



Latitude:36.17527, Longitude:-94.44661

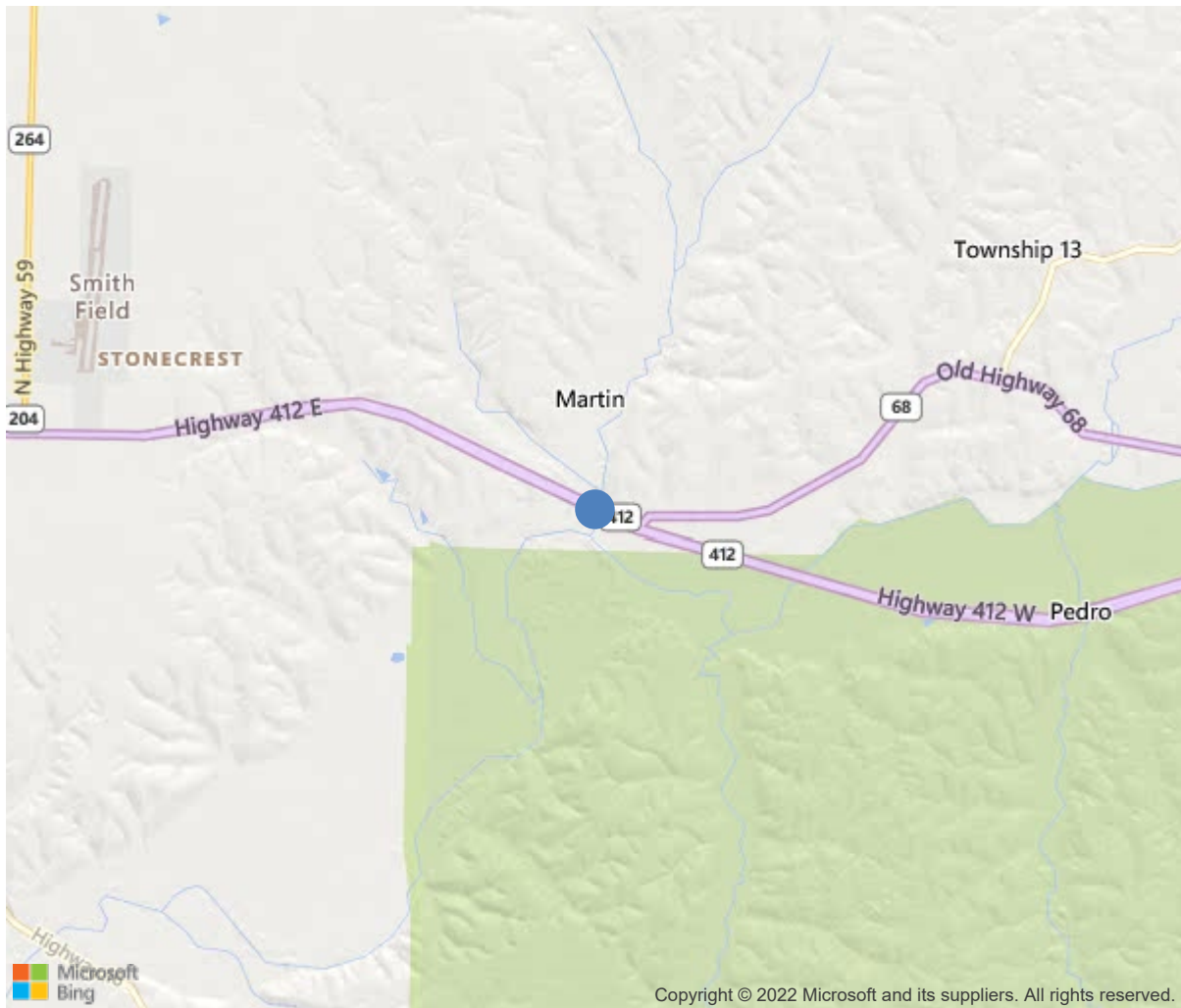
Route:412 Section:01 Log:7.158

Arnold Road ID:4x412x1xA, Arnold Log mile:7.154

District 09, Benton County

Owner: 1-State Highway Agency

2.8 MI E OF JT SH59&US412



36.17527, -94.44661

Inspection Direction : W to E



Bridge #B6475(Routine, Underwater type 2)

US 412 EB Benton 2 over BUTLER CREEK

Location: 2.8 MI E OF JT SH59&US412

Team Lead: Benjamin Smith Inspection Date: May 12, 2021

IDENTIFICATION	
(1) State Names	Arkansas
(8) Structure Number	B6475
(5) Inventory Route	412
(2) Highway Agency District	09
(3) County Code	7-Benton County, Arkansas
(4) Place Code	0
(6) Features Intersected	BUTLER CREEK
(7) Facility Carried	US 412 EB Benton 2
(9) Location	2.8 MI E OF JT SH59&US412
(11) Mile Point	7.158 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte & Subrte	0000412010
(16) Latitude	36.1752709898535
(17) Longitude	-94.4466124540367
(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	1994
(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	10000
(30) Year of ADT	2018
(109) Truck ADT	11 %
(19) Bypass, Detour Length	1 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	65 ft
(49) Structure Length	167 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	42.8 ft
(32) Approach Roadway Width (W/Shoulders)	40 ft
(33) Bridge Median	0-No median
(34) Skew	20 Deg
(35) Structure Flared	No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	41.3 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	R-The right structure of paralle
(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	8
(61) Channel & Channel Protection	8
(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	60
(65) Inventory Rating Method	1-Load Factor(LF)
(66) Inventory Rating	
Type	3
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	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	25900
(115) Year of Future ADT	2038

INSPECTIONS *			
(90) Inspection Date			05/2021
(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.			



Bridge #B6475(Routine, Underwater type 2)

US 412 EB Benton 2 over BUTLER CREEK

Location: 2.8 MI E OF JT SH59&US412

Team Lead: Benjamin Smith, Inspection Date: May 12, 2021

ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	6600	4928	1670	2	0
1120	Efflorescence/Rust Staining	SF	14	0	12	2	0
1130	Cracking (RC and Other)	SF	328	0	328	0	0
1190	Abrasion/Wear (PSC/RC)	SF	1330	0	1330	0	0
(12)	<p>Driving surface- The driving surface of the deck deck has multiple cracks throughout the deck. Maintenance forces have attempted to seal the cracks, but the cracks are still present.</p> <p>Under surface- Has sip forms in all bays. Span#1- the left overhang has 2' of cs3 efflorescence and 2' of cs2 efflorescence. The right overhang has 1' of cs2 efflorescence. Span #2- the right overhang has 6' of cs2 efflorescence. The left overhang has 1' of cs2 efflorescence. Span #3- has 1' of cs2 efflorescence in the left overhang. The right overhang has 1' of cs2 efflorescence over the cap at the beginning of the span.</p>						
107	Steel Open Girder/Beam	LF	825	817	1	7	0
1000	Corrosion	LF	8	0	1	7	0
515	Steel Protective Coating	SF	8066	8045	14	7	0
3430	Oxide Film Degradation Color/Texture Adherence(Steel Protective Coatings)	SF	21	0	14	7	0
(107)	<p>Span #1- beam #1 has 1' of cs2 corrosion on the top flange. Beam #3 has 3' of cs3 corrosion at the beginning of the span. 4' of cs3 corrosion on the top flange near mid span with cs2 corrosion on the web and bottom flange in the same location. The construction joint in span #1 left side is leaking and causing corrosion on beam #1,3 and the S.I.P. forms Span #2- no deficiencies noted. Span #3- no deficiencies noted.</p>						
210	Reinforced Concrete Pier Wall	LF	28	28	0	0	0
(210)	<p>Pier wall #1- no deficiencies noted. The footings have cover at this inspection. Pier wall #2- no deficiencies noted. The footings have cover at this inspection.</p>						
215	Reinforced Concrete Abutment	LF	128	118	10	0	0
1130	Cracking (RC and Other)	LF	10	0	10	0	0
(215)	<p>Abutment #1- The abutment back wall has several transverse cracks in the top of the back wall visible from the driving surface. The rip rap is partially missing on the downstream portion of the embankment. Minor erosion was noted at the toe of the slope. Abutment #2- The abutment back wall has several transverse cracks in the top of the back wall visible from the driving surface. The rip rap is partially missing on the downstream portion of the embankment. Minor erosion was noted at the toe of the slope.</p>						
234	Reinforced Concrete Pier Cap	LF	87	87	0	0	0

Team Lead: Benjamin Smith, **Inspection Date:** May 12, 2021

ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
(234)							
Pier cap #1- No noteworthy deficiencies at this inspection.							
Pier cap #2- No noteworthy deficiencies at this inspection.							
300	Strip Seal Expansion Joint	LF	90	7	83	0	0
2310	Leakage	LF	3	0	3	0	0
2350	Debris Impaction	LF	80	0	80	0	0
(300)							
Abutment #1 seal- has loose debris impaction.							
Abutment #2 seal- the joint seal at abutment #2 is leaking at the midsection with loose debris impaction.							
310	Elastomeric Bearing	EA	20	19	0	1	0
1000	Corrosion	EA	1	0	0	1	0
515	Steel Protective Coating	SF	40	38	0	2	0
3430	Oxide Film Degradation Color/Texture Adherence(Steel Protective Coatings)	SF	2	0	0	2	0
(310)							
Elastomeric bearings- Span #1, bearing #3 over the West abutment has cs3 corrosion due to apparent leakage through the joint seal.							
321	Reinforced Concrete Approach Slab	SF	2800	2483	282	35	0
1130	Cracking (RC and Other)	SF	48	0	13	35	0
1190	Abrasion/Wear (PSC/RC)	SF	269	0	269	0	0
(321)							
Abutment #1 approach slab- The West approach slab has several sealable cracks and light abrasion. The approach roadway adjacent to the approach slab has loss of asphalt and has created a pothole.							
Abutment #2 approach slab- has light abrasion with sealable cracks.							
331	Reinforced Concrete Bridge Railing	LF	334	316	18	0	0
1090	Exposed Rebar	LF	1	0	1	0	0
1130	Cracking (RC and Other)	LF	17	0	17	0	0
(331)							
Right parapet wall- The parapet wall has vertical cracks that correspond with the saw joints. The right parapet wall in Span #2 near bent #2 has a 12" long spall with steel exposed steel adjacent to the drain. The 3rd and 4th section have longitudinal cracking in the top edge.							
Left parapet wall- The parapet wall has vertical cracks that correspond with the saw joints.							



Approach view in direction of log mile.



4' of corrosion on beam #3 in span #1.



Upstream channel view.



Typical view of the undersurface.



Downstream channel view.



Typical view of driving surface.



Inventory looking East



General view of span #3 and abutment #2.



Loss of pourable joint material typical.



Span #1 bays #1 & #2 active corrosion of SIP forms.



West approach roadway adjacent to west approach slab right lane potholes.



Abutment #2 joint material debris impact and loss of adhesion.



Elevation looking South.



General view of deck



Abutment #1 joint material debris impaction and loss of adhesion.

Maintenance Needs

Date Reported: 05/17/2011

Priority: D- Routine

Type of Work: None

Status: Assigned

Component:

Deficiency Description

Deck - The compression joint seals at both bridge ends have debris impaction the full length of joints.

The pourable type joint material in the construction joints is missing in locations allowing leakage that appears to be causing corrosion to SIP forms.

Remarks



Typical of pourable joint material in the construction joints right lane.



Span #1, bays #1 and #2-Corrosion to SIP forms.



Typical - compression joint seals have debris
impaction.



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Location: 2.8 MI E OF JT SH59&US412

Team Lead: Benjamin Smith **Inspection Date:** May 12, 2021

Date Reported: 05/17/2011

Priority: D- Routine

Type of Work: None

Status: Assigned

Component:

Deficiency Description

Deck / Approach slabs - The driving surface of the deck and approach slabs have numerous sealable cracks throughout.

Remarks



Typical of sealable deck cracking.



Typical cracking in the right lane of west approach slab.



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US 412 EB Benton 2 over BUTLER CREEK

Location: 2.8 MI E OF JT SH59&US412

Team Lead: Benjamin Smith **Inspection Date:** May 12, 2021

Date Reported: 05/08/2017
Priority: C - Important
Type of Work: None
Status: Monitor
Component:

Deficiency Description

West approach roadway - The ACHM driving surface of the West approach roadway has a pothole in the right lane at the juncture of the approach slab.

Remarks



Approach roadway at Right lane of west approach roadway - pothole.



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Team Lead: Benjamin Smith **Inspection Date:** May 12, 2021

Inspection Comments

Structure is logged West to East and is accessible with a small extension ladder. The structure is inspected with the flow of traffic.

No bat activity was noted.