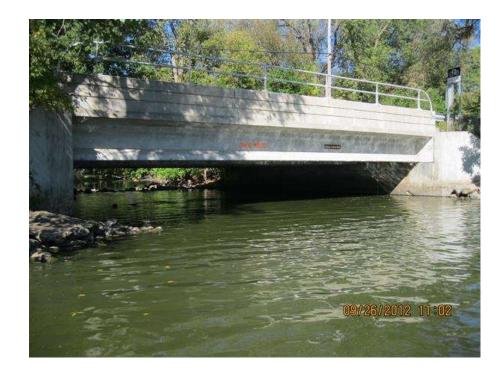
2016 ROUTINE BRIDGE INSPECTION REPORT



BRIDGE # 4513 CSAH 45(LONG LK) over RICE CREEK

DISTRICT: Metro COUNTY: Ramsey

COUNTY: Ramsey CITY/TOWNSHIP: New Brighton

STATE: Minnesota

Date of Inspection: 09/15/2016 Equipment Used: Life Jacket, Probing Rod, Other - Chest Waders

Owner: County Highway Agency

Inspected By: Bodelson, Dan



Report Written By: Dan Bodelson Report Reviewed By: Nicklaus Fischer Final Report Date: 10/20/2016

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Minnesota Structure Inventory Report

Bridge ID: 4513 CSAH 45(LC		Date: 10/20/2016
GENERAL	ROADWAY	INSPECTION Userkey 102
Agency Br. No.	Bridge Match ID (TIS) 0	···· ···
District Metro Maint. Area Crew	Roadway O/U Key Route On Structure	Unofficial Structurally Deficient N
	Route Sys 04 - CSAH Number 45	Unofficial Functionally Obsolete N
County 062 - Ramsey	Roadway Name or Description	Unofficial Sufficiency Rating 98.4
City New Brighton	CSAH 45	Routine Inspection Date 09/15/2016
Township Desc. Loc. 0.2 MI N OF JCT CSAH 11	Level of Service 1 - MAINLINE	Routine Inspection Frequency 24
	Roadway Type 2 - 2-way traffic	Inspector Name CO Bridge
Sect., Twp., Range 18 - 030N - 23W Latitude Deg 45 Min 5 Sec 4.17	Control Section (TH Only)	Status A - Open
	Reference Point 001+00.750	NBI CONDITION RATINGS
Longitude Deg 93 Min 12 Sec 41.65	Detour Length 1.0 mi	Deck 6 - Satisfactory Condition
Custodian 02 - County Highway Agency	Lanes On 2 Under 0	Unsound Deck %
Owner 02 - County Highway Agency	ADT 4432 Year 2008	Superstructure 6 - Satisfactory Condition
BMU Agreement Year Built 1926	HCADT 0 ADTT 0 %	Substructure 7 - Good Condition
	Functional Class 16 - Urban - Minor Arterial	Channel7 - Needs minor repairs
MN Year Reconstructed 1984	RDWY DIMENSIONS	Culvert N - Not Applicable
FHWA Year Reconstructed	If Divided NB-EB SB-WB	NBI APPRAISAL RATINGS
MN Temporary Status	Roadway Width 44.00 ft. ft.	Structure Evaluation 6
Bridge Plan Location 3 - COUNTY	Vertical Clearance ft. ft.	Deck Geometry 7
Date Opened to Traffic 11/1/1984	Max. Vert. Clear. ft. ft.	Underclearances N
On-Off System 1 - ON	Horizontal Clear. 43.9 ft. ft.	Water Adequacy 8 - Bridge Above Approache
Legislative District 50B	Lateral Clearance ft. ft.	Approach Alignment 6 - Equal to present minimu
ABC Suitable	Appr. Surface Width 44.0 ft.	SAFETY FEATURES
STRUCTURE	Bridge Roadway Width 44.0 ft.	Bridge Railing 1 - MEETS STANDARDS
Service On 5 - Highway-pedestrian		GR Transition 1 - MEETS STANDARDS
Service Under 5 - Waterway		Appr. Guardrail 1 - MEETS STANDARDS
Main Span Type	MISC. BRIDGE DATA	GR Termini 1 - MEETS STANDARDS
1 - Concrete 06 - Deck Girder	Structure Flared 0 - No flare	IN DEPTH INSP.
Main Span Detail	Parallel Structure N - No parallel structure	Y/N Freq Date
Appr. Span Type	Field Conn. ID	Frac. Critical N
	Abutment Foundation 1 - CONC	Underwater N
Appr. Span Detail	(Material/Type) 3 - FTG PILE	Pinned Asbly. N
Skew 0	Pier Foundation N - N/A	Spec. Feat.
Culvert Type	(Material/Type) N - N/A	WATERWAY
Barrel Length ft. Cantilever ID	Historic Status 5 - Not eligible	Drainage Area (sq. mi.)
	PAINT	Waterway Opening 176 sq. ft.
NUMBER OF SPANS		Navigation Control 0 - No nav. control on waterw
MAIN: 1 APPR: 0 TOTAL: 1	Year Painted	Pier Protection
Main Span Length44.8ft.	Unsound Paint %	Nav. Clr. (ft.) Vert. ft. Horiz. ft.
Structure Length 47.0 ft.	Painted Area sq. ft.	Nav. Vert. Lift Bridge Clear. (ft.)
Deck Width (Out-to-Out) 52.8 ft.	Primer Type	MN Scour Code I - LOW RISK Year 1998
Deck Material 1 - Concrete Cast-in-Place	Finish Type	CAPACITY RATINGS
Wear Surf Type 4 - Low Slump Concrete	BRIDGE SIGNS	Design Load 5 - HS 20
Wear Surf Install Year 1984	Posted Load 0 - Not Required	Operating Rating 1 - LF (LF) HS 30.7
Wear Course/Fill Depth 0.17 ft.		Inventory Rating 1 - LF (LF) HS 18.4
Deck Membrane 0 - None Deck Rebars 0 - None		Posting VEH: SEMI: DBL:
Deck Rebars Install Year	Horizontal 1 - Object Markers	Rating Date 06/01/2011
Structure Area (Out-to-Out) 2482 sq. ft.	Vertical N - Not Applicable	Minnesota Permit Codes
Roadway Area (Curb-to-Curb) 2067 sq. ft.		A: N - N/A
Sidewalk Width Lt 0.00 ft. Rt 6.00 ft.		B: N - N/A
Curb Height Lt 0.83 ft. Rt 0.00 ft.		C: N - N/A
Rail Type Lt 30 Rt 27		

Minnesota Structure Inventory Report

Bridge ID: 4513 CSAH 45(LONG LK) over RICE CREEK

Date: 09/14/2016

+ G E N E R A L +Agency Br. No.CrewDistrict05Maint. AreaCounty062 - RamseyCityNew BrightonTownship	+ R O A D W A Y + Bridge Match ID (TIS) 0 Route On Structure Route System of Description CSAH 45 Level of Service 1 - MAINLINE Roadway Type 2 - 2-way traffic Control Section (TH Only) Reference Point 001+00.750 Detour Length 1.0 mi. Lanes ON 2 UNDER 0 ADT 4432 YEAR 2008 HCADT ADTT % Functional Class 16 - Urban - Minor Arterial	+ INSPECTION+ Userkey 102 Structurally Deficient N Functionally Obsolete N Sufficiency Rating 98.4 Routine Inspection Date 09/15/2016 Routine Inspection Date 09/15/2016 Routine Inspection Frequency 24 Inspector Name Bodelson, Dan Status A - Open + N B I Deck 6 Unsound Superstructure 6 Substructure 7
District 05 Maint. Area County 062 - Ramsey City New Brighton Township New Brighton Desc. Loc. 0.2 MI N OF JCT CSAH 11 Sect., Twp., Range 18 - 030N - 23W Latitude 45 ° 5 ° 4.17 " Longitude 93 ° 12 ° 41.65 " Custodian 02 - County Highway Agency BMU Agreement 1926 Year Built 1984 FHWA Year Reconstructed 1984	Roadway O/U Key Route On Structure Route Sys 04 - CSAH Number 45 Roadway Name or Description CSAH 45 Level of Service 1 - MAINLINE Roadway Type 2 - 2-way traffic Control Section (TH Only) Reference Point 001+00.750 Detour Length 1.0 mi. Lanes ON 2 UNDER 2008 HCADT ADT %	Structurally Deficient N Functionally Obsolete N Sufficiency Rating 98.4 Routine Inspection Date 09/15/2016 Routine Inspection Frequency 24 Inspector Name Bodelson, Dan Status A - Open + N B I C O N D I T I O N R A T I N G S + Deck 6 Unsound Superstructure 6 Deck %
County 062 - Ramsey City New Brighton Township	Route Sys 04 - CSAH Number 45 Roadway Name or Description CSAH 45 Level of Service 1 - MAINLINE Roadway Type 2 - 2-way traffic Control Section (TH Only) Reference Point Reference Point 001+00.750 Detour Length 1.0 ADT 4432 YEAR 2008 HCADT ADT	Functionally Obsolete N Sufficiency Rating 98.4 Routine Inspection Date 09/15/2016 Routine Inspection Frequency 24 Inspector Name Bodelson, Dan Status A - Open + N B1 C O N D I T I O N R A T I N G S + Deck 6 Unsound Superstructure 6
CityNew BrightonTownshipDesc. Loc.0.2 MI N OF JCT CSAH 11Sect., Twp., Range18 - 030N - 23WLatitude45 ° 5 ° 4.17 "Longitude93 ° 12 ° 41.65 "Custodian02 - County Highway AgencyOwner02 - County Highway AgencyBMU Agreement1926MN Year Reconstructed1984FHWA Year Reconstructed1984	Roadway Name or Description CSAH 45 Level of Service 1 - MAINLINE Roadway Type 2 - 2-way traffic Control Section (TH Only) Reference Point 001+00.750 Detour Length 1.0 mi. Lanes ON 2 UNDER 0 ADT 4432 YEAR 2008 HCADT ADTT %	Sufficiency Rating 98.4 Routine Inspection Date 09/15/2016 Routine Inspection Frequency 24 Inspector Name Bodelson, Dan Status A - Open + N B I C O N D I T I O N R A T I N G S + Deck 6 Unsound Superstructure 6
TownshipDesc. Loc.0.2 MI N OF JCT CSAH 11Sect., Twp., Range18 - 030N - 23WLatitude45 ° 5 ' 4.17 "Longitude93 ° 12 ' 41.65 "Custodian02 - County Highway AgencyOwner02 - County Highway AgencyBMU Agreement1926Year Built1984FHWA Year Reconstructed	CSAH 45 Level of Service 1 - MAINLINE Roadway Type 2 - 2-way traffic Control Section (TH Only) Reference Point 001+00.750 Detour Length 1.0 mi. Lanes ON 2 UNDER 0 ADT 4432 YEAR 2008 HCADT ADTT %	Routine Inspection Date 09/15/2016 Routine Inspection Frequency 24 Inspector Name Bodelson, Dan Status A - Open + N B I C O N D I T I O N R A T I N G S + Deck 6 Unsound Superstructure 6 Deck %
Desc. Loc. 0.2 MI N OF JCT CSAH 11 Sect., Twp., Range 18 - 030N - 23W Latitude 45 ° 5 ° 4.17 " Longitude 93 ° 12 ° 41.65 " Custodian 02 - County Highway Agency Owner 02 - County Highway Agency BMU Agreement 1926 MN Year Reconstructed 1984 FHWA Year Reconstructed 1984	Level of Service 1 - MAINLINE Roadway Type 2 - 2-way traffic Control Section (TH Only) Reference Point 001+00.750 Detour Length 1.0 mi. Lanes ON 2 UNDER 0 ADT 4432 YEAR 2008 HCADT ADTT %	Routine Inspection Frequency 24 Inspector Name Bodelson, Dan Status A - Open + N B I C O N D I T I O N R A T I N G S + Deck 6 Unsound Superstructure 6
Sect., Twp., Range 18 - 030N - 23W Latitude 45 ° 5 ' 4.17 " Longitude 93 ° 12 ' 41.65 " Custodian 02 - County Highway Agency Owner 02 - County Highway Agency BMU Agreement 1926 MN Year Reconstructed 1984 FHWA Year Reconstructed 1984	Roadway Type 2 - 2-way traffic Control Section (TH Only) Reference Point 001+00.750 Detour Length 1.0 mi. Lanes ON 2 UNDER 0 ADT 4432 YEAR 2008 HCADT ADTT %	Inspector Name Bodelson, Dan Status A - Open + N B I C O N D I T I O N R A T I N G S + Deck 6 Unsound Superstructure 6 Deck %
Latitude45 ° 5 ° 4.17 "Longitude93 ° 12 ° 41.65 "Custodian02 - County Highway AgencyOwner02 - County Highway AgencyBMU Agreement1926Year Built1926MN Year Reconstructed1984FHWA Year Reconstructed	Control Section (TH Only) Reference Point 001+00.750 Detour Length 1.0 mi. Lanes ON 2 UNDER 0 ADT 4432 YEAR 2008 HCADT ADTT %	Status A - Open + N B I C O N D I T I O N R A T I N G S + Deck 6 Unsound Superstructure 6 Deck %
Longitude93 ° 12 ' 41.65 "Custodian02 - County Highway AgencyOwner02 - County Highway AgencyBMU Agreement1926Year Built1926MN Year Reconstructed1984FHWA Year Reconstructed	Reference Point 001+00.750 Detour Length 1.0 mi. Lanes ON 2 UNDER 0 ADT 4432 YEAR 2008 HCADT ADT ADTT %	+ N B I CONDITION RATINGS+ Deck 6 Unsound Superstructure 6 Deck %
Custodian 02 - County Highway Agency Owner 02 - County Highway Agency BMU Agreement 1926 Year Built 1926 MN Year Reconstructed 1984 FHWA Year Reconstructed 1984	Detour Length 1.0 mi. Lanes ON 2 UNDER 0 ADT 4432 YEAR 2008 HCADT ADT %	Deck 6 Unsound Superstructure 6 Deck %
Owner02 - County Highway AgencyBMU Agreement1926Year Built1984FHWA Year Reconstructed1984	LanesON2UNDER0ADT4432YEAR2008HCADTADTT%	Superstructure 6 Deck %
BMU Agreement Year Built 1926 MN Year Reconstructed 1984 FHWA Year Reconstructed 1984	ADT 4432 YEAR 2008 HCADT ADTT %	Superstructure 6
Year Built1926MN Year Reconstructed1984FHWA Year Reconstructed1984	HCADT ADTT %	Substructure 7
MN Year Reconstructed 1984 FHWA Year Reconstructed		
FHWA Year Reconstructed	Functional Class 10 - Ulban - Wilnut Attenat	Channel 7
		Culvert N
MAL To many Oracle		
MN Temporary Status	+RDWY DIMENSIONS+	+NBI APPRAISAL RATINGS+
Bridge Plan Location 3 - COUNTY	If Divided NB-EB SB-WB	Structure Evaluation 6
Date Opened to Traffic 11/1/1984	Roadway Width 44.00 ft. ft.	Deck Geometry 7
On - Off System 1 - ON	Vertical Clearance ft. ft.	Underclearances N
Legislative District 50B	Max. Vert. Clear. ft. ft.	Waterway Adequacy 8
Potential ABC 2 - N/A	Horizontal Clear. 43.9 ft. ft.	Approach Alignment 6
+ S T R U C T U R E +	Lateral Clearance ft. ft.	
Service On 5 - Highway-pedestrian	Appr. Surface Width 44.0 ft.	+SAFETY FEATURES+
Service Under 5 - Waterway	Bridge Roadway Width 44.0 ft.	Bridge Railing 1 - MEETS STANDARDS
Main Span Type 1 - Concrete	Median Width On Bridge ft.	GR Transition 1 - MEETS STANDARDS
Main Span Design 06 - Deck Girder		Appr. Guardrail 1 - MEETS STANDARDS
Main Span Detail	+MISC. BRIDGE DATA+	GR Termini 1 - MEETS STANDARDS
Appr. Span Type	Structure Flared 0 - No flare	
Appr. Span Design	Parallel Structure N - No parallel structure	+IN DEPTH INSP.+
Appr. Span Detail	Field Conn. ID	Y/N Freq Date
Skew 0	Abutment 1 - CONC	Frac. Critical N
Culvert Type	Foundation (Material/Type) 3 - FTG PILE	Underwater N
Barrel Length		Pinned Asbly. N
Cantilever ID	Pier Foundation N - N/A (Material/Type)	Spec. Feat.
	N - N/A	
Number of Spans	Historic Status 5 - Not eligible	+ W A T E R W A Y +
MAIN: 1 APPR: 0 TOTAL:		Drainage Area (sq. mi.)
Main Span Length 44.8 ft.	+ P A I N T +	Waterway Opening (sf.) 176
Structure Length 47.0 ft.		
Deck Width (Out-to-Out) 52.8 ft.	Year Painted	Navigation Control 0 - No nav. control on Pier Protection _
Deck Material 1 - Concrete Cast-in-Place	Unsound Paint %	
Wear Surf Type 4 - Low Slump Concrete	Painted Area sq. ft.	Nav. Clr. (ft.) Vert. 0.0 Horiz. 0.0
Wear Surf Install Year 1984	Primer Type	Nav. Vert. Lift Bridge Clear. (ft.)
Wear Course/Fill Depth 0.17 ft.	Finish Type	MN Scour Code I - LOW RISK Year 1998
Deck Membrane 0 - None		+CAPACITY RATINGS+
Deck Rebars 0 - None	+ BRIDGE SIGNS+	Design Load 5 - HS 20
Deck Rebars Install Year		Operating Rating 2 - HS TRUCK 30.7
Structure Area (Out-to-Out) 2482 sq. ft.	Posted Load 0 - Not Required	Inventory Rating 2 - HS TRUCK 18.4
Roadway Area (Curb-to-Curb) 2067 sq. ft.	Traffic 0 - Not Required	Posting VEH: SEMI: DBL:
Sidewalk Width 50A. Lt 0.00 ft. 50B. Rt 6.00 ft.	Horizontal 1 - Object Markers	Rating Date 06/01/2011
Curb Height Lt 0.83 ft. Rt 0.00 ft.	Vertical N - Not Applicable	Overweight Permit Codes
Rail TypeLt30Rt27		А N - N/A В N - N/A С N - N/A

MINNESOTA BRIDGE INSPECTION REPORT

10/20/2016	
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BRIDO	GE 4513 CS	AH 45(LONG L	.K) OVER F				ROUTIN	IE INSP.	DATE: 0	9/15/20)16
County:	Ramsey		Locat	tion: 0.2 MI N C	OF JCT CSAH 1	1	Length:	4	7.0 ft.		
City:	New Brighto	n	Route	e: 04 - CSAH 45	Ref. Pt.: 00	01+00.750	Deck Width	n: 52	2.8 ft.		
Townsh	nip:		Contr	ol Section:			Rdwy. Area	a/ Pct. Unsi	nd: 2067 so	q. ft. / %	1
Section	: 18 Towns	ship: 030N Ran	ge: 23W Ma	int. Area:			Paint Area/	Pct. Unsn	d: sq. ft. /	/ %	
Span T	ype: 1 - Concrete	3 - Girder and Flo	orbeam Loo	cal Agency Bridge	e Nbr.:		Culvert:	N/A			
List:	System						Postings:				
NBI De	ck: 6 Super	: 6 Sub: 7	Chan: 7	Culv: N							
				Open, Poste	d, Closed: A -	Open					
A		and a Ma		MN Scour Co	ode: I - LOW R	ISK					
	al Ratings - Appr		terway: 8	T		et De mine d		ficial Struc			Ν
Require	ea Briage Signs -	Load Posting: 0 -	•			ot Required		ficial Funct			Ν
		Horizntal: 1 -	Object Marke	rs ve	rtical: N - N	lot Applicable	Unot	ficial Suffic	iency Ratir	ng	98.4
ELEM NBR	ELEMEN	T NAME	ENV RE	PORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS 5
022	Low Slump O/L Deck with Uncoa		2	Routine	09/15/2016	2486 SF	0	2486	0	0	0
				Routine	09/24/2014	2486 SF	0	2486	0	0	0
		Notes: [2011-20	141 The are 9() I E of moderate	size unsealed o	racks in deck	Still in cond	lition state :	#2 The co	mhined	area of
		distress is less th			Size unsealed e			inton state	#2. THE CO	mbineu	
		[2006-2010] The Underside of dec	k should be cl	leaned for better i	inspection.	_	_	r tight crack	ks in deck.	[1995-2	012]
		[2004-2014] The	e is spalling a	at both ends adjac	cent to formed jo	pints at approa	ch panels.				
110	Reinforced Cond Beam	crete Girder or	2	Routine	09/15/2016	423 LF	0	423	0	0	N/A
				Routine	09/24/2014	423 LF	0	423	0	0	N/A
		Notes: [2009-20 [2008-2014] Con There are horizon [2003-2014] Mind	crete girders antal cracks at	are in proper align	nment . irder. [2006-201	2] Also crackir	ng above ab			jirder #7	
215	Reinforced Cond	crete	2	Routine	09/15/2016	105 LF	0	105	0	0	N/A
				Routine	09/24/2014	105 LF	0	105	0	0	N/A
		Notes: [2014] M [2010-2014] The [2008-2014] The [2006-2014] The [2008-2014] The [1995-2014] Som SE & NE corner. [1995-2014] Dete bridge seat south [2007-2014] The	e is horizonta e is minor cra e is horizonta e is minor- mo e Cracking at erioration of cc girder #6.	I & vertical cracki icking at NE corne I & vertical cracki oderate scaling p wing wall expans ork along both sid	ng at bridge sea er bridge seat. ng north end be resent both abu sion joints @ SE es of south and	at between gird slow #3 & #4 gi tments at wate E & SW corner north abutmen	ders #7 & #8 irders. er line. abutment. M nts. [2005-20	3. Minor- mod 012] Crack	erate spalli	-	-
301	Poured Deck Jo	int	2	Routine	09/15/2016	105 LF	0	0	105	N/A	N/A
				Routine	09/24/2014	105 LF	0	0	105	N/A	N/A
		Notes: [2008-20 [2005-2014] Majo						hed with bi	ituminous.		
311	Expansion Bear	ina	2	Routine	09/15/2016	10 EA	0	10	0	N/A	N/A
011			£	Routine	09/24/2014	10 EA	0	10	0	N/A	N/A
		Notoo: [2002.20	111 Doorings				uontituuse	abangad to	10 cook :-	n 2005	
		Notes: [2002-20	r+j bearings s	show illie deterio	auon. wempers	s are sound. Q	uanily was	unanyeu to	o io each ll	11 ∠005.	

ELEM NBR		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	09/15/2016	1 EA	0	1	0	N/A	N/A
			Routine	09/24/2014	1 EA	0	1	0	N/A	N/A
	Notes: [2002	2-2014] Bea	rings show little dete	rioration. Membe	rs are sound.					
321	Concrete Approach Slab-Concrete Wearing Surface	2	Routine	09/15/2016	2 EA	0	2	0	0	N/A
	Cundoc		Routine	09/24/2014	2 EA	0	2	0	0	N/A
	SOUTH APF [2014] 3' X 1 [2009-2014] Longitudinal NORTH APF [2005-2014] [2010-2014]	ROACH SL 25' spall in There is one cracks in so ROACH SL One 20' mo The north a	south approach pane major spall on south uth approach.	el n approach slab nal crack in north s 2 major spalls a	at the bridge join approach pane & 1 moderate sp	l at center ball at brid	line. ge joint.			9
331	Reinforced Concrete Bridge	2	Routine	09/15/2016	135 LF	0	135	0	0	N/A
	Railing		Routine	09/24/2014	135 LF	0	135	0	0	N/A
	per section - [2005-2014]	most preval Concrete ra	re are numerous mod ent near anchorage f iling could use a spe ne chalking of metal	for steel railing. cial surface treat	ment.	in concret	e railing bot	th sides. C		CIACKS
358	per section - [2005-2014] [2008-2014] Bridge rail is	most preval Concrete ra There is sor a combinati	ent near anchorage f iling could use a sper ne chalking of metal on concrete & metal w/ type B pipe railing Routine	for steel railing. cial surface treat railing both sides railing. East side 09/15/2016	ment. 5. has type "J" co 1 EA	ncrete rail	ing w/ type	"B" pipe ra	ailing. West	side ha
358	per section - [2005-2014] [2008-2014] Bridge rail is type "F" cond	most preval Concrete ra There is sor a combinati crete railing	ent near anchorage f iling could use a sper ne chalking of metal on concrete & metal w/ type B pipe railing	for steel railing. cial surface treat railing both sides railing. East side	ment. 5. has type "J" co	ncrete rail	ing w/ type	"B" pipe ra	ailing. West	side ha
358	per section - [2005-2014] [2008-2014] Bridge rail is type "F" cond Concrete Deck Cracking Smart Flag Notes: [2007	most preval Concrete ra There is sor a combinati crete railing 2 2 7-2014] The	ent near anchorage f iling could use a sper ne chalking of metal on concrete & metal w/ type B pipe railing Routine	for steel railing. cial surface treat railing both sides railing. East side	ment. 5. has type "J" co 1 EA 1 EA	ncrete rail 0 0	ing w/ type	"B" pipe ra	ailing. West	side ha
	per section - [2005-2014] [2008-2014] Bridge rail is type "F" cond Concrete Deck Cracking Smart Flag Notes: [2007 Minor tight cl Underside of Concrete Deck	most preval Concrete ra There is sor a combinati crete railing 2 2 7-2014] The	ent near anchorage f iling could use a spec- ne chalking of metal on concrete & metal w/ type B pipe railing Routine Routine re are numerous uns	for steel railing. cial surface treat railing both sides railing. East side	ment. 5. has type "J" co 1 EA 1 EA	ncrete rail 0 0	ing w/ type	"B" pipe ra	ailing. West	side ha
	per section - [2005-2014] [2008-2014] Bridge rail is type "F" cond Concrete Deck Cracking Smart Flag Notes: [2007 Minor tight co	most preval Concrete ra There is sor a combinati crete railing 2 7-2014] The racks exists	ent near anchorage f iling could use a spec ne chalking of metal on concrete & metal w/ type B pipe railing Routine Routine re are numerous uns in deck 2002-2006.	for steel railing. cial surface treat railing both sides railing. East side 09/15/2016 09/24/2014 ealed moderate	ment. has type "J" co 1 EA 1 EA 1 EA size cracks in th	ncrete rail 0 0 e deck.	ing w/ type	"B" pipe ra 0 0	ailing. West	side ha N/A N/A
	per section - [2005-2014] [2008-2014] Bridge rail is type "F" cond Concrete Deck Cracking Smart Flag Notes: [2007 Minor tight co Underside of Concrete Deck Smart Flag	most preval Concrete ra There is sor a combinati rete railing 2 7-2014] The acks exists 2	ent near anchorage f iling could use a spec ne chalking of metal on concrete & metal w/ type B pipe railing Routine Routine re are numerous uns in deck 2002-2006. Routine	for steel railing. cial surface treati railing both sides railing. East side 09/15/2016 09/24/2014 ealed moderate s 09/15/2016 09/24/2014	ment. has type "J" co 1 EA 1 EA size cracks in th 1 EA 1 EA 1 EA	ncrete rail 0 0 e deck. 0 0	ing w/ type 1 1 1 1 1	"B" pipe ra	ailing. West	side ha N/A N/A
359	per section - [2005-2014] [2008-2014] Bridge rail is type "F" cond Concrete Deck Cracking Smart Flag Notes: [2007 Minor tight co Underside of Concrete Deck Smart Flag	most preval Concrete ra There is sor a combination 2 2-2014] The racks exists 2 2-2014] Mind	ent near anchorage f iling could use a spec ne chalking of metal on concrete & metal w/ type B pipe railing Routine Routine re are numerous uns in deck 2002-2006. Routine Routine	for steel railing. cial surface treati railing both sides railing. East side 09/15/2016 09/24/2014 ealed moderate s 09/15/2016 09/24/2014	ment. has type "J" co 1 EA 1 EA size cracks in th 1 EA 1 EA 1 EA	ncrete rail 0 0 e deck. 0 0	ing w/ type 1 1 1 1 1	"B" pipe ra	ailing. West	side ha N/A N/A
359	per section - [2005-2014] [2008-2014] Bridge rail is type "F" cond Concrete Deck Cracking Smart Flag Notes: [2007 Minor tight cr Underside of Concrete Deck Smart Flag Notes: [2007	most preval Concrete ra There is sor a combinati rete railing 2 7-2014] The racks exists 2 2-2014] Mind	ent near anchorage f iling could use a spec- ne chalking of metal on concrete & metal w/ type B pipe railing Routine re are numerous uns in deck 2002-2006. Routine Routine or cracking with efflor	for steel railing. cial surface treat railing both sides railing. East side 09/15/2016 09/24/2014 ealed moderate 09/15/2016 09/24/2014 rescence. Distres	ment. has type "J" co 1 EA 1 EA size cracks in th 1 EA 1 EA 1 EA 1 EA	ncrete rail 0 0 e deck. 0 0 0 s than 2%.	ing w/ type 1 1 1 1 1	"B" pipe ra	ailing. West	side ha
359	per section - [2005-2014] [2008-2014] Bridge rail is type "F" cond Concrete Deck Cracking Smart Flag Notes: [2007 Minor tight co Underside of Concrete Deck Smart Flag Notes: [2007 Reinforced Concrete Wingwa Notes: [2014 [2008-2014] [2006-2014] [1995-2014]	most preval Concrete ra There is sor a combinati rete railing 2 7-2014] The racks exists 2 2-2014] Minor 1 2 4] Minor craa There is a n There is sor Expansion r	ent near anchorage f iling could use a spec- ne chalking of metal on concrete & metal w/ type B pipe railing Routine re are numerous uns in deck 2002-2006. Routine cr cracking with efflor Routine	for steel railing. cial surface treats railing both sides railing. East side	ment. has type "J" co 1 EA 1 EA 1 EA Size cracks in th 1 EA 1 EA 1 EA 1 EA 4 EA	ncrete rail 0 0 e deck. 0 0 s than 2%. 0 0 0 wingwall.	ing w/ type 1 1 1 1 1 4 4 4 4 There is mo	"B" pipe ra	ailing. West	side ha N/A N/A 0 0 0 N/A N/A N/A
358 359 387 964	per section - [2005-2014] [2008-2014] Bridge rail is type "F" cond Concrete Deck Cracking Smart Flag Notes: [2007 Minor tight co Underside of Concrete Deck Smart Flag Notes: [2007 Reinforced Concrete Wingwa Notes: [2014 [2008-2014] [2006-2014] [1995-2014]	most preval Concrete ra There is sor a combinati rete railing 2 7-2014] The racks exists 2 2-2014] Minor 1 2 4] Minor craa There is a n There is sor Expansion r	ent near anchorage f iling could use a sper ne chalking of metal on concrete & metal w/ type B pipe railing Routine re are numerous uns in deck 2002-2006. Routine ro cracking with efflor Routine cr cracking with efflor Routine ching in the NW WW, hinor 6' horizontal cra ne moderate delamir naterial is missing at	for steel railing. cial surface treats railing both sides railing. East side	ment. has type "J" co 1 EA 1 EA 1 EA Size cracks in th 1 EA 1 EA 1 EA 1 EA 4 EA	ncrete rail 0 0 e deck. 0 0 s than 2%. 0 0 0 wingwall.	ing w/ type 1 1 1 1 1 4 4 4 4 There is mo	"B" pipe ra	ailing. West	side har N/A N/A 0 0 0 N/A N/A N/A E corner.
359 387	per section - [2005-2014] [2008-2014] Bridge rail is type "F" cond Concrete Deck Cracking Smart Flag Notes: [2007 Minor tight cr Underside of Concrete Deck Smart Flag Notes: [2002 Reinforced Concrete Wingwar Notes: [2014 [2008-2014] [2006-2014] [1995-2014] [2005-2014]	most preval Concrete ra There is sor a combinati rete railing 2 7-2014] The acks exists 2 2-2014] Minor 1 2 4] Minor crac There is a n There is sor Expansion r Trees behin	ent near anchorage f iling could use a sper ne chalking of metal on concrete & metal w/ type B pipe railing Routine re are numerous uns in deck 2002-2006. Routine Routine or cracking with efflor Routine ching in the NW WW, ninor 6' horizontal cra ne moderate delamir naterial is missing at d the SE wingwall sh	for steel railing. cial surface treating both sides railing. East side 	ment. has type "J" co 1 EA 1 EA 1 EA size cracks in th 1 EA 1 EA 1 EA 1 EA 4 EA 5 WW. 6 Spalling at SE WW.	ncrete rail 0 0 e deck. 0 0 5 than 2%. 0 0 0 wingwall.	ing w/ type 1 1 1 1 1 1 4 4 4 4 There is monthank	"B" pipe ra	ailing. West	side ha N/A N/A 0 0 0 N/A N/A E corner

ROUTINE INSP. DATE: 09/15/2016

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
981	Signing		2	Routine	09/15/2016	1 EA	1	0	0	0	0
				Routine	09/24/2014	1 EA	1	0	0	0	0
		Notes: [2002	-2014] All a	appropriate signing is	in place.						
982	Approach Guardr	ail	2	Routine	09/15/2016	1 EA	0	1	0	N/A	N/A
				Routine	09/24/2014	1 EA	0	1	0	N/A	N/A
		[2005-2014]	Some mod	rdrail is in place & fu erate damage to gua crash attenuator for g	rdrail system. SE	guardrail not ir			o low spee	d as per M	NDOT.
984	Deck & Approach	n Drainage	2	Routine	09/15/2016	1 EA	0	1	0	N/A	N/A
		-		Routine	09/24/2014	1 EA	0	1	0	N/A	N/A
				re is some undermini n drains into Rice Cre							
985	Slopes & Slope F	Protection	2	Routine	09/15/2016	1 EA	0	1	0	N/A	N/A
				Routine	09/24/2014	1 EA	0	1	0	N/A	N/A
986				derate erosion at the at NE corner by prop Routine	09/15/2016	005. 1 EA	0	1	0	N/A	N/A
				Routine	09/24/2014	1 EA	0	1	0	N/A	N/A
		[2012-2014] T [2006-2014] T [2002-2011] T bridge on the [2007-2012] <i>A</i> Low slump ov 2016 Bridge 2014 Bridge 2012 Bridge 2011 Bridge 2010 Bridge 2009 Bridge	he sidewa here are n here is set west side. Additional r erlay mix v safety ins a safety ins a safety ins a safety ins a safety ins a safety ins	ettlement both ends lk contains some mod inor spalls on the cu tlement both ends of epairs are needed. vas used for placeme pection was conducte pection was conducte pection was conducte pection was complete pection was complete pection was complete	derate spalls. rb. sidewalk at bridge ant of bridge side ed by Dan Bodels ed by B. Essler & ed by B. Wieman ed by B. Wieman ed by B. Wieman ed by B. Wieman	ge approaches. walk. 500, Brian Essle D. Bodelson of B. Essler & D. 001 10/10/2011 11/01/2010. 7/05/2009.	Sidewalk er & Randy n 9/24/201 Bodelson	b Bussiere of 9 Bussiere of 4. on 9/26/20	atched with		us at the
		2007 Inspec	ction was c	ompleted by Bret Wie odeled in 1984.							
				derate w/ minor spall	ing and delamina	ation.					
36A. E	Brdg Railings NBI:	Vehicular ra	ilings mee	current standards.							
36B	. Transitions NBI:	Guardrail tra	ansitions m	eet current standards	6.						
36C. Ap	opr Guardrail NBI:	Approach g	uardrail me	ets current standards	3.						
36	D. Appr Guardrail Terminal NBI:	Guardrail te	rminations	meet current standar	ds.						
59. Su	perstructure NBI:	Concrete ha	as moderat	e cracking & spalling.							
60. \$	Substructure NBI:	Concrete ha	as minor cr	acking scaling & dela	mination.						
	61. Channel NBI:	No notable Minor debris		nd substructure. I.							

6

BRIDGE 4513 CSAH 45(LONG LK) OVER RICE CREEK

ROUTINE INSP. DATE: 09/15/2016

BRIDGE	E 4513 CSA	H 45(LON	G LK) OV	ER RICE CREEK			ROUTI	NE INSP	. DATE: (09/15/201	16
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
6	62. Culvert NBI:										
71. Water	rway Adeq NBI:	Greater that	n 3 feet of f	reeboard.							
	Appr Roadway Alignment NBI:	Very minor	speed redu	ction required.							
Ir	nventory Notes:										

Dan Bodelson

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Nicklaus Fischer

Inspector's Signature

Reviewer's Signature

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MINNESOTA BRIDGE INSPECTION REPORT

10/20/2016

Inspector: CO Bridge

County	: Ramsey	Location: 0.2 M	I N OF JCT CSA	111	Length:		47.0 ft.		
City:	New Brighton	Route: 04 - CSA		001+00.750	Deck Wid		52.8 ft.		
Townsl	-	Control Section:			Rdwy. Ar	ea/ Pct. Ur		sq. ft. / %	, D
Sectior		W Maint. Area:				a/ Pct. Uns		-	
Span T	ype: 1 - Concrete 3 - Girder and Floorbeau		ridge Nbr.:		Culvert:	N/A			
List:	System	0 ,	C C		Postings:				
NBI De	ck: 6 Super: 6 Sub: 7 Cha	an: 7 Culv: N	1						
		Open, P	osted, Closed: A	A - Open					
Annrai	al Ratings - Approach: 6 Waterway		ur Code: I - LOW	RISK	Lla	official Ctru	et maller D	ficiont	N
••	ed Bridge Signs - Load Posting: 0 - Not Re		Traffic: 0	Not Required		official Stru			N
rtoquin	Horizntal: 1 - Object			- Not Applicable		official Fur			N 98.4
		Markoro	vorticul. It	i tot i ppiloabio	-	official Suf	-	-	90.4
ELEM NBR	ELEMENT NAME	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	
12	Reinforced Concrete Deck	Routine	09/15/2016	2491 SF	0	2441	50	0	
		Migrated Values	5	2491 SF	0	2441	50	0	
	Notes: [2016] Concrete deck is 47' x 5 [2002-2016] Minor cracking with efflore		l area is less than	2%.					
	510 - Wearing Surfaces	Routine	09/15/2016	2068 SF	0	2026	42	0	
		Migrated Values	5	2068 SF	0	2026	42	0	
	[2011-2016] The are 90 LF of moderat [2006-2010] There are 80 LF of minor [1995-2012] Underside of deck should [2004-2016] There is spalling at both e	to moderate size cra be cleaned for bette	acks in deck. [200 er inspection.	5-2008] Minor ti					
110	Reinforced Concrete Open Girder/Beam	Routine	09/15/2016	423 LF	0	423	0	0	
		Migrated Values	6	423 LF	0	423	0	0	
	Notes: [2009-2016] Diaphragms are ir [2008-2016] Concrete girders are in pr There are horizontal cracks at north er [2006-2016] Also cracking above abutt [2003-2016] Minor cracks are present.	oper alignment . id of #1 girder. ment at north end gi	irder #7.		of 'T' Girder	#4.			
215	Reinforced Concrete Abutment	Routine	09/15/2016	173 LF	0	173	0	0	
		Migrated Values		173 LF	0	173	0	0	
	Notes: [2016] South Abutment = 55', I [2016] Migrator added 40 LF to abutme [2014-2016] Moderate delamination at [2010-2016] There is horizontal & verti [2008-2016] There is minor cracking a [2006-2016] There is horizontal & verti [2008-2016] There is minor- moderate	ent quantity to acco construction joint b cal cracking at bridg t NE corner bridge s cal cracking north e	unt for wingwalls ridge seat south g ge seat between g seat. nd below #3 & #4	CS1:0 CS2:40 (irder #6 with rus irders #7 & #8. girders.	CS3:0 CS4		wing = 10.	5' Total	= 173 LF

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	09/15/2016	105 LF	0	0	105	0	
		Migrated Values		105 LF	0	0	105	0	
	Notes: [2008-2016] Joints need replac [2005-2014] Major spalls are present a 2012-2014] They have been patched w	djacent to joints. [ailed - 100% in c	ondition #3.					
11	Movable Bearing	Routine	09/15/2016	10 EA	0	10	0	0	
		Migrated Values		10 EA	0	10	0	0	
	Notes: [2002-2016] Bearings show littl Members are sound. Quantity was cha		05.						
13	Fixed Bearing	Routine	09/15/2016	1 EA	0	1	0	0	
		Migrated Values		1 EA	0	1	0	0	
	Notes: [2002-2016] Bearings show littl	•	pers are sound.						
21	Reinforced Concrete Approach Slab	Routine	09/15/2016	1760 SF	0	1700	60	0	
		Migrated Values		1760 SF	0	1700	60	0	
	[2014-2016] 3' X 1.25' spall in south ap [2009-2016] There is one major spall o [2002-2016] There are two 20' moderat NORTH APPROACH SLAB [2016] North approach slab is 44' wide [2005-2016] One 20' moderate size lon [2010-2016] The north approach slab o [2005-2016] Bituminous patching is new	n south approach slat te Longitudinal cracks x 20' long = 880 SF gitudinal crack in nort ontains 2 major spalls	in south approa th approach pane s & 1 moderate s	ch. el at centerline. pall at bridge jo		otholes.			
30	Metal Bridge Railing	Routine	09/15/2016	135 LF	0	135	0	0	
00		Migrated Values	00/10/2010	135 LF	0	135	0	0	
	Notes: [2008-2016] There is some chat Bridge rail is a combination concrete &	Iking of metal railing b	ooth sides.						
	East side has type "J" concrete railing	w/ type "B" pipe railing	g. West side has	type "F" concre	ete railing v	w∕ type B pi	pe railing.		
	515 - Steel Protective Coating	Routine	09/15/2016	364 SF	0	364	0	0	
		Migrated Values		364 SF	0	364	0	0	
	Notes: [2016] Minor coating deterioration [2016] Metal railing is 135' long x 2.7' h								
31	Reinforced Concrete Bridge Railing	Routine	09/15/2016	135 LF	0	135	0	0	
		Migrated Values		135 LF	0	135	0	0	
	Notes: [2007-2016] There are numero most prevalent near anchorage for stee [2005-2016] Concrete railing could use	el railing.		in concrete rail	ing both s	ides. Conta	ins 2-3 cra	acks per secti	ion ·
	East side has type "J" concrete railing	w/ type "B" pipe railing	g. West side has	type "F" concre	ete railing v	w/ type B pi	pe railing.		
00	Critical Deficiencies or Safety Hazards	Routine	09/15/2016	1 EA	1	0	0	0	
		Migrated Values		1 EA	1	0	0	0	
	Notes: No critical structural deficiencie	s or serious safety ha	zards are prese	nt on this struct	ure.				
-	Concrete Decks - Cracking & Sealing	Routine	09/15/2016	0 LF	0	0	0	0	
10				0 L E	0	0	0	0	
10		Migrated Values		0 LF	0	0	0	0	

ELEM NBR	ELEM	IENT NAME	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
891	Other Bridge Sigr	ning	Routine	09/15/2016	1 EA	1	0	0	0
			Migrated Values		1 EA	1	0	0	0
	Notes: [2002-2	2016] All appropriate si	gning is in place.						
892	Slopes & Slope P	rotection	Routine	09/15/2016	1 EA	0	1	0	0
			Migrated Values		1 EA	0	1	0	0
	[2006-2016] Th [2011-2016] So [2003-2016] Th	here has been some mome movement of the generation of the generati	acking & settlement of ovement of riprap @ N grouted riprap at SE co on at the NW corner. [2 r by property owner in 2	E corner. Riprap rner. Riprap is gr 011-2014] Also s	is not grouted a outed at SE co	rner.		all.	
893	Guardrail		Routine	09/15/2016	1 EA	0	1	0	0
			Migrated Values		1 EA	0	1	0	0
	[2005-2016] So	ome moderate damage	ace & functioning prope to guardrail system. S ator for guardrail syster	E guardrail not ir			v speed as	per MNDC	DT.
394	Deck & Approach	n Drainage	Routine	09/15/2016	1 EA	0	1	0	0
			Migrated Values		1 EA	0	1	0	0
			ndermining at both apro Rice Creek is plugged v						
895	Sidewalk, Curb, 8	& Median	Routine	09/15/2016	1 EA	0	1	0	0
00									
	[2014-2016] Th [2012-2016] Th [2006-2016] Th [2002-2011] Th	nere is settlement both ne sidewalk contains so nere are minor spalls o		e bituminous pato	ch at the bridge	approache		0 uminous at	0 the bridge on t
	[2014-2016] Th [2012-2016] Th [2006-2016] Th [2002-2011] Th west side. [2007-2012] Ad	nere is settlement both ne sidewalk contains so nere are minor spalls o nere is settlement both dditional repairs are ne	ends of walk on west si ends of sidewalk of the ome moderate spalls. n the curb. ends of sidewalk at bri	e bituminous pato dge approaches.	mped with bitur ch at the bridge	ninous. approache	es.	-	-
	[2014-2016] Th [2012-2016] Th [2006-2016] Th [2002-2011] Th west side. [2007-2012] Ad	nere is settlement both the sidewalk contains so there are minor spalls o there is settlement both dditional repairs are ne terlay mix was used for	ends of walk on west si ends of sidewalk of the ome moderate spalls. n the curb. ends of sidewalk at bri eded.	e bituminous pato dge approaches.	mped with bitur ch at the bridge	ninous. approache	es.	-	-
	[2014-2016] Th [2012-2016] Th [2006-2016] Th [2002-2011] Th west side. [2007-2012] Ac Low slump ove	nere is settlement both the sidewalk contains so there are minor spalls o there is settlement both dditional repairs are ne terlay mix was used for	ends of walk on west si ends of sidewalk of the ome moderate spalls. n the curb. ends of sidewalk at bri eded. placement of bridge sid	e bituminous pato dge approaches. lewalk.	mped with bitur ch at the bridge . Sidewalk has l	ninous. approache	es.	uminous at	the bridge on t
900	[2014-2016] Th [2012-2016] Th [2006-2016] Th [2002-2011] Th west side. [2007-2012] Ac Low slump ove Protected Specie Notes: [2016]	nere is settlement both ne sidewalk contains so here are minor spalls o here is settlement both dditional repairs are ne erlay mix was used for s no protective species f	ends of walk on west si ends of sidewalk of the ome moderate spalls. In the curb. ends of sidewalk at bri eded. placement of bridge sid Routine Migrated Values	e bituminous pato dge approaches. lewalk. 09/15/2016	mped with bitur ch at the bridge . Sidewalk has t 1 EA 1 EA	ninous. approache been patch	es. and with bit	uminous at	the bridge on t
	[2014-2016] Th [2012-2016] Th [2006-2016] Th [2002-2011] Th west side. [2007-2012] Ac Low slump ove Protected Specie Notes: [2016] Use this eleme	here is settlement both the sidewalk contains so here are minor spalls o here is settlement both dditional repairs are ne erlay mix was used for s no protective species f ent to track the presence 2016 Bridge safety in 2014 Bridge safety ir 2011 Bridge safety ir 2010 Bridge safety ir 2009 Bridge safety ir 2008 Bridge safety ir	ends of walk on west si ends of sidewalk of the ome moderate spalls. In the curb. ends of sidewalk at bri eded. placement of bridge side Routine Migrated Values ound. e of protected species spection was conducted spection was conducted spection was conducted spection was conducted spection was conducted spection was completed spection was completed by Bret Wie	e bituminous pate dge approaches. lewalk. 09/15/2016 living on this stru of by Dan Bodels d by Dan Bodels d by B. Essler & d by B. Wieman d by B. Wieman	nped with bitur ch at the bridge . Sidewalk has h 1 EA 1 EA 1 EA 1 EA 1 EA 1 EA 1 EA 1 EA	ninous. approache been patch 1 1 1 er & Randy 9/24/201 Bodelson	es. ed with bit 0 0 0 Bussiere of 4. on 9/26/20	uminous at 0 0 0 0 9/15/201	the bridge on t 0 0
	[2014-2016] Th [2012-2016] Th [2006-2016] Th [2002-2011] Th west side. [2007-2012] Ac Low slump ove Protected Specie Notes: [2016] Use this eleme General Notes:	here is settlement both the sidewalk contains so here are minor spalls o here is settlement both dditional repairs are ne erlay mix was used for s no protective species f ent to track the presence 2016 Bridge safety in 2014 Bridge safety in 2011 Bridge safety in 2010 Bridge safety in 2009 Bridge safety in 2008 Bridge safety in 2008 Bridge safety in 2007 Inspection was Bridge #4513 was re	ends of walk on west si ends of sidewalk of the ome moderate spalls. In the curb. ends of sidewalk at bri eded. placement of bridge side Routine Migrated Values ound. e of protected species spection was conducted spection was conducted spection was conducted spection was conducted spection was conducted spection was completed spection was completed by Bret Wie	e bituminous pate dge approaches. lewalk. 09/15/2016 living on this stru d by Dan Bodels d by B. Essler & d by B. Wieman d by B. Wieman d by B. Wieman d by B. Wieman d by B. Paine ar man 7/24/2007.	nped with bitur ch at the bridge . Sidewalk has h 1 EA 1 EA 1 EA 1 EA 0. Bodelson or , B. Essler & D. on 10/10/2011. 11/01/2010. 7/05/2009. nd B. Wieman 1	ninous. approache been patch 1 1 1 er & Randy 9/24/201 Bodelson	es. ed with bit 0 0 0 Bussiere of 4. on 9/26/20	uminous at 0 0 0 0 9/15/201	the bridge on t 0 0
00	[2014-2016] Th [2012-2016] Th [2006-2016] Th [2002-2011] Th west side. [2007-2012] Ac Low slump ove Protected Specie Notes: [2016] Use this eleme General Notes: 58. Deck NBI:	here is settlement both the sidewalk contains so here are minor spalls o here is settlement both dditional repairs are ne erlay mix was used for s no protective species f ent to track the presence 2016 Bridge safety in 2014 Bridge safety in 2011 Bridge safety in 2010 Bridge safety in 2009 Bridge safety in 2008 Bridge safety in 2008 Bridge safety in 2007 Inspection was Bridge #4513 was re	ends of walk on west si ends of sidewalk of the ome moderate spalls. In the curb. ends of sidewalk at bri eded. placement of bridge side Routine Migrated Values ound. e of protected species spection was conducted spection was conducted spection was conducted spection was conducted spection was completed spection was com	e bituminous pate dge approaches. lewalk. 09/15/2016 living on this stru d by Dan Bodels d by B. Essler & d by B. Wieman d by B. Wieman d by B. Wieman d by B. Wieman d by B. Paine ar man 7/24/2007.	nped with bitur ch at the bridge . Sidewalk has h 1 EA 1 EA 1 EA 1 EA 0. Bodelson or , B. Essler & D. on 10/10/2011. 11/01/2010. 7/05/2009. nd B. Wieman 1	ninous. approache been patch 1 1 1 er & Randy 9/24/201 Bodelson	es. ed with bit 0 0 0 Bussiere of 4. on 9/26/20	uminous at 0 0 0 0 9/15/201	the bridge on t 0 0
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BRIDGE 4513 CSAH 45(LONG LK) OVER RICE CREEK

ELEM NBR	ELEM	ENT NAME	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
		Minor debris in channel.							
62.	Culvert NBI:								
71. Waterwa	ay Adeq NBI:	Greater than 3 feet of fre	eeboard.						
	opr Roadway ignment NBI:	Very minor speed reduc	tion required.						
Inve	entory Notes:								

Dan Bodelson

Inspector's Signature

Nicklaus Fischer

Reviewer's Signature



Photo 1 -



Photo 2 -



Photo 3 -

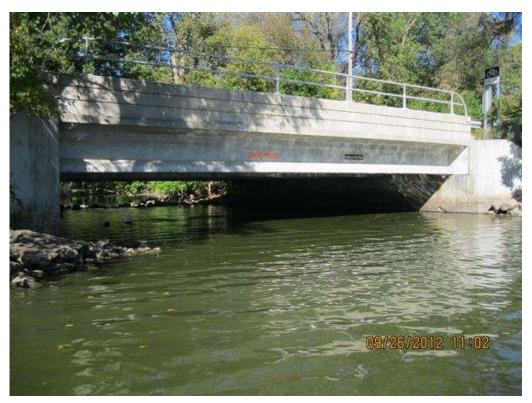


Photo 4 -



Photo 5 -



Photo 6 -

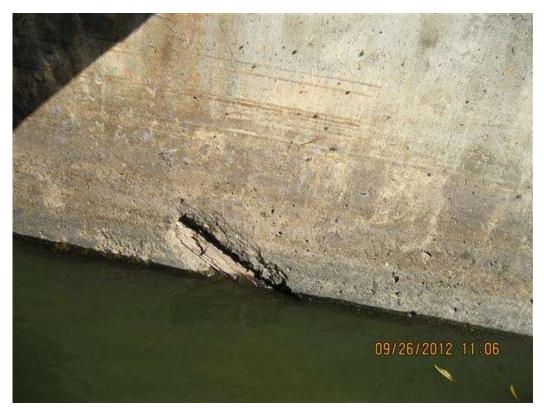


Photo 7 -



Photo 8 -

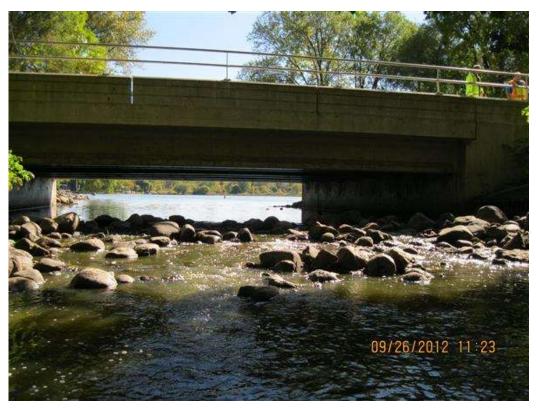


Photo 9 -

Culvert

Bridge No.: 4513

Culvert				
ltem	Description	Condition	Comments	
Culvert Overall:	NBI Item 62	N		

Minnesota Scour Code: | -

I - LOW RISK

Waterway Inspection				
ltem No.	Yes, No, NA or Not Visible	Description		
1.		Is there a significant build-up of debris?		
2.		Is there erosion of the embankment around the headwalls?		
3.		Is there any indication of cracking or settlement of the culvert barrel or headwalls?		
4.		Is there shifting of the channel alignment or erosion of the stream banks? Also are there cracks in the soil of the banks parallel to the stream?		
5.		Do scour measurements indicate that the streambed is below the bottom of the cutoff walls at the ends of the culvert?		
6.		Is there evidence of distress in the roadway or approaches such as cracks in the pavement and sags in the guardrail or roadway? Also, is there cracking, erosion, or failure of the side slopes at or adjacent to the culvert?		
7.		Is there an indication of "piping" of water along the outside of the culvert such as cavities adjacent to the barrel?		
8.		Is the culvert without a bottom and scour measurements indicate that the streambed is below the plan streambed elevations?		
9.		Has the riprap or other scour protection been damaged or otherwise made ineffective?		
10.		If the culvert was designed to be buried (fill inside the culvert), is the material still in the barrel?		

Notes:

- Streambed sounding data is to be documented.

- Soundings of the streambed should be done at each end of the culvert. If Items #5 or #8 are "Yes", then a streambed profile of the scoured area should be done.

- If "Yes" is the answer to any items on the checklist, notify the Program Administrator for further instructions.

Bу

Comments:

Completed On

Channel

				Bridge No.: 4513		
			Chann	el		
	Item	Description	Condition	Comments		
Channel Overall:		NBI Item 61	7	No notable scour around substructure. Minor debris in channel.		
		B	ank Protection	/Revetment		
	ltem	Description	Condition	Comments		
Upstrea	m Bank Protection					
Downst	ream Bank Protect	ion:				
Bridge I	Revetment:					
Minneso	ota Scour Code:	I - LOW RISK				
			Underwater In	spection		
Underw	ater Inspection By	Divers:				
No. of P	iers To Be Inspecte	ed:				
		V	Vaterway Char	acteristics		
Referen	ce Point:	High Water Elev.:		Current Water Elev.:		
Pile Tip	Elev.:	Low Water Elev.:		Current Streambed Elev.:		
		Scour Ho	le Elev.:	Current Scour Hole Elev.:		
		Waterway Ins	pection: (Not a	applicable for culverts)		
ltem No.	Yes, No, NA or Not Visible	Description				
1.		Is there a significant build-u	p of debris?			
2.		Is there a change in the horizontal alignment of the handrail or structure members such as beams?				
3.		Is there any indication of ve	ertical movement c	f the superstructure?		
4.		- Is there shifting of the channel alignment or erosion of the stream banks? Also are there cracks in the soil of the - banks parallel to the stream?				
5.		Is there a significant change in the alignment of hte exterior bearings?				
6.		Are there cracks or other si	gns of distress in t	the approach pavement?		
7.		Is the water currently on the superstructure?				
8.		Are the slopes unstable?				
9.		Do scour measurements indicate: (place a check by all that apply.)				
		A. that the streamed	is two or more feet	below the bottom of pier footings which are supported on piles?		
		B. scour below the bo	ottom of spread foo	otings?		
		C. scour below the bo	ottom of high abutr	nent footings?		
		D. that the streambed	has scoured five	feet or more below the original streambed elevation at pier bents?		

10.

Notes:

- Streambed sounding data is to be documented.

- Per Minnesota Bridge Inspection Manual Section 2.2.5, at bridges that require x-sections, take channel x-sections, along the upstream and/or downstream face of the bridge.

- If "Yes" is the answer to any items on the checklist, notify the Program Administrator for further instructions.

Comments:

Completed On By

Scour POA

Bridge No.: 4513

Scour POA

1. Is POA on File?

2. Date of most recent POA:

3. Here is a link to Minnesota's Bridge Scour website for other

- <u>http://www.dot.state.mn.us/bridge/hydraulics/scour.html</u>
- The Scour POA should be kept in the bridge file and/or uploaded to SIMS using the "Inspection Files" tab.

Implementation

Scour POAs are required to be implemented by FHWA.

1. Is this POA being implemented?

Maintenance

Element S	Source Code	Work Code	Description	P/R	Priority	Work Order #	Year Due	Last Viewed	Entered	Start Date	Completed	
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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.: 4513	BRIDGE OWNER: County Highway Agency				
DATE INSPECTED: 09/15/2016	STRUCTURE TYPE: Concrete				
FACILITY CARRIED: CSAH 45(LONG LK)	irder and Floorbeam System FEATURES INTERSECTED: RICE CREEK				
TYPE OF INSPECTION: ✓ ROUTINE □ FRACTURE □ □ PINNED ASS □ □ SPECIAL: □ □ DAMAGE: □ Check all that apply: □ COMPLEX:					
Redundancy: 🗌 Load Path	Connection 🗌 Riveted				
Structural	Type: Dolted				
Internal	U Welded				
	Other:				
 Was a critical finding identified during this i 	inspection or upon				
structural review?					
a) If selected " Yes " above, state briefly the finding(s):					
2. If a critical finding was identified, what is th	ne 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.

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	☐ Yes	🗌 No
	mentioned in Question 3, suggest the need for detailed structural		
	analysis and/or a revised load rating?		

- 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