

**TO: Bismarck-Mandan Metropolitan Planning Organization
Technical Advisory Committee**

FROM: Rachel Lukaszewski, MPO Executive Director

DATE: November 7, 2022

RE: TAC Meeting

There will be a meeting of the Bismarck-Mandan MPO Technical Advisory Committee on **Monday, November 14, 2022, at 10:00 AM**. The meeting will be held in the Ed “Bosh” Froehlich Meeting Room of the Mandan City Hall at 205 2nd Avenue NW, Mandan, ND. The agenda is outlined below.

The City of Bismarck and TAC members are encouraging citizens to provide their comments for public hearing items on the Bismarck-Mandan Metropolitan Planning Organization TAC agenda via email to mpo@bismarcknd.gov. Please include which item number your comment references. It will be sent to the members, as well as placed with the minutes. To ensure your comments are received prior to the meeting, please submit them by 5:00 pm 1 business day prior to the meeting. If you would like to participate via video or audio link for a 3-5 minute comment on a regular agenda public hearing item, please provide your name, agenda item and e-mail address to the above e-mail at least 3 days before the meeting.

Many of the 14 (fourteen) TAC members will attend this meeting in-person, but have the option to request a ZOOM invite for remote participation. **Individuals wishing to participate via ZOOM should email contact information to mpo@bismarcknd.gov at least 3 days in advance of the meeting to receive a meeting invite tailored uniquely to them.**

As always, live meeting coverage is available on Government Access Channels 2 & 602HD, Radio Access at 102.5 FM Radio, or stream FreeTv.org and RadioAccess.org. Agenda items can be found online at MPO Technical Advisory Committee.

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Next scheduled TAC meeting is on 12/19/2022. Please call 701-355-1852 with questions.

Any individual requiring special accommodations to allow access or participation at the meeting is asked to notify ADA Coordinator, Bismarck-Mandan MPO, PO Box 5503, Bismarck, ND 58506-5503 or complete and submit the Request for Reasonable Accommodations form at <http://www.bismarcknd.gov/DocumentCenter/View/23201> at least five (5) days prior to the meeting.

PROJECTS UPDATE

<u>Project</u>	<u>% Complete</u>	<u>Contracted Completion Date</u>
East Main Avenue Corridor Study	65	06/30/2023
Sunset Drive Corridor Study	35	08/31/2023
2021 TDMSE/2025-2050 MTP	1	03/31/2025
2022 Transit Development Plan	15	12/31/2023
2022 Traffic Data Acquisition	90	11/18/2022

Common MPO Acronyms

ATAC: Advanced Traffic Analysis Center	NDDOT: North Dakota Department of Transportation
CPG: Consolidated Planning Grant	RSP: Regionally Significant Project
FHWA: Federal Highway Administration	TDM: Travel Demand Model
FTA: Federal Transit Administration	TIP: Transportation Improvement Plan
MTP: Metropolitan Transportation Plan	UPWP: Unified Planning Work Program

A full list of common MPO acronyms may be accessed online
<https://www.bismarcknd.gov/DocumentCenter/View/37890/MPO-acronyms>

**BISMARCK-MANDAN METROPOLITAN PLANNING ORGANIZATION
TECHNICAL ADVISORY COMMITTEE
OCTOBER 17, 2022**

The Bismarck-Mandan Metropolitan Planning Organization (MPO) Technical Advisory Committee (TAC) met on October 17, 2022, at 10:00 a.m. in the Ed “Bosh” Froehlich Meeting Room, Mandan City Hall, 205 2nd Ave NW, Mandan, ND. Rachel Lukaszewski presided.

Members present or participating via Zoom were Ben Ehreth, Dan Schriock, Deidre Hughes, Gabe Schell, Andrew Stromme, Justin Froseth, Nick Nustad, Mitch Flanagan, Dean Schloss, Wayne Zacher, and Rachel Lukaszewski. Members absent were John Saiki and Natalie Pierce. The Freight Industry Representative membership formerly held by Chuck Peterson is currently vacant.

Others present or participating via Zoom were Stephen Larson, Bismarck-Mandan MPO; Kristen Sperry, Federal Highway Administration (FHWA); Mark Berg, City of Bismarck Engineering; Will Hutchings, Stantec; Jason Carbee, HDR; James Hines, Traffic Data Solutions; Scott Harmstead and Bill Troe, SRF Consulting; and Adam McGill, KLJ.

MINUTES

Chair Lukaszewski called for consideration of the minutes from September 19, 2022.

MOTION: Mr. Froseth made a motion to approve the September 19, 2022 minutes as presented. Mr. Schriock seconded the motion and with Ben Ehreth, Dan Schriock, Deidre Hughes, Gabe Schell, Andrew Stromme, Justin Froseth, Nick Nustad, Mitch Flanagan, Dean Schloss, Wayne Zacher, and Chair Lukaszewski voting in favor, the minutes of the September 19, 2022 meeting were approved.

EAST MAIN AVENUE CORRIDOR STUDY

Mr. Harmstead provided a study update for SRF. SRF has established three primary design alternatives for the corridor. They are approaching the alternatives in a unique way, as they have divided the corridor into three segments, one from 7th Street to 12th Street, one from 12th Street to Airport Road, and one from Airport Road to 26th Street. The design alternatives will be reviewed using those segments, since each segment is unique. One alternative being considered keeps the current five-lane configuration, but with improved sidewalks and a boulevard. The second alternative would use a three-lane configuration with a center turn lane and significant pedestrian and boulevard improvements including on-street parking, and the third alternative would be a three-lane roadway with a median to improve corridor safety. SRF is conducting technical review of these alternatives to evaluate their potential impacts on safety, congestion, and other corridors. There will be a Study Review Committee meeting in about a month to go over the alternatives and the technical analysis. The analysis will also look at how the alternatives might affect economic and redevelopment opportunities along the corridor. The study is on schedule, and another round of public meetings will be held on November 30 and December 1.

SUNSET DRIVE CORRIDOR STUDY

Mr. McGill presented a study update from KLJ. He said they completed their first round of public input meetings on September 21. The first round of social media ads for this reached about 12,000 people and resulted in 37 clicks for the study website, while the second round reached about 15,000 people resulting in 34 clicks. The study website has reached about 2,000 different people and received 89 comments. KLJ has also received 72 surveys back and generated additional website activity by using a QR code outreach via postcards and fliers. The stakeholder meeting held the morning of September 21 was attended by 8 community members, and the public open house in the afternoon was attended by about 20 people. KLJ is preparing a draft public engagement report based on the feedback received so far. The next steering committee meeting will be November 3, where the public feedback on the study will be presented along with existing and future conditions models. Work on design alternatives for the corridor will begin after the meeting.

2021 TDMSE/2025-2050 MTP

Mr. Carbee provided a study update for HDR on the 2021 Travel Demand Model and Socio Economic (TDMSE) project along with the 2025-2050 Metropolitan Transportation Plan (MTP). This dual study will go for a little over two years. HDR had their kickoff call with HDR, SRF, and MPO staff on September 28 to go over the study approach and scope. The TDMSE portion will come first, so HDR is looking at immediate data needs and next steps to get this going. A stakeholder group is being assembled for the TDMSE, and Mr. Carbee expects more significant updates in the coming months.

2022 TRANSIT DEVELOPMENT PLAN (TDP)

Mr. Troe provided a study update for SRF. He said they are off to a strong start with their public outreach. SRF facilitated a strategic planning meeting with the Bis-Man Transit Board to go over the TDP process. One important element of this TDP that is different from previous plans is an examination of Bis-Man Transit's organizational structure and whether there might be better organizational alternatives available. SRF participated in the September Street Fair in Bismarck and collected feedback from attendees; they also carried out some rides on the transit system to talk with transit riders and gather input from them. SRF is developing an interactive map and a survey to use to collect additional public feedback and is collecting information needed to evaluate the existing conditions at Bis-Man Transit. The possibility of Transit acquiring additional federal funding, if certain criteria are met, will be explored.

2022 TRAFFIC DATA ACQUISITION UPDATE

Mr. Hines provided a brief update on the Traffic Data Acquisition for Traffic Data Solutions (TDS). TDS has submitted summary spreadsheets for 43 of the 87 intersections they collected in Bismarck and Mandan. They are about 40 percent done with the quality control portion of the project, keeping them on schedule to complete the project in November. TDS completed all their video count collections in Bismarck and Mandan and has also received the counts collected by North Dakota Department of Transportation (NDDOT).

2023-2026 TRANSPORTATION IMPROVEMENT PROGRAM MODIFICATIONS

Mr. Larson presented on Exhibit F in the packet. This month the MPO completed two administrative modifications to the recently adopted 2023-2026 TIP. Administrative

modifications are used for minor changes to the TIP; they do not need to be advertised or opened for public comment and are presented to the boards for informational purposes only. The first modification is based on NDDOT's feedback at the September TAC meeting and adds the annual project phase cost estimates for the project years 2023 through 2025 to the TIP. The estimates for the 2026 project year will be added when they are available from NDDOT. The second modification concerns a highway planning study NDDOT is undertaking on Grant Marsh Bridge, to evaluate the feasibility of replacing the bridge. The modification moves the project from funding year 2022 to funding year 2023, while all other project details remain unchanged.

Mr. Schell asked if the second modification also adjusts the 2022-2025 TIP, and Mr. Larson said it does.

BIS-MAN TRANSIT UPDATE

Ms. Hughes provided an update for Bis-Man Transit. She said Bis-Man Transit was recently awarded AARP community challenge grant funding to film a series of "how to use public transit" videos. Transit expects to receive the videos in the next couple of weeks and use them on a variety of platforms. Transit recently installed solar lighting at its shelters to improve safety and visibility. Also, eight additional benches (four in Bismarck and four in Mandan) are expected to be placed along the Transit route over the next few weeks. Transit is experiencing a steady increase in both fixed-route and paratransit ridership. In August, Transit saw 7,600 fixed-route riders, the highest since February 2020. Transit purchased two new fixed-route buses in July, and they went into service last month. These buses have an improved farebox system, and Transit has released an RFP to upgrade the farebox system on its other buses. The farebox system upgrade will be funded with 5339 grant funds and will allow Transit to resolve the procurement findings from its last Triennial Review. The Bis-Man Transit Board recently approved a new safety plan to align with new Federal Transit Administration (FTA) requirements, and updated Transit Asset Management (TAM) and maintenance plans will be considered this month. Finally, Transit is considering options to address the needs of its evening riders. Possible solutions include expanding fixed-route hours to 8 or 9 p.m., or opening the after-hours demand response service to the public from 7 p.m. to midnight Monday through Saturday. Transit has been seeking public input on these options for the last few months.

ROADWAY PROJECTS

Mr. Schriock did not have an update for Burleigh County.

Mr. Schell provided an update for the City of Bismarck on their four ongoing federal aid roadway projects. Their 43rd Avenue project from State Street to 26th Street is nearing completion. The roundabout at 19th Street is complete, and the final pours at 26th Street should be coming in the next couple of weeks. The project will be substantially done by the end of November. The replacement of traffic signals on 7th and 9th Streets between Front Avenue and Avenue C is still ongoing; there are still some missing components for the new signals due to supply chain issues that have caused delays, but the project will hopefully be finished by November. The downtown concrete repair project is on its last phase on 5th Street, and that roadway should be opened in the next couple of weeks by the end of October. There may be some minor elements of the project that carry over to next year. Finally, the Expressway Bridge rehabilitation over the BNSF railroad tracks, with lighting work included, running from about Vermont Drive to Main Avenue, is under construction and waiting on lighting fixtures and bridge work completion.

Mr. Nustad said Lincoln does not have any projects at this time.

Mr. Froseth said the 1806 S/6th Avenue SE project they had in Mandan this year is substantially complete and everything is open for traffic.

Mr. Schloss said NDDOT has opened the 80th Street bridge to traffic and is just finishing some minor items. Mr. Zacher said NDDOT has a couple of planning studies getting underway, one on Grant Marsh Bridge and one on the Sunset Drive Interchange in Mandan.

OTHER BUSINESS

Carbon Reduction Grant Program Update

Ms. Lukaszewski informed TAC about the Carbon Reduction Program, a federal grant opportunity available for the next several years. NDDOT has authority to select all projects that will be funded under this program. A portion of the available funding will be apportioned to the Bismarck-Mandan MPO area. While NDDOT is taking the lead on selecting projects for funding for the 2023 construction season, they are willing to listen to project ideas from the local jurisdictions. There are a couple points to consider if a local jurisdiction brings a project to NDDOT for consideration. The project should reduce carbon emissions (such as through bicycle-pedestrian elements, reducing congestion, or supporting public transit). The project should also be shovel-ready so it can be funded and constructed in 2023. Ms. Lukaszewski said TAC members should contact her by October 31 if they have projects to pursue for this program, and she will forward them to NDDOT.

Mr. Schell asked about timelines for the Carbon Reduction Program. Currently the only projects he has are concepts, and while these could quickly become shovel-ready projects, 2023 might be too soon to make that happen. Mr. Zacher said for the 2023 construction season, that is why NDDOT is only able to look at projects with preliminary work already well under way.

Ms. Lukaszewski said the funding for this program will also be available through 2026, although for the funding years 2024 through 2026, NDDOT will be looking to align projects funded with the Carbon Reduction Plan they are developing. There is opportunity for local jurisdictions to work with NDDOT as they develop their Carbon Reduction Plan to promote projects for future funding. She does not expect a formal solicitation process for these funds, since NDDOT has full authority to designate these funds. The funding split for the program is 80/20, and the funding available for the MPO area in 2023 is around \$600,000.

Mr. Zacher noted Fargo used some 2022 Carbon Reduction money for Transit buses.

ADJOURNMENT

There being no further business, the meeting was adjourned at 10:34 a.m., with the next scheduled meeting to take place on November 14, 2022, at 10:00 a.m.

Respectfully Submitted,

Stephen Larson
Recording Secretary

APPROVED:

Rachel Lukaszewski, Chair

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) / LOCAL ROADS SAFETY PROGRAM (LRSP) SUMMARY

NOVEMBER 2022

A total of three (3) project applications were submitted for fiscal funding year 2027 HSIP/LRSP. The submitting jurisdictions are Burleigh County and the City of Bismarck. The projects were scored against the goals and objectives of the Metropolitan Transportation Plan (MTP) by MPO staff. Points are provided to TAC and Policy Board for information, discussion, and potential prioritization.

JURISDICTION	TYPE	PROJECT DESCRIPTION	TOTAL COST / FEDERAL COST	Score	Consistent with MTP
Burleigh County	Construction	71st Ave NE & 26th St NE Intersection Reconstruction Construction of a roundabout to include lighting and landscaping	\$4,800,000 / \$3,600,000	11.3	Yes
City of Bismarck	Construction	Main Ave & Bismarck Expwy Right Turn Lanes/Approach Widening Construct NB, SB and EB exclusive right turn lanes and widen the north approach to the intersection to accommodate dual SB left turn lanes	\$914,000 / \$822,600	12.5	Yes
City of Bismarck	Construction	Washington St & Bowen Ave Remove existing traffic signal, install raised median island and pedestrian crossing control such as Rectangular Rapid Flashing Beacon or Hawk system	\$140,000 / \$126,000	12.5	Yes

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HSIP/LRSP SCORING METHODOLOGY:

The applications will be scored by MPO staff using the MTP HSIP objectives. These scores will not be prioritized by staff but rather will be provided to the TAC for board discussion. TAC may rank the projects based in their discussion, and the ranking will be provided to PB. PB will be provided the staff score and TAC ranking. PB has the authority to accept, change, or deny any prioritization for the HSIP/LRSP Program.

HSIP/LRSP SCORING (For MPO Staff Use):

HSIP/LRSP Scoring Objectives
1A: Reduce the incidence of all motor vehicle and non-motor vehicle (pedestrian and cyclist) crashes, with an emphasis on serious injury and fatal crashes. This may include implementing improvements that are both proven Crash Reduction Measures at locations with an existing crash history or at locations without an existing crash history as a proactive improvement (SMO)
2B: Maintain street signage and visibility (SMO)
4A: Enhance the efficient and safe movement of freight and goods including investments in congestion reduction and safety improvements on the critical urban freight corridors and other designated freight corridors (SMO)
7B: Leverage the existing transportation system by emphasizing low-cost, high impact solutions that may include incremental system improvements, system preservation, and technology applications to alleviate congestion in lieu of more expensive projects such as roadway widening (SMO)

1. **Project: Main Ave & Bis Expwy**
Submitting Entity: City of Bismarck

Total Points 12.5

- a. Objective 1A: x 4 pts
- b. Objective 2B: x 5 pts
- c. Objective 4A: x 2.3 pts
- d. Objective 7B: x 1.2 pts

2. **Project: Washington St & Bowen Ave**
Submitting Entity: City of Bismarck

Total Points 12.5

- a. Objective 1A: x 4 pts
- b. Objective 2B: x 5 pts
- c. Objective 4A: x 2.3 pts
- d. Objective 7B: x 1.2 pts

3. **Project: Intersection 71st Ave NE & 26th St NE**
Submitting Entity: Burleigh County

Total Points 11.3

- a. Objective 1A: x 4 pts
- b. Objective 2B: x 5 pts
- c. Objective 4A: x 2.3 pts
- d. Objective 7B: 1.2 pts

HSIP/ LRSP SCORING RESULTS

Number (in order of points)	Agency/ Project	Total Points
Tied #1	City of Bismarck – Main & Expwy	12.5
Tied #1	City of Bismarck – Washington & Bowen	12.5
#2	Burleigh County – 71 st Ave NE & 26 th St NE	11.3

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation, Programming
SFN 59959 (11-2019)

23 USC § 409 Documents
NDDOT Reserves All Objections

Please attach a location map(s). You may use additional sheets to further describe your project.

Agency Name City of Bismarck		NDDOT District Bismarck	
Contact Name Mark A. Berg		Current Date 10/14/22	
Email Address mberg@bismarcknd.gov		Telephone Number 701-355-15129	Project Cost Estimate (attach detailed copy) \$914,000.00
Location Description Main Avenue and Bismarck Expressway	Roadway Ownership ☒ State ☐ County ☐ City ☐ Tribe	Vision Zero Emphasis Area (check all that apply) ☐ Younger Drivers ☐ Speeding or Aggressive Drivers ☐ Alcohol-Related ☐ Unbelted Vehicle Occupants ☐ Lane Departure ☒ Intersections	Functional Class ☐ Local Road or Street ☐ Minor Collector ☐ Major Collector ☐ Minor Arterial ☒ Principal Arterial
Improvement Category (check all that apply)			
☐ Access Management ☒ Intersection Geometry ☐ Parking ☐ Roadway Delineation ☐ Advanced Technology & ITS ☐ Intersection Traffic Control ☐ Pedestrians & Bicyclists ☐ Roadway Signs & Traffic Control ☒ Alignment ☐ Lighting ☐ Railroad Grade Crossings ☐ Shoulder Treatments ☐ Animal Related ☐ Miscellaneous ☐ Roadside ☐ Speed Management ☐ Interchange Design ☐ Non-infrastructure ☒ Roadway ☐ Work Zone			
Describe Current Safety Issues Lack of northbound, southbound and eastbound exclusive right turn lanes to separate decelerating right turning traffic from high speed through traffic. Additional deceleration and storage area for high volume southbound left turning traffic. Currently during peak hour traffic southbound left turning vehicles stack beyond the available left turn storage into the high speed through lane posted at 50 MPH.			
Describe Proposed Safety Improvements Construct northbound, southbound and eastbound exclusive right turn lanes to provide area for vehicles to decelerate and have storage out of the high speed through traffic lane. Widen the north approach to this intersection to accommodate dual southbound left turn lanes.			

For questions or comments contact:
Justin Schlosser
701-328-2673
jjschlosser@nd.gov

Please email completed form to this address: hsip@nd.gov



October 14, 2022

Mr. Justin Schlosser, PE
Traffic Operations
North Dakota Department of Transportation
608 Boulevard Avenue
Bismarck, North Dakota 58505-0700

Subject: Highway Safety Improvement Project (HSIP)

Justin:

This letter is to submit the attached application for the HSIP safety program to be considered for funding. The City of Bismarck would like to submit for a project at the intersection of Bismarck Expressway/ND810 and Main Avenue. At this time this intersection has been identified as a high crash location (2019-2021) and ranked as 19 out of 50 high crash locations with 32 crashes. The first year that this intersection was identified as high crash location was the 2017-2019 review

The safety concern is to reduce the number of north/south rear-end crashes by constructing exclusive right turn lanes. The construction of north/south right-turn lanes would improve safety by removing traffic slowing to make a right turn out of the highspeed through lanes.

In addition to separating the slower traffic right turning traffic from the high-speed through traffic, right turn overlaps could be added to coincide with the non-conflicting protected left turn phases.

The long-term benefits after implementation should be realized through improved vehicular safety, traffic flow, reduction in turning maneuver conflicts, and reduction of driver aggression.

I have attached the required HSIP project applications, aerial photo and an estimate of the cost.

If you have any questions, contact my office.

Sincerely,

Mark Berg \s\

Mark A. Berg, PE
Bismarck Traffic Engineer

Attachment

Traffic Study

Main Avenue and Bismarck Expressway/ND 810

Existing Conditions

The average daily traffic entering this intersection from the north or south is estimated at 20,000 with 14 percent truck traffic. The existing traffic control for this intersection is a traffic actuated signal system. All approaches to this intersection have two through lanes, exclusive left turn lanes but no right turn lanes except for the westbound movement. The left-turning traffic signal control is a flashing yellow arrow allowing for protected/permissive movements. No pedestrian facilities are in place on all four approaches at this intersection.

Crash Review

The review period for this intersection is 2019 through 2021. There were 15 rear end crashes (no predominant direction) and 11 left turn crashes (no predominant direction). 10 total crashes (31%) occurred during non-dry conditions.

Safety Concerns

1. The lack of north/south right-turn lanes reduce the number of rear-end crashes. Separating traffic that is slowing to make a right turn from the higher speed through traffic could potentially reduce the number of rear-end crashes.
2. The high volume of southbound left turning traffic causes this movement to stack up beyond the storage area of the existing left turn lane and into the inside southbound through traffic lane. This situation creates a safety concern resulting from stopped left turning traffic in a high speed through traffic lane.

Counter Measure

1. The optimal solution is to construct exclusive right turn lanes for north/southbound turning vehicles separate decelerating traffic from the higher speed through traffic.

In addition to separating decelerating right turning traffic from the higher speed through traffic, modifying the traffic signal system to include right turn overlap phasing to operate with non-conflicting left turn phases would also have benefits by increasing capacity and decreasing delay.

2. The solution to having southbound left turning exceeding the available storage area stopped in the inside through lane would be to consider a southbound double left turn lane.

Before moving forward with a project to build additional turn lanes the traffic count conducted on 09/20/2022 be verified since the 80th Street overpass over I-94 was closed and typical travel patterns may have been altered. A new count should be conducted to verify the validity of the previous count.

Supporting Documentation

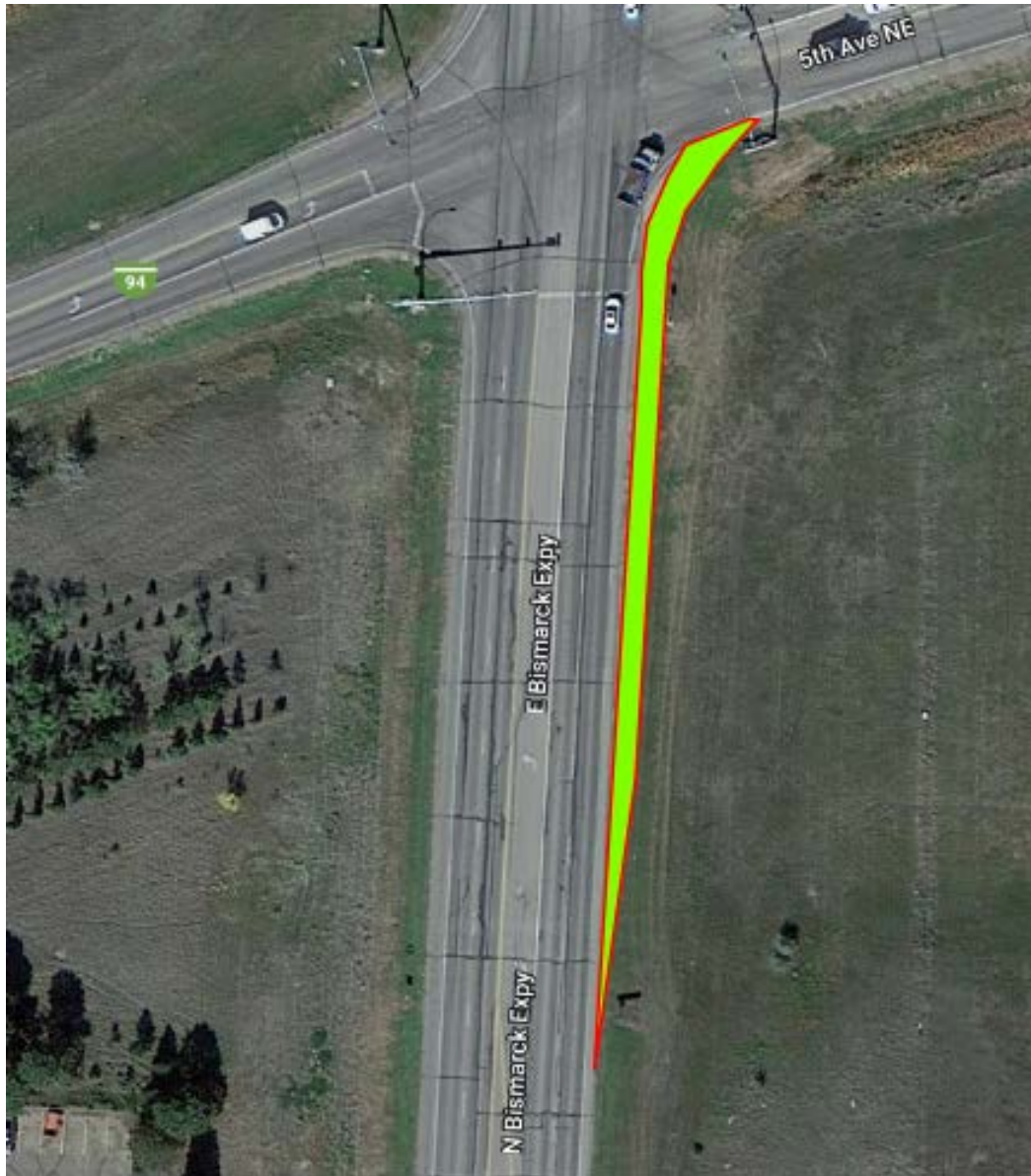
The purpose and need for the north and south right turn lanes on Bismarck Expressway at Main Avenue were determined using the Right Turn Lane flow chart from the NDDOT Traffic Operations Manual. The intersection is signalized and has a posted speed limit of 50 MPH. The minimum peak hour volumes for right turning traffic exceed the threshold value of 50 vehicles during the peak hour. Based on the flowchart north and south right turn lanes are warranted.

Cost Analysis – North South Right Turn Lanes

Item	Quantity	Unit	Estimated Unit Price	Total Estimated Cost
Contract bond	1	EA	\$ 5,000.00	\$5,000.00
Mobilization	1	LS	\$ 50,000.00	\$50,000.00
Top Soil	1000	CY	\$ 15.00	\$15,000.00
Erosion Control	1	LS	\$ 10,000.00	\$10,000.00
Traffic Control	1	LS	\$ 25,000.00	\$25,000.00
Relocate Light Poles	3	EA	\$ 7,000.00	\$21,000.00
45" Arch Pipe Extension	30	LF	\$ 250.00	\$7,500.00
Common Excavation	2400	CY	\$ 25.00	\$60,000.00
Granular Base	1600	CY	\$ 80.00	\$128,000.00
Pavement milling surface	100	TN	\$ 160.00	\$16,000.00
Hot Bituminous Pavement	1600	SY	\$ 150.00	\$240,000.00
Seeding/Sodding	1	AC	\$ 4,000.00	\$4,000.00
Relocate Pull Box	4	EA	\$ 3,000.00	\$12,000.00
Relocate Type II Signal Std	2	EA	\$ 7,500.00	\$15,000.00
Revise Traffic Signal - Overlaps	1	LS	\$ 100,000.00	\$100,000.00
Relocate Signs	4	EA	\$ 500.00	\$2,000.00
Pavement Marking	1	LS	\$ 20,000.00	\$20,000.00
Revise Lighting	3	EA	\$ 7,000.00	\$21,000.00
TOTAL (2022)				\$751,500.00
TOTAL (2027) - 4%/5 Years				(\$914,314.66)

Cost Analysis –Southbound Double Left Turn Lanes

No cost analysis was developed for the southbound double left turn lane lack of clarity and complexity of the concept of installing a double left turn lane on Bismarck Expressway. The interior double left turn lane would require additional exterior widening of the road through the functional area of the intersection. This may impact existing traffic signal standards or require additional crash attenuation devices be installed.



Northbound Right Turn Lane



Southbound Right Turn Lane

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP)**PROJECT APPLICATION**

North Dakota Department of Transportation, Programming
SFN 59959 (11-2019)

23 USC § 409 Documents
NDDOT Reserves All Objections

Please attach a location map(s). You may use additional sheets to further describe your project.

Agency Name City of Bismarck		NDDOT District Bismarck	
Contact Name Mark A. Berg		Current Date 10/14/22	
Email Address mberg@bismarcknd.gov		Telephone Number 701-355-1529	Project Cost Estimate (attach detailed copy) \$140,000.00
Location Description Washington Street and Bowen Avenue	Roadway Ownership ☐ State ☐ County ☒ City ☐ Tribe	Vision Zero Emphasis Area (check all that apply) ☐ Younger Drivers ☐ Speeding or Aggressive Drivers ☐ Alcohol-Related ☐ Unbelted Vehicle Occupants ☐ Lane Departure ☒ Intersections	Functional Class ☐ Local Road or Street ☐ Minor Collector ☐ Major Collector ☐ Minor Arterial ☒ Principal Arterial
Improvement Category (check all that apply)			
☐ Access Management	☐ Intersection Geometry	☐ Parking	☐ Roadway Delineation
☐ Advanced Technology & ITS	☒ Intersection Traffic Control	☒ Pedestrians & Bicyclists	☐ Roadway Signs & Traffic Control
☐ Alignment	☐ Lighting	☐ Railroad Grade Crossings	☐ Shoulder Treatments
☐ Animal Related	☐ Miscellaneous	☐ Roadside	☐ Speed Management
☐ Interchange Design	☐ Non-infrastructure	☐ Roadway	☐ Work Zone
Describe Current Safety Issues The existing traffic signal at the intersection of Washington St and Bowen Avenue no longer meets traffic signal warrants. When the traffic signal is removed there will still be a need for pedestrians to cross at this intersection.			
Describe Proposed Safety Improvements Remove the existing traffic signal system and install a pedestrian crossing control such as a Rectangular Rapid Flashing Beacon system (RRFB) or a Hawk system with a raise median refuge island.			

For questions or comments contact:
Justin Schlosser
701-328-2673
jjschlosser@nd.gov

Please email completed form to this address: hsip@nd.gov



October 14, 2022

Mr. Justin Schlosser, PE
Traffic Operations
North Dakota Department of Transportation
608 Boulevard Avenue
Bismarck, North Dakota 58505-0700

Subject: Highway Safety Improvement Project (HSIP)

Justin:

This letter is to submit the attached application for the HSIP safety program to be considered for funding. The City of Bismarck would like to submit for a project at the intersection of Washington Street and Bowen Avenue for the removal of a non-warranted traffic signal and replacement with a median pedestrian refuge and enhanced pedestrian crossing. At this time this intersection will have a need for pedestrian crossing facility at this intersection with Burleigh County housing development on the east side and Kiwanis Park on the west side of Washington Street.

The safety concern, the ability for pedestrians to safely cross Washington Street, will result from the removal of a non-warranted traffic. A Rectangular Rapid Flashing Beacon (RRFB) system along with a raised median refuge could provide a safe crossing for pedestrians.

The long-term benefits after implementation should be realized through improved vehicular safety, traffic flow, reduction in turning maneuver conflicts, while maintaining adequate pedestrian crossing opportunities of this multi-lane roadway.

I have attached the required HSIP project applications, aerial photo and an estimate of the cost.

If you have any questions, contact my office.

Sincerely,

Mark Berg \s\

Mark A. Berg, PE
Bismarck Traffic Engineer

Attachment



Traffic Study

Washington Street and Bowen Avenue

Existing Conditions

The average daily traffic entering this intersection from the north or south is estimated at 15,300 ADT with 1 percent truck traffic. The existing traffic control for this intersection is no longer Warranted. Washington street is a 5-lane urban roadway. The posted speed limit on Washington street is 35 MPH. The west approach of Bowen Avenue is offset 130 south of the east approach of Bowen Avenue to Washington Street. Pedestrian facilities are in place across the east approach and west approach to Washington Street. Pedestrian facilities to cross Washington Street are located on the south approach of Washington Street to the west approach of Bowen Avenue.

Crash Review

The review period for this intersection is 2019 through 2021. There were 2 rear end crashes (no predominant direction) and 3 angle crashes (no predominant direction) at the east approach of Bowen Avenue to Washington street. at the west approach of Bowen Avenue to Washington street 2 rear-end crashes occurred.

Safety Concerns

After the removal of the traffic signal system at this offset intersection a pedestrian facility will be necessary for pedestrians going between the Burleigh County Housing Development and Kiwanis Park.

Counter Measure

The optimal solution after the traffic signal is taken out of service would be to install a Hybrid crossing beacon system or Rectangular Rapid Flashing Beacon. A raise median island refuge should be utilized with either system to reduce the crossing distance.

Supporting Documentation

This project was identified in the Bismarck-Mandan MPO's 2020 intersection analysis study.

Cost Analysis

Traffic Signal removal - \$25,000

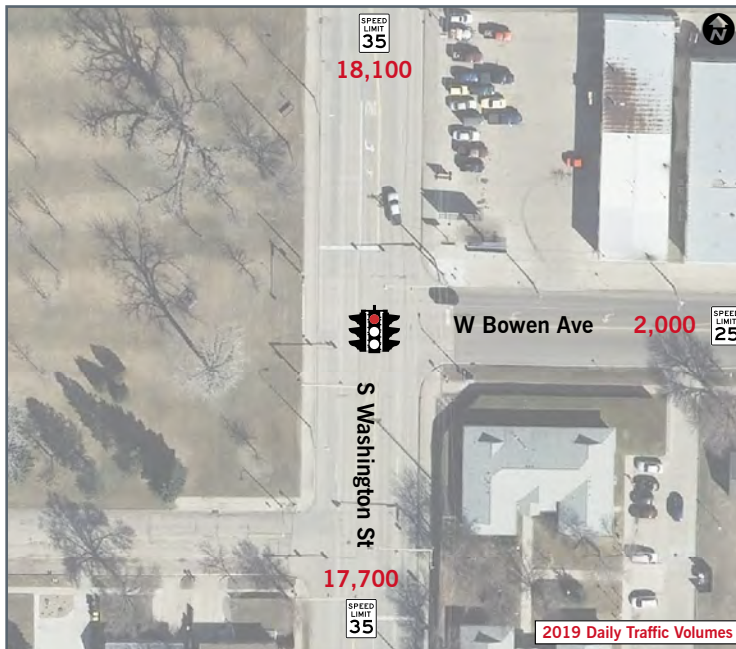
RRFB - \$25,000

Median treatment \$70,000

Total = \$120,000 construction cost

Indexed 4% for 4 years = \$140,000 construction cost

Washington Street and Bowen Avenue North Bismarck

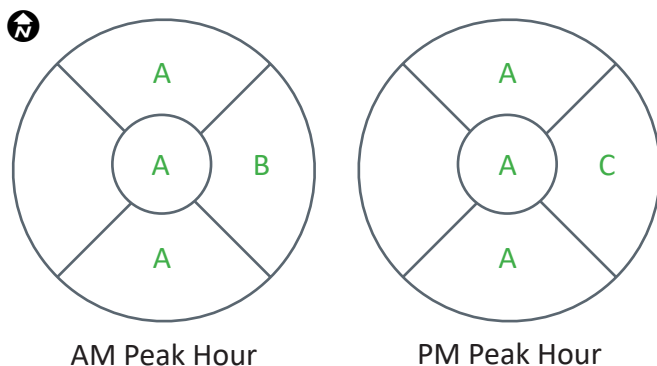


The Washington Street and Bowen Avenue North intersection is signalized. The west approach of Bowen Avenue is offset, forming another intersection with Washington Street 130 feet to the south. Immediately surrounding land use includes light industrial and residential, with Kiwanis Park on the northwest quadrant of the intersection.

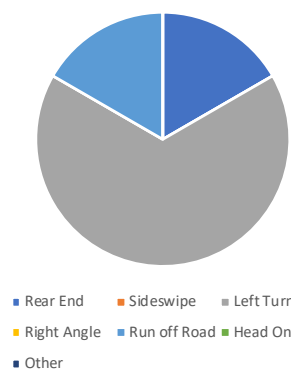
The traffic signal at this intersection does not meet traffic signal warrants during any hour of the day. Unwarranted traffic signals have been proven to increase overall crash potential, most notably a stark increase in rear-end crashes compared to warranted traffic signals or lesser control devices.

The intersection experiences a disproportionate number of rear-end crashes, a type of crash common at traffic signals. The intersection also experienced one bicycle crash within the study period.

Traffic Operations Level of Service



Crash History 01/01/2013 - 12/31/2017



6 Total Crashes
Critical Crash Rate?

- ☐ Yes
☒ No

Above Average Crash Rate?

- ☐ Yes
☒ No

Repeatable Crash Types?

- ☒ Yes - Left Turn
☐ No

Multimodal Facilities

- ☐ Recent Pedestrian Crash?
- ☒ Recent Bicycle Crash?
- ☐ Within 1/4 Mile of School?
- ☒ Along Transit Route?
- ☒ Crossing with 4 or More Lanes?
- ☐ Crossing with Speeds Higher than 35 MPH?
- ☒ High Land Use Density?

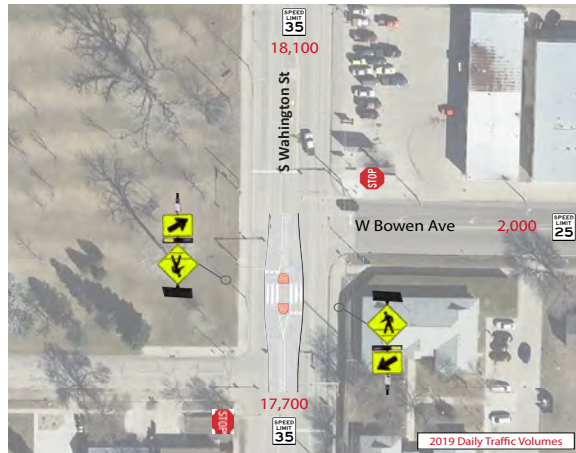
There are sidewalks on each quadrant and a marked crosswalk on the east leg. Bus Route 2 (Blue Route) runs through the intersection.

Traffic Control Warrants

- ☐ **Meets Signal Warrants?**
0/8 Warrant 1: Eight Hour Traffic Volumes
0/4 Warrant 2: Four Hour Traffic Volumes
0/1 Warrant 3: Peak Hour Traffic Volumes
- ☐ **Meets Warrant for Dedicated Left-Turn Phasing?**
- ☐ **Meets All-Way Stop Control Warrants?**
0/8 Minimum Traffic Volumes

The intersection does not meet warrants for the existing signal based on observed traffic volumes.

Alternative 1: Remove Signal



● Safety

- Research shows a 24 percent decrease in total crashes and a 53 percent decrease in injury crashes after removing an unwarranted signal.

● Multimodal Conditions

- Removes traffic control on Washington Street, making pedestrian crossings more difficult. However, research shows refuge islands reduce pedestrian crashes by around 40 percent, and that rectangular rapid flashing beacons can increase driver compliance for yielding to pedestrians from 18 percent to 81 percent.

● Traffic Operations

- Maintains minor approach LOS C or better throughout the day for both Bowen Avenue approaches, while maintaining free-flow operations on Washington Street.

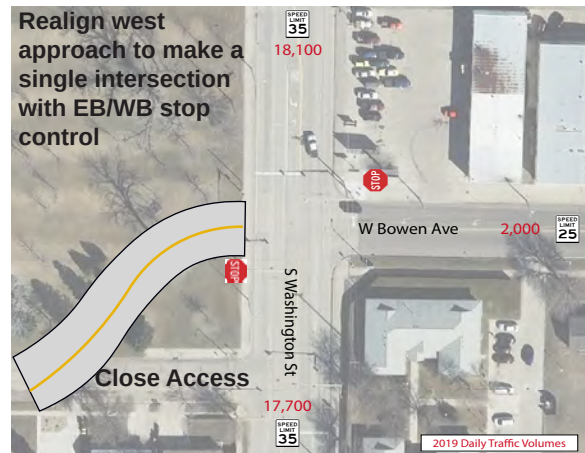
● Cost and Impacts

- Estimated cost of \$70,000 for a pedestrian refuge island, and \$20,000 for roadside beacons with higher costs if an overhead configuration is used. There would be minimal impacts to curb lines since there is already median space for the refuge island.

● Other Notes

- Requires consistency with design decisions at the south Bowen Avenue intersection.

Alternative 2: Remove Signal and Realignment



● Safety

- Creating a four-legged intersection introduces more conflict points (9 conflict points at a T intersection, 32 conflicts at a standard intersection).

● Multimodal Conditions

- Removes traffic control on Washington Street, making pedestrian crossings more difficult.

● Traffic Operations

- Minor approach LOS D is expected in the AM and PM peak hours.

● Cost and Impacts

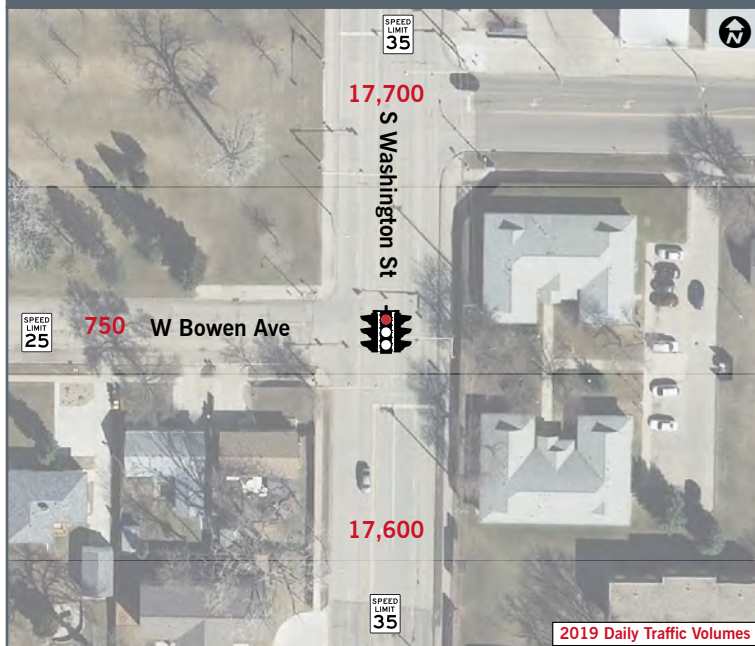
- Estimated cost of \$500,000. The park property is protected by the National Environmental Policy Act (NEPA) and serves as a stormwater detention area, which could render this concept infeasible.

● Other Notes

- Existing intersection offset does not introduce overlapping left turns, mitigating conflicts seen at intersections that are offset in the opposite direction.

Summary: Traffic signal removal and replacement with a pedestrian refuge island and flashing beacon has the potential to reduce crash potential, improve traffic flow along Washington Street and provide similar, if not improved, pedestrian crossing conditions.

Washington Street and Bowen Avenue South Bismarck

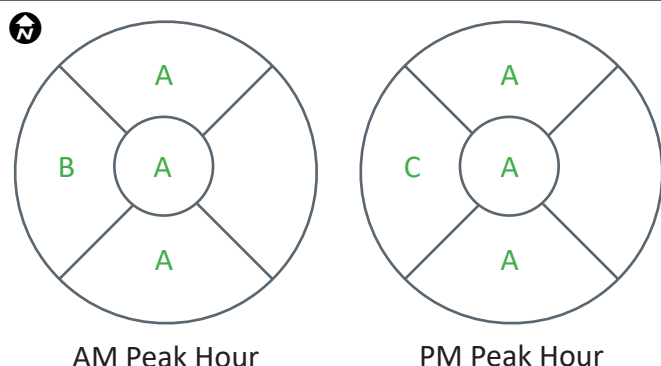


The Washington Street and Bowen Avenue South intersection is signalized. The east approach of Bowen Avenue is offset, forming another intersection with Washington Street 130 feet to the north. Immediately surrounding land use includes light industrial and residential, with Kiwanis Park on the northwest quadrant of the intersection.

The traffic signal at this intersection does not meet traffic signal warrants during any hour of the day. Unwarranted traffic signals have been proven to increase overall crash potential, most notably a stark increase in rear-end crashes compared to warranted traffic signals or lesser control devices.

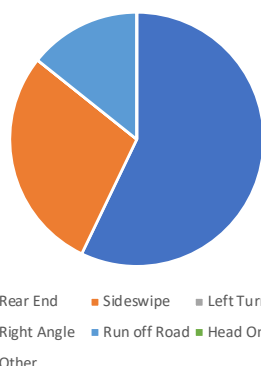
The intersection experiences a disproportionate number of rear-end crashes, a type of crash common at traffic signals. The intersection also experienced one bicycle crash within the study period.

Traffic Operations Level of Service



Crash History

01/01/2013 - 12/31/2017



7 Total Crashes

Critical Crash Rate?

- ☐ Yes
☒ No

Above Average Crash Rate?

- ☐ Yes
☒ No

Repeatable Crash Types?

- ☒ Yes - Rear End
☐ No

Multimodal Facilities

- ☐ Recent Pedestrian Crash?
- ☒ Recent Bicycle Crash?
- ☐ Within 1/4 Mile of School?
- ☒ Along Transit Route?
- ☒ Crossing with 4 or More Lanes?
- ☐ Crossing with Speeds Higher than 35 MPH?
- ☒ High Land Use Density?

There are sidewalks on each quadrant and a marked crosswalk on the south leg. Bus Route 2 (Blue Route) runs through the intersection.

Traffic Control Warrants

- ☐ **Meets Signal Warrants?**
0/8 Warrant 1: Eight Hour Traffic Volumes
0/4 Warrant 2: Four Hour Traffic Volumes
0/1 Warrant 3: Peak Hour Traffic Volumes
- ☐ **Meets Warrant for Dedicated Left-Turn Phasing?**
- ☐ **Meets All-Way Stop Control Warrants?**
0/8 Minimum Traffic Volumes

The intersection does not meet warrants for the existing signal based on observed traffic volumes.

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation, Programming
SFN 59959 (11-2019)

23 USC § 409 Documents
NDDOT Reserves All Objections

Please attach a location map(s). You may use additional sheets to further describe your project.

Agency Name Burleigh County		NDDOT District 1	
Contact Name Marcus Hall		Current Date 11/3/22	
Email Address mahall@nd.gov	Telephone Number 701-204-7748		Project Cost Estimate (attach detailed copy) 4,800,000
Location Description Legal Description:: Section 2,3,10, and 11 Township 139 N, Range 80 W 71st Ave. NE & 26th St. NE	Roadway Ownership ☐ State ☒ County ☐ City ☐ Tribe	Vision Zero Emphasis Area (check all that apply) ☒ Younger Drivers ☒ Speeding or Aggressive Drivers ☐ Alcohol-Related ☐ Unbelted Vehicle Occupants ☒ Lane Departure ☒ Intersections	Functional Class ☐ Local Road or Street ☐ Minor Collector ☐ Major Collector ☐ Minor Arterial ☒ Principal Arterial
Improvement Category (check all that apply)			
☐ Access Management	☒ Intersection Geometry	☐ Parking	☐ Roadway Delineation
☐ Advanced Technology & ITS	☒ Intersection Traffic Control	☐ Pedestrians & Bicyclists	☐ Roadway Signs & Traffic Control
☐ Alignment	☒ Lighting	☐ Railroad Grade Crossings	☐ Shoulder Treatments
☐ Animal Related	☐ Miscellaneous	☒ Roadside	☒ Speed Management
☐ Interchange Design	☐ Non-infrastructure	☒ Roadway	☐ Work Zone
Describe Current Safety Issues This intersection was identified for safety improvements in the Burleigh County LSRP due to the high volume of traffic flow that has developed in recent years. Improvements of the 71st Ave NE & 26th St NE corridors have been referenced in the Arrive 2045 MTP. Upon recent site visits, there appears to be an abundance of turn movements from 26th Street onto Centennial Road across traffic headed east and west bound especially in the peak hour commutes. The intersection would benefit from lighting to improve visibility at night and in the early morning hours. The speed limit is currently set at 55 mph causing potential for collisions with all the turning movements. 26th Street has areas of rural residential housing and 71st Ave serves as a direct route to Legacy High School causing a larger number of younger, lesser experienced drivers using the roadways on a daily basis. We have also witnessed excessive speeds along this corridor. It should also be noted that 26th Street NE is in Burleigh County's short term project list to be constructed to the south from 71st Ave to 43rd Ave. NE which will greatly impact the traffic patterns in the area and intersection.			
Describe Proposed Safety Improvements The current configuration of this intersection is a stop control on the north and south bound traffic of 26th Street NE and a through condition on 71st Avenue NE. Due to the the traffic volumes, projected growth in the area, turn movements required along with the future roadway plans to have 26th Street improved to 43rd Ave NE we are proposing an intersection improvement which includes the construction of a roundabout to allow traffic to continue movement while increasing safety while servicing the ever growing traffic in the area. Providing a roundabout would allow for safer turn movements and while also addressing the speed and lighting issues.			

For questions or comments contact:

Justin Schlosser
701-328-2673
jjschlosser@nd.gov

Please email completed form to this address: hsip@nd.gov

BURLEIGH COUNTY, NORTH DAKOTA ESTIMATED PROJECT LIMITS

N
11/03/2022



SCOPING REPORT

Report Completed By: Daniel Schriock, P.E.
Phone Number: (701) 204-7748

Date: 11/03/2022

Project Description: Reconstruction of 71st Avenue NE & 26th Street NE intersection.

Legal Description: Section 2, 3, 10, and 11 Township 139 North, Range 80 West

Functional and Funding Roadway Classification: Principal Arterial

Project Schedule: Proposed to use funding from 2027 HSIP Funds

Purpose and Need of Project: This intersection was identified for safety improvements due to the high volume of traffic flow that has developed in recent years and does not meet current or future needs. Thankfully severe crashes have not yet increased, but unfortunately the number of near misses and other collisions have been rising and this is due to continued development in the area and vehicular and truck traffic diverting around Bismarck to use the 71st/Centennial corridor from US 83. Due to the high traffic volume, projected growth, turn movements required, along with plans to improve 26th St. NE south to 43rd Ave. NE it is proposed to construct a roundabout or some other improvement at this intersection to allow traffic to continue movement while increasing safety while servicing traffic from these roadways. The utility impacts will be moderate with some relocation necessary.

1. Construction History

CONSTRUCTION HISTORY – 71 ST AVENUE NE & 26 TH STREET NE				
Year	Construction	Depth (in)	Width (ft)	Oil
Unknown	Asphalt Pavement 26 th St. NE	4	24	Unknown
2014	Asphalt Overlay 71 st Ave NE	3	28	PG 58-28

2. Existing Conditions

71st Avenue NE (West):

Existing Inslopes - Left: 4:1 Right: 4:1

Existing Typical Section - Driving Lanes: 12 Shoulders: 2 ft Total Asphalt Width: 28 ft

Total Gravel Width: 32 ft Depth of Asphalt: Unknown

Depth of Gravel: Unknown Turn Lanes: None

Average Daily Traffic:

Year	ADT	Source
2015	3900	Bismarck-Mandan MPO MTP
2013	5,270	Burleigh County
2027	6,250	Forecasted (2015 at 4% Growth)
2045	21,000	Bismarck-Mandan MPO MTP

71st Avenue NE (East):Existing Inslopes - Left: 4:1 Right: 4:1Existing Typical Section - Driving Lanes: 12 Shoulders: 2 ft Total Asphalt Width: 36 ftTotal Gravel Width: 32 ft Depth of Asphalt: UnknownDepth of Gravel: Unknown Turn Lanes: Left

Average Daily Traffic:		
Year	ADT	Source
2015	5,000	Bismarck-Mandan MPO MTP
2013	4,710	Burleigh County
2026	8,100	Forecasted (2015 at 4% Growth)
2045	20,900	Bismarck-Mandan MPO MTP

26th Street NE (North):Existing Inslopes - Left: 4:1 Right: 4:1Existing Typical Section - Driving Lanes: 12 Shoulders: 0 ft Total Asphalt Width: 24 ftTotal Gravel Width: 26 ft Depth of Asphalt: UnknownDepth of Gravel: Unknown Turn Lanes: Left & Right

Average Daily Traffic:		
Year	ADT	Source
2015	1,200	Bismarck-Mandan MPO MTP
2019	1,230	Burleigh County
2026	1,950	Forecasted (2015 at 4% Growth)
2045	2,600	Bismarck-Mandan MPO MTP

26th Street NE (South):Existing Inslopes - Left: 4:1 Right: 4:1Existing Typical Section - Driving Lanes: 11 Shoulders: 0 ft Total Asphalt Width: 22 ftTotal Gravel Width: 24 ft Depth of Asphalt: UnknownDepth of Gravel: Unknown Turn Lanes: None

Average Daily Traffic:		
Year	ADT	Source
2015	2,800	Bismarck-Mandan MPO MTP
2013	280	Burleigh County
2026	4,480	Forecasted (2019 at 4% Growth)
2045	3,000	Bismarck-Mandan MPO MTP

3. Condition of Pavement Section:
The existing roadway has low amounts of longitudinal and transverse cracks.
4. Existing Geometry:
 - Horizontal Curves:** No
 - Vertical Curves:** No
 - Major Intersections:** 71st Avenue NE and 26th Street NE
 - Vertical Clearances:** NA
 - Ramps:** None
 - Existing Structures:** None
 - Centerline Culverts:** Culverts under all legs of intersection
 - Railroad Crossing:** Railroad Crossing is located approximately ½ mile west of intersection
5. Access Points to Adjoining Properties:
6. Existing Sidewalks/Shared Use Paths:
There are no existing sidewalks or shared use paths.
7. Existing or Additional Storm Sewer:
The culvert sizes and locations will be addressed with and H&H study.
8. County Water and Sanitary Sewer Line:
There is no existing water or sanitary sewer lines.
9. Existing Lighting Systems:
There are no existing lighting systems in the project corridor.
10. Traffic Signals and Turning Lanes:
There are no turn lanes or traffic signals currently at the proposed intersection.

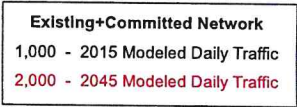
Burleigh County Highway Department

Preliminary Estimate of Costs

Reconstruction of 71st Ave. NE & 26th St NE Intersection

11/3/2022

<u>Item Description</u>	<u>Price</u>
Roundabout	\$3,500,000.00
Lighting	\$200,000.00
Landscaping	\$100,000.00
ROW	\$200,000.00
	\$4,000,000.00
<u>Non-Participating</u>	
Design Engineering	\$400,000.00
Construction Engineering	\$400,000.00
<u>Total Cost</u>	<u>\$4,800,000.00</u>
HSIP	\$3,600,000.00
Match	\$400,000.00
Local Non Participating	\$800,000.00



BURLEIGH COUNTY, NORTH DAKOTA

AVERAGE DAILY TRAFFIC COUNT (ADT) MAP

N
11/03/2022

Average Daily Traffic: 26th St NE (North of 71st Ave)

Year	ADT	Source
2015	1,200	Bismarck-Mandan MPO MTP
2019	1,230	Burleigh County
2026	1,950	Forecasted (2015 at 4% Growth)
2045	2,600	Bismarck-Mandan MPO MTP

26TH ST NE

71ST AVE NE

Average Daily Traffic: 71st Ave NE (West of 26th St)

Year	ADT	Source
2015	3,900	Bismarck-Mandan MPO MTP
2013	5,270	Burleigh County
2027	6,250	Forecasted (2015 at 4% Growth)
2045	21,000	Bismarck-Mandan MPO MTP

71ST AVE NE

Average Daily Traffic: 71st Ave NE (East of 26th St)

Year	ADT	Source
2015	5,000	Bismarck-Mandan MPO MTP
2013	4,710	Burleigh County
2026	8,100	Forecasted (2015 at 4% Growth)
2045	20,900	Bismarck-Mandan MPO MTP

Average Daily Traffic: 26th St NE (South of 71st Ave)

Year	ADT	Source
2015	2,800	Bismarck-Mandan MPO MTP
2013	280	Burleigh County
2026	4,480	Forecasted (2019 at 4% Growth)
2045	3,000	Bismarck-Mandan MPO MTP

26TH ST NE

 Project Extent

0 500 1,000 Feet

30

Total Crashes: 9 (Sorted by Date)		23 USC § 407 Documents NDDOT Reserves All Objections		Rural Segment Crash Summary Sheets		LEGEND ► Fatal ► Incapacitating Injury ► Non-Incapacitating Injury ► Possible Injury ◆ Wet surface ※ Snow, Ice, Slush, Frost ▲ Crash related to work zone ① Unit number		1. Contributing Factor * = alcohol or drugs involved 2. Most Harmful Event For single vehicle crashes, the most harmful event is shown in parentheses in the "Type of Collision" column		VISION ZERO	
City: Burleigh County											
Location: 71st Ave N & 26th St											
Start - End Date: 9/1/2017 - 8/31/2022 (5 Years)											
Crash No.		Crash Severity Date, Day Surface Conditions, Weather Lighting, Time Road Geometrics, Relation to Jct		Type of Collision		① AGE SEX CITY STATE Unit Configuration Movement (traffic control) Contributing Factor ¹ Most Harmful Event ²		Shortened Narrative		Name of Intersection Diagram	
1	1042884	PDO 11/03/17 Friday Slush Snow Daylight 2:58 PM Straight (on Level) Intersection		※ Other		① 63M BISMARCK ND Pickup - Van - Utility WB Turning Right To Fast for Conditions ② 18F BALDWIN ND Pickup - Van - Utility SB Turning Right (Stop) Weather		D1 intended to make a WB to NB right turn, lost control on icy road while turning, and slid into V2 (stopped facing south at stop sign).			
2	1047896	PDO 01/12/18 Friday Snow Clear Dark 6:17 PM Straight (on Level) Intersection		※ Rear End		① 41M BISMARCK ND Pickup - Van - Utility EB Going Straight To Fast for Conditions ② 39F BISMARCK ND Passenger Car EB Turning Left					
3	1051340	PDO 03/05/18 Monday Ice / Snow Sleet/Hail/Freezing Rai Dawn 6:43 AM Straight (on Level) Intersection		※ Rear End		① 19M BISMARCK ND Passenger Car SB Going Straight (Stop) Weather ② 63M BISMARCK ND Pickup - Van - Utility SB Turning Right (Stop) Weather					
4	1052734	PDO 03/26/18 Monday Dry Clear Daylight 2:25 PM Straight (on Level) Intersection		Rear End		① 17M BISMARCK ND Passenger Car WB Going Straight Following too Close ② 43F BISMARCK ND Pickup - Van - Utility WB Slowing/Stopping					
5	1068758	► Non-incapacitating injury 01/02/19 Wednesday Snow Blowing Snow Dawn 7:45 AM Straight (on Level) Intersection		※ Angle		① 29F BISMARCK ND Pickup - Van - Utility EB Going Straight Weather ② 56F BISMARCK ND Passenger Car NB Turning Right (Stop) Failed to Yield					
6	1070530	PDO 01/28/19 Monday Ice / Snow Sleet/Hail/Freezing Rai Dark(L) 6:55 AM Straight (on Level) Intersection		※ Single Veh. (Overtum / Rollover)		① 27M BISMARCK ND Pickup - Van - Utility EB Going Straight Weather Overtum / Rollover ② 37F BALDWIN ND Pickup - Van - Utility SB Going Straight (Stop)		Driver lost control on icy road and hit stop sign at intersection.			
7	1092312	► Possible Injury 02/28/20 Friday Ice / Snow Fog / Smoke / Dust Dawn 7:13 AM Straight (on Level) Intersection		※ Rear End		① 20M BISMARCK ND Passenger Car SB Slowing/Stopping (Stop) To Fast for Conditions ② 37F BALDWIN ND Pickup - Van - Utility SB Going Straight (Stop)					
8	1100676	► Non-incapacitating injury 11/05/20 Thursday Dry Clear Daylight 5:08 PM Straight (on Level) Intersection		Rear End		① 36F HAZEN ND Pickup - Van - Utility EB Going Straight Careless/Reckless Driving ② 47F BISMARCK ND Pickup - Van - Utility EB Turning Left					
9	1124884	► Incapacitating Injury 07/06/22 Wednesday Dry Clear Daylight 3:00 PM Straight (on Level) Intersection		Sideswipe (Same Dir.)		① 35M BISMARCK ND Motorcycle WB Going Straight Speed ② 26M BISMARCK ND Construction Equipment WB Turning Left		WB traffic was backed-up behind a slow-moving backhoe. The backhoe made a WB to SB left turn and was hit by V1 (WB motorcyclist attempting to pass the line of vehicles in a no-passing zone).			
10											

Detailed Intersection Information

Burleigh County Rural Intersection List

			Analysis															
Int #	Intersection Description	Config	Config(2)	Total Entering ADT	Source	Skew	On/Near Curve	Development	RR Xing	Major Surface Type	Minor Surface Type	Minor Leg Approach Apron Type (if gravel)	Notes	ADT	Traffic Control Device	Street Lights	Flashers	Previous STOP (+5mi)
500.01	SE 392nd St & 48th Ave SE	T	Undivided	53	Estimate	No	Yes	No	No	Gravel	Gravel			53	Thru-Stop	No	No	
500.02	SE 392nd St & 34th Ave SE	T	Undivided	53	Count	No	No	No	No	Gravel	Gravel			53	Thru-Stop	No	No	Yes
500.03	NE 405th St & Burleigh County Hwy 1	X	Undivided	605	Count	No	No	Yes	No	Paved	Paved			605	Thru-Stop	No	No	Yes
500.04	NE 405th St & Interstate 94 EB Ramps	X	Undivided	213	Count	No	No	No	No	Paved	Paved		Interstate 94 EB Ramps	213	Thru-Stop	No	No	Yes
500.05	NE 392nd St & 227th Ave NE	X	Undivided	155	Count/Estimate	No	No	No	No	Gravel	Gravel			155	Thru-Stop	No	No	No
500.06	NE 392nd St & North Dakota Hwy 36	X	Undivided	368	Count	No	No	No	No	Paved	Paved			368	Thru-Stop	No	No	No
501.01	12th Ave SW & 435th Ave NE	X	Undivided	745	Count	No	No	No	No	Paved	Paved		On Burleigh/McLean county line	745	Thru-Stop	No	No	No
501.02	NE 145th St & 435th Ave NE	X	Undivided	68	Count	No	Yes	No	No	Gravel	Gravel			68	Thru-Stop	No	No	Yes
502.01	North Dakota Hwy 1804 & 266th Ave NE	T	Undivided	305	Count	No	Yes	No	No	Paved	Gravel	Paved		305	Thru-Stop	No	No	Yes
502.02	US Hwy 83 & 266th Ave NE	X	Undivided	3,853	Count	No	No	No	No	Paved	E - Paved, W - Gravel	Paved		3,853	Thru-Stop	No	No	Yes
502.03	NE 164th St & NE 266th St	T	Undivided	50	Count	No	No	No	No	Gravel	Gravel			50	Thru-Stop	No	No	No
502.04	NE 197th St & 266th Ave NE	X	Undivided	55	Count	No	No	No	No	Gravel	Gravel			55	Thru-Stop	No	No	Yes
503.01	SE Moffitt Rd & SE 158th St	X	Undivided	570	Count	No	No	No	No	Paved	Paved			570	Thru-Stop	No	No	No
504.01	US Hwy 83 & 89th Ave SE	X	Undivided	1,065	Count	No	No	No	No	Paved	Gravel	Paved		1,065	Thru-Stop	No	No	Yes
505.01	SE 66th St & Lincoln Rd SE	T	Undivided	3,085	Count	No	No	Yes	No	Paved	Paved			41,465	Thru-Stop	No	No	No
505.02	SE 93rd St & Lincoln Rd SE	X	Undivided	480	Count	No	No	No	No	Paved	W - Paved, E - Gravel	Gravel		480	Thru-Stop	No	No	No
505.03	SE 158th St & Lincoln Rd SE	X	Undivided	333	Count	No	No	No	No	Paved	Gravel	Paved		333	Thru-Stop	No	No	No
505.04	US Hwy 83 & 34th Ave SE	X	Undivided	1,485	Count	No	No	No	No	Paved	Gravel	Paved		1,485	Thru-Stop	No	No	Yes
505.05	US Hwy 83 & 48th Ave SE	T	Undivided	1,480	Count	No	No	No	No	Paved	Gravel	Paved		1,480	Thru-Stop	No	No	Yes
506.01	NE 236th St & County Hwy 1	X	Undivided	838	Count	No	Yes	No	No	Paved	N - Paved, S - Gravel	Paved		838	Thru-Stop	No	No	Yes
506.03	NE 249th St & 214th Ave NE	X	Undivided	70	Count	No	No	No	No	Gravel	Gravel			70	Thru-Stop	No	No	No
506.04	NE 249th St & 227th Ave NE	T	Undivided	53	Count	No	No	No	No	Gravel	Gravel			53	Thru-Stop	No	No	No
507.01	NE 158th St & Apple Creek Rd SE	X	Undivided	603	Count	No	Yes	No	Yes	Paved	Paved			603	Thru-Stop	No	No	No
507.02	NE 158th St & County Hwy 10	X	Undivided	1,560	Count	No	No	No	No	Paved	Paved			1,560	Thru-Stop	No	No	Yes
508.01	North Dakota Hwy 1804 & SE 106th St	T	Undivided	610	Count/Model	Yes	No	No	No	Paved	Paved			610	Thru-Stop	No	No	No
508.02	North Dakota Hwy 1804 & SE 93rd St	X	Undivided	735	Count	No	No	No	No	Paved	N - Paved, S - Gravel	Paved		735	Thru-Stop	No	No	No
508.03	SE 93rd St & Apple Creek Rd SE	T	Undivided	805	Count	No	No	No	No	Paved	Paved			805	Thru-Stop	No	No	Yes
509.01	NE 106th St & County Hwy 10	T	Undivided	1,583	Count	Yes	No	No	No	Paved	Gravel	Paved		1,583	Thru-Stop	No	No	No
509.03	NE 106th St & 71st Ave NE	X	Undivided	133	Count	No	Yes	No	No	Gravel	Gravel			133	Uncontrolled	No	No	No
509.04	NE 119th St & 201st Ave NE	X	Undivided	125	Count	No	No	No	No	Paved	Gravel	Gravel		125	Thru-Yield	No	No	No
510.01	US Hwy 83 & 71st Ave NE	X	Divided	9,618	Count	No	No	No	No	Paved	Paved			9,618	Signal	No	No	No
510.02	NE 20th St & 71st Ave NE	X	Undivided	4,198	Count	No	No	No	No	Paved	Paved			4,198	Thru-Stop	No	No	No
510.03	NE 41st St & 71st Ave NE (WEST)	X	Undivided	5,460	Count	No	Yes	No	No	Paved	Paved			5,460	Thru-Stop	No	No	No
510.04	NE 41st St & 71st Ave NE (EAST)	T	Undivided	1,833	Count	No	Yes	No	No	Paved	Paved			1,833	Thru-Stop	No	No	No
510.05	NE 66th St & 71st Ave NE	X	Undivided	350	Count	No	No	No	No	Paved	Paved			350	Thru-Yield	No	No	No
511.01	SE 66th St & Apple Creek Rd	X	Undivided	3,990	Count	No	No	No	No	Paved	Paved			3,990	Thru-Stop	No	No	No
512.01	SE 66th St & County Hwy 10	X	Undivided	6,998	Count	No	No	No	No	Paved	Paved			6,998	Thru-Stop	No	No	No
513.01	US Hwy 83 & County Hwy 10	X	Undivided	2,235	Count	No	No	No	No	Paved	Paved			2,235	Thru-Stop	No	No	Yes
514.01	North Dakota Hwy 1804 & 175th Ave NE	T	Undivided	348	Count	No	Yes	No	No	Paved	Gravel	Paved		348	Thru-Stop	No	No	No
514.02	US Hwy 83 & 175th Ave NE	X	Divided	4,290	Count	No	No	No	No	Paved	Gravel	Paved		4,290	Thru-Stop	No	No	No
515.01	US Hwy 83 & 201st Ave NE	X	Divided	3,328	Count	No	No	No	No	Paved	E - Paved, W - Gravel	Gravel		3,328	Thru-Stop	No	No	Yes
515.02	NE 197th St & 201st Ave NE	X	Undivided	70	Count	No	No	No	No	Gravel	Gravel			70	Unknown	No	No	No
516.01	NE 197th St & 227th Ave NE	X	Undivided	70	Count	No	No	No	No	Gravel	Gravel			70	Unknown	No	No	No
517.01	North Dakota Hwy 36 & NE 171st St	X	Undivided	875	Count	No	No	No	No	Paved	Gravel	Paved		875	Thru-Stop	No	No	No
518.01	North Dakota Hwy 14 & 214th Ave NE	X	Undivided	485	Count	No	No	No	No	Paved	Gravel	Gravel		485	Thru-Stop	No	No	Yes
519.01	North Dakota Hwy 36 & Main St S	T	Undivided	768	Count	No	No	No	No	Paved	Paved			768	Thru-Stop	No	No	No
519.02	Main St & Railroad St	X	Undivided	230	Count	No	No	Yes	No	Paved	Paved			230	Thru-Stop	No	No	No
519.03	NE 145th St & New Johns Lake Rd	X	Undivided	30	Count	No	Yes	No	No	Gravel	Gravel			30	Unknown	No	No	No
521.01	US Hwy 83 & 149th Ave NW	X	Divided	4,408	Count	No	Yes	No	No	Paved	W - Paved, E - Gravel	Paved		4,408	Thru-Stop	No	No	Yes
522.01	SE 52nd St & 48th Ave SE	T	Undivided	1,043	Count	No	No	No	No	Paved	Gravel	Paved		1,043	Thru-Stop	No	No	No
523.01	North Dakota Hwy 1804 & SE Desert Rd	T	Undivided	1,038	Count	No	Yes	No	No	Paved	Paved	Paved		1,038	Thru-Stop	No	No	No
524.01	NE 26th St & 97th Ave NE	X	Undivided	590	Count	No	No	No	No	Paved	Paved			590	Thru-Stop	No	No	No
526.01	S Washington St & 48th Ave SW	X	Undivided	900	Count	No	No	No	No	Paved	Paved			900	Thru-Stop	No	No	Yes
526.02	SE 12th St & 48th Ave SE	X	Undivided	1,388	Count	No	No	No	No	Paved	Paved			1,388	Thru-Stop	No	No	No
526.03	US Hwy 83 & 48th Ave SE	X	Undivided	3,268	Count	No	No	No	No	Paved	W - Paved, E - Gravel	Paved		3,268	Thru-Stop	No	No	No
527.01	North Dakota Hwy 1804 & N Washington St	X	Undivided	4,428	Count	No	No	No	No	Paved	Paved			4,428	Thru-Stop	No	No	No
531.01	North Dakota Hwy 1804 & NW 15th St	X	Undivided	2,833	Count	No	No	Yes	No	Paved	N - Paved, S - Gravel	Gravel		2,833	Thru-Stop	No	No	Yes
532.01	NW River Rd & Wilderness Cove Rd	T	Undivided	2,013	Count	No	No	No	No	Paved	Paved			2,013	Thru-Stop	No	No	No
532.02	NW River Rd & Sandy River Rd NW	T	Undivided	1,890	Count	No	No	No	No	Paved	Paved			1,890	Thru-Stop	No	No	No
532.03	NW River Rd & Burnt Creek Rd (SOUTH)	T	Undivided	1,940	Count	No	No	No	No	Paved	Paved			1,940	Thru-Stop	No	No	No
532.04	NW River Rd & Burnt Creek Rd (NORTH)	T	Undivided	633	Count	No	Yes	No	No	Paved	Paved			633	Thru-Stop	No	No	Yes
532.05	North Dakota Hwy 1804 & Burnt Creek Rd	X	Undivided	1,305	Count	Yes	No	No	No	Paved	Paved			1,305	Thru-Stop	No	No	No
535.01	North Dakota Hwy 1804 & NW 28th St	T	Undivided	1,465	Count	No	No	No	No	Paved	Paved			1,465	Thru-Stop	No	No	No

Detailed Intersection Information

Burleigh County Rural Intersection List

			Years of Data		Total Crashes		Severe Crashes		Right Angle Crashes		Severity					Diagram - Severe Crashes ONLY										Light Conditions - Severe Crashes ONLY					Road Condition - Sev ONLY				
Int #	Intersection Description	Config							% Sev RA	Severe Right Angle	K	A	B	C	PDO	Rear End	Sideswipe Passing	Angle (Opposite Direction)	Single Veh	Right Angle	Angle (Same Direction)	Angle (Not Specific)	Head On	Sideswipe Opposing	Rear-to-Rear	Rear-to-Side	Day	Dawn/ Dusk	Dark with Streetlights	Dark	Other/ Unknown	Dry	Wet	Snow/ Slush	Other
500.01	SE 392nd St & 48th Ave SE	T	5	0	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
500.02	SE 392nd St & 34th Ave SE	T	5	0	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
500.03	NE 405th St & Burleigh County Hwy 1	X	5	1	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
500.04	NE 405th St & Interstate 94 EB Ramps	X	5	0	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
500.05	NE 392nd St & 227th Ave NE	X	5	0	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
500.06	NE 392nd St & North Dakota Hwy 36	X	5	0	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
501.01	12th Ave SW & 435th Ave NE	X	5	0	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
501.02	NE 145th St & 435th Ave NE	X	5	0	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
502.01	North Dakota Hwy 1804 & 266th Ave NE	T	5	0	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
502.02	US Hwy 83 & 266th Ave NE	X	5	1	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
502.03	NE 184th St & NE 266th St	T	5	0	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
502.04	NE 197th St & 266th Ave NE	X	5	0	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
503.01	SE Moffitt Rd & SE 156th St	X	5	1	1	100%	1		1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
504.01	US Hwy 83 & 89th Ave SE	X	5	0	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
505.01	SE 66th St & Lincoln Rd SE	T	5	0	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
505.02	SE 93rd St & Lincoln Rd SE	X	5	1	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
505.03	SE 168th St & Lincoln Rd SE	X	5	0	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
505.04	US Hwy 83 & 34th Ave SE	X	5	0	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
505.05	US Hwy 83 & 48th Ave SE	T	5	0	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
506.01	NE 236th St & County Hwy 1	X	5	0	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
506.03	NE 249th St & 214th Ave NE	X	5	0	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
506.04	NE 249th St & 227th Ave NE	T	5	0	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
507.01	NE 158th St & Apple Creek Rd SE	X	5	0	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
507.02	NE 158th St & County Hwy 10	X	5	5	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
508.01	North Dakota Hwy 1804 & SE 106th St	T	5	1	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
508.02	North Dakota Hwy 1804 & SE 93rd St	X	5	1	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
508.03	SE 93rd St & Apple Creek Rd SE	T	5	1	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
509.01	NE 106th St & County Hwy 10	T	5	1	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
509.03	NE 106th St & 71st Ave NE	X	5	1	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
509.04	NE 119th St & 201st Ave NE	X	5	0	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
510.01	US Hwy 83 & 71st Ave NE	X	5	16	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
510.02	NE 26th St & 71st Ave NE	X	5	6	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
510.03	NE 41st St & 71st Ave NE (WEST)	X	5	2	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
510.04	NE 41st St & 71st Ave NE (EAST)	T	5	1	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
510.05	NE 66th St & 71st Ave NE	X	5	0	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
511.01	SE 66th St & Apple Creek Rd	X	5	10	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
512.01	SE 66th St & County Hwy 10	X	5	8	1	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
513.01	US Hwy 83 & County Hwy 10	X	5	1	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
514.01	North Dakota Hwy 1804 & 175th Ave NE	T	5	1	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
514.02	US Hwy 83 & 175th Ave NE	X	5	1	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
515.01	US Hwy 83 & 201st Ave NE	X	5	2	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
515.02	NE 197th St & 201st Ave NE	X	5	0	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
516.01	NE 197th St & 227th Ave NE	X	5	0	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
517.01	North Dakota Hwy 36 & NE 171st St	X	5	1	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
518.01	North Dakota Hwy 14 & 214th Ave NE	X	5	2	1	50%	1		1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
519.01	North Dakota Hwy 36 & Main St S	T	5	0	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
519.02	Main St & Railroad St	X	5	0	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
519.03	NE 145th St & New Johns Lake Rd	X	5	0	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
521.01	US Hwy 83 & 149th Ave NW	X	5	1	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
522.01	SE 52nd St & 46th Ave SE	T	5	1	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
523.01	North Dakota Hwy 1804 & SE Desert Rd	X	5	1	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
524.01	NE 26th St & 97th Ave NE	X	5	1	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
526.01	S Washington St & 48th Ave SW	X	5	3	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
526.02	SE 12th St & 48th Ave SE	X	5	1	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
526.03	US Hwy 83 & 48th Ave SE	X	5	2	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
527.01	North Dakota Hwy 1804 & N Washington St	X	5	5	1	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
531.01	North Dakota Hwy 1804 & NW 15th St	X	5	6	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
532.01	NW River Rd & Wilderness Cove Rd	T	5	3	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
532.02	NW River Rd & Sandy River Rd NW	T	5	4	0	0%	0		0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			

Burleigh County
Rural Intersection Listing

Int #	Intersection Description	Skew	On/Near Curve	Development	RR Xing	ADT	Previous STOP (>5mi)	Total Crashes	ADT Cross Product >100,000	Crash Cost
500.01	SE 392nd St & 48th Ave SE	No	Yes	No	No	53	No	0	No	\$ -
500.02	SE 392nd St & 34th Ave SE	No	No	No	No	53	Yes	0	No	\$ -
500.03	NE 405th St & Burleigh County Hwy 1	No	No	Yes	No	605	Yes	1	No	\$ 12,000
500.04	NE 405th St & Interstate 94 EB Ramps	No	No	No	No	213	Yes	0	No	\$ -
500.05	NE 392nd St & 227th Ave NE	No	No	No	No	155	No	0	No	\$ -
500.06	NE 392nd St & North Dakota Hwy 36	No	No	No	No	368	No	0	No	\$ -
501.01	12th Ave SW & 435th Ave NE	No	No	No	No	745	Yes	0	No	\$ -
501.02	NE 145th St & 435th Ave NE	No	Yes	No	No	68	Yes	0	No	\$ -
502.01	North Dakota Hwy 1804 & 266th Ave NE	No	Yes	No	No	305	Yes	0	No	\$ -
502.02	US Hwy 83 & 266th Ave NE	No	No	No	No	3853	Yes	1	Yes	\$ 12,000
502.03	NE 184th St & NE 266th St	No	No	No	No	50	No	0	No	\$ -
502.04	NE 197th St & 266th Ave NE	No	No	No	No	55	Yes	0	No	\$ -
503.01	SE Moffit Rd & SE 158th St	No	No	No	No	570	No	1	No	\$ 824,000
504.01	US Hwy 83 & 89th Ave SE	No	No	No	No	1065	Yes	0	No	\$ -
505.01	SE 66th St & Lincoln Rd SE	No	No	Yes	No	41465	No	0	Yes	\$ -
505.02	SE 93rd St & Lincoln Rd SE	No	No	No	No	480	No	1	No	\$ 12,000
505.03	SE 158th St & Lincoln Rd SE	No	No	No	No	333	No	0	No	\$ -
505.04	US Hwy 83 & 34th Ave SE	No	No	No	No	1485	Yes	0	No	\$ -
505.05	US Hwy 83 & 48th Ave SE	No	No	No	No	1480	Yes	0	No	\$ -
506.01	NE 236th St & County Hwy 1	No	Yes	No	No	838	No	0	No	\$ -
506.03	NE 249th St & 214th Ave NE	No	No	No	No	70	No	0	No	\$ -
506.04	NE 249th St & 227th Ave NE	No	No	No	No	53	No	0	No	\$ -
507.01	NE 158th St & Apple Creek Rd SE	No	Yes	No	Yes	603	Yes	0	No	\$ -
507.02	NE 158th St & County Hwy 10	No	No	No	No	1560	Yes	5	Yes	\$ 308,000
508.01	North Dakota Hwy 1804 & SE 106th St	Yes	No	No	No	610	No	1	No	\$ 12,000
508.02	North Dakota Hwy 1804 & SE 93rd St	No	No	No	No	735	No	1	Yes	\$ 91,000
508.03	SE 93rd St & Apple Creek Rd SE	No	No	No	No	805	Yes	1	Yes	\$ 91,000
509.01	NE 106th St & County Hwy 10	Yes	No	No	No	1583	No	1	No	\$ 136,000
509.03	NE 106th St & 71st Ave NE	No	Yes	No	No	133	No	1	No	\$ 12,000
509.04	NE 119th St & 201st Ave NE	No	No	No	No	125	No	0	No	\$ -
510.01	US Hwy 83 & 71st Ave NE	No	No	No	No	9618	No	16	Yes	\$ 519,000
510.02	NE 26th St & 71st Ave NE	No	No	No	No	4198	No	6	Yes	\$ 320,000
510.03	NE 41st St & 71st Ave NE (WEST)	No	Yes	No	No	5460	No	2	Yes	\$ 24,000
510.04	NE 41st St & 71st Ave NE (EAST)	No	Yes	No	No	1833	No	1	No	\$ 12,000
510.05	NE 66th St & 71st Ave NE	No	No	No	No	350	No	0	No	\$ -
511.01	SE 66th St & Apple Creek Rd	No	No	No	No	3990	No	10	Yes	\$ 571,000
512.01	SE 66th St & County Hwy 10	No	No	No	No	6998	No	8	Yes	\$ 496,000
513.01	US Hwy 83 & County Hwy 10	No	No	No	No	2235	Yes	1	Yes	\$ 12,000
514.01	North Dakota Hwy 1804 & 175th Ave NE	No	Yes	No	No	348	No	1	No	\$ 12,000
514.02	US Hwy 83 & 175th Ave NE	No	No	No	No	4290	No	1	Yes	\$ 136,000
515.01	US Hwy 83 & 201st Ave NE	No	No	No	No	3328	Yes	2	Yes	\$ 24,000
515.02	NE 197th St & 201st Ave NE	No	No	No	No	70	No	0	No	\$ -
516.01	NE 197th St & 227th Ave NE	No	No	No	No	70	No	0	No	\$ -
517.01	North Dakota Hwy 36 & NE 171st St	No	No	No	No	875	No	1	No	\$ 12,000
518.01	North Dakota Hwy 14 & 214th Ave NE	No	No	No	No	485	Yes	2	No	\$ 836,000
519.01	North Dakota Hwy 36 & Main St S	No	No	No	No	768	No	0	No	\$ -
519.02	Main St & Railroad St	No	No	Yes	No	230	No	0	No	\$ -
519.03	NE 145th St & New Johns Lake Rd	No	Yes	No	No	30	No	0	No	\$ -
521.01	US Hwy 83 & 149th Ave NW	No	Yes	No	No	4408	Yes	1	Yes	\$ 12,000
522.01	SE 52nd St & 48th Ave SE	No	No	No	No	1043	No	1	No	\$ 12,000
523.01	North Dakota Hwy 1804 & SE Desert Rd	No	Yes	No	No	1038	No	1	Yes	\$ 12,000
524.01	NE 26th St & 97th Ave NE	No	No	No	No	590	Yes	1	No	\$ 12,000
526.01	S Washington St & 48th Ave SW	No	No	No	No	900	No	3	Yes	\$ 160,000
526.02	SE 12th St & 48th Ave SE	No	No	No	No	1388	No	1	Yes	\$ 91,000
526.03	US Hwy 83 & 48th Ave SE	No	No	No	No	3268	No	2	Yes	\$ 24,000
527.01	North Dakota Hwy 1804 & N Washington St	No	No	No	No	4428	No	5	Yes	\$ 872,000
531.01	North Dakota Hwy 1804 & NW 15th St	No	No	Yes	No	2833	Yes	6	Yes	\$ 72,000
532.01	NW River Rd & Wilderness Cove Rd	No	No	No	No	2013	No	3	No	\$ 36,000
532.02	NW River Rd & Sandy River Rd NW	No	No	No	No	1890	No	4	Yes	\$ 48,000
532.03	NW River Rd & Burnt Creek Rd (SOUTH)	No	No	No	No	1940	No	9	Yes	\$ 108,000
532.04	NW River Rd & Burnt Creek Rd (NORTH)	No	Yes	No	No	633	Yes	1	No	\$ 12,000
532.05	North Dakota Hwy 1804 & Burnt Creek Rd	Yes	No	No	No	1305	No	4	Yes	\$ 572,000
535.01	North Dakota Hwy 1804 & NW 28th St	No	No	No	No	1465	No	1	Yes	\$ 12,000

Burleigh County
Rural Intersection Prioritization

Rank	Int #	Intersection Description	Skew	On/Near Curve	Development	RR Xing	Previous STOP (>5mi)	Total Crashes	ADT Cross Product >100,000	Priority	Crash Cost
1	531.01	North Dakota Hwy 1804 & NW 15th St			*		*	*	*	★★★★	\$ 72,000
2	521.01	US Hwy 83 & 149th Ave NW		*			*	*	*	★★★★	\$ 12,000
3	532.05	North Dakota Hwy 1804 & Burnt Creek Rd	*					*	*	★★★★	\$ 572,000
4	507.02	NE 158th St & County Hwy 10					*	*	*	★★★	\$ 308,000
5	508.03	SE 93rd St & Apple Creek Rd SE					*	*	*	★★★	\$ 91,000
6	510.03	NE 41st St & 71st Ave NE (WEST)		*				*	*	★★★	\$ 24,000
7	515.01	US Hwy 83 & 201st Ave NE					*	*	*	★★★	\$ 24,000
8	500.03	NE 405th St & Burleigh County Hwy 1			*		*	*	*	★★★	\$ 12,000
9	502.02	US Hwy 83 & 266th Ave NE					*	*	*	★★★	\$ 12,000
10	513.01	US Hwy 83 & County Hwy 10					*	*	*	★★★	\$ 12,000
11	523.01	North Dakota Hwy 1804 & SE Desert Rd		*				*	*	★★★	\$ 12,000
12	532.04	NW River Rd & Burnt Creek Rd (NORTH)		*			*	*	*	★★★	\$ 12,000
13	507.01	NE 158th St & Apple Creek Rd SE		*		*	*			★★★	\$ -
14	527.01	North Dakota Hwy 1804 & N Washington St						*	*	★★	\$ 872,000
15	518.01	North Dakota Hwy 14 & 214th Ave NE					*	*	*	★★	\$ 836,000
16	511.01	SE 66th St & Apple Creek Rd						*	*	★★	\$ 571,000
17	510.01	US Hwy 83 & 71st Ave NE						*	*	★★	\$ 519,000
18	512.01	SE 66th St & County Hwy 10						*	*	★★	\$ 496,000
19	510.02	NE 26th St & 71st Ave NE						*	*	★★	\$ 320,000
20	526.01	S Washington St & 48th Ave SW						*	*	★★	\$ 160,000
21	509.01	NE 106th St & County Hwy 10	*					*	*	★★	\$ 136,000
22	514.02	US Hwy 83 & 175th Ave NE						*	*	★★	\$ 136,000
23	532.03	NW River Rd & Burnt Creek Rd (SOUTH)						*	*	★★	\$ 108,000
24	508.02	North Dakota Hwy 1804 & SE 93rd St						*	*	★★	\$ 91,000
25	526.02	SE 12th St & 48th Ave SE						*	*	★★	\$ 91,000
26	532.02	NW River Rd & Sandy River Rd NW						*	*	★★	\$ 48,000
27	526.03	US Hwy 83 & 48th Ave SE						*	*	★★	\$ 24,000
28	508.01	North Dakota Hwy 1804 & SE 106th St	*					*	*	★★	\$ 12,000
29	509.03	NE 106th St & 71st Ave NE		*				*	*	★★	\$ 12,000
30	510.04	NE 41st St & 71st Ave NE (EAST)		*				*	*	★★	\$ 12,000
31	514.01	North Dakota Hwy 1804 & 175th Ave NE		*				*	*	★★	\$ 12,000
32	524.01	NE 26th St & 97th Ave NE					*	*	*	★★	\$ 12,000
33	535.01	North Dakota Hwy 1804 & NW 28th St						*	*	★★	\$ 12,000
34	501.02	NE 145th St & 435th Ave NE		*			*			★★	\$ -
35	502.01	North Dakota Hwy 1804 & 266th Ave NE		*			*			★★	\$ -
36	505.01	SE 66th St & Lincoln Rd SE			*				*	★★	\$ -
37	503.01	SE Moffit Rd & SE 158th St						*	*	★	\$ 824,000
38	532.01	NW River Rd & Wilderness Cove Rd						*	*	★	\$ 36,000
39	505.02	SE 93rd St & Lincoln Rd SE						*	*	★	\$ 12,000
40	517.01	North Dakota Hwy 36 & NE 171st St						*	*	★	\$ 12,000
41	522.01	SE 52nd St & 48th Ave SE					*	*	*	★	\$ 12,000
42	500.01	SE 392nd St & 48th Ave SE		*						★	\$ -
43	500.02	SE 392nd St & 34th Ave SE					*			★	\$ -
44	500.04	NE 405th St & Interstate 94 EB Ramps					*	*	*	★	\$ -
45	501.01	12th Ave SW & 435th Ave NE					*	*	*	★	\$ -
46	502.04	NE 197th St & 266th Ave NE					*	*	*	★	\$ -
47	504.01	US Hwy 83 & 89th Ave SE					*	*	*	★	\$ -
48	505.04	US Hwy 83 & 34th Ave SE					*	*	*	★	\$ -
49	505.05	US Hwy 83 & 48th Ave SE					*	*	*	★	\$ -
50	506.01	NE 236th St & County Hwy 1		*						★	\$ -
51	519.02	Main St & Railroad St			*					★	\$ -
52	519.03	NE 145th St & New Johns Lake Rd		*						★	\$ -
53	500.05	NE 392nd St & 227th Ave NE								\$	\$ -
54	500.06	NE 392nd St & North Dakota Hwy 36								\$	\$ -
55	502.03	NE 184th St & NE 266th St								\$	\$ -
56	505.03	SE 158th St & Lincoln Rd SE								\$	\$ -
57	506.03	NE 249th St & 214th Ave NE								\$	\$ -
58	506.04	NE 249th St & 227th Ave NE								\$	\$ -
59	509.04	NE 119th St & 201st Ave NE								\$	\$ -
60	510.05	NE 66th St & 71st Ave NE								\$	\$ -
61	515.02	NE 197th St & 201st Ave NE								\$	\$ -
62	516.01	NE 197th St & 227th Ave NE								\$	\$ -
63	519.01	North Dakota Hwy 36 & Main St S								\$	\$ -
Totals			Total Stars --	3	13	4	1	21	37	24	
				5%	21%	6%	2%	33%	59%	38%	

Totals	#	%
★★★★★★	0	0%
★★★★★	0	0%
★★★★	0	0%
★★★	2	3%
★★	11	17%
★	23	37%
-	16	25%
-	11	17%
	63	100%

Stars	
Skew	- If intersection is skewed at an angle of 15 degrees or greater.
On/Near Curve	- If intersection is on or within 1,000 feet of curve.
Development	- If intersection aerial shows a commercial development with access near intersection.
RR Xing	- If intersection has a railroad crossing on any approach within 500 feet.
Previous STOP (>5 mi)	- If vehicles approaching the stop control have not had a previous stop along the roadway within 5 miles
Total Crashes	- If intersection has at least 1 crash.
Ratio (Min/Maj)	- If intersection has an ADT ratio in the range of 0.2 to 0.8.

PROJECT SUBMITTAL LIST

Entity:

Contact Person:

Revision: November 2019

Date: _____

Phone Number:

If you have questions with filling out the list, please contact Stacey Hanson at 701-328-4469

[illegible]

Notes	Description
(1)	<i>PriR = Primary Regional, SecR = Secondary Regional, URP = Urban Roads Program, INT = Interstate, BRI = Bridge</i>
(2)	<i>Interstate, Principal Arterial, Minor Arterial, Collector</i>
(3)	<i>PM = Preventive Maintenance, MiR = Minor Rehabilitation, SI = Structural Improvement, MaR = Major Rehabilitation, N/R = New/Reconstruction</i>
(4)	<i>Brief description of the project (Exs: Thin Lift Overlay, Mill and Overlay, Concrete Pavement Repair, etc.)</i>

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URBAN GRANTS PROGRAM SUMMARY

NOVEMBER 2022

A total of two (2) project applications were submitted for the fiscal funding year 2025 Urban Grants Program. The projects were scored against the goals and objectives of the Metropolitan Transportation Plan (MTP) by MPO staff. Points are provided to TAC and Policy Board for information, discussion, and potential prioritization. **This is not a ranking.**

JURISDICTION	PROJECT TYPE	PROJECT DESCRIPTION	TOTAL COST / FEDERAL COST	MTP	POINTS
Mandan	Reconstruction Phase I	Downtown Core Reconstruct Phase I – 1st St NW from Collins Ave to 6th Ave NW Full reconstruct on 1 st St roadway with concrete (rather than mill and overlay due to exceedingly poor pavement condition; poor curb, gutter, and sidewalk conditions; and a need to replace old watermain); sidewalk and sidewalk ramp improvements to bring up to ADA compliance; possible curb bulb outs; signage and striping; integrating beautification elements recommended in the Mandan Downtown Sub Area Study such as benches, bike racks, LED and decorative lighting; also potential reverse angle parking trial and sidewalk widening will be examined during preliminary design.	\$7,043,438 / \$5,005,460	YES	13.998
Bismarck	Rehabilitation	Front Ave and 5th St Pavement Rehab – Front Ave, 9th St to S. Mandan St and 3rd St, Front Ave to Main Ave and 5th St, Bowen Ave to Main Ave. Mill and overlay, curb and gutter repairs, sidewalk repairs, ADA ramp upgrades, curb extensions, plastic pavement marking, watermain replacement, roadway and pedestrian lighting upgrades, street trees and landscaping improvements, modifications of traffic signals for implementing leading pedestrian intervals, benches, bike racks, bus shelter pads, and signage.	\$3,056,000 / \$1,850,000	YES	17.498

klr_nov_2022

URBAN GRANT SCORING METHODOLOGY:

The applications will be scored by MPO staff using the MTP Urban Roads/Urban Regional objectives. These scores will not be prioritized by staff but rather will be provided to the TAC for board discussion. TAC may rank the projects based in their discussion, and the ranking will be provided to PB. PB will be provided the staff score and TAC ranking. PB has the authority to accept, change, or deny any prioritization for the Urban Grant Program.

URBAN GRANT SCORING (For MPO Staff Use):

Urban Grant Scoring Objectives
1A: Reduce the incidence of all motor vehicle and non-motor vehicle (pedestrian and cyclist) crashes, with an emphasis on serious injury and fatal crashes. This may include implementing improvements that are both proven Crash Reduction Measures at locations with an existing crash history or at locations without an existing crash history as a proactive improvement (SMO)
1C: Enhance transportation security and reliability by developing strategies to address critical transportation assets identified that will facilitate the rapid movement of first responders and support incident management during times of emergency (SMO)
2A: Maintain pavement quality and bridges at acceptable levels (SMO)
2B: Maintain street signage and visibility (SMO)
2C: Maintain the current bicycle & pedestrian system (SMO)
3A: Implement projects and programs that will reduce travel delays on corridors that have an existing or proposed Level of Service (LOS) D or worse, to a LOS C or better after the improvement is made (SMO)
3B: Provide and maintain corridors functionally classified as minor arterials and above that facilitate longer-distance travel within the region (SMO)
3C: Improve the continuity of the multimodal systems for pedestrians, cyclists, or transit riders; through improved network connections and reduction of system gaps (SMO)
4A: Enhance the efficient and safe movement of freight and goods including investments in congestion reduction and safety improvements on the critical urban freight corridors and other designated freight corridors (SMO)
5C: Improve bicycle and pedestrian system accessibility and connectivity opportunities while maintaining safety by implementing transportation investments identified in the most recent Bismarck-Mandan MPO Bicycle and Pedestrian Plan (SMO)
7B: Leverage the existing transportation system by emphasizing low-cost, high impact solutions that may include incremental system improvements, system preservation, and technology applications to achieve reduced congestion in lieu of more expensive projects such as roadway widening (SMO)

1. Project: 1st Street and Avenues Reconstruct Phase ITotal Points 13.998

Submitting Entity: City of Mandan

- a. Objective 1A: x 2.25 pts
- b. Objective 1C: x 2.25 pts
- c. Objective 2A: x 1.666 pts
- d. Objective 2B: x 1.666 pts
- e. Objective 2C: x 1.666 pts
- f. Objective 3A: 1.2 pts
- g. Objective 3B: x 1.2 pts
- h. Objective 3C: x 1.2 pts
- i. Objective 4A: 2.3 pts
- j. Objective 5C: x 2.1 pts
- k. Objective 7B: 1.2 pts

2. Project: Front Avenue & 5th Street Pavement RehabilitationTotal Points 17.498

Submitting Entity: City of Bismarck

- a. Objective 1A: x 2.25 pts
- b. Objective 1C: x 2.25 pts
- c. Objective 2A: x 1.666 pts
- d. Objective 2B: x 1.666 pts
- e. Objective 2C: x 1.666 pts
- f. Objective 3A: 1.2 pts
- g. Objective 3B: x 1.2 pts
- h. Objective 3C: x 1.2 pts
- i. Objective 4A: x 2.3 pts
- j. Objective 5C: x 2.1 pts
- k. Objective 7B: x 1.2 pts

URBAN GRANTS SCORING RESULTS

Number (in order of points)	Agency/ Project	Total Points
1	City of Bismarck Front Avenue & 5 th Street Pavement Rehabilitation	17.498
2	City of Mandan 1 st Street & Avenues Reconstruction Phase I	13.998

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Urban Grant Program Application

Coversheet

LPA

City of Mandan

Contact Person

Justin Froseth

Title

Planning and Engineering Director

Address

205 2nd Avenue Northwest

Telephone

701-667-3225

Email

jfroseth@cityofmandan.com

Project Name

1st Street and Avenues Reconstruct (Phase 1)

LPA Applicant Signature (Highest Elected Official)

_____ Tim Helbling, Mayor

NDDOT District Engineer Signature if project is located on/impacts a State Highway

Date Submitted: 11/4/2022

Application Attachment Checklist (check all that have been attached)

☒ Relevant excerpts from adopted plans ☒ Map(s) depicting project location ☒ Cross Section of Roadway/facility

☒ Pictures, Graphics, and/or other visual aids ☒ Relevant supporting data

☐ Other Attachments (describe)

[Click here to enter text.](#)

Information in this Box is for NDDOT to Complete

Date Received _____

Is this Project Title 23 Code of Federal Regulation Eligible including location on a federal aid route?

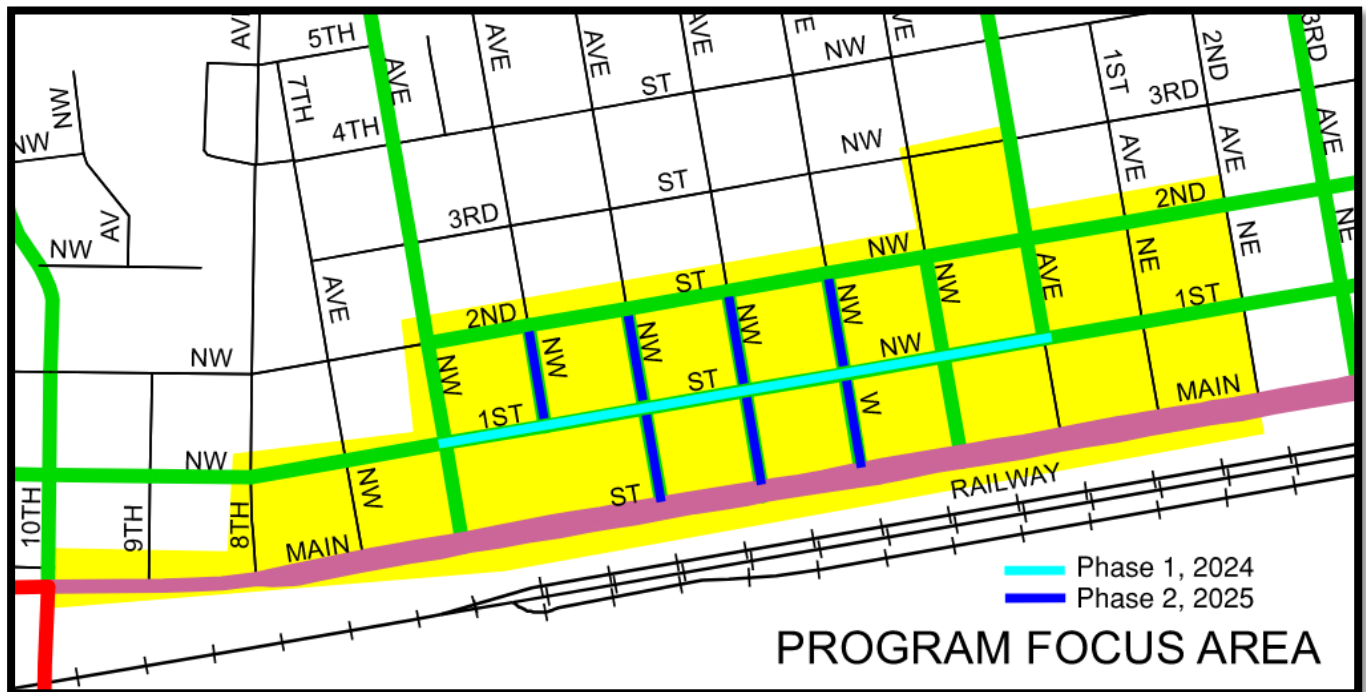
Yes ☐

No ☐

General Project Information

Project Description (including location and scope of work for which funding is requested)

The primary goal and objective of the entire project is to reconstruct 1st Street NW and several Avenues in the core downtown area of Mandan (see map below). The project design will be finalized once funding is available. Construction is intended to occur in two phases in order to utilize Urban Grant Program (UGP) funding and for the City to provide the local match required from available funds. Based on preliminary cost estimates completed for the entire project, locations for Phase 1 include 1st Street NW from Collins Avenue to 6th Avenue NW; locations for Phase 2 include 2nd, 3rd, 4th, and 5th Avenues from Main Street to 2nd Street NW. The final construction phasing may change, depending on the amount of grant funds awarded and completion of final design. Per UGP Policy, the City of Mandan (City) will ensure final construction phasing has stand-alone or independent utility and does not require the completion of other phase(s) to meet the project's intended purpose or function. Another UGP Application for the second phase will be submitted next year and the City understands it will need to compete with other projects on an equal basis.



A full reconstruct is needed as opposed to a less intense approach, such as a mill and overlay, due to, 1) the condition is such that a mill and overlay would not be sufficient, 2) there are poor curb and gutter and sidewalk conditions, and 3) the watermain under these Avenues needs replacement. The proposed project will also provide beautification elements such as landscaping and streetscape improvements integrated throughout. We plan to incorporate examples highlighted in the Downtown Subarea Study that will work best for our streets and avenues when we get to the detailed design. Examples of items we would look to incorporate include Figures 221 through 227 of the Study as shown below.

Figure 221: Planter and Street Tree Protection



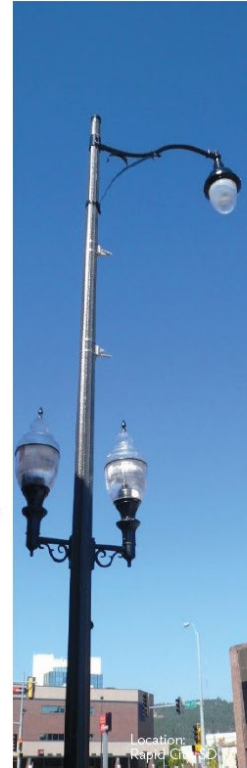
Location: Unknown

Figure 222: Portable Planter Boxes



Location: Crested Butte, CO

Figure 223: Decorative Light Fixture



Location: Rapid City, SD

Figure 224: Curb Extension and Planter Box



Location: Concordia, KS

Figure 225: Benches and Trash Receptacles



Location: Omaha, NE

Figure 226: Benches and Trash Receptacles



Location: Rapid City, SD

Figure 227: Bike Racks and Trash Receptacles



Location: Boulder, CO

As a demonstration of its commitment to the project as a priority, the City has already expended more than \$178,000 of local funds to-date to complete design and boundary surveys, preliminary environmental, data collection, preliminary engineering and detailed cost analyses. This work occurred between January-November 2020; and the project is now on hold due to lack of funding.

Total Project Cost

The Phase 1 estimate is \$7,043,438. Total project estimate, including Phase 2 and non-participating costs of a watermain replacement, is \$12,810,600. Refer to the Cost Estimate section below for more detailed information.

Amount of Grant Funds Requested (cannot exceed 80% of total project cost)

\$5,055,460 (represents 80% of Phase 1 participating costs)

Competitive Criteria

1. **Community Need for Project:** Explain why the project is needed including appropriate detail. Include any 100% locally funded components of the project that are part of the overall project or other planned projects that may compliment this project. Documentation of information to support the need such as relevant data, existing and if appropriate projected conditions, and any related analysis through studies or reports would be appropriate to identify in this section. Attachments such as but not limited to: maps, pictures, other graphics; and supporting data demonstrating the need for the project is encouraged.

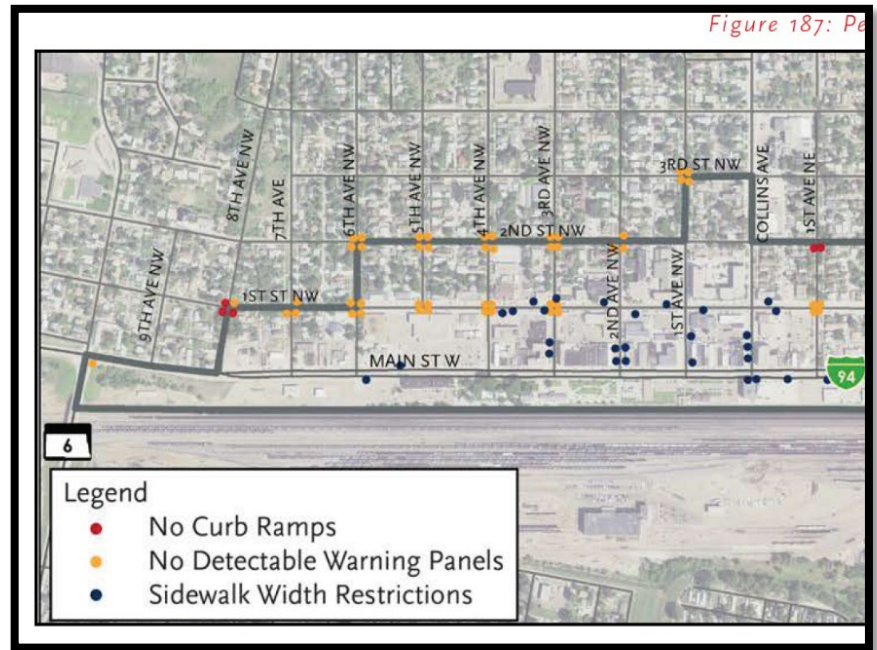
The City in partnership with the Bismarck-Mandan Metropolitan Planning Organization (BMMPO), recently completed the Downtown Subarea Study (Study) in late 2016. From the Study, many existing problems have been discussed by the Study's steering committee members. City staff had three actively engaged representatives that participated in the Study's steering committee and continue in that ad hoc capacity today by participating in beautification discussions regarding the downtown area. Some prevalent comments from the meetings, which

have also been expressed since the Study was completed, include:

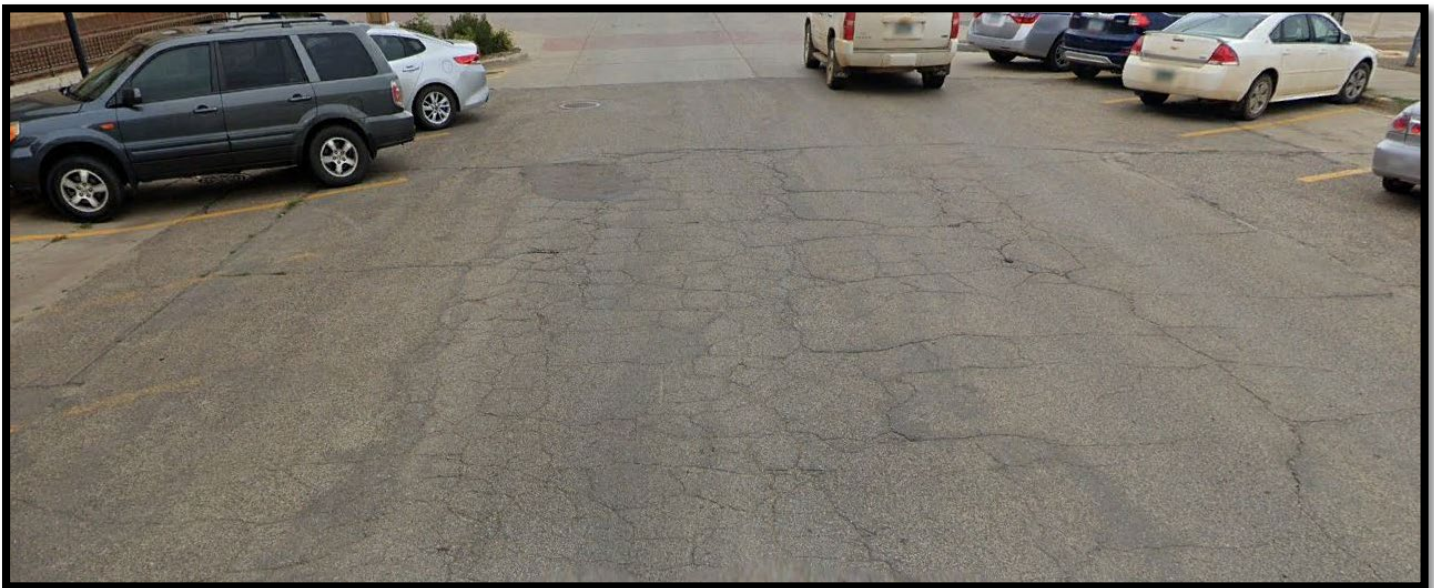
- Poor pavement conditions of Avenues in the core downtown area.
- Poor sidewalk conditions of Avenues in the core downtown area. Many which are non-compliant with ADA requirements, as illustrated in Figure 187 from the Downtown Subarea Study draft plan.
- Unightly downtown infrastructure (streets and sidewalks), as illustrated in the pictures below.
- Requests have been made for the possibility of using Avenue sidewalks for patron seating areas if infrastructure improvements are made.

With the above concerns in mind, along with a desire to make Mandan's core downtown area more pedestrian friendly for all users, the Downtown Subarea Study team provided ideas to revitalize downtown the Avenues. The ideas for the Avenues have not yet been developed to the level of detail of our primary corridors (Main Street and 1st Street), but the Study has brought forward ideas with a welcoming environment in mind to revitalize and make the core downtown area more pedestrian friendly.

Addressing the condition of the road segments targeted for this project, pavement condition studies done in both 2012 and 2016 show predominately poor conditions for these segments. Below are pictures showing current street conditions.



1st Street NW between 1st and 2nd Avenue looking east to 1st Avenue.



1st Street NW between 1st and 2nd Avenue looking west to 2nd Avenue.



1st Street NW between 2nd and 3rd Avenue looking east to 2nd Avenue.



1st Street NW between 3rd and 4th Avenue looking west to 4th Avenue.



1st Street NW between 4th and 5th Avenue looking east to 4th Avenue.



All images shown above in this section are Google Earth street view screenshots from August 2019.

2nd Avenue NW just north of Main Street looking south to Main. Taken December of 2017.



2nd Avenue NW between 1st and 2nd Street looking south to 1st Street. Taken December of 2017.



4th Avenue NW between Main Street and 1st Street looking north towards 1st Street. Taken December of 2017.



2. **Community Impact of Project:** Describe how the project will offer significant long term value to the community specifically in addressing the following program objectives (a-f):

a) Preserve existing transportation assets

The Project will reconstruct existing core downtown Streets and Avenues. Streets are some of our most valuable assets in the community as they accommodate all modes of transportation in the core of the city.

b) Ensure safety of all users of the transportation system

The Project will improve deficiencies in the sidewalk system on all reconstructed streets to meet ADA compliance requirements. We will explore the widening of sidewalks during preliminary design to see if that would be the best approach for the City, while balancing roadway needs. We are not calling for drastic changes to vehicle operation on the Avenues with this plan. The Study did develop an alternative on 1st Street that called for reverse angle parking. We will explore that in preliminary design with the possibility of implementing along 1st Street in a couple block segment as a trial run. Staff acknowledges safety benefits to reverse angle parking, especially as it relates to bicycles sharing the roadway. However, we do not presently have community buy-in for this idea.

c) Improve multi-modal transportation options such as walking, bicycling, and public transportation

The improved safety, aesthetics, and ADA accessibility enhancements of the project will greatly improve the accessibility for all users of multi-modal transportation to access downtown Mandan. As a result, we anticipate these changes will promote more pedestrians and users of public transportation to frequent downtown Mandan to access goods and services.

- d) Enhance the economic vitality of the area by providing transportation assets that support: revitalization efforts; development of vacant or underutilized parcels within existing urban areas; and/or redevelopment of established portions of communities**

The project will have a positive effect on revitalizing downtown Mandan. This goes back to the improved accessibility for all users of multi-modal transportation ability to access the area for goods and services which will stimulate the downtown economic growth. In addition to the City's improvements outlined in this application, a restaurant, a brewery, a German-inspired beer hall, and a craft cocktail bar have all committed to Main Street in this core downtown area since this Study was started. The City has purchased property that sat vacant for years between 4th and 6th Avenues just north of Main. The City is actively working with the private sector to bring the best use to that property.

- e) Support economically sustainable growth, lessening the need for outward expansion of community transportation infrastructure and associated services**

In the heart of downtown Mandan, this project will make downtown Mandan more accessible, with the anticipation that these improvements will help drive more commercial investment in downtown Mandan resulting in a decreased need for that investment to expand to the fringes of the city.

- 3. Consistency with an LPA Associated Plan:** Document linkage between the proposed project and a publicly accepted/adopted plan(s) and/or public involvement process. Clear linkage should be demonstrated between the proposed project and the associated public acceptance/support which would include documenting the reference(s) in the plan and/or public involvement process. Relevant excerpts from such documents are encouraged to attach with the application. Examples of publicly accepted/adopted plans might include but are not limited to: Community Comprehensive Plan; Downtown Master Plan; Neighborhood/Subarea/Corridor Plan; Bicycle/Pedestrian Plan; Housing Plan; Long Range Transportation Plan; Transit Development Plan; and/or Renaissance Zone Plan. A stand-alone public involvement process which demonstrates community support for the specific project is also acceptable and should be documented in the application.

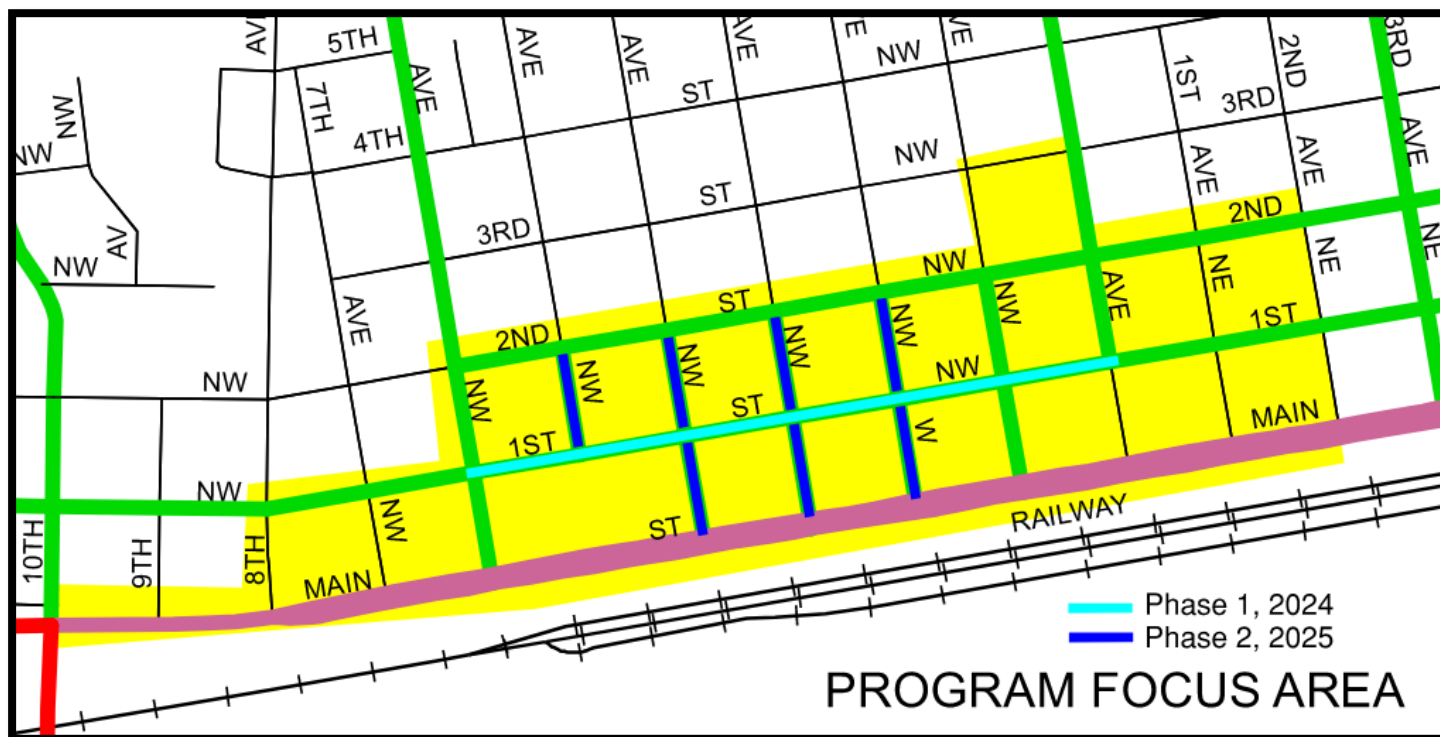
This project is inspired by the Mandan Downtown Subarea Study. The Study was led by the BMMPO in partnership with the City. The Study received final approval from both the City Commission and the Metropolitan Planning Organization Policy Board. More information may be found by clicking either of the following links:

https://www.bismarcknd.gov/DocumentCenter/View/31642/Downtown_Mandan_Subarea_Study_Final_Report

<https://www.kljeng.com/featured-projects/downtown-mandan-subarea-study>

- 4. Project Support of Urban Core/Central Business District:** Projects which directly support the urban core/central business district (CBD) will be given preferential consideration. Identify the project location and how it will support the urban core/CBD. (Attach 8.5" x 11" or 11" x 17" color map depicting project location in relation to urban core/CBD if applicable to the project type)

This project is in the heart of downtown Mandan. Below is a map depicting the project location as it relates to the map furnished by the NDDOT for the Urban Grant Program. The project location for what is anticipated to be Phase 1 is shown in light blue, while anticipated Phase 2 is shown in dark blue.



5. **Projects that Maximize the Return on Investment from Public Funds:** Projects which can demonstrate a positive private return on investment of public funds will be given preferential consideration. Examples of this may include but not be limited to increased retail sales, new jobs, and/or new dwelling units anticipated as a direct result of the proposed project.

The City has already laid the groundwork in revitalizing downtown Mandan and continues to do so through various projects. Some examples include the investments incentive programs such as the restaurant sales tax incentive and the Renaissance Zone building improvements program. More recently, the City purchased the property between 4th and 6th Avenues NW, just north of Main Street, and is working on private/public partnerships in order to redevelop that area for the benefit of the entire community. This project fits well with the previous efforts to improve vibrancy of our downtown area while allowing us to realize significant economic benefits.

Existing Conditions

(information requested in this section may not be appropriate for all project types)

Functional Classification of Roadway

1st Street NW (anticipated phase 1) is a minor arterial. Avenues (anticipated phase 2) are collectors.

Current AADT (including source)

Varies from 1,030 on 4th Avenue to about 5,255 on 1st street NW near Collins Avenue. (From NDDOT interactive traffic counts site. All 2016 counts.)

Forecasted AADT (including source)

2040 projection Varies from 1,167 on 4th Avenue to about 5,939 on 1st Street near Collins Avenue. (Factor derived from Downtown Subarea Study Traffic Forecasting Memo on page 2 of 4, then applied to current AADT numbers).

Posted or Statutory Speed Limit

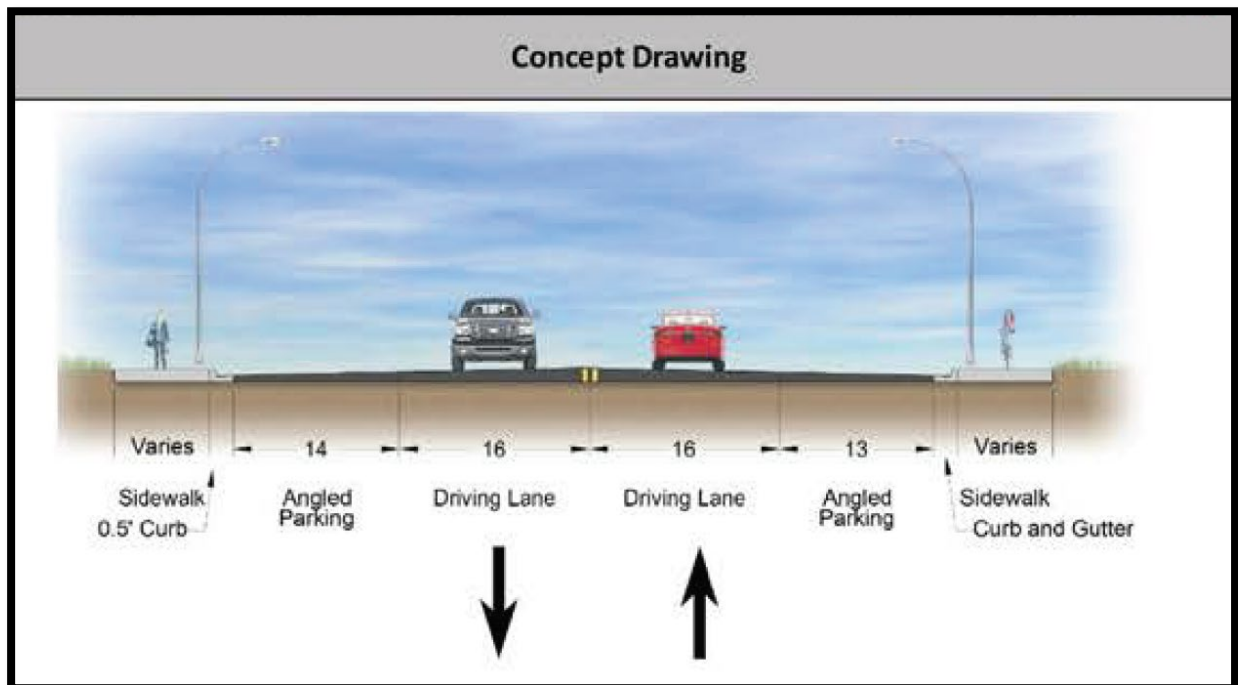
25 mph

Cross Section of Roadway (attach graphics depicting current dimensions and key roadway elements)

Avenues are approximately 60 feet wide from face of curb to face of curb with angled parking allowed on both sides and one driving lane in each direction, unstriped. They are typically lined with sidewalk against the curb and gutter. The sidewalk is about 10 feet wide except for where a basement access was allowed to protrude out into the sidewalk space. Below is a 2019 Google Earth street view snip to illustrate a typical cross section of our downtown avenues. This is 2nd Avenue just north of Main Street and looking north.



Below is the existing cross section of 1st Street.

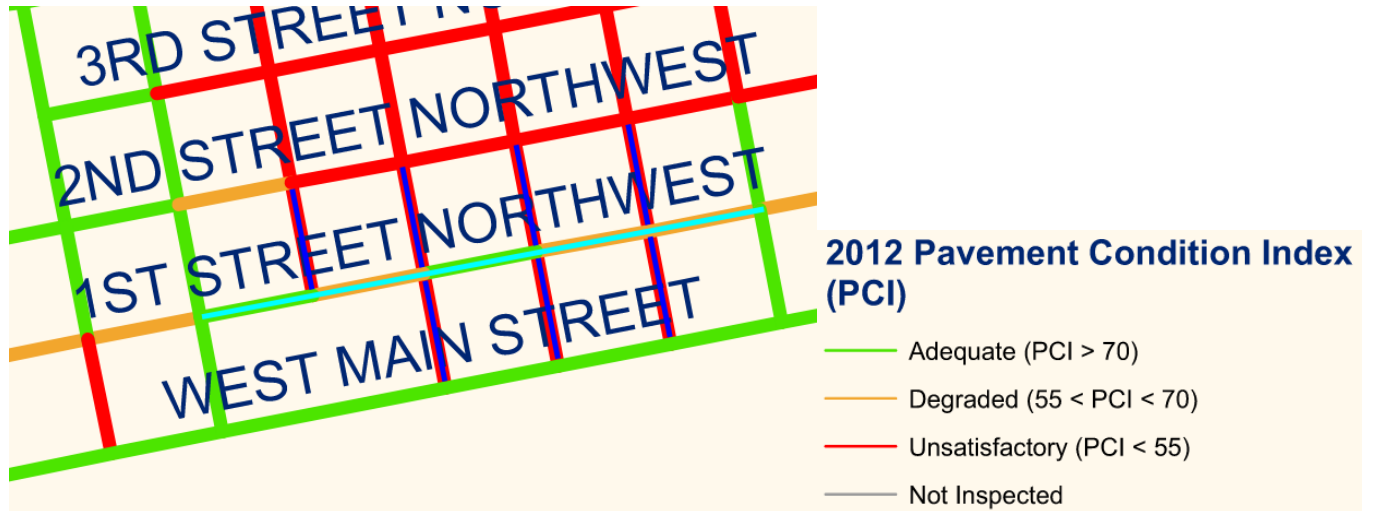


Pavement rating or condition

Avenues are unsatisfactory and 1st Street NW is mostly classified as degraded according to the 2012 Mandan State of the Streets Technical Report.

https://www.cityofmandan.com/vertical/sites/%7B38C3EFDC-F4D8-4D02-9E13-0987A081A7A4%7D/uploads/Dynatest_PCI.pdf

Below is a screenshot of Appendix A, Map 3: Pavement Condition Index (PCI) Values from the 2012 Mandan State of the Streets Technical Report.



They are also shown to be in poor condition from the 2016 pavement condition survey done in all urban areas statewide. A snapshot of that is shown below.

https://dotsc.ugpti.ndsu.nodak.edu/grit_viewer/



Year of Last Federal Investment at this Location

None found.

When was the current section built?

Record not found.

Year last surfaced or received maintenance?

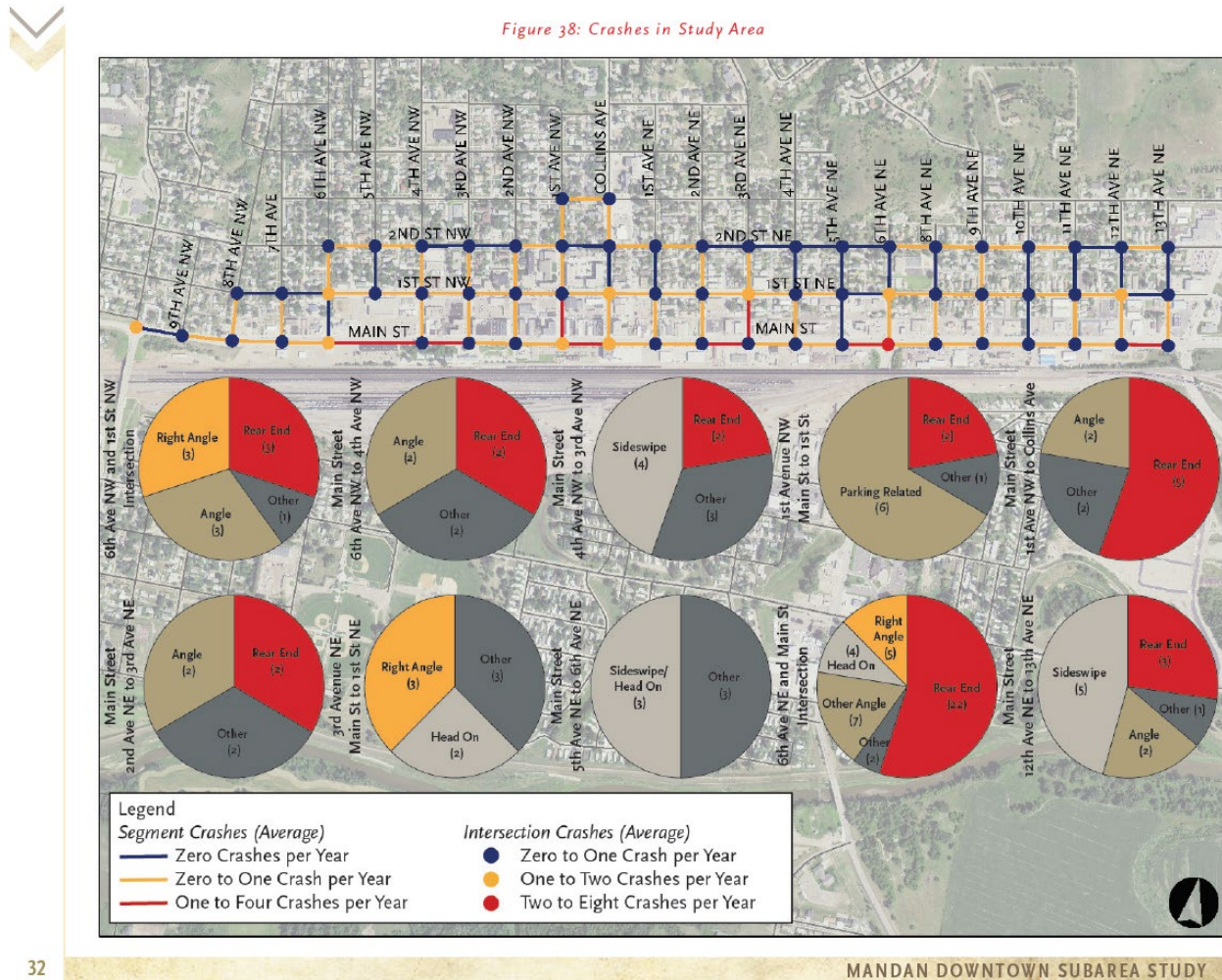
Do not know.

Lighting

Mix of LED and high-pressure sodium.

Crash Rate or Number of Crashes?

Minimal concern within the corridors of this project. Figure 38 from the Downtown Subarea Study illustrates an NDDOT traffic operations study done in the fall of 2016.

**Other Known Safety Concerns?**

Pedestrian crossing. Poor bicycling conditions. ADA accessibility.

Intersections (how many, type, control, etc.)

Reconstruction limits include going through 7 street intersections and 13 alleyways.

Is parking allowed and what type?

Yes. Predominately angle with some parallel.

Are there any bridges, box culverts, etc. within the project corridor?

No.

What is the condition of the existing sanitary sewer, storm sewer, and water lines?

Watermain needs replacement under much of the proposed project area. Possibly sanitary unless we accomplish that with trenchless methods. That decision has yet to be made. It is anticipated that a fair amount of storm inlet work will be needed. Likely about 3,000 feet of storm main replacement needed as well.

Are there any Access points to adjoining property that present a special concern?

None of particular concern.

Bicycle/Pedestrian, and Public Transportation Accommodations (Sidewalk, shared use paths, bicycle lanes)?

Sidewalk of varying widths along most of these corridors. An important element of this project would be to make sure sidewalks meet ADA compliance standards and that they fit with the goal of creating a more accessible district.

Is there an existing transit or other public transportation facility located within the project limits?

The Capital Area Transit (CAT) fixed route service comes within a block of the west side of the project limits.

Do any school buses, transit buses, other multi-modal vehicles, etc. use this route?

School buses and Transit bus services.

Does a RRX or RR facility exist within the project limits?

No, BNSF main line and rail yard is a couple blocks south of most of this work, just south of Main Street.

Other existing conditions that are not listed identified above?

None

Proposed Improvements

(information requested in this section may not be appropriate for all project types)

What are the proposed Improvements (specific scope of work)?

This project's main goal and objective is to reconstruct 1st Street NW and several Avenues in the core downtown area of Mandan with concrete. Based on preliminary cost estimates completed for the entire project, locations for Phase 1 include 1st Street NW from Collins Avenue to 6th Avenue NW; locations for Phase 2 include 2nd, 3rd, 4th, and 5th Avenues from Main Street to 2nd Street NW. The proposed project is to reconstruct these Streets and Avenues with beautification elements such as landscaping and streetscape improvements integrated throughout. As described above, the City's intent is to phase these improvements.

Proposed Length

Approximately 4,500 feet for the total project. Approximately 2,400 feet for anticipated phase 1 and approximately 2,100 feet for anticipated phase 2.

Proposed Cross Section (attach graphics depicting current dimensions and key roadway elements)

Proposed cross sections will be similar to the existing as seen above. During preliminary design, we will want to look at sidewalk widths vs. roadway widths to see how we may make some changes to accomplish the goal of making the district more walkable and pedestrian friendly. Changes to the existing cross sections aren't anticipated to be major in nature.

Proposed Surfacing Type

New concrete.

Proposed Lighting, if applicable

We will want to incorporate new, LED lighting into this project. We will explore decorative where it makes sense.

Proposed Traffic Control changes

With the urban regional project programmed, Main Street got all new traffic signalization in 2019. Within the Study, an alternate for consideration was for 1st Street to be a roundabout corridor. That ranked lower than some of the other alternatives, but we would still consider during preliminary design if it made sense for any of these intersections at that time. Also, we would check for any signalization warrants.

Proposed Safety Improvements

Reconstruct sidewalks to meet ADA compliance. Updated signage and striping where applicable to make traffic flow clearer to all modes of transportation. Evaluate opportunities to improve parking configurations.

Proposed Intersection Improvements

Will look at any signalization warrants or roundabouts during preliminary design. Possible curb bulb outs. Improvements to sidewalk ramps.

Proposed Traffic Calming Measures

Urban design elements to narrow the feel of the corridor's some such as planters.

Will parking be allowed and type?

Yes. We will keep the angle parking for the majority of the corridor, and consider a possible trial of reverse angle parking that could be extended if well received.

Will any bridges, box culverts, etc. be built/replaced within the project corridor and how will they be modified?

No.

Will any private utilities, water lines, sanitary sewer, and/or storm sewer lines need to be replaced or worked on with this project or potentially in the recent future (identify year)? Have private utilities been coordinated with?

Yes, most of the watermain under many of these streets will need to be replaced. Also, expect that most of the storm sewer will need to be replaced that runs under many of these streets. Sanitary sewer replacement should be minimal. Most of it runs in the alleys in the project area. What doesn't could be done with trenchless technologies. Private utilities have not yet been contacted.

Are there any access points along the project corridor that need to be addressed for mobility or safety concerns?

None of particular note.

Will a Sidewalk or shared use path be installed or replaced?

Yes. Most of the sidewalk along these streets are in poor conditions and in need of replacement.

What ADA improvements will need to be made on this project?

Currently, there are many areas of non-conformance as previously stated. We will bring all sidewalk within these project limits up to ADA compliance.

Do any special accommodations need to be made for school buses, public transportation, other multi-modal vehicles, etc. on this route?

None anticipated.

Proposed Railroad Crossing Work

No.

Other Proposed Improvements

Nothing else major anticipated.

Environmental/Cultural Issues on the proposed Projects

Identify *Yes*, *No*, or *Unknown* for each environmental/cultural issue. If *Yes*, provide a brief description of the issue in the *Comments* box.

Agricultural, Archeological sites, and/or Historical sites

None anticipated.

Lakes, waterways, floodplains Wetland

No.

Stormwater management

Updated stormwater facilities throughout planned. However, no major stormwater issues exist in this particular project area.

Hazardous materials sites

The project area is in direct correlation with the diesel spill recovery effort that has been ongoing for over 10 years. The recovery has been a great success, with over 95% of the product being recovered and wells are actively being retired.

Hazardous materials on existing structure

None in addition to the above.

Upland habitat

None.

Endangered/threatened/migratory species

None.

Section 4(f) (Refers to the use of publicly owned park and recreational lands, wildlife and waterfowl refuges, and significant historical or archeological sites in transportation project development.)

There is public park space on the south side of Main Street near this project. None directly along the proposed corridor though.

Section 6(f) (Refers to Land and Water Conservation Fund (LWCF) Act - the conversion to other use of lands or facilities acquired with LWCF Act funds and requires replacement of used land with lands of equal value and use.)

None known of.

Through/adjacent to tribal land

None known of.

Additional comments on Environmental/Cultural Issues section

Historic in nature being in the core downtown area of the City.

Miscellaneous Issues of Proposed Improvements

Construction Restrictions (*migratory bird, local events, etc.*)

Mandan Progress Organization events occur typically about five or six weekends over the summer months. During construction, we would want to be cognizant of those and prepare accordingly.

Right-of-Way Required (parcels, owners, relocations, etc.) (NOTE: It is recommended that local funds be used to acquire right-of-way on the LPA system.)

None anticipated. However, full reconstruction of all sidewalks will be right up to the property line with zero building setbacks in many cases. Will need to be cognizant of that throughout.

Proposed Traffic Control during Construction

Temporary traffic control will be utilized to get the public through the site. Closures are expected since the project is a concrete reconstruct of these streets. The City will coordinate with the property owners and businesses as much as possible.

Ineligible Project Items

We recognize that the watermain replacement and any sanitary sewer work will all need to be locally funded. We may want to address the condition of our alleyways at the same time as well. If so, we recognize that will be locally funded as well.

Additional comments on Miscellaneous Issues section

None.

Cost Estimate

Itemized Project Cost Estimate (For roadway projects this might include things like preliminary engineering, right-of-way, utilities, construction, construction engineering, bridges, and miscellaneous. For other types of projects include relevant items. Rows can be added as to the following table as necessary).

Item	Total Project (including Phase 2)	Total (Phase 1)	Federal (Phase 1)	State (Phase 1)	Local (Phase 1)
Preliminary & Final Engineering	\$ 956,180	\$ 717,135	\$ 573,708	-	\$ 143,427
Eligible Item Construction and Contingency	\$ 9,561,800	\$ 5,124,100	\$ 4,099,280	-	\$1,024,820
Construction Engineering	\$ 956,180	\$ 478,090	\$ 382,472	-	\$ 95,618
Subtotal – UGP Eligible (Participating)	\$ 11,474,160	\$ 6,319,325	\$ 5,055,460		\$1,263,865
Watermain Replacement (includes Engineering)	\$ 1,336,680	\$ 724,138	-	-	\$724,138
Total Project	\$ 12,810,840	\$ 7,043,463	\$5,055,460	\$ 0	\$1,988,003

Please see attached preliminary detailed cost estimate for the project dated November 2022 for more detail on the anticipate scope of construction and breakdown of phases.

What is the source of the local funds?

City sales tax fund, City wide property taxes and possibly special assessments to benefiting properties. As previously stated, the City has already expended more than \$178,000 of local funds to-date to complete design and boundary surveys, preliminary environmental, data collection, preliminary engineering and detailed cost analyses.

MANDAN DOWNTOWN STREET IMPROVEMENTS 1ST STREET NW, 6TH AVENUE NW TO COLLINS AVENUE CITY OF MANDAN PROJECT NUMBER: 2019-08, SID 217 NDDOT PROJECT NUMBER: UGP-1-988(045), PCN 22551 KLI PROJECT NUMBER 1904-02191 NOVEMBER 2022 CONCRETE PAVEMENT, CURB AND GUTTER, STORM SEWER, WATERMAIN, SIDEWALK, PAVEMENT MARKING, LIGHTING, LANDSCAPING											
SPEC	CODE	ITEM DESCRIPTION	UNIT	PHASED QUANTITIES		TOTAL QUANTITY	UNIT PRICE		PHASED COST		
				QUANTITY (ANTICIPATED PHASE 1)	QUANTITY (ANTICIPATED PHASE 2)				COST (ANTICIPATED PHASE 1)	COST (ANTICIPATED PHASE 2)	COST
103	0100	CONTRACT BOND	L SUM	0.5	0.5	1	\$100,000		\$50,000	\$50,000	\$100,000
202	0136	REMOVAL OF PAVEMENT	SY	14,217	14,262	28,479	\$25		\$355,421	\$356,552	\$711,973
202	0130	REMOVAL OF CURB & GUTTER	LF	5,248	4,063	9,311	\$10		\$52,480	\$40,630	\$93,110
202	0230	REMOVAL OF INLETS	EA	12	9	21	\$1,000		\$12,000	\$9,000	\$21,000
203	0101	COMMON EXCAVATION-TYPE A	CY	495	505	1,000	\$40		\$19,800	\$20,200	\$40,000
216	0100	WATER	M GAL	170	174	344	\$75		\$12,771	\$13,029	\$25,800
251	0000	EROSION CONTROL	L SUM	0.5	0.5	1	\$20,500		\$10,250	\$10,250	\$20,500
302	0120	AGGREGATE BASE COURSE CL 5	TON	8,073	8,325	16,398	\$45		\$363,285	\$374,625	\$737,910
550	0112	8IN NON-REINF CONCRETE PAVEMENT CL AE	SY	9,358	10,818	20,176	\$100		\$935,800	\$1,081,800	\$2,017,600
570	0713	8IN CONCRETE PAVEMENT REPAIR-FULL DEPTH-DOWELED	SY	941	0	941	\$200		\$188,200	\$0	\$188,200
702	0100	MOBILIZATION	L SUM	0.5	0.5	1	\$1,000,000		\$500,000	\$500,000	\$1,000,000
704	1100	TRAFFIC CONTROL	LSUM	0.5	0.5	1	\$150,000		\$75,000	\$75,000	\$150,000
709	0151	GEOSYNTHETIC MATERIAL TYPE R1	SY	11,092	12,172	23,264	\$4		\$44,368	\$48,687	\$93,055
714	0210	PIPE CONC REINF 15IN CL III-STORM DRAIN	LF	0	62	62	\$165		\$0	\$10,230	\$10,230
714	0615	PIPE CONC REINF 24IN CL III	LF	963	0	963	\$190		\$182,970	\$0	\$182,970
714	0820	PIPE CONC REINF 30IN CL III	LF	255	0	255	\$225		\$57,375	\$0	\$57,375
722	0110	MANHOLE 60IN	EA	0	5	5	\$7,000		\$0	\$35,000	\$35,000
722	4060	INLET MOUNTABLE CURB-TYPE B	LF	16	15	31	\$6,900		\$110,400	\$103,500	\$213,900
722	3510	INLET-TYPE 2	EA	12	9	21	\$6,700		\$80,400	\$60,300	\$140,700
722	6240	ADJUST UTILITY APPURTENANCE	EA	9	9	18	\$500		\$4,455	\$4,545	\$9,000
724	0210	FITTINGS-DUCTILE IRON	LBS	125	125	250	\$25		\$3,125	\$3,125	\$6,250
724	0310	GATE VALVE & BOX 8IN	EA	0	15	15	\$4,000		\$0	\$60,000	\$60,000
724	0314	GATE VALVE & BOX 12IN	EA	8	0	8	\$8,000		\$64,000	\$0	\$64,000
724	0291	REMOVE & REPLACE GATE VALVE W/BOX 4IN	EA	2	0	2	\$4,500		\$9,000	\$0	\$9,000
724	0311	REMOVE & REPLACE GATE VALVE W/BOX 8IN	EA	2	0	2	\$5,000		\$10,000	\$0	\$10,000
724	0313	REMOVE & REPLACE GATE VALVE W/BOX 12IN	EA	10	0	10	\$9,000		\$90,000	\$0	\$90,000
724	0600	WATER SERVICE	LF	684	697	1,381	\$55		\$37,598	\$38,357	\$75,955
724	0412	8IN HYDRANT	EA	1	1	2	\$8,000		\$8,000	\$8,000	\$16,000
724	0430	REMOVE HYDRANT	EA	1	1	2	\$2,000		\$2,000	\$2,000	\$4,000
724	0830	WATERMAIN 8IN PVC	LF	5	2,044	2,049	\$120		\$600	\$245,280	\$245,880
724	0850	WATERMAIN 12IN PVC	LF	1,567	0	1,567	\$150		\$235,050	\$0	\$235,050
724	0000	WATER LINE CONNECTION	EA	14	42	56	\$2,000		\$28,000	\$84,000	\$112,000
748	0140	CURB & GUTTER-TYPE I	LF	5,248	4,063	9,311	\$30		\$157,440	\$121,890	\$279,330
750	0030	PIGMENTED IMPRINTED CONCRETE	SY	470	0	470	\$200		\$94,000	\$0	\$94,000
750	0100	SIDEWALK CONCRETE	SY	3,492	2,814	6,306	\$100		\$349,200	\$281,400	\$630,600
750	0107	SIDEWALK - DECORATIVE	SY	787	0	787	\$200		\$157,400	\$0	\$157,400
750	0150	SIDEWALK TRENCH DRAIN	EA	6	6	12	\$4,500		\$26,730	\$27,270	\$54,000
750	0300	STEPS CONCRETE	L SUM	0.5	0.5	1	\$50,000		\$25,000	\$25,000	\$50,000
750	1020	DRIVEWAY CONCRETE 8IN	SY	196	631	827	\$100		\$19,600	\$63,067	\$82,667
750	2115	DETECTABLE WARNING PANELS	SF	285	291	576	\$55		\$15,682	\$15,998	\$31,680
754	0000	PERMANENT SIGNING	LSUM	0.5	0.5	1	\$20,000		\$10,000	\$10,000	\$20,000
762	0000	PREFORMED PATTERNED PVMT MK	L SUM	0.5	0.5	1	\$70,220		\$35,110	\$35,110	\$70,220
770	9402	LIGHTING SYSTEM (AESTHETIC)	L SUM	0.5	0.5	1	\$450,000		\$225,000	\$225,000	\$450,000
970	0001	LANDSCAPING APPURTENANCES	L SUM	0.5	0.5	1	\$200,000		\$100,000	\$100,000	\$200,000

ANTICIPATED PHASE 1 SUMMARY TABLE		ANTICIPATED PHASE 2 SUMMARY TABLE		TOTAL PROJECT SUMMARY TABLE	
Subtotal Anticipated Phase 1 - Participating	\$4,270,100	Subtotal Anticipated Phase 2 - Participating	\$3,698,100	Subtotal - Participating	\$7,968,200
Contingency (20%) - Participating	\$854,000	Contingency (20%) - Participating	\$739,600	Contingency (20%) - Participating	\$1,593,600
Prelim & Final Engineering (75% Of Total Prelim & Final Engineering - Participating)	\$717,135	Prelim & Final Engineering (25% Of Total Prelim & Final Engineering - Participating)	\$239,045	Prelim & Final Engineering (10%) - Participating	\$956,180
Construction Engineering (50% Of Total Construction Engineering - Participating)	\$478,090	Construction Engineering (50% Of Total Construction Engineering - Participating)	\$478,090	Construction Engineering (10%) - Participating	\$956,180
Construction Cost Anticipated Phase 1 - Participating (Storm + Road)	\$6,319,325	Construction Cost Anticipated Phase 2 - Participating (Storm + Road)	\$5,154,835	Total Construction Cost - Participating (Storm + Road)	\$11,474,160

Subtotal - Watermain	\$487,400	Subtotal - Watermain	\$440,800	Subtotal - Watermain	\$928,200
Contingency (20%) - Watermain	\$97,500	Contingency (20%) - Watermain	\$88,200	Contingency (20%) - Watermain	\$185,700
Prelim & Final Engineering (75% Of Total Prelim & Final Engineering - Watermain)	\$83,543	Prelim & Final Engineering (25% Of Total Prelim & Final Engineering - Watermain)	\$27,848	Prelim & Final Engineering (10%) - Watermain	\$111,390
Construction Engineering (50% Of Total Construction Engineering - Watermain)	\$55,695	Construction Engineering (50% Of Total Construction Engineering - Watermain)	\$55,695	Construction Engineering (10%) - Watermain	\$111,390
Construction Cost Anticipated Phase 1 - Watermain	\$724,138	Construction Cost Anticipated Phase 2 - Watermain	\$612,543	Total Construction Cost - Watermain	\$1,336,680

ROW Acquisition	\$0.00	ROW Acquisition	\$0.00	ROW Acquisition	\$0.00
Utility Relocation	\$0.00	Utility Relocation	\$0.00	Utility Relocation	\$0.00
Anticipated Phase 1 Project Cost	\$ 7,043,463	Anticipated Phase 2 Project Cost	\$ 5,767,378	Total Project Cost	\$ 12,810,840

* The phasing in this cost estimate is based on phase 1 including 1st Street NW from Collins Avenue to 6th Avenue NW and phase 2 including 2nd, 3rd, 4th, and 5th Avenues from Main Street to 2nd Street NW.

Urban Grant Program Application

Coversheet

LPA

Bismarck

Contact Person

Gabe Schell

Title

City Engineer

Address

221 N 5th Street, Bismarck, ND

Telephone

701-355-1505

Email

gschell@bismarcknd.gov

Project Name

Front Avenue and 5th Street Pavement Rehabilitation

LPA Applicant Signature (Highest Elected Official)

NDDOT District Engineer Signature if project is located on/impacts a State Highway

Date Submitted

11/7/2022

Application Attachment Checklist (check all that have been attached)

☐ Relevant excerpts from adopted plans ☐ Map(s) depicting project location ☐ Cross Section of Roadway/facility

☐ Pictures, Graphics, and/or other visual aids ☐ Relevant supporting data

☐ Other Attachments (describe)

[Click here to enter text.](#)

Information in this Box is for NDDOT to Complete

Date Received _____

Is this Project Title 23 Code of Federal Regulation Eligible including location on a federal aid route?

Yes ☐

No ☐

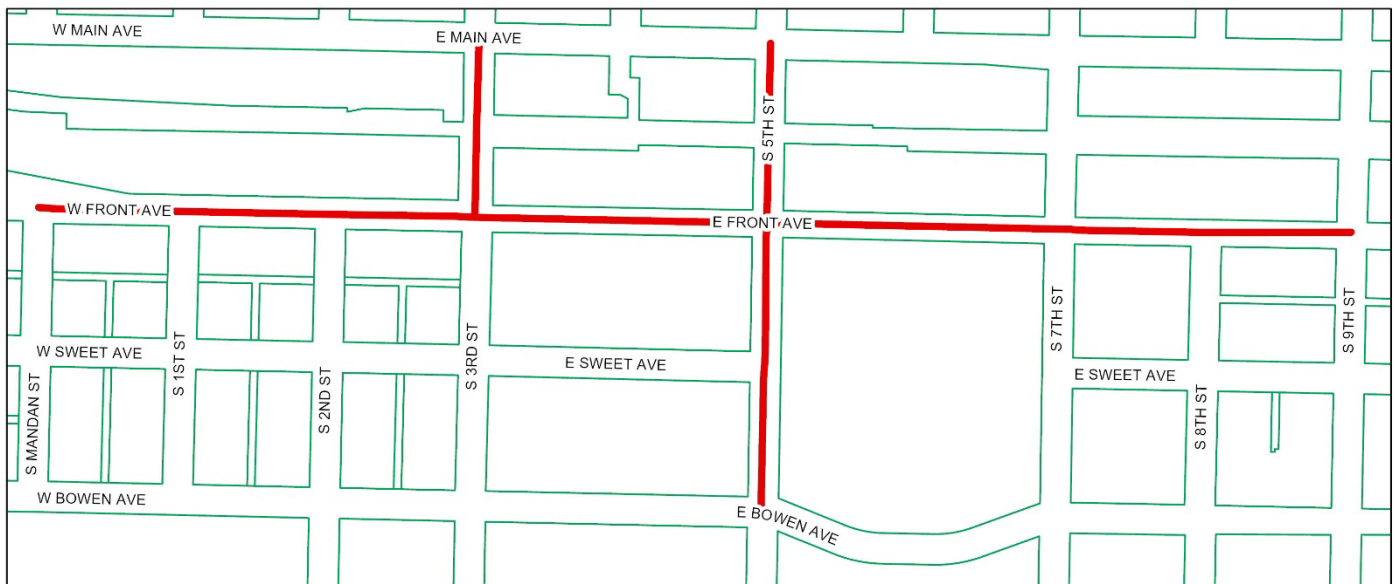
General Project Information

Project Description (including location and scope of work for which funding is requested)

Project consists of improvements to downtown Bismarck primarily on Front Avenue, 3rd Street and 5th Street bounded by Main Avenue on the north, Mandan Street on the west and 9th Street on the east. Project scope includes mill and overlay, curb and gutter repairs, sidewalk repairs, ADA ramp upgrades, curb extensions, plastic pavement marking, watermain replacement, roadway and pedestrian lighting upgrades, street trees and landscaping improvements modifications of traffic signals for implementing leading pedestrian intervals, benches, bike racks, bus shelter pads and signage.

Construction Limits: Front Avenue from Mandan Street to 9th Street, 3rd Street from Front Avenue to Main Avenue and 5th Street from Bowen Avenue to Main Avenue.

Environmental Area: Front Avenue from Mandan Street to 9th Street, 3rd Street from Front Avenue to Main Avenue and 5th Street from Bowen Avenue to Main Avenue.



Total Project Cost

\$3,056,000

Amount of Grant Funds Requested (cannot exceed 80% of total project cost)

\$1,850,000

Competitive Criteria

1. **Community Need for Project:** Explain why the project is needed including appropriate detail. Include any 100% locally funded components of the project that are part of the overall project or other planned projects that may complement this project. Documentation of information to support the need such as relevant data, existing and if appropriate projected conditions, and any related analysis through studies or reports would be appropriate to identify in this section. Attachments such as but not limited to: maps, pictures, other graphics; and supporting data demonstrating the need for the project is encouraged.

The primary component of the project is a mill and overlay of Front Avenue from Mandan Street to 9th Street and 5th Street from Sweet Avenue to the railroad tracks. The proposed work would repair the distressed wearing course and would restore the useful life of the previously invested infrastructure through increased load carrying capacity. Front Ave, 3rd Street and 5th Street are functionally classified as minor arterials and provide north/south and east/west connectivity into and out of the CBD. 3rd Street and 5th Street with its quiet zone at-grade crossing of BNSF railroad provide interconnectivity for all modes of transportation from downtown Bismarck to land uses south of the railroad tracks. The project would also revise/improve any non-compliant pedestrian crossing to meet ADA requirements. Select traffic signals would be modified to include push-button activation in order to implement leading pedestrian intervals which have been shown to reduce pedestrian/vehicle crashes. This project would evaluate the need for pedestrian lighting along Front Avenue from 3rd Street to 7th Street, 3rd Street between Front Avenue and the railroad tracks, and 5th Street from Bowen Avenue to the railroad tracks.

2. **Community Impact of Project:** Describe how the project will offer significant long term value to the community specifically in addressing the following program objectives (a-f):
 - a) **Preserve existing transportation assets**
This project would preserve the existing useful life of the asphalt surfacing by milling the wearing course of pavement and overlaying a new wearing course. Damaged curb would be replaced to improve stormwater conveyance and aesthetic appeal. Implementation of this project will preserve the majority of the existing infrastructure by making minimal modifications to better serve the public transportation needs.
 - b) **Ensure safety of all users of the transportation system**
Traffic signals would be evaluated for the need for push-button activation in order to implement leading pedestrian intervals which have been shown to reduce crashes involving pedestrians. Leading pedestrian interval would allow the pedestrians to get a “head start” into entering the crosswalk with all four signalized approaches showing a red indication for vehicular traffic for 2-3 seconds while the activated pedestrian receives the “walk” designation. This safety feature is proposed only if the signal infrastructure includes pedestrian activated crosswalk in order to minimize vehicular driver frustration of an “all red” indication during the signal cycles with no pedestrian activity.
 - c) **Improve multi-modal transportation options such as walking, bicycling, and public transportation**
This project would evaluate and enhance multi-modal options by improving ADA ramp locations. Five of the six public transportation bus routes utilize the bus transit stop on Front Avenue between 5th Street and 7th Street. This project would assess the need for sidewalks at two locations that are presently not installed.
 - d) **Enhance the economic vitality of the area by providing transportation assets that support: revitalization efforts; development of vacant or underutilized parcels within existing urban areas; and/or redevelopment of established portions of communities**
This project would increase the economic viability of the area by providing a street that accommodates all users. By providing a reliable transportation network for all modes of travel, development and redevelopment interest is maintained or expanded.
 - e) **Support economically sustainable growth, lessening the need for outward expansion of community transportation infrastructure and associated services**
This project supports existing business and the development of new business in downtown Bismarck by creating an atmosphere more conducive to pedestrian activity both during daytime work and evening

social activity. This is accomplished by focusing more on multimodal forms of transportation.

3. **Consistency with an LPA Associated Plan:** Document linkage between the proposed project and a publicly accepted/adopted plan(s) and/or public involvement process. Clear linkage should be demonstrated between the proposed project and the associated public acceptance/support which would include documenting the reference(s) in the plan and/or public involvement process. Relevant excerpts from such documents are encouraged to attach with the application. Examples of publicly accepted/adopted plans might include but are not limited to: Community Comprehensive Plan; Downtown Master Plan; Neighborhood/Subarea/Corridor Plan; Bicycle/Pedestrian Plan; Housing Plan; Long Range Transportation Plan; Transit Development Plan; and/or Renaissance Zone Plan. A stand-alone public involvement process which demonstrates community support for the specific project is also acceptable and should be documented in the application.

This project was identified in the Downtown Bismarck Subarea plan to include traffic calming measures and provide for existing business and the development of new business in downtown Bismarck by creating an atmosphere more conducive to pedestrian activity both during daytime work and evening social activity.

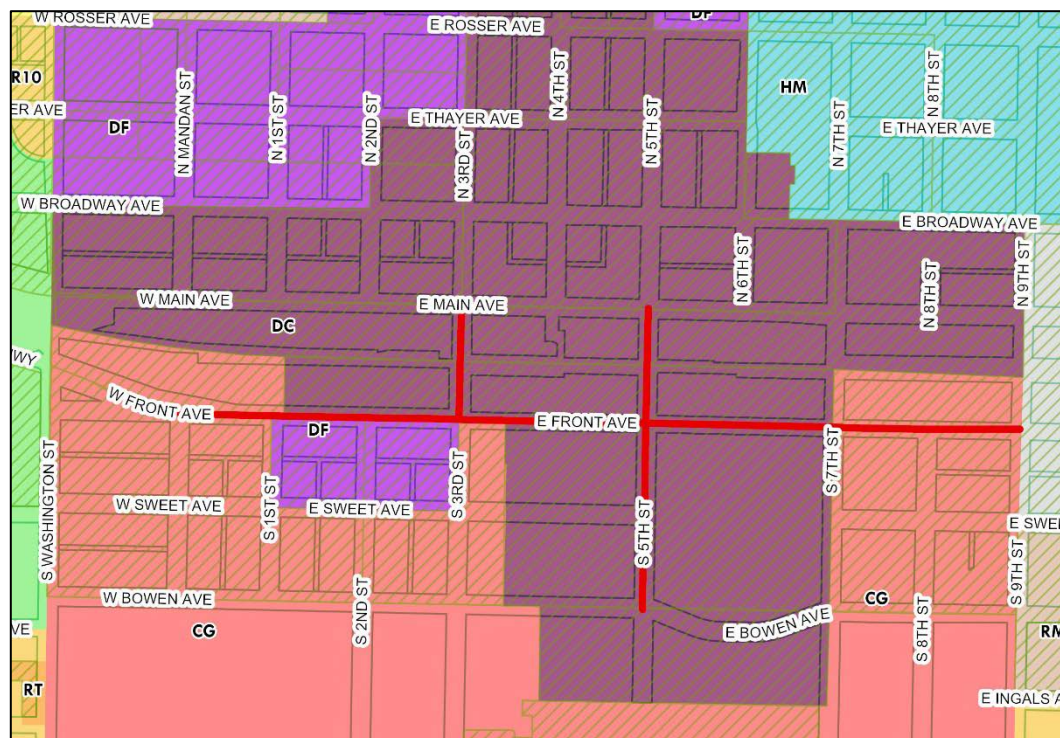
In August of 2019 the board of City Commissioners adopted the Downtown Streetscape Standards. The purpose of these standards was to enhance and preserve the quality of the public right of way in the downtown core and provide an attractive, coherent and safe experience

Downtown Streetscape Standards Website:

https://www.bismarcknd.gov/DocumentCenter/View/33761/Downtown-Streetscape-Standards_071119

4. **Project Support of Urban Core/Central Business District:** Projects which directly support the urban core/central business district (CBD) will be given preferential consideration. Identify the project location and how it will support the urban core/CBD. (Attach 8.5" x 11" or 11" x 17" color map depicting project location in relation to urban core/CBD if applicable to the project type)

This proposed project is near the southern fringe of the downtown core as shown on the map below.. This project will continue to expand the area to support the continued growth of the activities of the central business district. Investing transportation dollars into these roadways would provide a funding source that would lessen the costs to the adjacent property owners for these improvements. The University of Mary is the property owner at the corner of Front Avenue and 5th Street and seeks to continue its presence within Bismarck.



5. **Projects that Maximize the Return on Investment from Public Funds:** Projects which can demonstrate a positive private return on investment of public funds will be given preferential consideration. Examples of this may include but not be limited to increased retail sales, new jobs, and/or new dwelling units anticipated as a direct result of the proposed project.

The zoning is downtown core, downtown fringe and commercial for all of the properties within the project area. The land uses vary from event center, retail, office, and restaurants to mixed use residential and public. Maintaining a healthy level of service on the infrastructure within the downtown core, downtown fringe and hospital medical is essential to continuing the development and redevelopment potential in all of these properties. City pedestrian activity on subject corridors and the relationship of non-time limit parking just outside of this area as a generator of pedestrian activity into and out of these roadways throughout the day. Please see the attached letter of support from the Downtown Business Association of Bismarck for additional information.

Existing Conditions

(information requested in this section may not be appropriate for all project types)

Functional Classification of Roadway

Minor Arterials – Front Avenue, 3rd Street and 5th Street

Current AADT (including source)

Front Avenue – 4,800

3rd Street – 10,700

5th Street – 2,500

Source: NDDOT Interactive Map

Forecasted AADT (including source)

Recently completed 2020-2045 MTP did not cite traffic growth on a corridor by corridor level but the 2045 transportation model did include a percentage of growth anticipated to occur within the community through 2045 to be absorbed by the traffic analysis zones located in the downtown area due to redevelopment.

Posted or Statutory Speed Limit

25 MPH

Cross Section of Roadway (attach graphics depicting current dimensions and key roadway elements)

Majority of roadway widths are 40' or 48' face of curb to face of curb. Two-way traffic. Sidewalk widths are 6' with some areas only having sidewalks on one side of the street. Right of way width is 80'.

Pavement rating or condition

The pavement is in fair condition with the average Pavement Condition Index score of 66 in 2022. The pavement is projected to be in a degraded condition with an anticipated pavement condition index score of 60 in 2024, requiring a mill and overlay.

Year of Last Federal Investment at this Location**When was the current section built?**

5th Street from Bowen Ave to Sweet Avenue – Reconstructed 2019

5th Street from Sweet Avenue to BNSF Railroad tracks – Reconstructed 1963

Front Avenue from Mandan Street to 3rd Street – Reconstructed 1958

Year last surfaced or received maintenance?

5th Street from Sweet Avenue to BNSF Railroad tracks – Mill and Overlay 2011

Front Avenue from Mandan Street to 3rd Street – Mill and Overlay 1999

Front Avenue from 3rd Street to 9th Street – Mill and Overlay 2011

Lighting

In Place

Crash Rate or Number of Crashes?

Since 2010 there has been approximately 780 crashes within the project area, of those 78% of crashes resulted in property damage only, 56% of the crashes were intersection related and 76% of crashes were rear ends or angles.

Other Known Safety Concerns?

There was one pedestrian fatality that took place at the railroad crossing in 2021 on 5th Street. There is a quiet rail system with pedestrian arms in place. This system was working properly at the time of the incident.

Intersections (how many, type, control, etc.)

There are 12 intersections in total within the project area. Traffic signals are in place on Front Avenue at 3rd Street, 5th Street, 7th Street and 9th Street as well as on Main Avenue at 3rd Street and 5th Street. The intersection of 5th Street and Bowen Avenue is all-way stop controlled. All other intersections are stop controlled

Is parking allowed and what type?

Yes, parallel parking at select locations

Are there any bridges, box culverts, etc. within the project corridor?

No

What is the condition of the existing sanitary sewer, storm sewer, and water lines?

Underground infrastructure for storm and sanitary sewer is in good condition at this time. The watermain on Front Ave and 5th Street is in need of replacement and would be replaced at the time of the street improvement project.

Are there any Access points to adjoining property that present a special concern?

No

Bicycle/Pedestrian, and Public Transportation Accommodations (Sidewalk, shared use paths, bicycle lanes)?

6' minimum width sidewalks are in place throughout the project area. There are two locations on Front Avenue where the sidewalk is only on one side of the street.

Is there an existing transit or other public transportation facility located within the project limits?

Yes, on Front Avenue between 5th Street and 7th Street.

Do any school buses, transit buses, other multi-modal vehicles, etc. use this route?

Yes, transit routes utilize all streets within the project limits.

Does a RRX or RR facility exist within the project limits?

Yes, there are quiet zone at grade crossings of BNSF railroad located on 3rd Street and 5th Street between Main Avenue and Front Avenue

Other existing conditions that are not listed identified above?

None at this time

Proposed Improvements

(information requested in this section may not be appropriate for all project types)

What are the proposed Improvements (specific scope of work)?

This project proposes a mill and overlay on Front Ave from Mandan Street to 9th Street and 5th Street from Sweet Ave to the railroad tracks. Installation of permanent pavement markings, upgrade ADA ramps and select watermain replacement is also proposed for these streets.

Pedestrian curb extensions would be considered at the intersection of 5th Street and Sweet Avenue.

Pedestrian lighting would be considered on Front Ave from 3rd Street to 7th Street, 5th Street from Bowen Ave to railroad tracks and 3rd Street from Front Avenue to railroad tracks.

Proposed Length

5,115 feet (0.97 miles)

Proposed Cross Section (attach graphics depicting current dimensions and key roadway elements)

No change to existing cross section

Proposed Surfacing Type

Asphalt, no change

Proposed Lighting, if applicable

Installation of pedestrian lighting on Front Avenue from 3rd Street to 7th Street, 3rd Street from Front Avenue to BNSF Railroad and 5th Street from Bowen Avenue to BNSF Railroad.

Proposed Traffic Control changes

None

Proposed Safety Improvements

Should any of the existing traffic signals be unwarranted and the signal is removed, pedestrian crossings at the intersection would be addressed. At the intersections where, near miss interactions between pedestrians and vehicular traffic are occurring, the implementation of leading pedestrian intervals could be considered to give more of an advantage to pedestrians by allowing pedestrians extra crossing time before cars can go. Intersections will be evaluated to determine if curb extensions could be installed.

Proposed Intersection Improvements

Consideration for high visibility crosswalks and curb extensions.

Proposed Traffic Calming Measures

Pedestrian curb extensions included at select intersections.

Will parking be allowed and type?

Yes, existing parallel parking will remain. No additional parking will be added to the project area.

Will any bridges, box culverts, etc. be built/replaced within the project corridor and how will they be modified?

No

Will any private utilities, water lines, sanitary sewer, and/or storm sewer lines need to be replaced or worked on with this project or potentially in the recent future (identify year)? Have private utilities been coordinated with?

The City watermain on Front Avenue and 5th Street will be replaced. There are no known issues of private utility at this time.

Are there any access points along the project corridor that need to be addressed for mobility or safety concerns?

No

Will a Sidewalk or shared use path be installed or replaced?

Sidewalk gaps along Front Avenue will be installed.

What ADA improvements will need to be made on this project?

Installation of tactile truncated dome panels at pedestrian crossings.

Do any special accommodations need to be made for school buses, public transportation, other multi-modal vehicles, etc. on this route?

Consideration for transit routes and bus transit stops will be looked into during the construction of the project.

Proposed Railroad Crossing Work

No.

Other Proposed Improvements

[Click here to enter text.](#)

Environmental/Cultural Issues on the proposed Projects

Identify *Yes*, *No*, or *Unknown* for each environmental/cultural issue. If *Yes*, provide a brief description of the issue in the *Comments* box.

Agricultural, Archeological sites, and/or Historical sites

Yes, portions of some the streets lie within the Downtown Bismarck Historic District. Within the district are many buildings list as individually eligible/contributing structures. Project improvements would not require right of way or

impact any existing building and there are no contributing historical elements within the right of way itself.

Lakes, waterways, floodplains Wetland

No

Stormwater management

No

Hazardous materials sites

No

Hazardous materials on existing structure

No

Upland habitat

No

Endangered/threatened/migratory species

No

Section 4(f) (Refers to the use of publicly owned park and recreational lands, wildlife and waterfowl refuges, and significant historical or archeological sites in transportation project development.)

No

Section 6(f) (Refers to Land and Water Conservation Fund (LWCF) Act - the conversion to other use of lands or facilities acquired with LWCF Act funds and requires replacement of used land with lands of equal value and use.)

No

Through/adjacent to tribal land

No

Additional comments on Environmental/Cultural Issues section

[Click here to enter text.](#)

Miscellaneous Issues of Proposed Improvements

Construction Restrictions (*migratory bird, local events, etc.*)

No

Right-of-Way Required (parcels, owners, relocations, etc.) (NOTE: It is recommended that local funds be used to acquire right-of-way on the LPA system.)

No

Proposed Traffic Control during Construction

Maintain traffic on roadway. Detour used at times or restriction to one-way during phasing.

Ineligible Project Items

City watermain replacement

Additional comments on Miscellaneous Issues section

[Click here to enter text.](#)

Cost Estimate

Itemized Project Cost Estimate (For roadway projects this might include things like preliminary engineering, right-of-way, utilities, construction, construction engineering, bridges, and miscellaneous. For other types of projects include relevant

items. Rows can be added as to the following table as necessary).

Item	Total	Federal	State	Local
Engineering (In House)	278,000			278,000
Watermain Replacement	498,000			498,000
Federal Aid Eligible Items	2,280,000	1,850,000		435,000
Totals	3,056,000	1,850,000		1,211,000

What is the source of the local funds?

Sales tax and/or special assessments.

City of Bismarck
Engineering Department
NDDOT Grant Support

September 28, 2021

Mark Berg, Gabe Schell, City of Bismarck elected officials & NDDOT

I'm writing to express support for Bismarck's current NDDOT Urban Grant Program application for Downtown Bismarck related projects. Our organizations represent over 200 businesses with nearly 9,000 employees, we also advocate for the largest and densest employment center in Bismarck located Downtown.



Smart Efficient Infrastructure: Bismarck's pursuit of infill projects has led to more than \$150 million dollars in returned taxable valuation on existing infrastructure, generating wealth for the community. As the downtown continues to grow and intensify in use, these NDDOT Urban Road Grant applications would support the highest value per acre areas in our community. We are writing to give support for the following:

- *7th Street –Front Avenue to Broadway Avenue and 9th Street – Front Avenue to Main Avenue Concrete Pavement Repair*
- *Additional matching funds for the downtown street pavement rehabilitation – Rosser Avenue, 3rd Street to 7th Street and 3rd Street, Rosser Avenue to Main 9 Avenue.*
- *Front Avenue/5th Street improvements*

As always, we want to touch briefly on the return on investment for road improvements in Downtown Bismarck. When done with all modes of transportation and pedestrians in mind, we can see a very positive ROI. Improvement's like our Main Ave Road Diet, Quiet Rail Zone, Chancellor Square Reconfiguration, and our 5th St Demonstration Project have produced positive returns including:

- Increase in private commercial activity (based on permit applications)
- Increase in pedestrian activity
- New housing units
- Safer intersections and roadways
- Improved pedestrian environment and experience
- Continued increase in property valuation

We will continue to work with our partners at the City of Bismarck and NDDOT to help further this application in any way. Thank you for your consideration.

Sincerely,

Kate Herzog, President & COO
Downtown Bismarck Community Foundation 501c3 &

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November 14-15th, 2022Re: **Rail/ Highway Crossing Safety Program**

Four projects were received for the 2023 Rail/Highway Crossing Safety Program. The submitting jurisdiction was the City of Bismarck. Urban Rail projects are not scored by staff or ranked by a committee, but they may be prioritized by TAC and Policy Board prior to submission to NDDOT.

Jurisdiction	Type	Project Location	Total Cost / Federal	MTP	Points
Bismarck	Upgrade/Construction	Airport Road Rail Crossing: Pedestrian crossing pads and possible pedestrian gates if required by BNSF on both sides of Airport Road.	Unknown/100 % federal funds	Yes	NA
Bismarck	Upgrade/Construction	24th Street Rail Crossing: Pedestrian crossing pads on the west side of 24 th Street.	Unknown/100 % federal funds	Yes	NA
Bismarck	Upgrade/Construction	26th Street Rail Crossing: Pedestrian crossing pads on the west side of 26 th Street.	Unknown/100 % federal funds	Yes	NA
Bismarck	Upgrade/Construction	Yegen Road Rail Crossing: Automated crossing gates at the crossing south of Fuller Avenue on Yegen Road.	Unknown/100 % federal funds	Yes	NA

//RAD December 2021

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Resolution of Adoption

For the North Dakota Department of Transportation's 2022-2026 Performance Measure Targets (PM2 and PM3)

Whereas, the U.S. Department of Transportation established six performance measures for Infrastructure Conditions—including pavements and bridges on the National Highway System—as detailed in 23 CFR 490, Subpart C, National Performance Management Measures for Assessing Pavement Condition, and 23 CFR 490, Subpart D, National Performance Management Measures for Assessing Bridge Condition; and

Whereas, the U.S. Department of Transportation established three performance measures for System Performance—specific to travel time reliability of passenger vehicles and freight vehicles on the National Highway System—as detailed in 23 CFR 490, Subpart E, National Performance Management Measures to Assess Performance of the National Highway System, and 23 CFR 490, Subpart F, National Performance Management Measures to Assess Freight Movement on the Interstate System; and

Whereas, the North Dakota Department of Transportation (NDDOT) established statewide performance targets for each of these measures in accordance with 23 CFR 490.209; and

Whereas, metropolitan planning organizations (MPOs) must establish Infrastructure Condition and System Performance targets; and

Whereas, the federal government has established a deadline for the adoption or renewal of Infrastructure Condition and System Performance targets by MPOs of March 29, 2022; and

Whereas, MPOs have the option of adopting the state targets in lieu of creating their own; and

Now, therefore, be it resolved, that the Bismarck-Mandan Metropolitan Planning Organization agrees to plan and program projects so that the projects contribute to the accomplishment of NDDOT's Pavement Condition, Bridge Condition, and System Performance targets, as outlined in the following attachment.

CERTIFICATE

The undersigned, duly elected chairperson of the Bismarck-Mandan Metropolitan Planning Organization Policy Board, certifies that the forgoing is a true and correct copy of a Resolution, adopted at a legally convened meeting of the Bismarck-Mandan Metropolitan Planning Organization Policy Board held on November 15, 2022.

Gerarld Wise,
Chairman, Bismarck-Mandan MPO Policy Board

Date

Overview – Typically FHWA asks for a narrative to add context to the submittal of State DOT Targets. The actual measurements FHWA typically seeks comment on, are not populated in the system by HPMS currently. Although HPMS calculations/measurements are not available for direct comparison, we believe from our calculations, that significant progress was achieved the past performance period. This was accomplished by following the Life Cycle Planning, and Programming processes documented in the Department Transportation Asset Management Plan (TAMP) with actual implementation taking place in the Departments Statewide Transportation Improvement Plan (STIP).

Next Performance Period's targets are as follows:

Pavements

Pavement Measure	2022-2026 Target
Interstate Good Condition	75.6%
Non-Interstate Good Condition	58.3%
Interstate Poor Condition	3.0%
Non-Interstate Poor Condition	3.0%

Bridges

Measure	2022-2026 Target
Percent NHS Bridges in Good Condition by Deck Area	50.0
Percent NHS Bridges in Poor Condition by Deck Area	10.0

Reliability

Measure	2022-2026 Target
Interstate Reliability	85.0%
Non-Interstate NHS Reliability	85.0%
Truck Travel Time Reliability Index	2.0

Resolution of Adoption

For the North Dakota Department of Transportation's 2022 Transit Asset Management (TAM) Plan and Targets

Whereas, the National Transit Asset Management System Final Rule (49 U.S.C 625) requires all agencies who receive federal financial assistance under 49 U.S.C Chapter 53 and own, operate, or manage capital assets used in the provision of public transportation create a TAM plan; and

Whereas, transit agencies must fulfill this requirement through an individual or group TAM plan; and

Whereas, the North Dakota Department of Transportation (NDDOT) has recently completed and enacted an updated group TAM plan, with Bis-Man Transit as a participant; and

Whereas, MPOs are required by the Federal Transit Administration to adopt the TAM plan(s) of their area transit agencies, and additionally to support their TAM performance targets and measures; and

Now, therefore, be it resolved, that the Bismarck-Mandan Metropolitan Planning Organization adopts Bis-Man Transit's 2022 TAM Plan, and agrees to plan and program projects so that the projects contribute to the accomplishment of this TAM Plan's targets for the following performance measures, which are further detailed in the adopted TAM Plan:

Agency Name	Asset Category	Asset Class	2022 Target	2023 Target	2024 Target	2025 Target	2026 Target	2027 Target
NDDOT	Equipment	Non Revenue/Service Automobile	29%	40%	40%	37%	35%	29%
NDDOT	Equipment	Other Rubber Tire Vehicles	60%	40%	40%	37%	35%	29%
NDDOT	Facilities	Administrative / Maintenance Facilities	0%	0%	0%	0%	0%	0%
NDDOT	Facilities	Passenger Facilities	0%	0%	0%	0%	0%	0%
NDDOT	Revenue Vehicles	BU - Bus	29%	28%	15%	14%	15%	15%
NDDOT	Revenue Vehicles	CU - Cutaway	15%	25%	25%	24%	28%	20%
NDDOT	Revenue Vehicles	MV - Minivan	11%	20%	25%	28%	25%	24%
NDDOT	Revenue Vehicles	SV - Sports Utility Vehicle	50%	50%	40%	37%	35%	40%
NDDOT	Revenue Vehicles	VN - Van	36%	35%	42%	40%	35%	24%

Methods for Target-Setting

The target is a percent of revenue and nonrevenue vehicles within a particular asset class that has met or exceeded the Useful Life Benchmark (ULB). North Dakota transit agencies provide input on ULB while considering their local environment such as weather resiliency, local geography, frequency of service, passenger load, etc. The ULB thresholds set by NDDOT included the following, Buses - 14 years, Cutaways - 10 years, and Minivans, Modified vans, and Automobiles - 8 years. These targets were set considering, FTA recommendations, 5-year history of meeting past targets, comparisons of surrounding states ULB, and comparisons of states of similar inventory size, climate and geography ULBs. The target for facilities is that 0% of the transit facilities are rated with a condition rating below 3.0 on the FTA Transit Economic Requirement Model Scale.

CERTIFICATE

The undersigned, duly elected chairperson of the Bismarck-Mandan Metropolitan Planning Organization Policy Board, certifies that the forgoing is true and correct copy of a Resolution, adopted at a legally convened meeting of the Bismarck-Mandan Metropolitan Planning Organization Policy Board held on November 15, 2022.

Gerarld Wise,
Chair, Bismarck-Mandan MPO Policy Board

Date

TAM Plan

TAM Plan Name: Transit Asset Management
TAM Plan Type: Group Plan Sponsor
Agency Name: North Dakota Department of Transportation
Account Executive Name: Becky Hanson
Last Modified Date: 06/16/2022

Introduction

Brief Overview

Transit Asset Management (TAM) is a strategic and systematic process through which an organization procures, operates, maintains, rehabilitates, and replaces transit assets to manage their performance, risks, and costs over their lifecycle to provide safe, cost-effective, and reliable service to current and future passengers. The primary intended audience for this document is North Dakota Department of Transportation (NDDOT) Tier II subrecipients. Tier II subrecipients are defined as 5311 subrecipients, members of American Indian tribes, agencies with 100 revenue vehicles or less, and subrecipients of 5310 funds who do not receive direct Federal funding. They can choose whether to participate in this group plan or a separate NDDOT-approved TAM plan they have created. The National Transit Asset Management System Final Rule (49 U.S.C. 625) requires that all agencies who receive federal financial assistance under 49 U.S.C. Chapter 53 and own, operate, or manage capital assets used in the provision of public transportation create a TAM plan. Agencies are required to fulfill this requirement through an individual or group plan. NDDOT is the sponsor for a group TAM Plan and has developed this plan on behalf of their subrecipients Tier II transit agencies. Currently there are 28 transit agencies in the state of North Dakota; 23 are Rural agencies, 3 are Tribal, and 3 are Urban. Four agencies offer Fixed Route mode with Complementary Paratransit, 25 offer Demand Response service, and 3 agencies offer Intercity routes.

Methods for Target-Setting

The target is a percent of revenue and nonrevenue vehicles within a particular asset class that has met or exceeded the Useful Life Benchmark (ULB). North Dakota transit agencies provide input on ULB while considering their local environment such as weather resiliency, local geography, frequency of service, passenger load, etc. The ULB thresholds set by NDDOT included the following, Buses - 14 years, Cutaways - 10 years, and Minivans, Modified vans, and Automobiles - 8 years. These targets were set considering, FTA recommendations, 5-year history of meeting past targets, comparisons of surrounding states ULB, and comparisons of states of similar inventory size, climate and geography ULBs. The target for facilities is that 0% of the transit facilities are rated with a condition rating below 3.0 on the FTA Transit Economic Requirement Model Scale.

Performance Targets & Measures

Agency Name	Asset Category	Asset Class	2022 Target	2023 Target	2024 Target	2025 Target	2026 Target	2027 Target
North Dakota Department of Transportation	Equipment	Non Revenue/Service Automobile	29%	40%	40%	37%	35%	29%
North Dakota Department of Transportation	Equipment	Other Rubber Tire Vehicles	60%	40%	40%	37%	35%	29%
North Dakota Department of Transportation	Facilities	Administrative / Maintenance Facilities	0%	0%	0%	0%	0%	0%
North Dakota Department of Transportation	Facilities	Passenger Facilities	0%	0%	0%	0%	0%	0%
North Dakota Department of Transportation	Revenue Vehicles	BU - Bus	29%	28%	15%	14%	15%	15%
North Dakota Department of Transportation	Revenue Vehicles	CU - Cutaway	15%	25%	25%	24%	28%	20%
North Dakota Department of Transportation	Revenue Vehicles	MV - Minivan	11%	20%	25%	28%	25%	24%
North Dakota Department of Transportation	Revenue Vehicles	SV - Sports Utility Vehicle	50%	50%	40%	37%	35%	40%
North Dakota Department of Transportation	Revenue Vehicles	VN - Van	36%	35%	42%	40%	35%	24%

TAM Vision

The core of Transit Asset Management (TAM) is to minimize the cost or ownership of the transit passenger vehicles, service vehicles and transit facilities while maximizing their performance. TAM will assist in prioritizing funding based on condition and performance which will maintain a state of good repair for North Dakota's public transportation assets and provide safe, comfortable and reliable transportation for the citizens of North Dakota.

TAM Goals

Goal	Objectives
Improved	Improves on-time performance, service operations, and vehicle and facility

customer service 77	cleanliness. Reduces vehicle down-time. Focuses investments around customer-centered wants and needs.
Improved productivity, reduced safety risks, and reduced costs	Maintains assets more effectively, using condition-based approaches and predictive and preventive maintenance strategies to reduces costs while improving service delivery. Reduces chances of maintenance-related safety hazards due to improved asset condition.
Data for decision-making	Better aligns spending with a transit agency's goal and objectives to obtain the greatest return from limited funds. Incorporates lifecycle cost, risk and performance trade-offs into operations and capital programming. Improves visibility for budgeting maintenance work and for understanding other costs or financial risks due to major component and other replacement needs. Provides better understanding of the relationships between investments and outcomes (condition, safety, operations) and can lead to more accurate estimates of system needs to meet a target condition.
Better data for improved stakeholder communications	Improves transparency and accountability leading to improved relationships with stakeholders. Provides more accurate and timely data to communicate with agency board and customers.

TAM Roles and Responsibilities

Department / Individual	Role (Title and/or Description)	Sub-Recipient
Accountable Executive	Each transit agency completes a form designating an Accountable Executive. The definition of “Accountable Executive” from 49 C.F.R. §673.5 of the PTASP final rule is: a single, identifiable person who has ultimate responsibility for carrying out the agency’s Transit Asset Management Plan; and control or direction over the human and capital resources needed to develop and maintain the agency’s Transit Asset Management Plan in accordance with 49 U.S.C. § 5326.	Deidre Hughes

Sub Recipients

Agency Name	Accountable Executive
Spirit Lake Tribe	Jolene Crosswhite
Williston Council for the Aging	Ashlee Torgerson
Wildrose Public Transportation	Amber Haugenoe
West River Transit	Nancy Felix
Walsh County Transportation Program	Pam Landsem
Turtle Mountain Band of Chippewa Indian	Ronald Trottier
Stark County Council on Aging / Elder Care	Erin Humphrey
Standing Rock Public Transportation	Pam Ternes
Southwest Transportation Services	Tamara Hofland
South Central Adult Services	Patricia Hansen
Souris Basin Transit	Darrell Francis
Pembina County Meals and Transportation	Sally Kliniske
Nutrition United	Larry Leonard
Kidder-Emmons County Senior Services	Renee Price
Kenmare Wheels & Meals	Lia Bartlett
James River Senior Citizens Center, Inc.	Maureen Wegenke
Hazen Busing Project	Peg Rahn
Golden Valley/Billings County Council On Aging	Vera Kruger
Fargo Park District	Paul Grindeland
Dickey County Senior Citizens	Jennifer Person
Devils Lake Transit (Senior Meals & Services)	Kirby Stittsworth
City of Minot	Brian Horinka
Cities Area Transit	Dale Bergman
Cavalier County Senior Meals & Services	Karrie Mikkelsen
Can-Do Transportation	Larry Leonard
Bis-Man Transit Board	Deidre Hughes
Benson County Transportation	Susan Fossen

Capital Asset Inventory

Asset Inventory Summary

Asset Category/Class	Total	Avg	Avg	Avg Replacement	Total Replacement
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	Number	Age	Mileage	Cost/Value	Cost/Value
Revenue Vehicles	302	7.4	5,159	\$0.00	\$0.00
AO - Automobile	3		-	\$0.00	\$0.00
BU - Bus	34	10.2	13,434	\$0.00	\$0.00
CU - Cutaway Bus	120	7.6	5,895	\$0.00	\$0.00
MV - Mini-van	124	6.3	2,803	\$0.00	\$0.00
SV - Sport Utility Vehicle	2	15.0	-	\$0.00	\$0.00
VN - Van	19	8.5	2,427	\$0.00	\$0.00
Equipment	16	9.3	N/A	\$14,560.81	\$232,973.00
Non Revenue/Service Automobile	6	8.7	N/A	\$7,523.67	\$45,142.00
Other Rubber Tire Vehicles	10	9.6	N/A	\$18,783.10	\$187,831.00
Facilities	21	12.6	N/A	\$0.00	\$0.00
Maintenance	19	11.5	N/A	\$0.00	\$0.00
Passenger Facilities	2	23.0	N/A	\$0.00	\$0.00

Condition Assessment

Asset Condition Summary

Asset Category/Class	Total Number	Avg Age	Avg Mileage	Avg Replacement Cost/Value	Total Replacement Cost/Value	% At or Exceeds ULB	% of Track Miles in Slow Zone	Number of Facilities less than 3 on TERM scale
Revenue Vehicles	302	7.4	5,159	\$0.00	\$0.00	40%	N/A	N/A
AO - Automobile	3		-	\$0.00	\$0.00	0%	N/A	N/A
BU - Bus	34	10.2	13,434	\$0.00	\$0.00	41%	N/A	N/A
CU - Cutaway Bus	120	7.6	5,895	\$0.00	\$0.00	40%	N/A	N/A
MV - Mini-van	124	6.3	2,803	\$0.00	\$0.00	39%	N/A	N/A
SV - Sport Utility Vehicle	2	15.0	-	\$0.00	\$0.00	100%	N/A	N/A
VN - Van	19	8.5	2,427	\$0.00	\$0.00	53%	N/A	N/A
Equipment	16	9.3	N/A	\$14,560.81	\$232,973.00	44%	N/A	N/A
Non Revenue/Service Automobile	6	8.7	N/A	\$7,523.67	\$45,142.00	67%	N/A	N/A
Other Rubber Tire Vehicles	10	9.6	N/A	\$18,783.10	\$187,831.00	30%	N/A	N/A
Facilities	21	12.6	N/A	\$0.00	\$0.00	N/A	N/A	1
Maintenance	19	11.5	N/A	\$0.00	\$0.00	N/A	N/A	1
Passenger Facilities	2	23.0	N/A	\$0.00	\$0.00	N/A	N/A	0

Decision Support

Decision Support Tools

The following tools are used in making investment decisions:

Process/Tool	Brief Description
Funding Sources and amounts	Availability of revenue applied for by each public transportation agency whether federal, state, or local sources, for capital assets may limit ability to purchase new or replacement assets, as well as ability to maintain capital assets through the useful life of the asset.
Inspections	Biennial inspections of capital assets conducted as part of maintaining a State of Good Repair and Quality Assurance/Condition Assignment program.
Agency 3 - 5 Year Plans	Plans, budgets and forecasts by transit agency to access current economic situations and forecast future position based on expected expense and revenue while taking into account predicted trends in local communities to assist in planning future capital asset purchases and replacement costs.
BlackCat	A software system used to manage and record maintenance activities performed

Maintenance Module 79	on capital assets tracking timely preventive maintenance tasks and alert to upcoming maintenance so making maintenance tracking more connected, efficient and visible.
BlackCat Transit Data Management System	A software system that uses asset inventory and condition information to generate list reports of capital assets. In addition to available lists of Inventory assets, the software system provides reports which can be prioritized by condition, age, mileage, etc.

Investment Prioritization

While we can link information gained from the data sets of asset inventory, condition assessment, and other decision support tools, there are financial constraints that may limit the actions taken toward achieving the following goals. There are many tradeoffs including asset condition and costs of projects and the ability to impact condition for varying assets with the funds available. As the state group plan sponsor we can't always dictate how the transit agencies spend funding available from state and local sources but we will work with the agencies to develop investment prioritizations that support the TAM policies.

Proposed Investments

Project Name	Project Year	Asset Category	Asset Class	Cost	Priority	Updated Date
Replacement and Expansion Vehicles	2027	Revenue Vehicles	MV - Mini-van	\$192,000.00	Medium	9/14/2022 11:08:21 AM
Replacement and Expansion Vehicles	2027	Revenue Vehicles	CU - Cutaway Bus	\$1,260,000.00	High	9/14/2022 11:08:09 AM
Replacement and Expansion Vehicles	2026	Revenue Vehicles	MV - Mini-van	\$200,000.00	Low	9/14/2022 10:55:22 AM
Replacement ad Expansion Vehicles	2026	Revenue Vehicles	CU - Cutaway Bus	\$450,000.00	Low	9/14/2022 11:08:33 AM
Replacement and Expansion Vehicles	2025	Revenue Vehicles	CU - Cutaway Bus	\$450,000.00	Low	9/14/2022 11:08:46 AM
Replacement and Expansion Vehicles	2025	Revenue Vehicles	MV - Mini-van	\$720,000.00	Medium	9/14/2022 10:55:02 AM
Replacement and Expansion Vehicles	2024	Revenue Vehicles	MV - Mini-van	\$288,000.00	Medium	9/14/2022 10:54:37 AM
Replacement and Expansion Vehicles	2024	Revenue Vehicles	CU - Cutaway Bus	\$1,260,000.00	Medium	9/14/2022 10:59:19 AM
Replacement and Expansion Vehicles	2024	Revenue Vehicles	BU - Bus	\$4,800,000.00	Low	9/14/2022 11:09:11 AM
Williston Facility Rehab	2024	Facilities	Administration	\$500,000.00	Medium	9/14/2022 11:08:58 AM
Dispatch Software Software - West River, Souris Basin, Dickinson	2024	Equipment	Software	\$435,000.00	Medium	9/15/2022 12:05:50 PM
City of Minot Facility Renovation	2024	Facilities	Administration	\$500,000.00	Medium	9/15/2022 12:03:14 PM
Replacement and Expansion Vehicles	2023	Revenue Vehicles	BU - Bus	\$2,625,000.00	Medium	9/14/2022 11:09:47 AM
Replacement and Expansion Vehicles	2023	Revenue Vehicles	CU - Cutaway Bus	\$1,890,000.00	High	9/14/2022 11:09:33 AM
Replacement and Expansion Vehicles	2023	Revenue Vehicles	MV - Mini-van	\$1,050,000.00	High	9/14/2022 10:59:48 AM

Signature

I, **Becky Hanson** , hereby certify on **09/27/2022** that the information provided in this TAM Plan is accurate, correct and complete.

Sub-recipient Certification

Sub-recipient Agency Name	Sub-recipient Email Address	Certified By	Certified Date
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Spirit Lake Tribe	dkarel@nd.gov	Darcy Karel	10/06/2022
Williston Council for the Aging	director@willistonseniors.org	Ashlee Torgerson	09/29/2022
Wildrose Public Transportation	wildrosepublic@gmail.com	Amber D. Haugenoe	10/18/2022
West River Transit	westriver.bisman@midconetwork.com	Carol Anderson	09/29/2022
Walsh County Transportation Program	pl1@polarcomm.com	Pam Landsem	09/28/2022
Turtle Mountain Band of Chippewa Indian	dkarel@nd.gov	Darcy Karel	10/06/2022
Stark County Council on Aging / Elder Care	erinh@eldercareregion8.org	Erin Humphrey	10/11/2022
Standing Rock Public Transportation	pam.ternes@sittingbull.edu	Pamela Ternes	10/05/2022
Southwest Transportation Services	swtransit@ndtransit.org	Tamara Hofland	10/01/2022
South Central Adult Services	pat@southcentralseniors.org	Patricia Hansen	09/28/2022
Souris Basin Transit	sbtransit@srt.com	Darrell Francis	10/05/2022
Pembina County Meals and Transportation	pcmt@polarcomm.com	Sally Kliniske	10/06/2022
Nutrition United	nutusms@utma.com	Larry Leonard Jr	10/05/2022
Kidder-Emmons County Senior Services	kess@bektel.com	Renee Price	09/29/2022
Kenmare Wheels & Meals			
James River Senior Citizens Center, Inc.	jrsc@csicable.net	Maureen A Wegenke	10/04/2022
Hazen Busing Project			
Golden Valley/Billings County Council On Aging			
Fargo Park District	pgrindeland@fargoparks.com	Paul W. Grindeland	10/05/2022
Dickey County Senior Citizens	dcsc213@yahoo.com	Jennifer Person-Klein	09/29/2022
Devils Lake Transit (Senior Meals & Services)	dltran@gondtc.com	Kirby Stittsworth	09/29/2022
City of Minot	brian.horinka@minotnd.org	Brian Horinka	10/05/2022
Cities Area Transit			
Cavalier County Senior Meals & Services	ccsms@utma.com	Karrie L. Mikkelsen	09/29/2022
Can-Do Transportation			
Bis-Man Transit Board	dhughes@bismantransit.com	Deidre Hughes	10/27/2022
Benson County Transportation	susanpatfossen@gondtc.com	Susan Fossen	09/29/2022

Deidre Hughes, confirm that I am the
(Name of the Accountable Executive)

Accountable Executive for Bis-Man Transit Board.
(Name of Transit Agency)

I certify that my transit agency is in compliance with the TAM Rule.

My agency has met the TAM Plan requirements by

☒ Participating in a Group Plan sponsored by North Dakota Department of Transportation

☐ Completing our own TAM Plan and keeping it up-to-date. I have provided an updated copy of our TAM Plan to North Dakota Department of Transportation Transit section.

We confirm that we are implementing the TAM plan at our property.

Signed,

Deidre Hughes
Accountable Executive

9/30/2022
Date (Annually)

Facility & Equipment Condition Assessment

Rating	Condition	Description
5	Excellent	No visible defects, new or near new condition, may still be under warranty if applicable
4	Good	Good condition, but no longer new, may have some slightly defective or deteriorated component(s), but is overall functional
3	Adequate	Moderately deteriorated or defective components; but has not exceeded useful life
2	Marginal	Defective or deteriorated component(s) in need of replacement; exceeded useful life
1	Poor	Critically damaged component(s) or in need of immediate repair; well past useful life

State of Good Repair (Facilities) = 3+

Vehicle Condition Assessment

Rating	Condition	Description
5	Excellent	Brand new, no major problems exist, only routine preventive maintenance required
4	Good	Elements are in good working order, minimal signs of wear, requires nominal or infrequent minor repairs (more than 6 months between minor repairs)
3	Adequate	Has reached mid-life condition (3.5), requires frequent minor repairs (6 or less months between) or infrequent major repairs (6 or more months between)
2	Marginal	Reaching or just past the end of useful life, increasing number of defective or deteriorated components and increasing maintenance needs
1	Poor	Past useful life, needs immediate repair or replacement, requires frequent major repairs (6 or less months between), may have critically damaged component(s)

Bis-Man Transit

ASSET MANAGEMENT PLAN**Mission Statement**

Bis-Man Transit's mission is to effectively and efficiently provide safe, clean, and reliable vehicles for use by its customers and operators and to maintain transit vehicles, facilities and equipment in such condition as to operate at a full level of performance.

Graduated Preventative Maintenance Program

The emphasis of Bis-Man Transit system's maintenance program is preventative rather than reactive maintenance. A strong preventative maintenance program effectively reduces overall maintenance costs, increases reliability and performance, and reduces the high cost of unpredictable repairs caused by reactive maintenance. Bis-Man Transit uses a graduated preventative maintenance program (PM) that is based on the manufacturer's recommendations and is modified based on experience and the local conditions within Burleigh and Morton Counties. Solid PM practices maximize useful life, are cost-efficient over the life of the vehicle, facility, and equipment, and ensure that assets remain in safe operating condition.

Bis-Man Transit has an aggressive preventative maintenance program that schedules vehicle inspections based on a variety of categories. The PM schedule established is progressive based on usage and vehicle type. Vehicles are inspected based on mileage and time. In addition, each vehicle receives an annual comprehensive inspection.

Bis-Man Transit conducts annual facility maintenance condition assessments. These inspections include components such as roof, shell, interior, plumbing, HVAC, fire protection, electrical, equipment, and site inspections.

Bis-Man Transit's staff continually reviews maintenance practices to identify potential improvements to the program. This assures optimum benefits from the scheduled inspections.

On-time vehicle inspection variance

The allowable variance with all preventative maintenance vehicle inspections is a minus 500 miles to a plus 500 miles. Any inspection completed within this parameter is considered on time. Sample inspection sheets are attached.

Local Conditions

Local conditions have a direct impact on the level of PM need. Bis-Man Transit provides service throughout Burleigh and Morton Counties. The following conditions are considered when developing a PM program for a vehicle or group of vehicles:

- Service Design
 - Urban Service - Fixed route and complimentary paratransit/demand service. Due to the frequency of the stops and traffic congestion in the urban area, vehicles used for this service require a higher level of PM
 - Rural Area - Infrequent stops in a long-distance corridor
- Topography and Weather - Salt and gravel from the winter roads may cause premature wear on certain parts of the vehicles. Those parts are inspected more frequently than the manufacturer recommends. Build up of snow and ice may cause additional cleaning of vehicles.
- Local Policies:
 - Cleanliness -All vehicles must be cleaned daily
 - Pre and Post-Trip Inspections -All vehicles are inspected prior to entering services and upon exiting service.

Authorize, Direct, and Control Maintenance Activities and Costs

The Operations Team is responsible for developing the PM schedule for each vehicle fleet and facility. This schedule ensures that all PM activities are completed in a timely manner and is consistent with the manufacturer's recommendations.

The tasks performed throughout the PM and repair process are reviewed by the Operations Maintenance Manager and staff.

This consistent review is designed to ensure that decisions are made at the proper level of management.

The PM tracking report is regularly printed and reviewed to identify which vehicles or facility components are due or coming due for Preventative/Preservation Maintenance. The identified vehicles are removed from service and scheduled for maintenance.

Work orders are created, and appointments are made to complete the identified maintenance.

Bis-Man Transit maintains PM inspection process data for specific vehicle component systems such as wheelchair lifts, video security systems, HVAC systems, wheelchair securements, and fare collection systems. These items are inspected during the regularly scheduled preventative maintenance process and can be found on both fixed route and paratransit preventative maintenance forms.

These component systems each have their own PM schedules, forms, and tracking reports. An Operations Maintenance Manager is tasked to review the tracking reports and generates the work orders to perform the maintenance.

Other needed repairs may be identified during the PM inspection. These are referred to as "PM write-ups." In addition, drivers may report vehicle problems.

The Operations Maintenance Manager reviews the PM write-ups and driver reports. The repairs are then scheduled into the repair shop and completed before the vehicle returns to service. A separate work order may be issued for this type of repair

Identify, Track, and Record Maintenance Activities and Costs

Bis-Man Transit uses a system of manual and computerized forms and reports to schedule and perform preventative/preservation maintenance (PM) and repairs to its fleet of vehicles or facilities. These documents include:

- Work orders
- Service orders
- Purchase orders
- Parts requests
- PM Tracking report
- PM Inspection forms

After a vehicle or facility is identified as needing PM, a work order is prepared that describes the work to be completed, the account codes to be charged, and instructions as to which level of PM is to be performed. All the PM labor and costs are captured under the PM code on the work order. When there is a PM write-up, a new work order or multiple work orders are then generated listing those repairs. All repair labor and parts are charged to the work orders under the specific coding applicable to the individual repairs.

The required parts and supplies are charged to the work order updated to the PM Tracking Report to show when the PM was completed.

If a repair is determined to be covered under the warranty, the appropriate coding will be identified on the work order. A warranty claim is submitted to the applicable manufacturer/vendor. (See warranty Recovery Program section of this plan for more details).

Process to oversee work done by contractors

Bis-Man Transit contracts with a private operator maintenance of vehicles owned by the City of Bismarck. The contractor is required to maintain the vehicles in accordance with the plan. To ensure compliance, Bis-Man Transit requires the contractor to submit all work orders for preventative maintenance and repairs. In addition, Maintenance Department staff conducts an annual physical inspection of all Transit agency vehicles maintained by the contractor.

Warranty Recovery System

Bis-Man Transit operates a warranty recovery program to ensure that cost of parts and repairs on warranty-covered items are recovered.

- Failed Components
- Authorization for warranty return and labor claims, if applicable, are obtained from the manufacturer or vendor. Information is supplied to the vendor on the circumstances of the failure if known. The item is then returned to the vendor warranty department for repair or replacement. Bis-Man Transit retains a copy of the warranty claim form for tracking purposes.
- Receipt from manufacturer/vendor
- When a unit is received at Bis-Man Transit, it is entered into the inventory system via an Inventory Adjustment form that is coded as a warranty replacement. A Journal Voucher form is completed and forwarded to the Accounting Department to make the necessary accounting adjustments. Labor credit if received, is applied to the appropriate cost center via a credit entry applied to the work order used when the defective part was removed.

Cost Analysis Tool

Bis-Man Transit uses a life cycle cost analysis tool as part of its decision-making process when establishing and making changes to preventative maintenance intervals. Factors included in the decision-making include useful life benchmark, age (for vehicles both mileage and age of vehicle), maintenance cost, and available funding. This enables our agency to analyze the cost effects of alternative practices over the life of the asset.

Additional References

This asset management policy is additional to the most recently approved data and policy requirements of the State approved Bis-Man Transit Fleet and Facility Maintenance Policies.

PROGRESS UPDATE: TRAFFIC DATA ACQUISITION IN BISMARCK AND MANDAN

November 03, 2022

To

Rachel Lukaszewski
Executive Director
Bismarck-Mandan MPO
221 N 5th Street
Bismarck, ND 58506

Summary

As of November 03, 2022, Traffic Data Solutions (TDS) has completed field video collection at all the study intersections in Bismarck and Mandan. TDS received the video files for the 12 locations collected by NDDOT.

TDS has submitted spreadsheet with summary of traffic volumes at all the intersections on October 18, 2022. As part of Deliverable 3.0 and 4.0, Raw data files in PDF and Excel format; online access to the study intersections via MioVision datalink have been provided to MPO.

TDS is planning to submit the deliverable 2.0 on November 14, 2022, with the below items.

- GIS shape file with traffic counts and location information.

Progress Update

❖ Task-1: Data Collection Schedule (100% completed)

- TDS has developed a 3-week data collection schedule starting from the September 13th, 2022, to acquire turning movement counts at 87 intersections and shared with MPO.

❖ Task-2: Data Acquisition (100% completed)

- TDS has deployed traffic counters to collect 24-hour turning movement counts at the study intersections as per the schedule.
- Task-2 data acquisition has completed on September 29, 2022.

❖ Task-3: Data Processing & QC (100% completed)

- TDS has analyzed all study intersections for turning movement counts in 15-minute intervals using MioVision online platform.
- TDS has analyzed traffic data into 3-group classification (Lights / Buses / Trucks).
- TDS analyzed pedestrian and bike user data at 62 intersections selected by BM-MPO.
- TDS has received video filed for NDDOT collected traffic counts at 12 intersections to obtain turning movement counts.
- TDS has performed QC and QA on the traffic counts.
- TDS has developed a spreadsheet with traffic volumes and site information including date of collection, start time and duration of study, intersection details and traffic counts.
- TDS has submitted the deliverable 1(a) to BM-MPO for review on September 30, 2022.

❖ Task-4: Deliverables (80% completed)

- As part of **Deliverables**, TDS developed a master spreadsheet with the traffic counts and the count location information including date of collection, start time and duration of study, intersection details and share with MPO and its partners. Also TDS has submitted the raw data files and online access to videos and project files.
- TDS will provide a GIS shape file with all the traffic count information to MPO in the month of November.

Project Status Tracker

An estimated schedule for the project milestones is presented below. As of November 3, 2022, TDS is ahead of the schedule. Anticipated project finish date is November 14, 2022.

Work Item Description	Status	%	End Date
Task-1: Data collection schedule	Completed	100%	9/5/2022
Task 2: Data Acquisition (in Field)	Completed	100%	9/29/2022
Task-3: Data Processing & QC	Completed	100%	10/13/2022
Task-4: Deliverable 1.0	Completed	100%	10/14/2022
Task-4: Deliverable 2.0	In Progress	20%	11/14/2022
Task-4: Deliverable 3.0 & 4.0	Completed	100%	10/14/2022

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PROGRESS REPORT

SRF COMM. NOS.	14186
PROGRESS REPORT NO.	9
DATE	November 2, 2022

REPORTING PERIOD	October 2022
PROJECT NAME	Bismarck E Main Ave Corridor Study
PREPARED BY	Scott Harmstead – SRF

PROBLEMS ENCOUNTERED/ITEMS OF CONCERN

<u>Project Issues/Concerns</u> NA. Contract executed 2/14/22 April snowstorm delayed traffic counts/cameras to week of May 2. No significant impact to overall project schedule anticipated. Existing Conditions and Issues and Needs memorandums have been combined.
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TASK PROGRESS – SCHEDULE/BUDGET SUMMARY

TASK	PERCENT COMPLETE	NOTES	STATUS
Phase 1 – Baseline Input	99%	Traffic data collection complete. Existing operations analysis via VISSIM complete. ATAC has completed existing and future model runs, currently under SRF review. Issues and Needs memorandum to be combined with Existing Conditions memorandum. Single memo submitted to PRC for review.	On Schedule
Phase 2 – Issues and Needs	99%	VISSIM model further developed and 2045 no-build model complete. Issues and Needs memorandum to be combined with Existing Conditions memorandum. Single memo submitted to PRC for review.	On Schedule
Phase 3 – Alternative Development	75%	Apex Engineering has developed cross sections and layouts for three alternatives for each segment (three segments total), property redevelopment concepts developed by SRF. Alternatives to be refined after review and input by stakeholders and the public.	On Schedule
Phase 4- Alternative Analysis	75%	3-lane VISSIM model and results completed for three corridor alternatives. Internal draft of Alternatives Analysis memorandum developed.	On Schedule
Phase 5 – Finalization and Implementation	0%		On Schedule
Engagement	69%	Initial stakeholder open house and public meeting complete. Individual stakeholder outreach completed. SRC Meetings 1-3 completed. Preparation started for Nov. 30 – Dec. 1 stakeholder and public engagement. SRC Meeting 4 set for Nov. 16	On Schedule
Project Management	60%	Client check-ins, progress reports, internal coordination	On Schedule
Total	65%		On Schedule

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Status Report #5

Project: Sunset Drive Corridor Study

Consultant: KLJ

Reporting Period: 10/7/2022 to 11/4/2022

Tasks Completed to Date:

Task	% of Task Complete
Task 1 – Project Management and Coordination	25%
Task 2 – Public Engagement	50%
Task 3 – Existing Conditions Documentation	100%
Task 4 – Future Conditions Analysis	50%
Task 5 – Goals/Objectives/Project Purpose & Need	0%
Task 6 – Alternatives Development	35%
Task 7 – Alternative Analysis	0%
Task 8 – Project Implementation & Corridor Concept Plan	0%
Task 9 – Draft Report	0%

Overall percentage of project complete: 35%

Summary of activities within reporting period:

Task 1 – Project Management and Coordination

- Project Oversight and management with BMMPO

Task 2 – Public Engagement

- Public Engagement Report Submitted.
- Steering committee meeting #2 held on Thursday, November 3rd. Topics for the meeting included:
 - Public Input Meeting 1 recap
 - Existing and Future traffic condition review
 - Review Mandan's future development plan and impacts to traffic.
 - Alternatives development discussion
 - Updates on NDDOT's interchange project

Sunset Drive Corridor Study

Task 3 – Existing Conditions Report

- Existing Conditions report Submitted.

Task 4 – Future Conditions Analysis

- ATAC information received, and initial run of future model completed.

Task 5 – Goals/Objectives/Project Purpose & Need

- No activities

Task 6 – Alternatives Development

- Draft alternatives developed based off of future demands.

Task 7 – Alternative Analysis

- No activities

Task 8 – Project Implementation & Corridor Concept Plan

- No activities

Task 9 – Draft and Final Report

- No activities



Invoice Progress Report

Date: Tuesday, November 01, 2022

Project: Bismarck-Mandan TDMSE and MTP Update

To: Rachel Lukaszewski

From: Jason Carbee

Subject: Progress Report for September 19, 2022 to October 22, 2022

Please note that this progress report summarizes the work completed during the invoice period, and **includes some redundancy with the TAC progress report for Sept 7 – Oct 7:**

TDMSE Task 1 – Project Management

- Notice to proceed was received on September 7, 2022.
- The consultants began establishing internal accounting, project controls, and quality checking requirements.
- Conducted kickoff meeting between HDR, SRF, and Bismarck Mandan staff on September 28, 2022.
- Established subconsultant contracts.
- Provided updates to TAC and Policy Board meetings

TDMSE Task 2 - Outreach and Stakeholder Consultation

- SRF is developing focus group list in coordination with MPO staff. Focus groups to invite input on factors related to growth (e.g. school districts, Chamber EDC, development community, others). Focus group meetings to be planned and held through this month (November).
- Team coordinated with the MPO on creation of a TDMSE study steering committee. Looking to have that committee formed and to have a kickoff meeting as soon as possible.
- SRF has socioeconomic projection methodology memorandum under development
 - Another memorandum under development that reviews previous studies and related projections

TDMSE Task 3- TDMSE Data Needs

- Data needs were discussed with MPO staff during Sept 28 kick off call.
- SRF has gathered most necessary data for socioeconomic projections has been gathered. Enough data is on-hand to develop regional/MPO-wide projections.

Details on project schedule, project status, and completion by task are presented in the attached progress table.

Project Progress Summary

Task	Start Date	End Date	Percent Complete		Explanation / Discussion
			Period Start	Period End	
TDMSE Task 1 - Project Management	Sep-22	Jun-23	0%	30%	Reflects HDR hours for TDMSE – mostly project setup.
TDMSE Task 2 - Outreach and Stakeholder Consultation	Sep-22	Jun-23	0%	0%	Note that SRF completed significant setup efforts on this task during the period.
TDMSE Task 3- TDMSE Data Needs	Sep-22	Nov-23	0%	<5%	Note that SRF completed significant data collection efforts on this task during the period.
TDMSE Task 4 - TDMSE Methodology	Oct-22	Nov-23	0%	0%	
TDMSE Task 5 - Development Scenario and Forecasts	Nov-22	Feb-23	0%	0%	
TDMSE Task 6 - Baseline Study Expectations (Forecasts)	Nov-22	Mar-23	0%	0%	
TDMSE Task 7- Allocate Socioeconomic Data	Dec-22	May-23	0%	0%	
TDMSE Task 8 - Model Performance Review and Validation	Feb-23	Jun-23	0%	0%	
TDMSE Task 9 - Report	Sep-22	Jul-23	0%	0%	
MTP TASK 1 - Project Management	Jun-23	Dec-24	0%	1%	Project setup efforts.
MTP TASK 2 – Public Engagement	Jun-23	Dec-24	0%	0%	
MTP TASK 3 – Data Collection	Jun-23	Sep-23	0%	0%	
MTP TASK 4 - Goals, Objectives & Performance Measures	Aug-23	Oct-23	0%	0%	
MTP TASK 5 – Baseline System Conditions	Aug-23	Jan-24	0%	0%	
MTP TASK 6 - Develop & Screen Alternatives	Jan-24	May-24	0%	0%	
MTP TASK 7 – Financial Plan and Implementation Schedule	Oct-23	Jun-24	0%	0%	
MTP TASK 8 – MTP Document Development and Review	Jun-24	Dec-24	0%	0%	
Project Totals	Sep-22	Dec-24	0%	1%	Current invoice reflects just HDR changes for first 5 weeks.



PROGRESS REPORT

SRF COMMISSION NO.	022-15824
PROGRESS REPORT NO.	2
DATE	October 31, 2022

REPORTING PERIOD	October 1, 2022 through October 31, 2022
PROJECT NAME	Bismarck-Mandan MPO Transit Development Plan
PREPARED BY	Bill Troe
ROUTE/COPY TO	Teresa Carey
Percent Complete through Period	15%

COMPLETED ACTIVITIES PREVIOUS PERIOD (October 2022)

- Gathered the bulk of the service data needed to complete an assessment of current conditions/strengths/weaknesses.
- Initiated work on preparing background/transit by the numbers summary for distribution. Will be ready in November.
- Initiated work on Small Transit Intensive Communities (STIC) update based on 2021 transit figures and 2020 (ESTIMATED) population. Including, service increments needed to satisfy.
- Set first public meeting date – December 6 (Mandan over the noon hour – Bismarck in late afternoon).
- Distributed community transit survey. Will be open through mid-November.
- Met (Zoom) with Bismarck city department representatives to discuss how their staff supports transit and alternate organizational structure frameworks being reviewed.
- Conducted organizational discussion with Jim Neubauer at Mandan.
- Through Kimley Horn – Initiated funding/financial condition assessment.

ONGOING ACTIVITY THIS PERIOD (November 2022)

- Prepare material for Public Meeting 1.
- Finalize current conditions assessment.
- Prepare demographics assessment.
- Prepare peer review (to the extent peers can be identified).
- Distribute Bis-Man Transit overview summary (transit by the numbers)

PROJECTED ACTIVITY NEXT PERIOD (December 2022)

- Public Meeting.
- Document future growth areas.

PROBLEMS ENCOUNTERED/ITEMS OF NOTE/SCHEDULE REVISIONS

- None.