

# Bridge Inspection Report

03541

SH 46-02 LM 13.97

over

Lost Creek Relief



**Inspection Date:**

**Inspected By:**

**Inspection Type(s):**

Inspector:

Structure Number: 03541

Inspection Date:

Facility Carried: SH 46-02 LM 13.97

## Bridge Inspection Report

## National Bridge Inventory

IDENTIFICATION		INSPECTIONS	
(1) STATE CODE	056 - Arkansas	(90) INSPECTION DATE	09/05/2017
(8) STRUCTURE NUMBER	03541	(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
(4) PLACE CODE	00000	A. FRACTURE CRITICAL DETAIL	N
(6) FEATURES INTERSECTED	Lost Creek Relief	B. UNDERWATER INSPECTION	N
(7) FACILITY CARRIED	SH 46-02 LM 13.97	C. OTHER SPECIAL	N
(9) LOCATION	3.5 Mi S US 270-Sheridan	CONDITION	
(11) MILEPOINT	13.970	(58) DECK	7
(12) BASE HIGHWAY NETWORK	0	(59) SUPERSTRUCTURE	6
(13A) LRS INVENTORY ROUTE	0000000000	(60) SUBSTRUCTURE	7
(13B) SUBROUTE NUMBER	00	(61) CHANNEL & CHANNEL PROTECTION	7
(16) LATITUDE	34.26234	(62) CULVERT	N
(17) LONGITUDE	-92.46818	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	8	(68) DECK GEOMETRY	4
(46) NUMBER OF APPROACH	0	(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL	N
(107) DECK STRUCTURE TYPE	2	(71) WATERWAY ADEQUACY	8
(108A) WEARING SURFACE	1	(72) APPROACH ROADWAY ALIGNMENT	8
(108B) DECK MEMBRANE	0	(36) TRAFFIC SAFETY FEATURE	
(108C) DECK PROTECTION	0	36A) BRIDGE RAILINGS:	0
AGE OF SERVICE		36B) TRANSITIONS:	0
(27) YEAR BUILT	1966	36C) APPROACH GUARDRAIL:	0
(106) YEAR RECONSTRUCTED	0000	36D) APPROACH GUARDRAIL ENDS:	0
(42) TYPE OF SERVICE	ON 1 UNDER 9	(113) SCOUR CRITICAL BRIDGES	5
(28) LANES	ON 02 UNDER 00	SUFFICIENCY RATING	82.7
(29) AVERAGE DAILY TRAFFIC	1400	STATUS	ND
(19) BYPASS DETOUR LENGTH	8	CLASSIFICATION	
(30) YEAR OF AVERAGE DAILY TRAFFIC	2014	(112) NBIS BRIDGE LENGTH	Y
(109) AVERAGE DAILY TRUCK TRAFFIC	1	(104) HIGHWAY SYSTEM OF THE INVENTORY ROUTE	0
GEOMETRIC DATA		(26) FUNCTIONAL CLASSIFICATION OF INVENTORY ROUTE	07
(48) LENGTH OF MAX SPAN (ft.)	19	(100) STRAHNET HIGHWAY DESIGNATION	0
(49) STRUCTURE LENGTH (ft.)	152	(101) PARALLEL STRUCTURE DESIGNATION	N
(50) CURB/SIDEWALK WIDTHS (ft.)	LEFT 1 RIGHT 1	(102) DIRECTION OF TRAFFIC	2
(51) BRDG RDWY WIDTH CURB-TO-CURB (ft.)	25.9	(103) TEMP STRUCTURE	
(52) DECK WIDTH, OUT-TO-OUT (ft.)	28	(105) FEDERAL LANDS HIGHWAYS	0
(32) APPROACH ROADWAY WIDTH (ft.)	26.9	(110) DESIGNATED NATIONAL NETWORK	0
(33) BRIDGE MEDIAN	0	(20) TOLL	3
(34) SKEW (DEG.)	0	(21) MAINTENANCE RESPONSIBILITY	01
(35) STRUCTURE FLARED	0	(37) HISTORICAL	5
(10) INV RTE, MIN VERT CLEAR (ft.)	99.99	NAVIGATION DATA	
(47) TOTAL HORIZONTAL CLEARANCE (ft.)	26.9	(38) NAVIGATION CONTROL	0
(53) VERTICAL CLEARANCE OVER BRIDGE ROADWAY (ft.)	99.99	(111) PIER OR ABUTMENT PROTECTION	5
(54) VERTICAL UNDER CLEARANCE (ft.)	N 0	(39) NAV VERT CLEARANCE (ft.)	0
(55) LATERAL UNDER CLEARANCE RIGHT (ft.)	N 99.9	(116) MIN NAVIGATION VERT CLEARANCE, VERT LIFT BRIDGE (ft.)	0
(56) MIN LATERAL UNDER CLEARANCE (ft.)	0	(40) NAV HORIZONTAL CLEARANCE (ft.)	0
PROPOSED IMPROVEMENTS			
(75A) TYPE OF WORK PROPOSED	35	(75B) WORK DONE BY	1
(76) LENGTH OF STRUCTURE IMPROVEMENT (ft.)	152.0		
(94) BRIDGE IMPROVEMENT COST (\$)	0		
(95) ROADWAY IMPROVEMENT COST (\$)	0		
(96) TOTAL PROJECT COST	190		
(97) YEAR OF IMPROVEMENT COST ESTIMATE	2003		
(114) FUTURE ADT	1182		
(115) YEAR OF FUTURE ADT	2028		

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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
16 - Reinforced Concrete Top Flange	1- Ben.	4256	sq. ft.	4222	34	0	0
	Deck: 28' wide x 152' long. Some units with minor transverse cracking with some small spalls near grouted key ways.						
1080 - Delamination/Spall/Patched Area		7			7		
1130 - Cracking (RC and Other)		27			27		

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## Element Inspection

110 - Reinforced Concrete Open Girder/Beam	1- Ben.	1216	ft.	1107	42	67	0
	<p>Girders: 8 precast units per span / 152' total span.</p> <p>Spalling with steel exposed (minor section loss) along bottom of legs at locations indicated</p> <p>Span 3 Unit 5: Right leg at beginning of span – 2' long.</p> <p>Span 3 Unit 5: Right leg at end of span – 3' long.</p> <p>Span 5 Unit 3: Right leg at beginning of span – 4' long.</p> <p>Span 6 Unit 3: Right leg at end of span – 2' long.</p> <p>NOTE: Spalling is at anchorage point of reinforcing steel and ability to carry loads may be beginning to be reduced.</p> <p>Spalling with steel exposed (minor section loss) along bottom of legs at locations indicated:</p> <p>Span 1 Unit 7: Right leg from 15-55% point – 8' long.</p> <p>Span 1 Unit 8: Left leg at 2/3 span – 2' long.</p> <p>Span 3 Unit 4: Left leg at 1/3 point – 4' long.</p> <p>Span 3 Unit 6: Left leg at 1/3 point – 3' long.</p> <p>Span 3 Unit 7: Right leg at 20% point – 1' long.</p> <p>Span 4 Unit 2: Right leg at 85% point – 1' long.</p> <p>Span 4 Unit 4: Left leg at 1/3 span – 3' long.</p> <p>Span 4 Unit 4: Right leg at midspan – 1' long.</p> <p>Span 4 Unit 8: Left leg at 2/3 span – 3' long.</p> <p>Span 5 Unit 2: Left leg at 90% point – 2' long.</p> <p>Span 5 Unit 2: Right leg at 90% point – 2' long.</p> <p>Span 5 Unit 3: Right leg at 2/3 span – 2' long.</p> <p>Span 5 Unit 7: Right leg at 1/3 span – 1' long.</p> <p>Span 5 Unit 8: Left leg from 1/4 to midspan – 6' long.</p> <p>Span 6 Unit 1: Right leg at midspan – 2' long.</p> <p>Span 6 Unit 2: Left leg at midspan – 3' long.</p> <p>Span 6 Unit 5: Left leg at 1/4 point – 6' long.</p> <p>Span 8 Unit 4: Right leg from 1/4 to midspan – 7' long.</p> <p>Cracking and delaminations along bottom of legs at locations indicated:</p> <p>Span 1 Unit 8: Left leg at 40% point – 2' long.</p> <p>Span 1 Unit 7: Right leg at 2/3 point – 4' long.</p> <p>Span 3 Unit 3: Right leg at 1/4 span – 3' long.</p> <p>Span 3 Unit 3: Right leg at midspan – 2' long.</p> <p>Span 3 Unit 3: Right leg at 80% point – 3' long.</p> <p>Span 3 Unit 4: Left leg at 1/4 point – 6' long.</p> <p>Span 3 Unit 4: Right leg at 20% point – 3' long.</p> <p>Span 4 Unit 2: Right leg at 2/3 point – 1' long.</p> <p>Span 4 Unit 5: Right leg end of span – 2' long.</p> <p>Span 5 Unit 1: Right leg at midspan – 4' long.</p> <p>Span 5 Unit 1: Right leg at 90% point – 2' long.</p> <p>Span 5 Unit 3: Right leg at 45% point – 1' long.</p> <p>Span 6 Unit 3: Right leg at 1/3 span – 3' long.</p> <p>Span 6 Unit 5: Left leg at 90% point – 3' long.</p> <p>Span 7 Unit 3: Right leg at 1/3 span – 1' long.</p>						
1080 - Delamination/Spall/Patched Area		42			42		
1090 - Exposed Rebar		67				67	

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## Element Inspection

215 - Reinforced Concrete Abutment	1- Ben.	72	ft.	72			
	Abutments: 36' each / Bent 1 & 9.						
227 - Reinforced Concrete Pile	1- Ben.	21	each	12	9	0	0
	Piling: 3 per bent / Bents 2-8. Some local scour present at bents 4-6 mainly at pile 1 (up to 3' deep.) Pile at bents 4-6 have some light abrasion.						
1190 - Abrasion/Wear (PSC/RC)		6			6		
6000 - Scour		3			3		
234 - Reinforced Concrete Pier Cap	1- Ben.	196	ft.	190	6	0	0
	Caps: 28' each / Bents 2-8. Bent 5: A couple minor-sized horizontal cracks on back face near centerline and under Unit 7. (6' total)						
1130 - Cracking (RC and Other)		6			6		
330 - Metal Bridge Railing	1- Ben.	304	ft.	304			
	Railing: 152' each side. Coating: ? square feet/linear feet of railing. Metal railing with concrete posts.						
515 - Steel Protective Coating		6992	sq. ft.	6992			

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## Bridge Inspection Report

### Maintenance Needs

Date Reported: 09/03/2015

Priority: D - Routine

Work Code: Clean

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#### Deficiency Description:

Channel - Span 3: Moderate build-up of logs, limbs, and other debris again Bent 3 Pile 3 (under bridge) stretching under Span 3 towards Bent 4.

#### Work Description:

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Date Repairs Completed:

Maintenance Comments:

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Stage: Open



PHOTO 1    Description    Channel - Bent 3 Pile 3



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Inspection Date:

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## Bridge Inspection Report

### Maintenance Needs

Date Reported: 09/03/2015

Priority: D - Routine

Work Code: Repair

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#### Deficiency Description:

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

Span 3 Unit 5: Right leg at beginning of span – 2' long.

Span 3 Unit 5: Right leg at end of span – 2' long.

Span 5 Unit 3: Right leg at beginning of span – 4' long.

Span 6 Unit 3: Right leg at end of span – 2' long.

NOTE: Spalling is at anchorage point of reinforcing steel and ability to carry loads may be beginning to be reduced.

Work Description:

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Date Repairs Completed:

#### Maintenance Comments:

David: this one concerns me more with the location of the spalling and slight section loss of the longitudinal steel. I know these are still 19' units, but this needs to be looked at asap

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Stage: Monitor

Stage: Monitor



PHOTO 1      Description      Span 6 Unit 3 right



PHOTO 2      Description      Span 3 Unit 5 right

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## Bridge Inspection Report

### Maintenance Needs

Date Reported: 09/03/2015

Priority: D - Routine

Work Code: Repair

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#### Deficiency Description:

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

- Span 1 Unit 8: Left leg at 40% point – 2' long.
- Span 1 Unit 7: Right leg at 2/3 point – 4' long.
- Span 3 Unit 3: Right leg at 1/4 span – 3' long.
- Span 3 Unit 3: Right leg at midspan – 2' long.
- Span 3 Unit 3: Right leg at 80% point – 3' long.
- Span 3 Unit 4: Left leg at 1/4 point – 6' long.
- Span 3 Unit 4: Right leg at 20% point – 3' long.
- Span 4 Unit 2: Right leg at 2/3 point – 1' long.
- Span 4 Unit 5: Right leg end of span – 2' long.
- Span 5 Unit 1: Right leg at midspan – 4' long.
- Span 5 Unit 1: Right leg at 90% point – 2' long.
- Span 5 Unit 3: Right leg at 45% point – 1' long.
- Span 6 Unit 3: Right leg at 1/3 span – 3' long.
- Span 6 Unit 5: Left leg at 90% point – 3' long.
- Span 7 Unit 3: Right leg at 1/3 span – 1' long.

#### Work Description:

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Date Repairs Completed:

Maintenance Comments:

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Stage: Monitor

PHOTO 1

Description

Span 6 Unit 3 right





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### Maintenance Needs

Stage: Monitor



PHOTO 2 Description Span 3 Unit 3 right

Stage: Monitor

Stage: Monitor



PHOTO 4 Description Span 1 units 7&8 have spalls with exposed rebar.



PHOTO 3 Description Span 3 units 3-4 have cracks, delams and spalls with exposed rebar to legs. Common units 5-7 this span.

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### Maintenance Needs

Date Reported: 09/03/2015

Priority: C - Important

Work Code: Repair

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#### Deficiency Description:

Approach roadway – Bent 1: Asphalt is cracked and broken up with some shallow spalling (potholes) and minor settlement.

#### Work Description:

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Date Repairs Completed:

Maintenance Comments:

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Stage: Monitor



PHOTO 1      Description      Approach roadway - Bent 1