

Bridge 02354 Inspection Report



Latitude:33.44418, Longitude:-93.04864

Route:79 Section:03 Log:5.629

Arnold Road ID:52x79x3xA, Arnold Log mile:5.627

District 07, 103 - Ouachita County

Owner: 1 - State Highway Agency

Inspection Direction: 2 - S to N

Bridge Posting Information

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

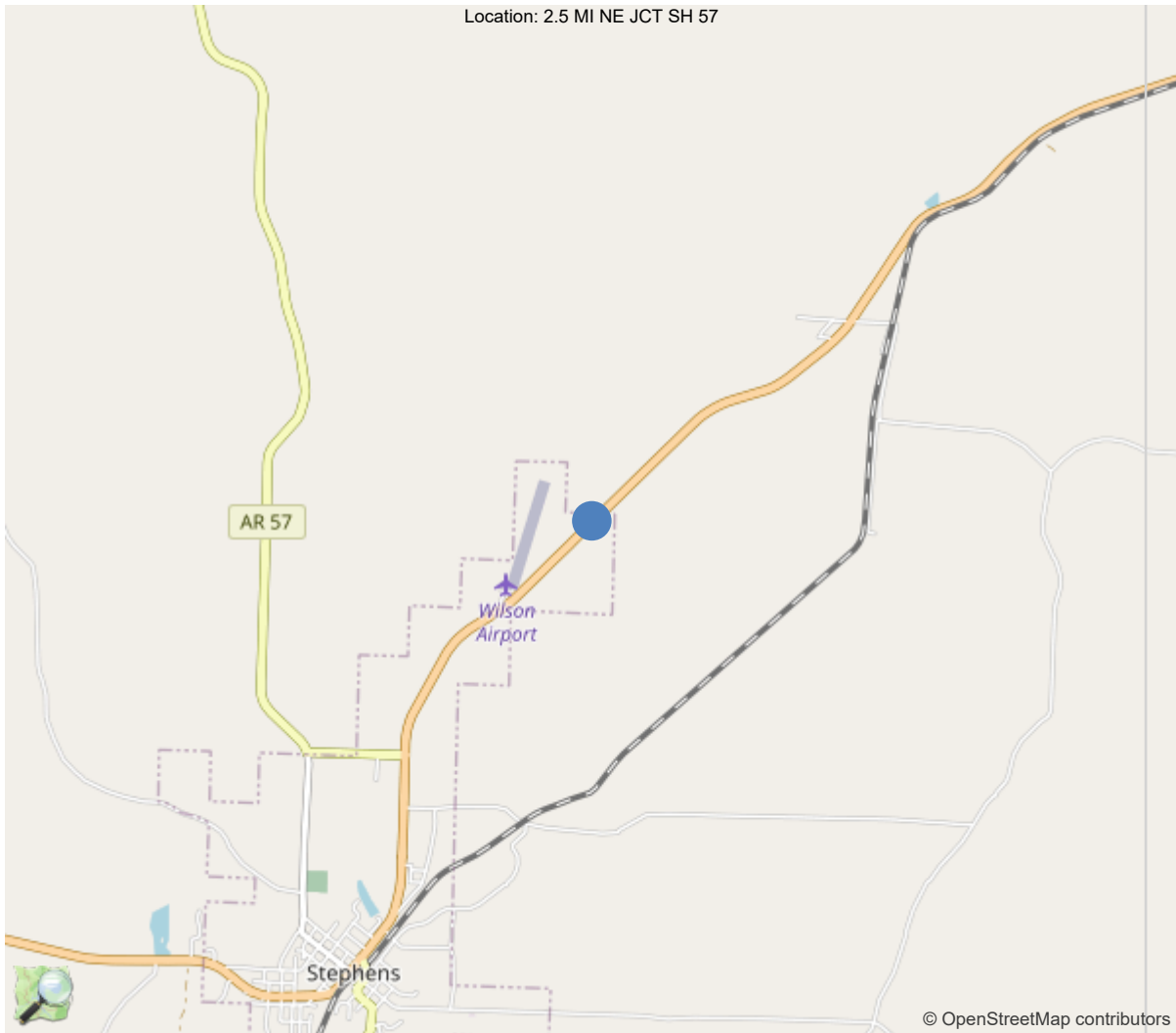
70 - Bridge Posting: 5 - Equal to or above legal loads

Legal Load	Calculated Capacity	Beginning of Bridge Sign Current Value	End of Bridge Sign Current Value
Code 4 (22 Tons)	36		
Code 9 (31 Tons)	41		
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



33.44418, -93.04864



Asset #02354(Routine)

US 79 S-3 LM 5.62 over GUM CREEK

Location: 2.5 MI NE JCT SH 57

Team Lead: Rickie Bratton Inspection Date: 08/05/2024

National Bridge Inventory Data Sheet

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	02354
(5) Inventory Route	1
(2) Highway Agency District	07 - District 07
(3) County Code	103 - Ouachita County
(4) Place Code	66860
(6) Features Intersected	GUM CREEK
(7) Facility Carried	US 79 S-3 LM 5.62
(9) Location	2.5 MI NE JCT SH 57
(11) Mile Point	5.629 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte & Subrte	0000079030
(16) Latitude	33.44418
(17) Longitude	-93.04864
(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	5
(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	1948
(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	2500
(30) Year of ADT	2018
(109) Truck ADT	14 %
(19) Bypass, Detour Length	8 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	34 ft
(49) Structure Length	172 ft
(50) Curb or Sidewalk Width	
Left	2 ft
Right	2 ft
(51) Bridge Roadway Width Curb to Curb	25.9 ft
(52) Deck Width Out to Out	31.2 ft
(32) Approach Roadway Width (W/Shoulders)	36.1 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	25.9 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	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	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	6
(60) Substructure	5
(61) Channel & Channel Protection	5
(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	54
(65) Inventory Rating Method	1 - Load Factor(LF)
(66) Inventory Rating	
Type	
Rating	32
(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	6
(72) Approach Roadway Alignment	7
(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	0 - Inspected feature does not meet
(113) Scour Critical Bridges	7 - Countermeasures have been insta
PROPOSED IMPROVEMENTS	
(75) Type of Work	31 - Replacement of bridge or
(76) Length of Structure Improvement	203 ft
(94) Bridge Improvement Cost	\$ 0
(95) Roadway Improvement Cost	\$ 235
(96) Total Project Cost	\$ 717
(97) Year of Improvement Cost Estimate	2002
(114) Future ADT	2800
(115) Year of Future ADT	2038

INSPECTIONS *			
(90) Inspection Date			08/05/2024
(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		
* 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: Rickie Bratton, Inspection Date: 08/05/2024

Specifications for National Bridge Inventory Sheets

IDENTIFICATION	
B.ID.01 Bridge Number	02354
B.ID.02 Bridge Name	
B.ID.03 Previous Bridge No.	
B.W.01 Year Built	1948

LOCATION	
B.L.01 State Code	5 - Arkansas
B.L.02 County Code	103 - Ouachita County
B.L.03 Place Code	66860 - Stephens
B.L.04 Highway Agency District	07 - District 07
B.L.05 Latitude	33.44418
B.L.06 Longitude	-93.04864
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	2.5 MI NE JCT SH 57
B.L.12 Metropolitan Planning Organization	

CLASSIFICATION	
B.CL.01 Owner	S01 - State transportation departme
B.CL.02 Maint. Responsibility	S01 - State transportation departme
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	171.9
B.G.02 Total Bridge Length	171.9
B.G.03 Max Span Length	34.1
B.G.04 Min Span Length	34
B.G.05 Bridge Width Out-to-Out	31.2
B.G.06 Bridge Width Curb-to-Curb	25.9
B.G.07 Left Curb or Sidewalk Width	2
B.G.08 Right Curb or Sidewalk Width	2
B.G.09 Approach Roadway Width	36.1

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	15
B.G.14 Sidehill Bridge	N - Not a sidehill bridge
B.G.15 Irregular Deck Area	
B.G.16 Calculated Deck Area	5358.3

LOADS AND LOAD RATING	
B.LR.01 Design Load	H20 - H-20
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	0.89
B.LR.06 Operating Load Rating Factor	1.5
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	7 - GOOD - Some minor defects.
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	7 - GOOD - Some minor defects.
B.C.07 Bridge Bearings Cond.	5 - FAIR - Some moderate defec
B.C.08 Bridge Joints Condition	8 - VERY GOOD - Some inherent
B.C.09 Channel Condition Rating	5 - FAIR - Moderate defects; b
B.C.10 Channel Protection Condition	7 - GOOD - Some minor defects.
B.C.11 Scour Condition Rating	8 - Insignificant scour.
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	
B.C.15 UW Inspection Condition	

APPRAISAL	
B.AP.01 Approach Roadway Alignment	G - Good
B.AP.02 Overtopping Likelihood	1 - Remote - once every 100 years o
B.AP.03 Scour Vulnerability	BCE-T - TEMP - Undesigned scour cou
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: Rickie Bratton, Inspection Date: 08/05/2024

SPAN SETS			
M1			
B.SP.02 # of Spans	5	B.SP.08 Deck Interaction	IM - Integral or monolithic
B.SP.03 # of Beam Lines	5	B.SP.09 Deck Material and Type	C01 - Reinforced concrete - ca
B.SP.04 Span Material	C01 - Reinforced concrete - ca	B.SP.10 Wearing Surface	B01 - Bituminous (asphalt)
B.SP.05 Span Continuity	1 - Simple or single span	B.SP.11 Deck Protective System	0 - None
B.SP.06 Span Type	G03 - Girder/beam - tee-beam	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			
A1			
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	PX - Pile - other
B.SB.04 Substructure Type	A02 - Abutment - stub	B.SB.07 Foundation Protective System	0 - None
P1			
B.SB.02 No. of Substructure Units	4	B.SB.05 Substructure Protective System	0 - None
B.SB.03 Substructure Material	C01 - Reinforced concrete - ca	B.SB.06 Foundation Type	PX - Pile - other
B.SB.04 Substructure Type	B03 - Bent - pile	B.SB.07 Foundation Protective System	0 - None

HIGHWAY FEATURES			
H1			
B.F.02 Feature Location	C - Carried on bridge	B.H.09 Annual ADT	2500
B.F.03 Feature Name	US 79 S-3 LM 5.62	B.H.10 Annual ADTT	350
B.H.01 Functional Classification	3 - Principal Arterial - Other	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	Y - NHS	B.H.13 Highway Min Vertical Clearance	99.9
B.H.04 National Highway Freight Network	1-T - TEMP - NHFN - 1 or 2 or	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	79030	B.H.16 Highway Max Usable Surface Width	25.5
B.H.07 LRS Mile Point	5.629	B.H.17 Bypass Detour Length	8
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	79	2-T - TEMP - Two-way traffic - NS or EW	2 - U.S. route	1 - Mainline



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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	GUM 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
PO - Permanent - 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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Asset #02354(Routine)
US 79 S-3 LM 5.62 over GUM CREEK
Location: 2.5 MI NE JCT SH 57

Team Lead: Rickie Bratton Inspection Date: 08/05/2024

Inspection Notes

General Observation

Hip boots and ladder used for inspection.

58 - Deck (7 - GOOD CONDITION - some minor problems.)

Good condition - overlay has cracks of joint, undersurface has cracks with light efflorescence.

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

satisfactory condition. Bearings rocked and rusty. Plates are rusty also.

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

Fair condition - exposed steel with section loss.

61 - Channel/Channel Protection (5 - Bank protection is being eroded. River control devices and/or embankment have major damage. Trees and brush restrict the channel.)

Scour action is eroding away the bank of the channel 50' upstream of the bridge.



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US 79 S-3 LM 5.62 over GUM CREEK

Location: 2.5 MI NE JCT SH 57

Team Lead: Rickie Bratton Inspection Date: 08/05/2024

National Bridge Element Quantities and Notes

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
16	Reinforced Concrete Top Flange	SF	4472	4427	45	0	0
1090	Exposed Rebar	SF	5	0	5	0	0
1120	Efflorescence/Rust Staining	SF	40	0	40	0	0
510	Wearing Surfaces	SF	4472	4376	96	0	0
3220	Crack (Wearing Surface)	SF	96	0	96	0	0
110	Reinforced Concrete Open Girder/Beam	LF	860	814	46	0	0
1080	Delamination/Spall/Patched Area	LF	3	0	3	0	0
1130	Cracking (RC and Other)	LF	43	0	43	0	0
(110) The reinforced concrete girders all have some minor hairline cracks in the sides of the girders.							
215	Reinforced Concrete Abutment	LF	122	118	4	0	0
1080	Delamination/Spall/Patched Area	LF	4	0	4	0	0
227	Reinforced Concrete Pile	EA	20	0	10	10	0
1190	Abrasion/Wear (PSC/RC)	EA	20	0	10	10	0
234	Reinforced Concrete Pier Cap	LF	125	103	10	12	0
1080	Delamination/Spall/Patched Area	LF	5	0	0	5	0
1090	Exposed Rebar	LF	7	0	0	7	0
1130	Cracking (RC and Other)	LF	10	0	10	0	0
(234) Bent 4 pier cap has a spalled area with exposed steel @ column 4 , and a spalled area between columns 4 & 5.							
304	Open Expansion Joint	LF	125	125	0	0	0
311	Movable Bearing	EA	25	0	0	25	0
1000	Corrosion	EA	15	0	0	15	0
2210	Movement	EA	10	0	0	10	0
(311) Bearings rocked and rusty. Plates are rusty also.							
313	Fixed Bearing	EA	25	0	10	15	0
1000	Corrosion	EA	25	0	10	15	0
(313) Rusty							
330	Metal Bridge Railing	LF	60	60	0	0	0
515	Steel Protective Coating	SF	120	120	0	0	0
331	Reinforced Concrete Bridge Railing	LF	334	333	1	0	0

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
1080	Delamination/Spall/Patched Area	LF	1	0	1	0	0
(331) Normal wear.							

Inspection Photos and Notes



Span 3 looking back bottom surface overview



Bent 4 cap bottom exposed rebar



Channel downstream overview left side.



Channel upstream overview right side



Bents 3&4 pile have abrasion.



Span 1 bay 4 bottom surface has efflorescence. Common all spans.



Bearings and plates all bents active corrosion



Elevation



Deck overview



Approach roadway Northbound



Elevation



Elevation



Underview



Deck overview



Typical view of the girders



Downstream



Upstream



Approach



Name plate

Maintenance Needs

Date Reported: 08/10/2022

Priority: C - Important

Type of Work: Repair (General)

Status: Monitor

Component: Channel

Deficiency Description

Scour action is eroding away the bank of the channel 50' upstream of the bridge.

Remarks



Scour action is eroding away the bank of the channel 50' upstream of the bridge.

Maintenance Needs

Date Reported: 07/30/2012

Priority: D- Routine

Type of Work: Repair (General)

Status: Monitor

Component: Superstructure

Deficiency Description

All bearings and pads have 100% paint failure and rust.

Remarks



Bearings and plates all bents active corrosion



Bt. 3, looking ahead at bearings.



Bt. 2, masonry plates have layering rust, all bearings have corrosion.

Maintenance Needs

Date Reported: 07/17/2014

Priority: D- Routine

Type of Work: Repair (General)

Status: Monitor

Component: Substructure

Deficiency Description

Bent 4 cap has 4' spall with exposed rebar. 07/26/2018 JPR -- There are 2 spalls on Bt. 4, 1 @ pile #4 and one between piles 4 & 5.

Remarks



Bent 4 cap bottom exposed rebar



Bent 4 cap spalled



Bt. 4, back side of cap, @ pile 4 & 5, spall with exposed rebar.

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	No
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)



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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 (No)

A-65 - Clogged deck drains?



Asset #02354(Routine)

US 79 S-3 LM 5.62 over GUM CREEK

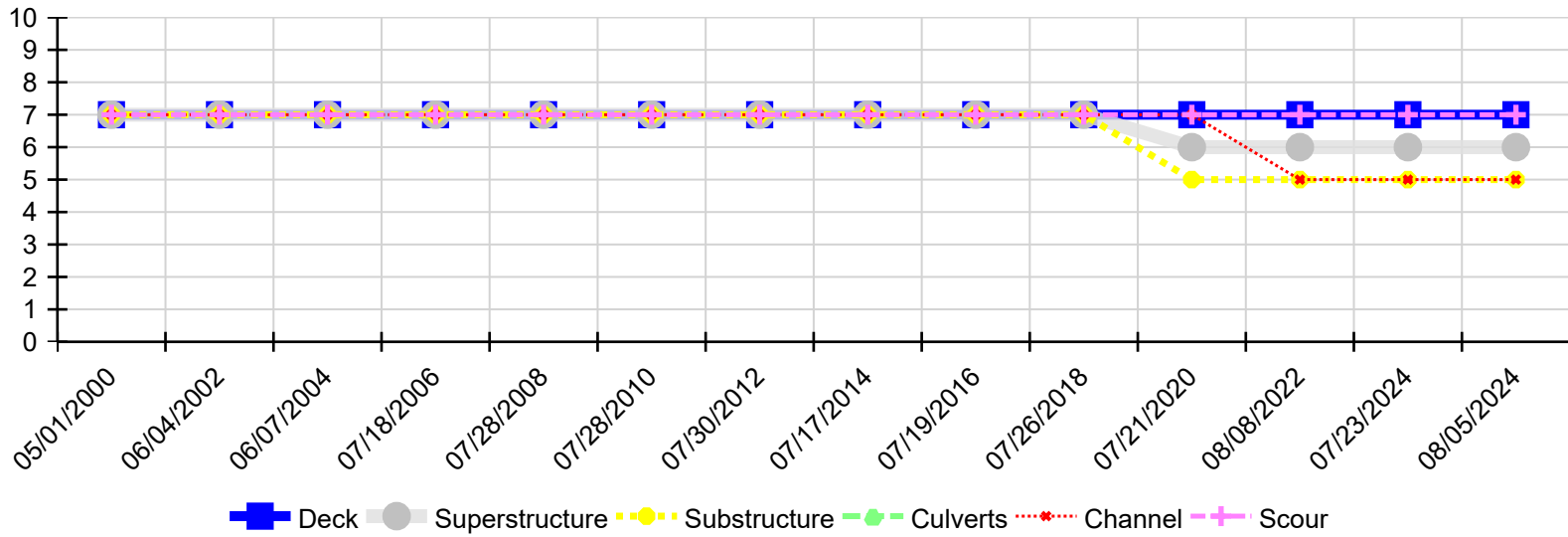
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A-66 - Approach minor pothole/leveling needed



Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
08/05/2024	7	6	5	N	5	7
07/23/2024	7	6	5	N	5	7
08/08/2022	7	6	5	N	5	7
07/21/2020	7	6	5	N	7	7
07/26/2018	7	7	7	N	7	7
07/19/2016	7	7	7	N	7	7
07/17/2014	7	7	7	N	7	7
07/30/2012	7	7	7	N	7	7
07/28/2010	7	7	7	N	7	7
07/28/2008	7	7	7	N	7	7
07/18/2006	7	7	7	N	7	7
06/07/2004	7	7	7	N	7	7
06/04/2002	7	7	7	N	7	7
05/01/2000	7	7	7	N	7	7