

### 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**

Name:*	Salutation	Carla First Name	J Middle Name	Stueve Last Name
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Department:				
Email:	Carla.Stueve@	hennepin.us		
Address:	1600 Prairie D	rive		
*	Medina	Minneso	ta	55340
	City	State/Provinc	e	Postal Code/Zip
Phone:*	612-596-0356			
	Phone		Ext.	
Fax:				
What Grant Programs are you most interested in?	Regional Solic Elements	itation - Roadwa	ays Includir	ng Multimodal

### **Organization Information**

Name:

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** 

Primary County where the Project is Located

CSAH 19 (Shadywood Road) over Narrows Channel Bridge (No. 27516) Rehabilitation

Hennepin

Jurisdictional Agency (If Different than the Applicant):

Brief Project Description (Limit 2,800 characters; approximately 400 words)

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.

Include location, road name/functional class, type of improvement, etc.

<u>TIP Description Guidance</u> (will be used in TIP if the project is selected for funding) Project Length (Miles)

CSAH 19 OVER NARROWS CHANNEL - REHAB BR. 27516

0.12

### **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 co

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:

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.

### **Project Information-Roadways**

County, City, or Lead Agency	Hennepin County
Functional Class of Road	A Minor Arterial (Expander)
Road System	CSAH
TH, CSAH, MSAS, CO. RD., TWP. RD., CITY STREET	
Road/Route No.	19
i.e., 53 for CSAH 53	
Name of Road	Shadywood Road
Example; 1st ST., MAIN AVE	
Zip Code where Majority of Work is Being Performed	55391
(Approximate) Begin Construction Date	04/12/2021
(Approximate) End Construction Date	11/19/2021
TERMINI:(Termini listed must be within 0.3 miles of any wo	ork)
From: (Intersection or Address)	Approximatly 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.	
SIDEWALK, CURB AND GUTTER,STORM SEWER, SIGNALS, LIGHTING, GUARDRAIL, BIKE PATH, PED RAMPS,	
SIDEWALK, CURB AND GUTTER,STORM SEWER, SIGNALS, LIGHTING, GUARDRAIL, BIKE PATH, PED RAMPS, BRIDGE, PARK AND RIDE, ETC.	27516
SIDEWALK, CURB AND GUTTER,STORM SEWER, SIGNALS, LIGHTING, GUARDRAIL, BIKE PATH, PED RAMPS, BRIDGE, PARK AND RIDE, ETC. BRIDGE/CULVERT PROJECTS (IF APPLICABLE)	

### **Specific Roadway Elements**

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES

Mobilization (approx. 5% of total cost)	\$0.00
Removals (approx. 5% of total cost)	\$0.00
Roadway (grading, borrow, etc.)	\$0.00
Roadway (aggregates and paving)	\$0.00
Subgrade Correction (muck)	\$0.00
Storm Sewer	\$0.00
Ponds	\$0.00
Concrete Items (curb & gutter, sidewalks, median barriers)	\$0.00
Traffic Control	\$0.00
Striping	\$0.00
Signing	\$0.00
Lighting	\$0.00
Turf - Erosion & Landscaping	\$0.00
Bridge	\$1,900,000.00
Retaining Walls	\$0.00
Noise Wall (do not include in cost effectiveness measure)	\$0.00
Traffic Signals	\$0.00
Wetland Mitigation	\$0.00
Other Natural and Cultural Resource Protection	\$0.00
RR Crossing	\$0.00
Roadway Contingencies	\$0.00
Other Roadway Elements	\$0.00
Totals	\$1,900,000.00

## **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	\$0.00

Wayfinding	\$0.00
Bicycle and Pedestrian Contingencies	\$0.00
Other Bicycle and Pedestrian Elements	\$0.00
Totals	\$0.00

## 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**

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

Totals	
Total Cost	\$1,900,000.00
Construction Cost Total	\$1,900,000.00
Transit Operating Cost Total	\$0.00

### **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, 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.

List the goals, objectives, strategies, and associated pages:

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 surface.

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)

List the applicable documents and pages:

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.

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

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.

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

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.

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

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.

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

#### **Roadways Including Multimodal Elements**

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

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

#### Roadway Expansion and Reconstruction/Modernization projects only:

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

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

#### Bridge Rehabilitation/Replacement 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 MnDOTs 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. Yes

4. The bridge must carry vehicular traffic. Bridges can carry traffic from multiple modes. However, bridges that <u>are exclusively</u> 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

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

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

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.

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

#### **Requirements - Roadways Including Multimodal Elements**

Measure A	A: Functional	Classification
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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 timesensitive 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

Location	CSAH 19 south of Lafayette Road
Current AADT Volume	11900.0
Existing Transit Routes on the Project:	671
Upload Transit Map	1466539059810_CSAH 019 (Shadywood Road) Bridge - Transit Connections.pdf

Response (Limit 1,400 characters; approximately 200 words)

<b>Response: Current</b>	Daily Person	Throughput
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Average Annual Daily Transit Ridership	0
Current Daily Person Throughput	15470.0

### Measure B: 2040 Forecast ADT

Use Metropolitan Council model to determine forecast (2040) ADT volume	Yes
METC Staff - Forecast (2040) ADT volume	0
OR	
Approved county or city travel demand model to determine forecast (2040) ADT volume	No
Forecast (2040) ADT volume	16200.0

### 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.

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

Upload Map

1466794943786\_CSAH 019 (Shadywood Road) Bridge - SocioEconomic.pdf

### Measure B: Affordable Housing

	City/Township	Segment Length in Miles (Population)
Orono		1527.0
Shorewood		2920.0
Spring Park		1997.0
Tonka Bay		1591.0
		8035

### **Total Project Length**

Total Project Length (Total Population)

0.12

### Affordable Housing Scoring - To Be Completed By Metropolitan Council Staff

City/Township	Segment Length (Miles)	Total Length (Miles)	Score		Segment Length/Total Length	Housing Score Multiplied by Segment percent	9
		0		0	0	(	)

### 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

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

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			
РМ			

PM	Yes	
Document Status:		
Document approved (include copy of signed cover sheet)	100%	
Document submitted to State Aid for review	75% d	ate submitted
Document in progress; environmental impacts identified; review request letters sent		
50%		
Document not started	Yes	
0%		
Anticipated date or date of completion/approval	08/31/2020	
4)Review of Section 106 Historic Resources (10 Percent of I	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/archaeological 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 proper 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?	ties?	
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

#### 100%

Section 4f resources present within the project area, but no known adverse effects 80% Project impacts to Section 4f/6f resources likely coordination/documentation has begun 50% Project impacts to Section 4f/6f resources likely coordination/documentation has not begun 30% Unsure if there are any impacts to Section 4f/6f resources in the project area 0% 6)Right-of-Way (15 Percent of Points) Right-of-way, permanent or temporary easements not required 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 100% Railroad Right-of-Way Agreement is executed (include signature page) Railroad Right-of-Way Agreement required; Agreement has been initiated

Yes

Yes

100%

#### 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.m to determine if your project needs to go through the Metropolitan Coun 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**

File Name	Description	File Size
Fig 01- Project Location CSAH 19 Bridge.pdf	Project Location CSAH 19 Bridge	803 KB
Fig 02 - MnDOT Inspection and Inventory Reports - CSAH 19.pdf	MnDOT Inspection and Inventory Reports - CSAH 19	101 KB
Fig 03 - Photos of CSAH 19 Deficiencies.pdf	Photos of CSAH 19 Deficiencies	779 KB
Fig 04 - CSAH 19 Bridge Rehab - Typical Section.pdf	CSAH 19 Bridge Rehab - Typical Section	173 KB
Fig 05- CSAH 19 2016 Heavy Commercial Volumes.pdf	CSAH 19 2016 Heavy Commercial Volumes	69 KB
Fig 06 - CSAH 19 Bridge - 2016 AADT.pdf	CSAH 19 Bridge - 2016 AADT	60 KB
Fig 07 - CSAH 19 Bridge 2040 Forecasts from Mark Filipi.pdf	CSAH 19 Bridge 2040 Forecasts from Mark Filipi	96 KB
Fig 08 - Orono - Public Transit Routes.pdf	Orono - Public Transit Routes	515 KB
Fig 09 - Hennepin County Priority Bikeways.pdf	Hennepin County Priority Bikeways	875 KB
Fig 10 - Orono - Comprehensive Trail System Map.pdf	Orono - Comprehensive Trail System Map	750 KB
Fig 11 - Trail Concept Design Study - Bridge Concept.pdf	Trail Concept Design Study - Bridge Concept	252 KB
Fig 12 - Trail Concept Design Study - On-Street Preliminary Concept Design.pdf	Trail Concept Design Study - On-Street Preliminary Concept Design	436 KB
Fig 13 - Trail Concept Design Study - Off-Street Trail Preliminary Concept Design.pdf	Trail Concept Design Study - Off-Street Trail Preliminary Concept Design	433 KB
Fig 14 - OronoSupportLetter.pdf	Orono Support Letter	33 KB
Fig 15 - Tonka Bay Support Letter.pdf	Tonka Bay Support Letter	61 KB











### MINNESOTA STRUCTURE INVENTORY REPORT

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### Bridge ID: 27516

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### CSAH 19 over NARROWS CHAN; CIRCLE RD

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Date: 06/10/2016

+ GENERAL +	+ ROADWAY +	+ INSPECTION +
Agency Br. No.	Bridge Match ID (TIS) 1	Deficient Status S.D.
District METRO Maint. Area	Roadway O/U Key 1-ON	Sufficiency Rating 54.0
County 27 - HENNEPIN	Route Sys/Nbr CSAH 19	Last Inspection Date 06-12-2015
City ORONO	Roadway Name or Description	Inspection Frequency 12
Township	SHADYWOOD RD (CSAH 19)	Inspector Name HENNEPIN COUNTY
Desc. Loc. 0.8 MI S OF JCT CSAH 15	Roadway Function MAINLINE	Status A-OPEN
Sect., Twp., Range 21 - 117N - 23W	Roadway Type 2 WAY TRAF	+ NBI CONDITION RATINGS +
Latitude 44d 55m 39.61s	Control Section (TH Only)	Deck 3 % UNSOUND 5
Longitude 93d 35m 38.76s	Ref. Point	Superstructure 6
Custodian COUNTY	Date Opened to Traffic 01-01-1964	Substructure 4
Owner COUNTY	Detour Length 14 mi.	Channel 7
Inspection By HENNEPIN COUNTY	Lanes 2 Lanes ON Bridge	Culvert N
Year Built 1964	ADT (YEAR) 13,600 (2005)	+ NBI APPRAISAL RATINGS +
MN Year Remodeled	HCADT	Structure Evaluation 4
FHWA Year Reconstructed	Functional Class. URB/MINOR ART	Deck Geometry 9
Bridge Plan Location COUNTY	+ RDWY DIMENSIONS +	Underclearances 5
Potential ABC N.A.	If Divided NB-EB SB-WB	Waterway Adequacy 8
	Roadway Width 52.0 ft	Approach Alignment 6
+ STRUCTURE +	Vertical Clearance	+ SAFETY FEATURES +
Service On HWY;PED	Max. Vert. Clear.	Bridge Railing 0-SUBSTANDARD
Service Under HWY;STREAM	Horizontal Clear. 51.9 ft	GR Transition 0-SUBSTANDARD
Main Span Type CSTL BEAM SPAN	Lateral CIr Lt/Rt	Appr. Guardrail 1-MEETS STANDARDS
Main Span Detail	Appr. Surface Width 37.0 ft	GR Termini 0-SUBSTANDARD
Appr. Span Type	Bridge Roadway Width 52.0 ft	+ IN DEPTH INSP. +
Appr. Span Detail	Median Width on Bridge	Frac. Critical
Skew <sup>5L</sup>	+ MISC. BRIDGE DATA +	Underwater
Culvert Type	Structure Flared NO	Pinned Asbly.
Barrel Length	Parallel Structure NONE	Spec. Feat.
Number of Spans	Field Conn. ID RIVETED	+ WATERWAY +
MAIN: 3 APPR: 0 TOTAL: 3	Cantilever ID	Drainage Area
Main Span Length 121.0 ft	Foundations	Waterway Opening 945 sq ft
Structure Length 320.7 ft	Abut. CONC - FTG PILE	Navigation Control NO PRMT REQD
Deck Width 58.8 ft	Pier CONC - FTG PILE	Pier Protection
Deck Material C-I-P CONCRETE	Historic Status NOT ELIGIBLE	Nav. Vert./Horz. Clr.
Wear Surf Type LOW SLUMP CONC	On - Off System ON	Nav. Vert. Lift Bridge Clear.
Wear Surf Install Year 1981	+ PAINT +	MN Scour Code I-LOW RISK
Wear Course/Fill Depth 0.25 ft	Year Painted <sup>1981</sup> Pct. Unsound <sup>5</sup> %	Scour Evaluation Year 1991
Deck Membrane NONE	Painted Area 29,100 sf	+ CAPACITY RATINGS +
Deck Rebars NONE	Primer Type ORGANIC ZINC	Design Load H 20
Deck Rebars Install Year	Finish Type VINYL	Operating Rating HS 35.70
Structure Area 18,857 sq ft	+ BRIDGE SIGNS +	Inventory Rating HS 21.40
Roadway Area 16,673 sq ft	Posted Load NOT REQUIRED	Posting
Sidewalk Width - L/R 1.5 ft 3.0 ft	Traffic NOT REQUIRED	Rating Date 01-23-2013
Curb Height - L/R 0.67 ft 0.67 ft	Horizontal OBJECT MARKERS	Overweight Permit Codes
Rail Codes - L/R 19 19	Vertical NOT APPLICABLE	A: N B: N C: N

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16,673 sq ft 3 %

29,100 sq ft 5 %

Suff. Rate: 54.0

QTY

CS 4

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06/10/201	6 N	INNESOTA BRID	GE INSPECTION F	REPORT		
Inspected BRIDGE	by: HENNEPIN COUNTY				TE: 06-1	12-2015
City: OR Township Section: 2	HENNEPIN RONO	Location: 0.8 MI S OI Route: CSAH 19 Control Section:	F JCT CSAH 15 Ref. Pt.: 003+00.410 Maint. Area:	Length: 320.7 ft Deck Width: 58.8 Rdwy. Area / Pct. L	3 ft Jnsnd:	16,673
Appraisal	Ratings - Approach: 6 Waterway: Bridge Signs - Load Posting: NOT F	Open, 8 MN Sc REQUIRED Traffic: NOT	our Code: I-LOW RISK REQUIRED		t: S.D.	Suff. Ra
ELEM NBR	ELEMENT NAME	516       CSAH 19 OVER NARROWS CHAN; CIRCLE RD       INSP. DATE: 66-12-2015         NEPIN       Location:       0.8 MI S OF JCT CSAH 15       Length:       320.7 ft         O       Route:       CSAH 19       Ref. PL::       003+00.410       Deck Witht:       58.8 ft         O       Control Section:       Maint. Area:       Rdwy. Area / Pct. Unsnd:       16.673:         ownship: 117N Range: 23W       Local Agency Bridge Nbr:       Paint Area / Pct. Unsnd:       29.100 st         Super: 6       Sub: 4. Chan: 7. Culv: N       Open, Posted, Closed:       OPEN       Unvert:       NA         ings - Approach: 6       Waterway: 8       MN Scour Code:       I-LOW RISK       Def. Stat:       S.D.       Suff. Ral         Igg Signs - Load Posting: NOT REQUIRED       Traffic: NOT REQUIRED       Traffic: NOT REQUIRED       OTY       OTY       OTY       OTY         Store chicle structural deficiencies or serious safety hazards are present on this structure.       No critical structural deficiencies or serious safety hazards are present on this structure.       No critical structural deficiencies or serious safety hazards are present on this structure.         No Critical structura deficiencies or serious safety neares & spalls wi rebar exp & rust throughout bridge. I' X 4' delam @       N abut. CENTER SPAN: Delam areas & spalls near mid span wir usted rebar. Nougo condis serion loss on some earespublica plates. 2 areas ne				
800	CRITICAL DEFS OR SAFETY HAZ	ARDS 06-12-201	5 1 EA			0
N	lotes: No critical structural deficier	ncies or serious safety hazaro	is are present on this structu	re.		
12	REINFORCED CONCRETE DECK	06-12-201	5 18,857 SF	16,971	0	1,886
	exp rebars. Copings spalled dripline for entire length of b end. '14-delams & spall abo trans cracks w/ efflor and 14 delam.	l in numerous places. '13-W s ridge. Many spalls w/ rebars ve N abut in W 2 bays. 115 s I5 SF of map cracking; 165 s	side coping spalled in numer exp and large delams in cer SF of spalls w/ rebar exp & 5 SF of popouts and scale. '15-	ous areas. Rust spots iter span @ const jt/gi SF w/o rebar; 10 SF 135 SF of spall w/ reb	s from chai irder splice of delam; 5	irs @ e @ N 530 LF of ) SF of
	WEARING SURFACE		,	,		-
, , , , , , , , , , , , , , , , , , ,	'13-some areas of scaling. filled w/ epoxy in SB @ S e	Cracks sealed since last insp end. '14-deck spalls @ poure	pection. Bit patched spall in 3 d joints. 2' x 8" & 3' x 8" spal	SB @ N end. Several I w/ rebar exp in W fac	small(<1 s	sf) spalls
810	CONC WEAR SURF-CRACKING S	EALING 06-12-201	5 0 L F	0	0	0
N				-		
300	STRIP SEAL DECK JOINT	06-12-201	5 115 LF	1	79	0
N	abut. '13-minor spalling of d	al cracked. Both abut joints a eck adj to jt. When viewed fre seal out & 2' partially out. No to joint.	om underneath, jt is open 1-	1/4"-1-1/2". '14-partial	ly filled w/ s	sand.
301	POURED SEAL JOINT	06-12-201	5 118 LF	0	83	0
N		& joints deteriorated. '13-sor span over the channel. '14-o				-
330	METAL BRIDGE RAILING	06-12-201	5 636 LF	0	636	0

33 0 0 Notes: [2016] Migrator assumed concrete/metal combination type rail. 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 06-12-2015 999 SF 999 0 0 0 4001 100461 Min -. . : . 4000 00

_		Notes:	[2016] Migrator assum	ed CS1 and a quant	ity of 999 SF.					
-	331	REINF	ORCED CONC BRIDGE	RAILING	06-12-2015	636 LF	0	636	0	0

	Notes:	[2016] Migrator assumed concrete/metal 333. Spalls & rust spots @ vert cracks in '13-a 6" spall in SW rail post behind guar NW corner. Posts scraped in NW. NE rai of W rail over S seawall. 6" spall in SE po	railbases. Several spall drail. Most vert cracks s il post has many cracks.	ealed. Small pieces of Corner rail posts crac	<sup>2</sup> 2 metal rail posts ked across top. '1	gone, +/-50	' from	
822	BITUM	IINOUS APPROACH ROADWAY	06-12-2015	2 EA	0	2	0	0
	Notes:	320. N Approach. Cracked & spalled @ I cracks in travel lanes. '15-no change.	back of parapet. '13-moo	l - large spalls. '14-spa	alls have been fille	ed w/ bit. Lon	g	
		407. S approach. Cracks & spalling @ jo changed-S approach only. Settlement in		-		acks. '14-qty		
107	STEEL	- GIRDER OR BEAM	06-12-2015	2,241 LF	2,023	218	0	0
	Notes:	107. Paint flaking off @ several areas. R some areas of top & bottom flanges of fa flange rusted @ most splices. '13-bottom splices in center span of all girders. '14-1 entire length.	scia girders. Riveted spl n ext flange of both fascia	ice plates. Paint bliste as have paint failure &	red & peeled in so rusting. Rust star	ome areas. T rting @ top fl	op ange	
51	5 STEEL	PROTECTIVE COATING	06-12-2015	29,100 SF	26,269	0	2,649	182
	Notes:	[2016] Migrator used inventory quantity						
205	REINF	ORCED CONCRETE COLUMN	06-12-2015	6 EA	6	0	0	0
	Notes:	205. '14-minor paint flaking @ P1. 10 LF	of very minor vert crack	s in S face of W colum	n @ P2. '15-no c	hange.		
15	REINF	ORCED CONCRETE ABUTMENT	06-12-2015	158 LF	40	59	0	59
		215. Water on seats of both. North-parage in parapet wall were repaired w/ epoxy, w w/ efflor in seat '13-large horiz cracks in	which is cracked. Large	spalls w/ rebar exp & r	usted on seat. Ma	any cracks &		
			which is cracked. Large s face of seat. Many of the it of position because of ome cracks & delams w/ it. Spall in seat of W bay	spalls w/ rebar exp & r ese are located under severe delam, crack. efflor in seat and para . Vert cracks every 3'-6	usted on seat. Ma bearings. No wat South-vert cracks pet. '13-delams ir 6'. Several horiz c	any cracks & er standing. w/ efflor in p parapet. Ho racks in face	delams parapet priz e of seat	
		in parapet wall were repaired w/ epoxy, w w/ efflor in seat. '13-large horiz cracks in '15-water standing on seat. Parapet is ou & seat & rust stains thru horiz cracks. So crack w/ rust in center @ base of parape	which is cracked. Large s face of seat. Many of the it of position because of ome cracks & delams w/ it. Spall in seat of W bay	spalls w/ rebar exp & r ese are located under severe delam, crack. efflor in seat and para . Vert cracks every 3'-6	usted on seat. Ma bearings. No wat South-vert cracks pet. '13-delams ir 6'. Several horiz c	any cracks & er standing. w/ efflor in p parapet. Ho racks in face	delams parapet priz e of seat	
234	REINF	in parapet wall were repaired w/ epoxy, w w/ efflor in seat. '13-large horiz cracks in '15-water standing on seat. Parapet is ou & seat & rust stains thru horiz cracks. So crack w/ rust in center @ base of parape are under bearings. No water standing. A	which is cracked. Large s face of seat. Many of the it of position because of ome cracks & delams w/ it. Spall in seat of W bay	spalls w/ rebar exp & r ese are located under severe delam, crack. efflor in seat and para . Vert cracks every 3'-6	usted on seat. Ma bearings. No wat South-vert cracks pet. '13-delams ir 6'. Several horiz c	any cracks & er standing. w/ efflor in p parapet. Ho racks in face	delams parapet priz e of seat	0
234	REINF Notes:	in parapet wall were repaired w/ epoxy, w w/ efflor in seat. '13-large horiz cracks in '15-water standing on seat. Parapet is ou & seat & rust stains thru horiz cracks. So crack w/ rust in center @ base of parape are under bearings. No water standing. A Wingwall notes: 387.	which is cracked. Large s face of seat. Many of the it of position because of ome cracks & delams w/ t. Spall in seat of W bay. At center joint, abut is tip 06-12-2015 hairline diag crack in S fa	spalls w/ rebar exp & r ese are located under severe delam, crack. efflor in seat and para . Vert cracks every 3'-f ped back 1/2" in 4'. '14 115 LF ace of P2 under B1 be	usted on seat. Ma bearings. No wat South-vert cracks pet. '13-delams ir 6'. Several horiz o 4-no water on sea 115	w/ efflor in p parapet. Ho racks in face ts. '15-no cha	delams parapet riz e of seat ange. 0	0
234	Notes:	in parapet wall were repaired w/ epoxy, w w/ efflor in seat. '13-large horiz cracks in '15-water standing on seat. Parapet is ou & seat & rust stains thru horiz cracks. So crack w/ rust in center @ base of parape are under bearings. No water standing. A Wingwall notes: 387. ORCED CONCRETE PIER CAP 234. Fine crack in P2 cap under B5. '13-	which is cracked. Large s face of seat. Many of the it of position because of ome cracks & delams w/ t. Spall in seat of W bay. At center joint, abut is tip 06-12-2015 hairline diag crack in S fa	spalls w/ rebar exp & r ese are located under severe delam, crack. efflor in seat and para . Vert cracks every 3'-f ped back 1/2" in 4'. '14 115 LF ace of P2 under B1 be	usted on seat. Ma bearings. No wat South-vert cracks pet. '13-delams ir 6'. Several horiz o 4-no water on sea 115	w/ efflor in p parapet. Ho racks in face ts. '15-no cha	delams parapet riz e of seat ange. 0	0
	Notes:	in parapet wall were repaired w/ epoxy, w w/ efflor in seat. '13-large horiz cracks in '15-water standing on seat. Parapet is ou & seat & rust stains thru horiz cracks. So crack w/ rust in center @ base of parape are under bearings. No water standing. A Wingwall notes: 387. ORCED CONCRETE PIER CAP 234. Fine crack in P2 cap under B5. '13- S face of P2. Fine crack in P1 under B5.	which is cracked. Large s face of seat. Many of the it of position because of ome cracks & delams w/ t. Spall in seat of W bay. At center joint, abut is tip 06-12-2015 hairline diag crack in S fa '14-no change. '15-same 06-12-2015 lies & installed new pins g on S abut bearings w/	spalls w/ rebar exp & r ese are located under severe delam, crack. efflor in seat and para . Vert cracks every 3'-f ped back 1/2" in 4'. '14 115 LF ace of P2 under B1 be e. 18 EA on all abut bearings ir minor-mod surface rus	usted on seat. Ma bearings. No wat South-vert cracks pet. '13-delams ir 6'. Several horiz of 4-no water on sea 115 arring. Hairline ho 11 n '07 & '08. Minor st. Mod surface ru	any cracks & er standing. w/ efflor in p p parapet. Ho cracks in face ts. '15-no cha 0 riz crack in E 7 surface rust st on most	delams parapet riz e of seat ange. 0 : half of 0 on	
11	Notes: EXPAN Notes:	in parapet wall were repaired w/ epoxy, w w/ efflor in seat. '13-large horiz cracks in '15-water standing on seat. Parapet is ou & seat & rust stains thru horiz cracks. So crack w/ rust in center @ base of parape are under bearings. No water standing. A Wingwall notes: 387. ORCED CONCRETE PIER CAP 234. Fine crack in P2 cap under B5. '13-I S face of P2. Fine crack in P1 under B5. NSION BEARING 311. Removed, blasted, painted assemb fascia bearings of S pier. '13-paint flaking	which is cracked. Large s face of seat. Many of the it of position because of ome cracks & delams w/ t. Spall in seat of W bay. At center joint, abut is tip 06-12-2015 hairline diag crack in S fa '14-no change. '15-same 06-12-2015 lies & installed new pins g on S abut bearings w/	spalls w/ rebar exp & r ese are located under severe delam, crack. efflor in seat and para . Vert cracks every 3'-f ped back 1/2" in 4'. '14 115 LF ace of P2 under B1 be e. 18 EA on all abut bearings ir minor-mod surface rus	usted on seat. Ma bearings. No wat South-vert cracks pet. '13-delams ir 6'. Several horiz of 4-no water on sea 115 arring. Hairline ho 11 n '07 & '08. Minor st. Mod surface ru	any cracks & er standing. w/ efflor in p p parapet. Ho cracks in face ts. '15-no cha 0 riz crack in E 7 surface rust st on most	delams parapet riz e of seat ange. 0 : half of 0 on	
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311	Notes: EXPAN Notes: FIXED Notes:	in parapet wall were repaired w/ epoxy, w w/ efflor in seat. '13-large horiz cracks in '15-water standing on seat. Parapet is ou & seat & rust stains thru horiz cracks. So crack w/ rust in center @ base of parape are under bearings. No water standing. A Wingwall notes: 387. ORCED CONCRETE PIER CAP 234. Fine crack in P2 cap under B5. '13-I S face of P2. Fine crack in P1 under B5. NSION BEARING 311. Removed, blasted, painted assemb fascia bearings of S pier. '13-paint flaking bearings of N abut. N abut bearings are w BEARING	which is cracked. Large s face of seat. Many of the it of position because of ome cracks & delams w/ it. Spall in seat of W bay. At center joint, abut is tip 06-12-2015 hairline diag crack in S fa '14-no change. '15-same 06-12-2015 lies & installed new pins g on S abut bearings w/ vertical @ 75 deg air ten 06-12-2015	spalls w/ rebar exp & r ese are located under severe delam, crack. efflor in seat and para . Vert cracks every 3'-6 ped back 1/2" in 4'. '14 115 LF ace of P2 under B1 be e. 18 EA on all abut bearings ir minor-mod surface rus np. '14-no change. '15- 6 EA	usted on seat. Ma bearings. No wat South-vert cracks pet. '13-delams ir 6'. Several horiz o 4-no water on sea 115 aring. Hairline ho 11 n '07 & '08. Minor st. Mod surface ru -N abut bearings	w/ efflor in p parapet. Ho parapet. Ho pracks in face ts. '15-no cha 0 riz crack in E 7 surface rust st on most are vert @ 70	delams parapet riz e of seat ange. 0 E half of 0 on 0 deg.	0
311	Notes: EXPAN Notes: FIXED Notes:	in parapet wall were repaired w/ epoxy, w w/ efflor in seat. '13-large horiz cracks in '15-water standing on seat. Parapet is ou & seat & rust stains thru horiz cracks. So crack w/ rust in center @ base of parape are under bearings. No water standing. A Wingwall notes: 387. ORCED CONCRETE PIER CAP 234. Fine crack in P2 cap under B5. '13-I S face of P2. Fine crack in P1 under B5. NSION BEARING 311. Removed, blasted, painted assemb fascia bearings of S pier. '13-paint flaking bearings of N abut. N abut bearings are BEARING 313. At P2. Surface rust on fascia bearin	which is cracked. Large s face of seat. Many of the it of position because of ome cracks & delams w/ t. Spall in seat of W bay. At center joint, abut is tip 06-12-2015 hairline diag crack in S fa '14-no change. '15-same 06-12-2015 lies & installed new pins g on S abut bearings w/ vertical @ 75 deg air ten 06-12-2015 gs. '13-no change. '14-n 06-12-2015	spalls w/ rebar exp & r ese are located under severe delam, crack. efflor in seat and para . Vert cracks every 3'-6 ped back 1/2" in 4'. '14 115 LF ace of P2 under B1 be e. 18 EA on all abut bearings ir minor-mod surface rus np. '14-no change. '15- 6 EA o change. '15-same. 1 EA	usted on seat. Ma bearings. No wat South-vert cracks pet. '13-delams ir 6'. Several horiz of 4-no water on sea 115 earing. Hairline ho 11 n '07 & '08. Minor st. Mod surface ru -N abut bearings - 4	ny cracks & er standing. w/ efflor in p parapet. Ho pracks in face ts. '15-no cha 0 riz crack in E 7 surface rust st on most are vert @ 70 2 0	delams parapet riz e of seat ange. 0 E half of 0 on 0 deg. 0 0	0
311 313 355	Notes: EXPAN Notes: FIXED Notes: SECO Notes:	in parapet wall were repaired w/ epoxy, w w/ efflor in seat. '13-large horiz cracks in '15-water standing on seat. Parapet is ou & seat & rust stains thru horiz cracks. So crack w/ rust in center @ base of parape are under bearings. No water standing. A Wingwall notes: 387. ORCED CONCRETE PIER CAP 234. Fine crack in P2 cap under B5. '13- S face of P2. Fine crack in P1 under B5. NSION BEARING 311. Removed, blasted, painted assemb fascia bearings of S pier. '13-paint flaking bearings of N abut. N abut bearings are of BEARING 313. At P2. Surface rust on fascia bearing NDARY MEMBERS (SUPER) 380. Steel diaphragms are riveted x-brack	which is cracked. Large s face of seat. Many of the it of position because of ome cracks & delams w/ t. Spall in seat of W bay. At center joint, abut is tip 06-12-2015 hairline diag crack in S fa '14-no change. '15-same 06-12-2015 lies & installed new pins g on S abut bearings w/ vertical @ 75 deg air ten 06-12-2015 gs. '13-no change. '14-n 06-12-2015	spalls w/ rebar exp & r ese are located under severe delam, crack. efflor in seat and para . Vert cracks every 3'-6 ped back 1/2" in 4'. '14 115 LF ace of P2 under B1 be e. 18 EA on all abut bearings ir minor-mod surface rus np. '14-no change. '15- 6 EA o change. '15-same. 1 EA	usted on seat. Ma bearings. No wat South-vert cracks pet. '13-delams ir 6'. Several horiz of 4-no water on sea 115 earing. Hairline ho 11 n '07 & '08. Minor st. Mod surface ru -N abut bearings - 4	ny cracks & er standing. w/ efflor in p parapet. Ho pracks in face ts. '15-no cha 0 riz crack in E 7 surface rust st on most are vert @ 70 2 0	delams parapet riz e of seat ange. 0 E half of 0 on 0 deg. 0 0	0
	Notes: EXPAN Notes: FIXED Notes: SECO Notes:	in parapet wall were repaired w/ epoxy, w w/ efflor in seat. '13-large horiz cracks in '15-water standing on seat. Parapet is ou & seat & rust stains thru horiz cracks. So crack w/ rust in center @ base of parape are under bearings. No water standing. A Wingwall notes: 387. ORCED CONCRETE PIER CAP 234. Fine crack in P2 cap under B5. '13-I S face of P2. Fine crack in P1 under B5. NSION BEARING 311. Removed, blasted, painted assemb fascia bearings of S pier. '13-paint flaking bearings of N abut. N abut bearings are v BEARING 313. At P2. Surface rust on fascia bearin NDARY MEMBERS (SUPER) 380. Steel diaphragms are riveted x-brac rusting on several N abut diaphragms. '1	which is cracked. Large s face of seat. Many of the it of position because of ome cracks & delams w/ t. Spall in seat of W bay. At center joint, abut is tip 06-12-2015 hairline diag crack in S fa '14-no change. '15-same 06-12-2015 lies & installed new pins g on S abut bearings w/ vertical @ 75 deg air ten 06-12-2015 gs. '13-no change. '14-n 06-12-2015 cing. X-bracing bottom bi 4-no change. '15-same. 06-12-2015	spalls w/ rebar exp & r ese are located under severe delam, crack. efflor in seat and para . Vert cracks every 3'-6 ped back 1/2" in 4'. '14 115 LF ace of P2 under B1 be e. 18 EA on all abut bearings ir minor-mod surface rus np. '14-no change. '15- 6 EA o change. '15-same. 1 EA racket bent over main	usted on seat. Ma bearings. No wat South-vert cracks pet. '13-delams ir 6'. Several horiz of 4-no water on sea 115 earing. Hairline ho 11 n '07 & '08. Minor st. Mod surface ru -N abut bearings 4 1 span in N end of 1	any cracks & er standing. w/ efflor in p p parapet. Ho pracks in face ts. '15-no cha 0 riz crack in E 7 surface rust st on most are vert @ 70 2 0 bay 2. '13-mo 0	delams parapet riz e of seat ange. 0 5 half of 0 0 0 0 0 0 0 0 0 0 0	0

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

OTHE	R BRIDGE SIGNING	06-12-2015	1 EA	0	1	0	0
Notes:					-		
SLOP	ES & SLOPE PROTECTION	06-12-2015	1 EA	0	1	0	0
Notes:	abuts. North-some settlement on top rebar exp. South-'13-minor-mod cra	o on W side. '13-6" x 5' spall @ cking. Few small delams begin	top. '15-spall in top u	nder 2nd bay fro	om W is 6" x 6	6' w/	
GUAR	DRAIL	06-12-2015	1 EA	0	1	0	0
Notes:					acer blocks tv	visted	
DECK	& APPROACH DRAINAGE	06-12-2015	1 EA	1	0	0	0
Notes:	984. Deck drains were plugged whe	n O/L was repaired in '81. '13-	no change. '14-same.	'15-same.			
SIDEV	VALK, CURB, & MEDIAN	06-12-2015	1 EA	0	1	0	0
Notes:			e of curb. '14-several s	spalls on curb a	re <1 SF. '15-	horiz	
MISCI	ELLANEOUS ITEMS	06-12-2015	1 EA	1	0	0	0
Notes:	P1. 6" pipe behind W fascia beam is side. Buried fiber optic cable E of b rusted. Seawall & parking @ S end	resting on diaphragms. Telep ridge. Some conc crib wall mer under bridge. MH, GV & shuto	hone line along top of nbers are cracked, de	S pier. 3 condu teriorated & spa	its in curb on alled w/ rebar	E exp &	
PROT	· · · · · ·	06-12-2015	1 EA	1	0	0	0
Notes:	Use this element to track the preser	ce of protected species living	on this structure.				
General Notes:	-	nannel 6/12/15 JDE & PTH. 60	)' Snooper over E side	e only. Snooper	on shoulder.		
	<ul> <li>215. Repair abut seats. Repairing N a seat &amp; supported @ deck-monitor for</li> <li>301. Repair poured joints.</li> <li>320 &amp; 407. Repair roadway spalls &amp; I</li> <li>407. Ramp S bit approach w/ bit</li> </ul>	changes. arge cracks @ ends of bridge. & NW.	or repair-it is structura	Ily adequate @	present. Hing	jed @	
	Notes: SLOP Notes: GUAR Notes: DECK Notes: SIDEV Notes: MISCI Notes: PROT Notes: General Notes:	SE & NW. Small X4-4 in SW. No Pa SW. SLOPES & SLOPE PROTECTION Notes: 985. Trans & a few long cracks in bo abuts. North-some settlement on top rebar exp. South-'13-minor-mod cra '15-slope beginning to settle around GUARDRAIL Notes: 982. Guardrail approach ends are tu @ all corners. '14-several rail posts DECK & APPROACH DRAINAGE Notes: 984. Deck drains were plugged whe SIDEWALK, CURB, & MEDIAN Notes: 986. Sealed trans cracks in curbs. S cracks, some w/ rebar exp in E curb MISCELLANEOUS ITEMS Notes: 988. At high water, channel overflow P1. 6" pipe behind W fascia beam is side. Buried fiber optic cable E of bir rusted. Seawall & parking @ S end // inspection report SW-19-A for seawa PROTECTED SPECIES Notes: Use this element to track the present General *Bridge 27516 CSAH 19 / Narrows CM Notes: Recommended Repairs: 215. Repair abut seats. Repairing N at seat & supported @ deck-monitor for 301. Repair poured joints. 320 & 407. Repair roadway spalls & la 407. Ramp S bit approach w/ bit 981. Replace signs: X4-5 @ SE, NE &	Notes:       981. Horiz clearance marker X4-4 & No Fishing Or Standing On Bridder SE & NW. Small X4-4 in SW. No Parking @ NW & NE. '13-no charal SW.         SLOPES & SLOPE PROTECTION       06-12-2015         Notes:       985. Trans & a few long cracks in both. Waterproof membrane is p abuts. North-some settlement on top on W side. '13-6'' x 5' spall @ rebar exp. South-'13-minor-mod cracking. Few small delams begin '15-slope beginning to settle around utility pipe on W end.         GUARDRAIL       06-12-2015         Notes:       982. Guardrail approach ends are turned down except in SW & NE @ all corners. '14-several rail posts in SE are broken. Post also bridge.         DECK & APPROACH DRAINAGE       06-12-2015         Notes:       984. Deck drains were plugged when O/L was repaired in '81. '13-1         SIDEWALK, CURB, & MEDIAN       06-12-2015         Notes:       986. Sealed trans cracks in curbs. Some moderate spalling on face cracks, some w/ rebar exp in E curb.         MISCELLANEOUS ITEMS       06-12-2015         Notes:       988. At high water, channel overflows N seawall to N of P1. Evider P1. 6'' pipe behind W fascia beam is resting on diaphragms. Telep side. Buried fiber optic cable E of bridge. Some conc crib wall mer rusted. Seawall & parking @ S end under bridge. MH, GV & shutor inspection report SW-19-A for seawalls @ Narrows channel.         PROTECTED SPECIES       06-12-2015         Notes:       Use this element to track the presence of protected species living of General "Bridge 27516 CSAH 19 / Narrows Channel 6/12/15 JDE & PTH. 60 Notes:	Notes:       981. Horiz clearance marker X4-4 & No Fishing Or Standing On Bridge sign @ NW & SE SE & NW. Small X4-4 in SW. No Parking @ NW & NE '13-no change. '14-Adopt A High SW.         SLOPES & SLOPE PROTECTION       06-12-2015       1 EA         Notes:       985. Trans & a few long cracks in both. Waterproof membrane is pulled away @ both. Tr abuts. North-some settlement on top on W side. '13-6' x 5' spall @ top. '15-spall in top u rebar exp. South-'13-minor-mod cracking. Few small delams beginning to occur. '14-1' '15-slope beginning to settle around utility pipe on W end.         GUARDRAIL       06-12-2015       1 EA         Notes:       982. Guardrail approach ends are turned down except in SW & NE. Minor damage @ all @ all corners. '14-several rail posts in SE are broken. Post also broken in NW. '15-no ch DECK & APPROACH DRAINAGE       06-12-2015       1 EA         Notes:       984. Deck drains were plugged when O/L was repaired in '81. '13-no change. '14-same.         SIDEWALK, CURB, & MEDIAN       06-12-2015       1 EA         Notes:       986. Sealed trans cracks in curbs. Some moderate spalling on face of curb. '14-several scracks, some w/ rebar exp in E curb.       1 EA         Notes:       988. At high water, channel overflows N seawall to N of P1. Evidence of flowing water fm P1. 6" pipe behind W fascia beam is resting on diaphragms. Telephone line along top of side. Burled fiber optic cable E of bridge. Some conc crib wall members are cracked, de rusted. Seawall & parking @ S end under bridge. MH, GV & shutoffs @ span 1 on E side inspection report SW-19-A for seawalls @ Narrows channel.         PROTECTE	Notes:       981. Horiz clearance marker X4-4 & No Fishing Or Standing On Bridge sign @ NW & SE approaches. >         SE & NW, Small X4-4 in SW. No Parking @ NW & NE. '13-no change. '14-Adopt A Highway sign in SW         SLOPES & SLOPE PROTECTION       06-12-2015       1 EA       0         Notes:       985. Trans & a few long cracks in both. Waterproof membrane is pulled away @ both. Top of both slope abuts. North-some settlement on top on W side '13-6' x 5' spall @ top. '15-spall in top under 2nd bay fn rebar exp. South-'13-minor-mod cracking. Few small delams beginning to occur. '14-st SF spall in S pa '15-slope beginning to settle around utility pipe on W end.         GUARDRAIL       06-12-2015       1 EA       0         Notes:       982. Guardrail approach ends are turned down except in SW & NE. Minor damage @ all corners. '13-sg @ all corners. '14-several rail posts in SE are broken. Post also broken in NW. '15-no change.         DECK & APPROACH DRAINAGE       06-12-2015       1 EA       1         Notes:       984. Deck drains were plugged when O/L was repaired in '81. '13-no change. '14-several spalls on curb a cracks, some w/ rebar exp in E curb.       06-12-2015       1 EA       1         Notes:       986. Sealed trans cracks in curbs. Some moderate spalling on face of flowing water from S of N toe o P1. 6' pipe behind W fascia beam is resting on diaphragms. Telephone line along top of S pier. 3 condu side. Burking @N sarking @N seawall to N of P1. Evidence of flowing water from S of N toe o P1. 6' pipe behind W fascia beam is resting on diaphragms. Telephone line along top of S pier. 3 condu side. Burking @N sarkin	Notes:       981. Horiz clearance marker X4-4 & No Fishing Or Standing On Bridge sign @ NW & SE approaches. X4-5 missing in         SLOPES & SLOPE PROTECTION       06-12-2015       1 EA       0       1         Notes:       985. Trans & a few long cracks in both. Waterproof membrane is pulled away @ both. Top of both slopes have a 6" g       abuts. North-some settlement on top on W side. '13-6" x 5' spail @ top. '15-spail in top under 2nd bay from W is 6" x 4         rebar exp. South-Tainnor-mod cracking. Few small delams beginning to occur. '14-<1 SF spail in S paving @ W end '15-slope beginning to settle around utility pipe on W end.	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       06-12-2015       1 EA       0       1       0         Notes:       985. Trans & a few long cracks in both. Waterproof membrane is pulled away @ both. Top of both Siopes have a 6° gap @ abuts. North-some settlement on top on W side. '13-6° x 5° spall @ top. '16-spall in top under 2nd bay from W is 6° x 6° w/ rebare 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.

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988. Cut tree @ E end of N pier for snooper access.

06/10/2016

Inspected by: HENNEPIN COUNTY

### MINNESOTA BRIDGE INSPECTION REPORT OLD ELEMENT SYSTEM

**BRIDGE 27516 CSAH 19 OVER NARROWS CHAN; CIRCLE RD** INSP. DATE: 06-12-2015 ELEM QTY QTY QTY QTY QTY NBR ELEMENT NAME ENV INSP. DATE QUANTITY CS 1 CS 2 CS 3 CS 4 CS 5 LS O/L (CONC DECK) 22 06-12-2015 18.858 SF 0 0 18.858 0 0 4 06-13-2014 18,858 SF 0 0 18,858 0 0 |22. Very numerous trans & long cracks & spalls. Minor spall in SBL. '13-some areas of scaling. Cracks sealed since last Notes: 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.| STRIP SEAL JOINT 300 4 06-12-2015 115 LF 1 79 35 N/A N/A 79 06-13-2014 115 LF 35 N/A N/A 1 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 POURED DECK JOINT 4 06-12-2015 118 LF 0 83 35 N/A N/A 06-13-2014 118 LF 83 35 N/A 0 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.| CONC APPR SLAB-BITOL 06-12-2015 0 N/A 320 2 1 EA 0 0 1 06-13-2014 1 EA 0 0 0 N/A 1 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** 06-12-2015 0 0 0 4 1 FA 1 N/A 06-13-2014 1 EA N/A 0 0 0 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** 06-12-2015 636 LF 636 0 N/A N/A 4 0 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 GIRDER 3 06-12-2015 2,241 LF 2,023 204 14 0 0 06-13-2014 2,241 LF 2,023 204 14 0 0 107. Paint flaking off @ several areas. Rust @ several locations especially @ top flanges & abuts. Some minor rust @ Notes: 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. 0 380 SECONDARY ELEMENTS 2 06-12-2015 1 EA 1 0 0 N/A 06-13-2014 1 FA 0 0 0 N/A 1 [380. Steel diaphragms are riveted x-bracing. X-bracing bottom bracket bent over main span in N end of bay 2. '13-mod Notes: rusting on several N abut diaphragms. '14-no change. '15-same.| **EXPANSION BEARING** 06-12-2015 0 311 3 18 FA 11 7 N/A N/A 18 EA N/A 06-13-2014 7 0 N/A 11 [311. Removed, blasted, painted assemblies & installed new pins on all abut bearings in '07 & '08. Minor surface rust on Notes: 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.|

06/10/2016

### MINNESOTA BRIDGE INSPECTION REPORT OLD ELEMENT SYSTEM

RIDG	SE 2751	6 CSAH 19 OVER N	ARROWS CH	IAN; CIRCLE	RD		INSP. DA	TE: 06-12	-2015	
ELEM NBR		ELEMENT NAME	ENV	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QT CS
313	FIXED I	BEARING	3	06-12-2015 06-13-2014	6 EA 6 EA	4 4	2 2	0 0	N/A N/A	N// N//
	Notes:	313. At P2. Surface rust on fa	scia bearings. '1	3-no change. '14	-no change. '15-sar	me.				
205	CONCF	RETE COLUMN	2	06-12-2015 06-13-2014	6 EA 6 EA	6 6	0 0	0 0	0 0	N/# N/#
	Notes:	205. '14-minor paint flaking @	P1. 10 LF of ve	ry minor vert cra	cks in S face of W c	olumn @ P2	. '15-no cha	inge.		
215	CONCF	RETE ABUTMENT	4	06-12-2015 06-13-2014	118 LF 118 LF	0 0	59 59	0 59	59 0	N/# N/#
	Notes:	215. Water on seats of both. I spalls in parapet wall were rep & delams w/ efflor in seat. '13- standing. '15-water standing o efflor in parapet & seat & rust s parapet. Horiz crack w/ rust in cracks in face of seat are under seats. '15-no change.	aired w/ epoxy, large horiz crack n seat. Parapet stains thru horiz center @ base o	which is cracked is in face of seat. s out of position cracks. Some cr of parapet. Spall	Large spalls w/ reb Many of these are because of severe of acks & delams w/ ef in seat of W bay. Ve	oar exp & rus located unde delam, crack fflor in seat a ert cracks ev	ted on seat er bearings. . South-vert nd parapet. ery 3'-6'. Se	. Many crac No water cracks w/ '13-delams veral horiz	in	
234	CONCF	RETE CAP	2	06-12-2015	115 LF	115	0	0	0	N/A
	Notes:	234. Fine crack in P2 cap und of S face of P2. Fine crack in F		-		115 81 bearing. H	0 lairline horiz	0 crack in E	0 half	N/A
387	CONCF	RETE WINGWALL	2	06-12-2015 06-13-2014	4 EA 4 EA	4 4	0 0	0 0	0 0	N/# N/#
	Notes:	387.								
358	CONC I	DECK CRACKING	2	06-12-2015 06-13-2014	1 EA 1 EA	0 1	1 0	0 0	0 0	N/A N/A
	Notes:	358. Rigid O/L cracked long th sealed. Unsealed cracks are n Density is >10'.	-	-		-			;	
359	CONC I	DECK UNDERSIDE	2	06-12-2015 06-13-2014	1 EA 1 EA	0 0	0 0	1 1	0 0	C
	Notes:	[359. Many rust spots in copin- efflor. Minor honeycomb area delam @ N abut. CENTER SF areas near counterculture poir loss on some exp rebars. Cop spots from chairs @ dripline for const jt/girder splice @ N end. rebar; 10 SF of delam; 530 LF SF of spall w/ rebar exp; 20 SF	near N & S piers AN: Delam area at are delam & ha ings spalled in n or entire length o '14-delams & sp of trans cracks	. Many delam ar is & spalls near r ave rusted rebar. umerous places. f bridge. Many sp pall above N abut	eas & spalls w/ reba nid span w/ rusted r Numerous map cra '13-W side coping s palls w/ rebars exp a in W 2 bays. 115 S	ar exp & rust ebar & some acks & few lo spalled in nu and large del ¡F of spalls w	throughout near splice ng cracks. M merous area ams in cent // rebar exp	bridge. 1' X plates. 2 Minor sectio as. Rust er span @ & 5 SF w/o	n	
360	SETTLE	EMENT	2	06-12-2015 06-13-2014	1 EA 1 EA	1 1	0 0	0 0	N/A N/A	N/A N/A
	Notes:	360. S abut is tipped back 1/2	" in 4' @ center							
964	CRITIC	AL FINDING	2	06-12-2015	1 EA	1	0	N/A	N/A	N/A
	Notes:	964.		06-13-2014	1 EA	1	0	N/A	N/A	N/A
981	SIGNIN	G	2	06-12-2015 06-13-2014	1 EA 1 EA	0	1	0	0	C
	Notes:	981. Horiz clearance marker > NE, SE & NW. Small X4-4 in S sign in SW.		ig Or Standing O	n Bridge sign @ NV	V & SE appro		5 missing in	1	Ū

06/10/2016

### MINNESOTA BRIDGE INSPECTION REPORT OLD ELEMENT SYSTEM

Inspected by: HENNEPIN COUNTY

BRIDO	SE 2751	6 CSAH 19 OVER N	NARROWS CH	IAN; CIRCLE	RD		INSP. DA	TE: 06-12	2-2015	
ELEM NBR		ELEMENT NAME	ENV	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QT CS
982	GUARD	DRAIL	2	06-12-2015 06-13-2014	1 EA 1 EA	0 0	1 1	0 0	N/A N/A	N/A N/A
	Notes:	982. Guardrail approach end twisted @ all corners. '14-sev						er blocks		
984	DRAINA			06-12-2015 06-13-2014	1 EA 1 EA	1 1	0 0	0 0	N/A N/A	N/A N/A
	Notes:	984. Deck drains were plugg	ed when O/L was	repaired in '81.	'13-no change. '14-s	same. '15-sa	ime.			
985	SLOPE	S	2	06-12-2015 06-13-2014	1 EA 1 EA	0 0	1 1	0 0	N/A N/A	N/A N/A
	Notes:	<ul> <li>985. Trans &amp; a few long crac</li> <li>abuts. North-some settlem</li> <li>w/ rebar exp. South-'13-minor</li> <li>'15-slope beginning to settle a</li> </ul>	ent on top on W s r-mod cracking. F	side. '13-6" x 5' s ew small delams	pall @ top. '15-spal	in top unde	r 2nd bay fr	om W is 6" >	x 6'	
986	CURB 8	& SIDEWALK	2	06-12-2015 06-13-2014	1 EA 1 EA	0 1	1 0	0 0	N/A N/A	N/A N/A
	Notes:	986. Sealed trans cracks in c '15-horiz cracks, some w/ reb		erate spalling on	face of curb. '14-se	veral spalls	on curb are	<1 SF.		
988	MISCEL	LLANEOUS	2	06-12-2015 06-13-2014	1 EA 1 EA	1 1	0 0	0 0	N/A N/A	N/A N/A
	Notes:	988. At high water, channel of P1. 6" pipe behind W fascia b side. Buried fiber optic cable & rusted. Seawall & parking ( inspection report SW-19-A for	eam is resting on E of bridge. Som ② S end under bri	i diaphragms. Te e conc crib wall i idge. MH, GV & :	lephone line along t members are cracke	op of S pier. ed, deteriora	. 3 conduits ted & spalle	in curb on E d w/ rebar e	E exp	
Genera	al Notes:	*Bridge 27516 CSAH 19 / N	larrows Channel 6	6/12/15 JDE & F	PTH. 60' Snooper ov	er E side on	ly. Snooper	on shoulde	r.	
		Recommended Repairs:								
		215. Repair abut seats. Rep Hinged @ seat & supported			be major repair-it is	structurally a	adequate @	present.		











# CSAH 019 - CP 1635 Bridge Rehabilitation 6' 8 12' 12' 8' 6' Bike lane Buffer Drive lane Drive lane Buffer Bike lane
#### VEHICLE CLASSIFICATION DATA CSAH 19 (SHADYWOOD RD.) S. OF -LAFAYETTE RD. W. / STUDY # 4044

	Hourly Averages Combined														
Interval Start	Total	Motor Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Tailgating
12:00 AM	54.0	0.0	47.0	6.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1:00 AM	23.5	0.0	18.0	4.5	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2:00 AM	20.5	0.0	18.5	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3:00 AM	25.0	0.0	17.0	6.0	1.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4:00 AM	52.0	1.5	32.0	16.0	0.0	1.5	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
5:00 AM	155.0	1.5	98.5	40.5	0.0	10.0	0.5	0.5	2.5	1.0	0.0	0.0	0.0	0.0	0.0
6:00 AM	503.0	4.5	334.5	109.0	14.0	29.5	4.0	0.0	5.0	1.5	0.0	1.0	0.0	0.0	0.0
7:00 AM	918.5	13.5	580.5	198.0	39.0	53.5	8.0	2.0	17.5	1.5	2.0	2.5	0.0	0.5	0.0
8:00 AM	848.5	12.5	493.0	191.0	38.5	78.0	5.5	3.0	20.5	3.5	0.0	3.0	0.0	0.0	0.0
9:00 AM	753.0	9.0	420.0	178.0	36.0	82.0	4.5	2.0	16.0	3.0	0.0	2.0	0.5	0.0	0.0
10:00 AM	701.5	3.5	408.5	170.0	29.0	61.0	8.5	3.0	14.5	2.5	0.5	0.0	0.5	0.0	0.0
11:00 AM	738.5	4.0	429.0	178.5	33.5	61.0	8.0	3.0	18.0	0.5	0.5	2.0	0.0	0.5	0.0
12:00 PM	766.0	8.5	445.5	178.0	32.5	67.0	7.5	3.0	20.5	1.0	1.0	1.5	0.0	0.0	0.0
1:00 PM	806.5	14.0	477.0	192.5	30.0	61.0	6.5	3.5	18.5	2.5	0.0	1.0	0.0	0.0	0.0
2:00 PM	886.0	11.0	530.0	199.0	43.5	64.5	9.5	3.0	19.5	3.5	0.0	0.5	1.0	1.0	0.0
3:00 PM	1043.5	22.0	599.5	205.5	83.5	82.0	7.0	4.5	31.0	1.5	0.0	6.5	0.0	0.5	0.0
4:00 PM	1161.0	25.0	682.0	221.5	102.0	82.0	4.5	1.0	32.5	2.0	0.5	7.0	0.5	0.5	0.0
5:00 PM	1215.0	27.5	763.5	217.5	100.0	65.0	3.5	1.5	21.5	1.5	0.5	12.0	0.0	1.0	0.0
6:00 PM	937.0	16.5	617.0	170.0	51.5	57.0	2.0	0.5	16.5	1.0	0.0	3.5	0.0	1.5	0.0
7:00 PM	691.5	14.5	491.5	134.5	13.5	29.5	0.5	0.0	6.0	0.0	0.0	1.5	0.0	0.0	0.0
8:00 PM	569.0	14.0	413.0	103.5	9.0	27.0	0.5	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
9:00 PM	417.5	4.5	320.0	70.0	1.5	17.5	0.0	0.0	3.5	0.5	0.0	0.0	0.0	0.0	0.0
10:00 PM	250.5	2.0	185.0	51.0	0.5	10.5	0.0	0.0	1.0	0.0	0.0	0.5	0.0	0.0	0.0
11:00 PM	107.0	0.5	88.0	16.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Daily Average	13643.5	210.0	8508.5	2858.5	659.0	944.5	80.5	30.5	266.5	28.0	5.0	44.5	2.5	5.5	0.0

Study Grand Totals															
	Total	Motor Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Tailgating
Combined	27287	420 1.5 %	17017 62.4 %	5717 21.0 %	1318 4.8 %	1889 6.9 %	161 0.6 %	61 0.2 %	533 2.0 %	56 0.2 %	10 0.0 %	89 0.3 %	5 0.0 %	11 0.0 %	0 0.0 %
N.B.	14333	161 1.1 %	8827 61.6 %	2997 20.9 %	668 4.7 %	1184 8.3 %	68 0.5 %	49 0.3 %	297 2.1 %	32 0.2 %	5 0.0 %	41 0.3 %	1 0.0 %	3 0.0 %	0 0.0 %
S.B.	12954	259 2.0 %	8190 63.2 %	2720 21.0 %	650 5.0 %	705 5.4 %	93 0.7 %	12 0.1 %	236 1.8 %	24 0.2 %	5 0.0 %	48 0.4 %	4 0.0 %	8 0.1 %	0 0.0 %

## DAILY TOTAL OF HEAVY COMMERCIAL VEHICLES = **2,066**

05-93-5-17-16-C.rdf

### HENNEPIN COUNTY TRANSPORTATION PLANNING DIVISION

TOTAL VOLUME DATA CSAH 19 (SHADYWOOD RD.) S. OF -LAFAYETTE RD. W. / STUDY # 4059 Site: 05

			TE RD. W	,			Weekly	y Volun	ne							
	Mor	า	Tue Wed			Thu Fri			Sat		Sun		Mon - Fri			
Interval	5/16/2	016	5/17/2	2016	5/18/	2016	5/19/	2016	5/20/2	2016	5/21/2	016	5/22/2	016	Avera	age
Start	N.B.	S.B.	N.B.	S.B.	N.B.	S.B.	N.B.	S.B.	N.B.	S.B.	N.B.	S.B.	N.B.	S.B.	N.B.	S.B.
12:00 AM	-	-	-	-	-	-	33	26	29	20	-	-	-	-	31.0	23.0
1:00 AM	-	-	-	-	-	-	12	10	15	10	-	-	-	-	13.5	10.0
2:00 AM	-	-	-	-	-	-	9	11	16	5	-	-	-	-	12.5	8.0
3:00 AM	-	-	-	-	-	-	10	16	12	12	-	-	-	-	11.0	14.0
4:00 AM	-	-	-	-	-	-	26	31	19	28	-	-	-	-	22.5	29.5
5:00 AM	-	-	-	-	-	-	51	98	59	102	-	-	-	-	55.0	100.0
6:00 AM	-	-	-	-	-	-	198	316	211	281	-	-	-	-	204.5	298.5
7:00 AM	-	-	-	-	-	-	383	568	336	550	-	-	-	-	359.5	559.0
8:00 AM	-	-	-	-	-	-	408	440	385	464	-	-	-	-	396.5	452.0
9:00 AM	-	-	-	-	-	-	345	416	346	399	-	-	-	-	345.5	407.5
10:00 AM	-	-	-	-	-	-	331	359	338	375	-	-	-	-	334.5	367.0
11:00 AM	-	-	-	-	349	365	381	382	-	-	-	-	-	-	365.0	373.5
12:00 PM	-	-	-	-	364	372	416	380	-	-	-	-	-	-	390.0	376.0
1:00 PM	-	-	-	-	387	393	472	361	-	-	-	-	-	-	429.5	377.0
2:00 PM	-	-	-	-	437	411	503	421	-	-	-	-	-	-	470.0	416.0
3:00 PM	-	-	-	-	661	401	572	453	-	-	-	-	-	-	616.5	427.0
4:00 PM	-	-	-	-	701	426	730	465	-	-	-	-	-	-	715.5	445.5
5:00 PM	-	-	-	-	699	480	815	436	-	-	-	-	-	-	757.0	458.0
6:00 PM	-	-	-	-	523	414	582	355	-	-	-	-	-	-	552.5	384.5
7:00 PM	-	-	-	-	368	312	363	340	-	-	-	-	-	-	365.5	326.0
8:00 PM	-	-	-	-	310	268	282	278	-	-	-	-	-	-	296.0	273.0
9:00 PM	-	-	-	-	225	188	217	205	-	-	-	-	-	-	221.0	196.5
10:00 PM	-	-	-	-	123	99	164	115	-	-	-	-	-	-	143.5	107.0
11:00 PM	-	-	-	-	43	39	74	58	-	-	-	-	-	-	58.5	48.5
Totals	0	0	0	0	5190	4168	7377	6540	1766	2246	0	0	0	0	7166.5	6477.0
Combined	0		0		93	58	139	17	401	.2	0		0		1364	3.5
Split (%)	-	-	-	-	55.5	44.5	53.0	47.0	44.0	56.0	-	-	-	-	52.5	47.5
Peak Hours																
12:00 AM -					11:00	11:00	8:00	7:00	8:00	7:00					0.00 414	7.00 414
12:00 PM	-	-	-	-	AM	AM	AM	AM	AM	AM	-	-	-	-	8:00 AM	7:00 AM
Volume	-	-	-	-	349	365	408	568	385	550	-	-	-	-	396.5	559.0
12:00 PM - 12:00 AM	-	-	-	-	4:00 PM	5:00 PM	5:00 PM	4:00 PM	-	-	-	-	-	-	5:00 PM	5:00 PM
Volume	_	-	_	_	701	480	815	465	-	_	-	-	_	-	757.0	458.0
voiume	-	-	-	-	/01	400	013	405	-	-	-	-	-	-	/5/.0	450.0

RAW TOTAL:	13,644
ADJUSTMENT FACTOR:	1.146

2016 AADT:

11,900

From:	<u>Filipi, Mark</u>
То:	Sierra Saunders
Cc:	Jason R Pieper; Jason D Gottfried; Carla J Stueve; Robert H. Byers
Subject:	RE: 2016 Regional Solicitation - Forecast AADT"s
Date:	Thursday, June 16, 2016 10:23:49 AM
Attachments:	image006.png image008.png image010.png

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.

Project	Forecast Volume
CSAH 15 (Shoreline Dr) Bridge Replacement	20,900
CSAH 19 (Manitou Rd/Shadywood Rd) Bridge Rehabilita	tion 16,200
CSAH 23 (Marshall St NE)	10,500
CSAH 32 (Penn Ave) Reconstruction	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)
CSAH 66 (Golden Valley Rd) Reconstruction	19,900 (West of Noble Ave.)
	10,200 (East of Indiana Ave.)
CSAH 81 (Bottineau Blvd) Expansion	51,100
CSAH 81 (Broadway Ave) Bridge Replacement	24,700
CSAH 152 (Webber Pkwy) Reconstruction	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.

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



Mark Filipi, AICP PTP Manager, Technical Planning Support Metropolitan Transportation Services mark.filipi@metc.state.mn.us P.651.602.1725 | F.651.602.1739 390 North Robert Street | St. Paul, MN | 55101 | metrocouncil.org From: Sierra Saunders [mailto:Sierra.Saunders@hennepin.us]
Sent: Wednesday, June 15, 2016 8:02 AM
To: Filipi, Mark <Mark.Filipi@metc.state.mn.us>
Cc: Jason R Pieper <Jason.Pieper@hennepin.us>; Jason Gottfried <Jason.gottfried@hennepin.us>; Carla Stueve <Carla.Stueve@hennepin.us>; Robert H. Byers <Robert.Byers@hennepin.us>
Subject: 2016 Regional Solicitation - Forecast AADT's

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.



K:\139\13909000\Comp Plan Update\139MAP 4A-5.dwg

3/29/2010



### Full Listing of Planned 2040 Bikeway System Segments

Figure 1 Planned 2040 Bikeway System Corridors Map



## Comprehensive Trail System Plan

City of Orono Minnesota



Existing Separated Trails



Future Trails (May Be Road Shoulder or Separated)















use the loop but can experience the Narrows.

The Narrows offers an opportunity to create a safe and separated roadway crossing for the trail.

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



On-Street Trail Preliminary Concept Design

County Road 19 Trail Concept Design 41



Off-Street Trail Preliminary Concept Design



# **CITY OF ORONO**

Street Address: 2750 Kelley Parkway Orono, MN 55356

Mailing Address: P.O. Box 66 Crystal Bay, MN 55323 www.ci.orono.mn.us

Telephone (952) 249-4600 Fax (952) 249-4616

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,

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



4901 Manitou Road, Tonka Bay, Minnesota 55331

(952) 474-7994

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