



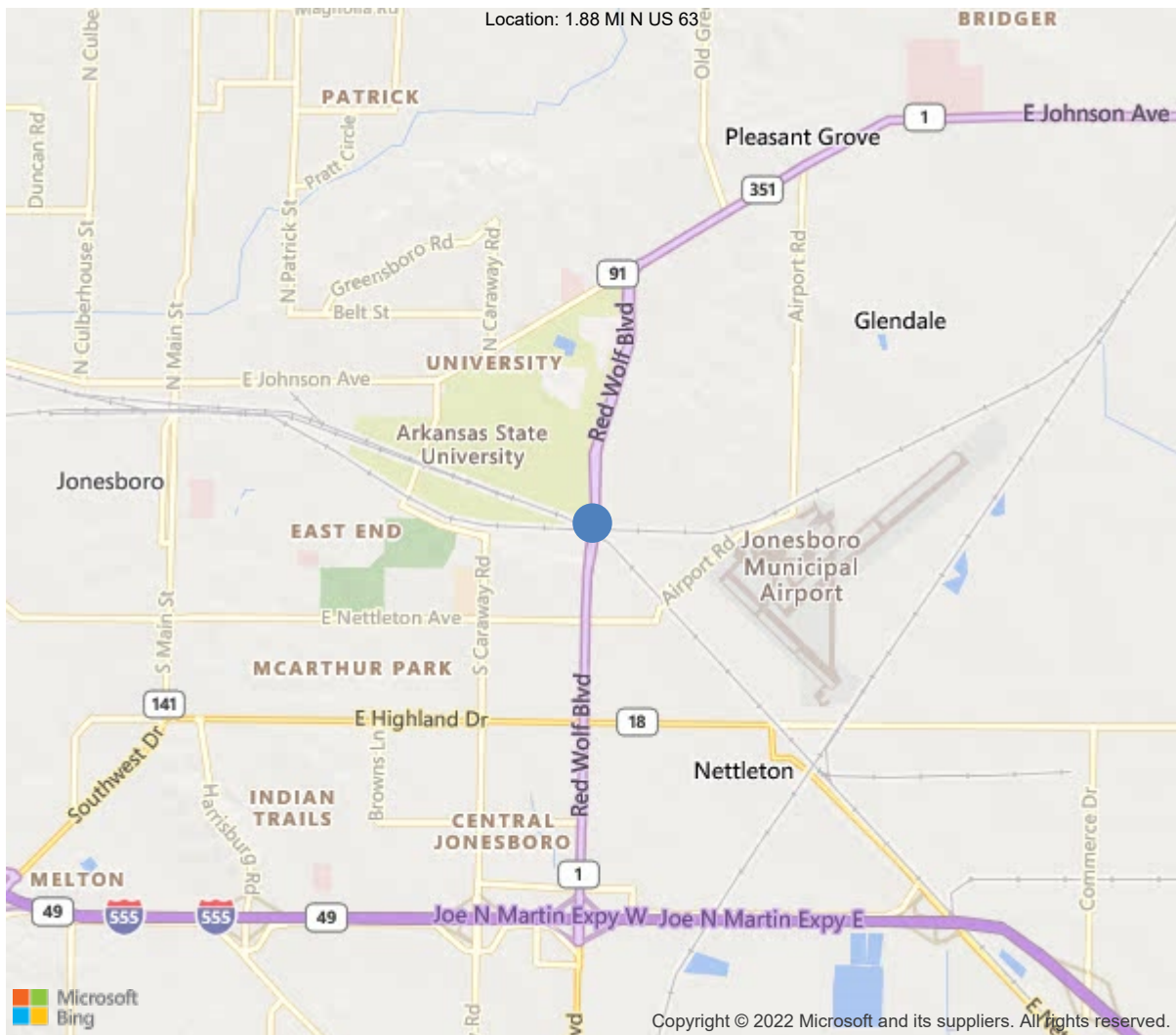
Latitude:35.83524, Longitude:-90.66794

Route:49 Section:03 Log:12.28

Arnold Road ID:16x49x3xA, Arnold Log mile:12.335

District 10, 31 - Craighead County

Owner: 1 - State Highway Agency



35.83524, -90.66794





Asset #05452(Routine)

US 49 over ST L SF & ST L SW RRS

Location: 1.88 MI N US 63

Team Lead: James Adams, Inspection Date: 05/24/2022

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	05452
(5) Inventory Route	1
(2) Highway Agency District	10 - District 10
(3) County Code	31 - Craighead County
(4) Place Code	35710
(6) Features Intersected	ST L SF & ST L SW RRS
(7) Facility Carried	US 49
(9) Location	1.88 MI N US 63
(11) Mile Point	12.28 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte & Subrte	0000049030
(16) Latitude	35.83524
(17) Longitude	-90.66794
(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	0 - None
AGE AND SERVICE	
(27) Year Built	1972
(106) Year Reconstructed	0
(42) Type of Service	12
On	1 - Highway
Under	2 - Railroad
(28) Lane	
On	4
Under	0
(29) Average Daily Traffic	38160
(30) Year of ADT	2018
(109) Truck ADT	2 %
(19) Bypass, Detour Length	4 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	113 ft
(49) Structure Length	283 ft
(50) Curb or Sidewalk Width	
Left	0.5 ft
Right	0.5 ft
(51) Bridge Roadway Width Curb to Curb	69.9 ft
(52) Deck Width Out to Out	73 ft
(32) Approach Roadway Width (W/Shoulders)	70.9 ft
(33) Bridge Median	2 - Closed median(no
(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	69.9 ft
(53) Min Vert Clear Over Bridge Rdwy	99.99 ft
(54) Min Vert Underclear	23.32 ft
Ref:	
(55) Min Lat Underclear RT	13 ft
Ref:	
(56) Min Lat Underclear LT	0 ft
NAVIGATION DATA	
(38) Navigation Control	N - Not applicable, no waterwa
(111) Pier Protection	5 - None present but re-evalua
(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	14 - Urban Other Principal Art
(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	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	5
(59) Superstructure	7
(60) Substructure	6
(61) Channel & Channel Protection	N
(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	7
(68) Deck Geometry	9
(69) Clearances, Vertical/Horizontal	5
(71) Waterway Adequacy	N
(72) Approach Roadway Alignment	7
(36A) Bridge Railings	1 - Inspected feature meets current
(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	N - Bridge not over waterway.
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	54300
(115) Year of Future ADT	2038

INSPECTIONS *			
(90) Inspection Date	05/24/2022		
(91) Frequency	24		
(92) Critical Feature Inspection	Done	Freq. (Mon)	Date
A: Fracture Critical Detail	No		
B: Underwater Inspection	No		
C: Other Special Inspection			
<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>			

### 58 - Deck (5)

Underclearances checked & verified this inspection.  
Northwest approach rail has some minor collision damage.  
Bent 4 northbound roadway has a 4ft. x 4in. deep settled area at backwall of bridge.  
Concrete rail has several minor cracks and a few delaminated areas.  
Approach slabs have settled in the past & covered with asphalt.  
Approach slab at bent 1 right side is undermined.  
Bent 1 South bound lanes compression seal is missing.  
Bent 1 North bound lanes compression seal is deteriorated, split, and losing adhesion.  
Bent 4 North bound lane compression seal is missing.  
Bent 4 South bound lane compression seal is deteriorated, split, and losing adhesion.  
Deck has numerous transverse cracks, and a few areas of map cracking.  
Deck has abrasion wear in wheel paths.  
Deck has several spalls and delaminated areas,  
Deck has a few potholes with exposed rebar, especially in span 2.  
Deck near bent 1 is partially covered with asphalt shim.  
Soffit has a few transverse cracks with efflorescence.

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### 59 - Superstructure (7)

Steel girders have a few areas of minor freckled rust, mostly near end bents. Girder webs have some streaking rust behind 1st stiffener at end bents. Paint system is slightly faded.  
Span 1 girder 2 & 8 has one loose splice bolt in bottom flange.  
Span 2 splice 2 girder 8 has three loose bolts in bottom flange.  
Span 3 girder 3 has 2 loose bolts on bottom flange.  
Span 3 girder 4 has one loose splice bolt in bottom flange.  
Bents 1 & 4 bearings are rusted with section loss.  
Bent 1 bearings 6, 7, and 8 each have one anchor bolt sheared off.  
Bent 4 bearings 1 and 9 each have one anchor bolt nut missing.  
Bent 4 bearing 1 has both cotter keys missing.  
Bent 4 bearings 3, 4, and 5 are tilted forward near max rotation.

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### 60 - Substructure (6)

Span 1 Concrete Slope Paving has a 12 ft. X 12 ft. X 6ft.deep void at Northwest corner of bridge eroded 3ft. back under cap.  
Much of slope paving has fell in.  
Span 4 Concrete Slope Paving has a 20ft. x 8ft. area of settling of concrete and losing some embankment beginning at edge of roadway.  
Bent 1 cap has heavy dirt & debris buildup from missing compression seal.  
Bent 1 cap has a 8ft. horizontal crack with rust stains & 2ft. of delamination.  
Backwalls have a few cracks with efflorescence.  
Caps have a few small delaminated areas and spalls with exposed rebar.  
Trees growing under & beside bridge.

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### A-46 - Asset Files

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Asset #05452(Routine)

US 49 over ST L SF & ST L SW RRS

Location: 1.88 MI N US 63

Team Lead: James Adams, Inspection Date: 05/24/2022

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	20513	8143	8900	3470	0
1080	Delamination/Spall/Patched Area	SF	165	0	0	165	0
1090	Exposed Rebar	SF	9	0	9	0	0
1120	Efflorescence/Rust Staining	SF	259	0	174	85	0
1130	Cracking (RC and Other)	SF	3220	0	0	3220	0
1190	Abrasion/Wear (PSC/RC)	SF	8717	0	8717	0	0
107	Steel Open Girder/Beam	LF	2810	2476	331	3	0
1000	Corrosion	LF	331	0	331	0	0
1020	Connection	LF	3	0	0	3	0
515	Steel Protective Coating	SF	33151	29669	3316	166	0
3440	Effectiveness (Steel Protective Coatings)	LF	3482	0	3316	166	0
205	Reinforced Concrete Column	EA	12	12	0	0	0
210	Reinforced Concrete Pier Wall	LF	94	94	0	0	0
215	Reinforced Concrete Abutment	LF	214	189	3	22	0
1080	Delamination/Spall/Patched Area	LF	3	0	3	0	0
1120	Efflorescence/Rust Staining	LF	4	0	0	4	0
1130	Cracking (RC and Other)	LF	6	0	0	6	0
6000	Scour	LF	12	0	0	12	0
234	Reinforced Concrete Pier Cap	LF	140	134	6	0	0
1090	Exposed Rebar	LF	6	0	6	0	0
302	Compression Joint Seal	LF	146	0	0	73	73
2320	Seal Adhesion	LF	73	0	0	0	73
2330	Seal Damage	LF	73	0	0	73	0
311	Movable Bearing	EA	20	0	0	20	0
1000	Corrosion	EA	14	0	0	14	0
1020	Connection	EA	6	0	0	6	0
313	Fixed Bearing	EA	20	20	0	0	0
321	Reinforced Concrete Approach Slab	SF	2284	2176	0	108	0
1130	Cracking (RC and Other)	SF	108	0	0	108	0
510	Wearing Surfaces	SF	2284	2037	0	247	0



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ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
3210	Delam/Spall/Patched Area/Pothole	SF	79	0	0	79	0
3220	Crack (Wearing Surface)	SF	168	0	0	168	0
330	Metal Bridge Railing	LF	562	562	0	0	0
331	Reinforced Concrete Bridge Railing	LF	562	315	0	247	0
1080	Delamination/Spall/Patched Area	LF	6	0	0	6	0
1130	Cracking (RC and Other)	LF	241	0	0	241	0

**Deck**

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	20513	8143	8900	3470	0
1080	Delamination/Spall/Patched Area	SF	165	0	0	165	0
1090	Exposed Rebar	SF	9	0	9	0	0
1120	Efflorescence/Rust Staining	SF	259	0	174	85	0
1130	Cracking (RC and Other)	SF	3220	0	0	3220	0
1190	Abrasion/Wear (PSC/RC)	SF	8717	0	8717	0	0

**58 - Deck (5)**

Comment: Underclearances checked & verified this inspection.  
Northwest approach rail has some minor collision damage.  
Bent 4 northbound roadway has a 4ft. x 4in. deep settled area at backwall of bridge.  
Concrete rail has several minor cracks and a few delaminated areas.  
Approach slabs have settled in the past & covered with asphalt.  
Approach slab at bent 1 right side is undermined.  
Bent 1 South bound lanes compression seal is missing.  
Bent 1 North bound lanes compression seal is deteriorated, split, and losing adhesion.  
Bent 4 North bound lane compression seal is missing.  
Bent 4 South bound lane compression seal is deteriorated, split, and losing adhesion.  
Deck has numerous transverse cracks, and a few areas of map cracking.  
Deck has abrasion wear in wheel paths.  
Deck has several spalls and delaminated areas,  
Deck has a few potholes with exposed rebar, especially in span 2.  
Deck near bent 1 is partially covered with asphalt shim.  
Soffit has a few transverse cracks with efflorescence.





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**Superstructure**

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
107	Steel Open Girder/Beam	LF	2810	2476	331	3	0
1000	Corrosion	LF	331	0	331	0	0
1020	Connection	LF	3	0	0	3	0
515	Steel Protective Coating	SF	33151	29669	3316	166	0
3440	Effectiveness (Steel Protective Coatings)	LF	3482	0	3316	166	0

**59 - Superstructure (7)**

Comment: Steel girders have a few areas of minor freckled rust, mostly near end bents. Girder webs have some streaking rust behind 1st stiffener at end bents. Paint system is slightly faded.

Span 1 girder 2 & 8 has one loose splice bolt in bottom flange.

Span 2 splice 2 girder 8 has three loose bolts in bottom flange.

Span 3 girder 3 has 2 loose bolts on bottom flange.

Span 3 girder 4 has one loose splice bolt in bottom flange.

Bents 1 & 4 bearings are rusted with section loss.

Bent 1 bearings 6, 7, and 8 each have one anchor bolt sheared off.

Bent 4 bearings 1 and 9 each have one anchor bolt nut missing.

Bent 4 bearing 1 has both cotter keys missing.

Bent 4 bearings 3, 4, and 5 are tilted forward near max rotation.



## Substructure

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
205	Reinforced Concrete Column	EA	12	12	0	0	0
210	Reinforced Concrete Pier Wall	LF	94	94	0	0	0
215	Reinforced Concrete Abutment	LF	214	189	3	22	0
1080	Delamination/Spall/Patched Area	LF	3	0	3	0	0
1120	Efflorescence/Rust Staining	LF	4	0	0	4	0
1130	Cracking (RC and Other)	LF	6	0	0	6	0
6000	Scour	LF	12	0	0	12	0
234	Reinforced Concrete Pier Cap	LF	140	134	6	0	0
1090	Exposed Rebar	LF	6	0	6	0	0

### 60 - Substructure (6)

Comment: Span 1 Concrete Slope Paving has a 12 ft. X 12 ft. X 6ft.deep void at Northwest corner of bridge eroded 3ft. back under cap.

Much of slope paving has fell in.

Span 4 Concrete Slope Paving has a 20ft. x 8ft. area of settling of concrete and losing some embankment beginning at edge of roadway.

Bent 1 cap has heavy dirt & debris buildup from missing compression seal.

Bent 1 cap has a 8ft. horizontal crack with rust stains & 2ft. of delamination.

Backwalls have a few cracks with efflorescence.

Caps have a few small delaminated areas and spalls with exposed rebar.

Trees growing under & beside bridge.



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Culvert

ELEMENTS	DESCRIPTION	UNITS	TOTAL				
				CS1	CS2	CS3	CS4





Elevation 5-25-2022



Northbound inside lane settlement



Span 3



Span 2 southbound





Span 2 northbound



Bent 1 right debris on cap



Span 1



Deck



Roadway 5-24-2022



**Maintenance Needs**

**Date Reported:** 04/26/2012  
**Priority:** B - Pressing  
**Type of Work:** Repair (General)  
**Status:** Monitor  
**Component:** Deck

**Deficiency Description**

Deck has several spalls and delaminated areas, some with rebar exposed.

**Remarks**



Deck patches/holes



Deck patches/holes



Deck patches/holes



Deck patches/holes





Asset #05452(Routine)  
US 49 over ST L SF & ST L SW RRS  
Location: 1.88 MI N US 63

Team Lead: James Adams, Inspection Date: 05/24/2022



Spalls



Typ



**Date Reported:** 04/26/2012  
**Priority:** C - Important  
**Type of Work:** Replace (General)  
**Status:** Monitor  
**Component:** Element

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#### Deficiency Description

Bent 1 South bound lanes compression seal is missing. Bent 1 North bound lanes compression seal is deteriorated, split, and losing adhesion.

Bent 4 South bound lane compression seal is deteriorated, split, and losing adhesion. Bent 4 North bound lane compression seal is missing.

#### Remarks

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B1

**Date Reported:** 04/26/2012  
**Priority:** D- Routine  
**Type of Work:** Repair (General)  
**Status:** Monitor  
**Component:** Superstructure

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**Deficiency Description**

Span 1 girder 2 & 8 have one loose splice bolt each in bottom flange.  
Span 2 splice 2 girder 8 has three loose bolts in bottom flange.  
Span 3 girder 3 has 2 loose bolts on bottom flange.  
Span 3 girder 4 has one loose splice bolt in bottom flange.

**Remarks**

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Span 1 girder 2

**Date Reported:** 04/26/2012  
**Priority:** C - Important  
**Type of Work:** (Inactive) (Inactive) 9 - None  
**Status:** Monitor  
**Component:** Superstructure

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**Deficiency Description**

Bent 1 bearings 6, 7, and 8 each have one anchor bolt sheared off.  
Bent 4 bearings 1 and 9 each have one anchor bolt nut missing.  
Bent 4 bearing 1 has both cotter keys missing.  
Bent 4 bearings 3, 4, and 5 are tilted forward near max rotation.

**Remarks**

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Typical bearing



Bent 4 bearing 5



**Date Reported:** 04/26/2012  
**Priority:** C - Important  
**Type of Work:** Repair (General)  
**Status:** Monitor  
**Component:** Miscellaneous

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#### Deficiency Description

Concrete slope paving is undermined near bent 1 Rt and near bent 4 Rt. Concrete slope paving has settled/caved in and has a large void underneath.

#### Remarks

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Bent 4 right



Bent 4 right



Bent 1 right



Bent 1 right





B1 Rt



Bent 4 Rt





**Date Reported:** 04/28/2016  
**Priority:** C - Important  
**Type of Work:** Repair (General)  
**Status:** Monitor  
**Component:** Approach

---

**Deficiency Description**

Approach slab at bent 1 Rt is undermined.

**Remarks**

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Asset #05452(Routine)

US 49 over ST L SF & ST L SW RRS

Location: 1.88 MI N US 63

Team Lead: James Adams, Inspection Date: 05/24/2022

**Date Reported:** 05/25/2022  
**Priority:** C - Important  
**Type of Work:** Repair (General)  
**Status:** Open  
**Component:** Approach

---

#### Deficiency Description

Bent 4 northbound roadway has a 4ft. x 4in. deep settled area at backwall of bridge.

#### Remarks

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**Date Reported:** 05/25/2022  
**Priority:** C - Important  
**Type of Work:** (Inactive) (Inactive) 1 - Clean  
**Status:** Open  
**Component:** Substructure

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**Deficiency Description**

Dirt & debris buildup on bents 1 & 4 caps due to missing compression seals causing corrosion to bearings.

**Remarks**

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**Asset #05452(Routine)**

**US 49 over ST L SF & ST L SW RRS**

**Location: 1.88 MI N US 63**

**Team Lead: James Adams, Inspection Date: 05/24/2022**

## **Routine Maintenance**

Check Box Maintenance Items

<b>Data Field</b>	<b>Value</b>
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 - Hydo and LMC Advised	



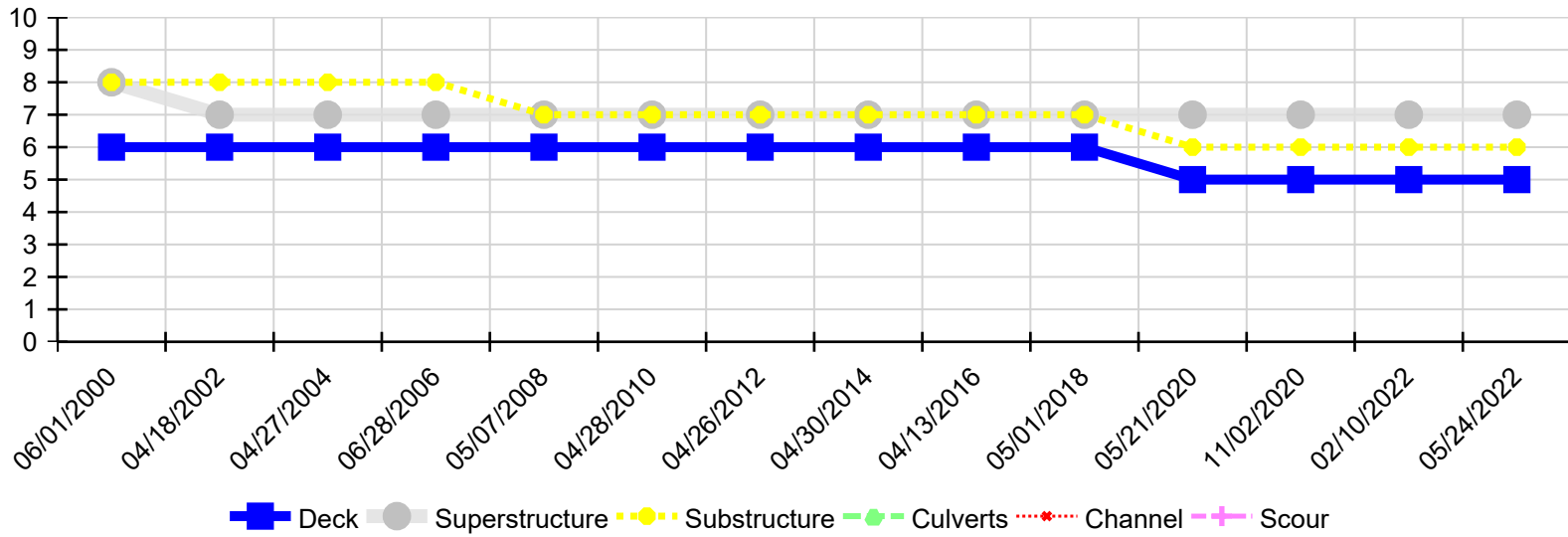
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Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
05/24/2022	5	7	6	N	N	N
02/10/2022	5	7	6	N	N	N
11/02/2020	5	7	6	N	N	N
05/21/2020	5	7	6	N	N	N
05/01/2018	6	7	7	N	N	N
04/13/2016	6	7	7	N	N	N
04/30/2014	6	7	7	N	N	N
04/26/2012	6	7	7	N	N	N
04/28/2010	6	7	7	N	N	N
05/07/2008	6	7	7	N	N	N
06/28/2006	6	7	8	N	N	N
04/27/2004	6	7	8	N	N	N
04/18/2002	6	7	8	N	N	N
06/01/2000	6	8	8	N	N	N