



Application

17071 - 2022 Roadway Spot Mobility

17727 - CSAH 46/CSAH 85 Roundabout

Regional Solicitation - Roadways Including Multimodal Elements

Status: Submitted
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Primary Contact

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What Grant Programs are you most interested in? Regional Solicitation - Roadways Including Multimodal Elements

Organization Information

Name: DAKOTA COUNTY

Jurisdictional Agency (if different):

Organization Type: County Government

Organization Website:

Address: TRANSPORTATION DEPT
14955 GALAXIE AVE

* APPLE VALLEY Minnesota 55124
City State/Province Postal Code/Zip

County: Dakota

Phone:* 952-891-7100
Ext.

Fax:

PeopleSoft Vendor Number 0000002621A15

Project Information

Project Name CSAH 46/CSAH 85 Roundabout

Primary County where the Project is Located Dakota

Cities or Townships where the Project is Located: Vermillion Township and Nininger Township

Jurisdictional Agency (If Different than the Applicant):

Brief Project Description (Include location, road name/functional class, type of improvement, etc.)

The project is the construction of a roundabout at the intersection of CSAH 46, an A-minor arterial, and CSAH 85, a major collector. The purpose of the project is to improve safety at the intersection by reducing crashes. Several crashes involving injuries to passengers have occurred at this intersection over the last three years.

(Limit 2,800 characters; approximately 400 words)

TRANSPORTATION IMPROVEMENT PROGRAM (TIP)

DESCRIPTION - will be used in TIP if the project is selected for funding. See MnDOT's TIP description guidance. Construct roundabout

Include both the CSAH/MSAS/TH references and their corresponding street names in the TIP Description (see Resources link on Regional Solicitation webpage for examples).

Project Length (Miles) 0

to the nearest one-tenth of a mile

Project Funding

Are you applying for competitive funds from another source(s) to implement this project? No

If yes, please identify the source(s)

Federal Amount \$1,756,000.00

Match Amount \$439,000.00

Minimum of 20% of project total

Project Total \$2,195,000.00

For transit projects, the total cost for the application is total cost minus fare revenues.

Match Percentage 20.0%

Minimum of 20%

Compute the match percentage by dividing the match amount by the project total

Source of Match Funds State Aid

A minimum of 20% of the total project cost must come from non-federal sources; additional match funds over the 20% minimum can come from other federal sources

Preferred Program Year

Select one: 2026

Select 2024 or 2025 for TDM and Unique projects only. For all other applications, select 2026 or 2027.

Additional Program Years: 2024, 2025

Select all years that are feasible if funding in an earlier year becomes available.

Project Information: Roadway Projects

County, City, or Lead Agency Dakota County

Functional Class of Road A-minor arterial

Road System CSAH

TH, CSAH, MSAS, CO. RD., TWP. RD., CITY STREET

Road/Route No. 46

i.e., 53 for CSAH 53

Name of Road 160th Street

Example; 1st ST., MAIN AVE

Zip Code where Majority of Work is Being Performed 55033

(Approximate) Begin Construction Date 05/06/2024

(Approximate) End Construction Date 10/04/2024

TERMINI:(Termini listed must be within 0.3 miles of any work)

From:
(Intersection or Address)

To:
(Intersection or Address)

DO NOT INCLUDE LEGAL DESCRIPTION

Or At	Intersection of CSAH 46 and CSAH 85
Miles of Sidewalk (nearest 0.1 miles)	0
Miles of Trail (nearest 0.1 miles)	0.2
Miles of Trail on the Regional Bicycle Transportation Network (nearest 0.1 miles)	0
Primary Types of Work	GRADE, AGG BASE SURF, LIGHTING, BIKE PATH, PED RAMPS

Examples: GRADE, AGG BASE, BIT BASE, BIT SURF, SIDEWALK, CURB AND GUTTER, STORM SEWER, SIGNALS, LIGHTING, GUARDRAIL, BIKE PATH, PED RAMPS, BRIDGE, PARK AND RIDE, ETC.

BRIDGE/CULVERT PROJECTS (IF APPLICABLE)

Old Bridge/Culvert No.:

New Bridge/Culvert No.:

**Structure is Over/Under
(Bridge or culvert name):**

Requirements - All Projects

All Projects

1. The project must be consistent with the goals and policies in these adopted regional plans: Thrive MSP 2040 (2014), the 2040 Transportation Policy Plan (2018), the 2040 Regional Parks Policy Plan (2018), and the 2040 Water Resources Policy Plan (2015).

Check the box to indicate that the project meets this requirement. Yes

2. The project must be consistent with the 2040 Transportation Policy Plan. Reference the 2040 Transportation Plan goals, objectives, and strategies that relate to the project.

Goal: Transportation System Stewardship (page 2.2)

Objective: Operate the regional transportation system to efficiently and cost-effectively move people and freight (page 2.2)

Strategy: A1. Regional transportation partners will place the highest priority for transportation investments on strategically preserving, maintaining, and operating the transportation system (page 2.2)

Goal: Safety and security for all users (page 2.5)

Objective: Reduce fatal and serious injury crashes and improve safety and security for all modes of passenger travel and freight transport (page 2.5)

Strategy: B1. Regional transportation partners will incorporate safety and security considerations for all modes and users throughout the processes of planning, funding, construction, and operation (page 2.5)

Strategy: B3. Regional transportation partners should monitor and routinely analyze safety and security data by mode, severity, and location to identify priorities and progress (page 2.6)

Strategy: B4. Regional transportation partners will support the state's vision of moving toward zero traffic fatalities and serious injuries, which includes supporting educational and enforcement programs to increase awareness of regional safety issues, shared responsibility, and safe behavior (page 2.7)

Briefly list the goals, objectives, strategies, and associated pages:

3. The project or the transportation problem/need that the project addresses must be in a local planning or programming document. Reference the name of the appropriate comprehensive plan, regional/statewide plan, capital improvement program, corridor study document [studies on trunk highway must be approved by the Minnesota Department of Transportation and the Metropolitan Council], or other official plan or program of the applicant agency [includes Safe Routes to School Plans] that the project is included in and/or a transportation problem/need that the project addresses.

List the applicable documents and pages: Unique projects are exempt from this qualifying requirement because of their innovative nature.

Dakota County Capital Improvements Program (2022-2026)

Limit 2,800 characters, approximately 400 words

4. The project must exclude costs for studies, preliminary engineering, design, or construction engineering. Right-of-way costs are only eligible as part of transit stations/stops, transit terminals, park-and-ride facilities, or pool-and-ride lots. Noise barriers, drainage projects, fences, landscaping, etc., are not eligible for funding as a standalone project, but can be included as part of the larger submitted project, which is otherwise eligible. Unique project costs are limited to those that are federally eligible.

Check the box to indicate that the project meets this requirement. Yes

5. Applicant is a public agency (e.g., county, city, tribal government, transit provider, etc.) or non-profit organization (TDM and Unique Projects applicants only). Applicants that are not State Aid cities or counties in the seven-county metro area with populations over 5,000 must contact the MnDOT Metro State Aid Office prior to submitting their application to determine if a public agency sponsor is required.

Check the box to indicate that the project meets this requirement. Yes

6. Applicants must not submit an application for the same project elements in more than one funding application category.

Check the box to indicate that the project meets this requirement. Yes

7. The requested funding amount must be more than or equal to the minimum award and less than or equal to the maximum award. The cost of preparing a project for funding authorization can be substantial. For that reason, minimum federal amounts apply. Other federal funds may be combined with the requested funds for projects exceeding the maximum award, but the source(s) must be identified in the application. Funding amounts by application category are listed below in Table 1. For unique projects, the minimum award is \$500,000 and the maximum award is the total amount available each funding cycle (approximately \$4,000,000 for the 2022 funding cycle).

Strategic Capacity (Roadway Expansion): \$1,000,000 to \$10,000,000

Roadway Reconstruction/Modernization: \$1,000,000 to \$7,000,000

Traffic Management Technologies (Roadway System Management): \$500,000 to \$3,500,000

Spot Mobility and Safety: \$1,000,000 to \$3,500,000

Bridges Rehabilitation/Replacement: \$1,000,000 to \$7,000,000

Check the box to indicate that the project meets this requirement. Yes

8. The project must comply with the Americans with Disabilities Act (ADA).

Check the box to indicate that the project meets this requirement. Yes

9. In order for a selected project to be included in the Transportation Improvement Program (TIP) and approved by USDOT, the public agency sponsor must either have a current Americans with Disabilities Act (ADA) self-evaluation or transition plan that covers the public right of way/transportation, as required under Title II of the ADA. The plan must be completed by the local agency before the Regional Solicitation application deadline. For the 2022 Regional Solicitation funding cycle, this requirement may include that the plan is updated within the past five years.

The applicant is a public agency that employs 50 or more people and has a completed ADA transition plan that covers the public right of way/transportation. Yes

(TDM and Unique Project Applicants Only) The applicant is not a public agency subject to the self-evaluation requirements in Title II of the ADA.

Date plan completed:

06/29/2018

<https://www.co.dakota.mn.us/Transportation/TransportationStudies/Past/Documents/ADATransitionPlan.pdf>

Link to plan:

The applicant is a public agency that employs fewer than 50 people and has a completed ADA self-evaluation that covers the public right of way/transportation.

Date self-evaluation completed:

Link to plan:

Upload plan or self-evaluation if there is no link

Upload as PDF

10. The project must be accessible and open to the general public.

Check the box to indicate that the project meets this requirement. Yes

11. The owner/operator of the facility must operate and maintain the project year-round for the useful life of the improvement, per FHWA direction established 8/27/2008 and updated 6/27/2017. Unique projects are exempt from this qualifying requirement.

Check the box to indicate that the project meets this requirement. Yes

12. The project must represent a permanent improvement with independent utility. The term independent utility means the project provides benefits described in the application by itself and does not depend on any construction elements of the project being funded from other sources outside the regional solicitation, excluding the required non-federal match. Projects that include traffic management or transit operating funds as part of a construction project are exempt from this policy.

Check the box to indicate that the project meets this requirement. Yes

13. The project must not be a temporary construction project. A temporary construction project is defined as work that must be replaced within five years and is ineligible for funding. The project must also not be staged construction where the project will be replaced as part of future stages. Staged construction is eligible for funding as long as future stages build on, rather than replace, previous work.

Check the box to indicate that the project meets this requirement. Yes

14. The project applicant must send written notification regarding the proposed project to all affected state and local units of government prior to submitting the application.

Check the box to indicate that the project meets this requirement. Yes

Roadways Including Multimodal Elements

1. All roadway and bridge projects must be identified as a principal arterial (non-freeway facilities only) or A-minor arterial as shown on the latest TAB approved roadway functional classification map.

Check the box to indicate that the project meets this requirement. Yes

Roadway Strategic Capacity and Reconstruction/Modernization and Spot Mobility projects only:

2. The project must be designed to meet 10-ton load limit standards.

Check the box to indicate that the project meets this requirement. Yes

Bridge Rehabilitation/Replacement and Strategic Capacity projects only:

3. Projects requiring a grade-separated crossing of a principal arterial freeway must be limited to the federal share of those project costs identified as local (non-MnDOT) cost responsibility using MnDOT's Cost Participation for Cooperative Construction Projects and Maintenance Responsibilities manual. In the case of a federally funded trunk highway project, the policy guidelines should be read as if the funded trunk highway route is under local jurisdiction.

Check the box to indicate that the project meets this requirement.

4. The bridge must carry vehicular traffic. Bridges can carry traffic from multiple modes. However, bridges that are exclusively for bicycle or pedestrian traffic must apply under one of the Bicycle and Pedestrian Facilities application categories. Rail-only bridges are ineligible for funding.

Check the box to indicate that the project meets this requirement.

Bridge Rehabilitation/Replacement projects only:

5. The length of the bridge clear span must exceed 20 feet.

Check the box to indicate that the project meets this requirement.

6. The bridge must have a National Bridge Inventory Rating of 6 or less for rehabilitation projects and 4 or less for replacement projects.

Check the box to indicate that the project meets this requirement.

Roadway Expansion, Reconstruction/Modernization, and Bridge Rehabilitation/Replacement projects only:

7. All roadway projects that involve the construction of a new/expanded interchange or new interchange ramps must have approval by the Metropolitan Council/MnDOT Interchange Planning Review Committee prior to application submittal. Please contact Michael Corbett at MnDOT (Michael.J.Corbett@state.mn.us or 651-234-7793) to determine whether your project needs to go through this process as described in Appendix F of the 2040 Transportation Policy Plan.

Check the box to indicate that the project meets this requirement.

Requirements - Roadways Including Multimodal Elements

Specific Roadway Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Mobilization (approx. 5% of total cost)	\$100,000.00
Removals (approx. 5% of total cost)	\$100,000.00
Roadway (grading, borrow, etc.)	\$650,000.00
Roadway (aggregates and paving)	\$725,000.00
Subgrade Correction (muck)	\$0.00
Storm Sewer	\$150,000.00
Ponds	\$0.00
Concrete Items (curb & gutter, sidewalks, median barriers)	\$50,000.00
Traffic Control	\$75,000.00
Striping	\$15,000.00
Signing	\$5,000.00
Lighting	\$100,000.00
Turf - Erosion & Landscaping	\$100,000.00
Bridge	\$0.00
Retaining Walls	\$0.00

Noise Wall (not calculated in cost effectiveness measure)	\$0.00
Traffic Signals	\$0.00
Wetland Mitigation	\$0.00
Other Natural and Cultural Resource Protection	\$0.00
RR Crossing	\$0.00
Roadway Contingencies	\$0.00
Other Roadway Elements	\$0.00
Totals	\$2,070,000.00

Specific Bicycle and Pedestrian Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Path/Trail Construction	\$25,000.00
Sidewalk Construction	\$0.00
On-Street Bicycle Facility Construction	\$0.00
Right-of-Way	\$0.00
Pedestrian Curb Ramps (ADA)	\$100,000.00
Crossing Aids (e.g., Audible Pedestrian Signals, HAWK)	\$0.00
Pedestrian-scale Lighting	\$0.00
Streetscaping	\$0.00
Wayfinding	\$0.00
Bicycle and Pedestrian Contingencies	\$0.00
Other Bicycle and Pedestrian Elements	\$0.00
Totals	\$125,000.00

Specific Transit and TDM Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Fixed Guideway Elements	\$0.00
Stations, Stops, and Terminals	\$0.00
Support Facilities	\$0.00
Transit Systems (e.g. communications, signals, controls, fare collection, etc.)	\$0.00
Vehicles	\$0.00
Contingencies	\$0.00

Right-of-Way	\$0.00
Other Transit and TDM Elements	\$0.00
Totals	\$0.00

Transit Operating Costs

Number of Platform hours	0
Cost Per Platform hour (full loaded Cost)	\$0.00
Subtotal	\$0.00
Other Costs - Administration, Overhead,etc.	\$0.00

Totals

Total Cost	\$2,195,000.00
Construction Cost Total	\$2,195,000.00
Transit Operating Cost Total	\$0.00

Congestion within Project Area:

Free-Flow Travel Speed:	61
<i>The free-flow travel speed is the black number</i>	
Peak Hour Travel Speed:	59
<i>The peak hour travel speed is the red number</i>	
Percentage Decrease in Travel Speed in Peak Hour Compared to Free-Flow (calculation):	3.28%
Upload the "Level of Congestion" map:	1649866702269_46-85 Congestion Map.pdf

Congestion on adjacent Parallel Routes:

Adjacent Parallel Corridor	TH 55
Adjacent Parallel Corridor Start and End Points:	
Start Point:	TH 52
End Point:	Jacob Avenue
Free-Flow Travel Speed:	61
<i>The Free-Flow Travel Speed is black number.</i>	
Peak Hour Travel Speed:	59
<i>The Peak-Hour Travel Speed is red number.</i>	
Percentage Decrease in Travel Speed in Peak Hour Compared to Free-Flow (calculation):	3.28%

Principal Arterial Intersection Conversion Study:

Proposed at-grade project that reduces delay at a High Priority Intersection:

(70 Points)

Proposed at-grade project that reduces delay at a Medium Priority Intersection:

(65 Points)

Proposed at-grade project that reduces delay at a Low Priority Intersection:

(60 Points)

Not listed as a priority in the study:

(0 Points)

Congestion Management and Safety Plan IV:

Proposed at-grade project that reduces delay at a CMSP opportunity area:

(70 Points)

Not listed as a CMSP priority location: Yes

(0 Points)

Measure C: Current Heavy Commercial Traffic

RESPONSE: Select one for your project, based on the updated 2021 Regional Truck Corridor Study:

Along Tier 1:

Miles: 0

(to the nearest 0.1 miles)

Along Tier 2:

Miles: 0

(to the nearest 0.1 miles)

Along Tier 3:

Miles: 0

(to the nearest 0.1 miles)

The project provides a direct and immediate connection (i.e., intersects) with either a Tier 1, Tier 2, or Tier 3 corridor: Yes

None of the tiers:

Measure A: Engagement

i. Describe any Black, Indigenous, and People of Color populations, low-income populations, disabled populations, youth, or older adults within a ½ mile of the proposed project. Describe how these populations relate to regional context. Location of affordable housing will be addressed in Measure C.

ii. Describe how Black, Indigenous, and People of Color populations, low-income populations, persons with disabilities, youth, older adults, and residents in affordable housing were engaged, whether through community planning efforts, project needs identification, or during the project development process.

iii. Describe the progression of engagement activities in this project. A full response should answer these questions:

Response:

The project is currently early in development. A total of three publicly subsidized rental housing units are located within 1/2 mile of the project. No right of way impacts are anticipated from this project, and the impacts will be limited to potential road closures and detours. People in this area will be engaged through an introductory mailing, meetings with individual landowners and renters, and one or more open houses. The purpose and need were identified primarily through a review of traffic safety data along the corridor.

(Limit 2,800 characters; approximately 400 words):

Measure B: Equity Population Benefits and Impacts

Describe the projects benefits to Black, Indigenous, and People of Color populations, low-income populations, children, people with disabilities, youth, and older adults. Benefits could relate to:

This is not an exhaustive list. A full response will support the benefits claimed, identify benefits specific to Equity populations residing or engaged in activities near the project area, identify benefits addressing a transportation issue affecting Equity populations specifically identified through engagement, and substantiate benefits with data.

Acknowledge and describe any negative project impacts to Black, Indigenous, and People of Color populations, low-income populations, children, people with disabilities, youth, and older adults. Describe measures to mitigate these impacts. Unidentified or unmitigated negative impacts may result in a reduction in points.

Below is a list of potential negative impacts. This is not an exhaustive list.

Response:

The project will improve the safety of the intersection by reducing travel speed and conflict points at the intersection. Furthermore, it will construct off-road bicycle facilities around the intersection and ADA ramps to allow for non-motorized users to more safely cross CSAH 46 and CSAH 85, both of which are high-speed facilities.

(Limit 2,800 characters; approximately 400 words):

Measure C: Affordable Housing Access

5.0	6.7	-1.7	775	775	-1317.5	-1317.5	Not applicable. 164987526 No railroad crossing is involved with this project. 6399_46-57 Synchro.pdf
							-1317

Vehicle Delay Reduced

Total Peak Hour Delay Reduced	-1317.5
Total Peak Hour Delay Reduced	-1317.5

Measure B: Roadway projects that do not include new roadway segments or railroad grade-separation elements

Total (CO, NOX, and VOC) Peak Hour Emissions without the Project (Kilograms):	Total (CO, NOX, and VOC) Peak Hour Emissions with the Project (Kilograms):	Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):
1.12	1.168	-0.048
1	1	0

Total

Total Emissions Reduced:	-0.048
Upload Synchro Report	1649875595664_46-57 Synchro.pdf

Please upload attachment in PDF form. (Save Form, then click 'Edit' in top right to upload file.)

Measure B: Roadway projects that are constructing new roadway segments, but do not include railroad grade-separation elements (for Roadway Expansion applications only):

Total (CO, NOX, and VOC) Peak Hour Emissions without the Project (Kilograms):	Total (CO, NOX, and VOC) Peak Hour Emissions with the Project (Kilograms):	Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):
0	0	0

Total Parallel Roadway

Emissions Reduced on Parallel Roadways 0

Upload Synchro Report

Please upload attachment in PDF form. (Save Form, then click 'Edit' in top right to upload file.)

New Roadway Portion:

Cruise speed in miles per hour with the project: 0

Vehicle miles traveled with the project: 0

Total delay in hours with the project: 0

Total stops in vehicles per hour with the project: 0

Fuel consumption in gallons: 0

Total (CO, NOX, and VOC) Peak Hour Emissions Reduced or Produced on New Roadway (Kilograms): 0

EXPLANATION of methodology and assumptions used:(Limit 1,400 characters; approximately 200 words)

Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms): 0.0

Measure B: Roadway projects that include railroad grade-separation elements

Cruise speed in miles per hour without the project: 0

Vehicle miles traveled without the project: 0

Total delay in hours without the project: 0

Total stops in vehicles per hour without the project: 0

Cruise speed in miles per hour with the project: 0

Vehicle miles traveled with the project: 0

Total delay in hours with the project: 0

Total stops in vehicles per hour with the project: 0

Fuel consumption in gallons (F1) 0

Fuel consumption in gallons (F2) 0

Fuel consumption in gallons (F3) 0

Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms): 0

EXPLANATION of methodology and assumptions used:(Limit 1,400 characters; approximately 200 words)

Measure A: Benefit of Crash Reduction

Crash Modification Factor Used:

(Limit 700 Characters; approximately 100 words)

Conversion of stop-controlled intersection into single-lane roundabout

Rationale for Crash Modification Selected:

(Limit 1400 Characters; approximately 200 words)

The crash modification was selected because it is the primary scope item for the project and best addresses the crash issue at this intersection. The intersection is being converted to a single lane roundabout to address a location with a crash history.

Project Benefit (\$) from B/C Ratio

\$7,448,049.00

Total Fatal (K) Crashes:

0

Total Serious Injury (A) Crashes:

1

Total Non-Motorized Fatal and Serious Injury Crashes:

0

Total Crashes:

7

Total Fatal (K) Crashes Reduced by Project:

0

Total Serious Injury (A) Crashes Reduced by Project:

1

Total Non-Motorized Fatal and Serious Injury Crashes Reduced by Project:

0

Total Crashes Reduced by Project:

2

Worksheet Attachment

1649878736205_Copy of 2022 Benefit-Cost-Worksheet_4685.xlsx

Upload Crash Modification Factors and B/C Worksheet in PDF form.

Measure A: Pedestrian Safety

Determine if these measures do not apply to your project. Does the project match either of the following descriptions?

If either of the items are checked yes, then **score for entire pedestrian safety measure is zero.** Applicant does not need to respond to the sub-measures and can proceed to the next section.

Project is primarily a freeway (or transitioning to a freeway) and does not provide safe and comfortable pedestrian facilities and crossings.

No

Existing location lacks any pedestrian facilities (e.g., sidewalks, marked crossings, wide shoulders in rural contexts) and project does not add pedestrian elements (e.g., reconstruction of a roadway without sidewalks, that doesnt also add pedestrian crossings and sidewalk or sidepath on one or both sides).

No

SUB-MEASURE 1: Project-Based Pedestrian Safety Enhancements and Risk Elements

To receive maximum points in this category, pedestrian safety countermeasures selected for implementation in projects should be, to the greatest extent feasible, consistent with the countermeasure recommendations in the Regional Pedestrian Safety Action Plan and state and national best practices. Links to resources are provided on the Regional Solicitation Resources web page.

Please answer the following two questions with as much detail as possible based on the known attributes of the proposed design. If any aspect referenced in this section is not yet determined, describe the range of options being considered, to the greatest extent available. If there are project elements that may increase pedestrian risk, describe how these risks are being mitigated.

1. Describe how this project will address the safety needs of people crossing the street at signalized intersections, unsignalized intersections, midblock locations, and roundabouts.

Treatments and countermeasures should be well-matched to the roadways context (e.g., appropriate for the speed, volume, crossing distance, and other location attributes). Refer to the Regional Solicitation Resources web page for guidance links.

Response:

This project will convert an unsignalized intersection to a single lane roundabout. Off-road trails will be constructed in all four quadrants of the roundabout, with ramps that tie into the roadway shoulders. Crossings at the roundabout will also be constructed to allow non-motorized users to cross CSAH 85 or CSAH 46 at locations where traffic speeds are reduced. Splitter islands will also be constructed with ADA crossings to provide a refuge area for non-motorized users and shorten the amount of time they are exposed to vehicle traffic.

(Limit 2,800 characters; approximately 400 words)

Is the distance in between signalized intersections increasing (e.g., removing a signal)?

Select one:

No

If yes, describe what measures are being used to fill the gap between protected crossing opportunities for pedestrians (e.g., adding High-Intensity Activated Crosswalk beacons to help motorists yield and help pedestrians find a suitable gap for crossing, turning signal into a roundabout to slow motorist speed, etc.).

Response:

(Limit 1,400 characters; approximately 200 words)

Will your design increase the crossing distance or crossing time across any leg of an intersection? (e.g., by adding turn or through lanes, widening lanes, using a multi-phase crossing, prohibiting crossing on any leg of an intersection, pedestrian bridge requiring length detour, etc.). This does not include any increases to crossing distances solely due to the addition of bike lanes (i.e., no other through or turn lanes being added or widened).

Select one:

No

If yes,

How many intersections will likely be affected?

Response:

Describe what measures are being used to reduce exposure and delay for pedestrians (e.g., median crossing islands, curb bulb-outs, etc.)

Response:

(Limit 1,400 characters; approximately 200 words)

If grade separated pedestrian crossings are being added and increasing crossing time, describe any features that are included that will reduce the detour required of pedestrians and make the separated crossing a more appealing option (e.g., shallow tunnel that doesn't require much elevation change instead of pedestrian bridge with numerous switchbacks).

Response:

(Limit 1,400 characters; approximately 200 words)

If mid-block crossings are restricted or blocked, explain why this is necessary and how pedestrian crossing needs and safety are supported in other ways (e.g., nearest protected or enhanced crossing opportunity).

Response:

(Limit 1,400 characters; approximately 200 words)

2. Describe how motorist speed will be managed in the project design, both for through traffic and turning movements. Describe any project-related factors that may affect speed directly or indirectly, even if speed is not the intended outcome (e.g., wider lanes and turning radii to facilitate freight movements, adding turn lanes to alleviate peak hour congestion, etc.). Note any strategies or treatments being considered that are intended to help motorists drive slower (e.g., visual narrowing, narrow lanes, truck aprons to mitigate wide turning radii, etc.) or protect pedestrians if increasing motorist speed (e.g., buffers or other separation from moving vehicles, crossing treatments appropriate for higher speed roadways, etc.).

Response:

(Limit 2,800 characters; approximately 400 words)

If known, what are the existing and proposed design, operation, and posted speeds? Is this an increase or decrease from existing conditions?

Response:

(Limit 1,400 characters; approximately 200 words)

SUB-MEASURE 2: Existing Location-Based Pedestrian Safety Risk Factors

These factors are based on based on trends and patterns observed in pedestrian crash analysis done for the Regional Pedestrian Safety Action Plan. Check off how many of the following factors are present. Applicants receive more points if more risk factors are present.

Existing road configuration is a One-way, 3+ through lanes
or

Existing road configuration is a Two-way, 4+ through lanes

Existing road has a design speed, posted speed limit, or speed study/data showing 85th percentile travel speeds in excess of 30 MPH or more Yes

Existing road has AADT of greater than 15,000 vehicles per day

The construction of the single lane roundabout will reduce speeds on CSAH 46, which is a high-speed facility. The posted speed on CSAH 46 is 55 mph. It is anticipated that speeds will be reduced to 20 mph or less at the intersection with CSAH 85 with the construction of the roundabout. Splitter islands with curb and gutter will also be constructed to encourage slower speeds and also provide refuges for non-motorized user.

The existing posted speed on CSAH 46 is 55 mph. The existing operating speed on CSAH 46 at the intersection is approximately 60 mph for through traffic. The proposed design and posted speed is also 55 mph. However, at the roundabout, the operating speed on CSAH 46 will be reduced to 20 mph or less, which will be a decrease from existing conditions.

List the AADT

8000

SUB-MEASURE 3: Existing Location-Based Pedestrian Safety Exposure Factors

These factors are based on based on trends and patterns observed in pedestrian crash analysis done for the Regional Pedestrian Safety Action Plan. Check off how many of the following existing location exposure factors are present. Applicants receive more points if more risk factors are present.

Existing road has transit running on or across it with 1+ transit stops in the project area (If flag-stop route with no fixed stops, then 1+ locations in the project area where roadside stops are allowed. Do not count portions of transit routes with no stops, such as non-stop freeway sections of express or limited-stop routes. If service was temporarily reduced for the pandemic but is expected to return to 2019 levels, consider 2019 service for this item.)

Existing road has high-frequency transit running on or across it and 1+ high-frequency stops in the project area (high-frequency defined as service at least every 15 minutes from 6am to 7pm weekdays and 9am to 6pm Saturdays. If service frequency was temporarily reduced for the pandemic but is expected to return to 2019 levels, consider 2019 frequency for this item.)

Existing road is within 500 of 1+ shopping, dining, or entertainment destinations (e.g., grocery store, restaurant)

If checked, please describe:

(Limit 1,400 characters; approximately 200 words)

Existing road is within 500 of other known pedestrian generators (e.g., school, civic/community center, senior housing, multifamily housing, regulatorily-designated affordable housing)

If checked, please describe:

(Limit 1,400 characters; approximately 200 words)

Measure A: Multimodal Elements and Existing Connections

Response:

The project will construct off-road bicycle facilities around the intersection and ADA ramps to allow for non-motorized users to more safely cross CSAH 46 and CSAH 85, both of which are high-speed facilities. Splitter islands will be constructed with ADA ramps and crossings to provide a refuge for non-motorized users. The roundabout at the intersection will decrease operating speeds on CSAH 46, which will also improve safety of non-motorized users crossing CSAH 46.

(Limit 2,800 characters; approximately 400 words)

Transit Projects Not Requiring Construction

If the applicant is completing a transit application that is operations only, check the box and do not complete the remainder of the form. These projects will receive full points for the Risk Assessment.

Park-and-Ride and other transit construction projects require completion of the Risk Assessment below.

[Check Here if Your Transit Project Does Not Require Construction](#)

Measure A: Risk Assessment - Construction Projects

1. Public Involvement (20 Percent of Points)

Projects that have been through a public process with residents and other interested public entities are more likely than others to be successful. The project applicant must indicate that events and/or targeted outreach (e.g., surveys and other web-based input) were held to help identify the transportation problem, how the potential solution was selected instead of other options, and the public involvement completed to date on the project. The focus of this section is on the opportunity for public input as opposed to the quality of input. NOTE: A written response is required and failure to respond will result in zero points.

Multiple types of targeted outreach efforts (such as meetings or online/mail outreach) specific to this project with the general public and partner agencies have been used to help identify the project need.

100%

At least one meeting specific to this project with the general public has been used to help identify the project need.

50%

At least online/mail outreach effort specific to this project with the general public has been used to help identify the project need.

50%

No meeting or outreach specific to this project was conducted, but the project was identified through meetings and/or outreach related to a larger planning effort.

25%

No outreach has led to the selection of this project. Yes

0%

Describe the type(s) of outreach selected for this project (i.e., online or in-person meetings, surveys, demonstration projects), the method(s) used to announce outreach opportunities, and how many people participated. Include any public website links to outreach opportunities.

Response:

(Limit 2,800 characters; approximately 400 words)

2. Layout (25 Percent of Points)

Layout includes proposed geometrics and existing and proposed right-of-way boundaries. A basic layout should include a base map (north arrow; scale; legend;* city and/or county limits; existing ROW, labeled; existing signals;* and bridge numbers*) and design data (proposed alignments; bike and/or roadway lane widths; shoulder width;* proposed signals;* and proposed ROW). An aerial photograph with a line showing the projects termini does not suffice and will be awarded zero points. *If applicable

Layout approved by the applicant and all impacted jurisdictions (i.e., cities/counties/MnDOT. If a MnDOT trunk highway is impacted, approval by MnDOT must have occurred to receive full points. A PDF of the layout must be attached along with letters from each jurisdiction to receive points.

100%

A layout does not apply (signal replacement/signal timing, stand-alone streetscaping, minor intersection improvements). Applicants that are not certain whether a layout is required should contact Colleen Brown at MnDOT Metro State Aid colleen.brown@state.mn.us.

100%

For projects where MnDOT trunk highways are impacted and a MnDOT Staff Approved layout is required. Layout approved by the applicant and all impacted local jurisdictions (i.e., cities/counties), and layout review and approval by MnDOT is pending. A PDF of the layout must be attached along with letters from each jurisdiction to receive points.

75%

Layout completed but not approved by all jurisdictions. A PDF of the layout must be attached to receive points. Yes

50%

Layout has been started but is not complete. A PDF of the layout must be attached to receive points.

25%

Layout has not been started

0%

Attach Layout

1649883835454_4657-Layout 02162022.pdf

Please upload attachment in PDF form.

Additional Attachments

Please upload attachment in PDF form.

3.Review of Section 106 Historic Resources (15 Percent of Points)

No known historic properties eligible for or listed in the National Register of Historic Places are located in the project area, and project is not located on an identified historic bridge Yes

100%

There are historical/archeological properties present but determination of no historic properties affected is anticipated.

100%

Historic/archeological property impacted; determination of no adverse effect anticipated

80%

Historic/archeological property impacted; determination of adverse effect anticipated

40%

Unsure if there are any historic/archaeological properties in the project area.

0%

Project is located on an identified historic bridge

4.Right-of-Way (25 Percent of Points)

Right-of-way, permanent or temporary easements, and MnDOT agreement/limited-use permit either not required or all have been acquired

100%

Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required - plat, legal descriptions, or official map complete

50%

Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required - parcels identified Yes

25%

Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required - parcels not all identified

0%

5.Railroad Involvement (15 Percent of Points)

No railroad involvement on project or railroad Right-of-Way agreement is executed (include signature page, if applicable) Yes

100%

Signature Page

Please upload attachment in PDF form.

Railroad Right-of-Way Agreement required; negotiations have begun

50%

Railroad Right-of-Way Agreement required; negotiations have not begun.

0%

Measure A: Cost Effectiveness

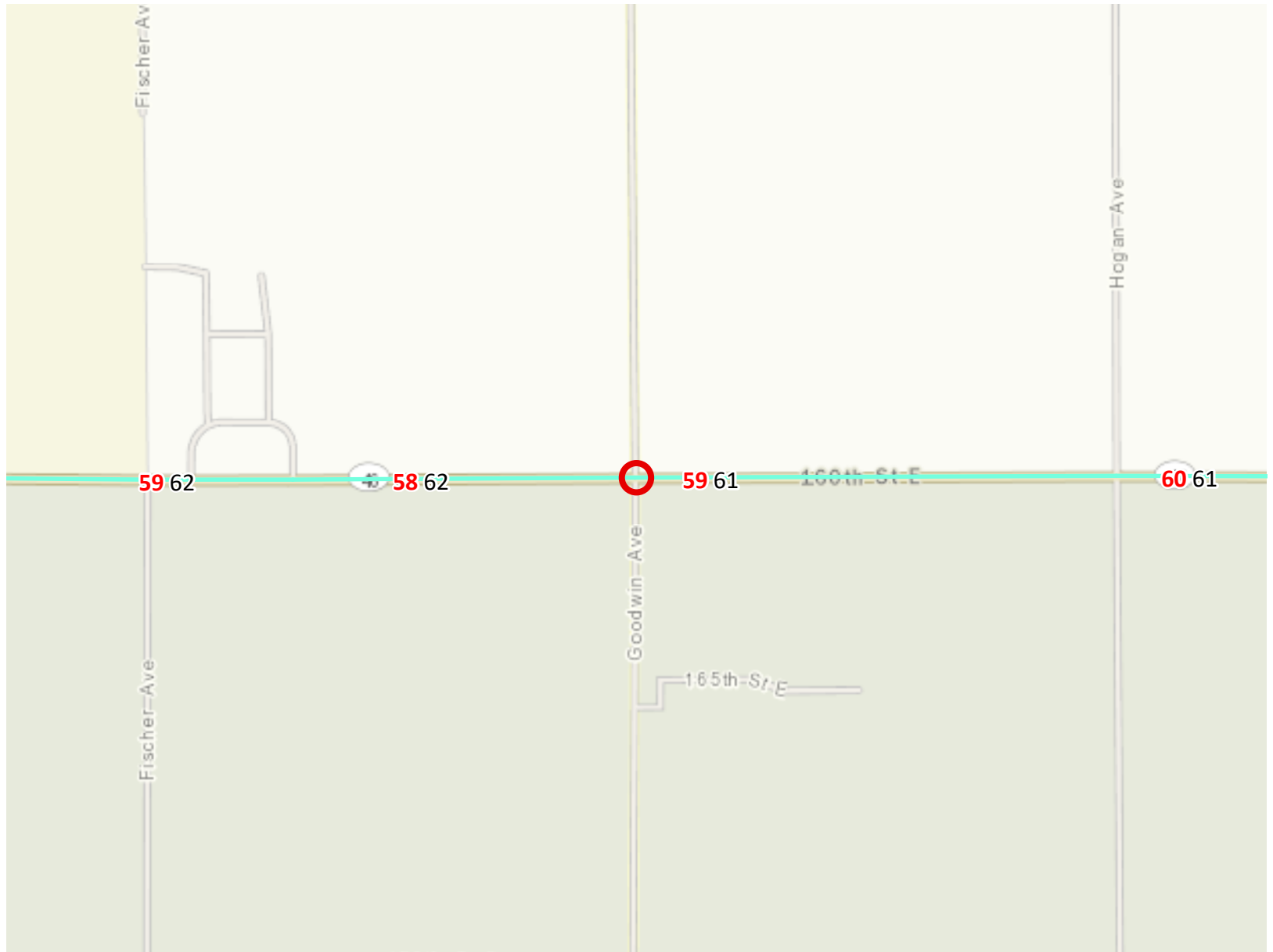
Total Project Cost (entered in Project Cost Form):	\$2,195,000.00
Enter Amount of the Noise Walls:	\$0.00
Total Project Cost subtract the amount of the noise walls:	\$2,195,000.00
Enter amount of any outside, competitive funding:	\$0.00
Attach documentation of award:	
Points Awarded in Previous Criteria	
Cost Effectiveness	\$0.00

Other Attachments

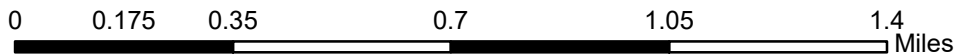
File Name	Description	File Size
17727_CrashSheet.pdf	B/C Cost Worksheet	201 KB
4657-Layout 02162022.pdf	Project Layout	6.0 MB
CP 46-57 Project Summary.pdf	Project Summary	7.3 MB

Level of Congestion

Roadway Spot Mobility & Safety Project: CSAH 46/CSAH 85 Roundabout | Map ID: 1649866141119



- Project Points
- A Minor Arterials
- A Minor Arterials Planned
- Principal Arterials
- Principal Arterials Planned



Created: 4/13/2022
LandscapeRSA1

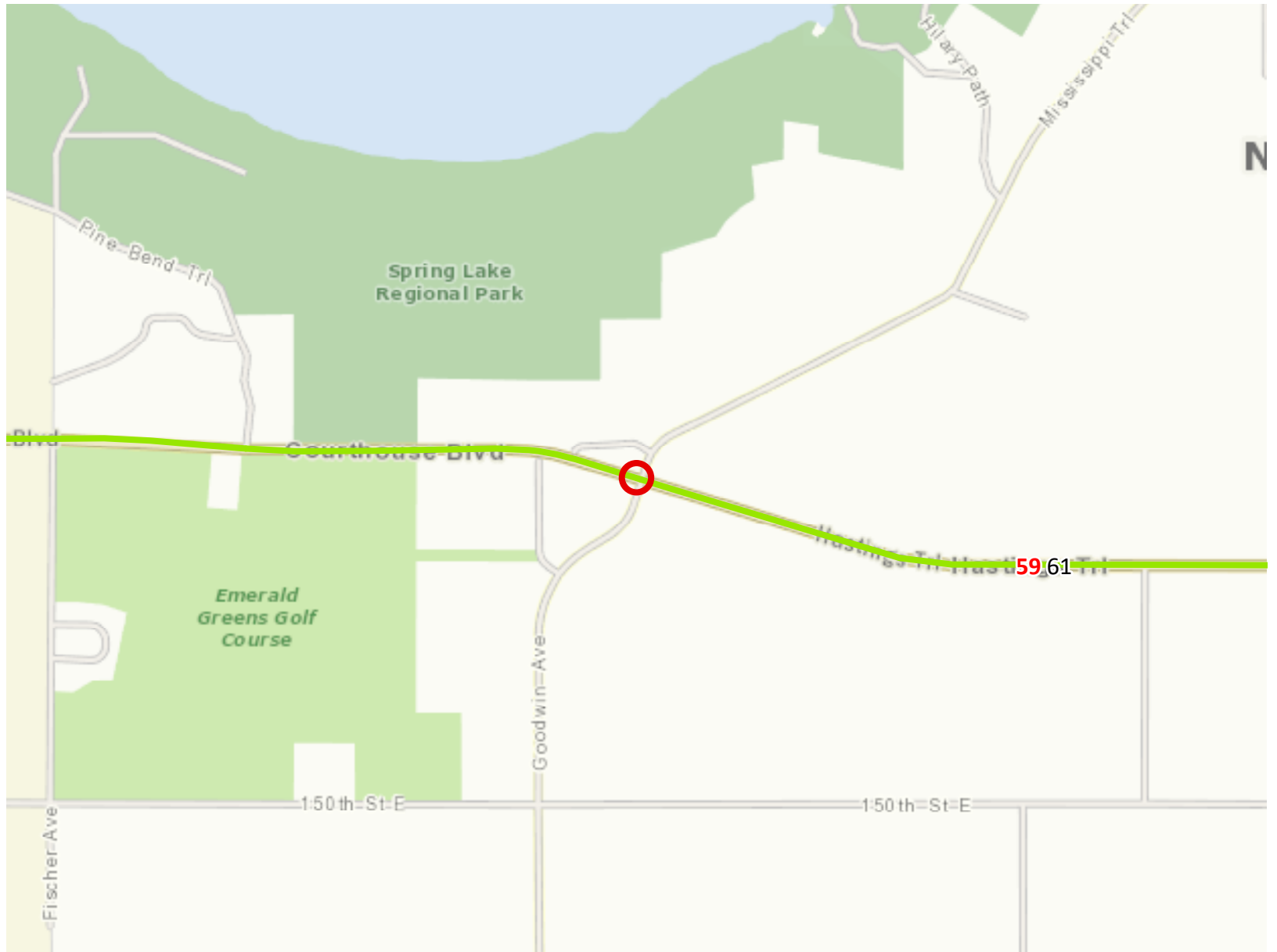


For complete disclaimer of accuracy, please visit
<https://giswebsite.metc.state.mn.us/gisite/notice.aspx>



Level of Congestion

Roadway Spot Mobility & Safety Project: CSAH 46/CSAH 85 - Parallel Route | Map ID: 1649866474972



- Project Points
- A Minor Arterials
- A Minor Arterials Planned
- Principal Arterials
- Principal Arterials Planned



Created: 4/13/2022
LandscapeRSA1



For complete disclaimer of accuracy, please visit
<https://giswebsite.metc.state.mn.us/gis/notice.aspx>



Socio-Economic Conditions

Roadway Spot Mobility & Safety Project: CSAH 46/CSAH 85 Roundabout | Map ID: 1649866141119


Results

Total of publicly subsidized rental housing units in census tracts within 1/2 mile: 3

Project located in census tracts that are BELOW the regional average for population in poverty or population of color.



 Points

 Area of Concentrated Poverty



Created: 4/13/2022
LandscapeRSA2



For complete disclaimer of accuracy, please visit
<http://giswebsite.metc.state.mn.us/gisite/notice.aspx>



3: CSAH 85/Goodwin Ave & CSAH 46/160th St

Direction	All
Future Volume (vph)	670
Total Delay / Veh (s/v)	3
CO Emissions (kg)	0.61
NOx Emissions (kg)	0.12
VOC Emissions (kg)	0.14

3: CSAH 85/Goodwin Ave & CSAH 46/160th St

Future	AM
Future Volume (vph)	775
Total Delay / Veh (s/v)	5
CO Emissions (kg)	0.79
NOx Emissions (kg)	0.15
VOC Emissions (kg)	0.18

Total Network Performance By Run

Run Number	1	2	3	4	5	6	7
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.2	0.3	0.4	0.4	0.2	0.2
Total Delay (hr)	0.2	0.2	0.3	0.2	0.3	0.2	0.2
Total Del/Veh (s)	6.7	6.4	7.6	6.9	7.7	7.1	6.6
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.2	0.2	0.2	0.1	0.1	0.0	0.0
Fuel Used (gal)	1.6	1.5	1.6	1.5	1.7	1.6	1.5
Fuel Eff. (mpg)	30.2	29.5	30.1	30.5	29.6	30.7	30.3
HC Emissions (g)	35	19	22	24	32	22	25
CO Emissions (g)	1071	847	857	866	1097	900	932
NOx Emissions (g)	102	60	69	73	96	71	76

Total Network Performance By Run

Run Number	8	9	10	Avg
Denied Delay (hr)	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.3	0.3	0.2	0.3
Total Delay (hr)	0.2	0.2	0.2	0.2
Total Del/Veh (s)	6.0	7.0	6.4	6.8
Stop Delay (hr)	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.1	0.1	0.1	0.1
Fuel Used (gal)	1.6	1.5	1.4	1.6
Fuel Eff. (mpg)	29.4	29.9	30.8	30.1
HC Emissions (g)	17	29	11	24
CO Emissions (g)	817	994	693	907
NOx Emissions (g)	57	86	41	73

Intersection: 3: CSAH 85/Goodwin Ave & CSAH 46/160th St

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	3	28	21	12
Average Queue (ft)	1	10	7	3
95th Queue (ft)	8	35	27	17
Link Distance (ft)	935	1198	925	1041
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

Total Network Performance By Run

Run Number	1	2	3	4	5	6	7
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.2	0.3	0.4	0.2	0.3	0.2
Total Delay (hr)	0.3	0.2	0.2	0.3	0.3	0.2	0.2
Total Del/Veh (s)	6.7	6.3	6.0	6.9	6.6	6.0	6.0
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.3	0.1	0.2	0.3	0.2	0.2	0.1
Fuel Used (gal)	1.9	1.7	1.8	1.9	1.9	1.7	1.9
Fuel Eff. (mpg)	29.7	29.3	29.6	29.1	29.5	29.8	29.4
HC Emissions (g)	33	17	27	35	38	23	14
CO Emissions (g)	1078	824	1051	1149	1254	947	838
NOx Emissions (g)	98	58	87	104	114	75	53

Total Network Performance By Run

Run Number	8	9	10	Avg
Denied Delay (hr)	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.4	0.3	0.2	0.3
Total Delay (hr)	0.3	0.3	0.2	0.3
Total Del/Veh (s)	7.5	7.5	6.8	6.7
Stop Delay (hr)	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.4	0.3	0.4	0.3
Fuel Used (gal)	2.2	2.0	1.7	1.9
Fuel Eff. (mpg)	28.3	29.0	28.3	29.2
HC Emissions (g)	39	36	17	28
CO Emissions (g)	1303	1223	861	1053
NOx Emissions (g)	114	111	60	87

Intersection: 3: CSAH 85/Goodwin Ave & CSAH 46/160th St

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	37	17	29	28
Average Queue (ft)	18	4	9	11
95th Queue (ft)	46	20	31	35
Link Distance (ft)	935	1198	925	1041
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

3: CSAH 85/Goodwin Ave & CSAH 46/160th St

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Future Volume (vph)	670
Total Delay / Veh (s/v)	3
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3: CSAH 85/Goodwin Ave & CSAH 46/160th St

Future	AM
Future Volume (vph)	775
Total Delay / Veh (s/v)	5
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Total Network Performance By Run

Run Number	1	2	3	4	5	6	7
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.2	0.3	0.4	0.4	0.2	0.2
Total Delay (hr)	0.2	0.2	0.3	0.2	0.3	0.2	0.2
Total Del/Veh (s)	6.7	6.4	7.6	6.9	7.7	7.1	6.6
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.2	0.2	0.2	0.1	0.1	0.0	0.0
Fuel Used (gal)	1.6	1.5	1.6	1.5	1.7	1.6	1.5
Fuel Eff. (mpg)	30.2	29.5	30.1	30.5	29.6	30.7	30.3
HC Emissions (g)	35	19	22	24	32	22	25
CO Emissions (g)	1071	847	857	866	1097	900	932
NOx Emissions (g)	102	60	69	73	96	71	76

Total Network Performance By Run

Run Number	8	9	10	Avg
Denied Delay (hr)	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.3	0.3	0.2	0.3
Total Delay (hr)	0.2	0.2	0.2	0.2
Total Del/Veh (s)	6.0	7.0	6.4	6.8
Stop Delay (hr)	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.1	0.1	0.1	0.1
Fuel Used (gal)	1.6	1.5	1.4	1.6
Fuel Eff. (mpg)	29.4	29.9	30.8	30.1
HC Emissions (g)	17	29	11	24
CO Emissions (g)	817	994	693	907
NOx Emissions (g)	57	86	41	73

Intersection: 3: CSAH 85/Goodwin Ave & CSAH 46/160th St

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	3	28	21	12
Average Queue (ft)	1	10	7	3
95th Queue (ft)	8	35	27	17
Link Distance (ft)	935	1198	925	1041
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

Total Network Performance By Run

Run Number	1	2	3	4	5	6	7
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.2	0.3	0.4	0.2	0.3	0.2
Total Delay (hr)	0.3	0.2	0.2	0.3	0.3	0.2	0.2
Total Del/Veh (s)	6.7	6.3	6.0	6.9	6.6	6.0	6.0
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.3	0.1	0.2	0.3	0.2	0.2	0.1
Fuel Used (gal)	1.9	1.7	1.8	1.9	1.9	1.7	1.9
Fuel Eff. (mpg)	29.7	29.3	29.6	29.1	29.5	29.8	29.4
HC Emissions (g)	33	17	27	35	38	23	14
CO Emissions (g)	1078	824	1051	1149	1254	947	838
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Total Network Performance By Run

Run Number	8	9	10	Avg
Denied Delay (hr)	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.4	0.3	0.2	0.3
Total Delay (hr)	0.3	0.3	0.2	0.3
Total Del/Veh (s)	7.5	7.5	6.8	6.7
Stop Delay (hr)	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.4	0.3	0.4	0.3
Fuel Used (gal)	2.2	2.0	1.7	1.9
Fuel Eff. (mpg)	28.3	29.0	28.3	29.2
HC Emissions (g)	39	36	17	28
CO Emissions (g)	1303	1223	861	1053
NOx Emissions (g)	114	111	60	87

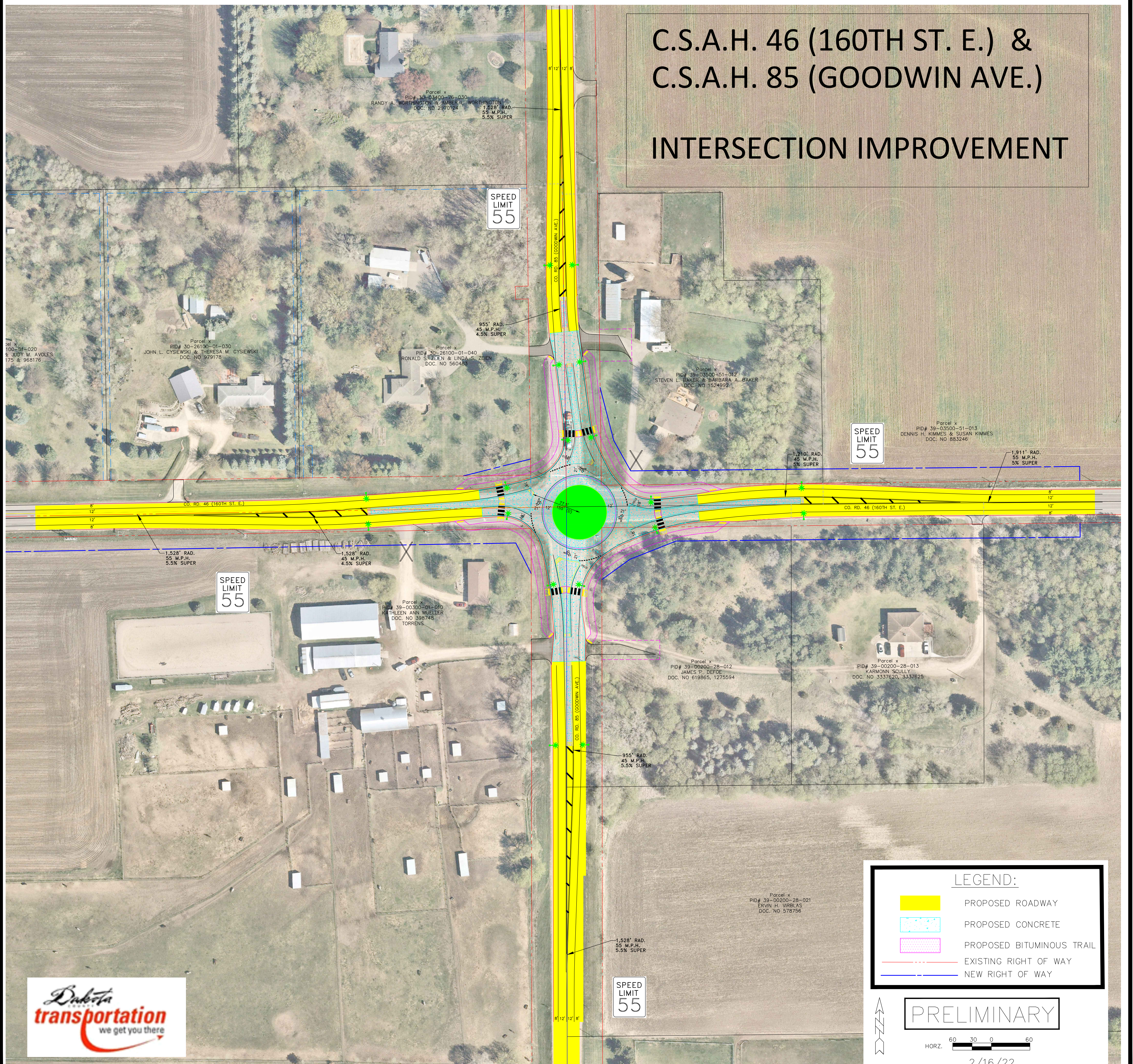
Intersection: 3: CSAH 85/Goodwin Ave & CSAH 46/160th St

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	37	17	29	28
Average Queue (ft)	18	4	9	11
95th Queue (ft)	46	20	31	35
Link Distance (ft)	935	1198	925	1041
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

C.S.A.H. 46 (160TH ST. E.) & C.S.A.H. 85 (GOODWIN AVE.) INTERSECTION IMPROVEMENT



LEGEND:

- PROPOSED ROADWAY
- PROPOSED CONCRETE
- PROPOSED BITUMINOUS TRAIL
- EXISTING RIGHT OF WAY
- NEW RIGHT OF WAY

PRELIMINARY

2/16/22



Traffic Safety Benefit-Cost Calculation

Highway Safety Improvement Program (HSIP) Reactive Project



A. Roadway Description

Route	CSAH 86	District	Metro	County	Dakota
Begin RP		End RP		Miles	0.100
Location	CSAH 46 & CR 85				

B. Project Description

Proposed Work	Conversion of a stop controlled intersection to a single lane roundabout		
Project Cost*	\$2,195,000	Installation Year	2026
Project Service Life	20 years	Traffic Growth Factor	3.0%

* exclude Right of Way from Project Cost

C. Crash Modification Factor

0.29	Fatal (K) Crashes	Reference	229
0.29	Serious Injury (A) Crashes		
0.29	Moderate Injury (B) Crashes	Crash Type	All
0.29	Possible Injury (C) Crashes		
0.29	Property Damage Only Crashes		www.CMFclearinghouse.org

D. Crash Modification Factor (optional second CMF)

	Fatal (K) Crashes	Reference	
	Serious Injury (A) Crashes		
	Moderate Injury (B) Crashes	Crash Type	
	Possible Injury (C) Crashes		
	Property Damage Only Crashes		www.CMFclearinghouse.org

E. Crash Data

Begin Date	1/1/2019	End Date	12/31/2021	3 years
Data Source	MnCMAT			
Crash Severity	All	< optional 2nd CMF >		
K crashes	0			
A crashes	1			
B crashes	1			
C crashes	2			
PDO crashes	3			

F. Benefit-Cost Calculation

\$7,448,049	Benefit (present value)	B/C Ratio = 3.40
\$2,195,000	Cost	

Proposed project expected to reduce 2 crashes annually, 1 of which involving fatality or serious injury.

F. Analysis Assumptions

Crash Severity	Crash Cost	
K crashes	\$1,500,000	Link: mndot.gov/planning/program/appendix_a.html Real Discount Rate: 0.7% Default Traffic Growth Rate: 3.0% Revised Project Service Life: 20 years Revised
A crashes	\$750,000	
B crashes	\$230,000	
C crashes	\$120,000	
PDO crashes	\$13,000	

G. Annual Benefit

Crash Severity	Crash Reduction	Annual Reduction	Annual Benefit
K crashes	0.00	0.00	\$0
A crashes	0.71	0.24	\$177,500
B crashes	0.71	0.24	\$54,433
C crashes	1.42	0.47	\$56,800
PDO crashes	2.13	0.71	\$9,230
			\$297,963

H. Amortized Benefit

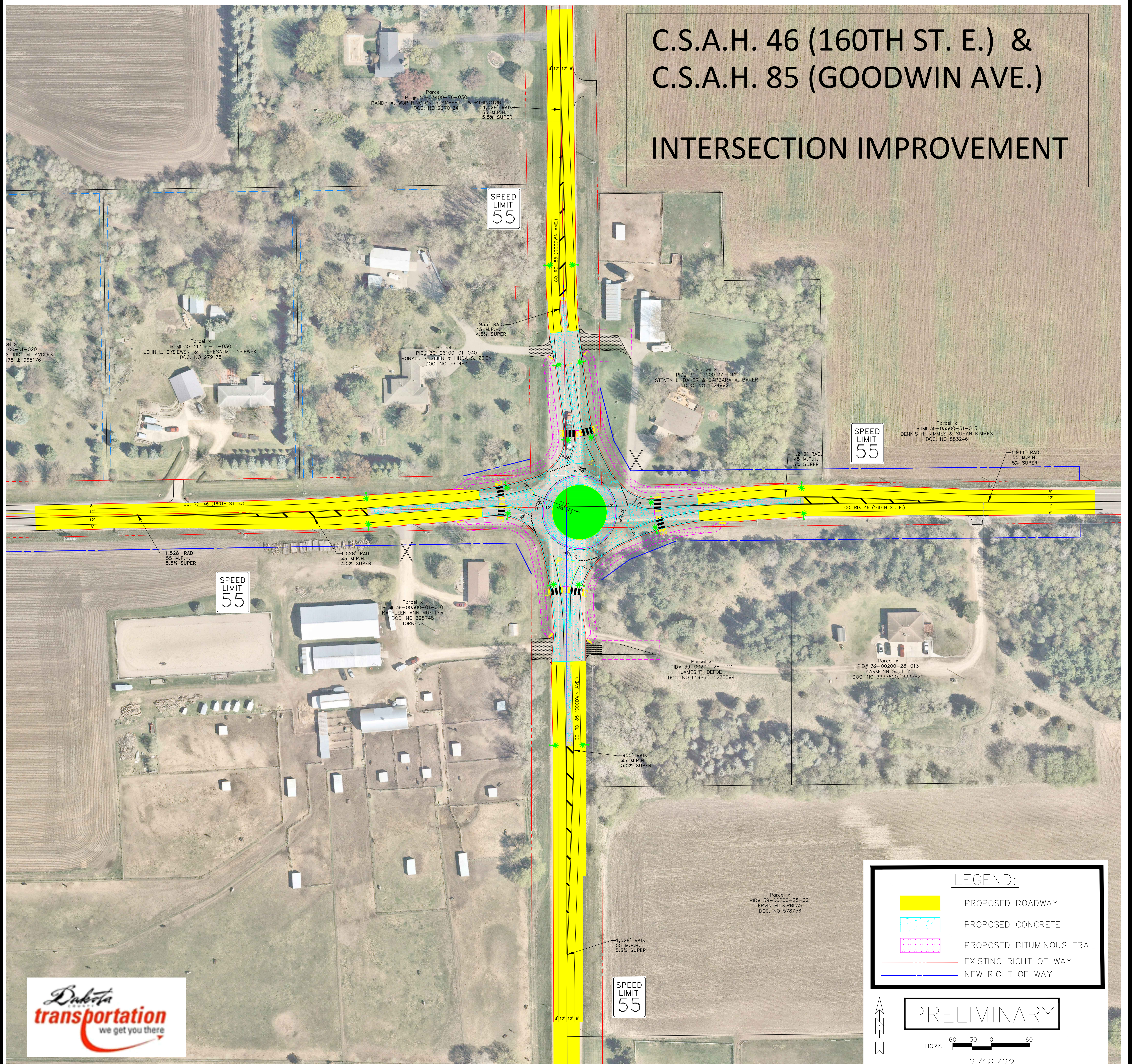
Year	Crash Benefits	Present Value	
2026	\$297,963	\$297,963	Total = \$7,448,049
2027	\$306,902	\$304,769	
2028	\$316,109	\$311,730	
2029	\$325,593	\$318,850	
2030	\$335,360	\$326,132	
2031	\$345,421	\$333,581	
2032	\$355,784	\$341,200	
2033	\$366,457	\$348,993	
2034	\$377,451	\$356,964	
2035	\$388,775	\$365,117	
2036	\$400,438	\$373,457	
2037	\$412,451	\$381,987	
2038	\$424,824	\$390,711	
2039	\$437,569	\$399,635	
2040	\$450,696	\$408,763	
2041	\$464,217	\$418,099	
2042	\$478,144	\$427,648	

2043	\$492,488	\$437,416
2044	\$507,263	\$447,407
2045	\$522,481	\$457,625
0	\$0	\$0
0	\$0	\$0
0	\$0	\$0
0	\$0	\$0
0	\$0	\$0
0	\$0	\$0
0	\$0	\$0
0	\$0	\$0
0	\$0	\$0
0	\$0	\$0
0	\$0	\$0
0	\$0	\$0

NOTE:

This calculation relies on the real discount rate, which accounts for inflation. No further discounting is necessary.

C.S.A.H. 46 (160TH ST. E.) & C.S.A.H. 85 (GOODWIN AVE.) INTERSECTION IMPROVEMENT



LEGEND:

- PROPOSED ROADWAY
- PROPOSED CONCRETE
- PROPOSED BITUMINOUS TRAIL
- EXISTING RIGHT OF WAY
- NEW RIGHT OF WAY

PRELIMINARY

HORZ.

 2/16/22



Project Overview

Dakota County is proposing to reconstruct the intersection of County State Aid Highway (CSAH) 46 and CSAH 85 in Vermillion and Nininger Townships. The purpose of the project is to improve safety and operations at the intersection.

Work on the project is anticipated to include:

- Construction of a roundabout at the intersection
- Drainage improvements
- Lighting at the roundabout

Project Benefits

The reconstruction of the intersection at CSAH 46 and CSAH 85 will provide several benefits to the corridor and the area. The proposed project will:

- Improve safety of the intersection by reducing conflict points
- Improve drainage

Project Funding

- Based on Dakota County 2022-2026 Capital Improvements Program
- Estimated Costs
 - Design = \$200,000
 - Right of Way = \$150,000
 - Construction = \$2,200,000
 - Total Project Cost = \$2,550,000

Project Schedule

- Design – 2022
- Right of Way acquisition – 2023
- Construction – 2024

For More Information

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