

## Bridge 14772 Inspection Report



Latitude:35.12317, Longitude:-93.71175

Route:39 Section:00 Log:0.4

Arnold Road ID:42xRICHIERDx1xA, Arnold Log mile:0.537

District 08, 83 - Logan County

Owner: 2 - County Highway Agency

Inspection Direction: 1 - N to S

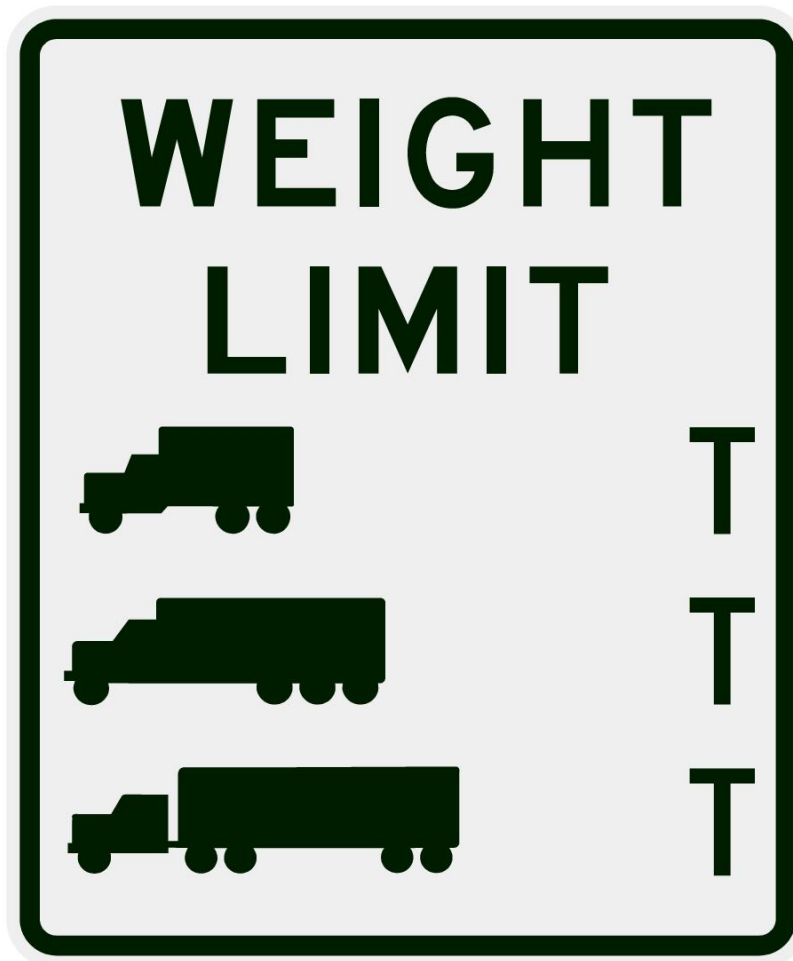
### Bridge Posting Information

41 - Structure Open/Posted/Closed: A - Open, no restriction

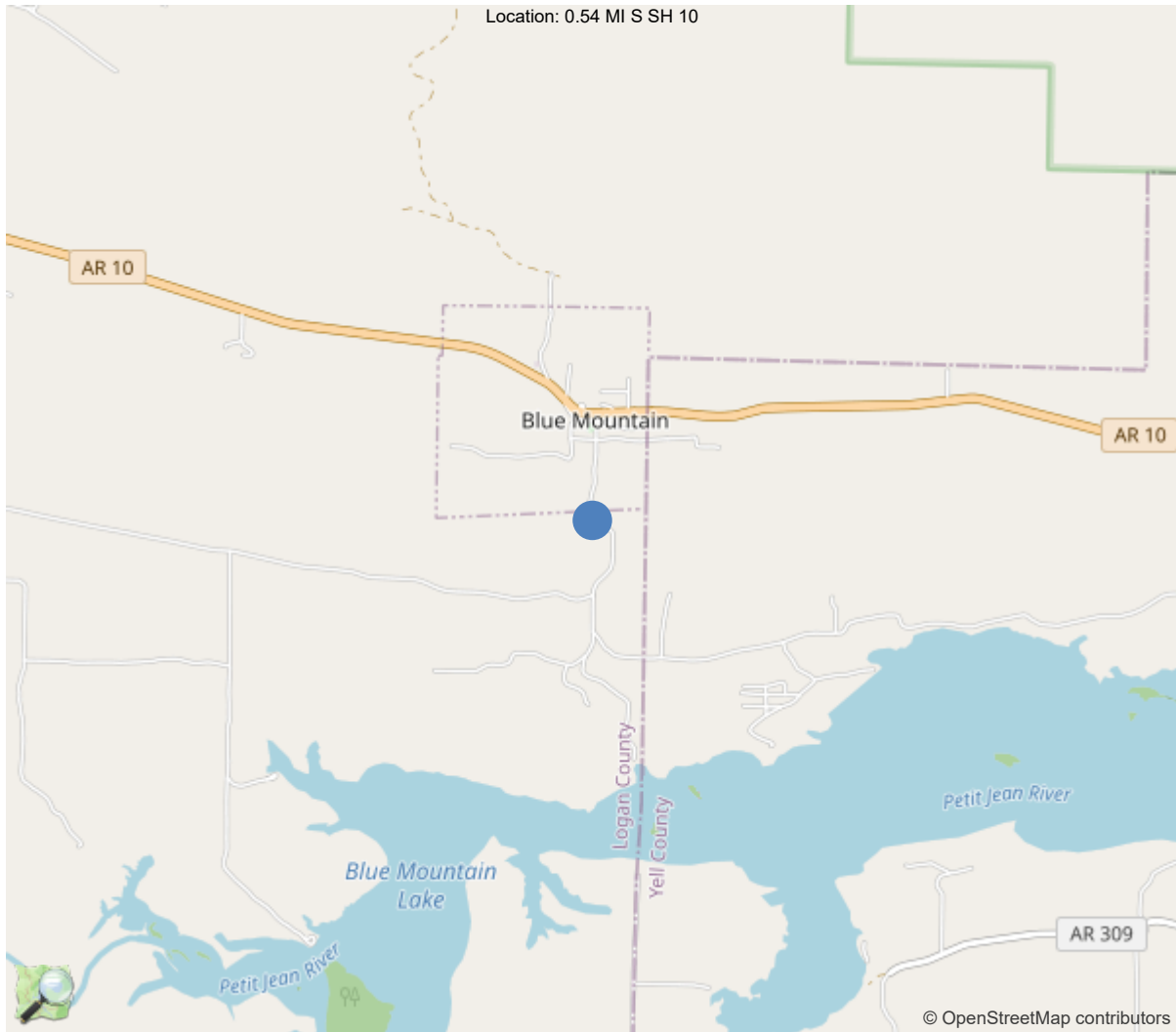
70 - Bridge Posting: 5 - Equal to or above legal loads

Legal Load	Calculated Capacity	Beginning of Bridge Sign Current Value	End of Bridge Sign Current Value
Code 4 (22 Tons)	26		
Code 9 (31 Tons)	31		
Code 5 (40 Tons)	44		

If calculated capacity is less than the Legal Load Listed, the Bridge Legally Requires Posting Signs to be installed by the Bridge Owner.



30"x36" AR



35.12317, -93.71175



## National Bridge Inventory Data Sheet

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	14772
(5) Inventory Route	1
(2) Highway Agency District	08 - District 08
(3) County Code	83 - Logan County
(4) Place Code	0
(6) Features Intersected	Ashley Creek Logan Co.
(7) Facility Carried	Richie Road
(9) Location	0.54 MI S SH 10
(11) Mile Point	0.4 mi
(12) Base Highway Network	No
(13) LRS Inventory Rte & Subrte	0000000000
(16) Latitude	35.1231666666667
(17) Longitude	-93.71175
(98) Border Bridge State Code	
(99) Border Bridge Structure No.	
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	122
Material	1 - Concrete
Type	22 - Channel 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	2 - Concrete Precast Panels
(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	1966
(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	190
(30) Year of ADT	2018
(109) Truck ADT	1 %
(19) Bypass, Detour Length	7 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	20 ft
(49) Structure Length	60 ft
(50) Curb or Sidewalk Width	
Left	0.5 ft
Right	0.5 ft
(51) Bridge Roadway Width Curb to Curb	17.1 ft
(52) Deck Width Out to Out	18.2 ft
(32) Approach Roadway Width (W/Shoulders)	16.1 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	17.7 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	0
(26) Functional Class	8 - Rural Minor Collector
(100) Defense Highway	0 - The inventory route is not
(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
(20) Toll	3 - On free road. The structure
(21) Maintain	2 - County Highway Agency
(22) Owner	2 - County Highway Agency
(37) Historical Significance	5 - Bridge is not eligible for
CONDITION	
(58) Deck	6
(59) Superstructure	6
(60) Substructure	5
(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	40
(65) Inventory Rating Method	1 - Load Factor(LF)
(66) Inventory Rating	
Type	
Rating	24
(70) Bridge Posting	5 - Equal to or above legal loads
(41) Structure Open/Posted/Closed	A - Open, no restriction
APPRAISAL	
(67) Structural Evaluation	
(68) Deck Geometry	3
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	4
(72) Approach Roadway Alignment	3
(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	5 - Bridge foundations determined t
PROPOSED IMPROVEMENTS	
(75) Type of Work	31 - Replacement of bridge or
(76) Length of Structure Improvement	85 ft
(94) Bridge Improvement Cost	\$ 0
(95) Roadway Improvement Cost	\$ 109
(96) Total Project Cost	\$ 259
(97) Year of Improvement Cost Estimate	2003
(114) Future ADT	123
(115) Year of Future ADT	2007

INSPECTIONS *			
(90) Inspection Date			09/26/2024
(91) Frequency			24
(92) Critical Feature Inspection	Done	Freq. (Mon)	Date
A: Fracture Critical Detail	No		
B: Underwater Inspection	No		
C: Other Special Inspection	No		
<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>			



Team Lead: Rhett Franks, Inspection Date: 09/26/2024

### Specifications for National Bridge Inventory Sheets

IDENTIFICATION	
B.ID.01 Bridge Number	14772
B.ID.02 Bridge Name	
B.ID.03 Previous Bridge No.	
B.W.01 Year Built	1966

LOCATION	
B.L.01 State Code	5 - Arkansas
B.L.02 County Code	83 - Logan County
B.L.03 Place Code	00000 - N/A
B.L.04 Highway Agency District	08 - District 08
B.L.05 Latitude	35.1231666666667
B.L.06 Longitude	-93.71175
B.L.07 Border Bridge Number	
B.L.08 Border Bridge State or Country Code	
B.L.09 Border Bridge Insp. Resp.	
B.L.10 Border Bridge Designated Lead State	
B.L.11 Bridge Location	0.54 MI S SH 10
B.L.12 Metropolitan Planning Organization	

CLASSIFICATION	
B.CL.01 Owner	L01 - County highway agency
B.CL.02 Maint. Responsibility	L01 - County highway agency
B.CL.03 Federal or Tribal Land Access	N - Not Applicable
B.CL.04 Historic Significance	N - Bridge is not eligible for the
B.CL.05 Toll	N - Bridge does not carry a toll ro
B.CL.06 Emergency Evacuation Designation	

ROADSIDE HARDWARE	
B.RH.01A Bridge Railing Type	
B.RH.01B Bridge Railing Year (YY)	
B.RH.01C Bridge Railing Test Level	
B.RH.02A Transition Type	
B.RH.02B Transition Year (YY)	
B.RH.02C Transition Test Level	

BRIDGE GEOMETRY	
B.G.01 NBIS Bridge Length	60
B.G.02 Total Bridge Length	60
B.G.03 Max Span Length	20
B.G.04 Min Span Length	20
B.G.05 Bridge Width Out-to-Out	18
B.G.06 Bridge Width Curb-to-Curb	17.1
B.G.07 Left Curb or Sidewalk Width	0.7
B.G.08 Right Curb or Sidewalk Width	0.7
B.G.09 Approach Roadway Width	16.1

B.G.10 Bridge Median	0 - No median
B.G.11 Skew	0
B.G.12 Curved Bridge	N - Not curved
B.G.13 Max Bridge Height	9
B.G.14 Sidehill Bridge	N - Not a sidehill bridge
B.G.15 Irregular Deck Area	
B.G.16 Calculated Deck Area	1083.4

LOADS AND LOAD RATING	
B.LR.01 Design Load	H15 - H-15
B.LR.02 Design Method	
B.LR.03 Load Rating Date	
B.LR.04 Load Rating Method	LFR - Load Factor Rating
B.LR.05 Inventory Load Rating Factor	0.67
B.LR.06 Operating Load Rating Factor	1.11
B.LR.07 Controlling Legal Load Rating Factor	
B.LR.08 Routine Permit Loads	

INSPECTION REQUIREMENTS	
B.IR.01 NSTM Inspection Required	N - NSTM inspection not required.
B.IR.02 Fatigue Details	N - No E/E' details
B.IR.03 UW Inspection Required	N - Underwater inspection not requi
B.IR.04 Complex Feature	N - Bridge does not have complex fe

COMPONENT CONDITION RATINGS	
B.C.01 Deck Condition Rating	6 - SATISFACTORY - Widespread
B.C.02 Superstructure Condition	6 - SATISFACTORY - Widespread
B.C.03 Substructure Condition	5 - FAIR - Some moderate defec
B.C.04 Culvert Condition	N - NOT APPLICABLE - Component
B.C.05 Bridge Railing Condition	7 - GOOD - Some minor defects.
B.C.06 Bridge Railing Transitions Condition	6 - SATISFACTORY - Widespread
B.C.07 Bridge Bearings Cond.	N - NOT APPLICABLE - Component
B.C.08 Bridge Joints Condition	6 - SATISFACTORY - Widespread
B.C.09 Channel Condition Rating	6 - SATISFACTORY - Widespread
B.C.10 Channel Protection Condition	6 - SATISFACTORY - Widespread
B.C.11 Scour Condition Rating	6 - Widespread minor or isolat
B.C.12 Bridge Condition Classification	F - Fair
B.C.13 Lowest Condition Rating	5 - FAIR - Some moderate defec
B.C.14 NSTM Insp. Condition	N - NOT APPLICABLE - Component
B.C.15 UW Inspection Condition	

APPRAISAL	
B.AP.01 Approach Roadway Alignment	P - Poor
B.AP.02 Overtopping Likelihood	5 - High - once every 3 to 10 years
B.AP.03 Scour Vulnerability	0 - Scour appraisal has not been co
B.AP.04 Scour Plan of Action	0 - A scour POA is not required.
B.AP.05 Seismic Vulnerability	0 - Seismic evaluation not complete

Team Lead: Rhett Franks, Inspection Date: 09/26/2024

SPAN SETS			
<b>M1</b>			
B.SP.02 # of Spans	3	B.SP.08 Deck Interaction	IM - Integral or monolithic
B.SP.03 # of Beam Lines	6	B.SP.09 Deck Material and Type	C02 - Reinforced concrete - pr
B.SP.04 Span Material	C02 - Reinforced concrete - pr	B.SP.10 Wearing Surface	C01 - Concrete - monolithic
B.SP.05 Span Continuity	1 - Simple or single span	B.SP.11 Deck Protective System	0 - None
B.SP.06 Span Type	G07 - Girder/beam - channel ad	B.SP.12 Deck Reinforcing Protective System	0 - None
B.SP.07 Span Protective System	0 - None	B.SP.13 Deck Stay-In-Place Forms	0 - None

SUBSTRUCTURE SETS			
<b>A1</b>			
B.SB.02 No. of Substructure Units	2	B.SB.05 Substructure Protective System	0 - None
B.SB.03 Substructure Material	C01 - Reinforced concrete - ca	B.SB.06 Foundation Type	F02 - Footing - on rock
B.SB.04 Substructure Type	A01 - Abutment - cantilever/wa	B.SB.07 Foundation Protective System	0 - None
<b>P1</b>			
B.SB.02 No. of Substructure Units	2	B.SB.05 Substructure Protective System	0 - None
B.SB.03 Substructure Material	C01 - Reinforced concrete - ca	B.SB.06 Foundation Type	F02 - Footing - on rock
B.SB.04 Substructure Type	B01 - Bent - column or open	B.SB.07 Foundation Protective System	0 - None

HIGHWAY FEATURES			
<b>H1</b>			
B.F.02 Feature Location	C - Carried on bridge	B.H.09 Annual ADT	190
B.F.03 Feature Name	Richie Road	B.H.10 Annual ADTT	1
B.H.01 Functional Classification	6 - Minor Collector	B.H.11 Year of Annual ADT	2018
B.H.02 Urban Code	99999	B.H.12 Highway Max Usable Vertical Clearance	99.9
B.H.03 NHS Designation	N - Non-NHS	B.H.13 Highway Min Vertical Clearance	99.9
B.H.04 National Highway Freight Network	N - Not on the NHFN	B.H.14 Highway Min Horizontal Clearance, Left	
B.H.05 STRAHNET Designation	N - Not a STRAHNET route	B.H.15 Highway Min Horizontal Clearance, Right	
B.H.06 LRS Route ID		B.H.16 Highway Max Usable Surface Width	17.3
B.H.07 LRS Mile Point	0.4	B.H.17 Bypass Detour Length	7
B.H.08 Lanes On Highway	2	B.H.18 Crossing Bridge Number	

HIGHWAY ROUTES					
Highway Parent	B.RT.01 Route Designation	B.RT.02 Route Number	B.RT.03 Route Direction	B.RT.04 Route Type	B.RT.05 Service Type
H1	R01	39	2-T - TEMP - Two-way traffic - NS or EW	4 - County route	1 - Mainline



Team Lead: Rhett Franks, Inspection Date: 09/26/2024

## WATERWAY FEATURES

W1

B.F.02 Feature Location	B - Below bridge	B.N.03 Movable Bridge Max Navigation Vertical Clearance	
B.F.03 Feature Name	Ashley Creek Logan Co.	B.N.04 Navigation Channel Width	
B.N.01 Navigable Waterway	N - Not navigable waters	B.N.05 Navigation Channel Min Horizontal Clearance	
B.N.02 Navigation Min Vertical Clearance		B.N.06 Substructure Navigation Protection	

## POSTING STATUS DATA

B.PS.01 Load Posting Status	B.PS.02 Posting Status Change Date
PO - Permanent and Open	

## LOAD EVALUATION AND POSTING

B.EP.01 Legal Load Configuration	B.EP.02 Legal Load Rating Factor	B.EP.03 Posting Type	B.EP.04 Posting Value
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## Inspection Notes

### General Observation

10/27/2022 - RSM & JPW: Routine and Underwater Type II inspections conducted this date. See notes tab for documentation. Channel sounded / profiled this inspection. See Microstation sketch linked in Files tab for sounding measurements.

09/30/2020 - JCJ & TJL - Routine Inspection conducted this date.

09/06/2018 - EJW - Underwater Type II Inspection conducted on this date. Wading and probing indicates that the footings are exposed at Bents # 2 & 3 with no apparent scour problems or undermining.

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### 58 - Deck (6 - SATISFACTORY CONDITION - structural elements show some minor deterioration.)

Overall, the deck is in satisfactory condition with a newer asphalt wearing surface, minor abrasion in the curbs with transverse cracking.

#### Driving Surface:

Asphalt wearing surface has longitudinal reflective cracks in the asphalt over the longitudinal joints between the channel units and transverse cracks over the intermediate bents. Isolated areas of map cracking.

Visible portion of deck has light abrasion / wear visible in the gutters.

History files indicate that there is light surface scale/abrasion with hairline transverse cracks on the driving surface of the deck before it was covered with asphalt.

#### Deck Undersurface:

Undersurface of the deck portion of channel units have scale with minor leaching.

Span 1, unit 2 has a full depth transverse crack with light efflorescence approximately 3' Bent 11. The cracks propagate partially down the stems.

#### Approach guardrails:

Maintenance forces have made repairs to the approach guard rails since the last inspection.

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### 59 - Superstructure (6 - SATISFACTORY CONDITION - structural elements show some minor deterioration.)

Overall, the superstructure is in satisfactory condition with moderate flexure cracking, spalling, minor cracking with efflorescence in the stems.

#### Concrete Channel Beams:

The stems of the units are transversely tie-bolted together.

Pre-Cast concrete channels with vertical hairline flexure cracking in the stems of the units at approximately 6" to 8" centers.

Several channel beams in all spans have diagonal shear type cracks adjacent to the bents.

Span 1, unit 2 has a full depth transverse crack with light efflorescence in the deck portion of unit approximately 3' from bent 1. The cracks propagate partially down the stems diagonally.

Isolated areas of shallow concrete spalls with no exposed reinforcing steel.

Exterior channel beams have shallow spalling in the exterior stems around the bolts that attach the bridge railing posts.

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**60 - Substructure** (5 - FAIR CONDITION - all primary structural elements are sound but may have minor section loss, cracking, spalling or scour.)

Overall, the substructure is in fair condition with concrete deterioration, spalling with/without exposed reinforcing steel, exposed footings, vertical cracking and heavy abrasion at the water elevation.

Bent caps have isolated areas of honeycombing from the construction process. Maintenance forces have grouted over the shallow 12" spall with exposed reinforcing steel in span 3 bent 3 cap over column 2 in the past.

Span 2 Bent 2, column 2 has 2" deep concrete deterioration.

Span 1 Bents 2 columns have medium abrasion at the base.

Span 2 Bent 3, column # 1 has concrete deterioration at the base with concrete section loss approximately 6" high and 4" deep that extends across the entire width of column.

Span 3 Bent 3, column 2 has a 5" area of concrete deterioration at the corners of the column base.

Span 4 Bent 3, column 3 at cap juncture spalling with exposed reinforcing steel on exterior edge of column / 5" area of concrete deterioration near the base.

Span 4 Bent 4 column has a 14" long shallow horizontal spall with exposed reinforcing steel at the base. Exposed reinforcing steel has measurable section loss.

Span 3 Bent 3, Portions of the top footings are exposed at this inspection. Approximately 14" of the vertical face of Bent 4 footing is exposed with minor voids under the footing near centerline. bent 4 left wing wall has a non-uniform footing with voids that penetrate up to approximately 12" under the edge of the footing. Voids do not reach the face of the wing wall during this inspection.

Footings appear to be founded on non-uniform solid rock channel that is exposed in areas.

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**61 - Channel/Channel Protection** (6 - Bank is beginning to slump. River control devices and embankment protection have widespread minor damage. There is minor stream bed movement evident. Debris is restricting the channel slightly.)

Overall, the channel is in satisfactory condition with no-uniform channel floor, sluffing banks at the abutments, moderate aggradation, large drift restricting the channel flow. Banks are sparsely vegetated with weeds and small brush.

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**A-64 - Vegetation Removal Requested** (Y)

Span 2, bent 3, has drift build up in between the columns.

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## Inspection Photos and Notes



Elevation



Inventory



Typical undersurface.



Span 1, bent 1, left side approach is missing flare panel.





Rail has new paint.



Deck has new asphalt wearing surface . 3"



Typical deck



Span 3, bent 3, unit 3 left leg has spalling. CS2





09/26/2024

Span 1, bent 1, unit 4, right leg has flexure cracking. CS2



09/26/2024

Span 1, bent 1, unit 1 left leg has spalling at lag bolt. CS3



09/26/2024

Span 3, bent 4, right side has erosion approximately 1'.



09/26/2024

Span 3, bent 4, footing is exposed.





Span 3, bent 3, column 1, has spalling. CS3



Span 1, bent 2, column 2, has spalling. CS3



Span 1, bent 2, column 3, has concrete deterioration. CS3



Left side down stream





Right side down stream



Span 2, bent 3, has drift build up in between the columns.

### Maintenance Needs

**Date Reported:** 12/14/2012

**Priority:** C - Important

**Type of Work:** Repair (General)

**Status:** Monitor

**Component:** Substructure

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### Deficiency Description

Substructure -

The bases of columns have concrete section loss due to abrasion and deteriorated concrete. Bent # 3, column # 1 has concrete deterioration at the base with concrete section loss approximately 6" high and 4" deep that extends across the entire width of column.

### Remarks

09/60/2020 - JCJ & TJL - Maintenance forces have grouted over the majority of the defects in the caps and columns above the water elevation.

Concrete deterioration and section loss in the base of the columns at the footing juncture exists below the water elevation.

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09/26/2024

Span 3, bent 3, column 1, has section loss.



10/27/2022

Bent 3, column 1-Concrete section loss at base of column





**10/27/2022**

Bent 3, column 1-Concrete section loss at base of column



**09/06/2018**

Bent # 3 Lt column concrete deterioration with section loss.

### Maintenance Needs

**Date Reported:** 10/01/2020

**Priority:** D- Routine

**Type of Work:** Repair (General)

**Status:** Monitor

**Component:** Substructure

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### Deficiency Description

Abutment # 2 Left Wing Wall (Southeast wing wall)

The Southeast wing wall has a non uniform footing with voids that penetrate approximately 12" under the edge of the footing. Voids do not reach the face of the wing wall during this inspection.

### Remarks

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Span 3, bent 4, left side wing wall undermining.



The Southeast wing wall has a non uniform footing with voids that penetrate approximately 12" under the edge of the footing. Voids do not reach the face of the wing wall during this inspection.





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## Routine Maintenance

### Check Box Maintenance Items

Type of Maintenance	Is Recommended?
A-54 - Sealable Deck Cracks	No
A-55 - Deck Washing Needed	No
A-56 - Joint Cleaning/Flushing Needed	No
A-57 - Beam End and Bearing Paint Needed	No
A-58 - Cap Cleaning/Flushing Needed	No
A-59 - Joint Repair Needed	No
A-60 - Full Beam Painting Needed	No
A-61 - Polymer Overlay Advised	No
A-62 - Hydro and LMC Advised	No
A-63 - Missing/Incorrect Log Mile Signage	No
A-64 - Vegetation Removal Requested	Yes
A-65 - Clogged deck drains?	
A-66 - Approach minor pothole/leveling needed	

**A-54 - Sealable Deck Cracks (No)**

**A-55 - Deck Washing Needed (No)**

**A-56 - Joint Cleaning/Flushing Needed (No)**



**Asset #14772(Routine)**

**Richie Road over Ashley Creek Logan Co.**

**Location: 0.54 MI S SH 10**

**Team Lead: Rhett Franks Inspection Date: 09/26/2024**

**A-57 - Girder End and Bearing Painting Needed (No)**

**A-58 - Cap Cleaning/Flushing Needed (No)**

**A-59 - Joint Repair Needed (No)**

**A-60 - Full Girder Painting Needed (No)**

**A-61 - Polymer Overlay Advised (No)**

**A-62 - Hydro and LMC Advised (No)**

**A-63 - Missing/Incorrect Log Mile Signage (No)**



**A-64 - Vegetation Removal Requested (Yes)**

Span 2, bent 3, has drift build up in between the columns.



Span 2, bent 3, has drift build up in between the columns.

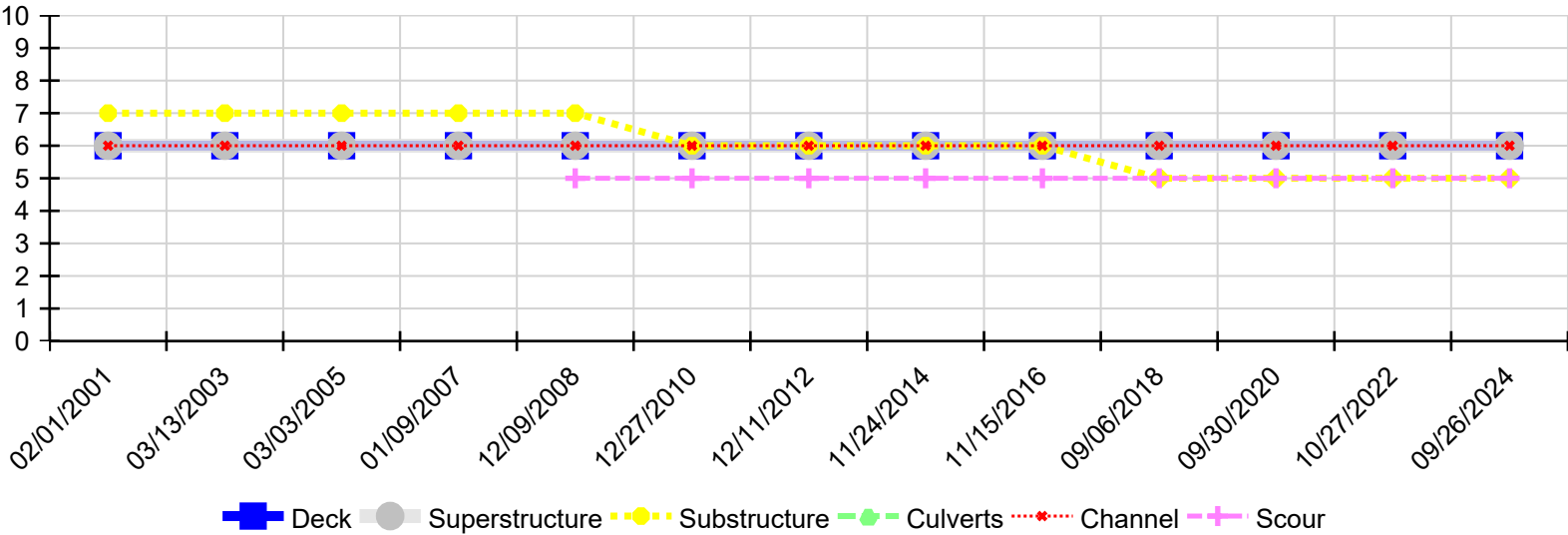
**A-65 - Clogged deck drains?**

**A-66 - Approach minor pothole/leveling needed**





Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
09/26/2024	6	6	5	N	6	5
10/27/2022	6	6	5	N	6	5
09/30/2020	6	6	5	N	6	5
09/06/2018	6	6	5	N	6	5
11/15/2016	6	6	6	N	6	5
11/24/2014	6	6	6	N	6	5
12/11/2012	6	6	6	N	6	5
12/27/2010	6	6	6	N	6	5
12/09/2008	6	6	7	N	6	5
01/09/2007	6	6	7	N	6	N
03/03/2005	6	6	7	N	6	N
03/13/2003	6	6	7	N	6	N
02/01/2001	6	6	7	N	6	N