



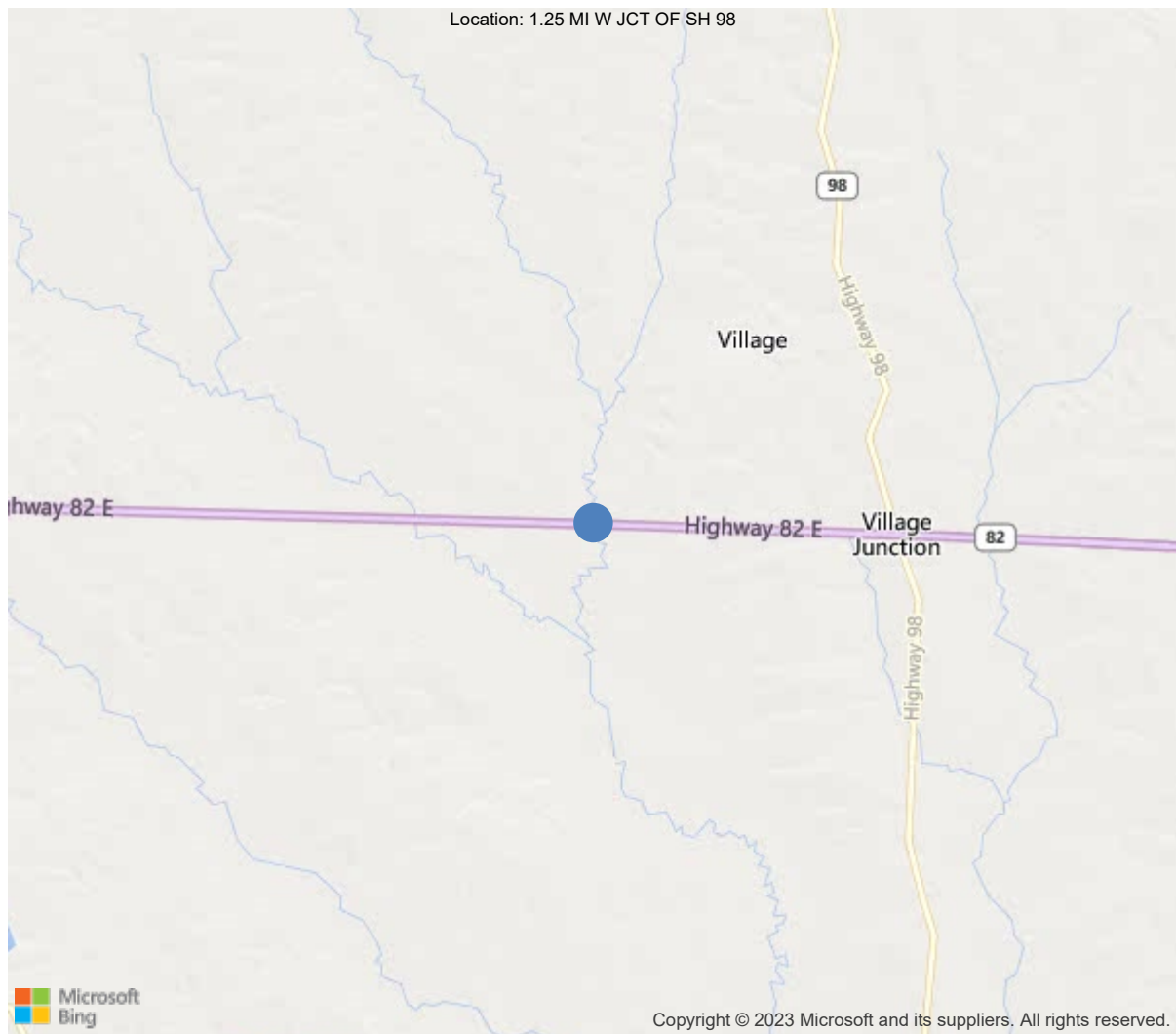
Latitude:33.24998, Longitude:-93.07780

Route:82 Section:04 Log:10.358

Arnold Road ID:14x82x4xA, Arnold Log mile:10.361

District 07, 27 - Columbia County

Owner: 1 - State Highway Agency



33.24998, -93.07780





Asset #02668(Routine, Underwater type 2)

US 82 S-4 LM 10.36 over HARPER CREEK

Location: 1.25 MI W JCT OF SH 98

Team Lead: Rickie Bratton, Inspection Date: 02/23/2022

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	02668
(5) Inventory Route	1
(2) Highway Agency District	07 - District 07
(3) County Code	27 - Columbia County
(4) Place Code	0
(6) Features Intersected	HARPER CREEK
(7) Facility Carried	US 82 S-4 LM 10.36
(9) Location	1.25 MI W JCT OF SH 98
(11) Mile Point	10.358 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte & Subrte	0000082040
(16) Latitude	33.24998
(17) Longitude	-93.0778
(98) Border Bridge State Code	
(99) Border Bridge Structure No.	
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	32
Material	3 - Steel
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	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	1950
(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	3700
(30) Year of ADT	2018
(109) Truck ADT	1 %
(19) Bypass, Detour Length	12 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	32 ft
(49) Structure Length	162 ft
(50) Curb or Sidewalk Width	
Left	0 ft
Right	0 ft
(51) Bridge Roadway Width Curb to Curb	25.9 ft
(52) Deck Width Out to Out	31.9 ft
(32) Approach Roadway Width (W/Shoulders)	40 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	28.9 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	6
(59) Superstructure	6
(60) Substructure	5
(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	47
(65) Inventory Rating Method	1 - Load Factor(LF)
(66) Inventory Rating	
Type	
Rating	28
(70) Bridge Posting	5 - Equal to or above legal loads
(41) Structure Open/Posted/Closed	A - Open, no restriction
APPRAISAL	
(67) Structural Evaluation	5
(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	5 - Bridge foundations determined t
PROPOSED IMPROVEMENTS	
(75) Type of Work	31 - Replacement of bridge or
(76) Length of Structure Improvement	192 ft
(94) Bridge Improvement Cost	\$ 0
(95) Roadway Improvement Cost	\$ 400
(96) Total Project Cost	\$ 1159
(97) Year of Improvement Cost Estimate	2002
(114) Future ADT	4925
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date	02/23/2022		
(91) Frequency	24		
(92) Critical Feature Inspection	Done	Freq. (Mon)	Date
A: Fracture Critical Detail	No		
B: Underwater Inspection	No		
C: Other Special Inspection			
* 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.			



Asset #02668(Routine, Underwater type 2)

District: 07, County: 27 - Columbia County

Team Lead: Rickie Bratton, Inspection Date: 02/23/2022

#### General Observation

Logged west to east.

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

Repairs have been made to beam ends, corrosion with minor section loss, raised NBI rating from a 5 to a 6.

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#### A-46 - Asset Files

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Asset #02668(Routine, Underwater type 2)

US 82 S-4 LM 10.36 over HARPER CREEK

Location: 1.25 MI W JCT OF SH 98

Team Lead: Rickie Bratton, Inspection Date: 02/23/2022

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	4212	4023	135	54	0
1080	Delamination/Spall/Patched Area	SF	16	0	16	0	0
1090	Exposed Rebar	SF	40	0	1	39	0
1120	Efflorescence/Rust Staining	SF	133	0	118	15	0
<p>(12) KRM &amp; ADC 2/26/2020 Deck has a wearing surface, Wearing surface has large transverse cracks in all spans. Soffits have efflorescence cracks in all spans. Soffits a end of deck have exposed reinforcing steel in all spans.</p> <p>Span 1-24' of soffit cracks            Span 2-20' of soffit cracks            Span 3-25' of soffit cracks            Span 4-20' of soffit cracks            Span 5-20' of soffit cracks</p> <p>Soffit,            Spans 1-3 have spalls with exposed rebar, and delams,            some spans have small cracks with light efflorescence.</p>							
107	Steel Open Girder/Beam	LF	810	535	255	20	0
1000	Corrosion	LF	275	0	255	20	0
515	Steel Protective Coating	SF	4933	11	3934	988	0
3420	Peeling/Bubbling/Cracking	LF	4922	0	3934	988	0
<p>(107) KRM &amp; ADC 2/26/2020 Bents 3, 4 and 5 have repaired areas at beam ends, Beams have corrosion scattered throughout structure, some beam ends have minor section loss to lower webs and bottom flanges.</p> <p>Span 5 beam 5, right side, beam has flaking rust on top flange do to water leaking on it.            Freckled rust is present on beam ends.</p> <p>Bent 3 girder repairs ahead side all 5 same at bent 2            Bent 4 girder 2            Bent 5 all 5 ahead side.</p>							
215	Reinforced Concrete Abutment	LF	76	76	0	0	0
(215) KRM & ADC 2/26/2020 West abutment 1 has 6' of spalls, East abutment has erosion at center of bridge.							
227	Reinforced Concrete Pile	EA	16	12	4	0	0
6000	Scour	EA	4	0	4	0	0
<p>(227) KRM &amp; ADC 2/26/2020 Bent 4 has local scour at all 4 piles,            Bents 2 and 3 Piles have collars around them where they were either cracked or had cracks and spalls.</p>							
234	Reinforced Concrete Pier Cap	LF	104	67	22	15	0
1080	Delamination/Spall/Patched Area	LF	3	0	3	0	0
1090	Exposed Rebar	LF	10	0	6	4	0

**Team Lead:** Rickie Bratton, **Inspection Date:** 02/23/2022

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
1120	Efflorescence/Rust Staining	LF	19	0	9	10	0
1130	Cracking (RC and Other)	LF	5	0	4	1	0
(234) KRM & ADC 2/26/2020 Bents 2,3 and 5, have exposed rebar, and cracks with efflorescence.							
305	Assembly Joint without Seal	LF	191	0	0	191	0
2350	Debris Impaction	LF	191	0	0	191	0
(305) KRM & ADC 2/26/2020 There is an ACHM overlay on this bridge, that goes over the joints thus restricting the free movement some.							
311	Movable Bearing	EA	25	0	18	7	0
1000	Corrosion	EA	25	0	18	7	0
(311) KRM & ADC 2/26/2020 All bearings have corrosion.							
313	Fixed Bearing	EA	25	0	18	7	0
1000	Corrosion	EA	25	0	18	7	0
(313) KRM & ADC 2/26/2020 All bearings have corrosion.							
330	Metal Bridge Railing	LF	324	172	152	0	0
1000	Corrosion	LF	150	0	150	0	0
1020	Connection	LF	2	0	2	0	0
515	Steel Protective Coating	SF	1026	576	450	0	0
3440	Effectiveness (Steel Protective Coatings)	LF	450	0	450	0	0
(330) KRM & ADC 2/26/2020 Metal bridge rail has 2 loose connection on left side, minor corrosion scattered throughout structure. Protective coating has lost its effectiveness.							

## Deck

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	4212	4023	135	54	0
1080	Delamination/Spall/Patched Area	SF	16	0	16	0	0
1090	Exposed Rebar	SF	40	0	1	39	0
1120	Efflorescence/Rust Staining	SF	133	0	118	15	0
<p>(12) KRM &amp; ADC 2/26/2020 Deck has a wearing surface, Wearing surface has large transverse cracks in all spans. Soffits have efflorescence cracks in all spans. Soffits a end of deck have exposed reinforcing steel in all spans.</p> <p>Span 1-24' of soffit cracks            Span 2-20' of soffit cracks            Span 3-25' of soffit cracks            Span 4-20' of soffit cracks            Span 5-20' of soffit cracks</p> <p>Soffit,            Spans 1-3 have spalls with exposed rebar, and delams,            some spans have small cracks with light efflorescence.</p>							





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Location: 1.25 MI W JCT OF SH 98

Team Lead: Rickie Bratton, Inspection Date: 02/23/2022

## Superstructure

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
107	Steel Open Girder/Beam	LF	810	535	255	20	0
1000	Corrosion	LF	275	0	255	20	0
515	Steel Protective Coating	SF	4933	11	3934	988	0
3420	Peeling/Bubbling/Cracking	LF	4922	0	3934	988	0
(107) KRM & ADC 2/26/2020 Bents 3, 4 and 5 have repaired areas at beam ends, Beams have corrosion scattered throughout structure, some beam ends have minor section loss to lower webs and bottom flanges.							
Span 5 beam 5, right side, beam has flaking rust on top flange do to water leaking on it. Freckled rust is present on beam ends.							
Bent 3 girder repairs ahead side all 5 same at bent 2 Bent 4 girder 2 Bent 5 all 5 ahead side.							

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

Comment: Repairs have been made to beam ends, corrosion with minor section loss, raised NBI rating from a 5 to a 6.

## Substructure

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
215	Reinforced Concrete Abutment	LF	76	76	0	0	0
(215) KRM & ADC 2/26/2020 West abutment 1 has 6' of spalls, East abutment has erosion at center of bridge.							
227	Reinforced Concrete Pile	EA	16	12	4	0	0
6000	Scour	EA	4	0	4	0	0
(227) KRM & ADC 2/26/2020 Bent 4 has local scour at all 4 piles, Bents 2 and 3 Piles have collars around them where they were either cracked or had cracks and spalls.							
234	Reinforced Concrete Pier Cap	LF	104	67	22	15	0
1080	Delamination/Spall/Patched Area	LF	3	0	3	0	0
1090	Exposed Rebar	LF	10	0	6	4	0
1120	Efflorescence/Rust Staining	LF	19	0	9	10	0
1130	Cracking (RC and Other)	LF	5	0	4	1	0
(234) KRM & ADC 2/26/2020 Bents 2,3 and 5, have exposed rebar, and cracks with efflorescence.							



Asset #02668(Routine, Underwater type 2)

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Location: 1.25 MI W JCT OF SH 98

Team Lead: Rickie Bratton, Inspection Date: 02/23/2022

## Culvert

ELEMENTS	DESCRIPTION	UNITS	TOTAL				
				CS1	CS2	CS3	CS4





Elevation.



Typical deck



Typical view of under surface.



Deck overview.





Span 2 soffit overview.



Inventory



Approach roadway Eastbound.



Elevation





Typical cracking in wearing surface.



Wearing surface 481' of cracks.26xlength.



Settlement at east approach.



Span 5 right side spalls in the soffits with exposed reinforcing steel.





Span 1 soffit has spall with exposed rebar.



Span 1 right side spall with exposed reinforcing steel.



Span 3 girder 2 corrosion to top flange.corrosion



Span 4 bent 5 beam ends have corrosion.





Repairs on piles at bents 2 thru 4.



Bent 4 all 4 piles have local scour.



Bents 2-4 piles with cracks or spalls have been repaired with collars.



Bent 3 under side of cap has exposed reinforcing steel.





Bent 4 right side has efflorescence cracking.



Bent 5 back side between piles 3 and 4 large spall with exposed reinforcing steel.



Bent 2 cap back has crack.



Typical condition of joints.





Bent 2 corrosion to moveable bearings.



Typical condition of bearings.



Bent 5 span 5 bearings have active corrosion.



Loose connection span 2 left side.



Typical condition of metal bridge rail.



**Asset #02668**(Routine, Underwater type 2)

**US 82 S-4 LM 10.36 over HARPER CREEK**

**Location: 1.25 MI W JCT OF SH 98**

**Team Lead:** Rickie Bratton, **Inspection Date:** 02/23/2022

#### **Maintenance Needs**

**Date Reported:** 02/17/2011

**Priority:** D- Routine

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

**Status:** Monitor

**Component:**

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#### **Deficiency Description**

Bent 2 & 5, concrete caps.

Bent 5, concrete cap.  
Cracked with efflorescence.

3' spall with exposed steel.  
02/19/2016 JPR -- Both spalls have exposed steel with section loss.

#### **Remarks**

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Bent 5 cap with large spall with exposed steel & section loss, between piles 3 & 4. Also cracking & delamination to bottom of cap between piles 2 & 3.



Bent 3 cap, spall between piles 2 & 3 with exposed steel & section loss.



Bent 5 cap cracks with efflorescence.



Bent 5 cap large spall with exposed rebar.



**Date Reported:** 02/19/2016  
**Priority:** C - Important  
**Type of Work:** (Inactive) (Inactive) 9 - None  
**Status:** Monitor  
**Component:**

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**Deficiency Description**

Abutment 2 scour back and under abutment cap between piling 2 & 3 with some roadway settlement.

**Remarks**

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Abutment 2 cap has scour between piles 2 & 3, with pile 3 exposed (1').



Abutment 2 cap has scour between piles 2 & 3, with pile 3 exposed (1').





**Asset #02668**(Routine, Underwater type 2)

**US 82 S-4 LM 10.36 over HARPER CREEK**

**Location: 1.25 MI W JCT OF SH 98**

**Team Lead:** Rickie Bratton, **Inspection Date:** 02/23/2022

## **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	



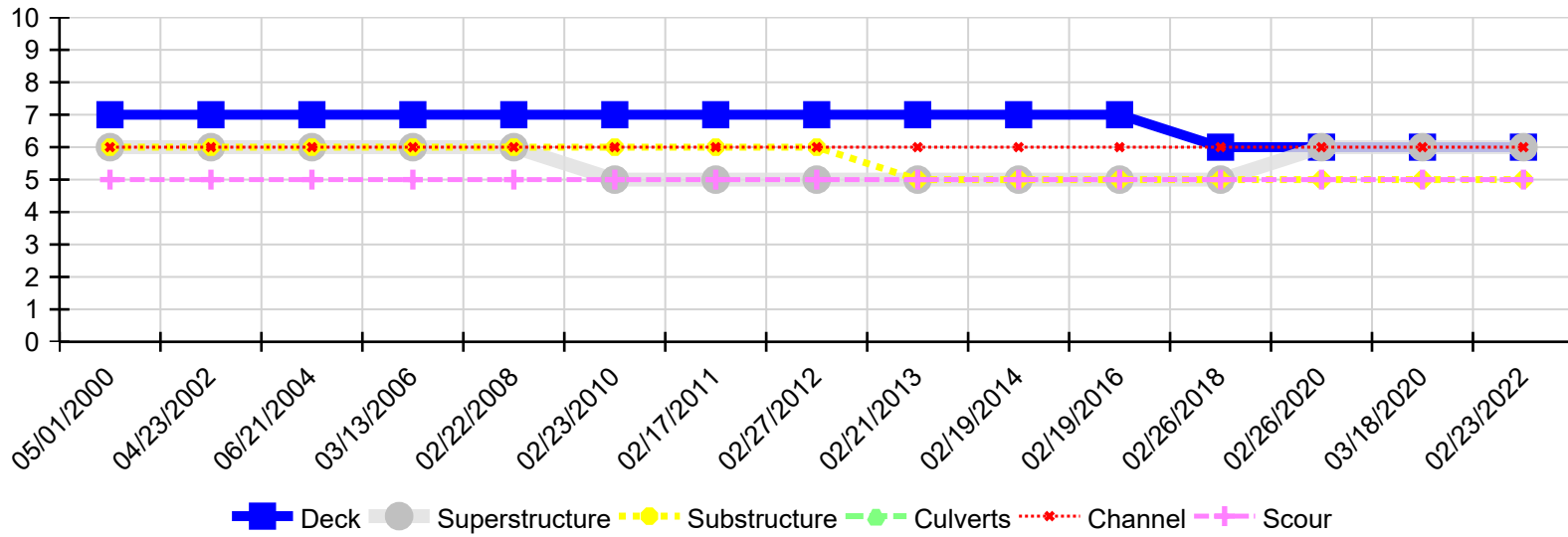
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Location: 1.25 MI W JCT OF SH 98

Team Lead: Rickie Bratton, Inspection Date: 02/23/2022

Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
02/23/2022	6	6	5	N	6	5
03/18/2020	6	6	5	N	6	5
02/26/2020	6	6	5	N	6	5
02/26/2018	6	5	5	N	6	5
02/19/2016	7	5	5	N	6	5
02/19/2014	7	5	5	N	6	5
02/21/2013	7	5	5	N	6	5
02/27/2012	7	5	6	N	6	5
02/17/2011	7	5	6	N	6	5
02/23/2010	7	5	6	N	6	5
02/22/2008	7	6	6	N	6	5
03/13/2006	7	6	6	N	6	5
06/21/2004	7	6	6	N	6	5
04/23/2002	7	6	6	N	6	5
05/01/2000	7	6	6	N	6	5