

TIGER FY 2015 DISCRETIONARY GRANT APPLICATION

## TONTO CREEK BRIDGE PROJECT

# ARIZONA



**TIGER**  
**GRANTS**



**APPLICATION DATE**

June 5, 2015

**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 2015 National Infrastructure Investments

**LOCATION**

Gila County, Arizona

Arizona Congressional District 4  
(U.S. Rep. Paul Gosar)

**AREA**

Rural

**REQUESTED AMOUNT**

\$15,846,000

**TOTAL PROJECT COST**

\$17,860,000

**PROJECT WEB ADDRESS**

[www.tontocreekbridge.com](http://www.tontocreekbridge.com)

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## CHANGES NOTED FROM PRE-APPLICATION

The amount requested in Gila County’s Final TIGER Grant application differs from that listed in the Pre-application as outlined below.

	<b>TIGER Application</b>	<b>Pre-application</b>	<b>Difference</b>
Federal Funding	\$15,846,000	\$16,110,000	-\$264,000
Applicant Funding	\$2,014,843	\$1,790,000	\$224,843
Total	\$17,860,843	\$17,900,000	-\$39,157

The total project costs have been refined following the completion of the 100% Engineers Estimate. The requested amount has been reduced in the Final TIGER grant application and Gila County’s financial commitment to the project has been increased.

## A. PROJECT DESCRIPTION

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 \$17.86 million. This application requests \$15.846 million (89 percent of the project cost). The remainder of the project cost, \$2.014 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. 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. Plans, Specifications and Estimates will be submitted to ADOT for final review in June 2015 following Gila County's acquisition of the final private parcel of land for right-of-way, which is currently in escrow.

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](http://www.tontocreekbridge.com)



*Motorist attempting to cross Tonto Creek one month after flood – February 2010*



*Sheriff's Office rescuing motorist one month after flood – February 2010*

FIGURE 1 - TYPICAL SECTIONS

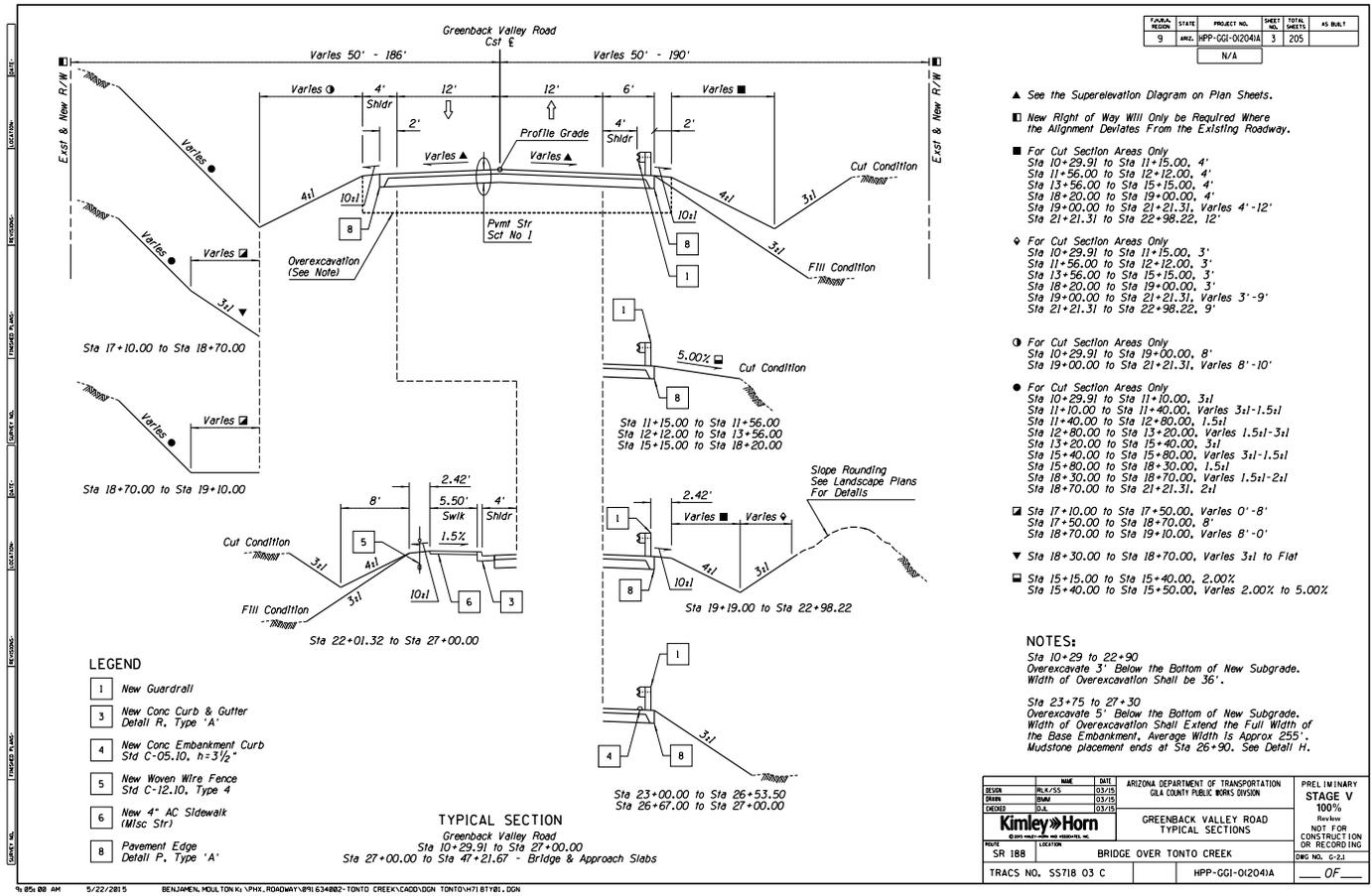
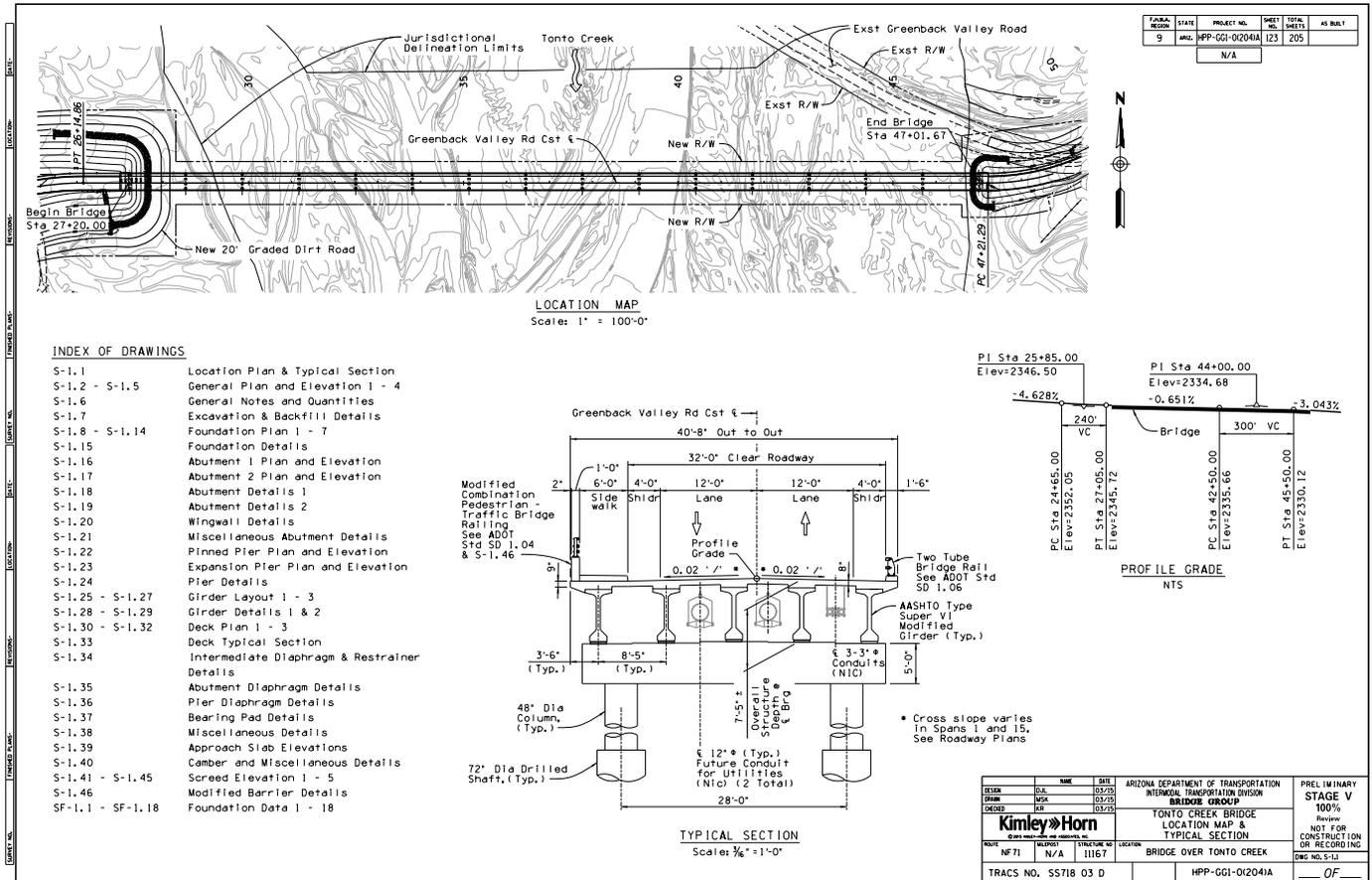
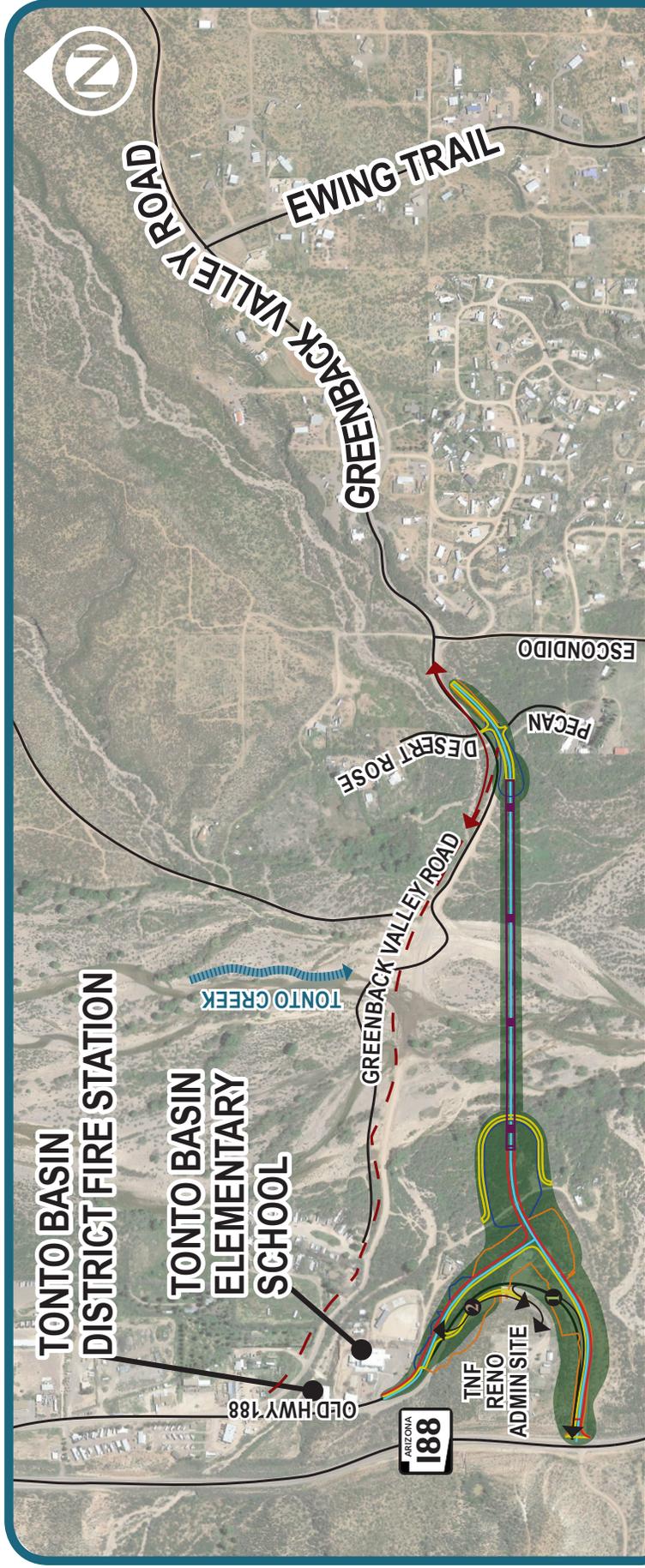


FIGURE 2 - PROJECT LIMITS



## Tonto Creek Bridge Project Promotes Ladders of Opportunity

It is important to point out that this project supports all of the selection criteria, goals, and objectives for TIGER Grant funding requirements and truly demonstrates the attributes of a Ladders of Opportunity project. 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 health-care, 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.



*Greenback Valley Road closed due to flooding – January 2010*



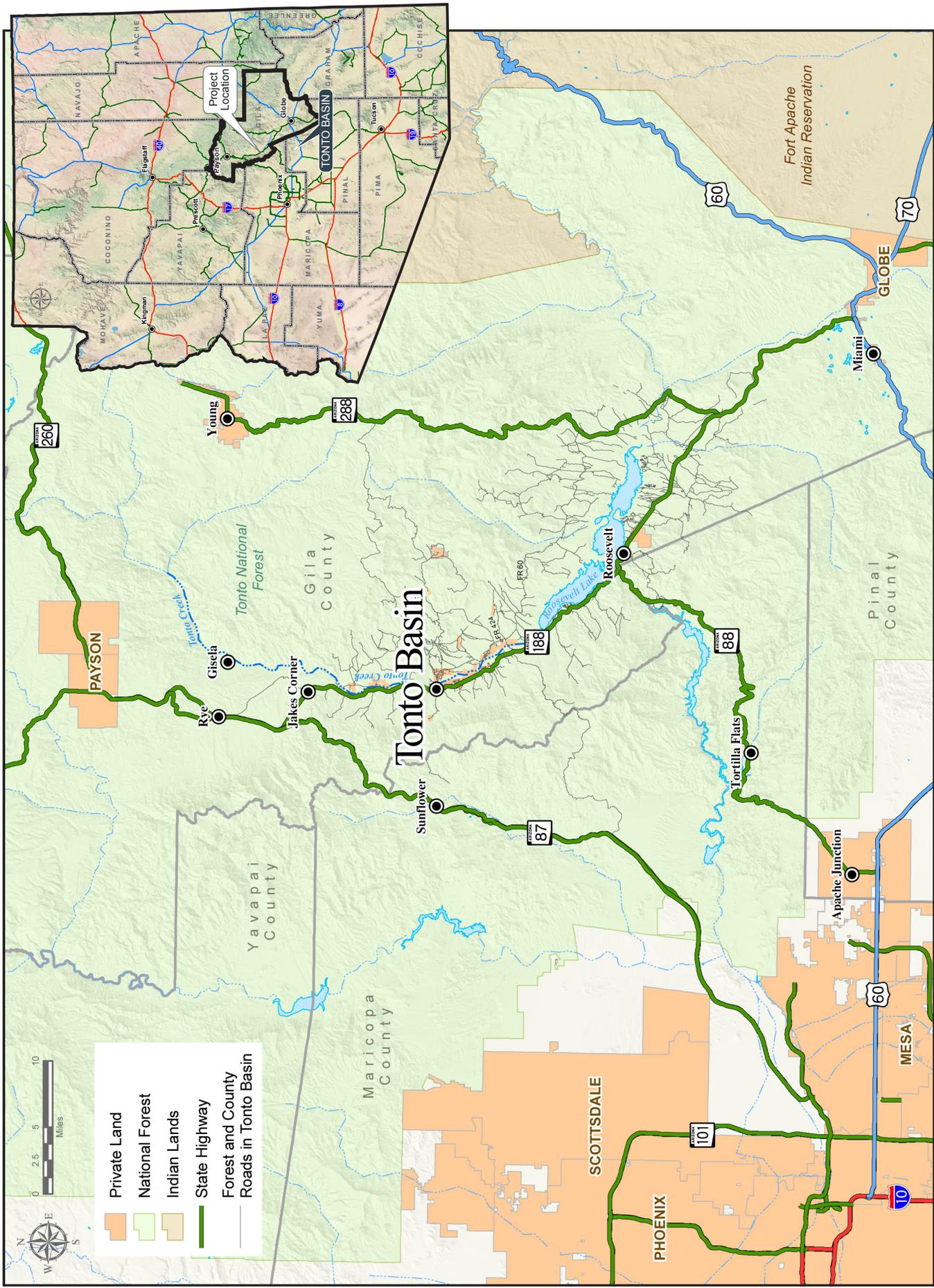
*Six Weeks After Flood – February 2010*

## B. 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.

FIGURE 3 – PROJECT LOCATION



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.

## C. PROJECT PARTIES

Gila County is the sole applicant for this project.

## D. GRANT FUNDS AND SOURCES/USE OF PROJECT FUNDS

Grant Funds are requested in the amount of \$15,846,000 to fund the \$17,860,843 cost to construct the project. Gila County will provide a \$2,014,843 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 requests consideration of funding support for the \$15,846,000 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

Project Components	Breakdown		
	Costs	GILA COUNTY	TIGER GRANT
<b>Construction</b>			
Land Acquisition	\$276,518	\$276,518	-
Utility Relocation	\$200,100	-	\$200,100
Construction	\$17,384,225	\$1,738,325	\$15,645,900
<b>Total Project Cost</b>	<b>\$17,860,843</b>		
<b>Construction Funding</b>		<b>\$2,014,843</b>	<b>\$15,846,000</b>
<b>Percentage</b>	<b>100%</b>	<b>11%</b>	<b>89%</b>

## E. SELECTION CRITERIA

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

### I. Primary Selection Criteria

#### A. 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.

**B. ECONOMIC COMPETITIVENESS**

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. As previously stated, Tonto Basin includes some of the largest tracts of private, developable land in the County. The west side of



*Tonto Creek*

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 being 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. “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 618 near-term jobs for the investment of \$15,986,160 (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.

### C. QUALITY OF LIFE

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. 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.



*Greenback Valley Road Requiring Maintenance*

- **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.

• 1/30/15 – 2/9/15	<b>8 days</b>	• 1/20/10 – 4/5/10	<b>74 days</b>
• 3/3/14 – 3/6/14	<b>3 days</b>	• 12/17/08 – 3/5/09	<b>79 days</b>
• 3/8/13 – 3/15/13	<b>7 days</b>	• 1/26/08 – 3/13/08	<b>48 days</b>
• 3/27/13 – 2/9/13	<b>13 days</b>	• 12/29/04 – 3/8/05	<b>70 days</b>
		• 2/28/03 – 4/10/03	<b>42 days</b>

### *Recent Road Closures*

### *Major Flood Events*

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.

#### **D. ENVIRONMENTAL SUSTAINABILITY**

A number of environmental benefits associated with this project have been detailed in the Biological Evaluation, Biological Opinion from the US 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<sub>10</sub> 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](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<sub>10</sub> 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)]
- $PM_{10}$  – 650 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](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 US 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. 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 five high-flow Tonto Creek crossing closures totaling 344 days—an average of 26 days (~1 month) per year. **This data shows that Tonto Creek is closed to crossing more than 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. School children and elderly individuals regularly cross the creek during unsafe conditions—the current crossings are far from a “safe route to school.”

**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 that was flooding, down to Indian Point boat launch. 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*

## II. 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

While Gila County is the 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 partner are shown in **Table 2**.

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

TABLE 2: PROJECT TEAM MEMBERS

<b>Lead Federal Agency</b>
Federal Highway Administration (FHWA)
<b>Sponsoring Agency</b>
Gila County
<b>Cooperating Agencies</b>
U.S. Army Corps of Engineers
Tonto National Forest
<b>Participating Agencies</b>
Arizona Department of Transportation (ADOT)
Central Arizona Governments
<b>Other Project Team Members</b>
Tonto Basin School District
Tonto Basin Fire District
Tonto Basin Residents

- 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.

## F. RESULTS OF BENEFIT-COST ANALYSIS

A benefit-cost analysis (BCA) has been prepared following the requirements of the TIGER 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 five major long-term impacts areas identified in the TIGER Grant application. These include:

- 1. 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 \$16,289,949—much less than the discounted benefits of \$28,161,759. 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.
- 2. Long-Term 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.
- 3. Livability.** 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 of 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.
- 4. Environmental Sustainability.** 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. 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 personal 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.

A summary of the BCA prepared is shown in **Table 3** below.

**TABLE 3: BENEFIT-COST RATIO AND NET PRESENT VALUE (\$2014)**

	<b>Present Value @ 3%</b>	<b>Present Value @ 7%</b>
<b>Costs</b>		
60-year Life Cycle Cost of Tonto Creek Bridge	\$18,183,493	\$16,289,949
<b>Benefits</b>		
Emergency Response Expenses	\$55,497,912	\$28,152,823
Annual at-grade Maint. Expenses		
Fatalities avoided (VSL)		
<b>Benefit/Cost Ratio:</b>	<b>3.05</b>	<b>1.73</b>

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](http://www.tontocreekbridge.com)).

## G. PROJECT READINESS AND NEPA

Gila County has been planning this project since 2009 when the design concept report and environmental studies were started. As shown in **Table 4** on the following page, 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 will be completed in June of 2015 (last parcel of land in escrow). The remaining item involves obtaining the 404 permit.

TABLE 4: AGENCY APPROVALS AND PERMITS

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

## I. Technical Feasibility

Design is complete. The 100% plans, specifications, and estimates package is complete and will be submitted to ADOT for final review in June 2015 following final right-of-way acquisition.

## II. Financial Feasibility

The County has committed the portion of the funds listed in Section D. The requested TIGER Discretionary Grants funds are for the balance of the construction costs for the project.

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 the construction of the project in cooperation with Gila County.

### III. Project Schedule

The schedule graphic (**Table 5** below) outlines the remaining design stage submittals and permits required to have bid documents by September 2015. The schedule provides for construction bid advertisement by April 2016 with award of the construction contract in July 2016, more than one year before the requirement for obligating funds by September 2017.

TABLE 5: PROJECT SCHEDULE

STAGE	DATE
<b>Design</b>	
30% design – <b>complete</b>	September 15, 2011
60% design – <b>complete</b>	November 7, 2011
95% design – <b>complete</b>	March 19, 2012
Right-of-Way Acquisition – <b>complete</b>	May 2015
100% design – <b>complete</b>	June 2015
Final PS&E	September 2015
404 Permit Issued	February 2016
<b>Contracting<sup>1</sup></b>	
Advertise	April 2016
Open Bids	June 2016
Award	July 2016
<b>Construction<sup>1</sup></b>	
Preconstruction Conference	August 2016
Begin Construction <sup>1</sup>	September 2016

<sup>1</sup> Advertisement and Construction Schedule is contingent upon funding availability.

### IV. Required Approvals

#### A. ENVIRONMENTAL PERMITS AND REVIEWS

NEPA Environmental approval for the project has been completed. 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).

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

#### B. LEGISLATIVE APPROVALS

No legislative action is required for the project. Local officials wholeheartedly support and endorse this project. A letter of support from Arizona's 4th District Representative Paul Gosar is included with this application.

#### C. 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 CAG's TIP as well as ADOT'S STIP. A letter of support from CAG is included with this application.

## **V. Assessment of Project Risks and Mitigation Strategies**

The risks assessment for this project is very low. The County will have acquired all property for right-of-way by the time of this submittal. 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 February 2016 issuance of the permit. Depending on the Corps' workload and review time, permit issuance could slip a few months to possibly April/May 2016.

## **FEDERAL WAGE RATE CERTIFICATION**

A signed Federal Wage Rate Certification form is included as an attachment.

## **SUPPLEMENTARY DOCUMENTS AVAILABLE ON PROJECT WEBSITE**

[www.tontocreekbridge.com](http://www.tontocreekbridge.com)

- Narrative
- Benefit-Cost Analysis
- Final Environmental Assessment
- Stage V (100%) Construction Documents
- Construction Cost Estimate
- Letters of Support

- Administration
- Auto/Equipment Maintenance
- Consolidated Roads
- Engineering Services
- Facilities and Land Management
- Fleet/Fuel Management
- Floodplain Management
- GIS & Survey Services
- Recycling & Landfill Management
- Survey



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## **GILA COUNTY PUBLIC WORKS DIVISION**

### **FEDERAL WAGE RATE CERTIFICATION**

I, Steve Sanders, on behalf of Gila County Arizona, the sponsoring agency for the Tonto Creek Bridge project, hereby certify that Gila County will comply with the requirements of subchapter IV of chapter 31 of title 40, United States Code (Federal wage rate requirements), as required by the FY 2014 Continuing Appropriations Act), if awarded TIGER funding for this project.

I further certify that the specific information required by TIGER FY 2015 NOFA for the Tonto Creek Bridge Project, totaling \$17,860,843, of which \$15,846,000 of TIGER funds are being requested, is provided on the project website, available to the public at [www.tontocreekbridge.com](http://www.tontocreekbridge.com).

I understand that my local agency may not receive TIGER funding unless this certification is made and posted.

A handwritten signature in blue ink, appearing to read 'Steve Sanders', is written over a light blue rectangular background.

Steve Sanders  
Deputy Director  
Gila County Public Works Division  
Gila County, Arizona  
Signed this 29th day of May, 2015