



**Bridge #02393**(Underwater type 2, Routine)

**Us-79/Sec-15/L1.86 over Big Piney Creek**

**Location: 1.86 Mi North Monroe Co**

**Team Lead:** Drew Melton **Inspection Date:** August 24, 2020



Latitude:34.75427, Longitude:-91.07737

Route:79 Section:15 Log:1.86

Arnold Road ID:39x79x15xA, Arnold Log mile:1.862

District 01, Lee County

Owner: 1-State Highway Agency



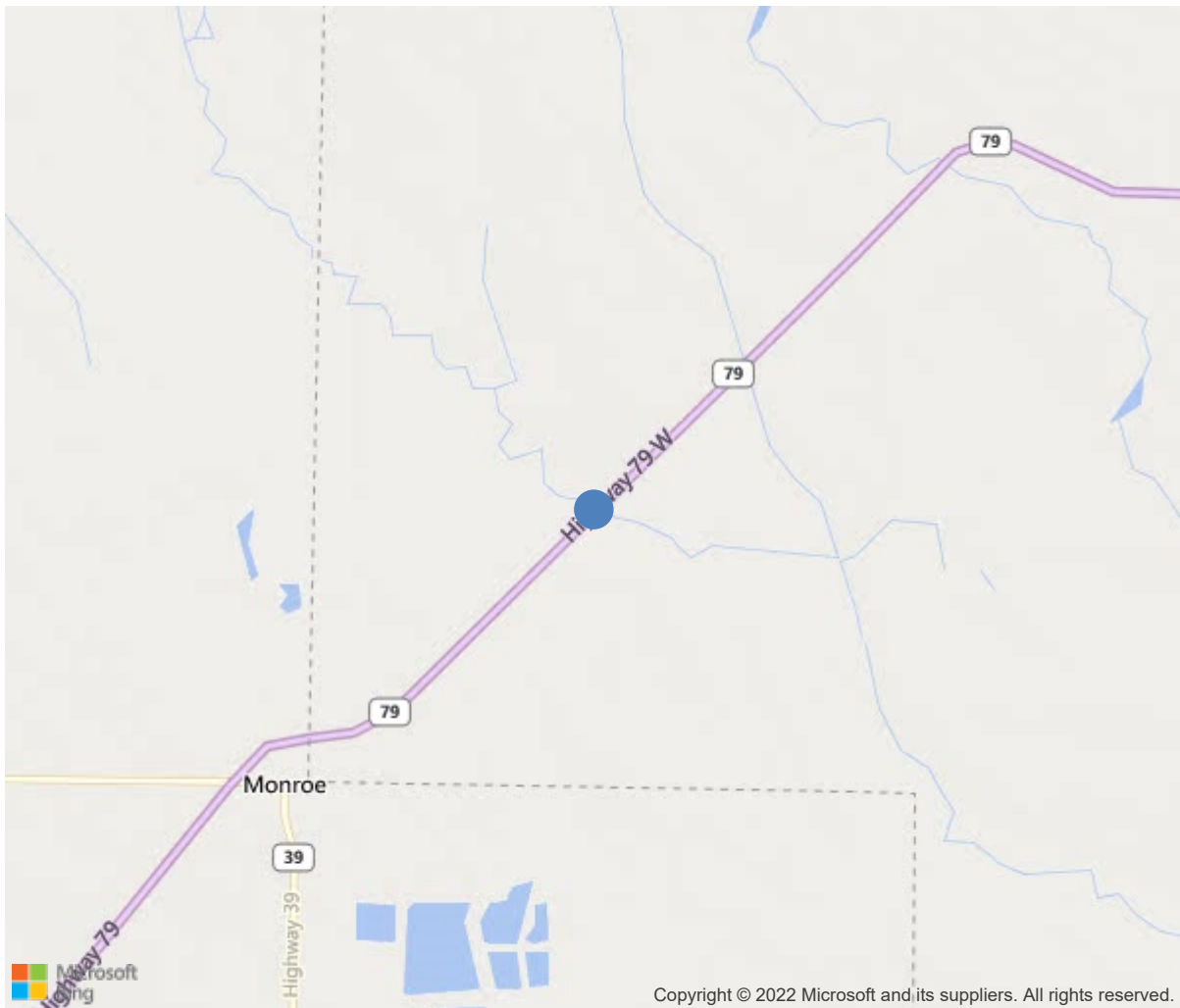
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34.75427, -91.07737

Inspection Direction : W to E



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IDENTIFICATION	
(1) State Names	Arkansas
(8) Structure Number	02393
(5) Inventory Route	79
(2) Highway Agency District	01
(3) County Code	77-Lee County, Arkansas
(4) Place Code	0
(6) Features Intersected	Big Piney Creek
(7) Facility Carried	Us-79/Sec-15/L1.86
(9) Location	1.86 Mi North Monroe Co
(11) Mile Point	1.86 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte & Subrte	0000079150
(16) Latitude	34.75427
(17) Longitude	-91.07737
(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	5
(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	1952
(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	580
(30) Year of ADT	2019
(109) Truck ADT	23 %
(19) Bypass, Detour Length	21 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	30 ft
(49) Structure Length	152.2 ft
(50) Curb or Sidewalk Width	
Left	1.5 ft
Right	1.5 ft
(51) Bridge Roadway Width Curb to Curb	26 ft
(52) Deck Width Out to Out	29 ft
(32) Approach Roadway Width (W/Shoulders)	28.9 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	28.9 ft
(53) Min Vert Clear Over Bridge Rdwy	99.99 ft
(54) Min Vert Underclear	0 ft
Ref:	
(55) Min Lat Underclear RT	0 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	1
(26) Functional Class	2-Rural Principal Arterial - Oth
(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	1-The inventory route is part of the
(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	4
(60) Substructure	8
(61) Channel & Channel Protection	8
(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	53
(65) Inventory Rating Method	1-Load Factor(LF)
(66) Inventory Rating	
Type	5
Rating	32
(70) Bridge Posting	5-Equal to or above legal loads
(41) Structure Open/Posted/Closed	A-Open, no restriction
APPRAISAL	
(67) Structural Evaluation	4
(68) Deck Geometry	5
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	8
(72) Approach Roadway Alignment	8
(36A) Bridge Railings	0-Inspected feature does not meet cur
(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	Replacement of bridge or other
(76) Length of Structure Improvement	182 ft
(94) Bridge Improvement Cost	\$ 0
(95) Roadway Improvement Cost	\$ 235
(96) Total Project Cost	\$ 669
(97) Year of Improvement Cost Estimate	2003
(114) Future ADT	700
(115) Year of Future ADT	2038

INSPECTIONS *			
(90) Inspection Date			08/2020
(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	Yes		08/2021
* 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	4187	4187	0	0	0
510	Wearing Surfaces	SF	3959	3266	493	200	0
3220	Crack (Wearing Surface)	SF	693	0	493	200	0
(12)	Dirt, debris, and vegetation growing in left and right gutters. Soffit has hairlines transverse cracks spaced four feet apart. Wearing surface is cracked transverse at all bents and multiple cracks every where else. Span #1 left curb has a one foot spall with exposed rebar 5% section loss. Span #4 right curb has two foot long spall near bent #5 with rebar exposed.						
107	Steel Open Girder/Beam	LF	609	251	302	50	6
1000	Corrosion	LF	358	0	302	50	6
515	Steel Protective Coating	SF	4135	0	0	2067	2068
3440	Effectiveness (Steel Protective Coatings)	SF	4135	0	0	2067	2068
(107)	Girders have surface rust full length with 50% bare steel rest of paint is oxidized and peeling. Span #2 girder #3 at bent #2 has three inch hole at haunch and two three inch holes in web one around diaphragm and another at lower flange. Lower web and lower flange has section loss for four feet. Span #2 girder #4 at bent #2 haunch has holes totaling one foot with section loss in web down to t-splice. Span #3 bent #3 girder #2 has hole in web six inches long at haunch and up to 50% section loss in web around diaphragm. Span #3 bent #3 girder #4 has section loss with small pin hole and one inch hole at haunch. Span #4 bent #4 girder #1 has a one inch long hole in web at haunch rest of web around haunch has section loss up to 75%. Span #4 bent #4 girder #2 first foot has lower flange with up to 50% section loss. Span #4 bent #4 girder #4 has a one inch hole in web at haunch with rest of web at haunch with up to 75% section loss. Span #5 bent #5 girder #1 has a hole in web at lower flange one foot long up to inch and a half tall approximately one and a half feet from end of girder. Lower flange for and lower web has section loss up to 60%. Haunch area on outside end of girder has 100% section loss. Span #5 abutment #2 girder #1 has a one inch hole in web at haunch with rest of web at haunch down to splice with section loss up to 50%. Outside girder ends have corrosion with laminations with section loss up to 50% at diaphragm and haunch's with Web bowing outward. Bottom flanges near caps in non repaired areas have up to 15% section loss for 2'.  Span #2 bent #2 girder #1 has a seven inch tall by five foot long t- splice. Span #2 bent #2 girder #2 has a one foot by one foot t-splice. Span #2 bent #2 girder #4 has a one foot tall by three and a half foot long t-splice. Span #3 bent #3 girder #1 has a one foot tall by five foot long t-splice. Span #3 bent #3 girder #3 has a one foot by three foot t-splice. Span #3 bent #3 girder #4 has a one foot tall by four foot long t-splice. Span #4 bent #4 girder #1 has a one foot tall by three foot long t-splice. Span #4 bent #4 girder #2 has a foot and a half square splice in web at diaphragm. Span #4 bent #4 girder #3 has a one foot by one foot splice in web at diaphragm. Span #4 bent #4 girder #4 has a one foot tall by four foot long t-splice. Span #5 bent #5 girder #3 has a t-splice one and a foot tall by five foot long. Span #5 bent #5 girder #4 has a t-splice that is eight feet long fifteen inches tall. Span #5 abutment #2 girder #1 has a fourteen inch tall by three foot long t-splice.						
215	Reinforced Concrete Abutment	LF	52	52	0	0	0



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ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
227	Reinforced Concrete Pile	EA	16	15	1	0	0
1090	Exposed Rebar	EA	1	0	1	0	0
(227)	Bent #5 pile #2 back face has a one foot spall with exposed rebar. All piles have minor abrasion with no loss aggregate.						
234	Reinforced Concrete Pier Cap	LF	104	103	0	1	0
1080	Delamination/Spall/Patched Area	LF	1	0	0	1	0
(234)	Bent #4 back face above pile #3 has one foot delaminated area.						
305	Assembly Joint without Seal	LF	189	0	48	117	24
2370	Metal Deterioration or Damage	LF	189	0	48	117	24
(305)	Joint steel on top of curbs has 25% paint left with corrosion no section loss. Joint steel underneath the bridge has no paint and corroded with section loss full length primarily on outside two feet of each end up to 10% section loss towards center and some 100% on ends.						
311	Movable Bearing	EA	20	0	0	20	0
1000	Corrosion	EA	20	0	0	20	0
515	Steel Protective Coating	SF	40	0	0	0	40
3440	Effectiveness (Steel Protective Coatings)	SF	40	0	0	0	40
(311)	Movable bearings have corrosion and laminations with section loss up to 15%. There is little to no paint left on bearings. Span #4 bent #5 bearing #2 is rocked forward.						
313	Fixed Bearing	EA	20	0	0	20	0
1000	Corrosion	EA	20	0	0	20	0
515	Steel Protective Coating	SF	40	0	0	0	40
3440	Effectiveness (Steel Protective Coatings)	SF	40	0	0	0	40
(313)	Fixed bearings have corrosion with laminations with up to 5% section loss. Abutment #1 girder #2 left anchor bolt broken / missing. There is little to no paint left on bearings.						
330	Metal Bridge Railing	LF	304	0	0	304	0
1000	Corrosion	LF	304	0	0	304	0
515	Steel Protective Coating	SF	912	0	0	456	456

**Team Lead:** Drew Melton, **Inspection Date:** August 24, 2020

## Maintenance Needs

**Date Reported:** 08/07/2014

**Priority:** D- Routine

**Type of Work:** Clean

**Status:** Monitor

**Component:** Deck

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## Deficiency Description

Dirt, debris, and vegetation growing in left and right gutters.

## Remarks

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Typical gutters

**Date Reported:** 08/07/2014  
**Priority:** C - Important  
**Type of Work:** Repair  
**Status:** Assigned  
**Component:** 107 - Steel Open Girder/Beam

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### Deficiency Description

Span #3 bent #3 girder #2 has hole in web six inches long at haunch and up to 50% section loss in web around diaphragm.

Span #3 bent #3 girder #4 has section loss with small pin hole and one inch hole at haunch.

Span #4 bent #4 girder #1 has a one inch long hole in web at haunch rest of web around haunch has section loss up to 75%.

Span #4 bent #4 girder #2 first foot has lower flange with up to 50% section loss.

Span #4 bent #4 girder #4 has a one inch hole in web at haunch with rest of web at haunch with up to 75% section loss.

Span #5 abutment #2 girder #1 has a one inch hole in web at haunch with rest of web at haunch down to splice with section loss up to 50%.

Outside girder ends have corrosion with laminations with section loss up to 50% at diaphragm and haunch's with Web bowing outward.

### Remarks

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Typical outside girder.



Span #4 bent #4 girder #4 has a one inch hole in web at haunch with rest of web at haunch with up to 75% section loss.





Span #4 bent #4 girder #2 first foot has lower flange with up to 50% section loss.



Span #4 bent #4 girder #1 has a one inch long hole in web at haunch rest of web around haunch has section loss up to 75%.



Span #3 bent #3 girder #4 has section loss with small pin hole and one inch hole at haunch.



Span #3 bent #3 girder #2 has hole in web six inches long at haunch and up to 50% section loss in web around diaphragm.



Span #5 abutment #2 girder #1 has a one inch hole in web at haunch with rest of web at haunch down to splice with section loss up to 50%.





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**Team Lead:** Drew Melton **Inspection Date:** August 24, 2020

**Date Reported:** 08/07/2014  
**Priority:** C - Important  
**Type of Work:** Clean  
**Status:** Monitor  
**Component:** Channel

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#### **Deficiency Description**

Vegetation is growing under and beside bridge on left and right side of abutment #1,2 and onto roadway.

#### **Remarks**

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Typical vegetation



**Date Reported:** 08/19/2019  
**Priority:** C - Important  
**Type of Work:** Repair  
**Status:** Forward State  
**Component:** Approach

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**Deficiency Description**

Approach #1 left side is eroded with void under approach shoulder.

**Remarks**

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Approach #1 left side is eroded with void under approach shoulder.

**Date Reported:** 08/19/2019  
**Priority:** B - Pressing; 6 month completion goal  
**Type of Work:** Repair  
**Status:** Assigned  
**Component:** 107 - Steel Open Girder/Beam

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### Deficiency Description

Span #2 girder #3 at bent #2 has three inch hole at haunch and two three inch holes in web one around diaphragm and another at lower flange. Lower web and lower flange has section loss for four feet.  
Span #2 girder #4 at bent #2 haunch has holes totaling one foot with section loss in web down to t-splice.  
Span #5 bent #5 girder #1 has a hole in web at lower flange one foot long up to inch and a half tall approximately one and a half feet from end of girder. Lower flange for and lower web has section loss up to 60%. Haunch area on outside end of girder has 100% section loss.

### Remarks

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Span #2 girder #3 at bent #2 has three inch hole at haunch and two three inch holes in web one around diaphragm and another at lower flange. Lower web and lower flange has section loss for four feet.



Span #2 girder #4 at bent #2 haunch has holes totaling one foot with section loss in web down to t-splice.



Span #5 bent #5 girder #1 has a hole in web at lower flange one foot long up to inch and a half tall approximately one and a half feet from end of girder. Lower flange for and lower web has section loss up to 60%. Haunch area on outside end of girder has 100% section loss.



**Date Reported:** 08/19/2019  
**Priority:** D- Routine  
**Type of Work:** Clean  
**Status:** Monitor  
**Component:** 107 - Steel Open Girder/Beam

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**Deficiency Description**

Girders have surface rust full length with 50% bare steel rest of paint is oxidized and peeling.

**Remarks**

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Typical outside girder condition.



Typical paint condition inside girder.



**Date Reported:** 08/25/2020  
**Priority:** C - Important  
**Type of Work:** Clean  
**Status:** Open  
**Component:** 311 - Movable Bearing

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#### Deficiency Description

Movable bearings have corrosion and laminations with section loss up to 15%.  
There is little to no paint left on bearings.  
Span #4 bent #5 bearing #2 is rocked forward.

#### Remarks

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Typical movable bearing.



Span #4 bent #5 bearing #2 is rocked forward.

**Date Reported:** 08/25/2020  
**Priority:** D- Routine  
**Type of Work:** Clean  
**Status:** Open  
**Component:** 313 - Fixed Bearing

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#### Deficiency Description

Fixed bearings have corrosion with laminations with up to 5% section loss.  
Abutment #1 girder #2 left anchor bolt broken / missing.  
There is little to no paint left on bearings.

#### Remarks

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Typical fixed bearing condition.



Typical abutment bearing



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**Team Lead:** Drew Melton **Inspection Date:** August 24, 2020

### **Inspection Comments**

Drawing number:6585-87,5252A,C

Approach #1 left side is eroded with void under approach shoulder.

Vegetation is growing under and beside bridge on left and right side of abutment #1,2 and onto roadway.