



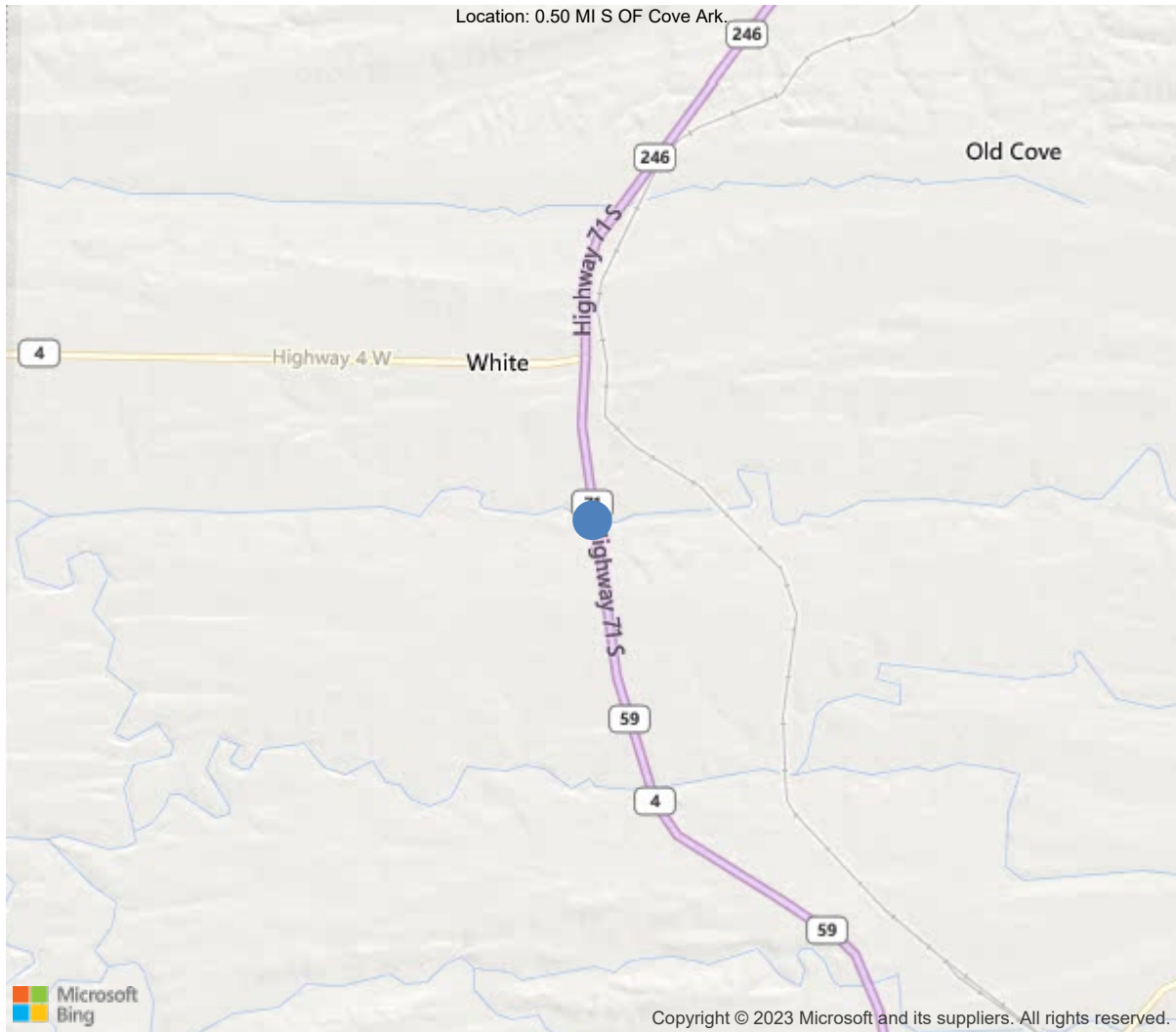
Latitude:34.42056, Longitude:-94.41083

Route:71 Section:08 Log:18.546

Arnold Road ID:57x71x8xA, Arnold Log mile:18.555

District 04, 113 - Polk County

Owner: 1 - State Highway Agency



34.42056, -94.41083



Asset #02146(Routine)

US 71 - Polk Co. over Buffalo Creek

Location: 0.50 MI S OF Cove Ark.

Team Lead: Eric West, Inspection Date: 08/16/2021

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	02146
(5) Inventory Route	1
(2) Highway Agency District	04 - District 04
(3) County Code	113 - Polk County
(4) Place Code	0
(6) Features Intersected	Buffalo Creek
(7) Facility Carried	US 71 - Polk Co.
(9) Location	0.50 MI S OF Cove Ark.
(11) Mile Point	18.546 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte & Subrte	0000071080
(16) Latitude	34.4205611111111
(17) Longitude	-94.4108333333333
(98) Border Bridge State Code	
(99) Border Bridge Structure No.	
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	14
Material	1 - Concrete
Type	4 - Tee beam
(44) Approach Structure Type	00
Material	0 - Other
Type	0 - Other
(45) No. of Spans in Main Unit	3
(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	1940
(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	4700
(30) Year of ADT	2014
(109) Truck ADT	1 %
(19) Bypass, Detour Length	8 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	30 ft
(49) Structure Length	92 ft
(50) Curb or Sidewalk Width	
Left	1.5 ft
Right	1.5 ft
(51) Bridge Roadway Width Curb to Curb	26.2 ft
(52) Deck Width Out to Out	31.1 ft
(32) Approach Roadway Width (W/Shoulders)	33.1 ft
(33) Bridge Median	0 - No median
(34) Skew	0 Deg
(35) Structure Flared	0 - No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	30.2 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 w
(111) Pier Protection	1 - Navigation protection not
(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 -
(100) Defense Highway	2 - The inventory route is on
(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 par
(20) Toll	3 - On free road. The structu
(21) Maintain	1 - State Highway Agency
(22) Owner	1 - State Highway Agency
(37) Historical Significance	5 - Bridge is not eligible for
CONDITION	
(58) Deck	7
(59) Superstructure	7
(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	57
(65) Inventory Rating Method	1 - Load Factor(LF)
(66) Inventory Rating	
Type	
Rating	34
(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	3
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	6
(72) Approach Roadway Alignment	8
(36A) Bridge Railings	0 - Inspected feature does not meet
(36B) Transitions	1 - Inspected feature meets current
(36C) Approach Guardrail	1 - Inspected feature meets current
(36D) Approach Guardrail Ends	1 - Inspected feature meets current
(113) Scour Critical Bridges	8 - Bridge foundations determined t
PROPOSED IMPROVEMENTS	
(75) Type of Work	31 - Replacement of bridge or
(76) Length of Structure Improvement	119 ft
(94) Bridge Improvement Cost	\$ 0
(95) Roadway Improvement Cost	\$ 400
(96) Total Project Cost	\$ 918
(97) Year of Improvement Cost Estimate	2003
(114) Future ADT	5855
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date	08/16/2021		
(91) Frequency	24		
(92) Critical Feature Inspection	Done	Freq. (Mon)	Date
A: Fracture Critical Detail	No		
B: Underwater Inspection	No		
C: Other Special Inspection			
<p>* 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.</p>			



Asset #02146(Routine)

District: 04, County: 113 - Polk County

Team Lead: Eric West, Inspection Date: 08/16/2021

General Observation (False)

05232019 SPC- Element quantities plan verified.

1018

A-15 - Late Reason (N/A)

08/16/2021 - EJW - Inspection conducted late due to heavy workload.

A-46 - Asset Files

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Asset #02146(Routine)

US 71 - Polk Co. over Buffalo Creek

Location: 0.50 MI S OF Cove Ark.

Team Lead: Eric West, Inspection Date: 08/16/2021

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
16	Reinforced Concrete Top Flange	SF	2490	2457	30	3	0
1090	Exposed Rebar	SF	3	0	0	3	0
1120	Efflorescence/Rust Staining	SF	19	0	19	0	0
1130	Cracking (RC and Other)	SF	11	0	11	0	0
510	Wearing Surfaces	SF	2340	851	3	1486	0
3210	Delam/Spall/Patched Area/Pothole	SF	17	0	3	14	0
3220	Crack (Wearing Surface)	SF	1472	0	0	1472	0
(16) -There are a few transverse cracks with efflorescence / rust stains at variable spacing visible from the undersurface of spans #2 and #3, bay #1. -Span #1 Rt has a 2" spall with exposed reinforcing steel adjacent to deck drain #2. -Span #2 Bay # 3 has a 5" spall in the expansion dam adjacent to girder #4. (510-16) -The majority of the asphalt driving surface has mapcracking. -Potholes forming in asphalt driving surface where the asphalt is breaking up over the expansion joints.							
110	Reinforced Concrete Open Girder/Beam	LF	372	284	88	0	0
1080	Delamination/Spall/Patched Area	LF	2	0	2	0	0
1120	Efflorescence/Rust Staining	LF	41	0	41	0	0
1130	Cracking (RC and Other)	LF	45	0	45	0	0
(110) -The concrete girders have vertical hairline flexure cracks at variable spacing. -Span #1, Girder #1 undersurface has a shallow delaminated area adjacent to abutment #1 and bent #2.							
205	Reinforced Concrete Column	EA	8	2	5	1	0
1080	Delamination/Spall/Patched Area	EA	4	0	4	0	0
1190	Abrasion/Wear (PSC/RC)	EA	2	0	1	1	0
(205) -Light abrasion at the base of the intermediate bent columns at the water elevation. -Bent #3 column #2 has a baseball sized spall to the backface side. -There are no apparent changes since the last inspection.							
210	Reinforced Concrete Pier Wall	LF	40	1	39	0	0
1080	Delamination/Spall/Patched Area	LF	2	0	2	0	0
1130	Cracking (RC and Other)	LF	2	0	2	0	0
1190	Abrasion/Wear (PSC/RC)	LF	35	0	35	0	0
(210) -Bent #2 pier wall back face has a 16" delaminated/spall under girder #2 and a diagonal crack Rt of centerline. -Bent #3 has a vertical crack at the centerline. -The previously documented 10" spall at the base of the web wall in bent # 3 was not visible during this inspection.							
215	Reinforced Concrete Abutment	LF	112	109	1	2	0
1080	Delamination/Spall/Patched Area	LF	1	0	1	0	0
1090	Exposed Rebar	LF	2	0	0	2	0

Team Lead: Eric West, **Inspection Date:** 08/16/2021

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
(215) -The substructure has shallow 1" spalls (at approximately 24" centers) around the ends of the tie wire used during the construction process typical in this type of structure. -Abutment # 2 has a 4" spall with exposed reinforcing steel in the right side of abutment #2 backwall.							
220	Reinforced Concrete Pile Cap/Footing	LF	2	0	2	0	0
6000	Scour	LF	2	0	2	0	0
(220) The channel has submerged drift accumulation at bent #3 causing localized scour that has partially exposed the top of the column #2 footing.							
234	Reinforced Concrete Pier Cap	LF	53	52	0	1	0
1090	Exposed Rebar	LF	1	0	0	1	0
(234) -The backface of bent #2 cap has a shallow 8" spall with exposed reinforcing steel on the right side. The exposed reinforcing steel has initial section loss.							
305	Assembly Joint without Seal	LF	120	0	0	120	0
2350	Debris Impaction	LF	120	0	0	120	0
(305) -The assembly joint seals are covered with asphalt and are not visible. The joints appear sound with no apparent problems at this inspection.							
311	Movable Bearing	EA	12	0	0	12	0
1000	Corrosion	EA	7	0	0	7	0
2210	Movement	EA	5	0	0	5	0
(311) -The bearings have a failed paint system with severe corrosion / section loss. -The bearings have heavy pack rust between rockers and masonry plates in several locations that appears to be restricting bearing movement.							
313	Fixed Bearing	EA	12	0	3	9	0
1000	Corrosion	EA	12	0	3	9	0
(313) -The bearings have a failing paint system with active corrosion and thick flaking rust. The bearings have pack rust between the sole and masonry plates.							
331	Reinforced Concrete Bridge Railing	LF	184	165	11	8	0
1080	Delamination/Spall/Patched Area	LF	10	0	8	2	0
1090	Exposed Rebar	LF	7	0	1	6	0
1130	Cracking (RC and Other)	LF	2	0	2	0	0
(331) -There are several shallow baseball sized spalls with no exposed reinforcing steel in the concrete bridge railing. -The undersurface of the curb portion of the railing on the right side has shallow 6" spalls with exposed reinforcing steel visible from the undersurface. The exposed reinforcing steel appears to have initial section loss at this inspection.							

US 71 - Polk Co. over Buffalo Creek

Location: 0.50 MI S OF Cove Ark.

Team Lead: Eric West, **Inspection Date:** 08/16/2021

Deck

[illegible]

US 71 - Polk Co. over Buffalo Creek

Location: 0.50 MI S OF Cove Ark.

Team Lead: Eric West, **Inspection Date:** 08/16/2021

Superstructure

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
110	Reinforced Concrete Open Girder/Beam	LF	372	284	88	0	0
1080	Delamination/Spall/Patched Area	LF	2	0	2	0	0
1120	Efflorescence/Rust Staining	LF	41	0	41	0	0
1130	Cracking (RC and Other)	LF	45	0	45	0	0
(110) -The concrete girders have vertical hairline flexure cracks at variable spacing. -Span #1, Girder #1 undersurface has a shallow delaminated area adjacent to abutment #1 and bent #2.							

Substructure

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
205	Reinforced Concrete Column	EA	8	2	5	1	0
1080	Delamination/Spall/Patched Area	EA	4	0	4	0	0
1190	Abrasion/Wear (PSC/RC)	EA	2	0	1	1	0
(205) -Light abrasion at the base of the intermediate bent columns at the water elevation. -Bent #3 column #2 has a baseball sized spall to the backface side. -There are no apparent changes since the last inspection.							
210	Reinforced Concrete Pier Wall	LF	40	1	39	0	0
1080	Delamination/Spall/Patched Area	LF	2	0	2	0	0
1130	Cracking (RC and Other)	LF	2	0	2	0	0
1190	Abrasion/Wear (PSC/RC)	LF	35	0	35	0	0
(210) -Bent #2 pier wall back face has a 16" delaminated/spall under girder #2 and a diagonal crack Rt of centerline. -Bent #3 has a vertical crack at the centerline. -The previously documented 10" spall at the base of the web wall in bent # 3 was not visible during this inspection.							
215	Reinforced Concrete Abutment	LF	112	109	1	2	0
1080	Delamination/Spall/Patched Area	LF	1	0	1	0	0
1090	Exposed Rebar	LF	2	0	0	2	0
(215) -The substructure has shallow 1" spalls (at approximately 24" centers) around the ends of the tie wire used during the construction process typical in this type of structure. -Abutment # 2 has a 4" spall with exposed reinforcing steel in the right side of abutment #2 backwall.							
220	Reinforced Concrete Pile Cap/Footing	LF	2	0	2	0	0
6000	Scour	LF	2	0	2	0	0
(220) The channel has submerged drift accumulation at bent #3 causing localized scour that has partially exposed the top of the column #2 footing.							
234	Reinforced Concrete Pier Cap	LF	53	52	0	1	0
1090	Exposed Rebar	LF	1	0	0	1	0
(234) -The backface of bent #2 cap has a shallow 8" spall with exposed reinforcing steel on the right side. The exposed reinforcing steel has initial section loss.							



Asset #02146(Routine)

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Team Lead: Eric West, Inspection Date: 08/16/2021

Culvert

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
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Elevation



Roadway



Typical driving surface of the deck.



Typical undersurface of the deck.



Span #3 Lt spalling with exposed reinforcing steel on the undersurface of the deck and on the rail post undersurface.



Bent #2 wearing surface over the expansion joint.



Bent #3 wearing surface over the expansion joint.



Abutment #2 wearing surface over the expansion joint.



Bent #3 Column # vertical cracks in the edge of the column.



Backface of bent #2 pier wall has a 16" delaminated/spall under girder #2.



Bent # 3 typical.



The backface of bent #2 cap has a shallow 8" spall with exposed reinforcing steel on the right side.



Abutment #2 Rt shallow spalling with exposed reinforcing steel at the wing wall juncture.



Bent # 3 bearings with active corrosion and layers of flaking rust.



Bent #2 bearings with active corrosion and layers of flaking rust.



Abutment #1 bearings with active corrosion and layers of flaking rust.



Span #2 Lt spalling under the concrete curb.



Left bridge rail with spalling.

Maintenance Needs

Date Reported: 07/15/2019
Priority: C - Important
Type of Work: Repair (General)
Status: Monitor
Component: Element

Deficiency Description

Driving surface -

The asphalt driving surface is breaking up in a few locations over the expansion joints allowing potholes to form in the driving surface.

Remarks



Pothole forming over abutment #1 expansion joint.



Bent #2 expansion joint-Pothole in asphalt driving surface.

Date Reported: 07/15/2019
Priority: C - Important
Type of Work: (Inactive) (Inactive) 1 - Clean
Status: Monitor
Component: Channel

Deficiency Description

Channel -

The channel has submerged drift accumulation at bent #3 causing localized scour that has partially exposed the top of the footing at column #2.

Remarks



Bent #3, column #2-Drift.



Scour hole at column #2 of bent #3.



Asset #02146(Routine)

US 71 - Polk Co. over Buffalo Creek

Location: 0.50 MI S OF Cove Ark.

Team Lead: Eric West, Inspection Date: 08/16/2021

Date Reported: 07/24/2013
Priority: C - Important
Type of Work: Repair (General)
Status: Monitor
Component: Superstructure

Deficiency Description

Bearings -

The bearings have a failed paint system with severe corrosion / section loss. Heavy pack rust between the sole plates and rockers appear to be restricting movement in several locations.

Remarks



Span #3, bearing #2-Severe corrosion / section loss.



Span #3, bearing #3, over bent #3- Severe corrosion / section loss.



Span #1, bearing #2 over bent #2- Severe corrosion / section loss.



Span #3, bearing #2, over bent #3- Severe corrosion / section loss. Photo #2.

Date Reported: 08/17/2021
Priority: C - Important
Type of Work: Repair (General)
Status: Open
Component: Approach

Deficiency Description

Approach Guardrail-
The Northwest and the Southeast approach guardrail has damage to the end terminals.

Remarks



Southeast approach guardrail end terminal with a broke post.



Northwest approach guardrail with damage to the end terminal and the guardrail.



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Routine Maintenance

Check Box Maintenance Items

Type of Maintenance	Is recommended?
A-54 - Sealable Deck Cracks	
A-55 - Deck Washing Needed	
A-56 - Joint Cleaning/Flushing Needed	
A-57 - Beam End and Bearing Paint Needed	
A-58 - Cap Cleaning/Flushing Needed	
A-59 - Joint Repair Needed	
A-60 - Full Beam Painting Needed	
A-61 - Polymer Overlay Advised	
A-62 - Hydro and LMC Advised	



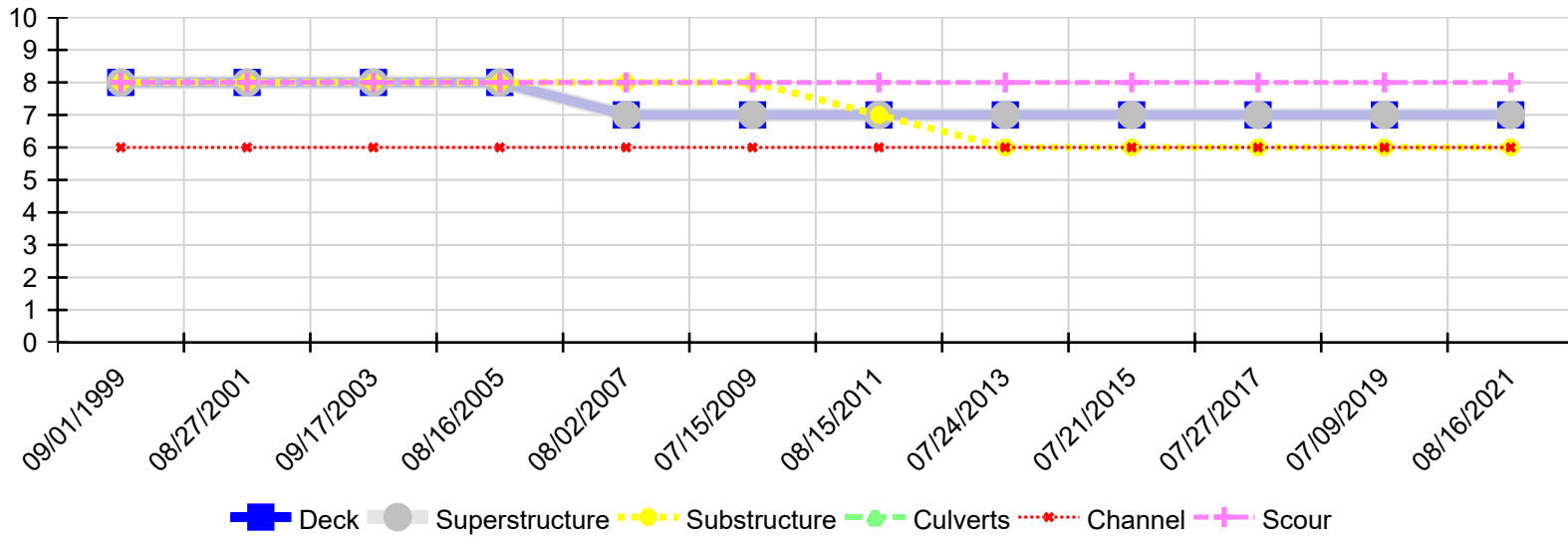
Asset #02146(Routine)

US 71 - Polk Co. over Buffalo Creek

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Team Lead: Eric West, Inspection Date: 08/16/2021

Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
08/16/2021	7	7	6	N	6	8
07/09/2019	7	7	6	N	6	8
07/27/2017	7	7	6	N	6	8
07/21/2015	7	7	6	N	6	8
07/24/2013	7	7	6	N	6	8
08/15/2011	7	7	7	N	6	8
07/15/2009	7	7	8	N	6	8
08/02/2007	7	7	8	N	6	8
08/16/2005	8	8	8	N	6	8
09/17/2003	8	8	8	N	6	8
08/27/2001	8	8	8	N	6	8
09/01/1999	8	8	8	N	6	8