U.S. 101/Prado Road Interchange Project

On U.S. 101 in San Luis Obispo County
05-SLO-101-PM 26.5-27.3
Project ID Number 0516000105

Initial Study
with Proposed Mitigated Negative Declaration

Volume 1 of 2

Prepared by the
State of California Department of Transportation

January 2023

Caltrans

General Information About This Document

What's in this document:

The California Department of Transportation (Caltrans) has prepared this Initial Study, which examines the potential environmental impacts of alternatives being considered for the proposed project in San Luis Obispo County in California. The document explains why the project is being proposed, the alternatives being considered for the project, the existing environment that could be affected by the project, potential impacts of each of the alternatives, and proposed avoidance, minimization, and/or mitigation measures.

What you should do:

- Please read the document. Additional copies of the document and the related technical studies are available for review at the Caltrans District 5 Office at 50 Higuera Street, San Luis Obispo, California 93401; at the San Luis Obispo County Public Works Department at 976 Osos Street, Suite 207, San Luis Obispo, California 93408; and at the San Luis Obispo Library at 995 Palm Street, San Luis Obispo, California 93403.
- Attend the public information meeting on February 15, 2023.
- Tell us what you think. If you have any comments regarding the proposed project, please send your written comments to Caltrans by the deadline. Submit comments via U.S. mail to: Dianna Beck, Associate Environmental Planner, District 5 Environmental Division, California Department of Transportation, 50 Higuera Street, San Luis Obispo, California 93401. Submit comments via email to: Dianna.Beck@dot.ca.gov.
- Submit comments by the deadline: March 6, 2023.

What happens next:

After comments are received from the public and the reviewing agencies, Caltrans may 1) give environmental approval to the proposed project, 2) do additional environmental studies, or 3) abandon the project. If the project is given environmental approval and funding is appropriated, Caltrans could design and construct all or part of the project.

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please write to or call Caltrans, Attention: Dianna Beck, Associate Environmental Planner, District 5 Environmental Division, 50 Higuera Street, San Luis Obispo, California 93401; 805-459-9406 (Voice), or use the California Relay Service 1-800-735-2929 (Teletype to Voice), 1-800-735-2922 (Voice to Teletype), 1-800-855-3000 (Spanish Teletype to Voice and Voice to Teletype), 1-800-854-7784 (Spanish and English Speech-to-Speech), or 711.

05-SLO-101-PM 26.5-27.3
Project ID Number 0516000105

Extend Prado Road over U.S. 101 to connect with Dalidio Drive and rebuild the existing U.S. 101 northbound on- and off-ramp connections to Prado Road

INITIAL STUDY
with Proposed Mitigated Negative Declaration

Submitted Pursuant to: (State) Division 13, California Public Resources Code

THE STATE OF CALIFORNIA
Department of Transportation
and
City of San Luis Obispo
Responsible Agency: California Transportation Commission

Jason Wilkinson

Jason Wilkinson
Acting Deputy District Director, Environmental Analysis, District 5
California Department of Transportation
CEQA Lead Agency

1/11/23

Date

The following individual can be contacted for more information about this document:

Dianna Beck, Associate Environmental Planner, District 5, 50 Higuera Street, San Luis Obispo, California 93401; 805-459-9406.

DRAFT
Proposed Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

State Clearinghouse Number: Pending

District-County-Route-Post Mile: 05-SLO-101-PM 26.5-27.3

EA/Project Number: EA 05-1H640 and Project ID Number 0516000105

Project Description

The City of San Luis Obispo proposes to extend Prado Road over U.S. 101 to connect with Dalidio Drive and rebuild the existing U.S. 101 northbound on- and off-ramp connections to Prado Road. The interchange is in the City of San Luis Obispo at post mile 26.8 on U.S. 101. The project limits extend from post mile 26.5 to post mile 27.3.

Determination

Caltrans District 5 has prepared this Initial Study with Proposed Mitigated Negative Declaration to give notice to interested agencies and the public that Caltrans intends to adopt a Mitigated Negative Declaration for this project. This does not mean that Caltrans' decision regarding this project is final. The Initial Study with Proposed Mitigated Negative Declaration is subject to change based on comments received from interested agencies and the public.

On the basis of this study, it is determined that the proposed action will not have a significant effect on energy, greenhouse gas emissions, mineral resources, noise, population and housing, public services, recreation, transportation, utilities and service systems, and wildfire.

The project would have no significantly adverse effect on aesthetics, agriculture and forest resources, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, and tribal cultural resources because the following mitigation measures would reduce potential effects to insignificance:

- AES-1 and AES-2 require developing and implementing a Tree Protection and Replacement Plan that protects trees to be preserved during construction and provides suitable replacements for trees that require removal during construction.
- AES-3 requires developing a landscaping design with plantings that offer a variety of colors, shapes, and species with an emphasis on drought-tolerant native plant materials.
- AG-1 requires that for each acre of Important Farmland that is converted due to project implementation, 1 acre of comparable land in agricultural production will be preserved in perpetuity.

- AQ-1 requires implementing fugitive dust control measures during project construction.
- BIO-1 requires construction activities to avoid and minimize potential impacts to California red-legged frogs and Coast Range newts.
- BIO-2 requires construction activities to avoid and minimize potential impacts to southwestern pond turtles.
- BIO-3 requires construction activities to avoid and minimize potential impacts to steelheads.
- BIO-4 requires construction activities to avoid and minimize potential impacts to nesting birds.
- BIO-5 requires construction activities to avoid and minimize potential impacts associated with invasive species.
- BIO-6 requires construction activities to avoid and minimize potential impacts to riparian habitat and jurisdictional areas.
- BIO-7 requires implementing a Habitat Mitigation and Monitoring Plan that provides a minimum 2-to-1 replacement ratio for permanent impacts to riparian habitat unless otherwise directed by regulatory agencies.
- CR-1 requires stopping construction work if a potential archaeological resource is encountered. It also requires a qualified archaeologist to evaluate the proper treatment of the potential resource.
- GEO-1 requires stopping construction work if a potential paleontological resource is encountered. It also requires a qualified paleontologist to evaluate the potential resource.
- HAZ-1 requires a preconstruction investigation of surface soils for aerially deposited lead. A workplan will be developed detailing the methodology, results, and measures for proper management and disposal of contaminated soils if aerially deposited lead is detected above acceptable levels in project site soils.
- HAZ-2 requires testing surface soils in the proposed right-of-way to determine the presence or absence of pesticides, herbicides, and arsenic. A workplan will be developed describing the sampling methodology, results, and requirements for removal, transportation, and disposal of impacted soil.
- HAZ-3 requires marking known petroleum pipelines in the project area before the start of any project construction activities and developing a contingency plan that specifies the requirements for soil handling and/or remediation if contaminated soil from a petroleum pipeline is encountered.

_____

Jason Wilkinson
Acting Deputy District Director, Environmental Analysis, District 5
California Department of Transportation

_____

Date

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Chapter 1 Proposed Project

1.1 Introduction

The City of San Luis Obispo proposes to extend Prado Road over U.S. 101 to connect Prado Road with Dalidio Drive and rebuild the existing U.S. 101 northbound on- and off-ramp connections to Prado Road. The interchange is in the City of San Luis Obispo at post mile 26.8 on U.S. 101. The project limits extend from post mile 26.5 to post mile 27.3. U.S. 101 through the study area is currently a four-lane divided freeway with auxiliary lanes provided between Madonna Road and Marsh Street.

The project is included in the 2020 State Transportation Improvement Program. Project construction is expected to start in 2026 and span approximately three years. The current programmed cost for construction is approximately $58,700.000.

Caltrans, as assigned by the Federal Highway Administration, is the lead agency under the National Environmental Policy Act (known as NEPA). Caltrans is also the lead agency under the California Environmental Quality Act (known as CEQA). As the NEPA lead, Caltrans is preparing a separate Categorical Exclusion document for the project. As the CEQA lead, Caltrans has prepared this document—an Initial Study with Proposed Mitigated Negative Declaration—for the project.

1.2 Purpose and Need

The purpose of the project is to improve overall circulation and accessibility in the project area for all transportation modes. There is a need to provide better community connectivity between the existing and planned neighborhoods east and west of the U.S. 101 freeway and resolve forecasted operational deficiencies on State and city facilities. This connectivity need extends to all transportation modes.

1.2.1 Purpose

The purpose of the project is to:

- Improve overall operations on U.S. 101 and nearby interchanges;
- Improve safety and mobility for bicyclists and pedestrians; and
- Improve transit performance and enhance transit opportunities.

1.2.2 Need

The need for the project involves providing better community connectivity by improving current and future operations on U.S. 101 and nearby interchanges, improving safety and mobility for bicyclists and pedestrians, improving transit performance, and enhancing transit opportunities.

Improve Overall Operations of U.S. 101 and Adjacent Interchanges

One need for the project is generated by existing year and/or forecasted year traffic congestion along U.S. 101 between the interchange with Los Osos Valley Road and the interchange with Marsh Street. The May 2019 U.S. 101/Prado Road Interchange Traffic Operations Analysis Report and Intersection Control Evaluation documents the existing year's traffic conditions based on 2019 traffic counts from the City of San Luis Obispo Traffic Counts and Speed Surveys database and Caltrans mainline traffic counts from 2014 and 2018. As detailed in the Traffic Operations Analysis Report and Intersection Control Evaluation, several intersections and freeway segments in the vicinity of the project site experience congestion that exceeds Caltrans' level of service targets during the morning peak hour and evening peak hour under both the existing (2016) and the forecasted design-year (2045) intersection traffic conditions without project implementation.

Improve Safety and Mobility for Bicyclists and Pedestrians

The City of San Luis Obispo has identified the need to extend Prado Road over U.S. 101 to provide connectivity from Madonna Road east to the planned Prado Road east extension to Broad Street as a main east/west connector across town to shopping centers and, most notably, the city's only middle school. In addition to providing additional pedestrian access and connectivity, Class 1 bike paths and Class 2 bike lanes are proposed along Prado Road from the western boundary of the Margarita Area Specific Plan, continuing to the proposed Prado Road grade-separated crossing of U.S. 101, and then continuing on Dalidio Road to Laguna Lake Park.

Improve Transit Performance and Enhance Transit Opportunities

The San Luis Obispo Regional Transit Authority needs to facilitate more efficient transit routes. The San Luis Obispo Regional Transit Authority is in the process of developing administrative and operations office space and maintenance and storage facilities. The San Luis Obispo Regional Transit Authority is locating these uses next to the northwest corner of the existing Prado Road/Elks Lane/U.S. 101 northbound ramps intersection based on the need to provide regional accessibility via U.S. 101. The project would provide connectivity from the east side of U.S. 101 to the west side of the City of San Luis Obispo, facilitating more efficient transit connectivity.

1.3 Project Description

This section describes the proposed action and the project alternatives developed to meet the purpose and need of the project while avoiding or minimizing environmental impacts.

The City of San Luis Obispo proposes to extend Prado Road over U.S. 101 to connect with Dalidio Drive and rebuild the existing U.S. 101 northbound on- and off-ramp connections to Prado Road to provide congestion relief, operational efficiency, and multimodal connectivity. The interchange is in the City of San Luis Obispo at post mile 26.8 on U.S. 101. The project limits extend from post mile 26.5 to post mile 27.3. The regional location of the project and the project limits are shown in Figure 1-1 and Figure 1-2.

The area surrounding the project includes commercial use northwest of the intersection of Prado Road and U.S. 101, commercial and residential uses northeast of said intersection, the city-owned corporation yard and Water Resource Recovery Facility southeast of the intersection, and the San Luis Ranch property west of U.S. 101. The San Luis Ranch property is currently in the initial phases of development, with approved commercial, residential, recreational, and agricultural land uses under the San Luis Ranch Specific Plan adopted by the city in 2017 (City of San Luis Obispo 2017a). On the eastern end of the Prado Road alignment, the project abuts the western limits of the San Luis Obispo Creek Bridge Widening Project, which has independent utility from the proposed project and is being reviewed by the City of San Luis Obispo as of spring 2022. The proposed action does not contemplate any improvements to or activity within the riparian area associated with San Luis Obispo Creek at the location of the San Luis Obispo Creek Bridge Widening Project.

The project is within Caltrans District 5 in the City of San Luis Obispo in San Luis Obispo County. The project area is within Township 31 South, Range 12 East on the U.S. Geological Survey San Luis Obispo, California 7.5-minute quadrangle. Figures 1-1 and 1-2 are regional and project location maps, respectively.

Figure 1-1 Project Vicinity Map

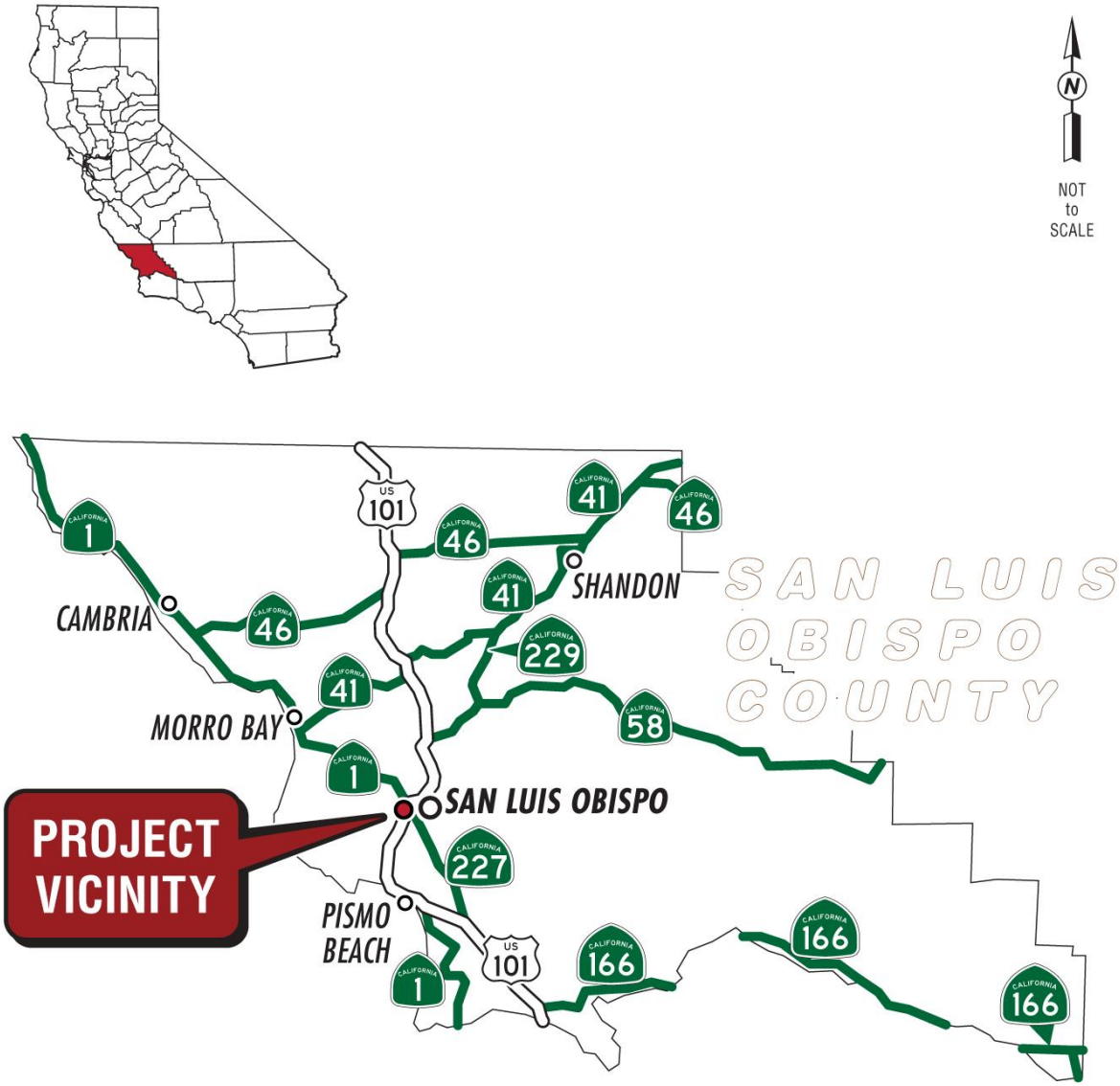
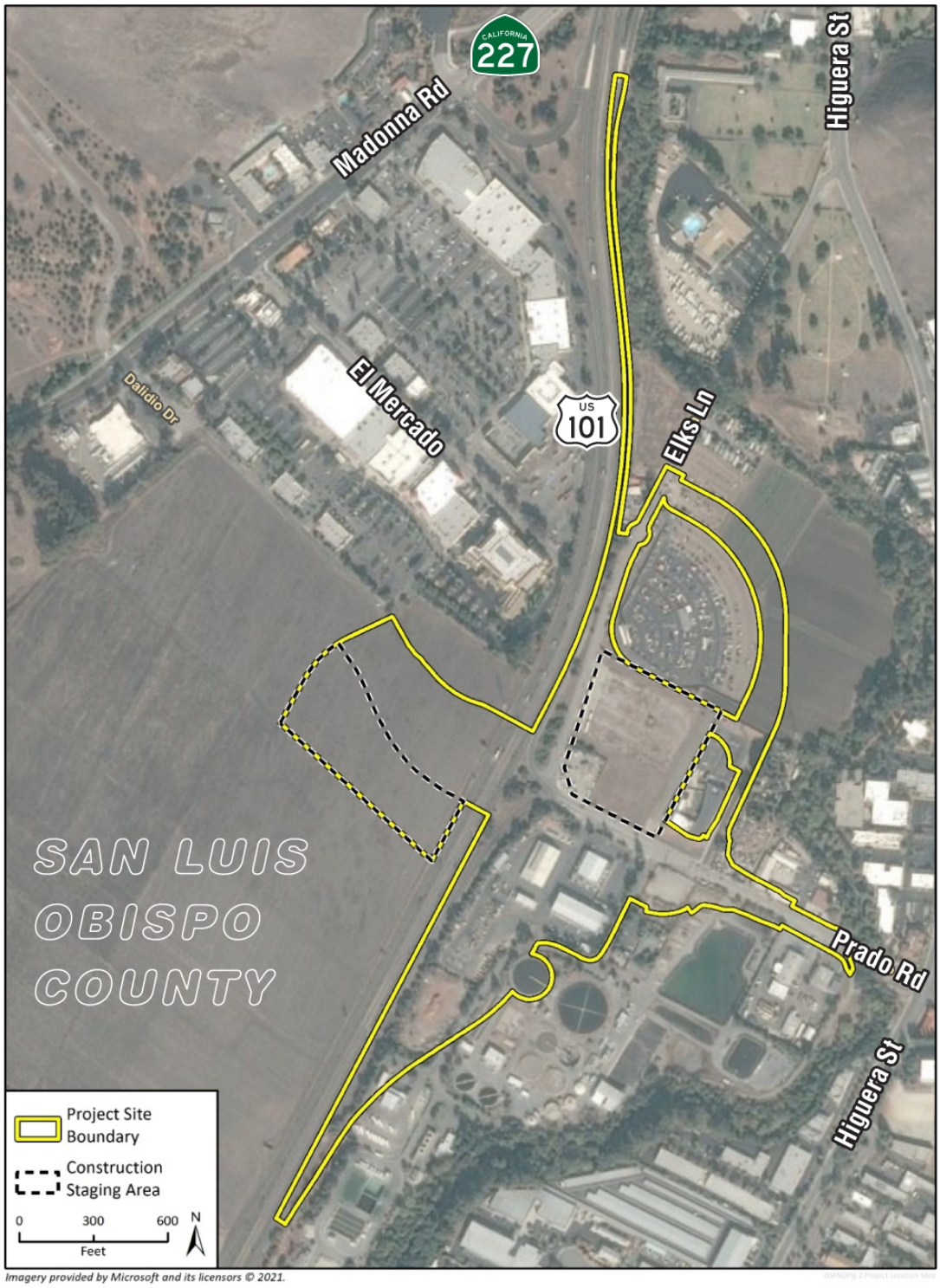


Figure 1-2 Project Location Map



NOT to SCALE

1.4 Project Alternatives

Four preliminary Build Alternatives—A1R, A3, A4R, and A7—have been identified by the project development team as viable and to be further studied in the Project Approval and Environmental Document phase. Each of the viable Build Alternatives includes a partial interchange with the proposed Prado Road Overcrossing built over U.S. 101 and a new U.S. 101 northbound off-ramp and U.S. 101 northbound on-ramp from Prado Road.

1.4.1 Build Alternatives

This project contains a number of standardized project measures that are used on most, if not all, Caltrans projects and were not developed in response to any specific environmental impact resulting from the proposed project. These measures are listed later in this chapter under “Standard Measures and Best Management Practices Included in All Build Alternatives.”

U.S. 101 through the study area is currently a four-lane divided freeway with auxiliary lanes provided between Madonna Road and Marsh Street. The Ultimate Concept Facility (beyond 2035) for U.S. 101 within the study area is identified as a freeway with a capacity of up to six lanes, though there is no funding currently identified for providing a six-lane freeway section. Though not funded, each viable Build Alternative will accommodate the Ultimate Concept Facility through the proposed Prado Road Overcrossing.

Common Design Features of the Build Alternatives

The project would include the construction of a new continuous northbound U.S. 101 auxiliary lane between the Prado Road northbound on-ramp and the Madonna Road northbound off-ramp. This auxiliary lane is proposed for all project alternatives. The auxiliary lane will be built next to the existing U.S. 101 northbound travel lane and will require the removal of the existing outside shoulder. The auxiliary lane will be built to a 12-foot paved width with a new 10-foot paved outside shoulder along the entire length.

Prado Road (Dalidio Drive) would be extended west of U.S. 101 to the intersection with the Froom Ranch Road/Dalidio Drive intersection via an overpass structure. The extension of Prado Road would have a minimum four-lane divided arterial section through and next to the interchange with a separate sidewalk/Class 4 bikeway and 5-foot-wide shoulder.

Each Build Alternative would encroach into the current floodplain located to the east and west of U.S. 101. Improvements to reduce this encroachment include placing a portion of the U.S. 101 northbound off-ramp and northbound on-ramp and most of the Prado Road (Dalidio Drive) extension west of U.S. 101 to the intersection with the future Froom Ranch Road/Dalidio Drive intersection on structures raised above the floodplain. A Midwest Guardrail System is proposed to be placed next to the outside shoulder of the proposed

northbound U.S. 101 auxiliary lanes to mitigate nonstandard Clear Recovery Zone clearances between the outside U.S. 101 northbound travel lane and nearby trees within the riparian corridor associated with San Luis Obispo Creek. Placement of the guardrail system at this location is proposed for all project alternatives.

The project would require the take of a portion of the city-owned corporation yard located south of Prado Road and east of U.S. 101 (Assessor's Parcel Number 053-051-045), which would result in the need for the city to relocate some or all operations from this facility to another location. The potential effect on the corporation yard's operations would vary based on the area of take required for each project alternative (described below under Unique Features of the Build Alternatives). No offsite relocation of corporation yard buildings is currently proposed as part of this action.

The project would require realigning Elks Lane east of U.S. 101. The specific future alignment of Elks Lane would depend on the requirements of the individual Build Alternatives.

The city has an independent project to widen Prado Road from the planned Elks Lane realignment connection with Prado Road east to the western limits of the San Luis Obispo Creek Bridge Widening Project. The project will transition Prado Road between the proposed interchange and San Luis Obispo Creek Bridge Widening Project improvements.

Construction is expected to start in 2026 and be completed in 2029.

Unique Features of the Build Alternatives

Alternative A1R

Figure 1-3 shows the Alternative A1R geometric concept, which assumes a roundabout provided at the U.S. 101 northbound ramp intersection with Prado Road. The other preliminary geometric design elements presented for Alternative A1R include the following:

- The interchange configuration is consistent with a Type L-1 tight diamond configuration to the east of U.S. 101.
- A portion of the U.S. 101 northbound off-ramp and on-ramp will be placed on the overpass structure.
- Most of the Prado Road (Dalidio Drive) extension from the intersection with the future Elks Lane east of U.S. 101 to the intersection with the future Froom Ranch Road/Dalidio Drive west of U.S. 101 will be placed on the overpass structure.
- An approximately 1,200-foot auxiliary lane is provided between the Prado Road northbound on-ramp and the Madonna Road northbound off-ramp.

Alternative A1R would result in a take of about 1.7 acres of the city-owned corporation yard on Assessor's Parcel Number 053-051-045.

Alternative A1R would require relocating Elks Lane around the east side of the Sunset Drive-In, as shown in Figure 1-3, with the Elks Lane Realignment Option 2.

Alternative A3

Figure 1-4 shows the Alternative A3 geometric concept, which assumes traffic signal control provided at the U.S. 101 northbound ramp intersection with Prado Road. Other preliminary geometric design elements presented for Alternative A3 include the following:

- The interchange configuration is consistent with a Type L-1 tight diamond configuration on the east side of U.S. 101.
- A portion of the U.S. 101 northbound off-ramp and on-ramp will be placed on the overpass structure.
- Most of the Prado Road (Dalidio Drive) extension from the intersection with the future Elks Lane east of U.S. 101 to the intersection with the future Froom Ranch Road/Dalidio Drive west of U.S. 101 will be placed on the overpass structure.
- An approximately 1,060-foot auxiliary lane is provided between the Prado Road northbound on-ramp and the Madonna Road northbound off-ramp.

Alternative A3 would result in a take of about 1.6 acres of the city-owned corporation yard on Assessor's Parcel Number 053-051-045.

Alternative A3 would retain the alignment of Elks Lane around the west side of the Sunset Drive-In, as shown in Figure 1-4, with the Elks Lane Realignment Option 1.

Alternative A4R

Figure 1-5 shows the Alternative A4R geometric concept, which assumes a roundabout provided at the U.S. 101 northbound ramp intersection with Prado Road. The other preliminary geometric design elements presented for Alternative A4R include the following:

- The interchange configuration is consistent with a Type L-7 partial cloverleaf configuration on the east side of U.S. 101.
- A portion of the U.S. 101 northbound off-ramp and on-ramp will be placed on the overpass structure.
- Most of the Prado Road (Dalidio Drive) extension from the intersection with the future Elks Lane east of U.S. 101 to the intersection with the future Froom Ranch Road/Dalidio Drive west of U.S. 101 will be placed on the overpass structure.

- An approximately 2,280-foot auxiliary lane is provided between the Prado Road northbound on-ramp and the Madonna Road northbound off-ramp.

Alternative A4R would result in a take of about 9 acres of the city-owned corporation yard on Assessor's Parcel Number 053-051-045 and the city's Water Resource Recovery Facility southeast of the intersection.

Alternative A4R would retain the alignment of Elks Lane around the west side of the Sunset Drive-In, as shown in Figure 1-5, with the Elks Lane Realignment Option 1.

Alternative A7

Figure 1-6 shows the Alternative A7 geometric concept, which assumes roundabout control provided at the Prado Road/Elks Lane/U.S. 101 northbound ramp intersection with Prado Road. Other preliminary geometric design elements presented for Alternative A7 include the following:

- The interchange configuration is similar in concept to a Type L-6 configuration on the east side of U.S. 101. The exception, though, is instead of the ramps connecting with a frontage road, the off-ramp is merged with eastbound Prado Road before the roundabout while the on-ramp diverges from westbound Prado Road after the roundabout.
- A portion of the U.S. 101 northbound off-ramp and on-ramp will be placed on the overpass structure.
- Most of the Prado Road (Dalidio Drive) extension from the intersection with the future Elks Lane east of U.S. 101 to the intersection with the future Froom Ranch Road/Dalidio Drive west of U.S. 101 will be placed on the overpass structure.
- An approximately 1,120-foot auxiliary lane is provided between the Prado Road northbound on-ramp and the Madonna Road northbound off-ramp.

Alternative A7 would result in a take of about 1.1 acres of the city-owned corporation yard located on Assessor's Parcel Number 053-051-045.

Alternative A7 would retain the alignment of Elks Lane around the west side of the Sunset Drive-In, as shown in Figure 1-6, with the Elks Lane Realignment Option 1.

Figure 1-3 Alternative A1R Concept

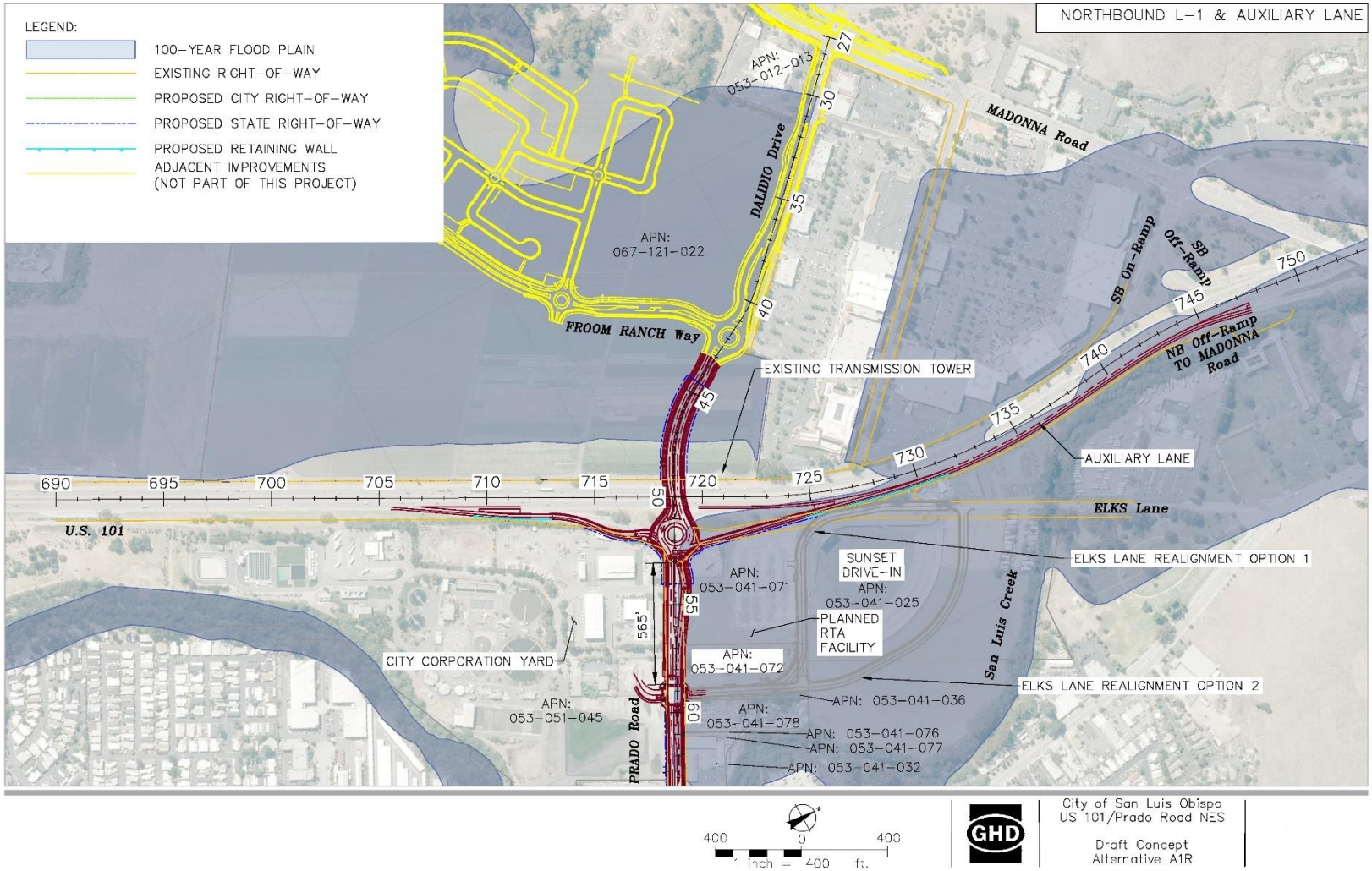


Figure 1-4 Alternative A3 Concept

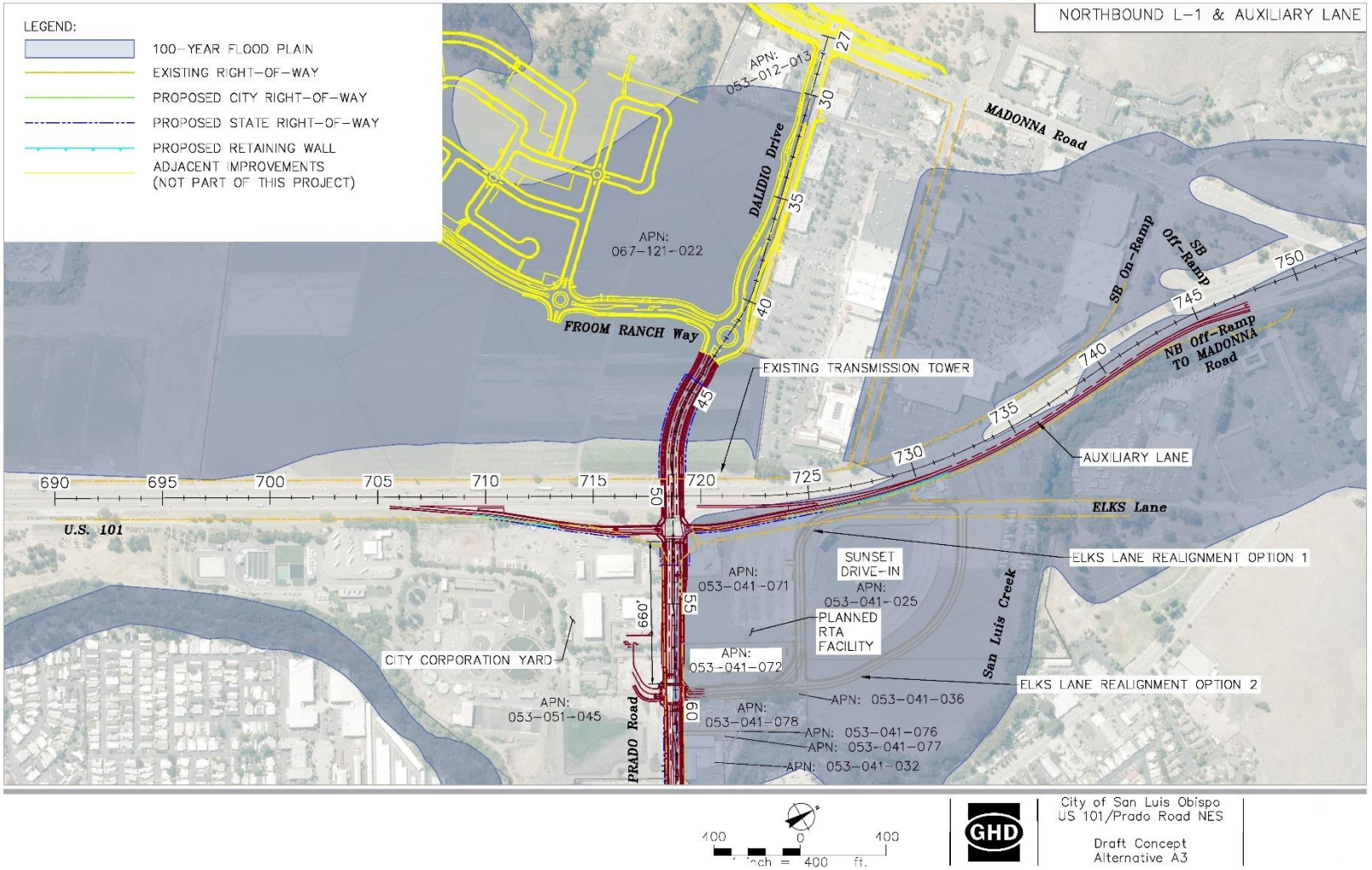


Figure 1-5 Alternative A4R Concept

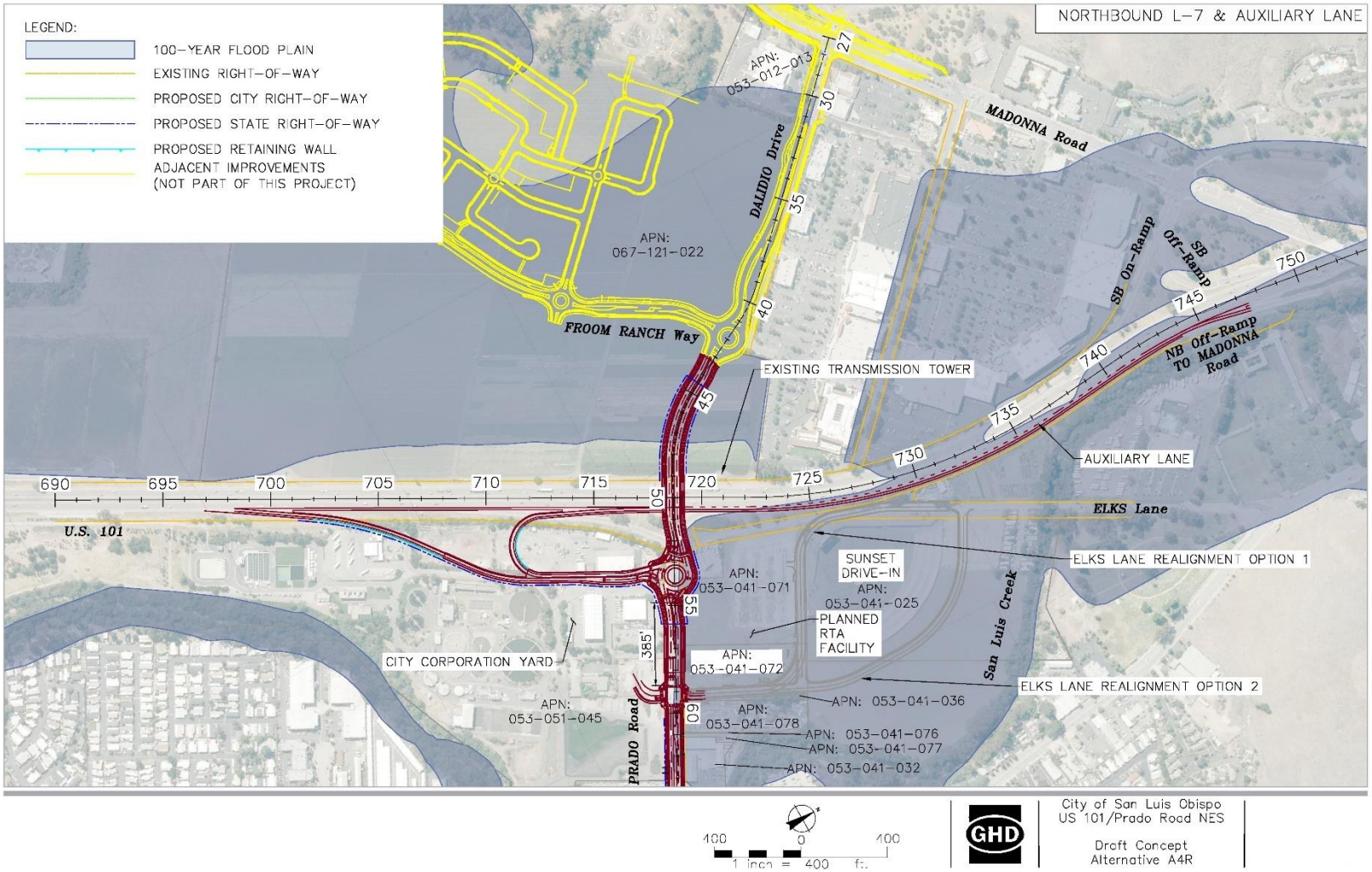
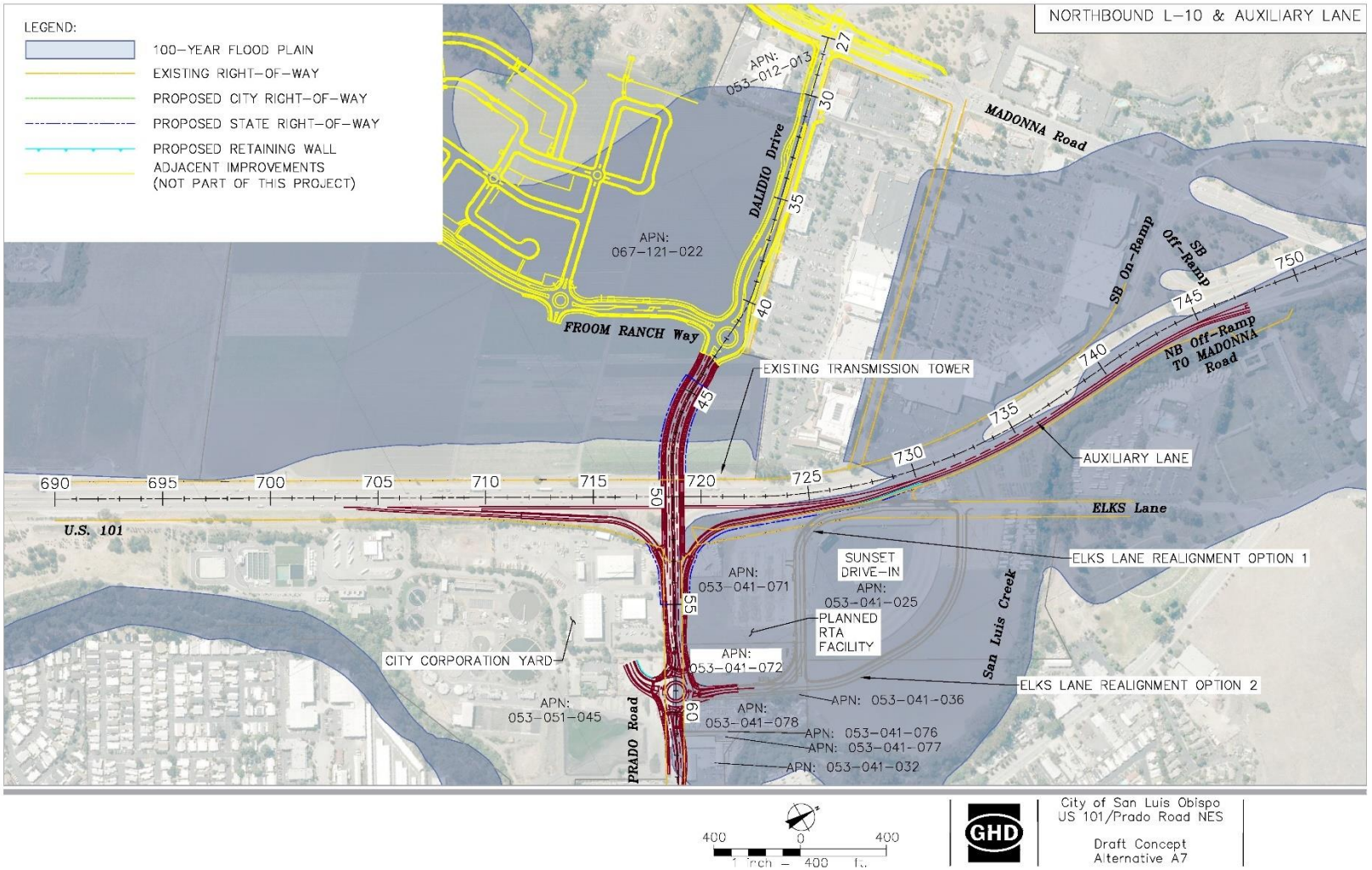


Figure 1-6 Alternative A7 Concept



1.4.2 No-Build (No-Action) Alternative

Under the No-Build Alternative, no actions would be taken, and no improvements would be built at the existing U.S. 101/Prado Road interchange.

1.5 Alternatives Considered but Eliminated from Further Discussion

The Project Study Report-Project Development Support for the project was completed in April 2018. This report discussed and evaluated the project alternatives discussed in detail above and alternatives considered but eliminated from further discussion.

1.5.1 Viable but Eliminated Alternative

Alternative A2

Alternative A2 was a partial cloverleaf configuration with a proposed loop northbound off-ramp to and a direct on-ramp from Prado Road located on the north side of Prado Road. Alternative A2 was identified as a viable alternative that the project development team eliminated due to the loss of a transportation asset (San Luis Obispo Regional Transit Authority's new facility) in the northwest quadrant of the interchange and the less than standard weave length between Prado Road northbound on-ramp and Madonna Road northbound off-ramp. As a result, the project development team determined that Alternative A2 did not meet the project's purpose and need, and it was removed from further consideration.

1.5.2 Non-Viable Alternatives

Alternative A5 (Single-Point Interchange)

Alternative A5 was a single-point diamond interchange configuration with Prado Road crossing over U.S. 101. When the project development team agreed that only the northbound ramp configurations to and from Prado Road were viable for this project, Alternative A5 was removed from further consideration because it could not be built as two separate projects.

Alternative A6 (Compact Diamond Configuration)

Alternative A6 was a compact diamond interchange configuration with Prado Road crossing over U.S. 101 and southbound partial cloverleaf ramps on the west side of U.S. 101. When the project development team determined that only the northbound ramps to and from Prado Road were viable, the southbound partial cloverleaf ramps were eliminated, and only the northbound compact diamond ramps remained. This northbound ramp configuration was the same as provided with Alternative A3. As a result, Alternative A6 was

removed from further consideration because this alternative is no longer applicable.

Alternative B (Prado Road Overcrossing Only)

Alternative B considered building the Prado Road Overcrossing only over U.S. 101. The project development team eliminated Alternative B from further consideration because it would not meet the project's purpose and need. Building the Prado Road Overcrossing over U.S. 101 was determined to be inconsistent with city planning, and removing the U.S. 101 northbound ramps from Prado Road was determined to negatively impact the overall operations at nearby interchanges north and south of the project site.

1.5.3 Alternatives Eliminated During the Project Approval and Environmental Document Phase

The initial steps of the Project Approval and Environmental Document phase, such as the technical studies in Volume 2 Technical Studies Bound Separately, included an evaluation of additional Build Alternatives—A1 and A4—and a side slope option for all Build Alternatives. Based on the conclusions of the final Intersection Control Evaluation, Build Alternatives A1 and A4, which would have provided signalized control at the U.S. 101 northbound ramp intersection with Prado Road, were determined to no longer be viable Build Alternatives moving forward and have been eliminated from further analysis in the Project Approval and Environmental Document phase. Similarly, based on the findings of the Two-Dimensional Hydraulic Model Update Final Report (City of San Luis Obispo 2019a), fill embankments were found to be hydrologically infeasible. As a result, the side slope option for each alternative was determined to no longer be a viable build option and has been eliminated from further analysis in the Project Approval and Environmental Document phase.

1.6 Standard Measures and Best Management Practices Included in All Build Alternatives

Project features, which can include both design elements of a project and standardized measures that are applied to all or most Caltrans projects, such as Best Management Practices and measures included in the Standard Plans and Specifications or as Standard Special Provisions, are considered to be an integral part of the project and have been considered prior to any significance determinations documented below.

The four preliminary Build Alternatives described in Section 1.4 include design elements intended to avoid or minimize effects on potentially historic properties in the vicinity. Best Management Practices to be implemented during project construction to minimize or prevent sediment or pollutants in

stormwater runoff may include but would not be limited to using temporary desilting basins, locating construction vehicle maintenance activities in staging areas to avoid leaks or spills of fuels, motor oil, coolant, and other hazardous materials, and installing a temporary, large sediment barrier and erosion control blankets. Additionally, postconstruction water quality treatment Best Management Practices may include but would not be limited to filtration and infiltration devices, such as detention basins and biofiltration swales, or low-impact development flow-through treatment devices. To ensure compliance with National Pollutant Discharge Elimination System requirements, existing postconstruction runoff control facilities removed or demolished by the project will be rebuilt or replaced within the project area.

1.7 Discussion of the NEPA Categorical Exclusion

This document contains information regarding compliance with the California Environmental Quality Act (CEQA) and other state laws and regulations. Separate environmental documentation, supporting a Categorical Exclusion determination, has been prepared in accordance with the National Environmental Policy Act. When needed for clarity, or as required by CEQA, this document may contain references to federal laws and/or regulations (CEQA, for example, requires consideration of adverse effects on species identified as a candidate, sensitive, or special-status species by the U.S. National Marine Fisheries Service and the U.S. Fish and Wildlife Service—that is, species protected by the Federal Endangered Species Act).

1.8 Permits and Approvals Needed

The following permits, licenses, agreements, and certifications are required for project construction:

Agency	Permit/Approval	Status
State Water Resources Control Board	Enrollment under the Statewide Construction General Permit	Pending application
California Department of Fish and Wildlife	1602 Agreement for Streambed Alteration	Pending application
City of San Luis Obispo	Tree Removal Permit	Pending application
City of San Luis Obispo	Temporary Discharge Permit	Pending application
City of San Luis Obispo	Amendment to Existing Caltrans Recycled Water Service Application	Pending application

Chapter 2 CEQA Evaluation

2.1 CEQA Environmental Checklist

This checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. Potential impact determinations include Significant and Unavoidable Impact, Less Than Significant Impact With Mitigation Incorporated, Less Than Significant Impact, and No Impact. In many cases, background studies performed in connection with a project will indicate that there are no impacts to a particular resource. A "No Impact" answer reflects this determination. The questions in this checklist are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Project features, which can include both design elements of the project and standardized measures that are applied to all or most Caltrans projects, such as Best Management Practices and measures included in the Standard Plans and Specifications or as Standard Special Provisions, are considered to be an integral part of the project and have been considered prior to any significance determinations documented below.

"No Impact" determinations in each section are based on the scope, description, and location of the proposed project as well as the appropriate technical report (bound separately in Volume 2), and no further discussion is included in this document.

2.1.1 Aesthetics

Considering the information in the Visual Impact Assessment dated September 2021, the following significance determinations have been made:

Except as provided in Public Resources Code Section 21099:

Question—Would the project:	CEQA Significance Determinations for Aesthetics
a) Have a substantial adverse effect on a scenic vista?	**Less Than Significant Impact**
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	**No Impact**

Question—Would the project:	CEQA Significance Determinations for Aesthetics
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?	**Less Than Significant Impact with Mitigation Incorporated**
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	**Less Than Significant Impact**

Affected Environment

The project is in an area of the City of San Luis Obispo that is largely built but contains some farmland, with existing streetlights along Prado Road and U.S. 101 and parking lot lighting on nearby properties.

U.S. 101 in the vicinity of the project site is eligible for listing as a state scenic highway but is not officially designated. The nearest officially designated state scenic highway is State Route 1, north of the San Luis Obispo city limits (Caltrans 2021).

The City of San Luis Obispo General Plan Conservation and Open Space Element includes policies intended to preserve or enhance the visual character of the city. The following policies would be applicable to the project:

Policy 9.1.1: Preserve natural and agricultural landscapes. The City of San Luis Obispo will implement the following policies and will encourage other agencies with jurisdiction to do the same:

A. Natural and agricultural landscapes that the city has not designated for urban use will be maintained in their current patterns of use.

B. Any development that is permitted in natural or agricultural landscapes will be visually subordinate to and compatible with the landscape features. Development would include but would not be limited to buildings, signs (including billboard signs), roads, utility and telecommunication lines, and structures. Such development will:

1. Avoid visually prominent locations such as ridgelines and slopes exceeding 20 percent.
2. Avoid unnecessary grading, vegetation removal, and site lighting.
3. Incorporate building forms, architectural materials, and landscaping that respect the setting, including the historical pattern of development in similar settings, and avoid stark contrasts with its setting.

4. Preserve scenic or unique landforms, significant trees in terms of size, age, species, or rarity, and rock outcroppings.

Policy 9.1.4: Streetscapes and major roadways. In the acquisition, design, construction, or significant modification of major roadways (highways/regional routes and arterial streets), the city will promote the creation of "streetscapes" and linear scenic parkways or corridors that promote the city's visual quality and character, enhance nearby uses, and integrate roadways with surrounding districts. To accomplish this, the city will:

A. Establish streetscape design standards for major roadways.

B. Encourage the creation and maintenance of median planters and widened parkway plantings.

C. Retain mature trees in the public right-of-way.

D. Emphasize the planting and maintenance of California native tree species of sufficient height, spread, form, and horticultural characteristics to create the desired streetscape canopy, shade, buffering from nearby uses, and other desired streetscape characteristics, consistent with the city's tree ordinance or as recommended by the tree committee or as approved by the architectural review commission.

E. Encourage the use of water-conserving landscaping, street furniture, decorative lighting and paving, arcaded walkways, public art, and other pedestrian-oriented features to enhance the streetscape appearance, comfort, and safety.

F. Encourage and, where possible, require undergrounding of overhead utility lines and structures.

Policy 9.2.1: Views to and from public places, including scenic roadways. The city will preserve and improve views of important scenic resources from public places and encourage other agencies with jurisdiction to do the same. Public places include parks, plazas, the grounds of civic buildings, streets and roads, and publicly accessible open spaces. In particular, the route segments shown in Figure 11 of the Conservation and Open Space Element are designated as scenic roadways.

A. Development projects will not wall off scenic roadways and block views.

B. Utilities, traffic signals, and public and private signs and lights will not intrude on or clutter views, consistent with safety needs.

C. Where important vistas of distant landscape features occur along streets, street trees will be clustered to facilitate viewing of the distant features.

D. Development projects, including signs, in the viewshed of a scenic roadway will be considered "sensitive" and require architectural review.

The General Plan Conservation and Open Space Element identifies scenic vistas within and next to the city. These vistas include but are not limited to

the southern edge of Laguna Lake looking to the northwest, the southeastern edge of the Irish Hills Natural Reserve looking to the northeast, and areas near Cuesta Park looking east (City of San Luis Obispo 2006, Figure 11).

The City of San Luis Obispo regulates tree removal within its jurisdiction. Certain tree species are afforded protections pursuant to city ordinances (Tree Ordinance Number 1664 2019 Series). The Tree Ordinance requires a permit from the city for the removal of any tree outside of the R-1 and R-2 residential zones.

Environmental Consequences

a) The project site is outside the cone of view for each of the city's designated vistas. The site is about 1.5 miles from the vista point, located at the southeastern edge of the Irish Hills Natural Reserve; however, views of the site from this point are partially obstructed by intervening vegetation and the existing Los Osos Valley Road/U.S. 101 interchange. Visual renderings of the project from the east, west, south, and north are shown in Figures 2-1 through 2-4. The project's proposed overcrossing and additional traffic signal or roundabout would be of similar dominance as the buildings, infrastructure, and urban vegetation in and around the project area. Therefore, the project would not have a substantial adverse effect on a scenic vista, and this impact would be less than significant.

b) The project site is not visible from the portion of State Route 1 that is designated as a state scenic highway, about 2.8 miles to the north. The project would not affect existing rock outcroppings or historic buildings, including the two historic structures recently relocated to the northeastern portion of the San Luis Ranch property. Limited removal of existing mature non-native trees may be required. However, such tree removal would not occur within view of a state scenic highway. Consequently, the project would not substantially damage scenic resources within view of a state scenic highway, and no impact would occur.

c) The Prado Road (Dalidio Drive) extension west of U.S. 101 would be built on existing agricultural land associated with the 131-acre San Luis Ranch property. However, the city-adopted San Luis Ranch Specific Plan accounts for the extension of Prado Road (Dalidio Drive) west of U.S. 101 and designates land along this extension for Neighborhood Commercial use (City of San Luis Obispo 2017a). Visual renderings of the project from the east, west, south, and north are shown in Figures 2-1 through 2-4. The project would not involve construction in visually prominent locations, such as ridgelines or hillslopes, that would substantially degrade the visual character of the site or its surroundings.

Figure 2-1 Visual Rendering from Prado Road looking west toward U.S. 101

Figure 2-2 Visual Rendering from Dalidio Drive looking east toward U.S. 101

Figure 2-3 Visual Rendering from U.S. 101 Northbound

Figure 2-4 Visual Rendering from U.S. 101 Southbound

The project would change views from Prado Road and U.S. 101, which are designated under the city's General Plan Circulation Element as having moderate and high scenic value, respectively. The project would result in a moderate-to-low resource change for viewers along Prado Road because it would generally be consistent with the scale of urban vegetation and agricultural land that contribute to the visual character. Similarly, the project would result in moderate to moderate-to-low visual impacts along U.S. 101 because the proposed overcrossing would be of a similar scale as other overcrossing structures along U.S. 101, and viewers would pass the overcrossing at a high rate of speed, minimizing exposure to the structure. The project would have a moderate-to-high level of resource change in areas along Dalidio Drive due to the construction of a new dominant infrastructural feature in a primarily agricultural location. However, Dalidio Drive is not designated as having moderate or high scenic value under the city's General Plan.

Aesthetic treatment may be required at all auxiliary structures, such as retaining walls and concrete barriers consistent with the Aesthetic Barrier Design guidance and the California Highway Barrier Aesthetics Report (Caltrans 2002). Design for auxiliary structures would be built consistent with the City of San Luis Obispo Community Design Guidelines. The design, placement, site features, and visual treatments would relate to building architecture and site topography. These elements would be of the same quality in design and materials as the surrounding infrastructure. Aesthetic treatments within the State Right-of-Way would be required to be reviewed and approved by Caltrans.

Project construction may require the removal of mature, native, and non-native trees, a key feature contributing to the visual character of the Prado Road corridor. The number of trees to be removed, trimmed, and/or have their critical root zones impacted by the project would be dependent on the final design of the project and construction access needs. In locations where qualifying tree removal is required, the city requires a tree removal permit and compensatory tree planting to meet the requirements of the city's tree ordinance. Removing trees would potentially conflict with General Plan Policies 9.1.1(B)(4) and 9.1.4(C). Required Avoidance, Minimization, and/or Mitigation Measures would reduce this impact to a less than significant level.

d) The project may involve the installation of street lighting and/or traffic signals. Given the largely developed nature of the project site and ample light sources along U.S. 101 and Prado Road, the project would not add substantial lighting that would adversely affect nighttime views in the area. The project would not involve elements that would generate large areas of reflective surfaces that would increase sources of daytime glare. Operational impacts related to light and glare would be less than significant.

Construction may require temporary lighting; construction light sources would include lighting during night work and lighting to illuminate pavement and

portals through overcrossing falsework. Construction lighting would be directed toward construction activities. Pursuant to Caltrans Standard Specifications, falsework lighting would be aimed to avoid glare to oncoming motorists (Caltrans 2018b). Given that construction lighting would be temporary in nature and directed to minimize glare or light trespass, this impact would be less than significant.

Avoidance, Minimization, and/or Mitigation Measures

The following mitigation measures for tree protection and replacement and landscape plan requirements would be required to reduce potential impacts to visual resources resulting from project implementation:

Mitigation Measure AES-1. Tree Protection and Replacement Plan. Before issuing grading or building permits, a Tree Protection and Replacement Plan will be prepared for the project based on the final grading and building plans. The Tree Protection and Replacement Plan will identify all trees within the project limits. The Tree Protection and Replacement Plan will stipulate that all trees not proposed for removal will be preserved and protected from harm during project construction activities (consistent with requirements of Mitigation Measure AES-2).

If, during the preparation of the Tree Protection and Replacement Plan, it is discovered that trees within the project study area must be removed, the Caltrans Design Engineer and District Landscape Architect will agree that tree removal is necessary before final approval of the project plans. Where trees are authorized by Caltrans for removal, they will be replaced with native or other horticulturally appropriate species suitable for the area at a minimum ratio of three new trees for each tree removed, as directed by the Caltrans District Landscape Architect. All replacement planting will include a minimum three-year plant establishment period.

The project specifications will include provisions requiring the protection of all trees as directed in this measure, and the cost estimate will include adequate funds for identified tree protection measures and tree replacement and maintenance measures, if necessary.

Mitigation Measure AES-2. **Tree Protection.** All qualifying trees within 25 feet of proposed ground disturbances that will be retained will be temporarily fenced with chain-link or other material throughout all grading and construction activities. The fencing shall be installed outside the dripline of each tree or as far from the trunk as is feasible while accommodating project construction and be shown in the Tree Protection and Replacement Plan. No construction equipment shall be staged, parked, or stored within the dripline of any qualifying tree. If project construction requires activities within the dripline of a tree that is proposed to be retained, an arborist shall be present during ground-disturbing work under the dripline.

Mitigation Measure AES-3. **Landscape Plan**. A landscape plan shall be developed by the city and approved by the District Landscape Architect before project approval. The landscape plan shall consist of plantings that offer a variety of colors, shapes, and species with an emphasis on drought-tolerant, native plant materials. The landscape plan shall include plantings along constructed walls and structures as well as benched and graded areas within the project corridor to soften visual changes and reduce the visual scale of new project features. Landscaping shall be overseen for a minimum period of two years or as determined by the District Landscape Architect.

2.1.2 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 the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Considering the information in the Farmland Conversion Impact Rating analysis dated September 2021, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Agriculture and Forest Resources
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?	**Less Than Significant Impact with Mitigation Incorporated**
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	**Less Than Significant Impact with Mitigation Incorporated**
c) Conflict with existing zoning, 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**

Question—Would the project:	CEQA Significance Determinations for Agriculture and Forest Resources
d) Result in the loss of forest land or conversion of forest land to non-forest use?	**No Impact**
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use?	**Less Than Significant Impact**

Affected Environment

The project site is in a portion of the City of San Luis Obispo that is largely built but contains some farmland. Much of the project site consists of existing roadways and highways, with nearby parcels zoned for public facilities, offices, and commercial space. However, the portion of the project site associated with the proposed Prado Road extension west of U.S. 101 to Dalidio Drive is on the 131-acre San Luis Ranch property. The portion of the project site associated with the proposed Elks Lane realignment is on a 12.5-acre agricultural property. These areas are designated as Prime Farmland under the City of San Luis Obispo General Plan Conservation and Open Space Element (City of San Luis Obispo 2006) and the 2016 San Luis Obispo County Important Farmland Map from the Farmland Mapping and Monitoring Program (California Department of Conservation 2016). The project site is not under a Williamson Act contract (City of San Luis Obispo 2006).

The San Luis Ranch property northwest of the project site is slated for development with commercial, residential, recreational, and agricultural land uses under the San Luis Ranch Specific Plan, approved by the city in 2017 (City of San Luis Obispo 2017a). The San Luis Ranch Specific Plan includes the Prado Road extension to Dalidio Drive; parcels next to the roadway are zoned C-N-SP (Neighborhood Commercial – Specific Plan) and AG-SP (Agricultural – Specific Plan) (City of San Luis Obispo 2017a).

Environmental Consequences

a, b) Portions of the project site include areas zoned for agricultural production, although these areas are not under a Williamson Act contract. The project would result in the direct conversion of about 1.25 acres of existing prime agricultural land to transportation use to accommodate the extension of Prado Road west of U.S. 101 to Dalidio Drive. The extension of Prado Road may also split about 4 acres of agricultural land in the northeastern corner of the San Luis Ranch property between the proposed Prado Road extension and U.S. 101 from the remainder of the San Luis Ranch property. This may result in an indirect conversion of these 4 acres of prime agricultural land. In addition, depending on the alternative selected, the realignment of Elks Lane may result in the conversion of about 2.6 acres of

prime agricultural land on a 12.5-acre property east of the Sunset Drive-In property. As a result, the project could result in the conversion of a total of up to about 7.85 acres of prime farmland, including 5.25 acres (4 percent) of prime farmland on the San Luis Ranch property and 2.6 acres (21 percent) of prime farmland on the property east of the Sunset Drive-In. The direct and indirect farmland conversion impacts for each project alternative are shown in Table 1 below.

In Table 1 below, Alternatives A3 and A7 include Options 1 and 2 for Elks Lane realignment; Option 1 would result in no farmland impacts, and Option 2 would result in direct farmland conversion.

Table 1 Project Alternatives Farmland Impacts

Project Element	Alternative A1R	Alternative A3	Alternative A4R	Alternative A7
Prado Road/Dalidio Road Connection Direct Conversion	1.25 acres	1.25 acres	1.25 acres	1.25 acres
Prado Road/Dalidio Road Connection Indirect Conversion	4 acres	4 acres	4 acres	4 acres
Elks Lane Realignment Direct Conversion	2.6 acres	0 or 2.6 acres	0 acre	0 or 2.6 acres
Elks Lane Realignment Indirect Conversion	0 acre	0 acre	0 acre	0 acre
Total Farmland Conversion	7.85 acres	5.25 or 7.85 acres	5.25 acres	5.25 or 7.85 acres

The project would not change the zoning or prevent agricultural production on the parcels next to the proposed Prado Road extension and Elks Lane realignment.

The San Luis Ranch Project Final Environmental Impact Report, certified by the City of San Luis Obispo in 2017, assesses the potential impacts on agricultural land associated with the build-out of the San Luis Ranch Specific Plan, including the Prado Road extension to Dalidio Drive (City of San Luis Obispo 2017b). The certified San Luis Ranch Project Final Environmental Impact Report includes Mitigation Measure AG-1, which requires 1 acre of agricultural land of comparable productivity to be preserved in perpetuity for every acre of Important Farmland on the San Luis Ranch property—including Prime Farmland, Farmland of Statewide Importance, and Unique Farmland—that is permanently converted to nonagricultural use as a result of Specific Plan development. The Prado Road extension was included as a project component in the San Luis Ranch Project Final Environmental Impact Report;

therefore, the Prado Road extension portion of this project would be required to comply with Mitigation Measure AG-1 from the San Luis Ranch Project Final Environmental Impact Report. This measure ensures consistency with Policy 8.6.3C of the city's General Plan Conservation and Open Space Element, which states that for widespread habitat type or farmland impacts, mitigation shall consist of permanently protecting an equal area of equal quality, which does not already have permanent protection, in the San Luis Obispo Planning Area (City of San Luis Obispo 2017a). Similarly, this Initial Study includes required Avoidance, Minimization, and/or Mitigation Measures, which would reduce this impact to a less than significant level.

c, d) There is no land zoned for forest land, timberland, or timberland production within or next to the project alignment. The project would not result in the direct or indirect conversion of forest land to non-forest use. No impact would occur.

e) The project would introduce new access to the San Luis Ranch property west of U.S. 101. The build-out of the San Luis Ranch Specific Plan would convert about 56 of the 109 acres (51 percent) of agricultural land on the property to nonagricultural land uses. The remaining 53 acres of agricultural land on the San Luis Ranch property, which is next to U.S. 101 and the western portion of the project site, would remain in agricultural production.

As described under checklist items (a) and (b), the San Luis Ranch Project Final Environmental Impact Report evaluates impacts to agricultural resources associated with the build-out of the San Luis Ranch Specific Plan, including the proposed extension of Prado Road, and concludes that such impacts would be less than significant with mitigation incorporated.

Mitigation Measure AG-1 under the San Luis Ranch Project Final Environmental Impact Report calls for each acre of Important Farmland converted in the Specific Plan Area to be offset by the preservation of an acre of land of comparable agricultural productivity in perpetuity. This includes farmland on the site that would be converted either directly or indirectly by the U.S. 101/Prado Road Interchange project. Therefore, compliance with existing requirements would ensure that the project would not result in any additional conversion of farmland to nonagricultural use not already addressed in the San Luis Ranch Project Final Environmental Impact Report. Consequently, this impact would be less than significant.

Avoidance, Minimization, and/or Mitigation Measures

The following mitigation measure for the conservation of Important Farmland would be required to reduce potential impacts to agricultural resources resulting from project implementation:

Mitigation Measure AG-1. Agricultural Conservation. The city shall provide that for every 1 acre of Important Farmland (Prime Farmland,

Farmland of Statewide Importance, and Unique Farmland) on the site that is permanently converted to non-agricultural use as a result of the Elks Lane realignment, one (1) acre of comparable land in agricultural production shall be preserved in perpetuity. The land dedicated to agriculture pursuant to this measure shall be of the size, location, and configuration appropriate to maintain a viable, working agricultural operation. Said mitigation shall be satisfied through:

- Granting a perpetual conservation easement(s), deed restriction(s), or other farmland conservation mechanism(s) to a qualified conservation organization that has been approved by the city, or establishing a perpetual conservation easement(s) or deed restriction(s) held by the city or other farmland conservation mechanism(s), for the purpose of permanently preserving agricultural land. The land covered by said onsite and/or offsite easement(s) or deed restriction(s) shall be located within or contiguous to the city's Urban Reserve Line or Greenbelt, subject to review and approval of the city's Natural Resources Manager; or
- Making an in-lieu payment to the City of San Luis Obispo's Open Space Fund to be applied toward the future purchase of a perpetual conservation easement(s) or deed restriction(s) held by the city or other farmland conservation mechanism(s), for the purpose of permanently preserving agricultural land. The land covered by said onsite and/or offsite easement(s) or deed restriction(s) shall be located within or contiguous to the city's Urban Reserve Line or Greenbelt, subject to review and approval of the city's Natural Resources Manager. The amount of the payment shall be sufficient to conserve similar land on a per acre basis, as determined by a licensed appraiser; or
- Making an in-lieu payment to a qualified conservation organization that has been approved by the city and that is organized for conservation purposes, to be applied toward a future purchase of comparable agricultural land, or a perpetual conservation easement, deed restriction, or other farmland conservation mechanism to preserve the required amount of agricultural land in San Luis Obispo County. The amount of the payment shall be sufficient to conserve similar land on a per acre basis, as determined by the qualifying entity or a licensed appraiser; or
- Any combination of the above.

2.1.3 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.

Considering the information in the Air Quality and Greenhouse Gas Technical Study dated September 2021, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Air Quality
a) Conflict with or obstruct implementation of the applicable air quality plan?	**No Impact**
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?	**Less Than Significant Impact with Mitigation Incorporated**
c) Expose sensitive receptors to substantial pollutant concentrations?	**Less Than Significant Impact with Mitigation Incorporated**
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	**Less Than Significant Impact**

Affected Environment

The City of San Luis Obispo is in the South Central Coast Air Basin, which is under the jurisdiction of the San Luis Obispo County Air Pollution Control District. The San Luis Obispo County Air Pollution Control District (District) monitors air pollutant levels to assure that air quality standards are met, and if they are not met, develops strategies to meet the standards. Depending on whether the standards are met or exceeded, the air basin is classified as being in “attainment” or as “non-attainment.” The County of San Luis Obispo is designated non-attainment for the State 1-hour and 8-hour ozone standard in addition to the state standard for fugitive particulate matter with diameters of 10 micrometers and smaller (PM10 or fugitive dust). The eastern portion of the County is also designated as non-attainment for the federal 8-hour ozone standard; however, the project is located in western San Luis Obispo County. Thus, this designation does not apply to the project location. The County is unclassified or in attainment for all other criteria pollutants under the National Ambient Air Quality Standards and California Ambient Air Quality Standards (San Luis Obispo County Air Pollution Control District 2019).

The major sources of fugitive dust in the South Central Coast Air Basin are agricultural operations, vehicle dust, grading, and dust produced by high winds. Additional sources of particulate pollution include diesel exhaust; mineral extraction and production; combustion products from industry and motor vehicles; smoke from wildfires and open burning; paved and unpaved roads; condensation of gaseous pollutants into liquid or solid particles; and wind-blown dust from soils disturbed by demolition and construction, agricultural operations, off-road vehicle recreation, and other activities. Ozone is a secondary pollutant that is formed by a reaction between nitrogen oxides and reactive organic gases in the presence of sunlight. Therefore, ozone levels are dependent on the amount of these precursors. In the South Central Coast Air Basin, the major sources of reactive organic gases are motor vehicles, organic solvents, petroleum production, and pesticides. The major sources of nitrogen oxides are motor vehicles, public utility power generation,

and fuel combustion by various industrial sources (San Luis Obispo County Air Pollution Control District 2001).

Construction Emissions Thresholds

The district has developed specific daily and quarterly quantitative thresholds that apply to projects within the South Central Coast Air Basin. Daily thresholds are for projects that would be completed in less than one quarter (90 days). Quarterly thresholds are applicable to the project because construction would last for more than one quarter. The applicable thresholds from the District's CEQA Air Quality Handbook (2012) and 2017 Clarification Memorandum are shown in Table 2 and described below.

Table 2 San Luis Obispo County Air Pollution Control District Significance Thresholds for Project-Level Construction Impacts

Pollutant	Daily (Pounds per Day)	Quarterly Tier 1 (Tons per Quarter)	Quarterly Tier 2 (Tons per Quarter)
Ozone Precursors (Reactive Organic Gases Plus Nitrogen Oxides)	137	2.5	6.3
Diesel Particulate Matter ($PM_{2.5}$)	7	0.13	0.32
Fugitive Particulate Matter (PM_{10})	None	2.5	None

Source: San Luis Obispo County Air Pollution Control District 2012.

Ozone Precursors Construction Emissions Thresholds

As of October 2016, the District has determined that projects shall implement Standard Mitigation Measures anytime a construction project exceeds the 137 pounds per day threshold, regardless of whether or not the duration of construction is over 90 days (1 quarter). In addition, the District requires Standard Fugitive Dust Mitigation Measures if a project has a grading area greater than 4 acres or is within 1,000 feet of any sensitive receptor (San Luis Obispo County Air Pollution Control District 2012 and 2017).

- Quarterly–Tier 1. For construction projects, exceeding the 2.5 ton/quarter threshold requires standard mitigation measures and best available control technology for construction equipment. Offsite mitigation may be required if feasible mitigation measures are not implemented or if no mitigation measures are feasible for the project; and
- Quarterly–Tier 2. For construction projects exceeding the 6.3 ton/quarter threshold, Standard Mitigation Measures, Best Available Control Technology, implementation of a Construction Activity Management Plan and offsite mitigation are required.

Diesel Particulate Matter ($PM_{2.5}$) Construction Emissions Thresholds

- Quarterly–Tier 1. For construction projects lasting more than one quarter, exceeding the 0.13 tons per quarter threshold requires standard mitigation measures, best available control technology for construction equipment; and
- Quarterly–Tier 2. For construction projects lasting more than one quarter, exceeding the 0.32 ton per quarter threshold requires standard mitigation measures, best available control technology, implementation of a Construction Activity Management Plan, and offsite mitigation.

Fugitive Particulate Matter (PM_{10}) Dust Construction Emissions Thresholds

- Quarterly: Exceeding the 2.5 tons per quarter threshold requires Fugitive Particulate Matter Mitigation Measures and may require the implementation of a Construction Activity Management Plan.

Sensitive Receptors

Ambient air quality standards have been established to represent the levels of air quality considered sufficient, with an adequate margin of safety, to protect public health and welfare. They are designed to protect that segment of the public most susceptible to respiratory distress. Certain population groups are considered more sensitive to air pollution than others. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardio-respiratory diseases. Residential uses are also considered sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Nearby sensitive receptors include existing residential land uses east of the project site and approved but not-yet-constructed residential land uses west of the project site, the closest of which have property boundaries approximately 700 feet from the edge of the Project Intersection.

Methodology

The district recommends the use of the most recent version of the California Emissions Estimator Model (version 2020.4.0) to estimate the construction and operational emissions of a project. The emissions model for the project was based on the construction of a Prado Road extension over U.S. 101 to connect with Dalidio Drive in the City of San Luis Obispo. The model also included the reconstruction of the existing U.S. 101 northbound ramp on and off-ramp connections to Prado Road to provide congestion relief, operational efficiency, and multimodal connectivity.

To conservatively estimate the potential air pollutant emissions generated by the project, the emissions modeling accounts for the maximum potential build-out and project footprint among the various alternatives' designs. As discussed in Section 1.4.1, Build Alternatives, and shown in Figure 1-3 through Figure 1-6, all Build Alternatives would occur in the same general

area and would include the extension of Prado Road/Dalidio Drive to the intersection of Froom Ranch Road/Dalidio Drive, realignment of Elks Lane east of U.S. 101, a new northbound U.S. 101 auxiliary lane between the Prado Road northbound on-ramp and the Madonna Road northbound off-ramp, and a Midwest Guardrail System next to the proposed northbound U.S. 101 auxiliary lane's outside shoulder.

Construction is expected to start during 2026 and be completed in 2029. As a conservative estimate based on the current alternative designs for the project, the analysis anticipates that up to 325,000 cubic yards of fill material would be imported (hauled) to the site for the development of the project, depending on the Project alternative selected. The analysis used California Emissions Estimator Model default values for the construction schedule and equipment generated based on the maximum potential area of development input into the model. In addition, the district Standard Fugitive Dust mitigation measures are included in the model since the grading area exceeds 4 acres, and the project is within 1,000 feet of sensitive receptors. The California Emissions Estimator Model results are included in the Air Quality and Greenhouse Gas Technical Study.

Although the project would improve traffic flow and reduce idling time, the project would not involve the construction of additional vehicle lanes or increase the capacity of the existing interchange. As a result, the project would not involve any operational changes or other activities with the potential to result in long-term emissions; therefore, no analysis of operational emissions is included. (Refer to Section 2.1.17, Transportation, for a detailed discussion of the expected traffic volume reductions that would result from project implementation).

Environmental Consequences

a) The District adopted the 2001 Clean Air Plan in 2002. The 2001 Clean Air Plan is a comprehensive planning document that is intended to provide evidence to the District and other local agencies, including the city, on how to attain and maintain the State standards for ozone and fugitive particulate matter (PM_{10}). The 2001 Clean Air Plan presents a detailed description of the sources and pollutants which impact the jurisdiction, future air quality impacts to be expected under current growth trends, and an appropriate control strategy for reducing ozone precursor emissions, thereby improving air quality.

The District identifies significant impacts related to consistency with the 2001 Clean Air Plan by determining whether a project would exceed the population projections used in the Clean Air Plan for the same area, whether the vehicle trips and vehicle miles traveled generated by the project would exceed the rate of population growth for the same area, and whether applicable land use management strategies and transportation control measures from the Clean Air Plan have been included in the project to the maximum extent feasible.

Project Implementation would not induce direct or indirect population growth. The proposed interchange configuration is designed to improve traffic flow and vehicle speeds and would not involve increases in idling. One of the considerations in evaluating induced travel is a project's effect on land use that could occur as a result of the project. The proposed project would not result in land use development that would lead to induced travel. As discussed in detail in Section 2.1.17, Transportation, the proposed overcrossing would provide a more direct route through the city, resulting in a net overall reduction in daily Vehicle Miles Traveled in the city and at the regional level. Therefore, the project would be consistent with applicable transportation control measures in the Clean Air Plan by allowing more efficient travel in the area. Overall, the project would not conflict with the 2001 Clean Air Plan, and there would be no impacts.

b) Temporary construction activities associated with the project would generate fugitive dust, ozone precursor emissions, and diesel exhaust emissions, which would contribute to the existing San Luis Obispo County State non-attainment status for ozone and fugitive particulate matter. Table 3 shows the estimated maximum daily and quarterly emissions during construction (based on the maximum potential build-out and project footprint among the various alternatives' designs).

Table 3 Potential Construction Emissions

Scenario	Project Emissions	Significance Threshold	Exceeds Threshold?
Maximum Daily Emissions of Reactive Organic Gases plus Nitrogen Oxides	62	137 pounds per day	No
Maximum Daily Diesel Particulate Matter Emissions	1	7 pounds per day	No
Maximum Quarterly Emissions of Reactive Organic Gases plus Nitrogen Oxides	1.7	Tier 1: 2.5 tons per quarter Tier 2: 6.3 tons per quarter	No
Maximum Quarterly Emissions of Diesel Particulate Matter	0.01	Tier 1: 0.13 tons per quarter Tier 2: 0.32 tons per quarter	No
Maximum Quarterly Emissions of Fugitive Particulate Matter (PM_{10})	0.1	Tier 1: 25 tons per quarter Tier 2: none	No

Source: Attachment 1 for California Emissions Estimator Model.

The primary pollutants associated with project construction would be windblown dust and diesel exhaust generated during construction, hauling, and various other activities. As shown in Table 3, project construction would not exceed the 137 pounds per day threshold for ozone precursors (combined Reactive Organic Gases plus Nitrogen Oxides) emissions, nor would it

exceed the Tier 1 quarterly emissions thresholds for ozone precursors, diesel particulate matter, and fugitive particulate matter.

Caltrans Standard Specifications pertaining to dust control are required for all project construction activities. The provisions of Caltrans Standard Specifications, Section 14-9.02 “Air Pollution Control” and Section 14-9.03 “Dust Control” require the contractor to comply with applicable District rules, ordinances, and regulations. Therefore, District fugitive dust control measures would be required.

In addition, as described above under Methodology and detailed in Section 2.1.17, Transportation, the project would not involve any operational changes or other activities with the potential to result in long-term emissions. Rather, the project would result in reduced vehicle miles traveled and associated air pollutant emissions. Therefore, the project would have less than significant operational impacts.

c) A carbon monoxide hot spot analysis for a project is required if the area is classified as federal “non-attainment” or “maintenance” for carbon monoxide and/or diesel particulate matter or fugitive particulate matter. On March 10, 2006, the U.S. Environmental Protection Agency published a final rule that establishes the transportation conformity criteria and procedures for determining which transportation projects must be analyzed for local air quality impacts in diesel particulate matter and fugitive particulate matter federal non-attainment and maintenance areas. The project is located in the South Central Coast Air Basin, which is classified as a non-attainment-transitional area for the State standard for fugitive particulate matter. The San Luis Obispo County portion of the South Central Coast Air Basin is in attainment of the State standards for carbon monoxide and is unclassified for the State standard for diesel particulate matter. According to the U.S. Environmental Protection Agency’s Transportation Conformity Guidance, $PM_{2.5}$ hot-spot analysis is required for Projects of Air Quality Concern in federal non-attainment areas (Code of Federal Regulations Title 40 93.123 [b][1]). Projects that are exempt or not Projects of Air Quality Concern do not require hot-spot analyses. Because the project is not in a federal non-attainment area, the project does not require a hot-spot analysis. In addition, the project is exempt from regional conformity requirements pursuant to the Code of Federal Regulations Title 40 93.127.

The project is an interchange configuration project that is designed to improve traffic flow and vehicle speeds and would not involve increases in idling. As a result, the project is not of Air Quality Concern under 40 Code of Federal Regulations 93.123(b)(1)(i) and (ii) and does not require a hot spot analysis.

In accordance with the District CEQA Air Quality Handbook, standard mitigation measures for localized construction impacts on nearby sensitive receptors are required because there are sensitive receptors located within

1,000 feet of the project site (residential uses within approximately 700 feet), development of the project site would involve grading more than 4 acres, and because the South Central Coast Air Basin is in a State non-attainment area for fugitive particulate matter. Required Avoidance, Minimization, and/or Mitigation Measures would reduce this impact to a less than significant level.

d) During construction, the project would generate odors associated with diesel exhaust, paving, and painting. However, these emissions would be temporary and typical of construction activities. The District CEQA Air Quality Handbook (2012) identifies typical land uses that have the potential to result in odorous emissions and provides recommendations for siting new sensitive land uses near these uses. The project is not considered a significant odor source according to the CEQA Air Quality Handbook. Therefore, the project would not result in significant objectionable odors that would impact a substantial number of people.

Avoidance, Minimization, and/or Mitigation Measures

Mitigation Measure AQ-1. Fugitive Dust Control Measures. Construction projects shall implement the following dust control measures to reduce fugitive particulate matter emissions in accordance with District requirements. All fugitive dust mitigation measures shall be shown on grading and building plans:

- Reduce the amount of the disturbed area where possible;
- Water trucks or sprinkler systems shall be used during construction in sufficient quantities to prevent airborne dust from leaving the site. Increased watering frequency shall be required whenever wind speeds exceed 15 miles per hour. Reclaimed (non-potable) water shall be used whenever possible;
- All dirt stockpile areas shall be sprayed daily as needed;
- Permanent dust control measures identified in the approved project revegetation and landscape plans shall be implemented as soon as possible following completion of any soil disturbing activities;
- Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading shall be sown with a fast germinating, non-invasive grass seed and watered until vegetation is established;
- All disturbed soil areas not subject to revegetation shall be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the San Luis Obispo County Air Pollution Control District;
- All roadways, driveways, sidewalks, and other areas to be paved shall be completed as soon as possible after grading unless seeding or soil binders are used;
- Vehicle speed for all construction vehicles shall not exceed 15 miles per hour on any unpaved surface at the construction site;

- All trucks hauling dirt, sand, soil, or other loose materials are to be covered or shall maintain at least 2 feet of freeboard (minimum vertical distance between the top of load and top of trailer) in accordance with California Vehicle Code Section 23114;
- Install wheel washers where vehicles enter and exit unpaved roads onto streets or wash off trucks and equipment leaving the site;
- Sweep streets at the end of each day if visible soil material is carried onto nearby paved roads. Water sweepers with reclaimed water shall be used where feasible;
- The contractor or builder shall designate a person or persons to monitor fugitive dust emissions and enhance the implementation of the measures as necessary to minimize dust complaints, reduce visible emissions below 20 percent opacity, and to prevent the transport of dust offsite. Their duties shall include holidays and weekend periods when work may not be in progress.

2.1.4 Biological Resources

Considering the information in the Natural Environment Study dated October 2021, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Biological Resources
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or National Oceanic and Atmospheric Administration Fisheries?	**Less Than Significant Impact with Mitigation Incorporated**
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	**Less Than Significant Impact with Mitigation Incorporated**
c) 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?	**Less Than Significant Impact**
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	**Less Than Significant Impact with Mitigation Incorporated**

Question—Would the project:	CEQA Significance Determinations for Biological Resources
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	**Less Than Significant Impact with Mitigation Incorporated**
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**

Affected Environment

The Area of Potential Impact for this project regarding biological resources is defined as the maximum amount of potential disturbance area for both temporary and permanent impacts and is extensive enough to include all proposed alternatives and project components, including traffic, lane, and shoulder modifications, subject roads, and city and Caltrans rights-of-way. The Biological Study Area for this project was established based on an aerial review of the Area of Potential Impact and adds a 50-foot buffer.

Biological field surveys were conducted on July 27, 2018, April 7, 2021, and August 4, 2021. These surveys were designed to assess habitat suitability for special-status species, characterize and map habitats, natural communities, and land cover types, map potentially jurisdictional features, and develop an inventory of all plant and animal species detected within the Biological Study Area.

Queries of the U.S. Fish and Wildlife Service Information for Planning and Consultation system, California Department of Fish and Wildlife California Natural Diversity Database, National Marine Fisheries Service species lists, and California Native Plant Society Online Inventory of Rare and Endangered Plants were conducted to obtain comprehensive information regarding State and federally listed and other special-status species considered to have potential to occur within the Biological Study Area, the San Luis Obispo, California U.S. Geological Survey 7.5-minute topographic quadrangle, and the surrounding eight quadrangles.

The city regulates tree removal within its jurisdiction. Certain tree species are afforded protections pursuant to city ordinances (Tree Ordinance Number 1664 2019 Series). The city tree ordinance requires permits from the city for the removal of any tree, except for the removal of a tree within R-1 and R-2 residential zones.

Environmental Consequences

a) Special-Status Plants

Two special-status plants were determined to have the potential to exist within the Biological Study Area based on their biological requirements

compared to existing site conditions and the range of each species. These species include Congdon's tarplant *(Centromadia parryi ssp. congdonii)* and black-flowered figwort (*Scrophularia atrata*). A field survey was conducted that coincided with blooming periods for these plants, and neither species was seen. No federal or state listed endangered, threatened, or rare plant species were seen within the Biological Study Area during the field survey. Therefore, no impacts to special-status plant species would occur.

Special-Status Animals

Nine special-status animal species may occur onsite based on the presence of suitable habitat. These species include the California red-legged frog (*Rana draytonii*), which is federally threatened and state species of special concern; South-Central California Coast Distinct Population Segment steelhead trout (*Oncorhynchus mykiss irideus*), which is federally endangered; white-tailed kite (*Elanus leucurus*), which is a fully protected species; ferruginous hawk (*Buteo regalis*) and Cooper's hawk (*Accipiter cooperii*), which are state watch list species; and purple martin (*Progne subis*), loggerhead shrike (*Lanius ludovicianus*), Coast Range newt *(Taricha torosa torosa),* and southwestern pond turtle (*Emys marmorata*), which are state species of special concern.

In addition to special-status wildlife species, the Biological Study Area has suitable habitat for a variety of common nesting bird species and raptors that are afforded protection under the California Fish and Game Code and/or Migratory Bird Treaty Act.

No state or federally listed or otherwise sensitive animal species were observed within the Biological Study Area during the field survey.

California Red-Legged Frog Impacts

The Biological Study Area was assessed for the potential to support the California red-legged frog based on the habitats present within and next to the Biological Study Area, as well as an occurrence approximately 0.5 mile south of the Biological Study Area. The project site is within the known range of the California red-legged frog in San Luis Obispo County, based on the current range depicted in the U.S. Fish and Wildlife Service Recovery Plan for the California red-legged frog (USFWS, 2002). Federally designated critical habitat for the California red-legged frog has also been identified in the vicinity and is located approximately 0.65 mile north of the Biological Study Area.

San Luis Obispo Creek, within the northeast corner of the Biological Study Area, contains potentially suitable breeding habitat for the California red-legged frog. The arroyo willow thicket lining the creek is considered suitable habitat for juvenile dispersal and foraging adults. However, the western bank is heavily incised, limiting access for dispersal. In addition, steep concrete slope protection was seen along the western bank of the creek in the northeastern corner of the Biological Study Area. The slope protection runs from the ordinary

high-water mark to the top of the bank. The western side of San Luis Obispo Creek within the Biological Study Area is also not suitable dispersal habitat due to the presence of the highway, lack of vegetation cover, compacted road shoulder and pavement, and heavy, fast-moving vehicular traffic.

The only areas with suitable dispersal habitat for the California red-legged frog are lower on the bank, where there may be sufficient vegetation cover and soil moisture. The Biological Study Area does not currently contain suitable breeding habitat for the California red-legged frog. Currently, no areas of potential pooling of standing water of sufficient depth to support California red-legged frog breeding are present within the Biological Study Area. However, potential California red-legged frog breeding habitat may occur further upstream or downstream in the creek.

In addition, one human-made pond associated with the city Water Resource Recovery Facility occurs in the southeastern portion of the Area of Potential Impact. While water within the pond could provide potentially suitable habitat for the California red-legged frog, the concrete wall surrounding the pond creates a barrier that would prevent the California red-legged frog from entering. Therefore, it is unlikely that the pond would provide habitat for the California red-legged frog or that the species would occur within it.

Because the project would disturb more than 1 acre of land, it would be subject to the National Pollutant Discharge Elimination System General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order Number 2012-0006-DWQ) adopted by the State Water Resources Control Board (Water Board). Compliance with the permit requires the project applicant to file a Notice of Intent with the Water Board. Permit conditions require the preparation of a Stormwater Pollution Prevention Plan. The Stormwater Pollution Prevention Plan will describe the site, the facility, erosion and sediment controls, runoff water quality monitoring, means of waste disposal, implementation of approved local plans, construction sediment and erosion control measures, maintenance responsibilities, and non-stormwater management controls. Inspection of construction sites before and after storms is also required to identify stormwater discharge from the construction activity and to identify and implement erosion controls, where necessary.

Impacts to water quality would be avoided with spill prevention and mandatory erosion control measures determined suitable for the proposed project in the required Stormwater Pollution Prevention Plan. Although the project would add an auxiliary lane and remove one 3-inch diameter at breast height arroyo willow next to the west bank of San Luis Obispo Creek, the project would not impact the California red-legged frog because the work areas are not considered suitable breeding, foraging or dispersal habitat. Therefore, no dispersing juveniles or foraging adults are expected to occur in affected locations next to the west bank of San Luis Obispo Creek.

Potential impacts to the California red-legged frog would require Avoidance, Minimization, and/or Mitigation Measures to reduce to a less than significant level.

Coast Range Newt Impacts

The project site is within the known range of the Coast Range newt, and one occurrence has been documented within a 3-mile radius of the Biological Study Area. The arroyo willow thicket on the terrace above the west bank of San Luis Obispo Creek is considered suitable upland habitat for foraging and aestivation, although the species was not observed during the field survey. The project would not result in substantial loss or fragmentation of Coast Range newt habitat. Direct impacts to this species could occur if it is present onsite during construction activities. Given that this species is an amphibian that uses similar habitats to the California red-legged frog, implementing the mitigation measures provided for the California red-legged frog are suitable and appropriate for this species as well.

Therefore, potential direct and indirect impacts to this species resulting from project implementation would require Avoidance, Minimization, and/or Mitigation Measures to reduce to a less than significant level.

Southwestern Pond Turtle Impacts

The Biological Study Area occurs within the known range of the southwestern pond turtle, and there are four occurrences of this species documented by the California Natural Diversity Database records within a 3-mile radius of the Biological Study Area. San Luis Obispo Creek provides suitable habitat as it supports aquatic vegetation and exposed banks for basking. The arroyo willow thicket lining San Luis Obispo Creek provides suitable nesting habitat for this species. No southwestern pond turtles were observed during the field surveys.

The project would not result in substantial loss or fragmentation of southwestern pond turtle habitat. Habitat for this species is not expected to be affected because both channels and arroyo willow thicket immediately lining the channels occur outside the Area of Potential Impact. Due to the nearby freeway and ground disturbance, this species is not expected to occur on the western edge of the thicket where the individual tree will be removed. In addition, due to the high degree of disturbance associated with the remainder of the site, this species is not expected to overwinter within the proposed disturbance area. This species is only expected to occur incidentally, if at all if individuals move through the site during the wet season due to the proximity of the project site to potentially suitable aquatic habitat. Potential impacts to the southwestern pond turtle would require Avoidance, Minimization, and/or Mitigation Measures to reduce to a less than significant level.

South-Central California Coast Steelhead Trout Impacts

The field surveys identified suitable habitat for South-Central California Coast steelhead trout (steelhead) within the San Luis Obispo Creek stream channel; however, no steelheads were seen. The project would not require work in San Luis Obispo Creek; therefore, the project would not result in direct take of steelhead, including harm or harassment. The project does not include construction within the stream channel itself. However, indirect impacts to steelhead could result from accidental release of sediment or spills of wet concrete, chemicals, or oil if the spills reach occupied habitat. Potential indirect impacts would be avoided using spill prevention and erosion control measures required for the proposed project through the implementation of the Stormwater Pollution Prevention Plan. Potential indirect project-related impacts to this species as well as potential impacts to San Luis Creek from potential invasive species introduction would require Avoidance, Minimization, and/or Mitigation Measures to reduce to a less than significant level.

Designated Critical Habitat for Steelhead Impacts and Mitigation

The project would not result in substantial loss or fragmentation of steelhead federally designated critical habitat. All project-related disturbances would occur outside the banks of the creek and no overhanging vegetation would be impacted. As such, direct impacts to federally designated critical habitat would not occur, and the project will not result in permanent shading of federally designated steelhead critical habitat within San Luis Obispo Creek. Indirect impacts to steelhead critical habitat could occur as a result of general project-related disturbance, water quality issues, or if a spill containing water quality contaminants occurs within the Biological Study Area during construction of the project. Potential indirect project-related impacts to this species would require Avoidance, Minimization, and/or Mitigation Measures to reduce to a less than significant level.

Ferruginous Hawk, Cooper's Hawk, Purple Martin, Loggerhead Shrike, White-Tailed Kite, And Other Nesting Birds Impacts

Suitable habitats for birds protected by the Migratory Bird Treaty Act and raptors protected under California Fish and Game Code (as discussed above) occur within and next to the Biological Study Area. No avian nests or individuals were detected during the field surveys. Although potentially suitable nesting habitat is present for raptors, foraging habitat is limited within the Biological Study Area due to existing development and transportation corridors. Regular cultivation and other agricultural practices within the western portion of the Biological Study Area generally eliminate habitat for burrowing animals such as small mammals, which are a common prey base for raptors. Accordingly, the project would not result in significant loss or fragmentation of nesting bird habitat.

Potential direct impacts could occur to resident, migratory, and raptor species if nests are present within the Biological Study Area during construction.

Indirect impacts to nesting birds could result from general project-related disturbance and noise if nesting pairs are present within the Biological Study Area during implementation. Potential project-related impacts to nesting bird species would require Avoidance, Minimization, and/or Mitigation Measures to reduce to a less than significant level.

Invasive Species Impacts

Sixteen invasive species were seen in the Biological Study Area during the field surveys. Many of the invasive species in the study area are present as part of intentionally planted landscaping. However, once established, such species can proliferate and spread into natural areas. Some species can also regenerate from root and stem fragments. Ground disturbance in the Biological Study Area and removal of existing, invasive, non-native plant species could result in the spread of these species into new areas. Non-native plants can out-compete native species and/or alter habitat toward a state that is unsuitable for special-status species.

For example, the spread of certain weed species can reduce the biodiversity of native habitats through the displacement of vital pollinators, potentially eliminating special-status plant species. There is potential for the project to result in the spread of invasive plant species. Required Avoidance, Minimization, and/or Mitigation Measures would reduce this impact to a less than significant level.

b) Potentially jurisdictional features within the Biological Study Area were evaluated during the field surveys to record existing conditions and determine the limits of jurisdiction. The extent of potential California Department of Fish and Wildlife jurisdiction was delineated by reviewing the topography and morphology of potentially jurisdictional features to determine the outer limit of riparian vegetation, where present, or the top of banks for stream features lacking riparian vegetation, to identify streams potentially subject to Section 1600 et seq. of the California Fish and Game Code. The topography and morphology of potentially jurisdictional features were also reviewed to determine the outer limit of the top of the stream banks for additional areas that the Regional Water Quality Control Board may regulate under the Porter-Cologne Act.

No evidence of wetlands subject to regulation by the U.S. Army Corps of Engineers was seen in the Biological Study Area during field surveys. Other waters subject to U.S. Army Corps of Engineers and Regional Water Quality Control Board jurisdictions are confined to the reach of San Luis Obispo Creek bordering the northeastern side of the Biological Study Area confined to the Ordinary High Water Mark pursuant to the Clean Water Act and conservatively to the top of the bank pursuant to the Porter-Cologne Act.

The San Luis Obispo streambed and streambank habitats up to the top of the bank, as well as riparian vegetation to the outer dripline of the riparian

community, are subject to the jurisdiction of the California Department of Fish and Wildlife pursuant to Section 1600 et seq. of the California Fish and Game Code. San Luis Obispo Creek has defined bed and banks, supports wildlife within and outside the Biological Study Area, and maintains a direct connection to the Pacific Ocean and, therefore, falls under the jurisdiction of the California Department of Fish and Wildlife. The bed and banks associated with San Luis Obispo Creek occur outside the Biological Study Area; however, approximately 0.79 acre of associated riparian habitat subject to the California Department of Fish and Wildlife's permitting authority under Section 1600 et seq. of the California Fish and Game Code occurs within the Biological Study Area.

Impacts from the implementation of the proposed project would include the removal of one arroyo willow tree with a diameter at breast height of three inches, resulting in a permanent impact to 0.02 acre of the 0.79-acre California Department of Fish and Wildlife jurisdictional area. The tree removal is required to accommodate work associated with the northbound U.S. 101 auxiliary lane.

The project also has the potential to result in accidental sediment release into San Luis Obispo Creek or accidental release of construction-related chemicals to the creek. As discussed under checklist item (a), the project applicant would be required to prepare a Stormwater Pollution Prevention Plan including, but not limited to, a description of the site, erosion and sediment controls, runoff water quality monitoring, means of waste disposal, maintenance responsibilities, and non-stormwater management controls for the project.

The project would also require a Streambed Alteration Agreement because tree removal activities would take place within the California Department of Fish and Wildlife jurisdiction. In compliance with California Department of Fish and Wildlife requirements, the Streambed Alteration Agreement must detail the project location and description of the proposed work, the potential impacts of the project, and specific avoidance, minimization, and compensatory mitigation measures that will be undertaken to protect fish, wildlife, and plant resources. These measures may include but would not be limited to pre-activity surveys for sensitive species and nesting birds, contractor training, flagging of work limits, specific vegetation removal methodology, and installation of various Best Management Practices to address project-related pollutants and erosion.

Due to impacts to the 0.02-acre area of arroyo willow thicket habitat in the California Department of Fish and Wildlife jurisdictional area, a Habitat Mitigation and Monitoring Plan would be required. The required Habitat Mitigation and Monitoring Plan would provide for a 2:1 restoration ratio (2 acres of mitigation for every 1 acre of impacts) for permanent impacts unless otherwise directed by regulatory agencies. Replacement of the sensitive

habitat resource shall occur in the designated sensitive habitat mitigation portion of the Biological Study Area and must not inadvertently result in additional impacts to sensitive plant or wildlife species. In addition, all areas of temporary disturbance shall be stabilized and revegetated with an assemblage of native disturbance would be required for the Streambed Alteration Agreement permitting and stipulated in the Habitat Mitigation and Monitoring Plan to be stabilized vegetation suitable for the area. Anticipated activities that are associated with the implementation of the required Habitat Mitigation and Monitoring Plan include the application of native willow/ riparian seed mix and the removal of non-native weedy species within the habitat mitigation area. The final Habitat Mitigation and Monitoring Plan would be required to be implemented immediately after project completion and monitored throughout project construction and during the first year after completion.

The project will be required to follow the guidelines within the statewide stormwater National Pollutant Discharge Elimination System permit (Caltrans permit) for portions of the project within the Caltrans right-of-way. The City of San Luis Obispo's MS4 National Pollutant Discharge Elimination System permit will be followed in all other areas outside of the Caltrans right-of-way. This permit will include regulations pertaining to stormwater and non-stormwater discharges from Caltrans properties and facilities and discharges associated with the operation and maintenance of the State highway system. Construction Best Management Practices would be implemented in accordance with the Construction General Permit (Order Number 2009-0009-DWQ), which requires the development and implementation of a Stormwater Pollution Prevention Plan.

The Best Management Practices included in the Stormwater Pollution Prevention Plan may include but are not limited to the use of temporary de-silting basins, construction vehicle maintenance to avoid leaks or spills of hazardous materials, and installation of temporary large sediment barriers and erosion control blankets. Nevertheless, due to impacts to the 0.02-acre area of arroyo willow thicket habitat in the California Department of Fish and Wildlife jurisdictional area, implementation of Avoidance, Minimization, and/or Mitigation Measures would be required to ensure that impacts to San Luis Obispo Creek and the riparian corridor surrounding the creek are reduced to a less than significant level.

c) Potentially jurisdictional features within the Biological Study Area were evaluated during the field surveys to record existing conditions and determine the limits of jurisdiction. No wetlands were identified in the Area of Potential Impacts during the field surveys. Therefore, the construction and operation of the project would not result in a significant impact on wetlands, including, but not limited to, marshes, vernal pools, and coastal wetlands.

d) San Luis Obispo Creek and its associated riparian habitat within the northeast corner of the Biological Study Area may be utilized by wildlife, such as Steelhead, as a migratory corridor and/or nursery site. Project construction activities have the potential to impact San Luis Obispo Creek, as described under Sections 2.1.4.b and 2.1.4.c, above. Therefore, the project would be required to implement Avoidance, Minimization, and/or Mitigation Measures to avoid impacts to San Luis Obispo Creek during project construction. With the implementation of required Avoidance, Minimization, and/or Mitigation Measures the project would not interfere substantially with the movement of any native resident or migratory species or impede the use of a native wildlife nursery site.

e) During the field surveys, native trees, as well as trees planted for ornamental purposes, were documented within the Biological Study Area, primarily along the Prado Road and U.S. 101 rights-of-way as well as along perimeters of the existing water treatment facility south of the project site. Native trees in the Biological Study Area included coast live oak (*Quercus agrifolia*), Southern California black walnut (*Juglans californica*), California sycamore (*Platanus racemosa*), and Fremont cottonwood (*Populus fremontii*), as well as other species native to California but not known to occur naturally in the vicinity of the Biological Study Area, such as Monterey pine (*Pinus radiata*), hollyleaf cherry (*Prunus ilicifolia*), coast redwood (*Sequoia sempervirens*), California incense-cedar (*Calocedrus decurrens*), and Monterey cypress (*Hesperocyparis macrocarpa*). Non-native tree species in the Biological Study Area include scattered individuals of the Peruvian pepper tree (*Schinus molle*), blue gum eucalyptus (*Eucalyptus globulus*), and acacia (*Acacia* sp.). Additionally, arroyo willow (*Salix lasiolepis*) trees occur in association with San Luis Obispo Creek in the northern portion of the Biological Study Area.

Impacts to trees within the disturbance footprint from the construction of the project include trimming, disturbance within the critical root zones from work within the tree's dripline, or removal. Depending on the alternative selected and final design of the proposed project, the project may require the removal of ornamental trees along Prado Road and along the U.S. 101 rights-of-way which are protected pursuant to the city tree ordinance. Trees in the Biological Study Area next to work areas may also be indirectly impacted through pruning or root compaction. The number of trees in the Biological Study Area that would require removal or trimming or which may have their critical root zones impacted by the project would depend on the final design of the project and construction access needs. One arroyo willow tree would be removed from San Luis Obispo Creek in the northern part of the Project site. Removal of this arroyo willow tree would require a tree removal permit and would result in the need for a Habitat Mitigation and Monitoring Plan and Streambed Alteration Agreement, as discussed in Section 2.1.4.b, c, and d, above).

Removing trees would require a tree removal permit and compensatory tree planting to meet the requirements of the city tree ordinance. Avoidance, Minimization, and/or Mitigation Measures require the preparation of a Tree Protection and Replacement Plan identifying all trees within the project limits and stipulating that all trees not proposed for removal shall be preserved and protected from harm during construction activities. Compliance with Avoidance, Minimization, and/or Mitigation Measures would require concurrence from the Caltrans Design Engineer and District Landscape Architect for any necessary tree removal, as well as additional tree protection measures during project construction activities, which would ensure compliance with the city's tree protection ordinances. Implementation of these requirements would reduce impacts to trees within and next to the Biological Study Area to a less than significant level.

f) There is no existing Habitat Conservation Plan, Natural Community Conservation Plan, or another approved local, regional, or state habitat conservation plan in the project vicinity. Therefore, no impact would occur.

Avoidance, Minimization, and/or Mitigation Measures

California Red-Legged Frog and Coast Range Newt Mitigation

Mitigation Measure BIO-1. California Red-Legged Frog and Coast Range Newt. The city shall implement the following to avoid and minimize potential impacts to California red-legged frog and Coast Range newt. Because these species utilize similar habitats, the implementation of the following measures shall be implemented for both species.

- A qualified biologist(s) shall conduct a preconstruction survey within 48 hours before the start of any work activities within and around the project disturbance footprint. If the preconstruction survey identifies the presence of individuals of California red-legged frog or Coast Range newt, or if individuals of these species are encountered during construction, then work shall stop work and comply with all relevant requirements of the Federal Endangered Species Act before resuming project activities.
- No motorized equipment shall enter riparian areas. Arroyo willow tree removal shall be performed with hand tools only.
- Before trimming or removing trees within riparian areas, a qualified biologist shall conduct a training session for the tree removal crew. At a minimum, the training shall include a description of the California red-legged frog and its habitat and Coast Range newt and its habitat, the specific measures that are being implemented to conserve the California red-legged frog and Coast Range newt for the project, and the boundaries within which the project may be accomplished.
- A biological monitor familiar with semi-aquatic species that have the potential to occur shall monitor the trimming or removal of trees within riparian areas. If California red-legged frog or Coast Range newt are

observed in the work area, all shall stop work until all relevant requirements of the federal Endangered Species Act have been implemented.

- All areas of the project site disturbed by activities associated with the project shall be re-vegetated with an assemblage of native riparian, wetland, and upland vegetation suitable for the area as detailed in the Landscape Plan and approved by the District Landscape Architect. Locally collected plant materials shall be used to the extent practicable.

Southwestern Pond Turtle Mitigation

Mitigation Measure BIO-2. Southwestern Pond Turtle. The city shall ensure the following actions are implemented to avoid and minimize potential impacts to the southwestern pond turtle:

- Qualified biologist(s) shall conduct a preconstruction survey within 48 hours before the start of work activities within and around areas that may serve as potential habitat for the southwestern pond turtle, including guard rail and erosion control installation. If individuals of the southwestern pond turtle are found, the approved biologist shall be allowed sufficient time to move them from the project site before work activities begin. The biologist(s) shall relocate any individual southwestern pond turtle the shortest distance possible to a location that contains suitable habitat that is not likely to be affected by activities associated with the project.
- Access routes, staging, and construction areas shall be limited to the minimum area necessary to achieve the project goal and minimize potential impacts to southwestern pond turtle habitat, including locating access routes and construction staging areas outside of wetlands and riparian areas to the maximum extent practicable.
- Before the start of construction activities, high-visibility orange construction fencing shall be installed along the perimeter of the area of disturbance and construction access routes to ensure avoidance of sensitive habitat.
- Before starting construction activities, a qualified biologist(s) shall conduct a training session for all construction personnel conducting vegetation removal activities, including a description of the southwestern pond turtle, its habitat and legal status, and the need for conservation of the species.

South-Central California Coast Steelhead Trout and Designated Critical Habitat Mitigation

Mitigation Measure BIO-3. South-Central California Coast steelhead trout. The applicant shall ensure the following actions are undertaken to avoid and minimize potential impacts to steelhead:

- Before any activities begin on the project, a qualified biologist shall conduct a training session for all construction personnel. The training shall include a description of the steelhead and its habitat, the specific

measures that are being implemented to conserve this species for the current project, and the boundaries within which the project may be accomplished.

- Before starting construction activities, high-visibility orange construction fencing shall be installed outside of the tops of the banks of San Luis Obispo Creek along the limits of the proposed disturbance to avoid disturbance to steelhead and its federally designated critical habitat. Fencing shall be located a minimum of 20 feet from the edge of the riparian canopy or top of the bank and shall be maintained throughout the construction period. Once construction in this area is complete, the fencing may be removed.
- During the duration of project activities, waste shall be properly contained and secured, promptly removed from the work site, and disposed of regularly. Following construction, all trash and construction debris shall be removed from the work areas.
- Project construction activities within 50 feet from the edge of the riparian canopy or top .of the bank of San Luis Obispo Creek shall only occur during the dry season (e.g., between May 1 and November 1) in any given year, when potential effects to steelhead would be minimal.
- To control sedimentation during and after project implementation, the following Best Management Practices shall be implemented for the project. It shall be the city's responsibility to maintain control of construction operations and to keep the entire site in compliance with required Best Management Practices.
    - Erosion shall be controlled by covering stockpiled construction materials (i.e., soil, spoils, aggregate, fly ash, stucco, hydrated lime, etc.) over 2.0 cubic yards that are not actively being used, consistent with the applicable construction general permit, or through other means of erosion control approved by the city (e.g., temporary erosion and sediment control). The site shall be maintained to minimize sediment-laden runoff to any storm drainage system, including existing drainage swales and/or sand watercourses.
    - If grading operations are expected to denude slopes, the slopes shall be protected with erosion control measures immediately following grading on the slopes.
    - During construction, to prevent sedimentation and debris from entering San Luis Obispo Creek during construction, a temporary large sediment barrier shall be installed along the top of the banks of the channel before the start of construction activities planned for the project.
    - Equipment will be checked daily for leaks before the start of construction activities. A spill kit will be placed near the creek and will

remain readily available during construction if any contaminant is accidentally released.

- The project biologist will monitor construction activities, in-stream habitat, and overall performance of Best Management Practices and sediment controls to identify and reconcile any condition that could adversely affect steelhead or their habitat. The biologist will stop work if necessary and will recommend site-specific measures to avoid adverse effects to steelhead and their habitat.
- The city shall be responsible for monitoring erosion and sediment control measures (including but not limited to fiber rolls, inlet protections, and gravel bags) before, during, and after storm events. Monitoring includes maintaining a file documenting onsite inspections, problems encountered, corrective actions, notes, and a map of remedial implementation measures.

Ferruginous Hawk, Cooper's Hawk, Purple Martin, Loggerhead Shrike, White-Tailed Kite, And Other Nesting Birds Mitigation

Mitigation Measure BIO-4. Nesting Birds. The city shall ensure the following actions are undertaken to avoid and minimize potential impacts to nesting birds:

- For construction activities occurring during the nesting season (generally February 1 to September 15), surveys for nesting birds covered by the California Fish and Game Code and/or Migratory Bird Treaty Act shall be conducted by a qualified biologist no more than 3 days before vegetation removal or initial construction activities. The surveys shall include the disturbance area plus a 500-foot buffer around the site, where feasible, accounting for private property right-of-entry constraints. If active nests are located, all construction work shall be conducted outside a buffer zone from the nest to be determined by the qualified biologist. The buffer shall be a minimum of 250 feet for non-raptor bird species and 500 feet for raptor species unless there is a compelling biologically valid reason for a smaller buffer (e.g., a physical barrier, such as a hill or large building, between the nest and the site, blocks line of sight and reduces noise). Larger buffers may be required depending upon the status of the nest and the construction activities occurring in the vicinity of the nest. The buffer area(s) shall be closed to all construction personnel and equipment until the adults and young are no longer reliant on the nest site. A qualified biologist shall confirm that breeding/nesting is completed and the young have fledged the nest before removal of the buffer. Readily visible exclusion zones shall be established in areas where nests must be avoided.
- Removal of vegetation within suitable nesting bird habitats shall be scheduled to occur in the fall and winter (between September 16 and January 31), after fledging and before the initiation of the nesting season.

- If active white-tailed kite nests are located during surveys, all construction work shall be conducted outside a buffer zone from the nest to be determined by the qualified biologist. The buffer shall be a minimum of 300 feet for raptor species, including white-tailed kites. Larger buffers may be required depending upon the status of the nest and the construction activities occurring in the vicinity of the nest. The buffer area(s) shall be closed to all construction personnel and equipment until the adults and young are no longer reliant on the nest site. A qualified biologist shall confirm that breeding/nesting is completed and the young have fledged the nest before the buffer is removed.

Invasive Species Mitigation

Mitigation Measure BIO-5. Invasive Species. The city shall ensure the following actions are undertaken to avoid and minimize potential impacts associated with invasive species in the project area:

- Before construction, a qualified botanist/biologist shall provide invasive plant prevention training and an appropriate identification/instruction guide to staff and contractors. A list of target species shall be included, along with measures for early detection and eradication.
- Before construction, specific areas shall be designated for cleaning tools, vehicles, equipment, clothing, footwear, and other gear.
- Before entering and exiting the work site, all tools, equipment, vehicles, clothing and footwear, and other gear shall be cleaned to remove soil, seeds, and other plant parts.
- The reproductive parts of any invasive plants, such as seeds, mature flowers, and roots/shoots of species that can reproduce vegetatively, shall be contained in sealed containers and removed from the project site and disposed of at a licensed landfill/disposal site. Before transporting invasive plant materials, the receiving areas of the landfill/disposal site shall be confirmed by the city as designated for invasive plant waste disposal. The city shall ensure that 100 percent containment of invasive plant materials is enforced during the transport of invasive plants to the disposal site.
- All disturbed areas that are not converted to hardscape or formally landscaped shall be hydroseeded with a mix of locally native species upon completion of work in those areas. In areas where construction is ongoing, hydroseeding shall occur where no construction activities have occurred before winter rains. If exotic species invade these areas before hydroseeding, weed removal shall occur in consultation with a qualified botanist/biologist. Alternatively, in areas not suitable for hydroseeding, areas that are not hardscaped and are planned for formal landscaping shall be mulched to reduce the potential for invasive species to colonize. Mulch shall be at least four inches thick and shall be weed free.

Riparian Habitat and Jurisdictional Area Mitigation

Mitigation Measure BIO-6. Riparian Habitat. The city shall ensure the following actions are undertaken to avoid and minimize potential impacts to riparian habitat and jurisdictional areas:

- All refueling, maintenance, and staging of equipment and vehicles shall occur at least 100 feet from riparian habitat or bodies of water and in a location where a potential spill would not drain directly toward aquatic habitat (e.g., on a slope that drains away from the water source). Before the start of work activities, a plan must be in place for a prompt and effective response to any accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should an accidental spill occur.
- Raw cement, concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to aquatic species resulting from project-related activities shall be prevented from contaminating the soil and/or entering jurisdictional areas.
- To control sedimentation during and after project implementation, appropriate erosion control Best Management Practices (e.g., temporary erosion and sediment control) shall be implemented to minimize adverse effects on San Luis Obispo Creek. Plastic monofilament erosion control matting shall not be implemented onsite.
- Before the start of construction activities, high-visibility orange construction fencing shall be installed along the limits of the proposed disturbance outside of the top of the western bank of San Luis Obispo Creek and its associated riparian habitat to minimize the potential for disturbance of this area.
- Project activities within 60 feet of San Luis Obispo Creek shall occur during the dry season (e.g., between May 1 and November 1) in any given year.

Mitigation Measure BIO-7. Habitat Mitigation and Monitoring Plan. A Habitat Mitigation and Monitoring Plan shall be prepared, which will provide a minimum 2-to-1 restoration ratio (replaced to removed) for permanent impacts to riparian habitat unless otherwise directed by pertinent regulatory agencies. Mitigation activities associated with the replacement of riparian habitat shall occur in the designated sensitive habitat mitigation portion of the Biological Study Area and shall avoid additional impacts to sensitive plant or wildlife species. All areas of temporary disturbance shall be stabilized and revegetated with an assemblage of native vegetation suitable for the area. Examples of activities associated with the implementation of the Habitat Mitigation and Monitoring Plan include the application of native willow/ riparian seed mix and the removal of non-native weedy species within the

habitat mitigation area. The final Habitat Mitigation and Monitoring Plan will be implemented immediately after project completion.

2.1.5 Cultural Resources

Considering the information in the Historical Resources Evaluation Report, Archaeological Survey Report, Finding of No Adverse Effect without Standard Conditions, and Historic Property Survey Report dated February 2020 and Supplemental Historic Property Survey Report and Supplemental Archaeological Survey Report dated January 2022, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Cultural Resources
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	**Less Than Significant Impact**
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	**Less Than Significant Impact with Mitigation Incorporated**
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	**Less Than Significant Impact**

Affected Environment

The Archaeological Survey Report and Supplemental Archaeological Survey Report document efforts to identify archaeological resources in the project Area of Potential Effect. Native American outreach conducted for this project and nearby projects indicated that the general project vicinity is sensitive for archaeological resources. Sixteen previously recorded cultural resources were identified within a 1-mile radius of the Area of Potential Effect during a records search at the Central Coast Information Center. One archaeological resource, an isolated prehistoric artifact (P-40-038212), was documented in the Area of Potential Effect. P-40-038212 was originally recorded in 2000 as an isolated artifact consisting of a single, prehistoric-tested, Franciscan chert cobble. A 2016 pedestrian survey of the Area of Potential Effect failed to re-identify the prehistoric artifact associated with P-40-038212 and did not identify any other archaeological resources within the Area of Potential Effect (Haas et al. 2016).

The Historical Resources Evaluation Report identified one historic property within the project Area of Potential Effect: the Sunset Drive-In, which is eligible for listing in the National Register of Historic Places at the local level of significance (Treffers and Zamudio-Gurrola 2020). In addition, the Supplemental Historic Property Survey Report identified one previously recorded historic-era built environmental resource at 70-74 Prado Road in the indirect Area of Potential Effect, which was found by the State Historic Preservation Office to be ineligible for listing in the National Register of

Historic Places, California Register of Historical Resources, and/or local designations.

Environmental Consequences

a) A Finding of No Adverse Effect was completed in February 2020 to evaluate the project's potential effect on the Sunset Drive-In, which is eligible for listing in the National Register of Historic Places at the local level of significance. Under 36 Code of Federal Regulations 800.5 (1), the "criteria of adverse effect" are described as follows: "An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified after the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance, or be cumulative."

The Finding of No Adverse Effect identified that the project would not adversely affect the Sunset Drive-In property because the project does not constitute an adverse effect as defined by 36 Code of Federal Regulations 800.5(a)(2) because the project would not physically alter contributing features of the theater, the road improvements and realignment, would not diminish the existing setting, and no new atmospheric or audible elements will be introduced that would diminish the integrity of the Sunset Drive-In. This impact would be less than significant.

b) The Area of Potential Effect has been extensively disturbed by the construction of U.S. 101 and other roadways, the San Luis Obispo Water Resource Recovery Facility south of the Area of Potential Effect, various buildings and infrastructure, and agricultural activities within the Area of Potential Effect. No archaeological resources were identified within or next to the Area of Potential Effect in the most recent (2016) survey, which failed to re-identify the isolated prehistoric artifact identified in 2000. These conditions indicate a low likelihood of encountering intact archaeological deposits in the Area of Potential Effect. Nevertheless, due to the known sensitivity of the project area, there is potential for ground-disturbing activities in and around the vicinity of the Area of Potential Effect to uncover previously unidentified archaeological resources. Required Avoidance, Minimization, and/or Mitigation Measures would reduce this impact to a less than significant level.

c) Cultural resources studies and consultation did not identify any archeological resources, including human remains, within the Area of Potential Effect. Nevertheless, due to the known sensitivity of the project area, there is potential for ground-disturbing activities in and in the vicinity of the Area of Potential Effect to uncover previously undiscovered human

remains. If human remains are found, the State of California Health and Safety Code Section 7050.5 requires that no further disturbance 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 would be notified immediately.

If the human remains are determined to be prehistoric, the coroner would notify the Native American Heritage Commission, which would determine and notify a most likely descendant pursuant to Public Resources Code Section 5097.98. The most likely descendant would 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. The project would adhere to the statutory requirements of the State Health and Safety Code and Public Resources Code, which would ensure proper procedures are implemented if human remains are uncovered. Compliance with applicable State and local regulations regarding the handling of human remains would ensure that this impact would be less than significant.

Avoidance, Minimization, and/or Mitigation Measures

Mitigation Measure CR-1. Unidentified Cultural Materials. If archaeological resources are exposed during construction, all work shall be halted within 50 feet of the exposed resource until a qualified archaeologist can visit the site of discovery and assess the significance of the find(see 36 Code of Federal Regulations 800.11.1 and California Code of Regulations, Title 14, Section 15064.5[f]).

Examples of cultural materials that could be exposed during construction include ground stone tools such as mortars, bowls, pestles, and manos; chipped stone tools such as projectile points or choppers; flakes of stone not consistent with the immediate geology such as obsidian or fused shale; historic trash pits containing bottles and/or ceramics; or structural remains. If the resources are found to be significant, they must be avoided or will be mitigated consistent with State Historic Preservation Officer Guidelines.

2.1.6 Energy

Question—Would the project:	CEQA Significance Determinations for Energy
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?	**Less Than Significant Impact**
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	**No Impact**

Affected Environment

Section 4 of the city's General Plan Conservation and Open Space Element includes goals, policies, and programs related to sustainable energy use in the city (City of San Luis Obispo 2006). The Conservation and Open Space Element contains goals and policies supporting an increase in the use of sustainable energy sources, such as solar, wind, and thermal energy. Supporting policies include those promoting energy efficiency improvements, efficient city building operation, and solar access. The goals, policies, and programs contained in the Conservation and Open Space Element pertain largely to building design and municipal operations.

Electricity and Natural Gas

Pacific Gas and Electric provides electricity to the City of San Luis Obispo, while Southern California Gas provides natural gas service. Table 4 shows the electricity consumption by sector and the overall total for the Pacific Gas and Electric service area, which stretches across the State of California from Eureka in the north to Bakersfield in the south, and from the Pacific Ocean in the west to the Sierra Nevada in the east. Table 4 also shows the natural gas consumption by Southern California Gas users throughout Central and Southern California.

In Table 4, the source for the figures contained in "Electricity Consumption (Gigawatt-Hours) is the California Energy Commission 2020a. The source for the figures in "Natural Gas Consumption (Million U.S. Therms) is the California Energy Commission 2020b.

Table 4 Energy Consumption in the Service Area in 2020

Sector	Electricity Consumption (Gigawatt-Hours)	Natural Gas Consumption (Million U.S. Therms)
Agriculture and Water Pump	6,638	74
Commercial Building	26,247	802
Commercial Other	3,949	88
Industry	9,814	1,616
Mining and Construction	1,748	226
Residential	29,834	2,426
Streetlight	290	Not Applicable
Total Usage	78,519	5,231

Petroleum

Petroleum fuels are primarily consumed by on-road and off-road equipment in addition to some industrial processes. In 2019, approximately 39 percent of the state's energy consumption was used for transportation activities (U.S. Energy Information Administration 2020). Though California's population and economy are expected to grow, gasoline demand is projected to decline from roughly 15.6 billion gallons in 2017 to between 12.1 billion and 12.6 billion gallons in 2030 (a 19 percent to 22 percent reduction) in response to both

increasing vehicle electrification and higher fuel economy for new gasoline vehicles (California Energy Commission 2018). California requires all motorists to use California Reformulated Gasoline, which is sourced almost exclusively from in-state refineries.

Gasoline, which is used by light-duty cars, pickup trucks, and sport utility vehicles, is the most used transportation fuel in California, with 11.2 billion gallons sold in 2020. Diesel, which is used primarily by heavy-duty trucks, delivery vehicles, buses, trains, ships, boats and barges, farm equipment, and heavy-duty construction and military vehicles, is the second most used fuel in California, with 1.6 billion gallons sold in 2020 (California Energy Commission 2021).

Environmental Consequences

a) Construction Energy Demand

During project construction, energy would be consumed in the form of petroleum-based fuels used to power off-road construction vehicles and equipment on the project site, construction workers traveling to and from the project site, and vehicles used to import or export material to and from the site. The project would require site preparation and grading, including importing up to 325,000 cubic yards of material, pavement and asphalt installation, construction of the freeway overcrossing, and landscaping and hardscaping.

The total consumption of gasoline and diesel fuel during project construction was estimated using California Emissions Estimator Model based on the assumptions and factors used to estimate construction air pollutant emissions in Section 2.1.3, Air Quality. Table 5 presents the estimated construction fuel use and associated energy consumption. Appendix B provides the energy calculation sheets.

Table 5 Estimated Fuel Consumption During Construction

Source	Gasoline (Gallons)	Diesel (Gallons)
Construction Equipment and Hauling Trips	0	217,568
Construction Worker Vehicle Trips	7,137	0

As shown in Table 5, construction equipment and hauling trips would consume approximately 217,568 gallons of diesel, and worker trips would consume approximately 7,137 gallons of gasoline over the project construction period. The construction energy estimates represent a conservative estimate as the construction equipment used in each phase of construction was assumed to be operating every day of construction.

Construction equipment would be maintained to all applicable standards and requirements, and construction activity and associated fuel consumption and energy use would be temporary and typical for active construction sites. In

addition, construction contractors would be required to comply with the provisions of the California Code of Regulations Title 13 Sections 2449 and 2485, which prohibit diesel-fueled commercial motor vehicles and off-road diesel vehicles from idling for more than five minutes and would minimize unnecessary fuel consumption. Construction equipment would be subject to the U.S. Environmental Protection Agency Construction Equipment Fuel Efficiency Standard, which would also minimize inefficient, wasteful, or unnecessary fuel consumption. These practices would result in the efficient use of energy necessary to construct the project. It is also reasonable to assume contractors would avoid wasteful, inefficient, and unnecessary fuel consumption during construction to reduce construction costs. Therefore, the project would not involve the inefficient, wasteful, and unnecessary use of energy during construction, and the construction-phase impact related to energy consumption would be less than significant.

Operational Energy Demand

The project would not substantially change any existing operational energy consumption associated with streetlight fixtures or typical roadway maintenance activities occurring along Prado Road or U.S. 101. The project would not result in induced land use development that would lead to induced travel. As discussed in detail in Section 2.1.17, Transportation, the proposed overcrossing would provide a more direct route through the city, resulting in a net overall reduction in daily vehicle miles traveled in the city and at the regional level. Furthermore, the project does not involve the construction of any residential, commercial, industrial, or other land uses that would generate vehicle trips and consume petroleum fuel. Therefore, impacts related to operational energy consumption would be less than significant.

b) The project does not involve the construction of any buildings and would not result in a substantial increase in operational energy demand. Therefore, most of the energy-related policies described in the Conservation and Open Space Element are not applicable to the project. However, Policy 4.4.2 states that the city's transportation and circulation systems shall foster travel by modes other than motor vehicles, including walking, bicycles, and public transit. The project would provide a new freeway overcrossing equipped with bike lanes and sidewalk facilities, enhancing connectivity for cyclists and pedestrians and facilitating active transportation. Therefore, the project would be consistent with Policy 4.4.2.

Given that the project would not involve substantial long-term operational energy demand, it would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. No impact would occur.

2.1.7 Geology and Soils

Question—Would the project:	CEQA Significance Determinations for Geology and Soils
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.	**Less Than Significant Impact**
ii) Strong seismic ground shaking?	**Less Than Significant Impact**
iii) Seismic-related ground failure, including liquefaction?	**Less Than Significant Impact**
iv) Landslides?	**Less Than Significant Impact**
b) Result in substantial soil erosion or the loss of topsoil?	**Less Than Significant Impact with Mitigation Incorporated**
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 onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?	**Less Than Significant Impact**
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	**Less Than Significant Impact**
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	**No Impact**
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	**Less Than Significant Impact with Mitigation Incorporated**

Affected Environment

The project site is in the Coast Ranges Geomorphic Province, characterized by northwest-trending mountain ranges reaching elevations of up to 6,000 feet above sea level. The province extends along most of coastal California, from southern Santa Barbara County to near the Oregon state line. The province is bounded by the Transverse Ranges to the south, the Great Valley to the east, and the Pacific Ocean to the west (California Geological Survey 2002).

The Coast Ranges province is seismically active, with ranges and valleys trending sub-parallel to the San Andreas Fault. Active and potentially active

regional fault zones in the vicinity of the project site include the Los Osos Fault, off-shore Hosgri Fault, Rinconada Fault, San Simeon Fault, and San Andreas Fault (City of San Luis Obispo 2000). Seismic events can result in ground shaking, liquefaction, landslides, subsidence, tsunami, and seiche. The Los Osos Fault Zone is closest to the project site, approximately 1.8 miles northwest (California Department of Conservation 2021).

The project site is underlain by Holocene- to late Pleistocene-age young alluvial deposits (Qya), according to the preliminary geologic map of the west half of the San Luis Obispo 30' x 60' quadrangle (Wiegers 2021). The City of San Luis Obispo Land Use and Circulation Elements Update Final Program Environmental Impact Report notes that the most paleontologically productive formations in the San Luis Obispo region are marine terraces, approximately 8 to 9 miles southwest of the city (City of San Luis Obispo 2014b).

Environmental Consequences

a.i, a.ii, a.iii, a.iv) No portion of the project site is located in a California Geological Survey designated Alquist-Priolo earthquake fault zone. The nearest Alquist-Priolo earthquake fault zone to the project site is the Los Osos Fault Zone, approximately 1.8 miles northwest of the site near the western limits of the city (California Department of Conservation 2021).

Liquefaction typically occurs in areas where groundwater is less than 30 feet from the surface and where the soils are composed of poorly consolidated fine-to-medium-grained sand. Along with the necessary soil conditions, the ground acceleration and duration of the earthquake must be of a sufficient level to initiate liquefaction. Similar to most of the city, the project site is underlain by soils with a high liquefaction potential.

A large seismic event, such as a fault rupture, seismic shaking, or ground failure, could result in damage to or collapse of the proposed roadway or overcrossing. This risk already exists with current roadways and overcrossings along U.S. 101 in the project area. The project does not involve the construction of any habitable structures that would increase the exposure of people to potential substantial adverse effects resulting from a seismic event. The project, including the proposed overcrossing, would be constructed in accordance with the Caltrans Seismic Design Criteria (Version 2.0), which includes seismic design criteria detailing minimum requirements to meet performance goals for Caltrans bridges. The Seismic Design Criteria include seismicity and foundation design standards to reduce impacts from ground shaking, liquefaction, and other seismic hazards (Caltrans 2019).

Given the relatively flat nature of the project site, it is not susceptible to landslide hazards (City of San Luis Obispo 2000).

Because the project would not involve the development of new habitable structures, is not located within an Alquist-Priolo earthquake fault zone, does

not cross an active fault, is not susceptible to landslide hazards, and would be required to comply with Caltrans Seismic Design Criteria to reduce the potential for collapse or other damage that could expose people to loss, injury, or death during a seismic event, this impact would be less than significant.

b) Most of the project area is disturbed, consisting of the existing Prado Road and U.S. 101 rights-of-way and agricultural land on the San Luis Ranch property west of the freeway. Nevertheless, construction activities would result in a new disturbance on the project site, resulting in potential for soil erosion and loss of topsoil.

Because the project would disturb more than 1 acre of land, it would be subject to the National Pollutant Discharge Elimination System General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order Number 2012-0006-DWQ) adopted by the State Water Resources Control Board (Water Board). Compliance with the permit requires the project applicant to file a Notice of Intent with the Water Board. Permit conditions require the preparation of a Stormwater Pollution Prevention Plan, which must describe the site, the facility, erosion and sediment controls, runoff water quality monitoring, means of waste disposal, implementation of approved local plans, construction sediment and erosion control measures, maintenance responsibilities, and non-stormwater management controls. Inspection of construction sites before and after storms is also required to identify stormwater discharge from the construction activity and to identify and implement erosion controls, where necessary. Compliance with existing regulatory requirements, including the implementation of applicable Best Management Practices related to wind and water erosion control, would reduce potential soil loss and erosion from the site.

Also, exposed soils during construction may be susceptible to wind erosion. Caltrans Standard Specifications require compliance with the rules, ordinances, and regulations of the applicable Air Pollution Control District. Avoidance, Minimization, and/or Mitigation Measures discussed in Section 2.1.3, Air Quality, would require implementation of San Luis Obispo County Air Pollution Control District's standard dust control measures, which include using water trucks/sprinklers systems to water exposed soil, spraying dirt stockpiles daily, limiting vehicle speeds to 15 miles per hour on unpaved roadways, and completing roadway and sidewalk paving as soon as possible after grading to minimize the duration of soil exposure on the project site. Required Avoidance, Minimization, and/or Mitigation Measures would this impact to a less than significant level.

c) The project area is relatively flat and does not contain any mapped landslides or landslide hazard areas (City of San Luis Obispo 2000). The project site is designated by the city as having high liquefaction potential. The project site is not located in an area of documented subsidence. The nearest

area of documented subsidence in the City of San Luis Obispo is located along Los Osos Valley Road, approximately 0.7 mile south of the project site; the subsidence in this area has ceased by discontinuing groundwater extraction in the area (County of San Luis Obispo 1999).

The project does not involve development on steep slopes, groundwater or mineral extraction, or other activities that would decrease soil stability. The project would be constructed in accordance with Caltrans Seismic Design Criteria, which require preliminary site investigation and soil testing. If such testing indicates potential for liquefaction or collapse, remediation strategies such as ground improvement, avoidance, or structural modification would be required to be incorporated into the project design to minimize potential impacts to the project. Because the site is not prone to landslides or subsidence and design criteria would be incorporated to reduce impacts associated with potential liquefaction or soil collapse, this impact would be less than significant.

d) The project site is predominantly underlain by Cropley clay and Salinas silty clay loam soils. According to the city's Land Use and Circulation Elements Update Final Program Environmental Impact Report, Cropley clay soils have a high shrink-swell potential, while Salinas silty clay loam soils have low to moderate shrink-swell potential (City of San Luis Obispo 2014b). Consequently, the project may be located on expansive soil.

The project would not involve the construction of any habitable structures, which would minimize the exposure of people to risk associated with expansive soils. Pursuant to Caltrans Standard Specifications (Caltrans 2018b), the project would be required to implement soil stabilization measures, which include relative compaction standards, application of soil stabilization agents, and quality control soil testing. The standard specifications also include standards for the construction of structures and site drainage, which would further reduce potential impacts associated with expansive soils. Because the project would not construct habitable structures and would require site testing and soil stabilization measures consistent with Caltrans Standard Specifications, the project would not create a substantial risk to life or property associated with expansive soils, and this impact would be less than significant.

e) The project would not include the use of septic tanks or alternative wastewater disposal systems. No impact would occur.

f) The project site is underlain by late Quaternary alluvial deposits, which are generally considered to have low paleontological sensitivity. There are no known, unique paleontological resources or sites or unique geologic features in the project site. Furthermore, project construction would be within the existing Caltrans and city rights-of-way along U.S. 101 and Prado Road and undeveloped agricultural land west of the freeway. As a result, grading,

excavation, and other construction activities would primarily occur in previously disturbed areas that are not likely to contain intact paleontological resources. Nevertheless, the possibility exists that ground-disturbing construction activities could unearth and damage previously unidentified paleontological resources. Required Avoidance, Minimization, and/or Mitigation Measures would reduce this impact to a less than significant level.

Avoidance, Minimization, and/or Mitigation Measures

Mitigation Measure GEO-1. Paleontological Resources. If paleontological resources are exposed during construction, all work shall be halted within 100 feet of the exposed resource until a qualified paleontologist can visit the site of discovery and assess the significance of the find. Caltrans shall be informed of the discovery immediately. If the paleontological resource is determined to be significant, the paleontologist shall have the authority to salvage and remove the fossil from its locality, as appropriate, before ground-disturbing or other construction activities resume in the area. Any fossils recovered during the development, along with their contextual stratigraphic data, shall be offered to the City of San Luis Obispo or other appropriate institution with an educational and research interest in the materials. The paleontologist shall prepare a report of the results of any findings as part of a testing or mitigation plan following an accepted professional practice.

2.1.8 Greenhouse Gas Emissions

Considering the information in the Air Quality and Greenhouse Gas Technical Study dated September 2021, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Greenhouse Gas Emissions
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	**Less Than Significant Impact**
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	**No Impact**

Affected Environment

In response to an increase in human-made greenhouse gas concentrations over the past 150 years, California has implemented legislation to reduce statewide emissions. Assembly Bill 32 codifies the statewide goal of reducing emissions to 1990 levels by 2020 (essentially a 15 percent reduction below 2005 emission levels) and the adoption of regulations to require reporting and verification of statewide greenhouse gas emissions. Senate Bill 32 extends Assembly Bill 32, requiring the State to further reduce greenhouse gases to 40 percent below 1990 levels by 2030.

On December 14, 2017, the California Air Resources Board adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 statewide target set by Senate Bill 32. The 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally appropriate quantitative thresholds consistent with a statewide per capita goal of six metric tons of carbon dioxide equivalent by 2030 and two metric tons of carbon dioxide equivalent by 2050 (California Air Resources Board 2017). [Carbon dioxide equivalent is a measure used to compare emissions from a variety of greenhouse gasses based on their global warming potential. The carbon dioxide equivalent calculation considers carbon dioxide and the converted equivalent amounts of carbon monoxide, methane, nitrogen dioxide, and hydrofluorocarbons.] As stated in the 2017 Scoping Plan, these goals may be appropriate for plan-level analyses (city, county, subregional, or regional level), but not for specific individual projects because they include all emissions sectors in the State.

Most individual projects do not generate sufficient greenhouse gas emissions to directly influence climate change. However, physical changes caused by a project can contribute incrementally to significant cumulative effects, even if individual changes resulting from a project are limited. The issue of climate change typically involves an analysis of whether a project's contribution towards an impact would be cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines, Section 15064[h][1]).

Significance Thresholds

The City of San Luis Obispo adopted greenhouse gas emissions thresholds for use in CEQA documents on August 18, 2020, based on the adopted Climate Action Plan. The adopted greenhouse gas thresholds are as follows:

1. If a project is consistent with the 2014 General Plan land use and zoning designations and has a pre-2030 build-out year, then illustrated compliance with the Climate Action Plan Consistency Checklist would result in less than significant greenhouse gas emissions and not result in a cumulatively considerable greenhouse gas emission impact.

2. If a project is not consistent with the 2014 General Plan land use and zoning designations and has a pre-2030 build-out year, then the following quantitative greenhouse gas thresholds and consistency with the Climate Action Plan Consistency Checklist would result in less than significant greenhouse gas emissions and not result in a cumulatively considerable greenhouse gas emission impact:

- Residential: 0.7 metric tons of carbon dioxide equivalent per year per resident.

- Non-Residential: 0.7 metric tons of carbon dioxide equivalent per year per employee.
- Mixed-Use: 0.9 metric tons of carbon dioxide equivalent per year per service person.

3. If a project has a post-2030 build-out year, then emissions at or below 0 metric tons of carbon dioxide equivalent per year would result in less than significant greenhouse gas emissions and not result in a cumulatively considerable greenhouse gas emission impact.

The City of San Luis Obispo Climate Action Plan serves as the city's qualified greenhouse gas reduction strategy. The greenhouse gas-reducing policy provisions contained in the Climate Action Plan were prepared with the purpose of complying with the requirements of Senate Bill 32 and achieving the Senate Bill 32 target of 40 percent below 1990 levels by 2030 and the carbon neutrality target for 2035.

The 2017 Scoping Plan provides a framework for achieving the 2030 statewide target set by Senate Bill 32. The 2017 Scoping Plan does not provide project-level thresholds for land use development but recommends that local governments adopt policies and locally appropriate quantitative thresholds consistent with a statewide per capita goal of 6 metric tons of carbon dioxide equivalent by 2030 and 2 metric tons of carbon dioxide equivalent by 2050. As stated in the 2017 Scoping Plan, these goals are appropriate for plan-level analyses.

Methodology

While the project is not related to specific land use, the project is identified as a Transportation Capital Project and is listed under Program 9.2.2. in the Circulation Element of the City's 2014 General Plan. Refer to Section 2.1.17 for more detail. The project also has a pre-2030 build-out year. Because the project is consistent with the 2014 General Plan and has a pre-2030 build-out year, the Climate Action Plan Consistency Checklist was used to demonstrate consistency and tier from the Climate Action Plan per CEQA Guidelines Section 15183.5

Calculations of carbon dioxide, methane, and nitrogen dioxide emissions are provided for informational purposes. The calculations focus on carbon dioxide, methane, and nitrogen dioxide because these make up 98.9 percent of all greenhouse gas emissions by volume (IPCC 2007) and are the greenhouse gas emissions that the project would emit in the largest quantities. Fluorinated gases, which are primarily associated with industrial processes, were also considered for the analysis. However, because the project is a roadway expansion, the quantity of fluorinated gases would not represent a substantial proportion of emissions from the project. Calculations are based on the methodologies discussed in the California Air Pollution Control Officers Association CEQA and Climate Change white paper (2008)

and included the use of the California Climate Action Registry General Reporting Protocol (2009). Greenhouse gas emissions associated with the project were calculated using the most recent version of the California Emissions Estimator Model (version 2020.4.0). The results are included in the Air Quality and Greenhouse Gas Technical Study in Volume 2 of this document. To conservatively estimate the potential air pollutant emissions generated by the project, the emissions modeling accounts for the maximum potential build-out and project footprint among the various alternatives' designs. Refer to Section 2.1.3, Air Quality, for a detailed discussion of emissions results and assumptions.

Construction Emissions

Construction of the project would generate greenhouse gas emissions primarily as a result of material processing, operation of construction equipment onsite as well as from vehicles transporting construction workers to and from the project site, and emissions arising from traffic delays due to construction. Site preparation and grading typically generate the greatest amount of emissions due to the use of grading equipment and soil hauling. This analysis assumes 325,000 cubic yards of fill material that would be imported to the site.

California Air Pollution Control Officers Association does not discuss whether any of the suggested threshold approaches adequately address impacts from temporary construction activity. As stated in the CEQA and Climate Change white paper, "more study is needed to make this assessment or to develop separate thresholds for construction activity" (California Air Pollution Control Officers Association 2008). Nevertheless, total construction greenhouse gas emissions were calculated for informational purposes.

Operational Emissions

The Climate Action Plan Consistency Checklist was used to determine the consistency of the operation of the project and tier from the City of San Luis Obispo Climate Action Plan per CEQA Guidelines Section 15183.5.

Environmental Consequences

a) Construction activities would result in new, greenhouse gas emissions in the area. Total greenhouse gas emissions from project construction were estimated for informational purposes in the 2021 Air Quality Technical Study using the California Emissions Estimator Model, as shown in Table 6.

Table 6 Estimated Construction Greenhouse Gas Emissions

Scenario	Carbon Dioxide	Methane	Nitrogen Dioxide	Total (Carbon Dioxide Equivalent)
Total Emissions (Metric Tons)	2,190	Less than 1	Less than 1	2,255

Source: Attachment 1 for California Emissions Estimator Model.

With innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the greenhouse gas emissions produced during construction can be mitigated to some degree by longer intervals between maintenance and rehabilitation events. In addition, according to Caltrans' Standard Specifications Section 7-1.02A, 7-1.02C, and 14-9.02, the construction of the project must comply with all local San Luis Obispo County Air Pollution Control District rules, ordinances, and regulations for air quality restrictions. Project construction would also be required to comply with the California Air Resources Board's anti-idling law, which states that vehicles not engaged in work activities may not idle for more than five minutes and that vehicles may not idle auxiliary power systems for more than five minutes to power heaters, air conditioners or any other equipment if the vehicle has a sleeper berth and is within 100 feet of a restricted area (homes and schools). Compliance with these rules, ordinances, and regulations would minimize greenhouse gas emissions generated by project construction.

The project does not include operational changes to the local roadways or U.S. 101 with the potential to result in long-term, operational greenhouse gas emissions. The project is designed to provide congestion relief, operational efficiency, and multimodal connectivity and would not induce land use development that would lead to new travel and increased vehicle miles traveled. As discussed in detail in Section 2.1.17, Transportation, the proposed overcrossing would provide a more direct route through the city, resulting in a net overall reduction in daily vehicle miles traveled in the city and at the regional level. The highest levels of greenhouse gas emissions from mobile sources, such as automobiles, occur at stop-and-go speeds (0 to 25 miles per hour) and speeds over 55 miles per hour (2021 Air Quality and Greenhouse Gas Technical Study). Therefore, the project would reduce greenhouse gas emissions by reducing vehicle miles traveled, relieving congestion, and improving the operation of roadways in the area.

Construction of the project would result in an increase in greenhouse gas emissions. The project would not result in operational greenhouse gas emissions and is expected to reduce long-term operational greenhouse gas emissions with improvements to the local roadways.

The project is consistent with the 2014 General Plan and has a pre-2030 built-out year. Therefore, the Climate Action Plan Consistency Checklist was used to determine if the project complies with greenhouse gas reduction targets. The Climate Action Plan Consistency Checklist is included in Volume 2 of this document. The proposed project is consistent with all applicable measures and items in the Consistency Checklist; therefore, it would result in less than significant greenhouse gas emissions and would not result in a cumulatively considerable impact. This impact would be less than significant.

b) Climate Action Plan Consistency

The City of San Luis Obispo Climate Action Plan serves as a qualified greenhouse gas reduction strategy consistent with State CEQA Guidelines. The Climate Action Plan outlines a course of action to reach carbon neutrality and includes six pillars: 1) lead by example, 2) clean energy systems, 3) green buildings, 4) connected community, 5) circular economy, and 6) natural solutions. A project is considered consistent with the city's Climate Action Plan if it includes provisions to further the emissions reduction goals in the Plan. The proposed project would provide congestion relief, operational efficiency, and multimodal connectivity, which could result in a reduction in greenhouse gas emissions. The project would not conflict with any of the foundational actions of the Climate Action Plan. Therefore, the project would be consistent with the Climate Action Plan, and there would be no impacts.

Senate Bill 32/2017 Scoping Plan Consistency

The 2017 Scoping Plan provides a framework for achieving the 2030 statewide emissions target codified by Senate Bill 32 and recommends that local governments adopt policies and locally appropriate quantitative thresholds consistent with a statewide per capita goal of six metric tons of carbon dioxide equivalent by 2030 and two metric tons of carbon dioxide equivalent by 2050 (California Air Resources Board 2017). As discussed above, the project would not conflict with the goals of the locally adopted greenhouse gas reduction strategy or result in an increase in long-term operational greenhouse gas emissions. Therefore, the project would not conflict with the 2017 Scoping Plan, which has been developed to achieve the statewide emissions target set by Senate Bill 32, and there would be no impacts.

San Luis Obispo Council of Governments' Regional Transportation Plan Consistency

San Luis Obispo Council of Governments' Regional Transportation Plan, which includes a Sustainable Communities Strategy, serve as the blueprint for the regional transportation system and seeks to promote sustainable mobility. The project is included in the 2019 Regional Transportation Plan as an "unconstrained" project. The analysis in the Final Environmental Impact Report for the 2019 Regional Transportation Plan includes all projects from the constrained and unconstrained project lists. The unconstrained list is included as a worst-case scenario for purposes of CEQA analysis in the event all projects from the combined lists become available. Therefore, the project is included in the regional emission analysis and would be consistent with the 2019 Regional Transportation Plan.

2.1.9 Hazards and Hazardous Materials

An Initial Environmental Site Assessment, dated August 11, 2017, was completed for the project site. The Initial Environmental Site Assessment included a review of databases, city and County records, and a site

reconnaissance in July 2017. Considering the information in the Initial Environmental Site Assessment, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Hazards and Hazardous Materials
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	**Less Than Significant Impact**
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?	**Less Than Significant Impact**
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	**No Impact**
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	**Less Than Significant Impact with Mitigation Incorporated**
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	**Less Than Significant Impact**
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	**Less Than Significant Impact**
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	**Less Than Significant Impact**

Affected Environment

Hazardous Materials Sites

The following databases and listings compiled pursuant to Government Code Section 65962.5 were checked for known hazardous materials contamination at the project site:

- United States Environmental Protection Agency
    - Comprehensive Environmental Response, Compensation, and Liability Information System/Superfund Enterprise Management System/Envirofacts database search

- State Water Resources Control Board
  - GeoTracker search for leaking underground storage tanks and other cleanup sites
- Department of Toxic Substances Control
  - EnviroStor database for hazardous waste facilities or known contamination sites
  - Cortese List of Hazardous Waste and Substances Sites

Airport Hazards

The San Luis Obispo County Regional Airport Land Use Plan identifies special function land uses which are commonly regarded as requiring special protection from hazards such as aircraft collisions. These land uses include impaired egress uses, such as elementary and secondary schools, hospitals, nursing homes, and other similar uses where occupants are relatively unable to move out of harm's way, and unusually hazardous uses, such as those including aboveground storage of flammable materials, fuel pumping facilities, electric transmission lines, or aboveground pipelines (San Luis Obispo County Airport Land Use Commission 2021).

Emergency Response

The San Luis Obispo city Council adopted the City of San Luis Obispo Emergency Operations Plan in 2011 and the revised Emergency Operations Plan in 2016. The Emergency Operations Plan contains information on potential emergencies in the city, protective actions available to the city during disasters, and a detailed description of all applicable emergency management systems, including the city's Emergency Operations Center and Emergency Communications Center. While the Emergency Operations Plan does not delineate specific evacuation routes within the city, it does state that the field Incident Commander and/or other appropriate command staff such as the city Emergency Operations Center Director, County Emergency Operations Center Emergency Services Director, or County Health Officer, acting upon appropriate advice and recommendation from specialists, will determine the appropriate areas that may need evacuating during a disaster (City of San Luis Obispo 2016). The Emergency Operations Plan also identifies methods to disseminate information to the public, such as public address systems on vehicles, emergency alert systems, emergency new information, or door-to-door communication.

Environmental Consequences

a, b) The project includes the reconstruction and extension of existing roadways. The new freeway overcrossing and on/off ramps may be used for routine transport of hazardous materials. However, transport of hazardous materials on the new facilities would be subject to the same requirements as other existing transportation corridors. Operation of the proposed new facilities would not require the transport of new hazardous materials or otherwise

increase the routine transport of hazardous materials. Potentially hazardous materials such as fuels, lubricants, and solvents would be used during project construction. However, the transport, use, and storage of hazardous materials during the construction of the project would be conducted in accordance with all applicable state and federal laws, such as the Hazardous Materials Transportation Act, Resource Conservation and Recovery Act, the California Hazardous Material Management Act, and the California Code of Regulations, Title 22. This impact would be less than significant.

c) The nearest school to the project site is Pacific Beach High School and the Family Partnership Charter School, approximately 0.6 mile to the southwest. Therefore, the project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. No impact would occur.

d) The following hazardous materials sites were identified on or with the potential to be on the project site during the Initial Environmental Site Assessment:

- Potential presence of aerially deposited lead in project site soils.
- Potential presence of pesticides and herbicides in project site soils from prior agricultural operations.
- A petroleum pipeline from a listed Unocal site is present at the intersection of Elks Lane and Prado Road.
- Potential residual petroleum hydrocarbons in surface soils at the former U-Haul facility (253 Elks Lane; currently Regional Transit Authority maintenance facility), which is identified as a leaking underground storage tank site.

In November 2020 Rincon prepared a Remedial Excavation Report for the San Luis Obispo Regional Transit Authority Bus Maintenance Facility (former U-Haul facility) located at 253 Elks Lane. The Remedial Excavation Report documented excavation performed at the site to remove soil impacted by petroleum hydrocarbons above Environmental Screening Levels. A total of 80.76 tons of soil were disposed of under nonhazardous waste manifests at Cold Canyon Landfill. The Remedial Excavation Report concluded petroleum hydrocarbon impacted soil identified and delineated during the assessment was properly removed and disposed of offsite, and no additional assessment or remediation is recommended at the site.

No additional hazardous materials or environmental areas of concern are identified within the project area. However, the potential aerially deposited lead, pesticides and herbicides, and petroleum pipeline listed above could result in hazards to the public or the environment. Required Avoidance, Minimization, and/or Mitigation Measures would reduce these impacts to a less than significant level.

e) The project site is approximately 1.5 miles northwest of the San Luis Obispo County Regional Airport and is located within the airport's land use planning area (Airport Land Use Commission of San Luis Obispo County 2021). The project site is located within Safety Area S-1b, an area within gliding distance of prescribed flight paths for aircraft operations at less than 500 feet above ground level. The Airport Land Use Plan contains specific safety policies to determine project consistency with the Airport Land Use Plan. Table 7 shows the project's consistency with applicable Airport Land Use Plan safety policies.

Table 7 Airport Land Use Plan Safety Policies

Policy	Project Consistency
Policy S-1: The proposed project would be determined to be inconsistent with the Airport Land Use Plan if the proposed project or local action would permit or lack sufficient provisions to prohibit structures and other obstacles within the Runway Protection Zones for any runway at the Airport, as depicted in Figure 4.	**Consistent**. The project site is located within Safety Area S-1b, an area within gliding distance of prescribed flight paths for aircraft operations at less than 500 feet above ground level, and is not located in a Runway Protection Zone, as delineated by the Airport Land Use Plan. Furthermore, the project proposes an extension of a roadway and a freeway overcrossing, neither of which would present an obstacle for any runway at the San Luis Obispo County Regional Airport.
Policy S-2: The proposed project would be determined to be inconsistent with the Airport Land Use Plan if the proposed project or local action would permit or fail to adequately prohibit any future residential or nonresidential development or redevelopment, which would create, within the site to be developed or redeveloped, a density greater than specified in Table 7 of the Airport Land Use Plan or any mixed-use development or redevelopment which would create, within the site to be developed or redeveloped, densities greater than illustrated in Figures 5 through 8 of the Airport Land Use Plan.	**Consistent.** The project does not involve any elements that would affect residential or nonresidential densities within the Airport Land Use Plan planning area.
Policy S-3: The proposed project would be determined to be inconsistent with the ALUP if the proposed project or local action would permit or fail to adequately prohibit any future development project which specifies, entails, or would result in a greater building coverage than permitted by Table 7 of the Airport Land Use Plan.	**Consistent**. The project does not involve construction of any buildings and would not permit or otherwise authorize such construction on the project site.
Policy S-4: The proposed project would be determined to be inconsistent with the Airport Land Use Plan if the proposed project or local action would permit or fail to adequately prohibit high-intensity land uses or special land use functions (impaired egress uses or unusually hazardous uses), except that, when conditions specified by Table 7 for density adjustments have been determined to be met by the Airport Land Use Commission, high-intensity land and/or special function uses may be allowed in Aviation Safety Area S-2.	**Consistent**. The project does not propose any high-intensity land uses, such as amusement parks/fairgrounds, convention/exhibit halls, major auditoriums, stadiums, arenas, or space for temporary events attracting dense concentrations of people. Furthermore, the project does not propose any impaired egress uses or unusually hazardous uses, as defined above.

Source: Airport Land Use Commission of San Luis Obispo County 1973.

As shown in Table 7, the project would be consistent with safety policies described in the San Luis Obispo Regional Airport's Airport Land Use Plan. The project does not propose the construction of any habitable structures, impaired egress or unusually hazardous land uses, or high-intensity land uses. Therefore, the project would not result in a safety hazard for people residing or working in the project area, and this impact would be less than significant.

f) The project would improve circulation by providing an additional freeway overcrossing where one does not currently exist, improving access to U.S. 101 from areas west of the freeway, and minimizing out-of-direction travel during emergency response or evacuation. During project construction, intermittent ramp or lane closures may temporarily impede emergency response or evacuation. However, such impacts would be temporary.

Pursuant to Caltrans Deputy Directive 60, the project would be required to implement a Transportation Management Plan. Consistent with Caltrans' Transportation Management Plan Guidelines, the project-specific Transportation Management Plan would be required to include public information, motorist information, incident management, construction strategies, demand management, and alternate route/detour strategies to reduce traffic impacts during roadway construction projects. Public information strategies include notification to emergency services, including fire, law enforcement, and ambulance services, of start dates, work schedules, significant traffic pattern changes, transit routes, traffic collisions, and other incidents in the work zone (Caltrans 2015). With the implementation of the required project-specific Transportation Management Plan, closures or detours along either roadway would occur with advanced notification to emergency services, providing an opportunity to coordinate emergency response and provide appropriate evacuation direction should an emergency occur during project construction. Consequently, impacts related to emergency response and evacuation would be less than significant.

g) The project site is located in a developed area in the city. According to the California Department of Forestry and Fire Protection, the project site is not in a very high fire hazard severity zone (California Department of Forestry and Fire Protection 2021). In addition, the city's General Plan indicates the project site is in a low fire hazard area and states that all build-out of the area will apply normal fire protection measures (City of San Luis Obispo 2000). The project also does not propose new buildings or habitable development. Therefore, the project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires, and this impact would be less than significant. For additional discussion of potential impacts related to wildfire, please refer to Section 2.1.20, Wildfire.

Avoidance, Minimization, and/or Mitigation Measures

The following mitigation measures would reduce impacts related to hazardous materials exposure to a less than significant level.

- **Mitigation Measure HAZ-1. Aerially Deposited Lead**. A workplan shall be developed for aerially deposited lead sampling for the area of the selected project alternative. Surficial soil samples shall be collected and analyzed for total lead in areas that are to be disturbed for the project. The workplan shall require the investigation of surface soils to be conducted before construction. The workplan shall include all required measures for proper management and disposal of contaminated soils in accordance with the U.S. Toxic Substances Control Act, California Health and Safety Code, and California Occupational Safety and Health Act if the total lead is detected above acceptable levels in the project site soils. The workplan shall require that investigation and/or remediation of soil contamination be performed in accordance with Department of Toxic Substances Control procedures and requirements and require Department of Toxic Substances Control approval before recommencing construction or demolition work.
- **Mitigation Measure HAZ-2. Pesticides and Herbicides**. Surface soils shall be tested by a professional geologist or environmental professional to determine the presence or absence of pesticides, herbicides, and arsenic along proposed rights-of-way. A workplan describing sampling locations and sampling and analytical methods shall be prepared by the project developer before the start of work. The workplan shall include laboratory data for the impacted soils to profile excavated soil before transport, treatment, and recycling at a licensed treatment facility. The workplan shall also detail the requirements for removal, transportation, and disposal of impacted soil in accordance with applicable federal, state, and local laws, regulations, and ordinances. The workplan shall require that investigation and/or remediation of soil contamination be performed in accordance with Department of Toxic Substances Control procedures and requirements and require Department of Toxic Substances Control approval before recommencing construction or demolition work.
- **Mitigation Measure HAZ-3. Petroleum Pipelines**. The petroleum pipeline at the intersection of Elks Lane and Prado Road shall be properly marked by the developer before the start of any project construction activities. A contingency plan shall be developed by the developer and include all applicable federal, state, and local regulatory requirements for soil handling and/or remediation if contaminated soil from the petroleum pipeline is encountered during construction activities. All other known pipelines in the project area shall be identified and marked by the developer before the start of any construction activities.

2.1.10 Hydrology and Water Quality

Considering the information in the Water Quality Assessment Report dated November 2021, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Hydrology and Water Quality
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water or groundwater quality?	**Less Than Significant Impact with Mitigation Incorporated**
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	**Less Than Significant Impact with Mitigation Incorporated**
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 onsite or offsite;	**Less Than Significant Impact**
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite;	**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; or	**Less Than Significant Impact**
(iv) impede or redirect flood flows?	**Less Than Significant Impact**
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	**Less Than Significant Impact**
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	**Less Than Significant Impact**

Affected Environment

The project site is in the Estero Bay Hydrologic Unit, Point Buchon Hydrologic Area, and San Luis Obispo Creek sub-area. San Luis Obispo Creek originates in the Santa Lucia Range northeast of San Luis Obispo and generally flows southwest, draining an approximately 84-square mile watershed before emptying into the Pacific Ocean at Avila Beach. The Area of Potential Impacts for this project regarding hydrological and water resources is defined as the maximum amount of potential disturbance area for both temporary and permanent impacts and is extensive enough to include all proposed alternatives and project components, including traffic, lane, and shoulder modifications, subject roads, and city and Caltrans rights-

of-way. San Luis Obispo Creek is located approximately 50 feet from the project site. Surface flows from the project site generally flow toward Prefumo Creek, a tributary of San Luis Obispo Creek, which flows approximately 0.25 mile west of the project site.

The federal Clean Water Act establishes the framework for regulating discharges to Waters of the U.S. to protect their beneficial uses. The Porter-Cologne Water Quality Act regulates water quality within California and establishes the authority of the State Water Resources Control Board and the nine Regional Water Quality Control Boards. The State Water Resources Control Board requires construction projects to provide careful management and close monitoring of runoff during construction, including onsite erosion protection, sediment management, and prevention of non-stormwater discharges. The State and Regional Water Boards issue National Pollutant Discharge Elimination System permits to regulate specific discharges. The National Pollutant Discharge Elimination System Construction General Permit regulates stormwater discharges from construction sites disturbing more than 1 acre of land.

The project site overlies the San Luis Obispo Valley Groundwater Basin (Basin Number 3-009), an approximately 12,700-square mile basin bound by the Santa Lucia Range to the northeast, the San Luis Range to the southwest, and impermeable Miocene and Franciscan Group rock on all other sides (Department of Water Resources [DWR] 2004). Groundwater in the basin is generally found in Pleistocene and Holocene age terrestrial deposits. Groundwater levels in the basin are susceptible to inter-annual variation in precipitation, such as multi-year drought or wet cycles, with recorded fluctuations in groundwater elevations of up to 19.5 feet per year (DWR 2004). Primary sources of recharge in the basin include precipitation, irrigation, and streamflow. In 2017, the city and County of San Luis Obispo became the Groundwater Sustainability Agencies for the portions of their respective jurisdictions overlying the San Luis Obispo Valley basin to implement the Sustainable Groundwater Management Act. The project site is located entirely in the City of San Luis Obispo Groundwater Sustainability Agency boundary.

Environmental Consequences

a, e) Surface Water

Excavation, grading, and other project construction activities would result in soil disturbance and potential discharges of sediment, trash, petroleum products, concrete waste, sanitary waste, or other construction-related chemicals into nearby water bodies. Construction activities could also result in an accidental fuel or hazardous materials leak or spill. As a result, the project could result in adverse impacts to water quality in Prefumo Creek and San Luis Obispo Creek. As discussed in Section 2.1.7, Geology and Soils, project construction activities would be subject to the permitting requirements of the

National Pollutant Discharge Elimination System General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit Order Number 2009-0009-DWQ and subsequent amendments), requiring the preparation and implementation of a Stormwater Pollution Prevention Plan. The Stormwater Pollution Prevention Plan must specify all Best Management Practices for sediment and pollution prevention for project construction. These Best Management Practices may include but would not be limited to the use of temporary desilting basins, construction vehicle maintenance to avoid leaks or spills of hazardous materials, and installation of temporary large sediment barriers and erosion control blankets. Construction-related water quality impacts would be avoided through the implementation of Best Management Practices included in the Stormwater Pollution Prevention Plan to prevent sedimentation and pollution in nearby waters from the proposed project.

Net new impervious surface for the project is calculated based on both new and replaced impervious areas. The overall net new impervious surface for the project would be 0.6 to 2 acres, depending on the alternative selected. Project operation could result in impacts to water quality due to pollutant accumulation on new impervious surfaces and the associated increase in stormwater runoff volume and velocity from these surfaces during precipitation events. As discussed in the Water Quality Assessment Report, Best Management Practices for the project would be developed in accordance with the requirements of the city's Stormwater Management Plan and Municipal Code Chapter 12.08, Urban Stormwater Quality and Discharge Control, and the Caltrans Permit and Project Planning and Design Guide. In addition to the sediment control Best Management Practices (required by Avoidance, Minimization, and/or Mitigation Measures discussed in Section 2.1.4, Biological Resources) to prevent impacts to south-central California coast steelhead and designated critical habitat for steelhead, Best Management Practices for the project may include but would not be limited to filtration and infiltration devices, such as detention basins and biofiltration swales, low-impact development flow-through treatment devices, stormwater pollution treatment facilities, and erosion control practices. With the implementation of all applicable water quality treatment Best Management Practices, project operations would be compliant with the requirements of the city's Stormwater Management Plan and Municipal Code Chapter 12.08, Urban Stormwater Quality and Discharge Control, and the Caltrans Permit and Project Planning and Design Guide designed to avoid adverse impacts of projects in the city to water quality by avoiding and/or reducing pollution, erosion, and sedimentation. Caltrans would be required to verify that stormwater quality and discharge control requirements have been implemented to the city's satisfaction and that the proposed development does not adversely affect the water quality in the project area. Compliance with the applicable regulations and guidelines, as well as required Avoidance, Minimization, and/or Mitigation Measures, would ensure that water quality

impacts associated with increased impervious surfaces on the project site would be less than significant.

The project area is under the jurisdiction of Regional Water Quality Control Board Region 3 (Central Coast Region). The Regional Water Quality Control Board provides permits for projects with the potential to affect surface waters and groundwater locally. The Regional Water Quality Control Board is responsible for preparing the Water Quality Control Plan for the Central Coastal Basin (Basin Plan). The Basin Plan designates beneficial uses of water in the region and establishes narrative and numerical water quality objectives. The State has developed total maximum daily loads, which are a calculation of the maximum amount of a pollutant a waterbody can have and still meet water quality objectives established by the region. In the project area, Prefumo Creek does not meet water quality objectives for its designated beneficial uses and is listed as impaired for fecal coliform, nitrate, dissolved oxygen, toxicity, and turbidity (State Water Resources Control Board 2021). Additionally, San Luis Obispo Creek (below Osos Street) is listed as impaired for benthic community effects, chloride, Escherichia coli (E. coli), fecal coliform, nitrate, dissolved oxygen, and sodium (State Water Resources Control Board 2021). Project construction and operation could exacerbate these impairments by increasing the discharge of sediments and other pollutants to these water bodies via stormwater runoff. As described above, the project would be required to implement construction water quality Best Management Practices in compliance with the Construction General Permit and treatment Best Management Practices pursuant to Caltrans and city policies that avoid and/or reduce pollution, erosion, and sedimentation associated with project construction activities, ensuring that the project does not exacerbate existing exceedances of the total maximum daily loads established to meet water quality objectives for surface water bodies near the project site, including Prefumo Creek and San Luis Obispo Creek. Caltrans and the City of San Luis Obispo shall verify that water quality control requirements have been satisfied and that the proposed roadway improvements do not adversely affect the water quality in the project area.

With adherence to existing regulatory requirements, the project would not exacerbate existing water quality issues in the vicinity of the project site, and it would not obstruct or conflict with the implementation of a water quality plan. This impact would be less than significant.

Groundwater

The project site overlies the San Luis Obispo Valley Groundwater Basin (the Basin). Existing groundwater issues in the Basin include high levels of total dissolved solids, averaging around 770 milligrams per liter, as well as elevated nitrate and sodium concentrations (GSI Water Solutions Inc. 2018). Project construction equipment could result in pollution of the underlying groundwater from oil, gasoline, lubricants, or other chemical leaks or spills. Project compliance with the required Construction General Permit would

involve the implementation of stormwater and non-stormwater Best Management Practices to reduce spills, leaks, or other pollution from project construction that would further impair groundwater quality.

In April 2019, the Department of Water Resources published ranked prioritizations of the State's groundwater basins to help identify, evaluate, and determine the need for additional groundwater level monitoring. The Department of Water Resources ranked the Basin as a "High" priority basin (DWR 2019). As a result, a Groundwater Sustainability Plan under the Sustainable Groundwater Management Act must be developed and implemented for the Basin. As required by the Sustainable Groundwater Management Act, the San Luis Obispo Valley Groundwater Basin Groundwater Sustainability Agencies developed a Groundwater Sustainability Plan in October 2021. The Groundwater Sustainability Plan guides groundwater users on how to reach sustainable groundwater levels in the future (San Luis Obispo Valley Basin Groundwater Sustainability Agencies 2021).

Implementation of the water quality treatment Best Management Practices as well as the water quality treatment Best Management Practices of the City of San Luis Obispo MS4 permit and the Caltrans National Pollutant Discharge Elimination System permit, would be required to ensure the project would not substantially degrade groundwater quality and would not conflict with or obstruct implementation of the Groundwater Sustainability Plan. Therefore, with the implementation of required Avoidance, Minimization, and/or Mitigation Measures, this impact would be less than significant.

b) The project does not propose any land uses that would increase long-term demand for water, and it does not propose the extraction of groundwater. Additionally, the existing impervious surface within the State right-of-way portion of the site would be converted to vegetated right-of-way. Stormwater runoff from the project site could provide recharge benefits in the vegetated right-of-way through required infiltration treatment Best Management Practices and downstream in Prefumo Creek and/or San Luis Obispo Creek. Therefore, the project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge to impede sustainable groundwater management or the San Luis Obispo Valley Groundwater Basin Groundwater Sustainability Plan. This impact would be less than significant.

c.i, c.ii, c.iii, c.iv) The project site is generally flat, with elevations ranging from approximately 130 to 140 feet above sea level. Surface flows on the project site generally travel from north to south toward Prefumo Creek and San Luis Obispo Creek.

Construction of the project may alter the existing drainage pattern of the site due to grading and paving activities. The project would result in an overall increase in impervious surface of up to 2 acres on the project site and would

include the removal of existing biofiltration strips along the U.S. 101 northbound lane.

Pursuant to the National Pollutant Discharge Elimination System Statewide Stormwater Permit Waste Discharge Requirements for the State of California Department of Transportation (Order 2012-0011-DWQ and subsequent amendments), the project would be required to implement postconstruction treatment control Best Management Practices to infiltrate, harvest, reuse, evapotranspire, or capture and treat runoff from the 85th percentile, 24-hour rainfall event. Best Management Practices required under the Construction General Permit include but would not be limited to detention and infiltration basins or low-impact development flow-through treatment devices. To ensure compliance with National Pollutant Discharge Elimination System Requirements, existing postconstruction runoff control facilities removed/demolished by the project will be reconstructed/replaced within the project area.

Additionally, portions of the project site outside the State right-of-way are subject to the National Pollutant Discharge Elimination System Phase 2 Small MS4 General Permit (Order 2013-0001-DWQ), which requires postconstruction low-impact development design standards for roadway projects. Similar to the postconstruction requirements of the Caltrans National Pollutant Discharge Elimination System permits, low-impact development design standards under the Phase 2 Small MS4 General Permit include the following design and performance standards:

- Low impact design of the project to minimize stormwater runoff and minimize disturbance of natural drainage features.
- Treatment of runoff from the 85th percentile, 24-hour event using infiltration, harvest and reuse, or capture Best Management Practices, such as a bioretention facility.
- Retaining the 95th percentile, 24-hour rainfall event.
- Ensuring proposed and existing peak flows match for the 2-year through 10-year rainfall events.

Adherence to the requirements of applicable stormwater permits would reduce impacts associated with site drainage alteration by capturing and treating, infiltrating, or harvesting stormwater flows from the project site.

As depicted in the Water Quality Assessment Report, due to the proximity of the project to Prefumo Creek and San Luis Obispo Creek, the northwestern and northeastern portions of the project site are in the 100-year floodplain, with the southern portion of the site within the 500-year floodplain. Development on the project site would be subject to the City of San Luis Obispo's Flood Damage Prevention Ordinance, as codified in Chapter 17.78 of the city's Municipal Code. Pursuant to the ordinance, the project would

require review by the city's floodplain administrator to verify that permit requirements have been satisfied and that the proposed development does not adversely affect the carrying capacity of areas where base flood elevations have been determined, but a floodway has not been designated. Compliance with the city's existing flood damage prevention regulations would ensure that the proposed new roadway facilities would not substantially impede flood flows or otherwise result in adverse effects associated with the 100-year and 500-year floodplains that extend onto the project site. Therefore, this impact would be less than significant.

d.) The project site is located approximately 6 miles from the coast and is not within the Tsunami Inundation Area (California Emergency Management Agency, California Geological Survey, and University of Southern California 2009). According to the City of San Luis Obispo General Plan Safety Element, the city is not subject to inundation from seiche (City of San Luis Obispo 2000). The project site is within a flood hazard zone. However, the project would not involve the construction or installation of any structures or facilities that would use, process, or store pollutants that could be released in the event of inundation. Therefore, this impact would be less than significant.

Avoidance, Minimization, and/or Mitigation Measures

Implementation of Avoidance, Minimization, and/or Mitigation Measure BIO-3 would be required to reduce impacts to hydrological resources to a less than significant level.

2.1.11 Land Use and Planning

Question—Would the project:	CEQA Significance Determinations for Land Use and Planning
a) Physically divide an established community?	**No Impact**
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?	**Less Than Significant Impact**

Affected Environment

East of U.S. 101, Prado Road is an existing highway/regional route surrounded by commercial, industrial, and public facilities land uses. Agricultural land is located west of the freeway, with commercial development located northwest of the project site along Dalidio Drive and Madonna Road.

Parcels north of Prado Road have a General Plan land use designation of Office and a zoning designation of Office–Planned Development overlay (O-PD). Parcels south of Prado Road have a General Plan land use designation of Public and zoning designation of Public Facility (PF). Parcels west of U.S. 101 have land use designations of Neighborhood Commercial and Agriculture

under the San Luis Ranch Specific Plan and zoning designations of Neighborhood Commercial–Specific Plan Area overlay (C-N-SP) and Agriculture–Specific Plan Area overlay (AG-SP).

Environmental Consequences

a) Improvements to the Prado Road/U.S. 101 interchange would not physically divide an established community east of U.S. 101 because Prado Road is an existing roadway. The portion of the project site associated with the proposed Prado Road extension west of U.S. 101 to Dalidio Drive is located on the San Luis Ranch property. This area is designated as Prime Farmland under the City of San Luis Obispo General Plan Conservation and Open Space Element. Furthermore, the project would construct a vehicle, bicycle, and pedestrian connection over the U.S. 101 freeway that does not currently exist, connecting portions of San Luis Obispo along Prado Road east of the freeway with residences, schools, commercial development, and parks west of the freeway, including planned development in the San Luis Ranch Specific Plan Area. Therefore, the project would not physically divide an established community and would improve connectivity in the city. No impact would occur.

b) The project would be constructed primarily within the existing public right-of-way along Prado Road and U.S. 101. The project would be compatible with the existing surrounding land uses. Depending on the alternative selected, a portion of the city-owned corporation yard southeast of the project site may require relocation to accommodate the proposed interchange and right-of-way. No offsite relocation of corporation yard buildings has been proposed at this time. Any subsequent relocation or alteration of these facilities would be subject to applicable environmental review requirements under CEQA, with mitigation incorporated as necessary to reduce any potentially significant environmental impacts. A discussion of project consistency with applicable land use plans, policies, and regulations is included below.

City of San Luis Obispo General Plan Consistency

The project is included in the Transportation Capital Projects of the City of San Luis Obispo General Plan Circulation Element (City of San Luis Obispo 2014a). Therefore, the project would implement improvements to the city's circulation network identified in the Circulation Element and would be consistent with goals, policies, and programs contained therein to expand the bicycle network, support a regional bikeway network, and develop bikeways with road improvements.

The portion of the proposed Prado Road extension west of U.S. 101 on the San Luis Ranch property is in the San Luis Ranch Specific Plan Area. In its discussion of the purpose for the San Luis Ranch (Dalidio) Specific Plan Area, the Land Use Element of the City of San Luis Obispo General Plan identifies the need for a Prado Road connection, including an overpass or

interchange, as well as circulation connections to integrate the property with the surrounding circulation network for all modes of travel (City of San Luis Obispo 2014c). The project is consistent with these identified needs.

As further discussed in Section 2.1.2, Agriculture and Forest Resources, the project has the potential to impact prime agricultural lands because the Prado Road extension west of U.S. 101 would require the acquisition of farmland on the San Luis Ranch property, and there is the potential to impact prime agricultural lands for the Elks Lane realignment, depending on the project alternative. Local policies regarding the protection of prime agricultural lands are contained in the Conservation and Open Space Element of the San Luis Obispo General Plan, which has the goal to "secure and maintain a diverse network of open land encompassing particularly valuable natural and agricultural resources, connected with the landscape around the urban area." The Conservation and Open Space Element designates the San Luis Ranch property as prime farmland (City of San Luis Obispo 2006).

The San Luis Ranch Project Final Environmental Impact Report, certified by the City of San Luis Obispo for the San Luis Ranch Specific Plan in 2017, assesses the environmental impacts of the San Luis Ranch Specific Plan, General Plan Amendment/Pre-Zoning, and Development Plan/Vesting Tentative Tract Map for the 131-acre San Luis Ranch site. The Prado Road extension to Dalidio Drive is included in the San Luis Ranch Specific Plan as part of the proposed street network on the site. The Final Environmental Impact Report includes an agricultural conservation mitigation measure to reduce the impact to agricultural resources resulting from development on the property. Mitigation Measure AG-1, Agricultural Conservation, from the San Luis Ranch Specific Plan Final Environmental Impact Report, requires that for every 1 acre of Important Farmland on the site, including Prime Farmland, Farmland of Statewide Importance, and Unique Farmland, that is permanently converted to nonagricultural use as a result of project development, 1 acre of comparable land in agricultural production shall be preserved in perpetuity (City of San Luis Obispo 2017b).

Policy 8.6.3C of the Conservation and Open Space Element states that for widespread habitat types or for farmland, mitigation shall consist of permanently protecting an equal area of equal quality that does not already have permanent protection in the San Luis Obispo Planning Area (City of San Luis Obispo 2006). Because the loss of prime farmland associated with the project would be offset through perpetual preservation of comparable farmland, the proposed project would be consistent with the Conservation and Open Space Element of the General Plan.

The project would be constructed primarily within the public right-of-way, and the extension of Prado Road (Dalidio Drive) west of U.S. 101 would be consistent with policies and projects contained in the city's General Plan and San Luis Ranch Specific Plan. The project does not propose any General

Plan or Specific Plan amendments or zone changes. Therefore, the project would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, and this impact would be less than significant.

2.1.12 Mineral Resources

Question—Would the project:	CEQA Significance Determinations for Mineral Resources
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?	**Less Than Significant Impact**
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	**Less Than Significant Impact**

Affected Environment

According to the City of San Luis Obispo General Plan Conservation and Open Space Element, mineral resource recovery in and around San Luis Obispo includes mines and quarries producing basaltic stone, red rock, and cinnabar, an ore of mercury (City of San Luis Obispo 2006). The Mineral Land Classification Map for the San Luis Obispo-Santa Barbara Region and the San Luis Obispo quadrangle designates the project site, along with most of the city, as Mineral Resource Zone 3 (Miller 1989). Areas located in Mineral Resource Zone 3 contain mineral deposits, the significance of which cannot be evaluated from available data.

Environmental Consequences

a, b) Policy 6.5.1(A) of the city's General Plan Conservation and Open Space Element prohibits mineral extraction within city limits, and the project does not include any uses or activities that would result in the loss of availability of a known mineral resource or a locally important mineral resource recovery site. Therefore, impacts to mineral resources would be less than significant.

2.1.13 Noise

Considering the information in the U.S. 101/Prado Road Interchange Improvement Project Noise Study Report dated October 2021, the following significance determinations have been made:

Question—Would the project result in:	CEQA Significance Determinations for Noise
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	**Less Than Significant Impact**
b) Generation of excessive groundborne vibration or groundborne noise levels?	**Less Than Significant Impact**
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 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	**Less Than Significant Impact**

Affected Environment

Noise

Sound is a vibratory disturbance created by a moving or vibrating source, which is capable of being detected by the hearing organs. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment (Caltrans 2013a).

Noise levels are commonly measured in decibels using the A-weighted sound pressure level (A-weighted decibels). The A-weighting scale is an adjustment to the actual sound pressure levels so they are consistent with the human hearing response. Decibels are measured on a logarithmic scale that quantifies sound intensity, similar to how the Richter scale is used to measure earthquake magnitudes. A doubling of the energy of a noise source, such as a doubling of traffic volume, would increase the noise level by 3 decibels; dividing the energy in half would result in a 3 decibels decrease (Crocker 2007).

Human perception of noise is not linear in terms of A-weighted decibels or in terms of sound energy. Two sources do not “sound twice as loud” as one source. It is widely accepted that the average healthy ear can barely perceive changes of 3 A-weighted decibels (increase or decrease) (i.e., twice the sound energy); that a change of 5 A-weighted decibels is readily perceptible (8 times the sound energy); and that an increase (or decrease) of 10 A-weighted decibels sounds twice (half) as loud ([10.5x the sound energy] (Crocker 2007).

Sound changes in both level and frequency spectrum as it travels from the source to the receiver. The most obvious change is the decrease in level as

the distance from the source increases. How noise reduces with distance depends on factors such as the type of sources (e.g., point or line, the path the sound will travel, site conditions, and obstructions). Noise levels from point sources typically reduce or drop off at a rate of 6 A-weighted decibels per doubling of distance (e.g., construction, industrial machinery, ventilation units). Noise from line sources (e.g., roadway, pipeline, railroad) typically reduces at about 3 A-weighted decibels per doubling of distance (Caltrans 2013a). Noise levels may also be reduced by intervening structures that "shield" the receiver from the noise source; the amount of reduction provided by this shielding depends on the size of the intervening structure(s) and the frequencies of the noise levels. Natural terrain features such as hills and dense woods, and human-made features such as buildings and walls, can significantly alter noise levels. Generally, any large structure blocking the line of sight will provide at least a 5 A-weighted decibels reduction in source noise levels at the receiver (Federal Highway Administration 2011). Structures can substantially reduce exposure to noise as well. The Federal Highway Administration's guidelines indicate that modern building construction generally provides an exterior-to-interior noise level reduction of 20 to 35 A-weighted decibels with closed windows.

The impact of noise is not a function of loudness alone. The time of day when noise occurs and the duration of the noise are also important factors in a project's potential noise impact. Most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors have been developed. One of the most frequently used noise metrics is the equivalent noise level (Leq); it considers both duration and sound power level. Leq is defined as the single steady A-weighted level equivalent to the same amount of energy as that contained in the actual fluctuating levels over time. Typically, Leq is summed over a 1-hour period (Crocker 2007). Lmax is the highest instantaneous sound level measured during a specified period.

Noise that occurs at night tends to be more disturbing than noise that occurs during the day. Community noise is measured using Community Noise Equivalent Level, which is the 24-hour average noise level with a plus 5 A-weighted decibels penalty for noise occurring from 7:00 p.m. to 10:00 p.m. and a plus 10 A-weighted decibels penalty for noise occurring from 10:00 p.m. to 7:00 a.m. (Caltrans 2013a). The relationship between the peak-hour Leq value and the Community Noise Equivalent Level depends on the distribution of traffic during the day, evening, and night. Quiet suburban areas typically have Community Noise Equivalent Level noise levels in the range of 40 to 50 A-weighted decibels, while areas near arterial streets are in the 50-to-60-plus Community Noise Equivalent Level range. Normal conversational levels are in the 60 to 65-A-weighted decibels Leq range; ambient noise levels greater than 65 A-weighted decibels Leq can interrupt conversations (Federal Transit Administration 2018).

Some land uses are more sensitive to ambient noise levels than other uses due to the amount of noise exposure and the types of activities involved. For example, residences, motels, hotels, schools, libraries, churches, nursing homes, auditoriums, museums, cultural facilities, parks, and outdoor recreation areas are more sensitive to noise than commercial and industrial land uses.

Vibration

Vibration is a unique form of noise because its energy is carried through buildings, structures, and the ground, whereas sound is simply carried through the air. As a result, vibration is generally felt rather than heard. Some vibration effects can be caused by noise (e.g., the rattling of windows from passing trucks). This phenomenon is caused by the coupling of the acoustic energy at frequencies that are close to the resonant frequency of the material being vibrated. Typically, groundborne vibration generated by human-made activities reduces rapidly as the distance from the source of the vibration increases. The ground motion caused by vibration is measured as particle velocity in inches per second peak particle velocity and is referenced as vibration decibels.

Regulatory Setting

Caltrans

According to Caltrans Standard Specifications Section 14-8.02, “Noise Control,” construction noise shall not exceed 86 A-weighted decibels Lmax at 50 feet from the job site activities from 9:00 p.m. to 6:00 a.m.

Caltrans Noise Abatement Criteria serve as the Caltrans and Federal Highway Administration standard for identifying potential noise impacts along roadways. Traffic noise impacts, as defined in 23 Code of Federal Regulation 772.5, occur when the predicted noise level approaches or exceeds the land use specific Noise Abatement Criteria specified in 23 Code of Federal Regulation 772, or a predicted noise level substantially exceeds the existing noise level (a “substantial” noise increase).

City of San Luis Obispo General Plan and State of California Noise Standards

The Noise Element and Noise Guidebook (1996) of the City of San Luis Obispo General Plan uses modified land use compatibility standards recommended by the California Department of Health Services. The noise criteria for the city and the State of California for current and projected conditions state that the noise intrusive to interior habitable space of residential units from exterior sources should not exceed 45 CNEL. The General Plan Noise Element restricts noise in outdoor living areas due to transportation noise sources to 60 CNEL.

The following Noise Element policy applies to the project and the local noise environment:

Policy 1.4. New Transportation Noise Sources. Noise created by new transportation noise sources, including road, railroad, and airport expansion projects, shall be mitigated to not exceed the levels specified in Table 4.10-3 for outdoor activity areas and indoor spaces of noise-sensitive land uses, which were established before the new transportation noise source.

City of San Luis Obispo Municipal Code Construction Noise Standards

Tables 8 and 9 show the city's maximum allowable noise levels for short-term operation of mobile equipment and long-term operation of stationary equipment at residential properties. Where technically and economically feasible, the city requires that construction activities that use mobile or stationary equipment that may result in noise at residential properties be conducted so that maximum sound levels from stationary equipment at affected properties would not exceed 60 A-weighted decibels for single-family residences (Municipal Code 9.12.050). Except for emergency repair of public service utilities or where an exception is issued by the city Community Development Department, the city prohibits the operation of tools or equipment used in construction, drilling, repair, alteration, or demolition work daily between the hours of 7:00 p.m. and 7:00 a.m. or any time on Sundays or holidays, such that the sound creates a noise disturbance across a residential or commercial property line.

Table 8 Maximum Noise Levels for Nonscheduled, Intermittent, Short-Term Operation (Less Than 10 Days) of Mobile Equipment

Time	Single-Family Residential	Multifamily Residential	Mixed Residential/ Commercial
Daily, except Sundays and legal holidays, from 7:00 a.m. to 7:00 p.m.	75 A-Weighted Decibels	80 A-Weighted Decibels	85 A-Weighted Decibels
Daily, from 7:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays	60 A-Weighted Decibels	65 A-Weighted Decibels	70 A-Weighted Decibels

Source: City of San Luis Obispo Municipal Code.

Table 9 Maximum Noise Levels for Repetitively Scheduled and Relatively Long-Term Operation (Periods of 10 Days or More) of Stationary Equipment

Time	Single-Family Residential	Multifamily Residential	Mixed Residential/ Commercial
Daily, except Sundays and legal holidays, from 7:00 a.m. to 7:00 p.m.	60 A-Weighted Decibels	65 A-Weighted Decibels	70 A-Weighted Decibels
Daily, from 7:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays	50 A-Weighted Decibels	55 A-Weighted Decibels	60 A-Weighted Decibels

Vibration

The City of San Luis Obispo considers construction-related vibration significant if construction-related activities create a vibration that is above the vibration perception threshold. The vibration perception threshold is defined in the City of San Luis Obispo Municipal Code (Section 9.12.050) as "The minimum ground or structure-borne vibrational motion necessary to cause a normal person to be aware of the vibration by such direct means as, but not limited to, sensation by touch or visual observation of moving objects. The perception threshold shall be presumed to be a motion velocity of 0.01 inch per second over the range of 1 to 100 Hertz."

Section 9.12.050(B)(7) prohibits operating or permitting to the operation of any device that creates a vibration exceeding the perception threshold of an individual at the property boundary of the source if located on private property or 150 feet from the source if on public space or in the public right-of-way. Since the project involves the construction of roadway infrastructure within the public right-of-way, vibration impacts would violate the standards set forth in the San Luis Obispo Municipal Code if construction or operation would generate groundborne vibration greater than 0.01 inch per second peak particle velocity (perception threshold) at 150 feet from the source.

Additionally, Caltrans' Transportation and Construction-Induced Vibration Manual (Caltrans 2013b) provides general guidance on vibration issues associated with the construction and operation of projects in relation to human perception and structural damage. Table 10 indicates vibration levels at which humans would be affected by vibration levels.

In the second column in Table 10, titled "Maximum Vibration Level (Inches per Second) for Transient Sources," transient construction vibrations are generated by a single isolated vibration event, such as blasting or wrecking balls.

In the third column in Table 10, titled "Maximum Vibration Level (Inches per Second) for Continuous/Frequent Intermittent Sources," continuous/frequent intermittent vibrations result from equipment or activities such as excavation

equipment, static compaction equipment, tracked vehicles, vibratory pile drivers, and vibratory compaction equipment.

Table 10 California Department of Transportation Vibration Annoyance Potential Criteria

Human Response Condition	Maximum Vibration Level (Inches per Second) for Transient Sources	Maximum Vibration Level (Inches per Second) for Continuous/Frequent Intermittent Sources
Barely Perceptible	0.04	0.01
Distinctly Perceptible	0.25	0.04
Strongly Perceptible	0.9	0.10
Severe	2.0	0.4

Source: California Department of Transportation 2013b.

Environmental Consequences

a) Noise Analysis Methodology

Construction Noise

During project construction, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. According to Caltrans Standard Specifications Section 14-8.02, “Noise Control,” construction noise shall not exceed 86 A-weighted decibels Lmax at 50 feet from the job site activities from 9:00 p.m. to 6:00 a.m. and internal combustion engines must be equipped with the manufacturer-recommended muffler and internal combustion engines cannot be operated on the job site without the appropriate muffler.

Construction noise estimates for the project are based on noise levels reported by Federal Highway Administration Highway Construction Noise Handbook (2006) and the Federal Transit Administration Transit Noise and Vibration Impact Assessment (2018). Estimated construction noise levels were adjusted based on the distance to nearby noise-sensitive receptors using a standard noise reduction rate of 6 decibels per doubling of distance and do not account for the presence of intervening structures or topography, which could reduce noise levels at receptor locations. Additionally, construction equipment included in the analysis for the project was based on typical construction equipment associated with roadway construction projects. The analysis assumes that construction equipment would be operating concurrently during different phases of the project. Therefore, the noise levels estimated for the project represent a conservative estimate of expected construction noise.

Long-Term Operational Noise

Traffic noise levels were predicted using the Federal Highway Administration Traffic Noise Model Version 2.5. Noise modeling was conducted for each of the project alternatives to evaluate which alternative(s) would have the worst-case potential noise impact. The comparison to existing conditions is included in the analysis to identify traffic noise impacts as defined under 23 Code of Federal Regulations 772. The comparison to no-project conditions indicates the direct effect of the project. The estimated noise levels were then compared to the applicable Caltrans Noise Abatement Criteria to determine the potential noise impacts of the project. The Noise Abatement Criteria serve as the Caltrans and Federal Highway Administration standard for identifying potential noise impacts along roadways. Traffic noise impacts, as defined in 23 Code of Federal Regulations 772.5, occur when the predicted noise level approaches or exceeds the land-use-specific Noise Abatement Criteria specified in 23 Code of Federal Regulations 772 or a predicted noise level substantially exceeds the existing noise level (a “substantial” noise increase).

Noise Impacts

Construction Noise

The closest noise-sensitive receptor to the project site is the Prado Day Center, modeled at 145 feet from the project boundary. The second and third closest sensitive receptors are a mobile home park and the Embassy Suites Hotel modeled at 250 feet and 435 feet from the site, respectively. Peak construction noise levels from the combined construction phase equipment could be up to 77 A-weighted decibels Leq at the Prado Day Center, 72 A-weighted decibels Leq at the mobile home park, and 67 A-weighted decibels Leq at the hotel. Accordingly, no adverse noise impacts from project construction would occur because construction noise would not exceed the Caltrans Standard Specifications Section 14.8-02 of 86 A-weighted decibels Lmax or the city’s standard of 85 A-weighted decibels in mixed commercial/residential areas. Also, construction noise would be short-term in duration and intermittent, further reducing potential noise impacts. Construction noise impacts would be less than significant.

Long-Term Operational Noise

Table 11 shows the future noise levels at sensitive noise receptors in the project vicinity in comparison to the applicable Noise Abatement Criteria for each land use.

The figures in the second column in Table 11 are rounded to the nearest decibel.

In the fourth column in Table 11, titled “Substantial Increase,” a substantial increase is plus 12 A-weighted decibels from the existing noise level.

In the fifth column in Table 11, titled “Noise Abatement Criteria (A-weighted decibels Leq[h]),” the Leq(h) activity criteria values are for impact determinations only and are not design standards for noise abatement measures. All values are A-weighted decibels.

In the sixth column in Table 11 titled, “Noise Abatement Criteria Exceedance? (Yes/No),” the noise abatement criteria for the exterior noise level are not approached or exceeded. Exterior-to-interior noise level reduction is assumed to be 20 A-weighted decibels, resulting in a 44 A-weighted decibels worst-case interior noise level. These noise abatement criteria would also not be approached or exceeded.

Table 11 Future (2045) Noise Environment With Project Alternatives 1, 3, 4, and 7

Sensitive Noise Receptor	With Project (A-Weighted Decibels Leq)	Without Project (A-Weighted Decibels Leq)	Substantial Increase?	Noise Abatement Criteria (A-Weighted Decibels Leq[h])	Noise Abatement Criteria Exceedance? (Yes/No)
Prado Day Center (Exterior)	64	63	No	67	No
Mobile Home Park (Exterior)	65	61	No	67	No
Hotel (Exterior)	70	69	No	72	No

As shown in Table 11, noise levels at sensitive receptors in the project vicinity would not exceed the applicable Noise Abatement Criteria. Therefore, the project would not generate a substantial permanent increase in ambient noise levels in the vicinity of the project in excess of established standards, and this impact would be less than significant.

b) Certain types of construction equipment can generate high levels of groundborne vibration. Construction of the proposed project would utilize vibration-producing equipment, including dozers, loaded trucks, and jackhammers during most construction phases. Construction equipment would operate, on average, approximately 25 feet from the project site boundary within the public right-of-way along Prado Road or U.S. 101. Section 9.12.050(B)(7) of the City of San Luis Obispo Municipal Code prohibits operating or permitting the operation of any device that creates a vibration above the perception threshold of an individual (0.01 inch per second peak particle velocity) at 150 feet from the source if located on a public space or public right-of-way. Table 12 shows groundborne vibration levels associated with equipment that is expected to be used in conjunction with project construction. As shown in Table 12, vibration levels would not exceed the threshold at 150 feet from the source and, therefore, would comply with Section 9.12.050(B)(7) of the municipal code.

Table 12 Construction Vibration Levels

Construction Equipment	Groundborne Vibration Level at 25 Feet (Reference Distance) in Inches per Second Peak Particle Velocity	Groundborne Vibration Level at 150 Feet in Inches per Second Peak Particle Velocity
Loaded Trucks	0.076	0.005
Bulldozer–Large	0.089	0.006
Hoe Ram	0.089	0.006
Jackhammer	0.035	0.002

Source: Federal Transit Administration 2018.

Project operation would involve the passage of vehicular traffic, including trucks and passenger vehicles, along Prado Road, U.S. 101, and the Prado Road (Dalidio Drive) extension west of the freeway. Such traffic may generate limited groundborne vibration but would not substantially increase groundborne vibration above existing levels because vehicle traffic, including large trucks, is already traveling along Prado Road and U.S. 101. The project does not include elements that would generate long-term increases in vibration, such as railroad tracks or heavy stationary equipment. Therefore, because project construction would not generate groundborne vibration in excess of thresholds described in the San Luis Obispo Municipal Code and

project operation would not substantially increase groundborne vibration, this impact would be less than significant.

c) As discussed in Section 2.1.9, Hazards and Hazardous Materials, the project site is located approximately 1.5 miles northwest of the San Luis Obispo County Regional Airport. According to the Airport Land Use Plan, the project site is located within the airport's projected 55 A-weighted decibels noise contour and 75 A-weighted decibels single-event noise contour (Airport Land Use Commission of San Luis Obispo County 2005). As such, the project site experiences noise associated with airport and air travel activities overhead.

The project does not involve the construction of residences, businesses, noise-sensitive receptors, or any habitable structures. Construction workers would temporarily be exposed to airplane noise overhead during project construction. However, ambient noise levels in the vicinity of the project site range from approximately 59 A-weighted decibels Leq near Dalidio Drive to 70 A-weighted decibels Leq along Prado Road, with roadways serving as the primary noise source. Given the existing ambient noise levels on the site and the expected operation of construction equipment, noise on the project site would be typical of construction work zones, and airport noise would not substantially contribute to ground-level noise during construction. Therefore, the site's proximity to the airport would not expose people residing or working in the project area to excessive noise levels, and this impact would be less than significant.

2.1.14 Population and Housing

Question—Would the project:	CEQA Significance Determinations for Population and Housing
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	**Less Than Significant Impact**
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	**No Impact**

Affected Environment

The city has a current population of 46,058 (California Department of Finance 2021). The project site includes a portion of the San Luis Ranch Specific Plan area. The San Luis Ranch Specific Plan calls for the development of the 131-acre San Luis Ranch site with residential, recreational, commercial, and agricultural uses. The San Luis Ranch Project Environmental Impact Report estimates the build-out of the San Luis Ranch Specific Plan would add 1,293 residents to the city, increasing San Luis Obispo's population by 2.8 percent. Development of the San Luis Ranch Specific Plan Area and associated

population growth is accounted for in the City of San Luis Obispo's General Plan Land Use Element and is consistent with population projections therein. Potential future development on the San Luis Ranch property under the San Luis Ranch Specific Plan was determined to result in less than significant impacts regarding growth effects such as population and housing, public services, and utilities and service systems (City of San Luis Obispo 2017b).

Environmental Consequences

a) The project does not include any housing or business development and would not directly induce population growth in the city. The project would facilitate the development of the San Luis Ranch Specific Plan Area by creating a roadway connection and freeway crossing to the San Luis Ranch Specific Plan Area that does not currently exist. While the project would indirectly facilitate population growth by facilitating the development of the San Luis Ranch Specific Plan Area, this growth would be consistent with the city's General Plan projections and would not result in substantial new environmental impacts beyond those identified for the General Plan and San Luis Ranch Specific Plan. Therefore, this impact would be less than significant.

b) The project would predominantly be constructed within the existing public right-of-way along Prado Road and U.S. 101. While the project would require the acquisition of 4 to 6 acres of Caltrans and city right-of-way and 3 to 4 acres of slope easements, this acquisition would not affect any existing housing. Therefore, the project would not displace substantial numbers of existing people or housing, and no impact would occur.

2.1.15 Public Services

Question:	CEQA Significance Determinations for Public Services
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: Fire protection?	**Less Than Significant Impact**
Police protection?	**Less Than Significant Impact**
Schools?	**No Impact**
Parks?	**Less Than Significant Impact**
Other public facilities?	**Less Than Significant Impact**

Affected Environment

Fire Protection

Fire protection services are provided by the San Luis Obispo city Fire Department, which is staffed by four administrative professionals and 42 firefighters. Services provided by the fire department include fire response, emergency medical response, hazardous materials response, public assistance, and nonemergency services, such as fire and life safety inspections, building inspections, fire code investigations, and public education. The Fire Department maintains a response time goal of 4 minutes travel time to 95 percent of all emergencies (City of San Luis Obispo 2021a).

The nearest fire station to the project site is the Fire Department Headquarters at 2160 Santa Barbara Avenue, about 1.7 miles (driving distance) northeast of the project site. Fire Station 4, at 1395 Madonna Road, is about 1.9 miles (driving distance) west of the project site.

Police Protection

The San Luis Obispo Police Department provides police protection for the city, including the project site. The Police Department has 90 employees, including 61 sworn police officers, and is divided into two Bureaus: Operations and Administrative Services. The Operations Bureau includes the Patrol Services Division, the Traffic Safety Unit, Situation Oriented Response Team, and Neighborhood Services. The Administrative Services Bureau includes the Administrative Services Division, Investigative Division, Communications Division, and Records Unit (City of San Luis Obispo 2021b). The Police Station is at 1042 Walnut Street, about 2.2 miles (driving distance) north of the project site.

Public Schools

The project site is in the San Luis Coastal Unified School District, which operates 10 elementary schools, two middle schools, three high schools, and an adult school (San Luis Coastal Unified School District 2021).

Environmental Consequences

a.1) Upon connection of Prado Road to Dalidio Drive under the project build-out, Fire Station 4 would be located within 1.0 mile of the project site (driving distance), shortening the distance from the nearest fire station to the site. In addition, the project would improve traffic flow through the project area by constructing the overcrossing over U.S. 101, improving potential fire response times in the project site vicinity. The project does not include new housing or businesses that would increase the demand for fire protection services. Therefore, the project would not result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities. This impact would be less than significant.

a.2) The project site is served by the San Luis Obispo County Police Department police protection services, and the project would not result in any new development that would be expected to increase demand for such services. In addition, the project would improve traffic flow through the project area by constructing the overcrossing over U.S. 101, improving potential police response times in the project site vicinity. Therefore, the project would not result in substantial adverse physical impacts associated with the need for new or physically altered police protection facilities. This impact would be less than significant.

a.3) The project would not involve the construction of any new housing or businesses that would increase the population in the city or otherwise result in an increase in enrollment at San Luis Coastal Unified School District schools. Therefore, the project would not necessitate new or physically altered schools with the potential to cause significant environmental impacts. No impact would occur.

a.4) The project may facilitate improved access to existing recreational facilities, such as the Bob Jones Bike Trail east of U.S. 101 and Laguna Lake Park west of U.S. 101, by creating a freeway overcrossing with Class 2 bike lanes and pedestrian facilities that do not currently exist. This may result in a marginal increase in the usage of these recreational amenities. However, this increase would not be substantial, as such facilities are currently accessible via existing freeway overcrossings north and south of the project site. The project does not involve the construction of any housing or other development that would increase demand for parks or recreational facilities. Therefore, this impact would be less than significant.

a.5) The project does not involve the construction of housing or other development that would increase demand on government facilities.

Depending on the alternative selected, a portion of the city-owned corporation yard southeast of the project site may require relocation to accommodate the proposed interchange and right-of-way. No offsite relocation of corporation yard buildings has been proposed at this time. Any subsequent relocation or alteration of these facilities would be subject to applicable environmental review requirements under CEQA, with mitigation incorporated as necessary to reduce any potentially significant environmental impacts. Therefore, the project would not increase demand for government facilities, and because any relocation of existing facilities would undergo project-specific environmental review, this impact would be less than significant.

2.1.16 Recreation

Question—Would the project:	CEQA Significance Determinations for Recreation
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	**Less Than Significant Impact**
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**

Affected Environment

The city's park system includes a mix of 28 parks and recreation facilities covering approximately 206 acres. The city's parks include a broad range of recreational features, including multiuse fields, softball/baseball fields, basketball courts, soccer fields, tennis courts, pickleball courts, a skate park, and disc golf courses. The city also owns and manages 16 open spaces and recreational trails covering nearly 3,800 acres (City of San Luis Obispo 2019b).

Environmental Consequences

a) The project does not involve new housing and would not result in permanent job creation that would substantially increase the use of area parks. A minor increase in the use of nearby recreational facilities such as the Bob Jones Bike Trail east of U.S. 101 and Laguna Lake Park west of U.S. 101 may occur, as the project would enhance bicycle and pedestrian connections to these facilities by providing Class 2 bike lanes and sidewalks along the Prado Road overcrossing. Any increase in use would be minimal, as these facilities are already accessible via the Madonna Road overcrossing to the north or the Los Osos Valley Road overcrossing to the south, both of which also provide Class 2 bike lanes and pedestrian connections. Therefore, this impact would be less than significant.

b) The project does not include the construction or expansion of any recreational facilities that might have an adverse physical effect on the environment. No impact would occur.

2.1.17 Transportation

Considering the information in the U.S. 101/Prado Road Interchange Traffic Operations Analysis Report and Intersection Control Evaluation dated May 2019 and the U.S. 101/Prado Road Vehicle Miles Traveled Analysis Memorandum dated June 2020, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Transportation
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	**No Impact**
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	**Less Than Significant Impact**
c) 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**
d) Result in inadequate emergency access?	**Less Than Significant Impact**

Affected Environment

Level of Service Standards

The City of San Luis Obispo General Plan Circulation Element contains policies and programs pertaining to the city's circulation network, including policies targeting traffic reduction, transit, bicycle and pedestrian amenities, and street network changes (City of San Luis Obispo 2014a). These policies include performance standards for circulation facilities, including bicycle, pedestrian, transit, and vehicle facilities.

The Circulation Element also establishes priorities for each mode, such that construction, expansion, or alteration for one mode does not degrade the service level of a higher priority mode. In the study area, modes are prioritized as follows: 1) vehicles, 2) transit, 3) bicycles, and 4) pedestrians. Exceptions to multimodal priorities may apply when in conflict with safety or regulatory requirements or conflicts with area character, topography, street design, and existing density.

As described in the CEQA Guidelines and in Public Resources Code 21099(b)(2), "automobile delay, as described solely by Level of Service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to this division,

except in locations specifically identified in the guidelines, if any." The existing traffic conditions at intersections and roadway segments in the project vicinity are provided for informational purposes.

Study Area Intersections

The Traffic Operations Analysis Report and Intersection Control Evaluation traffic analysis evaluated the project's effect on regional transportation based on traffic forecasts for the project Opening Year (2025) and Design Year (2045) for the following scenarios: No Build Alternative (Prado Road northbound existing ramps remain), Overcrossing Alternative (Prado Road overcrossing is constructed without ramps), and Full Build Alternative (full or partial access interchange at Prado Road is constructed). The Overcrossing Alternative was removed during the Project Study Report-Project Development Support phase (completed in April 2018) as it was determined not to meet the Project's Purpose and Need (refer to Section 1.2). The traffic analysis considers impacts at the following study intersections:

- Los Osos Valley Road/Calle Joaquin
- Los Osos Valley Road/U.S. 101 Southbound Ramps
- Los Osos Valley Road/U.S. 101 Northbound Ramps
- Los Osos Valley Road/Higuera Street
- Higuera Street/Prado Road
- Prado Road/Elks Lane/U.S. 101 Northbound Ramps
- Prado Road/U.S. 101 Southbound Ramps (future)
- Prado Road/Dalidio Drive/Froom Ranch Way (future)
- Madonna Road/Higuera Street
- Madonna Road/U.S. 101 Southbound Ramps
- Madonna Road/U.S. 101 Northbound Ramps
- Madonna Road/El Mercado Street
- Madonna Road/Dalidio Drive
- Los Osos Valley Road/Madonna Road
- Los Osos Valley Road/Froom Ranch Way

Study Area Roadway Segments

The Traffic Operations Analysis Report and Intersection Control Evaluation consider the project's effect on the following U.S. 101 highway segments:

- South of Los Osos Valley Road
- Los Osos Valley Road to Prado Road

- Prado Road to Madonna Road
- Madonna Road to Marsh Street

Existing Traffic Conditions

The Traffic Operations Analysis Report and Intersection Control Evaluation assessed the Level of Service at study area intersections and highway mainlines and ramps for the morning and evening peak hours under existing conditions using 2019 traffic counts obtained from the City of San Luis Obispo Traffic Counts and Speed Surveys database and Caltrans mainline traffic counts from 2014 and 2018. The project baseline analysis was done for construction year 2025 with a design year of 2045. The Level of Service and delay for all intersections and freeway segments were determined using the methodology documented in the Highway Capacity Manual, 6th Edition.

Tables 13 and 14 summarize the existing Level of Service at study area intersections and freeway mainline, ramps, and weaving sections, respectively.

In the first column in Table 13, the Analysis of Prado Road/U.S. 101 Southbound Ramps and Prado Road/Dalidio Drive/Froom Ranch Way intersections are not included for existing conditions because these are future intersections that have not yet been constructed.

In Table 14, bold values denote the exceedance of Caltrans' Level of Service C standard. To supplement the Highway Capacity Manual weaving (lane changing) analysis, peak hour weaving section operations were also evaluated using the Leisch Method. Caltrans noted that, though an auxiliary lane currently does not exist on Northbound U.S. 101 between Prado Road and Madonna Road, this segment essentially operates as a weaving section and should also be evaluated using the Leisch Method. In the seventh row in Table 14, titled "U.S. 101 Northbound North of Prado Road," supplemental analysis for weaving sections using the Leisch Method indicates that the segment operates at Level of Service D/E and Level of Service E during the morning and evening peak hours, respectively. In the eighth row in Table 14 titled, "U.S. 101 Northbound South of Marsh Street," supplemental analysis for weaving sections using the Leisch Method indicates that the segment operates at Level of Service C/D and Level of Service D during the morning and evening peak hours, respectively. In the ninth row in Table 14, titled "U.S. 101 Southbound South of Marsh Street," supplemental analysis for weaving sections using the Leisch Method indicates that the segment operates at Level of Service C and Level of Service E during the morning and evening peak hours, respectively.

Table 13 Level of Service for Study Area Intersections under Existing Conditions

Intersection	Control Type	Target Level of Service	Morning Peak Hour Delay	Morning Peak Hour Level of Service	Evening Peak Hour Delay	Evening Peak Hour Level of Service
Los Osos Valley Road/Calle Joaquin	Signal	D	4.6	A	5.6	A
Los Osos Valley Road/U.S. 101 Southbound Ramps	Signal	C	12.6	B	18.2	B
Los Osos Valley Road/U.S. 101 Northbound Ramps	Signal	C	27.6	C	21.8	C
Los Osos Valley Road/Higuera Street	Signal	D	15.0	B	19.0	B
Higuera Street/Prado Road	Signal	D	16.1	B	19.2	B
Prado Road/U.S. 101 Northbound Ramps	Stop Sign	C	9.1	A	13.3	B
Higuera Street/Madonna Road	Signal	D	18.1	B	21.3	C
Madonna Road/U.S. 101 Northbound Ramps	Signal	C	17.2	B	21.0	C
Madonna Road/U.S. 101 Southbound Ramps	Signal	C	16.9	B	23.1	C
Madonna Road/El Mercado Street	Signal	D	7.2	A	17.4	B
Dalidio Drive/Madonna Road	Signal	D	9.5	A	51.3	D
Los Osos Valley Road/Madonna Road	Signal	D	25.5	C	44.8	D
Los Osos Valley Road/Froom Ranch Way	Signal	D	19.2	B	31.3	C

Source: Traffic Operations Analysis Report and Intersection Control Evaluation, Table 1.

Table 14 Level of Service for Study Area Freeway Mainline, Ramps, and Weaving Sections Under Existing Conditions

Segment	Segment Type	Target Level of Service	Morning Peak Hour-Volume	Morning Peak Hour-Level of Service	Evening Peak Hour-Volume	Evening Peak Hour-Level of Service
U.S. 101 Northbound South of Los Osos Valley Road	Freeway	C	2,774	C	2,249	C
U.S. 101 Northbound Los Osos Valley Road Off-Ramp	Diverge	C	**546**	**D**	579	C
U.S. 101 Northbound Los Osos Valley Road On-Ramp	Merge	C	215	C	467	C
U.S. 101 Northbound South of Prado Road	Freeway	C	2,443	C	2,137	C
U.S. 101 Northbound Prado Road Off-Ramp	Diverge	C	225	C	135	C
U.S. 101 Northbound North of Prado Road	Weave	C	2,951	C	2,986	C
U.S. 101 Northbound South of Marsh Street	Weave	C	3,410	B	3,492	B
U.S. 101 Southbound South of Marsh Street	Weave	C	2,753	B	4,018	C
U.S. 101 Southbound Madonna Road On-Ramp	Merge	C	144	B	377	C
U.S. 101 Southbound South of Madonna Road	Freeway	C	1,663	B	**2,881**	**D**
U.S. 101 Southbound Los Osos Valley Road Off-Ramp	Diverge	C	621	B	**611**	**D**
U.S. 101 Southbound Los Osos Valley Road On-Ramp	Merge	C	364	B	**774**	**D**
U.S. 101 Southbound South of Los Osos Valley Road	Freeway	C	1,406	B	**3,044**	**D**

Source: Traffic Operations Analysis Report and Intersection Control Evaluation, Tables 2 and 3.

Vehicle Miles Traveled

Caltrans has determined that Vehicle Miles Traveled is the most appropriate primary measure of transportation impacts for capacity-increasing transportation projects on the State Highway System. The project would not involve the construction of additional vehicle lanes or increase the capacity of the existing interchange; however, a discussion of the project's potential affects on regional (Citywide and Countywide) Vehicle Miles Traveled is included to compare the same baseline network with the addition of the Prado Road extension over U.S. 101, northbound ramps, and the northbound auxiliary lane between Prado Road and Marsh Street.

CEQA Guidelines Section 15064.3(b) identifies criteria for evaluating transportation impacts. Specifically, the guidelines state that vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Caltrans has not adopted thresholds of significance for the evaluation of potential vehicle miles traveled impacts, but current guidance refers to the Governor's Office of Planning and Research *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018). Caltrans has also published the Caltrans *Vehicle Miles Traveled-Focused Transportation Impact Study Guide* (May 2020), which describes methods for evaluating transportation impacts and projects that would include an analysis of vehicle miles traveled.

The City of San Luis Obispo adopted the Multimodal Transportation Impact Study Guidelines in June 2020. The Guidelines include vehicle miles traveled thresholds of significance for analyses in CEQA documents which are based on the Office of Planning and Research *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018), the Caltrans *Vehicle Miles Traveled-Focused Transportation Impact Study Guide* (May 2020), and the San Luis Obispo Council of Governments *Transition from LOS to Vehicle Miles Traveled Staff Report* (October 2019).

In support of the city's Multimodal Transportation Impact Study Guidelines and vehicle miles traveled thresholds, a technical study compared the regional San Luis Obispo Council of Governments and San Luis Obispo city travel demand models with enumerated vehicle miles traveled data sources such as Longitudinal Employer-Household Dynamics data. The analysis demonstrated that the city's travel demand model, which boundaries incorporate the entirety of San Luis Obispo County, more closely represents Longitudinal Employer-Household Dynamics data, and therefore is the preferred tool for accurately forecasting vehicle miles traveled for projects within the City of San Luis Obispo and assessing induced travel. As part of the Prado Road Traffic Operations Analysis Report, the San Luis Obispo Council of Governments endorsed and Caltrans approved the use of the city's travel demand model for assessing the project.

The city's travel demand model is capable of estimating the net overall change in vehicle miles traveled as a result of the proposed interchange; and is sensitive to travel time and cost as well as mode choice, distribution, and assignment consistent with the requirements described in Office of Planning and Research *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018).

As recommended by the Office of Planning and Research, the city determined regional geographies as the vehicle miles traveled baseline.

According to CEQA Guidelines Section 15064.3(b)(2), transportation projects that reduce or have no impact on vehicle miles traveled should be presumed to cause a less than significant transportation impact.

Environmental Consequences

a) The project consists of roadway improvements, including the construction of a freeway overcrossing and extension of Prado Road (Dalidio Drive) west of U.S. 101. The project would accommodate Class 4 bike lanes and pedestrian sidewalks, improving pedestrian and cyclist safety. While the project would not result in new vehicle trip generation because it does not propose new development, such as homes or businesses, the proposed roadway improvements would affect vehicle, transit, bicycle, and pedestrian circulation in the city.

The Traffic Operations Analysis Report and Intersection Control Evaluation (May 2019) analyzed potential intersection and freeway impacts associated with the build-out of each of the project alternatives and provided a comparison of the Level of Service at study area intersections under Opening Year (2025) conditions for each project alternative as well as the No-Build Alternative. As demonstrated in that analysis, no study area intersections would exceed the target Level of Service without the project or with the construction of any of the project alternatives. Therefore, the project would not conflict with either Caltrans or the City of San Luis Obispo Level of Service standards. In addition, as described in the CEQA Guidelines and in Public Resources Code 21099(b)(2), "automobile delay, as described solely by the level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to this division, except in locations specifically identified in the guidelines, if any."

The project is a Capital Improvement Project identified in the City's General Plan Circulation Element and would implement improvements along Prado Road, including vehicle, bicycle, and pedestrian circulation improvements, envisioned in the Circulation Element. Specifically, the project would implement Circulation Element Program 9.2.2:

Program 9.2.2: Prado Road Improvements. The city shall ensure that changes to Prado Road (Projects 1, 2, and 19 in Table 5 of the Circulation Element of the City's General Plan) and other related system improvements are implemented in a sequence that satisfies circulation demands caused by area development.

The sponsors of development projects that contribute to the need for the Prado Road interchange or overpass (Project 19 on Table 5 of the Circulation Element of the City's General Plan) will be required to prepare or fund the preparation of a Project Study Report for the interchange project. The Project Study Report shall meet the requirements of the California Department of Transportation.

Therefore, the project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, and bicycle and pedestrian facilities.

b) Vehicle Miles Traveled

Using the City of San Luis Obispo's travel demand model, the 2016 baseline was compared to the same baseline network with the addition of the Prado Road extension over U.S. 101, northbound ramps, and the northbound auxiliary lane between Prado Road and Marsh Street. The results of this analysis are presented in Table 15. Copies of the analysis supporting these results are included in the U.S. 101/Prado Road Vehicle Miles Traveled Analysis Memorandum in Volume 2 of this document.

Table 15 City Travel Demand Model Vehicle Miles Traveled Analysis

Baseline Geography	Baseline Net Vehicle Miles Traveled	Baseline Net Vehicle Miles Traveled With Project	Change
Countywide Geography	8,486,293	8,483,614	Negative 0.07 percent
Citywide Geography	1,027,441	1,024,822	Negative 0.50 percent

As shown in Table 15, the project would result in a net overall reduction in daily vehicle miles traveled by 0.50 percent at the city Sphere of Influence level and 0.07 percent at the regional level. This finding is consistent with the purpose of the proposed overcrossing to provide a more direct route through the city, reducing out-of-direction travel and vehicle volumes on other nearby routes.

Induced Travel

One of the considerations in evaluating induced travel is a project's effect on land use that could occur as a result of the project. The proposed project would not result in land use development that would lead to induced travel and vehicle miles traveled. Potential development beyond that envisioned in

the city's current General Plan would require an assessment of vehicle miles traveled as it directly relates to future land use development independent of the Prado Road Interchange.

Induced travel also includes shifts to new facilities from other routes, modes, or times resulting from projects that make vehicle travel easier. The city's travel demand model is capable of estimating the net overall change in vehicle miles traveled as a result of the proposed interchange (results shown in Table 15). Currently, trips between the east and west sides of U.S. 101 in the vicinity of the project take direction routes via Madonna Road or Los Osos Valley Road. The travel demand model forecasts that these trips will re-route to the more direct Prado Road Overpass when available. The forecasted vehicle miles traveled reduction is consistent with the volume predicted to shift to that more direct route and the shorter distance that more direct route would provide. As a result, the project would not cause substantial induced travel and would result in an overall reduction in regional vehicle miles traveled.

c) The project does not propose sharp curves. While the project would involve the construction of an interchange in a new configuration, ramp intersection control would be provided by either a traffic signal or roundabout. As a result, the project would not substantially increase hazards due to a geometric design feature or incompatible use, and this impact would be less than significant.

d) The project involves roadway improvements that would enhance circulation by improving a freeway interchange and providing a freeway overcrossing that does not presently exist. Therefore, the project would result in beneficial long-term impacts regarding emergency access by improving vehicular flow and providing an additional freeway crossing for emergency service providers throughout the city.

During the construction period, vehicular flow along Prado Road and, to a lesser extent, U.S. 101, may be intermittently disrupted or reduced. As described in Section 2.1.9, Hazards and Hazardous Materials, the project would be required to implement a Transportation Management Plan pursuant to Caltrans Deputy Directive 60. According to Caltrans' Guidelines, Transportation Management Plans include public information, motorist information, incident management, construction strategies, demand management, and alternate route/detour strategies. Public information strategies include notification to emergency services, including fire, law enforcement, and ambulance services, of start dates, work schedules, significant traffic pattern changes, transit routes, traffic collisions, and other incidents in the work zone (Caltrans 2015). With the implementation of the required, project-specific Transportation Management Plan, closures or detours along either roadway would occur with advanced notification to emergency services, providing an opportunity to coordinate emergency access during project construction. Given the short duration and temporary

nature of any reductions in vehicular flow through the project area that may impede emergency access and the project's long-term beneficial impact to emergency service circulation throughout the city, this impact would be less than significant.

2.1.18 Tribal Cultural Resources

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, or 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:

Question:	CEQA Significance Determinations for Tribal Cultural Resources
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 Incorporated**
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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	**Less Than Significant Impact with Mitigation Incorporated**

Affected Environment

On July 1, 2015, California Assembly Bill 52 of 2014 was enacted, expanding CEQA by defining a new resource category, "tribal cultural resources." Assembly Bill 52 states, "A project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment" (Public Resources Code Section 21084.2). It further states the lead agency shall establish measures to avoid impacts altering the significant characteristics of a tribal cultural resource when feasible (Public Resources Code Section 21084.3).

Public Resources Code Section 21074 (a)(1)(A) and (B) defines tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" and is:

1. 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

2. 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 these criteria, the lead agency shall consider the significance of the resource to a California Native American tribe.

Assembly Bill 52 also establishes a formal consultation process for California tribes regarding those resources. The consultation process must be completed before a CEQA document can be certified or adopted. Under Assembly Bill 52, lead agencies are required to "begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project." Native American tribes to be included in the process are those having requested notice of projects proposed in the jurisdiction of the lead agency.

On March 20, 2018, and August 12, 2021, the City of San Luis Obispo distributed Assembly Bill 52 consultation letters for the proposed project, including project information, map, and contact information, to ten Native American contacts. The Native American contacts provided with an Assembly Bill 52 consultation letter via certified mail include the following list of recipients:

- Barbareño/Ventureño Band of Mission Indians
- Coastal Band of the Chumash Nation
- Northern Chumash Tribal Council
- Salinan Tribe of Monterey and San Luis Obispo Counties
- Santa Ynez Band of Chumash Indians
- Xolon-Salinan Tribe
- Yak Tityu Tityu Yak Tilhini—Northern Chumash Tribe

Under Assembly Bill 52, Native American tribes have 30 days to respond and request further project information and formal consultation, and lead agencies have 30 days to begin consultation proceedings after a tribe has requested it.

On August 22, 2021, the city received an email from the Barbareño/Ventureño Band of Mission Indians indicating that they defer to the Northern Chumash Tribe on the project. On August 23, 2021, the city received an email from the Northern Chumash Tribe requesting consultation on the project due to the sensitivity of the project area. In addition, on September 20, 2021, the city received an email from the Salinan Tribe of Monterey/San Luis Obispo Counties requesting the results of the cultural resources studies for the project and requesting project updates. The project will continue to comply with all applicable tribal consultation requirements of Public Resources Code Section 21080.3 and all other applicable regulations as the proposed project moves through the required review and approval process.

Environmental Consequences

a, b) On February 26, 2018, Rincon requested a records search of the Sacred Lands File from the Native American Heritage Commission to identify the potential for tribal cultural resources within the project site and to obtain contact information for Native American groups or individuals who may know resources within the project site. On March 8, 2018, the Sacred Lands File search was returned with negative results. At the time of this reporting, no known sacred sites or tribal cultural resources have been identified within the project site.

However, based on feedback received from the Northern Chumash Tribe and Salinan Tribe of Monterey/San Luis Obispo Counties, the potential exists for construction activities to unearth unknown and unidentified sacred sites or tribal cultural resources. Required Avoidance, Minimization, and/or Mitigation Measures in Section 2.1.5, Cultural Resources, would reduce this impact to a less than significant level.

2.1.19 Utilities and Service Systems

Question—Would the project:	CEQA Significance Determinations for Utilities and Service Systems
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 relocation of which could cause significant environmental effects?	**Less Than Significant Impact**
b) 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**
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?	**No Impact**
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?	**Less Than Significant Impact**
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	**Less Than Significant Impact**

Affected Environment

Water

Water services are provided by the city Utilities Department. The city has four primary water supply sources including Whale Rock Reservoir, Salinas

Reservoir, Nacimiento Reservoir, and recycled water (for irrigation), with groundwater serving as a fifth supplemental source. According to the city's 2020 Urban Water Management Plan and based on the city's available water supplies and estimates of future water demand, the city's water resources are determined to be reliable during normal and extended drought periods (City of San Luis Obispo 2021c). The city's Water Treatment Plant also has the capacity to meet projected water demand at build-out under the city's most recent General Plan (City of San Luis Obispo 2014b).

Wastewater Treatment

The City of San Luis Obispo Water Resource Recovery Facility collects and processes wastewater from land uses in the city, California Polytechnic State University (Cal Poly), and the airport. In 2021, the Water Resource Recovery Facility treated an average of 2.96 million gallons per day of wastewater, before discharging it into the San Luis Obispo Creek (Metz 2022). The Water Resource Recovery Facility is undergoing a comprehensive upgrade to the facility, called SLO Water Plus, which will increase treatment capacity, provide a new treatment system, update the odor control system, and improve flood protections (City of San Luis Obispo 2022).

Solid Waste

San Luis Garbage provides waste and recycling services in the city, including the project site. The nearest landfill to the project site is the Cold Canyon Landfill at 2268 Carpenter Canyon Road, approximately 6.4 miles southeast of the project site. According to the city, the Cold Canyon Landfill accepts various construction-related waste, including asphalt/concrete and mixed construction and demolition debris (City of San Luis Obispo 2021e). The facility has a permitted capacity of 23.9 million cubic yards, with a remaining capacity of approximately 13 million cubic yards (CalRecycle 2021). The Cold Canyon Landfill has a maximum daily throughput of 1,650 tons per day with an estimated closure date of 2040 (CalRecycle 2021).

Electric Power and Natural Gas

As described in detail in Section 2.1.6, Energy, Pacific Gas and Electric provides electricity and Southern California Gas provides natural gas service to the city.

Environmental Consequences

a) Water

The project does not include any new housing or other development that would generate substantial long-term water demand and does not involve the construction of new or expanded water supply infrastructure. However, the project would include landscaped areas post-development, which would involve long-term use of water. Landscaping would consist of drought-tolerant species watered by efficient landscape irrigation systems, resulting in minor water use post-project construction. The proposed landscaping would be

required to be consistent with the City's Water Efficient Landscape Ordinance. During project construction activities, required Avoidance, Minimization, and/or Mitigation Measures implement San Luis Obispo Air Pollution Control District's standard fugitive dust control measures, which require short-term watering of exposed soil during construction to reduce emissions. However, water demand for fugitive dust mitigation activities would be limited and temporary and would be met using recycled water supplies to minimize potable water demand. The project could result in the relocation of some existing water lines. However, the relocation activities would occur within the proposed project footprint. The project would not require or result in the construction of new or expanded water facilities, and this impact would be less than significant.

Wastewater Treatment

The project would not result in any new land uses that would increase sanitary wastewater generation or otherwise contribute to an increase in wastewater treatment requirements. The amount or characteristics of wastewater treated at the Water Resource Recovery Facility would not change compared to existing conditions with the implementation of the proposed project. The project could result in the relocation of some existing wastewater infrastructure. However, the relocation activities would occur within the proposed project footprint. Any necessary dewatering to the collection system would be conducted under a Temporary Discharge Permit from the city and would be required to comply with all permit requirements. The project would not require or result in the construction of new wastewater treatment infrastructure, and this impact would be less than significant.

Stormwater Drainage

As discussed in Section 2.1.10, Hydrology and Water Quality, the project would replace existing impervious surfaces on a relatively flat project site. The project would result in an overall increase in impervious surface of up to 2 acres due to the extension of Prado Road (Dalidio Drive). Increases in the impervious surface cover have the potential to increase runoff volume and flow to existing stormwater facilities. The project would be required to implement postconstruction treatment control Best Management Practices to infiltrate, harvest, reuse, evapotranspire, or capture and treat runoff from the 85th percentile, 24-hour rainfall event, pursuant to the National Pollutant Discharge Elimination System Statewide Stormwater Permit Waste Discharge Requirements for State of California Department of Transportation (Order 2012-0011-DWQ and subsequent amendments) and the National Pollutant Discharge Elimination System Phase 2 Small MS4 General Permit (Order 2013-0001-DWQ). Stormwater capture, infiltration, or treatment Best Management Practices required pursuant to these permits include the following design and performance standards related to detention and infiltration basins or low-impact development flow-through treatment devices:

- Low impact design of the project to minimize stormwater runoff and minimize disturbance of natural drainage features.
- Treatment of runoff from the 85th percentile, 24-hour event using infiltration, harvest and reuse, or capture Best Management Practices, such as a bioretention facility.
- Retaining the 95th percentile, 24-hour rainfall event.
- Ensuring proposed and existing peak flows match for the 2-year through 10-year rainfall events.

Implementation of these practices would minimize potential impacts to the stormwater conveyance system. Therefore, compliance with applicable National Pollutant Discharge Elimination System permit requirements would ensure that the project would result in less than significant impacts to stormwater drainage facilities.

Electric Power

As discussed in Section 2.1.6, Energy, the project would not substantially increase long-term energy demand. Potential energy demand, such as that needed for streetlights or typical roadway maintenance activities, would be met with existing electric power infrastructure that currently serves the project site and vicinity. Therefore, no new or relocated energy facilities would be required as a result of the proposed project. The project was designed to avoid the high voltage tower on the west side of U.S. 101. The project would not require or result in the need for new or expanded electric power facilities, and this impact would be less than significant.

Natural Gas

The project would not involve any new land uses that would require natural gas service. While the project could result in the relocation of existing natural gas facilities, such activities would occur within the proposed project footprint. Therefore, the project would not require or result in the need for new or expanded natural gas facilities that would result in physical environmental impacts beyond those identified throughout this Initial Study. This impact would be less than significant.

Telecommunications

The project would not involve any new land uses that would require telecommunications infrastructure. While the project could result in the relocation of existing telecommunications facilities, such activities would occur within the proposed project footprint. Therefore, the project would not require or result in the need for new or expanded telecommunications facilities that would result in physical environmental impacts beyond those identified throughout this Initial Study. This impact would be less than significant.

b) As discussed in checklist item a) in this subsection, the project does not include any new development land uses that would generate substantial long-term water demand. The project would include landscaped areas post-development, which would involve long-term use of water. Water use for landscaping would be minimized through the planting palette and installation of water-efficient irrigation systems. The proposed landscaping would be required to be consistent with the City's Water Efficient Landscape Ordinance. Compliance with San Luis Obispo Air Pollution Control District's standard fugitive dust control measures during project construction activities would require short-term watering of exposed soil during construction. However, water demand for fugitive dust mitigation activities would be limited and temporary and would be met using reclaimed water supplies to the extent feasible. The project would not impact water supply availability for any reasonably foreseeable future development during normal, dry, and multiple dry years. Therefore, impacts related to the availability of water supply would be less than significant.

c) As discussed in checklist item a) in this subsection, the project would not increase sanitary wastewater generation or otherwise contribute to an increase in wastewater treatment requirements or wastewater treatment capacity at the Water Resource Recovery Facility. No impact would occur.

d, e) Once constructed, project operation would not result in new solid waste. Project construction activities would generate solid waste in the form of demolition debris, asphalt/concrete, and spoiled soils. Construction waste would be disposed of in accordance with all applicable federal, state, and local policies. The project would be required to comply with the State's 65 percent construction/demolition waste diversion requirement and would be required to prepare a construction waste management plan to identify waste management and diversion procedures. Recycling facilities in the project site vicinity that accept demolished concrete/asphalt materials include North County Recycling in Templeton and Hanson Aggregates in Santa Margarita. Local solid waste infrastructure can accept solid waste generated by project construction activities that are not diverted for recycling. Once constructed, long-term project operation would not generate solid waste, and the project would not otherwise impair the attainment of solid waste reduction goals. Potential impacts associated with solid waste management would be less than significant.

2.1.20 Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones:

Question—Would the project:	CEQA Significance Determinations for Wildfire
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	**Less Than Significant Impact**
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?	**Less Than Significant Impact**
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?	**Less Than Significant Impact**
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?	**Less Than Significant Impact**

Affected Environment

The San Luis Obispo region is prone to potential wildfire events due to its warm, dry climate, surrounding rural hillsides and mountains, and expansive coverage of ignitable vegetation. During the summer and autumn months, strong off-shore Santa Ana winds can create fast-moving fires that spread rapidly from the sparsely populated hillsides in the Irish Hills, Santa Lucia foothills, Cerro San Luis Obispo, Bishop Peak, and Islay Hill areas downslope toward neighborhoods in the city. Recent wildfires near the city include the 1994 Highway 41 Fire, 1996 Highway 58 Fire, and the 2015 Cuesta Fire (City of San Luis Obispo 2014; California Department of Forestry and Fire Protection 2015).

While a natural ecological process in coastal chaparral and forest systems, wildfire return intervals have decreased throughout California, resulting in more frequent ecological disturbance, loss of biodiversity, and colonization by non-native grass species (U.S. Forest Service 2018). Furthermore, post-fire conditions leave exposed mountain slopes and hillsides vulnerable to surface erosion and runoff. Debris flows during post-fire rainy seasons can pose a risk to life and property and occur with little warning. In California, as little as 0.3 inch of rain in 30 minutes can produce debris flows on post-fire landscapes (U.S. Geological Survey 2018).

In 2019, San Luis Obispo County published the Community Wildfire Protection Plan, which identifies opportunities for agency coordination and pre-fire planning and management strategies (San Luis Obispo County 2019). The city, including the project site, is located in Planning Area SLO-1 of the Community Wildfire Protection Plan.

The project site is in a local responsibility area, Moderate Fire Hazard Severity Zone, according to the most recent San Luis Obispo County Fire Hazard Severity Zones Map (California Department of Forestry and Fire Protection 2007, 2009). The nearest state responsibility area is south of Los Osos Valley Road, about 0.8 mile south of the project site. The nearest Very High Fire Hazard Severity Zone is a state responsibility area near the Irish Hills Natural Reserve, about 1.0 mile south of the project site.

Environmental Consequences

a, b, c, d) The project site is not located in a state responsibility area or Very High Fire Hazard Severity Zone. The project site is developed with existing roadway infrastructure and agricultural land, with limited potential to spark a widespread wildfire. The project would deliver long-term benefits to circulation in the city by creating an additional freeway overcrossing, facilitating potential emergency evacuation.

Project construction may require temporary lane closures or detours, which would have the potential to impair emergency response or evacuation. However, as noted in Section 2.1.17, Transportation, any such closures or detours would be temporary in nature and subject to a Caltrans Transportation Management Plan, which would include public information strategies such as notification to emergency services, including fire, law enforcement, and ambulance services, of start dates, work schedules, significant traffic pattern changes, transit routes, traffic collisions, and other incidents in the work zone. Such notification would reduce potential temporary impacts to wildfire emergency response or evacuation during project construction.

The project involves the construction of new roadway infrastructure and connectivity in a developed portion of the city, which would improve emergency access and would not exacerbate wildfire risks. The project does not involve the construction of habitable structures and is located on a relatively flat landscape. As such, the project would not 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. Impacts related to wildfire would be less than significant.

2.1.21 Mandatory Findings of Significance

Question:	CEQA Significance Determinations for Mandatory Findings of Significance
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	**Less Than Significant Impact with Mitigation Incorporated**
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 with Mitigation Incorporated**
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	**Less Than Significant Impact with Mitigation Incorporated**

Environmental Consequences

a) As discussed in this Initial Study, project development has the potential to degrade the quality of the environment in several issue areas without the incorporation of the identified mitigation measures. As discussed in the Biological Resources section, the project's potential impacts to special-status plants and animals would be less than significant with the following Avoidance, Minimization, and/or Mitigation Measures discussed throughout this Initial Study:

- BIO-1 including, but not limited to, preconstruction surveys, specifications for work within/near the arroyo willow tree thicket, and specifications for revegetation;
- BIO-2 including preconstruction survey and limitations on access routes, staging, and construction areas;
- BIO-3 including, but not limited to, construction personnel training, fencing, waste control, seasonal work limitations, erosion and water pollution minimization, and sedimentation control;
- BIO-4 requiring nesting bird surveys, seasonal limitations for removal of vegetation within suitable nesting bird habitats, and nesting bird avoidance;

- BIO-5 including measures for removal from and prevention of invasive plant species spread on the project site;
- BIO-6 including, but not limited to, spill prevention measures, hazardous materials contamination prevention measures, sedimentation controls, fencing, and seasonal work avoidance; and
- BIO-7 requires the preparation of a Habitat Mitigation and Monitoring Plan to provide for the restoration of permanent impacts to riparian habitats.

As discussed in the Cultural Resources section, the project's potential impacts to historical or prehistoric resources would be less than significant with the following Avoidance, Minimization, and/or Mitigation Measures discussed throughout this Initial Study:

- CR-1 including the stop-work and assessment measures that would be required if previously unidentified archaeological resources are exposed during construction.

As discussed in the Geology and Soils section, the project's potential impacts to paleontological resources would be less than significant with the following Avoidance, Minimization, and/or Mitigation Measures discussed throughout this Initial Study:

- GEO-1 requires evaluating any finds following the unanticipated discovery of paleontological resources during project construction.

With the implementation of required Avoidance, Minimization, and/or Mitigation Measures described herein, the project would not substantially degrade the quality of the environment, reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, 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.

b) Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of this proposed project. All environmental issues considered in this Initial Study have been found to result in no impact, a less than significant impact, or a less than significant impact with mitigation incorporated at the project level. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor but collectively substantial impacts taking place over a period of time.

Cumulative impacts to resources in the project area may result from other infrastructure development in the project vicinity or from residential, commercial, industrial, or other land use development. These activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology,

contamination, erosion, sedimentation/n, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts such as changes in community character, traffic patterns, housing availability, and employment.

CEQA Guidelines Section 15130 describes when a cumulative impact analysis is necessary and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts under CEQA can be found in Section 15355 of the CEQA Guidelines. A definition of cumulative impacts under NEPA can be found in 40 Code of Federal Regulations Section 1508.7 of the Council on Environmental Quality Regulations.

Cumulative impacts of several resource areas have been addressed in the individual resource sections, including Air Quality, Greenhouse Gas Emissions, Noise, Transportation/Circulation, and Utilities and Service Systems. Other issues (e.g., Geology/Soils, Hazards and Hazardous Materials) are by their nature project-specific, and impacts at one location do not add to impacts at other locations or create additive impacts. Therefore, the impacts of the proposed project would be individually limited and not cumulatively considerable.

Although incremental changes in certain issue areas would occur as a result of the project, the proposed project would be consistent with existing general plan goals, programs, policies, and zoning ordinance requirements for the transportation improvements. All environmental impacts that could occur as a result of the project would be reduced to a less than significant level through compliance with existing regulations and applicable General Plan policies and Municipal Code requirements discussed in this Initial Study and implementation of the mitigation measures recommended in this Initial Study for the following resource areas: agriculture and forestry resources, air quality, biological resources, cultural and tribal cultural resources, geology and soils, and hazards and hazardous materials. Therefore, the project would have less than significant cumulative impacts with the implementation of the mitigation measures included in this Initial Study.

c) Effects on human beings are generally associated with impacts related to such issue areas as air quality, agriculture, geology and soils, hazards, hydrology and water quality, noise, and traffic safety. As discussed in the respective sections of this Initial Study, project implementation would result in potential environmental impacts to human beings in the areas of air quality and hazards. Avoidance, Minimization, and/or Mitigation Measures AG-1, AQ-1, and HAZ-1 through HAZ-4 would reduce project impacts as a result of effects on human beings to a less than significant level. Potential impacts to human beings in the areas of hydrology and water quality, geology and soils, noise, and traffic safety would be less than significant. With the implementation of identified mitigation measures, the project would not cause substantial adverse effects on human beings, either directly or indirectly.

Appendix A Title VI Policy Statement

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY Gavin Newsom, Governor

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September 2021

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To obtain this information in an alternate format such as Braille or in a language other than English, please contact the California Department of Transportation, Office of Civil Rights, at 1823 14th Street, MS-79, Sacramento, CA 95811; PO Box 942874, MS-79, Sacramento, CA 94274-0001; (916) 324-8379 (TTY 711); or at Title.VI@dot.ca.gov.

Toks Omishakin
Director

"Provide a safe and reliable transportation network that serves all people and respects the environment."

Appendix B References

Bibliography

Airport Land Use Commission of San Luis Obispo County. 2005. Airport Land Use Plan for the San Luis Obispo County Regional Airport. Amended May 18, 2005. Available at: https://www.sloairport.com/wp-content/uploads/2016/10/alup_txt.pdf. Accessed February 2022.

California Air Resources Board. 2017. California 2017 Climate Change Scoping Plan. Available at: https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/scoping_plan_2017.pdf. Accessed December 2021.

California Air Pollution Control Officers Association. 2008. CEQA and Climate Change whitepaper. January 2008. Available at: www.capcoa.org/wp-content/uploads/2012/03/capcoa-white-paper.pdf. Accessed September 2021.

California Climate Action Registry. 2009. General Reporting Protocol. Available at: https://sfenvironment.org/sites/default/files/fliers/files/ccar_grp_3-1_january2009_sfe-web.pdf. Accessed November 2021.

California Department of Conservation. 2009. Tsunami Inundation Maps. https://www.conservation.ca.gov/cgs/documents/tsunami/maps/tsunami_inundation_pismobeach_quad_slo.pdf. Accessed December 2021.

_____2016. California Important Farmland Finder Map. Available at: https://maps.conservation.ca.gov/dlrp/ciff/. Accessed December 2021.

_____2021. EQ Zapp: California Earthquake Hazards Zone Application. Available at: https://www.conservation.ca.gov/cgs/geohazards/eq-zapp. Accessed December 2021.

California Department of Finance. 2021.E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2021 with 2010 Census Benchmark. May 2021. Available at: https://www.dof.ca.gov/forecasting/demographics/estimates/e-5/. Accessed December 2021.

California Department of Forestry and Fire Protection. 2007. San Luis Obispo County Fire Hazard Severity Zone Map. State Responsibility Area. Adopted November 2007. Available at: https://osfm.fire.ca.gov/media/6795/fhszs_map40.pdf. Accessed December 2021.

_____2009. San Luis Obispo County Fire Hazard Severity Zone Map. Local Responsibility Area. Recommended July 2009. Available at: https://osfm.fire.ca.gov/media/5980/san_luis_obispo.pdf. Accessed December 2021.

_____2015. Cuesta Fire Incident. Available at: https://www.fire.ca.gov/incidents/2015/8/16/cuesta-fire/. Accessed December 2021.

_____2021. Fire Hazard Severity Zone Viewer Map. Available at: https://egis.fire.ca.gov/fhsz/. Accessed December 2021.

California Department of Transportation (Caltrans). 2002. California Highway Barrier Aesthetics. June 2002. Available at: https://dot.ca.gov/-/media/dot-media/programs/design/documents/barrier-aesth1final-a11y.pdf. Accessed May 2022.

_____2013a. Technical Noise Supplement to the Traffic Noise Analysis Protocol. Available at: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf. Accessed December 2021.

_____2013b. Transportation and Construction Vibration Guidance Manual. September 2013. Available at: https://www.contracosta.ca.gov/documentcenter/view/34120/caltrans-2013-construction-vibration-pdf. Accessed December 2021.

_____2015. Transportation Management Plan Guidelines. November 2015. Available at: https://dot.ca.gov/-/media/dot-media/programs/traffic-operations/documents/tmp/tmp-guidelines-07202122763-rt1.pdf. Accessed February 2022).

_____2018a. Scenic Highways. Available at: http://www.dot.ca.gov/design/lap/livability/scenic-highways/. Accessed April 2019).

_____2018b. Standard Specifications. Available at: http://ppmoe.dot.ca.gov/hq/esc/oe/construction_contract_standards/std_specs/2018_stdspecs/2018_stdspecs.pdf. Accessed September 2021.

_____2019. Seismic Design Criteria, Version 2.0, April 2019. Available at: https://dot.ca.gov/-/media/dot-media/programs/engineering/documents/seismicdesigncriteria-sdc/202007-seismicdesigncriteria-v2-a11y.pdf. Accessed December 2021.

_____2020. Vehicle Miles Traveled-Focused Transportation Impact Study Guide. May 2020. Available at: https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-05-20-approved-vmt-focused-tisg-a11y.pdf. Accessed February 2022.

_____2021. California Scenic Highway Mapping System. Available at: https://www.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa. Accessed November 2021.

California Department of Water Resources. 2004. San Luis Obispo Valley Groundwater Basin, Bulletin 118. Last Updated: February 27, 2004. Available at: https://water.ca.gov/-/media/dwr-website/web-pages/programs/groundwater-management/bulletin-118/files/2003-basin-descriptions/3_009_sanluisobispovalley.pdf (accessed February 2022)._____2019. Sustainable Groundwater Management Act 2019 Basin Prioritization. January 2019. Available at: https://www.emwd.org/sites/default/files/file-attachments/sgma_basin_prioritization_2019_results.pdf?1559164669 Accessed February 2022.

California Emergency Management Agency, California Geological Survey, and University of Southern California. 2009. Tsunami Inundation for Emergency Planning. Pismo Beach Quadrangle. Scale 1:24,000. July 1, 2009. Available at: https://www.conservation.ca.gov/cgs/documents/tsunami/maps/tsunami_inundation_pismobeach_quad_slo.pdf. Accessed February 2009.

California Energy Commission. 2018. Revised Transportation Energy Demand Forecast 2018-2030. April 19, 2018. Available at: https://efiling.energy.ca.gov/getdocument.aspx?tn=223244. Accessed November 2021.

_____2020a. Electricity Consumption by Entity. Available at: http://ecdms.energy.ca.gov/elecbyutil.aspx. Accessed November 2021.

_____2020b. Gas Consumption by County. Available at: http://ecdms.energy.ca.gov/gasbycounty.aspxv. Accessed November 2021.

_____2021. “California Retail Fuel Outlet Annual Reporting (CEC-A15) Results.” Available at: https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-retail-fuel-outlet-annual-reporting. Accessed November 2021.

California Geological Survey. 2002. California Geomorphic Provinces. Note 36. Available at: https://www.conservation.ca.gov/cgs/documents/publications/cgs-notes/cgs-note-36.pdf. Accessed December 2021.

CalRecycle. 2021. Solid Waste Information System (SWIS). Cold Canyon Landfill, Inc. (40-AA-0004). Available at: https://www2.calrecycle.ca.gov/solidwaste/siteactivity/details/1509?siteid=3171. Accessed December 2021.

County of San Luis Obispo Board of Supervisors. 2018. Notification of Intent to Initiate Development of Groundwater Sustainability Plan for the San Luis Obispo Valley Groundwater Basin. Available at: https://www.slocounty.ca.gov/departments/public-works/forms-documents/committees-programs/sustainable-groundwater-management-act-(sgma)/san-luis-obispo-valley-groundwater-basin/slo-basin-noi.aspx Accessed February 2022.

Crocker, Malcolm J. 2007. Handbook of Noise and Vibration Control, John Wiley & Sons.

Department of Toxic Substances Control. 2019a. EnviroStor database. https://www.envirostor.dtsc.ca.gov/public/. Accessed April 2019.

_____2019b. DTSC's Hazardous Waste and Substances Site List - Site Cleanup (Cortese List). https://www.dtsc.ca.gov/sitecleanup/cortese_list.cfm. Accessed April 2019.

Federal Emergency Management Agency. Flood Map Service Center. Map: 06079C1066G, effective November 16, 2012. Available at: https://msc.fema.gov/portal/search?addressquery=san%20luis%20obispo%2c%20ca#searchresultsanchor

Federal Highway Administration. 2011. Highway Traffic Noise: Analysis and Abatement Guidance. FHWA-HEP-10-025. Available at: https://www.fhwa.dot.gov/environment/noise/regulations_and_guidance/analysis_and_abatement_guidance/revguidance.pdf. Accessed December 2021.

_____2019. Sustainability. https://www.fhwa.dot.gov/environment/sustainability/resilience/. Last updated February 7, 2019. Accessed: August 21, 2019.

_____No date. Sustainable Highways Initiative. https://www.sustainablehighways.dot.gov/overview.aspx. Accessed: August 21, 2019.

Federal Transit Administration. 2018. Transit Noise and Vibration Impact Assessment Manual. September 2018. Available at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf. Accessed January 6, 2022.

Governor's Office of Planning and Research. 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA. April 2018. Available at: https://opr.ca.gov/docs/20180416-743_technical_advisory_4.16.18.pdf. Accessed February 2022.

GSI Water Solutions, Inc. 2018. San Luis Obispo Valley Basin Characterization and Monitoring Well Installation. Available at: https://www.slocounty.ca.gov/departments/public-works/forms-documents/committees-programs/sustainable-groundwater-management-act-(sgma)/san-luis-obispo-valley-groundwater-basin/slo-basin-characterization-report.aspx. Accessed February 2022.

Jennings, C. W. 1958. Geologic Map of California, San Luis Obispo Sheet. Scale 1:250,000. Available at: https://ngmdb.usgs.gov/prodesc/proddesc_328.htm. Accessed December 2021).

Intergovernmental Panel on Climate Change. 2007. Summary for Policymakers. In: Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M.

Marquis, K.B. Avery, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

Metz, Jennifer. 2020. Utilities Project Manager, City of San Luis Obispo. Personal communication via email regarding City of San Luis Obispo Water Resource Recovery Facility operations with Chris Bersbach, Supervising Planner, Rincon Consultants, Inc. October 7, 2020.

Miller, R. V. 1989. Mineral Land Classification map. San Luis Obispo–Santa Barbara P-C Region, San Luis Obispo Quadrangle. Scale: Reduced from 1:24,000. Available at: https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc. Accessed December 2021.

Natural Resources Conservation Service. 2017. Web Soil Survey. Last Modified: August 21, 2017. Available at: https://websoilsurvey.sc.egov.usda.gov/app/websoilsurvey.aspx. Accessed March 2019.

San Luis Coastal Unified School District. 2021. Our Schools. Available at: https://www.slcusd.org/our-schools. Accessed December 2021.

San Luis Obispo, City of. 2000. Safety Element. Available at: http://www.slocity.org/home/showdocument?id=6645. Accessed December 2021.

_____2006. Conservation and Open Space Element. Available at: https://www.slocity.org/home/showdocument?id=6651. Accessed December 2021.

_____2014a. Circulation Element. Available at: https://www.slocity.org/home/showdocument?id=20412. Accessed December 2021.

_____2014b. Land Use and Circulation Element Update Draft Program EIR. Available at: https://www.slocity.org/home/showdocument?id=6723. Accessed December 2021.

_____2014c Land Use Element. Available at: https://www.slocity.org/home/showdocument?id=6635. Accessed December 2021.

_____2016. Emergency Operations Plan. Available at: https://www.slocounty.ca.gov/getattachment/40e9d234-8576-41a1-82fe-a07f3b67a20a/county-emergency-operations-plan-(eop).aspx. Accessed December 2021.

_____2017a. San Luis Ranch Specific Plan. Available at: https://www.slocity.org/home/showpublisheddocument/24679/637102669193230000. Accessed December 2021.

_____2017b. San Luis Ranch Specific Plan Final EIR. Available at: https://www.slocity.org/home/showdocument?id=15653. Accessed December 2021.

_____2019a. 2-Dimensional Hydraulic Model Update.

_____2019b. San Luis Obispo Parks and Recreation Master Plan – Community Needs Assessment. Available at: https://www.slocity.org/home/showpublisheddocument/23356/636958660067030000. Accessed December 2021.

_____2021a. Fire Department: Fire Stations and Training Grounds. Available at: https://www.slocity.org/government/department-directory/fire-department/about-us/fire-stations-facilities. Accessed December 2021.

_____2021b. Police Department.: About the Department Available at: https://www.slocity.org/government/department-directory/police-department/about-the-department. Accessed December 2021.

_____2021c. 2020 Urban Water Management Plan. Available at: https://www.slocity.org/home/showpublisheddocument/31041/637673768464130000. Accessed December 2021.

_____2021e. Utilities Department: Construction & Demolition Recycling Program. Available at: https://www.slocity.org/government/department-directory/utilities-department/garbage-recycling/construction-demolition-recycling-program. Accessed December 2021.

_____2022. Water Plus. Available at: https://www.slowrrfproject.org/about. Accessed February 2022.

San Luis Obispo Council of Governments. 2019. Transition from LOS to VMT Staff Report. October 2019.

San Luis Obispo, County of. 1999. General Plan Safety Element. Available at: https://www.slocounty.ca.gov/departments/planning-building/forms-documents/plans-and-elements/elements/safety-element.pdf. Accessed December 2021.

_____2019. Community Wildfire Protection Plan. Available at: https://www.slocounty.ca.gov/departments/county-fire-department/publications/community-wildfire-protection-plan.pdf. Accessed December 2021.

San Luis Obispo County Air Pollution Control District (District). 2001. Clean Air Plan. December 2001. Available at: https://storage.googleapis.com/slocleanair-org/images/cms/upload/files/business/pdf/cap.pdf. Accessed February 2022.

_____2012. CEQA Air Quality Handbook. April 2012. Available at: https://www.prcity.com/documentcenter/view/14604/california-environmental-quality-act-handbook---2012-volume-1-pdf. Accessed February 2022.

_____2017. Clarification Memorandum for the San Luis Obispo County Air Pollution Control District's 2012 CEQA Air Quality Handbook. November 2017. Available at: https://storage.googleapis.com/slocleanair-org/images/cms/upload/files/final_clarification%20memorandum%2020172.pdf. Accessed November 2021.

San Luis Obispo County Airport Land Use Commission. 2021. San Luis Obispo County Regional Airport Land Use Plan. Available at: https://www.slocounty.ca.gov/departments/planning-building/forms-documents/planning-projects/airport-land-use-plan-update/airport-land-use-plan-(amended-restated).pdf. Accessed December 2021.

San Luis Obispo Valley Basin Groundwater Sustainability Agencies. 2021. San Luis Obispo Valley Basin Groundwater Sustainability Plan. October 2021. Available at: https://02ee8e55-e735-4a38-bedf-455049034f73.filesusr.com/ugd/3de50a_f330a123a74e4007a9cf6d027961e1f2.pdf. Accessed February 2022.

State of California. 2018. California's Fourth Climate Change Assessment. http://www.climateassessment.ca.gov/. Accessed: August 21, 2019.

_____2019. California Climate Strategy. https://www.climatechange.ca.gov/. Accessed: August 21, 2019.

State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties and the State—January 1, 2011-2020. Sacramento, California, May 2020.

State Water Resources Control Board. 2019a. GeoTracker database. https://geotracker.waterboards.ca.gov/. Accessed April 2019.

_____2021. 2018 California Integrated Report (Clean Water Act Section 303(d) List and 305(b) Report). https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2018_integrated_report.html. Accessed February 2022.

U.S. Department of Transportation. 2011. Policy Statement on Climate Change Adaptation. June. Available at: https://www.fhwa.dot.gov/environment/sustainability/resilience/policy_and_guidance/usdot.cfm. Accessed August 2019.

U.S. Energy Information Administration. 2020."California – State Profile and Energy Estimates." Available at: https://www.eia.gov/state/?sid=ca#tabs-2. Accessed November 2021.

U.S. Environmental Protection Agency. 2009. Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Section 202(a) of the Clean Air Act. https://www.epa.gov/ghgemissions/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a-clean. Accessed August 2019.

_____2018. Inventory of U.S. Greenhouse Gas Emissions and Sinks. https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks. Accessed: August 21, 2019.

_____2019. Envirofacts database. https://www3.epa.gov/enviro/. Accessed April 2019).

U.S. Forest Service. 2018. “Fire in chaparral ecosystems.” Last modified November 30, 2018. https://www.fs.fed.us/psw/topics/fire_science/ecosystems/chaparral.shtml. Accessed April 2019.

U.S. Geological Survey. 2018. Post-Fire Flooding and Debris Flow. Last modified: October 31, 2018. Available at: https://ca.water.usgs.gov/wildfires/wildfires-debris-flow.html. Accessed April 2019.

U.S. Global Change Research Program. 2018. Fourth National Climate Assessment. https://nca2018.globalchange.gov/. Accessed: August 2019.

Wiegers, M.O. 2021. Preliminary geologic map of the west half of the San Luis Obispo 30’ x 60’ quadrangle, California, version 2.0: California Geological Survey. Scale 1:100,000. Available at: https://filerequest.conservation.ca.gov/?q=preliminary-geologic-map-sanluisobispo-100k-west-v2-map.pdf. Accessed April 2022.

Appendix C Energy Calculations

U.S. 101 and Prado Road Interchange Connection

Last Updated: 3/28/2022

Compression-Ignition Engine Brake-Specific Fuel Consumption (BSFC) Factors **[1]**:

HP: 0 to 100	0.0588	HP: Greater than 100	0.0529

Values above are expressed in gallons per horsepower-hour/BSFC.

CONSTRUCTION EQUIPMENT

Construction Equipment	#	Hours per Day	Horsepower	Load Factor	Construction Phase	Fuel Used (gallons)
Rubber Tired Dozers	2	8	247	0.4	Demolition Phase	10,027
Excavators	3	8	158	0.38	Demolition Phase	9,140
Concrete/Industrial Saws	1	8	81	0.73	Demolition Phase	3,336
Rubber Tired Dozers	3	8	247	0.4	Site Preparation Phase	3,760
Tractors/Loaders/Backhoes	4	8	97	0.37	Site Preparation Phase	2,025
Graders	1	8	187	0.41	Grading Phase	5,836
Excavators	1	8	158	0.38	Grading Phase	4,570
Rubber Tired Dozers	1	8	247	0.4	Grading Phase	7,520
Tractors/Loaders/Backhoes	3	8	97	0.37	Grading Phase	9,111
Air Compressors	1	6	78	0.48	Architectural Coating Phase	1,584
Pavers	2	8	130	0.42	Paving Phase	20,780
Paving Equipment	2	8	132	0.36	Paving Phase	18,085
Rollers	2	8	80	0.38	Paving Phase	12,862
					Total Fuel Used	**108,637 (Gallons)**

Construction Phase	Days of Operation
Demolition Phase	120
Site Preparation Phase	30
Grading Phase	180
Paving Phase	450
Architectural Coating Phase	120
Total Days	900

WORKER TRIPS

Constuction Phase	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
Demolition Phase	24.1	15	13.0	970.95
Site Preparation Phase	24.1	18	13.0	291.29
Grading Phase	24.1	15	13.0	1456.43
Paving Phase	24.1	15	13.0	3641.08
Architectural Coating Phase	24.1	12	13.0	776.76
		Total		**7,136.51**

HAULING AND VENDOR TRIPS

Trip Class	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
		HAULING TRIPS		
Demolition Phase	7.5	224	20.0	597.33
Site Preparation Phase	7.5	0	20.0	0.00
Grading Phase	7.5	40625	20.0	108333.33
Paving Phase	7.5	0	20.0	0.00

Architectural Coating Phase	7.5	0	20.0	0.00
			Total	**108,930.67**
		VENDOR TRIPS		
Demolition Phase	7.5	0	5.0	0.00
Site Preparation Phase	7.5	0	5.0	0.00
Grading Phase	7.5	0	5.0	0.00
Paving Phase	7.5	0	5.0	0.00
Architectural Coating Phase	7.5	0	5.0	0.00
			Total	**-**

Total Gasoline Consumption (gallons)	**7,137**
Total Diesel Consumption (gallons)	**217,568**

Sources:

[1] United States Environmental Protection Agency. 2021. *Exhaust and Crankcase Emission Factors for Nonroad Compression-Ignition Engines in MOVES3.0.2* . September. Available at: https://www.epa.gov/system/files/documents/2021-08/420r21021.pdf.

[2] United States Department of Transportation, Bureau of Transportation Statistics. 2021. *National Transportation Statistics* . Available at: https://www.bts.gov/topics/national-transportation-statistics.

List of Technical Studies Bound Separately (Volume 2)

- Initial Environmental Site Assessment, August 2017
- Remedial Excavation Report, San Luis Obispo Regional Transit Authority Bus Maintenance Facility, 253 Elks Lane, San Luis Obispo, California, November 2020.
- Farmland Conversion Impact Rating Memorandum, September 2021
- Moderate Level Visual Impact Assessment, September 2021
- Air Quality Technical Study, September 2021
- Climate Action Plan Consistency Checklist, September 2020
- Natural Environment Study, October 2021
- Archaeological Survey Report, January 2020
- Finding of No Adverse Effect without Standard Conditions, February 2020
- Historic Property Survey Report, January 2020
- Historic Resources Evaluation Report, February 2020
- Supplemental Historic Properties Survey Report and Archeological Survey Report, January 2022
- Water Quality Assessment Report, November 2021
- Noise Study Report, October 2021
- U.S. 101/Prado Road Interchange Traffic Operations Analysis Report and Intersection Control Evaluation, May 2019
- U.S. 101/Prado Road Vehicle Miles Traveled Analysis, June 2020
- Community Impact Assessment, September 2021

To obtain a copy of one or more of these technical studies/reports or the Initial Study, please send your request to:

Dianna Beck
Associate Environmental Planner, District 5
California Department of Transportation, CEQA Lead Agency
50 Higuera Street, San Luis Obispo, California 93401

Or send your request via email to: Dianna.Beck@dot.ca.gov
Or call: 805-459-9406

Please provide the following information in your request:

Project title: U.S. 101/Prado Road Interchange Project
General location information: San Luis Obispo County, California
District number-county code-route-post mile: District 5–SLO-101–PM 26.5-27.3
Project ID number: 0516000105