# 2016 ROUTINE BRIDGE INSPECTION REPORT



#### BRIDGE # 62566 CSAH 51(LEXINGTON) over RICE CREEK

DISTRICT: Metro COUNTY: Ramsey CITY/TOWNSHIP: Shoreview

STATE: Minnesota

Date of Inspection: 09/14/2016 Equipment Used: Life Jacket

**Owner: County Highway Agency** 

Inspected By: Essler, Brian

Report Written By: Brian Essler

Report Reviewed By: Nicklaus Fischer

Final Report Date: 01/06/2017



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#### **Minnesota Structure Inventory Report**

Bridge ID: 62566 CSAH 51(LEXINGTON) over RICE CREEK Date: 01/06/2017 INSPECTION **GENERAL ROADWAY** Bridge Match ID (TIS) 0 Userkey 102 Agency Br. No. **District** Metro Roadway O/U Key Route On Structure Unofficial Structurally Deficient N Maint. Area Crew Route Sys 04 - CSAH Number 51 Unofficial Functionally Obsolete N County 062 - Ramsey **Roadway Name or Description Unofficial Sufficiency Rating** 80.2 City Shoreview **Routine Inspection Date** 09/14/2016 CSAH 51 **Township** Level of Service 1 - MAINLINE **Routine Inspection Frequency** Desc. Loc. 0.2 MI S OF JCT CSAH 1 Inspector Name CO Bridge Roadway Type 2 - 2-way traffic Sect., Twp., Range - 030N - 23W 3 **Status** A - Open Control Section (TH Only) **Deg** 45 **Sec** 14.76 Latitude Min 7 Reference Point 015+00.330 **NBI CONDITION RATINGS** Longitude Deg 93 Sec 54.99 Min 9 Deck **Detour Length** 6 - Satisfactory Condition Custodian 02 - County Highway Agency Unsound Deck % 2 Lanes On 4 Under 0 Owner 02 - County Highway Agency Superstructure 6 - Satisfactory Condition **ADT** 7968 Year 2008 **BMU Agreement** Substructure 6 - Satisfactory Condition HCADT 0 ADTT 0 Year Built 1993 Channel 7 - Needs minor repairs Functional Class 16 - Urban - Minor Arterial **MN Year Reconstructed** Culvert N - Not Applicable **RDWY DIMENSIONS FHWA Year Reconstructed NBI APPRAISAL RATINGS** SR-WR If Divided NR-FR **MN Temporary Status** Structure Evaluation 6 Roadway Width 54.80 ft. ft. **Bridge Plan Location** 3 - COUNTY **Deck Geometry** Vertical Clearance ft. **Date Opened to Traffic Underclearances** Max. Vert. Clear. ft. ft. **On-Off System** 1 - ON Water Adequacy 8 - Bridge Above Approache Horizontal Clear. 54.7 ft. Legislative District 50B Approach Alignment 7 - Better than present minir Lateral Clearance ft. ft. **ABC Suitable SAFETY FEATURES** Appr. Surface Width 52.0 ft. **STRUCTURE** Bridge Railing 1 - MEETS STANDARDS **Bridge Roadway Width** 548 ft. Service On 5 - Highway-pedestrian **GR Transition** 0 - SUBSTANDARD Median Width On Bridge Service Under 5 - Waterway Appr. Guardrail 0 - SUBSTANDARD MISC. BRIDGE DATA Main Span Type **GR Termini** N - NOT REQUIRED Structure Flared 0 - No flare 1 - Concrete 09 - Slab Span IN DEPTH INSP. Main Span Detail Parallel Structure N - No parallel structure Y/N Freq Date Appr. Span Type Field Conn. ID Frac. Critical Ν Abutment Foundation 1 - CONC Underwater Ν Appr. Span Detail (Material/Type) 3 - FTG PILE Pinned Asblv. Skew 10 L Pier Foundation N - N/A Spec. Feat. **Culvert Type** (Material/Type) N - N/A WATERWAY **Barrel Length** ft. **Historic Status** 5 - Not eligible Drainage Area (sq. mi.) 146.0 **Cantilever ID Waterway Opening** 168 **PAINT** NUMBER OF SPANS Navigation Control 0 - No nav. control on waterw Year Painted APPR: 0 TOTAL: 1 MAIN: 1 **Pier Protection Unsound Paint %** Main Span Length 39.0 Nav. Clr. (ft.) Vert. ft. Horiz. ft Painted Area sq. ft. Structure Length Nav. Vert. Lift Bridge Clear. (ft.) 41.0 ft **Primer Type** MN Scour Code I - LOW RISK Year 1998 Deck Width (Out-to-Out) 66.8 ft. Finish Type **Deck Material** 1 - Concrete Cast-in-Place **CAPACITY RATINGS Wear Surf Type** 1 - Monolithic Concrete (concu **Design Load** 9 - HS 25 (OR GREATER) **BRIDGE SIGNS** Wear Surf Install Year 1993 Operating Rating 1 - LF (LF) HS 45.9 Posted Load 0 - Not Required Wear Course/Fill Depth 0.17 Inventory Rating 1 - LF (LF) HS 25.0 Traffic 0 - Not Required Deck Membrane 0 - None Posting VEH: DBL: **Deck Rebars** 1 - Epoxy Coated Reinforcing Horizontal 0 - Not Required Rating Date 12/7/1992 **Deck Rebars Install Year** 1993 Vertical N - Not Applicable **Minnesota Permit Codes** Structure Area (Out-to-Out) 2739 sa. ft. A: N - N/A Roadway Area (Curb-to-Curb) 2250 sq. ft. Sidewalk Width Lt 8.00 ft. Rt 0.00 B: N - N/A ft.

**Curb Height** 

Rail Type

Lt 0.00

Lt 22

ft. Rt 0.00

Rt 22

ft

C: N - N/A

#### **Minnesota Structure Inventory Report**

Bridge ID: 62566 CSAH 51 over RICE CREEK (LEXINGTON) Date: 09/13/2016

(LEXINGTON)						
+ G E N E R A L +	+ R O A D W A Y +	+INSPECTION+				
Agency Br. No. Crew	Bridge Match ID (TIS) 0	Userkey 102				
District 05 Maint. Area	Roadway O/U Key Route On Structure	Structurally Deficient N				
County 062 - Ramsey	Route Sys 04 - CSAH Number 51	Functionally Obsolete N				
City Shoreview	Roadway Name or Description	Sufficiency Rating 80.2				
Township	CSAH 51	Routine Inspection Date 09/14/2016				
Desc. Loc. 0.2 MI S OF JCT CSAH 1	Level of Service 1 - MAINLINE	Routine Inspection Frequency 24				
Sect., Twp., Range 3 - 030N - 23W	Roadway Type 2 - 2-way traffic	Inspector Name Essler, Brian				
Latitude 45 ° 7 ' 14.76 ''	Control Section (TH Only)	Status A - Open				
<b>Longitude</b> 93 ° 9 ' 54.99 ''	Reference Point 015+00.330	+NBI CONDITION RATINGS+				
Custodian 02 - County Highway Agency	Detour Length 4.0 mi.	Deck 6 Unsound 2				
Owner 02 - County Highway Agency	Lanes ON 4 UNDER 0	Superstructure 6 Deck %				
BMU Agreement	<b>ADT</b> 7968 <b>YEAR</b> 2008	Substructure 6				
Year Built 1993	HCADT ADTT %	Channel 7				
MN Year Reconstructed	Functional Class 16 - Urban - Minor Arterial	Culvert N				
FHWA Year Reconstructed						
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 On - Off System 1 - ON	Roadway Width 54.80 ft. ft.	Deck Geometry 5				
On - Off System 1 - ON Legislative District 50B	Vertical Clearance ft. ft.	Underclearances N				
Potential ABC 2 - N/A	Max. Vert. Clear. ft. ft.	Waterway Adequacy 8				
Totaliai ABO 2 N/A	Horizontal Clear. 54.7 ft. ft.	Approach Alignment 7				
+STRUCTURE+	Lateral Clearance ft. ft.	+SAFETY FEATURES+				
Service On 5 - Highway-pedestrian	Appr. Surface Width 52.0 ft.	+SAFEIT FEATURES+				
Service Under 5 - Waterway	Bridge Roadway Width 54.8 ft.	Bridge Railing 1 - MEETS STANDARDS				
Main Span Type 1 - Concrete	Median Width On Bridge ft.	GR Transition 0 - SUBSTANDARD				
Main Span Design 09 - Slab Span	MICO PRIDOS DATA	Appr. Guardrail 0 - SUBSTANDARD				
Main Span Detail	+MISC. BRIDGE DATA+	GR Termini N - NOT REQUIRED				
Appr. Span Type	Structure Flared 0 - No flare	+IN DEPTH INSP.+				
Appr. Span Design	Parallel Structure N - No parallel structure					
Appr. Span Detail	Field Conn. ID  Abutment 1 - CONC	Y/N Freq Date				
Skew 10 LEFT	Foundation 2 ETC DILE	Frac. Critical N				
Culvert Type	(Material/Type)	Underwater N				
Barrel Length Cantilever ID	Pier Foundation N - N/A	Pinned Asbly. N				
Cantilever ib	(Material/Type) N - N/A	Spec. Feat.				
Number of Spans	Waterla Otaton 5 Net alleible	+ W A T E R W A Y +				
MAIN: 1 APPR: 0 TOTAL:	Historic Status 5 - Not eligible	Drainage Area (sq. mi.) 146.0				
Main Span Length 39.0 ft.	+ P A I N T +	Waterway Opening (sf.) 168				
Structure Length 41.0 ft.		Navigation Control 0 - No nav. control on				
Deck Width (Out-to-Out) 66.8 ft.	Year Painted	Pier Protection _				
Deck Material 1 - Concrete Cast-in-Place	Unsound Paint %	Nav. Clr. (ft.) Vert. 0.0 Horiz. 0.0				
Wear Surf Type 1 - Monolithic Concrete	Painted Area sq. ft.	Nav. Vert. Lift Bridge Clear. (ft.)				
Wear Surf Install Year 1993	Primer Type	MN Scour Code I - LOW RISK Year 1998				
Wear Course/Fill Depth 0.17 ft.	Finish Type	+CAPACITY RATINGS+				
Deck Membrane 0 - None						
Deck Rebars 1 - Epoxy Coated Reinforcing	+BRIDGE SIGNS+	Design Load 9 - HS 25 (OR GREATER)				
Deck Rebars Install Year 1993	Broad and Control	Operating Rating 2 - HS TRUCK 45.9 Inventory Rating 2 - HS TRUCK 25.0				
Structure Area (Out-to-Out) 2739 sq. ft.	1	Inventory Rating 2 - HS TRUCK 25.0  Posting VEH: SEMI: DBL:				
Roadway Area (Curb-to-Curb) 2250 sq. ft.		Rating Date 12/7/1992				
Sidewalk Width 50A. Lt 8.00 ft. 50B. Rt 0.00 ft.		Overweight Permit Codes				
Curb Height         Lt 0.00 ft.         Rt 0.00 ft.           Rail Type         Lt 22         Rt 22	14 - Not Applicable	A N - N/A B N - N/A C N - N/A				
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#### MINNESOTA BRIDGE INSPECTION REPORT

01/06/2017

BRIDGE 62566 CSAH 51(LEXINGTON) OVER RICE CREEK							ROUTINE INSP. DATE: 09/14/2016					
County City: Townsl Section Span T List: NBI De	Shoreview hip: n: 3 Towns Type: 1 - Concrete		Rou Con nge: 23W M Lo	tte: 04 - CSAH trol Section: laint. Area: ocal Agency Brid		1 015+00.330	-				%	
				•	sted, Closed: A	•						
	sal Ratings - Appr ed Bridge Signs -	Load Posting: 0	aterway: 8 - Not Require - Not Require	ed		RISK Not Required Not Applicable	Un	official Stru official Fun official Suff	ctionally C	bsolete	N N 80.2	
ELEM NBR	ELEMEN	T NAME	ENV R	EPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS 5	
038	Top of Concrete Overlay - Uncoa	`	2	Routine	09/14/2016	2734 SF	0	2734	0	0	0	
	0.101.00			Routine	09/19/2014	2734 SF	0	2734	0	0	0	
215	Reinforced Con-	[2008] There is [2010-2014] The diagonal cracks [2001-2004] 2 n Deck was const	a total of 205 ere are 3- 41' @ SE corner ninor cracks a	LF of minor crace longitudinal crace and 3 diagonal t west edge. Mir	F of minor- moder cking of the concrets on the deck. I cracks @ NE conor cracking prese. No low slump of 09/14/2016	rete slab. Deck also conta rner. [2006-201 ent in east 1/2 v	ains a diago 4] Distress with spalling	onal crack is less tha g.	@ NW & S n 2%.	SW corne		
	, , , , , , , , , , , , , , , , , , , ,			Routine	09/19/2014	141 LF	0	140	1	0	N/A	
		[2014] There ar [2010-2012] The [2008-2014] The [2008-2014] The	e major spall a e major spalls ere are major ere is modera ere is graffiti o utments have	at the SW corne at the SE corne spalls at the SE te cracking @ al on the south abu minor to modera	r. and 6"X3" at S' er. 6"X2" at upper corner. One at u butment seats at	SE corner and pper SE corner all 4 corners.	and one a	t lower SE				
301	Poured Deck Jo	pint	2	Routine	09/14/2016	141 LF	0	0	141	N/A	N/A	
				Routine	09/19/2014	141 LF	0	0	141	N/A	N/A	
		Notes: [2006-2	014] Centerlin	e joints of both	approach panels	need replacem	ent. No joir	nts in deck	•			
321	Concrete Appro Slab-Concrete V Surface		2	Routine	09/14/2016	2 EA	0	0	2	0	N/A	
				Routine	09/19/2014	2 EA	0	0	2	0	N/A	
		[2012-2014] Re [2010] Both slat [2001-2008] Bo	habilitation of os have mode th slabs have	the concrete ad rate cracking & minor cracking &		nts is recomme	ended.	on of conci	rete at join	ts adjace	nt to deck.	

	ELEMENT NAME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS 5
331	Reinforced Concrete Bridge Railing	2	Routine	09/14/2016	82 LF	0	82	0	0	N/A
	Naming		Routine	09/19/2014	82 LF	0	82	0	0	N/A
	[2010-2014] The [2008] There a	ne east rai re modera	west rail contains 4 v I contains vertical cra te spalls on the east al cracks with spalls p	cking with nume side concrete ra	rous moderate		. No expos	ed rebar.		
358	Concrete Deck Cracking Smart Flag	2	Routine	09/14/2016	1 EA	0	1	0	0	N/A
			Routine	09/19/2014	1 EA	0	1	0	0	N/A
	Notes: [2010-2 [2002-2006] M		re are numerous min ng.	or to moderate c	racks in the con	crete deck	(approxim	ately 250 l	LF).	
359	Underside of Concrete Deck Smart Flag	2	Routine	09/14/2016	1 EA	0	0	1	0	0
	- Cinait i lag		Routine	09/19/2014	1 EA	0	0	1	0	0
	[2010-2012] Tł cracks. [2002-2008] C	nere are 6 racking wit	acking w/efflorescend longitudinal cracks a th efflorescence unde ingitudinal cracks acr	cross the bridge erside the deck is	s light.	-		•		
387										
387	Reinforced Concrete Wingwall	2	Routine	09/14/2016	4 EA	0	3	1	0	N/A
387	Reinforced Concrete Wingwall	2	Routine Routine	09/14/2016 09/19/2014	4 EA 4 EA	0 0	3	1 1	0 0	N/A N/A
387	Notes: [2014] [2004-2014] Ti w/spalling at e. [2010-2014] S'	Thereis 2- nere is mir xpansion j W wingwal	Routine 1.5' horizontal cracks or diagonal cracking	09/19/2014 s in NW WW at bridge seats a as separation of	4 EA	0 The SE W	3 /W contains	1 s some mir	0 nor cracking	N/A
964	Notes: [2014] [2004-2014] Ti w/spalling at e. [2010-2014] S'	Thereis 2- nere is mir xpansion j W wingwal	Routine 1.5' horizontal cracks or diagonal cracking oint. Il at expansion joint h	09/19/2014 s in NW WW at bridge seats a as separation of	4 EA	0 The SE W	3 /W contains	1 s some mir	0 nor cracking	N/A
964	Notes: [2014] [2004-2014] The wispalling at e. [2010-2014] Step [2004-2012] The second control of the second c	Thereis 2- nere is mir xpansion j W wingwal	Routine 1.5' horizontal cracks for diagonal cracking oint. Il at expansion joint h 0' diagonal crack at t	09/19/2014 in NW WW at bridge seats a as separation of he SW corner.	4 EA all four corners. 0.1' and wing w	0 The SE W	3 /W contains to the sou	1 s some mir th has dro	0 nor cracking pped 1/2".	N/A g
964	Notes: [2014] [2004-2014] Ti w/spalling at e: [2010-2014] Si [2004-2012] Ti  Critical Finding Smart Flag	Thereis 2- nere is mir xpansion j W wingwa nere is a 1	Routine 1.5' horizontal cracks for diagonal cracking oint. Il at expansion joint h 0' diagonal crack at t	09/19/2014 s in NW WW at bridge seats a as separation of he SW corner.  09/14/2016 09/19/2014	4 EA all four corners. 0.1' and wing w 1 EA 1 EA	0 The SE W vall section	3 /W contains to the sou	1 s some mir th has drop N/A	0 nor cracking pped 1/2". N/A	N/A g N/A
964	Notes: [2014] [2004-2014] Ti w/spalling at e: [2010-2014] Si [2004-2012] Ti  Critical Finding Smart Flag	Thereis 2- nere is mir xpansion j W wingwa nere is a 1	Routine 1.5' horizontal cracks oor diagonal cracking oint. Il at expansion joint h 0' diagonal crack at t  Routine Routine	09/19/2014 s in NW WW at bridge seats a as separation of he SW corner.  09/14/2016 09/19/2014	4 EA all four corners. 0.1' and wing w 1 EA 1 EA	0 The SE W vall section	3 /W contains to the sou	1 s some mir th has drop N/A	0 nor cracking pped 1/2". N/A	N/A g N/A
964	Notes: [2014]	Thereis 2- nere is mir xpansion j W wingwal nere is a 1 2	Routine 1.5' horizontal cracks for diagonal cracking oint. Il at expansion joint h 0' diagonal crack at t  Routine  Routine  E THIS CRITICAL FI	09/19/2014 s in NW WW at bridge seats a as separation of he SW corner.  09/14/2016 09/19/2014 NDING SMART	4 EA all four corners. 0.1' and wing w 1 EA 1 EA FLAG.	0 The SE W vall section 1 1	3 /W contains to the sou	s some mir th has drop N/A N/A	0 nor cracking pped 1/2". N/A N/A	N/A g N/A N/A
964	Notes: [2014] [2004-2014] Th w/spalling at e. [2010-2014] St [2004-2012] Th  Critical Finding Smart Flag  Notes: DO NO	Thereis 2- nere is mir xpansion j W wingwal nere is a 1 2 DT DELET	Routine 1.5' horizontal cracks oor diagonal cracking oint. Il at expansion joint h 0' diagonal crack at t  Routine Routine E THIS CRITICAL FI	09/19/2014 s in NW WW at bridge seats a as separation of he SW corner.  09/14/2016 09/19/2014  NDING SMART  09/14/2016 09/19/2014	4 EA all four corners. 0.1' and wing w 1 EA 1 EA FLAG.	0 The SE W vall section 1 1	3 /W contains to the sou  0 0	s some mir th has drop N/A N/A	0 nor cracking pped 1/2".  N/A N/A 0	N/A g N/A N/A 0
964	Notes: [2014] [2004-2014] Th w/spalling at e. [2010-2014] St [2004-2012] Th  Critical Finding Smart Flag  Notes: DO NO	Thereis 2- nere is mir xpansion j W wingwal nere is a 1 2 DT DELET	Routine 1.5' horizontal cracks oor diagonal cracking oint. Il at expansion joint h 0' diagonal crack at t  Routine Routine E THIS CRITICAL FI  Routine Routine Routine	09/19/2014 s in NW WW at bridge seats a as separation of he SW corner.  09/14/2016 09/19/2014  NDING SMART  09/14/2016 09/19/2014	4 EA all four corners. 0.1' and wing w 1 EA 1 EA FLAG.	0 The SE W vall section 1 1	3 /W contains to the sou  0 0	s some mir th has drop N/A N/A	0 nor cracking pped 1/2".  N/A N/A 0	N/A g N/A N/A 0
964	Notes: [2014] [2004-2014] The wispalling at each [2010-2014] Step [2004-2012] The Critical Finding Smart Flag  Notes: DO NO Signing  Notes: [2012-2012-2012-2012] Notes: [2012-2012-2012-2012-2012-2012-2012-2012	Thereis 2- nere is mir xpansion j W wingwa nere is a 1  2  OT DELET  2	Routine 1.5' horizontal cracks for diagonal cracking oint. Il at expansion joint h 0' diagonal crack at t  Routine Routine E THIS CRITICAL FI  Routine Routine Routine	09/19/2014 s in NW WW at bridge seats a as separation of the SW corner.  09/14/2016 09/19/2014  NDING SMART  09/14/2016 09/19/2014  present.	4 EA all four corners. 0.1' and wing w 1 EA 1 EA FLAG. 1 EA 1 EA	The SE Wall section  1 1 1	3 /W contains to the soul 0 0 0	s some min th has drop N/A N/A 0 0	0 nor cracking pped 1/2".  N/A N/A  0 0	N/A g N/A N/A
964	Notes: [2014]	Thereis 2- nere is mir xpansion j W wingwal nere is a 1  2  2  2014] All a  2  2014] Thei uardrail sy	Routine 1.5' horizontal cracks for diagonal cracking oint. Il at expansion joint ho' diagonal crack at the Routine Routine E THIS CRITICAL FI Routine Routine Routine Routine Routine Routine Routine Routine	o9/19/2014 s in NW WW at bridge seats a as separation of he SW corner.  o9/14/2016 o9/19/2014  NDING SMART  o9/14/2016 o9/19/2014  present.  09/14/2016 age to the guard functioning proper	4 EA all four corners. 0.1' and wing w 1 EA	The SE Wall section  1 1 1 0 0	3 /W contains to the soul   0  0  0   1  1  1	s some mir th has drop N/A N/A 0 0	0 nor cracking pped 1/2".  N/A N/A  0 0  N/A	N/A  N/A  N/A  N/A
964	Notes: [2014]	Thereis 2- nere is mir xpansion j W wingwal nere is a 1  2  2  2014] All a  2  2014] Thei uardrail sy	Routine 1.5' horizontal cracks for diagonal cracking oint. Il at expansion joint hoo' diagonal crack at the Routine Routine E THIS CRITICAL FI Routine Routine Routine Routine Routine ppropriate singing is Routine Routine re are moderate damestem is in place and	o9/19/2014 s in NW WW at bridge seats a as separation of he SW corner.  o9/14/2016 o9/19/2014  NDING SMART  o9/14/2016 o9/19/2014  present.  09/14/2016 age to the guard functioning proper	4 EA all four corners. 0.1' and wing w 1 EA	The SE Wall section  1 1 1 0 0	3 /W contains to the soul   0  0  0   1  1  1	s some mir th has drop N/A N/A 0 0	0 nor cracking pped 1/2".  N/A N/A  0 0  N/A	N/A  N/A  N/A  N/A  N/A
964	Notes: [2014]	Thereis 2- nere is mir expansion j W wingwal nere is a 1  2  DT DELET  2  2014] All a  2  2014] Thei uardrail sy s collision of	Routine  1.5' horizontal cracks for diagonal cracking oint. Il at expansion joint ho' diagonal crack at the Routine Routine  E THIS CRITICAL FI  Routine Routine Propriate singing is  Routine	o9/19/2014 s in NW WW at bridge seats a as separation of he SW corner.  o9/14/2016 o9/19/2014  NDING SMART  o9/14/2016 o9/19/2014  present.  09/14/2016 age to the guard functioning proped of the SE guar	4 EA all four corners.  0.1' and wing w  1 EA 1 E	The SE Wall section  1 1 1 0 0 epair guard	3 /W contains to the soul   0	s some mir th has drop N/A N/A 0 0	0 nor cracking pped 1/2".  N/A N/A  0 0  N/A N/A	N/A  N/A  N/A  O  O  N/A  N/A

Inspector's Signature

Reviewer's Signature

BRIDGE 62566 CSAH 51(LEXINGTON) OVER RICE CREEK						ROUTINE INSP. DATE: 09/14/2016						
ELEM NBR	ELEMENT	ГNАМЕ	ENV	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS (	
985	Slopes & Slope F	Protection	2	Routine	09/14/2016	1 EA	0	1	0	N/A	N/A	
				Routine	09/19/2014	1 EA	0	1	0	N/A	N/A	
		[2014] Rip ra [2006-2014] [2012-2014]	ap is filled wi There is sor Riprap is op	erosion at the NW co th sediment me movement of ripra perating as intended. ment of the concrete v	ap south side of F Some settlement	both sides. The			n grouted.			
986	Curb & Sidewalk		2	Routine	09/14/2016	1 EA	0	1	0	N/A	N/A	
				Routine	09/19/2014	1 EA	0	1	0	N/A	N/A	
		[2002-2014]  [2016] Brid [2014] Brid [2012] Brid [2002-2000] [2010] Brid [2002-2000] Bridge safe [2008] Gra	Sidewalk ur  dge safety in dge safety ir dge safety ir 6] Bituminou dge safety in lge safety in 8] Bituminou ety inspectio ffiti is on the	spection was comple sapproach roadway n was completed by south abutment [200 ome cracking of the sapproach roadway south abutment]	ted by B. Essler, eted by B. Essler ted by B. Wiema to concrete appreted by B. Wiema ted by B. Paine & to concrete appreted by B. Graffiti is on to	D. Bodelson & & D. Bodelson on, D. Bodelson on	R. Bussier on 9/19/20 & B. Essleve settled 11/2008. ve settled and wingward wingward.	No addition re on 9/14/ 014. er on 9/19/ & need par & need par	2016. 2012. tching.			
	58. Deck NBI:	Bridge #62	2566 was co	nstructed in 1993. umerous cracks with		Ü						
36A. E	Brdg Railings NBI:											
36B	B. Transitions NBI:											
36C. Ap	opr Guardrail NBI:											
36	D. Appr Guardrail Terminal NBI:											
59. Su	uperstructure NBI:	Numerous	moderate c	racking								
60.	Substructure NBI:	Moderate of	cracking with	n 4 spalls								
	61. Channel NBI:	Minor eros	sion									
	62. Culvert NBI:	Bridge										
71. Wa	terway Adeq NBI:	Greater tha	an 3' of freel	ooard								
7	<ol><li>Appr Roadway Alignment NBI:</li></ol>		reduction re	quired								
	Inventory Notes:											
		Brian Essl	ler				Nic	cklaus Fis	scher			
		nootor's Sign			_			iowor's Sig				

#### MINNESOTA BRIDGE INSPECTION REPORT

01/06/2017

Inspector: CO Bridge

#### BRIDGE 62566 CSAH 51(LEXINGTON) OVER RICE CREEK

County: Ramsey Location: 0.2 MI S OF JCT CSAH 1 Length: 41.0 ft.

City: Shoreview Route: 04 - CSAH 51 Ref. Pt.: 015+00.330 Deck Width: 66.8 ft.

Township: Control Section: Rdwy. Area/ Pct. Unsnd: 2250 sq. ft. / 2%

Section: 3 Township: 030N Range: 23W Maint. Area: Paint Area/ Pct. Unsnd: sq. ft. / %

Span Type: 1 - Concrete 1 - Slab Local Agency Bridge Nbr.: Culvert: N/A

List: Postings:

NBI Deck: 6 Super: 6 Sub: 6 Chan: 7 Culv: N

Open, Posted, Closed: A - Open

MN Scour Code: I - LOW RISK

Appraisal Ratings - Approach: 7 Waterway: 8 Unofficial Structurally Deficient N

Required Bridge Signs - Load Posting: 0 - Not Required Traffic: 0 - Not Required Unofficial Functionally Obsolete N

Horizntal: 0 - Not Required Vertical: N - Not Applicable Unofficial Sufficiency Rating 80.2

**ELEM** QTY QTY QTY QTY **NBR ELEMENT NAME** REPORT TYPE INSP. DATE **QUANTITY** CS<sub>1</sub> CS<sub>2</sub> CS<sub>3</sub> CS<sub>4</sub> Reinforced Concrete Slab 2739 SF 2439 0 300 0 38 09/14/2016 Routine 2739 SF 0 300 0 Migrated Values 2439

Notes: [2016] There are moderate spalls at the SE corner underside of the deck

[2014-2016] There are 10 longitudinal cracks across the bridge + diagonal cracking at sides. Approximately 10 X L= 300 LF of cracks.

[2010-2016] Moderate cracking w/efflorescence

[2010-2012] There are 6 longitudinal cracks across the bridge + diagonal cracking at sides. Approximately 6 X L= 240 LF of cracks.

[2002-2008] Cracking with efflorescence underside the deck is light.

[2004] There are three longitudinal cracks across the bridge and diagonal cracking near corners. Approximately 5 X L = 200 LF of cracks.

510 - Wearing Surfaces Routine 09/14/2016 2250 SF 2205 0 45 0

Migrated Values 2250 SF 2205 0 45 0

Notes: [2010-2016] There is a total of 250 LF of minor- moderate but numerous cracks in the concrete slab with spalls present.

[2010-2016] There are 3- 41' longitudinal cracks on the deck. Deck also contains a diagonal crack @ NW & SW corners, 2 diagonal cracks @ SE corner and 3 diagonal cracks @ NE corner. [2006-2014] Distress is less than 2%.

[2008] There is a total of 205 LF of minor cracking of the concrete slab.

[2001-2004] 2 minor cracks at west edge. Minor cracking present in east 1/2 with spalling.

Concrete Slab with Uncoated Rebar. Deck was constructed with full depth concrete. No low slump overlay. Reinforcement has 3" of concrete cover.

215 Reinforced Concrete Abutment Routine 09/14/2016 181 LF 0 170 11 0 Migrated Values 181 LF 0 170 11 0

Notes: [2016] There are 1' X 9" spall at the SW corner.

2016] There are major spalls at the SE corner. 6"X2' at upper SE corner and 6"X3" at lower SE corner.

[2016] There are 1' X 6" spall at the NW corner.

[2008-2016] There is moderate cracking @ abutment seats at all 4 corners.

[2008-2016] There is graffiti on the south abutment.

[2001-2016] Abutments have minor to moderate vertical and horizontal cracking w/efflorescence.

[2014-2016] There is graffiti on the north abutment.

Wingwall notes: [2014-2016] There is 2-1.5' horizontal cracks in NW WW

[2004-2016] There is minor diagonal cracking at bridge seats all four corners. The SE WW contains some minor cracking w/spalling at expansion joint.

[2010-2016] SW wingwall at expansion joint has separation of 0.1' and wing wall section to the south has dropped 1/2". [2004-2012] There is a 10' diagonal crack at the SW corner.

[2016] Migrator added 40 LF to abutment quantity to account for wingwalls (CS1:0 CS2:30 CS3:10 CS4:0).

[2014] There are major spall at the SW corner. and 6"X3" at SW corner.

[[2010-2012] There are major spalls at the SE corner. One at upper SE corner and one at lower SE corner.

[2006] There is minor spalling at SE corner.

301 Pourable Joint Seal Routine 09/14/2016 141 LF 0 141 0 0 Migrated Values 141 LF 0 141 0 0

Notes: [2016] B3 repairs were done on all joints on both approach panels

[2006-2014] Centerline joints of both approach panels need replacement. No joints in deck.

#### BRIDGE 62566 CSAH 51(LEXINGTON) OVER RICE CREEK

ELEM NBR	ELEMENT NAME	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4			
321	Reinforced Concrete Approach Slab	Routine	09/14/2016	2080 SF	0	2080	0	0			
		Migrated Values		2080 SF	0	2080	0	0			
	Notes: [2016] B3 repairs were done of [2016] there is moderate cracking and [2016] Migrator assumed an approach [2010-2014] Bituminous patches are le [2012-2014] Rehabilitation of the conci [2010] Both slabs have moderate cracl [2001-2008] Both slabs have minor crac [2004-2010] There is moderate deterior	spalling on both approslab length of 20FT a titing loose. There is set adjacent to deck judges & spalling.  acking & spalling.	pach panels. Ind used the investigation deterion Indicate in the investigation of the investi	oration of concre ended.			to deck.				
331	Reinforced Concrete Bridge Railing	Routine	09/14/2016	82 LF	0	82	0	0			
		Migrated Values		82 LF	0	82	0	0			
	Notes: [2016] The west rail contains 5 [2010-2014] The west rail contains 4 version [2010-2014] The east rail contains vertical contains vertical cracks with [2001-2008] Minor vertical cracks with	ertical cracks with mo ical cracking with nun ne east side concrete	derate spalls. nerous moderate	e size spalls. No	exposed r	ebar.					
300	Critical Deficiencies or Safety Hazards	Routine	09/14/2016	1 EA	1	0	0	0			
		Migrated Values		1 EA	1	0	0	0			
	Notes: NO CRITICAL FINDINGS OBS	ERVED DURING TH	E LAST INSPEC	CTION.							
10	Concrete Decks - Cracking & Sealing	Routine	09/14/2016	300 LF	0	300	0	0			
		Migrated Values		300 LF	0	300	0	0			
	Notes: [2014-2016] There are 10 longitudinal cracks across the bridge + diagonal cracking at sides. Approximately 10 X L= 300 LF of cracks [2010-2014] There are numerous minor to moderate cracks in the concrete deck (approximately 250 LF). [2002-2006] Minor cracking.										
91	Other Bridge Signing	Routine	09/14/2016	1 EA	1	0	0	0			
		Migrated Values		1 EA	1	0	0	0			
	Notes: [2012-2016] All appropriate sin	ging is present.									
92	Slopes & Slope Protection	Routine	09/14/2016	1 EA	0	1	0	0			
		Migrated Values		1 EA	0	1	0	0			
	Notes: [2014-2016] Moderate erosion at the NW corner [2014-2016] Rip rap is filled with sediment [2006-2016] There is some movement of riprap south side of Rice Creek. [2012-2016] Riprap is operating as intended. Some settlement both sides. The north side has been grouted. [2012-2016] Also settlement of the concrete wall south side of Rice Creek at the SW corner.										
393	Guardrail	Routine	09/14/2016	1 EA	0	1	0	0			
		Migrated Values		1 EA	0	1	0	0			
	Notes: [2016] SE end has been replaced [2008-2016] There are moderate damage to the guardrail system. [2006-2016] Guardrail system is in place and functioning properly. [2004] There is collision damage to the SE end of the SE guardrail. Need to repair guardrail.										
94	Deck & Approach Drainage	Routine	09/14/2016	1 EA	1	0	0	0			
		Migrated Values	· · ·	1 EA	1	0	0	0			

#### BRIDGE 62566 CSAH 51(LEXINGTON) 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
895	Sidewalk, Curb, &	& Median	Routine	09/14/2016	1 EA	0	1	0	0
			Migrated Values		1 EA	0	1	0	0
	[2008-2016] Si [2010-2016] Th [2014] Sidewal [2012] The side [2008-2012] Th	Sidewalk under bridge I dewalk on bridge is on here is 10 If of major cra k under bridge at the we ewalk settlement is 4" a here is settlement north k under bridge shows s	the west side. Sidewal cking @ SW corner ur est and east ends of co t south abutment and p side of sidewalk unde	k contains mode nder bridge. oncrete sidewalk oulling away fron r bridge with crac	erate spalling & of was patched win abutment 2". cks at west and	vith bitumin	nous.		
900	Protected Specie	S	Routine	09/14/2016	1 EA	1	0	0	0
	•		Migrated Values		1 EA	1	0	0	0
	Notes: No prot	tected species living for	and on this structure.						
	General Notes:	[2016] Bridge safety ir [2014] Bridge safety i [2012] Bridge safety i [2002-2006] Bituminoo [2010] Bridge safety ir [2008] Bridge safety ir [2002-2008] Bituminoo Bridge safety inspectic [2008] Graffiti is on the [2006-2008] There is s Bridge #62566 was co	nspection was comple nspection was comple us approach roadway nspection was complet nspection was complet us approach roadway on was completed by e south abutment [200 some cracking of the s	ted by B. Essler ted by B. Wiema to concrete appred by B. Wiema ed by B. Paine & to concrete appred to concrete appred Wieman 10/6] Graffiti is on the	& D. Bodelson an, D. Bodelson oach panels haven 9/29/2010.  & B. Wieman 9/100 oach panels haven 03/2006. The abutments are	on 9/19/20 & B. Esslove settled 11/2008. We settled	014. er on 9/19/2 & need pat & need pat	2012. ching.	
	58. Deck NBI:	Numerous moderate r	numerous cracks with	spalls.					
36A. E	Brdg Railings NBI:								
36B	3. Transitions NBI:								
36C. Ap	opr Guardrail NBI:								
36	D. Appr Guardrail Terminal NBI:								
59. St	perstructure NBI:	Numerous moderate of	cracking						
60.	Substructure NBI:	Moderate cracking wit	h 4 spalls						
	61. Channel NBI:	Minor erosion							
	62. Culvert NBI:	Bridge							
71. Wa	terway Adeq NBI:	Greater than 3' of free	board						
7	2. Appr Roadway Alignment NBI:	No speed reduction re	equired						
	Inventory Notes:								
		Brian Essler				Nic	klaus Fis	cher	
		pector's Signature		_			iewer's Sig		



Photo 1 - cracks under deck north side cl



Photo 2 - cracks under deck south side cl



Photo 3 - cracks under deck south side cl2



Photo 4 - cracks under deck south side cl3



Photo 5 - cracks under deck west side



Photo 6 - east concrete rail 2

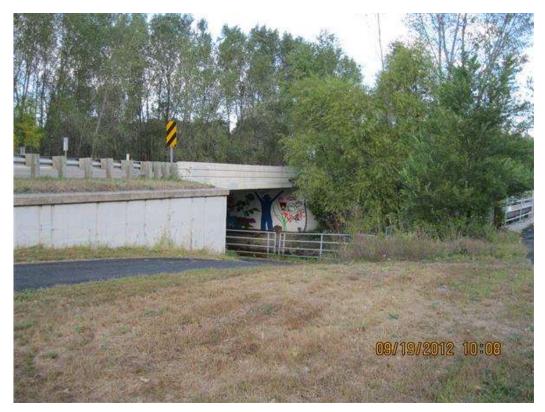


Photo 7 - east side



Photo 8 - looking north



Photo 9 - looking south

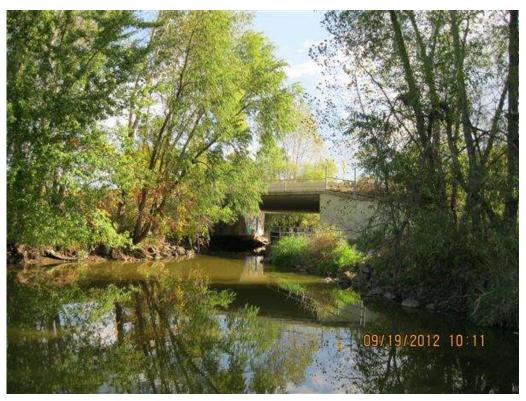


Photo 10 - west side



Photo 11 - west side 2



Photo 12 - B3 repair 2016



Photo 13 - B3 repair1 2016



Photo 14 - B3 repair2 2016



Photo 15 - SE Guardrail 2016



Photo 16 - North approach panel 2016



Photo 17 - South approach panel 2016