



US-412 Priority Improvements for Interstate Designation



OKLAHOMA
Transportation

INFRA No: 20.934

MEGA No: 20.937

BASIC PROJECT INFORMATION	
What is the Project Name?	US-412 Priority Improvements for Interstate Designation Project
Who is the Project Sponsor?	Oklahoma Department of Transportation (ODOT)
Was an application for USDOT discretionary grant funding for this project submitted previously?	No
PROJECT COSTS	
MPDG Request Amount	Exact Amount in year-of-expenditure dollars: \$83,874,000
Estimated Other Federal funding (excl. MPDG)	Estimate in year-of-expenditure dollars: \$27,895,000
Estimated Other Federal funding (excl. MPDG) further detail	Other Federal funding from Federal Formula dollars: \$27,895,000 Other Federal funding being requested from other USDOT grant opportunities?: \$ _____ From What Program(s)?: _____
Estimated non- Federal funding	Estimate in year-of-expenditure dollars: \$27,895,000
Future Eligible Project Cost (Sum of previous three rows)	Estimate in year-of-expenditure dollars: \$139,790,000
Previously incurred project costs (if applicable)	Estimate in year-of-expenditure dollars: \$-
Total Project Cost (Sum of 'previous incurred' and 'future eligible')	Estimate in year-of-expenditure dollars: \$139,790,000
INFRA: Amount of Future Eligible Costs by Project Type	<p>A highway freight project on the National Highway Freight Network: \$139,790,000</p> <p>A highway or bridge project on the National Highway System: \$139,790,000</p> <p>A freight intermodal, freight rail, or freight project within the boundaries of a public or private freight rail, water (including ports), or intermodal facility and that is a surface transportation infrastructure project necessary to facilitate direct intermodal interchange, transfer, or access into or out of the facility: \$ _____</p> <p>A highway-railway grade crossing or grade separation project: \$ _____</p> <p>A wildlife crossing project: \$ _____</p> <p>A surface transportation project within the boundaries or functionally connected to an international border crossing that</p>

	<p>improves a facility owned by fed/state/local government and increases throughput efficiency: \$ _____</p> <p>A project for a marine highway corridor that is functionally connected to the NHFN and is likely to reduce road mobile source emissions: \$ _____</p> <p>A highway, bridge, or freight project on the National Multimodal Freight Network: \$ _____</p>
Mega: Amount of Future Eligible Costs by Project Type	<p>A highway or bridge project on the National Multimodal Freight Network: \$139,790,000</p> <p>A highway or bridge project on the National Highway Freight Network: \$139,790,000</p> <p>A highway or bridge project on the National Highway System: \$139,790,000</p> <p>A freight intermodal (including public ports) or freight rail project that provides public benefit: \$ _____</p> <p>A railway highway grade separation or elimination project: \$ _____</p> <p>An intercity passenger rail project: \$ _____</p> <p>A public transportation project that is eligible under assistance under Chapter 53 of title 49 and is a part of any of the project types described above: \$ _____</p> <p>A grouping, combination, or program of interrelated, connected, or dependent projects of any of the projects described above</p>
Project Location	
State(s) in which project is located	Oklahoma
INFRA: small or large project	Large
Urbanized Area in which project is located, if applicable	N/A
Population of Urbanized Area (According to 2010 Census)	N/A
Is the project located (entirely or partially) in Area of Persistent Poverty or Historically Disadvantaged Community?	<p>APP: Census Tract 304.03, 404, 405.02</p> <p>HDC: Census Tract 304.03 405.2</p>
Is the project located (entirely or partially)	<p>Opportunity Zones: Yes, 40097040400</p> <p>Empowerment Zones: No</p>

in Federal or USDOT designated areas	Promise Zones: No Choice Neighborhoods: No
Is the project currently programmed in the: • TIP • STIP • MPO Long Range Transportation Plan • State Long Range Transportation Plan • State Freight Plan	STIP : Yes, Specific interchanges and structures within the corridor. ODOT 8 year Construction Work Plan: Sheet 1 Sheet 2

Table of Contents

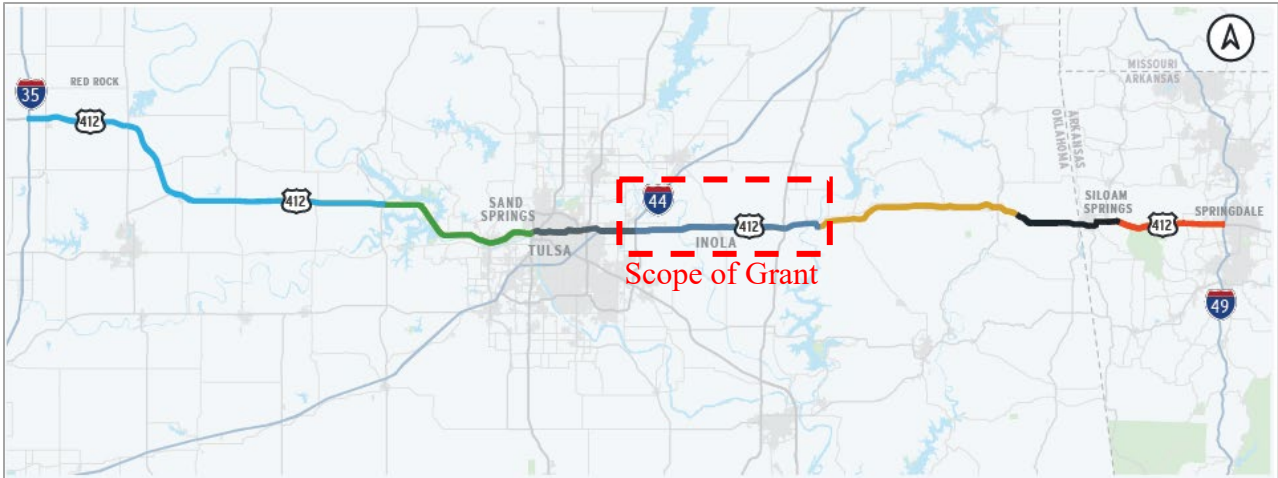
1.0	Project Description.....	1
2.0	Project Location.....	3
3.0	Project Parties	5
4.0	Local Funds, Sources and Uses	6
5.0	Project Outcome Criteria	9
6.0	Benefit Cost Analysis	17
7.0	Project Readiness and Environmental Risk.....	18
	Table 1: Total Project Cost (Previously Incurred and Future Eligible Costs)	6
	Table 2: Sources and Uses of Funds	8
	Table 3: Future Project Costs and Construction Phasing.....	8
	Table 4: Collision Rates for Rural Expressway and Rural Interstate in Oklahoma.....	9
	Table 5: BCA Results	17
	Table 6: Project Delivery Risks and Mitigations.....	20
	Table 7: Statutory Selection Requirements.....	21
	Figure 1: US-412 Regionwide Improvement Scope.....	1
	Figure 2: Locations for Possible Interchanges and Overpasses.....	2
	Figure 3: Project Study Area.....	4
	Figure 4: Areas of Persistent Poverty and Historically Disadvantaged Communities	5
	Figure 5: ODOT Tax Allocations	7
	Figure 6: Planned 412 Development Projects.....	12
	Figure 7: Existing Electric Vehicle Charging Stations in Oklahoma	14
	Figure 8: Project Schedule	19

1.0 Project Description

The Infrastructure Investment and Jobs Act (IIJA) of 2021 designated a portion of US-412 in Arkansas and Oklahoma as a [future interstate on the National Highway System](#) (p. 438). The Oklahoma Department of Transportation (ODOT) is seeking funding to begin this conversion starting with a 27-mile segment just east of Tulsa. The **US-412 Priority Improvements for Interstate Designation Project** (the Project) is estimated to cost \$140 million and includes 18 grade separations consisting of upgrades to four existing overpasses, eight new full access interchanges and six new overpasses. In addition to the new structures, resurfacing of existing structures will be completed.

The designation of US-412 to an interstate is mandated at the federal level in the IIJA, which signals the importance of US-412 to the nation. Achieving the corridor’s full interstate potential and design standards will serve future passenger and freight traffic needs, improve safety along the Project corridor, strengthen the resiliency of the nation’s east/west interstates, and facilitate economic growth and quality of life for the region.

Figure 1: US-412 Regionwide Improvement Scope



Source: ODOT

The Project is part of a larger effort to improve US-412 to interstate standards ultimately connecting I-35 and I-49. Figure 1 above provides a breakdown of the segments to be improved. This Project corridor is the middle blue segment through the City of Inola, east of Tulsa.

Transportation Challenges and Solutions

The existing US-412 is currently a high-speed corridor with a posted speed limits ranging from 65 mph to 70 mph. The existing Project corridor has at-grade intersections as shown in the photo to the right as well as four grade-separated interchanges/overpasses.

Because access control is inconsistent for the entirety of US-412, drivers within the Project corridor can experience unsafe conditions including unexpected slowing and accelerating, passing and weaving, and dangerous

access points. The points on Figure 2 identify where access will need to be evaluated and improved to either an interchange, overpass or a cul-de-sac with no access. A decision on the type of improvement at each location will be made as environmental and preliminary engineering phases move forward.



Example of an at-grade intersection on US-412 in the corridor.
Source: ODOT

Figure 2: Locations for Possible Interchanges and Overpasses



Source: ODOT

Key points along the Project corridor include the interchange with Interstate 44 (I-44). Serving as the west end terminus of the Project, I-44 is a key multi-state corridor of freight significance in the heartland of America. Improving the interchange with I-44 will be a consideration as part of the Project. Other critical points of access on the Project corridor is the marine port terminals of Catoosa and Oakley's Port 33. These ports are a part of the [McClellan-Kerr Arkansas River Navigation System \(MKARNS\)](#), which transports billions of dollars' worth of commodities every year from barge to truck and rail for distribution throughout the United States.

In addition to these existing assets, the Project corridor will be primed to improve access to:

- A proposed new Panasonic car battery manufacturing center near the existing MidAmerica Industrial Park on the east end of the Project corridor – 4,000 new jobs;
- Canoo electric vehicle factory at the MidAmerica Industrial Park – 1,500 new jobs; and
- Tulsa International Airport and Northwest Arkansas Regional Airport

Upgrading to interstate standards will create a much safer environment for the traffic demand that these facilities will create. Removing the at-grade turning movements and constructing interchanges will ensure free-flow speeds on the facility and improve travel times.

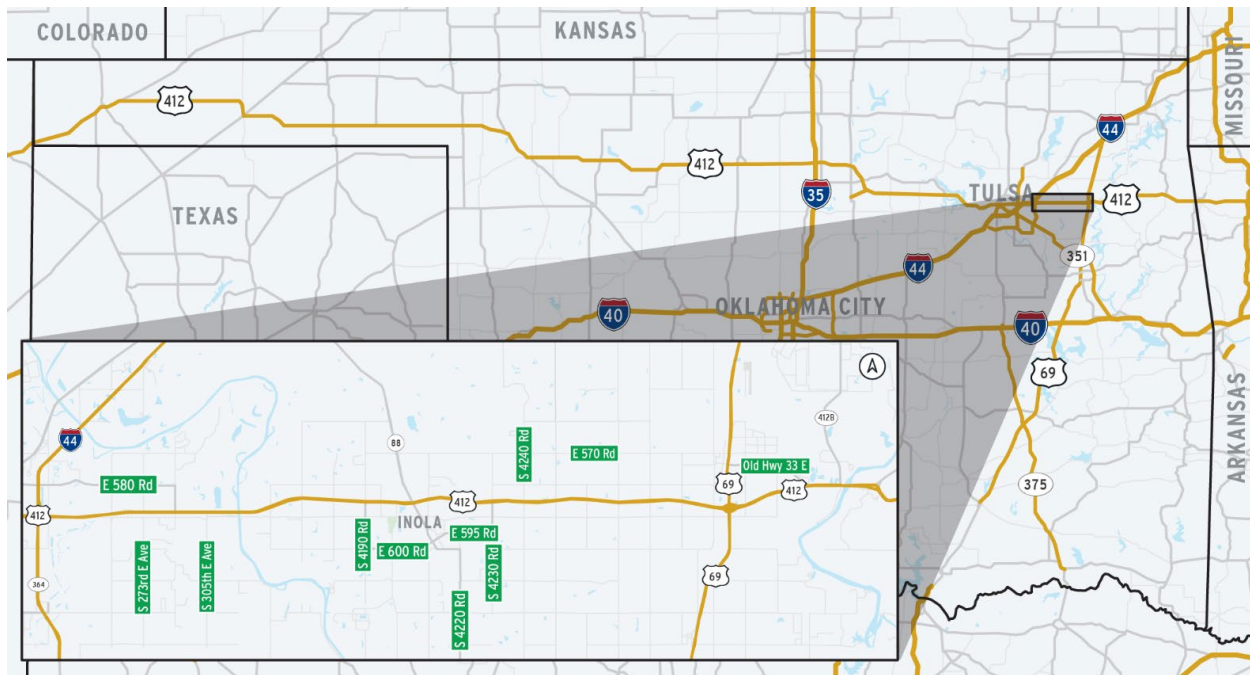
2.0 Project Location

The US-412 Project is approximately 26 miles in length with a west terminus at I-44 (Will Rogers Turnpike) and an east terminus where the Cherokee Turnpike splits-off from US-412A. The approximate GPS coordinates for the midpoint of the study area is 36.169N, -95.527W. The east end Project terminus is approximately 41 miles away from the Oklahoma/Arkansas state line. The Project corridor passes through the far eastern portion of Tulsa and continues through communities including Fair Oaks, Gregory, Inola, and Chouteau.

Major junctions from west to east include:

- I-44 in Tulsa
- SH-88 in Inola
- US-69 in Chouteau
- The Cherokee Turnpike - a toll road to the east of the proposed US-412 project area

Figure 3: Project Study Area



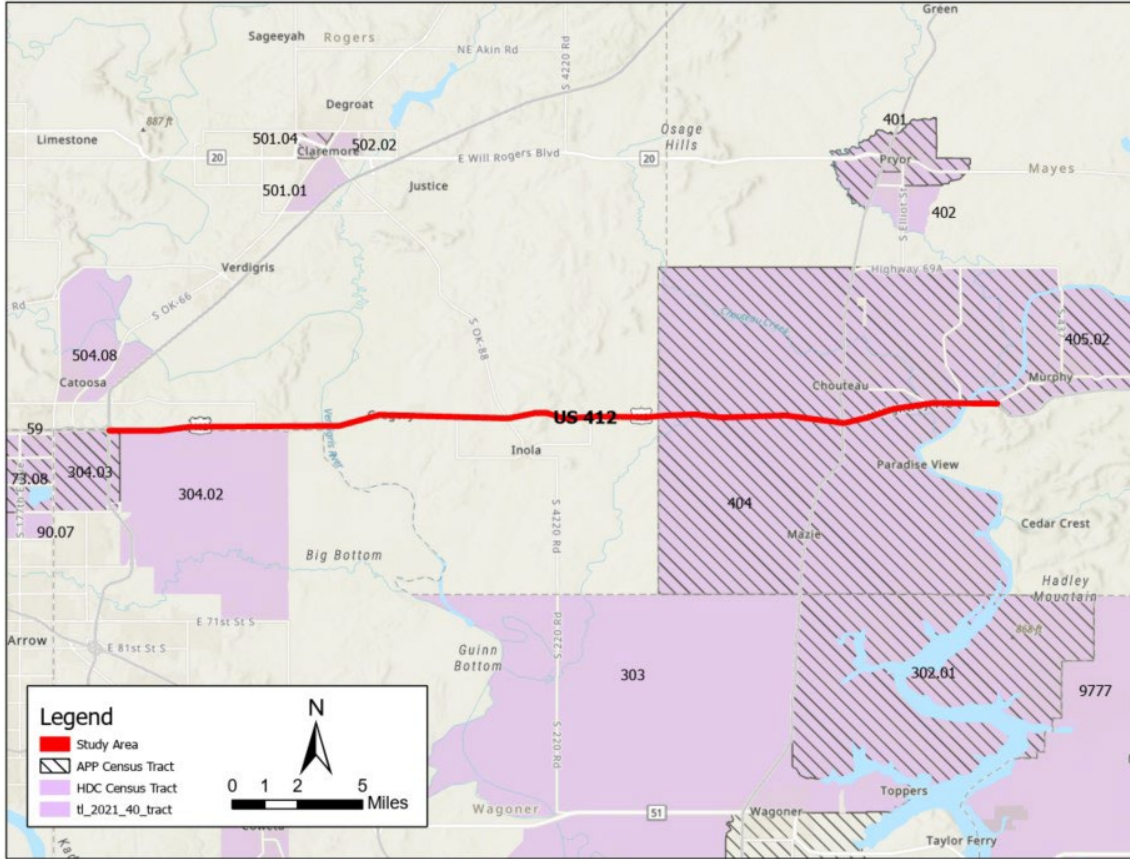
Source: ODOT

Portions of the corridor either move through or are adjacent to Areas of Persistent Poverty (APP) or Historically Disadvantaged Communities (HDC). Census Tract 404 is the only APP and HDC that surrounds US-412 in the eastern portion of the study area. Census Tracts 304.02, 304.03 and 405.02 are considered APP and HDC, but are contained in the east and west limits.

Indian nations located in the three counties that border the Project corridor (alphabetical):

1. [Alabama-Quassarte Tribal Town](#) (Peoples: Alabama, Coushatta)
2. [Cherokee Nation](#) (Peoples: Cherokee, Cherokee Freedmen, Natchez)
3. [The Muscogee \(Creek\) Nation](#) (Peoples: Muscogee Creek, Yuchi)

Figure 4: Areas of Persistent Poverty and Historically Disadvantaged Communities



Sources: FHWA, HUD, ESRI

3.0 Project Parties

ODOT is the Project sponsor and has decades of experience with receipt and expenditure of federal transportation funds. Numerous entities in the region support the Project through formal letters, all of which are uploaded to grants.gov and can also be found on the [US-412 Grant website](#).

4.0 Local Funds, Sources and Uses

ODOT is requesting \$84 million in MEGA/INFRA funds; **60 percent of the future eligible total Project cost.** ODOT will contribute an additional \$28 million in future state funding (non-federal funds) to the Project and an additional \$28 million will come from Federal-State formula funds. Even with current agency support, **ODOT cannot complete the Project without federal financial assistance.** Funds from the MEGA/INFRA grant program will allow full construction to be completed by 2029. Table 1 includes the total costs for the US-412 Priority Improvements for Interstate Designation Project.

Table 1: Total Project Cost (Previously Incurred and Future Eligible Costs)

	Previously Incurred Expenses	Future Eligible Costs	Percentage of Future Costs	Total Project Cost
Non-Federal Funds	-	\$27,985,000	20%	\$27,985,000
Other Federal Funds	-	\$27,985,000	20%	\$27,985,000
INFRA/MEGA Grant Funds	-	\$83,874,000	60%	\$83,874,000
Total Project Costs	-	\$139,790,000	100%	\$139,790,000

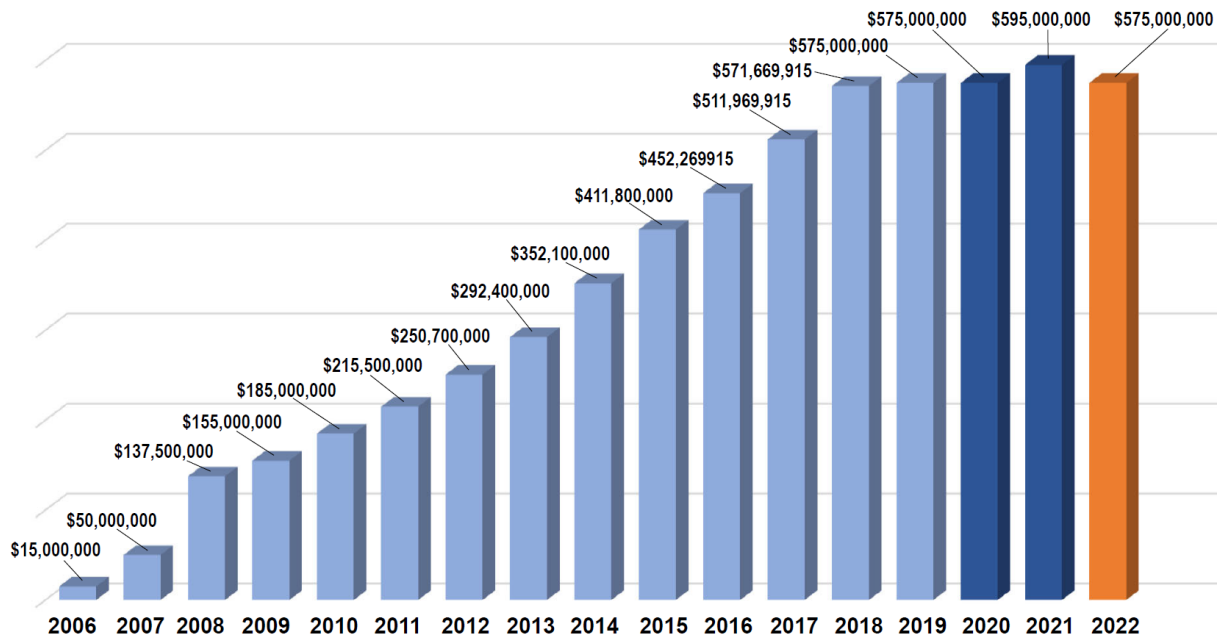
ODOT is funded by both state and federal dollars. In 2005, House Bill 1078 passed creating the Rebuilding Oklahoma Access and Driver Safety (ROADS) fund that permanently dedicated state income tax dollars to help supplement the minimal state dollars invested over the previous decades. Oklahoma, like many states, faced budget shortfalls from 2010-2017, resulting in nearly \$800 million in cumulative budget cuts to the transportation system during that period. The Oklahoma Legislature has recognized that cutting transportation funding was not an option and implemented the following countermeasures to partially offset this temporary budget impact:

- In 2016 and 2020, ODOT was authorized to sell \$200 million in bonds to partially offset the budget shortfalls that impacted the transportation budget that year.
- In 2018, for the first time in over 30 years, state lawmakers united to pass a required supermajority (75 percent house and senate) tax increase to boost state revenue that included state motor fuel tax (3 cents on diesel and 6 cents on gasoline). While this revenue was not

additive to the ROADS fund allocation, this transportation industry generated revenue was committed 100 percent to ODOT to help ensure that future budget shortfalls would not impact ODOT funding as occurred in 2016 and 2017. By 2021, the ROADS cap increased to \$595 million.

Illustrated in Figure 5, the commitment since 2006 has built a new annual state commitment of \$575 million in transportation funding. That represents an estimated \$5.3 billion in non-federal revenue commitment during this period. The dark blue bars in 2020 and 2021 depict COVID-19 years, and the increase in 2021 is due to the selling of bonds due to budget shortfalls as described in the text above.

Figure 5: ODOT State Revenues



Source: ODOT Comptroller

Development of the Project is currently in the Planning Environmental Linkages (PEL) phase. Project costs are based on conceptual engineering estimates using average costs to build an overpass, interchange and grade/pave a roadway. The local cost share for the project comes from ODOT statewide transportation dollars. The obligated MEGA/INFRA grant funding would be used to cover parts of the costs associated with construction as shown in Table 2. A 10% contingency and 6% engineering and construction (E&C) is included in the cost projection. ODOT is committed to the Project and should the Project encounter unforeseen costs, ODOT will cover additional costs.

Table 2: Sources and Uses of Funds

	Engineering / Design	NEPA	ROW & Utilities	Construction	Contingency + E&C
State Funds (ODOT)					
<i>Future Cost</i>	\$3,955,000	\$3,955,000	\$1,072,000	\$15,227,000	\$3,776,000
Other Federal Funds					
<i>Future Cost</i>			\$8,928,000	\$15,227,000	\$3,776,000
Grant Funds (MPDG)					
<i>Future Cost</i>				\$72,546,000	\$11,328,000
Total Previously Incurred Costs					
Total Future Element Costs	\$3,955,000	\$3,955,000	\$10,000,000	\$103,000,000	\$18,880,000

A detailed breakdown of future eligible Project costs by year is shown below in Table 3.

Table 3: Future Project Costs and Construction Phasing

	2022	2023	2024	2025	2026	2027	2028
Engineering/Design	\$500,000	\$1,727,500	\$1,727,500				
NEPA	\$750,000	3,205,000					
ROW & Utilities		\$3,334,000	\$3,334,000	\$3,334,000			
Construction				\$25,750,000	\$25,750,000	\$25,750,000	\$25,750,000
Contingency + E&C	\$195,187	\$1,290,651	\$790,349	\$4,541,287	\$4,020,842	\$4,020,842	\$4,020,842
Total Future Project Costs	\$1,445,187	\$9,556,151	\$5,851,849	\$33,624,287	\$29,770,842	\$29,770,842	\$29,770,842

5.0 Project Outcome Criteria

5.1 Criterion 1 – Safety

The current configuration of US-412 contains multiple at-grade intersections with no acceleration lanes for vehicles turning onto the highway. Left turn bays do exist at the at-grade intersections, but aggressive breaking does occur at times when a vehicle has to yield to oncoming traffic. From 2016 – 2020, there were a total of **10 fatal accidents** and **197 injury accidents** on



Multiple at-grade intersections on US-412 create safety hazards for those accessing the corridor. The combination of vehicles on US-412 moving at posted speeds of 65 MPH and vehicles turning onto the corridor with no acceleration lane means that drivers must have increased awareness in these locations. Misjudging the speeds of oncoming vehicles cause serious and sometimes fatal crashes. Photo Credit: ODOT

US-412. Table 4 shows the benefits of upgrading a system from a rural expressway to a rural interstate. Using ODOT statewide averages, the total injury and fatal crash rates are expected to significantly improve on US-412. The results of the BCA analysis support this assumption. Safety-related improvements along the corridor including eliminating the at-grade intersections and modernizing the system to interstate standards will result in a **potential crash savings of \$138.6 million (NPV)**.

Table 4: Collision Rates for Rural Expressway and Rural Interstate in Oklahoma

	Collision Rates 2016-2020		
	Overall	Injury	Fatal
Rural Expressway	59.55	12.49	1.28
Rural Interstate	40.29	5.69	0.65

Source: ODOT Crash Data, Rates are per 100 million VMT

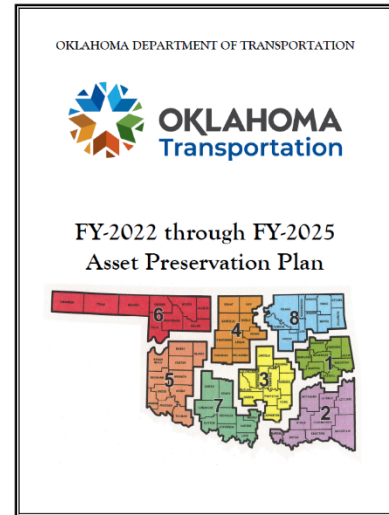
5.2 Criterion 2 – State of Good Repair

ODOT has estimated full lifecycle costs of the Project, including the maintenance and operating costs. Lifecycle cost forecasts use recent maintenance and operating cost analysis of other similar new corridors, in addition to accounting for regular pavement maintenance, rehabilitation/reconstruction projects, annual general maintenance, and contingency in place within ODOT’s maintenance budget based on recent extreme weather conditions from climate change. ODOT’s current budget added \$40 million to prepare for additional maintenance based on more extreme weather (including flooding, tornados, and cold weather events).

Maintenance associated with the project includes biennial bridge inspections for all structures. Bridge rehabilitations traditionally occur 30 years after the structure is built, unless repairs are needed earlier. Based on these assumptions, the estimated maintenance cost for the Project will be \$463.4 thousand (NPV) through 2048, **equating to an annual increase in \$23.2 thousand (NPV) in maintenance costs** when compared to the no-build alternative.

The corridor will be maintained in accordance with ODOT’s maintenance schedule. ODOT maintains a detailed [Asset Preservation Plan](#) for existing infrastructure and future transportation improvements within each county. These plans begin with ODOT’s Field District Engineer building on a condition assessment of the highway network based upon their knowledge of the transportation needs and priorities in each district.

ODOT and its partners are confident in the ability to pay for operations and maintenance needs based on the state’s recent increases in **dedicated transportation funding**.



ODOT Transportation Asset Management (TAM)

Following construction, the new interstate will be included in ODOT’s TAM system, built on quality information inputs and disciplined analysis to establish a basis for optimizing expenditures to sustain and improve ODOT’s transportation system in an efficient manner.

5.3 Criterion 3 – Economic Impacts, Freight Movement and Job Creation

US-412 is developing into a vital economic corridor for the state and the country with good paying jobs with free/fair choice to join a union. One of the primary reasons for upgrading the proposed corridor is due to the existing and planned development projects that are located nearby (see Figure 6). Factories such as the GRDA Facility at MidAmerica Industrial Park will add approximately 1,500 new jobs to the area. The MidAmerica Industrial Park is also home to Google, who in [2007 announced \\$700 million in investments in the state](#), mainly at this facility. In May of 2022, Google announced an additional [\\$75 million investment](#) at MidAmerica Industrial Park. In March of 2022, Northern Data also announced a [\\$270 million investment](#) at the MidAmerica Industrial Park for a new data center that will employ at least 150 people.

LEAD Act Passed to Incentivize Economic Development

In April 2022, the [Large-scale Economic Activity and Development \(LEAD\) Act](#), aimed at securing a massive Panasonic manufacturing facility along US-412 in the study area, was passed. A decision on whether Panasonic will accept this nearly \$700 million incentive package is imminent. If Panasonic chooses to locate their facility at the approved site adjacent to US-412, [a minimum 4,000 direct jobs will be created](#). Once indirect jobs are factored in, that number could grow to nearly 10,000 jobs.

In addition to the facilities listed in Figure 6, nearly 4,000 new jobs could be located at a predetermined site in the corridor if Panasonic decides to locate a battery manufacturing facility in Oklahoma.

US-412 directly connects to I-44, which is a Tier 1 freight corridor, one of the highest travelled freight corridors in the country. This section of roadway also borders the eastern limits of Tulsa, Oklahoma an urbanized area with a [population of 413,066](#) and a metropolitan population of over one million.

The impact of upgrading US-412 to an interstate goes beyond passenger vehicle and freight trucking movements. This portion of US-412 directly serves the Tulsa Port of Catoosa and Oakley's Port 33 on the [MKARNS](#). The Port of Catoosa Railroad also feeds into BNSF rail tracks, extending the economic impacts of the region. Working together, the ports, rail lines and US-412 create significant economic opportunity for the region. Over 22,000 full and part time jobs are provided for in Oklahoma and the surrounding region from the MKARNS. In 2021, [MKARNS transported 10.7 million tons of goods values at \\$3.7 billion](#).

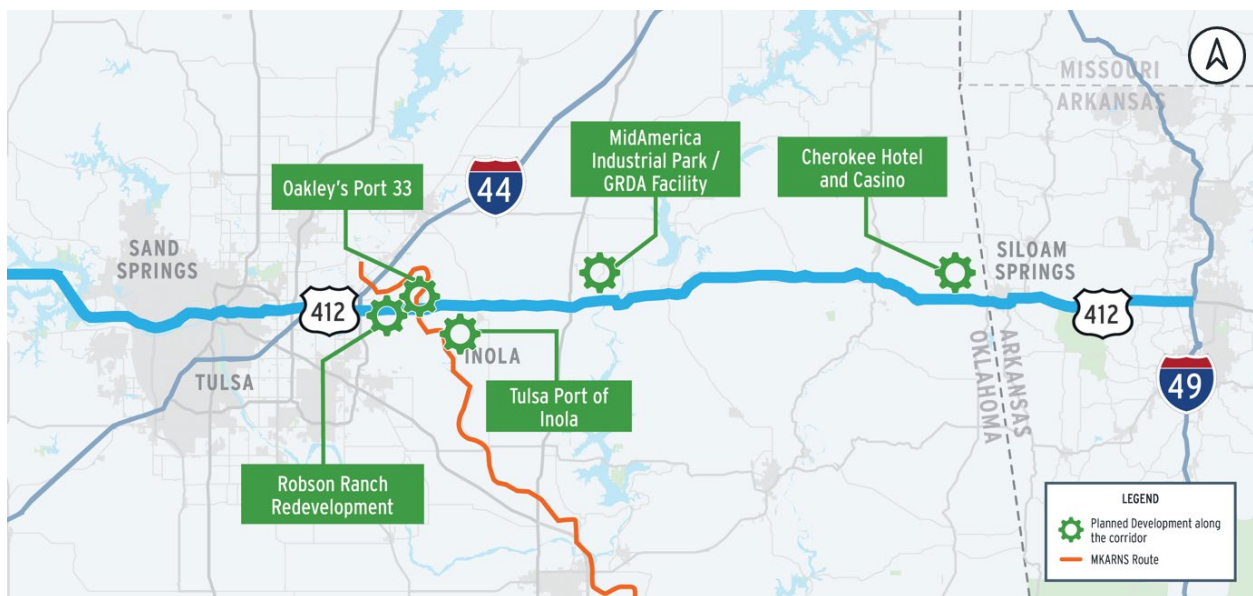
The Army Corps of Engineers recently released their plans to utilize funding from the IJA to deepen the MKARNS channel from 9 feet to 12 feet. A deeper channel will allow for increased barge capacity up to 400 tons per barge. Additionally, the [Port of Inola](#), located near US-412, just recently completed the Sofidel America Manufacturing facility, a \$360 million dollar investment employing over 400 people with direct access to barge transportation.

The location of a Panasonic battery facility adjacent to US-412 would be viewed as advantageous by EV-related businesses who seek to implement a just-in-time management strategy. The just-in-time system aligns raw material orders from suppliers like Panasonic directly with production schedules, which increases efficiency and decreases waste and inventory costs. The just-in-time production process relies on reliable suppliers, and suppliers need a resilient transportation system for moving commodities. Transformation of US-412 into an interstate equates to:

- better efficiency for the movement of people and goods;
- the resiliency of the larger transportation network; and
- a corridor primed for an emerging innovation economy, which can lead to cutting-edge vehicle efficiencies and transportation technology.

Upgrading US-412 will improve the multimodal transportation systems and increase the productivity for the large factories and ports that surround the roadway. The state of Oklahoma is working with new companies that locate in the area to have a hiring plan that includes opportunities for historically underrepresented groups.

Figure 6: Planned US-412 Development Projects



5.4 Criterion 4 – Climate Change, Resiliency and the Environment

ODOT’s plan to work with private industries to develop electric vehicle (EV) charging station infrastructure will contribute to reducing transportation-related greenhouse gas emissions and help put the U.S. on a path to net-zero emissions by 2050. According to the [U.S. Department of Energy](#), all-electric vehicles, plug-in hybrid electric vehicles, and hybrid electric vehicles typically produce lower tailpipe emissions compared to conventional vehicles. Using lower carbon fuels is one of three actions people can take to reduce greenhouse gasses from transportation, says the [U.S. Environmental Protection Agency](#) (EPA).

Many of the businesses that may locate to this corridor are involved in alternative, clean energy development. Panasonic would be developing EV batteries and Canoo is developing EV’s at the MidAmerica Industrial Park. ODOT hopes that US-412 will continue to develop into an alternative energy corridor for the region.

5.5 Criterion 5 – Equity, Multimodal Options and Quality of Life

As described in more detail under Criterion 6 ([Project Delivery section](#)), ODOT is launching a PEL study which will include a mobility equity analysis for the area. Mentioned in the Project Location section, the project is located adjacent to APP, HDC’s, and tribal nations. The equity analysis to be completed in the PEL will take into consideration policies, goals, and methodologies to include [Justice40](#). The intended overarching outcome from the equity analysis is to facilitate a Project design that will address area transportation needs and provide the greatest level of access to key areas of importance, such as major job centers or places of cultural significance. The equity analysis will also inform public involvement activities for the Project, including engaging with organizations, agencies and representatives who can help Project planners make decisions that can increase opportunities and improve the quality of life for areas adjacent to the corridor.

ODOT has the opportunity to develop a plan on EV charging station rollout which will include Public-Private partnerships along that corridor with the private entities being the ultimate owners and operators. Improving EV charging station infrastructure affects equity in the following ways:

- It will help to accelerate equitable adoption of EVs; and
- It will make charging stations convenient, reliable, affordable, and an equitable charging experience for all users, including people who cannot reliably charged at home.

ODOT understands that its Project must comply with pertinent provisions of the Build America, Buy America (BABA) title of the Infrastructure Investment and Jobs Act (IIJA). It further understands that these provisions are applicable to all federal grant awards made on or after May 14, 2022, along with other provisions or guidance provided by the Office of Management and Budget (OMB) [Memorandum](#) regarding implementation of the BABA title of the IIJA. It also will act in a manner that aligns with [Executive Order 14005, Ensuring the Future is Made in All of America by All of America's Workers](#).

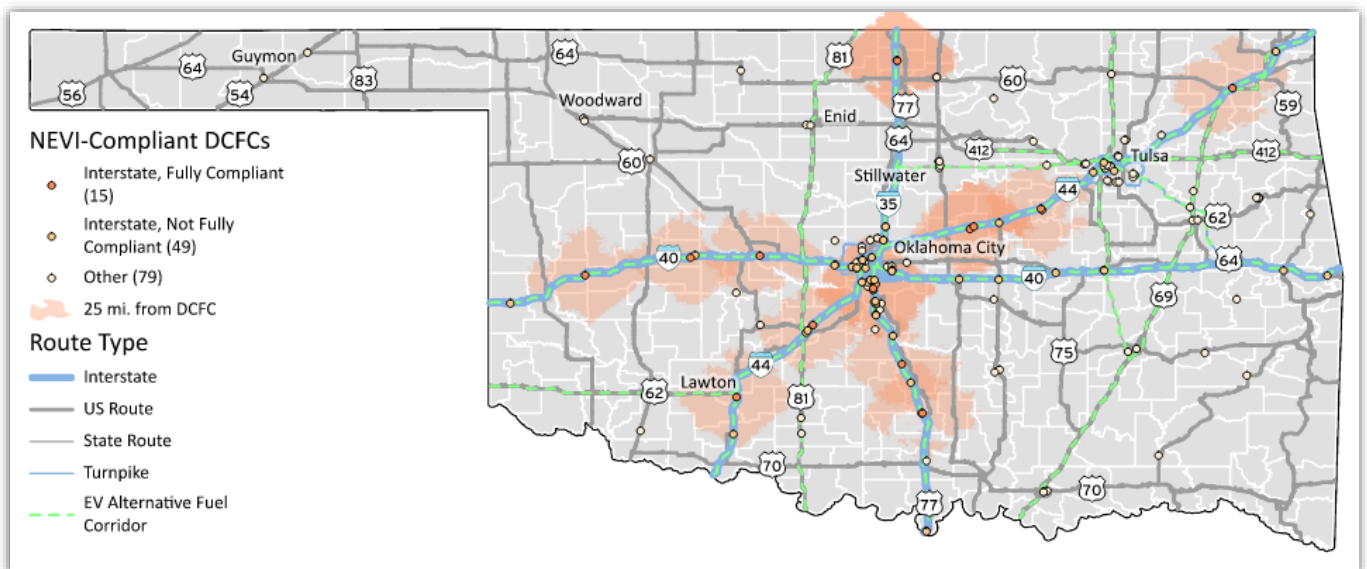
5.6 Criterion 6 – Innovation

Technology

ODOT has the opportunity to develop a plan on EV charging station rollout which will include Public-Private partnerships along that corridor with the private entities being the ultimate owners and operators. The buildout is part of ODOT’s statewide EV infrastructure deployment plan, which will receive \$66.3 million over the next five years from the [National Electric Vehicle Infrastructure \(NEVI\) Formula Program](#). NEVI is a \$5 billion effort to establish a national network of 500,000 EV charging stations by 2030 along federally designated [Alternative Fuel Corridors](#).

Figure 7 shows Oklahoma’s 15 existing EV charging stations on interstates that are compliant with NEVI standards, 49 EV stations on interstates that are not compliant, as well as 79 stations not located within one mile of an interstate. US-412 currently offers some charging stations, but the number of stations is sparse and the stations are separated by long distances.

Figure 7: Existing Electric Vehicle Charging Stations in Oklahoma



ODOT will look to use the latest in drone technology, including PIXDmatic, a drone software tool used for next-generation photogrammetry for large scale corridor mapping, which is relevant to the needs of US-412.

PIX4Dmatic will yield high quality orthomosaic mapping of the corridor, as well as a base file for proposed improvements that stakeholders and the public can easily understand when it comes time to engage the community.

ODOT also will consider technology ideas including adding ITS solutions focused on improved personal mobility and freight supply chain optimization. Collaboration with the Oklahoma Turnpike Authority (OTA) will be needed to ensure that the OTA's conversion to all-electric tolling ties in with the Project for seamless travel. OTA's conversion is underway at the Cherokee Turnpike, which is located at the east end terminus of the Project corridor.



Technology solutions are consistent with the statewide initiatives initiated by Tim Gatz, Oklahoma's Secretary of Transportation and Executive Director for ODOT.

Project Delivery

ODOT has initiated work for development of a PEL Study. The PEL, expected to be completed by summer 2023, will evaluate US-412 from I-35 north of Oklahoma City to I-49 in Springdale, Arkansas to determine needs for upgrading the facility into an interstate. The delivery benefits resulting from the PEL for this Project are described below:

1) Accepted by NEPA

The activities, outcomes and documentation that result from the PEL are accepted and easily transferrable to satisfy requirements of the National Environmental Policy Act (NEPA). PELs can help to expedite federal environmental reviews to support project development and delivery. Effective public involvement and agency coordination are required elements for a successful PEL. ODOT expects outcomes from its PEL will include development of a purpose and need as well as determination of goals/objectives.

2) Public Involvement

The PEL will include in-person and virtual public involvement activities. By the time the NEPA process begins, ODOT will have already become familiar with stakeholders, including special interest groups, proponents and opponents, and, ODOT will have a good sense of key issues and concerns. The PEL will enable ODOT to understand stakeholder needs far enough in advance of Project delivery that innovative equity programs can be developed. Ideally, ODOT would like to create equity programs in collaboration with groups such as historically underserved communities and workforce development agencies.

3) Preliminary Screening

Preliminary screening of alternatives and elimination of unreasonable alternatives would be a significant outcome of the PEL, as well as mitigation needs and right of way assessments. By zeroing-in on viable design alternatives, Project delivery can be facilitated in a timelier manner. Work under the PEL could include recommendations for innovative technologies and approaches, as well as recommendations for multi-modal or mass transit elements.

Project Bundling

Many States continue to see an increase in the number of highways and bridges needing attention. Many of the structures that would be built as part of the US-412 conversion are already included in Oklahoma's [State Transportation Improvement Program \(STIP\)](#). Project bundling helps address this national issue. By awarding a single contract for several similar preservation, rehabilitation, or replacement projects, agencies can streamline design and construction, reduce costs, and effectively decrease transportation project backlogs.

Innovative Financing

ODOT will be using state funds, Federal formula dollars in addition to the requested MEGA/INFRA funds. No other sources of financing have been identified for the project.

6.0 Benefit Cost Analysis

The US-412 Project provides significant safety improvements and travel reliability to the for the corridor. Following the USDOT’s guidance for a Benefit-Cost Analysis (BCA), the US-412 Project generates a **benefit-cost ratio (BCR) of 1.71**. A more detailed BCA technical memorandum, as well as the BCA spreadsheet model are uploaded to [grants.gov](https://www.grants.gov). The BCA results are summarized below and in Table 5, expressed in terms of net present value (NPV) and BCR, using a discount rate of seven percent.

- **Total Project Capital Cost: \$139,790,000 (2020\$)**
 All costs for the BCA were converted to 2020\$.
 Total Project costs in year of expenditure equates to \$80,590,367.
- **Operations and Maintenance Costs: \$479,520**
 Over the course of the Project life cycle (20 years), the Project will increase costs \$463,437 in maintenance.
- **Total Project Benefits: \$138,195,935**
 Safety savings produces the largest quantifiable benefit of the US-412 Project.

Table 5: BCA Results

Project	Capital Costs	Project Costs (NPV)	Total Net Benefit	Total Net Benefit (NPV)	Benefit-Cost Ratio
2022 BCA SUMMARY - U.S. 412 Interstate Conversion Project	\$139,790,000	\$80,590,367	\$435,657,501	\$138,195,935	1.71

7.0 Project Readiness and Environmental Risk

With additional funding from the INFRA/MEGA grant to leverage state investment, ODOT commits that the Project can begin construction within 18 months of funding obligation. The sections below provide substantial evidence of the Applicants preparedness.

ODOT is focused on accountability in Project delivery and performance, and is committed to transparency and quality performance in all projects and operations. The project team has an extensive history of delivering projects on time and on budget.

If ODOT is awarded grant funding, ODOT will provide schedule incentives for early completion and monitor quality throughout construction in order to ensure the Project achieves the optimal public benefits and meets or exceeds Project schedule and accountability measures.

To support this commitment, ODOT will organize a **US-412 Project Performance Team** comprised of the persons from the design firm, the field district, and local city/county officials who will attend Project status meetings and be able to provide the construction team with accelerated answers to the contractor's requests for information. With this process and strategies including construction incentives, ODOT feels confident in committing to the schedule accountability milestones for obligation of funds and construction.

7.1 Technical Feasibility

ODOT has extensive experience designing and constructing projects similar in complexity and scale to the one proposed in this application. The project is currently in the PEL phase and will be designed in accordance with FHWA and AASHTO standards. The cost estimates for this Project were developed based on estimated quantities and similar projects constructed in the State of Oklahoma.

7.2 Project Schedule

A detailed Project schedule that includes all major Project milestones has been prepared anticipating MPDG funding. ODOT is prepared to receive funding obligation by September 2025 and will start construction by spring 2026.

Assessment of Project Risks and Mitigation Strategies

Table 6: Project Delivery Risks and Mitigations

RISK	RISK REGISTER	MITIGATION STRATEGIES
Environmental	Medium	Because the project is on existing ROW, impacts are expected to be minimal. ODOT is currently working on a PEL study that will be directly transferrable to NEPA. Because this process is in the early stages, the project team cannot directly eliminate the possibility of environmental issues.
Environmental Justice	Medium	The proposed improvements do run adjacent to APP, HDC's and Native American lands. Because the proposed project is on existing ROW, impacts are expected to be minimal. ODOT will be coordinating a thorough public engagement process to ensure that the proposed improvements contain equitable solutions for all who would be impacted by the project.
Funding	High	Construction of the project cannot happen without additional Federal assistance. However, ODOT has committed sufficient funds to initiate the Project prior to the obligation of funds. Historically, ODOT has met every funding obligation for previous grant applications. In the unlikely instance that the project incurs cost overruns, contingency funds that have been built into the project will be used. ODOT is prepared to cover additional cost overruns through their program funds.
Procurement Contracting & Labor Agreements	High	Uncertainties with inflation may cause the project costs, including procurement, to increase by the time ODOT is prepared to move into the procurement stage. The project team did assume a 10% contingency in the overall project cost.
Right-of-Way	Low	Most of the ROW has been acquired for the project since the proposed improvements are located on the existing US-412 alignment. Additional information will be gathered in the preliminary design stages to determine how much more ROW will need to be acquired.
Schedule	Medium	ODOT is prepared to advance all pre-construction activities in according to the timeline described in the "Project Readiness" section. The project schedule will include clear communications and documentation regarding rain days, careful management of Project schedule, and early and frequent communication with Project contractors.
Technical Feasibility	Medium	ODOT is well experienced with successfully delivering these types of projects.
Utilities	Low	The proposed improvements will take place on existing ROW. Utilities will be well defined and understood during prior to construction. ODOT staff and procurement contractors are well-versed in identifying and coordinating utility relocation, if any is needed.

Statutory Project Requirements

Table 7: Statutory Selection Requirements

23 U.S.C. 117 INFRA	49 U.S.C. 6701 Mega	Guidance
1) The project will generate national, or regional economic, mobility, or safety benefits	(1) The project is likely to generate national or regional economic, mobility, safety benefits	Yes. The project will directly support the growing economic development happening along the US-412 corridor. The primary monetary benefit comes in the form of safety. All existing at-grade intersections will be upgraded to grade separated interchanges, overpasses or cul-de-sacs. The safety improvements equate to a \$138.6 million (NPV) savings over a 20 year evaluation period.
2) The project will be cost effective	(3) The project will be cost effective	Yes. The BCA provided a BCR value of 1.71 with a total net benefit of \$138,195,935.
3) The project will contribute to 1 or more of the national goals described under Section 150	No statutory requirement	Yes, the project contributes to multiple goals, the largest being safety. All existing at-grade intersections will be upgraded to grade separated interchanges, overpasses or cul-de-sacs. The safety improvements equate to a \$138.6 million (NPV) savings over a 20-year evaluation period.
4) The project is based on the results of preliminary engineering	No statutory requirement	The US-412 Priority Improvements for Interstate Designation Project is on the Federal list for highways to be upgraded to an interstate. A PEL study is currently underway to address some of the requirements under NEPA.
5) With respect to related non-federal financial commitments, 1 or more stable and dependable sources of funding and financing are available to construct, maintain, and operate the project, and contingency amounts are available to cover unanticipated cost increases	(4) With respect to non-federal financial commitments, 1 or more stable and dependable sources are available to construct, operate, and maintain the project, and to cover cost increases	ODOT has a stable funding source available for the project, however the project is not feasible without INFRA/MEGA grant funds. See “Local Funds, Sources, and Uses” section of the grant for further details.
6) The project cannot be easily and efficiently completed without other Federal funding or financing available to the project sponsor	(2) The project is in significant need of Federal funding	The project is beginning the preliminary design and PEL study for the project. MPDG funds would be used specifically for construction. ODOT will continue the PEL process regardless of the outcome of the MPDG grant decision. However, construction would not be feasible unless additional Federal dollars were awarded.
7) The project is reasonably expected to begin no later than 18 months after the date of obligation of funds for the project	(5) The applicant have, or will have, sufficient legal, financial, and technical capacity to carry out the project	Pending NEPA and other pre-construction activities, the project will begin construction in 2025. If Federal funding is received, ODOT commits to beginning construction no later than 18 months after funds are obligated.