

**2016 ROUTINE  
BRIDGE INSPECTION REPORT**



**BRIDGE # 62002  
CP RAIL over CSAH 49(RICE ST)**

**DISTRICT: Metro**

**COUNTY: Ramsey**

**CITY/TOWNSHIP: Shoreview**

**STATE: Minnesota**

**Date of Inspection: 10/13/2016**

**Equipment Used: Bucket Van**

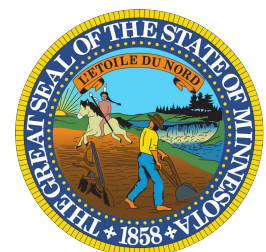
**Owner: County Highway Agency**

**Inspected By: Essler, Brian**

**Report Written By: Brian Essler**

**Report Reviewed By: Nicklaus Fischer**

**Final Report Date: 12/02/2016**



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# Minnesota Structure Inventory Report

**Bridge ID:** 62002

CP RAIL

over CSAH 49(RICE ST)

**Date:** 12/02/2016

GENERAL	
<b>Agency Br. No.</b>	
<b>District</b> Metro	
<b>Maint. Area</b>	<b>Crew</b>
<b>County</b> 062 - Ramsey	
<b>City</b> Shoreview	
<b>Township</b>	
<b>Desc. Loc.</b> 1.0 MI N OF JCT TH 694	
<b>Sect., Twp., Range</b> 30 - 030N - 22W	
<b>Latitude Deg</b> 45 <b>Min</b> 3 <b>Sec</b> 33.62	
<b>Longitude Deg</b> 93 <b>Min</b> 6 <b>Sec</b> 22.82	
<b>Custodian</b> 02 - County Highway Agency	
<b>Owner</b> 02 - County Highway Agency	
<b>BMU Agreement</b>	
<b>Year Built</b> 1988	
<b>MN Year Reconstructed</b>	
<b>FHWA Year Reconstructed</b>	
<b>MN Temporary Status</b>	
<b>Bridge Plan Location</b> 1 - CENTRAL	
<b>Date Opened to Traffic</b>	
<b>On-Off System</b> 0 - OFF	
<b>Legislative District</b> 54B	
<b>ABC Suitable</b>	

STRUCTURE	
<b>Service On</b> 2 - Railroad	
<b>Service Under</b> 1 - Highway, w/ or w/out ped.	
<b>Main Span Type</b>	
3 - Steel	05 - Thru Girder
<b>Main Span Detail</b>	
<b>Appr. Span Type</b>	
<b>Appr. Span Detail</b>	
<b>Skew</b> 62 R	
<b>Culvert Type</b>	
<b>Barrel Length</b> ft.	
<b>Cantilever ID</b>	

NUMBER OF SPANS			
<b>MAIN:</b> 1	<b>APPR:</b> 0	<b>TOTAL:</b> 1	
<b>Main Span Length</b>	145.5	ft.	
<b>Structure Length</b>	161.5	ft.	
<b>Deck Width (Out-to-Out)</b>	24.0	ft.	
<b>Deck Material</b>	N - Not Applicable		
<b>Wear Surf Type</b>	N - Not Applicable (applies onl		
<b>Wear Surf Install Year</b>			
<b>Wear Course/Fill Depth</b>	0.00	ft.	
<b>Deck Membrane</b>	0 - None		
<b>Deck Rebars</b>	N - Not Applicable (no deck)		
<b>Deck Rebars Install Year</b>			
<b>Structure Area (Out-to-Out)</b>	3876	sq. ft.	
<b>Roadway Area (Curb-to-Curb)</b>		sq. ft.	
<b>Sidewalk Width</b>	Lt 0.00	ft.	Rt 0.00
<b>Curb Height</b>	Lt 0.00	ft.	Rt 0.00
<b>Rail Type</b>	Lt NN		Rt NN

ROADWAY		
<b>Bridge Match ID (TIS)</b>		
<b>Roadway O/U Key</b>	none	
<b>Route Sys</b>	<b>Number</b>	
	<b>Roadway Name or Description</b>	
<b>Level of Service</b>		
<b>Roadway Type</b>		
<b>Control Section (TH Only)</b>		
<b>Reference Point</b>		
<b>Detour Length</b>	mi	
<b>Lanes</b>	<b>On</b>	<b>Under</b> 2
	<b>ADT</b>	<b>Year</b>
<b>HCADT</b>	0	<b>ADTT</b> 0 %
<b>Functional Class</b>		

RDWY DIMENSIONS		
<b>If Divided</b>	<b>NB-EB</b>	<b>SB-WB</b>
<b>Roadway Width</b>	ft.	ft.
<b>Vertical Clearance</b>	ft.	ft.
<b>Max. Vert. Clear.</b>	ft.	ft.
<b>Horizontal Clear.</b>	ft.	ft.
<b>Lateral Clearance</b>	ft.	ft.
<b>Appr. Surface Width</b>	ft.	
<b>Bridge Roadway Width</b>	ft.	
<b>Median Width On Bridge</b>	ft.	

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

PAINT	
<b>Year Painted</b>	1988
<b>Unsound Paint %</b>	
<b>Painted Area</b>	32218 sq. ft.
<b>Primer Type</b>	D - Organic Zinc - 3309
<b>Finish Type</b>	

BRIDGE SIGNS	
<b>Posted Load</b>	0 - Not Required
<b>Traffic</b>	0 - Not Required
<b>Horizontal</b>	0 - Not Required
<b>Vertical</b>	0 - Not Required

INSPECTION	
<b>Userkey</b>	102
<b>Unofficial Structurally Deficient</b>	N
<b>Unofficial Functionally Obsolete</b>	N
<b>Unofficial Sufficiency Rating</b>	-2
<b>Routine Inspection Date</b>	10/13/2016
<b>Routine Inspection Frequency</b>	12
<b>Inspector Name</b>	CO Bridge
<b>Status</b>	A - Open

NBI CONDITION RATINGS	
<b>Deck</b>	6 - Satisfactory Condition
<b>Unsound Deck %</b>	
<b>Superstructure</b>	7 - Good Condition
<b>Substructure</b>	6 - Satisfactory Condition
<b>Channel</b>	N - Not Applicable
<b>Culvert</b>	N - Not Applicable

NBI APPRAISAL RATINGS	
<b>Structure Evaluation</b>	N
<b>Deck Geometry</b>	N
<b>Underclearances</b>	6
<b>Water Adequacy</b>	N - Not Applicable
<b>Approach Alignment</b>	N - Not Applicable

SAFETY FEATURES	
<b>Bridge Railing</b>	N - NOT REQUIRED
<b>GR Transition</b>	N - NOT REQUIRED
<b>Appr. Guardrail</b>	0 - SUBSTANDARD
<b>GR Termini</b>	N - NOT REQUIRED

IN DEPTH INSP.			
	Y/N	Freq	Date
<b>Frac. Critical</b>	N		
<b>Underwater</b>	N		
<b>Pinned Asbly.</b>	N		
<b>Spec. Feat.</b>			

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

CAPACITY RATINGS		
<b>Design Load</b>	8 - RAILROAD	
<b>Operating Rating</b>	5 - NRAP	80.0
<b>Inventory Rating</b>	5 - NRAP	80.0
<b>Posting VEH:</b>	<b>SEMI:</b>	<b>DBL:</b>
<b>Rating Date</b>		
<b>Minnesota Permit Codes</b>		
<b>A:</b>	N - N/A	
<b>B:</b>	N - N/A	
<b>C:</b>	N - N/A	

# Minnesota Structure Inventory Report

Bridge ID: 62002

CP RAIL over CSAH 49(RICE ST)

Date: 10/04/2016

+ GENERAL +	+ ROADWAY +	+ INSPECTION +																				
<b>Agency Br. No.</b> <b>District</b> 05 <b>Maint. Area</b> <b>County</b> 062 - Ramsey <b>City</b> Shoreview <b>Township</b> <b>Desc. Loc.</b> 1.0 MI N OF JCT TH 694 <b>Sect., Twp., Range</b> 30 - 030N - 22W <b>Latitude</b> 45 ° 3 ' 33.62 " <b>Longitude</b> 93 ° 6 ' 22.82 " <b>Custodian</b> 02 - County Highway Agency <b>Owner</b> 02 - County Highway Agency <b>BMU Agreement</b> <b>Year Built</b> 1988 <b>MN Year Reconstructed</b> <b>FHWA Year Reconstructed</b> <b>MN Temporary Status</b> <b>Bridge Plan Location</b> 1 - CENTRAL <b>Date Opened to Traffic</b> <b>On - Off System</b> 0 - OFF <b>Legislative District</b> 54B <b>Potential ABC</b> 2 - N/A	<b>Bridge Match ID (TIS)</b> <b>Roadway O/U Key</b> <b>Route Sys</b> <b>Number</b> <b>Roadway Name or Description</b>  <b>Level of Service</b> <b>Roadway Type</b> <b>Control Section (TH Only)</b> <b>Reference Point</b> <b>Detour Length</b> <b>mi.</b> <b>Lanes</b> <b>ON</b> <b>UNDER</b> 2 <b>ADT</b> <b>YEAR</b> <b>HCADT</b> <b>ADTT</b> % <b>Functional Class</b>	<b>Userkey</b> 102 <b>Structurally Deficient</b> N <b>Functionally Obsolete</b> N <b>Sufficiency Rating</b> -2 <b>Routine Inspection Date</b> 10/13/2016 <b>Routine Inspection Frequency</b> 12 <b>Inspector Name</b> Essler, Brian <b>Status</b> A - Open																				
		+ NBI CONDITION RATINGS +																				
		<b>Deck</b> 6 <b>Unsound Deck %</b> <b>Superstructure</b> 7 <b>Substructure</b> 6 <b>Channel</b> N <b>Culvert</b> N																				
		+ NBI APPRAISAL RATINGS +																				
		<b>Structure Evaluation</b> N <b>Deck Geometry</b> N <b>Underclearances</b> 6 <b>Waterway Adequacy</b> N <b>Approach Alignment</b> N																				
		+ SAFETY FEATURES +																				
		<b>Bridge Railing</b> N - NOT REQUIRED <b>GR Transition</b> N - NOT REQUIRED <b>Appr. Guardrail</b> 0 - SUBSTANDARD <b>GR Termini</b> N - NOT REQUIRED																				
		+ IN DEPTH INSP. +																				
		<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">Y/N</th> <th style="text-align: center;">Freq</th> <th style="text-align: center;">Date</th> </tr> </thead> <tbody> <tr> <td><b>Frac. Critical</b></td> <td style="text-align: center;">N</td> <td></td> <td></td> </tr> <tr> <td><b>Underwater</b></td> <td style="text-align: center;">N</td> <td></td> <td></td> </tr> <tr> <td><b>Pinned Asbly.</b></td> <td style="text-align: center;">N</td> <td></td> <td></td> </tr> <tr> <td><b>Spec. Feat.</b></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Y/N	Freq	Date	<b>Frac. Critical</b>	N			<b>Underwater</b>	N			<b>Pinned Asbly.</b>	N			<b>Spec. Feat.</b>			
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<b>Spec. Feat.</b>																						
		+ WATERWAY +																				
		<b>Drainage Area (sq. mi.)</b> <b>Waterway Opening (sf.)</b> <b>Navigation Control</b> N - Not applicable, no <b>Pier Protection</b> - <b>Nav. Clr. (ft.)</b> <b>Vert.</b> 0.0 <b>Horiz.</b> 0.0 <b>Nav. Vert. Lift Bridge Clear. (ft.)</b> <b>MN Scour Code</b> A - NON PERMISSIBLE <b>Year</b>																				
		+ CAPACITY RATINGS +																				
		<b>Design Load</b> 8 - RAILROAD <b>Operating Rating</b> 7 - RAILROAD      80.0 <b>Inventory Rating</b> 7 - RAILROAD      80.0 <b>Posting VEH:</b> <b>SEMI:</b> <b>DBL:</b> <b>Rating Date</b>  <b>Overweight Permit Codes</b> <b>A</b> N - N/A <b>B</b> N - N/A <b>C</b> N - N/A																				
+ STRUCTURE +	+ RDWY DIMENSIONS +																					
<b>Service On</b> 2 - Railroad <b>Service Under</b> 1 - Highway, w/ or w/out ped. <b>Main Span Type</b> 3 - Steel <b>Main Span Design</b> 05 - Thru Girder <b>Main Span Detail</b> <b>Appr. Span Type</b> <b>Appr. Span Design</b> <b>Appr. Span Detail</b> <b>Skew</b> 62 <b>RIGHT</b> <b>Culvert Type</b> <b>Barrel Length</b> <b>Cantilever ID</b>	<b>If Divided</b> <b>NB-EB</b> <b>SB-WB</b> <b>Roadway Width</b> <b>ft.</b> <b>ft.</b> <b>Vertical Clearance</b> <b>ft.</b> <b>ft.</b> <b>Max. Vert. Clear.</b> <b>ft.</b> <b>ft.</b> <b>Horizontal Clear.</b> <b>ft.</b> <b>ft.</b> <b>Lateral Clearance</b> <b>ft.</b> <b>ft.</b> <b>Appr. Surface Width</b> <b>ft.</b> <b>Bridge Roadway Width</b> <b>ft.</b> <b>Median Width On Bridge</b> <b>ft.</b>																					
		+ MISC. BRIDGE DATA +																				
		<b>Structure Flared</b> 0 - No flare <b>Parallel Structure</b> N - No parallel structure <b>Field Conn. ID</b> <b>Abutment Foundation (Material/Type)</b> 3 - FTG PILE <b>Pier Foundation (Material/Type)</b> N - N/A N - N/A <b>Historic Status</b> 5 - Not eligible																				
		+ PAINT +																				
		<b>Year Painted</b> 1988 <b>Unsound Paint %</b> <b>Painted Area</b> 32218 <b>sq. ft.</b> <b>Primer Type</b> D - Organic Zinc - 3309 <b>Finish Type</b>																				
		+ BRIDGE SIGNS +																				
		<b>Posted Load</b> 0 - Not Required <b>Traffic</b> 0 - Not Required <b>Horizontal</b> 0 - Not Required <b>Vertical</b> 0 - Not Required																				
<b>Number of Spans</b> <b>MAIN:</b> 1 <b>APPR:</b> 0 <b>TOTAL:</b> <b>Main Span Length</b> 145.5 <b>ft.</b> <b>Structure Length</b> 161.5 <b>ft.</b> <b>Deck Width (Out-to-Out)</b> 24.0 <b>ft.</b> <b>Deck Material</b> N - Not Applicable <b>Wear Surf Type</b> N - Not Applicable (applies <b>Wear Surf Install Year</b> <b>Wear Course/Fill Depth</b> 0.00 <b>ft.</b> <b>Deck Membrane</b> 0 - None <b>Deck Rebars</b> N - Not Applicable (no deck) <b>Deck Rebars Install Year</b> <b>Structure Area (Out-to-Out)</b> 3876 <b>sq. ft.</b> <b>Roadway Area (Curb-to-Curb)</b> <b>sq. ft.</b> <b>Sidewalk Width</b> 50A. Lt 0.00 <b>ft.</b> 50B. Rt 0.00 <b>ft.</b> <b>Curb Height</b> <b>Lt</b> 0.00 <b>ft.</b> <b>Rt</b> 0.00 <b>ft.</b> <b>Rail Type</b> <b>Lt</b> NN <b>Rt</b> NN																						

**MINNESOTA BRIDGE INSPECTION REPORT**

12/02/2016

**BRIDGE 62002 CP RAIL OVER CSAH 49(RICE ST)**

**ROUTINE INSP. DATE: 10/13/2016**

County: Ramsey	Location: 1.0 MI N OF JCT TH 694	Length: 161.5 ft.
City: Shoreview	Route: Ref. Pt.:	Deck Width: 24.0 ft.
Township:	Control Section:	Rdwy. Area/ Pct. Unsnd: sq. ft. / %
Section: 30 Township: 030N Range: 22W Maint. Area:		Paint Area/ Pct. Unsnd: 32218 sq. ft. / %
Span Type: 3 - Steel 3 - Girder and Floorbeam	Local Agency Bridge Nbr.:	Culvert: N/A
List: System		Postings:
NBI Deck: 6 Super: 7 Sub: 6 Chan: N Culv: N		
	Open, Posted, Closed: A - Open	
	MN Scour Code: A - NON WATERWAY	
Appraisal Ratings - Approach: N Waterway: N		Unofficial Structurally Deficient N
Required Bridge Signs - Load Posting: 0 - Not Required	Traffic: 0 - Not Required	Unofficial Functionally Obsolete N
Horizontal: 0 - Not Required	Vertical: 0 - Not Required	Unofficial Sufficiency Rating N

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
107	Painted Steel Girder or Beam	2	Routine	10/13/2016	322 LF	257	65	0	0	0
			Routine	10/15/2015	322 LF	257	65	0	0	0

Notes: [2013-2015] Approximately 35% of the north girder contains peeling of paint and rusting. Approximately 5% of the south girder contains some minor peeling of paint.  
 [2004-2009] No surface rust. Painted organic zinc rich in 1988.  
 [2004-2015] Graffiti is on the inside and outside of both steel girders.  
 Two 169" deep welded steel "Through Girders" serve as railing.

152	Painted Steel Floorbeam	2	Routine	10/13/2016	1296 LF	1166	130	0	0	0
			Routine	10/15/2015	1296 LF	1166	130	0	0	0

Notes: [2009-2015] 10% of floor beams contain minor peeling of paint system and corrosion.  
 [2003-2007] 5% of floor beams contain minor peeling of paint system and corrosion in early signs of distress.  
 [2007-2015] Diagonal bracing is in proper alignment.

215	Reinforced Concrete Abutment	2	Routine	10/13/2016	121 LF	0	121	0	0	N/A
			Routine	10/15/2015	121 LF	0	121	0	0	N/A

Notes: WEST ABUTMENT  
 [2013-2015] 2 - 10' minor crack's in NW corner  
 [2013-2015] There are numerous moderate spalls at the SW corner.  
 [2007-2015] The west abutment contains numerous moderate diagonal & vertical cracking at the SW corner.  
 [2011-2015] West abut has 4 horizontal cracks the entire length.  
 EAST ABUTMENT  
 [2015] Joint material loose on north end  
 [2015] moderate spall on NE corner 2' x 3"  
 [2013-2015] 8' diagonal minor crack in SE corner  
 [2007-2015] The east abutment has diagonal cracking near the south side.  
 [2003-2015] East abutment has 4- 16' moderate vertical cracks with numerous minor horizontal cracking present.

313	Fixed Bearing	2	Routine	10/13/2016	2 EA	0	2	0	N/A	N/A
			Routine	10/15/2015	2 EA	0	2	0	N/A	N/A

Notes: [2015] Minor paint failure  
 [2009-2015] Minor deterioration with corrosion is present.

314	Pot Bearing	1	Routine	10/13/2016	4 EA	0	4	0	N/A	N/A
			Routine	10/15/2015	4 EA	0	4	0	N/A	N/A

Notes: [2015] Minor paint failure  
 [2014-2015] Minor deterioration with corrosion is present.  
 Minor deterioration with some corrosion present. Four expansion bearings changed to pot bearings in 2011.

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
315	Disk Bearing	1	Routine	10/13/2016	4 EA	0	4	0	N/A	N/A
			Routine	10/15/2015	4 EA	0	4	0	N/A	N/A
Notes: [2015] Minor paint failure [2014-2015] Minor deterioration with corrosion is present. Minor deterioration is present. Four expansion bearings changed to disk bearings in 2011.										
387	Reinforced Concrete Wingwall	1	Routine	10/13/2016	4 EA	0	4	0	0	N/A
			Routine	10/15/2015	4 EA	0	4	0	0	N/A
Notes: [2015] Moderate erosion behind NW wingwall [2014-2015] 2 - 5' minor horizontal cracks in SE corner [2013-2015] 8' diagonal moderate crack in SW wingwall, north end [2013-2015] 14' diagonal moderate crack in SW wingwall, north end [2004-2015] There are numerous minor to moderate spalls present at all 4 abutment wings with minor to moderate deterioration. [2003-2015] SW wing has minor horizontal, diagonal & vertical cracking with deterioration of cork expansion joints. [2011-2015] SW wing has occasional moderate spalls. [2003-2015] SE wing has minor cracking at the SE corner with some rusting. There is a 14' horizontal crack. [2011-2015] NW corner has numerous minor cracking with numerous moderate spalls present at abutment. [2003-2015] The NE WW has minor cracking and minor spalls w/ rust present.										
401	Steel Ballast Plate Deck (Railroad Bridges)	1	Routine	10/13/2016	3875 SF	0	3875	0	0	0
			Routine	10/15/2015	3875 SF	0	3875	0	0	0
Notes: [2014-2015] More than 100 LF of leaching through the bottom of Ballast Plate. [2006-2015] There are 55 ballast hold downs that are hanging loose on chains or not bolted through hold down plates and the floor beam. [2011-2012] Hold down plates are not needed and could be cut off. Element #30 was deleted 2007. Element #401 was created. RR tracks are still active.										
964	Critical Finding Smart Flag	2	Routine	10/13/2016	1 EA	1	0	N/A	N/A	N/A
			Routine	10/15/2015	1 EA	1	0	N/A	N/A	N/A
Notes: DO NOT DELETE THIS CRITICAL FINDING SMART FLAG.										
982	Approach Guardrail	2	Routine	10/13/2016	1 EA	0	1	0	N/A	N/A
			Routine	10/15/2015	1 EA	0	1	0	N/A	N/A
Notes: [2014-2015] minor scrapes on guardrail system [2010-2015] There are no crash attenuators or twisted end treatments present on the guardrail system. Not required as per MNDOT. [2007-2015] The south end of the east guardrail is buried. The north end of the west guardrail is exposed. [2015] guardrail is 8' behind curb.										
985	Slopes & Slope Protection	2	Routine	10/13/2016	1 EA	0	1	0	N/A	N/A
			Routine	10/15/2015	1 EA	0	1	0	N/A	N/A
Notes: [1992-2015] There is moderate erosion at the SE slope. [2003-2015] The NW wingwall contains moderate erosion and settlement alongside the wingwall.										

General Notes: [2016] Bridge safety inspection was completed by Dan Bodelson & Brian Essler on 10/13/2016  
[2015] Bridge safety inspection was completed by Dan Bodelson & Brian Essler on 10/15/2015  
[2014] Bridge safety inspection was completed by Dan Bodelson & Brian Essler on 10/13/2014  
[2013] Bridge safety inspection was completed by Dan Bodelson & Brian Essler on 9/26/2013  
[2012] Bridge safety inspection was completed by B. Wieman on 10/24/2012.  
2011 Bridge safety inspection was completed by B. Wieman on 10/28/2011. All lateral bracing is in place. No sign of collision damage 2011.  
2010 Bridge safety inspection was completed by B. Wieman & D. Bodelson 11/30/2010.  
MN/DOT compliance review team inspected bridge 10/19/2010 along with Ramsey County.  
2009 Bridge safety inspection was completed by B. Wieman 10/26/2009.  
2007 Bridge safety inspection was completed by B. Wieman and B. Essler 8/23/2007.  
2006 Bridge safety inspection was completed by Bret Wieman 10/31/2006.  
Bridge # 62002 Built in 1988. Year 1998 turn back to Ramsey County.

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
	58. Deck NBI:		Moderate paint failure & surface corrosion							
	36A. Brdg Railings NBI:		CP Rail over CSAH # 49 - no bridge railing							
	36B. Transitions NBI:		CP Rail over CSAH # 49 - no bridge railing							
	36C. Appr Guardrail NBI:		Guardrail is 8' behind curb							
	36D. Appr Guardrail Terminal NBI:		CP Rail over CSAH # 49							
	59. Superstructure NBI:		Steel deck & beams have minor corrosion							
	60. Substructure NBI:		Abutments @ wing walls have minor to moderate cracks & spalls.							
	61. Channel NBI:		CP Rail over CSAH # 49							
	62. Culvert NBI:		CP Rail over CSAH # 49							
	71. Waterway Adeq NBI:		CP Rail over CSAH # 49							
	72. Appr Roadway Alignment NBI:		CP Rail over CSAH # 49							
	Inventory Notes:									

Brian Essler  
Inspector's Signature

Nicklaus Fischer  
Reviewer's Signature

# MINNESOTA BRIDGE INSPECTION REPORT

12/02/2016

Inspector: CO Bridge

## BRIDGE 62002 CP RAIL OVER CSAH 49(RICE ST)

County: Ramsey	Location: 1.0 MI N OF JCT TH 694	Length: 161.5 ft.
City: Shoreview	Route: Ref. Pt.:	Deck Width: 24.0 ft.
Township:	Control Section:	Rdwy. Area/ Pct. Unsnd: sq. ft. / %
Section: 30 Township: 030N Range: 22W Maint. Area:		Paint Area/ Pct. Unsnd: 32218 sq. ft. / %
Span Type: 3 - Steel 3 - Girder and Floorbeam	Local Agency Bridge Nbr.:	Culvert: N/A
List: System		Postings:
NBI Deck: 6 Super: 7 Sub: 6 Chan: N Culv: N		
	Open, Posted, Closed: A - Open	
	MN Scour Code: A - NON WATERWAY	

Appraisal Ratings - Approach: N Waterway: N	Unofficial Structurally Deficient N
Required Bridge Signs - Load Posting: 0 - Not Required	Unofficial Functionally Obsolete N
Horizontal: 0 - Not Required	Unofficial Sufficiency Rating N
Traffic: 0 - Not Required	
Vertical: 0 - Not Required	

ELEM NBR	ELEMENT NAME	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
30	Steel Deck Corrugated/Orthotropic/Etc.	Routine	10/13/2016	3876 SF	3798	0	78	0
		Migrated Values		3876 SF	3798	0	78	0
Notes: [2014-2016] More than 100 LF of leaching through the bottom of Ballast Plate. [2006-2016] There are 55 ballast hold downs that are hanging loose on chains or not bolted through hold down plates and the floor beam. [2011-2012] Hold down plates are not needed and could be cut off. Element #30 was deleted 2007. Element #401 was created. RR tracks are still active.								
510	- Wearing Surfaces	Routine	10/13/2016	3876 SF	3876	0	0	0
		Migrated Values		3876 SF	3876	0	0	0
Notes: [2016] Steel ballast plates and ballast.								
107	Steel Open Girder/Beam	Routine	10/13/2016	311 LF	246	65	0	0
		Migrated Values		311 LF	246	65	0	0
Notes: [2016] South girder 150 LF north girder 161 LF [2013-2016] Approximately 35% of the north girder contains peeling of paint and rusting. Approximately 5% of the south girder contains some minor peeling of paint. [2004-2009] No surface rust. Painted organic zinc rich in 1988. [2004-2015] Graffiti is on the inside and outside of both steel girders. Two 169" deep welded steel "Through Girders" serve as railing.								
515	- Steel Protective Coating	Routine	10/13/2016	9174 SF	5504	3670	0	0
		Migrated Values		9174 SF	5504	3670	0	0
Notes: [2016] 2 through girders at 150 LF and 161 LF with 150" web and a 18" flange ( 150' + 161') ( 2 X 150" + 3 X 18") [2013-2016] Approximately 35% of the north girder contains peeling of paint and rusting. Approximately 5% of the south girder contains some minor peeling of paint. [2004-2009] No surface rust. Painted organic zinc rich in 1988. [2016] Migrator used inventory quantity of 32,218 SF and estimated the condition states.								
152	Steel Floor Beam	Routine	10/13/2016	1296 LF	1166	130	0	0
		Migrated Values		1296 LF	1166	130	0	0
Notes: [2009-2016] 10% of floor beams contain minor peeling of paint system and corrosion. [2007-2016] Diagonal bracing is in proper alignment. [2003-2007] 5% of floor beams contain minor peeling of paint system and corrosion in early signs of distress.								
515	- Steel Protective Coating	Routine	10/13/2016	10704 SF	10598	106	0	0
		Migrated Values		10704 SF	10598	106	0	0
Notes: [2016] 54 W24 X 146 floor beams 24" long. 54 X 24' X ( 2 X 24.7" + 3 X 12.9") = 10704 SF [2009-2016] 10% of floor beams contain minor peeling of paint system and corrosion. [2003-2007] 5% of floor beams contain minor peeling of paint system and corrosion in early signs of distress.								



**BRIDGE 62002 CP RAIL OVER CSAH 49(RICE ST)**

ELEM NBR	ELEMENT NAME	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
215	Reinforced Concrete Abutment	Routine	10/13/2016	160 LF	29	131	0	0
		Migrated Values		160 LF	29	131	0	0
<p>Notes: [2016] Abutments are 26 LF, NW &amp; SE wing walls are 17 LF and the NE &amp; SW wing walls are 37 LF .  WEST ABUTMENT  [2016] West abut has 6 horizontal cracks the entire length.  [2013-2016] 2 - 10' minor crack's in NW corner  [2013-2016] There are numerous moderate spalls at the SW corner.  [2007-2016] The west abutment contains numerous moderate diagonal &amp; vertical cracking at the SW corner.  [2011-2015] West abut has 4 horizontal cracks the entire length.  EAST ABUTMENT  [2015-2016] Joint material loose on north end  [2015-2016] moderate spall on NE corner 2' x 3"  [2013-2016] 8' diagonal minor crack in SE corner  [2007-2016] The east abutment has diagonal cracking near the south side.  [2003-2016] East abutment has 4- 16' moderate vertical cracks with numerous minor horizontal cracking present.</p> <p>Wingwall notes: [2015-2016] Moderate erosion behind NW wingwall  [2014-2016] 2 - 5' minor horizontal cracks in SE corner  [2013-2016] 8' diagonal moderate crack in SW wingwall, north end  [2013-2016] 14' diagonal moderate crack in SW wingwall, north end  [2004-2016] There are numerous minor to moderate spalls present at all 4 abutment wings with minor to moderate deterioration.  [2003-2016] SW wing has minor horizontal, diagonal &amp; vertical cracking with deterioration of cork expansion joints.  [2011-2016] SW wing has occasional moderate spalls.  [2003-2016] SE wing has minor cracking at the SE corner with some rusting. There is a 14' horizontal crack.  [2011-2016] NW corner has numerous minor cracking with numerous moderate spalls present at abutment.  [2003-2016] The NE WW has minor cracking and minor spalls w/ rust present.</p>								
313	Fixed Bearing	Routine	10/13/2016	2 EA	0	2	0	0
		Migrated Values		2 EA	0	2	0	0
<p>Notes: [2015-2016] Minor paint failure  [2009-2016] Minor deterioration with corrosion is present.</p>								
314	Pot Bearing	Routine	10/13/2016	4 EA	0	4	0	0
		Migrated Values		4 EA	0	4	0	0
<p>Notes: [2015-2016] Minor paint failure  [2014-2016] Minor deterioration with corrosion is present.  Minor deterioration with some corrosion present. Four expansion bearings changed to pot bearings in 2011.</p>								
315	Disk Bearing	Routine	10/13/2016	4 EA	0	4	0	0
		Migrated Values		4 EA	0	4	0	0
<p>Notes: [2015-2016] Minor paint failure  [2014-2016] Minor deterioration with corrosion is present.  Minor deterioration is present. Four expansion bearings changed to disk bearings in 2011.</p>								
800	Critical Deficiencies or Safety Hazards	Routine	10/13/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
<p>Notes: NO CRITICAL FINDINGS OBSERVED DURING THE LAST INSPECTION.</p>								
892	Slopes & Slope Protection	Routine	10/13/2016	1 EA	0	1	0	0
		Migrated Values		1 EA	0	1	0	0
<p>Notes: [1992-2016] There is moderate erosion at the SE slope.  [2003-2016] The NW wingwall contains moderate erosion and settlement alongside the wingwall.</p>								
893	Guardrail	Routine	10/13/2016	1 EA	0	1	0	0
		Migrated Values		1 EA	0	1	0	0
<p>Notes: [2014-2016] minor scrapes on guardrail system  [2010-2016] There are no crash attenuators or twisted end treatments present on the guardrail system. Not required as per MNDOT.  [2007-2016] The south end of the east guardrail is buried. The north end of the west guardrail is exposed.  [2016] NW guardrail is buried in the slope.  [2015] guardrail is 8' behind curb.</p>								

**BRIDGE 62002 CP RAIL OVER CSAH 49(RICE ST)**

ELEM NBR	ELEMENT NAME	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
894	Deck & Approach Drainage	Routine	10/13/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
Notes: [2016] drainage is functioning adequately. [2016] Water goes south along both curb line to a spillway								
900	Protected Species	Routine	10/13/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
Notes: [2016] No protected species living found on this structure.								

General Notes: [2016] Bridge safety inspection was completed by Dan Bodelson & Brian Essler on 10/13/2016  
 [2015] Bridge safety inspection was completed by Dan Bodelson & Brian Essler on 10/15/2015  
 [2014] Bridge safety inspection was completed by Dan Bodelson & Brian Essler on 10/13/2014  
 [2013] Bridge safety inspection was completed by Dan Bodelson & Brian Essler on 9/26/2013  
 [2012] Bridge safety inspection was completed by B. Wieman on 10/24/2012.  
 2011 Bridge safety inspection was completed by B. Wieman on 10/28/2011. All lateral bracing is in place. No sign of collision damage 2011.  
 2010 Bridge safety inspection was completed by B. Wieman & D. Bodelson 11/30/2010.  
 MN/DOT compliance review team inspected bridge 10/19/2010 along with Ramsey County.  
 2009 Bridge safety inspection was completed by B. Wieman 10/26/2009.  
 2007 Bridge safety inspection was completed by B. Wieman and B. Essler 8/23/2007.  
 2006 Bridge safety inspection was completed by Bret Wieman 10/31/2006.  
 Bridge # 62002 Built in 1988. Year 1998 turn back to Ramsey County.

- 58. Deck NBI: Moderate paint failure & surface corrosion
  - 36A. Brdg Railings NBI: CP Rail over CSAH # 49 - no bridge railing
  - 36B. Transitions NBI: CP Rail over CSAH # 49 - no bridge railing
  - 36C. Appr Guardrail NBI: Guardrail is 8' behind curb
  - 36D. Appr Guardrail Terminal NBI: CP Rail over CSAH # 49
  - 59. Superstructure NBI: Steel deck & beams have minor corrosion
  - 60. Substructure NBI: Abutments @ wing walls have minor to moderate cracks & spalls.
  - 61. Channel NBI: CP Rail over CSAH # 49
  - 62. Culvert NBI: CP Rail over CSAH # 49
  - 71. Waterway Adeq NBI: CP Rail over CSAH # 49
  - 72. Appr Roadway Alignment NBI: CP Rail over CSAH # 49
- Inventory Notes:

\_\_\_\_\_  
 Brian Essler  
 Inspector's Signature

\_\_\_\_\_  
 Nicklaus Fischer  
 Reviewer's Signature

# Pictures



Photo 1 - 62002 No side



Photo 2 - 62002 So side

# Pictures



Photo 3 - 62002 Top



Photo 4 - tracks WB



# Pictures



Photo 5 - west abutment