) AND SHALL HAVE BELL AND SPIGOT JOINTS IN COMPLIANCE WITH ASTM 3139 WITH GASKETS MEETING ASTM F 477. ALL FITTINGS SHALL BE DUCTILE IRON PRESSURE CLASS 250 CONFORMING TO ASSA STD 153 FOR PUSH-ON AND MECHANICAL JOINTS AND AWWA C110 FOR FLANGED FITTINGS. ALL FITTINGS SHALL HAVE A CEMENT MORTAR LINING CONFORMING TO AWWA C104 FLANGED FITTINGS SHALL ONLY BE USED WHERE NOTED ON THE DRAWINGS.

4. DOMESTIC WATER LINES SMALLER THAN 4 INCHES SHALL BE POLYVINYL CHLORIDE (PVC) PIPE MEETING THE FOLLOWING REQUIREMENTS, ASTM D1785, PVC 1120, SCHEDULE 40, 160 PSIG MIN WITH SOLVENT WELDED JOINTS.

5. GATE VALVES: ALL GATE VALVES SHALL MEET OR EXCEED THE LATEST REVISION OF AWWA C515 FOR REDUCED WALL RESILIENT-SEATED GATE VALVES (OR C509 FOR RESILIENT SEATED GATE VALVES) AND SHALL BE PROVIDED WITH LEFT HAND TO OPEN, DUCTILE IRON (OR CAST IRON) BODY WITH EPOXY COATING INSIDE AND OUT COMPLYING WITH THE LATEST REVISION OF AWWA C550, NUT OPERATED NON-RISING STEM WITH 2 FOOT SQUARE OPERATING NUT, TWO O-RING STEM SEALS ABOVE THE THRUST COLLAR AND ONE BELOW, O-RING GASKETS AND 304 STAINLESS STEEL BOLTS AND NUTS ON BONNET AND STUFFING BOX AND EPDM RUBBER ENCAPSULATED WEDGIE (WHEN AVAILABLE AT NO EXTRA COST. ALL GATE VALVES SHALL BE MANUFACTURED BY MUELLER COMPANY, KENNEDY VALVE, CO. CLOW VALVE CO, AMERICAN FLOW CONTROL, AMERICAN AYK CO. OR US PIPE. 2 INCH AND SMALLER GATE VALVES SHALL BE CLASS 125 WITH STANDARD THREAD, BRONZE WITH WHEEL, AND BE MANUFACTURED BY MILWAUKEE (NO. 105) OR NIBCO.

6. CHECK VALVES: UNLESS SPECIFIED OTHERWISE, ALL CHECK VALVES SHALL BE SWING TYPE WITH SPRING AND LEVER AND SHALL COMPLY WITH THE LATEST REVISION OF AWWA C508. THE VALVES SHALL HAVE CLASS 125 FLANGED ENDS UNLESS SHOWN OTHERWISE ON THE DRAWINGS. CHECK VALVES SHALL BE MANUFACTURED BY MUELLER, CLOW OR M&H.

7. THRUST BLOCKS SHALL BE CONSTRUCTED AT ALL HORIZONTAL AND VERTICAL FITTINGS FOR PIPES 4 INCH DIAMETER AND LARGER ACCORDING TO CITY OF VISALIA STANDARDS.

8. FIRE HYDRANT ASSEMBLIES: FIRE HYDRANTS SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH CITY OF VISALIA STANDARDS.

9. SERVICE LINES: DOMESTIC AND IRRIGATION SERVICE LINES AND METER CONNECTIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF VISALIA STANDARDS AS APPLICABLE FOR THE SERVICE.

LEGEND

BC	BEGIN CURVE	MB	MAILBOX
BCR	BEGIN CURB RETURN	MJ	MECHANICAL JOINT
BP: STA	ALIGNMENT BEGINNING POINT	OG	ORIGINAL GROUND
BSW	BACK OF SIDEWALK	P	PAVEMENT
C	CONCRETE	PCC	POINT OF COMPOUND CURVATURE
CR	CROWN OF ROAD	POC	POINT OF CURVATURE
C&G	CURB & GUTTER	PRC	POINT OF REVERSE CURVATURE
EP	EDGE OF PAVEMENT	RD	EDGE OF ROAD
EP: STA	ALIGNMENT END POINT	(R)	RADIAL BEARING
EC	END CURVE	S=0.0000	SLOPE, IN FOOT PER FOOT
ECR	END CURB RETURN	SS	SANITARY SEWER
(000.00)	EXISTING ELEVATION	SSMH	SANITARY SEWER MANHOLE
FDR-C	FULL DEPTH RECLAMATION W/ CEMENT	STA.	STATION
FL	FLOW LINE	TC	TOP OF CURB
FTG	TOP OF FOOTING ELEVATION	TOE	TOE OF SLOPE
GB	GRADE BREAK	000.00	PROPOSED ELEVATION
GV	GATE VALVE	SD	STORM DRAIN
HMA	HOT MIX ASPHALT	SDMH	STORM DRAIN MANHOLE
HP	HINGE POINT	W	WATER LINE
INV.	INVERT		
LIP	LIP OF GUTTER		

PROPOSED CONCRETE
PROPOSED ASPHALT CONCRETE
CHAIN LINK FENCE
STORM DRAIN PIPE LINE
SANITARY SEWER PIPE LINE
DRAINAGE INLET
FIRE HYDRANT ASSEMBLY
STREET LIGHT
WATER METER
WATER VALVE
STREET SIGN
STORM DRAIN MANHOLE
SEWER MANHOLE
"R" VALUE
PROPOSED LANDSCAPE AREA

EXISTING ASPHALT PAVEMENT
EXISTING CONCRETE
EXISTING GAS LINE
ELECTRIC AND COMMUNICATION OVERHEAD LINE
EXISTING CHAIN LINK FENCE
EXISTING WOODEN FENCE
EXISTING IRON FENCE
EXISTING AT&T OVERHEAD LINE
EXISTING ELECTRICAL OVERHEAD LINE
EXISTING ELECTRICAL UNDERGROUND CONDUIT
EXISTING CENTRAL VALLEY INDEPENDENT NETWORK LINE
EXISTING STORM DRAIN PIPE LINE
EXISTING SANITARY SEWER PIPE LINE
EXISTING DRAINAGE INLET
EXISTING FIRE HYDRANT ASSEMBLY
EXISTING STREET LIGHT
EXISTING WATER METER
EXISTING WATER VALVE

EXISTING STREET SIGN
EXISTING SURVEY MONUMENT
EXISTING CHRYSTIE BOX (UTILITY TYPE)
EXISTING TELEPHONE PEDESTAL
EXISTING BOLLARD
EXISTING TELEPHONE VAULT
EXISTING ELECTRIC VAULT
EXISTING POWER POLE
EXISTING GUY ANCHOR
EXISTING STORM DRAIN MANHOLE
EXISTING SEWER MANHOLE
PROPERTY LINE
EXIST. RIGHT OF WAY
SECTION LINE
CENTER LINE
IOD
PROPOSED RIGHT OF WAY

NO.	DATE	DESCRIPTION

PREPARED BY:
4CREEKS
324 S. SANTA FE, STE A.
P.O. BOX 7593
VISALIA, CA 93292
TEL: 559.802.3052
FAX: 559.802.3215
CHK BY: KM
DRW BY: MH

CITY OF VISALIA
315 E. ACEQUIA AVE.
VISALIA, CA 93291

RIGGIN AVENUE
WIDENING & IMPROVEMENTS
GENERAL NOTES

PROJ. NO. 21097
DATE:9/10/2021
DESIGN BY: MA | DRAWN BY:BA
SCALE: AS SHOWN
SHEET 2 OF 29

60% SUBMITTAL

Know what's **below.**
Call before you dig.

NORTH

40' 0' 40'

GENERAL DEMOLITION NOTES:

1. ALL SAWCUTS TO BE A NEAT, CLEAN, ON GRADE EDGE.
2. CONTRACTOR TO REMOVE AND DISPOSE OF ALL VEGETATION, CONCRETE, IRRIGATION SYSTEMS, ASPHALT, AGGREGATE BASE , SOIL, FENCES, STRUCTURES, ETC. WITHIN APPROXIMATE LIMITS OF CLEARING, GRUBBING, AND DEMOLITION; UNLESS OTHERWISE NOTED ON THESE PLANS.
3. ALL EXISTING STREET SIGNS THAT CANNOT BE RE-USED SHALL BE RETURNED TO THE CITY OF VISALIA CORP. YARD.
4. ANY EXISTING MANHOLES AND/OR WATER VALVES ENCOUNTERED WHETHER OR NOT SHOWN ON THESE PLANS SHALL BE PROTECTED AND ADJUSTED TO FINISH GRADE.
5. ALL CONCRETE AND ASPHALT LOCATED OUTSIDE DEMOLITION LIMITS TO BE PROTECTED IN PLACE.
6. EXISTING IMPROVEMENTS AND UTILITIES TO BE PROTECTED IN PLACE UNLESS SHOWN OTHERWISE ON THESE PLANS.

DEMOLITION NOTES

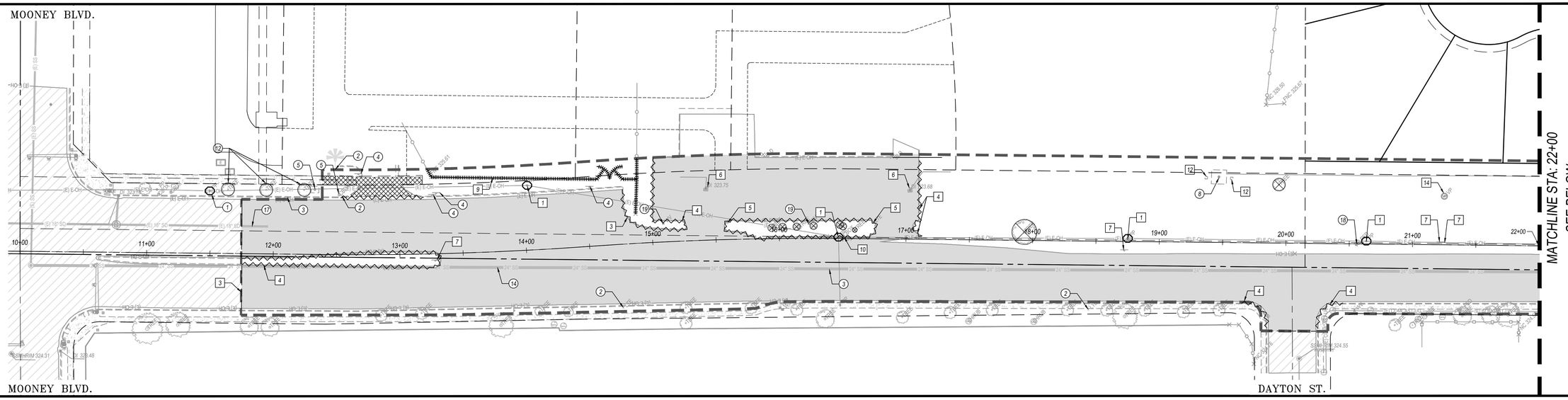
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2. REMOVE EXISTING ASPHALT CONCRETE
3. SAWCUT EXISTING ASPHALT CONCRETE TO A NEAT CLEAN ON-GRADE EDGE
4. SAWCUT & REMOVE EXISTING CURB & GUTTER / CURB
5. REMOVE EXIST. LIGHT & SALVAGE TO OWNER
6. REMOVE EXISTING DRAINAGE INLET
7. REMOVE & SALVAGE EXISTING SIGN
8. REMOVE & RELOCATE EXIST. ELECTRICAL BOX. (TO BE DONE BY SOUTHERN CALIFORNIA EDISON)
9. REMOVE EXISTING FENCE
10. REMOVE EXISTING CONTROL BOX
11. REMOVE & SALVAGE TEMPORARY TRAFFIC SIGNAL
12. REMOVE EXISTING BOLLARD
13. REMOVE EXISTING IRRIGATION RISER
14. REMOVE EXISTING VENT PIPE

PROTECTION NOTES

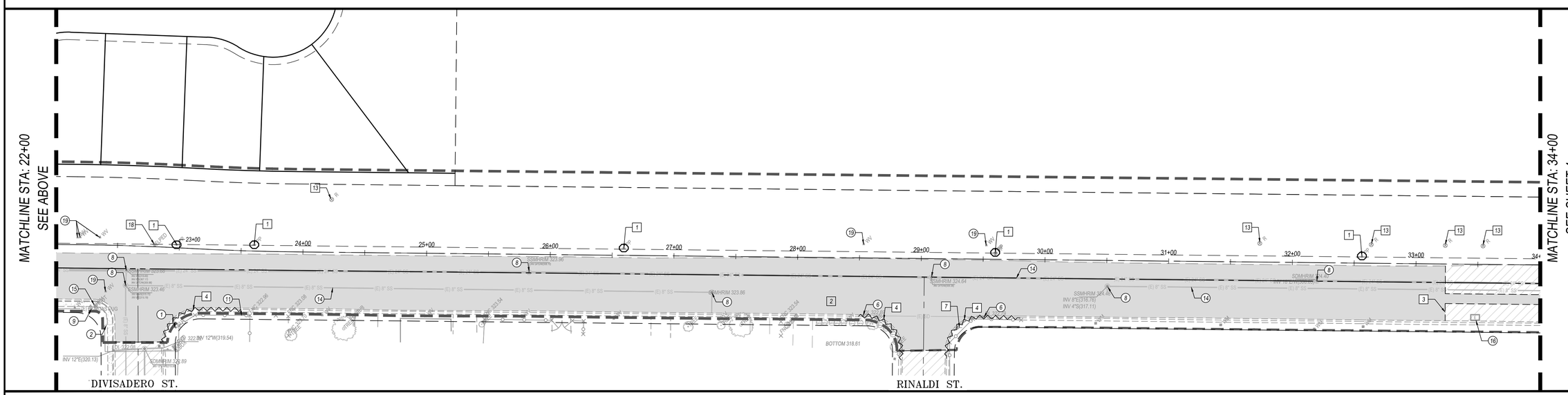
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3. PROTECT IN PLACE EXISTING CURB & GUTTER
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18. PROTECT IN PLACE EXISTING TELEPHONE PEDESTAL
19. PROTECT IN PLACE EXISTING WATER VALVE

LEGEND

- APPROXIMATE LIMITS OF CLEARING, GRUBBING, & DEMOLITION
- EXIST. ASPHALT CONCRETE REMOVAL
- EXIST. CONCRETE REMOVAL
- EXIST. CURB / CURB & GUTTER REMOVAL
- SAWCUT LINE
- EXIST. FENCE REMOVAL
- EXIST. VEGETATION REMOVAL
- EXIST. VEGETATION PROTECTION
- EXIST. POWER POLE
- EXIST. UTILITY POLE



RIGGIN AVE. STA: 10+00 – 22+00



RIGGIN AVE. STA: 22+00 – 34+00

NO.	DATE	DESCRIPTION

PROFESSIONAL ENGINEER — MICHAEL HIGGINS — No. 83518 — STATE OF CALIFORNIA — CIVIL

324 S. SANTA FE, STE.A
P.O. BOX 7593
VISALIA, CA 93292
TEL: 559.802.3052
FAX: 559.802.3215

PREPARED BY: 4CREEKS — CHK BY: RM — DRW BY: MH

CITY OF VISALIA
315 E. ACEQUIA AVE.
VISALIA, CA 93291

RIGGIN AVENUE
WIDENING & IMPROVEMENTS
TOPOGRAPHIC & DEMOLITION PLAN

60% SUBMITTAL

PROJ. NO. 21097	
DATE:9/10/2021	
DESIGN BY: MA	DRAWN BY:BA
SCALE: AS SHOWN	
SHEET 3 OF 29	

Know what's **below.**
Call before you dig.

811

NORTH

40' 0' 40'

GENERAL DEMOLITION NOTES:

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2. CONTRACTOR TO REMOVE AND DISPOSE OF ALL VEGETATION, CONCRETE, IRRIGATION SYSTEMS, ASPHALT, AGGREGATE BASE , SOIL, FENCES, STRUCTURES, ETC. WITHIN APPROXIMATE LIMITS OF CLEARING, GRUBBING, AND DEMOLITION; UNLESS OTHERWISE NOTED ON THESE PLANS.
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6. EXISTING IMPROVEMENTS AND UTILITIES TO BE PROTECTED IN PLACE UNLESS SHOWN OTHERWISE ON THESE PLANS.

DEMOLITION NOTES

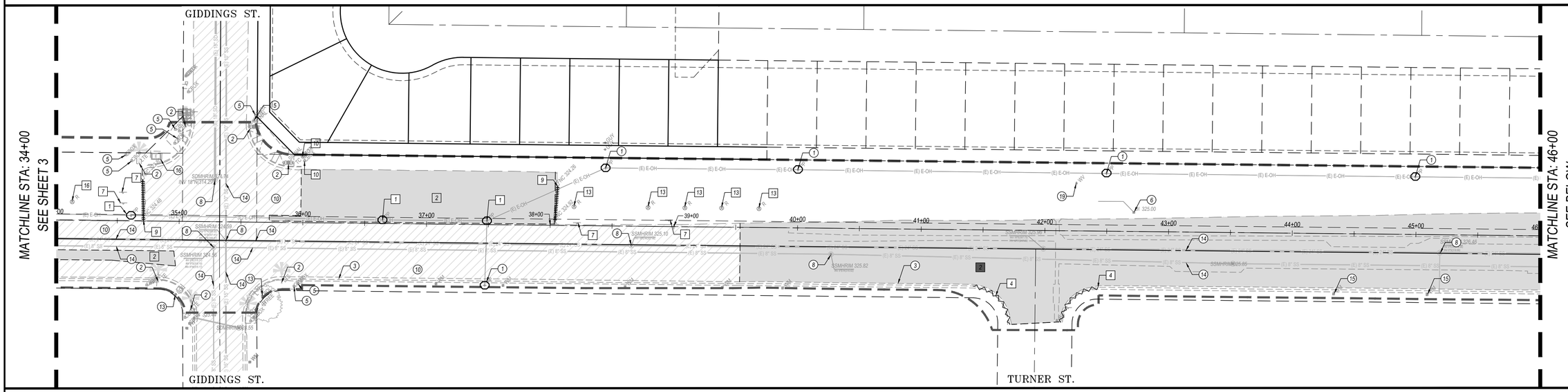
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PROTECTION NOTES

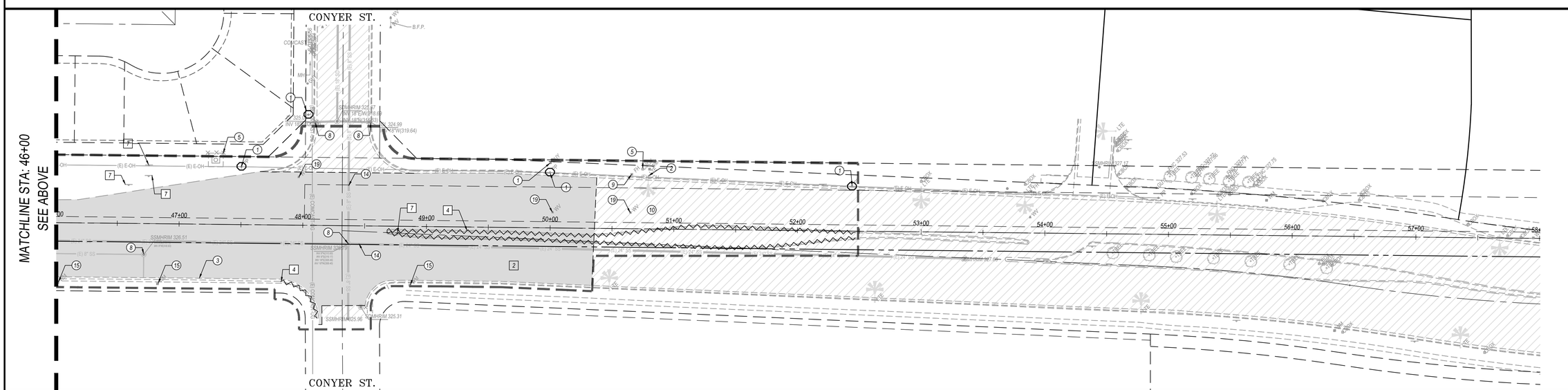
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18. PROTECT IN PLACE EXISTING TELEPHONE PEDESTAL
19. PROTECT IN PLACE EXISTING WATER VALVE

LEGEND

- APPROXIMATE LIMITS OF CLEARING, GRUBBING, & DEMOLITION
- EXIST. ASPHALT CONCRETE REMOVAL
- EXIST. CONCRETE REMOVAL
- EXIST. CURB / CURB & GUTTER REMOVAL
- SAWCUT LINE
- EXIST. FENCE REMOVAL
- EXIST. VEGETATION REMOVAL
- EXIST. VEGETATION PROTECTION
- EXIST. POWER POLE
- EXIST. UTILITY POLE



RIGGIN AVE. STA: 34+00 – 46+00



RIGGIN AVE. STA: 46+00 – 58+00

NO.	DATE	DESCRIPTION

PROFESSIONAL ENGINEER — MICHAEL ANTHONY — No. 83918 — CIVIL — STATE OF CALIFORNIA

324 S. SANTA FE, STE. A
P.O. BOX 7593
VISALIA, CA 93292
TEL: 559.802.3052
FAX: 559.802.3215

PREPARED BY: 4CREEKS — CHK BY: KM — DRW BY: MH

CITY OF VISALIA
315 E. ACEQUIA AVE.
VISALIA, CA 93291

RIGGIN AVENUE
WIDENING & IMPROVEMENTS
TOPOGRAPHIC & DEMOLITION PLAN

PROJ. NO. 21097	
DATE:9/10/2021	
DESIGN BY: MA	DRAWN BY:BA
SCALE: AS SHOWN	
SHEET 4 OF 29	

60% SUBMITTAL

Know what's **below.**
Call before you dig.

811

NORTH

40' 0' 40'

WATER KEYNOTES (THIS SHEET ONLY)

1	XXX.

UTILITY CONFLICT KEYNOTES (THIS SHEET ONLY)

U1	POLE AND GUY TO BE RELOCATED BY UTILITY COMPANY

POTHOLING KEYNOTES (THIS SHEET ONLY)

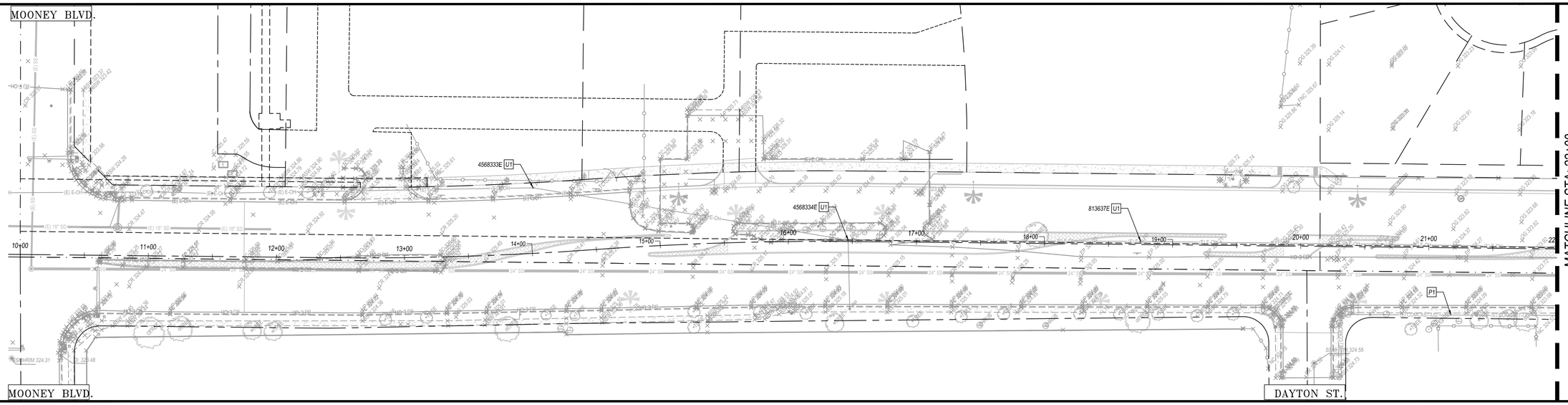
P1	EXIST. COMCAST UNDERGROUND
P2	EXIST. COMCAST UNDERGROUND

LEGEND

- EXIST. ASPHALT CONCRETE
- PROPOSED ASPHALT CONCRETE
- PROPOSED CONCRETE
- DETECTABLE WARNING SURFACE
- MEDIAN STAMPED CONCRETE
- PROPOSED STREET LIGHTING SINGLE HEAD
- P.XXX.XX = PROPOSED PAVEMENT ELEVATION
- P (XXX.XX) = EXISTING PAVEMENT ELEVATION
- PROPOSED STORM OR SEWER MANHOLE TYP.
- PROPOSED STREET LIGHT PULL BOX
- EXIST. POWER POLE
- EXIST. UTILITY POLE

GENERAL UTILITY NOTES:

1. THE UTILITY INFORMATION SHOWN ON THESE PLANS IS BASED ON UTILITY PLATS RECEIVED FROM THE UTILITY COMPANIES, ABOVE GROUND IMPROVEMENTS IDENTIFIED DURING THE TOPOGRAPHIC SURVEY STAGE, USA MARKINGS PROVIDED DURING PRELIMINARY POTHOLING, AND SOME PRELIMINARY POTHOLING INFORMATION. IT SHALL BE THE RESPONSIBILITY OF EACH UTILITY COMPANY TO REVIEW THIS DRAWING AND VERIFY THAT THE LOCATIONS OF THEIR UTILITIES ARE ACCURATELY SHOWN AND CALLED OUT. NOTIFY THE CITY'S CONSULTANT WITH ANY CORRECTIONS AS SOON AS POSSIBLE.
2. THIS PLAN CALLS OUT SOME OF THE MAJOR UTILITY CONFLICT LOCATIONS THAT NEED TO BE RESOLVED. THERE WILL MOST LIKELY BE OTHER CONFLICT POINTS THAT THE UTILITY COMPANY DISCOVERS THAT NEED TO BE RESOLVED. UTILITY COMPANY SHALL CLEARLY IDENTIFY ALL CONFLICT POINTS AND NEW IMPROVEMENTS ON THEIR RELOCATION PLANS.
3. UTILITY TO ALSO INCLUDE LATERAL RELOCATIONS AND MORE MINOR INFRASTRUCTURE RELOCATIONS ON THEIR PLANS.
4. REFER TO COVER AND DEMO SHEETS FOR BENCHMARKS, GENERAL NOTES, & INFORMATION.
5. TOPO SURVEY FADED IN THE BACKGROUND OF THE PLAN.
6. ALL UTILITIES REQUIRED TO ADJUST INFRASTRUCTURE TO GRADE.



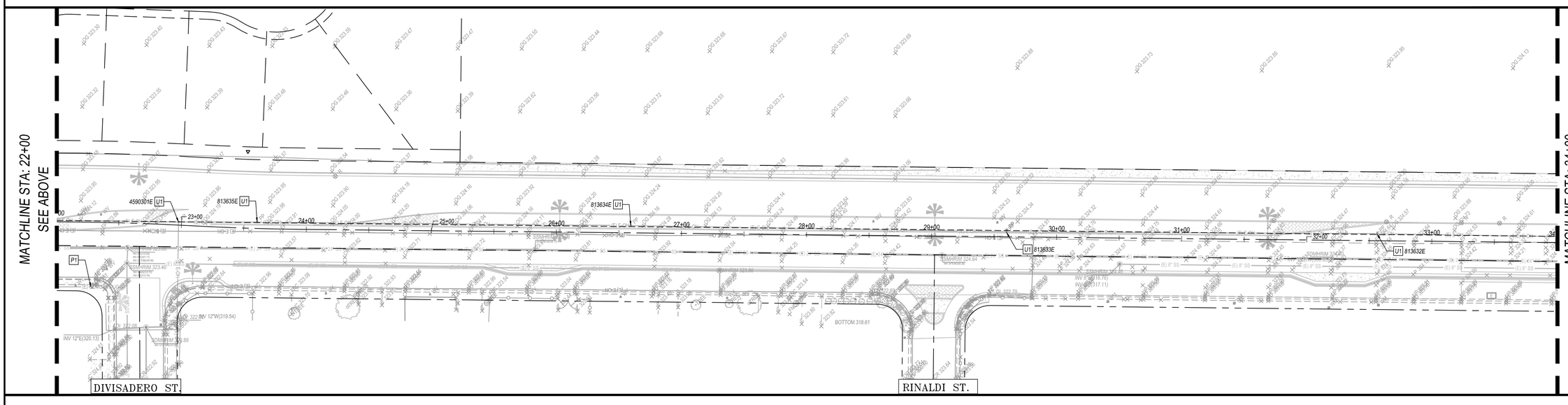
RIGGIN AVE. STA: 10+00 – 22+00

UTILITY ABBREVIATION LEGEND

DTT - DEPTH TO TOP
ATT - AT&T INC.
COM - COMCAST
CW - CALWATER
SCE - SOUTHERN CALIFORNIA EDISON
SCG - SOUTHERN CALIFORNIA GAS
CNTL - CENTURY LINK

EXISTING UTILITY LINE LEGEND

(E) AT&T UG	ATT UNDERGROUND	(E) E&C OH	SCE AND COM OVERHEAD
(E) COMCAST UG	COM UNDERGROUND	(E) E,T&C OH	SCE, ATT AND COM OVERHEAD
(E) W	CW	(E) GAS	SCG
(E) E OH	SCE OVERHEAD		



RIGGIN AVE. STA: 22+00 – 34+00

NO.	DATE	DESCRIPTION

PROFESSIONAL ENGINEER — MICHAEL FOLTZ — No. 81938 — STATE OF CALIFORNIA — CIVIL

PREPARED BY:
4CREEKS
324 S. SANTA FE, STE. A
P.O. BOX 7593
VISALIA, CA 93292
TEL: 559.802.3052
FAX: 559.802.3215

CHK BY: KM
DRW BY: MH

VISALIA Founded 1852

CITY OF VISALIA
315 E. ACEQUIA AVE.
VISALIA, CA 93291

RIGGIN AVENUE
WIDENING & IMPROVEMENTS
UTILITY & POTHOLING PLAN

PROJ. NO. 21097	
DATE:9/10/2021	
DESIGN BY: MA	DRAWN BY:BA
SCALE: AS SHOWN	
SHEET 5 OF 29	

60% SUBMITTAL

Know what's **below.**
Call before you dig.

NORTH

40' 0' 40'

WATER KEYNOTES (THIS SHEET ONLY)

1 XXX.

UTILITY CONFLICT KEYNOTES (THIS SHEET ONLY)

U1 POLE AND GUY TO BE RELOCATED BY UTILITY COMPANY

POTHOLING KEYNOTES (THIS SHEET ONLY)

P1 EXIST. COMCAST UNDERGROUND

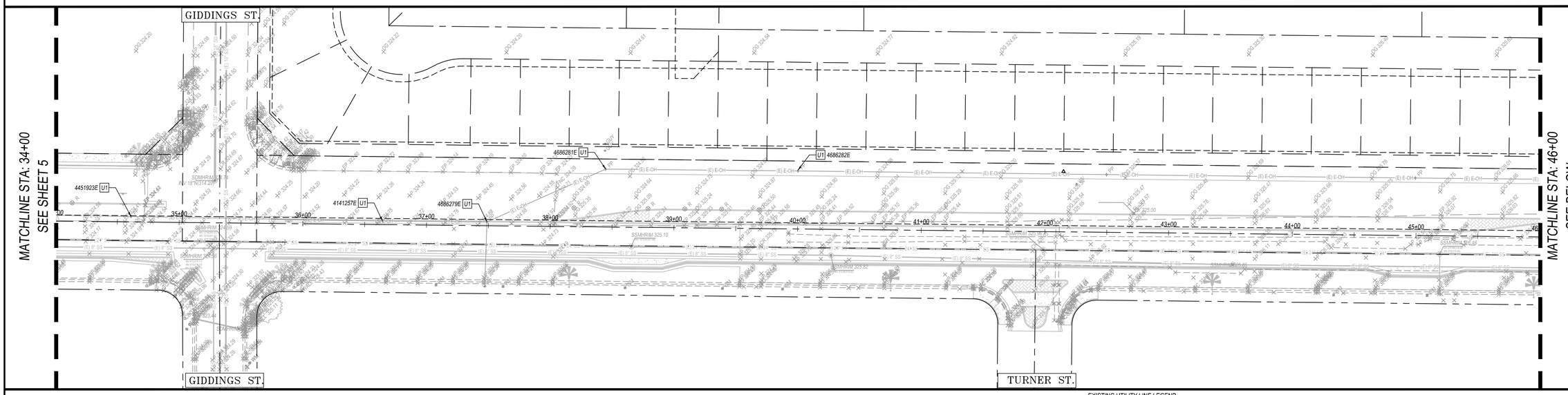
P2 EXIST. COMCAST UNDERGROUND

LEGEND

- EXIST. ASPHALT CONCRETE
- PROPOSED ASPHALT CONCRETE
- PROPOSED CONCRETE
- DETECTABLE WARNING SURFACE
- MEDIAN STAMPED CONCRETE
- PROPOSED STREET LIGHTING SINGLE HEAD
- P.XXX.XX = PROPOSED PAVEMENT ELEVATION
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- PROPOSED STORM OR SEWER MANHOLE TYP.
- PROPOSED STREET LIGHT PULL BOX
- EXIST. POWER POLE
- EXIST. UTILITY POLE

GENERAL UTILITY NOTES:

1. THE UTILITY INFORMATION SHOWN ON THESE PLANS IS BASED ON UTILITY PLATS RECEIVED FROM THE UTILITY COMPANIES, ABOVE GROUND IMPROVEMENTS IDENTIFIED DURING THE TOPOGRAPHIC SURVEY STAGE, USA MARKINGS PROVIDED DURING PRELIMINARY POTHOLING, AND SOME PRELIMINARY POTHOLING INFORMATION. IT SHALL BE THE RESPONSIBILITY OF EACH UTILITY COMPANY TO REVIEW THIS DRAWING AND VERIFY THAT THE LOCATIONS OF THEIR UTILITIES ARE ACCURATELY SHOWN AND CALLED OUT. NOTIFY THE CITY'S CONSULTANT WITH ANY CORRECTIONS AS SOON AS POSSIBLE.
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5. TOPO SURVEY FADED IN THE BACKGROUND OF THE PLAN.
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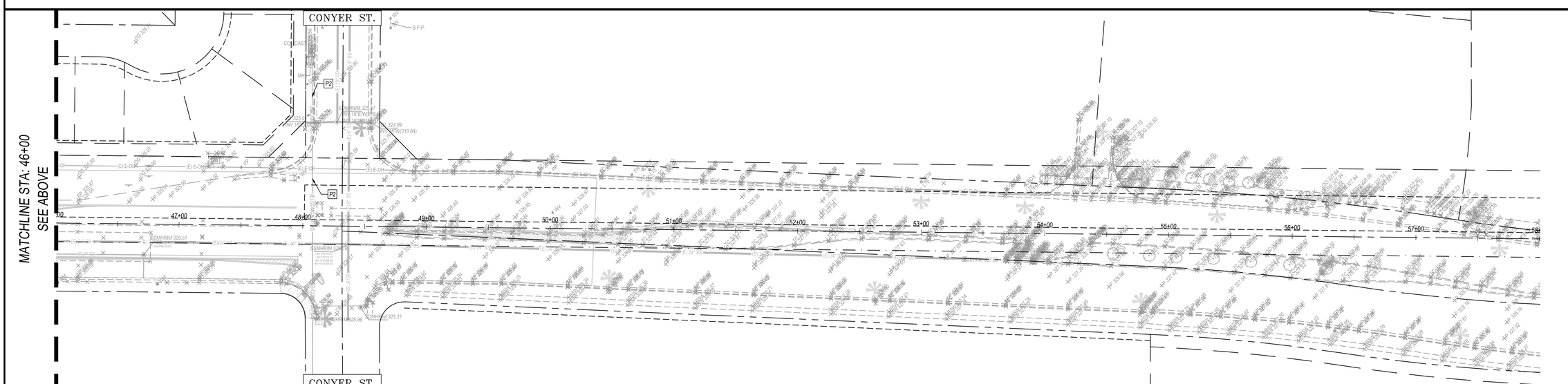
RIGGIN AVE. STA: 34+00 – 46+00

UTILITY ABBREVIATION LEGEND

DTT - DEPTH TO TOP
ATT - AT&T INC.
COM - COMCAST
CW - CALWATER
SCE - SOUTHERN CALIFORNIA EDISON
SCG - SOUTHERN CALIFORNIA GAS
CNTL - CENTURY LINK

EXISTING UTILITY LINE LEGEND

(E) AT&T UG	ATT UNDERGROUND	(E) E&C OH	SCE AND COM OVERHEAD
(E) COMCAST UG	COM UNDERGROUND	(E) E,T&C OH	SCE, ATT AND COM OVERHEAD
(E) W	CW	(E) GAS	SCG
(E) E OH	SCE OVERHEAD		



RIGGIN AVE. STA: 46+00 – 58+00

NO.	DATE	DESCRIPTION

PROFESSIONAL ENGINEER — MICHAEL ANTHONY — No. 81516 — STATE OF CALIFORNIA

PREPARED BY:
4CREEKS
324 S. SANTA FE, STE. A
P.O. BOX 7593
VISALIA, CA 93292
TEL: 559.802.3052
FAX: 559.802.3215

CHK BY: KM
DRW BY: MH

VISALIA Founded 1852

CITY OF VISALIA
315 E. ACEQUIA AVE.
VISALIA, CA 93291

RIGGIN AVENUE
WIDENING & IMPROVEMENTS
UTILITY & POTHOLING PLAN

PROJ. NO. 21097
DATE:9/10/2021
DESIGN BY: MA | DRAWN BY:BA
SCALE: AS SHOWN
SHEET 6 OF 29

60% SUBMITTAL

Know what's **below.**
Call before you dig.

NORTH

40' 0' 40'

2' 0' VERTICAL SCALE

GENERAL CONSTRUCTION NOTES:

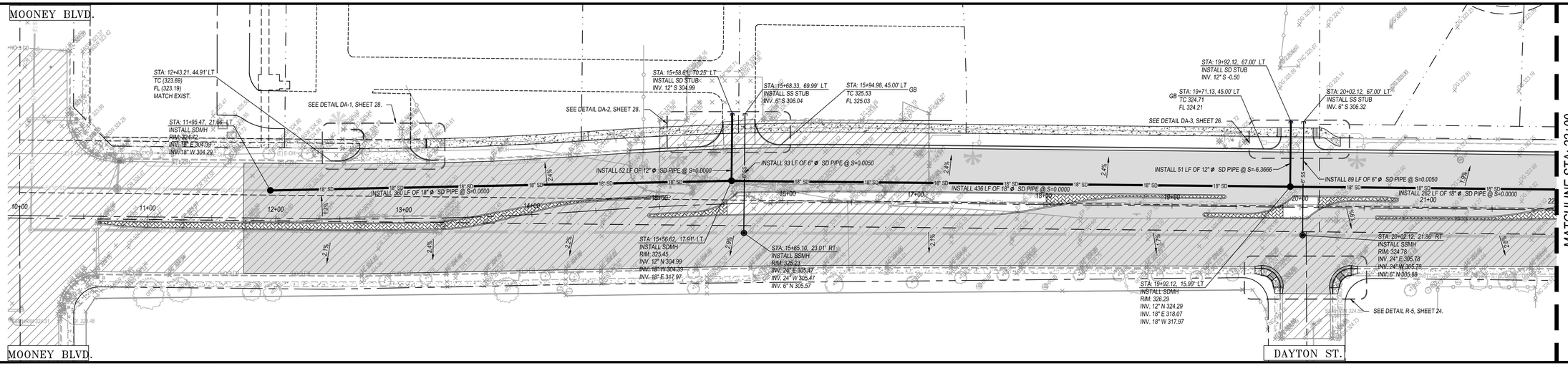
1. ALL SAWCUTS TO BE A NEAT, CLEAN, ON GRADE EDGE.
2. ALL NEW CONCRETE IMPROVEMENTS SHALL BE DOWELED INTO EXIST. CONCRETE IMPROVEMENTS PER CITY STD. C-34, SHEET 29.
3. SEE SEWER & WATER PLANS FOR ADDITIONAL INFORMATION.

CONSTRUCTION KEYNOTES (THIS SHEET ONLY)

1. INSTALL CONCRETE COLD JOINT PER CITY STD. C-34
2. INSTALL CONCRETE CURB AND GUTTER PER CITY STD. C-4
3. INSTALL DRIVE APPROACH PER CITY STD. C-24
4. INSTALL MEDIAN CURB PER CITY STD. C-8
5. INSTALL DRAINAGE INLET PER CITY STD. D-12
6. INSTALL STORM DRAIN MANHOLE PER CITY STD. D-1
7. INSTALL SANITARY SEWER MANHOLE PER CITY STD. S-1
8. TIE-INTO EXIST. MANHOLE

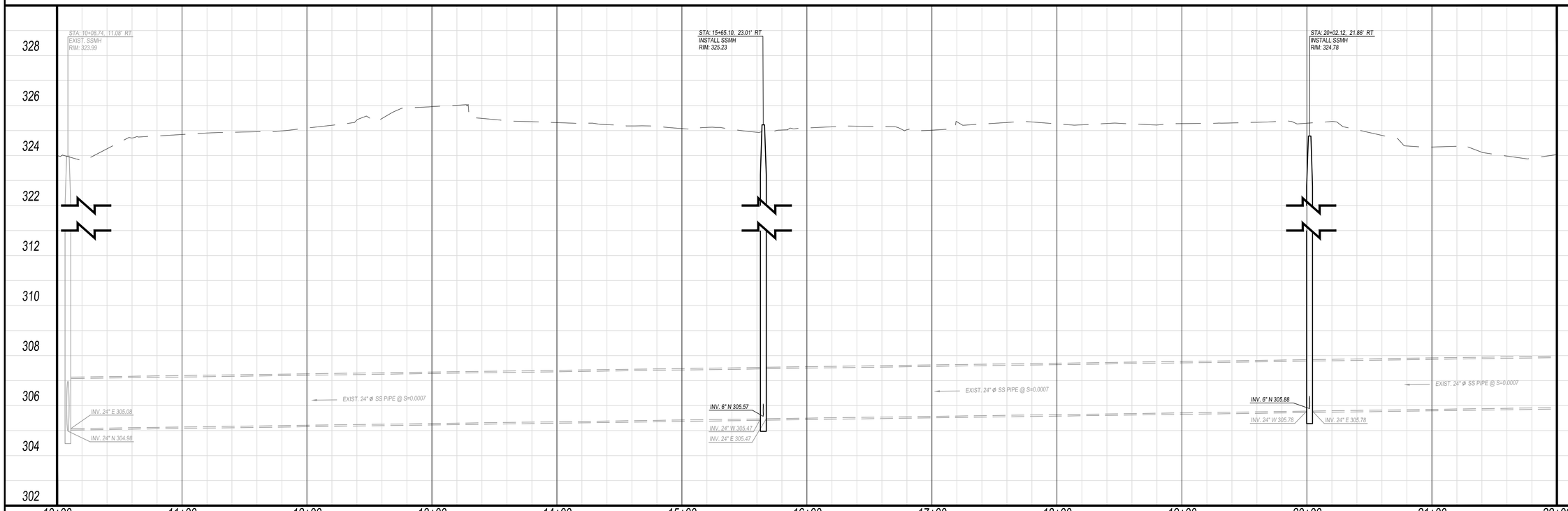
LEGEND

- DETAIL REFERENCE
- EXIST. ASPHALT CONCRETE
- EXIST. CONCRETE
- PROPOSED CONCRETE
- PROPOSED ASPHALT CONCRETE
- STAMPED MEDIAN (C-35)



MATCHLINE STA: 22+00
SEE SHEET 8

RIGGIN AVE. STA: 10+00 – 22+00



NO.	DATE	DESCRIPTION

PROFESSIONAL ENGINEER — MICHAEL ANTHONY — No. 87938 — STATE OF CALIFORNIA — CIVIL

PREPARED BY:
4CREEKS
324 S. SANTA FE, STE. A
P.O. BOX 7293
VISALIA, CA 93292
TEL: 559.802.3052
FAX: 559.802.3215

CHK BY: KM
DRW BY: MH

CITY OF VISALIA
315 E. ACEQUIA AVE.
VISALIA, CA 93291

RIGGIN AVENUE
WIDENING & IMPROVEMENTS
IMROVEMENT PLAN

PROJ. NO. 21097
DATE:9/10/2021
DESIGN BY: MA | DRAWN BY:BA
SCALE: AS SHOWN
SHEET 7 OF 25

60% SUBMITTAL

Know what's **below.**
Call before you dig.

811

NORTH

40' 0' 40'

2' 0'

VERTICAL SCALE

GENERAL CONSTRUCTION NOTES:

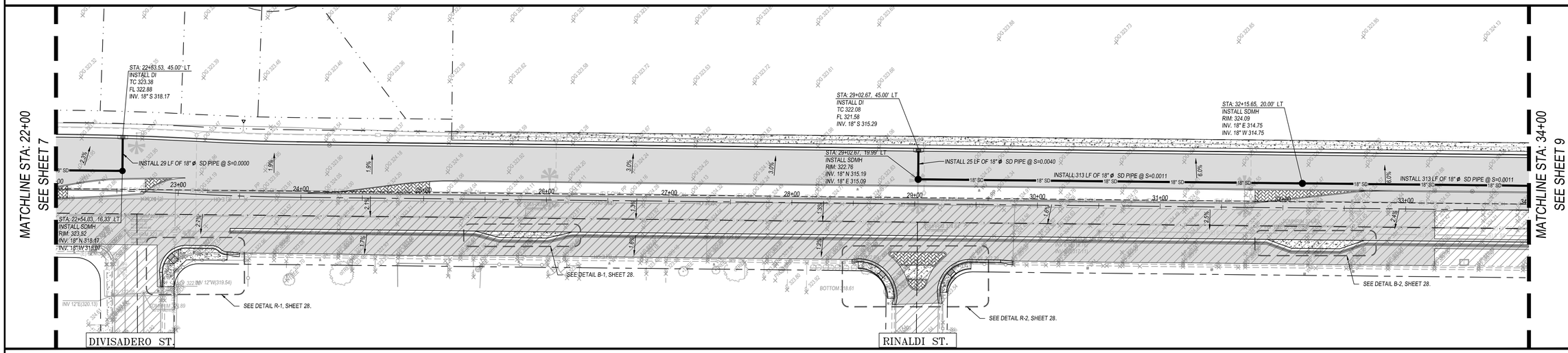
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3. SEE SEWER & WATER PLANS FOR ADDITIONAL INFORMATION.

CONSTRUCTION KEYNOTES (THIS SHEET ONLY)

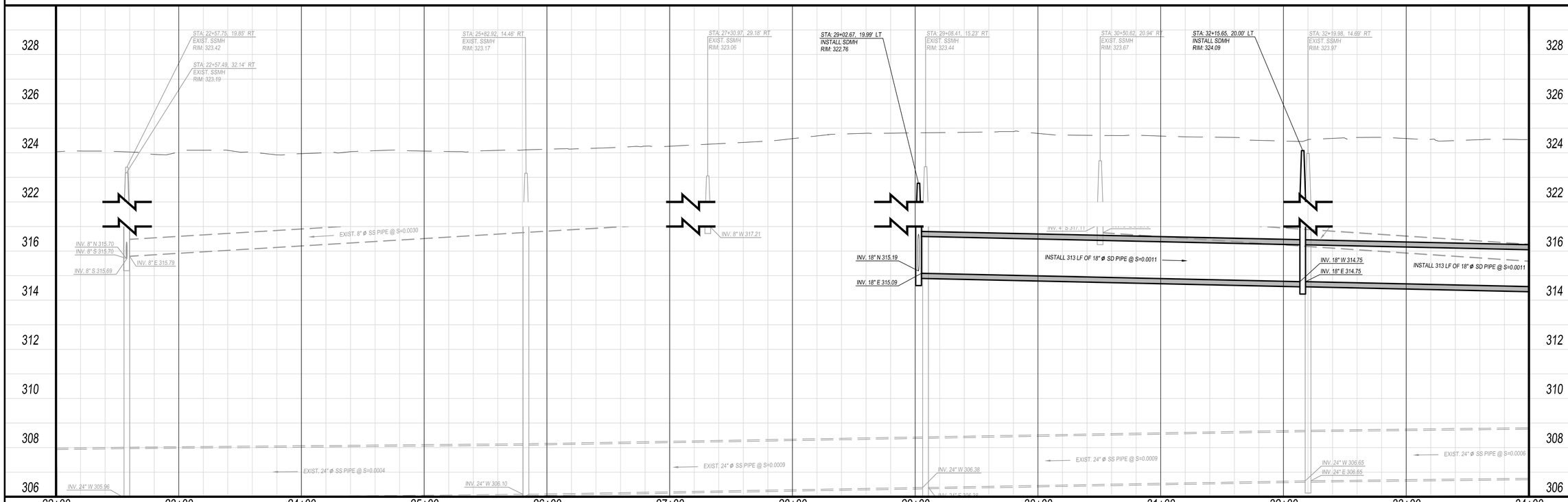
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5. INSTALL DRAINAGE INLET PER CITY STD. D-12
6. INSTALL STORM DRAIN MANHOLE PER CITY STD. D-1
7. INSTALL SANITARY SEWER MANHOLE PER CITY STD. S-1
8. TIE-INTO EXIST. MANHOLE

LEGEND

- DETAIL REFERENCE
- EXIST. ASPHALT CONCRETE
- EXIST. CONCRETE
- PROPOSED CONCRETE
- PROPOSED ASPHALT CONCRETE
- STAMPED MEDIAN (C-35)



RIGGIN AVE. STA: 22+00 – 34+00



324 S. SANTA FE, STE. A
P.O. BOX 7293
VISALIA, CA 93292
TEL: 559.802.3052
FAX: 559.802.3215

PREPARED BY: 4CREEKS

CHK BY: KM
DRN BY: MH

NO.	DATE	DESCRIPTION

CITY OF VISALIA
315 E. ACEQUIA AVE.
VISALIA, CA 93291

RIGGIN AVENUE
WIDENING & IMPROVEMENTS
IMROVEMENT PLAN

PROJ. NO. 21097
DATE:9/10/2021
DESIGN BY: MA | DRAWN BY:BA
SCALE: AS SHOWN
SHEET 8 OF 25

60% SUBMITTAL

Know what's **below.**
Call before you dig.

NORTH

40' 0' 40'

2' 0' VERTICAL SCALE

GENERAL CONSTRUCTION NOTES:

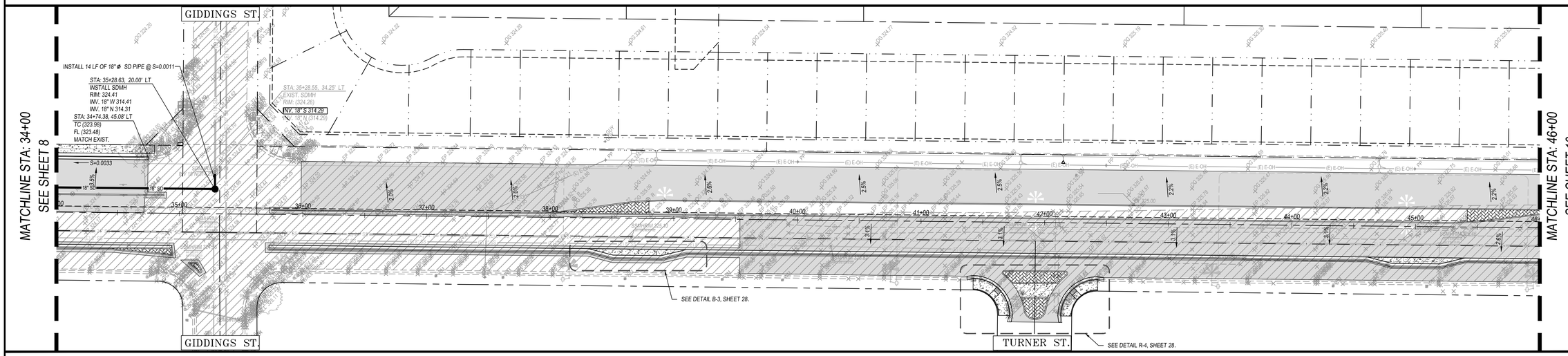
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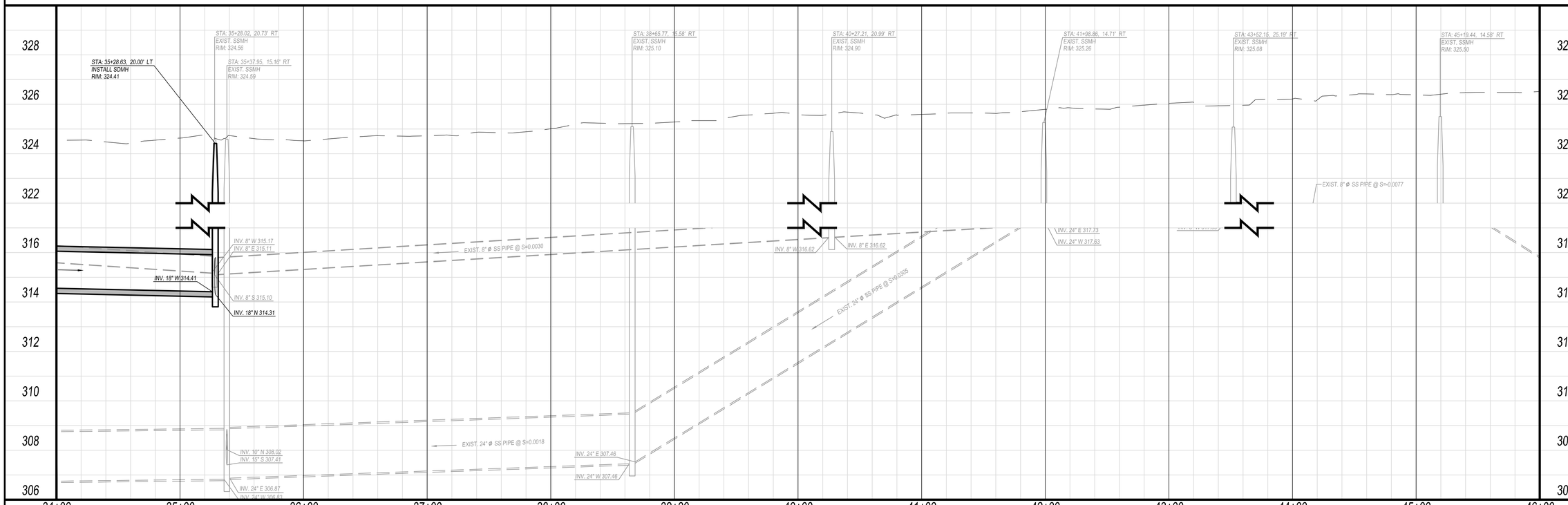
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LEGEND

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- EXIST. ASPHALT CONCRETE
- EXIST. CONCRETE
- PROPOSED CONCRETE
- PROPOSED ASPHALT CONCRETE
- STAMPED MEDIAN (C-35)



RIGGIN AVE. STA: 34+00 – 46+00



NO.	DATE	DESCRIPTION

PREPARED BY:
4CREEKS
324 S. SANTA FE, STE. A
P.O. BOX 7293
VISALIA, CA 93292
TEL: 559.802.3052
FAX: 559.802.2215
CHK BY: KM
DRW BY: MH

CITY OF VISALIA
315 E. ACEQUIA AVE.
VISALIA, CA 93291

RIGGIN AVENUE
WIDENING & IMPROVEMENTS
IMROVEMENT PLAN

PROJ. NO. 21097	
DATE:9/10/2021	
DESIGN BY: MA	DRAWN BY:BA
SCALE: AS SHOWN	
SHEET 9 OF 25	

60% SUBMITTAL

Know what's **below.**
Call before you dig.

NORTH

40' 0' 40'

2' 0'
VERTICAL SCALE

GENERAL CONSTRUCTION NOTES:

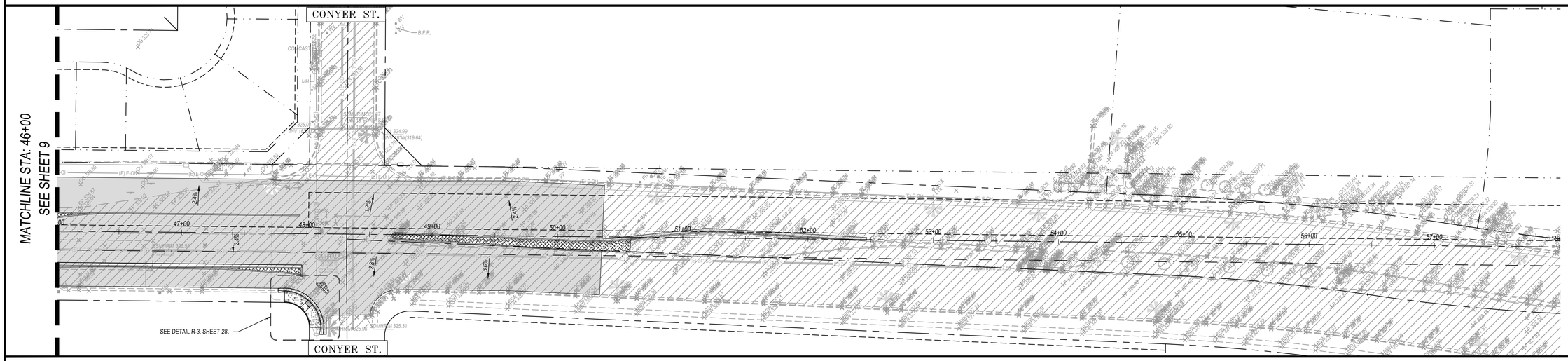
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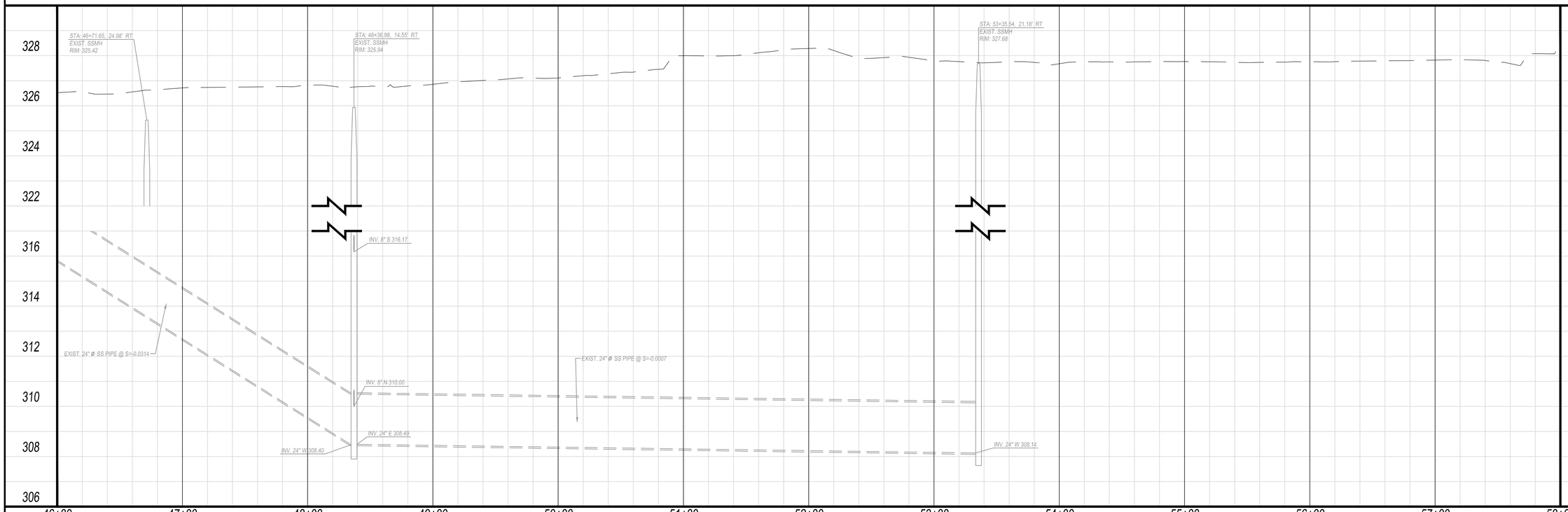
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LEGEND

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- EXIST. CONCRETE
- PROPOSED CONCRETE
- PROPOSED ASPHALT CONCRETE
- STAMPED MEDIAN (C-35)



RIGGIN AVE. STA: 46+00 – 58+00



NO.	DATE	DESCRIPTION

PREPARED BY:

4CREEKS
324 S. SANTA FE, STE. A
P.O. BOX 7593
VISALIA, CA 93292
TEL: 559.802.3052
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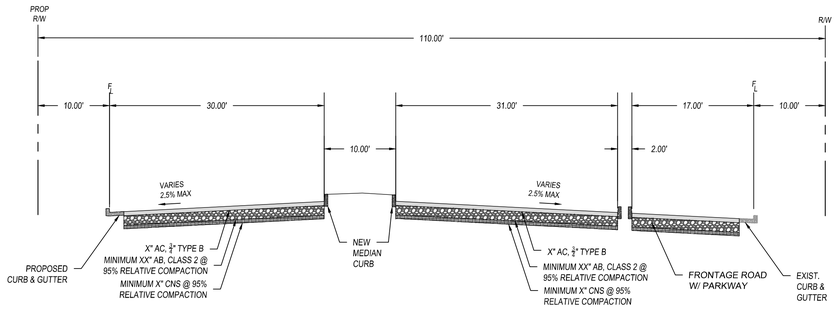
CITY OF VISALIA
315 E. ACEQUIA AVE.
VISALIA, CA 93291

RIGGIN AVENUE
WIDENING & IMPROVEMENTS
IMROVEMENT PLAN

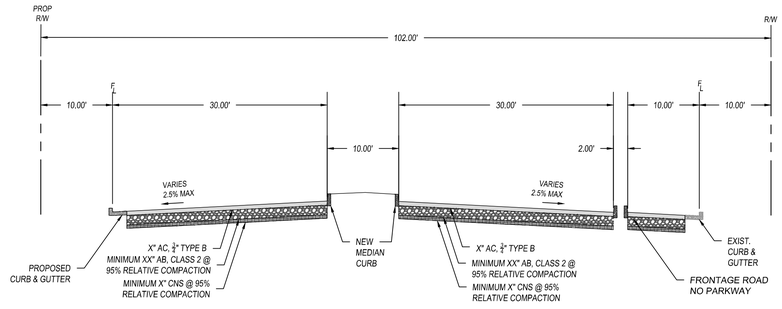
PROJ. NO. 21097
DATE:9/10/2021
DESIGN BY: MA | DRAWN BY:BA
SCALE: AS SHOWN
SHEET 10 OF 25

60% SUBMITTAL

Know what's **below.**
Call before you dig.



RIGGIN AVENUE
STA. 10+00 - END
ULTIMATE BUILD -OUT



RIGGIN AVENUE
STA. 10+00 - END
ULTIMATE BUILD -OUT @
FIRE BAY

NOTES:

1. ASPHALT CONCRETE SHALL BE TYPE A, WITH ¾" AGGREGATE GRADATION AND PG 64-10 LIQUID ASPHALT BINDER PER CITY OF VISALIA STANDARD SPECIFICATIONS.
2. TACK COAT IS REQUIRED AND SHALL BE APPLIED PER CITY STANDARD SPECIFICATIONS.
3. ASPHALT CONCRETE REQUIREMENTS SHALL BE AS STATED IN THE CITY OF VISALIA STANDARD SPECIFICATIONS.
4. ASPHALT CONCRETE SHALL BE PLACED ONLY WHEN THE ATMOSPHERIC TEMPERATURE IS 50° F AND RISING.

NO.	DATE	DESCRIPTION

PROFESSIONAL ENGINEER — MICHAEL ANTHONY — No. 83182 — STATE OF CALIFORNIA — CIVIL

PREPARED BY:
4CREEKS
324 S. SANTA FE, STE. A
P.O. BOX 7593
VISALIA, CA 93292
TEL: 559.802.3052
FAX: 559.802.3215

DRW BY: MH | CHK BY: KM

CITY OF VISALIA
315 E. ACEQUIA AVE.
VISALIA, CA 93291

RIGGIN AVENUE
WIDENING & IMPROVEMENTS
CROSS SECTIONS

PROJ. NO. 21097
DATE:9/10/2021
DESIGN BY: MA | DRAWN BY:BA
SCALE: AS SHOWN
SHEET 11 OF 29

60% SUBMITTAL

Know what's **below.**
Call before you dig.

811

NORTH

40' 0' 40'

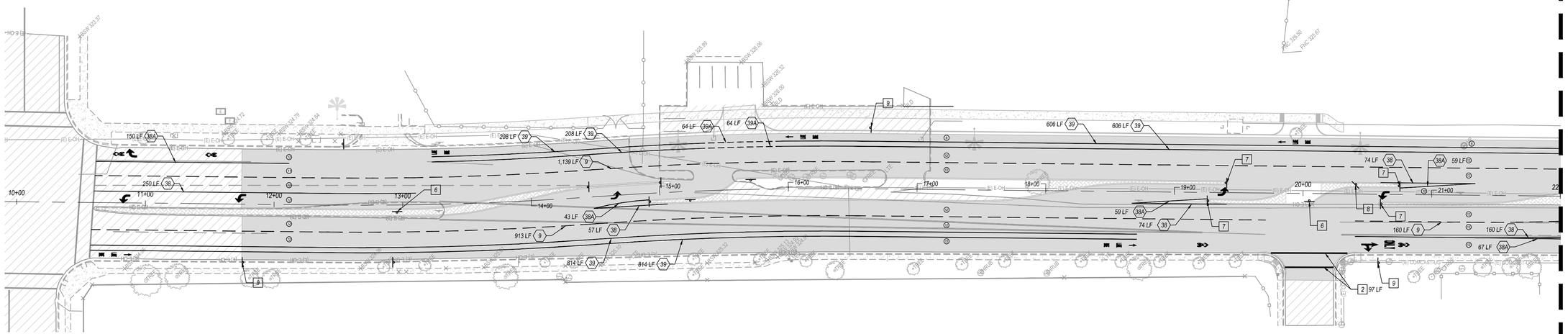
LEGEND & KEYNOTES

- (X) INSTALL DETAIL NO. PER STATE STANDARD PLANS (PER LENGTH SHOWN ON PLANS)
- (X) NO. INDICATES WIDTH OF LANE
- 1 TIMBER BARRICADE, SEE CITY STD. B-1
- 2 INSTALL BASIC CROSSWALK PER CALTRANS STANDARD PLAN A24F. PAINT SHALL BE WHITE THERMOPLASTIC PAINT.
- 3 PAINT CURB RED (PER LENGTH SHOWN ON PLANS)
- 4 ACCESS AISLES SHALL BE MARKED WITH A PAINTED BORDERLINE AROUND THE PERIMETER. THE AREA WITHIN THE BORDERLINES SHALL BE MARKED WITH HATCHED LINES A MAXIMUM OF 36" O.C. PAINT SHALL BE WHITE THERMOPLASTIC.
- 5 INSTALL R4-7 AND OM1-1 SIGNS PER CITY STD. TS-8.
- 6 INSTALL R6-1R AND OM1-1 SIGNS PER CITY STD. TS-8.
- 7 INSTALL TYPE H MARKERS AND OM2-1H SIGN PER CITY STD. TS-8.
- 8 INSTALL R5-1 SIGN PER CITY STD. TS-8.
- 9 INSTALL R81(CA) SIGN
- 10 INSTALL R3-7R AND R118(CA) SIGNS

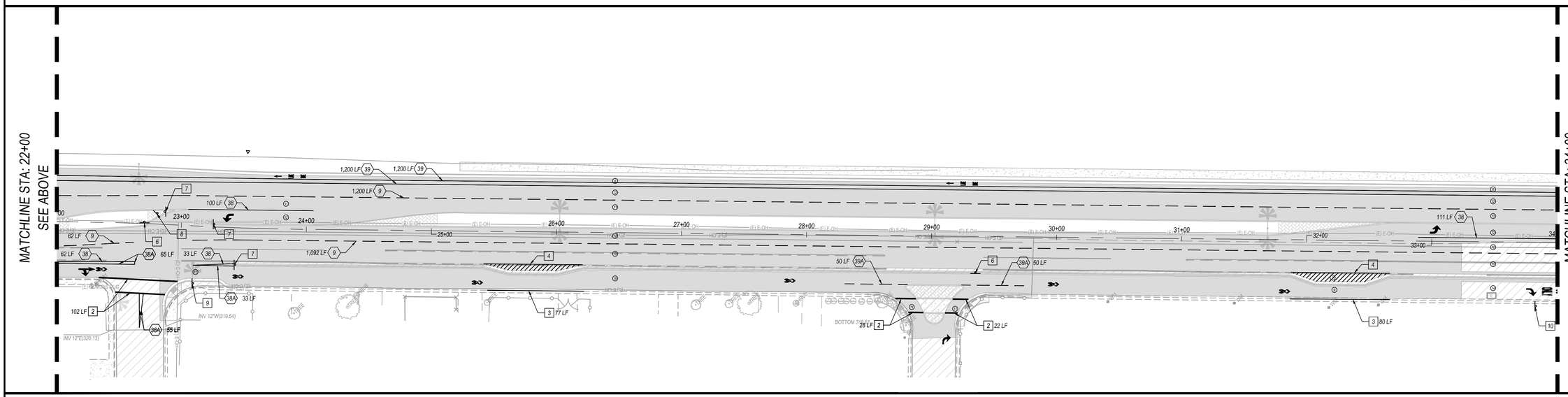
- INSTALL TYPE IV (L) PAVEMENT MARKING
- INSTALL TYPE IV (R) PAVEMENT MARKING
- INSTALL TYPE VI PAVEMENT MARKING
- INSTALL SHARROW
- INSTALL "STOP" PAVEMENT MARKING
- INSTALL "ONLY" PAVEMENT MARKING
- FURNISH & INSTALL SIGN AND POST AT THIS LOCATION
- INSTALL "BIKE LANE" PAVEMENT MARKER W/ ARROW

SIGNAL AND STRIPING NOTES:

1. *WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION, STANDARD PLANS AND SPECIFICATIONS, SIGN SPECIFICATION SHEETS, THE 2014 CALIFORNIA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (2014 CALIFORNIA MUTCD, LATEST EDITION), THE LATEST EDITION OF THE CITY OF VISALIA STANDARD SPECIFICATION AND DRAWINGS, AND THE SPECIAL PROVISIONS.*
2. *THESE PLANS ARE ACCURATE FOR SIGNING AND STRIPING ONLY.*
3. *ALL CROSSWALKS SHALL BE 12 FEET WIDE, OUTSIDE EDGE TO OUTSIDE EDGE PER CITY STANDARD DRAWING P-7, UNLESS OTHERWISE NOTED ON THE PLANS.*
4. *INSTERSECTION STREET NAME SIGNS SHALL BE INSTALLED PER CITY STANDARD DRAWING TS-7, UNLESS OTHERWISE NOTED ON THE PLANS.*
5. *ALL SIGNS SHALL BE INSTALLED PER 2014 CALIFORNIA MUTCD, LATEST EDITION.*
6. *TYPE IV WHITE ARROW (RIGHT AND LEFT) SHALL BE INSTALLED PER STATE STANDARDS, UNLESS OTHERWISE NOTED ON THE PLANS.*
7. *ALL EXISTING STRIPING OR PAVEMENT MESSAGES TO BE REMOVED OR IN CONFLICT WITH IMPROVEMENTS ARE TO BE REMOVED BY LIGHTLY GRINDING.*
8. *INSTALL "NO PARKING" SIGNS ON STREET LIGHT POLES WHEN POSSIBLE*
9. *ALL EXISTING SIGNS TO BE PROTECTED IN PLACE SHALL BE ADJUSTED TO FINISHED GRADE SO THAT THE LOWEST SIGN ON THE POST MEETS CLEARANCES SPECIFIED IN THE 2014 CALIFORNIA MUTCD, LATEST EDITION FOR EACH SIGN TYPE.*



RIGGIN AVE. STA: 10+00 – 22+00



RIGGIN AVE. STA: 22+00 – 34+00

NO.	DATE	DESCRIPTION

PREPARED BY:
4CREEKS
324 S. SANTA FE, STE. A
P.O. BOX 7593
VISALIA, CA 93292
TEL: 559.802.3052
FAX: 559.802.3215
DRW BY: MH | CHK BY: KM

CITY OF VISALIA
315 E. ACEQUIA AVE.
VISALIA, CA 93291

RIGGIN AVENUE
WIDENING & IMPROVEMENTS
SIGNING, STRIPING & MARKING PLAN

60% SUBMITTAL

PROJ. NO. 21097
DATE:9/10/2021
DESIGN BY: MA | DRAWN BY:BA
SCALE: AS SHOWN
SHEET 12 OF 29

Know what's **below.**
Call before you dig.

811

NORTH

40' 0' 40'

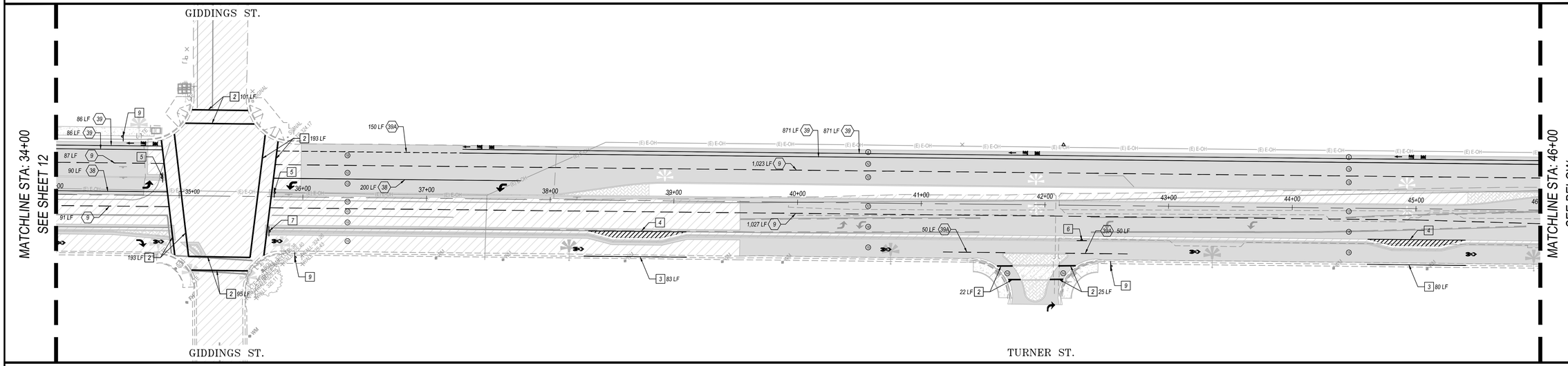
LEGEND & KEYNOTES

- (X) INSTALL DETAIL NO. PER STATE STANDARD PLANS (PER LENGTH SHOWN ON PLANS)
- (X) NO. INDICATES WIDTH OF LANE
- 1 TIMBER BARRICADE, SEE CITY STD. B-1
- 2 INSTALL BASIC CROSSWALK PER CALTRANS STANDARD PLAN A24F. PAINT SHALL BE WHITE THERMOPLASTIC PAINT.
- 3 PAINT CURB RED (PER LENGTH SHOWN ON PLANS)
- 4 ACCESS AISLES SHALL BE MARKED WITH A PAINTED BORDERLINE AROUND THE PERIMETER. THE AREA WITHIN THE BORDERLINES SHALL BE MARKED WITH HATCHED LINES A MAXIMUM OF 36" O.C. PAINT SHALL BE WHITE THERMOPLASTIC.
- 5 INSTALL R4-7 AND OM1-1 SIGNS PER CITY STD. TS-8.
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- 7 INSTALL TYPE H MARKERS AND OM2-1H SIGN PER CITY STD. TS-8.
- 8 INSTALL R5-1 SIGN PER CITY STD. TS-8.
- 9 INSTALL R81(CA) SIGN
- 10 INSTALL R3-7R AND R118(CA) SIGNS

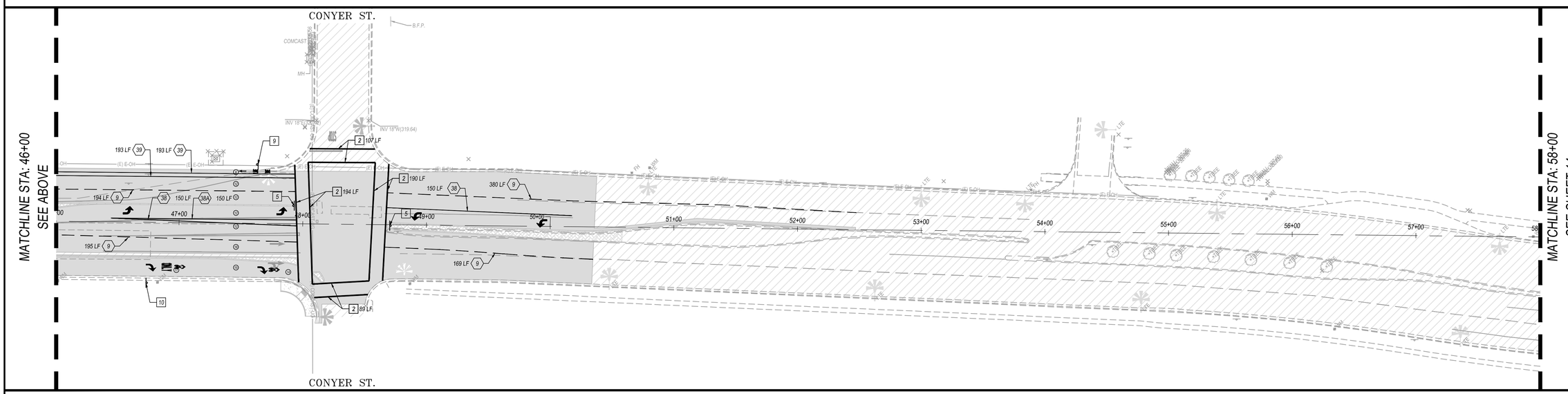
- INSTALL TYPE IV (L) PAVEMENT MARKING
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- INSTALL SHARROW
- INSTALL "STOP" PAVEMENT MARKING
- INSTALL "ONLY" PAVEMENT MARKING
- FURNISH & INSTALL SIGN AND POST AT THIS LOCATION
- INSTALL "BIKE LANE" PAVEMENT MARKER W/ ARROW

SIGNAL AND STRIPING NOTES:

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8. INSTALL "NO PARKING" SIGNS ON STREET LIGHT POLES WHEN POSSIBLE
9. ALL EXISTING SIGNS TO BE PROTECTED IN PLACE SHALL BE ADJUSTED TO FINISHED GRADE SO THAT THE LOWEST SIGN ON THE POST MEETS CLEARANCES SPECIFIED IN THE 2014 CALIFORNIA MUTCD, LATEST EDITION FOR EACH SIGN TYPE.



RIGGIN AVE. STA: 34+00 – 46+00



RIGGIN AVE. STA: 46+00 – 58+00

NO.	DATE	DESCRIPTION

PROFESSIONAL ENGINEER MICHAEL HOLLOWAY 12/31/2021 STATE OF CALIFORNIA

324 S. SANTA FE, STE. A
P.O. BOX 7593
VISALIA, CA 93292
TEL: 559.802.3052
FAX: 559.802.3215

PREPARED BY: 4CREEKS

CHK BY: KH
DRW BY: MH

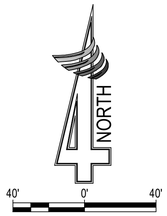
CITY OF VISALIA
315 E. ACEQUIA AVE.
VISALIA, CA 93291

RIGGIN AVENUE
WIDENING & IMPROVEMENTS
SIGNING, STRIPING & MARKING PLAN

60% SUBMITTAL

PROJ. NO. 21097	
DATE:9/10/2021	
DESIGN BY: MA	DRAWN BY:BA
SCALE: AS SHOWN	
SHEET 13 OF 29	

811
Know what's **below.**
Call before you dig.



LEGEND & KEYNOTES

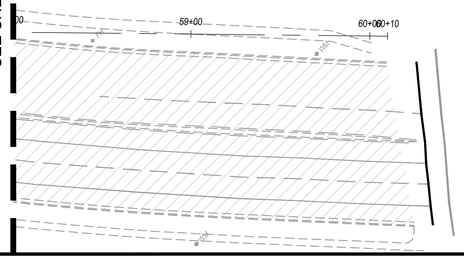
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3	PAINT CURB RED (PER LENGTH SHOWN ON PLANS)
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INSTALL TYPE IV (L) PAVEMENT MARKING
INSTALL TYPE IV (R) PAVEMENT MARKING
INSTALL TYPE VI PAVEMENT MARKING
INSTALL SHARROW
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INSTALL "ONLY" PAVEMENT MARKING
FURNISH & INSTALL SIGN AND POST AT THIS LOCATION
INSTALL "BIKE LANE" PAVEMENT MARKER W/ ARROW

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9. *ALL EXISTING SIGNS TO BE PROTECTED IN PLACE SHALL BE ADJUSTED TO FINISHED GRADE SO THAT THE LOWEST SIGN ON THE POST MEETS CLEARANCES SPECIFIED IN THE 2014 CALIFORNIA MUTCD, LATEST EDITION FOR EACH SIGN TYPE.*

MATCHLINE STA: 58+00
SEE SHEET 13



RIGGIN AVE. STA: 58+00 – END

NO.	DATE	DESCRIPTION

PROFESSIONAL ENGINEER MICHAEL ANDERSON No. 81318 STATE OF CALIFORNIA

324 S. SANTA FE, STE. A
P.O. BOX 7593
VISALIA, CA 93292
TEL: 559.802.3052
FAX: 559.802.3215

PREPARED BY: 4CREEKS
CHK BY: KM
DRW BY: MH

CITY OF VISALIA
315 E. ACEQUIA AVE.
VISALIA, CA 93291

RIGGIN AVENUE
WIDENING & IMPROVEMENTS
SIGNING, STRIPING & MARKING PLAN

PROJ. NO. 21097
DATE:9/10/2021
DESIGN BY: MA | DRAWN BY:BA
SCALE: AS SHOWN
SHEET 14 OF 29

60% SUBMITTAL

Know what's **below.**
Call before you dig.

NORTH

40' 0' 40'

SHEET NOTES

1. GENERAL: *THE REQUIREMENTS OF THE SPECIFICATIONS, THE FOREGOING GENERAL NOTES AND MECHANICAL NOTES SHALL APPLY TO ALL WORK HEREUNDER.*
2. SCOPE: *THE CONTRACTOR SHALL FURNISH AND INSTALL A COMPLETE WORKING ELECTRICAL SYSTEM AS SHOWN ON THE DRAWINGS. IT SHALL, AT PROJECT COMPLETION AND BEFORE FINAL ACCEPTANCE, BE DEMONSTRATED TO HAVE A COMPLETE AND WORKING FUNCTIONAL OPERATION.*
3. CODE COMPLIANCE: *ALL WORK AND MATERIALS SHALL COMPLY WITH THE CALIFORNIA ELECTRICAL CODE (CEC); CALIFORNIA CODE OF REGULATIONS (CCR); CALIFORNIA BUILDING CODE (CBC), CAL OSHA; AND ALL OTHER LAWS, ORDINANCES AND REGULATIONS HAVING JURISDICTION ON THIS WORK.*
4. UL APPROVAL: *ALL MATERIAL AND EQUIPMENT WITHIN THE SCOPE OF THE UL REEXAMINATION SERVICE SHALL BE APPROVED BY THE UNDERWRITERS LABORATORIES FOR THE PURPOSE FOR WHICH THEY ARE USED AND SHALL BEAR THEIR LABEL.*
5. SUBMITTALS: *SUBMIT MANUFACTURER'S DATA FOR LIGHTING FIXTURES, DEVICES, PANELBOARDS, ETC., TO BE USED ON THE PROJECT.*
6. RECORD DRAWINGS: *THE CONTRACTOR SHALL FURNISH TO THE ENGINEER, A COMPLETE SET OF "AS CONSTRUCTED" DRAWINGS WHICH CLEARLY INDICATE ALL DEVIATIONS FROM THE BASIC CONTRACT DOCUMENTS, INCLUDING LOCATION AND DEPTH FOR ALL STUBBED CONDUITS, LOCATION AND SIZE FOR ALL SPARE CONDUITS, CONDUIT ROUTING, AND CONDUCTORS; CIRCUIT NUMBERS FOR ALL DEVICES (NEW AND EXISTING) WITHIN THE AREA OF WORK SHALL BE VERIFIED AND INDICATED ON RECORD DRAWINGS.*
7. *POLES AND FIXTURES SHALL BE INSTALLED PER CURRENT CITY OF VISALIA STREET LIGHT STANDARDS.*
8. *STREET LIGHT FOUNDATIONS ARE TO BE INSTALLED AS SHOWN ON 2016 VISALIA STREET LIGHT STANDARDS SL-6. FOUNDATIONS SHALL BE INSTALLED 2' FROM CENTER OF FOUNDATION TO FACE OF CURB.*
9. *CONDUIT INSTALLED SHALL BE 1 ½" PVC SCHEDULE 40. CONDUIT DEPTH SHALL BE MINIMUM 36" OF COVER UNDER ROADWAYS AND 24" ELSEWHERE.*
10. *CONDUCTORS INSTALLED SHALL BE AS SHOWN ON 2016 VISALIA STREET LIGHT STANDARDS SL-8.*
11. *STREET LIGHT METER PEDESTAL SHALL BE INSTALLED PER MODIFIED 2016 VISALIA STREET LIGHT STANDARDS SL-9.*
12. *STUB CONDUIT AS SHOWN FOR FUTURE EXTENSION ON STREET LIGHTS. INSTALL PULL BOX AT END OF STUB.*
13. *AFTER CONDUCTOR INSTALLATION, ALL CONDUITS WILL BE SEALED WITH DUCTSEAL..*
14. *CONDUCTORS SHALL HAVE XHHW INSULATION TYPE.*
15. *ALL ELECTRICAL PEDESTALS ARE TO BE INSTALLED IN THE CITY RIGHT OF WAY.*

LEGEND

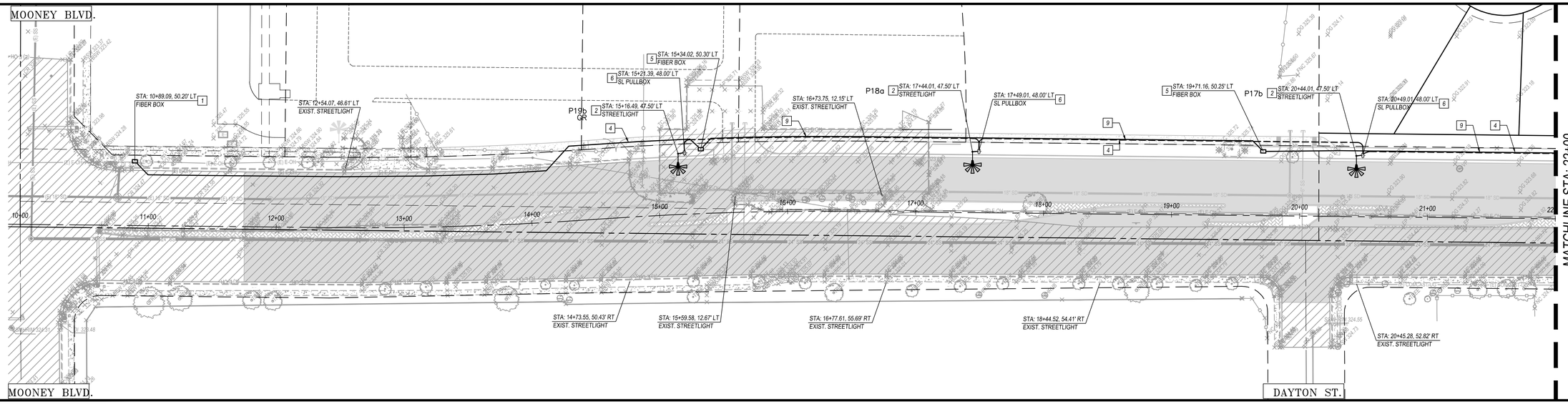
SL-5	*26'(ARTERIAL/COLLECTOR) POLE W/ 8' ARM AND GREENCOBRA LED FIXTURE.*
GR	*5/8" x 8' COPPER CLAD GROUND ROD INSTALLED AT SERVICE PEDESTAL AND IN PULL BOXES AS DESIGNED ON THE PLANS. BOX LID TO BE GROUNDED*
PC	*POLE TOP MOUNTED PHOTOCELL*
SP	*SERVICE POINT. STREET LIGHT METER PEDESTAL INSTALLED PER SL-9*
	STREET LIGHT (ARTERIAL & MAJOR COLLECTOR)
	STREET LIGHT (ARTERIAL & MAJOR COLLECTOR) - DOUBLE HEAD
	STREETLIGHT PULL BOX - INSTALLED AS PER SL-7. BOX LID TO BE GROUNDED
	120/240 METER PEDESTAL
	NEW STREET LIGHT CABLE IN 1-1/2" CONDUIT
	EXISTING 1-1/2" PVC CONDUIT WITH 4/C 3-#6CU & 1-#8CU (1 RUN)

FIXTURES

COUNT:
METER PEDESTAL = 1(NEW) & 1(EXISTING)
PULL BOXES = 18
SL-5 STREET LIGHTS W/ LEOTEK GC1-60F DOUBLE LED HEAD (13400 LUMEN EACH) = 3
GC1-60F-MV-NW-3-GY-700
SL-5 STREET LIGHTS W/ LEOTEK GC1-60F LED HEAD (13400 LUMEN) = 11
GC1-60F-MV-NW-3-GY-700

CONSTRUCTION KEYNOTES (THIS SHEET ONLY)

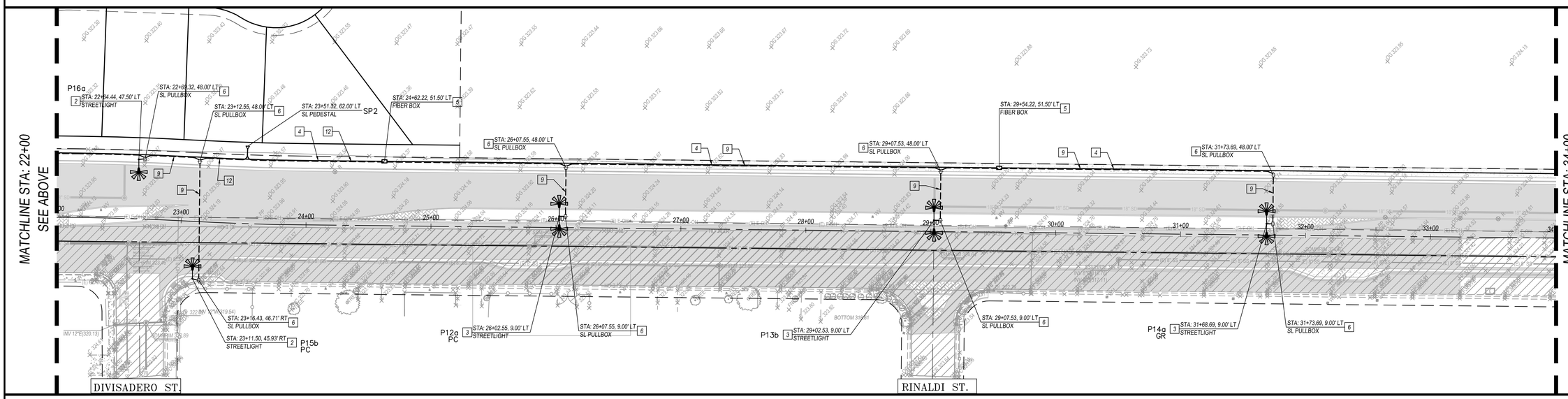
1. *INSTALL CITY STD. TE-10 FIBER PULL BOX PER DETAIL TE-10, SHEET 29.*
2. *INSTALL CITY STD. STREETLIGHT PER DETAIL SL-5, SHEET 28.*
3. *INSTALL CITY STD. DUAL MEDIAN STREETLIGHT PER DETAIL SL-5, SHEET 28.*
4. *INSTALL 3" PVC CONDUIT WITH TRACER WIRE AND PULL ROPE.*
5. *INSTALL CITY STD. TE-5 FIBER PULL BOX PER DETAIL TE-5, SHEET 29.*
6. *INSTALL CITY STD. STREETLIGHT PULL BOX PER DETAIL SL-7, SHEET 28.*
7. *EXISTING 1-1/2" PVC CONDUIT WITH 4/C 3-#6CU & 1-#8CU (1 RUN)*
8. *REMOVE EXISTING PULL BOX AND EXTEND WITH 1-1/2" PVC CONDUIT WITH 4/C 3-#6CU & 1-#8CU (1 RUN)*
9. *INSTALL 1-1/2" PVC CONDUIT WITH 4/C 3-#6CU & 1-#8CU (1 RUN)*
10. *EXISTING 1-1/2" PVC CONDUIT WITH 4/C 3-#6CU & 1-#8CU (1 RUN) AND 3/C 3-#14CU (1 RUN)*
11. *EXISTING EMPTY 1-1/2" PVC CONDUIT*
12. *INSTALL 1-1/2" PVC CONDUIT WITH 4/C 3-#6CU & 1-#8CU (1 RUN) AND 3/C 3-#14CU (1 RUN)*



RIGGIN AVE. STA: 10+00 – 22+00

FIBER OPTIC CONDUIT / STREET LIGHT CONDUIT NOTES (THIS SHEET ONLY)

1. *CONTRACTOR TO INSTALL FIBER OPTIC & STREET LIGHT CONDUIT PER CITY STD. TE-9, SHEET 35 (WHERE APPLICABLE).*



RIGGIN AVE. STA: 22+00 – 34+00

NO.	DATE	DESCRIPTION

PROFESSIONAL ENGINEER — MARIO ALVAREZ — No. 83918 — STATE OF CALIFORNIA — CIVIL

PREPARED BY:
4CREEKS
324 S. SANTA FE, STE A.
P.O. BOX 7593
VISALIA, CA 93292
TEL: 559.802.3052
FAX: 559.802.3215

CHK BY: KM
DRW BY: MH

CITY OF VISALIA
315 E. ACEQUIA AVE.
VISALIA, CA 93291

RIGGIN AVENUE
WIDENING & IMPROVEMENTS
STREET LIGHTING & FIBER INTERCONNECT PLAN

60% SUBMITTAL

PROJ. NO. 21097
DATE:9/10/2021
DESIGN BY: MA | DRAWN BY:BA
SCALE: AS SHOWN
SHEET 15 OF 29

Know what's **below.**
Call before you dig.

NORTH

40' 0' 40'

SHEET NOTES

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LEGEND

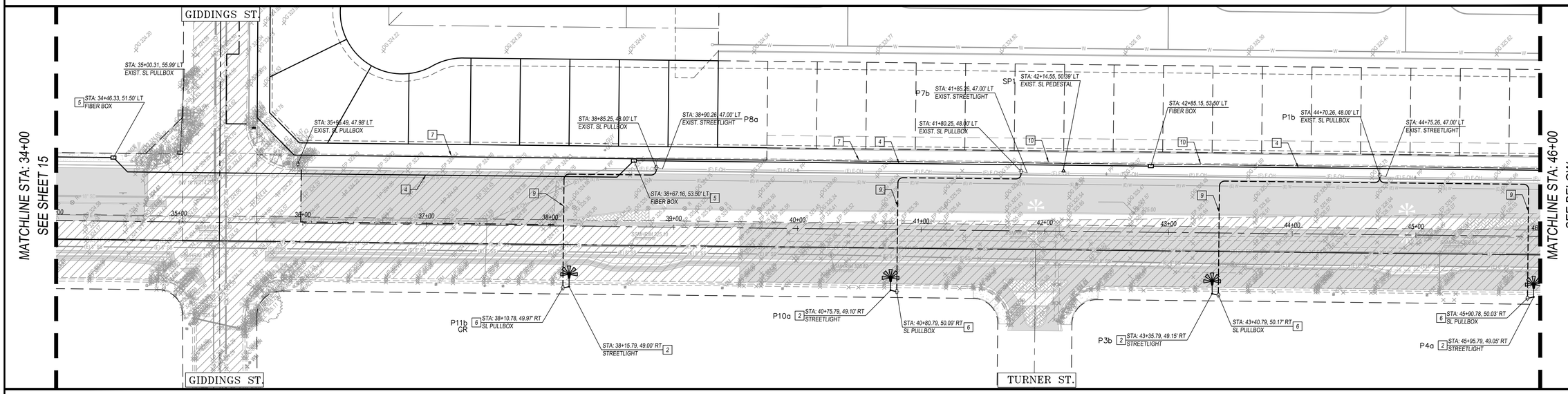
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CONSTRUCTION KEYNOTES (THIS SHEET ONLY)

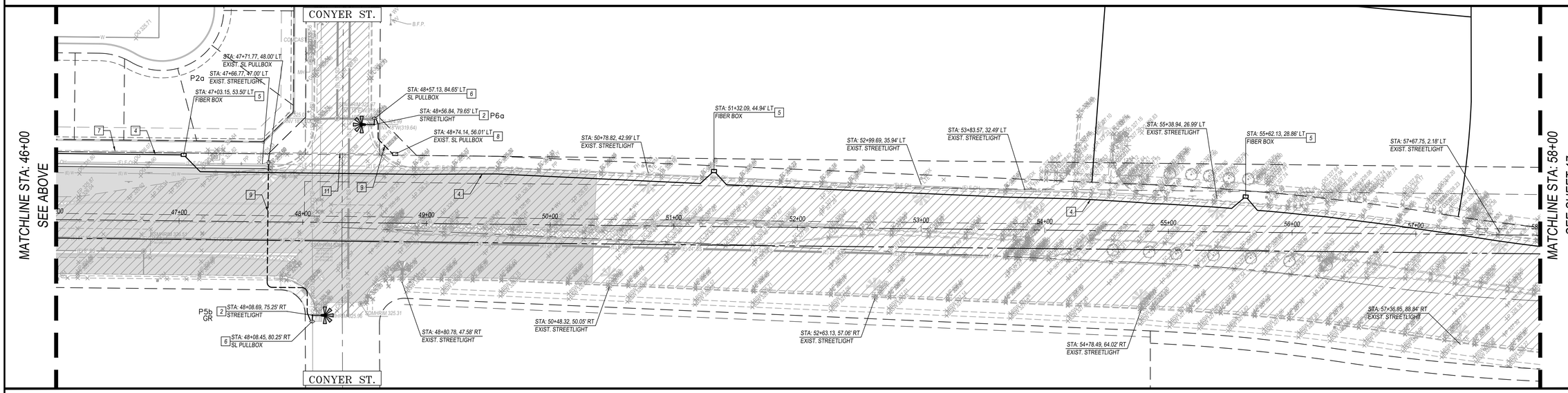
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5. *INSTALL CITY STD. TE-5 FIBER PULL BOX PER DETAIL TE-5, SHEET 29.*
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7. *EXISTING 1-1/2" PVC CONDUIT WITH 4/C 3-#6CU & 1-#8CU (1 RUN)*
8. *REMOVE EXISTING PULL BOX AND EXTEND WITH 1-1/2" PVC CONDUIT WITH 4/C 3-#6CU & 1-#8CU (1 RUN)*
9. *INSTALL 1-1/2" PVC CONDUIT WITH 4/C 3-#6CU & 1-#8CU (1 RUN)*
10. *EXISTING 1-1/2" PVC CONDUIT WITH 4/C 3-#6CU & 1-#8CU (1 RUN) AND 3/C 3-#14CU (1 RUN)*
11. *EXISTING EMPTY 1-1/2" PVC CONDUIT*
12. *INSTALL 1-1/2" PVC CONDUIT WITH 4/C 3-#6CU & 1-#8CU (1 RUN) AND 3/C 3-#14CU (1 RUN)*



RIGGIN AVE. STA: 34+00 – 46+00

FIBER OPTIC CONDUIT / STREET LIGHT CONDUIT NOTES (THIS SHEET ONLY)

1. *CONTRACTOR TO INSTALL FIBER OPTIC & STREET LIGHT CONDUIT PER CITY STD. TE-9, SHEET 35 (WHERE APPLICABLE).*



RIGGIN AVE. STA: 46+00 – 58+00

NO.	DATE	DESCRIPTION

4CREEKS, INC.
324 S. SANTA FE, STE. A
P.O. BOX 7593
VISALIA, CA 93292
TEL: 559.802.3052
FAX: 559.802.3215
PREPARED BY:
CHK BY: KM
DRW BY: MH

CITY OF VISALIA
315 E. ACEQUIA AVE.
VISALIA, CA 93291

RIGGIN AVENUE
WIDENING & IMPROVEMENTS
STREET LIGHTING & FIBER INTERCONNECT PLAN

60% SUBMITTAL

PROJ. NO. 21097
DATE:9/10/2021
DESIGN BY: MA | DRAWN BY:BA
SCALE: AS SHOWN
SHEET 16 OF 29

811
Know what's **below.**
Call before you dig.

NORTH
40' 0' 40'

SHEET NOTES

1. GENERAL: THE REQUIREMENTS OF THE SPECIFICATIONS, THE FOREGOING GENERAL NOTES AND MECHANICAL NOTES SHALL APPLY TO ALL WORK HEREUNDER.
2. SCOPE: THE CONTRACTOR SHALL FURNISH AND INSTALL A COMPLETE WORKING ELECTRICAL SYSTEM AS SHOWN ON THE DRAWINGS. IT SHALL, AT PROJECT COMPLETION AND BEFORE FINAL ACCEPTANCE, BE DEMONSTRATED TO HAVE A COMPLETE AND WORKING FUNCTIONAL OPERATION.
3. CODE COMPLIANCE: ALL WORK AND MATERIALS SHALL COMPLY WITH THE CALIFORNIA ELECTRICAL CODE (CEC); CALIFORNIA CODE OF REGULATIONS (CCR); CALIFORNIA BUILDING CODE (CBC), CAL OSHA; AND ALL OTHER LAWS, ORDINANCES AND REGULATIONS HAVING JURISDICTION ON THIS WORK.
4. UL APPROVAL: ALL MATERIAL AND EQUIPMENT WITHIN THE SCOPE OF THE UL REEXAMINATION SERVICE SHALL BE APPROVED BY THE UNDERWRITERS LABORATORIES FOR THE PURPOSE FOR WHICH THEY ARE USED AND SHALL BEAR THEIR LABEL.
5. SUBMITTALS: SUBMIT MANUFACTURER'S DATA FOR LIGHTING FIXTURES, DEVICES, PANELBOARDS, ETC., TO BE USED ON THE PROJECT.
6. RECORD DRAWINGS: THE CONTRACTOR SHALL FURNISH TO THE ENGINEER, A COMPLETE SET OF "AS CONSTRUCTED" DRAWINGS WHICH CLEARLY INDICATE ALL DEVIATIONS FROM THE BASIC CONTRACT DOCUMENTS, INCLUDING LOCATION AND DEPTH FOR ALL STUBBED CONDUITS, LOCATION AND SIZE FOR ALL SPARE CONDUITS, CONDUIT ROUTING, AND CONDUCTORS; CIRCUIT NUMBERS FOR ALL DEVICES (NEW AND EXISTING) WITHIN THE AREA OF WORK SHALL BE VERIFIED AND INDICATED ON RECORD DRAWINGS.
7. POLES AND FIXTURES SHALL BE INSTALLED PER CURRENT CITY OF VISALIA STREET LIGHT STANDARDS.
8. STREET LIGHT FOUNDATIONS ARE TO BE INSTALLED AS SHOWN ON 2016 VISALIA STREET LIGHT STANDARDS SL-6. FOUNDATIONS SHALL BE INSTALLED 2' FROM CENTER OF FOUNDATION TO FACE OF CURB.
9. CONDUIT INSTALLED SHALL BE 1 ½" PVC SCHEDULE 40. CONDUIT DEPTH SHALL BE MINIMUM 36" OF COVER UNDER ROADWAYS AND 24" ELSEWHERE.
10. CONDUCTORS INSTALLED SHALL BE AS SHOWN ON 2016 VISALIA STREET LIGHT STANDARDS SL-8.
11. STREET LIGHT METER PEDESTAL SHALL BE INSTALLED PER MODIFIED 2016 VISALIA STREET LIGHT STANDARDS SL-9.
12. STUB CONDUIT AS SHOWN FOR FUTURE EXTENSION ON STREET LIGHTS. INSTALL PULL BOX AT END OF STUB.
13. AFTER CONDUCTOR INSTALLATION, ALL CONDUITS WILL BE SEALED WITH DUCTSEAL..
14. CONDUCTORS SHALL HAVE XHHW INSULATION TYPE.
15. ALL ELECTRICAL PEDESTALS ARE TO BE INSTALLED IN THE CITY RIGHT OF WAY.

LEGEND

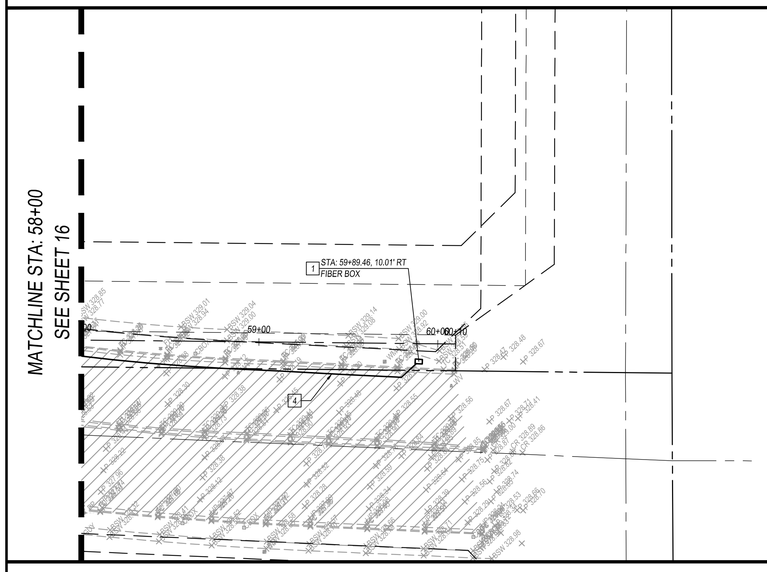
SL-5	26'(ARTERIAL/COLLECTOR) POLE W/ 8' ARM AND GREENCOBRA LED FIXTURE.
GR	5/8" x 8' COPPER CLAD GROUND ROD INSTALLED AT SERVICE PEDESTAL AND IN PULL BOXES AS DESIGNED ON THE PLANS. BOX LID TO BE GROUNDED
PC	POLE TOP MOUNTED PHOTOCELL
SP	SERVICE POINT. STREET LIGHT METER PEDESTAL INSTALLED PER SL-9
	STREET LIGHT (ARTERIAL & MAJOR COLLECTOR)
	STREET LIGHT (ARTERIAL & MAJOR COLLECTOR) - DOUBLE HEAD
	STREETLIGHT PULL BOX - INSTALLED AS PER SL-7. BOX LID TO BE GROUNDED
	120/240 METER PEDESTAL
	NEW STREET LIGHT CABLE IN 1-1/2" CONDUIT
	EXISTING 1-1/2" PVC CONDUIT WITH 4/C 3-#6CU & 1-#8CU (1 RUN)

FIXTURES

COUNT:
METER PEDESTAL = 1(NEW) & 1(EXISTING)
PULL BOXES = 18
SL-5 STREET LIGHTS W/ LEOTEK GC1-60F DOUBLE LED HEAD (13400 LUMEN EACH) = 3
GC1-60F-MV-NW-3-GY-700
SL-5 STREET LIGHTS W/ LEOTEK GC1-60F LED HEAD (13400 LUMEN) = 11
GC1-60F-MV-NW-3-GY-700

CONSTRUCTION KEYNOTES (THIS SHEET ONLY)

1. INSTALL CITY STD. TE-10 FIBER PULL BOX PER DETAIL TE-10, SHEET 29.
2. INSTALL CITY STD. STREETLIGHT PER DETAIL SL-5, SHEET 28.
3. INSTALL CITY STD. DUAL MEDIAN STREETLIGHT PER DETAIL SL-5, SHEET 28.
4. INSTALL 3" PVC CONDUIT WITH TRACER WIRE AND PULL ROPE.
5. INSTALL CITY STD. TE-5 FIBER PULL BOX PER DETAIL TE-5, SHEET 29.
6. INSTALL CITY STD. STREETLIGHT PULL BOX PER DETAIL SL-7, SHEET 28.
7. EXISTING 1-1/2" PVC CONDUIT WITH 4/C 3-#6CU & 1-#8CU (1 RUN)
8. REMOVE EXISTING PULL BOX AND EXTEND WITH 1-1/2" PVC CONDUIT WITH 4/C 3-#6CU & 1-#8CU (1 RUN)
9. INSTALL 1-1/2" PVC CONDUIT WITH 4/C 3-#6CU & 1-#8CU (1 RUN)
10. EXISTING 1-1/2" PVC CONDUIT WITH 4/C 3-#6CU & 1-#8CU (1 RUN) AND 3/C 3-#14CU (1 RUN)
11. EXISTING EMPTY 1-1/2" PVC CONDUIT
12. INSTALL 1-1/2" PVC CONDUIT WITH 4/C 3-#6CU & 1-#8CU (1 RUN) AND 3/C 3-#14CU (1 RUN)



STREET LIGHT FIXTURES

EXISTING SP1 - CIRCUIT 1								
POLE # & PHASE	LUMEN	WATTS	VD% @ SL		POLE # & PHASE	LUMEN	WATTS	VD% @ SL
					EX. P1b	13400	133	0.75%
EX. P2a	13400	133	1.34%		P3b	13400	133	0.97%
P4a	13400	133	0.96%		P5b	13400	133	1.20%
P6a	13400	133	1.48%					

EXISTING SP1 - CIRCUIT 2								
POLE # & PHASE	LUMEN	WATTS	VD% @ SL		POLE # & PHASE	LUMEN	LUMEN	VD% @ SL
					EX. P7b	13400	133	0.13%
EX. P8a	13400	133	0.37%		EX. P9b	13400	133	1.17%
P10a	13400	133	0.27%		P11b	13400	133	0.87%

SP2 - CIRCUIT 1								
POLE # & PHASE	LUMEN	WATTS	VD% @ SL		POLE # & PHASE	LUMEN	LUMEN	VD% @ SL
P12A	26800	266	1.06%		P13b	26800	266	1.13%
P14a	26800	266	2.13%					

SP2 - CIRCUIT 2								
POLE # & PHASE	LUMEN	WATTS	VD% @ SL		POLE # & PHASE	LUMEN	LUMEN	VD% @ SL
					P15b	13400	133	0.23%
P16a	13400	133	0.17%		P17b	13400	133	0.63%
P18a	13400	133	0.66%		P19b	13400	133	1.13%

RIGGIN AVE. STA: 58+00 – END

FIBER OPTIC CONDUIT / STREET LIGHT CONDUIT NOTES (THIS SHEET ONLY)

1. CONTRACTOR TO INSTALL FIBER OPTIC & STREET LIGHT CONDUIT PER CITY STD. TE-9, SHEET 35 (WHERE APPLICABLE).

NO.	DATE	DESCRIPTION

PREPARED BY:
4CREEKS
324 S. SANTA FE, STE. A
P.O. BOX 7593
VISALIA, CA 93292
TEL: 559.802.3052
FAX: 559.802.3215

DRW BY: MH | CHK BY: KM

CITY OF VISALIA
315 E. ACEQUIA AVE.
VISALIA, CA 93291

RIGGIN AVENUE
WIDENING & IMPROVEMENTS
STREET LIGHTING & FIBER INTERCONNECT PLAN

PROJ. NO. 21097
DATE:9/10/2021
DESIGN BY: MA | DRAWN BY:BA
SCALE: AS SHOWN
SHEET 17 OF 29

60% SUBMITTAL

Know what's **below.**
Call before you dig.

CONSTRUCTION AND GRADING KEYNOTES: (THIS SHEET ONLY)

1. INSTALL CONCRETE COLD JOINT. SEE CITY STD. C-34, SHEET 25.
2. GUTTER PAN SHALL NOT EXCEED 5% IN THE PATH OF TRAVEL. ASPHALT TO BE FLUSH WITH LIP AT BOTTOM OF RAMPS.
3. PROVIDE 4'x4' MIN. ADA LANDING, SLOPE SHALL NOT EXCEED 2% IN ANY DIRECTION.
4. CONSTRUCT SIDEWALK PER CITY STD. C-9, SHEET 31.
5. CONSTRUCT DEPRESSED CURB WITH SMOOTH TRANSITION.
6. RE-GRADE LANDSCAPE AREAS TO MATCH NEW IMPROVEMENTS. ADJUST IRRIGATION TO PROVIDE FULLY FUNCTIONING SYSTEM & REPLACE LANDSCAPING IN KIND.
7. CONSTRUCT BUS TURNOUT PER THE DIMENSIONS ON THE PLANS. SEE DETAIL TR-5, SHEET 36.
8. CONSTRUCT COMMERCIAL DRIVE APPROACH PER THE DIMENSIONS ON THE PLANS. SEE DETAIL C-24, SHEET 31.

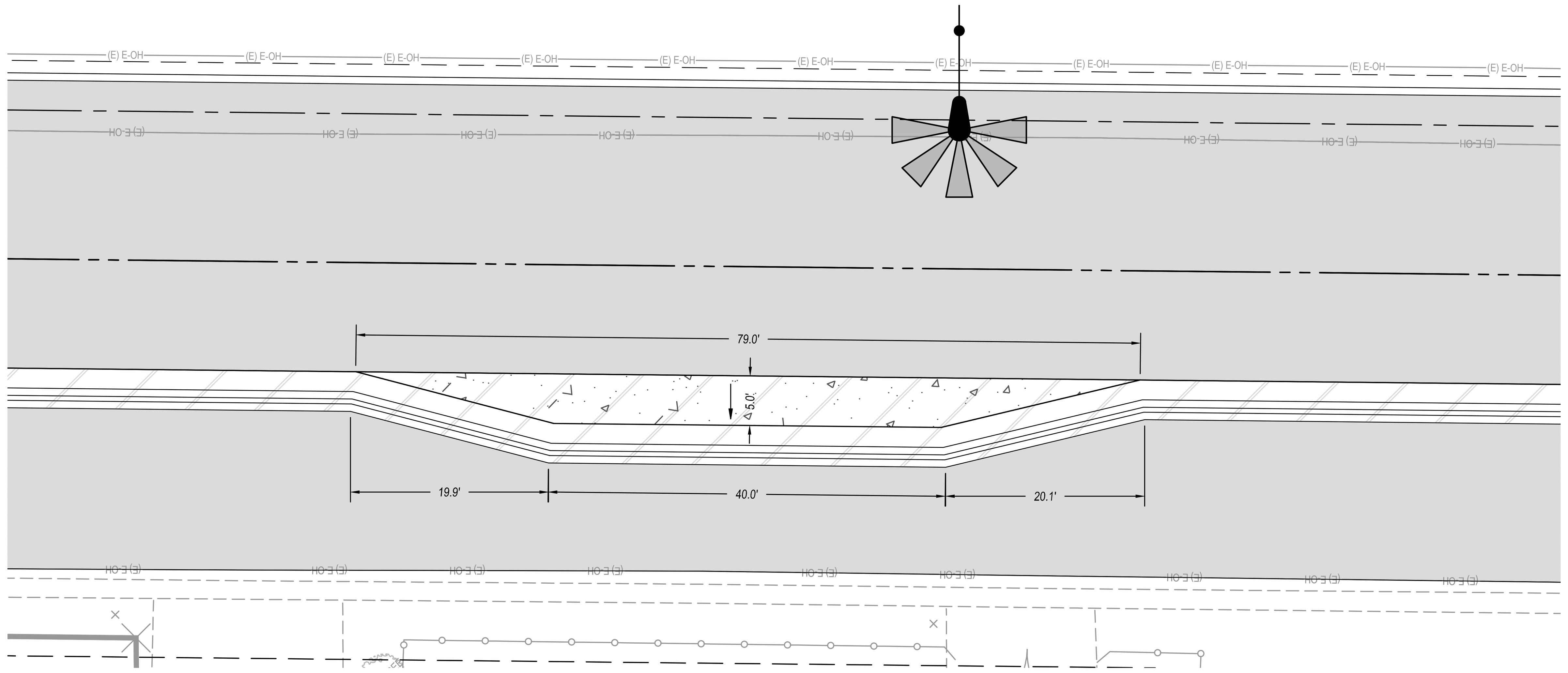
GENERAL NOTES

1. ALL CURBS AND CURB AND GUTTERS SHALL BE POURED PRIOR TO RAMPS AND SIDEWALKS, MONOLITHIC POURS WILL NOT BE ALLOWED.
2. CURBS AND GUTTER AT DRIVE APPROACHES SHALL BE PER CITY STD'S.
3. CROSS SLOPES PERPENDICULAR TO PATH OF TRAVEL ON ALL RAMPS AND SIDEWALKS TO BE 1.5% MAXIMUM
4. CONTRACTOR TO DAYLIGHT GRADE TO EXIST. AT A 4:1 MAX. SLOPE.

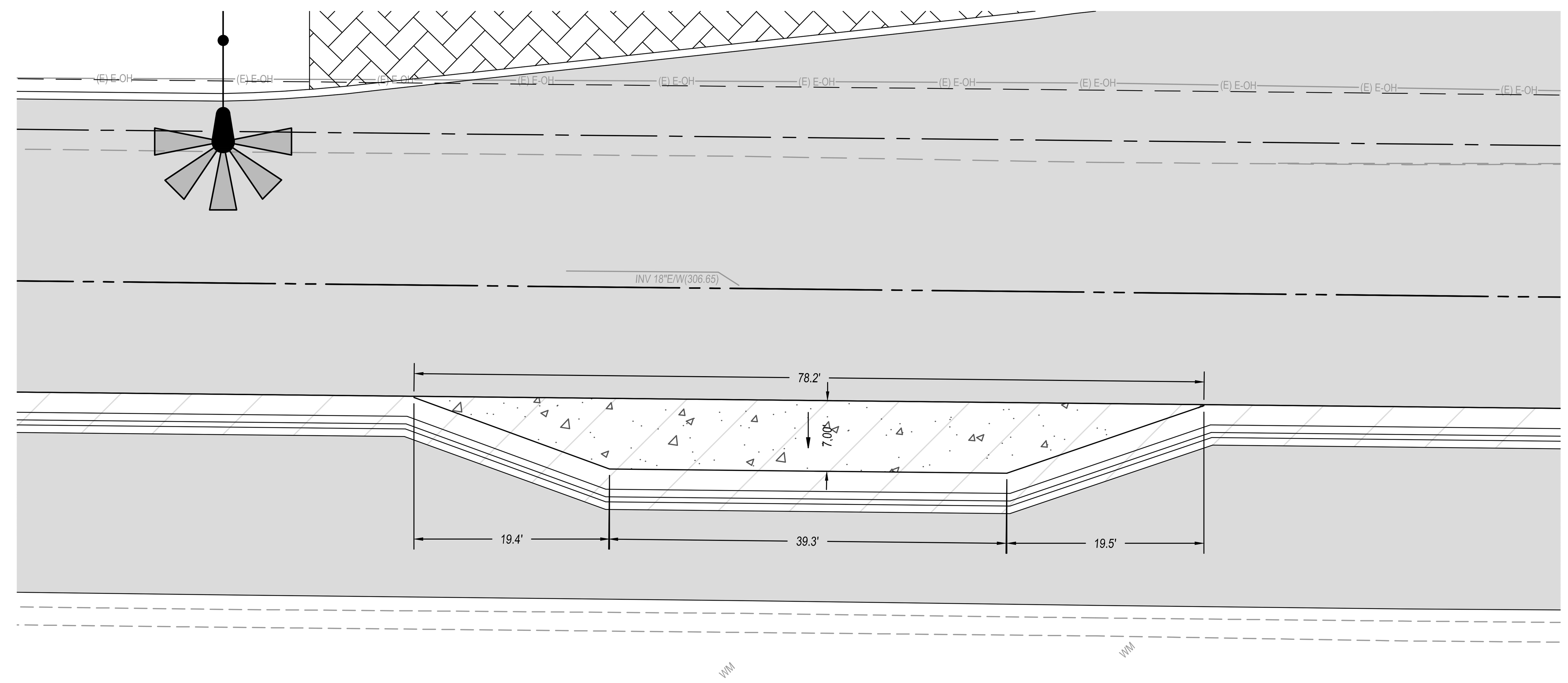
LEGEND

- DETECTABLE WARNING SURFACE
- PROPOSED CONCRETE
- PROPOSED ASPHALT SECTION
- EXISTING ASPHALT HATCH NOT SHOWN FOR CLARITY
- EXISTING CONCRETE
- EXIST. POWER POLE
- EXIST. UTILITY POLE
- SLOPE DIRECTION

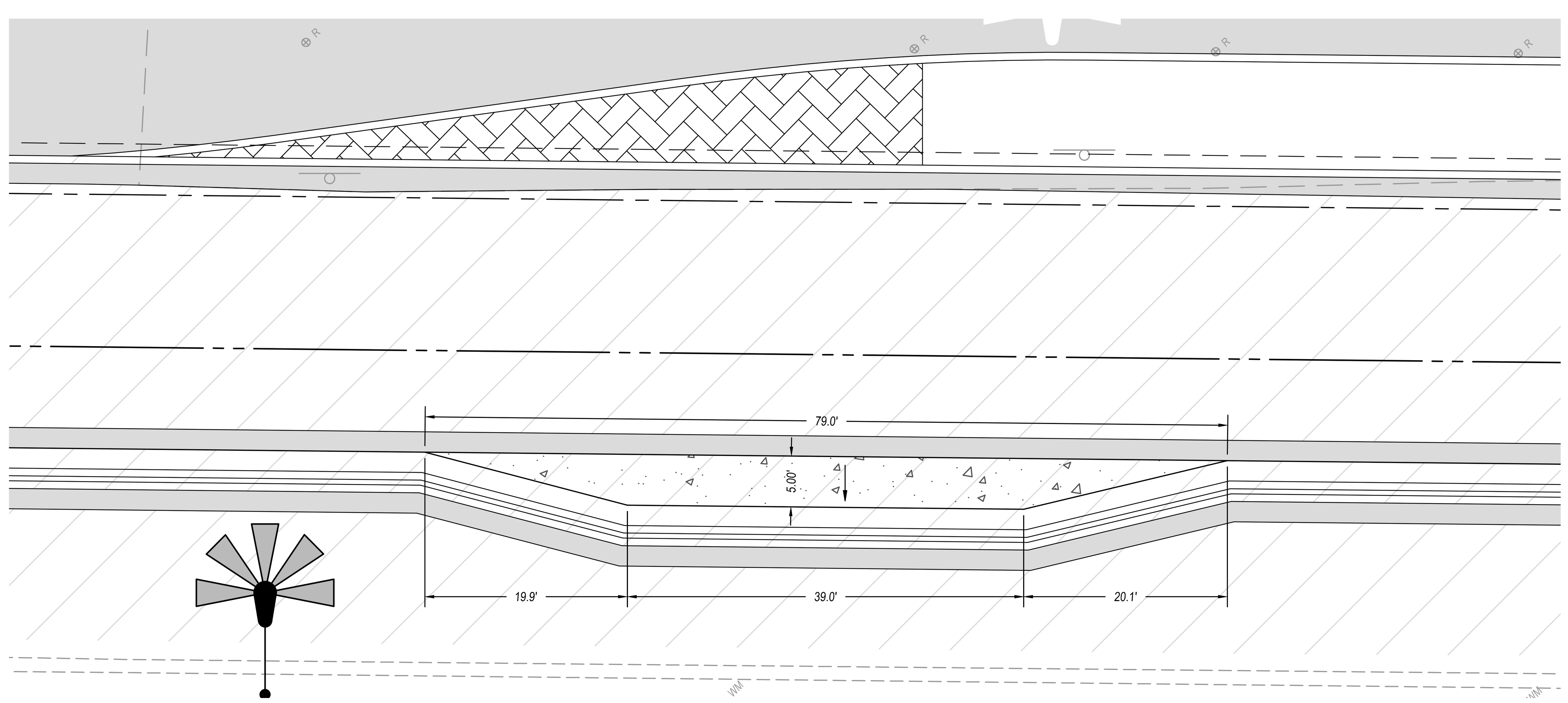
NO.	DATE	DESCRIPTION

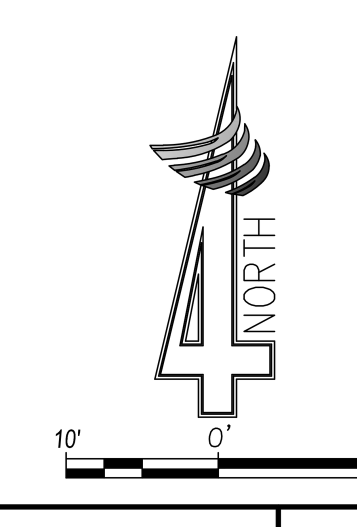


BUS TURNOUT DETAIL - SOUTH SIDE OF RIGGIN AVE. B-1



BUS TURNOUT DETAIL - SOUTH SIDE OF RIGGIN AVE. B-2





BUS TURNOUT DETAIL - SOUTH SIDE OF RIGGIN AVE. B-3

REGISTERED PROFESSIONAL ENGINEER
KYLE J. McDONALD
NO. 82531
Exp. 09/30/22
CIVIL
STATE OF CALIFORNIA
NOT FOR CONSTRUCTION

PREPARED BY:
4CREEKS
324 S. SANTA FE, STE. A
P.O. BOX 7593
VISALIA, CA 93292
TEL: 559.802.3052
FAX: 559.802.3215

DRW BY: MH
CHK BY: KM

CITY OF VISALIA
315 E. ACEQUIA AVE.
VISALIA, CA 93291

RIGGIN AVENUE
WIDENING & IMPROVEMENTS
BUS TURNOUT DETAILS

PROJ. NO. 21097
DATE:9/10/2021
DESIGN BY: MA | DRAWN BY:BA
SCALE: AS SHOWN
SHEET 18 OF 29

60% SUBMITTAL

Know what's below.
Call before you dig.

CONSTRUCTION AND GRADING KEYNOTES: (THIS SHEET ONLY)

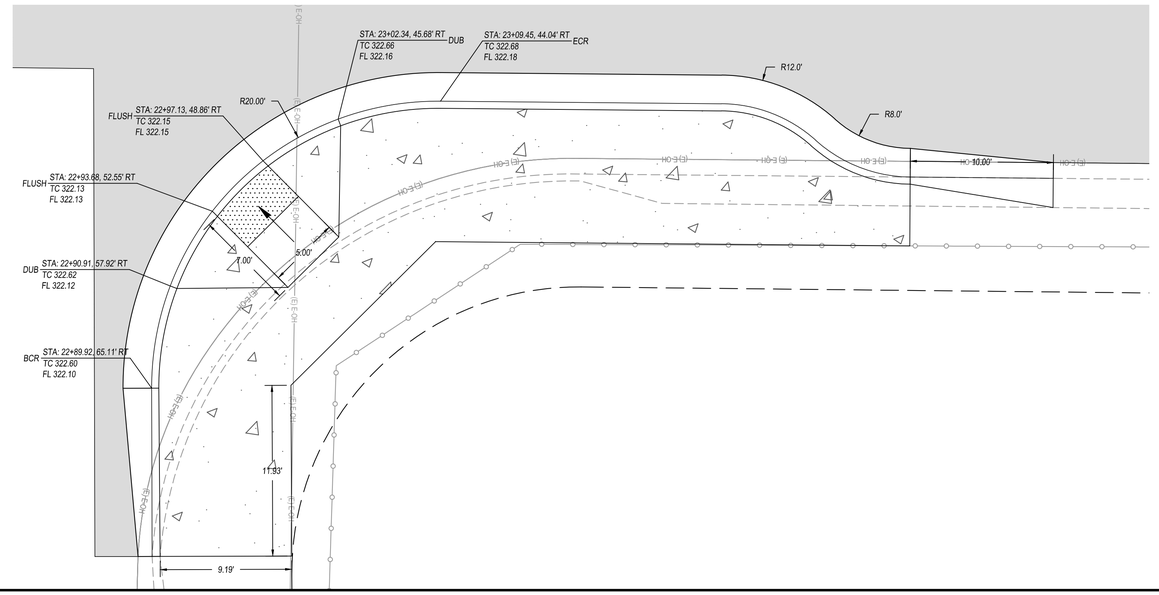
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2. GUTTER PAN SHALL NOT EXCEED 5% IN THE PATH OF TRAVEL. ASPHALT TO BE FLUSH WITH LIP AT BOTTOM OF RAMPS.
3. PROVIDE 4'x4' MIN. ADA LANDING, SLOPE SHALL NOT EXCEED 2% IN ANY DIRECTION.
4. CONSTRUCT SIDEWALK PER CITY STD. C-9, SHEET 31.
5. CONSTRUCT DEPRESSED CURB WITH SMOOTH TRANSITION.
6. RE-GRADE LANDSCAPE AREAS TO MATCH NEW IMPROVEMENTS. ADJUST IRRIGATION TO PROVIDE FULLY FUNCTIONING SYSTEM & REPLACE LANDSCAPING IN KIND.
7. CONSTRUCT BUS TURNOUT PER THE DIMENSIONS ON THE PLANS. SEE DETAIL TR-5, SHEET 36.
8. CONSTRUCT COMMERCIAL DRIVE APPROACH PER THE DIMENSIONS ON THE PLANS. SEE DETAIL C-24, SHEET 31.

GENERAL NOTES

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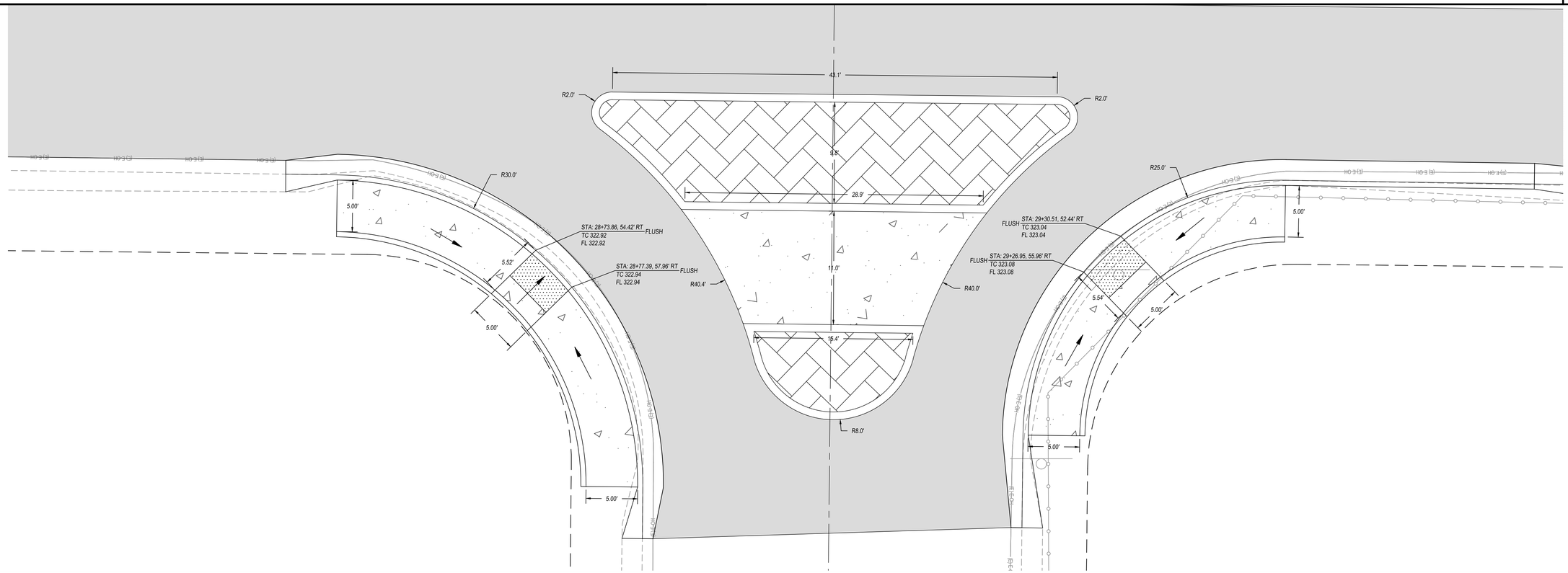
LEGEND

- DETECTABLE WARNING SURFACE
- PROPOSED CONCRETE
- PROPOSED ASPHALT SECTION
- EXISTING ASPHALT HATCH NOT SHOWN FOR CLARITY
- EXISTING CONCRETE
- EXIST. POWER POLE
- EXIST. UTILITY POLE
- SLOPE DIRECTION



RAMP DETAIL - SE CORNER OF DIVISADERO & RIGGIN AVE

R-1



RAMP DETAIL - SOUTH SIDE OF RINALDI ST & RIGGIN AVE

R-2

NO. | DATE | DESCRIPTION

NORTH
5' 0' 5'

324 S. SANTA FE, STE. A
P.O. BOX 7593
VISALIA, CA 93292
TEL: 559.802.3052
FAX: 559.802.3215

PREPARED BY: 4CREEKS

CHK BY: KM
DRN BY: MH

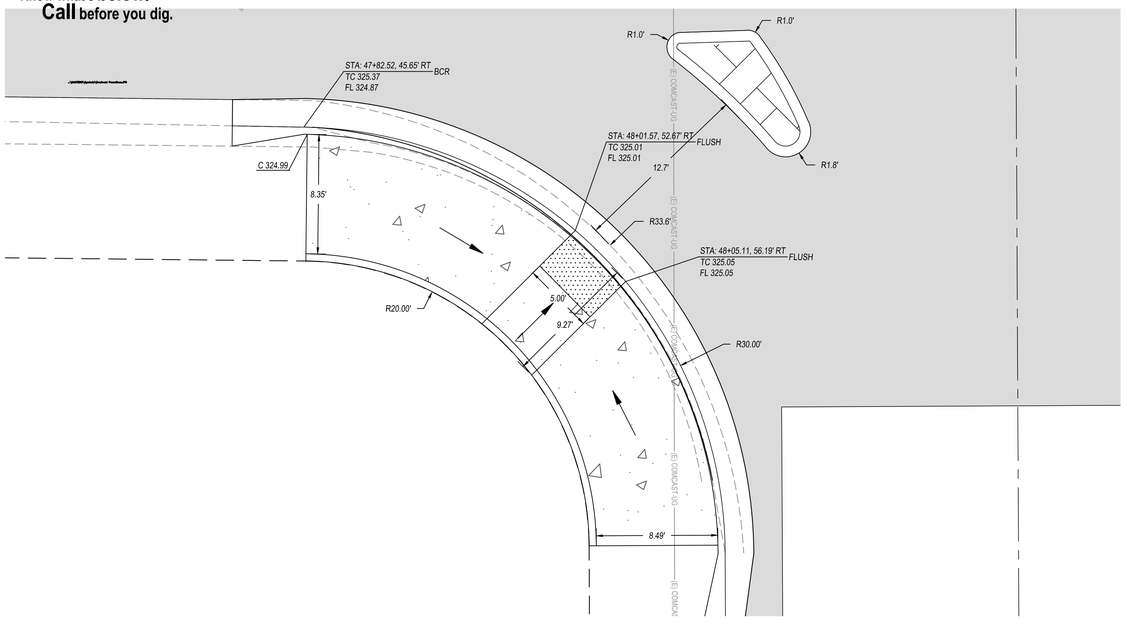
CITY OF VISALIA
315 E. ACEQUIA AVE.
VISALIA, CA 93291

RIGGIN AVENUE
WIDENING & IMPROVEMENTS
RAMP DETAILS

PROJ. NO. 21097
DATE:9/10/2021
DESIGN BY: MA | DRAWN BY:BA
SCALE: AS SHOWN
SHEET 19 OF 29

60% SUBMITTAL

Know what's **below.**
Call before you dig.



RAMP DETAIL - SW CORNER OF CONYER ST & RIGGIN AVE

R-3

CONSTRUCTION AND GRADING KEYNOTES: (THIS SHEET ONLY)

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3. PROVIDE 4'x4' MIN. ADA LANDING, SLOPE SHALL NOT EXCEED 2% IN ANY DIRECTION.
4. CONSTRUCT SIDEWALK PER CITY STD. C-9, SHEET 31.
5. CONSTRUCT DEPRESSED CURB WITH SMOOTH TRANSITION.
6. RE-GRADE LANDSCAPE AREAS TO MATCH NEW IMPROVEMENTS. ADJUST IRRIGATION TO PROVIDE FULLY FUNCTIONING SYSTEM & REPLACE LANDSCAPING IN KIND.
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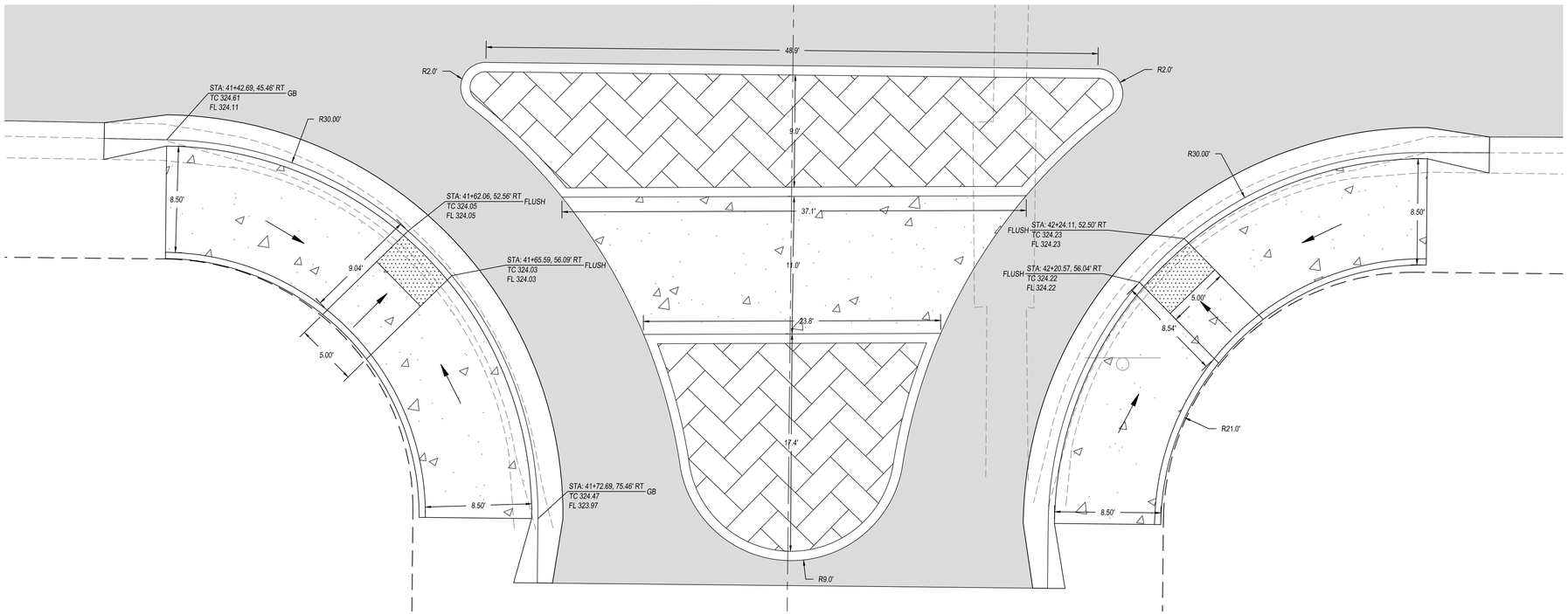
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LEGEND

- DETECTABLE WARNING SURFACE
- PROPOSED CONCRETE
- PROPOSED ASPHALT SECTION
- EXISTING ASPHALT HATCH NOT SHOWN FOR CLARITY
- EXISTING CONCRETE
- EXIST. POWER POLE
- EXIST. UTILITY POLE
- SLOPE DIRECTION





RAMP DETAIL - SE CORNER OF CONYER ST & RIGGIN AVE

R-4

NO.	DATE	DESCRIPTION

324 S. SANTA FE, STE. A
P.O. BOX 7593
VISALIA, CA 93292
TEL: 559.802.3052
FAX: 559.802.3215

PREPARED BY: 4CREEKS

CHK BY: KM

DRW BY: MH

CITY OF VISALIA
315 E. ACEQUIA AVE.
VISALIA, CA 93291

RIGGIN AVENUE
WIDENING & IMPROVEMENTS
RAMP DETAILS

PROJ. NO. 21097
DATE:9/10/2021
DESIGN BY: MA | DRAWN BY:BA
SCALE: AS SHOWN
SHEET 20 OF 29

60% SUBMITTAL

Know what's **below.**
Call before you dig.

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GENERAL NOTES

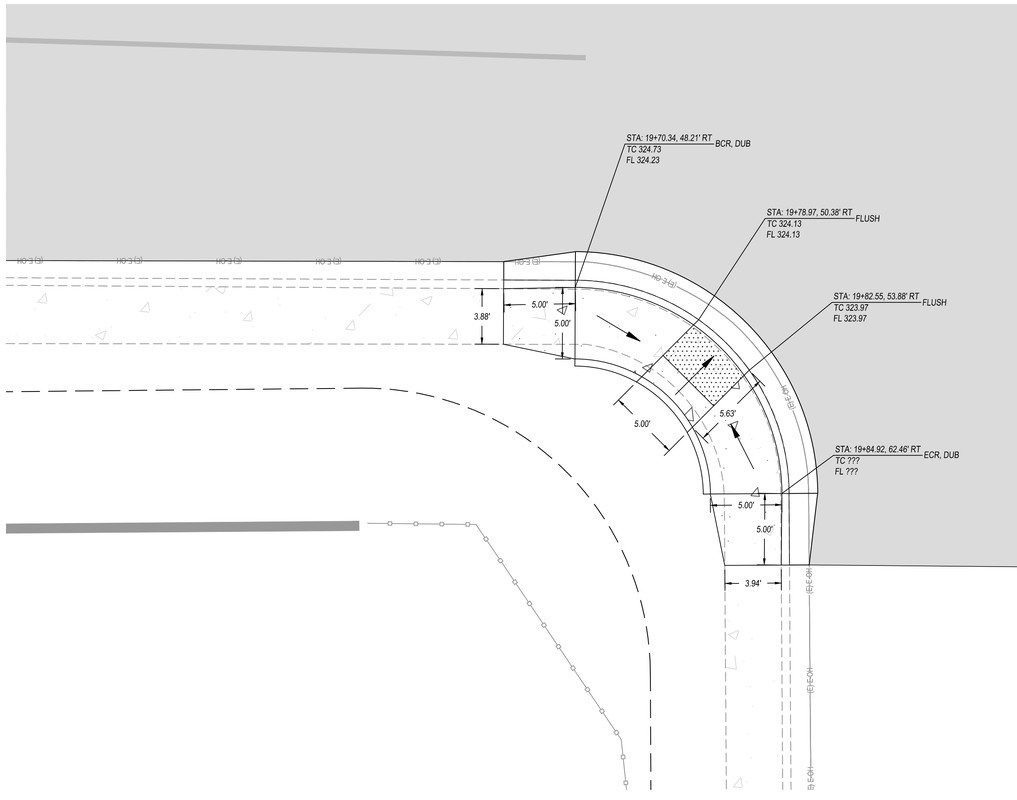
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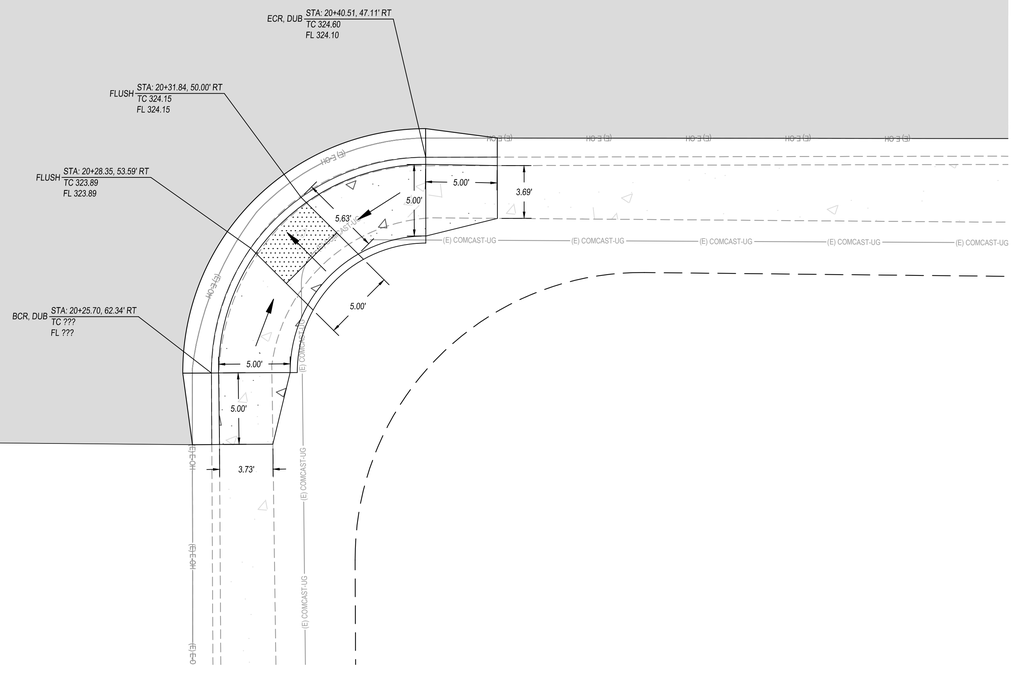
LEGEND

- DETECTABLE WARNING SURFACE
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- PROPOSED ASPHALT SECTION
- EXISTING ASPHALT HATCH NOT SHOWN FOR CLARITY
- EXISTING CONCRETE
- EXIST. POWER POLE
- EXIST. UTILITY POLE
- SLOPE DIRECTION

NORTH

5' 0' 5'





RAMP DETAIL - SOUTH SIDE OF RIGGIN @ DAYTON ST.

R-5

NO.	DATE	DESCRIPTION

PREPARED BY:

4CREEKS
324 S. SANTA FE, STE. A
P.O. BOX 7593
VISALIA, CA 93292
TEL: 559.802.3052
FAX: 559.802.3215

CHK BY: KM

DRW BY: MH

CITY OF VISALIA
315 E. ACEQUIA AVE.
VISALIA, CA 93291

RIGGIN AVENUE
WIDENING & IMPROVEMENTS
RAMP DETAILS

PROJ. NO. 21097
DATE: 9/10/2021
DESIGN BY: MA | DRAWN BY: BA
SCALE: AS SHOWN
SHEET 21 OF 29

60% SUBMITTAL

Know what's **below.**
Call before you dig.

CONSTRUCTION AND GRADING KEYNOTES: (THIS SHEET ONLY)

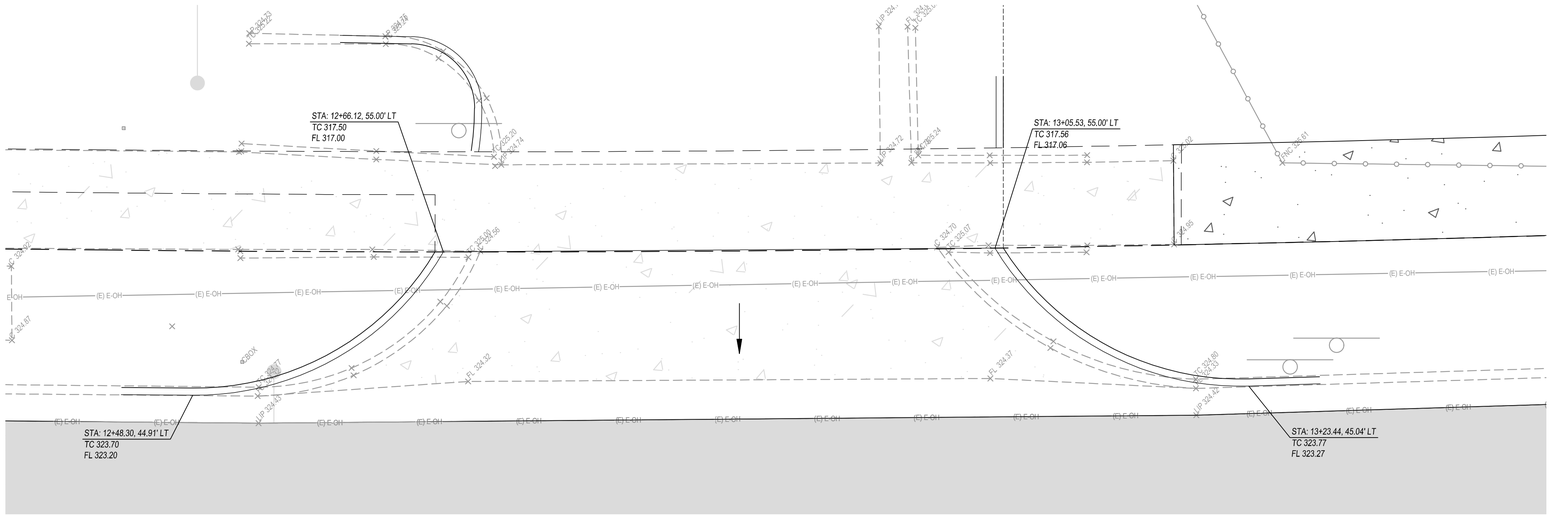
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8. CONSTRUCT COMMERCIAL DRIVE APPROACH PER THE DIMENSIONS ON THE PLANS. SEE DETAIL C-24, SHEET 31.

GENERAL NOTES

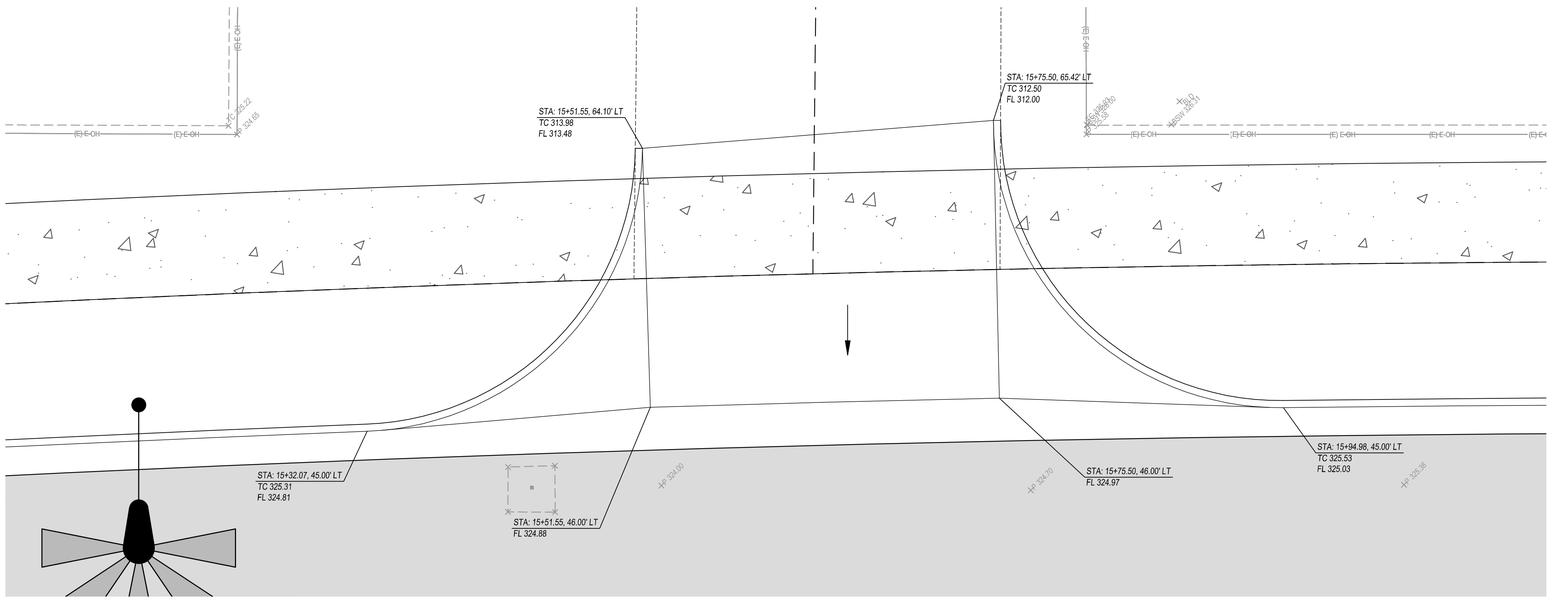
1. ALL CURBS AND CURB AND GUTTERS SHALL BE POURED PRIOR TO RAMPS AND SIDEWALKS, MONOLITHIC POURS WILL NOT BE ALLOWED.
2. CURBS AND GUTTER AT DRIVE APPROACHES SHALL BE PER CITY STD'S.
3. CROSS SLOPES PERPENDICULAR TO PATH OF TRAVEL ON ALL RAMPS AND SIDEWALKS TO BE 1.5% MAXIMUM
4. CONTRACTOR TO DAYLIGHT GRADE TO EXIST. AT A 4:1 MAX. SLOPE.

LEGEND

- DETECTABLE WARNING SURFACE
- PROPOSED CONCRETE
- PROPOSED ASPHALT SECTION
- EXISTING ASPHALT HATCH NOT SHOWN FOR CLARITY
- EXISTING CONCRETE
- EXIST. POWER POLE
- EXIST. UTILITY POLE
- SLOPE DIRECTION



DRIVE APPROACH DETAIL @ STA: XX+XX NORTH SIDE OF RIGGIN AVE. DA-1



DRIVE APPROACH DETAIL @ STA: XX+XX NORTH SIDE OF RIGGIN AVE. DA-2

NO.	DATE	DESCRIPTION

PROFESSIONAL ENGINEER — MICHAEL ANTHONY FOCHTMAN — No. 92152 — STATE OF CALIFORNIA — CIVIL

PREPARED BY:
4CREEKS
324 S. SANTA FE, STE. A
P.O. BOX 7593
VISALIA, CA 93292
TEL: 559.802.3052
FAX: 559.802.3215

CHK BY: KM
DRN BY: MH

CITY OF VISALIA
315 E. ACEQUIA AVE.
VISALIA, CA 93291

RIGGIN AVENUE
WIDENING & IMPROVEMENTS
DRIVE APPROACH DETAILS

PROJ. NO. 21097
DATE:9/10/2021
DESIGN BY: MA | DRAWN BY:BA
SCALE: AS SHOWN
SHEET 22 OF 29

60% SUBMITTAL

Know what's **below.**
Call before you dig.

CONSTRUCTION AND GRADING KEYNOTES: (THIS SHEET ONLY)

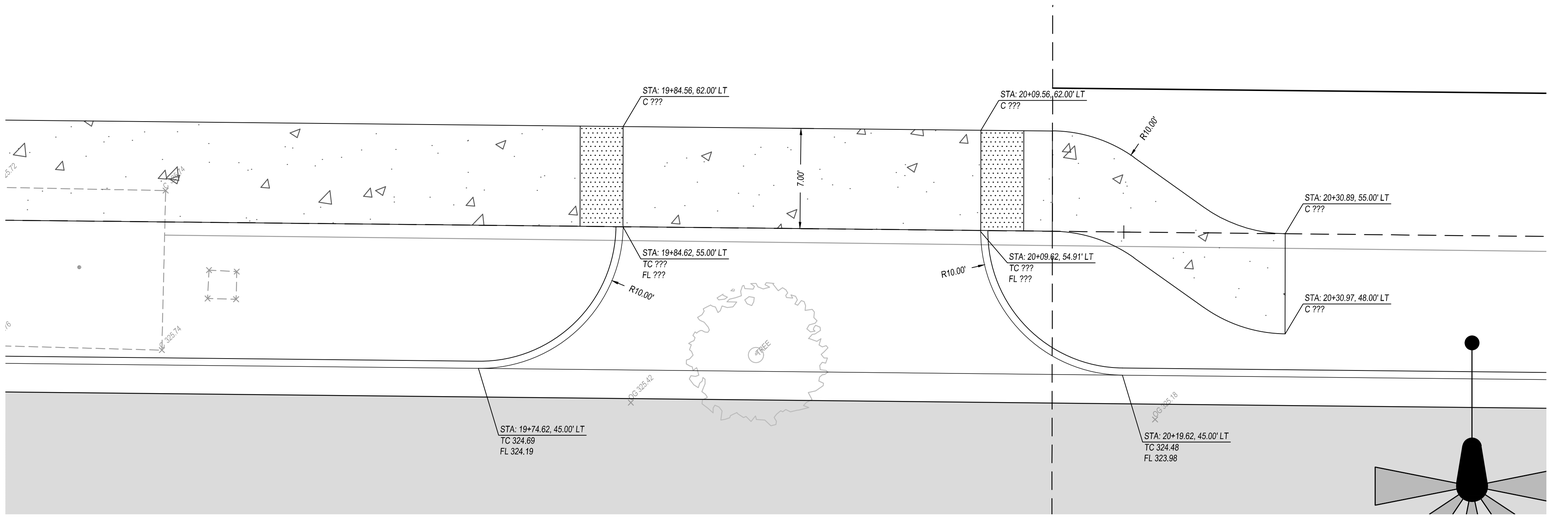
1. INSTALL CONCRETE COLD JOINT. SEE CITY STD. C-34, SHEET 25.
2. GUTTER PAN SHALL NOT EXCEED 5% IN THE PATH OF TRAVEL. ASPHALT TO BE FLUSH WITH LIP AT BOTTOM OF RAMPS.
3. PROVIDE 4'x4' MIN. ADA LANDING, SLOPE SHALL NOT EXCEED 2% IN ANY DIRECTION.
4. CONSTRUCT SIDEWALK PER CITY STD. C-9, SHEET 31.
5. CONSTRUCT DEPRESSED CURB WITH SMOOTH TRANSITION.
6. RE-GRADE LANDSCAPE AREAS TO MATCH NEW IMPROVEMENTS. ADJUST IRRIGATION TO PROVIDE FULLY FUNCTIONING SYSTEM & REPLACE LANDSCAPING IN KIND.
7. CONSTRUCT BUS TURNOUT PER THE DIMENSIONS ON THE PLANS. SEE DETAIL TR 5, SHEET 36.
8. CONSTRUCT COMMERCIAL DRIVE APPROACH PER THE DIMENSIONS ON THE PLANS. SEE DETAIL C-24, SHEET 31.

GENERAL NOTES

1. ALL CURBS AND CURB AND GUTTERS SHALL BE POURED PRIOR TO RAMPS AND SIDEWALKS, MONOLITHIC POURS WILL NOT BE ALLOWED.
2. CURBS AND GUTTER AT DRIVE APPROACHES SHALL BE PER CITY STD'S.
3. CROSS SLOPES PERPENDICULAR TO PATH OF TRAVEL ON ALL RAMPS AND SIDEWALKS TO BE 1.5% MAXIMUM
4. CONTRACTOR TO DAYLIGHT GRADE TO EXIST. AT A 4:1 MAX. SLOPE.

LEGEND

- DETECTABLE WARNING SURFACE
- PROPOSED CONCRETE
- PROPOSED ASPHALT SECTION
- EXISTING ASPHALT HATCH NOT SHOWN FOR CLARITY
- EXISTING CONCRETE
- EXIST. POWER POLE
- EXIST. UTILITY POLE
- SLOPE DIRECTION



DRIVE APPROACH DETAIL @ STA: XX+XX NORTH SIDE OF RIGGIN AVE.

DA-3

NORTH

5' 0' 5'

NO.	DATE	DESCRIPTION

324 S. SANTA FE, STE. A
P.O. BOX 7293
VISALIA, CA 93292
TEL: 559.802.3052
FAX: 559.802.3215

PREPARED BY: 4CREEKS

CHK BY: KM
DRW BY: MH

CITY OF VISALIA
315 E. ACEQUIA AVE.
VISALIA, CA 93291

RIGGIN AVENUE
WIDENING & IMPROVEMENTS
DRIVE APPROACH DETAILS

PROJ. NO. 21097
DATE:9/10/2021
DESIGN BY: MA | DRAWN BY:BA
SCALE: AS SHOWN
SHEET 23 OF 29

60% SUBMITTAL

GENERAL CONCRETE NOTES

1. ALL CONCRETE SHALL BE CLASS 3 CONCRETE UNLESS OTHERWISE SPECIFIED.
2. CLASS 2 CONCRETE SHALL CONTAIN NOT LESS THAN 590 POUNDS OF PORTLAND CEMENT PER CUBIC YARD WITH 1 INCH AGGREGATE. 5 INCH MAXIMUM SLUMP. 3000 P.S.I. AT 28 DAYS.
3. CLASS 3 CONCRETE SHALL CONTAIN NOT LESS THAN 505 POUNDS OF PORTLAND CEMENT PER CUBIC YARD WITH 1 INCH AGGREGATE. 5 INCH MAXIMUM SLUMP. 2500 P.S.I. AT 28 DAYS.
4. CLASS 4 CONCRETE SHALL CONTAIN NOT LESS THAN 420 POUNDS OF PORTLAND CEMENT PER CUBIC YARD WITH 1 INCH AGGREGATE. 5 INCH MAXIMUM SLUMP. 2500 P.S.I. AT 28 DAYS.
5. WHEN MAXIMUM DAYTIME TEMPERATURE EXCEEDS 50° F. ALL NEWLY PLACED CONCRETE SHALL BE SPRAYED UNIFORMLY WITH A CURING COMPOUND. CURING COMPOUND SHALL BE APPLIED AT A NOMINAL RATE OF ONE GALLON PER 150 SQUARE FEET, UNLESS OTHERWISE SPECIFIED.
6. ALL WORK CONSTRUCTED BY THESE STANDARDS SHALL BE IN COMPLIANCE WITH ALL CURRENT ADA REGULATIONS.
7. WHERE REBAR IS USED, CONTRACTOR SHALL INSTALL WIRE TIES SECURELY AT ALL REBAR CROSSINGS. CONCRETE BLOCK OR CHAIRS AS APPROVED BY THE CITY ENGINEER SHALL BE INSTALLED PRIOR TO CONCRETE INSTALLATION TO KEEP REBAR IN THE PROPER LOCATION.

CURBS AND GUTTERS

1. ALL CURB AND GUTTER, VEE GUTTER, MEDIAN CURB AND LANDSCAPE CURB SHALL BE CLASS 3 CONCRETE.
2. BARRIER TYPE CURB AND GUTTER SHALL HAVE A MINIMUM GRADIENT OF 0.20 FEET PER 100 FEET OR AS APPROVED BY THE CITY ENGINEER.
3. BARRIER TYPE CURB AND GUTTER ON THE CURVE OF CUL-DE-SACS AND STREET BULBS SHALL HAVE A MINIMUM GRADIENT OF 0.35 FEET PER 100 FEET OR AS APPROVED BY THE CITY ENGINEER.
4. ROLL TYPE CURB AND GUTTER SHALL HAVE A MINIMUM GRADIENT OF 0.35 FEET PER 100 FEET OR AS APPROVED BY THE CITY ENGINEER.
5. VEE GUTTER SHALL HAVE A MINIMUM GRADIENT OF 0.25 FEET PER 100 FEET OR AS APPROVED BY THE CITY ENGINEER.
6. ALL CURB AND GUTTER, VEE GUTTER, MEDIAN CURB AND LANDSCAPE CURB SHALL BE PLACED ON 6 INCH MOIST AND COMPACTED BASE MATERIALS. 95 PERCENT MINIMUM RELATIVE COMPACTION.
7. ALL CURB AND GUTTER, VEE GUTTER, MEDIAN CURB AND LANDSCAPE CURB SHALL HAVE A LIGHT BROOM FINISH.
8. ALL CURB AND GUTTER AND VEE GUTTER SHALL HAVE WEAKENED PLANE JOINTS CONSTRUCTED AT 15 FOOT CENTERS. MEDIAN CURB AND LANDSCAPE CURB SHALL HAVE WEAKENED PLANE JOINTS CONSTRUCTED AT 8 FOOT CENTERS. WEAKENED PLANE JOINTS SHALL BE A MINIMUM OF 1-1/2 INCHES IN DEPTH AND SHALL BE FINISHED WITH A SCORING TOOL LEAVING THE EDGES ROUNDED.
9. ALL EXPOSED SURFACES OF CURB AND GUTTER, VEE GUTTER, MEDIAN CURB AND LANDSCAPE CURB SHALL NOT VARY IN EXCESS OF 0.02 FEET WHEN A 10 FOOT STRAIGHT EDGE IS PLACED ON THE SURFACE, EXCEPT AT GRADE CHANGES OR CURVES.
10. ALL CURB AND GUTTER AND VEE GUTTER SHALL BE WATER TESTED FOR FLOW.
11. ALL CURB AND GUTTER, VEE GUTTER, MEDIAN CURB AND LANDSCAPE CURB SHALL BE CURED IN ACCORDANCE WITH THE PROVISIONS IN THE GENERAL CONCRETE NOTES IN THESE IMPROVEMENT STANDARDS.

APPROVED BY: _____ CITY ENGINEER R.P.E. 81734 09/16/16 DATE — CITY OF VISALIA DESIGN & IMPROVEMENT STANDARDS

CONCRETE SPECIFICATIONS — REVISIONS 07/19/16 BK 2016 — C-1

CONCRETE SPECIFICATIONS 1 C-1

SIDEWALKS AND RAMPS

1. ALL SIDEWALKS AND RAMPS SHALL BE CLASS 3 CONCRETE.
2. SIDEWALKS AND RAMPS SHALL BE PLACED ON 6 INCH MOIST AND COMPACTED BASE MATERIALS. 90 PERCENT RELATIVE COMPACTION UNDER SIDEWALKS. 95 PERCENT RELATIVE COMPACTION UNDER RAMPS AND SIDEWALKS AT CURB RETURNS.
3. SIDEWALKS AND RAMPS SHALL BE STEEL TROWELED AND HAVE A LIGHT BROOM FINISH UNLESS OTHERWISE NOTED. RAMPS SHALL HAVE A HEAVY BROOM FINISH ACROSS THE SLOPE OF THE RAMP.
4. SIDEWALKS AND RAMPS SHALL HAVE WEAKENED PLANE JOINTS CONSTRUCTED AT 15 FOOT CENTERS AND WHERE SHOWN IN THESE IMPROVEMENT STANDARDS. WEAKENED PLANE JOINTS SHALL BE A MINIMUM OF 1 INCH IN DEPTH AND SHALL BE FINISHED WITH A SCORING TOOL LEAVING THE EDGES ROUNDED.
5. ESTABLISHED SIDEWALK PATTERN IN BLOCK SHALL BE MATCHED.
6. SPECIAL SIDEWALK DESIGNS AND MATERIALS SHALL BE SUBJECT TO APPROVAL BY THE CITY ENGINEER.
7. SIDEWALK INSTALLED IN INFILL OR EXISTING AREAS SHALL BE SUBJECT TO THE APPROVAL OF THE CITY ENGINEER.
8. ALL SIDEWALKS AND RAMPS SHALL BE CURED IN ACCORDANCE WITH THE PROVISIONS IN THE GENERAL CONCRETE NOTES OF THESE IMPROVEMENT STANDARDS.
9. DETECTABLE WARNING SURFACES SHALL BE INSTALLED PER THESE IMPROVEMENT STANDARDS AND AS REQUIRED BY THE CITY ENGINEER.

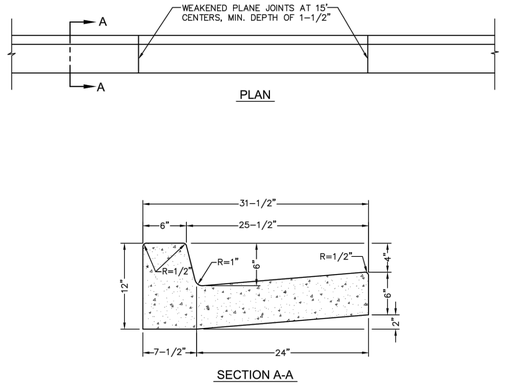
DRIVE APPROACHES

1. ALL DRIVE APPROACHES SHALL BE CLASS 3 CONCRETE UNLESS OTHERWISE NOTED.
2. SINGLE FAMILY RESIDENTIAL DRIVE APPROACHES SHALL BE PLACED ON 6 INCH MOIST AND COMPACTED BASE MATERIALS. 95 PERCENT RELATIVE COMPACTION.
3. MULTI-FAMILY RESIDENTIAL, OFFICE AND COMMERCIAL DRIVE APPROACHES SHALL BE PLACED ON 6 INCH MOIST AND COMPACTED BASE MATERIALS. 95 PERCENT RELATIVE COMPACTION.
4. MAJOR COMMERCIAL DRIVE APPROACHES SHALL BE PLACED ON 6 INCH MOIST AND COMPACTED CLASS 2 AGGREGATE BASE OVER 6 INCH MOIST AND COMPACTED BASE MATERIALS. 95 PERCENT RELATIVE COMPACTION.
5. DRIVE APPROACHES SHALL BE STEEL TROWELED AND HAVE A LIGHT BROOM FINISH.
6. DRIVE APPROACHES SHALL HAVE A WEAKENED PLANE JOINT CONSTRUCTED AT EACH EDGE AND AT THE CENTERLINE. WEAKENED PLANE JOINTS SHALL BE A MINIMUM OF 1-1/2 INCH IN DEPTH AND SHALL BE FINISHED WITH A SCORING TOOL LEAVING THE EDGES ROUNDED.
7. NOT MORE THAN 50 PERCENT OF PROPERTY FRONTAGE SHALL BE USED AS DRIVE APPROACH.
8. DRIVE APPROACHES ON STATE ROUTES ARE SUBJECT TO APPROVAL BY CALTRANS.
9. ALL EXPOSED SURFACES OF DRIVE APPROACHES AND FLOW LINES SHALL NOT VARY IN EXCESS OF 0.02 FEET WHEN A 10 FOOT STRAIGHT EDGE IS PLACED ON THE SURFACE, EXCEPT AT GRADE CHANGES OR CURVES.
10. ALL DRIVE APPROACHES SHALL BE CURED IN ACCORDANCE WITH THE PROVISIONS IN THE GENERAL CONCRETE NOTES OF THESE IMPROVEMENT STANDARDS.

APPROVED BY: _____ CITY ENGINEER R.P.E. 81734 09/16/16 DATE — CITY OF VISALIA DESIGN & IMPROVEMENT STANDARDS

CONCRETE SPECIFICATIONS — REVISIONS 06/14/13 BK 2016 — C-2

CONCRETE SPECIFICATIONS 2 C-2



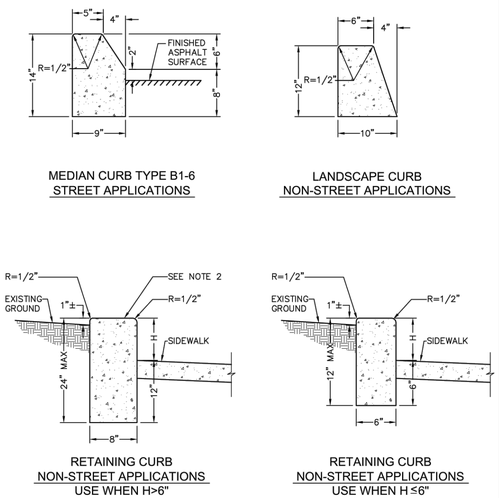
NOTES:

1. ALL CONCRETE SHALL BE CLASS 3 CONCRETE.
2. A WEAKENED PLANE JOINT OR COLD JOINT SHALL BE INSTALLED AT THE END OF CURB RETURNS AND AT THE CENTERLINE OF PROPOSED DRIVE APPROACHES.
3. CALTRANS FACILITIES REQUIRE STATE STANDARD CURB AND GUTTER.
4. WHERE ADA ACCESSIBLE PATH CROSSES GUTTER PAN, SLOPE IN THE DIRECTION OF TRAVEL SHALL BE 4% MININMUM AND 5% MAXIMUM.

APPROVED BY: _____ CITY ENGINEER R.P.E. 81734 09/16/16 DATE — CITY OF VISALIA DESIGN & IMPROVEMENT STANDARDS

BARRIER CURB AND GUTTER TYPE A2-6 — REVISIONS 06/30/16 BK 2016 — C-4

BARRIER CURB & GUTTER C-4



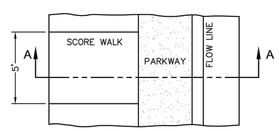
NOTES:

1. ALL CONCRETE SHALL BE CLASS 3 CONCRETE.
2. REBAR SHALL BE USED AT THE DISCRETION OF THE CITY ENGINEER.

APPROVED BY: _____ CITY ENGINEER R.P.E. 81734 09/16/16 DATE — CITY OF VISALIA DESIGN & IMPROVEMENT STANDARDS

MEDIAN CURB TYPE B1-6, RETAINING CURB AND LANDSCAPE CURB — REVISIONS 06/14/13 BK 2016 — C-8

MEDIAN CURB C-8



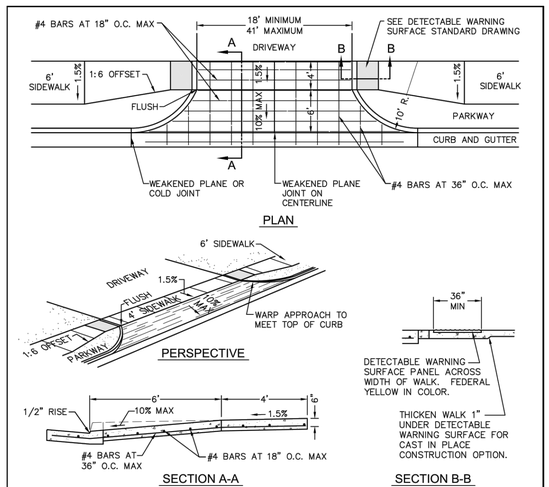
NOTES:

1. ALL CONCRETE SHALL BE CLASS 3 CONCRETE.

APPROVED BY: _____ CITY ENGINEER R.P.E. 81734 09/16/16 DATE — CITY OF VISALIA DESIGN & IMPROVEMENT STANDARDS

SIDEWALK - RESIDENTIAL WITH PARKWAY — REVISIONS 06/30/16 BK 2016 — C-9

SIDEWALKS - RESIDENTIAL W/ PARKWAY C-9



NOTES:

1. ALL CONCRETE SHALL BE CLASS 3 CONCRETE.
2. ON COLLECTOR AND ARTERIAL STREETS, THE MINIMUM DRIVE APPROACH WIDTH SHALL BE 21' FOR ONE-WAY DRIVE APPROACHES AND 36' FOR TWO-WAY DRIVE APPROACHES, OR AS APPROVED BY CITY ENGINEER.
3. REBAR SHALL BE DEFORMED STEEL BARS AND SHALL BE GRADE 40 MINIMUM. REBAR SHALL BE FREE OF RUST OR DIRT AND SHALL BE THOROUGHLY CLEANED BEFORE PLACEMENT.
4. REBAR SHALL HAVE A MINIMUM OF 2" OF CLEAR COVERAGE.
5. NOT MORE THAN 50% OF PROPERTY FRONTAGE SHALL BE USED AS DRIVE APPROACH.
6. WIDTH AND LOCATION OF DRIVE APPROACHES ON STATE ROUTES IS SUBJECT TO APPROVAL BY CALTRANS.

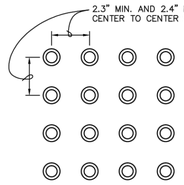
APPROVED BY: _____ CITY ENGINEER R.P.E. 81734 09/16/16 DATE — CITY OF VISALIA DESIGN & IMPROVEMENT STANDARDS

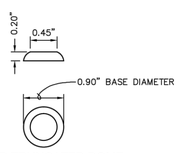
OFFICE/COMMERCIAL DRIVE APPROACH (ALTERNATIVE - WITH CURB RETURNS) — REVISIONS 09/15/16 BK 2016 — C-24

COMMERCIAL DRIVE APPROACH C-24

NOTE:

* WHERE INSTALLED IN A RADIAL PATTERN, TRUNCATED DOMES SHALL HAVE A CENTER TO CENTER SPACING OF 1.6" MINIMUM TO 2.4" MAXIMUM OR AS INDICATED PER CURRENT CBC.





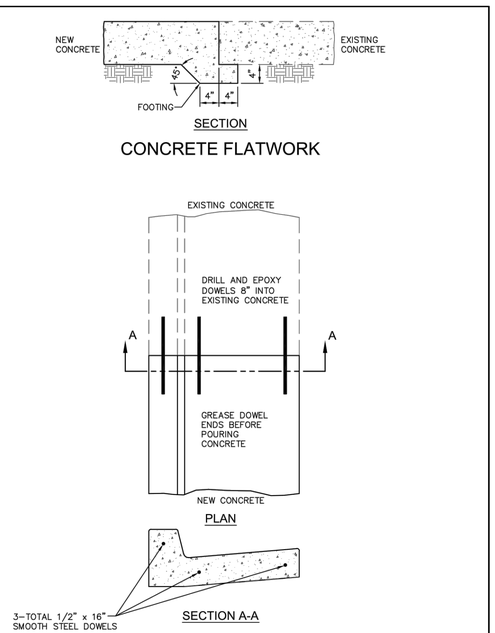
NOTES:

1. DETECTABLE WARNING SURFACE SHALL BE INSTALLED AT THE BOTTOM OF ALL CURB RAMPS.
2. DETECTABLE WARNING SHALL BE INSTALLED SO THAT IT BUTTS UP FLUSH AGAINST THE BACK OF ADJACENT CURB. WHERE CURBS ARE ON A CURVE, THE BACK OF CURB SHALL BE STRAIGHTENED AT THE DETECTABLE WARNING LOCATION SO THE WARNING BUTTS UP FLUSH AGAINST THE BACK OF CURB.
3. DETECTABLE WARNING SURFACE SHALL BE THE FULL WIDTH OF RAMP AND SHALL BE A MINIMUM OF 36" IN DEPTH.
4. DETECTABLE WARNING SURFACE SHALL BE PREMIXED FEDERAL YELLOW COLORED AND SHALL BE AN AUTHORIZED MATERIAL FROM THE CITY OF VISALIA DETECTABLE WARNING SURFACE AUTHORIZED MATERIAL LIST.
5. IN RETROFIT TYPE SITUATIONS ON EXISTING SURFACES THE CITY WILL ALLOW RETROFIT TYPE WARNING PANELS. RETROFIT PANEL MATERIALS SHALL BE SUBMITTED TO THE CITY ENGINEER FOR ACCEPTANCE PRIOR TO CONSTRUCTION. PANELS SHALL BE GLUED AND BOLTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. BOTTOM OF PANELS SHALL BE FLUSH AGAINST THE ADJACENT CONCRETE SURFACE.

APPROVED BY: _____ CITY ENGINEER R.P.E. 81734 09/16/16 DATE — CITY OF VISALIA DESIGN & IMPROVEMENT STANDARDS

DETECTABLE WARNING SURFACE DETAIL — REVISIONS 09/15/16 BK 2016 — C-33

DETECTABLE WARNING SURFACE C-33



APPROVED BY: _____ CITY ENGINEER R.P.E. 81734 09/16/16 DATE — CITY OF VISALIA DESIGN & IMPROVEMENT STANDARDS

CONCRETE COLD JOINTS — REVISIONS 10/23/12 BK 2016 — C-34

CONCRETE COLD JOINTS C-34

NO. DATE DESCRIPTION

PROFESSIONAL ENGINEER MICHAEL ANTHONY HOLLOWELL STATE OF CALIFORNIA

PREPARED BY: 4CREEKS
324 S. SANTA FE, STE. A
P.O. BOX 7593
VISALIA, CA 93292
TEL: 559.802.3052
FAX: 559.802.3215

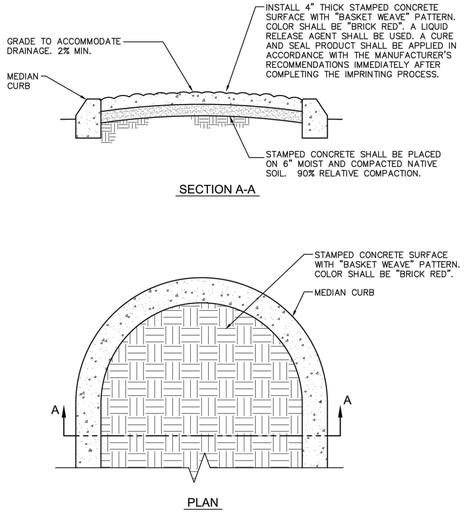
CHK BY: KM
DRW BY: MH

CITY OF VISALIA
315 E. ACEQUIA AVE.
VISALIA, CA 93291

RIGGIN AVENUE
WIDENING & IMPROVEMENTS
CIVIL DETAILS

60% SUBMITTAL

PROJ. NO. 21097
DATE: 9/10/2021
DESIGN BY: MA | DRAWN BY: BA
SCALE: AS SHOWN
SHEET 24 OF 29



NOTES:

1. WHEN MATCHING AN EXISTING COBBLESTONE MEDIAN, "RIVER ROCK" PATTERN WITH "COBBLESTONE GRAY" COLOR AND A LIQUID RELEASE AGENT SHALL BE USED.

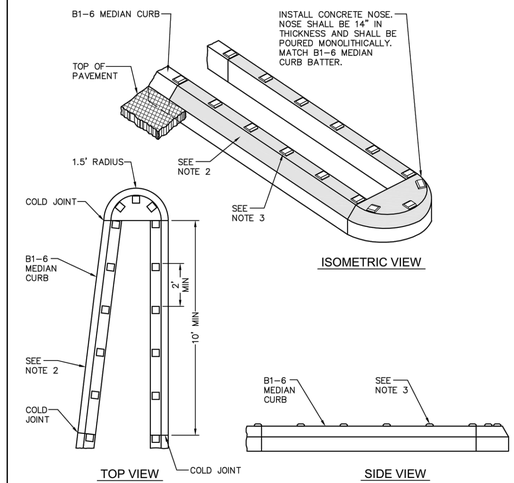
APPROVED BY: _____ CITY ENGINEER R.P.E. 81734 09/16/16 DATE

CITY OF VISALIA
DESIGN & IMPROVEMENT STANDARDS

STAMPED CONCRETE MEDIAN

REVISIONS 07/19/16 BK 2016

C-35



NOTES:

1. ALL CONCRETE SHALL BE CLASS 3 CONCRETE.
2. THE TOP AND FACE OF THE CURB SHALL BE PAINTED WITH WHITE OR YELLOW WATERBORNE PAINT AND APPLY GLASS BEADS FOR RETROREFLECTIVITY IN ACCORDANCE TO CITY OF VISALIA STANDARD SPECIFICATIONS.
3. INSTALL TYPE G OR TYPE D RAISED PAVEMENT MARKERS PER CALTRANS STANDARD SPECIFICATIONS SECTION 81-3.02C. THE RAISED PAVEMENT MARKERS SHALL BE ATTACHED TO THE TOP OF THE CURB USING ADHESIVES PER CALTRANS STANDARD SPECIFICATIONS SECTIONS 81-3.02D AND 81-3.02E.

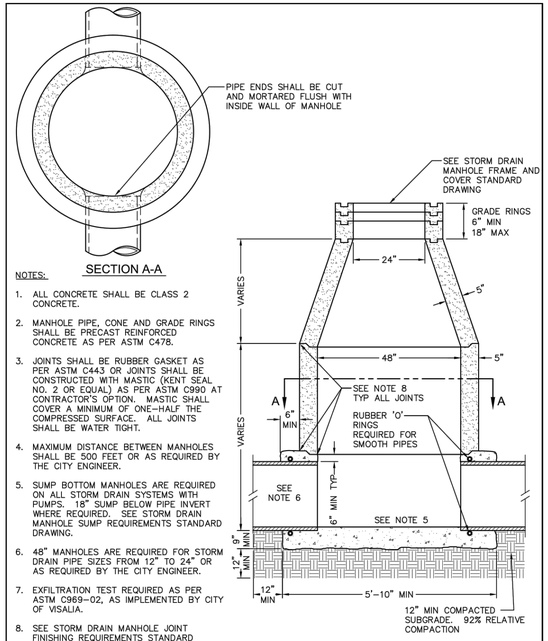
APPROVED BY: _____ CITY ENGINEER R.P.E. 81734 09/16/16 DATE

CITY OF VISALIA
DESIGN & IMPROVEMENT STANDARDS

MEDIAN NOSE DETAIL

REVISIONS 09/08/16 BK 2016

C-36



NOTES:

1. ALL CONCRETE SHALL BE CLASS 2 CONCRETE.
2. MANHOLE PIPE, CONE AND GRADE RINGS SHALL BE PRECAST REINFORCED CONCRETE AS PER ASTM C478.
3. JOINTS SHALL BE RUBBER GASKET AS PER ASTM C443 OR JOINTS SHALL BE CONSTRUCTED WITH MASTIC (KENT SEAL NO. 2 OR EQUAL) AS PER ASTM C990 AT CONTRACTOR'S OPTION. MASTIC SHALL COVER A MINIMUM OF ONE-HALF THE COMPRESSED SURFACE. ALL JOINTS SHALL BE WATER TIGHT.
4. MAXIMUM DISTANCE BETWEEN MANHOLES SHALL BE 500 FEET OR AS REQUIRED BY THE CITY ENGINEER.
5. SUMP BOTTOM MANHOLES ARE REQUIRED ON ALL STORM DRAIN SYSTEMS WITH PUMPS. 18" SUMP BELOW PIPE INVERT WHERE REQUIRED. SEE STORM DRAIN MANHOLE SUMP REQUIREMENTS STANDARD DRAWING.
6. 48" MANHOLES ARE REQUIRED FOR STORM DRAIN PIPE SIZES FROM 12" TO 24" OR AS REQUIRED BY THE CITY ENGINEER.
7. EXFILTRATION TEST REQUIRED AS PER ASTM C969-02, AS IMPLEMENTED BY CITY OF VISALIA.
8. SEE STORM DRAIN MANHOLE JOINT FINISHING REQUIREMENTS STANDARD DRAWING.

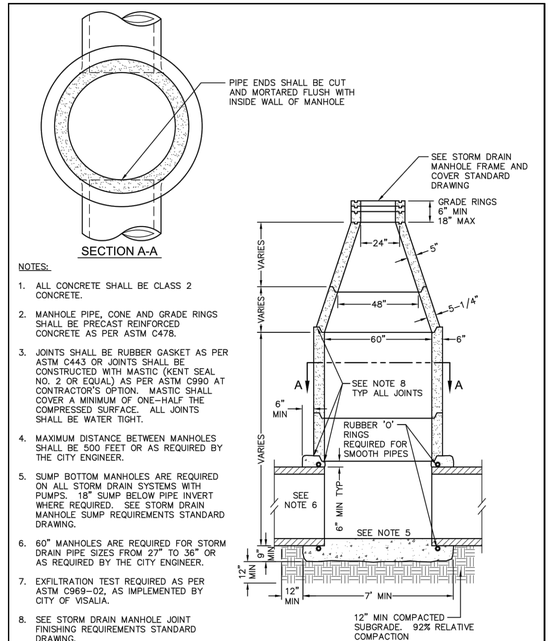
APPROVED BY: _____ CITY ENGINEER R.P.E. 81734 09/16/16 DATE

CITY OF VISALIA
DESIGN & IMPROVEMENT STANDARDS

48" STORM DRAIN MANHOLE

REVISIONS 06/14/13 BK 2016

D-1



NOTES:

1. ALL CONCRETE SHALL BE CLASS 2 CONCRETE.
2. MANHOLE PIPE, CONE AND GRADE RINGS SHALL BE PRECAST REINFORCED CONCRETE AS PER ASTM C478.
3. JOINTS SHALL BE RUBBER GASKET AS PER ASTM C443 OR JOINTS SHALL BE CONSTRUCTED WITH MASTIC (KENT SEAL NO. 2 OR EQUAL) AS PER ASTM C990 AT CONTRACTOR'S OPTION. MASTIC SHALL COVER A MINIMUM OF ONE-HALF THE COMPRESSED SURFACE. ALL JOINTS SHALL BE WATER TIGHT.
4. MAXIMUM DISTANCE BETWEEN MANHOLES SHALL BE 500 FEET OR AS REQUIRED BY THE CITY ENGINEER.
5. SUMP BOTTOM MANHOLES ARE REQUIRED ON ALL STORM DRAIN SYSTEMS WITH PUMPS. 18" SUMP BELOW PIPE INVERT WHERE REQUIRED. SEE STORM DRAIN MANHOLE SUMP REQUIREMENTS STANDARD DRAWING.
6. 60" MANHOLES ARE REQUIRED FOR STORM DRAIN PIPE SIZES FROM 27" TO 36" OR AS REQUIRED BY THE CITY ENGINEER.
7. EXFILTRATION TEST REQUIRED AS PER ASTM C969-02, AS IMPLEMENTED BY CITY OF VISALIA.
8. SEE STORM DRAIN MANHOLE JOINT FINISHING REQUIREMENTS STANDARD DRAWING.

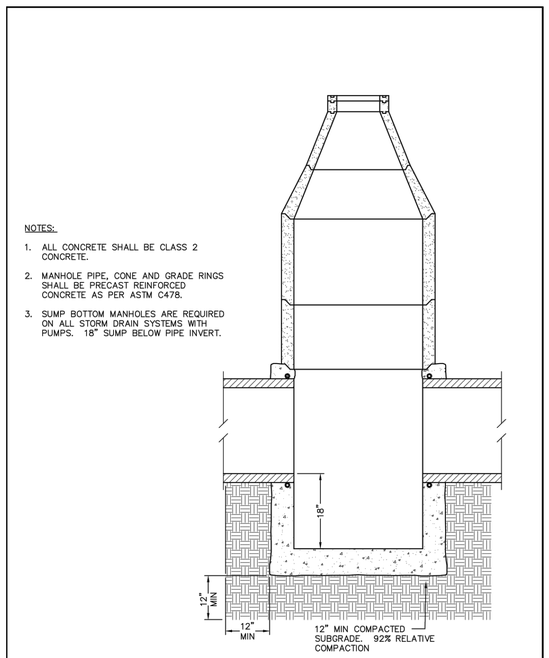
APPROVED BY: _____ CITY ENGINEER R.P.E. 81734 09/16/16 DATE

CITY OF VISALIA
DESIGN & IMPROVEMENT STANDARDS

60" STORM DRAIN MANHOLE

REVISIONS 06/14/13 BK 2016

D-2



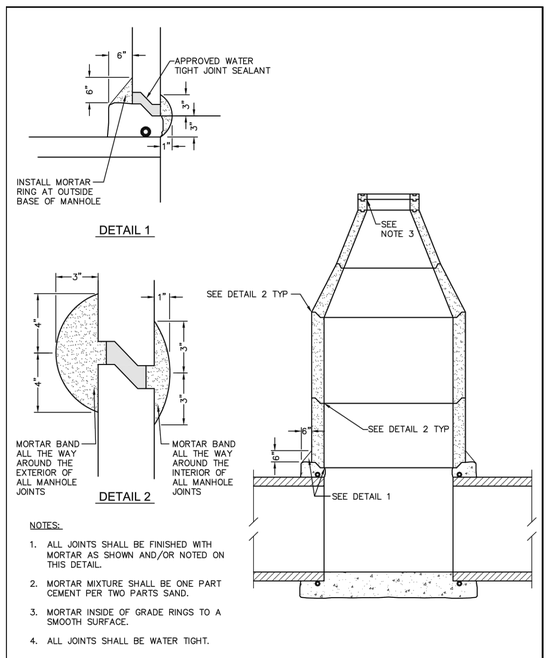
APPROVED BY: _____ CITY ENGINEER R.P.E. 81734 09/16/16 DATE

CITY OF VISALIA
DESIGN & IMPROVEMENT STANDARDS

STORM DRAIN MANHOLE
SUMP REQUIREMENTS

REVISIONS 06/14/13 BK 2016

D-6



NOTES:

1. ALL JOINTS SHALL BE FINISHED WITH MORTAR AS SHOWN AND/OR NOTED ON THIS DETAIL.
2. MORTAR MIXTURE SHALL BE ONE PART CEMENT PER TWO PARTS SAND.
3. MORTAR INSIDE OF GRADE RINGS TO A SMOOTH SURFACE.
4. ALL JOINTS SHALL BE WATER TIGHT.

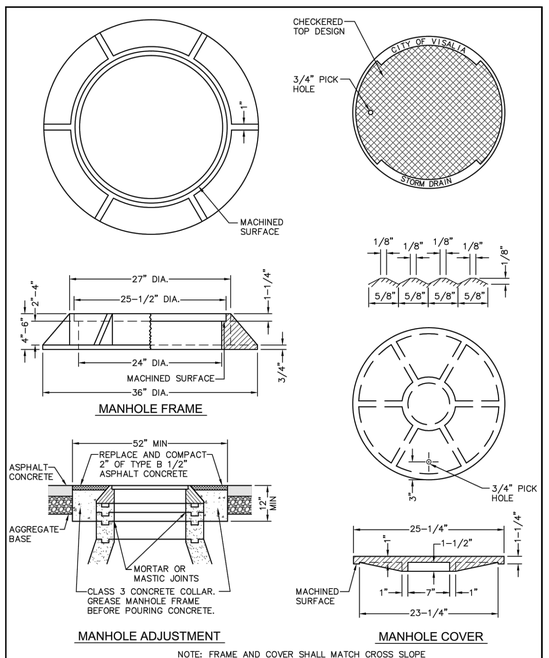
APPROVED BY: _____ CITY ENGINEER R.P.E. 81734 09/16/16 DATE

CITY OF VISALIA
DESIGN & IMPROVEMENT STANDARDS

STORM DRAIN MANHOLE
JOINT FINISHING REQUIREMENTS

REVISIONS 06/14/13 BK 2016

D-7



NOTE: FRAME AND COVER SHALL MATCH CROSS SLOPE

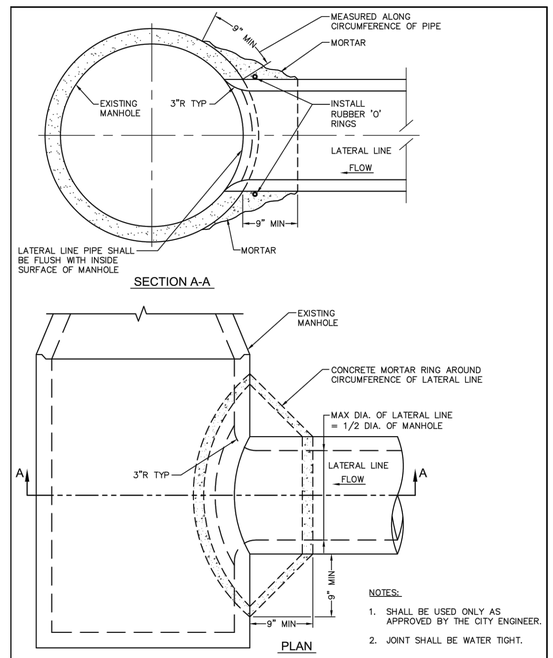
APPROVED BY: _____ CITY ENGINEER R.P.E. 81734 09/16/16 DATE

CITY OF VISALIA
DESIGN & IMPROVEMENT STANDARDS

STORM DRAIN
MANHOLE FRAME AND COVER

REVISIONS 06/14/13 BK 2016

D-8



NOTES:

1. SHALL BE USED ONLY AS APPROVED BY THE CITY ENGINEER.
2. JOINT SHALL BE WATER TIGHT.

APPROVED BY: _____ CITY ENGINEER R.P.E. 81734 09/16/16 DATE

CITY OF VISALIA
DESIGN & IMPROVEMENT STANDARDS

LATERAL LINE CONNECTION
AT EXISTING MANHOLE

REVISIONS 06/14/13 BK 2016

D-10

STAMPED CONCRETE MEDIAN	C-35
MEDIAN NOSE DETAIL	C-36
48" STORM DRAIN MANHOLE	D-1
60" STORM DRAIN MANHOLE	D-2
STORM DRAIN MANHOLE SUMP REQUIREMENTS	D-6
STORM DRAIN MANHOLE JOINT FINISHING REQUIREMENTS	D-7
STORM DRAIN MANHOLE FRAME & COVER	D-8
LATERAL LINE CONNECTION @ EXISTING MANHOLE	D-10

NO. DATE DESCRIPTION

PROFESSIONAL ENGINEER MICHAEL HARRELL FOLTZ 93338 STATE OF CALIFORNIA

4CREEKS
324 S. SANTA FE, STE. A
P.O. BOX 7593
VISALIA, CA 93292
TEL: 559.802.3052
FAX: 559.802.3215

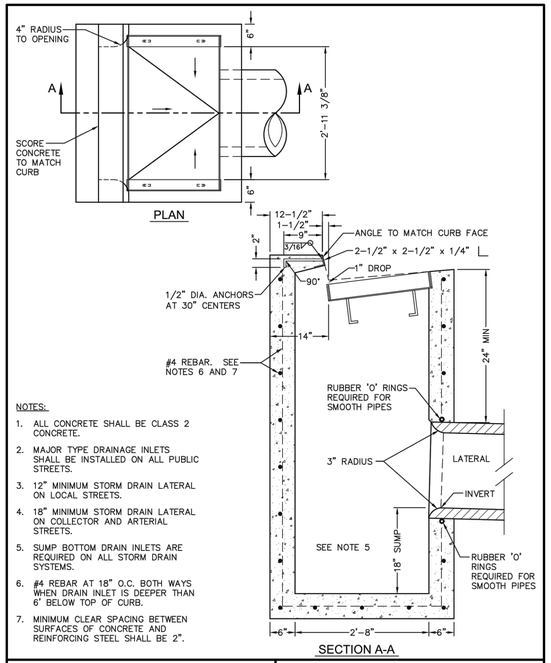
PREPARED BY: CHK BY: KH DRN BY: MH

CITY OF VISALIA
315 E. ACEQUIA AVE.
VISALIA, CA 93291

RIGGIN AVENUE
WIDENING & IMPROVEMENTS
CIVIL DETAILS

60% SUBMITTAL

PROJ. NO. 21097
DATE:9/10/2021
DESIGN BY: MA DRAWN BY:BA
SCALE: AS SHOWN
SHEET 25OF 29



NOTES:

1. ALL CONCRETE SHALL BE CLASS 2 CONCRETE.
2. MAJOR TYPE DRAINAGE INLETS SHALL BE INSTALLED ON ALL PUBLIC STREETS.
3. 12" MINIMUM STORM DRAIN LATERAL ON LOCAL STREETS.
4. 18" MINIMUM STORM DRAIN LATERAL ON COLLECTOR AND ARTERIAL STREETS.
5. SUMP BOTTOM DRAIN INLETS ARE REQUIRED ON ALL STORM DRAIN SYSTEMS.
6. #4 REBAR AT 18" O.C. BOTH WAYS WHEN DRAIN INLET IS DEEPER THAN 6' BELOW TOP OF CURB.
7. MINIMUM CLEAR SPACING BETWEEN SURFACES OF CONCRETE AND REINFORCING STEEL SHALL BE 2".

APPROVED BY: CITY ENGINEER R.P.E. 81734 09/16/16 DATE

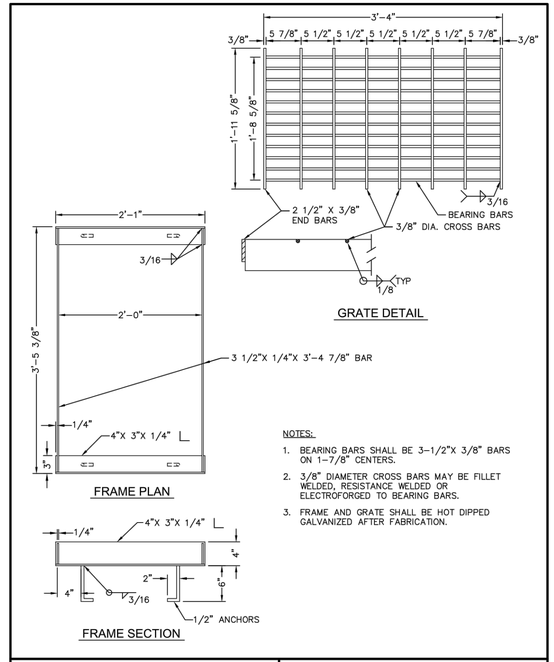
CITY OF VISALIA
DESIGN & IMPROVEMENT STANDARDS

DRAINAGE INLET – GO TYPE

REVISIONS 06/14/13 BK 2016

D–12

DRAINAGE INLET D-12



NOTES:

1. BEARING BARS SHALL BE 3-1/2"X 3/8" BARS ON 1-7/8" CENTERS.
2. 3/8" DIAMETER CROSS BARS MAY BE FILLET WELDED, RESISTANCE WELDED OR ELECTROFORGED TO BEARING BARS.
3. FRAME AND GRATE SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.

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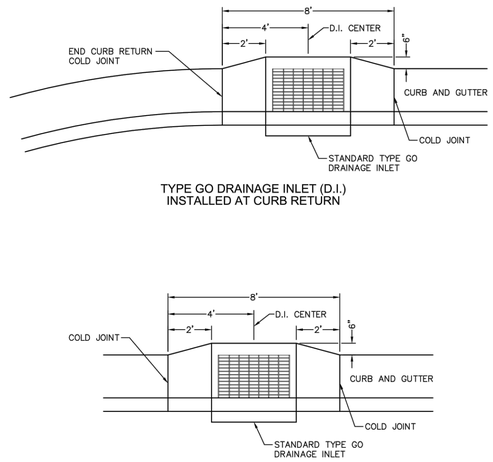
CITY OF VISALIA
DESIGN & IMPROVEMENT STANDARDS

DRAINAGE INLET – GO TYPE FRAME AND GRATE DETAIL

REVISIONS 06/17/04 BK 2016

D–13

DRAINAGE INLET - FRAME & GRATE D-13



TYPE GO DRAINAGE INLET (D.I.) INSTALLED AT CURB RETURN

TYPE GO DRAINAGE INLET (D.I.) INSTALLED MID-BLOCK

APPROVED BY: CITY ENGINEER R.P.E. 81734 09/16/16 DATE

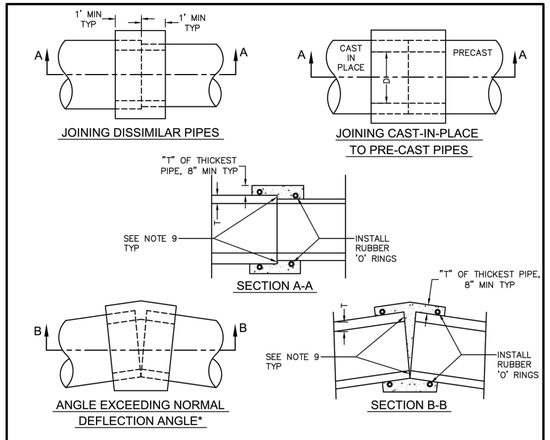
CITY OF VISALIA
DESIGN & IMPROVEMENT STANDARDS

MISCELLANEOUS DRAINAGE INLET DETAILS

REVISIONS 08/26/16 BK 2016

D–14

MISCELLANEOUS DRAINAGE INLET DETAILS D-14



NOTES:

1. CONCRETE COLLAR SHALL BE CLASS 2 CONCRETE.
2. INSIDE COLLAR SHALL MATCH PIPE DIAMETER, SMOOTH STEEL TROWEL FINISH.
3. ALLOW CONCRETE TO HARDEN BEFORE BACKFILLING.
4. WHEN FORMING ANGLES ENGINEER MAY REQUIRE CHAMFERING OF PIPE ENDS.
5. JOINTS SHALL BE WATER TIGHT.
6. THIS DETAIL IS NOT FOR USE WITH PVC/PLASTIC PIPES. JOINING OF PVC/PLASTIC PIPES SHALL BE AS APPROVED BY THE CITY ENGINEER.
7. THIS DETAIL MAY BE USED FOR PIPES UP TO 48" IN DIAMETER. COLLARS FOR PIPES LARGER THAN 48" SHALL BE AS APPROVED BY THE CITY ENGINEER.
8. EXFILTRATION TEST REQUIRED AS PER ASTM C969–02 AS IMPLEMENTED BY THE CITY OF VISALIA.
9. CONTRACTOR SHALL INSTALL A QUICK SETTING TYPE HYDRAULIC CEMENT TO ALL JOINTS PRIOR TO POURING CONCRETE COLLAR. HYDRAULIC CEMENT SHALL BE A NON–SHRINKING, NON–METALLIC AND NON–CORROSIVE TYPE WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 5,000 P.S.I. HYDRAULIC CEMENT DATA SHALL BE SUBMITTED TO THE CITY ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION. JOINT SEAL SHALL BE WATER TIGHT.

* THIS INSTALLATION METHOD SHALL ONLY BE USED WHERE APPROVED BY THE CITY ENGINEER IN WRITING. SEE NOTE 4.

APPROVED BY: CITY ENGINEER R.P.E. 81734 09/16/16 DATE

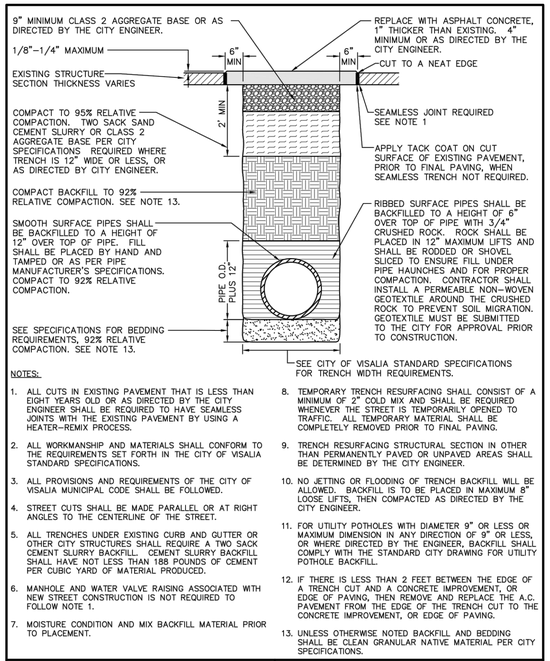
CITY OF VISALIA
DESIGN & IMPROVEMENT STANDARDS

CONSTRUCTION JOINT CONCRETE FILLED COLLAR

REVISIONS 06/14/13 BK 2016

D–37

CONSTRUCTION JOINT CONCRETE FILLED COLLAR D-37



NOTES:

1. ALL CUTS IN EXISTING PAVEMENT THAT IS LESS THAN EIGHT YEARS OLD OR AS DIRECTED BY THE CITY ENGINEER SHALL BE REQUIRED TO HAVE SEAMLESS JOINTS WITH THE EXISTING PAVEMENT BY USING A HEATER–REMIX PROCESS.
2. ALL WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN THE CITY OF VISALIA STANDARD SPECIFICATIONS.
3. ALL PROVISIONS AND REQUIREMENTS OF THE CITY OF VISALIA MUNICIPAL CODE SHALL BE FOLLOWED.
4. STREET CUTS SHALL BE MADE PARALLEL OR AT RIGHT ANGLES TO THE CENTERLINE OF THE STREET.
5. ALL TRENCHES UNDER EXISTING CURB AND GUTTER OR OTHER CITY STRUCTURES SHALL REQUIRE A TWO SACK CEMENT SLURRY BACKFILL. CEMENT SLURRY BACKFILL SHALL HAVE NOT LESS THAN 188 POUNDS OF CEMENT PER CUBIC YARD OF MATERIAL PRODUCED.
6. MANHOLE AND WATER VALVE RAISING ASSOCIATED WITH NEW STREET CONSTRUCTION IS NOT REQUIRED TO FOLLOW NOTE 1.
7. MOISTURE CONDITION AND MIX BACKFILL MATERIAL PRIOR TO PLACEMENT.
8. TEMPORARY TRENCH RESURFACING SHALL CONSIST OF A MINIMUM OF 2" COLD MIX AND SHALL BE REQUIRED WHENEVER THE STREET IS TEMPORARILY OPENED TO TRAFFIC. ALL TEMPORARY MATERIAL SHALL BE COMPLETELY REMOVED PRIOR TO FINAL PAVING.
9. TRENCH RESURFACING STRUCTURAL SECTION IN OTHER THAN PERMANENTLY PAVED OR UNPAVED AREAS SHALL BE DETERMINED BY THE CITY ENGINEER.
10. NO JETTING OR FLOODING OF TRENCH BACKFILL WILL BE ALLOWED. BACKFILL IS TO BE PLACED IN MAXIMUM 8" LOOSE LIFTS, THEN COMPACTED AS DIRECTED BY THE CITY ENGINEER.
11. FOR UTILITY POTHOLES WITH DIAMETER 9" OR LESS OR MAXIMUM DIMENSION IN ANY DIRECTION OF 9" OR LESS, OR WHERE DIRECTED BY THE ENGINEER, BACKFILL SHALL COMPLY WITH THE STANDARD CITY DRAWING FOR UTILITY POTHOLE BACKFILL.
12. IF THERE IS LESS THAN 2 FEET BETWEEN THE EDGE OF A TRENCH CUT AND A CONCRETE IMPROVEMENT, OR EDGE OF PAVING, THEN REMOVE AND REPLACE THE A.C. PAVEMENT FROM THE EDGE OF THE TRENCH CUT TO THE CONCRETE IMPROVEMENT, OR EDGE OF PAVING.
13. UNLESS OTHERWISE NOTED BACKFILL AND BEDDING SHALL BE CLEAN GRANULAR NATIVE MATERIAL PER CITY SPECIFICATIONS.

APPROVED BY: CITY ENGINEER R.P.E. 81734 09/16/16 DATE

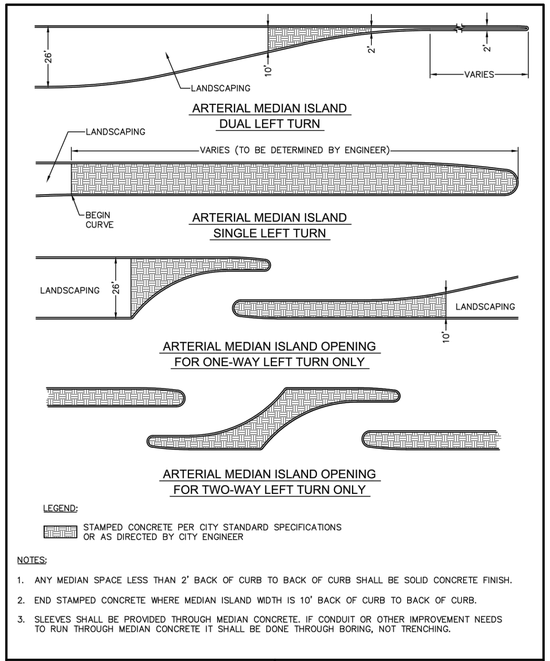
CITY OF VISALIA
DESIGN & IMPROVEMENT STANDARDS

TRENCH BACKFILL/PATCH PAVING

REVISIONS 10/31/14 BK 2016

E–1

TRENCH BACKFILL / PATCH PAVING E-1



LEGEND:

STAMPED CONCRETE PER CITY STANDARD SPECIFICATIONS OR AS DIRECTED BY CITY ENGINEER

NOTES:

1. ANY MEDIAN SPACE LESS THAN 2' BACK OF CURB TO BACK OF CURB SHALL BE SOLID CONCRETE FINISH.
2. END STAMPED CONCRETE WHERE MEDIAN ISLAND WIDTH IS 10' BACK OF CURB TO BACK OF CURB.
3. SLEEVES SHALL BE PROVIDED THROUGH MEDIAN CONCRETE. IF CONDUIT OR OTHER IMPROVEMENT NEEDS TO RUN THROUGH MEDIAN CONCRETE IT SHALL BE DONE THROUGH BORING, NOT TRENCHING.

APPROVED BY: CITY ENGINEER R.P.E. 81734 09/16/16 DATE

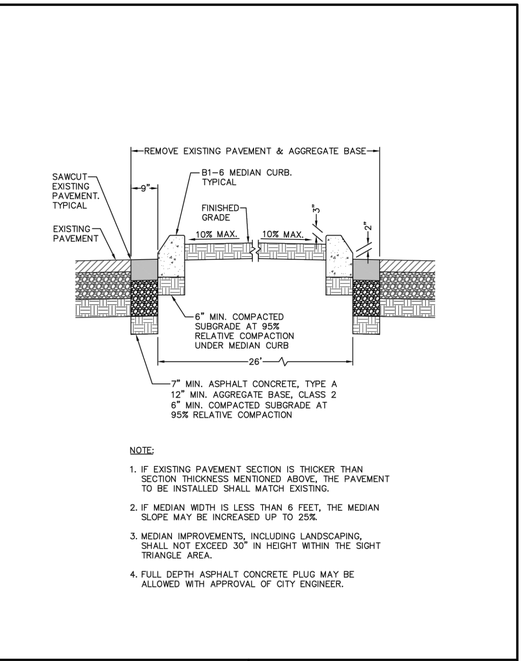
CITY OF VISALIA
DESIGN & IMPROVEMENT STANDARDS

STAMPED CONCRETE & LANSCAPING LOCATIONS IN ARTERIAL MEDIANS

REVISIONS 08/05/16 BK 2016

P–13

STAMPED CONCRETE & LANDSCAPE LOATIONS P-13



NOTE:

1. IF EXISTING PAVEMENT SECTION IS THICKER THAN SECTION THICKNESS MENTIONED ABOVE, THE PAVEMENT TO BE INSTALLED SHALL MATCH EXISTING.
2. IF MEDIAN WIDTH IS LESS THAN 6 FEET, THE MEDIAN SLOPE MAY BE INCREASED UP TO 25%.
3. MEDIAN IMPROVEMENTS, INCLUDING LANDSCAPING, SHALL NOT EXCEED 30" IN HEIGHT WITHIN THE SIGHT TRIANGLE AREA.
4. FULL DEPTH ASPHALT CONCRETE PLUG MAY BE ALLOWED WITH APPROVAL OF CITY ENGINEER.

APPROVED BY: CITY ENGINEER R.P.E. 81734 09/16/16 DATE

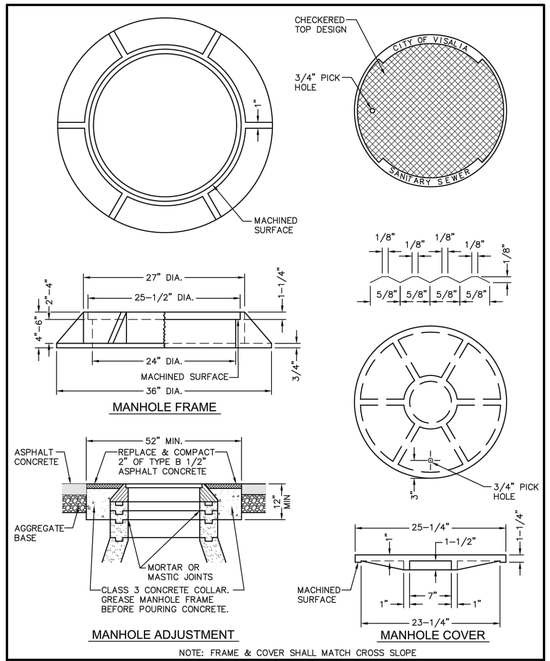
CITY OF VISALIA
DESIGN & IMPROVEMENT STANDARDS

ARTERIAL MEDIAN INSTALLATION IN EXISTING PAVEMENT

REVISIONS 08/10/16 BK 2016

P–14

ARTERIAL MEDIAN INSTALLATION IN EXISTING PAVEMENT P-14



NOTE: FRAME & COVER SHALL MATCH CROSS SLOPE

APPROVED BY: CITY ENGINEER R.P.E. 81734 09/16/16 DATE

CITY OF VISALIA
DESIGN & IMPROVEMENT STANDARDS

SANITARY SEWER MANHOLE FRAME AND COVER

REVISIONS 12/18/07 BK 2016

S–6

SANITARY SEWER MANHOLE FRAME & COVER S-6

NO.	DATE	DESCRIPTION

PROFESSIONAL ENGINEER — MICHAEL A. HOLLOWAY — No. 81734 — STATE OF CALIFORNIA

PREPARED BY: 4CREEKS
324 S. SANTA FE, STE. A
P.O. BOX 7593
VISALIA, CA 93292
TEL: 559.802.3052
FAX: 559.802.3215

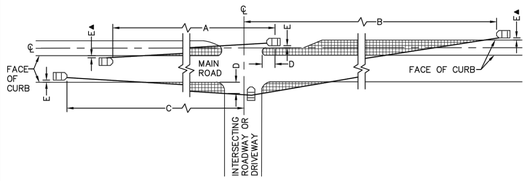
DRW BY: MH CHK BY: KM

CITY OF VISALIA
315 E. ACEQUIA AVE.
VISALIA, CA 93291

RIGGIN AVENUE
WIDENING & IMPROVEMENTS
CIVIL DETAILS

PROJ. NO. 21097
DATE:9/10/2021
DESIGN BY: MA DRAWN BY:BA
SCALE: AS SHOWN
SHEET 26 OF 29

60% SUBMITTAL



LEGEND:

▲ WHERE NO MEDIAN IS PRESENT USE CENTER OF ROADWAY AS A SUBSTITUTE FOR E

HEIGHT RESTRICTED AREA (SEE NOTE 4)

TABLE A

STREET	A	B*	C**	D	E
COLLECTOR	355'	500'	385'	18'	3'
ARTERIAL	480'	700'	480'	18'	3'

* REDUCE COLUMN "B" BY 165 FEET FOR SIGNALIZED INTERSECTIONS

** DIMENSION "C" IS FOR RIGHT-TURNS AT SIDE STREET APPROACHES PROVIDING ONLY RIGHT-IN/RIGHT-OUT MOVEMENTS. WHERE LEFT TURNS ARE ALLOWED, DIMENSION "C" SHALL EQUAL DIMENSION "B".

NOTES:

1. DIMENSIONS SHOWN IN TABLE "A" SHALL BE VERIFIED BASED ON AASHTO STANDARDS.
2. SIGHT DISTANCE FOR A COLLECTOR ROADWAY IS BASED ON A PASSENGER CAR ON A ROADWAY THAT PROVIDES 2-LANES IN EACH DIRECTION WITH A 14' RAISED MEDIAN, A DESIGN SPEED OF 40 MPH, AND AN APPROACH GRADE OF LESS THAN THREE PERCENT.
3. SIGHT DISTANCE FOR AN ARTERIAL ROADWAY IS BASED ON A PASSENGER CAR ON A ROADWAY THAT PROVIDES 3-LANES IN EACH DIRECTION WITH A 24' RAISED MEDIAN, A DESIGN SPEED OF 50 MPH, AND AN APPROACH GRADE OF LESS THAN THREE PERCENT.
4. NO SIGNS, FENCES, WALLS, UTILITY BOXES, STRUCTURES, SHRUBS, HEDGES, OR OTHER PLANTS, (EXCLUDING TREES), OVER 30 INCHES IN HEIGHT SHALL BE PERMITTED WITHIN THE RESTRICTED AREAS.
5. TREES ARE PERMITTED WITHIN THE RESTRICTED AREAS PROVIDED:
   A. NO LIMBS, LEAVES NEEDLES OR OTHER FOLIAGE ABOVE 30 INCHES OR BELOW 84 INCHES ARE PERMITTED.
   B. TREES ARE PLANTED SO AS NOT TO OBSTRUCT 20% OF THE VISIBILITY WHEN COMBINED WITH OTHER OBSTRUCTIONS PRESENT.
6. SIGHT DISTANCE FOR TYPICAL RIGHT ANGLE INTERSECTION ONLY. SKEWED INTERSECTIONS WILL REQUIRE ADDITIONAL DESIGN FOR REVIEW AND APPROVAL FROM CITY ENGINEER.

APPROVED BY: _____ CITY ENGINEER R.P.E. 81734 09/16/16 DATE

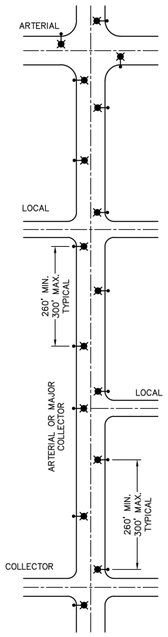
CITY OF VISALIA
DESIGN & IMPROVEMENT STANDARDS

SIGHT DISTANCE REQUIREMENTS FOR ARTERIAL & COLLECTOR STREETS

REVISIONS 08/26/16 BK 2016

SD-3

SIGHT DISTANCE REQUIREMENTS FOR ARTERIAL & COLLECTOR STREETS | SD-3



NOTES:

1. STREETLIGHTS ON ARTERIAL STREETS SHALL BE LED – MINIMUM 16,000 LUMEN WITH CUT–OFF LUMINAIRES, LUMINAIRE ELEVATION OF 29', MOUNTED ON MARBLELITE POLES WITH 8' ALUMINUM MAST ARMS.
2. STREETLIGHTS ON MAJOR COLLECTOR STREETS SHALL BE LED – MINIMUM 9,500 LUMEN WITH CUT–OFF LUMINAIRES, LUMINAIRE ELEVATION OF 29', MOUNTED ON MARBLELITE POLES WITH 8' ALUMINUM MAST ARMS.
3. STREETLIGHTS SHALL BE INSTALLED AT LOCATIONS AS DETERMINED BY THE CITY ENGINEER UPON REVIEW OF SUBMITTED IMPROVEMENT PLANS.
4. TWO STREETLIGHTS SHALL BE INSTALLED AT EACH INTERSECTION. STREETLIGHT SPACING SHALL BE 260' MINIMUM TO 300' MAXIMUM.
5. STREETLIGHTS SHALL BE INSTALLED ON BOTH SIDES OF THE STREET.
6. IF AN INTERSECTION IS SIGNALIZED, A STREETLIGHT SHALL BE INSTALLED ON EACH CORNER AS A PART OF THE TRAFFIC SIGNAL SYSTEM.
7. A STREETLIGHT PLAN PREPARED BY A LICENSED ENGINEER SHALL BE SUBMITTED TO THE CITY. THE PLAN SHALL INCLUDE LOCATIONS OF STREETLIGHTS, PULL BOXES, CONDUIT, METER PEDESTAL, POINT OF SERVICE, AND VOLTAGE DROP CALCULATIONS. THE LIGHTING SYSTEM MUST COMPLY WITH THE CURRENT NATIONAL ELECTRICAL CODE (NEC) AND THE CALIFORNIA ELECTRICAL CODE (CEC).
8. STREET LIGHTING SHALL BE DESIGNED TO MINIMIZE THE NUMBER OF METER PEDESTALS.
9. A "WILL SERVE" LETTER FROM SOUTHERN CALIFORNIA EDISON SHALL BE SUBMITTED TO THE CITY PRIOR TO APPROVAL OF STREET LIGHTING PLANS.
10. A MINIMUM SEPARATION OF 20' IS REQUIRED BETWEEN TREES AND STREETLIGHT POLES.
11. ALL STREETLIGHTS INSTALLED OR REPLACED IN THE CENTRAL BUSINESS DISTRICT ARE SUBJECT TO APPROVAL OF THE CITY ENGINEER.

APPROVED BY: _____ CITY ENGINEER R.P.E. 81734 09/16/16 DATE

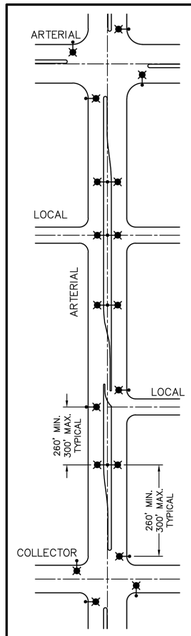
CITY OF VISALIA
DESIGN & IMPROVEMENT STANDARDS

ARTERIAL AND MAJOR COLLECTOR STREET LIGHTING

REVISIONS 04/29/16 BK 2016

SL-3

ARTERIAL & MAJOR COLLECTOR STREET LIGHTING | SL-3



NOTES:

1. STREET LIGHTS SHALL BE INSTALLED IN MEDIAN. STREET LIGHTS INSTALLED IN MEDIAN SHALL BE INSTALLED ON SINGLE OCTAGONAL POLES WITH A POLE HEIGHT OF 25'–9" AND SHALL HAVE DUAL MAST ARMS WITH A LENGTH OF 8' EACH.
2. INTERSECTIONS MAY BE SUPPLEMENTED WITH LIGHTING BEHIND CURB AND GUTTER IF MEDIAN LIGHTING CANNOT BE POSITIONED TO PROVIDE ADEQUATE ILLUMINATION.
3. STREETLIGHTS ON ARTERIAL STREETS SHALL BE LED – MINIMUM 16,000 LUMEN WITH CUT–OFF LUMINAIRES, LUMINAIRE ELEVATION OF 29', MOUNTED ON MARBLELITE POLES WITH 8' ALUMINUM MAST ARMS.
4. STREETLIGHTS ON MAJOR COLLECTOR STREETS SHALL BE LED – MINIMUM 9,500 LUMEN WITH CUT–OFF LUMINAIRES, LUMINAIRE ELEVATION OF 29', MOUNTED ON MARBLELITE POLES WITH 8' ALUMINUM MAST ARMS.
5. STREETLIGHTS SHALL BE INSTALLED AT LOCATIONS AS DETERMINED BY THE CITY ENGINEER UPON REVIEW OF SUBMITTED IMPROVEMENT PLANS.
6. STREETLIGHT SPACING SHALL BE 260' MINIMUM TO 300' MAXIMUM.
7. IF AN INTERSECTION IS SIGNALIZED, A STREETLIGHT SHALL BE INSTALLED ON EACH CORNER AS A PART OF THE TRAFFIC SIGNAL SYSTEM.
8. A STREETLIGHT PLAN PREPARED BY A LICENSED ENGINEER SHALL BE SUBMITTED TO THE CITY. THE PLAN SHALL INCLUDE LOCATIONS OF STREETLIGHTS, PULL BOXES, CONDUIT, METER PEDESTAL, POINT OF SERVICE, AND VOLTAGE DROP CALCULATIONS. THE LIGHTING SYSTEM MUST COMPLY WITH THE CURRENT NATIONAL ELECTRICAL CODE (NEC) AND THE CALIFORNIA ELECTRICAL CODE (CEC).
9. STREET LIGHTING SHALL BE DESIGNED TO MINIMIZE THE NUMBER OF METER PEDESTALS.
10. A "WILL SERVE" LETTER FROM SOUTHERN CALIFORNIA EDISON SHALL BE SUBMITTED TO THE CITY PRIOR TO APPROVAL OF STREET LIGHTING PLANS.
11. A MINIMUM SEPARATION OF 20' IS REQUIRED BETWEEN TREES AND STREETLIGHT POLES.
12. ALL STREETLIGHTS INSTALLED OR REPLACED IN THE CENTRAL BUSINESS DISTRICT ARE SUBJECT TO APPROVAL OF THE CITY ENGINEER.

APPROVED BY: _____ CITY ENGINEER R.P.E. 81734 09/16/16 DATE

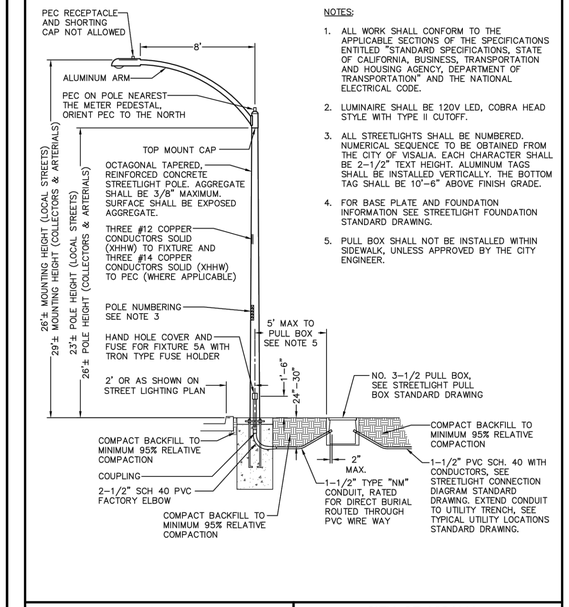
CITY OF VISALIA
DESIGN & IMPROVEMENT STANDARDS

ARTERIAL STREET LIGHTING WITH MEDIAN CURB

REVISIONS 08/22/16 BK 2016

SL-4

ARTERIAL STREET LIGHTING W/ MEDIAN CURB | SL-4



NOTES:

1. ALL WORK SHALL CONFORM TO THE APPLICABLE SECTIONS OF THE SPECIFICATIONS ENTITLED "STANDARD SPECIFICATIONS, STATE OF CALIFORNIA, BUSINESS, TRANSPORTATION AND HOUSING AGENCY, DEPARTMENT OF TRANSPORTATION" AND THE NATIONAL ELECTRICAL CODE.
2. LUMINAIRE SHALL BE 120V LED, COBRA HEAD STYLE WITH TYPE II CUTOFF.
3. ALL STREETLIGHTS SHALL BE NUMBERED. NUMERICAL SEQUENCE TO BE OBTAINED FROM THE CITY OF VISALIA. EACH CHARACTER SHALL BE 2-1/2" TEXT HEIGHT. ALUMINUM TAGS SHALL BE INSTALLED VERTICALLY. THE BOTTOM TAG SHALL BE 10'-6" ABOVE FINISH GRADE.
4. FOR BASE PLATE AND FOUNDATION INFORMATION SEE STREETLIGHT FOUNDATION STANDARD DRAWING.
5. PULL BOX SHALL NOT BE INSTALLED WITHIN SIDEWALK, UNLESS APPROVED BY THE CITY ENGINEER.

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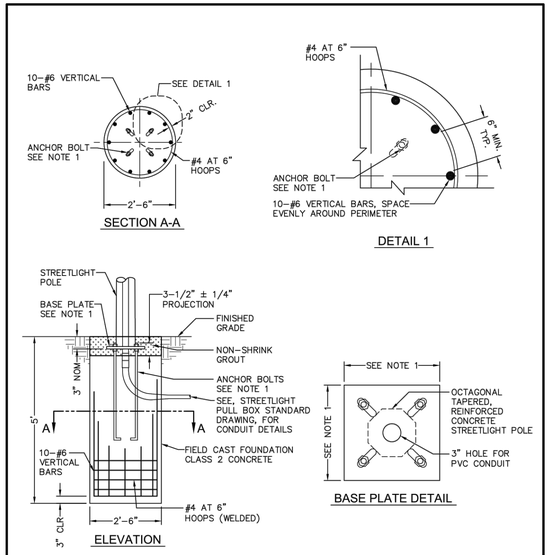
CITY OF VISALIA
DESIGN & IMPROVEMENT STANDARDS

STREETLIGHT POLE

REVISIONS 08/22/16 BK 2016

SL-5

STREETLIGHT POLE | SL-5



CAST-IN-DRILLED HOLE PILE FOUNDATION
REINFORCED PILE

NOTE:

1. BASE PLATE AND ANCHOR BOLT DIMENSIONS PER MANUFACTURER SPECIFICATIONS. AT MINIMUM, ANCHOR BOLTS 1"ø x 36"x4". INSTALL PER MANUFACTURERS RECOMMENDATION.

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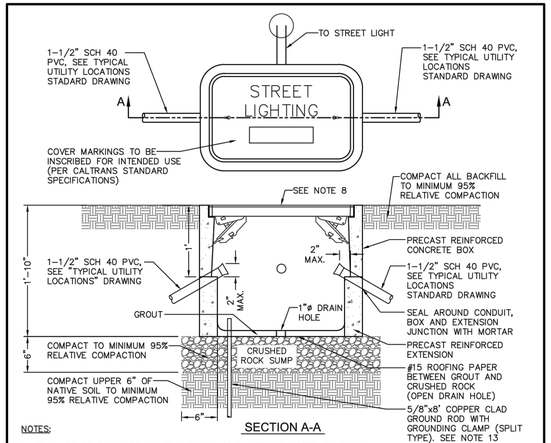
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STREETLIGHT FOUNDATION

REVISIONS 08/22/16 BK 2016

SL-6

STREETLIGHT FOUNDATION | SL-6



NOTES:

1. PULL BOXES SHALL BE NO. 3–1/2 UNLESS OTHERWISE NOTED ON PLANS.
2. PULL BOXES SHALL BE GROUTED PRIOR TO INSTALLATION OF CONDUCTORS. SLOPED TOWARD THE DRAIN HOLE. PLACE A LAYER OF ROOFING PAPER BETWEEN THE CRUSHED ROCK AND GROUT. OPEN AT DRAIN HOLE.
3. PULL LIDS BEFORE POURING CONCRETE AROUND PULL BOXES.
4. WRAP BOX WITH ROOFING PAPER BEFORE BACKFILLING.
5. PULL BOX SHALL BE TRAFFIC RATED PER CALTRANS STANDARDS IF NOT LOCATED BEHIND A CURB.
6. STREET LIGHT CONDUCTORS SHALL BE INSTALLED CONTINUOUS. SPLICES SHALL ONLY BE PERMITTED AT THE PULL BOX.
7. FIRMLY INSTALL DUCT SEAL AFTER INSTALLATION OF CONDUCTORS.
8. A LOCKING LID SHALL BE INSTALLED. LID SHALL BE GALVANIZED STEEL DIAMOND PLATE, MINIMUM THICKNESS 3/16", WITH MINIMUM TWO CLAMPING JAWS. DELIVER ONE KEY PER PROJECT TO THE CITY OF VISALIA REPRESENTATIVE OR AS DIRECTED BY THE CITY REPRESENTATIVE. LID SHALL BE LOCKJAW BRAND OR APPROVED EQUAL. LID SHALL BE BONDED PER CALTRANS STANDARDS FOR TRAFFIC RATED LIDS.
9. A MINIMUM OF 2' OF SLACK IN EACH CONDUCTOR SHALL BE LEFT IN EACH PULL BOX. TWIST AND PUSH TO BOTTOM OF PULL BOX TO PREVENT WIRE FROM PULLING THROUGH.
10. CONDUIT SHALL HAVE SMOOTH ENDS. EMPTY CONDUITS SHALL BE CAPPED WITHOUT GLUE.
11. CONDUIT SHALL BE MANDREL TESTED AFTER BACKFILL AND COMPACTION IN THE PRESENCE OF THE CITY OF VISALIA REPRESENTATIVE.
12. REFER TO TYPICAL UTILITY LOCATIONS STANDARD DRAWING FOR PLACEMENT OF STREET LIGHTING CONDUIT IN UTILITY TRENCHES.
13. GROUND RODS REQUIRED ONLY IN PULL BOX FARTHEST FROM THE METER PEDESTAL AND IN THE METER PEDESTAL.

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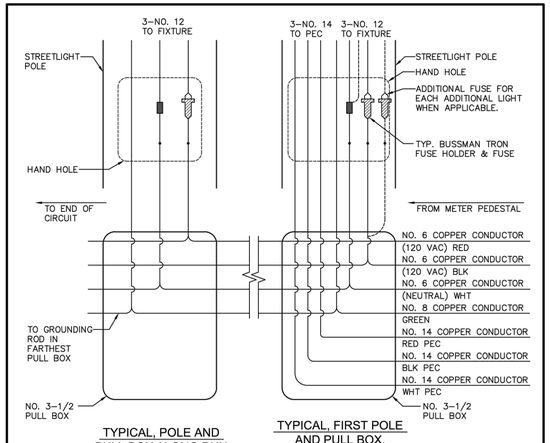
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STREETLIGHT PULL BOX

REVISIONS 08/22/16 BK 2016

SL-7

STREETLIGHT PULL BOX | SL-7



NOTES:

1. ALL CONDUCTORS SHALL BE (XHHW) TYPE, OR AS APPROVED BY CITY ENGINEER.
2. VOLTAGE DROP CALCULATIONS SHALL BE PERFORMED BY A LICENSED ENGINEER AND SUBMITTED TO THE CITY OF VISALIA FOR REVIEW.
3. 240V CIRCUITS ARE NOT STANDARD BUT MAY BE USED IF WARRANTED BY SPECIAL CIRCUMSTANCES. 240V CIRCUITS REQUIRE APPROVAL OF THE CITY ENGINEER AND SHALL BE DESIGNED BY A LICENSED ENGINEER.
4. SPLICES SHALL BE PER CALTRANS STANDARD PLAN ES–13A, TYPE "S" OR TYPE "ST" AS APPLICABLE. SPLICES SHALL BE INSULATED IN ACCORDANCE WITH METHOD "B".
5. SPLIT BOLT CONNECTOR (KEARNEY CONNECTORS, OR EQUAL), MAY BE USED TO SPLICE NO. 8 CONDUCTORS OR LARGER WITH METHOD "B" INSULATION.
6. WIRE NUTS ARE NOT ALLOWED FOR SPLICING.
7. THIS WIRING DIAGRAM DOES NOT SHOW THE SEPARATE GFI CIRCUIT REQUIRED IN THE DOWNTOWN AREA.

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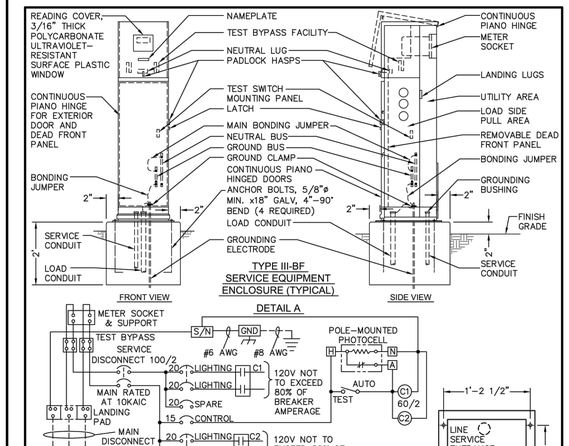
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STREETLIGHT CONNECTION DIAGRAM

REVISIONS 08/22/16 BK 2016

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STREETLIGHT CONNECTION DIAGRAM | SL-8



ENCLOSURE CONSTRUCTION NOTES:

1. EXTERIOR, 1/8" ALUMINUM, AND INTERIOR 14 GA COLD ROLLED STEEL, ELECTRICALLY WELDED AND REINFORCED WHERE REQUIRED.
2. CONSTRUCTION WILL BE NEMA 3R, RAINTIGHT.
3. ALL NUTS, BOLTS AND SCREWS WILL BE STAINLESS STEEL.
4. NUTS, BOLTS & SCREWS WILL NOT BE VISIBLE FROM OUTSIDE OF ENCLOSURE.
5. NAMEPLATES WILL BE PROVIDED AS REQUIRED.
6. CONTROL WIRING WILL BE MARKED AT BOTH ENDS BY PERMANENT WIRE MARKERS.
7. A PLASTIC COVERED WIRING DIAGRAM WILL BE ATTACHED TO THE INSIDE OF THE FRONT DOOR.
8. ENCLOSURE WILL BE FACTORY WIRED AND CONFORM TO REQUIRED NEMA AND UL 508A STANDARDS.
9. COLOR TO BE: ANODIZED ALUMINUM
10. CONDUIT FROM SOUTHERN CALIFORNIA EDISON (SCE) POINT OF SERVICE SHALL BE 3" SCH. 80 PVC WITH A PULL ROPE PER SCE STANDARDS.
11. METER PEDESTAL SHALL CONFORM TO EUSERC DRAWING NO. 308.

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CITY OF VISALIA
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STREETLIGHT METER PEDESTAL TYPE III–BF

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STREETLIGHT METER PEDESTAL TYPE III - BF | SL-9

NO.	DATE	DESCRIPTION

4CREEKS
324 S. SANTA FE, STE. A
P.O. BOX 7593
VISALIA, CA 93292
TEL: 559.802.3052
FAX: 559.802.3215

CHK BY: KM

PREPARED BY:

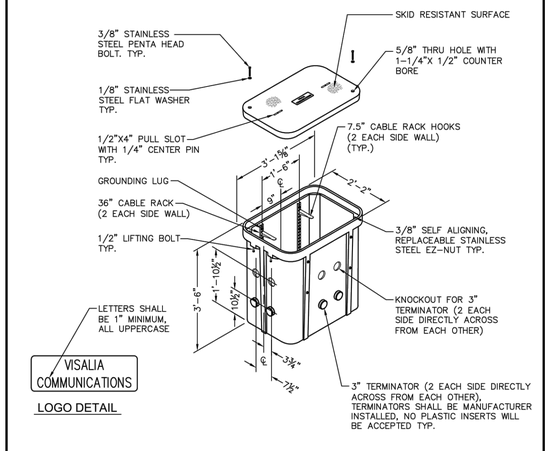
DRW BY: MH

CITY OF VISALIA
315 E. ACEQUIA AVE.
VISALIA, CA 93291

RIGGIN AVENUE
WIDENING & IMPROVEMENTS
CIVIL DETAILS

PROJ. NO. 21097
DATE:9/10/2021
DESIGN BY: MA | DRAWN BY:BA
SCALE: AS SHOWN
SHEET 27 OF 29

60% SUBMITTAL



LOGO DETAIL

PLAN SYMBOL:

[C] NEW

[C] EXISTING

NOTE:

THE BOX OF THIS ASSEMBLY SHALL MEET BOTH PERFORMANCES AND TESTING OF ANSI/SCTE 77 TIER 15. INDEPENDENT THIRD PARTY VERIFICATION OF TEST REPORTS STAMPED BY A REGISTERED PROFESSIONAL ENGINEER CERTIFYING THAT ALL TEST PROVISIONS OF THIS SPECIFICATION HAVE BEEN MET ARE REQUIRED WITH EACH SUBMITTAL. SEE THE FOLLOWING TYPICAL FIBER PULL BOX STANDARD DRAWINGS FOR INSTALLATION INFORMATION.

TYPICAL PULL BOX

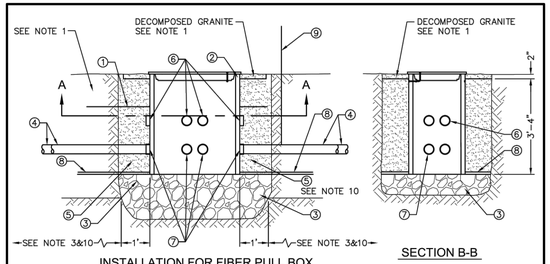
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DESIGN & IMPROVEMENT STANDARDS

TYPICAL FIBER PULL BOX

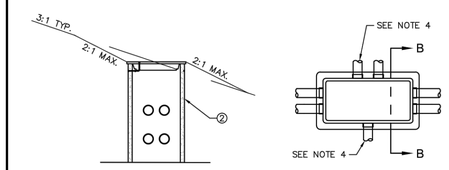
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INSTALLATION FOR FIBER PULL BOX

SECTION B-B



INSTALLATION ON SLOPE

SECTION A-A

MATERIAL LIST	
ITEM	DESCRIPTION
①	WARNING TAPE-"CAUTION FIBER OPTIC LINE BURIED BELOW"
②	CITY OF VISALIA FIBER PULL BOX – SEE TYPICAL FIBER PULL BOX STANDARD DRAWINGS
③	3/4" CLEAN CRUSHED ROCK
④	3" DIAMETER SCHEDULE 40 PVC CONDUITS
⑤	CONTROLLED LOW STRENGTH MATERIAL–SEE NOTE 10
⑥	3" TERMINATOR KNOCK OUT – SEE TYPICAL FIBER PULL BOX STANDARD DRAWINGS
⑦	3" TERMINATOR
⑧	30# FELT PAPER & GALVANIZED STEEL SCREEN – SEE NOTE 8
⑨	PULL BOX DELINEATOR (FLEXIBLE IDENTIFICATION MARKER)–SEE NOTE 9

NOTES:

1. SEE TYPICAL FIBER TRENCH DETAILS STANDARD DRAWING AND TYPICAL FIBER TRENCH & STREET LIGHT JOINT TRENCH DETAIL STANDARD DRAWING FOR TRENCH REQUIREMENTS.
2. SEE TYPICAL FIBER PULL BOX INSTALLATION NOTES STANDARD DRAWING FOR ADDITIONAL NOTES.
3. STRICTER REQUIREMENTS AS DIRECTED BY THE CITY ENGINEER IF PULL BOX IS WITHIN ROADWAY.

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CITY OF VISALIA
DESIGN & IMPROVEMENT STANDARDS

TYPICAL FIBER PULL BOX INSTALLATION 1 OF 2

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TYPICAL FIBER PULL BOX INSTALLATION NOTES:

1. BACKFILL WITH DESIGNATED 3/4" CLASS 2 AGGREGATE BASE TO SIX (6) INCHES BELOW FINISH GRADE. BACKFILL WITH FOUR (4) INCHES OF WITH SELECT EXCAVATED MATERIAL AND THOROUGHLY COMPACT. TWO (2) INCHES OF DECOMPOSED GRANITE SHALL BE USED TO MATCH SLOPES.
2. THIS PULL BOX IS DESIGNED FOR NON-TRAFFIC AREAS.
3. CONDUIT FROM THE TYPICAL TRENCH SECTION SHALL NOT DEFLECT BY MORE THAN ONE (1) INCHES PER FOOT FROM THE ALIGNMENT PRECEDING OR FOLLOWING THE PULL BOX.
4. LATERAL CONDUIT AS REQUIRED.
5. ALL POWER AND COMMUNICATIONS CABLE SHALL BE TAGGED WITH CABLE IDENTIFICATION.
6. "VISALIA COMMUNICATIONS" SHALL BE THE TITLE EMBOSSED ON THE LID.
7. PVC CONDUIT SHALL BE USED TO ATTACH TO PULL BOX TERMINATORS. SEE TYPICAL FIBER PULL BOX STANDARD DRAWING.
8. 30# FELT PAPER AND A GALVANIZED STEEL SCREEN WITH NO LARGER THAN THREE QUARTERS (3/4) OF AN INCH OPENINGS SHALL BE INSTALLED BETWEEN PULL BOX AND AGGREGATE.
9. INSTALL ORANGE FLEXIBLE IDENTIFICATION MARKERS TWELVE (12) INCHES IN FRONT OF EACH PULL BOX WITHOUT TOUCHING CONDUIT. MARKER HEIGHT SHALL BE THREE (3) FEET ABOVE GRADE AND LABELED "FIBER OPTIC CABLE". FLEXIBLE IDENTIFICATION MARKERS SHALL NOT BE INSTALLED AT PULL BOXES AT SIGNALIZED INTERSECTIONS.
10. POUR 2-SACK SLURRY, OR A CONTROLLED LOW STRENGTH MATERIAL THAT MEETS CALTRANS SPECIFICATIONS, WITHIN TWELVE (12) INCHES OF PULL BOX.
11. PULL BOX HEIGHT ABOVE FINISHED GRADE SHALL PERMIT TWO (2) INCHES OF DECOMPOSED GRANITE TO BE USED TO MATCH SLOPE.
12. REFER TO TYPICAL FIBER PULL BOX STANDARD DRAWING FOR PULL BOX DIMENSIONS.
13. EXISTING PULL BOX CONFIGURATIONS MAY VARY. LOCATIONS WHERE PULL BOXES ARE BEING REPLACED, FIBER PULL BOXES SHALL BE INSTALLED AS SHOWN ON THIS SHEET UNLESS DIRECTED OTHERWISE BY THE CITY ENGINEER OR DESIGNEE.
14. EXISTING CONDUIT ENTERING A PULL BOX MAY NOT BE CORRECTLY ALIGNED TO FACILITATE PULLING CABLES THROUGH THE PULL BOX BY USE OF A PULLING SHOE. THE FORCE ACCOUNT ITEM FOR CONDUIT RECONDITIONING DOES NOT COVER REALIGNMENT OF CONDUIT TO ALLOW FOR PULLING THROUGH AN EXISTING PULL BOX, THEREBY ELIMINATING IT AS A PULL POINT.
15. IN ALL LOCATIONS WHERE FIBER OPTIC CABLE ENTERS A PULL BOX, CABLE SLACK SHALL BE LOOSELY LOOPED USING THE RACK AND HOOK SYSTEM. THIRTY FOOT (30') OF SLACK SHALL BE LEFT WHERE THE FIBER OPTIC CABLE ENTERS/EXITS THE COMMUNICATION VAULT PROVIDING A SIXTY FOOT (60') COIL OF SLACK.
16. A GROUNDING ELECTRODE REQUIRED WHEN SPECIFIED.

INSTRUCTIONS:

IT IS INTENDED THAT THESE NOTES SHALL BE PLACED ON THE PLANS WHERE APPROPRIATE TO FIT SPECIFIC PROJECT CONDITIONS. IF THEY ARE EDITED OR ALTERED, THESE NOTES SHALL REQUIRE APPROVAL BY THE CITY ENGINEER OR DESIGNEE.

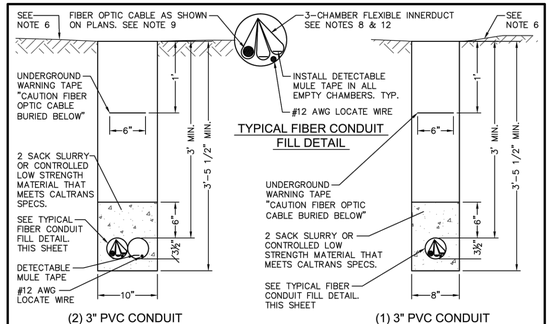
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CITY OF VISALIA
DESIGN & IMPROVEMENT STANDARDS

TYPICAL FIBER PULL BOX INSTALLATION 2 OF 2

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TYPICAL FIBER CONDUIT FILL DETAIL

(2) 3" PVC CONDUIT OPEN TRENCH INSTALLATION

(1) 3" PVC CONDUIT OPEN TRENCH INSTALLATION

NOTES:

1. CONDUIT CONTENTS ARE ORIENTED ASSUMING THE SECTION FACING IN THE DIRECTION OF TRAVEL FOR THE MAJOR ARTERIAL.
2. ALL SPOIL MATERIAL SHALL BE REMOVED OFFSITE BY THE CONTRACTOR.
3. AREA SHALL BE RETURNED TO EXISTING GRADE.
4. CONDUIT COUPLINGS SHALL BE STAGGERED.
5. #12 AWG LOCATE WIRE SHALL BE INSTALLED IN ALL CONDUITS. DETECTABLE MULE TAPE SHALL BE INSTALLED IN ALL UNUSED CONDUITS AND FLEXIBLE INNERDUCT CHAMBERS. LEAVE A 10 FOOT LOOP OF WIRE IN A SMALL JUNCTION BOX WITHIN 5 FEET OF THE CONTROLLER CABINET, OR WITHIN THE CABINET.
6. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT TO 95% OF MAXIMUM DENSITY.
7. CONTROLLED LOW STRENGTH MATERIAL REQUIRED WHEN TRUNK AND/OR BRANCH FIBER-OPTIC CABLES INSTALLED IN CONDUIT (2-SACK SLURRY).
8. FLEXIBLE INNERDUCT, MULE TAPE, AND LOCATE WIRE SHALL BE INSTALLED AT TIME OF CONDUIT INSTALLATION AND SHALL TERMINATE AT EACH PULL BOX LOCATED ON PLANS.
9. IF FIBER IS BEING INSTALLED IN EXISTING CONDUIT AND INNERDUCT IS NOT PRESENT, THE 3 CHAMBER FLEXIBLE INNERDUCT SHALL BE INSTALLED PRIOR TO FIBER INSTALLATION.
10. TRENCH UNDER PAVEMENT OR SIDEWALK SHALL REQUIRE MINIMUM ONE-SACK SLURRY (DIRECTED BY CITY ENGINEER OR DESIGNEE) AND BACKFILL PER CITY OF VISALIA EXCAVATION STANDARD DRAWINGS.
11. FIBER INSTALLATION AND TESTING SHALL CONFORM TO THE CITY OF VISALIA STANDARDS AND SPECIFICATIONS.
12. IN CASES WHERE FIBER IS NOT BEING INSTALLED (I.E., CONDUIT ONLY INSTALLATIONS), THE FLEXIBLE INNERDUCT SHALL NOT BE INSTALLED.
13. WHERE CONDUIT IS PLACED IN AN OPEN TRENCH, IT SHALL NOT DEVIATE MORE THAN ONE INCH PER FOOT (1":12" MAX.) IN EITHER THE HORIZONTAL OR VERTICAL PLANES.
14. CONDUIT RUNS SHALL FOLLOW THE MOST DIRECT ROUTE POSSIBLE WITH NO MORE THAN TWO 90° BENDS BETWEEN PULL POINTS AND NO MORE THAN A TOTAL OF 270° OF BEND BETWEEN PULL POINTS.
15. NO MORE THAN ONE WEEK PRIOR TO THE INSTALLATION OF ANY CABLE, ALL NEW AND EXISTING CONDUIT RUNS IN WHICH CABLE IS TO BE INSTALLED SHALL BE CLEARED BY PULLING A METAL-DISC MANDREL OF 90% DIAMETER OF THE CONDUIT.
16. WHEN CONDUIT IS TRENCHED UNDER ROADWAY PAVEMENT, THERE SHALL BE SUFFICIENT VERTICAL CLEARANCE BETWEEN CONDUIT AND PAVEMENT STRUCTURAL SECTION AS DIRECTED BY THE CITY ENGINEER.

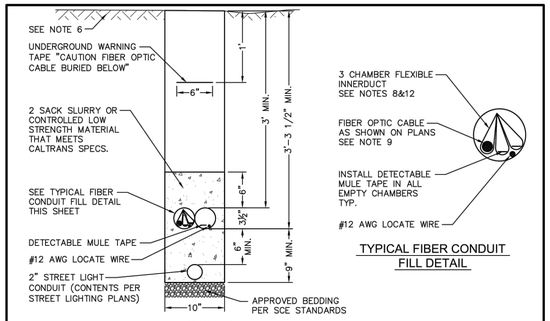
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CITY OF VISALIA
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TYPICAL FIBER TRENCH DETAILS

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TYPICAL FIBER CONDUIT FILL DETAIL

(2) 3" PVC CONDUIT OPEN TRENCH INSTALLATION

NOTES:

1. CONDUIT CONTENTS ARE ORIENTED ASSUMING THE SECTION FACING IN THE DIRECTION OF TRAVEL FOR THE MAJOR ARTERIAL.
2. ALL SPOIL MATERIAL SHALL BE REMOVED OFFSITE BY THE CONTRACTOR.
3. AREA SHALL BE RETURNED TO EXISTING GRADE.
4. CONDUIT COUPLINGS SHALL BE STAGGERED.
5. #12 AWG LOCATE WIRE SHALL BE INSTALLED IN ALL CONDUITS. DETECTABLE MULE TAPE SHALL BE INSTALLED IN ALL UNUSED CONDUITS AND FLEXIBLE INNERDUCT CHAMBERS. LEAVE A 10 FOOT LOOP OF WIRE IN A SMALL JUNCTION BOX (CHRISTY FIBERLYTE FL9 OR APPROVED EQUAL) WITHIN 5 FEET OF THE CONTROLLER CABINET. DETECTABLE MULE TAPE SHALL BE INSTALLED IN ALL UNUSED CONDUITS AND FLEXIBLE INNERDUCT CHAMBERS.
6. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT TO 95% OF MAXIMUM DENSITY.
7. CONTROLLED LOW STRENGTH MATERIAL REQUIRED WHEN TRUNK AND/OR BRANCH FIBER-OPTIC CABLES INSTALLED IN CONDUIT.
8. FLEXIBLE INNERDUCT, MULE TAPE, AND LOCATE WIRE SHALL BE INSTALLED AT TIME OF CONDUIT INSTALLATION AND SHALL TERMINATE AT EACH PULL BOX LOCATED ON PLANS.
9. IF FIBER IS BEING INSTALLED IN EXISTING CONDUIT AND INNERDUCT IS NOT PRESENT, THE 3 CHAMBER FLEXIBLE INNERDUCT SHALL BE INSTALLED PRIOR TO FIBER INSTALLATION.
10. TRENCH UNDER PAVEMENT OR SIDEWALK SHALL REQUIRE MINIMUM ONE-SACK SLURRY (DIRECTED BY CITY ENGINEER OR DESIGNEE) BACKFILL PER CITY OF VISALIA EXCAVATION STANDARD DRAWINGS.
11. FIBER INSTALLATION AND TESTING SHALL CONFORM TO THE CITY OF VISALIA STANDARDS AND SPECIFICATIONS.
12. IN CASES WHERE FIBER IS NOT BEING INSTALLED (I.E., CONDUIT ONLY INSTALLATIONS), THE FLEXIBLE INNERDUCT SHALL NOT BE INSTALLED.
13. WHERE CONDUIT IS PLACED IN AN OPEN TRENCH, IT SHALL NOT DEVIATE MORE THAN ONE INCH PER FOOT (1":12" MAX.) IN EITHER THE HORIZONTAL OR VERTICAL PLANES.
14. CONDUIT RUNS SHALL FOLLOW THE MOST DIRECT ROUTE POSSIBLE WITH NO MORE THAN TWO 90° BENDS BETWEEN PULL POINTS AND NO MORE THAN A TOTAL OF 270° OF BEND BETWEEN PULL POINTS.
15. NO MORE THAN ONE WEEK PRIOR TO THE INSTALLATION OF ANY CABLE, ALL NEW AND EXISTING CONDUIT RUNS IN WHICH CABLE IS TO BE INSTALLED SHALL BE CLEARED BY PULLING A METAL-DISC MANDREL OF 90% DIAMETER OF THE CONDUIT.

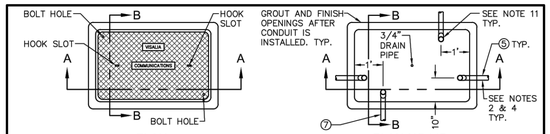
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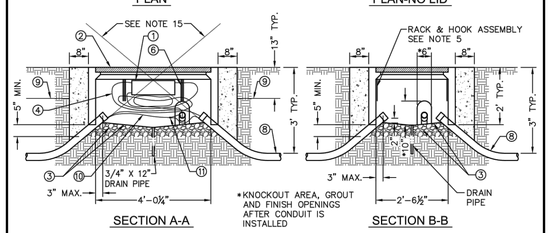
TYPICAL FIBER AND STREET LIGHTING JOINT TRENCH DETAIL

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PLAN-NO LID



SECTION A-A

*KNOCKOUT AREA, GROUT AND FINISH OPENINGS AFTER CONDUIT IS INSTALLED

SECTION B-B

NOTE: STRICTER REQUIREMENTS AS DIRECTED BY THE CITY ENGINEER IF PULL BOX IS WITHIN ROADWAY.

LEGEND:

① FIBER OPTIC CABLE SPLICE CLOSURE.

② FIBER OPTIC SPLICE VAULT LID.

③ 1.5 INCH MAXIMUM COARSE AGGREGATE WITH 2 INCHES GROUT COVER OVER THE AGGREGATE. THE GROUT COVER SHALL BE SLOPED TOWARD THE DRAIN FOR DRAINAGE.

④ FIBER OPTIC CABLE. COIL AS REQUIRED.

⑤ PROPOSED SMFO BRANCH OR TRUNKLINE CONDUIT, IF NEEDED SEE PLANS

⑥ RACK & HOOK ASSEMBLY. SEE NOTE 5 ON TYPICAL COMMUNICATIONS VAULT INSTALLATION NOTES STANDARD DRAWING

⑦ TRAFFIC SIGNAL CONDUIT TYP. IF NEEDED. SEE PLANS.

⑧ 45 DEGREE ELBOW, 36" RADIUS MIN. ELBOW AND COUPLING MAY NOT BE NECESSARY FOR NEW CONDUIT INSTALLED BY DIRECTIONAL BORING. NEW CONDUIT INSTALLED BY DIRECTIONAL DRILLING SHALL ENTER SPLICE VAULT WITH BENDING RADIUS OF 36" MIN. SEE NOTE 15.

⑨ WARNING TAPE. FOR NEW CONDUIT INSTALLED BY TRENCHING

⑩ COIL 3 FEET OF TRACER WIRE.

⑪ SPLICE TRACER WIRE PER CALTRANS STANDARD SPECIFICATIONS FOR CONDUCTOR SPLICING.

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TYPICAL COMMUNICATIONS VAULT INSTALLATION 1 OF 2

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TYPICAL COMMUNICATIONS VAULT INSTALLATION NOTES:

1. TRUNKLINE CONDUIT(S) FROM THE TYPICAL BORE OR TRENCH SECTION SHOULD NOT DEFLECT BY MORE THAN ONE FOOT PER 10 FEET FROM THE ALIGNMENT PRECEDING OR FOLLOWING PULL BOX/SPLICE VAULT ENTRANCE/EXIT.
2. EXCESS CONDUIT FOR ALL CONDUIT ENDS SHALL BE CUT BACK TO PROVIDE STUB ENDS OF 1" MINIMUM TO 2" MAXIMUM.
3. SEE PLAN SHEETS FOR NUMBER AND SIZE OF CONDUIT.
4. IF MORE THAN 3 CONDUITS ARE REQUIRED IN SAME KNOCKOUT, KNOCKOUT SHALL BE WIDENED TO 1/2" MORE THAN THE COMBINED CONDUIT WIDTH.
5. ALL SPLICE VAULTS SHALL BE FURNISHED WITH TWO RACKS AND HOOKS INSTALLED ON EACH OF THE TWO LONG SIDES.
6. TRUNKLINE CONDUITS SHALL ENTER THROUGH KNOCKOUTS.
7. SPLICE VAULTS, VAULT EXTENSION, AND VAULT LIDS SHALL BE CHRISTY N48 UTILITY BOX OR APPROVED EQUIVALENT, AND SUPPORT MINIMUM TEST LOAD OF 12,500 LBS. IF SPLICE VAULT IS LOCATED IN TRAVEL WAY, SPLICE VAULT AND LID SHALL CONFORM VERTICAL PROOF LOAD STRENGTH REQUIREMENT AS PER CALTRANS STANDARD SPECIFICATIONS, SECTION 86-2.07.
8. LOCKING MECHANISM SHALL BE PROVIDED FOR VAULT LID. TWO 3/8" PENTA HEAD BOLTS AT 90° SHALL BE USED, ONE 3/8" PENTA HEAD SOCKET AND RATCHET SHALL BE PROVIDED TO CITY OF VISALIA FOR EVERY 10 SPLICE VAULTS.
9. "VISALIA COMMUNICATIONS" SHALL BE CASTED ON THE TOP FACE OF ALL VAULT LIDS.
10. CUT CONDUIT, DE-BURR, AND RE-THREAD PRIOR TO INSTALLING FIBER OPTIC CABLE AND/OR OTHER CABLES/CONDUCTORS. ALL METALLIC CONDUITS SHALL HAVE THREADED METALLIC BUSHINGS. ALL PVC AND HDPE CONDUITS SHALL HAVE BELL ENDS.
11. FURNISH AND INSTALL CAPS OR DUCT PLUGS FOR ALL UNUSED CONDUIT.
12. SPLICE CLOSURE SHALL BE ATTACHED TO THE RACK AND HOOK SYSTEM ON THE SAME SIDE AS THE FIBER OPTIC CABLE. THE SPLICE CLOSURE SHALL BE ANGLED TO FACILITATE MINIMUM BENDING RADIUS IN THE CABLE.
13. IF APPLICABLE, SPLICE VAULT HEIGHT ABOVE EXISTING DIRT GRADE SHALL PERMIT 1" OF FUTURE SURFACE LANDSCAPING. WHEN SPLICE VAULT IS INSTALLED IN EXISTING SIDEWALK, SPLICE VAULT LID SHALL SIT FLUSH WITH THE SIDEWALK. COORDINATE WITH ENGINEER WHERE THIS APPLIES.
14. EACH FIBER OPTIC SPLICE VAULT SHALL BE EQUIPPED WITH 50' MIN. OF SLACK IN THE TRUNKLINE CABLE AND 25' MIN. OF SLACK IN THE BRANCH CABLE ON EACH SIDE OF FIBER OPTIC SPLICE CLOSURE. (I.E. THE TRUNKLINE CABLE TYPICALLY WILL HAVE 50' OF SLACK AND THE BRANCH CABLE WILL TYPICALLY HAVE 25' OF SLACK.)
15. BOTTOM OF CONDUIT CENTERLINE SHALL BE ALIGNED TO EXIT TOP OF SPLICE VAULT TO FACILITATE CABLE PULLING.
16. MINIMUM SPLICE VAULT DEPTH SHALL BE 2'. IF NECESSARY, AN EXTENSION MAY BE USED TO MEET THIS REQUIREMENT.

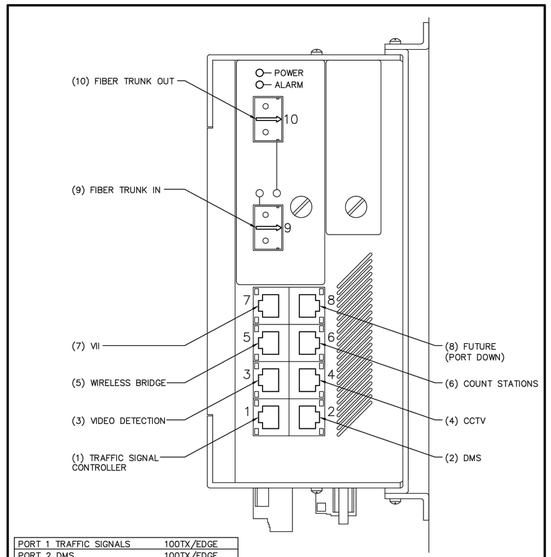
APPROVED BY: _____ CITY ENGINEER R.P.E. 81734 09/16/16 DATE

CITY OF VISALIA
DESIGN & IMPROVEMENT STANDARDS

TYPICAL COMMUNICATIONS VAULT INSTALLATION 2 OF 2

REVISIONS 09/15/16 BK 2016

TE-11



PORT 1 TRAFFIC SIGNALS	100TX/EDGE
PORT 2 DMS	100TX/EDGE
PORT 3 VIDEO DETECTION	100TX/EDGE
PORT 4 CCTV	100TX/EDGE
PORT 5 WIRELESS	100TX/TRUNK
PORT 6 COUNT STATIONS	100TX/EDGE
PORT 7 VII (FUTURE)	100TX/EDGE
PORT 8 SPARE	100TX/OFF
PORT 9 FIBER IN	1000FX/TRUNK
PORT 10 FIBER OUT	1000FX/TRUNK

APPROVED BY: _____ CITY ENGINEER R.P.E. 81734 09/16/16 DATE

CITY OF VISALIA
DESIGN & IMPROVEMENT STANDARDS

ITS FIELD SWITCH STATIC PORT ASSIGNMENTS

REVISIONS 08/25/16 BK 2016

TE-12

TYPICAL FIBER & STREET LIGHTING JOINT TRENCH DETAIL TE-9

TYPICAL COMMUNICATIONS VAULT INSTALLATION 1 OF 2 TE-10

TYPICAL COMMUNICATIONS VAULT INSTALLATION 2 OF 2 TE-11

BUS SHELTER & SIGN LOCATION W/ WHEELCHAIR AREA TR-1

NO. DATE DESCRIPTION

PROFESSIONAL ENGINEER MICHAEL A. KNOLL 81734 STATE OF CALIFORNIA

324 S. SANTA FE, STE. A
P.O. BOX 7593
VISALIA, CA 93292
TEL: 559.802.3052
FAX: 559.802.3215

4CREEKS

PREPARED BY:

CHK BY: KM

DRW BY: MH

CITY OF VISALIA
315 E. ACEQUIA AVE.
VISALIA, CA 93291

RIGGIN AVENUE
WIDENING & IMPROVEMENTS
CIVIL DETAILS

PROJ. NO. 21097

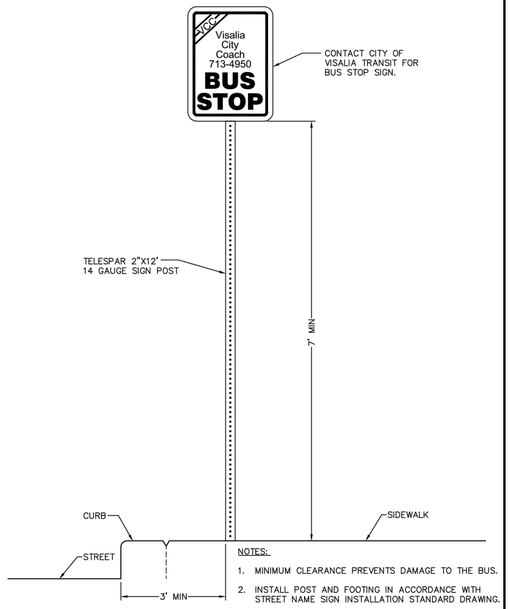
DATE:9/10/2021

DESIGN BY: MA DRAWN BY:BA

SCALE: AS SHOWN

SHEET 28OF 29

60% SUBMITTAL



NOTES:

1. MINIMUM CLEARANCE PREVENTS DAMAGE TO THE BUS.
2. INSTALL POST AND FOOTING IN ACCORDANCE WITH STREET NAME SIGN INSTALLATION STANDARD DRAWING.

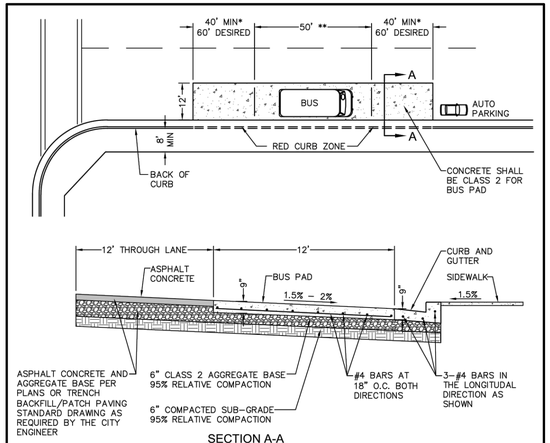
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CITY OF VISALIA
DESIGN & IMPROVEMENT STANDARDS

BUS STOP SIGN

REVISIONS 09/15/16 BK 2016

TR-2



SECTION A-A

NOTES:

1. CONCRETE FOR BUS PAD SHALL BE CLASS 2.
2. CONCRETE FOR SIDEWALK AND CURB AND GUTTER SHALL BE CLASS 2 OR CLASS 3.
3. REINFORCING BARS SHALL BE DEFORMED STEEL BARS AND SHALL BE GRADE 40 MINIMUM. REINFORCING BARS SHALL BE FREE OF RUST OR DIRT AND SHALL BE THOROUGHLY CLEANED BEFORE PLACEMENT.
4. REINFORCING BARS SHALL HAVE A MINIMUM OF 3" OF CLEAR COVERAGE.
5. WEAKEND PLANE JOINTS SHALL BE PLACED IN THE BUS PAD AT 10'–15' CENTERS, MINIMUM DEPTH OF 2". JOINTS IN CURB AND GUTTER SHALL ALIGN WITH JOINTS IN BUS PAD WHERE POSSIBLE.

* 40' MINIMUM FOR SPEED LIMIT 30 MPH AND UNDER. 60' DESIRABLE FOR SPEED LIMIT ABOVE 30 MPH.

** FOR EACH ADDITIONAL PASS THROUGH BUS BERTH ADD 50', AND FOR EACH ADDITIONAL LAYOVER BUS BERTH ADD 80'.

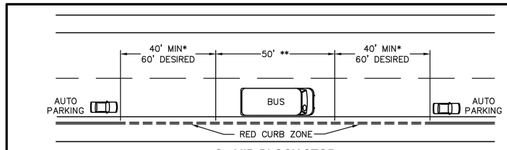
APPROVED BY: _____ CITY ENGINEER R.P.E. 81734 09/16/16 DATE

CITY OF VISALIA
DESIGN & IMPROVEMENT STANDARDS

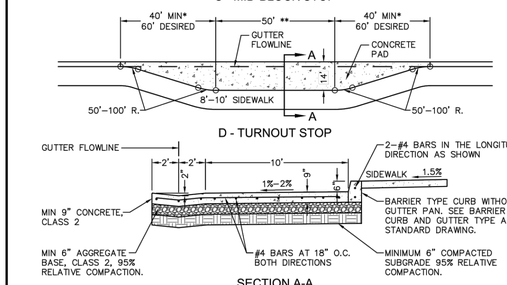
BUS PAD

REVISIONS 09/27/13 BK 2016

TR-3



C - MID-BLOCK STOP



SECTION A-A

NOTES:

1. CONCRETE FOR VEE GUTTER AND BUS PAD SHALL BE CLASS 2.
2. CONCRETE FOR SIDEWALK AND CURB AND GUTTER SHALL BE CLASS 2 OR CLASS 3.
3. REINFORCING BARS SHALL BE DEFORMED STEEL BARS AND SHALL BE GRADE 40 MINIMUM. REINFORCING BARS SHALL BE FREE OF RUST OR DIRT AND SHALL BE THOROUGHLY CLEANED BEFORE PLACEMENT.
4. REINFORCING BARS SHALL HAVE A MINIMUM OF 3" OF CLEAR COVERAGE.
5. WEAKEND PLANE JOINTS SHALL BE PLACED IN THE BUS PAD AT 12'–15' CENTERS, MINIMUM DEPTH OF 2". JOINTS IN CURB AND GUTTER SHALL ALIGN WITH JOINTS IN BUS PAD WHERE POSSIBLE.

* 40' MINIMUM FOR SPEED LIMIT 30 MPH AND UNDER. 60' DESIRABLE FOR SPEED LIMIT ABOVE 30 MPH.

** FOR EACH ADDITIONAL PASS THROUGH BUS BERTH ADD 50', AND FOR EACH ADDITIONAL LAYOVER BUS BERTH ADD 80'.

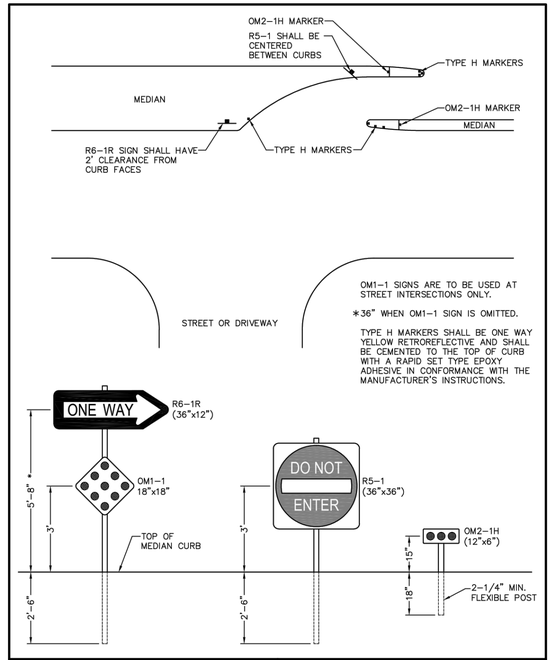
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CITY OF VISALIA
DESIGN & IMPROVEMENT STANDARDS

BUS STOPS C & D

REVISIONS 09/27/13 BK 2016

TR-5



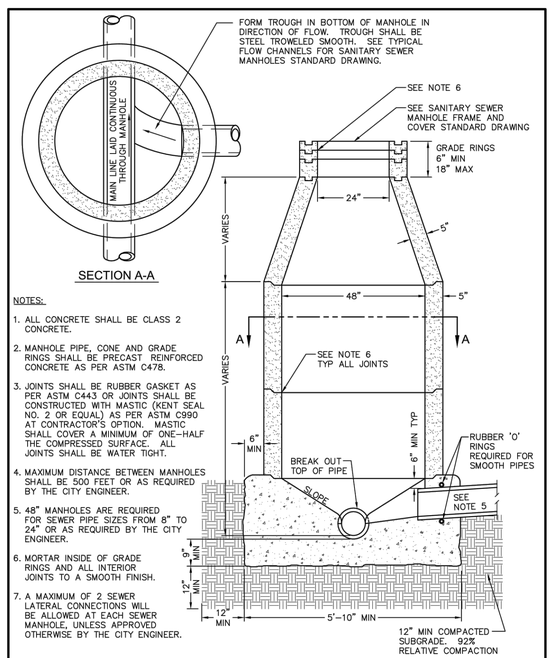
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CITY OF VISALIA
DESIGN & IMPROVEMENT STANDARDS

MEDIAN ISLAND OPENING SIGNING

REVISIONS 08/25/16 BK 2016

TS-8



SECTION A-A

NOTES:

1. ALL CONCRETE SHALL BE CLASS 2 CONCRETE.
2. MANHOLE PIPE, CONE AND GRADE RINGS SHALL BE PRECAST REINFORCED CONCRETE AS PER ASTM C478.
3. JOINTS SHALL BE RUBBER GASKET AS PER ASTM C443 OR JOINTS SHALL BE CONSTRUCTED WITH MASTIC (KENT SEAL NO. 2 OR EQUAL) AS PER ASTM C990 AT CONTRACTOR'S OPTION. MASTIC SHALL COVER A MINIMUM OF ONE–HALF THE COMPRESSED SURFACE. ALL JOINTS SHALL BE WATER TIGHT.
4. MAXIMUM DISTANCE BETWEEN MANHOLES SHALL BE 500 FEET OR AS REQUIRED BY THE CITY ENGINEER.
5. 48" MANHOLES ARE REQUIRED FOR SEWER PIPE SIZES FROM 8" TO 24" OR AS REQUIRED BY THE CITY ENGINEER.
6. MORTAR INSIDE OF GRADE RINGS AND ALL INTERIOR JOINTS TO A SMOOTH FINISH.
7. A MAXIMUM OF 2 SEWER LATERAL CONNECTIONS WILL BE ALLOWED AT EACH SEWER MANHOLE, UNLESS APPROVED OTHERWISE BY THE CITY ENGINEER.

APPROVED BY: _____ CITY ENGINEER R.P.E. 81734 09/16/16 DATE

CITY OF VISALIA
DESIGN & IMPROVEMENT STANDARDS

48" SANITARY SEWER MANHOLE

REVISIONS 09/27/13 BK 2016

S-1

BUS STOP SIGN TR-2
BUS PAD TR-3
BUS STOPS C & D TR-5
MEDIAN ISLAND OPENING SIGNING TS-8
48" SANITARY SEWER MANHOLE S-1

NO. DATE DESCRIPTION

4CREEKS
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VISALIA, CA 93292
TEL: 559.802.3052
FAX: 559.802.3215

PREPARED BY: CHK BY: KM DRW BY: MH

CITY OF VISALIA
315 E. ACEQUIA AVE.
VISALIA, CA 93291

RIGGIN AVENUE
WIDENING & IMPROVEMENTS
CIVIL DETAILS

PROJ. NO. 21097
DATE:9/10/2021
DESIGN BY: MA DRAWN BY:BA
SCALE: AS SHOWN
SHEET 29 OF 29

60% SUBMITTAL

Appendix F

Noise Study Report



Noise Study Report

Riggin Avenue Widening - Mooney Boulevard to Conyer Street Project

County of Tulare, California

District 6-TUL-46

HIPL – 5044 (140)

January 2022

Caltrans

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Noise Study Report

Riggin Avenue Widening - Mooney Boulevard to Conyer Street Project

County of Tulare, California

District 6-TUL-46

HIPL – 5044 (140)

January 2022

Prepared by: _____ **Date:** 1/3/2022

Ken Chen
Noise Specialist
Dokken Engineering

Reviewed by: _____ **Date:** _____

NAME
TITLE
Caltrans District 6

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Summary

The City of Visalia (City), in cooperation with the California Department of Transportation (Caltrans), proposes to widen Riggin Avenue between Mooney Boulevard and Conyer Street from an undivided two-lane road to a four-lane divided road with a separated frontage road, median, sidewalks, curb and gutters, and streetlights as part of the Riggin Avenue Widening Between Mooney Boulevard and Conyer Street Project (Project).

Existing Environment

A review of aerial photography and the City of Visalia General Plan Land Use Map were studied to identify land uses that could be subject to traffic and construction noise impacts from the proposed Project. Existing land uses in the project area were categorized by land use type and Activity Category, and the extent of frequent human use. Land uses in the project vicinity consist of residential, retail service, and agricultural parcels. Receptors were included in this assessment if they were located in the first row of receivers in sensitive land uses adjacent to the proposed Riggin Avenue widening that would benefit from a lowered noise level. A total of 43 (forty-three) receptor locations were modelled within this evaluation area. As stated in the Protocol, noise abatement is only considered where frequent human use occurs and where a lowered noise level would be of benefit. Accordingly, this impact analysis focuses on locations with defined outdoor activity areas, such as residential backyards and common use areas at multi-family residences.

The geometry of the project relative to nearby existing and planned land uses was also identified. The topography of the project area varies in elevation throughout the proposed project right of way.

Short-term measurement locations were selected to serve as representative modeling locations and for noise model calibration purposes. A project Noise Study Report Work Plan showing the proposed measurement locations was submitted to Caltrans on November 12th, 2021 and Caltrans provided guidance on November 16th, 2021.

Short-term monitoring was conducted at three (3) locations on November 30th, 2021 using Larson David Model 824 Type 1 sound level meters. Measurements were taken for a duration of 15-minutes at each site. Meteorological conditions (temperature, wind speed and direction, relative humidity) were logged for each measurement session on field data forms, provided in Appendix D.

Future Traffic Noise Impacts

Traffic noise levels were predicted using the FHWA Traffic Noise Model Version 2.5 (TNM 2.5). Traffic volumes, vehicle classification percentages, and traffic speeds under existing and design year (2030) conditions were provided by the Visalia General Plan Update – Final Environmental Impact Report (City of Visalia 2014) for input into the traffic noise model. Since the Final Environmental Impact Report only includes traffic volume projections up to 2030, a projected annual growth rate of 2.6% was applied to estimate peak hour traffic in the existing baseline year 2021 and design year 2040.

Under the No Build Alternative, Riggin Avenue would not be widened. Without the widening, Riggin Avenue would not match the planned width as stated in the City of Visalia's circulation element within the City's General Plan. The traffic noise modeling results for the design year 2040 No Build Alternative range from 43 to 67 dBA Leq(h), as shown in Table B-1 of Appendix B. One receiver, R9, would approach or exceed its respective NAC Activity Category standard under No Build conditions in the design year 2040.

The design year traffic noise modeling results for the Build Alternative range from 44 to 68 dBA Leq(h), as shown in Table B-1 of Appendix B. Noise levels from Existing to Build conditions are expected to increase by up to 6 dBA. Noise levels under 2040 Build conditions did not approach (within 1 dBA) or exceed their respective NAC Activity Category standard at any existing evaluated receivers. One receiver, R40, would experience noise levels exceeding its respective NAC (Activity Category B) in the design year; however, this receiver represents multiple undeveloped residences, and the final location of their future outdoor use areas, as well as soundwall heights, are unknown. Based on information provided by the City, a minimum 6-foot soundwall was assumed in the traffic noise model to be built at future residences. This receiver was analyzed to provide information that will allow the local community to avoid noise-incompatible future land development. Therefore, no further noise abatement evaluation was required.

Construction Noise Impacts

No adverse noise impacts from construction are anticipated because construction would be conducted in accordance with the Caltrans' Standard Specifications 14-8.02 "Noise Control." Construction noise would be short-term, intermittent and overshadowed by traffic noise within the project area.

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List of Abbreviated Terms

CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNEL	Community Noise Equivalent Level
dB	Decibels
dBA	A-weighted Decibels
FHWA	Federal Highway Administration
Hz	Hertz
kHz	Kilohertz
L_{dn}	Day-Night Level
L_{eq}	Equivalent Sound Level
$L_{eq}(h)$	Equivalent Sound Level over one hour
L_{max}	Maximum Sound Level
LOS	Level of Service
L_n	Percentile-Exceeded Sound Level
µPa	Micro-Pascals
mph	Miles Per Hour
NAC	Noise Abatement Criteria
NADR	Noise Abatement Decision Report
NEPA	National Environmental Policy Act
NSR	Noise Study Report
Protocol	Caltrans Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects
SPL	Sound Pressure Level
TeNS	Caltrans' Technical Noise Supplement
TNM 2.5	FHWA Traffic Noise Model Version 2.5

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Chapter 1. Introduction

1.1. Purpose of the Noise Study Report

The purpose of this Noise Study Report (NSR) is to evaluate noise impacts and abatement under the requirements of Title 23, Part 772 of the Code of Federal Regulations (23 CFR 772) "Procedures for Abatement of Highway Traffic Noise." Title 23, Part 772 provides procedures for preparing operational and construction noise studies and evaluating noise abatement considered for federal and federal-aid highway projects. According to 23 CFR 772.3, all highway projects that are developed in conformance with this regulation are deemed to be in conformance with Federal Highway Administration (FHWA) noise standards.

The California Department of Transportation (Caltrans) Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects (Protocol) (Caltrans 2020) provides Caltrans policy for implementing 23 CFR 772 in California. The Protocol outlines the requirements for preparing NSRs.

1.2. Project Purpose and Need

The purpose of the project is to:

- Improve existing and future traffic operations by adding an additional eastbound and westbound travel lane to accommodate existing and additional future traffic;
- Provide sidewalk connectivity on the north side of Riggin Avenue between North Mooney Boulevard and North Conyer Street; and
- Improve traffic and pedestrian safety by adding a 17' frontage road along the south side of Riggin Avenue.

The project is needed to:

- Bring the ultimate roadway width into conformance with the City of Visalia General Plan Circulation Element;
- Fill the gap for pedestrian travel mode that currently exists between North Mooney Boulevard and North Conyer Street; and
- Protect the fronting residents along the south side of Riggin Ave from high speed arterial traffic and protect motorists along Riggin Ave from ingress and egress of vehicles along the fronting residents.

Chapter 2. Project Description

The City of Visalia, in cooperation with the California Department of Transportation (Caltrans), proposes to widen Riggin Avenue between Mooney Boulevard and Conyer Street from an undivided two-lane road to a four-lane divided road with a separated frontage road, median, sidewalks, curb and gutters, and streetlights as part of the Riggin Avenue Widening Between Mooney Boulevard and Conyer Street Project (Project).

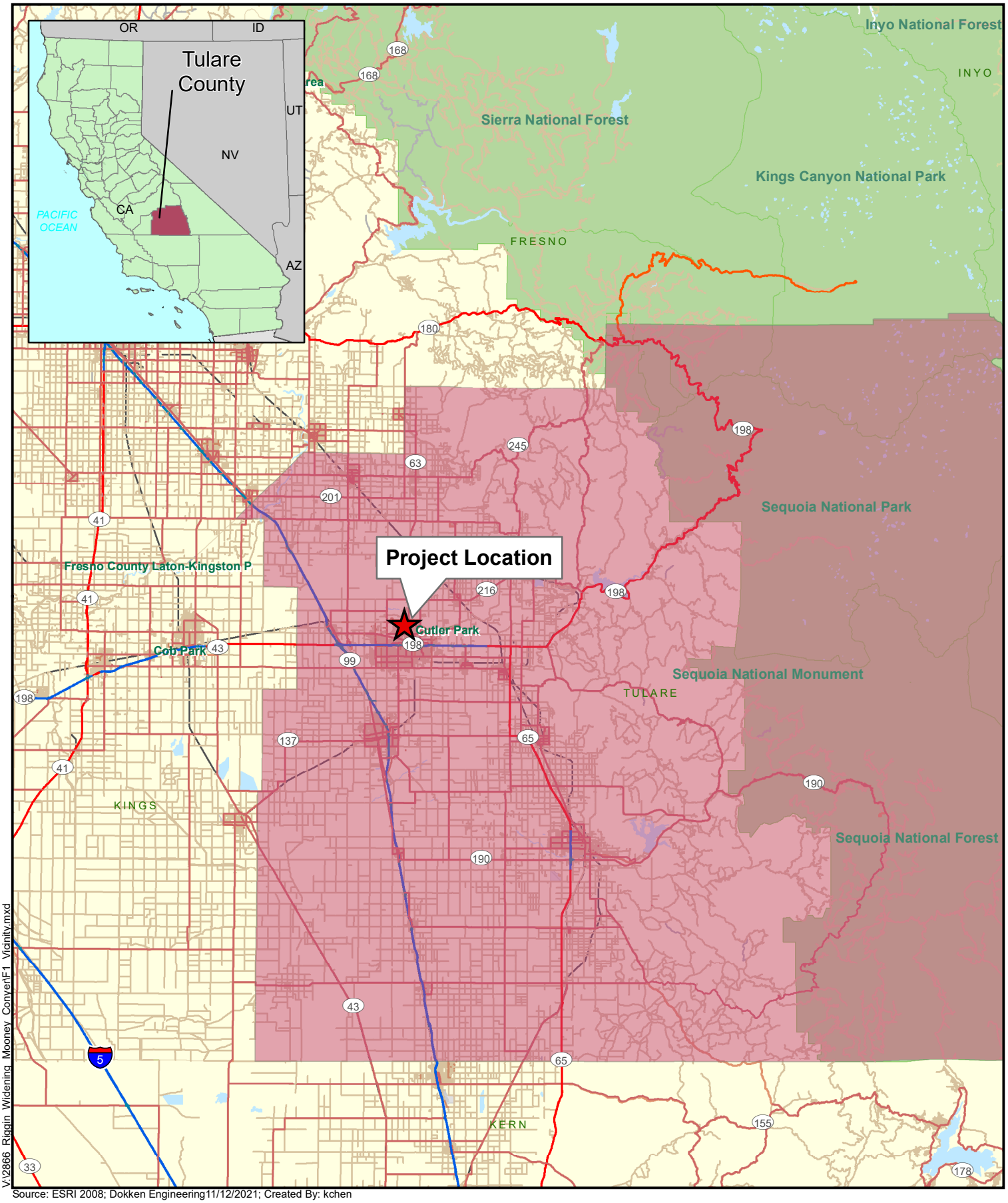
2.1. No Build Alternative

Under the No Build Alternative, Riggin Avenue would not be widened. Without the widening, Riggin Avenue would not match the planned width as stated in the City of Visalia's circulation element within the City's General Plan.

2.2. Build Alternative

The proposed Project would widen 0.72 miles of the arterial classified roadway from Mooney Boulevard to Conyer Street to the ultimate roadway width as planned for in the City of Visalia's circulation element within the City's General Plan. The project will widen the existing two-lane undivided roadway into four-lane divided roadway to meet the current traffic demands within the existing 110' right of way width. The widening project will include concrete work such as the installation of sidewalk, curb and gutter replacement, bus stop, fire bay, 10' center median, and ADA curb ramp improvements; utility relocation; storm drain extensions; streetlighting; fiber interconnect; and a 17' frontage road for the homes along Riggin Avenue.

The Project is anticipated to be constructed within existing City owned right of way. There is no additional right of way acquisition anticipated. There may be limited access to residential properties for short periods as the contractor works in the vicinity, however, full access will be restored as soon as possible, or by the end of the workday. The project would not involve the use of a temporary road or ramp closure. Temporary detours may be required for through traffic. Project cost is approximately $8,038,000. Construction will begin in the Summer of 2022 and is anticipated to last 4 months.



Source: ESRI 2008; Dokken Engineering11/12/2021; Created By: kchen

V:\2866_Riggin_Widening_Mooney_Conyer\F1_Vicinity.mxd

0 5 10 15 Miles

FIGURE 1
Project Vicinity
HIPL-5044(140)
Riggin Avenue Widening - Mooney Boulevard to Conyer Street
City of Visalia, California

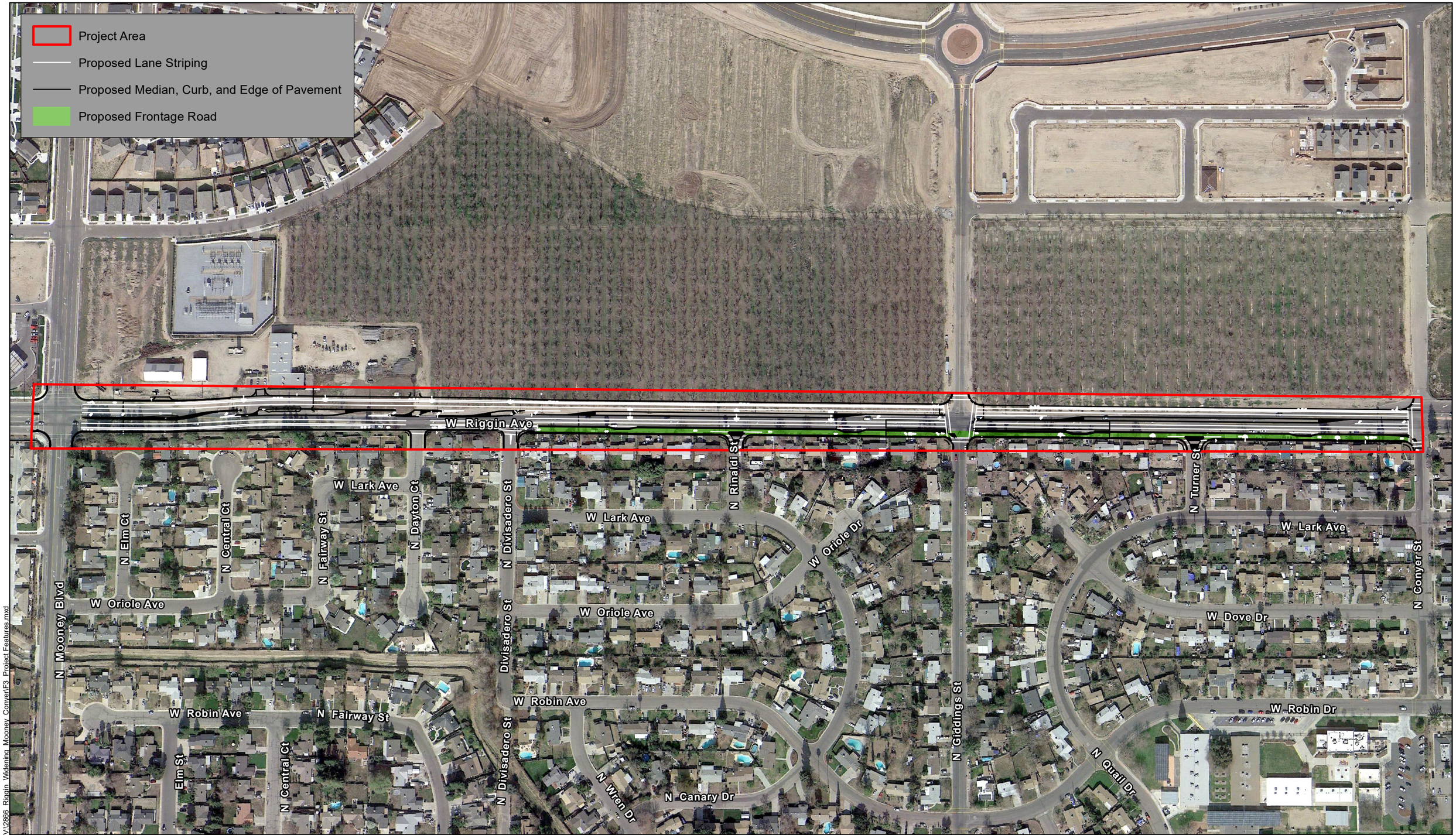


Source: ESRI World Street Maps Online; Dokken Engineering 11/12/2021; Created By: kchen

Document Path: V:\2866 Riggin Widening Mooney Conyer\F2 Location.mxd

0 0.25 0.5 0.75 1 Miles

FIGURE 2
Project Location
HIPL-5044(140)
Riggin Avenue Widening - Mooney Boulevard to Conyer Street
City of Visalia, California



V:\12866_Riggin_Widening_Mooney_Conyer\F3_Project Features.mxd

Source: ESRI Maps Online; Dokken Engineering 12/15/2021; Created By: kchen

1 inch = 250 feet

0 250 500 750 1,000 Feet

FIGURE 3
Project Features
HIPL-5044(140)
Riggin Avenue Widening - Mooney Boulevard to Conyer Street
City of Visalia, California

Chapter 3. Fundamentals of Traffic Noise

The following is a brief discussion of fundamental traffic noise concepts. For a detailed discussion, please refer to Caltrans' Technical Noise Supplement (TeNS) (Caltrans 2013), a technical supplement to the Protocol that is available on the Caltrans Web site (http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013B.pdf).

3.1. Sound, Noise, and Acoustics

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a hearing organ, such as a human ear. Noise is defined as loud, unexpected, or annoying sound.

In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receptor, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receptor determine the sound level and characteristics of the noise perceived by the receptor. The field of acoustics deals primarily with the propagation and control of sound.

3.2. Frequency

Continuous sound can be described by frequency (pitch) and amplitude (loudness). A low-frequency sound is perceived as low in pitch. Frequency is expressed in terms of cycles per second, or Hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed in kilohertz (kHz), or thousands of Hertz. The audible frequency range for humans is generally between 20 Hz and 20,000 Hz.

3.3. Sound Pressure Levels and Decibels

The amplitude of pressure waves generated by a sound source determines the loudness of that source. Sound pressure amplitude is measured in micro-Pascals (mPa). One mPa is approximately one hundred billionth (0.00000000001) of normal atmospheric pressure. Sound pressure amplitudes for different kinds of noise environments can range from less than 100 to 100,000,000 mPa. Because of this huge range of values, sound is rarely expressed in terms of mPa. Instead, a logarithmic scale is used to describe sound pressure level (SPL) in terms of decibels (dB). The threshold of hearing for young people is about 0 dB, which corresponds to 20 mPa.

3.4. Addition of Decibels

Because decibels are logarithmic units, SPL cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3-dB increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dB higher than one source under the same conditions. For example, if one automobile produces an SPL of 70 dB when it passes an observer, two cars passing simultaneously would not produce 140 dB—rather, they would combine to produce 73 dB. Under the decibel scale, three sources of equal loudness together produce a sound level 5 dB louder than one source.

3.5. A-Weighted Decibels

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by the characteristics of the human ear.

Human hearing is limited in the range of audible frequencies as well as in the way it perceives the SPL in that range. In general, people are most sensitive to the frequency range of 1,000–8,000 Hz, and perceive sounds within that range better than sounds of the same amplitude in higher or lower frequencies. To approximate the response of the human ear, sound levels of individual frequency bands are weighted, depending on the human sensitivity to those frequencies. Then, an "A-weighted" sound level (expressed in units of dBA) can be computed based on this information.

The A-weighting network approximates the frequency response of the average young ear when listening to most ordinary sounds. When people make judgments of the relative loudness or annoyance of a sound, their judgments correlate well with the A-scale sound levels of those sounds. Other weighting networks have been devised to address high noise levels or other special problems (e.g., B-, C-, and D-scales), but these scales are rarely used in conjunction with highway-traffic noise. Noise levels for traffic noise reports are typically reported in terms of A-weighted decibels or dBA. Table 3-1 describes typical A-weighted noise levels for various noise sources.

Table 3-1. Typical A-Weighted Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	— 110 —	Rock band
Jet fly-over at 1000 feet		
	— 100 —	
Gas lawn mower at 3 feet		
	— 90 —	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	— 80 —	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawn mower, 100 feet	**— 70 —**	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	**— 60 —**	
		Large business office
Quiet urban daytime	**— 50 —**	Dishwasher next room
Quiet urban nighttime	**— 40 —**	Theater, large conference room (background)
Quiet suburban nighttime		
	— 30 —	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	— 20 —	
		Broadcast/recording studio
	— 10 —	
Lowest threshold of human hearing	**— 0 —**	Lowest threshold of human hearing

Source: Caltrans 2013.

3.6. Human Response to Changes in Noise Levels

As discussed above, doubling sound energy results in a 3-dB increase in sound. However, given a sound level change measured with precise instrumentation, the subjective human perception of a doubling of loudness will usually be different than what is measured.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear is able to discern 1-dB changes in sound levels, when exposed to steady, single-frequency ("pure-tone") signals in the midfrequency (1,000 Hz–8,000 Hz) range. In typical noisy environments, changes in noise of 1 to 2 dB are generally not perceptible. However, it is widely accepted that people are able to begin to detect sound level increases of 3 dB in typical noisy environments. Further, a 5-dB increase is generally perceived as a distinctly noticeable increase, and a 10-dB increase is generally perceived as a doubling of loudness. Therefore, a doubling of sound energy (e.g., doubling the volume of traffic on a highway) that would result in a 3-dB increase in sound, would generally be perceived as barely detectable.

3.7. Noise Descriptors

Noise in our daily environment fluctuates over time. Some fluctuations are minor, but some are substantial. Some noise levels occur in regular patterns, but others are random. Some noise levels fluctuate rapidly, but others slowly. Some noise levels vary widely, but others are relatively constant. Various noise descriptors have been developed to describe time-varying noise levels. The following are the noise descriptors most commonly used in traffic noise analysis.

- **Equivalent Sound Level (L_{eq}):** L_{eq} represents an average of the sound energy occurring over a specified period. In effect, L_{eq} is the steady-state sound level containing the same acoustical energy as the time-varying sound that actually occurs during the same period. The 1-hour A-weighted equivalent sound level (L_{eq}[h]) is the energy average of A-weighted sound levels occurring during a one-hour period, and is the basis for noise abatement criteria (NAC) used by Caltrans and FHWA.

- **Percentile-Exceeded Sound Level (L_{xx}):** L_{xx} represents the sound level exceeded for a given percentage of a specified period (e.g., L_{10} is the sound level exceeded 10% of the time, and L_{90} is the sound level exceeded 90% of the time).

- **Maximum Sound Level (L_{max}):** L_{max} is the highest instantaneous sound level measured during a specified period.

- **Day-Night Level (L_{dn}):** L_{dn} is the energy average of A-weighted sound levels occurring over a 24-hour period, with a 10-dB penalty applied to A-weighted sound levels occurring during nighttime hours between 10 p.m. and 7 a.m.

- **Community Noise Equivalent Level (CNEL):** Similar to L_{dn}, CNEL is the energy average of the A-weighted sound levels occurring over a 24-hour period, with a 10-dB penalty applied to A-weighted sound levels occurring during the nighttime hours between 10 p.m. and 7 a.m., and a 5-dB penalty applied to the A-weighted sound levels occurring during evening hours between 7 p.m. and 10 p.m.

3.8. Sound Propagation

When sound propagates over a distance, it changes in level and frequency content. The manner in which noise reduces with distance depends on the following factors.

3.8.1. Geometric Spreading

Sound from a localized source (i.e., a point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 decibels for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path, and hence can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 decibels for each doubling of distance from a line source.

3.8.2. Ground Absorption

The propagation path of noise from a highway to a receptor is usually very close to the ground. Noise attenuation from ground absorption and reflective-wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually sufficiently accurate for distances of less than 200 feet. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receptor, such as a parking lot or body of water,), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receptor, such as soft dirt, grass, or scattered bushes and trees), an excess ground-attenuation value of 1.5 decibels per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 decibels per doubling of distance.

3.8.3. Atmospheric Effects

Receptors located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) from the highway due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects.

3.8.4. Shielding by Natural or Human-Made Features

A large object or barrier in the path between a noise source and a receptor can substantially attenuate noise levels at the receptor. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Natural terrain features (e.g., hills and dense woods) and human-made features (e.g., buildings and walls) can substantially reduce noise levels. Walls are often constructed between a source and a receptor specifically to reduce noise. A barrier that breaks the line of sight between

a source and a receptor will typically result in at least 5 dB of noise reduction. Taller barriers provide increased noise reduction. Vegetation between the highway and receptor is rarely effective in reducing noise because it does not create a solid barrier.

Chapter 4. Federal Regulations and State Policies

This report focuses on the requirements of 23 CFR 772, as discussed below.

4.1. Federal Regulations

4.1.1. 23 CFR 772

23 CFR 772 provides procedures for preparing operational and construction noise studies and evaluating noise abatement considered for federal and Federal-aid highway projects. Under 23 CFR 772.7, projects are categorized as Type I, Type II, or Type III projects.

- FHWA defines a Type I project as a proposed federal or federal-aid highway project for the construction of a highway on a new location or the physical alteration of an existing highway which significantly changes either the horizontal or vertical alignment of the highway. The following projects are also considered to be Type I projects:

- The addition of a through-traffic lane(s). This includes the addition of a through-traffic lane that functions as a high-occupancy vehicle (HOV) lane, high-occupancy toll (HOT) lane, bus lane, or truck climbing lane,

- The addition of an auxiliary lane, except for when the auxiliary lane is a turn lane,

- The addition or relocation of interchange lanes or ramps added to a quadrant to complete an existing partial interchange,

- Restriping existing pavement for the purpose of adding a through traffic lane or an auxiliary lane,

- The addition of a new or substantial alteration of a weigh station, rest stop, ride-share lot, or toll plaza.

If a project is determined to be a Type I project under this definition, the entire project area as defined in the environmental document is a Type I project.

A Type II project is a noise barrier retrofit project that involves no changes to highway capacity or alignment. A Type III project is a project that does not meet the classifications of a Type I or Type II project. Type III projects do not require a noise analysis.

Under 23 CFR 772.11, noise abatement must be considered for Type I projects if the project is predicted to result in a traffic noise impact. In such cases, 23 CFR 772 requires that the project sponsor "consider" noise abatement before adoption of the final NEPA document. This process involves identification of noise abatement measures that are reasonable, feasible, and likely to be incorporated into the project, and of noise impacts for which no apparent solution is available.

Traffic noise impacts, as defined in 23 CFR 772.5, occur when the predicted noise level in the design year approaches or exceeds the NAC specified in 23 CFR 772, or a predicted noise level substantially exceeds the existing noise level (a "substantial" noise increase). 23 CFR 772 does not specifically define the terms "substantial increase" or "approach"; these criteria are defined in the Protocol, as described below.

Table 4-1 summarizes NAC corresponding to various land use activity categories. Activity categories and related traffic noise impacts are determined based on the actual or permitted land use in a given area.

4.1.2. Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects

The Protocol specifies the policies, procedures, and practices to be used by agencies that sponsor new construction or reconstruction of federal or Federal-aid highway projects. The Protocol defines a noise increase as substantial when the predicted noise levels with project implementation exceed existing noise levels by 12 dBA or more. The Protocol also states that a sound level is considered to approach an NAC level when the sound level is within 1 dB of the NAC identified in 23 CFR 772 (e.g., 66 dBA is considered to approach the NAC of 67 dBA, but 65 dBA is not).

The Technical Noise Supplement to the Protocol provides detailed technical guidance for the evaluation of highway traffic noise. This includes field measurement methods, noise modeling methods, and report preparation guidance.

Table 4-1. Activity Categories and Noise Abatement Criteria (23 CFR 772)

Activity Category	Activity $L_{eq}[h]$[1]	Evaluation Location	Description of Activities
A	57	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B[2]	67	Exterior	Residential.
C[2]	67	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A–D or F.
F			Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G			Undeveloped lands that are not permitted.

[1] The $L_{eq}(h)$ activity criteria values are for impact determination only and are not design standards for noise abatement measures. All values are A-weighted decibels (dBA).

[2] Includes undeveloped lands permitted for this activity category.

4.2. State Regulations and Policies

4.2.1. California Environmental Quality Act (CEQA)

Noise analysis under the California Environmental Quality Act (CEQA) may be required regardless of whether or not the project is a Type I project. The CEQA noise analysis is completely independent of the 23 CFR 772 analysis done for NEPA. Under CEQA, the baseline noise level is compared to the build noise level. The assessment entails looking at the setting of the noise impact and then how large or perceptible any noise increase would be in the given area. Key considerations include: the uniqueness of the setting, the sensitive nature of the noise receptors, the magnitude of the noise increase, the number of residences affected, and the absolute noise level.

The significance of noise impacts under CEQA are addressed in the environmental document rather than the NSR. Even though the NSR (or noise technical memorandum) does not specifically evaluate the significance of noise impacts under CEQA, it must contain the technical information that is needed to make that determination in the environmental document.

4.2.2. Section 216 of the California Streets and Highways Code

Section 216 of the California Streets and Highways Code relates to the noise effects of a proposed freeway project on public and private elementary and secondary schools. Under this code, a noise impact occurs if, as a result of a proposed freeway project, noise levels exceed 52 dBA-L_{eq}(h) in the interior of public or private elementary or secondary classrooms, libraries, multipurpose rooms, or spaces. This requirement does not replace the "approach or exceed" NAC criterion for FHWA Activity Category E for classroom interiors, but it is a requirement that must be addressed in addition to the requirements of 23 CFR 772.

If a project results in a noise impact under this code, noise abatement must be provided to reduce classroom noise to a level that is at or below 52 dBA-L_{eq}(h). If the noise levels generated from freeway and roadway sources exceed 52 dBA-L_{eq}(h) prior to the construction of the proposed freeway project, then noise abatement must be provided to reduce the noise to the level that existed prior to construction of the project.

If a project results in a noise impact under this code, noise abatement must be provided to reduce classroom noise to a level that is at or below 52 dBA L_{eq}(h). If the classroom noise level generated from freeway and non-freeway sources exceed 52 dBA L_{eq}(h) prior to the construction of the proposed freeway project, then noise abatement must be provided to reduce the noise to the level that existed prior to construction of the project.

Chapter 5. Study Methods and Procedures

5.1. Methods for Identifying Land Uses and Selecting Noise Measurement and Modeling Receiver Locations

A review of aerial photography and the City of Visalia General Plan Land Use Map were studied to identify land uses that could be subject to traffic and construction noise impacts from the proposed Project. Existing land uses in the Project area were categorized by land use type and Activity Category as defined in Table 4-1, and the extent of frequent human use. Land uses in the Project vicinity consist of residential, agricultural parcels. Receptors were included in this assessment if they were located in the first row of receivers in sensitive land uses adjacent to the proposed Riggin Avenue widening that would benefit from a lowered noise level. A total of 43 (forty-three) receptor locations were modelled within this evaluation area. These modeled receptor locations are shown in Figure 4. As stated in the Protocol, noise abatement is only considered where frequent human use occurs and where a lowered noise level would be of benefit. Accordingly, this impact analysis focuses on locations with defined outdoor activity areas, such as residential backyards and common use areas at multi-family residences.

The geometry of the project relative to nearby existing and planned land uses was also identified. The topography of the project area varies in elevation throughout the proposed project right of way.

Short-term measurement locations were selected to serve as representative modeling locations and for noise model calibration purposes.

5.2. Field Measurement Procedures

A field noise study was conducted in accordance with recommended procedures in TeNs. The following is a summary of the measurement equipment and procedures used to collect existing sound level data.

5.2.1. Short-Term Measurements

Short-term measurements were conducted on November 30th, 2021 using a Larson Davis Model 824 Type 1 sound level meter. Measurements were taken over a 15-minute period at each site. Short-term monitoring was conducted at Activity Category B and F land uses. The short-term measurement locations are identified in Figure 4. Noise measurement field monitoring forms are located in Appendix D.

During the short-term measurements, field staff attended each meter. Minute-to-minute L_{eq} values collected during the measurement period (typically 15 minutes in duration) were logged manually, and dominant noise sources observed during each individual 1-minute period were also identified and logged. Using this approach, those minutes when traffic noise was observed to be a dominant contributor to noise levels at a given measurement location could be distinguished from one-minute noise levels where other non-traffic noise sources (such as aircraft and lawn equipment) contributed significantly to existing noise levels.

Temperature, wind speed, and humidity were recorded based on weather.com results at the time of the short-term monitoring session. During the short-term measurements at NM-1 through NM-3, wind speeds typically averaged 2 to 3 miles per hour (mph). Temperatures 70°F, with relative humidity ranging from 38% to 41%.

Vehicles were classified as automobiles, medium-duty trucks, or heavy-duty trucks. Automobiles are vehicles with two axles and four tires that are designed primarily to carry passengers. Small vans and light trucks are included in this category. Medium-duty trucks included all cargo vehicles with two axles and six tires. Heavy-duty trucks include all vehicles with three or more axles. The posted speed limit on the adjacent local roadways was approximately 45 miles per hour (mph). Traffic was observed to be travelling at approximately 45 mph on Riggin Avenue during the short-term measurements.

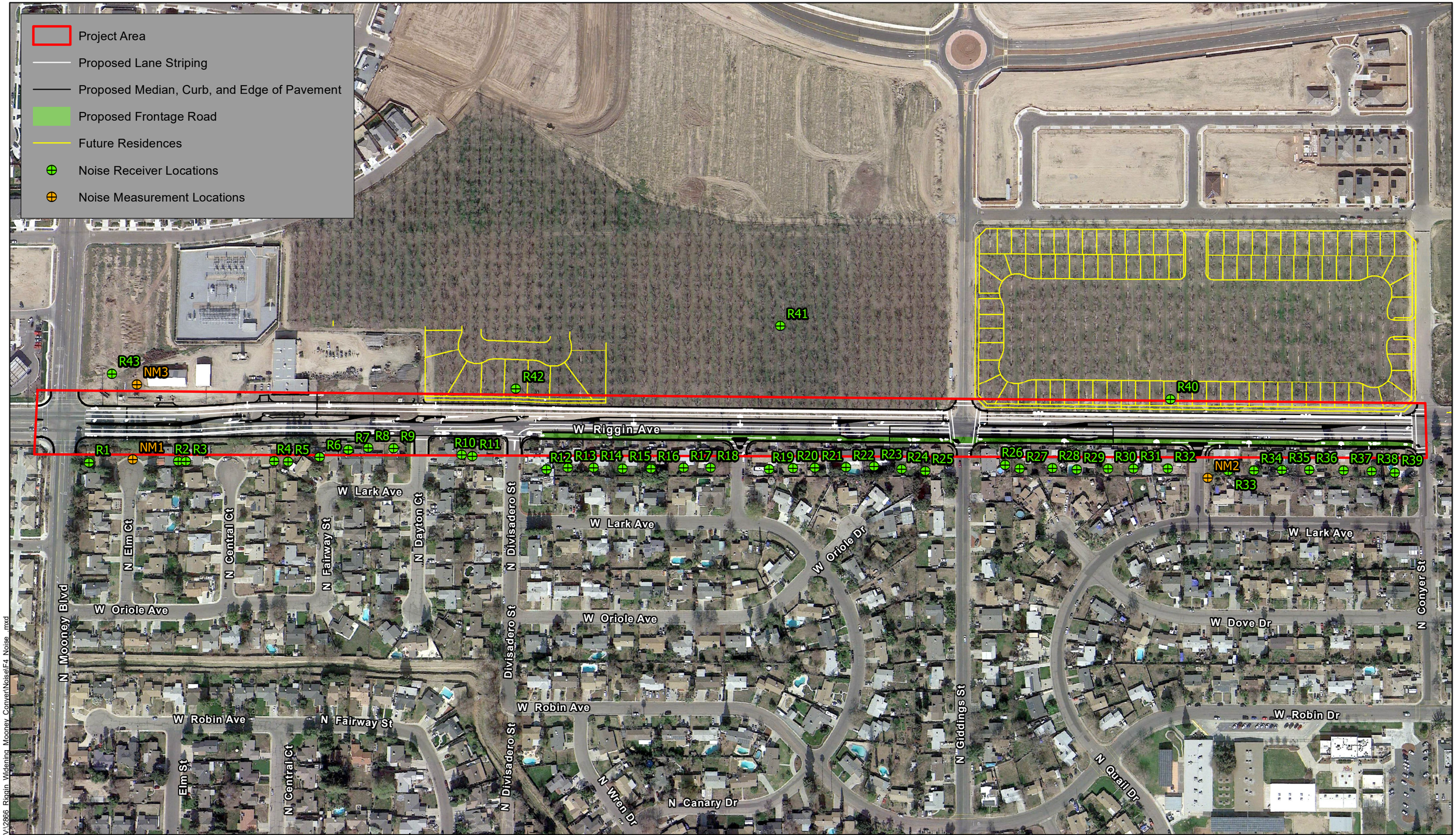
5.3. Traffic Noise Level Prediction Methods

Traffic noise levels were predicted using the FHWA Traffic Noise Model Version 2.5 (TNM 2.5). Key inputs to the traffic noise model were the locations of roadways, shielding features, ground type, and receivers. Three-dimensional representations of these inputs were developed using CAD drawings, aerials, and topographic contours provided by the project engineers.

Traffic noise was evaluated under existing conditions, design year No Build conditions, and design year conditions with the project alternative. Traffic volumes, vehicle classification percentages, and traffic speeds under existing and design year (2030) conditions were provided by the Visalia General Plan Update – Final Environmental Impact Report (City of Visalia 2014) for input into the traffic noise model. Since the Final Environmental Impact Report only includes traffic volume projections up to 2030, a projected annual growth rate of 2.6% was applied to estimate peak hour traffic in the existing baseline year 2021 and design year 2040.

Appendix B contains a summary of the traffic volumes and assumptions used for modeling existing and design year conditions with and without the project alternatives.

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V:\2866_Riggin_Widening_Mooney_Conver\Noise\F4_Noise_.mxd

Source: ESRI Maps Online; Dokken Engineering 12/15/2021; Created By: kchen

1 inch = 250 feet

0 200 400 600 800 1,000 Feet

FIGURE 4

Noise Measurements and Receiver Locations

HIPL-5044(140)

Riggin Avenue Widening - Mooney Boulevard to Conyer Street

City of Visalia, California

To validate the accuracy of field noise measurements results, TNM 2.5 was used to compare measured noise levels to modeled noise levels at field measurement locations. For each location, traffic volumes counted during a 15-minute period during the short-term measurements were normalized to one-hour volumes. These normalized volumes were assigned to the corresponding proposed project area roadways to simulate the noise source strength during the actual measurement period. Modeled and measured noise levels were then compared to determine if a K-factor would need to be applied to any monitoring location.

5.4. Methods for Identifying Traffic Noise Impacts and Consideration of Abatement

Traffic noise impacts are considered to occur at receptor locations where predicted design year noise levels are 12 dB or more greater than existing noise levels, or where predicted design year noise levels approach or exceed the NAC for the applicable activity category. Where traffic noise impacts are identified, noise abatement must be considered for reasonableness and feasibility as required by 23 CFR 772 and the Protocol.

According to the Protocol, abatement measures are considered acoustically feasible if a minimum noise reduction of 5 dB at impacted receptor locations is predicted with implementation of the abatement measures. In addition, barriers should be designed to intercept the line-of-sight from the exhaust stack of a truck to the first tier of receptors, as required by the Highway Design Manual, Chapter 1100. Other factors that affect feasibility include topography, access requirements for driveways and ramps, presence of local cross streets, utility conflicts, other noise sources in the area, and safety considerations.

The overall reasonableness of noise abatement is determined by the following three factors:

- The noise reduction design goal.
- The cost of noise abatement.
- The viewpoints of benefited receptors (including property owners and residents of the benefited receptors).

The Caltrans' acoustical design goal is that a barrier must be predicted to provide at least 7 dB of noise reduction at one benefited receptor. This design goal applies to any receptor and is not limited to impacted receptors.

The Protocol defines the procedure for assessing reasonableness of noise barriers from a cost perspective. Based on 2019 construction costs an allowance of $107,000 is provided for each benefited receptor (i.e., receptors that receive at least 5 dB of noise reduction from a noise barrier). The total allowance for each barrier is calculated by multiplying the number of benefited receptors by $107,000. If the estimated construction cost of a barrier is less than the total calculated allowance for the barrier, the barrier is considered reasonable from a cost perspective. The viewpoints of benefits receptors are determined by a survey that is typically conducted after completion of the noise study report. The process for conducting the survey is described in detail in the Protocol.

The noise study report identifies traffic noise impacts and evaluates noise abatement for acoustical feasibility. It also reports information that will be used in the reasonableness analysis including if the 7 dB design goal reduction in noise can be achieved and the abatement allowances. The noise study report does not make any conclusions regarding reasonableness. The feasibility and reasonableness of noise abatement is reported in the Noise Abatement Decision Report.

Chapter 6. Existing Noise Environment

6.1. Existing Land Uses

A review of aerial photography and the City of Visalia General Plan Land Use Map were studied to identify land uses that could be subject to traffic noise impacts from the proposed Project. The following land uses were identified in the Project area:

- Single-family residences: Activity Category B
- Retail Services: Activity Category E
- Agricultural: Activity Category F

As required by the Protocol, noise abatement is only considered for areas of frequent human use that would benefit from a lowered noise level. Accordingly, this impact analysis focuses on locations with defined outdoor activity areas, such as residential backyards and common use areas at multi-family residences. Within the study area, these outdoor activity areas primarily occur on land uses with the Activity Category B.

6.2. Noise Measurement Results

The existing noise environment at the existing residential receptors located within the project study area were quantified through short-term noise level measurements conducted at three (3) locations on November 30th, 2021.

6.2.1. Short-Term Monitoring

Table 6-1 summarizes the results of the short-term noise monitoring conducted in the project area. Short-term noise measurements NM-1 through NM-3 were used to calibrate the noise model.

Table 6-1. Summary of Short-Term Measurements

Position	Location	Land Uses	Start Time	Duration (minutes)	Measured L_{eq}	Direction	Autos	Medium Trucks	Heavy Trucks	Bus	Moto	Observed Speed (mph)
NM-1	N Elm Ct at the circle	Residential	1:43 p.m.	15	57.5	West bound	100	3	3	1	0	45 mph
						East bound	116	1	2	1	0	
NM-2	1038 W Lark Ave Along N Turner St	Residential	2:18 p.m.	15	58.7	West bound	111	1	1	2	0	45 mph
						East bound	95	3	0	1	1	
NM-3	Near Starbucks at N Mooney Blvd and W Riggin Ave	Commercial	2:50 p.m.	15	62.1	West bound	125	4	0	1	0	45 mph
						East bound	107	4	1	1	2	

Note: Refer to Figure 4 for measurement locations and boundaries of each area.

TNM 2.5 was used to compare measured traffic noise levels to modeled noise levels at field measurement locations. Table 6-2 compares measured and modeled noise levels at each measurement location (see Figure 4). The predicted sound levels are within 3 dB of the measured sound levels and are, therefore, considered to be in reasonable agreement with the measured sound levels. Therefore, no further adjustment of the model was necessary.

Table 6-2. Comparison of Measured to Predicted Sound Levels in the TNM Model

Measurement Position	Measured Sound Level (dBA)	Predicted Sound Level (dBA)	Measured minus Predicted (dB)
NM-1	57.5	56.8	0.7
NM-2	58.7	56.8	1.9
NM-3	62.1	63.3	-1.2

Table B-1 in Appendix B presents existing noise levels at each receptor.

Chapter 7. Future Noise Environment, Impacts and Considered Abatement

The noise study was conducted to determine the future traffic noise impacts at sensitive receivers near the proposed Riggin Avenue widening. Potential long-term noise impacts associated with project operations arise solely from traffic noise. Traffic noise was evaluated for future scenarios design year 2040 No Build, and future design year 2040 build as worst-case conditions for forty-one (43) receiver locations. These land uses fall into the NAC Activity Category B, E and F. The FHWA and Caltrans NAC for these land uses are as follows:

- Activity Category B, 67 dBA $L_{eq}(h)$
- Activity Category E, 72 dBA $L_{eq}(h)$
- Activity Category F, none

The predicted future worst-case traffic noise levels for the Build Alternative were extrapolated from traffic data provided by the Visalia General Plan – Final Environmental Impact Report (FEIR) (City of Visalia 2014). Since the Final Environmental Impact Report only includes traffic volume projections up to 2030, a projected annual growth rate of 2.6% was applied to estimate peak hour traffic in the existing baseline year 2021 and design year 2040.

TNM 2.5 is sensitive to the volume of trucks on the roadway because trucks contribute disproportionately to the traffic noise. Truck percentages on modeled roadways were also obtained from the Visalia General Plan FEIR. A summary of traffic data used for the existing and design year conditions with and without the proposed Project are presented in Appendix A.

Table B-1 in Appendix B summarizes the traffic noise modeling results for the design year (2040) conditions with the No Build and Build Alternatives. The modeled future noise levels for the Build Alternative were compared to the respective NAC land use Activity Category to determine whether a traffic noise impact would occur. Traffic noise impacts occur when either of the following occurs: (1) if the traffic noise level at a sensitive receptor location is predicted to "approach or exceed" the NAC, or (2) if the predicted traffic noise level is 12 dBA or more over the corresponding modeled existing noise level at the sensitive receptor locations analyzed. When traffic noise impacts occur, noise abatement measures must be considered.

As stated in the TeNS, modeling results are rounded up to the nearest decibel before comparisons are made. In some cases, this can result in relative changes that may not appear intuitive. An example would be a comparison between sound levels of 64.4 and 64.5 dBA L_{eq}. The difference between these two values is 0.1 dB. However, after rounding, the difference is reported as 1 dB.

7.1. Future Noise Impacts

Under the No Build Alternative, Riggin Avenue would not be widened. Without the widening, Riggin Avenue would not match the planned width as stated in the City of Visalia's circulation element within the City's General Plan. The traffic noise modeling results for the design year 2040 No Build Alternative range from 43 to 67 dBA Leq(h), as shown in Table B-1 of Appendix B. One receiver, R9, would approach or exceed its respective NAC Activity Category standard under No Build conditions in the design year 2040.

The design year traffic noise modeling results for the Build Alternative range from 44 to 68 dBA Leq(h), as shown in Table B-1 of Appendix B. Noise levels from Existing to Build conditions are expected to increase by up to 6 dBA. Noise levels under 2040 Build conditions did not approach (within 1 dBA) or exceed their respective NAC Activity Category standard at any evaluated receivers. One receiver, R40, would experience noise levels exceeding its respective NAC (Activity Category B) in the design year; however, this receiver represents multiple undeveloped residences, and the final location of their future outdoor use areas, as well as soundwall heights, are unknown. Based on information provided by the City, a minimum 6-foot soundwall was assumed in the traffic noise model to be built at future residences. This receiver was analyzed to provide information that will allow the local community to avoid noise-incompatible future land development. Therefore, no further noise abatement evaluation was required.

Table 7-1. Comparison of Modeled Existing and Future Noise Levels

Receiver ID	Location	Type of Land Use	Number of Dwelling Units	Noise Abatement Category	Modeled Existing Peak Noise Level, dBA $L_{eq}(h)$	Modeled 2040 No Build Peak Noise Level, dBA $L_{eq}(h)$	Modeled 2040 Build Peak Noise Level, dBA $L_{eq}(h)$
R1	2937 N Elm Ct	SFR	1	B(67)	39	43	44
R2	2936 N Elm Ct	SFR	1	B(67)	56	60	61
R3	2935 N Central Ct	SFR	1	B(67)	56	59	60
R4	2934 N Central Ct	SFR	1	B(67)	58	61	62
R5	1836 W Lark Ave	SFR	1	B(67)	59	62	63
R6	1828 W Lark Ave	SFR	1	B(67)	61	64	64
R7	1820 W Lark Ave	SFR	1	B(67)	62	65	65
R8	1810 W Lark Ave	SFR	1	B(67)	62	65	65
R9	1800 W Lark Ave	SFR	1	B(67)	62	66	65
R10	2936 N Dayton St	SFR	1	B(67)	58	62	62
R11	2937 N Divisadero St	SFR	1	B(67)	57	61	61
R12	1639 W Riggin Ave	SFR	1	B(67)	47	51	51
R13	1627 W Riggin Ave	SFR	1	B(67)	46	50	50
R14	1613 W Riggin Ave	SFR	1	B(67)	47	50	51
R15	1549 W Riggin Ave	SFR	1	B(67)	47	50	51
R16	1537 W Riggin Ave	SFR	1	B(67)	47	50	51
R17	1525 W Riggin Ave	SFR	1	B(67)	47	50	51
R18	1513 W Riggin Ave	SFR	1	B(67)	49	53	54
R19	1441 W Riggin Ave	SFR	1	B(67)	47	51	51
R20	1429 W Riggin Ave	SFR	1	B(67)	47	50	51
R21	1415 W Riggin Ave	SFR	1	B(67)	46	50	51
R22	1401 W Riggin Ave	SFR	1	B(67)	47	50	51
R23	1339 W Riggin Ave	SFR	1	B(67)	46	50	50
R24	1327 W Riggin Ave	SFR	1	B(67)	47	50	51
R25	2935 N Giddings St	SFR	1	B(67)	54	57	58
R26	2936 N Giddings St	SFR	1	B(67)	58	61	62
R27	1223 W Riggin Ave	SFR	1	B(67)	47	51	52
R28	1211 W Riggin Ave	SFR	1	B(67)	47	51	52
R29	1147 W Riggin Ave	SFR	1	B(67)	48	51	52
R30	1137 W Riggin Ave	SFR	1	B(67)	47	51	52
R31	1125 W Riggin Ave	SFR	1	B(67)	47	51	52
R32	1109 W Riggin Ave	SFR	1	B(67)	48	51	52
R33	1037 W Riggin Ave	SFR	1	B(67)	47	51	52
R34	1025 W Riggin Ave	SFR	1	B(67)	47	50	52
R35	1013 W Riggin Ave	SFR	1	B(67)	47	50	52
R36	1001 W Riggin Ave	SFR	1	B(67)	47	50	52
R37	937 W Riggin Ave	SFR	1	B(67)	46	50	52

Table 7-1. Comparison of Modeled Existing and Future Noise Levels

Receiver ID	Location	Type of Land Use	Number of Dwelling Units	Noise Abatement Category	Modeled Existing Peak Noise Level, dBA $L_{eq}(h)$	Modeled 2040 No Build Peak Noise Level, dBA $L_{eq}(h)$	Modeled 2040 Build Peak Noise Level, dBA $L_{eq}(h)$
R38	925 W Riggin Ave	SFR	1	B(67)	46	50	52
R39	2936 N Conyer St	SFR	1	B(67)	46	50	51
R40	Future Residence north of Riggin Ave	SFR	-	B(67)	67	64	67
R41	Agricultural field north of Riggin Ave	OS	0	F	61	65	66
R42	Future Residence north of Riggin Ave	SFR	-	B(67)	65	62	65
R43	3010 N Mooney Blvd	RS	1	E(72)	63	67	68

Chapter 8. Construction Noise

During construction of the Project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Table 8-1 summarizes noise levels produced by construction equipment that is commonly used on roadway construction projects. Construction equipment is expected to generate noise levels ranging from 70 to 90 dB at a distance of 50 feet, and noise produced by construction equipment would be reduced over distance at a rate of about 6 dB per doubling of distance. To minimize the construction-generated noise, abatement measures as specified in the special provisions under Caltrans Standard Specifications Section 14-8.02 must be followed:

- Do not exceed 86 dBA at 50 feet from the job site activities from 9 p.m. to 6 a.m.
- Equip an internal combustion engine with the manufacturer recommended muffler.
- Do not operate an internal combustion engine on the job site without the appropriate muffler.

Table 8-1. Construction Equipment Noise

Equipment	Maximum Noise Level (dBA at 50 feet)
Scrapers	89
Bulldozers	85
Heavy Trucks	88
Backhoe	80
Pneumatic Tools	85
Concrete Pump	82

Source: Federal Transit Administration 2006.

No adverse noise impacts from construction are anticipated because construction would be conducted in accordance with Standard Specification 14-8.02 and applicable local noise standards. Construction noise would be short-term, intermittent, and overshadowed by local traffic noise. Compliance with City of Visalia local noise ordinances for construction is recommended to minimize construction noise.

Chapter 9. References

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Appendix A Traffic Data

Table A-1. Existing Calibration Traffic Volumes Used in TNM (NM-1)

	Segment	Number of Lanes	Total Traffic	Auto #	MT #	HT #	Bus #	Moto #	Speed (A/MT/HT/Bus/Moto)
Riggin Avenue – North Dayton Street to North Mooney Boulevard	Westbound	1	428	400	12	12	4	0	45/45/45/45/0
Riggin Avenue – North Mooney Boulevard to North Dayton Street	Eastbound	1	480	464	4	8	4	0	45/45/45/45/0

Source: Dokken Engineering, November 2021
A = Auto, MT = medium truck, HT = heavy truck, Moto = motorcycle

Table A-2. Existing Calibration Traffic Volumes Used in TNM (NM-2)

	Segment	Number of Lanes	Total Traffic	Auto #	MT #	HT #	Bus #	Moto #	Speed (A/MT/HT/Bus/Moto)
Riggin Avenue –North Conyer Street to North Giddings Street	Westbound	1	460	444	4	4	8	0	45/45/45/45/0
Riggin Avenue – North Giddings Street to North Conyer Street	Eastbound	1	400	380	12	0	4	4	45/45/0/45/45

Source: Dokken Engineering, November 2021
A = Auto, MT = medium truck, HT = heavy truck, Moto = motorcycle

Table A-3. Existing Calibration Traffic Volumes Used in TNM (NM-3)

	Segment	Number of Lanes	Total Traffic	Auto #	MT #	HT #	Bus #	Moto #	Speed (A/MT/HT/Bus/Moto)
Riggin Avenue – North Dayton Street to North Mooney Boulevard	Westbound	1	520	500	16	0	4	0	45/45/0/45/0
Riggin Avenue – North Mooney Boulevard to North Dayton Street	Eastbound	1	460	428	16	4	4	8	45/45/45/45/45

Source: Dokken Engineering, November 2021
A = Auto, MT = medium truck, HT = heavy truck, Moto = motorcycle

Table A-4. Existing 2021 Peak Hour Traffic Volumes Used in TNM

	Segment	Number of Lanes	Total Peak Hour Traffic	Auto %	MT %	HT %	Speed (A/MT/HT)
Riggin Avenue – North Conyer Street to North Mooney Boulevard	Westbound	1	712	95	3	2	45/45/45
Riggin Avenue – North Mooney Boulevard to North Conyer Street	Eastbound	1	712	95	3	2	45/45/45

Source: Visalia General Plan Update – Final Environmental Impact Report, October 2014
A = Auto, MT = medium truck, HT = heavy truck

Table A-5. Design Year 2040 No Build Peak Hour Traffic Volumes Used in TNM

	Segment	Number of Lanes	Total Peak Hour Traffic	Auto %	MT %	HT %	Speed (A/MT/HT)
Riggin Avenue – North Conyer Street to North Mooney Boulevard	Westbound	1	1,571	95	3	2	45/45/45
Riggin Avenue – North Mooney Boulevard to North Conyer Street	Eastbound	1	1,571	95	3	2	45/45/45

Source: Visalia General Plan Update – Final Environmental Impact Report, October 2014
A = Auto, MT = medium truck, HT = heavy truck

Table A-6. Design Year 2040 Build Peak Hour Traffic Volumes Used in TNM

	Segment	Number of Lanes	Total Peak Hour Traffic	Auto %	MT %	HT %	Speed (A/MT/HT)
Riggin Avenue – North Conyer Street to North Mooney Boulevard	Westbound	2	2,044	95	3	2	45/45/45
Riggin Avenue – North Mooney Boulevard to North Conyer Street	Eastbound	2	2,044	95	3	2	45/45/45

Source: Visalia General Plan Update – Final Environmental Impact Report, October 2014
A = Auto, MT = medium truck, HT = heavy truck

Appendix B Predicted Future Noise Levels

Table B-1. Predicted Future Noise Levels and Noise Barrier Analysis

Receptor I.D.	Land Use	Noise Abatement category (NAC)	Number of Dwelling Units	Address	Modeled Existing Year 2021 Noise Level Leq, dBA	Modeled Future No Build Year 2040 Noise Level Leq, dBA	Modeled Future Build Year 2040 Noise Level Leq, dBA	Existing to Future No Build Year Project Noise Increase	Existing to Future Build Year Project Noise Increase	No Build to Build Year Project Noise Increase
R1	SFR	B(67)	1	2937 N Elm Ct	39	43	44	4	5	1
R2	SFR	B(67)	1	2936 N Elm Ct	56	60	61	4	5	1
R3	SFR	B(67)	1	2935 N Central Ct	56	59	60	3	4	1
R4	SFR	B(67)	1	2934 N Central Ct	58	61	62	3	4	1
R5	SFR	B(67)	1	1836 W Lark Ave	59	62	63	3	4	1
R6	SFR	B(67)	1	1828 W Lark Ave	61	64	64	3	3	0
R7	SFR	B(67)	1	1820 W Lark Ave	62	65	65	3	3	0
R8	SFR	B(67)	1	1810 W Lark Ave	62	65	65	3	3	0
R9	SFR	B(67)	1	1800 W Lark Ave	62	**66**	65	4	3	-1
R10	SFR	B(67)	1	2936 N Dayton St	58	62	62	4	4	0
R11	SFR	B(67)	1	2937 N Divisadero St	57	61	61	4	4	0
R12	SFR	B(67)	1	1639 W Riggin Ave	47	51	51	4	4	0
R13	SFR	B(67)	1	1627 W Riggin Ave	46	50	50	4	4	0
R14	SFR	B(67)	1	1613 W Riggin Ave	47	50	51	3	4	1
R15	SFR	B(67)	1	1549 W Riggin Ave	47	50	51	3	4	1
R16	SFR	B(67)	1	1537 W Riggin Ave	47	50	51	3	4	1
R17	SFR	B(67)	1	1525 W Riggin Ave	47	50	51	3	4	1
R18	SFR	B(67)	1	1513 W Riggin Ave	49	53	54	4	5	1
R19	SFR	B(67)	1	1441 W Riggin Ave	47	51	51	4	4	0
R20	SFR	B(67)	1	1429 W Riggin Ave	47	50	51	3	4	1
R21	SFR	B(67)	1	1415 W Riggin Ave	46	50	51	4	5	1
R22	SFR	B(67)	1	1401 W Riggin Ave	47	50	51	3	4	1
R23	SFR	B(67)	1	1339 W Riggin Ave	46	50	50	4	4	0
R24	SFR	B(67)	1	1327 W Riggin Ave	47	50	51	3	4	1
R25	SFR	B(67)	1	2935 N Giddings St	54	57	58	3	4	1

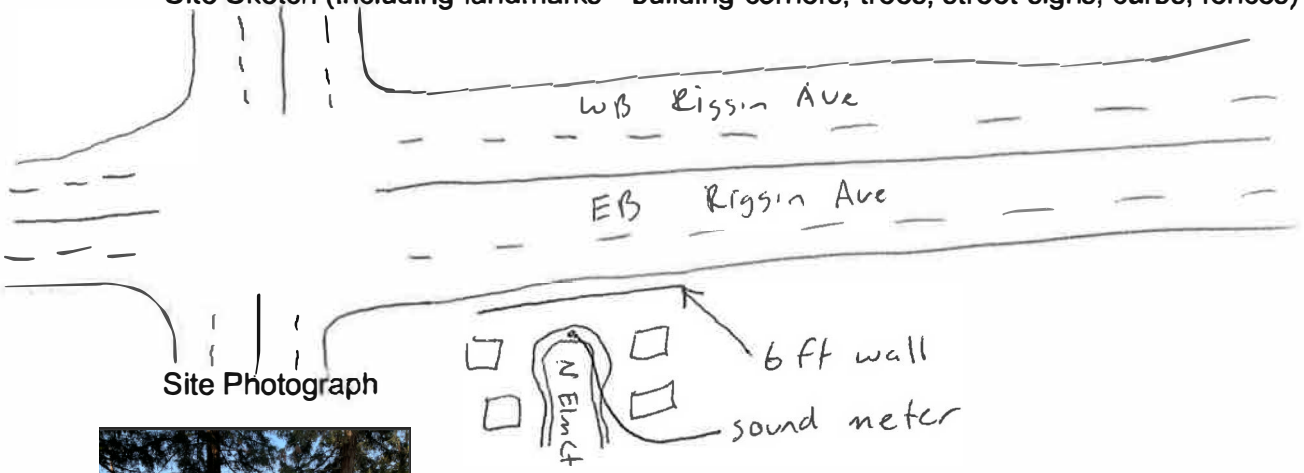
Receptor I.D.	Land Use	Noise Abatement category (NAC)	Number of Dwelling Units	Address	Modeled Existing Year 2021 Noise Level Leq, dBA	Modeled Future No Build Year 2040 Noise Level Leq, dBA	Modeled Future Build Year 2040 Noise Level Leq, dBA	Existing to Future No Build Year Project Noise Increase	Existing to Future Build Year Project Noise Increase	No Build to Build Year Project Noise Increase
R26	SFR	B(67)	1	2936 N Giddings St	58	61	62	3	4	1
R27	SFR	B(67)	1	1223 W Riggin Ave	47	51	52	4	5	1
R28	SFR	B(67)	1	1211 W Riggin Ave	47	51	52	4	5	1
R29	SFR	B(67)	1	1147 W Riggin Ave	48	51	52	3	4	1
R30	SFR	B(67)	1	1137 W Riggin Ave	47	51	52	4	5	1
R31	SFR	B(67)	1	1125 W Riggin Ave	47	51	52	4	5	1
R32	SFR	B(67)	1	1109 W Riggin Ave	48	51	52	3	4	1
R33	SFR	B(67)	1	1037 W Riggin Ave	47	51	52	4	5	1
R34	SFR	B(67)	1	1025 W Riggin Ave	47	50	52	3	5	2
R35	SFR	B(67)	1	1013 W Riggin Ave	47	50	52	3	5	2
R36	SFR	B(67)	1	1001 W Riggin Ave	47	50	52	3	5	2
R37	SFR	B(67)	1	937 W Riggin Ave	46	50	52	4	6	2
R38	SFR	B(67)	1	925 W Riggin Ave	46	50	52	4	6	2
R39	SFR	B(67)	1	2936 N Conyer St	46	50	51	4	5	1
R40	SFR	B(67)	-	Future Residence north of Riggin Ave	67	64	67	-3	0	3
R41	OS	F	0	Agricultural Field north of Riggin Ave	61	65	**66**	4	5	1
R42	SFR	B(67)	-	Future Residence north of Riggin Ave	65	62	65	-3	0	3
R43	RS	E(72)	1	3010 N Mooney Blvd	63	67	68	4	5	1

Appendix C Field Data

Noise Field Data Sheet

Project Name and Number	Riggin Ave NM 1
Receptor Site	Sidewalk on N Elm Ct, Visalia CA
Latitude/Longitude/Description	36° 21' 22.34 N, -119° 18' 49.22 W
Start Date & Time	11/30/21 1:43 pm
End Date & Time	11/30/21 1:58 pm
Relative Humidity (%),Temperature (degrees F), Wind Speed/Direction	Humidity 41% 70° F Wind 2MPH
Vehicle Speeds	45 mph
Notes	- 6 ft wall - At 1:44pm car pulled out of driveway - 57.5 dBA Leq, Data #5

Site Sketch (including landmarks—building corners, trees, street signs, curbs, fences)



Site Photograph

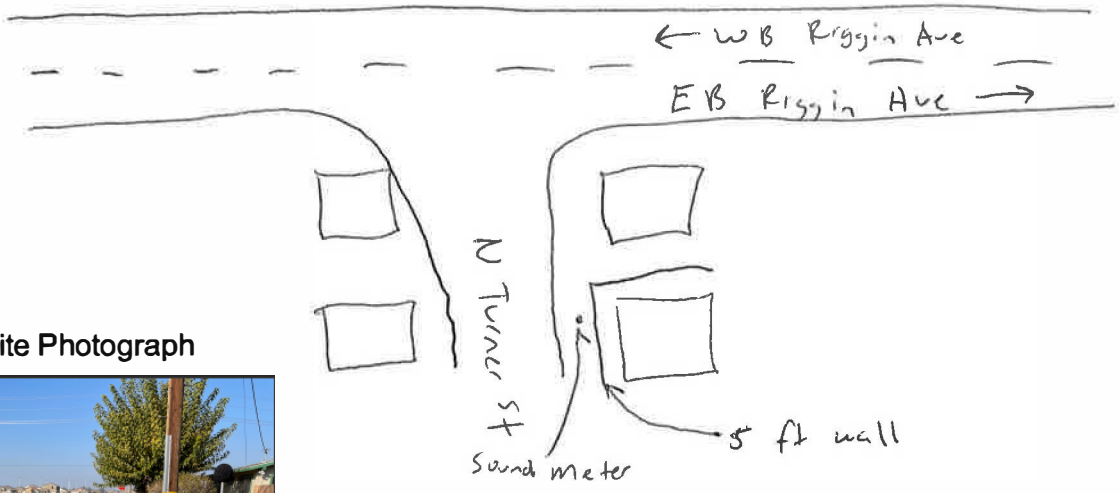


Equipment	Meter Type: Larson Davis 824
	Calibrator: Larson Davis Cal 200
Company meter #	
Staff	Roberto R, Ken C.

Noise Field Data Sheet

Project Name and Number	Riggin Ave NM 2
Receptor Site	Sidewalk on N Turner st, next to 1037 W Riggin Ave, Visalia CA
Latitude/Longitude/Description	36° 21' 21.61 N, -119° 18' 12.26 W
Start Date & Time	11/30/21 2:18 pm
End Date & Time	11/30/21 2:33 pm
Relative Humidity (%),Temperature (degrees F), Wind Speed/Direction	Humidity 38% 70° F Wind 3 mPH
Vehicle Speeds	45 mPH
Notes	- 58.7 dBA Leq Data # 6

Site Sketch (including landmarks—building corners, trees, street signs, curbs, fences)



Site Photograph

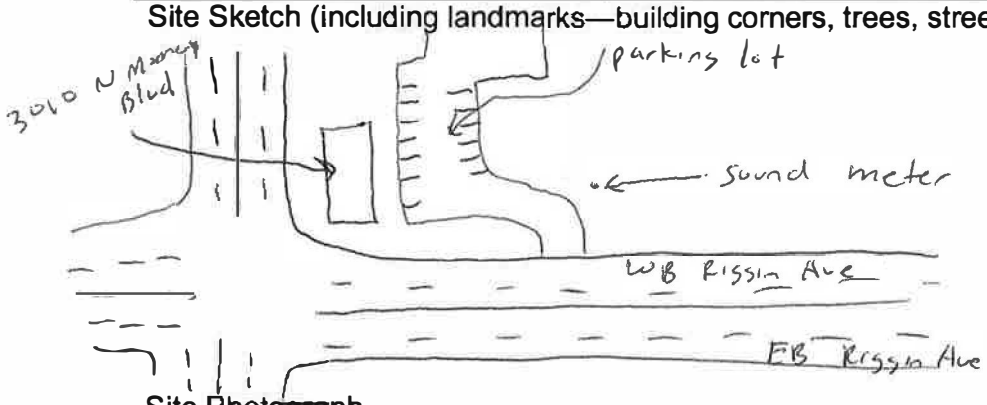


Equipment	Meter Type: Larson Davis 824
	Calibrator: Larson Davis cal 200
Company meter #	
Staff	Roberto R, Ken C.

Noise Field Data Sheet

Project Name and Number	Riggin Ave NM3
Receptor Site	3010 N Mooney Blvd, Visalia, CA
Latitude/Longitude/Description	36° 21' 24.30 N, -119° 18' 48.93 W
Start Date & Time	11/30/21 2:50 pm
End Date & Time	11/30/21 3:05 pm
Relative Humidity (%),Temperature (degrees F), Wind Speed/Direction	Humidity 38% 70° F Wind 3 MPH
Vehicle Speeds	45 MPH
Notes	- 62.1 dBA Leq Data # 7

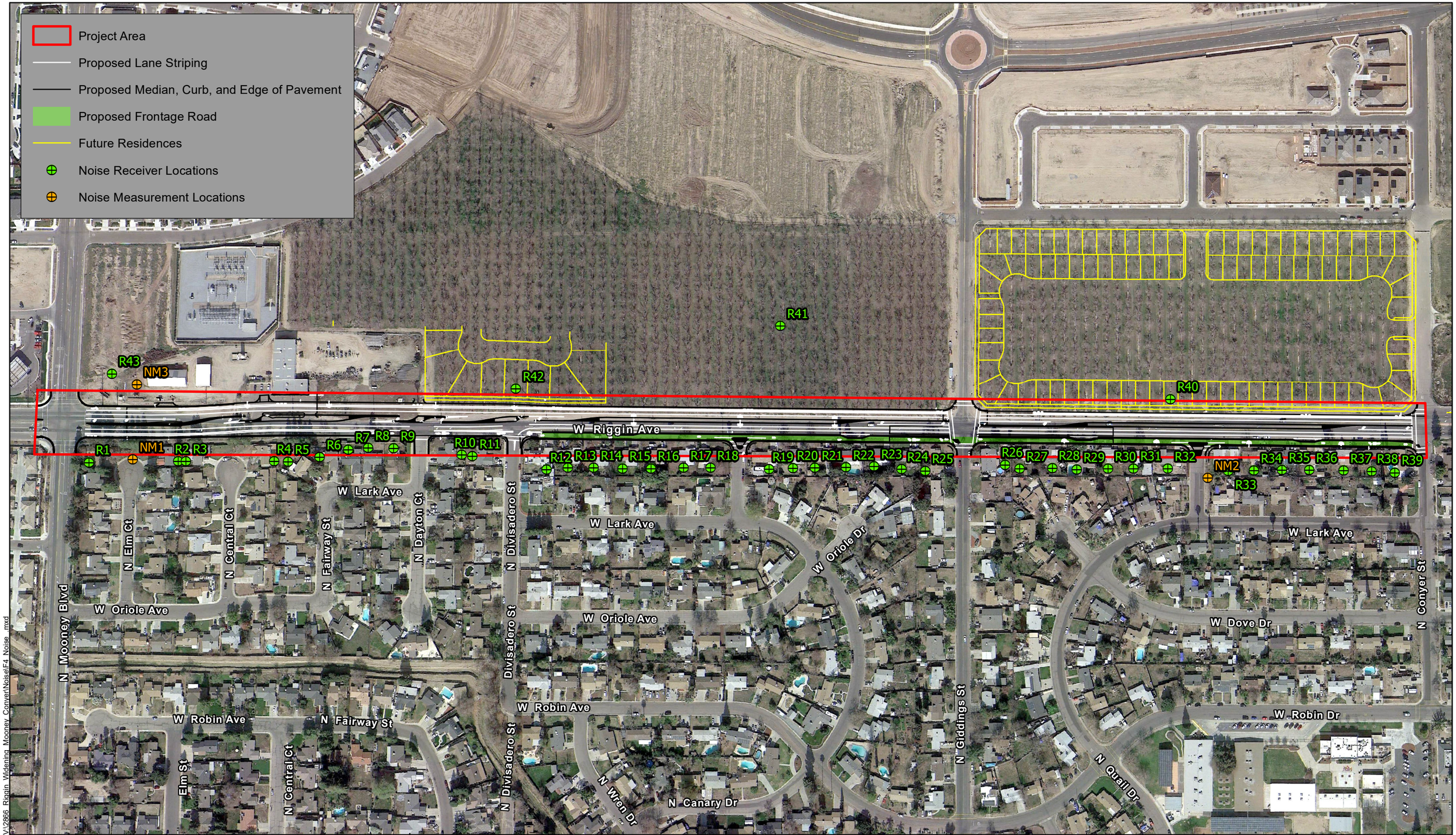
Site Sketch (including landmarks—building corners, trees, street signs, curbs, fences)



Site Photograph



Equipment	Meter Type: Larson Davis 824
	Calibrator: Larson Davis Cal 200
Company meter #	
Staff	Roberto R., Ken C.



V:\2866_Riggin_Widening_Mooney_Conver\Noise\F4_Noise_.mxd

Source: ESRI Maps Online; Dokken Engineering 12/15/2021; Created By: kchen

1 inch = 250 feet

0 200 400 600 800 1,000 Feet

FIGURE 4

Noise Measurements and Receiver Locations

HIPL-5044(140)

Riggin Avenue Widening - Mooney Boulevard to Conyer Street

City of Visalia, California