

**2016 ROUTINE
BRIDGE INSPECTION REPORT**



**BRIDGE # 90409
CSAH 55(JACKSON) over CP RAIL**

DISTRICT: Metro

COUNTY: Ramsey

CITY/TOWNSHIP: St Paul

STATE: Minnesota

Date of Inspection: 08/19/2016

Equipment Used:

Owner: County Highway Agency

Inspected By: Burt, Dick; Engel, Michael; Reimer, Dan

Report Written By: Dan Reimer

Report Reviewed By: Glenn Pagel

Final Report Date: 11/02/2016

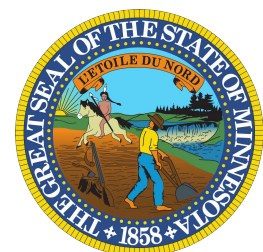


Table of Contents

<u>SECTION</u>	<u>PAGE</u>
COVER	1
STRUCTURE INVENTORY	2
ELEMENTS	3
THUMBNAIL PICTURES	7

Minnesota Structure Inventory Report

Bridge ID: 90409

CSAH 55(JACKSON) over CP RAIL

Date: 11/01/2016

+ GENERAL +				+ ROADWAY +				+ INSPECTION +					
Agency Br. No.	Crew			Bridge Match ID (TIS)	0			Userkey	199				
District	05	Maint. Area		Roadway O/U Key	Route On Structure			Structurally Deficient	N				
County	062 - Ramsey			Route Sys	04 - CSAH	Number 55		Functionally Obsolete	Y				
City	St Paul			Roadway Name or Description				Sufficiency Rating	30.6				
Township				CSAH 55				Routine Inspection Date	08/19/2016				
Desc. Loc.	0.1 MI N OF JCT CSAH 31			Level of Service	1 - MAINLINE			Routine Inspection Frequency	12				
Sect., Twp., Range	19 - 029N - 22W			Roadway Type	2 - 2-way traffic			Inspector Name	Reimer, Dan				
Latitude	44 °	58'	43.36"	Control Section (TH Only)				Status	P - Posted for Load				
Longitude	93 °	5'	47.03"	Reference Point	001+00.320			+ NBI CONDITION RATINGS +					
Custodian	02 - County Highway Agency			Detour Length	1.0	mi.		Deck	5	Unsound Deck %			
Owner	02 - County Highway Agency			Lanes	ON	2	UNDER	0	5				
BMU Agreement				ADT	6872	YEAR		2008	5				
Year Built	1959			HCA DT	ADTT %			Channel	N				
MN Year Reconstructed				Functional Class	16 - Urban - Minor Arterial			Culvert	N				
FHWA Year Reconstructed				+ RDWY DIMENSIONS +				+ NBI APPRAISAL RATINGS +					
MN Temporary Status				If Divided	NB-EB		SB-WB	Structure Evaluation	3				
Bridge Plan Location	4 - MUNICIPAL			Roadway Width	30.00	ft.		Deck Geometry	3				
Date Opened to Traffic				Vertical Clearance	ft.		ft.	Underclearances	4				
On - Off System	1 - ON			Max. Vert. Clear.	ft.		ft.	Waterway Adequacy	N				
Legislative District	66A			Horizontal Clear.	29.9	ft.		Approach Alignment	8				
Potential ABC	2 - N/A			Lateral Clearance	ft.		ft.	+ SAFETY FEATURES +					
+ STRUCTURE +				Appr. Surface Width	40.0		ft.	Bridge Railing	0 - SUBSTANDARD				
Service On	5 - Highway-pedestrian			Bridge Roadway Width	30.0		ft.	GR Transition	0 - SUBSTANDARD				
Service Under	2 - Railroad			Median Width On Bridge	ft.			Appr. Guardrail	0 - SUBSTANDARD				
Main Span Type	2 - Concrete Continuous			+ MISC. BRIDGE DATA +				GR Termini	0 - SUBSTANDARD				
Main Span Design	09 - Slab Span			Structure Flared	0 - No flare			+ IN DEPTH INSP. +					
Main Span Detail				Parallel Structure	N - No parallel structure				Y/N				
Appr. Span Type				Field Conn. ID				Frac. Critical	N				
Appr. Span Design				Abutment Foundation (Material/Type)	1 - CONC			Underwater	N				
Appr. Span Detail				Pier Foundation (Material/Type)	1 - CONC			Pinned Asbly.	N				
Skew	54	RIGHT			1 - SPRD SOIL			Spec. Feat.					
Culvert Type				Historic Status	5 - Not eligible			+ WATERWAY +					
Barrel Length				+ PAINT +				Drainage Area (sq. mi.)					
Cantilever ID				Year Painted				Waterway Opening (sf.)					
				Unsound Paint %				Navigation Control	N - Not applicable, no				
				Painted Area	sq. ft.			Pier Protection					
				Primer Type				Nav. Clr. (ft.)	Vert.	0.0	Horiz.	0.0	
				Finish Type				Nav. Vert. Lift Bridge Clear. (ft.)					
				+ BRIDGE SIGNS +				MN Scour Code	A - NON	Year			
				Posted Load	2 - Vehicle & Semi (Type R12-5)			+ CAPACITY RATINGS +					
				Traffic	0 - Not Required			Design Load	4 - H 20				
				Horizontal	0 - Not Required			Operating Rating	2 - HS TRUCK	12.2			
				Vertical	0 - Not Required			Inventory Rating	2 - HS TRUCK	7.2			
								Posting VEH:	18	SEMI:	32	DBL:	32
								Rating Date	10/16/2013				
								Overweight Permit Codes					
								A	N - N/A	B	N - N/A	C	N - N/A

MINNESOTA BRIDGE INSPECTION REPORT

11/02/2016

Inspector: CO Bridge

BRIDGE 90409 CSAH 55(JACKSON) OVER CP RAIL

County: Ramsey	Location: 0.1 MI N OF JCT CSAH 31	Length: 109.5 ft.
City: St Paul	Route: 04 - CSAH 55 Ref. Pt.: 001+00.320	Deck Width: 42.0 ft.
Township:	Control Section:	Rdwy. Area/ Pct. Unsnd: 3283 sq. ft. / %
Section: 19 Township: 029N Range: 22W Maint. Area:		Paint Area/ Pct. Unsnd: sq. ft. / %
Span Type: 2 - Concrete Continuous 1 - Slab	Local Agency Bridge Nbr.:	Culvert: N/A
List:		Postings: 18 32 32

NBI Deck: 5 Super: 5 Sub: 5 Chan: N Culv: N
 Open, Posted, Closed: P - Posted for Load
 MN Scour Code: A - NON WATERWAY

Appraisal Ratings - Approach: 8 Waterway: N Unofficial Structurally Deficient N
 Required Bridge Signs - Load Posting: 2 - Vehicle & Semi (Type Traffic: 0 - Not Required Unofficial Functionally Obsolete Y
 R12-5)
 Horizontal: 0 - Not Required Vertical: 0 - Not Required Unofficial Sufficiency Rating 30.6

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	08/19/2016	4599 SF	4139	0	460	0
		Migrated Values		4599 SF	4139	0	460	0
Notes: Heavy leaching, staining and efflorescence is present. 2016 Rust staining is also present. 2016 16 SF of delamination's are present, mostly at the center line of the bridge. 2016								
510 -	Wearing Surfaces	Routine	08/19/2016	3283 SF	2955	0	328	0
		Migrated Values		3283 SF	2955	0	328	0
Notes: Asphalt patches are present on the bridge deck. 2016 Chained deck surface for delams in 2015. Unsound wearing surface SF quantity = 200 SF total of delams are present. 2015 Unsound wearing surface area total is between 2% and 10% of the entire deck sf total. 2015								
205	Reinforced Concrete Column	Routine	08/19/2016	12 EA	8	4	0	0
		Migrated Values		12 EA	8	4	0	0
Notes: Spall repair at column. 2011 Corners at 3 columns are cracked or spalled. S. side of tracks. 2013-16 1 column delaminating - N. side of the tracks. 2016								
215	Reinforced Concrete Abutment	Routine	08/19/2016	184 LF	101	60	23	0
		Migrated Values		184 LF	101	60	23	0
Notes: Differential settlement of 2" horizontally at centerline joint at N. Abut. 2005 [2009] Water evident on both abutments Abut. joints leak. 2011-16 Extensive cracking, leaching and staining present. 2013-16 Delams and spalls deeper than 1" and greater than 6" in diameter are present. 2013-16 NW wing wall is tilted out 2" at the joint. 2014-16 NE wing wall has a 3' spall at the top. 2014-16 SE wing wall is tilted out 2" at the joint. 2014-16								
220	Reinforced Concrete Pile Cap/Footing	Routine	08/19/2016	138 LF	137	1	0	0
		Migrated Values		138 LF	137	1	0	0
Notes: Minor vertical cracks are present. (.012 and smaller) 2016 S. footing - N. side has 1 moderate wide crack. (.012" to .050") E. end. 2016								
234	Reinforced Concrete Pier Cap	Routine	08/19/2016	135 LF	126	3	6	0
		Migrated Values		135 LF	126	3	6	0
Notes: There is a four sq. ft. spall at the north side of the center joint in the south pier. 2011-16 N. Pier has 4 sq. ft. of spall at the bottom of the cap. 2005-16 S. Pier has 4 Ln. ft. of spall at the bottom of the SE cap. 2015-16 Exposed aggregate and wide cracks are present. 2016 Most issues are at the center line of the bridge. 2016								

BRIDGE 90409 CSAH 55(JACKSON) OVER CP RAIL

ELEM NBR	ELEMENT NAME	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
301	Pourable Joint Seal	Routine	08/19/2016	300 LF	0	0	200	100
		Migrated Values		300 LF	0	0	200	100
Notes: Leaching thru construction joints of slab at centerline of roadway. 2014-16 Missing sealant. 2013-16 Leaching through transverse joints. 1992-2016 Deck adjacent to joint has spalling and delams present. (approaches) 2014-16 Bituminous repairs and patching is present. 2013-16 Concrete repairs needed to reseal properly. 2016								
321	Reinforced Concrete Approach Slab	Routine	08/19/2016	915 SF	689	50	176	0
		Migrated Values		915 SF	689	50	176	0
Notes: Wide crack in the north approach lane. 1992-2016 [2009] 1"+ settlement both approaches N. approach is concrete. 2014 Asphalt patches are present. 2016 Hairline cracks are present. 2016								
330	Metal Bridge Railing	Routine	08/19/2016	217 LF	109	108	0	0
		Migrated Values		217 LF	109	108	0	0
Notes: Railing consists of metal posts with a 2" pipe rail on top. 2 metal cables are below the pipe rail. The second post from the north end of the east railing is bent out 3". 2016 Components are slightly bent and mis aligned. Mostly on the E. side. 2013-16 Impact damage to the east side railing. 2014 All posts on the NE side and railing have been repaired. (impact damage) 2014								
515 - Steel Protective Coating		Routine	08/19/2016	865 SF	0	439	86	340
		Migrated Values		865 SF	0	439	86	340
Notes: CS-2, chalking and fading of finish coat. CS-3, primer coat is exposed. CS-4, exposed metal, rusting, no protective coating. 2016								
800	Critical Deficiencies or Safety Hazards	Routine	08/19/2016	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	08/19/2016	670 LF	670	0	0	0
		Migrated Values		670 LF	670	0	0	0
Notes: Unsealed cracks less than .012" wide. 2016								
822	Bituminous Approach Roadway	Routine	08/19/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
Notes: S. approach was milled and overlaid with bituminous. 2014								
883	Concrete Shear Cracking	Routine	08/19/2016	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 concrete pier caps.								
890	Load Posting or Vertical Clearance Signing	Routine	08/19/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
Notes: Load posting signs are in place. 18T/32T/32T 2014-16								
892	Slopes & Slope Protection	Routine	08/19/2016	1 EA	0	1	0	0
		Migrated Values		1 EA	0	1	0	0
Notes: Minor to moderate erosion at south slope. 1993-2016								

BRIDGE 90409 CSAH 55(JACKSON) OVER CP RAIL

ELEM NBR	ELEMENT NAME	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
893	Guardrail	Routine	08/19/2016	1 EA	0	1	0	0
		Migrated Values		1 EA	0	1	0	0
Notes: The approaches have 2 cables and posts for guardrail. 2005-16 Cables and posts repaired on east side. 2014 (impact damage) Cable system is intact - substandard. 2016								
894	Deck & Approach Drainage	Routine	08/19/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
Notes: Use this element to rate the condition, function, and adequacy of the drainage system.								
895	Sidewalk, Curb, & Median	Routine	08/19/2016	1 EA	0	0	0	1
		Migrated Values		1 EA	0	0	0	1
Notes: The N.E. approach walk is tilted 2" down at the east railing and flush at the curb. 2005-07 The NW walk is down about 4". 1995-2016 All approach curbs and walks are badly settled and broken. 1991-2016 Both sides - walk patched with asphalt. 1996-2016 There is no sidewalk in the north and south roadways. 2000-16 Approach walks are in very poor condition. 2011-16 Severe settlement is present. More than 2". CS-4 2016								
899	Miscellaneous Items	Routine	08/19/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
Notes: The northwest and southeast retaining walls are tipped out 1" to 3" inch. 2007-16								
900	Protected Species	Routine	08/19/2016	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. None found in 2016.								

General Notes: CP Railroad contact:
Nate Lund cell (651) 238-8033 nathan_lund@cpr.ca

County contacts: Kathy Jascke 266-7192
Nick Fischer 266-7119

58. Deck NBI: Moderate to advanced deterioration. 2015
Moderate to extensive delaminations and spalling. 2015

36A. Brdg Railings NBI:

36B. Transitions NBI:

36C. Appr Guardrail NBI:

36D. Appr Guardrail
Terminal NBI:

59. Superstructure NBI: Concrete Slab Span Moderate to advanced deterioration. 2015
Moderate to extensive delaminations and spalling. 2015

60. Substructure NBI: Differential settlement North Abutment of 2" at centerline
NW & SE wing walls tilted 2" out of plumb

61. Channel NBI:

62. Culvert NBI:

71. Waterway Adeq NBI:

72. Appr Roadway
Alignment NBI:

Inventory Notes:

BRIDGE 90409 CSAH 55(JACKSON) OVER CP RAIL

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

Dan Reimer
Inspector's Signature

Glenn Pagel
Reviewer's Signature



1. pothole 90409
Jackson 003.JPG



2. railing repair
2014-04-23.jpg



3. restricted bridges.JPG



4. 2013 Elevation view
003.JPG



5. Center span
delam.JPG



6. Delam at S abut.JPG



7. E side map
cracking.JPG



8. Facing N.JPG



9. Offset of N abut at
center (1).JPG



10. Offset of N abut at
center (2).JPG



11. Offset of N abut at
center looking straight
up.JPG



12. S Approach, SB
lane.JPG



13. SE Pier cap.JPG



14. Top of N abut, W
end.JPG



15. Top of S abut, E
end.JPG