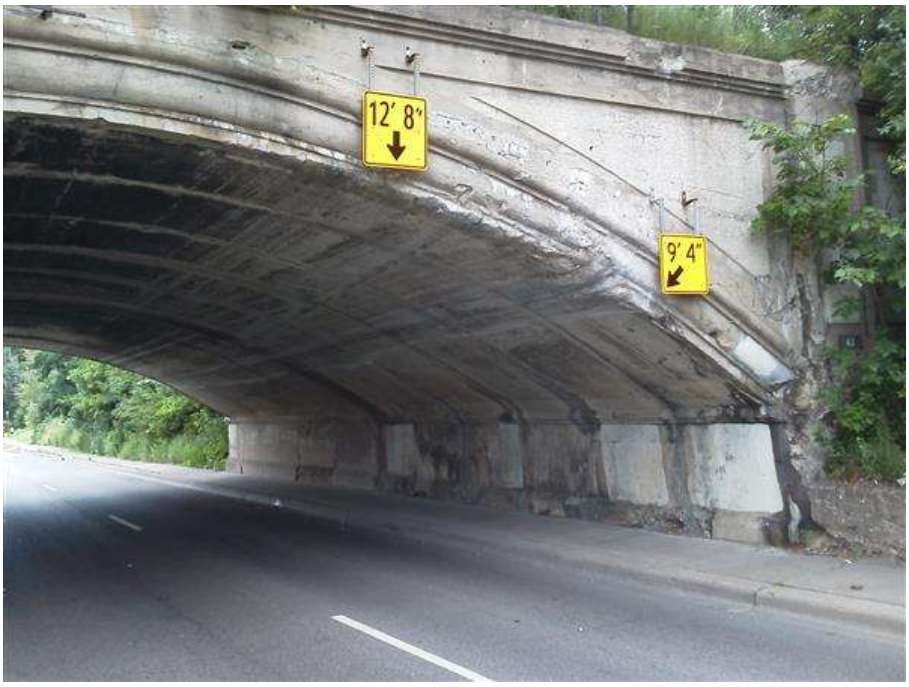
2016 ROUTINE
BRIDGE INSPECTION REPORT



BRIDGE # 90405
BNSF RR over CSAH 51(LEXINGTON)

DISTRICT: Metro **COUNTY:** Ramsey **CITY/TOWNSHIP:** St Paul

STATE: Minnesota

Date of Inspection: 05/14/2016
Equipment Used:

Owner: County Highway Agency

Inspected By: Engel, Michael; Grau, Joe; Sanders, Rick

Report Written By: Joe Grau
Report Reviewed By: Glenn Pagel
Final Report Date: 08/24/2016

Table of Contents

Minnesota Structure Inventory Report

Bridge ID: 90405 BNSF RR **over** CSAH 51(LEXINGTON) **Date:** 08/24/2016

GENERAL

Agency Br. No.
District Metro
Maint. Area **Crew**
County 062 - Ramsey
City St Paul
Township
Desc. Loc. 0.2 MI S OF JCT MSAS 122
Sect., Twp., Range 26 - 029N - 23W
Latitude **Deg** 44 **Min** 58 **Sec** 24.87
Longitude **Deg** 93 **Min** 8 **Sec** 47.62
Custodian 27 - Railroad
Owner 02 - County Highway Agency
BMU Agreement
Year Built 1907
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 66B
ABC Suitable

STRUCTURE

Service On 2 - Railroad
Service Under 1 - Highway, w/ or w/out ped.
Main Span Type
1 - Concrete 12 - Arch
Main Span Detail U - SPANRDEL FILLED ARC
Appr. Span Type
Appr. Span Detail
Skew 0
Culvert Type
Barrel Length ft.
Cantilever ID

NUMBER OF SPANS

MAIN: 1 **APPR:** 0 **TOTAL:** 1
Main Span Length 50.0 ft.
Structure Length 110.0 ft.
Deck Width (Out-to-Out) 73.0 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) 8030 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
Route Sys **Number**
Roadway Name or Description
Railroad over
Level of Service
Roadway Type
Control Section (TH Only)
Reference Point
Detour Length mi
Lanes **On** **Under** 2
ADT **Year**
HCADT 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 1 - CONC
(Material/Type)
Pier Foundation N - N/A
(Material/Type) N - N/A
Historic Status 5 - Not eligible

PAINT

Year Painted
Unsound Paint %
Painted Area sq. ft.
Primer Type
Finish Type

BRIDGE SIGNS

Posted Load 0 - Not Required
Traffic 0 - Not Required
Horizontal 0 - Not Required
Vertical 2 - Shldr Clr Restr (Arch)

INSPECTION

Userkey 199
Unofficial Structurally Deficient N
Unofficial Functionally Obsolete N
Unofficial Sufficiency Rating -2
Routine Inspection Date 05/14/2016
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 5 - Somewhat better than m

SAFETY FEATURES

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

IN DEPTH INSP.

	Y/N	Freq	Date
Frac. Critical	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: 90405 **BNSF RR over CSAH 51 (LEXINGTON)** Date: 08/10/2016

+GENERAL+

Agency Br. No.		**Crew**	
District	05	**Maint. Area**	
County	062 - Ramsey		
City	St Paul		
Township			
Desc. Loc.	0.2 MI S OF JCT MSAS 122		
Sect., Twp., Range	26 - 029N - 23W		
Latitude	44 ° 58 ' 24.87 ''		
Longitude	93 ° 8 ' 47.62 ''		
Custodian	27 - Railroad		
Owner	02 - County Highway Agency		
BMU Agreement			
Year Built	1907		
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	66B		
Potential ABC	2 - N/A		

+STRUCTURE+

Service On	2 - Railroad
Service Under	1 - Highway, w/ or w/out ped.
Main Span Type	1 - Concrete
Main Span Design	12 - Arch
Main Span Detail	U - SPANRDEL FILLED ARCH
Appr. Span Type	
Appr. Span Design	
Appr. Span Detail	
Skew	0
Culvert Type	
Barrel Length	
Cantilever ID	

Number of Spans

MAIN: 1 **APPR:** 0 **TOTAL:**

Main Span Length	50.0	**ft.**
Structure Length	110.0	**ft.**
Deck Width (Out-to-Out)	73.0	**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)	8030	**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	

+ROADWAY+

Bridge Match ID (TIS)			
Roadway O/U Key			
Route Sys		**Number**	
	Roadway Name or Description		
	Railroad over		
Level of Service			
Roadway Type			
Control Section (TH Only)			
Reference Point			
Detour Length		**mi.**	
Lanes	**ON**	**UNDER**	2
	ADT	**YEAR**	
HCADT		**ADTT**	**%**
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 (Material/Type)	1 - CONC
Pier Foundation (Material/Type)	N - N/A N - N/A
Historic Status	5 - Not eligible

+PAINT+

Year Painted	
Unsound Paint %	
Painted Area	**sq. ft.**
Primer Type	
Finish Type	

+BRIDGE SIGNS+

Posted Load	0 - Not Required
Traffic	0 - Not Required
Horizontal	0 - Not Required
Vertical	2 - Shldr Clr Restr (Arch)

+INSPECTION+

Userkey	199		
Structurally Deficient	N		
Functionally Obsolete	N		
Sufficiency Rating	-2		
Routine Inspection Date		05/14/2016	
Routine Inspection Frequency		12	
Inspector Name	Grau, Joe		
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	5

+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

BRIDGE 90405 BNSF RR OVER CSAH 51(LEXINGTON) **ROUTINE INSP. DATE: 05/14/2016**

County: Ramsey
City: St Paul
Township:
Section: 26 Township: 029N Range: 23W
Span Type: 1 - Concrete 11 - Arch - Deck
List:
NBI Deck: N Super: 5 Sub: 5 Chan: N Culv: N

Location: 0.2 MI S OF JCT MSAS 122
Route: Ref. Pt.:
Control Section:
Maint. Area:
Local Agency Bridge Nbr.:
Open, Posted, Closed: A - Open
MN Scour Code: A - NON WATERWAY

Length: 110.0 ft.
Deck Width: 73.0 ft.
Rdwy. Area/ Pct. Unsnd: sq. ft. / %
Paint Area/ Pct. Unsnd: sq. ft. / %
Culvert: N/A
Postings:

Appraisal Ratings - Approach: 5 Waterway: N
Required Bridge Signs - Load Posting: 0 - Not Required Traffic: 0 - Not Required
Horizntal: 0 - Not Required Vertical: 2 - Shldr Clr Restr (Arch)

Unofficial Structurally Deficient N
Unofficial Functionally Obsolete N
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
144	Reinforced Concrete Arch	2	Routine	05/14/2016	52 LF	0	52	0	0	N/A
			Routine	05/14/2015	52 LF	0	52	0	0	N/A
	Notes: Many leakage stained vertical cracks in the arch which are mostly at the lower 6 feet. 2000-08. Minor spalling along these cracks. South facia of arch cracked and spalling. 85-13 South arch is 1-1/2" lower at east and west abutments than north arch. 85-15 Moderate cracking, leaching, staining and surface scale present. 2013-15 Minor delaminations and spalls present. 2013-15									
215	Reinforced Concrete Abutment	2	Routine	05/14/2016	141 LF	84	47	10	0	N/A
			Routine	05/14/2015	141 LF	84	47	10	0	N/A
	Notes: Both abutments have spalling and cracking, especially along bases. 00-13 Spalling on much of the vertical abutment faces and base. 06-13 Significant amount of water being transmitted thru the abutment. 2009-13 Moderate cracking, leaching, staining and surface scale present. 2013-15 Minor delaminations and spalls present. 2013-15 CS 3 - has extensive deterioration, spalls and scaling. 2014-15									
333	Masonry, Other or Combination Material Railing	2	Routine	05/14/2016	220 LF	0	220	0	N/A	N/A
			Routine	05/14/2015	220 LF	0	220	0	N/A	N/A
	Notes: Railing for maintenance crews only. 2014-15									
362	Traffic Impact Smart Flag	2	Routine	05/14/2016	1 EA	0	1	0	N/A	N/A
			Routine	05/14/2015	1 EA	0	1	0	N/A	N/A
	Notes: Impact damage has occurred, mostly outside lanes. 2013-15									
387	Reinforced Concrete Wingwall	2	Routine	05/14/2016	4 EA	0	4	0	0	N/A
			Routine	05/14/2015	4 EA	0	4	0	0	N/A
	Notes: Wing wall coping and verticle faces are spalling, especially at the bottom, 85-13 Moderate cracking, leaching, staining and surface scale present. 2013-15 Minor delaminations and spalls present. 2013-15									

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
964	Critical Finding Smart Flag	2	Routine	05/14/2016	1 EA	1	0	N/A	N/A	N/A
			Routine	05/14/2015	1 EA	1	0	N/A	N/A	N/A
	Notes: Date 2003-10-09 - Previous comments > DO NOT DELETE THIS CRITICAL FINDING SMART FLAG.									
981	Signing	2	Routine	05/14/2016	1 EA	1	0	0	0	0
			Routine	05/14/2015	1 EA	1	0	0	0	0
	Notes: The north advance sign only reads low clearance. 98-07. 12'-8" at center line of inside N.B. lane and has been hit and damaged. 2007-11 13'-0" at center of S.B. lane 10'-6" at S.G.L. 2014 9'-4" at N.G.L. 2014 New signs. 2012 All required signage is in place. 2015									
986	Curb & Sidewalk	1	Routine	05/14/2016	2 EA	2	0	0	N/A	N/A
			Routine	05/14/2015	2 EA	2	0	0	N/A	N/A
	Notes: Curb and walk is under bridge , not on bridge. 2012-15									
988	Miscellaneous Items	1	Routine	05/14/2016	1 EA	1	0	0	N/A	N/A
			Routine	05/14/2015	1 EA	1	0	0	N/A	N/A
	Notes:									

General Notes: BNSF RR contact info:

Michael Anderson bridges and structures supervisor (763) 782-3310 cell (612) 749-3401
michael.anderson5@bnsf.com

Lane Gilliland bridge inspector cell (612) 219-4219

58. Deck NBI:

36A. Brdg Railings NBI: Roadway is under bridge.

36B. Transitions NBI:

36C. Appr Guardrail NBI:

36D. Appr Guardrail Terminal NBI:

59. Superstructure NBI:

60. Substructure NBI:

61. Channel NBI:

62. Culvert NBI:

71. Waterway Adeq NBI:

72. Appr Roadway Alignment NBI:

Inventory Notes:

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

Joe Grau
Inspector's Signature

Glenn Pagel
Reviewer's Signature

MINNESOTA BRIDGE INSPECTION REPORT

08/24/2016

Inspector: CO Bridge

BRIDGE 90405 BNSF RR OVER CSAH 51(LEXINGTON)

County: Ramsey
City: St Paul
Township:
Section: 26 Township: 029N Range: 23W
Span Type: 1 - Concrete 11 - Arch - Deck
List:
NBI Deck: N Super: 5 Sub: 5 Chan: N

Location: 0.2 MI S OF JCT MSAS 122
Route: Ref. Pt.:
Control Section:
Maint. Area:
Local Agency Bridge Nbr.:
Culv: N
Open, Posted, Closed: A - Open
MN Scour Code: A - NON WATERWAY

Length: 110.0 ft.
Deck Width: 73.0 ft.
Rdwy. Area/ Pct. Unsnd: sq. ft. / %
Paint Area/ Pct. Unsnd: sq. ft. / %
Culvert: N/A
Postings:

Appraisal Ratings - Approach: 5 Waterway: N
Required Bridge Signs - Load Posting: 0 - Not Required
Horizntal: 0 - Not Required
Traffic: 0 - Not Required
Vertical: 2 - Shldr Clr Restr (Arch)

Unofficial Structurally Deficient N
Unofficial Functionally Obsolete N
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
144	Reinforced Concrete Arch	Routine	05/14/2016	52 LF	0	52	0	0
		Migrated Values		52 LF	0	52	0	0

Notes: Many leakage stained vertical cracks in the arch which are mostly at the lower 6 feet. 2000-08.
Minor spalling along these cracks.
South facia of arch cracked and spalling. 1985-2016
South arch is 1-1/2'' lower at east and west abutments than north arch. 85-15
Moderate cracking, leaching, staining and surface scale present. 2013-16
Minor delaminations and spalls present. 2013-16
Delam over traffic, SB on S. side fascia. 2016
Delam over sidewalk / traffic - NB gutter lane. 2016

215	Reinforced Concrete Abutment	Routine	05/14/2016	181 LF	65	60	53	3
		Migrated Values		181 LF	65	60	53	3

Notes: Both abutments have spalling and cracking, especially along bases. 2000-16
Spalling on much of the vertical abutment faces and base. 2006-16
Significant amount of water being transmitted thru the abutment. 2009-16
Moderate cracking, leaching, staining and surface scale present. 2013-16
Minor delamination and spalls present. 2013-16
CS 3 - has extensive deterioration, spalls and scaling. 2014-16
CS 4 - Spalling deeper than 4''. 2016
Coping and vertical faces are spalling, especially at the bottom, 2000-16
Moderate cracking, leaching, staining and surface scale present. 2013-16
Minor delamination and spalls present. 2013-16

800	Critical Deficiencies or Safety Hazards	Routine	05/14/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0

Notes: NO CRITICAL FINDINGS OBSERVED DURING THE LAST INSPECTION. None found in 2016.

880	Impact Damage	Routine	05/14/2016	1 EA	0	1	0	0
		Migrated Values		1 EA	0	1	0	0

Notes: Impact damage has occurred, mostly outside lanes. 2013-16

890	Load Posting or Vertical Clearance Signing	Routine	05/14/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0

Notes: The north advance sign only reads low clearance. 98-07.
12'-8'' at center line of inside N.B. lane and has been hit and damaged. 2007-11
13'-0'' at center of S.B. lane
10'-6'' at S.G.L. 2014
9'-4'' at N.G.L. 2014

New signs. 2012

BRIDGE 90405 BNSF RR OVER CSAH 51(LEXINGTON)

ELEM NBR	ELEMENT NAME	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
891	Other Bridge Signing	Routine	05/14/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
	Notes: All required signage is in place. 2015-16							
892	Slopes & Slope Protection	Routine	05/14/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
	Notes: Use this element to rate the condition of slopes and slope protection.							
894	Deck & Approach Drainage	Routine	05/14/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
	Notes: Use this element to rate the condition, function, and adequacy of the drainage system.							
895	Sidewalk, Curb, & Median	Routine	05/14/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
	Notes: Curb and walk is under bridge , not on bridge. 2012-15							
899	Miscellaneous Items	Routine	05/14/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
900	Protected Species	Routine	05/14/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
	Notes: Use this element to track the presence of protected species living on this structure. None noticed in 2016.							

General Notes: BNSF RR contact info:

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michael.anderson5@bnsf.com

Lane Gilliland bridge inspector cell (612) 219-4219

58. Deck NBI:

36A. Brdg Railings NBI: Roadway is under bridge.

36B. Transitions NBI:

36C. Appr Guardrail NBI:

36D. Appr Guardrail Terminal NBI:

59. Superstructure NBI:

60. Substructure NBI:

61. Channel NBI:

62. Culvert NBI:

71. Waterway Adeq NBI:

72. Appr Roadway Alignment NBI:

Inventory Notes:

Joe Grau

Glenn Pagel

BRIDGE 90405 BNSF RR OVER CSAH 51(LEXINGTON)

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

Inspector's Signature

Reviewer's Signature

Pictures

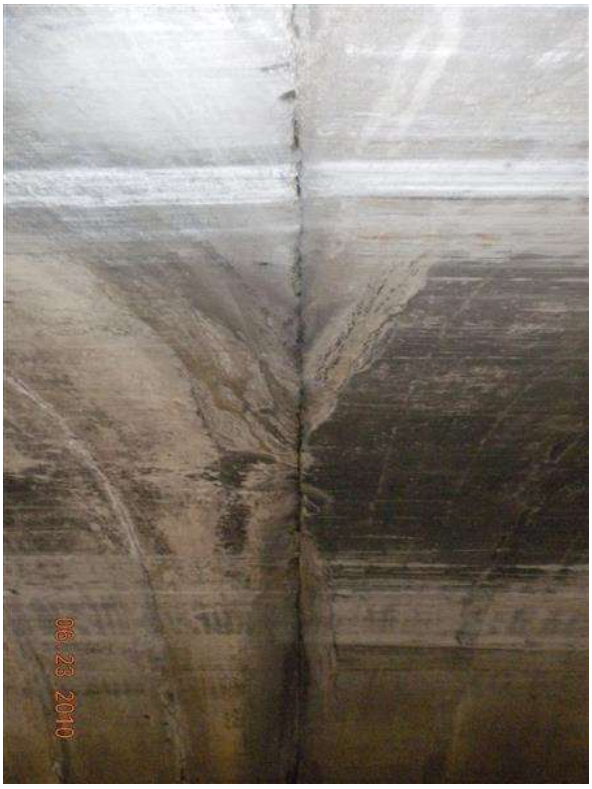

Photo 1 - 6-23-2010 CL_joint

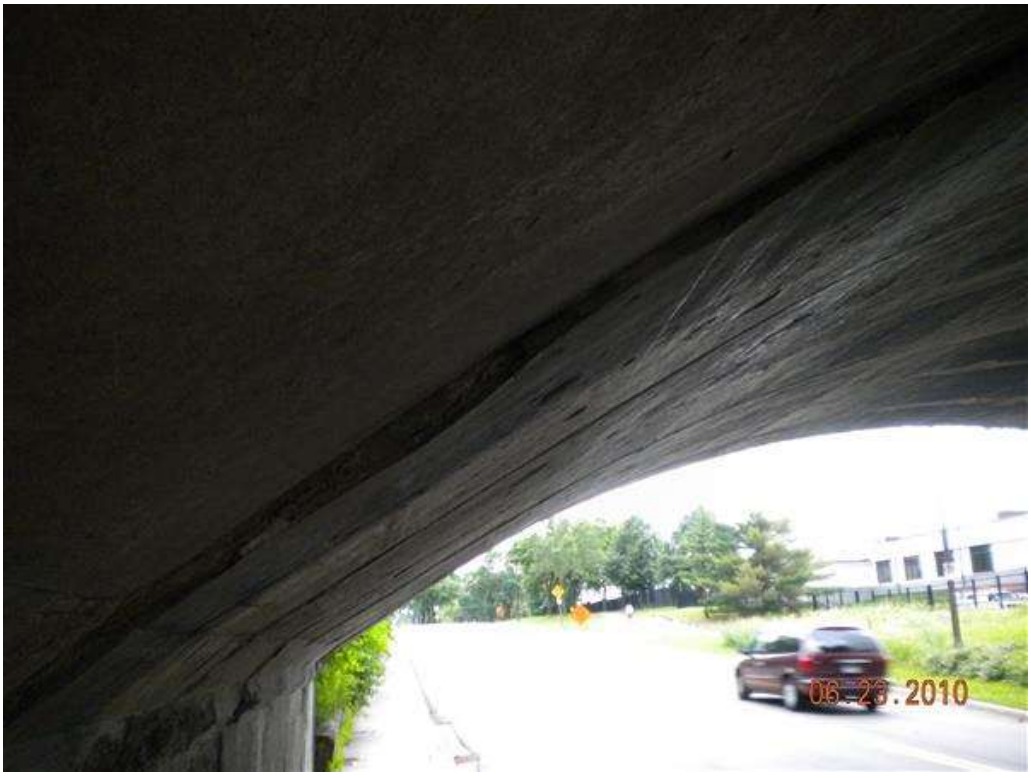

Photo 2 - 6-23-2010 CL_joint_offset

Pictures

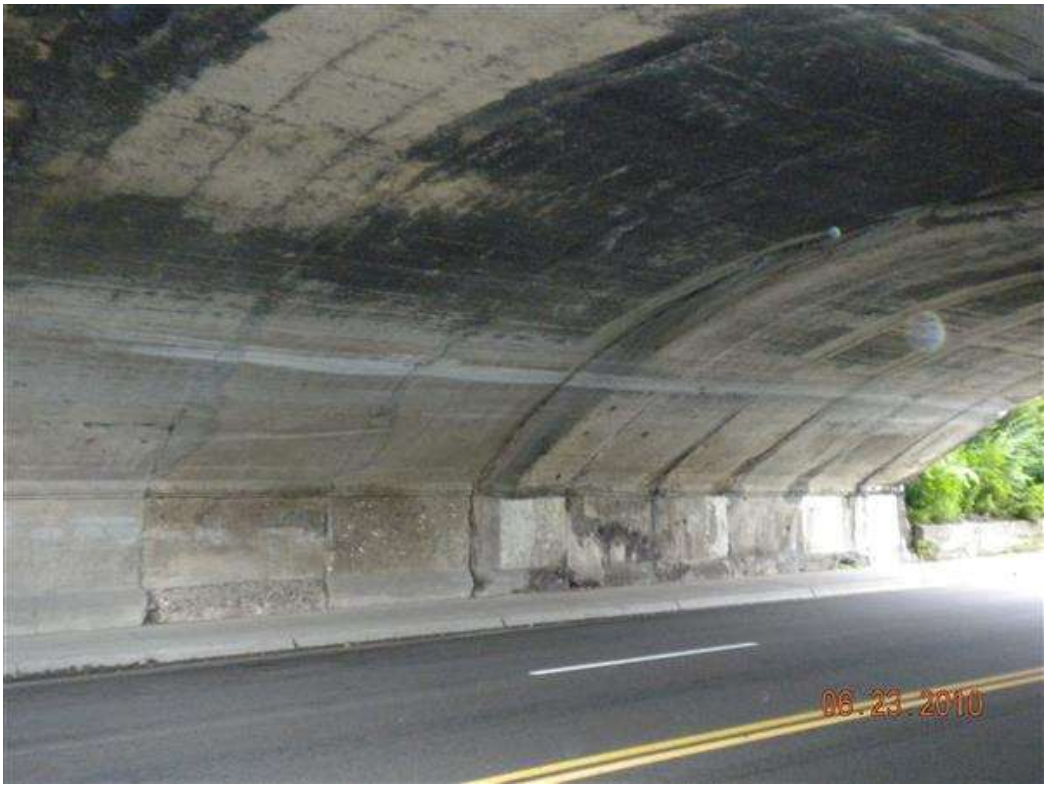

Photo 3 - 6-23-2010 eastside arch

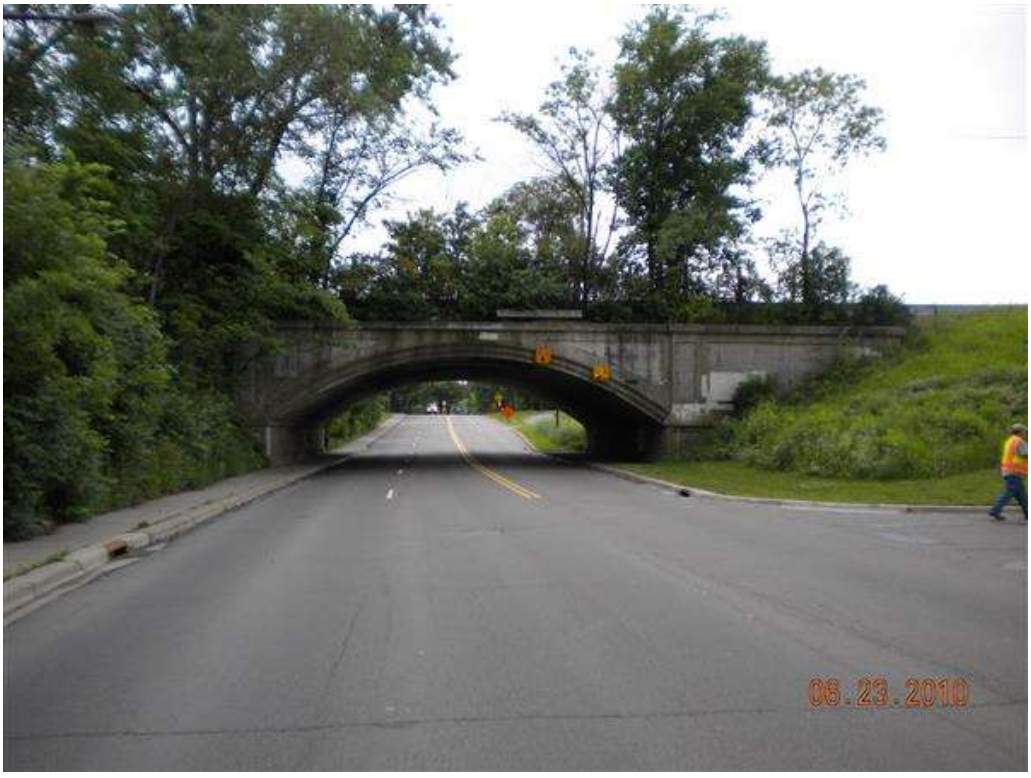

Photo 4 - 6-23-2010 SB_elevation view

Pictures

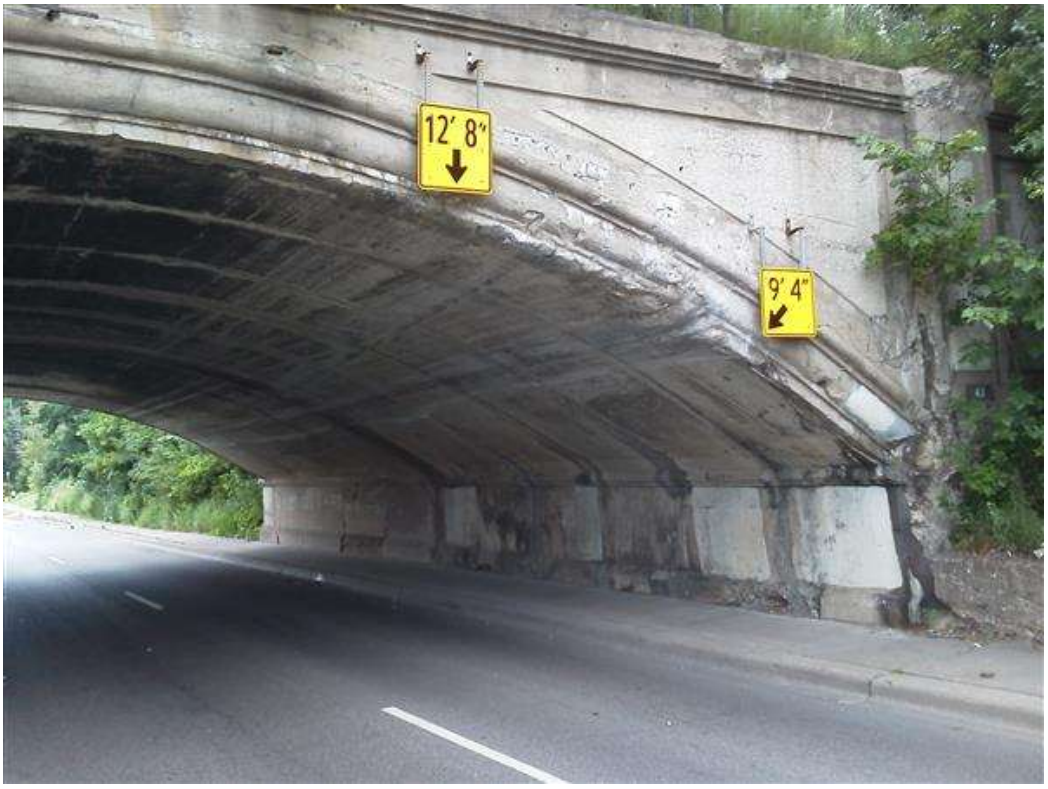

Photo 5 - IMG_20120628_080715

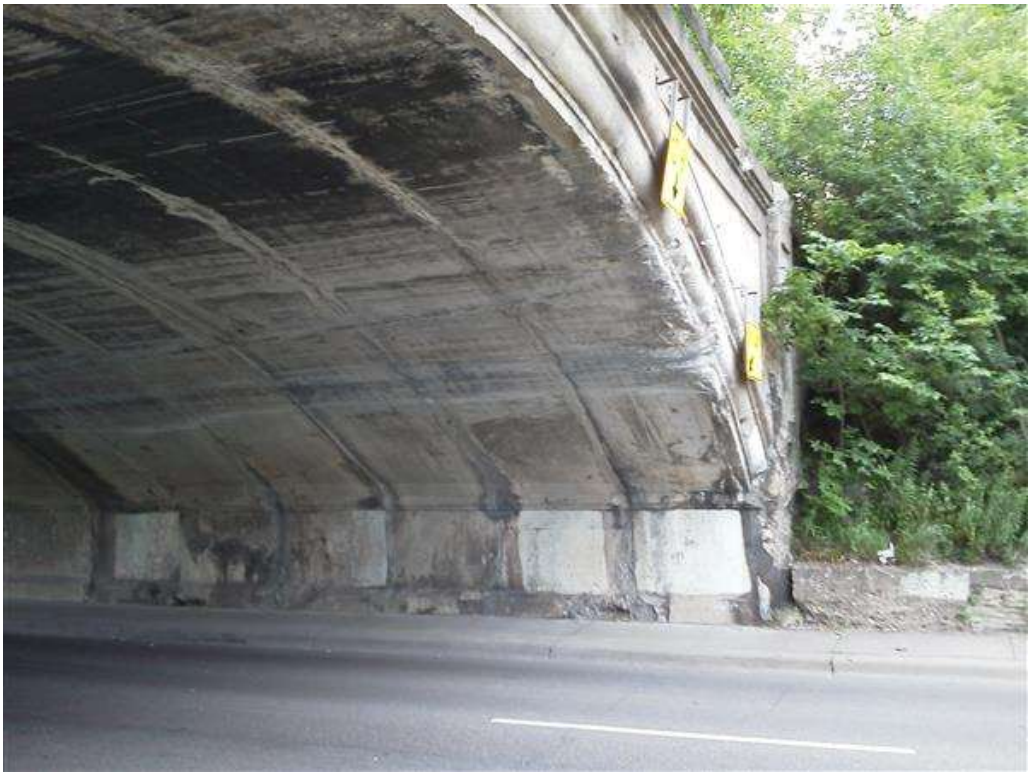

Photo 6 - IMG_20120628_080745

Pictures

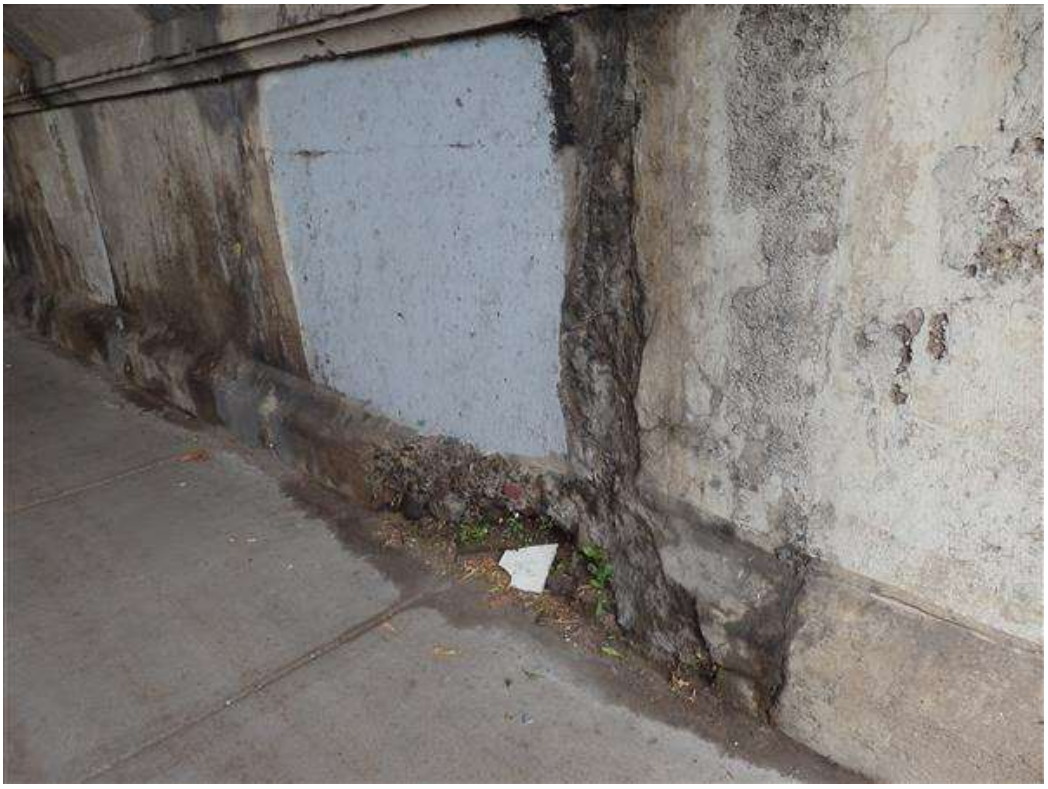

Photo 7 - Abutment at sidewalk E side (1)

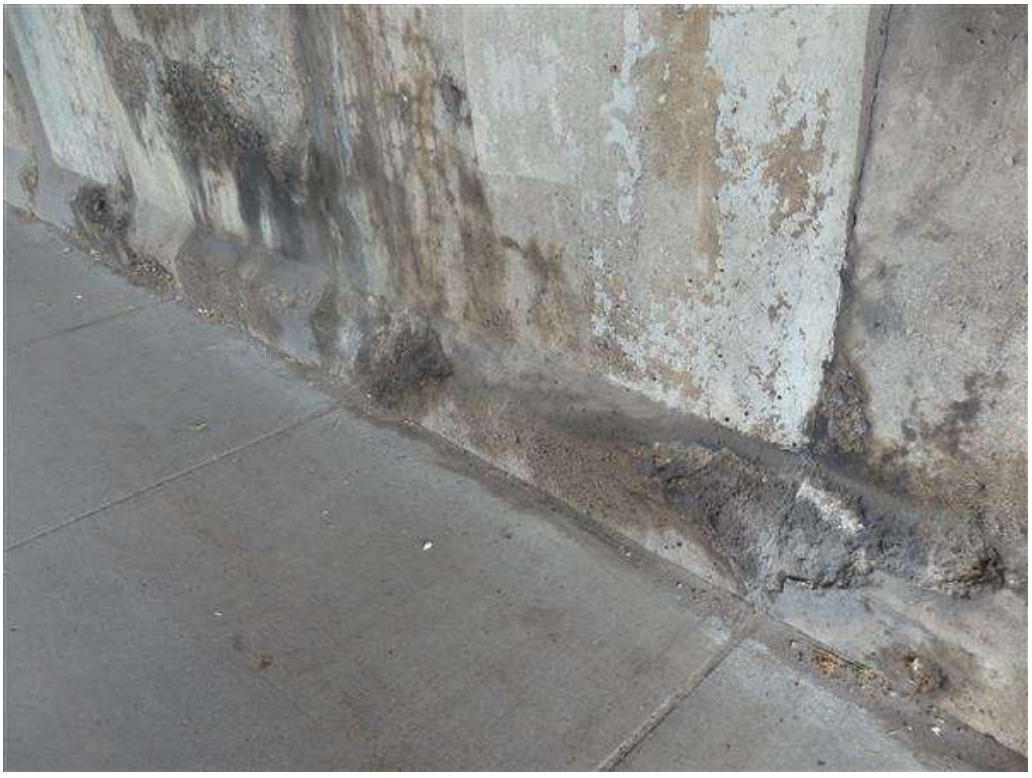

Photo 8 - Abutment at sidewalk E side (2)

Pictures

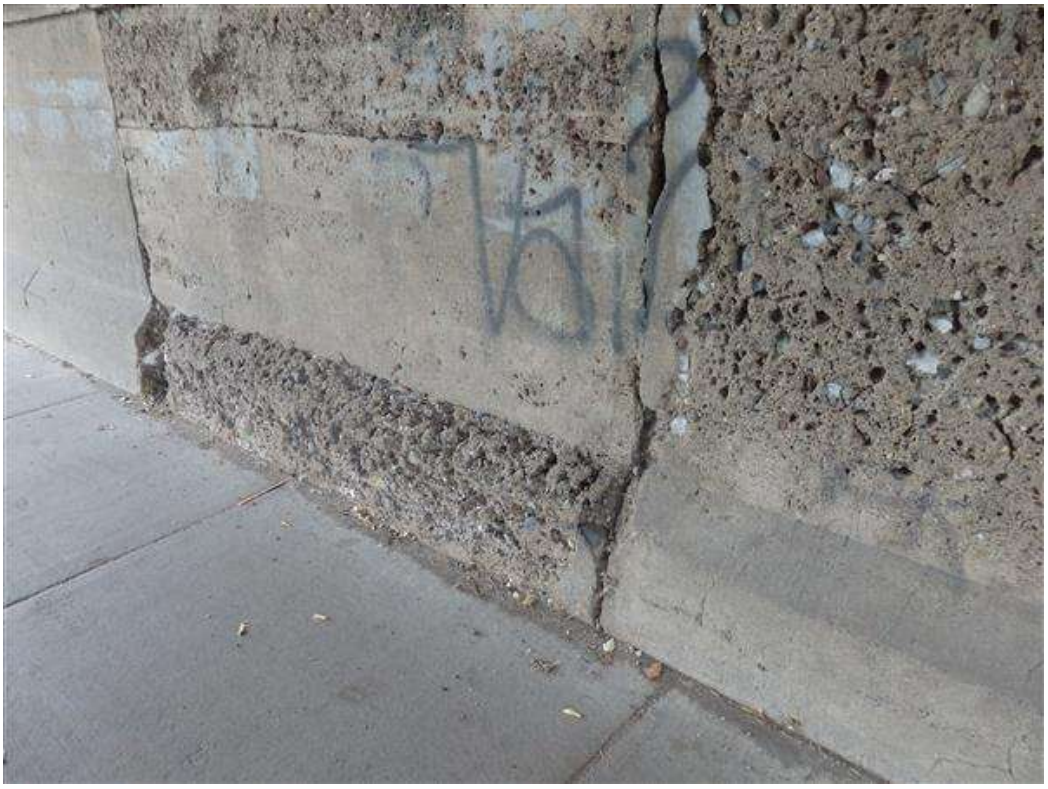

Photo 9 - Abutment at sidewalk E side (3)

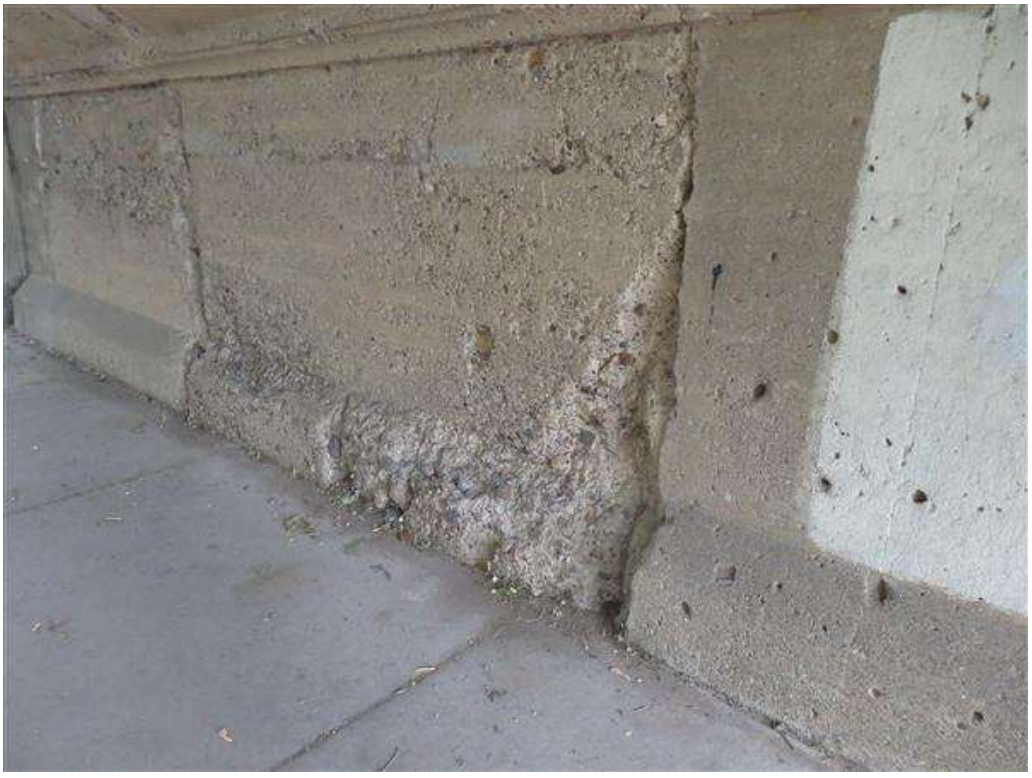

Photo 10 - Abutment at sidewalk W side (1)

Pictures

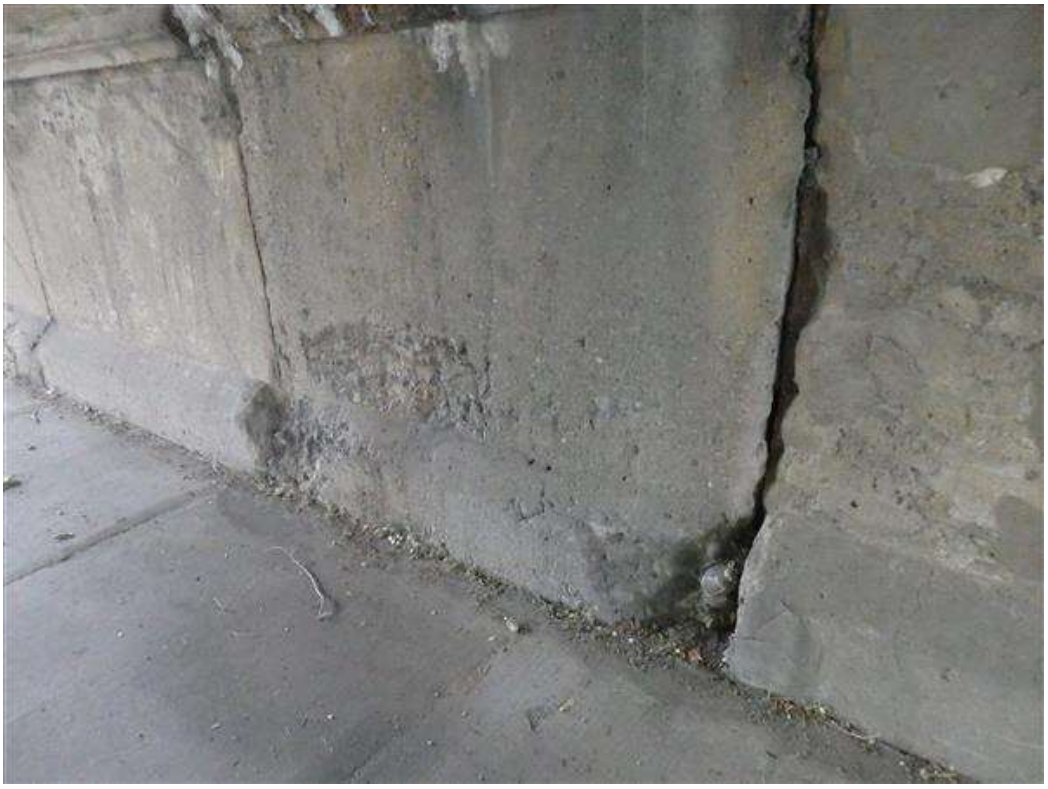

Photo 11 - Abutment at sidewalk W side (2)

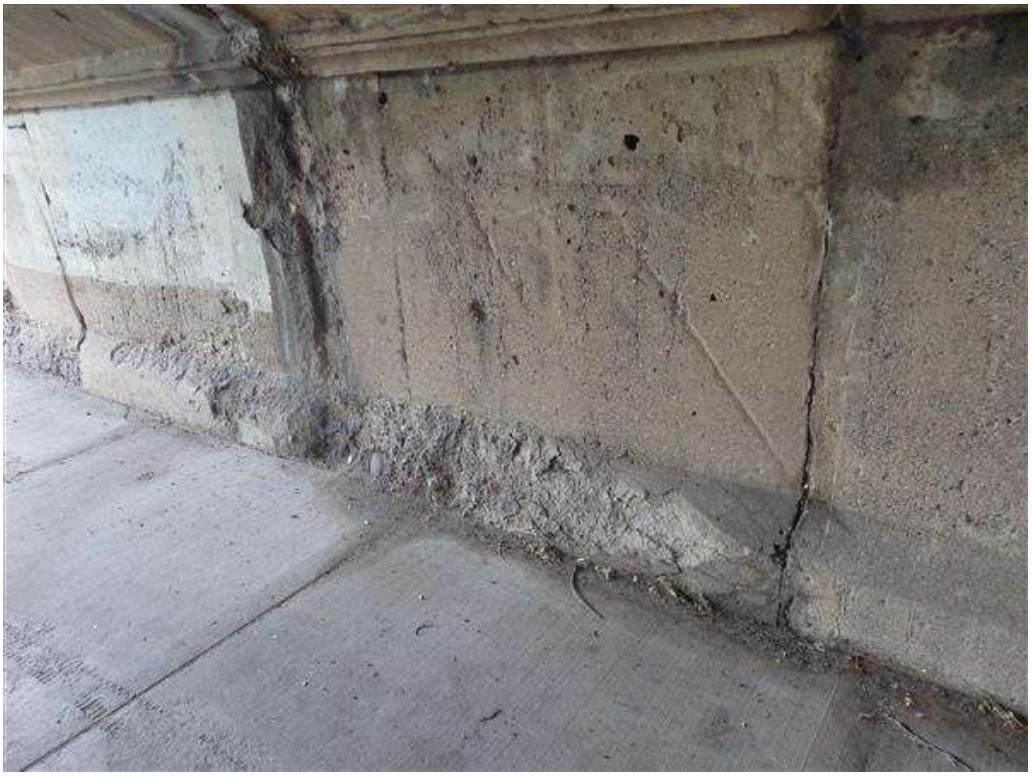

Photo 12 - Abutment at sidewalk W side (3)

Pictures

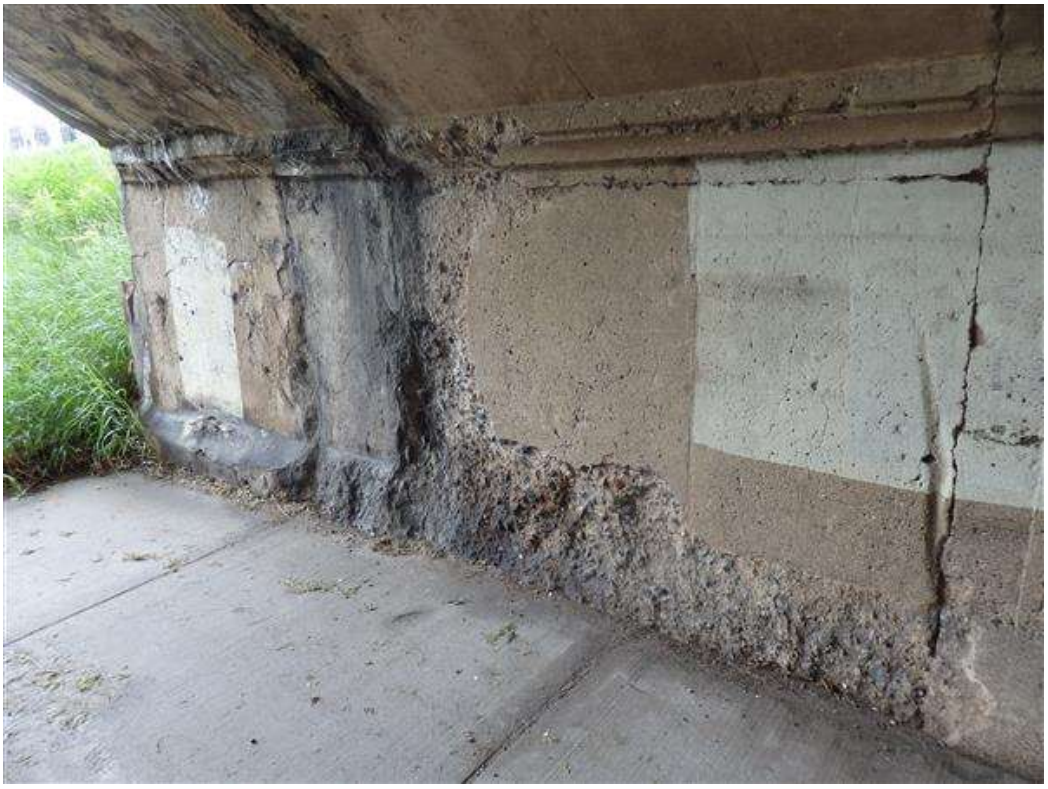

Photo 13 - Abutment at sidewalk W side (4)

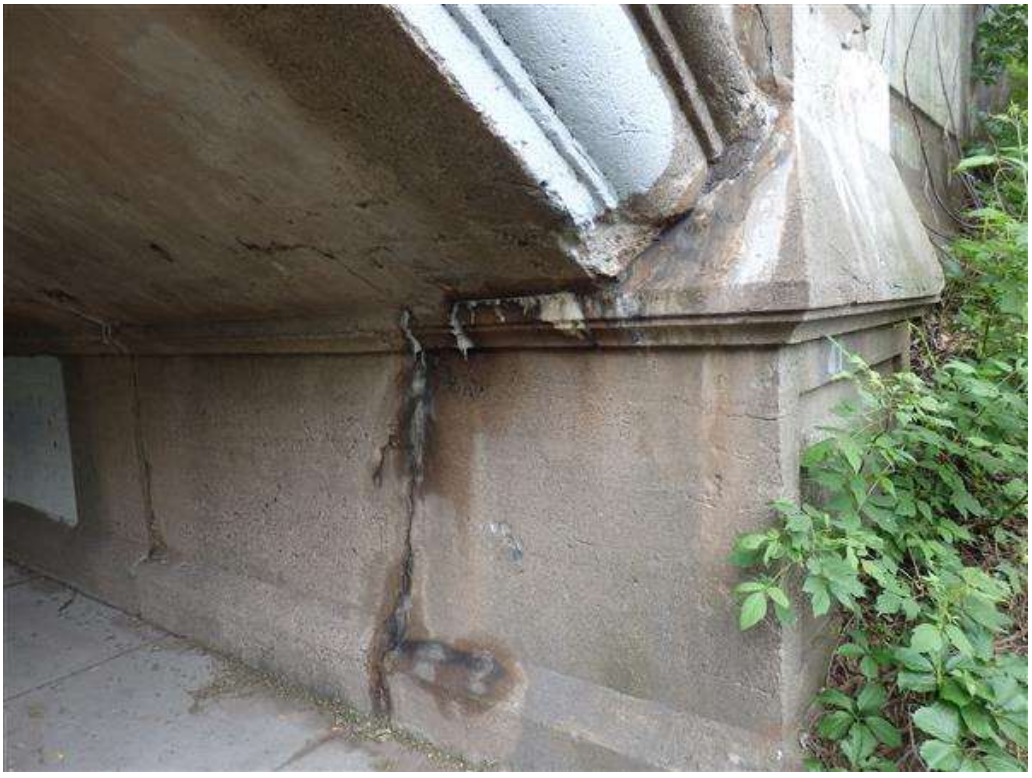

Photo 14 - NW corner

1. 6-23-2010 CL_joint.JPG

2. 6-23-2010 CL_joint_offset.JPG

3. 6-23-2010 eastside arch.JPG

4. 6-23-2010 SB_elevation view.JPG

5. IMG_20120628_080715.jpg

6. IMG_20120628_080745.jpg

7. Abutment at sidewalk E side (1).JPG

8. Abutment at sidewalk E side (2).JPG

9. Abutment at sidewalk E side (3).JPG

10. Abutment at sidewalk W side (1).JPG

11. Abutment at sidewalk W side (2).JPG

12. Abutment at sidewalk W side (3).JPG

13. Abutment at sidewalk W side (4).JPG

14. NW corner.JPG

Culvert

Bridge No.: 90405

Culvert

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

Minnesota Scour Code: A - NON WATERWAY

Waterway Inspection

Item 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.

Comments:

Completed On _____ By _____

Channel

Bridge No.: 90405

Channel

Item	*Description*	*Condition*	*Comments*
Channel Overall:	**NBI Item 61**	N	

Bank Protection/Revetment

Item	*Description*	*Condition*	*Comments*
Upstream Bank Protection:			
Downstream Bank Protection:			
Bridge Revetment:			

Minnesota Scour Code: A - NON WATERWAY

Underwater Inspection

Underwater Inspection By Divers:

No. of Piers To Be Inspected:

Waterway Characteristics

Reference Point:		**High Water Elev.:**		**Current Water Elev.:**	
Pile Tip Elev.:		**Low Water Elev.:**		**Current Streambed Elev.:**	
		Scour Hole Elev.:		**Current Scour Hole Elev.:**	

Waterway Inspection: (Not applicable for culverts)

Item No.	Yes, No, NA or Not Visible	Description
1.		Is there a significant build-up 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 vertical movement of 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 signs of distress in 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 bottom of spread footings?
		☐ C. scour below the bottom of high abutment footings?
		☐ D. that the streambed has scoured five feet or more below the original streambed elevation at pier bents?

10. _____ Have the scour countermeasures been damaged or otherwise made ineffective?

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.: 90405

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
   - *http://www.dot.state.mn.us/bridge/hydraulics/scour.html*
   - 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	Source Code	Work Code	Description	P/R	Priority	Work Order #	Year Due	Last Viewed	Entered	Start Date	Completed

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.: 90405

BRIDGE OWNER: County Highway Agency

DATE INSPECTED: 05/14/2016

STRUCTURE TYPE: Concrete Arch - Deck

FACILITY CARRIED: BNSF RR

FEATURES INTERSECTED: CSAH 51(LEXINGTON)

TYPE OF INSPECTION: ☑ ROUTINE
☐ FRACTURE CRITICAL
☐ PINNED ASSEMBLY:
☐ SPECIAL:
☐ DAMAGE:
☐ COMPLEX:

Check all that apply:

Redundancy: ☐ Load Path ☐ Structural ☐ Internal

Connection Type: ☐ Riveted ☐ Bolted ☐ Welded ☐ Other:

1. Was a critical finding identified during this inspection or upon structural review? ☐ Yes ☐ No

   a) If selected "**Yes**" above, state briefly the finding(s):

2. If a critical finding was identified, what is the 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. ☐ Yes ☐ No

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

   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