

Bridge Inspection Report

02378

US 270-10 LM 3.42

over

Hurricane Creek



Inspection Date:

Inspected By:

Inspection Type(s):

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Inspector:

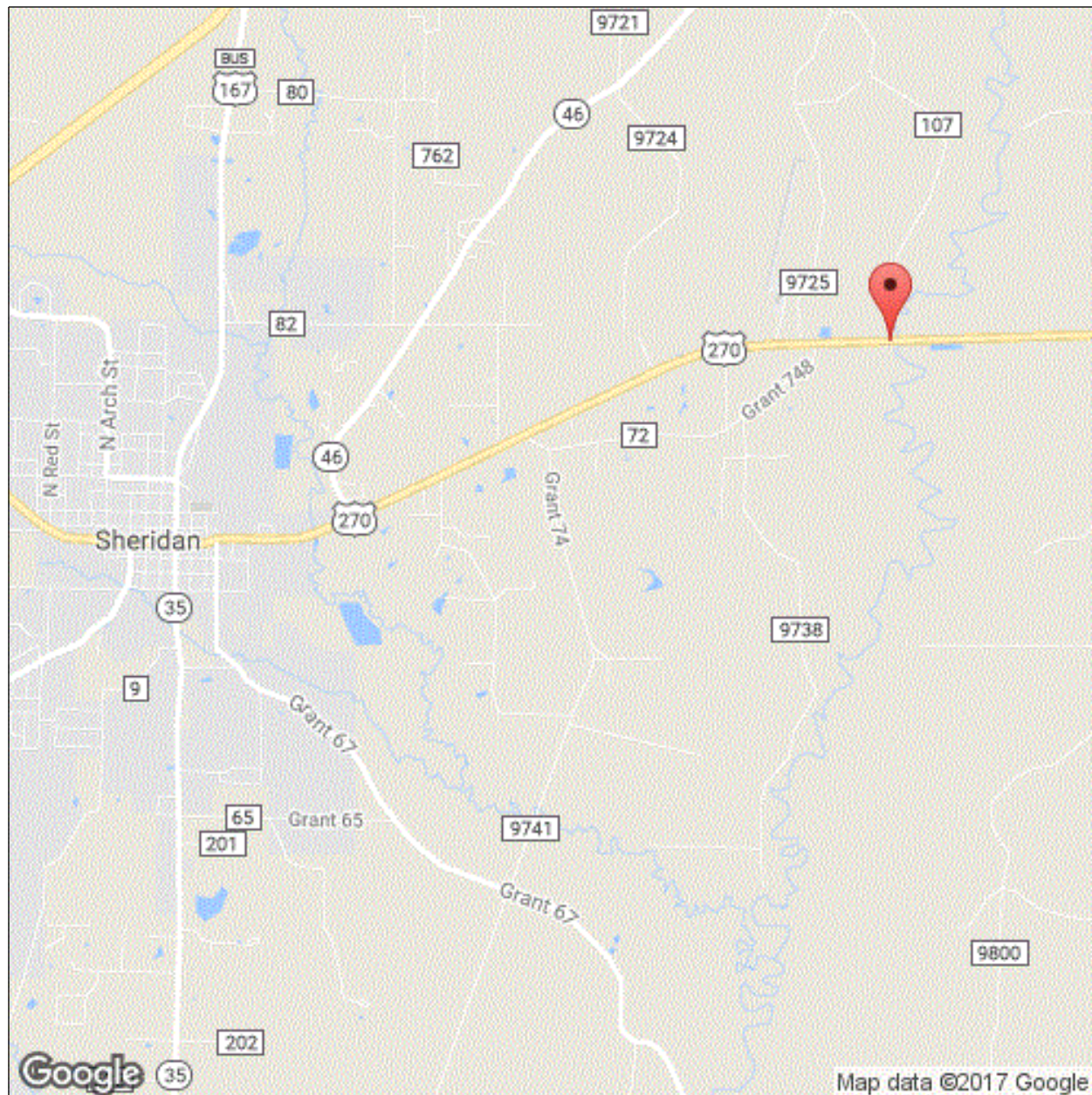
Structure Number: 02378

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Facility Carried: US 270-10 LM 3.42

Bridge Inspection Report

Location Map



Latitude: 34.31992

Longitude: -92.34273

Inspector:

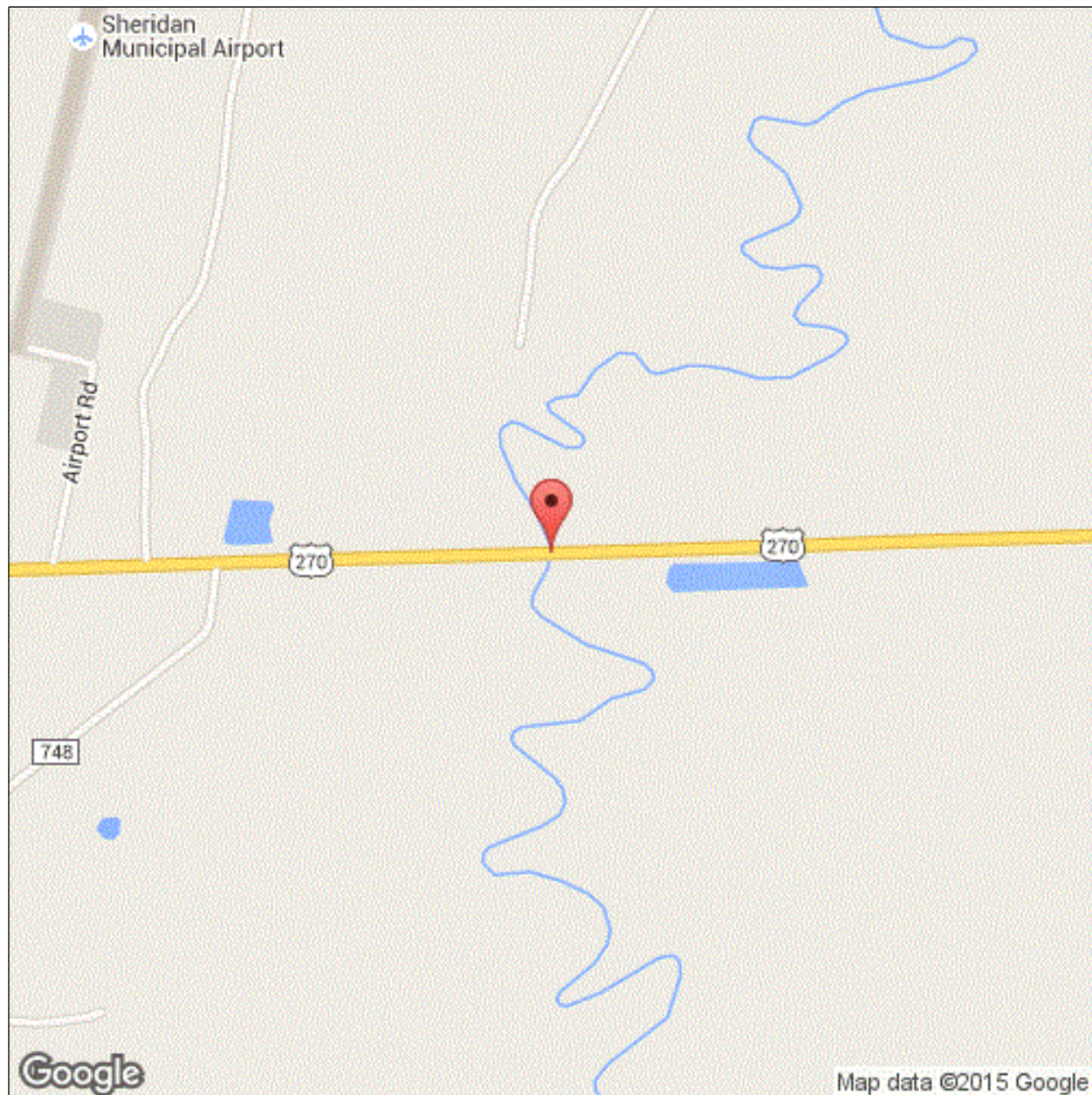
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Inspector:

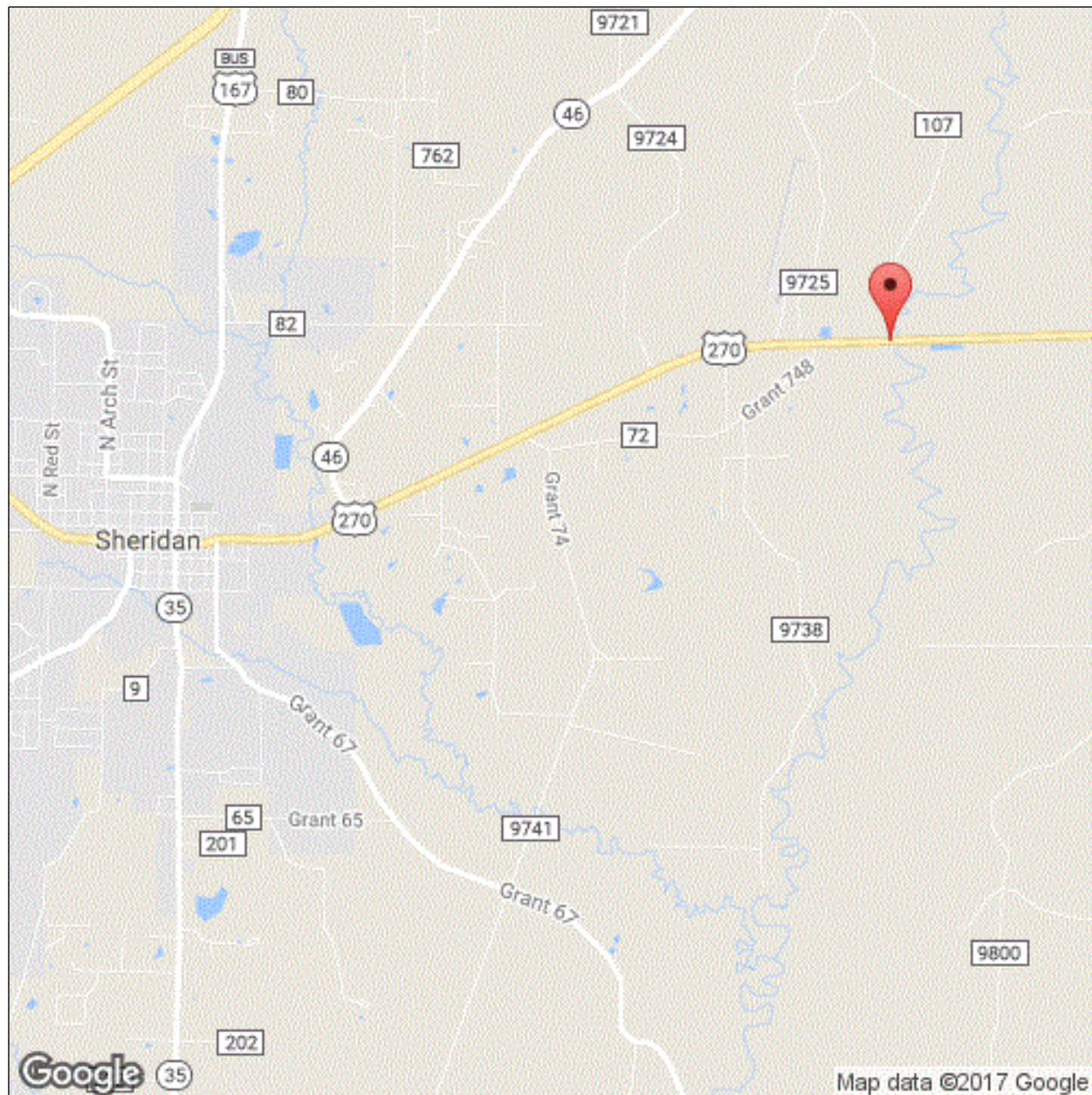
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Location Map



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Bridge Inspection Report

Executive Summary

Bridge is logged from west to east.

Layout D# 6582, Job# 6314

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Bridge Inspection Report

National Bridge Inventory

IDENTIFICATION		INSPECTIONS	
(1) STATE CODE	056 - Arkansas	(90) INSPECTION DATE	10/03/2017
(8) STRUCTURE NUMBER	02378	(91) DESIGNATED INSPECTION FREQUENCY	24
(5) INV. ROUTE (ON/UNDER)	1 2 1 270 0	(92) CRITICAL FEATURE INSPECTION	(93) CFI DATE
(2) HIGHWAY AGENCY	02 (3) COUNTY CODE 053	A. FRACTURE CRITICAL DETAIL	N
(4) PLACE CODE	00000	B. UNDERWATER INSPECTION	N
(6) FEATURES INTERSECTED	Hurricane Creek	C. OTHER SPECIAL	N
(7) FACILITY CARRIED	US 270-10 LM 3.42		
(9) LOCATION	3.42 Mi E US 167-Sheridan		
(11) MILEPOINT 3.420	(12) BASE HIGHWAY NETWORK 1		
(13A) LRS INVENTORY ROUTE	0000270100 (13B) SUBROUTE NUMBER 00		
(16) LATITUDE	34.31992 (17) LONGITUDE -92.34273		
(98A) BORDER BRIDGE CODE			
PERCENT RESPONSIBILITY	(99) BORDER BRIDGE STRUCT		
STRUCTURE TYPE AND MATERIAL		CONDITION	
(43) STRUCTURE TYPE, MAIN		(58) DECK	7
A) KIND OF MATERIAL/DESIGN: 3 - Steel		(59) SUPERSTRUCTURE	6 (60) SUBSTRUCTURE 6
B) TYPE OF DESIGN/CONSTR: 02 - Stringer/Multi-beam or Girder		(61) CHANNEL & CHANNEL PROTECTION	7 (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	15 (46) NUMBER OF APPROACH	0	
(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	1948 (106) YEAR RECONSTRUCTED	0000	
(42) TYPE OF SERVICE	ON 1 UNDER 5	(31) DESIGN LOAD	4
(28) LANES	ON 02 UNDER 00	(63) METHOD USED TO DETERMINE OPERATING RATING	1
(29) AVERAGE DAILY TRAFFIC	6700 (19) BYPASS DETOUR LENGTH	(64) OPERATING RATING	44.0
(30) YEAR OF AVERAGE DAILY TRAFFIC	2014	(65) METHOD USED TO DETERMINE INVENTORY RATING	1
(109) AVERAGE DAILY TRUCK TRAFFIC	1	(66) INVENTORY RATING	26.0
		(70) BRIDGE POSTING	5
		(41) STRUCTURE OPEN/POSTED/CLOSED	A
GEOMETRIC DATA		APPRAISAL	
(48) LENGTH OF MAX SPAN (ft.)	36 (49) STRUCTURE LENGTH (ft.)	542	
(50) CURB/SIDEWALK WIDTHS (ft.)	LEFT 2 RIGHT 2	(67) STRUCTURAL EVALUATION	5
(51) BRDG RDWY WIDTH CURB-TO-CURB (ft.)	25.9	(68) DECK GEOMETRY	3
(52) DECK WIDTH, OUT-TO-OUT (ft.)	31.8	(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL	N
(32) APPROACH ROADWAY WIDTH (ft.)	29.9	(71) WATERWAY ADEQUACY	8
(33) BRIDGE MEDIAN	0 (34) SKEW (DEG.)	(72) APPROACH ROADWAY ALIGNMENT	8
(35) STRUCTURE FLARED	0 (10) INV RTE, MIN VERT CLEAR (ft.)	(36) TRAFFIC SAFETY FEATURE	
(47) TOTAL HORIZONTAL CLEARANCE (ft.)	28.9	36A) BRIDGE RAILINGS:	0
(53) VERTICAL CLEARANCE OVER BRIDGE ROADWAY (ft.)	99.99	36B) TRANSITIONS:	0
(54) VERTICAL UNDER CLEARANCE (ft.)	N 0	36C) APPROACH GUARDRAIL:	0
(55) LATERAL UNDER CLEARANCE RIGHT (ft.)	N 99.9	36D) APPROACH GUARDRAIL ENDS:	1
(56) MIN LATERAL UNDER CLEARANCE (ft.)	0	(113) SCOUR CRITICAL BRIDGES	5
		SUFFICIENCY RATING	2 STATUS 54.4
PROPOSED IMPROVEMENTS		CLASSIFICATION	
(75A) TYPE OF WORK PROPOSED	31 (75B) WORK DONE BY	1	
(76) LENGTH OF STRUCTURE IMPROVEMENT (ft.)	582.0	(112) NBIS BRIDGE LENGTH	Y
(94) BRIDGE IMPROVEMENT COST (\$)	0	(104) HIGHWAY SYSTEM OF THE INVENTORY ROUTE	1
(95) ROADWAY IMPROVEMENT COST (\$)	400	(26) FUNCTIONAL CLASSIFICATION OF INVENTORY ROUTE	02
(96) TOTAL PROJECT COST	2466	(100) STRAHNET HIGHWAY DESIGNATION	0
(97) YEAR OF IMPROVEMENT COST ESTIMATE	2004	(101) PARALLEL STRUCTURE DESIGNATION	N
(114) FUTURE ADT	7117 (115) YEAR OF FUTURE ADT	(102) DIRECTION OF TRAFFIC	2
		(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	0
		(111) PIER OR ABUTMENT PROTECTION	5
		(39) NAV VERT CLEARANCE (ft.)	0
		(116) MIN NAVIGATION VERT CLEARANCE, VERT LIFT BRIDGE (ft.)	0
		(40) NAV HORIZONTAL CLEARANCE (ft.)	0

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.	17235	sq. ft.	17078	157	0	0
Deck: 31.8' wide x 542' long. Wearing surface: Bents 2-15: Large transverse cracking in asphalt wearing surface at each bent. Stormwater is leaking down through cracks and onto ends of girders and onto bearings and caps. Wearing surface is beginning to deteriorate and show wide-spread map cracking, especially in wheel ruts. Curb Some scattered areas of cracking and minor spalling (traffic impact damage?) along edge of curbs with a small area of light scaling on Span 15 left. Bent 11 right: Road-iron on curb has been bent up at edge of travel lane and could possible catch on traffic.							
1090 - Exposed Rebar		32			32		
1120 - Efflorescence/Rust Staining		90			90		
1130 - Cracking (RC and Other)		35			35		
510 - Wearing Surfaces		13984	sq. ft.	9287	4336	361	0
3220 - Crack (Wearing Surface)		4697			4336	361	
107 - Steel Open Girder/Beam	1- Ben.	2700	ft.	2550	0	148	2
Girders: 5 per span \ 540' total span. Coating: 6.8 square feet per linear feet of girder. Span 6 Girder 1 @ Bent 6: Hole (1/2" x 2") rusted in top of web at haunch. Rust with flaking and section loss on web and bottom flange of girder - on top of old section loss that has been painted over. (2') Various locations: Some rust and minor section loss, especially at ends of girders at haunches and around diaphragm connections. (2' each end of each girder = 148' total) Various locations: Paint is flaking off - no rust. (Approximately 5% = 135') Some old pitting and minor section loss (10-25%) to web and bottom flange in various locations from previous rusting that has been painted over.							
1000 - Corrosion		150				148	2
515 - Steel Protective Coating		18360	sq. ft.	16320	918	1020	102
3420 - Peeling/Bubbling/Cracking (Steel Protective Coatings)		918			918		
3440 - Effectiveness (Steel Protective Coatings)		1122				1020	102
215 - Reinforced Concrete Abutment	1- Ben.	76	ft.	74	2	0	0
Abutments: 38' each \ Bents 1 & 16. A couple of small spalls in both abutments out side of overhang.							
1080 - Delamination/Spall/Patched Area		2			2		

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Element Inspection

227 - Reinforced Concrete Pile	1- Ben.	72	each	66	6	0	0
Piling: 5 per bent \ Bents 2-5, 7-10, & 12-15; 6 (double-battered) per bent \ Bents 6 & 11. Bent 7 pile 1 has small cracks near cap on ahead face. Bent 9 all 5 pile have some minor abrasion to lower 3' near water line.							
1130 - Cracking (RC and Other)		1			1		
1190 - Abrasion/Wear (PSC/RC)		5			5		
234 - Reinforced Concrete Pier Cap	1- Ben.	364	ft.	341	0	23	0
Caps: 26' each \ Bents 2-15. Bent 2,3,4,5, 7,14 & 15 have spalls with exposed rebar most common on bottom of caps.							
1090 - Exposed Rebar		23				23	
305 - Assembly Joint without Seal	1- Ben.	448	ft.	132	0	316	0
Joint Seals: 28' each bents 1-16 Joint seals have asphalt overly to curb.. Debris impaction.							
2350 - Debris Impaction		316				316	
311 - Movable Bearing	1- Ben.	80	each	0	0	80	0
Bearings: 5 per bent. Coating: 2 square feet each. Heavy flaking rust and section loss, with pack rust hindering movement of all. bearings. Span 13 Bearing 2 @ Bent 14: Bearing is leaned back to movement limit.(full tilt)							
1000 - Corrosion		79				79	
2220 - Alignment		1				1	
515 - Steel Protective Coating		160	sq. ft.	0	0	0	160
3440 - Effectiveness (Steel Protective Coatings)		160					160
313 - Fixed Bearing	1- Ben.	80	each	0	40	40	0
Bearings: 5 per bent. Coating: 2 square feet each. Some flaking rust, pack rust and section loss.							
1000 - Corrosion		80			40	40	
515 - Steel Protective Coating		160	sq. ft.	0	0	80	80
3440 - Effectiveness (Steel Protective Coatings)		160				80	80
331 - Reinforced Concrete Bridge Railing	1- Ben.	1084	ft.	1084			
Railing: 542' each side. Some areas of collision damage repairs to rails and posts in various locations.							

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Bridge Inspection Report

Pictures

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Bridge Inspection Report

Sketches

Inspector:

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Bridge Inspection Report

Maintenance Needs

Date Reported: 10/03/2017

Priority: C - Important

Work Code:

Deficiency Description:

Bearings most locations have heavy flaking rust, pack rust and section loss to masonry plates and bearings. Bent 14 bearing 2 is also at full tilt.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Open



PHOTO 1 Description Bent 14 bearing 5 back has heavy flaking rust with pack rust.

Stage: Open



PHOTO 2 Description Bent 14 bearing 2 heavy flaking rust and froze at full tilt.

Inspector:

Inspection Date:

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Bridge Inspection Report

Maintenance Needs

Stage: Open



PHOTO 3 Description Bent 14 bearings 1-2 misalignment.

Stage: Open

Stage: Open



PHOTO 5 Description Span 10 at bent 11 girder 5 has some flaking rust with minor section loss.

Stage: Open



PHOTO 4 Description Bent 11 bearing 1 has heavy corrosion to bottom of bearing and masonry plate. Common all bearing this bent.



PHOTO 6 Description Bent 12 bearing 3 heavy flaking rust with pack rust.

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Maintenance Needs

Date Reported: 10/03/2017

Priority: D - Routine

Work Code:

Deficiency Description:

Caps bent 2,3,4,5,7,14 &15 have spalls with exposed rebar. Most common on bottom face.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Inspector:

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Bridge Inspection Report

Maintenance Needs

Date Reported: 10/3/2011 12:00:00 AM

Priority: G - General/ Preventive maintenance

Work Code: Repair

Deficiency Description:

Deck – Bents 1-16: Large transverse cracking in asphalt wearing surface at each bent. Stormwater is leaking down through cracks and onto ends of girders and onto bearings and caps.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Monitor



PHOTO 1 Description Wearing surface - Bent 2 (cracking)

Stage: Monitor



PHOTO 2 Description Wearing surface - Bent 5 (cracking)

Inspector:

Inspection Date:

Structure Number: 02378

Facility Carried: US 270-10 LM 3.42

Bridge Inspection Report

Maintenance Needs

Stage: Monitor



PHOTO 3 Description Wearing surface - Bent 10 (cracking)

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Bridge Inspection Report

Maintenance Needs

Date Reported: 10/03/2017

Priority: C - Important

Work Code: Repair

Deficiency Description:

Span 6 Girder 1 @ Bent 6: Hole (1/2" x 2") rusted in top of web at haunch. Rust with flaking and section loss on web and bottom flange of girder. Several girders have some flaking rust to haunch area with minor section loss.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Monitor



PHOTO 1 Description Span 6 Girder 1 @ Bent 6 (corrosion)

Stage: Monitor



PHOTO 2 Description Span 6 Girder 1 @ Bent 6 (corrosion)

Inspector:

Structure Number: 02378

Inspection Date:

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Bridge Inspection Report

Maintenance Needs

Stage: Monitor



PHOTO 3 Description Span 10 at bent 11 girder 5 has some flaking rust with minor section loss.

Stage: Monitor



PHOTO 4 Description Span 12 at bent 13 girders 5 has flaking rust to girder end.

Stage: Monitor



PHOTO 5 Description Span 6 bent 6 girder 1 has small hole in web at haunch with heavy flaking rust and section loss to lower flange at bearing area 2'.

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Maintenance Needs

Date Reported: 10/2/2013 12:00:00 AM

Priority: G - General/ Preventive maintenance

Work Code: Repair

Deficiency Description:

Girders - various locations: Some rust and minor section loss, especially at ends of girders at haunches and around diaphragm connections.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Monitor



PHOTO 1 Description Span 2 Girder 5 @ Bent 2 (corrosion)