

Bridge Inspection Report

B5629
I-540 NB-Sebastian
over
Jenny Lind Street



Inspection Date:

Inspected By:

Inspection Type(s):

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Inspector:

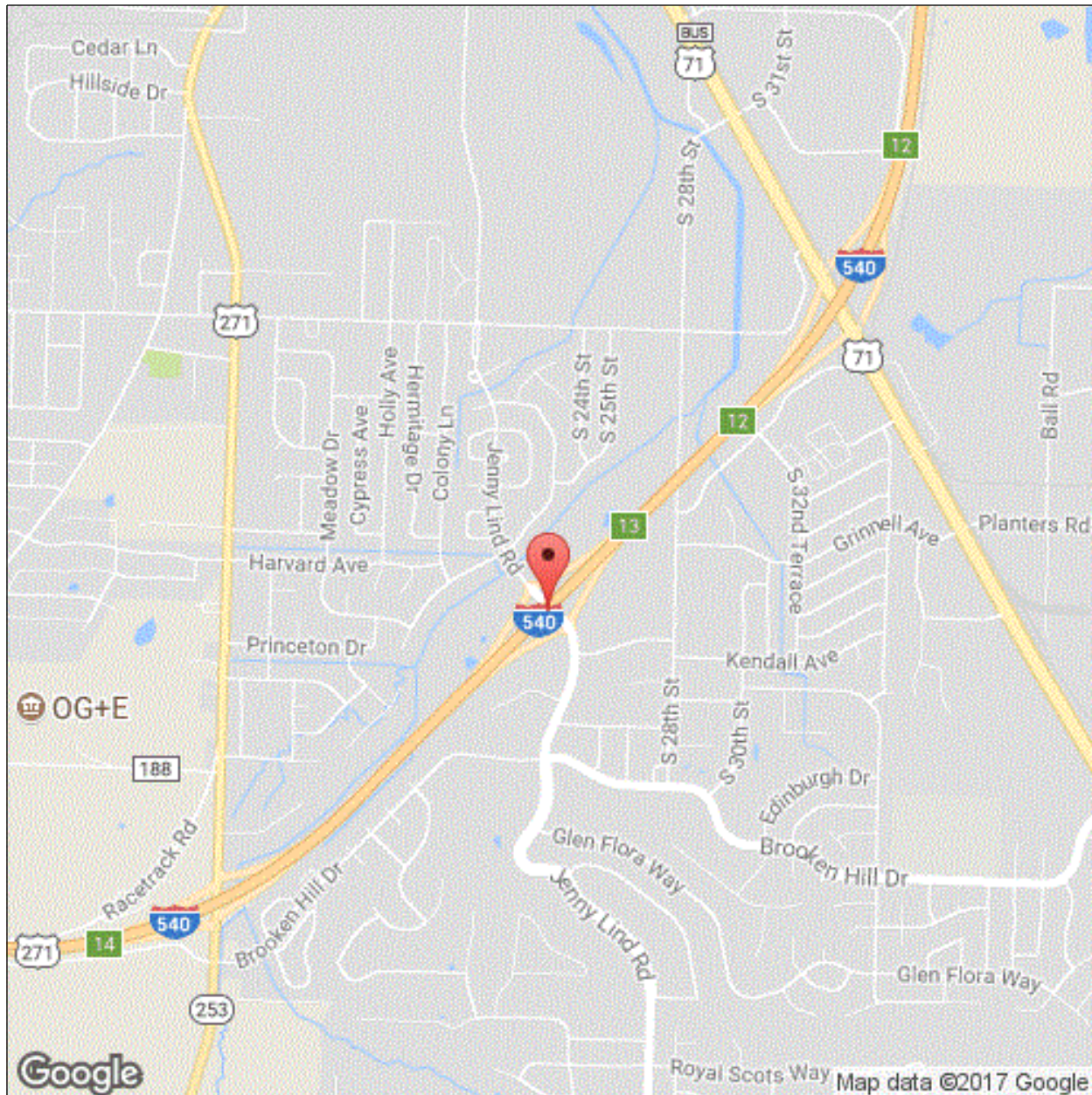
Structure Number: B5629

Inspection Date:

Facility Carried: I-540 NB-Sebastian

Bridge Inspection Report

Location Map



Latitude: 35.30275

Longitude: -94.41034

Inspector:

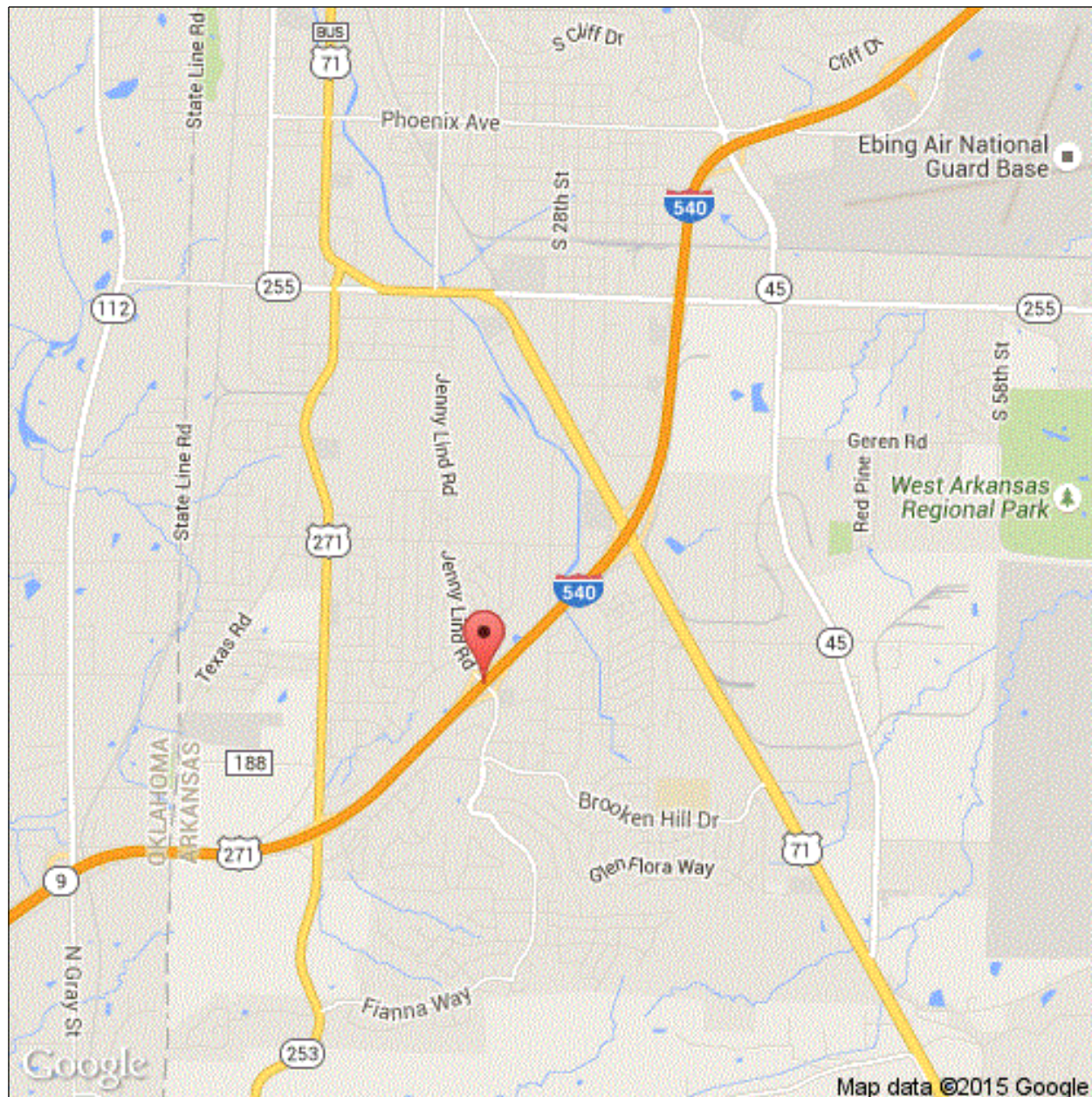
Structure Number: B5629

Inspection Date:

Facility Carried: I-540 NB-Sebastian

Bridge Inspection Report

Location Map



Latitude: 35.30275

Longitude: -94.41034

Inspector:

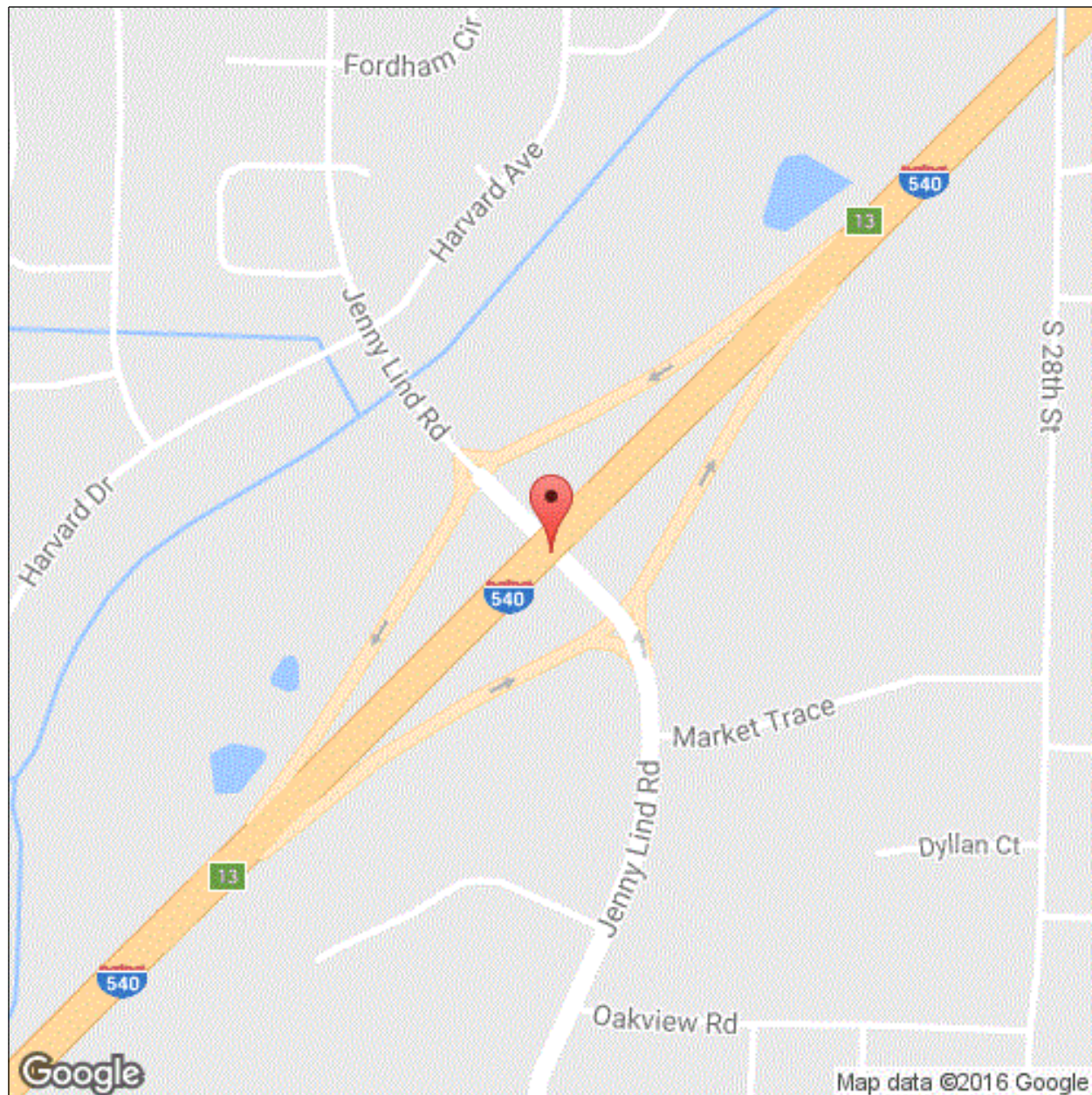
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Bridge Inspection Report

Location Map



Latitude: 35.30275

Longitude: -94.41034

Inspector:

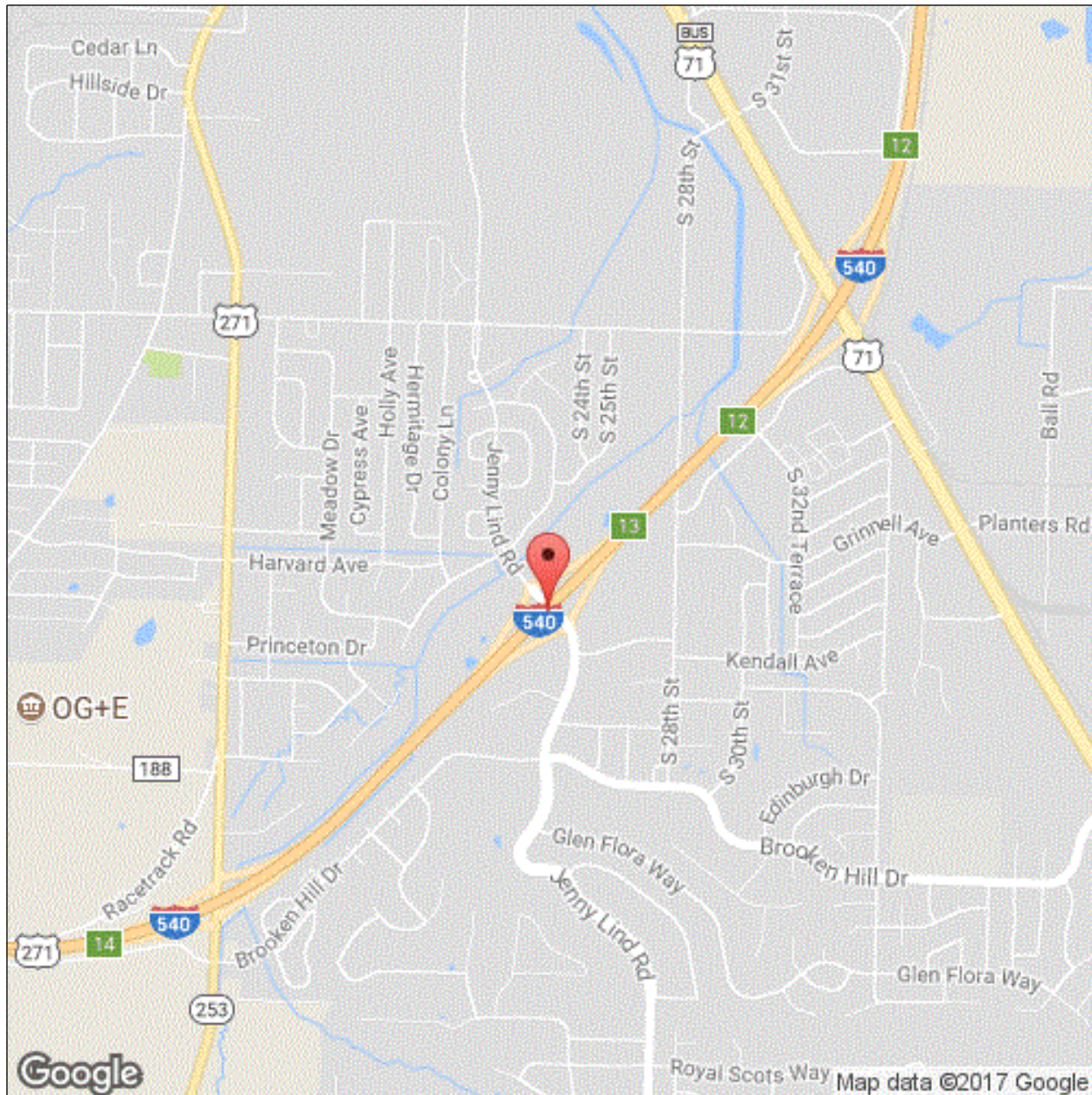
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Location Map



Latitude: 35.30275

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Bridge Inspection Report

Executive Summary

08/10/2015 - EJW & RWF - Under Record Clearance only, No changes in clearances. Special Inspection removed on this date and Under Record Clearance inspection added to document under clearances due to structure having less than 15'-0" vertical under clearances.

08/08/2016 - JCJ & JML - The expansion joints appear to be fully expanded at 88 degrees Fahrenheit. The top of the Southwest abutment backwall (Bent 1) has a 6' area that is rubbelized and breaking apart near the centerline of the structure that is visible from the driving surface of the deck. There are delaminated areas in the backwalls where the deck makes contact with the backwalls that is visible from the undersurface of the deck.

08/15/2017 - JCJ & JML - Under Record Clearance Inspection - Underclearance is less than 15'. The underclearances for this structure were Actual Field Measured during this inspection. The structure is posted for 14' 11" Underclearance at both approaches on Jenny Lind. Beams 6 & 7 have insignificant scrape marks. There are no apparent changes since the last inspection.

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Bridge Inspection Report

National Bridge Inventory

IDENTIFICATION		INSPECTIONS	
(1) STATE CODE	056 - Arkansas	(90) INSPECTION DATE	08/08/2016
(8) STRUCTURE NUMBER	B5629	(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	Jenny Lind Street	C. OTHER SPECIAL	Y 24 08/15/2017
(7) FACILITY CARRIED	I-540 NB-Sebastian		
(9) LOCATION	0.95 MI W JCT US 71 & 540		
(11) MILEPOINT 1.660	(12) BASE HIGHWAY NETWORK 1		
(13A) LRS INVENTORY ROUTE	0000540010 (13B) SUBROUTE NUMBER 00		
(16) LATITUDE 35.30275	(17) LONGITUDE -94.41034		
(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 1	(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 1977	(106) YEAR RECONSTRUCTED 0000	(31) DESIGN LOAD	6
(42) TYPE OF SERVICE ON 1 UNDER 1		(63) METHOD USED TO DETERMINE OPERATING RATING	1
(28) LANES ON 02 UNDER 04		(64) OPERATING RATING	60.0
(29) AVERAGE DAILY TRAFFIC 28000	(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.) 76	(49) STRUCTURE LENGTH (ft.) 78	(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	5
(52) DECK WIDTH, OUT-TO-OUT (ft.) 43.7		(71) WATERWAY ADEQUACY	N
(32) APPROACH ROADWAY WIDTH (ft.) 41.0		(72) APPROACH ROADWAY ALIGNMENT	8
(33) BRIDGE MEDIAN 0	(34) SKEW (DEG.) 0	(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 14.92		36D) APPROACH GUARDRAIL ENDS:	1
(55) LATERAL UNDER CLEARANCE RIGHT (ft.) H 11.5		(113) SCOUR CRITICAL BRIDGES	N
(56) MIN LATERAL UNDER CLEARANCE (ft.) 12		SUFFICIENCY RATING	0 STATUS 97.0
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	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: B5629

Inspection Date:

Facility Carried: I-540 NB-Sebastian

Bridge Inspection Report

National Bridge Inventory

UNDER RECORD 2

IDENTIFICATION

(1) STATE CODE	056 - Arkansas	(7) FACILITY CARRIED	I 540-SEC 1, EB LN
(3) COUNTY CODE	131	(8) STRUCTURE NUMBER	B5629
(4) PLACE CODE	24060	(9) LOCATION	0.95 MI W JCT US 71 & 540
(5) INV. ROUTE (ON/UNDER)	2 5 1 29350 0	(11) MILEPOINT	4.859 (12) BASE HIGHWAY NETWORK 0
(6) FEATURES INTERSECTED	Jenny Lind Street	(13A) LRS INVENTORY ROUTE	0000000000 (13B) SUBROUTE NUMBER 00
		(16) LATITUDE	35. 3027222222222
		(17) LONGITUDE	-94.41025

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	2	(30) YEAR OF AVERAGE DAILY TRAFFIC	1983
(27) YEAR BUILT	1977	(42) TYPE OF SERVICE	ON 1 UNDER 1
(28) LANES	ON 02 UNDER 04	(109) AVERAGE DAILY TRUCK TRAFFIC	1
(29) AVERAGE DAILY TRAFFIC	1534		

GEOMETRIC DATA

(10) INV RTE, MIN VERT CLEARANCE	15.1	(48) LENGTH OF MAXIMUM SPAN	76	(49) STRUCTURE LENGTH	78
(47) TOTAL HORIZONTAL CLEARANCE	70.6				

CLASSIFICATION

(20) TOLL	3	(102) DIRECTION OF TRAFFIC	2
(26) FUNCTIONAL CLASSIFICATION OF INVENTORY ROUTE	16	(103) TEMP STRUCTURE	
(100) STRAHNET HIGHWAY DESIGNATION	0	(104) HIGHWAY SYSTEM OF THE INVENTORY ROUTE	0
(101) PARALLEL STRUCTURE DESIGNATION	R	(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.	3237	sq. ft.	2195	801	241	0
	08/08/2016 - JCJ & JML - The driving surface of the deck has sealable map cracking. Maintenance forces have sealed the cracks in the Right lanes with epoxy in the past. The cracks in the Left lane have not been sealed. The undersurface of the deck has two baseball size spalls with exposed reinforcing steel in the overhang portion of the deck on the right side adjacent to the North abutment. The deck appears to make contact with the abutment backwalls in areas.						
1080 - Delamination/Spall/Patched Area		2			1	1	
1130 - Cracking (RC and Other)		480			240	240	
1190 - Abrasion/Wear (PSC/RC)		560			560		
107 - Steel Open Girder/Beam	1- Ben.	546	ft.	545	0	1	0
	08/08/2016 - JCJ & JML - There are insignificant scrape marks on the bottom flanges of Beams # 6 & 7 from apparent traffic impacts. The paint system is in place but is beginning to chalk at this inspection. The web of Beam # 4 over the East abutment has active corrosion with flaking rust in the upper portion of the web at the juncture of the deck haunch.						
1000 - Corrosion		1				1	
515 - Steel Protective Coating		4572	sq. ft.	4571	0	0	1
3440 - Effectiveness (Steel Protective Coatings)		1					1
215 - Reinforced Concrete Abutment	1- Ben.	90	ft.	23	57	2	8
	08/08/2016 - JCJ & JML - The top of the Southwest abutment backwall (Bent 1) has a 6' area that is rubble and breaking apart near the centerline of the structure. Both abutments have golfball size delaminated areas and spalls with exposed snap ties from the construction process. There are delaminated areas where the deck makes contact with the backwalls at 88 degrees Fahrenheit. There is vertical and diagonal cracking in both stem walls with no apparent change since the last inspection. Bent 2, Northeast abutment - Maintenance forces have repaired the top of the backwall and replaced the deck joint sealant in the past. Repairs appear to be holding at this inspection.						
1080 - Delamination/Spall/Patched Area		48			38	2	8
1120 - Efflorescence/Rust Staining		1			1		
1130 - Cracking (RC and Other)		18			18		

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Bridge Inspection Report

Element Inspection

302 - Compression Joint Seal	1- Ben.	84	ft.	43	0	0	41
<p>08/08/2016 - JCJ & JML - Bent 1 - The armored expansion joint compression seal at the south bridge end has deteriorated and is allowing water, dirt and debris to leak onto the south abutment bridge seat. The expansion joint appears to be fully closed with the deck joint seal torn / shredded. The ambient temperature at the time of inspection was approximately 88 degrees Fahrenheit. The backwall adjacent to the expansion joint is rubbelized and breaking apart adjacent to the expansion joint at this inspection.</p> <p>Bent 2 - Maintenance forces have made repairs to the top of the backwall and replaced the deck joint sealant over the Northeast abutment.</p>							
2330 - Seal Damage		41					41
311 - Movable Bearing	1- Ben.	7	each	0	7	0	0
<p>08/08/2016 - JCJ & JML - Expansion bearings appear to be expanded at 88 degrees Fahrenheit. The deck makes contact with the backwall in areas. There is minor corrosion between the rocker and the masonry plate.</p>							
1000 - Corrosion		7			7		
313 - Fixed Bearing	1- Ben.	7	each	0	7	0	0
<p>08/08/2016 - JCJ & JML - The ambient temperature at the time of inspection was approximately 88 degrees Fahrenheit. The deck makes contact with the backwall in areas. There is minor corrosion with flaking rust between the sole and masonry plates.</p>							
1000 - Corrosion		7			7		
321 - Reinforced Concrete Approach Slab	1- Ben.	2954	sq. ft.	2928	24	2	0
<p>08/08/2016 - JCJ & JML - The Southwest approach slab adjacent to Bent 1 has 2' of spalling with no exposed reinforcing steel. The Northeast approach slab adjacent to Bent 2 has one transverse crack.</p>							
1080 - Delamination/Spall/Patched Area		2				2	
1130 - Cracking (RC and Other)		24			24		
330 - Metal Bridge Railing	1- Ben.	78	ft.	72	0	6	0
<p>08/08/2016 - JCJ & JML - The metal portions of the Right bridge railing has loose rail / post connections.</p>							
1020 - Connection		6				6	
331 - Reinforced Concrete Bridge Railing	1- Ben.	78	ft.	62	12	4	0
<p>08/08/2016 - JCJ & JML - The base of the median parapet has spalling at the North and South bridge ends located over the abutment backwalls.</p>							
1080 - Delamination/Spall/Patched Area		4				4	
1130 - Cracking (RC and Other)		12			12		

Inspector:

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Bridge Inspection Report

Pictures

Inspector:

Inspection Date:

Structure Number: B5629

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Bridge Inspection Report

Sketches

Inspector:

Structure Number: B5629

Inspection Date:

Facility Carried: I-540 NB-Sebastian

Bridge Inspection Report

Maintenance Needs

Date Reported: 8/28/2012 12:00:00 AM

Priority: G - General/ Preventive maintenance

Work Code:

Deficiency Description:

The right edge of the deck at Bent # 2 ponds water in the gutters.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Date Reported: 8/19/2014 12:00:00 AM

Priority: D - Routine

Work Code:

Deficiency Description:

Undersurface of deck -

The undersurface of the deck has two baseball size spalls with exposed reinforcing steel in the overhang portion of the deck on the right side adjacent to the north abutment.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Inspector:

Structure Number: B5629

Inspection Date:

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Bridge Inspection Report

Maintenance Needs

Date Reported: 8/5/2011 12:00:00 AM

Priority: D - Routine

Work Code:

Deficiency Description:

Deck -

The deck has sealable cracking in the Inside lane

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description Unsealed cracks in the Left Lane.

Stage: Assigned



PHOTO 2 Description Right lane epoxy repairs.

Inspector:

Structure Number: B5629

Inspection Date:

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Bridge Inspection Report

Maintenance Needs

Date Reported: 8/5/2011 12:00:00 AM

Priority: D - Routine

Work Code:

Deficiency Description:

Expansion joint seal at West bridge end -

The armored expansion joint compression seal at the West bridge end has deteriorated and is allowing water, dirt and debris to leak onto the south abutment bridge seat.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description Bent 1. Typical

Stage: Assigned



PHOTO 2 Description Bent 1. Top of backwall is breaking apart

Inspector:

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Bridge Inspection Report

Maintenance Needs

Date Reported: 8/5/2011 12:00:00 AM

Priority: D - Routine

Work Code:

Deficiency Description:

Approach slabs have minor settlement.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description East approach slab.

Inspector:

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Bridge Inspection Report

Maintenance Needs

Date Reported: 8/28/2012 12:00:00 AM

Priority: G - General/ Preventive maintenance

Work Code:

Deficiency Description:

West abutment -

The top of the West abutment backwall is approximately 1/2" higher than the bridge deck and appears to be slightly leaning away from the bridge deck.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description

Inspector:

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Bridge Inspection Report

Maintenance Needs

Date Reported: 8/20/2014 12:00:00 AM

Priority: D - Routine

Work Code:

Deficiency Description:

Superstructure -

The bearings have a failing paint system with pack rust in the bearing devices in locations.

The armored expansion joints have areas of active corrosion with flaking rust adjacent to the top flanges of the exterior beams visible from the undersurface. The web of beam # 4 over the north abutment has active corrosion with flaking rust in the upper portion of the web at the juncture of the deck haunch.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description Bent 1. Beam 3. Bearing

Stage: Assigned



PHOTO 2 Description Bent 2. Beam 4.

Inspector:

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Bridge Inspection Report

Maintenance Needs

Date Reported: 8/20/2014 12:00:00 AM

Priority: G - General/ Preventive maintenance

Work Code:

Deficiency Description:

Median parapet -

The base of the median parapet has spalling with exposed reinforcing steel at the north and south bridge ends.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description Bent 2. Top of backwall

Stage: Assigned



PHOTO 2 Description Bent 1. Top of backwall is breaking apart