

Project Description

The Oklahoma Department of Transportation (ODOT), in partnership with the City of Tulsa (COT), is seeking \$10 million in FY 2023 RAISE discretionary funds to complete the reconstruction of the US-75/W. 81st Street Interchange and associated improvements on W. 81st Street in the city of Tulsa, Oklahoma (**Figure 1**). US-75 is on the National Highway System (NHS) and National Highway Freight Network (NHFN) and is among the highest volume truck freight routes in the state¹. US-75 is included in the top 5% of freight bottlenecks in the Tulsa area and is listed as a critical freight corridor in ODOT’s State Freight Plan, 2023-2030. The W. 81st Street interchange provides access to older, minority and lower-income neighborhoods to the west and Tulsa Hills, a rapidly developing commercial and retail area to the east.

ODOT and COT propose to reconstruct the existing US-75/W. 81st Street interchange as a diverging diamond interchange (DDI), provide additional capacity on W. 81 Street, and provide new pedestrian and bicycle facilities across US-75 (**Figure 2**). This innovative design will improve safety and traffic flow and provide a connection for non-vehicular traffic where none exists today. Specific improvements planned as part of the project include:

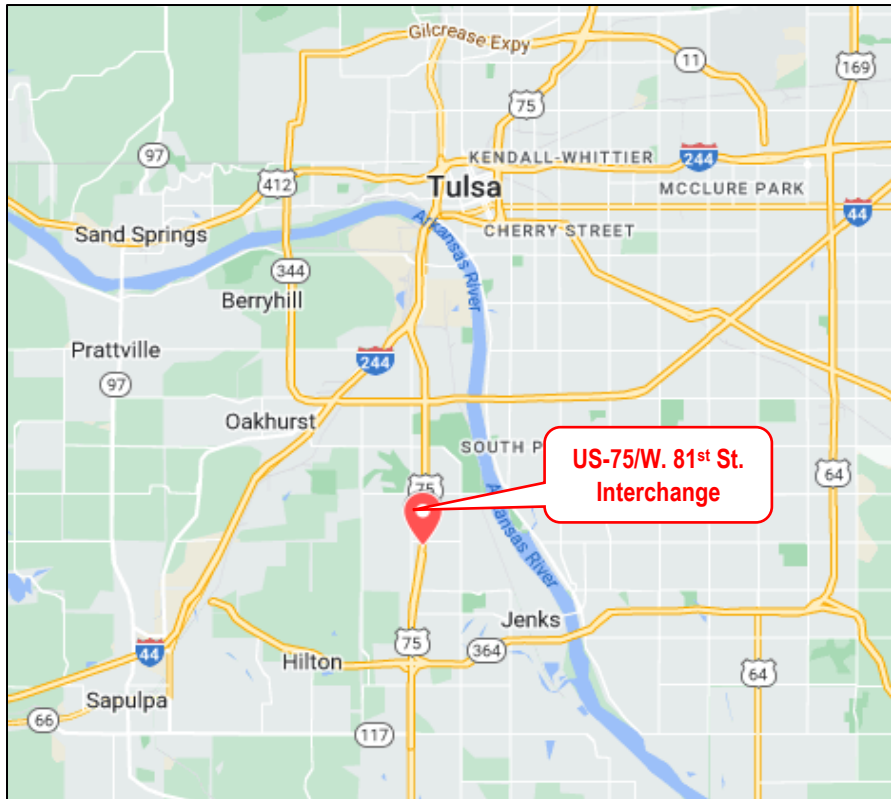


Figure 1: US-75/W. 81st Street Interchange Location Map

- Replace the northbound and southbound bridges on US-75 over W. 81st Street as 70’-wide steel bridges to accommodate future widening of US-75,
- Reconstruct the existing standard diamond interchange to a diverging diamond interchange (DDI), including accommodation for bicycles and pedestrians across US-75,
- Reconstruct the portions of US-75 and interchange ramps necessary to accommodate the new bridges and interchange with new concrete pavement,
- Widen W. 81st Street from S. Tacoma Ave. across US-75 through the eastern ramp intersection to a 5-lane section including two 12’-wide lanes in each direction, a 12’ center turn lane, and 12’ multipurpose trail on both sides (**Figure 3**), and

¹ [Oklahoma Freight Transportation Plan, 2023-2030](#)

- Construct subsurface storm drain on W. 81st Street to convey stormwater.

ODOT completed 60% plans (preliminary plans for right-of-way) in October 2022 and has a completed NEPA document. Final right-of-way plans (65%) are anticipated in the next 30 days. ODOT intends to let the project in November of 2024.

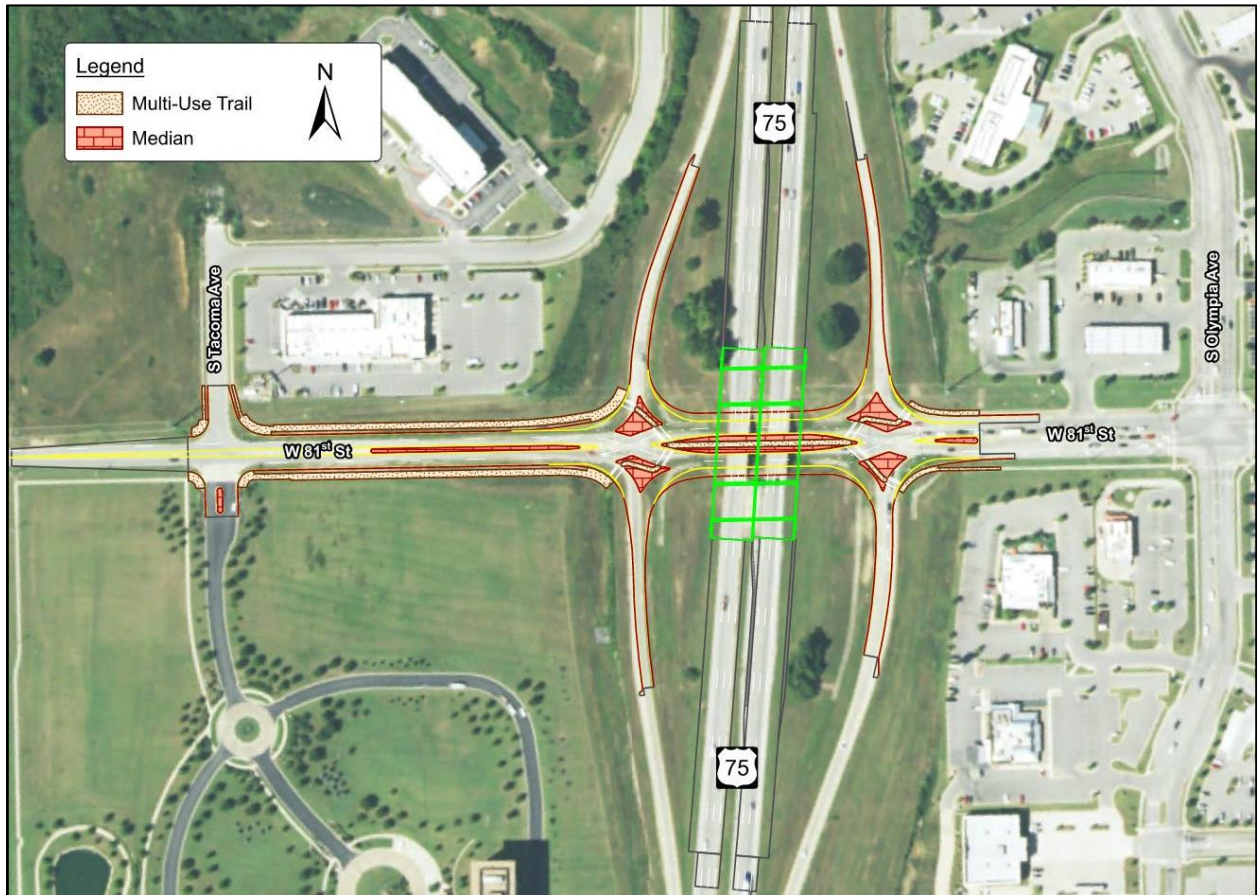


Figure 3: Proposed Diverging Diamond Interchange

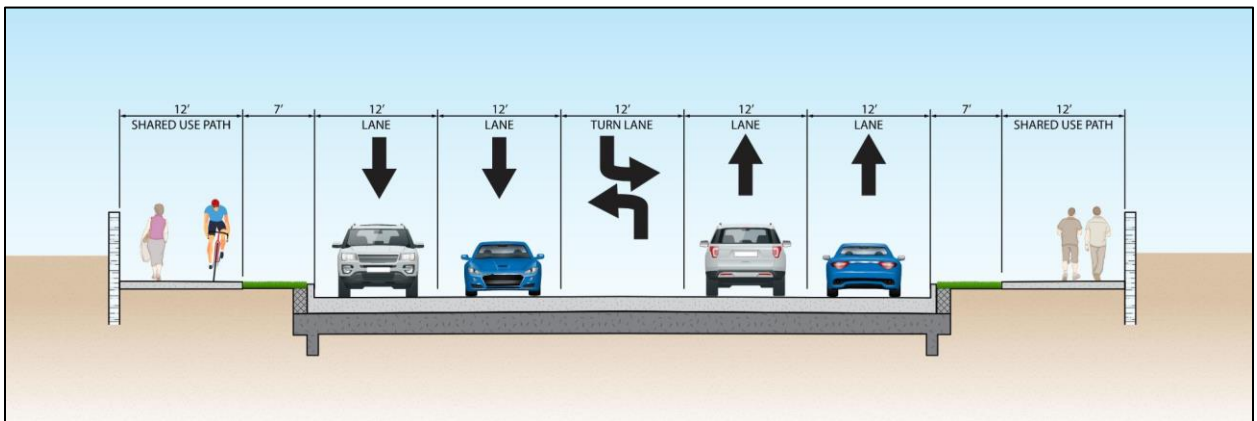


Figure 2: Proposed Typical Section, W. 81st Street

Transportation Challenges and Solutions

The primary needs for the US-75/W.81st Street Interchange Project are to adequately accommodate existing and future travel demand, including freight traffic, and to provide a connection for bicycles and pedestrians across US-75. With over 21,000 vehicles per day entering the interchange, total network delay in the AM and PM peak hours is 47 and 44 vehicle hours of delay, respectively, with interchange movements operating at LOS D condition. The existing configuration offers limited turn lane storage which is frequently exceeded and single through lanes across the interchange, which creates congestion during the peak periods. Without improvement this is anticipated to worsen to 179 and 249 vehicle-hours of network delay in the AM and PM peak hours. The DDI is anticipated to significantly improve this condition. By 2045, total network delay is anticipated to be reduced by 94 vehicle-hours and 104 vehicle-hours in the AM and PM peak periods with the proposed improvements with interchange intersections operating at LOS C or better. More detailed traffic data is available at [US-75/81st RAISE](#).

Another transportation challenge at the US-75 and W. 81st Street interchange is a lack of safe accommodation for pedestrians and bicycles. Due to the limited horizontal clearance under the US-75 bridges and the use of concrete barriers to protect the bridge piers, there is no room for non-vehicular traffic to safely cross the highway (**Figure 4**). The closest crossing to W. 81st Street is one mile south at W. 91st Street, which even then provides only a marginal shoulder, no pedestrian signals, and no dedicated sidewalk, and there are no pedestrian and bicycle facilities to connect W. 81st Street and W. 91st Street. Further, there are no crossings of US-75 with dedicated bicycle/pedestrian facilities to the north or south for several miles. Recent commercial development along W. 81st Street has resulted in the construction of some discontinuous sidewalk. The US-75/W. 81st Street interchange project will provide a connection across US-75 and will link some of these sidewalk segments (**Figure 5**). Providing a connection across the physical barrier of the freeway will result in significant pedestrian and bicycle travel time savings and make trips



Figure 4: W. 81st Street under US-75 (facing east)

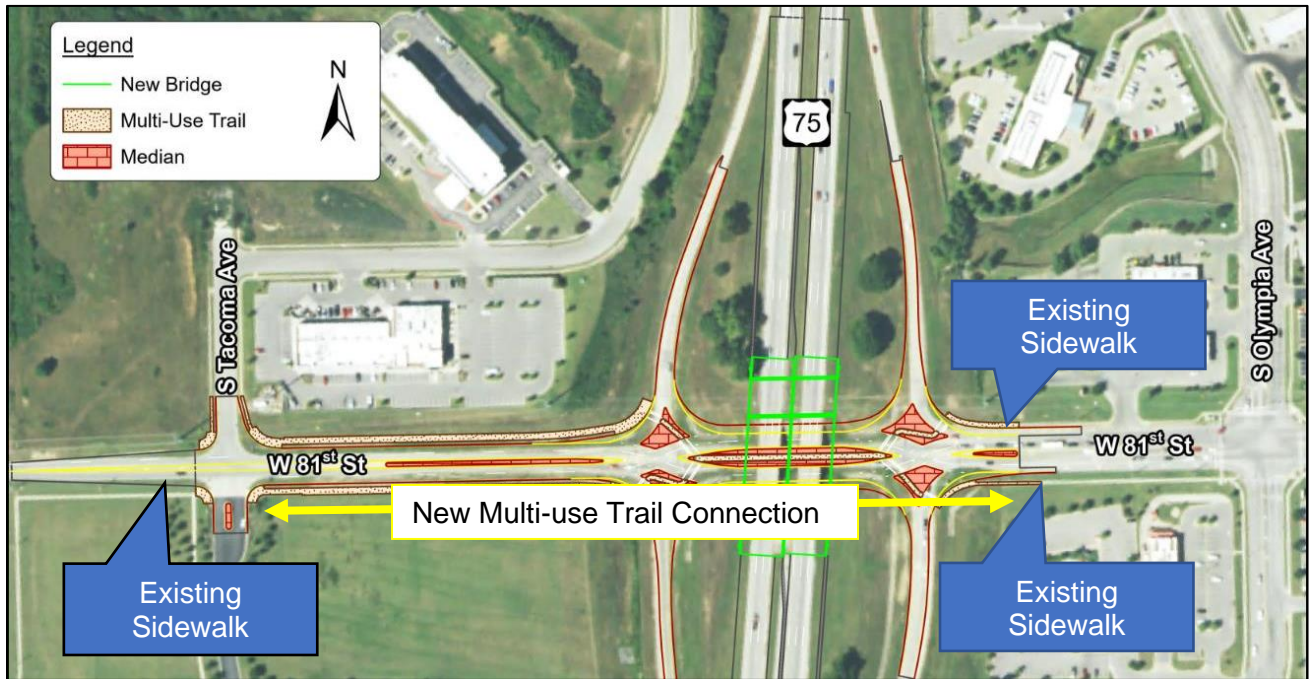


Figure 5: Proposed Connection of Existing Sidewalks on W. 81st Street

more attractive between the residential areas west of US-75 and the jobs and services available at the Tulsa Hills.

Project History

ODOT initiated a comprehensive study of US-75 through the Tulsa area in the late 1990s. A Major Investment Study (MIS) for the US-75 corridor from SH-67 north ten miles to I-44 was completed in 1999, and an Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) authorized by the Federal Highway Administration in 2002. The corridor traverses the cities of Tulsa, Jenks, and Glenpool, some of the fastest growing in the region. The 2002 EA (**Figure 6**) authorized the reconstruction of US-75 to a four-to-eight lane facility, fully access controlled, with improved or new interchanges throughout the corridor and frontage roads in certain locations. ODOT completed an EA Reevaluation of the US-75/W. 81st Street Interchange in 2018.

Since approval of the 2002 EA, ODOT has completed several projects in the corridor including new interchanges at W. 71st Street and W. 111th Street, as well as a fully directional interchange at I-44 and US-75 that is currently under construction. ODOT has also recently begun preliminary engineering studies of US-75 from W. 211th Street north to W. 81st Street to look at alternatives for implementing access control within

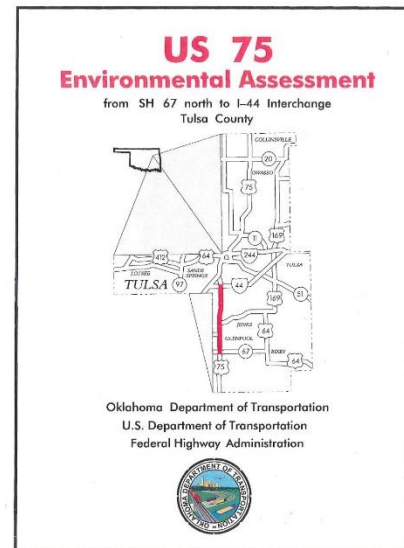


Figure 6: US-75 Environmental Assessment, 2002

this 13-mile segment. There are construction projects programmed in ODOT's 8-Year Workplan for an additional 17 miles of US-75 south of Tulsa towards the Muscogee Nation headquarters in Okmulgee, Oklahoma. The 2002 EA and 2018 Reevaluation of the US-75/W. 81st Street Interchange are included on the project website at [US-75/81st RAISE](#).

ODOT's investment in the US-75 corridor is indicative of the importance of this highway to transportation in Oklahoma. At a more local level, the US-75/W. 81st Street Interchange is a congested interchange that provides access to a major commercial and retail center, but lacks accommodation for pedestrians and bicyclists. Improvements at this interchange would not only improve conditions locally but would support ODOT's future plans for the US-75 corridor.

Project Location

Figure 1 above shows the location of the US-75/W. 81st Street Interchange in Tulsa, Oklahoma. The coordinates are latitude 36.046514, longitude -96.007060. W. 81st Street is the border of the 2010 Census-designated Tulsa urbanized area; therefore the project is half within an urban area (north of W. 81st Street) and half within a rural area (south of W. 81st Street). The project is within Census Tracts 67.12 and 67.13 in Tulsa County and is not located within a USDOT-defined Area of Persistent Poverty or a Historically Disadvantaged Community. However, there are low-income and minority populations that will be served by this project, as described in the Merit Criteria.