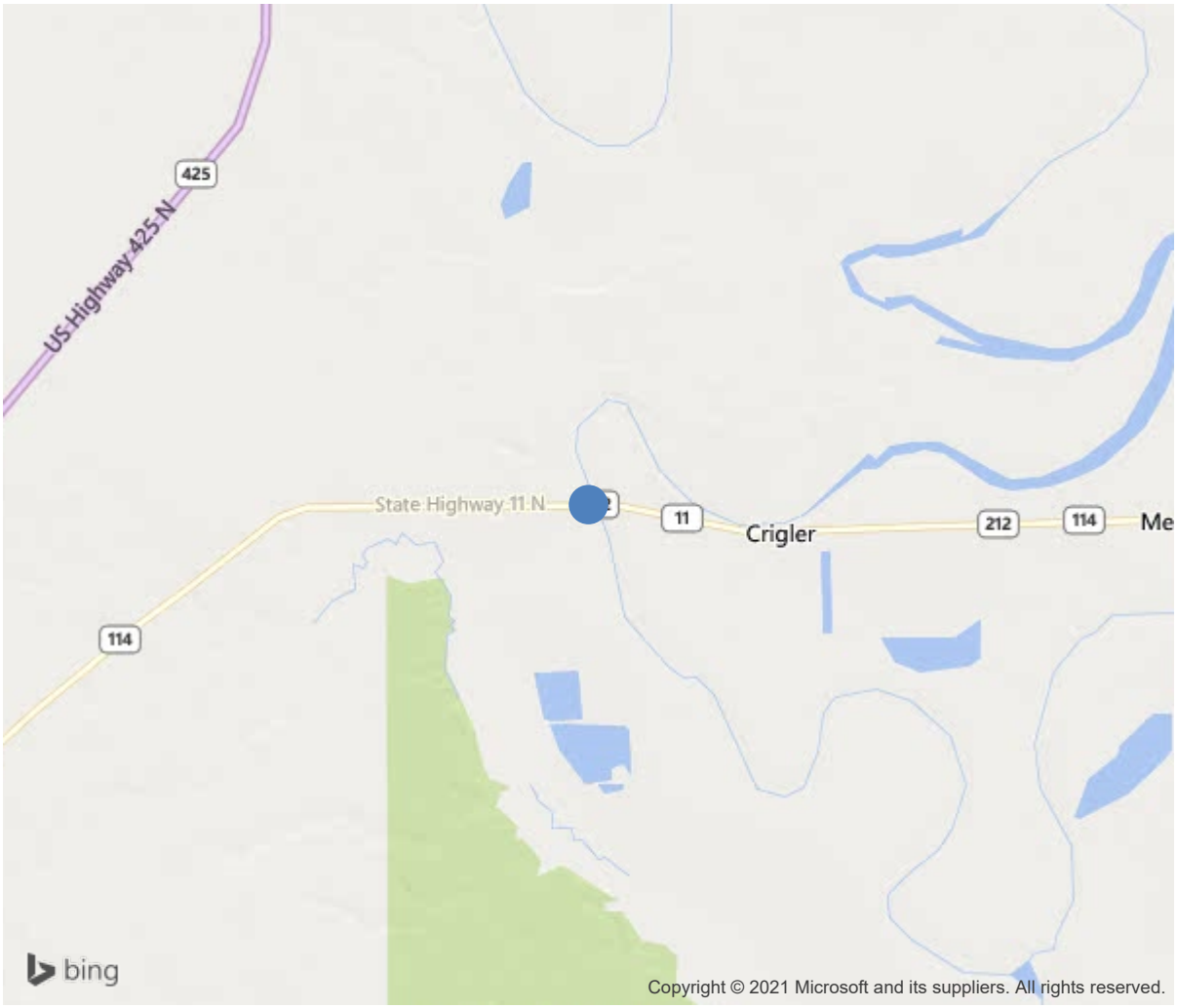
Bridge #02856(Routine)
SH 11-03 LM 3.77 over Bayou Bartholomew
Location: 3.8 Mi E US 425, StarCity
Team Lead: Sharon Hooks **Inspection Date:** September 23, 2019

3.8 Mi E US 425, StarCity



33.96115, -91.78599

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IDENTIFICATION	
(1) State Names	Arkansas
(8) Structure Number	02856
(5) Inventory Route	11
(2) Highway Agency District	02
(3) County Code	79-Lincoln County, Arkansas
(4) Place Code	0
(6) Features Intersected	Bayou Bartholomew
(7) Facility Carried	SH 11-03 LM 3.77
(9) Location	3.8 Mi E US 425, StarCity
(11) Mile Point	3.77 mi
(12) Base Highway Network	No
(13) LRS Inventory Rte & Subrte	0000000000
(16) Latitude	33.96115
(17) Longitude	-91.78599
(98) Border Bridge State Code	
(99) Border Bridge Structure No.	
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	32
Material	3-Steel
Type	2-Stringer/Multi-beam or girder
(44) Approach Structure Type	00
Material	0-Other
Type	0-Other
(45) No. of Spans in Main Unit	10
(46) No. of Approach Spans	0
(107) Deck Structure Type	1-Concrete Cast-in-Place
(108) Wearing Surface/Protective System	
Type of Wearing Surface	6-Bituminous
Type of Membrane	0-None
Type of Deck Protection	0-None
AGE AND SERVICE	
(27) Year Built	1954
(106) Year Reconstructed	0
(42) Type of Service	15
On	1-Highway
Under	5-Waterway
(28) Lane	
On	2
Under	0
(29) Average Daily Traffic	1300
(30) Year of ADT	2014
(109) Truck ADT	1 %
(19) Bypass, Detour Length	24 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	32 ft
(49) Structure Length	322 ft
(50) Curb or Sidewalk Width	
Left	1 ft
Right	1 ft
(51) Bridge Roadway Width Curb to Curb	24 ft
(52) Deck Width Out to Out	26.1 ft
(32) Approach Roadway Width (W/Shoulders)	25.9 ft
(33) Bridge Median	0-No median
(34) Skew	0 Deg
(35) Structure Flared	No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	24 ft
(53) Min Vert Clear Over Bridge Rdwy	99.99 ft
(54) Min Vert Underclear	0 ft
Ref:	
(55) Min Lat Underclear RT	99.9 ft
Ref:	
(56) Min Lat Underclear LT	0 ft
NAVIGATION DATA	
(38) Navigation Control	0-No navigation control on water
(111) Pier Protection	5-None present but re-evaluation
(39) Navigation Vertical Clearance	0 ft
(116) Vert-Lift Bridge Nav Min Vert Clear	0 ft
(40) Navigation Horizontal Clearance	0 ft

CLASSIFICATION	
(112) NBIS Bridge Length	Y
(104) Highway System	0
(26) Functional Class	7-Rural Major Collector
(100) Defense Highway	0-The inventory route is not a S
(101) Parallel Structure	N-No parallel structure exists.
(102) Direction of Traffic	2 - way traffic
(103) Temporary Structure	
(105) Federal Lands Highways	0-N/A
(110) Designated National Network	0-The inventory route is not part of
(20) Toll	3-On free road. The structure is toll-
(21) Maintain	1-State Highway Agency
(22) Owner	1-State Highway Agency
(37) Historical Significance	5-Bridge is not eligible for the NRHP
CONDITION	
(58) Deck	6
(59) Superstructure	5
(60) Substructure	6
(61) Channel & Channel Protection	6
(62) Culverts	N
LOAD RATING AND POSTING	
(31) Design Load	2-M 13.5 / H 15
(63) Operating Rating Method	1
(64) Operating Rating	
Type	1-Load Factor(LF)
Rating	42
(65) Inventory Rating Method	1-Load Factor(LF)
(66) Inventory Rating	
Type	10
Rating	25
(70) Bridge Posting	5-Equal to or above legal loads
(41) Structure Open/Posted/Closed	A-Open, no restriction
APPRAISAL	
(67) Structural Evaluation	5
(68) Deck Geometry	4
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	8
(72) Approach Roadway Alignment	8
(36) Traffic Safety Features	0001
A) Bridge Railings	0-Inspected feature does not meet cur
B) Transitions	0-Inspected feature does not meet cur
C) Approach Guardrail	0-Inspected feature does not meet cur
D) Approach Guardrail Ends	1-Inspected feature meets currently a
(113) Scour Critical Bridges	8-Bridge foundations determined to be
PROPOSED IMPROVEMENTS	
(75) Type of Work	
(76) Length of Structure Improvement	0 ft
(94) Bridge Improvement Cost	$ 0
(95) Roadway Improvement Cost	$ 0
(96) Total Project Cost	$ 0
(97) Year of Improvement Cost Estimate	
(114) Future ADT	1615
(115) Year of Future ADT	2028

INSPECTIONS			
(90) Inspection Date			
(91) Frequency			24 Months
(92) Critical Feature Inspection	Done	Freq. (Mon)	Date
A: Fracture Critical Detail	No	24	
B: Underwater Inspection	No	0	
C: Other Special Inspection	No	0	

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ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	9016	8722	294	0	0
1080	Delamination/Spall/Patched Area	SF	42	0	42	0	0
1090	Exposed Rebar	SF	2	0	2	0	0
1120	Efflorescence/Rust Staining	SF	100	0	100	0	0
1190	Abrasion/Wear (PSC/RC)	SF	150	0	150	0	0
510	Wearing Surfaces	SF	7728	6440	1288	0	0
3230	Effectiveness (Wearing Surface)	SF	1288	0	1288	0	0

(12)

Deck: 28' by 322
Wearing surface: Thin asphalt (pea gravel/ chip) seal - thinning and wearing out in various locations.

Span 1 left: A couple potholes in left (outside) wheel rut - patched with asphalt mix (10 sqft).
Span 5 right: Spalling/potholes in left (inside) wheel rut - patched with asphalt mix (12 sqft).
Span 7 left gutterline: 2.5' wide x 6' long pothole/spall just inside curb near midspan (20 sqft).
Abrasion and delambs mainly on left side of deck gutter lines .

Soffit - Span 6 Bay 1: Minor to moderate transverse lines of efflorescence every 4-5'.

107	Steel Open Girder/Beam	LF	1280	1195	72	13	0
1000	Corrosion	LF	85	0	72	13	0
515	Steel Protective Coating	SF	7808	1797	1952	3804	255
3440	Effectiveness (Steel Protective Coatings)	SF	6011	0	1952	3804	255

(107)

Girders: 4 per span / 320' total span
Coating: 6.1 square feet per linear feet of girder.
(State forces have made repairs to haunch areas previously listed as needing repaired.)
Remaining areas of girders have scattered light surface rust with some small areas of measurable section lose.

215	Reinforced Concrete Abutment	LF	68	68	0	0	0

(215)

Abutments: 34' each bents 1 & 11

227	Reinforced Concrete Pile	EA	36	9	27	0	0
1080	Delamination/Spall/Patched Area	EA	3	0	3	0	0
1190	Abrasion/Wear (PSC/RC)	EA	24	0	24	0	0

(227)

Pile: 4 each bents 2-10
Bent 3 Pile 3, Bent 4 Pile 3, Bent 9 Pile 3: spalls with exposed rebar. Repaired by state forces.
Abrasion on piles on bents 4-9.

ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
234	Reinforced Concrete Pier Cap	LF	234	218	16	0	0
1080	Delamination/Spall/Patched Area	LF	6	0	6	0	0
1090	Exposed Rebar	LF	2	0	2	0	0
1130	Cracking (RC and Other)	LF	8	0	8	0	0
(234)							
Caps: 26' each bents 2-10 Bent 8 cap has small spall with exposed rebar right end. State forces have repaired cap at bent 8 . Bent 2, 3, 4, 5 & 10 all have small spalls or cracks.							
304	Open Expansion Joint	LF	216	186	5	25	0
2350	Debris Impaction	LF	25	0	0	25	0
2360	Adjacent Deck or Header	LF	5	0	5	0	0
(304)							
Joints: 24' each bents 2-10 Bents 4, 7, & 9: Slight (1/2") elevation difference in road irons. Span 7 right @ Bent 8: Spalling of concrete adjacent to join road iron in inside (left) wheel rut (5' long).							
305	Assembly Joint without Seal	LF	48	0	0	48	0
2350	Debris Impaction	LF	48	0	0	48	0
(305)							
Joint Seals: 24" each bents 1 & 11 Sliding plates at abutment only. Leaking onto superstructure and substructure. Flaking rust forming with chip seal debris impaction.							
311	Movable Bearing	EA	40	0	25	15	0
1000	Corrosion	EA	40	0	25	15	0
515	Steel Protective Coating	SF	40	0	0	0	40
3440	Effectiveness (Steel Protective Coatings)	SF	40	0	0	0	40
(311)							
Bearings: 4 each per span /spans 1-10 Coating: 1 square feet each. Heavy corrosion and section loss.							
313	Fixed Bearing	EA	40	0	25	15	0
1000	Corrosion	EA	40	0	25	15	0
515	Steel Protective Coating	SF	40	0	0	0	40
3440	Effectiveness (Steel Protective Coatings)	SF	40	0	0	0	40
(313)							
Bearings: 4 each per span/ spans 1-10 Coating: 1 square feet each. Heavy corrosion and section loss.							

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ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
330	Metal Bridge Railing	LF	644	644	0	0	0
515	Steel Protective Coating	SF	1803	0	1803	0	0
3440	Effectiveness (Steel Protective Coatings)	SF	1803	0	1803	0	0

(330)

Railing: 322' each side.
Coating: 2.8 square feet per linear feet of railing.
Paint is flaking off, thinning, and deteriorating throughout.

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Maintenance Needs

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Inspection Comments

Beginning of structure toward US 425, Star City, West End.

Only underwater elements are 18" octagonal concrete piles in water deeper than 2' at low levels. Dropping Underwater Inspection.