

Project / Submission Name* (42/300 characters)

Baker Boulevard Bridge Replacement Project

Section 1. Applicant Information

Contact Information (primary)*

Jeremy

Johnson

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Nominating Agency Name* (46/50 characters)

San Bernardino County Transportation Authority

Nominating Agency Type* (choose from list)

Nominating Agency Information*

Country: United States

Address: 1170 W. 3rd Street, 2nd Floor

City: San Bernardino

State, Province, or Region: California

Zip or Postal Code: 92410

Implementing Agency Information*

Country: United States

Address: 825 E 3rd Street, RM143

City: San Bernardino

State, Province, or Region: California

Zip or Postal Code: 92415

[UPLOAD] Nominating and Implementing Agency Agreement

Section 2. General Overview

Is the nominated project included within the Caltrans SCRIPT unconstrained project priority list?*

The Local Transportation Climate Adaptation Program requires a 20% non-federal match.

The non-federal share for the second cycle is reduced by 3 percentage points due to the Caltrans State Climate Resiliency Improvement Plan for Transportation (SCRIPT) integration into the California Transportation Plan (C.T.P.) 2050 by addendum.

The non-federal share may be reduced by an additional 7 percentage points if, prior to nomination, the project is included in the Caltrans SCRIPT unconstrained project priority list.

The non-federal share may not be reduced by more than 10 percentage points.

The Commission will prioritize nominations that are included in the Caltrans State Climate Resiliency Improvement Plan for Transportation (SCRIPT) unconstrained project priority list.

Yes

No

[UPLOAD] Cover Letter*

[UPLOAD] Fact Sheet*

Total LTCAP Funding Request* (Number only)

Input the requested amount in whole thousands (e.g. \$3,980,000).

\$13,000,000

Project Type* (selection)

A. Resilience Improvements that improve the ability of an existing surface transportation asset to withstand one or more elements of a weather event or natural disaster, or to increase the resilience of surface transportation infrastructure from the impacts of changing conditions, such as sea level rise, flooding, wildfires, extreme weather events, and other natural disasters [23 United States Code 176(d)(4)(A)].

B. Community Resilience and Evacuation Route activities that strengthen and protect evacuation routes that are essential for providing and supporting evacuations caused by emergency events, including: resilience improvements if they will improve evacuation routes, and projects to ensure the ability of the evacuation routes to provide safe passage during an evacuation and reduce the risk of damage to evacuation routes as a result of future emergency events [23 United States Code 176(d)(4)(B)].

- Applicants must notify the Secretary of the United States Department of Transportation prior to applying to the Local Transportation Climate Adaptation Program for the construction of new or redundant evacuation routes or for the installation of communications and intelligent transportation system equipment and infrastructure, counterflow measures, or shoulders. [23 United States Code 176(d)(4)(B)(III) and (IV)].

C. At-Risk Coastal Infrastructure activities that strengthen, stabilize, harden, elevate, relocate or otherwise enhance the resilience of highway and non-rail infrastructure, including: bridges, roads, pedestrian walkways, and bicycle lanes, and associated infrastructure, such as culverts and tide gates to protect highways that are subject to, current or long-term future risks from a weather event, a natural disaster, or changing conditions, including coastal

flooding, coastal erosion, wave action, storm surge, or sea level rise, in order to improve transportation and public safety or reduce costs by avoiding larger future maintenance or rebuilding costs [23 United States Code 176(d)(4)(C)]. Port facilities and public transportation facilities are also eligible non-rail infrastructure [23 United States Code. 176(c)(3)(B)].

System Resilience Elements*

Projects carried out with PROTECT Formula Program funds may seek funding for natural infrastructure or the construction or modification of storm surge, flood protection, or aquatic ecosystem elements that are functionally connected to an eligible transportation improvement project.

Yes, this project incorporates resilience elements.

No, this project does not incorporate resilience elements.

Project Priority* (number only)

Applicants submitting multiple project nominations must clearly prioritize its project nominations. The Commission may elect to only evaluate the highest priority project nomination submitted by each applicant.

For nominating agencies submitting a single project nomination, please select the highest priority (5)

4

Project Overview* (739/750 words)

Include a brief, one to three paragraph, non-technical description of the project, total project cost and requested amount. If the project includes multiple project modes, each project mode must be described.

The County of San Bernardino, in collaboration with the California Department of Transportation (Caltrans), is undertaking a critical infrastructure project to replace the existing two-lane timber bridge on Baker Boulevard with a new four-lane concrete structure. This bridge, located near the unincorporated community of Baker in San Bernardino County, California, crosses the Mojave River and serves as a vital transportation link for the region. The project aims to enhance safety, improve traffic flow, and ensure long-term resilience against natural hazards.

The new bridge will feature a modern design with improved structural integrity, making it more resilient to flooding and other environmental threats. This upgrade is essential to accommodate the increasing traffic volumes and ensure safety and efficiency of the roadway.

INCREASING CLIMATE RESILIENCE:

Climate resilience is a central focus of the Baker Boulevard Bridge Replacement Project. The existing timber bridge is vulnerable to flooding, which has become more frequent and severe due to changing climate patterns. By replacing the timber structure with a reinforced concrete bridge, the project will significantly enhance the resilience of this critical transportation link. The new design includes features to withstand catastrophic floods and potential wildfires, ensuring that the bridge remains operational during extreme weather events.

The project also addresses climate change impacts by incorporating sustainable design elements. The concrete structure will reduce the need for frequent repairs, thereby decreasing the overall carbon footprint associated with the bridge. Additionally, the improved drainage system will help manage stormwater more effectively, reducing the risk of flooding and associated damage.

PROTECTING AT-RISK TRANSPORTATION AND INFRASTRUCTURE:

The Baker Bridge is a crucial part of the local transportation network, connecting residents and travelers to essential services and destinations. The current bridge's deteriorated condition poses significant risks to public safety and disrupts the flow of traffic. The new four-lane concrete bridge will provide a reliable and safe passage for all users, including pedestrians and cyclists.

This project is not just about replacing an old bridge; it's about ensuring the continuity of a vital transportation corridor. The upgraded bridge will support the economic vitality of the region by facilitating the movement of goods and people. It will also enhance access to key locations, including the world's tallest thermometer, local businesses, and tourist attractions, thereby supporting the local economy and improving the quality of life for residents.

POSITIVE IMPACT ON UNDERREPRESENTED COMMUNITIES:

The Baker Boulevard Bridge Replacement Project will have a significant positive impact on underrepresented and disadvantaged communities in the region. The existing bridge's frequent flooding and structural issues disproportionately affect these communities, hindering their access to essential services and economic opportunities.

By providing a reliable and resilient transportation link, the project will ensure that all community members have equal access to jobs, education, healthcare, and other vital resources.

Improved infrastructure will also promote social equity by reducing travel times and transportation costs for residents in rural and underserved areas. The new bridge will enhance connectivity, making it easier for people to commute to work, school, and other daily activities.

Additionally, the new bridge will significantly improve the safety of pedestrians who frequently utilize this bridge to access the rest of their community. By being able to utilize a dedicated walkway, non-motorized users will be ensured safe passage alongside this major highway. This project aligns with broader goals of environmental justice and transportation equity, ensuring that the benefits of modern infrastructure reach all segments of the population.

PROJECT COST AND REQUESTED AMOUNT:

The total estimated construction cost for the Baker Boulevard Bridge Replacement Project is \$28 million, scheduled for fiscal year 2025/26. This estimate covers the construction phase and does not include planning, design, environmental assessments, right-of-way acquisitions, or potential regulatory mitigation costs.

Currently, the project has secured funding from the San Bernardino County Transportation Authority (SBCTA) Measure I Major Local Highway Projects (MLHP) funds amounting to \$5.4 million and Surface Transportation Program (STP) funds totaling \$9.6 million. However, there remains a funding shortfall of approximately \$13 million, which is critical to bringing the project to fruition. This shortfall accounts for escalation costs and the overall project construction expenses.

To bridge this gap, additional funding is being sought to ensure that the project can proceed without delays and meet its targeted completion timeline. The requested amount will cover the remaining costs and enable the project team to move forward with construction, thereby delivering a safer, more resilient, and efficient bridge for the community of Baker and its surrounding areas.

Project Background* (825/1200 words)

HISTORY:

The existing bridge on Baker Boulevard, formerly known as State Route 31, was originally constructed in 1931. It was built as a 93-foot, five-span, simple-supported stringer timber bridge crossing the Mojave River. In response to the 1938 flood event, significant repairs and extensions were made to the bridge. The repairs included replacing all untreated Douglas Fir timber with Redwood, and adding nine new spans to the west and eight to the east, extending the bridge to an overall length of approximately 408 feet. Additionally, the channel below was excavated to maintain a minimum clearance of six feet below the bottom stringer (soffit) of the bridge.

Presently, the bridge stands as a 22-span simple-supported stringer timber bridge with a five to six-inch thick continuous cast-in-place reinforced concrete deck overlain with asphalt concrete. The bridge features closed-end reinforced concrete struttled abutments supported on Coastal Douglas Fir timber piles.

CONTEXT:

Baker Boulevard is classified as a Major Highway, with an Average Daily Traffic (ADT) of 9,559 vehicles, measured in 2022, and an expected future ADT of 15,074 by 2045. Trucks comprise 30% of the total vehicle traffic. The bridge is located within the unincorporated community of Baker in San Bernardino County, a designated Disadvantaged Community (DAC) approximately 600 feet southwest of SR-127 along Baker Boulevard. The original 90-foot long bridge constructed in 1931 was rehabilitated and lengthened in 1939 following a significant flood event. The current structure is a 408-foot long, 28-foot 10-inch wide, 22-span timber bridge with a reinforced concrete deck

and asphalt overlay. Both abutments have concrete backwalls behind timber columns with concrete caps supporting the timber stringers.

Baker is a crucial rest stop and fuel station for travelers and lies adjacent to Interstate 15 (I-15) which serves as the main artery for those traveling from Southern California en route to Las Vegas, Nevada. It is the last town until reaching the California state line, which is approximately 60 miles through the Mojave Desert. The community is home to an elementary school, junior high, high school, and an airport. The main economy is tourism with popular attractions such as the world's tallest thermometer, the Alien Fresh Jerky store, the Mad Greek restaurant and a new Tesla charging station. Baker Boulevard is an alternate route to I-15, especially when the main highway experiences closures and other traffic issues. Although not currently identified as a terminal access route for Surface Transportation Assistance Act (STAA) trucks, it is utilized as such, providing access to food, fuel, lodging, and repair services.

The bridge's timber piles, abutments, and retaining wall system are vulnerable to flooding and fire. Historically, fire tanks or barrels filled with sand were used to protect the structure from fire, but these protections are no longer in place. The 1938 storm nearly washed out the original bridge, necessitating its lengthening and the excavation of the channel below to ensure a minimum vertical clearance of six feet against future storm events.

The current bridge has a plywood sidewalk, measuring only two-feet wide, placed on top of the vehicular wheel guard, which pedestrians use to cross. However, many pedestrians walk within the travel lane due to the lack of an accessible footpath, highlighting the need for improved pedestrian safety facilities. The bridge is located near the Mojave National Preserve, between two dry lakes—Silver Lake downstream and Soda Lake upstream. These lakes, remnants of the greater Lake Mojave from 10,000 years ago, are fed by the Mojave River, which acts as the main tributary for storm runoff in the region. When Soda Lake fills, water travels downstream to Silver Lake, causing both lakes to rise under the bridge. The presence of vegetation around the bridge indicates high groundwater levels.

PURPOSE:

The primary purpose of the project is to replace and widen the existing Baker Boulevard bridge over the Mojave River from two lanes to four lanes. This capacity increase is necessary to accommodate the projected rise in traffic, ensuring the infrastructure meets future transportation demands. Additionally, the project aims to enhance the safety and resilience of the bridge, protecting it against flooding and fire hazards.

NEED:

The existing Baker Boulevard bridge is well beyond its lifespan, having been constructed in 1931 and only minimally repaired and extended since then. The timber structure, despite its historical significance, is now significantly degraded, with increasing maintenance requirements and vulnerability to natural hazards. The timber piles, abutments, and retaining wall system are particularly susceptible to flooding and fire, compromising the structural integrity and safety of the bridge.

The two ditches over which the bridge is constructed—Soda Lake upstream and Silver Lake downstream—are flooding with increasing frequency due to changing climate patterns and extreme weather events. This frequent flooding exacerbates the deterioration of the bridge and poses significant challenges for the local community, including safety hazards, economic impact, and community access.

Therefore, the replacement and widening of the Baker Boulevard bridge over the Mojave River is a critical infrastructure project that addresses current deficiencies and prepares for future needs. As a result, this project will significantly enhance traffic capacity, safety, and resilience. It will also provide economic benefits to the community of Baker and ensure the preservation of an essential transportation link. By addressing these needs, the project will contribute to a well-planned, balanced, and sustainable transportation network in San Bernardino County.

Project Scope* (2129/2500 words)

A concise description of the project, scope, and anticipated benefits (outcomes and outputs) proposed for funding, including type of infrastructure (e.g., road, transit, active transportation, parking structure, natural infrastructure, etc.) and improvements to be made (e.g., construction, maintenance, relocation, elevation, etc.). **Outputs listed here must be consistent with the outputs submitted in the electronic Project Programming Request form.**

PROJECT AND SCOPE

San Bernardino County proposes to replace the existing two-lane Baker Boulevard Bridge (Bridge No. 54C-0127) over the Mojave River with a new four-lane bridge structure. This project is designed to meet the County's policy for a Major Arterial Highway, aiming to improve safety and operational efficiency along this critical transportation route. Key stakeholders include the County, the County Flood Control District, Caltrans, and the Baker Community Service District. The existing bridge will be replaced with a four-lane, ten-span cast-in-place reinforced concrete slab structure, supported by seat-type abutments and pile extensions. The bridge deck will measure approximately 405 feet in length and 94.3 feet in width.

Per County Road Planning and Design Standards, design speed for a Major Highway in the desert on flat terrain is 60 mph. However, the proposed bridge lies within an established speed zone of 35 mph that takes into consideration Baker Community Services District's request, adjoining residential and commercial businesses on both sides along with projected growth and increase in traffic volume. See Attachment H for SBC Board Resolution 2001-125. Baker Boulevard is not currently designated as a STAA truck route, but there is potential for future designation given the high truck utilization along the route and proximity to Interstate 15 and Highway 127 which is a designated STAA Terminal Access Route. Baker Boulevard is primarily used by trucks and residents to access food, fuel, lodging, and repair services. The 2022 ADT for the bridge is 9,559 vehicles per day and the 2045 projected ADT is 15,074 vehicles per day with 30% truck traffic.

TYPE OF INFRASTRUCTURE:

The recommended structure type is a CIP-R/C slab based on the low construction cost, low maintenance, and ease of construction. The recommended bridge is 10 spans with a total length of 405'-0" and span lengths of 40'-6". The total width pending selection of combination vehicular barrier and pedestrian railing with sidewalks on the bridge is 96'-4" with four 12'-0" lanes, 12'-0" median, 10'-0" shoulders, and installation of either Caltrans Standard Plan Type 732SW or 85SW barriers. Combination vehicular barrier and pedestrian railings with sidewalks along with the inclusion of tubular hand railing to satisfy bicycle railing height requirements is recommended given established speed zone encompassing the bridge is 35 mph; compliance with MASH (Manual for Assessing Safety Hardware) TL-2 testing levels for cars and trucks having speeds at 44 mph, and California State Department of Transportation, Caltrans, approval of these standards for posted speeds up to 45 mph - ref.: Caltrans 2023 Highway Design Manual Section 208.10 Bridge Barrier and Railings. The bridge deck/structure will be 1'-8" deep based on a minimum depth to span ratio of 0.040.

Both abutment 1 and 2 will be diaphragm type abutments on driven pile foundations. The piers will be Pre-cast/Pre-stressed (PC/PS) pile extensions. A General Plan for the recommended structure type can be found in Attachment A. A cast-in-place superstructure was selected as the project location is within 90 minutes of several concrete suppliers in Barstow, CA and Las Vegas, NV (Robertsons Ready Mix and Sierra Ready Mix).

IMPROVEMENTS TO BE MADE:

A Type Selection Report was completed by the County to obtain consensus for the recommended structure type, span configuration, typical section and vertical profile. Dokken Engineering recommends a **405-ft, 10-span cast-in-place reinforced slab bridge founded on driven precast pile extensions.**

The project will involve several key improvements:

1. Construction: A new ten-span cast-in-place reinforced concrete slab bridge will replace the existing timber bridge. This includes constructing new seat-type abutments and pile extensions to support the new structure.
2. Design Adjustments: The bridge will feature a vertical profile with a high point at the center, facilitating positive surface drainage. AASHTO's A Policy of Geometric Design of Highways and Streets and San Bernardino County standards are being used for the design of the roadway approaches.
3. Pedestrian and Bicycle Facilities: The new bridge will include improved pedestrian pathways and sidewalks, increasing the safety for non-motorized users. Tubular hand railings will be installed to meet bicycle railing height requirements.
4. Environmental and Hydraulic Considerations: A Draft Hydrology, Hydraulics and Scour Analysis Report was completed to determine the anticipated flow and water surface elevation for the Q₁₀₀ storm event to design the replacement bridge to meet FHWA hydraulic conveyance recommended guidelines.

5. Flood Control Access: The project includes constructing a ramp downstream of the bridge along the eastern levee for channel maintenance and bridge inspection by the County Flood Control District.

6. Right-of-Way Acquisitions: Temporary construction easements will be secured in adjacent privately owned parcels and County Flood Control District property to facilitate construction activities.

PA&ED and PS&E are funded through San Bernardino County Transportation Authority (SBCTA) Measure I Major Local Highway Projects (MLHP) funds. Construction will be funded using a combination of MLHP, and Surface Transportation Program (STP) and alternate funds yet to be determined.

Additionally, to facilitate construction, temporary construction easements are needed outside existing County right-of-way in adjacent privately owned parcels located upstream of the bridge and within County Flood Control District property downstream.

The estimated base construction cost is \$17 million. Adding contingencies, construction management and escalation yields a total estimated 2026 construction cost of approximately \$28 million. Funding identified to be allocated for construction using MLHP and STP funds is currently set at \$15 million. STP Construction funds are programmed for FY 25/26 requiring the project to be advertised for construction prior to the end of 2025.

SCHEDULE:

The project schedule is designed to ensure that the replacement and widening of the Baker Boulevard Bridge is completed in a timely and efficient manner, aligning with funding timelines and stakeholder requirements. The critical milestones and deadlines for the project are as follows:

Environmental Document: Completion of the environmental document is scheduled for July 2025. This milestone involves conducting thorough environmental assessments to identify potential impacts and mitigation measures, ensuring compliance with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA).

Environmental Permitting: Securing the necessary environmental permits will be completed by November 2025. This step includes obtaining approvals from relevant regulatory agencies to proceed with construction activities without adverse environmental impacts.

Final Design: The final design phase will also be completed by November 2025. This phase involves detailed engineering and design work to finalize the specifications and plans for the new bridge structure, ensuring all technical and safety standards are met.

Right of Way: Acquisition of the necessary right-of-way will be completed by November 2025. This step involves securing temporary construction easements and any additional land required for the project, ensuring that construction can proceed without legal or logistical obstacles.

Construction Advertisement: The project will be advertised for construction by December 2025. This involves preparing and releasing bid documents to solicit contractors for the construction phase, ensuring a competitive and transparent procurement process.

Construction Phase: Following the advertisement, construction is anticipated to commence promptly and is expected to be completed within a timeframe that minimizes disruption to traffic and local communities. The construction phase will include the demolition of the existing bridge, erection of the new structure, and all associated infrastructure improvements.

The overall timeline ensures that the project is ready to bid by the end of 2025, with construction activities carefully coordinated to adhere to this schedule. The design team and project stakeholders are committed to meeting these milestones, ensuring that the project progresses smoothly and efficiently from planning through to completion.

ANTICIPATED BENEFITS PROPOSED FOR FUNDING (OUTPUTS AND OUTCOMES)

ENVIRONMENTAL AND CLIMATE RESILIENCE BENEFITS:

Climate Resilient Updating: The proposed project will incorporate considerations of climate change, resiliency, and environmental justice through incorporation of specific design elements to withstand catastrophic floods and potential wildfires. The project poses the possibility to construct a SBC Flood Control District ramp downstream of the bridge along the eastern levee for channel maintenance and to facilitate bridge inspection. The existing bridge is a flat profile, however the proposed replacement bridge will include a vertical with a highpoint at the center of the bridge to provide slopes for positive surface drainage.

Improves the Resiliency of At-Risk Structures to Climate Change: This project is located within an area of the Mojave Desert that is subject to extreme weather conditions including summer monsoonal moisture. Flash flooding can, and does occur, which can damage bridges causing periodic road closures.

Climate change presents a potential to exacerbate these weather-related risks. Building resiliency into the transportation system helps protect assets against these greater risks by limiting disruptions and eliminating significant downtimes and closures. The County has completed hydrology studies for the area to estimate design flows from rains and flooding. The hydrologic data will be critical to the design for reinforcing these structures against climate change. The bridges will also be designed to strengthen and protect against other natural threats, such as earthquakes and wildfires. The design will be compliant with AASHTO and Caltrans codes, which have been updated to include resiliency elements.

Addresses the Disproportionate Negative Environmental Impacts of Transportation on Disadvantaged Communities: This project will benefit the residents of Baker, an unincorporated Disadvantaged rural community in San Bernardino County. People in the most disadvantaged communities are least able to afford the time and cost to travel the longer routes required due to bridge weight restrictions or closures. They should be afforded unrestricted access from their homes to jobs, schools, shopping, hospitals, and services. The median income of the Baker community is only \$31,786, which is severely lower, by almost 60%, than the median income for

the County (\$79,091), the State of California (\$91,551), and even the Nation (\$74,755) (US Census Bureau, 2022).

Per the Climate and Economic Justice Screening Tool, the project is within Census Tract 060710.103.00 and is designated as a disadvantaged community. This Census Tract has a population of 3,547. Factors that contribute to this Census Tract's disadvantaged designation include high energy costs, lack of indoor plumbing in homes, high unemployment rates, low income levels and individuals having less than a high school level education.

SAFETY BENEFITS:

One of the County's primary goals with this project is the safe operation of the bridge and restoration of accessibility for all roadway users. The replacement of the bridge along Baker Boulevard will allow the County to open this section of the roadway safely with minimal weight restrictions. The bridge will be designed to increase mobility while safely accommodating legal and permit loads.

Non-Motorized Users Safety: Currently, the bridge is used by pedestrians as a way to access their community. However, the bridge does not have an adequate dedicated walkway, and pedestrians have to choose between walking on a narrow plywood, makeshift path or share the road with cars driving along a major arterial highway. The new bridge will provide improved safety for both bicycles and pedestrians traveling these rural areas as a result of the bridge widening to modern standards.

Emergency Access:

The replacement of the Baker Boulevard Bridge will significantly enhance emergency access by eliminating the existing choke point where the bridge currently narrows from four lanes to two lanes. This bottleneck restricts access for emergency vehicles and reduces traffic volume, potentially delaying critical response times during emergencies. By expanding the bridge to a full four-lane structure, the project will ensure unimpeded access for fire, medical, and law enforcement services, allowing them to respond more swiftly and effectively to emergencies. The improved capacity will also facilitate smoother traffic flow, reducing congestion and ensuring that residents and emergency services can move efficiently during critical situations. This enhancement is particularly vital in a region prone to extreme weather events, where rapid evacuation and timely emergency response are crucial for public safety. The new bridge will therefore play a key role in bolstering the overall resilience and safety of the Baker community.

ECONOMIC BENEFITS:

Increased Tourism/Improved Local Economy: The Baker Bridge Replacement Project, while focused on an unincorporated area of San Bernardino County, does hold significant potential for broader tourism and economic benefits. Baker serves as a crucial rest stop and is the last fueling and Tesla charging station before the state line available for the millions of Californians who travel the main artery of I-15 to Las Vegas. The main economy of Baker is tourism, boasting the world's

tallest thermometer as well as being home to the famous Alien Fresh Jerky store and a renowned Greek restaurant in addition to several other locally-owned cafes and diners. It is the closest intersecting arterial to Death Valley Road (Route 127). By replacing the deteriorating bridge along Baker Boulevard, the project will ensure seamless access to these attractions, capturing economic opportunities and supporting local businesses. Enhanced infrastructure will make Baker an even more attractive stop for travelers, thereby boosting tourism and improving the local economy.

[UPLOAD] 2024 State Highway System Project Impact Assessment Form

Upload a file. No files have been attached yet.

Acceptable file types: .csv, .doc, .docx, .odt, .pdf, .rtf, .txt, .wpd, .wpl

*For projects on the state highway system, applicants **must** submit the State Highway System Project Impact Assessment Form (CTC-0002).*

<https://dot.ca.gov/-/media/dot-media/programs/local-assistance/documents/atp/cy6/state-highway-system-project-impact-assessment-form-ctc-0002-modified-031022.pdf>

[UPLOAD] Project Map*

Select up to 6 files to attach. No files have been attached yet. You may add 6 more files.

Acceptable file types: .csv, .doc, .docx, .odt, .pdf, .rtf, .txt, .wpd, .wpl, .gif, .jpg, .jpeg, .png, .svg, .tif, .tiff

- A map (or maps, to a maximum of six) that includes:
 - o The boundaries of the proposed project location(s).
 - Provide neighborhood, city, or county boundaries, as applicable.**
 - o The geographic boundaries and access points of the climate-vulnerable, underserved, or under-resourced communities within the project study area*
 - o Destinations that the proposed project is benefitting.*
 - o A legend.*
 - o A scale bar.**

[UPLOAD] Photos*

Select up to 10 files to attach. No files have been attached yet. You may add 10 more files.

Acceptable file types: .gif, .jpg, .jpeg, .png, .svg, .tif, .tiff

- Photos (rendering or actual) of the project location(s).
 - o If the project location has experienced a climate event related to the project nomination's identified climate threat, applicants are encouraged to provide a photo of the impacted transportation facility and surrounding communities.**

Photo Information (optional) (99/100 Words)

Applicants may use this space to provide pertinent context about the photos uploaded, such as the date and a brief description of the photo's subject.

The first picture is of the timber bridge, with two pedestrians walking alongside the bridge to access the other side of the community. As you can see, the “walkway” is extremely unsafe, with a single lane for cars to share with the pedestrians. The proposed plans would have a dedicated walkway so that pedestrians can safely cross the bridge to access its community. (Source: Google Photos). Additionally, several photos are of Baker Bridge damaged by fire. As it is a timber bridge, you can see the black soot on the bridge’s underbelly, along with substantial damage to the infrastructure.

Reversible Lanes were considered for this project.*

Confirmation that, for any capacity-increasing project or major street or highway realignment project, the agency considered reversible lanes for that project pursuant to Streets and Highways Code Section 100.15

Yes
No

3. Screening Criteria

[UPLOAD] Eligibility Verification*

Select up to 2 files to attach. No files have been attached yet. You may add 2 more files.

Acceptable file types: .csv, .doc, .docx, .odt, .pdf, .rtf, .txt, .wpd, .wps

Provide documentation for eligibility verification.

Screening Criteria A. Identification of Climate Threat* (8/20 words)

Identification of at least one projected climate threat that will pose a risk to transportation infrastructure using Cal-Adapt or Our Coast, Our Future web tools (Appendix C).

E.g., "Flooding", "Extreme Heat", "Storm Surge", etc.

Increased intensity and instances of flooding and fire

[UPLOAD] Screening Criteria A. Identification of Climate Threat (screenshot)*

Select up to 5 files to attach. No files have been attached yet. You may add 5 more files.

Acceptable file types: .csv, .doc, .docx, .odt, .pdf, .rtf, .txt, .wpd, .wpl, .gif, .jpg, .jpeg, .png, .svg, .tif, .tiff

Applicants must provide a screenshot or screen printout from Cal-Adapt or Our Coast, Our Future that clearly shows the data view screen with displayed climate threat information that supports the project nomination.

Screening Criteria B. State and Federal Thresholds for Climate-vulnerable Populations*

Project nominations must meet federal or state thresholds to be considered a disadvantaged community or a climate vulnerable, under-resourced, or underserved community (**Appendix D**). Priority will be given to project nominations that meet both federal and state thresholds.

This project meets a Federal threshold.

This project meets a State threshold.

Federal Tool Used*

Climate and Economic Justice Screening Tool

U.S. Department of Transportation Equitable Transportation Community Explorer

State Tool Used*

CalEnviroScreen 4.0

California Healthy Places Index 3.0

California Healthy Places Index 3.0 - Extreme Heat Edition

Climate Change & Health Vulnerability Data and Indicators

Median Household Income

Native American Tribal Lands

Regional Definition

Other

Screening Criteria C1. Consistency with State Plans.* (Checkmark)

This nomination is consistent with The Governor's Office of Emergency Services Adaptation Planning Guide (<https://resilientca.org/apg/>).

C2. Consistency with the California State Adaptation Strategy. * **(181/200 words)**

Identify which priority and associated goal the project nomination most closely aligns with (<https://www.climate resilience.ca.gov/priorities/>).

The project to replace the deteriorated Baker Bridge aligns with the California State Adaptation Strategy under the priority of "Bolster Public Health and Safety Against Increasing Climate Risks." This priority aims to enhance infrastructure resilience to climate impacts, ensuring community safety.

According to this priority, the health and safety impacts of climate change are having serious effects on the lives of our state's residents, sometimes literally threatening lives. San Bernardino is no different, as road closures due to weather events have led to actual fatalities (according to CalTrans). Additionally, road closures have led to unnecessary increased transportation, which in turn exacerbates the amount of Particulate Matter released into the air, infecting local communities.

Within this priority, the project aligns with Goal B: Consider future climate impacts in governmental planning and investment decisions, particularly Action 2 (incorporate climate considerations into emergency planning) and Action 6 (prioritize investments to reduce climate risk in transportation). By incorporating robust design standards to withstand extreme weather and reducing transportation-related air pollution, the project directly supports these actions, enhancing the overall resilience and health of the community.

C3. Consistency with the Regional Transportation Plan and Sustainable Communities Strategy* (196/200 words)

· Confirmation that the proposed project is consistent with the current approved Regional Transportation Plan, and if within the boundaries of a Metropolitan Planning Organization, consistent with the Sustainable Communities Strategy.

· Include a link to the current and approved Regional Transportation Plan and Sustainable Communities Strategy. Indicate page numbers where the project nomination is identified.

This project aligns with objectives in the SCAG 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy ("Connect SoCal") and the SBC Countywide Transportation Plan (SBC CTP,).

Connect SoCal focuses on sustainability, climate change mitigation, and environmental justice to reduce GHG emissions and strengthen climate resilience.

The SBC CTP aims to enhance quality of life and mobility through efficient, environmentally responsible transportation solutions. The bridge project's focus on safety, sustainability, and environmental justice corresponds with these strategic goals.

According to the SBC CTP, this project addresses key regional issues such as improving air quality, reducing GHG emissions and VMT, and strengthening major tourism routes to boost economic competitiveness. The California Transportation Plan (CTP) 2050 also highlights the need for collaboration among local, regional, state, and federal agencies, including private stakeholders, to optimize transportation funding and operations. This alignment with the SBC CTP, Connect SoCal, and the CTP 2050 underscores the project's commitment to sustainable and equitable development, enhancing community well-being, and promoting growth and fair access to transportation resources.

Regional Transportation Plan (pages 14-17): <https://www.gosbcta.com/plan/countywide-comprehensive-transportation-plan/>

Sustainable Communities Strategy (pages 5-7): chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://scag.ca.gov/sites/main/files/file-attachments/f2016rtpscs_01_introduction.pdf?1606073240

C4. Consistency with Regional Climate Resiliency and Environmental Justice Goals * (199/200 words)

· Briefly describe how the project nomination furthers regional climate resiliency and environmental justice goals, targets, or performance measures of a current and approved plan:

o Regional Transportation Plan, Sustainable Communities Strategy, General Plan, Indigenous Community Plan, Local Hazard Mitigation Plan, or Stand-alone climate action or adaptation plan.

o Include a link to the approved plan. Indicate page numbers where the regional climate resiliency and environmental justice goals, targets, or performance measures are identified.

Completed in partnership with SBCTA, the San Bernardino County Regional Greenhouse Gas Reduction Plan (SBCRGHGRP) provides a framework for local governments and stakeholders to collaborate on county-wide climate action initiatives. This program aligns with the SBCRGHGRP's several "On-Road" goals, including coordinating with regional agencies and Caltrans to maintain transportation infrastructure, support GHG reductions, and provide safe and economically beneficial roadways for local residents.

Replacing Baker Bridge will significantly advance the area's climate resiliency and environmental justice goals by creating safer, more reliable, and sustainable infrastructure. This upgraded bridge will be specifically designed to withstand extreme weather events, ensuring mobility for the Baker community and surrounding areas, especially during times of emergency. The use of efficient designs and materials will help lower GHG emissions during construction and throughout the

bridge's lifespan. Therefore, reducing the risk of structural damage and lowering maintenance costs. Additionally, reliable infrastructure supports economic growth by creating jobs, bolstering local businesses, and improving mobility. Moreover, this investment in infrastructure is crucial for ensuring equitable access to opportunities and resources, and ultimately enhancing the quality of life and health outcomes for this disadvantaged rural community in San Bernardino County.

Link(Pages 24-26): <https://www.gosbcta.com/plan/regional-greenhouse-gas-reduction-plan/>

C5. Consistency with other Regional or Local climate adaptation plans or reports, if applicable. (199/200 words)

- Identify and briefly describe how the project nomination furthers goals, performance measures, or targets of, any regional or local climate adaptation plans or reports not previously mentioned.*
- Include links to any plans or reports described. Indicate page numbers where the project nomination is identified.*

The Desert Renewable Energy Conservation Plan (DRECP) aligns with the proposed project's objectives by emphasizing sustainability, habitat conservation, and climate resilience. The DRECP is designed to facilitate renewable energy development while preserving natural resources, which complements replacing aging infrastructure with a more resilient design. It also emphasizes protecting wildlife habitats and managing lands to support renewable energy and conservation goals. This includes coordinated land use planning and habitat management to mitigate development impacts on sensitive species and ecosystems, thereby ensuring ecological integrity and long-term environmental health.

In alignment with these goals, the project involves replacing the outdated Baker Bridge to enhance climate resilience and support renewable energy-related economic activities. Notably, one of the benefits of the project is its support for essential logistics for renewable energy development, ensuring that infrastructure can accommodate the needs of this growing sector. The project is backing the DRECP's framework by enhancing infrastructure to withstand extreme weather conditions and ensuring dependable access routes. Ultimately, the DRECP and the project aim to upgrade San Bernardino County's transportation system, fostering economic opportunities for communities and safeguarding the natural surrounding land.

Link_to_Fact_Sheet (Page 1): chrome-extension://efaidnbmnnnibpcajpcgclefindmkaj/https://www.energy.ca.gov/sites/default/files/2019-12/DRECP_Conservation_Fact_Sheet_ada.pdf

4. Evaluation Section

Responses to the evaluation criteria must demonstrate how the project nomination meets the Local Transportation Climate Adaptation Program policy objectives. Project applications will be evaluated, scored, and then prioritized based on how well the project nomination addresses and demonstrates each of the following criteria.

A. Climate Threat Impacts to Transportation Infrastructure and Climate-vulnerable Communities

A1. Climate Threat

Impacts to Transportation Infrastructure. * (999/1000 words)

*Discuss the risks to transportation infrastructure from the climate threat identified in **Screening Criteria A**. Describe how recurring damage or asset failure may impact statewide and regional mobility, economic opportunities, goods movement, and the environment or natural resources.*

San Bernardino County faces significant risks to its transportation infrastructure due to climate change, especially regarding the Baker Boulevard Bridge. Constructed in 1931 with simple timber girders and continuous cast-in-place reinforced concrete decks, is critically endangered by increasingly severe weather patterns. The County's challenges are twofold: the bridge is well beyond its intended lifespan, and climate change is accelerating its degradation.

ECONOMIC OPPORTUNITIES

Structural vulnerabilities of the Bridge pose risks to economic opportunities and goods movement in the region. Despite being a severely underfunded community, Baker has one advantage: its strategic location on the route to Las Vegas. This positioning fosters a strong tourism economy, with attractions such as the Alien Fresh Jerky store and the world's tallest thermometer, both of which are famous among Southern Californians. Additionally, Baker boasts a Tesla charging station, making it a convenient stop for electric vehicle travelers on their way to Las Vegas.

Supporting tourism through solid transportation infrastructure is crucial for maintaining and enhancing these economic opportunities. A deteriorating bridge undermines these prospects, as it could discourage travelers from stopping in Baker due to safety concerns and accessibility issues. Ensuring a reliable and resilient bridge is essential for accommodating the influx of tourists and sustaining the economic vitality of the region.

REGIONAL MOBILITY

The Baker Boulevard Bridge plays a crucial role in regional mobility. Over the past 90 years, it has endured intensifying weather conditions, including flash floods, increased truck traffic, erosion, and seismic activity. With two narrow lanes the bridge easily becomes bottle-necked and severely limits its utility for regional transportation. The bridge's critical location as a primary

route means that without a functional alternative, motorists could be delayed or stranded during adverse weather conditions, thereby disrupting statewide and regional mobility.

ENVIRONMENT AND NATURAL RESOURCES

The area surrounding the Baker Boulevard Bridge is prone to flooding, lying between two historic lake beds, Soda Lake and Silver Lake, both fed by the Mojave River. When the River floods these lakes fill, with great risk of flash floods to the area. Baker Bridge is directly centered in a Federal Emergency Management Agency (FEMA) designated National Flood Hazard Zone A indicating the highest possible risk for flood hazards. Historical data shows significant damage to the bridge specifically in the 1938 event that washed out the 90-ft long 1931 bridge and a 2005 event in which the water surface at Baker approached the soffit of the current 408-ft long 1939 bridge. According to the Global Climate Model data tool Cal-Adapt, both the intensity and frequency of extreme precipitation events in San Bernardino County will continue to increase over the next 50 years due to climate impacts by greenhouse gasses and aerosol emissions. Historically observed data for the Baker area over a 30 year average shows that 2 events per year on average were experienced but those extreme precipitation events are expected to increase to up to 6 events per year by 2074 (Cal-Adapt, <https://cal-adapt.org/tools/extreme-precipitation>). Left neglected, Baker Bridge will be further degraded by the increase in frequency and intensity of flooding due to climate change. The reliability of Baker Boulevard as a critical travel route will be threatened and therefore the transportation infrastructure that is so vital to the mobility of Californians will be crippled.

Extreme flooding events are not the only threat to maintaining the transportation infrastructure of the Baker community, wildfires also pose a considerable threat to the mobility of the community and their natural resources as well. Because Baker Bridge is composed of 408 feet of dilapidated timber and lies over a dry river bed bordering the Mojave Desert the bridge is particularly vulnerable to the threat of fire. The community of Baker experienced an observed average of 4 extreme heat days per year over the course of the last 30 years. Meaning the number of days in a year when the daily maximum temperature is above 115.5°F. By using Cal-Adapt it is projected that the number of extreme heat days will occur at a rate of 15-19 additional days per year by the year 2064 (<https://cal-adapt.org/tools/local-climate-change-snapshot>) due to climate impacting factors. Extreme heat days in desert areas accelerates the drying of vegetation and soil, reduces humidity, and enhances the conditions for wildfires to start and spread. This interplay between temperature, moisture, and vegetation makes wildfires more likely and more severe during periods of extreme heat which will only continue to increase over time thus exacerbating the threat to the timber structure of the current Baker Bridge. Should Baker Bridge fall victim to fire the transportation infrastructure of the area would again be handicapped by yet another extreme weather event.

GOODS MOVEMENT

The Baker Boulevard Bridge is critical for goods movement in the region. The bridge's current condition restricts the passage of larger commercial vehicles due to it being a narrow two-lane bridge which disrupts the efficient flow of goods for the area. This is particularly detrimental in this rural area where this transportation link is vital for economic sustainability. As previously mentioned, Baker Boulevard is used as an alternate route to I-15 when the interstate experiences closures and other traffic-related issues. I-15 is the main thoroughfare for the movement of goods between Southern California and Southern Nevada, connecting a larger state-wide interstate system. While Baker Boulevard is not currently identified as a terminal access route for Surface

Transportation Assistance Act (STAA) trucks, it is utilized as such, providing an alternative route for motorists and freight movement as needed. By replacing the outdated timber bridge with a modern concrete structure and widening it to four lanes, the project will ensure that the bridge can handle increases in traffic and accommodate future plans for STAA use.

The new bridge design will incorporate advanced engineering techniques to address climate change risks, including enhanced resilience to flash floods, seismic activity, and other threats. These improvements will ensure that the infrastructure remains functional during extreme weather events, thereby enhancing the safety and reliability of the transportation network.

A2. Climate Threat Impacts to Climate-vulnerable Communities.* (932/1000 words)

*Describe the impacts to the climate-vulnerable, under-resourced, or underserved communities identified in **Screening Criteria B** from the climate threat's effects to the transportation infrastructure. Describe impacts to safety and public health and well-being, including potential displacement of communities and individuals. Describe impacts to cultural resources, including Tribal cultural resources, as applicable.*

The unincorporated community of Baker, California is located within San Bernardino County, a critically underfunded County, and one of California's most climate-vulnerable, under-resourced, and underserved communities (San Bernardino County, Fair Share Committee 2022). According to both the CalEnviroScreen 4.0 and the Climate and Economic Justice Screening tool, Baker is a designated Disadvantaged Community (DAC).

According to the California Healthy Places Index: Extreme Heat Edition, the community of Baker is extremely climate vulnerable. On average, this census tract has 207.9 projected number of days above 90 degrees. Comparatively, the median value for the state is only 79 days. The census tract is in the 11th percentile for California Healthy Places Index, which means that 89% of California's other communities have healthier conditions. Per the Health Index, Baker is designated as having "less healthy conditions," meaning that currently, this community is NOT resilient, and therefore climate vulnerable. This is due to multiple factors, such as the level of poverty in the area (making it difficult to react effectively to extreme weather events), high rates of unemployment, and some of the highest ozone levels in the state, leading to high rates of asthma and preterm births. Baker's vulnerability is exacerbated by its status as an underserved and under-resourced area, making it especially susceptible to the adverse effects of climate change. The impacts on safety, public health, well-being, and cultural resources are profound and multifaceted.

Impacts on Safety and Public Health

The current timber bridge on Baker Boulevard is highly vulnerable to extreme weather events, including floods, wildfires, and earthquakes. The community of Baker is at critical risk due to these threats, which are intensified by climate change. The US Army Corps of Engineers (USACE) has identified a high urgency of action for the Mojave River Dam, indicating that an extreme flood event could lead to overtopping and potential failure. Such a failure would result in a devastating

flood wave reaching Baker, posing an immediate threat to the residents and infrastructure. The existing bridge, built from timber, is particularly susceptible to these threats. In the event of a flood, the bridge could fail, cutting off critical evacuation routes and leaving residents stranded. This is a significant safety concern, as it would impede access to emergency services and potentially result in life-threatening situations. Wildfires pose an additional threat, as the timber bridge could be easily consumed by fire, further isolating the community and making escape routes impassable.

Moreover, the current state of the bridge limits its capacity to withstand seismic activity. An earthquake could severely damage or collapse the bridge, again leaving this disadvantaged community without essential transportation routes. The replacement of this bridge with a concrete structure designed to withstand such events is crucial to ensuring the safety and well-being of the residents.

The inability to evacuate or access emergency services during extreme weather events not only puts lives at risk but also has long-term public health implications. Traffic disruptions and detours due to bridge failure increase idling, vehicle emissions and particulate matter in the air. With prolonged exposure to hazardous air conditions, the Baker community could experience increased rates of respiratory and cardiovascular illnesses, especially among vulnerable populations such as the elderly and those with pre-existing health conditions. This environmental degradation will negatively impact the already at-risk communities' health and contribute to broader ecological damage.

Potential Displacement of Communities

The heightened risk of infrastructure failure due to climate change could lead to the displacement of communities. If the bridge fails during a flood, wildfire, or earthquake, residents may be forced to evacuate their homes, potentially losing their properties and livelihoods. This displacement can have devastating social and economic effects, particularly for under-resourced and underserved communities already struggling with limited access to services and economic opportunities.

Displacement not only disrupts the social fabric of the community but also places a significant burden on local and regional resources. Temporary housing, emergency services, and long-term relocation efforts require substantial investment and coordination, which can be particularly challenging for an already underfunded area like San Bernardino County's High Desert Region. Recovery and restabilization for an under-resourced and underserved community is extremely difficult to achieve. The Baker Bridge replacement project aims to mitigate these risks by providing resilient infrastructure that ensures continuous access and connectivity, thereby reducing the likelihood of displacement.

Impacts to Cultural Resources

The community of Baker lies directly between two culturally significant national parks - the 1.6 million acre Mojave National Preserve to the South and the largest national park in the contiguous United States, Death Valley National Park to the North. The disruption or destruction of transportation infrastructure can have far-reaching impacts on being able to access these cultural assets. Flooding, fires, and seismic events that damage or destroy Baker Bridge would limit the

public's ability to engage with and observe these important natural and cultural resources. Enhancing the resilience of critical infrastructure, like Baker Bridge, ensures that these cultural resources remain accessible and protected from the adverse effects of climate change.

The Baker Bridge Replacement Project will advance both equity and improve quality of life for community members in Baker who have been underserved by transportation infrastructure investments. The 19,500 square miles of the County's High Desert Region is likely the most underserved region in the U.S.'s lower 48 States in terms of transportation federal funds per square mile of area. Through the California Transportation Commission, this project will positively impact the Baker community and the surrounding region by improving access to emergency care, health services, and other essential services; protecting access to cultural resources, and improving overall climate resiliency.

B. Resiliency, Preservation, Enhancement, and Protection Benefits

B1. Explain how the proposed project will increase the climate resiliency of the at-risk transportation infrastructure. * (589/750 words)

Based on the climate threat identified in Screening Criteria A.

The proposed Baker Boulevard Bridge Replacement Project aims to significantly enhance the climate resiliency of at-risk transportation infrastructure, particularly addressing the threat of flooding identified in Screening Criteria A. The project incorporates several key design and engineering improvements to ensure the bridge can withstand the increasing severity and frequency of climate-related events.

Engineering and Design Improvements:

One of the primary enhancements is the transition from a flat timber bridge to a concrete bridge with an angled profile. The current bridge's flat design makes it more susceptible to flooding, as water can easily accumulate and overflow onto the bridge during heavy rainfall. The new angled design will facilitate better water drainage, preventing water from pooling on the bridge surface and reducing the risk of flooding. This change will ensure that the bridge remains passable even during severe weather events, thereby enhancing the overall safety and reliability of the transportation network.

Transition from Timber to Concrete:

The replacement of the existing timber bridge with a concrete structure will also significantly increase the bridge's resilience to climate threats. Timber bridges are particularly vulnerable to wildfires, which are becoming more frequent and intense due to climate change. Concrete, on the other hand, is much more resistant to fire and other environmental hazards. This transition will therefore not only improve the bridge's durability but also reduce maintenance costs and increase its lifespan.

Flood Risk Mitigation:

The project includes comprehensive hydrology studies to support the bridge design, ensuring it can withstand a 100-year flood event. These studies have provided critical data on the area's flood risk, allowing engineers to incorporate context-sensitive design elements that address the specific challenges posed by climate change. By designing the bridge to handle extreme flooding, the project will mitigate the risk of structural failure during such events, ensuring continuous and safe transportation for the community.

Safer Roads and Worker Safety:

The proposed bridge will include the latest safety features, making the roads safer for all users. Context-sensitive design will be employed to account for the increased flood risk associated with climate change. Additionally, the project will prioritize the safety of construction and maintenance workers by ensuring that all zones are kept secure and that the latest safety protocols are followed.

Comprehensive Hazard Mitigation:

Beyond flooding, the engineering design for the Baker Boulevard Bridge will account for other weather and hazard variables, including seismic activity. The bridge will be constructed to meet modern seismic design standards, ensuring it can withstand earthquakes and other ground movements. This comprehensive approach to hazard mitigation will further enhance the bridge's resilience to various climate threats, ensuring long-term functionality and safety.

Climate Change, Resiliency, and Environmental Justice:

The concrete bridge reconstruction will incorporate specific design elements to withstand catastrophic floods and potential wildfires, reflecting a commitment to climate change resiliency and environmental justice. By building a structure that is more robust and less susceptible to climate-related damages, the project addresses the disproportionate impacts of climate change on disadvantaged communities. Ensuring that the bridge remains operational during extreme weather events is critical for maintaining access to essential services and economic opportunities for these communities.

Hydraulic Capacity Improvements:

The hydraulic capacities of the watercourses beneath the bridge are expected to be significantly improved as a result of the bridge replacements. This enhancement will reduce the likelihood of water flow obstructions and associated flooding, ensuring that the bridge can handle increased water volumes during heavy rainfall and storm events. Improved hydraulic capacity is a crucial element in mitigating flood risk and enhancing the overall resilience of the transportation infrastructure.

B2. Explain how the proposed project will increase the transportation system's ability to preserve, enhance, or protect each

of the following at the local AND regional levels OR statewide level: 1) Mobility; 2) Accessibility, 3) Economic development and vitality, 4) Goods movement, 5) Environment and natural resources; 6) Safety of adjacent communities and all users of the transportation system; 7) Cultural resources, including Tribal cultural resources, if applicable; 8) Other critical infrastructure, if applicable. * (746/750 words)

1) Explain how the proposed project will increase the transportation system's ability to preserve, enhance, or protect each of the following at the local and regional or statewide level:

- mobility*
- accessibility*
- economic development and vitality*
- goods movement*
- environment or natural resources*
- safety of adjacent communities and all users of the transportation system*
- cultural resources, including Tribal cultural resources, if applicable*
- other critical infrastructure, if applicable.*

This proposed project will increase the transportation system's ability to preserve, enhance, or protect each of the following at the local and regional levels:

1. Mobility:

This project will benefit residents of Baker, an unincorporated and Disadvantaged Community (DAC) within San Bernardino County. As in most rural areas, travel by personal vehicle is the only mode of transportation for this community as no public transportation options are available. The project will eliminate detours that could create extended travel time and added fuel costs. Baker Bridge connects one side of the community to the other on the only through access road and residents should be afforded unrestricted access from their homes to jobs, schools, shopping, hospitals, and services which require using Baker Bridge. A reinforced, resilient Baker Bridge is critical to the mobility of the community whether traveling by car, bicycle or on-foot.

2. Accessibility:

The delays the two-lane Baker Boulevard Bridge creates are detrimental to the access needed by the community and the region at large. Also, in its current state, Baker Boulevard Bridge currently only has a 2-foot wide plywood plank on either side of the bridge to serve as a walkway for pedestrians. By widening the traffic lanes and installing proper ADA compliant sidewalks, Baker Boulevard will be accessible to pedestrians in a way that it is not currently.

3. Economic Development:

The Baker Bridge Replacement Project is critical to maintaining the vitality of the local economy which is based largely on tourism. Baker serves as a crucial rest stop along I-15 which is the main

artery for all Southern Californians traveling to Las Vegas. Baker is the last fueling station between it and the Nevada state line which is 50 miles away. Baker also recently opened a Tesla charging station making it a convenient stop for electric vehicle travelers needing that service as well. Baker boasts several popular tourist attractions such as the famous Alien Fresh Jerky store. Enhanced infrastructure will make Baker an even more attractive stop for travelers, thereby boosting tourism and improving the local economy.

4. Goods movement:

As previously mentioned, Baker Boulevard is used as an alternate route to I-15 when the interstate experiences closures and other traffic-related issues. I-15 is the main thoroughfare for the movement of goods between Southern California and Southern Nevada, connecting a larger state-wide interstate system. While Baker Boulevard is not currently identified as a terminal access route for Surface Transportation Assistance Act (STAA) trucks, it is utilized as such, providing an alternative route for motorists and freight movement as needed. By replacing the outdated timber bridge with a modern concrete structure, the project will ensure that the bridge can handle increases in traffic capacity, reducing issues related to hindering the movement of goods in the region.

5. Environment:

This project is located within an area of the Mojave Desert that is subject to extreme weather conditions including summer monsoonal moisture. Flash flooding can and does occur and can damage the bridge causing periodic road closures. Significant damage occurred in the 1938 weather event that washed out the 1931 bridge and a 2005 event in which the water surface at Baker approached the soffit of the current 1939 bridge. Climate change presents a potential to exacerbate these weather-related risks. Building resiliency into the transportation system helps protect assets against these greater risks by limiting disruptions and eliminating significant downtimes and closures. The County has completed hydrology studies for the area to estimate design flows from rains and flooding. The hydrologic data will be critical to the design for hardening Baker Bridge against climate change. The new and improved bridge will also be designed to strengthen and protect against other natural threats, such as earthquakes and wildfires. The design will be compliant with AASHTO and Caltrans codes, which have been updated to include resiliency elements.

6. Safety of adjacent communities and all users of the transportation system

The bridge improvement will enable ambulances, fire trucks, and other emergency responders reach the community quickly and effectively, thereby reducing response times during critical incidents. The bridge will be designed to withstand extreme weather events, such as floods and earthquakes, reducing the likelihood of closures and ensuring continuous safe passage for all travelers. Enhanced safety features, such as improved guardrails, dedicated sidewalks, and four wider lanes, will further protect motorists, cyclists, and pedestrians, creating a safer travel environment for everyone. The reduction in detours will also minimize the risk of accidents and exposure to hazardous conditions, ultimately safeguarding public health and well-being for everyone.

C. Environmental equity for climate-vulnerable, under-resourced, and/or underserved communities

C1. Explain how the proposed project incorporates environmental equity and directly benefits climate-vulnerable, under-resourced, and underserved communities. * (856/1000 words)

Based on the federally disadvantaged/state climate-vulnerable populations identified in Screening Criteria B.

The proposed project to replace Baker Bridge incorporates environmental equity and directly benefits climate-vulnerable, under-resourced, and underserved communities in several significant ways. By addressing critical transportation challenges and enhancing infrastructure resilience, the project aims to improve public health, safety, and economic opportunities for residents of San Bernardino County, particularly those in the unincorporated community of Baker.

HOW THE PROJECT INCORPORATES ENVIRONMENTAL EQUITY

San Bernardino County is an underserved area with significant climate-vulnerable populations. These communities face higher exposure to environmental hazards, limited economic opportunities, and poor access to reliable transportation. By replacing deteriorated bridges with modern, resilient structures, the project addresses these critical issues directly. The project aims to reduce greenhouse gas (GHG) emissions and improve air quality, thereby mitigating health impacts such as respiratory illnesses that are prevalent in these communities due to poor air quality.

The project incorporates environmental equity by prioritizing community engagement from the outset. By involving the community early in the planning process, the project ensures that the needs and desires of local residents are at the forefront of decision-making. This proactive engagement means that the project is built based on the expressed needs of the community, rather than imposing solutions after the fact. This approach is especially important for underserved communities in San Bernardino County, who have disproportionately suffered in terms of environmental degradation, economic hardship, and inadequate transportation infrastructure.

Throughout the project development, extensive public outreach and stakeholder engagement activities were conducted to ensure that the needs and concerns of local residents were addressed. Public meetings, community workshops, and consultations with local businesses and civic organizations were held to gather input and feedback, with public hearings and comments available to the public through the Barstow to Needles Master Plan. This collaborative approach ensures that the project aligns with the community's priorities and promotes environmental justice by addressing the specific challenges faced by climate-vulnerable populations.

HOW THE PROJECT DIRECTLY BENEFITS THE COMMUNITY:

Reduction of Greenhouse Gas Emissions and Air Quality Improvements

One of the key benefits of the project is the significant reduction in greenhouse gas (GHG) emissions and criteria pollutants. By replacing the existing timber bridges with modern concrete structures, the project will prevent motorists from being stranded and reduce the need for long

detours. This will minimize vehicle idling and shorten travel distances, leading to substantial decreases in fuel consumption and associated emissions.

Enhanced Safety and Resilience

The project will significantly enhance the safety and resilience of the transportation infrastructure by replacing the current timber bridge with a robust concrete structure. This new bridge is designed to withstand catastrophic floods, wildfires, and earthquakes, thereby providing a reliable escape route during emergencies. The current timber bridge, vulnerable to failure during such events, poses a significant risk of leaving residents stranded. By ensuring the new bridge can handle extreme weather conditions and seismic activity, the project will protect the community, safeguarding them against potential displacement and ensuring continuous access to critical services and evacuation routes. In addition, the concrete construction will protect against wildfires, which could otherwise destroy the timber bridges and leave residents trapped in emergency situations. The new design also offers greater protection against earthquakes, enhancing the community's overall resilience to natural disasters.

Pedestrian Safety and Community Improvement

Improving pedestrian safety is a key equity measure of the project, directly benefiting the climate-vulnerable, under-resourced, and underserved communities in Baker. The new bridge design will include dedicated pedestrian walkways, which the current bridge lacks. This addition will significantly enhance the safety of residents who currently share the road with vehicles, including large trucks, creating a hazardous situation. By providing safe, separate walkways for pedestrians, the project will improve overall community connectivity, ensuring that all residents, including those without vehicles, can safely access schools, businesses, and essential services. This improvement is crucial for fostering a safer, more equitable community environment.

Addressing Mobility Barriers

Baker Bridge has significant weight restrictions, preventing large vehicles, including emergency services and commercial trucks, from using this route. This impacts goods movement and services to the area, which are critical for the local economy and access to essential services. The project will remove these weight restrictions, enhancing mobility for all vehicle types and ensuring that emergency services can reach residents in need. This is particularly important for those living in disadvantaged communities, where access to healthcare and emergency services is already limited.

Economic Development and Vitality

The proposed bridge replacement will also stimulate economic development and vitality in the region. By improving the transportation infrastructure, the project will support the movement of goods and services, attract tourism, and enable local businesses to thrive. This is particularly beneficial for the under-resourced community of Baker, as improved infrastructure can lead to job creation and increased economic opportunities.

Improved Access to Essential Services

The replacement of the deteriorated bridges will improve access to essential services such as healthcare, education, and emergency response. Currently, the bridge is only two-lanes and gets

bottlenecked, sometimes preventing ambulances and other emergency vehicles to respond with as much efficiency as they could in critical situations for residents. By providing safe and reliable infrastructure, the project will ensure that residents have timely access to these vital services, enhancing their quality of life and overall well-being.

C2. Describe how anti-displacement policies (Appendix B) and actions are being implemented to discourage project-induced impacts. If indirect displacement is not an issue, applicants must explain why it is not a concern. * (102/500 words)

Based on the federally disadvantaged/state climate-vulnerable populations identified in Screening Criteria B.

Indirect displacement is not a concern for this project as there are no residents who need to be displaced to complete the project. In fact, this project will help prevent displacement as a result of climate change, since it will lead to a more climate resilient infrastructure. The project involves the replacement of an existing bridge on Baker Boulevard with an improved structure, without altering the existing footprint or requiring land acquisition that could displace people. The bridge currently exists, and the project focuses solely on upgrading it to enhance safety and resilience. Therefore, no anti-displacement policies are necessary for this project.

D. Community Engagement

D1. Describe the public stakeholders who were engaged in the development of the project nomination. * (243/500 words)

Based on the federally disadvantaged/state climate-vulnerable populations identified in Screening Criteria B.

As the project has not yet been started, no public stakeholders have been engaged. However, the County is currently in the process of engaging with public stakeholders to participate in the development of the project. The County plans to use its comprehensive Community Engagement Plan that has been exercised for other areas of the National Trails Highway and Historic Route 66 bridge replacement projects.

For the Baker Boulevard Bridge Replacement Project, the project team has identified key stakeholders who will be critical in ensuring the success and inclusivity of the project. The primary stakeholders include:

1. San Bernardino County Transportation Authority (SBCTA): The lead agency for the project, responsible for coordinating funding, planning, and execution.
2. San Bernardino County Public Works Department: Engaged in the technical aspects of the project and providing necessary support for implementation.
3. Caltrans: Partnered with SBCTA to ensure that state standards and regulations are adhered to during the project.
4. San Bernardino County Flood Control District: Responsible for managing flood control measures and ensuring the new bridge can withstand extreme weather conditions.
5. Baker Community Services District: Represents the local community and will play a crucial role in ongoing community engagement.
6. City of Baker: Engages with local governance to ensure that municipal concerns and community needs are addressed.
7. Local Businesses and Civic Organizations: Including representatives from the tourism sector, given Baker's status as a key rest stop and tourist attraction on the way to Las Vegas.

D2. Describe the process used to identify the community's mobility needs and explain how the proposed project will address those mobility needs. * (440/500 words)

The project team will implement extensive community engagement activities to identify and address the mobility needs of the Baker community. The following activities will ensure a comprehensive understanding of the transportation challenges faced by residents, especially those in disadvantaged and underserved communities.

Initial Community Engagement:

The project team will conduct public outreach and stakeholder engagement activities, including public meetings, community workshops, and consultations with local businesses and civic organizations. These activities will be designed to gather input and feedback from a broad range of community members.

Public Meetings:

Three public meetings will be organized in Baker to provide a platform for residents to voice their concerns and suggestions regarding transportation and mobility issues. These meetings will be scheduled on different dates and advertised through various channels, including the County's website, social media platforms, mailings, and local newspapers, to maximize attendance and accessibility.

Workshops and Consultations:

In addition to public meetings, smaller group meetings and workshops with stakeholders will be held to ensure a wide range of perspectives are considered. These sessions will focus on identifying specific mobility barriers and potential solutions.

Addressing Mobility Barriers:

Many bridges within this project scope have significant weight restrictions, so almost no large vehicles can use this route. This impacts goods movement and services to the area and surrounding regions that depend on this road. By replacing these deteriorated bridges with modern, resilient structures, the project aims to eliminate these weight restrictions, thereby enhancing mobility for all vehicle types, including heavy trucks essential for goods movement and emergency services.

Operational Benefits and Efficiency:

The new bridge will significantly reduce travel time and distance, as shown in the reduction of vehicle hours and miles traveled. This reduction translates into substantial savings in delay costs, including crew costs, locomotive ownership, operating costs, fuel, and intermodal lading costs.

Public Engagement and Ongoing Collaboration:

The engagement process will continue throughout the project's implementation phase. Additional public meetings will be organized to gather updated input from residents and stakeholders, emphasizing the participation of vulnerable communities impacted by the project. Feedback from these meetings will be documented and incorporated into the project plans as relevant.

Support for Local Economy and DBEs:

The County will provide information regarding opportunities for Disadvantaged Business Enterprises (DBEs) to participate in and compete for project contracts, ensuring fair opportunities for small businesses owned and controlled by socially and economically disadvantaged individuals. The County's public works contracts have a required DBE participation goal, averaging about 10%, to support this initiative.

These planned activities will ensure that the mobility needs of the Baker community are thoroughly identified and addressed, leading to a more efficient and equitable transportation system.

D3. Describe and provide documentation of the public outreach, engagement, and collaboration activities performed during the project development. Explain how stakeholder engagement will continue during project implementation.* (269/500 words)

Once public outreach engagement and collaboration activities are performed, documentation of all public outreach and engagement activities will be maintained via published plans and reports and shared with relevant stakeholders to ensure accountability and continuous improvement in the engagement process.

Importantly, stakeholder engagement will continue during the project implementation phase. For example, throughout the project life cycle, information will be provided regarding opportunities for Disadvantaged Business Enterprises (DBEs) to participate and compete for project contracts with the County. County public works contracts have a required DBE participation goal, which has averaged about 10%, to provide fair opportunities for small businesses owned and controlled by socially and economically disadvantaged individuals.

To foster continuous engagement, the project team will maintain open lines of communication with stakeholders through newsletters, social media updates, and a dedicated project website. Regular updates and feedback sessions will be scheduled to keep the public informed about project milestones and gather input. This ongoing dialogue will help in refining the project plans to better meet community needs.

During the implementation phase, the project will continue to prioritize stakeholder engagement by organizing periodic public meetings and providing updates through various communication channels. Collaboration with local agencies, such as the County of San Bernardino, Caltrans, and the Baker Community Services District, will be essential to address any emerging issues promptly and maintain project transparency.

The project team will work closely with local schools, community groups, and environmental organizations to promote educational initiatives about the importance of infrastructure resilience and climate adaptation. By involving these groups, the project aims to create long-term benefits for the community, beyond the immediate infrastructure improvements.

D4. Explain how community input was received and incorporated into the project.* (456/500 words)

The development of the Baker Boulevard Bridge Replacement Project will involve extensive community outreach and stakeholder engagement to ensure that the voices of local residents and other stakeholders are heard and incorporated into the project planning and implementation process.

Initial Community Outreach Efforts:

Initial outreach efforts will be conducted as part of the project's development. Public meetings will be held in Baker to gather input from community members. These meetings will provide an opportunity for residents to express their concerns, suggestions, and expectations regarding the bridge replacement project. The input from these meetings will be instrumental in shaping the project's initial design and approach.

Public Meetings and Stakeholder Engagement:

As the project progresses, additional public meetings will be organized to gather updated input from residents and stakeholders, with an emphasis on the vulnerable communities impacted by the project. These meetings will be scheduled in Baker, ensuring that the maximum number of people can attend and participate. The meetings will be advertised through various channels, including the County's website, social media platforms, mailings, and local newspapers, ensuring broad awareness and accessibility. Community groups will assist in coordinating logistics for these meetings, further integrating community involvement.

Documentation and Feedback Incorporation:

During these meetings, comments and questions from the public will be documented and made available on the County's website, along with the meeting presentations. This transparency will allow for continuous public engagement and provide a record of community feedback. The project team will review and incorporate relevant feedback into the project plans, ensuring that the community's needs and concerns are addressed. For example, suggestions regarding the inclusion of pedestrian walkways and enhanced safety features will be integrated into the design.

Collaboration with Agencies and Organizations:

The project team will collaborate with various agencies and organizations, including Caltrans, the County of San Bernardino, and the Baker Community Services District, to align the project with broader state and federal guidelines. This collaboration will ensure that the project not only meets local needs but also adheres to higher standards of safety, resilience, and environmental sustainability.

Future Stakeholder Engagement:

Stakeholder engagement will continue throughout the project implementation phase. Periodic public meetings will be organized to provide updates on project progress and gather ongoing feedback. These sessions will ensure that any emerging issues are promptly addressed and that the community remains informed and involved. The project team will also use newsletters, social media updates, and a dedicated project website to keep the public informed about milestones and opportunities for input.

Educational Initiatives:

Additionally, the project will include educational initiatives to promote the importance of infrastructure resilience and climate adaptation. Local schools, community groups, and environmental organizations will be involved in these initiatives, creating long-term benefits for the community beyond the immediate infrastructure improvements.

D5. Identify strategies included in the project scope that seek to avoid or minimize impacts, as determined through collaboration with community members. * (446/500 words)

The Baker Boulevard Bridge Replacement Project Team is committed to minimizing negative impacts on the community during the construction phase. Although direct collaboration with community members has not yet occurred, the project team is dedicated to engaging with the Baker community to identify potential concerns and collaboratively develop strategies to address them. The following outlines their approach to identifying these strategies and implementing them to minimize disruptions.

Identification of Community Concerns

The project team will initiate a series of public meetings and workshops to gather input from community members about potential concerns during the construction phase. Through these engagements, they will work closely with residents, businesses, and other stakeholders to identify key issues such as traffic disruptions, noise, and accessibility. Understanding these concerns is crucial for developing targeted mitigation strategies that address the specific needs of the community.

Collaborative Planning for Construction Phases

Once potential concerns are identified, the project team will collaborate with the community to develop a phased construction plan that minimizes disruptions. This plan will involve detailed scheduling and coordination to maintain traffic flow and accessibility. For example, construction activities may be scheduled during off-peak hours to reduce traffic congestion and ensure that critical access routes remain open. The phased approach will also prioritize maintaining pedestrian access and safe walkways throughout the construction period.

Environmental and Noise Mitigation Measures

In response to community feedback, the project team will implement specific measures to mitigate environmental impacts, such as noise and dust. This will include using noise barriers, water sprays, and other dust suppression techniques. The team will also collaborate with residents to determine the best times for potentially disruptive activities, ensuring that construction work is conducted in a manner that minimizes inconvenience, especially in residential areas and near sensitive locations such as schools.

Preservation of Cultural and Environmental Resources

Throughout the construction phase, the project team will work with local agencies and community members to protect cultural and environmental resources. This includes careful monitoring and management of construction activities to avoid damaging nearby historical sites and natural

habitats. Any necessary mitigations will be implemented in consultation with local stakeholders to ensure that these resources are preserved.

Continuous Communication and Community Engagement

To maintain transparency and keep the community informed, the project team will establish ongoing communication channels, including newsletters, social media, and a dedicated project website. Regular updates will be provided to inform the community about construction schedules, progress, and any potential changes. Additionally, public meetings and feedback sessions will be held throughout the construction phase to address emerging concerns and gather input. This ongoing dialogue will enable the project team to respond swiftly to issues and adjust plans as necessary to minimize impacts.

Section 5. Additional Evaluation Criteria

A. Reduction of Greenhouse Gases – Describe how the proposed project will reduce greenhouse gas emissions and criteria pollutants and advance California’s air quality and climate goals, including the proposed use of natural infrastructure elements. * (250/250 words)

The proposed project to replace the Baker Bridge with a modern and widened structure stands to significantly reduce greenhouse gas (GHG) emissions and criteria pollutants, advancing California’s air quality and climate goals. By providing a reliable detour route, the new bridge will prevent motorists from being stranded and reduce the need for detours, which currently increase vehicle idling and emissions leading to decreased fuel consumption and emissions.

Based on an Initial Study completed by the County of San Bernardino for an identical project (Rock Springs Road Bridge over the Mojave River), the Rock Springs Road Bridge can serve as a case study to illustrate GHG reduction benefits. Notably, while Rock Springs serves as a strong example, the Baker project stands to benefit even more due to its higher traffic volume, particularly from tourist and local traffic. This increased volume suggests that the reductions in emissions and fuel consumption could be even more substantial than those observed at Rock Springs.

The project will enhance traffic flow and reduce congestion, leading to lower emissions from vehicles. Additionally, the use of durable materials like concrete will reduce the need for frequent maintenance, further decreasing emissions related to maintenance activities. The inclusion of natural infrastructure elements, such as enhanced vegetation and green spaces, will also help absorb CO₂ and other pollutants, contributing to improved air quality. These combined efforts align with California’s broader environmental objectives, making the Baker Boulevard Bridge Replacement Project a critical initiative for advancing the state's climate and air quality goals.

B. Reduction of Vehicle Miles Traveled – The project nomination should demonstrate how the project will minimize vehicle miles traveled while maximizing person throughput. * (238/250 words)

The proposed replacement of the bridge on Baker Boulevard is designed to minimize vehicle miles traveled (VMT) and maximize person throughput, drawing on the successful case study of the Rock Springs Road Bridge over the Mojave River. Like the Baker Boulevard project, the Rock Springs Road project involved replacing an outdated structure to eliminate long detours and improve traffic flow. However, Baker is even more positioned to benefit from this type of infrastructure upgrade due to its strategic location and higher volume of tourist traffic. Thus, the benefits observed in the Rock Springs Road project serve as a conservative estimate for the potential impact in Baker.

By providing a modern, efficient structure, the Baker project will eliminate the need for long detours currently necessitated by the weight and structural limitations of the existing timber bridge. This will directly reduce VMT, as vehicles will have a direct and reliable route available. The project will also facilitate smoother traffic flow, reduce congestion, and increase person throughput by accommodating more vehicles and pedestrians safely and efficiently.

Additionally, the project will enhance connectivity for local residents, allowing for more direct access to essential services, employment, and educational opportunities. Given Baker's greater potential for economic growth and higher traffic demand, the anticipated reductions in VMT and improvements in throughput may surpass those achieved in the Rock Springs Road project, making this initiative a key contributor to a more sustainable and efficient transportation network.

C1. Transportation, Land Use, and Housing Goals (Regional) – The project nomination should explain how the project will advance transportation, land use, and housing goals within the region as identified in the region’s Regional Transportation Plan, Sustainable Communities Strategy (where applicable), and Regional Housing Needs Allocation. * (326/500)

This may include demonstrating how the project will support or align with the region’s Regional Early Action Planning (REAP) grant investments or other regional planning or implementation efforts.

The Southern California Association of Governments (SCAG) Regional Comprehensive Plan Report includes a Regional Transportation Plan (RTP). The RTP was created to guide policies and funding to ensure that they reflect the long term vision and goals of SCAG and align with the Regional Comprehensive Plan. The RTP goals are: “1) establish a more efficient transportation system that reduces and better manages vehicle activity, and 2) build a cleaner transportation system that minimizes air quality impacts and is energy efficient” (SCAG Regional

Comprehensive Plan Report). Both of these goals support the Baker Bridge Replacement project because it is “demonstrated to be both regionally beneficial relative to the performance in the regional transportation system and reflective of ... community needs throughout the region”.

The Regional Comprehensive Plan states that transportation policies can benefit and impact land use and housing by focusing transportation investments to serve the region’s community needs for housing and jobs thereby guiding land use planning. In doing so, transportation investments can increase property values and demand for subsequent development and have a positive impact on the local economic landscape.

The quality of life in any region depends in large part on travel - how easy it is to get from home to work and back, the amount of time spent commuting, and the types and degree of choices available for getting around. Closely related to that are the choices about how land should be used and what kinds of buildings should be constructed. The types and appearances of buildings, how they function, and where they are located all have an effect on transportation use.

Sustainably planning for land use and housing in Southern California will maximize the efficiency of the existing transportation network, provide the necessary amount and mix of housing for the region’s growing population, enable a diverse and growing economy and protect important natural resources. The Baker Bridge Replacement projects aligns with all of these aims of SCAG and will help to achieve their goals for the larger Regional Comprehensive Plan.

C2. Transportation, Land Use, and Housing Goals (Local) – The project nomination should explain how the project will advance local transportation, land use, and housing goals. * (260/500)

This narrative may include:

1) Demonstrating, at the time of project nomination, the local jurisdiction has submitted its Housing Element annual progress report to the State of California for the current and prior year; or

2) Demonstrating the local jurisdiction applied to the Department of Housing and Community Development’s Prohousing Designation Program and meets Prohousing criteria that support efficient land use. Applicants are encouraged to apply for the California Department of Housing and Community Development’s (HCD) Prohousing Designation Program and to describe how local policies align with prohousing (<https://www.hcd.ca.gov/community-development/prohousing/index.html>).

a. The project nomination must include a commitment by the local jurisdiction to continue pursuing full Prohousing Designation after receiving Local Transportation Climate Adaptation Program funding.

If housing is not an issue for the local jurisdiction, provide a detailed explanation, including an accounting of the jurisdiction's assigned local share of the Regional Housing Needs Allocation and the jurisdiction's progress toward meeting those needs documented in the jurisdiction's Housing Element annual progress report for the current and prior years.

According to the Baker Community Action Guide (BCAG) the community “aspires to grow by improving the tourism capture and opportunities of Las Vegas traffic and reinvigorating hospitality and travel-oriented businesses on Baker Boulevard” as well as desiring “to improve employment opportunities for its residents.” The BCAG also calls for improved community infrastructure and an increase in housing development. The replacement of Baker Bridge would directly impact this community’s goals to preserve and advance their crucial economic backbone of tourism while strengthening their transportation infrastructure and affording them the opportunity for the economic growth they desire.

San Bernardino County also developed a Countywide Plan to guide future decisions, investments, and improvements which affect both the incorporated and unincorporated areas within its jurisdiction. The Baker Bridge Replacement Project aligns with and supports all of the following Countywide goals as well:

- Accommodation of growth in the unincorporated county when it benefits existing communities and supports the regional economy.
- Support growth through the balance of jobs and housing to reduce vehicle miles traveled, increase job opportunities and household income, and improve quality of life.
- Intend that new commercial development in the unincorporated areas serve unincorporated residential areas, tourists, and/or freeway travelers.
- Encourage new commercial development to be concentrated to enhance pedestrian circulation and reduce vehicular congestion and vehicle miles traveled.

By taking into consideration the goals of the Baker community itself and those governing it, replacing the Baker Bridge would play a significant role in helping achieve all of these objectives at the intersection of transportation, land use and housing for the community.

D. Cost Effectiveness – Consideration will be given to projects that provide positive benefits in relationship to the project costs. * (133/250)

The Commission will consider measurable benefits using the California Life-Cycle Benefit/Cost Analysis (<https://dot.ca.gov/programs/transportation-planning/division-of-transportation-planning/data-analytics-services/transportation-economics>) or an alternative proposed by the applicant.

The Baker Boulevard Bridge Replacement Project is a highly cost-effective solution, particularly given the current state of the existing timber bridge, which is well beyond its expected lifespan of 80 years, now approaching 100 years. The cost of maintaining a bridge at the end of its life is significantly higher than the cost of replacement, as ongoing repairs and maintenance efforts become increasingly frequent and expensive. This project will eliminate these escalating

maintenance costs, ensuring a more reliable and durable infrastructure. The long-term savings from reduced maintenance, combined with the enhanced safety and resilience provided by the new bridge, offer substantial benefits in relation to the project costs. This investment not only addresses immediate infrastructure needs but also provides a sustainable, cost-effective solution that will serve the community for many decades to come.

[UPLOAD] Cost Effectiveness Screenshot (optional)*

Section 6. Funding and Project Delivery

Delivery Method: Specify what delivery method is being used for the project. If a delivery method other than design-bid-build is used for the project, identify the delivery method used. If the delivery method is unknown at the time of nomination, it should be reported as soon as it is known. * (14/250)

This can be a one sentence statement, but no more than one paragraph.

The delivery method being used for the Baker Boulevard Bridge Replacement Project is design-bid-build. Prior to the design phase we will conduct a community input period so that members of the Baker community will be engaged in partnership and collaboration with the project. It is important to honor the voices of those in these underserved and under-resourced communities at every opportunity.

Contracts: If more than one contract is needed for the construction phase and separate allocations are needed, explain in this section. (126/250 Words)

Multiple contracts will be needed for the construction phase of the Baker Boulevard Bridge Replacement Project. The project is currently funded through a combination of San Bernardino County Transportation Authority (SBCTA) Measure I Major Local Highway Projects (MLHP) funds and Surface Transportation Program (STP) funds. The total estimated construction cost is \$28 million, with \$15 million already allocated from MLHP and STP funds. Given this funding structure and the requirement to advertise the project for construction before the end of 2025, separate allocations will be necessary to cover the full construction cost, including contingencies, construction management, and escalation. This grant proposal aims to secure the \$13 million needed to address the funding shortfall, which will be specifically integrated to enhance the

bridge's climate resilience and sustainability.

Schedule Threats: In narrative format, list any potential schedule threats and proposed mitigation strategies to keep the project on schedule. Examples of schedule threats include geotechnical analysis needs or concerns, complicated utility relocations, or land acquisition needs. * (702/750)

The Baker Boulevard Bridge Replacement Project faces several potential schedule threats that could impact its timely completion. Identifying these threats and proposing effective mitigation strategies is essential to keeping the project on track and ensuring it meets the critical milestones set for 2025. The key schedule threats and their mitigation strategies are discussed below.

Geotechnical Analysis Needs:

One of the primary schedule threats involves the need for additional geotechnical analysis. The preliminary foundation report (PFR) provided preliminary recommendations based on subsurface information from nearby bridges, as no site-specific field investigation was conducted initially. This preliminary information is sufficient for the bridge type selection process; however, site-specific geotechnical field investigations, laboratory testing, and engineering analyses are crucial for final design recommendations.

Mitigation Strategy: To mitigate this threat, it is essential to expedite the approval of the bridge type selection so that site-specific geotechnical investigations can commence immediately. Engaging a geotechnical engineering firm early in the project and scheduling field investigations as soon as the bridge type is approved will help gather necessary data without causing significant delays. Continuous coordination between the design team and geotechnical engineers will ensure that any arising issues are promptly addressed, preventing potential schedule slips.

Environmental Permitting Delays:

Securing the necessary environmental permits is another significant schedule threat. The environmental document must be completed by July 2025, with all permits secured by November 2025. Delays in obtaining approvals from regulatory agencies could hinder the commencement of construction activities.

Mitigation Strategy: Early engagement with environmental regulatory agencies is critical. Initiating the permitting process well in advance and maintaining regular communication with the agencies will help identify and address any potential issues early. Preparing comprehensive environmental assessments that comply with CEQA and NEPA requirements will facilitate smoother and quicker approval processes. Additionally, allocating dedicated resources to handle environmental permitting can ensure timely submission and follow-up on permit applications.

Complicated Utility Relocations:

The relocation of utilities is often a complex process that can pose significant schedule threats. Utility relocations may require coordination with multiple utility companies, and any delays in this process can impact the overall project timeline.

Mitigation Strategy: Early identification of all utilities that need to be relocated is crucial. The project team should engage with utility companies at the earliest stages of the project to plan and schedule relocations. Developing a detailed utility relocation plan that includes timelines and responsibilities will help manage this process effectively. Additionally, securing agreements with utility companies that outline their commitments and timelines can mitigate potential delays.

Land Acquisition Needs:

Acquiring the necessary right-of-way and securing temporary construction easements are potential schedule threats. Any legal or logistical obstacles in this process can delay the project.

Mitigation Strategy: To address this threat, the project team should begin land acquisition processes as early as possible. Engaging with property owners and negotiating agreements well in advance will help secure the needed land without delays. Utilizing eminent domain as a last resort, if necessary, can also ensure that land acquisition does not hinder the project timeline. Clear communication with all stakeholders and affected parties will facilitate smoother negotiations and acquisitions.

Construction Advertisement and Bidding Delays:

The project must be advertised for construction by December 2025. Any delays in preparing and releasing bid documents or in the bidding process itself could impact the start of construction.

Mitigation Strategy: To mitigate this threat, the project team should start preparing bid documents well in advance of the December 2025 deadline. Ensuring that all documentation is complete and accurate will prevent delays during the advertisement phase. Additionally, engaging with potential contractors early and providing them with preliminary project information can help expedite the bidding process. Establishing a clear and transparent bidding process will attract competitive bids and facilitate timely selection of a contractor.

Unforeseen Environmental Conditions:

Unexpected environmental conditions, such as adverse weather or unidentified site contamination, can pose significant threats to the project schedule.

Mitigation Strategy: Conducting thorough site assessments and environmental studies during the planning phase will help identify potential issues early. Developing contingency plans for adverse weather conditions and other unforeseen environmental factors will ensure that the project can adapt and continue without major delays. Incorporating buffer times into the project schedule can provide flexibility to handle unexpected events.

Other Potential Threats: A description of other potential threats considered.(477/500)

This may include, but is not limited to, threats associated with deliverability and engineering issues, and funding commitments.

DELIVERABILITY:

Coordination with multiple stakeholders, including the County, Caltrans, and the Baker Community Service District, can be complex and time-consuming. Any delays in obtaining necessary approvals or aligning stakeholder priorities could impact the project timeline.

Mitigation Strategy: To mitigate these risks, it is crucial to maintain robust project management practices, including regular stakeholder meetings, clear communication channels, and a detailed project timeline with built-in contingencies. Assigning a dedicated project manager to oversee coordination efforts and ensure timely decision-making will also help streamline the process.

FUNDING:

Securing adequate funding for the project is another potential threat. The total construction cost is estimated at \$28 million, with \$15 million currently allocated from the San Bernardino County Transportation Authority (SBCTA) Measure I Major Local Highway Projects (MLHP) funds and Surface Transportation Program (STP) funds. However, there is a \$13 million funding shortfall.

Mitigation Strategy: The project team should actively pursue additional funding opportunities and maintain close communication with funding agencies to ensure timely allocation of the required funds. Developing a strong case for the project's benefits, including its role in climate resilience and economic impact, will be essential in securing the necessary financial support. Additionally, preparing contingency plans for phased construction or scope adjustments can provide flexibility in case of funding delays.

ENGINEERING:

Surface Conditions:

The project site extends across the Mojave River channel, which falls within FEMA flood hazard "Zone A," subject to inundation by a 1% annual flood (100-year flood). The lack of a determined base flood elevation by FEMA presents a challenge in designing the bridge to withstand potential flooding and scour.

Mitigation Strategy: Additional hydrological studies and flood risk assessments will be conducted to inform the final design, ensuring the bridge can withstand extreme flooding events. Engaging experienced hydrologists early in the project and integrating their findings into the design process will help mitigate this risk.

Groundwater:

Groundwater depth is a critical factor in assessing liquefaction potential and foundation design. Preliminary designs have conservatively placed the groundwater table at the riverbed elevation for initial screening. However, using an abnormally high groundwater level without clear evidence can lead to costly overdesigns.

Mitigation Strategy: To mitigate potential delays, site-specific field investigations will be prioritized and scheduled immediately after type selection approval. Close coordination with geotechnical experts will ensure accurate data collection and analysis.

Corrosion

The potential for soil corrosion at the project site poses another engineering threat. The preliminary analysis suggests the presence of clayey soils, which are typically corrosive. However, the exact corrosion potential will be evaluated during the final design phase using site-specific soil borings and laboratory tests.

Mitigation Strategy: If the soils are found to be corrosive, appropriate mitigation measures, such as using corrosion-resistant materials or protective coatings, will be implemented in the bridge design to prevent long-term damage and ensure structural integrity. Regular monitoring and testing during construction will ensure these measures are effective.

Will this project require Rail Company Coordination?*

Yes

No

California Environmental Quality Act and National Environmental Policy Act Status* (389/1000 words)

A one to two paragraph description of where the applicant is in the process of securing approval for California Environmental Quality Act and, if necessary, National Environmental Policy Act.

*i. If the California Environmental Quality Act documents are not complete, in a one or two paragraph description, explain how the applicant will ensure the completion of required environmental documentation within six months of program adoption as required in the guidelines as outlined in **Section 19**.*

ii. A one to two paragraph description of the environmental and community impacts as identified in the environmental document and if applicable the proposed mitigations. This can also be presented in a table format.

iii. A link to the final environmental document(s), or the draft environmental document(s), must be included for all project segments.

Currently, this project is in the beginning stages of securing approval for the California Environmental Quality Act and of the National Environmental Policy Act. The County intends to prepare a joint NEPA/CEQA document that is designed to meet the requirements of both NEPA and the California Environmental Quality Act (CEQA).

To mitigate the threat of delays in environmental permitting and compliance, the project team will leverage a successful template developed from identically similar previous bridge replacement projects (the Dola and Lanzit Ditches on the National Trails Highway). This template includes proven strategies for navigating the environmental review process efficiently. By initiating the process as early as possible, the team can anticipate potential challenges and streamline permit applications. A dedicated environmental team, experienced in similar projects, will oversee the process, conducting necessary studies and coordinating with relevant regulatory agencies. The established template ensures that regular communication with permitting authorities is maintained, enabling the team to track the status of applications and address any concerns promptly. Additionally, buffer periods will be incorporated into the schedule to account for potential delays, ensuring that the project remains on track.

ENVIRONMENTAL IMPACT AND MITIGATION MEASURES:

GEN-A: All work, including equipment staging, will remain on paved areas. No new work outside disturbed areas or existing rights-of-way (i.e., existing shoulder-to-shoulder and/or curb-to curb) will be performed without further environmental evaluations. GEN-B: Material staging area shall be clearly delineated in order to keep equipment and trucks within existing paved areas. Further, project related vehicle access, maintenance activities, and equipment storage shall be restricted to established roads, designated access roads, maintenance rights-of-way, and designated storage, staging, and parking areas. Off-road traffic outside of these designated areas shall be prohibited. GEN-C: Standard best management practices shall be implemented during all maintenance activities, especially those pertaining to dust control, erosion control, and stormwater pollution prevention. If equipment is parked overnight then a drip pan, or some other form of protection, shall be placed under the vehicle in order to contain any drips, leaks, and or spills. All food and maintenance trash shall be removed from the site daily.

Reference: IOM dated January 17, 2024 Subject: SUBJECT: CEQA REVIEW: Baker Boulevard Bridge Over Mojave River Channel, Restoration & Replacement Geotechnical Boring (W.O. H14278). File: Yard 12/Irwin Road.

Links:

- <https://ceqanet.opr.ca.gov/2014121001>
- 3091_Baker_Type Selection Report_20240703

Section 7. Funding

Funding Table: Provide the table below for all project phases. This table must be consistent with the electronic Project Programming Request form submitted with the project nomination.*

- **ROW SUP & CON SUP:** Only for Caltrans implemented projects.
- **Required Match:** Project funding must include the required funding match.
- **Cost Overruns:** A description that demonstrates the ability to absorb any cost overruns and deliver the project nomination with no additional funding from this program.
- **Federal Discretionary Grant Funds:** Identify any discretionary federal grant funds that have been committed as of the project nomination due date, or those discretionary federal grant funds that have been applied for and not yet committed. Proof of the commitment should be provided in the form of a letter or public announcement issued by the authorizing federal agency.

	A	B	C	D	E
1	Phase	Fiscal Year of Allocation	Amount	Funding Source	Committed or Uncommitted
2	PAED	2015	2,515,500	SBCTA MLHP**	Committed
3	PSE	2015		SBCTA MLHP**	Committed
4	ROW	2015		SBCTA MLHP**	Committed
5	ROW SUP	N/A			
6	CON	2015	27,930,000	SBCTA MLHP**	Committed
7	CON SUP	N/A			

[UPLOAD] Project Programming Request*

Upload a file. No files have been attached yet.

Acceptable file types: .csv, .doc, .docx, .odt, .pdf, .rtf, .txt, .wpd, .wpl

Each project nomination must include an electronic Project Programming Request form. The electronic Project Programming Request form must list federal, state, local, and private funding categories by project phase and fiscal year. If the project nomination includes multiple project modes to be delivered under separate contracts, each project mode must have its own electronic Project Programming Request form. The scope, benefits, schedule, and funding plan of the electronic Project Programming Request form must be consistent with the information in the project nomination. Access to the electronic Project Programming Request form may be found on the Caltrans website, which may be accessed here: <https://dot.ca.gov/programs/financial-programming/office-of-capital-improvement-programming-ocip>.