



Latitude:35.40630, Longitude:-94.42055

Route:255 Section:05 Log:1.56

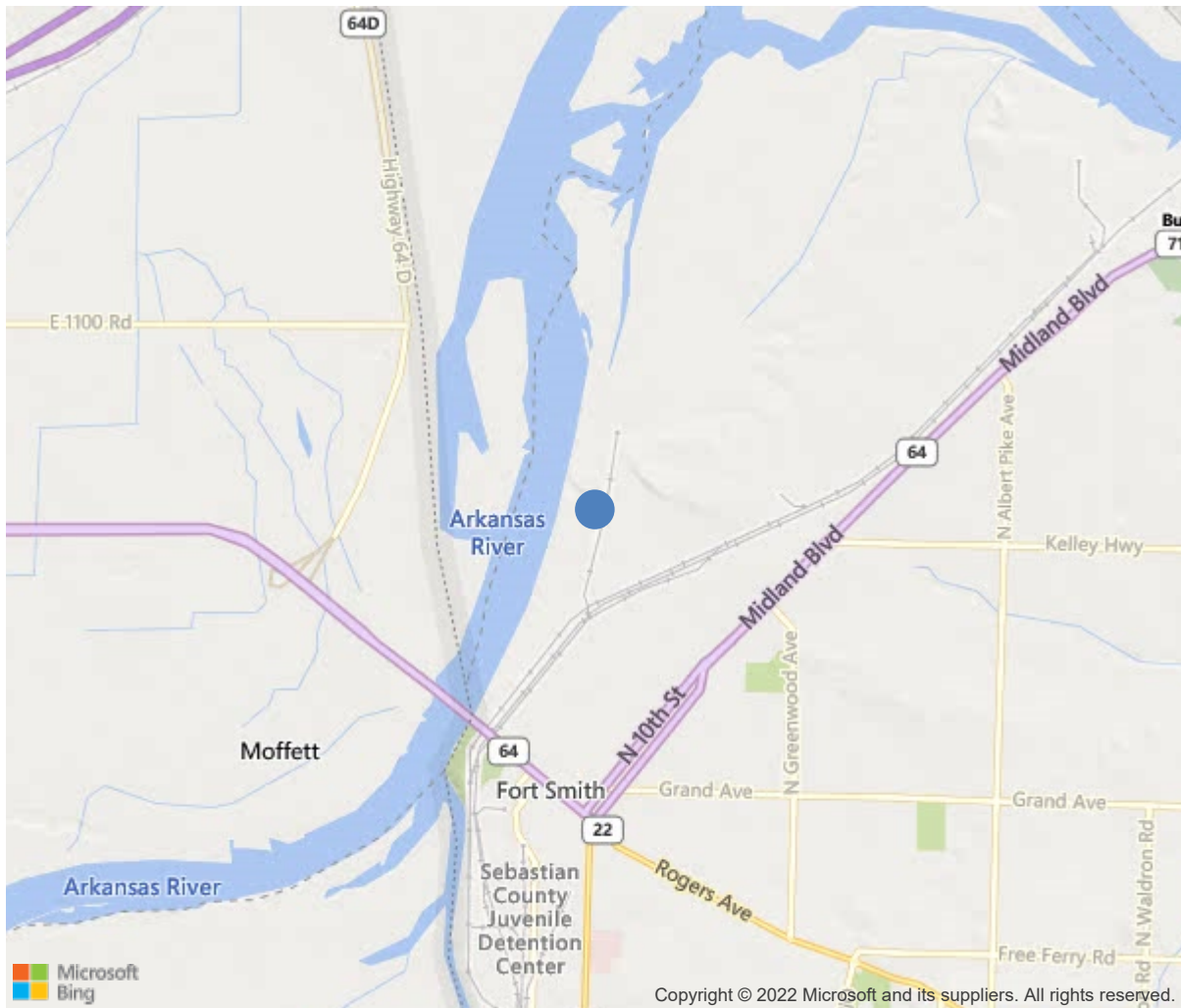
Arnold Road ID:65x255x5xA, Arnold Log mile:1.558

District 04, Sebastian County

Owner: 1-State Highway Agency

Place Code: 24550 - Fort Smith

JCT SH 55 & P STREET



35.40630, -94.42055

Inspection Direction : S to N



Bridge #05360(Routine, Underwater type 2)

State Highway 255 over Sewer Outlet

Location: JCT SH 55 & P STREET

Team Lead: Jeff Jones Inspection Date: April 06, 2022

IDENTIFICATION	
(1) State Names	Arkansas
(8) Structure Number	05360
(5) Inventory Route	255
(2) Highway Agency District	04
(3) County Code	131-Sebastian County, Arkansas
(4) Place Code	24550
(6) Features Intersected	Sewer Outlet
(7) Facility Carried	State Highway 255
(9) Location	JCT SH 55 & P STREET
(11) Mile Point	1.56 mi
(12) Base Highway Network	No
(13) LRS Inventory Rte & Subrte	0000000000
(16) Latitude	35.4063
(17) Longitude	-94.42055
(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 placed
Type of Membrane	0-None
Type of Deck Protection	0-None
AGE AND SERVICE	
(27) Year Built	1972
(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	2223
(30) Year of ADT	2018
(109) Truck ADT	1 %
(19) Bypass, Detour Length	2 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	35 ft
(49) Structure Length	105 ft
(50) Curb or Sidewalk Width	
Left	0.4 ft
Right	0.4 ft
(51) Bridge Roadway Width Curb to Curb	43 ft
(52) Deck Width Out to Out	46 ft
(32) Approach Roadway Width (W/Shoulders)	44 ft
(33) Bridge Median	0-No median
(34) Skew	10 Deg
(35) Structure Flared	No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	44 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	0
(26) Functional Class	16-Urban 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	6
(59) Superstructure	6
(60) Substructure	5
(61) Channel & Channel Protection	5
(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	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	5
(68) Deck Geometry	6
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	9
(72) Approach Roadway Alignment	7
(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	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	3954
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date			04/2022
(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 #05360(Routine, Underwater type 2)

State Highway 255 over Sewer Outlet

Location: JCT SH 55 & P STREET

Team Lead: Jeff Jones, Inspection Date: April 06, 2022

ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
38	RC Slab	SF	4857	3583	1139	135	0
1090	Exposed Rebar	SF	2	0	1	1	0
1120	Efflorescence/Rust Staining	SF	21	0	0	21	0
1130	Cracking (RC and Other)	SF	1251	0	1138	113	0
(38)	<p>-This is a voided slab structure.</p> <p>-Diagonal cracks in corners of each slab typical. Maintenance forces have sealed some cracks with epoxy in the past but unsealed cracks still exist during this inspection.</p> <p>-There are areas with spalling in the curb and exterior edges of the deck over the intermediate bents.</p> <p>-No visible shear cracks apparent in the edges of the slabs.</p> <p>-There is an 8" piece of reinforcing steel exposed in the Right deck drain of Span # 2.</p> <p>-There are numerous sealable longitudinal cracks in the driving surface of the deck.</p> <p>-There is dirt accumulation in the gutters.</p> <p>-Expansion joints are full of dirt and debris.</p> <p>Slab soffit:</p> <p>-Numerous longitudinal cracks are visible from the undersurface with a few that appear to have leakage with rust stains.</p> <p>-There are transverse cracks with rust stains in the undersurface of Span # 1 near mid-span of the Left side of structure.</p>						
215	Reinforced Concrete Abutment	LF	130	128	2	0	0
1130	Cracking (RC and Other)	LF	2	0	2	0	0
(215)	<p>Note: This structure has had a history of rotation of both abutments towards the center. Refer to history files and documentation of measurements taken to monitor the progress of the movement.</p> <p>There is earth settlement under the abutment caps.</p> <p>End Bents:</p> <p>-The abutments have a few vertical cracks.</p> <p>-Measurements to monitor substructure movement taken from exterior top corners of abutment caps. Black painted reference marks made at measurement locations.</p> <p>04/06/2022 - JCJ & TJL - Actual field measurements indicate that the abutments are rotating towards the channel. Measurements taken from the Face of abutment cap to the Face of abutment cap. See documentation attached to this report for additional information. Plan dimension is 101.00' Actual field measurement Left side - 100.25' Actual field measurement Right side - 100.19'. Measurements were taken with a Hilti Laser Range Meter.</p>						
227	Reinforced Concrete Pile	EA	26	26	0	0	0
(227)	<p>Substructure is founded on 18" octagonal pre-cast concrete piling.</p> <p>-Reinforced concrete piling has a coal tar protective coating on the base of piles in accordance with the Design Plan Drawing.</p> <p>-Minor areas with missing tar at the base of the columns.</p> <p>-The piles have loops made from stranded wire cast in the upper portions of piles from the construction process.</p> <p>-No apparent deficiencies to the piles during this inspection.</p>						
234	Reinforced Concrete Pier Cap	LF	96	78	18	0	0

ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
1080 (234)	Delamination/Spall/Patched Area	LF	18	0	18	0	0
-The caps have minor spalls where snap ties are located from construction process. -The ahead side of Bent # 2 cap has two delaminated areas approximately 16" long adjacent to Pile # 2.							
301	Pourable Joint Seal	LF	94	8	0	0	86
2350 (301)	Debris Impaction	LF	86	0	0	0	86
-The deck joint sealant is not visible due to heavy debris impaction. The joints are full of Incompressible material with vegetation growing in the gutters.							
330	Metal Bridge Railing	LF	210	197	12	1	0
1020 (330)	Connection	LF	13	0	12	1	0
Two pipe aluminum bridge railing mounted on the concrete railing. The metal bridge railing posts on both sides of the structure have loose anchor bolts. Approach railing: The Northwest approach railing has collision damage that has created a "pocket" in the railing and fractured 5 of the concrete posts at the base.							
331	Reinforced Concrete Bridge Railing	LF	210	188	18	4	0
1080	Delamination/Spall/Patched Area	LF	1	0	0	1	0
1090	Exposed Rebar	LF	3	0	0	3	0
1130 (331)	Cracking (RC and Other)	LF	18	0	18	0	0
-The concrete portion of bridge railing has spalling with exposed reinforcing steel on the Left and Right sides over Bent # 2 and along the base of railing on left side of Span # 3.							



Elevation.



Roadway.



Approach roadway facing South.



Deck. Typical.



Deck. Typical.



Typical undersurface of the slab.



Typical driving surface of the slab.



Bent # 1 approach roadway settlement.



Bent # 4 earth settlement under the abutment cap.



Bent # 1 asphalt settlement.



North approach settlement..



Northwest approach guardrail damage.



Elevation.



Longitudinal cracking that has been sealed in the past.



Dirt and debris accumulation in the gutters.



Span # 2 longitudinal cracking visible on the undersurface of the slab.



Span # 1 longitudinal cracking with leakage visible from the undersurface of the slab.



Span # 2 slab soffit. Typical.



Span # 3 slab soffit. Typical.



Longitudinal cracking in the deck of Span # 2.



Deck. Typical.



Span # 1 slab soffit. Typical.



Span # 1 slab soffit has cracking with rust stains.



Span # 1 slab soffit has cracking with rust stains.



Span # 1 slab soffit with longitudinal cracks and rust stains.



Span # 1 slab soffit with transverse cracks with rust stains.



Bent # 4. Typical.



Earth settlement under the South abutment.



Typical concrete piles.



Bent # 2 concrete piling. Typical.



Bent # 3. Piling # 5 typical. -Minor areas with missing tar at the base of the columns.



Bent # 3 cap. Ahead face. Typical.



Bent # 2 ahead face. Typical.



-The ahead side of Bent # 2 cap has two delaminated areas approximately 16" long adjacent to Pile # 2.



Bent # 3 back face. Typical.



Bent # 2 debris impact in the joint seal.



Bent # 3 debris impact in the joint seal.



Expansion joint over Bent # 2. Debris impact.



The Right bridge railing post over Bent # 3 has loose anchor bolts.



Span # 1, Bent # 2 Rt spalling with exposed reinforcing steel in the base of the bridge rail.



Spall with exposed reinforcing steel in the Right curb over Bent # 2.



There is embankment erosion and rip rap displacement along both sides of the channel. Photo of South embankment.

Maintenance Needs

Date Reported: 06/26/2012
Priority: D- Routine
Type of Work: Repair
Status: Monitor
Component: 301 - Pourable Joint Seal

Deficiency Description

Expansion joints -

The poured type expansion joint sealant has deteriorated and is missing in several locations over bents # 2 and # 3 allowing incompressible materials to enter the joints and appears to be forcing spans # 1 and # 3 away from the channel.
(See attached maintenance memorandum)

Remarks



Bent # 3 expansion joint-Debris impaction.



Left side over Bent # 2.



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Team Lead: Jeff Jones **Inspection Date:** April 06, 2022



Expansion joint over Bent # 3. Debris impaction.

Date Reported: 04/26/2016
Priority: C - Important
Type of Work: Replace
Status: Monitor
Component: Approach

Deficiency Description

Approach guardrail:

The Northwest approach railing has collision damage that has created a "pocket" in the railing and fractured 5 of the concrete posts at the base.

The Southeast approach guardrail has collision damage with several fractured concrete posts and spacer blocks.

Remarks



Northwest approach guardrail.



Northwest approach railing-Collision damage.



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Team Lead: Jeff Jones Inspection Date: April 06, 2022



Northwest approach railing-Fractured posts.



Northwest approach guardrail has collision damage.



The Southeast approach guardrail has collision damage with several fractured concrete posts and spacer blocks.

Date Reported: 04/27/2016
Priority: D- Routine
Type of Work: Repair
Status: Monitor
Component: Substructure

Deficiency Description

Approach Roadway-

There are voids under the approach gutters adjacent to the abutments. There is earth settlement under the abutment caps.

Remarks



Abutment # 1
-Minor settlement of embankment.



Abutment # 2, left side. Void.





Void under the North approach gutters.



Earth settlement under the South abutment cap.

Date Reported: 04/27/2016
Priority: G - General/ Preventive maintenance
Type of Work: None
Status: Monitor
Component: Substructure

Deficiency Description

Substructure - Actual field measurements indicate that the abutments have 5/8" of additional movement on the Left side and 1/8" additional movement on the Right side since the 04/26/2016 inspection. See documentation attached to this report for additional information.

Plan dimension is 101.00'

Actual field measurement Left side - 100.25'

Actual field measurement Right side - 100.19'

Measurements were taken with a Hilti laser range meter.

Remarks

04/06/2022 - JCJ & TJL - Actual field measurements taken during this inspection.



Abutment # 1.



Abutment # 2.



Bridge #05360(Routine, Underwater type 2)

State Highway 255 over Sewer Outlet

Location: JCT SH 55 & P STREET

Team Lead: Jeff Jones **Inspection Date:** April 06, 2022

Date Reported: 05/04/2020
Priority: C - Important
Type of Work: Repair
Status: Monitor
Component: Approach

Deficiency Description

Approach Roadway-

The approach roadway has settlement that is causing additional impact to the slab spans.

Remarks



North approach settlement.



Bent # 1 asphalt settlement.



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Settlement at the North approach slab adjacent to
Bent # 4.



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Location: JCT SH 55 & P STREET

Team Lead: Jeff Jones Inspection Date: April 06, 2022

Date Reported: 04/06/2022
Priority: C - Important
Type of Work: Repair
Status: Open
Component: Channel

Deficiency Description

There is embankment erosion and rip rap displacement along both sides of the channel.

Remarks



There is embankment erosion and rip rap displacement along both sides of the channel.
Photo of South embankment.



There is embankment erosion and rip rap displacement along both sides of the channel.
Photo of North embankment.



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Team Lead: Jeff Jones **Inspection Date:** April 06, 2022

Date Reported: 04/06/2022
Priority: D- Routine
Type of Work: Clean
Status: Open
Component: 38 - RC Slab

Deficiency Description

There is dirt accumulation in the gutters.

Remarks



There is dirt accumulation in the gutters.



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Team Lead: Jeff Jones **Inspection Date:** April 06, 2022

Date Reported: 04/06/2022
Priority: C - Important
Type of Work: Repair
Status: Open
Component: 330 - Metal Bridge Railing

Deficiency Description

The bridge railing posts have loose anchor bolts.

Remarks



The right bridge railing post over Bent # 3 has loose anchor bolts.



The right bridge railing post over Bent # 3 has loose anchor bolts.



Bridge #05360(Routine, Underwater type 2)

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Location: JCT SH 55 & P STREET

Team Lead: Jeff Jones **Inspection Date:** April 06, 2022

Inspection Comments

Note: This structure has had a history of rotation of both abutments towards the center. Refer to history files and documentation of measurements taken to monitor the progress of rotation.

04/06/2022 - JCJ & TJL - Routine Inspection and Type 2 Underwater Inspection conducted this date.

04/06/2022 - JCJ & TJL - Actual field measurements indicate that the abutments are rotating towards the channel. Measurements taken from the face of abutment cap to the face of abutment cap. See documentation attached to this report for additional information. Plan dimension is 101.00' Actual field measurement Left side - 100.25' Actual field measurement Right side - 100.19'. Measurements were taken with a Hilti Laser Range Meter.

Substructure Notes

Note: This structure has had a history of rotation of both abutments towards the center. Refer to history files and documentation of measurements taken to monitor the progress of rotation.

04/06/2022 - JCJ & TJL - Actual field measurements indicate that the abutments are rotating towards the channel. Measurements taken from the Face of abutment cap to the Face of abutment cap. See documentation attached to this report for additional information. Plan dimension is 101.00' Actual field measurement Left side - 100.25' Actual field measurement Right side - 100.19'. Measurements were taken with a Hilti Laser Range Meter.