Strengthening Connections: Rehabilitating I-44 Bridges for Regional Resilience

Oklahoma Department of Transportation

Bridge Investment Program FY 2024

Supplemental Project Narrative

OKLAHOMA Transportation

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Project Description, Location, and Parties

Project Description

Interstate 44 (I-44) is an essential 636-mile highway that connects multiple nationwide interstate facilities, including I-40 and I-70. Every year, millions of people and dollars in freight cross twin bridges over the Union Pacific Railroad (UPRR) west of downtown Oklahoma City. For over fifteen years, the bridges have been classified in the National Bridge Inventory (NBI) as being in "fair" condition for the deck, superstructure, and substructure. However, the bridges have continued to deteriorate and will likely fall to being in "poor" condition in the next two to three years. Without rehabilitation, these bridges will harm the movement of the surrounding community and freight, both on the interstate and on the UPRR, deteriorating the regional and national supply. The *Strengthening Connections: Rehabilitating I-44 Bridges for Regional Resilience* Project (Project) is a critical project that is well-suited for a Bridge Investment Program (BIP) bridge grant.

The I-44 bridges over Black Gold Drive and the UPRR are a vital traffic connection in the Oklahoma City region and nationally. This corridor of I-44 is the heaviest traveled corridors in Oklahoma, with an estimated average daily traffic of 152,700 with six percent being trucks. The estimated daily traffic is expected to increase, reaching almost 200,000 vehicles per day in 2050. Built in 1974, the bridges have had numerous repairs and maintenance over their 50-year life, most recently in 2018. Both bridges carry four lanes of 60 mile per hour (mph) traffic and have two shoulders that are each 12 feet wide. The structures do not meet modern design standards, including superelevation and vertical clearance standards (see **State of Good Repair**).

The Project will rehabilitate the existing northbound (NB) and southbound (SB) bridges, NBI 18769 and NBI 18770, respectively, to modern standards and ensure the bridges are compatible with the future anticipated traffic volumes on the corridor. There will be three basic stages of construction which will allow for three to four lanes of traffic in each direction to be maintained throughout construction. Prefabricated Bridge Elements and Systems (PBES), a type of Accelerated Bridge Construction (ABC), will be employed to reduce the duration of impacts to the traveling public, the surrounding communities, and regional freight traffic (see **Innovation**). The Project meets BIP goals by **improving the safety, efficiency, and reliability of the movement of people and freight** over the bridges and improving their condition through rehabilitation.

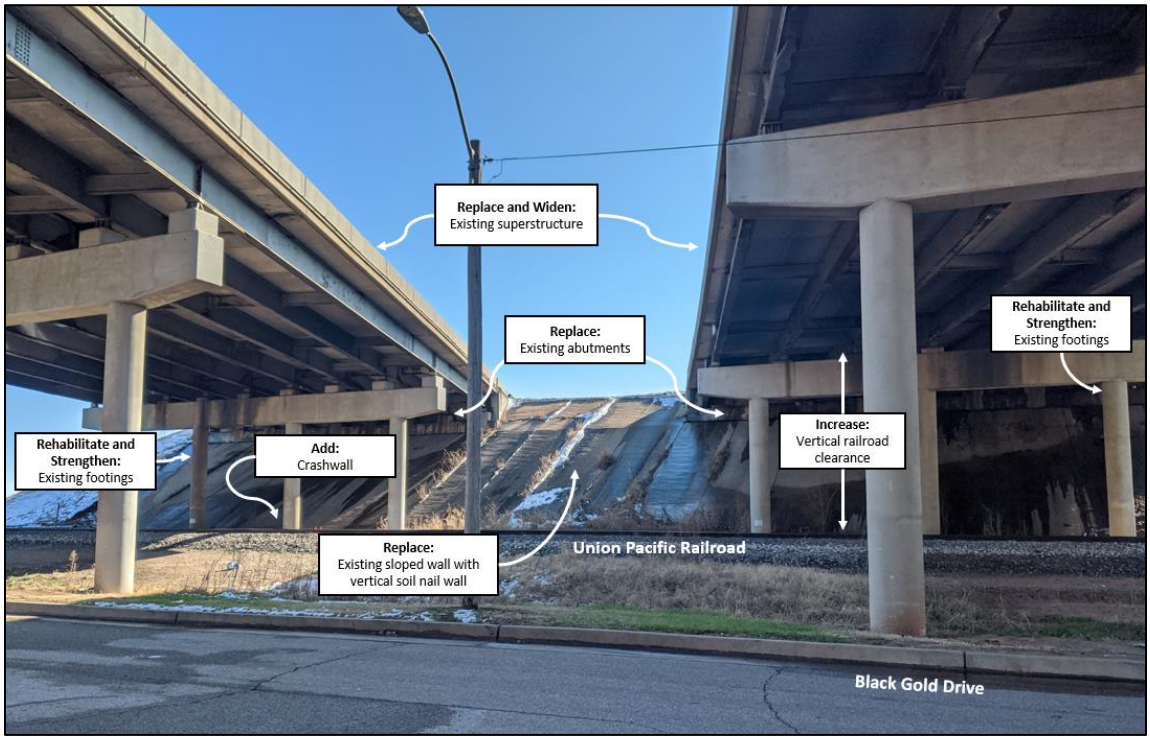
The Project, with a total capital cost of **$35.8 million** in 2023 dollars, or $31.2 million in 2022 discounted dollars per federal guidance, provides an overall benefit cost ratio of **8.56**. Previously incurred costs, including the cost for 90 percent design, total **$2 million**.

Statement of Work

The Project proposes the rehabilitation of the existing I-44 NB and SB bridges over Black Gold Drive and the UPRR, Bridges NBI 18769 and NBI 18770, respectively, in Oklahoma City, Oklahoma.

The I-44 NB and SB bridges will be rehabilitated to modern standards including additional shoulder space that will provide safe opportunity for travelers if there are incidents on the roadway. The rehabilitation consists of replacing the existing abutments and superstructure while **utilizing as much of the existing substructure as possible**. The existing piers will be widened to accommodate the increased superstructure width and a crashwall will be added to Pier 1, per railroad requirements (**Figure 1**). The layout of the proposed bridges will match the existing span configurations and skews, except for the end spans where the new abutments will be placed behind the existing abutments. The existing vertical railroad clearance will be increased to railroad requirements, and horizontal railroad clearances will only be reduced slightly due to the addition of a crashwall. The rehabilitation will use PBES which are built near-site to reduce onsite construction time and have fewer impacts to regional mobility for people and freight, as discussed further in the **Innovation** section. The rehabilitation will extend the current design life for the bridges, bring the bridges to current design standards, and reduce future maintenance costs (see **Benefit Cost Analysis [BCA]**).

Figure 1: Summary of Work



Source: ODOT

Project Location

The Project bridges are located just west of downtown Oklahoma City, Oklahoma and adjacent to the State Fair Grounds (**Figure 2**). The bridges are part of the U.S. Census Bureau designated Oklahoma City urbanized area; project coordinates are 35.470953 N / -97.579373 W. I-44 has its western terminus in Wichita Falls, Texas where it meets U.S. 277, U.S. 281, and U.S. 287 and its eastern terminus in St. Louis, Missouri where it meets I-70. Major I-44 junctions include I-40, I-35, I-49, I-55, and I-70, making this corridor of I-44 an **integral piece of the United States supply**

chain. Due to these major roadway connections, every year over 75,000 kilotons of freight travel through this corridor on the highway and up to 4,000 kilotons of freight travel on the UPRR.

The bicycle network surrounding the Project Area consists of multi-use trails, bike lanes, and shared routes (see **Equity and Quality of Life**). There are no bicycle or pedestrian paths on I-44 as it is an Interstate facility and therefore exempt from the bicycle/pedestrian requirement outlined in the Notice of Funding Opportunity (NOFO).

Economic generators near the Project Area include the Oklahoma State Fair Grounds and the Oklahoma State University – Oklahoma City campus. More information on economic generators can be found in **Economic Competitiveness and Opportunity**. Residential homes, retail, and moderate and heavy industrial land uses are present near the Project. However, the primary land uses directly adjacent to the Project Area are the university campus (low intensity urban) and State Fair Grounds (moderate intensity urban).

Figure 2: Project Area

Source: ODOT

The Project is located in U.S. Census Tract 1070.02 which is **considered an Area of Persistent Poverty (APP) and a Historically Disadvantaged Community (HDC)** (**Figure 3**). Census Tract 1070.02 has an estimated population of 2,400 (Equitable Transportation Community [ETC] Explorer). According to ETC Explorer, the tract surrounding the Project Area ranks in the:

- **97th Percentile in Transportation Safety – one of the most disadvantaged communities in the United States**
- **96th Percentile in Climate and Disaster Risk Burden – one of the most disadvantaged communities in the United States**
- 85th Percentile in Social Vulnerability – considered disadvantaged
- 82nd Percentile in Health Vulnerability – considered disadvantaged
- 81st Percentile in Environmental Burden – considered disadvantaged

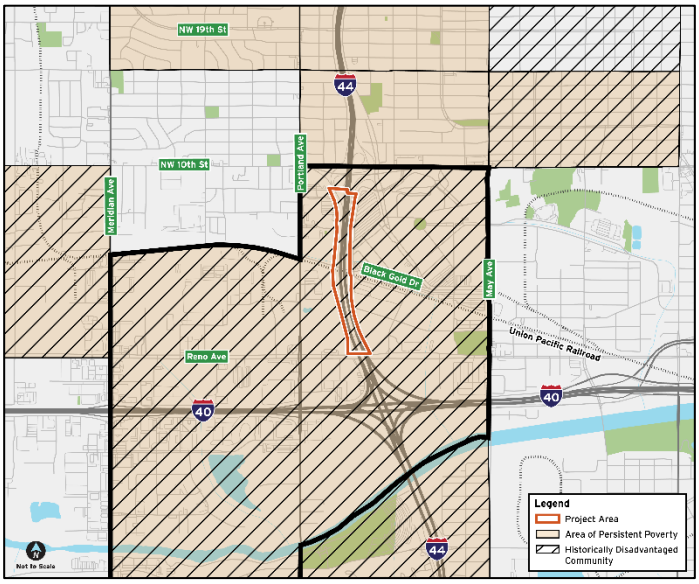
The communities near the Project Area rely on I-44 for commuting and daily life activities. The Project is surrounded by the neighborhood associations of Reed Park and WesTen, with WesTen being the only neighborhood association within the Project Area. The WesTen District focuses on improving the quality of life for the residents and hundreds of locally owned businesses in the area, including some that have been in business for over 60 years. The Reed Park Neighborhood Association focuses on beautifying the neighborhood and improving community relationships

through group action. According to aerial photography, the area quickly developed in the late 1940s including residential and commercial land uses.

Project Parties

The Oklahoma Department of Transportation (ODOT) is the Project sponsor and is investing 100 percent of the non-Federal match for the project. ODOT has decades of experience with receipt and expenditure of Federal transportation funds and is committed to improving conditions and safety on Oklahoma bridges and roads. ODOT has the technical and financial capacity to deliver the project within the timeframe prescribed in the **Project Readiness** section.

Figure 3: Historically Disadvantaged Communities



Source: U.S. Department of Transportation

There is no identified entity that can or will receive direct financial benefit from the project.

Additional Eligibilty Requirements

Maintenance Commitment: ODOT will uphold the maintenance of the rehabilitated bridges in alignment with the organization's Transportation Asset Management Plan, as discussed in the **Asset Management Plan** section. ODOT will allocate the funding for the Project's maintenance costs through their dedicated maintenance fund. More information on anticipated maintenance expenses can be found in the **Reduce Maintenance Costs** section.

Bike and Pedestrian Accommodation: There are no bicycle or pedestrian paths on I-44 as it is an Interstate facility and ODOT is restricted from placing active transportation facilities on the roadway. Therefore, bicycle and pedestrian infrastructure is not included as a component of the Project.

Project History

Planning for the Project has been underway for almost ten years. A Field Assessment Report was completed in 2015 that recommended full superstructure replacement as a repair activity to meet future needs.

After this recommendation, an Engineering Study was completed in 2020 to evaluate construction methods and potential impacts to the traveling public. The options evaluated ranged from traditional construction means with high user cost delays to the full closure of I-44 to reduce construction time. Although public engagement was not part of the 2020 study, the needs and costs to the surrounding communities, traveling public, and freight network were all considered when choosing the final design. Public engagement is discussed further in **Equity and Quality of Life**.

The Study concluded that a minimal increase in construction costs was worth it to implement PBES that would reduce the user delay costs that would otherwise be incurred by traditional construction means, as described in the **Statement of Work**.

The Project directly supports additional investments being made in the corridor such as the I-40 and I-44 interchange (K-Interchange Project). The K-Interchange Project's goal is to replace the existing I-40 and I-44 interchange, approximately 0.7 miles south of the *Rehabilitating I-44 Bridges Project*. The interchange replacement will reconfigure the system ramps to remove the left-hand movements that lead to traffic weaves and safety issues, as discussed in the **Safety and Mobility** section. The Project will enable the K-Interchange Project to create a more cohesive roadway leading to the new interchange configuration, improving safety and improving the movement of people and goods through the corridor.

The Project is supported by a broad range of stakeholders. See **Letters of Support**.

National Bridge Inventory Data

In 2022, the **NBI rated the I-44 NB and SB bridges as five out of ten in all three categories** – superstructure, substructure, and deck. A rating of five places the bridges in the "fair" condition category, however, the bridges have continued to deteriorate and will likely fall to the "poor" condition category if the bridges are not rehabilitated, as discussed in the Engineer's Report. For more information, NBI data can be found in the recommended application template.

Project Budget, Sources, and Uses of Funding

The total Project cost is $35.8 million in 2023 dollars, or $31.2 million in 2022 discounted dollars per federal guidance. ODOT is seeking BIP bridge grant funding in the amount of $28.7 million. This amount accounts for 80 percent of the total remaining Project cost. The Project includes a previously incurred costs amount of $2.2 million, as shown in the BCA memo and workbook.

Table 1 outlines the Project costs according to task and funding splits. The cost estimates are based on completion of 90 percent design and incorporate a 12 percent engineering and construction management (E&C) and 20 percent contingency cost. E&C costs during construction are anticipated to be higher than the usual six percent ODOT assumption because of the specialized inspection for unique elements of this project: PBES, soil nail retaining wall, demolition and erection plan approvals, and anticipated night work inspections. The non-federal sources will be provided by ODOT, at a total of $7.2 million to be used for construction.

Table 1: Project Budget

Element	Federal Funds	Non-Federal Sources	Total Project Cost
Construction	$21,337,600	$5,334,400	$26,672,000
E&C	$3,072,614	$768,154	$3,840,768
Contingency	$4,267,520	$1,066,880	$5,334,400
Totals	**$28,677,734**	**$7,169,434**	**$35,847,168**

*Please see the BCA excel spreadsheet for specific calculations; Please see Supporting Documents for the ODOT Cost Estimate

Criterion #1: State of Good Repair

Structure Conditions

The I-44 bridges have been classified as "fair" for the deck, superstructure, and substructure for over fifteen years during bridge inspections and are likely to fall into the "poor" classification in the next two to three years (see Engineer's Report). The bridges were built in 1974 and do not meet current design criteria, such as superelevation and vertical clearance. In the summer of 2018, an inspection of the I-44 SB bridge revealed the bridge had **spalled out joints, large potholes, heavy surface rust, and failed abutment joints** (**Figures 4, 5, and 6**). It was found that due to a combination of forces the bridge deck was **shifting out of position up to five inches**. See Supporting Documents for a copy of the most recent formal bridge inspection.

In the winter of 2018, an inspection of the I-44 NB bridge revealed similarly deteriorating conditions. There were steel foundation pilings visible under abutments, heavy cracking that was noted as needing attention soon, and it was noted that **"only 55% of the bearing is under each beam" due to beam rotation**. Due to this shifting, bridge lighting conduits have been moved or broken and have needed repairs to continue operating. These inspection reports prove bridge rehabilitation is necessary. See Supporting Documents for a copy of the most recent formal bridge inspection.

As the condition of the bridges continue to decline, there will be detrimental effects to the surrounding communities, regional movement of goods and people, and the nation's supply chain. If the bridges were to close due to their deteriorating condition, there would be significant congestion on the alternative route, I-235, and the major connection between I-40 and

Figure 4: Deck Sliding

Image showing bridge deck sliding relative to girders and abutments. Source: ODOT

Figure 5: Visible Pilings

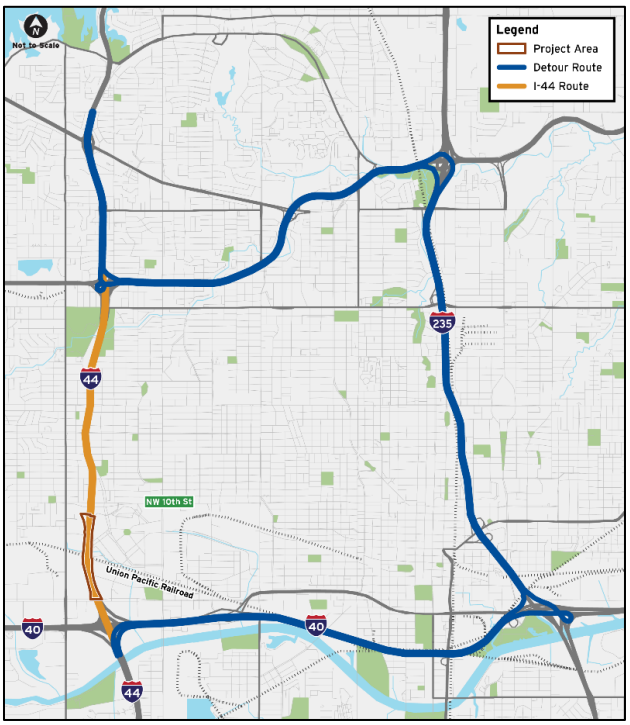
Image showing the deterioration of the soffit of the bridge deck over the abutments. Source: ODOT

Figure 6: Deteriorating Abutment

Image showing deterioration of abutment seat and backwall. Source: ODOT

I-44 would be greatly affected, impairing the movement of over 75,000 kilotons of freight on this corridor per year (P. 2-8). The **16-mile detour utilizes I-235 and I-40**, traveling through downtown Oklahoma City, as shown in **Figure 7**. If the bridges were to collapse, the UPRR would see **an impact of up to 4,000 kilotons of freight unable to move on this section of rail** (P. 7).

Figure 4: Bridge Closure Detour Route



Source: ODOT

The new design will be improved to comply with modern standards. The **superelevation will be improved** from 2.2% to 2.8% to accommodate for the posted 60 mph speed limit on the roadway curve just south of the bridges. Additionally, the **vertical clearance will be improved** from 22'-6" to 23'-4", benefitting the UPRR (see design specifications in the Supporting Documents). The major Project activities include rehabilitating the existing NB and SB bridges to modern standards and ensuring the bridges are compatible with the future needs of the corridor (see **Statement of Work**). This includes new superstructure design which will improve the ability of these structures to withstand loads from permit and heavy load. Rehabilitating the bridges will improve the deteriorating condition of the bridges, improve long-term resiliency, and reduce maintenance costs. Refer to the **BCA** for total miles traveled and corresponding impacts associated with No-Build and Build scenarios.

Reduce Maintenance Costs

Over the next 20 years, the estimated cost of work needed to maintain the two existing bridges totals $5.7 million. Over 20 years, maintaining the rehabilitated bridges totals $100,000. Therefore, rehabilitating the two bridges will significantly reduce maintenance costs for ODOT. The millions of dollars could be diverted to other critical maintenances needs around the state.

Asset Management Plan

The following objectives identified in ODOT's Transportation Asset Management Plan (TAMP) are aligned and consistent with replacing and rehabilitating the I-44 bridges:

- Maximize system performance and operations
- Improve and maintain bridge condition levels on the state highway system
- Ensure a safe and secure transportation system for all users (see **Safety and Mobility**)
- Facilitate the movement of people and goods and improve connectivity between regions and activity centers (see **Economic Competitiveness and Opportunity**).

Project Plan

To improve the condition of the I-44 bridges they will both be rehabilitated to modern standards including additional shoulder space that will provide safe opportunity for travelers if there are incidents on the roadway. The rehabilitation consists of replacing the existing abutments and superstructure while **utilizing as much of the existing substructure as possible**. The existing piers will be widened to accommodate the increased superstructure width and a crashwall will be added to Pier 1, per railroad requirements. See design specifications in the Supporting Documents. The rehabilitation will use structural components that are built offsite and lifted into place to reduce onsite construction time and have a shorter duration of impacts to regional mobility for people and freight, as discussed further in the **Innovation** section. Rehabilitating the I-44 bridges over the UPRR will **eliminate the need for emergency repairs due to structural failures** and is a critical first step for the future K-Interchange Project (see **Project History**) that will **ease the bottleneck** at the I-40 and I-44 interchange just to the south, improving safety for the traveling public. The rehabilitation will extend the current design life for the bridges, bring the bridges to current design standards, and reduce future maintenance costs (see **BCA**).

Long-Term Resiliency

According to the ETC Explorer, the community surrounding the I-44 bridges is **one of the most disadvantaged communities in the United States (97th percentile) for Climate Disaster and Risk Burden**. This is due the anticipated changes in extreme weather and the multitude of impervious surfaces in the area that will lead to more disaster losses as the climate changes. More extreme weather events could include flooding or seismic events, the effects of which would be exacerbated by the large surface area share of impervious surfaces and close proximity to the Oklahoma River. The Project rehabilitation includes strengthening the footings of the bridges, which would **strengthen the overall structure to raise the level of protection against any seismic effects**.

Seismic activity across the state has increased in frequency since the early 2010s, and the rehabilitation of the bridges will ensure they can endure seismic events. Additionally, ODOT has recently changed their bridge inspection response following seismic activity. Previously, ODOT bridge inspection crews would inspect all bridges within a certain radius of an earthquake epicenter, with the radius determined simply from the magnitude of the earthquake. In 2017, ODOT began using ShakeCast to generate a bridge inspection priority order based on factors such as proximity to the epicenter, bridge condition and age, and U.S. Geological Society seismic data. ShakeCast has enabled ODOT to enact a faster, more pinpointed response targeting the bridges most susceptible to damage caused by earthquakes. Skewed span bridges, similar to these in the Project, perform poorly in ShakeCast simulations. The proposed bridge rehabilitation will improve foundations and piers and install new elastomeric bearing devices which have improved performance in seismic events. See **Climate Change, Sustainability, Resiliency, and the Environment** for more information on long-term resiliency.

Criterion #2: Safety and Mobility

Crash Reduction Benefits

The Project enables a future project (K-Interchange Project) that will reconfigure the system ramps to remove the left-hand movements that lead to traffic weaves and safety issues. With the Project, the merge lanes are elongated, and traffic is allowed to merge from 10th Street more safely. These elongated lanes improve safety and the movement of people and goods through the corridor. Without the completion of the Project, the traffic bottlenecks at the interchange and backs onto the SB bridge, creating major safety issues.

Table 2: Total Crashes 2017 to 2021

Collision Type	Property Damage	Injury	Total
Rear End	51	2	53
Sideswipe	23	2	25
Fixed Object	9	1	10
Other	5	0	5
Rollover	0	1	1
Angle Turning	1	0	1
Other Single Vehicle	1	0	1
Total	**90**	**6**	**96**

Source: ODOT Highway Safety Office

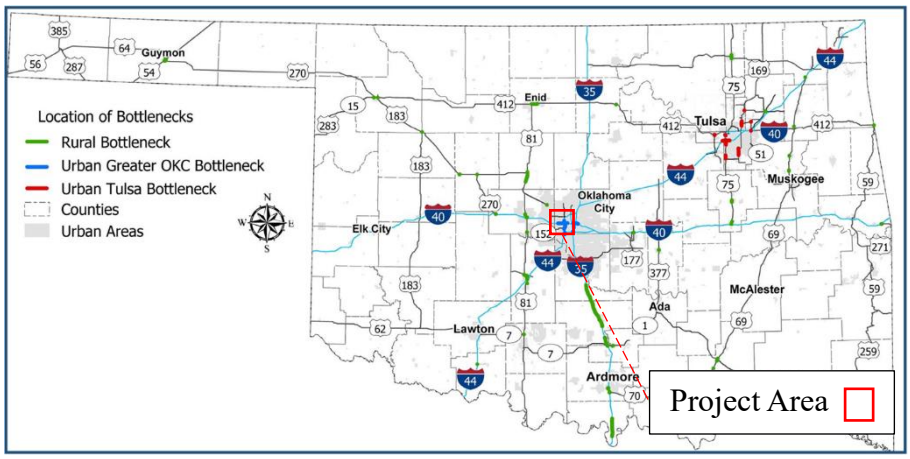
Due to the large traffic volumes and the bottleneck that begins at the I-44 and I-40 interchange, collision rates on the I-44 bridges, specifically the SB bridge, are high. Collision data was obtained from the ODOT Highway Safety Office Data to determine the nature and frequency of collisions along this section of I-44. The collision information was collected extending 1,000 feet north and south of the twin bridges over the most recent five-year period available (2017-2021).

During this period, there were 90 property damage only crashes, six injury crashes, and zero fatal crashes. The majority of the crash types during the five-year period were rear end crashes. **Table 2** provides more details about the collisions in the Project Area.

Existing Safety Problems

Just south of the I-44 SB bridge, the roadway transitions from four through travel lanes to two through travel lanes, creating a bottleneck that requires travelers to reduce their speed. This corridor of I-44 is identified by the ODOT Freight Transportation Plan as **one of the top five percent bottleneck locations in the state of Oklahoma (Figure 8)**. The most prevalent crash type was rear end collisions, accounting for over 54 percent of all collisions. According to the Federal Highway Administration (FHWA), rear end

Figure 5: Top Five Percent Bottleneck Locations in Oklahoma



Source: Oklahoma Freight Transportation Plan, 2023-2030

collisions are commonly observed on congested roadways where stopped traffic occurs in the travel lanes and sudden deceleration from vehicles traveling at higher rates of speed is required, such as the bottleneck occurring on I-44 SB.

The next most common crash type was sideswipe collisions, accounting for approximately 26 percent of all collisions. According to the FHWA, sideswipe collisions are commonly observed on congested roadways where sudden deceleration is required and by frequent and sudden lane changing between two through lanes. In addition to the roadway transitioning from four through travel lanes to two through travel lanes, the I-44 and I-40 interchange has left exits, which create traffic weaves that create bottleneck issues and can lead to sideswipe collisions while vehicles are changing lanes (**Figure 9**). These elements are part of the K-Interchange Project design that is enabled by the additional shoulder space added onto the I-44 bridges.

Figure 6: Context of SB Bottleneck

Source: ODOT

The BCA used a Crash Modification Factor (CMF) for adding shoulder width to a roadway which is determined to reduce the likelihood of fatal, injury, and property damage only crashes in all weather conditions. It expected that the Project would **reduce crashes on this segment by 22.6 percent**.

In addition to supporting the K-Interchange Project, the *Strengthening Connections Project* will bring the bridges to current design standards, including improving the current superelevation to fit the bridges designated speed (see **State of Good Repair**). This improvement will help reduce the prevalence of crashes on wet or icy roadways as without correct superelevation, vehicles are more likely to skid through road curves, especially on wet conditions and at high speeds. 25 percent of Project Area collisions took place on wet and icy roadways.

I-44 Bridges 2028 Project Statistics:

- Number of structures to be improved: 2
- Average Car Occupancy: 1.67
- Total Person Miles Travelled (No-build): 267,594
- Average Annual Daily Traffic: 160,236
- Average Daily Truck Traffic: 6%, 9,614

*Lane miles and expected AADT assumed equal in the No-Build and Build scenarios.

Protecting Motorized and Non-Motorized Travelers

It has been documented above that the rehabilitation of the I-44 bridges will protect motorized travelers from safety risks. There are no bicycle or pedestrian paths on I-44 as

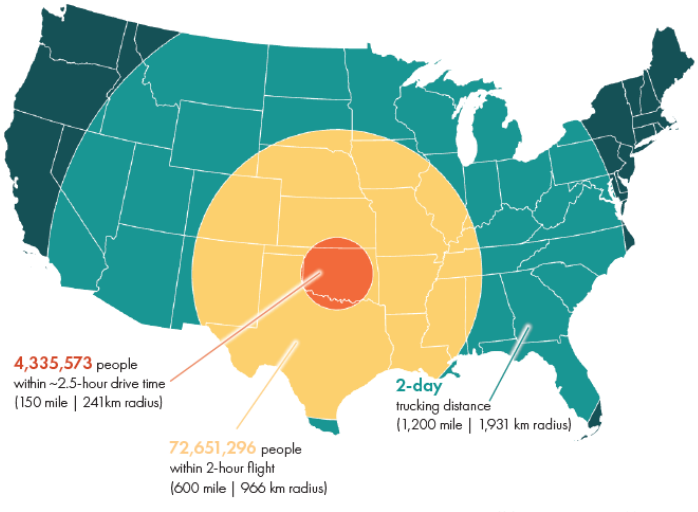
it is an Interstate facility and ODOT is restricted from placing active transportation facilities on the roadway. However, the existing active transportation network is available within close proximity (see **Equity and Quality of Life**). The existing network offers bike lanes and shared bicycle roads towards downtown Oklahoma City and a multi-use trail that runs parallel to the Project. The active transportation network around the Project Area connects the WesTen and Reed Park neighborhoods and provides meaningful connections to businesses and job opportunities.

Criterion #3: Economic Competitiveness and Opportunity

Freight Movement and Improving Supply Chains

I-44 connects three states (Texas, Oklahoma, and Missouri) and is on the National Highway System (NHS), Strategic Highway Network (STRAHNET), National Highway Freight Network (NHFN), and the National Multimodal Freight Network (NMFN). As discussed in the **Project Description**, I-44 traverses multiple Interstates and highways across Oklahoma and the United States. There are **over 9,100 trucks per day that cross the I-44 bridges** with an average daily truck traffic of six percent.

Figure 7: Oklahoma City Freight Proximity



Source: Greater Oklahoma City Chamber

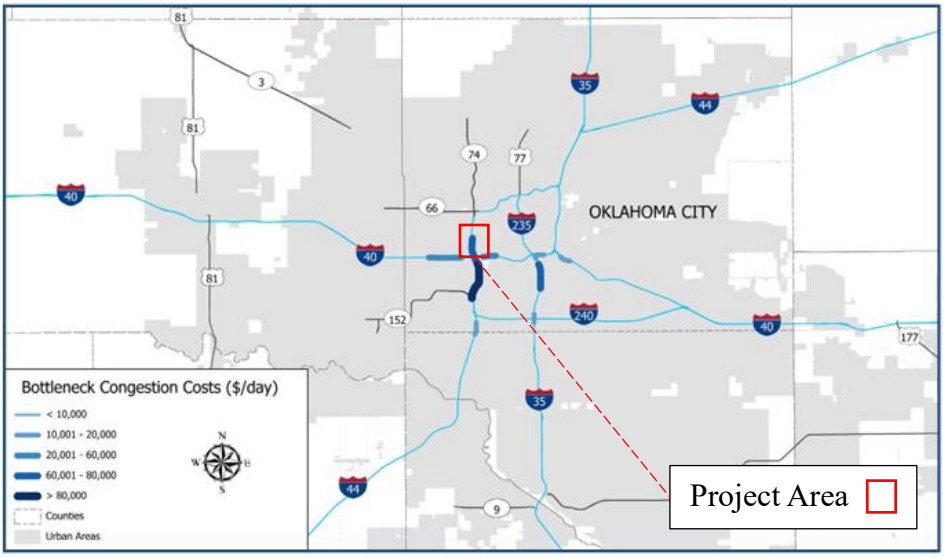
The Project is located just north of the junction of two major interstates (I-40 and I-44) and is equidistant from the east and west coasts and major trade partners of Canada and Mexico. There are more than 30 million people within 400 miles of Oklahoma City (121 million within 800 miles) and over 178 million customers can be reached by truck the same day or overnight (**Figure 10**). Coupled with I-35, another major interstate, located approximately six miles east of the Project, this is a crucial location for the movement of people and goods.

The Project addresses one of the top five percent worst freight bottlenecks in Oklahoma as identified in the 2023-2030 Oklahoma Freight Transportation Plan, as shown in **Figure 11.** The bottleneck congestion in the corridor costs between **$60,000 and $80,000 per day** in driver wages, fuel consumption, and broader supply chain consequences.

Utilizing the Freight Analysis Framework (FAF) Data Visualization Tool, it is projected that by 2030 Oklahoma and Texas will be 16th in the top 50 state pairs for truck and all commodities, with an estimated $69.6 billion (2017 USD) in goods being transported between the two states,

solidifying the importance of the Project for the movement of goods. The Oklahoma Freight Transportation Plan projects that between 2023 and 2030, Oklahoma's inbound, outbound, and within-state freight tonnage will **grow from 434 million tons in 2023 to 487 million tons in 2030, a 12.2 percent increase**. Movement of freight by truck is expected to increase by 10.7 percent. Without addressing the current bottlenecks, **congestion is expected to continue to increase**.

Figure 8: Oklahoma Freight Bottlenecks



Source: Oklahoma Freight Transportation Plan, 2023-2030

The 2022 Truck Travel Time Reliability (TTTR) on the I-44 NB and SB bridges was 1.28 (good) and 2.74 (poor), respectively. ODOT's TTTR Interstate target is 1.33 and the current statewide average TTTR is 1.27. The SB bridge is more than double the target and the NB is at risk of falling into the poor category at 1.28. While the I-44 SB bridge has similar traffic volumes, the reliability performance is worse than that of the I-44 NB bridge. This is due to the geometric configuration just south of the bridges at the I-40 and I-44 interchange. Just south of the I-44 bridges, the roadway transitions from four travel lanes to two travel lanes, creating a bottleneck that requires travelers to reduce their speed. Additionally, the I-44 and I-40 interchange has left exits, which create inefficient traffic weaves that create bottleneck issues and cause crashes. This is exacerbated by the 10th Street SB entrance being less than a mile from the left exits, requiring drivers to move across four travel lanes to exit onto the interchange. As discussed in **Safety and Mobility**, the bottleneck at the I-40 and I-44 interchange leads to traffic stopping and weaving, causing rear end and sideswipe collisions. With average daily traffic expected to increase, this bottleneck will be exacerbated. The rehabilitation of the I-44 bridges is imperative to improve traffic flow and freight reliability and better facilitate the movement of goods through both Oklahoma and the nation.

Major Employers

Rehabilitating the twin I-44 bridges will improve mobility, efficiency, and reliability not only for the major employers in the Project Area but for all movement of people and freight that use I-44 in Oklahoma City. Without rehabilitation, the state of the bridges could compromise over $60,000 and $80,000 per day in driver wages, fuel consumption, and broader supply chain consequences and harm the livelihood of the people that rely on this corridor to commute for employment and community resources.

Within a mile of the Project are a variety of businesses, mostly warehousing and distribution facilities, that rely on this corridor of I-44. The Greater Oklahoma City Chamber has identified the major employers for the region which include multiple locations near of the Project: **Dell, Inc.** (2,100 employees), **United Parcel Service** (1,830 employees) and **Great Plains Coca-Cola Bottle Company** (1,300 employees). Those and other businesses reliant on the I-44 bridges include those listed and described in **Table 3**.

Table 3: Businesses Near the Project Area

Employer	Description
Dell, Inc.	Dell, Inc., the world's largest computer maker, has hired and trained more then 2,000 people and has a total economic impact of $631 million in the region since 2004. The Dell Campus is located just over a mile south of the Project.
Great Plains Coca-Cola Bottle Company	Great Plains Coca-Cola Bottle Company is the sixth-largest independent Coca-Cola bottler in North America and has approximately 1,300 employees. The distributer is located a half mile west of the Project.
Oklahoma State University – Oklahoma City (OSU OKC)	Located on 110 acres adjacent to the Project, for the 2024-2025 school year, OSU OKC has 331 full-time faculty and staff and over 5,000 students.
Oklahoma State Fair Grounds	Spread out over 435 acres adjacent to the Project, the Fair Grounds host nearly 200 events annually at their major venues including Jim Norick Arena and Bennett Event Center.
Oklahoma City Police and Fire Training Center / Oklahoma City Fire Department Fire Maintenance	The Oklahoma City Police Department employs over 1,100 officers and 300 employees and the Oklahoma City Fire Department employs over 850 firefighters. These officers and firefighters rely on the training center adjacent to the Project for their Fire and Police Academies.
Oklahoma National Stockyards and Western Livestock Commission	The Oklahoma National Stockyards is home to the largest cattle market in the world and is part of the Main Street USA Program. It is located approximately a mile southeast of the Project.
Postal Facilities	Within a mile of the Project are three major postal facilities for the United States Postal Service (USPS), United Parcel Service (UPS), and FedEx. These postal facilities are vital to the nation's communication network. Additionally, UPS is the single largest employer in the Teamsters Union.
Other distribution facilities	Haskell Lemon Construction Company; Northwest Crane Service; Capital Distributing; Hahn Appliance Warehouse, Atlas Asphalt Products, Inc.; Forest Lumber and Forest Doors & Windows

A major economic generator for the I-44 corridor is the Oklahoma National Stockyards and Western Livestock Commission. The Stockyards are located approximately a mile southeast of the I-44 bridges in Stockyards City. The Stockyards are home to the **largest cattle market in the world**, with over 102 million cattle moving through the stockyard since its inception in 1910. The Stockyards contribute to the freight movement of the area, with the addition of large semi-trucks needed to move cattle that traverse the I-44 bridges. The Stockyards are a major economic generator for the region and nation and rely heavily on this corridor of I-44 for the movement of the cattle industry.

Oklahoma City is a major hub for logistics and distribution occupations, with over 85,000 jobs in the greater Oklahoma City area including truck drivers, laborers and freight movers, and stockers and order fillers (**Table 4**). These occupations are also well paid, with almost all earning a median wage over $15 per hour, which almost twice the state and federal minimum wage.

Table 4: Logistics and Distribution Occupations and Wages

Occupation	Jobs in Greater Oklahoma City	Median Hourly Earnings
Customer Service Representatives	15,900	$17.24
Production, Planning, and Expediting Clerks	2,654	$24.17
Shipping, Receiving, and Inventory Clerks	4,119	$16.90
First-Line Supervisors of Transportation and Material Moving Materials	3,036	$27.92
Heavy and Tractor-Trailer Truck Drivers	11,381	$22.76
Light Truck Drivers	5,081	$18.23
Industrial Truck and Tractor Operators	4,925	$18.59
Laborers and Freight, Stock, and Material Movers	13,410	$15.32
Stockers and Order Fillers	15,355	$15.28

Source: Greater Oklahoma City Chamber

The WesTen District focuses on improving the quality of life for the residents and hundreds of locally owned businesses in the area, including some that have been in business for over 60 years. WesTen is identified by Oklahoma City's comprehensive plan, *planokc*, as an existing retail corridor with planned revitalization (P. 122). The planned revitalization includes integrating mixed use and income land uses, upgrading streetscapes, creating pedestrian connections, and supporting sustainable economic growth.

Support for Good-Paying Jobs and Strong Labor Standards

ODOT is committed to supporting good paying jobs and strong labor standards while complying with both Federal and Oklahoma laws.

Oklahoma Unified Certification Program for Disadvantaged Business Enterprises

ODOT serves as the Unified Certification Program (UCP) for the State of Oklahoma, providing a one-stop-shop for businesses that meet the Disadvantaged Business Enterprises (DBE) certification requirements and become certified. The UCP allows these DBE firms to be used to meet the DBE goal requirements on any project with funding from the United States Department of Transportation (USDOT). ODOT's 2023-2025 Triennial DBE goal is 16.0 percent and the Federal Fiscal Year (FFY) 2023 goal attainment was 17.3 percent. **Total dollars to DBEs increased almost 40 percent from 2022 to 2023**. Oklahoma's project-level goal setting is data-driven, utilizing current DBE certification information and historical DBE pay item performance to identify the project goal achievement possibility. ODOT offers DBE Supportive Services to help certified DBE firms in Oklahoma develop into self-sufficient businesses, capable of competing on federally funded highway projects. These services, under FHWA guidelines, aim to increase the number of active minority businesses in the highway program and contribute to their growth and self-sufficiency. ODOT's commitment includes offering various forms of training and technical assistance, all free of charge.

ODOT strives to ensure equal opportunities and to level the playing field for DBE firms by providing full and meaningful participation opportunities on federally funded projects. ODOT conducted a Disparity Study in 2021 to evaluate DBE opportunities and is using the input to develop innovative solutions to strengthen the DBE program.

Transportation Assistance Program

The ODOT Contract Compliance Division hosts an annual Transportation Assistance Program (TAP) at various Oklahoma county technology centers. TAP is a free, week-long, job training program that prepares women and people of color seeking jobs for entry into the transportation and construction job market. TAP provides valuable certification training opportunities that businesses look for when hiring individuals in the transportation and construction trades. The program includes hands-on experience and free certifications in forklift operation/safety, work zone flagging, CPR/First Aid/Bloodborne pathogen training, Occupational Safety and Health Administration (OSHA) 10-hour construction training, and workforce skills. ODOT is planning a TAP to take place in 2025.

In addition to TAP, ODOT has multiple DBE events throughout the year, including networking events, job fairs, and compliance training.

Support for Good-Paying Jobs

As of May 2023, the average hourly pay for highway construction jobs in the Oklahoma City metro area is $26.06 an hour, which is slightly lower than the median hourly wage of $27.25 for all jobs in the region according to the Bureau of Labor Statistics. Recognizing the opportunity these jobs present for economic upward mobility, ODOT annually sponsors a Transportation and Construction Job Fair with industry recruiters. The event is free of charge and allows job seekers to meet with recruiters from all aspects of transportation, civil engineering, surveying, trucking, highway construction and heavy equipment operations. Special emphasis is placed on recruiting women and minorities to attend the event. According to a recent report by Today's Homeowner, Oklahoma ranks in the **top 25 percent of states with the highest percentage of female construction trade workers**, and there is great opportunity to expand those numbers. Women Accessing Non-Traditional Trade (WANTT), a local nonprofit, is also encouraging more women to consider construction as a career path. WANTT provides a free, eight-week pre-apprenticeship training program to teach women skills in tools, construction math, and CPR.

On-the-Job Training Opportunities

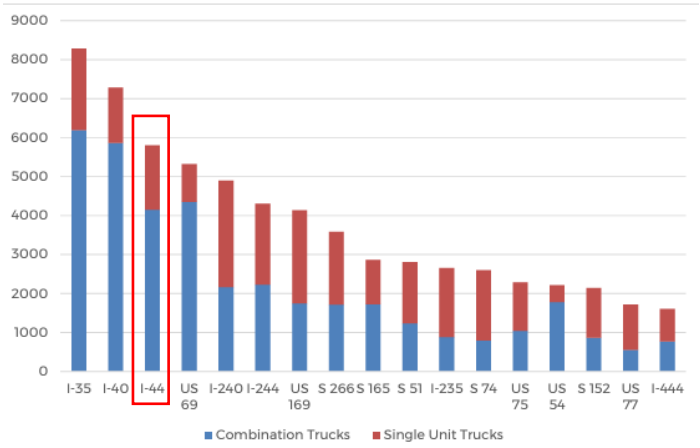
ODOT has also established an On-the-Job Training (OJT) Program in accordance with regulations of the U.S. Department of Transportation at 23 CFR Part 230, Subpart A, Equal Employment Opportunity on Federal and Federal aid Construction Contracts. It is ODOT's policy to require full utilization of all available training and skill improvement opportunities to assure the increased participation of minority groups, disadvantaged persons, and women in all phases of the highway construction industry. The federal OJT program targets disadvantaged individuals, minority groups, and women for entry into journey level positions to ensure that a competent workforce is available to meet highway construction hiring needs, and to address the historical under-representation of members of these groups in highway construction skilled crafts.

Criterion #4: Climate Change, Sustainability, Resiliency, and the Environment

Greenhouse Gas Emissions and Air Pollution

The Project will reduce greenhouse gas emissions from the transportation sector by reducing congestion and idling on a roadway that has the **third highest volume of truck traffic** in the state (see **Figure 12**) and is within disadvantaged communities that face high rates of asthma (above the 80th percentile nationwide). The Environmental Protection Agency's (EPA) Environmental Justice Screening and Mapping Tool (EJScreen) indicates that the Project Area has several pollution and source concerns. According to the EJScreen report, the Project Area is in the 93rd percentile (nationwide) for Particulate Matter (PM) 2.5, 92nd percentile for Nitrogen Dioxide (NO_2), 88th percentile for diesel PM, and 83rd percentile for Ozone pollution. Elevated exposure to these air pollutants presents great risks as they can be inhaled and cause serious health problems. The Project **will not be adding additional lanes** in the project area, therefore limiting any negative air quality impacts caused by induced demand.

Figure 9: Major Oklahoma Truck Traffic Highways (2021)



Source: ODOT, Traffic Analysis Branch, 2022

From 2017 to 2021, there were a total of 96 reported crashes in the Project Area, the majority of these collisions being rear ends. Each of these crashes can cause traffic to back up or even come to a complete stop for extended periods of time. The rehabilitation of the bridges includes additional shoulder space that will provide safe opportunity for travelers if there are incidents on the roadway, reducing congestion from crashes. Avoided congestion and reduced collisions will result in a total discounted savings of $128 million for the NB bridge and $113.5 million for the SB bridge. This equates to an **overall annual program savings of $8.1 million per year** (see **BCA Narrative**). By rehabilitating the I-44 bridges, the probability of bridge failure by 2052 decreases significantly. The majority of the environmental impacts would stem from the **16-mile emergency detour route** utilizing I-235. Additionally, a significant reduction of collisions and more efficient vehicular flow is expected with rehabilitation, which will help eliminate some of the negative environmental impacts to the surrounding communities caused by slow-moving and idling vehicles.

Enhancing Alternative Fuel Corridors

The I-44 corridor has been nominated by the USDOT and ODOT as an Alternative Fuel Corridor (AFC). As an AFC, it will aid in the transportation of freight and goods through clean energy

sources and provide electric vehicle (EV) infrastructure. ODOT's plan to work with private industries to develop EV charging station infrastructure will contribute to reducing transportation-related greenhouse gas emissions. According to the U.S. Department of Energy, EVs typically produce lower tailpipe emissions compared to conventional vehicles. Oklahoma's National Electric Vehicle Infrastructure Plan will enhance opportunities for drivers to select cleaner vehicles with reliable access to alternate fueling stations. **By rehabilitating the bridges on I-44, the Project aids in the creation of a safe, efficient, nationwide alternative fuel corridor.**

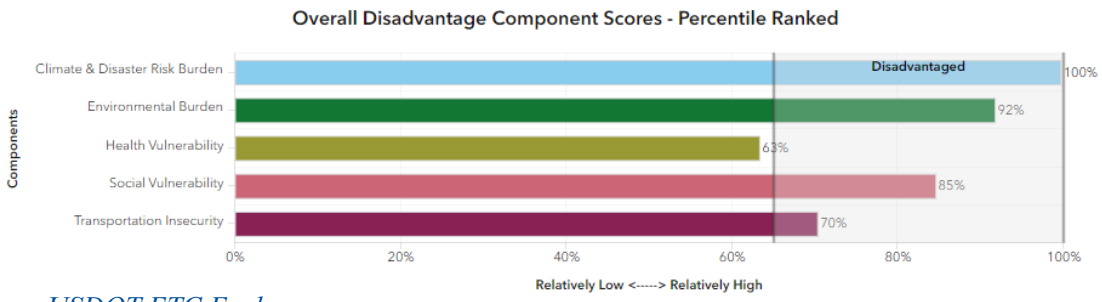
Resiliency

Seismic activity across the state has increased in frequency since the early 2010s, and the rehabilitated bridges are designed to endure these ever more common seismic events, as discussed in **State of Good Repair**. The Project presents a range of resiliency improvements. With the existing bridge conditions and high AADT, any crash or event in the existing corridor has cascading impacts on the safety and movement of people and goods. In addition to the significant risk posed by the deteriorating infrastructure conditions, the Project Area faces environmental risks. The Federal Emergency Management Agency (FEMA) National Risk Index indicates that Census Tract 1070.02, which the Project is entirely within, is within the **91st percentile for overall disaster risk**. Nationally, the Census Tract is in the 99th percentile for tornados, the 99th percentile for hail, the 94th percentile for heat waves, the 93rd percentile for ice storms, and the 86th percentile for earthquakes. These weather events, paired with aging and structurally deficient infrastructure can present serious health, safety, and mobility impacts and challenge the resilience of the regional and national transportation system. The proposed bridge rehabilitation will improve foundations and piers alongside bearing devices that improve response to severe weather, including seismic events.

Impacts on Disadvantaged Communities

The population in Census Tract 1070.02 is 71 percent people of color and 51 percent low income. Additionally, the Tract is in the 80th percentile nationally for asthma and the 79th percentile for low life expectancy. These health risks could be attributed to the high amounts of air pollutants present in the area. A significant reduction of collisions and an increase in vehicular flow are expected with rehabilitation, which will help eliminate some of the negative environmental impacts to the surrounding communities caused by slow-moving and idling vehicles, including a reduction in exposure to potentially dangerous air pollution.

Figure 10: Disadvantaged Component Scores



Source: USDOT ETC Explorer

The ETC Explorer indicates that Census Tract 1070.02 ranks high for disadvantaged indices for climate and disaster risk burden, environmental burden, social vulnerability, and transportation insecurity (**Figure 13**). The Project will provide several benefits to surrounding Environmental Justice (EJ) populations, such as a more efficient supply chain corridor that supports the state's economy and creates more jobs in the region, better disaster preparedness, and improved circulation for roadway users.

Criterion #5: Equity and Quality of Life

The Project will improve the quality of life for people locally and regionally by improving the safety for roadway users and supporting the economies that rely on this corridor. Decisions made during the planning and preliminary design phase led to the Project Team selecting a design that calls for the I-44 bridges to be constructed on the existing alignment, which eliminates the need for property acquisitions or displacements. See **Letters of Support**.

Planning and Engagement Efforts

The Project Area is surrounded by industrial land uses, with the closest residents a half-mile away from the bridges. Additionally, **the Project is to be constructed on the existing bridge alignment, so there will be no associated property acquisitions or displacements**. Stakeholders surrounding the Project have been notified of the intent to make improvements to these bridges. Early proactive engagement with residents and additional businesses traditionally takes place in instances where a new or modified roadway alignment will impact nearby properties. However, since the design team has identified a way to make improvements without impacting any property surrounding the Project, coordination with the public will instead take place in the next design stage. During the design process, the needs and costs to the surrounding communities, traveling public, and regional freight network were considered. The 2020 Alternatives Study concluded that a minimal increase in construction costs was worth it to implement Accelerated Bridge Construction techniques to reduce the onsite construction time. The reduced construction time would have a shorter duration of impacts for the surrounding community and the movement of freight than would otherwise be incurred by traditional construction means, as described in the **Statement of Work**. In advance of construction, the Project Team plans to conduct public engagement to share the benefits of the improvements, the changes in traffic patterns, and construction schedule.

The earliest support for the Project from stakeholders and the public came from the drafting of the Statewide Transportation Improvement Plan (STIP) that was adopted in April of 2024. During the drafting of the STIP, which includes the Project (P. 32), ODOT, FHWA, Tribal Governments, and Metropolitan Planning Organizations (MPOs) were partners in the planning process and were proactive in ensuring an open access public involvement process. During the public engagement process the partners used methods such as public meetings, advisory groups, and informational pamphlets to consult, solicit input, and receive comments from the public. The information given to the public was available in multiple languages to ensure non-English speaking guests could participate, ask questions, and have their comments addressed by the project partners.

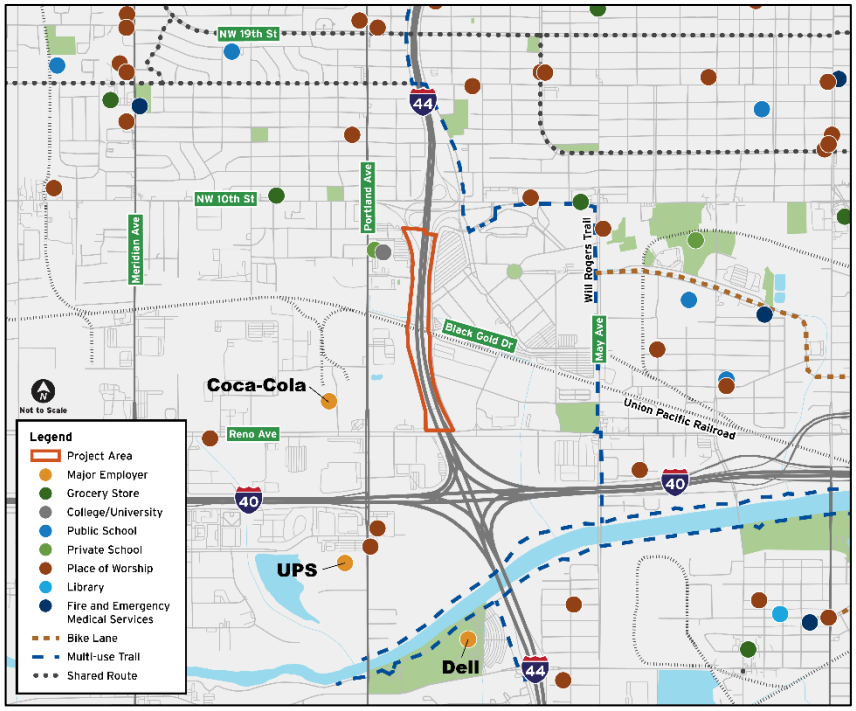
Alternative Transportation Considerations

As described in the **Project Description**, the U.S. Census Tract that contains the Project is considered an APP and HDC. According to the ETC Explorer, the Census Tract that contains the Project Area ranks in the **78th percentile for transportation cost burden** nationally. The average household spends over 21 percent of their household income on transportation and just over four percent of households do not have access to a vehicle. Offering alternative transportation choices is important to ODOT and the City of Oklahoma City, as exemplified by the existing Oklahoma Active Transportation Plan and BikeWalkOKC Plan. There are no bicycle or pedestrian paths on I-44 as it is an Interstate facility and ODOT is restricted from placing active transportation facilities on the roadway. Existing alternative transportation that pass near or through the Project Area are described below and will not be negatively impacted from Project construction.

Transit

EMBARK has no active bus routes that travel using the I-44 bridges over the UPRR, however there are multiple bus routes that run near the Project Area, including Route 9 on Reno Avenue and Route 38 on 10th Street. The OKC Moves Bus Study includes a long-term recommendation for a new bus route to Will Rogers World Airport that would use the I-44 corridor to be implemented in the next ten years (P. 9-25). The recommended route would provide transit service to jobs near the airport, reduce congestion, and enhance area mobility. The recommended transit line, if implemented, would rely on this corridor of I-44 that is in need of improvements. If no improvements are made to the bridges, the current deteriorating state could compromise the reliability of the transit line which would sever the critical connection between the surrounding communities and job opportunities near the airport.

Figure 11: Active Transportation Connections to Community Resources



Source: ODOT and ESRI

Active Transportation

There are no bicycle or pedestrian paths on I-44 as it is an Interstate facility and ODOT is restricted from placing active transportation facilities on the roadway. However, ODOT is committed to ensuring that the active transportation system surrounding the Project is not impacted by

construction. As shown in **Figure 14**, there are existing bicycle lanes, trails, and shared roadways available near the Project Area that allow for bicyclists and pedestrians to travel parallel to the improvements on I-44. This active transportation infrastructure provides access to vital community resources including recreational opportunities within the larger trail system, including the Will Rogers Trail that runs parallel to I-44 near the Project Area (See **Figure 14**). The Will Rogers Trail is an active transportation route that runs parallel to I-44 to the north and connects to the Oklahoma River Trails to the south, where it connects to downtown Oklahoma City. Given the active transportation system's distance from the proposed improvements, the network will not be affected by construction of the bridges.

Access to Community Resources

I-44 is a vital connection to community resources within the Oklahoma City region including housing and jobs. As shown in **Figure 14**, there are a multitude of community resources surrounding the Project Area including grocery stores, schools, places of worship, and recreational opportunities. If the I-44 bridges over the UPRR were to deteriorate or fail, the residential areas to the north and south of the Project Area would be disconnected from important community resources. It is essential that the bridges are rehabilitated to a higher level of service to maintain these community connections.

Criterion #6: Innovation

Technology Innovations

During construction, ODOT will use Intelligent Transportation Systems (ITS) to ensure work zones on I-44 are safe and to minimize travel delays for drivers. The Smart Work Zone uses temporary cameras, sensors, and message signs to monitor travel speeds and congestion, support incident management, and enhance the safety of roadway users and construction workers.

Project Delivery Innovations

Innovative construction techniques to be implemented on the Project will result in faster overall delivery and eliminate commerce impacts to the surrounding communities and regional supply chain. During the 2020 Alternatives Study, the bridges were deemed as **essential to the local economy**, with potential closures costing users hundreds of dollars per day (P. 106). Additionally, traditional construction methods would likely require the closing of the UPRR under the bridges, which would have broader supply chain impacts to the almost 4,000 kilotons of freight that moves on the UPRR every year (P. 7). Accelerated construction is critical to minimize the impacts to commerce on this national artery.

The first innovation is the use of an Accelerated Bridge Construction (ABC) **method,** Prefabricated Bridge Elements and Systems (PBES). Several superstructure bridge elements will be precast or preassembled nearby and lifted into place during construction using closure pours to connect segments. The PBES connections will use ultra high-performance concrete (UHPC) for the closure pores to create a strong structural connection.

The prefabricated structural elements are constructed in a nearby location away from traffic, transported to the site, and installed in segments to the final position. ODOT has collaborated with the City of Oklahoma City, and they are open to the use of the Oklahoma State Fair Grounds for construction staging. PBES improve site constructability, bridge quality and durability, while reducing traffic impacts and onsite construction times. PBES have been shown to **minimize environmental impacts, impacts to existing roadway alignments, and the need for utility relocation and ROW property acquisitions**. The use of PBES will result in reduced construction times and, therefore, minimizing impacts to traffic on the I-44 corridor. While PBES have been used in the United States since the early 2000s, ODOT has constructed or is constructing only three other projects utilizing PBES. Therefore, the technique is innovative for ODOT, but the contracting community has some level of comfort building these structures.

Figure 12: Example of PBES Installation

Photo Credit: Iowa Department of

To connect the PBES superstructure elements together, an innovative cement composite material that has enhanced durability compared to conventional concretes, UHPC, will be used. Due to the unique chemical properties of UHPC, it is found to have 15 to 85 times longer service life span than traditional concrete. This longer service life will reduce the frequency of future repairs, thus reducing the impacts to the movement of people and goods through the I-44 corridor.

Benefit-Cost Analysis

The Project has a Benefit-Cost Ratio (BCR) of 8.56. This ratio was derived by dividing total discounted benefits by total discounted costs over a 30-year period. **Table 5** shows the breakdown of BCR per structure, below. The results throughout this memo were derived based on the 2023 BCA Guidance - December Update and USDOT's 2024 updated guidance on the BIP BCA Tool.

Table 5: Project Improvements Benefits Summary

Benefits	Southbound Bridge	Northbound Bridge	Total (2022$)
Safety	$19,462,335	$19,098,266	$38,560,601
Travel Time	$58,767,062	$58,767,062	$117,534,125
Vehicle Operating Cost	$40,057,392	$40,057,392	$80,114,785
Emissions (CO2)	$9,726,992	$9,726,992	$19,453,983
Emissions (non-CO2)	$484,904	$484,904	$969,808
Other Environmental	$310,868	$310,868	$621,736
Maintenance	$2,853,078	$2,853,078	$5,706,155
Residual Value	$1,834,320	$2,228,515	$4,062,835
Total Benefits	**$133,496,951**	**$133,527,077**	**$267,024,028**
Total Discounted Costs	**$14,097,583**	**$17,093,278**	**$31,190,862**
Net Present Value (NPV)	**$119,399,367**	**$116,433,799**	**$235,833,166**

Project Readiness

ODOT has a proven record and the technical capacity to deliver the *Strengthening Connections: Rehabilitating I-44 Bridges for Regional Resilience* Project. ODOT has successfully delivered projects that have received federal discretionary awards such as the US 69/75 project in Calera, the US-281 (Route 66) Bridgeport Bridge, and the I-44/US75 interchange project in Tulsa. ODOT has the capacity to successfully deliver the Project and has a history of complying with applicable Federal requirements including, but not limited to, compliance with Title VI/Civil Rights requirements to ensure that no person is excluded from participation, denied benefits, or otherwise subjected to discrimination under any program or activity, on the basis of race, color, national origin, sex, age, or disability.

Stable funding sources have been identified and committed to delivering the Project and adequate contingency has been accounted for to make the risk of cost overruns as minimal as possible (see **Project Budget, Sources, and Uses of Funding**).

Environmental Risk Assessment

Project Schedule

Figure 13: Project Schedule

Task	2024				2025				2026				2027				2028			
Grant Obligation								■												
Environmental																				
CE Reauthorization										■										
Preliminary Design	■																			
Final Design	■	■	■	■	■	■														
Obligation of Funds										■										
Authorization & Letting											■									
Construction																				
Engagement										■		■		■						
Construction												■	■	■	■	■	■			
Project Closeout																			■	

Many of the milestones that the administration would consider risks have been completed, including preliminary design and National Environmental Policy Act (NEPA) documentation. ODOT is in the process of approving final design and is prepared to receive a funding obligation by Q4 2025 and proceed with construction by Q4 2026. Without grant funding, Project construction would be delayed. The Project Schedule (**Figure 16**) provides detailed information regarding major milestones. ODOT has previously incurred costs of $2.2 million to date.

Required Approvals – Environmental Permits and Reviews

All structures being rehabilitated or replaced will occur on existing alignment and no ROW or utility relocation is needed, reducing the environmental risk associated with the Project. The text below describes the required approvals and permits, their status, and timeline for receiving the necessary documentation:

- Automatic Categorical Exclusion (CE) – ODOT completed an Automatic Categorical Exclusion for the Project in May 2023 (see Supporting Documents). The document will

need to be reauthorized in May 2026. The CE will need to be reauthorized in 2026. To reauthorize, ODOT will complete a standard environmental checklist.

- Railroad Agreement – The bridges span over the UPRR tracks requiring a signed agreement with the railroad prior to construction. To obtain an agreement, ODOT must submit plans for UPRR to review and approve. ODOT has submitted the 30, 60 and 90 percent design review to UPRR as of October 2024. There is currently ongoing coordination with the UPRR to obtain design plan approval. Plans, Specifications, and Estimate (PS&E) are scheduled to be completed and an ODOT/UPRR agreement signed prior to letting. The awarded contractor will have to submit a construction permit for approval by UPRR.

State and Local Approvals – Federal Transportation Requirements Affecting State Environmental Permit and Reviews

The Project is listed in a variety of state and local documents:

- ODOT Eight-Year Construction Work Plan – The Project is accounted for in the statewide transportation program and is scheduled in FFY 2027 (Job Number 30637(04)).
- State Transportation Improvement Plan (STIP) – The STIP incorporates the first four years of the ODOT Eight-Year Construction Work Plan. The Project is currently scheduled in the STIP for FFY 2027 (P. 57).
- Oklahoma Freight Transportation Plan – The plan identifies the I-44 corridor as a top five percent bottleneck for freight traffic in the state.
- ODOT Long Range Transportation Plan (LRTP) – The LRTP is a policy document that provides a strategic direction for the development of the Oklahoma multimodal transportation system. The Project aligns with ODOT's long-range strategic direction.
- Transportation Asset Management Plan (TAMP) – The Project improves system resilience and reliability and is consistent with the goals set out in ODOT's 2022 to 2031 TAMP with the intent of maintaining and preserving Oklahoma's transportation network.

Technical Feasibility

ODOT has the technical capacity and competency to successfully complete this Project. ODOT has a close partnership with the FHWA Oklahoma Division through which it receives its federal aid allocation and discretionary grant funding. ODOT has been awarded several discretionary grants from various programs and is familiar with developing grant agreements, administering the funding, and providing the necessary reporting such as the US 69/75 project in Calera, the US-281 (Route 66) Bridgeport Bridge, and the I-44/US75 interchange project in Tulsa. ODOT has the technical expertise and resources dedicated to the Project to provide quality control over all aspects of design and construction, ensure the Project meets all federal requirements, and keep the public informed of the Project's progress.

Civil Rights and Title VI

ODOT's Contact Compliance Division oversees the Department's DBE program and ensures that ODOT and all its consultants and contractors comply with applicable Civil Rights requirements. ODOT's 2023-2025 Triennial DBE goal is 16 percent. From 2022 to 2023 the total dollars to DBEs increased almost 40 percent. Oklahoma's project-level goal setting is data-driven, utilizing current

DBE certification information and historical DBE pay item performance to identify the project goal achievement probability.

Title VI of the Civil Rights Act of 1964 is the main legal authority for ODOT's external nondiscrimination programs. ODOT ensures that no persons or groups of persons shall, on the grounds of race, color, sex, religion, national origin, age, disability, retaliation, or genetic information, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any and all programs, services, or activities administered by ODOT, its recipients, sub-recipients, and contractors. ODOT complies with Title VI by developing a Title VI Implementation Plan, conducting internal and external compliance reviews, conducting training for staff, suppliers, vendors, contractors, local governments, and other ODOT sub-recipients of federal funds, and developing Title VI compliance information for internal and external dissemination.

Assessment of Project Risks and Mitigation Strategies

Potential Project risks and mitigation strategies to minimize the possible impact of the risks are summarized in **Table 6**. Environmental and right-of-way related risks are significantly reduced given that no right-of-way acquisition is required and there are no water resources within the Project Area. Meaningful public involvement is anticipated to engage the communities potentially affected by the Project. ODOT has sufficient capacity to implement the proposed activities based on the schedule presented in **Project Schedule**.

Table 6: Project Risks and Mitigation Strategies

Project Risk	Risk Level (High, Medium, Low)	Description / Mitigation Strategies
Coordination with Union Pacific Railroad	High	The bridges span over the UPRR tracks requiring a signed agreement with the railroad prior to construction. There is currently ongoing coordination with the UPRR to obtain design plan approval. PS&E are scheduled to be completed and an ODOT/UPRR agreement signed prior to letting.
Right-of-Way / Property Acquisition	Low	The decision to construct the bridges on the exiting alignment has reduced many concerns with ROW acquisition. There is no ROW or property acquisition necessary for Project construction.
Construction Materials Cost	Low	The cost estimates are based on completion of 90 percent design and incorporate a 12 percent E&C and 20 percent contingency cost. E&C costs during construction are anticipated to be higher than the usual six percent ODOT assumption because of the specialized inspection for unique elements of this project: PBES, soil nail retaining wall, demolition and erection plan approvals, and anticipated night work inspections.
Environmental Approvals	Low	An Automatic CE has been approved for the Project.

Project Risk	Risk Level (High, Medium, Low)	Description / Mitigation Strategies
Procurement, Contracting, and Labor Agreements	Low	ODOT, in partnership with the FHWA, will procure a construction team well in advance of the identified construction date through a competitive process meeting Federal requirements. The team will meet all provisions for hiring, training, and advancement of minority, women, and veteran-owned businesses. Furthermore, the team must show proficiency in acquiring the remaining necessary permits required to begin construction on or before the target letting date.
Schedule	Low	The ODOT team has advanced the project into final design and is ready to begin construction in Q4 2026.
Utility Delays	Low	Utility delays are not anticipated as major utilities located along the I-44 corridor were avoided in the design of the Project.

Administration Priorities and Departmental Strategic Plan Goals

The project supports all the Administration Priorities and Departmental Strategic Plan Goals. These are listed below with the corresponding narrative section that substantiates it:

- Safety: See **Merit Criterion #2**
- Climate Change and Sustainability: See **Merit Criterion #4**
- Equity: See **Merit Criterion #5**
- Workforce Development, Job Quality, and Wealth Creation: See **Merit Criterion #3**

DOT Priority Selection Considerations

The narrative has established that the bridges are in fair condition and are likely to fall into poor condition in the next two to three years (see Engineer's Report) and that ODOT needs federal BIP funding to complete the Project, otherwise other projects around the state will be delayed or cancelled to cover the cost due to the deteriorating condition of these bridges. The Project/bridges:

- Do not currently meet design standards, but the new bridges meet modern design standards (see **Criterion #1**)
- Is ready to proceed to construction by Q4 2026 (see **Project Readiness**)
- Has an Automatic CE obtained (see Supporting Documents)
- Has national and regional significance (see **Merit Criterion #3**)
- Considers Workforce Development, Job Quality, and Wealth Creation (**see Merit Criterion #3**)