FY 2019 BUILD Discretionary Grant Application

TONTO CREEK BRIDGE PROJECT

ARIZONA

APPLICATION DATE
July 15, 2019

PRIME APPLICANT
Gila County Public Works Division
(Local Government)

DUNS NUMBER
147259191

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PROJECT TYPE
Road and Bridge Capital Project

PROJECT DESCRIPTION
Multimodal transportation project improving deficient roadway geometry including the construction of a bridge over Tonto Creek with pedestrian and bicyclist facilities.

CFDA # 20.933
FY 2019 National Infrastructure Investments

LOCATION
Gila County, Arizona
Arizona Congressional District 4

AREA
Rural

REQUESTED AMOUNT
$17,419,801

TOTAL PROJECT COST
$20,493,884

PROJECT WEB ADDRESS
www.tontocreekbridge.com
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I. PROJECT DESCRIPTION
When Tonto Creek rises, area residents can be cut off from food, medical supplies, emergency services, work, and school for as long as three months at a time. That is why Lonny Cline recently found himself transporting a man suffering from a massive stroke in the shovel of a tractor. The man lived to thank Cline for his help, but Cline said the terror he felt during the transport is something he hopes never to experience again. Cline’s family has ranched in the area since the mid-1800s, and he, along with another long-time resident, George Ewing, have driven, boated, and carted people across the swollen creek morning and night during flood season for several decades. Ewing drives more than 25 students to school during flood season in his retired 5-ton military troop carrier, which is affectionately called the GI by locals. He often has to refuse transport, however, when the water is too high.

At least five people have died trying to cross the creek when the water was high in the last 25 years. Two of the deaths were the result of people trying to cross on foot, while the other three deaths involved people trying to cross in their own vehicles.

In the following video, residents share how the lack of a year-round crossing has deeply impacted their safety and economic stability.

Click www.tontocreekbridge.com to play the Tonto Creek Bridge – The Human Element video

The Tonto Creek Bridge project will construct a bridge across Tonto Creek and improve the existing roadway in the rural census designated place (CDP) of Tonto Basin in Gila County. The County and the residents of Tonto Basin have been working to make this project a reality since the early 1980s. Gila County is the project sponsor and the design and ultimate construction is being administered by the Arizona Department of Transportation (ADOT) through the local public agency (LPA) program. The total cost of the project is $20.49 million. This application requests $17.42 million (85 percent of the project cost). The remainder of the project cost, $3.07 million, will be funded using County transportation tax funds and the County’s share of state gas tax revenue.
The project will construct a 1,980-ft-long, 40-ft-wide multi-span AASHTO precast concrete girder bridge with raised sidewalk over Tonto Creek. In addition, approximately 1-½ miles of existing geometrically deficient road will be improved. Three existing at-grade dirt road crossings currently serve as the only means for crossing Tonto Creek in the project area—Greenback Valley Road (FR 71), Bar-X Road (FR 470), and A-Cross Road (FR 60). The project eliminates two of these at-grade dirt crossings from the County road system providing critical all-weather access to the Tonto Basin region. The project will enrich the quality of life for residents of Tonto Basin through improved safety along the road and access for first responders; efficiency of travel; access to educational institutions, businesses, and healthcare facilities; and enhanced recreational opportunities on public Forest Services lands.

The scope of work for the Tonto Creek Bridge project comprises four main components:

1. Construction of a bridge across Tonto Creek
2. Improvements to the safety and operations of Old State Hwy 188 through horizontal and vertical adjustments
3. Improved circulation and access to the Tonto National Forest Reno Administrative site, which is a staging area for forest fire fighting
4. Providing facilities for safe walking and bicycling across Tonto Creek, especially for children attending the Tonto Basin Elementary School

The NEPA process has been completed and the FHWA issued a FONSI on August 26, 2011. The design is 100% complete. Final Signed and Sealed Plans, Specifications and Estimates will be submitted to ADOT for final review once construction funding has been secured. Gila County has already acquired all land for right-of-way.

The typical sections in Figure 1 depict how accessibility and multimodal needs will be accomplished through the project. The project limits for Tonto Creek improvements are shown in Figure 2. Reports, plans, and other documents prepared for the project can be viewed at the project team website: www.tontocreekbridge.com.
Tonto Creek Bridge Project Promotes Safety and Economic Opportunities in Rural Arizona

This project supports all of the selection criteria, goals, and objectives for BUILD Grant funding requirements and brings significant safety and economic benefits to a rural region of Arizona.

Construction of the Tonto Creek Bridge:

- Increases connectivity to employment and supports workforce development by allowing residents year-round access to employment centers in Phoenix, Globe, and Payson
- Enables children to safely and consistently reach local schools
- Promotes access to the numerous recreational opportunities offered by the Tonto National Forest and Roosevelt Lake
- Increases regional safety by providing consistent access for residents requiring healthcare, first responders, and forest fire fighters
- Promotes economic development through increased business opportunities and tourism and revitalizes this disconnected community consisting largely of disadvantaged groups—specifically low income and the elderly

In addition, the project enjoys great team, public agency, and community support as shown in the application and supporting documents.

II. PROJECT LOCATION

The project is located between Payson and Globe on State Route 188 in the Tonto Basin in northern Gila County (See Figure 3 on the following page). Tonto Basin encompasses over 31 square miles. The east and west halves of Tonto Basin are bisected by Tonto Creek with Roosevelt Lake and the Roosevelt Dam to the south. Much of Tonto Basin lies within the surrounding Tonto National Forest. The Tonto Basin Community is one of the fastest-growing areas with the largest tracts of developable private land in Gila County. 2010 census data reported 1,424 residents, an increase of over 580 or 40% since 2000. There are a total of 759 family households with a median income for transportation facility users per household of $23,398. There are an additional 546 seasonal, recreational, and vacation housing units. The median age in Tonto Basin is 63.3 years, as it is a popular retirement and recreational location for people around Arizona.

Gila County covers nearly 4,800 square miles with 55% of the land within the Tonto National Forest and 38% within the Fort Apache and San Carlos tribal reservations. Three percent of the land is owned by the Bureau of Land Management and the State of Arizona. Only four percent, 192 square miles, of the land is privately held with 16% of this land being in Tonto Basin.
The bridge and roadway improvements will provide these families, retirees, and recreational/vacation users a safe and reliable crossing of Tonto Creek year-round. The project also supports objectives of the Tonto National Forest including providing access to public lands. Recreational activities help to support local businesses in the area year-round with access to the east side of Tonto Creek being the driving factor.

III. GRANT FUNDS, SOURCES, AND USES OF PROJECT FUNDS

Grant Funds are requested in the amount of $17,419,801 to fund the $20,493,884 cost to construct the project. Gila County will provide a $3,074,083 match. These funds would pay for the construction of the project identified in the 100% construction documents prepared in May 2015. As a rural and economically distressed area, Gila County and the community of Tonto Basin respectfully request consideration of funding support for the $17,419,801 required to complete the project construction costs. As previously described, Gila County has limited funds and revenue streams to draw upon for its transportation improvement needs. Without alternative funding sources, the County will not be able to construct this project.

TABLE 1: PROJECT COSTS AND FUNDING BREAKDOWN

<table>
<thead>
<tr>
<th>Project Components</th>
<th>Breakdown</th>
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<tbody>
<tr>
<td></td>
<td>Costs</td>
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<tr>
<td>Construction</td>
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<tr>
<td>Construction</td>
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<tr>
<td>Construction Funding</td>
<td>$3,074,083</td>
</tr>
<tr>
<td>Percentage</td>
<td>100%</td>
</tr>
</tbody>
</table>

Gila County has administered numerous Federal and State Grants from various authorities such as: Automated Flood Warning System U.S. Department of Commerce National Oceanic and Atmospheric, Federal Geographic Data National Spatial Data Metadata Implementation, Homeland Security Grants, USDA Forest Service, Arizona Department of Commerce, Arizona Department of Environmental Quality, Arizona State Parks Heritage Fund, Governor’s Office of Highway Safety, and Local Transportation Assistance Funds (LTAF) to mention a few. All grant reports have been completed and the grants have been closed in a timely basis; there have been no insufficient audits.

The Arizona Department of Transportation will administer construction of the project in cooperation with Gila County.
IV. MERIT CRITERIA

The five significant sources of beneficial long-term outcomes resulting from the Tonto Creek Bridge project are described in the following sections.

1. Primary Selection Criteria

   a. Safety

   The number one goal of the project and the one that garners the most vocal and passionate response from stakeholders and the public in general is safety. Since 2003, there have been six major flooding events of Tonto Creek requiring road closures totaling 348 days—an average of 25 days (~1 month) per year. This data shows that Tonto Creek is closed to crossing 7% of the time. That does not include the number of days when the crossing is open to vehicles, but unsafe for use by pedestrians and bicyclists.

   Since 1995, four fatalities have been directly attributable to individuals operating motor vehicles crossing Tonto Creek during high flow events. A fifth fatality occurred when a motorist, traveling at night along one of the existing at-grade road crossings, inadvertently drove along a dirt road into Roosevelt Lake and drowned while trying to escape from her vehicle.

   Access across the creek when it is flowing above flood stage is often provided by local residents driving a privately owned military troop transport vehicle. Although not condoned by the County or other agencies, this option is one of last resort for residents. Drivers attempting to cross the creek when the depths do not appear to be deep are often caught in the currents and sink holes requiring rescue by emergency personnel.

   Marsha Warner drove her friend, Alanna, across the creek for surgery in February this year. Warner said the water was less than an inch from the bottom of her truck window, but the surgery was something that had to be done. School children and elderly individuals regularly cross the creek during unsafe conditions—the current crossings are far from a “safe route to school.” George Ewing, 72, has been featured by several state and local media outlets for driving up to 25 schoolchildren to and from school in a retired military transport vehicle when the creek is flooded.
Construction of this project will eliminate five principal safety issues:

1. Motorists attempting to make unsafe vehicular crossings.
2. Pedestrians and bicyclists, including school children, attempting to make unsafe crossings.
3. Inability for fire vehicles and personnel to reach both community and forest fires on the east side of Tonto Creek.
4. Inability for emergency medical vehicles, including airborne in poor weather, to respond to medical emergencies when Tonto Creek is impassible.
5. Inability for law enforcement to reach the scenes of incidents when the Creek is impassible.

As stated previously, there have been five documented motorist fatalities in the past 25-year period. This equates to an average of one fatality every five years or the potential to eliminate 12 fatalities over the 60-year life-cycle of the bridge used in the benefit-cost analysis.

Although historical data are not available regarding pedestrian, bicyclist, and law enforcement incidents involving an impassible Tonto Creek, they have all likely happened and must be prevented from happening in the future. The federal Highway Safety Improvement Program, authorized in 23 US Code, Section 148, states in Paragraph (c)(2)(E)(ii) the need to identify opportunities for preventing the development of such hazardous conditions, which surely exist for these issues.

Data is available and was provided by the Tonto Basin Fire District for fire and emergency medical service incidents. There are on average 20 fire emergencies per year requiring the crossing of Tonto Creek. If the creek cannot be crossed 7% of the time without a bridge, the number of fires per year that cannot be responded to is 1.4. Applied over 60 years, the number of non-responses is 84. The average number of emergency medical service (EMS) calls per year that require crossing Tonto Creek is 82. Again, if the creek cannot be crossed 7% of the time without a bridge, the number of EMS calls that cannot be responded to is approximately six per year. If a conservative assumption is made that 1% of all EMS calls are life-threatening, the number of potential fatalities from non-responses applied over 60 years is four.

The impacts to the general public and first responders can be summarized in the words of Steve Holt, Tonto Basin District Fire Chief, describing the difficulties encountered during EMS responses:

"Due to slow response we have had several individuals who have had very long and complicated transports. I remember an elderly patient with stroke symptoms a few years ago that we had to put in the County’s deuce-and-a-half in a huge thunderstorm, transport across Oak Creek, (which) was flooding, down to Indian Point boat launch. (He was) put in a GCSO boat and transported across Lake Roosevelt in this raging storm to Horse Pasture Campground and loaded in our ambulance for his first definitive care and transport by ground to Payson Regional Medical Center. This took about 3 hours to complete and made the Patient’s 2-3 hour window for therapy impossible to achieve...I also remember an incident where we had to put a patient in our old secondary 4X4 ambulance with only one attendant and tow it across the creek with the County’s huge front end loader, which resulted in the destruction of the ambulance due to flooding. It is amazing that we have not had injuries or deaths by first responders in my department and the County’s employees in the heroic efforts by all for these residents. We attempt to keep it safe but sometimes these calls are a huge challenge.”

Steve Holt, Tonto Basin District Fire Chief

b. State of Good Repair

The principal goal of the Gila County Public Works Division is to “Provide a safe, efficient and cost effective multi-modal circulation system that provides for adequate mobility and access.” This project will improve a deficient portion of the County’s road system for all users including pedestrians and bicyclists in a region that has endured insufficient transportation facilities for decades. The project will positively impact the community of Tonto Basin, the Roosevelt Lake recreational area, and a large portion of the Tonto National Forest.
Regional visitors and travelers frequently utilize the area to recreate, vacation, and relocate for retirement. The construction of this project will reduce life-cycle costs of maintenance and road repair that the County currently expends due to the upkeep of dirt and gravel roads and reconstruction and grading due to the frequent “washouts” of the existing roads from storm events as shown in the Benefit-Cost Analysis.

c. Economic Competitiveness

*Chris and Anne Marie Hansel purchased their home in 2006 and built a $14,000 commercial kitchen for their prickly pear jam business. They sell their products all over the state, but they have had to leave their home for three to four months at a time when Tonto Creek floods, resulting in lost income for their family.*

*Mark Moppin owns the M&M Winery Restaurant and said his business lost almost $20,000 in profits in February and March 2019. His employees also suffered from lack of work.*

The project is located in the center of a regional destination for visitors and recreationists from throughout Arizona. The economic viability of the area will be enhanced through the development of additional residential properties and increased recreational users once they can be assured of safe and reliable transportation in the area. Additional business development will occur as the demand for goods and services increase. The County has received numerous e-mails on the status of the project from local realtors who have clients and private citizens looking to build new homes in the area once the project is constructed. The lost productivity of Forest Service lands as well as the reduced use of Roosevelt Lake impacts the regional economy.

Tonto Basin includes some of the largest tracts of private, developable land in the County. The west side of Tonto Creek, which makes up half the private land, includes established residential neighborhoods, the public library, post office, school, fire station, and businesses ranging from grocery, hardware, auto repair, restaurants, and lodging. The east side of Tonto Creek includes almost two-thirds of the residential properties and over half the population. The ability to further develop this land and maximize land values and entice economic development hinges on the ability of people to safely and reliably travel within the area without the worry of being stranded by flooding for days, weeks, and even months at a time while the creek is running.

Also important is how the economic viability of the Tonto Basin region is affected by the loss of work days and associated income for many current residents because of the inability or inordinate time necessary to reach work locations when the crossing is closed.

*Mary Hendrickson has lived in Tonto Basin since 2000 and has worked for several local restaurants and businesses. She misses weeks of work every year due to the floods and her inability to cross Tonto Creek. She remembers when her husband became ill in 2010 and the creek was flooded. The two rode the G.I. across Tonto Creek to seek treatment because of the seriousness of his condition. “It’s a good thing we were able to get back across because he would have died without it (treatment),” Hendrickson said.*

“Lost work days”—or worse, the loss of employment—from not being able to show up at work due to being trapped on the wrong side of the creek during flooding will be eliminated when the project is completed. This will benefit not only the employees and the community, but also the employers and the availability of the product or service they provide.
Gila County and Tonto Basin are economically distressed areas as defined by section 301 of the Public Works and Economic Development Act (PWEDA). This project will immediately create local construction jobs for the residents of Gila County and the state of Arizona. Following the guidelines described in Table 4 of the FHWA Employment Impact in Federally Aided Highway Construction Investment report, this project will create 590 near-term jobs for the investment of $15,280,741 (assumes 38,638 jobs per $1 billion invested). The magnitude of the work, the anticipated duration of construction, and the rural location will provide local businesses (motels, restaurants, equipment rental suppliers, and grocery/hardware stores) with an influx of capital and demand.

The longer-term benefit to the economy of the area is the year-round access to recreational facilities and the local purchasing power for those who no longer miss work up to weeks at a time due to flooding or those who lose their jobs due to their inability to travel to work. Over the past 40 years, Arizona has been one of the most rapidly growing states in the country. Opening the large tracts of private developable land on the east side of Tonto Creek to year-round, all-weather access allows the region to participate in the growth and associated economic development along with the rest of the state. This growth will significantly stimulate the economy in this economically distressed region and county.

### d. Environmental Protection

A number of environmental benefits associated with this project have been detailed in the Biological Evaluation, Biological Opinion from the U.S. Fish and Wildlife Service, Final Environmental Assessment, and Final Design Concept Report. The bridge and road improvements provide several benefits: 1) vehicular and truck traffic will no longer drive through the creek bed. This will improve the water quality by reducing turbidity from the removal of constant disturbance of the soils, and 2) greatly reducing the chances of oil, grease, gasoline, and other VOC’s from depositing directly into the creek from vehicles and trucks. The Tonto Creek Bridge along with the associated roadway improvements will remove over two acres or 1.5 miles of two-lane dirt road from use.

In the immediate vicinity of the project, air quality will be improved by eliminating two dirt and gravel roads in the area road network, reducing fugitive dust and decreasing the PM$_{10}$ counts. This is estimated at 149 short tons per year based on FHWA Multi-Pollutant Emissions Benefits of Transportation Strategies, Section 7 Road Dust Reduction Strategies, 34 Road Paving examples for Low-Volume Roads using the following factors (http://www.fhwa.dot.gov/environment/air_quality/conformity/research/mpe_benefits/mpe07.cfm):

- **Length of unpaved road section** – 1.0 mile (removed from County inventory with project)
- **Average Daily Traffic (ADT)** – 650 vehicles per day
- **PM$_{10}$ emission factor for unpaved roads** – 573.91 grams/vehicle mile
- **PM$_{10}$ emission factor for paved roads (low volume)** – 1.59 grams/vehicle mile
- **Calculated VMT Affected** = (ADT) x (project length) = 650 x 1.0 miles = 650 vehicle miles/day
- **Calculated emissions reduced** = (VMT Affected) x [(emission factor unpaved) – (emission factor paved)]
- **PM$_{10}$** – 560 x (573.91 – 1.59) = 372,008 grams/day = 149 short tons/year

Following the Maricopa County Air Pollution Control Regulations Rule 242 Emission Offsets Generated by the Voluntary Paving of Unpaved Roads (http://www.maricopa.gov/AQ/divisions/planning_analysis/rules/docs/draft/NPR_242_august_252006_MACQD.pdf) the following estimated reduction of particulate emissions from publicly accessible unpaved roads is as follows:

- **Length of unpaved section** – 1.0 mile (removed from County inventory with project)
- **Average Daily Traffic (ADT)** – 650 vehicles per day
- **Emission factor, E (lb/VMT)**
  - **E** = ((s/12)*1.467)/1.572 – 0.00047 lb/VMT where s = 11.0 for non-gravel roads
  - **E** = 0.85 lb/VMT
- **PM$_{10}$** = 650 ADT x 1.0 miles x 365 days/yr x 0.85 lb/VMT = 202,849 lb/yr = 101 tons/yr
The project will also eliminate the need, during creek crossing closures, to use the alternative dirt road around the east side of Lake Roosevelt for essential trips to and from the east side of Tonto Creek.

The removal of vehicular traffic from the creek will also enhance the travel corridors used for wildlife in the area by eliminating vehicle collisions and impairment of riparian habitat. As part of the mitigation measures associated with the continued operations of the Roosevelt Dam, the development of a Resource Development Plan was prepared by the Tonto National Forest that included the establishment of the Tonto Creek Riparian Unit (TCRU) to monitor and manage the recovery of riparian areas along Tonto Creek, directly south of the project location. The proposed Tonto Creek Bridge and the environmental benefits that result will complement and enhance the goals and objectives set forth in the TCRU. The Tonto National Forest has been an active participant in developing this project and concurs with the benefits this project provides in relation to the TCRU.

Additionally, as part of the Environmental Impact Statement prepared in 2002 by the U.S. Fish and Wildlife Service for the raising of the Roosevelt Dam, the Roosevelt Habitat Conservation Plan (RHCP) was developed by the Salt River Project (SRP) to meet the requirements of the permit for the construction and operation of the dam. As SRP is responsible for implementing the RHCP, they have been involved in the development of the Tonto Creek Bridge project to ensure that any proposed activities are consistent with the plan requirements.

e. Quality of Life

Lucy Heisler’s husband needed a lung transplant and had to sign a compliance contract that stated he would participate in treatment for about a year and a half before he could receive new lungs. While discussing the issue of flooding, the couple decided to try to find a travel trailer they could park on the west side of Tonto Creek. After researching the costs of his treatment in addition to the new living arrangements, her husband cancelled the contract and started hospice because of the burden on the family and expense of living away from their home.

Keith Godbold retired from firefighting, so when his father was sick in bed in the mid-1990s and unable to cross the creek, Godbold had him picked up by helicopter and flew him to Mesa for treatment. “The doctors told us that in one more hour, he would have been dead,” Godbold said. Unfortunately, because of weather conditions that result in flooding, air transport is often impossible.

The Tonto Creek Bridge is an investment in the quality of life for Tonto Basin residents as well as an improvement in access and mobility for all people utilizing the private and public lands in the region. The USDOT, HUD, and EPA have developed six livability principles as part of the Partnership for Sustainable Communities. This project furthers five of the six livability principles.

• **Provide more transportation choices.** This project will provide a currently unavailable year-round safe and reliable road for the residents, businesses, government agencies (including Tonto National Forest), service providers (including emergency and law enforcement), and visitors in Tonto Basin. According to traffic counters put into place by Gila County in 2003, more than 760 vehicles crossed Tonto Creek every day near Punkin Center and A Cross. According to the 2000 Census, 840 people lived in Tonto Basin. By
2010, the population had grown to 1,424. This road will provide a reliable facility for automobiles, trucks, transit vehicles, pedestrians, and bicyclists. Air and water quality is improved by the elimination of dirt roads and by removing vehicles from traveling through the creeks.

It will provide a reliable roadway and the most direct and fastest route for residents’ work, shopping, medical, and other trips outside the region. Travel time savings per one-way trip to and from the Phoenix metropolitan area or to the County seat in Globe using the bridge instead of the alternative route, which is a primitive Forest Service dirt road along the east side of Lake Roosevelt, is approximately two hours. The alternative route is 65 miles long as compared to the current ½-mile crossing.

- **Enhance economic competitiveness.** The project will provide reliable and timely access to the entire Tonto Creek Basin. In doing so, it will enhance the Basin’s economic competitiveness by making the existing businesses and services available on a dependable basis throughout the year. Developable land in the Basin will be more attractive for investors because of dependable access to markets and reliable services such as fire and law enforcement. The development of land should not be viewed as a transfer of activities from another region, but rather an increase in the productivity of land that will be needed as the nation continues to grow.

- **Support existing communities.** The community of Tonto Basin was established by homesteaders in the 1880s. This project improves the efficiency of public works investments through the construction of a sustainable facility versus the continual expenditure of scarce funds reconstructing dirt roads washed out with every storm event. The project also safeguards rural landscapes by removing the dirt roads from the creek bed while incorporating the visual quality objectives of the US Forest Service into the new facilities. It improves the efficiency of public works investments by eliminating the continuous need for emergency repairs to existing crossings caused by flooding and the maintenance or replacement of existing crossings destroyed or damaged by Tonto Creek. The annual savings in emergency repairs and maintenance or re-grading of existing dirt roads crossing Tonto Creek is estimated to be $125,304 when the bridge project is constructed.

- **Coordinate policies and leverage investment.** The project’s viability is only possible through the cooperation and partnering between Gila County and the federal government for funding. The project also enhances the overall Tonto Basin while at the same time achieving planning objectives of the County.

- **Value communities and neighborhoods.** The project will enhance the unique characteristics of Tonto Creek Basin by creating a safe and walkable community that is completely accessible to residents and visitors to meet, socialize, participate together in community activities, and enjoy each other’s company.

The project is consistent with Gila County’s Comprehensive Plan, Transportation Study, Central Arizona Governments’ TIP, and ADOT’s STIP. It provides for vehicular, pedestrian, and bicyclist access across Tonto Creek regardless of the conditions of the waters below. The western terminus of the project is located at the front door of the Tonto Basin School. The bridge and adjacent improvements along Old State Hwy 188
will provide extra lane widths for vehicles and a paved pathway for bicyclists and pedestrians to cross Tonto Creek. School children can safely bike or walk to school. Residents will no longer need to wait for flows to subside to attend work, shop for basic essentials, or obtain medical services. Tourists and recreational visitors to the area will be able to travel to the eastern locations by vehicle, mountain bike, or hiking on foot without traversing through dangerous flood waters.

Below is a summary of recent road closures and major flood events that have rendered Tonto Creek impassable, stranding half the population on the east side.

<table>
<thead>
<tr>
<th>Duration of Road Closures</th>
<th>Major Flood Events</th>
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<tbody>
<tr>
<td>2019 – 46 days</td>
<td>2/15/19 – 5/15/19 – 90 days</td>
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<tr>
<td>2018 – 10 days</td>
<td>1/1/17 – 2/4/17 – 35 days</td>
</tr>
<tr>
<td>2017 – 75 days</td>
<td>1/20/10 – 4/5/10 – 74 days</td>
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<tr>
<td>2016 – 40 days</td>
<td>12/17/08 – 3/5/09 – 79 days</td>
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<tr>
<td>2015 – 8 days</td>
<td>1/26/08 – 3/13/08 – 48 days</td>
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<tr>
<td>2014 – 3 days</td>
<td>12/29/04 – 3/8/05 – 70 days</td>
</tr>
<tr>
<td>2013 – 20 days</td>
<td>2/28/03 – 4/10/03 – 42 days</td>
</tr>
</tbody>
</table>

Numerous e-mails have been received via the County’s project website from the public, actively supporting the project and the benefits it will provide to the welfare and living conditions of the residents of Tonto Basin and Arizona.
2. Secondary Selection Criteria

a. Innovation

The scope of work from an engineering and construction perspective is relatively straightforward. The County and their design consultant have worked to develop an efficient and cost-effective design that addressed all site constraints while meeting the needs of project stakeholders. The design focused on constructability and low-maintenance design details.

b. Partnership

To date Gila County has spent over $380,000 of local money acquiring right-of-way for this project. In 2015 Gila County enacted a local ½-cent Transportation Excise Tax to help fund their county-wide transportation program. Additionally, Gila County receives transportation funding from Arizona’s Highway User Revenue Fund (HURF), which is comprised of state gas tax revenue. Last year Gila County received a total of $6.3 million in funding through HURF and the County’s ½-cent Transportation Excise Tax. These funds were used for the maintenance and operations for Gila County’s 765 miles of existing roads. The County is unable to fully fund and build this project without additional outside resources and support.

While Gila County is the sole applicant for this project, it recognizes that this project has required support and assistance from other agencies and stakeholders to become reality. The County has been actively fostering partnerships with numerous agencies and stakeholders for many years. The project team has worked closely from day one to ensure that all team members, as well as the public at large, have been afforded the opportunity to participate in the development, design, and ultimate construction of this much-needed facility.

A key to the success of this project has been partnering with federal, state, and local agencies to develop a specific project that benefits the region and all of its stakeholders and to identify funding assistance to construct a transportation facility—one that promotes the safety and welfare of all citizens and benefits generations to come through increased multimodal accessibility while improving the region’s environment. Project partners are shown in Table 2.

TABLE 2: PROJECT TEAM MEMBERS

<table>
<thead>
<tr>
<th>Lead Federal Agency</th>
<th>Federal Highway Administration (FHWA)</th>
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</thead>
<tbody>
<tr>
<td>Sponsoring Agency</td>
<td>Gila County</td>
</tr>
<tr>
<td>Cooperating Agencies</td>
<td>U.S. Army Corps of Engineers</td>
</tr>
<tr>
<td></td>
<td>Tonto National Forest</td>
</tr>
<tr>
<td>Participating Agencies</td>
<td>Arizona Department of Transportation (ADOT)</td>
</tr>
<tr>
<td></td>
<td>Central Arizona Governments</td>
</tr>
<tr>
<td>Other Project Team Members</td>
<td>Tonto Basin School District</td>
</tr>
<tr>
<td></td>
<td>Tonto Basin Fire District</td>
</tr>
<tr>
<td></td>
<td>Tonto Basin Residents</td>
</tr>
</tbody>
</table>
The partnership between Gila County and the Tonto National Forest is strong. The Tonto Basin Ranger District and staff from the Supervisor’s Office have been actively involved in this project from the beginning. Their support is evident in the continued cooperation and collaboration as the project moves forward. A letter of support from the Tonto National Forest is attached.

The Tonto Basin Fire District and Tonto Basin School District continue to provide support, time, and assistance with the project, allowing their facilities to be used for public meetings and gatherings. Since the early 1970s, residents and stakeholders have provided support through public meetings, Town Halls, phone calls, e-mails, work with state-wide leaders, and letters of support. They have willingly endorsed the project site location and have cooperated with field surveys and information gathering necessary to complete the NEPA studies and engineering design.

i.) Jurisdictional and Stakeholder Collaboration

As previously stated, this project has been developed with close partnering and collaboration among a host of jurisdictional agencies and stakeholders. The non-federal partnerships associated with this project include the following entities:

- Gila County Board of Supervisors
- Gila County Community Development
- Gila County Emergency Management
- Gila County Sheriff’s Department
- ADOT Local Public Agency Section
- ADOT Environmental Planning Group
- ADOT Bridge Group
- ADOT Globe District
- Central Arizona Governments
- Tonto Basin School District
- Tonto Basin Fire District
- Tonto Basin Residents

Although Gila County is the only non-federal agency providing funding for this project other than staff support, this project has shown that many entities with diverse missions and goals can come together in a collaborative effort that results in substantial benefit for each of the entities.

ii.) Disciplinary Integration

Gila County and the Tonto National Forest share common goals and desires relating to this project. The Forest has been involved from day one of the project working with the County on the location and design elements of the project that will protect and preserve the historic and cultural assets within the project area. The project enhances the environment for the continued development of the Tonto Creek Riparian Unit.

This project will also bring together and integrate the two halves of the Tonto Basin and associated services. All of the Basin will enjoy year-round fire protection, school, access, emergency medical services, and access to jobs and businesses. The project also supports the principle of the Roosevelt Habitat Conservation Plan.
V. PROJECT READINESS

Gila County has been planning this project since 2009 when the design concept report and environmental studies were started. As shown in Table 3 below, the County’s private consultant has completed and received approvals on the design concept report and environmental assessment including a FONSI. Design engineering is complete (100%). Right-of-way acquisition has been completed by Gila County. The remaining work involves preparing an update to the completed environmental assessment and obtaining the 404 permit.

### TABLE 3: AGENCY APPROVALS AND PERMITS

<table>
<thead>
<tr>
<th>Agency</th>
<th>Type of Application/Permit</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Highway Administration</td>
<td>Environmental Assessment Approval</td>
<td>Completed – update required</td>
</tr>
<tr>
<td></td>
<td>EIS Need Decision/FONSI</td>
<td>Completed</td>
</tr>
<tr>
<td>U.S. Army Corps of Engineers</td>
<td>Section 404 Permit</td>
<td>Submittal Pending Construction Funding</td>
</tr>
<tr>
<td>U.S. Fish &amp; Wildlife Service</td>
<td>Biological Opinion</td>
<td>Completed</td>
</tr>
<tr>
<td>U.S. Forest Service (Tonto Forest)</td>
<td>Consultation</td>
<td>Completed</td>
</tr>
<tr>
<td>Arizona Department of Transportation</td>
<td>Environmental Assessment Approval</td>
<td>Completed</td>
</tr>
<tr>
<td></td>
<td>EIS Need Decision/FONSI</td>
<td>Completed</td>
</tr>
<tr>
<td></td>
<td>Class III Cultural Resource Determinations</td>
<td>Completed</td>
</tr>
<tr>
<td></td>
<td>Biological Evaluation (T&amp;E Species)</td>
<td>Completed</td>
</tr>
<tr>
<td></td>
<td>Design Concept Report Approval</td>
<td></td>
</tr>
<tr>
<td>Arizona Department of Environmental Quality</td>
<td>National Pollutant Discharge Elimination System</td>
<td>To be requested</td>
</tr>
<tr>
<td>Gila County Flood Control District</td>
<td>Encroachment Permit for Construction</td>
<td>To be requested</td>
</tr>
</tbody>
</table>

a. Technical Feasibility

Design is complete. The 100% plans, specifications, and estimates package is complete. Final submittal to ADOT is pending construction funding.

b. Project Schedule

The schedule included in Table 4 on the following page outlines the remaining design stage submittals and permits required to have the full bid package by April 2021. The schedule provides for construction bid advertisement by May 2021 with award of the construction contract in August 2021, one to two months before the requirement for obligating funds by September 2021.
<table>
<thead>
<tr>
<th>STAGE</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td></td>
</tr>
<tr>
<td>30% design – complete</td>
<td>September 15, 2011</td>
</tr>
<tr>
<td>60% design – complete</td>
<td>November 7, 2011</td>
</tr>
<tr>
<td>95% design – complete</td>
<td>March 19, 2012</td>
</tr>
<tr>
<td>100% design – complete</td>
<td>June 2015</td>
</tr>
<tr>
<td>Right-of-Way Acquisition – complete</td>
<td>March 2016</td>
</tr>
<tr>
<td>Final PS&amp;E</td>
<td>March 2020</td>
</tr>
<tr>
<td>Update Environmental Assessment</td>
<td>March 2021</td>
</tr>
<tr>
<td>404 Permit Issued</td>
<td>April 2021</td>
</tr>
<tr>
<td>Contracting</td>
<td></td>
</tr>
<tr>
<td>Advertise</td>
<td>May 2021</td>
</tr>
<tr>
<td>Open Bids</td>
<td>July 2021</td>
</tr>
<tr>
<td>Award</td>
<td>August 2021</td>
</tr>
<tr>
<td>Construction</td>
<td></td>
</tr>
<tr>
<td>Preconstruction Conference</td>
<td>October 2021</td>
</tr>
<tr>
<td>Begin Construction</td>
<td>November 2021</td>
</tr>
</tbody>
</table>

1 Advertisement and Construction Schedule is contingent upon funding availability.

c. Required Approvals

1. Environmental Permits and Reviews

After conducting an Environmental Assessment and public outreach following a detailed, NEPA-compliant Public Involvement Plan, NEPA Environmental approval for the project was obtained. A Finding of No Significant Impact was signed by FHWA in August 2011. This and other support documents can be found on the Tonto Creek Bridge project website at: [www.tontocreekbridge.com](http://www.tontocreekbridge.com).

Since the Environmental Assessment was completed in 2011, an update to the Environmental Assessment will be required once construction funding has been obtained. Since the completion of the Environmental Assessment and in anticipation of obtaining construction funding, Gila County has continued to perform annual southwestern willow flycatcher surveys within the project limits (as required in the Environmental Assessment and Biological Opinion) and send those surveys to the U.S. Fish and Wildlife Service. In addition, Gila County maintains regular contact with ADOT’s Environmental Planning Section regarding the project status and requirements.

Additionally, once construction funding is secured, the 404 permit and utility clearances will be submitted and finalized.

2. State and Local Approvals

No legislative action is required for the project. Local officials wholeheartedly support and endorse this project. Letters of support are included from U.S. Senators Kyrsten Sinema and Martha McSally, Arizona’s District 4 Representative Paul Gosar, and Arizona’s District One Representative Tom O’Halleran.

3. State and Local Planning

All elements of the Tonto Creek Bridge project are discussed and listed in the 2014 Gila County Transportation Study and as part of the Gila County Comprehensive Plan. The project is also listed in Central Arizona...
Governments’ TIP as well as ADOT’S STIP. A letter of support from Central Arizona Governments is included with this application.

d. Assessment of Project Risks and Mitigation Strategies

The risks assessment for this project is very low. The County has acquired all property for right-of-way. Engineering design is complete and has been developed following ADOT guidelines. The one unknown at this time is the timing on the issuance of the 404 permit. Coordination for this permit has been ongoing with the US Army Corps of Engineers. At the Corps’ request, the County is waiting to submit the Nationwide permit application until construction funding has been identified/secured. The risk to the project would be anticipated January 2020 issuance of the permit.

VI. BENEFIT-COST ANALYSIS

A benefit-cost analysis (BCA) has been prepared following the requirements of the BUILD Discretionary Grants application guidelines. Gila County would like to note that the following is not an exhaustive, all-encompassing analysis. Data was compiled, referenced, and analyzed using known or applicable monetary costs and benefits.

To the extent possible given the available data, the BCA prepared reflects the economic benefits in all of the major long-term impacts areas identified in the BUILD Grant application. These include:

1. **Safety.** Construction of the bridges will improve safety in a number of ways by providing:
   - A year-round, all-weather crossing for the residents and visitors to the region.
   - A safe route to school for the students and teachers of Tonto Basin Elementary School.
   - During emergency situations fire fighters, police, and emergency personnel will be able to access the east side of Tonto Creek regardless of the weather conditions.
   - Access for the Tonto National Forest to fight fires on lands located on the east side of Tonto Creek.
   - A means to eliminate the loss of life experienced over the last 19 years from individuals attempting to cross the creek when the creek is flowing. Five fatalities since 1993 have been attributed to the at-grade road crossings.

2. **State of Good Repair.** The project will reduce the yearly maintenance costs in addition to the emergency repair and reconstruction costs Gila County currently expends annually to maintain the at-grade dirt roads improved by the project. The 60-year life cycle discounted cost of the project is $18,659,731—much less than the discounted benefits of $27,969,625. The costs required for yearly maintenance of the new bridges is off-set by the savings to the County from existing at-grade road crossing maintenance and flood repair.

3. **Economic Competitiveness.** Improved and reliable transportation facilities will eliminate lost work days from the inability to travel to work due to flooding. The year-round all-weather crossing of Tonto Creek will also provide more opportunity to develop the existing large tracts of land into viable and sustainable residential, commercial, and manufacturing facilities. Lost revenue from visitors and recreational users of the land in the region will also be greatly reduced with safe and reliable access.

4. **Environmental Protection.** Improved air and water quality through the removal of vehicular traffic through Tonto Creek and with the paving of existing dirt roads will be realized. Riparian habitat will re-establish with the removal of the at-grade crossings which supports the Tonto Creek Riparian Unit’s goal.

5. **Quality of Life.** Access to a safe transportation facility for the area that accommodates vehicles, pedestrians, bicyclists, hikers, and campers, as well as school children adds to the livability and quality of life for the area. The project also provides enhanced job commuting options. It also provides improved connections between residential and commercial areas, as well as access to emergency services.
A summary of the BCA prepared is shown in Table 5 below.

### TABLE 5: BENEFIT-COST RATIO AND NET PRESENT VALUE ($2020)

<table>
<thead>
<tr>
<th></th>
<th>Present Value @ 3%</th>
<th>Present Value @ 7%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Costs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-year Life Cycle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of Tonto Creek</td>
<td>$20,770,439</td>
<td>$18,659,731</td>
</tr>
<tr>
<td>Bridge</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Benefits</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emergency Response</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expenses</td>
<td>$55,136,772</td>
<td>$27,969,625</td>
</tr>
<tr>
<td>Annual at-grade Maint.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expenses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fatalities avoided (VSL)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Benefit/Cost Ratio:</strong></td>
<td>2.65</td>
<td>1.50</td>
</tr>
</tbody>
</table>

The BCA has not taken into account any added monetary benefits from the project relating to reduced travel time, the tabulation of lost wages from the inability to reach places of work for residents on the east side of Tonto Creek, the increase in property values from more development, or the revenue loss for the Tonto National Forest and local businesses from reduced tourism and recreational use in the area during flooding events. The BCA also does not include additional livability benefits from bicycle or pedestrian access across the creek by use of the bridge. A narrative outlining the approach taken for this BCA has been provided as an attachment and is also located on the Tonto Creek Bridge project team website (www.tontocreekbridge.com).

**SUPPLEMENTARY DOCUMENTS AVAILABLE ON PROJECT WEBSITE**

www.tontocreekbridge.com

- Tonto Creek Bridge – The Human Element Video
- Narrative
- Benefit-Cost Analysis Memo and Support
- Final Environmental Assessment
- Stage V (100%) Construction Documents
- Construction Cost Estimate
- Letters of Support
  - Arizona Congressional District 4 (U.S. Representative Paul Gosar)
  - Arizona Congressional District 1 (U.S. Representative Tom O’Halleran)
  - U.S. Senator Kyrsten Sinema
  - U.S. Senator Martha McSally
  - Central Arizona Governments
  - Tonto National Forest
  - Tonto Basin Fire District
  - Tonto Basin Elementary School District