



Latitude:33.77286, Longitude:-91.50514

Route:138 Section:03 Log:20.94

Arnold Road ID:22x138x3xA, Arnold Log mile:20.931

District 02, Drew County

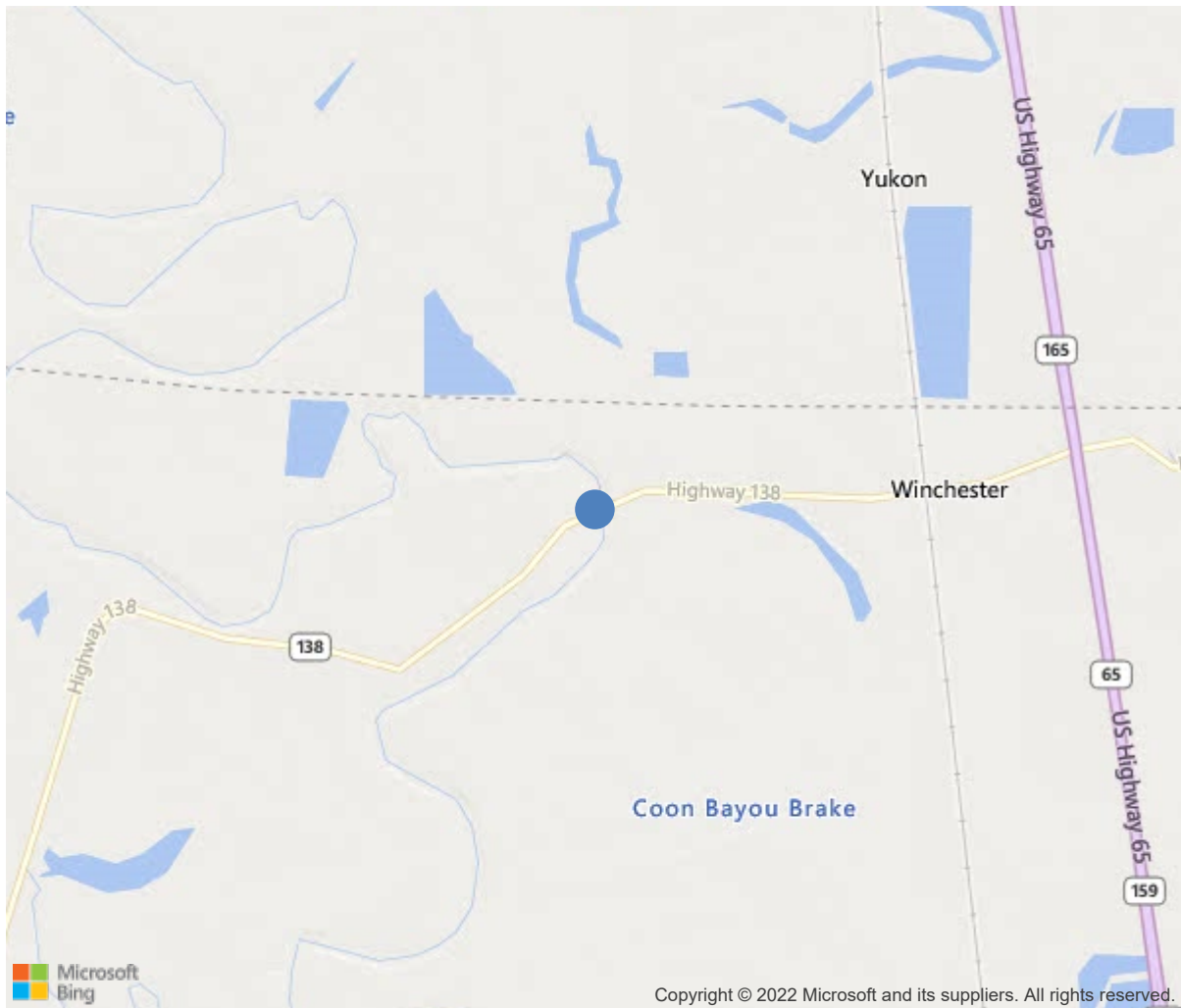
Owner: 1-State Highway Agency



Bridge #05436(Routine, Underwater type 2)
SH 138-03 LM 20.94 over Bayou Bartholomew
Location: 2.8 Mi W US 65-Winchester

Team Lead: Sharon Hooks **Inspection Date:** July 13, 2021

2.8 Mi W US 65-Winchester



33.77286, -91.50514

Inspection Direction : W to E



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SH 138-03 LM 20.94 over Bayou Bartholomew

Location: 2.8 Mi W US 65-Winchester

Team Lead: Sharon Hooks Inspection Date: July 13, 2021

IDENTIFICATION	
(1) State Names	Arkansas
(8) Structure Number	05436
(5) Inventory Route	138
(2) Highway Agency District	02
(3) County Code	43-Drew County, Arkansas
(4) Place Code	0
(6) Features Intersected	Bayou Bartholomew
(7) Facility Carried	SH 138-03 LM 20.94
(9) Location	2.8 Mi W US 65-Winchester
(11) Mile Point	20.94 mi
(12) Base Highway Network	No
(13) LRS Inventory Rte & Subrte	0000000000
(16) Latitude	33.77286
(17) Longitude	-91.50514
(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	6
(46) No. of Approach Spans	0
(107) Deck Structure Type	1-Concrete Cast-in-Place
(108) Wearing Surface/Protective System	
Type of Wearing Surface	1-Monolithic Concrete (concurrently placed
Type of Membrane	0-None
Type of Deck Protection	0-None
AGE AND SERVICE	
(27) Year Built	1971
(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	780
(30) Year of ADT	2014
(109) Truck ADT	1 %
(19) Bypass, Detour Length	17 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	60 ft
(49) Structure Length	362 ft
(50) Curb or Sidewalk Width	
Left	0 ft
Right	0 ft
(51) Bridge Roadway Width Curb to Curb	25.9 ft
(52) Deck Width Out to Out	28.7 ft
(32) Approach Roadway Width (W/Shoulders)	29.9 ft
(33) Bridge Median	0-No median
(34) Skew	15 Deg
(35) Structure Flared	No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	27.2 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	7
(60) Substructure	7
(61) Channel & Channel Protection	6
(62) Culverts	N
LOAD RATING AND POSTING	
(31) Design Load	4-M 18 / H 20
(63) Operating Rating Method	1
(64) Operating Rating	
Type	1-Load Factor(LF)
Rating	44
(65) Inventory Rating Method	1-Load Factor(LF)
(66) Inventory Rating	
Type	6
Rating	26
(70) Bridge Posting	5-Equal to or above legal loads
(41) Structure Open/Posted/Closed	A-Open, no restriction
APPRAISAL	
(67) Structural Evaluation	6
(68) Deck Geometry	5
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	8
(72) Approach Roadway Alignment	8
(36A) Bridge Railings	1-Inspected feature meets currently a
(36B) Transitions	0-Inspected feature does not meet cur
(36C) Approach Guardrail	0-Inspected feature does not meet cur
(36D) Approach Guardrail Ends	0-Inspected feature does not meet cur
(113) Scour Critical Bridges	5-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	774
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date			07/2021
(91) Frequency			24 Months
(92) Critical Feature Inspection	Done	Freq. (Mon)	Date
A: Fracture Critical Detail	No		
B: Underwater Inspection	No		
C: Other Special Inspection	No		
* The inspection date and frequency information in this box contains the current NBI date and frequency information. Please refer to the report header for the date this inspection was conducted.			

ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	10332	5532	0	4800	0
1130	Cracking (RC and Other)	SF	4800	0	0	4800	0
(12) Deck: 28.7' wide x 360' long = 10,332 sqft. Spans 1- 6: Numerous unsealed, moderate to large sized transverse cracks (spacing - 2-4'). No evidence of cracking or efflorescence on soffit.							
107	Steel Open Girder/Beam	LF	1140	1092	48	0	0
1000	Corrosion	LF	48	0	48	0	0
515	Steel Protective Coating	SF	8770	8478	0	292	0
3440	Effectiveness (Steel Protective Coatings)	SF	292	0	0	292	0
(107) Girders: 4 per span / Spans 1-6 (60' spans = 360' total span). Coating: W24x76 = 6.09 square feet per linear feet of girder. Some light surface rust beginning to show near bents on top of bottom flange and bottom of web (1' each location).							
205	Reinforced Concrete Column	EA	12	0	12	0	0
1190	Abrasion/Wear (PSC/RC)	EA	12	0	12	0	0
(205) Columns: 3 per bent / Bents 2-5. All columns have light abrasive wear from water.							
215	Reinforced Concrete Abutment	LF	74	54	0	20	0
6000	Scour	LF	20	0	0	20	0
(215) Abutments: 27' each (skewed - with 5' wings each corner) / Bents 1 & 7. Endslope - Span 1: Significant erosion under abutment cap and down slope - exposing bottom of cap and pile back to approach roadway. Exposing 4 pile. SCOUR CS3 20'							
220	Reinforced Concrete Pile Cap/Footing	LF	104	104	0	0	0
(220) Pile footing: 26' each / Bents 2-5 NOTE: 6 pile each under cap footing.- not always visible due to water levels.							
227	Reinforced Concrete Pile	EA	33	28	5	0	0
1190	Abrasion/Wear (PSC/RC)	EA	5	0	5	0	0
(227) Piling: 4 per bent (visible due to erosion) / Bent 1; 6 sub-pile per bent / Bents 2-5 (not always visible due to water elevations); 5 per bent / Bent 6.							

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ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
Bent 5: Pile have light abrasive wear.							
234	Reinforced Concrete Pier Cap	LF	130	125	5	0	0
1090	Exposed Rebar	LF	5	0	5	0	0
(234)							
Caps: 26' each (skewed) \ Bents 2-6. Bents 2, 3, 4 & 5: Small spalls with exposed rebar.							
302	Compression Joint Seal	LF	196	0	0	178	18
2330	Seal Damage	LF	18	0	0	0	18
2340	Seal Cracking	LF	178	0	0	178	0
(302)							
Joints: 28' each (skewed) \ Bents 1-7. Bents 1- 7: Preformed joint material is worn and tattered in places and is beginning to leak storm-water down through onto ends of girders and caps. Bent 1 centerline: 2' piece of material missing. Bent 4 centerline 4' piece of material missing. Bent 5: right lane at shoulder and near center line 6' piece missing. Bent 6 : left lane 6' missing.							
311	Movable Bearing	EA	24	0	24	0	0
1000	Corrosion	EA	24	0	24	0	0
515	Steel Protective Coating	SF	72	0	0	72	0
3440	Effectiveness (Steel Protective Coatings)	SF	72	0	0	72	0
(311)							
Movable bearings: 4 per bent / Bents 2 back, 3 back, 4 back, 4 ahead, 5 ahead, & 6 ahead. Coating: 3 square feet each. Some corrosion with initial pitting.							
313	Fixed Bearing	EA	24	0	24	0	0
1000	Corrosion	EA	24	0	24	0	0
515	Steel Protective Coating	SF	72	0	0	72	0
3440	Effectiveness (Steel Protective Coatings)	SF	72	0	0	72	0
(313)							
Fixed bearings: 4 per bent / Bents 1, 2 ahead, 3 ahead, 5 back, 6 back, & 7. Coating: 3 square feet each. Some corrosion with initial pitting.							
331	Reinforced Concrete Bridge Railing	LF	724	724	0	0	0
(331)							
Railing: 362' each side.							



Approach.



Bent 6 joint material missing.



Overview of soffit and girders.



Typical paint condition.



Span 1 joint seals are torn with small areas missing and have debris impactation.



Deck span large unsealed cracks.



Deck overview.



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Team Lead: Sharon Hooks **Inspection Date:** July 13, 2021

Maintenance Needs

Date Reported: 07/18/2011
Priority: G - General/ Preventive maintenance
Type of Work: N/A
Status: Monitor
Inspection Direction W to E
Component:

Deficiency Description

Endslope - Spans 5-6: Minor erosion along left side of bridge.
Ditch-out material piled up on both sides of bridge, but not spread in erosion area.

Remarks

Date Reported: 07/07/2015
Priority: C - Important

Type of Work: N/A

Status: Assigned

Inspection Direction W to E

Component:

Deficiency Description

Endslope - Span 1: Significant erosion under abutment cap and down slope - exposing bottom of cap and pile back to approach roadway.

Erosion appeared to have been caused by a hole eroded at the right side of bridge end and along side of roadway, allowing stormwater to flow down and under abutment - hole has been filled and roadway patched at bridge end, but voids still exist in endslope.

Existence of voids is evidenced by settlement of left lane roadway surface just inside edge line, right at bridge end.

Remarks

Comments from prior to 2019:

"Let's look at this one and see if we can form up and replace some of the lost material with flow able select material. Let me know if you have additional ideas on a repair? We also possible could core through the roadway and see if the void is there. Would be a good place to pump??? Gerald / Ronnie: I think this is a hold over note from David Henning??? I say lets pack rip up against and under the cap. Advise when complete"



Deck - Spans 1-6: Typical



Abutment - Bent 1 right



Abutment - Bent 1 left



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Date Reported: 07/18/2011

Priority: D- Routine

Type of Work: N/A

Status: Monitor

Inspection Direction W to E

Component:

Deficiency Description

Deck – Spans 1- 6: Numerous unsealed, moderate to large sized transverse cracks (spacing – 2-4').
No evidence of cracking or efflorescence on soffit.

Remarks



Span 5 deck cracks



Deck span 4 has large unsealed cracks up to 0.060"



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Span 5 deck has unsealed cracks up to 0.060"

Date Reported: 07/18/2011

Priority: D- Routine

Type of Work: N/A

Status: Monitor

Inspection Direction W to E

Component:

Deficiency Description

Joints – Bents 1- 7:

Preformed joint material is worn and tattered in places - with material missing in several places, and is beginning to leak stormwater down through onto ends of girders and caps.

Bent 1: 1' piece of material missing @ centerline.

Bent 4: 4' piece of material missing @ centerline.

Bent 5: 6' piece of material missing.

Remarks

Remove the old joint material, clean the joint thoroughly, and replace.



Joint seal



Joint - Bent 1



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Date Reported: 07/13/2021

Priority: D- Routine

Type of Work: Clean

Status: Open

Inspection Direction W to E

Component: Bridge

Deficiency Description

Trees, vines and vegetation growing under bridge.

Remarks



Trees growing under bridge.



Trees and vegetation growing under bridge.



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Inspection Comments

Beginning of structure toward US 278, Monticello, West End.

Changed logmile from 20.84 to 20.94 per straight line from Tech Services dated 1/2010. DMH 8/3/2011

06-20-2007, Dropping UW inspection due to sub-str. elements are not continuously submerged. High water events occur. No signs of channel scour up or down stream. NBI Items #60 and #61 will represent all elements that occasionally stand in water. RLW.