



Latitude:33.82265, Longitude:-93.91715

Route:2 Section:00 Log:1.38

Arnold Road ID:31xBRIGHTSTARRDx0xA, Arnold Log mile:0.556

District 03, 61 - Howard County

Owner: 2 - County Highway Agency

Inspection Direction: 3 - E to W

### Bridge Posting Information

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

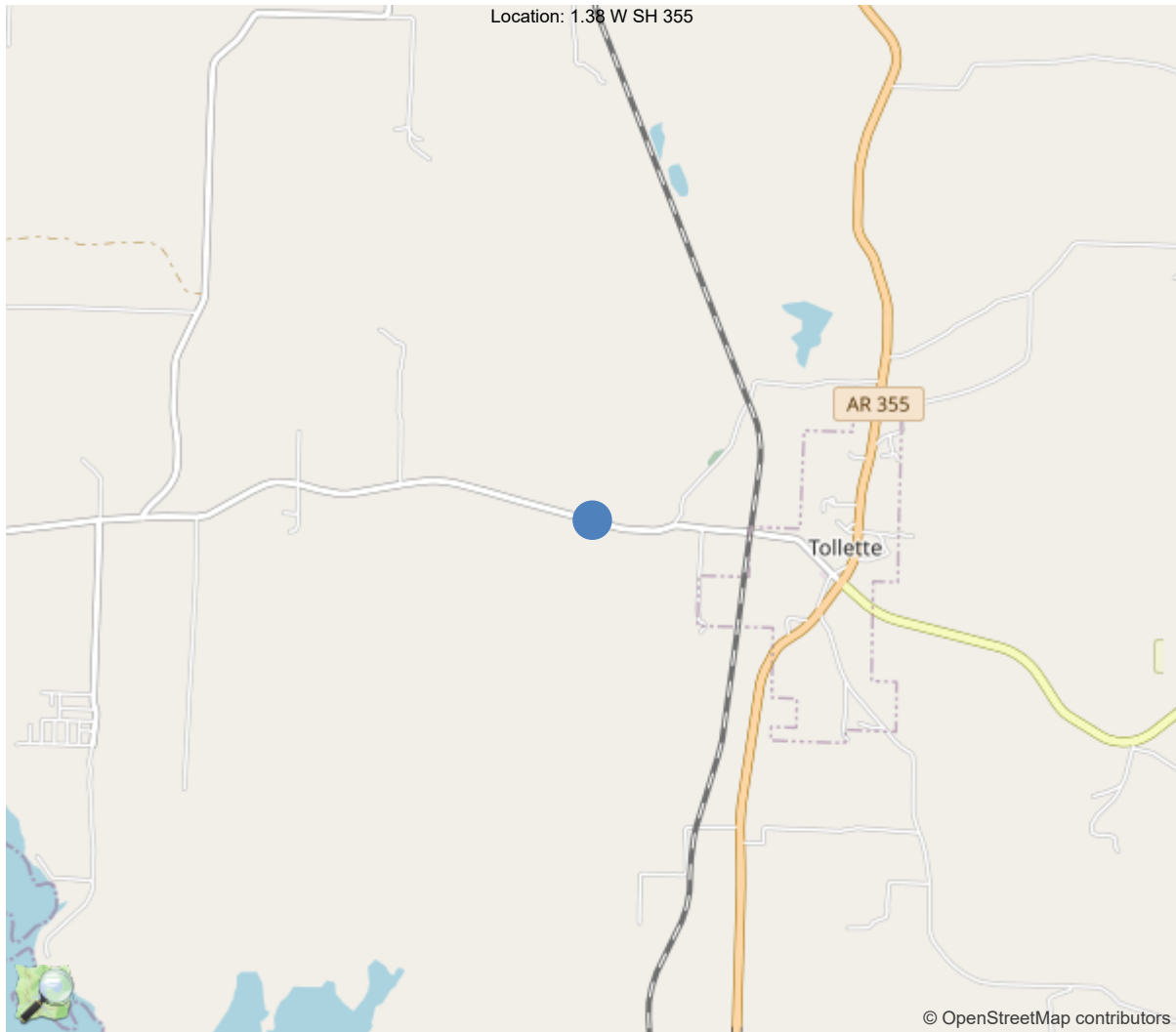
70 - Bridge Posting: 5 - Equal to or above legal loads

Legal Load	Calculated Capacity	Beginning of Bridge Sign Current Value	End of Bridge Sign Current Value
Code 4 (22 Tons)	39		
Code 9 (31 Tons)	42		
Code 5 (40 Tons)	48		

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



33.82265, -93.91715





**Asset #13878**(Routine, Underwater type 2)

**CR2/BRIGHT STAR RD over MINE CREEK**

**Location: 1.38 W SH 355**

**Team Lead: Jared Kegley Inspection Date: 12/11/2023**

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	13878
(5) Inventory Route	1
(2) Highway Agency District	03 - District 03
(3) County Code	61 - Howard County
(4) Place Code	0
(6) Features Intersected	MINE CREEK
(7) Facility Carried	CR2/BRIGHT STAR RD
(9) Location	1.38 W SH 355
(11) Mile Point	1.38 mi
(12) Base Highway Network	No
(13) LRS Inventory Rte & Subrte	0000000000
(16) Latitude	33.822647
(17) Longitude	-93.917145
(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	11
(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	1965
(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	807
(30) Year of ADT	2018
(109) Truck ADT	1 %
(19) Bypass, Detour Length	15 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	45 ft
(49) Structure Length	383 ft
(50) Curb or Sidewalk Width	
Left	1 ft
Right	1 ft
(51) Bridge Roadway Width Curb to Curb	21.3 ft
(52) Deck Width Out to Out	23.2 ft
(32) Approach Roadway Width (W/Shoulders)	22 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	21.3 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	0
(26) Functional Class	7 - Rural Major 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	6
(61) Channel & Channel Protection	6
(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	49
(65) Inventory Rating Method	1 - Load Factor(LF)
(66) Inventory Rating	
Type	
Rating	30
(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	4
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	8
(72) Approach Roadway Alignment	7
(36A) Bridge Railings	1 - Inspected feature meets current
(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	
(76) Length of Structure Improvement	0 ft
(94) Bridge Improvement Cost	\$ 0
(95) Roadway Improvement Cost	\$ 0
(96) Total Project Cost	\$ 0
(97) Year of Improvement Cost Estimate	
(114) Future ADT	235
(115) Year of Future ADT	2007

INSPECTIONS *			
(90) Inspection Date	12/11/2023		
(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		
* 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.			





Team Lead: Jared Kegley, Inspection Date: 12/11/2023

IDENTIFICATION	
B.ID.01 Bridge Number	13878
B.ID.02 Bridge Name	
B.ID.03 Previous Bridge No.	
B.W.01 Year Built	

LOCATION	
B.L.01 State Code	5 - Arkansas
B.L.02 County Code	61 - Howard County
B.L.03 Place Code	00000 - N/A
B.L.04 Highway Agency District	03 - District 03
B.L.05 Latitude	33.822647
B.L.06 Longitude	-93.917145
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	
B.L.12 Metropolitan Planning Organization	

CLASSIFICATION	
B.CL.01 Owner	
B.CL.02 Maint. Responsibility	
B.CL.03 Federal or Tribal Land Access	
B.CL.04 Historic Significance	
B.CL.05 Toll	
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	
B.G.02 Total Bridge Length	
B.G.03 Max Span Length	
B.G.04 Min Span Length	31
B.G.05 Bridge Width Out-to-Out	
B.G.06 Bridge Width Curb-to-Curb	
B.G.07 Left Curb or Sidewalk Width	
B.G.08 Right Curb or Sidewalk Width	
B.G.09 Approach Roadway Width	

B.G.10 Bridge Median	
B.G.11 Skew	
B.G.12 Curved Bridge	N - Not curved
B.G.13 Max Bridge Height	29
B.G.14 Sidehill Bridge	N - Not a sidehill bridge
B.G.15 Irregular Deck Area	
B.G.16 Calculated Deck Area	

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

INSPECTION REQUIREMENTS	
B.IR.01 NSTM Inspection Required	
B.IR.02 Fatigue Details	
B.IR.03 UW Inspection Required	
B.IR.04 Complex Feature	

COMPONENT CONDITION RATINGS	
B.C.01 Deck Condition Rating	
B.C.02 Superstructure Condition	
B.C.03 Substructure Condition	
B.C.04 Culvert Condition	
B.C.05 Bridge Railing Condition	6 - SATISFACTORY - Widespread
B.C.06 Bridge Railing Transitions Condition	5 - FAIR - Some moderate defec
B.C.07 Bridge Bearings Cond.	N - NOT APPLICABLE - Component
B.C.08 Bridge Joints Condition	4 - POOR - Widespread moderate
B.C.09 Channel Condition Rating	
B.C.10 Channel Protection Condition	
B.C.11 Scour Condition Rating	
B.C.12 Bridge Condition Classification	
B.C.13 Lowest Condition Rating	
B.C.14 NSTM Insp. Condition	
B.C.15 UW Inspection Condition	

APPRAISAL	
B.AP.01 Approach Roadway Alignment	
B.AP.02 Overtopping Likelihood	
B.AP.03 Scour Vulnerability	
B.AP.04 Scour Plan of Action	
B.AP.05 Seismic Vulnerability	

Team Lead: Jared Kegley, Inspection Date: 12/11/2023

SPAN SETS			
<b>M1</b>			
B.SP.02 # of Spans	11	B.SP.08 Deck Interaction	IM - Integral or monolithic
B.SP.03 # of Beam Lines	7	B.SP.09 Deck Material and Type	C02 - Reinforced concrete - pr
B.SP.04 Span Material	C01 - Reinforced concrete - ca	B.SP.10 Wearing Surface	0 - None
B.SP.05 Span Continuity	1 - Simple or single span	B.SP.11 Deck Protective System	0 - None
B.SP.06 Span Type	G08 - Girder/beam - channel sp	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	P04 - Pile - prestressed concr
B.SB.04 Substructure Type	A02 - Abutment - stub	B.SB.07 Foundation Protective System	0 - None
<b>P1</b>			
B.SB.02 No. of Substructure Units	10	B.SB.05 Substructure Protective System	0 - None
B.SB.03 Substructure Material	C01 - Reinforced concrete - ca	B.SB.06 Foundation Type	P04 - Pile - prestressed concr
B.SB.04 Substructure Type	B03 - Bent - pile	B.SB.07 Foundation Protective System	0 - None

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

WATERWAY FEATURES			
<b>W1</b>			
B.F.02 Feature Location	B - Below bridge	B.N.03 Movable Bridge Max Navigation Vertical Clearance	
B.F.03 Feature Name	Mine Creek	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

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



Asset #13878(Routine, Underwater type 2)

CR2/BRIGHT STAR RD over MINE CREEK

Location: 1.38 W SH 355

Team Lead: Jared Kegley Inspection Date: 12/11/2023

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

Deck is rated a 6 this inspection due to sealable deck cracks in various top flange units and spalls at the corners of various units. Asphalt overlay in both beginning and end of bridge spans.

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

Superstructure is rated a 6 this inspection due to minor spalls in various locations on bottom side of channel beams, spalling and cracking at corners of various outer units above caps. Cracking and spalling is present on both sides of bent 11, 10, 8, 6, 5, 4, 3, 2 above caps in outer units. All units are bolted together, bolts have corrosion.

**60 - Substructure** (6 - SATISFACTORY CONDITION - structural elements show some minor deterioration.)

Substructure is rated a 6 this inspection due to spalls and delams on various concrete caps and cracking with efflorescence in bent 1 abutment. Concrete pile is exposed under bent 1 abutment, no MN at this time, just need to monitor during future inspections. Spalling with rebar exposed to right side of bent 1 abutment wing.

**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.) Channel is rated a 6 this inspection due to bank damage in various locations of streambank. Channel soundings were taken this inspection and linked to report files.

**A-54 - Sealable Deck Cracks** (Y)

Sealable deck cracking in all spans in various locations of top flange.

**A-59 - Joint Repair Needed** (Y)

Joints are leaking at various bents.

**A-B.C.11 - B.C.11 Scour Condition Rating (New NBIS)** (6 - Widespread minor or isolated moderate scour.)

Scour is rated a 6 this inspection due to isolated moderate scour around bent 6.





Scour to bank around bent 6



Spall on left side of bent 5 cap



Minor spalling on various precast units. Span 3



Minor spalling on various precast units





Cracking with Efflorescence in abutment 1



Pile exposed right side of abutment 1



Pile exposed right side of abutment 1



Spalling with rebar exposed to right side of bent 1 abutment wing





Spalling on right and left sides of bent 6



Abrasion to columns



Bent 9



Bent 9





Delam on left side of bent 9, span 10 side.



Delam and cracking with efflorescence above bent 11. Both sides have cracking with efflorescence



Underside of deck photo



Precast units





Bent photo



Abutment photo



All units bolted together



End of bridge left side cracking on abutment wing





Elevation



Asphalt at end of bridge



Spall with rebar exposed on right side of concrete bridge railing in span 7



Upstream





12/11/2023

Downstream



12/11/2023

Spalls on edges of precast units



12/11/2023

Spalls on edges of precast units



12/11/2023

Spalls on edges of precast units





Upstream



Sealable deck cracking in all spans

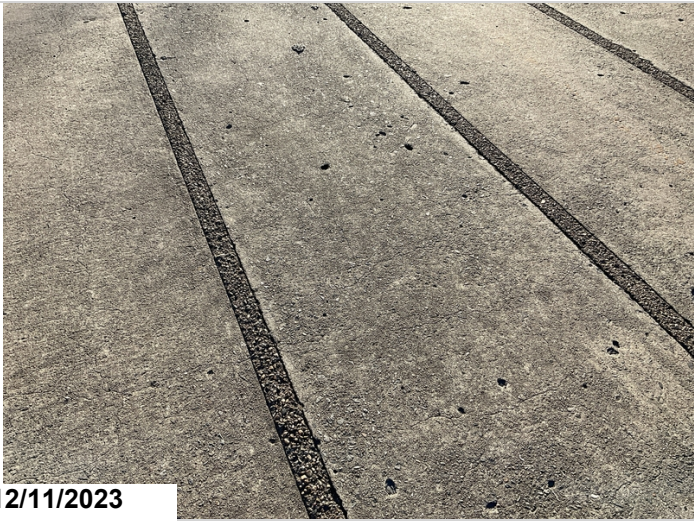


Cracking in units



Cracking in units





Cracking in units



Loss of joint material



Loss of joint material



Joint photo





Cracking in asphalt wearing surface in span 1



Grout between units



Grout between units



Large cracking in asphalt at beginning of bridge





Asphalt on span 1



Asphalt on span 1



Asphalt on span 1



Beginning of bridge right side damage





Bridge railing



Bridge railing transition



Deck photo



Alignment



### Maintenance Needs

Date Reported: 12/09/2018

Priority: D- Routine

Type of Work: Substructure Repair

Status: Monitor

Component: Substructure

### Deficiency Description

Beginning of bridge Right side has exposed rebar and Left side wing walls has cracking and are leaning do to embankment pushing against them End of bridge wing walls has cracking present also and slight leaning to them also

### Remarks



Abutment wing wall left side cracks



Right side end of bridge abutment wing wall cracks



Abutment wing wall cracked and exposed rebar right side beginning of bridge



Right side abutment wing wall end of bridge





Right side beginning of bridge wing wall leaning and cap leaning opposite direction



Left side beginning of bridge wing leaning also cap leaning in opposite direction



Abutment wing wall crack left side of beginning of bridge



**Maintenance Needs**

**Date Reported:** 12/09/2018

**Priority:** D- Routine

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

**Status:** Monitor

**Component:** Approach

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**Deficiency Description**

Guard rail beginning of bridge right side is sheared next to the first guard rail post

**Remarks**

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Guard rail busted right side beginning of bridge



## Routine Maintenance

### Check Box Maintenance Items

Type of Maintenance	Is recommended?
A-54 - Sealable Deck Cracks	Yes
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	Yes
A-60 - Full Beam Painting Needed	
A-61 - Polymer Overlay Advised	
A-62 - Hydro and LMC Advised	
A-63 - Missing/Incorrect Log Mile Signage	
A-64 - Vegetation Removal Requested	

#### **A-54 - Sealable Deck Cracks (Yes)**

Sealable deck cracking in all spans in various locations of top flange.



Sealable deck cracking in all spans



**A-55 - Deck Washing Needed**

**A-56 - Joint Cleaning/Flushing Needed**

**A-57 - Girder End and Bearing Painting Needed**

**A-58 - Cap Cleaning/Flushing Needed**

**A-59 - Joint Repair Needed (Yes)**  
Joints are leaking at various bents.



Loss of joint material

**A-60 - Full Girder Painting Needed**

**A-61 - Polymer Overlay Advised**





**Asset #13878**(Routine, Underwater type 2)

**CR2/BRIGHT STAR RD over MINE CREEK**

**Location: 1.38 W SH 355**

**Team Lead: Jared Kegley Inspection Date: 12/11/2023**

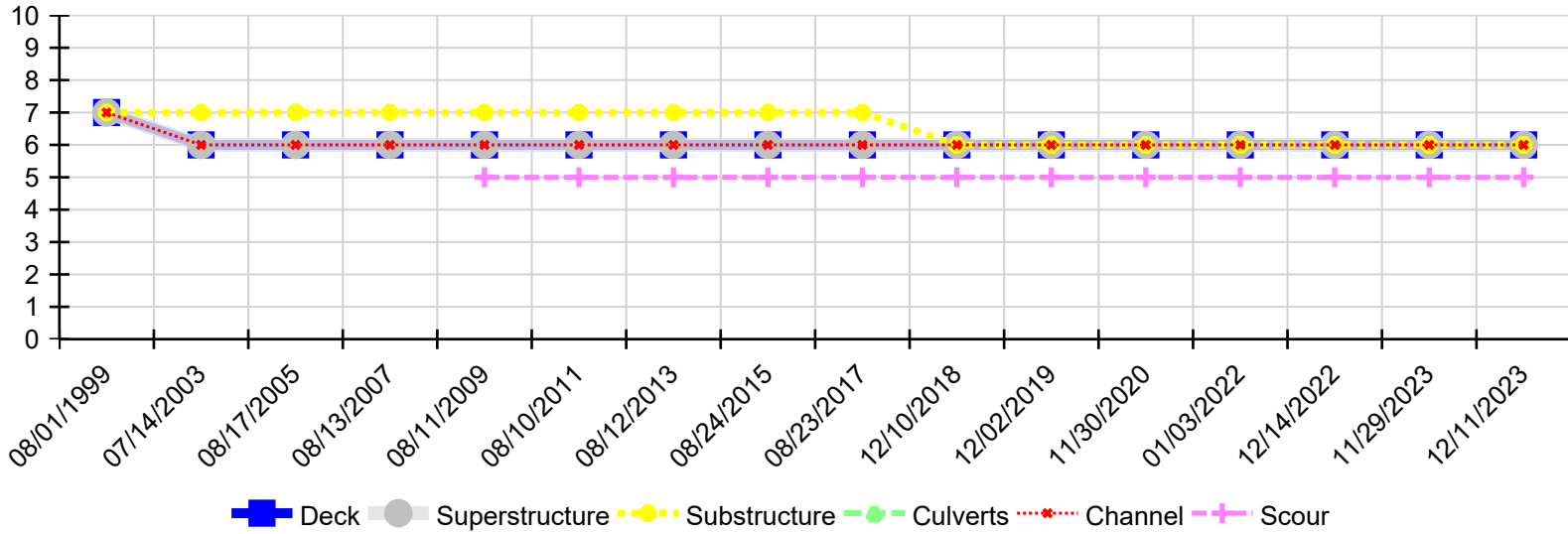
**A-62 - Hydro and LMC Advised**

**A-63 - Missing/Incorrect Log Mile Signage**

**A-64 - Vegetation Removal Requested**



### Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
12/11/2023	6	6	6	N	6	5
11/29/2023	6	6	6	N	6	5
12/14/2022	6	6	6	N	6	5
01/03/2022	6	6	6	N	6	5
11/30/2020	6	6	6	N	6	5
12/02/2019	6	6	6	N	6	5
12/10/2018	6	6	6	N	6	5
08/23/2017	6	6	7	N	6	5
08/24/2015	6	6	7	N	6	5
08/12/2013	6	6	7	N	6	5
08/10/2011	6	6	7	N	6	5
08/11/2009	6	6	7	N	6	5
08/13/2007	6	6	7	N	6	N
08/17/2005	6	6	7	N	6	N
07/14/2003	6	6	7	N	6	N
08/01/1999	7	7	7	N	7	N