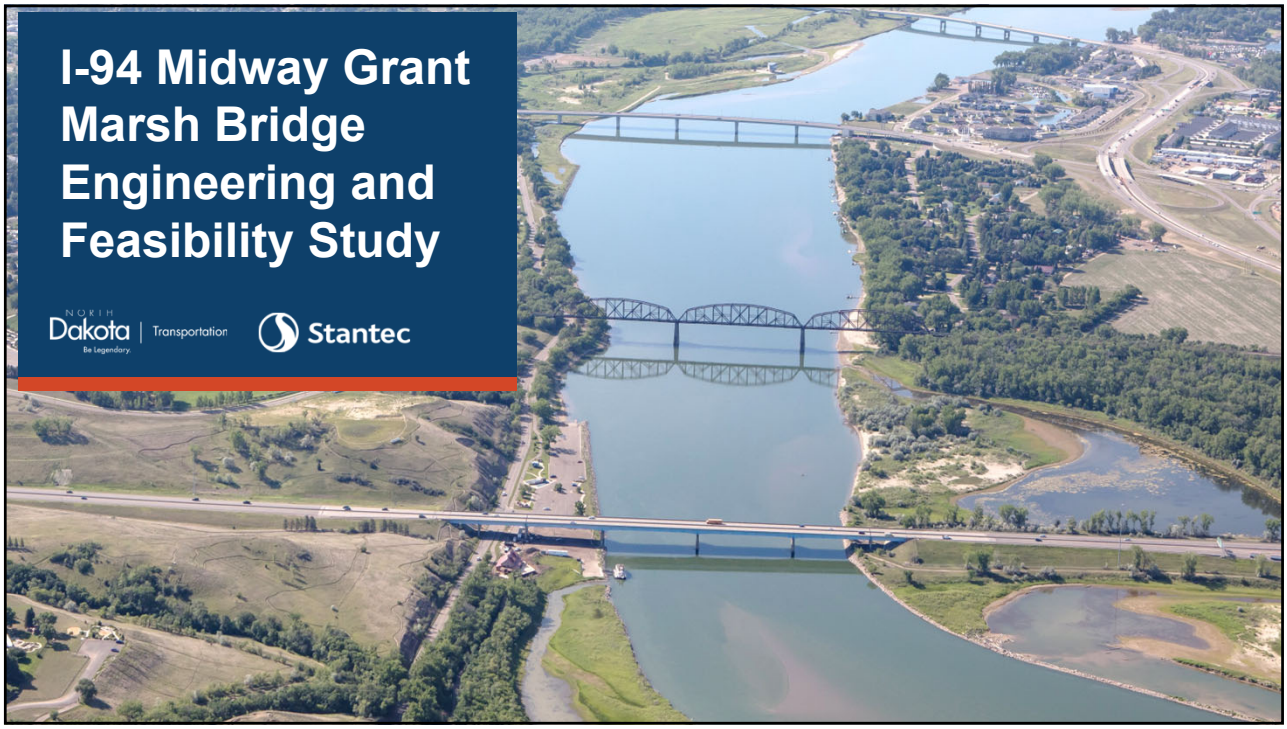
I-94 Midway Grant Marsh Bridge Engineering and Feasibility Study



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Key Project Contacts

- Theresa Maahs, P.E. – Project Manager (Stantec)
- Michael E. Johnson, P.E. – NDDOT Project Manager

Study Advisory Team

- City of Mandan
- City of Bismarck
- FHWA
- Bismarck-Mandan MPO
- Morton County
- Burleigh County
- NDDOT

Consultant Team

Theresa Maahs
Project Manager

Keith Strickland
Traffic Interstate Operations

Aaron Cook
Roadway Design

Wade Frank
Bridge Design Development

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Agenda

- Welcome / Introduction
- Study Overview
- Existing Conditions
- Traffic Analysis
- Structural
- Study Schedule / Next Steps
- Staying Involved

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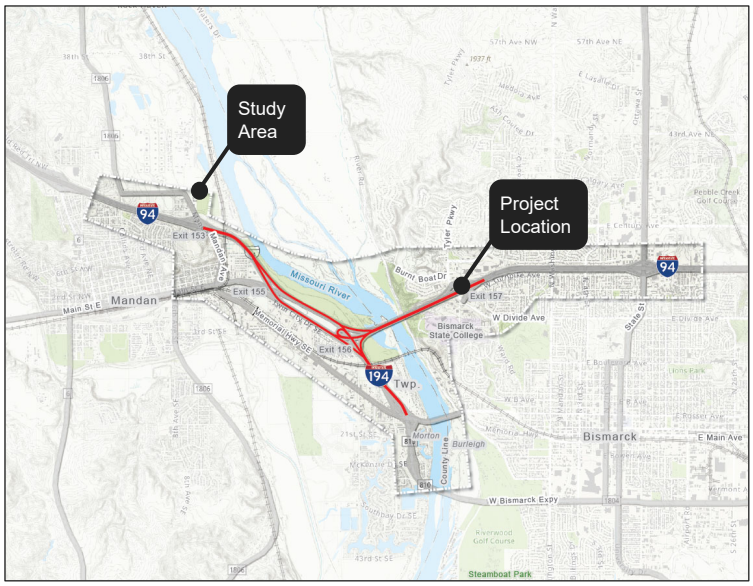
Study Overview

Project Location

- I-94 from Exit 153 in Mandan to Exit 157 in Bismarck.
- Encompasses the Midway interstate system and Grant Marsh Bridge
- Alternatives will be developed for this area.

Study Area

- Includes the project location and various ramps and segments surrounding the project location.
- Helps us understand how alternatives impact the greater roadway network.



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Project Background

Northern Bridge Corridor Study, 2005 - This study identified a future regional beltway corridor and right-of-way for the selected alternatives.

Interstate and Bismarck Expressway Corridor Study, 2006 – Identified prioritized and constrained projects to reduce congestion.

Mandan Memorial Highway Corridor Study, 2010 – Addressed a variety of issues and recommended future roadway reconstruction alternatives.

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Bismarck-Mandan I-94 Corridor Study, 2015 – Identified current and future transportation issues along I-94 from ND 25 (in Morton County) on the west to 80th Street NE (in Burleigh County).

Mandan-Bismarck Corridor Improvement Study, 2016 – Transportation study to evaluate the potential improvement of 20 corridors located in the cities of Mandan and Bismarck.

Bismarck-Mandan Regional Freight Study, 2018 – I-94 and I-194 are key regional freight corridors, in addition to BNSF.

Bismarck-Mandan Metropolitan Transportation Plan Arrive 2045, 2020 – Identified prioritized and constrained projects to reduce congestion.

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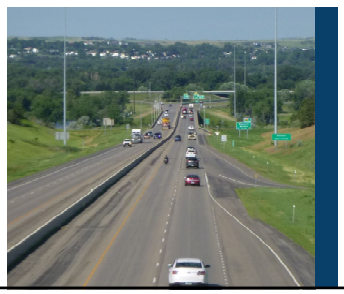
Objectives

1. Analyze performance of I-94, I-194, and connected roadways and ramps in terms of operations, capacity and need for replacement.

2. To develop reasonable alternatives and a clear, comprehensive plan to move the project through scoping and into NEPA and design.



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I-94 Feasibility Study is using a … "Planning and Environment Linkages" (PEL) approach

- Planning and Environment Linkages (PEL)
- Federal Highway Administration recognized process
- Connects transportation planning and environmental/ community concerns
- More information at: www.environment.fhwa.dot.gov/env_initiatives/PEL.aspx
- Informational video: https://youtu.be/kc44jvF8kAg

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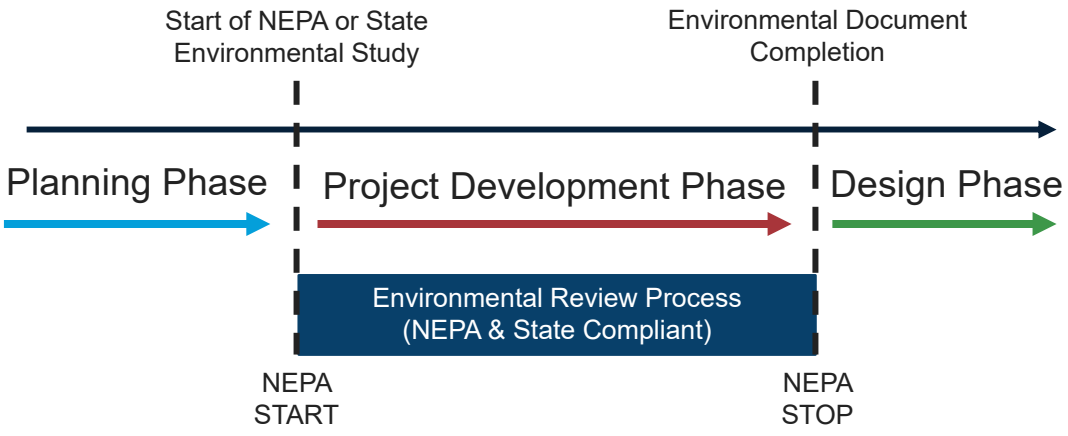
PEL Accelerates Project Delivery



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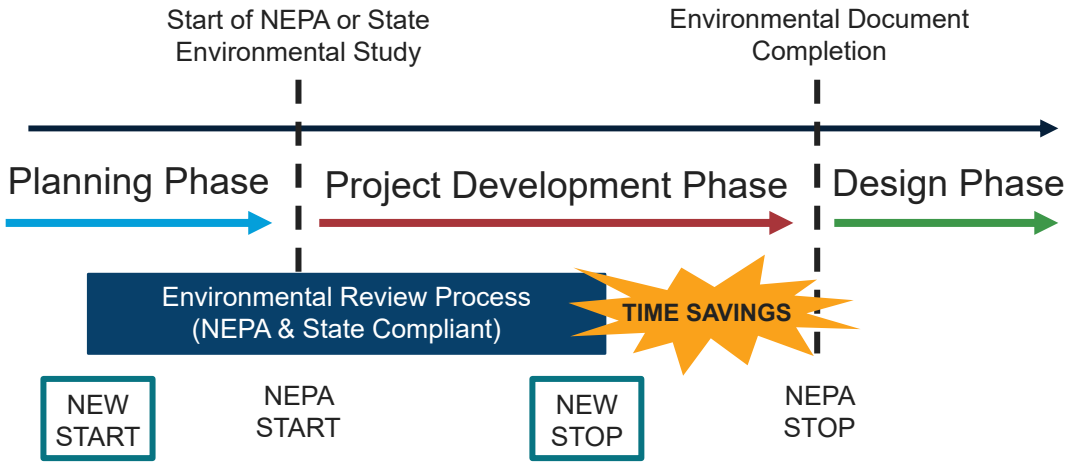
PEL Accelerates Project Delivery



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Benefits of PEL Studies

- **Accelerated project delivery**
- **Consistency with federal and state laws & regulation**
- **Better informed project selection to the State Transportation Improvement Program (STIP)**
- **Enhanced DOT coordination with Local Governments**
- **Early identification of local Stakeholders**
- **Engaging non-transportation agencies in the decision-making process**
- **Fostering relationships between NDDOT and the Public**
- **Creating better, more responsive outcomes for the entire community**

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I-94 Feasibility Study generates "Planning Products"

The North Dakota Department of Transportation may adopt this planning product into the environmental review process, pursuant to Title 23 U.S.C. § 168(d)(4).

Examples

- Traffic Studies
- Environmental Resources
- Community Input
- Alternative Solutions
- Recommendations moving forward

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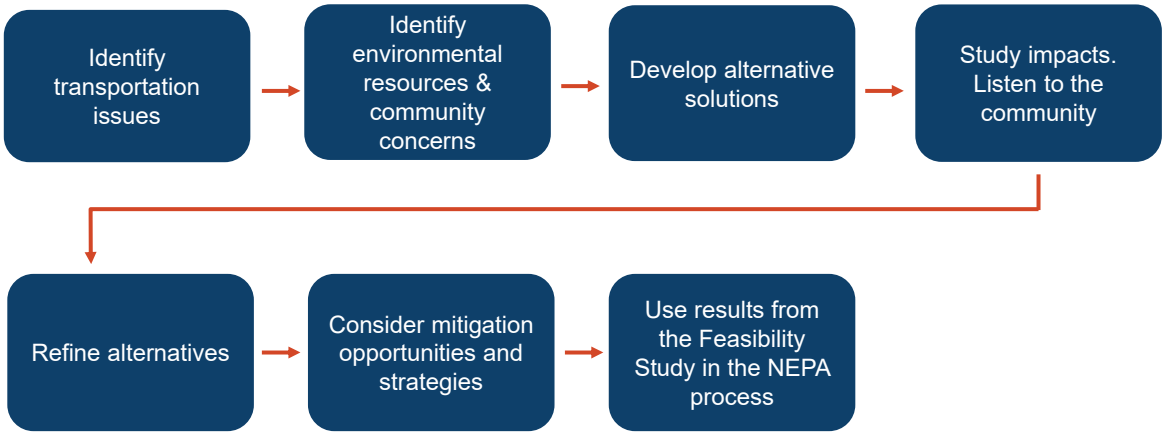
Study Process



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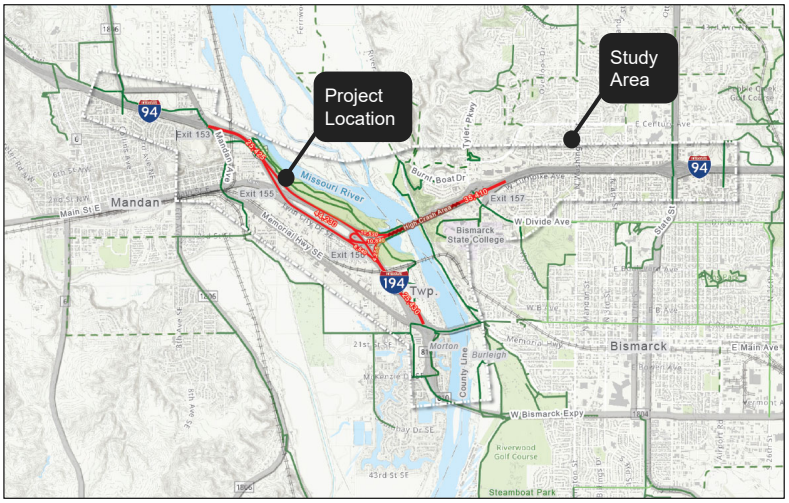
Existing Conditions

Existing Conditions



- Traffic analysis
- Environmental studies
- River hydraulics
- Roadway and bridge design
- Multi-modal needs
- Aesthetics
- Other considerations necessary to develop reasonable alternatives

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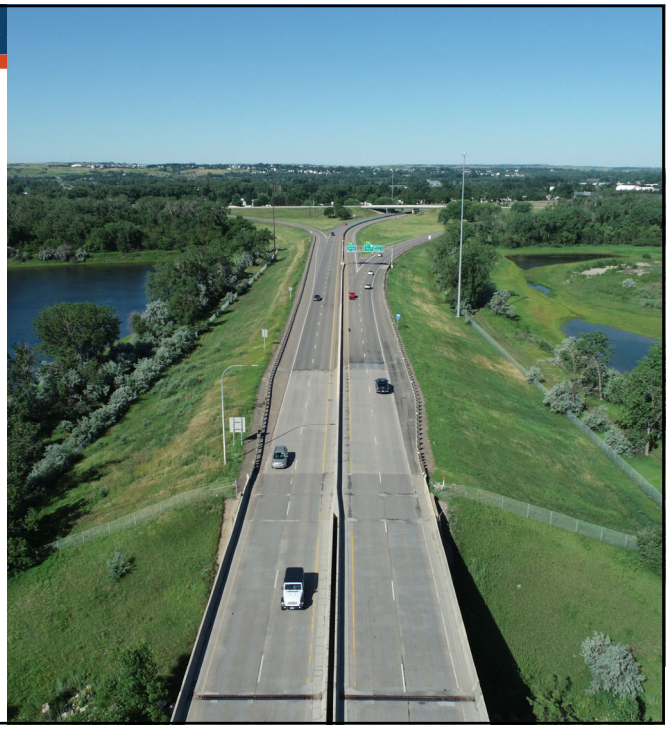
Critical Issues

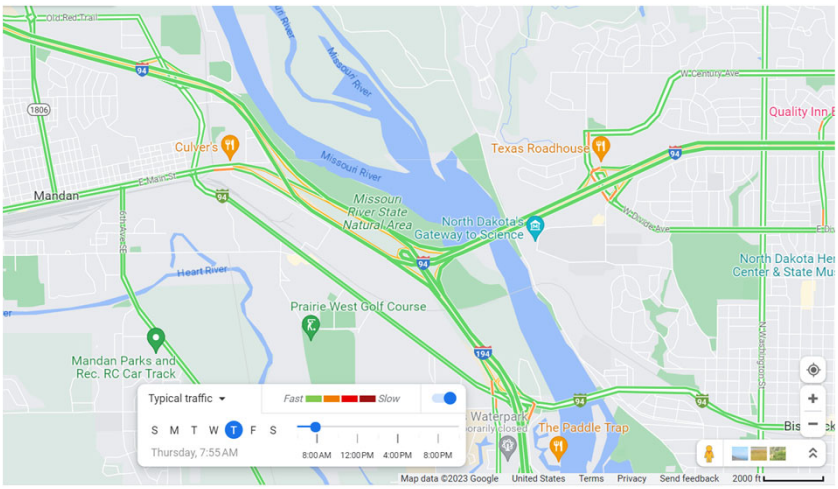
- Vital regional and local connection on I-94
- Geometric deficiencies
- Structural deficiencies
- Limited resiliency for major incidents on I-94
- Construction Staging
- Pedestrian Facility
- Floodplains
- Slope Stability
- Adjacent Parks
- Context Sensitive Design Considerations
- Navigation Clearance



Traffic Analysis

Existing Traffic Operations

- Average Freeway Travel Speeds at 7:55 AM Thursday (Google Maps)
- Freeway speeds are free flow
- Local interchanges are moderately congested



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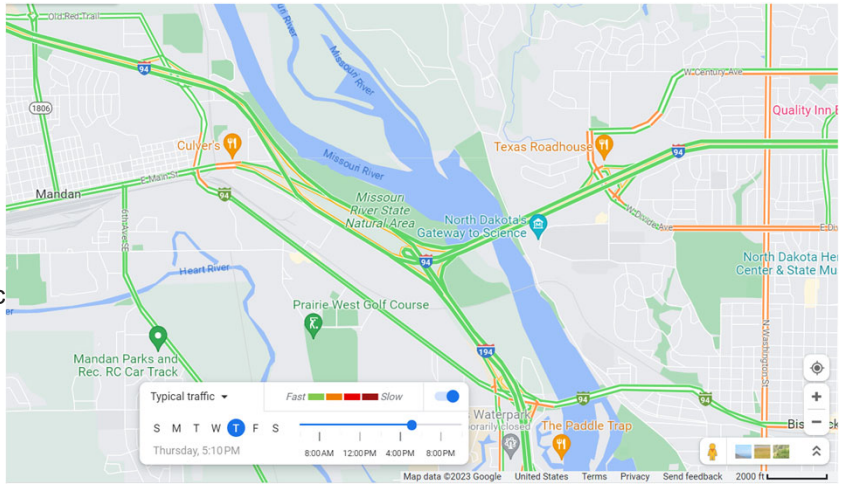
Existing Traffic Operations

- Average Freeway Travel Speeds at 5:10 PM Thursday (Google Maps)
- Freeway speeds are free flow
- Local interchanges are moderately congested
- Recommendations based on 2050 design year traffic volumes



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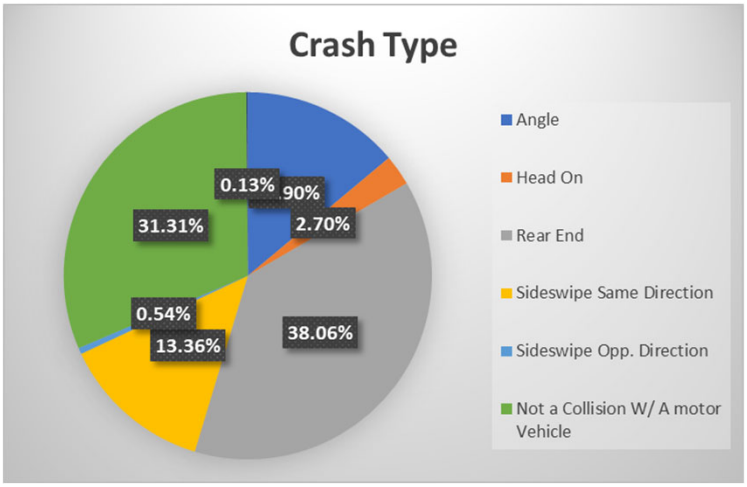
Existing Traffic Safety

- Study Area Crash Type History: 741 Crashes (2018 – 2022)
  - Majority of Rear End crashed
  - 2nd Highest – Not a Collision with a Motor Vehicle
  - Majority of I-94 crashes occurred between I-194 and Tyler Parkway interchanges



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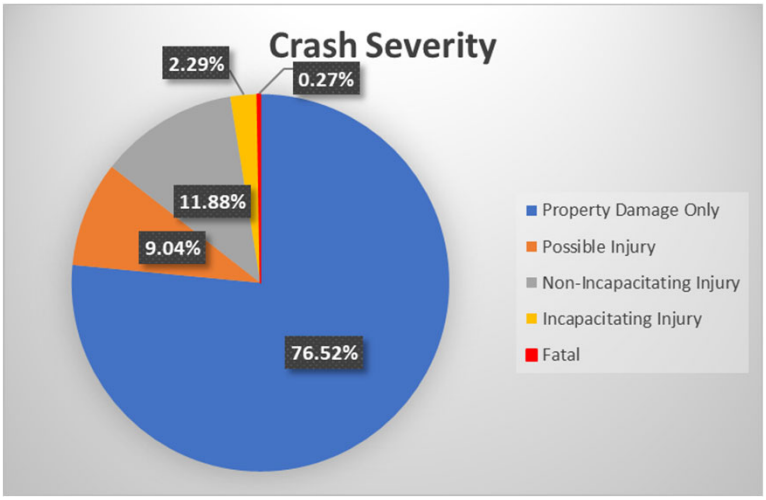
Existing Traffic Safety

- Study Area Crash Severity History (2018 – 2022)
  - Includes 2 Fatal Crashes
  - Majority Property Damage Only
  - Recommendations to reduce future crashes



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Structural

Grant Marsh Bridge

- Built in 1965
- 1125 feet long
- 30-foot wide roadway in each direction
- Repairs and rehabilitation projects
  - Deck replacements and overlays
  - Steel and concrete repairs
  - Repainted in 1982, 2002, 2015
- Current condition rating is 5 (fair)
- Upcoming Repair Project
  - Deck overlay
  - Steel and concrete repairs
  - Spot painting
  - Extend the useful life of the structure

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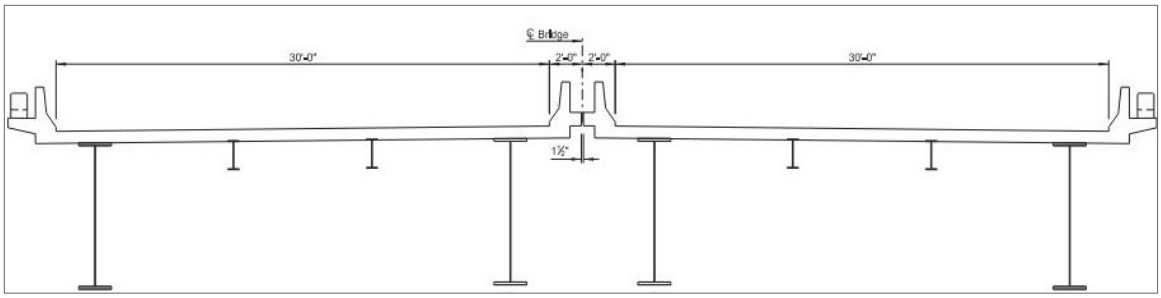
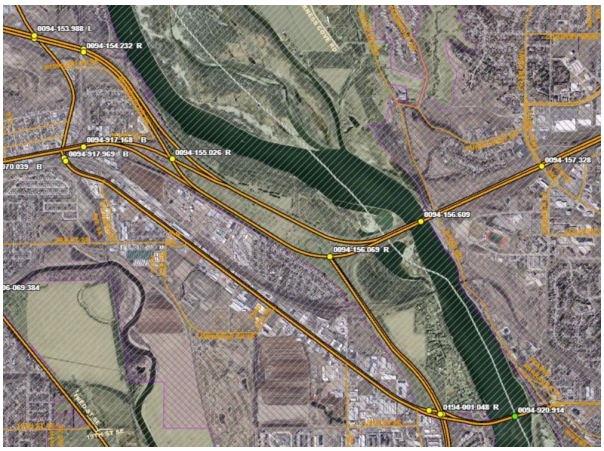


- Non-redundant structure
- Insufficient roadway width (narrow shoulders)
- Not feasible to widen
- Future replacement necessary

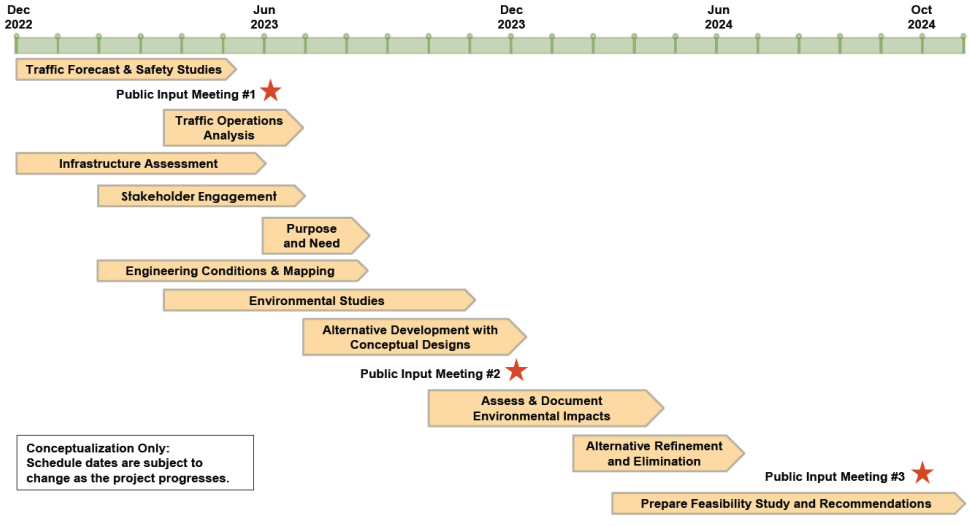
Corridor Bridges

- Interchange bridges
- Grade separation bridges
- Midway bridges (5) – 1964-1965
- I-194 bridges (3) – 1981
- Tyler Parkway bridge – 1995
- All in satisfactory to good condition
- Modification or replacement of all may be required in the future



Study Schedule / Next Steps

Tentative Schedule



Next Steps

Collect comments from the public regarding opportunities and issues within the study area and how they use the roadway. Comment period closes on June 20.

Complete future traffic operations analysis.

Develop a Purpose and Need Statement and assess/document environmental impacts.

Continue engaging with local, state, and federal agencies; stakeholders; and the general public.

Develop an array of alternatives and conceptual designs. Refine and eliminate alternatives through technical analysis, and agency, stakeholder, and public input.

Create a draft study report for comment. A final report will be sent to NDDOT leadership for final review. NDDOT leadership will determine which alternatives to advance.

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Staying Involved

Visit the Project Website

www.dot.nd.gov/midway-grantmarsh

Stay up-to-date on meetings, next steps, and opportunities. Materials from this public input meeting will be available to view on the project website following the meeting.

Interact with the Project

Place pins on our **interactive virtual map** to tell us what is important to you, opportunities for improvement, and how you use the corridor. This is available through the project website.

SCAN ME!

Contact Us

We'd love to stay in touch and hear your feedback throughout the project.

Theresa Maahs, Stantec Project Manager
theresa.maahs@stantec.com | (612) 712-2083

Michael E. Johnson, P.E., NDDOT Project Manager
mijohnson@nd.gov | (701) 328-2118

Attend a Future Public Meeting

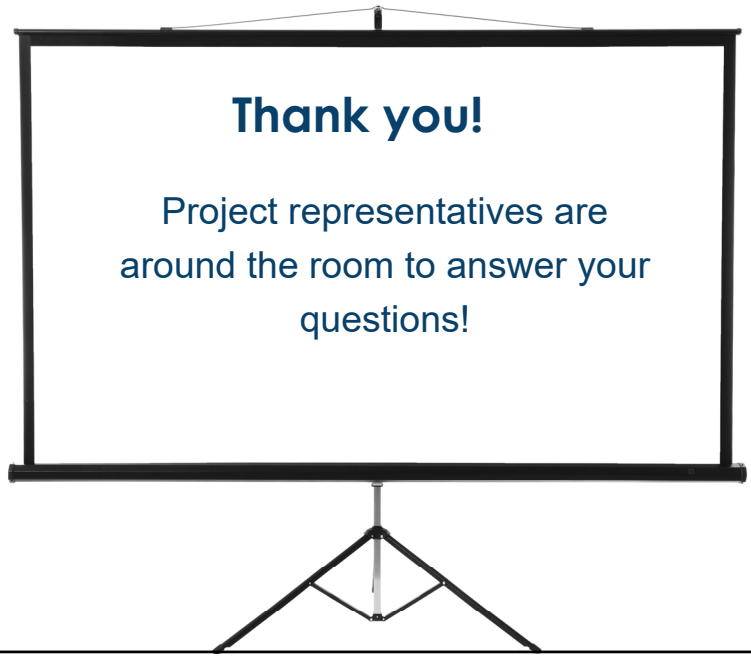
Plan to join us at future public meetings. We will advertise upcoming meetings online and throughout the community. The next public input meeting is tentatively planned for **Winter 2023**.

Leave a Comment

Share feedback via written comments on the forms provided at the meeting or via email. Comments will be collected until **June 20**.

Subscribe for Project Updates

Sign-up for **email notifications** through the project website. Notifications include upcoming engagement opportunities and when new information has been posted.



Thank you!

Project representatives are around the room to answer your questions!

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