SR 186 All-American Canal Bridge Project

IMPERIAL COUNTY, CALIFORNIA
DISTRICT 11 – IMP – 186 (PM 0.5-2.0)
11 – 43108 / 11-2000-0096

Summary of Environmental Studies



Prepared by the
State of California, Department of Transportation

The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this Project are being, or have been, carried out by Caltrans pursuant to 23 USC 327 and the Memorandum of Understanding dated May 27, 2022, and executed by FHWA and Caltrans.

February 11, 2025

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CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION DETERMINATION FORM (rev. 06/2022)

Project Information

Project Name (if applicable): 11-IMP-186

DIST-CO-RTE: 11-IMP-186 **PM/PM:** 0.5 / 2.0

EA: 11-43108 / 1120000096 **Federal-Aid Project Number:** N/A

Caltrans proposes construction of a new bridge crossing over the All-American Canal (canal) and realignment of a portion of State Route 186 between Post Miles (PM) 0.5 and 2.0 in Imperial County, California. The work includes construction of a new 580-foot segmental concrete bridge, realignment of 186 to meet the new bridge, with drainage, landscaping, right-of-way easements, utility relocation and preservation of environmentally sensitive areas. See page 3 for a more detailed project description and see ECR for environmental commitments.

Caltrans CEQA Determination (Check one)

☐ **Not Applicable** – Caltrans is not the CEQA Lead Agency

☐ **Not Applicable** – Caltrans has prepared an IS or EIR under CEQA

Based on an examination of this proposal and supporting information, the project is:

☐ **Exempt by Statute.** (PRC 21080[b]; 14 CCR 15260 et seq.)

☒ **Categorically Exempt. Class** 2 (PRC 21084; 14 CCR 15300 et seq.)

- ☐ No exceptions apply that would bar the use of a categorical exemption (PRC 21084 and 14 CCR 15300.2). See the SER Chapter 34 for exceptions.

☐ **Covered by the Common Sense Exemption**. This project does not fall within an exempt class, but it can be seen with certainty that there is no possibility that the activity may have a significant effect on the environment (14 CCR 15061[b][3].)

Senior Environmental Planner or Environmental Branch Chief

Koji Tsunoda	Koji Tsunoda	1/14/2025
Print Name	Signature	Date

Project Manager

Jorge Perez Valdes	Jorge Perez-Valdes	1/10/2025
Print Name	Signature	Date

Caltrans NEPA Determination (Check one)

☐ **Not Applicable**

Caltrans has determined that this project has no significant impacts on the environment as defined by NEPA, and that there are no unusual circumstances as described in 23 CFR 771.117(b). See SER Chapter 30 for unusual circumstances. As such, the project is categorically excluded from the requirements to prepare an EA or EIS under NEPA and is included under the following:

☐ **23 USC 326:** Caltrans has been assigned, and hereby certifies that it has carried out the responsibility to make this determination pursuant to 23 USC 326 and the Memorandum of Understanding dated April 18, 2022, executed between FHWA and Caltrans. Caltrans has determined that the project is a Categorical Exclusion under:

☒ **23 CFR 771.117(c): activity (c)(28)**

☐ **23 CFR 771.117(d): activity (d)(_)**

☐ **Activity __ listed in Appendix A of the MOU between FHWA and Caltrans**

☐ **23 USC 327:** Based on an examination of this proposal and supporting information, Caltrans has determined that the project is a Categorical Exclusion under 23 USC 327. The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 USC 327 and the Memorandum of Understanding dated May 27, 2022, and executed by FHWA and Caltrans.

Senior Environmental Planner or Environmental Branch Chief

Koji Tsunoda	Koji Tsunoda	1/14/2025
Print Name	Signature	Date

Project Manager/ DLA Engineer

Jorge Perez Valdes	Jorge Perez-Valdes	1/10/2025
Print Name	Signature	Date

Date of Categorical Exclusion Checklist completion (if applicable): 12/30/2024
Date of Environmental Commitment Record or equivalent: 12/31/2024

Briefly list environmental commitments on continuation sheet if needed (i.e., not necessary if included on an attached ECR). Reference additional information, as appropriate (e.g., additional studies and design conditions).

Continuation sheet:

PROJECT DESCRIPTION

The California Department of Transportation (Caltrans) proposes to replace the existing bridge over the All-American Canal (canal) on State Route 186 (SR-186) between PM 0.5 and 2.0 in southeastern Imperial County, California.

The proposed new bridge would be a 580-foot-long segmental concrete bridge structure, crossing the canal just north of the existing bridge location. SR-186 would be realigned to meet the new bridge abutments on each end of the bridge. The bridge would include two 12-foot-wide lanes, one lane for each direction of travel, with eight-foot-wide shoulders and six-foot wide sidewalks. Tubular railing would be installed atop concrete barrier located along both sides of the bridge.

SR-186 would be realigned to meet the new bridge abutments, beginning south of the bridge at post mile 0.5 and terminate north of the bridge at the intersection of SR-186 with Interstate 8 (I-8) at post mile 2.0. The work would also include drainage, landscaping, right-of-way easements, utility relocation and preservation of environmentally sensitive areas. The total length of the project would be approximately 1.5 miles.

Bridge Structure Details

The bridge segment over the canal would utilize a 230-foot cast-in-place segmental box girder. Outside of the canal limits (south and north ends of the bridge), a 175-foot cast in place box girder, on falsework, would be utilized. (*This bridge structure would not require trestles nor falsework within the canal, nor would it require elements that pierce the apron of the canal weir. Permanent modifications to the canal would not be made, and the existing canal weir would remain in place.)

Abutments and bents would utilize 60” cast-in-drilled-hole (CIDH) reinforced concrete piles. The project would utilize imported fill to support and elevate the new bridge abutments on either side of the canal.

The proposed structure would provide the following features as specifically discussed in previous planning documents for this project:

- Maintenance of access to the canal from a public road.
- Provision for safe access to United State Bureau of Reclamation (USBOR) /Imperial Irrigation District (IID) facilities during construction.
- A 20-foot horizontal clearance between the canal inside crown and the pile bents.
- Minimum vertical clearance of 14-feet at the operations and maintenance (O&M) roads.
- A new bridge spanning the entire width of the canal without any supports in the canal.

- A new bridge crossing the centerline of the canal at 70 to 90 degrees per USBOR Engineering and O&M Guidelines for Crossings.
- Improvements that do not increase USBOR's costs, adversely impact the public or operating personnel safety, and/or negatively impact USBOR's, or its successor's, ability to fulfill their ownership, operation, and maintenance responsibilities.

To maintain visual continuity in the vicinity of the proposed bridge:

- Bridge rails would be "see-through" to maximize views to the water.
- Concrete barrier Type 85SW Mod, bridge anchor blocks and other concrete features would be integrally colored tan to blend with the native soils.
- Bridge rail height would meet height requirements for bicycle users; however, chain link fencing on top of the bridge rail would be avoided to maintain unobstructed views to the water.

Mainline Realignment and Roadway Tie-Ins

The project would realign the existing two-lane highway and bridge to the west and over the canal. Mainline realignment would begin near STA 104+50 and continue through STA 132+00, south of the I-8 intersection. The posted speed would be a maximum of 45 mph.

Along the northern and southern banks of the canal (under the mainline), the design accommodates the existing 20-foot-wide maintenance roads, with a minimum 14-foot vertical clearance, for continued use by USBOR and the IID. Restricted access would be provided from the new SR-186 mainline to these maintenance roads. A permanent truck turning area (cul-de-sac) would be provided, extending approximately 190 feet north of the northern terminus of the existing bridge. The turning area would include a minimum 63-foot turning radius to accommodate USBOR and IID maintenance vehicles.

Retaining Walls

To minimize cut and fill areas, a retaining wall, approximately 200 feet in length, is proposed northwest of the existing bridge, north of the Quechan Casino Resort South Entrance between STA 124+25 and 126+23.

Landscaping, Grading and Increase in Impervious Surface

The project requires cut and fill that will result in a disturbed surface area. The project would increase impervious surface. During construction:

- Trucks and equipment shall be confined to previously disturbed areas to the extent possible.
- Avoid tree and vegetation removal if possible.
- Collect duff prior to clearing and grubbing vegetated areas. Duff must consist of vegetation removed and collected from clearing and grubbing activities. Vegetation may include trees, shrubs, ground cover, grasses, bark, leaves, and roots with attached soil. Collect and stockpile duff and 0.5' of topsoil. Spread duff over finished graded areas and track walk.

- Protect vegetation outside of the work area by prohibiting staging areas, material storage, parking, and construction access in vegetated areas.
- BMPs such as fiber rolls, felt fiber fabric, gravel bags (if used) must be made of biodegradable materials. (No plastic).

Right-of-Way

The project improvements would be located on Fort Yuma / Quechan Tribal Community land deeded to USBOR, and the existing 100-foot permanent easement granted to Caltrans would shift to the west. New slope easements from USBOR would be required to provide the cut slopes/grading (north and south of the canal). The current 100-foot easement of the existing bridge would be returned back to USBOR; however, the existing bridge would remain in use by the USBOR and the IID, with a restricted access roadway from the new alignment. Maintenance of a portion of the old SR-186 necessary for Reclamation project purposes would be operated and maintained by the IID.

The proposed improvements would occupy a portion of existing defunct Union Pacific Railroad (UPRR) right-of-way (ROW), requiring new easements south of the canal. Placement of fill within approximately 1.5 acre of UPRR right of way will be explored further in the next phase of the project development process.

Drainage

Roadway stormwater would be captured and redirected away from the canal utilizing drainage features such as dikes, overside drains, underground precast drainage/infiltration inlets, basins, catch basins and/or retention basins or released south of the canal, as appropriate.

Utility Relocation and Environmentally Sensitive Areas

Overhead transmission power lines and several other utilities would require relocation to achieve a clear recover zone, or protection-in-place.

Existing environmentally sensitive areas (ESAs) would be avoided.

Temporary Construction Features

During project construction, SR-186 through-traffic would be temporarily detoured to an alignment located east of SR-186 and continue use of the existing bridge while the new facilities are being constructed. This temporary detour road would be provided between STA 101+00 and STA 136+20, approximately. After construction, the detour road pavement would be removed, crushed for reuse as fill, in coordination with the Caltrans District 11 landscape architect. Staging would occur within an approximate 6-acre area northwest of the proposed bridge in the vicinity of the Quechan Casino Resort South Entrance.

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Chapter 1 Supporting Environmental Study

1.1 HUMAN ENVIRONMENT

1.1.1 Existing and Future Land Use

Imperial County is situated in the far southeast of California within the Imperial Valley, and shares borders with San Diego County to the west, Riverside County to the north, the U.S. state of Arizona to the east, and the Mexican state of Baja California to the south. Encompassing the El Centro Metropolitan Statistical Area, it contributes to the Southern California border region, characterized as the smallest yet economically diverse area in the state.

State Route 186 (SR 186), commonly referred to as Algodones Road, is a California state highway linking Interstate 8 (I-8) in Imperial County to the U.S.–Mexico border close to the Colorado River. The route extends from its starting point at the Andrade Port of Entry, facilitating connectivity with Los Algodones, Baja California, to its conclusion near Araz Junction in Winterhaven, California. The proposed Project is located on State Route 186 (SR-186) from PM 0.5 to PM 2.0 in Imperial County. SR-186 is in the eastern portion of Imperial County and operates as a two-lane conventional highway. Predominantly traveling in a north/south direction for over two miles, the route is located mostly on an easement within Quechan tribal land in the Fort Yuma Indian Reservation and provides access to the Andrade Port of Entry (POE) for vehicles travelling to and from Mexico.

Imperial County designates the land use of the Project site and surrounding area as Recreation/Open Space. The Project site and surrounding area do not have zoning designations as this area is within the Fort Yuma Indian Reservation.

Surrounding land uses includes the I-8 highway to the north, open space and the All-American Canal and Imperial County Irrigation facilities to the east, open space, the Quechan Casino Resort and a facility building to the west, and lastly the Alamo Canal and California/Arizona state border to the south. The general area consists of water systems, roadway systems, open spaces, and the Quechan casino.

As described previously, SR-186 is located on an easement within the Quechan tribal land. An updated land use agreement will be required outlining how Caltrans can utilize tribal land for the Project.

1.1.2 Consistency with State, Regional, and Local Plans and Programs

Affected Environment

There are several community, regional, and transportation plans that include the Project area. The following types of plans were considered and are discussed below.

- Transportation Plans (Regional/Metropolitan Transportation Plans (RTPs/MTPs) and Regional/Metropolitan Transportation Improvement Programs (RTIP/MTIPs).
- Regional Growth Plans (if proposed or adopted).
- Habitat Conservation Plans or similar regional conservation plans.
- General, Community, and Airport Plans

1.1.2.1 Transportation Plans/Programs

SCAG Federal Transportation Improvement Program

The Federal Transportation Improvement Program (FTIP) is a federally mandated 4-year program for all federally funded transportation Projects in the region, as well as all regionally significant transportation Projects for which approval from federal funding agencies is required, regardless of funding source. The FTIP is a comprehensive listing of such transportation Projects proposed over a 6-year period. As the Metropolitan Planning Organization (MPO) for the region, SCAG is responsible for developing the FTIP for submittal to Caltrans and the federal funding agencies. The FTIP for the SCAG region is developed in partnership between the six County Transportation Commissions (CTCs) of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. The Projects in the FTIP have been found to be consistent with SCAG's approved RTP/SCS. See Appendix B0.

The proposed Project is included in the SCAG federally approved 2020 RTP Amendment #1, (Project Identification [FTIP ID] IMP170701) and is proposed for federal funding from the Bridge Restoration & Replace (No Lane Additions) with Non-motorized and/or TCM Scope/Facilities Program.

The proposed Project's operational emissions, which would include ozone precursors reactive organic gases (ROG) and nitrogen oxides (NOx), would meet the transportation conformity requirements imposed by U.S. Environmental Protection Agency (U.S. EPA) and SCAQMD.

Regional Transportation Plan (RTP) and State Highway Operations and Protection Plan (SHOPP)

Regional Transportation Plans (RTPs) are prepared by regional agencies to identify a 20-year vision for transportation priorities and investments. The RTP Guidelines

articulate the federal and state requirements for the development of RTPs, as well as provide resources and planning practice examples.

The Office of State Highway Operations and Protection Program (SHOPP) Management has primary responsibility for planning, developing, managing and reporting the four-year SHOPP portfolio of Projects. This includes preparation of the four-year program, participating in the development of the State Highway System Management Plan, coordinating the formal amendment of adopted SHOPP Projects, coordinating with CTC staff, management of the annual Minor Program, coordination with Districts and Headquarters divisions, and upkeep of Project information in the Department's California Transportation Improvement Program System (CTIPS) database.

Currently, there are no planned RTP Projects scheduled in this area. There is a Quechan tribal Project proposed on SR-186 from the I-8 interchange to the All-American Canal (RTP ID 6120009). This Project would add a signal and turn pockets at the main entrance to the Quechan Casino, and one turn pocket into the secondary driveway. This Project also proposes to construct roundabouts at both the east and westbound ramps at the Algodones (I-8/SR-186 Separation) interchange. A maintenance pavement rehabilitation Project is also proposed along SR-186, which will be funded from SHOPP.

FAST Act Surface Transportation Block Grant Program (STBG) Set-Aside for Coordinated Border Infrastructure [1109]

Public Law 114-94, the Fixing America's Surface Transportation Act (FAST Act) was enacted on December 4, 2015. The FAST Act funds surface transportation programs—including, but not limited to, Federal-aid highways—at over $305 billion for fiscal years (FY) 2016 through 2020. The FAST Act provides the Surface Transportation Block Grant Program with an estimated annual average of $11.7 billion, which States and localities may use for Projects to preserve or improve conditions and performance on any Federal-aid highway, bridge Projects on any public road, facilities for nonmotorized transportation, transit capital Projects, and public bus terminals and facilities. It allows the Governor of a border State to designate up to five percent of the State's STBG funds for border infrastructure Projects eligible under the SAFETEA-LU Coordinated Border Infrastructure Program. Funds so designated must be derived from the portion of a State's STBG apportionment available for use in any area of the State.

1.1.2.2 Regional Growth Plans

Connect SoCal (SCAG RTP/SCS)

SCAG is a regional agency established pursuant to California Government Code Section 6500, also referred to as the Joint Powers Authority law. SCAG is designated as a Council of Governments, a Regional Transportation Planning Agency, and an MPO. The proposed Project site is within SCAG's regional authority. As an MPO and public agency, SCAG develops transportation and housing strategies that transcend

jurisdictional boundaries that affect the quality of life for Southern California as a whole. On September 3, 2020, SCAG's Regional Council adopted Connect SoCal. Connect SoCal is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. Connect SoCal embodies a collective vision for the region's future and was developed with input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses, and local stakeholders in Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties. Connect SoCal includes more than 4,000 transportation Projects, ranging from highway improvements to railroad grade separations, bicycle lanes, new transit hubs, and replacement bridges. These future investments were included in county plans that were developed by the six CTCs, all seeking to reduce traffic bottlenecks, improve the efficiency of the region's network, and expand mobility choices. The goals of Connect SoCal are to: 1) encourage regional economic prosperity and global competitiveness; 2) improve mobility, accessibility, reliability, and improve travel conditions for people and goods movement; 3) enhance the preservation, security, and resilience of the regional transportation system; 4) increase person and goods movement and travel choices within the transportation system; 5) reduce greenhouse gas emission and improve air quality; 6) support healthy and equitable communities; 7) adapt to a changing climate and support an integrated regional development pattern and transportation network; 8) leverage new transportation technologies and data-driven solutions that result in more efficient travel; 9) encourage development of diverse housing types in areas that are supported by multiple transportation options; and 10) promote conservation of natural and agricultural lands and restoration of habitats.

1.1.2.3 Habitat and Conservation Plans

The Imperial Irrigation District (IID) is presently engaged in formulating a Natural Community Conservation Plan (NCCP) and Habitat Conservation Plan (HCP) in collaboration with the California Department of Fish and Game (DFG) and the United States Fish and Wildlife Service (USFWS). The NCCP is generally defined as a cooperative statewide initiative aimed at identifying and implementing measures to conserve and manage natural biological diversity on an ecosystem scale within a designated Planning Area, while accommodating other covered activities.

Similarly, an HCP is a comprehensive federal planning tool employed to achieve enduring biological regulatory objectives and offers legal protection for discretionary activities falling under the Endangered Species Act (ESA). To obtain an Incidental Take Permit for federally listed threatened or endangered species, an approved HCP is mandatory, while an NCCP provides comparable coverage from a state standpoint. These permits extend coverage to non-listed species that may potentially be listed in the future, serving as a risk management tool to ensure heightened regulatory certainty that aligns with the IID/SDCWA Transfer Agreement. An approved HCP/NCCP assures that the permit's terms remain unchanged over time, commonly referred to as a 'no surprises' assurance.

1.1.2.4 Air Quality and Climate Change Plans

The Federal Clean Air Act (CAA) of 1971 and the CCA Amendments (1977) established the national ambient air quality standards (NAAQS), which are promulgated by the EPA. The State of California has also adopted its own California ambient air quality standards (CAAQS), which are promulgated by the California Air Resources Board (CARB). Both the State of California and the Federal government have established health-based ambient air quality standards for six air pollutants. These pollutants include ozone (O_3), carbon monoxide (C_O), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particles that are 10 microns or less in diameter (PM_{10}) and subset $PM_{2.5}$, and lead. In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. The entire County is designated as a nonattainment area for the PM10 NAAQS and CAAQS. The central portion of Imperial County is designated as a nonattainment area for the $PM_{2.5}$ NAAQS. The Imperial County portion of the SSAB is in attainment or unclassified with the NAAQS and CAAQS for the other applicable criteria pollutants.

Regional air districts, such as Imperial County Air Pollution Control District (ICAPCD), formulate plans for air quality attainment or management, which are then submitted to CARB for evaluation, approval, and integration into the relevant State Implementation Plans (SIPs). These plans outline strategies at a regional level to meet air quality standards. For 8-Hour Ozone (O_3), ICAPCD adopted the Final 2009 8-hour Ozone Modified Air Quality Management Plan in July 2010, featuring control measures crucial for managing ROG and NO_X emissions in O_3 nonattainment areas. The comprehensive strategy incorporates programs and control measures aligned with Reasonable Available Control Technology (40 CFR 51.912) and ensures a net decrease in emissions from stationary sources.

Regarding Coarse Particulate Matter (PM_{10}), ICAPCD embraced the PM_{10} SIP in August 2009, introducing dust control measures (Regulation VIII). EPA approval on April 23, 2013, incorporated Regulation VIII's fugitive dust rules into the Imperial County portion of the California SIP.

For Fine Particulate Matter ($PM_{2.5}$), ICAPCD adopted the $PM_{2.5}$ SIP in December 2014, attributing the majority of $PM_{2.5}$ emissions to transport from Mexico. The SIP demonstrates compliance with the 2006 PM2.5 NAAQS, emphasizing the role of international emissions from Mexicali, Mexico. The $PM_{2.5}$ SIP, aligned with the Clean Air Act (CAA), fulfills the attainment demonstration requirement.

To address cross-border air quality issues, ICAPCD collaborates with Mexican counterparts, aiming for emissions reduction strategies and Projects. The Air Quality Task Force (AQTF) in the Mexicali/Imperial air shed involves representatives from federal, state, and local governments, academia, environmental organizations, and the public. Established to enhance the air quality monitoring network, emissions inventories, pollution transport modeling, and overall air quality improvement programs, AQTF promotes regional cooperation for environmental enhancement.

The purpose of this Imperial Valley Regional Climate Action Plan (Regional CAP) is to address the impacts of climate change and reduce greenhouse gas (GHG) emissions in the Imperial Valley region which includes the County of Imperial (County) and the cities of Brawley, Calexico, Calipatria, Holtville, El Centro, Imperial, and Westmorland. The Regional CAP is consistent with and complementary to statewide legislation and regulatory mandates, and establishes local strategies, measures, and actions aimed at reducing GHG emissions.

1.1.2.5 General Plans

Imperial County General Plan

The Imperial County General Plan comprises ten Elements, namely Land Use, Housing, Circulation and Scenic Highways, Noise, Seismic and Public Safety, Agricultural, Conservation and Open Space, Geothermal/Alternative Energy and Transmission, Water, and Parks & Recreation. Additionally, it incorporates a Land Use Map that designates various land use categories, indicating locations, describing the type, and specifying the anticipated maximum allowable density for ultimate development.

This all-encompassing General Plan has been meticulously crafted following a thorough assessment of the County's physical and cultural resources, socio-economic conditions, and business environment. It strives to strike a balance by formulating land use policies and programs that aim to uphold the "quality of life" in the region. The General Plan is a dynamic document, open to amendments as necessary to address evolving community and regional goals, changes in physical and public infrastructure resources, and societal concerns.

The presented General Plan is the outcome of a collaborative effort involving County staff, a community Ad Hoc Advisory Committee, Planning Commission, Board of Supervisors, and numerous citizens and groups. This collective endeavor commenced in 1987 and concluded in 1993. The Plan serves as a comprehensive guide for development within the County, offering mechanisms to realize community goals and objectives through a coordinated implementation program.

Relevant policies in the Circulation & Scenic Highways, Conservation and Open Space, Environmental Justice, Land Use, Noise, Seismic & Public Safety (Including the Multi-Jurisdictional Hazard Mitigation Plan (MHMP)), and Water elements were reviewed, as follows:

Circulation & Scenic Highways Element - The Circulation and Scenic Highways Element identifies the location and extent of transportation routes and facilities. It is intended to meet the transportation needs of local residents and businesses, and as a source for regional coordination. The inclusion of Scenic Highways provides a means of protecting and enhancing scenic resources within highway corridors in Imperial County. The purpose of the Circulation and Scenic Highways Element is to provide a comprehensive document which contains the latest knowledge about the transportation needs of the County and the various modes available to meet these needs. Additionally, the purpose

of this Element is to provide a means of protecting and enhancing scenic resources within both rural and urban scenic highway corridors.

Conservation and Open Space Element - The Conservation Element and Open Space Element provides detailed plans and measures for the preservation and management of biological and cultural resources, soils, minerals, energy, regional aesthetics, air quality, and open space. The purpose of the Conservation and Open Space Element is to promote the protection, maintenance, and use of the County's natural resources with particular emphasis on scarce resources, and to prevent wasteful exploitation, destruction, and neglect of the State's natural resources. Additionally, the purpose of this Element is to recognize that natural resources must be maintained for their ecological value for the direct benefit to the public, protect open space for the preservation of natural resources, the managed production of resources, outdoor recreation, and for public health and safety.

Environmental Justice Element - In 2017, County staff began coordination with state and local agencies including the State Department of Toxic Substances Control, Imperial Task Force, and the Comite Civico del Valle (CCV) to strengthen efforts in attaining compliance with the latest State law and goals regarding environmental protection and SB 1000 requirements. In 2017, the County took steps to promote sustainable, affordable housing by incorporating ADU language into the County's Land Use Ordinance. The County made additional changes to the Land Use Ordinance in 2019 regarding cannabis and industrial hemp uses, and in 2020 made additional changes to Divisions 4, 5, 8, 10, 12, 14, and 16 of the Land Use Ordinance. From 2020 to 2023, the County updated the Housing Element and Seismic and Public Safety Element to be consistent with State law. These update processes included a review of disadvantaged unincorporated communities, evaluating potential housing sites in hazard prone areas, and a Climate Change Vulnerability Assessment that identified which populations are most vulnerable to climate change hazards. In 2021, the County adopted the Multi-Jurisdictional Hazard Mitigation Plan (MHMP) as part of the Seismic and Public Safety Element. In 2022, the County updated Divisions 5, 8, 14, and 16 of the Land Use Ordinance pursuant to recent Federal Emergency Management Agency (FEMA) Floodplain Management Regulations. As a first step in preparing the County's first Environmental Justice (EJ) Element, the County has drafted a memo that identifies and provides background about environmental justice communities of concern in Imperial County. The next steps in the EJ Element process will include review of the memo by community members, a comprehensive outreach strategy to connect with Community Based Organizations and community members throughout the unincorporated county, and the preparation of a EJ Element that provide a framework for the County to address environmental justice issues over the next 20 years through policies and implementation programs.

Land Use Element - The Land Use Element designates the general distribution, location, and extent (including standards for population density and building intensity) of the uses of land for housing, business, industry, agriculture, open space, public facilities, and other categories of public and private uses. The primary purpose of the Land Use Element is to identify the goals, policies, and standards of the General Plan

that will guide the physical growth of Imperial County, including the public facilities necessary to support such growth.

Noise Element - The Noise Element examines noise sources and provides information to be used in setting land use policies to protect noise sensitive land uses and for developing and enforcing a local noise ordinance. The Noise Element of the Imperial County General Plan provides a program for incorporating noise issues into the land use planning process, with a goal of minimizing adverse noise impacts to receptors which are sensitive to noise.

Seismic & Public Safety Element - The Seismic and Public Safety Element identifies goals and policies that will minimize the risks associated with natural and human-made hazards and specifies land use planning procedures that should be implemented to avoid hazardous situations. The purpose of the Seismic and Public Safety Element is directly concerned with reducing the loss of life, injury, and property damage that might result from disaster or accident.

Imperial County has developed this MHMP to create a safer community. The purpose of the MHMP is to significantly reduce deaths, injuries, and other disaster losses caused by natural and human caused hazards in Imperial County. The MHMP describes past and current hazard mitigation activities and outlines goals, strategies, and actions for reducing future disaster losses. The Imperial County MHMP is the representation of the County's commitment to reduce risks from natural and other hazards and serves as a guide for decision-makers as they commit resources to reducing the effects of natural and other hazards. While Federal Disaster Mitigation Act (DMA) of 2000 requires that local communities address only natural hazards, the FEMA recommends that local comprehensive mitigation plans address man-made and technological hazards to the extent possible. Towards that goal, the Planning Jurisdictions have addressed an expansive set of hazards.

Water Element - The Water Element identifies and analyzes the sources and availability of water within the County and establishes policies and programs to maintain its availability, conserve its use, and preserve its quality. The Water Element is an optional Element of the Imperial County General Plan as permitted by Section 65303 of the California Government Code. The purpose of the Water Element is to assure that goals and policies are adopted that preserve and enhance the County's water resource availability and water quality.

Environmental Consequences

Policy/Goal	Alternative 1 No-Build Alternative	Alternative 2 Build Alternative
SCAG FTIP		
Project Identification [ID] IMP190201) - Realign, widen and construct a new bridge over the All-American Canal (AAC) on a portion of State Route 186 (SR-186) from approximately a half a mile south of the AAC to the I-8 Interchange (For PA&ED only[1]). This Project is a non-capacity increasing improvement.	**Not Consistent.** Alternative 1 would maintain the existing alignment of SR-186 and not construct a new bridge over the canal.	**Consistent.** Alternative 2 would realign, widen and construct a new bridge over on a portion of SR-186 from approximately a half mile south of the canal to the I-8 Interchange. Alternative 2 is also a non-capacity increasing improvement.
Connect SoCal RTP/SCS		
Goal 2: Maximize mobility and accessibility for all people and goods in the region.	**Not Consistent.** Alternative 1 would not realign and construct a bridge that would better service to the visitors traveling through the Andrade Port of Entry, implement pedestrian/ bicycle access, accommodate international and interregional movement of people, goods and services.	**Consistent.** Under Alternative 2, the new bridge will provide pedestrian access and better facilitate international and interregional movement of people, goods and services, as well as the bicycling community, and better serve the visitors traveling through the Andrade Port of Entry.
Goal 3: Ensure travel safety and reliability for all people and goods in the region.	**Not Consistent.** The existing bridge has likely exceeded its service life. The bridge was designed according to standard specifications of the time to accommodate two lanes of 15-ton trucks. The substantial increase in traffic volume on SR-186 along with recent structural evaluations have led to a weight restriction on the bridge at 20 tons. Existing pedestrian and bicycle access deficiencies will remain.	**Consistent.** Alternative 2 would construct a new bridge built to Caltrans Highway Design Standards over the All-American Canal (canal), with minimal to no design exceptions; This bridge will improve mobility, including pedestrian and bicycle safety.
Goal 4: Preserve and ensure a sustainable regional transportation system.	**Not Consistent.** See response under Goal 2.	**Consistent.** See response under Goal 2.
Goal 6: Protect the environment and health of residents by improving air quality and encouraging active transportation (non-motorized transportation such as bicycling and walking).	**Not Consistent.** The existing bridge is not built to Caltrans Highway Design Standards for current and future traffic volumes. BOR's structural evaluation resulted in a weight restriction of 20 tons on the bridge and Andrade POE currently redirects all truck and bus traffic to other POEs (increasing vehicle miles traveled); otherwise, the weight load on the bridge exceeds what the bridge was originally designed for. Additionally, there are current deficiencies of active transportation.	**Consistent.** Alternative 2 would construct a new bridge built to Caltrans Highway Design Standards so that all truck and bus traffic coming from Andrade POE can utilize the bridge and reduce vehicle miles traveled. This bridge will also improve mobility, including pedestrian and bicycle safety that will enhance active transportation.

[1] Caltrans Project Approval & Environmental Document stage

Policy/Goal	Alternative 1 No-Build Alternative	Alternative 2 Build Alternative
Goal 8: Encourage land use and growth patterns that facilitate transit and active transportation.	**Not Consistent.** No changes to transit or non-motorized transportation would result from Alternative 1.	**Consistent.** Alternative 2 would improve access for pedestrian and cyclists.
Policy 2: Ensuring safety, adequate maintenance, and efficiency of operations on the existing multimodal transportation system should be the highest RTP/SCS priorities for any incremental funding in the region.	**Not Consistent.** See response under Goal 8.	**Consistent.** See response under Goal 8.
Policy 4: Transportation demand management (TDM) and nonmotorized transportation will be focus areas, subject to Policy 1.	**Not Consistent.** See response under Goal 8.	**Consistent.** See response under Goal 8.
Policy 7: The RTP/SCS will encourage transportation investments that result in cleaner air, a better environment, a more efficient transportation system and sustainable outcomes in the long run.	**Not Consistent.** See response under Goal 6.	**Consistent.** See response under Goal 6.
Regional Transportation Plan (RTP) and State Highway Operations and Protection Plan (SHOPP)		
RTP ID 6120009: At I-8/SR-186, Improve Interchange - Widen and Improve Ramps	**Not Consistent.** Alternative 1 would not realign SR-186 and construct a new bridge over the canal. Under this Alternative, RTP ID 6120009 would not be supported. Additionally, there would be no funding under this alternative.	**Consistent.** Under this Alternative, a new bridge would be constructed as well as mobility improvements. The new bridge and improvements would support RTP ID 6120009. Additionally, SHOPP funding will be provided for this Alternative.
FAST Act Surface Transportation Block Grant Program (STBG) Set-Aside for Coordinated Border Infrastructure [1109]		
The FAST Act provides the Surface Transportation Block Grant Program with an estimated annual average of $11.7 billion, which States and localities may use for Projects to preserve or improve conditions and performance on any Federal-aid highway, bridge Projects on any public road, facilities for nonmotorized transportation, transit capital Projects, and public bus terminals and facilities	**Not Consistent.** Alternative 1 would not construct a new bridge and improve or preserve the existing bridge. STBG funding would not be provided under this alternative.	**Consistent:** Alternative 2 would construct a new bridge that would improve existing conditions and performance. This alternative would receive STBG funding.

Environmental Consequences

The proposed Project is consistent with each of the applicable previously discussed planning documents for the project area Therefore no negative consequences are expected from construction of this project.

1.1.3 Parks and Recreational Facilities

Regulatory Setting

The Park Preservation Act (California Public Resources Code [PRC] Sections 5400-5409) prohibits local and state agencies from acquiring any property which is in use as a public park at the time of acquisition unless the acquiring agency pays sufficient compensation or land, or both, to enable the operator of the park to replace the park land and any park facilities on that land.

Affected Environment

Imperial County is situated in a valley within the Sonoran Desert. The region boasts diverse topography, ranging from challenging mountains to gentle, sandy hills, and is enriched by bodies of water like the Colorado River and Salton Sea. This geographical diversity provides ample opportunities for outdoor recreation, including off-highway activities, hiking, and boating. The County, characterized by a mix of urban settlements and extensive farmland, features numerous parks.

Imperial County designates the land use of the Project site and surrounding areas as Recreation/Open Space. However, there are no parks and or recreational facilities within the Project site, and surrounding areas.

Parks

Parks within the unincorporated area of the County are classified by a combination of various factors including size, number of amenities, location, ease of access, and oversight (Federal, State, or County). There are five different park classifications:

1. Limited Facility Park: Usually located in the open desert areas of the County and contains minimal amenities.

    a. Unincorporated Imperial County has four Limited Facility Parks

2. Neighborhood Park: Small parks (usually less than three acres) that are usually located within the confines of unincorporated communities while being within walking distance of a residential district for ease of access by pedestrians. Often referred to pocket parks and include playground equipment and other active uses.

    a. Unincorporated Imperial County has three Neighborhood Parks

3. Community Park: Larger than a neighborhood park (from 3-80 acres) and are shared by the entire local community. This type of park is usually entirely within an unincorporated community and typically has a major active recreational use such as athletic fields or courts which the entire community uses. Numerous onsite amenities, not usually available at a neighborhood park, such as baseball fields, basketball courts, and larger picnic areas are located within a Community Park

    a. Unincorporated Imperial County has four Community Parks.

4. Regional Park: Outside or inside of a community, but with ease of access from a major road, these parks are shared by the entire populace of the County. These parks are much like community parks except they are typically larger and are meant to serve the entire County. In addition to sports fields and grassy leisure areas with picnic tables, a regional park is usually distinguished by a water feature such as a pond or lake.

    a. Unincorporated Imperial County has five Regional Parks.

5. State and Federal Parks: These parks are maintained by the State or Federal government. These parks are typically large pieces of land and may include hundreds of acres under wildlife preserve with designated areas for human use. These parks usually attract visitors from outside the County and typically have outdoor recreational opportunities, with trails for hiking, designated areas for camping and off-highway driving, and wildlife preserves where access is limited or prohibited.

    a. The State maintains four major park areas in Imperial County, which include the Salton Sea State Recreation Area, the Picacho State Recreation Area, the Ocotillo Wells State Vehicular Recreation Area, and a portion of the Anza-Borrego Desert State Park. The Federal government's main parkland area is the Imperial Sand Dunes Recreation and Wilderness Area. Both Federal and State parkland are in wilderness areas of the County, serving to protect wildlife habitat while providing for outdoor recreational opportunities.

The Algodones Dunes (also known as Imperial Sand Dunes) are a well-known landmark to both local residents and the thousands of travelers who pass by them each year. The dunes extend along the east perimeter of the Imperial Valley. The 40-mile dune system is one of the largest in the United States. The dunes were formed from the windblown beach sands of prehistoric Blake Sea. Some dune crests reach heights of more than 300 feet. The largest and tallest dunes are located in the central area and west side, while the east side contains smaller dunes and numerous washes. The three most popular areas are Glamis/Gecko, Buttercup Valley, and Dunebuggy Flats. The dunes are also a popular filming location.

Open Space

Much of Imperial County is open space. Open space is considered any parcel or area of land or water that is essentially unimproved and devoted to preservation of natural resources, outdoor recreation, and protection of the public health and safety (ICPDS 1993). The state and federal governments manage large amounts of open space in Imperial County, the largest being the California Desert Conservation Area under BLM jurisdiction. Many of the areas in the California Desert Conservation Area are managed either for the preservation of natural resources or for outdoor recreation or both.

The Imperial Sand Dunes (also referred to as Algodones Dune) is just northwest of the Project site. The Project site is not located in a Federal Off Highway Vehicle Area.

Designated Trails

Multiple trails are present in Imperial County; some traverse long distances, while others are smaller scenic loops. There are five designated trails in Imperial County, with the closest to the Project site being the Juan Bautista de Anza National Historic Trail. This trail consists of 1,200 miles total (from Nogales, Arizona, to the San Francisco Bay Area) and includes the De Anza Historical Marker, Historical Expedition Campsites, marked trail sections, and hiking/biking along the trail.

Environmental Consequences

The Build Alternative is a non-capacity increasing Project and would not construct or cause to expand, recreational facilities. The proposed Project would include realigning a portion of SR 186 and construct a new bridge over the All-American Canal. The new bridge will improve safety and better facilitate international and interregional movement of people, goods, and services.

1.1.4 Community Character and Cohesion

Regulatory Setting

NEPA, as amended established that the federal government use all practicable means to ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings (42 United States Code [USC] 4331[b][2]). The Federal Highway Administration (FHWA) in its implementation of NEPA (23 USC 109[h]) directs that final decisions on Projects are to be made in the best overall public interest. This requires taking into account adverse environmental impacts, such as destruction or disruption of human-made resources, community cohesion, and the availability of public facilities and services.

Under the CEQA, an economic or social change by itself is not to be considered a significant effect on the environment. However, if a social or economic change is related to a physical change, then social or economic change may be considered in determining whether the physical change is significant. Since this Project would result in physical change to the environment, it is appropriate to consider changes to community character and cohesion in assessing the significance of the Project's effects.

Affected Environment

The following analysis is based on data gathered from the U.S. Census Bureau. Characteristics of the community such as population, race, ethnicity, income, and housing were evaluated to determine the character and cohesion of the community surrounding the Project.

The Project is located on SR 186 in Imperial County. Although the Project is part of the state highway system, the Project is within an easement from the Fort Yuma – Quechan Indian tribe. The reservation borders the states of Arizona, California and Baja California, Mexico. Encompassing 45,000 acres, the reservation is bisected on the south by Interstate 8 (I-8). As described further in Section 2.2.7 – Environmental Justice, the Fort Yuma Reservation is categorized under SB 535 as disadvantaged community. The population of Fort Yuma is predominantly Native.

Consequently, several million cars a year drive through the Fort Yuma Quechan Reservation on their way to and from Phoenix and San Diego. Largely an agriculture community, the Tribe leases its thousands of acres for agriculture to both Indian and non-Indian farmers. In addition to farming, the Fort Yuma Quechan Reservation counts on tourism and related business to augment its economy. The hot summers and relatively warm winter temperatures make the site a desirable winter vacation spot from November to March. To serve this audience the Tribe manages five trailer and RV parks, one grocery store, museum, casino, utility company, a fish and game department, tribal police department and court system. Other visitor attractions include the nearby California dunes and Yuma's historic areas, golf courses and shopping at San Luis, a port-of-entry community. Water sports such as fishing, water skiing and swimming at lakes along the Colorado River are also available.

Historically the Quechan made good use of the Colorado River’s natural annual flooding process to develop a robust agricultural economy. They lived in settlements scattered north and south of the River, and eastward along the Gila River. The number and precise locations of these settlements shifted from year to year and even from season to season within the year. The geographical arrangement of the settlements was thus closely geared to the condition of the rivers and the techniques of bottomland horticulture. The settlements were gradually abandoned after the Reservation was created, and families moved within the Reservation boundaries to receive individual ten-acre plots of farmland allotted to them by the federal government. Today, that agricultural use continues, although water is also used for domestic, commercial, municipal, and industrial purposes. As for most tribes in the Basin, water is central to the Quechan Tribe’s culture and heritage. The location of their ancestral settlements near the Colorado River meant that the River was a central part of their life, giving them a natural setting and irrigation for growing food and for sustaining their culture (Ten Tribes 2018).

The Reservation encompasses a portion of the ancestral home of the Quechan People. Their aboriginal villages were located in or near the Colorado River’s floodplain, which allowed annual floods to deposit rich soil from upriver. This ended with development of dams and diversions upstream from the Quechan homeland, which essentially cut off the historical flows to the area.

Regarding, visual character and cohesion. The existing All-American Canal Bridge has views to the canal due to the open bridge pipe railing design. Views to water are unusual in the desert and the crossing provides an interesting view of the canal operational facilities. The horizon has views of a strip of agricultural green and distant

mountains. Power poles, signage, guardrail, and transmission lines lower the visual quality of the viewshed. In the context discussed in this report, “scenic resources” are those officially designated by federal, state, regional, tribal, or local authorities; “visual resources” are those that exist in the project Area of Visual Effect (AVE) without being officially recognized.

No portion of the project is within an officially designated State Scenic Highway or a highway eligible for designation. Views to the canal water could be considered a visual resource within the desert environment.

Environmental Consequences

The Build Alternative would not change any existing community boundaries or physically divide an established community. The Build Alternative is not anticipated to influence growth patterns in the Project area since no new land would be open for development. The Build Alternative would not result in new zoning or land use classifications for any of the Project area.

The Build Alternative is expected to result in beneficial effects on nearby communities by developing a new bridge that would provide pedestrian access and improve safety, and better facilitate international and interregional movement of people, goods and services. The proposed Project would also increase access for the travelling public, as well as the bicycling community. The Project components under the proposed Project would better serve the visitors traveling through the Andrade Port of Entry seeking to endure the tourism, gaming, and recreational attractions offered by the Fort Yuma-Quechan Tribe.

As part of the This section is based on the Visual Impact Assessment (VIA) (Appendix B13), an analysis of the project’s visual compatibility considered the proposed project environment (e.g., grading, constructed features, vegetation cover, and ancillary visual elements), visual character, intactness, lighting, and glare, and assessed how much these components were compatible with the visual character, intactness, lighting, and glare of the existing natural environment (e.g., land, water, vegetation) and the cultural environment (e.g., roadway, buildings, infrastructure, and other structures).

The visual impacts of the Project were assessed by a Visual Impact Assessment which determined the Build Alternative would cause a ‘moderately adverse’ visual change with ‘low’ visual sensitivity and result in a ‘very low adverse’ visual impact with the inclusion of environmental commitment measures.

The visual contrast of the proposed Project with the existing natural environments would be moderately adverse due to the increased area devoted to roadway paving which displaces the desert landscaping. The visual contrast of the proposed Project with existing cultural and project environments would have no effect because the scope of work has similar features and characteristics as the existing cultural and project environments. The proposed bridge will not affect the existing canal structures, waters, or bridge crossing. The proposed project environment’s visual attributes—visual character, intactness, lighting, and glare is now analyzed for visually compatibility with

the same attributes of the natural, cultural, and existing project environments for this key view. The new bridge would feature open railing without a fence to allow views of the canal like the existing bridge crossing. The materials and color of the new bridge and roadway will be visually compatible with the existing canal bridge and roadway. The roadside would be seeded with native desert species and the resulting vegetative cover would be sparse which is consistent with existing conditions. The existing tall native Blue Palo Verde shrubs in the desert washes south of the canal would be removed by construction. It will take many years for seedlings to achieve the height of the existing shrubs. Night lighting is not proposed. Glare from the road surface would not be an issue.

The Project would benefit viewers by providing views of the All-American Canal to motorists, cyclists, and pedestrians. Unlike the old bridge. The new bridge will feature sidewalks to allow pedestrians to view the canal. The bridge rails will be low profile and employ a “see-through” post-and-beam system to allow views to the water. The bridge rails and sidewalks will be colored tan to blend with the natural desert environment.

1.1.5 Environmental Justice

Regulatory Setting

All Projects involving a federal action (funding, permit, or land) must comply with EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,* signed by President William J. Clinton on February 11, 1994. This EO directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal Projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. Low income is defined based on the Department of Health and Human Services poverty guidelines. For 2024, this was $31,200 for a family of four (OEHHA 2023)

EO 14096—"Revitalizing Our Nation’s Commitment to Environmental Justice for All” was enacted on April 21, 2023. EO 14096 on environmental justice does not rescind EO 12898 – “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,” which has been in effect since February 11, 1994, and is currently implemented through DOT Order 5610.2C. This implementation will continue until further guidance is provided regarding the implementation of the new EO 14096 on environmental justice.

All considerations under Title VI of the Civil Rights Act of 1964, and related statutes, have also been included in this Project. The Department’s commitment to upholding the mandates of Title VI is demonstrated by its Title VI Policy Statement, signed by the Director.

On June 30, 2022, Governor Gavin Newsom signed into law Senate Bill (SB) 125, providing funding to develop a Lithium Valley Specific Plan and Programmatic Environmental Impact Report (PEIR), and to distribute grants to local community-based

organizations to conduct engagement related to the Specific Plan and PEIR. The Specific Plan process includes a significant environmental justice (EJ) component, including community outreach and development of an Environmental Justice Working Group. This process is already underway and will integrate with the EJ Element process.

Currently, the County has drafted a memorandum that identifies and provides background about environmental justice communities of concern in Imperial County. The next steps in the EJ Element process will include review of the memo by community members, a comprehensive outreach strategy to connect with Community Based Organizations and community members throughout the unincorporated county, and the preparation of a EJ Element that provide a framework for the County to address environmental justice issues over the next 20 years through policies and implementation program.

Affected Environment

To assess whether the Project could lead to disproportionately high and adverse effects on a minority and/or low-income population, demographic characteristics within and adjacent to the Project area must be reviewed. The analysis of environmental justice impacts leverages data from the American Community Survey (ACS) (U.S. Census Bureau 2022). The ACS 5-year estimates for race, ethnicity, and poverty levels were examined for census tracts containing the Project area, as well as Imperial County, which was used as a reference area.

The Council on Environmental Quality has established the following definitions for environmental justice under NEPA:

- Minority populations should be identified where either: (a) the minority population of the affected area exceeds 50% or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unity of geographic analysis.

- Low-income populations in an affected area should be identified with the statistical poverty thresholds from the Bureau of the Census' Current Population Reports, Series P-60 on Income and Poverty. In identifying low-income populations, agencies may consider as a community either a group of individuals living in geographic proximity to one another, or as a set of individuals (such as migrant workers or Native Americans) where either type of group experiences conditions of environmental exposure or effect.

The Federal Highway Administration Guidance on Environmental Justice and NEPA (FHWA 2011) identifies minority populations as Black or African American, Hispanic, Asian American, American Indian/Alaskan Native, and Native Hawaiian/Pacific Islander. The United States Census Hispanic or Latino category is separate because people of Hispanic or Latino origin may be of any race.

For the purpose of this analysis, “meaningfully greater” is assumed to be 10 percentage points greater than the reference population (Imperial County), and low-income populations are identified where more than 25% of the census tract falls below the poverty level. The table below lists the study area census tracts along with their race and ethnicity and the percentage of their populations that are below the poverty level. The Fort Yuma Indian Reservation is part of Census Tracts 124 and 9400. However, the U.S. Census collects demographic data specifically for Reservations to avoid undercounting; therefore, data for the study area census tracts and the Fort Yuma Indian Reservation are presented.

Environmental Justice Analysis for Census Tracts in Study Area

Geography	Total Population	Minority	Hispanic or Latino	Total (Minority + Hispanic or Latino)	Below Poverty	Environmental Justice Community*
Imperial County	179,702	6.6%	91.0%	97.6%	22.6%	Yes
Census Tract 124	756	6.2%	66.6%	72.8%	32.3%	Yes
Census Tract 9400	1,967	56.0%	24.4%	80.4%	36.9%	Yes
Fort Yuma Indian Reservation **	1,536	71.0%	23.5%	94.6%	34.8%	Yes

Notes: *Minority is the sum of Black, American Indian/Alaska Native, Asian, Native Hawaiian/Pacific Islander. Source: U.S. Census American Community Survey 2021. **Source: *My Tribal Area* (U.S. Census) 2018-2022 American Community Survey 5-Year Estimates

As shown on the table above, the minority populations of the reference population, Imperial County is approximately 6%. However, combined with the Hispanic or Latino population result in an over 97% minority population. Within Census Tract 124, 6% of the population identifies as minority and approximately 67% identifies as Hispanic or Latino, for a combined 73% minority population. Within Census Tract 9400, approximately 80% of the population is minority and/or Hispanic/Latino. Within the Fort Yuma Indian Reservation, where the proposed Project is located, nearly 95% of the population is minority and/or Hispanic or Latino. Using the base line of over 50% population identifies as minority populations, the proposed Project area has a notable Environmental Justice population.

The poverty level in Imperial County is approximately 23%, while the poverty level in Census Tract 124, Census Tract 9400, and the Fort Yuma Indian Reservation are over 30%. Compared to the reference population of Imperial County, Census Tract 124, Census Tract 9400, and the Fort Yuma Indian Reservation are considered Environmental Justice populations with regards to poverty levels.

Therefore, the Fort Yuma Indian Reservation, where the proposed Project is located, is an Environmental Justice community in terms of population demographics and poverty levels.

Outreach to Disadvantaged Communities

11/2/2023 (In-Person Meeting) – Meeting with the Quechan Tribe Council. This meeting confirmed that a “tangent” alignment was the most acceptable to the tribe. Mr. Dimitar

Peev (Caltrans former Design Manager), presented the preliminary design concept to the Tribe. The Tribe expressed support of the Project. We received a copy of Resolution R-184-23 from Alex Belous (U.S. Bureau of Reclamation), as approved by the Fort Yuma Quechan Indian Tribal Council, expressing its support for Bureau of Reclamation's preferred alternative for the SR-186 bridge location over the All-American Canal and within the alignment updated by Caltrans (it should be noted that the alignment and bridge design concept was revised after we received Resolution R-184-23.

1/26/2023 (Virtual Meeting via Microsoft Teams) - Meeting with Bureau of Reclamation and Mr. Manfred Scott (Quechan Tribe Cultural Committee). Cameron Chafee (Caltrans Design Manager) presented an updated design concept at the meeting.

March 2023 (In-Person Quechan Tribe Monitoring) – A tribal monitor accompanied lead archaeologist, Koji Tsunoda, during the process of a phase I archaeological survey.

7/8/2024 (Virtual Meeting) - Verification was made that a tribal monitor would not be needed, assuming geotechnical borings were conducted within the areas specified in the meeting. The meeting was with Dennis Boone (Quechan Tribe Safety - TERO Director), Karen Islas (District 11 Native American Liaison). Joseph Kaump (Geotechnical Drilling Services - Liaison between Design & Contract Manager), Brian Yamashiro (Caltrans Office of Geotechnical Design South), John Garcia (District 11 External Affairs) who discussed TERO Guidance and Compliance Plan related to upcoming geotechnical drilling work.

2023/2024 and Ongoing (Project Development Team [PDT] Meeting) – Despite the project's environmental document type being a Categorical Exclusion (CE) under NEPA and a Categorical Exemption (CE) under CEQA, ongoing participation and coordination with stakeholders including the tribe, IID, an BOR, are conducted in accordance with CEQA/NEPA during the PDT Meetings. These meetings ensure compliance with all applicable CEQA/NEPA regulations, and facilitates collaboration among stakeholders, and contributes to advancing project milestones efficiently.

Environmental Consequences

Under the Build Alternative, the proposed Project will provide pedestrian access and improve safety along SR 186. SR 186 is the main north-south road through the Fort Yuma Indian Reservation and better facilitate international and interregional movement of people, goods and services and would increase access for the travelling public, as well as the bicycling community, and better serve the visitors traveling through the Andrade Port of Entry.

The bridge was constructed in the 1930’s and designed according to standard specifications of the time to accommodate two lanes of 15-ton trucks. The substantial increase in traffic volume on SR-186 along with recent structural evaluations have led to a weight restriction on the bridge at 20 tons. The design of the bridge does not provide standard lane width and lack of shoulder space are safety issues for motorists, bicyclists and pedestrians. The Build Alternative would address inequities experienced by

disadvantaged communities in the area due to congestion from lane widths standard not being met and shoulder space not being provided.

Additionally, given the discussion regarding environmental justice communities, the Project footprint would be outside of residential uses in the Fort Yuma Reservation area and would not impact these uses, nor displace existing communities in the Project area.

For the reasons described above, no disproportionately high and adverse impacts would occur to low income and/or minority populations and tribal populations. The Build Alternative has been designed to serve the communities in the Project area as a whole.

1.1.6 Equity

Regulatory Setting

Equity in transportation seeks fairness in mobility and accessibility to meet the needs of all community members. A central goal of transportation equity is to facilitate social and economic opportunities by providing equitable levels of access to affordable and reliable transportation options based on the needs of the populations being served, particularly populations that are traditionally underserved. It is important to note that transportation equity does not mean equal. An equitable transportation plan considers the circumstances impacting a community's mobility and connectivity needs, and this information is used to determine the measures needed to develop an equitable transportation network (U.S. Department of Transportation 2022a, 2022b).

Equity, while related to environmental justice, discussed previously in section 1.1.5, is more broadly defined. Recent laws and policies have been adopted regarding equity and the consideration of how past policies and plans have resulted in disparities for underserved and disadvantaged populations.

Executive Order 13985. EO 13985, Advancing Racial Equity and Support for Underserved Communities Through the Federal Government (EPA 2021), affirms that "the Federal Government should pursue a comprehensive approach to advancing equity for all, including people of color and others who have been historically underserved, marginalized, and adversely affected by persistent poverty and inequality. Affirmatively advancing equity, civil rights, racial justice, and equal opportunity is the responsibility of the whole of our Government." Under EO 13985, the term "equity" means the consistent and systematic fair, just, and impartial treatment of all individuals, including individuals who belong to underserved communities that have been denied such treatment, such as Black, Latino, and Indigenous and Native American persons, Asian Americans and Pacific Islanders and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality. The term "underserved communities" refers to populations sharing a particular characteristic, as well as geographic communities, that have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life. The EO seeks to advance equity through various efforts, including coordinating

across the federal government, identifying methods to assess equity, conducting an equity assessment in federal agencies, allocating federal resources to advance fairness and opportunity, promoting equitable delivery of government benefits and equitable opportunities, engaging with members of underserved communities, and establishing an Equitable Data Working Group.

USDOT Equity and Access Policy. The U.S. Department of Transportation's March 2021 Equity and Access Policy Statement (USDOT 2021) states that "the Department is committed to promoting equitable delivery of government benefits and opportunities, including advancing meaningful engagement with all communities and ensuring that government contracting and procurement opportunities are available on an equal basis to all eligible providers of goods and services." The policy statement reiterates USDOT's commitment to incorporate environmental justice and equity principles into transportation planning and decision-making processes, including ensuring full and equitable access to programs, activities, and services for persons with limited English proficiency in accordance with Executive Order 13166 *Improving Access to Services for Persons with Limited English Proficiency.*

Caltrans Equity Statement. The Caltrans Equity Statement (December 10, 2020) acknowledges that communities of color and underserved communities have experienced fewer benefits and a greater share of negative impacts associated with our state's transportation system. Some of these disparities reflect a history of transportation decision-making, policy, processes, planning, design, and construction that "quite literally put up barriers, divided communities, and amplified racial inequities, particularly in our Black and Brown neighborhoods."

Affected Environment

As described in Section 2.2.5, Environmental Justice, the two census tracts in the study area were identified as environmental justice communities, based on the Council on Environmental Quality's (CEQ) definitions. These census tracts are also considered disadvantaged communities, as economically disadvantaged communities and communities of color are historically underserved. In addition to U.S. Census information, the California Office of Environmental Health Hazard Assessment's (OEHHA) CalEnviroScreen 4.0 tool was consulted for this equity analysis (OEHHA 2021). The CalEnviroScreen identifies California communities that are disproportionately burdened by multiple sources of pollution. This tool combines pollution burden and population characteristics to derive a percentile "score" (from 0 to 100 percent) for counties and census tracts that can then be compared across the state. Specifically, CalEnviroScreen 4.0 assesses 21 indicators statistically to characterize pollution burden and population. For example, pollution burden data include ozone, diesel particulate matter, hazardous waste, and traffic impacts; examples of population characteristics data include asthma, cardiovascular disease, poverty, and unemployment. The higher the CalEnviroScreen 4.0 percentile score, the more a community (e.g., census tract) is disproportionately burdened by pollution sources

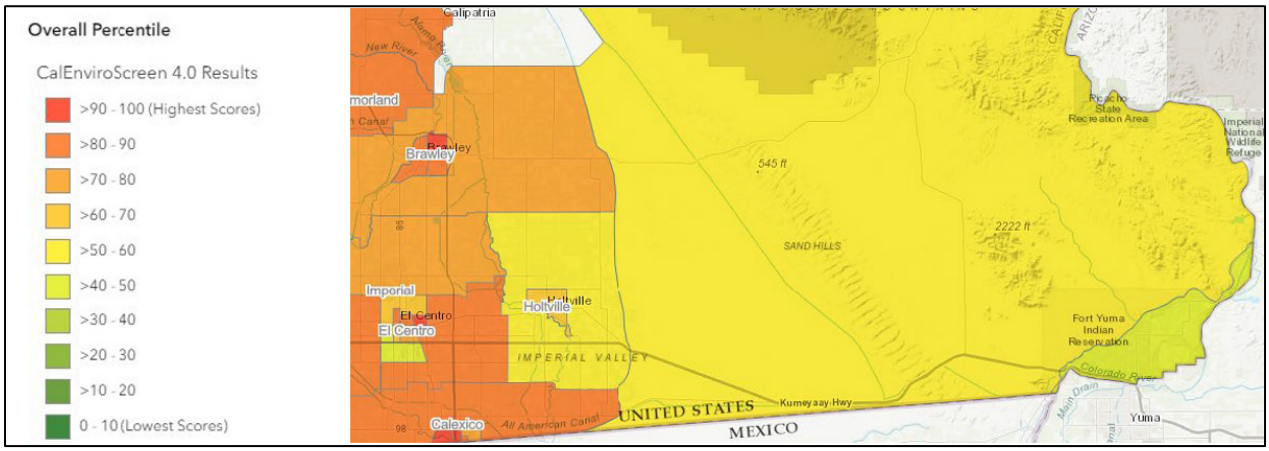
The California Environmental Protection Agency has defined disadvantaged communities as those census tracts that fall in or above the 75th percentile in

CalEnviroScreen. CalEnviroScreen also maps disadvantaged communities as designated by the California Environmental Protection Agency (CalEPA) for allocation of SB 535 funding based on the following criteria:

- Census tracts receiving the highest 25 percent of overall scores in CalEnviroScreen 4.0
- Census tracts lacking overall scores in CalEnviroScreen 4.0 because of data gaps but receiving the highest 5 percent of CalEnviroScreen 4.0 cumulative pollution burden scores.
- Census tracts identified in the 2017 Disadvantaged Communities designation as disadvantaged, regardless of their scores in CalEnviroScreen 4.0.
- Lands under the control of federally recognized tribes.

Below shows the CalEnviroScreen 4.0 results for the two census tracts in the study area, as well as the Fort Yuma Indian Reservation within the context of the greater eastern Imperial County area for comparison.

CalEnviroScreen 4.0 Eastern Imperial County



Imperial County is presently identified by the U.S. EPA as not meeting health-protective national air quality standards (NAAQS) for fine particulates, and ozone-forming pollutants, and is specifically classified as an area in serious nonattainment for larger particulates (PM_{10}), originating from sources such as dust and smoke, with potential acute health impacts. Sources of air pollution leading to these nonattainment designations in the region stem from agricultural activities (e.g., soil tillage, agricultural burning, use of diesel farming equipment). Further contributions to nonattainment status in Imperial County includes truck traffic on unpaved roads, industrial processes, construction, and demolition activities, off-highway recreational vehicles, and various air emissions, including those from the U.S.- Mexico border. In addition, according to CalEnviroScreen 4.0, a significant portion of Imperial County is situated in the top 80th to 95th percentile of all areas in California for pesticide applications, proximity to solid waste facilities, and proximity to businesses generating hazardous waste.

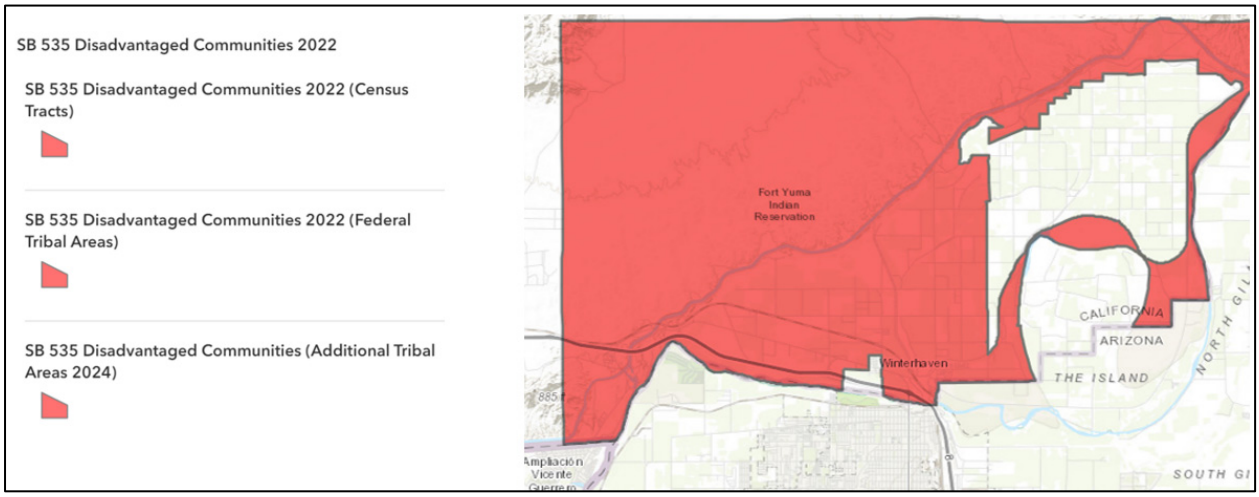
For the study area census tracts, and the Fort Yuma Indian Reservation, shown below, CalEnviroScreen 4.0 - Project Area, indicates a slightly lower pollution burden compared to the Imperial County. Census tract 124 has an overall CalEnviroScreen score of 51, or 51st percentile (i.e., greater exposure than 51% of census tracts statewide), and a specific pollution burden at 45th percentile, with notably high percentile scores for impacts to drinking water, pesticides, and ozone. Census tract 124 is 71st percentile for poverty. Census tract 9400 has an overall CalEnviroScreen score of 41, or 41st percentile, and a pollution burden at 28th percentile, with notably high percentile scores for pesticides, $PM_{2.5}$, and ozone. Census tract 9400 is the 96th percentile for poverty.

CalEnviroScreen 4.0 - Project Area



Although CalEnviroScreen 4.0 does not specifically delineate tribal lands for cumulative pollution burden analysis, CalEnviroScreen does map SB 535 Disadvantaged Communities. As shown in the figure below, SB 353 Communities, the Fort Yuma Indian Reservation is designated as a Disadvantaged Community under SB 353, as described above. This official designation correlates with the high CalEnviroScreen scores for the Project area census tracts discussed above and affirm the presence of underserved communities in the proposed Project vicinity.

SB 535 Communities



Environmental Consequences

The environmental consequences of the proposed Project are evaluated for their potential to adversely affect underserved and disadvantaged communities through changes in the human and natural environment. Project effects on communities can include changes in pollution burdens, modifications to community character, and exacerbation of historical impacts from transportation infrastructure (e.g., divided communities). Section 2.2.5, Environmental Justice, evaluates whether minority and/or low-income populations will experience disproportionately adverse environmental effects as a result of the proposed Project.

Construction of the Project would temporarily increase pollution resulting from construction equipment emissions such as ozone and PM2.5, and fugitive dust. In addition, intermittent and temporary lane closures and detours would inconvenience roadway users. Further, construction activity, and movement of construction equipment and trucks would result in increased travel times. The project would comply with all Caltrans' specifications and BMPs to reduce construction related emissions and fugitive dust.

A Transportation Management Plan (TMP) would be prepared which would implement measures to inform the community and drivers of project construction activities, provide signage and detours, and maintain access and parking for properties in the project vicinity during construction. Project outreach should include requests for the minority community to meaningfully provide input into Project decisions such as recommendations for aesthetic treatments should they be required, and measures taken to reduce travel delays and parking effects.

Once completed, the Build Alternative would address some of the historic inequities experienced by the disadvantaged community such as bridge structure safety, vehicle and pedestrian safety, and congestion and pollution exposure from a highly traveled roadway. Although, traffic volume is projected to increase along SR-186 due to

increasing goods movement between the U.S. and Mexico, as discussed in Section 2.2.8, Traffic and Transportation, a Vehicle Miles Traveled (VMT) analysis is not required for the proposed project, as it meets the screening criteria for a project "Not likely to lead to a measurable and substantial increase in VMT" pursuant to Section 5.1.1 of the Transportation Analysis under CEQA. Therefore, the Build Alternative would not cause disproportionately high and adverse effects on underserved and disadvantaged communities through changes in the human and natural environments.

Avoidance and/or Minimization Measures

To minimize effects during construction, access and circulation throughout the study area will be maintained to the maximum extent feasible. A Transportation Management Plan (TMP) would be in place during construction to ensure that all modes of transportation continue to have access through the Project area. Further, construction impacts would be minimized by adhering to Caltrans' standard specifications and BMPs which address such impacts as fugitive dust control and construction equipment emissions.

1.1.7 Utilities/Emergency Services

Affected Environment

Utilities

Power, gas, telecommunications (fiber optic), and water utilities are located within the Project area. Imperial Irrigation District (IID) provides water and electrical power to the Project area.

Verizon, Spectrum, Starlink, and TDS Telecom are the main telecommunication providers in the Project area.

Law Enforcement

The Quechan Police Department and California Highway Patrol (CHP) provide law enforcement and traffic control/enforcement services within the Project area.

CHP Office 620 is located at 1 Killingworth Dr, Winterhaven, CA 92283, approximately two miles west of the Project site. The CHP has jurisdiction over I-8 and SR 186.

The Quechan Police Department is located at Quechan Police Department, 450 Quechan Dr, Winterhaven, CA 92283, approximately five miles east of the Project site.

Fire Protection/Suppression

Fire protection and suppression is provided by the Winterhaven Fire Protection District, located at 495 S Third Avenue, Winterhaven, CA 92283, approximately 5 miles east of the Project site.

Imperial County Fire Department Station 8, located at 518 Railroad Ave, Winterhaven, CA 92283, approximately 5 miles east of the Project site.

Environmental Consequences

Lane closures and detours within the Project area would be required to construct the Build Alternative. During final design, a Transportation Management Plan (TMP) will be developed for the Project to minimize construction-related delays and inconvenience to the Project area residents, employees, and the traveling public. The TMP will include notification to emergency service providers and the public of lane closures and detours; coordination with CHP and local law enforcement and emergency service providers on contingency plans; and using portable Changeable Message Signs where possible to minimize delays. Therefore, no emergency services would be temporarily affected by construction of the Build Alternative. No law enforcement, fire, and/or emergency services would be permanently affected by the proposed Project as access to SR 186 would not be permanently altered by the Project.

Utility investigations have identified the location and extent of existing service lines within the Project. The Project would require relocating some utilities. There are existing 115 kilovolt (KV) overhead electrical lines that would need to be relocated and overhead utility lines would be raised to maintain the required clearance above the local roadways. The relocation of utilities would result in localized construction impacts that will require coordination and temporary measures to maintain service.

Avoidance and Minimization Measures

To minimize potential effects, coordination with the local utility companies is required during final design. Notifications to any affected parties would be made in advance by the utility provider and/or Public Information Officer to minimize service disruption.

In addition, prior to construction activities, the construction contractor would contact utilities, DigAlert services, and/or other applicable entities to mark underground facilities, as needed.

1.1.8 Traffic and Transportation/Pedestrian and Bicycle Facilities

Regulatory Setting

The Department, as assigned FHWA, directs that full consideration should be given to the safe accommodation of pedestrians and bicyclists during the development of Federal-aid highway Projects (see 23 Code of Federal Regulations [CFR] 652). It further directs that the special needs of the elderly and people with disabilities must be considered in all Federal-aid Projects that include pedestrian facilities. When current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle traffic, every effort must be made to minimize the detrimental effects on all highway users who share the facility.

In July 1999, the U.S. Department of Transportation (USDOT) issued an Accessibility Policy Statement pledging a fully accessible multimodal transportation system. Accessibility in federally assisted programs is governed by the USDOT regulations (49 CFR 27) implementing Section 504 of the Rehabilitation Act (29 United States Code

[USC] 794). The FHWA has enacted regulations for the implementation of the 1990 Americans with Disabilities Act (ADA), including a commitment to build transportation facilities that provide equal access for all persons. These regulations require application of the ADA requirements to federal-aid Projects, including Transportation Enhancement Activities.

The information in this section is based, in part, on the VMT Statement by Caltrans in December 2024 (Appendix B15). This section is also based on the Exempt From Air Quality Conformity Determination Per 40 CFR 93.126 (Appendix B3) and Transportation Air Quality Conformity Findings Checklist (Appendix B12).

Affected Environment

SR-186, also locally known as Algodones Road, is a State highway (U.S. DOT 2011) as well as part of the National Highway System as a principal arterial (U.S. DOT 2024) that connects Interstate 8 (I-8) with the U.S. – Mexico border at the Andrade Port of Entry. The existing SR-186 bridge (at PM 1.06) was constructed for operations and maintenance of the canal in the 1930's. The bridge became part of a public roadway system in 1967, with Caltrans adopting the road in 1972 as part of SR-186. Subsequent to the opening of the Andrade Point of Entry border crossing in 1970, the primary use has transitioned from its early 20th-century role, which included both rail and road crossings, to primarily facilitating vehicular and pedestrian traffic. The existing bridge is on a United States Bureau of Reclamation (BOR) 7-gate water flow check structure facility (weir) built in the 1930's. According to USBOR, the bridge was designed with a minimum concrete compression strength of 2500 pounds per square inch (PSI) and for two lanes with maximum 15-ton trucks in accordance with the Standard Specifications for Highway Bridges, American Association of State Highway Officials (ed. 2002). A structural evaluation resulted in a weight restriction of 20 tons on the bridge and Andrade POE currently redirects all truck and bus traffic to other POEs; otherwise, the weight load on the bridge exceeds what the bridge was originally designed for.

Travel Demand Modeling and Forecasting Methodology

The travel demand modeling and forecasting for this project were conducted using the Imperial County Travel Model (ICTM), consistent with guidelines provided by Caltrans, the Southern California Association of Governments (SCAG), and the Imperial County Transportation Commission (ICTC). The ICTM is a sub-regional model focused on Imperial County, owned and maintained by Caltrans District 11. It was developed to reflect regional travel patterns and incorporates existing and projected land use, population, and employment data. Recently, in 2023, the ICTM has also incorporated the ICTC's Long-Range Transportation Plan. This model was calibrated based on observed traffic counts and travel behavior surveys to ensure accuracy in simulating current conditions.

<u>Key Aspects of the ICTM</u>

- Socioeconomic Data: The model uses population and employment forecasts for the horizon years of 2035 and 2045. These forecasts reflect expected growth in

residential, commercial, and industrial development within the project's influence area.

- Land Use Data: Land use data were integrated into the model to represent existing and planned developments within the study area. The land use categories included residential, commercial, mixed-use, and industrial zones, with future projections based on regional development plans.

- Network and Zone System: The study area was divided into traffic analysis zones (TAZs) that reflect local and regional road networks, major activity centers, and expected development locations. The model incorporates key roadways, including highways, arterials, and collectors, with link attributes such as capacity, free-flow speeds, and length.

- Trip Generation: Trip generation rates were calculated, accounting for factors such as land use type, size, and proximity to major transportation corridors. The total number of trips produced and attracted by each TAZ was estimated based on land use characteristics.

- Trip Distribution: The trip distribution step used a gravity model to forecast where trips would begin and end. The model assigns trips between origins and destinations based on the attractiveness of the destination (e.g., employment centers) and the travel time between zones.

- Mode Choice: The mode choice model forecasts the percentage of trips made by various modes, including automobiles, transit, walking, and bicycling. The model considered factors such as travel time, cost, and the availability of transit options.

- Traffic Assignment: Once the trip tables were developed, traffic was assigned to the roadway network using a user-equilibrium traffic assignment algorithm. The assignment process accounted for congestion effects, ensuring that travel times increased with traffic volumes, and redistributed traffic until no driver could reduce travel time by changing routes.

Calibration and Validation

The model was calibrated using observed traffic data. Calibration was performed to ensure that the model replicates existing traffic volumes and conditions accurately. Validation was conducted by comparing modeled results with observed data for both daily and peak hour traffic volumes, using key performance metrics such as the root mean square error (RMSE) and percent error within acceptable thresholds.

Forecast Scenarios

The model was used to develop traffic forecasts for the No-Build and Build scenarios for the horizon years of 2035 and 2045. The No-Build scenario assumed no roadway improvements, while the Build scenario included the proposed project's roadway

enhancements, including highway realignment and new bridge construction. The forecasting results provide insights into future traffic conditions, congestion levels, and potential operational improvements required to meet projected demand.

Trip Origin and Destination

There are two types of trips: I-E trips and E-E trips, which could potentially be impacted by the planned expansions of the Andrade Port of Entry, as they utilize the bridge over the All-American Canal. I-E trips originate within Imperial County (internal) but have destinations outside of it (external), or vice versa. E-E trips both originate and end outside of Imperial County.

Daily I-E trips

In the current SCAG regional transportation model and ICTM, the depiction of daily I-E trips is as follows:

Home-based work (HBW):

There are two types of HBW trips. “Direct” home-work trips directly between home and work. “Strategic” home-work trips include one or more intermediate stops between home and work.

Home-based shopping (HBS),

Home-based other (HBO),

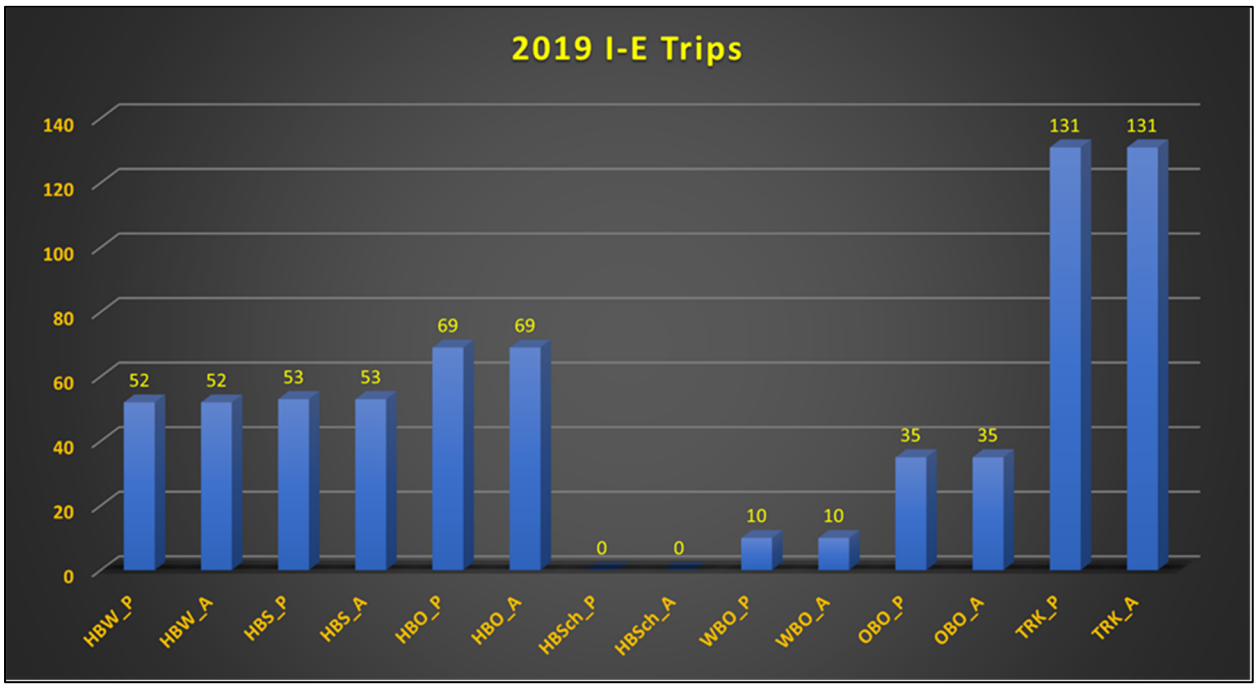
Home-based school (HBSch),

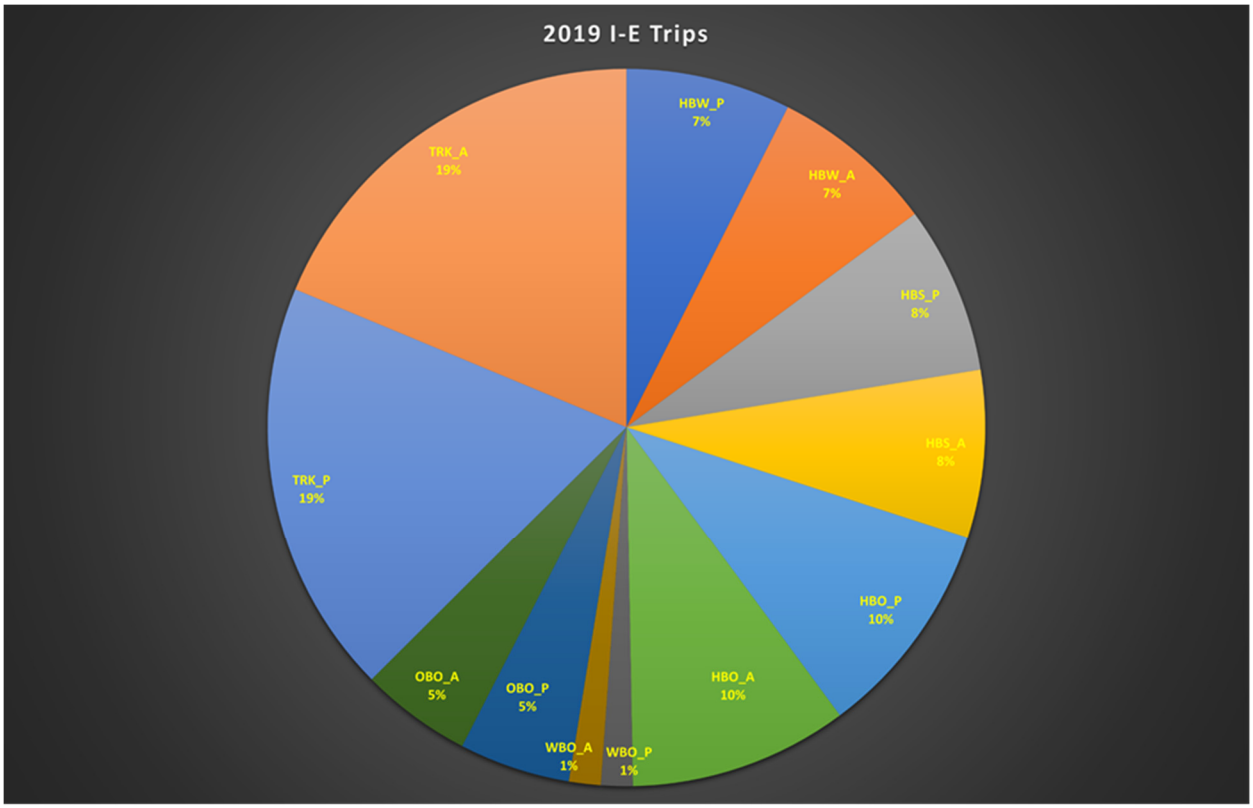
Work-based other (WBO),

Other-based other (OBO),

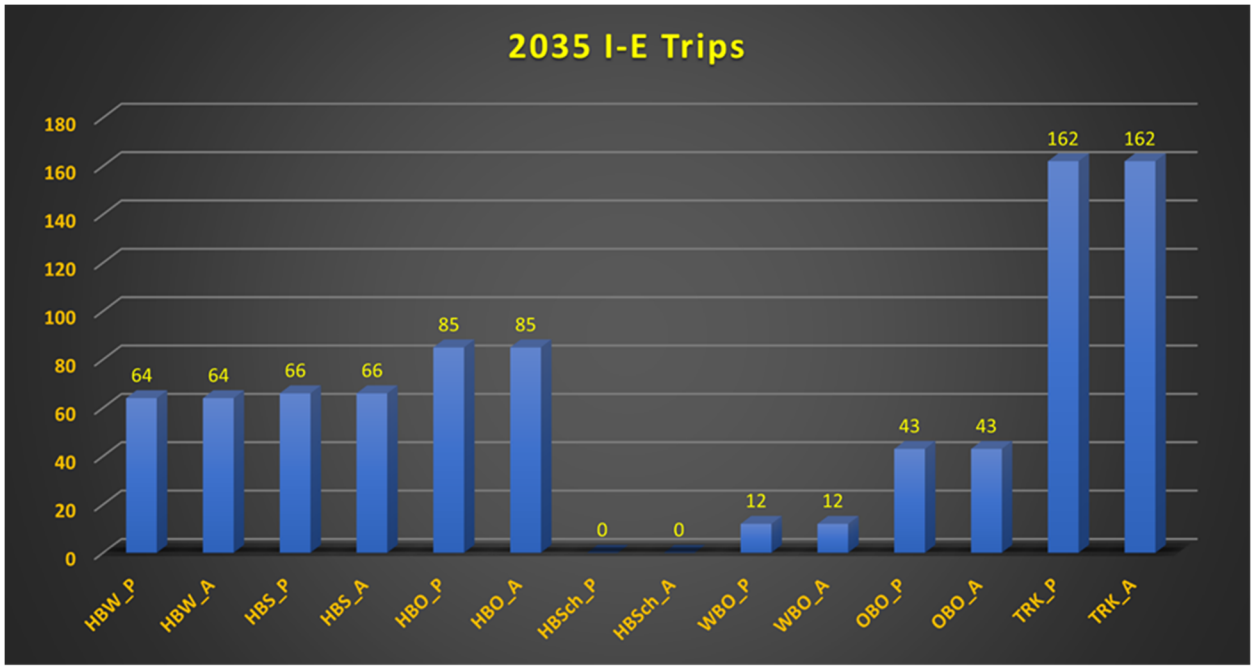
and Trucking (TRK) trips.

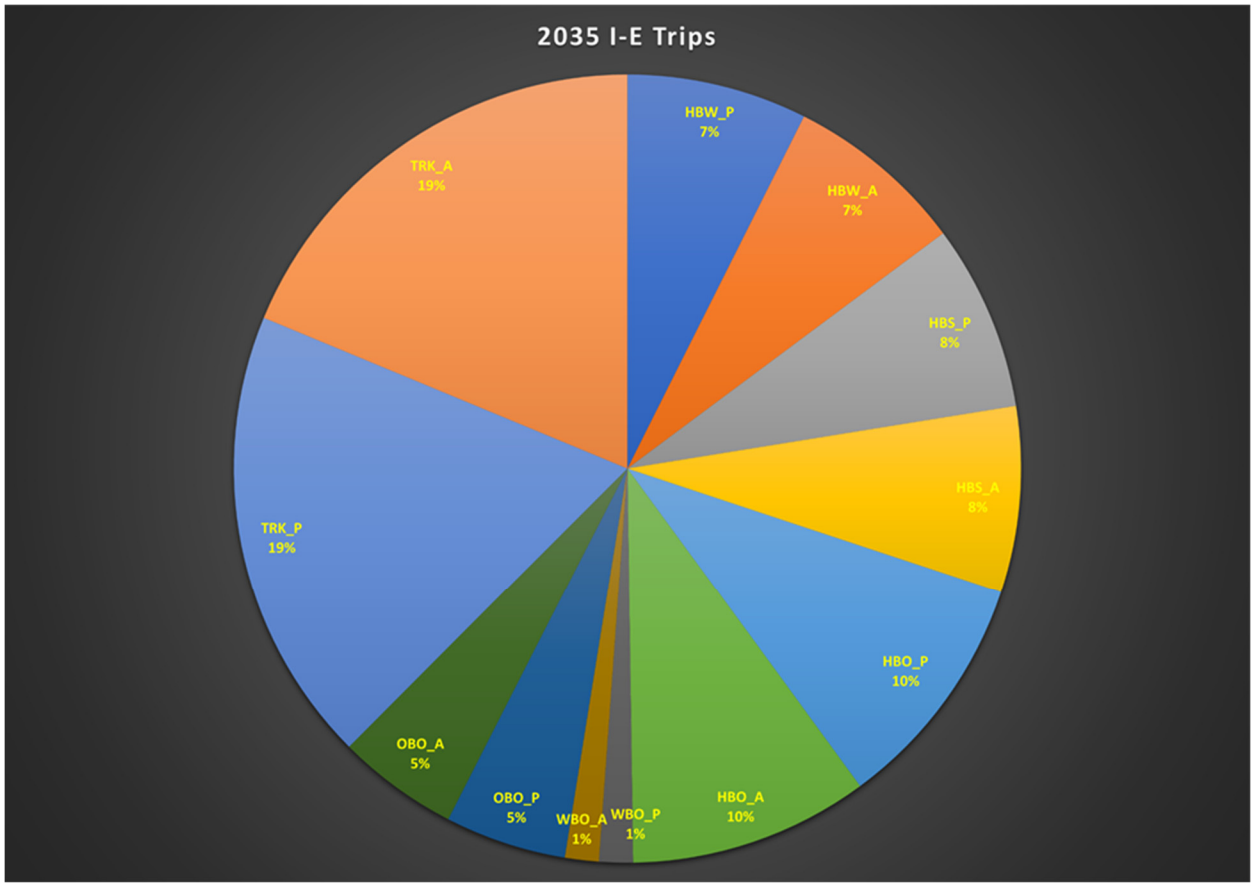
Year 2019


2019 I-E Trips
140
120
100
80
60
40
20
0
52
52
53
53
69
69
0
0
10
10
35
35
131
131
HBW_P
HBW_A
HBS_P
HBS_A
HBO_P
HBO_A
HBSch_P
HBSch_A
WBO_P
WBO_A
OBO_P
OBO_A
TRK_P
TRK_A

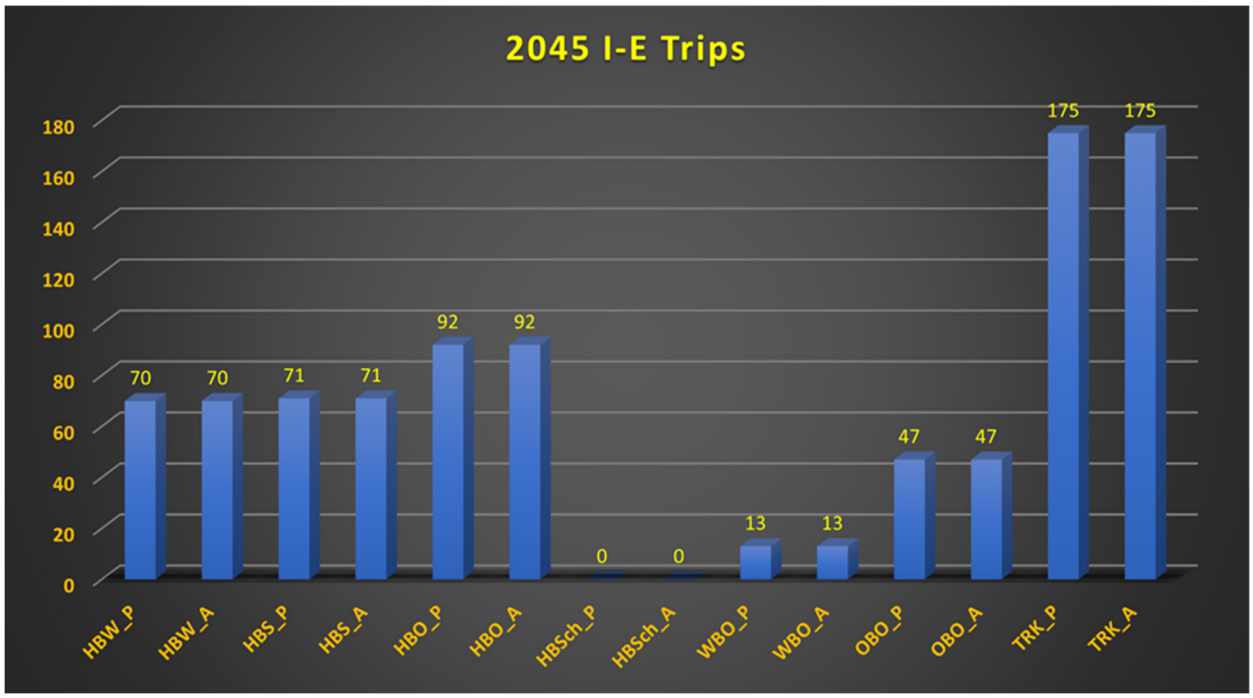

2019 I-E Trips
HBW_P 7%
HBW_A 7%
HBS_P 8%
HBS_A 8%
HBO_P 10%
HBO_A 10%
WBO_P 1%
WBO_A 1%
OBO_P 5%
OBO_A 5%
TRK_P 19%
TRK_A 19%

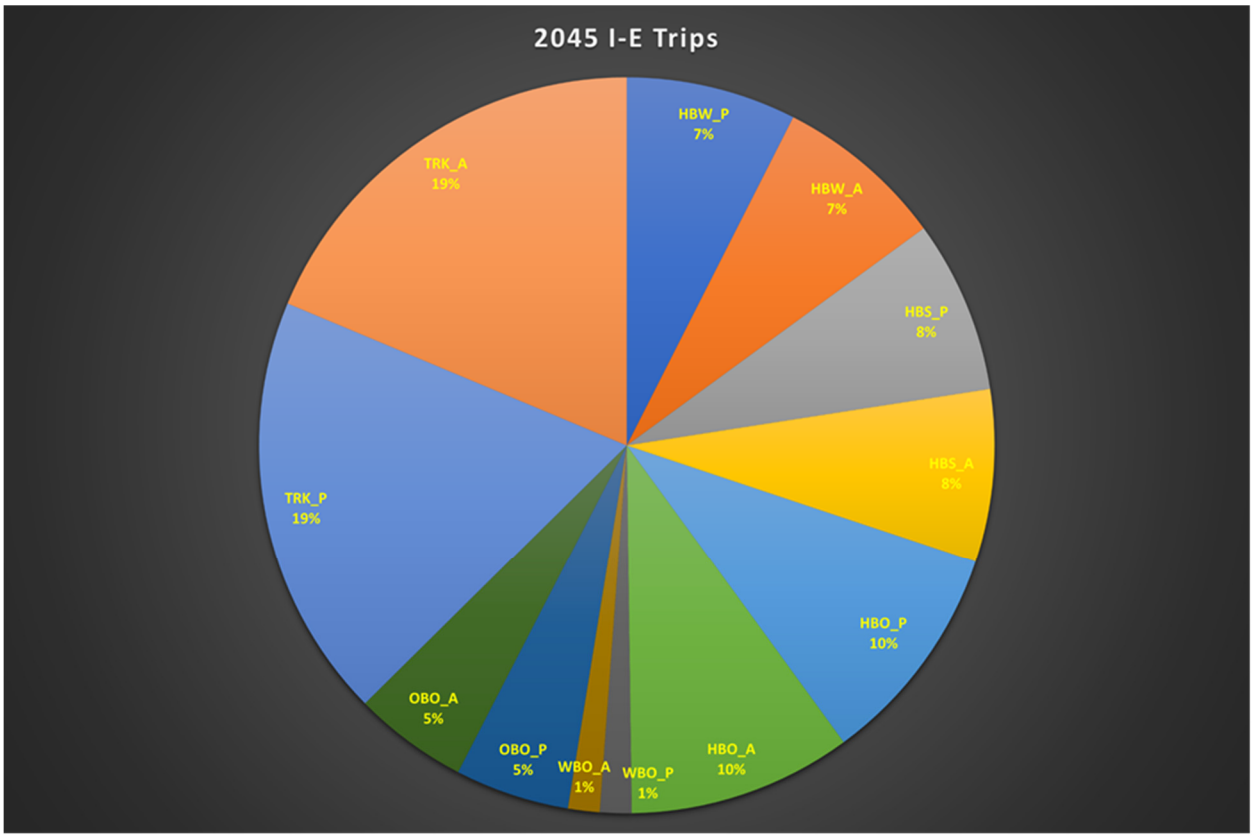
Year 2035


2035 I-E Trips
180
160
140
120
100
80
60
40
20
0
64
64
66
66
85
85
0
0
12
12
43
43
162
162
HBW_P
HBW_A
HBS_P
HBS_A
HBO_P
HBO_A
HBSch_P
HBSch_A
WBO_P
WBO_A
OBO_P
OBO_A
TRK_P
TRK_A

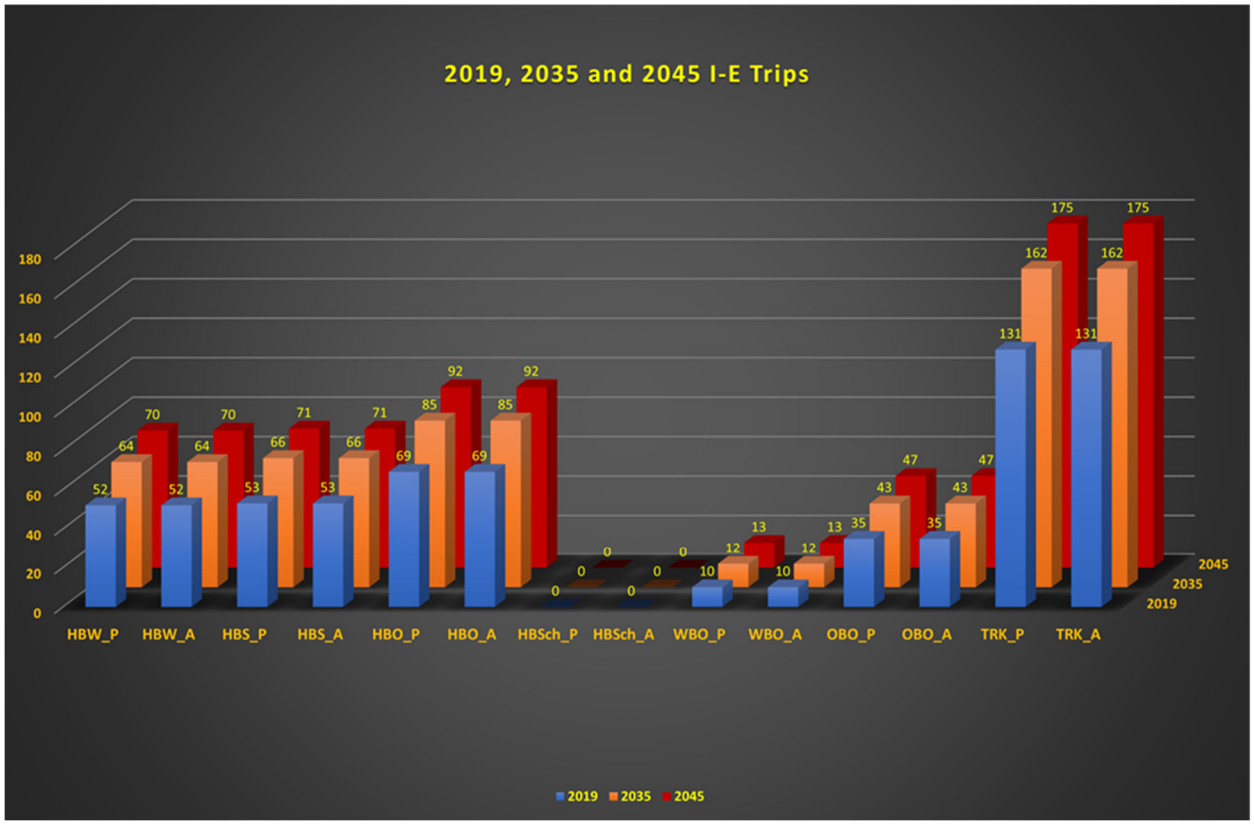

2035 I-E Trips
HBW_P 7%
HBW_A 7%
HBS_P 8%
HBS_A 8%
HBO_P 10%
HBO_A 10%
WBO_P 1%
WBO_A 1%
OBO_P 5%
OBO_A 5%
TRK_P 19%
TRK_A 19%

Year 2045


2045 I-E Trips
180
160
140
120
100
80
60
40
20
0
70
70
71
71
92
92
0
0
13
13
47
47
175
175
HBW_P
HBW_A
HBS_P
HBS_A
HBO_P
HBO_A
HBSch_P
HBSch_A
WBO_P
WBO_A
OBO_P
OBO_A
TRK_P
TRK_A

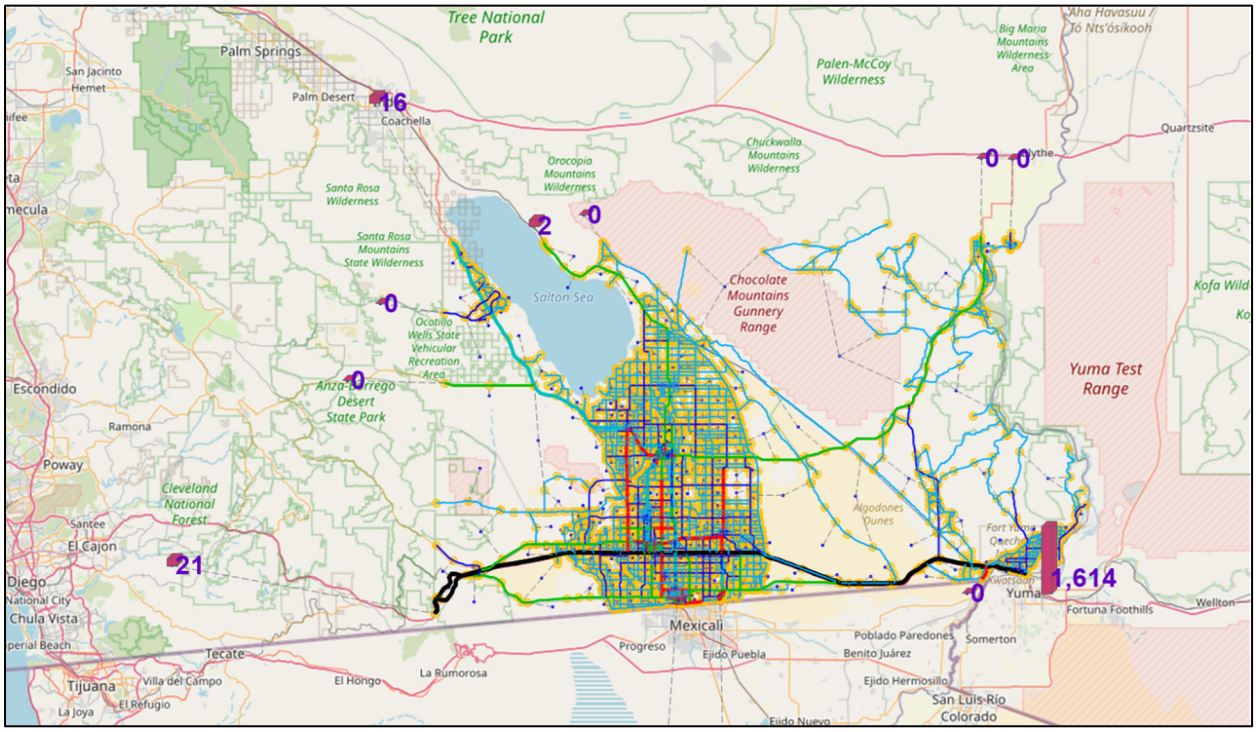

2045 I-E Trips
HBW_P 7%
HBW_A 7%
HBS_P 8%
HBS_A 8%
HBO_P 10%
HBO_A 10%
WBO_P 1%
WBO_A 1%
OBO_P 5%
OBO_A 5%
TRK_P 19%
TRK_A 19%

Below is the summary of daily I-E trips:

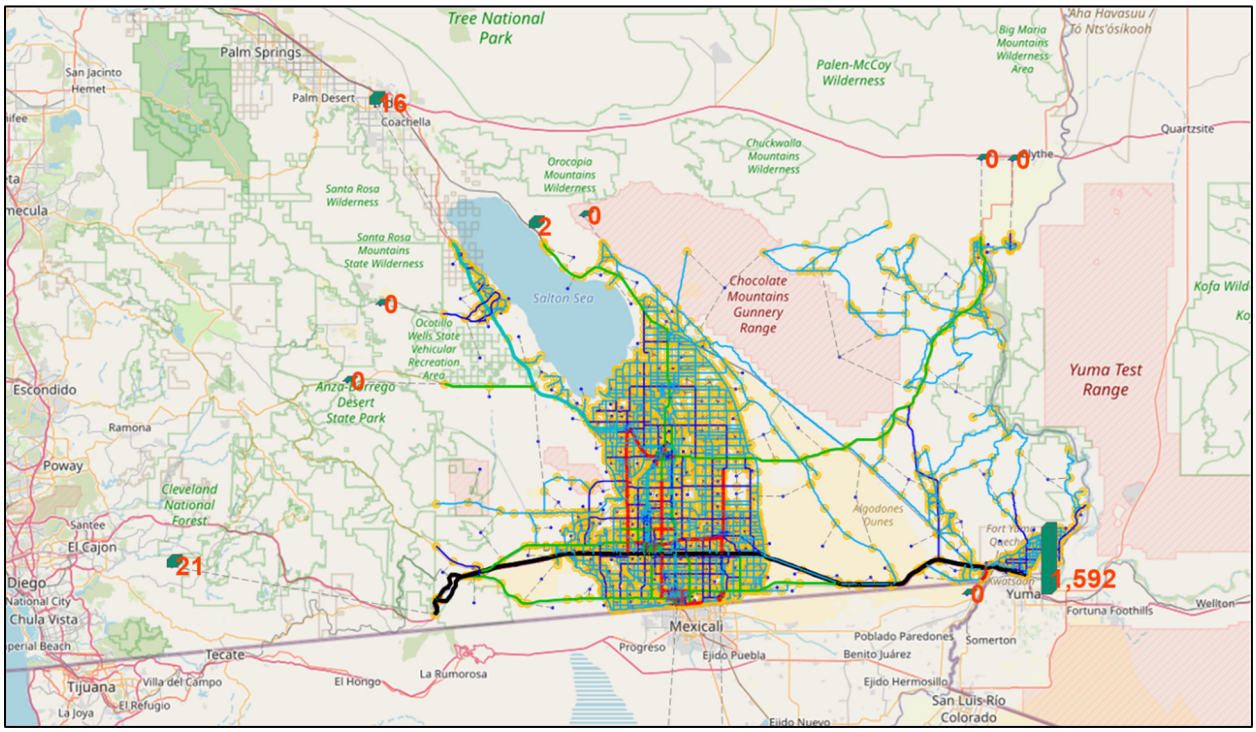


Daily E-E trips

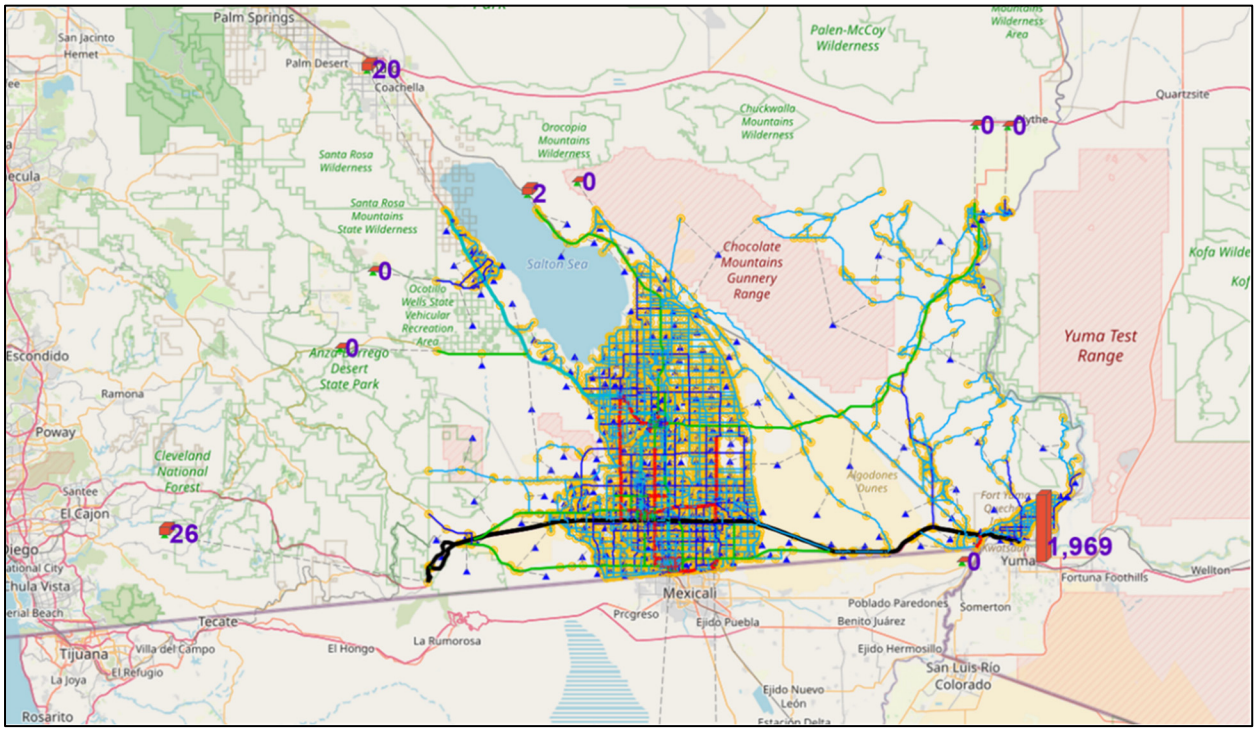
2019 E-E Trips originate from the south of the Andrade Port of Entry.



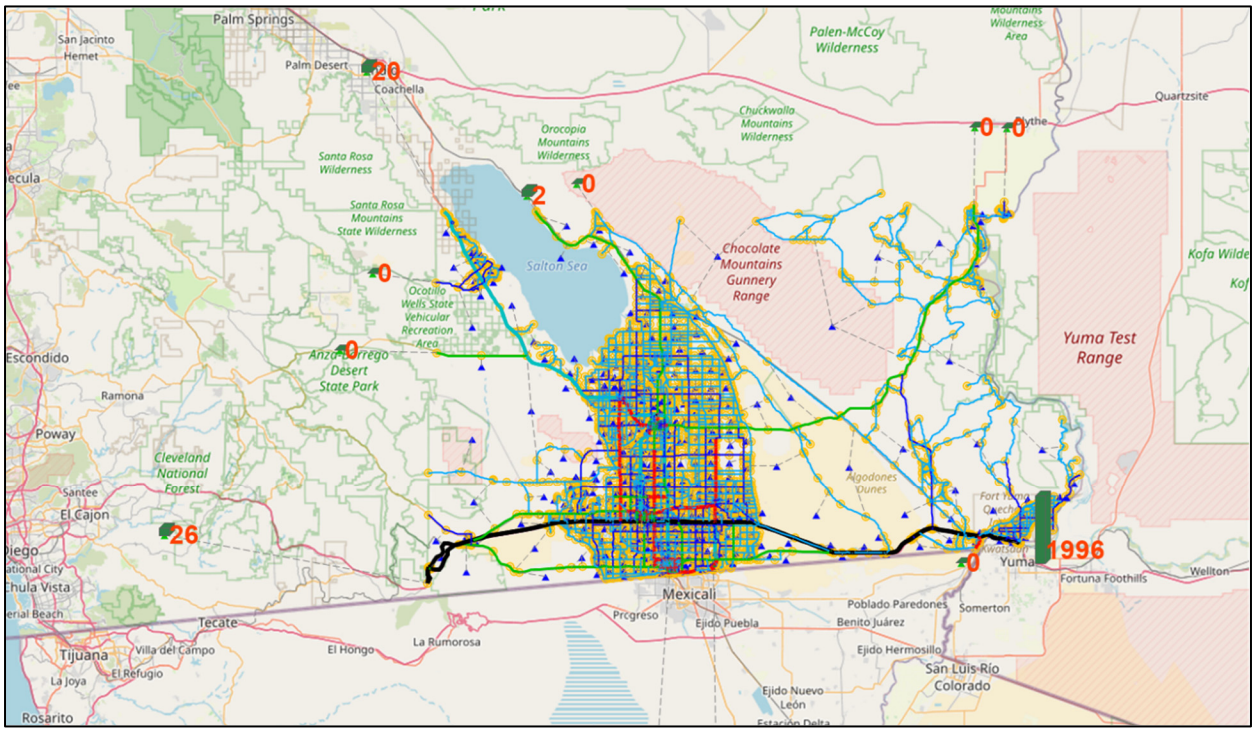
2019 E-E Trips end to the south of the Andrade Port of Entry.



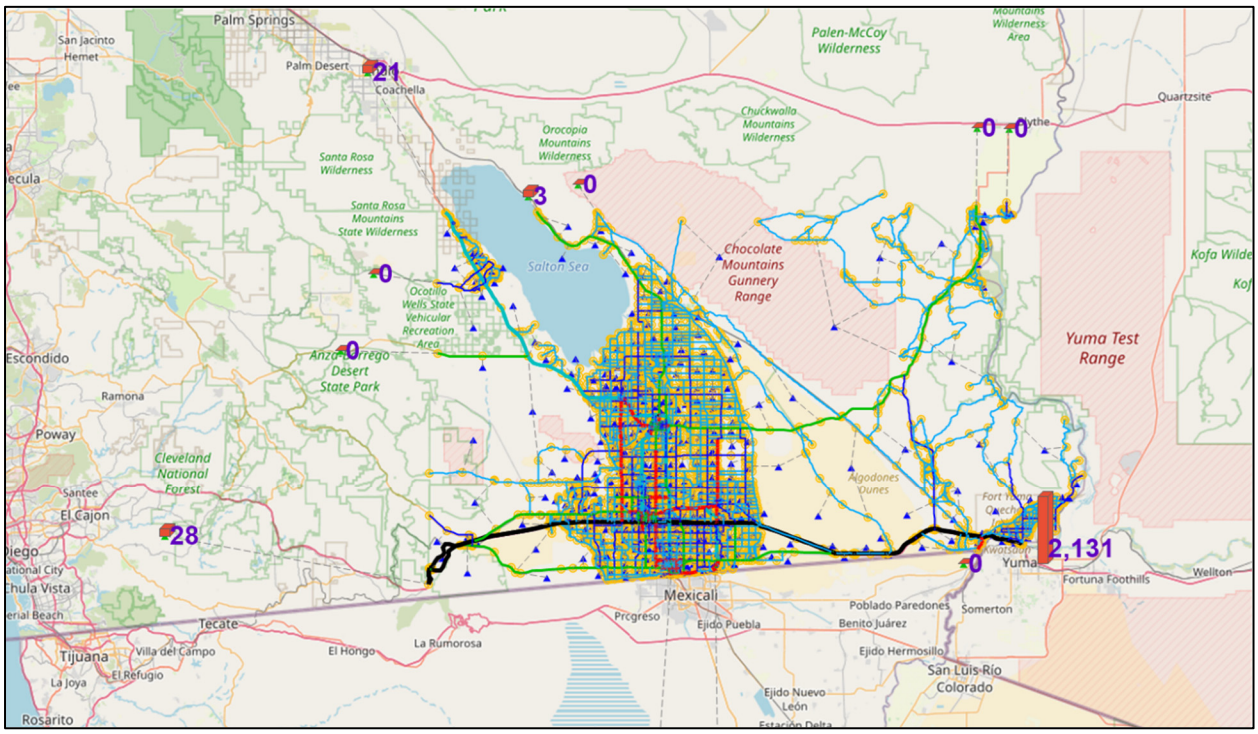
2035 E-E Trips originate from the south of the Andrade Port of Entry.



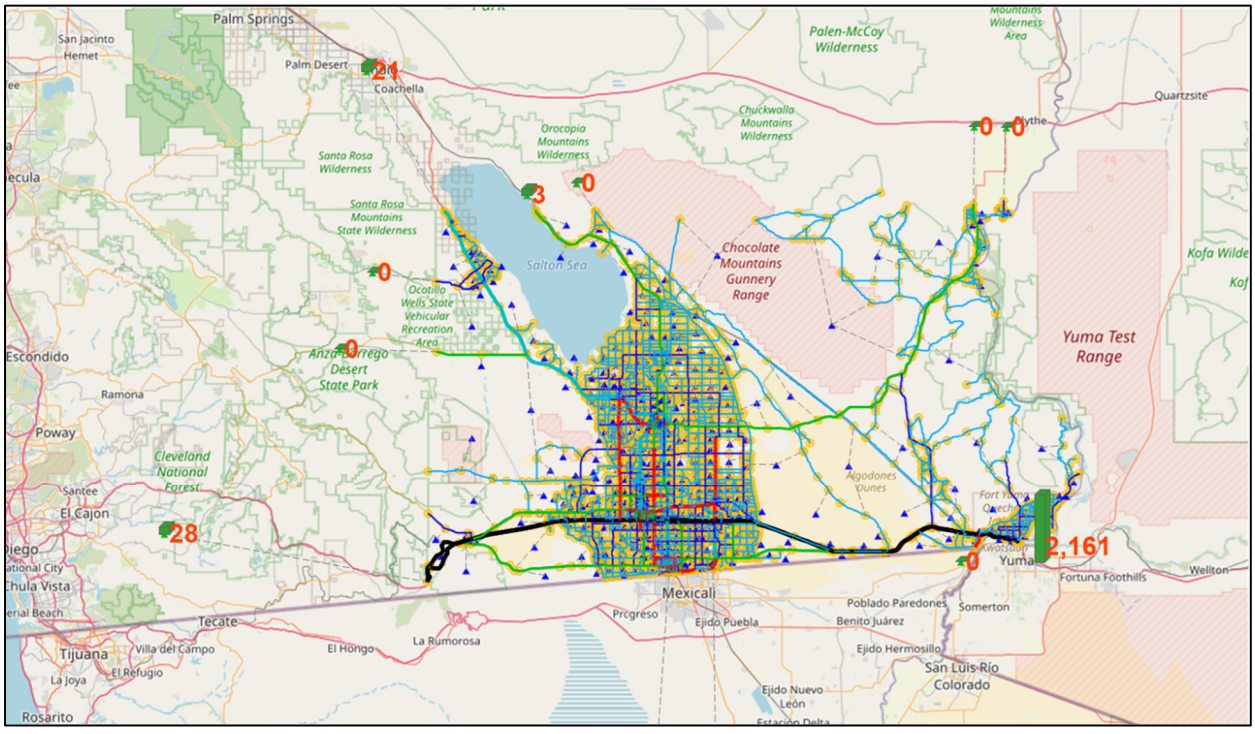
2035 E-E Trips end to the south of the Andrade Port of Entry.



2045 E-E Trips originate from the south of the Andrade Port of Entry.



2045 E-E Trips end to the south of the Andrade Port of Entry.



Existing Traffic Conditions

In the current ICTM, 2019 is considered the base year. The Average Annual Daily Traffic (AADT) in the base year on the existing bridge over the All-American Canal and its upstream roadway, northward to the I-8 freeway, is approximately 7,630 vehicles/day (3,815 vehicles/day on both the northbound and southbound lanes), with the Level of Service (LOS) rated as A. The total AADT downstream of the existing bridge, southward toward the US-Mexico border, is approximately 5,510 vehicles/day, with the LOS rated as A.

Caltrans historical traffic count data shows that peak hour volumes on the roadway consistently occur during the early morning (AM) hours and the average daily truck percentage is 6.9%.

The Engineering and Traffic Survey (E&TS) determined that the speed limit along SR-186, from I-8 to the border, is 40 miles per hour (mph). Due to the existing condition of the All-American Canal Check Bridge, the speed limit over the bridge has been reduced to 30 mph following an agreement between Caltrans, the Bureau of Reclamation, and the Imperial Irrigation District.

Public Transportation/Bicycle Facilities

Although current shoulder space is not available for bicyclists to ride bicyclists are allowed on SR-186 and do use the bridge to cross the All-American Canal. Pedestrians are not permitted on the bridge due to lack of shoulders and mechanical equipment on the check structure operating platform.

Environmental Consequences

The proposed Project will replace the existing bridge to address deficiencies, facilitate travel, accommodate international and interregional movement of people and goods, and improve safety. It will not conflict with any program, plan, ordinance or policy addressing the circulation system.

The new bridge will provide pedestrian access and improve safety, and better facilitate international and interregional movement of people, goods and services and would increase access for the travelling public, as well as the bicycling community, and better serve the visitors traveling through the Andrade Port of Entry.

Given the age of the bridge, the structure has likely exceeded its service life. The bridge was designed according to standard specifications of the time to accommodate two lanes of 15-ton trucks. The substantial increase in traffic volume on SR-186 along with recent structural evaluations have led to a weight restriction on the bridge at 20 tons. The design of the bridge does not provide standard lane width and lack of shoulder space are safety issues for motorists, bicyclists and pedestrians. The bridge structure houses high voltage electrical and mechanical equipment used to run the check structure’s mechanical gates, creating a risk for travelers utilizing the bridge as part of a public roadway system.

Future Traffic Conditions

2035 and 2045 are the two default horizon yeas being forecasted by the current ICTM.

In 2035 Build scenario, the AADT on the new bridge over the All-American Canal and its upstream roadway, northward to the I-8 freeway, is approximately 9,100 vehicles/day, with the LOS rated as B. The total AADT downstream of the new bridge, southward toward the US-Mexico border, is approximately 6,720 vehicles/day, with the LOS rated as A.

In 2045 Build scenario, the AADT on the existing bridge over the All-American Canal and its upstream roadway, northward to the I-8 freeway, is approximately 10,020 vehicles/day, with the LOS rated as B. The total AADT downstream of the new bridge, southward toward the US-Mexico border, is approximately 7,660 vehicles/day, with the LOS rated as A.

The speed limit over the new All-American Canal Check Bridge will match the recommendation from the E&TS, which is 40 mph.

Traffic Projections for the 20-and 40-year Design Years

Derived from the forecasted data, the future traffic projections for the 20-and 40-year Design Years are reported here. Please also refer to the Design Designation section.

ADT (2028) = 8,460	The average daily traffic, in number of vehicles, for the construction year.
ADT (2048) = 10,300	The average daily traffic for the future year used as a target in 20-year design life.
ADT (2068) = 11,280	The average daily traffic for the future year used as a target in 40-year design life.
DHV = 1,450	The two-way design hourly volume, vehicles; generally, the 30th highest hourly volume of the future year chosen for design.
ESAL40 = 4,552,276	The equivalent single axle loads forecasted for 40-year pavement design life and engineering.
TI40 = 11.0	Traffic Index used for 40-year pavement design life and engineering.
ESAL20 = 2,079,564	The equivalent single axle loads forecasted for 20-year pavement design life and engineering.
TI20 = 10.0	Traffic Index used for 20-year pavement design life and engineering
D = 68.20%	The percentage of the DHV in the direction of heavier flow.
T = 7.10%	The truck traffic volume expressed as a percent of the DHV (excluding recreational vehicles).
V = 55 mph	Design speed in miles per hour.
CLIMATE REGION = Desert	Climate Region as defined in Highway Design Manual (HDM), Topic 615. In addition to establishing design requirements for the project, this information is used by the Resident Engineer during construction to determine which clauses in the Standard Specifications apply to the project.

The LOSs in 2028, 2048, and 2068 on the bridge over the All-American Canal, its upstream roadway northward to the I-8 freeway, and its downstream roadway southward toward the US-Mexico border are all rated as B.

1.1.9 Visual/Aesthetics

Regulatory Setting

NEPA, as amended, established that the federal government use all practicable means to ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings (42 United States Code [USC] 4331[b][2]). The Federal Highway Administration (FHWA) in its implementation of NEPA (23 USC 109[h]) directs that final decisions on Projects are to be made in the best overall public interest. This requires taking into account adverse environmental impacts, such as destruction or disruption of human-made resources, community cohesion, and the availability of public facilities and services.

Under the CEQA, an economic or social change by itself is not to be considered a significant effect on the environment. However, if a social or economic change is related to a physical change, then social or economic change may be considered in determining whether the physical change is significant. Since this Project would result in physical change to the environment, it is appropriate to consider changes to community character and cohesion in assessing the significance of the Project's effects.

This section is based on the Visual Impact Assessment (VIA) (Appendix B13) prepared by Caltrans in 2024 and a Visual Study Memorandum (Appendix 14) prepared by Caltrans in 2023.

Affected Environment

The proposed Project would change the visual landscape by creating new beneficial views of the All-American Canal for motorists, cyclists, and pedestrians. The new bridge would be constructed west of the existing All-American Canal Bridge and offer views to the existing bridge and the check structures. The new bridge would be slightly elevated above the canal than the current bridge and will offer broader views than the existing canal bridge. The new bridge would benefit users by providing views to the canal water in both directions. Unlike the old bridge, the new bridge will feature sidewalks to allow pedestrians to view the canal. The proposed bridge rail will be low profile and employ a "see-through" post-and-beam system to allow views through the rail to the water.

The existing All-American Canal Bridge has views to the canal due to the open bridge pipe railing design. Views to water are unusual in the desert and the crossing provides an interesting view of the canal operational facilities. The horizon has views of a strip of agricultural green and distant mountains. Power poles, signage, guardrail, and transmission lines lower the visual quality of the viewshed. In the context discussed in this report, "scenic resources" are those officially designated by federal, state, regional, tribal, or local authorities; "visual resources" are those that exist in the project Area of Visual Effect (AVE) without being officially recognized.

No portion of the project is within an officially designated State Scenic Highway or a highway eligible for designation. Views to the canal water could be considered a visual resource within the desert environment.

As part of the Visual Impact Assessment (VIA), Appendix B13), an analysis of the project's visual compatibility considered the proposed project environment (e.g., grading, constructed features, vegetation cover, and ancillary visual elements), visual character, intactness, lighting, and glare, and assessed how much these components were compatible with the visual character, intactness, lighting, and glare of the existing natural environment (e.g., land, water, vegetation) and the cultural environment (e.g., roadway, buildings, infrastructure, and other structures). There are two major types of viewer groups for highway projects: neighbors and travelers. Each viewer group can be subdivided into smaller categories of viewers based on land use (for neighbors) and mode of and reason for travel (for travelers). Each category has its own particular level of viewer exposure and viewer awareness, resulting in distinct and predictable visual concerns for each viewer group and category.

Environmental Consequences

The visual impacts of the Project were assessed by a Visual Impact Assessment which determined the Build Alternative would cause a 'moderately adverse' visual change with 'low' visual sensitivity and result in a 'very low adverse' visual impact with the inclusion of environmental commitment measures. Key views and landscape context photos document essential baseline conditions to use later to compare with a project simulation and to assess the visual impact of the project. Key views are located at points that are publicly accessible and where they provide the most significant and unobstructed image of the existing visual character and quality of the landscape unit that may be changed by the proposed project.

Low-profile, tan-colored concrete "see-through" bridge rails and tan-colored sidewalks on the bridge are project features that the Project Development Team (PDT) has agreed are appropriate for the project scope and budget. These elements will help retain the unique character of the Canal's visual environment and will help generate public acceptance of the project.

These project aesthetic features and elements constitute "good design" and are part of the project and not environmental commitments (for the project's visual impact). These aesthetic features are standard aesthetic treatments that are included in Caltrans' Highway Design Manual, Standard Plans, Standard Specifications and Standard Special Provisions.

The visual contrast of the proposed Project with the existing natural environments would be moderately adverse due to the increased area devoted to roadway paving which displaces the desert landscaping. The visual contrast of the Built Alternative with existing cultural and project environments would have no effect because the scope of work has similar features and characteristics as the existing cultural and project environments. The proposed bridge will not affect the existing canal structures, waters, or bridge crossing. The Project would benefit viewers by providing views of the All-

American Canal to motorists, cyclists, and pedestrians. Unlike the old bridge. The new bridge will feature sidewalks to allow pedestrians to view the canal. The bridge rails will be low profile and employ a “see-through” post-and-beam system to allow views to the water. The bridge rails and sidewalks will be colored tan to blend with the natural desert environment. The proposed project environment’s visual attributes—visual character, intactness, lighting, and glare is now analyzed for visually compatibility with the same attributes of the natural, cultural, and existing project environments for this key view. The new bridge would feature open railing without a fence to allow views of the canal like the existing bridge crossing. The materials and color of the new bridge and roadway will be visually compatible with the existing canal bridge and roadway. The roadside would be seeded with native desert species and the resulting vegetative cover would be sparse which is consistent with existing conditions. The existing tall native Blue Palo Verde shrubs in the desert washes south of the canal would be removed by construction. It will take many years for seedlings to achieve the height of the existing shrubs. Night lighting is not proposed. Glare from the road surface would not be an issue.

The visual compatibility and visual contrast of the proposed Project with the existing natural environments from this key view will be moderately adverse due to the increased pavement and loss of desert shrubs. The dark roadway paving will contrast with light colored desert soils. However, the new bridge crossing the canal would offer vivid new views to the canal weir and turbulent waters. The proposed project would use similar materials and colors for the roadway paving and bridge for unity with the existing visual environment. Tan-color concrete “see-through” bridge rails with tan-color bridge sidewalks are proposed Project features that will help retain the unique character of the Canal’s visual environment.

Additionally, the proposed Project environment’s visual qualities, vividness and unity is now analyzed with the same qualities of the natural, cultural, and existing project environments for this key view. The proposed new bridge and paved cul-de-sac would increase the footprint of the roadway which will contrast with the existing natural environment. The dark asphalt paving will contrast with light colored desert soils. The vividness of the canal crossing would be enhanced due to new views to the canal which are not currently available. The proposed Project would maintain unity with the existing project environment by using compatible materials and colors for the roadway paving and the tan-colored bridge rails and tan colored bridge sidewalks.

The project would change the visual landscape by creating new beneficial views of the All-American Canal for motorists, cyclists, and pedestrians. The new bridge would be constructed west of the existing All-American Canal Bridge and offer views to the existing bridge and the check structures. The new bridge would be slightly elevated above the canal than the current bridge and will offer broader views than the existing canal bridge. The new bridge would benefit users by providing views to the canal water in both directions. Unlike the old bridge, the new bridge will feature sidewalks to allow pedestrians to view the canal. The proposed bridge rail will be low profile and employ a “see-through” post-and-beam system to allow views through the rail to the water.

The new bridge, roadway realignment, cul-de-sac, and removal of roadside vegetation would affect the natural character of the site due to the increased paving, additional guardrail, end treatments and signage. The loss of roadside vegetation would further alter the natural character of the site. The proposed SR-186 realignment and new bridge would be compatible with the existing cultural environment which is focused on the All-American Canal and the SR-186 roadway. The proposed bridge will not affect the existing canal structures, waters, or bridge crossing. The bridge has been designed to completely avoid impacts to the canal facility. The bridge rails and sidewalks will be colored tan to blend with the natural desert environment. Temporary or permanent visual impacts caused by the contractor's operations may include night lighting, dust, temporary structures, hauling materials, contractor yards and vegetation removal.

Due to the quantity of viewers experiencing the project, the viewer exposure is considered high. Viewer sensitivity and response to the anticipated visual change would be low. Collectively, the 'low' visual change combined with the 'low' visual sensitivity to changes indicates the Project will cause a 'very low adverse' visual impact with the inclusion of environmental commitment measures. With regards to the No-Build Alternative, no visual changes would be reasonably expected to occur in the foreseeable future if the project is not constructed.

Avoidance and/or Minimization Measures

The following Environmental Commitment Measures will be implemented to reduce impacts on visual/aesthetics resources during construction of the Build Alternative.

V-1 Bridge rails shall be low-profile, "see-through" concrete Type 85 bridge rails to maximize views to the water. Avoid fencing on top of the rail to maximize unobstructed views from the bridge to the water.

V-2 Bridge rails shall be low-profile, "see-through" concrete Type 85 bridge rails to maximize views to the water. Avoid fencing on top of the rail to maximize unobstructed views from the bridge to the water.

V-3 Concrete bridge elements such as railing, sidewalk, anchor blocks shall be integrally colored with an earth toned color to match the color of the existing bridge and desert soils.

V-4 Concrete walls shall have curved surfaces/alignments, integral earth-tone colors, and enhanced surface textures to reduce the apparent wall size and increase the wall's compatibility with the surroundings.

V-5 Collect and stockpile duff and 0.5' topsoil prior to clearing and grubbing vegetated areas. Duff must consist of vegetation removed and collected from clearing and grubbing activities. Vegetation may include trees, shrubs, ground cover, grasses, bark, leaves, and roots with attached soil. Spread duff over finished graded areas where drainage water will collect (swales and basins). Track walk duff into the soil. Seed all disturbed areas

with a native desert seed mix approved by the District Biologist. Apply seed in the Winter seeding window. (Nov 15-Feb 1)

V-6 Grading would utilize techniques such as slope rounding to approximate the appearance of natural topography. Berms would be used where space allows to provide visual interest or to screen unsightly views. Basins and drainage swales shall appear as natural landscape features (ponds or streambeds)

V-7 BMPs such as fiber rolls, felt fiber fabric, gravel bags (if used) must be made of biodegradable materials. (No plastic).

V-8 Protect vegetation outside of the work area by prohibiting staging areas, material storage, parking, and construction access in vegetated areas.

V-9 Upon completion of the earthwork in an area, spread duff to a uniform thickness where drainage water will collect (swales and basins). Do not apply duff within 3 feet of the edge of pavement. Trackwalk duff with tracked equipment run perpendicular to slope contours. Water may be used to assist this process but must not cause erosion.

1.1.10 Cultural Resources

The information in this section is based on the Historic Property Survey Report (HPSR) (Appendix B16) and Finding of No Effect/Environmentally Sensitive Areas (Appendix B17) both prepared by Caltrans in 2024.

Regulatory Setting

The term “cultural resources,” as used in this document, refers to the “built environment” (e.g., structures, bridges, railroads, water conveyance systems, etc.), places of traditional or cultural importance, and archaeological sites (both prehistoric and historic), regardless of significance. Under federal and state laws, cultural resources that meet certain criteria of significance are referred to by various terms including “historic properties,” “historic sites,” “historical resources,” and “tribal cultural resources.” Laws and regulations dealing with cultural resources include:

The National Historic Preservation Act (NHPA) of 1966, as amended, sets forth national policy and procedures for historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for listing in the National Register of Historic Places (NRHP). Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties and to allow the Advisory Council on Historic Preservation (ACHP) the opportunity to comment on those undertakings, following regulations issued by the ACHP (36 Code of Federal Regulations [CFR] 800). On January 1, 2014, the First Amended Section 106 Programmatic Agreement (PA) among the Federal Highway Administration (FHWA), the ACHP, the California State Historic Preservation Officer (SHPO), and the Department went into effect for Department Projects, both state and local, with FHWA involvement.

The PA implements the ACHP's regulations, 36 CFR 800, streamlining the Section 106 process and delegating certain responsibilities to the Department. The FHWA's responsibilities under the PA have been assigned to the Department as part of the Surface Transportation Project Delivery Program (23 United States Code [USC] 327).

As the Project is partially located on lands owned by the Fort Yuma Indian Reservation (Quechan Tribe), the Caltrans First Amended Section 106 Programmatic Agreement [does not apply/was requested not to be used by the federal agency] and consultation will occur under the National Historic Preservation Act implementing regulations at 36 CFR § 800.

The Archaeological Resources Protection Act (ARPA) applies when a Project may involve archaeological resources located on federal or tribal land. The ARPA requires that a permit be obtained before excavation of an archaeological resource on such land can take place.

The California Environmental Quality Act (CEQA) requires the consideration of cultural resources that are historical resources and tribal cultural resources, as well as "unique" archaeological resources. California Public Resources Code (PRC) Section 5024.1 established the California Register of Historical Resources (CRHR) and outlined the necessary criteria for a cultural resource to be considered eligible for listing in the CRHR and, therefore, a historical resource. Historical resources are defined in PRC Section 5020.1(j). In 2014, Assembly Bill 52 (AB 52) added the term "tribal cultural resources" to CEQA, and AB 52 is commonly referenced instead of CEQA when discussing the process to identify tribal cultural resources (as well as identifying measures to avoid, preserve, or mitigate effects to them). Defined in PRC Section 21074(a), a tribal cultural resource is a CRHR or local register eligible site, feature, place, cultural landscape, or object which has a cultural value to a California Native American tribe. Tribal cultural resources must also meet the definition of a historical resource. Unique archaeological resources are referenced in PRC Section 21083.2.

PRC Section 5024 requires state agencies to identify and protect state-owned historical resources that meet the NRHP listing criteria. It further requires the Department to inventory state-owned structures in its rights-of-way. Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with the State Historic Preservation Officer (SHPO) before altering, transferring, relocating, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the NRHP or are registered or eligible for registration as California Historical Landmarks. Procedures for compliance with PRC Section 5024 are outlined in a Memorandum of Understanding (MOU)[2] between the Department and SHPO, effective January 1, 2015. For most Federal-aid Projects on the State Highway System, compliance with the Section 106 PA will satisfy the requirements of PRC Section 5024.

[2] The MOU is located on the Caltrans Standard Environmental Reference (SER) at https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/5024mou-15-a11y.pdf

Generally, PRC Section 5024 does not apply to Local Assistance Projects unless a Project includes state-owned historical resources.

Other federal and state laws and regulations also apply to cultural resources. See the SER, Vol. 2, Chapter 1, "General Information," for a more complete listing and descriptions. Include those other laws and regulations as applicable to the Project.

Not all information about cultural resources can be fully disclosed to the public. The location of archaeological sites and confidential information provided by California Native American tribes are exempt from disclosure to the public by law in part, to protect sites from looters. Prior written consent to disclose information provided by a California Native American tribe during the environmental review process is necessary before some or all of that information can be disclosed to the public. A tribally approved confidential appendix or summary may be included in the document.

Affected Environment

The Area of Potential Effects (APE) encompasses approximately 22.8 acres and was established to include the Project's footprint and the identified historic properties as a whole. Because the All-American Canal and the Inter-California Railroad are large linear resources, only portions that may be directly affected by the Project are included in the current APE ("Focused APE"); however, a resource as a whole was in consideration when the Project's effect determination was made.

Archaeological and architectural field surveys were conducted on May 20, 2024, where the APE was accessible and permission to enter was obtained from the Quechan Tribe. During the field surveys, a designated Tribal monitor accompanied the survey staff. The surveys identified a total of seven historic properties (four Native American cultural resources and three build environment resources). In order to avoid adverse effects to the identified resources during construction of the Project, an action plan was developed in this report to implement Environmentally Sensitive Areas (ESAs) and the Secretary of the Interior's Standards for the Treatment of Historic Properties (Standards), in accordance with 36 Code of Federal Regulations (CFR) Part 68.

The following historic properties have been identified within the Project's APE as a result of Caltrans' historic property identification efforts (Appendix 19). It must be noted that none of them is a State-owned cultural resource because the Project is entirely located on Quechan's tribal land and Caltrans only retains a highway operational easement.

All-American Canal (P-13-007130 / CA-IMP-7130H)

The All-American Canal (P-13-007130 and CA-IMP-7130H) has been found to be an eligible historic property for the National Register of Historic Places (NRHP) by the Bureau of Land Management (BLM) and Imperial Irrigation District (IID). It was found eligible under Criterion A (broad historical patterns) and C (engineering construction). Significance is on the local, state, and national levels because of its association with a major Federal public works Project, IID, and Imperial Valley. Excavation of the canal

began in 1934 and opened operations in 1940. The SHPO concurred with this determination of eligibility in a letter dated April 10, 2006. The All-American Canal is not a Caltrans-owned property; it was built and is owned by BOR and is maintained and operated by the IID. In 2016, the canal was also designated as a National Historic Civil Engineering Landmark by the American Society of Civil Engineers.

A small portion of the All-American Canal exists within the APE. This area is located between PMs 1.6 and 1.7 on SR-186 where the new bridge will span the canal.

Inter-California Railroad

The background research indicated that a portion of the Inter-California Railroad was located within the Project limits. However, as a result of a field investigation it was found out that the railroad was already decommissioned and removed, and therefore no remnant of this railroad was identified within the Project limits.

Although the proposed Project will encroach on the railroad's right of way, which is considered a character defining feature of the eligible railroad line this encroachment will only be a few feet wide, affecting only a small percentage of this long linear historic property.

Commemorative Monument for the Expedition of Hernando de Alarcón (1540)

A commemorative monument for the expedition of Hernando de Alarcón (1540) is located immediately adjacent to the Project limits (P-18-008046, CHL #568). The actual resource is the Colorado River, which was used by Hernando de Alarcón's expedition. However, a monument to commemorate his expedition was erected near the All-American Canal's spillway adjacent to the Project limits. For the purpose of the current undertaking only, this resource (monument only) will be considered eligible for the NRHP without execution of a formal evaluation. Impacts to this resource during construction will be avoided by the establishment of an ESA. The Colorado River is well outside of the Project's APE; therefore, no avoidance or mitigation measure is necessary.

Native American Cultural Resources

As part of the historic property identification effort, four Native American cultural resources were identified adjacent to the Project limits. Two of these resources are not recorded in the California Historical Resources Information System (CHRIS), so no trinomial or primary number has been assigned, and details of this resources are not available as the Quechan Tribe wishes to maintain its confidentiality. For the purpose of the proposed Project, all four resources will be considered eligible for the National Register of Historic Places (NRHP) without execution of a formal evaluation.

The results of the HPSR (Appendix B16) indicated the proposed Project would result in No Adverse Effect to the cultural resources identified within the APE and described above. During construction, the Native American Cultural Resources identified within the APE will be protected by the establishment of an Environmental Sensitive Area

(ESA), as well as archaeological and Native American monitoring, controlled grading within archaeological monitoring areas (AMA), and Cultural Resources Sensitivity Training, to prevent any inadvertent impacts during construction.

However, while the proposed Project would result in No Adverse Effect to cultural resources identified within the APE, the overall location of the Proposed Project is within Tribal lands. Therefore, the location of the proposed Project is considered culturally sensitive with the potential to encounter previously unknown cultural and historical resources during construction. Implementation of the measures discussed below, potential impacts to known and unknown cultural resources would not be adverse.

Avoidance and/or Minimization Measures

The following Avoidance, Minimization, and/or Mitigation Measures will be implemented to reduce impacts on cultural resources during construction of the Build Alternative.

CR-1 If cultural materials are discovered during construction, all earthmoving activity within 60 feet of the discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.

CR-2 If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the county coroner contacted. Pursuant to Public Resources Code Section 5097.98, if the remains are thought to be Native American, the coroner will notify the NAHC, which will then notify the Most Likely Descendant (MLD). At this time, the person who discovered the remains will contact the District 11 Native American Coordinator so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC Section 5097.98 are to be followed as applicable.

CR-3 The establishment ESAs shall protect elements of the resource in place for the duration of the Project. The ESAs will be marked on Plans and delineated in the field by an Archaeologist and Native American Monitor.

CR-4 Archaeological Monitor(s) as assigned by Caltrans and Native American Monitor(s) shall monitor all ground disturbing construction related activities within the AMAs established for the Project.

CR-5 Cultural Resources Sensitivity Training shall be required for all personnel working on the Project during construction. The Archaeological Monitor assigned by Caltrans will deliver this training. Materials for the training will be provided by Caltrans in the event the Archaeological Monitor is not available to deliver training. As an additional condition, during a preconstruction meeting, the Contractors will be notified of the presence of cultural resource conditions, such as an ESA and the SOIS.

1.2 PHYSICAL ENVIRONMENT

1.2.1 Hydrology and Floodplain

Regulatory Setting

EO 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. FHWA requirements for compliance are outlined in 23 Code of Federal Regulations (CFR) 650 Subpart A.

To comply, the following must be analyzed:

- The practicability of alternatives to any longitudinal encroachments.
- Risks of the action.
- Impacts on natural and beneficial floodplain values.
- Support of incompatible floodplain development.
- Measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values affected by the Project.

The base floodplain is defined as “the area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year.” An encroachment is defined as “an action within the limits of the base floodplain.”

The information in this section is based, in part, on the Stormwater Data Report (SWDR) (Appendix B10), the Hydraulic Report (Appendix B4), and Project Drawings: Impervious Areas prepared by Caltrans in 2024.

Affected Environment

Within the project limits, the new bridge crossing over the All-American Canal floodplain is located within a FEMA Zone D flood plains which is the flood insurance rate zone that corresponds to unstudied areas where flood hazards are undetermined, but possible. The FEMA Flood Insurance Rate Map (FIRM) map number for the project area is 06025C2251C.

The Design Capacity flow for the All-American Canal is 10,155 CFS (cubic feet per second). Maximum flow varies monthly based on the season and river conditions, with maximum flow typically occurring in April, May, and June.

An estimate of scour potential at the bridge abutments was conducted. Scour is the erosion of sediment around bridge abutments and piers due to flowing water and can lead to bridge failure. Evaluation of total scours includes (1) long-term degradation of the riverbed; (2) horizontal and vertical contraction scour; and (3) local scour at the

piers and abutments. The National Cooperative Highway Research Program (NCHPR) method for calculating scour provides a “total scour depth” which includes both contraction scours and local abutment scour components. According to the Hydrology Report prepared for the Project, the calculated combined total scour depth for the contraction scour and local abutment scour at both abutments is 0.0 feet. Consequently, the potential contraction scour at the abutments and local abutment scour is also 0.0 feet.

Design of the new bridge will have a minimum soffit (bottom slab of box girders) elevation of 517.6 feet, with approximately 17.5 feet of freeboard at Design Capacity, and 11.9 feet of freeboard at maximum available capacity. Freeboard is the minimum vertical distance between the bottom of the bridge's girders and the design highwater or ice elevation.

Environmental Consequences

Although the Project area is within an area not evaluated for flood hazards, it is not anticipated that the Project will result in floodplain encroachment. The project’s bridge strategy will be designed to produce the least amount of impact to the floodplain.

Both abutment support location elevations (i.e., the local ground elevations at the abutment faces) are placed higher than the calculated water surface elevation for the Proposed bridge, and therefore are not subject to direct scour for the flow conditions modeled.

Based on the concrete line slope for canal with control flow capacity of the canal, with the longitudinal slope of 0.000087 ft/ft, and maximum velocity of 3.7 ft/sc. The resulting long-term degradation showed that there is no trend of degradation at the proposed structures. Therefore, assuming a design life of 75-year, long-term projected scour degradation will be zero and it will not add to the total scour depth. The Proposed bridge work will result in no change to the canal velocity and water surface elevation.

The Build Alternative would adhere to Caltrans Storm Water Quality Handbooks, Construction Manual BMPs listed in Attachment M of the SWDR. These BMPs include soil stabilization controls, erosion control, drainage inlet protection and other construction related controls.

1.2.2 Water Quality and Stormwater Runoff

The information in this section is based, in part, on the Stormwater Data Report (SWDR) (Appendix B10), the Hydraulic Report (Appendix B4), and Project Drawings: Impervious Areas prepared by Caltrans in 2024.

Regulatory Setting

Federal Requirements: Clean Water Act

In 1972, Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to the waters of the United States (U.S.) from any point source[3] unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. This act and its amendments are known today as the Clean Water Act (CWA). Congress has amended the act several times. In the 1987 amendments, Congress directed dischargers of storm water from municipal and industrial/construction point sources to comply with the NPDES permit scheme. The following are important CWA sections:

- Sections 303 and 304 require states to issue water quality standards, criteria, and guidelines.

- Section 401 requires an applicant for a federal license or permit to conduct any activity that may result in a discharge to waters of the U.S. to obtain certification from the state that the discharge will comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request (see below).

- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the U.S. Regional Water Quality Control Boards (RWQCBs) administer this permitting program in California. Section 402(p) requires permits for discharges of storm water from industrial/construction and municipal separate storm sewer systems (MS4s).

- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the U.S. This permit program is administered by the U.S. Army Corps of Engineers (USACE).

- Ordinarily, Projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of the USACE's Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the USACE decision to approve is based on compliance with U.S. Environmental Protection Agency's (U.S. EPA) Section 404 (b)(1) Guidelines (40 Code of Federal Regulations [CFR] Part 230), and whether the permit approval is in the public interest. The Section 404(b)(1) Guidelines (Guidelines) were developed by the U.S. EPA in conjunction with the USACE and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that the USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S. and not have any other significant adverse environmental consequences. According to the Guidelines, documentation is

[3] A point source is any discrete conveyance such as a pipe or a man-made ditch.

needed that a sequence of avoidance, minimization, and compensation measures has been followed, in that order. The Guidelines also restrict permitting activities that violate water quality or toxic effluent[4] standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause "significant degradation" to waters of the U.S. In addition, every permit from the USACE, even if not subject to the Section 404(b)(1) Guidelines, must meet general requirements. See 33 CFR 320.4. A discussion of the LEDPA determination, if any, for the document is included in the Wetlands and Other Waters section.

The goal of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."

The USACE issues two types of 404 permits: General and Individual. There are two types of General permits: Regional and Nationwide. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to allow a variety of minor Project activities with no more than minimal effects.

State Requirements: Porter-Cologne Water Quality Control Act

California's Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. This act requires a "Report of Waste Discharge" for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the state. It predates the CWA and regulates discharges to waters of the state. Waters of the state include more than just waters of the U.S., like groundwater and surface waters not considered waters of the U.S. Additionally, it prohibits discharges of "waste" as defined, and this definition is broader than the CWA definition of "pollutant." Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA.

The State Water Resources Control Board (SWRCB) and RWQCBs are responsible for establishing the water quality standards (objectives and beneficial uses) required by the CWA and regulating discharges to ensure compliance with the water quality standards. Details about water quality standards in a Project area are included in the applicable RWQCB Basin Plan. In California, RWQCBs designate beneficial uses for all water body segments in their jurisdictions and then set criteria necessary to protect those uses. As a result, the water quality standards developed for particular water segments are based on the designated use and vary depending on that use. In addition, the SWRCB identifies waters failing to meet standards for specific pollutants. These waters are then state listed in accordance with CWA Section 303(d). If a state determines that waters are impaired for one or more constituents and the standards cannot be met through point source or non-point source controls (NPDES permits or WDRs), the CWA requires the establishment of Total Maximum Daily Loads (TMDLs). TMDLs specify

[4] The U.S. EPA defines "effluent" as "wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall."

allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed.

State Water Resources Control Board and Regional Water Quality Control Boards

The SWRCB administers water rights, sets water pollution control policy, and issues water board orders on matters of statewide application, and oversees water quality functions throughout the state by approving Basin Plans, TMDLs, and NPDES permits. RWCQBs are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

- **National Pollutant Discharge Elimination System (NPDES) Program**

  Municipal Separate Storm Sewer Systems (MS4)

  Section 402(p) of the CWA requires the issuance of NPDES permits for five categories of storm water discharges, including Municipal Separate Storm Sewer Systems (MS4s). An MS4 is defined as “any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over storm water, that is designed or used for collecting or conveying storm water.” The SWRCB has identified the Department as an owner/operator of an MS4 under federal regulations. The Department’s MS4 permit covers all Department rights-of-way, properties, facilities, and activities in the state. The SWRCB or the RWQCB issues NPDES permits for five years, and permit requirements remain active until a new permit has been adopted.

  The Department’s MS4 Permit, Order No. 2022-0033-DWQ (adopted on June 22, 2022, and effective on January 1, 2023), has three basic requirements:

  1. The Department must comply with the requirements of the Construction General Permit (see below);

  2. The Department must implement a year-round program in all parts of the State to effectively control storm water and non-storm water discharges; and

  3. The Department storm water discharges must meet water quality standards through implementation of permanent and temporary (construction) Best Management Practices (BMPs), to the maximum extent practicable, and other measures as the SWRCB determines to be necessary to meet the water quality standards.

  To comply with the permit, the Department developed the Statewide Storm Water Management Plan (SWMP) to address storm water pollution controls related to

highway planning, design, construction, and maintenance activities throughout California. The SWMP assigns responsibilities within the Department for implementing storm water management procedures and practices as well as training, public education and participation, monitoring and research, program evaluation, and reporting activities. The SWMP describes the minimum procedures and practices the Department uses to reduce pollutants in storm water and non-storm water discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of BMPs. The proposed Project will be programmed to follow the guidelines and procedures outlined in the latest SWMP to address storm water runoff.

Construction General Permit

Construction General Permit, Order No. 2022-0057-DWQ (adopted on September 8, 2022, and effective on September 1, 2023). The permit regulates storm water discharges from construction sites that result in a Disturbed Soil Area (DSA) of one acre or greater, and/or are smaller sites that are part of a larger common plan of development. By law, all storm water discharges associated with construction activity where clearing, grading, and excavation result in soil disturbance of at least one acre must comply with the provisions of the General Construction Permit. Construction activity that results in soil disturbances of less than one acre is subject to this Construction General Permit if there is potential for significant water quality impairment resulting from the activity as determined by the RWQCB. Operators of regulated construction sites are required to develop Storm Water Pollution Prevention Plans (SWPPPs); to implement sediment, erosion, and pollution prevention control measures; and to obtain coverage under the Construction General Permit.

The Construction General Permit separates Projects into Risk Levels 1, 2, or 3. Risk levels are determined during the planning and design phases and are based on potential erosion and transport to receiving waters. Requirements apply according to the Risk Level determined. For example, a Risk Level 3 (highest risk) Project would require compulsory storm water runoff pH and turbidity monitoring, and before construction and after construction aquatic biological assessments during specified seasonal windows. For all Projects subject to the permit, applicants are required to develop and implement an effective SWPPP. In accordance with the Department's SWMP and Standard Specifications, a Water Pollution Control Program (WPCP) is necessary for Projects with DSA less than one acre.

Section 401 Permitting

Under Section 401 of the CWA, any Project requiring a federal license or permit that may result in a discharge to a water of the U.S. must obtain a 401 Certification, which certifies that the Project will be in compliance with state water quality standards. The most common federal permits triggering 401 Certification are CWA Section 404 permits issued by the USACE. The 401 permit certifications are

obtained from the appropriate RWQCB, dependent on the Project location, and are required before the USACE issues a 404 permit.

In some cases, the RWQCB may have specific concerns with discharges associated with a Project. As a result, the RWQCB may issue a set of requirements known as WDRs under the State Water Code (Porter-Cologne Act) that define activities, such as the inclusion of specific features, effluent limitations, monitoring, and plan submittals that are to be implemented for protecting or benefiting water quality. WDRs can be issued to address both permanent and temporary discharges of a Project.

Affected Environment

The proposed Project will replace the existing SR-186 bridge over the All-American Canal. Most of the water from the Colorado River is diverted to the All-American Canal that begins at Yuma, Arizona. The canal is the Imperial Valley's only water sources and provides drinking water to 9 cities and over 500,000 acres of farmland in the valley.

The canal is a man-made, concrete lined aqueduct that is not considered a waterbody or natural drainage. The Colorado River Basin Quality Control Board (CRBQCB) Region 7 has jurisdiction within the project limits. There are no total maximum daily loads (TMDLs) currently listed within the project limits, and the canal is not on the 303(d) list of impaired waters.

Environmental Consequences

The project areas is greater than one acre; therefore, Caltrans must meet requirements set forth under the National Pollutant Discharge Elimination System (NPDES) Permit mandated by the Federal Clean Water Act for discharge of storm water runoff, the project will comply with NPDES requirements.

Construction of the proposed Project would result in 24.34 acres of disturbed soil and result in 2.46 acres of net new impervious surface. Because the Project area exceeds 1-acre in disturbed soil, a Storm Water Pollution Prevention Program (SWPPP) will be prepared prior to construction to establish project-specific permanent and temporary BMPs. During the design phased, Water Pollution Control Plans will be prepared to determine the minimum control requirements to be included in the SWPPP.

Standard erosion control practices will be implemented to minimize soil erosion following construction activities. Typical measures utilized during construction include applications of fiber rolls for slope stability and sediment control, temporary drainage inlet protection, temporary concrete washouts for concrete spoils, street sweeping, contour grading, temporary silt fence, and temporary hydraulic mulch.

The Project would not require use of groundwater for construction or operation. Although groundwater is found within the project limits, it is anticipated that water needed during construction activities would be trucked in. Further, once construction is complete, maintenance activities would require minimal amounts of water which would

be trucked in. No new groundwater sources would be required, nor would groundwater be used from any existing groundwater wells for Project construction or operation. No impacts to groundwater basin recharge or management would occur.

The proposed Project would not alter existing drainage patterns in the area, nor impede drainage flows, nor exceed the capacity of any stormwater drainage. The existing drainage in the Project area flows off the edge of the roadway or is directed by dikes to over side drains. Stormwater from the eastbound off-ramp is currently treated by the Quechan Casino retention basin. Storm water from SR-186, the westbound off-ramp, westbound on-ramp, and eastbound on-ramp flows into desert washes and ditches and is discharged into the All-American Canal. Although the project will result in 2.46 acres of net new impervious surface, as part of the proposed Project, a detention basin will be placed on the western side of SR-186 just prior to the bridge to treat water flows from the new roadway along its western edge. Water flowing from the bridge deck and along and along the western edge of the highway will be directed down the slope and away from the canal near the south end of the new bridge where it crosses the All-American Canal. Water flowing along the eastern edge of the highway will be channelized on the shoulder along hot mix asphalt (HMA) dike and into a drainage inlet where it will be piped across the highway and dispersed south of the Canal. Therefore, no impacts related to drainage systems would occur.

The proposed Project site is located in southeastern California, approximately 140 miles east of the Pacific Ocean. As such, there is no risk of tsunami at the Project site. Seiches are standing waves in an enclosed or partially enclosed body of water and are most commonly causes by seismic activity. As previously described, the project is in a seismically active area. However, the proposed Project replaces an existing bridge structure and does not include new facilities. As such, the risk associated with seiches is no greater than what currently exists. The Project areas is located within a FEMA Zone D flood plain zone. Zone D is an area that has not be studied for flood hazards; flood hazards are undetermined, but possible. The replacement bridge will be designed to minimize risks from flooding. Therefore, risk of release of pollutants due to the inundation of the Project area as a result of flood, tsunami or seiche are minimal. No impacts would occur.

The Project is not expected to violate any water quality standards and measures would be taken during construction and throughout operation to prevent contaminants from leaving the site by runoff. A 401 certification is not required because the project does not involve discharges of dredged or fill material to waters of the United States, including wetlands and other water bodies or involve construction of hydroelectric facilities. Compliance with RWQCB requirements, an NPDES permit, implementation of construction phase SWPPPs, the Project would not conflict with or obstruct implementation of any groundwater management plans.

The increase in stormwater runoff would be minimal in relation to the amount of impervious surfaces that currently exists in the project area. Additionally, some of the increase in runoff would be offset by the addition of new landscaped areas. Nonetheless, permanent treatment BMPs will be evaluated in compliance with the

guidelines and procedures outlined in the latest SWDR and Appendix E of the Caltrans Project Planning and Design Guide to address stormwater runoff, or relevant local standards where applicable. Adhering to existing regulations and implementing standard BMPs would ensure that no adverse water quality effects occur due to increased runoff from the Project.

1.2.3 Geology/Soils/Seismic/Topography

Regulatory Setting

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects "outstanding examples of major geological features." Topographic and geologic features are also protected under the CEQA.

This section also discusses geology, soils, and seismic concerns as they relate to public safety and Project design. Earthquakes are prime considerations in the design and retrofit of structures. Structures are designed using the Department's Seismic Design Criteria (SDC). The SDC provides the minimum seismic requirements for highway bridges designed in California. A bridge's category and classification will determine its seismic performance level and which methods are used for estimating the seismic demands and structural capabilities[5].

Affected Environment

The information in this section is based, in part, on the Structure Preliminary Geotechnical Report (SPGR) (Appendix B11) prepared by Caltrans in 2023.

Regional Geology

The general Project site is located at the intersection of an alluvial fan, originating from the Cargo Muchacho Mountains to the northwest, and the Colorado River to the southeast. Soil types mapped at the Project site consist of Alluvium (Qal), and Older Alluvium (Qc). A relatively small mountain, Pilot Knob, is located approximately 1.0-miles southwest of the Project site and is composed of Precambrian age (541 – 485 million years ago [mya])quartz diorite gneiss.

Subsurface conditions are varying forms of medium dense to dense sand, and sand with gravel in the upper 10 to 40 feet of the subsurface. Below this, the materials transition from dense to very dense sand and sand with gravel, and stiff to hard clay. These materials are interpreted to Alluvium and Old Alluvium based on geologic mapping.

Topography

The general topographic relief of the Project areas is relatively flat with elevations ranging from approximately 160 – 180 feet above mean sea level (msl) in the area

[5] For more information, please see: https://dot.ca.gov/programs/engineering-services

adjacent to the canal, with discrete areas north of the canal on the west and east sides of Algodones Road ranging from approximately 200 – 240 feet above msl. Surface elevations of the existing ground adjacent to the banks of the canal, and at the alignment of the new crossing, are approximately 175 to 180 ft. Water surface elevation for the canal at this location is approximately 165 ft. A relatively small mountain, Pilot Knob, is located approximately 1.0-miles southwest of the Project site.

Soils

The U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) and the National Soil Information System (NASIS) identified soils in the Project area as primarily coarse to fine well-drained sandy loams (USDA). Native materials mapped at the Project location consist of Alluvium (Qal) and Older Alluvium (Qc)

Faults/Seismic Activity

The region is seismically active influenced by the San Andreas Rift and Fault systems at the Pacific and North American Tectonic Plate boundary. Fault zones with an approximate 10% or greater likelihood of experiencing an M≥6.7 earthquake in the next 30 years most near the Project site include; the Imperial Fault Zone (approximately 33 miles SW), the Cerro Pietro Fault Zone (approximately 40 miles SW) the Brawley Fault Zone (approximately 45 miles W), and the San Andres Fault Zone (Coachella Section, approximately 71 miles NW).

The Project site is not located within an Alquist-Priolo Earthquake Fault Zone or within 1,000 ft from any Holocene or younger aged fault. Therefore, the Project site is not considered susceptible to surface fault rupture hazards.

Environmental Consequences

Construction of the Build Alternative would be temporary and once operational no change from current geological conditions would occur. Physical Project improvements within the earthquake fault zone would be limited to modifications to the ground surface, traffic signals, and gantries. Additionally, the entire Project would occur within a seismically active region. However, the Build Alternative would be constructed to meet Caltrans' Seismic Design Criteria, which would minimize potential risks related to fault rupture and seismic ground shaking. Site-specific soil conditions would be evaluated during the design phase in the Project Geotechnical Report, which would provide recommendations to address any soil, liquefaction, or seismic issues. No landslide issues would occur given the flat topography and distance from any steep terrain. The proposed SR-186 realignment would be constructed in accordance with the bridge design specifications outlined in Caltrans' Bridge Design Practice Manual to ensure bridge safety when considering maximum demands or force effects due to various loads during its design life. By constructing the Project in accordance with these regulations and recommendations, the Build Alternative would not result in adverse effects due to geologic, seismic, or topographical conditions. During construction of the Build Alternative, excavated soil would be exposed, increasing the potential for soil erosion. Temporary effects due to soil erosion are discussed in Section 2.3.2 – Water Quality

and Stormwater Runoff and would be addressed by compliance with the NPDES Construction General Permit. Erosion would be addressed through implementation of standard measures as part of the Project, including erosion control BMPs that would be part of the SWPPP. With implementation of these standard measures, no short-term direct or indirect adverse effects due to soil erosion would occur during construction of the Build Alternative.

Avoidance and/or Minimization Measures

The following avoidance, minimization and/or mitigation measures will address potential impacts to geology, seismic and soils resources.

GEO 1 – The design of the proposed Project complies with all applicable Caltrans guidelines with respect to seismic design.

1.2.4 Hazardous Waste/Materials

This section is based on the Review (0-Phase) of 'SR-186 Bridge Over All-American Canal' Project prepared by Caltrans in 2024.

Regulatory Setting

Hazardous materials, including hazardous substances and wastes, are regulated by many state and federal laws. Statutes govern the generation, treatment, storage and disposal of hazardous materials, substances, and waste, and also the investigation and mitigation of waste releases, air and water quality, human health, and land use.

The primary federal laws regulating hazardous wastes/materials are the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, and the Resource Conservation and Recovery Act (RCRA) of 1976[6]. The purpose of CERCLA, often referred to as "Superfund," is to identify and cleanup abandoned contaminated sites so that public health and welfare are not compromised. The RCRA provides for "cradle to grave" regulation of hazardous waste generated by operating entities. Other federal laws include:

- Community Environmental Response Facilitation Act (CERFA) of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety and Health Act (OSHA)

[6] https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-1-federal-requirements#Ch1CERCLA

- Atomic Energy Act
- Toxic Substances Control Act (TSCA)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

In addition to the acts listed above, Executive Order (EO) 12088, *Federal Compliance with Pollution Control Standards*, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

California regulates hazardous materials, waste, and substances under the authority of the CA Health and Safety Code and is also authorized by the federal government to implement RCRA in the state. California law also addresses specific handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning of hazardous waste. The Porter-Cologne Water Quality Control Act also restricts disposal of wastes and requires cleanup of wastes that are below hazardous waste concentrations but could impact ground and surface water quality. California regulations that address waste management and prevention and cleanup of contamination include Title 22 Division 4.5 Environmental Health Standards for the Management of Hazardous Waste, Title 23 Waters, and Title 27 Environmental Protection.

Worker and public health and safety are key issues when addressing hazardous materials that may affect human health and the environment. Proper management and disposal of hazardous material is vital if it is found, disturbed, or generated during Project construction.

Avoidance and/or Mitigation Measures

Soil has been evaluated for Aerially deposited lead (ADL) and the concentrations of ADL within the soil are at unregulated concentrations. Therefore, avoidance and/or mitigation measures are not necessary.

1.2.5 Noise and Vibration

Regulatory Setting

NEPA and CEQA provide the broad basis for analyzing and abating highway traffic noise effects. The intent of these laws is to promote the general welfare and to foster a healthy environment. The requirements for noise analysis and consideration of noise abatement and/or mitigation, however, differ between NEPA and CEQA.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

CEQA requires a strictly baseline versus build analysis to assess whether a proposed Project will have a noise impact. If a proposed Project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the Project unless those measures are not feasible. The rest

of this section will focus on the NEPA/Title 23 Part 772 of the Code of Federal Regulations (23 CFR 772) noise analysis; please see Chapter 3 of this document for further information on noise analysis under CEQA.

NATIONAL ENVIRONMENTAL POLICY ACT AND 23 CFR 772

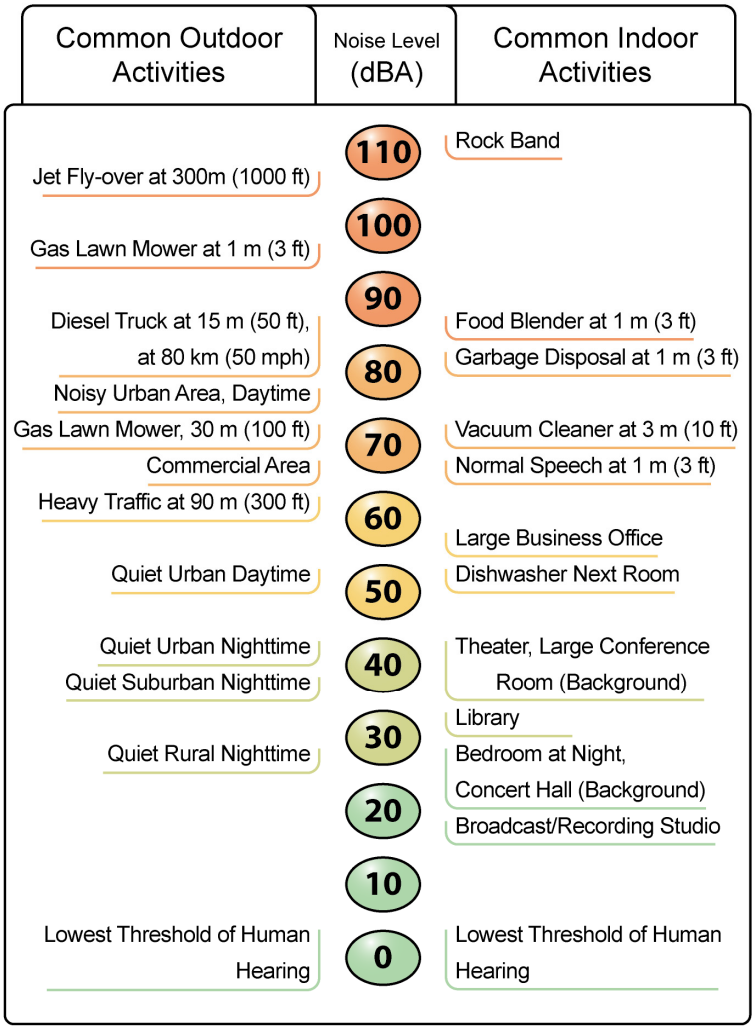
For highway transportation Projects with Federal Highway Administration (FHWA) involvement (and the Department, as assigned), the Federal-Aid Highway Act of 1970 and its implementing regulations (23 CFR 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway Project. The regulations include noise abatement criteria (NAC) that are used to determine when a noise impact would occur. The NAC differ depending on the type of land use under analysis. For example, the NAC for residences (67 dBA[7]) is lower than the NAC for commercial areas (72 dBA). The following table lists the noise abatement criteria for use in the NEPA/23 CFR 772 analysis.

Noise Abatement Criteria		
Activity Category	**NAC,** Hourly A- Weighted Noise Level, Leq(h)	**Description of activity category**
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B[1]	67 (Exterior)	Residential.
C[1]	67 (Exterior)	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52 (Interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72 (Exterior)	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A–D or F.
F	No NAC— reporting only	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical, etc.), and warehousing.
G	No NAC— reporting only	Undeveloped lands that are not permitted.
[1] *Includes undeveloped lands permitted for this activity category.*		

[7] Noise level is measured in decibels

The figure below lists the noise levels of common activities to enable readers to compare the actual and predicted highway noise levels discussed in this section with common activities.

Noise Levels of Common Activities



According to the Department's *Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects, April 2020*, a noise impact occurs when the predicted future noise level with the Project substantially exceeds the existing noise level (defined as a 12 dBA or more) or when the future noise level with the Project approaches or exceeds the NAC. A noise level is considered to approach the NAC if it is within 1 dBA of the NAC.

If it is determined that the Project will have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be reasonable and feasible at the time of final design are incorporated into the Project

plans and specifications. This document discusses noise abatement measures that would likely be incorporated in the Project.

The Department's *Traffic Noise Analysis Protocol* sets forth the criteria for determining when an abatement measure is reasonable and feasible. Feasibility of noise abatement is basically an engineering concern. Noise abatement must be predicted to reduce noise by at least 5 dB at an impacted receptor to be considered feasible from an acoustical perspective. It must also be possible to design and construct the noise abatement measure for it to be considered feasible. Factors that affect the design and constructability of noise abatement include, but are not limited to, safety, barrier height, topography, drainage, access requirements for driveways, presence of local cross streets, underground utilities, other noise sources in the area, and maintenance of the abatement measure. The overall reasonableness of noise abatement is determined by the following three factors: 1) the noise reduction design goal of 7 dB at one or more impacted receptors; 2) the cost of noise abatement; and 3) the viewpoints of benefited receptors (including property owners and residents of the benefited receptors).

Imperial County General Plan – Noise Element

The Noise Element of the General Plan is a mandatory component of all general plans pursuant to the State Government Code, Section 65302. The State guidelines, Section 65302(f), specify the content of the Noise Element, which includes the requirement to analyze, to the extent practicable, the current and Projected noise levels of:

- Highways and freeways;
- Primary arterials and major local streets;
- Passenger and freight on-line railroad operations and ground rapid transit systems;
- Commercial, general aviation, heliport, helistop, and military airport operations, aircraft overflights, jet engine test stands, and all other ground facilities and maintenance functions related to airport operation;
- Local industrial plants, including, but not limited to railroad classification yards; and
- Other ground stationary noise sources identified by local agencies as contributing to the community noise environment.

Affected Environment

The noise study area encompasses all developed and undeveloped land uses surrounding the Project limits, with a focus on noise-sensitive land uses. In general, noise-sensitive land uses include areas were serenity and quiet are of extraordinary significance, such as residential land uses, and community uses such as hospital, schools, and cemeteries, and parks. As noted in Section 2.2.1, Existing and Future Land Use, Section 2.2.3, Parks and Recreation Facilities, there are no noise-sensitive land uses in the Project area.

Environmental Consequences

During construction of the Project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. No adverse noise impacts from construction are anticipated because construction would be conducted in accordance with Caltrans Standard Specifications Section 14.8-02. Construction noise would be short-term, intermittent, and overshadowed by local traffic noise.

Construction activities could cause intermittent localized concern from vibration in the Project area. Processes such as earth moving with bulldozers, the use of vibratory compaction rollers, demolitions, or pavement braking may cause construction related vibration impacts such as human annoyance or, in some cases, building damage. There are cases where it may be necessary to use this type of equipment in close proximity to residential buildings. The vibration levels created by the normal movement of vehicles including graders, front loaders, and backhoes used for construction are the same order of magnitude as the groundborne vibration created by heavy vehicles traveling on streets and highways. Therefore, operating equipment would not generate excessive groundborne noise or vibration. No permanent adverse impacts would occur, and minimization measures would be used to the fullest extent possible.

Avoidance and/or Minimization Measures

Any noise increases during construction would be temporary and BMPs described below would be used to lessen its effects. Construction noise is regulated by California Department of Transportation's Standard Specifications, 2024, Section 714-8.02 Noise Control Requirements, which states that noise resulting from work activities must be monitored and not to exceed 86 dBA Lmax at 50 feet from the job site from 9:00 pm to 6:00 am.

The following are control and minimization measures that would be implemented to lessen impacts from construction noise.

N-1 Newer equipment with improved noise muffling shall be used, and all equipment items shall have the manufacturers' recommended noise abatement measures (e.g., mufflers, engine covers, and engine vibration isolators) intact and operational. Newer equipment will generally be quieter in operation than older equipment. All construction equipment shall be inspected at periodic intervals to ensure proper maintenance and presence of noise-control devices (e.g., mufflers and shrouding).

N-2 Construction lay-down or staging areas shall be selected in industrially zoned districts. If industrially zoned areas are not available, commercially zoned areas may be used, or locations that are at least 100 feet from any noise-sensitive land use (e.g., residences).

1.2.6 Energy

Regulatory Setting

NEPA (42 United States Code [USC] Part 4332) requires the identification of all potentially significant impacts to the environment, including energy impacts.

CEQA Guidelines section 15126.2(b) and Appendix F, Energy Conservation, require an analysis of a Project's energy use to determine if the Project may result in significant environmental effects due to wasteful, inefficient, or unnecessary use of energy, or wasteful use of energy resources.

Affected Environment

State Energy Resources and Consumption

California has a diverse portfolio of energy resources. The state ranked seventh in the nation in crude oil production and third in oil-refining capacity in 2023. The state was the largest consumer of jet fuel and the second-largest consumer of motor gasoline among the 50 states. It was also the second-largest electricity consumer in the nation but only the fourth-largest electricity producer, requiring additional needed electricity be supplied by out-of-state generators. Renewable resources accounted for 54 percent of California's in-state electricity generation in 2023. Though California is the most populous state, it had the fourth lowest per capita energy consumption (i.e., total energy consumption divided by the population) in the nation in 2023 (U.S. EIA 2024). California's relatively low per capita energy consumption is due in part to the state's robust energy efficiency policies and legislation.

The transportation sector is the top consumer of energy in California, comprising 41 percent of energy consumption in 2023 (U.S. EIA 2024). The state relies on both nonrenewable and renewable energy sources. Nonrenewable energy resources used in California include petroleum, natural gas, and nuclear power; renewable energy resources include hydroelectric, biomass, wind, solar, and geothermal heat. A total of 54 percent of California's electricity comes from renewable sources, and 44 percent of that renewable energy comes from solar. Fossil fuels have been the leading transportation fuels in the country and state. Gasoline is the most consumed fuel in California, at approximately 56 percent of the total fossil fuel consumption for the state's transportation sector.

Alternatives to fossil fuels for transportation have helped decrease the dependence on gasoline and other fossil fuels. In addition to traditional petroleum fuels, California currently uses the following "alternative" fuels and energy sources: compressed natural gas (CNG); electric (EVC); ethanol, 85 percent (E85); hydrogen; liquefied natural gas (LNG); liquefied petroleum gas (LPG).

Environmental Consequences

The Build Alternative would result in short-term energy consumption due to the manufacture of construction materials, the use of construction equipment requiring

petroleum fuels, and construction workers' motor vehicles as they travel to and from the site.

However, construction-related energy consumption under the proposed Project would be temporary and would not result in excessive energy consumption by adhering to Caltrans' Construction Standard Specifications, which include requirements to consider environmentally friendly treatments and use materials with recycled content to the extent feasible. Additionally, idling of construction equipment would be limited to 5 minutes or less, which would reduce wasteful use of fuel. Once operational, the proposed Project would not increase capacity or add traffic and would result in a negligible increase in energy consumption. Therefore, the proposed Project would have no energy impact

1.3 BIOLOGICAL ENVIRONMENT

1.3.1 Natural Communities

The information in this section is based on the Natural Environment Study (Minimal Impacts) (NESMI) prepared for the proposed Project by Caltrans in July 2024 (Appendix B5).

Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act are discussed below in the Threatened and Endangered Species Section 2.4.5. Wetlands and other waters are also discussed below in Section 2.4.2.

The Biological Study Area (BSA) is defined as the area permanently and temporarily affected by the proposed Project, including the proposed staging/storage areas, plus a 500-foot buffer. The BSA totals approximately 60 acres of arrow-weed scrub, 12 acres of disturbed wetland, 100 acres of desert creosote scrub, 76 acres of disturbed habitat, and 52 acres of developed land. The All-American Canal, and the Alamo Canal are within the BSA.

Average maximum temperature at the nearest weather station in Yuma Valley, Arizona is 87.4 degrees Fahrenheit, and the average minimum temperature is 54.0 degrees Fahrenheit. Precipitation is generally 2.86 inches annually (Western Regional Climate Center 2023). The general soil type throughout the Project area range from fine sandy loam to fine sand, with slopes between 0 and 2 percent, which are typically seen on floodplains and alluvial basin floors.

A list of sensitive wildlife and plant species potentially occurring within the BSA in The Yuma West 7.5-minute USGS quadrangle was compiled to evaluate potential impacts resulting from the Project. The list was developed based on information compiled from the USFWS, CDFW, CNDDB, CNPS, and other current publications. The NESMI includes 21 species (six plant species, one invertebrate, four reptiles, seven birds, and three mammals) and one sensitive habitat with the potential to occur in the BSA, their

protection status, habitat information, likelihood of occurrence with BSA, and supporting comments, as necessary. Based on the previous species occurrences, four species (three birds and one mammal) were historically identified within the BSA. There are three threatened, endangered, or candidate species on the species list provided by the USFWS with no designated critical habitat for listed species in the BSA on July 22, 2024.

A field survey to assess habitat, vegetation communities, and jurisdictional features was conducted by Caltrans Biologists on October 11, 2023, in the Biological Study Area (BSA).

Affected Environment

There are approximately 172 acres of natural communities of special concern within the BSA consisting of 60 acres of arrow-weed scrub, 12 acres of disturbed wetland, and 100 acres of desert creosote scrub. Arrow-weed (Pluchea sericea) scrub habitat is found in the Alamo Canal, but the Alamo Canal will be avoided during work on the proposed Project, and therefore will not be discussed further.

Disturbed Wetland

There is approximately 12 acres of disturbed wetland in the All-American Canal in the BSA. The habitat consists mostly of open water and concrete-lined channel with mostly groundcover vegetation in the Project footprint. Some patches of big saltbush and common reed are in the BSA in the All-American Canal but are outside (upstream and downstream) of the Project area.

Arrow-weed Scrub

Although approximately 60 acres of moderate to dense streamside thickets of arrow-weed scrub exists within the BSA, it is found primarily in the Alamo Canal. No work is being done within or adjacent to the Alamo Canal, and as such, no temporary or permanent impacts would occur. Therefore, no further analysis of arrow-weed scrub is required.

Desert Creosote Scrub

There are approximately 100 acres of desert creosote scrub habitat in the BSA The habitat consists mostly of scattered native vegetation consisting mainly of blue paloverde and creosote bush. Other vegetation observed during surveys include burrobush (*Ambrosia dumosa*), six weeks grama (*Bouteloua barbata*), desert croton (*Croton californicus*), longleaf jointfir (*Ephedra trifurca*), Sonoran sandmat (*Euphorbia micromera*), prostrate spurge (*Euphorbia polycarpa*), honeysweet (*Tidestromia suffruticosa*), and fanleaf crinklemat (*Tiquilia plicata*)

Special Status Plant Species

No listed plant species were identified in the USFWS species list that may occur within the proposed Project footprint or may be affected by the proposed Project. Sensitive plant species, including Harwood's milk-vetch (*Astragalus insularis var. harwoodii*),

Wiggin's croton (*Croton wigginsii*), mud nama (*Nama stenocarpa*), giant spanish-needle (*Palafoxia arida var. gigantea*), roughstalk witch grass (*Panicum hirticaule ssp. hirticaule*), and narrow-leaf sandpaper plant (*Petalonyx linearis*) were not detected historically within the BSA. Therefore, no impacts to special status plant species are anticipated from the Project and no compensatory mitigation will be required.

Special Status Animal Species

Two listed animal species were identified in the USFWS species list that may occur within the proposed Project location, or may be affected by the proposed Project, the federal candidate monarch butterfly (*Danaus plexippus*) and the federally endangered Yuma Ridgway's rail (*Rallus obsoletus yumanensis*). There is no designated critical habitat within the BSA. There are also historical occurrences of the Gila woodpecker (*Melanerpes uropygialis*), Arizona Bell's vireo (*Vireo bellii arizonae*), and Yuma hispid cotton rat (*Sigmodon hispidus eremicus*) in the BSA. However, the Alamo Canal, which provides habitat for these species will be avoided during construction. There is no suitable habitat for these species within the Project footprint. Therefore, no impacts to special status animal species are anticipated from the Project and no compensatory mitigation will be required.

Environmental Consequences

Disturbed Wetland

The proposed Project will not have permanent or temporary impacts to disturbed wetland. The new bridge spanning the entire width of the All-American Canal will avoid any impacts to disturbed wetland. Since there are no anticipated permanent or temporary impacts, compensatory mitigation will not be required. Avoidance and minimization of potential temporary effects to disturbed wetland would be achieved through implementation of measures BIO-1, and BIO-3 through BIO-6, described below.

Desert Creosote Scrub

The proposed Project will result in temporary impacts to 0.94 acres scrub, and permanent impacts to 4.87acres of desert creosote scrub. Avoidance and minimization of potential temporary and permanent impacts to desert creosote scrub would be achieved through implementation of measures BIO-1 through BIO-6, described below.

Avoidance and/or Minimization Measures

Avoidance and minimization of potential effects occurring adjacent to the Project area would be achieved through implementation of the following measures:

BIO-1 Native vegetation and desert creosote scrub outside of the construction area will be avoided and designated as an environmentally sensitive area (ESA) on the Project plans and protected by installing temporary ESA fencing, if needed.

BIO-2 Temporary impacts to 5.54 acres of desert creosote scrub habitat from the Project will be offset by restoring the temporarily impacted areas to pre-

construction conditions. In areas where creosote vegetation is cleared and grubbed, the duff materials, consisting of the soils and materials from the removed vegetation, will be stockpiled and reapplied to temporarily impacted areas. If additional seeding is needed, Caltrans proposed the native seed mixture in the table, below, to be applied to temporarily impacted areas. Duff material will be applied to temporary impact areas as soon as possible following regrading after completion of construction to prevent encroachment by nonnative plants.

BIO-3 All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other such activities will be outside of areas with disturbed wetland and desert creosote scrub habitat.

BIO-4 Appropriate erosion and siltation controls will be installed prior to construction and maintained until construction completion.

BIO-5 Impacts from fugitive dust will be avoided and minimized through watering, monitoring, and other appropriate measures.

BIO-6 The Project site will be kept as clean of debris as possible.

Proposed Seed Mix for Temporary Impacted Desert Creosote Scrub Areas

Scientific Name	Common Name	Pure Live Seed per Acre (LBS)	Percent Minimum Germination
Ambrosia dumosa	Burro weed	1.5	70%
Aristidea adscensionis	Three-awn	1.5	60%
Aristidea purpurea	Purple three-awn	2.0	50%
Atriplex canescens	Four-wing saltbush	2.0	40%
Croton californicus	Desert croton	1.0	30%
Encelia farinose	Brittlebush	3.0	60%
Larrea tridentata	Creosote bush	2.0	50%
Olneya tesota	Desert ironwood	3.0	30%
Parkinsonia florida	Blue palo verde	1.0	30%
Petalonyx thurberi	Sandpaper plant	0.25	20%
Sporobolus cryptandrus	Sand dropsee	4.0	70%
Sphaeralcea ambigua	Desert mallow	2.0	30%

1.3.2 Wetlands and Other Waters

Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Federal Water Pollution Control Act, more commonly referred to as the Clean Water Act (CWA) (33 United States Code [USC] 1344), is the primary law

regulating wetlands and surface waters. One purpose of the CWA is to regulate the discharge of dredged or fill material into waters of the U.S., including wetlands. Waters of the U.S. include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. The lateral limits of jurisdiction over non-tidal water bodies extend to the ordinary high water mark (OHWM), in the absence of adjacent wetlands. When adjacent wetlands are present, CWA jurisdiction extends beyond the OHWM to the limits of the adjacent wetlands. To classify wetlands for the purposes of the CWA, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils formed during saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the CWA.

Section 404 of the CWA establishes a regulatory program that provides that discharge of dredged or fill material cannot be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers (USACE) with oversight by the U.S. Environmental Protection Agency (U.S. EPA).

The USACE issues two types of 404 permits: General and Individual. There are two types of General permits: Regional and Nationwide. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to allow a variety of minor Project activities with no more than minimal effects.

Ordinarily, Projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of USACE's Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the USACE decision to approve is based on compliance with U.S. EPA's Section 404(b)(1) Guidelines (40 Code of Federal Regulations [CFR] 230), and whether permit approval is in the public interest. The Section 404 (b)(1) Guidelines (Guidelines) were developed by the U.S. EPA in conjunction with the USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that the USACE may not issue a permit if there is a "least environmentally damaging practicable alternative" (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S., and not have any other significant adverse environmental consequences.

The Executive Order for the Protection of Wetlands (EO 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, EO 11990 states that a federal agency, such as FHWA and/or the Department, as assigned, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: (1) that there is no practicable alternative to the construction and (2) the proposed Project includes all practicable measures to minimize harm. A Wetlands Only Practicable Alternative Finding must be made.

At the state level, wetlands and waters are regulated primarily by the State Water Resources Control Board (SWRCB), the Regional Water Quality Control Boards (RWQCBs) and the California Department of Fish and Wildlife (CDFW). In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or the Tahoe Regional Planning Agency) may also be involved. Sections 1600-1607 of the California Fish and Game Code require any agency that proposes a Project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFW before beginning construction. If CDFW determines that the Project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFW jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the USACE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFW.

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA. In compliance with Section 401 of the CWA, the RWQCBs also issue water quality certifications for activities which may result in a discharge to waters of the U.S. This is most frequently required in tandem with a Section 404 permit request. Refer to Section 2.3.2 - Water Quality for more details.

Affected Environment

The new bridge spanning the entire width of the All-American Canal will avoid impacts to jurisdictional waters of the U.S. and waters of the State. The proposed bridge structure would not require trestles of falsework within the canal, nor would it require elements that pierce the apron of the canal weir.

Environmental Consequences

The proposed Project is not anticipated to result in permanent or temporary impacts to waters of the U.S., or waters of the State, under the jurisdiction of the USACE, RWQCB, and CDFW. Therefore, a Section 404, Nationwide Permit 14 for Linear Transportation Structures from U.S. Army Corps of Engineers (USACOE), a 401 Water Quality Certification from the State Water Resources Control Board, and a 1602 Lake and Streambed Alteration Agreement from California Department of Fish and Wildlife (CDFW) will not be required.

Avoidance and/or Minimization Measures

To avoid permanent impacts to waters of the U.S./waters of the State under the jurisdiction of the USACE, CDFW, and RWQCB, implementation of the following measures are required:

WAT-1 The temporary construction staging areas, access roads, and equipment storage shall be strategically placed at a minimum of 100 feet to avoid impacts to jurisdictional waters.

WAT-2 The jurisdictional water features outside of the work areas shall be designated as an ESA on the Project plans.

WAT-3 If needed, the ESA will be temporarily fenced using ESA fencing or lathe with flagging tape to exclude construction activities from the area. The Project Biologist will be onsite during the staking to identify the boundaries of the jurisdictional waters and shall supervise the placement of ESA exclusion fencing. The temporary fences around the ESAs, if needed, shall be installed as the first order of work. The locations of the ESA exclusion fence will be documented on construction maps.

Since there are no anticipated permanent or temporary impacts to disturbed wetland habitat, compensatory mitigation will not be required.

1.3.3 Plant Species

Regulatory Setting

The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) have regulatory responsibility for the protection of special-status plant species. “Special status” species are selected for protection because they are rare and/or subject to population and habitat declines. Special status is a general term for species that are provided varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act (FESA) and/or the California Endangered Species Act (CESA). Please see the Threatened and Endangered Species section in this document for detailed information about these species.

This section of the document discusses all other special-status plant species, including CDFW species of special concern, USFWS candidate species, and California Native Plant Society (CNPS) rare and endangered plants.

The regulatory requirements for FESA can be found at 16 United States Code (USC) Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402. The regulatory requirements for CESA can be found at California Fish and Game Code, Section 2050, et seq. Department Projects are also subject to the Native Plant Protection Act, found at California Fish and Game Code, Section 1900-1913, and the California Environmental Quality Act (CEQA), found at California Public Resources Code, Sections 21000-21177.

Affected Environment

Special Status Plant Species

No listed plants were identified in the USFWS species list that may occur within the proposed Project footprint or may be affected by the proposed Project. Sensitive plant species, including Harwood’s milk-vetch (*Astragalus insularis* var. *harwoodii*), Wiggin’s croton (*Croton wigginsii*), mud nama (*Nama stenocarpa*), giant spanish-needle (*Palafoxia arida* var. *gigantea*), roughstalk

witch grass (*Panicum hirticaule* ssp. *hirticaule*), and narrow-leaf sandpaper plant (*Petalonyx linearis*) were not detected historically within the BSA.

Environmental Consequences

Federal

No take of federally listed species is anticipated as a result of the Project. If Project plans change, which may result in potential effects to federally listed species; or, if federally listed species are detected before or during construction; or if additional information on the distribution of listed or proposed species becomes available that results in potential effects as a result of construction at either location, Caltrans will initiate additional Section 7 consultation with USFWS.

State

No take of state-listed species is anticipated as a result of the Project. If Project plans change, which may result in potential effects to state listed species; or, if state listed species are detected before or during construction; or if additional information on the distribution of listed species becomes available that results in potential effects as a result of construction at either location, Caltrans will initiate a Section 2081 Incidental Take Permit consultation with CDFW.

Avoidance and/or Minimization Measures

No impacts to special status plant species are anticipated from the Project and no compensatory mitigation will be required.

1.3.4 Animal Species

Regulatory Setting

Many state and federal laws regulate impacts to wildlife. The U.S. Fish and Wildlife Service (USFWS), the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries), and the California Department of Fish and Wildlife (CDFW) are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with animals not listed or proposed for listing under the federal or state Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in the Threatened and Endangered Species Section [##] below. All other special-status animal species are discussed here, including CDFW fully protected species and species of special concern, and USFWS or NOAA Fisheries candidate species.

Federal laws and regulations relevant to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

State laws and regulations relevant to wildlife include the following:

- California Environmental Quality Act
- Sections 1600 – 1603 of the California Fish and Game Code
- Sections 4150 and 4152 of the California Fish and Game Code

Affected Environment

Two listed animal species were identified in the USFWS species list that may occur within the BSA, the federal candidate monarch butterfly (Danaus plexippus) and the federally endangered Yuma Ridgway's rail (Rallus obsoletus yumanensis). There is no designated critical habitat within the BSA. There are also historical occurrences of the Gila woodpecker (Melanerpes uropygialis), Arizona Bell's vireo (Vireo bellii arizonae), and Yuma hispid cotton rat (Sigmodon hispidus eremicus) in the BSA. The Alamo Canal provides habitat for these species.

Environmental Consequences

Although animal species were identified within the BSA, specifically in the Alamo Canal, the canal will be avoided during construction. There is no suitable habitat for these species within the Project footprint. Therefore, no impacts to special status animal species are anticipated from the Project and no compensatory mitigation will be required.

However, migratory birds have the potential to nest in trees and shrubs in the environmental study area during construction. Although these species are not considered special-status wildlife species, their occupied nests and eggs are protected by CFGC Sections 3503 and 3503.5 and the Migratory Bird Treaty Act. During construction, measures MTB-1 and MTB-2 will reduce impacts to species protected by CFGC Sections 3503 and 3503.5 as well as the Migratory Bird Treaty Act.

Avoidance and/or Minimization Measures

The following measures will be implemented to avoid impacts to birds during the nesting season, which typically occurs between February 15 and August 31:

MTB-1 If vegetation clearing is to take place during the nesting season a pre-construction nesting bird survey shall be conducted within 3 days of these activities.

MTB-2 A no-disturbance buffer shall be established around any active nest or nesting pair territory to limit the impacts of construction activities. The buffer shall not be removed until after the nesting season or until after a qualified wildlife biologist determines that the young have fledged (usually late June to mid-July). The extent of these buffers shall be determined by the biologist (coordinating with USFWS and CDFW) and will depend on the level of noise or construction disturbance, line-of-sight between the

nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers. Suitable buffer distances may vary between species but is typically 100 feet.

1.3.5 Threatened and Endangered Species

Regulatory Setting

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act (FESA): 16 United States Code (USC) Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402. This act and later amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the FHWA (and the Department, as assigned), are required to consult with the U.S. USFWS and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries) to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 may include a Biological Opinion with an Incidental Take Statement or a Letter of Concurrence. Section 3 of FESA defines take as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct."

California has enacted a similar law at the state level, the California Endangered Species Act (CESA), California Fish and Game Code Section 2050, et seq. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset Project-caused losses of listed species populations and their essential habitats. The California Department of Fish and Wildlife (CDFW) is the agency responsible for implementing CESA. Section 2080 of the California Fish and Game Code prohibits "take" of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the California Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful development Projects; for these actions, an incidental take permit is issued by CDFW. For species listed under both FESA and CESA requiring a Biological Opinion under Section 7 of FESA, the CDFW may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the California Fish and Game Code.

Another federal law, the Magnuson-Stevens Fishery Conservation and Management Act of 1976, was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the United States, by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery

management authority beyond the exclusive economic zone over such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

The following list provides a summary of the regulatory requirements pertaining to threatened and endangered species:

Federal Endangered Species Act

- The U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service/NOAA Fisheries implement the Federal Endangered Species Act of 1973 (FESA) (16 USC §1531 et seq.). Threatened and endangered species on the federal list (50 CFR §17.11, 17.12) are protected from "take" (direct or indirect harm), unless a FESA Section 10 Permit is granted or a FESA Section 7 Biological Opinion with incidental take provisions is rendered.

- Pursuant to requirements of FESA, an agency reviewing a proposed Project within its jurisdiction must determine whether any federally listed species may be present in the BSA and determine whether the proposed Project will have a potential impact upon such species.

- Under FESA, habitat loss is considered to be an impact to the species. In addition, the agency is required to determine whether the Project is likely to jeopardize the continued existence of any species proposed to be listed under FESA or result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 USC §1536[3], [4]). Therefore, Project related impacts to these species or their habitats would be considered significant and would require mitigation.

- Species that are candidates for listing are not protected under FESA; however, USFWS advises that a candidate species could be elevated to listed status at any time, and therefore, applicants should regard these species with special consideration.

California Endangered Species Act

- The California Endangered Species Act of 1970 (CESA) (CFG Code §2050 et seq., and CCR Title 14, §670.2, 670.51) prohibits "take" (defined as hunt, pursue, catch, capture, or kill) of species listed under CESA. A CESA permit must be obtained if a Project will result in take of listed species, either during construction or over the life of the Project. Section 2081 establishes an incidental take permit program for state-listed species.

- Under CESA, the California Department of Fish and Wildlife (CDFW) has the responsibility for maintaining a list of threatened or endangered species designated under state law (CFG Code 2070). CDFW also maintains lists of species of special concern, which serve as "watch lists." Pursuant to the requirements of CESA, an agency reviewing proposed Projects within its jurisdiction must determine whether any state-listed species may be present in

the BSA and determine whether the proposed Project will have a potentially significant impact upon such species. Project related impacts to species on the CESA list would be considered significant and would require mitigation.

Affected Environment

Regional Species and Habitats and Natural Communities of Concern

A list of sensitive wildlife and plant species potentially occurring within the BSA in the Yuma West 7.5-minute USGS quadrangle was compiled to evaluate potential impacts resulting from the Project is shown in the table below. The list was developed based on information compiled from the USFWS, CDFW, CNDDB, CNPS, and other current publications. There are three threatened, endangered, or candidate species on the species list provided by the USFWS but with no designated critical habitat for listed species in the BSA. CNDDB identified one listed reptile species and four listed bird species that may also be found within the BSA.

CNDDB Species List

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent[2]	Rationale
INVERTEBRATES					
Monarch butterfly	*Danaus Plexippus*	FC	Closed-cone coniferous forest	A	Suitable habitat not found in the Project footprint
REPTILES					
Desert tortoise	*Gopherus agassizii*	FT/ ST	Mojavean Desert scrub, Sonoran Desert scrub	P	Desert scrub habitat in Project footprint, but desert tortoise and burrows not historically observed in Project area
BIRDS					
Western yellow-billed cuckoo	*Coccyzus americanus*	FT/ SE	Riparian forest	A	Suitable habitat not found in the Project footprint
Gilded flicker	*Colaptes chrysoides*	SE	Riparian forest, riparian woodland	A	Suitable habitat not found in the Project footprint
California black rail	*Laterallus jamaicensis coturniculus*	ST	Brackish marsh, freshwater marsh, marsh & swamp, salt marsh	A	Suitable habitat not found in the Project footprint
Gila woodpecker	*Melanerpes uropygialis*	SE	Riparian forest, riparian woodland	A	Historically observed in BSA, but suitable habitat not found in the Project footprint
Yuma Ridgway's rail	*Rallus obsoletus yumanensis*	FE/ ST	Marsh & swamp, salt marsh, wetland	A	Historically observed in BSA, but suitable habitat not found in the Project footprint
Arizona Bell's vireo	*Vireo bellii arizonae*	SE	Riparian forest	A	Historically observed in BSA, but suitable habitat not found in the Project footprint

[1]Status: Federal Endangered (FE); Federal Threatened (FT); Federal Proposed (FP, FPE, FPT); Federal Candidate (FC), Federal Species of Concern (FSC); State Endangered (SE); State Threatened (ST); Fully Protected (FP); State Rare (SR); State Species of Special Concern (SSC); California Native Plant Society (CNPS), etc.

[2]Absent [A] - no habitat present and no further work needed. Habitat Present [HP] - habitat is or may be present. The species may be present. Present [P] - the species is present. Critical Habitat [CH] - Project footprint is located within a designated critical habitat unit but does not necessarily mean that appropriate habitat is present.

This Project is located outside of NOAA Fisheries jurisdiction; therefore, a NOAA Fisheries species list is not required and no effects to NOAA Fisheries species are anticipated.

Environmental Consequences

Federal

No take of federally listed species is anticipated as a result of the Project. If Project plans change, which may result in potential effects to federally listed species; or, if federally listed species are detected before or during construction; or if additional information on the distribution of listed or proposed species becomes available that results in potential effects as a result of construction at either location, Caltrans will initiate additional Section 7 consultation with USFWS.

State

No take of state-listed species is anticipated as a result of the Project. If Project plans change, which may result in potential effects to state listed species; or, if state listed species are detected before or during construction; or if additional information on the distribution of listed species becomes available that results in potential effects as a result of construction at either location, Caltrans will initiate a Section 2081 Incidental Take Permit consultation with CDFW.

Avoidance and/or Minimization Measures

No impacts to threatened and endangered species are anticipated from the proposed Project and no compensatory mitigation will be required.

1.3.6 Invasive Species

Regulatory Setting

On February 3, 1999, President William J. Clinton signed Executive Order (EO) 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health." FHWA guidance issued August 10, 1999, directs the use of the State’s invasive species list, maintained by the California Invasive Species Council to define the invasive species that must be considered as part of the NEPA analysis for a proposed Project.

Under E.O. 13112, federal agencies cannot authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species in the United States or elsewhere unless all reasonable measures to minimize risk of harm have been analyzed and considered.

Affected Environment

Invasive species were identified during the surveys of the BSA, including species that were on the National Invasive Species Management Plan, the State of California Noxious Weed List, and the Cal-IPC Invasive Plant Inventory Database (http://www.cal-ipc.org/paf/). Sahara mustard (*Brassica tournefortii*), spike watermilfoil (*Myriophyllum spicatum*), giant salvinia (*Salvinia molesta*), and salt cedar (*Tamarix ramosissma*) have a high rating; Bermuda grass (*Cynodon dactylon*), crystalline iceplant (*Mesembryanthemum crystallinum*), and Mexican fan palm (*Washingtonia robusta*) have a moderate rating on the California Invasive Plant Inventory Database.

Environmental Consequences

Invasive plant species and noxious weeds were identified within the BSA during field surveys. As such, the Build Alternative has the potential to contribute to the spread or introduction of invasive species within the BSA from seeds being released during ground disturbing activities, and/or seeds being present on construction equipment and vehicles. Implementation of avoidance and minimization measures INV-1 through INV-3, would further avoid the potential for the spread of invasive species in the BSA.

Once construction is completed, the Build Alternative would be similar to existing conditions. As described in Section 1.3, Project Description, the proposed Project would replace an existing bridge; however, the new bridge will maintain the same number of travel lanes as currently exist. Further, as described in Section 2.29, Traffic and Transportation, the proposed Project is not anticipated to increase capacity on the new bridge structure, or on SR-186. As such, the potential for invasive seeds being present on vehicles utilizing the new bridge structure and SR-186 would be low and the effects of invasive species in the BSA would not increase from existing conditions. Once the new bridge structure is operational, all maintenance vehicles and equipment would be required to implement avoidance and minimization measures similar to measures INV-1 through INV-3, to avoid the potential for the spread of invasive species in the BSA.

Avoidance and/or Minimization Measures

To prevent the spread of invasive species during the length of the Project work, the following avoidance and minimization measures will be implemented:

INV-1 Special care will be taken during transport, use, and disposal of soils containing invasive weed seeds. Seed heads will be bagged, and all invasive species will be either sprayed or removed and properly disposed of to prevent spread into areas outside of the construction area.

INV-2 Erosion control measures for this Project shall be designed to prevent the spread of invasive plant species.

INV-3 Landscaping designs for this Project shall not contain invasive species in the plant selections or seed mixtures.

Chapter 2 California Environmental Quality Act (CEQA) Evaluation

2.1.1 Aesthetics

Except as provided in Public Resources Code Section 21099, would the Project:

Question	CEQA Determination
a) Have a substantial adverse effect on a scenic vista?	No Impact
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	No Impact
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from 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
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	No Impact

This section is based on the Visual Impact Assessment (VIA) (Appendix B13) prepared by Caltrans in 2024 and a Visual Study Memorandum (Appendix 14) prepared by Caltrans in 2023.

a) No Impact

There are minimal scenic vistas or views within the project limits, consisting of views of hillsides in rural desert areas, scattered Palos Verde scrub and the All-American Canal. The proposed project would make highway improvements without altering these features or inhibiting scenic viewpoints in the area. Project construction would be short term, and equipment and storage would only be briefly visible to motorists on the roadway. Therefore, there would be no impact.

b) No Impact

The proposed project is not located within a designated State Scenic Highway, and it would not alter any scenic resources such as trees, rock outcroppings, or historic buildings. Project improvements would be focused on existing highway assets (pavement, guardrails, culverts, crosswalks, and signage), which do not provide scenic value. Therefore, there would be no impact to scenic resources.

c) Less Than Significant Impact

The proposed project would result in changes to the visual character of the project site. The new bridge, additional roadway pavement, and removal of roadside vegetation will affect the natural site character. The bridge rails and sidewalks will be colored tan to blend with the natural desert environment. The project will create opportunities for new beneficial views of the All-American Canal for motorists, cyclists, and pedestrians. The proposed bridge rail will be low profile and employ a “see-through” post-and-beam system to allow views to the water. The Project will cause a ‘very low adverse’ visual impact with the inclusion of impact avoidance measures. Therefore, the impact would be less than significant.

d) No Impact

Operation of the proposed project would not introduce any new light sources. Roadside sign panels would be replaced, but this would not substantially increase glare in the area. Light and glare levels would remain like existing conditions following project implementation. Nighttime construction may occur as part of the proposed project construction phase, but the effects would be temporary. Therefore, there would be no permanent impact due to new sources of substantial light or glare in the area.

2.1.2 Agriculture and Forestry 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. Would the Project:

Question	CEQA Determination
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?	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	No Impact

Question	CEQA Determination
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	No Impact
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?	No Impact

As discussed in the Farmland section in Chapter 2, the proposed Project would not convert unique farmland to non-agricultural land due the Project site not being located on important farmland. No impacts would occur. Mitigation is not required.

There are no parcels under a Williamson Act contract within the Project limits. No impacts would occur. Mitigation is not required.

There are no forest or timberlands within the Project limits. No impacts would occur. Mitigation is not required.

There are no other changes anticipated to farmland or forest land. No impacts would occur. Mitigation is not required.

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. Would the Project:

Question	CEQA Determination
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?	No Impact
c) Expose sensitive receptors to substantial pollutant concentrations?	No Impact
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	No Impact

This section is based on the Exempt From Air Quality Conformity Determination Per 40 CFR 93.126 (Appendix B3) and Transportation Air Quality Conformity Findings Checklist (Appendix B12).

The proposed project is not expected to conflict with or obstruct the implementation of the applicable air quality plan. The Project does not involve increasing the number of travel lanes or significantly altering traffic patterns, ensuring consistency with air quality management goals. Since the Project does not increase vehicle miles traveled (VMT) and involves no demolition or rehabilitation of the existing bridge, no cumulatively considerable net increase of any criteria pollutant is expected. While construction activities may result in temporary emissions, these are considered minor and unavoidable. Additionally, a VMT analysis is not required for the proposed project, as it meets the screening criteria for a project “Not likely to lead to a measurable and substantial increase in VMT” pursuant to Section 5.1.1 of the Transportation Analysis under CEQA.

The Project is expected to have minimal impact on pollutant concentrations as there is no significant change in traffic operations or major construction-related activities near sensitive receptors. Temporary construction emissions will be managed in accordance with applicable regulations to minimize exposure. The Project is not anticipated to produce emissions that would lead to odors or otherwise adversely affect a substantial number of people. Temporary construction emissions will be minor and managed appropriately, with no operational emissions expected to increase.

2.1.4 Biological Resources

Would the Project:

Question	CEQA Determination
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 NOAA Fisheries?	No Impact
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?	No Impact
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?	No Impact

Question	CEQA Determination
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?	No Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	No Impact

The information in this section is based on the Natural Environment Study (Minimal Impacts) (NESMI) prepared for the proposed Project by Caltrans in July 2024 (Appendix B5)

Detailed in the Animal Species and the Threatened and Endangered Species sections in Chapter 2, three listed animal species were identified in the USFWS species list that may occur within the BSA, the federal candidate monarch butterfly (*Danaus plexippus*) and the federally endangered Yuma Ridgway's rail (*Rallus obsoletus yumanensis*). There is no designated critical habitat within the BSA. There are also historical occurrences of the Gila woodpecker (*Melanerpes uropygialis*), Arizona Bell's vireo (*Vireo bellii arizonae*), and Yuma hispid cotton rat (*Sigmodon hispidus eremicus*) in the BSA. The Alamo Canal provides habitat for these species.

Although animal species were identified within the BSA, specifically in the Alamo Canal, the canal will be avoided during construction. There is no suitable habitat for these species within the Project footprint.

No take of federally listed species is anticipated as a result of the Project. If Project plans change, which may result in potential effects to federally listed species; if federally listed species are detected before or during construction; or if additional information on the distribution of listed or proposed species becomes available that results in potential effects as a result of construction at either location, Caltrans will initiate additional Section 7 consultation with USFWS.

Additionally, no take of state-listed species is anticipated as a result of the Project. If Project plans change, which may result in potential effects to state listed species; if state listed species are detected before or during construction; or if additional information on the distribution of listed species becomes available that results in potential effects as a result of construction at either location, Caltrans will initiate a Section 2081 Incidental Take Permit consultation with CDFW.

This Project is located outside of NOAA Fisheries jurisdiction; therefore, a NOAA Fisheries species list is not required and no effects to NOAA Fisheries species are anticipated.

Therefore, no impacts to special status animal species are anticipated from the Project and no compensatory mitigation will be required.

There are approximately 172 acres of natural communities of special concern within the BSA consisting of 60 acres of arrow-weed scrub, 12 acres of disturbed land and 100 acres of desert creosote scrub. Arrow-weed scrub habitat is found in the Alamo Canal, and Alamo Canal will be avoided during construction and operations.

However, the proposed Project will result in permanent impacts to 0.94 acres of desert creosote scrub.

Additionally, Invasive species were identified during the surveys of the BSA, including species that were on the National Invasive Species Management Plan, the State of California Noxious Weed List, and the Cal-IPC Invasive Plant Inventory Database (http://www.cal- ipc.org/paf/). Sahara mustard (*Brassica tournefortii*), spike watermilfoil (*Myriophyllum spicatum*), giant salvinia (*Salvinia molesta*), and salt cedar (*Tamarix ramosissma*) have a high rating; Bermuda grass (*Cynodon dactylon*), crystalline iceplant (*Mesembryanthemum crystallinum*), and Mexican fan palm (*Washingtonia robusta*) have a moderate rating on the California Invasive Plant Inventory Database. Inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur.

Avoidance and minimization of potential effects to desert creosote scrub habitat occurring adjacent to the Project area would be achieved through implementation of the following measures:

BIO-7 Desert creosote scrub habitat outside of the construction area will be designated as an ESA on the Project plans and protected by installing temporary ESA fencing, if needed.

BIO-8 Temporary impacts to desert sage scrub habitat from the Project will be offset by restoring the temporarily impacted areas to pre-construction conditions. In areas where creosote vegetation is cleared and grubbed, the duff materials, consisting of the soils and materials from the removed vegetation, will be stockpiled and reapplied to temporarily impacted areas. If additional seeding is needed, Caltrans proposes native seed mix to be applied to temporarily impacted areas. Duff material will be applied to temporary impact areas as soon as possible following regrading after completion of construction to prevent encroachment by nonnative plants.

BIO-9 All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other such activities will be outside of areas with desert creosote scrub habitat.

Any debris or runoff from the construction will be directed away from desert creosote scrub habitat.

To prevent the spread of invasive species during the length of the Project work, the following measures will be implemented:

BIO-10 Special care will be taken during transport, use, and disposal of soils containing invasive weed seeds. Seed heads will be bagged, and all invasive species will be either sprayed or removed and properly disposed of to prevent spread into areas outside of the construction area.

BIO-11 Erosion control measures for this Project shall be designed to prevent the spread of invasive plant species.

BIO-12 Landscaping designs for this Project shall not contain invasive species in the plant selections or seed mixtures.

As detailed in the Wetlands section in Chapter 2, habitat of the BSA consists mostly of open water and concrete-lined channel with mostly groundcover vegetation in the Project footprint. Some patches of big saltbush (Atriplex lentiformis) and common reed (Phragmites australis) are in the BSA in the All-American Canal but are outside (upstream and downstream) of the Project area. one type of wetland (disturbed wetlands) was identified in the survey area. There is approximately 12 acres of disturbed wetland in the All-American Canal in the BSA. Disturbed wetlands consist of areas permanently or periodically inundated by water, which have been significantly modified by human activity. This includes portions of wetlands with obvious artificial structures, including irrigation canals such as the All- American Canal. Approximately 12 acres of disturbed wetland exists within the BSA.

The proposed work will not have permanent impacts to disturbed wetland.

To avoid permanent impacts to waters of the U.S./waters of the State under the jurisdiction of the USACE, CDFW, and RWQCB, implementation of the following measures are required:

BIO-13 The temporary construction staging areas, access roads, and equipment storage shall be strategically placed at a minimum of 100 feet to avoid impacts to jurisdictional waters.

BIO-14 The jurisdictional water features outside of the work areas shall be designated as an ESA on the Project plans.

BIO-15 If needed, the ESA will be temporarily fenced using ESA fencing or lathe with flagging tape to exclude construction activities from the area. The Project Biologist will be onsite during the staking to identify the boundaries of the jurisdictional waters and shall supervise the placement of ESA exclusion fencing. The temporary fences around the ESAs, if needed,

shall be installed as the first order of work. The locations of the ESA exclusion fence will be documented on construction maps.

Since there are no anticipated permanent or temporary impacts o to disturbed wetland habitat, compensatory mitigation will not be required.

Although animal species were identified within the BSA, specifically in the Alamo Canal, the canal will be avoided during construction. There is no suitable habitat for these species within the Project footprint.

However, migratory birds have the potential to nest in trees and shrubs in the environmental study area during construction. Although these species are not considered special-status wildlife species, their occupied nests and eggs are protected by CFGC Sections 3503 and 3503.5 and the Migratory Bird Treaty Act.

The following measures will be implemented to avoid impacts to birds during the nesting season, which typically occurs between February 15 and August 31:

BIO-16 If vegetation clearing is to take place during the nesting season a pre-construction nesting bird survey shall be conducted within 3 days of these activities.

BIO-17 A no-disturbance buffer shall be established around any active nest or nesting pair territory to limit the impacts of construction activities. The buffer shall not be removed until after the nesting season or until after a qualified wildlife biologist determines that the young have fledged (usually late June to mid-July). The extent of these buffers shall be determined by the biologist (coordinating with USFWS and CDFW) and will depend on the level of noise or construction disturbance, line-of-sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers. Suitable buffer distances may vary between species but is typically 100 feet.

e) No Impact

This Project will not conflict with any local policies or ordinances protecting biological resources.

f) No Impact

This Project will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

2.1.5 Cultural Resources

Would the Project:

Question	CEQA Determination
a) Cause a substantial adverse change in the significance of a historical resource pursuant to in §15064.5?	No Impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	No Impact
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	No Impact

The information in this section is based on the Historic Property Survey Report (HPSR) (Appendix B16) and Finding of No Effect/Environmentally Sensitive Areas (Appendix B17) both prepared by Caltrans in 2024. See also Section 1.10.

The Area of Potential Effects (APE) encompasses approximately 22.8 acres and was established to include the Project's footprint and the identified historic properties as a whole. Because the All-American Canal and the Inter-California Railroad are large linear resources, only portions that may be directly affected by the Project are included in the current APE ("Focused APE"); however, a resource as a whole was in consideration when the Project's effect determination was made.

The following historic properties have been identified within the Project's APE as a result of Caltrans' historic property identification efforts (Appendix B16). It must be noted that none of them is a State-owned cultural resource because the Project is entirely located on Quechan's tribal land and Caltrans only retains a highway operational easement.

- All-American Canal (P-13-007130 / CA-IMP-7130H)
- Inter-California Railroad
- Commemorative Monument for the Expedition of Hernando de Alarcón (1540)
- Native American Cultural Resources

As part of the historic property identification effort, four Native American cultural resources were identified adjacent to the Project limits. Two of these resources are not recorded in the California Historical Resources Information System (CHRIS), so no trinomial or primary number has been assigned, and details of this resources are not available as the Quechan Tribe wishes to maintain its confidentiality. For the purpose of the proposed Project, all four resources will be considered eligible for the National Register of Historic Places (NRHP) without execution of a formal evaluation.

Additionally, archaeological and architectural field surveys were conducted on May 20, 2024, where the APE was accessible and permission to enter was obtained from the Quechan Tribe. During the field surveys, a designated Tribal monitor accompanied the survey staff. The surveys identified a total of seven historic properties (four Native American cultural resources and three build environment resources). In order to avoid

adverse effects to the identified resources during construction of the Project, an action plan was developed in this report to implement Environmentally Sensitive Areas (ESAs) and the Secretary of the Interior's Standards for the Treatment of Historic Properties (Standards), in accordance with 36 Code of Federal Regulations (CFR) Part 68.

The results of the HPSR (Appendix B16) indicated the proposed Project would result in No Adverse Effect to the cultural resources identified within the APE and described above. During construction, the Native American Cultural Resources identified within the APE will be protected by the establishment of an Environmental Sensitive Area (ESA), as well as archaeological and Native American monitoring, controlled grading within archaeological monitoring areas (AMA), and Cultural Resources Sensitivity Training, to prevent any inadvertent impacts during construction. Environmental Commitments CR-1 through CR-5 would be implemented as part of the proposed project.

2.1.6 Energy

Would the Project:

Question	CEQA Determination
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation?	No Impact
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	No Impact

The proposed Project would result in short-term energy consumption due to the manufacture of construction materials, the use of construction equipment requiring petroleum fuels, and construction workers' motor vehicles as they travel to and from the site. However, construction-related energy consumption under the proposed Project would be temporary and would not result in excessive energy consumption by adhering to Caltrans' Construction Standard Specifications, which include requirements to consider environmentally friendly treatments and use materials with recycled content to the extent feasible. Additionally, idling of construction equipment would be limited to 5 minutes or less, which would reduce wasteful use of fuel. Once operational, the proposed Project would not increase capacity or add traffic and would result in a negligible increase in energy consumption. Therefore, the proposed Project would have no energy impact.

2.1.7 Geology and Soils

Would the Project:

Question	CEQA Determination
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.	No Impact
ii) Strong seismic ground shaking?	No Impact
iii) Seismic-related ground failure, including liquefaction?	No Impact
iv) Landslides?	No Impact
b) Result in substantial soil erosion or the loss of topsoil?	No Impact
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	No Impact
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	No 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?	No Impact

The information in this section is based, in part, on the Structure Preliminary Geotechnical Report (SPGR), the Preliminary Foundation Reports (Appendix B11) prepared by Caltrans in 2023 and the Paleontological Resource Assessment Memorandum prepared by Caltrans in 2024.

The nearest fault is the Algodones fault transverses through the Project site. This fault is a concealed fault formed in the cap rocks of sedimentary basin, which is influenced by the regional or local stress field, and activities in the basement rift system. A concealed fault zone is characterized by strong concealment and is associated with dominant fault zone.

Additionally, per the County's General Plan and CGS Seismic Hazards Program, the Project site is not located within the Alquist-Priolo Earthquake Fault Zone. The proposed Project would adhere to the most up to date building codes.

Liquefaction and landslides are two seismically related concerns. Liquefaction is where loose, saturated sands and silts lose their shear strength due to an increase in pore pressure between grains or particles. Granular soils are more prone to this phenomenon than are silty clays. Clays are not affected by seismic motion. This loss of shear strength causes the affected soil to temporarily flow as a liquid, having the semblance of quicksand, and may cause excessive settlements and sand boils at the ground surface. This phenomenon may be expected to occur if dynamic forces of ground shaking take place.

The California Earthquake Hazards Zone Application ("EQ Zapp") is an onlinee map that allows anyone with a computer, tablet or smartphone to conveniently check whether a property is in an earthquake hazard zone.

Earthquake hazard zones define areas subject to following three distinct types of geologic ground failures

- Fault rupture, where the surface of the earth breaks along a fault;
- Liquefaction, in which the soil temporarily turns to quicksand and cannot support structures;
- Earthquake-induced landslides.

The proposed Project site is not within an earthquake hazard zone.

Soils in Imperial County are formed by stratified alluvial deposits. A large portion of the County includes fine-textured lakebed sediments. Approximately 28 known soil types occur in Imperial County. The clay material deposited in riverine environments during the formation of the Colorado River delta terrace is the source of the Holtville and Imperial soils.

The rich soils of Imperial County, and particularly of the Imperial Valley, were created by periodic flooding of the Colorado River over thousands of years which left deep, rich deposits of silt. Information on the adequacy and importance of soils in the County, taking into account general soil conditions and characteristics, is available from the U.S. Department of Agriculture Soil Conservation Service and the California State Department of Conservation. The Soil Conservation Service (SCS) has grouped soils into eight capability classes according to their suitability for most kinds of field crops.

Figure 2.4-1 of the County’s General Plan illustrates the general soils in Imperial County. The proposed Project site is within the Pilot Knob Mesa.

As part of background research, geology and paleontological resource sensitivity maps of the proposed Project corridor were consulted to assess sensitivity for paleontological resources. In addition, Paleontological Identification Report (PIR)/Paleontological Evaluation Report (PER)/Paleontological Mitigation Plan (PMP) for the SR-186/Interstate 8 Interchange Project (Deméré and Siren 2009) was also consulted. The results of the background research indicated that the current project limits are situated

within the young alluvium on the south side of All American Canal, and the Pleistocene alluvial deposits on the north side of All American Canal. In consultation with San Diego Natural History Museum on May 7, 2024, it was determined that the proposed construction of a detour route and the preparation of a laydown yard would have the higher potential for impacting paleontological resources embedded in the Pleistocene alluvial deposits. In order to mitigate the potential impacts to paleontological resources, implementation of a paleontological mitigation monitoring program will be required. Environmental Analysis Branch D requests that the following items be incorporated into the project's ECR, and necessary funds to retain qualified paleontologists be secured. In addition, Environmental Analysis Branch D will obtain a permit to conduct mitigation monitoring during construction from BIA and Quechan Tribe prior to construction.

PAL-1 A qualified paleontologist (as defined in the Caltrans' Standard Environmental Reference) must be invited to the pre-construction (or tailgate) meeting to consult with the grading and excavation contractors concerning excavation schedules, paleontological field techniques, and safety issues. A qualified paleontologist is defined as an individual with a MS or Ph.D. in paleontology or geology who is familiar with paleontological procedures and techniques, who is knowledgeable in the geology and paleontology of San Diego County, and who has worked as a paleontological mitigation project supervisor in the county for at least one year.

PAL-2 A paleontological monitor must be on-site on a full-time basis during the original cutting of previously undisturbed deposits of high or moderate paleontological resource potential, and on-site on a part-time basis during the original cutting of previously undisturbed deposits of low paleontological resource potential (sedimentary deposits of younger alluvium), to inspect exposures for contained fossils. A paleontological monitor is defined as an individual who has experience in the collection and salvage of fossil materials. The paleontological monitor must work under the direction of a qualified paleontologist. As grading progresses, the qualified paleontologist and paleontological monitor will confer with the Resident Engineer regarding the level of effort needed and reduce the scope of the monitoring program to an appropriate level if it is determined that the potential for impacts to paleontological resources is lower than anticipated.

PAL-3 If paleontological resources of potential scientific interest (including all vertebrate fossils and deposits of petrified wood) are encountered during construction activities, they would be handled in accordance with the principles and recommendations found in Assessment of Fossil Management on Federal & Indian Lands (Department of the Interior [DOI] 2000). In most cases this fossil salvage can be completed in a short period of time. However, some fossil specimens (such as a complete large mammal skeleton) may require an extended salvage period. In these instances, the paleontologist (or paleontological monitor) will consult with

the RE to temporarily divert, or halt grading, to allow recovery of fossil remains in a timely manner.

PAL-4 During the monitoring and recovery phases, the qualified paleontologist and/or the paleontological monitor will also routinely collect stratigraphic data (e.g., lithology, vertical thickness, lateral extent of strata, nature of upper and lower contacts, and taphonomic character of exposed strata). Collection of such data is critical for providing a stratigraphic context for any recovered fossils.

PAL-5 Fossil remains collected during monitoring and salvage must be cleaned (removal of extraneous enclosing sedimentary rock material), prepared, sorted (separating fossils of the different species), cataloged (scientific identification of species, assignment of inventory tracking numbers, and recording of these numbers in a computerized collection database), and curated as part of the mitigation program.

PAL-6 A final summary report that outlines the results of the mitigation program must be completed. This report will include discussion of the methods used, stratigraphic section(s) exposed and documented, fossils collected, and significance of recovered fossils.

2.1.8 Greenhouse Gas Emissions

Would the Project:

Question	CEQA Determination
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	No Impact
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	No Impact

This section is based on the Exempt From Air Quality Conformity Determination Per 40 CFR 93.126 (Appendix B3) and Transportation Air Quality Conformity Findings Checklist (Appendix B12).

See Section 2.3.5 of this document.

The proposed project is considered to cause minimal or no increase in operational GHG emissions since it does not increase the number of travel lanes on SR 186, thereby avoiding an increase in vehicle miles traveled (VMT). Although unavoidable GHG emissions will occur during the construction phase from material processing, transportation, on-site equipment, and traffic delays, these emissions are managed through measures such as improved traffic management plans and innovations in

materials and specifications. Furthermore, the use of long-life pavement and improved planning offsets emissions by reducing the frequency of maintenance and rehabilitation activities. As such, the overall impact is not considered significant.

Additionally, the proposed project complies with applicable plans, policies, and regulations for reducing GHG emissions. Construction contracts include Caltrans Standard Specifications to ensure compliance with all relevant air quality and emission reduction requirements. These include provisions under Sections 7-1.02A and 7-1.02C, which mandate adherence to Air Resources Board (ARB) emission reduction regulations, and Section 14-9.02, which requires compliance with air pollution control rules and idling restrictions. These measures align with and support efforts to reduce GHG emissions, ensuring consistency with state and local policies.

2.1.9 Hazards and Hazardous Materials

Would the Project:

Question	CEQA Determination
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	No 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?	No Impact
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	No Impact
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?	No Impact
e) For a Project located within an airport land use plan or, where such a plan has not been adopted, within two nautical miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the Project area?	No Impact
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	No Impact
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	No Impact

This information is based on the Review (0-Phase) Memorandum (Appendix B8) and Site Assessment Questionnaire (Appendix B9) prepared by Caltrans in 2024.

Environmental Engineering staff reviewed the EnviroStor (DTSC), GeoTracker (SWRCB), and Historic Aerials databases for nearby hazardous waste/unauthorized release facilities that may have impacted the environmental condition of the project area. No facilities were identified. Additionally, an X-ray fluorescence (XRF) survey was performed along the shoulders of SR-186. Results of this survey show unregulated concentrations of ADL within the soil. Standard special provision (SSP) will be provided by Environmental Engineering Branch during the 1-phase. Removal of any wooden posts from existing guardrail or existing signposts will generate TWW. These products contain hazardous chemical preservatives therefore TWW is considered a California Hazardous Waste. Environmental Engineering will provide SSP, if needed, during the 1-phase. Environmental Engineering Branch will provide SSPs, if needed, for removal of any existing thermoplastic, traffic stripe, and/or pavement marking during the 1-phase.

The Project site is located within the Holtville Unified School District, however there are no schools located within the Project site and surrounding areas. The nearest schools in the district are in Holtville, approximately 35 miles northwest of the site. The proposed Project is a non-capacity increasing Project, as the Project would include a realigning portion of SR 186 and construct a new bridge over the All-American Canal. Thus, operationally, the Project would improve emergency access. Temporary construction impacts could have the potential to impact emergency access during construction.

However, the proposed Project includes a Traffic Management Plan which takes into account emergency response actions and evacuations that may be required to occur through the construction areas, including during temporary closures. Coordination with California Highway Patrol and local emergency response agencies is included in the Traffic Management Plan to avoid impairment of any response or evacuation.

The Project site is outside a State Responsibility Area, and not within a Very High Fire Severity Zone (VHFSZ) (Cal Fire 2024). The proposed Project would not exacerbate wildfire risks due to slope, prevailing winds and other factors. Additionally, the proposed Project would provide wider shoulders and require utility relocation along an existing roadway corridor. No additional water sources would be required. The Project will also incorporate materials that provide slope stability and prevent downstream exposure to runoff. The drainage features of the proposed alignment will not change the receiving waters.

No other environmental engineering concerns are anticipated on this project.

2.1.10 Hydrology and Water Quality

Would the Project:

Question	CEQA Determination
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	No Impact
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?	No Impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: (i) result in substantial erosion or siltation on- or off-site;	No Impact
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	No 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	No Impact
(iv) impede or redirect flood flows?	No Impact
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation?	No Impact
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	No Impact

The information in this section is based, in part, on the Stormwater Data Report (SWDR) (Appendix B10), the Hydraulic Report (Appendix B4), and Project Drawings: Impervious Areas prepared by Caltrans in 2024.

The proposed Project will replace the existing SR-186 bridge over the All-American Canal. Most of the water from the Colorado River is diverted to the All-American Canal that begins at Yuma, Arizona. The canal is the Imperial Valley's only water sources and provides drinking water to 9 cities and over 500,000 acres of farmland in the valley.

The canal is a man-made, concrete lined aqueduct that is not considered a waterbody or natural drainage. The Colorado River Basin Quality Control Board (CRBQCB) Region 7 has jurisdiction within the project limits. There are no total maximum daily loads (TMDLs) currently listed within the project limits, and the canal is not on the 303(d) list of impaired waters.

The project areas is greater than one acre; therefore, Caltrans must meet requirements set forth under the National Pollutant Discharge Elimination System (NPDES) Permit

mandated by the Federal Clean Water Act for discharge of storm water runoff, the project will comply with NPDES requirements.

Construction of the proposed Project would result in 24.34 acres of disturbed soil and result in 2.46 acres of net new impervious surface. Because the Project area exceeds 1-acre in disturbed soil, a Storm Water Pollution Prevention Program (SWPPP) will be prepared prior to construction to establish project-specific permanent and temporary BMPs. During the design phased, Water Pollution Control Plans will be prepared to determine the minimum control requirements to be included in the SWPPP.

Standard erosion control practices will be implemented to minimize soil erosion following construction activities. Typical measures utilized during construction include applications of fiber rolls for slope stability and sediment control, temporary drainage inlet protection, temporary concrete washouts for concrete spoils, street sweeping, contour grading, temporary silt fence, and temporary hydraulic mulch.

The Project would not require use of groundwater for construction or operation. Although groundwater is found within the project limits, it is anticipated that water needed during construction activities would be trucked in. Further, once construction is complete, maintenance activities would require minimal amounts of water which would be trucked in. No new groundwater sources would be required, nor would groundwater be used from any existing groundwater wells for Project construction or operation. No impacts to groundwater basin recharge or management would occur.

The proposed Project would not alter existing drainage patterns in the area, nor impede drainage flows, nor exceed the capacity of any stormwater drainage. The existing drainage in the Project area flows off the edge of the roadway or is directed by dikes to over side drains. Stormwater from the eastbound off-ramp is currently treated by the Quechan Casino retention basin. Storm water from SR-186, the westbound off-ramp, westbound on-ramp, and eastbound on-ramp flows into desert washes and ditches and is discharged into the All-American Canal. Although the project will result in 2.46 acres of net new impervious surface, as part of the proposed Project, a detention basin will be placed on the western side of SR-186 just prior to the bridge to treat water flows from the new roadway along its western edge. Water flowing from the bridge deck and along and along the western edge of the highway will be directed down the slope and away from the canal near the south end of the new bridge where it crosses the All-American Canal. Water flowing along the eastern edge of the highway will be channelized on the shoulder along hot mix asphalt (HMA) dike and into a drainage inlet where it will be piped across the highway and dispersed south of the Canal. Therefore, no impacts related to drainage systems would occur.

The proposed Project site is located in southeastern California, approximately 140 miles east of the Pacific Ocean. As such, there is no risk of tsunami at the Project site. Seiches are standing waves in an enclosed or partially enclosed body of water and are most commonly causes by seismic activity. As previously described, the project is in a seismically active area. However, the proposed Project replaces an existing bridge structure and does not include new facilities. As such, the risk associated with seiches

is no greater than what currently exists. The Project areas is located within a FEMA Zone D flood plain zone. Zone D is an area that has not be studied for flood hazards; flood hazards are undetermined, but possible. The replacement bridge will be designed to minimize risks from flooding. Therefore, risk of release of pollutants due to the inundation of the Project area as a result of flood, tsunami or seiche are minimal. No impacts would occur.

The Project is not expected to violate any water quality standards and measures would be taken during construction and throughout operation to prevent contaminants from leaving the site by runoff . A 401 certification is not required because the project does not involve discharges of dredged or fill material to waters of the United States, including wetlands and other water bodies or involve construction of hydroelectric facilities. Compliance with RWQCB requirements, an NPDES permit, implementation of construction phase SWPPPs, the Project would not conflict with or obstruct implementation of any groundwater management plans. No impacts would occur.

2.1.11 Land Use and Planning

Would the Project:

Question	CEQA Determination
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?	No Impact

There are no established communities within the Project site and surrounding area. The nearest community is the Sleepy Hollow RV Park, approximately 5,000 ft southwest of the Project site. Imperial County designates the land use of the Project site and surrounding area as Recreation/Open Space. The Project site and surrounding area do not have zoning designations as this area is within the Fort Yuma Indian Reservation. Surrounding land uses includes the I-8 highway to the north, open space and the All-American Canal and Imperial County Irrigation facilities to the east, open space, the Quechan Casino Resort and a facility building to the west, and lastly the Alamo Canal and California/Arizona state border to the south. The general area consists of water systems, roadway systems, open spaces, and the Quechan casino.

State Route 186 (SR 186), commonly referred to as Algodones Road, is a California state highway linking Interstate 8 (I-8) in Imperial County to the U.S.–Mexico border close to the Colorado River. The route extends from its starting point at the Andrade Port of Entry, facilitating connectivity with Los Algodones, Baja California, to its conclusion near Araz Junction in Winterhaven, California. The proposed Project is located on State Route 186 (SR-186) from PM 0.5 to PM 2.0 in Imperial County. SR-186 is in the eastern portion of Imperial County and operates as a two-lane conventional highway. Predominantly traveling in a north/south direction for over two miles, the route

is located mostly on an easement within Quechan tribal land in the Fort Yuma Indian Reservation and provides access to the Andrade Port of Entry (POE) for vehicles travelling to and from Mexico.

An updated land use agreement will be required outlining how Caltrans can utilize tribal land for the Project.

Additionally, this non-capacity increasing Project proposes to realign a portion of State Route 186 (SR 186) and construct a new bridge over the All-American Canal. The new bridge, additional roadway, and removal of roadside vegetation would further shift the character of the site to be transportation oriented due to the increased paving, additional guardrail, end treatments and signage. Therefore, no impacts would occur. No mitigation measures are required.

Imperial County designates the land use of the Project site and surrounding areas as Recreation/Open Space. The Project site and surrounding areas does not have zoning designations as this area is within Fort Yuma Indian Reservation. Surrounding land uses includes the I-8 highway to the north, open space and the All-American Canal and Imperial County Irrigation facilities to the east, open space, the Quechan Casino Resort and a facility building to the west, and lastly the Alamo Canal and California/Arizona state border to the south. The general area consists of water systems, roadway systems, open spaces, and a casino.

The proposed Project would not change any existing community boundaries or physically divide an established community. The proposed Project would not result in new zoning or land use classifications that could open new areas for development or otherwise divide an existing community. Therefore, no impacts would occur to land use and planning. No mitigation is required.

2.1.12 Mineral Resources

Would the Project:

Question	CEQA Determination
a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?	No 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?	No Impact

The proposed Project site is designed by Imperial County General Plan as Recreation/Open Space. The Recreation/Open Space category recognizes the unique recreational character of Imperial County and includes desert, mountain, and waterfront areas with the potential for development as public or private parks and recreation facilities in appropriate areas. The Recreation/Open Space category also restricts the

intensity of uses on lands important for the preservation of natural resources including areas for managed production of mineral resources.

A number of mineral resources in Imperial County are currently being extracted. These mineral resources include gold, gypsum, sand, gravel, lime, clay, stone, kyanite, limestone, sericite, mica, tuff, salt, potash, and manganese. Several issues influence the extraction of mineral deposits in Imperial County, including the location of geologic deposition, the potential for impacts to the environment, and land use conflicts. As a result, the extraction of mineral resources is limited to a relatively small number of sites throughout the County.

Figure 8 of the County's General Plan illustrates that there are no known mineral resources within or near the Project site.

Additionally, The United States Geological Survey (USGS) and California Department of Conservation, Geological Survey Division provide online tools for analyzing mineral resources. The USGS Mineral Resources Data System does not identify any records within the Project site and surrounding areas. The CGS produces Mineral Land Classification (MLC) studies that identify areas with potentially important mineral resources that should be considered in local and regional planning. There are no mineral resources identified within the Project site and surrounding areas, as the site is not near an MLC area (USGS 2024). Additionally, the nearest CGS identified mine is approximately 1.1 mile southwest of the site (CGS 2024).

Thus, there are no known mineral resources located near the Project site. The proposed Project is a non-capacity improvement Project. No impacts would occur. Mitigation is not required.

2.1.13 Noise

Would the Project result in:

Question	CEQA Determination
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 two nautical 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

The noise study area encompasses all developed and undeveloped land uses surrounding the Project limits, with a focus on noise-sensitive land uses. In general, noise-sensitive land uses include areas were serenity and quiet are of extraordinary significance, such as residential land uses, and community uses such as hospital, schools, and cemeteries, and parks. As noted in Section 2.2.1, Existing and Future Land Use, Section 2.2.3, Parks and Recreation Facilities, there are no noise-sensitive land uses in the Project area.

During construction of the proposed Project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. No adverse noise impacts from construction are anticipated because construction would be conducted in accordance with Caltrans Standard Specifications Section 14.8-02. Construction noise would be short-term, intermittent, and overshadowed by local traffic noise. Construction activities could cause intermittent localized concern from vibration in the Project area. Processes such as earth moving with bulldozers, the use of vibratory compaction rollers, demolitions, or pavement braking may cause construction related vibration impacts such as human annoyance or, in some cases, building damage. There are cases where it may be necessary to use this type of equipment in close proximity to residential buildings. The vibration levels created by the normal movement of vehicles including graders, front loaders, and backhoes used for construction are the same order of magnitude as the groundborne vibration created by heavy vehicles traveling on streets and highways. Therefore, operating equipment would not generate excessive groundborne noise or vibration. No permanent adverse impacts would occur, and minimization measures would be used to the fullest extent possible.

Any noise increases during construction would be temporary and BMPs described below would be used to lessen its effects. Construction noise is regulated by California Department of Transportation's Standard Specifications, 2024, Section 714-8.02 Noise Control Requirements, which states that noise resulting from work activities must be monitored and not to exceed 86 dBA Lmax at 50 feet from the job site from 9:00 pm to 6:00 am.

As further described in section 1.2.5, Noise, control and minimization measures N-1 and N-2 would be implemented to lessen impacts from construction noise.

2.1.14 Population and Housing

Would the Project:

Question	CEQA Determination
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)?	No Impact
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	No Impact

The proposed Project is anticipated to address the deficiencies of the existing roadway and canal crossing by constructing a new bridge that meets Caltrans Highway Design Standards for current and future traffic volumes, design speed, and structural capacity. The new bridge would improve safety and better facilitate international and interregional movement of people, goods, and services.

Therefore, the proposed Project would not increase capacity or access, and thus; would not directly or indirectly induce population growth in the area. The Project would not add new homes or businesses and would not extend any roads or other infrastructure, displacement of people and homes would not occur. The proposed Project is a non-capacity increasing Project, as the Project would include realigning a portion of SR 186 and construct a new bridge over the All-American Canal. The new bridge will improve safety and better facilitate international and interregional movement of people, goods, and services.

2.1.15 Public Services

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 following public services:

Question	CEQA Determination
a) Fire protection?	No Impact
b) Police protection?	No Impact
c) Schools?	No Impact
d) Parks?	No Impact
e) Other public facilities?	No Impact

The proposed Project is a non-capacity increasing Project, as the Project would include a realigning portion of SR 186 and construct a new bridge over the All-American Canal. The new bridge will improve safety and better facilitate international and interregional movement of people, goods, and services.

Fire protection is currently provided to the County of Imperial by the Imperial County Fire Department. A total of three stations are staffed and operated by the County of Imperial. The headquarters is located in Imperial. Two substations are located in Heber and Seeley. The staff at these three stations includes a fire chief, an assistant fire chief, 13 fire fighters, three shift captains, one training officer, one fire prevention officer, and three fire engine mechanics. The average response time is 8 to 10 minutes.

The nearest fire protection service to the Project site is the Imperial County Fire Department Station #8 (518 Railroad Ave, Winterhaven, CA 92283), approximately 5.6 miles east of the site.

The proposed Project is a non-capacity development Project and would not increase the demand for fire protection services.

The Imperial County Sheriff's Department states that the County's service goal is 1.5 deputies per 1,000 population. Given the County's vast open space in unincorporated areas, patrol functions and traffic law enforcement are used. County Sheriff patrol is conducted by uniformed deputies in clearly marked law enforcement vehicles in assigned jurisdictional areas of Imperial County.

Additionally, the California Highway Patrol (CHP) serves the Project site The CHP Station #620, Winterhaven Area (1 Killingsworth Drive Felicity, CA 92283), is approximately 2.5 miles west of the Project site.

Aligned with the CHP's Border Division, the office oversees patrols on Interstate 8 from Highway 98 east to the Arizona State line, Highway 78 from Ogilby Rd. east to the Riverside County line, SR-186 from Interstate 8 south to the international border with Mexico, and 400 miles of unincorporated county roadways. The Area ensures safety and security for residents, commuters, and tourists traveling between San Diego and Phoenix, AZ. Notable recreational areas include the Imperial Sand Dunes and the Colorado River, attracting visitors on weekends and holidays. Winterhaven shares its eastern border with Yuma, AZ, across the Colorado River, with a population exceeding 90,000 in the summer and rising to over 180,000 in the winter months.

The proposed Project is a non-capacity development Project and would not increase the demand for police protection services.

The Project site is located within the Holtville Unified School District, however there are no schools located within the Project site and surrounding areas. The nearest schools in the district are in Holtville, approximately 35 miles northwest of the site.

The proposed Project is a non-capacity development Project and would not increase the demand for school services.

Parks within the unincorporated area of the County are classified by a combination of various factors including size, number of amenities, location, ease of access, and oversight (Federal, State, or County). There are five different park classifications: Limited Facility Park, Neighborhood Park. Community Park, Regional Park, State and Federal Parks.

There are no neighborhood parks pr regional parks within the vicinity of the Project site.

Additionally, the proposed Project is a non-capacity development Project and would not increase the demand for park services.

See the next section 3.2.16 Recreation, for further analysis.

The Imperial Irrigation District (IID) provides electricity to the County of Imperial and parts of Riverside and San Diego Counties. The District serves more than 70,000 customers.

The Southern California Gas Company provides gas service to the County of Imperial. The availability of gas service is based upon present conditions of gas supply and regulatory policies. As a public utility, the Southern California Gas Company is under the jurisdiction of the California Public Utilities Commission. The gas company can also be affected by actions of federal regulatory agencies.

The Picacho landfill serves the Winterhaven/Bard area and is located on land owned by the Quechan Indian Reservation.

There are no libraries service the Project area and surrounding area. The nearest library is in Yuma County.

Additionally, the proposed Project is a non-capacity development Project and would not increase the demand for other public facilities such as utilities, libraries, solid waste management, and telecommunications.

2.1.16 Recreation

Question	CEQA Determination
a) Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	No Impact
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

Parks within the unincorporated area of the County are classified by a combination of various factors including size, number of amenities, location, ease of access, and oversight (Federal, State, or County). There are five different park classifications: Limited Facility Park, Neighborhood Park. Community Park, Regional Park, State and Federal Parks.

There are no neighborhood parks or regional parks within the vicinity of the Project site.

The State maintains four major park areas in Imperial County, which include the Salton Sea State Recreation Area, the Picacho State Recreation Area, the Ocotillo Wells State Vehicular Recreation Area, and a portion of the Anza-Borrego Desert State Park. The Federal government's main parkland area is the Imperial Sand Dunes Recreation and Wilderness Area. Both Federal and State parkland are in wilderness areas of the

County, serving to protect wildlife habitat while providing for outdoor recreational opportunities. However, the Project site is not located near a major park area.

Additionally, the proposed Project is a non-capacity increasing Project and would not construct or cause to expand, recreational facilities. The proposed Project would include realigning a portion of SR 186 and construct a new bridge over the All-American Canal. The new bridge will improve safety and better facilitate international and interregional movement of people, goods, and services.

2.1.17 Transportation

Would the Project:

Question	CEQA Determination
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)?	No 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)?	No Impact
d) Result in inadequate emergency access?	No Impact

The information in this section is based, in part, on the VMT Statement by Caltrans in December 2024 (Appendix B15). This section is also based on the Exempt From Air Quality Conformity Determination Per 40 CFR 93.126 (Appendix B3) and Transportation Air Quality Conformity Findings Checklist (Appendix B12).

The Project does not conflict with plans, ordinances or policy addressing transportation alternatives. The proposed Project is a non-capacity increasing Project, as the Project would include realigning a portion of SR 186 and construct a new bridge over the All-American Canal. Thus, a VMT analysis is not needed. No impacts would occur. Mitigation is not required.

The proposed Project is a non-capacity increasing Project, as the Project would include a realigning portion of SR 186 and construct a new bridge over the All-American Canal. Thus, operationally, the Project would improve emergency access. Temporary construction impacts could have the potential to impact emergency access during construction. As previously mentioned, a VMT analysis is not required for the proposed project, as it meets the screening criteria for a project “Not likely to lead to a measurable and substantial increase in VMT” pursuant to Section 5.1.1 of the Transportation Analysis under CEQA. The Transportation Analysis Framework (TAF) and Transportation Analysis under CEQA (TAC) guide transportation impact analysis for

projects on the State Highway System as part of the CEQA process. Caltrans has prepared these documents to guide implementation of SB 743. The TAF and TAC establish Caltrans guidance on how to analyze induced travel associated with transportation projects and how to determine impact significance under CEQA, respectively.

The TAC requires analysis for induced travel caused by transportation projects, as measured in VMT, as a negative transportation impact under CEQA, and seeks to minimize that impact. Caltrans has developed a review process that screens out certain types of projects not likely to lead to measurable and substantial increase in VMT. These projects may be "screened" from preparing an induced travel analysis. The Caltrans District 11 Environmental Division determined that the type of work being proposed in this project meets the screening criteria of project types that are not likely to lead to a measurable and substantial increase in vehicle travel pursuant to Section 5.1.1 of the TAC. Section 5.1.1 of the TAC provides a list of projects that meet the VMT screening criteria and are therefore not required to undergo VMT analysis. This list of screened project types comes directly from the OPR Technical Advisory on Evaluating transportation Impacts in CEQA.

The proposed project would not increase capacity on the highway system, and it qualifies as a Project Type Not Likely to Lead to a Measurable and Substantial Increase in Vehicle Travel. Caltrans proposes to build a new bridge (replacement bridge) adjacent to the existing bridge. The travelling public would no longer have access to the retired bridge. The lane configuration of the new bridge is the same as the existing bridge, two-lanes in each direction. The new bridge structure will not be wider, to allow for future lanes. The approach roads will be realigned to meet the new bridge with the same number of lanes. Therefore, this is effectively a bridge replacement project and highway realignment to provide access to the new bridge with no increase in roadway capacity. Additionally, an in-house modeling exercise was conducted, with the results indicating that the project would not cause a significant transportation impact and would not be supported by substantial evidence, as defined in CEQA Guidelines §15384, with enough relevant information and reasonable inferences that a fair argument could be made to support a significance conclusion.

Additionally, the proposed Project includes a Traffic Management Plan which takes into account emergency response actions and evacuations that may be required to occur through the construction areas, including during temporary closures. Coordination with California Highway Patrol and local emergency response agencies is included in the Traffic Management Plan to avoid impairment of any response or evacuation.

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, 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 Determination
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	No Impact
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	No Impact

An archaeological and architectural field surveys were conducted on May 20, 2024, where the APE was accessible and permission to enter was obtained from the Quechan Tribe. During the field surveys, a designated Tribal monitor accompanied the survey staff. The surveys identified a total of seven historic properties (four Native American cultural resources and three build environment resources). In order to avoid adverse effects to the identified resources during construction of the Project, an action plan was developed in this report to implement Environmentally Sensitive Areas (ESAs) and the Secretary of the Interior's Standards for the Treatment of Historic Properties (Standards), in accordance with 36 Code of Federal Regulations (CFR) Part 68.

The results of the HPSR (Appendix B16) indicated the proposed Project would result in No Adverse Effect to the cultural resources identified within the APE and described above. During construction, the Native American Cultural Resources identified within the APE will be protected by the establishment of an Environmental Sensitive Area (ESA), as well as archaeological and Native American monitoring, controlled grading within archaeological monitoring areas (AMA), and Cultural Resources Sensitivity Training, to prevent any inadvertent impacts during construction. Environmental Commitments CR-1 through CR-5 would be implemented as part of the proposed project.

2.1.19 Utilities and Service Systems

Would the Project:

Question	CEQA Determination
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?	No Impact
b) Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years?	No 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?	No Impact
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	No Impact

The proposed Project is a non-capacity increasing Project, as the Project would include a realigning portion of SR 186 and construct a new bridge over the All-American Canal. Lane closures and detours within the Project area would be required to construct the Build Alternative. During final design, a Transportation Management Plan (TMP) will be developed for the Project to minimize construction-related delays and inconvenience to the Project area residents, employees, and the traveling public.

Utility investigations have identified the location and extent of existing service lines within the Project. The Project would require relocating some utilities. There are existing 115 kilovolt (KV) overhead electrical lines that would need to be relocated and overhead utility lines would be raised to maintain the required clearance above the local roadways. The relocation of utilities would result in localized construction impacts that will require coordination and temporary measures to maintain service.

To minimize potential effects, coordination with the local utility companies is required during final design. Notifications to any affected parties would be made in advance by the utility provider and/or Public Information Officer to minimize service disruption.

In addition, prior to construction activities, the construction contractor would contact utilities, DigAlert services, and/or other applicable entities to mark underground facilities, as needed.

2.1.20 Wildfire

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

Question	CEQA Determination
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	No 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?	No 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?	No 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?	No Impact

The proposed Project is a non-capacity increasing Project, as the Project would include a realigning portion of SR 186 and construct a new bridge over the All-American Canal. Thus, operationally, the Project would improve emergency access. Temporary construction impacts could have the potential to impact emergency access during construction.

However, the proposed Project includes a Traffic Management Plan which takes into account emergency response actions and evacuations that may be required to occur through the construction areas, including during temporary closures. Coordination with California Highway Patrol and local emergency response agencies is included in the Traffic Management Plan to avoid impairment of any response or evacuation.

The Project site is outside a State Responsibility Area, and not within a Very High Fire Severity Zone (VHFSZ) (Cal Fire 2024). The proposed Project would not exacerbate wildfire risks due to slope, prevailing winds and other factors. Additionally, the proposed Project would provide wider shoulders and require utility relocation along an existing roadway corridor. No additional water sources would be required. The Project will also incorporate materials that provide slope stability and prevent downstream exposure to runoff. The drainage features of the proposed alignment will not change the receiving waters.

2.1.21 Mandatory Findings of Significance

Question	CEQA Determination
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?	No Impact
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)?	No Impact
c) Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	No Impact

The proposed project involves constructing a new bridge across the All-American Canal, which will not impact disturbed wetlands or jurisdictional waters of the U.S. and State. As a result, compensatory mitigation, and permits (Section 404, 401 Water Quality Certification, and Section 1602 Lake and Streambed Alteration) are not required. The project will avoid impacts to federally and state-listed species, and if any changes occur that could affect these species, Caltrans will initiate appropriate consultations. The canal, home to animal species, will be avoided during construction, and no impacts to special-status species are expected.

Migratory birds could nest in the area, but construction measures (MTB-1 and MTB-2) will minimize impacts to these birds, as protected by the Migratory Bird Treaty Act. Invasive species and noxious weeds identified in the area will be managed through measures (INV-1 through INV-3) to prevent their spread during construction.

Once completed, the new bridge will have the same number of lanes as the existing one and will not increase traffic capacity. As a result, the risk of invasive species spread from the new bridge will remain similar to current conditions. Maintenance vehicles will also follow measures to minimize invasive species spread.

Additionally, the proposed project is not expected to conflict with or obstruct the implementation of the applicable air quality plan. The Project does not involve increasing the number of travel lanes or significantly altering traffic patterns, ensuring consistency with air quality management goals. Since the Project does not increase vehicle miles traveled (VMT) and involves no demolition or rehabilitation of the existing

bridge, no cumulatively considerable net increase of any criteria pollutant is expected. While construction activities may result in temporary emissions, these are considered minor and unavoidable. Additionally, a VMT analysis is not required for the proposed project, as it meets the screening criteria for a project “Not likely to lead to a measurable and substantial increase in VMT” pursuant to Section 5.1.1 of the Transportation Analysis under CEQA.

2.2 CLIMATE CHANGE

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the Earth's climate system. The Intergovernmental Panel on Climate Change, established by the United Nations and World Meteorological Organization in 1988, is devoted to greenhouse gas (GHG) emissions reduction and climate change research and policy. Climate change in the past has generally occurred gradually over millennia, or more suddenly in response to cataclysmic natural disruptions. The research of the Intergovernmental Panel on Climate Change and other scientists over recent decades, however, has unequivocally attributed an accelerated rate of climatological changes over the past 150 years to GHG emissions generated from the production and use of fossil fuels.

Human activities generate GHGs consisting primarily of carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF_6), and various hydrofluorocarbons (HFCs). CO_2 is the most abundant GHG; while it is a naturally occurring and necessary component of Earth’s atmosphere, fossil-fuel combustion is the main source of additional, human-generated CO_2 that is the main driver of climate change. In the U.S. and in California, transportation is the largest source of GHG emissions, mostly CO_2.

The impacts of climate change are already being observed in the form of sea level rise, drought, extended and severe fire seasons, and historic flooding from changing storm patterns. The most important strategy to address climate change is to reduce GHG emissions. Additional strategies are necessary to mitigate and adapt to these impacts. In the context of climate change, “mitigation” involves actions to reduce GHG emissions to lessen adverse impacts that are likely to occur. “Adaptation” is planning for and responding to impacts to reduce vulnerability to harm, such as by adjusting transportation design standards to withstand more intense storms, heat, and higher sea levels. This analysis will include a discussion of both in the context of this transportation Project.

2.2.1 Regulatory Setting

2.2.1.1 Federal

To date, no nationwide numeric mobile-source GHG reduction targets have been established, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the Project level.

The National Environmental Policy Act (NEPA) (42 United States Code [USC] Part 4332) requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or Project. In January 2023, the White House CEQ issued updated and expanded interim National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change (88 Fed. Reg. 1196) (CEQ NEPA GHG Guidance), in accordance with EO 14057, *Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability*, 86 FR 70935 (Dec. 13, 2021) and EO 14008, *Tackling the Climate Crisis at Home and Abroad*. The CEQ guidance does not establish numeric thresholds of significance but emphasizes quantifying reasonably foreseeable lifetime direct and indirect emissions whenever possible. This guidance also emphasizes resilience and environmental justice in Project-level climate change and GHG analyses.

The Federal Highway Administration (FHWA) recognizes the threats that extreme weather, sea level rise, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. FHWA therefore supports a sustainability approach that assesses vulnerability to climate risks and incorporates resilience into planning, asset management, Project development and design, and operations and maintenance practices (FHWA 2022). This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values— “the triple bottom line of sustainability” (FHWA n.d.). Program and Project elements that foster sustainability and resilience also support economic vitality and global efficiency, increase safety and mobility, enhance the environment, promote energy conservation, and improve the quality of life.

Early efforts by the federal government to improve fuel economy and energy efficiency to address climate change and its associated effects include The Energy Policy and Conservation Act of 1975 (42 USC Section 6201); and Corporate Average Fuel Economy (CAFE) Standards. The U.S. Department of Transportation’s National Highway Traffic and Safety Administration (NHTSA) sets and enforces corporate average fuel economy (CAFÉ) standards for on-road motor vehicles sold in the United States. The Environmental Protection Agency (U.S. EPA) calculates average fuel economy levels for manufacturers, and also sets related GHG emissions standards for vehicles under the Clean Air Act. Raising CAFE standards leads automakers to create a more fuel-efficient fleet, which improves our nation’s energy security, saves consumers money at the pump, and reduces GHG emissions (U.S. DOT 2014). These standards are periodically updated and published through the federal rulemaking process.

2.2.1.2 State

California has been innovative and proactive in addressing GHG emissions and climate change by passing multiple Senate and Assembly bills and executive orders (EOs).

In 2005, EO S-3-05 initially set a goal to reduce California’s GHG emissions to 80 percent below year 1990 levels by 2050, with interim reduction targets. Later EOs and Assembly and Senate bills refined interim targets and codified the emissions reduction goals and strategies. The California Air Resources Board (ARB) was directed to create

a climate change scoping plan and implement rules to achieve “real, quantifiable, cost-effective reductions of greenhouse gases.” Ongoing GHG emissions reduction was also mandated in Health and Safety Code (H&SC) Section 38551(b). In 2022, the California Climate Crisis Act was passed, establishing state policy to reduce statewide human-caused GHG emissions by 85 percent below 1990 levels, achieve net zero GHG emissions by 2045, and achieve and maintain negative emissions thereafter.

Beyond GHG reduction, the State maintains a climate adaptation strategy to address the full range of climate change stressors and passed legislation requiring state agencies to consider protection and management of natural and working lands as an important strategy in meeting the state’s GHG reduction goals.

2.2.1.3 Regional

Imperial County Regional Climate Action Plan

The purpose of the Imperial Valley Regional Climate Action Plan (Regional CAP) is to address the impacts of climate change and reduce greenhouse gas (GHG) emissions in the Imperial Valley region which includes the County of Imperial (County) and the cities of Brawley, Calexico, Calipatria, Holtville, El Centro, Imperial, and Westmorland. The Regional CAP is consistent with and complementary to statewide legislation and regulatory mandates, and establishes local strategies, measures, and actions aimed at reducing GHG emissions.

The primary objective of the Regional CAP is to identify strategies and measures that would assist local agencies in reducing GHG emissions to levels consistent with State targets and goals. CARB’s California 2017 Climate Change Scoping Plan (2017 Scoping Plan) provides a pathway to achieving State targets as directed by AB 32, SB 32, and Executive Orders B-30-15 and S-3-05. These targets are consistent with prevailing climate science and the state’s role in stabilizing global warming below dangerous thresholds. The State’s legislative goals aim to reduce statewide emissions to:

- 1990 levels by 2020;
- 40 percent below 1990 levels by 2030; and
- 80 percent below 1990 levels by 2050.

2.2.2 Environmental Setting

The proposed Project is in a rural area, with a primarily natural resources based, open space, agricultural and tourism economy. SR 186 is the main transportation route to and through the area for both passenger and commercial vehicles. The nearest alternate route is I-8 2,000 feet to the north. Traffic counts are low. Railroad tracks running east and west, north of I-8, and north of SR-180 right-of-way, carrying freight trains. Caltrans and Imperial County Transportation Commission (ICTC) guides transportation

development. The Imperial County General Plan Circulation, Renewable Energy/Transmission, and Natural Environment elements address GHGs in the Project area.

2.2.2.1 GHG Inventories

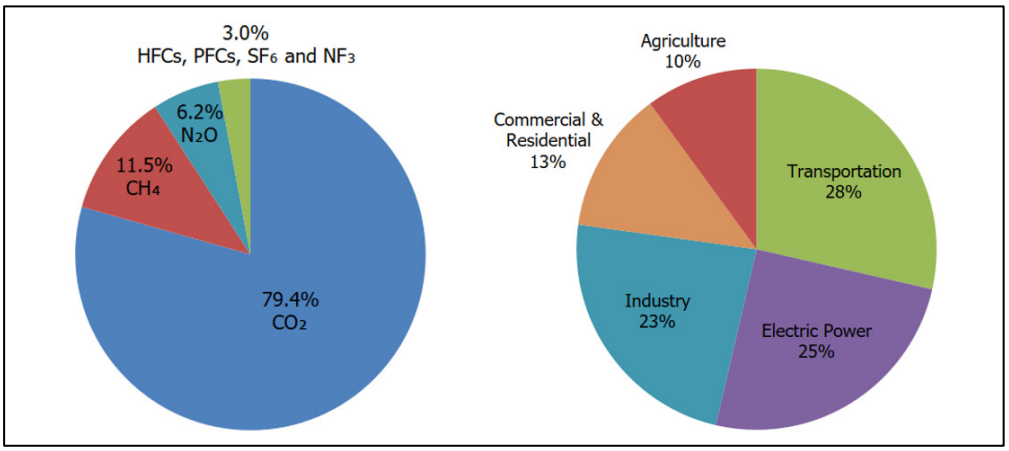
A GHG emissions inventory estimates the amount of GHGs discharged into the atmosphere by specific sources over a period of time. Tracking annual GHG emissions allows countries, states, and smaller jurisdictions to understand how emissions are changing and what actions may be needed to attain emission reduction goals. U.S. EPA is responsible for documenting GHG emissions nationwide, and the ARB does so for the state of California, as required by H&SC Section 39607.4. Cities and other local jurisdictions may also conduct local GHG inventories to inform their GHG reduction or climate action plans.

National GHG Inventory

The annual GHG inventory submitted by the U.S. EPA to the United Nations provides a comprehensive accounting of all human-produced sources of GHGs in the United States. Total national GHG emissions from all sectors in 2021 were 5,586.0 million metric tons (MMT), factoring in deductions for carbon sequestration in the land sector. (Land Use, Land Use Change, and Forestry provide a carbon sink equivalent to 12% of total U.S. emissions in 2021 [U.S. EPA 2023a].) While total GHG emissions in 2021 were 17% below 2005 levels, they increased by 6% over 2020 levels. Of these, 79.4% were CO2, 11.5% were CH4, and 6.2% were N2O; the balance consisted of fluorinated gases. From 1990 to 2021, CO2 emissions decreased by only 2% (U.S. EPA 2023a).

The transportation sector's share of total GHG emissions increased to 28% in 2021 and remains the largest contributing sector. Transportation fossil fuel combustion accounted for 92% of all CO2 emissions in 2021. This is an increase of 7% over 2020, largely due to the rebound in economic activity following the COVID-19 pandemic (U.S. EPA 2023a, 2023b).

U.S. 2021 Greenhouse Gas Emissions

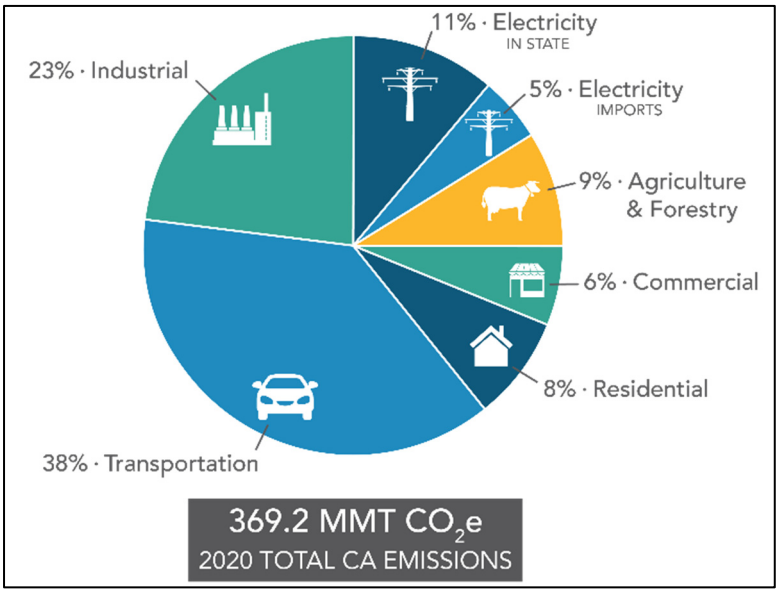


(Source: U.S. EPA 2023b)

State GHG Inventory

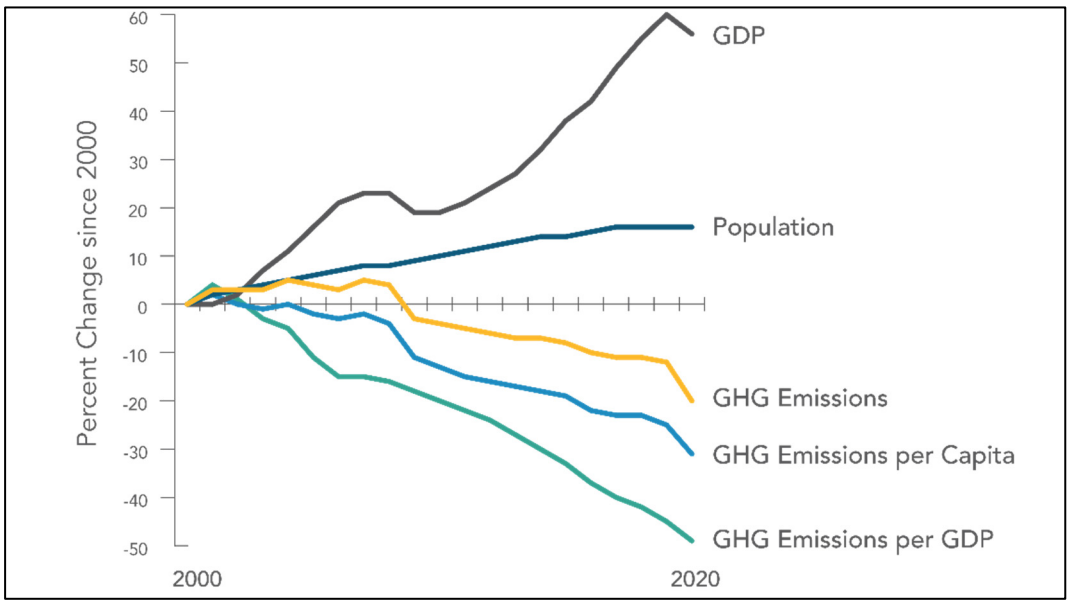
ARB collects GHG emissions data for transportation, electricity, commercial/residential, industrial, agricultural, and waste management sectors each year. It then summarizes and highlights major annual changes and trends to demonstrate the state's progress in meeting its GHG reduction goals. Overall statewide GHG emissions declined from 2000 to 2020 despite growth in population and state economic output (ARB 2022a).

California 2020 Greenhouse Gas Emissions by Economic Sector



(Source: ARB 2022a)

Change in California GDP, Population, and GHG Emissions since 2000



(Source: ARB 2022a)

AB 32 required ARB to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing GHG emissions to 1990 levels by 2020, and to update it every 5 years. The AB 32 Scoping Plan and the subsequent updates contain the main strategies California will use to reduce GHG emissions. ARB adopted the first scoping plan in 2008. The second updated plan, California's 2017 Climate Change Scoping Plan, adopted on December 14, 2017, reflects the 2030 target established in EO B-30-15 and SB 32. The *2022 Scoping Plan for Achieving Carbon Neutrality,* adopted September 2022, assesses progress toward the statutory 2030 reduction goal and defines a path to reduce human-caused emissions to 85 percent below 1990 levels and achieve carbon neutrality no later than 2045, in accordance with AB 1279 (ARB 2022b).

2.2.2.2 Regional Plans

As required by *The Sustainable Communities and Climate Protection Act of 2008*, ARB sets regional GHG reduction targets for California's 18 metropolitan planning organizations (MPOs) to achieve through planning future Projects that will cumulatively achieve those goals and reporting how they will be met in the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Targets are set at a percent reduction of passenger vehicle GHG emissions per person from 2005 levels. The proposed Project is included in the RTP/SCS for Southern California Association of Governments (SCAG). The regional reduction target for SCAG is -13 percent by 2035 (ARB 2021).

As part of the Imperial Valley Regional Climate Action Plan (Regional CAP), a greenhouse gas (GHG) emissions inventory and forecast were prepared for the region and each individual jurisdiction in Imperial Valley. This inventory and forecast estimate GHG emissions from communitywide activities, organized by emissions sector (i.e., energy, transportation, water, waste, and agriculture). GHG emissions quantities are expressed in terms of metric ton of carbon dioxide equivalent (MTCO2e). The regional and local inventories include GHG emissions estimates for the years 2005, 2012, and 2018. GHG emission forecasts provide an estimate of future emissions levels based on current trends and activities. The Regional CAP includes two emissions forecast scenarios for regional and local emissions: the business-as-usual (BAU) scenario, and the Legislatively Adjusted BAU scenario. A summary for the methodologies and regional estimates is provided in Chapter 3 of the Regional CAP. Additional details for inventory and forecast assumptions and data are provided in Appendices A and B of the Regional CAP.

In 2018, it is estimated that communitywide activities in the County generated approximately 2,840,144MTCO2e. Emissions from on-road and off-road transportation, which include emissions associated with fuel combustion in vehicles, account for the greatest contribution to emissions generated in the unincorporated county. Emissions from energy, which includes electricity and natural gas consumption, accounted for the second largest contribution to emissions. Generally, overall emissions have decreased

since 2005, including emissions from the energy, water, and waste sectors. However, emissions from on- and off-road transportation have increased by approximately 22 percent between 2005 and 2018. The 2005, 2012, and 2018 inventories by emissions sector for the County are summarized in Table 4.1-1 of the Regional Cap.

See table below for a list of policies and strategies from the two regional plans.

Regional and Local Greenhouse Gas Reduction Plans

Title	GHG Reduction Policies or Strategies
SCAG. Connect SoCal 2024 (2024-2050 RTP/SCS) November 2, 2023, Draft.	• Prioritize the most vulnerable populations and communities subject to climate hazards to help the people, places and infrastructure that are most at risk for climate change impacts. In doing so, recognize that disadvantaged communities are often overburdened • Support local and regional climate and hazard planning and implementation efforts • Support nature-based solutions to increase regional resilience of the natural and built environment • Promote sustainable water use planning, practices and storage that improve regional water security and resilience in a drier environment • Support an integrated planning approach to help local jurisdictions meet housing production needs in a drier environment • Support investments that are well-maintained and operated, coordinated, resilient and result in improved safety, improved air quality and minimized greenhouse gas emissions • Integrate the region's development pattern and transportation network to improve air quality, reduce greenhouse gas emissions and enable more sustainable use of energy and water • Support local and regional partners by identifying funding opportunities that will help achieve greenhouse gas emission reduction and provide technical assistance and resources, when available • Reduce hazardous air pollutants and greenhouse gas emissions and improve air quality throughout the region through planning and implementation efforts • Support investments that reduce hazardous air pollutants and greenhouse gas emissions
SCAG. ICTC. Imperial County Regional Climate Action Plan (Regional CAP)	• Consider various agricultural land and open space conservation strategies that allow developers to preserve lands and/or increase residential development density in smart growth infill areas by removing development potential of lands • Reduce Vehicle Miles Travelled • Reduce Fuel Consumption • Increase Energy Efficiency

Source: SCAG. Connect SoCal. Chapter 3. November 2023. Draft. Available at: https://scag.ca.gov/sites/main/files/file-attachments/23-2987-connect-socal-2024-draft-ch-03-our-plan-110223.pdf?1698262847

SCAG. ICTC. Imperial County Regional Plan. June 2021. Available at: https://www.imperialctc.org/assets/documents/transportation-plans-and-studies/ICTC-Regional-Climate-Action-Plan_FINAL.pdf

2.2.3 Project Analysis

GHG emissions from transportation Projects can be divided into those produced during operation and use of the State Highway System (SHS) (operational emissions) and those produced during construction. The primary GHGs produced by the transportation sector are CO_2, CH_4, N_2O, and HFCs. CO_2 emissions are a product of burning gasoline or diesel fuel in internal combustion engines, along with relatively small amounts of CH_4 and N_2O. A small amount of HFC emissions related to refrigeration is also included in the transportation sector. (GHGs differ in how much heat each traps in the atmosphere, called global warming potential, or GWP. CO_2 is the most important GHG, so amounts of other gases are expressed relative to CO_2, using a metric called "carbon dioxide equivalent," or CO_2e. The global warming potential of CO_2 is assigned a value of 1, and the GWP of other gases is assessed as multiples of CO_2.)

The CEQA Guidelines generally address greenhouse gas emissions as a cumulative impact due to the global nature of climate change (Pub. Resources Code, § 21083(b)(2)). As the California Supreme Court explained, "because of the global scale of climate change, any one Project's contribution is unlikely to be significant by itself." (Cleveland National Forest Foundation v. San Diego Assn. of Governments (2017) 3 Cal.5th 497, 512.) In assessing cumulative impacts, it must be determined if a Project's incremental effect is "cumulatively considerable" (CEQA Guidelines Sections 15064(h)(1) and 15130).

To make this determination, the incremental impacts of the Project must be compared with the effects of past, current, and probable future Projects. Although climate change is ultimately a cumulative impact, not every individual Project that emits greenhouse gases must necessarily be found to contribute to a significant cumulative impact on the environment.

2.2.3.1 Operational Emissions

The purpose of this Project is to address the deficiencies of the existing roadway and canal crossing by constructing a new bridge that meets Caltrans Highway Design Standards for current and future traffic volumes, design speed, and structural capacity. The new bridge will improve safety and better facilitate international and interregional movement of people, goods, and services.

The Project will not increase the vehicle capacity of the roadway. Caltrans proposes to build a new bridge (replacement bridge) adjacent to the existing bridge. The travelling public would no longer have access to the retired bridge. The lane configuration of the new bridge is the same as the existing bridge, two-lanes in each direction. The new bridge structure will not be wider, to allow for future lanes. The approach roads will be realigned to meet the new bridge with the same number of lanes. This type of Project is considered to cause minimal or no increase in operational GHG emissions. Because the Project would not increase the number of travel lanes on SR 186 no increase in vehicle

miles traveled (VMT) would occur. While some GHG emissions during the construction period would be unavoidable, no increase in operational GHG emissions is expected.

2.2.3.2 Construction Emissions

Construction GHG emissions would result from material processing and transportation, on-site construction equipment, and traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases. While construction GHG emissions are only produced for a short time, they have long-term effects in the atmosphere, so cannot be considered “temporary” in the same way as criteria pollutants that subside after construction is completed.

Use of long-life pavement, improved traffic management plans, and changes in materials can also help offset GHG emissions produced during construction by allowing longer intervals between maintenance and rehabilitation activities.

All construction contracts include Caltrans Standard Specifications related to air quality. Section 7-1.02A and 7 1.02C, Emissions Reduction, requires contractors to comply with all laws applicable to the Project and to certify they are aware of and will comply with all ARB emission reduction regulations. Section 14-9.02, Air Pollution Control, requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes. Certain common regulations, such as equipment idling restrictions, that reduce construction vehicle emissions also help reduce GHG emissions.

2.2.3.3 CEQA Conclusion

Caltrans is firmly committed to implementing measures to help reduce GHG emissions. These measures are outlined in the following section.

2.2.4 Greenhouse Gas Reduction Strategies

2.2.4.1 Statewide Efforts

In response to Assembly Bill 32, the Global Warming Solutions Act, California is implementing measures to achieve emission reductions of GHGs that cause climate change. Climate change programs in California are effectively reducing GHG emissions from all sectors of the economy. These programs include regulations, market programs, and incentives that will transform transportation, industry, fuels, and other sectors to take California into a sustainable, cleaner, low-carbon future, while maintaining a robust economy (ARB 2022c).

Major sectors of the California economy, including transportation, will need to reduce emissions to meet 2030 and 2050 GHG emissions targets. The Governor’s Office of Planning and Research identified five sustainability pillars in a 2015 report: (1)

Increasing the share of renewable energy in the State's energy mix to at least 50 percent by 2030; (2) Reducing petroleum use by up to 50 percent by 2030; (3) Increasing the energy efficiency of existing buildings by 50 percent by 2030; (4) Reducing emissions of short-lived climate pollutants; and (5) Stewarding natural resources, including forests, working lands, and wetlands, to ensure that they store carbon, are resilient, and enhance other environmental benefits (OPR 2015).

The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital that the state build on past successes in reducing criteria and toxic air pollutants from transportation and goods movement. GHG emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of vehicle miles traveled (VMT). Reducing today's petroleum use in cars and trucks is a key state goal for reducing greenhouse gas emissions by 2030 (California Environmental Protection Agency 2015).

In addition, SB 1386 (Wolk 2016) established as state policy the protection and management of natural and working lands and requires state agencies to consider that policy in their own decision making. Trees and vegetation on forests, rangelands, farms, and wetlands remove carbon dioxide from the atmosphere through biological processes and sequester the carbon in above- and below-ground matter.

Subsequently, Governor Gavin Newsom issued Executive Order N-82-20 to combat the crises in climate change and biodiversity. It instructs state agencies to use existing authorities and resources to identify and implement near- and long-term actions to accelerate natural removal of carbon and build climate resilience in our forests, wetlands, urban greenspaces, agricultural soils, and land conservation activities in ways that serve all communities and in particular low-income, disadvantaged, and vulnerable communities. To support this order, the California Natural Resources Agency released *Natural and Working Lands Climate Smart Strategy* (California Natural Resources Agency 2022).

2.2.4.2 Caltrans Activities

Caltrans continues to be involved on the Governor's Climate Action Team as the ARB works to implement EOs S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. EO B-30-15, issued in April 2015, and SB 32 (2016), set an interim target to cut GHG emissions to 40 percent below 1990 levels by 2030. The following major initiatives are underway at Caltrans to help meet these targets.

Climate Action Plan for Transportation Infrastructure

The California Action Plan for Transportation Infrastructure (CAPTI) builds on executive orders signed by Governor Newsom in 2019 and 2020 targeted at reducing GHG emissions in transportation, which account for more than 40 percent of all polluting emissions, to reach the state's climate goals. Under CAPTI, where feasible and within existing funding program structures, the state will invest discretionary transportation

funds in sustainable infrastructure Projects that align with its climate, health, and social equity goals (California State Transportation Agency 2021).

California Transportation Plan

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. It serves as an umbrella document for all the other statewide transportation planning documents. The CTP 2050 presents a vision of a safe, resilient, and universally accessible transportation system that supports vibrant communities, advances racial and economic justice, and improves public and environmental health. The plan's climate goal is to achieve statewide GHG emissions reduction targets and increase resilience to climate change. It demonstrates how GHG emissions from the transportation sector can be reduced through advancements in clean fuel technologies; continued shifts toward active travel, transit, and shared mobility; more efficient land use and development practices; and continued shifts to telework (Caltrans 2021a).

Caltrans Strategic Plan

The *Caltrans 2020–2024 Strategic Plan* includes goals of stewardship, climate action, and equity. Climate action strategies include developing and implementing a Caltrans Climate Action Plan; a robust program of climate action education, training, and outreach; partnership and collaboration; a VMT monitoring and reduction program; and engaging with the most vulnerable communities in developing and implementing Caltrans climate action activities (Caltrans 2021b).

Caltrans Policy Directives and Other Initiatives

Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012) established a policy to ensure coordinated efforts to incorporate climate change into Caltrans decisions and activities. Other Director's policies promote energy efficiency, conservation, and climate change, and commit Caltrans to sustainability practices in all planning, maintenance, and operations. *Caltrans Greenhouse Gas Emissions and Mitigation Report* (Caltrans 2020) provides a comprehensive overview of Caltrans' emissions and current Caltrans procedures and activities that track and reduce GHG emissions. It identifies additional opportunities for further reducing GHG emissions from Department-controlled emission sources, in support of Caltrans and State goals.

2.2.4.3 Project-Level GHG Reduction Strategies

The following measures will also be implemented in the Project to reduce GHG emissions and potential climate change impacts from the Project.

2.2.5 Adaptation

Reducing GHG emissions is only one part of an approach to addressing climate change. Caltrans must plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage.

Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and in the frequency and intensity of wildfires. Flooding and erosion can damage or wash out roads; longer periods of intense heat can buckle pavement and railroad tracks; storm surges combined with a rising sea level can inundate highways. Wildfire can directly burn facilities and indirectly cause damage when rain falls on denuded slopes that landslide after a fire. Effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. Furthermore, the combined effects of transportation Projects and climate stressors can exacerbate the impacts of both on vulnerable communities in a Project area. Accordingly, Caltrans must consider these types of climate stressors in how highways are planned, designed, built, operated, and maintained.

2.2.5.1 Federal Efforts

Under NEPA Assignment, Caltrans is obligated to comply with all applicable federal environmental laws and FHWA NEPA regulations, policies, and guidance. Caltrans practices generally align with the 2023 CEQ interim Guidance on Consideration of Greenhouse Gas Emissions and Climate Change, which offers recommendations for additional ways of evaluating Project effects related to GHG emissions and climate change. These recommendations are not regulatory requirements.

The *Fifth National Climate Assessment*, published in 2023, presents the most recent science and "analyzes the effects of global change on the natural environment, agriculture, energy production and use, land and water resources, transportation, human health and welfare, human social systems, and biological diversity; [It] analyzes current trends in global change, both human-induced and natural, and Projects major trends for the subsequent 25 to 100 years … to support informed decision-making across the United States." Building on previous assessments, it continues to advance "an inclusive, diverse, and sustained process for assessing and communicating scientific knowledge on the impacts, risks, and vulnerabilities associated with a changing global climate" (U.S. Global Change Research Program 2023).

The U.S. Department of Transportation recognizes the transportation sector's major contribution of GHGs that cause climate change and has made climate action one of the department's top priorities (U.S. DOT 2023). FHWA's policy is to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. FHWA has developed guidance and tools for transportation planning that fosters resilience to climate effects and sustainability at the federal, state, and local levels (FHWA 2022).

The National Oceanic and Atmospheric Administration provides sea level rise Projections for all U.S. coastal waters to help communities and decision makers assess their risk from sea level rise. Updated Projections through 2150 were released in 2022 in a report and online tool (NOAA 2022).

2.2.5.2 State Efforts

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system. A number of state policies and tools have been developed to guide adaptation efforts.

California's Fourth Climate Change Assessment (Fourth Assessment) (2018) provides information to help decision makers across sectors and at state, regional, and local scales protect and build the resilience of the state's people, infrastructure, natural systems, working lands, and waters. The Fourth Assessment reported that if no measures are taken to reduce GHG emissions by 2021 or sooner, the state is Projected to experience an up to 8.8 degrees Fahrenheit increase in average annual maximum daily temperatures; a two-thirds decline in water supply from snowpack resulting in water shortages; a 77% increase in average area burned by wildfire; and large-scale erosion of up to 67% of Southern California beaches due to sea level rise. These effects will have profound impacts on infrastructure, agriculture, energy demand, natural systems, communities, and public health (State of California 2018).

Sea level rise is a particular concern for transportation infrastructure in the coastal zone. Major urban airports will be at risk of flooding from sea level rise combined with storm surge as early as 2040; San Francisco airport is already at risk. Miles of coastal highways vulnerable to flooding in a 100-year storm event will triple to 370 by 2100, and 3,750 miles will be exposed to temporary flooding. The Fourth Assessment's findings highlight the need for proactive action to address these current and future impacts of climate change.

To help actors throughout the state address the findings of California's Fourth Climate Change Assessment, AB 2800's multidisciplinary Climate-Safe Infrastructure Working Group published *Paying it Forward: The Path Toward Climate-Safe Infrastructure in California*. This report provides guidance on assessing risk in the face of inherent uncertainties still posed by the best available climate change science. It also examines how state agencies can use infrastructure planning, design, and implementation processes to respond to the observed and anticipated climate change impacts (Climate-Safe Infrastructure Working Group 2018.

EO S-13-08, issued in 2008, directed state agencies to consider sea level rise scenarios for 2050 and 2100 during planning to assess Project vulnerabilities, reduce risks, and increase resilience to sea level rise. It gave rise to the 2009 *California Climate Adaptation Strategy*, the Safeguarding California Plan, and a series of technical reports on statewide sea level rise Projections and risks, including the *State of California Sea-Level Rise Guidance Update* in 2018. The reports addressed the full range of climate change impacts and recommended adaptation strategies. The current *California Climate Adaptation Strategy* incorporates key elements of the latest sector-specific plans such as the *Natural and Working Lands Climate Smart Strategy*, *Wildfire and Forest Resilience Action Plan*, *Water Resilience Portfolio,* and the CAPTI (described above). Priorities in the 2023 *California Climate Adaptation Strategy* include acting in partnership with California Native American Tribes, strengthening protections for

climate-vulnerable communities that lack capacity and resources, implementing nature-based climate solutions, using best available climate science, and partnering and collaboration to best leverage resources (California Natural Resources Agency 2023).

EO B-30-15 recognizes that effects of climate change threaten California's infrastructure and requires state agencies to factor climate change into all planning and investment decisions. Under this EO, the Office of Planning and Research published *Planning and Investing for a Resilient California: A Guidebook for State Agencies*, to encourage a uniform and systematic approach to building resilience.

SB 1 Coastal Resources: Sea Level Rise (Atkins 2021) established statewide goals to "anticipate, assess, plan for, and, to the extent feasible, avoid, minimize, and mitigate the adverse environmental and economic effects of sea level rise within the coastal zone." As the legislation directed, the Ocean Protection Council collaborated with 17 state planning and coastal management agencies to develop the *State Agency Sea-Level Rise Action Plan for California* in February 2022. This plan promotes coordinated actions by state agencies to enhance California's resilience to the impacts of sea level rise (California Ocean Protection Council 2022).

2.2.5.3 Caltrans Adaptation Efforts

Caltrans Vulnerability Assessments

Caltrans completed climate change vulnerability assessments to identify segments of the State Highway System vulnerable to climate change effects of precipitation, temperature, wildfire, storm surge, and sea level rise.

The climate change data in the assessments were developed in coordination with climate change scientists and experts at federal, state, and regional organizations at the forefront of climate science. The findings of the vulnerability assessments guide analysis of at-risk assets and development of Adaptation Priority Reports as a method to make capital programming decisions to address identified risks.

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Appendix A Topics Considered but Determined not to be Relevant

As part of the scoping and environmental analysis carried out for the Project, the following environmental issues were considered.

Coastal Zone

There will be no effects to coastal resources because the Project is not located within the Coastal Zone. The Project site is over 150 miles from the coast and therefore is not within a designated California Coastal Commission coastal zone.

Wild and Scenic Rivers

According to the National Wild and Scenic Rivers System, the nearest Wild and Scenic Rivers are approximately 200 miles north, northwest of the Project site. Therefore, no impacts to Wild and Scenic Rivers are anticipated.

Farmlands/Timberlands

There are no lands affected by the Project which are under Williamson Act contract or that have farmland designation.[8] The Imperial County General Plan Land Use Element does not designate farmland near or adjacent to the Project site. The California Department of Conservation Farmland Mapping and Monitoring Program does not identify any Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or Williamson Act Contracted lands within or adjacent to the Project. Further, the Project is not located within any land use designated as Timberland Production Zones (TPZs). Therefore, no impacts to these resources are anticipated.

Growth

Caltrans conducted the first-cut screening in accordance with the *Caltrans Guidance for Preparers of Growth-Related, Indirect Impact Analyses (*Caltrans 2016) to determine whether there would be growth impacts from the proposed Project. Projects that do not increase capacity do not require an analysis of growth-related impacts. The proposed improvements, road realignment and bridge replacement, are safety improvements and are unlikely to change the accessibility of the area because the number of trips is not likely to increase substantially, would not affect travel speeds or times, and would not affect congestion. Additionally, while the Project type (realignment and bridge replacement) would increase the travel lane and shoulder widths to current standards, it would not increase capacity. Therefore, no growth-related impacts are anticipated.

[8] California Department of Conservation. California Important Farmland Finder. https://maps.conservation.ca.gov/dlrp/ciff/

The Project will replace an existing transportation facility to address structural and safety deficiencies. The Project will not result in the need for additional housing and associated services and will not increase capacity on the new facility.

Relocations and Real Property Acquisition

There are no homes or other improved real property in the construction area that would be displaced due to acquisition or require relocation. Therefore, no impacts related relocations and real property acquisitions are anticipated.

Air Quality

Based on the Exempt From Air Quality Conformity Determination Per 40 CFR 93.126 prepared for the Project by Caltrans in 2024 (Appendix B3), because the proposed Project consists of a realignment of a portion of SR 186 and replacement of the existing bridge over the All-American Canal, and is not capacity increasing, the proposed Project is exempt from air quality conformity determination. According to 40 Code of Federal Regulations (CFR) 93.126, Table 2, “widening narrow pavements or reconstructing bridges (no additional travel lanes)” are exempt from all air quality conformity requirements. Construction impacts related to air quality are discussed in Section 2.6, Construction Impacts.

Section 4(f)

There are no historic sites, parks and recreational resources, wildlife or waterfowl refuges, which meet the definition of a Section 4(f) resource, within the Project vicinity.

The Butterfield Overland National Historic Trail and the Juan Bautista de Anza National Historic Trail cross or are adjacent to the Project site. However, Public Law 95-625 states that no land or site located along a designated National Historic Trail is subject to the provisions of Section 4(f) unless such land or site is deemed to be of historical significance under the criteria for the National Register of Historic Places (NRHP) (Section 4(f) Tutorial https://www.environment.fhwa.dot.gov/env_topics/4f_tutorial/properties_historic.aspx)

Therefore, this Project is not subject to the provisions of Section 4(f) of the Department of Transportation Act of 1966.

Appendix B List of Environmental Technical Reports

SR 186 All-American Canal Bridge Project

IMPERIAL COUNTY, CALIFORNIA
DISTRICT 11 – IMP – 186 (PM 0.5-2.0)
11 - 43108 / 1120000096

Environmental Technical Reports

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List of Environmental Technical Reports

#	Title	Date
B0	2019 Federal Transportation Improvement Program Report	N/A
B1	Environmental Commitment Record	N/A
B2	Categorical Exclusion Checklist	December 30, 2024
B3	Exempt From Air Quality Conformity Determination Per 40 CFR 93.126	March 28, 2024
B4	Hydraulic Report	November 22, 2024
B5	Natural Environment Study (NES) Minimal Impacts	July 31, 2024
B6	Paleontological Resource Assessment Memorandum	July 3, 2024
B7	Project Drawings: Impervious Areas	N/A
B8	Review (0-Phase) of 'Sr-186 Bridge Over All-American Canal' Project	July 18, 2023
B9	Site Assessment Questionnaire	February 29, 2024
B10	Storm Water Data Report (SWDR)	December 17, 2024
B11	Structure Preliminary Geotechnical Report (SPGR)	November 7, 2023
B12	Transportation Air Quality Conformity Findings Checklist	December 30, 2024
B13	Visual Impact Assessment (VIA)	December 12, 2024
B14	Visual Study Memorandum	July 18, 2023
B15	VMT Decision Statement	December 18, 2024
B16	Historic Property Survey Report (HPSR) - *Under Separate Cover*	August 21, 2024
B17	Finding of No Adverse Effect	September 23, 2024

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Environmental Technical Report B0

2019 Federal Transportation Improvement Program

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2019 Federal Transportation Improvement Program
Amendment #19-27
Imperial County
Comparison Report
(in $000's)

Co.	Sys	RTPID	Project ID	Amd	Ver	Program	Rt	PMB	PME	Total Project Cost
Imperial	State Hwy	REG0701	IMP190901	19-27	1	NCN27	186			$4,500

SR-186 All American Canal Bridge Realignment and cosntruct new bridge.The Project will realign the two-lane highway on a new aligment and will construct a new bridge over the canal. It will provide pedestrian access to the Algodone

										Fund	Fiscal Year	ENG	ROW	CON	Fund Total	Total Programmed	Prior	FY18/19	FY19/20	FY20/21	FY21/22	FY22/23	FY23/24
										CBIP	'20/21	4,500	0	0	4,500								
										CBIP	'	4,500	0	0	4,500								
Agency:	CALTRANS									Project TOTALS:		4,500	0	0		4,500	0	0	0	4,500	0	0	0
SCAG Change Reason	NEW PROJECT																					
Pct_Change	+0%		Cost_Difference	+$0		Status				Programmed												

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Environmental Technical Report B1

Environmental Commitment Record

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Revised:1/10/2025

Original date: December 31, 2024

Environmental Generalist: Raychel Skeen

Phone: (619) 930-6600

Environmental Commitments Record (ECR)

PID 1120000096

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SWC - Construction Storm Water Coordinator

Rte: SR 186

PM: 0.5 to 2.0

EA 43108

	Task and Brief Description	Reference	Responsible Branch / Staff	Timing / Phase	NSSP, SSP, Std Spec, Permit	PS&E Action Taken to Comply/Remarks	Construction Action Taken to Comply/Remarks	PS&E Task Completed		Construction Task Completed	
								Initial	Date	Initial	Date
1	Environmental PS&E Review		EG	Final Design							
2	Preconstruction Meeting		RE	Start of Construction							
3	Transfer Resident Engineer Book		DE/ PE/ RE	Start of Construction							
4	Prejob Meeting		RE	Start of Construction							
5	Environmental Compliance Review		DE/ PE/ RE/ EG	RTL and/or Start of Construction							
	Generalist	.	.	.	.	.	.	.	.	.	.
6	If scope of work changes or if previously unidentified environmental resources are discovered, contact the Caltrans Environmental Planner for further review.	CE/CE dated 12/30/24	PE/ EG	Design/ Construction							
	Aesthetics/Visual	.	.	.	.	.	.	.	.	.	.
7	Bridge rails shall be low-profile, “see-through” concrete Type 85SW Mod bridge rails to maximize views to the water. Avoid fencing on top of the rail to maximize unobstructed views from the bridge to the water.	Environmental Commitment Measure V-1 (VIA 12/12/2024)	DE/ PE/ RE/ ECL	Design/ Construction	21-2.02B						
8	Bridge rails shall be low-profile, “see-through” concrete Type 85SW Mod bridge rails to maximize views to the water. Avoid fencing on top of the rail to maximize unobstructed views from the bridge to the water.	Environmental Commitment Measure V-2 (VIA 12/12/2024)	PE/ RE	Design/ Construction	21-2.03B						
9	Concrete bridge elements such as railing, sidewalk, anchor blocks shall be integrally colored with an earth toned color to match the color of the existing bridge and desert soils.	Environmental Commitment Measure V-3 (VIA 12/12/2024)	PE/ RE/ VS	Design/ Construction	51-1.01A, 51-1.03G(1), 78-4_07_A10-21-22						
10	Concrete walls shall have curved surfaces/alignments, integral earth-tone colors, and enhanced surface textures to reduce the apparent wall size and increase the wall’s compatibility with the surroundings.	Environmental Commitment Measure V-4 (VIA 12/12/2024)	PE/ RE/ VS	Design/ Construction	51-1.01A, 51-1.03G(1)						
11	Collect and stockpile duff and 0.5’ topsoil prior to clearing and grubbing vegetated areas. Duff must consist of vegetation removed and collected from clearing and grubbing activities. Vegetation may include trees, shrubs, ground cover, grasses, bark, leaves, and roots with attached soil. Spread duff over finished graded areas where drainage water will collect (swales and basins). Track walk duff into the soil. Seed all disturbed areas with a native desert seed mix approved by the District Biologist. Apply seed in the Winter seeding window. (Nov 15-Feb 1)	Environmental Commitment Measure V-5 (VIA 12/12/2024)	PE/ RE/ VS	Design/ Construction	51-1.01A, 51-1.03G(1)						

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								Initial	Date	Initial	Date
12	Grading would utilize techniques such as slope rounding to approximate the appearance of natural topography. Berms would be used where space allows to provide visual interest or to screen unsightly views. Basins and drainage swales shall appear as natural landscape features (ponds or streambeds)	Environmental Commitment Measure V-6 (VIA 12/12/2024)	PE/ RE/ ESB/ ECL	Design/ Construction							
13	BMPs such as fiber rolls, felt fiber fabric, gravel bags (if used) must be made of biodegradable materials. (No plastic).	Environmental Commitment Measure V-7 (VIA 12/12/2024)	PE/ RE	Design/ Construction							
14	Protect vegetation outside of the work area by prohibiting staging areas, material storage, parking, and construction access in vegetated areas.	Environmental Commitment Measure V-8 (VIA 12/12/2024	RE	Construction							
15	Protect vegetation outside of the work area by prohibiting staging areas, material storage, parking, and construction access in vegetated areas.	Environmental Commitment Measure V-8 (VIA 12/12/2024	RE/ ECL	Construction							
16	Upon completion of the earthwork in an area, spread duff to a uniform thickness where drainage water will collect (swales and basins). Do not apply duff within 3 feet of the edge of pavement. Trackwalk duff with tracked equipment run perpendicular to slope contours. Water may be used to assist this process but must not cause erosion.	Environmental Commitment Measure V-9 (VIA 12/12/2024	PE/ RE/ ECL	Design/ Construction	21-2.03B						
	NPDES	.	.	.	.	.	.	.	.	.	.
17	Design project in conformance with the NPDES Permit Order 2012-0011-DWQ and Appendix E of the Caltrans Project Planning and Design Guide (PPDG).	NPDES Memo (RS) 7/17/2023	DE/ SWC	Design							
18	Disturbed Soil Area (DSA) under or over one acre would determine whether a Water Pollution Control Program (WPCP) or a Stormwater Pollution Prevention Plan (SWPPP) is required prior to the start of construction.	NPDES Memo (RS) 7/17/2023	DE/ SWC	Design							
19	Project Engineer to determine whether a Short Form Storm Water Data Report (SWDR) or Long Form SWDR shall be prepared.	NPDES Memo (RS) 7/17/2023	DE/ SWC	Design							
20	Preparation of a Storm Water Pollution Prevention Plan (SWPPP) prior to the start of construction.	2012-0011-DWQ	RE/ ECL/ Contractors	Pre-Construction							

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								Initial	Date	Initial	Date
	Hazardous Materials	.	.	.	.	.	.	.	.	.	.
21	Lead Compliance Plan Section 7-1.02K(6)(j)(ii) applies if a bid item for a lead compliance plan is shown on the Bid Item List. Regulations containing specific Cal/OSHA requirements when working with lead include 8 CA Code of Regs § 1532.1. Submit a plan: 1. That documents your compliance program to prevent or minimize worker exposure to lead 2 .Including the items listed in 8 CA Code of Regs § 1532.1(e)(2)(B) 3. Sealed and signed by a CIH with knowledge of and experience complying with 8 CA Code of Regs Allow 7 days for review. Obtain authorization for the plan before starting any activity that presents the potential for lead exposure. Before starting any activity that presents the potential for lead exposure to employees who have no prior training, including State employees, provide a safety training program to these employees that complies with 8 CA Code of Regs § 1532.1 and your lead compliance plan.	Standard Specifications	EE/ ECL/ PE/ RE	Pre-Construction	7-1.02K(6)(j)(ii)						
22	Unregulated earth material containing lead is present on the job site. A lead compliance plan (LCPs) is required SSP 7-1.02K(6)(j)(iii) for soil considerations.	Standard Specifications	PE/ EE	Pre-Construction	SSP 7-1.02K(6)(j)(iii) and Std Spec 7-1.02K(6)(j)(ii)						
23	The LCP for SSP 7-1.02K(6)(j)(iii) must be submitted to Environmental Engineering as soon as received from Contractor. Allow 7 days for review.	Standard Specifications	PE/ EE	Pre-Construction	SSP 7-1.02K(6)(j)(iii) and Std Spec 7-1.02K(6)(j)(ii)						
24	Environmental Engineering must provide authorization for the plan before starting any activity that presents the potential for lead exposure.	Standard Specifications	EE Only	Pre-Construction	SSP 7-1.02K(6)(j)(iii)						
25	The LCP for SSP 36-4 is required for paint considerations.	Standard Specifications	PE/ EE	Design/ Construction	SSP 36-4 and Std Spec 7-1.02K(6)(j)(ii)						
26	Include Treated Wood Waste (TWW) SSP. TWW includes wood removed from the roadside such as sign posts and rail posts.	Standard Specifications	PE/ EE	Design/ Construction	SSP 14-11.14						
27	Residue containing lead from paint and thermoplastic.	Standard Specifications	PE/ EE	Design/ Construction	SSP 36-4						
28	Removal of yellow traffic stripe and pavement marking with hazardous waste residue.	Standard Specifications	DE/ EE/ EG	Design/ Construction	SSP 14-11.12						
29	Remove traffic stripes and pavement markings containing lead.	Standard Specifications	DE/ EE/ EG	Construction	SSP 84-9.03B						
30	Store treated wood waste at the jobsite until transport to the CA permitted disposal site.	Standard Specifications	DE/ EE/ EG	Construction	RSS 14-11.14D						

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EA 43108

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								Initial	Date	Initial	Date
31	Transport treated wood waste directly to the CA permitted disposal site after leaving the jobsite. Do not mix treated wood waste from the jobsite with waste from any other generator.	Standard Specifications	DE/ EE/ EG	Construction	RSS 14-11.14E						
	Noise and Vibration	.	.	.	.	.	.	.	.	.	.
32	Truck loading, unloading, and hauling operations shall be restricted so that noise and vibration are kept to a minimum through residential neighborhoods to the greatest possible extent.	Environmental Commitment Measure N-1	ECL / RE	Construction							
33	Temporary noise barriers shall be used and relocated, as needed, to protect sensitive receptors against excessive noise from construction activities involving large equipment and by small items such as compressors, generators, pneumatic tools, and jackhammers. Noise barriers can be made of heavy plywood, moveable insulated sound blankets, or other best available control techniques.	Environmental Commitment Measure N-2	ECL / RE	Construction							
34	Newer equipment with improved noise muffling shall be used, and all equipment items shall have the manufacturers' recommended noise abatement measures (e.g., mufflers, engine covers, and engine vibration isolators) intact and operational. Newer equipment will generally be quieter in operation than older equipment. All construction equipment shall be inspected at periodic intervals to ensure proper maintenance and presence of noise-control devices (e.g., mufflers and shrouding).	Environmental Commitment Measure N-3	ECL / RE	Construction							
35	Construction lay-down or staging areas shall be selected in industrially zoned districts. If industrially zoned areas are not available, commercially zoned areas may be used, or locations that are at least 100 feet from any noise-sensitive land use (e.g., residences).	Environmental Commitment Measure N-4	ECL / RE	Construction							
36	Contractor shall prepare a Noise and Vibration Monitoring and Mitigation Plan by a qualified Acoustical Engineer and submit it for approval. The Plan must outline noise and vibration monitoring procedures at predetermined noise and vibration sensitive sites. The Plan also must include calculated noise and vibration levels for various construction phases and mitigation measures that may be needed to meet the Project specifications. The Contractor shall not start any construction work or operate any noise-generating construction equipment at the construction site before approval of the Plan. The Plan must be updated every three months or sooner if there are any changes to the construction activities.	Environmental Commitment Measure N-5	ECL / RE	Construction							
37	Restrict the hours of vibration-intensive equipment or activities such as vibratory rollers so that impacts to residents are minimal (e.g., weekdays during daytime hours only when as many residents as possible are away from home).	Environmental Commitment Measure N-6	ECL / RE	Construction							

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								Initial	Date	Initial	Date
38	The owner of a building close enough to a construction vibration source that damage to that structure due to vibration is possible would be entitled to a preconstruction building inspection to document the preconstruction condition of that structure.	Environmental Commitment Measure N-7	PE / RE / ECL	Pre-Construction							
39	Conduct vibration monitoring during vibration-intensive activities	Environmental Commitment Measure N-8	ECL / RE	Construction							
	Geology and Soils	.	.	.	.	.	.	.	.	.	.
40	The design of the proposed Project complies with all applicable Caltrans guidelines with respect to seismic design.	Structure Preliminary Geotechnical Report (SPGR)	DE / PE	Design							
	Air Quality	.	.	.	.	.	.	.	.	.	.
41	Tier 4 interim or tier 4 final engines for off-road diesel-fueled vehicles subject to 13 CA Code of Regs § 2449 is required. This requirement does not apply to vehicles registered to operate on public roads when those vehicles are used solely to deliver materials or supplies to the job site.	Standard Specification	DE/ EE/ EG	Construction	NSSP 5-1.33						
42	Statement of certification (upon Contract signing) for compliance with NSSP 5-1.33	Standard Specification	DE/ EE/ EG	Construction	NSSP 7-1.02c						
43	Statement of certification (upon Contract signing) for compliance with SN-040.	Standard Specification	DE/ EE/ EG	Construction	SN-040						
44	Include Air Quality Control District Jurisdiction SSP. Comply with Imperial County Air Pollution Control District (APCD), as applicable.	Standard Specification	DE/ EE/ EG	Construction	NSSP 14-9.05						
45	SSP 14 9.02 Air Pollution Control is required.	Standard Specification	DE/ EE/ EG	Construction	14.9	Standard Specification					
	Biology	.	.	.	.	.	.	.	.	.	.
46	Native vegetation and desert creosote scrub outside of the construction area will be avoided and designated as an environmentally sensitive area (ESA) on the Project plans and protected by installing temporary ESA fencing, if needed.	Environmental Commitment Measure BIO-1 Natural Environment Study (Minimal Impacts) (NESMI)	ECL / RE	Construction							
47	Temporary impacts to 5.54 acres of desert creosote scrub habitat from the Project will be offset by restoring the temporarily impacted areas to pre-construction conditions. In areas where creosote vegetation is cleared and grubbed, the duff materials, consisting of the soils and materials from the removed vegetation, will be stockpiled and reapplied to temporarily impacted areas. If additional seeding is needed, Caltrans proposed the native seed mixture in the table, below, to be applied to temporarily impacted areas. Duff material will be applied to temporary impact areas as soon as possible following regrading after completion of construction to prevent encroachment by nonnative plants.	Environmental Commitment Measure BIO-2 (NESMI)	ECL / RE	Construction/ Post-Construction							

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Rte: SR 186
PM: 0.5 to 2.0

EA 43108

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								Initial	Date	Initial	Date
48	All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other such activities will be outside of areas with disturbed wetland and desert creosote scrub habitat.	Environmental Commitment Measure BIO-3 (NESMI)	ECL / RE	Construction							
49	Appropriate erosion and siltation controls will be installed prior to construction and maintained until construction completion.	Environmental Commitment Measure BIO-4 (NESMI)	ECL / RE / SWC	Construction							
50	Impacts from fugitive dust will be avoided and minimized through watering, monitoring, and other appropriate measures.	Environmental Commitment Measure BIO-5 (NESMI)	ECL / RE / SWC	Construction							
51	The Project site will be kept as clean of debris as possible.	Environmental Commitment Measure BIO-6 (NESMI)	ECL / RE / SWC	Construction							
52	Desert creosote scrub habitat outside of the construction area will be designated as an ESA on the Project plans and protected by installing temporary ESA fencing, if needed	NESMI	DE/ ESB	Design/ Construction							
53	Temporary impacts to desert sage scrub habitat from the Project will be offset by restoring the temporarily impacted areas to pre-construction conditions. In areas where creosote vegetation is cleared and grubbed, the duff materials, consisting of the soils and materials from the removed vegetation, will be stockpiled and reapplied to temporarily impacted areas. If additional seeding is needed, Caltrans proposes native seed mix to be applied to temporarily impacted areas. Duff material will be applied to temporary impact areas as soon as possible following regrading after completion of construction to prevent encroachment by nonnative plants.	NESMI	DE/ ESB/ ECL	Design/ Construction							
54	All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other such activities will be outside of areas with desert creosote scrub habitat.	NESMI	DE/ ESB/ SWC	Construction							
55	The temporary construction staging areas, access roads, and equipment storage shall be strategically placed at a minimum of 100 feet to avoid impacts to jurisdictional waters.	Environmental Commitment Measure WAT-1 (NESMI)	ECL / RE / SWC	Design/ Pre-Construction/ Construction							
56	The jurisdictional water features outside of the work areas shall be designated as an ESA on the Project plans.	Environmental Commitment Measure WAT-2 (NESMI)	EG / SWC / DE	Design							
57	If needed, the ESA will be temporarily fenced using ESA fencing or lathe with flagging tape to exclude construction activities from the area. The Project Biologist will be onsite during the staking to identify the boundaries of the jurisdictional waters and shall supervise the placement of ESA exclusion fencing. The temporary fences around the ESAs, if needed, shall be installed as the first order of work. The locations of the ESA exclusion fence will be documented on construction maps.	Environmental Commitment Measure WAT-3 (NESMI)	ECL / RE / SWC	Design/ Pre-Construction/ Construction							

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								Initial	Date	Initial	Date
58	If vegetation clearing is to take place during the nesting season a pre-construction nesting bird survey shall be conducted within 3 days of these activities.	Environmental Commitment Measure MTB-1 (NESMI)	DE/ ESB	Design/ Construction							
59	A no-disturbance buffer shall be established around any active nest or nesting pair territory to limit the impacts of construction activities. The buffer shall not be removed until after the nesting season or until after a qualified wildlife biologist determines that the young have fledged (usually late June to mid-July). The extent of these buffers shall be determined by the biologist (coordinating with USFWS and CDFW) and will depend on the level of noise or construction disturbance, line-of-sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers. Suitable buffer distances may vary between species but is typically 100 feet.	Environmental Commitment Measure MTB-2 (NESMI)	DE/ ESB	Design/ Construction							
60	Special care will be taken during transport, use, and disposal of soils containing invasive weed seeds. Seed heads will be bagged, and all invasive species will be either sprayed or removed and properly disposed of to prevent spread into areas outside of the construction area.	Environmental Commitment Measure INV-1 (NESMI)	ECL / RE	Construction							
61	Erosion control measures for this Project shall be designed to prevent the spread of invasive plant species.	Environmental Commitment Measure INV-2 (NESMI)	DE/ ESB/ SWC	Pre-Construction/ Construction							
62	Landscaping designs for this Project shall not contain invasive species in the plant selections or seed mixtures.	Environmental Commitment Measure INV-3 (NESMI)	DE/ ESB	Design/ Construction							
	Cultural	.	.	.	.	.	.	.	.	.	.
63	If cultural materials are discovered during construction, all earthmoving activity within 60 feet of the discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.	Environmental Commitment Measure CR-1 (Historic Property Survey Report (HPSR) (Caltrans 2024), the Archaeological Survey Report (ASR))	CSE/ ECL/ RE/ Contractors	Construction	14-2.03B						

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								Initial	Date	Initial	Date
64	If human remains are discovered during construction, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the county coroner contacted. Pursuant to Public Resources Code Section 5097.98, if the remains are thought to be Native American, the coroner will notify the NAHC, which will then notify the Most Likely Descendant (MLD). At this time, the person who discovered the remains will contact the District 11 Native American Coordinator so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC Section 5097.98 are to be followed as applicable.	Environmental Commitment Measure CR-2 (HPSR/ASR)	CSE/ ECL/ RE/ Contractors	Construction	14-2.03B						
65	The establishment ESAs shall protect elements of the resource in place for the duration of the Project. The ESAs will be marked on project plans and delineated in the field by an Archaeologist and Native American Monitor.	Environmental Commitment Measure CR-3 (HPSR/ASR)	CSE/ ECL/ RE/ Contractors	Pre-Construction/ Construction	14-2.03B						
66	Archaeological Monitor(s) as assigned by Caltrans and Native American Monitor(s) shall monitor all ground disturbing construction related activities within the AMAs established for the project.	Environmental Commitment Measure CR-4 (HPSR/ASR)	CSE/ ECL/ NAM	Pre-Construction/ Construction	14-2.03B						
67	Cultural Resources Sensitivity Training shall be required for all personnel working on the project during construction. The Archaeological Monitor assigned by Caltrans will deliver this training. Materials for the training will be provided by Caltrans in the event the Archaeological Monitor is not available to deliver training. As an additional condition, during a preconstruction meeting, the Contractors will be notified of the presence of cultural resource conditions, such as an ESA and the SOIS.	Environmental Commitment Measure CR-5 (HPSR/ASR)	CSE/ ECL/ RE/ Contractors	Pre-Construction/ Construction	14-2.03B						
68	The temporary scaffolding will be designed to be removable and reversible and avoid impacts to the canal's concrete apron	(HPSR/ASR)	CSE/ PE	Design/ Constructability Review/ Construction	14-2.03B						
69	ESA and SOIS conditions/measures will be incorporated into the ECR and will be part of the RE's pending file	(HPSR/ASR)	CSE/ EG/ ECL	Design/ Construction	14-2.03B						
70	The locations of the ESA will be field-verified and staked on the ground. Pre-construction field visit will be conducted to document existing conditions. ESA fence will be installed at least one week prior to the start of construction.	(HPSR/ASR)	CSE/ ECL	Design/ Pre-Construction/ Construction	14-2.03B						
71	RE will inform Cultural Resource Specialist of construction start date	(HPSR/ASR)	RE/ CSE/ ECL	Pre-Construction	14-2.03B						
72	At least one field visit will be conducted to ensure the appropriateness of the ESA/SOIS implementation during construction.	(HPSR/ASR)	CSE	Construction	14-2.03B						
73	Any repairs needed to the All-American Canal will be in-kind replacement per Secretary of Interio's Standards and in coordination with the Bureau of Reclamation and/or Imperial Irrigation District	(HPSR/ASR)	RE/ ECL/ CSE/ Contractors	Construction/ Post-Construction	14-2.03B						

Revised:1/10/2025

Original date: December 31, 2024

Environmental Generalist: Raychel Skeen

Phone: (619) 930-6600

Environmental Commitments Record (ECR)

PID 1120000096

CSE - Cultural Resource Specialist
DE - Design Engineer
ECL - Environmental Construction Liaison
EE - Environmental Engineering
EG - Environmental Generalist
ESB - Environmental Stewardship Branch
NAM - Native American Monitor
PE - Project Engineer
RE - Resident Engineer
SWC - Construction Storm Water Coordinator

Rte: SR 186

PM: 0.5 to 2.0

EA 43108

	Task and Brief Description	Reference	Responsible Branch / Staff	Timing / Phase	NSSP, SSP, Std Spec, Permit	PS&E Action Taken to Comply/Remarks	Construction Action Taken to Comply/Remarks	PS&E Task Completed		Construction Task Completed	
								Initial	Date	Initial	Date
74	Environmental Construction Liaison will notifiy the Cultural Resource Specialist when construction is completed. ESA fence will be removed.	(HPSR/ASR)	CSE/ ECL	Post-Construction	14-2.03B						
75	A Construction Monitoring Report will be prepared based on the monitoring activities after construction is completed.	(HPSR/ASR)	CSE	Construction/ Post-Construction	14-2.03B						
	Paleontological Resources	.	.	.	.	.	.	.	.	.	.
76	A qualified paleontologist (as defined in the Caltrans' Standard Environmental Reference) must be invited to the pre-construction (or tailgate) meeting to consult with the grading and excavation contractors concerning excavation schedules, paleontological field techniques, and safety issues. A qualified paleontologist is defined as an individual with a MS or Ph.D. in paleontology or geology who is familiar with paleontological procedures and techniques, who is knowledgeable in the geology and paleontology of San Diego County, and who has worked as a paleontological mitigation project supervisor in the county for at least one year.	PER	ECL / EG / ESB / RE	Construction							
77	A paleontological monitor must be on-site on a full-time basis during the original cutting of previously undisturbed deposits of high or moderate paleontological resource potential, and on-site on a part-time basis during the original cutting of previously undisturbed deposits of low paleontological resource potential (sedimentary deposits of younger alluvium), to inspect exposures for contained fossils. A paleontological monitor is defined as an individual who has experience in the collection and salvage of fossil materials. The paleontological monitor must work under the direction of a qualified paleontologist. As grading progresses, the qualified paleontologist and paleontological monitor will confer with the Resident Engineer regarding the level of effort needed and reduce the scope of the monitoring program to an appropriate level if it is determined that the potential for impacts to paleontological resources is lower than anticipated.	PER	ECL / EG / ESB / RE	Construction							
78	If paleontological resources of potential scientific interest (including all vertebrate fossils and deposits of petrified wood) are encountered during construction activities, they would be handled in accordance with the principles and recommendations found in Assessment of Fossil Management on Federal & Indian Lands (Department of the Interior [DOI] 2000). In most cases this fossil salvage can be completed in a short period of time. However, some fossil specimens (such as a complete large mammal skeleton) may require an extended salvage period. In these instances, the paleontologist (or paleontological monitor) will consult with the RE to temporarily divert, or halt grading, to allow recovery of fossil remains in a timely manner.	PER	ECL / EG / ESB / RE	Construction							

Revised:1/10/2025

Original date: December 31, 2024

Environmental Generalist: Raychel Skeen
Phone: (619) 930-6600

Environmental Commitments Record (ECR)

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Rte: SR 186
PM: 0.5 to 2.0

EA 43108

	Task and Brief Description	Reference	Responsible Branch / Staff	Timing / Phase	NSSP, SSP, Std Spec, Permit	PS&E Action Taken to Comply/Remarks	Construction Action Taken to Comply/Remarks	PS&E Task Completed		Construction Task Completed	
								Initial	Date	Initial	Date
79	During the monitoring and recovery phases, the qualified paleontologist and/or the paleontological monitor will also routinely collect stratigraphic data (e.g., lithology, vertical thickness, lateral extent of strata, nature of upper and lower contacts, and taphonomic character of exposed strata). Collection of such data is critical for providing a stratigraphic context for any recovered fossils.	PER	ECL / EG / ESB / RE	Construction							
80	Fossil remains collected during monitoring and salvage must be cleaned (removal of extraneous enclosing sedimentary rock material), prepared, sorted (separating fossils of the different species), cataloged (scientific identification of species, assignment of inventory tracking numbers, and recording of these numbers in a computerized collection database), and curated as part of the mitigation program.	PER	ECL / EG / ESB / RE	Construction							
81	A final summary report that outlines the results of the mitigation program must be completed. This report will include discussion of the methods used, stratigraphic section(s) exposed and documented, fossils collected, and significance of recovered fossils.	PER	ECL / EG / ESB / RE	Construction							

PROJECT PERSONNEL

Environmental Generalist: Raychel Skeen
Phone: (619) 930-6600

Rte: SR 186
PM: 0.5 to 2.0

EA 43108
Revised:1/10/2025

Initial	Full Name	Title	Phone Number	Date Assigned to Project	Date Transferred from Project	Remarks
RS	Raychel Skeen	Environmental Coo	619-930-6600			
MG	Marlene Gros	Landscape Archect	858-289-1267			
BB	Brent Berge	HW, Air, Noise	619-930-6916			
HC	Haley Chasteene	Paleo	619-987-5998			
NG	Natalia Galeana	Archaeologist	858-289-1266			
AN	Annika Nabors	Biologist	619-930-6574			
PL	Pauline Lamphere	Permit Specialist	858-289-1269			
RS	Roy Santos	Stormwater	858-289-1273			
CE	Christian Erickson	ECL	858-289-1264			

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Environmental Technical Report B2

Categorical Exclusion Checklist

January 30, 2024

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Categorical Exclusion Checklist

PROJECT INFORMATION

DIST-CO-RTE: 11-IMP-186

PM/PM: 11-IMP-186 **PM/PM:** 0.5 / 2.0

Fed. Aid Number (Local Project):

EA/Project Number: 11-43180 / 11200009

SECTION A: Type of CE

Use the information in this section to determine the applicable CE and corresponding activity for this project.

1. Project is a CE under CE Assignment 23 USC 326 (activity must be listed in 23 CFR 771.117 (c) or (d) list (See Chapter 30 in the SER) or included in activities listed in Appendix A of the CE Assignment MOU to be eligible for 23 USC 326).

☒ Yes, **Activity: (c)(28)** ☐ No

Notes for specific activities:

- **If using (c)9,** distinguish between (c)9(i) or (c)9(ii) on the form and include copy of the emergency declaration in the file.
- **If using (c)22,** identify in the project description that all work is within operational right-of-way.
- **If using (c)23,** distinguish between (c)23(i) and (c)23(ii) on the form.
- **If using (c)26, (c)(27), or (c)(28),** ensure that the action DOES NOT include any of the constraints found in 23 CFR 771.117(e). If it does, it may not be processed under (c)(26), (c)(27), or (c)(28), however, the project may qualify for a CE under 23 CFR 771.117(d)(13).

2. Project is a CE for a highway project under NEPA Assignment 23 USC 327 (Use only if project does not qualify under CE Assignment 23 USC 326 (activities not included in question 1)).

☐ Yes ☒ No

3. Independent Utility and Logical Termini

☒ The project complies with NEPA requirements related to connected actions and segmentation (i.e., the project must have independent utility, connect logical termini when applicable, be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made and not restrict further consideration of alternatives for other reasonably foreseeable transportation improvements). (FHWA Final Rule, "Background," Federal Register Vol. 79, No. 8, January 13, 2014.)

4. Categorical Exclusions Defined (23 CFR 771.117[a]).

FHWA regulation 23 CFR 771.117(a) defines categorical exclusions as actions which:

- do not induce significant impacts to planned growth or land use for the area;
- do not require the relocation of significant numbers of people;
- do not have a significant impact on any natural, cultural, recreational, historic or other resources;
- do not involve significant air, noise, or water quality impacts;
- do not have significant impacts on travel patterns; or
- do not otherwise, either individually or cumulatively, have any significant environmental impacts.

☒ Checking this box certifies that project meets the above definition for a Categorical Exclusion.

5. Exceptions to Categorical Exclusions/Unusual Circumstances (23 CFR 771.117[b]).

FHWA regulation 23 CFR 771.117(b) provides that any action which normally would be classified as a CE but could involve *unusual circumstances* requires the Department to conduct appropriate environmental studies to determine if the CE classification is proper. Unusual circumstances include actions that involve:

- Significant environmental impacts;
- Substantial controversy on environmental grounds;
- Significant impact on properties protected by section 4(f) of the DOT Act or section 106 of the National Historic Preservation Act; or
- Inconsistencies with any Federal, State, or local law, requirement or administrative determination relating to the environmental aspects of the action.

All of the above unusual circumstances have been considered in conjunction with this project. (Choose one)

☒ Checking this box certifies that **none of the above conditions apply** and that the project qualifies for a Categorical Exclusion.

☐ Checking this box certifies that unusual circumstances **are involved**. However, the appropriate studies/analysis have been completed, and it has been determined that the CE classification is still appropriate.

SECTION B: Compliance with FHWA NEPA policy to complete all other applicable environmental requirements[1] prior to making the NEPA determination:

During the environmental review process for which this CE was prepared, all applicable environmental requirements were evaluated. Outcomes for the following requirements are identified below and fully documented in the project file. [**NOTE: EVERY SECTION BELOW MUST BE COMPLETED, DO NOT SKIP ANY SECTIONS.**]

FSTIP

☒ The project description on the Categorical Exemption/Categorical Exclusion Form matches the project description in the FSTIP and RTP, and the appropriate page of the FSTIP is in the project file.

Air Quality

☒ Air Quality Conformity Findings Checklist has been completed and project meets all applicable AQ requirements.

☐ For 23 USC 326 projects which require an air quality conformity determination (this will apply to certain projects under 23 CFR 771.117(c)(22), (c)(23), (c)(26), (c)(27), and (c)(28)), list the date of the Caltrans conformity determination:

☐ For 23 USC 327 projects, list date of FHWA concurrence on conformity determination:

Cultural Resources

☒ Section 106 compliance is complete.

- ☐ A Screened Undertaking Memo was prepared, or
- ☒ A Historic Properties Survey Report was prepared, and the following finding was made:
  - ☐ No Historic Properties Affected ☐ No Adverse Effect with Standard Conditions
  - ☒ No Adverse Effect ☐ Adverse Effect/MOA ☐ Phasing/Project PA

Noise

23 CFR 772

☒ Is this a Type 1 project? ☒ Yes ☐ No (skip this section.)

☐ Future noise levels with project either approach or exceed NAC or result in a substantial increase.

If yes: ☐ Abatement is reasonable and feasible

☐ Abatement is not reasonable or feasible

[1] Please consult the SER for a complete list of applicable laws, statutes, regulations, and executive orders that must be considered before completing the CE.

Biology

USFWS

Species List[2]:

☐ Not required

☒ Required, Date: 7/18/2023

Effect Determination:

☒ No Effect Section 7 (Federal Endangered Species Act)

Consultation with USFWS Findings (Effect determination):

☐ Not Likely to Adversely Affect with USFWS Concurrence. Date: _____[3]

☐ Likely to Adversely Affect with Biological Opinion Date: _____[3]

NOAA Fisheries

Species List[2]:

☒ Not required

☐ Required, Date: _____

Effect Determination:

☒ No Effect Section 7 (Federal Endangered Species Act)

Consultation with NOAA Fisheries Findings (Effect determination):

☐ Not Likely to Adversely Affect with NOAA Fisheries Concurrence. Date: _____[3]

☐ Likely to Adversely Affect with Biological Opinion Date: _____[3]

Essential Fish Habitat (Magnuson-Stevens Act) Findings (Effect determination):

☒ Magnuson-Stevens Fishery Conservation and Management Act does not apply

☐ No Adverse Effect ☐ Adverse Effect and consultation with NOAA Fisheries

Floodplains

Floodplains (Executive Order #11988)

☒ No Floodplains ☐ No Significant Encroachment ☐ Significant Encroachment

[2] See the "Changes to Species List Requirements" memo (April 9, 2021) for decision tree and information on determining if a list is required and date requirements.
[3] If concurrence or BO is expected after PA&ED, enter "Pending" into this field.

Waters, Wetlands

Section 404 of the Clean Water Act

Impacts to Waters of the U.S.: ☒ No ☐ Yes; anticipated approval:

☐ Nationwide Permit ☐ Individual Permit ☐ Regional General Permit

☐ Letter of Permission

Section 401 of the Clean Water Act

☐ Exemption ☐ Certification ☒ Not Applicable

Wetland Protection (Executive Order #11990)

☒ No Wetland Impact

☐ Permanent Wetland Impact; Only Practicable Alternative Finding is included in a separate document in the project file

Section 4(f) Transportation Act (23 CFR 774)

Section 4(f) regulation was considered as a part of the review for this project and a determination was made:

☒ Section 4(f) does not apply

- ☐ There are no potential Section 4(f) properties in the project vicinity.
- ☒ The properties do not meet the definition of a Section 4(f) property, the project does not "use" a Section 4(f) property, or the project meets the criteria for an exception (e.g., temporary occupancy). Document in project file or CE.

☐ Section 4(f) applies

- ☐ De Minimis
- ☐ Programmatic: Type: N/A
- ☐ Individual:
  - ☐ Legal Sufficiency Review complete ☐ HQ Coordinator Review Complete

Section 6(f) – Properties Acquired with Land and Water Conservation Fund grants

Was the above property purchased with grant funds from the Land and Water Conservation Fund?

☒ No, Section 6(f) does not apply. No additional documentation required.

☐ Yes: ☐ Documentation of approval from National Park Service Director (through California State Parks) has been received for the conversion/and replacement of 6(f) property.

Coastal Zone

Coastal Zone Management Act of 1972

☒ Not in Coastal Zone ☐ Qualifies for Exemptions ☐ Qualifies for Waiver

☐ Coastal Permit Required

☐ Consistent with Federal, State, and Local Coastal Plans ☐ Federal Consistency

Coast Guard – Bridge Over Navigable Waters of the U.S.

☒ Not applicable
☐ 23 USC 144(c) USCG Bridge Permit Exception
☐ 33 CFR 115.70 Advance Approval
☐ USCG Bridge Permit

Relocation and Right of Way

Relocations

☒ No Relocations
☐ Project involves N/A relocations and will follow the provisions of the Uniform Relocation Act.

Right of Way Acquisitions/Easements

☐ No right of way acquisitions or easements
☒ Project involves 0 acquisitions but requires easements from the Bureau of Reclamation.

Hazardous Waste and Materials

Are hazardous materials or contamination exceeding regulatory thresholds (as set by U.S. EPA, Cal EPA, County Environmental Health, etc.) present? ☒ Yes ☐ No
If yes, is the nature and extent of the hazardous materials or contamination fully known?
☐ Yes ☒ No
If no, briefly discuss the plan for securing information: Pre-construction ADL Workplan

SECTION C: Certification

Based on the information obtained during environmental review process and included in this checklist, the project is determined to be a Categorical Exclusion pursuant to the National Environmental Policy Act and is in compliance with all other applicable environmental laws, regulations, and Executive Orders.

Prepared by:

Jean Settle		12/30/2024
Senior Environmental Planner, AECOM	Signature	Date

Environmental Technical Report B3

Memorandum: Exempt From Air Quality Conformity Determination Per 40 CFR 93.12

March 28, 2024

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State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

Memorandum

Making Conservation a California Way of Life.

To: EMERY L. MCCAFFERY
Associate Environmental Planner
Project Analysis, Branch C

Date: March 28, 2024

File: 11-43108
1120000096
11-IMP-186
PM 0.50/2.00

From: BRENT BERGE
Transportation Engineer/ Air Quality Specialist
Environmental Engineering

Subject: **EXEMPT FROM AIR QUALITY CONFORMITY DETERMINATION PER 40 CFR 93.126**

This project proposes to realign a portion of State Route 186 (SR-186) and construct a new bridge over All-American Canal. The portion of SR-186 to be realigned is approximately 0.3 miles (PM 1.7 to PM 2.0). The existing bridge over All-American Canal will not be demolished or disturbed. Tribal coordination with Quechan Indian Tribe will be necessary because the existing and proposed SR-186 alignments are entirely within the Quechan Reservation. Coordination with Imperial Irrigation District (IID) is also needed. This proposed work is non-capacity increasing. Ground disturbing activities will involve grading to build roadway. Piles may be driven to build bridge abutments at beginning and end of bridge.

This project is **exempt from air quality conformity determination**, according to 40 CFR 93.126, "Exempt Projects". Table 2 of this section lists "widening narrow pavements or reconstructing bridges (no additional travel lanes)" as an exempt category and would therefore exempt this project from all air quality conformity requirements.

If you have any questions or comments, please contact me at brent.berge@dot.ca.gov or (619) 930-6916.

c: Diane Vermeulen, Environmental Engineering Branch Chief
Shay Lynn M. Harrison, Chief, Environmental Analysis – Branch C

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Environmental Technical Report B4

Draft Final Hydraulic Report All-American Canal Bridge

November 22, 2024

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State of California
Department of Transportation Division of Engineering Services

DRAFT FINAL HYDRAULIC REPORT

All-American Canal Bridge

Bridge No. XX – XXX
11–Imperial–186– PM 0.5/2.1
EA No. 11 – 43108, EFIS No. 1120000096



Reviewed by: Omid Amiri *Date: November 22, 2024*

Prepared by: Fred Dastmalchi, PE
Registration Number C88751

This report has been prepared under my direction as the professional engineer in responsible charge of the work, in accordance with the provisions of the Professional Engineers Act of the State of California.

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1.0 INTRODUCTION:

This Draft Final Hydraulic Report (DFHR) presents the results of the Hydraulic Modeling analysis associated with the proposed bridge work at the All-American Canal (AAC) Bridge. This report evaluates the hydraulic and scour impacts due to the proposed project and any impacts by the new All-American Canal Bridge.

The United States Army Corps of Engineers (USACE) one- dimension steady flow hydraulic modeling software HEC-RAS (Hydrologic Engineering Center's River Analysis System 6.0.0) program was used to perform a hydraulic analysis to calculate the water surface elevation and velocity for the project bridge conditions. The HEC-RAS program was selected to obtain hydraulic information for the new bridge and to address the project's technical and design requirements as well as any other resource agency compliance requirements.

The following is an overview of the HEC-RAS floodplain analysis that was prepared for the project to assess the flood impacts as represented in the HEC-RAS hydraulic plans:

- Assessment of the Proposed Conditions for the Design Capacity discharge for the canal at new bridge.
- Assessment of potential scour associated with the Proposed Conditions for the Design Capacity discharge for the canal at new bridge.

2.0 PROJECT DESCRIPTION:

The All-American Canal Bridge is in Imperial County and is part of the SR-186 corridor, a two-lane conventional highway in the eastern portion of Imperial County, that connects interstate 8 (I-8) with the international border. Approximately half a mile south of Interstate 8, SR-186 crosses the All-American Canal, which is an 80-miles gravity fed aqueduct constructed in the 1930's by the United States Bureau of Reclamation (Reclamation) to transport water from the Colorado River. The bridge and check structure at Pilot Knob was built in 1938 to control flow in the All-American Canal.

SR-186 is on Quechan Tribe of the Fort Yuma Indian Reservation (Tribe) providing primary access to the Quechan Casino Resort and Quechan Sleepy Hollow Recreational Vehicle Park. The Canal Is still owned by Reclamation; however, the Imperial Irrigation District (IID) is responsible for operation and maintenance of the Canal.

This proposed project will realign a portion of State Route 186 (SR-186) and construct a new bridge over the All-American Canal (AAC). The new bridge will improve safety and better facilitate movement of people, goods, and services. See **Figure- 1** for a site map of the project location.



Figure- 1: Site Map of Project Location

SR-186 is a 2.1mile two-lane conventional highway that provides the access to the Algadones port of Entry at the US/Mexico Border and roadway that was constructed in 1927 on top of the bridge. It was intended to provide access to maintain and operate the Canal. The existing alignment crosses the All-American Canal at PM 1.06 using a structure (Bridge 58-320) consisting of a more than 80-years old U.S. Bureau of Reclamation (USBOR) water flow check structure facility.

The check structure was designed by USBOR in 1937 and built to regulate flow of the ACC with seven gates. The check structure includes a bridge that, according to USBOR was constructed for operations and maintenance purposes.
See **Figure- 2** which shows the existing bridge looking upstream at the All-American Canal bridge.
The bridge was built in 1938 on SR-186 (140.0' long and skew of zero). The structure is a continuous seven span RC slab (join over piers 3 &6) with RC diaphragm abutments and RC wall piers probably founded on spread footings. **Figure- 2A** which shows the available existing bridge information.

As of October 2013, National Bridge Inventory (NBI) item 113 is 8. The existing bridge was evaluated for scour by the Office of State Scour Evaluations and coded for the Federal Highway Administration (FHWA), NBI Item 113 code to identify the current status of the bridges regarding their vulnerability to scour. The NBI Item 113 code was determined to be 8 – "Bridge foundations determined to be stable for assessed or calculated scour conditions; scour is determined to be above top of footing by assessment."



Figure- 2: Looking Upstream at the All-American Canal Bridge

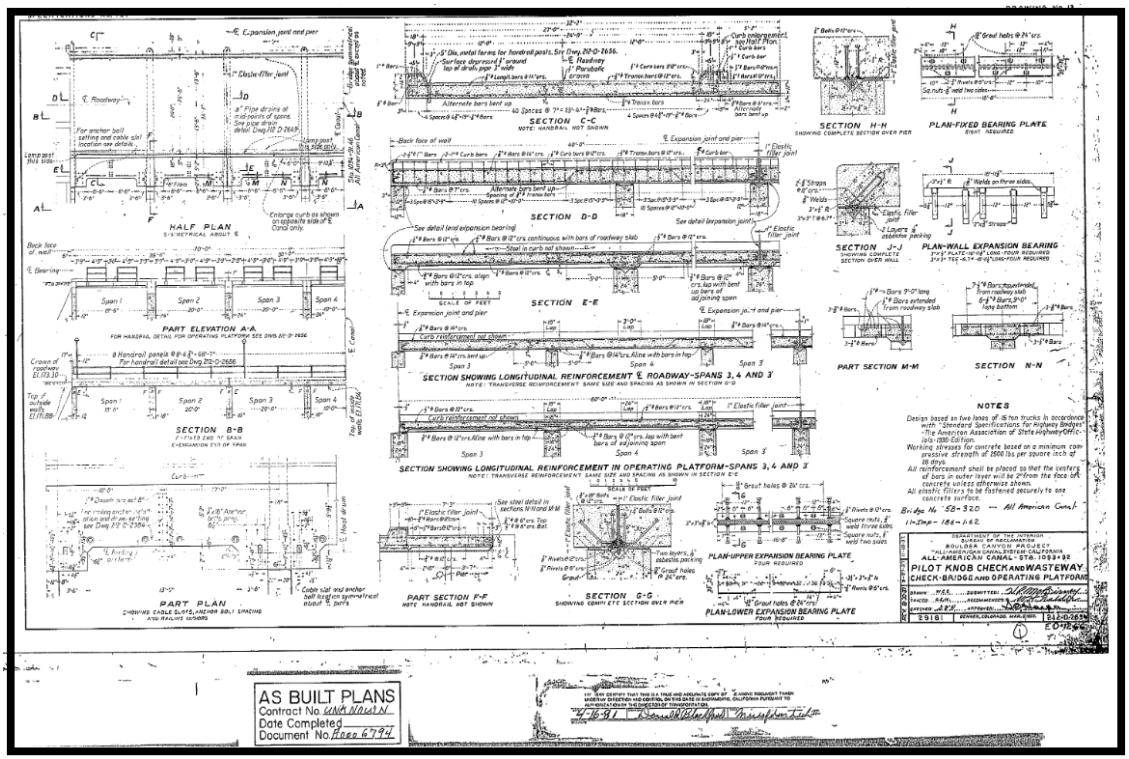

Figure- 2A: Existing Bridge Information

Alternative- 2 was selected for the study because it meets all the alternative criteria as enumerated in the PSR-PDS with the exception of criteria number 8. Subsequent meetings of the PDT obtained concurrence for the location of the bridge which is less than the 500 feet west of the existing bridge as specified in criteria number. Based on the alternative criteria, this alternative spans that the width of the Canal without any supports in the Canal. A minimum vertical clearance of 14-feet at the operation and maintenance road is required. This alternative would build a new structure downstream of the existing structure, and it consists of realigning approximately 0.5 miles 0f SR-186 and construction of a new 3-span 580-foot box girder bridge structure using a segmental construction method to avoid placing falsework in the canal as required by the United States Bureau of Reclamation, the owner of the All-American Canal. See **Figure- 3** which shows the proposed General Plan Sheet.

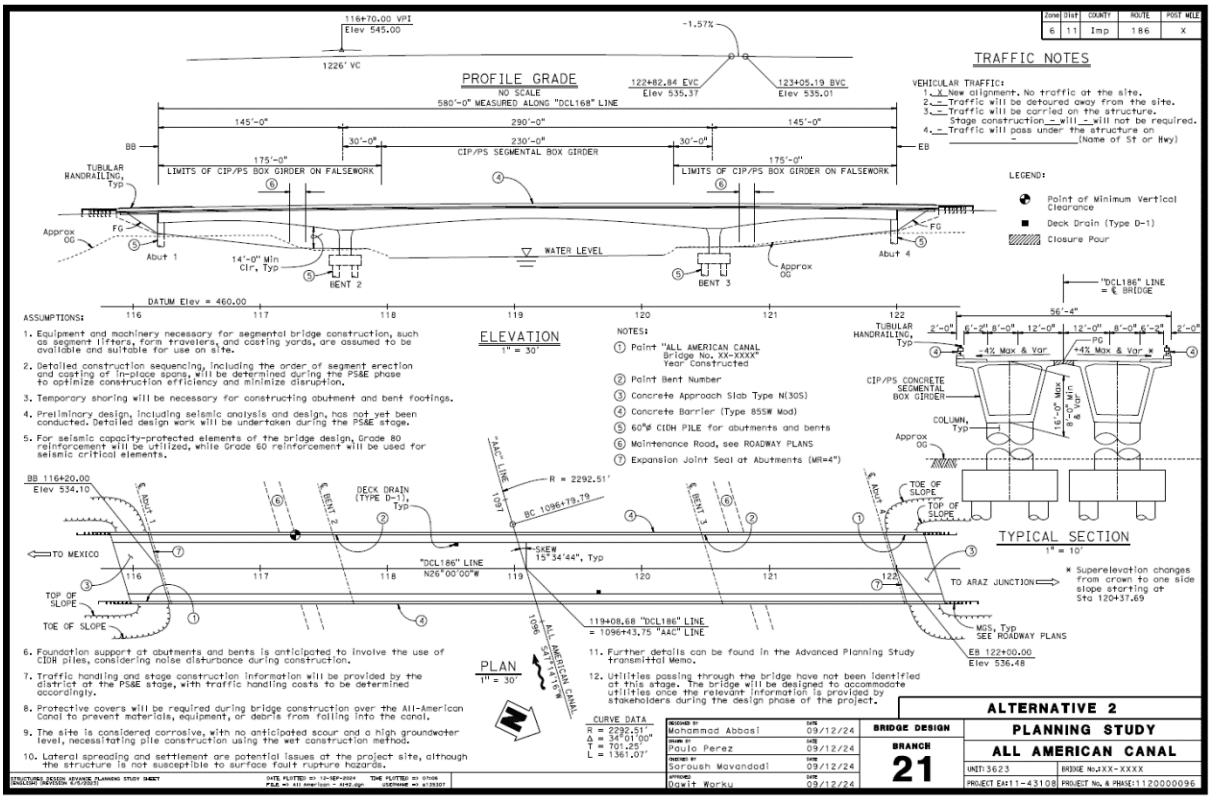

Figure- 3: Alternative- 2 Plan Study

2.1 Data Sources and References*:*

The data and references of this Draft Final Hydraulic Report were obtained from the following sources:

- Caltrans' Bridge Inspection Records (BIRs).
- SR-186 All-American Canal Bridge Replacement Feasibility Study 2019.
- "Preliminary Hydraulics Information for the Bridge Replacement Project of the All-American Canal" pre-email dated January 18, 2024.

- Design Planning Study for the Alternative 2, All American Canal Bridge from the Office of Bridge Design, Design Branch 21, dated April 2024.
- Average maximum flows range for a water year, earth Section 6 and profile with original design section, profile of the canal, and Design Capacity discharge Provided by the Imperial Irrigation District.
- 1981 As-Builts: Pilot Knob Check and Wasteway, Check Bridge and Operating Platform
- Field photo documentation dated October February 2011.
- Federal Emergency Management Agency (FEMA), September 26, 2008. "*Flood Insurance Rate Maps for Imperial County, California and Incorporated Areas, Flood Insurance Rate Map Number 06025C2250C*".
- HEC-18, "Evaluation Scour at Bridges" (5th Edition, April 2012).

2.2 Geographical Reference – Vertical Datum:

All vertical elevations in this draft final hydraulic report (DFHR), unless otherwise stated, are based on the North American Vertical Datum of 1988 (NAVD-88) plus 100 meters.

3.0 FLOODPLAIN ANALYSIS CONSTRAINTS:

Within the project limits, the new bridge crossing over the All-American Canal floodplain is located within a FEMA Zone D flood plains which is the flood insurance rate zone that corresponds to unstudied areas where flood hazards are undetermined, but possible. The FEMA Flood Insurance Rate Map (Map #06025C2251C) at the project location.
This project's bridge strategy will be designed to produce the least amount of impact to the floodplains. The proposed bridge will be designed with minimal impact to the floodplain. Figure -4 shows the FEMA Flood Insurance Rate Map.

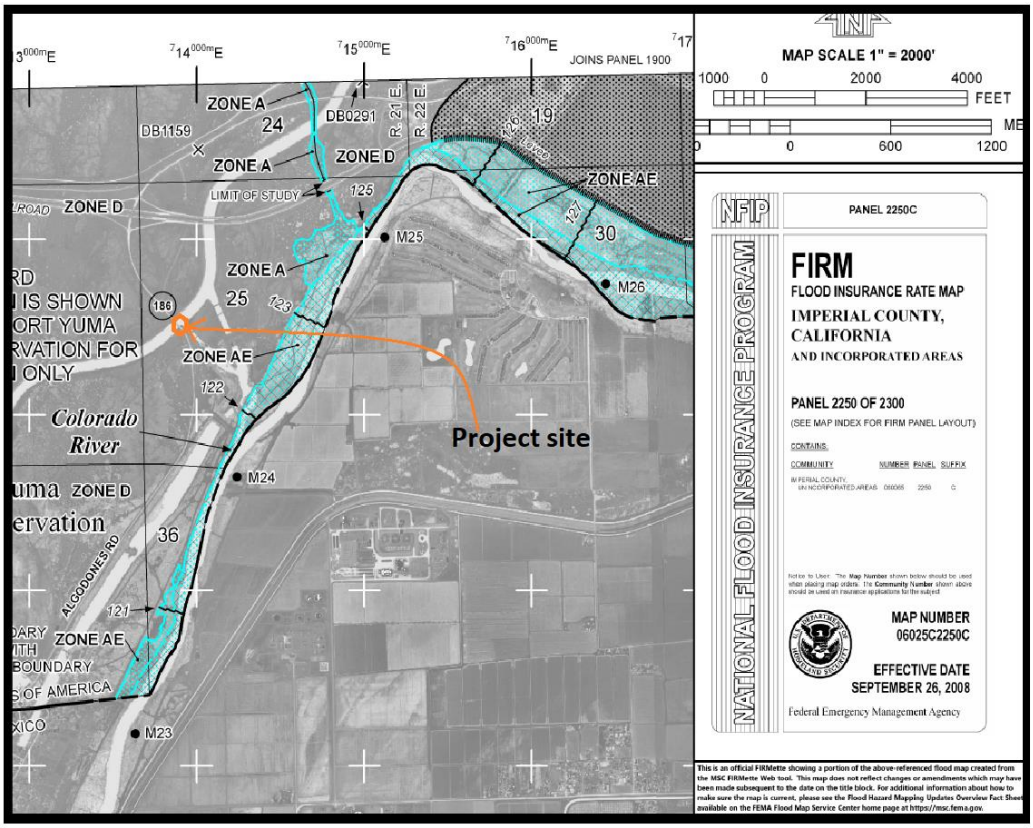

Figure- 4: FEMA FIRM of Project Location

4.0 PROJECT WATERSHED:

The watershed area analysis was not developed due to the control flow of the All-American Canal by Imperial Irrigation District.

5.0 PROJECT DESIGN FLOOD DISCHARGES:

Hydrology analysis using the Design Capacity flow for the All-American Canal (AAC) provided by Imperial Irrigation District (IID). Based on IID " the Design Capacity flow for the reach of the AAC is 10,155 CFS. Operation will never exceed the amount (at least on purpose). The maximum flow months are April, May, and June. Maximum flow will vary monthly based on the season and river conditions. Unless the project was going to use temporary canal supports for the lower flow periods then the full 10,155 CFS of canal capacity will be needed". Table-1 shows the estimated peak discharge considered for this study was based on design capacity of 10,155 CFS.

Table- 1: Design Flood Discharges Using Imperial Irrigation District

Frequency Discharge	Discharge (cfs)	Available Freeboard (Feet)
Design Capacity	10,155	17.5

For comparison purposes, estimated peak discharge considered for this study was based on two discharges: 1) Design Capacity of 10,155 CFS 2) Maximum Available Capacity (Full Canal) of 17,000 CFS. **Table- 2** shows the Flood Discharges and available freeboard at AAC.

Table- 2: Flood Discharges at AAC

Frequency Discharge	(cfs)	Available Freeboard (Feet)
Design Capacity*	10,155	17.5
Maximum Available Capacity** (Full Canal)	17,000	11.9

Notes: * Per IID ** Using HEC-RAS to compute maximum flow when canal is running full.

Table-3 shows the average maximum flows ranges for a water year (AAC Station 1117 discharges / included IID water order, CVWD water order & Brock Reservoir water order).

Table- 3: Average Maximum Flows for a Water Year Using Imperial Irrigation

Water Year Discharge	Maximum Flow (cfs)	Water Year Discharge	Maximum Flow (cfs)
January	3,000 – 5,000	July	6,000 – 8,000
February	4,000 – 6,000	August	5,000 – 7,000
March	5,000 – 7,000	September	5,000 – 7,000
April	7,000 – 10,000	October	4,500 – 6,500
May	8,000 – 10,000	November	4,000 – 6,000
June	7,000 – 9,000	December	3,500 – 5,500

6.0 HYDRAULIC MODEL:

This study used hydraulic modelling based on the U.S. Army Corps of Engineers HEC-RAS (Hydraulic Center River Analysis System) version 6.0.0.
Hydraulic parameters (water surface elevation and velocity) were obtained from the model based on the following assumptions:
1) Earth Section 6 and profile with original design section and dimensions at the P.K. check is located at STA 1092+92.79 information supply by the Imperial Irrigation District. Typical cross sections of All-American Canal at the proposed bridge used for the HEC-RAS model is shown in Figure- 5.
2) Top of the bank elevation at All-American Canal at the proposed bridge supply by structure design. The top of the bank elevation was used as the reference elevation to obtain the canal cross section and it was used to develop the hydraulic model. Figure- 6 shows profile and superelevation diagram.
3) The profile of the canal supply by the Imperial Irrigation District was used to calculate slope of the bottom of canal. See Figure- 7.

4) The discharges used for the bridge hydraulic analysis are shown in **Table- 1.**

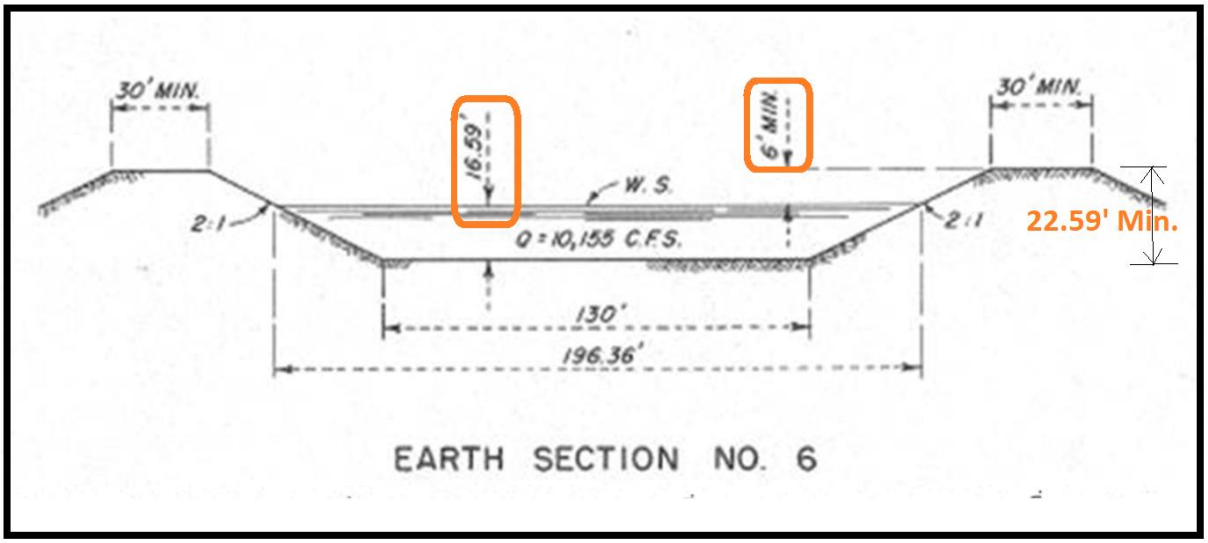

Figure- 5: Typical Cross Section of the All-American Canal at Proposed Bridge

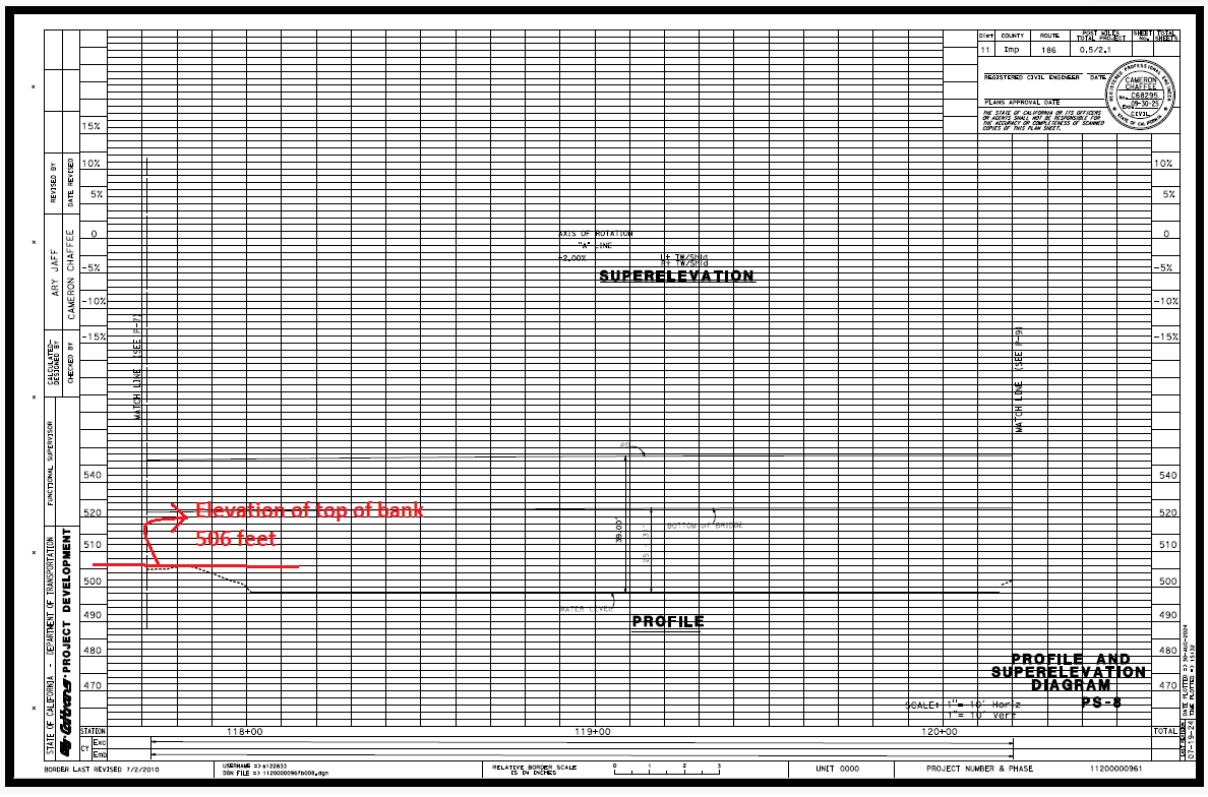

Figure- 6: Profile and Superelevation Diagram at Proposed Bridge

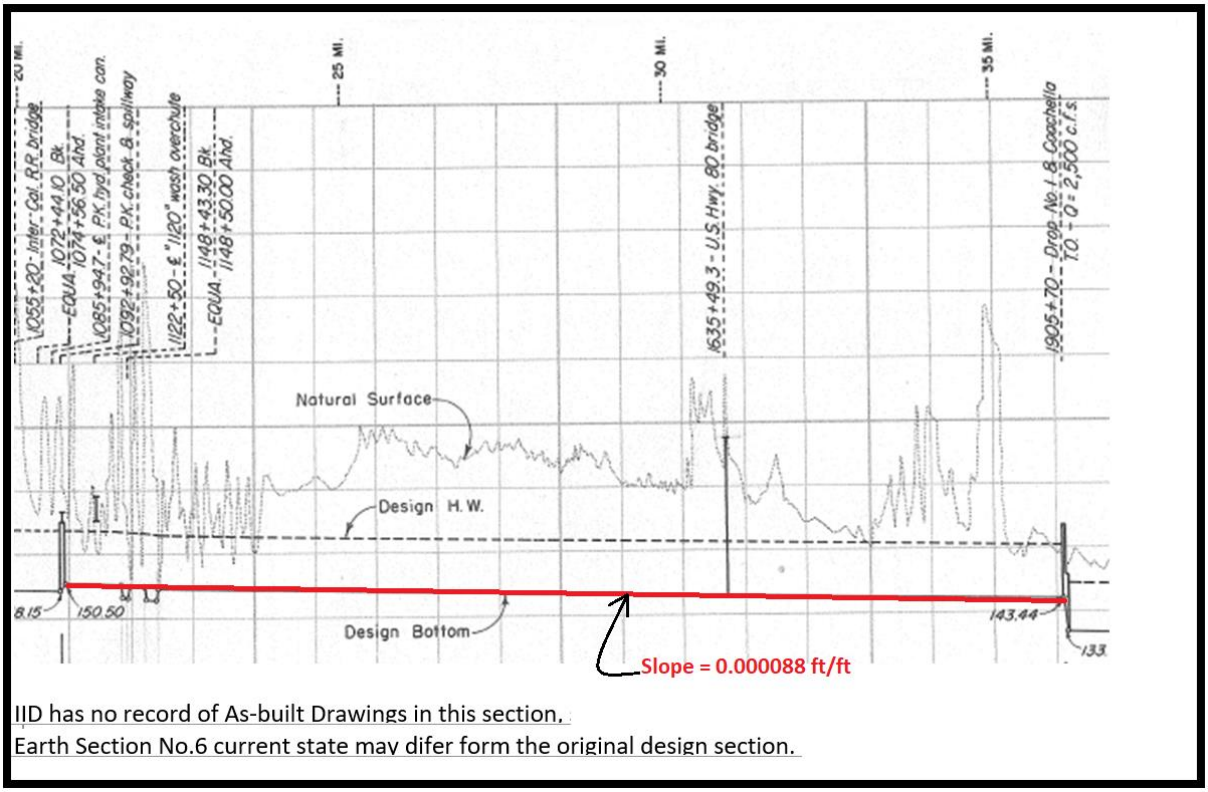

Figure- 7: Profile of the All-American Canal

The datum elevation used for this study is NAVD-88. The proposed bridge will be located between 126 feet and 167 feet downstream the existing bridge as measured between bridge centerlines, as shown in Figure- 1. The approximate upstream and downstream limits of the cross-section data are roughly 1,000 feet for the All-American Canal, cross sections for the HEC-RAS model are shown in Figure- 8.

For modeling purpose, representative Manning's ("n") roughness coefficient was estimated to account for relative differences in roughness for the study area. Based on site photos and engineering judgment, Manning's "n" values ranging 0.021 for the canal was selected for this study, as shown in Figure- 9**.**

The proposed bridge for the Alternative 2 study plan was used in the model with a minimum soffit elevation of 517.6 feet, as illustrated in Figure-10.

A downstream boundary condition with slope of .000087 ft/ft was used for this study. As shown in Figure- 11, the water surface elevation profiles for the Design Capacity and Maximum Available Capacity (full canal) discharges of the proposed bridge.

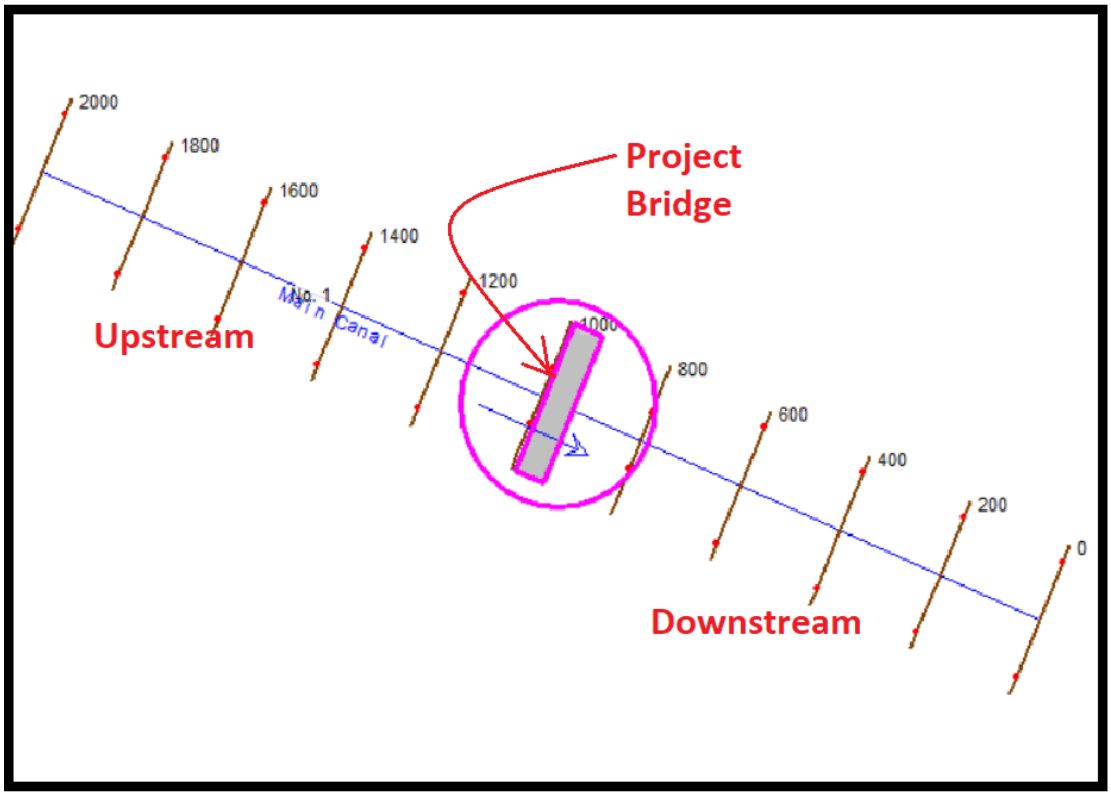

Figure- 8: View of HEC-RAS Cross Section



Figure- 9: Looking Southwest from SR-186 at Downstream

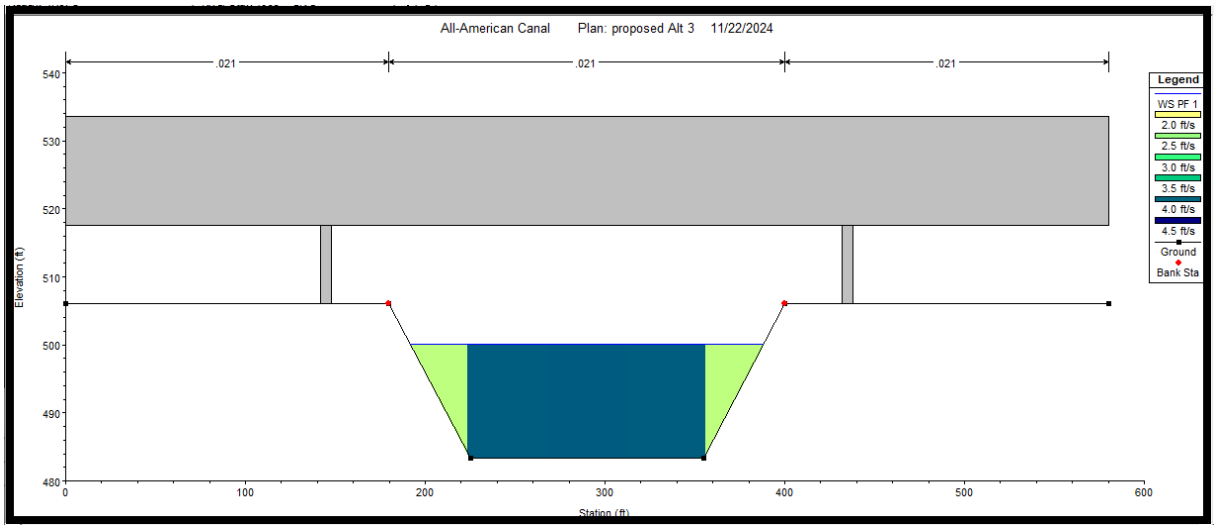

Figure- 10: HEC-RAS Cross Section at Upstream Alternative 2

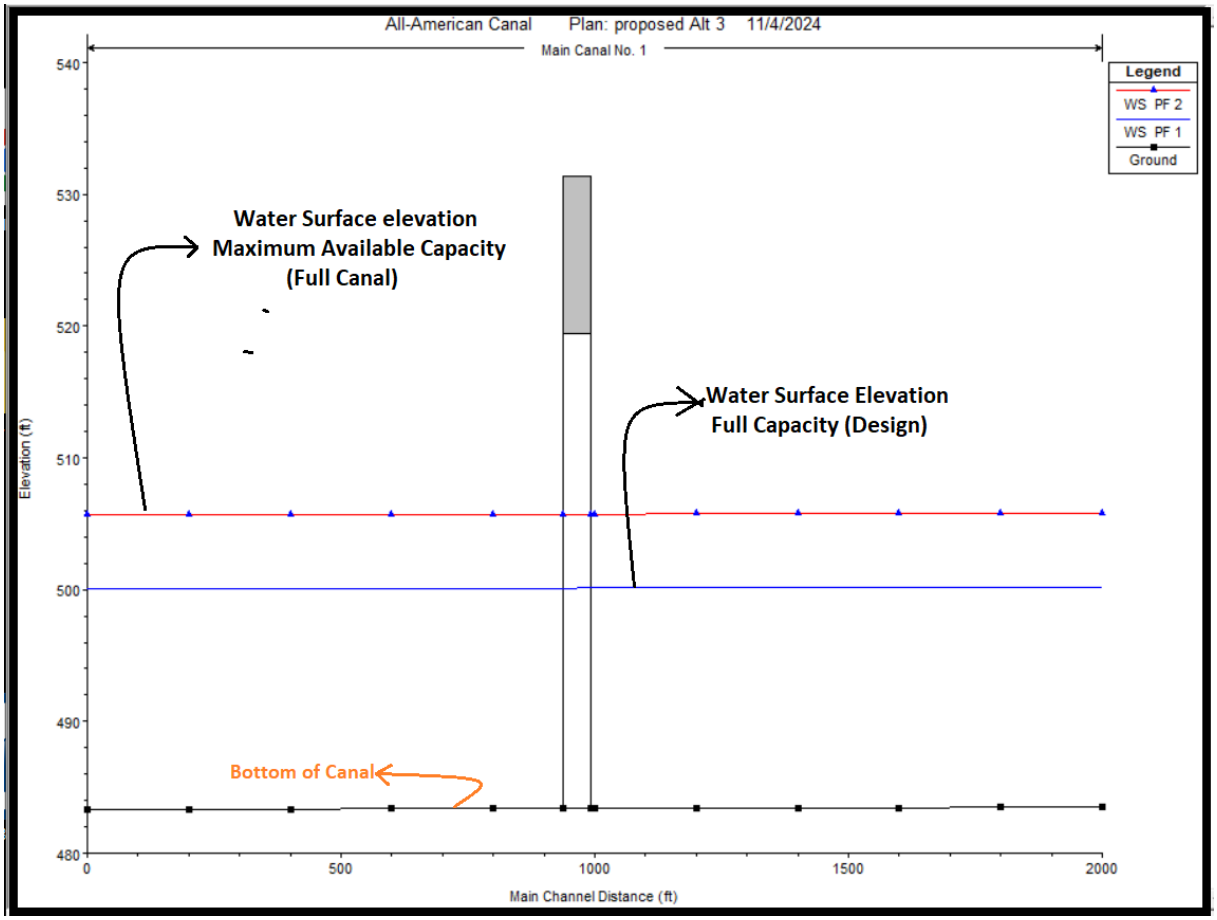

Figure- 11: WSEL Profile Plot of Downstream and Upstream at Proposed Bridge

A Design Capacity and Maximum Available Capacity discharge rates of 10,155 cfs and 17,000 cfs, respectively will be used at the proposed bridge for hydraulic model. Hydraulic results represent the existing conditions and post-project conditions at the proposed bridge.

Hydraulic plan was developed to assess the conditions for the post-project flood impacts and scour conditions and sets the baseline Design Capacity flood elevations throughout the project location.

Results indicate the construction of the new bridge; the water surface elevation will be same based on the control flow rate and maintain the same typical cross section of the All-American Canal of the new bridge. With a proposed minimum soffit elevation of 517.6 feet, there will be approximately 17.5 feet of freeboard over the Design Capacity and approximately 11.9 feet of freeboard over the maximum available capacity (full canal) and it will not cause pressure flow for the bridge. Table- 4A and Table-4B shows hydraulic results.

Table- 4A: Hydraulic Results for the Bridge

Flood Frequency	Min. Soffit Elevation (feet)	Water Surface Elevation (feet)		Freeboard Depth Average (feet)
		Downstream	Upstream	
Design Capacity	517.6	500.1	500.1	17.5
Maximum Available Capacity (Full Canal)	517.6	505.7	505.7	11.9

Table- 4B: Hydraulic Results for the Bridge

Flood Frequency	Min. Soffit Elevation (feet)	Water Surface Elevation (feet)	Maximum Channel Velocity (feet/second)	Freeboard Depth Average (feet)
Design Capacity *	517.6	500.1	4.3	17.5

*It was used to obtain scour calculation.

7.0 SCOUR ANALYSIS:

A scour analysis was performed for the proposed bridge applying the Design Capacity flood event and in accordance with the guidelines set forth by the Federal Highway Administration's *Hydraulic Engineering Circular Number 18 (HEC-18) - Evaluating Scour at Bridges, 5th Edition* and the National Cooperative Highway Research Program's *NCHRP Report 24-20 - Estimation of Scour at Bridge Abutments*. HEC-18 defines total scour as a summation of three components: (1) long-term degradation of the riverbed; (2) contraction scour, both horizontally and vertically, at the bridge; and (3) local scour at the piers and abutments.

7.1 Long-Term Degradation Changes:

Based on the concrete line slope for canal with control flow capacity of the canal, with the longitudinal slope of 0.000087 ft/ft, and maximum velocity of 3.7 ft/sc. The resulting long-term degradation showed that there is no trend of degradation at the proposed structures. Therefore, assuming a design life of 75-year, a long-term projected degradation will be zero and it will not add to the total scour depth.

7.2 Contraction Scour:

The National Cooperative Highway Research Program (NCHPR) 24-20 method for calculating abutment scour provides a single combined “total scour depth” which includes both contraction scour and local abutment scour components. Based on hydraulic results for the proposed bridge for a Design Capacity discharge, the calculated combined total scour depth for the contraction scour and local abutment scour at both abutments is 0.0 feet for the proposed bridge.
Consequently, potential contraction scour at the abutments and local abutment scour is also 0 feet. Both abutment support location elevations (i.e. the local ground elevations at the abutment faces) are placed higher than the calculated water surface elevation for the Proposed All-American Canal Bridge and therefore are not subject to direct scour for the flow conditions modeled.
Typically, when a single combined “total scour depth” value is obtained for an abutment using the NCHRP 24-20 method, individual components for contraction scour and local abutment scour are usually estimated independently by obtaining a value for contraction scour using an available equation in the current HEC-18 Manual and then assuming the remaining depth of the “total scour depth” represents the local abutment scour depth component. However, since the combined total scour depth is 0 feet using the NCHPR 24-20 method, available equations for contraction scour were used to confirm the calculated potential contraction scour at the abutments and pier columns all locations is 0 feet.
A summary of the contraction scour and local scour depths at each support location is shown in **Table- 5** and **Table- 6** for the proposed bridge.

7.3 Local Pier and Abutment Scour:

For the local scour conditions, local scour is analyzed. With assumed 9.0 ft pier column diameter, with an angle of contact zero degree for bent 2, and bent 3 for proposed bridge, and no appreciable debris accumulation, the local pier scours resulted in approximately zero feet for Pier 2 and Pier 3 for the proposed bridge (see **Table- 5** and **Table- 6**).

Table- 5: Scour Depth for the All-American Canal Bridge (Design Capacity, 100-Year)

Location	Approx. OG Elev. (ft)	Water Surface Depth U/S (ft)	Potential Scour Depth (ft)			
			Local	Contraction	Degradation	Total
A1	515.2	0	0.0	0.0	0.0	0.0
P2	504.9	0	0.0	0.0	0.0	0.0
P3	506.9	0	0.0	0.0	0.0	0.0
A4	518.0	0	0.0	0.0	0.0	0.0

Table- 6: Scour Depth for the All-American Canal Bridge (Design Capacity. 100-Year)

Substructure Component	Long-Term Scour Depths		Short-Term Scour Depths	Total Scour Depth (ft)
	Degradation (ft)	Contraction Scour (ft)	Local Scour (ft)	
Abutment 1	0.0	0.0	0.0	0.0
Pier 2	0.0	0.0	0.0	0.0
Pier 3	0.0	0.0	0.0	0.0
Abutment 4	0.0	0.0	0.0	0.0

8.0 CONCLUSIONS AND RECOMMENDATIONS:

- For Design Capacity flow conditions, proposed bridge has 17.5 feet available freeboard.
- For comparison, using Maximum Available Capacity flow conditions, proposed bridge has 11.9 feet available freeboard.
- The potential total scour depths were calculated to be zero feet for abutment 1 and abutment 4 for the proposed bridge.
- The potential total scour depths were calculated to be zero feet for bent 2 and for bent 3 for the proposed bridge.
- The proposed bridge work will result in no change to the canal velocity and water surface elevation.

9.0 SUMMARY INFORMATION FOR THE BRIDGE DESIGNER:

HYDROLOGIC SUMMARY			
	Design Flood	**Base Flood**	**Overtopping Flood**
Flood Frequency	Per Canal Design Capacity	N/A	Per Max. Available Capacity
Discharge	10,155 cfs	N/A	17,000 cfs

Water Surface Elevation at Bridge	500.1 feet	N/A	505.7 feet
Flood plain data are based upon information available when the plans were prepared and are shown to meet federal requirements. The accuracy of said information is not warranted by the State and interested or affected parties should make their own investigation.			

Table- 7: Summary Table for the All-American Canal Bridge

Minimum Soffit Elevation	517.6 feet
Substructure Component	Anticipated Total Scour Depths
• Abutment 1	0 feet
• Pier 2	0 feet
• Pier 3	0 feet
• Abutment 4	0 feet
Channel Velocity	4.3 feet/sec

SCOUR DATA TABLE		
Support Number	**Long Term (Degradation and Contraction) Scour Depth (feet)**	**Short Term (Local) Scour Depth (feet)**
Abutment 1	0	0
Pier 2	0	0
Pier 3	0	0
Abutment 4	0	0

Support No.	Long Term (Degradation and Contraction) Scour Elevation (ft)	Short Term (Local) Scour Depth (ft)
Abutment 1	515.2	0
Pier 2	504.9	0
Pier 3	506.9	0
Abutment 4	518.0	0

Environmental Technical Report B5

Natural Environment Study (Minimal Impacts)
(NESMI)

November 3, 2023

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Natural Environment Study (Minimal Impacts)

Imperial State Route 186

11-IMP-186-0.5/2.0

EA 11-431080 / PID 1120000096

July 2024

STATE OF CALIFORNIA
Department of Transportation

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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 call or write to Department of Transportation, Attn: David L. Nagy, Environmental Stewardship & Ecological Studies, 4050 Taylor Street, San Diego, CA 93401; (619) 208-6574 (Voice) or use the California Relay Service (800) 735-2929 (TTY to Voice), (800) 735-2922 (Voice to TTY) or 711.

1. Introduction

The California Department of Transportation (Caltrans) proposes to realign a portion of State Route 186 (SR-186) which crosses over the All-American Canal in eastern Imperial County between post mile (PM) 0.5 and PM 2.0. The realignment would begin one half-mile south of the canal and would terminate slightly north of the Interstate 8 (I-8) interchange.

1.1 Project History

1.1.1 Project Purpose and Need

The purpose of this project is to:

- Address the deficiencies of the existing roadway and canal crossing by constructing a new bridge that meets Caltrans Highway Design Standards for current and future traffic volumes, design speed, and structural capacity.
- Facilitate access for the traveling public, including accommodations for future pedestrian and/or bicycle access.
- Improve safety for the traveling public.
- Accommodate international and interregional movement of people, goods, and services.
- Provide better service for the visitors traveling through the Andrade Port of Entry.

The existing bridge over the All-American Canal is on a United States Bureau of Reclamation (USBOR) 7-gate water flow check structure facility built in the 1930's for operations and maintenance of the All-American Canal. Caltrans adopted the road in 1972 as part of SR-186. After the opening of the Andrade Port of Entry, the primary bridge use has changed from operations and maintenance to public travel. The bridge was not built to Caltrans Highway Design Standards with the weight load of the bridge for public travel exceeding the bridge limits for operations and maintenance and does not provide standard lane width or a shoulder for public travel. The bridge does not provide sufficient access to the Andrade Port of Entry due to weight limitations and safety concerns. The bridge also houses high voltage electrical and mechanical equipment used to run the check structure's mechanical gates, creating a risk for public travel.

1.2 Project Description

The project will realign the two-lane highway on a new alignment and will construct a new 580-foot segmental concrete bridge structure spanning the canal, located a minimum of 130 feet west and 25 feet higher than the existing bridge. The clearance from the water level of the All-American Canal to the soffit of the new bridge will be approximately 15 to 18 feet. In each northbound and southbound direction, the new bridge structure would provide a two-foot concrete barrier, six-foot sidewalk, eight-foot

shoulder and 12-foot travelled way. The new bridge sidewalk will provide pedestrian/bicycle access.

The bridge segment over the canal would utilize a 230-foot cast-in-place segmental box girder. Outside of the canal limits, a 175-foot cast-in-place box girder would be built on top of falsework. The proposed bridge structure would not require trestles or falsework within the canal, nor would it require elements that pierce the apron of the canal weir.

Abutments and bents would use 60-inch diameter cast-in-drilled-hole reinforced concrete piles. The project would utilize imported fill to support and elevate the new bridge abutments on either side of the canal.

The proposed structure would provide the following features:

- Maintenance of access to the All-American Canal from a public road.
- Provision for safe access to the USBOR/Imperial Irrigation District (IID) facilities during construction.
- A 30-foot horizontal clearance between the canal inside crown and the pile bents.
- Minimum clearance of 16 feet, 6 inches for the operations and maintenance roads.
- A new bridge spanning the entire width of the All-American Canal without any supports in the canal and crossing the centerline of the canal at 70 to 90 degrees per the USBOR Engineering and operations and maintenance guidelines for crossings.

The project improvements would be located on Fort Yuma/Quechan Tribal Community land deeded to the USBOR and the existing 100-foot permanent easement granted to Caltrans would shift to the west. New slope easements from USBOR would be required to provide the cut slopes and grading. The current 100-foot easement of the existing bridge would be returned to USBOR; however, the existing bridge would remain in use by the IID, via restricted-access tie-in ramps from SR-186. The proposed improvements would occupy a portion of existing defunct Union Pacific Railroad right-of-way, requiring new easements from the California Public Utilities Commission south of the canal. Placement of fill within approximately 1.5 acres of Union Pacific Railroad right-of-way would occur.

Two soft-bottom retention basins, sized at a maximum of 0.19 and 0.52 acre and located at the southwest and northwest quadrants of the proposed new bridge structure, respectively, may be incorporated into the final design if needed.

Overhead transmission power lines and several other utilities would require relocation to achieve a clear recovery zone, or will be protected in place.

During construction, SR-186 throughway traffic would be detoured temporarily to an easterly alignment that continues to use the existing bridge. After construction, the detour road pavement will likely be removed, while the roadway grading will remain.

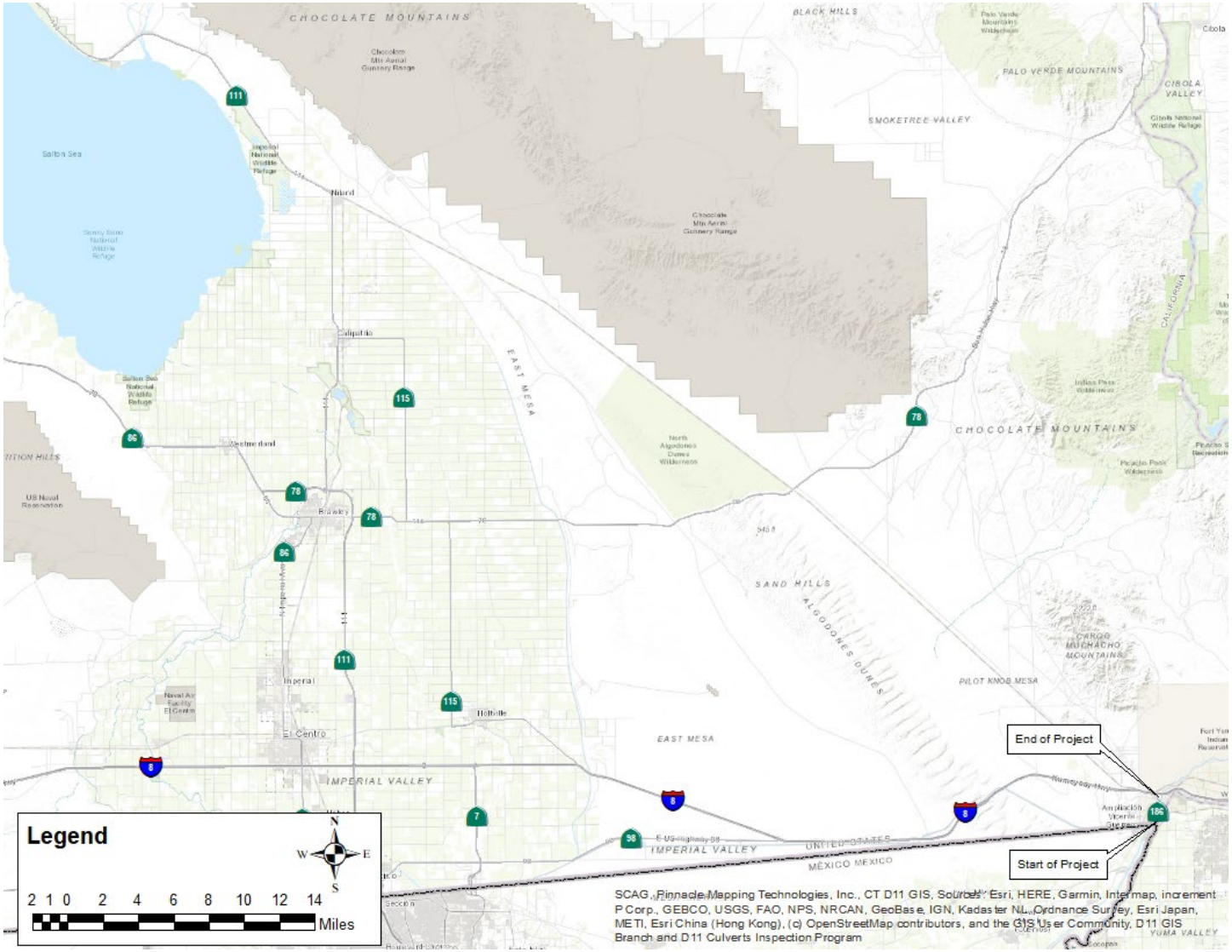

Figure 1: Project Location Map

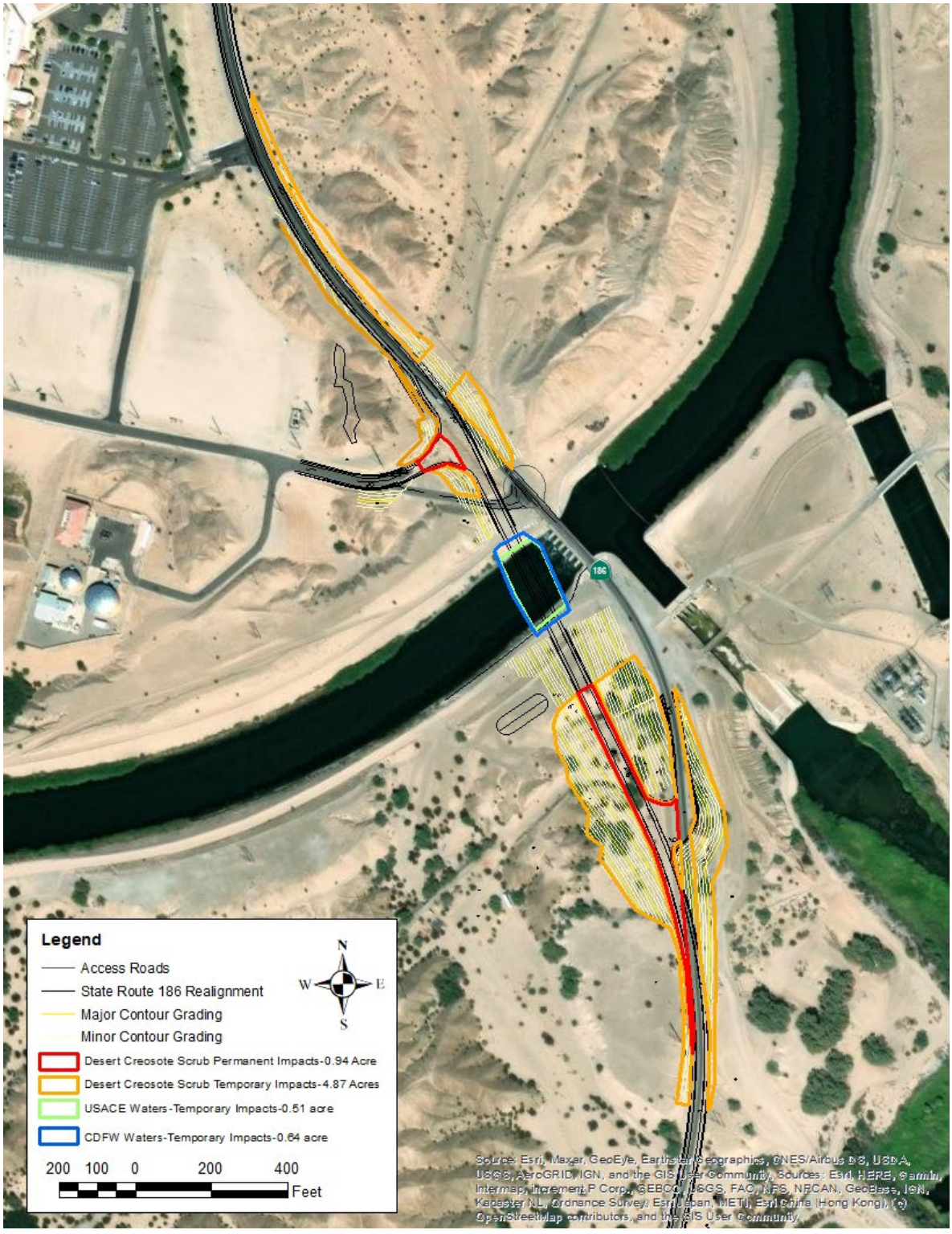

Figure 2: Project Aerial





Figure 3: Ground Photos. All-American Canal (top). Desert creosote scrub (bottom).

Staging would occur to the northeast of the proposed bridge, within an approximate 6-acre area in the vicinity of the Quechan Casino Resort South Entrance.

The project is on SR-186 from 0.5 mile north of the United States/Mexico Border to I-8 Eastbound Off-ramp, between PM 0.5 and PM 2.0, Imperial County, California in the Yuma West 7.5-minute U.S. Geological Survey (USGS) quadrangle.

2. Study Methods

To comply with the provisions of various State and Federal environmental statutes and executive orders, the potential impacts to natural resources of the region were investigated and documented. Potential impacts to resources were analyzed based on the proposed design of the project and ecological resources identified in the field surveys.

The Biological Study Area (BSA) was defined as the area permanently and temporarily affected by the proposed project plus a 500-foot buffer and the proposed staging/ storage areas (Figure 2). Actions considered when determining the BSA include ground disturbance, equipment access, right-of-way, air quality impacts, lighting effects, and noise disturbances during work. The project BSA totals approximately 60 acres of arrow-weed scrub, 12 acres of disturbed wetland, 100 acres of desert creosote scrub, 76 acres of disturbed habitat, and 52 acres of urban/developed land.

2.1 Regulatory Requirements

- Federal Endangered Species Act
    - The U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service/NOAA Fisheries implement the Federal Endangered Species Act of 1973 (FESA) (16 USC §1531 et seq.). Threatened and endangered species on the federal list (50 CFR §17.11, 17.12) are protected from “take” (direct or indirect harm), unless a FESA Section 10 Permit is granted or a FESA Section 7 Biological Opinion with incidental take provisions is rendered.
    - Pursuant to requirements of FESA, an agency reviewing a proposed project within its jurisdiction must determine whether any federally listed species may be present in the BSA and determine whether the proposed project will have a potential impact upon such species.
    - Under FESA, habitat loss is considered to be an impact to the species. In addition, the agency is required to determine whether the project is likely jeopardizing the continued existence of any species proposed to be listed under FESA or result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 USC §1536[3], [4]). Therefore, project related impacts to these species or their habitats would be considered significant and would require mitigation.

- Species that are candidates for listing are not protected under FESA; however, USFWS advises that a candidate species could be elevated to listed status at any time, and therefore, applicants should regard these species with special consideration.

- California Endangered Species Act

  - The California Endangered Species Act of 1970 (CESA) (CFG Code §2050 et seq., and CCR Title 14, §670.2, 670.51) prohibits “take” (defined as hunt, pursue, catch, capture, or kill) of species listed under CESA. A CESA permit must be obtained if a project will result in take of listed species, either during construction or over the life of the project. Section 2081 establishes an incidental take permit program for State-listed species.

  - Under CESA, the California Department of Fish and Wildlife (CDFW) has the responsibility for maintaining a list of threatened or endangered species designated under State law (CFG Code 2070). CDFW also maintains lists of species of special concern, which serve as “watch lists”. Pursuant to the requirements of CESA, an agency reviewing proposed projects within its jurisdiction must determine whether any State-listed species may be present in the BSA and determine whether the proposed project will have a potentially significant impact upon such species. Project related impacts to species on the CESA list would be considered significant and would require mitigation.

- Clean Water Act

  - Provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters.

  - Section 404: United States Army Corps of Engineers (USACE) Jurisdiction over fill materials in waters of the U.S., including wetlands. All federal agencies are to avoid impacts to wetlands whenever there is a practicable alternative. Section 404 established a permit program administered by USACE regulating the discharge of dredged or fill material into waters of the US (including wetlands).

  - Section 401: Requires that an applicant for a federal license or permit that allows activities resulting in a discharge to waters of the U.S., must obtain a State certification that the discharge complies with other provisions of CWA. The Regional Water Quality Board (RWQCB) administers the certification program in California.

  - The guidelines allow the discharge of dredged or fill material into the aquatic system only if there is no practicable alternative that would have less adverse impacts.

- Lake or Streambed Alteration Agreement

  - California Fish and Game (CFG) Code (§1601-1607) protects fishery resources by regulating any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake.

  - CDFW requires notification prior to commencement, and issuance of a Lake or Streambed Alteration Agreement, if a proposed project will result in the alteration or degradation of “waters of the State”. CDFW reviews the proposed actions and, if necessary, submits to the applicant a proposal for measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by the CDFW and the applicant is the Lake or Streambed Alteration Agreement.

  - The limit of CDFW jurisdiction is the “stream zone”, defined as “that portion of the stream channel that restricts lateral movement of water” and delineated at “the top of the bank or the outer edge of any riparian vegetation, whichever is more landward”.

- Executive Order 13112 – Invasive Species

  - On February 3, 1999, Executive Order (EO) 13112 was signed requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health." Federal Highway Administration (FHWA) guidance issued August 10, 1999 directs the use of the State’s invasive species list, maintained by the California Invasive Species Council to define the invasive plants that must be considered as part of the National Environmental Policy Act (NEPA) analysis for a proposed project.

  - Under E.O. 13112, federal agencies cannot authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species in the United States or elsewhere unless all reasonable measures to minimize risk of harm have been analyzed and considered.

- Migratory Bird Treaty Act

  - This treaty with Canada, Mexico, and Japan makes it unlawful to intentionally pursue, hunt, take, capture, or kill migratory birds. The law applies to the removal of nests (such as swallow nests on bridges) occupied by migratory birds during the breeding season. CFG Code (§3500) also prohibits the destruction of any nest, egg, or nestling.

2.2 Studies Required

2.2.1 Literature Search

Literature reviews included the California Natural Diversity Data Base (CNDDB) (CDFW 2024), United States Fish and Wildlife Service (USFWS 2024), and the California Native Plant Society (CNPS) Online Rare Plant Inventory (CNPS 2024). A USFWS Species List was obtained from Information for Planning and Consultation (IPaC) on July 22, 2024 (Appendix A). No work will occur within NOAA National Marine Fisheries Service (NOAA Fisheries) jurisdiction; therefore, a NOAA Fisheries Species List was not obtained for the project. A CNDDB search of the Yuma West 7.5-minute USGS quadrangle was conducted on July 22, 2024.

2.2.2 Field Reviews

A field survey to assess habitat, vegetation communities, and jurisdictional features was conducted by Caltrans Biologists Michael Galloway and Annika Nabors on October 11, 2023.

2.3 Agency Coordination and Professional Contacts

Caltrans requested a species list of federally threatened or endangered species expected to be present in or near the proposed action area from USFWS IPaC on July 22, 2024.

2.4 Limitations That May Influence Results

Surveys were conducted during the appropriate time of year with standard protocols used.

3. Results: Environmental Setting

Much of the project site is within a rural desert landscape consisting primarily of disturbed creosote scrub habitat. The All-American Canal, which is considered a disturbed wetland, and the Alamo Canal, which provides arrow-weed scrub habitat, are within the BSA. The project is situated in the Yuma West 7.5-minute USGS quadrangle.

3.1 Description of the Existing Physical and Biological Conditions

3.1.1 Study Area

SR-186 is a 2.1-mile two-lane conventional highway that provides the only access to the Andrade Port of Entry at the United States/Mexico Border and provides access to Quechan tribal lands. The BSA contains mostly open space and recreational land. This area ranges from a low to moderate level of disturbance through most of the project limits.

3.1.2 Physical Conditions

Average maximum temperature at the nearest weather station in Yuma Valley, Arizona is 87.4 degrees Fahrenheit, and the average minimum temperature is 54.0 degrees Fahrenheit. Precipitation is generally 2.86 inches annually (Western Regional Climate Center 2023). The general soil type throughout both project areas range from fine sandy loam to fine sand, with slopes ranging between 0 and 2 percent. These types of soils are typically seen on floodplains and alluvial basin floors. The runoff is slow and the possibility of erosion is slight. These soils are used for croplands and desert recreation.

3.1.3 Biological Conditions

Five primary vegetation communities occur with the SR-94 Culvert Rehabilitation Project BSA: arrow-weed scrub, disturbed wetland, desert creosote scrub, disturbed habitat, and urban/developed land.

Arrow-weed Scrub

The riparian vegetation of the Alamo Canal consists of moderate to dense streamside thickets strongly dominated by arrow-weed (*Pluchea sericea*), with scattered individuals of big saltbush (*Atriplex lentiformis*), common reed (*Phragmites australis*), around the margins of the thickets. Approximately 60 acres of arrow-weed scrub exists within the BSA.

Disturbed Wetland

Disturbed wetlands consist of areas permanently or periodically inundated by water, which have been significantly modified by human activity. This includes portions of wetlands with obvious artificial structures, including irrigation canals such as the All-American Canal. The banks of the All-American Canal consist mostly of bare ground, but there are some patches of big saltbush (*Atriplex lentiformis*) and common reed (*Phragmites australis*) in the BSA. Approximately 12 acres of disturbed wetland exists within the BSA.

Desert Creosote Scrub

Desert creosote scrub habitat includes shrubs 1.5 feet to 10 feet tall, widely spaced between bare ground. Dominated by creosote bush (*Larrea tridentata*) and blue paloverde (*Parkinsonia florida*). Approximately 100 acres of desert creosote sage scrub habitat exists within the BSA.

Disturbed

Disturbed habitat has been physically disturbed (by previous legal human activity) and are no longer recognizable as a native or naturalized vegetation association. Vegetation, if present, is nearly exclusively composed of nonnative plant species such as ornamentals or ruderal exotic species that take advantage of disturbance or shows

signs of past or present animal usage that removes any capability of providing viable natural habitat for uses other than dispersal. Examples of disturbed land include areas that have been graded, repeatedly cleared for fuel management purposes and/or experienced repeated use that prevents natural revegetation (i.e., dirt parking lots, trails that have been present for several decades), recently graded firebreaks, graded construction pads, construction staging areas, off-road vehicle trails, and old homesites. Approximately 76 acres of disturbed habitat exists within the BSA.

Developed

Developed areas have been constructed upon or are otherwise physically altered to an extent that native vegetation is no longer supported. Developed land is characterized by permanent or semi-permanent structures mostly from surrounding residential and commercial development, pavement or hardscape of SR-186 and adjacent roads, and landscaped areas that often require irrigation. Approximately 52 acres of developed habitat exists within the BSA.

3.1.4 Habitat Connectivity

The creosote scrub habitat within the BSA may provide limited wildlife movement, but connectivity is constrained by the Andrade Port of Entry at the United States/Mexico Border to the south and by the All-American Canal and I-8 to the north. The drainages of Alamo Canal provide limited opportunities for localized movement. There is more opportunity for movement along the riparian corridor of the Colorado River to the east of the BSA.

3.2 Regional Species and Habitats and Natural Communities of Concern

A list of sensitive wildlife and plant species potentially occurring within the BSA in the Yuma West 7.5-minute USGS quadrangle was compiled to evaluate potential impacts resulting from the project. The list was developed based on information compiled from the USFWS, CDFW, CNDDB, CNPS, and other current publications. The list shown in Table 1 includes 21 species (six plant species, one invertebrate, four reptiles, seven birds, three mammals) and one sensitive habitat with the potential to occur in the BSA, their protection status, habitat information, likelihood of occurrence within the BSA, and supporting comments as necessary. Based on the previous species occurrences, four species (three birds and one mammal) were historically identified within the BSA and are highlighted in Table 1. There are three threatened, endangered, or candidate species on the species list provided by the USFWS with no designated critical habitat for listed species in the BSA on July 22, 2024 (Appendix A).

Table 1: Listed, Proposed Species, Natural Communities, and Critical Habitat Potentially Occurring or Known to Occur in the Project Area.

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent[2]	Rationale
PLANTS					
Harwood's milk-vetch	*Astragalus insularis var. harwoodii*	CNPS 2B.2	Desert dunes, desert wash, Mojavean Desert scrub	P	Desert scrub habitat in the project footprint, but plant not historically observed in project area
Wiggins' croton	*Croton wigginsii*	CNPS 2B.2	Desert dunes, Sonoran Desert scrub	P	Desert scrub habitat in the project footprint, but plant not historically observed in project area
Mud nama	*Nama stenocarpa*	CNPS 2B.2	Marsh & swamp, wetland	A	Suitable habitat not found in the project footprint
Giant spanish-needle	*Palafoxia arida var. gigantea*	CNPS 1B.3	Desert dunes	A	Suitable habitat not found in the project footprint
Roughstalk witch grass	*Panicum hirticaule ssp. hirticaule*	CNPS 2B.1	Desert dunes, Mojavean Desert scrub, Sonoran Desert scrub	P	Desert scrub habitat in the project footprint, but plant not historically observed in project area
Narrow-leaf sandpaper-plant	*Petalonyx linearis*	CNPS 2B.3	Mojavean Desert scrub, Sonoran Desert scrub	P	Desert scrub habitat in the project footprint, but plant not historically observed in project area
INVERTEBRATES					
Monarch butterfly	*Danaus plexippus*	FC	Closed-cone coniferous forest	A	Suitable habitat not found in the project footprint
REPTILES					
Desert tortoise	*Gopherus agassizii*	FT/ST	Mojavean Desert scrub, Sonoran Desert scrub	P	Desert scrub habitat in project footprint, but desert tortoise and burrows not historically observed in project area
Banded Gila monster	*Heloderma suspectum cinctum*	SSC	Mojavean Desert scrub, Sonoran Desert scrub, riparian scrub	P	Desert scrub habitat in project footprint, but banded Gila monster not historically observed in project area
Sonoran mud turtle	*Kinosternon sonoriense*	SSC	Colorado River Basin flowing waters	A	Suitable habitat not found in the project footprint
Flat-tailed horned lizard	*Phrynosoma mcallii*	SSC	Desert dunes, Mojavean Desert scrub, Sonoran Desert scrub	P	Desert scrub habitat in project footprint, but flat-tailed horned lizard and burrows not historically observed in project area
BIRDS					
Western yellow-billed cuckoo	*Coccyzus americanus*	FT/SE	Riparian forest	A	Suitable habitat not found in the project footprint
Gilded flicker	*Colaptes chrysoides*	SE	Riparian forest, riparian woodland	A	Suitable habitat not found in the project footprint

Common Name	Scientific Name	Status[1]	General Habitat Description	Habitat Present/ Absent[2]	Rationale
Southwestern willow flycatcher	*Empidonax traillii extimus*	FE	Riparian forest, riparian woodland	A	Suitable habitat not found in the project footprint
California black rail	*Laterallus jamaicensis coturniculus*	ST	Brackish marsh, freshwater marsh, marsh & swamp, salt marsh	A	Suitable habitat not found in the project footprint
Gila woodpecker	***Melanerpes uropygialis***	**SE**	**Riparian forest, riparian woodland**	**A**	**Historically observed in BSA, but suitable habitat not found in the project footprint**
Yuma Ridgway's rail	***Rallus obsoletus yumanensis***	**FE/ST**	**Marsh & swamp, salt marsh, wetland**	**A**	**Historically observed in BSA, but suitable habitat not found in the project footprint**
Arizona Bell's vireo	***Vireo bellii arizonae***	**SE**	**Riparian forest**	**A**	**Historically observed in BSA, but suitable habitat not found in the project footprint**
MAMMALS					
Townsend's big-eared bat	*Corynorhinus townsendii*	SSC	Riparian forest, riparian woodland, Mojavean desert scrub	A	Suitable roosting habitat not found in project footprint
Colorado Valley woodrat	*Neotoma albigula venusta*	SSC	Sonoran Desert scrub	P	Desert scrub habitat in the project footprint, but Colorado Valley woodrat not historically observed in project area
Yuma hispid cotton rat	***Sigmodon hispidus eremicus***	**SSC**	**Wetlands and grasslands with dense grass and herbaceous plants**	**A**	**Historically observed in BSA, but suitable habitat not found in the project footprint**
HABITAT					
Sonoran cottonwood-willow riparian forest			Riparian forest	A	Suitable habitat not found in project footprint

[1]Status: Federal Endangered (FE); Federal Threatened (FT); Federal Proposed (FP, FPE, FPT); Federal Candidate (FC), Federal Species of Concern (FSC); State Endangered (SE); State Threatened (ST); Fully Protected (FP); State Rare (SR); State Species of Special Concern (SSC); California Native Plant Society (CNPS), etc.

[2]Absent [A] - no habitat present and no further work needed. Habitat Present [HP] - habitat is or may be present. The species may be present. Present [P] - the species is present. Critical Habitat [CH] - project footprint is located within a designated critical habitat unit but does not necessarily mean that appropriate habitat is present.

4. Results: Biological Resources, Discussion of Impacts, and Mitigation

4.1 Habitats and Natural Communities of Special Concern

There are approximately 172 acres of natural communities of special concern within the BSA consisting of 60 acres of arrow-weed scrub, 12 acres of disturbed wetland, and 100 acres of desert creosote scrub. Arrow-weed (*Pluchea sericea*) scrub habitat is found in the Alamo Canal, but Alamo Canal will be avoided during work; and therefore, will not be discussed further.

4.1.1 Discussion of Disturbed Wetland

4.1.1.1 Survey Results

There is approximately 12 acres of disturbed wetland in the All-American Canal in the BSA (Figure 3). The habitat consists mostly of open water and concrete-lined channel with mostly groundcover vegetation in the project footprint. Some patches of big saltbush and common reed are in the BSA in the All-American Canal but are outside (upstream and downstream) of the project area.

4.1.1.2 Project Impacts

The proposed work will not have permanent impacts to disturbed wetland. There will be approximately 0.64 acre of temporary impacts to the All-American Canal from the construction of the new bridge (Figure 2).

4.1.1.3 Avoidance and Minimization Efforts/Compensatory Mitigation

Avoidance and minimization of potential effects to disturbed wetland habitat occurring adjacent to the project area would be achieved through implementation of the following measures:

- Native vegetation outside of the construction area will be avoided and designated as an environmentally sensitive area (ESA) on the project plans and protected by installing temporary ESA fencing, if needed.

- All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other such activities will be outside of areas with disturbed wetland habitat. Any debris or runoff from the construction will be directed away from disturbed wetland habitat.

- Appropriate erosion and siltation controls will be installed prior to construction and maintained until construction completion.

- Impacts from fugitive dust will be avoided and minimized through watering, monitoring, and other appropriate measures.

- The project site will be kept as clean of debris as possible.

Since there are no anticipated permanent impacts and only minimal temporary impacts to disturbed wetland habitat, compensatory mitigation will not be required.

4.1.2 Discussion of Desert Creosote Scrub

4.1.2.1 Survey Results

There are approximately 100 acres of desert creosote scrub habitat in the BSA (Figure 3). The habitat consists mostly of scattered native vegetation consisting mainly of blue paloverde and creosote bush. Other vegetation observed during surveys include burrobush (*Ambrosia dumosa*), sixweeks grama (*Bouteloua barbata*), desert croton (*Croton californicus*), longleaf jointfir (*Ephedra trifurca*), Sonoran sandmat (*Euphorbia micromera*), prostrate spurge (*Euphorbia polycarpa*), honeysweet (*Tidestromia suffruticosa*), and fanleaf crinklemat (*Tiquilia plicata*).

4.1.2.2 Project Impacts

The SR-186 realignment will result in permanent impacts to 0.94 acre and temporary impacts to 4.87 acres of desert creosote scrub (Figure 2).

4.1.2.3 Avoidance and Minimization Efforts/Compensatory Mitigation

Avoidance and minimization of potential effects to desert creosote scrub habitat occurring adjacent to the project area would be achieved through implementation of the following measures:

- Desert creosote scrub habitat outside of the construction area will be designated as an ESA on the project plans and protected by installing temporary ESA fencing, if needed.

- Temporary impacts to 4.87 acres of desert sage scrub habitat from the project will be offset by restoring the temporarily impacted areas to pre-construction conditions. In areas where creosote vegetation is cleared and grubbed, the duff materials, consisting of the soils and materials from the removed vegetation, will be stockpiled and reapplied to temporarily impacted areas. If additional seeding is needed, Caltrans proposes the native seed mix in Table 2 to be applied to temporarily impacted areas. Duff material will be applied to temporary impact areas as soon as possible following regrading after completion of construction to prevent encroachment by nonnative plants.

- All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other such activities will be outside of areas with desert creosote scrub habitat.

Any debris or runoff from the construction will be directed away from desert creosote scrub habitat.

Table 2: Proposed Seed Mix for Temporary Impacted Desert Creosote Scrub Areas.

Scientific Name	Common Name	Pure Live Seed per Acre (LBS)	Percent Minimum Germination
Ambrosia dumosa	Burro weed	1.5	70%
Aristidea adscensionis	Three-awn	1.5	60%
Aristidea purpurea	Purple three-awn	2.0	50%
Atriplex canescens	Four-wing saltbush	2.0	40%
Croton californicus	Desert croton	1.0	30%
Encelia farinosa	Brittlebush	3.0	60%
Larrea tridentata	Creosote bush	2.0	50%
Olneya tesota	Desert ironwood	3.0	30%
Parkinsonia florida	Blue palo verde	1.0	30%
Petalonyx thurberi	Sandpaper plant	0.25	20%
Sporobolus cryptandrus	Sand dropseed	4.0	70%
Sphaeralcea ambigua	Desert mallow	2.0	30%

- Appropriate erosion and siltation controls will be installed prior to construction and maintained until construction completion.
- Impacts from fugitive dust will be avoided and minimized through watering, monitoring, and other appropriate measures.
- The project site will be kept as clean of debris as possible.

4.2 Special Status Plant Species

No listed plant species were identified in the USFWS species list that may occur within the proposed project footprint or may be affected by the proposed project. Sensitive plant species, including Harwood's milk-vetch (*Astragalus insularis* var. *harwoodii*), Wiggin's croton (*Croton wigginsii*), mud nama (*Nama stenocarpa*), giant spanish-needle (*Palafoxia arida* var. *gigantea*), roughstalk witch grass (*Panicum hirticaule* ssp. *hirticaule*), and narrow-leaf sandpaper plant (*Petalonyx linearis*) were not detected historically within the BSA. Therefore, no impacts to special status plant species are anticipated from the project and no compensatory mitigation will be required.

4.3 Special Status Animal Species

Two listed animal species were identified in the USFWS species list that may occur within the proposed project location, or may be affected by the proposed project, the federal candidate monarch butterfly (*Danaus plexippus*) and the federally endangered Yuma Ridgway's rail (*Rallus obsoletus yumanensis*). There is no designated critical

habitat within the BSA. There are also historical occurrences of the Gila woodpecker (*Melanerpes uropygialis*), Arizona Bell's vireo (*Vireo bellii arizonae*), and Yuma hispid cotton rat (*Sigmodon hispidus eremicus*) in the BSA. However, the Alamo Canal, which provides habitat for these species will be avoided during construction. There is no suitable habitat for these species within the project footprint. Therefore, no impacts to special status animal species are anticipated from the project and no compensatory mitigation will be required.

5. Conclusions and Regulatory Determinations

5.1 Federal Endangered Species Act Consultation Summary

The project is not anticipated to result in take of federally listed species. If project plans change, which may result in potential effects to federally listed species; if federally listed species are detected before or during construction; or if additional information on the distribution of listed or proposed species becomes available that results in potential effects as a result of construction at either location, Caltrans will initiate additional Section 7 consultation with USFWS.

This project is located outside of NOAA Fisheries jurisdiction; therefore, a NOAA Fisheries species list is not required and no effects to NOAA Fisheries species are anticipated.

5.2 California Endangered Species Act Consultation Summary

The project is not anticipated to result in take of State-listed species. If project plans change, which may result in potential effects to State listed species; if State listed species are detected before or during construction; or if additional information on the distribution of listed species becomes available that results in potential effects as a result of construction at either location, Caltrans will initiate a Section 2081 Incidental Take Permit consultation with CDFW.

5.3 Wetlands and Other Waters Coordination Summary

The project is not anticipated to result in permanent impacts to waters of the U.S./waters of the State under the jurisdiction of the USACE, RWQCB, and CDFW. The installation of a temporary column to support falsework to build the new bridge during construction will result in temporary impacts to 0.64 acre of the All-American Canal, including 0.51 acre of temporary impacts to jurisdictional waters of the U.S. Therefore, a Section 404, Nationwide Permit 14 for Linear Transportation Structures from USACE, a 401 Water Quality Certification from the RWQCB, and a 1602 Lake and Streambed Alteration Agreement from CDFW will be required. Caltrans will implement the following measures to minimize temporary impacts to waters of the U.S. and waters of the State under the jurisdiction of the USACE, RWQCB, and CDFW:

- The temporary construction staging areas, access roads, and equipment storage shall be strategically placed at a minimum of 100 feet to avoid impacts to jurisdictional waters.

- The jurisdictional water features outside of the work areas shall be designated as an ESA on the project plans.
- If needed, the ESA will be temporarily fenced using ESA fencing or lathe with flagging tape to exclude construction activities from the area. The Project Biologist will be onsite during the staking to identify the boundaries of the jurisdictional waters and shall supervise the placement of ESA exclusion fencing. The temporary fences around the ESAs, if needed, shall be installed as the first order of work. The locations of the ESA exclusion fence will be documented on construction maps.

5.4 Invasive Species

Invasive species were identified during the surveys of the BSA, including species that were on the National Invasive Species Management Plan, the State of California Noxious Weed List, and the Cal-IPC Invasive Plant Inventory Database (http://www.cal-ipc.org/paf/). Sahara mustard (*Brassica tournefortii*), spike watermilfoil (*Myriophyllum spicatum*), giant salvinia (*Salvinia molesta*), and salt cedar (*Tamarix ramosissma*) have a high rating; Bermuda grass (*Cynodon dactylon*), crystalline iceplant (*Mesembryanthemum crystallinum*), and Mexican fan palm (*Washingtonia robusta*) have a moderate rating on the California Invasive Plant Inventory Database. To prevent the spread of invasive species during the length of the project work, the following measures will be implemented:

- Special care will be taken during transport, use, and disposal of soils containing invasive weed seeds. Seed heads will be bagged, and all invasive species will be either sprayed or removed and properly disposed of to prevent spread into areas outside of the construction area.
- Erosion control measures for this project shall be designed to prevent the spread of invasive plant species.
- Landscaping designs for this project shall not contain invasive species in the plant selections or seed mixtures.

5.5 Migratory Bird Treaty Act

Measures will be implemented to avoid impacts to birds during the nesting season, which typically occurs between February 15 and August 31.

- If vegetation clearing is to take place during the nesting season a pre-construction nesting bird survey shall be conducted within 3 days of these activities.
- A no-disturbance buffer shall be established around any active nest or nesting pair territory to limit the impacts of construction activities. The buffer shall not be removed until after the nesting season or until after a qualified wildlife biologist determines that the young have fledged (usually late June to mid-July). The extent of these buffers shall be determined by the biologist (coordinating with USFWS and CDFW) and will depend on the level of noise or construction disturbance, line-of-sight between the nest and the disturbance, ambient levels of

noise and other disturbances, and other topographical or artificial barriers. Suitable buffer distances may vary between species but is typically 100 feet.

6. References

California Department of Fish and Wildlife (CDFW), California Natural Diversity Data Base (CNDDB). 2023. Report generated July 22, 2024.

California Invasive Plant Council (Cal-IPC). 2024. Cal-IPC Inventory. Berkeley, CA. Accessed July 22, 2024 from The Cal-IPC Inventory – California Invasive Plant Council.

California Native Plant Society (CNPS). 2023. Inventory of Rare and Endangered Plants (online edition). California Native Plant Society, Sacramento, CA. Accessed July 11, 2023 from http://www.cnps.org/inventory.

Holland, R.F. 1986. Preliminary Description of the Terrestrial Natural Communities of California. Nongame-Heritage Program, California Department of Fish and Game.

United States Fish and Wildlife Service (USFWS). 2023. Trust Resources, Information, Planning, and Consultation System Version 1.3. Accessed July 22, 2024 from http://ecos.fws.gov/ipac.

Western Regional Climate Center. 2023. Yuma Valley, Arizona (029657)—Climate Summary. Accessed July 11, 2023 from https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?az9657.

Appendix A: USFWS Species List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Carlsbad Fish And Wildlife Office
2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385
Phone: (760) 431-9440 Fax: (760) 431-5901

In Reply Refer To: 07/22/2024 22:53:15 UTC
Project Code: 2023-0105803
Project Name: IMP 186 All America Canal Bridge Construction

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A biological assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a biological assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a biological assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found at the Fish and Wildlife Service's Endangered Species Consultation website at:

https://www.fws.gov/service/esa-section-7-consultation

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Carlsbad Fish And Wildlife Office
2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385
(760) 431-9440

PROJECT SUMMARY

Project Code: 2023-0105803
Project Name: IMP 186 All America Canal Bridge Construction
Project Type: Bridge - New Construction
Project Description: The proposed project would realign a portion of the existing two-lane SR-186 from approximately one-half mile south of the All American Canal to the Interstate 8 (I-8) interchange. The project will realign the two-lane highway on a new alignment and will construct a new bridge spanning the canal. The new bridge will also provide a pedestrian access.
Project activity details include:
• Piles may be driven to build the new bridge abutments at the beginning and end of the bridge
• Ground disturbing activities include grading to build the roadway
• Utility pole relocation is needed for the new realignment
• Two staging areas are proposed for the work
• Asphalt-concrete grindings will occur at the beginning and end of construction where the new roadway joins the existing roadway
• Construction equipment includes bulldozers, graders, backhoes, dump trucks, rollers, and pavers

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@32.7327795,-114.71850517473914,14z



Counties: Imperial County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

BIRDS

NAME	STATUS
Southwestern Willow Flycatcher *Empidonax traillii extimus*	Endangered
There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	
Yuma Ridgway's Rail *Rallus obsoletus yumanensis*	Endangered
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3505	

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus*	Candidate
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency:	California Department of Transportation District 11
Name:	Michael Galloway
Address:	California Department of Transportation
Address Line 2:	4050 Taylor Street, MS-242
City:	San Diego
State:	CA
Zip:	92110
Email	michael.galloway@dot.ca.gov
Phone:	6199306692

Appendix B: CNDDB Species List

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Yuma West (3211466))

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Astragalus insularis var. harwoodii Harwood's milk-vetch	G5T4 S2	None None	Rare Plant Rank - 2B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	250 250	120 S:1	0	0	0	0	0	1	1	0	1	0	0
Coccyzus americanus occidentalis western yellow-billed cuckoo	G5T2T3 S1	Threatened Endangered	BLM_S-Sensitive USFS_S-Sensitive	120 125	165 S:2	0	0	0	0	0	2	2	0	2	0	0
Colaptes chrysoides gilded flicker	G4 S2	None Endangered	BLM_S-Sensitive IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	200 200	25 S:1	0	0	0	0	0	1	1	0	1	0	0
Corynorhinus townsendii Townsend's big-eared bat	G4 S2	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive	200 200	635 S:1	0	0	0	0	0	1	1	0	1	0	0
Croton wigginsii Wiggins' croton	G2G3 S2	None Rare	Rare Plant Rank - 2B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	164 164	12 S:1	0	0	0	0	0	1	1	0	1	0	0
Gopherus agassizii desert tortoise	G3 S2S3	Threatened Threatened	IUCN_CR-Critically Endangered	260 260	985 S:1	0	0	0	0	0	1	0	1	1	0	0
Heloderma suspectum cinctum banded Gila monster	G4T3 S1	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern	200 200	21 S:1	0	0	0	0	0	1	1	0	1	0	0
Kinosternon sonoriense Sonoran mud turtle	G3 SH	None None	CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened	120 120	5 S:1	0	0	0	0	1	0	1	0	0	1	0
Laterallus jamaicensis coturniculus California black rail	G3T1 S2	None Threatened	BLM_S-Sensitive CDFW_FP-Fully Protected IUCN_EN-Endangered	120 120	304 S:1	0	0	0	0	0	1	1	0	1	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Melanerpes uropygialis Gila woodpecker	G5 S2	None Endangered	BLM_S-Sensitive IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	120 130	62 S:2	0	0	0	0	0	2	1	1	2	0	0
Nama stenocarpa mud nama	G4G5 S1S2	None None	Rare Plant Rank - 2B.2		22 S:1	0	0	0	0	0	1	1	0	1	0	0
Neotoma albigula venusta Colorado Valley woodrat	G5T3T4 S1S2	None None		180 180	22 S:1	0	0	0	0	0	1	1	0	1	0	0
Palafoxia arida var. gigantea giant spanish-needle	G5T3? S2	None None	Rare Plant Rank - 1B.3 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	230 230	6 S:1	0	0	0	0	0	1	1	0	1	0	0
Panicum hirticaule ssp. hirticaule roughstalk witch grass	G5T5 S2	None None	Rare Plant Rank - 2B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden		18 S:1	0	0	0	0	0	1	1	0	1	0	0
Petalonyx linearis narrow-leaf sandpaper-plant	G4 S3?	None None	Rare Plant Rank - 2B.3	120 120	26 S:1	0	0	0	0	0	1	1	0	1	0	0
Phrynosoma mcallii flat-tailed horned lizard	G3 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened	130 130	340 S:1	0	0	0	0	0	1	1	0	1	0	0
Rallus obsoletus yumanensis Yuma Ridgway's rail	G3T3 S1	Endangered Threatened	CDFW_FP-Fully Protected	125 125	58 S:1	0	0	0	0	0	1	0	1	1	0	0
Sigmodon hispidus eremicus Yuma hispid cotton rat	G5T2T3 S2	None None	CDFW_SSC-Species of Special Concern	130 200	23 S:2	0	0	0	0	0	2	1	1	2	0	0
Sonoran Cottonwood Willow Riparian Forest Sonoran Cottonwood Willow Riparian Forest	G2 S1.1	None None		120 120	21 S:2	0	0	1	0	1	0	2	0	1	0	1
Vireo bellii arizonae Arizona Bell's vireo	G5T4 S3	None Endangered	BLM_S-Sensitive	120 120	38 S:1	0	0	0	0	0	1	1	0	1	0	0

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Environmental Technical Report B6

Paleontological Resource Assessment Memorandum

July 3, 2024

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State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

M e m o r a n d u m

To: JEAN LAFONTAINE SETTLE
Environmental Planning
AECOM

Date: July 3, 2024

File:
11-IMP-186
PM 0.5 – 2.0
EA 11-431080
EFIS 11 2000 0096

From: KOJI TSUNODA
Paleontological Resource Coordinator
Environmental Analysis Branch D

Subject: **PALEONTOLOGICAL RESOURCE ASSESSMENT FOR THE STATE ROUTE 186 REALIGNMENT PROJECT IN IMPERIAL COUNTY**

The California Department of Transportation (Caltrans) proposes to realign a portion of State Route (SR) 186 in Imperial County by constructing a new bridge over the All American Canal (Project). Currently, two build alternatives are proposed. The Project is entirely situated within Fort Yuma Indian Reservation (Quechan Tribe).

As part of background research, geology and paleontological resource sensitivity maps of the proposed Project corridor were consulted to assess sensitivity for paleontological resources. In addition, Paleontological Identification Report (PIR)/Paleontological Evaluation Report (PER)/Paleontological Mitigation Plan (PMP) for the SR-186/Interstate 8 Interchange Project (Deméré and Siren 2009) was also consulted. The results of the background research indicated that the current project limits are situated within the young alluvium on the south side of All American Canal, and the Pleistocene alluvial deposits on the north side of All American Canal. In consultation with San Diego Natural History Museum on May 7, 2024, it was determined that the proposed construction of a detour route and the preparation of a laydown yard would have the higher potential for impacting paleontological resources embedded in the Pleistocene alluvial deposits. In order to mitigate the potential impacts to paleontological resources, implementation of a paleontological mitigation monitoring program will be required. Environmental Analysis Branch D requests that the following items be incorporated into the project's Environmental Commitment Record (ECR), and necessary funds to retain qualified paleontologists be secured. In addition, Environmental Analysis Branch D will obtain a permit to conduct mitigation monitoring during construction from BIA and Quechan Tribe prior to construction.

1. A qualified paleontologist (as defined in the Caltrans' Standard Environmental Reference) must be invited to the pre-construction (or tailgate)

meeting to consult with the grading and excavation contractors concerning excavation schedules, paleontological field techniques, and safety issues. A qualified paleontologist is defined as an individual with a MS or Ph.D. in paleontology or geology who is familiar with paleontological procedures and techniques, who is knowledgeable in the geology and paleontology of San Diego County, and who has worked as a paleontological mitigation project supervisor in the county for at least one year.

2. A paleontological monitor must be on-site on a full-time basis during the original cutting of previously undisturbed deposits of high or moderate paleontological resource potential, and on-site on a part-time basis during the original cutting of previously undisturbed deposits of low paleontological resource potential (sedimentary deposits of younger alluvium), to inspect exposures for contained fossils. A paleontological monitor is defined as an individual who has experience in the collection and salvage of fossil materials. The paleontological monitor must work under the direction of a qualified paleontologist. As grading progresses, the qualified paleontologist and paleontological monitor will confer with the Resident Engineer regarding the level of effort needed and reduce the scope of the monitoring program to an appropriate level if it is determined that the potential for impacts to paleontological resources is lower than anticipated.

3. If paleontological resources of potential scientific interest (including all vertebrate fossils and deposits of petrified wood) are encountered during construction activities, they would be handled in accordance with the principles and recommendations found in Assessment of Fossil Management on Federal & Indian Lands (Department of the Interior [DOI] 2000). In most cases this fossil salvage can be completed in a short period of time. However, some fossil specimens (such as a complete large mammal skeleton) may require an extended salvage period. In these instances, the paleontologist (or paleontological monitor) will consult with the RE to temporarily divert, or halt grading, to allow recovery of fossil remains in a timely manner.

4. During the monitoring and recovery phases, the qualified paleontologist and/or the paleontological monitor will also routinely collect stratigraphic data (e.g., lithology, vertical thickness, lateral extent of strata, nature of upper and lower contacts, and taphonomic character of exposed strata). Collection of such data is critical for providing a stratigraphic context for any recovered fossils.

5. Fossil remains collected during monitoring and salvage must be cleaned (removal of extraneous enclosing sedimentary rock material), prepared, sorted (separating fossils of the different species), cataloged (scientific identification of species, assignment of inventory tracking numbers, and recording of these

numbers in a computerized collection database), and curated as part of the mitigation program.

6. A final summary report that outlines the results of the mitigation program must be completed. This report will include discussion of the methods used, stratigraphic section(s) exposed and documented, fossils collected, and significance of recovered fossils.

Should you have any questions, please contact me at koji.tsunoda@dot.ca.gov or haley.chansteene@dot.ca.gov

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Environmental Technical Report B7

Project Drawings: Impervious Area

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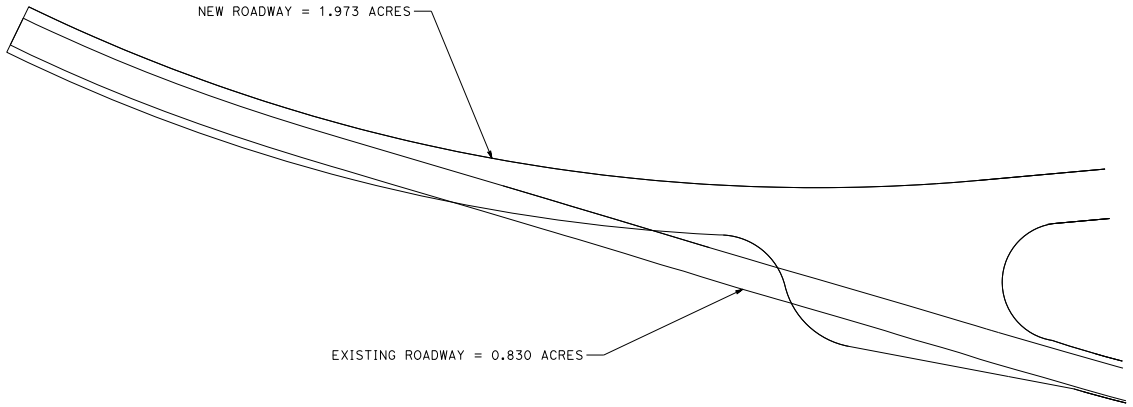
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	186	0.5/2.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CAMERON CHAFFEE
No. C68295
Exp. 09-30-25
CIVIL
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



IMPERVIOUS AREAS

SCALE: 1" = 50'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	ARY JAFF	REVISED BY
	CHECKED BY	CAMERON CHAFFEE	DATE REVISED

LAST REVISION
DATE PLOTTED => 4-SEP-2024
TIME PLOTTED => 08:33

BORDER LAST REVISED 8/5/2020

USERNAME => s122833
DGN FILE => 1120000096ea001_SWDR_CALCS.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT

PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	186	0.5/2.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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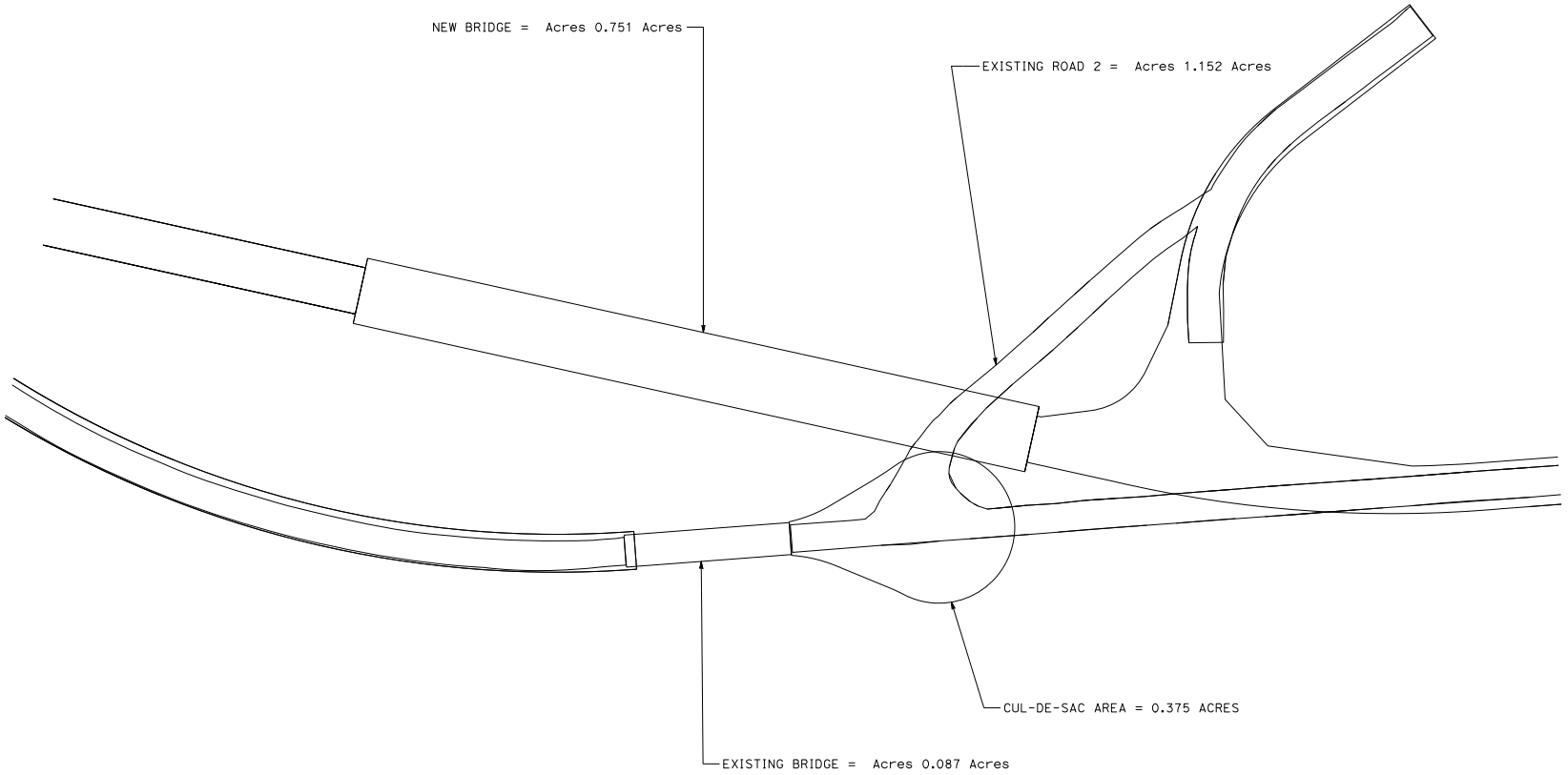
REGISTERED PROFESSIONAL ENGINEER
CAMERON CHAFFEE
No. C68295
Exp. 09-30-25
CIVIL
STATE OF CALIFORNIA



IMPERVIOUS AREA

SCALE: 1" = 50'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	ARY JAFF	REVISED BY
Caltrans		CHECKED BY	CAMERON CHAFFEE	DATE REVISED

LAST REVISION
DATE PLOTTED => 4-SEP-2024
TIME PLOTTED => 08:33

BORDER LAST REVISED 8/5/2020

USERNAME => s122833
DGN FILE => 1120000096ea002_SWDR_CALCS.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT

PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	Imp	186	0.5/2.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CAMERON CHAFFEE
No. C68295
Exp. 09-30-25
CIVIL
STATE OF CALIFORNIA

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IMPERVIOUS AREA

SCALE: 1" = 50'

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY	CHECKED BY
ARY JAFF	CAMERON CHAFFEE

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION | DATE PLOTTED => 4-SEP-2024
TIME PLOTTED => 08:33

BORDER LAST REVISED 8/5/2020

USERNAME => s122833
DGN FILE => 1120000096ea003_SWDR_CALCS.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT

PROJECT NUMBER & PHASE

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Environmental Technical Report B8

Memorandum: Review (0-Phase) of ‘SR-186 Bridge Over All-American Canal’ Project

July 18, 2023

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State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

Memorandum

Making Conservation a California Way of Life.

To: SHAY LYNN M. HARRISON
Chief, Environmental Analysis – Branch C

Date: July 18, 2023

File: 11-43108
1120000096
11-IMP-186
PM R0.5/R2.1

From: BRENT BERGE
Transportation Engineer
Environmental Engineering

Subject: **REVIEW (0-PHASE) OF 'SR-186 BRIDGE OVER ALL-AMERICAN CANAL' PROJECT**

This project proposes to realign a portion of State Route 186 (SR-186) and construct a new bridge over All-American Canal. The portion of SR-186 to be realigned is approximately 0.3 miles (PM 1.7 to PM 2.0). The existing bridge over All-American Canal will not be demolished or disturbed. Tribal coordination with Quechan Indian Tribe will be necessary because the existing and proposed SR-186 alignments are entirely within the Quechan Reservation. Coordination with Imperial Irrigation District (IID) is also needed. This proposed work is non-capacity increasing. Ground disturbing activities will involve grading to build roadway. Piles may be driven to build bridge abutments at beginning and end of bridge. Preliminary design information in the Environmental Study Request (ESR) indicates the project will involve new alignment, road realignment, bridge work, road cut/fill, grinding, construct access roads, equipment staging area, railroad, temporary easements, utility relocation, ground disturbance, and pile driving.

Environmental Engineering staff reviewed the EnviroStor (DTSC), GeoTracker (SWRCB), and Historic Aerials databases for nearby hazardous waste/unauthorized release facilities that may have impacted the environmental condition of the project area. No facilities were identified.

I. Hazardous Waste

Aerially Deposited Lead (ADL)
An X-ray fluorescence (XRF) survey was performed along the shoulders of SR-186. Results of this survey show unregulated concentrations of ADL within the soil. Standard special provision (SSP) will be provided by Environmental Engineering Branch during the 1-phase.

Treated wood waste (TWW)
Removal of any wooden posts from existing guardrail or existing signposts will generate TWW. These products contain hazardous chemical preservatives therefore TWW is considered a California Hazardous Waste. Environmental Engineering will provide SSP, if needed, during the 1-phase.

Thermoplastic, traffic stripe, and/or pavement marking
Environmental Engineering Branch will provide SSPs, if needed, for removal of any existing thermoplastic, traffic stripe, and/or pavement marking during the 1-phase.

II. Noise and Vibration

This project does not require a noise study analysis because the project does not involve the construction of a highway on a new location. This project involves physical alteration of an existing highway (SR-186). It does not meet the requirement for substantial horizontal alteration because it does not halve the distance between the traffic noise source and the closest receptor between the existing condition to the future build condition. Furthermore, it does not meet the requirement for substantial vertical alteration because the project does not remove shielding exposing the line-of-sight between the receptor and the traffic noise source. Therefore, this project is not a Type I project and therefore does not require a noise study analysis.

This project may require pile driving to build bridge abutments at beginning and end of bridge. Geotechnical engineering should be consulted to determine if vibration monitoring is needed during construction. If it is determined that vibration monitoring is required, then crack monitoring, elevation monitoring, and/or photo documentation may also be required. Environmental Engineering will provide SSPs during the 1-phase.

III. Final Comments

This determination is based on the information provided in the ESR from Dimitar Peev dated May 17, 2023. Please submit a supplemental request for an environmental engineering assessment to cover any changes in the nature or scope of the project.

No other environmental engineering concerns are anticipated on this project. If you have any questions or comments, please contact me at brent.berge@dot.ca.gov or (619) 930-6916.

c: Diane Vermeulen, Environmental Engineering Branch Chief
Dimitar Peev, Project Engineer
Emery McCaffery, Associate Environmental Planner

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Environmental Technical Report B9

Site Assessment Questionnaire

February 29, 2024

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SITE ASSESSMENT QUESTIONNAIRE

Date 2/29/2024

GEOTECHNICAL SERVICES

PROJECT INFORMATION

Adam Avakian 916-203-7625 adam.avakian@dot.ca.gov

Geoprofessional	Telephone No.	Email Address	Fax No.

Geographic Name / Bridge Name	District	County	Route	Post Miles
All-American Canal Bridge	11	IMP	186	0.5-2.1

Project No.	Phase	Sub Object	Activity	Reporting
1120000096	0	160	10	

Geotechnical Services of the Division of Engineering Services needs to conduct geotechnical and exploratory drilling at this site. A site plan showing the general location of the drilling program is attached. Field operations are tentatively scheduled to start 5/7/2024 , the borings

☒ **ARE** expected to extend to groundwater ☐ **ARE NOT** expected to extend to groundwater

Please complete this form to the best of your knowledge and return it by 3/29/2024 to the "Geoprofessonal" listed above. If your answers indicate the area is, or may be, contaminated, you will be contacted for further details.

Response by: Brent Berge (619) 930-6916

Print Name Phone Number

Has an initial site assessment been performed for this project? ☒ Yes ☐ No If yes, is the report available and from where?

In-house ISA performed and checklist available from Environmental Engineering Branch.

Was the proposed drilling area, as shown on the attached map, identified as having the potential for hazardous contamination?

No ☒ ☐ Yes If yes, why? ADL? No ☒ Yes ☐ If yes, maximum ppm: ☐

If yes, has a detailed site assessment been performed at this location? ☐ Yes ☐ No

Please briefly describe the results of the site assessment performed at the proposed drill location.

Encountering hazardous materials ☐ IS ☒ IS NOT anticipated within subsurface materials at this location. If any is, please attach a list of specific substances, levels, etc. that are anticipated at this site.

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Environmental Technical Report B10

Storm Water Data Reports (SWDR)– Long Form

December 17, 2024

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Dist-County-Route: 11-IMP-186
Post Mile Limits: PM 0.5 – 2.0
Type of Work: Realignment and Construct New Bridge
Project ID (EA): 1120000096 (11- 43108)
Program Identification: 20.XX.400.301
Phase: ☐ PID ☒ PA/ED ☐ PS&E

Applicable Caltrans Post Construction Treatment Requirement: 2012 ☐ 2022 ☐
Regional Water Quality Control Board(s): Colorado River Basin Quality Control Board (7)
Total Disturbed Soil Area: 24.34 acres PCTA: 2.461 acres
Alternative Compliance (acres): 0 acre ATA 2 (50% Rule)? Yes ☐ No ☒
Estimated Const. Start Date: 12/26/2027 Estimated Const. Completion Date: 6/19/28
Risk Level: RL 1 ☒ RL 2 ☐ RL 3 ☐ WPCP ☐ Other: _____
Is (M)WELO applicable? Yes ☐ No ☒
Is the Project within a TMDL watershed? Yes ☐ No ☒
Does the project require trash treatment? Yes ☐ No ☒
Notification of ADL reuse (if yes, provide date): Yes ☐ Date: _____ No ☒

This Report has been prepared under the direction of the following Licensed Person. The Licensed Person attests to the technical information contained herein and the date upon which recommendations, conclusions, and decisions are based. Professional Engineer or Landscape Architect stamp required at PS&E only.

Cameron Chaffee, Registered Project Engineer — 12/11/24 Date

I have reviewed the stormwater quality design issues and find this report to be complete, current and accurate:

[Stamp Required at PS&E only]

Jorge Perez-Valdes — 12/11/2024
Jorge Antonio Perez Valdes, Project Manager *Date*

Krystian Fimbres — 12/11/2024
Krystian Fimbres, District Maintenance Stormwater *Date*

Tim Mann — 12/17/2024
Tim Mann, Designated Landscape Architect Representative *Date*

Hamzeh Ramadan — 12/17/2024
Hamzeh Ramadan, NPDES/Stormwater Compliance Branch Chief *Date*

1. Project Description

- The proposed project is located on State Route 186 (SR-186) PM 0.5 north of the U.S./Mexico border to PM 2.1 south of the Interstate 8 (I-8) interchange. The proposed project would realign a portion of existing two-lane SR-186 from approximately 0.3 miles south of the All-American Canal to 0.3 miles north of the All-American Canal. The project will realign the two-lane highway on a new alignment and will construct a new bridge spanning the canal with 12-foot lanes, 8-foot shoulders and 6-foot sidewalks.

  . The total disturbed project area is based on areas of exposed, disturbed soil within the project limits that result from the construction of roadways, the bridge, grading work, including temporary facilities, and staging areas for construction.

  Total disturbed soil area: DSA= 24.34 Acres

  Net New Impervious: NNI = 2.461 acres

  Replaced impervious surface: RIS= 0 acre

  New impervious surface: 2.46= NNI+RIS= 2.461+0=2.461 acres

  See following table for DSA, NIS, NNI and RIS.

Route	PM	Description	DSA (Acre)	NNI (Acre)	RIS (Acre)	NIS=NNI+RIS (Acre)
IMP 186	0.5 -2.1	Roadway	24.34	1.797	0	1.797
IMP 186	1.5-1.7	Bridge		0.664	0	0.664
Total			**24.34**	2.461	0	2.461

  Post Construction Treatment Area: PCTA =2.461 Acres

  PCTA = NNI + RIS + ATA (1 Impervious) + ATA (2) = 2.461+0+0+0=2.461 ac

  RIS = 0 acre

  ATA (1 Impervious) =0 acre

  ATA (2) =0 acre

  NNI is not greater than 50% of the post project impervious area.

  Existing Treatment BMPs are not to be removed or modified as part of the project

- A detention basin will be placed on the western side of SR-186 just prior to the bridge over the canal to treat water flows coming off the roadway along its western edge. Water flowing from the bridge deck and along the western edge of the highway will be directed down the slope and away from the canal near the south end of the new bridge where it crosses the All-American Canal. Water flowing along the eastern edge of the highway will be channelized on the shoulder along HMA dike and into a drainage inlet where it will be piped across the highway and dispersed south of the Canal.

2. Site Data and Stormwater Quality Design Issues

- Receiving Water Bodies/Pollutants of Concern
- Accumulated water from the existing roadway sheet flows off the edge of traveled way or is directed by dikes to over side drains. Storm water from the eastbound off-ramp is currently treated by the Quechan Casino retention basin. Storm water from SR-186, the westbound off-ramp, westbound on-ramp, and eastbound on-ramp flows in desert washes and ditches and is discharged into the All-American Canal.
- The All-American Canal runs East-West and is located to the South of the I-8/SR-186 Interchange. Most of the water from the Colorado River is diverted to the All-American Canal that begins at Yuma, Arizona. The canal provides drinking water to 9 cities and over 500,000 acres of farmland in the Imperial Valley. At its downstream end it connects to the Westside Main Canal near Calexico. The All-American Canal is not on the 303(d) list. Since the California Department of Transportation (Caltrans) must meet requirements set forth under the National Pollutant Discharge Elimination System (NPDES) Permit mandated by the Federal Clean Water Act for discharge of storm water runoff, the project will need to be designed in conformance with NPDES requirements.
- 401 certifications will not be necessary because the project does not involve discharges of dredged or fill material to waters of the United States, including wetlands and other water bodies, or involve construction of a hydroelectric facilities.
- Drinking Water Reservoirs and/or Recharge Facilities within project limits
- The All-American Canal is the Imperial Valley's only water source and connects to the Westside Main Canal, which provides water for San Diego County. The Quechan Casino has a retention basin that stores runoff from the Casino site and eastbound off-ramp, a reclamation tank that stores recycled water, and a ground storage water tank that receives water from a well nearby.
- Regional Water Quality Control Board Special Requirements
- None
- The Colorado River Basin Quality Control Board (CRBQCB) Region 7 has jurisdiction within the project limits. The project discharges into the CRBQCB hydrologic unit 727.00, which is the Yuma watershed. There are no total maximum daily loads (TMDLs) currently listed within the project limits.
- CALWATER WATERSHED

Hydrologic Unit	YUMA	**Hydrologic Area**	undefined	**Hydrologic Sub-Area #**	727.00

WATERSHED BOUNDARY DATASET

Watershed	Picacho Wash-Colorado River	**Subwatershed**	Bee Wash-Colorado River	**Hydrologic Unit Code**	150301070107
Average Annual Precipitation (inches)	3.22				

- The 303(d) List of Impaired Waterbodies include the All American Canal, Colorado River (from Imperial Reservoir to California-Mexico Border), Colorado River and Associated Lakes and Reservoirs (from Lake Havasu Dam to Imperial Dam).
- Since the project area is greater than one acre the contractor must comply with the National Pollutant Discharge Elimination System (NPDES) General Construction Permit Order 2022-0057-DWQ, NPDES No. CAS000002 under Section 402 of the Clean Water Act (CWA) for storm water drainage.
- The project area is overlain by aeolean deposits (fine to coarse sands and silts), which are underlain by alluvial deposits consisting of sands with layers of silt and clay (up to 20 feet thick).
- The borings that were drilled for the Draft Materials Report encountered an upper layer of medium dense to very dense (and occasionally loose) poorly graded fine to medium dense sands, which overlay a layer of very stiff to hard fat clay. Where penetrated by the borings, the clay was underlain by dense to very dense, coarse to fine sands and silty sands.
- There is the potential for Aerially Deposited Lead, treated wood waste, and/or other hazardous materials that must be accounted for.
- Construction and Maintenance of BMPs would be within the right-of-way limits and no additional right- of-way is required.
- For project areas exceeding 1-acre in disturbed soil area, NPDES guidelines necessitate the development of a Storm Water Pollution Prevention Program (SWPPP) by the contractor prior to construction to establish project-specific permanent and temporary BMPs. During the design phase, Water Pollution Control Plans will be prepared to determine the minimum control requirements to be included in the SWPPP.
- Standard erosion control practices will be implemented to minimize soil erosion following construction activities. Typical measures utilized during construction include applications of fiber rolls for slope stability and sediment control, temporary drainage inlet protection, temporary concrete washouts for concrete spoils, street sweeping, contour grading, temporary silt fence, and temporary hydraulic mulch.
- Permanent erosion and sedimentation control features may include but will not be limited to the following permanent fiber rolls, bonded fiber matrix and installation of drainage facilities to handle excess runoff.
- There are no existing Treatment BMPs within the project limits. Existing pollutants are removed by filtration through sedimentation, adsorption to soil particles, and a minimal amount of infiltration through the soil as the storm water flows to the All-American Canal. The project will increase the impervious area which will in turn increase the velocity and volume within the project area; however, it should not have a considerable effect on downstream flow because the increase is minimal.

3. Risk Level Calculation

Estimated Const. Start Date: 12/26/2027 Estimated Const. Completion Date: 6/19/28

- R: https://lew.epa.gov
- Rainfall Erosivity Factor Calculator | US EPA
- Rainfall Erosivity Factor: R=17.82
- Soil Erodibility Factor: K= 0.43
- Length/Slope Factor: LS= 0.6

- Sediment Risk Factor: R x K x LS=17.82*0.43*0.6=4.6
- Receiving Water Risk Factor= NO
- Combined Risk Level: RL=1

Facility Information

Start Date: 12/26/2027	**Latitude:** 32.7341
End Date: 12/26/2028	**Longitude:** -114.7165

Calculation Results

Rainfall erosivity factor (R Factor) = 9.34

A rainfall erosivity factor of 5.0 or greater has been calculated for your site's period of construction.

You do NOT qualify for a waiver from NPDES permitting requirements and must seek Construction General Permit (CGP) coverage. If you are located in an area where EPA is the permitting authority (pdf), you must submit a Notice of Intent (NOI) through the NPDES eReporting Tool (NeT).Otherwise, you must seek coverage under your state's CGP.

Facility Information

Start Date: 12/26/2028	**Latitude:** 32.7341
End Date: 12/03/2029	**Longitude:** -114.7165

Calculation Results

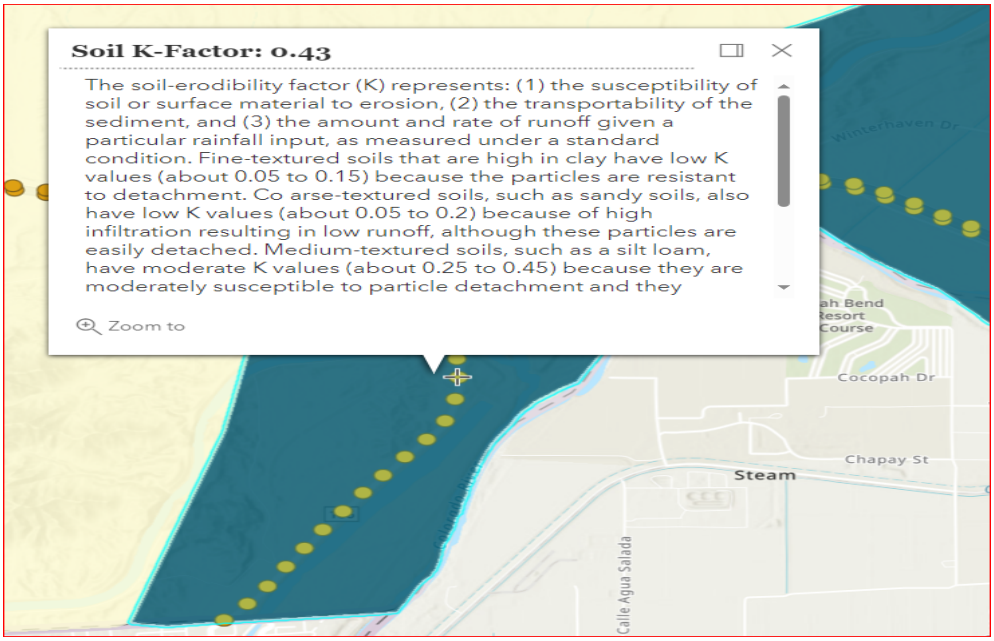
Rainfall erosivity factor (R Factor) = 8.48

A rainfall erosivity factor of 5.0 or greater has been calculated for your site's period of construction.

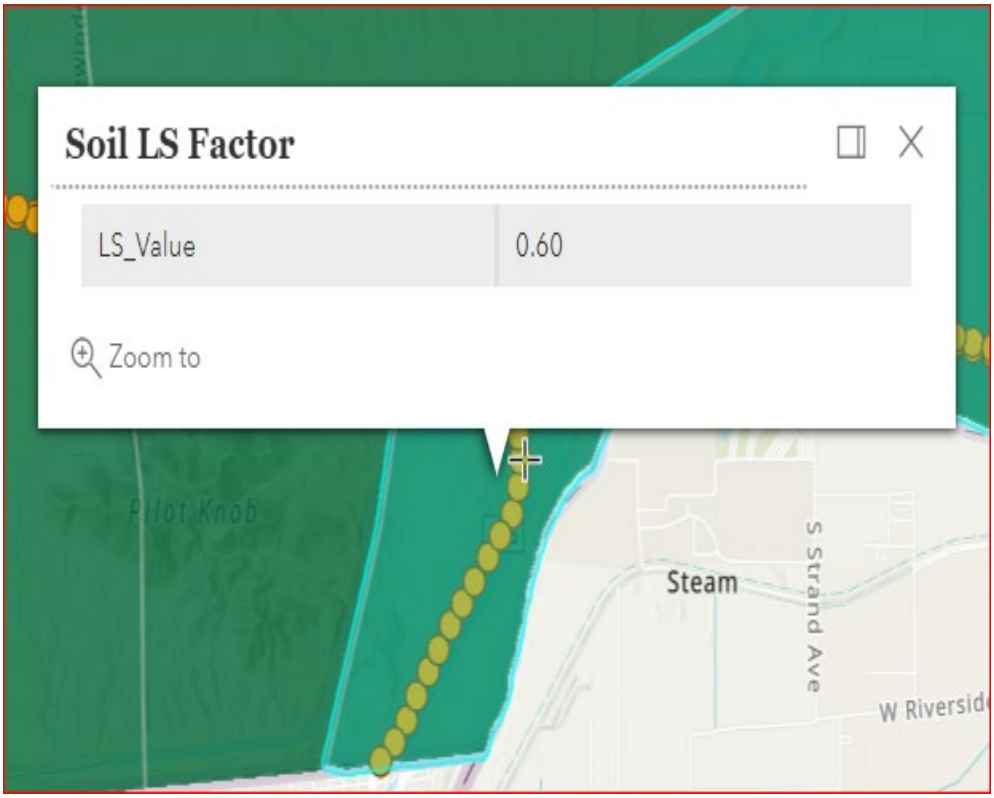
You do NOT qualify for a waiver from NPDES permitting requirements and must seek Construction General Permit (CGP) coverage. If you are located in an area where EPA is the permitting authority (pdf), you must submit a Notice of Intent (NOI) through the NPDES eReporting Tool (NeT).Otherwise, you must seek coverage under your state's CGP.

R=9.34+8.48=17.82

K=0.43



LS=0.60



RxKxLS= 17.82*0.43*0.6=4.60

4. Construction Site BMPs to be used on Project

- Temporary construction site BMP strategy will be implemented for this project to meet both current Caltrans criteria and the requirements presented in the CGP.
  - Storm Water Pollution Prevention Plan
- The project has a DSA of 24.34 acres. Because this project disturbs more than one acre of soil, a Storm Water Pollution Prevention Plan (SWPPP) must be submitted for this project by the Contractor prior to the start of construction. The SWPPP shall include a Construction Site Monitoring Program (CSMP).

Construction Site BMP Strategy:

This project will require a Storm Water Pollution Prevention Plan, SWPPP (Item #130300), since the disturbed soil area is more than 1 acre. The SWPPP will address non-storm water management and other waste management and will be submitted for this project by the Contractor prior to the start of construction.

- The cost of Construction Site BMPs will be allocated as bid line items. This cost is based on guidance from Appendix F for the Project Planning and Design Guidance Manual. The following construction site BMPs would need to be implemented to avoid water quality impacts:
  - Job Site Management (Item #130100)
  - Stormwater Pollution Prevention Plan (Item #130301)
  - Storm Water Annual Report (Item #130330)
  - Temporary Drainage Inlet Protection (Item #130610)
  - Street Sweeping (Item #130730)
  - Temporary Concrete Washouts (Item #130900)
  - Move-In/Move-Out (Temporary Erosion Control) (Item # 130505)
  - Temporary Construction Entrance (Item # 130710)
  - Fiber Rolls (Erosion Control) (Item # 210350)
  - Hydroseed (Item #210430)
  - Water Pollution Control Maintenance Sharing (Item #066595)
  - Additional Water Pollution Control (Item #066596)
  - Annual Construction General Permit Fee (Item #066916)
- The following construction site BMPs will be paid for as a lump sum as part of Job Site Management (Item # 130100):
- NS-1 Water Conservation Practices
- NS-3 Pacing & Grinding Operations
- NS-8 Vehicle & Equipment Cleaning
- NS-9 Vehicle & Equipment Fueling
  - NS-10 Vehicle and Equipment Maintenance
  - NS-12 Concrete Curing
  - NS-14 Concrete Finishing

WM-1 Material Delivery & Storage
WM-2 Material Use
WM-4 Spill Prevention & Control
WM-5 Solid Waste Management
WM-6 Hazardous Waste Management
WM-9 Sanitary/Septic Waste Management

- The cost estimate for Construction BMPs, based on proposed work, will be included in the project's estimate. This project will be coordinated with District Construction Storm Water Coordination (CSWC) at the PS&E stage.

5. Maintenance BMPs

- Drainage Inlet Stenciling is not required within the project limits.

6. Other Water Quality Requirements and Agreements

- The National Pollutant Discharge Elimination System Permit is the U.S. Environmental Protection Agency's program to control the discharge and pollutants to U.S. waters. Each of the Regional Water Quality Control Boards have been given the opportunity to specify any specific water quality concerns, which requires special requirements, in their region. In 1994, the Colorado River Basin Control Board adopted the NPDES Permit Number CAS617001. There are no negotiated understandings or agreements with the Colorado River Basin (Region 7) Water Quality Control Board pertaining to this project.
- This project will require inspections and monitoring related to stormwater and water quality due to its location related to All-American Canal.

7. Permanent BMPs

- An overall addition of paved area will increase the velocity and volume of flow within the project limits; however, it should not have a considerable effect on downstream flow. Most of the impervious area that will be added are along SR-186 south of I-8. Due to the increase in impervious surface area, the flow rate within the project limits will increase. Except for SR-186, all the storm water runoff along I-8 will utilize the existing treatment methods since there is a minimal increase in flow rate. To mitigate for flow rate increases on SR-186 and to minimize sediment discharges, a detention basin may be placed on the western side of SR-186 adjacent to the Quechan Casino service road. The detention basin will collect the roadway runoff from the portion of SR-186 north of the new connection to the Quechan Casino service road. Flows which accumulate south of the service road will be directed along HMA dike then onto the bridge where it will flow to the south end of the bridge into a down drain or overside drain down the slope to the existing surface where it will dissipate or if necessary, will accumulate in a detention/retention basin.

- Based upon the soils encountered in the borings, and the slopes having a maximum 4:1 (H: V) slope configuration, the slopes will be stable, and no deep-seated failures are expected to occur.

- Due to the sparse nature of the native vegetation and lack of significant rainfall, slope protection using a vegetative cover is not anticipated to be a viable option. Erosion Control sheets shall be developed and approved by the District Landscape Architect.

- Hard surface protection in the form of rock slope protection currently exists under the bridge abutments.

Rapid Stability Assessment

- RSA is not required for this project.
- No additional work proposed for the project due to the higher-level analysis.

Design Pollution Prevention (DPP) BMP Strategy

- When construction operations disturb existing roadside conditions, treatment BMPs may be required to promote the establishment of vegetation within those areas. Vegetated surfaces provide short and long-term protection from stormwater erosion. Vegetation minimizes overland and concentrated flow depths and velocities and maximizes the contact time between water and vegetated surfaces. This extended duration will enhance infiltration and pollutant removal opportunities. When vegetation is not available, compost and mulch are a desired treatment option providing surface protection to disturbed areas. In addition, all projects incorporating proposed slopes steeper than 4:1 (h:v) must have an Erosion Control Plan prepared or approved by the District Landscape Architect.

Concentrated Flow Conveyance Systems, Checklist DPP-1, Parts 1 and 4

The following concentrated flow conveyance systems have been proposed within the project limits and design will be finalized during PS&E stage.

- 1,00-feet of RCP Culvert (18-inch diameter)
- 2 concrete overside drains.
- 4 G-2 inlets
- 2 18” CMP Down drains
- 558 feet HMA dike

Preservation of Existing Vegetation, Checklist DPP-1, Parts 1 and 5

- The project improvements will require 24.3 acres of disturbed soil area. There are three sensitive vegetation communities which include disturbed desert saltbush scrub, disturbed Sonoran creosote bush scrub, and non- native grassland. Mitigation for these impacts shall occur with acquisition of appropriate acreage at a conservation area or mitigation bankition, proposed slopes steeper than 4:1 Erosion Control Plan are prepared for the project.

Treatment BMP Strategy

- The Targeted Design Constituent (TDC) is highway runoff which includes particulate and dissolved metals from the wearing of brake pads and the combustion products of fossil fuels as well as lubricants from automobiles. The project will mitigate for short-term water quality impacts from erosion and pollutant discharges using appropriate BMP methods. To avoid potential long-term impacts to water quality the project may be designed to include detention basins. The use of a

detention basins is considered as a sufficient treatment method for highway runoff, per California Storm water Quality Association BMP Handbook

- Detention Devices, Checklist T-1, Parts 1 and 4
- A detention basin is a permanent device formed by excavating and/or constructing an embankment so that runoff from the water quality design storm is temporarily detained under still conditions, allowing sediment and particulates to settle out before the runoff is discharged or permeates into the soil. The detention basin will treat highway runoff from SR-186 south of I-8

BMP Type	County Route Direction	Begin PM	End PM	Lat.	Long.	Treated Impervious Area (CT R/W)	Treated Impervious Area (Outside CT R/W	Treated Pervious Area (CT R/W	Treated Pervious Area (Outside CT R/W	Hydrologic Unit	Hydrologic Area	Hydrologic Sub-Area	WQV (cf)	BMP Area (sq. ft)
Detention Basin	IMP 186					2.461	0		0					

Required Attachments

- Vicinity Map
- Evaluation Documentation Form (EDF)

Supplemental Attachments:

- Checklist SW-1,2 & 3
- DPP Checklist
- Checklist T-1, Part 1
- Checklist T-1, Part 4_July 2017
- SWDR Summary Sheet

INDEX OF PLANS

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	186	1.2/2.0		

STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON

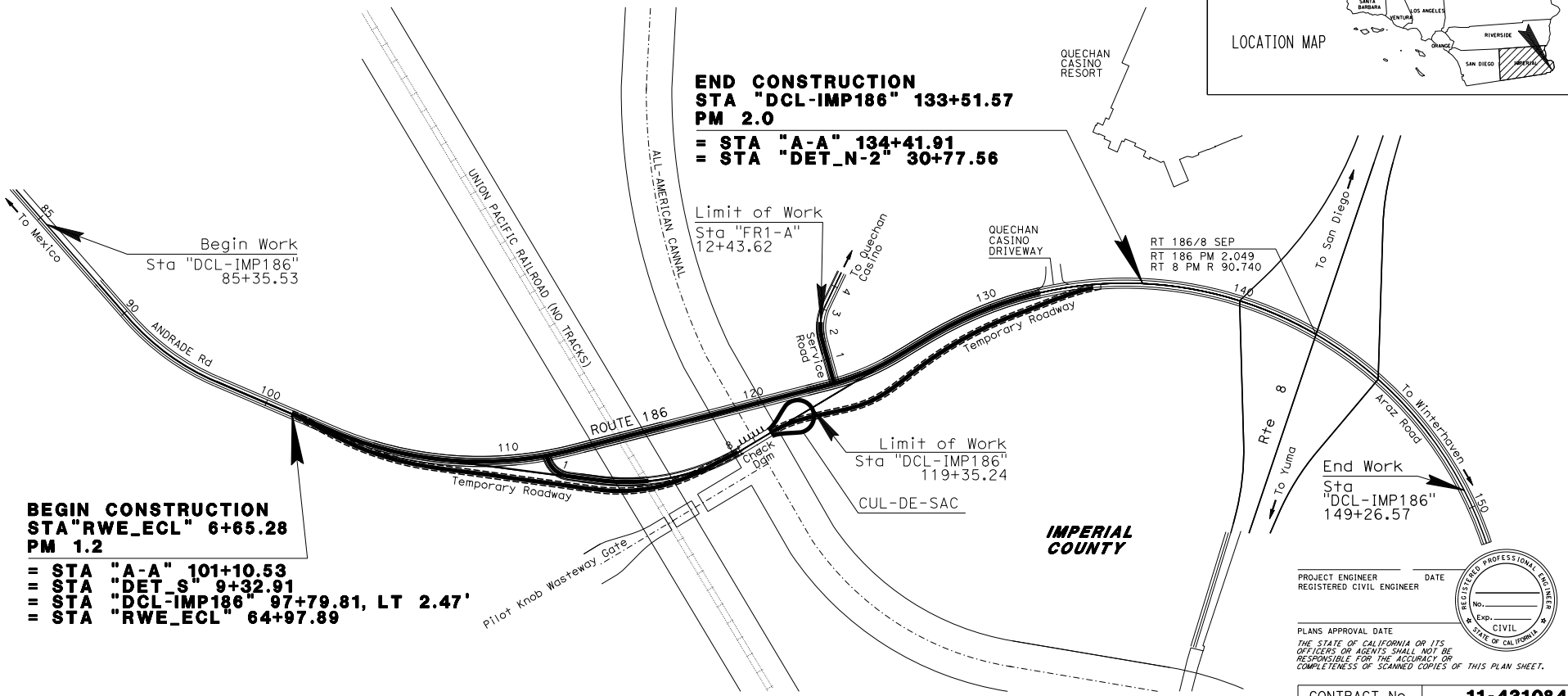
STATE HIGHWAY

IN IMPERIAL COUNTY
FROM 0.5 MILE NORTH OF THE MEXICO BORDER
TO ROUTE 8 EASTBOUND OFF-RAMP

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2018



LOCATION MAP



PROJECT MANAGER: JORGE A PEREZ VALDES

DESIGN MANAGER: CYNTHIA HOFFMAN-PAZ

PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

CONTRACT No.	11-431084
PROJECT ID	1120000096

LAST REVISION: DATE PLOTTED => 3-DEC-2024 TIME PLOTTED => 13:27

BORDER LAST REVISED 9/17/2018 | CALTRANS WEB SITE IS: HTTP//WWW.DOT.CA.GOV/ | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | USERNAME => s122833 DGN FILE => 1120000096ab001.dgn | UNIT 2786 | PROJECT NUMBER & PHASE 11200000960

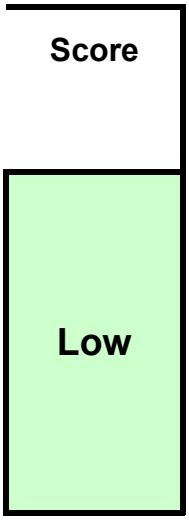
DATE: 10/03/2024

Project ID (EA): 1120000096 (11-431080)

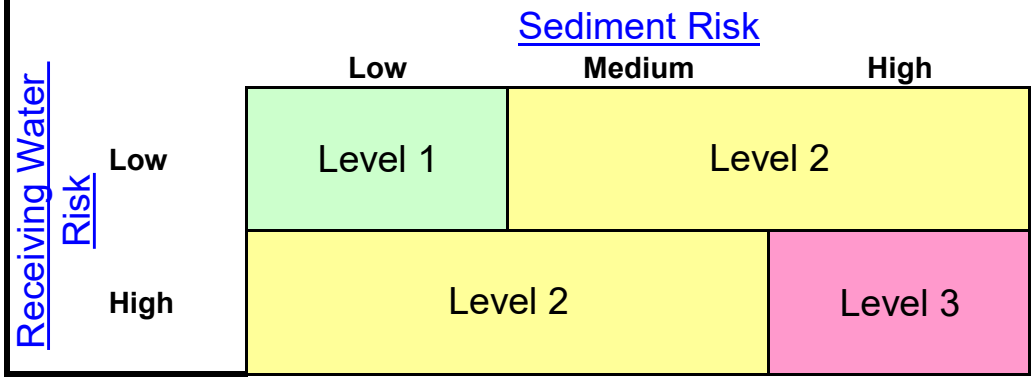
No.	Criteria	Yes ✓	No ✓	Supplemental Information for Evaluation
1.	Begin Project evaluation regarding requirement for implementation of Treatment BMPs	✓		Continue to 2.
2.	Is the scope of the Project to install Treatment BMPs (e.g., Alternative Compliance or TMDL requirement)?		✓	If **Yes**, go to 8. If **No**, continue to 3.
3.	Is there a direct or indirect discharge to surface waters?	✓		If **Yes**, continue to 4. If **No**, go to 9.
4.	As defined in the WQAR or ED, does the project: a. discharge to Areas of Special Biological Significance (ASBS), or b. discharge to a TMDL watershed where Caltrans is named stakeholder, or c. have other pollution control requirements for surface waters within the project limits (e.g. STGA)?		✓ ✓ ✓	If **Yes to any**, contact the District/Regional Design Stormwater Coordinator or District/Regional NPDES Coordinator to discuss the Department's obligations, go to 8 or 5. _____*(Dist./Reg. Coordinator initials)* If **No** to all, continue to 5.
5.	Are any existing Treatment BMPs partially or completely removed? (ATA Condition 1, Section 4.3.1)		✓	If **Yes**, go to 8 **AND** continue to 6. If **No**, continue to 6.
6.	Is this a Routine Maintenance Project?		✓	If **Yes**, go to 9. If **No**, continue to 7.
7.	Does the project result in an increase of 10,000 ft² (0.22 acre) or more of new impervious surface (NIS)?	✓		If **Yes**, go to 8. *NIS= 2.461 acres* If **No**, go to 9.
8.	Project is required to implement Treatment BMPs.	Complete Checklist T-1, Part 1.		
9.	Project is not required to implement Treatment BMPs. _____ *(Dist./Reg. Design SW Coord. Initials)* CC *(Project Engineer Initials)* 12/11/24 *(Date)*	Document for Project Files by completing this form and attaching it to the SWDR.		

	A	B	C
1	**Sediment Risk Factor Worksheet**		**Entry**
2	**A) R Factor**		
3	Analyses of data indicated that when factors other than rainfall are held constant, soil loss is directly proportional to a rainfall factor composed of total storm kinetic energy (E) times the maximum 30-min intensity (I30) (Wischmeier and Smith, 1958). The numerical value of R is the average annual sum of EI30 for storm events during a rainfall record of at least 22 years. "Isoerodent" maps were developed based on R values calculated for more than 1000 locations in the Western U.S. Refer to the link below to determine the R factor for the project site.		
4	http://cfpub.epa.gov/npdes/stormwater/LEW/lewCalculator.cfm		
5	**R Factor Value**		0
6	**B) K Factor (weighted average, by area, for all site soils)**		
7	The soil-erodibility factor K represents: (1) susceptibility of soil or surface material to erosion, (2) transportability of the sediment, and (3) the amount and rate of runoff given a particular rainfall input, as measured under a standard condition. Fine-textured soils that are high in clay have low K values (about 0.05 to 0.15) because the particles are resistant to detachment. Coarse-textured soils, such as sandy soils, also have low K values (about 0.05 to 0.2) because of high infiltration resulting in low runoff even though these particles are easily detached. Medium-textured soils, such as a silt loam, have moderate K values (about 0.25 to 0.45) because they are moderately susceptible to particle detachment and they produce runoff at moderate rates. Soils having a high silt content are especially susceptible to erosion and have high K values, which can exceed 0.45 and can be as large as 0.65. Silt-size particles are easily detached and tend to crust, producing high rates and large volumes of runoff. Use Site-specific data must be submitted.		
8	Site-specific K factor guidance		
9	**K Factor Value**		0
10	**C) LS Factor (weighted average, by area, for all slopes)**		
11	The effect of topography on erosion is accounted for by the LS factor, which combines the effects of a hillslope-length factor, L, and a hillslope-gradient factor, S. Generally speaking, as hillslope length and/or hillslope gradient increase, soil loss increases. As hillslope length increases, total soil loss and soil loss per unit area increase due to the progressive accumulation of runoff in the downslope direction. As the hillslope gradient increases, the velocity and erosivity of runoff increases. Use the LS table located in separate tab of this spreadsheet to determine LS factors. Estimate the weighted LS for the site prior to construction.		
12	LS Table		
13	**LS Factor Value**		0
14			
15	**Watershed Erosion Estimate (=RxKxLS) in tons/acre**		0
16	**Site Sediment Risk Factor**		**Low**
17	Low Sediment Risk: < 15 tons/acre		
18	Medium Sediment Risk: >=15 and <75 tons/acre		
19	High Sediment Risk: >= 75 tons/acre		
20			

Receiving Water (RW) Risk Factor Worksheet	Entry
A. Watershed Characteristics	**yes/no**
A.1. Does the disturbed area discharge (either directly or indirectly) to a **303(d)-listed waterbody impaired by sediment** (For help with impaired waterbodies please visit the link below) or has a **USEPA approved TMDL implementation plan for sediment**?:	**no**
http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml	
OR	
A.2. Does the disturbed area discharge to a waterbody with designated beneficial uses of SPAWN & COLD & MIGRATORY? (For help please review the appropriate Regional Board Basin Plan)	
http://www.waterboards.ca.gov/waterboards_map.shtml	
Region 1 Basin Plan	
Region 2 Basin Plan	
Region 3 Basin Plan	
Region 4 Basin Plan	
Region 5 Basin Plan	
Region 6 Basin Plan	
Region 7 Basin Plan	
Region 8 Basin Plan	
Region 9 Basin Plan	


Score
Low

Combined Risk Level Matrix



Project Sediment Risk:	**Low**
Project RW Risk:	**Low**
Project Combined Risk:	**Level 1**

Checklist SW-1, Site Data Sources

Checklist SW-1,
Site Data Sources

Prepared by: Devangi Dave Date: 10/04/2024 District-Co-Route: 11-IMP-186

PM: 0.5-2.0 Project ID/EA: 431080 RWQCB: Colorado River Basin (Region 7

Information for the following data categories should be obtained, reviewed and referenced as necessary throughout the project planning phase. Collect available project reports and any available documents pertaining to the category and list them and reference your data source. For specific examples of documents within these categories, refer to Section 6.4.3.2. Example categories have been listed below; add additional categories, as needed. Summarize pertinent information in Section 2 of the SWDR.

DATA CATEGORY/SOURCES	Date
Water Quality	
1. *Example: STGA/TMDL*	July 2024
Geotechnical	
1. *Example: Geotechnical Design Report (Project Report)*	
Topographic	July 2024
1. USGS maps	
2. Water Quality Planning Tool (ca.gov)	
3. The project lies within the Salton Trough which is a major topographic depression that straddles the US-Mexican border. The project area is made up of low-lying hills and narrow washes.	
Hydraulic	
1. Storm water runoff sheet flows off the edge of traveled way or is directed by overside drains to naturally depressed areas or desert washes.	July 2024
2.	
3.	
Climatic	
1. The rainy season dates for the project area are from November through May, but due to minimal amount of rain received yearly in the project area, there are no construction work exclusion dates or seasonal construction restrictions required by state or local regulatory agencies	August 2024
Other Data Categories	
1. *Example: Materials Report (Project Report)*	
2.	
3.	

Checklist SW-2, Stormwater Quality Issues Summary

Checklist SW-2,
Stormwater Quality Issues Summary

Prepared by: Devangi Dave Date: 10/03/2024 District-Co-Route: 11-IMP-186

PM: 0.5-2.1 Project ID/EA: 43180 RWQCB: Colorado River Basin (Region 7

The following questions provide a guide to collecting critical information relevant to project stormwater quality issues. Consult other Caltrans functional units (Environmental, Landscape Architecture, Maintenance, etc.) and the District/Regional Design Stormwater Coordinator as necessary. Summarize pertinent responses in Section 2 of the SWDR; do not discuss items identified as not applicable.

1.	Determine the receiving waters for the project	☒ Complete	☐ NA
2.	For the project limits, list the 303(d) impaired receiving water bodies and their constituents of concern.	☒ Complete	☐ NA
3.	Determine if there are any municipal or domestic water supply reservoirs or groundwater percolation facilities within the project limits, as shown by DWP.	☒ Complete	☐ NA
4.	Determine the RWQCB special requirements, including TMDLs, effluent limits, etc.	☒ Complete	☐ NA
5.	Determine if the project area has a trash TMDL or is in an STGA.	☐ Complete	☒ NA
6.	Determine regulatory agencies seasonal construction and construction exclusion dates or restrictions required by federal, state, or local agencies.	☒ Complete	☐ NA
7.	Determine if a 401 Certification will be required.	☒ Complete	☐ NA
8.	Identify rainy season.	☒ Complete	☐ NA
9.	If applicable, determine the general climate of the project area. Identify annual rainfall and rainfall intensity curves.	☒ Complete	☐ NA
10.	If considering Treatment BMPs, determine the soil classification, permeability, erodibility and depth to groundwater.	☒ Complete	☐ NA
11.	Determine contaminated soils within the project area.	☐ Complete	☒ NA
12.	Determine the total disturbed soil area of the project.	☒ Complete	☐ NA
13.	Describe the topography of the project site.	☒ Complete	☐ NA
14.	List any areas outside of the Caltrans right-of-way that will be included in the project (e.g., contractor's staging yard, work from barges, easements for staging).	☒ Complete	☐ NA
15.	Determine if additional right-of-way acquisition or easements and right-of-entry will be required for design, construction, and maintenance of BMPs. If so, how much?	☒ Complete	☐ NA
16.	Determine the estimated unit costs for right-of-way should it be needed for Treatment BMPs, stabilized conveyance systems, lay-back slopes, or interception ditches.	☒ Complete	☐ NA
17.	Determine if project area has any slope stabilization concerns.	☒ Complete	☐ NA
18.	Describe the local land use within the project area and adjacent areas.	☒ Complete	☐ NA
19.	Evaluate the presence of dry weather flow.	☐ Complete	☒ NA

Checklist SW-3, Measures for Avoiding or Reducing Stormwater Impacts

Checklist SW-3,
Measures for Avoiding or Reducing Potential Stormwater Impacts

Prepared by: Devangi Dave Date: 10/03/2024 District-Co-Route: 11-IMP-186

PM: 0.5-2.0 Project ID/EA: 43180 RWQCB: Colorado River Basin (Region 7)

The PE should confer with other functional units, such as Landscape Architecture, Hydraulics, Environmental, Materials, Construction and Maintenance, as needed to assess these issues. Summarize pertinent responses in Section 2 of the SWDR; do not discuss items identified as not applicable.

Options for avoiding or reducing potential impacts during project planning include the following:

1. Can the project be relocated or realigned to avoid/reduce impacts to receiving waters or to increase the preservation of critical (or problematic) areas such as floodplains, steep slopes, wetlands, and areas with erosive or unstable soil conditions? ☐ Yes ☒ No ☐ NA
2. Can structures and bridges be designed or located to reduce work in live streams and minimize construction impacts? ☐ Yes ☐ No ☒ NA
3. Can any of the following methods be utilized to minimize erosion from slopes:
   a. Disturbing existing slopes only when necessary? ☒ Yes ☐ No ☐ NA
   b. Minimizing cut and fill areas to reduce slope lengths? ☒ Yes ☐ No ☐ NA
   c. Incorporating retaining walls to reduce steepness of slopes or to shorten slopes? ☒ Yes ☐ No ☐ NA
   d. Acquiring right-of-way easements (such as grading easements) to reduce steepness of slopes? ☒ Yes ☐ No ☐ NA
   e. Avoiding soils or formations that will be particularly difficult to re-stabilize? ☐ Yes ☐ No ☒ NA
   f. Providing cut and fill slopes flat enough to allow re-vegetation and limit erosion to pre-construction rates? ☐ Yes ☐ No ☒ NA
   g. Providing benches or terraces on high cut and fill slopes to reduce concentration of flows? ☐ Yes ☒ No ☐ NA
   h. Rounding and shaping slopes to reduce concentrated flow? ☒ Yes ☐ No ☐ NA
   i. Collecting concentrated flows in stabilized drains and channels? ☒ Yes ☐ No ☐ NA
4. Does the project design allow for the ease of maintaining all BMPs? ☒ Yes ☐ No
5. Can the project be scheduled or phased to minimize soil-disturbing work during the rainy season? ☒ Yes ☐ No
6. Can permanent stormwater pollution controls such as paved slopes, vegetated slopes, basins, and conveyance systems be installed early in the construction process to provide additional protection and to possibly utilize them in addressing construction stormwater impacts? ☐ Yes ☒ No ☐ NA

Design Pollution Prevention BMPs
Checklist DPP-1, Part 1

Prepared by: Devangi Dave Date: 10/03/2024 District-Co-Route: 11-IMP-186

PM: 0.5-2.0 Project ID/EA: 430180 RWQCB: Colorado River Basin (Region 7)

Consideration of Design Pollution Prevention BMPs

Consideration of Downstream Effects Related to Potentially Increased Flow [to streams or channels]

Will the project increase velocity or volume of downstream flow? ☒ Yes ☐ No ☐ NA

Will the project discharge to unlined channels? ☐ Yes ☒ No ☐ NA

Will the project encroach, cross, realign, or cause other hydraulic changes to a stream that may affect downstream channel stability? ☐ Yes ☒ No ☐ NA

If Yes was answered to any of the above questions, consider ***Downstream Effects Related to Potentially Increased Flow***, complete the Checklist DPP-1, Part 2.

Slope/Surface Protection Systems

Will the project create new slopes or modify existing slopes? ☒ Yes ☐ No ☐ NA

If Yes was answered to the above question, consider ***Slope/Surface Protection Systems***, complete the Checklist DPP-1, Part 3.

Concentrated Flow Conveyance Systems

Will the project create or modify ditches, dikes, berms, or swales? ☒ Yes ☐ No ☐ NA

Will project create new slopes or modify existing slopes? ☒ Yes ☐ No ☐ NA

Will it be necessary to direct or intercept surface runoff? ☒ Yes ☐ No ☐ NA

Will cross drains be modified? ☒ Yes ☐ No ☐ NA

If Yes was answered to any of the above questions, consider ***Concentrated Flow Conveyance Systems***, complete the Checklist DPP-1, Part 4.

Preservation of Existing Vegetation, Soils, and Surface Water Buffer Areas

It is the goal of the Stormwater Program to maximize the protection of desirable existing vegetation, soils, and surface water buffer areas to provide erosion and sediment control benefits on all projects. ☒ Complete

Consider ***Preservation of Existing Vegetation, soils, and surface water buffer areas***, complete the Checklist DPP-1, Part 5.

Design Pollution Prevention BMPs
Checklist DPP-1, Part 2

Prepared by: Devangi Dave Date: 10/03/2024 District-Co-Route: 11-IMP-186

PM: 0.5-2.0 Project ID/EA: 4301080 RWQCB: Colorado River Basin (Region 7)

Downstream Effects Related to Potentially Increased Flow (NA)

1. Review total paved area and reduce to the maximum extent practicable. ☐ Complete

2. Review channel lining materials and design for stream bank erosion control. ☐ Complete

   a. See Chapters 860 and 870 of the HDM. ☐ Complete

   b. Consider channel erosion control measures within the construction limits as well as downstream. Consider scour velocity. If erosion control measures are required downstream of construction limits obtain the appropriate permits and right-of-way documents to include work within the construction limits. ☐ Complete

3. Include, where appropriate, energy dissipation devices at culvert outlets. ☐ Complete

4. Ensure all transitions between culvert outlets/headwalls/wingwalls and channels are smooth to reduce turbulence and scour. ☐ Complete

5. Include, if appropriate, peak flow attenuation basins or devices to reduce peak discharges. ☐ Complete

6. Calculate the water quality volume infiltrated within the project limits. These calculations will be used in the Checklist T-1, Part 1. ☐ Complete

Design Pollution Prevention BMPs
Checklist DPP-1, Part 3

Prepared by: Devangi Dave Date: 10/03/2024 District-Co-Route: 11-IMP-186

PM: 0.5-2.0 Project ID/EA: 431080 RWQCB: Colorado River Basin (Region 7)

Slope / Surface Protection Systems (NA)

1. What are the proposed areas of cut and fill? (attach plan or map) ☐ Complete
2. Were benches or terraces provided on high cut and fill slopes to shorten slope length? ☐ Yes ☐ No
3. Were concentrated flows collected in stabilized drains or channels? ☐ Yes ☐ No
4. Are new or disturbed slopes > 4:1 horizontal:vertical (h:v)? ☐ Yes ☐ No

   If Yes, District Landscape Architect is responsible for an erosion control strategy and may prepare an erosion control plan.
5. Are new or disturbed slopes > 2:1 (h:v)? ☐ Yes ☐ No

   If Yes, DES Geotechnical Design unit must prepare a Geotechnical Design Report, and the District Landscape Architect should prepare or approve an erosion control plan. Concurrence must be obtained from the District Maintenance Stormwater Coordinator for slopes steeper than 2:1 (h:v).

Vegetated Surfaces

1. Identify existing vegetation. ☐ Complete
2. Evaluate site to determine soil types, appropriate vegetation and planting strategies. ☐ Complete
3. How long will it take for permanent vegetation to establish? ☐ Complete
4. Plan transition BMPs from construction to permanent establishment. ☐ Complete
5. Have vegetated areas and supporting permanent irrigation systems been designed to comply with the Model Water Efficient Landscape Ordinance (MWELO) or local WELO? ☐ Yes ☐ No
6. Minimize overland and concentrated flow depths and velocities ☐ Complete

Hard Surfaces

1. Are hard surfaces minimized? ☐ Yes ☐ No

   Review appropriate SSPs for Vegetated Surface and Hard Surface Protection Systems. ☐ Complete

Design Pollution Prevention BMPs
Checklist DPP-1, Part 4

Prepared by: Devangi Dave Date: 10/03/2024 District-Co-Route: 11-IMP-186

PM: 0.5-2.0 Project ID/EA: 430180 RWQCB: Colorado River Basin (Region 7)

Concentrated Flow Conveyance Systems

Ditches, Berms, Dikes and Swales

1. Consider Ditches, Berms, Dikes, and Swales as per Topics 813, 834.3, 835, and Chapter 860 of the HDM. ☒ Complete
2. Review existing and proposed conditions to remove any dike not required for slope stability, erosion control, and water conveyance. ☒ Complete
3. Evaluate risks due to erosion, overtopping, flow backups or washout. ☒ Complete
4. Consider outlet protection where localized scour is anticipated. ☒Complete
5. Examine the site for run-on from off-site sources. ☒Complete
6. Consider permissible shear and velocity when selecting lining material (See Table 865.2 in the HDM). ☒Complete

Overside Drains

1. Consider downdrains, as per Index 834.4 of the HDM. ☒ Complete
2. Consider paved spillways for side slopes flatter than 4:1 h:v. ☒ Complete

Flared Culvert End Sections

1. Consider flared end sections on culvert inlets and outlets as per Chapter 827 of the HDM. ☒ Complete

Outlet Protection/Velocity Dissipation Devices

1. Consider outlet protection/velocity dissipation devices at outlets, including cross drains, as per Chapters 827 and 870 of the HDM. ☒ Complete

Review appropriate SSPs for Concentrated Flow Conveyance Systems. ☒Complete

Design Pollution Prevention BMPs
Checklist DPP-1, Part 5

Prepared by: Devangi Dave Date: 10/03/2024 District-Co-Route: 11-IMP-186

PM: 0.5-2.0 Project ID/EA: 430180 RWQCB: Colorado River Basin (Region 7)

Preservation of Existing Vegetation, Soils, and Surface Water Buffer Areas

1. Review Preservation of Property, (Clearing and Grubbing) to reduce clearing and grubbing and maximize preservation of existing vegetation, soils, and surface water buffer areas. ☒ Complete

2. Has all vegetation, soils, and surface water buffer areas to be retained been coordinated with Environmental, and identified and defined in the contract plans ☒ Yes ☐ No

3. Have steps been taken to minimize disturbed areas, such as locating temporary roadways to avoid stands of trees and shrubs and to follow existing contours to reduce cut and fill? ☒ Complete

4. Have impacts to preserved vegetation, soils, and surface water buffer areas been considered while work is occurring in disturbed areas? ☒ Yes ☐ No

5. Are all areas to be preserved delineated on the plans? ☒ Yes ☐ No

Checklist T-1, Part 1 (Treatment BMPs)

Treatment BMPs
Checklist T-1, Part 1

Prepared by: Devangi Dave

EDF). This checklist will be used to determine which Treatment BMPs should be considered for each BMP contributing drainage area within the project. Supplemental data will be needed to verify siting and design applicability for final incorporation into a project.

Complete this checklist for each phase of the project. This will help to determine if any changes to the BMP strategy are necessary, based on site specific information gathered during later phases. Use the responses to the questions as the basis of developing the narrative in Section 6 of the Stormwater Data Report to document that Treatment BMPs have been appropriately considered and/or incorporated.

Before evaluating an area for treatment capabilities or to incorporate a Treatment BMP, calculate the numeric sizing requirement for each contributing drainage area (WQV from the 85th percentile 24-hour storm event or WQF rate). Soil and geometric information for the project area will be necessary to use this Checklist.

Date: 10/03/2024 2024 District-Co-Route: 11-IMP-186

PM: 0.5-2.1 Project ID/EA: 431080 RWQCB: Colorado River Basin (Region 7)

Consideration of Treatment BMPs

This checklist is used for projects that require the consideration of Approved Treatment BMPs, as determined from the process described in Section 4 (Treatment Consideration) and the Evaluation Documentation Form (

Identify the overall project PCTA

Refer to Section 4.3 Treatment Areas for more information on defining these areas.

PCTA = NNI + RIS – EIA + ATA (1); OR ATA (2) = 2.46+0+0+0=2.46 acres

NNI = Net New Impervious Area =2.46 acres

RIS = Replaced Impervious Surface= 0 acre

EIA = Excluded Impervious Area=0 acre

ATA (1) = Additional Treatment Area required for existing Treatment BMPs that were removed or modified as part of the project[1] =0 acre

ATA (2) = Additional Treatment Area required when NNI is greater than 50 percent of total project impervious = 0 acre

What is the PCTA for the project? 2.46 Acres (A in Table E-1)

The PCTA is the area required to be treated by the project. The PE is to incorporate BMPs until the summation of the treated impervious area of all the BMPs is equivalent to the PCTA for the Project.

Once the PCTA has been treated, the project is in compliance with the post construction treatment requirement.

Total Maximum Daily Load (TMDL) Retrofit Projects

If the project is installing Treatment BMPs to only address TMDL requirements, then there is no required PCTA. The Treatment BMPs for a TMDL retrofit project should be designed to treat impervious and pervious contributing drainage areas in accordance with the TMDL Compliance Plan.

Overall Project Evaluation

Answer all questions, unless otherwise directed.

A. Overall Project Consideration

1. Is the project in a watershed with prescriptive Treatment BMP requirements in an adopted TMDL implementation plan or are there any other requirements for project area as described in the WQAR (e.g., District, RWQCB, Consent Decree)? ☐ Yes ☒ No

[1] If existing treatment BMPs are in TMDL areas and the pervious tributary area for the BMP has been documented for TMDL Compliance then the TBMP Pervious Area must also be added to ATA 1.

If Yes, consult the District/Regional Design Stormwater Coordinator or District/Regional NPDES Coordinator to determine if there are written agreements related to specific Treatment BMPs. In this case, determine if the rest of this checklist needs to be followed to address other post construction requirements. If not, document BMP(s) in the Individual Treatment BMP Summary Table, provide information on the basis of the BMP requirement and any regulatory coordination in the SWDR narrative, and complete Table E-2. Otherwise, continue.
If No, continue.

2. Does the receiving water have a TMDL for litter/trash, is there a region specific requirement related to trash, or is the project in an STGA? ☐ Yes ☒ No

   If Yes, first evaluate Multi Benefit Trash Treatment Systems that can treat other pollutants and are considered to be full-capture trash devices (Infiltration Basins/Trenches, Detention Basins, Media Filter, Bioretention). If Multi Benefit Trash Treatment Systems cannot be sited, determine if standalone full-capture devices (GSRDs, Trash Nets, Capture Housing) can be sited.

   If Multi Benefit Trash Treatment Systems or standalone full-capture devices are incorporated and no other Treatment BMPs are being considered, go to question 6 of "Individual BMP Evaluation". If full-capture devices are incorporated and additional Treatment BMPs are being considered, continue.

   If No, continue.

3. Is the project located in an area that uses traction sand more than twice a year? ☐ Yes ☒ No

   If Yes, first consider BMPs that can treat other pollutants and can capture traction sand. If other BMPs cannot be sited, consult the District/Regional Design Stormwater Coordinator to determine if standalone traction sand trap devices should be incorporated.

   If standalone devices are required and no other Treatment BMPs are being considered, go to question 6 of "Individual BMP Evaluation". Otherwise, continue with this checklist to identify Treatment BMPs that provide traction sand and other pollutant removal, or to design Treatment BMPs in series.

   If No, continue.

B. Dual Purpose Facilities

1. Does the project have (or propose to include) any dual purpose facilities that could meet treatment requirements
   (e.g., Dry Weather Flow Diversion, flood control basins, etc.)? ☐ Yes ☒ No

   If Yes and 100 percent of the PCTA and ATA 1 (Pervious) will be treated by the dual purpose facility, go to question 6 of "Individual BMP Evaluation".

   If Yes, but 100 percent of the PCTA and ATA 1 (Pervious) has not been addressed, continue.

   If No, continue.

C. Evaluate overall project area for infiltration opportunities using existing and proposed roadside surfaces (DPPIAs). Assure the DPPIA is stabilized to handle

highway drainage design flows, for both sheet and concentrated flows (See HDM Section 800).

Document DPPIAs on the "Individual Treatment BMP Summary Table" located at the end of this checklist.

1. Based on site conditions, do the DPPIAs infiltrate 100 percent of the WQV generated by the PCTA and ATA 1 (Pervious) for the project? ☒ Yes ☐ No

   Yes, go to question 6 of "Individual BMP Evaluation".

   If No, account for area infiltrated and continue.

2. Can infiltration for these areas be increased by using soil amendments or other means? ☐ Yes ☐ No

   If Yes, and 100 percent of the WQV generated by the PCTA and ATA 1 (Pervious) is infiltrated, go to question 6 of "Individual BMP Evaluation".

   If Yes, but 100 percent of the WQV generated by the PCTA and ATA 1 (Pervious) is not infiltrated, continue with this checklist to identify Treatment BMPs that will treat the remaining PCTA and ATA 1 (Pervious).

   If No, continue.

<u>Individual BMP Evaluation</u>

Answer the following questions for each Treatment BMP location being considered. The following process must be followed until the PCTA and ATA 1 (Pervious) or desired treatment area (Alternative Compliance) has been achieved. Use the Individual Treatment BMP Summary Table at the end of the checklist to summarize the selected BMP(s) based on the findings of the following questions for each BMP contributing drainage area.

1. Infiltration Devices (Infiltration Basin, Trench, Gallery, or other device)

   a. Can 100 percent of the BMP contributing drainage area WQV (or remaining WQV, if in series with a DPPIA or other BMP) be infiltrated? ☐ Yes ☐ No

      If Yes, go to question 6.

      If No, continue.

2. LID flow through Devices (Biofiltration Strips, Swales, & Bioretention)

   a. Is this a TMDL retrofit project or is the project within a TMDL watershed or 303(d) impaired receiving water body area? ☐ Yes ☐ No

      If Yes, when designing the TBMP device, determine the percent WQV infiltrated from both the impervious and pervious BMP contributing drainage areas. Consider using existing or amended soils:

      If infiltration is >50 percent, continue to b.

      If infiltration is ≤50 percent, go to question 3.

      If No, continue to b.

   b. Can LID flow through devices be designed to: ☐ Yes ☐ No

      Infiltrate 100 percent of the WQF/WQV (or remainder, if in series with a DPPIA or other BMP) from the BMP contributing drainage area, and

Meet the siting and design criteria of the Caltrans TBMP design guidance.

If Yes, continue to b.

If No, go to question 3.

c. LID flow through devices are considered to be an effective method of treatment, go to question 6.

3. Earthen type BMPs (Detention Devices, Media Filters, or other devices)

a. Can earthen type BMPs (standalone or in series with other approved Treatment BMPs) be designed to: ☐ Yes ☐ No

Infiltrate 100 percent of the WQV (or remainder, if in series with a DPPIA or other BMP) from the BMP contributing drainage area, and

Meet the criteria of the Caltrans design guidance for the treatment device being considered.

If Yes, continue to b.

If No, go to question 4.

b. Earthen type BMPs are considered to be an effective method of treatment, go to question 6.

4. Targeted Design Constituent (TDC)

This approach will compare the effectiveness of individual BMPs and allow the PE to use judgment when evaluating BMP feasibility (site constraints, safety, maintenance requirements, life-cycle costs, etc.).

a. Does the project discharge to a 303(d) impaired receiving water or a receiving water in a TMDL watershed where Caltrans is a named stakeholder? ☐ Yes ☐ No

If Yes, is the identified pollutant(s) considered to be a TDC (check all that apply below)? Continue to b.

☐ sediments ☐ copper (dissolved or total)

☐ phosphorus ☐ lead (dissolved or total)

☐ nitrogen ☐ zinc (dissolved or total) ☐ general metals (dissolved or total)[2]

If No or if no TDC is identified, use Matrix A to select BMPs and go to question 5.

b. Treating Only Sediment. Is sediment a TDC? ☐ Yes ☐ No

If Yes, use Matrix A to select BMPs and go to question 5.

If No, continue to c.

c. Treating Only Metals. Are copper, lead, zinc, or general metals listed TDCs? ☐ Yes ☐ No

[2] General metals is a designation used by Regional Water Boards when specific metals have not yet been identified as causing the impairment.

If Yes, use Matrix B to select BMPs, and go to question 5.

If No, continue to d.

d. Treating Only Nutrients. Are nitrogen and/or phosphorus listed TDCs? ☐ Yes ☐ No

If Yes, use Matrix C to select BMPs, and go to question 5.

If No, continue e.

e. Treating both Metals and Nutrients. Is copper, lead, zinc, or general metals AND nitrogen or phosphorous a TDC? ☐ Yes ☐ No

If yes, use Matrix D to select BMPs, and go to question 5.

If No, continue.

BMP Selection Matrix A: General Purpose Pollutant Removal			
Consider BMPs (or combinations of) to treat the contributing drainage area WQV with BMPs listed in this table. First evaluate Tier 1 BMPs, followed by Tier 2 BMPs when Tier 1 BMPs are not feasible. Within each Tier, BMP selection will be determined by the site-specific determination of feasibility, which includes life cycle costs. BMPs are chosen based on the infiltration category determined for BMP contributing drainage area. All BMPs shown are approved and may be used.			
	BMP ranking for infiltration category:		
	Infiltration < 20%	Infiltration 20% - 50%	Infiltration > 50%
Tier 1	Bioretention (all) Strip: HRT > 5 min Austin filter (concrete) Austin filter (earthen) Delaware filter OGFC	Austin filter (earthen) Detention (unlined) Infiltration devices Biofiltration Strip Bioretention (unlined)	Austin filter (earthen) Detention (unlined) Infiltration devices Biofiltration Strip Biofiltration Swale Bioretention (unlined)
Tier 2	Strip: HRT < 5 min Biofiltration Swale Detention (unlined)	Austin filter (concrete) Delaware filter Biofiltration Swale Bioretention (lined) OGFC	Austin filter (concrete) Delaware filter Bioretention (lined) OGFC
All BMPs shown are considered effective. The PE should use professional judgment when selecting BMPs based on overall site design and feasibility.			

BMP Selection Matrix B: Any metal is the TDC, but not nitrogen or phosphorous			
Consider BMPs (or combinations of) to treat the contributing drainage area WQV with BMPs listed in this table. First evaluate Tier 1 BMPs, followed by Tier 2 BMPs when Tier 1 BMPs are not feasible. Within each Tier, BMP selection will be determined by the site-specific determination of feasibility, which includes life cycle costs. BMPs are chosen based on the infiltration category determined for BMP contributing drainage area. All BMPs shown are approved and may be used.			
	BMP ranking for infiltration category:		
	Infiltration < 20%	Infiltration 20% - 50%	Infiltration > 50%
Tier 1	Austin filter (earthen) Austin filter (concrete) Bioretention (all) Delaware filter	Austin filter (earthen) Bioretention (unlined) Detention (unlined) Infiltration devices	Austin filter (earthen) Bioretention (unlined) Detention (unlined) Infiltration devices Biofiltration Strip Biofiltration Swale
Tier 2	Strip: HRT > 5 min Strip: HRT < 5 min Biofiltration Swale Detention (unlined)	Austin filter (concrete) Bioretention (lined) Delaware filter Biofiltration Strip Biofiltration Swale OGFC	Austin filter (concrete) Bioretention (lined) Delaware filter OGFC
All BMPs shown are considered effective. The PE should use professional judgment when selecting BMPs based on overall site design and feasibility.			

BMP Selection Matrix C: Phosphorous and / or nitrogen is the TDC, but no metals are the TDC			
Consider BMPs (or combinations of) to treat the contributing drainage area WQV with BMPs listed in this table. First evaluate Tier 1 BMPs, followed by Tier 2 BMPs when Tier 1 BMPs are not feasible. Within each Tier, BMP selection will be determined by the site-specific determination of feasibility, which includes life cycle costs. BMPs are chosen based on the infiltration category determined for BMP contributing drainage area. All BMPs shown are approved and may be used.			
	BMP ranking for infiltration category:		
	Infiltration < 20%	Infiltration 20% - 50%	Infiltration > 50%
Tier 1	Austin filter (earthen) Austin filter (concrete) Delaware filter* OGFC*	Austin filter (earthen) Detention (unlined) Infiltration devices	Austin filter (earthen) Detention (unlined) Infiltration devices Biofiltration Strip & Swale Bioretention (unlined)
Tier 2	Biofiltration Strip Biofiltration Swale Detention (unlined) Bioretention (all)	Austin filter (concrete) Delaware filter Biofiltration Strip Biofiltration Swale Bioretention (all) OGFC	Austin filter (concrete) Bioretention (lined) Delaware filter OGFC
All BMPs shown are considered effective. The PE should use professional judgment when selecting BMPs based on overall site design and feasibility.			
*Delaware and OGFC filters would be ranked in Tier 2 if the TDC is nitrogen only, as opposed to phosphorous only or both nitrogen and phosphorous.			

BMP Selection Matrix D: Any metal, plus phosphorous and / or nitrogen are the TDCs			
Consider BMPs (or combinations of) to treat the contributing drainage area WQV with BMPs listed in this table. First evaluate Tier 1 BMPs, followed by Tier 2 BMPs when Tier 1 BMPs are not feasible. Within each Tier, BMP selection will be determined by the site-specific determination of feasibility, which includes life cycle costs. BMPs are chosen based on the infiltration category determined for BMP contributing drainage area. All BMPs shown are approved and may be used.			
	BMP ranking for infiltration category:		
	Infiltration < 20%	Infiltration 20% - 50%	Infiltration > 50%
Tier 1	Austin filter (earthen) Austin filter (concrete) Delaware filter*	Austin filter (earthen) Detention (unlined) Infiltration devices	Austin filter (earthen) Detention (unlined) Infiltration devices Biofiltration Strip & Swale Bioretention (unlined)
Tier 2	Biofiltration Strip Biofiltration Swale Detention (unlined) Bioretention (all) OGFC	Austin filter (concrete) Delaware filter Biofiltration Strip Biofiltration Swale Bioretention (all) OGFC	Austin filter (concrete) Bioretention (lined) Delaware filter OGFC
All BMPs shown are considered effective. The PE should use professional judgment when selecting BMPs based on overall site design and feasibility.			
*In cases where earthen BMPs also infiltrate, Delaware filters are ranked in Tier 2 if the TDC is nitrogen only, but they are Tier 1 for phosphorous only or both nitrogen and phosphorous.			

5. Does the project discharge to a 303(d) receiving water that is listed for mercury or low dissolved oxygen? ☐ Yes ☐ No

   If Yes, contact the District/Regional NPDES Coordinator to determine if standing water in a Delaware Media Filter, Wet Basin, or other TBMP would be a risk to downstream water quality. Continue to question 6.

   If No, continue to question 6.

6. Identify the Treatment BMPs being considered and complete the Individual Treatment BMP Summary Table and Overall Project Treatment Summary Table on the following pages. Refer to Appendix B of the PPDG and review the checklists identified below for every Treatment BMP under consideration. ☐ Complete

   Document the basis of design in the SWDR narrative and complete Table E-2.

   ____ DPPIAs: Checklist T-1, Part 11

   ____ Infiltration Devices: Checklist T-1, Part 2

   ____ Biofiltration Strips and Biofiltration Swales: Checklist T-1, Part 3

   _x___ Detention Devices: Checklist T-1, Part 4

   ____ Traction Sand Traps: Checklist T-1, Part 5

   ____ Dry Weather Diversion: Checklist T-1, Part 6

   ____ GSRDs: Checklist T-1, Part 7

   ____ Trash Net: Checklist T-1, Part 7

   ____ Capture Housing: Checklist T-1, Part 7

   ____ Media Filter [Austin Sand Filter and Delaware Filter]: Checklist T-1, Part 8

   ____ Bioretention: Checklist T-1, Part 13

   ____ Open Graded Friction Course (OGFC): Checklist T-1, Part 12

   Note:

   Multi-Chamber Treatment Train (MCTT) is not listed here because Caltrans has found that other approved BMPs are equally effective and more sustainable due to lower life cycle costs.

   Wet Basins are not listed here due to feasibility issues due to site feasibility and issues with long term operation and maintenance.

   Pervious Pavement is not listed here because pervious pavement can only be used for non-highway areas.

   MCTT, Wet Basins, and Pervious Pavement may be considered or implemented upon the recommendation of the District/Regional Design and Maintenance Stormwater Coordinator.

7. Prepare cost estimate, including right-of-way, and document pertinent site specific determination of feasibility for selected Treatment BMPs and include in the SWDR for approval. ☒ Complete

Individual Treatment BMP Summary Table: (To be designed during PS&E phase)

List the selected BMPs based on the findings of this checklist and the treated areas associated with each BMP in Table E-2. For projects with multiple BMPs, add rows (if needed), or attach a separate sheet displaying the following information.

Each BMP must be tracked in Table E-2. Districts may use a modified table based upon their needs. See Section 6.6 for additional information.

Table E-2. Individual Treatment BMP Summary Table [1]

BMP Identifier-Number	BMP Type	Treated Impervious Area (CT RW) (ac)	Treated Impervious Area (Outside CT RW) (ac)	Treated Pervious Area (CT RW) (ac)	Treated Pervious Area (Outside CT RW) (ac)	Treated WQV/WQF/ FCV/FCF (%)
	Total Area to be Treated (acre)	(B in Table E-1)	(C in Table E-1)			

[1] *The treated areas identified in this table are a product of the BMP CDA and Treated WQV/WQF/FCV/FCF (%).*

Treatment BMPs
Checklist T-1, Part 4

Prepared by: Devangi Dave Date: : 10/04/2024 District-Co-Route: 11-IMP-186

PM: 0.5-2.0 Project ID/EA: 431080 RWQCB: Colorado River Basin (Region 7)

Detention Devices:

Two locations have been identified where drainage basins may be constructed as part of the project.

One is located between the All-American Canal and the new connection to the service road going into the Quechan Casino. It would accumulate water that runs along the west side of the new alignment and into drains that would be located on the north side of the service road. It would then be piped under the roadway into the proposed drainage basin. Water collected in this manner could then percolate into the permeable soils which occur in this area.

The second drainage basin may be located just south of the new bridge on the west side of the new alignment. It is in an area to the south of the All-American Canal. Water that accumulates from the bridge would be directed into a down drain or overside drain into the basin. Existing flow patterns are away from the canal. As an alternative to a basin, flows coming off the roadway south of the bridge could flow onto the existing terrain and allowed to disapate. Some energy disapation features could be incorporated into the design to limit erosion or migration of run off.

Feasibility

1. Is there sufficient head to prevent objectionable backwater conditions in the upstream drainage systems? ☐ Yes ☐ No
2. Is basin invert ≥ 5 ft above seasonally high groundwater or can it be designed with an impermeable liner? (Note: If an impermeable liner is used, the seasonally high groundwater elevation must not encroach within 12 inches of the invert.) ☐ Yes ☐ No

   If No to any question above, then Detention Devices are not feasible.
3. If the Detention Device is being used to capture traction sand, is the total volume of the device at least equal to the WQV designed to be treated plus the anticipated volume of traction sand, while maintaining a minimum 12-inch freeboard (1 ft)? ☐ Yes ☐ No

   If No, then Detention Devices are not feasible.
4. Does adequate area exist within the RW to place Detention Device? ☐ Yes ☐ No

   If yes, continue to the Design Elements section. If No, continue to Question 5.
5. If adequate area does not exist within RW, can suitable, additional RW be acquired to site Detention Device and how much RW would be needed to treat WQV? _____ acres ☐ Yes ☐ No

   If Yes, continue to the Design Elements section. If No, continue to Question 6.
6. If adequate area cannot be obtained, document in Section 6 of the SWDR that the inability to obtain adequate area prevents the incorporation of this Treatment BMP into the project. ☐ Complete

Design Elements: To be determined at PS&E phase, when more design information become available

*** Required Design Element –** A "Yes" response to these questions is required to further the consideration of this BMP into the project design. Document a "No" response in Section 6 of the SWDR to describe why this Treatment BMP cannot be included into the project design.

**** Recommended Design Element –** A "Yes" response is preferred for these questions, but not required for incorporation into a project design.

1. Has the location of the Detention Device been evaluated for any effects to the adjacent roadway and subgrade? * ☐ Yes ☐ No
2. Can a minimum freeboard of 12 inches be provided above the overflow event elevation? * ☐ Yes ☐ No
3. Is an upstream bypass or overflow outlet provided? * ☐ Yes ☐ No
4. Is the drawdown time of the Detention Device a maximum of 96 hours? * ☐ Yes ☐ No
5. Is the basin outlet designed to minimize clogging (minimum outlet orifice diameter of 0.5 inches)? * ☐ Yes ☐ No
6. Are the inlet and outlet structures designed to prevent scour and re-suspension of settled materials, and to enhance quiescent conditions? * ☐ Yes ☐ No
7. Can vegetation be established in an earthen basin at the invert and on the side slopes for erosion control and to minimize re-suspension? Otherwise include rock or similar protective system. Note: Detention Basins may be lined, in which case no vegetation would be required for lined areas. * ☐ Yes ☐ No
8. Has sufficient access for maintenance been provided? * ☐ Yes ☐ No
9. Is the side slope 4:1 (h:v) or flatter for interior slopes? ** ☐ Yes ☐ No

   (Note: Side slopes up to 3:1 (h:v) allowed with approval by District Maintenance.)
10. If significant sediment is expected from nearby slopes, can the Detention Device be designed with additional volume equal to the expected annual loading? ** ☐ Yes ☐ No
11. Is flow path as long as possible (> 2:1 length to width ratio at WQV elevation is recommended)? ** ☐ Yes ☐ No
12. Does the CDA for the device have trash treatment requirements?** ☐ Yes ☐ No

    If Yes, design and certify as Multi Benefit Trash Treatment (*See Caltrans Multi Benefit Treatment BMP Trash Full Capture Requirements Design Guidance*).

(Scroll down to Page 2
and edit for your project)

SWDR Summary Spreadsheet

1	2	3	4	5	6	7	8	9
SWDR Signed Date	District	EA/Project ID	County	Route	Beginning Postmile	End Postmile	Project Description	Project Phase
	11	431080/ 1120000096	Imp	183	0.5	2.1	2 lanes conventional Highway	PA&ED

10	11	12	13	14	15	16	17	18
SWDR/ Risk Level	Pollution Program	DSA (ac)	Net New Impervious (NNI) (ac)	Replaced Impervious Surface (RIS) (ac)	New Impervious Surface (NIS= NNI+RIS) (sf/ac)	ATA Condition 1 (ac)	ATA Condition 2 (ac)	Post Construction Treatment Area (PCTA=NIS+ ATA1+ATA2) (ac)
Long Form	SWPPP	24.34	2.46	0	4.46	0	0	2.46

19	20	21	22	23	24	25	26	27
TMDL Compliance Unit (ac)	Treated NIS Inside CT R/W (ac)	Treated NIS Outside CT R/W (ac)	Treated Stabilize area (ac)	Model Water Efficient Landscape Ordinance (MWELO)	Rapid Stability Assessment (RSA)	Percent Treated Area	Project's Watershed	Water Bodies Affected 303(d) List
	2.46	0	0	No	No	100%	Yuma	none

28	29	30	31	32	33	34	35
CT TMDL Waterbodies	MS4 Area	Bio-filtration Strip	Bio-filtration Swale	Detention Basin	Infiltration Basin	Gross Solids Removal Device (GSRD)	Design Pollution Prevention Infiltration Area (DPPIA)
No	Yes	0	0	1	0	0	0

36	37	38	39	40	41
Infiltration Trench	Austin Sand Filter	Delaware Sand Filter	Traction Sand Trap (TST)	Fish Passage	Other BMP
0	0	0	0	0	0

42	43	44
Construction Start Date	Construction End Date	SWDR Comments
12/26/2027	12/03/2029	

Environmental Technical Report B11

Memorandum: Structure Preliminary Geotechnical Report For New Bridge Over All-American Canal (SPGR)

November 7, 2023

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State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

M e m o r a n d u m

To: DAWIT WORKU
Bridge Design Branch 21
Office of Bridge Design South

Attn: Ahmed Elsadek Manhy

Date: November 7, 2023

File: 11-IMP-186-PM R0.5/R2.1
EA 11-43108
EFIS 1120000096
New Bridge over All-American Canal (Bridge No. TBD)

From: GEOTECHNICAL SERVICES
Office of Geotechnical Design South
Branch B

Subject: **STRUCTURE PRELIMINARY GEOTECHNICAL REPORT FOR NEW BRIDGE OVER ALL-AMERICAN CANAL**

Introduction

Per your request dated September 19, 2023, this Structure Preliminary Geotechnical Report (SPGR) has been prepared by the Office of Geotechnical Design South (OGDS), Branch B, for the proposed bridge located on State Route 186 (SR-186), over the All-American Canal (AAC), at approximate post mile (PM) 1.85, within Imperial County.

The purpose of this SPGR is to summarize the preliminary investigation performed and provide preliminary recommendations for the AAC Bridge. The recommendations in this report are based on the information transmitted from the Office of Bridge Design South included with their September 19, 2023 request:

- Vicinity Map (no date)
- Project Location Map (no date)
- Project Plans (last revision date August 18, 2023)
- Risk Register (dated August 1, 2018)
- (0-Phase) Env. Eng. Memo (dated July 18, 2023)
- PSR-PDS Final (dated April 2022)

Projection Description

The project site is in the census-designated place of Winterhaven. The project proposes to realign a portion of SR-186 and construct a new bridge over the AAC, adjacent to the current existing overcrossing (i.e., Bridge No. 58-0320). The purpose of the project is to address the deficiencies of the roadway and canal crossing, such that they meet Caltrans Highway Design Standards for current and future traffic volumes, design speed, and structural capacity. Currently, three

alternatives are under consideration for the overcrossing at AAC. Alternative #1 proposes a steel girder simple span bridge. Alternative #2 proposes a precast-prestressed spliced simple span bridge. Alternative #3 proposes a segmental three span bridge. Foundation details were not provided at the time of this report.

All elevations referenced in this report are based on the North Geodetic Vertical Datum of 1929 (NGVD 29), unless otherwise noted. To convert NGVD 29 to North American Vertical Datum of 1988 (NAVD 88), add 2.14 feet.

Geotechnical Investigation

In addition to reviewing the materials provided with the Office of Bridge Design South's September 19, 2023 request, the geotechnical investigation consisted of researching archived resources including As-built plans, As-built Log-of-Test-Borings (LOTB), geotechnical and other reports, and published geologic maps. A site reconnaissance was conducted by an OGDS professional on October 5, 2023 to review site access, existing conditions, and gather any additional pertinent site information.

SR-186's existing overcrossing at AAC (i.e., Bridge No. 58-0320) spans a water flow check structure facility (Pilot Knob), originally installed in 1938 (Storey, 2009). Associated As-built information for this structure relating to geotechnical considerations was not found during a desktop study. Information from several nearby projects was reviewed to provide insight into the region's geotechnical conditions, including:

- 02/03 All American Canal Bridge (Andrade) (Bridge No. 58-0306R/L, EA 11-029864). This bridge is located on Interstate 8 (I-8), PM R90.99 (Approximately 0.38 miles northeast (NE) of the project site):

    As-built LOTB indicate two rotary wash borings (advanced to a maximum depth of 100 feet below ground surface (bgs), Elev. 99 feet) and three dynamic cone penetration soundings (advanced to a maximum depth of 41 feet bgs, Elev. 159 feet) were conducted in 1967.

- Route 186/8 Separation (Algodones Road Overcrossing, Bridge No. 58-0305, EA 11-029864) located on SR-186, PM 2.08 (Approximately 0.42 miles northwest (NW) of the project site):

    As-built LOTB indicate two rotary wash borings (advanced to a maximum depth of 46 feet, Elev. 194 feet) and two dynamic cone penetration soundings (advanced to a maximum depth of 25 feet. Elev. 224 feet) were conducted in 1967.

• SR-186 Andrade Border Crossing Pedestrian Project (EA 11-294801) located on SR-186 at PM 0.0/0.4 (Approximately 1.3 miles south (S) of the project site):

Five hand augured borings (advanced to a maximum depth of 9 feet bgs, Elev. 115.5 feet, NAVD 88) were conducted in 2012 / 2013, and four borings (to a maximum depth of 15 feet bgs, unknown elevation).

A water surface elevation separation exists across the existing SR-186 AAC Bridge. During the site reconnaissance, canal water level was observed to be approximately 10 feet below the existing bridge surface on the southwest (SW) side and approximately 5 feet higher on the NE side.

Geotechnical Conditions

Geology

The bridge site is located at the intersection of an alluvial fan, emanating from the Cargo Muchacho Mountains to the northwest, and the Colorado River to the southeast. Native materials mapped at the project location consist of Alluvium (Qal) and Older Alluvium (Qc). A relatively small mountain, named Pilot Knob, exists approximately 1.0 mile southwest of the project site and is composed of Precambrian age quartz diorite gneiss (Chuckwalla Complex) (Morton, P.K., 1977). The Geologic Map is presented in Appendix I.

Surface Conditions

SR-186 at the project location is a two-lane conventional highway with approximate 12-foot-wide lanes, with a roughly NW-southeast(SE) orientation. Lanes at areas beyond the existing overcrossing are abutted by unpaved earth. Within the region of the existing crossing, pavement is abutted by guardrail and the crossing's railing barriers. In the proximity of the proposed bridge structure, adjacent to the canal's banks, existing ground is relatively flat with sparce scrub plants. Low lying hills, exposing the Old Alluvium, exist around the project site. The canal itself has paved side slopes at its bank, that extend approximately 150 feet to the NE and SW of the existing crossing. Existing aquatic vegetation was noted beyond the paved banks. An employee with the Imperial Irrigation District (IID) that was on site at the time of the site reconnaissance and indicated that the canal bed was also lined with concrete (L. Salas, personal communication, October 5, 2023). The employee noted that the bed lining extended from the check structure to "just before" the end of the SW paved side slope limits. A historic bridge report for the overcrossing from 1972 additionally notes that the waterway is "Concrete lined…" but does not provide additional As-built information for the bed lining. Visual confirmation of canal bed condition was not

possible during the site reconnaissance and verification of exact conditions against records from IID or other pertinent agency is recommended. Several roadside memorials exist adjacent to the SE abutment of the existing crossing (at the NE side). A California historic placard was noted on the NW side of SR-186 between the existing crossing and the wasteway gate to the east. Overhead power lines were observed running parallel with the canal, offset approximately 100 feet SE of the SE canal bank. A distribution pole and service line exist on the SW side of the existing overcrossing structure, connecting to the two small buildings associate with the check structure. Select site photos gathered during the site reconnaissance are included in Appendix III. An annotated copy of the project Layout Sheets is also included in Appendix III to reference photographed item locations.

During the site reconnaissance, utility boxes were noted on the SW side of the existing crossing at both ends of the bridge. An additional utility identification post was also noted adjacent to one of the boxes. Two drainage system outlets (and one inlet) were also observed adjacent to the existing overcrossing structure, just W of the NW abutment. One outlet appeared to be located between the existing crossing and proposed crossing's footprint. The second outlet appeared to be within the footprint of the proposed crossing. Photos of these items and their locations are provided in Appendix III.

In discussions with IID personnel that was onsite during the time of the site reconnaissance, existing utilities associated with the check structure exist between the two small buildings located just S of the SW abutment, running directly to the check structure's SW abutment itself (L. Salas, personal communication, October 5, 2023). Additionally, a low voltage wire that exists on the NE side of the bridge was pointed out (see Appendix III). Verification of exact check structure utilities against records from IID or other pertinent agency is recommended.

Subsurface Conditions

No As-built subsurface information was found for the existing overcrossing structure. Evaluation of published geologic maps, nearby project records, and observations made during the site reconnaissance are considered to develop initial anticipated subsurface conditions. As-built LOTB from All American Canal Bridge and Route 186/8 Separation Bridge indicate the subsurface conditions varying of from medium dense to dense sand and sand with gravel in the upper 10 to 40 feet of the subsurface (approximate elevations 190 to 160). Below this, the materials transition to from dense to very dense sand and sand with gravel, and stiff to hard clay. These materials are interpreted to be Alluvium and Old

Alluvium from the geologic map.

Groundwater

Surface elevations (Google, 2023) of the existing ground adjacent to the canal's banks, and at the alignment of the new crossing, is approximately 175.0 to 180.0 feet (NAVD 88 Datum). Water surface elevation for the canal at this location is approximately 165.0 feet (NAVD 88 Datum) based on observations made during the site reconnaissance. Groundwater is anticipated to mimic the water surface elevation of the canal. Therefore, groundwater is anticipated to be encountered at a depth of ten to fifteen feet bgs. This value may vary depending on changes to the flow height of the AAC at this location. This anticipated behavior is corroborated by records for past projects located adjacent to the AAC on SR-186 (i.e., SR-186 Andrade Border Crossing Pedestrian Project, EA 11-294801)

As-Built Data

As-built plans for the existing crossing's substructure were not found during a desktop study. The existing structure is also unique (a check structure) and not like the proposed crossing alternatives. Therefore, a review of records for a nearby overcrossing at the AAC was performed to gather information about past foundations utilized at the canal crossing (i.e., All American Canal Bridge (Andrade), Bridge No. 58-0306R/L, EA 11-029864).

Bridges 58-0306 R/L were constructed in 1973. They each consist of a two-lane overcrossing at the AAC. As-built records indicate that abutments are supported by spread footings placed within an approximate 15 to 20 feet of embankment fill material. Each of the three respective intermediate bents are supported with 36/30-inch CIDH piles. Tables 1 and 2 summarized these bridges' data.

Table 1: Summary of nearby As-built Abutment Foundation Data (58-0306 R/L)

Support Location	As-Built Bottom of Footing Elevation (feet)	As-built Allowable Footing Pressure (tsf)	As-built Design Footing Pressure (tsf)
Abut 1	200	1.5	1.5
Abut 5	195	2.0	2.0

Table 2: Summary of nearby As-built Bent Foundation Data (58-0306 R/L)

Support Location	Foundation Type	36-in CIDH Section						30-in CIDH Section					
		Min. Penetration Elev., (feet)		Average Penetration Elev. (feet)		Max. Penetration Elev. (feet)		Min. Penetration Elev., (feet)		Average Penetration Elev. (feet)		Max. Penetration Elev. (feet)	
		L. Br.	R. Br.	L. Br.	R. Br.	L. Br.	R. Br.	L. Br.	R. Br.	L. Br.	R. Br.	L. Br.	R. Br.
Bent 2	36-in Dia. CIDH atop 30-in Dia. CIDH. 3 each CIDHs per bent	137.97	136.63	137.16	133.99	136.70	129.78	116.70	116.00	115.57	111.00	114.00	107.00
Bent 3		138.80	136.50	137.97	135.80	135.84	135.40	118.70	116.50	117.23	115.70	115.00	115.10
Bent 4		136.50	136.48	135.72	136.07	135.13	135.84	116.00	116.00	115.3	115.33	115.00	115.00

Note:
1) CIDH pile design loads not found in As-built Information. Foundation report dated November 30, 1967 indicated spread footing foundations at bents instead of CIDH piles with a noted design load of 5.0 tsf.
2) Steel casing is noted for the 36-inch CIDH section in As-built drawings.
3) L. Br = 58-0306L, R.Br = 58-0306R.

Scour Data

A scour rating of the structure was identified in two supplementary bridge reports, first in 1992 and again in 1994. The reports designated a scour rating of "A1". No other scour data was found for the existing overcrossing. Additionally, conversations with IID onsite personnel indicated that the channel bottom is lined (L. Salas, personal communication, October 5, 2023), and therefore more resistant to local scour. Verification of As-built canal bed details may be needed if bridge support elements will be within the waterway.

Corrosion Evaluation

Archived corrosion data was not found within proximity to the proposed bridge. The site conditions may be preliminarily considered corrosive until corrosion testing has been performed on site specific soil samples.

Seismic Information

The region is seismically active influenced by the San Andreas Rift and Fault systems at the Pacific and North American Tectonic Plate boundary. Fault zones with an approximate 10% or greater likelihood of experiencing an $M \geq 6.7$ earthquake in the next 30 years most near the project site include; the Imperial Fault Zone (approximately 33 miles SW), the Cerro Pietro Fault Zone (approximately 40 miles SW) the Brawley Fault Zone (approximately 45 miles W), and the San Andres Fault Zone (Coachella Section, approximately 71 miles NW) (USGS, 2013).

Ground Motion Hazard

The bridge is located at Latitude 32.737449° and Longitude -114.717765°. Standard penetration test (SPT) blow counts data is not available for the existing crossing location. As-built LOTBs with SPT blow count data for a nearby project spanning the AAC however is available (i.e., All American Canal Bridge (Andrade), Bridge No. 58-0306R/L). Assuming a similar soil profile as this project's site, approximate average shear wave velocity for the upper 30 meters (V_{S30}) is 316 meters/second (1037 feet/second). Soil profile is classified as "S2" soil per Section 6.1 and 6.2.3 of the Seismic Design Criteria, V2.0.

The Design Spectrum for the Safety Evaluation Earthquake, as specified in Caltrans Seismic Design Criteria with October 2019 interim revisions, Version 2.0 (SDC v2.0), is the probabilistic response spectrum representing the horizontal ground motion at the site with a 5% probability of exceedance in 50 years (return period = 975 years). The USGS 2014 NSHM is used as the basis to determine the Design Spectrum in the form of the design Acceleration Response Spectrum (ARS). Using ARS Online v3.1.0 tool, the design Peak Ground Acceleration (PGA) = 0.26g, the mean earthquake moment magnitude for PGA is M = 6.94, and mean site-to-source distance for 1.0 second period spectral acceleration is R = 37.9 miles. The design ARS curve is included in Appendix II.

Other Seismic Hazards

Surface Fault Rupture Potential

The structure is not located within an Alquist-Priolo Earthquake Fault Zone or 1000 feet from any Holocene or younger aged fault. Therefore, per MTD 20-10, the structure is not considered susceptible to surface fault rupture hazards.

Seismic Slope Stability

Global slope stability studies will be performed for the bridge abutments when the bridge design alternative is chosen, and more accurate plans become available.

Liquefaction / Lateral Spreading Potential

This report is not intended to convey a detailed liquefaction analysis, however, the project features are anticipated to be underlain by non-cohesive sedimentary deposits and the groundwater table is anticipated to be within fifty feet (50.0 feet) of the ground surface, therefore, liquefaction at the project site is possible. There is also potential for seismically induced settlement and lateral spreading. Further site-specific information is needed to provide a more precise determination.

Geotechnical Recommendations

At time of this report, specific foundation choice details for the three alternatives have not been provided. OGDS provides the following preliminary foundation alternatives for the proposed bridge.

- Spread Footings: Spread footings are recommended as abutment support for the three bridge alternatives. Footings are anticipated be situated on embankment fills, well above the groundwater level. Recommendation may change pending liquefaction study.
- Large Diameter Drilled Shafts (CIDH Concrete Piles): Large diameter drilled shafts, those with diameters greater than 24 inches, may be considered for the bent supports of Alternative 3. Saturated granular foundation soils are anticipated to exist at the bents. Caving and flowing soils are anticipated, and "wet" construction methods and cased CIDH piles are needed. Potential impact to existing canal bed liner should be considered depending on existing condition and limits. Permissibility to work within the waterway from the owner entity should also be considered if elements are planned within that section.
- Driven Displacement Piles: Driven displacement piles such as Standard Plan precast prestressed concrete piles may be considered for the abutment supports of the alternatives and the bent supports of Alternative 3. These piles are relatively short with more predictable pile lengths when compared to driven non-displacement piles. Steel section options are however vulnerable to corrosion. A cofferdam will be needed to facilitate installation at any bent locations within the waterway (may be difficult or infeasible depending on canal bed liner limits and condition). Permissibility to work within the waterway from the owner entity should also be considered if elements are planned within that section.
- Cast-in-Steel-Shell (CISS) Concrete Piles: CISS piles are feasible but not recommended because installed pile lengths are expected to be variable and difficult to predict, CISS piles are generally costlier when compared to other foundation options, and steel section are vulnerable to corrosion.
- Driven Non-Displacement Piles: Driven non-displacement open-ended pipe piles or H-piles are feasible but not recommended because installed pile lengths are expected to be longer, variable, and more difficult to predict in these subsurface conditions and therefore more costly than

other options. Steel sections are also vulnerable to corrosion.

- Small Diameter Drilled Shafts (CIDH Concrete Piles): Small diameter drilled shafts, those with diameters of 24 inches and less, are not recommended for support. Caving and flowing soils are expected, and "wet" construction methods would be required. CIDH pile diameters of at least 24 inches are also needed to permit for Gamma-Gamma Logging.

Additional Field Work and Laboratory Testing

The available site information will not provide adequate data to complete the design recommendations for the bridge. Therefore, a field investigation consisting minimally of one boring at each support element and associated laboratory testing will be performed to characterize the site. If support element(s) are planned within the waterway, restrictions, significantly higher additional exploration costs, significant coordination, delays, and potential forbiddance to even perform exploration within the waterway should be considered.

The District Project Manager must initiate the process of obtaining drilling clearances (e.g., environmental permits, right of entry, categorical exemptions, etc.). For foundation investigation details, the District Project Manager should contact the Office of Geotechnical Design South, Branch B.

References

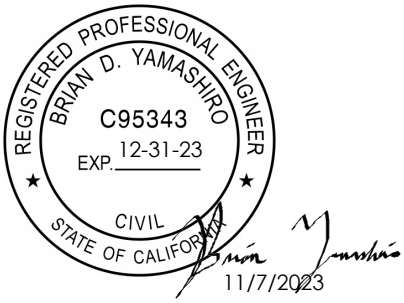
Field, E.H., Biasi, G.P., Bird, P., Dawson, T.E., Felzer, K.R., Jackson, D.D., Johnson, K.M., Jordan, T.H., Madden, C., Michael, A.J., Milner, K.R., Page, M.T., Parsons, T., Powers, P.M., Shaw, B.E., Thatcher, W.R., Weldon, R.J., II, and Zeng, Y. (2013). *Uniform California earthquake rupture forecast, version 3 (UCERF3)—The Time-Independent Model*: United States Geologic Survey, Reston.

Google. (2023). Map showing location of project site. <earth.google.com/web/> (accessed 9 October 2023)

Morton, P.K. (1966). Geologic Map of Imperial County, California, California Division of Mines and Geology.

Storey, B. (2009). *All-American Canal: Boulder Canyon Project,* Bureau of Reclamation, Denver.

Questions relating to this report should be directed to Brian Yamashiro and Adam Avakian.



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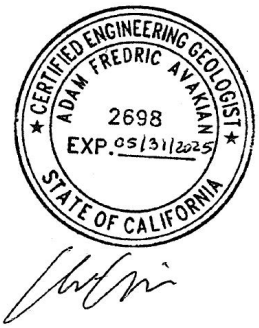

Adam Avakian, CEG
Engineering Geologist
Office of Geotechnical Design South
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(916) 203-7625

Appendices:
I. Geologic Map
II. Ground Motion Data Sheet
III. Site Photographs

c: Jorge Perez Valdes, District Project Manager
Behanu Dawa, Project Liaison Engineer
Waad Rafou, District 11 Materials Engineer



Qal

Alluvium

Unconsolidated clay, silt, sand, and gravel occurring primarily as valley fill and streamwash deposits.

Qc

Older alluvium

Partly dissected largely unconsolidated, poorly sorted silt, and gravel of alluvial fans, desert pavement areas, margins of larger canyons, and terraces. Includes Chemihuevis Formation.

mc

Chuckwalla Complex

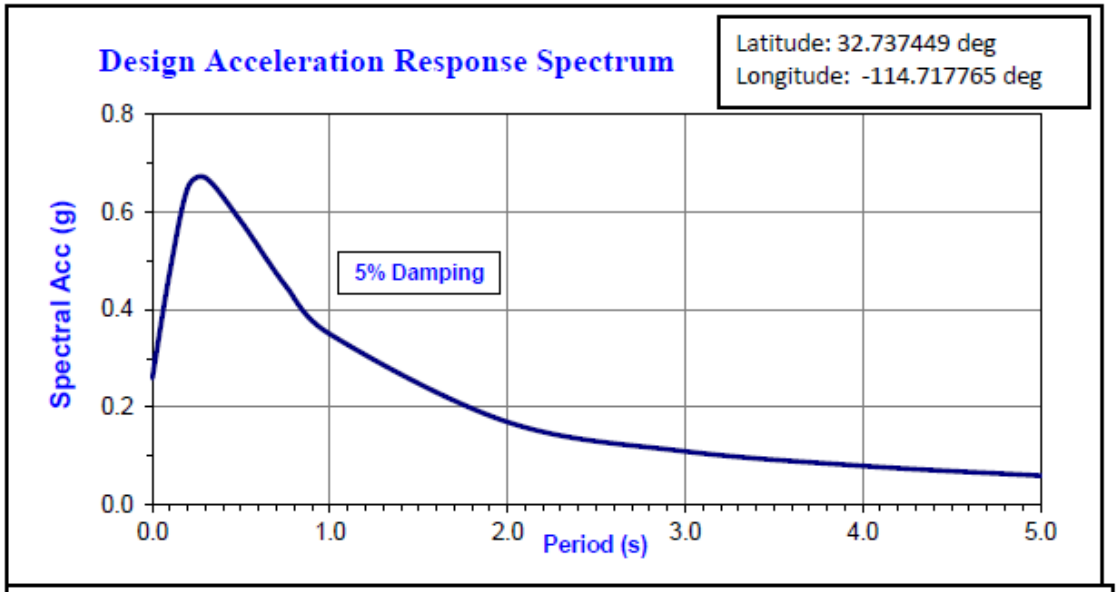
Quartz diorite gneiss (mcgn), *foliated hybrid granitic rocks, and granophyres, largely acidic to intermediate range in composition of Precambrian(?) age.*

Reference:
Morton, P.K. (1966). Geologic Map of Imperial County, California, California Division of Mines and Geology.

New Bridge over All-American Canal (SR-186)

Date: 10/10/2023

Period, T (sec)	Spectral Acceleration, Sa(g)
0.00	0.26
0.10	0.48
0.20	0.65
0.30	0.67
0.50	0.58
0.75	0.45
1.00	0.35
2.00	0.17
3.00	0.11
4.00	0.08
5.00	0.06



The Design ARS was developed using the ARS Online Version 3.0 webtool based on the 2014 USGS Probabilistic Data (Conterminous - Dynamic Model) with a 975 return period. Modifications for Basin and Near Fault factors are applied where applicable.

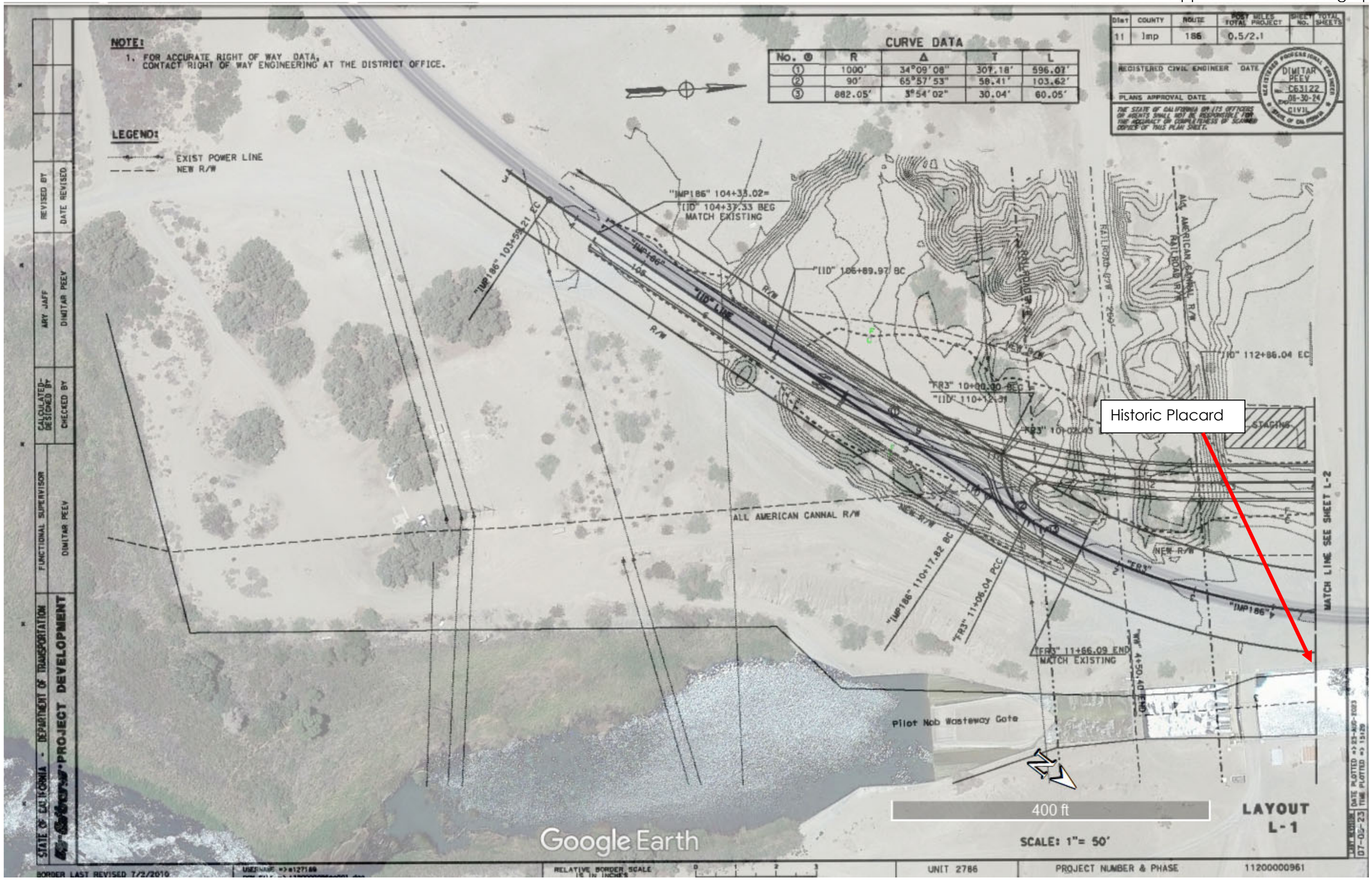
Seismic Loading Table (per MTD 1-47)

Soil Profile (V_{S30}): 1037 ft/s

PGA : 0.26g

Mean Magnitude (for PGA): **M** = 6.94

Design Acceleration Response Spectrum


NOTE:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
CURVE DATA
No. ® | R | Δ | T | L
① | 1000' | 34°09'08" | 307.18' | 596.07'
② | 90' | 65°57'53" | 58.41' | 103.62'
③ | 882.05' | 3°54'02" | 30.04' | 60.05'
Dist | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS
11 | Imp | 186 | 0.5/2.1
REGISTERED CIVIL ENGINEER DATE
PLANS APPROVAL DATE
DIMITAR PEEV C63122 06-30-24 CIVIL
LEGEND:
EXIST POWER LINE
NEW R/W
"IMP186" 104+33.02=
"IID" 104+37.33 BEG
MATCH EXISTING
"IMP186" 103+59.21 EC
"IMP186"
"IID" LINE
R/W
"IID" 106+89.97 BC
RAILROAD R/W
ALL AMERICAN CANNAL R/W
"IID" 112+86.04 EC
"FR3" 10+00.30 BEC
"IID" 110+12.31
Historic Placard
STAGING
NEW R/W
"FR3"
"IMP186"
"IMP186" 110+17.82 BC
"FR3" 11+06.04 PCC
"FR3" 11+66.09 END
MATCH EXISTING
"IMP" 45+04.50 END
Pilot Knob Wasteway Gate
MATCH LINE SEE SHEET L-2
400 ft
Google Earth
LAYOUT
L-1
SCALE: 1"= 50'
REVISED BY
DATE REVISED
ARY JAFF
DIMITAR PEEV
CALCULATED-DESIGNED BY
CHECKED BY
FUNCTIONAL SUPERVISOR
DIMITAR PEEV
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT
BORDER LAST REVISED 7/2/2019
RELATIVE BORDER SCALE IN INCHES
UNIT 2786
PROJECT NUMBER & PHASE
11200000961
DATE PLOTTED => 23-AUG-2023
TIME PLOTTED => 15:29
07-02-23

Power lines and distribution pole/line to check structure buildings

Stored materials

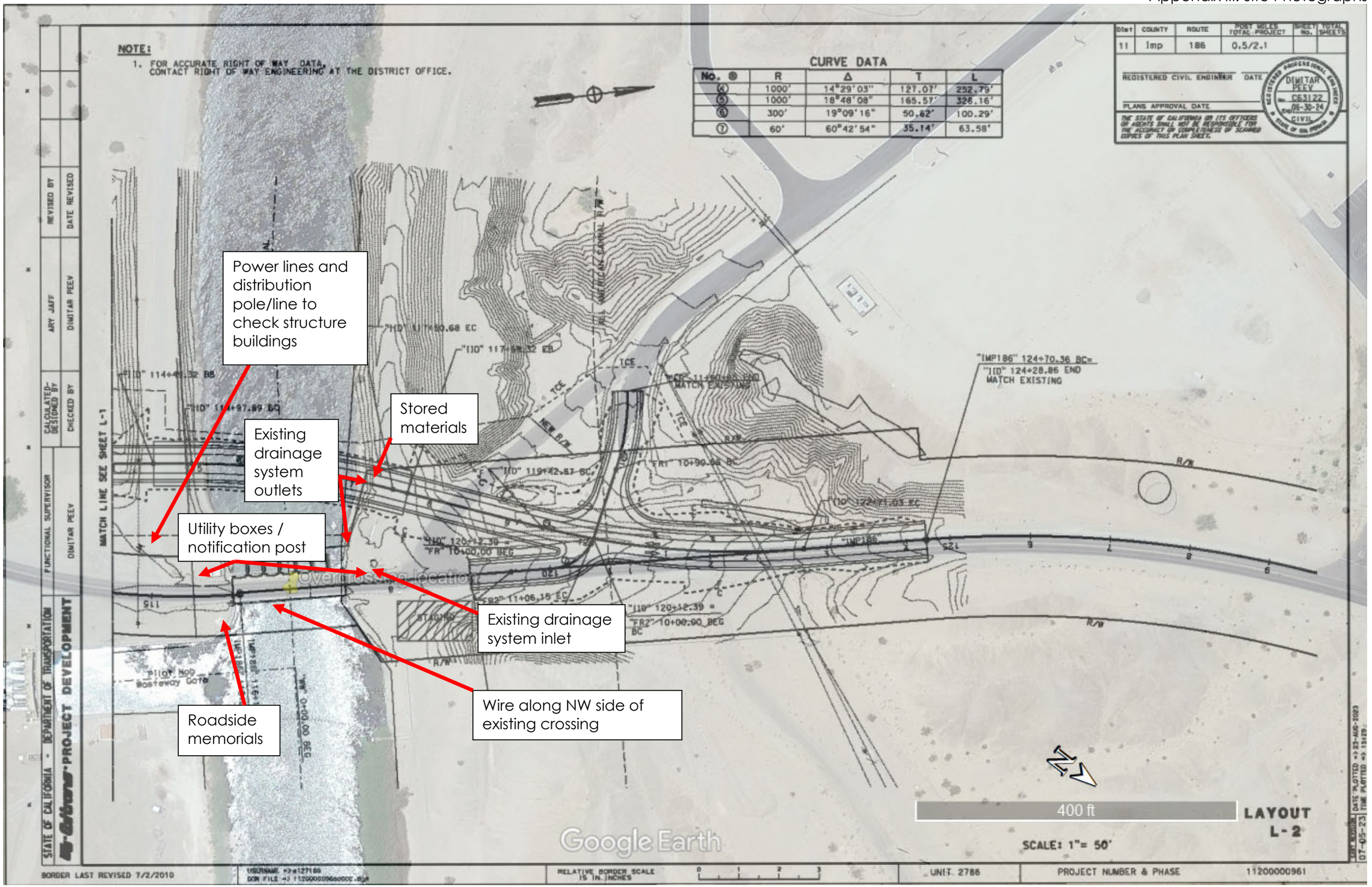
Existing drainage system outlets

Utility boxes / notification post

Existing drainage system inlet

Wire along NW side of existing crossing

Roadside memorials



Historic Placard



Overhead power lines and distribution to check structure buildings



Roadside memorials



Existing drainage outlets



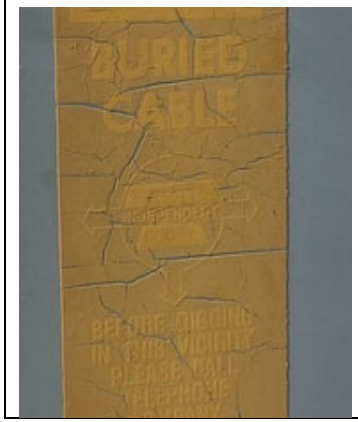
Existing drainage inlet



Stored Materials



Utility boxes and notification post labels





Wire at NW side of existing bridge



Environmental Technical Report B12

Transportation Air Quality Conformity Findings Checklist

December 30, 2024

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Transportation Air Quality Conformity Findings Checklist

PROJECT INFORMATION

Project Name: 11-IMP-186

DIST-CO-RTE-PM: 11-IMP-186 **PM/PM:** 0.5 / 2.0

EA: 11-43180 / 11200009 **Federal Aid Number:**

Document Type: ☒ 23 USC 326 CE ☐ 23 USC 327 CE ☐ EA ☐ EIS

CHECKLIST

Step 1. Is the project located in a nonattainment or maintenance area for ozone, nitrogen dioxide, carbon monoxide (CO), PM2.5, or PM10 per EPA's Green Book listing of non-attainment areas?

☐ If no, go to Step 18. **Transportation conformity does not apply to the project.**

☒ If yes, go to Step 2.

Step 2. Is the project exempt from conformity per 40 CFR 93.126 or 40 CFR 93.128?

☒ If yes, go to Step 18. **The project is exempt from all project-level conformity requirements (40 CFR 93.126 or 128)** (check one box below and identify the project type, if applicable).

- ☒ 40 CFR 93.126[1]
  Project type from Table 2: Widening narrow pavements or reconstructing bridges (no additional travel lanes)
- ☐ 40 CFR 93.128

☐ If no, **go** to Step 3.

Step 3. Is the project exempt from regional conformity per 40 CFR 93.127?

☐ If yes, go to Step 8. **The project is exempt from regional conformity requirements (40 CFR 93.127)** (identify the project type).
Project type: _____

☐ If no, go to Step 4.

Step 4. Is the project located in a region with a currently conforming RTP and TIP?

☐ If yes, t**he project is included in a currently conforming RTP and TIP per 40 CFR 93.115. The project's design and scope have not changed significantly from what was assumed in RTP conformity analysis (40 CFR 93.115[b])** Go to Step 8.

☐ If no and the project is located in an isolated rural area, go to Step 5.

☐ If no and the project is not located in an isolated rural area, STOP and do not proceed until a conforming RTP and TIP are adopted.

---

[1] Please refer to Clarifications on Exempt Project Determinations to verify exempt project type from Table 2. Road diets, auxiliary lanes less than one-mile, and ramp metering may be exempt under "projects that correct, improve, or eliminate a hazardous location or feature."

Step 5. For isolated rural areas, is the project regionally significant per 40 CFR 93.101, based on review by Interagency Consultation?

☐ If yes, go to Step 6.

☐ If no, go to Step 8. **The project, located in an isolated rural area, is not regionally significant and does not require a regional emissions analysis (40 CFR 93.101 and 93.109[e]).**

Step 6. Is the project included in another regional conformity analysis that meets the isolated rural area analysis requirements per 40 CFR 93.109, including Interagency Consultation and public involvement?

☐ If yes, go to Step 8. **The project, located in an isolated rural area, has met its regional analysis requirements through inclusion in a previously-approved regional conformity analysis that meets current requirements (40 CFR 93.109[e]).**

☐ If no, go to Step 7.

Step 7. The project, located in an isolated rural area, requires a separate regional emissions analysis.

☐ **Regional emissions analysis for regionally significant project, located in an isolated rural area, is complete. Regional conformity analysis was conducted that includes the project and reasonably foreseeable regionally significant projects for at least 20 years. Interagency Consultation and public participation were conducted. Based on the analysis, the interim or emission budget conformity tests applicable to the area are met (40 CFR 93.109[e] and 95.105).**[2] Go to Step 8.

Step 8. Is the project located in a CO nonattainment or maintenance area? (South Coast Air Basin only)

☐ If no, go to Step 9. **CO conformity analysis is not required.**

☐ If yes, **hot-spot analysis requirements for CO per the** CO Protocol (or per EPA's modeling guidance, CAL3QHCR can be used with EMFAC emission factors[3]) **have been met. Project will not cause or contribute to a new localized CO violation (40 CFR 93.116 and 93.123)**[4]. Go to Step 9.

Step 9. Is the project located in a PM10 and/or a PM2.5 nonattainment or maintenance area?

☐ If no, go to Step 13. **PM2.5/PM10 conformity analysis is not required.**

☐ If yes, go to Step 10.

[2] The analysis must support this conclusion before going to the next step.
[3] Use of the CO Protocol is strongly recommended due to its use of screening methods to minimize the need for modeling. When modeling is needed, the Protocol simplifies the modeling approach. Use of CAL3QHCR must follow U.S. EPA's latest CO hot spot guidance, using EMFAC instead of MOVES; see: http://www.epa.gov/otaq/stateresources/transconf/projectlevel-hotspot.htm#co-hotspot.
[4] As of October 1, 2007, there are no CO nonattainment areas in California. Therefore, the requirements to not worsen existing violations and to reduce/eliminate existing violations do not apply.

Step 10. Is the project considered to be a Project of Air Quality Concern (POAQC), as described in EPA's Transportation Conformity Guidance for PM 10 and PM 2.5?

☐ If no, **the project is not a project of concern for PM10 and/or PM2.5 hot-spot analysis based on 40 CFR 93.116 and 93.123 and EPA's Hot-Spot Analysis Guidance. Interagency Consultation concurred with this determination on _____**. Go to Step 12.

☐ If yes, go to Step 11.

Step 11. The project is a POAQC.

☐ **The project is a project of concern for PM10 and/or PM2.5 hot-spot analysis based on 40 CFR 93.116 and 93.123, and EPA's Hot-Spot Guidance. Interagency Consultation concurred with this determination on _____. Detailed PM hot-spot analysis, consistent with 40 CFR 93.116 and 93.123 and EPA's Hot-Spot Guidance, shows that the project would not cause or contribute to, or worsen, any new localized violation of PM10 and/or PM2.5 standards.** Go to Step 12.

Step 12. Does the approved PM SIP include any PM10 and/or PM2.5 control measures that apply to the project, and has a written commitment been made as part of the air quality analysis to implement the identified SIP control measures? [Control measures can be found in the applicable Federal Register notice at: https://www.epa.gov/state-and-local-transportation/conformity-adequacy-review-region-9#ca.]

☐ If yes, **a written commitment is made to implement the identified SIP control measures for PM10 and/or PM2.5 through construction or operation of this project (40 CFR 93.117).** Go to Step 14.

☐ If no, go to Step 13.

Step 13a. Have project-level mitigation or control measures for CO, PM10, and/or PM2.5, included as part of the project's design concept and scope, been identified as a condition of the RTP or TIP conformity determination? AND/OR

Step 13b. Are project-level mitigation or control measures for CO, PM10, and/or PM2.5 included in the project's NEPA document? AND

Step 13c (applies only if Step 13a and/or 13b are answered "yes")**.** Has a written commitment been made as part of the air quality analysis to implement the identified measures?

☐ If yes to 13a and/or 13b and 13c, **a written commitment is made to implement the identified mitigation or control measures for CO, PM10, and/or PM2.5 through construction or operation of this project. These mitigation or control measures are identified in the project's NEPA document and/or as conditions of the RTP or TIP conformity determination (40 CFR 93.125(a)).** Go to Step 14.

☐ If no, go to Step 14.

Step 14. Does the project qualify for a Categorical Exclusion pursuant to 23 USC 326?

☐ If yes, go to step 15.

☐ If no, the project requires preparation of a Categorical Exclusion, EA, or EIS pursuant to 23 USC 327. Go to Step 16.

Step 15. Is any analysis required by steps 1-13 of this form?[5]

☐ If yes, then Caltrans prepares the appropriate analysis and documentation for the project file and makes the conformity determination through its signature on the CE form. No FHWA involvement is required. See the AQCA Annotated Outline. Go to Step 18.

☐ If no, then Caltrans makes the conformity determination through its signature on the CE form. No FHWA involvement is required. Go to Step 18.

Step 16. Is the project located in a non-attainment/maintenance area for **ozone only** and considered not regionally significant/non-exempt?

☐ If yes, go to Step 18.[6]

☐ If no, then **an AQCA is needed**. See the AQCA Annotated Outline. Caltrans submits a conformity determination request to FHWA for FHWA's conformity determination. Go to Step 17.

Step 17. Send FHWA Request for Conformity Determination package and FHWA Submittal Package Checklist to DOTP- Air Quality (rodney.tavitas@dot.ca.gov) and DEA-Air Quality (daisy.laurino@dot.ca.gov) for completeness review. Please direct technical questions to DOTP-Air Quality office. Headquarters staff will coordinate with FHWA on behalf of the district.

Date of FHWA air quality conformity determination: _____

Step 18. STOP as all air quality conformity requirements have been met.

SIGNATURE

Jean Settle	Jean Settle	12/30/2024
Senior Environmental Planner, AECOM	Signature	Date

[5] Please note that not all projects that qualify for a categorical exclusion will be exempt from air quality conformity requirements. Many types of projects that may qualify for a CE (such as the addition of auxiliary lanes less than one-mile, weaving lanes less than one-mile, turning lanes less than one-mile, climbing lanes less than one-mile, parking, road diets, ramp metering, and even many bridge projects) MAY require some level of project level conformity analysis and may even require interagency consultation. Additionally, please note that for ALL projects the project file must include evidence that one of the three following situations apply: 1) Conformity does not apply to the project area; or 2) The project is exempt from all conformity analysis requirements; or 3) The project is subject to project-level conformity analysis (and possibly regional conformity analysis) and meets the criteria for a conformity determination. The project file must include all supporting documentation and this checklist.

[6] Project-level conformity analysis shows that the project will conform to the State Implementation Plan. Because the project area is Attainment/Unclassified for carbon monoxide (CO) and particulate matter (PM10 and PM2.5), no hot spot analysis is required for the project-level conformity determination by 40 CFR 93.116 and 93.123. The project comes from a conforming Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP). Include documentation of interagency consultation review in the final CE/EA/EIS, if applicable.

Environmental Technical Report B13

Visual Impact Assessment (VIA): Realign SR 186 & Construct All-American Canal Bridge

December 12, 2024

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VISUAL IMPACT ASSESSMENT

Realign SR 186 & Construct All-American Canal Bridge

12/12/2024

California Department of Transportation

11-IMP-186

PM 0.5-2.0

EFIS Project ID 1120000096

EA 11-43018

Prepared by: Marlene Gros **Date:** 12/12/2024

Marlene Gros
License # 2970
Project Landscape Architect for Caltrans
Visual Analysis, Environmental Division
District 11

Statement of Compliance: Produced in compliance with National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) requirements, as appropriate, to meet the level of analysis and documentation that has been determined necessary for this project.

Acronyms and Abbreviations

AVE	area of visual effect
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
Handbook	*Caltrans 2023 VIA Handbook*
FHWA	Federal Highway Administration
NEPA	National Environmental Policy Act
PDT	Project Development Team
VIA	visual impact assessment

No table of figures entries found.

Purpose of Report

The objectives of this visual impact assessment (VIA) report are to document potential visual impacts caused by the proposed project, and to propose measures to lessen any detrimental impacts that are identified. Visual impacts are demonstrated by identifying visual resources in the project area, measuring the degree of change that would occur because of the project, and predicting how the affected public would respond to or perceive those changes. This standard VIA follows the guidance outlined in the publication *Guidelines for the Visual Impact Assessment of Highway Projects* published by the Federal Highway Administration (FHWA) in January 2015. The format is from the *California Department of Transportation* (*Caltrans*) *2023 Via Handbook* (*Handbook*).

1 Project Visual Character and Quality

1.1 Project Location and Setting

The proposed project is on State Route 186 (SR-186) between PM 0.5 and PM 2.0 in Imperial County, California. The project area consists of a 1.5-mile segment of California State Route 186 south of the Quechan Casino.

The project is in the southern portion of Imperial County of southern California. SR-186 (Algodones Road) operates as a two-lane conventional highway. Predominantly traveling in a north/south direction for over two miles, the route is located mostly on an easement within Quechan tribal land in the Fort Yuma Indian Reservation and provides the only access to the Andrade/Algodones Port of Entry (POE) for vehicles travelling to and from the US/Mexico Border. The landscape is characterized by desert volcanic landforms and desert scrub in the desert washes. The land use within the project limits is mostly undeveloped except for the Quechan Casino, the All-American Canal and bridge crossing,

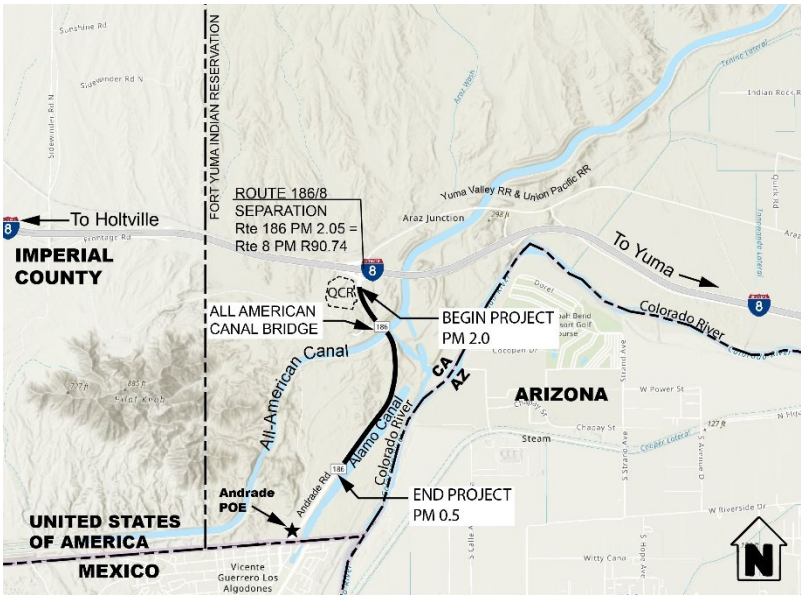

Figure 1-1 Project Location Map

1.1.1 Project Description

This project proposes to realign a portion of Imp-186 at the All-American Canal south of Imp-8. The proposed project will replace the All-American Canal crossing with a new segmental concrete bridge, including standard 12-foot lanes, eight-foot shoulders, six-foot sidewalks, and concrete barrier railing in each direction. Access for All-American Canal maintenance and operation will be improved. The project includes retaining walls, grading, drainage, guardrail, and roadside signs.

Roadway: The project proposes to construct a segment of SR-186 (Algodones Road) with one 12’ lane in each direction with 8’ shoulders and a 3’ hinge. The new roadway would connect to the existing SR-186 roadway (frontage road to existing bridge over the All-American Canal). The connector will have one 12’ lane in each direction with 2’ shoulders and a 3’ hinge. A new cul-de-sac constructed beyond the north end of the existing bridge will allow canal maintenance workers to turn around. Grading, signage and utility pole relocation, guardrail and traffic safety devices, drainage swales, vegetation removal and staging areas would be required.

Bridge: A new bridge would be constructed west of the existing bridge. The new bridge will better facilitate international and interregional movement of people, goods, and services and improve safety. The new bridge will have one 12’ lane in each direction with 8’ shoulders, 6’ sidewalks and see-through concrete bridge rails. The bridge would span the entire width of the canal without any supports in the canal. The bridge would span the existing maintenance roads along the canal. Bridge retaining walls would be required at the abutments. The bridge would provide a 30-foot horizontal clearance between the canal inside crown and the pile bents and provide a minimum vertical clearance of 20-foot at the operations and maintenance road.

1.1.2 Project Alternatives

This VIA examines two alternatives including the no-build alternative. The alternative assessed in this study is:

Alternative #1: Segmental Concrete Bridge Downstream of Existing Bridge

The proposed three-span segmental concrete bridge would be located between 126 feet and 167 feet as measured between the centerline of the existing bridge to the centerline of the proposed bridge. The new 580’ bridge would be supported by the bridge bents (columns) located on either side of the canal.

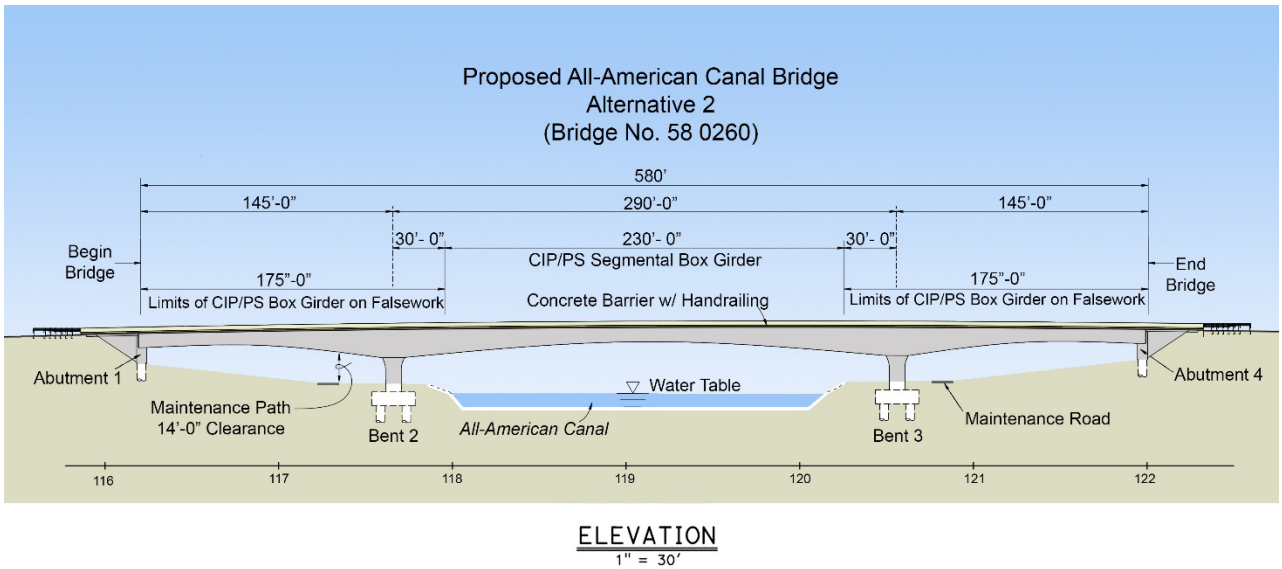

Figure 0-3 Alternative #1: Segmental Concrete Bridge

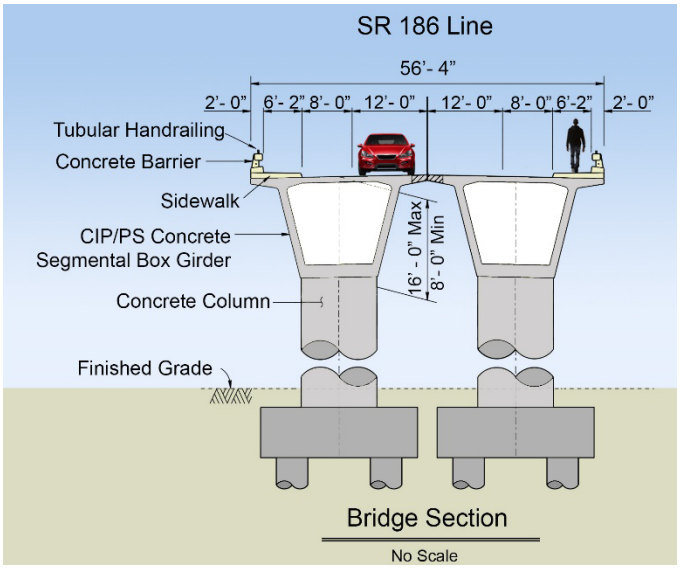

Figure 0-4 Alternative #1: Segmental Concrete Bridge

1.1.3 Project Aesthetic Features

Low-profile, tan-colored concrete “see-through” bridge rails and tan-colored sidewalks on the bridge are project features that the Project Development Team (PDT) has agreed are appropriate for the project scope and budget. These elements will help retain the unique character of the Canal’s visual environment and will help generate public acceptance of the project.

These project aesthetic features and elements constitute “good design” and are part of the project and not environmental commitments (for the project’s visual impact). These aesthetic features are standard aesthetic treatments that are included in Caltrans’ Highway Design Manual, Standard Plans, Standard Specifications and Standard Special Provisions.



This example of a low profile, “see through” bridge rail allows views to water.

1.1.4 Project Visual Character and Quality

This section provides a description of the visual character and visual quality of the project’s visual elements. SR-186 is a two-lane conventional highway in a rural desert landscape that connects interstate 8 with the international border. Approximately half a mile south of Interstate 8 (I-8), SR-186 crosses the All-American Canal, which is an 80-mile gravity fed aqueduct constructed in the 1930’s. The existing All-American Canal Bridge has views to the canal due to the open bridge pipe railing design. Views to water are unusual in the desert and the crossing provides an interesting view of the canal operational facilities. The horizon has views of a strip of agricultural green and distant mountains. Power poles, signage, guardrail, and transmission lines lower the visual quality of the viewshed



SB view of the existing SR 186 Bridge crossing the All-American Canal.



SB view of the existing SR 186 Bridge crossing the All-American Canal.

The main visible project features of the proposed project would be the bridge (paving, sidewalk, and bridge rail) and roadway elements (signage, additional pavement, guardrail). Lighting is not proposed. Desert vegetation within the construction footprint would be removed. New roadway paving would become a dominant visual feature due to the contrast of the dark asphalt paving with the light-colored desert soils. The vividness of the proposed features would be low. The intactness and unity of the proposed project features would be consistent with the existing setting. The visual character of the site would become more transportation oriented and the visual quality of the viewshed would be reduced due to increased pavement displacing native vegetation.

1.2 Scenic Resources and Visual Resources

In the context discussed in this report, “scenic resources” are those officially designated by federal, state, regional, tribal, or local authorities; “visual resources” are those that exist in the project Area of Visual Effect (AVE) without being officially recognized.

No portion of the project is within an officially designated State Scenic Highway or a highway eligible for designation. Views to the canal water could be considered a visual resource within the desert environment.



View of Existing SR-186 Bridge and Weir at the All-American Canal

2 Inventory Phase

The Inventory Phase consisted primarily of field documentation of key information about the existing landscape, and the potential sensitivity of viewers and scenic resources to visual change in the Area of Visual Effect (AVE). The baseline documentation and photography of the project area were collected. Landscape visual character and quality were described. Potential key views and scenic resources were documented. Potential viewers were noted, identified, and documented. The AVE, key views, and scenic resources of this project were verified during a site visit on 12/04/2023.

2.1 Key Views

Key views and landscape context photos document essential baseline conditions to use later to compare with a project simulation and to assess the visual impact of the project. Key views are located at points that are publicly accessible and where they provide the most significant and unobstructed image of the existing visual character and quality of the landscape unit that may be changed by the proposed project.

This study chose one key view location from the road as seen by a representative traveler to show changes to the viewshed for southbound travelers on SR-186. A key view from the existing bridge was not considered because the existing bridge will be closed to the public. It will be used by canal maintenance workers only.

Error! Not a valid bookmark self-reference. presents a map identifying the key view that will be used to assess visual impacts that may be caused by the proposed project.

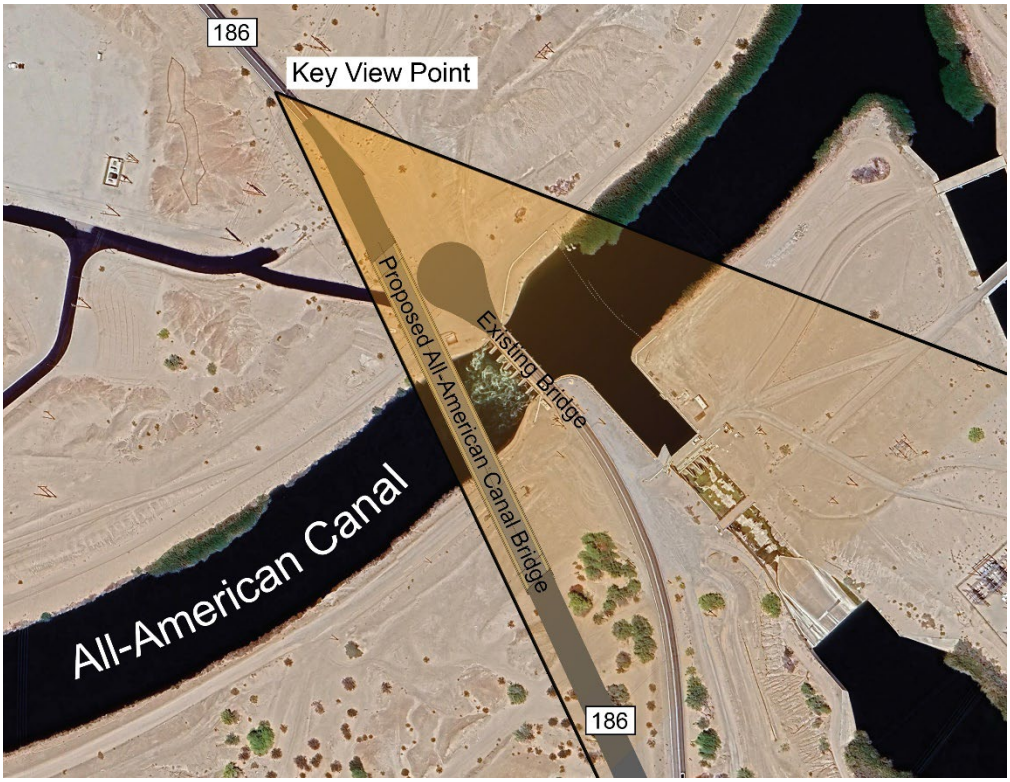

Figure 2-1 Key View

2.2 Viewers

There are two major types of viewer groups for highway projects: neighbors and travelers. Each viewer group can be subdivided into smaller categories of viewers based on land use (for neighbors) and mode of and reason for travel (for travelers). Each category has its own particular level of viewer exposure and viewer awareness, resulting in distinct and predictable visual concerns for each viewer group and category. This helps in predicting their sensitivity to visual change.

2.2.1 Neighbor Viewer Categories

Highway neighbors are people who have views to the highway project. For this project, highway neighbors are low in number. The area around the bridge and canal is undeveloped and the casino does not offer views to the bridge. Highway neighbors viewing the bridge would be canal workers with proximity views to the new bridge. Canal worker viewer exposure to the new bridge could be hours depending upon how often the workers visit the site. Workers would have low attention to the visual quality of the viewshed.

2.2.2 Traveler Viewer Categories

Highway travelers are people who have views from the road. “Travelers” refers only to viewers traveling on the highway project subject to this VIA. Affected viewers of the proposed realignment and bridge are primarily motorists on the highway traveling at moderate to high speeds. Motorists have a high viewer exposure and awareness due to the number of motorists and proximity to the project features. The Project’s existing and proposed SR 186 alignments are entirely within the Quechan/Fort Yuma Reservation, home of the Quechan Indians. Tourists use this roadway more in the cooler months of November to March to access the Quechan Casino Resort and the Paradise Casino in Yuma, AZ. Many motorists travel SR-186 to and from the Andrade-Los Algodones border crossing which is Mexico's northernmost port of entry. Motorists have short-duration, views of the All-American Canal from the bridge. Bicyclists are allowed on SR-186 and use the existing bridge to cross the All-American Canal. Pedestrians are not permitted on the existing bridge due to lack of shoulders and mechanical equipment on the check structure operating platform.

All highway travelers are expected to value the views to the canal waters because views of water in the desert are memorable.



View of Existing SR-186 Bridge and Weir at the All-American Canal looking north

Table 2-1 Matrix of Traveler Sensitivity to Visual Change

Subject Information	**Viewer Exposure**			**Viewer Awareness**			**Overall Viewer Sensitivity**
Traveler Viewer Category:	Proximity	Extent	Duration	Attention	Focal Features	Scenic Resources	
Motorists	Close	Many	Short	Low	Canal	Water	Moderate
Bicyclists	Close	Few	Short	Low	Canal	Water	Moderate
Pedestrians	Close	Few	Short	Low	Canal	Water	Low

3 Analysis Phase

The purpose of the Analysis Phase is to determine whether the visual change, combined with visual sensitivity, will result in beneficial, adverse, or neutral visual impact, and to what degree. The VIA analysis determined the project's visual impact by evaluating visual change (as determined by visual compatibility and visual contrast) and combining it with visual sensitivity (as determined by viewer and viewpoint sensitivity) as represented by key views. This relationship is shown in Figure 3-1**Error! Reference source not found.**. In addition, the impact visualizations were developed. Finally, this VIA report was assembled.

3.1 Visual Impact Analysis Methodology

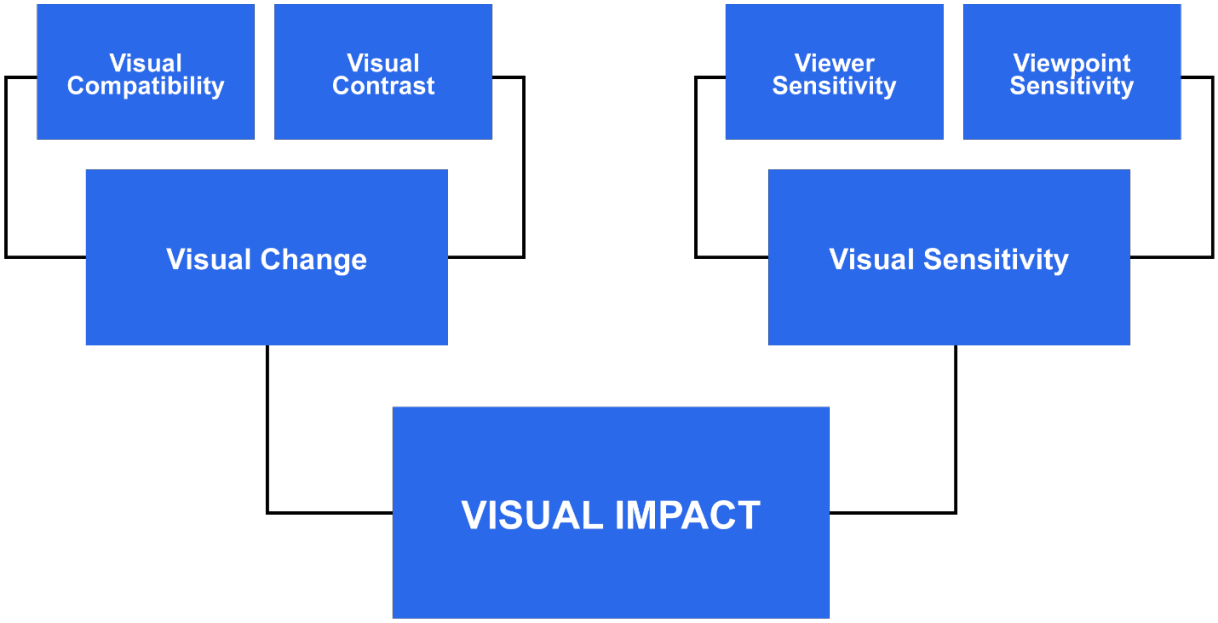

Figure 3-1 The Relationship of the Visual Attributes that Are Evaluated to Determine the Visual Impact of a Project during the Analysis Phase

Because it is not feasible to analyze all the views in which the proposed project would be seen, it is necessary to select a key view that would most clearly demonstrate the visual change. The key view was selected to represent the viewer group that has the highest potential to be affected by the project, considering exposure and sensitivity.

A potential key view was analyzed for the proposed built alternative and the No-Build Alternative. The evaluation was done by comparing the photograph of the existing conditions with the visualization of proposed conditions at the key viewpoint chosen to represent the study area. The key view was analyzed for visual compatibility, visual contrast, viewer sensitivity, and viewpoint sensitivity, visual change, and visual sensitivity as shown in **Error! Reference source not found.** and described in the following sections.

3.1.1 Photo Simulations

The final key view for which a photo-simulation was developed was selected from a number of other key views gathered during the Inventory Phase. The selected key view (KV#1) was based on professional judgement and the following criteria:

- The view of the project was relatively unobstructed and represented the full extent of the project's visual effect to the surrounding area.
- The viewpoint was publicly accessible and preferably was used by relatively more sensitive viewers, compared to other possible viewpoints.

3.1.2 Visual Compatibility

Analysis of the project's visual compatibility considered the proposed project environment (e.g., grading, constructed features, vegetation cover, and ancillary visual elements), visual character, intactness, lighting, and glare, and assessed how much these components were compatible with the visual character, intactness, lighting, and glare of the existing natural environment (e.g., land, water, vegetation) and the cultural environment (e.g., roadway, buildings, infrastructure, and other structures). The compatibility of each proposed project visual attribute with corresponding attributes of the existing natural and cultural project environment was considered for KV#1 and then briefly described. Based on the comparison of these visual attributes, and using professional judgement, the overall visual compatibility of KV#1 was described according to Table 3-1.

Table 3-1 Descriptive Values for Visual Compatibility and Contrast

Highly Adverse	Moderately Adverse	Slightly Adverse	No Effect	Slightly Beneficial	Moderately Beneficial	Highly Beneficial

3.1.3 Visual Contrast

Analysis of the project's visual contrast considered the proposed project environment's visual qualities of vividness and unity; and assessed how much they contrast with the vividness and unity of the natural, cultural, and existing project environments. The contrast of the proposed project's vividness and unity with the vividness and unity of the natural, cultural, and existing project environments was considered for KV#1 and then briefly described. Based on these comparisons, and using professional judgement, the overall visual contrast of KV#1 was described according to Table 3-1.

3.1.4 Visual Change

After analysis of visual compatibility and visual contrast for KV#1 with each alternative, visual change was determined based on visual compatibility and visual contrast descriptions, in accordance with Table 3-2.

Table 3-2 Descriptive Values of Visual Change

Visual Contrast		Visual Compatibility						
		Beneficial			None	Adverse		
		Highly	Moderately	Slightly	No Effect	Slightly	Moderately	Highly
Beneficial	Highly	Highly	Highly	Moderately	Moderately	Slightly	Slightly	None
	Moderately	Highly	Moderately	Moderately	Slightly	Slightly	None	Slightly
	Slightly	Moderately	Moderately	Slightly	Slightly	None	Slightly	Slightly
None	No Effect	Moderately	Slightly	Slightly	None	Slightly	Slightly	Moderately
Adverse	Slightly	Slightly	Slightly	None	Slightly	Slightly	Moderately	Moderately
	Moderately	Slightly	None	Slightly	Slightly	Moderately	Moderately	Highly
	Highly	None	Slightly	Slightly	Moderately	Moderately	Highly	Highly

3.1.5 Viewer Sensitivity

Viewer sensitivity is determined by a VIA preparer's judgment of levels of viewer exposure, viewer awareness, and visual quality preferences, resulting in distinct and predictable visual concerns for each viewer group and category; these factors helped to predict viewers' sensitivity to visual change. Viewer sensitivity to visual change was described in accordance with Table 3-3 for each key view.

Table 3-3 Descriptive Values for Viewer and Viewpoint Sensitivity

None	Low	Moderate	High

3.1.6 Viewpoint Sensitivity

Viewpoint sensitivity is determined by a VIA preparer's judgment of the scenic importance of a viewpoint and whether the viewpoint is part of an identified scenic resource. Sensitive viewpoints can be scenic or visual resources, vistas, landscapes, or ocean views important to neighbors or drivers. Viewpoint sensitivity was described in accordance with Table 3-3.

3.1.7 Visual Sensitivity

After analysis of viewer sensitivity and viewpoint sensitivity for each key view, visual sensitivity was determined for KV#1 based on their viewer sensitivity and viewpoint sensitivity descriptions, in accordance with Table 3-4. Viewpoint sensitivity from KV#1 would be low. Viewer sensitivity of travelers on SR-186 to project changes would be considered low.

Table 3-4 Descriptive Values of Visual Sensitivity

VISUAL SENSITIVITY	Viewer Sensitivity			
Viewpoint Sensitivity	None	Low	Moderate	High
High	Moderate	Moderate	High	High
Moderate	Low	Moderate	Moderate	High
Low	Low	Low	Moderate	Moderate
None	None	Low	Low	Moderate

3.1.8 Visual Impact

After analysis of visual change and visual sensitivity for KV#1, the visual impact was determined based on the visual change and visual sensitivity descriptions, in accordance with Table 3-5.

Table 3-5 Calculation of Visual Impact Based on Visual Change and Visual Sensitivity

Visual Change	Visual Sensitivity			
	None	Low	Moderate	High
Highly Beneficial	None	Low Beneficial	Moderately High Beneficial	Extremely High Beneficial
Moderately Beneficial	None	Very Low Beneficial	Moderately Low Beneficial	Moderately High Beneficial
Slightly Beneficial	None	Extremely Low Beneficial	Very Low Beneficial	Low Beneficial
No Effect	None	None	None	None
Slightly Adverse	None	Extremely Low Adverse	Very Low Adverse	Low Adverse
Moderately Adverse	None	Very Low Adverse	Moderately Low Adverse	Moderately High Adverse
Highly Adverse	None	Low Adverse	Moderately High Adverse	Extremely High Adverse

3.2 Alternative #1 Three-Span Segmental Concrete Box Girder Bridge, Key View #1 Visual Impact Analysis

The project proposes to construct a segment of SR-186 (Algodones Road) with one 12' lane in each direction and 8' shoulders. The new roadway would connect to the existing SR-186 roadway (frontage road to the existing bridge over the All-American Canal). A new 580' bridge would be constructed west of the existing bridge. The new bridge would have one 12' lane in each direction with 8' shoulders, 6' sidewalks and "see-through" concrete bridge rails. The bridge would span the entire width of the canal.

The proposed project would result in moderately adverse changes to the visual character of the area. The new bridge, additional roadway pavement, and removal of roadside vegetation will affect the natural site character. The proposed bridge will not affect the existing canal structures, waters, or bridge crossing. The bridge rails and sidewalks will be colored tan to blend with the natural desert environment.

The project would benefit viewers by providing views of the All-American Canal to motorists, cyclists, and pedestrians. Unlike the old bridge, the new bridge will feature sidewalks to allow pedestrians to view the canal. The proposed bridge rail will be low profile and employ a "see-through" post-and-beam system to allow views to the water.

The visual change is considered 'moderately adverse'. Visual sensitivity to the anticipated visual change is 'low'. Collectively, the 'moderately adverse' visual change combined with ''low" visual sensitivity indicates the Project will cause a 'very low adverse' visual impact with the inclusion of environmental commitment measures.

3.2.1 Photo Simulations



Figure 3-2 Key View #1 – Existing Condition – Alternative #1



Figure 3-3 Key View #1 – Proposed Condition
Note: See Figure 2-4 for key view location.

3.2.2 Visual Compatibility

The proposed project environment's visual attributes—visual character, intactness, lighting, and glare is now analyzed for visually compatibility with the same attributes of the natural, cultural, and existing project environments for this key view. The new bridge would feature open railing without a fence to allow views of the canal like the existing bridge crossing. The materials and color of the new bridge and roadway will be visually compatible with the existing canal bridge and roadway. The roadside would be seeded with native desert species and the resulting vegetative cover would be sparse which is consistent with existing conditions. The existing tall native Blue Palo Verde shrubs in the desert washes south of the canal would be removed by construction. It will take many years for seedlings to achieve the height of the existing shrubs. Night lighting is not proposed. Glare from the road surface would not be an issue.

The visual compatibility of the proposed project with the existing natural environments from this key view will be **moderately adverse** due to the increased pavement and loss of desert shrubs.

3.2.3 Visual Contrast

The proposed project environment's visual qualities, vividness and unity is now analyzed with the same qualities of the natural, cultural, and existing project environments for this key view. The proposed new bridge and paved cul-de-sac would increase the footprint of the roadway which will contrast with the existing natural environment. The dark asphalt paving will contrast with light colored desert soils. The vividness of the canal crossing would be enhanced due to new views to the canal which are not currently available. The proposed project would maintain unity with the existing project environment by using compatible materials and colors for the roadway paving and the tan-colored bridge rails and tan colored bridge sidewalks.

The visual contrast of the proposed project with the existing natural environments from this key view would be **moderately adverse** due to the increased area devoted to roadway paving which displaces the desert landscaping. The visual contrast of the proposed project with existing cultural and project environments would have no effect because the scope of work has similar features and characteristics as the existing cultural and project environments.

3.2.4 Visual Change

The visual compatibility and visual contrast of the proposed project with the existing natural environments from this key view will be **moderately adverse** due to the increased pavement and loss of desert shrubs. The dark roadway paving will contrast with light colored desert soils. However, the new bridge crossing the canal would offer vivid new views to the canal weir and turbulent waters. The proposed project would use similar materials and colors for the roadway paving and bridge for unity with the existing visual environment. Tan-color concrete "see-through" bridge rails with tan-color bridge sidewalks are proposed project features that will help retain the unique character of the Canal's visual environment.

Table 3-6 Visual Change for Key View # 1

Visual Compatibility	Visual Contrast	Visual Change
Moderately adverse	Moderately adverse	Moderately adverse

The overall visual change in the existing natural, cultural and project environments created by the proposed project as seen from this key view will be moderately adverse.

3.2.5 Viewer Sensitivity

Viewer exposure, awareness, and visual quality preference for each viewer category was described in Section 3.4 of this report.

Affected viewers of the proposed realignment and bridge are primarily motorists on the highway traveling at moderate speeds (30mph). Motorists have a high viewer exposure and awareness due to the number of motorists and proximity to the project features. Bicyclists are allowed on SR-186 and use the existing bridge to cross the All-American Canal. Bicyclists have a low viewer exposure due to the low number of bicyclists. Pedestrians are not permitted on the bridge due to lack of shoulders and mechanical equipment on the check structure operating platform. All users of the proposed bridge would be aware of the canal as they cross the bridge. The visual quality preference for all users is for the new bridge to construct a bridge rail that allows viewers to see the canal water. Overall viewer sensitivity to the proposed SR-186 realignment is low because the roadway width is like the existing condition. Overall viewer sensitivity to visual changes at the canal crossing will be low because the new bridge would allow closer unobstructed views to the canal water for all users than the existing bridge.

The overall viewer sensitivity to the proposed project in the existing natural, cultural and project environments from this key view will be low.

3.2.6 Viewpoint Sensitivity

This view of the SR-186 realignment does not contain scenic or visual resources. The viewpoint sensitivity to the proposed project in the existing natural, cultural and project environments from this key view will be low. The overall viewpoint sensitivity for the project would be low.

3.2.7 Visual Sensitivity

The overall viewer sensitivity to the proposed project in the existing natural, cultural and project environments from this key view will be low. The Viewpoint sensitivity from the proposed bridge is anticipated to be moderate because views to water are highly valued in the desert environment. The overall viewpoint sensitivity for the Project (SR-186 realignment and new bridge) would be low.

Table 3-7 Visual Sensitivity for Key View #1

Viewer Sensitivity	Viewpoint Sensitivity	Visual Sensitivity
low	low	low

3.2.8 Visual Impact

The project would change the visual landscape by creating new beneficial views of the All-American Canal for motorists, cyclists, and pedestrians. The new bridge would be constructed west of the existing All-American Canal Bridge and offer views to the existing bridge and the check structures. The new bridge would be slightly elevated above the canal than the current bridge and will offer broader views than the existing canal bridge. The new bridge would benefit users by providing views to the canal water in both directions. Unlike the old bridge, the new bridge will feature sidewalks to allow pedestrians to view the canal. The proposed bridge rail will be low profile and employ a "see-through" post-and-beam system to allow views through the rail to the water.

The new bridge, roadway realignment, cul-de-sac, and removal of roadside vegetation would affect the natural character of the site due to the increased paving, additional guardrail, end treatments and signage. The loss of roadside vegetation would further alter the natural character of the site. The proposed SR-186 realignment and new bridge would be compatible with the existing cultural environment which is focused on the All-American Canal and the SR-186 roadway. The proposed bridge will not affect the existing canal structures, waters, or bridge crossing. The bridge has been designed to completely avoid impacts to the canal facility. The bridge rails and sidewalks will be colored tan to blend with the natural desert environment.

Due to the quantity of viewers experiencing the project, the viewer exposure is considered high. Viewer sensitivity and response to the anticipated visual change would be low. Collectively, the 'low' visual change combined with the 'low' visual sensitivity to changes indicates the Project will cause a 'very low adverse' visual impact with the inclusion of environmental commitment measures.

Table 3-8 Visual Impact for Key View # 1

Visual Change	Visual Sensitivity	Visual Impact
Moderately Adverse	Low	Very Low Adverse

The overall visual impact of the proposed project on the existing natural, cultural and project environments as seen from this key view will be Very Low Adverse.

3.2.9 Temporary Construction Visual Impacts

Temporary or permanent visual impacts caused by the contractor's operations may include night lighting, dust, temporary structures, hauling materials, contractor yards and vegetation removal.

3.3 No-Build Alternative Visual Impact Analysis

No visual changes would be reasonably expected to occur in the foreseeable future if the project is not constructed.

4 Mitigation Phase (Environmental Commitments)

Caltrans and the FHWA require that a qualitative/aesthetic approach should be taken to address visual quality loss in the project area. This approach meets FHWA requirements because it addresses the actual loss of visual quality due to a project. This approach also facilitates avoidance, minimization, compensation, and/or enhancement measures that can lessen or compensate for a loss in visual quality. The inclusion of aesthetic features in the project, can help generate public acceptance of a project.

Colored concrete “see-through” bridge rails and colored concrete sidewalks are project features that the Project Development Team (PDT) has agreed are appropriate for the project scope and budget. These elements will help retain the unique character of the Canal’s visual environment and will help generate public acceptance of the project.

4.1 Recommendations for Environmental Commitment Measures

V-1. Bridge rails shall be low-profile, “see-through” concrete Type 85 bridge rails to maximize views to the water. Avoid fencing on top of the rail to maximize unobstructed views from the bridge to the water.

V-2. Concrete bridge elements such as railing, sidewalk, anchor blocks shall be integrally colored with an earth toned color to match the color of the existing bridge and desert soils.

V-3. Concrete walls shall have curved surfaces/alignments, integral earth-tone colors, and enhanced surface textures to reduce the apparent wall size and increase the wall’s compatibility with the surroundings.

V-4. Collect and stockpile duff and 0.5’ topsoil prior to clearing and grubbing vegetated areas. Duff must consist of vegetation removed and collected from clearing and grubbing activities. Vegetation may include trees, shrubs, ground cover, grasses, bark, leaves, and roots with attached soil. Spread duff over finished graded areas where drainage water will collect (swales and basins). Track walk duff into the soil. Seed all disturbed areas with a native desert seed mix approved by the District Biologist. Apply seed in the Winter seeding window. (Nov 15-Feb 1)

V-5. Grading would utilize techniques such as slope rounding to approximate the appearance of natural topography. Berms would be used where space allows to provide visual interest or to screen unsightly views. Basins and drainage swales shall appear as natural landscape features (ponds or streambeds)

V-6. BMPs such as fiber rolls, felt fiber fabric, gravel bags (if used) must be made of biodegradable materials. (No plastic).

V-7. Protect vegetation outside of the work area by prohibiting staging areas, material storage, parking, and construction access in vegetated areas.

Table 4-1 identifies environmental commitments for each visual impact.

Table 4-1 Environmental Commitments by Visual Impact

Visual Impact	Description of Environmental Commitments
A. Loss of views to canal water	Bridge rails shall be “see-through” concrete Type 85 bridge rails to maximize views to the water.
B. New bridge contrasts with existing canal	Concrete bridge elements such as railing, sidewalk, anchor blocks shall be integrally colored with an earth toned color to match the color of the existing bridge and desert soils. Galvanized tubular handrailing will be stained brown with Natina Steel.
C. New walls contrast with the desert setting.	Concrete walls shall have curved surfaces/alignments, integral earth-tone colors, and enhanced surface textures to reduce the apparent wall size and increase the wall’s compatibility with the surroundings.
D. Loss of desert scrub vegetation	Collect and stockpile duff and 0.5’ topsoil prior to clearing and grubbing vegetated areas. Duff must consist of vegetation removed and collected from clearing and grubbing activities. Vegetation may include trees, shrubs, ground cover, grasses, bark, leaves, and roots with attached soil. Spread duff over finished graded areas where drainage water will collect (swales and basins). Track walk duff into the soil. Seed all disturbed areas with a native desert seed mix approved by the District Biologist. Apply seed in the Winter seeding window. (Nov 15-Feb 1)
E. Landform Changes	Grading would utilize techniques such as slope rounding to approximate the appearance of natural topography. Berms would be used where space allows to provide visual interest or to screen unsightly views. Basins and drainage swales shall appear as natural landscape features (ponds or streambeds)
F. Plastic netting in landscape	BMPs such as fiber rolls, felt fiber fabric, gravel bags (if used) must be made of biodegradable materials. (No plastic).
G. Vegetation disturbance	Protect vegetation outside of the work area by prohibiting staging areas, material storage, parking, and construction access in vegetated areas.

5 Conclusions

The recommended measures would reduce the project’s visual impact as seen from SR-186 and the surrounding tribal lands. The intent of the above-listed measures would be to reduce the effect of the project caused primarily by the additional pavement, reduction of desert vegetation, and bridge construction, and to provide design treatments that would reduce or enhance the aesthetic condition of the project.

Even with implementation of the measures listed above, some visual impacts would remain, regardless of the project alternative. The above-listed measures, combined with proposed project features such as erosion control and aesthetic treatments, would lessen the negative visual change to the corridor. However, some of the detrimental visual impacts would remain because of the inherent alteration of scale, increased hard surface, and loss of vegetative character.

Appendix A: CEQA Checklist

Would the project:

a) Have a substantial adverse effect on a scenic vista?

No Impact. There are minimal scenic vistas or views within the project limits, consisting of views of hillsides in rural desert areas, scattered Palos Verde scrub and the All-American Canal. The proposed project would make highway improvements without altering these features or inhibiting scenic viewpoints in the area. Project construction would be short term, and equipment and storage would only be briefly visible to motorists on the roadway. Therefore, there would be no impact.

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

No Impact. The proposed project is not located within a designated State Scenic Highway, and it would not alter any scenic resources such as trees, rock outcroppings, or historic buildings. Project improvements would be focused on existing highway assets (pavement, guardrails, culverts, crosswalks, and signage), which do not provide scenic value. Therefore, there would be no impact to scenic resources.

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

Less Than Significant Impact. The proposed project would result in changes to the visual character of the project site. The new bridge, additional roadway pavement, and removal of roadside vegetation will affect the natural site character. The bridge rails and sidewalks will be colored tan to blend with the natural desert environment. The project will create opportunities for new beneficial views of the All-American Canal for motorists, cyclists, and pedestrians. The proposed bridge rail will be low profile and employ a “see-through” post-and-beam system to allow views to the water. The Project will cause a ‘very low adverse’ visual impact with the inclusion of impact avoidance measures. Therefore, the impact would be less than significant.

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

No Impact Operation of the proposed project would not introduce any new light sources. Roadside sign panels would be replaced, but this would not substantially increase glare in the area. Light and glare levels would remain like existing conditions following project implementation. Nighttime construction may occur as part of the proposed project construction phase, but the effects would be temporary. Therefore, there would be no permanent impact due to new sources of substantial light or glare in the area.

Appendix B: Potential Key Views Photographs






30
ZONE
AHEAD


SPEED
LIMIT
30

Appendix C: Scenic and Visual Resources Photographs





Environmental Technical Report B14

Memorandum: Visual Study, Realign SR 186 & Construct All-American Canal Bridge

July 18, 2023

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M e m o r a n d u m

Making Conservation.
a California Way of Life.

To: Emery L. McCaffery
Associate Environmental Planner
District 11 Project Analysis, Branch C

Date: July 18, 2023

File:Site 11-IMP-186
1120000096
EA 43108
PM IMP/186/0.5-2.0

From: MARLENE GROS
Landscape Associate
District 11 Visual Analysis, Environmental Division

Subject: **Realign SR 186 & Construct All-American Canal Bridge – VISUAL STUDY**

PURPOSE

The purpose of this study is to assess the visual impacts of the proposed SR 186 realignment & new bridge construction over the All-American Canal and to propose measures to reduce any associated adverse visual impacts.

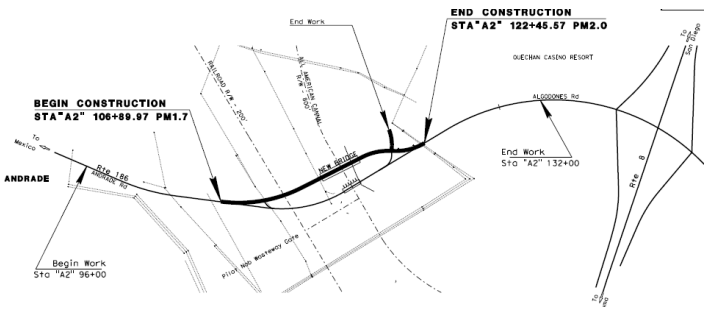
PROJECT LOCATION

The proposed project is located on State Route 186 (SR-186) from PM 0.5 to PM 2.0 in Imperial County. SR-186 is in the eastern portion of Imperial County and operates as a two-lane conventional highway. Predominantly traveling in a north/south direction for over two miles, the route is located mostly on an easement within Quechan tribal land in the Fort Yuma Indian Reservation and provides access to the Andrade Port of Entry (POE) for vehicles travelling to and from Mexico.

PROJECT DESCRIPTION

This non-capacity increasing project proposes to realign a portion of State Route 186 (SR 186) and construct a new bridge over the All-American Canal. The new bridge will improve safety and better facilitate international and interregional movement of people, goods, and services.

The project will involve new alignment, road realignment, bridge work, road cut/fill, AC grinding, construct access roads, equipment staging areas, railroad coordination, temporary easements, utility relocation, ground disturbance and pile driving.



"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability"

PROPOSED PROJECT FEATURES

Roadway

- Construct a segment of SR-186 (Algodones Road) with one 12' lane in each direction with 8' shoulders and a 3' hinge. Construct a connector to the existing SR-186 roadway (frontage road to existing bridge). The connector would have one 12' lane in each direction with 2' shoulders and a 3' hinge.
- Relocate utility poles.
- Two Staging Areas are proposed.

Bridge

The new bridge would be approximately 300' long and would:

- span the entire width of the Canal without any supports in the Canal.
- provide a 30-foot horizontal clearance between the Canal inside crown and the pile bents and provide a minimum vertical clearance of 16-feet 6-inches at the operations and maintenance (O&M)
- may drive piles to build bridge abutments at beginning and end of bridge.

EXISTING VISUAL RESOURCES

SR-186 is a two-lane conventional highway in a rural desert landscape that connects interstate 8 with the international border. Approximately half a mile south of Interstate 8 (I-8), SR-186 crosses the All-American Canal, which is an 80-mile gravity fed aqueduct constructed in the 1930's. The existing All-American Canal Bridge has views to the canal due to the open bridge railing design. Views to water are unusual in the desert and the crossing is memorable.



EXISTING VIEWER GROUPS, EXPOSURE AND SENSITIVITY

Affected viewers of the proposed realignment and bridge are primarily motorists on the highway traveling at moderate to high speeds. Motorists have a high viewer exposure and awareness due to the number of motorists and proximity to the project features. The existing and proposed SR 186 alignments are entirely within the Quechan/Fort Yuma Reservation, home of the Quechan (pronounced Kwatsáan) Indians. This roadway is used more in the cooler months of November to March to access the Paradise Casino in Yuma, AZ, and Quechan Casino Resort. Bicyclists are allowed on SR-186 and use the existing bridge to cross the All-American Canal. Pedestrians are not permitted on the bridge due to lack of shoulders and mechanical equipment on the check structure operating platform.

CHANGE TO VISUAL QUALITY/CHARACTER

The project would change the visual landscape by creating new views for roadway travelers. The new bridge would be constructed west of the existing All-American Canal Bridge and offer views to the existing bridge and the check structures in the foreground. The new bridge would also be visible from the existing bridge.



View of the existing bridge and check structures

The proposed SR-186 alignment will require removal of some roadside desert vegetation as shown below.



View from NB SR-186 approaching the existing bridge and check structures

VISUAL IMPACT ASSESSMENT

The new bridge, additional roadway, and removal of roadside vegetation would further shift the character of the site to be transportation oriented due to the increased paving, additional guardrail, end treatments and signage. The loss of roadside vegetation would further change the character of the site. The new bridge would benefit users by providing open views to the canal from both directions.

Due to the quantity of viewers experiencing the project, the viewer exposure is considered high. Viewer sensitivity and response to the anticipated visual change would be low. Collectively, the 'low' change in visual resources combined with the 'low' viewer response to changes indicates the Project will cause a 'low' visual impact with the inclusion of impact avoidance measures.

IMPACT AVOIDANCE MEASURES (ENVIRONMENTAL COMMITMENTS)

There would be no substantial visual impacts to the project locations and surrounding areas with the inclusion of the following avoidance measures:

- Bridge rails would be "see-through" to maximize views to the water.
- The visually preferred bridge rail is concrete barrier Type 85. The concrete would be integrally colored tan to blend with the native soils.
- Bridge anchor blocks and other concrete features would be integrally colored to match the bridge rail color.
- Bridge rail height would meet height requirements for bicycle users.
- Trucks and equipment shall be confined to previously disturbed areas to the extent possible.
- Avoid tree and vegetation removal if possible.
- Collect duff prior to clearing and grubbing vegetated areas. Duff must consist of vegetation removed and collected from clearing and grubbing activities. Vegetation may include trees, shrubs, ground cover, grasses, bark, leaves, and roots with attached soil. Collect and stockpile duff and 0.5' of topsoil. Spread duff over finished graded areas and track walk.
- Protect vegetation outside of the work area by prohibiting staging areas, material storage, parking, and construction access in vegetated areas.
- BMPs such as fiber rolls, felt fiber fabric, gravel bags (if used) must be made of biodegradable materials. (No plastic).

Environmental Technical Report B15

VMT Decision Statement

December 18, 2024

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VMT DECISION STATEMENT

43108 BRIDGE OVER ALL AMERICAN CANAL

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STATEMENT: Vehicle Miles Traveled (VMT) Analysis is Not Required for the 43108 - Bridge Over the All-American Canal Project, as it Meets the Screening Criteria for a Project "Not Likely to Lead to a Measurable and Substantial Increase in VMT" pursuant to Section 5.1.1 of the Transportation Analysis Under CEQA.

The Transportation Analysis Framework (TAF) and Transportation Analysis under CEQA (TAC) guide transportation impact analysis for projects on the State Highway System as part of the CEQA process. Caltrans has prepared these documents to guide implementation of SB 743. The TAF and TAC establish Caltrans guidance on how to analyze induced travel associated with transportation projects and how to determine impact significance under CEQA, respectively. The TAC requires analysis for induced travel caused by transportation projects, as measured in VMT, as a negative transportation impact under CEQA, and seeks to minimize that impact.

Caltrans has developed a review process that screens out certain types of projects *not likely to lead to measurable and substantial increase in VMT*. These projects may be "screened" from preparing an induced travel analysis.

The Caltrans District 11 Environmental Division determined that the type of work being proposed in this project meets the screening criteria of project types that are not likely to lead to a measurable and substantial increase in vehicle travel pursuant to Section 5.1.1 of the TAC. Section 5.1.1 of the TAC provides a list of projects that meet the VMT screening criteria and are therefore not required to undergo VMT analysis. This list of screened project types comes directly from the OPR Technical Advisory on Evaluating Transportation Impacts in CEQA. See the following:

ii) Project Types Not Likely to Lead to a Measurable and Substantial Increase in Vehicle Travel

"Rehabilitation, maintenance, replacement, safety, and repair projects designed to improve the condition of existing transportation assets (e.g., highways; roadways; bridges; culverts; Transportation Management System field elements such as cameras, message signs, detection, or signals; tunnels; transit systems; and assets that serve bicycle and pedestrian facilities) and that do not add additional motor vehicle capacity."

The proposed project would not increase capacity on the highway system, and it qualifies as a *Project Type Not Likely to Lead to a Measurable and Substantial Increase in Vehicle Travel*. Caltrans proposes to build a new bridge (replacement bridge) adjacent to the existing bridge. The travelling public would no longer have access to the retired bridge. The lane configuration of the new bridge is the same as the existing bridge, two-lanes in each direction. The new bridge structure will not be wider, to allow for future lanes. The approach roads will be realigned to meet the new bridge with the same number of lanes. Therefore, this is effectively a bridge replacement project and highway realignment to provide access to the new bridge with no increase in roadway capacity.

Additionally, an in-house modeling exercise was conducted, with the results indicating that the project would not cause a *significant transportation impact and would not be supported by substantial evidence*, *as defined in CEQA Guidelines §15384, with enough relevant information and reasonable inferences that a fair argument could be made to support a significance conclusion*.

ADOPTION: After circulation and consideration of the information in this statement, the Project Development Team (PDT) for this project adopted the decision on December 18, 2024.

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Environmental Technical Report B16

Historic Property Survey Report

August 21, 2024

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The Historic Property Survey Report (HPSR) contains confidential information and requires the following:

1. Viewing only by professionally qualified cultural resources specialists.

2. Viewing only after receipt of formal permission granted by the Quechan Indian Tribe.

Please contact the Caltrans Project Manager for any further inquiries.

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Environmental Technical Report B17

Finding of No Adverse Effect

September 23, 2024

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State of California • Natural Resources Agency
Gavin Newsom, *Governor*

DEPARTMENT OF PARKS AND RECREATION
OFFICE OF HISTORIC PRESERVATION
Armando Quintero, *Director*

Julianne Polanco, State Historic Preservation Officer
1725 23rd Street, Suite 100, Sacramento, CA 95816-7100
Telephone: (916) 445-7000 FAX: (916) 445-7053
calshpo.ohp@parks.ca.gov www.ohp.parks.ca.gov

September 23, 2024

VIA EMAIL

In reply refer to: FHWA_2024_0823_002

Ms. Julia Huddleson, Office Chief, Acting
Cultural Studies Office
Caltrans Division of Environmental Analysis
PO Box 942874
Sacramento, CA 94274

Subject: Finding of Effect for the Proposed State Route 186 Realignment Project, Imperial County, CA

Dear Ms. Huddleson:

Caltrans, as assigned by the Federal Highway Administration, is initiating consultation regarding the above project in accordance with Section 106 of the National Historic Preservation Act and implementing regulations codified at 36 CFR Part 800. As part of your documentation, Caltrans submitted a Historic Property Survey Report, an Archaeological Survey Report, and a Finding of Effect/Environmentally Sensitive Areas Implementation Action Plan for the proposed project.

Caltrans proposes to realign a portion of SR-186 over the All-American Canal to the west by constructing a new bridge. The existing bridge (weir) will remain in place and the easement over the existing roadway held by Caltrans will be vacated.

Caltrans identified the following seven potential historic properties within the APE:

- All-American Canal
- Inter-California Railroad
- DOT-KT-01
- DOT-KT-02
- DOT-KT-03
- DOT-KT-04
- Commemorative monument for the Hernando de Alarcon Expedition of 1540 (CHL #568)

The All-American Canal and Inter-California Railroad were previously determined eligible for the National Register of Historic Places (NRHP). The rest of the resources listed above were assumed eligible for the NRHP for the purposes of the current

undertaking only. As such, all identified resources under the current Project will be considered a historic property under 36 CFR Part 800.

Caltrans applied the criteria of adverse effect pursuant to 36 CFR Part 800.5 and found that the project will have no adverse effect on historic properties given the following conditions:

- Locations of five cultural resources within the area of potential effects (APE) (DOT-KT-01, -02, -3, -4, and Alarcón monument) will be designated as an Environmentally Sensitive Area (ESA). The ESA locations will be depicted on the project plans.
- Temporary scaffolding will be used on the All-American Canal. The scaffolding will be “removable and reversible” following the Secretary of the Interior’s Standards for the Rehabilitation of Historic Properties (SOIS)and will avoid impacts to the canal’s apron.
- ESA and SOIS conditions/measures will be incorporated into the Environmental Commitment Record and will be part of the Resident Engineer’s (RE) pending file.
- The locations of the ESA will be field verified and staked on the ground prior to construction.
- At a preconstruction meeting, the Contractors will be notified of the presence of cultural resource conditions, such as an ESA and the SOIS.
- The RE will inform the Cultural Resource Specialist of construction start date.
- A pre-construction field visit will be conducted to document the existing conditions.
- ESA fence will be installed at least one week prior to the start of construction.
- At least one field visit will be conducted to ensure the appropriateness of the ESA/SOIS implementation during construction.
- Any repairs needed to the All-American Canal will be in-kind replacement, following the SOIS, and in coordination with the Bureau of Reclamation and/or Imperial Irrigation District.
- Construction activities will be monitored, as necessary.
- The Environmental Construction Liaison will notify the Cultural Resource Specialist when construction is completed. ESA fence will be removed.
- A Construction Monitoring Report will be prepared based on the monitoring activities after construction is completed.

Based on review of the submitted documentation, the SHPO has the following comments:

1. The APE as currently delineated appears appropriate.
2. Caltrans’ effort to identify historic properties within the APE appears adequate.
3. The SHPO does not object to Caltrans’ finding of no adverse effect for the undertaking given the above conditions.

If you have any questions, please contact Natalie Lindquist at natalie.lindquist@parks.ca.gov .

Sincerely,

Julianne Polanco
State Historic Preservation Officer

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Appendix D List of Acronyms and Abbreviations

A	absent
AAC	All-American Canal
AB 52	Assembly Bill 52
ACHP	Advisory Council on Historic Preservation
ADA	Americans with Disabilities Act
ADL	Aerially deposited lead
ARB	Air Resources Board
AQTF	Air Quality Task Force
BAU	business-as-usual
BMPs	Best Management Practices
BOR	U.S. Bureau of Reclamation
BSA	Biological Study Area
CAA	Federal Clean Air Act
CAFE	Corporate Average Fuel Economy
CAL FIRE	California Department of Forestry and Fire Protection
CalEPA	California Environmental Protection Agency
Caltrans	California Department of Transportation
CAPTI	California Action Plan for Transportation Infrastructure
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCV	Comite Civico del Valle
CDFW	California Department of Fish and Wildlife
CEQ	Council on Environmental Quality

CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CERFA	Community Environmental Response Facilitation Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CH	Critical habitat
CHP	California Highway Patrol
CNPS	California Native Plant Society
C_O	carbon monoxide
Connect SoCal	SCAG's 2020 – 2045 Regional Transportation Plan/Sustainable Communities Strategy
County	Imperial County
CRHR	California Register of Historical Resources
CTCs	County Transportation Commissions
CTIPS	California Transportation Improvement Program System
CTP	California Transportation Plan
CWA	Clean Water Act
D11	Caltrans District 11 (San Diego County and Imperial County)
dBA	Noise level is measured in decibels
Department	California Department of Transportation
DFG	California Department of Fish and Game
DMA	Federal Disaster Mitigation Act of 2000
DP-30	Caltrans Director's Policy 30
DSA	Disturbed Soil Area
EJ	Environmental Justice

EO	Executive Order
EPA	Environmental Protection Agency
EQ Zapp	California Earthquake Hazards Zone Application
ESA	Endangered Species Act
ESA	environmentally sensitive area
FAST Act	Fixing America's Surface Transportation Act
FC	Federal Candidate
FCAA	Federal Clean Air Act
FE	Federal Endangered
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FIRFA	Federal Insecticide, Fungicide, and Rodenticide Act
FONSI	Finding of No Significant Impact
FP	Fully Protected
FP, FPE, FPT	Federal Proposed
FSC	Federal Species of Concern
FT	Federal Threatened
FTIP	Federal Transportation Improvement Program
FY	fiscal year
GHG	greenhouse gas
H&	Health and Safety Code
H_2S	hydrogen sulfide
HCP	Habitat Conservation Plan
HFCs	hydrofluorocarbons

HP	habitat present
I-8	Interstate 8
ICAPCD	Imperial County Air Pollution Control
ICTC	Imperial County Transportation Commission
IID	Imperial Irrigation District
IMP	Imperial County
Lbs	pounds
LEDPA	least environmentally damaging practicable alternative
MHMP	Multi-Jurisdictional Hazard Mitigation Plan
MLC	Mineral Land Classification
MMT	million metric tons
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization
MS4s	municipal separate storm sewer systems
MTCO2e	metric ton of carbon dioxide equivalent
MTS	Mountain time zone
N_2O	nitrous oxide
NAAQS	national ambient air quality standards
NAAQS	National Ambient Air Quality Standards
NAC	noise abatement criteria
NCCP	Natural Community Conservation Plan
NEPA	National Environmental Policy Act
NESMI	Natural Environment Study (Minimal Impacts)
NHPA	National Historic Preservation Act
NO_2	Nitrogen Dioxide

NOAA Fisheries	NOAA's Fisheries Services
NOAA	National Oceanic and Atmospheric Administration
NOx	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NW	northwest
O_3	Ozone
OEHHA	Office of Environmental Health Hazard Assessment
OHWM	ordinary high water mark
OSHA	Occupational Safety and Health Act
P	present
PA	Programmatic Agreement
PA&ED	Caltrans' Project Approval & Environmental Document stage
PAC 3	PDF Accessibility Checker 3
Pb	lead
PEIR	Programmatic Environmental Impact Report
Pilot Program	Surface Transportation Project Delivery Pilot Program
PLACs	permits, licenses, agreements, and certifications
PM	postmile
PM_{10}	particles that are 10 microns or less in diameter
$PM_{2.5}$	particles that are 2.5 microns or less in diameter
POE	Andrade Port of Entry
PRC	California Public Resources Code
Project	All-American Canal Bridge Replacement Project
PSI	per square inch

Qal	Alluvium
QC	Older Alluvium
RCRA	Resource Conservation and Recovery Act
Regional CAP	Imperial Valley Regional Climate Action Plan
ROG	reactive organic gases
RTP/SCS Strategy	Regional Transportation Plan and Sustainable Communities
RTPs/MTPs	Regional/Metropolitan Transportation Plans
RWQCB	Regional Water Quality Control Board
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCS	Soil Conservation Service
SDC	Seismic Design Criteria
SDCWA	San Diego County Water Authority
SE	State Endangered
SER	Standard Environmental Reference
SHOPP	The Office of State Highway Operations and Protection Program
SHPO	California State Historic Preservation Officer
SHS	State Highway System
SIP	State Implementation Plan
SO_2	sulfur dioxide
SPGR	Structure Preliminary Geotechnical Report
SR 186	State Route 186

SR	State Rare
SSC	State Species of Special Concern
ST	State Threatened
STBG	Surface Transportation Block Grant Program
SWMP	Storm Water Management Plan
SWPPPs	Storm Water Pollution Prevention Plans
SWRCB	State Water Resources Control Board
TDM	Transportation Demand Management
TMDLs	Total Maximum Daily Loads
TMP	Transportation Management Plan
TOC	Table of Contents
TPZs	Timberland Production Zones
TSCA	Toxic Substances Control Act
TSM	Transportation System Management
U.S. EPA	U.S. Environmental Protection Agency
U.S.	United States
USACE	U.S. Army Corps of Engineers
USC	United States Code
USDOT	United States Department of Transportation
USFWS	U.S. Fish and Wildlife Service
USGS	United States Geological Survey
VHFSZ	Very High Fire Severity Zone
VMT	vehicle miles traveled
VRP	Visibility Reducing Particles
WDRs	Water Discharge Requirements

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Appendix E List of Preparers

Agencies

Caltrans

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Ary Jaff, Design Engineer

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Michelle Madigan, Cultural Resource Studies/Built Environment

Koji Tsunoda, Cultural Resource Studies

Brent Berge, Environmental Engineering: Air Quality, Hazardous Waste, Noise and Vibrations

Brian Yamashiro, Transportation Engineer

Adam Avakian, Engineer Geologist

Michael Galloway, Biologist, Ecological Studies

Pauline Lamphere, Permit Specialist

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Kimberly Dodson, Acting Travel Forecasting/Modeling/LDR Branch Chief

Nancy Song, Student Assistant LDR

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Gwendolyn Denny, Right of Way Railroad Coordinator

Grace Ann Budomo, Right of Way Utility Relocations

Abu-Bkr Al-Jafri, Utilities Engineering

Grecia Meza, Utilities Engineering

Rafael Reyes, Native American Liaison (Acting)

Michael Hank, Land Surveys Division Chief

Ned Salman, Field Surveys Branch Chief

Dave Olander, Surveys Office Branch Chief

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Richard Covey, Right of Way Engineering

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Ahmed Elsadek Manhy, Senior Bridge Specialist

Mohammad Abbasi, Bridge Design

Dawit Worku Bridge, Design Branch Chief

Khondokar Karim, Project Liaison Engineer

Adrian Cortez, Senior Bridge Engineer (Specialist)

Fred Dastmalchi, Structure Hydraulics and Hydrology Branch

Ali Hashemi, Bridge Design

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