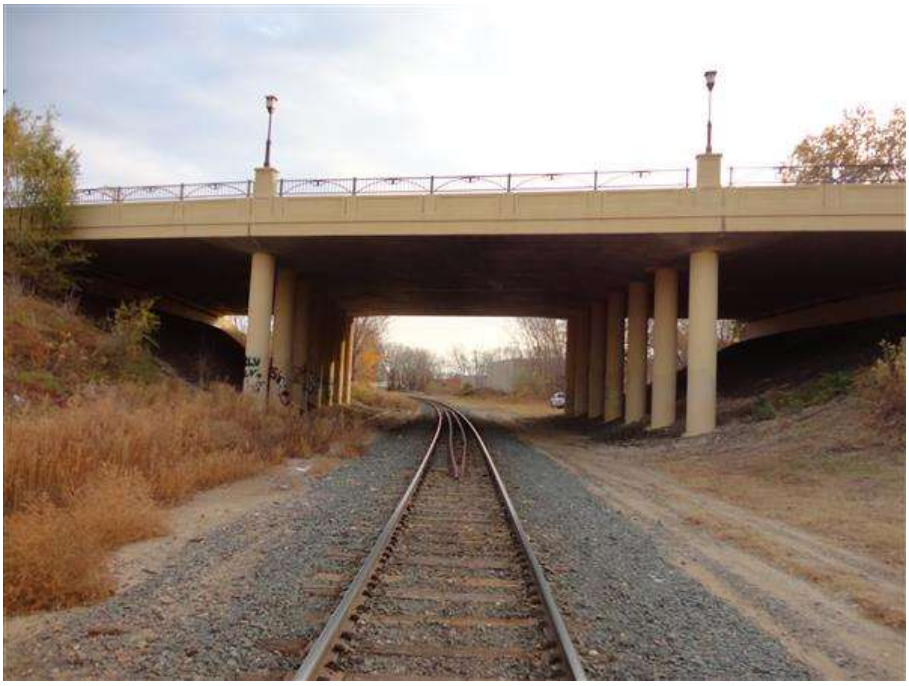
2016 ROUTINE
BRIDGE INSPECTION REPORT



BRIDGE # 62588
CSAH 44 NB over CP RAIL

DISTRICT: Metro **COUNTY:** Ramsey **CITY/TOWNSHIP:** St Anthony

STATE: Minnesota

Date of Inspection: 10/07/2016
Equipment Used:

Owner: County Highway Agency

Inspected By: Bodelson, Dan

Report Written By: Dan Bodelson
Report Reviewed By: Nicklaus Fischer
Final Report Date: 10/25/2016

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Minnesota Structure Inventory Report

Bridge ID: 62588 CSAH 44 NB **over** CP RAIL **Date:** 10/25/2016

GENERAL

Agency Br. No.
District Metro
Maint. Area **Crew**
County 062 - Ramsey
City St Anthony
Township
Desc. Loc. 0.1 MI N OF JCT CSAH 19
Sect., Twp., Range 31 - 030N - 23W
Latitude **Deg** 45 **Min** 2 **Sec** 12.80
Longitude **Deg** 93 **Min** 13 **Sec** 6.07
Custodian 02 - County Highway Agency
Owner 02 - County Highway Agency
BMU Agreement
Year Built 2001
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 50A
ABC Suitable

STRUCTURE

Service On 1 - Highway
Service Under 2 - Railroad
Main Span Type
2 - Concrete Continuous 09 - Slab Span
Main Span Detail
Appr. Span Type
Appr. Span Detail
Skew 16 L
Culvert Type
Barrel Length ft.
Cantilever ID

NUMBER OF SPANS

MAIN: 3 **APPR:** 0 **TOTAL:** 3
Main Span Length 55.8 ft.
Structure Length 139.6 ft.
Deck Width (Out-to-Out) 84.6 ft.
Deck Material 1 - Concrete Cast-in-Place
Wear Surf Type 4 - Low Slump Concrete
Wear Surf Install Year 2001
Wear Course/Fill Depth 0.25 ft.
Deck Membrane 0 - None
Deck Rebars 1 - Epoxy Coated Reinforcing
Deck Rebars Install Year 2001
Structure Area (Out-to-Out) 11981 sq. ft.
Roadway Area (Curb-to-Curb) 9870 sq. ft.
Sidewalk Width **Lt** 0.00 ft. **Rt** 0.00 ft.
Curb Height **Lt** 0.00 ft. **Rt** 0.00 ft.
Rail Type **Lt** 28 **Rt** 28

ROADWAY

Bridge Match ID (TIS) 0
Roadway O/U Key Route On Structure
Route Sys 04 - CSAH **Number** 44
Roadway Name or Description
CSAH 44
Level of Service 1 - MAINLINE
Roadway Type 2 - 2-way traffic
Control Section (TH Only)
Reference Point 000+00.091
Detour Length 2.0 mi
Lanes **On** 4 **Under** 0
ADT 22609 **Year** 2008
HCADT 0 **ADTT** 0 **%**
Functional Class 16 - Urban - Minor Arterial

RDWY DIMENSIONS

If Divided	NB-EB		SB-WB	
Roadway Width	38.10	ft.	27.60	ft.
Vertical Clearance		ft.		ft.
Max. Vert. Clear.		ft.		ft.
Horizontal Clear.	69.7	ft.		ft.
Lateral Clearance		ft.		ft.

Appr. Surface Width 66.0 ft.
Bridge Roadway Width 65.7 ft.
Median Width On Bridge 3.90 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 1 - CONC
(Material/Type) 3 - FTG PILE
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 0 - Not Required
Horizontal 0 - Not Required
Vertical N - Not Applicable

INSPECTION

Userkey 102
Unofficial Structurally Deficient N
Unofficial Functionally Obsolete N
Unofficial Sufficiency Rating 92.7
Routine Inspection Date 10/07/2016
Routine Inspection Frequency 24
Inspector Name CO Bridge
Status A - Open

NBI CONDITION RATINGS

Deck 6 - Satisfactory Condition
Unsound Deck %
Superstructure 6 - Satisfactory Condition
Substructure 8 - Very Good Condition
Channel N - Not Applicable
Culvert N - Not Applicable

NBI APPRAISAL RATINGS

Structure Evaluation 6
Deck Geometry 7
Underclearances 4
Water Adequacy N - Not Applicable
Approach Alignment 7 - Better than present minir

SAFETY FEATURES

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

IN DEPTH INSP.

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

WATERWAY

Drainage Area (sq. mi.)
Waterway Opening sq. ft.
Navigation Control N - Not applicable, no waterw
Pier Protection
Nav. Clr. (ft.) **Vert.** ft. **Horiz.** ft.
Nav. Vert. Lift Bridge Clear. (ft.)
MN Scour Code A - NON WATER **Year** 2001

CAPACITY RATINGS

Design Load 9 - HS 25 (OR GREATER)
Operating Rating 1 - LF (LF) HS 53.9
Inventory Rating 1 - LF (LF) HS 25.0
Posting VEH: **SEMI:** **DBL:**
Rating Date 2/11/2000

Minnesota Permit Codes

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

Minnesota Structure Inventory Report

Bridge ID: 62588 **CSAH 44 NB over CP RAIL** Date: 10/05/2016

+GENERAL+

Agency Br. No.	**Crew**
District	05 **Maint. Area**
County	062 - Ramsey
City	St Anthony
Township	
Desc. Loc.	0.1 MI N OF JCT CSAH 19
Sect., Twp., Range	31 - 030N - 23W
Latitude	45 ° 2 ' 12.80 "
Longitude	93 ° 13 ' 6.07 "
Custodian	02 - County Highway Agency
Owner	02 - County Highway Agency
BMU Agreement	
Year Built	2001
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	50A
Potential ABC	2 - N/A

+STRUCTURE+

Service On	1 - Highway
Service Under	2 - Railroad
Main Span Type	2 - Concrete Continuous
Main Span Design	09 - Slab Span
Main Span Detail	
Appr. Span Type	
Appr. Span Design	
Appr. Span Detail	
Skew	16 LEFT
Culvert Type	
Barrel Length	
Cantilever ID	

Number of Spans

MAIN: 3 **APPR:** 0 **TOTAL:**

Main Span Length	55.8 **ft.**
Structure Length	139.6 **ft.**
Deck Width (Out-to-Out)	84.6 **ft.**
Deck Material	1 - Concrete Cast-in-Place
Wear Surf Type	4 - Low Slump Concrete
Wear Surf Install Year	2001
Wear Course/Fill Depth	0.25 **ft.**
Deck Membrane	0 - None
Deck Rebars	1 - Epoxy Coated Reinforcing
Deck Rebars Install Year	2001
Structure Area (Out-to-Out)	11981 **sq. ft.**
Roadway Area (Curb-to-Curb)	9870 **sq. ft.**
Sidewalk Width	**50A. Lt** 0.00 **ft.** **50B. Rt** 0.00 **ft.**
Curb Height	**Lt** 0.00 **ft.** **Rt** 0.00 **ft.**
Rail Type	**Lt** 28 **Rt** 28

+ROADWAY+

Bridge Match ID (TIS)	0
Roadway O/U Key	Route On Structure
Route Sys	04 - CSAH **Number** 44
Roadway Name or Description	CSAH 44
Level of Service	1 - MAINLINE
Roadway Type	2 - 2-way traffic
Control Section (TH Only)	
Reference Point	000+00.091
Detour Length	2.0 **mi.**
Lanes	**ON** 4 **UNDER** 0
	ADT 22609 **YEAR** 2008
HCADT	**ADTT** **%**
Functional Class	16 - Urban - Minor Arterial

+RDWY DIMENSIONS+

If Divided	**NB-EB**		**SB-WB**	
Roadway Width	38.10	**ft.**	27.60	**ft.**
Vertical Clearance		**ft.**		**ft.**
Max. Vert. Clear.		**ft.**		**ft.**
Horizontal Clear.	69.7	**ft.**		**ft.**
Lateral Clearance		**ft.**		**ft.**

Appr. Surface Width	66.0 **ft.**
Bridge Roadway Width	65.7 **ft.**
Median Width On Bridge	3.90 **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)	1 - CONC 3 - FTG PILE
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	0 - Not Required
Horizontal	0 - Not Required
Vertical	N - Not Applicable

+INSPECTION+

Userkey	102
Structurally Deficient	N
Functionally Obsolete	N
Sufficiency Rating	92.7
Routine Inspection Date	10/07/2016
Routine Inspection Frequency	24
Inspector Name	Bodelson, Dan
Status	A - Open

+NBI CONDITION RATINGS+

Deck	6	**Unsound Deck %**
Superstructure	6	
Substructure	8	
Channel	N	
Culvert	N	

+NBI APPRAISAL RATINGS+

Structure Evaluation	6
Deck Geometry	7
Underclearances	4
Waterway Adequacy	N
Approach Alignment	7

+SAFETY FEATURES+

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

+IN DEPTH INSP.+

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

+WATERWAY+

Drainage Area (sq. mi.)	
Waterway Opening (sf.)	
Navigation Control	N - Not applicable, no
Pier Protection	_
Nav. Clr. (ft.)	**Vert.** 0.0 **Horiz.** 0.0
Nav. Vert. Lift Bridge Clear. (ft.)	
MN Scour Code	A - NON **Year** 2001

+CAPACITY RATINGS+

Design Load	9 - HS 25 (OR GREATER)	
Operating Rating	2 - HS TRUCK	53.9
Inventory Rating	2 - HS TRUCK	25.0

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

Rating Date 2/11/2000

Overweight Permit Codes

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

BRIDGE 62588 CSAH 44 NB OVER CP RAIL **ROUTINE INSP. DATE: 10/07/2016**

County: Ramsey
City: St Anthony
Township:
Section: 31 Township: 030N Range: 23W
Span Type: 2 - Concrete Continuous 1 - Slab
List:
NBI Deck: 6 Super: 6 Sub: 8 Chan: N Culv: N

Location: 0.1 MI N OF JCT CSAH 19
Route: 04 - CSAH 44 Ref. Pt.: 000+00.091
Control Section:
Maint. Area:
Local Agency Bridge Nbr.:
Open, Posted, Closed: A - Open
MN Scour Code: A - NON WATERWAY

Length: 139.6 ft.
Deck Width: 84.6 ft.
Rdwy. Area/ Pct. Unsnd: 9870 sq. ft. / %
Paint Area/ Pct. Unsnd: sq. ft. / %
Culvert: N/A
Postings:

Appraisal Ratings - Approach: 7 Waterway: N
Required Bridge Signs - Load Posting: 0 - Not Required Traffic: 0 - Not Required
Horizntal: 0 - Not Required Vertical: N - Not Applicable

Unofficial Structurally Deficient N
Unofficial Functionally Obsolete N
Unofficial Sufficiency Rating 92.7

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
205	Reinforced Concrete Column	1	Routine	10/07/2016	14 EA	0	14	0	0	N/A
			Routine	10/10/2014	14 EA	0	14	0	0	N/A
	Notes: [2008-2014] Minor spalls are present. [2003-2014] There is graffiti on the columns. [2006] Graffiti has been painted over.									
215	Reinforced Concrete Abutment	1	Routine	10/07/2016	171 LF	161	10	0	0	N/A
			Routine	10/10/2014	171 LF	161	10	0	0	N/A
	Notes: [2014] The south abutment has 5 minor vertical cracks. The north abutment has 7 minor vertical cracks. [2006-2012] The south abutment has 5 minor vertical cracks. The north abutment has 5 minor vertical cracks. [2008] The south abutment has a moderate crack @ construction joint. [2003-2006] Vertical crack through each abutment @ centerline + 2 other vertical cracks in each abutment. [2003-2012] Graffiti on north abutment.									
300	Strip Seal Deck Joint	1	Routine	10/07/2016	180 LF	0	180	0	N/A	N/A
			Routine	10/10/2014	180 LF	0	180	0	N/A	N/A
	Notes: [2010-2014] Evidence of minor leakage. Expansion joint may need to be cleaned & flushed for further inspection. [2008] Debris in the joint may be causing problems, but no sign of leakage. [2002-2006] Expansion joint has no deterioration but needs to be cleaned & flushed for further inspection.									
301	Poured Deck Joint	1	Routine	10/07/2016	180 LF	0	180	0	N/A	N/A
			Routine	10/10/2014	180 LF	0	180	0	N/A	N/A
	Notes: [2008-2014] Moderate adhesion & cohesion failure of joint seal. [2002-2006] Minor adhesion & cohesion failure of joint seal.									
310	Elastomeric (Expansion) Bearing	1	Routine	10/07/2016	14 EA	14	0	0	N/A	N/A
			Routine	10/10/2014	14 EA	14	0	0	N/A	N/A
	Notes: [2012-2014] Minor deterioration is present. Bearing seat is in good condition. [2001-2010] No deterioration.									

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
321	Concrete Approach Slab-Concrete Wearing Surface	1	Routine	10/07/2016	2 EA	0	2	0	0	N/A
			Routine	10/10/2014	2 EA	0	2	0	0	N/A
	Notes: [2012-2014] There is some settlement of the bituminous approach roadway resulting on impact on the approach slabs. South Approach Slab. [2006-2014] The east 1/2 of the south approach slab has 27 LF of transverse cracks. The west 1/2 of the south approach slab has 39 LF of longitudinal cracks + 24 LF of transverse cracks. [2002-2014] Longitudinal crack in south approach slab on west side at the storm sewer MH. North Approach Slab [2008-2014] The west 1/2 of the north approach slab has 65 LF of longitudinal & transverse cracks. [2002-2006] Minor crack in NW approach slab. Minor spalling in NE approach slab.									
333	Masonry, Other or Combination Material Railing	1	Routine	10/07/2016	479 LF	0	479	0	N/A	N/A
			Routine	10/10/2014	479 LF	0	479	0	N/A	N/A
	Notes: [2006-2014] There is moderate vertical cracking with efflorescence extending through the deck at the west fascia. [2003-2012] There are 2 areas of delamination on the west railing near the NW corner. [2001-2014] There is moderate vertical & horizontal cracking with w/moderate spalling & efflorescence @ both sides. Spalling is due to mix design. [2008-2014] The ornamental metal railing has some chalking. The railing consists of a combination concrete parapet & ornamental metal railing.									
358	Concrete Deck Cracking Smart Flag	1	Routine	10/07/2016	1 EA	0	1	0	0	N/A
			Routine	10/10/2014	1 EA	0	1	0	0	N/A
	Notes: [2008-2014] Minor to moderate longitudinal and transverse deck cracking. Minor spalls are present. [2002-2006] Minor longitudinal and transverse deck cracking with no spalls.									
359	Underside of Concrete Deck Smart Flag	1	Routine	10/07/2016	1 EA	0	1	0	0	0
			Routine	10/10/2014	1 EA	0	1	0	0	0
	Notes: SPAN #1 [2010-2014] There is longitudinal cracking with efflorescence at the centerline joint. Also near centerline contains two 10' transverse cracks with efflorescence and a 10' longitudinal crack at bearing #5. There is a longitudinal crack with efflorescence entire length at bearing #2. SPAN #2 [2008-2014] There is 35 LF of longitudinal cracking near column #3. [2008-2014] Span #2 also has 35 LF transverse cracking with efflorescence near centerline. SPAN14] There is 12' longitudinal cracking with efflorescence @ bearing #6. There are 4' & 6' transverse cracks at column #4.									
362	Traffic Impact Smart Flag	1	Routine	10/07/2016	1 EA	0	1	0	N/A	N/A
			Routine	10/10/2014	1 EA	0	1	0	N/A	N/A
	Notes: [2002-2014] Minor surface damage. No structural damage to the concrete railing. Could use paint @ traffic impact. [2002] Traffic impact has occurred to bridge rail 1/4 north of SE corner of bridge. 10' section of the ornamental metal railing was replaced in 2002.									
378	Low Slump O/L (Concrete Slab with Epoxy Rebar)	1	Routine	10/07/2016	11980 SF	0	11980	0	0	0
			Routine	10/10/2014	11980 SF	0	11980	0	0	0
	Notes: [2010-2014] There are moderate spalls throughout the deck. Distress is around 2%- still in condition state #2. [2008] There is moderate spalling on the west side and minor spalling on the east side. [2010-2014] Each side has over 100 LF of longitudinal & transverse cracking. [2006] The east 1/2 has 24 LF of longitudinal & transverse cracks @ median. The west 1/2 has 40 LF of longitudinal & transverse cracks.									

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
387	Reinforced Concrete Wingwall	1	Routine	10/07/2016	4 EA	0	4	0	0	N/A
			Routine	10/10/2014	4 EA	0	4	0	0	N/A
	Notes: [2014] SE wingwall has a 2' and a 3' crack w/effloresence. SW wingwall has a 2' crack w/effloresence. [2006-2012] SW wingwall has minor horizontal & vertical cracking. NW wingwall has horizontal & vertical cracking with efflorescence. [2008-2012] The SE wingwall has minor spalls present. [2003-2012] NE abutment wing has 2 minor horizontal cracks and 2 minor vertical cracks w/efflorescence.									
964	Critical Finding Smart Flag	2	Routine	10/07/2016	1 EA	1	0	N/A	N/A	N/A
			Routine	10/10/2014	1 EA	1	0	N/A	N/A	N/A
	Notes: DO NOT DELETE THIS CRITICAL FINDING SMART FLAG.									
983	Plowstraps	1	Routine	10/07/2016	1 EA	0	1	0	N/A	N/A
			Routine	10/10/2014	1 EA	0	1	0	N/A	N/A
	Notes: [2012-2014] There is a plowstrap missing at the NW quadrant. [2002-2010] Plowstraps are in place & show no sign of deterioration.									
984	Deck & Approach Drainage	1	Routine	10/07/2016	1 EA	1	0	0	N/A	N/A
			Routine	10/10/2014	1 EA	1	0	0	N/A	N/A
	Notes: [2002-2014] Drainage system is operating properly.									
985	Slopes & Slope Protection	1	Routine	10/07/2016	1 EA	0	1	0	N/A	N/A
			Routine	10/10/2014	1 EA	0	1	0	N/A	N/A
	Notes: [2002-2014] Some aggregate was dug out near top on the right at the south end. Some aggregate is loose. [2006-2014] There is some minor settlement on the south side. Slope protection is asphaltic coated crushed aggregate.									
986	Curb & Sidewalk	1	Routine	10/07/2016	1 EA	0	1	0	N/A	N/A
			Routine	10/10/2014	1 EA	0	1	0	N/A	N/A
	Notes: [2008-2014] There are numerous minor transverse cracking on the west side. [2006-2014] There are numerous moderate cracks on the east side almost the entire length of the sidewalk. Curb at the NW corner is beat up by snowplow @ approach panel. [2001-2014] Minor - moderate spalling on sidewalk both sides. [2003-2006] Spalling caused by soft aggregate in mix. [2001-2014] There is minor settlement @ SW corner of the bridge.									

General Notes: [2016] Bridge safety inspection was conducted by Dan Bodelson & Brian Essler 10/07/2016.
[2014] Bridge safety inspection was conducted by D. Bodelson & B. Essler 10/10/2014.
[2010] Bridge safety inspection was conducted by B. Wieman on 10/27/2010.
[2008] Bridge safety inspection was conducted by B. Wieman & B. Essler 10/30/2008.
Bridge safety inspection was conducted by Bret Wieman & Brian Essler. 11/17/2006.
Bridge #62588 is 12m, 17m & 12m continuous concrete slab spans built in 2000.

58. Deck NBI: Concrete deck has moderate cracking, leaching & scaling with minor spalls.

36A. Brdg Railings NBI: Vehicular railing meets current standards

36B. Transitions NBI: No guardrail

36C. Appr Guardrail NBI: No guardrail

36D. Appr Guardrail Terminal NBI: No guardrail

59. Superstructure NBI: Concrete has moderate scaling & cracking with minor spalling & delamination.

60. Substructure NBI: Concrete has minor cracking & scaling.

61. Channel NBI: CSAH # 44 over CP Rail - no water

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

62. Culvert NBI: CSAH # 44 over CP Rail - no water

71. Waterway Adeq NBI: CSAH # 44 over CP Rail - no water

72. Appr Roadway Alignment NBI: Minor sight distance problem with vertical curve over bridge, no speed reduction required.

Inventory Notes:

Dan Bodelson
Inspector's Signature

Nicklaus Fischer
Reviewer's Signature

MINNESOTA BRIDGE INSPECTION REPORT

10/25/2016

Inspector: CO Bridge

BRIDGE 62588 CSAH 44 NB OVER CP RAIL

County: Ramsey
City: St Anthony
Township:
Section: 31 Township: 030N Range: 23W
Span Type: 2 - Concrete Continuous 1 - Slab
List:
NBI Deck: 6 Super: 6 Sub: 8 Chan: N

Location: 0.1 MI N OF JCT CSAH 19
Route: 04 - CSAH 44 Ref. Pt.: 000+00.091
Control Section:
Maint. Area:
Local Agency Bridge Nbr.:
Culv: N
Open, Posted, Closed: A - Open
MN Scour Code: A - NON WATERWAY

Length: 139.6 ft.
Deck Width: 84.6 ft.
Rdwy. Area/ Pct. Unsnd: 9870 sq. ft. / %
Paint Area/ Pct. Unsnd: sq. ft. / %
Culvert: N/A
Postings:

Appraisal Ratings - Approach: 7 Waterway: N
Required Bridge Signs - Load Posting: 0 - Not Required Traffic: 0 - Not Required
Horizntal: 0 - Not Required Vertical: N - Not Applicable

Unofficial Structurally Deficient N
Unofficial Functionally Obsolete N
Unofficial Sufficiency Rating 92.7

ELEM NBR	ELEMENT NAME	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
38	Reinforced Concrete Slab	Routine	10/07/2016	11981 SF	11741	0	240	0
		Migrated Values		11981 SF	11741	0	240	0

Notes: SPAN #1
[2010-2016] There is longitudinal cracking with efflorescence at the centerline joint. Also near centerline contains two 10' transverse cracks with efflorescence and a 10' longitudinal crack at bearing #5.
There is a longitudinal crack with efflorescence entire length at bearing #2.
SPAN #2
[2008-2016] There is 35 LF of longitudinal cracking near column #3.
[2008-2016] Span #2 also has 35 LF transverse cracking with efflorescence near centerline.
[2014-2016] There is 12' longitudinal cracking with efflorescence @ bearing #6. There are 4' & 6' transverse cracks at column #4.

	510 - Wearing Surfaces	Routine	10/07/2016	9870 SF	9673	0	197	0
		Migrated Values		9870 SF	9673	0	197	0

Notes: Concrete Slab with Cathodic Protection System Notes:
[2010-2014] There are moderate spalls throughout the deck. Distress is around 2%- still in condition state #2.
[2016] Numerous cracks on west facia.
[2008] There is moderate spalling on the west side and moderate spalling on the east side.
[2010-2016] Each side has over 100 LF of longitudinal & transverse cracking.
[2006] The east 1/2 has 24 LF of longitudinal & transverse cracks @ median. The west 1/2 has 40 LF of longitudinal & transverse cracks.

205	Reinforced Concrete Column	Routine	10/07/2016	14 EA	0	14	0	0
		Migrated Values		14 EA	0	14	0	0

Notes: [2016] Minor paint failure.
[2008-2016] Minor spalls are present.
[2003-2016] There is graffiti on the columns. [2006] Graffiti has been painted over.

215	Reinforced Concrete Abutment	Routine	10/07/2016	290 LF	240	50	0	0
		Migrated Values		290 LF	240	50	0	0

Notes: [2016] Minor paint failure.
[2016] Migrator added 40 LF to abutment quantity to account for wingwalls (CS1:0 CS2:40 CS3:0 CS4:0).
[2016] Wingwalls are 21' each x 4 = 84' + 101' south abut. + 105' north abut. = 290 LF (measurements taken from plans)
[2014-2016] The south abutment has 5 minor vertical cracks. The north abutment has 7 minor vertical cracks.
[2006-2016] The south abutment has 5 minor vertical cracks. The north abutment has 5 minor vertical cracks.
[2008-2016] The south abutment has a moderate crack @ construction joint.
[2003-2016] Vertical crack through each abutment @ centerline + 2 other vertical cracks in each abutment.
[2003-2016] Graffiti on north abutment.

Wingwall notes: [2014-2016] SE wingwall has a 2' and a 3' crack w/efflorescence. SW wingwall has a 2' crack w/efflorescence.
[2006-2016] SW wingwall has minor horizontal & vertical cracking. NW wingwall has horizontal & vertical cracking with efflorescence.
[2008-2016] The SE wingwall has minor spalls present.
[2003-2016] NE abutment wing has 2 minor horizontal cracks and 4 minor vertical cracks w/efflorescence.

ELEM NBR	ELEMENT NAME	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
300	Strip Seal Expansion Joint	Routine	10/07/2016	180 LF	0	180	0	0
		Migrated Values		180 LF	0	180	0	0
	Notes: [2010-2016] Evidence of minor leakage. Expansion joint may need to be cleaned & flushed for further inspection. [2008] Debris in the joint may be causing problems, but no sign of leakage. [2002-2006] Expansion joint has no deterioration but needs to be cleaned & flushed for further inspection.							
301	Pourable Joint Seal	Routine	10/07/2016	180 LF	0	180	0	0
		Migrated Values		180 LF	0	180	0	0
	Notes: [2008-2016] Moderate adhesion & cohesion failure of joint seal. [2002-2006] Minor adhesion & cohesion failure of joint seal.							
310	Elastomeric Bearing	Routine	10/07/2016	14 EA	14	0	0	0
		Migrated Values		14 EA	14	0	0	0
	Notes: [2012-2016] Minor deterioration is present. Bearing seat is in good condition. [2001-2010] No deterioration.							
321	Reinforced Concrete Approach Slab	Routine	10/07/2016	5984 SF	0	5919	65	0
		Migrated Values		5984 SF	0	5919	65	0
	Notes: [2016] Bridge approach slabs are 44' long x 28' wide x 2 = 2464 SF & 44' long x 40' wide (left turn lanes) x 2 = 3520 SF - 5984 total. [2016] Migrator assumed an approach slab length of 20FT and used the inventory quantity of 66FT for the width. [2012-2016] There is moderate settlement of the bituminous on the north approach roadway resulting on impact on the approach slabs. South Approach Slab. [2006-2016] The east 1/2 of the south approach slab has 27 LF of transverse cracks. The west 1/2 of the south approach slab has 39 LF of longitudinal cracks + 24 LF of transverse cracks. [2002-2016] 40' of longitudinal crack in south approach slab on west side at the storm sewer MH. North Approach Slab [2008-2016] The west 1/2 of the north approach slab has 65 LF of moderate longitudinal & transverse cracks. (65' in condition state 3) [2002-2006] Minor crack in NW approach slab. Minor spalling in NE approach slab.							
330	Metal Bridge Railing	Routine	10/07/2016	479 LF	0	479	0	0
		Migrated Values		479 LF	0	479	0	0
	Notes: [2016] Migrator assumed concrete/metal combination type rail. [2006-2016] There is moderate vertical cracking with efflorescence extending through the deck at the west fascia. [2003-2012] There are 2 areas of delamination on the west railing near the NW corner. [2001-2016] There is moderate vertical & horizontal cracking with w/moderate spalling & efflorescence @ both sides. Spalling is due to mix design. [2008-2016] The ornamental metal railing has some chalking. The railing consists of a combination concrete parapet & ornamental metal railing.							
	515 - Steel Protective Coating	Routine	10/07/2016	797 SF	0	797	0	0
		Migrated Values		797 SF	0	797	0	0
	Notes: [2016] Migrator assumed CS1 and a quantity of 999 SF. [2016] Metal railing is 374' long x 2.13' high = 797 SF [2016] There is moderate rust on caps & bolts of all posts. [2008-2016] The ornamental metal railing has some chalking.							
331	Reinforced Concrete Bridge Railing	Routine	10/07/2016	479 LF	0	479	0	0
		Migrated Values		479 LF	0	479	0	0
	Notes: [2016] Migrator assumed concrete/metal combination type rail. [2016] 1' x1' major spall on east side of east rail - 20' from north end. [2016] Moderate paint failure on both railings. [2006-2016] There is moderate vertical cracking with efflorescence extending through the deck at the west fascia. [2003-2016] There are 2 areas of delamination on the west railing near the NW corner. [2001-2016] There is moderate vertical & horizontal cracking with w/moderate spalling & efflorescence @ both sides. Spalling is due to mix design. The railing consists of a combination concrete parapet & ornamental metal railing.							
800	Critical Deficiencies or Safety Hazards	Routine	10/07/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
	Notes: NO CRITICAL FINDINGS OBSERVED DURING THE LAST INSPECTION.							

ELEM NBR	ELEMENT NAME	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
810	Concrete Decks - Cracking & Sealing	Routine	10/07/2016	475 LF	0	475	0	0
		Migrated Values		475 LF	0	475	0	0
	Notes: [2016] 265' minor cracking on southbound & 210' minor cracking northbound. = 475' total. [2008-2016] Minor to moderate longitudinal and transverse deck cracking with effluence. Minor spalls are present. [2002-2006] Minor longitudinal and transverse deck cracking with no spalls.							
815	Plow Fingers	Routine	10/07/2016	1 EA	0	1	0	0
		Migrated Values		1 EA	0	1	0	0
	Notes: [2012-2016] There is a plowstrap missing at the NW quadrant. [2002-2010] Plowstraps are in place & show no sign of deterioration.							
880	Impact Damage	Routine	10/07/2016	1 EA	0	1	0	0
		Migrated Values		1 EA	0	1	0	0
	Notes: [2002-2016] Minor surface damage. No structural damage to the concrete railing. Could use paint @ traffic impact. [2002] Traffic impact has occurred to bridge rail 1/4 north of SE corner of bridge. 10' section of the ornamental metal railing was replaced in 2002.							
892	Slopes & Slope Protection	Routine	10/07/2016	1 EA	0	1	0	0
		Migrated Values		1 EA	0	1	0	0
	Notes: [2002-2016] Some aggregate was dug out near top on the right at the south end. Some aggregate is loose. [2006-2014] There is some minor settlement on the south side. Slope protection is asphaltic coated crushed aggregate.							
894	Deck & Approach Drainage	Routine	10/07/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
	Notes: [2002-2016] Drainage system is operating properly.							
895	Sidewalk, Curb, & Median	Routine	10/07/2016	1 EA	0	1	0	0
		Migrated Values		1 EA	0	1	0	0
	Notes: [2008-2016] There are numerous minor transverse cracking on the west side. [2006-2016] There are numerous moderate cracks on the east side almost the entire length of the sidewalk. Curb at the NW corner is beat up by snowplow @ approach panel. [2001-2016] Minor - moderate spalling on sidewalk both sides. [2003-2006] Spalling caused by soft aggregate in mix. [2001-2016] There is minor settlement @ SW corner of the bridge.							
900	Protected Species	Routine	10/07/2016	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 conducted by Dan Bodelson & Brian Essler 10/07/2016.
[2014] Bridge safety inspection was conducted by D. Bodelson & B. Essler 10/10/2014.
[2010] Bridge safety inspection was conducted by B. Wieman on 10/27/2010.
[2008] Bridge safety inspection was conducted by B. Wieman & B. Essler 10/30/2008.
Bridge safety inspection was conducted by Bret Wieman & Brian Essler. 11/17/2006.
Bridge #62588 is 12m, 17m & 12m continuous concrete slab spans built in 2000.

58. Deck NBI: Concrete deck has moderate cracking, leaching & scaling with minor spalls.

36A. Brdg Railings NBI: Vehicular railing meets current standards

36B. Transitions NBI: No guardrail

36C. Appr Guardrail NBI: No guardrail

36D. Appr Guardrail Terminal NBI: No guardrail

59. Superstructure NBI: Concrete has moderate scaling & cracking with minor spalling & delamination.

60. Substructure NBI: Concrete has minor cracking & scaling.

61. Channel NBI: CSAH # 44 over CP Rail - no water

BRIDGE 62588 CSAH 44 NB OVER CP RAIL

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

62. Culvert NBI: CSAH # 44 over CP Rail - no water

71. Waterway Adeq NBI: CSAH # 44 over CP Rail - no water

72. Appr Roadway Alignment NBI: Minor sight distance problem with vertical curve over bridge, no speed reduction required.

Inventory Notes:

Dan Bodelson
Inspector's Signature

Nicklaus Fischer
Reviewer's Signature

Pictures

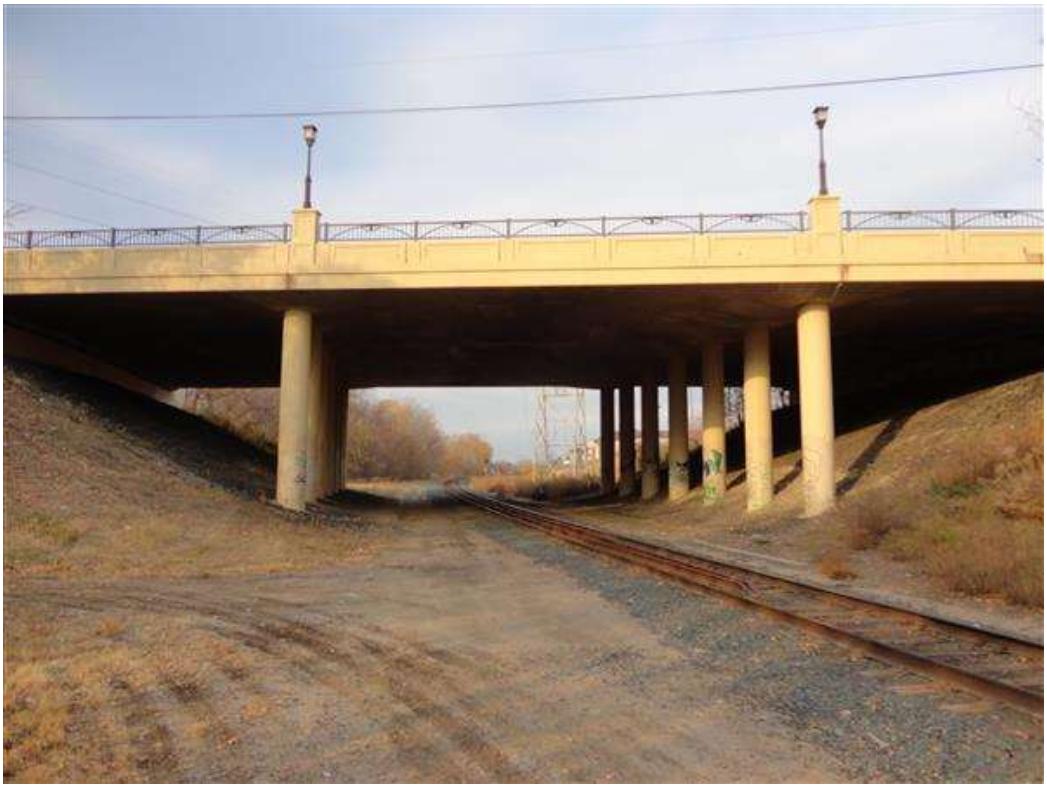

Photo 1 -

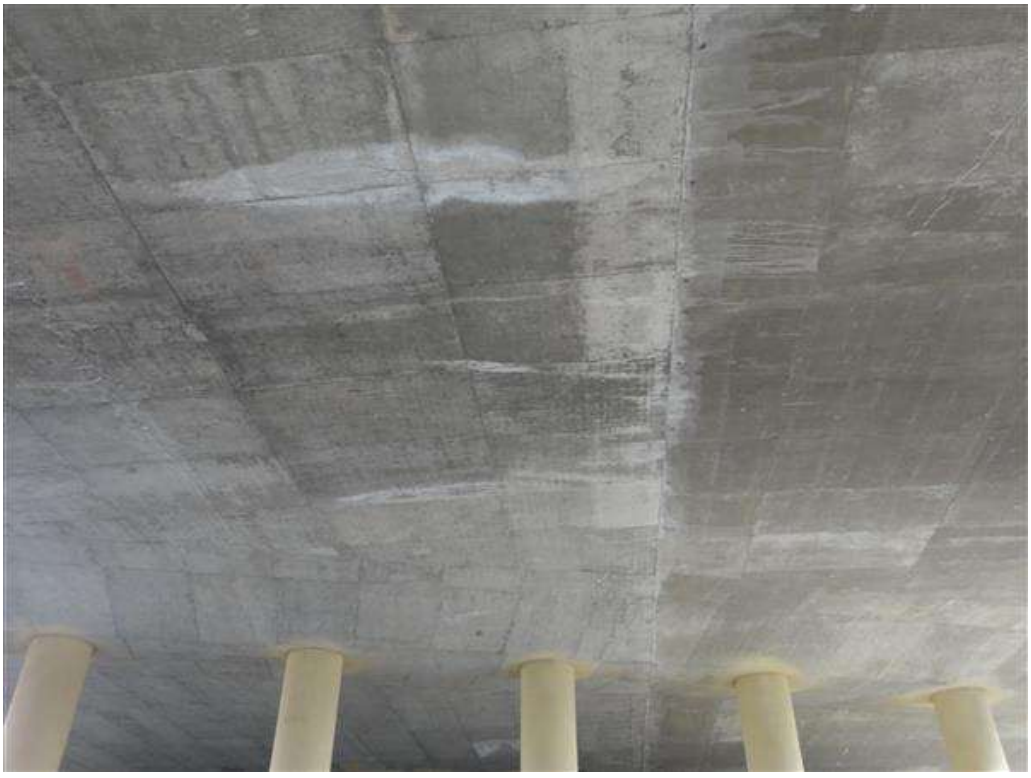

Photo 2 -

Pictures

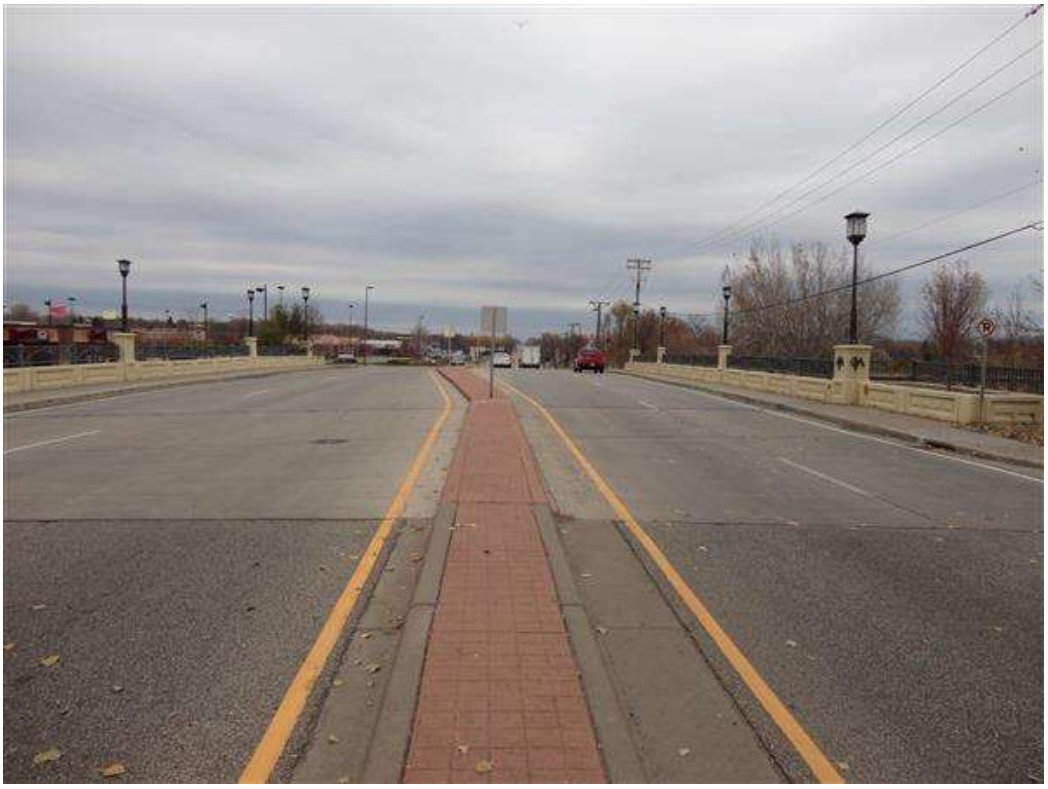

Photo 3 -

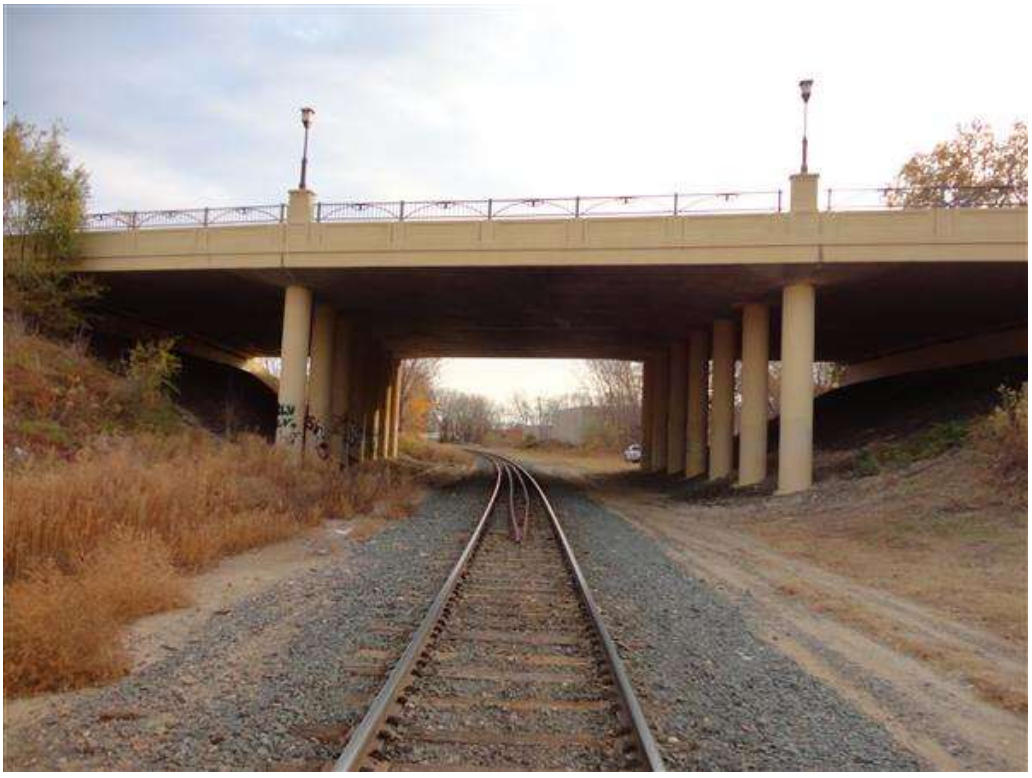

Photo 4 -

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.: 62588

BRIDGE OWNER: County Highway Agency

DATE INSPECTED: 10/07/2016

STRUCTURE TYPE: Concrete Continuous lab

FACILITY CARRIED: CSAH 44 NB

FEATURES INTERSECTED: CP RAIL

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