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OPPORTUNITY & PACKAGE DETAILS:

Opportunity Number:	DTOS59-25-RA-RAISE
Opportunity Title:	FY 2025 National Infrastructure Investments
Opportunity Package ID:	PKG00288352
Assistance Listing Number:	20.933
Assistance Listing Title:	National Infrastructure Investments
Competition ID:	
Competition Title:	
Opening Date:	11/01/2024
Closing Date:	01/30/2025
Agency:	69A345 Office of the Under Secretary for Policy
Contact Information:	Andrea Jacobson BUILD Program Manager E-mail: andrea.jacobson@dot.gov

APPLICANT & WORKSPACE DETAILS:

Workspace ID:	WS01473253
Application Filing Name:	FY 2025 National Infrastructure Investments
UEI:	CFXEZ75TPJ84
Organization:	SAN BERNARDINO COUNTY
Form Name:	Application for Federal Assistance (SF-424)
Form Version:	4.0
Requirement:	Mandatory
Download Date/Time:	Jan 27, 2025 11:06:05 AM EST
Form State:	Error(s)

FORM ACTIONS:

Application for Federal Assistance SF-424

*** 1. Type of Submission:**

- ☐ Preapplication
☒ Application
☐ Changed/Corrected Application

*** 2. Type of Application:**

- ☒ New
☐ Continuation
☐ Revision

*** If Revision, select appropriate letter(s):**

*** Other (Specify):**

*** 3. Date Received:**

Completed by Grants.gov upon submission.

4. Applicant Identifier:

5a. Federal Entity Identifier:

5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier:

8. APPLICANT INFORMATION:

*** a. Legal Name:**

SAN BERNARDINO COUNTY

*** b. Employer/Taxpayer Identification Number (EIN/TIN):**

956002748

*** c. UEI:**

CFXEZ75TPJ84

d. Address:

*** Street1:**

825 E. 3rd Street

Street2:

Room 143

*** City:**

San Bernardino

County/Parish:

*** State:**

CA: California

Province:

*** Country:**

USA: UNITED STATES

*** Zip / Postal Code:**

92415-0835

e. Organizational Unit:

Department Name:

Public Works

Division Name:

Transportation Planning

f. Name and contact information of person to be contacted on matters involving this application:

Prefix:

*** First Name:**

Jeremy

Middle Name:

*** Last Name:**

Johnson

Suffix:

Title:

Engineering Manager

Organizational Affiliation:

Department of Public Works

*** Telephone Number:**

909-387-8165

Fax Number:

909-387-7847

*** Email:**

jeremy.johnson@dpw.sbcounty.gov

Application for Federal Assistance SF-424

* 9. Type of Applicant 1: Select Applicant Type:

B: County Government

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

* 10. Name of Federal Agency:

69A345 Office of the Under Secretary for Policy

11. Assistance Listing Number:

20.933

Assistance Listing Title:

National Infrastructure Investments

* 12. Funding Opportunity Number:

DTOS59-25-RA-RAISE

* Title:

FY 2025 National Infrastructure Investments

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

Location Map for SF424.pdf

Add Attachment

Delete Attachment

View Attachment

* 15. Descriptive Title of Applicant's Project:

National Trails Highway 27 Rural Bridges Project

Attach supporting documents as specified in agency instructions.

Add Attachments

Delete Attachments

View Attachments

Application for Federal Assistance SF-424**16. Congressional Districts Of:**

* a. Applicant

33

* b. Program/Project

23

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment

Delete Attachment

View Attachment

17. Proposed Project:

* a. Start Date:

12/31/2025

* b. End Date:

12/31/2033

18. Estimated Funding (\$):

* a. Federal	25,000,000.00
* b. Applicant	46,800,000.00
* c. State	0.00
* d. Local	0.00
* e. Other	0.00
* f. Program Income	0.00
* g. TOTAL	71,800,000.00

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**☐ a. This application was made available to the State under the Executive Order 12372 Process for review on☐ b. Program is subject to E.O. 12372 but has not been selected by the State for review.☒ c. Program is not covered by E.O. 12372.*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**☐ Yes☒ No

If "Yes", provide explanation and attach

Add Attachment

Delete Attachment

View Attachment

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 18, Section 1001)**

☒ ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix:

* First Name:

Noel

Middle Name:

* Last Name:

Castillo

Suffix:

* Title:

Director, Department of Public Works

* Telephone Number:

909-387-7906

Fax Number:

909-387-7975

* Email:

noel.castillo@dpw.sbcounty.gov

* Signature of Authorized Representative:

Stephen Martinez

* Date Signed:

01/30/2025

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Contact Information:	Andrea Jacobson BUILD Program Manager E-mail: andrea.jacobson@dot.gov

APPLICANT & WORKSPACE DETAILS:

Workspace ID:	WS01473531
Application Filing Name:	FY 2025 National Infrastructure Investments
UEI:	CFXEZ75TPJ84
Organization:	SAN BERNARDINO COUNTY
Form Name:	Attachments
Form Version:	1.2
Requirement:	Mandatory
Download Date/Time:	Jan 27, 2025 02:06:16 PM EST
Form State:	No Errors

FORM ACTIONS:

ATTACHMENTS FORM

Instructions: On this form, you will attach the various files that make up your grant application. Please consult with the appropriate Agency Guidelines for more information about each needed file. Please remember that any files you attach must be in the document format and named as specified in the Guidelines.

Important: Please attach your files in the proper sequence. See the appropriate Agency Guidelines for details.

1) Please attach Attachment 1	<input type="text"/>	Add Attachment	Delete Attachment	View Attachment
2) Please attach Attachment 2	<input type="text"/>	Add Attachment	Delete Attachment	View Attachment
3) Please attach Attachment 3	<input type="text"/>	Add Attachment	Delete Attachment	View Attachment
4) Please attach Attachment 4	<input type="text"/>	Add Attachment	Delete Attachment	View Attachment
5) Please attach Attachment 5	<input type="text"/>	Add Attachment	Delete Attachment	View Attachment
6) Please attach Attachment 6	<input type="text"/>	Add Attachment	Delete Attachment	View Attachment
7) Please attach Attachment 7	<input type="text"/>	Add Attachment	Delete Attachment	View Attachment
8) Please attach Attachment 8	<input type="text"/>	Add Attachment	Delete Attachment	View Attachment
9) Please attach Attachment 9	<input type="text"/>	Add Attachment	Delete Attachment	View Attachment
10) Please attach Attachment 10	<input type="text"/>	Add Attachment	Delete Attachment	View Attachment
11) Please attach Attachment 11	<input type="text"/>	Add Attachment	Delete Attachment	View Attachment
12) Please attach Attachment 12	<input type="text"/>	Add Attachment	Delete Attachment	View Attachment
13) Please attach Attachment 13	<input type="text"/>	Add Attachment	Delete Attachment	View Attachment
14) Please attach Attachment 14	<input type="text"/>	Add Attachment	Delete Attachment	View Attachment
15) Please attach Attachment 15	<input type="text"/>	Add Attachment	Delete Attachment	View Attachment



FY 2025

Better Utilizing Investments to Leverage Development (BUILD) Grant Program

Route 66 Bridge Replacement Project

January 30, 2025

February 24, 2025

PROJECT DESCRIPTION

San Bernardino County (“the County”) seeks \$25 million from the **Better Utilizing Investments to Leverage Development (BUILD) Grant Program** to replace 27 bridges along the National Trails Highway (also known as “Route 66”) between Barstow and Amboy, California. This initiative (the “Project”) is crucial for resetting the service life of these vital infrastructure structures along this stretch of the highway and ensuring continued access for vehicles. These 27 bridges serve to bridge both literal and figurative gaps in service within a crucial rural transportation corridor. The complete closure of this corridor would have far-reaching implications for interstate commerce, national security, and the preservation of one of America’s historical treasures. The replacement of these bridges will enable the entire stretch of roadway to accommodate most vehicles and light trucks for the first time in over 9 years.

The National Trails Highway corridor is essential for freight movement, both by rail and truck, and the nearby Marine Corps Logistics Base Barstow and the Twentynine Palms Marine Corps Air Ground Combat Center. Each bridge proposed for replacement serves as a lifeline by connecting rural communities to daily destinations and facilitating the flow of commerce throughout the region. Residents of the rural towns lining Route 66 depend on these bridges for transportation, access to vital services and commercial activities.

Previously, National Trails Highway experienced an average daily traffic count of 1,737 vehicles, or an average of 634,005 per year. Primarily large trucks, visiting tourists, and resident vehicles crossed these bridges. Owing to structural deficiencies, the weight limit on some bridges along the project corridor have dropped to as low as 3 tons. This restriction prevents large emergency, military, and commercial vehicles from using the roadway, leading to significant disruptions in travel and the movement of goods. These challenges are particularly acute in rural areas including the communities in eastern San Bernardino County, where alternative routes are limited. Some sections along the project corridor are closed due to bridge collapses that resulted from significant storm events.

With BUILD funding, the County can ensure the continued functionality of Route 66, bolster economic growth, and improve community connectivity. The proposed bridge replacement will enhance the structural integrity and safety of the bridges and incorporate sustainable construction practices that comply with modern standards. The project will also preserve the historical significance of Route 66 and promote access to transportation resources for communities from Barstow to Needles. This funding is critical for maintaining the infrastructure that residents rely on and safeguarding the economic vitality of the region and the nation.

Detailed Statement of Work

The bridges proposed for replacement were constructed with the original design of simple timber girders and a continuous cast-in-place concrete deck. The bridges span various manufactured gullies that control surface drainage. The bridges are supported on closed-end, backfilled, timber pile extension strutted abutments and timber pile extension bents and now have asphalt overlays. Constructed as many as 10 or more decades ago in the 1920s and 1930s, these bridges are now well beyond their intended operational service life and urgently require replacement to meet the evolving demands of modern traffic and ensure public safety. Their advanced age has exposed them to continuous environmental elements, leading to significant deterioration over time. The weakened load-bearing capacity creates safety concerns for large emergency, military, and commercial vehicles. Given the bridges’ age, adaptation to current traffic conditions is critical to

prevent catastrophic failures and provide safe infrastructure for the movement of goods. Of the 27 bridges in this project scope, 10 have restricted weight limit postings as low as 3 tons due to significant structural deficiencies.

Proposed Replacement Bridge Design

To address safety and durability concerns, the existing bridges will be replaced with modern concrete bridges designed in accordance with American Association of State Highway and Transportation Officials standards, or equivalent, featuring pile extensions at the piers and robust piles supporting the abutment foundation. The bridge barriers will consist of steel California St-75 Bridge Rail painted white to match the existing railing and provide aesthetic continuity in the project area.

The proposed replacement structures will be designed to accommodate 100-year flood thresholds and withstand significant flooding events. Additionally, these new bridges will comply with current codes, incorporate seismic design criteria, and improve safety during seismic events. Care will be taken to replicate the original structure type for historical accuracy, preserving the heritage of these landmark bridges.

The County will ensure community involvement in bridge design by hosting public meetings at varying locations in the project area with dates selected to allow maximum participation. When possible, the County will reach out to existing community groups to help coordinate logistics.

Transportation Challenges and Solutions

The iconic Route 66, also known as the "Mother Road," has been an American institution for over 90 years, providing a vital transportation link between the Midwest and the West Coast. As with all infrastructure, maintenance and upgrades are necessary to keep this vital corridor safe and efficient for the millions of travelers who rely on the bridges each year. One of the most pressing transportation challenges facing Route 66 today is the replacement of aging bridges, many of which were constructed in the 1920s and 1930s. A multi-million-dollar initiative to upgrade several critical bridges along the route has been underway in recent years, but the process has presented numerous challenges, from navigating complex environmental regulations to managing the impact on local businesses and traffic flow.

National Trails Highway is the only alternate route to Interstate 40 (I-40), a heavily used route connecting Barstow to Needles, in the event of freeway closures. It also provides exclusive access to a 73-mile segment of BNSF's rail corridor and serves as a critical access route for the United States Marine Corps (Marine Corps) Logistics Base in Barstow and the Marine Corps Air Ground Combat Center in Twentynine Palms. Therefore, this project aims to mitigate potential safety risks for the community related to possible accidents or closures on I-40, derailments or collisions along the rail line, and delays in transporting essential equipment to military installations.

The new bridges will not only bolster safety but also preserve the area's historical character. Careful consideration will be applied to their design, ensuring that they accommodate both legal and permitted loads while retaining a historically accurate appearance and harmonizing with the surrounding environment. This project yields significant benefits in infrastructure enhancement and increased community accessibility, reinforcing the County's dedication to improving travel experiences for both residents and visitors.

Structurally Deficient Bridges: The 27 bridges along Route 66 have been deemed structurally deficient. This has led to limited travel options and forced detours that inconvenience drivers,

resulting in frustration and disruptions to local traffic patterns. To address these immediate impacts on travel, prioritizing the replacement of the most critical decommissioned bridges is essential. Implementing temporary structures or establishing alternate routes for certain types of vehicles can help maintain traffic flow while the replacement work is carried out.

Bridges with Weight Restrictions: Of the 27 bridges deemed structurally deficient, 10 have weight restrictions. This situation complicates logistics, affects the efficiency of freight transport, and jeopardizes the long-term viability of local businesses that rely on larger deliveries.

To address this issue, developing a phased replacement plan for the weight-restricted bridges is essential to allow heavier vehicles access to critical areas. Furthermore, collaborating with local trucking companies to establish clear routes and schedules can help mitigate the impact on commercial activity during the construction period.

Resilience and Natural Disasters: Recent years have witnessed the detrimental effects of natural disasters along segments of Route 66, with soaring incidents of catastrophic floods and wildfires affecting the integrity of many bridges in the project area. To address these challenges, the project will improve the bridges to withstand future flooding and the threat of wildfires.

BNSF Corridor Access

Due to the structurally deficient condition of the bridges, there are significant restrictions on the movement of goods and vehicles within the BNSF corridor. These limitations not only disrupt transportation efficiency but also hinder economic activity in the region. Furthermore, the inability to accommodate heavier loads may necessitate rerouting, further complicating logistics and contributing to longer travel times. Ultimately, the restrictions associated with these bridges can have a cascading effect on local businesses and the overall economy, underscoring the urgent need for repairs and upgrades.

Absence of Emergency Access to BNSF Corridor: Bridge replacements can block emergency access routes to critical infrastructure such as the BNSF Railway Southern Transcontinental corridor, potentially leading to delays in emergency response times. This is a nationally significant freight corridor stretching from the maritime ports in California to the major shipping facilities throughout the Midwest. To mitigate these delays, clear emergency access routes will be established alongside construction zones before work begins, ensuring that first responders and railroad maintenance vehicles have necessary access. Additionally, collaborating with local emergency services to develop contingency plans will further enhance rapid response capabilities in the event of an incident.

Project Background and History

The County's National Trails Highway, a vital transportation artery, is beset by a pressing infrastructure challenge. For nearly 80 years, the county has been maintaining 90-year-old timber bridges along this route, primarily using short-term fixes that have resulted in bridge maintenance costs exceeding \$1.8 million since 2020 for the 27 bridges. Despite these efforts, the bridges are still nearing the end of their service life, a situation that highlights the need for a more comprehensive repair program. This project boasts a favorable benefit-cost ratio of 1.3, driven largely by anticipated savings from reduced maintenance costs.

The County's 2017 Bridge Management Project serves as the foundation for the full 128-bridge replacement program. Leveraging its own resources, the County has undertaken initiatives to accelerate the bridge replacement process, including corridor-wide topographical mapping and

hydrology studies. In close collaboration with Caltrans, the County has divided the corridor into manageable sections to prioritize and program the replacement of all bridges.

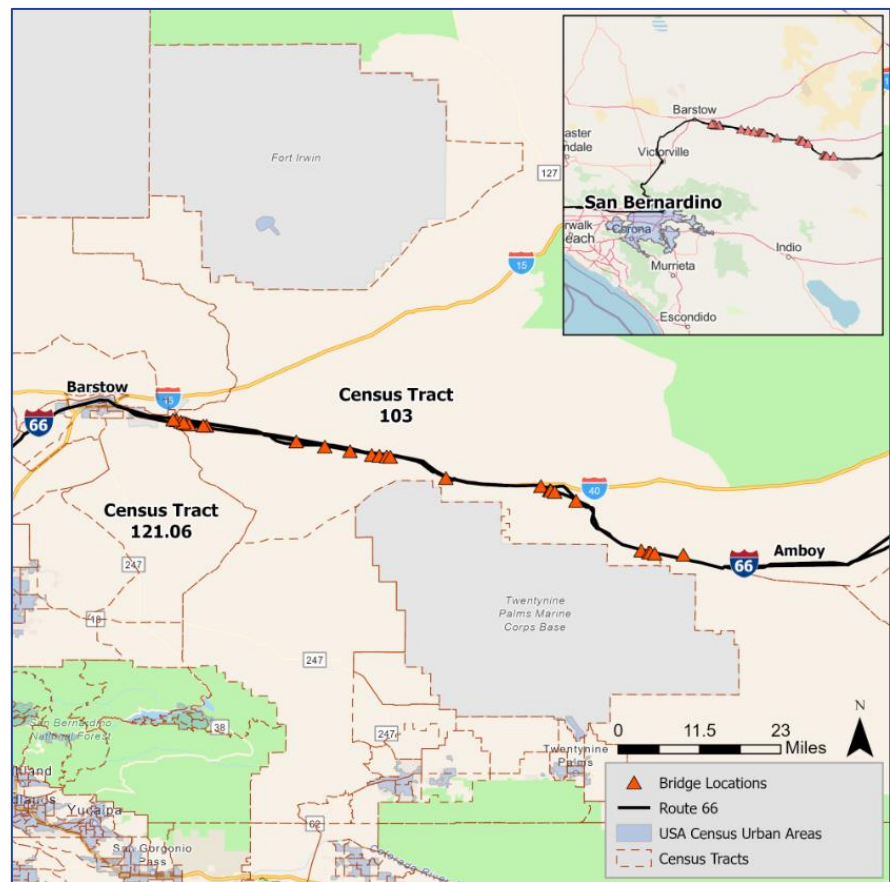
Previously Completed Components

The design stage for the 27 bridges is currently underway, with the Final Design set to be completed using local funds. In addition, the County will conduct a comprehensive analysis of the hydrology, gathering crucial data to accurately size the replacement bridges. This thorough preparatory work will ensure that the designs meet both functional and safety standards.

Project Location

San Bernardino County is the largest county by geographic area in the contiguous United States, encompassing 20,160 square miles that extend from the greater Los Angeles area to the borders of Nevada and Arizona, including access to the Colorado River. With a population exceeding 2.25 million residents, it is home to more people than 15 individual states and is classified as an urban area. The project is situated within Areas of Persistent Poverty in Census Tracts 121.06 and 103 and is considered Rural, as indicated by the [RAISE Grant Project Location Verification Website](#).

The project locations along Route 66 span multiple census tracts, as described above and illustrated in Figure 2 and Figure 1.



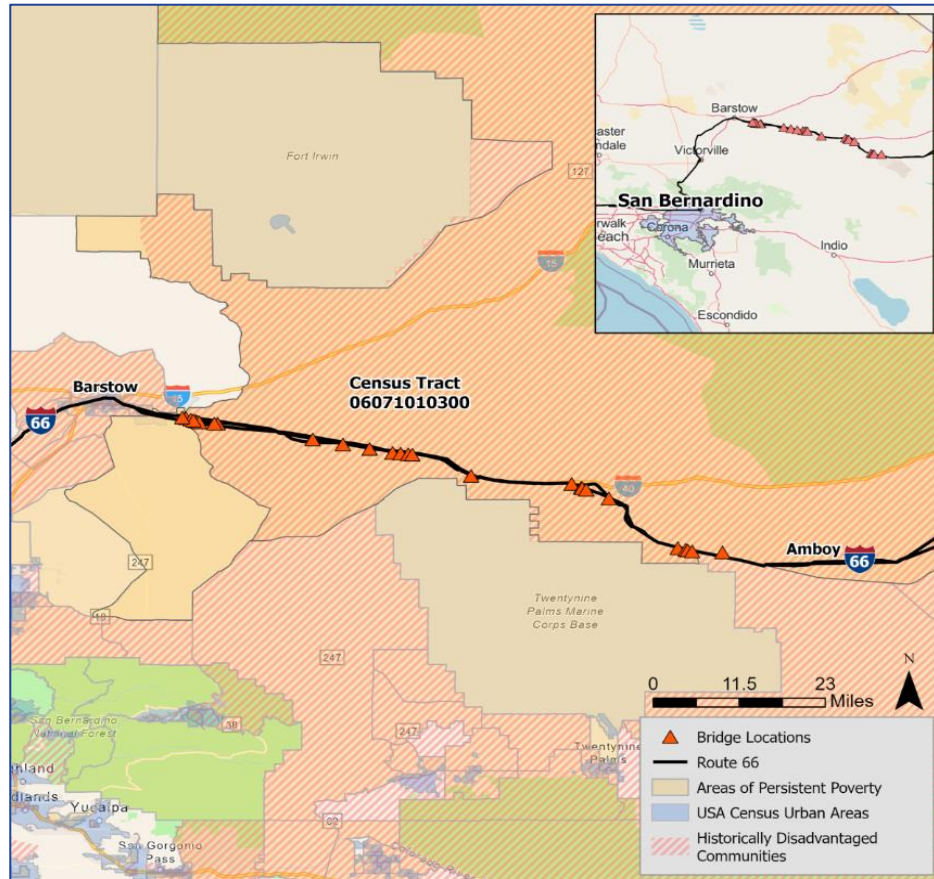


Figure 1. Project Location Map Illustrating the Location of Bridges within Areas of Persistent Poverty and Historically Disadvantaged Communities



FY 2025

Better Utilizing Investments to Leverage Development (BUILD) Grant Program

Route 66 Bridge Replacement Project

January 30, 2025

February 24, 2025

MERIT CRITERIA NARRATIVE

Merit Criteria #1: Safety

The primary objective of the Project is to restore safe and accessible travel along the National Trails Highway (also known as “Route 66”). To create a safer environment for all roadway users, the project aims to replace 27 bridges along the Route 66 corridor between Needles and Barstow. This initiative will safely reopen this vital section of the roadway with minimal weight restrictions. The benefits of bridge replacement include unrestricted travel, improved mobility, and user safety (motorized and nonmotorized) for all.

Reduces Fatalities

National Trails Highway is the only alternate route to Interstate 40 (I-40), a heavily used route connecting Barstow to Needles, in the event of freeway closures. It also provides exclusive access to a 73-mile segment of BNSF’s rail corridor and serves as a critical access route for the United States Marine Corps (Marine Corps) Logistics Base in Barstow and the Marine Corps Air Ground Combat Center in Twentynine Palms. Therefore, this project aims to mitigate potential safety risks for the community related to possible accidents or closures on I-40, incidents on or near the rail line, and delays in transporting essential equipment to military installations.

Emergency Access to I-40. The National Trails Highway provides access for emergency crews to respond quickly to potential tank or truck spills on I-40 (trucks Annual Average Daily Traffic volume is 17,138, mitigating potential risks to the community). National Trails Highway can reduce the time responders require to reach the accident by avoiding traffic congestion on I-40. In the event of a required closure on I-40, National Trails Highway serves as an effective detour versus a regional freeway reroute via I-15 and I-95, an approximately 115-mile detour from I-40.

Emergency Access to Railroad Corridor. The project aims to address a critical transportation artery, the BNSF Transcontinental Corridor rail line, which parallels National Trails Highway. This high-capacity rail corridor serves as a vital link between the West Coast ports and the Chicago interchange complex, providing the primary route for rail commerce between these two regions. The line also grants access to the extensive rail network in the eastern United States, facilitating the seamless movement of goods and services across the country.

One of the primary drivers of freight traffic on this line is an intermodal yard that plays a pivotal role in the efficient transfer of goods to market. This facility supports the regional and national economies through the timely delivery of essential goods. However, the transportation of potentially hazardous materials, including ethanol, could pose a public safety risks in the event of an accident. Roadway access to the tracks is essential for emergency response as well as routine inspection and maintenance activities.

While the BNSF Transcontinental Corridor is primarily a key freight corridor, it also accommodates passenger rail services, providing an essential link for passengers traveling between the west and east coasts. National Trails Highway plays a critical role in supporting the safe and efficient operation of this rail line by providing unimpeded access to BNSF's service



roads. This access enables maintenance crews to conduct regular track and signal inspections, perform routine maintenance tasks, and address any issues that may arise along the rail line. By proactively addressing potential issues, these maintenance activities help mitigate the risk of service interruptions, providing a safe and reliable transportation network for freight and passenger rail services. In addition to servicing maintenance crews, National Trails Highway serves as a crucial route for emergency responders in the event of a train emergency. This proximity enables rapid deployment of resources, minimizing the impact of incidents and safeguarding people and the environment. By facilitating access for emergency vehicles, this infrastructure project will enhance community safety and operational efficiency in the region.

A significant aspect of this project involves the planned replacement of bridges along National Trails Highway. By eliminating existing weight restrictions, this improvement will ensure unrestricted access for long-haul trucks, equipment, and emergency vehicles. This will enable the efficient movement of critical supplies and services, supporting regional economic growth and development. Furthermore, the enhanced access will also benefit local residents, allowing them to quickly access essential amenities and services in the event of an emergency.

Critical National Security Access. The Marine Corps Logistics Base in Barstow is essential for national defense, relying heavily on the BNSF rail line to transport military equipment and vehicles from the East Coast to the West. Disruptions to this supply chain, particularly a derailment near National Trails Highway, would pose significant safety risks and jeopardize national security by delaying critical military deliveries.

As a key hub for military asset movement, any incident affecting the Marine Corps Logistics Base could severely impede its operational capacity and readiness. It is crucial to prioritize the safety and security of the BNSF rail line, especially where military shipments occur. Mitigating the risk of derailments on this route is vital to ensuring both national security and the effective support of our defense efforts.

Collisions on National Trails Highway and I-40. To quantify mitigated risks, data from the Transportation Injury Mapping System at UC Berkeley were reviewed for 2017 to 2022. While specific project segment data were unavailable, collisions on I-40 were analyzed since National Trails Highway serves as an alternate route during I-40 closures. Between January 1, 2017, and December 31, 2022, there were 607 collisions on I-40 between Daggett and Amboy Road, resulting in 117 severe injuries and 59 fatalities. The most common collision types were hitting objects (229), vehicle overturns (204), rear-end collisions (106), sideswipes (41), head-on (7), hitting pedestrians (6), broadside (6), and others (8).

Caltrans records show that I-40 experiences an annual average of 23 hours of closures due to collisions and other traffic incidents. During these closures, emergency responders and others often use National Trails Highway to facilitate problem resolution and maintain travel along I-40. A detour through National Trails Highway could alleviate congestion, prevent stranded vehicles, and ensure goods mobility. In this rural area, limited alternative routes are available during incidents. If National Trails Highway were open without weight restrictions, motorists would only face an additional 16-mile detour via Kelbaker Road. In contrast, closed or restricted



bridges on National Trails Highway force drivers to take longer detours, adding nearly 120 miles to their trips illustrated in Figure 1

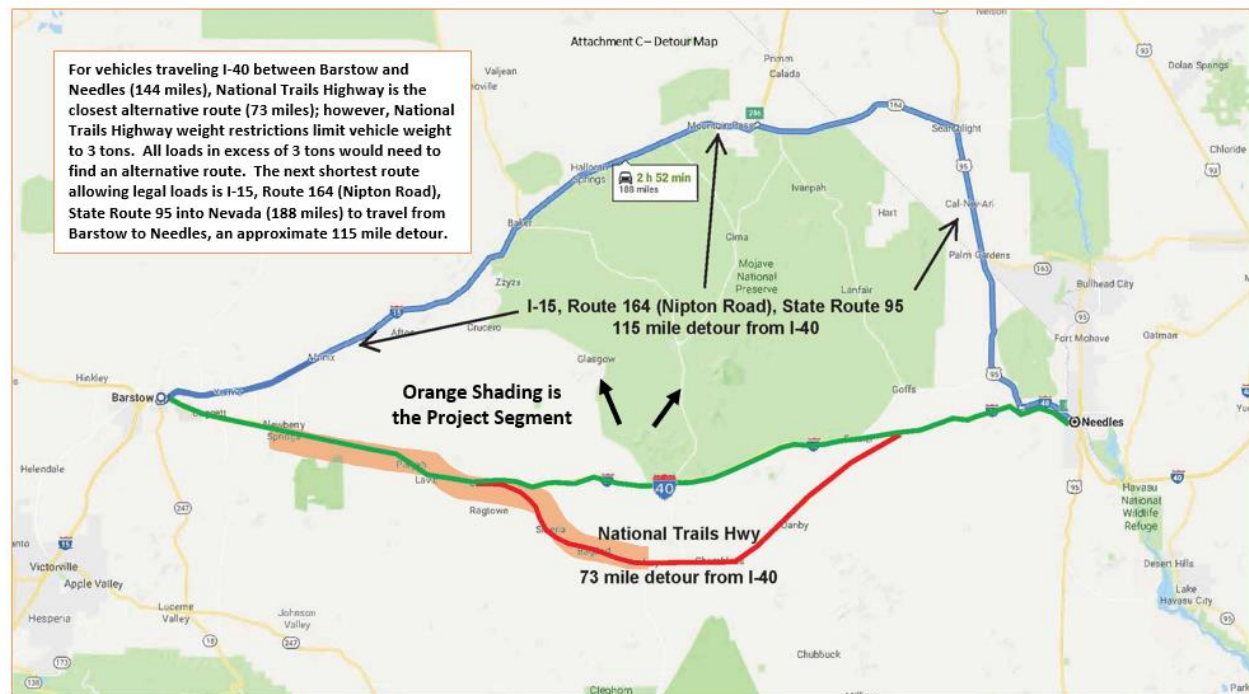


Figure 1. National Trails Highway Detour Map

Once the project is completed and efforts continue to reopen National Trails Highway east of Amboy Road to Essex—where several bridges were damaged in storms in 2014 and 2017—traffic will flow more freely. While some bridges may still have a maximum weight restriction of 32 tons (suitable for 18-wheeler trucks with loaded trailers), this could draw traffic away from the heavily traveled I-40, potentially reducing congestion and accidents.

Non-Motorized Users Safety. This infrastructure project will enhance bicycle safety in rural areas by replacing the aging bridges to modern standards and considerations for non-motorized users by increasing to two 6-foot shoulders for bicycles users and 2-foot railings, resulting in improved infrastructure and a safer riding environment.

Implements Actions and Activities Identified in the National Roadway Safety Strategy

This project supports U.S. DOT’s goal of achieving zero roadway deaths through a Safe Systems Approach. The project will support the “Safer People” and “Safer Roads” elements. A 2020 study by TRIP, a nonprofit organization in Washington DC which researches and evaluates economic and technical data on surface transportation issues, found that traffic crash and fatality rates on rural roads and bridges are extraordinarily high. They occur almost two-and-a-half times more frequently than on all other road types (more information at https://tripnet.org/wp-content/uploads/2020/04/TRIP_Rural_Roads_Report_2020.pdf). The 27 identified bridges were built nearly 90 years ago or more and have surpassed their useful operational life, leading to safety concerns. Replacing these bridges is crucial to ensuring safer travel along National Trails



Highway. During the planned public meetings, safety information will be presented, including a safer roads element that addresses flood risk. Hydrology studies have been completed in support of bridge design to mitigate this risk. As the bridges are replaced and upgraded with the latest safety features, construction and maintenance zones also will be kept safe for workers.

Merit Criteria #2: Environmental Sustainability

The project prioritizes resilience and sustainability by integrating specific concrete bridge design features that can withstand catastrophic floods and mitigate the risks of potential wildfires.

Reduces Transportation-Related Air Pollution and Greenhouse Gas Emissions

As detailed in Figure 2 of the Project Description, the project is located in Areas of Persistent Poverty and a rural area. Replacing the existing timber bridges with well-designed modern structures allows National Trails Highway to become a critical detour route for I-40 in the event of a catastrophic closure. Motorists could be stranded with no detour route available if current bridge weight limits remain, become more stringent, or if bridge outages occur. Cars would continue to idle under this scenario (as motorists would keep their cars running in the desert climate), creating greenhouse gas emissions (GHGs). The air quality benefits of the project for a 20-year period, and associated reduction in vehicle hours, vehicle miles, and fuel consumption, are presented in Table 1. Reductions from project implementation and a fully functioning National Highway Trails are significant. GHGs are estimated to be reduced by 2,291 tons of carbon dioxide (refer to the Benefit-Cost Analysis Calculations and BCA Technical Memorandum).

Table 1. Environmental Benefits: No Action vs. New Bridge Replacement

Environmental Factor	No Action (Existing)	Build New Bridges	Benefit: 20-years (Reduction)
Vehicle Hours	106,000	66,300	39,800
Vehicle Miles	5,830,000	3,643,000	2,187,000
Fuel Consumption (gal.)	595,200	371,000	224,200
Nitrogen Oxide Emissions (kg)	2,347	1,467	880
Particulate Matter (kg)	57	35	21
Carbon Dioxide Emission – GHG (metric tons)	6,100	3,800	2,300

Reduces Exposure to Elevated Levels of Air, Water, and Noise Pollution

This project will benefit residents in rural communities of the County. People in the most rural 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. Communities along the project segment, populations, and median household incomes are presented in Table 2 under Merit Criteria #3: Quality of Life (QoL). The median income of the project area communities is well below the median income for the County (\$70,287), the State of California (\$84,097), and the Nation (\$70,784) (US Census Bureau 2021).



Table 2. National Trails Highway Communities

National Trail Highway Community	Population	Median Household Income
Daggett	632	\$37,000
Newberry Springs	2,637	\$32,354
Ludlow	12	Data not available
Amboy/Cadiz	17	Data not available

Incorporates Energy Efficient Investments

The Mojave Desert region has some of the best solar, wind, and geothermal resources in the nation. These renewable resources have played and will continue to play a critical role in meeting the nation's energy needs, promoting energy independence, and reducing greenhouse gases over the next several decades. A number of regionally significant renewable energy facilities can only be accessed from National Trails Highway.

The County is considering private and Bureau of Land Management (BLM) land for future renewable energy projects, including largescale solar projects, which will promote economic development in the region. National Trails Highway is the major access road to sites under consideration. The current weight limit restrictions and potential future closures of the aging bridges would limit access of heavy vehicles, machinery, and materials transport for new solar project construction. The BLM has prepared the federally funded California Historic Route 66 - Needles to Barstow Corridor Management Plan (<https://route66ca.org/wp-content/uploads/2016/03/Complete-CMP-Document.pdf>) and is preparing the Desert Renewable Energy Conservation Plan (DRECP) (https://eplanning.blm.gov/public_projects/lup/66459/133460/163124/DRECP_BLM_LUPA_ROD.pdf), which discuss current efforts managing renewable energy projects. A key recommendation in the Route 66 Corridor Management Plan is to "Seek funding from federal and non-federal sources to provide a means of financing road modifications through partnerships with heavy users of the route (BNSF Railway, resource extraction, utilities, renewable energy developers, etc.), and develop and work with San Bernardino County to adopt design/preservation guidelines for the route addressing renewable energy projects." Given the potential for placement of renewable energy facilities along I-40, the need for an alternate east/west travel route to access these facilities is important. Expansion is dependent on a fully operational National Trails Highway.

The County has eight large active solar facilities spanning approximately 4,600 acres, with a capacity of 1,000 megawatts. Additionally, nine County projects are conditionally approved to cover 6,832 acres, adding another 1,000 megawatts of capacity. Six of these projects are located in Daggett near the National Trails Highway and include:

- Solar 66 Energy Project: A 7-megawatt facility on a 142-acre site near Nebo Street and National Trails Highway.
- Solar 33 Energy Project: A 5-megawatt facility on a 35-acre site along National Trails Highway, about one mile west of Hidden Springs Road.



Both projects received conditional approval in November 2021, with their construction and implementation reliant on full access to National Trails Highway.



Figure 2. Current Condition of the Ant Ditch Bridge

Improves the Resilience of At-Risk Infrastructure

This project focuses on an area of the Mojave Desert that experiences extreme weather, including intense summer monsoonal moisture. Flash flooding is a recurring, highly unpredictable threat that can damage bridges and lead to periodic road closures. Notably, in August 2014 and July 2018, flash floods caused damage to 66 bridges. As repairs and bridge replacements are completed, sections of National Trails Highway are gradually reopening. By building resilient infrastructure, the County aims to protect assets from these risks, minimize disruptions, and significantly reduce downtime and closures. The County has conducted hydrology studies to assess potential design flows resulting from heavy rains and flooding. The hydrologic data will be crucial in designing improvements to strengthen these structures. In addition to flood resistance, the bridge designs will

address other natural hazards such as earthquakes and wildfires. All designs will adhere to the latest American Association of State Highway and Transportation Officials (AASHTO) and Caltrans codes, which now incorporate resilience elements to ensure long-term viability and safety.

Merit Criteria #3: Quality of Life (QoL)

Improves Access to Daily Destinations

The 27 bridges addressed by the project are located on a segment of the National Trails Highway which connects rural and remote communities to vital destinations in Barstow and Needles, including schools, medical facilities, and over a dozen grocery stores. While Daggett, the second-largest town along the project route, is home to over 600 residents, there are no schools within this district. For those living along the project route, the closest hospitals are situated in Barstow and or Needles, as such residents depend on the National Trails Highway to daily access jobs, healthcare amenities, recreational parks, churches, and places of worship. In addition, many local residents use the highway for commuting purposes. For instance, over 150 BNSF employees work at the San Bernardino Intermodal and Automotive Facility and Barstow Intermodal Facility, and a significant number of them travel along the National Trails Highway daily to get to work.



Increase Affordable Transportation Choices

The project will benefit those in rural areas of the County. Every Census Tract in the project area is designated as an Area of Persistent Poverty by the U.S. DOT. By replacing and upgrading the bridges, this project aims to enhance connectivity and support residents in these rural communities. It is essential that residents of these rural areas have unrestricted access to jobs, schools, grocery stores, hospitals, and other vital services. By improving the infrastructure along this segment of the National Trails Highway, the project will reduce travel impediments, allowing residents to reach essential destinations more efficiently and at lower cost due to savings on gas and vehicle wear and tear.

Table 2 presents the demographics and median household incomes of the communities within the project area, which are notably below the median income for the County (\$70,287), the State of California (\$84,097), and the Nation (\$70,784) (US Census Bureau 2021). The bridge replacements will not only facilitate better access to services but also contribute to economic opportunities for these underserved populations. Ultimately, the improvements will promote connectivity by ensuring that all community members can travel without unnecessary barriers, fostering economic growth and social well-being.

Merit Criteria #4: Mobility and Community Connectivity

These 27 bridges serve to bridge both literal and figurative gaps in service within a crucial rural transportation corridor. The complete closure of this corridor would have far-reaching implications for interstate commerce, national security, and the preservation of one of America's historical treasures. The replacement of these bridges will enable the entire stretch of roadway to accommodate most vehicles and light trucks for the first time in over 9 years.

Improves Systemwide Connectivity

National Trails Highway frequently serves as a detour during accidents or interstate closures, offering the shortest alternate route for both passenger vehicles and freight transportation when I-40 is unavailable. This highway not only facilitates emergency access to I-40 but also provides vital connections to the BNSF Railroad Corridor. Additionally, it plays a crucial role in supporting national security by enabling the movement of personnel and equipment for the Marine Corps Logistics Base Barstow and the Twentynine Palms Marine Corps Air Ground Combat Center.

The Marine Corps Air Ground Combat Center at Twentynine Palms and Logistics Base Barstow, until the recent partial closure and imposed weight restrictions, used National Trails Highway as a critical access link to and from the base and heavily relied on receiving much of their equipment from the BNSF Railway line. Since 2020, the U.S. Armed Forces have spent over \$36 million per year in contractor services to haul military loads through the Mojave Desert because of bridge conditions. This expense could be reduced by approximately 15 percent with the funds the County is requesting.

Several regionally significant utility corridors can only be accessed from this road, including gas and oil pipelines and high-voltage transmission lines. Other important utility corridors that must



have unrestricted roadways and bridges to move large infrastructure include emerging solar power generation facilities and fiber-optic lines, as well as the Solar 66 Project, a new solar power generating facility in the community of Daggett.

Implements Plans that Address Gaps Identified in the Existing Network

Of the 27 bridges in this project scope, ten have restricted weight limit postings as low as three tons due to structural deficiencies. This weight restriction prevents large vehicles including emergency, military, and commercial vehicles from using the roadway, limiting travel and the movement of goods. The bridge replacements will prevent additional road closures and eliminate weight restrictions.

For those who live along the project route, the only local hospitals are as far as Barstow or Needles. As a result of bridge weight restrictions, ambulances cannot cross many of the bridges required to get local community members emergency care.

Directly Increases Intermodal and Multimodal Freight Movement

National Trails Highway offers the only emergency access point to a 73-mile section of the main transcontinental BNSF Railway line out of the Ports of Los Angeles and Long Beach. A railroad out-of-service condition or mechanical issue along this section while National Trails Highway has restricted weight limits has the potential to be catastrophic, as BNSF may not be able to get to the target repair site in order to restore rail traffic. Extended closure would impact the delivery of goods moved on this line valued between \$122 and \$147 billion annually. The impacts would be significant, and effects could be felt throughout the national economy.

National Trails Highway offers a detour to I-40 in case of closures or impasses due to accidents. I-40 is the third longest interstate in the U. S. and moves \$78 billion of freight annually along this east-west corridor. There is currently no detour option from I-40, as National Trails Highway offers the only bypass to a 96-mile section of the interstate. In the case of an I-40 closure, motorists could be stranded if the route remains closed. With an Annual Average Daily Traffic volume of 17,138 for trucks on this section of I-40, these closures drastically affect the movement of goods.

BNSF utilizes National Trails Highway for vehicular access to the railroad right-of-way. BNSF crews rely on access to the full length of National Trails Highway to conduct safety reviews of the tracks and move equipment to perform critical repairs that keep freight moving.

Includes Transportation Features to Increase Accessibility

The bridge will feature two 6-foot shoulders designed to enhance safety and increase the space between motorized and non-motorized road users. These shoulders will provide a dedicated area for pedestrians, cyclists, and other non-motorized travelers, ensuring they have safe and accessible passage across the bridge.



Merit Criteria #5: Economic Competitiveness & Opportunity

A fully operational National Trails Highway is a reliable detour for I-40 and for maintenance and emergency access to the BNSF railway. Both transportation routes are critical to supply chain reliability and goods movement in the region and nation. Implementing the proposed bridge project will bolster the economy, support the increase of freight mobility, and create and support good-paying jobs.

Improves Intermodal and/or Multimodal Freight Mobility

Local Mobility: Rural communities along the project corridor rely on I-40 and National Trails Highway; they have no other options for east/west travel. National Trails Highway plays a significant role in serving both rural transportation needs across the Mojave Desert. Local mining, farming, and utilities businesses need reliable access to National Trails Highway for goods movement. These businesses have experienced increased transportation costs and transit time because of closed and weight restricted bridges on National Trails Highway. For example:

- > Omya North America ships 70,000 tons of natural calcium carbonate each year from its mining site in Amboy along National Trails Highway to its plant in Lucerne Valley.
- > Chambless Water Company, a small water supply and distribution company, is the sole water supplier of the Omya North America Amboy quarry and relies on truck access to National Trails Highway to haul water to Omya for their annual salt production.
- > Cadiz Farm, 3.5 miles south of Chambless, is a 1,600-acre sustainable agricultural operation. Cadiz Farms delivery trucks, which typically weigh 80,000 pounds, rely on National Trails Highway to transport citrus and table grapes nationwide.

Regional/National Mobility: BNSF Railway. Rail infrastructure generally follows the National Trails Highway's route across the Mojave Desert. The BNSF rail network is a critical link in the Southern Transcontinental route between California, Chicago, and southern states. It is also used by Amtrak for passenger service. Freight traffic on the line consists of 1) intermodal containers and trailers carrying products to market and providing parcel services; 2) unit trains dedicated to hauling one type of freight such as grain, ethanol, steel coils and automobiles; and 3) general merchandise trains carrying mixed freight. The line is also shared with the Union Pacific Railroad between Barstow to Daggett where the Union Pacific line splits to the north.

BNSF crews rely on vehicular access to National Trails Highway to conduct track safety reviews and move equipment for critical repairs to keep freight moving. Access to National Trails Highway is critical to emergency responders in the event of an emergency. BNSF has informed the County that the current closures and weight restrictions could have significant negative impact on freight transport. The importance of reliable access will continue to be highlighted when Barstow International Gateway, a \$1.5 billion, state-of-the-art, master-planned rail hub is completed. The 4,500-acre site in Barstow will consist of a rail yard, intermodal facility, and warehouses for transloading freight from international and domestic containers.

I-40 Detour. I-40 is a major transcontinental highway from Barstow to Wilmington, North Carolina and is the interregional route connecting the cities of Barstow and Needles. One-third of cargo from the Ports of Los Angeles and Long Beach is trucked east on this route and is valued



at \$78 billion annually according to the Port of Los Angeles. For vehicles traveling I-40 between Barstow and Needles (130 miles), National Trails Highway is the closest alternative route (72 miles); however, National Trails Highway weight restrictions limit vehicle weight to 3 tons. All loads in excess of 3 tons need to find an alternative route. The next shortest route allowing legal loads from Barstow to Needles is I-15 to Route 164 (Nipton Road) to State Route 95 into Nevada (188 miles), an approximate 115-mile detour. National Trails Highway not only generates its own economy but connects significant local economies in Barstow and Needles. Loss of National Trails Highway as an alternate route for I-40 closures would have a negative impact on these two local economies.

In case of accidents or interstate closures, the California Highway Patrol frequently reroutes traffic onto National Trails Highway using Goffs Road, Essex Road, Kelbaker Road, Crucero Road, and Hector Mine Road exits. National Trails Highway is the shortest alternate route for passenger vehicles and goods movement when I-40 is closed. However, the bridges on National Trails Highway were not constructed to support the weight of modern trucks, particularly military vehicles, and equipment. In addition, there are restricted overhead vertical clearances on I-40 that require very tall loads to detour to National Trails Highway, the only paved alternative that does not have any height restriction.

Military Access: The Marine Corps Logistics Base in Barstow conducts military training exercises several times per year in conjunction with other armed forces branches. These exercises require the movement of personnel and equipment, including heavy military vehicles, from the Base to the Marine Corps Base near the City of Twentynine Palms. Marine Corps Logistics Base staff report that it is not currently able to use National Trails Highway due to the condition and weight limitations of the bridges. Instead, they must hire contractors to haul the equipment along unpaved BNSF access roads that parallel the rail line and then over BLM lands south to Twentynine Palms. The Marine Corps Logistics Base reports that it costs \$4,000 to \$7,600 per load to move equipment by contractor with between 90 and 200 loads hauled every three months, resulting in an annual cost of \$3,306,000. For special exercises, an additional 1,900 loads would be moved three times per year under the same hauling contract. As results, the total annual cost of hauling contracts equals \$35,796,000 to the United States Government due to restrictions on National Trails Highway. With the Project, the use of military vehicles and resources to haul the loads would generate a savings of \$5,369,000 annually.

Promotes Long-Term Economic Growth

The new bridges set to replace the over 90-year-old structures will eliminate existing weight restrictions, paving the way for long-haul heavy trucks to transit the National Trails Highway without limitations. This enhancement is crucial for logistics and freight transport, as it allows for the movement of larger goods efficiently and safely. With the increased capacity to accommodate modern trucking, these improvements will not only facilitate smoother transportation of goods but also stimulate long-term economic growth in the region by improving overall connectivity for commerce.



Merit Criteria #6: State of Good Repair

Restores and Modernizes Existing Core Infrastructure Assets

The project will restore and modernize 27 core infrastructure assets for the County, by designing and constructing new bridges that will improve conditions and state of good repair and minimize lifecycle costs.

Improve Asset Conditions: In consultation with the State Historic Preservation Officer (SHPO) and Caltrans Cultural Resources, the County has agreed to replace the existing timber bridges with modern concrete bridge designs that replicate the original structure type. Given that National Trails Highway is designated by the State of California as “Historic Highway Route 66,” it is important to keep the historic character of the bridges.

The project consists of the demolition of one (1) pipe culvert, one (1) concrete box culvert, and 25 two-lane timber bridges and replacement with AASHTO, or equivalent, two-lane concrete bridges, guardrails (with end treatments and approaches/departures), and other appurtenant structures. The engineering design will account for flooding (i.e., designed for a 100-year flood) and other weather and hazard variables, including seismic design. The bridge lengths will be extended to exceed 20 feet for eligibility under the Bridge Highway Program in the future, and also as needed to convey storm flows. The bridge widths will be widened to 40 feet to accommodate two 12-foot lanes, two 6-foot shoulders, and 2-foot railings. The vertical profile of the bridges will remain close to the existing profile except for those bridge locations where additional vertical clearance is required to provide sufficient water conveyance beneath the bridge. Any such necessary changes in vertical profiles will likely be 2 feet or less, with the elevation gradually conforming to the existing roadway elevations. The alignment would remain unchanged; however, approach roadwork of up to 800 feet on either side of each bridge may be needed to conform to the existing roadway vertical profile. Grading along the approaches and around the bridges may be needed for stormwater conveyance and drainage of the area.

The replacement bridges will provide a full level of performance. The service life expectancy is 75 years. Using modern materials and other design features will significantly reduce future operation and maintenance costs throughout the asset life. Current annual maintenance costs are approximately \$84,000. No maintenance costs are anticipated for the first 10 years of service, resulting in significant maintenance cost savings. The much-needed improvements will prevent additional road closures and remove most weight restrictions to accommodate multiple modes of travel and the movement of goods, allowing more commercial and large-vehicle use of the route.

Ensure Ongoing State of Good Repair of New Assets: The State of California provides funding to cities, counties, and the State’s Department of Transportation for road and bridge purposes through an excise tax on motor fuels. Recently, the legislature passed, and the voters affirmed, an additional excise tax on motor fuels and an additional vehicle registration fee with revenue allocated to the state, cities, and counties for transportation purposes, including road and bridge maintenance. Passage of the additional excise tax provides an allocation of maintenance revenue doubled over the original motor fuel tax. The County has sufficient revenue to ensure maintenance of the bridges reconstructed with 2025 BUILD funds.



Minimize Lifecycle Cost: Currently, the County's annual preventive maintenance budget is spent on temporary repairs. As the bridges age, increasing maintenance costs are necessary to maintain efficiency and safety. The point in the lifecycle of the infrastructure at which it became more efficient to replace rather than repair was passed long ago. The Project would save an estimated \$100,000 annually in avoided maintenance costs for the bridges.

Provides an Efficient and Well-Integrated Design

The County aims to build on the success of previous bridge upgrades along the National Trails Highway by implementing proven design strategies in the 27 Bridge Replacement Project. This approach will enhance efficiency and functionality, leading to a seamless and high-quality outcome. By incorporating lessons learned and best practices from past projects, the designs will not only comply with regulatory requirements but also enhance operational performance and user experience. This forward-thinking methodology is crucial for creating safe bridges while reducing construction and maintenance burdens.

Creates New Infrastructure in Remote Communities That Will be Maintained in a State of Good Repair

The project aims to replace aging infrastructure along a 70 mile stretch of National Trails Highway which runs through several remote communities in Southern California by replacing 27 outdated timber bridges, which are nearly 90 years old, with modern bridges with historical



appearance consistent with the era in which they were built. These new bridges, constructed with contemporary materials and advanced design features, are expected to significantly lower future operation and maintenance costs while ensuring optimal performance. With a service life expectancy of 75 years, the new bridges will require no maintenance costs for the first 10 years, leading to substantial savings.

Currently, the County's annual preventive maintenance budget is used for temporary repairs on the aging bridges, costing approximately \$84,000 each year. As these bridges continue to age, maintenance costs are expected to rise to maintain their efficiency and safety. The decision to replace rather than repair these bridges was made after it became clear that replacement was more cost-effective.

Figure 3 Current condition of Blue Ditch Bridge



Addresses Transportation System Vulnerabilities

This project will benefit residents in rural communities of San Bernardino County. Communities along the project segment have median household incomes well below the median for the state (refer to Table 2 for more detail). With their remote location, these communities also face barriers to accessing crucial amenities such as healthcare, higher education, and employment, which are more accessible in larger cities to the East and West along I-40 and National Trails Highway. They heavily rely on these two routes to access these opportunities. If I-40 were closed due to an incident, detour routes due to weight restrictions on the outdated timber bridges along National Trails Highway would add significantly more miles and additional time for residents trying to reach healthcare services, jobs, and other destinations. The completed project will lift weight restriction on bridges on the project segment allowing residents as well as emergency services to utilize National Trails Highway to travel between larger cities such as Barstow and the remote communities along the highway. The new bridges will provide resilience to future natural hazards, i.e., floods and earthquakes, not provided by the current timber bridges; thereby reducing the likelihood of potential bridge closures on this segment.

Improves Transportation Infrastructure Within the Existing Footprint

The need for this project arises from structurally deficient bridges that have exceeded their operational service life, posed safety concerns, and hindered transportation efficiency. The project will replace the identified 27 bridges and allow approximately 40 miles within the existing footprint of the National Trail Highway to be fully operational without imposed weight restrictions and detours. This approach allows the County to upgrade crucial transportation links without expanding the footprint, thereby minimizing environmental impact and disruption to local communities.

Merit Criteria #7: Partnerships and Collaboration

Engaged Residents and Community-Based Organizations

Public outreach has previously been conducted in 2013 as part of the development of the California Historic Route 66 Corridor Master Plan Needles to Barstow (<https://route66ca.org/wp-content/uploads/2016/03/Complete-CMP-Document.pdf>). Public meetings were held in Barstow, Needles, and Newberry Springs, with approximately 80 community members in attendance at each meeting. The outreach efforts included small group meetings with stakeholders; public meetings in Barstow, Needles, and Newberry Springs; presentations to governmental, tribal, and non-governmental organizations; and an organized bus tour of the corridor. In addition, over the last 10 years, Caltrans has engaged multiple stakeholders as part of the public consultation effort for the Programmatic Agreement, including the permitting agencies listed above, the National Park Service, twelve (12) Native American tribes, and historic preservation groups.

The project will include three new public meetings in Barstow, Needles, and Newberry Springs to gather updated input from residents and stakeholders, with an emphasis on the communities affected by the project. Community groups will coordinate logistics, when possible, for these meetings. The meetings will be planned on different dates to provide an opportunity for the greatest number of people to attend. The meetings will be advertised through various methods,



including the County’s website and social media platforms, mailings, and postings in local newspapers. Comments or questions received from the public at each meeting will be documented, and will be made available, along with the meeting presentation on the County’s website. Feedback will be incorporated into project plans as relevant.

Partner with Communities or Community Groups to Develop Workforce Strategies

The County is growing a local workforce with skills in warehousing and logistics, generating one in four new jobs in the region. Barstow Community College offers an Associate of Science Degree in Warehousing and Logistics as well as two certificate programs. The demand for warehousing and logistics expertise will double when Barstow International Gateway comes online to receive containers. National Trails Highway will become even more integral to the region’s economic success as a shipping hub, and the region is prepositioning to be ready for the opportunity. The County restarted a dormant paid internship program for student engineers to get hands-on experience and has completed the first year under the revived program.

Merit Criteria #8: Innovation in Technology, Delivery, and Financing

Innovative Technologies: Innovative Materials

The bridge design employs modern bridge techniques with historical features, an innovation for the County. Because National Trails Highway is designated by the State of California as “Historic Highway Route 66” and as a National Scenic Byway by the Federal Highway Administration, this project prioritizes unique and innovative designs. The County has been working with Caltrans Structures, Caltrans Cultural Resources, SHPO, and the U.S. Forest Service to design a replacement structure that replicates the original timber elements with a state-of-the-art, modern concrete system that satisfies SHPO’s concerns for preserving the historic fabric, look, and context of this national treasure, while complying with the latest AASHTO and Caltrans design codes, including seismic codes. The County intends to replicate this innovative design for all rural bridges along the National Trails Highway.

Innovative Project Delivery: Practices that Facilitate Accelerated Project Delivery

Both design and environmental project components will build on complex processes and documents that have already been completed. The County has developed a base design on other long and short bridges along this stretch of National Trails Highway, and the project design will be accelerated with the use of those base designs to the greatest extent possible. Please see the attached Project Readiness file for details. In 2016, the County drafted an Environmental Impact Report/Environmental Assessment (EIR/EA) for the 33 short bridges on National Trails Highway (including this project’s bridges) between Barstow and Needles. As noted previously, the County is currently working on other bridge projects on National Trails Highway, and the environmental documents for those projects are underway or complete and have been approved by Caltrans. These documents will inform and help to accelerate the update of the environmental document for this project. To further accelerate the environmental review, the County intends to update the draft EIR/EA and prepare a joint National Environmental Protection Act/California Environmental Quality Act document that is designed to meet the requirements of both laws.



This process will improve the efficiency and effectiveness of environmental permitting and review to accelerate project delivery.





FY 2025

Better Utilizing Investments to Leverage Development (BUILD) Grant Program

Route 66 Bridge Replacement Project

January 30, 2025

February 24, 2025

PROJECT READINESS

San Bernardino County ("County") has invested over \$1,890,900 over the past 10 years to prepare for the reconstruction of 33 short bridges with ages between 90 to 100 years old on National Trails Highway between Barstow and Needles. This prior work encompasses topographical and hydrological studies, bridge inspections, and the development of detailed scopes of work. "Significant progress has been made on various bridges along this section of National Trails Highway. The completed work includes critical elements such as design, environmental assessments, and permitting processes. The County will build on these efforts wherever possible. By integrating these advancements, the County aims to streamline operations, reduce delays, and implement a more effective rollout of the project.

In delivering the Project, the County and BNSF will leverage their long-standing collaborative relationships across jurisdictions, government agencies, the community, and through engineering and construction consultants. The County are committed to maintaining the planned facilities in a state of good repair once constructed, as evidenced by the ongoing maintenance of transportation facilities.

Planning and Constructability

STIP/TIP/TTIP/TAM Plan

The project is included in the 2023 Federal Transportation Improvement Program (FTIP) as Project ID 20151302¹.

Property Acquisition / Right-of-Way (ROW)

The owner of the existing facility is the County, and no new right-of-way (ROW) acquisition will be required for the project, as the County owns all the necessary ROW to execute the project. There are no plans for acquisition from any other parties.

Construction Techniques and Phasing

Given the bridges' critical locations along a vital connection for users, it is essential to minimize lengthy travel disruptions. To achieve this, the County plans to implement methods such as accelerated bridge construction, where feasible, while also complying with cultural and environmental requirements. This approach will reduce the duration of disruptions. During the final design and procurement stages, the County may adopt phased construction strategies to improve efficiency and effectively manage construction activities. This will allow continued access along National Trails Highway and prevent detrimental increases in travel times.

¹ FY23 FTIP http://ftip.scag.ca.gov/Documents/19FTIP_LocalAmend19_01_08SBD.pdf



Project Schedule

The County's proposed project will take five years from the date of obligation of funds (assumed to be January 2026). There are no ROW requirements. The project is currently in the feasibility stage of concept development. The proposed plan will refine these concepts, culminating in a complete 100% design of all project components by December 2027. The County will incorporate community feedback gathered both at the outset and throughout the engineering phase, specifically during December 2026 and August 2027.

National Trails Highway 27 Rural Bridges Project - USDOT Rural/INFRA Grant - update 081623

Project Schedule - Assumes Awards Announced January 2024			2021 thru 2024				CY 2025				CY 2026				CY 2027				CY 2028				CY 2029				CY 2030				CY 2031			
Task	Description/Milestones	Responsibility	21	22	23	24	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
0. PRE-AWARD ACTIVITIES																																		
0.1	Corridor-Wide Topographical Mapping and Hydrology Studies (Complete 2018)	SBC																																
0.2	Grant Applicant by San Bernardino County Board of Supervisors	SBC																																
0.3	Joint NEPA/CEQA (April 2025 to October 2027, 30 mos)	SBC																																
1. REPLACE 27 RURAL BRIDGES (5 Years)																																		
1.1	Execute Grant Agreement and Conduct Kick-Off Meeting with US DOT	SBC and USDOT																																
1.2	Obligation Deadline (September 30, 2026)	SBC																																
1.3	Engineering/PS&E (October 2027 to April 2028, 6 mos; includes 3 public meetings)	SBC and Consultant																																
1.3.1	Phase 3: 5 bridges along National Trails Highway between 17.74 miles east of Crucero Road and 19.92 miles east of Crucero Road																																	
1.3.2	Phase 4: replacing nine bridges along Nation Trail Highway between 0.6 miles of east of Daaet-Yerno Road and 0.35 miles west of Hidden Springs Road																																	
1.3.3	Phase 5: replacing eight bridges along National Trails Highway between 0.92 miles west of Fort Cady Road and 8.74 miles east of Hector Road																																	
1.3.4	Phase 6: five bridges along National Trails Highway between 2.15 miles east of Crucero Road and 6.75 miles east of Crucero Road																																	
1.4	Permitting (6 mos)	SBC and Consultant																																
1.5	Procurement: Construction Contractor (3 mos) April 2028 to July 2028	SBC																																
1.6	Construction (4 Years)	SBC																																
1.6.1	Obtain E-76 Approval	Contractor and SBC																																
1.6.2	First Group of 5 of 27 Bridges (FY 27/28)	Contractor and SBC																																
1.6.3	Second Group of 9 of 27 Bridges (FY 27/28)	Contractor and SBC																																
1.6.4	Third Group of 8 of 27 Bridges (FY 28/29)	Contractor and SBC																																
1.6.5	Fourth/Final Group of 5 of 27 Bridges (FY 29/30)	Contractor and SBC																																
2. PROJECT AND GRANT MANAGEMENT (5 Years)																																		
2.1	Federal Financial Report (SF-425)/Annual Budget Review/Progress Report	SBC																																
2.2	Grant Management	SBC																																

■ = Project Milestones

NEPA and Permitting

In 2016, the County drafted an Environmental Impact Report/ Environmental Assessment (EIR/EA) for the 33 short bridges on National Trails Highway between Barstow and Needles (including this project's 27 bridges). Owing to the age of the EIR/EA, it will require updating. The County is currently working on other bridge projects on National Trails Highway. The environmental documents for those projects are underway or already completed, reviewed, and approved by the California Department of Transportation (Caltrans). The applicant will use those environmental documents to streamline the preparation of the permitting and National Environmental Policy Act (NEPA) documents for the 27 bridges detailed in this application. To further accelerate the environmental review, the County intends to update the draft EIR/EA and prepare a joint NEPA/ California Environmental Quality Act (CEQA) document that meets the requirements of both NEPA and CEQA.

NEPA Status and Milestones and NEPA Class of Action

The County expects to prepare an Initial Study and Mitigated Negative Declaration/ Environmental Assessment (ISMND/EA) for the proposed project. Preparation of the ISMND/EA is expected to take 18 months for clearance and approval comprising 12 months to finalize the draft document and file it with U.S. Department of Transportation (USDOT) and Caltrans, and an additional 6 months for reviews and final approval. The environmental review will include required cultural, biological, and other technical studies.

Permits and Approvals



Because the National Trails Highway (Route 66) has been designated a registered historic highway, a nontraditional design will satisfy unique cultural and biological requirements. The design will include replacing 25 two-lane timber bridges, 1 pipe culvert, and 1 concrete box culvert with two-lane concrete bridges that incorporate historic appurtenances. The County is using this base design on other long and short bridges along this stretch of National Trails Highway, and the proposed project design will be accelerated with the use of those base designs to the greatest extent possible.

The County has already discussed the project with the applicable regulatory agencies. Permits anticipated to be required include a Clean Water Act Section 404 Nationwide Permit from the U.S. Army Corps of Engineers; Clean Water Act Section 401 Certification from the Lahontan and Colorado Regional Water Quality Control Boards; and Section 1602 Streambed Alteration Agreement from the California Department of Fish and Wildlife. The County has already obtained these permits for other large and small bridge construction projects that are complete or underway on this stretch of National Trails Highway. The County expects a similar and accelerated permitting process for this project.

Coordination with USDOT

The County is not currently coordinating with USDOT on the project proposal or NEPA analysis. However, the County is actively working internally on the preliminary engineering design, NEPA analysis, and permitting activities.

Project Support

The County has designed other bridges along the National Trails Highway and will capitalize on existing relationships to consult with the State Historic Preservation Officer, the Caltrans Cultural Resources Office, and the Caltrans Structures Department.

Public and Agency Involvement Process

In 2013, the California Historic Route 66 Association and the Bureau of Land Management (BLM California Desert District) conducted public outreach activities during development of the May 2015 *California Historic Route 66 Needles to Barstow Corridor Management Plan*.² The outreach efforts included small group meetings with stakeholders; public meetings in Barstow, Needles, and Newberry Springs; presentations to governmental, tribal, and nongovernmental organizations; and an organized bus tour of the corridor. In addition, over the last 10 years, Caltrans has engaged multiple stakeholders as part of the public consultation effort for the FHWA Section 106 Programmatic Agreement, including the permitting agencies listed above, the National Park Service, 12 Native American tribes (no tribes are adjacent to the corridor, but several have ancestral history that has shaped travel/settlement patterns in the area), and historic preservation groups.

The County will encourage community involvement by hosting three public meetings at different locations in the project area with varying dates to promote maximum participation. When possible, they will use existing community groups to help coordinate logistics. This engagement effort will follow the public outreach already conducted in 2013 during development of the *California Historic Route 66 Needles to Barstow Corridor Management Plan*.

² <https://route66ca.org/wp-content/uploads/2016/03/Complete-CMP-Document.pdf>



Many organizations are dedicated to promoting the importance of Route 66 in America's cultural heritage and acquiring the public support necessary to preserve the historic landmarks and revitalize the economies along the route. The County has frequently consulted with Route 66 preservation groups and other organizations for its projects along the corridor. The network of regional partners and stakeholders includes BNSF, U.S. Department of the Interior, United States Marine Corps, Caltrans, National Park Service, BLM, Route 66 National Historic Federation, and California Historic Route 66 Association.

Public and Agency Involvement Results

At the State level, as part of the ongoing and completed bridge work on this stretch of National Trails Highway, the County has worked closely with Caltrans' Division of Environmental Analysis, which is the lead agency for NEPA/CEQA as the Federal Highway Administration (FHWA) delegate. The project will continue to work closely with Caltrans throughout the approval process for the joint NEPA/CEQA document (see Letters of Support for Caltrans' support letter).

At the local level, the project has strong local support in the County. The San Bernardino County Transportation Authority (SBCTA) is providing \$54,000,000 (65% of total projects costs) toward the local match (see Funding Commitments for SBCTA's documentation), and the San Bernardino County Board of Supervisors formally approved the submission of this grant application at their Board Meeting on January 28, 2025.

The project has broad federal, state, and local support (see attached Letters of Support) including from BLM, BNSF Railway, Marine Corps Logistics Base in Barstow, Caltrans, California Historic Route 66 Association, California Highway Patrol, and others.

Risks and Mitigation

The County has a strong track record of delivering high-quality capital projects statewide and maintains efficient relationships with FHWA and USDOT. Because the project focuses on structural upgrades within the existing footprint, anticipated risks are minimal. As with any capital project, unforeseen delays will be proactively managed. Below are identified project risks and the associated mitigation strategy

Project Cost Overrun: Regular risk assessments will be conducted to identify funding and cost risks, enabling BNSF and the County to take proactive measures. Both parties will allocate a portion of their annual budgets to create a capital reserve for addressing cost overruns. Open communication will be maintained with stakeholders.

Project Schedule Delays: The County will hold regular meetings to review design milestones, identify potential delays early, and communicate progress to stakeholders. It will also assess resource allocation, conduct detailed risk assessments, and establish an effective communication plan. Free float will be included in the project schedule to accommodate unforeseen delays.

Delays from Utility Relocations: Level 3 fiber optic infrastructure exists along the corridor. The County is currently experiencing this risk at other bridges along the corridor. The process for managing the risk will be duplicated for the proposed project, which will minimize delays.

Procurement Delays: The County will implement a proactive approach by starting initial pre-advisement and bidding processes in parallel with final design activities and in



coordination with the Office of Planning. The County has conducted procurement for multiple bridge projects in the project area and will adapt existing bid documents and procurement processes.

Design Changes based on Stakeholder Feedback: The County will involve the public and stakeholders during project startup and key design stages to ensure that the designs reflect community needs. Engagement efforts will follow a consensus-building approach.

Technical Capacity Assessment

Federal Funding

The county has executed numerous capital projects, ensuring timely completion within budget. With a proficient support staff, the County is well-equipped to manage supervision and fulfill contractual obligations. Notably, all County projects funded through grants have either been completed on time and within budget or are currently progressing as planned. Notable initiatives include those shown in Table 1.

Table 1. Federally Funded Programs Awarded to San Bernardino County in the Past 14 Years

Project	Garnet Bridge Reconstruction	Glen Helen Bridge Project	10 Bridges Project
Funding Program	HBP/HBRR	HBP	HBP
Federal Agency	FHWA	FHWA	FHWA
Funding Award	HBP FUNDS: \$190,782 HBRR FUNDS: \$436,440	HBP FUNDS: \$51,434,000	HBP FUNDS: \$22,940,000
Grant Status	Completed	Construction	PS&E

Additionally, the County has effectively utilized funds from the Public Lands Highway Program to rehabilitate 3.6 miles of Needles Highway (\$7.2 million), underscoring its proven expertise in administering federal aid projects.

Federal Regulations

The County has extensive experience managing federal transportation funds for various projects. To manage those funds, the County regularly collaborates with agencies such as the FHWA, the Federal Railroad Administration, and the Federal Transit Administration. Each year, the County oversees projects that adhere to federal requirements, including Title VI, the Civil Rights Act of 1964. County-managed projects are designed to comply with relevant regulations, including Buy America, the Americans with Disabilities Act, the Uniform Relocation Assistance and Real Property Acquisition Act, the Davis-Bacon Act, and NEPA, along with any other applicable state and federal regulations.



Project Delivery

San Bernardino County has extensive experience and a strong track record in successfully delivering federally funded transit capital projects, including the Glen Helen Bridge Project, which is federally funded through the Highway Bridge Program and currently underway with a budget of \$50 million, which highlights the County's capability in managing multi-million-dollar bridge projects. In addition, the County is currently working on 3 bridge reconstruction projects along National Trails Highway, which is anticipated to be delivered at the end of 2025.

The County will leverage design, environmental, and other approvals from these related projects, which include: 1) two demonstration bridges, the Dola Ditch Bridge and the Lanzit Ditch Bridge, completed in 2017; 2) the 10 Bridges Project mentioned earlier; and 3) the 6 Bridges Project, which focuses on other shorter bridges (less than 20 feet) along this stretch of National Trails Highway.





FY 2025

Better Utilizing Investments to Leverage Development (BUILD) Grant Program

Route 66 Bridge Replacement Project

January 30, 2025

February 24, 2025

PROJECT BUDGET

Sources, Uses, and Availability of Funds

San Bernardino County seeks \$25 million in federal funding through the Better Utilizing Investments to Leverage Development (BUILD) Grant Program to replace 27 bridges. BUILD Grant Program funding is essential as other revenue sources are limited. These bridges, each less than 20 feet in length, do not qualify for funding under the federal Highway Bridge Program. The County can contribute a maximum of \$41.8 million in non-federal State of California State Transportation Improvement Program (STIP) funds for the improvements along National Trails Highway. Burlington Northern Santa Fe (BNSF) Railway will contribute an additional \$5 million in non-federal (private) funds. Documentation of funding commitments from the County and BNSF are attached. An award from the BUILD Grant Program would close the final funding gap for these bridge replacements, ensuring that the roadway can effectively serve residents, tourists, and local businesses, and facilitate both inter- and intrastate goods movement.

No other federal funds will be used for the Project. No other federal grants have been requested or awarded to the Project. Table 1 provides a summary of the proposed budget for Project components.

Table 1. Project Budget Summary by Component

Funding Source	Funding Amount
BUILD Funds	\$25,000,000
Other Federal Funds	\$0
Non-Federal Funds (STIP)	\$40,300,000
Non-Federal Funds (County Funds)	\$1,500,000
Non-Federal Funds (BNSF)	\$5,000,000
TOTAL PROJECT COST	\$71.8 million

Contingency Amount and Plan

A 15% contingency factor is included to account for potential cost increases. A 4.0% inflation factor has been included the total construction cost of the 27 bridges. Both percentages are based on the County's experience with directly related bridge projects that are completed and/or underway and are near the project area on National Trails Highway.

Regular risk assessments will be conducted to identify funding and cost risks, enabling the County to take proactive measures. Both parties will allocate a portion of their annual budgets to create a capital reserve for addressing funding shortfalls and cost overruns. Open communication will be maintained with stakeholders to keep them informed of potential risks. Additionally, the project management team will prepare funding forecasts to help mitigate those risks effectively.

Level of Design

The cost estimate is based on the premise that no design work has begun. The construction estimate is based on similar bridges along the National Trails Highway between Barstow and Needles within the same bridge replacement program.



Cost Estimates

Task	Description	FY 26/27	FY 27/28	FY 28/29	FY 29/30
1	Construct 5 small bridges between 17.74m east of Crucero Road and 19.92m east of Crucero Road	\$18,376,700			
2	Construct 9 small bridges between .6m east of Dagget-Yermo Road and 0.35m west of Hidden Springs Road		\$18,684,050		
3	Construct 8 small bridges between .92m west of Ft. Cady Road and 8.47m east of Hector Road			\$21,323,050	
4	Construct 5 small bridges between 2.15m east of Crucero Road and 6.75m east of Crucero Road				\$13,416,200

Project Costs by Location

Table 2a: 2020 Census Tract(s) Project Costs per Census Tract

2020 Census Tract(s)	Project Costs per Census Tract
103	\$5,318,518
121.06	\$66,481,482
TOTAL PROJECT COST	\$71,800,000

Table 2b: Urban and Rural Project Costs

Urban/Rural	Project Costs
Urban (2020 Census-designated urban area with a population greater than 200,000)	\$0
Rural (Located outside of a 2020 Census-designated urban area with a population greater than 200,000)	\$71,800,000
TOTAL PROJECT COST	\$71,800,000

