

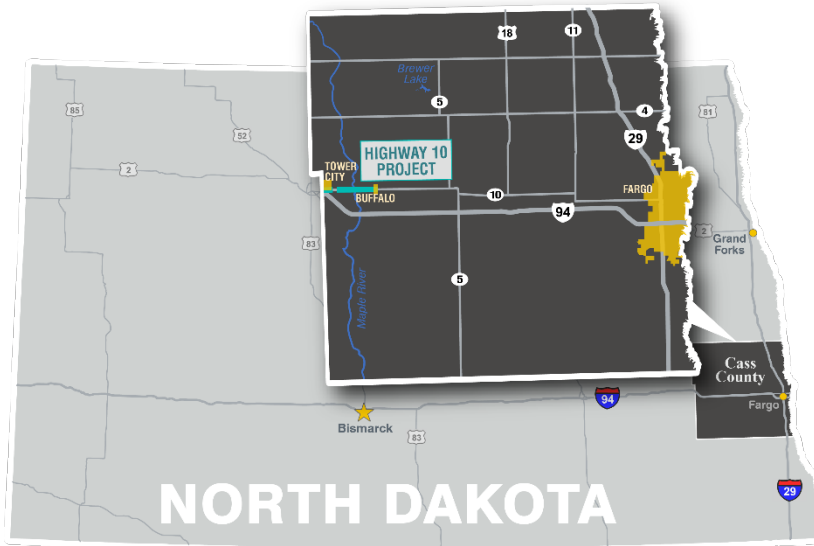


2024 HIGHWAY 10 Roadway Improvement Project

CASS COUNTY, NORTH DAKOTA

PROJECT DESCRIPTION

Cass County is requesting \$6,567,205 for completion of the Highway 10 Roadway Improvement Project (The Project). The Project is part of a comprehensive effort to improve safety, mobility, connectivity, accessibility, and economic development associated with County Highway 10 between Tower City and Buffalo. Cass County is proposing a grading and repaving project along




sections of Cass County Highway 10.

The Project will address existing and projected traffic capacity, safety issues, lack of multimodal accessibility due to minimal shoulder widths, limited pedestrian and bicycle access that do not meet ADA compliance, and deteriorating pavement conditions that no longer meet the needs for the current traffic load. The Project area also experiences localized flooding near the


Maple River on Highway 10, creating additional safety and maintenance concerns due to improper sloping, undersized culvert, and poor drainage. Completion of the Project will result in safer access along Highway 10 for regional residents to school, employment and essential services, reduce traffic delays, improve the movement of freight and agriculture, and increase the opportunity for community connectivity, equity, environmental sustainability, and economic growth.

The Project will address these critical transportation infrastructure issues, increase roadway resiliency and safety, ensure public and emergency access to essential services and critical destinations, and support active transportation by:




Rehabilitating 7 miles of roadway

Regrading ditches to a 10' width and a 5:1 slope to promote proper drainage and snow storage




Widening the road to incorporate shoulders for emergency services and pedestrian access



Increase size of culverts to withstand **50-year** flood events


RAISING

road sections to a higher profile that experience overtopping



Constructing roadway surface with **Perpetual Pavement** for a more resilient pavement structure

Upgrade existing and constructing new ADA-accessible pedestrian pathways





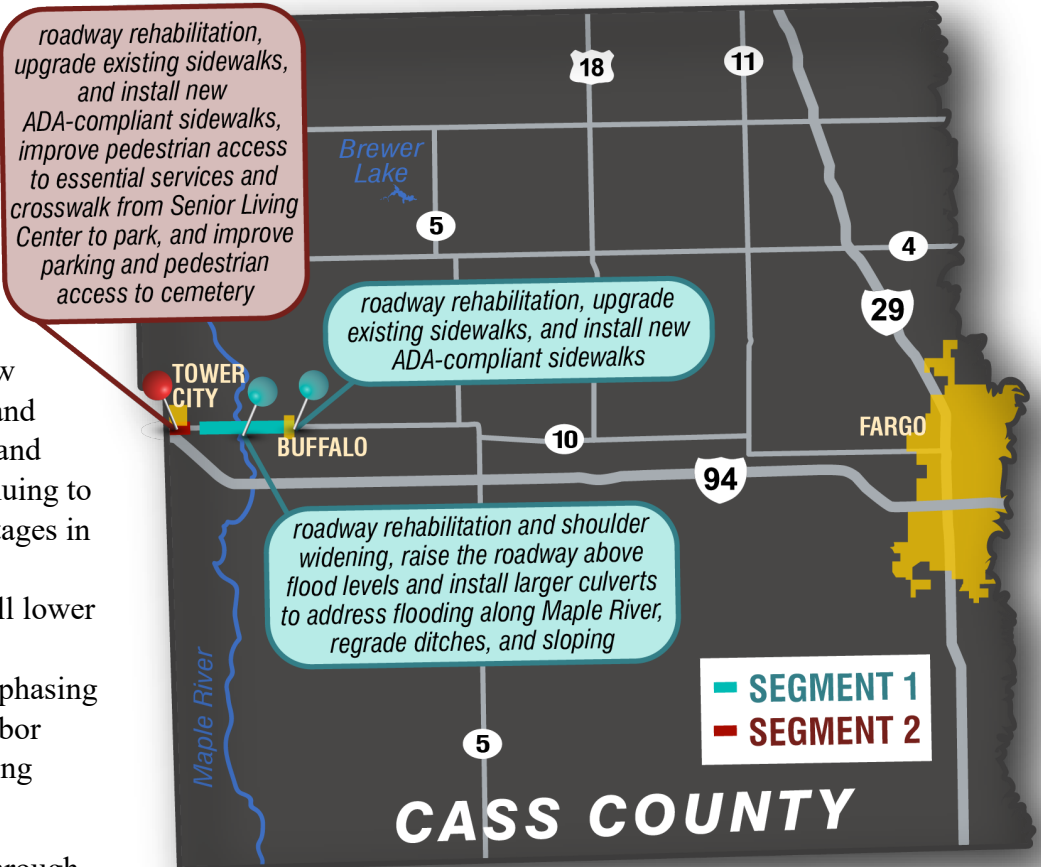
DETAILED STATEMENT OF WORK AND THE TRANSPORTATION CHALLENGES IT ADDRESSES

Many elements of the Project have been identified over the last several years by Cass County in both their Capital Improvement Plan (CIP) and Local Road Safety Plan. In the CIP, two of the long-range goals are reconstruction of paved roads and sloping to a standard of 4:1, reducing the opportunity for roll-over crashes and reducing/eliminating localized flooding on the roadways. The Project includes a full reconstruction of the proposed Project area and sloping for the sections of roadway where flooding occurs and where risk of roll-over crashes is most prominent.

The Project area consists of two segments along Highway 10 from Tower City to the town of Buffalo, approximately 6 miles. The segments have been chosen due to their condition ratings falling below county pavement condition averages, cost of maintenance, similar infrastructure type, similar construction work, and close vicinity of one another which will allow for cost savings in bidding and construction.

With the cost and demand for materials continuing to increase, coupled with shortages in the construction workforce, bundling these segments will lower mobilization costs, improve coordination, and allow for phasing construction to maximize labor force efficiency while limiting negative impacts to traffic.

The first segment extends through the town Buffalo and goes west towards Tower City. The section that runs through the main street of the Buffalo community has deteriorating roadway pavement, including cracking, rutting, depressions, and significant alligator cracking. Sidewalks have deteriorated and lack of ADA accessibility. The Project will rehabilitate the current roadway through



Road deterioration and lack of ADA accessibility



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town, upgrade existing sidewalks, and install new sidewalks where none currently exist with ADA-compliant curb ramps and business approaches.

The section extending west toward Tower City consists of two 12-foot paved travel lanes that are deteriorating, have minimal shoulder width, and lack of bicycle/pedestrian access. There is also limited room for emergency vehicles to safely pull over to address emergency situations or for safe storage of disabled vehicles along these roadways. The Project will provide roadway rehabilitation and shoulder widening from 2 foot to 6 foot to allow access for pedestrians and bicyclists and incorporate 6-inch edge lines for improved visibility and increased safety.

Additionally, along Highway 10, the Maple River causes localized flooding and washouts due to undersized culverts, improper sloping, and poor drainage. These sections will benefit from raising the roadway above protected flood elevation levels, increase the size of the culverts to withstand 50-year flood events, and regrade ditches to a 10 foot width and a 5:1 slope for proper drainage will allow for uninterrupted travel across the Project area while also building lasting stormwater infrastructure that will deter flooding and increase infrastructure resiliency into the future.



Lack of shoulder width and flooding from improper drainage

The second segment of the Project from Tower City to State Highway 38 suffers from deteriorating pavements, lack of safe pedestrian access, and ADA accessible sidewalks. Both Tower City and Buffalo students attend school in Tower City. There is no designated sidewalk or separated pathway to the school bus stop for children to walk safely along the Project area, yet the school is located on this corridor. This creates a critical safety concern for children that currently utilize the bus or walk to and from school.



Additionally, in Towner City the Tower Travel Center is utilized as the local grocery store and restaurant and is also located along the corridor. There is no safe pedestrian access to this essential service location.

The Project plans to take a Complete Streets approach, while prioritizing safety above all else. According to



Smart Growth America, deaths of people walking increased 4.7 percent in 2020. A Complete Streets approach will provide a safe and effective multimodal transportation system.

Highway 10 serves as an essential route for both residential and commercial travelers. Proximity to large population areas and major highways, Fargo and I-94 respectively, create a more urgent need for safe alternative routes, which Highway 10 provides. The Project will not only address safety, mobility, and state of good repair issues but will also provide the opportunity to reinvigorate the local economy, expand active transportation, and provide a better quality of life for residents within the surrounding communities.

PROJECT HISTORY AND RELATED INFRASTRUCTURE INVESTMENTS

County Road 10 was previously designated as US Highway 10 per the Federal Highway Act of 1921 and was informally designated as the Old Red Trail which ran across North Dakota prior to that. The corridor itself has significant economic and cultural significance to the region and State of North Dakota. With the completion of Interstate 94 corridor through eastern North Dakota, Highway 10 was turned over to Cass County. While the corridor has been maintained in a state of good repair, County Road 10 is now due for a significant upgrade to match projected needs along the corridor and through the communities of Tower City and Buffalo.

Current Pavement Condition Index (CPI) for the project corridor is rated as Fair (73) and poor through Buffalo (63). Both these conditions fall below the current county average of 82 (Very Good). The most recent paving of the Project area was in 2007, with a chip seal being performed in 2018. The culverts on the roadway are 65 to 75 years old, graded most recently in mid 1950s, which is approaching the roughly 75- to 100-year life expectancy of concrete culverts. The current condition of the culverts is deteriorating, and culvert structures are beginning to pull apart underneath the road as they were installed with no tie bars. All the township, farmstead, and private drive metal culverts have passed their 40- to 50-year life expectancy. These factors are exacerbated by the extreme weather conditions in this area, which lead to faster deterioration of infrastructure due to alternating extreme cold/hot weather conditions. This Project is identified as a priority in the 2024–2028 CIP but has not yet been completed due to constraints on local funding.

CURRENT DESIGN STATUS

The Project is a priority for Cass County and is currently programmed in the five-year Capital Improvement Program (CIP). All engineering and preconstruction activities are anticipated to be completed by the end of 2024 so the project will be bid ready and can proceed directly into construction in Quarter 1 of 2025. This preliminary and final design is being funded 100% by Cass County as they understand the importance of this project moving forward. Currently, the County is nearing 30 percent plans and is expected to be 50 percent complete by June. The Project will be able to be constructed in the following 2 years, allowing for completion of the Project in a reasonable period and prior to RAISE required timeframes for expenditures by September 2032. The proposed schedule and budget include final design activities with bid



letting to occur in Spring 2025. Initial assessments and cost estimates indicate there should be no issues or concerns related to design, and that the Project can move forward successfully and expediently should grant dollars be awarded.

LOCATION AND GEOGRAPHICAL DESCRIPTION

The Project area is located north of I-94 between the cities of Valley City and Fargo in Cass County in eastern North Dakota. This is a two-lane county highway that connects the rural communities of Tower City, population of 268, and Buffalo, population of 195. For purposes of the RAISE application, the area is defined as rural and currently consists of a rural roadway cross section. The Project area's terrain consists of low rolling hills and predominantly agricultural lands.

The segment along County Highway 10 connects to I-94 at Tower City and is a collector route that runs 7 miles east through Buffalo. This segment is in Census Tract 401, Health and Resilience Disadvantaged. This Census Tract is not currently designated as an area of Persistent Poverty or Historically Disadvantaged but is a Rural area.