

Bridge Inspection Report

00671

SH 23-Logan Co.
over
Petit Jean River



Inspection Date:

Inspected By:

Inspection Type(s):

Inspector:

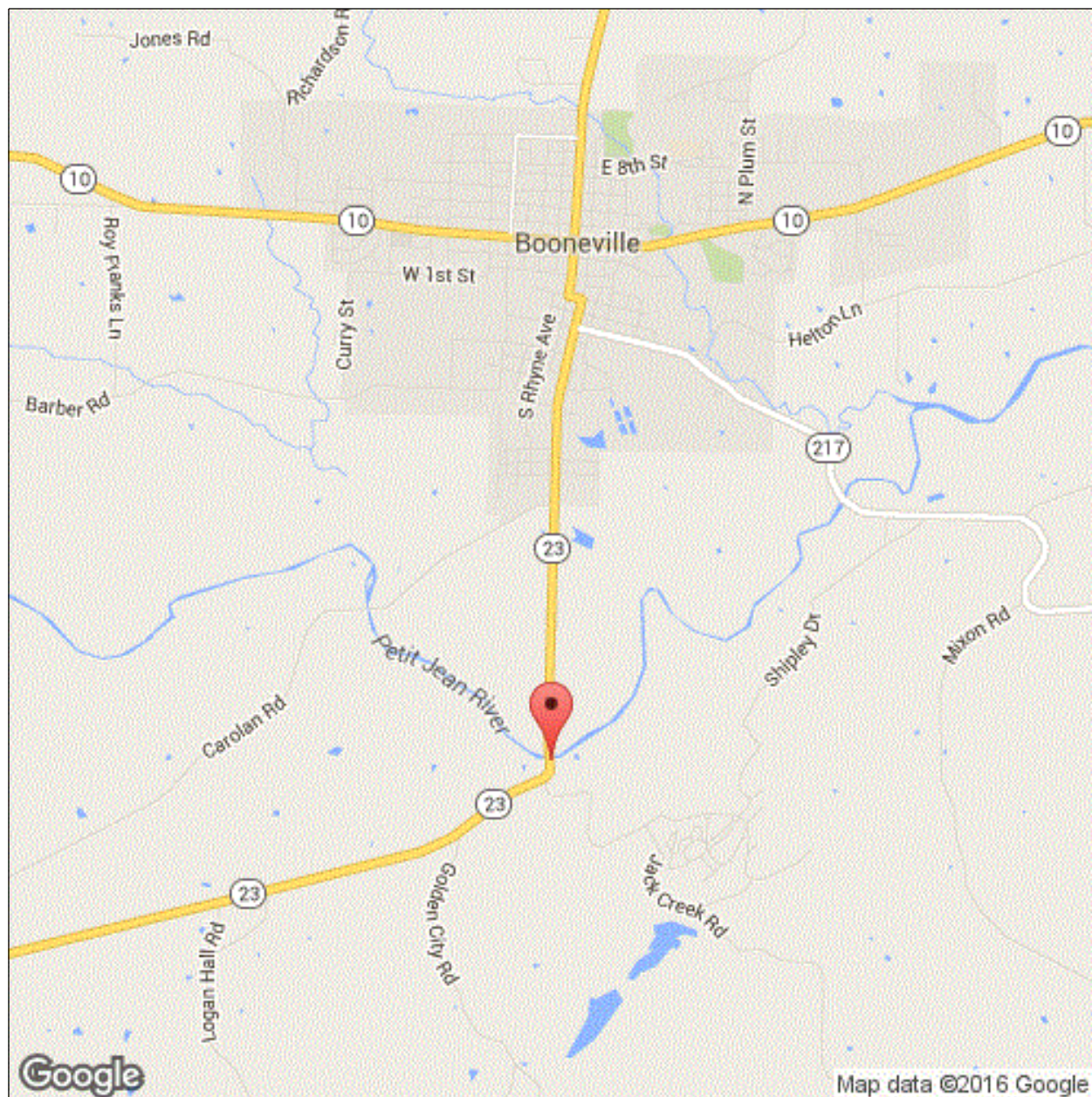
Structure Number: 00671

Inspection Date:

Facility Carried: SH 23-Logan Co.

Bridge Inspection Report

Location Map



Latitude: 35.10684

Longitude: -93.92371

Inspector:

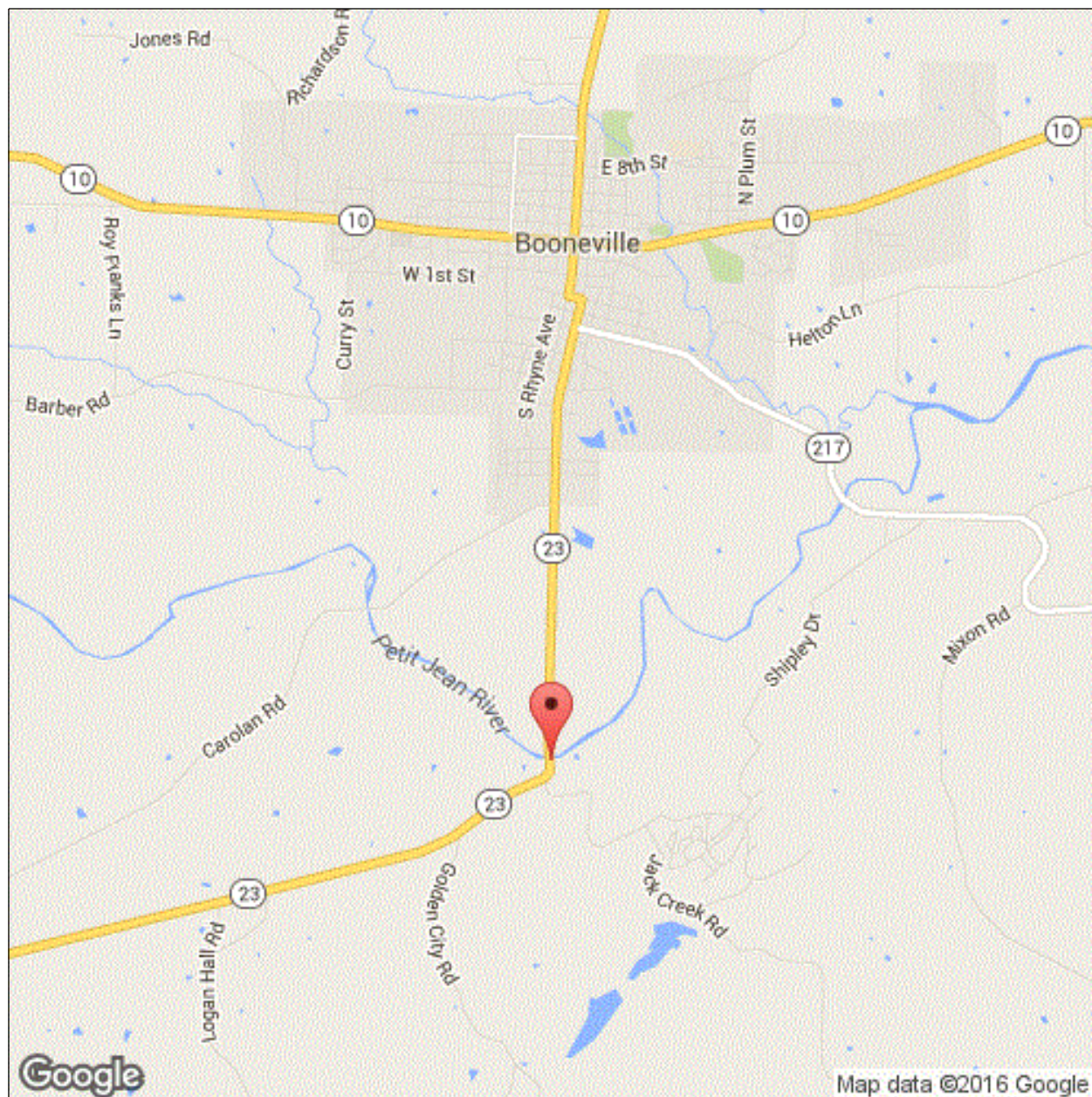
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National Bridge Inventory

IDENTIFICATION		INSPECTIONS	
(1) STATE CODE	056 - Arkansas	(90) INSPECTION DATE	05/07/2018
(8) STRUCTURE NUMBER	00671	(91) DESIGNATED INSPECTION FREQUENCY	24
(5) INV. ROUTE (ON/UNDER)	1 3 1 23 0	(92) CRITICAL FEATURE INSPECTION	(93) CFI DATE
(2) HIGHWAY AGENCY	04 (3) COUNTY CODE 083	A. FRACTURE CRITICAL DETAIL	N
(4) PLACE CODE	00000	B. UNDERWATER INSPECTION	N
(6) FEATURES INTERSECTED	Petit Jean River	C. OTHER SPECIAL	N
(7) FACILITY CARRIED	SH 23-Logan Co.		
(9) LOCATION	0.02 MI NO OF JCT SH 116		
(11) MILEPOINT 0.080	(12) BASE HIGHWAY NETWORK 1		
(13A) LRS INVENTORY ROUTE	0000023030 (13B) SUBROUTE NUMBER 00		
(16) LATITUDE 35.10684	(17) LONGITUDE -93.92371		
(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	6 (60) SUBSTRUCTURE 5
B) TYPE OF DESIGN/CONSTR: 02 - Stringer/Multi-beam or Girder		(61) CHANNEL & CHANNEL PROTECTION	8 (62) CULVERT N
(44) STRUCTURE TYPE, APPROACH SPANS			
A) KIND OF MATERIAL/DESIGN: 1 - Concrete			
B) TYPE OF DESIGN/CONSTR: 04 - Tee Beam			
(45) NUMBER OF SPANS IN MAIN 1	(46) NUMBER OF APPROACH 7		
(107) DECK STRUCTURE TYPE 1	(108A) WEARING SURFACE 6		
(108B) DECK MEMBRANE 0	(108C) DECK PROTECTION 0		
AGE OF SERVICE		LOAD RATING AND POSTING	
(27) YEAR BUILT 1961	(106) YEAR RECONSTRUCTED 0000	(31) DESIGN LOAD	4
(42) TYPE OF SERVICE ON 1	UNDER 5	(63) METHOD USED TO DETERMINE OPERATING RATING	1
(28) LANES ON 02	UNDER 00	(64) OPERATING RATING	56
(29) AVERAGE DAILY TRAFFIC 2900	(19) BYPASS DETOUR LENGTH 20	(65) METHOD USED TO DETERMINE INVENTORY RATING	1
(30) YEAR OF AVERAGE DAILY TRAFFIC 2014		(66) INVENTORY RATING	34
(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.) 92	(49) STRUCTURE LENGTH (ft.) 336	(67) STRUCTURAL EVALUATION	5
(50) CURB/SIDEWALK WIDTHS (ft.) LEFT 1.5	RIGHT 1.5	(68) DECK GEOMETRY	4
(51) BRDG RDWY WIDTH CURB-TO-CURB (ft.)	27.9	(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL	N
(52) DECK WIDTH, OUT-TO-OUT (ft.)	31.6	(71) WATERWAY ADEQUACY	8
(32) APPROACH ROADWAY WIDTH (ft.)	34.1	(72) APPROACH ROADWAY ALIGNMENT	4
(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:	0
(47) TOTAL HORIZONTAL CLEARANCE (ft.)	30.8	36B) TRANSITIONS:	0
(53) VERTICAL CLEARANCE OVER BRIDGE ROADWAY (ft.)	99.99	36C) APPROACH GUARDRAIL:	0
(54) VERTICAL UNDER CLEARANCE (ft.)	N 0	36D) APPROACH GUARDRAIL ENDS:	1
(55) LATERAL UNDER CLEARANCE RIGHT (ft.)	N 99.9	(113) SCOUR CRITICAL BRIDGES	5
(56) MIN LATERAL UNDER CLEARANCE (ft.)	000	SUFFICIENCY RATING	60.5 STATUS 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	0
(94) BRIDGE IMPROVEMENT COST (\$)	0	(26) FUNCTIONAL CLASSIFICATION OF INVENTORY ROUTE	06
(95) ROADWAY IMPROVEMENT COST (\$)	0	(100) STRAHNET HIGHWAY DESIGNATION	0
(96) TOTAL PROJECT COST	0	(101) PARALLEL STRUCTURE DESIGNATION	N
(97) YEAR OF IMPROVEMENT COST ESTIMATE		(102) DIRECTION OF TRAFFIC	2
(114) FUTURE ADT 3893	(115) YEAR OF FUTURE ADT 2028	(103) TEMP STRUCTURE	
		(105) FEDERAL LANDS HIGHWAYS	0
		(110) DESIGNATED NATIONAL NETWORK	0
		(20) TOLL	3
		(21) MAINTENANCE RESPONSIBILITY	01
		(22) OWNER	01
		(37) HISTORICAL	5
		NAVIGATION DATA	
		(38) NAVIGATION CONTROL	0
		(111) PIER OR ABUTMENT PROTECTION	1
		(39) NAV VERT CLEARANCE (ft.)	000
		(116) MIN NAVIGATION VERT CLEARANCE, VERT LIFT BRIDGE (ft.)	0
		(40) NAV HORIZONTAL CLEARANCE (ft.)	0000

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.	10618	sq. ft.	8573	1631	414	0
	-The driving surface of Span 3 has some cracks that have not been sealed. -Light wear on the driving surface in Span 3. -The gutters in Span 3 have areas of light scale with minor section loss. -Span 3 has one 24" diameter delaminated area in Bay 4 located 22' from Bent 4 that is visible from the undersurface of the deck. -Numerous shallow spalls with exposed reinforcing steel along the edges of the deck at the expansion joints and along the drip groove.						
1080 - Delamination/Spall/Patched Area		35			33	2	
1090 - Exposed Rebar		27			3	24	
1120 - Efflorescence/Rust Staining		37			37		
1130 - Cracking (RC and Other)		530			530		
1190 - Abrasion/Wear (PSC/RC)		1416			1028	388	
510 - Wearing Surfaces		8051	sq. ft.	7845	127	79	0
3210 - Delamination/Spall/Patched Area/Pothole (Wearing Surfaces)		7			7		
3220 - Crack (Wearing Surface)		199			120	79	
107 - Steel Open Girder/Beam	1- Ben.	450	ft.	0	432	18	0
	-Minor areas of active corrosion below the deck drains. -The paint system is beginning to deteriorate in areas with minor rust showing through the paint system throughout the main span superstructure. -Active corrosion in the top flanges that correspond with the full depth cracks in the deck.						
1000 - Corrosion		450			432	18	
515 - Steel Protective Coating		4886	sq. ft.	0	0	4691	195
3440 - Effectiveness (Steel Protective Coatings)		4886				4691	195
110 - Reinforced Concrete Open Girder/Beam	1- Ben.	980	ft.	970	6	4	0
	-Vertical hairline flexure cracks at approximately 12" centers typical. -Basket ball size spalling in 2 haunches at Bent 5. -Bent # 5 Girder #3 has spalling in the end of the girder over the bent. -Bent # 7 Girders # 2 - 3 have spalling with exposed reinforcing steel over the Bent cap.						
1080 - Delamination/Spall/Patched Area		2			2		
1090 - Exposed Rebar		4				4	
1130 - Cracking (RC and Other)		4			4		

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202 - Steel Column	1- Ben.	10	each	1	1	7	1
	-Original structure is cast in place concrete that has been widened with steel columns. -Bent 2 right piling has active corrosion at the base of pile with heavy pitting and the flange reduced by 1/2" on one flange and by 2.5" on the other flange. -Steel columns have small areas of active corrosion at the steel pile / concrete cap juncture with section loss up to 1/8". -The tops of the steel pile columns have been painted in the past with active corrosion and layers of rust beginning to form in areas.						
1000 - Corrosion		9			1	7	1
515 - Steel Protective Coating		400	sq. ft.	270	0	120	10
3440 - Effectiveness (Steel Protective Coatings)		130				120	10
205 - Reinforced Concrete Column	1- Ben.	12	each	7	2	3	0
	-Original structure is cast in place concrete that has been widened with steel columns. -Light scale at the base of Bent 3. -Bent # 4 has exposed reinforcing steel in the tops of both columns with initial section loss.						
1090 - Exposed Rebar		3				3	
1190 - Abrasion/Wear (PSC/RC)		2			2		
210 - Reinforced Concrete Pier Wall	1- Ben.	36	ft.	35	1	0	0
	-Bent # 4 has a vertical crack in the web wall.						
1130 - Cracking (RC and Other)		1			1		
215 - Reinforced Concrete Abutment	1- Ben.	70	ft.	70			
	-No apparent noteworthy problems at this inspection.						
234 - Reinforced Concrete Pier Cap	1- Ben.	197	ft.	177	5	15	0
	-Bent 2 cap has a 2' area of concrete spalling with exposed reinforcing steel at the ends of cap with initial section loss to the exposed reinforcing steel. -Bent 7, Rt side has spalling around three sides of cap with exposed reinforcing steel with 1/8" section loss to the exposed reinforcing steel. -Repairs have been made to Bent 5 concrete spalls with exposed reinforcing steel in the haunches under Girders 2 and 3.						
1080 - Delamination/Spall/Patched Area		3			2	1	
1090 - Exposed Rebar		12				12	
1120 - Efflorescence/Rust Staining		2			1	1	
1130 - Cracking (RC and Other)		3			2	1	
302 - Compression Joint Seal	1- Ben.	93	ft.	0	0	93	0
	-Compression deck joints appear to leak water.						
2310 - Leakage		93				93	
303 - Assembly Joint with Seal	1- Ben.	60	ft.	60			
	-No apparent problems since the last inspection. -The assembly joint appears to be firmly anchored at this inspection.						

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311 - Movable Bearing	1- Ben.	5	each	0	0	5	0
-Minor rust and active corrosion showing through the paint. -No apparent significant problems at this inspection.							
1000 - Corrosion		5				5	
515 - Steel Protective Coating		5	sq. ft.	0	0	5	0
3440 - Effectiveness (Steel Protective Coatings)		5				5	
313 - Fixed Bearing	1- Ben.	5	each	0	0	5	0
-Minor rust and active corrosion showing through the paint. -No apparent significant problems at this inspection.							
1000 - Corrosion		5				5	
515 - Steel Protective Coating		5	sq. ft.	0	0	5	0
3440 - Effectiveness (Steel Protective Coatings)		5				5	
330 - Metal Bridge Railing	1- Ben.	672	ft.	661	0	6	5
-The rail posts have a few loose or missing nuts but appears to be firmly attached and functioning as intended. -The rail connections are developing pack rust in isolated areas. -The left bridge rail in Span # 8 has collision damage that has fractured the end post from the structure and pulled the bolts through the bridge rail connections.							
1020 - Connection		9				6	3
7000 - Damage		2					2

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Maintenance Needs

Date Reported: 04/26/2016

Priority: C - Important

Work Code:

Deficiency Description:

Substructure. Steel columns.

Bent # 2 piling has active corrosion with significant section loss approximately 3' from the bases of piles visible due to embankment erosion that has exposed approximately 3' of the piling that was originally covered. The most notable areas are the flange of Column # 4 which has a area of complete section loss to the exterior side of the flange that is approximately 5" long and 2 1/2" wide.

Column # 1 has pitting and up to 3/8" section loss to the exterior side of the flange in the same location. The tops of the steel pile columns have active corrosion beginning to show through the recent paint job with layers of flaking paint forming at the base of the concrete cap.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Open



PHOTO 1 Description Bent # 2 right steel pile column with up to 2 1/2" section loss to the flange.

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Maintenance Needs

Date Reported: 04/26/2016

Priority: C - Important

Work Code:

Deficiency Description:

Approach Guard Rail

Approach guard rail on the Northeast side has collision damage that has broken four of the concrete post leaving the railing unattached at the broken posts.

The Left bridge railing at the North bridge end has collision damage to the concrete end post and the first metal post.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Open



PHOTO 1 Description Northeast approach guardrail damage.

Stage: Open



PHOTO 2 Description North bridge rail attachment left side.

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Maintenance Needs

Date Reported: 04/26/2016

Priority: G - General/ Preventive maintenance

Work Code:

Deficiency Description:

Superstructure

The paint system on Span # 3 steel beams is beginning to fail with areas of active corrosion and flaking rust below the deck drains.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description Failing paint system.

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Maintenance Needs

Date Reported: 04/26/2016

Priority: D - Routine

Work Code:

Deficiency Description:

Deck

The deck overhang has numerous shallow spalls with exposed reinforcing steel with active corrosion and initial section loss.

Span # 3 has sealable transverse deck cracking and light scale in the gutters.

The asphalt is breaking apart over the bents in random locations on the driving surface.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description The driving surface of Span 3 has sealable cracking.

Stage: Assigned



PHOTO 2 Description Span 3 has sealable transverse deck cracking and light scale in the gutters.

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Maintenance Needs

Date Reported: 04/26/2016

Priority: D - Routine

Work Code:

Deficiency Description:

Substructure

The concrete bent caps have shallow spalling with exposed reinforcing steel in numerous areas.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description Bent # 5 left cap cracking and spalling with exposed reinforcing steel.

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Maintenance Needs

Date Reported: 04/26/2016

Priority: D - Routine

Work Code:

Deficiency Description:

Substructure

Embankment erosion at Bent 2 that has removed approximately 3' of embankment material from the base of the Columns .

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Open



PHOTO 1	Description	Embankment erosion at Bent 2 that has removed approximately 3' of embankment material from the base of the Columns .
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Maintenance Needs

Date Reported: 04/26/2016

Priority: D - Routine

Work Code:

Deficiency Description:

Approach Roadway

The approach roadway at Bent 1 and 9 is cracked and has potholes at the bridge ends.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Open



PHOTO 1 Description The approach roadway at Bent 1 is cracked and has potholes at the bridge end.

Stage: Open



PHOTO 2 Description The approach roadway at Bent 9 (North abutment) is cracked and has potholes at the bridge end.