



Latitude:33.70688, Longitude:-91.64655

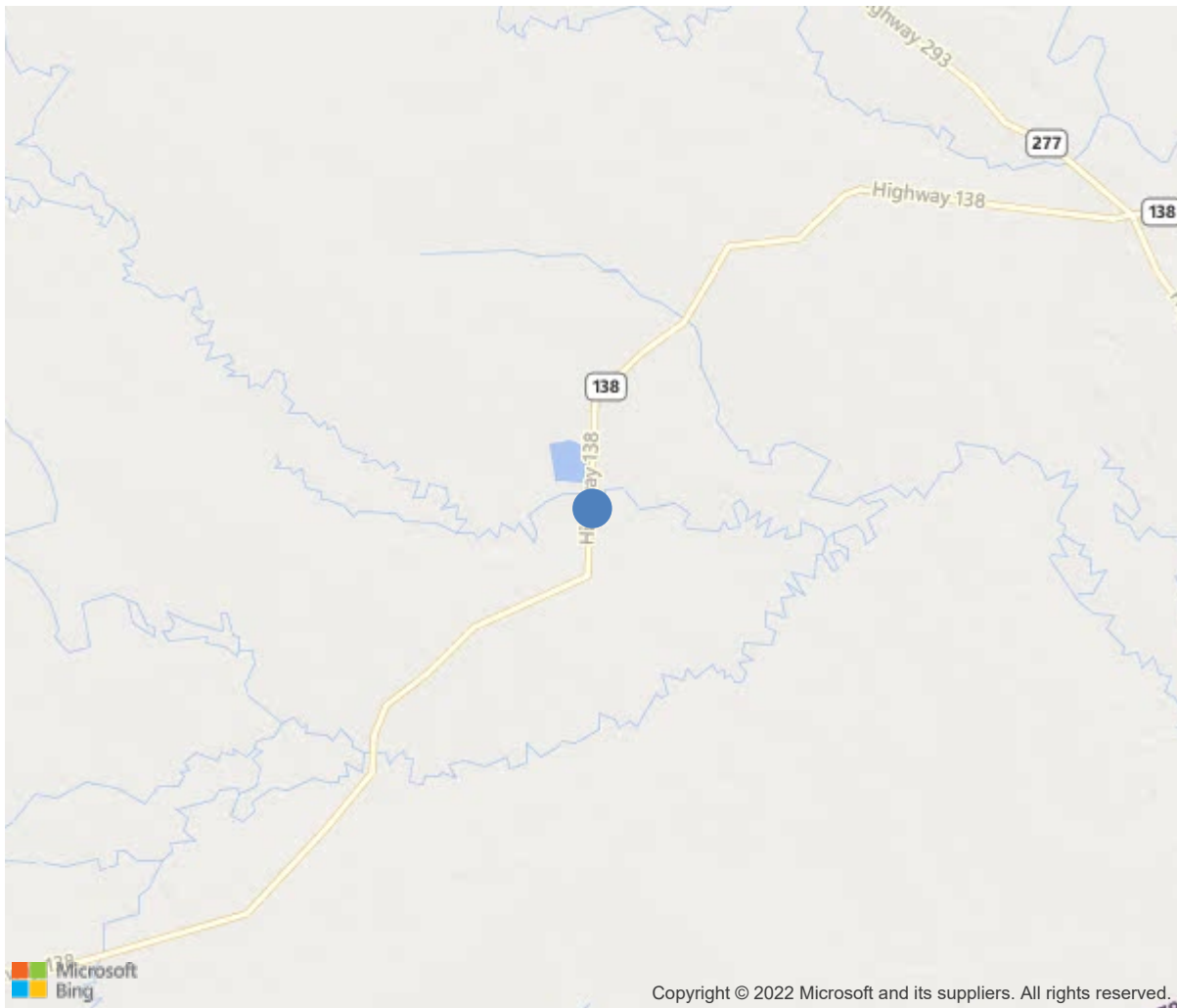
Route:138 Section:03 Log:9.75

Arnold Road ID:22x138x3xA, Arnold Log mile:9.741

District 02, Drew County

Owner: 1-State Highway Agency

9.75 Mi N US 278-Mt Tabor



33.70688, -91.64655

Inspection Direction : W to E



Bridge #M3082(Routine, Underwater type 2)

SH 138-03 LM 9.75 over Cut-Off Creek Relief

Location: 9.75 Mi N US 278-Mt Tabor

Team Lead: Greg Loomis Inspection Date: August 03, 2021

| IDENTIFICATION | |
|---|--|
| (1) State Names | Arkansas |
| (8) Structure Number | M3082 |
| (5) Inventory Route | 138 |
| (2) Highway Agency District | 02 |
| (3) County Code | 43-Drew County, Arkansas |
| (4) Place Code | 0 |
| (6) Features Intersected | Cut-Off Creek Relief |
| (7) Facility Carried | SH 138-03 LM 9.75 |
| (9) Location | 9.75 Mi N US 278-Mt Tabor |
| (11) Mile Point | 9.75 mi |
| (12) Base Highway Network | No |
| (13) LRS Inventory Rte & Subrte | 0000000000 |
| (16) Latitude | 33.7068808525289 |
| (17) Longitude | -91.6465484803253 |
| (98) Border Bridge State Code | |
| (99) Border Bridge Structure No. | |
| STRUCTURE TYPE AND MATERIAL | |
| (43) Main Structure Type | 122 |
| Material | 1-Concrete |
| Type | 22-Channel beam |
| (44) Approach Structure Type | 00 |
| Material | 0-Other |
| Type | 0-Other |
| (45) No. of Spans in Main Unit | 2 |
| (46) No. of Approach Spans | 0 |
| (107) Deck Structure Type | 2-Concrete Precast Panels |
| (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 | 1967 |
| (106) Year Reconstructed | 0 |
| (42) Type of Service | 19 |
| On | 1-Highway |
| Under | 9-Relief for waterway |
| (28) Lane | |
| On | 2 |
| Under | 0 |
| (29) Average Daily Traffic | 1100 |
| (30) Year of ADT | 2018 |
| (109) Truck ADT | 1 % |
| (19) Bypass, Detour Length | 17 mi |
| GEOMETRIC DATA | |
| (48) Length of Maximum Span | 17.5 ft |
| (49) Structure Length | 38.8 ft |
| (50) Curb or Sidewalk Width | |
| Left | 0.5 ft |
| Right | 0.5 ft |
| (51) Bridge Roadway Width Curb to Curb | 24 ft |
| (52) Deck Width Out to Out | 25 ft |
| (32) Approach Roadway Width (W/Shoulders) | 25.9 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 | 24 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 | 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 | 7-Rural Major Collector |
| (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 | 6 |
| (60) Substructure | 6 |
| (61) Channel & Channel Protection | 5 |
| (62) Culverts | N |
| LOAD RATING AND POSTING | |
| (31) Design Load | 0-Other or Unknown |
| (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 | 2 |
| 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 | 6 |
| (68) Deck Geometry | 4 |
| (69) Clearances, Vertical/Horizontal | N |
| (71) Waterway Adequacy | 6 |
| (72) Approach Roadway Alignment | 8 |
| (36A) Bridge Railings | 0-Inspected feature does not meet cur |
| (36B) Transitions | 0-Inspected feature does not meet cur |
| (36C) Approach Guardrail | 0-Inspected feature does not meet cur |
| (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 | Bridge rehabilitation because |
| (76) Length of Structure Improvement | 39 ft |
| (94) Bridge Improvement Cost | \$ 0 |
| (95) Roadway Improvement Cost | \$ 0 |
| (96) Total Project Cost | \$ 43 |
| (97) Year of Improvement Cost Estimate | 1996 |
| (114) Future ADT | 886 |
| (115) Year of Future ADT | 2028 |

| INSPECTIONS * | | | |
|--|-----------|-------------|------|
| (90) Inspection Date | 08/2021 | | |
| (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 | Yes | | / |
| * 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. | | | |

| ELEM | DESCRIPTION | UNITS | TOTAL | CS1 | CS2 | CS3 | CS4 |
|--|--------------------------------------|-------|-------|-----|-----|-----|-----|
| 16 | Reinforced Concrete Top Flange | SF | 953 | 953 | 0 | 0 | 0 |
| 510 | Wearing Surfaces | SF | 836 | 836 | 0 | 0 | 0 |
| (16) Deck: 25'-1" wide x 38' long = 953 sqft. (Unable to determine existence or condition of grout due to wearing surface.) Wearing surface (chip seal overlay of 1/2"): 22' wide x 38' long = 836 sqft. | | | | | | | |
| 110 | Reinforced Concrete Open Girder/Beam | LF | 266 | 245 | 6 | 15 | 0 |
| 1080 | Delamination/Spall/Patched Area | LF | 5 | 0 | 5 | 0 | 0 |
| 1090 | Exposed Rebar | LF | 16 | 0 | 1 | 15 | 0 |
| (110) Girders: 7 precast channel beam units per span / Spans 1 & 2 (19' each = 38' total). Units are bolted longitudinally and transversely - no noted missing or loose bolts. Small vertical and horizontal cracks in channel legs. Span 1 Unit 2 right: Spall with exposed rebar. Span 1 Unit 4 right leg: Small spall with exposed rebar. Span 1 Unit 7 right leg: Spall with exposed rebar. Span 2 Unit 2 left leg: Spall with exposed rebar. | | | | | | | |
| 216 | Timber Abutment | LF | 70 | 55 | 15 | 0 | 0 |
| 1140 | Decay/Section Loss | LF | 15 | 0 | 15 | 0 | 0 |
| (216) Backwalls: 35' each / Bents 1 & 3. Both back walls have some decay. | | | | | | | |
| 228 | Timber Pile | EA | 15 | 0 | 12 | 3 | 0 |
| 1020 | Connection | EA | 9 | 0 | 9 | 0 | 0 |
| 1140 | Decay/Section Loss | EA | 3 | 0 | 3 | 0 | 0 |
| 1150 | Check/Shake | EA | 3 | 0 | 0 | 3 | 0 |
| (228) Pile: 5 per bent / Bents 1-3. Bent 1 Piles 1-5: Repaired/replaced by state forces – CS2 connection x 5. Bent 2 Pile 1: Repaired/replaced by state forces – CS2 connection. Bent 2 Pile 2: Large check/split/delamination – CS3 checking. Bent 2 Pile 3: Repaired/replaced by state forces – CS2 connection. Bent 2 Pile 4: Moderate-sized checking – CS3 checking. Bent 2 Pile 5: Repaired/replaced by state forces – CS2 connection. Bent 3 Pile 1: Some minor decay – CS2 decay. Bent 3 Pile 2: Large checks/delamination with some minor decay – CS3 checking. Bent 3 Pile 3: Some surface decay at bottom – CS2 decay. Bent 3 Pile 4: Repaired/replaced by state forces – CS2 connection. | | | | | | | |

Bridge #M3082(Routine, Underwater type 2)
SH 138-03 LM 9.75 over Cut-Off Creek Relief
Location: 9.75 Mi N US 278-Mt Tabor

Team Lead: Greg Loomis, **Inspection Date:** August 03, 2021

| ELEM | DESCRIPTION | UNITS | TOTAL | CS1 | CS2 | CS3 | CS4 |
|--|--------------------------------------|-------|-------|-----|-----|-----|-----|
| Bent 3 Pile 5: Some areas of decay with some delamination – CS2 decay. | | | | | | | |
| 234 | Reinforced Concrete Pier Cap | LF | 84 | 77 | 5 | 2 | 0 |
| 1080 | Delamination/Spall/Patched Area | LF | 4 | 0 | 4 | 0 | 0 |
| 1130 | Cracking (RC and Other) | LF | 3 | 0 | 1 | 2 | 0 |
| (234) | | | | | | | |
| Caps: 28' each / Bents 1-3. Bent 2 right: Delamination/cracking on back face. Bent 2: Contact spalls on ahead face. | | | | | | | |
| 301 | Pourable Joint Seal | LF | 25 | 0 | 0 | 25 | 0 |
| 2350 | Debris Impaction | LF | 25 | 0 | 0 | 25 | 0 |
| (301) | | | | | | | |
| Joints: 25' each / Bent 2. Joint is CS3 debris-impacted due to asphalt seal. | | | | | | | |
| 330 | Metal Bridge Railing | LF | 76 | 76 | 0 | 0 | 0 |
| 515 | Steel Protective Coating | SF | 190 | 0 | 190 | 0 | 0 |
| 3410 | Chalking (Steel Protective Coatings) | SF | 190 | 0 | 190 | 0 | 0 |
| (330) | | | | | | | |
| Railing: 38' each side. Coating: 2.5 square feet per linear feet of railing. Metal rail on concrete posts. Railing is dull and has no luster and primer is beginning to show through. | | | | | | | |



Roadway view



Deck - Spans 1-2: Typical



Soffit - Span 2: Typical

Maintenance Needs

Date Reported: 10/17/2019
Priority: C - Important
Type of Work: Repair
Status: Repair Documented
Inspection Direction W to E
Component: Approach

Deficiency Description

CORRECTED - Approach roadway south end has settlement 1-3in drop coming off of deck.

Remarks

08-03-2021 GGL-PRD: Asphalt patch has been applied at bridge end / no bump remains.



Approach roadway has 2-3 in drop .



Approach roadway south end has settlement about 2-3 in drop.



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SH 138-03 LM 9.75 over Cut-Off Creek Relief

Location: 9.75 Mi N US 278-Mt Tabor

Team Lead: Greg Loomis **Inspection Date:** August 03, 2021



CORRECTED - Approach roadway - Bent 1:
Asphalt patch applied/no bump

Date Reported: 06/23/2014
Priority: D- Routine
Type of Work: Repair
Status: Repair Documented
Inspection Direction W to E
Component: 228 - Timber Pile

Deficiency Description

CORRECTED - Bent 3 Pile 4: Moderate- to large-sized checking on left side in top 4' - deteriorating and hollow in same area.

"Note" bent 3 pile 4 has continued to deteriorate and is now in the "A" priority on 4/2/2019 SDH

Remarks

Repaired by State Forces

Cut and replaced.



Bent 3 Pile 4 (decay)



CORRECTED - Bents 2&3 pile repairs.



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Team Lead: Greg Loomis **Inspection Date:** August 03, 2021

Date Reported: 06/23/2014
Priority: G - General/ Preventive maintenance
Type of Work: Replace
Status: Assigned
Inspection Direction W to E
Component: Approach

Deficiency Description

Log mile signs - both ends: Signs read "9.65" - should read "9.75".

Remarks



Log mile sign - Bent 1 right (incorrect numbers)

Date Reported: 07/06/2016
Priority: C - Important
Type of Work: Repair
Status: Repair Documented
Inspection Direction W to E
Component: 228 - Timber Pile

Deficiency Description

CORRECTED - Bent 1 Piles 1-4: Significant deterioration (hollow) in the top 4-6' of each pile.
Bent 2 Pile 3 Hollow

"Note" bent 1 pile 1 & 2 have continued to deteriorate and are now in the "A" priority on 4/2/2019 SDH

Remarks

Repaired by State Forces

Cut and replaced



Bent 1 Piles 1-2 (decay)



Bent 1 Piles 3-4 (decay)



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SH 138-03 LM 9.75 over Cut-Off Creek Relief

Location: 9.75 Mi N US 278-Mt Tabor

Team Lead: Greg Loomis **Inspection Date:** August 03, 2021



CORRECTED - Bents 2&3 pile repairs.

Date Reported: 06/26/2018
Priority: D- Routine
Type of Work: Repair
Status: Assigned
Inspection Direction W to E
Component: 110 - Reinforced Concrete Open Girder/Beam

Deficiency Description

Girders (precast channel beam legs) -
Span 1 Unit 2 right: Spall with exposed rebar.
Span 1 Unit 4 right leg: Small spall with exposed rebar.
Span 1 Unit 7 right leg: Spall with exposed rebar.
Span 2 Unit 2 left leg: Spall with exposed rebar.

Remarks



Span 1 girder 2 has spall with exposed rebar.



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Team Lead: Greg Loomis **Inspection Date:** August 03, 2021





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SH 138-03 LM 9.75 over Cut-Off Creek Relief

Location: 9.75 Mi N US 278-Mt Tabor

Team Lead: Greg Loomis **Inspection Date:** August 03, 2021

Date Reported: 06/26/2018

Priority: D- Routine

Type of Work: Repair

Status: Monitor

Inspection Direction W to E

Component: 228 - Timber Pile

Deficiency Description

Piling -

Bent 3 Pile 1: Some minor decay – CS2 decay.

Bent 3 Pile 3: Some surface decay at bottom – CS2 decay.

Bent 3 Pile 5: Some areas of decay with some delamination – CS2 decay.

Remarks



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Team Lead: Greg Loomis **Inspection Date:** August 03, 2021

Date Reported: 06/26/2018
Priority: D- Routine
Type of Work: Repair
Status: Monitor
Inspection Direction W to E
Component: 234 - Reinforced Concrete Pier Cap

Deficiency Description

Cap -
Bent 2 right: Delamination/cracking on back face .
Bent 2: Contact spalls on ahead face.

Remarks



Bent 2 cap behind has cracking with delam.

Date Reported: 08/03/2021
Priority: C - Important
Type of Work: Repair
Status: Open
Inspection Direction W to E
Component: Approach

Deficiency Description

Approach roadway - Bent 1 right: Area of active erosion at bridge end - behind wing-wall/back-wall (just beginning to reach inside curb / eroding around log mile post and railing post).

Remarks



Approach roadway - Bent 1 right: Erosion



Approach roadway - Bent 1 right: Erosion



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Location: 9.75 Mi N US 278-Mt Tabor

Team Lead: Greg Loomis **Inspection Date:** August 03, 2021

Inspection Comments

Bridge is logged from west to east (southwest to northeast).

Beginning of structure toward US 278, Monticello, Southwest End.

Item 113 changed from U to 5. Low risk of Scour, Structural foundation assessed as stable. See HEC 18 Chapters 10 and J.15. DMH (8/12/09)

04-24-2012, Updated log mile to match Tech Services data. RHB.