

Bridging the Gap: Multimodal Connections on I-35 over the Oklahoma River

Oklahoma Department of Transportation
Multimodal Project Discretionary Grant Application
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PROJECT DESCRIPTION



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Project Description

Bridging the Gap: Multimodal Connections on I-35 over the Oklahoma River is a marquis project in Oklahoma City that will have tremendous community impacts. The I-35 river bridge replacement project includes the construction of two new mainline bridges on I-35, a new I-35 ramp bridge spanning the Oklahoma River and rehabilitating the I-35 bridge over the Stillwater Railroad (**Component 1**). It also includes a separate “shared use” multimodal bridge will be constructed west of the I-35 SB bridge, and it will connect to the recently constructed Oklahoma River Trail system on both sides of the river (**Component 2**). The I-35 northbound (NB) bridge was constructed in 1986 (37 years ago) and the I-35 southbound (SB) bridge was constructed in 1987 (36 years ago). Based on the 2022 National Bridge Inventory (NBI), the condition rating of the deck, superstructure, and substructure is rated as a 5, is in Fair condition, and is at risk to be Structurally Deficient (SD).

Oklahoma Department of Transportation (ODOT) is requesting \$80 million in Fiscal Year (FY) 2023 and 2024 Multimodal Project Discretionary Grant (MPDG) funds from the National Infrastructure Project Assistance grants program (Mega) or the Nationally Significant Multimodal Freight and Highways Projects grants program (INFRA) to replace the I-35 NB and SB bridges, I-35 ramp Bridge, rehabilitate the I-35 bridge over the Stillwater railroad, and construct a new “shared use” multimodal bridge adjacent to the I-35 SB bridge (the Project). The new I-35 bridges would provide six 12-foot lanes in each direction, and a minimum of 12-foot inside and outside shoulders. Currently, the I-35 bridges have five lanes in each direction, but the shoulder widths are inadequate, causing both bridges to be considered functionally obsolete. The Project cost totals \$165,710,000. In addition to the \$80 million requested in MPDG funds, ODOT will use \$52,568,000 in other Federal funds. To cover the 20 percent match, ODOT will contribute \$29,142,000 of state funds ([Funding Commitment Letter](#)) and the City of Oklahoma City will contribute \$4,000,000. More detailed budget information is included in the **Project Budget** section.

I-35 begins in Laredo, Texas, and extends north through Texas, Oklahoma, Kansas, Missouri, Iowa, and then ends in Duluth, Minnesota. I-35 is a critical national corridor as it is on the National Highway System (NHS), the Strategic Highway Network (STRAHNET), and the National Highway Freight Network (NHFN). ODOT is currently conducting an I-35 Corridor Study from the Texas state line to Oklahoma City. The I-35 bridges over the Oklahoma River in Oklahoma City is a critical section of this corridor and replacing the NB and SB bridges will make the I-35 corridor more resilient to passenger and truck traffic, and earthquakes, as well as other climate related natural disasters such as flooding and tornadoes.

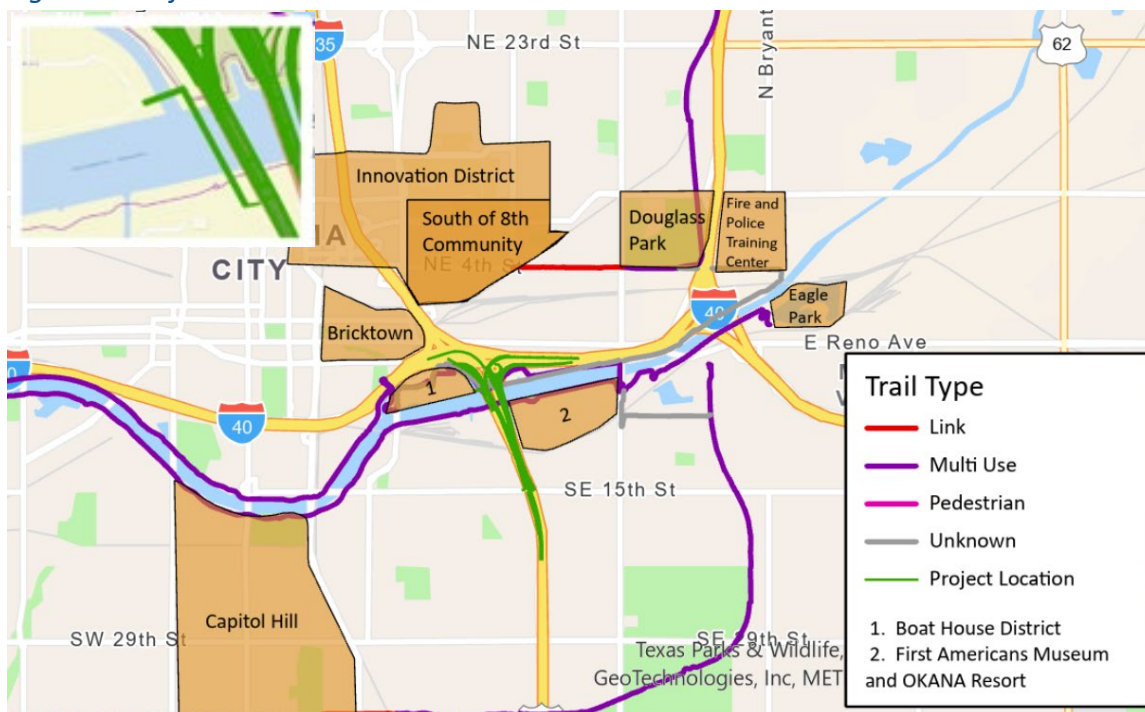
ODOT is dedicated to supporting a safe and effective transportation system that provides multimodal opportunities for active transportation users of all ages, abilities, and backgrounds. Consisting of sidewalks, bikeways, multimodal trails, and other infrastructure, Oklahoma’s growing active transportation system provides and promotes health and safety for users which benefits Oklahoma’s environment and economy. In consultation with stakeholders in the Project area, ODOT identified a terrific opportunity to include a multimodal bridge adjacent to the SB I-35 bridge and more information on this critical connection is included in **Equity, Multimodal Options, and Quality of Life** section in the Outcome Criteria Narrative.

The I-35 highway and multimodal bridge project is a priority project for ODOT, and it is in the Eight-year Construction Work Plan (CWP) and scheduled for construction in 2028.

Project Location

As shown in **Figure 1**, the Project is located 1.5 miles east and 0.5 miles south of downtown Oklahoma City and is in the Census-designated Urbanized Area of Oklahoma City, Oklahoma. Oklahoma City, located in central Oklahoma, is the state capital, and is the state’s largest city. There are numerous employers, restaurants, parks, and entertainment districts in the Project area, as shown in the map below. Additional information about the project area is provided in the **Economic Impacts, Freight Movement, and Job Creation** section in the **Outcome Criteria Narrative**.

Figure 1: Project Location

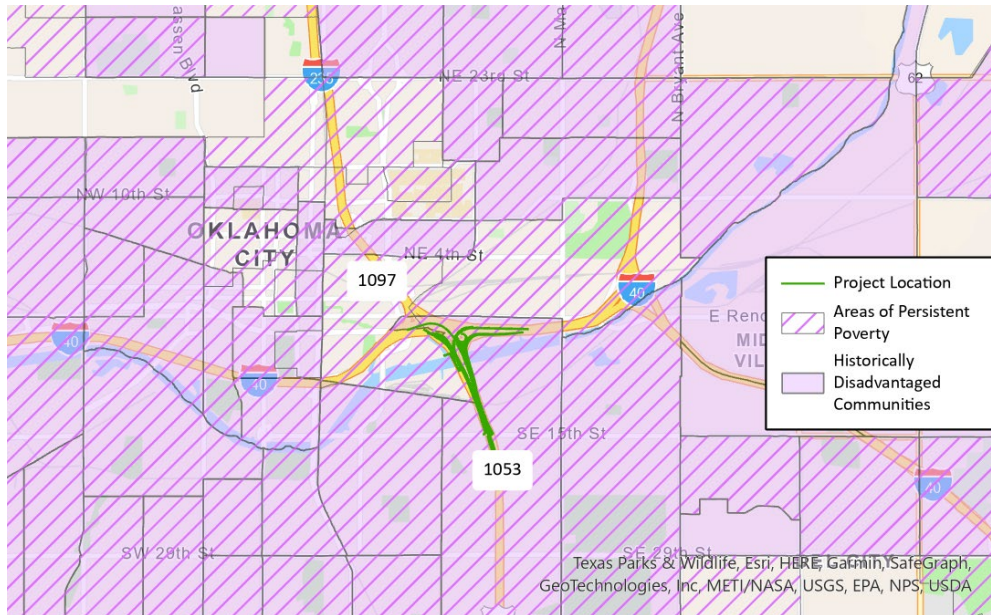


SOURCE: OKC TRAIL MAP AND GOOGLE MAPS

Historically Disadvantaged Communities and Areas of Persistent Poverty

Based on USDOT’s Transportation Disadvantaged Census Tract mapping tool and as shown in **Figure 2**, other than the multimodal bridge, the Project area is in Census tract 1053 which is a Historically Disadvantaged Community and an Area of Persistent Poverty. Contiguous to this Census tract are 11 other Census tracts (1072.07, 1073, 1073.03, 1073.05, 1073.06, 1074, 1078.01, 1054, 1048, 1049, and 1050) that are also Historically Disadvantaged Communities and Areas of Persistent Poverty. The project’s multimodal bridge component is in Census Tract 1097, which is located in an Area of Persistent Poverty. The multimodal bridge would provide unique and needed access to the Hispanic Capitol Hill district located on the south side of the Oklahoma River.

Figure 2: Historically Disadvantaged Communities and Areas of Persistent Poverty



SOURCE: GRANT PROJECT VERIFICATION TOOL¹ AND CLIMATE & ECONOMIC JUSTICE SCREENING TOOL²

Federally Designated Opportunity Zones

Based on data provided by the Department of Housing and Urban Development (HUD) and the White House Opportunity and Revitalization Council, the Project location is in Opportunity Zone 40109105300. There are also 11 Opportunities Zones in downtown Oklahoma City just north of the Project area. Also present in the Project area are Oklahoma City Empowerment Zones, which are part of an economic development initiative created by the Department of Housing and Urban development (HUD) to facilitate self-sustaining, long-term revitalization. Oklahoma City Empowerment Zones encompass 20 square miles of Oklahoma City’s most urban area, and the Project area is in an Empowerment Zone (Tract 1031.01).

Transportation Challenges

The 2022 ADT on both bridges is 129,212 and is projected to grow to 161,775 by 2040. Today, there are more than 9,000 trucks per day that cross the I-35 NB and SB bridges, and this will increase to over 11,300 trucks per day in 2040. As shown in **Table 1**, the Level of Service (LOS) on the I-35 bridges in 2022 was LOS E and by 2025 it will be LOS F. In 2022, the Level of Travel Time Reliability (LOTR) on the I-35 NB and SB bridge segments was 1.28 and 1.74, respectively. The Truck Travel Time Reliability (TTTR) on the I-35 NB and SB bridges was 2.36 and 4.33, which is rated as poor. ODOT’s TTTR Interstate target is 1.33 and the current statewide average TTTR is 1.27. While the I-35 SB direction has lower 2022 ADT values, the reliability performance is worse than that of I-35 NB. This is due to the geometric configurations of these segments. First, these segments of I-35 south of the Oklahoma River are characterized by substandard interchange spacing. The distance between the merge points of the I-40/I-35 system

¹ <https://maps.dot.gov/BTS/GrantProjectLocationVerification/> Persistent Poverty Census Tracts

² <https://screeningtool.geoplatform.gov/en/#3/33.47/-97.5>

interchange and the SE 15th Street interchange is only half a mile. Additionally, in the southbound direction two lanes from westbound I-40 merge with the three mainline lanes of I-35 SB. Immediately after this merge condition, the left lane drops, narrowing the capacity from five total lanes to four.

Table 1: Traffic Volumes and Congestions Measures

Segment	2022 ADT	2040 ADT	2022 LOS	2035 LOS	2040 LOS	2022 LOTTR	2022 TTTR
I-35 NB	69,422	86,942	E	F	F	1.28	2.36
I-35 SB	59,770	74,833				1.74	4.33

Source: ODOT

The limited bridge travel lane capacity and reduced shoulders and the merging of travel lanes directly south lead to traffic stopping and weaving. This further exacerbates queuing along I-35. In 2018, ODOT restriped the bridges to add a travel lane, and this helped reduce the backup on the I-40 to I-35 ramps; however, it narrowed the shoulder width on the bridges, making both bridges functionally obsolete.

Since the I-35 river bridge replacement project was first conceived and particularly during the stakeholder meetings in 2022, ODOT and its local partners and community stakeholders have emphasized broadening the project’s scope beyond replacing the two I-35 bridges to address local and non-motorized transportation challenges. Currently, the Oklahoma River is a barrier for residents to access jobs, healthcare, shopping, and events on the Oklahoma River. Over 20 percent of households near the Project area do not have access to a vehicle and therefore cannot safely utilize the existing I-35 bridge crossing nearest their homes to access jobs, education, healthcare, and other opportunities in central Oklahoma City by non-motorized means. As a result, the Project now includes a separate multimodal bridge that reflect priorities in Oklahoma City’s regional transportation plans, and that will better connect local neighborhoods and improve local non-motorized travel options for this Historically Disadvantaged Community and Area of Persistent Poverty.

Engineering Aspects

The I-35 NB and SB bridges will utilize three spans with plate girder steel beams. The spans will be configured to have one simply supported span tying to the north abutment and two continuous spans over the river and to the south abutment. The long central spans of the I-35 NB, SB, and multimodal bridges are designed to meet Class A course dimensions according to U.S. Rowing regulations. Between the piers, there will be room for seven 13.5-meter lanes (or eight 12-meter lanes) with a 5-meter buffer between the outer lanes and the piers. A minimum of 14-foot clearance will be provided over the normal water surface elevation to allow for motorized boat traffic. The multimodal bridge will be about 20 feet wide and 820 feet long with a primary span extending at least 360 feet. The multimodal bridge will be offset west of the I-35 SB bridge. The three I-35 bridges will utilize three continuous spans with plate girder steel beams. The continuous spans will allow the longest span over the river's center to have a less deep section than if supported spans were used.

To connect the multimodal bridge to the Oklahoma River Trail system, ADA-compliant ramps will branch off the existing Oklahoma River trail to provide pedestrians and cyclists access to the multimodal bridge. Vertical abutments will be used at the north bank for each bridge to allow adequate clearance and spacing for the trail to run under the bridge. The Mechanically Stabilized Earth (MSE) walls will be used to tie to the vertical abutments so that the alignment of the existing trail will not require extensive alteration. The MSE walls will also assist in minimizing the amount of additional right-of-way acquisition needed for the Project. Handrailing will be used along the extent of the paths under the bridges on both banks of the river to deter pedestrians from straying toward the I-35 traffic. Lighting and other aesthetic enhancements will be provided on the multimodal bridge and along the trail pathway to enhance the user experience and provide additional safety.

Project History and Incurred Costs

ODOT has incurred \$7.3 million to date maintaining, improving, and studying the I-35 bridges. The following provides the ODOT work history and the design status is currently at 30 percent.

- **August 2016:** ODOT commissioned an Interchange Capacity Study.
- **September 2017:** Interim I-35 ramp improvement plans developed.
- **October 2017:** Preliminary river bridge concepts introduced to stakeholders.
- **December 2017:** Stakeholder meeting to review bridge concept options.
- **Spring 2018** Interim I-35 Ramp improvement project striped an additional lane on both the NB and SB bridges using the shoulders to provide additional capacity.
- **August 2018:** Began traffic operational analysis for bridge concepts.
- **January 2019:** The Oklahoma City Boulevard Exit Ramp off the I-35 NB bridge traffic opens connecting I-35 to the newly constructed OKC boulevard.
- **Spring 2020:** ODOT initiated a Long Span Bridge Study to evaluate bridge concepts to span the Oklahoma River.
- **October 2021:** Long Span Bridge Study completed.
- **February 2022:** Stakeholder Meeting #1.
- **November 2022:** Stakeholder Meeting #2.
- **May 2023:** Stakeholder Meeting with Oklahoma City Leadership and the Chickasaw Nation to discuss the multimodal bridge.
- **June 2023:** Meeting with Oklahoma City Engineering Department to discuss the multimodal bridge.

Project Parties

The Project is led by ODOT, and the City of Oklahoma City is providing \$4 million to add aesthetics to the multimodal bridge. As a state transportation agency, ODOT plans, constructs, and maintains the highway system in Oklahoma and manages a large portfolio of Federal funds that are programmed within its [Eight-Year Construction Work Plan](#). While ODOT will lead the Project, there is significant support from local, regional, and Tribal officials as evidenced from the [letters of support](#) from the Oklahoma Congressional Delegation, the Chickasaw Nation, City of Oklahoma City, Association of Central Oklahoma Governments, EMBARK transit, First American Museum, Oklahoma City Riverfront Development Authority, and Riversport.