

**2016 ROUTINE
BRIDGE INSPECTION REPORT**



**BRIDGE # 90411
BNSF RR over CSAH 58(EDGERTON ST)**

DISTRICT: Metro **COUNTY:** Ramsey **CITY/TOWNSHIP:** Vadnais Heights
STATE: Minnesota

Date of Inspection: 11/15/2016

Equipment Used:

Owner: Railroad

Inspected By: Essler, Brian

Report Written By: Brian Essler
Report Reviewed By: Nicklaus Fischer
Final Report Date: 12/02/2016

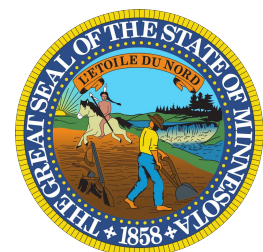


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Minnesota Structure Inventory Report

Bridge ID: 90411

BNSF RR

over CSAH 58(EDGERTON ST)

Date: 12/02/2016

GENERAL			
Agency Br. No.			
District Metro			
Maint. Area		Crew	
County 062 - Ramsey			
City Vadnais Heights			
Township			
Desc. Loc. 0.1 MI S OF JCT CSAH 16			
Sect., Twp., Range		32 - 030N - 22W	
Latitude	Deg	Min	Sec
45		2	37.67
Longitude	Deg	Min	Sec
93		4	36.00
Custodian 27 - Railroad			
Owner 27 - Railroad			
BMU Agreement			
Year Built		1948	
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 54B			
ABC Suitable			

STRUCTURE			
Service On 2 - Railroad			
Service Under 1 - Highway, w/ or w/out ped.			
Main Span Type		05 - Thru Girder	
3 - Steel			
Main Span Detail			
Appr. Span Type		01 - Beam Span	
7 - Timber			
Appr. Span Detail			
Skew	48	L	
Culvert Type			
Barrel Length		ft.	
Cantilever ID			

NUMBER OF SPANS			
MAIN:	1	APPR:	4
		TOTAL:	5
Main Span Length	52.0	ft.	
Structure Length	137.0	ft.	
Deck Width (Out-to-Out)	17.0	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)	2329	sq. ft.	
Roadway Area (Curb-to-Curb)	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 NN	Rt NN	

ROADWAY			
Bridge Match ID (TIS)			
Roadway O/U Key none			
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	2 - TIMBER
(Material/Type)	4 - PILE BENT
Pier Foundation	7 - DIFF
(Material/Type)	4 - PILE BENT
Historic Status	5 - Not eligible

PAINT	
Year Painted	1980
Unsound Paint %	70
Painted Area	sq. ft.
Primer Type	1 - Lead - non 3309
Finish Type	

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

INSPECTION	
Userkey	102
Unofficial Structurally Deficient	N
Unofficial Functionally Obsolete	N
Unofficial Sufficiency Rating	-2
Routine Inspection Date	11/15/2016
Routine Inspection Frequency	12
Inspector Name	CO Bridge
Status	A - Open

NBI CONDITION RATINGS	
Deck	N - Not Applicable
Unsound Deck %	
Superstructure	5 - Fair Condition
Substructure	5 - Fair Condition
Channel	N - Not Applicable
Culvert	N - Not Applicable

NBI APPRAISAL RATINGS	
Structure Evaluation N	
Deck Geometry	N
Underclearances	2
Water Adequacy	N - Not Applicable
Approach Alignment	8 - Equal to present desirabl

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	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	

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			
Minnesota Permit Codes			
A: N - N/A			
B: N - N/A			
C: N - N/A			

Minnesota Structure Inventory Report

Bridge ID: 90411

BNSF RR over CSAH 58(EDGERTON ST)

Date: 11/01/2016

+ GENERAL +	+ ROADWAY +	+ INSPECTION +			
Agency Br. No. Crew District 05 Maint. Area County 062 - Ramsey City Vadnais Heights Township Desc. Loc. 0.1 MI S OF JCT CSAH 16 Sect., Twp., Range 32 - 030N - 22W Latitude 45 ° 2' 37.67 " Longitude 93 ° 4' 36.00 " Custodian 27 - Railroad Owner 27 - Railroad BMU Agreement Year Built 1948 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 54B Potential ABC 2 - N/A	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 HCA DT ADTT % Functional Class	Userkey 102 Structurally Deficient N Functionally Obsolete N Sufficiency Rating -2 Routine Inspection Date 11/15/2016 Routine Inspection Frequency 12 Inspector Name Essler, Brian Status A - Open			
		+ NBI CONDITION RATINGS +			
		Deck N	Unsound Deck %		
		Superstructure 5			
		Substructure 5			
		Channel N			
		Culvert N			
		+ NBI APPRAISAL RATINGS +			
		Structure Evaluation N			
		Deck Geometry N			
		Underclearances 2			
		Waterway Adequacy N			
		Approach Alignment 8			
		+ 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	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		
		+ CAPACITY RATINGS +			
		Design Load	8 - RAILROAD		
		Operating Rating	7 - RAILROAD	65.0	
		Inventory Rating	7 - RAILROAD	65.0	
		Posting VEH:	SEMI:	DBL:	
		Rating Date			
		Overweight Permit Codes			
		A N - N/A	B N - N/A	C N - N/A	
+ STRUCTURE +	+ RDWY DIMENSIONS +	+ NBI APPRAISAL RATINGS +			
Service On 2 - Railroad Service Under 1 - Highway, w/ or w/out ped. Main Span Type 3 - Steel Main Span Design 05 - Thru Girder Main Span Detail Appr. Span Type 7 - Timber Appr. Span Design 01 - Beam Span Appr. Span Detail Skew 48 LEFT Culvert Type Barrel Length Cantilever ID Number of Spans MAIN: 1 APPR: 4 TOTAL: Main Span Length 52.0 ft. Structure Length 137.0 ft. Deck Width (Out-to-Out) 17.0 ft. Deck Material N - Not Applicable Wear Surf Type N - Not Applicable (applies) 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) 2329 sq. ft. Roadway Area (Curb-to-Curb) 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 NN Rt NN	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 (Material/Type) 2 - TIMBER 4 - PILE BENT Pier Foundation (Material/Type) 7 - DIFF 4 - PILE BENT Historic Status 5 - Not eligible				
	+ PAINT +				
	Year Painted 1980 Unsound Paint % 70 Painted Area sq. ft. Primer Type 1 - Lead - non 3309 Finish Type				
	+ BRIDGE SIGNS +				
	Posted Load 0 - Not Required Traffic 0 - Not Required Horizontal 1 - Object Markers Vertical 1 - Rdwy. Clr. Restriction				

MINNESOTA BRIDGE INSPECTION REPORT

12/02/2016

BRIDGE 90411 BNSF RR OVER CSAH 58(EDGERTON ST)

ROUTINE INSP. DATE: 11/15/2016

County: Ramsey	Location: 0.1 MI S OF JCT CSAH 16	Length: 137.0 ft.
City: Vadnais Heights	Route: Ref. Pt.:	Deck Width: 17.0 ft.
Township:	Control Section:	Rdwy. Area/ Pct. Unsnd: sq. ft. / %
Section: 32 Township: 030N Range: 22W Maint. Area:		Paint Area/ Pct. Unsnd: sq. ft. / 70%
Span Type: 3 - Steel 3 - Girder and Floorbeam	Local Agency Bridge Nbr.:	Culvert: N/A
List: System		Postings:
NBI Deck: N Super: 5 Sub: 5 Chan: N Culv: N		
	Open, Posted, Closed: A - Open	
	MN Scour Code: A - NON WATERWAY	
Appraisal Ratings - Approach: 8 Waterway: N		Unofficial Structurally Deficient N
Required Bridge Signs - Load Posting: 0 - Not Required	Traffic: 0 - Not Required	Unofficial Functionally Obsolete N
Horizontal: 1 - Object Markers	Vertical: 1 - Rdwy. Clr. Restriction	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	11/15/2016	486 LF	0	0	486	0	0
			Routine	11/12/2015	486 LF	0	0	486	0	0

Notes: [2014-2015] There is minor to moderate damage to west end of south girder.
 [2008-2015] There is moderate corrosion of gusset plates.
 [2007-2015] Two nuts & bolts are missing at the NE corner. Two nuts & bolts are missing at the SW corner.
 [2001-2015] Exposed steel with corrosion present. Paint system has failed. Steel girders need paint.
 [2004-2015] There are moderate scrapes bottom of south thru girder over southbound lane. Diagonal bracing could be replaced. Two - 60" X 52' steel "Thru Girders" serve as railing. There are 12 - 23' steel girders and 4 - 52' steel girders for a total of (12 X 23) + (4 X 52) = 484 LF. Includes Two - 60" X 52' steel "Thru Girders".

111	Timber Girder or Beam	2	Routine	11/15/2016	269 LF	0	269	0	0	N/A
			Routine	11/12/2015	269 LF	0	269	0	0	N/A

Notes: [2001-2015] There is minor decay with some splitting and cracking.

206	Timber Column	2	Routine	11/15/2016	36 EA	0	33	3	0	N/A
			Routine	11/12/2015	36 EA	0	33	3	0	N/A

Notes: [2015] Column #11 has a section loss area of 305' X 0.5'.
 [2007-2015] There is some rotting top of timber bracing at the NW corner. Also rotting top of timber bracing at the SW corner.
 [2012-2015] Timber columns contain some minor to moderate cracking and splitting.
 [2012-2015] Slight movement to timber columns #13 & #14 on the west side.
 [2001-2015] Slight movement to 3 columns (#19, #20 & #23) on the east side. Alignment is good except for column #23.
 [2012-2015] Movement appears to have stabilized.

210	Reinforced Concrete Pier Wall	2	Routine	11/15/2016	52 LF	0	51	1	0	N/A
			Routine	11/12/2015	52 LF	0	51	1	0	N/A

Notes: [2014-2015] There is moderate paint failure on both pier walls.
 [2010-2015] Moderate spalls and cracking are present on both pier walls. There are minor scrapes both sides.
 [2007-2015] There is a scrape on west pier wall at the SE corner. There is minor vertical cracking at mid span of west pier wall.
 [2007-2015] There is some delamination on east pier wall at the SW corner of the east pier wall.
 [2011-2015] Major spall at SW corner of east pier wall.
 [2007-2015] There is a moderate 6' vertical crack mid span west side of east pier wall and minor vertical crack full height mid span of east pier wall back side.
 [1995-2015] Special surface finish on the concrete piers are starting to peel & flake off.

216	Timber Abutment	2	Routine	11/15/2016	39 LF	0	39	0	0	N/A
			Routine	11/12/2015	39 LF	0	39	0	0	N/A

Notes: [2012-2015] Both abutments have some moderate cracking and splitting.
 [2006-2015] Alignment is good for both abutments.
 [1985-2015] Various nuts & washers are missing on the west abutment.

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
235	Timber Pier Cap	2	Routine	11/15/2016	108 LF	0	108	0	0	N/A
			Routine	11/12/2015	108 LF	0	108	0	0	N/A
Notes: [2008-2015] Alignment is good. [2001-2015] Timber pier cap has some moderate splitting and cracking are present.										
311	Expansion Bearing	2	Routine	11/15/2016	4 EA	0	4	0	N/A	N/A
			Routine	11/12/2015	4 EA	0	4	0	N/A	N/A
Notes: [2001-2015] Minor deterioration. Some buildup of debris.										
313	Fixed Bearing	2	Routine	11/15/2016	4 EA	0	4	0	N/A	N/A
			Routine	11/12/2015	4 EA	0	4	0	N/A	N/A
Notes: [2001-2015] Minor deterioration.										
362	Traffic Impact Smart Flag	2	Routine	11/15/2016	1 EA	0	0	1	N/A	N/A
			Routine	11/12/2015	1 EA	0	0	1	N/A	N/A
Notes: [2007-2015] Steel girders over southbound lane have been struck causing deformation. [2006-2015] Alignment of the girders are within tolerances. [2002-2015] Lateral bracing struck from underside causing deformation on two southbound braces. [2012-2015] Lateral bracing is split at the SE corner from traffic impact. Corrosion is also present on diagonal bracing. Diagonal bracing requires replacement.										
386	Timber Wingwall	2	Routine	11/15/2016	4 EA	0	4	0	0	N/A
			Routine	11/12/2015	4 EA	0	4	0	0	N/A
Notes: [2012-2015] There is some minor to moderate decay with cracking and splitting present. Some checking at the SE corner. [2003-2015] There is some undermining & erosion @ NE corner. Minor erosion at the SW corner.										
964	Critical Finding Smart Flag	2	Routine	11/15/2016	1 EA	1	0	N/A	N/A	N/A
			Routine	11/12/2015	1 EA	1	0	N/A	N/A	N/A
Notes: DO NOT DELETE THIS CRITICAL FINDING SMART FLAG.										
981	Signing	1	Routine	11/15/2016	1 EA	0	0	1	0	0
			Routine	11/12/2015	1 EA	0	0	1	0	0
Notes: [2008-2015] Horizontal clearance marker signs are in place 2008-2011. [2008-2015] Vertical clearance warning signs are in place. [2007] New horizontal clearance marker sign was installed at the NW corner of the bridge. There also should be a clearance sign posted at the bridge and at the nearest intersection. Vertical clearance 13' 5". Signs required: Vertical and horizontal clearance signs.										
982	Approach Guardrail	2	Routine	11/15/2016	1 EA	0	1	0	N/A	N/A
			Routine	11/12/2015	1 EA	0	1	0	N/A	N/A
Notes: [2014-2015] There is moderate damage to the twisted end treatment at the NW corner. [2013-2015] Moderate collision damage to the guardrail at the NE section. [2003-2015] Moderate collision damage to the guardrail at the SW and NW section. [1999-2015] No guardrail twisted end section at the SE corner of the bridge. Not required as per MNDOT Bridge Office.										
985	Slopes & Slope Protection	1	Routine	11/15/2016	1 EA	0	1	0	N/A	N/A
			Routine	11/12/2015	1 EA	0	1	0	N/A	N/A
Notes: [1997-2015] Riprap is eroding at the NE corner of the bridge.										

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
988	Miscellaneous Items	1	Routine	11/15/2016	1 EA	0	1	0	N/A	N/A
			Routine	11/12/2015	1 EA	0	1	0	N/A	N/A

Notes: [2008-2015] There is moderate corrosion of gusset plates.
 [2006-2015] There is slight movement of timber bracing.
 [2003-2015] Brush needs to be cleaned up on the SE corner of the bridge.
 [2001-2015] There is no hand railing on top of the bridge.
 There is a pedestrian path under the bridge on the west side.
 Retaining wall adjacent to path has been replaced with a concrete block retaining wall in 2010.
 Undesirable timber RR ties have been replaced in 2008.

General Notes: [2016] Bridge safety inspection was completed by Brian Essler, Dan Bodelson & Randy Bussiere on 11/15/2016.
 [2015] Bridge safety inspection was completed by B. Essler & D Bodelson on 11/12/2015.
 [2014] Bridge safety inspection was completed by Dan Bodelson & Randy Bussiere on 11/7/2014.
 [2013] Bridge safety inspection was completed by B. Essler & D Bodelson on 11/7/2013.
 New Bituminous mill & overlay 2013.
 [2012] Bridge safety inspection was completed by B. Wieman on 11/9/2012.
 2011 Bridge safety inspection was conducted by B. Wieman on 11/1/2011.
 2010 Bridge safety inspection completed by B. Wieman 11/03/2010.
 2009 Bridge safety inspection completed by B. Wieman 10/21/2009.
 2008 Safety Inspection by B. Wieman 10/15/2008. There is moderate corrosion of the gusset plates 2008-2013.
 2007 Safety Inspection completed by B. Wieman and B. Essler 8/13/2007.
 2006 Safety Inspection completed by Bret Wieman 10/25/2006.
 Two - 60" X 52' steel thru girders serve as railing.

58. Deck NBI: No deck railroad bridge

36A. Brdg Railings NBI: No railing railroad bridge

36B. Transitions NBI: railroad bridge

36C. Appr Guardrail NBI: railroad bridge

36D. Appr Guardrail
Terminal NBI: railroad bridge

59. Superstructure NBI: Exposed steel with corrosion present. Paint system has failed. moderate corrosion of gusset plates. Traffic damage to steel girder. minor decay with some splitting and cracking of timber beams

60. Substructure NBI: moderate cracking and splitting & movement on timber columns. Moderate spalls and cracking on pier walls.

61. Channel NBI: Not over water

62. Culvert NBI: Bridge

71. Waterway Adeq NBI: Not over water

72. Appr Roadway
Alignment NBI: no speed reduction required

Inventory Notes:

Brian Essler
Inspector's Signature

Nicklaus Fischer
Reviewer's Signature

MINNESOTA BRIDGE INSPECTION REPORT

12/02/2016

Inspector: CO Bridge

BRIDGE 90411 BNSF RR OVER CSAH 58(EDGERTON ST)

County: Ramsey	Location: 0.1 MI S OF JCT CSAH 16	Length: 137.0 ft.
City: Vadnais Heights	Route: Ref. Pt.:	Deck Width: 17.0 ft.
Township:	Control Section:	Rdwy. Area/ Pct. Unsnd: sq. ft. / %
Section: 32 Township: 030N Range: 22W Maint. Area:		Paint Area/ Pct. Unsnd: sq. ft. / 70%
Span Type: 3 - Steel 3 - Girder and Floorbeam	Local Agency Bridge Nbr.:	Culvert: N/A
List: System		Postings:
NBI Deck: N Super: 5 Sub: 5 Chan: N Culv: N		
	Open, Posted, Closed: A - Open	
	MN Scour Code: A - NON WATERWAY	
Appraisal Ratings - Approach: 8 Waterway: N		Unofficial Structurally Deficient N
Required Bridge Signs - Load Posting: 0 - Not Required	Traffic: 0 - Not Required	Unofficial Functionally Obsolete N
Horizontal: 1 - Object Markers	Vertical: 1 - Rdwy. Clr. Restriction	Unofficial Sufficiency Rating N

ELEM NBR	ELEMENT NAME	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
107	Steel Open Girder/Beam	Routine	11/15/2016	486 LF	0	486	0	0
		Migrated Values		486 LF	0	486	0	0
	Notes: [2014-2016] There is minor to moderate damage to west end of south girder. [2008-2016] There is moderate corrosion of gusset plates. [2007-2016] Two nuts & bolts are missing at the NE corner. Two nuts & bolts are missing at the SW corner. [2001-2016] Exposed steel with corrosion present. Paint system has failed. Steel girders need paint. [2004-2016] There are moderate scrapes bottom of south thru girder over southbound lane. Diagonal bracing could be replaced. Two - 60" X 52' steel "Thru Girders" serve as railing. There are 12 - 23' steel girders and 4 - 52' steel girders for a total of (12 X 23) + (4 X 52) = 484 LF. Includes Two - 60" X 52' steel "Thru Girders".							
515	Steel Protective Coating	Routine	11/15/2016	7692 SF	0	0	7692	0
		Migrated Values		7692 SF	0	0	7692	0
	Notes: [2008-2016] There is moderate corrosion of gusset plates. [2001-2016] Exposed steel with corrosion present. Paint system has failed. Steel girders need paint. [2016] 2 through girders 52' long with a 5' web and a 1.5' flange 2 X 52' X (2 X 5' + 3 X 1.5')= 4680 SF 2 beams 52' long with a 1' 8" web and a 1' 1" flange 2 X 52' X (2 X 20"/12 + 3 X 13"/12)= 685 SF 12 beams 23' long with a 1' 10" web and a 10" flange 12 X 23' X (2 X 22"/12 + 3 X 10"/12)= 1702 SF 5 floor beams 15' long with a 2' 4" web and a 1' 4" flange 5 X 15' X (2 X 26"/12 + 3 X 16"/12)= 625 SF							
111	Timber Open Girder/Beam	Routine	11/15/2016	269 LF	0	269	0	0
		Migrated Values		269 LF	0	269	0	0
	Notes: [2001-2016] There is minor decay with some splitting and cracking.							
210	Reinforced Concrete Pier Wall	Routine	11/15/2016	52 LF	0	51	1	0
		Migrated Values		52 LF	0	51	1	0
	Notes: [2014-2016] There is moderate paint failure on both pier walls. [2010-2016] Moderate spalls and cracking are present on both pier walls. There are minor scrapes both sides. [2007-2016] There is a scrape on west pier wall at the SE corner. There is minor vertical cracking at mid span of west pier wall. [2007-2016] There is some delamination on east pier wall at the SW corner of the east pier wall. [2011-2016] Major spall at SW corner of east pier wall. [2007-2016] There is a moderate 6' vertical crack mid span west side of east pier wall and minor vertical crack full height mid span of east pier wall back side. [1995-2016] Special surface finish on the concrete piers are starting to peel & flake off.							
216	Timber Abutment	Routine	11/15/2016	117 LF	0	117	0	0
		Migrated Values		117 LF	0	117	0	0
	Notes: [2016] 78 LF added to abutment quantity to account for wingwalls [2012-2016] Both abutments have some moderate cracking and splitting. [2006-2016] Alignment is good for both abutments. [1985-2016] Various nuts & washers are missing on the west abutment.							
	Wingwall notes: [2012-2016] There is some minor to moderate decay with cracking and splitting present. Some checking at the SE corner. [2003-2016] There is some undermining & erosion @ NE corner. Minor erosion at the SW corner.							

BRIDGE 90411 BNSF RR OVER CSAH 58(EDGERTON ST)

ELEM NBR	ELEMENT NAME	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
228	Timber Pile	Routine	11/15/2016	36 EA	0	33	3	0
		Migrated Values		36 EA	0	33	3	0
<p>Notes: [2015-2016] Column #11 has a section loss area of 3.5' X 0.5'. [2007-2016] There is some rotting top of timber bracing at the NW corner. Also rotting top of timber bracing at the SW corner. [2012-2016] Timber columns contain some minor to moderate cracking and splitting. [2012-2016] Slight movement to timber columns #13 & #14 on the west side. [2001-2016] Slight movement to 3 columns (#19, #20 & #23) on the east side. Alignment is good except for column #23. [2012-2016] Movement appears to have stabilized.</p>								
235	Timber Pier Cap	Routine	11/15/2016	108 LF	0	108	0	0
		Migrated Values		108 LF	0	108	0	0
<p>Notes: [2008-2016] Alignment is good. [2001-2016] Timber pier cap has some moderate splitting and cracking are present.</p>								
311	Movable Bearing	Routine	11/15/2016	4 EA	0	4	0	0
		Migrated Values		4 EA	0	4	0	0
<p>Notes: [2001-2016] Minor deterioration. Some buildup of debris.</p>								
313	Fixed Bearing	Routine	11/15/2016	4 EA	0	4	0	0
		Migrated Values		4 EA	0	4	0	0
<p>Notes: [2001-2016] Minor deterioration.</p>								
800	Critical Deficiencies or Safety Hazards	Routine	11/15/2016	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>								
880	Impact Damage	Routine	11/15/2016	1 EA	0	0	0	1
		Migrated Values		1 EA	0	0	0	1
<p>Notes: [2007-2016] Steel girders over southbound lane have been struck causing deformation. [2006-2016] Alignment of the girders are within tolerances. [2002-2016] Lateral bracing struck from underside causing deformation on two southbound braces. [2012-2016] Lateral bracing is split at the SE corner from traffic impact. Corrosion is also present on diagonal bracing. Diagonal bracing requires replacement.</p>								
890	Load Posting or Vertical Clearance Signing	Routine	11/15/2016	1 EA	0	0	1	0
		Migrated Values		1 EA	0	0	1	0
<p>Notes: [2016] Structure requires a vertical clearance sign . There also should be a clearance sign posted at the bridge and at the nearest intersection. Vertical clearance 13' 5".</p>								
891	Other Bridge Signing	Routine	11/15/2016	1 EA	0	0	1	0
		Migrated Values		1 EA	0	0	1	0
<p>Notes: [2008-2016] Horizontal clearance marker signs are in place 2008-2011. [2008-2016] Vertical clearance warning signs are in place. [2007] New horizontal clearance marker sign was installed at the NW corner of the bridge. There also should be a clearance sign posted at the bridge and at the nearest intersection. Vertical clearance 13' 5". Signs required: Vertical and horizontal clearance signs.</p>								
892	Slopes & Slope Protection	Routine	11/15/2016	1 EA	0	1	0	0
		Migrated Values		1 EA	0	1	0	0
<p>Notes: [2016] Moderate erosion on east bank at piling [1997-2016] Riprap is eroding at the NE corner of the bridge.</p>								
893	Guardrail	Routine	11/15/2016	1 EA	0	1	0	0
		Migrated Values		1 EA	0	1	0	0
<p>Notes: [2014-2016] There is moderate damage to the twisted end treatment at the NW corner. [2013-2016] Moderate collision damage to the guardrail at the NE section. [2003-2016] Moderate collision damage to the guardrail at the SW and NW section. [1999-2016] No guardrail twisted end section at the SE corner of the bridge. Not required as per MNDOT Bridge Office.</p>								

BRIDGE 90411 BNSF RR OVER CSAH 58(EDGERTON 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	11/15/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
Notes: [2016] Drainage is functioning adequately [2016] Drain to CB's north of bridge.								
899	Miscellaneous Items	Routine	11/15/2016	1 EA	0	1	0	0
		Migrated Values		1 EA	0	1	0	0
Notes: [2008-2016] There is moderate corrosion of gusset plates. [2006-2016] There is slight movement of timber bracing. [2003-2016] Brush needs to be cleaned up on the SE corner of the bridge. [2001-2016] There is no hand railing on top of the bridge. There is a pedestrian path under the bridge on the west side. Retaining wall adjacent to path has been replaced with a concrete block retaining wall in 2010. Undesirable timber RR ties have been replaced in 2008.								
900	Protected Species	Routine	11/15/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
Notes: [2016] No protected species found living on this structure.								

General Notes: [2016] Bridge safety inspection was completed by Brian Essler, Dan Bodelson & Randy Bussiere on 11/15/2016.
 [2015] Bridge safety inspection was completed by B. Essler & D Bodelson on 11/12/2015.
 [2014] Bridge safety inspection was completed by Dan Bodelson & Randy Bussiere on 11/7/2014.
 [2013] Bridge safety inspection was completed by B. Essler & D Bodelson on 11/7/2013.
 New Bituminous mill & overlay 2013.
 [2012] Bridge safety inspection was completed by B. Wieman on 11/9/2012.
 2011 Bridge safety inspection was conducted by B. Wieman on 11/1/2011.
 2010 Bridge safety inspection completed by B. Wieman 11/03/2010.
 2009 Bridge safety inspection completed by B. Wieman 10/21/2009.
 2008 Safety Inspection by B. Wieman 10/15/2008. There is moderate corrosion of the gusset plates 2008-2013.
 2007 Safety Inspection completed by B. Wieman and B. Essler 8/13/2007.
 2006 Safety Inspection completed by Bret Wieman 10/25/2006.
 Two - 60" X 52' steel thru girders serve as railing.

- 58. Deck NBI: No deck railroad bridge
 - 36A. Brdg Railings NBI: No railing railroad bridge
 - 36B. Transitions NBI: railroad bridge
 - 36C. Appr Guardrail NBI: railroad bridge
 - 36D. Appr Guardrail Terminal NBI: railroad bridge
 - 59. Superstructure NBI: Exposed steel with corrosion present. Paint system has failed.moderate corrosion of gusset plates. Traffic damage to steel girder. minor decay with some splitting and cracking of timber beams
 - 60. Substructure NBI: moderate cracking and splitting & movement on timber columns. Moderate spalls and cracking on pier walls.
 - 61. Channel NBI: Not over water
 - 62. Culvert NBI: Bridge
 - 71. Waterway Adeq NBI: Not over water
 - 72. Appr Roadway Alignment NBI: no speed reduction required
- Inventory Notes:

Brian Essler
Inspector's Signature

Nicklaus Fischer
Reviewer's Signature

Pictures



Photo 1 - looking west



Photo 2 - secolumns2-20-03

Pictures



Photo 3 - looking north 2013



Photo 4 - looking south 2013

Pictures



Photo 5 - SW corner of East pier wall 2013