



OKLAHOMA



Fiscal Years 2024 and 2026
Promoting Resilient Operations for Transformative, Efficient,
and Cost-Saving Transportation (PROTECT) Program

SH-125 Flood Prevention in Rural Northeast Oklahoma

Oklahoma Department of Transportation
Grant Request: \$5,430,998

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This is the Resilience Grant Application Template for the Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) Competitive Grant Program Fiscal Years 2024 through 2026 Notice of Funding Opportunity (NOFO).

I. Summary

Project Title	SH-125 Flood Prevention in Rural Northeast Oklahoma
Lead Applicant Name	Oklahoma Department of Transportation
Lead Applicant Type	☒ A State or political subdivision of a State.
Type of Grant(s)	☒ Resilience Improvement
Eligible Activities	Resilience Improvement Grants (23 United States Code (U.S.C.) § 176(d)(4)(A)(ii)): ☒ Resurfacing, restoring, rehabilitating, replacing, improving, or realigning a facility eligible for assistance under this program (see eligible facilities in the row below). ☐ Incorporating natural infrastructure. ☒ Upgrading existing surface transportation facilities to meet/exceed FHWA design standards. ☒ Installing flood mitigation measures. ☐ Strengthening rainwater removal systems. ☐ Upgrading or installing structural stormwater controls. ☐ Constructing a resilience project that addresses vulnerabilities described in the Resilience Improvement Plan (RIP) in your jurisdiction. ☒ Relocating roadways in a base floodplain. ☐ Stabilizing slide areas or slopes. ☒ Installing riprap. ☒ Lengthening or raising bridges. ☒ Increasing size or number of drainage structures. ☐ Installing seismic retrofits on bridges. ☐ Adding scour protection on bridges. ☐ Adding scour, stream stability, coastal, and other hydraulic countermeasures, including spur dikes. ☐ Implementing vegetation management in the right-of-way. ☐ Installing any other protective features, including natural infrastructure.



Project Area	City of Miami, Oklahoma	
Amount of Funding Requested Under this NOFO	\$5,430,998	
Cost Share Requested¹	\$5,430,998	
Total Project Cost	\$6,788,748	
Which Type(s) of Natural Hazards does the Project Address?	Flooding	
Which Transportation Modes are Addressed by the Project?	Vehicular traffic	
Project Description:		
Oklahoma Department of Transportation (ODOT) seeks PROTECT Program funding for the State Highway 125 (SH-125) Flood Prevention in Rural Northeast Oklahoma Project (the Project). The Project will reconstruct a 0.70-mile segment of SH-125 in rural Oklahoma to prevent future roadway flooding. The Project area is a two-lane undivided section of highway near the local fairgrounds, within a floodplain. The Project will replace a local bridge, widen shoulders, replace and enlarge the existing culvert, add a new culvert, and improve drainage. These improvements will mitigate the risk of flooding along surface transportation assets and enhance regional safety. Previously incurred costs for the Project total \$1,100,000; they include the 2017 ODOT SH-125 Design Feasibility Study (Study) and anticipated costs for design, engineering, and environmental work that are excluded from the scope of this Project's PROTECT grant application. The Study evaluated the water surface elevations, to assess the impact of raising the highway to avoid overtopping during flood events. It also assessed the replacement culvert to be constructed in the Project area. Recommended improvements included elevating parts of SH-125 and replacing the existing culvert with two 8-foot-by-6-foot reinforced concrete box (RCB) culverts. The Study identified improvements that are incorporated into the Project to reduce the frequency of roadway flooding, improve system reliability, and prevent backwater effects from local drainage. ODOT is requesting \$5,430,988 in PROTECT funds in conjunction with a \$1,357,750 nonfederal match to help fund the roadway enhancements and safety upgrades, to provide resilient infrastructure able to withstand adverse weather events.		
Attachments:	Attachment 1	Project Location Map
	Attachment 2	Flood Insurance Study

¹ See NOFO Section C.2 for Cost Sharing or Matching information.



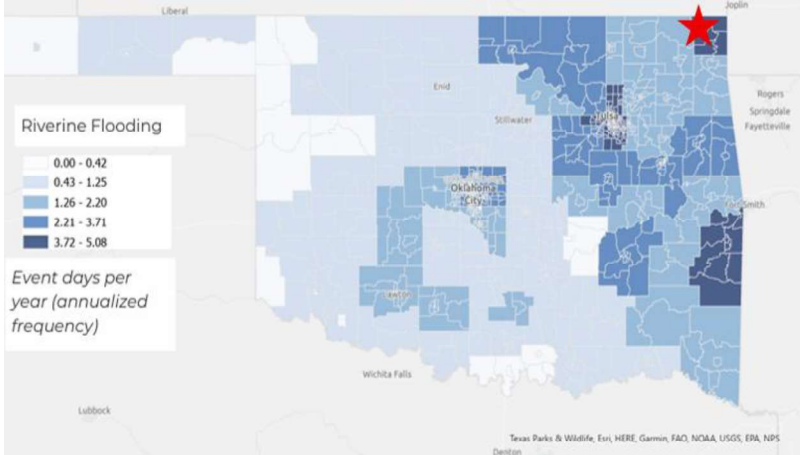
	Attachment 3	SH-125 Design Feasibility Study
	Attachment 4	Letters of Support
	Attachment 5	Project Budget
	Attachment 6	Benefit-Cost Analysis

II. Project Information

1	Project Title	SH-125 Flood Prevention in Rural Northeast Oklahoma
2	Project State	Oklahoma
3	Project Location	36°51'49.11"N 94°52'52.67"W 36°51'15.92"N 94°52'56.75"W The Project location is on SH-125, between the Neosho River Bridge and East 110 Road, in Miami, Oklahoma (Attachment 1). The City of Miami serves as the county seat of Ottawa County and has a population of about 13,000. The Project area is in rural Ottawa County, within the corporate limits of the City of Miami, near the Oklahoma-Missouri state line in northeastern Oklahoma. It is within the Neosho River watershed, with portions within Flood Zone AE, per the Federal Emergency Management Agency's (FEMA's) Flood Insurance Rate Map. Based on the water surface elevations in the effective Flood Insurance Study (FIS), SH-125's low point, which is within the Project area, is at an elevation of 758 feet, 17 feet underwater. SH-125 traverses mostly agricultural lands that include grazing land, cattle pasture, intermittent wooded areas, drainage swales and intermittent streams, and sparse rural development. The topography comprises gently rolling hills, which mark the transition between prairieland and the Ozark Plateau.
4	Which Census Tract(s) Does the Project Encompass?	Census Tract 5747
5	Is the Project Fully Located in a Rural Area?²	☒ Yes

² For purpose of this notice, the PROTECT Competitive Grant Program defines a rural area as any area outside of an Urbanized Area with a population over 200,000. (23 U.S.C. § 176(d)(5)(H)(ii)). Applicants can use the FHWA HEPGIS maps of MPO and 2020 Census Urban Areas to find this information: <https://hepgis-usdot.hub.arcgis.com/apps/72bcd861285c423c9d4aec6b8e48a496/explore>.



6	Is the Project Located in a Base Floodplain?	☒ Yes Flood Zone AE
7	Other Parties	ODOT is the single applicant of this PROTECT funding application, and no other parties will be involved in delivery of the grant activity.
8	Eligible Facility Type	☒ Highway project eligible for assistance under Title 23
9	Project Background	The Project area is in a regulatory floodway, as classified by FEMA (Zone AE). The Project is in one of Oklahoma's most flood-prone regions, with a greater annual frequency of riverine flooding events than many other parts of the state (Figure 1). Figure 1: Annualized Frequency of Riverine Flooding in Oklahoma  Since 2007, 14 flooding events have led to the closure of SH-125 in the Project area. During flooding events, water overtops the roadway, resulting in roadway closures, reduced mobility, safety hazards, and required detours for residents and emergency responders. The flooding highwater mark typically occurs at the northern end of the Project area (on the southern side of the Neosho River), before extending southward, inundating the Miami Fairgrounds, arena, horse barns, softball complex, and adjacent areas (Figure 2). As flooding events become more frequent, the Project's proposed improvements are <i>critical to reducing flooding impacts</i> and <i>preventing road closures</i> during flood events along SH-125. Improvements include reconstructing the profile of SH-125, constructing erosion controls, increasing shoulder widths, adding riprap to embankments for erosion control, improving local drainage, and replacing and



		enlarging culverts and bridge structures to allow more water to flow through designated areas instead of covering the roadway. Without these resilience improvements, continued surface erosion, subgrade damage, drainage issues, and roadway closures will become more costly and detrimental to the community. Figure 2: Flooding in Project Area  Previously incurred Project costs and anticipated future project development cost are estimated at \$1,100,000. The cost breakdown includes: ■ The 2017 ODOT SH-125 Study (\$50,000) ■ Estimated preliminary costs for design and engineering (\$750,000) ■ Estimated environmental work (\$300,000) Previously incurred costs and anticipated future project development costs are not included in the requested PROTECT grant funding for this Project. These costs will be paid for by ODOT.
10	Is the Proposed Project Prioritized on a RIP Developed in Accordance with 23 U.S.C. § 176(e)?	☐ Yes ☒ No
11	Has a RIP been Incorporated into an Applicable State DOT or MPO Long Range Transportation Plan?	☐ Yes ☒ No



III. Budget and Funding

1	PROTECT Competitive Grant Program Request Amount	\$5,430,998
2	Other Federal Funding	Estimated total of other federal funding, excluding PROTECT Competitive Grant Program requested funding, in year-of-expenditure dollars: \$0 Other federal programs and estimated amounts: Program: N/A Amount: \$0
3	Non-Federal Funding	<i>Source:</i> Rebuilding Oklahoma Access and Driver Safety (ROADS) Fund <i>Amount:</i> \$1,357,750
4	Future Eligible Project Cost	\$5,430,998
5	Previously Incurred Project Costs (If Applicable)	Amount: \$1,100,000
6	Total Project Cost	\$6,788,748
7	Grant Funds, Sources and Uses of Project Funds (Detailed Budget)	Activity: Total Roadway Surfacing Cost: \$2,167,330 Activity: Miscellaneous Roadway Cost: \$603,466 Activity: Erosion Control Cost: \$390,119 Activity: Earthwork Cost: \$758,566 Activity: Traffic Control Cost: \$195,060 Activity: Traffic Striping Cost: \$43,347 Activity: Detour Cost: \$281,700 Activity: Mobilization Cost: \$229,582 Activity: Staking Cost: \$70,038 Activity: Bridge Reconstruction Cost: \$1,300,000 Activity: Construction Management Cost: \$362,352 Activity: Contingency (10%) Cost: \$387,188 ☒ A detailed budget is attached separately. The file is named: Project Budget
8	Does the Project Involve the Construction of New Capacity?	☐ Yes ☒ No



9	Does the Project Involve Development Phase Activities, including Planning, Feasibility Analysis, Revenue Forecasting, Environmental Review, Preliminary Engineering and Design Work, and Other Preconstruction Activities Described under 23 U.S.C. § 176(d)(5)(F)(i)?	☐ Yes ☒ No
10	Has the Applicant Submitted Previous Applications for Federal Funding For This Project?	☐ Yes ☒ No

IV. Merit Criteria

Criterion #1: Vulnerability and Risk

A) Current and Future Weather Events Addressed:

Between the Neosho River and to the south of East 110 Road in Miami, SH-125 is extremely vulnerable to flooding events. The Project area is within Flood Zone AE, a 100-year floodplain defined by historical events, and is in one of Oklahoma's most flood-prone regions, with a greater annual frequency of riverine flooding events than many other parts of the state (Figure 1 in Project Background).

Based on the water surface elevations in the effective [FIS](#) (Attachment 2), SH-125's low point, which is within the Project area, is at an elevation of 758 feet, 17 feet underwater. Records from the nearby Neosho River U.S. Geological Survey (USGS) gauge show the Neosho River water surface elevation exceeded the low point in SH-125 five times between January 2008 and January 2018.

The following 14 flooding events were recorded from May 2007 to June 2026 and caused the highway to be closed to traffic: (1) May 2007, (2) June 2007, (3) April 2009, (4) May 2012, (5) June 2013, (6 and 7 – two separate events) December 2015, (8) May 2019, (9) May 2022 (10) May 2024, (11) April 2025, (12 and 13 – two separate events) June 2025, and (14) June 2026. According to a flooding data analysis in the Project area, flood water overtops SH-125 approximately once per year, making it a 1-year event. The analysis concluded Project improvements would avoid overtopping during even more severe events (25-year [4% annual risk] and 50-year [2% annual risk] events).

The Project's resilience improvements will reduce flooding impacts, prevent road closures during flood events, and enhance the safety for residents and emergency responders along SH-125. Improvements will include elevating the roadway, widening shoulders, replacing and enlarging the existing culvert, adding a new culvert bridge, adding riprap to embankments for



erosion control, and improving drainage to mitigate the risk of flooding along surface transportation assets.

B) Project Vulnerabilities Addressed:

Exposure

The Project is adjacent to the Neosho River in Ottawa County, the northeastern-most county of Oklahoma. The Neosho River is a 463-mile tributary of the Arkansas River that runs from northeastern Oklahoma to eastern Kansas, and has a long history of flooding events in Miami. Because of the river's extensive watershed and long reach, heavy rainfall in eastern Kansas can exacerbate flood events in Miami. Reflecting this hazard, the FEMA National Risk Index ranks Ottawa County as "Relatively Moderate" for riverine flooding risk at the 91st percentile nationally.³

According to the National Flood Hazard Layer (NFHL), SH-125 is in a special flood hazard area, including a regulatory floodway, and has experienced a series of significant flooding events for decades. The drainage area that contributes to USGS gauge 07185080, on the Neosho River at the SH-125 bridge, is approximately 6,011 square miles. The effective FEMA FIS lists a 10-year peak discharge of 86,300 cubic feet per second (cfs) and a 100-year peak discharge of 177,000 cfs. Based on the water surface elevations in the FIS, the low point in SH-125 is 17 feet underwater, at an elevation 758 feet, and the floodplain is approximately 1.2 miles wide during a 100-year flood event. Records from the nearby Neosho River gauge show the river's water surface elevation exceeded the low point in SH-125 five times between January 2008 and January 2018.

June 2013 Flood Event

On May 30, 2013, the National Weather Service issued a Tornado Watch and Severe Thunderstorm Warning for Miami. On the same day, the area received more than 4 inches of precipitation. On May 31 and June 1, an additional 1.14 inches of rain fell, increasing the multiday precipitation total.

Parts of SH-125, nine city roadways, and four county roadways were closed and did not reopen until June 4, 2013. When the Neosho River reaches 20 feet high, it can cover SH-125. On June 3, the Neosho River gauge crested at 22 feet, flooding SH-125 and the fairgrounds, arena, and horse barns. Numerous local events were relocated, rescheduled, or canceled.

Flooding events along SH-125 often result in roadway closures that affect residents and emergency responders. When SH-125 is closed, emergency responders must use detour routes that add 3.5 miles for local travel and 26.5 miles for highway traffic. Any impacts to the roadway pose risks locally and across the city, if emergency vehicles have to detour.

The proposed improvements in Section A will minimize flooding impacts along surface transportation assets and prevent road closures due to flood mitigation measures, enhancing safety for residents and emergency responders during extreme weather events.

³ <https://hazards.fema.gov/nri/map>



Sensitivity

The Project will reduce roadway sensitivity to extreme weather events by designing a roadway that will maintain its operability during flooding, by elevating the roadway and constructing new culverts and drainage along the roadway. The primary design concept involves roadway protection and flood water management.

The highway currently experiences overtopping, requiring local authorities to close the roadway and drivers to detour. SH-125 will be rebuilt in the Project area to protect the roadway by resurfacing and raising the profile by 6 feet, adding 8-foot shoulders in each direction of the 2-lane divided highway for safety, and adding riprap to embankments to control erosion and further stabilize the roadway.

Culverts in the Project area are intended to manage and direct water flow around and under SH-125 during flooding events. Existing flood management systems are failing, unable to withstand routine and extreme high water flood events. When the Neosho River crests and overflows, water covers the Project area and renders SH-125 unusable for hours or days at a time. Replacing the existing culverts and bridge will allow more water to flow around and under the roadway, contributing to a more stable roadway, infrastructure protection, and improved access during flood events.

Adaptive Capacity

The Project design provides for continued roadway operations during extreme flood events to minimize flood impacts and prevent road closures, benefiting the community. Elevating the roadway, increasing shoulder width, improving drainage, and replacing insufficient culverts will create a durable and adaptable design to better manage heavy water flows or flooding events.

Without these resilience improvements, continued surface erosion, subgrade damage, drainage issues, and roadway closures will become more costly and detrimental to the community, including residents, businesses, and emergency responders. Refer to Criterion #3 for more details about the Project design concept.

C) High Risk to the Transportation Asset Demonstrated:

Since 2007, 14 flooding events have led to the closure of SH-125 in the Project area. During flooding events, water overtops the roadway, resulting in roadway closures for hours or days at a time, reduced mobility, safety hazards, and required detours for residents and emergency responders.

The design responds to future 1-year, 25-year, and 50-year flood events locally. It also increases the water level of the Neosho River from weather events that may impact the Project area. The resilience improvements included in the Project will maintain transportation access during flood events by reducing the likelihood of overtopping, eliminating the need to close the roadway, and preserving the safety and function of the roadway over a longer period of time. Riprap will be used along embankments and next to new, larger-capacity culverts to stabilize these areas and prevent erosion from heavy stormwater periods.

The improvements will avoid damage to the roadway from overtopping and allow community assets to recover faster after flood events, by creating better stormwater and flood management



with larger, larger-capacity culverts. Together, these improvements will reduce and minimize travel delays, improve emergency response, and mitigate impacts from flood events.

Criterion #2: Criticality to American Families and Communities

A) Support for Continued Operations and Rapid Recovery:

Miami experiences significant transportation disruptions due to recurrent flooding along SH-125, a critical transportation route that is often closed when floodwaters overtop the highway. The Neosho River runs along the southwestern side of Miami, separating the developed portion of the city from the rural floodplain area. The SH-125 bridge is the primary transportation link across the Neosho River, connecting downtown Miami to critical community destinations, including the Miami Municipal Fairground, Joe Booth Softball Complex, publicly owned riverfront, and several residential neighborhoods south of the river. The highway also provides access to essential healthcare facilities; local businesses, including restaurants and grocery stores; educational institutions; the Miami Regional Airport; municipal buildings; and other critical facilities, most of which are in the developed areas of Miami northeast of the Neosho River. Attachment 1 shows a flood hazard area map of the Project area.

SH-125 has an average daily traffic of 6,700 vehicles and provides a vital connection to the rural and developed areas of Miami. However, persistent overtopping and flooding events have made SH-125 unreliable during extreme weather, leading to significant accessibility issues, road closures, and disruptions that threaten public safety, the economy, and the wellbeing of the rural and low-income populations. The Project is critical to the continued operations of SH-125 during extreme weather events by preventing future roadway closures and maintaining reliable access for families, communities, businesses, and emergency responders.

B) Timeliness in Addressing Community Risks:

Fourteen flooding events have been recorded from May 2007 to June 2026. Many of these events have led to road closures for multiple days, resulting in extensive detours to U.S. Route 59 and East 120 Road between Miami and the southern section of SH-125. These alternative routes were not designed to accommodate excess traffic volumes and as such resulted in poor traffic conditions and travel time delays. The existing conditions result in a detour distance of 26.5 miles for through traffic connecting to the interstate highway system, while local trips in more developed areas experience detour distance of 3.5 miles. Emergency responders also have limited access to areas of critical need during flood events because no viable emergency routes are available, reducing the reliability of emergency services and jeopardizing timely access to critical resources for families and communities in the Project area.

Collision data indicate eight collisions occurred in the Project area from 2017 to 2023. There are currently no shoulders along SH-125; the addition of 8-foot shoulders with rumble strips will enhance roadway safety by reducing the frequency and severity of crashes, improving emergency vehicle operations, and providing safe pull-off areas for vehicles and other roadway users, reducing crashes by approximately 39%. The larger-capacity culverts, shoulders, and replaced bridge will reduce the need for the City of Miami to physically close



the roadway and will support the safe passage of vehicles across the bridge during severe weather events.

The Project will improve the safety of the transportation system for residents and emergency responders by supporting the safe use of SH-125 during severe weather events and contributing to the reduction of vehicle collisions along the highway. Without the resilience improvements in this Project, impacts due to flooding along SH-125 will be severe for families and the communities within Miami and adjacent rural areas.

C) Support for Community Functions

The neighborhoods south of the Neosho River are popular with families. By enhancing the readiness of the highway to extreme weather, this Project will help working parents reliably get to and from their jobs and spend time with their children, building stronger families and a healthier community.

Most of the city's land area and population is north of the Neosho River in the developed part of Miami, with a small portion that extends south of the river. Three bridges connect these residential neighborhoods to the rest of Miami, including downtown, which is a major employment and retail center. The most direct option for residents who live south of the river to access downtown is through SH-125, making the highway a crucial link for commuters. When the roadway floods, residents have difficulty getting to their jobs.

Flooding events and road closures result in accessibility issues to services including schools, healthcare facilities, major grocery shops, and municipal buildings. School closures, missed or delayed medical appointments, job absenteeism, closure of recreational facilities, and revenue losses are direct consequences of these flooding events. Flooding also restricts emergency response capabilities because alternative emergency routes are unavailable, reducing dependable access to emergency services and critical resources for families and communities in the Project area. Extreme weather events due to flooding along SH-125 will continue to limit economic opportunities and harm the community without the Project.

D) Addressing a Critical Infrastructure Asset

The Project is on SH-125 in northeastern Oklahoma and provides a critical connection to nationally significant transportation corridors, including US-69, US-60 and I-44, which are part of the National Highway System and support critical regional and interstate freight movement.

Criterion #3: Design Elements, including Addressing Core Infrastructure

A) Current and Future Vulnerabilities Addressed:

The key goal of the Project design is to improve SH-125 within the Project limits to reduce flooding impacts and prevent road closures during flood events. The Project design will reduce *current and future vulnerabilities* and risks from *flood events*.

Table 1 identifies the key Project design elements, the benefits of each element, the location of design element, and the anticipated service life.



Table 1: Project Design Elements

Design Element	Benefits	Location	Service Life
Asphalt Pavement	■ Durable and low maintenance ■ Cost effective and fast installation	Length of the Project extent	20 years, conservatively
Shoulders with Rumble Strips	■ Enhances safety for both drivers and emergency vehicles ■ Accommodates pedestrians and cyclists ■ Improves drainage ■ Facilitates maintenance	Length of the Project extent	20 years, conservatively
RCB Culvert	■ Durable and strong ■ Versatile and fast installation ■ Manages water flow, preventing flooding	North of North Fairground Road	70 years
Concrete Bridge	Combines benefits of RCB culverts with the function of a bridge, handling both water flow and vehicle traffic	Southern end of the Project area, over the creek	70 years
Riprap	■ Prevents erosion ■ Durable and long lasting ■ Cost effective ■ Aesthetically pleasing	On the northern portion of SH-125 within the Project area	70 years
Improved Drainage	Improves water flow along the roadway during heavy storms	Length of the Project extent	30 years, conservatively

B) Source of Evidence-Based Scenarios Used as Basis for Design:

The Project design is being informed by ODOT's SH-125 Study (Attachment 3), which identifies the approach to adjusting the roadway profile, as well as water flow management. The Study used a hydraulic analysis of SH-125 improvements that included one- and two-dimensional models to understand the impact of proposed alternatives to mitigating roadway and Project area flooding. The one-dimensional steady-state model shows the roadway improvements result in no-rise in the base flood elevation.

C) How the Design Elements will Reduce Current and Future Vulnerabilities:

Building on the aforementioned analyses, the *Project design will elevate the roadway* between the Neosho River bridge and south of East 110 Road *to reduce the impacts of flooding on the roadway*. Elevating the roadway to a minimum elevation of 764.5 feet (from 758 feet) would provide a connection between the Neosho River bridge and East 110 Road and mitigate future flooding. The Project also replaces the existing 6-foot-wide-by-3.4-foot-tall concrete box culvert with two 8-foot-by-6-foot RCB culverts, *improve drainage along the roadway*, and



provides a new RCB culvert bridge south of East 110 Road. *Together, these improvements would prevent additional backwater* during a 100-year rainfall event in the local watershed.

D) Project will Improve the Condition & Safety of Transportation Infrastructure:

The Project will improve the transportation system's safety for roadway users by maintaining safe and reliable roadway access during severe weather events that may cause flooding, reducing vehicle crashes by 39.2% annually according to the BCA (Attachment 6). The design incorporates larger-capacity culverts along with 8-foot shoulders along the Project extent to reduce the need for City of Miami crews to physically close the roadway using barricades and city vehicles. Currently, no shoulders exist along SH-125 in the Project area, requiring the City of Miami to move its equipment to higher ground to prevent damage before severe weather events. An elevated roadway will also support the safe passage of vehicles across the bridge during severe weather events.

E) Future Maintenance of the Design Elements:

ODOT will be the entity responsible for Project maintenance during and after construction. The estimated annual maintenance costs for the life of the Project improvements is \$50,000. The funding source for these costs will be available through ODOT's operating budget as further described in the Financial Completeness section. The maintenance operating budget is funded through a combination of sources, which are programmed and available to support long-term asset management.

As the [ODOT Transportation Asset Management Plan 2022-2031](#) stated, federal, state, and local funding is used to preserve ODOT-owned NHS roadways. Approximately \$1.5 billion (after debt service and administration expenses) is anticipated to be available annually over the next 10 years (Fiscal Years [FY] 2022 – 2031) for maintenance.

F) Reinvesting in the American Family:

The Project will support predictable operations for families by reducing flooding-related bridge closure events. When SH-125 is closed due to flooding, rural families southwest of the Project area lose direct access to essential services, including the INTEGRIS Health Miami Hospital; Miami Fire Department and Emergency Management; schools; employment centers; Tribal offices; and other local amenities, including restaurants, local businesses, and public parks. Likewise, Miami families northeast of the Project cannot access the Miami Fairgrounds, a major employment and commerce center, or use SH-125, a critical route connecting residents to jobs outside the city. During the closure of SH-125, emergency responders and families must rely on detour routes that result in an additional travel distance of 3.5 miles for local travel and 26.5 miles for highway traffic. The bridge replacement in conjunction with the Project's other resilience improvements, will provide families on either side of the Project area with reliable access to essential services. By providing access to SH-125 during flood events, the Project supports regional economic growth and represents an investment in the wellbeing of local families.

The Project will particularly benefit persons with disabilities (the City of Miami has a disproportionately high percent of people with disabilities at 21.3% versus the national average of 13.3%) and others for whom unexpected detours or delays can create substantial



mobility challenges, resulting in a transportation system that is more accessible, resilient, and user-friendly.

Criterion #4: Innovation

The following innovative techniques will be used in design and construction to improve efficiency in Project delivery and prolong the federal investment into the transportation infrastructure. These techniques will reinforce the United States' leadership in technology and innovation.

Novel Technologies or Techniques:

- **Warm Mix Asphalt:** The Project will incorporate warm mix asphalt into roadway paving operations as part of ODOT's commitment to efficient and high-quality infrastructure practices. Warm mix asphalt is a proven paving technology that allows asphalt mixtures to be produced and placed at lower temperatures than conventional hot mix asphalt, reducing energy consumption and improving working conditions (reduced exposure to fumes and odors) during the construction period. Warm mix asphalt can enhance pavement performance, extend paving seasons, improve compaction, and facilitate more efficient Project delivery. By incorporating this innovative technology into Project delivery, ODOT will maintain the durability, safety, and long-term performance expected of the transportation network.
- **Accelerated Bridge Construction (ABC):** ABC is an innovative delivery element of the Project, leveraging advanced engineering techniques, prefabricated bridge components, and streamlined construction methodologies to significantly reduce onsite construction duration compared to traditional bridge delivery approaches. By shifting substantial portions of fabrication and assembly activities offsite, ABC improves construction efficiency, enhances quality control, and minimizes risks associated with weather delays and extended work zones. This innovative approach accelerates Project delivery, and reduces impacts to the traveling public, local businesses, and surrounding communities. To further enhance mobility during construction, ODOT will incorporate a shoofly, or temporary detour route, to allow traffic to be maintained around the work area while bridge construction progresses. The combination of ABC techniques and strategic traffic management solutions demonstrates ODOT's commitment to deploying innovative practices that improve safety, reduce traveling public delays, minimize construction-related disruptions, and deliver critical infrastructure improvements more efficiently and cost-effectively. By incorporating ABC into the delivery approach, operational objectives will be met with timely delivery of a resilient, key transportation asset.
- **Expanded Polystyrene (EPS) Geofoam:** ODOT will use EPS geofoam as an innovative construction material to support the embankment required to elevate the bridge above anticipated flood elevations. EPS geofoam is an ultra-lightweight engineered fill material that can substantially reduce the loads imposed on underlying soils compared to traditional embankment fills, making it particularly advantageous in areas with soft or low-bearing-capacity soils. By reducing settlement and minimizing the need for extensive ground improvement measures, EPS geofoam can help improve long-term structural performance while decreasing construction complexity and risk.



The material's lightweight properties can accelerate construction, reduce the quantity of imported fill material, minimize impacts to existing utilities and adjacent infrastructure, and lessen the overall footprint of construction activities. Because EPS blocks are prefabricated and rapidly installed, their use can also shorten construction schedules, reduce work-zone durations, and minimize disruptions to the traveling public. For bridge approaches that require substantial elevation increases to improve resilience against flood events, EPS geofoam offers a proven solution that balances performance, constructability, and cost-effectiveness.

By incorporating EPS geofoam where appropriate, ODOT will leverage innovative geotechnical engineering practices to address site-specific constraints while enhancing infrastructure resilience, reducing maintenance needs, and supporting the efficient delivery of a safe and reliable transportation asset. This underscores ODOT's commitment to incorporate advanced construction techniques that improve project outcomes while addressing operational challenges.

V. Project Readiness

Readiness: Technical Assessment

A) Applicant Capacity to Deliver the Project:

Tracing its roots back to 1911, ODOT is responsible for planning, designing, constructing, operating, and maintaining Oklahoma's highway-based transportation infrastructure. This includes the non-toll interstate system, U.S. highway system, and state highway system, along with managing the state-owned railroads. ODOT manages about 30,000 lane miles and nearly 6,800 highway bridges. ODOT assists local governments in administering programs to improve their local road systems. ODOT administers other multimodal programs, including freight rail, passenger rail, public transit and coordination with the McClellan-Kerr Arkansas River Navigation System, Oklahoma's inland waterway.

The agency has 2,255 employees, managing an annual budget of about \$2.5 billion. ODOT has significant experience managing federal funds. In FY25, about 45% of the budget was sourced through federal funding dollars. As such, ODOT has amassed extensive experience successfully delivering projects with federal grant funds to include multiple large infrastructure projects funded in part by the U.S. Department of Transportation through Infrastructure for Rebuilding America, Better Utilizing Investments to Leverage Development, Bridge Investment Program, and the Competitive Highway Bridge Program.

Backed by over a century of experience in the construction, operation, and maintenance of bridges, ODOT has a history of successfully delivering complex transportation projects. Its diverse staff portfolio includes project management, engineering, planning, construction management, and environmental compliance, giving ODOT the expertise, resources, and institutional capacity required to execute the Project successfully.

B) Federal Requirements:

ODOT has the expertise to confirm Project delivery complies with federal requirements. It has an established relationship with the Federal Highway Administration (FHWA) Oklahoma



Division, which provides its federal aid allocation and discretionary grant funding. ODOT has a strong Title VI and Americans with Disabilities Act program and is familiar with developing and executing grant agreements, administering grant funding, and completing and submitting the required reporting. ODOT has established policies, procedures, and internal controls for federal funds. It has the administrative, financial, and technical capacity to meet federal standards related to procurement, contracting, environmental review, civil rights compliance, financial management, reporting, and project oversight.

ODOT effectively manages a substantial portfolio of federally funded projects within its 8-year Capital Works Plan, an \$8.4 billion program that annually prioritizes projects based on available state and federal appropriations and currently receives 55% federal funding through this. During the Project, dedicated staff with the appropriate expertise, federal grant administration experience, and Project familiarity will collaborate with the consultant team to comply with applicable federal regulations, guidance, and reporting requirements.

C) Commitment for Timely Project Delivery:

Demonstrated by the following schedule, ODOT is prepared to meet PROTECT Competitive Grant Program obligation deadlines.

Table 2: Project Schedule

	Start	End
Preliminary Field Review & 30% Plans	December 2026	April 2027
Right-Of-Way & Utility	April 2027	October 2027
ROW Acquisition & 65% Plans	October 2027	December 2027
NEPA	April 2027	February 2028
Final Field Review & 90% Plans	January 2028	November 2028
Plans complete (PSE)	December 2028	July 2029
Ready to Let & Grant Obligation	August 2029	August 2029
Construction	November 2029	December 2030
Project Closeout	January 2031	March 2031

The Project schedule (Table 2) was developed by the District 8 Project team, which is responsible for projects in the northeastern portion of the state and builds on its members' countless years of experience in the transportation field. The schedule builds on work completed for the District 8 workplan and incorporates reasonable contingency periods to account for potential unforeseen delays, leaving room for flexibility to address issues without jeopardizing Project milestones or the overall completion date. ODOT's established project management practices, regular progress monitoring, and proactive risk management processes will enable staff to identify and address potential schedule impacts early, minimizing delays and maintaining Project momentum. Supported by a multidisciplinary team with a proven track record of delivering projects on time and within budget, ODOT will be well-positioned to complete the Project in accordance with established deadlines while maintaining a margin for unforeseen circumstances.



D) Technical Feasibility of the Project:

The Project's technical feasibility is demonstrated through ODOT's extensive experience delivering bridge and roadway infrastructure improvements, its qualified technical personnel, and the rigorous planning and preliminary engineering completed during Project development. Examples of past successful federal grant awards include the \$38 million Northeast Oklahoma Rural Bridge Strengthening Project (Competitive Highway Bridge Program) and the Roosevelt Memorial Bridge Investment Project (Bridge Investment Program).

The Project scope, schedule, and implementation approach were developed by a multidisciplinary team of consultant and ODOT professionals, including engineers, planners, environmental specialists, and project managers with relevant expertise in comparable projects. Preliminary engineering has confirmed the proposed improvements are achievable using proven engineering practices, established construction methods, and readily available technologies. Drawing on a long history of successfully delivering bridge infrastructure projects, ODOT is confident the Project is technically sound and fully achievable within the proposed schedule, budget, and performance parameters.

Readiness: Financial Completeness Assessment

A) Demonstrates the Costs are Reasonable and Necessary:

The Project budget was built using the budget developed by Lochner while preparing the Study, a reputable firm with over 80 years of industry experience (the proposed budget has been adjusted for inflation.) Lochner routinely works on similar projects and has established experience in Oklahoma. As such, the Project budget reflects a reasonable and necessary transportation investment to successfully deliver the Project.

The cost estimate was developed using industry-standard methodologies and informed by recent bid data, historical Project costs, current market conditions, and input from experienced engineering, construction, and project management professionals, including the District 8 Project Manager. To validate the cost estimate, ODOT conducted internal quality control reviews and benchmarked key cost assumptions using comparable projects. This validation process confirmed proposed line items accurately reflect anticipated Project needs and align with the scope of work.

B) Plan for Cost Overruns:

Based on risk assessments and historical experience with similar infrastructure projects, the budget includes appropriate contingency (10%) to address potential overruns while remaining fiscally reasonable.

Project expenditures will be tracked against the established budget and Project leadership will promptly evaluate variances to determine appropriate mitigation strategies. If unforeseen costs arise, ODOT has the experience and institutional processes to evaluate adjustments while maintaining Project delivery objectives and complying with federal grant requirements. Through proactive risk management, ongoing financial controls, and contingency planning, ODOT is well-positioned to address potential cost overruns and successfully deliver of the Project using available resources. As such, the cost estimate provides a well-supported,



transparent, and defensible basis for federal investment and demonstrates ODOT's commitment to prudent stewardship of federal funds.

C) Reasonable Availability of All Funding Needed:

ODOT has the funds in place to provide the cost share once a federal funding award is announced for the Project. The source of the nonfederal cost share is the ROADS fund, which is funded with state gasoline and diesel fuel tax revenue and most motor vehicle collections. The fund was initially established by the Legislature in 2005 and was guaranteed an annual apportionment until reaching its cap of \$575 million (hit in FY2019). Since then, this annual cap has been raised several times, with a cap of \$610 million in FY2016.

D) Future Operations, Maintenance, and Preservation Funding:

Future operations, maintenance, and preservation costs will be funded using a combination of funding sources that are programmed and available to support long-term asset management.

As the [ODOT Transportation Asset Management Plan 2022-2031](#) stated, federal, state, and local funding is used to preserve ODOT-owned NHS roadways. Primary state revenue sources include income tax, motor vehicle tax, and motor fuel funds via the ROADS fund, the State Transportation Fund, and other state sources. ODOT's primary federal funding sources include the National Highway Performance Program and the Surface Transportation Block Grant Program as well as apportionments for other federal aid programs such as the Bridge Formula Program and National Highway Freight Program for assets on designated freight corridors.

Approximately \$1.5 billion is anticipated to be available annually over the next 10 years (FY 2022 – 2031). This revenue forecast is based on a review of historically or categorically committed funding to state-aid and federal-aid highway system improvements and does not address ODOT-initiated set asides or other mandated programs. The budgetary projections assume a continuation of federal funding at FY 2022 Obligation Limitation base levels, without growth; each year this benchmark is adjusted based on the results of the annual Congressional budgeting process. The forecast accounts for changes in vehicle fuel economy and forecasted traffic volumes - as it pertains to motor fuel taxes - and deducts debt service and agency administration expenditures.

Through timely maintenance, preservation, and rehabilitation treatments, ODOT makes progress toward its performance goals and objectives at the lowest long-term cost. ODOT determines an optimal mix of treatments using predictive pavement and bridge management systems that evaluate the costs, benefits, and service life extensions of different funding options given site-specific conditions. This whole-life approach helps confirm the right treatment is funded at the right time, given available revenues and external risks such as extreme weather. As such, ODOT has a plan for sufficient future operations, maintenance and preservation costs.

E) Grant Funds will Support Construction Costs Only:

No portion of grant funds will be spent on development phase activities. The previous incurred costs of \$1,100,000 and anticipated future project development costs are not included in the requested PROTECT grant funding for this Project. These costs have been or will be paid for by ODOT.



Readiness: Permitting Risk Assessment

A) NEPA will be Complete in Time to Meet the Project Schedule:

ODOT has completed preliminary engineering in partnership with the City of Miami, and its Environmental Programs Division (EPD) will complete National Environmental Protection Act (NEPA) before grant obligation. EPD staff have decades of expertise successfully completing NEPA on projects from various federal agencies. EPD helps confirm road and bridge projects, ongoing maintenance activities, and facility or fleet operations follow environmental guidelines. It includes experts in a variety of disciplines who provide guidance and support throughout each project. Their work supports compliance with state and federal rules and regulations, as well as local ordinances, to protect and preserve Oklahoma's natural and cultural environment. In FY 2025, the EPD team reviewed 594 environmental documents, authorizing \$690 million in projects authorized and awarded through FHWA funding.

As such, EPD is confident NEPA will be complete for the Project schedule. Potential environmental risks and schedule constraints have been evaluated, and appropriate schedule float has been incorporated to accommodate unforeseen needs while maintaining Project milestones. Through proactive coordination with resource agencies, established environmental review procedures, and diligent project management, ODOT is confident NEPA requirements will be completed in a timely manner, allowing construction to proceed as scheduled while minimizing the risk of delays to Project delivery. ODOT is committed to minimizing potential environmental impacts and complying with applicable federal, state, and local laws, including NEPA, the Endangered Species Act, and the National Historic Preservation Act.

B) Permits and Approvals will be Obtained in Time to Meet the Project Schedule:

ODOT is confident the necessary permits and approvals will be secured in time, per the proposed Project schedule. Required permits and approvals were identified during Project planning, and the proposed schedule includes dedicated time (with contingency periods built in) for permit application preparation, agency review, coordination, and approval processes. ODOT has extensive experience obtaining federal, state, and local permits for transportation infrastructure projects and maintains strong working relationships with the relevant regulatory and resource agencies. Early coordination efforts help identify and resolve potential issues before they affect Project delivery, while regular monitoring of permit milestones ensures timely progress and accountability. Based on ODOT's record of successfully navigating permitting processes and its proactive approach to regulatory coordination, ODOT is confident the necessary permits and approvals will be obtained in time to support construction and Project implementation.

C) Public Engagement Will Occur and No Known Public Controversy Has Occurred:

The Project has no known public controversy and ODOT has a plan for effective public engagement and strategic collaboration with major stakeholders to achieve a successful outcome. The Project already has strong support from residents, the Regional Transportation Planning Organization, Indigenous Nations, and Ottawa County. These entities (demonstrated



by attached letters of support) will contribute to outreach processes, stakeholder coordination, management, and Project implementation through collaboration.

ODOT has a strong history of community engagement with federally and locally funded projects. To provide meaningful and inclusive public engagement, it has an engagement plan for construction projects to solicit input from residents, businesses, and other affected organizations. This plan will inform ODOT's public engagement activities. ODOT will encourage continuous public engagement throughout all Project development phases, tailoring engagement strategies for affected communities, including through meeting venues, communication styles, and accessible technologies. This approach creates an increased level of confidence and transparency in ODOT's planning and decision-making.

Proposed Activities for Public Engagement

To provide public engagement and community outreach, ODOT plans to do the following:

- **ODOT Website:** ODOT will communicate with the public about public meetings on its website. This will include information such as where and when a public event is being held, the purpose and description of a plan or project, documents, and contact information. ODOT regularly updates the public meetings webpage.
- **Direct Mail:** ODOT will send letters or postcards to public officials, agencies, and impacted property owners to gather their opinions and insights throughout Project implementation phases. This approach is a targeted way to reach stakeholders and affected parties with detailed information. Mailing lists will include active interest groups, local and Indigenous officials, stakeholders, affected parties, and those who have previously indicated interest in the Project. Postal communication typically includes a short background of a project; information regarding upcoming meetings, open houses, and hearings; a location map or other related project material; and a contact person for further information.
- **Public Notice:** ODOT routinely publishes public notices on its public meeting webpage and works with appropriate parties for public notice postings, which provide a project description and a contact person.
- **Public Meeting(s):** One or more public meetings will be held for the Project. Comment forms will be made available in hard copy form or online and may be submitted in person at the public meeting, by mail, or online at the meeting webpage.

D) No Known and Unmitigated Issues Posing High Risk to Project Delivery:

No known and unmitigated issues posing high risk to Project delivery exist to ODOT's knowledge. During Project planning and preliminary engineering activities, ODOT and the City of Miami completed a thorough analysis to arrive at this conclusion.

VI. Statutory and DOT Selection Priorities

Statutory Selection Priorities

For Resilience Improvement Grants:

☒ The benefits of the eligible activity proposed to be carried out by the eligible entity exceed the costs of the activity (as demonstrated by the economic analysis); and ☒ There is a need to



address the vulnerabilities of surface transportation assets of the eligible entity with a high risk of, and impacts associated with, failure due to the impacts of weather events, natural disasters, or changing conditions, such as sea level rise, wildfires, and increased flood risk.

Statutory Selection Priorities:

A) Benefits and Costs of the Project:

The Project benefits outweigh its costs. The Benefit-Cost Analysis (BCA) provides the benefits of the Project's resilience improvements (see attached in Attachment 6).

B) Addressing Vulnerabilities to Reduce Risk:

The City of Miami experiences significant transportation disruptions due to recurrent flooding along SH-125. Fourteen flooding events were recorded from May 2007 to June 2026. Many such events resulted in road closures for at least 2 days, resulting in extensive detours to U.S. Route 59 and East 120 Road between Miami and the southern section of SH-125. During flood-related closures of SH-125, emergency responders have limited access to the Project area due to isolated infrastructure and the lack of viable emergency routes. As a result, the reliability emergency services is reduced, for families and communities in the Project area.

The resilience improvements included are critical to address the vulnerabilities of surface transportation assets due to increased flood risk. The Project design provides for continued roadway operations during extreme flood events that minimize flood impacts, prevent road closures, enhance regional safety, and provide reliable roadway access to families and the community along SH-125 and the Miami region. Improvements include elevating the roadway, widening shoulders, replacing and enlarging the existing culvert, adding a new culvert bridge, adding riprap to embankments for erosion control, and improving drainage to mitigate the risk of flooding along surface transportation assets. Without these resilience improvements, consequences due to flooding along SH-125 will be severe for families, businesses, and the communities within the City of Miami and adjacent rural areas.

Planning Criteria 1B, 2A, 2.C, and 3A discuss the need for the Project to address vulnerabilities and reduce the risk of failure of critical surface transportation assets from extreme weather events and flooding.

DOT Selection Priorities

- ☒ The project would contribute to promoting economic prosperity in communities, including rural areas and Tribal communities.
- ☒ The project prioritizes improvement of the condition and safety of existing transportation infrastructure, particularly infrastructure with high cost of failure, such as bridges with lengthy detours, impacts to critical corridors, or failures that will cause economic disruption.
- ☒ The project demonstrates an ability to meet PROTECT Competitive Grant Program obligation deadlines. ☒ The project will reduce roadway traffic congestion.

DOT Selection Priorities:

A) Economic Prosperity in Communities, Rural and Tribal:



The Project will promote economic prosperity in rural northeastern Oklahoma by improving the reliability and resilience of a critical transportation link that serves residents, businesses, and visitors. By elevating the bridge and reducing flood-related closures, the Project will provide more dependable access to employment centers, commercial corridors, healthcare facilities, schools, and essential services. Improved transportation reliability will reduce travel delays, support the efficient movement of goods and services, and help local businesses maintain operations during severe weather events. By strengthening year-round transportation network connectivity, the Project will enhance economic stability and support continued investment in the surrounding rural communities.

The Project also benefit Tribal communities by improving access to the numerous federally recognized Tribal Nations and Tribal lands located in and around Miami, Oklahoma, including the Miami Tribe of Oklahoma (for which the City of Miami is named) and the Modoc Nation, Ottawa Tribe of Oklahoma, Peoria Tribe of Indians of Oklahoma, and Shawnee Tribe. Reliable transportation infrastructure is essential to connect Tribal members, employees, and visitors to government facilities, healthcare services, educational institutions, cultural destinations, and economic development opportunities. By reducing flood-related travel disruptions, the Project will provide consistent access to resources while supporting workforce mobility and regional economic activity (through the movement of goods and services). The proposed improvement in transportation reliability will foster greater economic opportunity and help strengthen the long-term prosperity of both Tribal and rural communities across the region.

B) Improvement of the Condition and Safety of Existing Transportation Infrastructure

The Project directly prioritizes the improvement of existing surface transportation infrastructure with a high cost of failure by improving a bridge that is vulnerable to recurring flooding, frequently resulting in associated roadway closures. Elevating the bridge will improve safety by reducing exposure to flood hazards, while allowing this critical corridor to remain operational during adverse weather events. The Project will also increase shoulder widths, improve culverts, and replace the geometrically and structurally deficient bridge to mitigate the risk of surface transportation flooding and improve the safety along SH-125.

As a critical component of the local transportation network, the bridge provides essential connectivity for residents, businesses, emergency services, school transportation, and freight movement. Without intervention, continued flooding poses an increasing risk of service disruptions, resulting in lengthy detours, increased travel times, reduced emergency response efficiency, and higher long-term maintenance costs. By addressing these vulnerabilities before the next failure occurs, the Project represents a proactive investment in critical transportation infrastructure resilience, safety, and asset preservation. The Project will strengthen existing transportation system reliability, minimize the potential for economic disruption caused by detours or closures, and provide long-term benefits to the traveling public by preserving a vital transportation asset and enhancing regional connectivity.

C) Project will Meet PROTECT Program Obligation Deadlines

The Project schedule (as discussed in the Project Readiness section) was developed by the District 8 Project team, which is responsible for projects in the northeastern portion of the state; it builds on the District 8 transportation team's extensive experience. The schedule



incorporates reasonable contingency periods to account for potential unforeseen delays while meeting PROTECT Competitive Grant Program deadlines, including the funding obligation deadline of September 30, 2029.

The schedule was created based on preliminary engineering, established project management experience, and sufficient and reasonable commitment of resources necessary to maintain schedule adherence. The ODOT Project team has developed a realistic and achievable delivery schedule that identifies key milestones and critical path activities to address unforeseen challenges while maintaining progress toward obligation requirements. ODOT has extensive experience delivering billions of dollars' worth of federally funded transportation projects and managing project development, environmental compliance, design, procurement, and construction activities per federal requirements. This experience, combined with proactive coordination among project partners and the community and a plan to contract a consultant for the scope of work, will allow preconstruction activities are completed in a timely manner and the Project to remain on track to satisfy all applicable PROTECT Program deadlines.

D) Project will Reduce Roadway Traffic Congestion

The Project will reduce roadway traffic congestion by reducing the frequency of flood-related bridge closures while also improving the operational efficiency of the SH-125 corridor. When the bridge is inundated and closed to traffic, roadway users are forced onto alternative routes, disproportionately increasing traffic volumes on surrounding roadways and creating delays, bottlenecks, and longer travel times. By elevating the bridge above anticipated 10-year flood event levels, the Project will help maintain reliable connectivity during severe weather events, allowing traffic to remain on its intended route and reducing detour related congestion. The Project is estimated to save an average of 10,300 passenger hours annually by reducing diversions from roadway flooding along SH-125 between 2031 and 2050.

The Project will enhance traffic operations and safety by reducing vehicle crashes by 39.2% annually and adding roadway shoulders where none currently exist. The shoulders will provide space for disabled vehicles, emergency response activities, and routine maintenance operations to occur outside the travel lanes, reducing the likelihood that incidents will impede travel flows. By improving roadway resilience, preserving network connectivity, and providing operational features that support safer and more efficient vehicle movement, the Project will improve travel time reliability, reduce traffic related delays, and enhance the overall performance of the regional transportation system.

VII. Benefit-Cost Analysis

Resilience Improvement Grant 23 U.S.C. § 176(d)(5)(E)(ii)(I)

☒ The applicant requests Resilience Improvement Grant Funding, and the Project is not prioritized in a RIP. The BCA is attached.