

Bridge Inspection Report

A5102
I 540-SEC 1, WB LN
over
US 71-SEC 14, RR



Inspection Date:

Inspected By:

Inspection Type(s):

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Inspector:

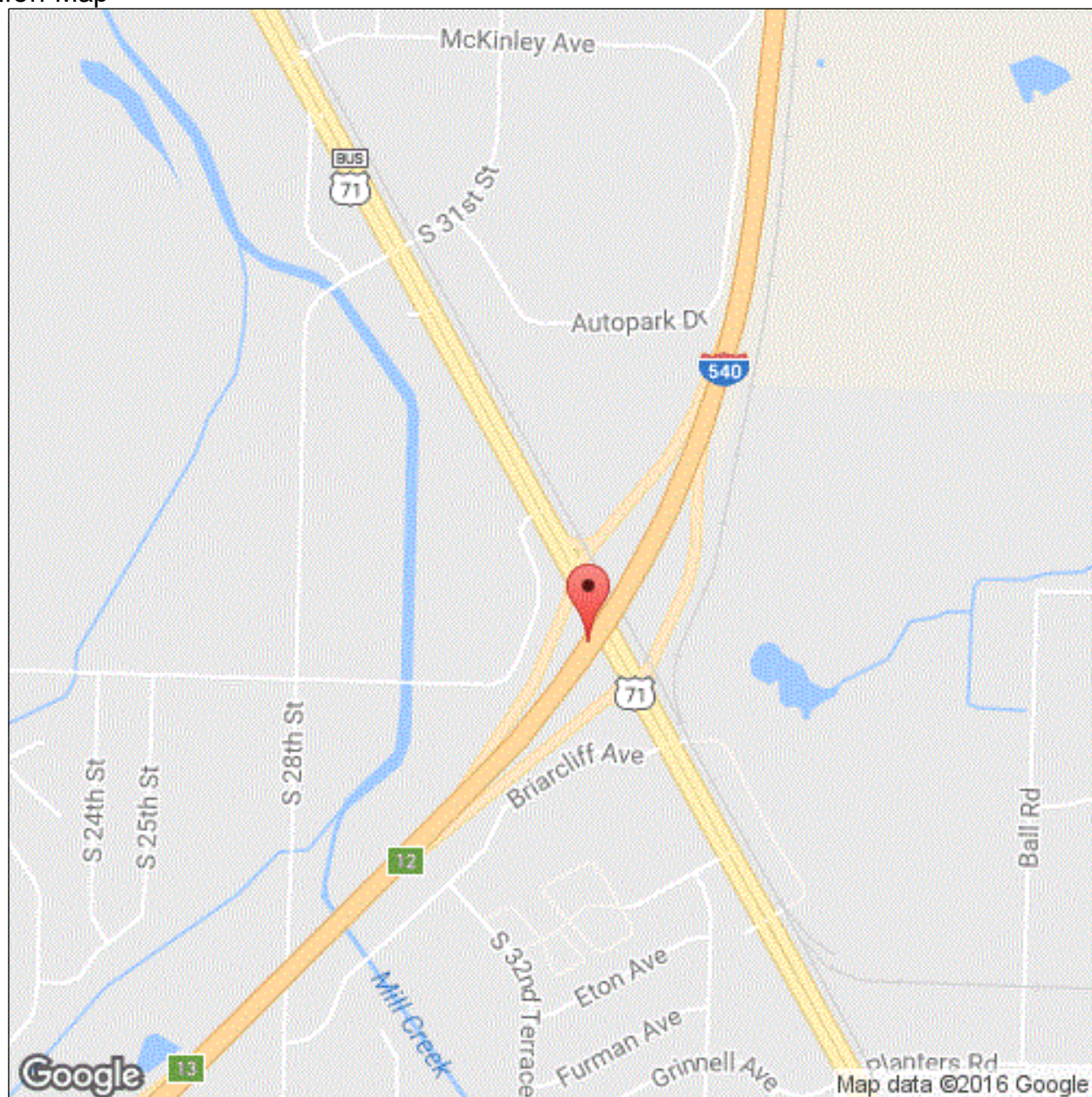
Inspection Date:

Structure Number: A5102

Facility Carried: I 540-SEC 1, WB
LN

Bridge Inspection Report

Location Map



Latitude: 35.312302

Longitude: -94.399231

Inspector:

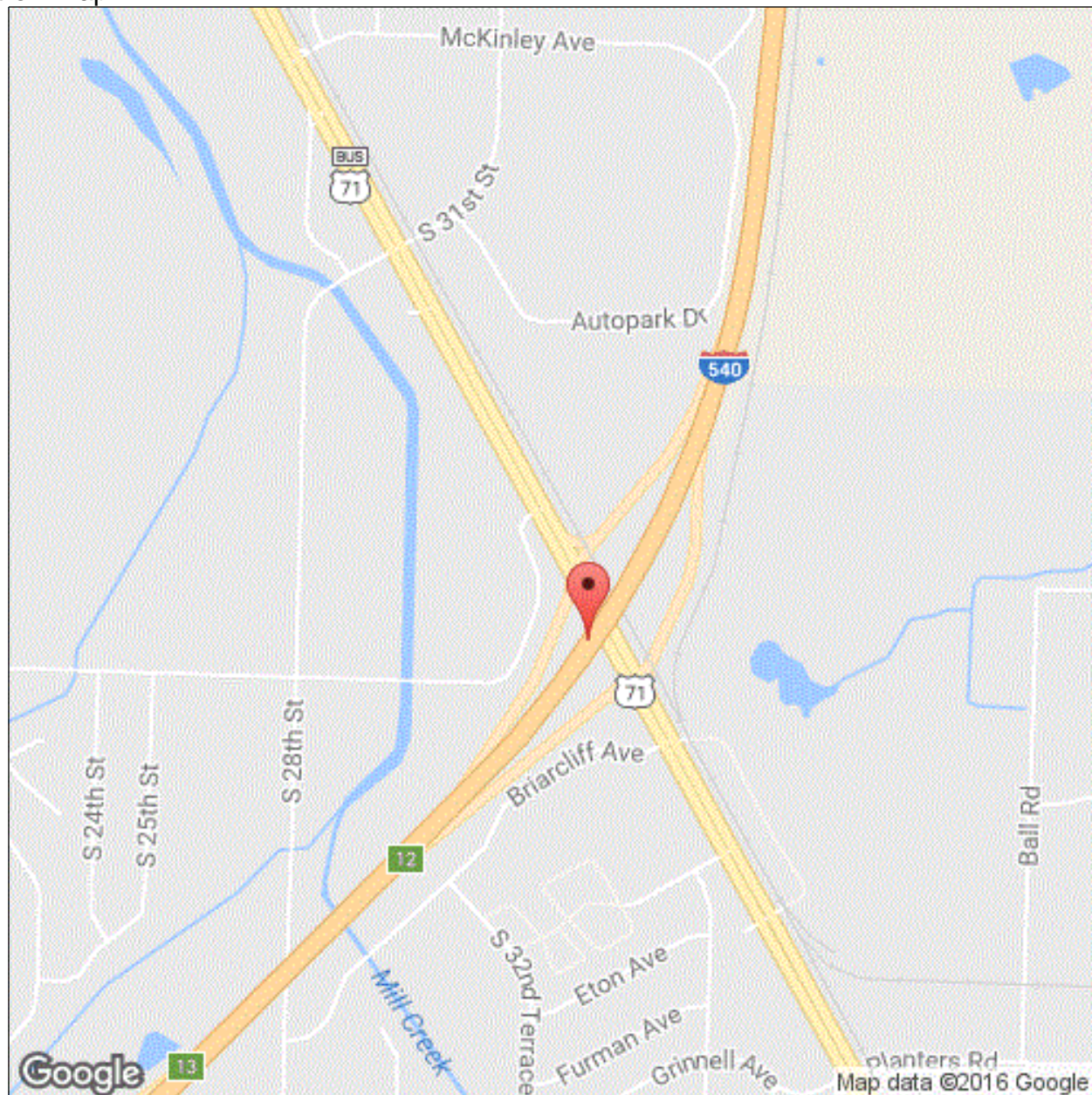
Inspection Date:

Structure Number: A5102

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LN

Bridge Inspection Report

Location Map



Latitude: 35.312302

Longitude: -94.399231

Inspector:

Structure Number: A5102

Inspection Date:

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LN

Bridge Inspection Report

Executive Summary

09/19/2016 - JCJ & JML - Minimum Vertical Underclearances were actual field measured this date. See Micro-Station drawing attached to this report for additional information.

Inspector:

Structure Number: A5102

Inspection Date:

Facility Carried: I 540-SEC 1, WB LN

Bridge Inspection Report

National Bridge Inventory

IDENTIFICATION		INSPECTIONS	
(1) STATE CODE	056 - Arkansas	(90) INSPECTION DATE	09/19/2016
(8) STRUCTURE NUMBER	A5102	(91) DESIGNATED INSPECTION FREQUENCY	24
(5) INV. ROUTE (ON/UNDER)	1 1 1 540 4	(92) CRITICAL FEATURE INSPECTION	(93) CFI DATE
(2) HIGHWAY AGENCY	04	(3) COUNTY CODE	131
(4) PLACE CODE	24060	A. FRACTURE CRITICAL DETAIL	N
(6) FEATURES INTERSECTED	US 71-SEC 14, RR	B. UNDERWATER INSPECTION	N
(7) FACILITY CARRIED	I 540-SEC 1, WB LN	C. OTHER SPECIAL	N
(9) LOCATION	JCT I540 & US 71	CONDITION	
(11) MILEPOINT	2.570	(58) DECK	6
(12) BASE HIGHWAY NETWORK	1	(59) SUPERSTRUCTURE	7
(13A) LRS INVENTORY ROUTE	0000540010	(60) SUBSTRUCTURE	6
(13B) SUBROUTE NUMBER	00	(61) CHANNEL & CHANNEL PROTECTION	N
(16) LATITUDE	35.312302	(62) CULVERT	N
(17) LONGITUDE	-94.399231	LOAD RATING AND POSTING	
(98A) BORDER BRIDGE CODE		(31) DESIGN LOAD	6
PERCENT RESPONSIBILITY	(99) BORDER BRIDGE STRUCT	(63) METHOD USED TO DETERMINE OPERATING RATING	1
STRUCTURE TYPE AND MATERIAL		(64) OPERATING RATING	60.0
(43) STRUCTURE TYPE, MAIN		(65) METHOD USED TO DETERMINE INVENTORY RATING	1
A) KIND OF MATERIAL/DESIGN:	3 - Steel	(66) INVENTORY RATING	36.0
B) TYPE OF DESIGN/CONSTR:	02 - Stringer/Multi-beam or Girder	(70) BRIDGE POSTING	5
(44) STRUCTURE TYPE, APPROACH SPANS		(41) STRUCTURE OPEN/POSTED/CLOSED	A
A) KIND OF MATERIAL/DESIGN:	0 - Other	APPRAISAL	
B) TYPE OF DESIGN/CONSTR:	00 - Other	(67) STRUCTURAL EVALUATION	6
(45) NUMBER OF SPANS IN MAIN	5	(68) DECK GEOMETRY	7
(46) NUMBER OF APPROACH	0	(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL	6
(107) DECK STRUCTURE TYPE	1	(71) WATERWAY ADEQUACY	N
(108A) WEARING SURFACE	1	(72) APPROACH ROADWAY ALIGNMENT	8
(108B) DECK MEMBRANE	0	(36) TRAFFIC SAFETY FEATURE	
(108C) DECK PROTECTION	0	36A) BRIDGE RAILINGS:	1
AGE OF SERVICE		36B) TRANSITIONS:	1
(27) YEAR BUILT	1975	36C) APPROACH GUARDRAIL:	1
(106) YEAR RECONSTRUCTED	0000	36D) APPROACH GUARDRAIL ENDS:	1
(42) TYPE OF SERVICE	ON 1 UNDER 4	(113) SCOUR CRITICAL BRIDGES	N
(28) LANES	ON 02 UNDER 06	SUFFICIENCY RATING	0
(29) AVERAGE DAILY TRAFFIC	42301	STATUS	98.0
(19) BYPASS DETOUR LENGTH	0	CLASSIFICATION	
(30) YEAR OF AVERAGE DAILY TRAFFIC	2013	(112) NBIS BRIDGE LENGTH	Y
(109) AVERAGE DAILY TRUCK TRAFFIC	1	(104) HIGHWAY SYSTEM OF THE INVENTORY ROUTE	1
GEOMETRIC DATA		(26) FUNCTIONAL CLASSIFICATION OF INVENTORY ROUTE	11
(48) LENGTH OF MAX SPAN (ft.)	78	(100) STRAHNET HIGHWAY DESIGNATION	1
(49) STRUCTURE LENGTH (ft.)	347	(101) PARALLEL STRUCTURE DESIGNATION	L
(50) CURB/SIDEWALK WIDTHS (ft.)	LEFT 0 RIGHT 0	(102) DIRECTION OF TRAFFIC	1
(51) BRDG RDWY WIDTH CURB-TO-CURB (ft.)	41.3	(103) TEMP STRUCTURE	
(52) DECK WIDTH, OUT-TO-OUT (ft.)	43.7	(105) FEDERAL LANDS HIGHWAYS	0
(32) APPROACH ROADWAY WIDTH (ft.)	38.1	(110) DESIGNATED NATIONAL NETWORK	1
(33) BRIDGE MEDIAN	0	(20) TOLL	3
(34) SKEW (DEG.)	28	(21) MAINTENANCE RESPONSIBILITY	01
(35) STRUCTURE FLARED	0	(22) OWNER	01
(10) INV RTE, MIN VERT CLEAR (ft.)	99.99	(37) HISTORICAL	5
(47) TOTAL HORIZONTAL CLEARANCE (ft.)	42.7	NAVIGATION DATA	
(53) VERTICAL CLEARANCE OVER BRIDGE ROADWAY (ft.)	99.99	(38) NAVIGATION CONTROL	N
(54) VERTICAL UNDER CLEARANCE (ft.)	H 20.4	(111) PIER OR ABUTMENT PROTECTION	1
(55) LATERAL UNDER CLEARANCE RIGHT (ft.)	H 20.8	(39) NAV VERT CLEARANCE (ft.)	0
(56) MIN LATERAL UNDER CLEARANCE (ft.)	17.6	(116) MIN NAVIGATION VERT CLEARANCE, VERT LIFT BRIDGE (ft.)	0
PROPOSED IMPROVEMENTS		(40) NAV HORIZONTAL CLEARANCE (ft.)	0
(75A) TYPE OF WORK PROPOSED	(75B) WORK DONE BY		
(76) LENGTH OF STRUCTURE IMPROVEMENT (ft.)	0		
(94) BRIDGE IMPROVEMENT COST (\$)	0		
(95) ROADWAY IMPROVEMENT COST (\$)	0		
(96) TOTAL PROJECT COST	0		
(97) YEAR OF IMPROVEMENT COST ESTIMATE			
(114) FUTURE ADT	21745		
(115) YEAR OF FUTURE ADT	2028		

Inspector:

Structure Number: A5102

Inspection Date:

Facility Carried: I 540-SEC 1, WB LN

Bridge Inspection Report

National Bridge Inventory

UNDER RECORD A

IDENTIFICATION

(1) STATE CODE	056 - Arkansas	(7) FACILITY CARRIED	I 540-SEC 1, WB LN
(3) COUNTY CODE	131	(8) STRUCTURE NUMBER	A5102
(4) PLACE CODE	24060	(9) LOCATION	JCT I540 & US 71
(5) INV. ROUTE (ON/UNDER)	A 2 1 71 3	(11) MILEPOINT	9.808 (12) BASE HIGHWAY NETWORK 1
(6) FEATURES INTERSECTED	US 71-SEC 14, RR	(13A) LRS INVENTORY ROUTE	0000071140 (13B) SUBROUTE NUMBER 00
		(16) LATITUDE	35. (17) LONGITUDE -94.399222222222
			312333333333

STRUCTURE TYPE AND MATERIAL

(43) STRUCTURE TYPE, MAIN A) KIND OF MATERIAL/DESIGN: 3 - Steel
 B) TYPE OF DESIGN/CONSTR: 02 - Stringer/Multi-beam or Girder

AGE OF SERVICE

(19) BYPASS DETOUR LENGTH	1	(30) YEAR OF AVERAGE DAILY TRAFFIC	2014
(27) YEAR BUILT	1975	(42) TYPE OF SERVICE	ON 1 UNDER 4
(28) LANES	ON 02 UNDER 06	(109) AVERAGE DAILY TRUCK TRAFFIC	1
(29) AVERAGE DAILY TRAFFIC	13500		

GEOMETRIC DATA

(10) INV RTE, MIN VERT CLEARANCE	20.5	(48) LENGTH OF MAXIMUM SPAN	78 (49) STRUCTURE LENGTH 347
(47) TOTAL HORIZONTAL CLEARANCE	65.6		

CLASSIFICATION

(20) TOLL	3	(102) DIRECTION OF TRAFFIC	1
(26) FUNCTIONAL CLASSIFICATION OF INVENTORY ROUTE	14	(103) TEMP STRUCTURE	
(100) STRAHNET HIGHWAY DESIGNATION	2	(104) HIGHWAY SYSTEM OF THE INVENTORY ROUTE	1
(101) PARALLEL STRUCTURE DESIGNATION	L	(110) DESIGNATED NATIONAL NETWORK	1

UNDER RECORD B

IDENTIFICATION

(1) STATE CODE	056 - Arkansas	(7) FACILITY CARRIED	I 540-SEC 1, WB LN
(3) COUNTY CODE	131	(8) STRUCTURE NUMBER	A5102
(4) PLACE CODE	24060	(9) LOCATION	JCT I540 & US 71
(5) INV. ROUTE (ON/UNDER)	B 2 1 71 1	(11) MILEPOINT	9.808 (12) BASE HIGHWAY NETWORK 1
(6) FEATURES INTERSECTED	US 71-SEC 14, RR	(13A) LRS INVENTORY ROUTE	0000071140 (13B) SUBROUTE NUMBER 00
		(16) LATITUDE	35. (17) LONGITUDE -94.399222222222
			312333333333

STRUCTURE TYPE AND MATERIAL

(43) STRUCTURE TYPE, MAIN A) KIND OF MATERIAL/DESIGN: 3 - Steel
 B) TYPE OF DESIGN/CONSTR: 02 - Stringer/Multi-beam or Girder

AGE OF SERVICE

(19) BYPASS DETOUR LENGTH	1	(30) YEAR OF AVERAGE DAILY TRAFFIC	2014
(27) YEAR BUILT	1975	(42) TYPE OF SERVICE	ON 1 UNDER 4
(28) LANES	ON 02 UNDER 06	(109) AVERAGE DAILY TRUCK TRAFFIC	1
(29) AVERAGE DAILY TRAFFIC	13500		

GEOMETRIC DATA

(10) INV RTE, MIN VERT CLEARANCE	21.4	(48) LENGTH OF MAXIMUM SPAN	78 (49) STRUCTURE LENGTH 347
(47) TOTAL HORIZONTAL CLEARANCE	65.1		

CLASSIFICATION

(20) TOLL	3	(102) DIRECTION OF TRAFFIC	1
(26) FUNCTIONAL CLASSIFICATION OF INVENTORY ROUTE	14	(103) TEMP STRUCTURE	
(100) STRAHNET HIGHWAY DESIGNATION	2	(104) HIGHWAY SYSTEM OF THE INVENTORY ROUTE	1
(101) PARALLEL STRUCTURE DESIGNATION	L	(110) DESIGNATED NATIONAL NETWORK	1

Inspector:

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Bridge Inspection Report

Element Inspection

	Environment	Total Quantity	Units	Condition State 1	Condition State 2	Condition State 3	Condition State 4
12 - Reinforced Concrete Deck	1- Ben.	14400	sq. ft.	11020	13	3367	0
	The road iron at Bent 6 in noisy under traffic load. Sounding indicates it is loose in the Lt lane and half of the Rt lane. Driving surface of the deck has numerous areas of sealable transverse, longitudinal and map cracking with no apparent repairs since the last inspection. Span 3 Rt lane has 2 areas where shallow potholes are beginning to form along the transverse cracks. Span 4 has areas that appear to be potholes forming with corresponding cracking visible on the undersurface with light efflorescence leaching from the cracks.						
1080 - Delamination/Spall/Patched Area		15			8	7	
1120 - Efflorescence/Rust Staining		5			5		
1130 - Cracking (RC and Other)		3360				3360	
107 - Steel Open Girder/Beam	1- Ben.	2429	ft.	2429			
	The paint system is beginning to chalk. Beam # 1 in Span # 2 has insignificant scrape marks on the bottom flange.						
515 - Steel Protective Coating		20646	sq. ft.	0	20646	0	0
3440 - Effectiveness (Steel Protective Coatings)		20646			20646		
205 - Reinforced Concrete Column	1- Ben.	12	each	9	3	0	0
	Bent # 4 Column # 3 has a shallow 6" spall that exposes reinforcing steel that has a rust coating with no apparent section loss at this inspection.						
1090 - Exposed Rebar		1			1		
1130 - Cracking (RC and Other)		2			2		
215 - Reinforced Concrete Abutment	1- Ben.	90	ft.	66	24	0	0
	The abutments and the backwall's have hairline vertical cracking. The abutments have minor isolated areas of superficial map cracking.						
1130 - Cracking (RC and Other)		24			24		
234 - Reinforced Concrete Pier Cap	1- Ben.	166	ft.	139	20	7	0
	Bent 4 Cap on the bottom side has a hairline crack between Columns 2 & 3. -Span 4 side of Bent 5 has an 18" vertical delamination area on the Lt side of the Cap -Span 5 side of Bent 5 cap has a basketball size delaminated area over Column 3.						
1080 - Delamination/Spall/Patched Area		10			3	7	
1130 - Cracking (RC and Other)		17			17		
302 - Compression Joint Seal	1- Ben.	262	ft.	8	78	132	44
	The compression joints seals are deteriorating at the abutments adjacent to the approach slabs and the compression deck joint seal has failed at Bent # 4. No apparent repairs by maintenance forces since the last inspection.						
2310 - Leakage		78			78		
2330 - Seal Damage		44					44

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Bridge Inspection Report

Element Inspection

2340 - Seal Cracking		88				88	
2360 - Adjacent Deck or Header		44				44	
311 - Movable Bearing	1- Ben.	35	each	23	12	0	0
Isolated areas of active corrosion, no significant or noteworthy changes since the last inspection.							
1000 - Corrosion		12			12		
313 - Fixed Bearing	1- Ben.	35	each	22	12	1	0
The masonry plates at Bent # 1 have layers of flaking rust and section loss. The sole plates have active corrosion and layers of rust beginning to form. The bearings at Bent # 6 have active corrosion and isolated areas with layers of rust beginning to form. Bearings have isolated areas of minor active corrosion. Bent # 1, Beam # 1 bearing has approximately 1/4 inch pack rust between the sole plate and the masonry plate.							
1000 - Corrosion		13			12	1	
321 - Reinforced Concrete Approach Slab	1- Ben.	3200	sq. ft.	3077	123	0	0
Minor sealable cracking in the approach slabs.							
1080 - Delamination/Spall/Patched Area		3			3		
1190 - Abrasion/Wear (PSC/RC)		120			120		
330 - Metal Bridge Railing	1- Ben.	347	ft.	344	3	0	0
09/19/2016 - JCJ & JML - There are areas with loose connections							
1020 - Connection		3			3		
331 - Reinforced Concrete Bridge Railing	1- Ben.	347	ft.	316	31	0	0
09/19/2016 - JCJ & JML - There is vertical cracking at variable spacing. There are several shallow baseball size spalls with exposed reinforcing steel in the base of the walls. There are insignificant scrape marks and shallow spalls from traffic impacts.							
1080 - Delamination/Spall/Patched Area		5			5		
1090 - Exposed Rebar		14			14		
1130 - Cracking (RC and Other)		12			12		

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Bridge Inspection Report

Pictures

Inspector:

Inspection Date:

Structure Number: A5102

Facility Carried: I 540-SEC 1, WB
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Bridge Inspection Report

Sketches

Inspector:

Inspection Date:

Structure Number: A5102

Facility Carried: I 540-SEC 1, WB
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Bridge Inspection Report

Maintenance Needs

Date Reported: 09/19/2016

Priority: C - Important

Work Code:

Deficiency Description:

The metal portions of the bridge railing have some loose connections.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Open



PHOTO 1 Description

Stage: Open



PHOTO 2 Description

Inspector:

Inspection Date:

Structure Number: A5102

Facility Carried: I 540-SEC 1, WB
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Bridge Inspection Report

Maintenance Needs

Date Reported: 9/13/2012 12:00:00 AM

Priority: D - Routine

Work Code:

Deficiency Description:

Deck -

The driving surface of the deck has sealable transverse, longitudinal and map cracking. Span # 3 has delaminated areas with shallow spalling.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description Span 1. Sealable deck cracks.

Stage: Assigned



PHOTO 2 Description Span 3 delaminated area.

Inspector:

Inspection Date:

Structure Number: A5102

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Bridge Inspection Report

Maintenance Needs

Date Reported: 9/13/2012 12:00:00 AM

Priority: D - Routine

Work Code:

Deficiency Description:

Compression joint seals -

The pourable type compression joint seals at the abutments between the backwall's and the approach slabs have deteriorated and appear to leak water. The compression joint seal has failed at Bent # 4 allowing water to leak onto the substructure. Deck joint seals have areas that are torn and leak.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description Span 1 deck joint seal

Stage: Assigned



PHOTO 2 Description Span 2 deck joint seal

Inspector:

Inspection Date:

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Bridge Inspection Report

Maintenance Needs

Stage: Assigned



PHOTO 3 Description Bent 4 deck joint seal is missing.

Inspector:

Inspection Date:

Structure Number: A5102

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Bridge Inspection Report

Maintenance Needs

Date Reported: 9/11/2014 12:00:00 AM

Priority: D - Routine

Work Code:

Deficiency Description:

Substructure -

Column # 3 of bent # 4 has an area of spalling approximately 6" X 6" that exposes reinforcing steel in the lower portion of the column. The exposed reinforcing steel has active corrosion with initial section loss.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description Bent 4. Column 3.

Inspector:

Structure Number: A5102

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Bridge Inspection Report

Maintenance Needs

Date Reported: 9/11/2014 12:00:00 AM

Priority: C - Important

Work Code:

Deficiency Description:

Expansion joint at north abutment -

The armored compression joint assembly at the north abutment is noisy when impacted by traffic. Sounding the assembly indicated that the assembly anchorage is loose on the backwall portion of the assembly the full width of the left lane and approximately 50% of the right lane. No apparent cracks in the assembly at this inspection.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description North abutment expansion joint