



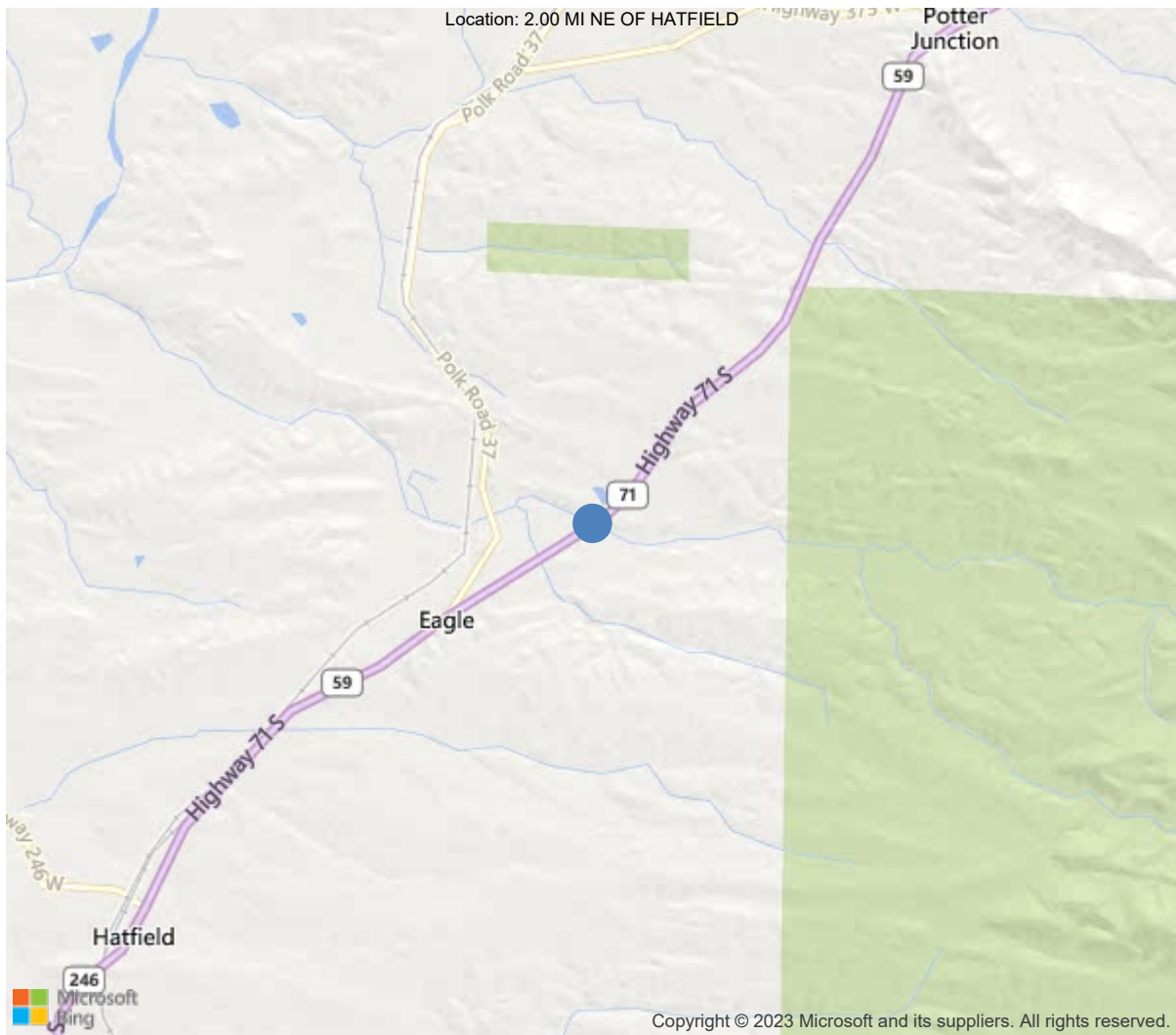
Latitude:34.51444, Longitude:-94.33786

Route:71 Section:08 Log:26.794

Arnold Road ID:, Arnold Log mile:

District 04, 113 - Polk County

Owner: 1 - State Highway Agency



34.51444, -94.33786



Asset #01918(Routine)

US 71 - Polk Co over Two Mile Creek

Location: 2.00 MI NE OF HATFIELD

Team Lead: Bob McEntyre, Inspection Date: 06/13/2019

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	01918
(5) Inventory Route	1
(2) Highway Agency District	04 - District 04
(3) County Code	113 - Polk County
(4) Place Code	0
(6) Features Intersected	Two Mile Creek
(7) Facility Carried	US 71 - Polk Co
(9) Location	2.00 MI NE OF HATFIELD
(11) Mile Point	26.794 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte & Subrte	0000071080
(16) Latitude	34.514444444444
(17) Longitude	-94.337861111111
(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	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	1 - Monolithic Concrete (concurrently pl
Type of Membrane	0 - None
Type of Deck Protection	0 - None
AGE AND SERVICE	
(27) Year Built	1936
(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	6200
(30) Year of ADT	2014
(109) Truck ADT	1 %
(19) Bypass, Detour Length	8 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	50 ft
(49) Structure Length	133 ft
(50) Curb or Sidewalk Width	
Left	0.5 ft
Right	0.5 ft
(51) Bridge Roadway Width Curb to Curb	24 ft
(52) Deck Width Out to Out	25.6 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	25.3 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	6
(59) Superstructure	6
(60) Substructure	6
(61) Channel & Channel Protection	7
(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	52
(65) Inventory Rating Method	1 - Load Factor(LF)
(66) Inventory Rating	
Type	
Rating	31
(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	2
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	8
(72) Approach Roadway Alignment	7
(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	162 ft
(94) Bridge Improvement Cost	\$ 0
(95) Roadway Improvement Cost	\$ 400
(96) Total Project Cost	\$ 1054
(97) Year of Improvement Cost Estimate	2003
(114) Future ADT	7475
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date	06/30/2021		
(91) Frequency	24		
(92) Critical Feature Inspection	Done	Freq. (Mon)	Date
A: Fracture Critical Detail	No		
B: Underwater Inspection	No		
C: Other Special Inspection			
* 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.			



Asset #01918(Routine)

District: 04, County: 113 - Polk County

Team Lead: Bob McEntyre, Inspection Date: 06/13/2019

General Observation (False)

06/13/2017 - JCJ & JML - Type 2 Underwater Inspection - Wading and probing along with visual observation during low and clear water conditions indicate that the top of the Left footing at Bent 1 is exposed, both footings are exposed at Bent 2 and the top of the Right Footing is exposed at Bent 3 with no apparent scour problems at this inspection. Non-uniform solid rock channel is exposed in areas.

A-46 - Asset Files

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Asset #01918(Routine)

US 71 - Polk Co over Two Mile Creek

Location: 2.00 MI NE OF HATFIELD

Team Lead: Bob McEntyre, Inspection Date: 06/13/2019

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	3640	340	3116	184	0
1080	Delamination/Spall/Patched Area	SF	56	0	22	34	0
1090	Exposed Rebar	SF	11	0	1	10	0
1120	Efflorescence/Rust Staining	SF	75	0	75	0	0
1130	Cracking (RC and Other)	SF	450	0	310	140	0
1190	Abrasion/Wear (PSC/RC)	SF	2708	0	2708	0	0
<p>(12) -Spans # 1 and # 2 have moderate width transverse cracks visible in the deck at variable spacing.</p> <p>-Span # 3 has wide full depth transverse and random cracking at approximately 3 foot centers with numerous superficial transverse cracks visible from the driving surface.</p> <p>-Maintenance forces have sealed the majority of the cracks in the Northbound lane. The cracks in the Southbound lanes are not sealed at this inspection.</p> <p>-Light scale / abrasion on the deck with isolated areas of medium scale / abrasion.</p> <p>Undersurface:</p> <p>-Undersurface of the deck overhangs have several large shallow concrete spalls with a few delaminated areas adjacent to the top flanges of the beams.</p> <p>-One basket ball sized spall with exposed reinforcing steel over the right side of bent # 2 has been painted by maintenance forces as a type of repair. Reinforcing steel appears to have active corrosion under the paint.</p> <p>-The overhang portion of the deck in span # 3 has a 12" fractured area on the right side adjacent to the abutment.</p> <p>Approach roadways:</p> <p>-South approach roadway has settlement in the wheel paths with failing asphalt repairs and potholes in the driving surface.</p> <p>-The right lane of the North approach roadway has failing asphalt repairs with potholes forming in the driving surface at the bridge end.</p>							
107	Steel Open Girder/Beam	LF	400	0	338	62	0
1000	Corrosion	LF	400	0	338	62	0
515	Steel Protective Coating	SF	3000	900	0	1025	1075
3440	Effectiveness (Steel Protective Coatings)	LF	2100	0	0	1025	1075
<p>(107) -Superstructure has Isolated areas of active corrosion visible in the top flanges of the beams where full depth deck cracking allows water to leak onto the beams. The top flanges of the exterior beams have areas of flaking rust with section loss in some locations.</p> <p>-Active corrosion in the diaphragms at bent # 2. No apparent noteworthy repairs since the last inspection.</p>							
205	Reinforced Concrete Column	EA	8	5	3	0	0
1080	Delamination/Spall/Patched Area	EA	1	0	1	0	0
1190	Abrasion/Wear (PSC/RC)	EA	2	0	2	0	0
<p>(205) -Light / medium abrasion at the base of columns and web wall is typical in bents # 2 and # 3. No apparent change since last inspection.</p> <p>-Bent # 3, column # 2 has a shallow baseball sized spall with no exposed reinforcing steel near base of column.</p>							
210	Reinforced Concrete Pier Wall	LF	32	0	30	2	0
1130	Cracking (RC and Other)	LF	3	0	1	2	0



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US 71 - Polk Co over Two Mile Creek

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Team Lead: Bob McEntyre, Inspection Date: 06/13/2019

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
1190	Abrasion/Wear (PSC/RC)	LF	29	0	29	0	0
(210) -The base of the web walls have light abrasion. -The web wall at bent # 2 has a few moderate width vertical cracks near centerline.							
215	Reinforced Concrete Abutment	LF	70	57	8	5	0
1080	Delamination/Spall/Patched Area	LF	5	0	1	4	0
1090	Exposed Rebar	LF	1	0	0	1	0
1130	Cracking (RC and Other)	LF	7	0	7	0	0
1190	Abrasion/Wear (PSC/RC)	LF	0	0	0	0	0
(215) -Abutment # 1, column # 1 footing is exposed. No apparent undermining at this inspection. -Light scale / abrasion is visible at the base of abutment # 1. -There is one softball sized spall with exposed reinforcing steel in the right stem wall of abutment # 1. -There is one 6" delaminated area in the face of abutment # 1 backwall under bay # 1. -The top of abutment # 1 backwall has a shallow baseball sized spall near centerline and three transverse cracks in the top of backwall visible from driving surface. -Abutment # 2 has four transverse cracks in the top of backwall visible from the driving surface. -The upper portion of abutment # 2 backwall is fractured on the left side at the wing wall juncture.							
220	Reinforced Concrete Pile Cap/Footing	LF	15	9	0	6	0
1080	Delamination/Spall/Patched Area	LF	1	0	0	1	0
1190	Abrasion/Wear (PSC/RC)	LF	5	0	0	5	0
(220) -Abutment # 1, footing for column # 1 is exposed at this inspection. No apparent undermining. -Bent # 2 footings are exposed at both columns. -Bent # 2 exposed footing at column # 2 has spalling along edge. -The channel has submerged drift at bent # 3 that is causing localized scour at base of columns / footings.							
234	Reinforced Concrete Pier Cap	LF	50	50	0	0	0
(234) -The intermediate bent caps have no apparent or noteworthy deficiencies at this inspection.							
305	Assembly Joint without Seal	LF	53	53	0	0	0
(305) -The sliding plate expansion joints at the North and South abutments make noise when impacted by traffic. No apparent change since last inspection.							
311	Movable Bearing	EA	9	1	2	6	0
1000	Corrosion	EA	8	0	2	6	0
515	Steel Protective Coating	SF	45	9	5	5	26
3440	Effectiveness (Steel Protective Coatings)	EA	36	0	5	5	26
(311) -Maintenance forces have painted over the active corrosion in the past as a type of repair. -The lower portions of the rockers and masonry plates at the abutments have active corrosion, flaking rust with significant section loss. Bearings # 1 and # 3 at abutment # 2 are the most extreme case with heavy corrosion and pack rust between rockers and masonry plates with areas of heavy section loss. Fretting is visible in the pin connections. -Bearing # 1 at abutment # 2 has one missing anchor bolt. The anchor bolt still in place has section loss and is missing the anchor bolt nut.							
313	Fixed Bearing	EA	3	0	1	2	0

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
1000	Corrosion	EA	3	0	1	2	0
515	Steel Protective Coating	SF	12	0	3	3	6
3440	Effectiveness (Steel Protective Coatings)	EA	12	0	3	3	6
(313) -Bearings have areas with a light rust coating, minor areas of active corrosion and flaking rust.							
331	Reinforced Concrete Bridge Railing	LF	266	195	66	5	0
1080	Delamination/Spall/Patched Area	LF	18	0	13	5	0
1090	Exposed Rebar	LF	1	0	1	0	0
1130	Cracking (RC and Other)	LF	52	0	52	0	0
(331) -The concrete curbs has numerous transverse cracks. -The concrete curb on the right side has concrete deterioration / spalling with exposed reinforcing steel at abutments # 1 and # 2. -Several of the bridge railing post on the right side of structure has collision damage that has caused spalls in the posts. Some of the spalled areas have exposed reinforcing steel.							

Deck

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	3640	340	3116	184	0
1080	Delamination/Spall/Patched Area	SF	56	0	22	34	0
1090	Exposed Rebar	SF	11	0	1	10	0
1120	Efflorescence/Rust Staining	SF	75	0	75	0	0
1130	Cracking (RC and Other)	SF	450	0	310	140	0
1190	Abrasion/Wear (PSC/RC)	SF	2708	0	2708	0	0

(12) -Spans # 1 and # 2 have moderate width transverse cracks visible in the deck at variable spacing.
 -Span # 3 has wide full depth transverse and random cracking at approximately 3 foot centers with numerous superficial transverse cracks visible from the driving surface.
 -Maintenance forces have sealed the majority of the cracks in the Northbound lane. The cracks in the Southbound lanes are not sealed at this inspection.
 -Light scale / abrasion on the deck with isolated areas of medium scale / abrasion.

Undersurface:
 -Undersurface of the deck overhangs have several large shallow concrete spalls with a few delaminated areas adjacent to the top flanges of the beams.
 -One basket ball sized spall with exposed reinforcing steel over the right side of bent # 2 has been painted by maintenance forces as a type of repair. Reinforcing steel appears to have active corrosion under the paint.
 -The overhang portion of the deck in span # 3 has a 12" fractured area on the right side adjacent to the abutment.

Approach roadways:
 -South approach roadway has settlement in the wheel paths with failing asphalt repairs and potholes in the driving surface.
 -The right lane of the North approach roadway has failing asphalt repairs with potholes forming in the driving surface at the bridge end.

Superstructure

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
107	Steel Open Girder/Beam	LF	400	0	338	62	0
1000	Corrosion	LF	400	0	338	62	0
515	Steel Protective Coating	SF	3000	900	0	1025	1075
3440	Effectiveness (Steel Protective Coatings)	LF	2100	0	0	1025	1075
<p>(107) -Superstructure has Isolated areas of active corrosion visible in the top flanges of the beams where full depth deck cracking allows water to leak onto the beams. The top flanges of the exterior beams have areas of flaking rust with section loss in some locations.</p> <p>-Active corrosion in the diaphragms at bent # 2. No apparent noteworthy repairs since the last inspection.</p>							

Substructure

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
205	Reinforced Concrete Column	EA	8	5	3	0	0
1080	Delamination/Spall/Patched Area	EA	1	0	1	0	0
1190	Abrasion/Wear (PSC/RC)	EA	2	0	2	0	0
(205) -Light / medium abrasion at the base of columns and web wall is typical in bents # 2 and # 3. No apparent change since last inspection. -Bent # 3, column # 2 has a shallow baseball sized spall with no exposed reinforcing steel near base of column.							
210	Reinforced Concrete Pier Wall	LF	32	0	30	2	0
1130	Cracking (RC and Other)	LF	3	0	1	2	0
1190	Abrasion/Wear (PSC/RC)	LF	29	0	29	0	0
(210) -The base of the web walls have light abrasion. -The web wall at bent # 2 has a few moderate width vertical cracks near centerline.							
215	Reinforced Concrete Abutment	LF	70	57	8	5	0
1080	Delamination/Spall/Patched Area	LF	5	0	1	4	0
1090	Exposed Rebar	LF	1	0	0	1	0
1130	Cracking (RC and Other)	LF	7	0	7	0	0
1190	Abrasion/Wear (PSC/RC)	LF	0	0	0	0	0
(215) -Abutment # 1, column # 1 footing is exposed. No apparent undermining at this inspection. -Light scale / abrasion is visible at the base of abutment # 1. -There is one softball sized spall with exposed reinforcing steel in the right stem wall of abutment # 1. -There is one 6" delaminated area in the face of abutment # 1 backwall under bay # 1. -The top of abutment # 1 backwall has a shallow baseball sized spall near centerline and three transverse cracks in the top of backwall visible from driving surface. -Abutment # 2 has four transverse cracks in the top of backwall visible from the driving surface. -The upper portion of abutment # 2 backwall is fractured on the left side at the wing wall juncture.							
220	Reinforced Concrete Pile Cap/Footing	LF	15	9	0	6	0
1080	Delamination/Spall/Patched Area	LF	1	0	0	1	0
1190	Abrasion/Wear (PSC/RC)	LF	5	0	0	5	0
(220) -Abutment # 1, footing for column # 1 is exposed at this inspection. No apparent undermining. -Bent # 2 footings are exposed at both columns. -Bent # 2 exposed footing at column # 2 has spalling along edge. -The channel has submerged drift at bent # 3 that is causing localized scour at base of columns / footings.							
234	Reinforced Concrete Pier Cap	LF	50	50	0	0	0
(234) -The intermediate bent caps have no apparent or noteworthy deficiencies at this inspection.							



Asset #01918(Routine)

US 71 - Polk Co over Two Mile Creek

Location: 2.00 MI NE OF HATFIELD

Team Lead: Bob McEntyre, Inspection Date: 06/13/2019

Culvert

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
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Inventory 1 looking North.



Span # 1, bearing # 3 over Abutment # 1-Corrosion with pack rust.



Bent # 3-Light abrasion to columns and web wall.



General view of abutment # 2 sliding plate assembly.



Span # 1, right side-Spalling adjacent to top flange.



The channel has submerged drift at bent # 2 that is causing localized scour at base of columns.



Span # 1, left lane-Moderate width transverse cracking.



Span # 1, left side-Spalling in deck overhang adjacent to top flange.



Span #2-General view of splice plate connection span 2.



Span # 2-General view of splice plate connection # 1.



Channel looking East.



General view of abutment # 2.



The right side of span # 3 deck overhang has large shallow spalls and delaminated areas.



General view of abutment # 1.



Span # 3, left lane-Moderate width transverse and random cracking.



Wear to driving surface.



Abutment # 2, bearing # 1-Missing anchor bolt.



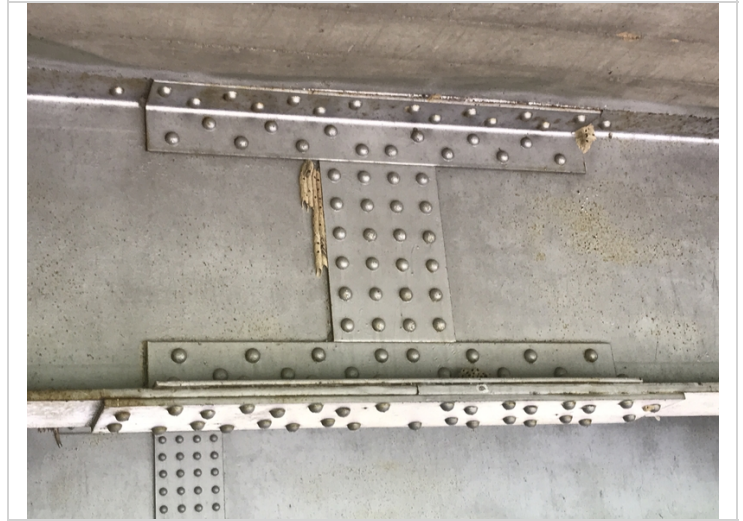
South approach roadway-Settlement in the wheel paths with potholes forming in the driving surface.



Abutment # 1 stem wall on right side-Baseball sized spall with exposed reinforcing steel.



Abutment # 2, bearing # 1-Corrosion with heavy section loss.



Span # 2-Typical of splice plate connections.



Abutment # 1-Spalling Under left end post.



Span # 1, beam # 1-Corrosion with section loss to top flange.



General view of bent # 2.



General view of bent # 3.



General view of abutment # 2 bearing area.



The Northwest approach railing has minor collision damage that has caused out of plane bending to the railing creating a "pocket" in the railing.



Span # 1, left lane-Transverse and mapcracking.



Abutment # 1 backwall-Delaminated area in bay # 1.



Bent # 3, bearing # 1 has corrosion with flaking rust and initial section loss to masonry plate.



General view of bent # 2 bearing area.



Bent # 2 exposed footing at column # 2 has spalling along edge.



Span # 2, left lane-Transverse cracking.



General view of span # 3 undersurface.



Span # 3, bearing # 3 over abutment # 2-Corrosion with heavy section loss.



Span # 1, beam # 2 over abutment # 1 has corrosion with section loss adjacent to the expansion dam.



Abutment # 1-General view of bearing area.



Spalling with exposed reinforcing steel in right undersurface at bent # 2.



General view of abutment # 1 sliding plate assembly.



South approach roadway, right lane-Settlement with pothole in wheel path.



Span # 1, right side-Shallow spalling with exposed reinforcing steel.



Span # 1, right bridge railing-Collision damage to post.



Span # 3, left lane-wide transverse cracking.



Span # 3, right side at abutment #2-Spalling with exposed reinforcing steel in curb.



The upper portion of abutment # 2 backwall is fractured on the left and right sides at the wing wall junctures.



The right lane of the North approach roadway has failing asphalt repairs with potholes forming in the driving surface at the bridge end.



General view of driving surface.



Bent # 2, column # 2 footing exposed.



Abutment # 1, column # 1 footing-Light abrasion.



Cracks in right lane sealed.



South approach roadway has settlement in the wheel paths with failing asphalt repairs and potholes in the driving surface.



Span # 2, right bridge railing-Collision damage to post.



Bent # 2 web wall-Wide vertical cracking.



Span # 2, beam # 2 over bent # 2-Corrosion with flaking rust to web.



General view of bent # 3 bearing area.



General view of span # 2 undersurface.



Abutment # 1, column # 1-Exposed footing.



Span # 1 undersurface-Transverse cracking with leakage / staining.



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US 71 - Polk Co over Two Mile Creek

Location: 2.00 MI NE OF HATFIELD

Team Lead: Bob McEntyre, Inspection Date: 06/13/2019

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	



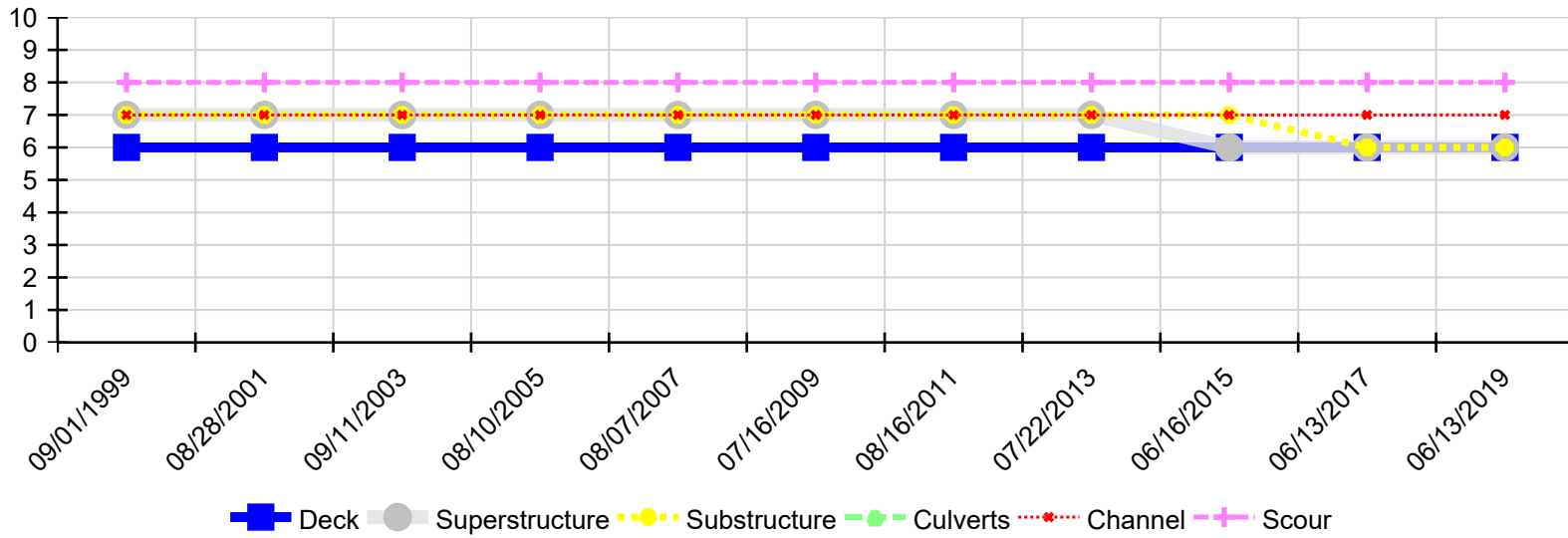
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US 71 - Polk Co over Two Mile Creek

Location: 2.00 MI NE OF HATFIELD

Team Lead: Bob McEntyre, Inspection Date: 06/13/2019

Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
06/13/2019	6	6	6	N	7	8
06/13/2017	6	6	6	N	7	8
06/16/2015	6	6	7	N	7	8
07/22/2013	6	7	7	N	7	8
08/16/2011	6	7	7	N	7	8
07/16/2009	6	7	7	N	7	8
08/07/2007	6	7	7	N	7	8
08/10/2005	6	7	7	N	7	8
09/11/2003	6	7	7	N	7	8
08/28/2001	6	7	7	N	7	8
09/01/1999	6	7	7	N	7	8

