

Bridge Inspection Report

A5101
I 540-SEC 1, SB LN
over
SH 255 Sebastian Co.



Inspection Date:

Inspected By:

Inspection Type(s):

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Inspector:

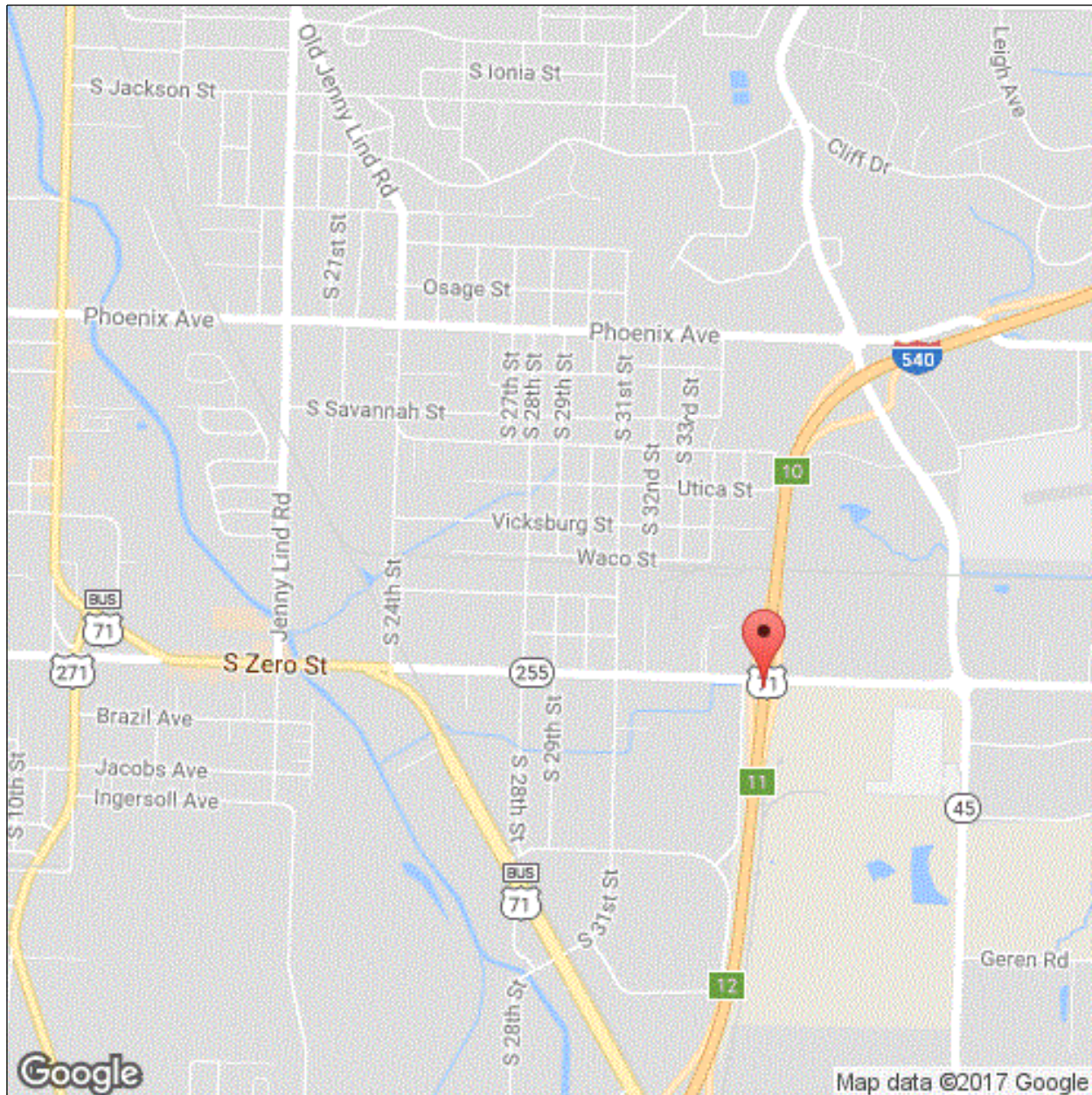
Structure Number: A5101

Inspection Date:

Facility Carried: I 540-SEC 1, SB LN

Bridge Inspection Report

Location Map



Latitude: 35.32718

Longitude: -94.39499

Inspector:

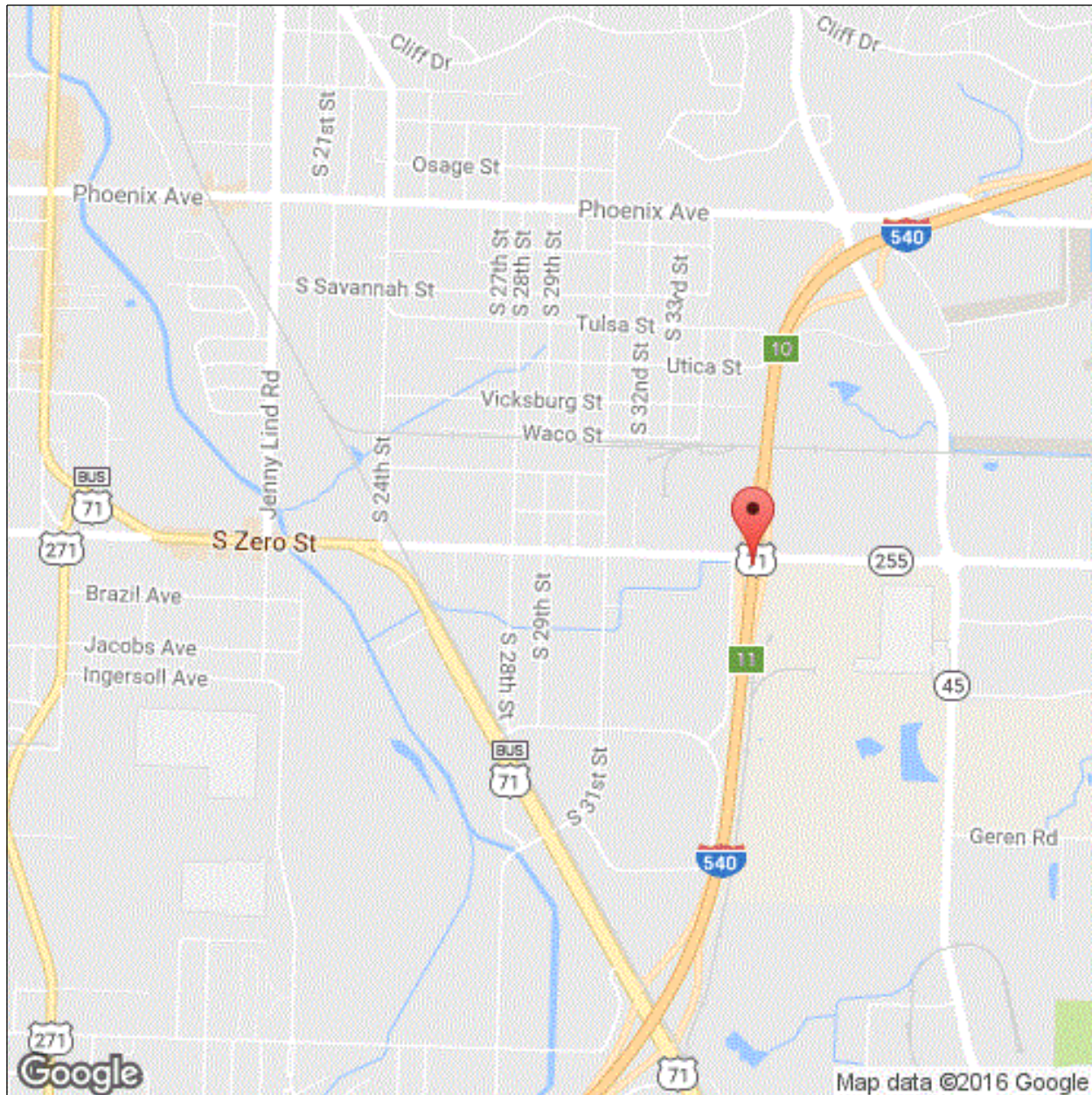
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Bridge Inspection Report

Location Map



Latitude: 35.32718

Longitude: -94.39499

Inspector:

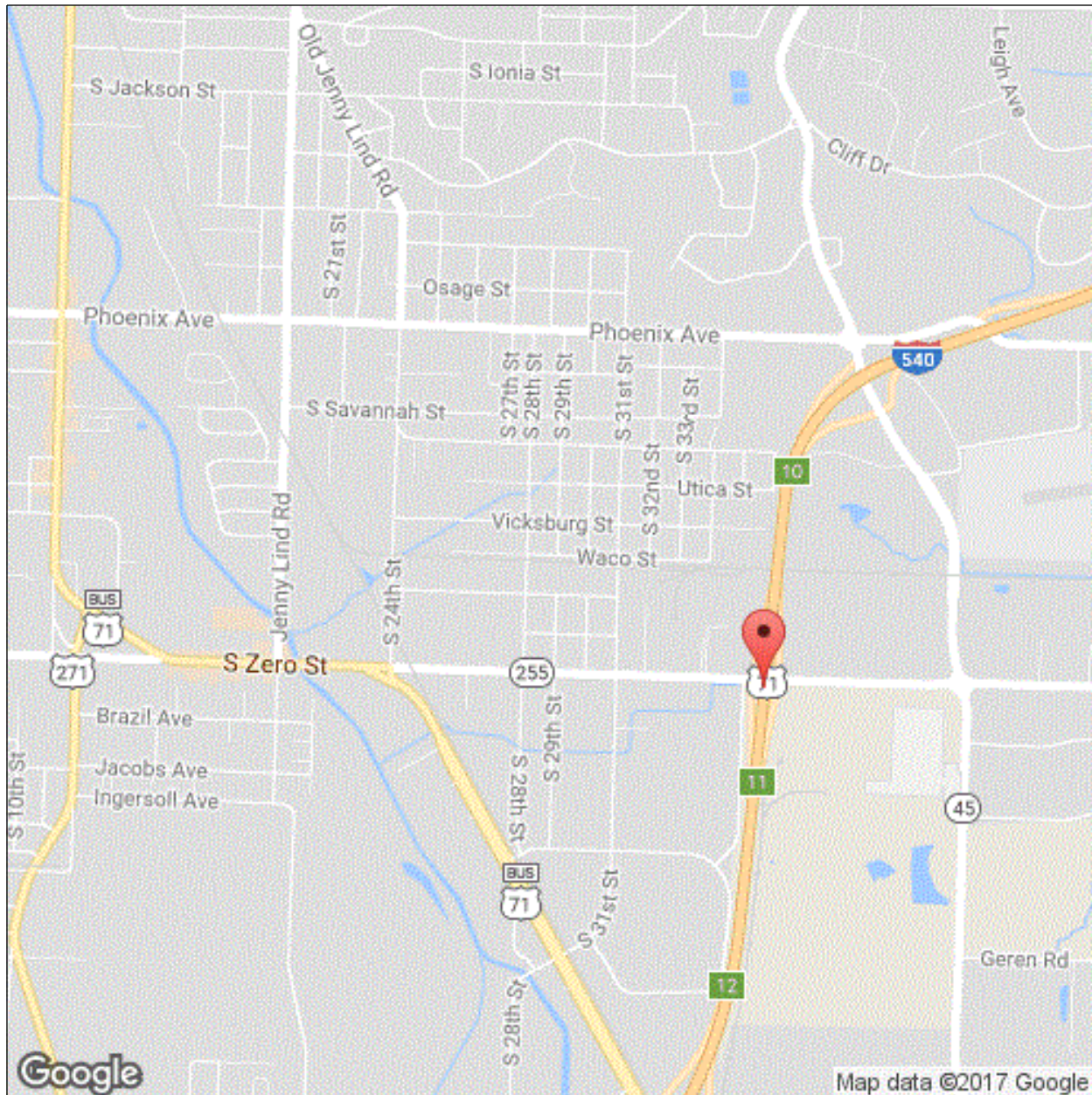
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Location Map



Latitude: 35.32718

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Bridge Inspection Report

Executive Summary

09/25/2017 - JCJ & JML - Special Recurring Inspection - Item 58, Deck has a NBIS Rating of 4. See Photos, Maintenance needs, and notes in the Element Inspection for additional information. Maintenance Forces have removed most of the delaminated areas over the traffic since the last inspection. There are no apparent significant changes since the last inspection.

09/21/2016 - JCJ & JML - Vertical underclearances were actual field measured during this inspection.

09/21/2016 - JCJ & JML - Special Inspection - Item 58, Deck has a NBIS Rating of 4. See Photos, Maintenance needs, and notes in the Element Inspection for additional information.

09/21/2016 - JCJ & JML - A Priority Maintenance Need - There are delaminated areas visible from the undersurface of the deck that are partially separated from the deck over the traveled roadway.

Inspector:

Structure Number: A5101

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Bridge Inspection Report

National Bridge Inventory

IDENTIFICATION		INSPECTIONS	
(1) STATE CODE	056 - Arkansas	(90) INSPECTION DATE	09/21/2016
(8) STRUCTURE NUMBER	A5101	(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	A. FRACTURE CRITICAL DETAIL	N
(4) PLACE CODE	24060	B. UNDERWATER INSPECTION	N
(6) FEATURES INTERSECTED	SH 255 Sebastian Co.	C. OTHER SPECIAL	Y 24 09/25/2017
(7) FACILITY CARRIED	I 540-SEC 1, SB LN		
(9) LOCATION	0.73 SO JCT SH 45		
(11) MILEPOINT 3.650	(12) BASE HIGHWAY NETWORK 1		
(13A) LRS INVENTORY ROUTE	0000540010 (13B) SUBROUTE NUMBER 00		
(16) LATITUDE 35.32718	(17) LONGITUDE -94.39499		
(98A) BORDER BRIDGE CODE			
PERCENT RESPONSIBILITY	(99) BORDER BRIDGE STRUCT		
STRUCTURE TYPE AND MATERIAL		CONDITION	
(43) STRUCTURE TYPE, MAIN		(58) DECK	4
A) KIND OF MATERIAL/DESIGN: 4 - Steel continuous		(59) SUPERSTRUCTURE	7
B) TYPE OF DESIGN/CONSTR: 07 - Frame (except frame culverts)		(60) SUBSTRUCTURE	7
(44) STRUCTURE TYPE, APPROACH SPANS		(61) CHANNEL & CHANNEL PROTECTION	N
A) KIND OF MATERIAL/DESIGN: 0 - Other		(62) CULVERT	N
B) TYPE OF DESIGN/CONSTR: 00 - Other			
(45) NUMBER OF SPANS IN MAIN 3	(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 1969	(106) YEAR RECONSTRUCTED 0000	(31) DESIGN LOAD	6
(42) TYPE OF SERVICE ON 6 UNDER 1		(63) METHOD USED TO DETERMINE OPERATING RATING	1
(28) LANES ON 02 UNDER 06		(64) OPERATING RATING	48.0
(29) AVERAGE DAILY TRAFFIC 57312	(19) BYPASS DETOUR LENGTH 0	(65) METHOD USED TO DETERMINE INVENTORY RATING	1
(30) YEAR OF AVERAGE DAILY TRAFFIC 2013		(66) INVENTORY RATING	28.0
(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.) 83	(49) STRUCTURE LENGTH (ft.) 185	(67) STRUCTURAL EVALUATION	6
(50) CURB/SIDEWALK WIDTHS (ft.) LEFT 0 RIGHT 0.4		(68) DECK GEOMETRY	8
(51) BRDG RDWY WIDTH CURB-TO-CURB (ft.) 42.0		(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL	3
(52) DECK WIDTH, OUT-TO-OUT (ft.) 44.7		(71) WATERWAY ADEQUACY	N
(32) APPROACH ROADWAY WIDTH (ft.) 44.0		(72) APPROACH ROADWAY ALIGNMENT	8
(33) BRIDGE MEDIAN 0	(34) SKEW (DEG.) 4	(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.) 43.0		36B) TRANSITIONS:	1
(53) VERTICAL CLEARANCE OVER BRIDGE ROADWAY (ft.) 99.99		36C) APPROACH GUARDRAIL:	1
(54) VERTICAL UNDER CLEARANCE (ft.) H 17.5		36D) APPROACH GUARDRAIL ENDS:	1
(55) LATERAL UNDER CLEARANCE RIGHT (ft.) H 2.2		(113) SCOUR CRITICAL BRIDGES	N
(56) MIN LATERAL UNDER CLEARANCE (ft.) 2.2		SUFFICIENCY RATING	1 STATUS 85.0
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	L
(97) YEAR OF IMPROVEMENT COST ESTIMATE		(102) DIRECTION OF TRAFFIC	1
(114) FUTURE ADT 31629	(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
		(22) OWNER	01
		(37) HISTORICAL	5
		NAVIGATION DATA	
		(38) NAVIGATION CONTROL	N
		(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: A5101

Inspection Date:

Facility Carried: I 540-SEC 1, SB LN

Bridge Inspection Report

National Bridge Inventory

UNDER RECORD 2

IDENTIFICATION

(1) STATE CODE	056 - Arkansas	(7) FACILITY CARRIED	I 540-SEC 1, WB LN
(3) COUNTY CODE	131	(8) STRUCTURE NUMBER	A5101
(4) PLACE CODE	24060	(9) LOCATION	0.73 SO JCT SH 45
(5) INV. ROUTE (ON/UNDER)	2 3 1 255 0	(11) MILEPOINT	5.279 (12) BASE HIGHWAY NETWORK 1
(6) FEATURES INTERSECTED	SH 255-SEC 3	(13A) LRS INVENTORY ROUTE	0000255030 (13B) SUBROUTE NUMBER 00
		(16) LATITUDE	35.3271944444445 (17) LONGITUDE -94.395

STRUCTURE TYPE AND MATERIAL

(43) STRUCTURE TYPE, MAIN A) KIND OF MATERIAL/DESIGN: 4 - Steel continuous
B) TYPE OF DESIGN/CONSTR: 07 - Frame (except frame culverts)

AGE OF SERVICE

(19) BYPASS DETOUR LENGTH	1	(30) YEAR OF AVERAGE DAILY TRAFFIC	2014
(27) YEAR BUILT	1969	(42) TYPE OF SERVICE	ON 6 UNDER 1
(28) LANES	ON 02 UNDER 06	(109) AVERAGE DAILY TRUCK TRAFFIC	1
(29) AVERAGE DAILY TRAFFIC	17000		

GEOMETRIC DATA

(10) INV RTE, MIN VERT CLEARANCE	18.5	(48) LENGTH OF MAXIMUM SPAN	83 (49) STRUCTURE LENGTH 185
(47) TOTAL HORIZONTAL CLEARANCE	70.0		

CLASSIFICATION

(20) TOLL	3	(102) DIRECTION OF TRAFFIC	2
(26) FUNCTIONAL CLASSIFICATION OF INVENTORY ROUTE	14	(103) TEMP STRUCTURE	
(100) STRAHNET HIGHWAY DESIGNATION	0	(104) HIGHWAY SYSTEM OF THE INVENTORY ROUTE	1
(101) PARALLEL STRUCTURE DESIGNATION	L	(110) DESIGNATED NATIONAL NETWORK	0

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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.	8052	sq. ft.	2664	1731	3657	0
	09/21/2016 - JCJ & JML - There are delaminated areas visible from the undersurface of the deck that are partially separated from the deck over traffic. The driving surface of the deck has sealable transverse cracking over the reinforcing steel and numerous areas with temporary asphalt patches. Span 1 has numerous areas of spalling, delamination, and patched areas in various stages of disrepair. Spans 2 & 3 have addition areas of transverse cracking, delaminated areas, and spalls. Span 2 Left shoulder area has light to medium scaling. The undersurface of the deck has shallow spalls with exposed reinforcing steel on Span 2, Bays 1 & 2 at the construction joint. Span 1, Bay 3 has an area of scaling on the undersurface near Bent 1. Span 1 has a spall with exposed reinforcing steel visible from the undersurface of the Right edge of deck where the deck makes contact with the backwall of Bent 1.						
1080 - Delamination/Spall/Patched Area		1209			940	269	
1090 - Exposed Rebar		7			7		
1120 - Efflorescence/Rust Staining		24			24		
1130 - Cracking (RC and Other)		3388				3388	
1190 - Abrasion/Wear (PSC/RC)		760			760		
107 - Steel Open Girder/Beam	1- Ben.	1295	ft.	1125	170	0	0
	09/21/2016 - JCJ & JML - Beams 3 & 4 at Bent 4 make contact with the abutment backwall. Superstructure has areas of paint failure that has exposed the primer base coat. There are no apparent changes since the last inspection.						
1000 - Corrosion		170			170		
515 - Steel Protective Coating		10653	sq. ft.	9208	0	0	1445
3440 - Effectiveness (Steel Protective Coatings)		1445					1445
215 - Reinforced Concrete Abutment	1- Ben.	95	ft.	81	14	0	0
	09/21/2016 - JCJ & JML - The Right side of Bent # 1 backwall has a diagonal crack located adjacent to Beam # 7. The abutments have very minor dirt and debris accumulation. -Bent # 1 has a vertical crack with a 6 inch spall with exposed reinforcing steel in the backwall at the Left side of abutment. No apparent section loss to the exposed reinforcing steel. There are no apparent significant changes since the last inspection.						
1120 - Efflorescence/Rust Staining		2			2		
1130 - Cracking (RC and Other)		12			12		

Inspector:

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Element Inspection

234 - Reinforced Concrete Pier Cap	1- Ben.	90	ft.	75	15	0	0
09/21/2016 - JCJ & JML - Baseball size spalls with exposed reinforcing steel in Bent # 2 Pedestals, in the bearing area of Beams # 1, 2, 3, 4, 5, 6 & 7. No apparent section loss to the exposed reinforcing steel. No significant changes since the last inspection. -The concrete portions of both bents have a few vertical hairline cracks at variable spacing. -Bent 3 has 2 shallow superficial spalls with no exposed reinforcing steel. -The compacted embankment has settled under the pile cap at Bent # 3.							
1080 - Delamination/Spall/Patched Area		2			2		
1090 - Exposed Rebar		8			8		
1130 - Cracking (RC and Other)		5			5		
302 - Compression Joint Seal	1- Ben.	90	ft.	0	0	0	90
09/21/2016 - JCJ & JML - - Compression joint seals not visible at this inspection.							
2330 - Seal Damage		90					90
311 - Movable Bearing	1- Ben.	14	each	5	9	0	0
09/21/2016 - JCJ & JML - - The bearings are approximately 90% expanded at Bent # 4, the temperature was approximately 90 degrees at the time of the inspection. The masonry plates at the abutments have active corrosion forming and are beginning to rust. Red rust (fretting) is visible at this inspection from the bearing pins. All pins are in place at this inspection.							
1000 - Corrosion		4			4		
2210 - Movement		5			5		
313 - Fixed Bearing	1- Ben.	14	each	14			
- The base plates have active corrosion and layers of rust beginning to form around the anchor bolts at Bents # 2 & 3. Bearing pins are beginning to show signs of wear with red rust.							
321 - Reinforced Concrete Approach Slab	1- Ben.	1600	sq. ft.	1558	0	42	0
Expansion joint material is missing from the North approach slab.							
1080 - Delamination/Spall/Patched Area		6				6	
1130 - Cracking (RC and Other)		36				36	
330 - Metal Bridge Railing	1- Ben.	185	ft.	185			
No apparent or significant changes since the last inspection.							
331 - Reinforced Concrete Bridge Railing	1- Ben.	185	ft.	181	4	0	0
- No apparent or noteworthy deficiencies at this inspection.							
1080 - Delamination/Spall/Patched Area		2			2		
1130 - Cracking (RC and Other)		2			2		

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Bridge Inspection Report

Pictures

Inspector:

Inspection Date:

Structure Number: A5101

Facility Carried: I 540-SEC 1, SB LN

Bridge Inspection Report

Sketches

Inspector:

Structure Number: A5101

Inspection Date:

Facility Carried: I 540-SEC 1, SB LN

Bridge Inspection Report

Maintenance Needs

Date Reported: 9/17/2012 12:00:00 AM

Priority: G - General/ Preventive maintenance

Work Code:

Deficiency Description:

Guard rail -

The guard rail under the structure adjacent to Bents # 2 and # 3 has collision damage.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description

Inspector:

Structure Number: A5101

Inspection Date:

Facility Carried: I 540-SEC 1, SB LN

Bridge Inspection Report

Maintenance Needs

Date Reported: 9/16/2014 12:00:00 AM

Priority: D - Routine

Work Code:

Deficiency Description:

North embankment -

The compacted embankment has settled under the pile cap at Bent # 3.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned

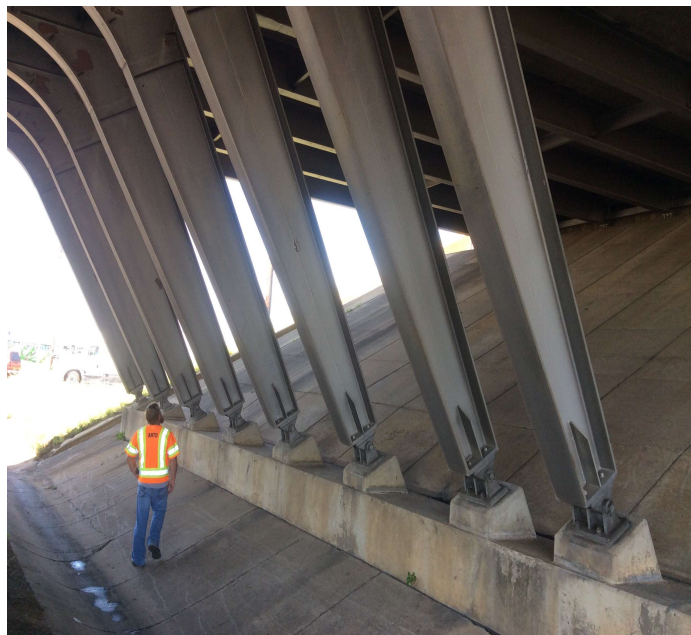


PHOTO 1 Description

Stage: Assigned



PHOTO 2 Description

Inspector:

Structure Number: A5101

Inspection Date:

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Bridge Inspection Report

Maintenance Needs

Date Reported: 09/21/2016

Priority: C - Important

Work Code:

Deficiency Description:

The North approach slab has two sealable transverse cracks. There is a 2' X 3' area where the concrete is fractured in the East edge of the North approach slab. Expansion joint material is missing from the North approach slab.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Open



PHOTO 1 Description

Stage: Open



PHOTO 2 Description

Inspector:

Structure Number: A5101

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Bridge Inspection Report

Maintenance Needs

Date Reported: 09/25/2017

Priority: C - Important

Work Code:

Deficiency Description:

The temporary asphalt patch is breaking apart with voids over the South abutment expansion joint.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Open



PHOTO 1 Description Bent 1 expansion joint

Inspector:

Structure Number: A5101

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Bridge Inspection Report

Maintenance Needs

Date Reported: 9/17/2012 12:00:00 AM

Priority: D - Routine

Work Code:

Deficiency Description:

Expansion joints / South approach roadway-

The expansion joints have deteriorated seals and allow water, dirt and debris to leak onto the substructure and accumulate against the steel superstructure promoting corrosion. The poured type joint sealant between the north abutment backwall and the approach slab has failed and is missing in locations.

The asphalt driving surface of the south approach roadway is beginning to come apart at the bridge end allowing potholes to form in the driving surface.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description Bent 4 expansion joint

Stage: Assigned



PHOTO 2 Description Bent 1 expansion joint.

Inspector:

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Bridge Inspection Report

Maintenance Needs

Date Reported: 9/17/2012 12:00:00 AM

Priority: D - Routine

Work Code:

Deficiency Description:

Superstructure -

The superstructure paint system has peeled and is missing in areas.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description Bent 2. Beams 3,4,&5

Stage: Assigned



PHOTO 2 Description Bent3. Beam 1.

Inspector:

Structure Number: A5101

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Maintenance Needs

Date Reported: 9/15/2014 12:00:00 AM

Priority: D - Routine

Work Code:

Deficiency Description:

Deck Soffit -

The undersurface of the deck has delaminated areas. There are shallow spalls with exposed reinforcing steel on Span 2, Bays 1 & 2 at the construction joint. Span 1, Bay 3 has an area of leaching / scaling on the undersurface near Bent 1. Span 1 has a spall with exposed reinforcing steel visible from the undersurface of the Right edge of deck where the deck makes contact with the backwall of Bent 1.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description Span2. Left edge of deck.

Stage: Assigned



PHOTO 2 Description Span 2 deck soffit.

Inspector:

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Maintenance Needs

Date Reported: 9/16/2014 12:00:00 AM

Priority: D - Routine

Work Code:

Deficiency Description:

Pedestals at bent # 2 -

The pedestals at bent # 2 have areas of spalling with exposed reinforcing steel.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description Bent 2. Pedestals at Beams 6 & 7

Inspector:

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Bridge Inspection Report

Maintenance Needs

Date Reported: 09/21/2016

Priority: C - Important

Work Code:

Deficiency Description:

The driving surface of the deck has sealable transverse cracking over the reinforcing steel and numerous areas with temporary asphalt patches. Span 1 has numerous areas of spalling, delamination, and patched areas in various stages of disrepair. Spans 2 & 3 have addition areas of transverse cracking, delaminated areas, and spalls. Span 2 Left shoulder area has light to medium scaling.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Monitor



PHOTO 1 Description Span 2. Typical

Stage: Monitor



PHOTO 2 Description Span 1. Typical

Inspector:

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Bridge Inspection Report

Maintenance Needs

Stage: Monitor



PHOTO 3 Description Span 2. Typical

Stage: Monitor



PHOTO 4 Description Span 3. Typical

Stage: Monitor



PHOTO 5 Description Span 3. Typical