



Latitude:36.24022, Longitude:-93.15231

Route:397 Section:00 Log:1.73

Arnold Road ID:5x397x0xA, Arnold Log mile:1.432

District 09, 9 - Boone County

Owner: 1 - State Highway Agency

Inspection Direction: 2 - S to N

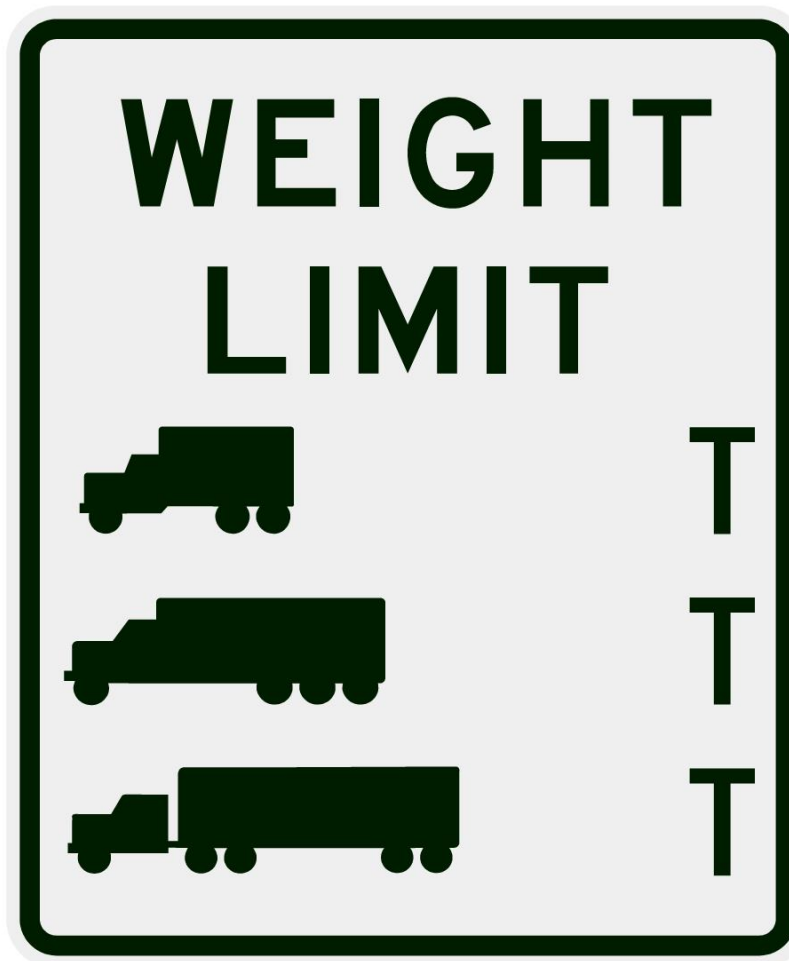
### Bridge Posting Information

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

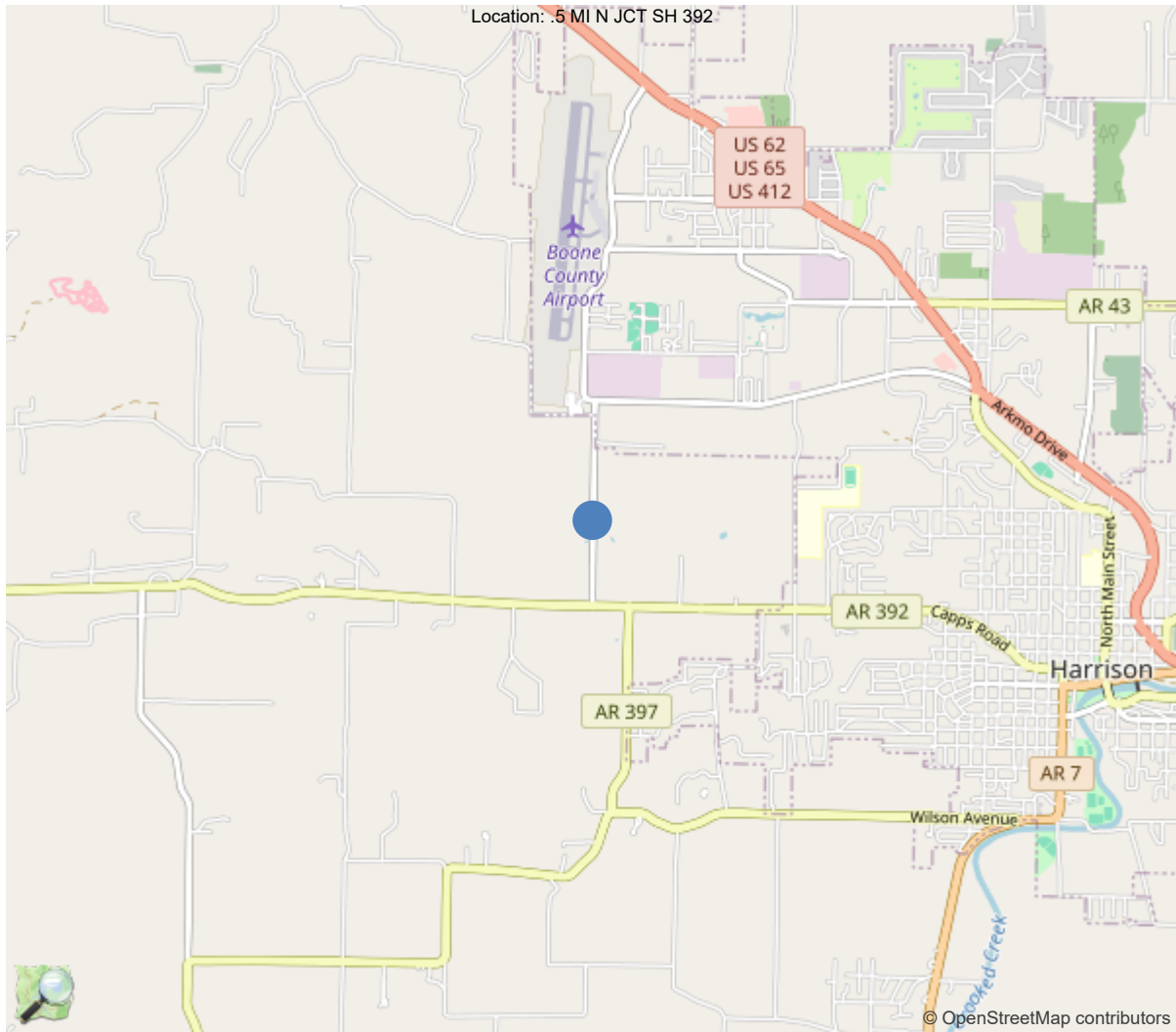
70 - Bridge Posting: 5 - Equal to or above legal loads

Legal Load	Calculated Capacity	Beginning of Bridge Sign Current Value	End of Bridge Sign Current Value
Code 4 (22 Tons)	40		
Code 9 (31 Tons)	50		
Code 5 (40 Tons)	60		

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



36.24022, -93.15231



Asset #M3967(Routine)

SH 397 Boone over DRY JORDAN CREEK

Location: .5 MI N JCT SH 392

Team Lead: Nathan Rowland Inspection Date: 08/10/2022

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	M3967
(5) Inventory Route	1
(2) Highway Agency District	09 - District 09
(3) County Code	9 - Boone County
(4) Place Code	0
(6) Features Intersected	DRY JORDAN CREEK
(7) Facility Carried	SH 397 Boone
(9) Location	.5 MI N JCT SH 392
(11) Mile Point	1.73 mi
(12) Base Highway Network	No
(13) LRS Inventory Rte & Subrte	0000000000
(16) Latitude	36.240224985972
(17) Longitude	-93.1523061051976
(98) Border Bridge State Code	
(99) Border Bridge Structure No.	
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	119
Material	1 - Concrete
Type	19 - Culvert
(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	N - Not applicable
(108) Wearing Surface/Protective System	
Type of Wearing Surface	N - Not applicable (applies only to stru
Type of Membrane	N - Not applicable (applies only to stru
Type of Deck Protection	N - Not applicable (applies only to stru
AGE AND SERVICE	
(27) Year Built	1976
(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	4229
(30) Year of ADT	2018
(109) Truck ADT	1 %
(19) Bypass, Detour Length	5 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	13 ft
(49) Structure Length	64 ft
(50) Curb or Sidewalk Width	
Left	0 ft
Right	0 ft
(51) Bridge Roadway Width Curb to Curb	0 ft
(52) Deck Width Out to Out	0 ft
(32) Approach Roadway Width (W/Shoulders)	29 ft
(33) Bridge Median	0 - No median
(34) Skew	30 Deg
(35) Structure Flared	0 - No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	37.7 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	16 - Urban Minor Arterial
(100) Defense Highway	0 - The inventory route is not
(101) Parallel Structure	N - No parallel structure exis
(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 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	N
(59) Superstructure	N
(60) Substructure	N
(61) Channel & Channel Protection	7
(62) Culverts	7
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	60
(65) Inventory Rating Method	1 - Load Factor(LF)
(66) Inventory Rating	
Type	
Rating	36
(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	N
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	8
(72) Approach Roadway Alignment	8
(36A) Bridge Railings	0 - Inspected feature does not meet
(36B) Transitions	0 - Inspected feature does not meet
(36C) Approach Guardrail	0 - Inspected feature does not meet
(36D) Approach Guardrail Ends	1 - Inspected feature meets current
(113) Scour Critical Bridges	8 - 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	5075
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date	08/10/2022		
(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: Nathan Rowland, Inspection Date: 08/10/2022

IDENTIFICATION	
B.ID.01 Bridge Number	M3967
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	9 - Boone County
B.L.03 Place Code	00000 - N/A
B.L.04 Highway Agency District	09 - District 09
B.L.05 Latitude	36.240224985972
B.L.06 Longitude	-93.1523061051976
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	
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	
B.G.13 Max Bridge Height	
B.G.14 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 Substructure Condition	
B.C.05 Bridge Railing Condition	
B.C.06 Bridge Railing Transitions Condition	
B.C.07 Bridge Bearings Cond.	
B.C.08 Bridge Joints Condition	
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:** Nathan Rowland, **Inspection Date:** 08/10/2022

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 #M3967**(Routine)

**SH 397 Boone over DRY JORDAN CREEK**

**Location: .5 MI N JCT SH 392**

**Team Lead:** Nathan Rowland **Inspection Date:** 08/10/2022

#### **General Observation**

8/10/2022 WNR & DBM: Routine inspection conducted this date. See notes for documentation.

Structure is logged from South to North and is accessible from the bottom slab.

No bat activity noted.

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ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
241	Reinforced Concrete Culvert	LF	243	29	207	7	0
1080	Delamination/Spall/Patched Area	LF	4	0	0	4	0
1090	Exposed Rebar	LF	3	0	0	3	0
1120	Efflorescence/Rust Staining	LF	6	0	6	0	0
1130	Cracking (RC and Other)	LF	38	0	38	0	0
1190	Abrasion/Wear (PSC/RC)	LF	163	0	163	0	0
(241) 8/10/2022 WNR & DBM:							
<p>Barrel #1- has 18' of hairline vertical and horizontal cracking and 4' of cs2 efflorescence cracking. The upstream end of the division wall has 1' of cs3 delamination. The barrel floor has up to 24" of build up for the entire length and width. The right wing wall of barrel #1 showed no deficiencies. The left wing wall has 2" of separation (measurement taken from the bottom of the top slab). The left wing has 19' of diagonal cracks of which some have efflorescence and a large patched area that is fractured and spalling with steel exposed.</p> <p>Barrel #2- has 6' of hairline vertical cracking and 2' of exposed rebar at the inlet end. The barrel floor has 40' of cs2 abrasion.</p> <p>Barrel #3- has 3' of hairline vertical cracking and 1' of cs2 efflorescence cracking. It has 1' of delamination cs3. The barrel floor has 43' of cs2 abrasion. Barrel #3 has up to 18" of the bottom slab exposed at the outlet end.</p> <p>Barrel #4- has 4' of hairline vertical cracking and 1' of cs3 steel exposed with some section outlet end of wall #4. The barrel floor has 42' of cs2 abrasion. Barrel #4 has up to 14" vertical face of the bottom slab exposed for 7' at the inlet end.</p> <p>Barrel #5- has 7' of hairline vertical cracking and 1' of cs2 efflorescence cracking. It has 1' of exposed rebar in the top slab at the outlet end. The barrel floor has 39' of cs2 abrasion. The left wing wall of barrel #5 has 8' of diagonal cracking. The right wing wall has a large spall at the wingwall and barrel juncture and 9' of diagonal cracking. The right wing also has 2" of separation (measurement taken from the bottom of the top slab).</p> <p>The outlet ends of barrels 2-5 have the vertical face of the bottom slab exposed</p> <p>Both headwalls have large amounts of deterioration with efflorescence leaching.</p> <p>Left headwall- has areas of deterioration.</p> <p>Right headwall- has deterioration with exposed rebar over barrel #2.</p>							
330	Metal Bridge Railing	LF	124	124	0	0	0
515	Steel Protective Coating	SF	372	372	0	0	0
(330) 8/10/2022 WNR & DBM:							
<p>The metal bridge railing consists of W-section railing attached to concrete posts.</p> <p>Left side- has deterioration on bridge rail posts #1, #10 &amp; #11, no rebar is exposed. No deficiencies noted on the metal railing.</p> <p>Right side- No deficiencies noted on the metal railing.</p>							



Elevation with log right to left



Inventory looking north



Barrel #1



Barrel #2



Barrel #3



Barrel #4



Barrel #5



Barrel #1 left wing wall



Downstream view



Upstream view



Typical view of driving surface.



Upstream channel view.



Downstream channel view.



Approach view in direction of log mile.



Approach view in direction of log mile.



Elevation view. Log mile from left to right.



Elevation view. Log mile from left to right.



24" of stream bed material build up in barrel 1.



14" of the vertical face of the bottom slab exposed at the barrel 4 outlet. Typical of barrels 2-5.



Typical barrel interior condition.



The left end of the bridge railing showing spalling and delamination on the concrete posts.

**Maintenance Needs**

**Date Reported:** 08/12/2014

**Priority:** D- Routine

**Type of Work:** (Inactive) (Inactive) 9 - None

**Status:** Assigned

**Component:**

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**Deficiency Description**

The right and left headwall has deterioration with exposed rebar over barrel #2.

**Remarks**

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Deterioration on the right edge of the top slab.



Efflorescence with concrete deterioration on the right edge of the top slab.

**Maintenance Needs**

**Date Reported:** 08/13/2018

**Priority:** D- Routine

**Type of Work:** (Inactive) (Inactive) 9 - None

**Status:** Monitor

**Component:**

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**Deficiency Description**

The division wall of barrel #2 & #4 and the top slab of barrel #5 have shallow spalls with rebar exposed.

**Remarks**

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Barrel #4 spalling with steel exposed on the outlet end of wall #4



Barrel #2 has exposed rebar at the inlet end.

**Maintenance Needs**

**Date Reported:** 08/10/2022

**Priority:** D- Routine

**Type of Work:** (Inactive) (Inactive) 1 - Clean

**Status:** Open

**Component:** Channel

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**Deficiency Description**

Barrels 3-5 have drift accumulation that is causing localized scour.

**Remarks**

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Barrels 3-5 have drift accumulation that is causing localized scour.



## 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	
A-63 - Missing/Incorrect Log Mile Signage	
A-64 - Vegetation Removal Requested	

**A-54 - Sealable Deck Cracks**

**A-55 - Deck Washing Needed**

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



**Asset #M3967(Routine)**  
**SH 397 Boone over DRY JORDAN CREEK**

**Location: .5 MI N JCT SH 392**

**Team Lead: Nathan Rowland Inspection Date: 08/10/2022**

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

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

**A-59 - Joint Repair Needed**

**A-60 - Full Girder 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**

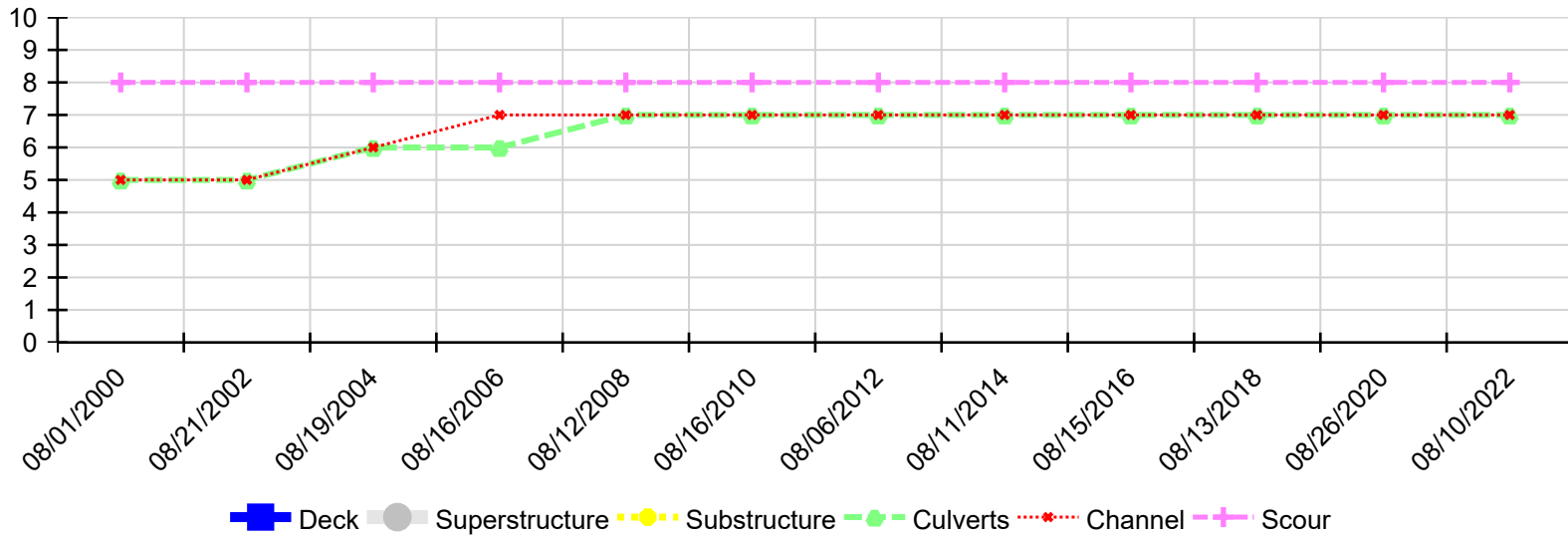


**Asset #M3967(Routine)**  
**SH 397 Boone over DRY JORDAN CREEK**

**Location: .5 MI N JCT SH 392**

**Team Lead: Nathan Rowland Inspection Date: 08/10/2022**

Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
08/10/2022	N	N	N	7	7	8
08/26/2020	N	N	N	7	7	8
08/13/2018	N	N	N	7	7	8
08/15/2016	N	N	N	7	7	8
08/11/2014	N	N	N	7	7	8
08/06/2012	N	N	N	7	7	8
08/16/2010	N	N	N	7	7	8
08/12/2008	N	N	N	7	7	8
08/16/2006	N	N	N	6	7	8
08/19/2004	N	N	N	6	6	8
08/21/2002	N	N	N	5	5	8
08/01/2000	N	N	N	5	5	8