

## Bridge 03551 Inspection Report



Latitude:33.25842, Longitude:-91.80972

Route:425 Section:02 Log:2.29

Arnold Road ID:2x425x2xA, Arnold Log mile:2.267

District 02, 3 - Ashley County

Owner: 1 - State Highway Agency

Inspection Direction: 2 - S to N

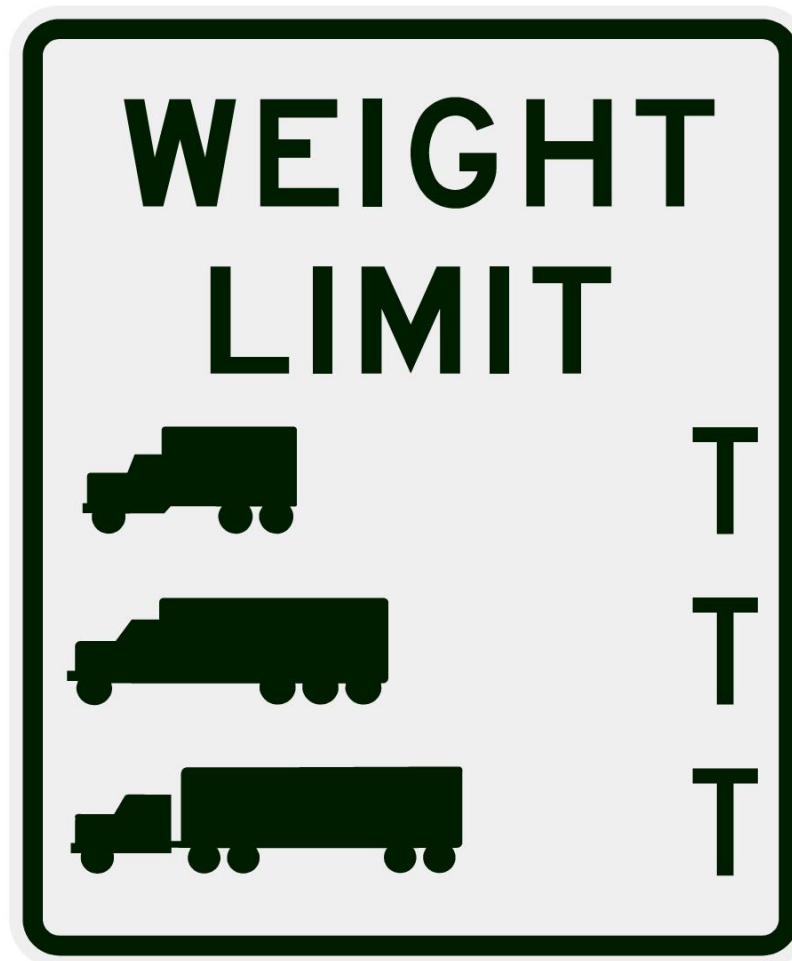
### Bridge Posting Information

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

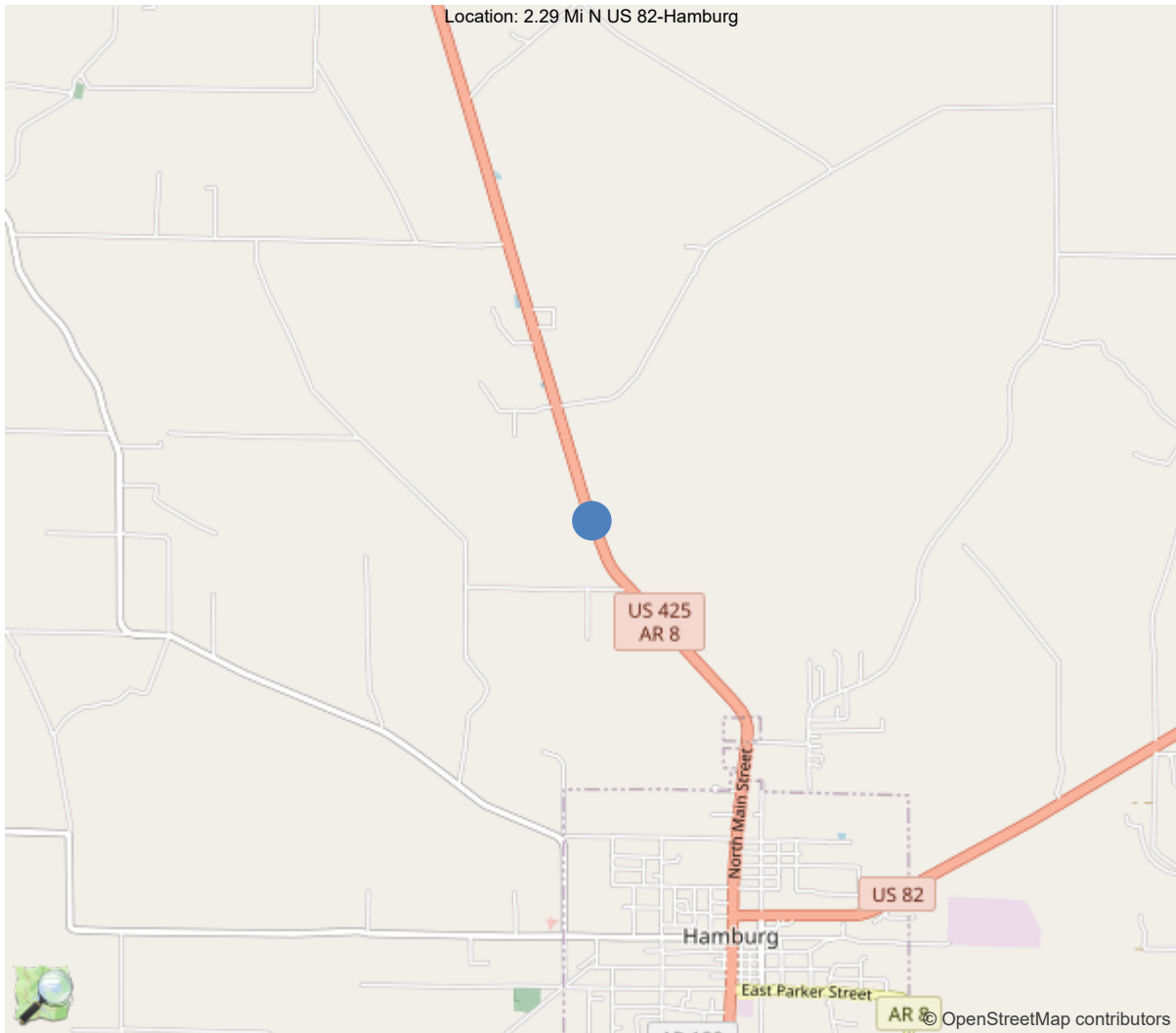
70 - Bridge Posting: 5 - Equal to or above legal loads

Legal Load	Calculated Capacity	Beginning of Bridge Sign Current Value	End of Bridge Sign Current Value
Code 4 (22 Tons)	39		
Code 9 (31 Tons)	46		
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



33.25842, -91.80972



Asset #03551(Routine)

US 425-02 LM 2.29 over Chemin-A-Haut Creek

Location: 2.29 Mi N US 82-Hamburg

Team Lead: Sharon Hooks Inspection Date: 05/17/2023

## National Bridge Inventory Data Sheet

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	03551
(5) Inventory Route	1
(2) Highway Agency District	02 - District 02
(3) County Code	3 - Ashley County
(4) Place Code	0
(6) Features Intersected	Chemin-A-Haut Creek
(7) Facility Carried	US 425-02 LM 2.29
(9) Location	2.29 Mi N US 82-Hamburg
(11) Mile Point	2.29 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte & Subrte	0000425020
(16) Latitude	33.2584230485011
(17) Longitude	-91.8097210502625
(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	1 - Monolithic Concrete (concurrently pl
Type of Membrane	0 - None
Type of Deck Protection	0 - None
AGE AND SERVICE	
(27) Year Built	1962
(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	3500
(30) Year of ADT	2018
(109) Truck ADT	1 %
(19) Bypass, Detour Length	25 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	25 ft
(49) Structure Length	75 ft
(50) Curb or Sidewalk Width	
Left	1 ft
Right	1 ft
(51) Bridge Roadway Width Curb to Curb	27.9 ft
(52) Deck Width Out to Out	33.6 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	27.9 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	6
(61) Channel & Channel Protection	7
(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	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	4
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	8
(72) Approach Roadway Alignment	6
(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	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	3392
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date			05/17/2023
(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: Sharon Hooks, Inspection Date: 05/17/2023

### Specifications for National Bridge Inventory Sheets

IDENTIFICATION	
B.ID.01 Bridge Number	03551
B.ID.02 Bridge Name	
B.ID.03 Previous Bridge No.	
B.W.01 Year Built	

LOCATION	
B.L.01 State Code	5 - Arkansas
B.L.02 County Code	3 - Ashley County
B.L.03 Place Code	00000 - N/A
B.L.04 Highway Agency District	02 - District 02
B.L.05 Latitude	33.2584230485011
B.L.06 Longitude	-91.8097210502625
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	
B.L.12 Metropolitan Planning Organization	

CLASSIFICATION	
B.CL.01 Owner	
B.CL.02 Maint. Responsibility	
B.CL.03 Federal or Tribal Land Access	
B.CL.04 Historic Significance	
B.CL.05 Toll	
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	
B.G.02 Total Bridge Length	
B.G.03 Max Span Length	
B.G.04 Min Span Length	
B.G.05 Bridge Width Out-to-Out	
B.G.06 Bridge Width Curb-to-Curb	
B.G.07 Left Curb or Sidewalk Width	
B.G.08 Right Curb or Sidewalk Width	
B.G.09 Approach Roadway Width	

B.G.10 Bridge Median	
B.G.11 Skew	
B.G.12 Curved Bridge	
B.G.13 Max Bridge Height	
B.G.14 Sidehill Bridge	
B.G.15 Irregular Deck Area	
B.G.16 Calculated Deck Area	

LOADS AND LOAD RATING	
B.LR.01 Design Load	
B.LR.02 Design Method	
B.LR.03 Load Rating Date	
B.LR.04 Load Rating Method	
B.LR.05 Inventory Load Rating Factor	
B.LR.06 Operating Load Rating Factor	
B.LR.07 Controlling Legal Load Rating Factor	
B.LR.08 Routine Permit Loads	

INSPECTION REQUIREMENTS	
B.IR.01 NSTM Inspection Required	
B.IR.02 Fatigue Details	
B.IR.03 UW Inspection Required	
B.IR.04 Complex Feature	

COMPONENT CONDITION RATINGS	
B.C.01 Deck Condition Rating	
B.C.02 Superstructure Condition	
B.C.03 Substructure Condition	
B.C.04 Culvert Condition	
B.C.05 Bridge Railing Condition	
B.C.06 Bridge Railing Transitions Condition	
B.C.07 Bridge Bearings Cond.	
B.C.08 Bridge Joints Condition	
B.C.09 Channel Condition Rating	
B.C.10 Channel Protection Condition	
B.C.11 Scour Condition Rating	
B.C.12 Bridge Condition Classification	
B.C.13 Lowest Condition Rating	
B.C.14 NSTM Insp. Condition	
B.C.15 UW Inspection Condition	

APPRAISAL	
B.AP.01 Approach Roadway Alignment	
B.AP.02 Overtopping Likelihood	
B.AP.03 Scour Vulnerability	
B.AP.04 Scour Plan of Action	
B.AP.05 Seismic Vulnerability	



Team Lead: Sharon Hooks, Inspection Date: 05/17/2023

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

POSTING STATUS DATA	
B.PS.01 Load Posting Status	B.PS.02 Posting Status Change Date

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



Asset #03551 (Routine)

US 425-02 LM 2.29 over Chemin-A-Haut Creek

Location: 2.29 Mi N US 82-Hamburg

Team Lead: Sharon Hooks Inspection Date: 05/17/2023

## Inspection Notes

### General Observation

Beginning of structure toward US 82, Hamburg, South End. 05-15-2007, Dropping UW inspection due to sub-str. elements are not continuously submerged. Durations of high water events occur.

Rock riprap on slopes at Abt's. NBI Items #60 and #61 will represent elements that occasionally stand in water. RLW.

Sufficiency Rating Calculation Accepted by jace626 at 2012-06-19 14:48:55

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### A-54 - Sealable Deck Cracks (Y)

Some sealable cracks with some very large cracks.

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### A-59 - Joint Repair Needed (Y)

Joints - Bents 1-4: Pourable joint material has deteriorated and joint is mostly filled with dirt and debris.

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

Log mile sign- Bent 1 right: No sign in place - post and object marker in place.

Sign:

"425-02

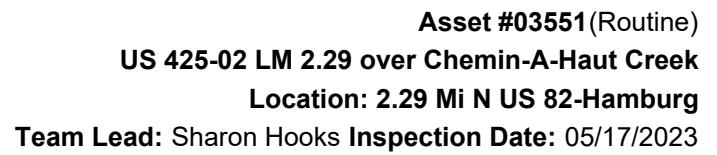
2.29"

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### National Bridge Element Quantities and Notes

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
38	RC Slab	SF	2258	299	0	1659	300
1080	Delamination/Spall/Patched Area	SF	9	0	0	9	0
1120	Efflorescence/Rust Staining	SF	40	0	0	40	0
1130	Cracking (RC and Other)	SF	600	0	0	300	300
1190	Abrasion/Wear (PSC/RC)	SF	1310	0	0	1310	0
(38) Deck (void-tube construction): 30.1' wide x 75' long = 2258 sqft.							
Deck: All spans: Several moderate-sized longitudinal full-depth cracks / significant abrasive wear with some scattered loss of aggregate and some spalls. Span 1: One large-sized longitudinal full-depth crack just right of centerline. Span 2: A couple large-sized full-depth longitudinal cracks in right lane with some heavy deterioration/scaling with right outer wheel-rut and just left of centerline near Bent 3. Span 3: One moderate- to large-sized full-depth longitudinal crack in left inner wheel-rut.  Sides of slabs: Vertical cracks at bents.  Soffit: Cracking with efflorescence at various locations – heaviest in Span 3. State forces have repaired/patched some spalls.							
215	Reinforced Concrete Abutment	LF	76	70	6	0	0
1080	Delamination/Spall/Patched Area	LF	2	0	2	0	0
1090	Exposed Rebar	LF	2	0	2	0	0
1130	Cracking (RC and Other)	LF	2	0	2	0	0
(215) Abutment: 34' each (with 2' wingwalls each corner) / Bents 1 & 4. Bent 4: Small spalls with exposed rebar - repaired/patched by state forces.							
227	Reinforced Concrete Pile	EA	10	0	10	0	0
1190	Abrasion/Wear (PSC/RC)	EA	10	0	10	0	0
(227) Piling: 5 per bent / Bents 2-3. All pile have light abrasive wear at water/groundline. Pile not visible due to high water this inspection. SDH 5/17/2023.							
234	Reinforced Concrete Pier Cap	LF	60	58	2	0	0
1080	Delamination/Spall/Patched Area	LF	2	0	2	0	0
(234) Caps: 30' each / Bents 2-3. Bent 3 back: Spalls with exposed rebar over Pile 1 - repaired/patched by state forces.							
301	Pourable Joint Seal	LF	112	0	56	0	56
2330	Seal Damage	LF	56	0	0	0	56



ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
2350	Debris Impaction	LF	56	0	56	0	0
(301) Joints: 28' each / Bents 1-4. Pourable joint material has deteriorated and joints are mostly filled with dirt and debris.							
321	Reinforced Concrete Approach Slab	SF	408	306	102	0	0
1130	Cracking (RC and Other)	SF	102	0	102	0	0
(321) Approach slabs: 2 each (24' wide x 34' long = 816 sqft each) / Bents 1 & 4. NOTE: Slab @ Bent 1 and half of slab @ Bent 4 have been overlaid and can no longer be inspected. Bent 4: Some scattered cracks.							
330	Metal Bridge Railing	LF	150	150	0	0	0
515	Steel Protective Coating	SF	375	0	375	0	0
3410	Chalking (Steel Protective Coatings)	SF	375	0	375	0	0
(330) Railing: 75' each side. Coating: 2.5 square feet per linear feet of railing. Railing is dull and has no luster.							

## Inspection Photos and Notes



Elevation.



Bent 3 joint seal has lost bond with debris impaction.



Span 2 deck abrasion with asphalt patches.



Span 1 soffit has large crack in same location as top of deck.  
Staining and moisture present.



Deck span 1 large unsealed cracks.



Deck overview.



Overview of soffit.



Approach.

### Maintenance Needs

**Date Reported:** 05/01/2017

**Priority:** B - Pressing

**Status:** Monitor

**Type of Work:** (Inactive) (Inactive) 0 - N/A

**Component:**

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### Deficiency Description

**Deck:**

All spans: Several moderate-sized longitudinal full-depth cracks / significant abrasive wear with some scattered loss of aggregate.

Span 1: One large-sized longitudinal full-depth crack just right of centerline.

Span 2: A couple large-sized full-depth longitudinal cracks in right lane with some heavy deterioration/scaling with right outer wheel-rut and just left of centerline near Bent 3.

Span 3: One moderate- to large-sized full-depth longitudinal crack in left inner wheel-rut.

Changed Priority from "C" to "B" SDH 2021.

**Sides of slabs:**

Vertical cracks at bents.

**Soffit:**

Cracking with efflorescence at various locations – heaviest in Span 3.

State forces have repaired/patched some spalls.

### Remarks



01/01/2020

Span 2 deck cracking completely through to soffit with efflorescence.



01/01/2020

Deck - Spans 1-3 : Typical



Span 1 Deck cracking



Deck spans 1-2 large unsealed longitudinal cracks up to 1/8" wide.





## Routine Maintenance

### Check Box Maintenance Items

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

Some sealable cracks with some very large cracks.

#### A-55 - Deck Washing Needed

#### A-56 - Joint Cleaning/Flushing Needed



**Asset #03551**(Routine)

**US 425-02 LM 2.29 over Chemin-A-Haut Creek**

**Location: 2.29 Mi N US 82-Hamburg**

**Team Lead: Sharon Hooks Inspection Date: 05/17/2023**

**A-57 - Girder End and Bearing Painting Needed**

**A-58 - Cap Cleaning/Flushing Needed**

**A-59 - Joint Repair Needed (Yes)**

Joints - Bents 1-4: Pourable joint material has deteriorated and joint is mostly filled with dirt and debris.

**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)**

Log mile sign- Bent 1 right: No sign in place - post and object marker in place.

Sign:

"425-02

2.29"

**A-64 - Vegetation Removal Requested**

**A-65 - Clogged deck drains?**



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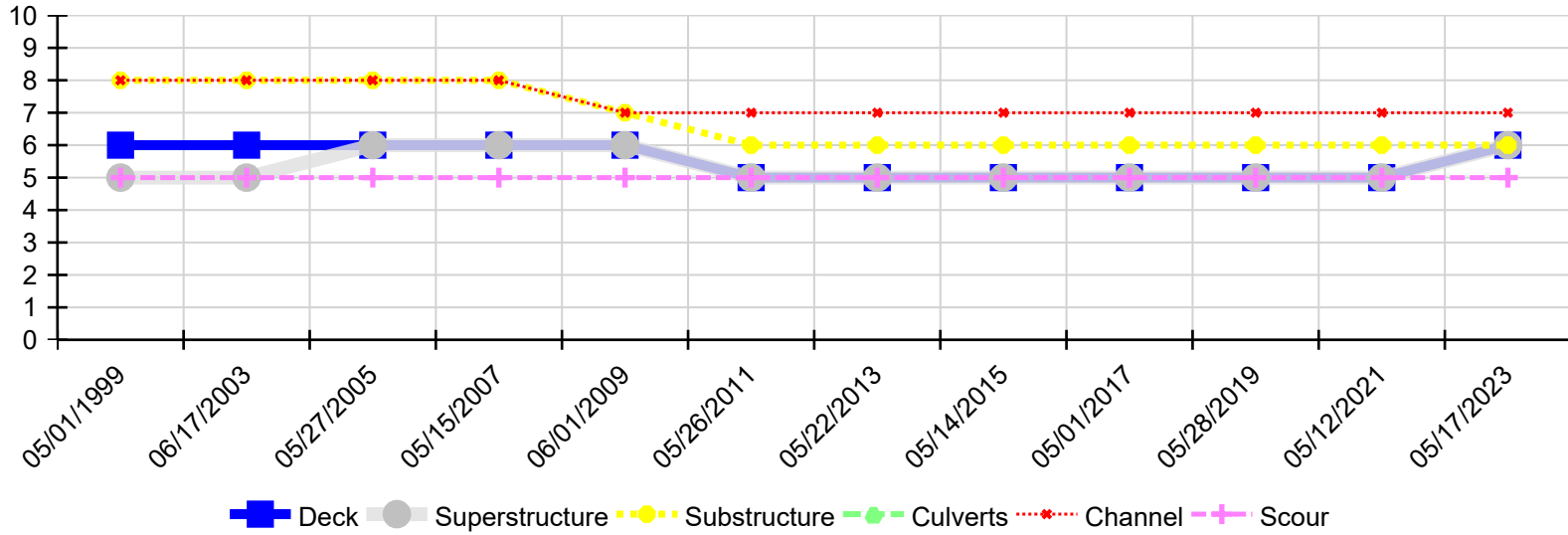
**Team Lead: Sharon Hooks Inspection Date: 05/17/2023**

**A-66 - Approach minor pothole/leveling needed**



**Asset #03551 (Routine)**  
**US 425-02 LM 2.29 over Chemin-A-Haut Creek**  
**Location: 2.29 Mi N US 82-Hamburg**  
**Team Lead: Sharon Hooks Inspection Date: 05/17/2023**

Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
05/17/2023	6	6	6	N	7	5
05/12/2021	5	5	6	N	7	5
05/28/2019	5	5	6	N	7	5
05/01/2017	5	5	6	N	7	5
05/14/2015	5	5	6	N	7	5
05/22/2013	5	5	6	N	7	5
05/26/2011	5	5	6	N	7	5
06/01/2009	6	6	7	N	7	5
05/15/2007	6	6	8	N	8	5
05/27/2005	6	6	8	N	8	5
06/17/2003	6	5	8	N	8	5
05/01/1999	6	5	8	N	8	5