

North Dakota Department of Transportation

I-29 Cross-Median Crash Elimination Project

Project Requirements

FY 2023/24 Multimodal Project Discretionary Grant (MPDG) Program

Project Name	I-29 Cross-Median Crash Elimination Project
Project Type	INFRA/Rural Project
Future Eligible Project Costs	\$ 22.50 million
FY 2023/24 MPDG Funds Requested	\$ 11.25 million

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Supporting Information can be found at: <https://www.srfconsulting.com/nddot-i-29-mpdg/>

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Statutory Project Requirements

Requirement #1 – The project will generate national, or regional economic, mobility, or safety benefits.

The I-29 Cross-Median Crash Elimination Project (Project) generates national and regional economic, mobility, and safety benefits for all users of the corridor. By eliminating cross-median crashes in the Project area, the Project will save travelers from life-changing crashes. An estimated 31 serious injury and fatal crashes will be eliminated by new high-tension median cable guardrail (HTMCG) on I-29 over the next twenty years. Mobility, travel time reliability, and freight travel time reliability will also be improved by elimination of cross-median crashes which result in traffic delays through the Project area.

The Project reduces vehicle hours traveled (VHT) on I-29 through the Project area [by 30,382 VHT](#) over twenty years, resulting in enhanced mobility and travel time reliability. I-29 through the Project area is part of the National Multimodal Freight Network, National Highway Freight Network, and Primary Highway Freight System. The Project provides economic, mobility, and safety benefits on one of the [most critical highway segments](#) on the U.S. freight transportation system between two of the largest economic regions in North Dakota, Fargo and Grand Forks. The corridor is also a vital truck freight corridor and major truck route connecting Canada to local commodity generators within the U.S. Midwest region.

A portion of the Project is in a designated area of persistent poverty (APP), Cass County Census Tract 3, and within approximately four miles of disadvantaged populations located in Cass County Census Tracts 6, 101.06, and 101.07. The Project will enhance economic vitality of the region by reducing serious injury and fatal crashes through installation of contiguous HTMCG between the growing economies of Fargo and Grand Forks. The Project creates a safer and more reliable connection between rural communities, disadvantaged populations, and two of the state's biggest regional economies.

Requirement #2 – The project will be cost effective.

The benefit-cost analysis (BCA) provides an indication of the economic desirability of a scenario, but results must be weighed by decision-makers along with the assessment of other effects and impacts. Projects are considered cost-effective if the benefit-cost ratio is at least 1.0. The I-29 Cross-Median Crash Elimination Project is considered very cost-effective as the benefit-cost ratio is 4.44. Initial capital costs, safety, travel time savings, air quality, and operations and maintenance were all analyzed as part of the BCA. The full analysis of the benefits can be found in the [BCA Narrative](#) and [BCA Calculations](#).

Requirement #3 – The project will contribute to 1 or more of the national goals described under Section 150.

The Project aligns with USDOT priorities and contributes to the following national goals under 23 U.S.C. § 150:

(1) Safety & (3) Congestion Reduction

As established in the preceding sections, the Project will eliminate cross-median crashes, improve safety of I-29, and save lives. The safety benefit of the Project will also reduce resultant delays caused by crash incident response, improving travel time reliability and mobility along I-29 in the Project area.

(4) System Reliability

The 67.3-mile Project will improve travel time reliability and freight travel time reliability of I-29 on a Primary Highway Freight System. The Project maximizes safety and ancillary benefits by reducing delays associated with responding to serious injury and fatal crashes in the Project area. Over time, the Project maximizes long-term performance of I-29 as a reliable Interstate System connecting the growing regions of Fargo and Grand Forks. Benefits of safety and reliability of the Project will also enhance I-29 as a major truck freight connection between Canada and the United States.

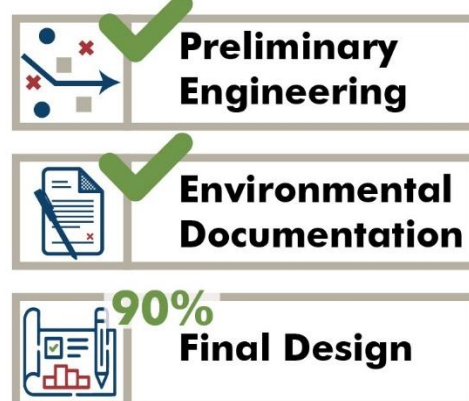
(5) Freight Movement and Economic Vitality

The Project provides direct safety benefits to the National Highway Freight Network and Primary Highway Freight System by eliminating cross-median crashes. In addition, the Project provides for sustained freight movement connecting regional commodities between Fargo and Grand Forks, as well as international trade markets between Canada and the United States. The Project enhances the economic vitality between the growing regions of Fargo and Grand Forks, the State of North Dakota, and the nation by providing a safer, more reliable I-29 through the Project area.

Requirement #4 – The project is based on the results of preliminary engineering.

The Project is a culmination of years of publicly vetted transportation planning and programming. Based on the results of [preliminary engineering](#), the Project is well positioned for delivery in 2025. Public involvement, preliminary engineering, and [environmental documentation](#) are completed with final design expected in the fourth quarter of 2023.

Figure 1. Project Design Status



Requirement #5 – With respect to related non-federal financial commitments, 1 or more stable and dependable sources of funding and financing are available to construct, maintain, and operate the project, and contingency amounts are available to cover unanticipated cost increases.

NDDOT is committed [to delivering the Project](#). State funding match is secure and stable, as enacted through North Dakota [Senate Bill 2113](#) and appropriated by North Dakota [House Bill 1012](#). Also known as the Flexible Transportation Fund, the legislation was enacted specifically for matching discretionary Federal transportation grant awards. NDDOT is prepared to handle cost overruns if they should occur through the flexible transportation funding provided through the Flexible Transportation Fund and has the ability to reallocate federal Highway Safety Improvement Program (HSIP) funding if needed. Funding for construction, operations, and maintenance are available for the Project which is programmed in NDDOT's Statewide Transportation Improvement Program (STIP) and applicable Metropolitan Transportation Improvement Programs (TIP).

Requirement #6 – The project cannot be easily and efficiently completed without other Federal funding or financing available to the project sponsor.

Without MPDG funding, the Project may face potentially negative impacts to scope, schedule, and cost. Without MPDG funding, Project scope may include reduction of project limits or reduced length of HTMCG on I-29. Project schedule may also be negatively impacted, as the Project would likely need to be split into separate, shorter projects phased over a longer period and delaying critical safety benefits including lives saved. Project costs could also be negatively impacted if MPDG funds are not received, because of the longer Project delivery schedule and subjected inflationary impacts to material and labor costs.

Requirement #7 – The project is reasonably expected to begin not later than 18 months after the date of obligation of funds for the project.

The Project is expected to be obligated within one year of the award announcement, well within the obligation deadline of September 30, 2026. NDDOT has extensive experience procuring and administering federally funded projects. NDDOT anticipates construction to begin in June of 2025 and be completed by November of 2025. Figure 2 shows the [Project schedule](#).

Figure 2. Project Schedule



[The project cost estimate](#) has been developed based on the results of preliminary engineering and 90 percent final design. In addition, NDDOT understands risks associated with HTMCG including potential mitigation strategies. With a proactive approach taken, NDDOT does not anticipate any of the identified risks to significantly alter schedule or costs.

Figure 3. Project Risks and Mitigation

Risk	Description	Mitigation Strategy
Schedule Delays	Schedule delays can happen due to unforeseen circumstances such as weather events or availability of materials/staffing.	A detailed project schedule for each of the project components will be prepared to keep track of the Project schedule and assure all necessary installation, design, and construction tasks are met. If one project component causes a delay, all attempts will be made to expedite other items of the schedule. NDDOT has also used milestone payments and compensation incentives to incentivize construction contractors to meet or exceed schedule expectations.
Steel Cable Material	NDDOT has had difficulty obtaining steel cable for HTMCG in the past.	NDDOT can be flexible while determining if steel cable supply will meet the construction timeline. Schedule can accommodate a two-year construction period, if needed. Steel cable, as part of HTMCG, is the last component of the Project to be installed. The steel cable is also the quickest component to install and can be installed in winter months. NDDOT will track steel cable supply and will be able to adjust as necessary.

INFRA Small Project Statutory Requirements

As demonstrated by the BCA performed for the Project, the B/C ratio is 4.44. The Project is very cost effective and will strengthen the overall transportation system in the region.

I-29 through the Project area is part of the National Multimodal Freight Network, National Highway Freight Network, and Primary Highway Freight System. The Project provides economic, mobility, and safety benefits on one of the [most critical highway segments](#) on the U.S. freight transportation system between two of the largest economic regions in North Dakota, Fargo and Grand Forks. The corridor is a vital truck freight corridor and major truck route connecting Canada to local commodity generators within the U.S. Midwest region.

The Project provides direct safety benefits to the National Highway Freight Network and Primary Highway Freight System by eliminating cross-median crashes. In addition, the Project provides for sustained freight movement connecting regional commodity movements between Fargo and Grand Forks, as well as international trade markets between Canada and the United States. The Project enhances the economic vitality between the growing regions of Fargo and Grand Forks, the State of North Dakota, and the nation by providing a safer, more reliable I-29 through the Project area.

The I-29 Cross-Median Crash Reduction Project is extremely beneficial for people living in the region from Fargo to Grand Forks as well as North Dakota, and therefore, is a high priority project for NDDOT.

Supporting Documents

Links to supporting documents are included throughout this narrative. All supporting documents and the MPDG grant application narrative are available to view at the following webpage:

<https://www.srfconsulting.com/nddot-i-29-mpdg/>