



Latitude:36.10649, Longitude:-94.01276

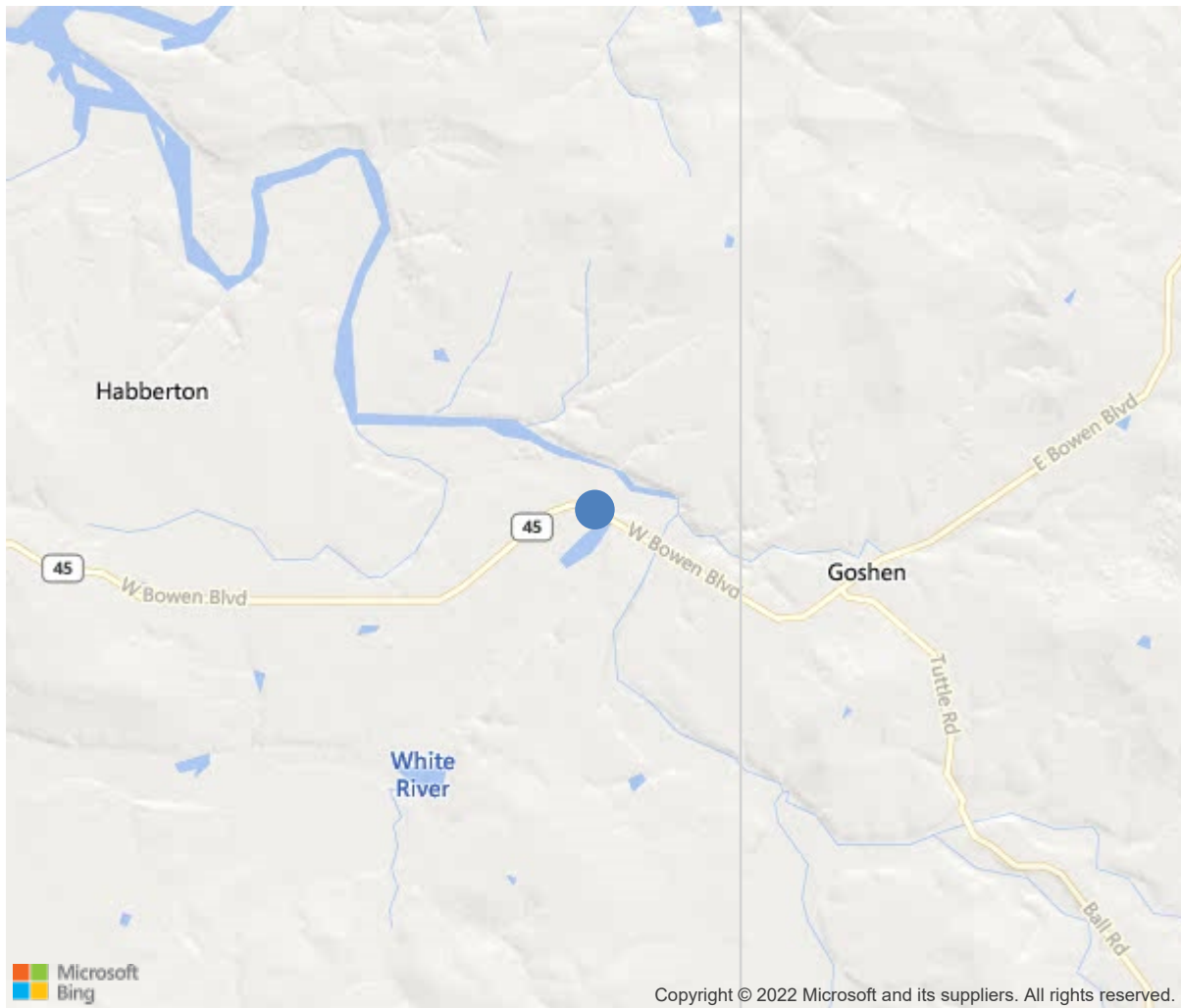
Route:45 Section:05 Log:9.48

Arnold Road ID:72x45x5xA, Arnold Log mile:9.468

District 04, Washington County

Owner: 1-State Highway Agency

9.48 MI E. OF US 71-B



36.10649, -94.01276

Inspection Direction : W to E



Bridge #06789(Routine)

SH 45 over White River-Washington

Location: 9.48 MI E. OF US 71-B

Team Lead: Eric West Inspection Date: September 08, 2022

IDENTIFICATION	
(1) State Names	Arkansas
(8) Structure Number	06789
(5) Inventory Route	45
(2) Highway Agency District	04
(3) County Code	143-Washington County, Arkansas
(4) Place Code	0
(6) Features Intersected	White River-Washington
(7) Facility Carried	SH 45
(9) Location	9.48 MI E. OF US 71-B
(11) Mile Point	9.48 mi
(12) Base Highway Network	No
(13) LRS Inventory Rte & Subrte	0000000000
(16) Latitude	36.10649
(17) Longitude	-94.01276
(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	8
(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 placed
Type of Membrane	0-None
Type of Deck Protection	1-Epoxy Coated Reinforcing
AGE AND SERVICE	
(27) Year Built	2002
(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	7200
(30) Year of ADT	2018
(109) Truck ADT	4 %
GEOMETRIC DATA	
(48) Length of Maximum Span	95 ft
(49) Structure Length	540 ft
(50) Curb or Sidewalk Width	
Left	0 ft
Right	0 ft
(51) Bridge Roadway Width Curb to Curb	39.4 ft
(52) Deck Width Out to Out	42.5 ft
(32) Approach Roadway Width (W/Shoulders)	24 ft
(33) Bridge Median	0-No median
(34) Skew	0 Deg
(35) Structure Flared	No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	40.7 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 water
(111) Pier Protection	5-None present but re-evaluation
(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	6-Rural Minor Arterial
(100) Defense Highway	0-The inventory route is not a S
(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 part of
(20) Toll	3-On free road. The structure is toll-
(21) Maintain	1-State Highway Agency
(22) Owner	1-State Highway Agency
(37) Historical Significance	5-Bridge is not eligible for the NRHP
CONDITION	
(58) Deck	7
(59) Superstructure	8
(60) Substructure	7
(61) Channel & Channel Protection	8
(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	8
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	5
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	6
(72) Approach Roadway Alignment	5
(36A) Bridge Railings	1-Inspected feature meets currently a
(36B) Transitions	1-Inspected feature meets currently a
(36C) Approach Guardrail	1-Inspected feature meets currently a
(36D) Approach Guardrail Ends	1-Inspected feature meets currently a
(113) Scour Critical Bridges	5-Bridge foundations determined to be
PROPOSED IMPROVEMENTS	
(75) Type of Work	
(76) Length of Structure Improvement	ft
(94) Bridge Improvement Cost	\$ 0
(95) Roadway Improvement Cost	\$
(96) Total Project Cost	\$
(97) Year of Improvement Cost Estimate	
(114) Future ADT	9001
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date			09/2022
(91) Frequency			24 Months
(92) Critical Feature Inspection	Done	Freq. (Mon)	Date
A: Fracture Critical Detail	No		
B: Underwater Inspection	Yes		07/2022
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:** Eric West, **Inspection Date:** September 08, 2022

ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	22684	17733	4908	43	0
1120	Efflorescence/Rust Staining	SF	168	0	168	0	0
1130	Cracking (RC and Other)	SF	2703	0	2660	43	0
1190	Abrasion/Wear (PSC/RC)	SF	2080	0	2080	0	0
(12)							
-Transverse cracks with light efflorescence at variable spacing in the overhangs are visible from the undersurface of the deck. -Light wear in the wheel paths. -Sealable longitudinal cracks over the top flanges of Beams # 2, 3, 4, and 5. Cracks are full length of structure. -There are isolated areas where map cracking is beginning to propagate from the longitudinal cracks. -Transverse cracks that appear to correspond with the joints in the parapet walls. -There are sealable transverse cracks approximately 6 inches from the expansion joints at abutments # 1 and # 2.							
107	Steel Open Girder/Beam	LF	3229	3229	0	0	0
515	Steel Protective Coating	SF	34286	34286	0	0	0
(107)							
-Span # 7, beam # 4, splice connection # 2 is missing one bolt in the bottom flange splice connection. -No visible cracks in the steel beams.							
205	Reinforced Concrete Column	EA	14	6	6	2	0
1130	Cracking (RC and Other)	EA	6	0	4	2	0
1190	Abrasion/Wear (PSC/RC)	EA	2	0	2	0	0
(205)							
-Bent # 2 Columns have multiple vertical cracks that range in width from hairline up to 0.04" wide. -Bent # 3, column # 1 has several short duration vertical cracks near the base. -Bents # 4 & 5 Left Columns have vertical hairline cracks. -Both columns of Bent # 7 have short duration vertical cracks at the water elevation that range in width from hairline up to approximately 1/16" which is located in the Left column. The previously documented cracking in the left column up to 3/16" wide could not be verified this inspection and may be below the water elevation.  2022 - UWI - Both columns at Bent 7 have multiple CS3 cracks running vertical. The cracks extend vertically from 2 feet above current water elevation to the mud line. Cracks are widest approximately 5 feet below the water elevation at this inspection. All 4 columns in bents 7 and 8 have minor pop outs and abrasion near the water surface elevation.							
215	Reinforced Concrete Abutment	LF	126	64	39	23	0
1120	Efflorescence/Rust Staining	LF	7	0	7	0	0
1130	Cracking (RC and Other)	LF	55	0	32	23	0
(215)							
-The top of both abutment backwalls have sealable longitudinal wide cracking for the majority of the length of backwall that is visible from the driving surface of the deck. -The top of both back walls have short duration transverse hairline cracks that are visible from the driving surface of the deck. -There are vertical hairline cracks with light efflorescence in the face of the backwalls. -Both abutments have diagonal hairline cracking in the face of the backwalls.							



**Team Lead:** Eric West, **Inspection Date:** September 08, 2022

ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
234	Reinforced Concrete Pier Cap	LF	287	210	77	0	0
1130	Cracking (RC and Other)	LF	77	0	77	0	0
(234)							
-Bent caps have vertical hairline cracks at the step downs and other random locations.							
300	Strip Seal Expansion Joint	LF	127	0	88	39	0
2330	Seal Damage	LF	14	0	14	0	0
2350	Debris Impaction	LF	113	0	74	39	0
(300)							
-Expansion joints are located at Bents # 1, 6, & 9. -Transverse cracking in the deck located approximately 6 inches from the expansion joints at abutments # 1 and # 2. -There are no apparent changes to the transverse cracks in the deck adjacent to the expansion joints. -Strip seal joints are in place with a few areas of where the rubber bead is torn / partially pulled out of its track with no apparent leakage. -The expansion joint assemblies at all locations have dirt and debris accumulation the full width of assemblies.							
310	Elastomeric Bearing	EA	54	51	1	2	0
1000	Corrosion	EA	3	0	1	2	0
515	Steel Protective Coating	SF	216	203	4	3	6
3430	Oxide Film Degradation Color/Texture Adherence(Steel Protective Coatings)	SF	13	0	4	3	6
(310)							
-The bearing at abutment # 1, beam # 6 has light flaking rust on the masonry plate. -Bearing # 6 over bent # 6 has flaking rust on the sole and masonry plates. -The exterior bearings at abutment # 2 have active corrosion with flaking rust in the external loading plate - masonry plate. -All other Bearings appear to be functioning as intended with no apparent noteworthy deficiencies at this inspection.							
331	Reinforced Concrete Bridge Railing	LF	1076	843	221	12	0
1080	Delamination/Spall/Patched Area	LF	4	0	4	0	0
1090	Exposed Rebar	LF	1	0	1	0	0
1130	Cracking (RC and Other)	LF	228	0	216	12	0
1234	ASR	LF	1	1	0	0	0
(331)							
-Minor spall with exposed reinforcing steel in the Left side of Span # 1 bridge railing. -Bridge railing has minor hairline map cracking in various locations. -Bridge railing has vertical cracks at variable spacing. -The bridge railing has a few isolated areas with condition state 3 map cracking during this inspection.							



Roadway



Typical driving surface of the deck.





Typical undersurface of the deck.



Typical undersurface of the deck.





Debris accumulation in the gutters.



Utility attachment.





Abutment #1 typical.



Bents # 2 - 5 typical.





Typical longitudinal deck cracking over the beams.



Sealable deck cracking.





Span #1 wide cracking adjacent to the strip seal expansion joint.



Span #8 cracking adjacent to the strip seal expansion.





Bent #2 column #2 vertical cracking.



Abutment #2 typical.





Abutment #1 wide cracking in the top of the backwall.



Bent #6 strip seal expansion joint.





Abutment #2 exterior bearings with active corrosion and pack rust.



Bridge rail map cracking.

## Maintenance Needs

**Date Reported:** 08/30/2018  
**Priority:** C - Important  
**Type of Work:** Repair  
**Status:** Monitor  
**Inspection Direction** W to E  
**Component:** Miscellaneous

---

### Deficiency Description

The utility attached to the South side of the structure has a fractured support bracket located at the East abutment.

### Remarks

---



The utility attached to the South side of the structure has a fractured / displaced support bracket located at the East abutment.



**Date Reported:** 08/30/2018  
**Priority:** D- Routine  
**Type of Work:** Repair  
**Status:** Monitor  
**Inspection Direction** W to E  
**Component:** 310 - Elastomeric Bearing

---

### Deficiency Description

Elastomeric Bearings -

The masonry plates for bearing # 6 at abutment # 1, and both exterior bearings at abutment # 2 have active corrosion with flaking rust.

### Remarks

---



The masonry plates for bearing # 6 at abutment # 1, and both exterior bearings at abutment # 2 have active corrosion with flaking rust.



The masonry plates for bearing # 6 at abutment # 1, and both exterior bearings at abutment # 2 have active corrosion with flaking rust.



**Date Reported:** 08/30/2018

**Priority:** D- Routine

**Type of Work:** Repair

**Status:** Monitor

**Inspection Direction** W to E

**Component:** 215 - Reinforced Concrete Abutment

---

### Deficiency Description

Substructure -

The top of the abutment backwalls have sealable longitudinal cracks that are visible from the driving surface of the deck.

### Remarks

---



The top of the abutment backwalls have sealable longitudinal cracks that are visible from the driving surface of the deck.

**Date Reported:** 08/23/2012

**Priority:** D- Routine

**Type of Work:** Repair

**Status:** Monitor

**Inspection Direction** W to E

**Component:** 12 - Reinforced Concrete Deck

---

### Deficiency Description

Deck -

Sealable longitudinal cracks over the top flanges of Beams # 2, 3, 4, and 5. Cracks are approximately full length of structure. There are isolated areas where map cracking is beginning to propagate from the longitudinal cracks. Transverse cracks that appear to correspond with the joints in the parapet walls. There is sealable transverse cracking located approximately 6 inches from the expansion joints at abutments # 1 and # 2.

### Remarks

---



Span 7, right lane-Longitudinal cracking.



Span 6, left lane longitudinal cracking.



Span 1-Transverse cracking / spalling adjacent to abutment # 1 expansion joint assembly.



**Date Reported:** 07/23/2014

**Priority:** D- Routine

**Type of Work:** Repair

**Status:** Monitor

**Inspection Direction** W to E

**Component:** 205 - Reinforced Concrete Column

---

### Deficiency Description

Substructure -

The columns in Bent # 7 have short duration vertical cracks at the water elevation that range in width from hairline up to 3/16".

2022 UWI - Both columns at Bent 7 have CS3 cracks that extend from water elevation to the mud line.

### Remarks

---



Bent 7, left column-Vertical cracking.



**Date Reported:** 07/18/2022  
**Priority:** D- Routine  
**Type of Work:** Clean  
**Status:** Monitor  
**Inspection Direction** W to E  
**Component:** Channel

---

**Deficiency Description**

2022 - UWI - Both bents 7 and 8 have large amounts of drift accumulation primarily on the upstream side.

**Remarks**

---



Drift and debris at bent 8.



Drift and debris at bent 7.



Bent # 7 & 8 drift accumulation.





Bridge #06789(Routine)  
SH 45 over White River-Washington  
Location: 9.48 MI E. OF US 71-B

Team Lead: Eric West Inspection Date: September 08, 2022

Date Reported: 09/08/2022  
Priority: D- Routine  
Type of Work: Clean  
Status: Open  
Inspection Direction W to E  
Component: Deck

---

#### Deficiency Description

R.C. Deck-  
The deck gutters have heavy gravel and debris accumulation.

#### Remarks

---



Debris accumulation in the gutters.

**Date Reported:** 09/08/2022  
**Priority:** C - Important  
**Type of Work:** Repair  
**Status:** Open  
**Inspection Direction** W to E  
**Component:** Approach

---

**Deficiency Description**

Approach Guardrail-

The approach guardrail end terminal at the Northwest approach has loose hardware attaching the end terminal to the wood post.

**Remarks**

---



Northwest approach guardrail end terminal loose.





Bridge #06789(Routine)  
SH 45 over White River-Washington  
Location: 9.48 MI E. OF US 71-B

Team Lead: Eric West Inspection Date: September 08, 2022

Date Reported: 09/12/2022  
Priority: D- Routine  
Type of Work: Repair  
Status: Open  
Inspection Direction W to E  
Component: Approach

---

#### Deficiency Description

Approach Roadway-  
The west approach roadway has asphalt settlement at the bridge end.

#### Remarks

---



West approach roadway asphalt settlement at  
abutment #1.



**Bridge #06789**(Routine)  
**SH 45 over White River-Washington**  
**Location: 9.48 MI E. OF US 71-B**

**Team Lead:** Eric West **Inspection Date:** September 08, 2022

### **Inspection Comments**

09/08/2022 - EJW & JPW - Routine Inspection conducted on this date.

A Boat is typically required to perform Underwater Type II Inspections.

08/13/2020 - RSM & SPC: Routine and Underwater Type II Inspections conducted this date. See element notes for documentation.

08/30/2018 - JCJ & TJL - A boat was used to gain access to Bents # 7 & 8 during this inspection. 08/02/2016 - EJW & RWF - Underwater Type 2 inspection conducted. Probing from a boat indicates no apparent scour problems at this inspection. Footings have cover with light drift accumulation at Bent #7.

---

### **Substructure Notes**

RSM & SPC: Underwater Type II Inspection: Probing from a boat revealed that all footings have cover with no apparent scour problems at this inspection. The channel has heavy drift accumulation at bent # 8.