Application

04776 - 2016 Bridges
04867 - CSAH 19 (Shadywood Road) over Narrows Channel Bridge (No. 27516) Rehabilitation
Regional Solicitation - Roadways Including Multimodal Elements

Status: Submitted
Submitted Date: 07/14/2016 12:01 PM

Primary Contact

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Title: Transportation Engineer
Department: 
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Address: 1600 Prairie Drive

City: Medina
State/Province: Minnesota
Postal Code/Zip: 55340
Phone: 612-596-0356
Fax:

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

Organization Information

Name: HENNEPIN COUNTY
Jurisdictional Agency (if different):

<table>
<thead>
<tr>
<th>Organization Type:</th>
<th>County Government</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization Website:</td>
<td>DPT OF PUBLIC WORKS</td>
</tr>
<tr>
<td>Address:</td>
<td>1600 PRAIRIE DR</td>
</tr>
<tr>
<td>*</td>
<td>MEDINA</td>
</tr>
<tr>
<td>County:</td>
<td>Hennepin</td>
</tr>
<tr>
<td>Phone:*</td>
<td>763-745-7600</td>
</tr>
<tr>
<td>Fax:</td>
<td></td>
</tr>
<tr>
<td>PeopleSoft Vendor Number</td>
<td>0000028004A9</td>
</tr>
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</table>

## Project Information

<table>
<thead>
<tr>
<th>Project Name</th>
<th>CSAH 19 (Shadywood Road) over Narrows Channel Bridge (No. 27516) Rehabilitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary County where the Project is Located</td>
<td>Hennepin</td>
</tr>
<tr>
<td>Jurisdictional Agency (If Different than the Applicant):</td>
<td>Hennepin</td>
</tr>
</tbody>
</table>
The project includes the rehabilitation of the CSAH 19 (Shadywood Road) bridge (No. 27516) located over the Narrows Channel of Lake Minnetonka. This bridge is on the border between the cities of Orono and Tonka Bay. CSAH 19 is an A-Minor Arterial roadway that currently carries 11,900 vehicles per day. This section of CSAH 19 is a vital corridor for all modes of traffic through the Lake Minnetonka area. The roadway extends north from TH 7 in the southern part of Hennepin County for approximately 24 miles into Wright County. This section is a heavily used bike route and provides a popular recreational/fishing area directly under the bridge. Bridge rehabilitation is needed to deliver safe and efficient transportation service to its users.

Existing Conditions:

The CSAH 19 bridge is classified as structurally deficient with a sufficiency rating of 54. The bridge is experiencing significant deterioration of the north abutment, including distortion and stress cracking. The abutment wall has separated from its originally constructed position and is resting on the adjacent bridge deck. Soil beneath the approach panel has filled the void created by this movement and may be causing further damage to the wall. The paving block appears to be pulling away from the end of the approach panel resulting in a void between it and the approach panel. Water that is leaking through the bridge deck is resulting in rapid deterioration of the uncoated reinforcement, steel beam ends, bearings, and abutment seat. In addition, there is no available space for thermal expansion to occur at either end of the bridge since the expansion joints are completely closed. Fluctuating temperatures result in a thermally induced axial load on the superstructure that was not originally accounted for in the design.
Project Improvements:

The project includes rehabilitation of this deteriorated bridge with improvements to the bridge deck, approach panel, abutment wall, joints, bridge beams and bearing assemblies. The improvements are needed as soon as possible to avoid failure of the abutment. The rehabilitation will include replacing the approach panels and north abutment parapet, replacing both expansion joints and the concrete deck, and sand blasting and repainting the beams and bearing assemblies.

The current bridge cross section is 52 feet, which includes two 12-foot driving lanes and two 14-foot shoulders. This cross section will remain intact with the proposed rehabilitation. The bridge would be designed for a 75-year or greater service life.

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**CSA 19 OVER NARROWS CHANNEL - REHAB BR. 27516**

**Project Length (Miles)**

0.12

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**TIP Description Guidance** (will be used in TIP if the project is selected for funding)

**Project Funding**

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

If yes, please identify the source(s)

**Federal Amount**

$1,520,000.00

**Match Amount**

$380,000.00

Minimum of 20% of project total

**Project Total**

$1,900,000.00

**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 and State

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: 2021
For TDM projects, select 2018 or 2019. For Roadway, Transit, or Trail/Pedestrian projects, select 2020 or 2021.

Additional Program Years:
Select all years that are feasible if funding in an earlier year becomes available.

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### Project Information-Roadways

<table>
<thead>
<tr>
<th>County, City, or Lead Agency</th>
<th>Hennepin County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functional Class of Road</td>
<td>A Minor Arterial (Expander)</td>
</tr>
<tr>
<td>Road System</td>
<td>CSAH</td>
</tr>
<tr>
<td></td>
<td>TH, CSAH, MSAS, CO. RD., TWP. RD., CITY STREET</td>
</tr>
<tr>
<td>Road/Route No.</td>
<td>19</td>
</tr>
<tr>
<td>i.e., 53 for CSAH 53</td>
<td></td>
</tr>
<tr>
<td>Name of Road</td>
<td>Shadywood Road</td>
</tr>
<tr>
<td>Example: 1st ST., MAIN AVE</td>
<td></td>
</tr>
<tr>
<td>Zip Code where Majority of Work is Being Performed</td>
<td>55391</td>
</tr>
<tr>
<td>(Approximate) Begin Construction Date</td>
<td>04/12/2021</td>
</tr>
<tr>
<td>(Approximate) End Construction Date</td>
<td>11/19/2021</td>
</tr>
</tbody>
</table>

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

**From:**
(Intersection or Address)
Approximately 300 feet north of bridge

**To:**
(Intersection or Address)
Approximately 300 feet south of bridge

*DO NOT INCLUDE LEGAL DESCRIPTION*

**Or At**

**Primary Types of Work**
Bridge rehabilitation

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

**BRIDGE/CULVERT PROJECTS (IF APPLICABLE)**

<table>
<thead>
<tr>
<th>Old Bridge/Culvert No.</th>
<th>27516</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Bridge/Culvert No.</td>
<td></td>
</tr>
</tbody>
</table>

**Specific Roadway Elements**

<table>
<thead>
<tr>
<th>CONSTRUCTION PROJECT ELEMENTS/COST</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESTIMATES</td>
<td></td>
</tr>
<tr>
<td>Construction Project Elements/Cost Estimates</td>
<td>Cost</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>Mobilization (approx. 5% of total cost)</td>
<td>$0.00</td>
</tr>
<tr>
<td>Removals (approx. 5% of total cost)</td>
<td>$0.00</td>
</tr>
<tr>
<td>Roadway (grading, borrow, etc.)</td>
<td>$0.00</td>
</tr>
<tr>
<td>Roadway (aggregates and paving)</td>
<td>$0.00</td>
</tr>
<tr>
<td>Subgrade Correction (muck)</td>
<td>$0.00</td>
</tr>
<tr>
<td>Storm Sewer</td>
<td>$0.00</td>
</tr>
<tr>
<td>Ponds</td>
<td>$0.00</td>
</tr>
<tr>
<td>Concrete Items (curb &amp; gutter, sidewalks, median barriers)</td>
<td>$0.00</td>
</tr>
<tr>
<td>Traffic Control</td>
<td>$0.00</td>
</tr>
<tr>
<td>Striping</td>
<td>$0.00</td>
</tr>
<tr>
<td>Signing</td>
<td>$0.00</td>
</tr>
<tr>
<td>Lighting</td>
<td>$0.00</td>
</tr>
<tr>
<td>Turf - Erosion &amp; Landscaping</td>
<td>$0.00</td>
</tr>
<tr>
<td>Bridge</td>
<td>$1,900,000.00</td>
</tr>
<tr>
<td>Retaining Walls</td>
<td>$0.00</td>
</tr>
<tr>
<td>Noise Wall (do not include in cost effectiveness measure)</td>
<td>$0.00</td>
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<tr>
<td>Traffic Signals</td>
<td>$0.00</td>
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<tr>
<td>Wetland Mitigation</td>
<td>$0.00</td>
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<tr>
<td>Other Natural and Cultural Resource Protection</td>
<td>$0.00</td>
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<tr>
<td>RR Crossing</td>
<td>$0.00</td>
</tr>
<tr>
<td>Roadway Contingencies</td>
<td>$0.00</td>
</tr>
<tr>
<td>Other Roadway Elements</td>
<td>$0.00</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>$1,900,000.00</strong></td>
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### Specific Bicycle and Pedestrian Elements

<table>
<thead>
<tr>
<th>Construction Project Elements/Cost Estimates</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Path/Trail Construction</td>
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<tr>
<td>Sidewalk Construction</td>
<td>$0.00</td>
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<tr>
<td>On-Street Bicycle Facility Construction</td>
<td>$0.00</td>
</tr>
<tr>
<td>Right-of-Way</td>
<td>$0.00</td>
</tr>
<tr>
<td>Pedestrian Curb Ramps (ADA)</td>
<td>$0.00</td>
</tr>
<tr>
<td>Crossing Aids (e.g., Audible Pedestrian Signals, HAWK)</td>
<td>$0.00</td>
</tr>
<tr>
<td>Pedestrian-scale Lighting</td>
<td>$0.00</td>
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<tr>
<td>Streetscaping</td>
<td>$0.00</td>
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</table>
### Specific Transit and TDM Elements

<table>
<thead>
<tr>
<th>CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed Guideway Elements</td>
<td>$0.00</td>
</tr>
<tr>
<td>Stations, Stops, and Terminals</td>
<td>$0.00</td>
</tr>
<tr>
<td>Support Facilities</td>
<td>$0.00</td>
</tr>
<tr>
<td>Transit Systems (e.g. communications, signals, controls, fare collection, etc.)</td>
<td>$0.00</td>
</tr>
<tr>
<td>Vehicles</td>
<td>$0.00</td>
</tr>
<tr>
<td>Contingencies</td>
<td>$0.00</td>
</tr>
<tr>
<td>Right-of-Way</td>
<td>$0.00</td>
</tr>
<tr>
<td>Other Transit and TDM Elements</td>
<td>$0.00</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>$0.00</strong></td>
</tr>
</tbody>
</table>

### Transit Operating Costs

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
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</thead>
<tbody>
<tr>
<td>Number of Platform hours</td>
<td>0</td>
</tr>
<tr>
<td>Cost Per Platform hour (full loaded Cost)</td>
<td>$0.00</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>$0.00</strong></td>
</tr>
<tr>
<td>Other Costs - Administration, Overhead, etc.</td>
<td>$0.00</td>
</tr>
</tbody>
</table>

### Totals

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Cost</strong></td>
<td>$1,900,000.00</td>
</tr>
<tr>
<td><strong>Construction Cost Total</strong></td>
<td>$1,900,000.00</td>
</tr>
<tr>
<td><strong>Transit Operating Cost Total</strong></td>
<td>$0.00</td>
</tr>
</tbody>
</table>

### Requirements - 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, the 2040 Regional Parks Policy Plan (2015), 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 objectives and strategies that relate to the project.
The CSAH 19 bridge rehabilitation project is consistent with the 2040 Transportation Policy Plan by meeting the following objectives and strategies:

A) Transportation System Stewardship: Through Hennepin County's annual bridge inspection program we ensure planned preservation and maintenance of our facilities. This project will rehabilitate a structurally deficient bridge that currently carries 11,900 vehicles per day.

B) Safety and Security: The rehabilitated bridge will provide a safer design to serve its users, and will retain the current cross section, with two 12-foot travel lanes and two 14-foot shoulders to accommodate dedicated buffered bicycle lanes on the bridge. The bridge rehabilitation will also solve the structural safety issues for this deficient bridge.

C) Access to Destinations: CSAH 19 is a regional corridor that extends approximately 24 miles from TH 7 in southern Hennepin County into Wright County, providing access for visitors to the Lake Minnetonka area and multiple regional trails. The bridge rehabilitation will continue to provide efficient access to key destinations in the area. This bridge also supports local transit Express Route 671.

D) Competitive Economy: CSAH 19 provides a vital connection for residents and visitors to access jobs, education, and recreational destinations.

E) Healthy Environment: The rehabilitated bridge will provide dedicated buffered bicycle lanes to support multi-modal traffic, which will provide an alternative local transportation connection bridging mature, walkable neighborhoods. The rehabilitated bridge will also benefit pedestrians and bicyclists on the bridge by providing a smoother pavement.
F) Leveraging Transportation Investments to Guide Land Use: Due to land constraints, development will be largely limited to subdivision and redevelopment. There is an imminent need to preserve and enhance the existing infrastructure to support transportation and land use in 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.

Top 20 Hennepin County Bridge Priority Ranking

MnDOT Bridge Inspection Report (pages attached)

MnDOT Structure Inventory Report (pages attached)

4. The project must exclude costs for studies, preliminary engineering, design, or construction engineering. Right-of-way costs are only eligible as part of bicycle/pedestrian projects, 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.

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

5. Applicants that are not 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.

- Roadway Expansion: $1,000,000 to $7,000,000
- Roadway Reconstruction/Modernization: $1,000,000 to $7,000,000
- Roadway System Management: $250,000 to $7,000,000
- 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.

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

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

Check the box to indicate that the project meets this requirement. Yes
10. The owner/operator of the facility must operate and maintain the project for the useful life of the improvement.

11. 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.

12. 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.

13. 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.

Roadways Including Multimodal Elements

1. All roadway and bridge projects must be identified as a Principal Arterial (Non-Freeway facilities only) or A-Minor Arterial as shown on the latest TAB approved roadway functional classification map.

Roadway Expansion and Reconstruction/Modernization projects only:

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

Bridge Rehabilitation/Replacement 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.

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.

5. The length of the bridge must equal or exceed 20 feet.

6. The bridge must have a sufficiency rating less than 80 for rehabilitation projects and less than 50 for replacement projects. Additionally, the bridge must also be classified as structurally deficient or functionally obsolete.
Measure A: Functional Classification

Area: 0.17
Project Length: 0.12
Average Distance: 1.4167

Upload Map
1466539291371_CSAH 019 (Shadywood Road) Bridge - Roadway Area.pdf

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

Existing Employment within 1 Mile: 1785
Existing Manufacturing/Distribution-Related Employment within 1 Mile: 216
Existing Students: 0

Upload Map
1466539409087_CSAH 019 (Shadywood Road) Bridge - Regional Economy.pdf

Measure C: Current Daily Heavy Commercial Traffic

Location: CSAH 19 bridge, south of Lafayette Road
Current Daily Heavy Commercial Traffic Volume: 2066.0
Date Heavy Commercial Count Taken: 05/19/2016

Measure D: Freight Elements
The CSAH 19 bridge over the Narrows Channel is a regionally significant freight route for Lake Minnetonka communities carrying 2,066 heavy commercial vehicles daily. CSAH 19 extends approximately 24 miles north from TH 7 in southern Hennepin County into Wright County. Traffic trends show increased freight and delivery trucks along this corridor and others in the region.

The bridge is classified as structurally deficient with a 54 sufficiency rating. The rehabilitation will include significant safety improvements to continue to serve heavy commercial vehicles with time-sensitive freight. The rehabilitation of this bridge will avoid potential load restrictions and rerouting of heavy vehicles. A detour from this connection would result in rerouting of truck traffic over 15 miles due to the limited routes around Lake Minnetonka accessible to heavy trucks.

As freight needs continue to increase, this project will improve mobility, safety and operations for truck traffic. The bridge rehabilitation will support economic development by providing efficient access to key destinations in the area. The project will preserve the existing cross section of 52 feet, with two 12-foot lanes and two 14-foot shoulders. It's anticipated the bridge would remain open to traffic throughout construction, thus avoiding lengthy detours. The bridge would be designed for a 75-year or greater service life.

### Measure A: Current Daily Person Throughput

<table>
<thead>
<tr>
<th>Location</th>
<th>CSAH 19 south of Lafayette Road</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current AADT Volume</td>
<td>11900.0</td>
</tr>
<tr>
<td>Existing Transit Routes on the Project:</td>
<td>671</td>
</tr>
<tr>
<td>Upload Transit Map</td>
<td>1466539059810_CSAH 019 (Shadywood Road) Bridge - Transit Connections.pdf</td>
</tr>
</tbody>
</table>
Response: Current Daily Person Throughput

<table>
<thead>
<tr>
<th>Measure</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Annual Daily Transit Ridership</td>
<td>0</td>
</tr>
<tr>
<td>Current Daily Person Throughput</td>
<td>15470.0</td>
</tr>
</tbody>
</table>

Measure B: 2040 Forecast ADT

<table>
<thead>
<tr>
<th>Measure</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use Metropolitan Council model to determine forecast (2040) ADT volume</td>
<td>Yes</td>
</tr>
<tr>
<td>METC Staff - Forecast (2040) ADT volume</td>
<td>0</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>Approved county or city travel demand model to determine forecast (2040) ADT volume</td>
<td>No</td>
</tr>
<tr>
<td>Forecast (2040) ADT volume</td>
<td>16200.0</td>
</tr>
</tbody>
</table>

Measure A: Project Location and Impact to Disadvantaged Populations

Select one:

- Project located in Area of Concentrated Poverty with 50% or more of residents are people of color (ACP50):

- Project located in Area of Concentrated Poverty:

- Projects census tracts are above the regional average for population in poverty or population of color:

- Project located in a census tract that is below the regional average for population in poverty or populations of color or includes children, people with disabilities, or the elderly: Yes
This bridge is located between the cities of Orono and Tonka Bay, which is identified as a census track that is below the regional average for population in poverty or populations of color. The project is in an area that includes children, people with disabilities and the elderly; although not in concentrations recognized by the Metropolitan Council.

The CSAH 19 bridge connects residents (inclusive of all races, ethnicity, incomes, and abilities) to jobs and educational opportunities. This section of CSAH 19 is a heavily used bike route and provides a popular recreational/fishing area directly under the bridge. The rehabilitation of the bridge will maintain a vital north-south link through the communities around Lake Minnetonka. This project will also allow for a very important bicycle link between the Dakota Rail Regional Trail and the Lake Minnetonka LRT Regional Trail. These regional trails create a non-motorized transportation option for populations who may not have access to a motor vehicle.

The project will provide a benefit to all residents, including children and elderly that currently live in the area by increasing the safety of this bridge. This will allow all transportation modes with the freedom to use this facility for commuting, recreational or social purposes. The CSAH 19 bridge rehabilitation project will provide a safer bridge design by maintaining space on the bridge for all residents, including children and elderly, to walk or bike along this facility. The project will not negatively impact low-income populations, populations of color, or the elderly. All facilities will be upgraded to current ADA standards to improve access for people with disabilities.
The response should address the benefits, impacts, and mitigation for the populations affected by the project.

Measure B: Affordable Housing

<table>
<thead>
<tr>
<th>City/Township</th>
<th>Segment Length in Miles (Population)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orono</td>
<td>1527.0</td>
</tr>
<tr>
<td>Shorewood</td>
<td>2920.0</td>
</tr>
<tr>
<td>Spring Park</td>
<td>1997.0</td>
</tr>
<tr>
<td>Tonka Bay</td>
<td>1591.0</td>
</tr>
</tbody>
</table>

Total Project Length

| Total Project Length (Miles) | 0.12 |

Affordable Housing Scoring - To Be Completed By Metropolitan Council Staff

<table>
<thead>
<tr>
<th>City/Township</th>
<th>Segment Length (Miles)</th>
<th>Total Length (Miles)</th>
<th>Score</th>
<th>Segment Length/Total Length</th>
<th>Housing Score Multiplied by Segment percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
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Affordable Housing Scoring - To Be Completed By Metropolitan Council Staff

| Total Project Length (Miles) | 8035.0 |
| Total Housing Score          | 0      |

Measure A: Bridge Condition

| Bridge Sufficiency Rating | 54.0 |

Measure B: Project Improvements

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

Measure A: Multimodal Elements and Existing Connections
The CSAH 19 bridge rehabilitation project will include the following multimodal elements:

- Buffered bicycle lanes
- Improved roadway surface

CSAH 19 provides a singular north/south connection across Lake Minnetonka between the Dakota Rail Regional Trail and the Lake Minnetonka Regional Trail. The corridor, which includes shoulders of varying width, is signed as a bike route and recognized as an existing on-street bikeway in the county bike plan. Designated pedestrian facilities are not provided except in commercial areas, the closest of which is approximately 0.75 miles north of the project area. In addition, CSAH 19 serves Express Route 671 with service between Excelsior and Downtown Minneapolis.

The corridor is identified as a planned off-street bikeway and prioritized as a top 25 planned bikeway segment in the county bicycle plan. Prior to the county bike plan, Shorewood, Tonka Bay, Orono, and Hennepin County collaborated to develop a County Road 19 Trail Concept Design for the corridor between the Dakota Rail Regional Trail and Lake Minnetonka Regional Trail. The concept design sought opportunities to improve conditions for people walking and biking both for local and regional recreation and transportation purposes. While an off-street connection is consistently identified among plans and studies, trail alignment and timeline for implementation remain uncertain.

Given the opportunity but uncertainty of future
corridor improvements, the overall bridge width and planned bikeway will allow for flexibility in design down the road. Dedicated buffered bicycle lanes will improve existing conditions by better defining space and preserving a seamless transition between the bridge and bikeable shoulders while providing an opportunity to easily modify lanes in the future to align with trail and sidewalk improvements on the approaches. Additional vertical separation (flexible delineators, for example) may be considered later in the design process.

Transit Projects Not Requiring Construction

If the applicant is completing a transit or TDM 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

1) Project Scope (5 Percent of Points)

Meetings or contacts with stakeholders have occurred
Yes
100%

Stakeholders have been identified
40%

Stakeholders have not been identified or contacted
0%

2) Layout or Preliminary Plan (5 Percent of Points)

Layout or Preliminary Plan completed
100%

Layout or Preliminary Plan started
50%

Layout or Preliminary Plan has not been started
Yes
0%

Anticipated date or date of completion
06/30/2020

3) Environmental Documentation (5 Percent of Points)
EIS  
EA  
PM  
Yes  

Document Status:  

Document approved (include copy of signed cover sheet)  
100%  

Document submitted to State Aid for review  
75%  

Document in progress; environmental impacts identified; review request letters sent  
50%  

Document not started  
0%  

Anticipated date or date of completion/approval  
08/31/2020  

4) Review of Section 106 Historic Resources (10 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%  

Historic/archeological review under way; determination of no historic properties affected or no adverse effect anticipated  
80%  

Historic/archeological review under way; determination of adverse effect anticipated  
40%  

Unsure if there are any historic/archaeological resources in the project area  
0%  

Anticipated date or date of completion of historic/archeological review:  

Project is located on an identified historic bridge  

5) Review of Section 4f/6f Resources (10 Percent of Points)  

4(f) Does the project impacts any public parks, public wildlife refuges, public golf courses, wild & scenic rivers or public private historic properties?  

Yes  

100%  

6(f) Does the project impact any public parks, public wildlife refuges, public golf courses, wild & scenic rivers or historic property that was purchased or improved with federal funds?  

No Section 4f/6f resources located in the project area  

Yes  

100%  

No impact to 4f property. The project is an independent bikeway/walkway project covered by the bikeway/walkway Negative Declaration statement; letter of support received
Section 4f resources present within the project area, but no known adverse effects

Project impacts to Section 4f/6f resources likely coordination/documentation has begun

Project impacts to Section 4f/6f resources likely coordination/documentation has not begun

Unsure if there are any impacts to Section 4f/6f resources in the project area

6) Right-of-Way (15 Percent of Points)

Right-of-way, permanent or temporary easements not required

Yes

100%

Right-of-way, permanent or temporary easements has/have been acquired

100%

Right-of-way, permanent or temporary easements required, offers made

75%

Right-of-way, permanent or temporary easements required, appraisals made

50%

Right-of-way, permanent or temporary easements required, parcels identified

25%

Right-of-way, permanent or temporary easements required, parcels not identified

0%

Right-of-way, permanent or temporary easements identification has not been completed

0%

Anticipated date or date of acquisition

7) Railroad Involvement (25 Percent of Points)

No railroad involvement on project

Yes

100%

Railroad Right-of-Way Agreement is executed (include signature page)

100%

Railroad Right-of-Way Agreement required; Agreement has been initiated
60%
Railroad Right-of-Way Agreement required; negotiations have begun

40%
Railroad Right-of-Way Agreement required; negotiations not begun

0%
Anticipated date or date of executed Agreement

8) Interchange Approval (15 Percent of Points)*

*Please contact Karen Scheffing at MnDOT (Karen.Scheffing@state.mn.us or 651-234-7784) to determine if your project needs to go through the Metropolitan Council/MnDOT Highway Interchange Request Committee.

Project does not involve construction of a new/expanded interchange or new interchange ramps
Yes

100%
Interchange project has been approved by the Metropolitan Council/MnDOT Highway Interchange Request Committee

100%
Interchange project has not been approved by the Metropolitan Council/MnDOT Highway Interchange Request Committee

0%

9) Construction Documents/Plan (10 Percent of Points)

Construction plans completed/approved (include signed title sheet)
100%

Construction plans submitted to State Aid for review
75%

Construction plans in progress; at least 30% completion
50%

Construction plans have not been started
Yes

0%

Anticipated date or date of completion
12/31/2020

10) Letting

Anticipated Letting Date
04/15/2021

---

**Measure A: Cost Effectiveness**

Total Project Cost (entered in Project Cost Form): $1,900,000.00

Enter Amount of the Noise Walls: $0.00

Total Project Cost subtract the amount of the noise walls: $1,900,000.00

Points Awarded in Previous Criteria
## Other Attachments

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<tr>
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<th>Description</th>
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<tr>
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<td>Project Location CSAH 19 Bridge</td>
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<td>Fig 02 - MnDOT Inspection and Inventory Reports - CSAH 19.pdf</td>
<td>MnDOT Inspection and Inventory Reports - CSAH 19</td>
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<td>Fig 05 - CSAH 19 2016 Heavy Commercial Volumes.pdf</td>
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<td>Fig 11 - Trail Concept Design Study - Bridge Concept.pdf</td>
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<td>Fig 14 - OronoSupportLetter.pdf</td>
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<tr>
<td>Fig 15 - Tonka Bay Support Letter.pdf</td>
<td>Tonka Bay Support Letter</td>
<td>61 KB</td>
</tr>
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</table>
Results

Project Length: 0.116 miles

Project Area: 0.171 sq mi
Results

WITHIN ONE MI of project:

Totals by City:

**Orono**
- Population: 1527
- Employment: 558
- Mfg and Dist Employment: 15

**Shorewood**
- Population: 2920
- Employment: 286
- Mfg and Dist Employment: 12

**Spring Park**
- Population: 1997
- Employment: 696
- Mfg and Dist Employment: 183

**Tonka Bay**
- Population: 1591
- Employment: 245
- Mfg and Dist Employment: 6

Postsecondary Students: 0
Results

Transit with a Direct Connection to project: 671

*indicates Planned Alignments
Results

Project located in a census tract that is below the regional average for population in poverty or populations of color, or includes children, people with disabilities, or the elderly:
(0 to 12 Points)
CSAH 019 (Shadywood Road/Manitou Road) Bridge Rehabilitation Project - CP 1635

2016 Regional Solicitation | Project Location Map

Transportation Planning
www.hennepin.us
04/11/2016
## GENERAL

**Agency Br. No.**

**District** METRO

**Maint. Area**

**County** 27 - HENNEPIN

**City** ORONO

**Township**

**Desc. Loc.** 0.8 MI S OF JCT CSAH 15

**Sect., Twp., Range** 21 - 117N - 23W

**Latitude** 44° 55' 39.61"

**Longitude** 93° 35' 38.76"

**Custodian** COUNTY

**Owner** COUNTY

**Inspection By** HENNEPIN COUNTY

**Year Built** 1964

**MN Year Remodeled**

**FHWA Year Reconstructed**

**Bridge Plan Location** COUNTY

**Potential ABC** N.A.

## ROADWAY

**Bridge Match ID (TIS)** 1

**Roadway O/U Key** 1-ON

**Route Sys/_nbr** CSAH 19

**Roadway Name or Description** SHADYWOOD RD (CSAH 19)

**Roadway Function** MAINLINE

**Roadway Type** 2 WAY TRAF

**Control Section (TH Only)**

**Ref. Point**

**Date Opened to Traffic** 01-01-1964

**Detour Length** 14 mi.

**Lanes** 2 Lanes ON Bridge

**ADT (YEAR)** 13,600 (2005)

**HCADT**

**Functional Class.** URB/MINOR ART

**Bridge Roadway Width** 52.0 ft

**Vertical Clearance**

**Max. Vert. Clear.**

**Horizontal Clear.** 51.9 ft

**Lateral Clr. - Lt/Rt**

**Appr. Surface Width** 37.0 ft

**Bridge Roadway Width** 52.0 ft

**Median Width on Bridge**

## STRUCTURE

**Number of Spans**

MAIN: 3  APPR: 0  TOTAL: 3

**Main Span Type** CSTL BEAM SPAN

**Main Span Length** 121.0 ft

**Structure Length** 320.7 ft

**Deck Width** 58.8 ft

**Deck Material** C-I-P CONCRETE

**Wear Surf Type** LOW SLUMP CONC

**Wear Surf Install Year** 1981

**Wear Course/Fill Depth** 0.25 ft

**Deck Membrane** NONE

**Decks** NONE

**Deck Rebars Install Year**

**Structure Area** 18,857 sq ft

**Roadway Area** 16,673 sq ft

**Sidewalk Width - L/R** 1.5 ft 3.0 ft

**Curb Height - L/R** 0.67 ft 0.67 ft

**Rail Codes - L/R** 19 19

## INSPECTION

**Deficient Status** S.D.

**Sufficiency Rating** 54.0

**Last Inspection Date** 06-12-2015

**Inspection Frequency** 12

**Inspector Name** HENNEPIN COUNTY

## NBI CONDITION RATINGS

**Deck** 3 % UNSOUND

**Superstructure**

**Substructure**

**Channel**

**Culvert**

## SAFETY FEATURES

**Bridge Railing**

**GR Transition**

**Approach Alignment**

**Underwater**

## DEPTH INSPECTION

**Frac. Critical**

**Underwater**

**Pinned Asbly.**

## WATERWAY

**Drainage Area**

**Waterway Opening** 945 sq ft

**Navigation Control** NO PRMT REQD

**Pier Protection**

**Nav. Vert./Horz. Clr.**

**Nav. Vert. Lift Bridge Clear.**

**MN Scour Code** I-LOW RISK

**Scour Evaluation Year** 1991

## CAPACITY RATINGS

**Design Load** H 20

**Operating Rating** HS 35.70

**Inventory Rating** HS 21.40

## POSTING

**Posting**

**Rating Date** 01-23-2013

**Overweight Permit Codes** A: N  B: N  C: N

## MISCELLANEOUS BRIDGE DATA

**Structure Flared**

**Parallel Structure**

**Field Conn. ID**

**Cantilever ID**

**Foundations**

**Abut.** CONC - FTG PILE

**Pier** CONC - FTG PILE

**Historic Status** NOT ELIGIBLE

**On - Off System**

## PAINT

**Year Painted** 1981

**Pct. Unsound** 5 %

**Painted Area** 29,100 sf

**Primer Type** ORGANIC ZINC

**Finish Type** VINYL

## BRIDGE SIGNS

**Posted Load** NOT REQUIRED

**Traffic** NOT REQUIRED

**Horizontal** OBJECT MARKERS

**Vertical** NOT APPLICABLE

## IN DEPTH INSP.

**Status** A-OPEN
INSPECTION REPORT

BRIDGE 27516  CSAH 19 OVER NARROWS CHAN; CIRCLE RD

County: HENNEPIN  Location: 0.8 Mi S OF JCT CSAH 15
City: ORONO  Route: CSAH 19  Ref. Plt.: 003+00.410
Township:  Control Section:  Maint. Area:  
Section: 21 Township: 117N Range: 23W  Local Agency Bridge Nbr:  
Span Type:  CSTL BEAM SPAN  
NBI Deck: 5  Super: 6  Sub: 4  Chan: 7  Culv: N  
Open, Posted, Closed: OPEN

Appraisal Ratings - Approach: 6  Waterway: 8  
MN Scour Code:  
Def. Stat: S.D.  Suff. Rate: 54.0

Required Bridge Signs - Load Posting: NOT REQUIRED  Traffic: NOT REQUIRED
Horizonal: OBJECT MARKERS  Vertical: NOT APPLICABLE

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<thead>
<tr>
<th>ELEM NBR</th>
<th>ELEMENT NAME</th>
<th>INSP. DATE</th>
<th>QUANTITY</th>
<th>QTY CS 1</th>
<th>QTY CS 2</th>
<th>QTY CS 3</th>
<th>QTY CS 4</th>
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<tr>
<td>800</td>
<td>CRITICAL DEF'S OR SAFETY HAZARDS</td>
<td>06-12-2015</td>
<td>1 EA</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
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</table>

Notes: No critical structural deficiencies or serious safety hazards are present on this structure.

12  REINFORCED CONCRETE DECK

Notes: 359. Many rust spots in coping from exp rebar chairs. Some cracks w/ rust & efflor. Numerous trans cracks, some w/ efflor. Minor honeycomb area near N & S piers. Many delam areas & spalls w/ rebar exp & rust throughout bridge. 1' X 4' delam @ N abut. CENTER SPAN: Delam areas & spalls near mid span w/ rusted rebar & some near splice plates. 2 areas near counterculture point are delam & have rusted rebar. Numerous map cracks & few long cracks. Minor section loss on some exp rebars. Copings spalled in numerous places. '13-W side coping spalled in numerous areas. Rust spots from chairs @ dripline for entire length of bridge. Many spalls w/ rebars exp and large delams in center span @ const j/pter splice @ N end. '14-delams & spall above N abut in W 2 bays. 115 SF of spalls w/ rebar exp & 5 SF w/o rebar; 10 SF of delam; 530 LF of trans cracks w/ efflor and 145 SF of map cracking; 165 SF of popouts and scale. '15-135 SF of spall w/ rebar exp; 20 SF of delam.

510  WEARING SURFACE

Notes: 358. Rigid O/L cracked long the length of bridge @ all 3 construction joints. Many trans & long cracks. '13-Most cracks sealed. Unsealed cracks are minor in size and >10' apart. '14-no change. '15-some unsealed cracks are mod in size. Density is >10'.

810  CONC WEAR SURF-CRACKING SEALING

Notes: 300. Sand in both joints. Seal cracked. Both abut joints are tight. South-Seal is possibly pulled out of extrusion & leaking on abut. '13-minor spalling of deck adj to jl. When viewed from underneath, jl is open 1-1/4"-1-1/2". '14-partially filled w/ sand. Joint opened 1" on top. 2' of seal out & 2' partially out. North-'13-jt is open 1/2"-3/4". '15-joint is opened 3/4" and partially filled. Minor deck spalls adj to joint.

301  POURRED SEAL JOINT

Notes: 331. Reinforced Conc bridge railing. 333. Spalls & rust spots @ vert cracks in railbases. Several spalls in both rails. Minor random cracking NE & NW end post. '13-a 6" spall in SW rail post behind guardrail. Most vert cracks sealed. Small pieces of 2 metal rail posts gone, +/-50' from NW corner. Posts scraped in NW. NE rail post has many cracks. Corner rail posts cracked across top. '14-3' spall on bottom of W rail over S seawall. 6" spall in SE post behind guardrail. '15-small piece of 3 metal rail posts gone.

515  STEEL PROTECTIVE COATING

333. Spalls & rust spots @ vert cracks in railbases. Several spalls in both rails. Minor random cracking NE & NW end post. '13-a 6" spall in SW rail post behind guardrail. Most vert cracks sealed. Small pieces of 2 metal rail posts gone, +/-50' from NW corner. Posts scraped in NW. NE rail post has many cracks. Corner rail posts cracked across top. '14-3' spall on bottom of W rail over S seawall. 6" spall in SE post behind guardrail. '15-small piece of 3 metal rail posts gone.

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<tr>
<th>Code</th>
<th>Description</th>
<th>Quantity</th>
<th>Description</th>
<th>Condition</th>
<th>Notes</th>
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<tbody>
<tr>
<td>822</td>
<td>BITUMINOUS APPROACH ROADWAY</td>
<td>06-12-2015</td>
<td>2 EA</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>822</td>
<td>Notes:</td>
<td></td>
<td>320. N Approach. Cracked &amp; spalled @ back of parapet. '13-mod - large spalls. '14-spalls have been filled w/ bit. Long cracks in travel lanes. '15-no change.</td>
<td></td>
<td></td>
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</tbody>
</table>

Notes: [2016] Migrator used inventory quantity of 29,100 SF and estimated the condition states.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Quantity</th>
<th>Description</th>
<th>Condition</th>
<th>Notes</th>
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<tr>
<td>515</td>
<td>STEEL PROTECTIVE COATING</td>
<td>06-12-2015</td>
<td>29,100 SF</td>
<td>26,269</td>
<td>0</td>
</tr>
<tr>
<td>515</td>
<td>Notes:</td>
<td></td>
<td>[2016] Migrator added 40 LF to abutment quantity to account for wingwalls (CS1:40 CS2:0 CS3:0 CS4:0). Water on seats of both. North-parapet is broken away and leaning to S, it is shoved by conc roadway. Cracks &amp; spalls in parapet wall were repaired w/ epoxy, which is cracked. Large spalls w/ rebar exp &amp; rusted on seat. Many cracks &amp; delams w/ efflor in seat. '13-large horiz cracks in face of seat. Many of these are located under bearings. No water standing. '15-water standing on seat. Parapet is out of position because of severe delam, crack. South-vert cracks w/ efflor in parapet &amp; seat &amp; rust stains thru horiz cracks. Some cracks &amp; delams w/ efflor in seat and parapet. '14-125 LF of minor rust on beams. '15-fascias have surface rust on bottom flange for entire length.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: (2016) Migrator added 40 LF to abutment quantity to account for wingwalls (CS1:40 CS2:0 CS3:0 CS4:0).
215. Water on seats of both. North-parapet is broken away and leaning to S, it is shoved by conc roadway. Cracks & spalls in parapet wall were repaired w/ epoxy, which is cracked. Large spalls w/ rebar exp & rusted on seat. Many cracks & delams w/ efflor in seat. '13-large horiz cracks in face of seat. Many of these are located under bearings. No water standing. '15-water standing on seat. Parapet is out of position because of severe delam, crack. South-vert cracks w/ efflor in parapet & seat & rust stains thru horiz cracks. Some cracks & delams w/ efflor in seat and parapet. '14-125 LF of minor rust on beams. '15-fascias have surface rust on bottom flange for entire length. |
### OTHER BRIDGE SIGNING

**Date:** 06-12-2015  
**Qty:** 1 EA  
**Remarks:** 0  
**Condition:** 1  
**Note:** 0

**Notes:**
- 981. Horiz clearance marker X4-4 & No Fishing Or Standing On Bridge sign @ NW & SE approaches. X4-5 missing in NE, SE & NW. Small X4-4 in SW. No Parking @ NW & NE. '13-no change. '14-Adopt A Highway sign in SW. '15-35 MPH sign in SW.

---

### SLOPES & SLOPE PROTECTION

**Date:** 06-12-2015  
**Qty:** 1 EA  
**Remarks:** 0  
**Condition:** 1  
**Note:** 0

**Notes:**
- 985. Trans & a few long cracks in both. Waterproof membrane is pulled away @ both. Top of both slopes have a 6" gap @ abuts. North-some settlement on top on W side. '13-6" x 5' spall @ top. '15-spall in top under 2nd bay from W is 6" x 6' w/ rebar exp. South-'13-minor-mod cracking. Few small delams beginning to occur. '14<-1 SF spall in S paving @ W end. '15-slope beginning to settle around utility pipe on W end.

---

### GUARDRAIL

**Date:** 06-12-2015  
**Qty:** 1 EA  
**Remarks:** 0  
**Condition:** 1  
**Note:** 0

**Notes:**
- 982. Guardrail approach ends are turned down except in SW & NE. Minor damage @ all corners. '13-spacer blocks twisted @ all corners. '14-several rail posts in SE are broken. Post also broken in NW. '15-no change.

---

### DECK & APPROACH DRAINAGE

**Date:** 06-12-2015  
**Qty:** 1 EA  
**Remarks:** 1  
**Condition:** 0  
**Note:** 0

**Notes:**
- 984. Deck drains were plugged when O/L was repaired in '81. '13-no change. '14-same. '15-same.

---

### SIDEWALK, CURB, & MEDIAN

**Date:** 06-12-2015  
**Qty:** 1 EA  
**Remarks:** 0  
**Condition:** 1  
**Note:** 0

**Notes:**
- 986. Sealed trans cracks in curbs. Some moderate spalling on face of curb. '14-several spalls on curb are <1 SF. '15-horiz cracks, some w/ rebar exp in E curb.

---

### MISCELLANEOUS ITEMS

**Date:** 06-12-2015  
**Qty:** 1 EA  
**Remarks:** 1  
**Condition:** 0  
**Note:** 0

**Notes:**
- 988. At high water, channel overflows N seawall to N of P1. Evidence of flowing water from S of N toe of slope to S side of P1. 6" pipe behind W fascia beam is resting on diaphragms. Telephone line along top of S pier. 3 conduits in curb on E side. Buried fiber optic cable E of bridge. Some conc crib wall members are cracked, deteriorated & spalled w/ rebar exp & rusted. Seawall & parking @ S end under bridge. MH, GV & shutoffs @ span 1 on E side. Cut tree @ SW approach. See inspection report SW-19-A for seawalls @ Narrows channel.

---

### PROTECTED SPECIES

**Date:** 06-12-2015  
**Qty:** 1 EA  
**Remarks:** 1  
**Condition:** 0  
**Note:** 0

**Notes:**
- Use this element to track the presence of protected species living on this structure.

---

**General Notes:**
- Bridge 27516 CSAH 19 / Narrows Channel 6/12/15 JDE & PTH. 60' Snooper over E side only. Snooper on shoulder.
- Recommended Repairs:
  215. Repair abut seats. Repairing N abut parapet wall would be major repair-it is structurally adequate @ present. Hinged @ seat & supported @ deck-monitor for changes.
  301. Repair poured joints.
  320 & 407. Repair roadway spalls & large cracks @ ends of bridge.
  407. Ramp S bit approach w/ bit
  981. Replace signs: X4-5 @ SE, NE & NW.
  982. Repair guardrail posts in SE & NW.
  985. Fill gap & replace seal @ top of slope paving @ abuts.
  988. Cut tree @ E end of N pier for snooper access.

---
## MINNESOTA BRIDGE INSPECTION REPORT
### OLD ELEMENT SYSTEM

**BRIDGE 27516**  
**CSAH 19 OVER NARROWS CHAN; CIRCLE RD**  
**INSP. DATE: 06-12-2015**

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<th>ELEMENT NAME</th>
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<td>06-13-2014</td>
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</table>

Notes:  
[22. Very numerous trans & long cracks & spalls. Minor spall in SBL. '13-some areas of scaling. Cracks sealed since last inspection. Bit patched spall in SB @ N end. Several small(<1 sf) spalls filled w/ epoxy in SB @ S end. '14-deck spalls @ poured joints. 2' x 8" & 3' x 8" spall w/ rebar exp in W face of main span. '15-epoxy repairs in SBL have deteriorated. Few unsealed cracks are moderate in size.]

| 300      | STRIP SEAL JOINT  | 4 06-12-2015   | 115 LF   | 1        | 79       | 35       | N/A      | N/A      |
|          |                    | 06-13-2014     | 115 LF   | 1        | 79       | 35       | N/A      | N/A      |

Notes:  
[300. Sand in both joints. Seal cracked. Both abut joints are tight. South-Seal is possibly pulled out of extrusion & leaking on abut. '13-minor spalling of deck adj to jt. When viewed from underneath, jt is open 1-1/4"-1-1/2". '14-partially filled w/ sand. Joint opened 1" on top. 2' of seal out & 2' partially out. North-'13-jt is open 1/2"-3/4". '15-joint is opened 3/4" and partially filled. Minor deck spalls adj to joint.]

| 301      | POURLED DECK JOINT| 4 06-12-2015   | 118 LF   | 0        | 83       | 35       | N/A      | N/A      |
|          |                    | 06-13-2014     | 118 LF   | 0        | 83       | 35       | N/A      | N/A      |

Notes:  
[301. Numerous small spalls & joints deteriorated. '13-some spalls filled w/ epoxy. Changed qty to reflect the 2 poured joints over the beam splices in the span over the channel. '14-conc spalled @ joints. Material missing from both joints. '15-no change.]

| 320      | CONC APPR SLAB-BITOL| 2 06-12-2015 | 1 EA     | 0        | 1        | 0        | 0        | N/A      |
|          |                    | 06-13-2014     | 1 EA     | 0        | 1        | 0        | 0        | N/A      |

Notes:  
[320. N Approach. Cracked & spalled @ back of parapet. '13-mod - large spalls. '14-spalls have been filled w/ bit. Long cracks in travel lanes. '15-no change.]

| 407      | BITUMINOUS APPROACH| 4 06-12-2015 | 1 EA     | 0        | 1        | 0        | 0        | N/A      |
|          |                    | 06-13-2014     | 1 EA     | 0        | 1        | 0        | 0        | N/A      |

Notes:  
[407. S approach. Cracks & spalling @ joint. '13-approach & curb settled 2" in SW. Large long & trans cracks. '14-qty changed-S approach only. Settlement in SW is now 2-1/2". Travel lanes settled 1/2". '15-no change.]

| 333      | RAILING - OTHER    | 4 06-12-2015   | 636 LF   | 0        | 636      | 0        | N/A      | N/A      |
|          |                    | 06-13-2014     | 636 LF   | 0        | 636      | 0        | N/A      | N/A      |

Notes:  
[333. Spalls & rust spots @ vert cracks in railbases. Several spalls in both rails. Minor random cracking NE & NW end post. '13-a 6" spall in SW rail post behind guardrail. Most vert cracks sealed. Small pieces of 2 metal rail posts gone, +/-50' from NW corner. Posts scraped in NW. NE rail post has many cracks. Corner rail posts cracked across top. '14-3' spall on bottom of W rail over S seawall. 6" spall in SE post behind guardrail. '15-small piece of 3 metal rail posts gone.]

| 107      | PAINTED STEEL GIDER| 3 06-12-2015 | 2,241 LF | 2,023    | 204      | 0        | 4        | 0        |
|          |                    | 06-13-2014     | 2,241 LF | 2,023    | 204      | 0        | 4        | 0        |

Notes:  
[107. Paint flaking off @ several areas. Rust @ several locations especially @ top flanges & abuts. Some minor rust @ some areas of top & bottom flanges of fascia girders. Riveted splice plates. Paint blistered & peeled in some areas. Top flange rusted @ most splices. '13-bottom ext flange of both fascias have paint failure & rusting. Rust starting @ top flange splices in center span of all girders. '14-125 LF of minor rust on beams. '15-fascias have surface rust on bottom flange for entire length.]

| 380      | SECONDARY ELEMENTS | 2 06-12-2015 | 1 EA     | 1        | 0        | 0        | 0        | N/A      |
|          |                    | 06-13-2014     | 1 EA     | 1        | 0        | 0        | 0        | N/A      |

Notes:  
[380. Steel diaphragms are riveted x-bracing. X-bracing bottom bracket bent over main span in N end of bay 2. '13-mod rusting on several N abut diaphragms. '14-no change. '15-same.]

| 311      | EXPANSION BEARING  | 3 06-12-2015 | 18 EA    | 11       | 7        | 0        | N/A      | N/A      |
|          |                    | 06-13-2014     | 18 EA    | 11       | 7        | 0        | N/A      | N/A      |

Notes:  
[311. Removed, blasted, painted assemblies & installed new pins on all abut bearings in '07 & '08. Minor surface rust on fascia bearings of S pier. '13-paint flaking on S abut bearings w/ minor-mod surface rust. Mod surface rust on most bearings of N abut. N abut bearings are vertical @ 75 deg air temp. '14-no change. '15-N abut bearings are vert @ 70 deg.]
### MINNESOTA BRIDGE INSPECTION REPORT

**OLD ELEMENT SYSTEM**

#### BRIDGE 27516
**CSAH 19 OVER NARROWS CHAN; CIRCLE RD**

**INSP. DATE: 06-12-2015**

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**Notes:**

- **313.** At P2. Surface rust on fascia bearings. '13-no change. '14-no change. '15-same.

- **205.** '14-minor paint flaking @ P1. 10 LF of very minor vert cracks in S face of W column @ P2. '15-no change.

- **215.** Water on seats of both. North-parapet is broken away and leaning to S, it is shoved by conc roadway. Cracks & delams w/ efflor in seat. '13-large horiz cracks in face of seat. Many of these are located under bearings. No water standing. '15-water standing on seat. Parapet is out of position because of severe delam, crack. South-vert cracks w/ efflor in parapet & seat & rust stains thru horiz cracks. Some cracks & delams w/ efflor in seat and parapet. '13-delams in parapet. Horiz crack w/ rust in center @ base of parapet. Spall in seat of W bay. Vert cracks every 3'-6'. Several horiz cracks in face of seat are under bearings. No water standing. At center joint, abut is tipped back 1/2" in 4'. '14-no water on seats. '15-no change.

- **387.** Fine crack in P2 cap under B5. '13-hairline diag crack in S face of P2 under B1 bearing. Hairline horiz crack in E half of S face of P2. Fine crack in P1 under B5. '14-no change. '15-same.

- **358.** Rigid O/L cracked long the length of bridge @ all 3 construction joints. Many trans & long cracks. '13-Most cracks sealed. Unsealed cracks are minor in size and >10' apart. '14-no change. '15-some unsealed cracks are mod in size. Density is >10'.

- **359.** Many rust spots in coping from exp rebar chairs. Some cracks w/ rust & efflor. Numerous trans cracks, some w/ efflor. Minor honeycomb area near N & S piers. Many delam areas & spalls w/ rebar exp & rust throughout bridge. 1' X 4' delam @ N abut. CENTER SPAN: Delam areas & spalls near mid span w/ rusted rebar & some near splice plates. 2 areas near counterculture point are delam & have rusted rebar. Numerous map cracks & few long cracks. Minor section loss on some exp rebars. Copings spalled in numerous places. '13-W side coping spalled in numerous areas. Rust spots from chairs @ dripline for entire length of bridge. Many spalls w/ rebars exp and large delams in center span @ const j/girder splice @ N end. '14-delams & spall above N abut in W 2 bays. 115 SF of spalls w/ rebar exp & 5 SF w/o rebar; 10 SF of delam; 530 LF of trans cracks w/ efflor and 145 SF of map cracking; 165 SF of popouts and scale. '15-135 SF of spall w/ rebar exp; 20 SF of delam.

- **360.** S abut is tipped back 1/2" in 4' @ center const joint. Continue to monitor.

- **964.** Horiz clearance marker X4-4 & No Fishing Or Standing On Bridge sign @ NW & SE approaches. X4-5 missing in NE, SE & NW. Small X4-4 in SW. No Parking @ NW & NE. '13-no change. '14-Adopt A Highway sign in SW. '15-35 MPH sign in SW.
# MINNESOTA BRIDGE INSPECTION REPORT
## OLD ELEMENT SYSTEM

**BRIDGE 27516**  
**CSAH 19 OVER NARROWS CHAN; CIRCLE RD**  
**INSP. DATE:** 06-12-2015

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</table>

Notes: 982. Guardrail approach ends are turned down except in SW & NE. Minor damage @ all corners. '13-spacer blocks twisted @ all corners. '14-several rail posts in SE are broken. Post also broken in NW. '15-no change.

| 984      | DRAINAGE       | 2   | 06-12-2015 | 1 EA     | 1        | 0        | 0        | N/A      | N/A      |
|          |                |     | 06-13-2014 | 1 EA     | 1        | 0        | 0        | N/A      | N/A      |

Notes: 984. Deck drains were plugged when O/L was repaired in '81. '13-no change. '14-same. '15-same.

| 985      | SLOPES         | 2   | 06-12-2015 | 1 EA     | 0        | 1        | 0        | N/A      | N/A      |
|          |                |     | 06-13-2014 | 1 EA     | 0        | 1        | 0        | N/A      | N/A      |

Notes: 985. Trans & a few long cracks in both. Waterproof membrane is pulled away @ both. Top of both slopes have a 6" gap @ abuts. North-some settlement on top on W side. '13-6" x 5" spall @ top. '15-spall in top under 2nd bay from W is 6" x 6" w/ rebar exp. South-13-minor-mod cracking. Few small delams beginning to occur. '14-<1 SF spall in S paving @ W end. '15-slope beginning to settle around utility pipe on W end.

| 986      | CURB & SIDEWALK| 2   | 06-12-2015 | 1 EA     | 1        | 0        | 0        | N/A      | N/A      |
|          |                |     | 06-13-2014 | 1 EA     | 1        | 0        | 0        | N/A      | N/A      |

Notes: 986. Sealed trans cracks in curbs. Some moderate spalling on face of curb. '14-several spalls on curb are <1 SF. '15-horiz cracks, some w/ rebar exp in E curb.

| 988      | MISCELLANEOUS  | 2   | 06-12-2015 | 1 EA     | 1        | 0        | 0        | N/A      | N/A      |
|          |                |     | 06-13-2014 | 1 EA     | 1        | 0        | 0        | N/A      | N/A      |

Notes: 988. At high water, channel overflows N seawall to N of P1. Evidence of flowing water from S of N toe of slope to S side of P1. 6" pipe behind W fascia beam is resting on diaphragms. Telephone line along top of S pier, 3 conduits in curb on E side. Buried fiber optic cable E of bridge. Some conc crib wall members are cracked, deteriorated & spalled w/ rebar exp & rusted. Seawall & parking @ S end under bridge. MH, GV & shutoffs @ span 1 on E side. Cut tree @ SW approach. See inspection report SW-19-A for seawalls @ Narrows channel.

General Notes: *Bridge 27516 CSAH 19 / Narrows Channel 6/12/15 JDE & PTH. 60' Snooper over E side only. Snooper on shoulder.

Recommended Repairs:

- 215. Repair abut seats. Repairing N abut parapet wall would be major repair-it is structurally adequate @ present.
- Hinged @ seat & supported @ deck-monitor for changes.
- 301. Repair poured joints.
- 320 & 407. Repair roadway spalls & large cracks @ ends of bridge.
- 407. Ramp S bit approach w/ bit
- 981. Replace signs: X4-5 @ SE, NE & NW.
- 982. Repair guardrail posts in SE & NW.
- 985. Fill gap & replace seal @ top of slope paving @ abuts.
- 988. Cut tree @ E end of N pier for snooper access.
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<td>11:00 PM</td>
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</tr>
</tbody>
</table>

Totals

| Combined       | 0    | 0    | 0    | 0    | 5190 | 4168 | 7377 | 6540 | 1766 | 2246 | 0    | 0    | 0    | 0    | 7166.5| 6477.0|

Split (%)

| -    | -    | -    | -    | 55.5 | 44.5 | 53.0 | 47.0 | 44.0 | 56.0 | -    | -    | -    | -    | -    | 52.5 | 47.5 |

| Peak Hours |

| 12:00 AM - 12:00 PM | -    | -    | -    | -    | 11:00 | 11:00 | 8:00 | 7:00 | 8:00 | 7:00 | -    | -    | -    | -    | 8:00 AM | 7:00 AM |
| Active Volume      | 349  | 365  | 408  | 568  | 385  | 550  | -    | -    | -    | -    | 396.5| 559.0 |

| 12:00 AM - 12:00 PM | -    | -    | -    | -    | 4:00  | 5:00  | 5:00 | 4:00 | -    | -    | -    | -    | -    | -    | 5:00 PM | 5:00 PM |
| Active Volume      | 701  | 480  | 815  | 465  | -    | -    | -    | -    | -    | -    | 757.0| 458.0 |

RAW TOTAL: 13,644
ADJUSTMENT FACTOR: 1.146

2016 AADT: 11,900
Sierra,

Here is the data you requested. It is generated from the model runs from the most recent update of the Council’s 2040 Transportation Policy Plan and is based in the four-step trip-based regional travel demand forecast model.

<table>
<thead>
<tr>
<th>Project</th>
<th>Forecast Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSAH 15 (Shoreline Dr) Bridge Replacement</td>
<td>20,900</td>
</tr>
<tr>
<td>CSAH 19 (Manitou Rd/Shadywood Rd) Bridge Rehabilitation</td>
<td>16,200</td>
</tr>
<tr>
<td>CSAH 23 (Marshall St NE)</td>
<td>10,500</td>
</tr>
<tr>
<td>CSAH 32 (Penn Ave) Reconstruction</td>
<td>16,200 (Note: The 2014 AADT you cite of 12,800 is actually outside your project area. 10,800 is the only AADT reported in your project area)</td>
</tr>
<tr>
<td>CSAH 66 (Golden Valley Rd) Reconstruction</td>
<td>19,900 (West of Noble Ave.)</td>
</tr>
<tr>
<td></td>
<td>10,200 (East of Indiana Ave.)</td>
</tr>
<tr>
<td>CSAH 81 (Bottineau Blvd) Expansion</td>
<td>51,100</td>
</tr>
<tr>
<td>CSAH 81 (Broadway Ave) Bridge Replacement</td>
<td>24,700</td>
</tr>
<tr>
<td>CSAH 152 (Webber Pkwy) Reconstruction</td>
<td>This roadway is not in the regional model. The model links in the area show an annualized growth rate of 0.5%. When applied to the 13,700 2013 volume, this grows to 16,100.</td>
</tr>
</tbody>
</table>

If you have any questions, please feel free to contact me.
Greetings Mark,

I’m writing to request 2040 Forecast AADT information for the Regional Solicitation. Below is the list of projects with our most recent adjusted traffic counts. Project location maps are attached, in the same order as the list below:

- CSAH 15 (Shoreline Dr) Bridge Replacement (Over Browns Bay/Tanager Channel): **16,500** (2014 AADT)
- CSAH 19 (Manitou Rd/Shadywood Rd) Bridge Rehabilitation (Over Narrows Channel): **11,900** (2016 AADT)
- CSAH 23 (Marshall St NE) Reconstruction: **8,800** (2016 AADT)
- CSAH 32 (Penn Ave) Reconstruction: **12,800** (2014 AADT)
- CSAH 66 (Golden Valley Rd) Reconstruction: **11,900** (2016 AADT)
- CSAH 81 (Bottineau Blvd) Expansion (4-lane divided to 6-lane divided): **21,400** (2013 AADT)
- CSAH 81 (Broadway Ave) Bridge Replacement (Over CSAH 153 [Lowry Ave]): **12,100** (2016 AADT)
- CSAH 152 (Webber Pkwy) Reconstruction: **13,700** (2013 AADT)

Please let me know if you need any additional information, and thank you!

Sierra Saunders
Multimodal Planner
Hennepin County Public Works
1600 Prairie Drive, Medina, MN 55340

Office: 612.596.0364
sierra.saunders@hennepin.us

Disclaimer: If you are not the intended recipient of this message, please immediately notify the sender of the transmission error and then promptly delete this message from your computer system.
Public Transportation Routes
City of Orono
Minnesota

MAP 4A-5

0 4500 9000
Scale in feet

Current Metro Transit Bus Route
Park & Ride Facilities

Bonestroo
Full Listing of Planned 2040 Bikeway System Segments

Figure 1 Planned 2040 Bikeway System Corridors Map

The map in Figure 1 shows the planned 2040 Bikeway System Corridors in Hennepin County. The map is a draft and includes a legend indicating planned bikeway segments. A specific project location is marked on the map.

Legend:
- Planned Bikeway Segments
- Top 15 Planned Bikeway Segments

This map is for informational purposes only and is not to be used for legal or financial decisions. It was prepared by Hennepin County Transportation Department for the Hennepin County Bicycle Transportation Plan. Any changes or updates to the plan may affect the map's accuracy.
The Narrows is a landmark for Lake Minnetonka, and it falls at a point that allows for trail users to move from one side of the corridor to the other. While the concepts might rely on this area as a means of safely traversing the corridor, the route is sufficiently long that trail users may choose to avoid the looping movements that would otherwise help them avoid cars on County Road 19. The public realm of the loop should attract trail users, with signage and landscaping, so that they not only use the loop but can experience the Narrows.
June 06, 2016

James N. Grube, P.E.
Hennepin County Engineer
Transportation Department
1600 Prairie Drive
Medina, MN 55340

Re: Support for Regional Solicitation Application
CSAH 19 (Shadywood Road) Bridge Rehabilitation over Narrows Channel

Dear Mr. Grube:

The City of Orono supports Hennepin County’s federal funding application through the Regional Solicitation for the proposed rehabilitation of the CSAH 19 (Shadywood Road) bridge over the Narrows Channel.

The city supports this county project to rehabilitate the existing bridge with improvements to the bridge deck, approach panel, abutment wall and joints, in addition to sand blasting and repainting the beams and bearing assemblies. These improvement will enhance the livability and quality of life for Orono and Hennepin County residents.

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

Sincerely,

[Signature]

Adam Edwards, P.E.
Director of Public Works/City Engineer
June 22, 2016

James N. Grube, P.E.
Hennepin County Engineer
Transportation Department
1600 Prairie Drive
Medina, MN 55340

Re: Support for Regional Solicitation Application
CSAH 19 (Shadywood Road) Bridge Rehabilitation over the Narrows Channel

Dear Mr. Grube:

The City of Tonka Bay supports Hennepin County’s federal funding application through the Regional Solicitation for the proposed rehabilitation of the CSAH 19 (Shadywood Road) bridge over the Narrows Channel.

The city supports this county project to rehabilitate the existing bridge with improvements to the bridge deck, approach panel, abutment wall and joints in addition to sand blasting and repainting the beams and bearing assemblies. These improvements will enhance the livability and quality of life for Tonka Bay and Hennepin County residents.

Thank you for making us aware of this application effort and the opportunity to provide our support. The city looks forward to working with you on this project.

Sincerely,

Lindy Crawford
City Administrator