



Application

19830 - 2024 Bridges
20039 - CSAH 146 (Brown Rd) Bridge Replacement Project
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: HENNEPIN COUNTY

Jurisdictional Agency (if different):

Organization Type: County Government

Organization Website:

Address: DPT OF PUBLIC WORKS
1600 PRAIRIE DR

***** MEDINA Minnesota 55340
City State/Province Postal Code/Zip

County: Hennepin

Phone: 763-745-7600
Ext.

Fax:

PeopleSoft Vendor Number 0000028004A9

Project Information

Project Name CSAH 146 (Brown Rd) Bridge Replacement Project

Primary County where the Project is Located Hennepin

Cities or Townships where the Project is Located: Orono

Jurisdictional Agency (If Different than the Applicant):

Brief Project Description (Include location, road name/functional class, type of improvement, etc.) This project includes the replacement of the CSAH 146 (Brown Rd) Bridge #90623 over the Luce Line State Trail in the City of Orono as shown in Attachment 02. CSAH 146 (Brown Rd) is classified as a Major Collector roadway.

The existing bridge (built in 1955) consists of a timber structure with a concrete deck that extends over the Long Lake Creek and Luce Line State Trail. The timber material throughout the structure has experienced advanced deterioration. In addition, the concrete deck is showing signs of extensive wear due to the frequency and size of visible cracking. A full replacement is being recommended as maintenance activities are no longer cost effective in preserving this bridge asset. Weight restrictions were introduced on this bridge in 2014, based on the results of a routine inspection, that prohibit certain types of commercial vehicles. The local planning index (LPI) for this bridge is 58 as shown in the Minnesota Structure Inventory Report (Attachment 03). Photos depicting the bridge's current condition are included in Attachment 04.

The proposed project will introduce a new bridge structure that is designed for a 75-year service life. The completion of this project will ensure that a grade separated crossing of the Luce Line State Trail is retained to eliminate conflicts for people walking and biking along the trail underneath the bridge. Additionally, the existing railing and guardrail will be upgraded to satisfy current design standards to ensure user safety. Furthermore, this project will eliminate weight restrictions along a collector route through the Lake Minnetonka Area. It is anticipated that this bridge will retain a shoulder space that can be upgraded should multimodal accommodations be constructed along CSAH 146 (Brown Rd) in the future. Attachment 05 includes a potential typical section for this project, and Attachment 06 includes the potential concept.

(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. CSAH 146 (Brown Rd) over the Luce Line State Trail in Orono - Replace Bridge #90623

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) 0.06

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 \$2,672,000.00

Match Amount \$668,000.00

Minimum of 20% of project total

Project Total \$3,340,000.00

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 Hennepin County

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: 2029

Select 2026 or 2027 for TDM and Unique projects only. For all other applications, select 2028 or 2029.

Additional Program Years:

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

Project Information-Roadways

NOTE: If your project has already been assigned a State Aid Project # (SAP or SP), please indicate SAP# here

SAP#:

County, City, or Lead Agency	Hennepin County
Functional Class of Road	Major Collector
Road System	CSAH
<i>TH, CSAH, MSAS, CO. RD., TWP. RD., CITY STREET</i>	
Road/Route No.	146
<i>i.e., 53 for CSAH 53</i>	
Name of Road	Brown Rd
<i>Example; 1st ST., MAIN AVE</i>	
TERMINI:(Termini listed must be within 0.3 miles of any work)	
From:	
Road System	
Road/Route No.	
<i>i.e., 53 for CSAH 53</i>	
Name of Road	
<i>Example; 1st ST., MAIN AVE</i>	
To:	
Road System	
<i>DO NOT INCLUDE LEGAL DESCRIPTION</i>	
Road/Route No.	
<i>i.e., 53 for CSAH 53</i>	
Name of Road	
<i>Example; 1st ST., MAIN AVE</i>	
In the City/Cities of:	
<i>(List all cities within project limits)</i>	
OR:	
At:	
Road System	
<i>(TH, CSAH, MSAS, CO. RD., TWP. RD., City Street)</i>	
Road/Route No.	
<i>i.e., 53 for CSAH 53</i>	
Name of Road	Bridge #90623
<i>Example; 1st ST., MAIN AVE</i>	
In the City/Cities of:	Orono
<i>(List all cities within project limits)</i>	
PROJECT LENGTH	
Miles	0.1
<i>(nearest 0.1 miles)</i>	
Primary Types of Work (check all the apply)	
New Construction	
Reconstruction	
Resurfacing	
Bituminous Pavement	
Concrete Pavement	
Roundabout	
New Bridge	
Bridge Replacement	Yes
Bridge Rehab	
New Signal	
Signal Replacement/Revision	
Bike Trail	
Other (do not include incidental items)	
BRIDGE/CULVERT PROJECTS (IF APPLICABLE)	
Old Bridge/Culvert No.:	90623
New Bridge/Culvert No.:	
Structure is Over/Under (Bridge or culvert name):	
OTHER INFORMATION:	
Zip Code where Majority of Work is Being Performed	55356
Approximate Begin Construction Date	05/01/2029
Approximate End Construction Date	10/31/2029

Miles of Trail (nearest 0.1 miles)	0
Miles of Sidewalk (nearest 0.1 miles)	0
Miles of trail on the Regional Bicycle Transportation Network (nearest 0.1 miles):	0
Is this a new trail?	No

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.

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

A) Transportation System Stewardship (p 2.2-2.4)

Objectives A & B; Strategies A1 & A2

The project will replace a functionally deteriorating bridge that provides key connections to TH 12. Reconstructing the bridge is a proactive cost-effective strategy to preserve the transportation system. Deferring replacement would likely result in closure of the bridge and roadway, which may have impacts on the Luce Line State Trail.

B) Safety and security (p 2.5-2.9)

Objectives A & B; Strategies B1, B3, B4 & B6

The project will address structural safety concerns related to the bridge. Deteriorating assets result in unsafe conditions for all users and will worsen over time. Safety issues may impact people using the Luce Line State Trail which passes under the bridge. Widened shoulders will accommodate multimodal users and provide space for people driving to pull over for emergencies.

C) Access to destinations (p 2.10-2.25)

Objectives A, B, C, D & E; Strategies C1, C2, C3, C4, C8, C9, C15, C16 & C17

CSAH 146 (Brown Rd) is a Major Collector and that provides key north-south access between Orono and Long Lake. The roadway provides access to residential and recreational destinations, including the Long Lake town center.

D) Competitive economy (p 2.26-2.29)

Objectives A, B & C; Strategies D1, D3 & D4

The project area serves needs for people to access residential, commercial and recreational locations in a residential rural area. Brown Road connects to a hub of shopping and restaurants in Long Lake; which is essential for the rural residential area that does not have many shopping or community centers nearby.

E) Healthy and equitable communities (p 2.30-2.34)

Objectives A, B, C & D; Strategies E1, E2, E3, E4, E5, E6 & E7

If the bridge needs to close due to deterioration, this would impact the Luce Line State Trail that passes underneath Brown Road.

F) Leveraging transportation investments to guide land use (p 2.35-2.41)

Objectives A & C; Strategies F1, F2, F3, F5, F6, F7

The project supports a design that suits the rural residential area. CSAH 146 (Brown Rd) provides direct access to Long Lake to the north, connecting to shops and destinations.

Replacing the bridge asset ensures that the area is attractive and suitable for development opportunities in the community. Replacing the bridge will preserve the prosperity that the Luce Line State Trail brings to the area.

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. 1) Hennepin County 2024-2028 Transportation CIP (Attachment 07)

2) Hennepin County 2040 Transportation Plan (pages 2-11 - 2-18)

URL: hennepin.us/-/media/hennepinus/your-government/projects-initiatives/2040-comprehensive-plan/2040-comprehensive-plan-full.pdf

3) Hennepin County Climate Action Plan (pages 50-54)

URL: hennepin.us/climate-action/-/media/climate-action/hennepin-county-climate-action-plan-final.pdf

4) Hennepin County Complete and Green Streets Policy (pages 10-11)

URL: hennepin.us/-/media/hennepinus/your-government/projects-initiatives/complete-streets/Complete-and-Green-Streets-Policy_Oct2023.pdf

5) Orono Comprehensive Plan (Pages 23-24)

URL: orononm.gov/DocumentCenter/View/1654/Chapter-4A-Transportation

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 2024 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 future Regional Solicitation funding cycles, this requirement may include that the plan has undergone a recent update, e.g., within five years prior to application.

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: 08/31/2015

Link to plan: hennepin.us/-/media/hennepinus/residents/transportation/documents/ada-sidewalk-transition-plan.pdf

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. This includes assurance of year-round use of bicycle, pedestrian, and transit facilities, per FHWA direction established 8/27/2008 and updated 4/15/2019. 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 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. Bridge Rehabilitation/Replacement projects must be located on a minor collector and above functionally classified roadway in the urban areas or a major collector and above in the rural areas.

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.

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. Yes

Bridge Rehabilitation/Replacement projects only:

5. The length of the in-place structure is 20 feet or longer.

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

6. The bridge must have a Local Planning Index (LPI) of less than 60 OR a National Bridge Inventory (NBI) Rating of 3 or less for either Deck Geometry, Approach Roadway, or Waterway Adequacy as reported on the most recent Minnesota Structure Inventory Report.

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

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 David Elvin at MnDOT (David.Elvin@state.mn.us or 651-234-7795) 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)	\$132,000.00
Removals (approx. 5% of total cost)	\$110,000.00
Roadway (grading, borrow, etc.)	\$49,400.00
Roadway (aggregates and paving)	\$105,000.00
Subgrade Correction (muck)	\$0.00
Storm Sewer	\$77,000.00
Ponds	\$0.00
Concrete Items (curb & gutter, sidewalks, median barriers)	\$0.00
Traffic Control	\$132,000.00

Striping	\$3,350.00
Signing	\$4,500.00
Lighting	\$0.00
Turf - Erosion & Landscaping	\$77,000.00
Bridge	\$1,804,000.00
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	\$745,650.00
Other Roadway Elements	\$0.00
Totals	\$3,239,900.00

Specific Bicycle and Pedestrian Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Path/Trail Construction	\$0.00
Sidewalk Construction	\$0.00
On-Street Bicycle Facility Construction	\$0.00
Right-of-Way	\$0.00
Pedestrian Curb Ramps (ADA)	\$0.00
Crossing Aids (e.g., Audible Pedestrian Signals, HAWK)	\$0.00
Pedestrian-scale Lighting	\$0.00
Streetscaping	\$77,000.00
Wayfinding	\$0.00
Bicycle and Pedestrian Contingencies	\$23,100.00
Other Bicycle and Pedestrian Elements	\$0.00
Totals	\$100,100.00

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

PROTECT Funds Eligibility

One of the new federal funding sources is Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT). Please describe which specific elements of your project and associated costs out of the Total TAB-Eligible Costs are eligible to receive PROTECT funds. Examples of potential eligible items may include: storm sewer, ponding, erosion control/landscaping, retaining walls, new bridges over floodplains, and road realignments out of floodplains.

INFORMATION: Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) Formula Program Implementation Guidance (dot.gov).

Response:

Based on a planning level review of the proposed scope of work that's primarily focused on replacing a deteriorated bridge, county staff did not identify any project elements that were obviously eligible for the PROTECT Program.

Totals

Total Cost	\$3,340,000.00
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Construction Cost Total	\$3,340,000.00
Transit Operating Cost Total	\$0.00

Measure A: Distance to the nearest parallel bridge

RESPONSE:

Location of nearest parallel bridge crossing:

CSAH 19 (North Shore Dr) - Approximately 13.2 miles

Explanation:

CSAH 146 (Brown Rd) serves north/south trips between Long Lake and Orono and provides an important crossing over TH 12. The roadway generally includes one lane in each direction.

It should be noted that the CSAH 146 (Brown Rd) bridge does not currently provide direct access ramps to the Luce Line State Trail for people biking; however, an informal goat path suggests that people walking and biking access the state trail from this location. The closest formal on/off ramps to the Luce Line State Trail are located at Orono Orchard Rd, approximately 0.7 miles to the east.

In 2016, Hennepin County replaced Bridge #90622 over Long Lake Creek as part of SP 027-74-005 - which is located approximately 0.5 miles south of this funding application. A similar detour route has been produced for the proposed project, as shown in Attachment 08, which minimizes additional traffic volumes diverted to roadways with a lower functional classification than CSAH 146 (Brown Rd) - Major Collector. The three alternate routes shown in the map include CSAH 19 (North Shore Dr), TH 12, and a Collector Route that are applicable to the CSAH 146 (Brown Rd) Bridge #90623.

In addition, people driving may choose to utilize Willow Dr, approximately 0.5 miles to west; however, this Collector Route is not anticipated to be the signed detour during construction activities.

Prior to construction, county staff will coordinate with staff at the City of Orono, City of Long Lake, MnDOT, and the Minnesota Department of Natural Resources (MnDNR) to better coordinate detours for all modes during construction activities.

(Limit 2,800 characters; approximately 400 words)

Distance from one end of proposed project to nearest non-local functionally classified parallel crossing and then back to the other side of the proposed project (calculated by Council Staff): 0

Measure B: Project Location Relative to Jobs, Manufacturing, and Education

Existing Employment within 1 Mile:	1891
Existing Manufacturing/Distribution-Related Employment within 1 Mile:	445
Existing Post-Secondary Students within 1 Mile:	0
Upload Map	1701983006033_RS 4_CSAH 146 Brown Rd Regional Economy.pdf

Please upload attachment in PDF form

Measure C: Regional Truck Corridor Tiers

Along Tier 1:

(65 Points)

Miles (to the nearest 0.1 miles): 0

If box above is checked, fill in length.

Along Tier 2:

(60 Points)

Miles (to the nearest 0.1 miles): 0

If box above is checked, fill in length.

Along Tier 3:

(55 Points)

Miles (to the nearest 0.1 miles): 0

If box above is checked, fill in length.

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

(10 Points)

The project is not located on a Tier 1, Tier 2, or Tier 3 corridor: Yes

(0 Points)

Measure A: Current Daily Person Throughput

Location	CSAH 146 from Fox St to CSAH 112 (SEQ ID #42723)
Current AADT Volume	3950.0
Existing Transit Routes on the Project:	N/A
<i>Select all transit routes that apply.</i>	
Upload "Transit Connections" map	1701983226607_RS 3_CSAH 146 Brown Rd Transit Connections.pdf
<i>Please upload attachment in PDF form</i>	

Response: Current Daily Person Throughput

Average Annual Daily Transit Ridership	0
Current Daily Person Throughput	5135.0

Measure B: 2040 Forecast ADT

Use Metropolitan Council model to determine forecast (2040) ADT volume No

If checked, METC Staff will provide Forecast (2040) ADT volume

OR

Identify the approved county or city travel demand model to determine forecast (2040) ADT volume

Hennepin County conducted a comprehensive travel demand forecasting analysis based on the Metropolitan Council's regional activity based model. Forecast traffic volumes were based on a combination of socio-economic and land use assumptions. It should be noted that the future transportation network was assumed to include projects identified in the county's Capital Improvement Program. Attachment 09 illustrates the forecast traffic volumes.

Forecast (2040) ADT volume 5100

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:

1. What engagement methods and tools were used?
2. How did you engage specific communities and populations likely to be directly impacted by the project?
3. What techniques did you use to reach populations traditionally not involved in community engagement related to transportation projects?
4. How were the project's purpose and need identified?
5. How was the community engaged as the project was developed and designed?
6. How did you provide multiple opportunities for of Black, Indigenous, and People of Color populations, low-income populations, persons with disabilities, youth, older adults, and residents in affordable housing to engage at different points of project development?
7. How did engagement influence the project plans or recommendations? How did you share back findings with community and re-engage to assess responsiveness of these changes?
8. If applicable, how will NEPA or Title VI regulations will guide engagement activities?

Response:

The CSAH 146 (Brown Rd) bridge project takes place within a rural residential context, with an estimated population of just under 900 within 0.5 miles of the project area. Of that population, 15% of the population are Black, Indigenous, and People of Color (BIPOC) and 18% of households have an income under 200% of the federal poverty level. There are a number of families living in the project area, as 28% of the population within 0.5 miles of the project area are under the age of 18. These demographic profiles are from the 2017 - 2021 5-year ACS estimates. In addition, this project will maintain a grade separated crossing for people walking and cycling along the Luce Line State Trail, a significant recreational destination for the Metro area which is estimated to accommodate 66,000 visitors in the summer months alone.

At the time of application submittal, formal engagement for this project has not started. If the project is funded, Hennepin County staff will collaborate with the City of Orono, the City of Long Lake, MnDOT, and the Minnesota DNR to identify appropriate engagement strategies to inform project development and objectives, particularly concerning the engagement of BIPOC, low-income, youth, and elderly residents.

Historically, public engagement has included providing project updates across multiple communication streams as applicable; including a project website, mobile texts, social media, and portable message display boards prior to construction activities. Outreach efforts often also include direct conversations with businesses and residents impacted by the proposed project. Outreach efforts will likely include staff from the county's Communications Team to ensure the use of best practices and plain language during all public engagement efforts.

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

Measure B: Disadvantaged Communities Benefits and Impacts

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

- ? pedestrian and bicycle safety improvements;*
- ? public health benefits;*
- ? direct access improvements for residents or improved access to destinations such as jobs, school, health care, or other;*
- ? travel time improvements;*
- ? gap closures;*
- ? new transportation services or modal options;*
- ? leveraging of other beneficial projects and investments;*
- ? and/or community connection and cohesion improvements.*

This is not an exhaustive list. A full response will support the benefits claimed, identify benefits specific to Disadvantaged communities residing or engaged in activities near the project area, identify benefits addressing a transportation issue affecting Disadvantaged communities 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.

- ? Decreased pedestrian access through sidewalk removal / narrowing, placement of barriers along the walking path, increase in auto-oriented curb cuts, etc.*
- ? Increased speed and/or cut-through traffic.*
- ? Removed or diminished safe bicycle access.*
- ? Inclusion of some other barrier to access to jobs and other destinations.*

Response:

The CSAH 146 (Brown Rd) Bridge Replacement Project will benefit BIPOC populations, low-income households, people with disabilities, youth, and other underrepresented communities through the preservation and expansion of modal options. Replacement of the CSAH 146 (Brown Rd) bridge will ensure the preservation of a grade separated crossing for the Luce Line State Trail, a key resource for active transportation that connects several communities in western Hennepin County starting as a regional trail in north Minneapolis at Theodore Wirth Pkwy before transitioning to a state trail in Plymouth.

It is anticipated that the replacement bridge will provide a wider shoulder to accommodate users walking, rolling, and biking along the corridor. Existing conditions force people walking and biking into a narrow 4 foot shoulder which leads to a dangerous and uncomfortable experience given the posted speed limit of 40 MPH. An expanded shoulder will advance the County's Complete and Green Streets Policy recently adopted in Fall 2023 by providing expanded modal options that match the surrounding rural residential context. This will provide benefits to all residents, particularly low-income residents or youth living in the project area who would walk or roll along the corridor to access the Luce Line State Trail for recreational or transportation uses. Replacement of the bridge will also preserve mobility for people driving throughout the corridor, as the bridge is currently load posted. Attachment 10 provides an overview of key community resources proximate to the proposed project. Most notably, CSAH 146 (Brown Rd) provides access for people south of the Luce Line Trail to Long Lake Library, childcare, and other educational resources in the City of Long Lake.

While future investments are needed to create robust multi-modal connections along the CSAH 146 (Brown Rd) corridor, the proposed project will ensure that future projects can connect to and leverage substantial County investments along CSAH 112 (Wayzata Blvd) to the north, which provides a key east/west all ages and abilities multiuse trail to the Orono Public Schools, grocery stores, retail, and other resources north of the project area. Without this investment, the CSAH 146 (Brown Rd) bridge would serve as a barrier for future multimodal projects.

During construction, increased noise and impacts to the travelling public are anticipated. Bridge closures and detours will be carefully coordinated with residents and stakeholders, and all efforts will be made to clearly communicate any construction impact via a project website, phone hotline, and appropriate signage.

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

Measure C: Affordable Housing Access

Describe any affordable housing developments (existing, under construction, or planned) within ½ mile of the proposed project. The applicant should note the number of existing subsidized units, which will be provided on the Socio-Economic Conditions map. Applicants can also describe other types of affordable housing (e.g., naturally-occurring affordable housing, manufactured housing) and under construction or planned affordable housing that is within a half mile of the project. If applicable, the applicant can provide self-generated PDF maps to support these additions. Applicants are encouraged to provide a self-generated PDF map describing how a project connects affordable housing residents to destinations (e.g., childcare, grocery stores, schools, places of worship).

Describe the project's benefits to current and future affordable housing residents within ½ mile of the project. Benefits must relate to affordable housing residents. Examples may include:

- ? specific direct access improvements for residents*
- ? improved access to destinations such as jobs, school, health care or other;*
- ? new transportation services or modal options;*
- ? and/or community connection and cohesion improvements.*

This is not an exhaustive list. Since residents of affordable housing are more likely not to own a private vehicle, higher points will be provided to roadway projects that include other multimodal access improvements. A full response will support the benefits claimed, identify benefits specific to residents of affordable housing, identify benefits addressing a transportation issue affecting residents of affordable housing specifically identified through engagement, and substantiate benefits with data.

Response:

As identified in the Met Council generated Socio-Economic Conditions map, 44 subsidized units exist in census tracts within 0.5 miles of the project. In addition, there is one affordable housing development of note just outside the 0.5 mile buffer (0.58 miles), the Hillside Terrace Apartments. Attachment 11 provides an overview of the location of this development, as well as unit sizes and affordability limits. Hillside Terrace provides 44 subsidized units of senior housing, which represents a population of users who may walk or roll along CSAH 146 (Brown Rd). The City of Long Lake is also home to several senior living facilities such as Stone Bay, Orono Woods, and Long Lake Assisted Living which also houses residents that are more likely to walk or roll. For these residents, CSAH 146 (Brown Rd) would be the primary route to access the Luce Line State Trail for recreation and active transportation.

As mentioned previously, the Luce Line State Trail is a regional facility (identified as a tier 2 alignment in the Regional Bicycle Transportation Network) that connects to several communities as well as the Three Rivers Park District's trail that begins in North Minneapolis at Theodore Wirth Regional Park, approximately one hour by bicycle to the east. Replacement of the CSAH 146 (Brown Rd) bridge will ensure that users can continue to enjoy a grade separated crossing for this important resource for active transportation and recreation for all, including residents of affordable housing along the trail to the east and west. Expansion of shoulder space on the new bridge will also remove a barrier for those walking, biking, and rolling along CSAH 146 (Brown Rd) and set the stage for future complete streets opportunities along the corridor.

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

Measure D: BONUS POINTS

Project is located in an Area of Concentrated Poverty:

Project's census tracts are above the regional average for population in poverty or population of color (Regional Environmental Justice Area): Yes

Project located in a census tract that is below the regional average for population in poverty or populations of color (Regional Environmental Justice Area):

Upload the "Socio-Economic Conditions" map used for this measure. 1701984168897_RS 2_CSAH 146 Brown Rd Socio Economic.pdf

Measure A: Bridge Condition

- Deck Rating: 5.0
- Superstructure Rating: 6.0
- Substructure Rating: 6.0
- Channel Rating: 0
- Culvert Rating: 0

Lowest National Bridge Inventory Condition Rating: 5.0

Upload Structure Inventory Report 1701984307027_CSAH 146 Brown Rd Bridge Inspection Report.pdf

Please upload attachment in PDF form

Measure A: Infrastructure Age

Load Posted (Check box if the bridge is load-posted): Yes

Measure A: Multimodal Elements and Existing Connections

Response:

The CSAH 146 (Brown Rd) Bridge Replacement Project will benefit multimodal users. The completion of this project will ensure that a grade separated crossing of the Luce Line State Trail (RBTN Tier 2 Alignment) is retained to eliminate conflicts for people walking and biking along the trail underneath the bridge. The Luce Line State Trail extends from the City of Plymouth to Carver County (the regional trail section connects Minneapolis to Plymouth). The Luce Line State Trail is exclusive for people walking and biking. A map illustrating this project in relation to key multi-modal facilities, such as the Luce Line State Trail, is included in Attachment 12.

Additionally, the bridge structure along CSAH 146 (Brown Rd) will include adequate shoulder width to accommodate on-road walking and biking. Should multimodal facilities be constructed along CSAH 146 (Brown Rd) on either end of Bridge #90623 in the future, the proposed design of this project will not present a constraint for multimodal users.

At this time, there is no fixed transit service that currently operates along or across CSAH 146 (Brown Rd).

(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:

This project was selected for pursuit of Regional Solicitation funding based on the overall asset condition. No public outreach specific to the project has taken place at this time, but it is expected to occur during the design phase of the project. Future outreach is likely to be coordinated with the City of Orono, City of Long Lake, MnDOT, and the Minnesota Department of Natural Resources.

(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 project?s 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

1702334434989_Attachment 06 - Potential Concept.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):	\$3,340,000.00
Enter Amount of the Noise Walls:	\$0.00
Total Project Cost subtract the amount of the noise walls:	\$3,340,000.00
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
Attachment 00 - List of Attachments.pdf	Attachment 00 - List of Attachments	77 KB
Attachment 01 - Project Narrative.pdf	Attachment 01 - Project Narrative	113 KB
Attachment 02 - Project Location Map.pdf	Attachment 02 - Project Location Map	1.1 MB
Attachment 03 - MN Structure Inventory Report.pdf	Attachment 03 - MN Structure Inventory Report	138 KB
Attachment 04 - Existing Condition Photos.pdf	Attachment 04 - Existing Condition Photos	260 KB
Attachment 05 - Potential Typical Section.pdf	Attachment 05 - Potential Typical Section	223 KB
Attachment 06 - Potential Concept.pdf	Attachment 06 - Potential Concept	1.3 MB
Attachment 07 - Hennepin County 2024-2028 Transportation CIP.pdf	Attachment 07 - Hennepin County 2024-2028 Transportation CIP	242 KB
Attachment 08 - Alternate Routes Map.pdf	Attachment 08 - Alternate Routes Map	1.8 MB
Attachment 09 - 2040 Forecast Traffic Volumes.pdf	Attachment 09 - 2040 Forecast Traffic Volumes	572 KB
Attachment 10 - Disadvantaged Communities and Resources Map.pdf	Attachment 10 - Disadvantaged Communities and Resources Map	542 KB
Attachment 11 - Affordable Housing Access Map and Detail Summary.pdf	Attachment 11 - Affordable Housing Access Map and Detail Summary	529 KB
Attachment 12 - Multimodal Connections Map.pdf	Attachment 12 - Multimodal Connections Map	1.2 MB
Attachment 13 - City of Orono Support Letter.pdf	Attachment 13 - City of Orono Support Letter	175 KB
Attachment 14 - MnDNR Support Letter.pdf	Attachment 14 - MnDNR Support Letter	99 KB

Regional Economy

Bridges Project: CSAH 146 (Brown Rd) Bridge Replacement Project | Map ID: 1701982704305

Results

WITHIN ONE MI of project:
Postsecondary Students: 0

Totals by City:

Orono

Population: 4494
Employment: 1891
Mfg and Dist Employment: 445



Project Points



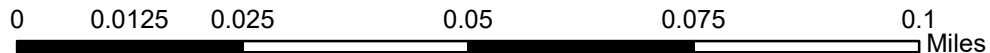
Manufacturing/Distribution Centers



Project



Job Concentration Centers



Created: 12/7/2023
LandscapeRSA5



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



Transit Connections

Bridges Project: CSAH 146 (Brown Rd) Bridge Replacement Project | Map ID: 1701982704305

Results

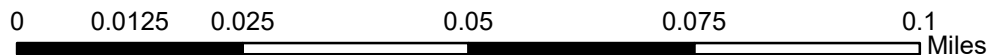
Transit with a Direct Connection to project:
-- NONE --

**indicates Planned Alignments*

Transit Market areas: 5



- | | | | | | | | | | | | |
|--|----------------------------|--|-----------------------------|--|-----------------------------|--|-----------------------------|--|-----------------------------|--|---------------------------|
| | Project Points | | Commuter Rail | | Commuter Rail | | Dedicated Bus Rapid Transit | | Arterial Bus Rapid Transit | | Modern Streetcar |
| | Project | | Dedicated Bus Rapid Transit | | Dedicated Bus Rapid Transit | | Highway Bus Rapid Transit | | Commuter Rail | | Undetermined |
| | Project Area | | Highway Bus Rapid Transit | | Highway Bus Rapid Transit | | Light Rail | | Dedicated Bus Rapid Transit | | Highway Bus Rapid Transit |
| | Active Stop | | Light Rail | | Light Rail | | Modern Streetcar | | Highway Bus Rapid Transit | | Light Rail |
| | Arterial Bus Rapid Transit | | Arterial Bus Rapid Transit | | Arterial Bus Rapid Transit | | Undetermined | | | | |



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LandscapeRSA3



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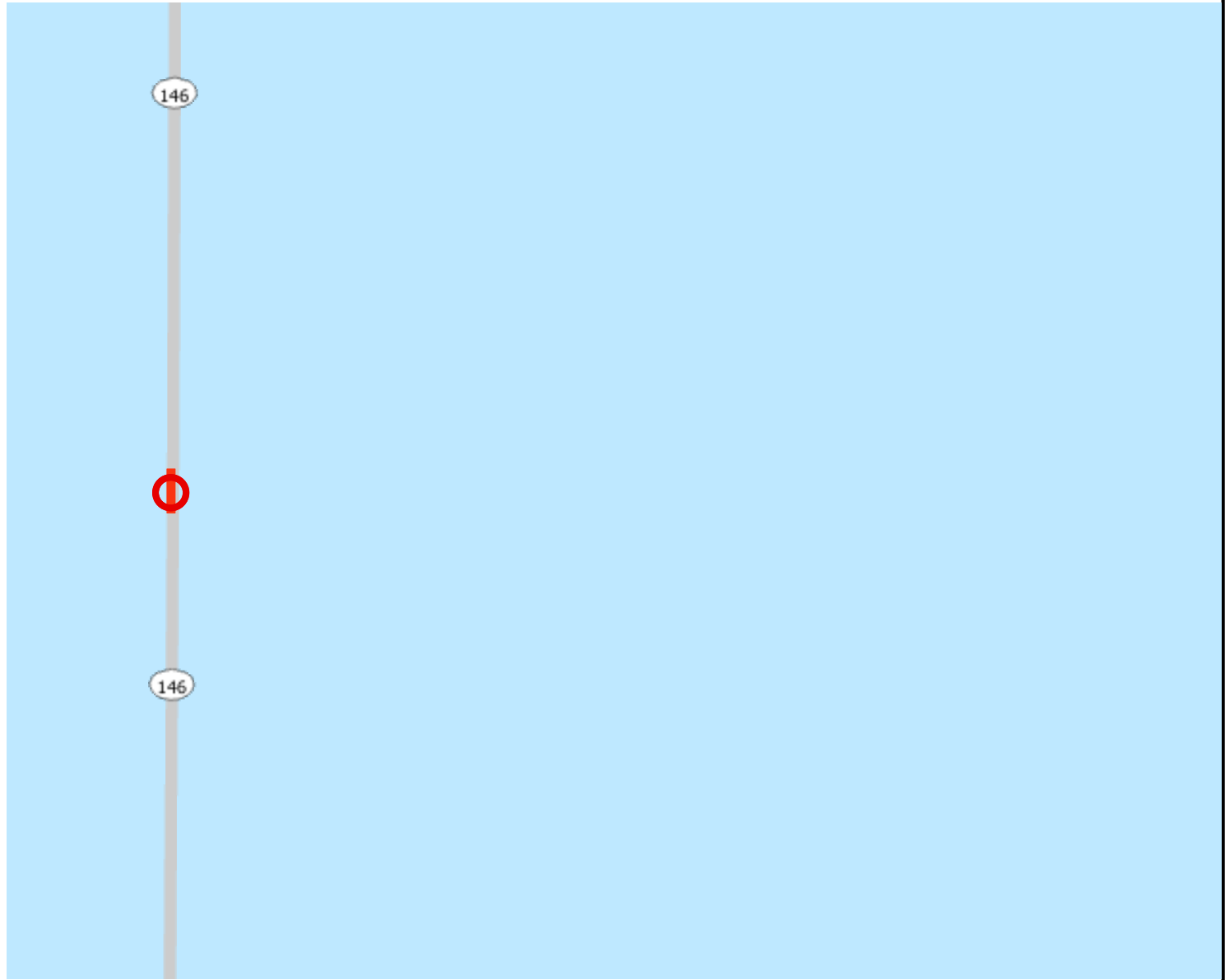
Socio-Economic Conditions





Bridges Project: CSAH 146 (Brown Rd) Bridge Replacement Project | Map ID: 1701982704305

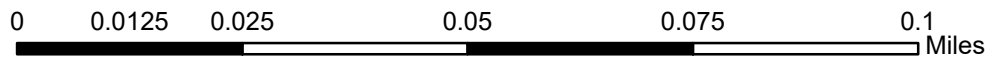
Results

Total of publicly subsidized rental housing units in census tracts within 1/2 mile: 44

Project located in census tract(s) that are ABOVE the regional average for population in poverty or population of color.



-  Points
-  Lines
-  Area of Concentrated Poverty
-  Regional Environmental Justice Area



Created: 12/7/2023
LandscapeRSA2



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MINNESOTA STRUCTURE INVENTORY REPORT

Bridge ID: 90623

S BROWN RD over LUCE LINE TRAIL

Date: 12/07/2023

+ GENERAL +			+ ROADWAY ON BRIDGE +		+ INSPECTION +	
Agency Br. No.	430	Crew	Facility	CSAH 146	Local Plan. Index	58
District	METRO	Maint. Area	LRS Mile Point	1.566	Overall Condition	FAIR
County	27 - HENNEPIN		Functional Class	MAJOR COLLECTOR	Last Routine Insp Date	07-31-2023
City	ORONO		Urban Code	57628 - TWIN CITIES	Routine Insp Frequency	24
Township			ADT (YEAR)	3,587 (2021)	Inspector Name	HENNEPIN COUNTY
Desc. Loc.	0.9 MI S OF JCT TH 12		HCADT		Status	P-LOAD POSTED
Sect., Twp., Range	03 - 117N - 23W		Speed Limit			
Latitude	44d 58m 30.52s		National Highway System	N	+ NBI CONDITION RATINGS +	
Longitude	93d 34m 25.43s		Detour Length	9 mi.	Deck	5
Custodian	COUNTY		Lanes	2 Lanes ON Bridge	Superstructure	6
Owner	COUNTY		Control Section (TH Only)		Substructure	6
Insp Responsibility	HENNEPIN COUNTY		Function	MAINLINE	Channel	N
Year Built	1955		Type	2 WAY TRAF	Culvert	N
Date Opened to Traffic	08-01-1967		Bridge Match ID	1	+ NBI APPRAISAL RATINGS +	
MN Year Remodeled	1967		Roadway Key	1-ON	Structure Evaluation	6
FHWA Year Reconstructed					Deck Geometry	4
Bridge Plan Location	COUNTY		+ RDWY DIMENSIONS ON BRIDGE +		Underclearances	N
Potential ABC	N.A.		If Divided	NB-EB SB-WB	Waterway Adequacy	N
+ STRUCTURE +			Roadway Width	30.0 ft	Approach Alignment	8
Service On	HWY;PED		Vertical Clearance		+ SAFETY FEATURES +	
Service Under	PED;BICYCLE		Max. Vert. Clear.		Bridge Railing	0-SUBSTANDARD
Main Span Type	TIMB BEAM SPAN		Horizontal Clear.	29.9 ft	GR Transition	0-SUBSTANDARD
Main Span Detail			Appr. Surface Width	40.0 ft	Appr. Guardrail	0-SUBSTANDARD
Appr. Span Type			Bridge Roadway Width	30.0 ft	GR Termini	0-SUBSTANDARD
Appr. Span Detail			Median Width on Bridge	NA	+ SPECIAL INSPECTIONS +	
Skew	15L		+ MISC. BRIDGE DATA +		NSTM	N
Culvert Type			Structure Flared	NO	Underwater	N
Barrel Length			Parallel Structure	NONE	Pinned Asbly.	N
No of Spans	Main: 5 Appr: 0 Total: 5		Field Conn. ID		+ WATERWAY +	
Main Span Length	22.0 ft		Cantilever ID		Drainage Area	
Structure Length	96.8 ft		+ FOUNDATIONS +		Waterway Opening	
Deck Width	38.8 ft		Abut.	CONC - FTG PILE	Navigation Control	NOT APPL
Deck Material	C-I-P CONCRETE		Pier	TIMBER - PILE BENT	Pier Protection	
Deck Install Year			Historic Status	NOT ELIGIBLE	Nav. Vert./Horz. Clr.	
Deck Rebar Layers	UNKN		On - Off System	ON	Nav. Vert. Lift Bridge Clear.	
Deck Rebar (NBI)	0-NONE		+ PAINT +		MN Scour Code	A-NON WATERWAY
Wear Surf Type	MONOLITHIC CONC		Year Painted		Scour Evaluation Year	1991
Wear Surf Install Year			Painted Area		+ CAPACITY RATINGS +	
Wear Course/Fill Depth			Primer Type		Design Load	H 20
Structure Area	3,756 sq ft		Finish Type		Operating Rating	HS 20.30
Roadway Area	2,906 sq ft		+ BRIDGE SIGNS +		Inventory Rating	HS 14.00
Sidewalk Width - L/R	3.0 ft	3.0 ft	Posted Load	VEHICLE ONLY	Posting	VEH: 32 SEMI: DBL:
Curb Height - L/R	0.50 ft	0.50 ft	Traffic	NOT REQUIRED	Rating Date	01-23-2013
Rail Codes - L/R	35	35	Horizontal	OBJECT MARKERS	Overweight Permit Codes	
			Vertical	NOT APPLICABLE	A: N	B: N C: N

12/07/2023

Crew:

MINNESOTA BRIDGE INSPECTION REPORT

Insp Responsibility: HENNEPIN COUNTY

BRIDGE 90623 S BROWN RD OVER LUCE LINE TRAIL**INSP. DATE: 07-31-2023**

County: HENNEPIN

Location: 0.9 MI S OF JCT TH 12

Length: 96.8 ft

City: ORONO

Facility: CSAH 146 Mile Pt: 1.566

Deck Width: 38.8 ft

Township:

Control Section: Maint. Area:

Rdwy. Area 2,906 sq ft

Section: 03 Township: 117N Range: 23W

Local Agency Bridge Nbr: 430

Paint Area

Main Span Type: TIMB BEAM SPAN

Open, Posted, Closed: LOAD POSTED

Culvert : N/A

NBI Deck: 5 Super: 6 Sub: 6 Chan: N Culv: N

Postings: 32 - -

Appraisal Ratings - Approach: 8 Waterway: N

MN Scour Code: A-NON WATERWAY

Local Plan. Index

58

Required Bridge Signs - Load Posting: VEHICLE ONLY

Traffic: NOT REQUIRED

Overall Condition: Fair

Horizontal: OBJECT MARKERS

Vertical: NOT APPLICABLE

ELEM NBR	ELEMENT NAME	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
800	CRITICAL DEFS OR SAFETY HAZARDS	07-31-2023	1 EA	1	0	0	0
		07-27-2021	1 EA	1	0	0	0
Notes: 800. '23- No critical structural deficiencies or serious safety hazards present at time of inspection.							
12	REINFORCED CONCRETE DECK	07-31-2023	3,756 SF	3,708	37	11	0
		07-27-2021	3,756 SF	3,708	37	11	0
Notes: 12. See General Notes. 1" nominal wood forms for conc deck still in place and hiding deck underside. Some forms split in various areas. Spall in deck coping on W side over center span. Conc is thru forms in span 4, 4th bay from E. Coping spalled on E side @ P4, also @ P1 w/ rebar exp. Forms are charred over P2 @ 1st bay from E. '14-Decayed knots in W bay of span 2 @ P2. Coping spall on E side @ P4 has rebar exp. Timber forms cracked in span 3 @ CL w/ conc exp. '21- 2 delams on E coping 1 center in span 3 and 1 in center span 4. 1 Spall with rebar exposed on W coping @ P2. 3' horizontal crack in W coping @ P3. Timber form in span 3 @ CL @ P3 was cut out with poly below concrete patch. Minor splinters in wood form at N abut, 1st bay W of C/L. '23- No changes at time of inspection.							
510	WEARING SURFACE	07-31-2023	2,906 SF	1,249	1,636	9	12
		07-27-2021	2,906 SF	1,249	1,641	9	7
Notes: 510. Top of Concrete Deck with Uncoated Rebar Notes: '16-Unsound patches & areas have been sawed out & patched w/ conc. Diag cracking @ NE & NW corners in patched areas. '21-1584 SF of sound concrete patches. Most temp epoxy patches have partially or totally failed. Several spalls (<1 SF & <1-1/2" deep). Cracks mostly sealed - minor cracks in patches are not. 6 LF of large unsealed cracks. '23-Several areas of failed patches. Approx. 5sq ft.							
301	POURED SEAL JOINT	07-31-2023	121 LF	0	108	7	6
		07-27-2021	121 LF	0	108	7	6
Notes: 301. '16-All 4 joints have been cut & redone since last insp. '21-Minor spalls affecting joint function along all. Cracks in joint material along all. Small areas of adhesion failure. '23-No change.							
330	METAL BRIDGE RAILING	07-31-2023	167 LF	158	5	4	0
		07-27-2021	167 LF	158	5	4	0
Notes: 330. '21-4' of lower rail of W is bent significantly. Minor surface rust at several rail/post connections. '23-No change.							
515	STEEL PROTECTIVE COATING	07-31-2023	404 SF	0	362	32	10
		07-27-2021	404 SF	0	362	32	10
Notes: 515. '21-several small areas of coating failure at post connections. Heavy chalking on several bottom rails of both. '23-No change.							
331	REINFORCED CONC BRIDGE RAILING	07-31-2023	28 LF	2	19	7	0
		07-27-2021	28 LF	2	19	7	0
Notes: 331. '16-2 posts w/ rusted rebar showing thru. '21-most posts have minor spalling along edges - larger spalls at bases of several. Vert cracks in many. '23-No change.							
822	BITUMINOUS APPROACH ROADWAY	07-31-2023	2 EA	0	1	1	0
		07-27-2021	2 EA	0	1	1	0
Notes: 822. SOUTH: '21-1' full width bit patch is deteriorated. Potholes along deck. Large cracks in roadway adjacent to patch. '23-No change.							

NORTH: '21-1' full width bit patch is deteriorated. Numerous large alligator cracks in bit adjacent to patch. Settlement at deck up to 3/4".

'23-No change.

215	REINFORCED CONCRETE ABUTMENT	07-31-2023	113 LF	87	16	10	0
		07-27-2021	113 LF	88	15	10	0

Notes: 215. Vert cracks in both, some w/ rust stains.

NORTH: '14-Paint flaking. 7 cracks..

'16-Paint flaking & peeling. Several cracks are rust stained.

'17-2 spalls in parapet total 1 SF. Cracks mod in size @ bottom of deck. 3 cracks are rust stained.

'19-Min-mod efflor across, large spall near center.

'23- Many of cracks in parapet have increased effloresces.

SOUTH: '14-paint flaking. 5 cracks.

'15-cracks are minor to mod in size.

'16- Paint flaking & peeling. 3 cracks w/ rust stains.

'23- Spall under 4th beam from East.

Wingwall notes: '23-All in good condition.

117	TIMBER STRINGER	07-31-2023	2,113 LF	1,974	124	15	0
		07-27-2021	2,113 LF	1,974	124	15	0

Notes: 117. See General Notes. Discoloring of timber @ joints. Many stringers in span 5 @ P4 are cracked @ cap notch.

'14-Min-mod checks & splits in all spans.

'16-Surface rust on few tie bolts in main span.

'21- 8' Horizontal check In 2nd From W Near P2.

'23-No changes at time of inspection.

228	TIMBER PILING	07-31-2023	28 EA	0	25	3	0
		07-27-2021	28 EA	0	25	3	0

Notes: 228. Read General Notes. Several columns are split, some up to 1".

Bent 1: 2nd column from E is split +/- 1". Several columns are projecting 1" to S of cap.

'15-the center column is 1" - 1 1/2" S of cap.

'23-no changes at time of inspection.

Bent 2: Piles appear twisted.

'14-E & W columns have 3/4" split.

'16-columns are narrower @ bottom than top & some have signs of fire damage.

'23- no changes at time of inspection.

Bent 3: Piles appear twisted.

'23- No changes at time of inspection.

Bent4: 2nd column from E moved 2.5". Also, several have moved +/- 1" to N and small portion of columns are projecting off cap.

'11-2nd column from E is now 3" off cap-continue to monitor.

'15-2nd column from E measures 3 1/4" off cap, measured on the north side.

'16-2nd column from W is not fully supporting cap-daylight can be seen.

'19-2nd from E is 3-1/4" off cap.

'23-no changes at time of inspection.

235	TIMBER PIER CAP	07-31-2023	157 LF	66	88	3	0
		07-27-2021	157 LF	66	88	3	0

Notes: 235. Read General Notes. '10-Currently raining & all caps wet in places.

P1-Ok.

P2-full length horiz crack.

'14-22' horiz crack.

'23- no changes at time of inspection.

P3-horiz crack in cap about halfway up, from center to E end.

'14-40' horizontal crack. Full length horiz crack.

'15-Cap is resting on E Pile on East edge.

'23- No changes at time of inspection.

P4-splinter in cap. horiz cracks @ W end and +/- 25' long, also 6' long @ E end.
 '14-35' horiz crack.
 '15-Cap doesn't appear to be resting on pile @ 2nd column from W. x
 '16-some very minor crushing of cap over piles adj to a pile not supporting cap.
 '23- No changes at time of inspection.

855	SECONDARY MEMBERS (SUPER)	07-31-2023	1 EA	0	1	0	0
		07-27-2021	1 EA	0	1	0	0
Notes:	855. A few diaphragms have minor splits. 24 diag and 8 timber braces. X-bracing is split @ center span. '13-some x-brace bolt heads rusting & some sheet rusting. '23-no changes at time of inspection.						
890	LOAD PST OR VERTICAL CLR SIGNING	07-31-2023	1 EA	1	0	0	0
		07-27-2021	1 EA	1	0	0	0
Notes:	890. '14-Load posting signs installed 8/14. '15-Signs in place and in good condition. '23-No change.						
891	OTHER BRIDGE SIGNING	07-31-2023	1 EA	1	0	0	0
		07-27-2021	1 EA	1	0	0	0
Notes:	891. Horiz clearance marker X4-4 and plow up/down X4-5 @ all corners. '19-Brown Rd sign for trail on E side @ Bent 2 & W side @ Bent 3. '21-X4-5 in SE is slightly faded. '23-No change.						
892	SLOPES & SLOPE PROTECTION	07-31-2023	1 EA	1	0	0	0
		07-27-2021	1 EA	1	0	0	0
Notes:	892. Minor cracks in grout on abut slopes. '23-no change.						
893	GUARDRAIL	07-31-2023	1 EA	0	0	1	0
		07-27-2021	1 EA	0	0	1	0
Notes:	893. '17-Beam rusted through @ NE rail post-does not affect anchorage to post. '21-NE & SE rails have minor impact damage. NW & SW in good condition. '23-No change.						
894	DECK & APPROACH DRAINAGE	07-31-2023	1 EA	0	0	0	1
		07-27-2021	1 EA	0	0	0	1
Notes:	894. 14" CMP @ SE and SW. '16-Concrete flume added behind wing in NE. '17-SE CMP has 8" separation +/- 25' down slope. '21-SE pipe is plugged where it is separated just west of the trail. '23-Flume failing in SE.						
895	SIDEWALK, CURB, & MEDIAN	07-31-2023	1 EA	0	0	1	0
		07-27-2021	1 EA	0	0	1	0
Notes:	895. Trans cracks in walk-sealed. Conc spalled @ SE and NW. Spall w/ rebar exp on E side @ pier 4 coping. Spall w/ rebar exp E side above pier 2. Walk spalled on W side in span 2, < 1 SF. '16-most cracks in walk have been sealed. Spall @ exp joint over P1. '17-Sealant deteriorated @ some walk cracks. '21-sealant is still mostly intact. All bit approach walks have some settlement, up to 2". Minor spall in W walk @ P3. Spall in NW is large. '23-Spall at North end of West sidewalk.						
899	MISCELLANEOUS ITEMS	07-31-2023	1 EA	1	0	0	0
		07-27-2021	1 EA	1	0	0	0
Notes:	899. 48" RCP culvert for stream running diag under bents 1, 2 & 3. 6" and 4" pipes on top of bents @ E side. Buried tel cable @ E. O/H power on W side and E to W over S span. '21-conduit on E side is cut at abutments-turns E and goes underground. '23- No change.						
900	PROTECTED SPECIES	07-31-2023	1 EA	0	1	0	0
		07-27-2021	1 EA	0	1	0	0
Notes:	900. '23- No change.						

General Bridge 90623 (430) CSAH 146 (S Brown Rd) over Luce Line Trail 7/31/23. ADT and MAM. No paper report generated data
 Notes: entered directly in to SIM's
 Bridge had new load rating in 2014 and as a result, snoopers can no longer be driven on bridge. Use bucket truck for inspection. Access trail from Willow Dr and exit trail on Orono Orchard rd.

READ: Plans show bents numbered 1-4 from north to south. They are called bents or piers in this report, but all references to

piers, bents, spans, etc are labeled to match plans.

Recommended Repairs:

301. Reseal poured deck joints.

331. Possibly modify or replace bridge railing. Does not meet AASHTO standards.

510. Epoxy seal new cracks in repaired areas of deck.

894. Clear veg from CMP inlets in NE, SE & SW. Reconnect CMP in SE slope.

895. Sealant deteriorated at some walk cracks. Reseal.

Deck: [5] '19-Many patches in top of deck. Some spalled patches have been refilled with bit.
'23-(5) Permanent patches are failing.

Superstructure: [6] '23-(6) Moderate splitting with minor decay.

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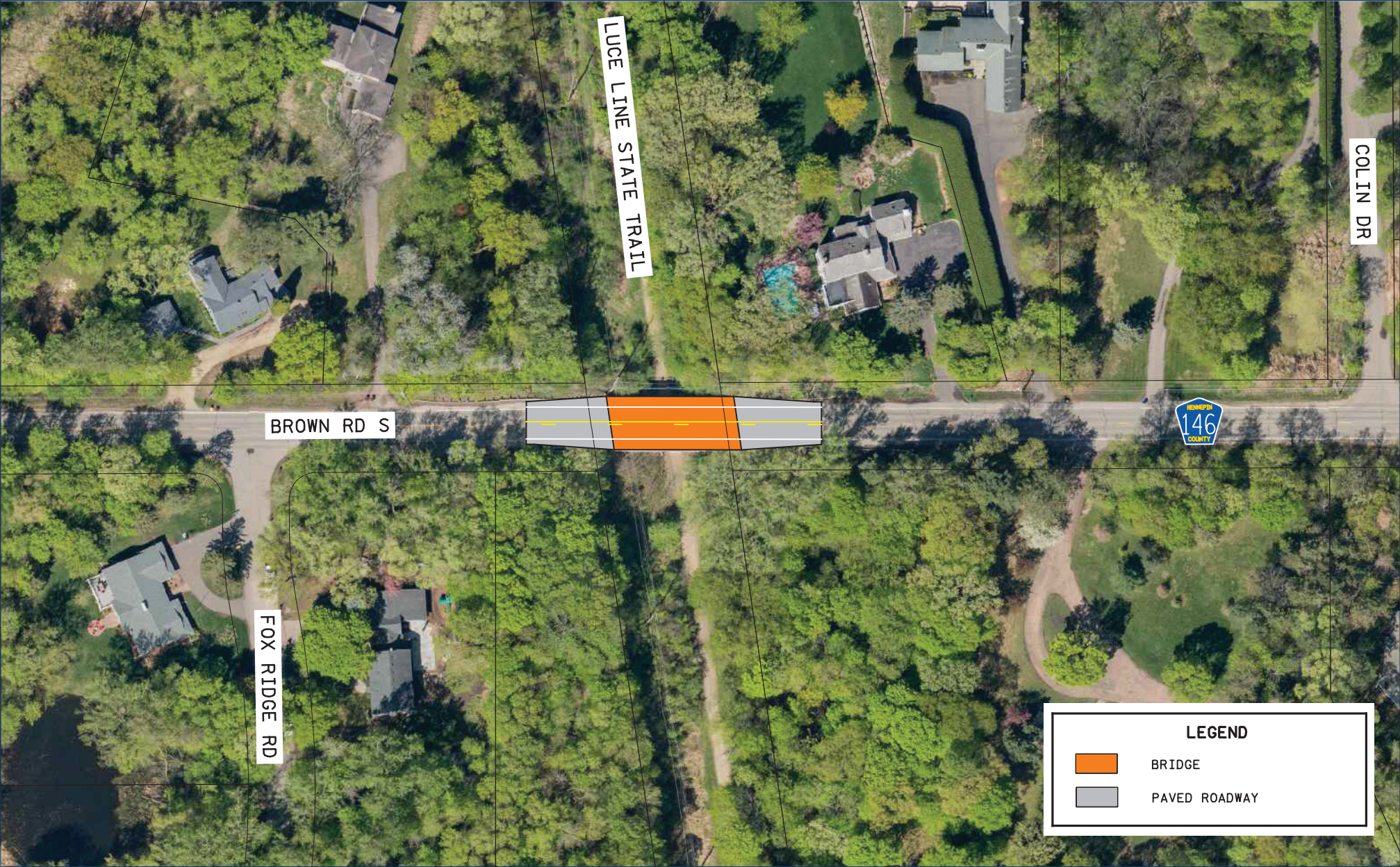
Appr Roadway [8] '23- (8) No speed reduction needed.

Alignment:

CSAH 146 (Brown Rd) Bridge Replacement Project

Attachment 06 | Potential Concept

HENNEPIN COUNTY
MINNESOTA



CSAH 146 (Brown Rd) Bridge Replacement Project

Attachment 00 | List of Attachments

1. Project Narrative
2. Project Location Map
3. Minnesota Structure Inventory Report
4. Existing Condition Photos
5. Potential Typical Section
6. Potential Concept
7. Hennepin County 2024-2028 Transportation CIP
8. Alternate Routes Map
9. Forecast 2040 Traffic Volumes Map
10. Disadvantaged Communities and Resources Map
11. Affordable Housing Access Map and Detail Summary
12. Multimodal Connections Map
13. City of Orono Support Letter
14. MnDNR Support Letter

CSAH 146 (Brown Rd) Bridge Replacement Project

Attachment 01 | Project Narrative

HENNEPIN COUNTY
MINNESOTA

Project Name

CSAH 146 (Brown Rd) Bridge Replacement Project

City(ies)

Orono

Commissioner District(s)

6

Capital Project Number

2181800

Project Category

Bridge Replacement

Scoping Manager

Emily Buell

Scoping Form Revision Dates

11/15/2023

Project Summary

Replace Bridge #90623 along Brown Road (CSAH 146) over the Luce Line State Trail in the City of Orono.

Roadway History

The existing bridge (built in 1955) consists of a timber structure with a concrete deck that extends over the Long Lake Creek and Luce Line State Trail. The timber material throughout the structure has experienced advanced deterioration. In addition, the concrete deck is showing signs of extensive wear due to the frequency and size of visible cracking. A full replacement is being recommended as maintenance activities are no longer cost effective in preserving this bridge asset. Weight restrictions were introduced on this bridge in 2014, based on the results of a routine inspection, that prohibit certain types of commercial vehicles.

Project Description and Benefits

The proposed project will introduce a new bridge structure that is designed for a 75-year service life. The completion of this project will ensure that a grade separated crossing of the Luce Line State Trail is retained to eliminate conflicts for people walking and biking along the trail underneath the bridge. Additionally, the existing railing and guardrail will be upgraded to satisfy current design standards to ensure user safety. Furthermore, this project will eliminate weight restrictions along a collector route through the Lake Minnetonka Area.

Project Risks & Uncertainties

It's desirable to minimize construction impacts to people walking and biking along the Luce Line State Trail, as well as people driving through the Lake Minnetonka area.

Project Map



Initial Project Timeline

Scoping: 2019 - 2025

Design: Q1 2026 - Q4 2028

R/W Acquisition: Q1 2027 - Q4 2028

Bid Advertisement: Q1 2029

Construction: Q2 2029 - Q3 2029

Project Delivery Responsibilities

Preliminary Design: Hennepin County

Final Design: Hennepin County

Construction Services: Hennepin County

Project Budget -	Project Level
Construction: \$	2,570,000
Cost Estimate Year:	2023
Construction Year:	2029
Annual Inflation Rate:	2.0%
Inflated Construction: \$	2,890,000
Design Services: \$	250,000
R/W Acquisition: \$	230,000
Other (Utility Burial): \$	-
Construction Services: \$	-
Contingency: \$	870,000
Total Project Budget: \$	4,240,000

Funding Notes

This project is eligible for federal funding through the Metropolitan Council's Regional Solicitation given the roadway's functional classification of Major Collector and a Local Planning Index value of 58.

CSAH 146 (Brown Rd) Bridge Replacement Project

Attachment 02 | Project Location Map



Disclaimer: This map (i) is furnished "AS IS" with no representation as to completeness or accuracy; (ii) is furnished with no warranty of any kind; and (iii) is not suitable for legal, engineering or surveying purposes. Hennepin County shall not be liable for any damage, injury or loss resulting from this map.



CSAH 146 (Brown Rd) Bridge Replacement Project

Attachment 03 | MN Structure Inventory Report

MINNESOTA STRUCTURE INVENTORY REPORT

Bridge ID: 90623

S BROWN RD over LUCE LINE TRAIL

Date: 12/07/2023

+ GENERAL +			+ ROADWAY ON BRIDGE +		+ INSPECTION +	
Agency Br. No.	430	Crew	Facility	CSAH 146	Local Plan. Index	58
District	METRO	Maint. Area	LRS Mile Point	1.566	Overall Condition	FAIR
County	27 - HENNEPIN		Functional Class	MAJOR COLLECTOR	Last Routine Insp Date	07-31-2023
City	ORONO		Urban Code	57628 - TWIN CITIES	Routine Insp Frequency	24
Township			ADT (YEAR)	3,587 (2021)	Inspector Name	HENNEPIN COUNTY
Desc. Loc.	0.9 MI S OF JCT TH 12		HCADT		Status	P-LOAD POSTED
Sect., Twp., Range	03 - 117N - 23W		Speed Limit			
Latitude	44d 58m 30.52s		National Highway System	N	+ NBI CONDITION RATINGS +	
Longitude	93d 34m 25.43s		Detour Length	9 mi.	Deck	5
Custodian	COUNTY		Lanes	2 Lanes ON Bridge	Superstructure	6
Owner	COUNTY		Control Section (TH Only)		Substructure	6
Insp Responsibility	HENNEPIN COUNTY		Function	MAINLINE	Channel	N
Year Built	1955		Type	2 WAY TRAF	Culvert	N
Date Opened to Traffic	08-01-1967		Bridge Match ID	1	+ NBI APPRAISAL RATINGS +	
MN Year Remodeled	1967		Roadway Key	1-ON	Structure Evaluation	6
FHWA Year Reconstructed					Deck Geometry	4
Bridge Plan Location	COUNTY		+ RDWY DIMENSIONS ON BRIDGE +		Underclearances	N
Potential ABC	N.A.		If Divided	NB-EB SB-WB	Waterway Adequacy	N
+ STRUCTURE +			Roadway Width	30.0 ft	Approach Alignment	8
Service On	HWY;PED		Vertical Clearance		+ SAFETY FEATURES +	
Service Under	PED;BICYCLE		Max. Vert. Clear.		Bridge Railing	0-SUBSTANDARD
Main Span Type	TIMB BEAM SPAN		Horizontal Clear.	29.9 ft	GR Transition	0-SUBSTANDARD
Main Span Detail			Appr. Surface Width	40.0 ft	Appr. Guardrail	0-SUBSTANDARD
Appr. Span Type			Bridge Roadway Width	30.0 ft	GR Termini	0-SUBSTANDARD
Appr. Span Detail			Median Width on Bridge	NA	+ SPECIAL INSPECTIONS +	
Skew	15L		+ MISC. BRIDGE DATA +		NSTM	N
Culvert Type			Structure Flared	NO	Underwater	N
Barrel Length			Parallel Structure	NONE	Pinned Asbly.	N
No of Spans	Main: 5 Appr: 0 Total: 5		Field Conn. ID		+ WATERWAY +	
Main Span Length	22.0 ft		Cantilever ID		Drainage Area	
Structure Length	96.8 ft		+ FOUNDATIONS +		Waterway Opening	
Deck Width	38.8 ft		Abut.	CONC - FTG PILE	Navigation Control	NOT APPL
Deck Material	C-I-P CONCRETE		Pier	TIMBER - PILE BENT	Pier Protection	
Deck Install Year			Historic Status	NOT ELIGIBLE	Nav. Vert./Horz. Clr.	
Deck Rebar Layers	UNKN		On - Off System	ON	Nav. Vert. Lift Bridge Clear.	
Deck Rebar (NBI)	0-NONE		+ PAINT +		MN Scour Code	A-NON WATERWAY
Wear Surf Type	MONOLITHIC CONC		Year Painted		Scour Evaluation Year	1991
Wear Surf Install Year			Painted Area		+ CAPACITY RATINGS +	
Wear Course/Fill Depth			Primer Type		Design Load	H 20
Structure Area	3,756 sq ft		Finish Type		Operating Rating	HS 20.30
Roadway Area	2,906 sq ft		+ BRIDGE SIGNS +		Inventory Rating	HS 14.00
Sidewalk Width - L/R	3.0 ft	3.0 ft	Posted Load	VEHICLE ONLY	Posting	VEH: 32 SEMI: DBL:
Curb Height - L/R	0.50 ft	0.50 ft	Traffic	NOT REQUIRED	Rating Date	01-23-2013
Rail Codes - L/R	35	35	Horizontal	OBJECT MARKERS	Overweight Permit Codes	
			Vertical	NOT APPLICABLE	A: N	B: N C: N

CSAH 146 (Brown Rd) Bridge Replacement Project

Attachment 03 | MN Structure Inventory Report

Page No: 2

12/07/2023

Crew:

MINNESOTA BRIDGE INSPECTION REPORT

Insp Responsibility: HENNEPIN COUNTY

BRIDGE 90623 S BROWN RD OVER LUCE LINE TRAIL

INSP. DATE: 07-31-2023

County: HENNEPIN	Location: 0.9 MI S OF JCT TH 12	Length: 96.8 ft
City: ORONO	Facility: CSAH 146 Mile Pt: 1.566	Deck Width: 38.8 ft
Township:	Control Section: Maint. Area:	Rdwy. Area 2,906 sq ft
Section: 03 Township: 117N Range: 23W	Local Agency Bridge Nbr: 430	Paint Area
Main Span Type: TIMB BEAM SPAN	Open, Posted, Closed: LOAD POSTED	Culvert: N/A
NBI Deck: 5 Super: 6 Sub: 6 Chan: N Culv: N		Postings: 32 - -
Appraisal Ratings - Approach: 8 Waterway: N	MN Scour Code: A-NON WATERWAY	Local Plan. Index 58
Required Bridge Signs - Load Posting: VEHICLE ONLY	Traffic: NOT REQUIRED	Overall Condition: Fair
Horizontal: OBJECT MARKERS	Vertical: NOT APPLICABLE	

ELEM NBR	ELEMENT NAME	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
800	CRITICAL DEFS OR SAFETY HAZARDS	07-31-2023	1 EA	1	0	0	0
		07-27-2021	1 EA	1	0	0	0

Notes: 800. '23- No critical structural deficiencies or serious safety hazards present at time of inspection.

12	REINFORCED CONCRETE DECK	07-31-2023	3,756 SF	3,708	37	11	0
		07-27-2021	3,756 SF	3,708	37	11	0

Notes: 12. See General Notes. 1" nominal wood forms for conc deck still in place and hiding deck underside. Some forms split in various areas. Spall in deck coping on W side over center span. Conc is thru forms in span 4, 4th bay from E. Coping spalled on E side @ P4, also @ P1 w/ rebar exp. Forms are charred over P2 @ 1st bay from E.
 '14-Decayed knots in W bay of span 2 @ P2. Coping spall on E side @ P4 has rebar exp. Timber forms cracked in span 3 @ CL w/ conc exp.
 '21- 2 delams on E coping 1 center in span 3 and 1 in center span 4. 1 Spall with rebar exposed on W coping @ P2. 3' horizontal crack in W coping @ P3. Timber form in span 3 @ CL @ P3 was cut out with poly below concrete patch. Minor splinters in wood form at N abut, 1st bay W of C/L.
 '23- No changes at time of inspection.

510 WEARING SURFACE		07-31-2023	2,906 SF	1,249	1,636	9	12
		07-27-2021	2,906 SF	1,249	1,641	9	7

Notes: 510. Top of Concrete Deck with Uncoated Rebar Notes:
 '16-Unsound patches & areas have been sawed out & patched w/ conc. Diag cracking @ NE & NW corners in patched areas.
 '21-1584 SF of sound concrete patches. Most temp epoxy patches have partially or totally failed. Several spalls (<1 SF & <1-1/2" deep). Cracks mostly sealed - minor cracks in patches are not. 6 LF of large unsealed cracks.
 '23-Several areas of failed patches. Approx. 5sq ft.

301	POURED SEAL JOINT	07-31-2023	121 LF	0	108	7	6
		07-27-2021	121 LF	0	108	7	6

Notes: 301. '16-All 4 joints have been cut & redone since last insp.
 '21-Minor spalls affecting joint function along all. Cracks in joint material along all. Small areas of adhesion failure.
 '23-No change.

330	METAL BRIDGE RAILING	07-31-2023	167 LF	158	5	4	0
		07-27-2021	167 LF	158	5	4	0

Notes: 330. '21-4' of lower rail of W is bent significantly. Minor surface rust at several rail/post connections.
 '23-No change.

515 STEEL PROTECTIVE COATING		07-31-2023	404 SF	0	362	32	10
		07-27-2021	404 SF	0	362	32	10

Notes: 515. '21-several small areas of coating failure at post connections. Heavy chalking on several bottom rails of both.
 '23-No change.

331	REINFORCED CONC BRIDGE RAILING	07-31-2023	28 LF	2	19	7	0
		07-27-2021	28 LF	2	19	7	0

Notes: 331. '16-2 posts w/ rusted rebar showing thru.
 '21-most posts have minor spalling along edges - larger spalls at bases of several. Vert cracks in many.
 '23-No change.

822	BITUMINOUS APPROACH ROADWAY	07-31-2023	2 EA	0	1	1	0
		07-27-2021	2 EA	0	1	1	0

Notes: 822. SOUTH: '21-1' full width bit patch is deteriorated. Potholes along deck. Large cracks in roadway adjacent to patch.
 '23-No change.

CSAH 146 (Brown Rd) Bridge Replacement Project

NORTH: '21-1' full width bit patch is deteriorated. Numerous large alligator cracks in bit adjacent to patch. Settlement at deck up to 3/4".
'23-No change.

215	REINFORCED CONCRETE ABUTMENT	07-31-2023	113 LF	87	16	10	0
		07-27-2021	113 LF	88	15	10	0

Notes: 215. Vert cracks in both, some w/ rust stains.

NORTH: '14-Paint flaking. 7 cracks..
'16-Paint flaking & peeling. Several cracks are rust stained.
'17-2 spalls in parapet total 1 SF. Cracks mod in size @ bottom of deck. 3 cracks are rust stained.
'19-Min-mod efflor across, large spall near center.
'23- Many of cracks in parapet have increased effloresces.

SOUTH: '14-paint flaking. 5 cracks.
'15-cracks are minor to mod in size.
'16- Paint flaking & peeling. 3 cracks w/ rust stains.
'23- Spall under 4th beam from East.

Wingwall notes: '23-All in good condition.

117	TIMBER STRINGER	07-31-2023	2,113 LF	1,974	124	15	0
		07-27-2021	2,113 LF	1,974	124	15	0

Notes: 117. See General Notes. Discoloring of timber @ joints. Many stringers in span 5 @ P4 are cracked @ cap notch.
'14-Min-mod checks & splits in all spans.
'16-Surface rust on few tie bolts in main span.
'21- 8' Horizontal check In 2nd From W Near P2.
'23-No changes at time of inspection.

228	TIMBER PILING	07-31-2023	28 EA	0	25	3	0
		07-27-2021	28 EA	0	25	3	0

Notes: 228. Read General Notes. Several columns are split, some up to 1".

Bent 1: 2nd column from E is split +/- 1". Several columns are projecting 1" to S of cap.
'15-the center column is 1" - 1 1/2" S of cap.
'23-no changes at time of inspection.

Bent 2: Piles appear twisted.
'14-E & W columns have 3/4" split.
'16-columns are narrower @ bottom than top & some have signs of fire damage.
'23- no changes at time of inspection.

Bent 3: Piles appear twisted.
'23- No changes at time of inspection.

Bent4: 2nd column from E moved 2.5". Also, several have moved +/- 1" to N and small portion of columns are projecting off cap.
'11-2nd column from E is now 3" off cap-continue to monitor.
'15-2nd column from E measures 3 1/4" off cap, measured on the north side.
'16-2nd column from W is not fully supporting cap-daylight can be seen.
'19-2nd from E is 3-1/4" off cap.
'23-no changes at time of inspection.

235	TIMBER PIER CAP	07-31-2023	157 LF	66	88	3	0
		07-27-2021	157 LF	66	88	3	0

Notes: 235. Read General Notes. '10-Currently raining & all caps wet in places.
P1-Ok.

P2-full length horiz crack.
'14-22' horiz crack.
'23- no changes at time of inspection.

P3-horiz crack in cap about halfway up, from center to E end.
'14-40' horizontal crack. Full length horiz crack.
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CSAH 146 (Brown Rd) Bridge Replacement Project

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P4-splinter in cap. horiz cracks @ W end and +/- 25' long, also 6' long @ E end.
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		07-27-2021	1 EA	0	0	0	1
Notes: 894. 14" CMP @ SE and SW. '16-Concrete flume added behind wing in NE. '17-SE CMP has 8" separation +/- 25' down slope. '21-SE pipe is plugged where it is separated just west of the trail. '23-Flume failing in SE.							
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CSAH 146 (Brown Rd) Bridge Replacement Project

Attachment 03 | MN Structure Inventory Report

Page No: 5

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'23-(5) Permanent patches are failing.

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Appr Roadway [8] '23- (8) No speed reduction needed.

Alignment:

CSAH 146 (Brown Rd) Bridge Replacement Project

Attachment 04 | Existing Condition Photos



Side profile of the existing bridge, as viewed from the Luce Line State Trail.



Timber framed substructure and superstructure.



Side profile of the existing bridge, as viewed from the Luce Line State Trail from below.



Patches and sealed cracks on the bridge deck.

CSAH 146 (Brown Rd) Bridge Replacement Project

Attachment 05 | Potential Typical Section



CSAH 146 (Brown Rd) Bridge Replacement Project

Attachment 07 | Hennepin County 2024-2027 Transportation CIP

Project Name: 2181800 CSAH 146 - Replace Bridge #90623 over Luce Line Trail
Major Program: Public Works
Department: Transportation Roads & Bridges

Funding Start: 2024
Funding Completion: 2028

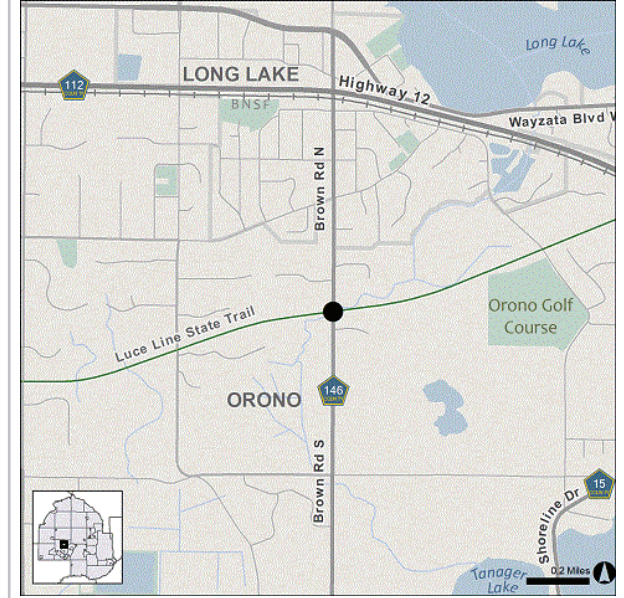
Summary:

Replace Bridge #90623 along Brown Road (CSAH 146) over the Luce Line State Trail in the City of Orono.

Purpose & Description:

The existing bridge (built in 1955) consists of a timber structure with a concrete deck that extends over the Long Lake Creek and Luce Line State Trail. The timber material throughout the structure has experienced advanced deterioration. In addition, the concrete deck is showing signs of extensive wear due to the frequency and size of visible cracking. A full replacement is being recommended as maintenance activities are no longer cost effective in preserving this bridge asset. Weight restrictions were introduced on this bridge in 2014, based on the results of a routine inspection, that prohibit certain types of commercial vehicles.

The proposed project will introduce a new bridge structure that is designed for a 75-year service life. The completion of this project will ensure that a grade separated crossing of the Luce Line State Trail is retained to eliminate conflicts for people walking and biking along the trail underneath the bridge. Additionally, the existing railing and guardrail will be upgraded to satisfy current design standards to ensure user safety. Furthermore, this project will eliminate weight restrictions along a collector route through the Lake Minnetonka Area.



REVENUE	Budget To-Date	Act & Enc	Balance	2024	2025	2026	2027	2028	Future	Total
Mn/DOT State Aid - Regular				50,000	205,000	295,000	4,600,000	1,200,000		6,350,000
Total				50,000	205,000	295,000	4,600,000	1,200,000		6,350,000

EXPENSE	Budget To-Date	Act & Enc	Balance	2024	2025	2026	2027	2028	Future	Total
Right of Way					80,000	120,000				200,000
Construction							4,000,000	1,000,000		5,000,000
Consulting				50,000	100,000	100,000				250,000
Contingency					25,000	75,000	600,000	200,000		900,000
Total				50,000	205,000	295,000	4,600,000	1,200,000		6,350,000

CSAH 146 (Brown Rd) Bridge Replacement Project

Attachment 07 | Hennepin County 2024-2027 Transportation CIP

Project Name: 2181800 CSAH 146 - Replace Bridge #90623 over Luce Line Trail	Funding Start: 2024
Major Program: Public Works	Funding Completion: 2028
Department: Transportation Roads & Bridges	

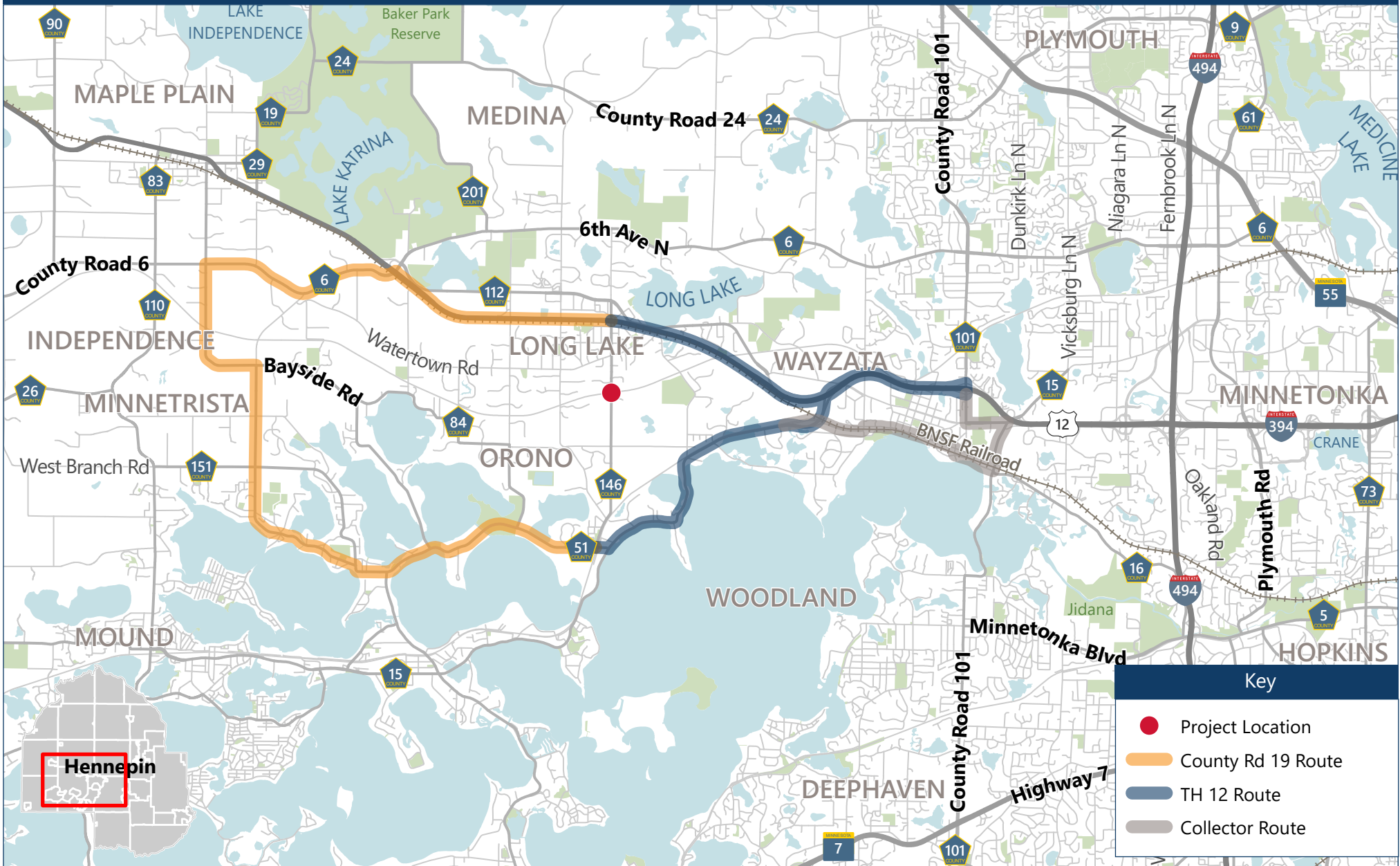
Current Year's CIP Process Summary	Budget To-Date	2024	2025	2026	2027	2028	Future	Total
Department Requested		50,000	205,000	295,000	4,600,000	1,200,000		6,350,000
Administrator Proposed		50,000	205,000	295,000	4,600,000	1,200,000		6,350,000
CBTF Recommended		50,000	205,000	295,000	4,600,000	1,200,000		6,350,000
Board Approved Final		50,000	205,000	295,000	4,600,000	1,200,000		6,350,000

<p>Scheduling Milestones (major phases only):</p> <table border="0"> <tr> <td><u>Activity</u></td> <td><u>Anticipated Timeframe</u></td> </tr> <tr> <td>Planning</td> <td>2020 - 2023</td> </tr> <tr> <td>Design</td> <td>Q1 2024 - Q4 2026</td> </tr> <tr> <td>Bid Advertisement</td> <td>Q1 2027</td> </tr> <tr> <td>Construction</td> <td>Q2 2027 - Q3 2027</td> </tr> <tr> <td>Completion</td> <td>Q 2028</td> </tr> </table>	<u>Activity</u>	<u>Anticipated Timeframe</u>	Planning	2020 - 2023	Design	Q1 2024 - Q4 2026	Bid Advertisement	Q1 2027	Construction	Q2 2027 - Q3 2027	Completion	Q 2028	<p>Board Resolutions / Supplemental Information:</p>
<u>Activity</u>	<u>Anticipated Timeframe</u>												
Planning	2020 - 2023												
Design	Q1 2024 - Q4 2026												
Bid Advertisement	Q1 2027												
Construction	Q2 2027 - Q3 2027												
Completion	Q 2028												
<p>Project's Effect on the Operating Budget:</p> <p>Staff does not anticipate that this project will have impacts to Transportation Department staff or annual operating costs. The proposed project will primarily replace existing bridge assets in-kind.</p>													
<p>Project's Effect on County Priorities:</p> <p>This project will advance disparity reduction efforts in the transportation domain by replacing a bridge nearing the end of its useful life, ensuring mobility for all modes. In particular, this project will maintain a grade separated crossing for the Luce Line Trail, a state trail that passes under Brown Road (CSAH 146).</p>													
<p>Changes from Prior CIP:</p> <ul style="list-style-type: none"> No changes to the overall Project Budget since the 2023-2027 Transportation CIP. 													

Last Year's CIP Process Summary	Budget To-Date	2023	2024	2025	2026	2027	Future	Total
Department Requested			50,000	205,000	295,000	4,600,000		5,150,000
Administrator Proposed			50,000	205,000	295,000	4,600,000		5,150,000
CBTF Recommended			50,000	205,000	295,000	4,600,000		5,150,000
Board Approved Final			50,000	205,000	295,000	4,600,000		5,150,000

CSAH 146 (Brown Rd) Bridge Replacement Project

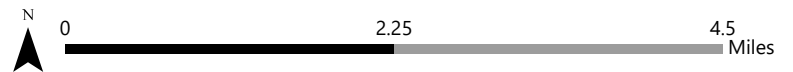
Attachment 08 | Alternate Routes Map



Disclaimer: This map (i) is furnished "AS IS" with no representation as to completeness or accuracy; (ii) is furnished with no warranty of any kind; and (iii) is not suitable for legal, engineering or surveying purposes. Hennepin County shall not be liable for any damage, injury or loss resulting from this map.

Publication date: 11/17/2023

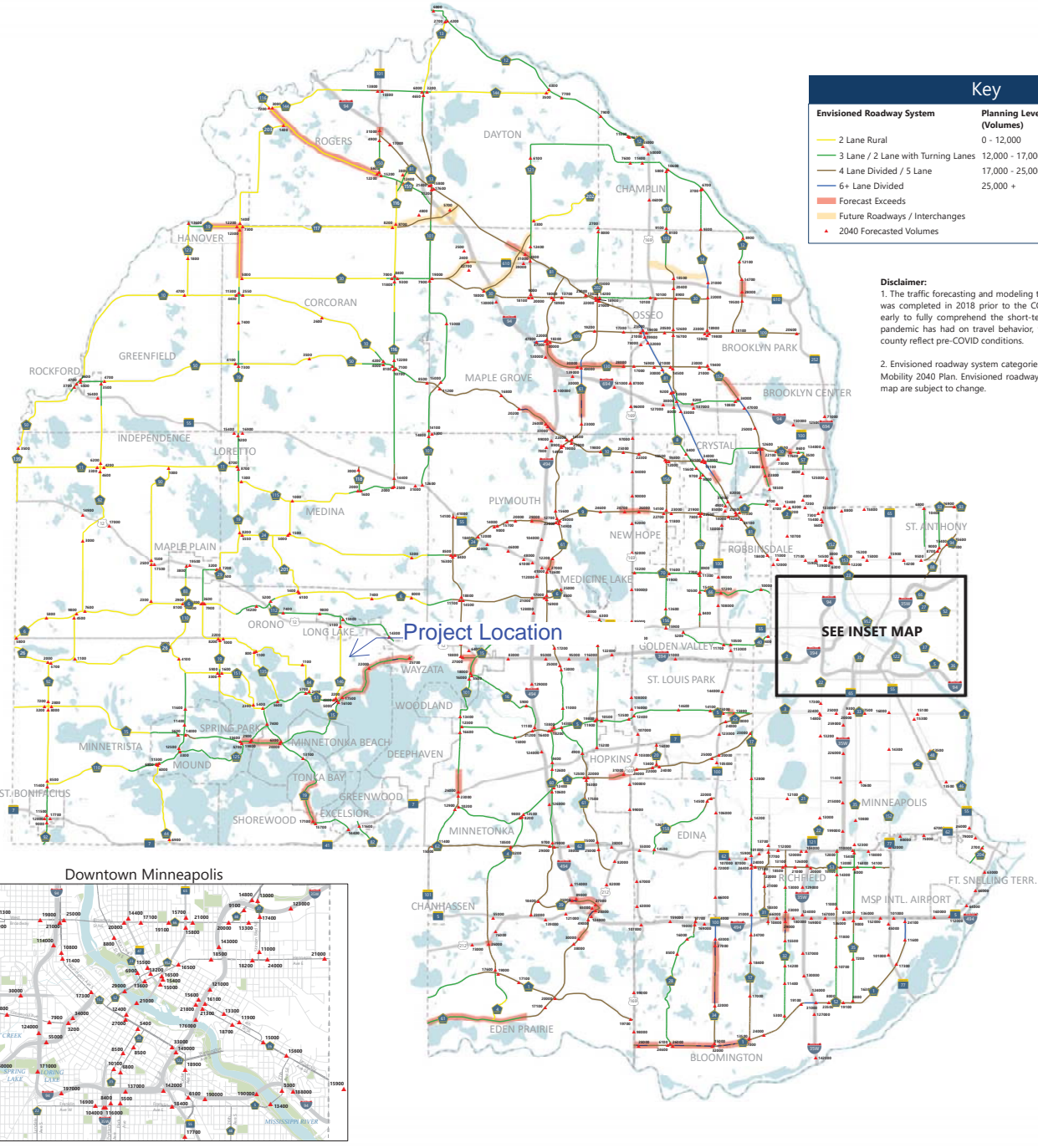
Data sources (if applicable):



CSAH 146 (Brown Rd) Bridge Replacement Project

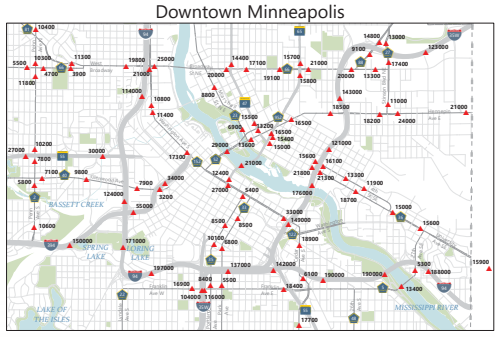
Attachment 09 | Forecast 2040 Traffic Volumes Map

HENNEPIN COUNTY
MINNESOTA



Envisioned Roadway System	Planning Level Thresholds (Volumes)	Right of Way
2 Lane Rural	0 - 12,000	146' - 166'
3 Lane / 2 Lane with Turning Lanes	12,000 - 17,000	90' - 110'
4 Lane Divided / 5 Lane	17,000 - 25,000	126' - 152'
6+ Lane Divided	25,000 +	154' +
Forecast Exceeds		
Future Roadways / Interchanges		
▲ 2040 Forecasted Volumes		

Disclaimer:
 1. The traffic forecasting and modeling to identify future roadway needs was completed in 2018 prior to the COVID-19 pandemic. As it is too early to fully comprehend the short-term and long-term impacts the pandemic has had on travel behavior, forecasts and modeling for the county reflect pre-COVID conditions.
 2. Envisioned roadway system categories were developed as part of the Mobility 2040 Plan. Envisioned roadway configurations reflected in this map are subject to change.



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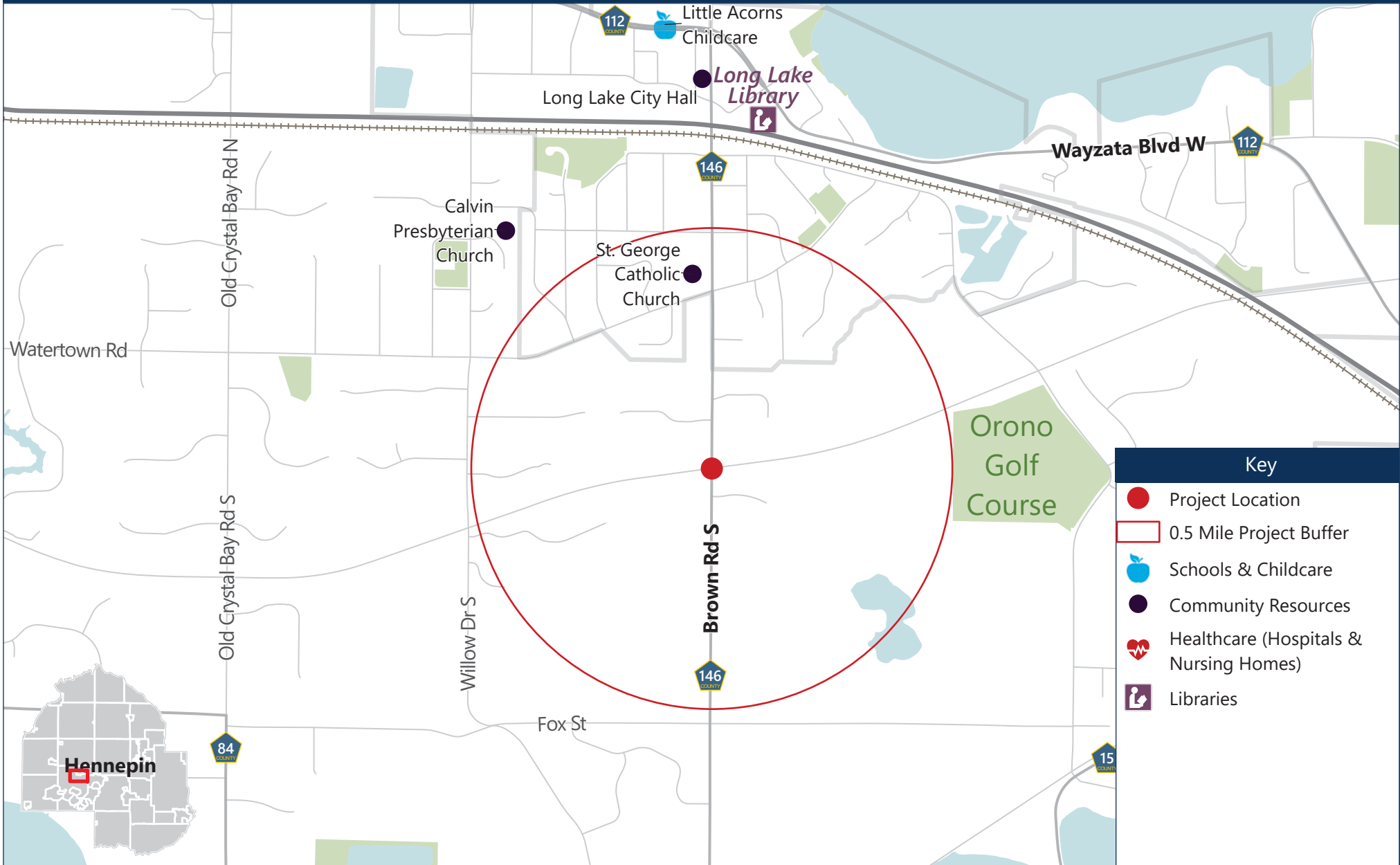
Publication date: 7/13/2023

Data sources: SRF Consulting, Hennepin County Transportation Planning



CSAH 146 (Brown Rd) Bridge Replacement Project

Attachment 10 | Disadvantaged Communities and Resources Map



Disclaimer: This map (i) is furnished "AS IS" with no representation as to completeness or accuracy; (ii) is furnished with no warranty of any kind; and (iii) is not suitable for legal, engineering or surveying purposes. Hennepin County shall not be liable for any damage, injury or loss resulting from this map.

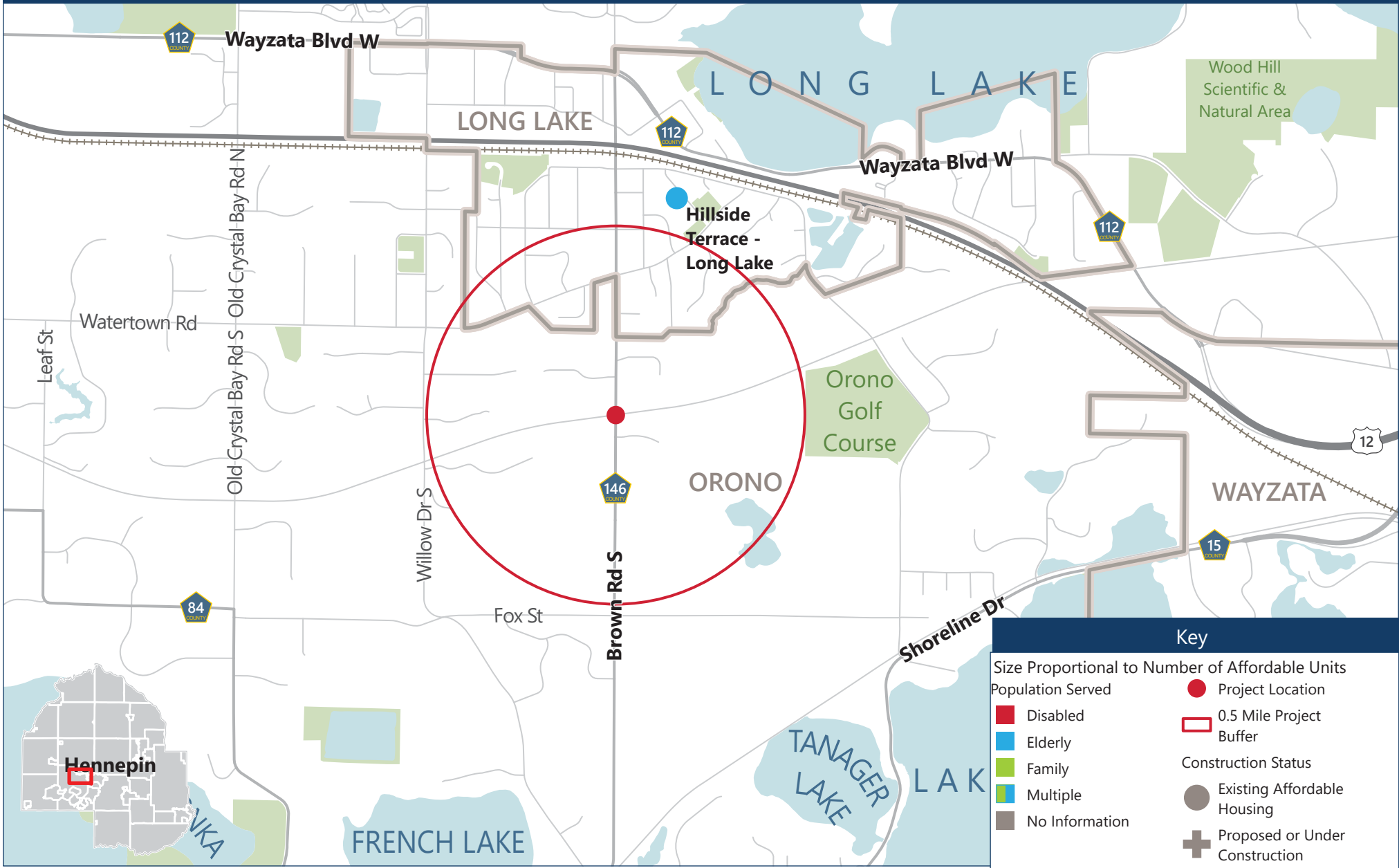
Publication date: 11/9/2023

Data sources (if applicable):



CSAH 146 (Brown Rd) Bridge Replacement Project

Attachment 11 | Affordable Housing Access Map and Detail Summary



Disclaimer: This map (i) is furnished "AS IS" with no representation as to completeness or accuracy; (ii) is furnished with no warranty of any kind; and (iii) is not suitable for legal, engineering or surveying purposes. Hennepin County shall not be liable for any damage, injury or loss resulting from this map.

Publication date: 11/6/2023

Data sources (if applicable):



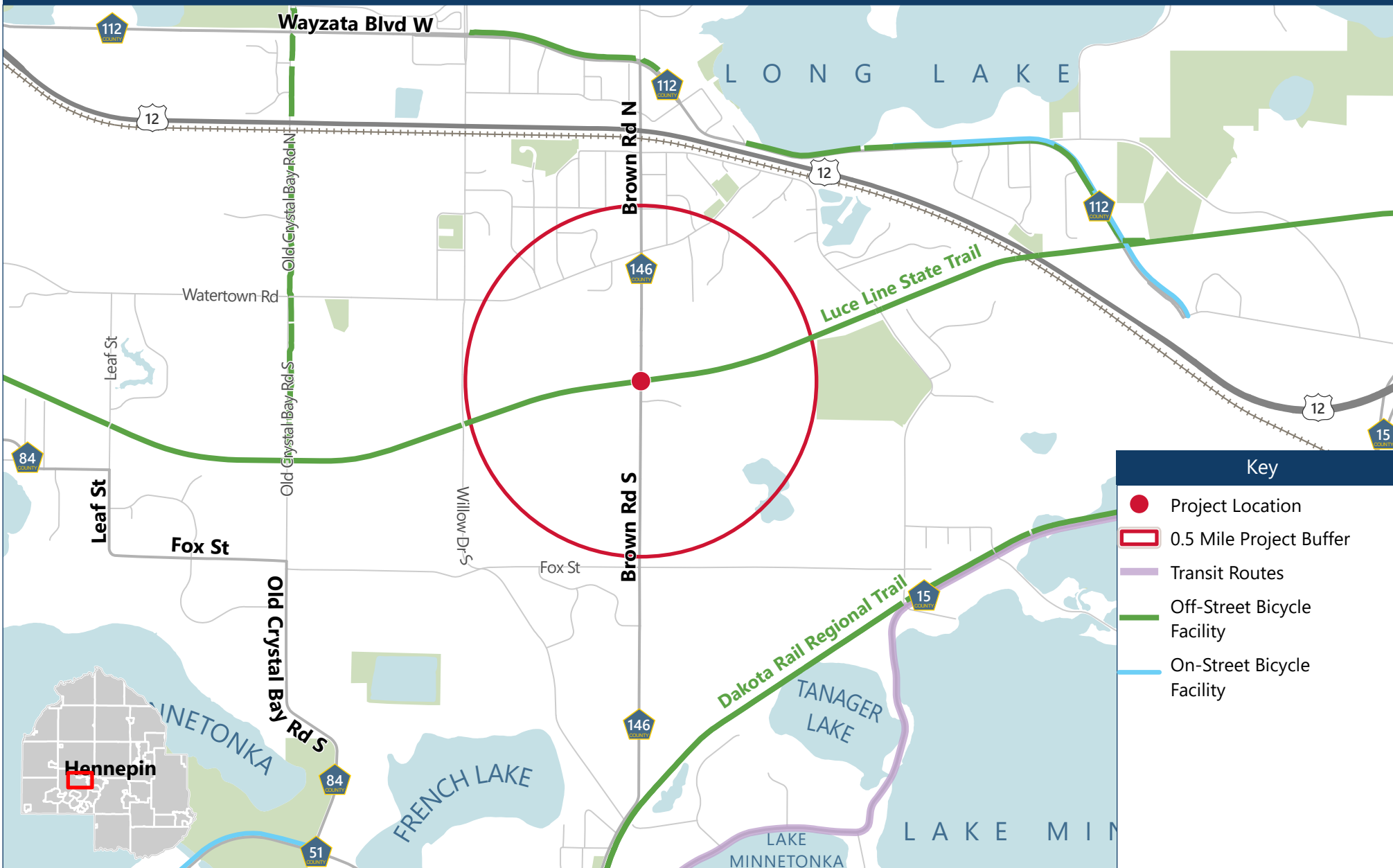
CSAH 146 (Brown Rd) Bridge Replacement Project

Attachment 11 | Affordable Housing Access Map and Detail Summary

Property ID	Property Name	Total Units	Affordable Units	30% AMI	50% AMI	60% AMI	0 BR	1 BR	2 BR	3 BR	4 BR
9522	Hillside Terrace - Long Lake	44	44	44	0	0	0	30	6	8	0

CSAH 146 (Brown Rd) Bridge Replacement Project

Attachment 12 | Multimodal Connections Map



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Publication date: 10/23/2023

Data sources (if applicable):





CSAH 146 (Brown Rd) Bridge Replacement Project

Attachment 13 | City of Orono Support Letter

CITY OF ORONO

2750 KELLEY PARKWAY, ORONO, MINNESOTA 55356

www.oronomn.gov

2 November 2023

Carla Stueve, P.E.
Director and County Highway Engineer
Hennepin County Transportation Project Delivery
1600 Prairie Drive
Medina, MN 55340

Dear Ms. Stueve:

The City of Orono hereby expresses its support for Hennepin County's Regional Solicitation federal funding application to replace Bridge #90623 along CSAH 146 (Brown Rd) over the Luce Line State Trail in the City of Orono.

This project will involve the replacement of Bridge #90623 along CSAH 146 (Brown Rd) over the Luce Line State Trail that is nearing the end of its useful life. The completion of this project will also ensure that a grade separated crossing of the Luce Line Regional Trail is retained to eliminate conflicts for people walking and biking along the trail underneath the bridge. This project presents an opportunity to replace a critical asset that currently includes weight restrictions, and also introduce a new bridge section that better accommodates people walking and biking through the area; thereby enhancing the livability and quality of life for Orono and Hennepin County residents.

The City of Orono acknowledges that the city may be required to cost participate in this project as outlined in the Hennepin County Cost Participation policy. Specific details regarding cost participation and maintenance responsibilities are anticipated to be determined during the design process as project development is advanced.

Thank-you for making us aware of this application and project, and the opportunity to provide support. The City of Orono looks forward to working with you on this project.

Adam T. Edwards, P.E.
City Administrator / City Engineer
Orono

CSAH 146 (Brown Rd) Bridge Replacement Project

Attachment 14 | MnDNR Support Letter



Parks and Trails Division
1200 Warner Road
Saint Paul, MN 55106

November 29, 2023

Dear Ms. Stueve:

The Minnesota Department of Natural Resources (MNDNR) hereby expresses its support for Hennepin County's Regional Solicitation federal funding application to replace Bridge #90623 along CSAH 146 (Brown Rd) over the Luce Line State Trail in the City of Orono.

This project will involve the replacement of Bridge #90623 along CSAH 146 (Brown Rd) over the Luce Line State Trail that is nearing the end of its useful life. The completion of this project will also ensure that a grade separated crossing of the Luce Line Regional Trail is retained to eliminate conflicts for people walking and biking along the trail underneath the bridge. This project presents an opportunity to replace a critical asset that currently includes weight restrictions, and introduce a new bridge section that better accommodates people walking and biking through the area; thereby enhancing the livability and quality of life for Orono and Hennepin County residents.

As the current owner and operator of the Luce Line State Trail, the MNDNR agrees to continue maintaining the Luce Line State Trail that extends underneath Bridge #90623 for the useful life of improvements.

Thank-you for making us aware of this application and project, and the opportunity to provide support. The MNDNR looks forward to working with you on this project.

Sincerely,

David Olsen
Digitally signed by David Olsen
Date: 2023.11.29 12:31:38 -06'00'

David Olsen
Acting Area Supervisor

Equal Opportunity Employer

CC:

Grant Wilson, Central Regional Director
Martha Reger, Acting Parks and Trails Central Regional Manager
Rachel Henzen, Acting Parks and Trails District 7 Supervisor