

Bridge Inspection Report

03540
SH 46-02 LM 13.80
over
Lost Creek



Inspection Date:

Inspected By:

Inspection Type(s):

Inspector:

Structure Number: 03540

Inspection Date:

Facility Carried: SH 46-02 LM 13.80

Bridge Inspection Report

National Bridge Inventory

IDENTIFICATION		INSPECTIONS	
(1) STATE CODE	056 - Arkansas	(90) INSPECTION DATE	09/05/2017
(8) STRUCTURE NUMBER	03540	(91) DESIGNATED INSPECTION FREQUENCY	24
(5) INV. ROUTE (ON/UNDER)	1 3 1 46 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	Lost Creek	C. OTHER SPECIAL	N
(7) FACILITY CARRIED	SH 46-02 LM 13.80	CONDITION	
(9) LOCATION	5.6 Mi S US 270-Sheridan	(58) DECK	7
(11) MILEPOINT 13.800	(12) BASE HIGHWAY NETWORK 0	(59) SUPERSTRUCTURE 6	(60) SUBSTRUCTURE 7
(13A) LRS INVENTORY ROUTE 0000000000	(13B) SUBROUTE NUMBER 00	(61) CHANNEL & CHANNEL PROTECTION 7	(62) CULVERT N
(16) LATITUDE 34.26314	(17) LONGITUDE -92.47088	LOAD RATING AND POSTING	
(98A) BORDER BRIDGE CODE		(31) DESIGN LOAD	2
PERCENT RESPONSIBILITY	(99) BORDER BRIDGE STRUCT	(63) METHOD USED TO DETERMINE OPERATING RATING	1
STRUCTURE TYPE AND MATERIAL		(64) OPERATING RATING	60.0
(43) STRUCTURE TYPE, MAIN		(65) METHOD USED TO DETERMINE INVENTORY RATING	1
A) KIND OF MATERIAL/DESIGN:	1 - Concrete	(66) INVENTORY RATING	36.0
B) TYPE OF DESIGN/CONSTR:	22 - Channel Beam	(70) BRIDGE POSTING	5
(44) STRUCTURE TYPE, APPROACH SPANS		(41) STRUCTURE OPEN/POSTED/CLOSED	A
A) KIND OF MATERIAL/DESIGN:	0 - Other	APPRAISAL	
B) TYPE OF DESIGN/CONSTR:	00 - Other	(67) STRUCTURAL EVALUATION	6
(45) NUMBER OF SPANS IN MAIN 15	(46) NUMBER OF APPROACH 0	(68) DECK GEOMETRY	4
(107) DECK STRUCTURE TYPE 2	(108A) WEARING SURFACE 1	(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL	N
(108B) DECK MEMBRANE 0	(108C) DECK PROTECTION 0	(71) WATERWAY ADEQUACY	8
AGE OF SERVICE		(72) APPROACH ROADWAY ALIGNMENT	8
(27) YEAR BUILT 1966	(106) YEAR RECONSTRUCTED 0000	(36) TRAFFIC SAFETY FEATURE	
(42) TYPE OF SERVICE ON 1	UNDER 5	36A) BRIDGE RAILINGS:	0
(28) LANES ON 02	UNDER 00	36B) TRANSITIONS:	0
(29) AVERAGE DAILY TRAFFIC 1400	(19) BYPASS DETOUR LENGTH 8	36C) APPROACH GUARDRAIL:	0
(30) YEAR OF AVERAGE DAILY TRAFFIC 2014		36D) APPROACH GUARDRAIL ENDS:	0
(109) AVERAGE DAILY TRUCK TRAFFIC 1		(113) SCOUR CRITICAL BRIDGES	5
GEOMETRIC DATA		SUFFICIENCY RATING	82.7
(48) LENGTH OF MAX SPAN (ft.) 19	(49) STRUCTURE LENGTH (ft.) 285	STATUS	ND
(50) CURB/SIDEWALK WIDTHS (ft.) LEFT 1	RIGHT 1	CLASSIFICATION	
(51) BRDG RDWY WIDTH CURB-TO-CURB (ft.)	25.9	(112) NBIS BRIDGE LENGTH	Y
(52) DECK WIDTH, OUT-TO-OUT (ft.)	28	(104) HIGHWAY SYSTEM OF THE INVENTORY ROUTE	0
(32) APPROACH ROADWAY WIDTH (ft.)	26.9	(26) FUNCTIONAL CLASSIFICATION OF INVENTORY ROUTE	07
(33) BRIDGE MEDIAN 0	(34) SKEW (DEG.) 0	(100) STRAHNET HIGHWAY DESIGNATION	0
(35) STRUCTURE FLARED 0	(10) INV RTE, MIN VERT CLEAR (ft.) 99.99	(101) PARALLEL STRUCTURE DESIGNATION	N
(47) TOTAL HORIZONTAL CLEARANCE (ft.)	26.9	(102) DIRECTION OF TRAFFIC	2
(53) VERTICAL CLEARANCE OVER BRIDGE ROADWAY (ft.)	99.99	(103) TEMP STRUCTURE	
(54) VERTICAL UNDER CLEARANCE (ft.)	N 0	(105) FEDERAL LANDS HIGHWAYS	0
(55) LATERAL UNDER CLEARANCE RIGHT (ft.)	N 99.9	(110) DESIGNATED NATIONAL NETWORK	0
(56) MIN LATERAL UNDER CLEARANCE (ft.)	0	(20) TOLL	3
PROPOSED IMPROVEMENTS		(21) MAINTENANCE RESPONSIBILITY	01
(75A) TYPE OF WORK PROPOSED 35	(75B) WORK DONE BY 1	(37) HISTORICAL	5
(76) LENGTH OF STRUCTURE IMPROVEMENT (ft.)	285	NAVIGATION DATA	
(94) BRIDGE IMPROVEMENT COST (\$)	0	(38) NAVIGATION CONTROL	0
(95) ROADWAY IMPROVEMENT COST (\$)	0	(111) PIER OR ABUTMENT PROTECTION	5
(96) TOTAL PROJECT COST	358	(39) NAV VERT CLEARANCE (ft.)	0
(97) YEAR OF IMPROVEMENT COST ESTIMATE	2003	(116) MIN NAVIGATION VERT CLEARANCE, VERT LIFT BRIDGE (ft.)	0
(114) FUTURE ADT 1182	(115) YEAR OF FUTURE ADT 2028	(40) NAV HORIZONTAL CLEARANCE (ft.)	0

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Element Inspection

	Environment	Total Quantity	Units	Condition State 1	Condition State 2	Condition State 3	Condition State 4
16 - Reinforced Concrete Top Flange	1- Ben.	7980	sq. ft.	7880	100	0	0
	Deck: 28' wide x 285' long. A few units have some scattered hairline- to minor-sized transverse cracks. Span 5 Unit 4: Some map cracking. Span 8 Unit 7: Minor cracking on deck corner at Bent 8 on left side. (1.5' long) Span 8 Unit 5: Some map cracking. Span 10 Unit 2: Some deterioration and loss of grout between adjacent units. Span 10- 11 Unit 1: have moved from their original alignment due to previous traffic impact. (enlarged grouted key ways between units 1-2)						
1080 - Delamination/Spall/Patched Area		35			35		
1130 - Cracking (RC and Other)		65			65		
110 - Reinforced Concrete Open Girder/Beam	1- Ben.	2280	ft.	2020	225	35	0
	Girders: 8 precast units per span / 285' total span. Various locations some units not bolted transversely most common between units 1-2 and 7-8. Spalling with steel exposed (minor section loss) along bottom of legs at locations indicated: Span 1 Unit 3: Right leg at beginning of span – 1' long. Span 1 Unit 5: Right leg at end of span – 2' long. Span 1 Unit 6: Right leg at end of span – 1' long. Span 2 Unit 3: Left leg at end of span – 1' long. Span 2 Unit 4: Left leg at beginning of span – 1' long. Span 2 Unit 4: Left leg at end of span – 1' long. Span 6 Unit 7: Left leg at beginning of span – 1' long. Span 7 Unit 4: Left leg at end of span – 1' long. (Have been repaired by State Forces.) NOTE: Spalling is at anchorage point of reinforcing steel and ability to carry loads may be beginning to be reduced. Span 3 & 4 have small spalls with exposed rebar 1' each Span 6 has small spalls with exposed rebar 3' Span 10-14 have spalls with exposed rebar on legs with some section loss to rebar. 31' total. All spans have some cracks and small delams in various channel legs. (Note span 10-11 unit 1 is misaligned due to previous traffic impact and not bolted transversely)						
1080 - Delamination/Spall/Patched Area		225			225		
1090 - Exposed Rebar		35				35	
215 - Reinforced Concrete Abutment	1- Ben.	72	ft.	72			
	Abutments: 36' each / Bents 1 & 16.						

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Element Inspection

227 - Reinforced Concrete Pile	1- Ben.	42	each	36	6	0	0
Piling: 3 per bent / Bents 2-15. Some minor (1-2' deep) localized scour at Bent 13 and spans 2-6 .							
6000 - Scour		6			6		
234 - Reinforced Concrete Pier Cap	1- Ben.	392	ft.	379	11	2	0
Caps: 28' each / Bents 2 -15. Some minor cracks and small delaminations with small spalls on corners. Some repairs have been made to various locations.							
1080 - Delamination/Spall/Patched Area		2			2		
1130 - Cracking (RC and Other)		11			9	2	
330 - Metal Bridge Railing	1- Ben.	570	ft.	570			
Railing: 285' each side. Coating: ? square feet/linear feet of railing. Metal railing with concrete posts. (Note repairs made to left rail post in span 11 from previous traffic impact.)							
515 - Steel Protective Coating		1311	sq. ft.	1311			

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Bridge Inspection Report

Maintenance Needs

Date Reported: 09/05/2017

Priority: C - Important

Work Code:

Deficiency Description:

Channel units span 3,4,6,10-14 have spalls with exposed rebar and some section loss to rebar on legs various locations. (State forces have repaired previously documented spalling.)

Work Description:

David: Do we need to look at replacing these?

Date Repairs Completed:

Maintenance Comments:

Stage: Open



PHOTO 1 Description Small spall with exposed rebar span 6 unit 8.

Stage: Open



PHOTO 2 Description Span 10 unit 7 has spall with exposed rebar.

Inspector:

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Bridge Inspection Report

Maintenance Needs

Stage: Open



PHOTO 3 Description Span 12 unit 2&3 has large spall with exposed rebar but common on units 7&8.

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Maintenance Needs

Date Reported: 09/05/2017

Priority: G - General/ Preventive maintenance

Work Code:

Deficiency Description:

Various locations channel units not bolted transversely. Most common at units 1-2 and 7-8.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Open



PHOTO 1 Description Span 3 unit 7-8 are not bolted together.

Inspector:

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Bridge Inspection Report

Maintenance Needs

Date Reported: 09/05/2017

Priority: C - Important

Work Code:

Deficiency Description:

Span 10-11 unit 1 is misaligned due to previous traffic impact with enlarged grouted key ways and some loss of bearing area to channel legs at span 11.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Open



PHOTO 1 Description Span 11 units 1 has separated due to not being bolted and traffic impact.

Stage: Open



PHOTO 2 Description Grouted keys at span 10 & 11 units 1 & 2 note excessive amount of grout in key due to unit 1 moving from traffic .

Inspector:

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Maintenance Needs

Stage: Open



PHOTO 3 Description Bent 12 unit 1 back has moved on cap due to not being bolted and traffic impact.

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Bridge Inspection Report

Maintenance Needs

Date Reported: 09/03/2015

Priority: G - General/ Preventive maintenance

Work Code: Repair

Deficiency Description:

Channel beam units: Spalling with steel exposed (minor section loss) along bottom of legs at various locations.

NOTE: State maintenance forces have cleaned and applied rust-inhibitor to reinforcing steel and have grouted-over exposed steel in many places; however, condition still exists in several locations throughout bridge.

Work Description:

Many units have been repaired by state forces.

Date Repairs Completed: 09/05/2017

Maintenance Comments:

Stage: Monitor



PHOTO 1 Description Span 13 Unit 8 left

Stage: Monitor



PHOTO 2 Description Span 12 Units 2 left & 3 right

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Bridge Inspection Report

Maintenance Needs

Date Reported: 09/03/2015

Priority: G - General/ Preventive maintenance

Work Code: Repair

Deficiency Description:

Channel beam units: Cracking and delaminations along bottom of legs at various locations.

NOTE: State maintenance forces have cleaned and applied rust-inhibitor to reinforcing steel and have grouted-over exposed steel in many places; however, condition still exists in several locations throughout bridge.

Work Description:

Repaired by state forces.

Date Repairs Completed: 09/05/2017

Maintenance Comments:

Stage: Monitor



PHOTO 1 Description Span 7 Unit 5 left

Stage: Monitor



PHOTO 2 Description Span 4 Unit 8 left

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Bridge Inspection Report

Maintenance Needs

Date Reported: 09/03/2015

Priority: D - Routine

Work Code: Repair

Deficiency Description:

Channel beam units: Spalling with steel exposed (minor section loss) along bottom of legs at various locations. Spalling is at anchorage point of reinforcing steel and ability to carry loads may be beginning to be reduced.

NOTE: State maintenance forces have cleaned and applied rust-inhibitor to reinforcing steel and have grouted-over exposed steel in many places; however, condition still exists in several locations throughout bridge.

Work Description:

Repaired by state forces.

Date Repairs Completed: 09/05/2017

Maintenance Comments:

Stage: Monitor



PHOTO 1 Description Span 7 Unit 4 left

Stage: Monitor



PHOTO 2 Description Span 6 Unit 7 left

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Maintenance Needs

Date Reported: 09/03/2015

Priority: D - Routine

Work Code: Repair

Deficiency Description:

Deck - Span 10 Unit 3: Cracking and spalling on left side at Bent 11 - small pieces of concrete coming loose and could become hazard for traffic.

(Note this has become a small spall near the grouted key way with no loose material remaining.2017)

Work Description:

Date Repairs Completed:

Maintenance Comments:

repair asap

Stage: Open



PHOTO 1 Description Deck - Span 10 Unit 3

Stage: Assigned



PHOTO 2 Description Some grout missing between channel units near midspan .