

**2015 ROUTINE  
BRIDGE INSPECTION REPORT**



**BRIDGE # 90423  
UP RR over CSAH 64(JOHNSON PARKWAY)**

**DISTRICT: Metro**

**COUNTY: Ramsey**

**CITY/TOWNSHIP: St Paul**

**Date(s) of Inspection: 08/13/2015**

**Equipment Used:**

**Owner: Railroad**

**Inspected By: Burt, Dick; Engel, Michael; Lee, Joseph; Schaaf, Jerry**

**Report Written By: Joseph Lee**

**Report Reviewed By: Glenn Pagel**

**Final Report Date: 12/22/2015**

**MnDOT Bridge Office  
3485 Hadley Avenue North  
Oakdale, MN 55128**



# MnDOT Structure Inventory Report

Bridge ID: 90423

UP RR

over CSAH 64(JOHNSON PARKWAY)

Date: 12/22/2015

GENERAL			
Agency Br. No.			
District Metro			
Maint. Area		Crew	
County 062 - Ramsey			
City St Paul			
Township			
Desc. Loc. 0.3 MI S OF JCT CSAH 64			
Sect., Twp., Range		27 - 029N - 22W	
Latitude	Deg 44	Min 58	Sec 10.72
Longitude	Deg 93	Min 2	Sec 41.88
Custodian 27 - Railroad			
Owner 27 - Railroad			
BMU Agreement			
Year Built		1906	
MN Year Reconstructed			
FHWA Year Reconstructed			
MN Temporary Status			
Bridge Plan Location 5 - OTHER			
Date Opened to Traffic			
On-Off System		0 - OFF	
Legislative District 67A			

STRUCTURE	
Service On	2 - Railroad
Service Under	1 - Highway, w/ or w/out ped.
Main Span Type	3 - Steel 05 - Thru Girder
Main Span Detail	
Appr. Span Type	3 - Steel 01 - Beam Span
Appr. Span Detail	
Skew	21 R
Culvert Type	
Barrel Length	ft.
Cantilever ID	

NUMBER OF SPANS			
MAIN: 1	APPR: 2	TOTAL: 3	
Main Span Length	45.0	ft.	
Structure Length	73.0	ft.	
Deck Width (Out-to-Out)	59.5	ft.	
Deck Material	N - Not Applicable		
Wear Surf Type	N - Not Applicable (applies onl		
Wear Surf Install Year			
Wear Course/Fill Depth	0.00	ft.	
Deck Membrane	0 - None		
Deck Rebars	N - Not Applicable (no deck)		
Deck Rebars Install Year			
Structure Area (Out-to-Out)	4344	sq. ft.	
Roadway Area (Curb-to-Curb)		sq. ft.	
Sidewalk Width	Lt 0.00	ft.	Rt 0.00
Curb Height	Lt 0.00	ft.	Rt 0.00
Rail Type	Lt NN	Rt NN	

ROADWAY		
Bridge Match ID (TIS)		
Roadway O/U Key		
Route Sys	Number	
Roadway Name or Description		
Level of Service		
Roadway Type		
Control Section (TH Only)		
Reference Point		
Detour Length	mi	
Lanes	On	Under 2
	ADT	Year
HCACT	0	ADTT 0 %
Functional Class		

RDWY DIMENSIONS		
If Divided	NB-EB	SB-WB
Roadway Width	ft.	ft.
Vertical Clearance	ft.	ft.
Max. Vert. Clear.	ft.	ft.
Horizontal Clear.	ft.	ft.
Lateral Clearance	ft.	ft.
Appr. Surface Width	ft.	
Bridge Roadway Width	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	4 - MASONRY
(Material/Type)	1 - SPRD SOIL
Pier Foundation	3 - STEEL
(Material/Type)	4 - PILE BENT
Historic Status	5 - Not eligible

PAINT	
Year Painted	1906
Unsound Paint %	
Painted Area	3000 sq. ft.
Primer Type	1 - Lead - non 3309
Finish Type	A - Red Lead

BRIDGE SIGNS	
Posted Load	0 - Not Required
Traffic	0 - Not Required
Horizontal	0 - Not Required
Vertical	1 - Rdwy. Clr. Restriction

INSPECTION	
Userkey	199
Unofficial Structurally Deficient	N
Unofficial Functionally Obsolete	N
Unofficial Sufficiency Rating	-2
Routine Inspection Date	08/13/2015
Routine Inspection Frequency	12
Inspector Name	City of St. Paul
Status	A - Open

NBI CONDITION RATINGS	
Deck	N - Not Applicable
Unsound Deck %	
Superstructure	3 - Serious Condition
Substructure	3 - Serious Condition
Channel	N - Not Applicable
Culvert	N - Not Applicable

NBI APPRAISAL RATINGS	
Structure Evaluation	N
Deck Geometry	N
Underclearances	3
Water Adequacy	N - Not Applicable
Approach Alignment	5 - Somewhat better than m

SAFETY FEATURES	
Bridge Railing	N - NOT REQUIRED
GR Transition	N - NOT REQUIRED
Appr. Guardrail	N - NOT REQUIRED
GR Termini	N - NOT REQUIRED

IN DEPTH INSP.		
Y/N	Freq	Date
Frac. Critical		
Underwater		
Pinned Asbly.		
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

CAPACITY RATINGS		
Design Load	8 - RAILROAD	
Operating Rating	2 - AS	HS 65.0
Inventory Rating	2 - AS	HS 65.0
Posting VEH:	SEMI:	DBL:
Rating Date		
MnDOT Permit Codes		
A:	N - N/A	
B:	N - N/A	
C:	N - N/A	

# MnDOT BRIDGE INSPECTION REPORT

12/22/2015

Inspector: City of St. Paul

**BRIDGE 90423 UP RR OVER CSAH 64(JOHNSON PARKWAY)**

**ROUTINE INSP. DATE: 08/13/2015**

County: Ramsey	Location: 0.3 MI S OF JCT CSAH 64	Length: 73.0 ft.
City: St Paul	Route: Ref. Pt.:	Deck Width: 59.5 ft.
Township:	Control Section:	Rdwy. Area/ Pct. Unsnd: sq. ft. / %
Section: 27 Township: 029N Range: 22W Maint. Area:		Paint Area/ Pct. Unsnd: 3000 sq. ft. / %
Span Type: 3 - Steel 03 - Girder and Floorbeam	Local Agency Bridge Nbr.:	Culvert: N/A
List: System		Postings:

NBI Deck: N Super: 3 Sub: 3 Chan: N Culv: N  
 Open, Posted, Closed: A - Open  
 MN Scour Code: A - NON WATERWAY

Appraisal Ratings - Approach: 5 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: 1 - Rdwy. Clr. Restriction	Unofficial Sufficiency Rating N

Structure Unit:

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
031	Timber Deck (No Overlay)	3	Routine	08/13/2015	4407 SF	0	0	4407	0	N/A
			Routine	08/13/2014	4407 SF	0	0	4407	0	N/A

Requires Monitoring  Monitored

Notes: Timber deck comprised of transverse railroad ties and track. 2011-15  
 No wear surface, open between ties. 2011-15  
 Longitudnal planks for maintenance personnel only. 2011-15  
 South side tracks have been removed. 2015  
 North side tracks remain active. 2015  
 Timber components have weathering and splitting present. 2015  
 Some components are loose and misaligned. 2015

107	Painted Steel Girder or Beam	2	Routine	08/13/2015	226 LF	0	0	216	10	0
			Routine	08/13/2014	226 LF	0	0	216	0	10

Requires Monitoring  Monitored

Notes: Quantity = 5 girders X 45.2' each = 226 LF total. 2015 verify  
 Bottom of north flange was hit by high load. 81-14  
 One stiffener is bent on the south side of the south girder. 06-14  
 Girders very heavily rusted at many locations, second north girder west side under tracks rusted completely through web in several locations. 2009-14 Could not find - 2015

113	Painted Steel Stringer	2	Routine	08/13/2015	584 LF	0	0	570	14	0
			Routine	08/13/2014	584 LF	0	0	584	0	0

Requires Monitoring  Monitored

Notes: First stringer north of center girder west of east steel bent has severe rusting with one-half flange gone at centerline at bottom of floor beam. Flanges have section loss present.  
 North bottom flange angle is bent up 1/2". 92-14  
 Gusset plate rusted through brace connection. 2013-14  
 Quantity = 8 rows of stringers X 73' each = 584 LF total. 2015 verify  
 Surface corrosion is prevalent though out all stringers. 2015  
 Isolated severe corrosion and rust. See photos - 2015

## Structure Unit:

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
152	Painted Steel Floorbeam	2	Routine	08/13/2015	276 LF	0	0	276	0	0
			Routine	08/13/2014	276 LF	0	0	276	0	0
			<input type="checkbox"/> Requires Monitoring			<input type="checkbox"/> Monitored				
Notes: Extensive corrosion present. 2012-14 Quantity = 12 beams X 23' each = 276 LF total verify 2015 Surface corrosion is prevalent though out all beams. 2015										
202	Painted Steel Column	2	Routine	08/13/2015	10 EA	0	0	0	10	0
			Routine	08/13/2014	10 EA	0	0	0	10	0
			<input checked="" type="checkbox"/> Requires Monitoring			<input type="checkbox"/> Monitored				
Notes: There are fist size holes rusted thru 4 columns 2 ft. from the base. 06-07. Corrected. 08. Watersheds in columns are very dirty and need to be cleaned again, 81-12 Several bent columns have extensive rusting and pitting at base plate and 3'-0' up. 81-12 Three columns were repaired with welded batten plates. 2008-13 Lower angles are severely rusted with section loss, 98-12 Three replaced on SE corner. 2013 N.E. bent, diagonal bracing gussets have section loss, S.E. also S.W. too, 06-12 Old column repairs have trapped sediment and water, significant section loss present adjacent to all gusset plate repair areas. 2009-15 Extensive deterioration is present at the lower column locations and connections. 2015 Severe corrosion and flaking rust. 2015										
217	Masonry, Other or Combination Material Abutment	2	Routine	08/13/2015	131 LF	71	30	30	0	N/A
			Routine	08/13/2014	131 LF	71	30	30	0	N/A
			<input type="checkbox"/> Requires Monitoring			<input type="checkbox"/> Monitored				
Notes: Moderate to extensive weathering of stone abutments. 2015 Mortar cracked and falling out. 2013-15 Northeast parapet (8'-0') and east abutment concrete and stone is cracked up and falling around bearings, 81-14 Parapet along N. 1/2 of So. track is broken and settled 4", 90-14										
231	Painted Steel Pier Cap	1	Routine	08/13/2015	138 LF	50	50	20	18	0
			Routine	08/13/2014	138 LF	120	0	0	18	0
			<input type="checkbox"/> Requires Monitoring			<input type="checkbox"/> Monitored				
Notes: Surface corrosion is prevalent through out. 2015 Multiple areas of severe corrosion with flaking rust. 2011-15 Extensive deterioration, isolated section loss present. 2011-15 2 broken anchor bolts - 4th beam from the NE side. 2014 2 broken rivets - bottom of top flange - 2nd column SE and 1st column N.end. 2014										
311	Expansion Bearing	2	Routine	08/13/2015	16 EA	0	0	16	N/A	N/A
			Routine	08/13/2014	16 EA	0	0	16	N/A	N/A
			<input type="checkbox"/> Requires Monitoring			<input type="checkbox"/> Monitored				
Notes: Dirty and rusty. 07-14 Bearings are severely restricted due to corrosion and debris. 2011-15 Bearings are located at the abutments.? 2015										

## Structure Unit:

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
313	Fixed Bearing	2	Routine	08/13/2015	16 EA	0	16	0	N/A	N/A
			Routine	08/13/2014	16 EA	0	16	0	N/A	N/A
			<input type="checkbox"/> Requires Monitoring	<input type="checkbox"/> Monitored						
Notes: Dirty and rusty. 07-14 Bearing areas have extensive corrosion and rust. 2011-15 Bearing areas located above the pier caps. 2015 Possibility that the center of the bridge over the roadway is a rigid structure. 2015 ?										
332	Timber Bridge Railing	2	Routine	08/13/2015	39 LF	0	0	39	N/A	N/A
			Routine	08/13/2014	39 LF	0	0	39	N/A	N/A
			<input type="checkbox"/> Requires Monitoring	<input type="checkbox"/> Monitored						
Notes: Wood railing at abutments only. 2011 Wood railing has severe deterioration. 2015 Railing is for maintenance personnel only. 2015										
357	Pack Rust Smart Flag	2	Routine	08/13/2015	1 EA	0	0	0	1	N/A
			Routine	08/13/2014	1 EA	0	0	0	1	N/A
			<input type="checkbox"/> Requires Monitoring	<input type="checkbox"/> Monitored						
Notes: Pack rust at bottom of columns of bents. 02-15 see photos-2015 Severe distress to steel column lower section and connections. 2015										
362	Traffic Impact Smart Flag	2	Routine	08/13/2015	1 EA	0	1	0	N/A	N/A
			Routine	08/13/2014	1 EA	0	1	0	N/A	N/A
			<input type="checkbox"/> Requires Monitoring	<input type="checkbox"/> Monitored						
Notes: The south brace and strut of the west bent is extremely rusted at the gusset plates and one of the double angles is completely gone. The bracing and strut are bent in towards the sidewalk about 8" near the center. All cross bracing in the NB lane has impact damage. 2014 Stiffeners on the outside of the girder beams ( N and S ) are bent from impact. 2014										
363	Section Loss Smart Flag	2	Routine	08/13/2015	1 EA	0	0	0	1	N/A
			Routine	08/13/2014	1 EA	0	0	0	1	N/A
			<input type="checkbox"/> Requires Monitoring	<input type="checkbox"/> Monitored						
Notes: The bottom gusset plates and double horizontal angle irons on bents are extremely rusted. 02-14 All lower bracing is severely rusted with much section loss. 06-14 Significant to severe section loss is present. 2015										
380	Secondary Structural Elements	2	Routine	08/13/2015	1 EA	1	0	0	0	N/A
			Routine	08/13/2014	1 EA	1	0	0	0	N/A
			<input type="checkbox"/> Requires Monitoring	<input type="checkbox"/> Monitored						
Notes: added element #380 - lateral bracing and sway bracing. 2014 NW bracing between stringers connection plate broken. 2014 Many badly damaged bracing angles. 93-15										

## Structure Unit:

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
418	Masonry, Other or Combination Material Wingwall	1	Routine	08/13/2015	3 EA	2	1	0	0	N/A
			Routine	08/13/2014	3 EA	2	1	0	0	N/A
		<input type="checkbox"/> Requires Monitoring		<input type="checkbox"/> Monitored						
Notes: Moderate weathering of stone wing walls. 2011-15										
964	Critical Finding Smart Flag	2	Routine	08/13/2015	1 EA	1	0	N/A	N/A	N/A
			Routine	08/13/2014	1 EA	1	0	N/A	N/A	N/A
		<input type="checkbox"/> Requires Monitoring		<input type="checkbox"/> Monitored						
Notes: DO NOT DELETE THIS CRITICAL FINDING SMART FLAG.										
981	Signing	2	Routine	08/13/2015	1 EA	0	1	0	0	0
			Routine	08/13/2014	1 EA	0	1	0	0	0
		<input type="checkbox"/> Requires Monitoring		<input type="checkbox"/> Monitored						
Notes: Low Clearance 12'-6". 83-15 Required signage is present. 2015										
985	Slopes & Slope Protection	1	Routine	08/13/2015	1 EA	0	1	0	N/A	N/A
			Routine	08/13/2014	1 EA	0	1	0	N/A	N/A
		<input type="checkbox"/> Requires Monitoring		<input type="checkbox"/> Monitored						
Notes: Minor erosion onto city walk at SW side. 2011-15 Brushing out of slopes recommended. 2011-15										
986	Curb & Sidewalk	2	Routine	08/13/2015	1 EA	1	0	0	N/A	N/A
			Routine	08/13/2014	1 EA	1	0	0	N/A	N/A
		<input type="checkbox"/> Requires Monitoring		<input type="checkbox"/> Monitored						
Notes: Date 2004-01-09 - Date 2002-11-04 - Date 2001-11-30 - Curb and walk is under bridge, Not on bridge. 2011										
988	Miscellaneous Items	1	Routine	08/13/2015	1 EA	1	0	0	N/A	N/A
			Routine	08/13/2014	1 EA	1	0	0	N/A	N/A
		<input type="checkbox"/> Requires Monitoring		<input type="checkbox"/> Monitored						
Notes: Ret. wall: N.W. cement block retaining wall is shifted out 4 1/2". 90-15 Painting: Entire bridge painting is recommended. 81-15 Note: South two tracks were removed. 84. Two active tracks in place on north 1/2 of bridge. 86-15 Bridge and track flexing. Spikes pulled out at center of bridge. 2010-14 Note: Name plate on each girder - "American Bridge Company of New York U.S.A. 1906."										

## Structure Unit:

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
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## General Notes: UP railroad contacts:

Mark Watlington (651) 552-3934 cell 1(402) 570-6947 mwwatlin@up.com  
 Jeff Meleneres cell (815) 298-4996

58. Deck NBI: Timber deck comprised of transverse railroad ties and track. 2011  
 No wear surface, open between ties. 2011  
 Longitudnal planks for maintenance crews only. 2011

36A. Brdg Railings NBI:

36B. Transitions NBI:

36C. Appr Guardrail NBI:

36D. Appr Guardrail  
 Terminal NBI:

59. Superstructure NBI: Severe deterioration is present. 2015  
 Isolated section loss in critical areas. 2015

60. Substructure NBI: Severe deterioration present. 2015  
 Severe section loss at critical areas. 2015

61. Channel NBI:

62. Culvert NBI:

71. Waterway Adeq NBI:

72. Appr Roadway  
 Alignment NBI:

Inventory Notes:

Joseph Lee

Inspector's Signature

Glenn Pagel

Reviewer's Signature



1. impact damage 013.JPG



2. impact damage 014.JPG



3. impact damage 015.JPG



4. NB signage 012.JPG



5. underdeck 016.JPG



6. underdeck 017.JPG



7. E.side - N.end column - zoom1.JPG



8. E.side - N.end column - zoom2.JPG



9. E.side - N.end column - zoom3.JPG



10. E.side - N.inside column - zoom1.JPG



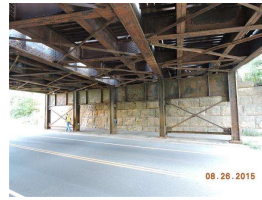
11. E.side - N.inside column - zoom2.JPG



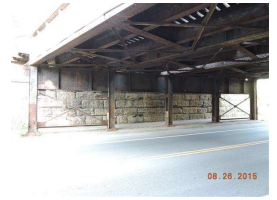
12. E.side - N.inside column - zoom3.JPG



13. E.side - S.end column - zoom1.JPG



14. pier cap E.side.JPG



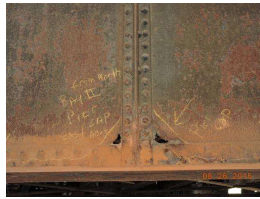
15. pier cap W.side.JPG



16. E.side - S.end column - zoom2.JPG



17. pier cap - E.side N.inside bay\_1.JPG



18. pier cap - E.side N.inside bay\_1zoomEast.JPG



19. pier cap - E.side N.inside bay\_1zoomWest.JPG



20. pier cap - W.side N.inside bay\_1.JPG



21. W.side - S.inside column - zoom3.JPG



22. W.side - S.end column - zoom3.JPG



23. W.side - N.inside column - zoom4.JPG



24. W.side - N.inside column - zoom3.JPG



25. W.side - N.inside column - zoom2.JPG



26. W.side - N.inside column - zoom1.JPG



27. W.side - N.end column - zoom3.JPG



28. W.side - N.end column - zoom2.JPG



29. W.side - N.end column - zoom1.JPG



30. W.side - Center column - zoom3.JPG



31. W.side - Center column - zoom2.JPG



32. W.side - Center column - zoom1.JPG



33. pier cap - W.side N.inside bay\_1zoomWest2.JPG



34. pier cap - W.side N.inside bay\_1.JPG



35. pier cap - W.side N.inside bay\_1zoomWest1.JPG





36. pier cap - W.side  
N.inside  
bay\_1zoomWest2.JPG