

Bridge Inspection Report

B5102
I 540-SEC 1, EB LN
over
US 71-SEC 14, RR



Inspection Date:

Inspected By:

Inspection Type(s):

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Inspector:

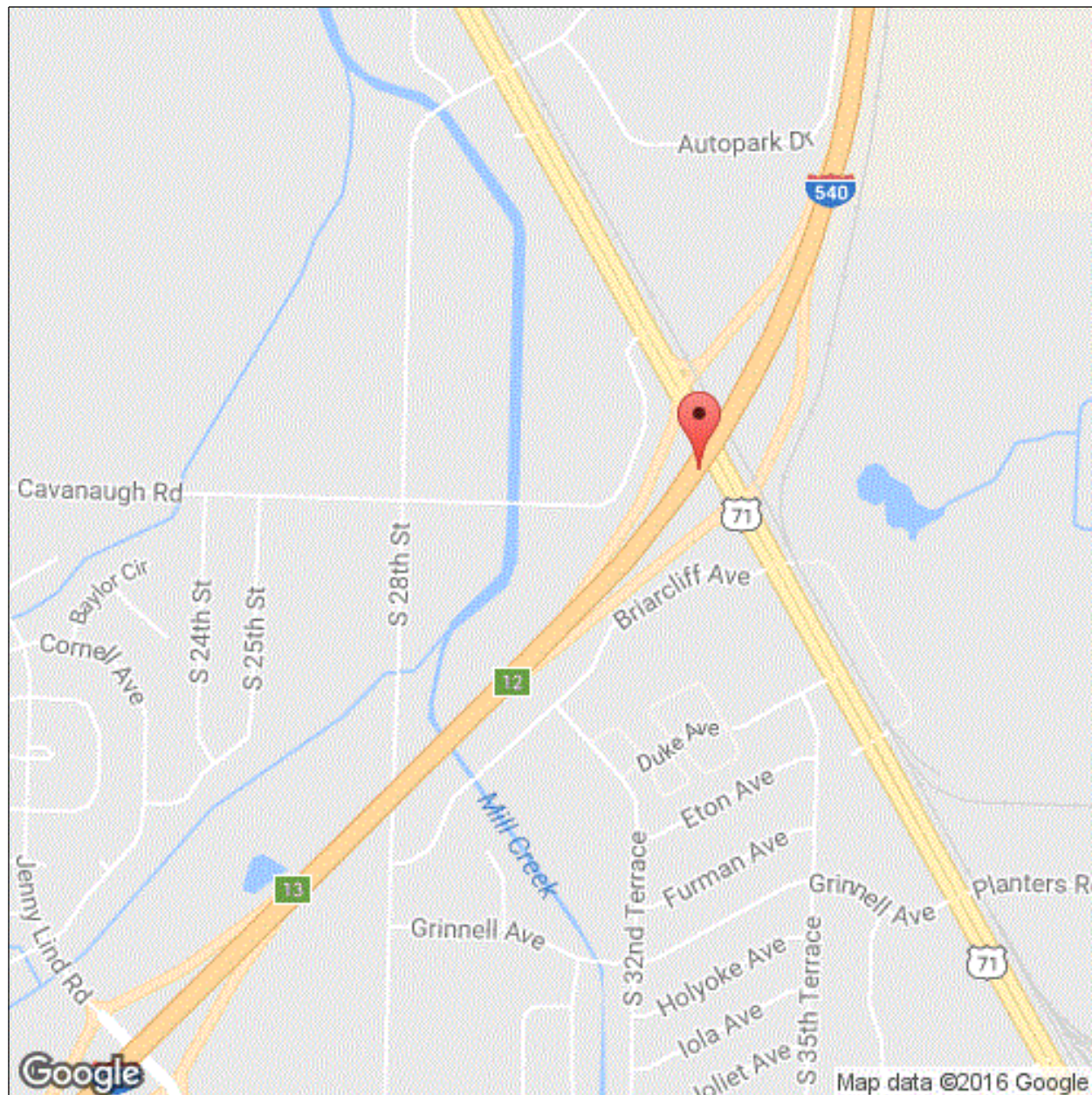
Structure Number: B5102

Inspection Date:

Facility Carried: I 540-SEC 1, EB LN

Bridge Inspection Report

Location Map



Latitude: 35.31218

Longitude: -94.39916

Inspector:

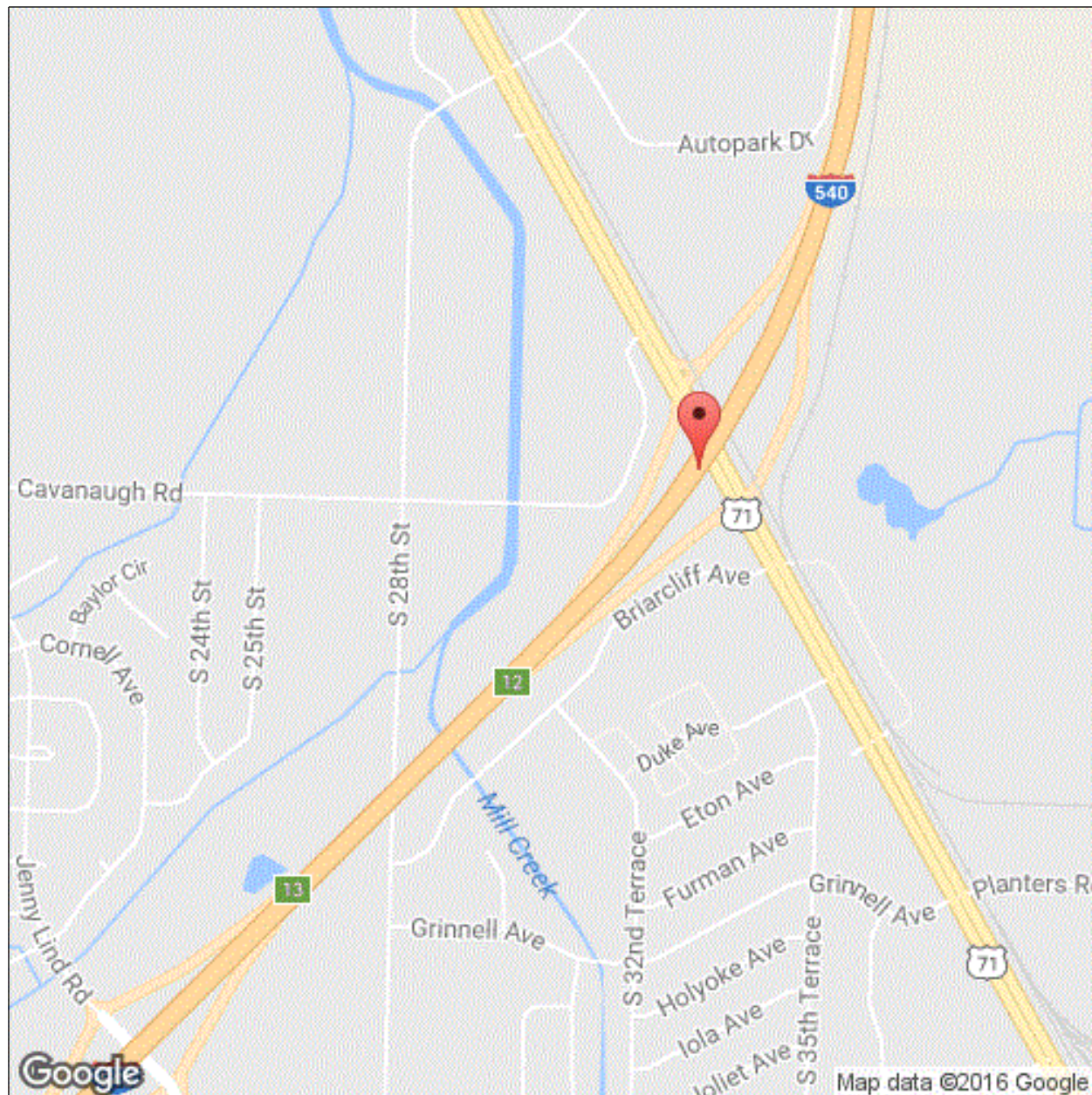
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Bridge Inspection Report

Location Map



Latitude: 35.31218

Longitude: -94.39916

Inspector:

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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:

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National Bridge Inventory

IDENTIFICATION		INSPECTIONS	
(1) STATE CODE	056 - Arkansas	(90) INSPECTION DATE	09/19/2016
(8) STRUCTURE NUMBER	B5102	(91) DESIGNATED INSPECTION FREQUENCY	24
(5) INV. ROUTE (ON/UNDER)	1 1 1 540 2	(92) CRITICAL FEATURE INSPECTION	(93) CFI DATE
(2) HIGHWAY AGENCY	04 (3) COUNTY CODE 131	A. FRACTURE CRITICAL DETAIL	N
(4) PLACE CODE	24060	B. UNDERWATER INSPECTION	N
(6) FEATURES INTERSECTED	US 71-SEC 14, RR	C. OTHER SPECIAL	N
(7) FACILITY CARRIED	I 540-SEC 1, EB LN		
(9) LOCATION	JCT I540 & US 71		
(11) MILEPOINT 2.570	(12) BASE HIGHWAY NETWORK 1		
(13A) LRS INVENTORY ROUTE	0000540010 (13B) SUBROUTE NUMBER 00		
(16) LATITUDE 35.31218	(17) LONGITUDE -94.39916		
(98A) BORDER BRIDGE CODE			
PERCENT RESPONSIBILITY	(99) BORDER BRIDGE STRUCT		
STRUCTURE TYPE AND MATERIAL		CONDITION	
(43) STRUCTURE TYPE, MAIN		(58) DECK	6
A) KIND OF MATERIAL/DESIGN: 3 - Steel		(59) SUPERSTRUCTURE	7 (60) SUBSTRUCTURE 6
B) TYPE OF DESIGN/CONSTR: 02 - Stringer/Multi-beam or Girder		(61) CHANNEL & CHANNEL PROTECTION	N (62) CULVERT N
(44) STRUCTURE TYPE, APPROACH SPANS			
A) KIND OF MATERIAL/DESIGN: 0 - Other			
B) TYPE OF DESIGN/CONSTR: 00 - Other			
(45) NUMBER OF SPANS IN MAIN 5	(46) NUMBER OF APPROACH 0		
(107) DECK STRUCTURE TYPE 1	(108A) WEARING SURFACE 1		
(108B) DECK MEMBRANE 0	(108C) DECK PROTECTION 0		
AGE OF SERVICE		LOAD RATING AND POSTING	
(27) YEAR BUILT 1975	(106) YEAR RECONSTRUCTED 0000	(31) DESIGN LOAD	6
(42) TYPE OF SERVICE ON 1 UNDER 4		(63) METHOD USED TO DETERMINE OPERATING RATING	1
(28) LANES ON 02 UNDER 06		(64) OPERATING RATING	60.0
(29) AVERAGE DAILY TRAFFIC 32000	(19) BYPASS DETOUR LENGTH 0	(65) METHOD USED TO DETERMINE INVENTORY RATING	1
(30) YEAR OF AVERAGE DAILY TRAFFIC 2013		(66) INVENTORY RATING	36.0
(109) AVERAGE DAILY TRUCK TRAFFIC 1		(70) BRIDGE POSTING	5
		(41) STRUCTURE OPEN/POSTED/CLOSED	A
GEOMETRIC DATA		APPRAISAL	
(48) LENGTH OF MAX SPAN (ft.) 78	(49) STRUCTURE LENGTH (ft.) 347	(67) STRUCTURAL EVALUATION	6
(50) CURB/SIDEWALK WIDTHS (ft.) LEFT 0 RIGHT 0		(68) DECK GEOMETRY	7
(51) BRDG RDWY WIDTH CURB-TO-CURB (ft.) 41.3		(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL	7
(52) DECK WIDTH, OUT-TO-OUT (ft.) 43.7		(71) WATERWAY ADEQUACY	N
(32) APPROACH ROADWAY WIDTH (ft.) 38.1		(72) APPROACH ROADWAY ALIGNMENT	8
(33) BRIDGE MEDIAN 0	(34) SKEW (DEG.) 28	(36) TRAFFIC SAFETY FEATURE	
(35) STRUCTURE FLARED 0	(10) INV RTE, MIN VERT CLEAR (ft.) 99.99	36A) BRIDGE RAILINGS:	1
(47) TOTAL HORIZONTAL CLEARANCE (ft.) 42.7		36B) TRANSITIONS:	1
(53) VERTICAL CLEARANCE OVER BRIDGE ROADWAY (ft.) 99.99		36C) APPROACH GUARDRAIL:	1
(54) VERTICAL UNDER CLEARANCE (ft.) H 20.58		36D) APPROACH GUARDRAIL ENDS:	1
(55) LATERAL UNDER CLEARANCE RIGHT (ft.) H 21.2		(113) SCOUR CRITICAL BRIDGES	N
(56) MIN LATERAL UNDER CLEARANCE (ft.) 17.4		SUFFICIENCY RATING	0 STATUS 98.0
PROPOSED IMPROVEMENTS		CLASSIFICATION	
(75A) TYPE OF WORK PROPOSED	(75B) WORK DONE BY	(112) NBIS BRIDGE LENGTH	Y
(76) LENGTH OF STRUCTURE IMPROVEMENT (ft.) 0		(104) HIGHWAY SYSTEM OF THE INVENTORY ROUTE	1
(94) BRIDGE IMPROVEMENT COST (\$)	0	(26) FUNCTIONAL CLASSIFICATION OF INVENTORY ROUTE	11
(95) ROADWAY IMPROVEMENT COST (\$)	0	(100) STRAHNET HIGHWAY DESIGNATION	1
(96) TOTAL PROJECT COST	0	(101) PARALLEL STRUCTURE DESIGNATION	R
(97) YEAR OF IMPROVEMENT COST ESTIMATE		(102) DIRECTION OF TRAFFIC	1
(114) FUTURE ADT 21745	(115) YEAR OF FUTURE ADT 2028	(103) TEMP STRUCTURE	
		(105) FEDERAL LANDS HIGHWAYS	0
		(110) DESIGNATED NATIONAL NETWORK	1
		(20) TOLL	3
		(21) MAINTENANCE RESPONSIBILITY	01
		(37) HISTORICAL	5
		NAVIGATION DATA	
		(38) NAVIGATION CONTROL	0
		(111) PIER OR ABUTMENT PROTECTION	1
		(39) NAV VERT CLEARANCE (ft.)	0
		(116) MIN NAVIGATION VERT CLEARANCE, VERT LIFT BRIDGE (ft.)	0
		(40) NAV HORIZONTAL CLEARANCE (ft.)	0

Inspector:

Structure Number: B5102

Inspection Date:

Facility Carried: I 540-SEC 1, EB LN

Bridge Inspection Report

National Bridge Inventory

UNDER RECORD A

IDENTIFICATION

(1) STATE CODE	056 - Arkansas	(7) FACILITY CARRIED	I 540-SEC 1, EB LN
(3) COUNTY CODE	131	(8) STRUCTURE NUMBER	B5102
(4) PLACE CODE	24060	(9) LOCATION	JCT I540 & US 71
(5) INV. ROUTE (ON/UNDER)	A 2 1 71 3	(11) MILEPOINT	9.818 (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. 3121388888889 (17) LONGITUDE -94.3990833333333

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	20.7	(48) LENGTH OF MAXIMUM SPAN	78 (49) STRUCTURE LENGTH 347
(47) TOTAL HORIZONTAL CLEARANCE	66.2		

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	R	(110) DESIGNATED NATIONAL NETWORK	1

UNDER RECORD B

IDENTIFICATION

(1) STATE CODE	056 - Arkansas	(7) FACILITY CARRIED	I 540-SEC 1, EB LN
(3) COUNTY CODE	131	(8) STRUCTURE NUMBER	B5102
(4) PLACE CODE	24060	(9) LOCATION	JCT I540 & US 71
(5) INV. ROUTE (ON/UNDER)	B 2 1 71 1	(11) MILEPOINT	9.818 (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. 3121388888889 (17) LONGITUDE -94.3990833333333

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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	21.6	(48) LENGTH OF MAXIMUM SPAN	78 (49) STRUCTURE LENGTH 347
(47) TOTAL HORIZONTAL CLEARANCE	65.7		

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	R	(110) DESIGNATED NATIONAL NETWORK	1

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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.	7757	3653	2990	0
	09/19/2016 - JCJ & JML - Sealable transverse cracking is typical in all spans. Span 4 Right lane near mid-span has a baseball sized spall with a scrap metal inclusion. Span 5 Right lane has a 6" spalled area. Driving surface of the deck has numerous transverse, longitudinal and map cracking with no apparent repairs since the last inspection. The undersurface has isolated areas of transverse cracks that have light efflorescence. The Right curb has spalls with exposed reinforcing steel. There is light abrasion in the wheel paths.						
1080 - Delamination/Spall/Patched Area		7			7		
1090 - Exposed Rebar		6			6		
1120 - Efflorescence/Rust Staining		40			40		
1130 - Cracking (RC and Other)		2990				2990	
1190 - Abrasion/Wear (PSC/RC)		3600			3600		
107 - Steel Open Girder/Beam	1- Ben.	2429	ft.	2429			
	09/19/2016 - JCJ & JML - Span 2, Beam 1 at Bent 3 has an area of light rust staining beginning to form on the bottom flange. The paint system is beginning to chalk.						
515 - Steel Protective Coating		20646	sq. ft.	0	20645	1	0
3440 - Effectiveness (Steel Protective Coatings)		20646			20645	1	
205 - Reinforced Concrete Column	1- Ben.	12	each	3	8	1	0
	09/19/2016 - JCJ & JML - Bent 2 and 3 columns have horizontal hairline cracks on approximately 12" centers that appear to be reflective cracking over the hoops in the columns. -Bent 4, Column 1 has a 12" delaminated area at the base of the column. -Bent 5, Column 2 has a baseball size spall with exposed reinforcing steel near the base of the column on the Span 5 side.						
1080 - Delamination/Spall/Patched Area		1				1	
1090 - Exposed Rebar		1			1		
1130 - Cracking (RC and Other)		7			7		
215 - Reinforced Concrete Abutment	1- Ben.	90	ft.	63	26	1	0
	09/19/2016 - JCJ & JML - The abutments and their backwalls have vertical and horizontal cracks. -The top of Bent # 1 backwall has an 8" shallow spall with no exposed reinforcing steel in the driving surface of the backwall. -Bent 6 backwall has a 4" spall with exposed reinforcing steel behind Beam 5 and a 14" spall with exposed reinforcing steel behind Beam 6.						
1080 - Delamination/Spall/Patched Area		1				1	
1090 - Exposed Rebar		2			2		
1130 - Cracking (RC and Other)		24			24		

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Element Inspection

234 - Reinforced Concrete Pier Cap	1- Ben.	166	ft.	118	25	23	0
Bent 2 Rt side of cap has a 4" shallow spall with exposed rebar and a small delaminated area approx 18" below the spall. -Bent 3, Rt side of cap has two 12" tall vertical cracks in the end of cap. -Bent 4, Span 4 side of cap has basketball sized delaminated areas between columns 1 & 2 and columns 2 & 3. -Bent 5, Span 5 side of cap has a 12" delaminated area between Columns 2 and 3. -Bent 5, bottom side of cap has a 12" delaminated area between Columns 2 and 3.							
1080 - Delamination/Spall/Patched Area		21			3	18	
1090 - Exposed Rebar		2			2		
1130 - Cracking (RC and Other)		25			20	5	
302 - Compression Joint Seal	1- Ben.	300	ft.	0	150	0	150
Bents 2, 4 & 5 joints have failed and the remaining seals are beginning to deteriorate.							
2330 - Seal Damage		300			150		150
311 - Movable Bearing	1- Ben.	35	each	23	12	0	0
Isolated areas of active corrosion.							
1000 - Corrosion		12			12		
313 - Fixed Bearing	1- Ben.	35	each	23	12	0	0
Active corrosion and pack rust still exist at the abutments with no apparent repairs by maintenance forces. Isolated areas of active corrosion with minor pack rust between the sole plate and the masonry plate.							
1000 - Corrosion		12			12		
321 - Reinforced Concrete Approach Slab	1- Ben.	3200	sq. ft.	3197	3	0	0
The Lt approach slab gutter at Bent 1 has a diagonal crack at the Bridge end.							
1080 - Delamination/Spall/Patched Area		1			1		
1130 - Cracking (RC and Other)		2			2		
330 - Metal Bridge Railing	1- Ben.	347	ft.	332	15	0	0
Span 5 Rt side near Bt 6 has a concrete spall at a joint line that has the end of a piece of rebar exposed. There is one loose nut on the metal bridge rail support bracket located near midspan on Span 5 Rt. There are numerous small areas of shallow exposed rebar on the lower portion of the bridge rail along the Rt side of the bridge on Span 5.							
1020 - Connection		3			3		
1900 - Distortion		12			12		
331 - Reinforced Concrete Bridge Railing	1- Ben.	347	ft.	270	76	1	0
The curb at Span 3 Lt at Bent 2 has a spalled corner with exposed rebar.							
1080 - Delamination/Spall/Patched Area		1				1	
1090 - Exposed Rebar		3			3		
1130 - Cracking (RC and Other)		73			73		

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Pictures

Inspector:

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Bridge Inspection Report

Sketches

Inspector:

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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:

Bearings -

The bearings have a failing paint system and active corrosion with pack rust between the sole and masonry plates.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description

Inspector:

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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 compression joint seals have failed at Bents # 2, 4 & 5. The pourable type compression joint seals are beginning to deteriorate at the abutments between the backwall's and the approach slabs.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description Bent 4 deck joint seal.

Stage: Assigned



PHOTO 2 Description Bent 5 deck joint seal

Inspector:

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Maintenance Needs

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

Priority: D - Routine

Work Code:

Deficiency Description:

Deck -

The Right lane of Span # 4 has an unknown metal object visible in a shallow spall that was apparently cast into the deck during the construction process. The metal object does not appear to be loose at this inspection.

The driving surface of the deck has sealable cracking in all spans.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description Span 4 debris cast in the deck.

Stage: Assigned



PHOTO 2 Description

Inspector:

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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:

Concrete curb on left side of structure -

The concrete curb on the left side of structure adjacent to the median barrier has apparent collision damage that has created spalling with exposed reinforcing steel in span # 1 at south abutment and in span # 3 at bent # 2.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description Median Barrier wall. Span 3 at Bent 2.

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Maintenance Needs

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

Priority: D - Routine

Work Code:

Deficiency Description:

Substructure -

The substructure has areas of spalling with exposed reinforcing steel, and delaminated areas.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description Bent 5, Column 2.

Stage: Assigned



PHOTO 2 Description Bent 6 Backwall

Inspector:

Inspection Date:

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Maintenance Needs

Stage: Assigned



PHOTO 3 Description Span 5 side of Bent 5