



Bridge #06798(Routine, Underwater type 2)

Madison SH 23 over WAR EAGLE CREEK

Location: 4.0 MI N JCT SH 16

Team Lead: Nathan Rowland **Inspection Date:** October 25, 2021



Latitude:35.90028, Longitude:-93.70230

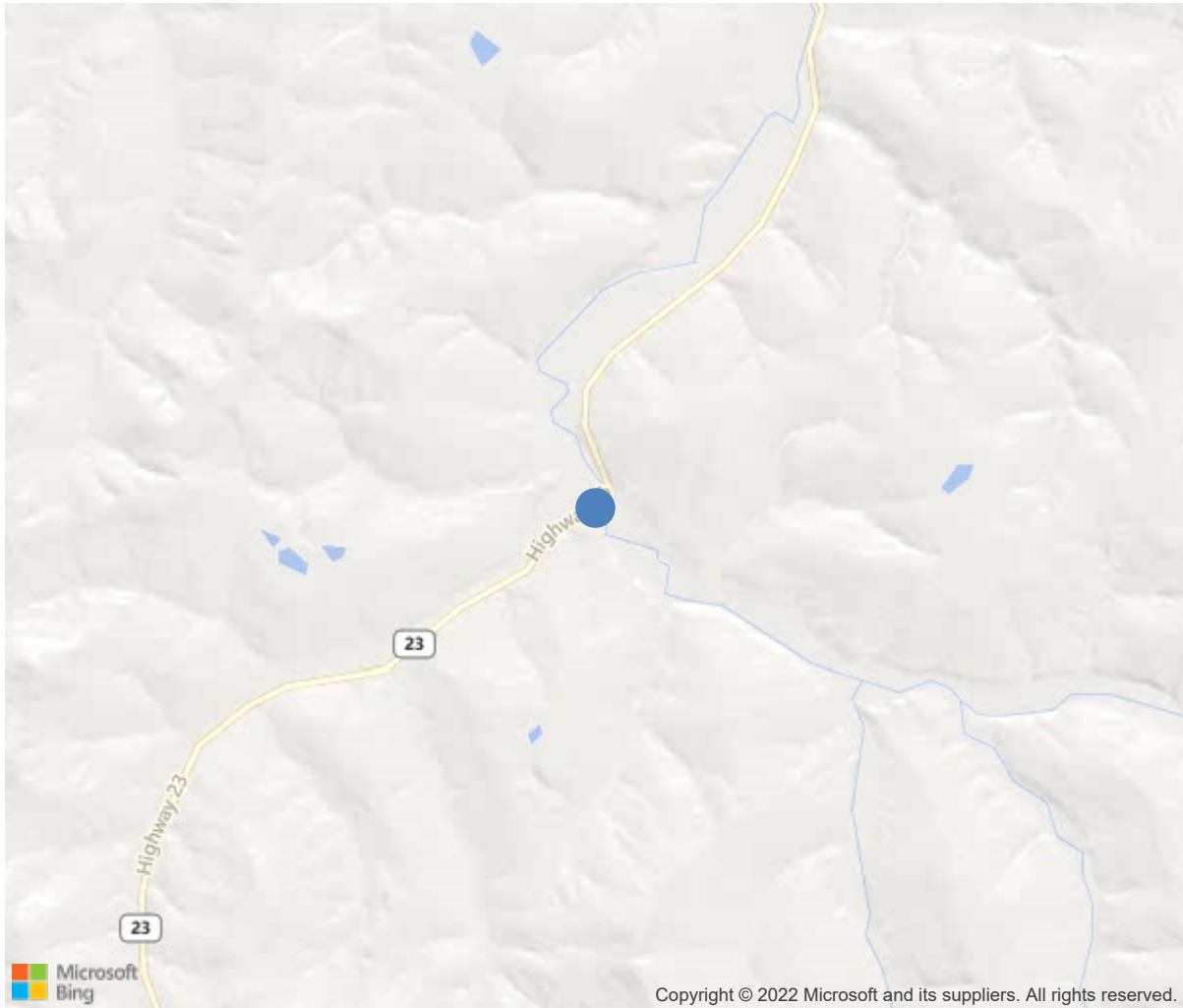
Route:23 Section:08 Log:12.97

Arnold Road ID:44x23x8xA, Arnold Log mile:12.892

District 09, Madison County

Owner: 1-State Highway Agency

4.0 MI N JCT SH 16



35.90028, -93.70230

Inspection Direction : S to N



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IDENTIFICATION	
(1) State Names	Arkansas
(8) Structure Number	06798
(5) Inventory Route	23
(2) Highway Agency District	09
(3) County Code	87-Madison County, Arkansas
(4) Place Code	0
(6) Features Intersected	WAR EAGLE CREEK
(7) Facility Carried	Madison SH 23
(9) Location	4.0 MI N JCT SH 16
(11) Mile Point	12.97 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte & Subrte	0000023080
(16) Latitude	35.90028
(17) Longitude	-93.7023
(98) Border Bridge State Code	
(99) Border Bridge Structure No.	
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	42
Material	4-Steel continuous
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	0-None (no additional concrete thickness o
Type of Membrane	0-None
Type of Deck Protection	1-Epoxy Coated Reinforcing
AGE AND SERVICE	
(27) Year Built	2001
(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	1100
(30) Year of ADT	2018
(109) Truck ADT	13 %
(19) Bypass, Detour Length	30 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	125 ft
(49) Structure Length	732 ft
(50) Curb or Sidewalk Width	
Left	0 ft
Right	0 ft
(51) Bridge Roadway Width Curb to Curb	35.8 ft
(52) Deck Width Out to Out	39.3 ft
(32) Approach Roadway Width (W/Shoulders)	32.2 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	37.1 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	1-Navigation protection not requ
(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	6-Rural Minor Arterial
(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	7
(59) Superstructure	7
(60) Substructure	7
(61) Channel & Channel Protection	7
(62) Culverts	N
LOAD RATING AND POSTING	
(31) Design Load	5-MS 18 / HS 20
(63) Operating Rating Method	1
(64) Operating Rating	
Type	1-Load Factor(LF)
Rating	60
(65) Inventory Rating Method	1-Load Factor(LF)
(66) Inventory Rating	
Type	6
Rating	36
(70) Bridge Posting	5-Equal to or above legal loads
(41) Structure Open/Posted/Closed	A-Open, no restriction
APPRAISAL	
(67) Structural Evaluation	7
(68) Deck Geometry	6
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	9
(72) Approach Roadway Alignment	8
(36A) Bridge Railings	1-Inspected feature meets currently a
(36B) Transitions	1-Inspected feature meets currently a
(36C) Approach Guardrail	1-Inspected feature meets currently a
(36D) 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	ft
(94) Bridge Improvement Cost	\$ 0
(95) Roadway Improvement Cost	\$
(96) Total Project Cost	\$
(97) Year of Improvement Cost Estimate	
(114) Future ADT	1152
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date			10/2021
(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.			

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ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	28689	26439	2250	0	0
1120	Efflorescence/Rust Staining	SF	83	0	83	0	0
1130	Cracking (RC and Other)	SF	2167	0	2167	0	0
(12)							
10/25/2021- WNR & DBM: -The majority of longitudinal and transverse cracking has been sealed. Repairs are beginning to fail as of this inspection. -The right lane has a large full length longitudinal crack that is approximately 4' left of white line. -The left and right overhang have efflorescence and cracking -The left and right deck overhangs has transverse cracking and efflorescence throughout the structure.							
107	Steel Open Girder/Beam	LF	3650	3649	1	0	0
1020	Connection	LF	1	0	1	0	0
515	Steel Protective Coating	SF	54567	54567	0	0	0
(107)							
10/25/2021- WNR & DBM: -The web of right exterior girders have discoloration at bases of web approximately 2" high and full length of structure. -Span #1, Girder #3 is missing one bolt in the bottom flange splice plate connection.							
205	Reinforced Concrete Column	EA	5	1	4	0	0
1130	Cracking (RC and Other)	EA	4	0	4	0	0
(205)							
10/25/2021- WNR & DBM: -Bent #1 column has a full height hairline crack on both exterior sides of column. -Bent #2 column has a full height vertical crack on both exterior sides of column. -Bent #3 column has a full height vertical crack on both exterior sides of column. -Bents #2 and #3 have minor scour holes at bases of columns. (Approximately 2' deep). -Bent #4 column has full height vertical cracking on the left side with other random areas of vertical cracking. The base of column has medium abrasion.							
215	Reinforced Concrete Abutment	LF	117	89	28	0	0
1080	Delamination/Spall/Patched Area	LF	2	0	2	0	0
1130	Cracking (RC and Other)	LF	26	0	26	0	0
(215)							
10/25/2021- WNR & DBM: -Abutment #1 backwall has a vertical crack in every bay visible from under the structure. -Abutment #2 has two shallow baseball sized spalls in the top of backwall visible from the driving surface. -Abutment #2 backwall has a full height hairline vertical crack in at centerline visible from under structure.							
234	Reinforced Concrete Pier Cap	LF	180	153	27	0	0
1130	Cracking (RC and Other)	LF	27	0	27	0	0
(234)							
10/25/2021- WNR & DBM:							

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[illegible]



View of bearings at abutment #1



View of bents #2 and #1



View of bent #4 ahead side.



General view view superstructure



View of bearings at abutment #2.



Bent #4 sliding plate.



Downstream view



Upstream view



Bent #2 sliding joint.



Large full length longitudinal cracking in the right lane of bridge deck.



General view of deck



View of abutment #1



Inventory looking north



Abutment #2 assembly joint



Typical sealed cracking northbound lanes



Elevation looking West.



Upstream



An area of the left bridge railing at abutment #1 has an area approximately 6" long and full height of the railing that is completely fractured under the vertical portion of the sliding plate assembly at abutment #1.



Right overhang typical transverse efflorescence and cracking.



Abutment #1 joint assembly



Sealed transverse deck cracking over bent #1



View of bent #2 ahead side



Left parapet over bent #4 complete fracture.



General view of bearings at abutment #1



Span #1 girder #3 splice plate bottom flange - Bolt still missing



Longitudinal cracking has been sealed typical throughout deck surface



General view of deck



Inventory looking North



Right parapet map cracking at bent #2.



Typical cracking in parapet wall.



Downstream



General view of span #5



Joint assembly at bent #2



General view of deck

Maintenance Needs

Date Reported: 10/31/2011

Priority: D- Routine

Type of Work: None

Status: Monitor

Inspection Direction S to N

Component:

Deficiency Description

Superstructure - The splice plate connection for girder #3 in span #1 is missing one bolt in the bottom flange splice plate.

Remarks



Span #1, Girder #3-Missing bolt in bottom flange splice plate.



Span #1 girder #3 splice plate bottom flange - Bolt still missing

Date Reported: 10/19/2017

Priority: D- Routine

Type of Work: None

Status: Monitor

Inspection Direction S to N

Component:

Deficiency Description

Concrete bridge railing - An area of the left bridge railing at abutment #1 and Bent #4 left bridge railing has an area approximately 6" long and full height of the railing that is completely fractured under the vertical portion of the sliding plate assembly at abutment #1.

Remarks



Span #1, Left side at abutment #1-Fractured concrete bridge railing.



An area of the left bridge railing at abutment #1 has an area approximately 6" long and full height of the railing that is completely fractured under the vertical portion of the sliding plate assembly at abutment #1.



Left parapet over bent #4 complete fracture.



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Inspection Comments

10/25/2021- WNR & DBM: Routine and underwater type II inspection conducted this date see element notes for documentation.

Logged South to North