



Latitude:34.64026, Longitude:-91.81008

Route:381 Section:01 Log:9.728

Arnold Road ID:43x381x1xA, Arnold Log mile:9.594

District 06, 85 - Lonoke County

Owner: 1 - State Highway Agency

### Bridge Posting Information

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

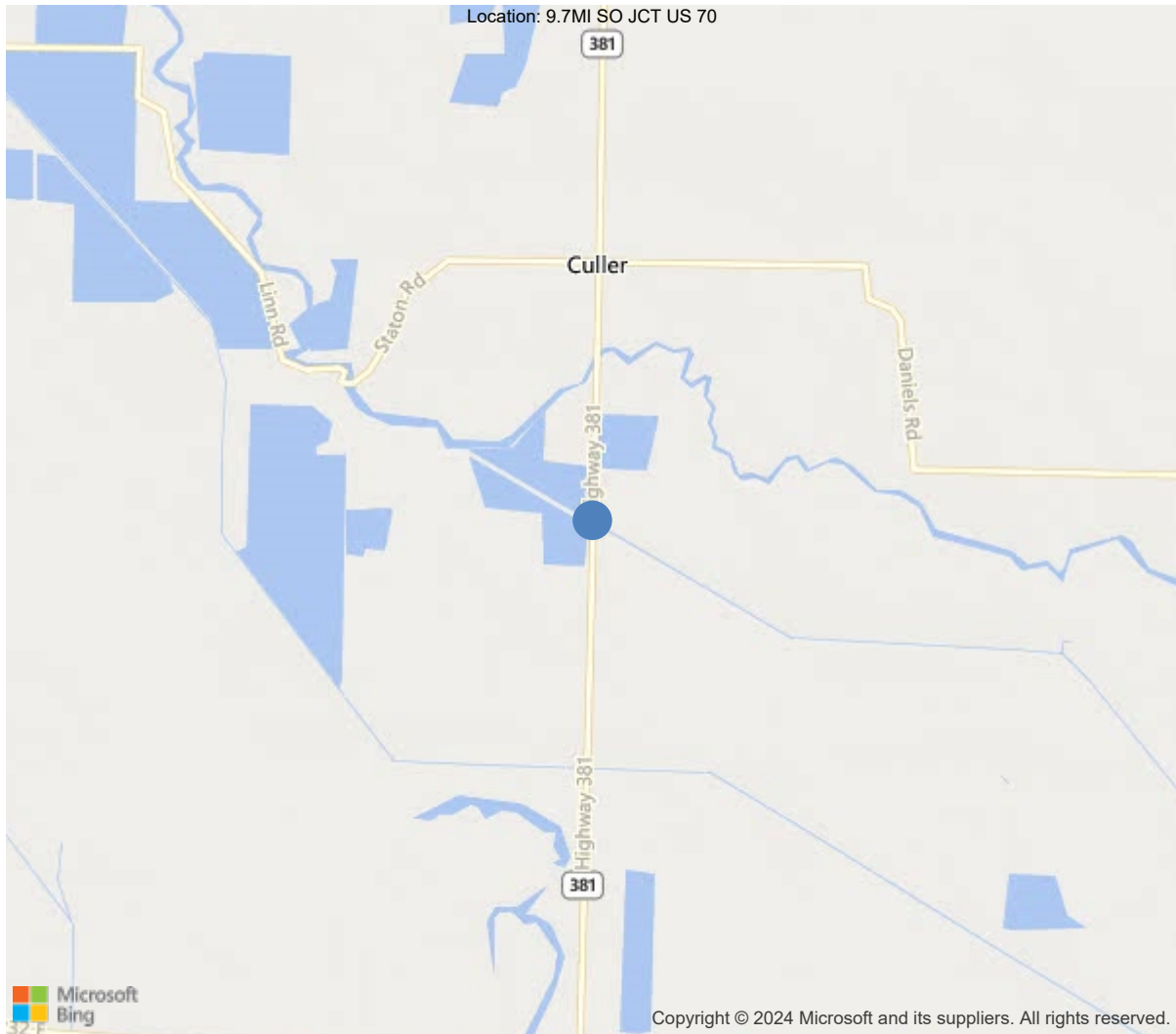
70 - Bridge Posting: 5 - Equal to or above legal loads

Legal Load	Calculated Capacity	Beginning of Bridge Sign Current Value	End of Bridge Sign Current Value
Code 4 (22 Tons)	38		
Code 9 (31 Tons)	43		
Code 5 (40 Tons)	50		

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



34.64026, -91.81008





Asset #05869(Routine, Underwater type 2)

SH 381Log 9.73 over BUFFALO DITCH

Location: 9.7MI SO JCT US 70

Team Lead: Bryan Saunders, Inspection Date: 09/19/2022

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	05869
(5) Inventory Route	1
(2) Highway Agency District	06 - District 06
(3) County Code	85 - Lonoke County
(4) Place Code	0
(6) Features Intersected	BUFFALO DITCH
(7) Facility Carried	SH 381Log 9.73
(9) Location	9.7MI SO JCT US 70
(11) Mile Point	9.728 mi
(12) Base Highway Network	No
(13) LRS Inventory Rte & Subrte	0000000000
(16) Latitude	34.64026
(17) Longitude	-91.81008
(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	1980
(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	210
(30) Year of ADT	2018
(109) Truck ADT	1 %
(19) Bypass, Detour Length	3 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	35 ft
(49) Structure Length	105 ft
(50) Curb or Sidewalk Width	
Left	0 ft
Right	0 ft
(51) Bridge Roadway Width Curb to Curb	27.9 ft
(52) Deck Width Out to Out	30.8 ft
(32) Approach Roadway Width (W/Shoulders)	29.9 ft
(33) Bridge Median	0 - No median
(34) Skew	25 Deg
(35) Structure Flared	0 - No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	29.5 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	0
(26) Functional Class	7 - Rural Major Collector
(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	0 - The inventory route is not
(20) Toll	3 - On free road. The structure
(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	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	56
(65) Inventory Rating Method	1 - Load Factor(LF)
(66) Inventory Rating	
Type	
Rating	34
(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	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	
(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	290
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date	09/19/2022		
(91) Frequency	24		
(92) Critical Feature Inspection	Done	Freq. (Mon)	Date
A: Fracture Critical Detail	No		
B: Underwater Inspection	No		
C: Other Special Inspection	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.			



Asset #05869(Routine, Underwater type 2)

District: 06, County: 85 - Lonoke County

Team Lead: Bryan Saunders, Inspection Date: 09/19/2022

### General Observation

AHTD Job # 60229 Drawing # 23525

Logged South bound.

Channel profile done 9/15/2020

---

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

piles observed and probed at water line

---

**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.)  
piles observed and probed at water line

---



**Asset #05869**(Routine, Underwater type 2)

**SH 381Log 9.73 over BUFFALO DITCH**

**Location: 9.7MI SO JCT US 70**

**Team Lead: Bryan Saunders, Inspection Date: 09/19/2022**

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
38	RC Slab	SF	3234	2569	665	0	0
1130	Cracking (RC and Other)	SF	265	0	265	0	0
1190	Abrasion/Wear (PSC/RC)	SF	400	0	400	0	0
(38) All spans have shear cracks at bents 1,2 and 3. All spans have up to 13/16 inch creep. Creep measured with string line 09/10/14. abrasion to deck from farm machinery							
215	Reinforced Concrete Abutment	LF	88	85	3	0	0
1130	Cracking (RC and Other)	LF	3	0	3	0	0
(215) Small scattered cracks in both abutments.							
227	Reinforced Concrete Pile	EA	12	0	12	0	0
1190	Abrasion/Wear (PSC/RC)	EA	12	0	12	0	0
(227) All piles have light abrasion							
234	Reinforced Concrete Pier Cap	LF	68	66	1	1	0
1080	Delamination/Spall/Patched Area	LF	1	0	0	1	0
1090	Exposed Rebar	LF	1	0	1	0	0
(234) Bent 3 cap back spall at the keyway right side. Bent 3 cap exposed rebar at pile 2							
301	Pourable Joint Seal	LF	62	0	0	62	0
2320	Seal Adhesion	LF	62	0	0	62	0
(301) Joint seals have lost bond							
331	Reinforced Concrete Bridge Railing	LF	210	210	0	0	0

**Team Lead:** Bryan Saunders, **Inspection Date:** 09/19/2022

## Deck

ELEMENTS		DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
38	RC Slab	SF	3234	2569	665	0	0	
1130	Cracking (RC and Other)	SF	265	0	265	0	0	
1190	Abrasion/Wear (PSC/RC)	SF	400	0	400	0	0	
(38) All spans have shear cracks at bents 1,2 and 3. All spans have up to 13/16 inch creep. Creep measured with string line 09/10/14. abrasion to deck from farm machinery								



Asset #05869(Routine, Underwater type 2)

SH 381Log 9.73 over BUFFALO DITCH

Location: 9.7MI SO JCT US 70

Team Lead: Bryan Saunders, Inspection Date: 09/19/2022

## Superstructure

ELEMENTS	DESCRIPTION	UNITS	TOTAL				
				CS1	CS2	CS3	CS4





Asset #05869(Routine, Underwater type 2)

SH 381Log 9.73 over BUFFALO DITCH

Location: 9.7MI SO JCT US 70

Team Lead: Bryan Saunders, Inspection Date: 09/19/2022

## Substructure

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
215	Reinforced Concrete Abutment	LF	88	85	3	0	0
1130	Cracking (RC and Other)	LF	3	0	3	0	0
(215) Small scattered cracks in both abutments.							
227	Reinforced Concrete Pile	EA	12	0	12	0	0
1190	Abrasion/Wear (PSC/RC)	EA	12	0	12	0	0
(227) All piles have light abrasion							
234	Reinforced Concrete Pier Cap	LF	68	66	1	1	0
1080	Delamination/Spall/Patched Area	LF	1	0	0	1	0
1090	Exposed Rebar	LF	1	0	1	0	0
(234) Bent 3 cap back spall at the keyway right side. Bent 3 cap exposed rebar at pile 2							

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

Comment: piles observed and probed at water line

### 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.)

Comment: piles observed and probed at water line



Elevation



Approach looking south



Deck view



Soffit view





Abrasion to the piles



Bent 1 abutment



**Asset #05869**(Routine, Underwater type 2)

**SH 381Log 9.73 over BUFFALO DITCH**

**Location: 9.7MI SO JCT US 70**

**Team Lead:** Bryan Saunders, **Inspection Date:** 09/19/2022

## **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	
A-63 Missing/Incorrect Log Mile Signage	
A-64 - Vegetation Removal Requested	

**A-54 - Sealable Deck Cracks**

**A-55 - Deck Washing Needed**

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



**Asset #05869**(Routine, Underwater type 2)

**SH 381Log 9.73 over BUFFALO DITCH**

**Location: 9.7MI SO JCT US 70**

**Team Lead:** Bryan Saunders, **Inspection Date:** 09/19/2022

**A-57 - Beam End and Bearing Painting 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**

**A-64 - Vegetation Removal Requested**



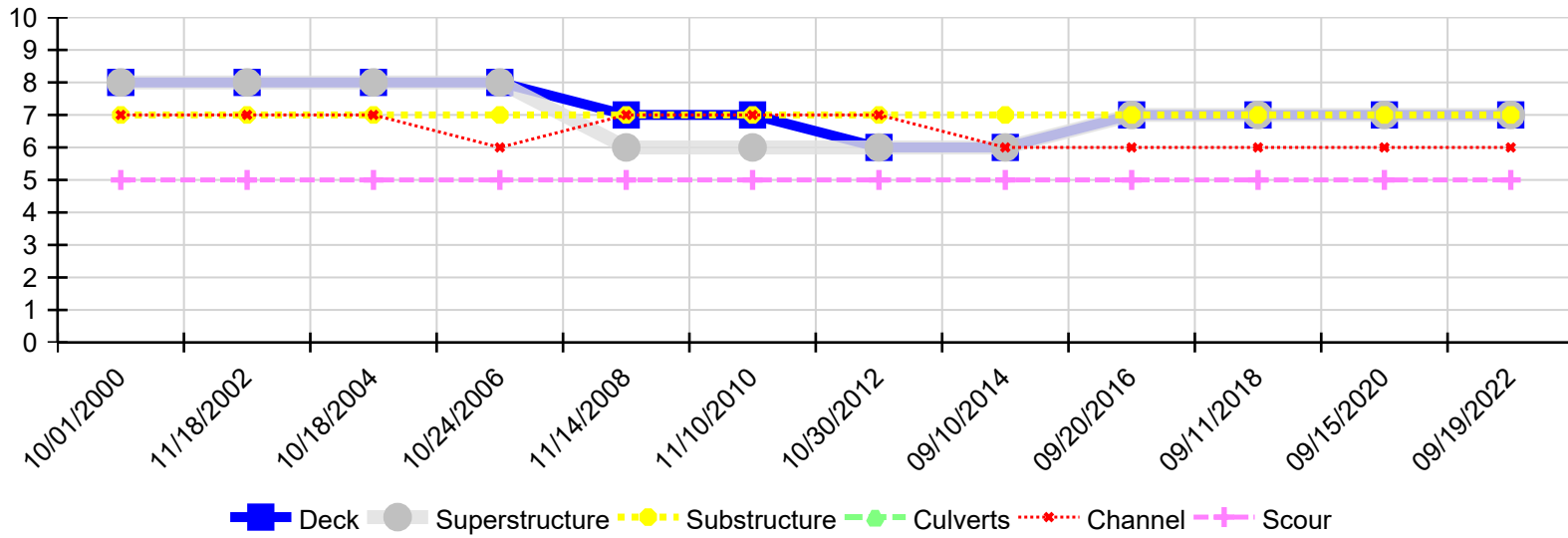
Asset #05869(Routine, Underwater type 2)

SH 381Log 9.73 over BUFFALO DITCH

Location: 9.7MI SO JCT US 70

Team Lead: Bryan Saunders, Inspection Date: 09/19/2022

Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
09/19/2022	7	7	7	N	6	5
09/15/2020	7	7	7	N	6	5
09/11/2018	7	7	7	N	6	5
09/20/2016	7	7	7	N	6	5
09/10/2014	6	6	7	N	6	5
10/30/2012	6	6	7	N	7	5
11/10/2010	7	6	7	N	7	5
11/14/2008	7	6	7	N	7	5
10/24/2006	8	8	7	N	6	5
10/18/2004	8	8	7	N	7	5
11/18/2002	8	8	7	N	7	5
10/01/2000	8	8	7	N	7	5