

Bridge 06787 Inspection Report



Latitude:36.14105, Longitude:-93.59344

Route:412 Section:04 Log:9.57

Arnold Road ID:44x412x4xA, Arnold Log mile:9.528

District 09, 87 - Madison County

Owner: 1 - State Highway Agency

Inspection Direction: 4 - W to E

Bridge Posting Information

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

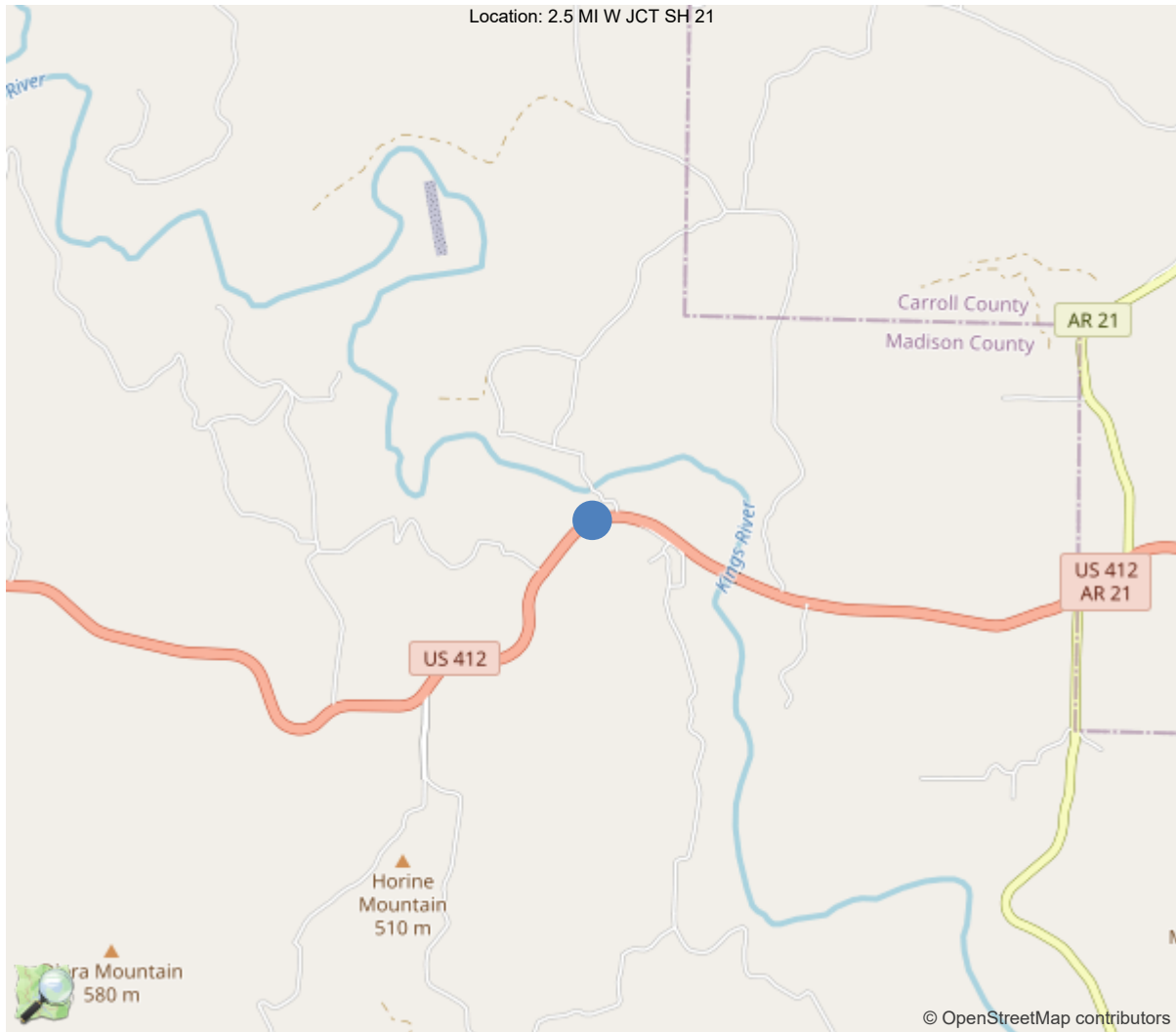
70 - Bridge Posting: 5 - Equal to or above legal loads

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



36.14105, -93.59344

National Bridge Inventory Data Sheet

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	06787
(5) Inventory Route	1
(2) Highway Agency District	09 - District 09
(3) County Code	87 - Madison County
(4) Place Code	0
(6) Features Intersected	ONION CREEK
(7) Facility Carried	US 412 S4 Madison
(9) Location	2.5 MI W JCT SH 21
(11) Mile Point	9.57 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte & Subrte	0000412040
(16) Latitude	36.14105
(17) Longitude	-93.59344
(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	1 - Epoxy Coated Reinforcing
AGE AND SERVICE	
(27) Year Built	2001
(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	6400
(30) Year of ADT	2018
(109) Truck ADT	14 %
(19) Bypass, Detour Length	25 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	56 ft
(49) Structure Length	153 ft
(50) Curb or Sidewalk Width	
Left	0 ft
Right	0 ft
(51) Bridge Roadway Width Curb to Curb	39.4 ft
(52) Deck Width Out to Out	42.5 ft
(32) Approach Roadway Width (W/Shoulders)	38.1 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	40.4 ft
(53) Min Vert Clear Over Bridge Rdwy	99.9 ft
(54) Min Vert Underclear	0 ft
Ref:	
(55) Min Lat Underclear RT	0 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	7
(60) Substructure	7
(61) Channel & Channel Protection	7
(62) Culverts	N
LOAD RATING AND POSTING	
(31) Design Load	5 - MS 18 / HS 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	5
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	9
(72) Approach Roadway Alignment	8
(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	8 - Bridge foundations determined t
PROPOSED IMPROVEMENTS	
(75) Type of Work	
(76) Length of Structure Improvement	ft
(94) Bridge Improvement Cost	\$ 0
(95) Roadway Improvement Cost	\$
(96) Total Project Cost	\$
(97) Year of Improvement Cost Estimate	
(114) Future ADT	6356
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date			05/20/2025
(91) Frequency			48
(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: Anthony Wood, Inspection Date: 05/20/2025

Specifications for National Bridge Inventory Sheets

IDENTIFICATION	
B.ID.01 Bridge Number	06787
B.ID.02 Bridge Name	
B.ID.03 Previous Bridge No.	02819
B.W.01 Year Built	2001

LOCATION	
B.L.01 State Code	5 - Arkansas
B.L.02 County Code	87 - Madison County
B.L.03 Place Code	00000 - N/A
B.L.04 Highway Agency District	09 - District 09
B.L.05 Latitude	36.14105
B.L.06 Longitude	-93.59344
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 W JCT SH 21
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	152.9
B.G.02 Total Bridge Length	152.9
B.G.03 Max Span Length	56.1
B.G.04 Min Span Length	47.6
B.G.05 Bridge Width Out-to-Out	42.7
B.G.06 Bridge Width Curb-to-Curb	39.4
B.G.07 Left Curb or Sidewalk Width	0
B.G.08 Right Curb or Sidewalk Width	0
B.G.09 Approach Roadway Width	38.1

B.G.10 Bridge Median	0 - No median
B.G.11 Skew	0
B.G.12 Curved Bridge	CU - Curved girder(s)
B.G.13 Max Bridge Height	35
B.G.14 Sidehill Bridge	N - Not a sidehill bridge
B.G.15 Irregular Deck Area	
B.G.16 Calculated Deck Area	6520.8

LOADS AND LOAD RATING	
B.LR.01 Design Load	HS20 - HS-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	1
B.LR.06 Operating Load Rating Factor	1.67
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	7 - GOOD - Some minor defects.
B.C.03 Substructure Condition	7 - GOOD - Some minor defects.
B.C.04 Culvert Condition	N - NOT APPLICABLE - Component
B.C.05 Bridge Railing Condition	6 - SATISFACTORY - Widespread
B.C.06 Bridge Railing Transitions Condition	9 - EXCELLENT - Isolated inher
B.C.07 Bridge Bearings Cond.	7 - GOOD - Some minor defects.
B.C.08 Bridge Joints Condition	7 - GOOD - Some minor defects.
B.C.09 Channel Condition Rating	7 - GOOD - Some minor defects.
B.C.10 Channel Protection Condition	6 - SATISFACTORY - Widespread
B.C.11 Scour Condition Rating	7 - Some minor scour.
B.C.12 Bridge Condition Classification	F - Fair
B.C.13 Lowest Condition Rating	6 - SATISFACTORY - Widespread
B.C.14 NSTM Insp. Condition	N - NOT APPLICABLE - Component
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	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	A - Seismic evaluation completed. B

Team Lead: Anthony Wood, Inspection Date: 05/20/2025

SPAN SETS			
M1			
B.SP.02 # of Spans	3	B.SP.08 Deck Interaction	CU - Composite - unshored cons
B.SP.03 # of Beam Lines	6	B.SP.09 Deck Material and Type	C01 - Reinforced concrete - ca
B.SP.04 Span Material	S01 - Steel - rolled	B.SP.10 Wearing Surface	0 - None
B.SP.05 Span Continuity	2 - Continuous	B.SP.11 Deck Protective System	0 - None
B.SP.06 Span Type	G02 - Girder/beam - I-shaped s	B.SP.12 Deck Reinforcing Protective System	C01 - Coating - epoxy coated
B.SP.07 Span Protective System	P01 - Patina - uncoated weathe	B.SP.13 Deck Stay-In-Place Forms	M01 - Metal

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	P01 - Pile - steel H-shape
B.SB.04 Substructure Type	A02 - Abutment - stub	B.SB.07 Foundation Protective System	0 - None
P1			
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			
H1			
B.F.02 Feature Location	C - Carried on bridge	B.H.09 Annual ADT	6400
B.F.03 Feature Name	US 412 S4 Madison	B.H.10 Annual ADTT	896
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	412040	B.H.16 Highway Max Usable Surface Width	40.3
B.H.07 LRS Mile Point	9.57	B.H.17 Bypass Detour Length	25
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	412	2-T - TEMP - Two-way traffic - NS or EW	2 - U.S. route	1 - Mainline



Team Lead: Anthony Wood, Inspection Date: 05/20/2025

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	ONION 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 #06787 (Routine, Underwater type 2)

US 412 S4 Madison over ONION CREEK

Location: 2.5 MI W JCT SH 21

Team Lead: Anthony Wood Inspection Date: 05/20/2025

Inspection Notes

General Observation

Structure #06787 can be visually inspected from the ground with a ladder or with a lane closure, flaggers, and Under Bridge Inspection Unit.

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

Overall, the deck is in good condition with cracking and abrasion.

59 - Superstructure (7 - GOOD CONDITION - some minor problems.)

Overall, the superstructure is in good condition with a minor active corrosion.

60 - Substructure (7 - GOOD CONDITION - some minor problems.)

Overall, the substructure is in good condition with minor cracking and cracking with efflorescence.

61 - Channel/Channel Protection (7 - Bank protection is in need of minor repairs. River control devices and embankment protection have a little minor damage. Banks and/or channel have minor amounts of drift.)

Overall, the channel is in good condition with minor bank slump.

A-54 - Sealable Deck Cracks (Y)

Spans 1 - 3 have minor cracking.

A-61 - Polymer Overlay Advised (Y)

Spans 1 - 3 have minor cracking.

B.C.05 Bridge Railing Condition Rating (6 - SATISFACTORY - Widespread minor or isolated moderate defects.)

Overall, the bridge rail is in satisfactory condition with cracking.

B.C.06 Bridge Railing Transitions Condition Rating (9 - EXCELLENT - Isolated inherent defects)

Overall, the transition rail is in excellent condition.

B.C.07 Bridge Bearings Condition Rating (7 - GOOD - Some minor defects.)

Overall, the bearings are in good condition.

B.C.08 Bridge Joints Condition Rating (7 - GOOD - Some minor defects.)

Overall, the joints are in good condition with minor debris impaction in the gutter lines.



Asset #06787(Routine, Underwater type 2)

US 412 S4 Madison over ONION CREEK

Location: 2.5 MI W JCT SH 21

Team Lead: Anthony Wood **Inspection Date:** 05/20/2025

B.C.10 Channel Protection Condition Rating (6 - SATISFACTORY - Widespread minor or isolated moderate defects.)

Overall, the channel protection is in satisfactory condition with areas of displaced rock at abutment 2.

A-B.C.11 - B.C.11 Scour Condition Rating (New NBIS) (7 - Some minor scour.)

Overall, the scour condition is good with minor erosion at abutments 1 & 2.

National Bridge Element Quantities and Notes

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	5930	3440	2416	74	0
1120	Efflorescence/Rust Staining	SF	74	0	0	74	0
1130	Cracking (RC and Other)	SF	1256	0	1256	0	0
1190	Abrasion/Wear (PSC/RC)	SF	1160	0	1160	0	0
(12) Driving Surface: Spans 1 - 3: Abrasion in the wheel paths. 1160SF CS2 Span 1: Cracking. 280SF CS2 Span 2: Cracking. 564SF CS2 Span 3: Cracking. 412SF CS2 Undersurface: Spans 1 - 3, Left, Overhang: Cracking with efflorescence with build up. 44SF CS3 Spans 1 - 3, Right, Overhang: Cracking with efflorescence with build up. 30SF CS3							
107	Steel Open Girder/Beam	LF	906	906	0	0	0
515	Steel Protective Coating	SF	7293	7293	0	0	0
205	Reinforced Concrete Column	EA	4	4	0	0	0
215	Reinforced Concrete Abutment	LF	126	124	2	0	0
1120	Efflorescence/Rust Staining	LF	2	0	2	0	0
(215) Abutment 1 & 2: Cracking with efflorescence. 3LF CS2							
234	Reinforced Concrete Pier Cap	LF	82	82	0	0	0
302	Compression Joint Seal	LF	86	74	0	12	0
2350	Debris Impaction	LF	12	0	0	12	0
(302) Abutment 1 & 2, Gutter Lines: Debris impaction. 12LF CS2							
310	Elastomeric Bearing	EA	24	12	0	12	0
1000	Corrosion	EA	12	0	0	12	0
(310) Abutments 1 & 2, Girders 1 - 6: Active corrosion with flaking rust.							
331	Reinforced Concrete Bridge Railing	LF	306	71	234	1	0
1080	Delamination/Spall/Patched Area	LF	1	0	0	1	0
1130	Cracking (RC and Other)	LF	234	0	234	0	0
(331) Span 1 - 3, Left & Right: Cracking. 234LF CS2 Span 2, Right: Spalling. 1LF CS3							

Inspection Photos and Notes



Elevation.



Inventory.



Typical deck.



Typical undersurface.



Channel, Left.



Channel, Right.



Spans 1 - 3: Transverse and longitudinal cracking.



Spans 1 - 3: Transverse and longitudinal cracking.



Typical bridge rail.



Typical transition.



Typical joints.



Areas of displaced rock in the channel beneath structure.



Abutment 1: Minor erosion.



Abutment 2: Minor erosion.



Spans 1 - 3: Abrasion in the wheel paths. 1160SF CS2



Span 3: Cracking. 412SF CS2



Span 2: Cracking. 564SF CS2



Span 1: Cracking. 280SF CS2



Spans 1 - 3, Right, Overhang: Cracking with efflorescence with build up. 30SF CS3



Spans 1 - 3, Left, Overhang: Cracking with efflorescence with build up. 44SF CS3



Typical girders.



Typical intermediate bent.



Abutment 1 & 2: Cracking with efflorescence. 3LF CS2



Typical intermediate bent.



Abutment 1 & 2, Gutter Lines: Debris impact. 12LF CS2



Abutments 1 & 2, Girders 1 - 6: Active corrosion with flaking rust.



Typical view of bearings



Span 1 - 3, Left & Right: Cracking. 234LF CS2



Span 2, Right: Spalling. 1LF CS3



Span 2, right. Parapet wall cracking.



Span 2, left. Parapet wall horizontal cracking.

Routine Maintenance

Check Box Maintenance Items

Type of Maintenance	Is Recommended?
A-54 - Sealable Deck Cracks	Yes
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	Yes
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 (Yes)

Spans 1 - 3 have minor cracking.



Spans 1 - 3: Transverse and longitudinal cracking.

A-55 - Deck Washing Needed (No)

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

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

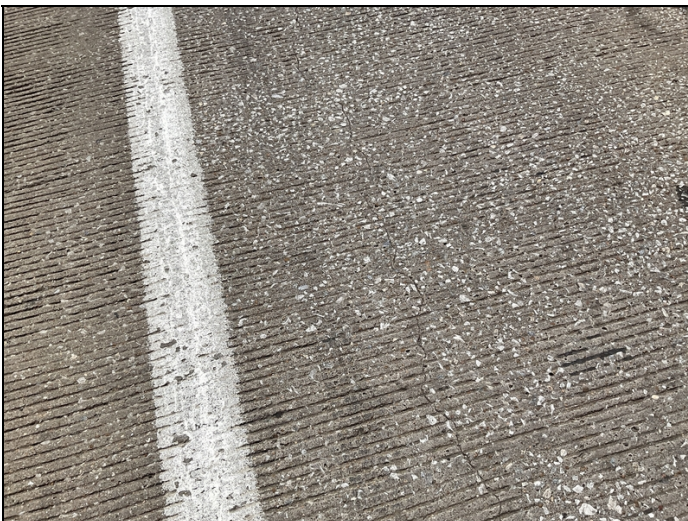
A-58 - Cap Cleaning/Flushing Needed (No)

A-59 - Joint Repair Needed (No)

A-60 - Full Girder Painting Needed (No)

A-61 - Polymer Overlay Advised (Yes)

Spans 1 - 3 have minor cracking.



Spans 1 - 3: Transverse and longitudinal cracking.



Asset #06787(Routine, Underwater type 2)

US 412 S4 Madison over ONION CREEK

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A-62 - Hydro and LMC Advised (No)

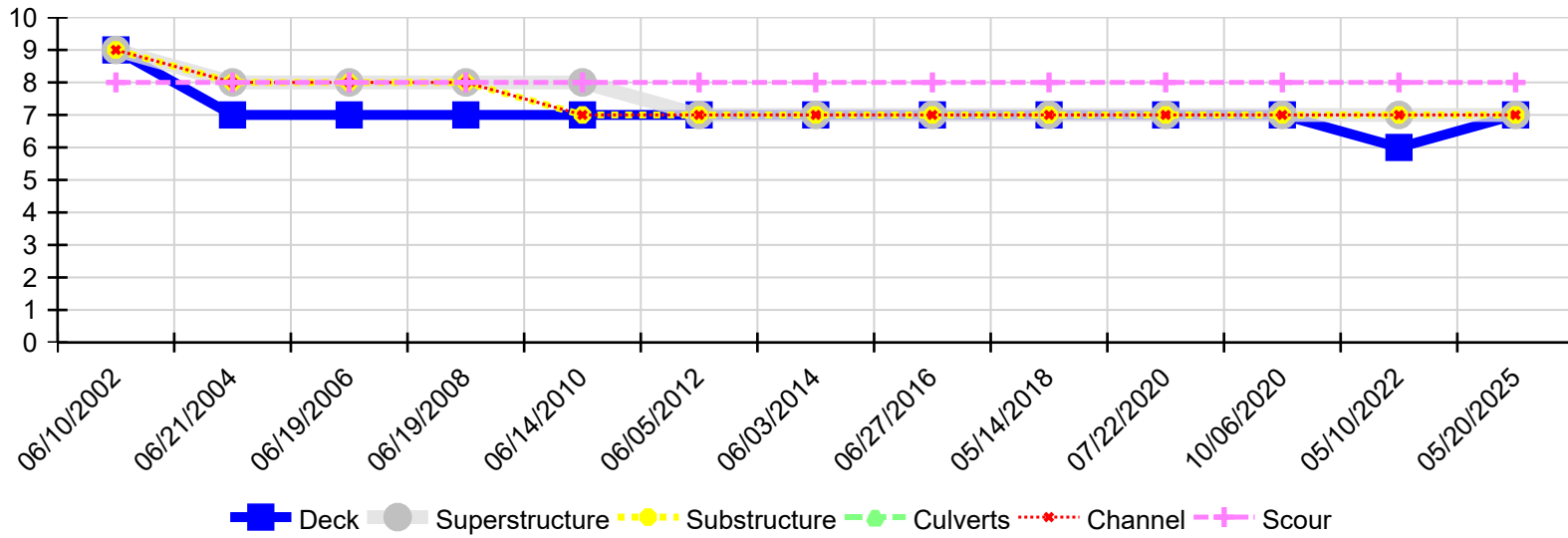
A-63 - Missing/Incorrect Log Mile Signage (No)

A-64 - Vegetation Removal Requested (No)

A-65 - Clogged deck drains?

A-66 - Approach minor pothole/leveling needed

Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
05/20/2025	7	7	7	N	7	8
05/10/2022	6	7	7	N	7	8
10/06/2020	7	7	7	N	7	8
07/22/2020	7	7	7	N	7	8
05/14/2018	7	7	7	N	7	8
06/27/2016	7	7	7	N	7	8
06/03/2014	7	7	7	N	7	8
06/05/2012	7	7	7	N	7	8
06/14/2010	7	8	7	N	7	8
06/19/2008	7	8	8	N	8	8
06/19/2006	7	8	8	N	8	8
06/21/2004	7	8	8	N	8	8
06/10/2002	9	9	9	N	9	8