



Latitude:36.16802, Longitude:-94.40396

Route:412 Section:01 Log:9.62

Arnold Road ID:4x412x1xB, Arnold Log mile:4.055

District 09, Benton County

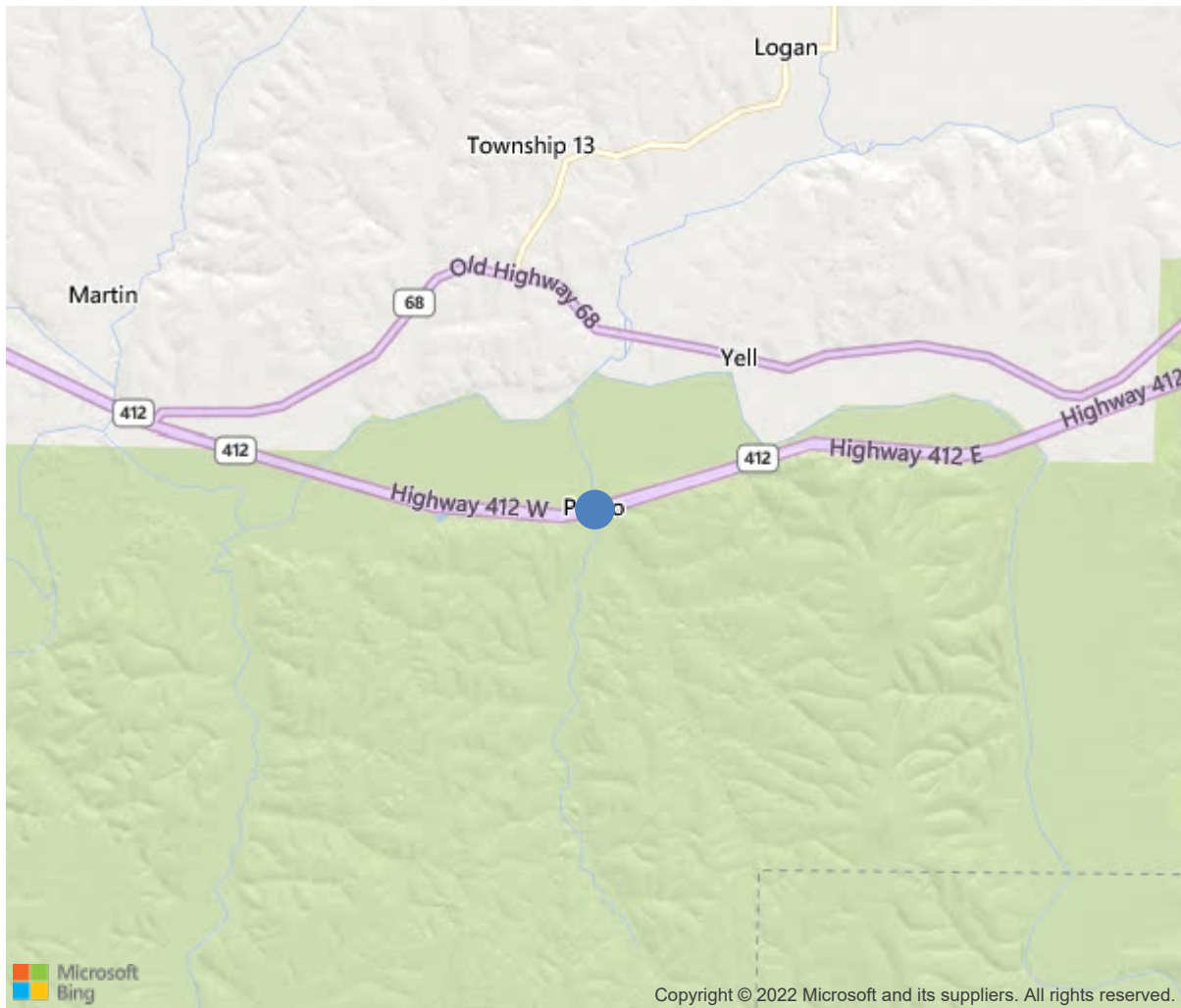
Owner: 1-State Highway Agency



Bridge #A6477 (Routine)
US 412 WB Benton 2 over PEDRO CREEK
Location: Bent Co 9.65 M E OK LINE

Team Lead: Benjamin Smith **Inspection Date:** June 10, 2021

Bent Co 9.65 M E OK LINE



36.16802, -94.40396

Inspection Direction : W to E



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IDENTIFICATION	
(1) State Names	Arkansas
(8) Structure Number	A6477
(5) Inventory Route	412
(2) Highway Agency District	09
(3) County Code	7-Benton County, Arkansas
(4) Place Code	0
(6) Features Intersected	PEDRO CREEK
(7) Facility Carried	US 412 WB Benton 2
(9) Location	Bent Co 9.65 M E OK LINE
(11) Mile Point	9.62 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte & Subrte	0000412010
(16) Latitude	36.16802
(17) Longitude	-94.40396
(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 placed
Type of Membrane	0-None
Type of Deck Protection	1-Epoxy Coated Reinforcing
AGE AND SERVICE	
(27) Year Built	1995
(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	26263
(30) Year of ADT	2013
(109) Truck ADT	1 %
(19) Bypass, Detour Length	1 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	95 ft
(49) Structure Length	238 ft
(50) Curb or Sidewalk Width	
Left	0 ft
Right	0 ft
(51) Bridge Roadway Width Curb to Curb	40 ft
(52) Deck Width Out to Out	42.7 ft
(32) Approach Roadway Width (W/Shoulders)	40 ft
(33) Bridge Median	0-No median
(34) Skew	30 Deg
(35) Structure Flared	Yes, flared
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	41 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 water
(111) Pier Protection	1-Navigation protection not requ
(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 - Oth
(100) Defense Highway	0-The inventory route is not a S
(101) Parallel Structure	L-The left structure of parallel
(102) Direction of Traffic	1 - way traffic
(103) Temporary Structure	
(105) Federal Lands Highways	0-N/A
(110) Designated National Network	1-The inventory route is part of the
(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	7
(60) Substructure	7
(61) Channel & Channel Protection	7
(62) Culverts	N
LOAD RATING AND POSTING	
(31) Design Load	6-MS 18+Mod / HS 20+Mod
(63) Operating Rating Method	1
(64) Operating Rating	
Type	1-Load Factor(LF)
Rating	58
(65) Inventory Rating Method	1-Load Factor(LF)
(66) Inventory Rating	
Type	3
Rating	35
(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	7
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	9
(72) Approach Roadway Alignment	8
(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	8-Bridge foundations determined to be
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	11987
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date			06/2021
(91) Frequency			24 Months
(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.			



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Team Lead: Benjamin Smith, Inspection Date: June 10, 2021

ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	9416	9229	184	3	0
1080	Delamination/Spall/Patched Area	SF	1	0	1	0	0
1120	Efflorescence/Rust Staining	SF	23	0	20	3	0
1130	Cracking (RC and Other)	SF	163	0	163	0	0
(12)	<p>-The wheel paths of the outside lane have light abrasion.</p> <p>-The driving surface of the deck has sealable longitudinal and transverse cracking in all spans. The longitudinal cracking appears to be over beams.</p> <p>-The sawn joints appear to have been sawn adjacent to the actual construction joints in locations leaving an unsealed crack adjacent to the joints.</p> <p>-SIP forms have active corrosion with flaking rust.</p> <p>-</p> <p>Undersurface-</p> <p>The outer vertical face of the Left overhang of span #1 has an area of map cracking with efflorescence over abutment #1. The underside of the left overhang in span #1 has 1' of delamination and 2' of cs2 efflorescence. The right overhang has 7' of cs2 efflorescence. The left overhang has a utility attached. The left overhang in span #2 has 3' of cs3 efflorescence. The right overhang has 11' of cs2 efflorescence. The span #3 overhangs have no deficiencies.</p>						
107	Steel Open Girder/Beam	LF	1416	1396	4	16	0
1000	Corrosion	LF	20	0	4	16	0
515	Steel Protective Coating	SF	14379	14339	8	32	0
3430	Oxide Film Degradation Color/Texture Adherence(Steel Protective Coatings)	SF	40	0	8	32	0
(107)	<p>Span #1-beam #1 has 4' of cs2 corrosion on the exterior lower web at the beginning of the span. Beam #5 has 4' of cs3 corrosion on the top flange and upper web at mid span. Beam #6 has 6' of cs3 corrosion on the bottom flange at mid span due to leaking construction joint seals.</p> <p>Span #2- beams #1, 6 have 3' of cs3 corrosion each at and adjacent to the 2nd splice plate.</p> <p>Span #3- beam #1 has several locations of factory defects on the bottom of the bottom flange. No cracking was noted.</p>						
210	Reinforced Concrete Pier Wall	LF	28	28	0	0	0
(210)	<p>The pier walls are 14' wide.</p> <p>Pier wall #1- no deficiencies noted.</p> <p>Pier wall #2- no deficiencies noted.</p>						
215	Reinforced Concrete Abutment	LF	148	108	38	2	0
1080	Delamination/Spall/Patched Area	LF	2	0	0	2	0
1120	Efflorescence/Rust Staining	LF	2	0	2	0	0
1130	Cracking (RC and Other)	LF	36	0	36	0	0

Team Lead: Benjamin Smith, **Inspection Date:** June 10, 2021

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Approach view in direction of log mile.



4' of cs2 corrosion on the exterior web of beam #1 in span #1.



Typical view of cs3 corrosion beneath the construction joints.



Upstream channel view.



Downstream channel view.



Factory defects on the bottom flange of beam #1 in span #3.



Typical view of driving surface.



General view of deck.



General view of abutment #1.



Railing right cracking with efflorescence.



View of abutment #1 compression joint.



Asphalt patch to east approach roadway



Elevation looking South



Inventory looking East



General view of span #2 undersurface.



East approach slab cracking.



Abutment #2 spalling

Maintenance Needs

Date Reported: 06/13/2011
Priority: D- Routine
Type of Work: Repair
Status: Assigned
Component:

Deficiency Description

Deck / Approach slabs - The driving surface of the deck and approach slabs have sealable cracking. The sawn joints appear to have been sawn adjacent to the actual construction joints leaving an unsealed crack along the joints in locations. The sawn joint material is missing in isolated areas. The East approach slab has an area of spalling approximately 2' long at the juncture of the approach roadway.

Remarks



East approach slab cracking.



Cracking along sawn joints



Sealable longitudinal deck cracks located in the driving surface.



East approach slab-Cracking.



East approach slab-Spalling.



Cracking along sawn joints

Date Reported: 06/13/2011
Priority: D- Routine
Type of Work: Repair
Status: Assigned
Component:

Deficiency Description

Expansion joints - The strip seal expansion joints have heavy debris impaction.

Remarks



Span #1 bay #5 active corrosion to SIP forms.



Abutment #1-Debris impaction in expansion joint.



View of abutment #1 compression joint.



Cracking along sawn joints.



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Span #1 right transverse crack adjacent to saw joint

Date Reported: 06/13/2017
Priority: D- Routine
Type of Work: None
Status: Monitor
Component:

Deficiency Description

East abutment - The top of the East abutment backwall has two areas of spalling that is creating potholes in the driving surface. The area surrounding the spalls is delaminated.

Remarks



Spalling in top of East abutment backwall.



Abutment #2 spalling



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Inspection Comments

Logged West to East and is accessible with an extension ladder. The structure is inspected against the flow of traffic.