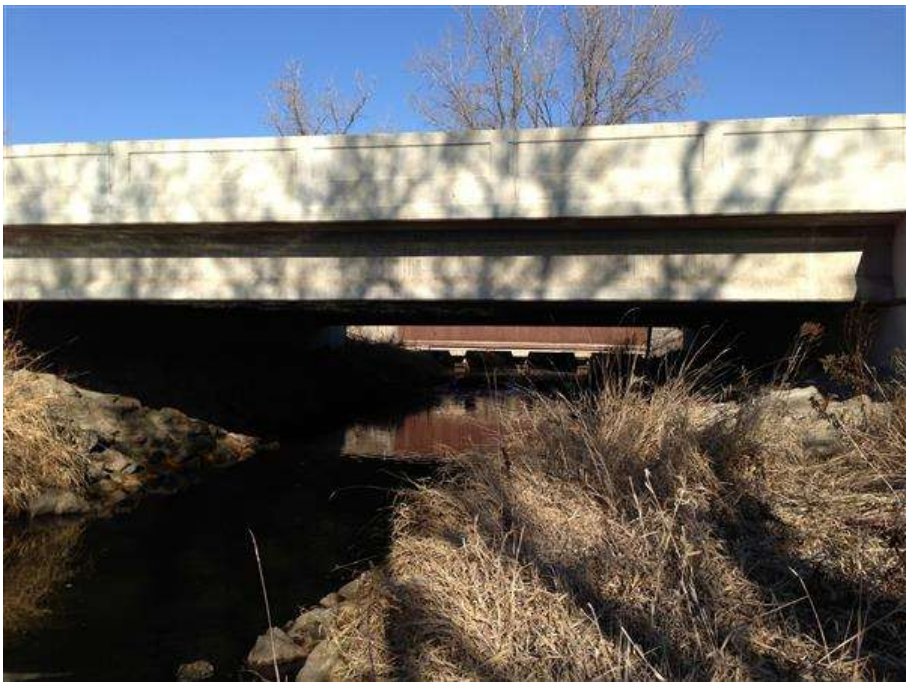
2016 ROUTINE
BRIDGE INSPECTION REPORT



BRIDGE # 62539
CSAH 3 over Rice Creek

DISTRICT: Metro **COUNTY:** Ramsey **CITY/TOWNSHIP:** Arden Hills

STATE: Minnesota

Date of Inspection: 11/08/2016
Equipment Used:

Owner: County Highway Agency

Inspected By: Bodelson, Dan

Report Written By: Dan Bodelson
Report Reviewed By: Nicklaus Fischer
Final Report Date: 11/28/2016

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Minnesota Structure Inventory Report

Bridge ID: 62539 CSAH 3 **over** Rice Creek **Date:** 11/28/2016

GENERAL

Agency Br. No.
District Metro
Maint. Area **Crew**
County 062 - Ramsey
City Arden Hills
Township
Desc. Loc. 0.2 Mmi E of jct TH 35W
Sect., Twp., Range 9 - 030N - 23W
Latitude **Deg** 45 **Min** 6 **Sec** 28.79
Longitude **Deg** 93 **Min** 11 **Sec** 7.20
Custodian 02 - County Highway Agency
Owner 02 - County Highway Agency
BMU Agreement
Year Built 2000
MN Year Reconstructed
FHWA Year Reconstructed
MN Temporary Status
Bridge Plan Location 3 - COUNTY
Date Opened to Traffic
On-Off System 1 - ON
Legislative District 50B
ABC Suitable

STRUCTURE

Service On 1 - Highway
Service Under 5 - Waterway
Main Span Type
5 - Prestress or Precast 01 - Beam Span
Main Span Detail
Appr. Span Type
Appr. Span Detail
Skew 0
Culvert Type
Barrel Length ft.
Cantilever ID

NUMBER OF SPANS

MAIN: 1 **APPR:** 0 **TOTAL:** 1
Main Span Length 49.2 ft.
Structure Length 51.2 ft.
Deck Width (Out-to-Out) 56.0 ft.
Deck Material 1 - Concrete Cast-in-Place
Wear Surf Type 4 - Low Slump Concrete
Wear Surf Install Year 2000
Wear Course/Fill Depth 0.16 ft.
Deck Membrane 0 - None
Deck Rebars 1 - Epoxy Coated Reinforcing
Deck Rebars Install Year 2000
Structure Area (Out-to-Out) 3692 sq. ft.
Roadway Area (Curb-to-Curb) 2863 sq. ft.
Sidewalk Width **Lt** 12.00 ft. **Rt** 0.00 ft.
Curb Height **Lt** 0.00 ft. **Rt** 0.00 ft.
Rail Type **Lt** 22 **Rt** 22

ROADWAY

Bridge Match ID (TIS) 0
Roadway O/U Key Route On Structure
Route Sys 04 - CSAH **Number** 3
Roadway Name or Description
CSAH 3
Level of Service 1 - MAINLINE
Roadway Type 2 - 2-way traffic
Control Section (TH Only)
Reference Point 001+00.380
Detour Length 4.0 mi
Lanes **On** 2 **Under** 0
ADT 7171 **Year** 2008
HCADT 0 **ADTT** 0 **%**
Functional Class 16 - Urban - Minor Arterial

RDWY DIMENSIONS

If Divided	NB-EB	SB-WB
Roadway Width	56.00 ft.	ft.
Vertical Clearance	ft.	ft.
Max. Vert. Clear.	ft.	ft.
Horizontal Clear.	ft.	ft.
Lateral Clearance	ft.	ft.

Appr. Surface Width 56.0 ft.
Bridge Roadway Width 56.0 ft.
Median Width On Bridge ft.

MISC. BRIDGE DATA

Structure Flared 0 - No flare
Parallel Structure N - No parallel structure
Field Conn. ID
Abutment Foundation 1 - CONC
(Material/Type) 3 - FTG PILE
Pier Foundation
(Material/Type)
Historic Status 5 - Not eligible

PAINT

Year Painted
Unsound Paint %
Painted Area sq. ft.
Primer Type
Finish Type

BRIDGE SIGNS

Posted Load 0 - Not Required
Traffic
Horizontal 0 - Not Required
Vertical N - Not Applicable

INSPECTION

Userkey 102
Unofficial Structurally Deficient N
Unofficial Functionally Obsolete N
Unofficial Sufficiency Rating 98.0
Routine Inspection Date 11/08/2016
Routine Inspection Frequency 24
Inspector Name CO Bridge
Status A - Open

NBI CONDITION RATINGS

Deck 7 - Good Condition
Unsound Deck %
Superstructure 8 - Very Good Condition
Substructure 8 - Very Good Condition
Channel 7 - Needs minor repairs
Culvert N - Not Applicable

NBI APPRAISAL RATINGS

Structure Evaluation 8
Deck Geometry 9
Underclearances N
Water Adequacy 8 - Bridge Above Approache
Approach Alignment 8 - Equal to present desirabl

SAFETY FEATURES

Bridge Railing 1 - MEETS STANDARDS
GR Transition 0 - SUBSTANDARD
Appr. Guardrail 1 - MEETS STANDARDS
GR Termini 1 - MEETS STANDARDS

IN DEPTH INSP.

	Y/N	Freq	Date
Frac. Critical	N		
Underwater	N		
Pinned Asbly.	N		
Spec. Feat.			

WATERWAY

Drainage Area (sq. mi.) 5.6
Waterway Opening 203 sq. ft.
Navigation Control 0 - No nav. control on waterw
Pier Protection
Nav. Clr. (ft.) **Vert.** ft. **Horiz.** ft.
Nav. Vert. Lift Bridge Clear. (ft.)
MN Scour Code L - STBL - LOW F **Year** 2002

CAPACITY RATINGS

Design Load 9 - HS 25 (OR GREATER)
Operating Rating 1 - LF (LF) HS 41.1
Inventory Rating 1 - LF (LF) HS 25.0
Posting VEH: **SEMI:** **DBL:**
Rating Date 4/27/2000

Minnesota Permit Codes

A: N - N/A
B: N - N/A
C: N - N/A

Minnesota Structure Inventory Report

Bridge ID: 62539 **CSAH 3 over Rice Creek** Date: 11/08/2016

+GENERAL+

Agency Br. No.	**Crew**
District	05 **Maint. Area**
County	062 - Ramsey
City	Arden Hills
Township	
Desc. Loc.	0.2 Mmi E of jct TH 35W
Sect., Twp., Range	9 - 030N - 23W
Latitude	45 ° 6 ' 28.79 ''
Longitude	93 ° 11 ' 7.20 ''
Custodian	02 - County Highway Agency
Owner	02 - County Highway Agency
BMU Agreement	
Year Built	2000
MN Year Reconstructed	
FHWA Year Reconstructed	
MN Temporary Status	
Bridge Plan Location	3 - COUNTY
Date Opened to Traffic	
On - Off System	1 - ON
Legislative District	50B
Potential ABC	2 - N/A

+STRUCTURE+

Service On	1 - Highway
Service Under	5 - Waterway
Main Span Type	5 - Prestress or Precast
Main Span Design	01 - Beam Span
Main Span Detail	
Appr. Span Type	
Appr. Span Design	
Appr. Span Detail	
Skew	0
Culvert Type	
Barrel Length	
Cantilever ID	

Number of Spans

MAIN: 1 **APPR:** 0 **TOTAL:**

Main Span Length	49.2 **ft.**
Structure Length	51.2 **ft.**
Deck Width (Out-to-Out)	56.0 **ft.**
Deck Material	1 - Concrete Cast-in-Place
Wear Surf Type	4 - Low Slump Concrete
Wear Surf Install Year	2000
Wear Course/Fill Depth	0.16 **ft.**
Deck Membrane	0 - None
Deck Rebars	1 - Epoxy Coated Reinforcing
Deck Rebars Install Year	2000
Structure Area (Out-to-Out)	3692 **sq. ft.**
Roadway Area (Curb-to-Curb)	2863 **sq. ft.**
Sidewalk Width	**50A. Lt** 12.00 **ft.** **50B. Rt** 0.00 **ft.**
Curb Height	**Lt** 0.00 **ft.** **Rt** 0.00 **ft.**
Rail Type	**Lt** 22 **Rt** 22

+ROADWAY+

Bridge Match ID (TIS)	0
Roadway O/U Key	Route On Structure
Route Sys	04 - CSAH **Number** 3
Roadway Name or Description	CSAH 3
Level of Service	1 - MAINLINE
Roadway Type	2 - 2-way traffic
Control Section (TH Only)	
Reference Point	001+00.380
Detour Length	4.0 **mi.**
Lanes	**ON** 2 **UNDER** 0
	ADT 7171 **YEAR** 2008
HCADT	**ADTT** **%**
Functional Class	16 - Urban - Minor Arterial

+RDWY DIMENSIONS+

If Divided	**NB-EB**	**SB-WB**
Roadway Width	56.00 **ft.**	**ft.**
Vertical Clearance	**ft.**	**ft.**
Max. Vert. Clear.	**ft.**	**ft.**
Horizontal Clear.	**ft.**	**ft.**
Lateral Clearance	**ft.**	**ft.**

Appr. Surface Width	56.0 **ft.**
Bridge Roadway Width	56.0 **ft.**
Median Width On Bridge	**ft.**

+MISC. BRIDGE DATA+

Structure Flared	0 - No flare
Parallel Structure	N - No parallel structure
Field Conn. ID	
Abutment	1 - CONC
Foundation (Material/Type)	3 - FTG PILE
Pier Foundation (Material/Type)	
Historic Status	5 - Not eligible

+PAINT+

Year Painted	
Unsound Paint %	
Painted Area	**sq. ft.**
Primer Type	
Finish Type	

+BRIDGE SIGNS+

Posted Load	0 - Not Required
Traffic	
Horizontal	0 - Not Required
Vertical	N - Not Applicable

+INSPECTION+

Userkey	102
Structurally Deficient	N
Functionally Obsolete	N
Sufficiency Rating	98.0
Routine Inspection Date	11/08/2016
Routine Inspection Frequency	24
Inspector Name	Bodelson, Dan
Status	A - Open

+NBI CONDITION RATINGS+

Deck	7	**Unsound Deck %**
Superstructure	8	
Substructure	8	
Channel	7	
Culvert	N	

+NBI APPRAISAL RATINGS+

Structure Evaluation	8
Deck Geometry	9
Underclearances	N
Waterway Adequacy	8
Approach Alignment	8

+SAFETY FEATURES+

Bridge Railing	1 - MEETS STANDARDS
GR Transition	0 - SUBSTANDARD
Appr. Guardrail	1 - MEETS STANDARDS
GR Termini	1 - MEETS STANDARDS

+IN DEPTH INSP.+

	Y/N	**Freq**	**Date**
Frac. Critical	N		
Underwater	N		
Pinned Asbly.	N		
Spec. Feat.			

+WATERWAY+

Drainage Area (sq. mi.)	5.6
Waterway Opening (sf.)	203
Navigation Control	0 - No nav. control on
Pier Protection	!
Nav. Clr. (ft.)	**Vert.** 0.0 **Horiz.** 0.0
Nav. Vert. Lift Bridge Clear. (ft.)	
MN Scour Code	L - STBL - **Year** 2002

+CAPACITY RATINGS+

Design Load	9 - HS 25 (OR GREATER)	
Operating Rating	2 - HS TRUCK	41.1
Inventory Rating	2 - HS TRUCK	25.0

Posting VEH: **SEMI:** **DBL:**

Rating Date 4/27/2000

Overweight Permit Codes

A N - N/A **B** N - N/A **C** N - N/A

BRIDGE 62539 CSAH 3 OVER Rice Creek **ROUTINE INSP. DATE: 11/08/2016**

County: Ramsey
City: Arden Hills
Township:
Section: 9 Township: 030N Range: 23W
Span Type: 5 - Prestressed Concrete 2 - Stringer/Multi-beam or Girder
List:
NBI Deck: 7 Super: 8 Sub: 8 Chan: 7 Culv: N
Open, Posted, Closed: A - Open
MN Scour Code: L - STBL - LOW RISK
Appraisal Ratings - Approach: 8 Waterway: 8
Required Bridge Signs - Load Posting: 0 - Not Required
Horizntal: 0 - Not Required
Traffic:
Vertical: N - Not Applicable

Location: 0.2 Mmi E of jct TH 35W
Route: 04 - CSAH 3 Ref. Pt.: 001+00.380
Control Section:
Maint. Area:
Local Agency Bridge Nbr.:

Length: 51.2 ft.
Deck Width: 56.0 ft.
Rdwy. Area/ Pct. Unsnd: 2863 sq. ft. / %
Paint Area/ Pct. Unsnd: sq. ft. / %
Culvert: N/A
Postings:

Unofficial Structurally Deficient N
Unofficial Functionally Obsolete N
Unofficial Sufficiency Rating 98.0

ELEM NBR	ELEMENT NAME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS 5
109	Prestressed Concrete Girder or Beam	2	Routine	11/08/2016	404 LF	404	0	0	0	N/A
			Routine	11/07/2014	404 LF	404	0	0	0	N/A
	Notes: [2006-2014] Prestressed concrete girders have little deterioration present. Girders & metal diaphragms are aligned and in place.									
215	Reinforced Concrete Abutment	2	Routine	11/08/2016	148 LF	111	37	0	0	N/A
			Routine	11/07/2014	148 LF	111	37	0	0	N/A
	Notes: [2014] Grafitti on east abutment, rust stains from top on west abutment - center. [2012-2014] Minor to moderate vertical cracking & discoloration present- 25% in condition state 2.									
301	Poured Deck Joint	1	Routine	11/08/2016	112 LF	0	0	112	N/A	N/A
			Routine	11/07/2014	112 LF	0	0	112	N/A	N/A
	Notes: [2010-2014] Silicon poured deck joints have failed. Recommend replacement. [2004-2008] Silicon poured deck joints have minor adhesion/cohesion failures present.									
310	Elastomeric (Expansion) Bearing	2	Routine	11/08/2016	16 EA	16	0	0	N/A	N/A
			Routine	11/07/2014	16 EA	16	0	0	N/A	N/A
	Notes: [2002-2014] Shows little deterioration and positioned properly.									
321	Concrete Approach Slab-Concrete Wearing Surface	2	Routine	11/08/2016	2 EA	0	0	2	0	N/A
			Routine	11/07/2014	2 EA	0	0	2	0	N/A
	Notes: [2014] 10 1/2' undermine on SE corner @ abutment, 7' undermine on SW corner @ abutment. [2010-2014] E8S joint filler has failed at both ends- recommend replacement. There is some traffic impact on both approach slabs due to the settlement of material underneath. [2008-2012] There is some additional settlement underneath the south side of approach slabs. [2012-2014] The west approach has 115 LF of moderate to major cracking across except for west bound shoulder. [2012-2014] The east approach slab has 135 LF of moderate to major transverse cracking full width. [2004-2006] R/conc approach slabs have been stabilized. Need to seal the cracks on the approach slabs. [2002] MN/DOT had contractor mud jack the approach panels to fix the settlement problem underneath the approach slabs.									

ELEM NBR	ELEMENT NAME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS 5
331	Reinforced Concrete Bridge Railing	2	Routine	11/08/2016	102 LF	0	102	0	0	N/A
			Routine	11/07/2014	102 LF	0	102	0	0	N/A
	Notes: [2012-2014] Concrete railing has numerous moderate spalling. [2008-2014] 100% in condition state 2. [2012-2014] There are 10 moderate vertical cracks in south rail and 21 moderate vertical cracks in north rail. Concrete railing is type F. Some rusting & staining is present.									
333	Masonry, Other or Combination Material Railing	2	Routine	11/08/2016	52 LF	0	52	0	N/A	N/A
			Routine	11/07/2014	52 LF	0	52	0	N/A	N/A
	Notes: [20122014] There are eight moderate vertical cracks with numerous moderate size spalls present. 100% in condition state #2. [2008-2014] Railing is located north side of sidewalk. There is some minor chipping & 100% chalking of paint. Concrete railing is parapet rail with ornamental metal rail.									
358	Concrete Deck Cracking Smart Flag	2	Routine	11/08/2016	1 EA	0	1	0	0	N/A
			Routine	11/07/2014	1 EA	0	1	0	0	N/A
	Notes: [2012-2014] Minor, but numerous diagonal cracks at the SE & SW corners with numerous moderate spalls present. [2002-2014] The deck surface has minor tight cracks.									
359	Underside of Concrete Deck Smart Flag	2	Routine	11/08/2016	1 EA	0	1	0	0	0
			Routine	11/07/2014	1 EA	0	1	0	0	0
	Notes: West side of Rice Creek- [2012-2014] Between girders #1 & #2 there is a 4' diagonal crack w/efflorescence at the west end. Between girders #2 & #3, girders #3 & #4 and girders #4 & #5 there is a 4' transverse crack w/efflorescence. [2008-2014] Between girders #7 & #8 there are 4 - 4' transverse cracks w/efflorescence. East side of Rice Creek- Between girders #1& #2, #2&#3 and #3& #4 there is a minor 4' diagonal or transverse crack with efflorescence. Between girders #7 & #8 there are two minor 4' cracks with efflorescence.									
377	Low Slump O/L (Concrete Deck with Epoxy Rebar)	2	Routine	11/08/2016	3692 SF	0	3692	0	0	0
			Routine	11/07/2014	3692 SF	0	3692	0	0	0
	Notes: [2008-2014] There is minor, but numerous cracking present mostly located at SE & SW corners. Distressed areas are < 2%. [2001-2008] Minor cracks are developing.									
387	Reinforced Concrete Wingwall	2	Routine	11/08/2016	4 EA	2	2	0	0	N/A
			Routine	11/07/2014	4 EA	2	2	0	0	N/A
	Notes: [2014] Numorous moderate spalls on SW wing wall, moved to condition state # 2 with SE wing wall. [2012-2014] Some numerous moderate spalling exists on the SE wingwall. [2012] Little deterioration exists on the SW, NW & NE wingwalls. [2003-2012-2014] Graffiti on NE wing wall.									
964	Critical Finding Smart Flag	2	Routine	11/08/2016	1 EA	1	0	N/A	N/A	N/A
			Routine	11/07/2014	1 EA	1	0	N/A	N/A	N/A
	Notes: DO NOT DELETE THIS CRITICAL FINDING SMART FLAG.									

ELEM NBR	ELEMENT NAME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS 5
981	Signing	2	Routine	11/08/2016	1 EA	0	1	0	0	0
			Routine	11/07/2014	1 EA	0	1	0	0	0
	Notes: [2014] Signing is O.K., moved to condition state # 2. [2004-2012] Horizontal clearance sign at the NW corner is needed. [2004] Horizontal clearance sign at the SW corner has been installed.									
982	Approach Guardrail	2	Routine	11/08/2016	1 EA	1	0	0	N/A	N/A
			Routine	11/07/2014	1 EA	1	0	0	N/A	N/A
	Notes: [2002-2014] Guardrails are in place and functioning properly.									
984	Deck & Approach Drainage	2	Routine	11/08/2016	1 EA	0	0	1	N/A	N/A
			Routine	11/07/2014	1 EA	0	0	1	N/A	N/A
	Notes: [2008-2014] The drainage system is functioning properly. [2002-2014] Major erosion of slopes @ SW,SE & NE corners. Fill is needed. [2004-2014] CB's are OK.									
985	Slopes & Slope Protection	2	Routine	11/08/2016	1 EA	0	1	0	N/A	N/A
			Routine	11/07/2014	1 EA	0	1	0	N/A	N/A
	Notes: [2008-2014] Major erosion of slopes at the SW & SE corners. Moderate erosion at the NE corner. Fill is needed. [2006-2014] Grouted rip rap has settled 1" - 2" @ abutments. [2004] Grouted rip rap has settled 1/2" - 1" @ abutments.									
986	Curb & Sidewalk	2	Routine	11/08/2016	1 EA	0	1	0	N/A	N/A
			Routine	11/07/2014	1 EA	0	1	0	N/A	N/A
	Notes: [2008-2014] There is some spalling on the sidewalk. [2002-2014] Curb is settling on the south side at approach panels. There also is settlement of bituminous bike path @ NW corner and deterioration of bituminous @ NE corner.									

General Notes: [2016] Bridge safety inspection was completed by Dan Bodelson, Brain Essler, Randy Bussiere, & Rob Gaetz on 11/08/2016.
[2014] Bridge safety inspection was completed by Dan Bodelson and Randy Bussiere on 11/07/2014.
[2012] Bridge safety inspection was completed by B. Wieman and D. Bodelson on 11/15/2012.
[2010] Bridge safety inspection was completed by B. Wieman 11/1/2010.
[2008] Bridge safety inspection was completed by B. Paine, B. Wieman & B. Essler 11/03/2008.
[2003] Mn/DOT had a Contractor mud jack approach panels. [2008] Could use additional mud-jacking under south side approach panels due to settlement.
[2008] Riprap was installed @ NW corner north of the bike path.
[10/6/2006] Bridge safety inspection was completed by Bret Wieman.
[2006-2014] Fill is needed at fence posts at SW & SE corners of bridge.
[2006-2014] Joints @ end of approach panels need to be sealed. There is deterioration of membrane and joint filler material.
[2006-2014] There are voids under the curb @ SW & SE corners of the bridge.

58. Deck NBI: Concrete has minor cracking, scaling & leaching.

36A. Brdg Railings NBI: Vehicular railings meet current standards.

36B. Transitions NBI: Guardrail transitions does not meet current standards.
Posts are 6' spacing @ bridge, not 1'-6 3/4" as per Sandard Plate 5-297.606M

36C. Appr Guardrail NBI: Approach guardrail meets current standards.

36D. Appr Guardrail Terminal NBI: Guardrail terminations meet current standards.

59. Superstructure NBI: Concrete has minor deterioration.

60. Substructure NBI: Concrete has minor deterioration.

61. Channel NBI: Channel has no notable aggregation or lateral movement.

62. Culvert NBI: Structure is not a culvert.

ELEM NBR	ELEMENT NAME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS 5

71. Waterway Adeq NBI: Greater than 3 feet of freeboard.

72. Appr Roadway Alignment NBI: No speed reduction required.

Inventory Notes:

Dan Bodelson
Inspector's Signature

Nicklaus Fischer
Reviewer's Signature

MINNESOTA BRIDGE INSPECTION REPORT

11/28/2016

Inspector: CO Bridge

BRIDGE 62539 CSAH 3 OVER Rice Creek

County: Ramsey
City: Arden Hills
Township:
Section: 9 Township: 030N Range: 23W
Span Type: 5 - Prestressed Concrete 2 - Stringer/Multi-beam or Girder
List:
NBI Deck: 7 Super: 8 Sub: 8 Chan: 7

Location: 0.2 Mmi E of jct TH 35W
Route: 04 - CSAH 3 Ref. Pt.: 001+00.380
Control Section:
Maint. Area:
Local Agency Bridge Nbr.:
Culv: N
Open, Posted, Closed: A - Open
MN Scour Code: L - STBL - LOW RISK

Length: 51.2 ft.
Deck Width: 56.0 ft.
Rdwy. Area/ Pct. Unsnd: 2863 sq. ft. / %
Paint Area/ Pct. Unsnd: sq. ft. / %
Culvert: N/A
Postings:

Appraisal Ratings - Approach: 8 Waterway: 8
Required Bridge Signs - Load Posting: 0 - Not Required
Horizntal: 0 - Not Required
Traffic:
Vertical: N - Not Applicable

Unofficial Structurally Deficient N
Unofficial Functionally Obsolete N
Unofficial Sufficiency Rating 98.0

ELEM NBR	ELEMENT NAME	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
12	Reinforced Concrete Deck	Routine	11/08/2016	3692 SF	3618	0	74	0
		Migrated Values		3692 SF	3618	0	74	0

Notes: West side of Rice Creek-
[2012-2016] Between girders #1 & #2 there is a 4' diagonal crack w/efflorescence at the west end.
Between girders #2 & #3, girders #3 & #4 and girders #4 & #5 there is a 4' transverse crack w/efflorescence.
[2008-2016] Between girders #7 & #8 there are 4 - 4' transverse cracks w/efflorescence.
East side of Rice Creek-
Between girders #1& #2, #2 3 and #3& #4 there is a minor 4' diagonal or transverse crack with efflorescence.
Between girders #7 & #8 there are two minor 4' cracks with efflorescence.

	510 - Wearing Surfaces	Routine	11/08/2016	2863 SF	2806	0	57	0
		Migrated Values		2863 SF	2806	0	57	0

Notes: Low Slump Overlay with Epoxy Rebar Notes:
[2008-2016] There is minor, but numerous cracking present mostly located at SE & SW corners. Distressed areas are < 2%.
[2001-2008] Minor cracks are developing.

109	Prestressed Concrete Open Girder/Beam	Routine	11/08/2016	404 LF	404	0	0	0
		Migrated Values		404 LF	404	0	0	0

Notes: [2006-2016] Prestressed concrete girders have little deterioration present. Girders & metal diaphragms are aligned and in place.

215	Reinforced Concrete Abutment	Routine	11/08/2016	182 LF	137	45	0	0
		Migrated Values		182 LF	137	45	0	0

Notes: [2016] Migrator added 40 LF to abutment quantity to account for wingwalls (CS1:20 CS2:20 CS3:0 CS4:0).
[2014] Grafitti on east abutment, rust stains from top on west abutment - center.
[2012-2016] Minor to moderate vertical cracking & discoloration present- 25% in condition state 2.

Wingwall notes: 8.5' wingwalls on all 4 corners = 34 LF + 148 LF of abutments = 182 LF total.
[2016] Numorous moderate spalls on SW wing wall, moved to condition state # 2 with SE wing wall.
[2012-2016] Some numerous moderate spalling exists on the SE wingwall.
[2012] Little deterioration exists on the SW, NW & NE wingwalls. [2003-2012-2014] Graffiti on NE wing wall.

301	Pourable Joint Seal	Routine	11/08/2016	112 LF	0	0	0	112
		Migrated Values		112 LF	0	0	0	112

Notes: [2010-2016] Silicon poured deck joints have failed. Recommend replacement.
[2004-2008] Silicon poured deck joints have minor adhesion/cohesion failures present.

310	Elastomeric Bearing	Routine	11/08/2016	16 EA	16	0	0	0
		Migrated Values		16 EA	16	0	0	0

Notes: [2002-2016] Shows little deterioration and positioned properly.

ELEM NBR	ELEMENT NAME	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
321	Reinforced Concrete Approach Slab	Routine	11/08/2016	2240 SF	0	0	2240	0
		Migrated Values		2240 SF	0	0	2240	0

Notes: [2016] Migrator assumed an approach slab length of 20FT and used the inventory quantity of 56FT for the width.
[2014-2016] 10 1/2' undermine on SE corner @ abutment, 7' undermine on SW corner @ abutment.
[2010-2016] E8S joint filler has failed at both ends- recommend replacement. There is some traffic impact on both approach slabs due to the settlement of material underneath.
[2008-2016] There is some additional settlement underneath the south side of approach slabs.
[2012-2016] The west approach has 115 LF of moderate to major cracking across except for west bound shoulder.
[2012-2016] The east approach slab has 135 LF of moderate to major transverse cracking full width.
[2004-2006] R/conc approach slabs have been stabilized. Need to seal the cracks on the approach slabs.
[2002] MN/DOT had contractor mud jack the approach panels to fix the settlement problem underneath the approach slabs.

330	Metal Bridge Railing	Routine	11/08/2016	52 LF	0	52	0	0
		Migrated Values		52 LF	0	52	0	0

Notes: [2016] Migrator assumed concrete/metal combination type rail.
[2012-2016] There are eight moderate vertical cracks with numerous moderate size spalls present. 100% in condition state #2.
[2008-2016] Railing is located north side of sidewalk. There is some minor chipping & 100% chalking of paint.
Concrete railing is parapet rail with ornamental metal rail.

	515 - Steel Protective Coating	Routine	11/08/2016	104 SF	0	104	0	0
		Migrated Values		104 SF	0	104	0	0

Notes: [2016] Migrator assumed CS1 and a quantity of 999 SF.
[2016] 52 LF x 2.0' high = 104 SF
[2016] Railing has minor deterioration with light chalking.

331	Reinforced Concrete Bridge Railing	Routine	11/08/2016	154 LF	0	154	0	0
		Migrated Values		154 LF	0	154	0	0

Notes: [2012-2016] Concrete railing has numerous moderate spalling.
[2008-2016] 100% in condition state 2.
[2012-2016] There are 10 moderate vertical cracks in south rail and 21 moderate vertical cracks in north rail.
Concrete railing is type F. Some rusting & staining is present.

[2016] Migrator assumed concrete/metal combination type rail.
[2012-2016] There are eight moderate vertical cracks with numerous moderate size spalls present. 100% in condition state #2.
[2008-2016] Railing is located north side of sidewalk. There is some minor chipping & 100% chalking of paint.
Concrete railing is parapet rail with ornamental metal rail.

800	Critical Deficiencies or Safety Hazards	Routine	11/08/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0

Notes: NO CRITICAL FINDINGS OBSERVED DURING THE LAST INSPECTION.

810	Concrete Decks - Cracking & Sealing	Routine	11/08/2016	195 LF	0	195	0	0
		Migrated Values		195 LF	0	195	0	0

Notes: [2016] There are 120 LF of unsealed minor crack's on the eastbound lanes & 75 LF of unsealed minor crack's on the westbound lanes = 195 LF total of Minor unsealed crack's
[2012-2014] Minor, but numerous diagonal cracks at the SE & SW corners with numerous moderate spalls present.
[2002-2014] The deck surface has minor tight cracks.

883	Concrete Shear Cracking	Routine	11/08/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0

Notes: Use this element to monitor the presence of shear cracking on concrete elements. Pay particular attention to the prestressed concrete beams.

891	Other Bridge Signing	Routine	11/08/2016	1 EA	0	1	0	0
		Migrated Values		1 EA	0	1	0	0

Notes: [2014-2016] Signing is O.K., moved to condition state # 2.
[2004-2012] Horizontal clearance sign at the NW corner is needed.
[2004] Horizontal clearance sign at the SW corner has been installed.

ELEM NBR	ELEMENT NAME	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
892	Slopes & Slope Protection	Routine	11/08/2016	1 EA	0	0	1	0
		Migrated Values		1 EA	0	0	1	0

Notes: [2016] Moderate erosion on the NW corner behind the wingwall.
[2008-2016] Major erosion of slopes at the SW & SE corners. Moderate erosion at the NE corner. Fill is needed.
[2006-2016] Grouted rip rap has settled 1" - 2" @ abutments.
[2004] Grouted rip rap has settled 1/2" - 1" @ abutments.

893	Guardrail	Routine	11/08/2016	1 EA	0	1	0	0
		Migrated Values		1 EA	0	1	0	0

Notes: Guardrail transitions does not meet current standards.
[2016] Posts are 6' spacing @ bridge, not 1'-6 3/4" as per Sandard Plate 5-297.606M - moved to condition state 2
[2002-2016] Guardrails are in place and functioning properly.

894	Deck & Approach Drainage	Routine	11/08/2016	1 EA	0	1	0	0
		Migrated Values		1 EA	0	1	0	0

Notes: [2008-2016] The drainage system is functioning properly.
[2002-2016] Major erosion of slopes @ SW,SE & NE corners. Fill is needed.
[2004-2016] CB's are OK.

895	Sidewalk, Curb, & Median	Routine	11/08/2016	1 EA	0	1	0	0
		Migrated Values		1 EA	0	1	0	0

Notes: [2008-2016] There is some spalling on the sidewalk.
[2002-2016] Curb is settling on the south side at approach panels. There also is settlement of bituminous bike path @ NW corner and deterioration of bituminous @ NE corner.

900	Protected Species	Routine	11/08/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0

Notes: Use this element to track the presence of protected species living on this structure.
[2016] No protective species found.

General Notes: [2016] Bridge safety inspection was completed by Dan Bodelson, Brain Essler, Randy Bussiere, & Rob Gaetz on 11/08/2016.
[2014] Bridge safety inspection was completed by Dan Bodelson and Randy Bussiere on 11/07/2014.
[2012] Bridge safety inspection was completed by B. Wieman and D. Bodelson on 11/15/2012.
[2010] Bridge safety inspection was completed by B. Wieman 11/1/2010.
[2008] Bridge safety inspection was completed by B. Paine, B. Wieman & B. Essler 11/03/2008.
[2003] Mn/DOT had a Contractor mud jack approach panels. [2008] Could use additional mud-jacking under south side approach panels due to settlement.
[2008] Riprap was installed @ NW corner north of the bike path.
[10/6/2006] Bridge safety inspection was completed by Bret Wieman.
[2006-2014] Fill is needed at fence posts at SW & SE corners of bridge.
[2006-2014] Joints @ end of approach panels need to be sealed. There is deterioration of membrane and joint filler material.
[2006-2014] There are voids under the curb @ SW & SE corners of the bridge.

58. Deck NBI: Concrete has minor cracking, scaling & leaching.

36A. Brdg Railings NBI: Vehicular railings meet current standards.

36B. Transitions NBI: Guardrail transitions does not meet current standards.
Posts are 6' spacing @ bridge, not 1'-6 3/4" as per Sandard Plate 5-297.606M

36C. Appr Guardrail NBI: Approach guardrail meets current standards.

36D. Appr Guardrail Terminal NBI: Guardrail terminations meet current standards.

59. Superstructure NBI: Concrete has minor deterioration.

60. Substructure NBI: Concrete has minor deterioration.

61. Channel NBI: Channel has no notable aggregation or lateral movement.

62. Culvert NBI: Structure is not a culvert.

71. Waterway Adeq NBI: Greater than 3 feet of freeboard.

72. Appr Roadway Alignment NBI: No speed reduction required.

ELEM NBR	ELEMENT NAME	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4

Inventory Notes:

Dan Bodelson
Inspector's Signature

Nicklaus Fischer
Reviewer's Signature

Pictures

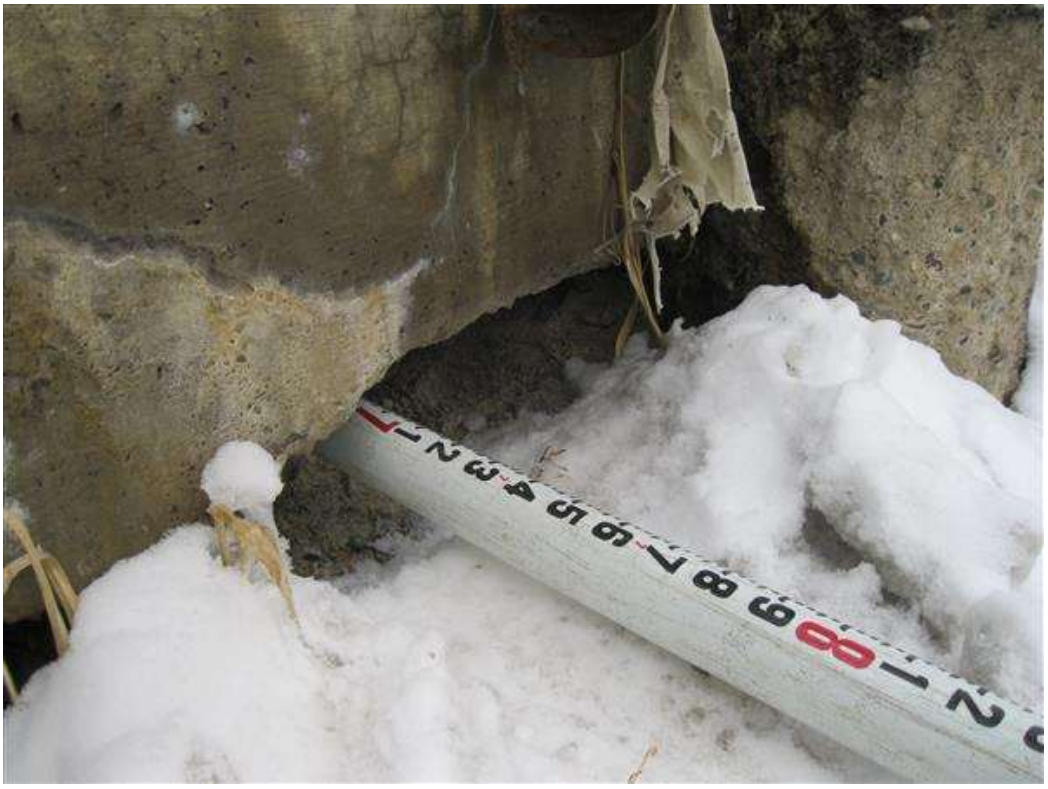

Photo 1 -

Photo 2 -

Pictures

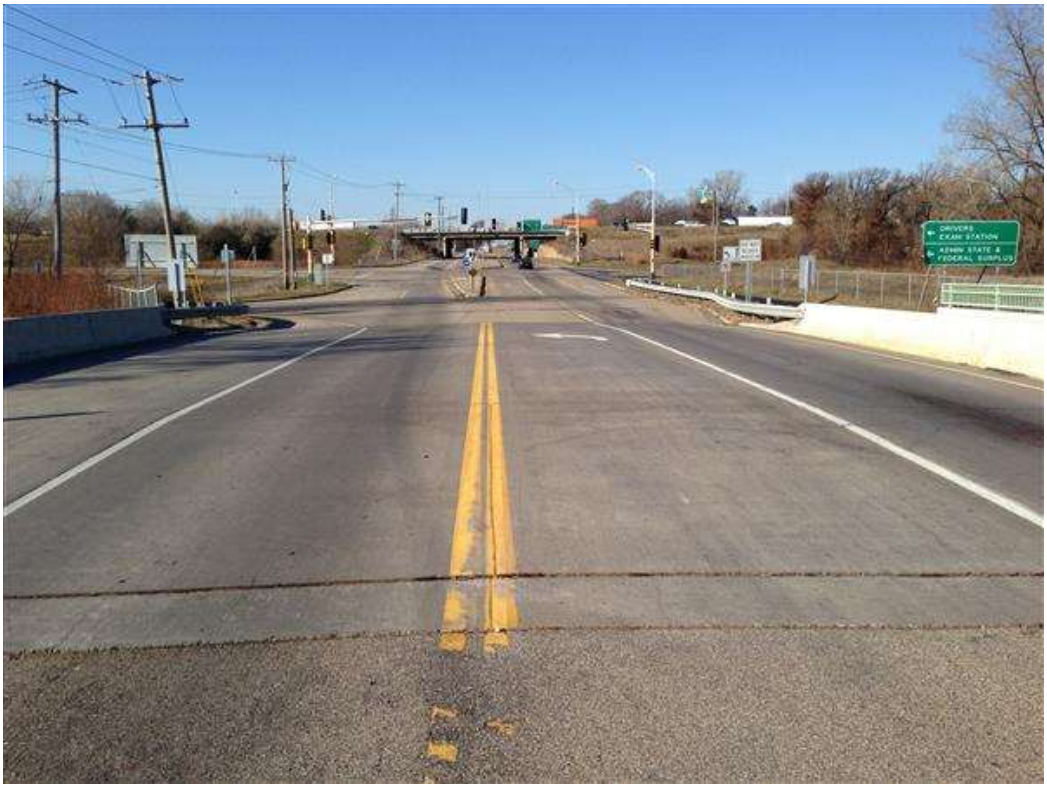

Photo 3 -

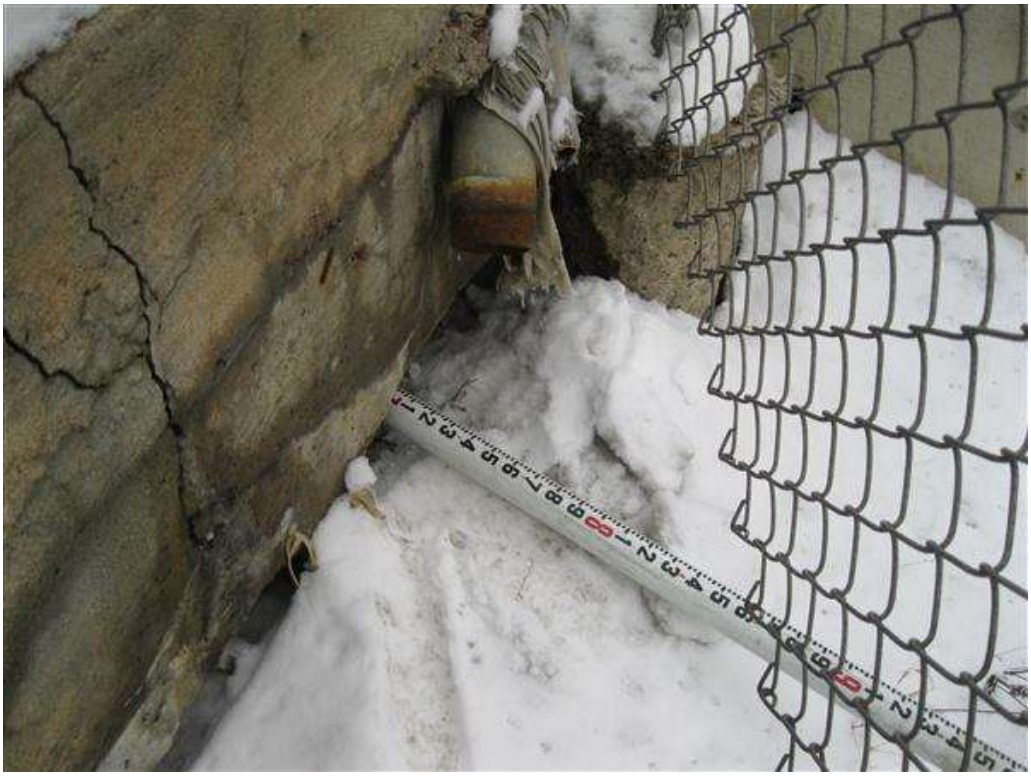

Photo 4 -

Pictures

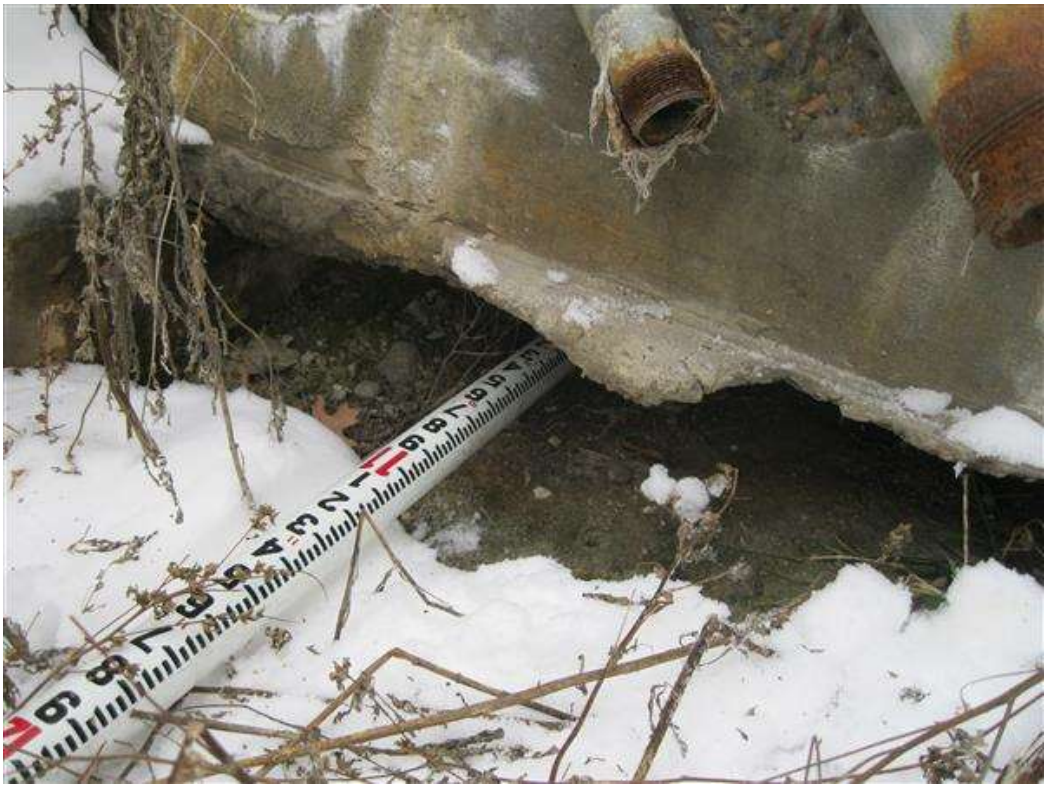

Photo 5 -

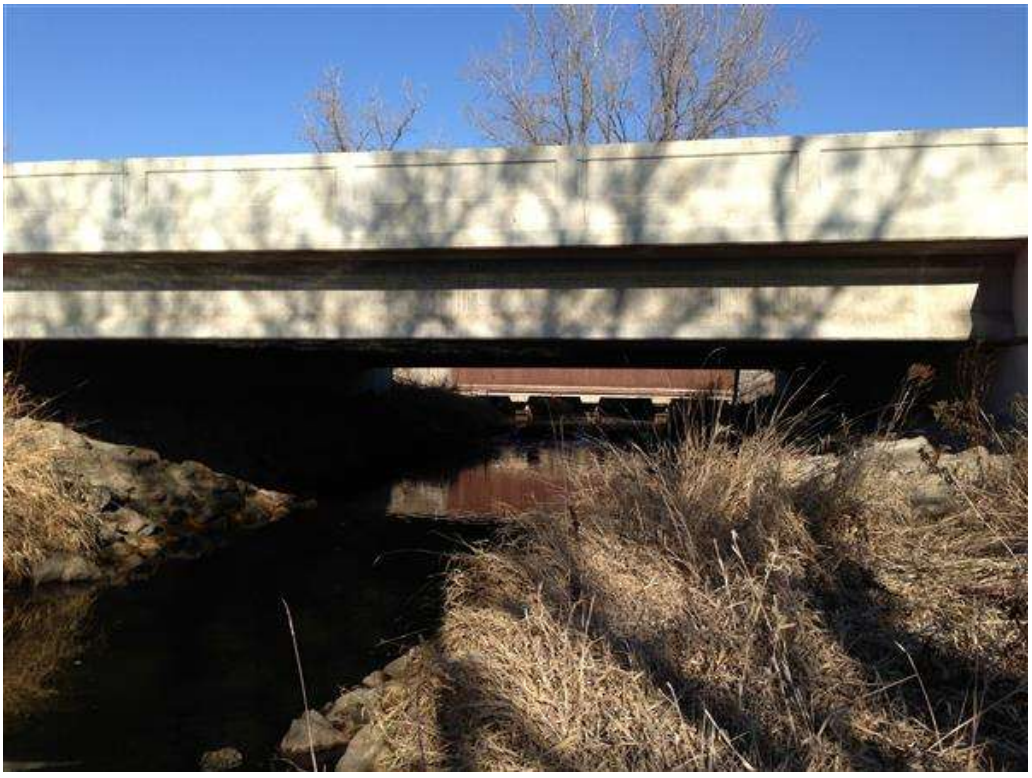

Photo 6 -

Channel

Bridge No.: 62539

Channel

Item	*Description*	*Condition*	*Comments*
Channel Overall:	**NBI Item 61**	7	Channel has no notable aggregation or lateral movement.

Bank Protection/Revetment

Item	*Description*	*Condition*	*Comments*
Upstream Bank Protection:			
Downstream Bank Protection:			
Bridge Revetment:			

Minnesota Scour Code: L - STBL - LOW RISK

Underwater Inspection

Underwater Inspection By Divers:

No. of Piers To Be Inspected:

Waterway Characteristics

Reference Point:		**High Water Elev.:**		**Current Water Elev.:**	
Pile Tip Elev.:		**Low Water Elev.:**		**Current Streambed Elev.:**	
		Scour Hole Elev.:		**Current Scour Hole Elev.:**	

Waterway Inspection: (Not applicable for culverts)

Item No.	Yes, No, NA or Not Visible	Description
1.		Is there a significant build-up of debris?
2.		Is there a change in the horizontal alignment of the handrail or structure members such as beams?
3.		Is there any indication of vertical movement of the superstructure?
4.		Is there shifting of the channel alignment or erosion of the stream banks? Also are there cracks in the soil of the banks parallel to the stream?
5.		Is there a significant change in the alignment of hte exterior bearings?
6.		Are there cracks or other signs of distress in the approach pavement?
7.		Is the water currently on the superstructure?
8.		Are the slopes unstable?
9.		Do scour measurements indicate: (place a check by all that apply.)

- ☐ A. that the streamed is two or more feet below the bottom of pier footings which are supported on piles?
- ☐ B. scour below the bottom of spread footings?
- ☐ C. scour below the bottom of high abutment footings?
- ☐ D. that the streambed has scoured five feet or more below the original streambed elevation at pier bents?

10. _____ Have the scour countermeasures been damaged or otherwise made ineffective?

Notes:

- Streambed sounding data is to be documented.

- Per Minnesota Bridge Inspection Manual Section 2.2.5, at bridges that require x-sections, take channel x-sections, along the upstream and/or downstream face of the bridge.

- If "Yes" is the answer to any items on the checklist, notify the Program Administrator for further instructions.

Comments:

Completed On _____ By _____

Scour POA

Bridge No.: 62539

Scour POA

1. Is POA on File? _____
2. Date of most recent POA: _____
3. Here is a link to Minnesota's Bridge Scour website for other
   - *http://www.dot.state.mn.us/bridge/hydraulics/scour.html*
   - The Scour POA should be kept in the bridge file and/or uploaded to SIMS using the "Inspection Files" tab.

Implementation

Scour POAs are required to be implemented by FHWA.

1. Is this POA being implemented? _____

Maintenance

Element	Source Code	Work Code	Description	P/R	Priority	Work Order #	Year Due	Last Viewed	Entered	Start Date	Completed

BRIDGE STRUCTURAL ASSESSMENT REPORT

PURPOSE:

This report is a structural assessment of the structure and its ability to carry loads based on conditions identified in the attached bridge inspection report. The assessment is only a cursory review intended to provide guidance as to the relative hazards for structural conditions and deficiencies identified. This report is mandatory for all fracture critical bridges and is completed by the Minnesota Bridge Office upon receipt of the 7 Day FC Report; however, it is an OPTIONAL tool for agencies to utilize at their discretion for all other inspection types.

BRIDGE NO.: 62539

BRIDGE OWNER: County Highway Agency

DATE INSPECTED: 11/08/2016

STRUCTURE TYPE: Prestressed Concrete tringer/Multi-beam or Girder

FACILITY CARRIED: CSAH 3

FEATURES INTERSECTED: Rice Creek

TYPE OF INSPECTION: ☑ ROUTINE
☐ FRACTURE CRITICAL
☐ PINNED ASSEMBLY:
☐ SPECIAL:
☐ DAMAGE:
☐ COMPLEX:

Check all that apply:

Redundancy: ☐ Load Path ☐ Structural ☐ Internal

Connection Type: ☐ Riveted ☐ Bolted ☐ Welded ☐ Other:

1. Was a critical finding identified during this inspection or upon structural review? ☐ Yes ☐ No

   a) If selected "**Yes**" above, state briefly the finding(s):

2. If a critical finding was identified, what is the current status? ☐ Pending ☐ Resolved ☐ N/A

   a) Briefly state actions taken:

3. Does the condition of any bridge component indicate impaired function? Examples of bridge components with impaired function include elements that are: frozen or immoveable, out-of-plumb or misaligned, distorted or structurally deformed, excessively deteriorated, cracked, broken, eroded or scoured. ☐ Yes ☐ No

a) If selected "**Yes**" above, state briefly the component(s) and condition(s):

4. Does the overall condition of the bridge, or any of its components mentioned in Question 3, suggest the need for detailed structural analysis and/or a revised load rating? ☐ Yes ☐ No

   a) If selected "**Yes**", state the reason for this recommendation and indicate a proposed timeframe in accordance with State of Minnesota Rule 8810.9500 (Subpart 2):

5. Based on the structural assessment of these findings, recommendations include:

   ☐ Repair/Maintenance ☐ Monitoring Plan
   ☐ Complex ☐ Increased Inspection Frequency

   Explain recommended actions:

6. Other comments:

Bridge Office Reviewer