

Bridge B3614 Inspection Report



Latitude:35.01585, Longitude:-90.83409

Route:40 Section:51 Log:237.82

Arnold Road ID:68x40x51xA, Arnold Log mile:237.75

District 01, 123 - St. Francis County

Owner: 1 - State Highway Agency

Inspection Direction: 4 - W to E

Bridge Posting Information

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

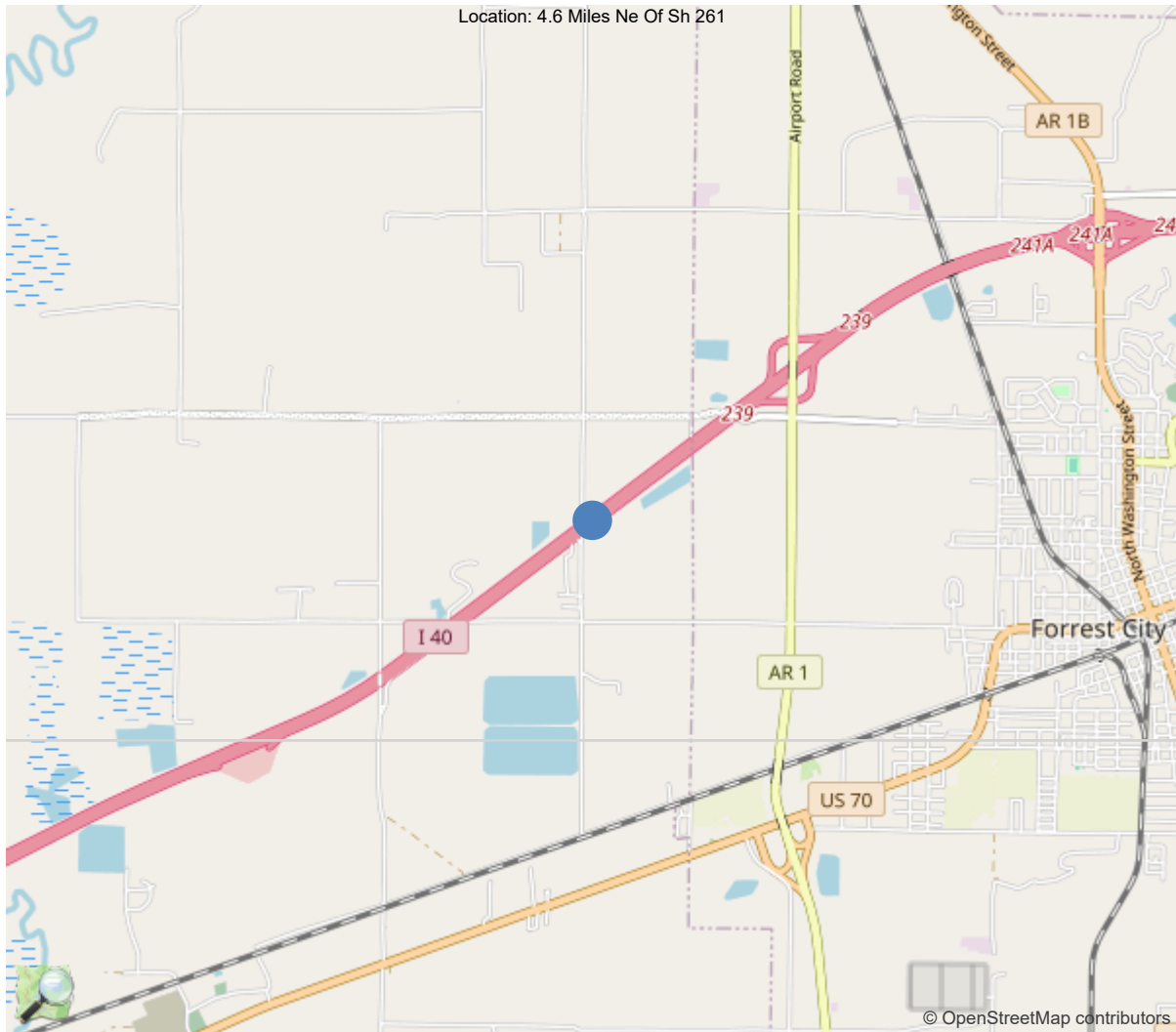
70 - Bridge Posting: 5 - Equal to or above legal loads

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



35.01585, -90.83409

National Bridge Inventory Data Sheet

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	B3614
(5) Inventory Route	1
(2) Highway Agency District	01 - District 01
(3) County Code	123 - St. Francis County
(4) Place Code	0
(6) Features Intersected	Spring Creek
(7) Facility Carried	I-40EB/Se51/237.82
(9) Location	4.6 Miles Ne Of Sh 261
(11) Mile Point	237.82 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte & Subrte	0000040510
(16) Latitude	35.01585
(17) Longitude	-90.834091
(98) Border Bridge State Code	
(99) Border Bridge Structure No.	
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	11
Material	1 - Concrete
Type	1 - Slab
(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	5 - Epoxy Overlay
Type of Membrane	0 - None
Type of Deck Protection	0 - None
AGE AND SERVICE	
(27) Year Built	1965
(106) Year Reconstructed	2015
(42) Type of Service	15
On	1 - Highway
Under	5 - Waterway
(28) Lane	
On	2
Under	0
(29) Average Daily Traffic	16791
(30) Year of ADT	2014
(109) Truck ADT	51 %
(19) Bypass, Detour Length	3 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	27.5 ft
(49) Structure Length	90 ft
(50) Curb or Sidewalk Width	
Left	0 ft
Right	0 ft
(51) Bridge Roadway Width Curb to Curb	40 ft
(52) Deck Width Out to Out	42 ft
(32) Approach Roadway Width (W/Shoulders)	38.1 ft
(33) Bridge Median	0 - No median
(34) Skew	52 Deg
(35) Structure Flared	0 - No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	40 ft
(53) Min Vert Clear Over Bridge Rdwy	99.99 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	1 - Rural Principal Arterial -
(100) Defense Highway	1 - The inventory route is on
(101) Parallel Structure	R - The right structure of par
(102) Direction of Traffic	1 - 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	6
(59) Superstructure	6
(60) Substructure	7
(61) Channel & Channel Protection	6
(62) Culverts	N
LOAD RATING AND POSTING	
(31) Design Load	6 - MS 18+Mod / HS 20+Mod
(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	6
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	8
(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	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	19965
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date			01/29/2024
(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: Myron Futrell, Inspection Date: 01/29/2024

Specifications for National Bridge Inventory Sheets

IDENTIFICATION	
B.ID.01 Bridge Number	B3614
B.ID.02 Bridge Name	
B.ID.03 Previous Bridge No.	
B.W.01 Year Built	1965

LOCATION	
B.L.01 State Code	5 - Arkansas
B.L.02 County Code	123 - St. Francis County
B.L.03 Place Code	00000 - N/A
B.L.04 Highway Agency District	01 - District 01
B.L.05 Latitude	35.01585
B.L.06 Longitude	-90.834091
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	4.6 Miles Ne Of Sh 261
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	87.5
B.G.02 Total Bridge Length	89.9
B.G.03 Max Span Length	29.9
B.G.04 Min Span Length	27.5
B.G.05 Bridge Width Out-to-Out	42
B.G.06 Bridge Width Curb-to-Curb	40
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	45
B.G.12 Curved Bridge	N - Not curved
B.G.13 Max Bridge Height	7
B.G.14 Sidehill Bridge	N - Not a sidehill bridge
B.G.15 Irregular Deck Area	
B.G.16 Calculated Deck Area	3775.1

LOADS AND LOAD RATING	
B.LR.01 Design Load	HS20M - HS-20 and Military
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	
B.IR.03 UW Inspection Required	N - Underwater inspection not requi
B.IR.04 Complex Feature	

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	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	7 - GOOD - Some minor defects.
B.C.07 Bridge Bearings Cond.	N - NOT APPLICABLE - Component
B.C.08 Bridge Joints Condition	5 - FAIR - Some moderate defec
B.C.09 Channel Condition Rating	6 - SATISFACTORY - Widespread
B.C.10 Channel Protection Condition	N - NOT APPLICABLE - Bridge do
B.C.11 Scour Condition Rating	5 - Moderate scour; strength a
B.C.12 Bridge Condition Classification	F - Fair
B.C.13 Lowest Condition Rating	6 - SATISFACTORY - Widespread
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	AB-T - TEMP - Stable for scour, pos
B.AP.04 Scour Plan of Action	0 - A scour POA is not required.
B.AP.05 Seismic Vulnerability	0 - Seismic evaluation not complete

SPAN SETS			
M1			
B.SP.02 # of Spans	3	B.SP.08 Deck Interaction	IM - Integral or monolithic
B.SP.03 # of Beam Lines	1	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	P01 - Polymer - epoxy
B.SP.05 Span Continuity	1 - Simple or single span	B.SP.11 Deck Protective System	0 - None
B.SP.06 Span Type	S02 - Slab - voided	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	P03 - Pile - concrete, cast-in
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	P03 - Pile - concrete, cast-in
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	16791
B.F.03 Feature Name	I-40EB/Se51/237.82	B.H.10 Annual ADTT	8563
B.H.01 Functional Classification	1 - Interstate	B.H.11 Year of Annual ADT	2014
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	1 - STRAHNET route	B.H.15 Highway Min Horizontal Clearance, Right	
B.H.06 LRS Route ID	40510	B.H.16 Highway Max Usable Surface Width	39.6
B.H.07 LRS Mile Point	237.82	B.H.17 Bypass Detour Length	3
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	40E	1-T - TEMP - One-way traffic - NB or EB or SB or WB	1 - Interstate route	1 - Mainline



Team Lead: Myron Futrell, Inspection Date: 01/29/2024

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	Spring 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 #B3614(Routine, Underwater type 2)

I-40EB/Se51/237.82 over Spring Creek

Location: 4.6 Miles Ne Of Sh 261

Team Lead: Myron Futrell Inspection Date: 01/29/2024

Inspection Notes

General Observation

Drawing numbers: 12123, 12122b.
Assisting Bridge Inspector-Charley Smith.
Waders were used for access.
No lane closure was required for this inspection.

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

Deck is in overall satisfactory condition. Deck has an epoxy coated wearing surface. Soffit / underside of deck has a few spalled areas with exposed rebar, some cracking with rust staining and efflorescence.

9/21/2017-changed deck rating from 7 back to 6 due to super being a slab.

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

Concrete slab superstructure is in overall satisfactory condition. Soffit / underside of deck has a few spalls with exposed rebar and some cracking with rust staining and efflorescence.

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

Concrete substructure is in overall good condition. Caps have some minor spalling some with exposed rebar and scaling on ends that are exposed to weather.

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 in overall satisfactory condition. Channel alignment is fair at structure, slopes underneath bridge have moderate erosion. Debris and vegetation restrict channel slightly.

A-55 - Deck Washing Needed (Y)

Dirt and debris in gutters.

A-63 - Missing/Incorrect Log Mile Signage (Y)

No log mile signs in place.

National Bridge Element Quantities and Notes

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
38	RC Slab	SF	3780	3172	300	308	0
1080	Delamination/Spall/Patched Area	SF	2	0	0	2	0
1090	Exposed Rebar	SF	6	0	0	6	0
1120	Efflorescence/Rust Staining	SF	300	0	0	300	0
1130	Cracking (RC and Other)	SF	300	0	300	0	0
510	Wearing Surfaces	SF	3330	3330	0	0	0
(38) Deck soffit-under surface has open longitudinal cracks with areas of light efflorescence and small rust stains all spans. Span #2 soffit-under surface has 1' spall with exposed rebar with minor section loss, 2' from bent #3 and 10' from right side of bridge, and left side has two 3' spills near bent #2 with exposed rebar with minor section loss and one 1' spall with exposed rebar with minor section loss near bent #3. Soffit-under surface span #3 right side at bent #3 has one-foot delaminated area. Deck has epoxy coated wearing surface.							
215	Reinforced Concrete Abutment	LF	144	144	0	0	0
227	Reinforced Concrete Pile	EA	18	18	0	0	0
234	Reinforced Concrete Pier Cap	LF	144	142	0	2	0
1090	Exposed Rebar	LF	2	0	0	2	0
(234) All caps both faces have several hairline vertical cracks various spacing. Bent #2 cap ahead face above pile #4 has six-inch spall with exposed rebar with 5% section loss. Bent #2 cap right end has six-inch spall with exposed rebar with 5% section loss. Bent #3 cap right end has moderate scaling with no loose aggregate. Bent #3 cap ahead face above pile #7 has six-inch spall with rebar exposed with 5% section loss. Bent #3 cap back face between piles 2,3 and 6,7 has 1' delamination at keyway.							
301	Pourable Joint Seal	LF	296	296	0	0	0
(301) Each poured joint has several areas where material has lost adhesion.							
321	Reinforced Concrete Approach Slab	SF	2880	2880	0	0	0
510	Wearing Surfaces	SF	2880	2880	0	0	0
(321) Approach slabs have an epoxy coated overlay							
331	Reinforced Concrete Bridge Railing	LF	180	117	61	2	0
1080	Delamination/Spall/Patched Area	LF	3	0	1	2	0
1130	Cracking (RC and Other)	LF	60	0	60	0	0
(331) Abutment #1 left transition rail has 2' X 2' spall with exposed rebar no section loss. Bridge rails have vertical cracks spaced three feet apart. Bent #2 right side rail at bottom span #1 has six-inch spall no rebar. Span #2 left side outside at bent #3 has three-inch spall with exposed rebar.							

Inspection Photos and Notes



Side view / elevation



Top view / inventory



Left bridge rail



Right bridge rail



Abutment #1 left bridge rail



Abutment #1 right approach rail



Abutment #1 left approach rail



Typical deck



Span #1 soffit / underside of deck



Span #2 soffit / underside of deck



Span #3 soffit / underside of deck



Span #2 soffit / underside of deck



Span #2 soffit left side spalled with exposed rebar



Bent #2 back face



Abutment #1



Bent #2 cap ahead face



Bent #3 cap back face



Bent #3 ahead face



Abutment #2



Bent #3 ahead face



Bent #2 ahead face



Channel right side



Channel left side



Dirt and debris in gutters



No log mile signs



Abutment #1 approach slab



Abutment #2 approach slab

Maintenance Needs

Date Reported: 01/25/2018

Priority: C - Important

Type of Work: Miscellaneous

Status: Repair Documented

Component: Channel

Deficiency Description

Small trees and vegetation are growing under and beside bridge.

Remarks

1/30/2024-Vegetation has been cut at time of inspection.



Trees and vegetation have been cleared



Typical vegetation

Maintenance Needs

Date Reported: 01/28/2022

Priority: D- Routine

Type of Work: Repair (General)

Status: Monitor

Component: Channel

Deficiency Description

Abutment #2 slope has areas of erosion up to the abutment.

Remarks



Abutment #2 slope has areas of erosion up to the abutment.



Asset #B3614(Routine, Underwater type 2)

I-40EB/Se51/237.82 over Spring Creek

Location: 4.6 Miles Ne Of Sh 261

Team Lead: Myron Futrell Inspection Date: 01/29/2024

Routine Maintenance

Check Box Maintenance Items

Type of Maintenance	Is Recommended?
A-54 - Sealable Deck Cracks	
A-55 - Deck Washing Needed	Yes
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	Yes
A-64 - Vegetation Removal Requested	
A-65 - Clogged deck drains?	
A-66 - Approach minor pothole/leveling needed	

A-54 - Sealable Deck Cracks

A-55 - Deck Washing Needed (Yes)

Dirt and debris in gutters.



Dirt and debris in gutters

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

A-60 - Full Girder Painting Needed

A-61 - Polymer Overlay Advised

A-62 - Hydro and LMC Advised

A-63 - Missing/Incorrect Log Mile Signage (Yes)

No log mile signs in place.



No log mile signs

A-64 - Vegetation Removal Requested

A-65 - Clogged deck drains?

A-66 - Approach minor pothole/leveling needed



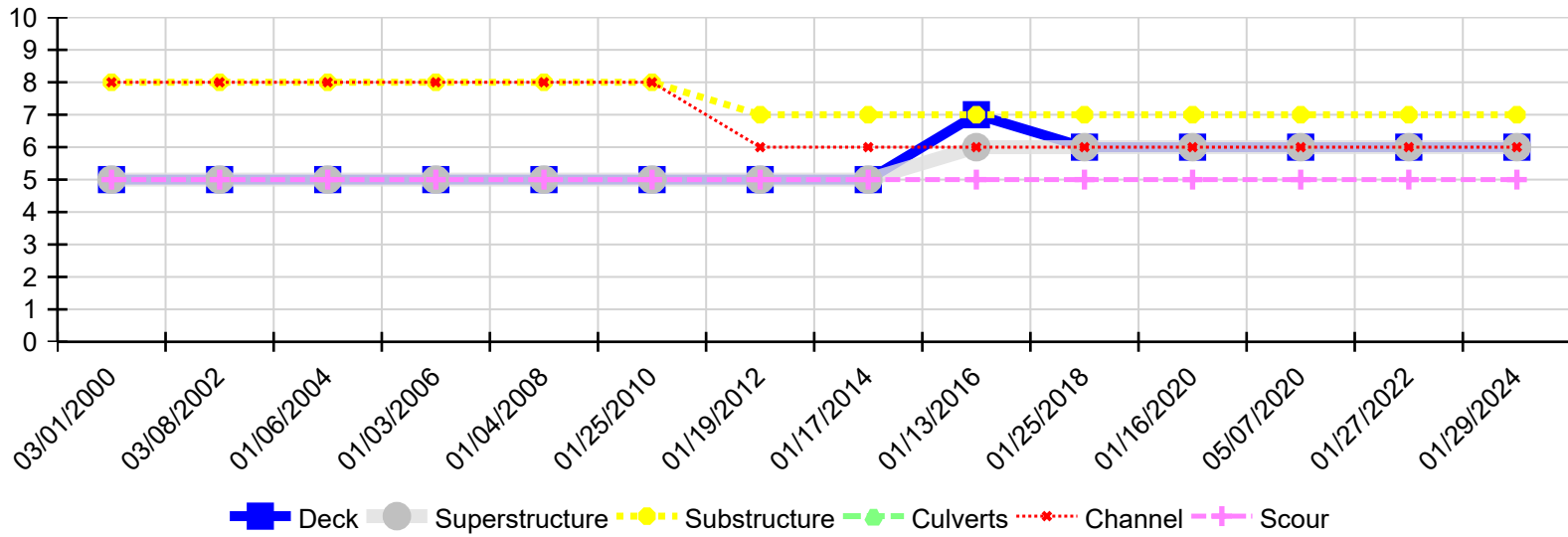
Asset #B3614(Routine, Underwater type 2)

I-40EB/Se51/237.82 over Spring Creek

Location: 4.6 Miles Ne Of Sh 261

Team Lead: Myron Futrell Inspection Date: 01/29/2024

Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
01/29/2024	6	6	7	N	6	5
01/27/2022	6	6	7	N	6	5
05/07/2020	6	6	7	N	6	5
01/16/2020	6	6	7	N	6	5
01/25/2018	6	6	7	N	6	5
01/13/2016	7	6	7	N	6	5
01/17/2014	5	5	7	N	6	5
01/19/2012	5	5	7	N	6	5
01/25/2010	5	5	8	N	8	5
01/04/2008	5	5	8	N	8	5
01/03/2006	5	5	8	N	8	5
01/06/2004	5	5	8	N	8	5
03/08/2002	5	5	8	N	8	5
03/01/2000	5	5	8	N	8	5