



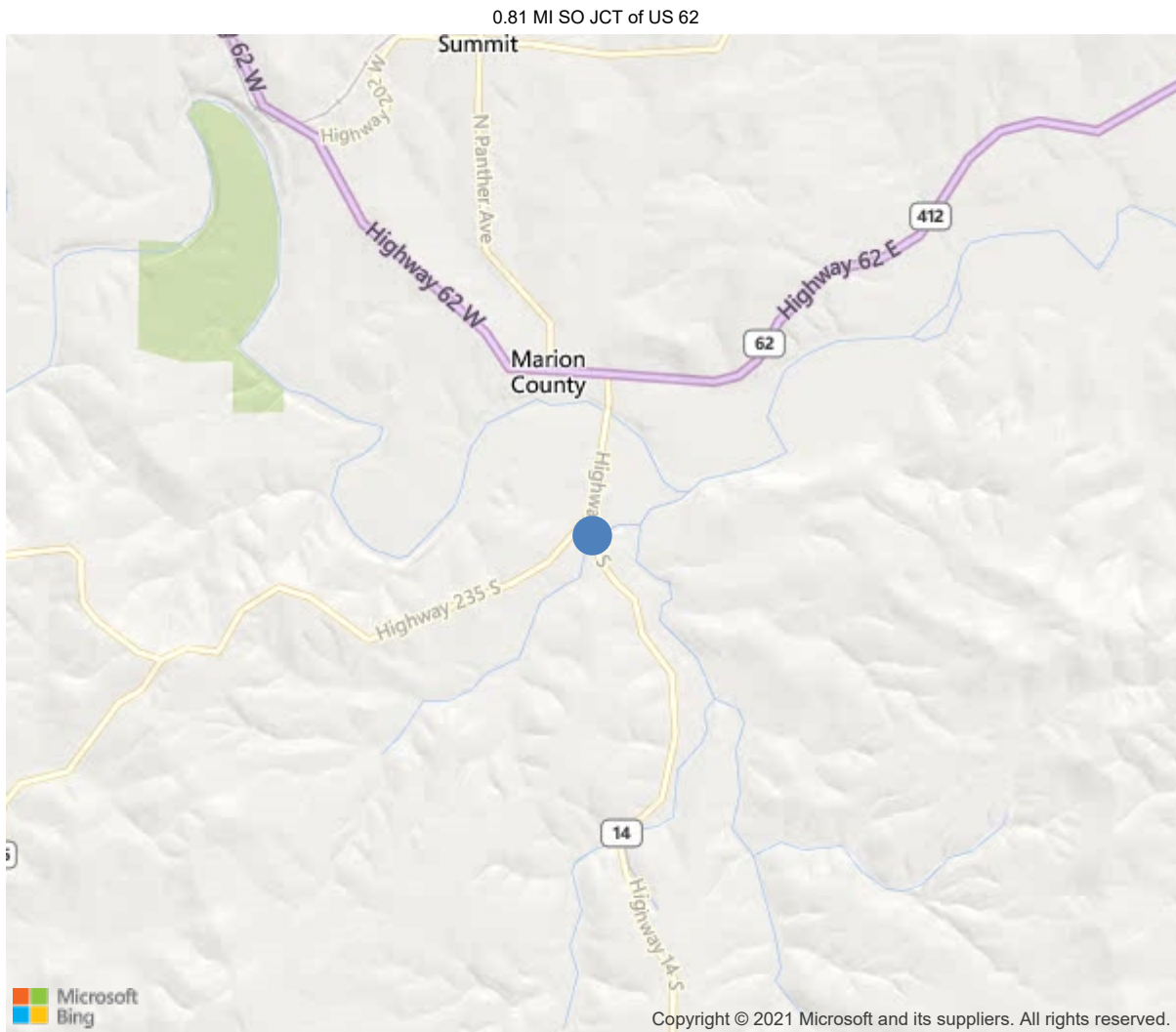
Latitude:36.21428, Longitude:-92.68085

Route:14 Section:03 Log:0.81

Arnold Road ID:45x14x3xA, Arnold Log mile:0.799

District 09, Marion County

Owner: 1-State Highway Agency



36.21428, -92.68085



Bridge #A0339(Routine)

SH 14 Marion over CAMPGROUND CREEK

Location: 0.81 MI SO JCT of US 62

Team Lead: Benjamin Smith Inspection Date: April 05, 2021

| IDENTIFICATION                            |                                  |
|---|----------------------------------|
| (1) State Names                           | Arkansas                         |
| (8) Structure Number                      | A0339                            |
| (5) Inventory Route                       | 14                               |
| (2) Highway Agency District               | 09                               |
| (3) County Code                           | 89-Marion County, Arkansas       |
| (4) Place Code                            | 0                                |
| (6) Features Intersected                  | CAMPGROUND CREEK                 |
| (7) Facility Carried                      | SH 14 Marion                     |
| (9) Location                              | 0.81 MI SO JCT of US 62          |
| (11) Mile Point                           | 0.81 mi                          |
| (12) Base Highway Network                 | Yes                              |
| (13) LRS Inventory Rte & Subrte           | 0000014030                       |
| (16) Latitude                             | 36.21428                         |
| (17) Longitude                            | -92.68085                        |
| (98) Border Bridge State Code             |                                  |
| (99) Border Bridge Structure No.          |                                  |
| STRUCTURE TYPE AND MATERIAL               |                                  |
| (43) Main Structure Type                  | 14                               |
| Material                                  | 1-Concrete                       |
| Type                                      | 4-Tee beam                       |
| (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                   | 6-Bituminous                     |
| Type of Membrane                          | 0-None                           |
| Type of Deck Protection                   | 0-None                           |
| AGE AND SERVICE                           |                                  |
| (27) Year Built                           | 1929                             |
| (106) Year Reconstructed                  | 1960                             |
| (42) Type of Service                      | 15                               |
| On  | 1-Highway                        |
| Under                                     | 5-Waterway                       |
| (28) Lane                                 |                                  |
| On  | 2                                |
| Under                                     | 0                                |
| (29) Average Daily Traffic                | 3000                             |
| (30) Year of ADT                          | 2018                             |
| (109) Truck ADT                           | 1 %                              |
| (19) Bypass, Detour Length                | 28 mi                            |
| GEOMETRIC DATA                            |                                  |
| (48) Length of Maximum Span               | 35 ft                            |
| (49) Structure Length                     | 105 ft                           |
| (50) Curb or Sidewalk Width               |                                  |
| Left                                      | 1.1 ft                           |
| Right                                     | 1.1 ft                           |
| (51) Bridge Roadway Width Curb to Curb    | 24 ft                            |
| (52) Deck Width Out to Out                | 27 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    | 24.6 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                  | 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                              | 5                                      |
| (59) Superstructure                    | 5                                      |
| (60) Substructure                      | 5                                      |
| (61) Channel & Channel Protection      | 7                                      |
| (62) Culverts                          | N                                      |
| LOAD RATING AND POSTING                |  |
| (31) Design Load                       | 2-M 13.5 / H 15                        |
| (63) Operating Rating Method           | 1                                      |
| (64) Operating Rating                  |  |
| Type                                   | 1-Load Factor(LF)                      |
| Rating                                 | 37                                     |
| (65) Inventory Rating Method           | 1-Load Factor(LF)                      |
| (66) Inventory Rating                  |  |
| Type                                   | 3                                      |
| Rating                                 | 22                                     |
| (70) Bridge Posting                    | 3-10.0 - 19.9 % below                  |
| (41) Structure Open/Posted/Closed      | P-Posted for load (may include o       |
| APPRAISAL                              |  |
| (67) Structural Evaluation             | 5                                      |
| (68) Deck Geometry                     | 2                                      |
| (69) Clearances, Vertical/Horizontal   | N                                      |
| (71) Waterway Adequacy                 | 8                                      |
| (72) Approach Roadway Alignment        | 8                                      |
| (36A) Bridge Railings                  | 1-Inspected feature meets currently a  |
| (36B) Transitions                      | 0-Inspected feature does not meet cur  |
| (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                      | Replacement of bridge or other         |
| (76) Length of Structure Improvement   | 132 ft                                 |
| (94) Bridge Improvement Cost           | \$ 0                                   |
| (95) Roadway Improvement Cost          | \$ 156                                 |
| (96) Total Project Cost                | \$ 466                                 |
| (97) Year of Improvement Cost Estimate | 2003                                   |
| (114) Future ADT                       | 4594                                   |
| (115) Year of Future ADT               | 2028                                   |

| INSPECTIONS *  |           |             |      |
|--|-----------|-------------|------|
| (90) Inspection Date   | 04/2021   |             |      |
| (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. |           |             |      |



**Team Lead:** Benjamin Smith, **Inspection Date:** April 05, 2021

| ELEM   | DESCRIPTION                          | UNITS | TOTAL | CS1  | CS2 | CS3 | CS4 |
|--|--------------------------------------|-------|-------|------|-----|-----|-----|
| 16   | Reinforced Concrete Top Flange       | SF    | 2835  | 2376 | 334 | 125 | 0   |
| 1080   | Delamination/Spall/Patched Area      | SF    | 53    | 0    | 48  | 5   | 0   |
| 1090   | Exposed Rebar                        | SF    | 11    | 0    | 0   | 11  | 0   |
| 1120   | Efflorescence/Rust Staining          | SF    | 148   | 0    | 94  | 54  | 0   |
| 1130   | Cracking (RC and Other)              | SF    | 247   | 0    | 192 | 55  | 0   |
| 510  | Wearing Surfaces                     | SF    | 2520  | 2289 | 197 | 34  | 0   |
| 3210   | Delam/Spall/Patched Area/Pothole     | SF    | 34    | 0    | 0   | 34  | 0   |
| 3220   | Crack (Wearing Surface)              | SF    | 197   | 0    | 197 | 0   | 0   |
| (16)   |                                      |       |       |      |     |     |     |
| <p>Driving surface-</p> <p>The driving surface has 3.5" asphalt overlay that has reflective cracking, pot holes and patched areas over the joints due to an indiscriminate overlay. The left side of the curb in all spans has large deteriorated &amp; spalled areas some with rebar exposed. The wearing surface of the deck has 34' of patched areas in the driving surface.</p> <p>The under surface of the deck -</p> <p>Span #1 under surface -The deck overhangs and under surface has transverse cracks with 6' of cs2 efflorescence and 22' of cs3 efflorescence with rust staining with small areas of honeycombing and patched areas. A small spall with rebar exposed exists in span #1 between tee beams #1 and #2 at abutment #1. The left deck overhang has 4' of deep spalling with rebar exposed. The right overhang has a small spall with rebar exposed near the drain.</p> <p>Span #2 under surface- The deck overhangs and under surface has transverse cracks with 55' of cs2 efflorescence and 22' of cs3 efflorescence with rust staining with small patches. A heavy concentration of efflorescence cracking exists between tee beams #1,2 in span #2. Span #2 has two 1' x 1' suspected areas of full depth deck failures in bay #1. The left deck overhang of span #2 has 3 areas of shallow exposed rebar. The right deck overhang has 1 small area of exposed rebar with heavy efflorescence. The left deck overhang cantilever has a large spall with exposed rebar.</p> <p>Span #3 under surface- has transverse cracks with efflorescence, some with rust staining and 15' of small patched areas. The left and right deck overhangs and under surface have cracking with 33' of cs2 efflorescence and 10' of cs3 efflorescence with areas of shallow exposed rebar.</p> |                                      |       |       |      |     |     |     |
| (16-510)   |                                      |       |       |      |     |     |     |
| The wearing surface of the deck has 34' of patched areas in the driving surface.   |                                      |       |       |      |     |     |     |
| 110  | Reinforced Concrete Open Girder/Beam | LF    | 315   | 99   | 188 | 28  | 0   |
| 1080   | Delamination/Spall/Patched Area      | LF    | 22    | 0    | 0   | 22  | 0   |
| 1090   | Exposed Rebar                        | LF    | 6     | 0    | 0   | 6   | 0   |
| 1130   | Cracking (RC and Other)              | LF    | 188   | 0    | 188 | 0   | 0   |
| (110)  |                                      |       |       |      |     |     |     |
| <p>All 3 beams in spans 1,2,3 have vertical hairline cracks that are spaced at approximately 12" intervals mostly near mid span, very few cracks were noted at the beginning and ends of the tee beams.</p> <p>Span #1 tee beams- have 77' of vertical and horizontal hairline flexure cracks in the beams. The beginning of beam #3 in span #1 has a shallow vertical exposed rebar at abutment #1. The underside of beam #1 has 2 small areas of shallow exposed rebar.</p>  |                                      |       |       |      |     |     |     |





Bridge #A0339(Routine)

SH 14 Marion over CAMPGROUND CREEK

Location: 0.81 MI SO JCT of US 62

Team Lead: Benjamin Smith, Inspection Date: April 05, 2021

| ELEM   | DESCRIPTION                     | UNITS | TOTAL | CS1 | CS2 | CS3 | CS4 |
|--|---------------------------------|-------|-------|-----|-----|-----|-----|
| <p>Span #2 tee beams- have 49' of vertical and horizontal hairline flexure cracks in the bottoms and sides of the beams. Tee beam #3 has a shallow exposed rebar on the outside face. Tee beam #2 has 1' of cs3 spalling at the beginning and end of the span over both bents. Tee beam #1 has 8' of delamination on the bottom edge with 1' of cs3 spalling at the end of the span.</p> <p>Span #3 tee beams- has 62' of vertical hairline flexure cracks in the beams. Tee beam #1 has 2 areas of vertical exposed rebar and 8' of delamination on the bottom edge with 1' of cs3 spalling at the beginning of the span.</p> |                                 |       |       |     |     |     |     |
| 205  | Reinforced Concrete Column      | EA    | 6     | 0   | 3   | 3   | 0   |
| 1080   | Delamination/Spall/Patched Area | EA    | 1     | 0   | 1   | 0   | 0   |
| 1090   | Exposed Rebar                   | EA    | 3     | 0   | 0   | 3   | 0   |
| 1130   | Cracking (RC and Other)         | EA    | 2     | 0   | 2   | 0   | 0   |
| (205)  |                                 |       |       |     |     |     |     |
| <p>Bent #1 columns-</p> <p>Column #1- has minor honeycombing and spalling.</p> <p>Column #2- has a small area of exposed rebar and minor spalling.</p> <p>Column #3- has a small area of exposed rebar near the haunch.</p> <p>Bent #2 columns-</p> <p>Column #1-has hairline vertical cracks.</p> <p>Column #2-has hairline vertical and horizontal cracks.</p> <p>Column #3-has exposed rebar and hairline vertical cracks.</p>  |                                 |       |       |     |     |     |     |
| 215  | Reinforced Concrete Abutment    | LF    | 96    | 75  | 21  | 0   | 0   |
| 1120   | Efflorescence/Rust Staining     | LF    | 1     | 0   | 1   | 0   | 0   |
| 1130   | Cracking (RC and Other)         | LF    | 20    | 0   | 20  | 0   | 0   |
| (215)  |                                 |       |       |     |     |     |     |
| <p>Abutment #1- has 12 total feet of full height hairline vertical and diagonal cracks and 1' of efflorescence cs2 cracking including the integral wing walls. The footing has cover.</p> <p>Abutment #2- has 8 feet of full height hairline vertical cracking with short duration diagonal cracks including the integral wing walls. The footing has cover.</p>   |                                 |       |       |     |     |     |     |
| 234  | Reinforced Concrete Pier Cap    | LF    | 45    | 14  | 2   | 29  | 0   |
| 1080   | Delamination/Spall/Patched Area | LF    | 19    | 0   | 0   | 19  | 0   |
| 1090   | Exposed Rebar                   | LF    | 10    | 0   | 0   | 10  | 0   |
| 1130   | Cracking (RC and Other)         | LF    | 2     | 0   | 2   | 0   | 0   |
| (234)  |                                 |       |       |     |     |     |     |
| <p>Bent #1 cap- has 13' total of patched or delaminated areas with 1' of exposed rebar ends at the right cap end and 1' of exposed rebar on span #2 side of cap near the left haunch. The left end of the bent #1 cap has a 1' long full height and width area of deteriorated concrete that is not yet affecting the bearing area.</p> <p>Bent #2 cap- has 6' of delamination and spalling, 8' of exposed rebar and 2' of vertical cracking. The cap has patched ares on both faces. The left side of the bent #2 cap end also has a large area of deteriorated concrete that is not yet affecting the bearing area.</p>      |                                 |       |       |     |     |     |     |
| 306  | Other Joint                     | LF    | 108   | 0   | 0   | 108 | 0   |
| 2350   | Debris Impaction                | LF    | 108   | 0   | 0   | 108 | 0   |

**Team Lead:** Benjamin Smith, **Inspection Date:** April 05, 2021

| ELEM  | DESCRIPTION          | UNITS | TOTAL | CS1 | CS2 | CS3 | CS4 |
|---|----------------------|-------|-------|-----|-----|-----|-----|
| (306)   |                      |       |       |     |     |     |     |
| The plans show that the joint material is 3/4" felt. The tops of the joints are covered by an indiscriminate overlay that does not appear to be preventing joint movement. Portions of the felt are visible from the underside. The felt is in place and functioning as intended. |                      |       |       |     |     |     |     |
| 311   | Movable Bearing      | EA    | 6     | 4   | 0   | 2   | 0   |
| 1000  | Corrosion            | EA    | 2     | 0   | 0   | 2   | 0   |
| (311)   |                      |       |       |     |     |     |     |
| The 4 original moveable bearings are bronze, and have a heavy patina coating.   |                      |       |       |     |     |     |     |
| The 2 steel sliding plate bearings under the added on portion of the structure under beam #1 have heavy corrosion and flaking rust.   |                      |       |       |     |     |     |     |
| 330   | Metal Bridge Railing | LF    | 210   | 210 | 0   | 0   | 0   |
| (330)   |                      |       |       |     |     |     |     |
| Bridge railing- The metal bridge rail has been replaced with new W-section railing along both sides of structure in 2017. No deficiencies were noted.   |                      |       |       |     |     |     |     |
| Approach railing- The right metal approach railing has a connection bolt that has pulled through the railing at the first post.   |                      |       |       |     |     |     |     |



Approach view in direction of log mile.



Downstream channel view.





Connection bolt has pulled through the metal railing at the first post of the right side approach railing



Upstream channel view.





Typical view of driving surface.



Elevation view. Log mile from left to right.





Upstream channel view.



Downstream channel view.





The left cap end of bent #1 has large areas of deteriorated concrete, these areas have not yet affected the bearing area



View of undersurface in span #3.





View of undersurface in span #2.



Steel bearing under beam #1 at pier #2. Typical of both.





The deck soffit in the left and right overhangs of span #1 and span #2 has deep spalling with exposed rebar.



Downstream channel view.





The left curb of all spans has deterioration with spalled areas, some areas have rebar exposed.



Elevation view. Log mile from left to right.





Typical view of driving surface.



The deck soffit in span #2 bay #1 has heavy efflorescence cracking with rust staining between tee beams #1 and #2





Upstream channel view.



The left cap end of bent #2 has large areas of deteriorated concrete, these areas have not yet affected the bearing area





Tee beam #3 has a shallow exposed rebar at the beginning of span #1.



Flexure cracking in beam #2 in span #2. Approximate spacing of 12".





View of abutment #1.



Original brass Bearing condition under beam #3 over bent #2.





Approach view in direction of log mile.



View of undersurface in span #1.





Spall with rebar exposed between beams #1 and 2 in span #1.



Beginning load posting.





Spalling with rebar exposed on bent #2 cap.



Ending load posting.





General view of abutment #2.



Approach view in direction of log mile.





Undersurface view.



Efflorescence in the right overhang of span 2.





Typical view of driving surface.



Spalling with rebar exposed on the span 3 side of the bent 2 cap.





General condition of beam 1 in span 3. Showing spalling with rebar exposed and delamination.



Pot hole in the right driving lane over the joint area.



### Maintenance Needs

**Date Reported:** 08/09/2011  
**Priority:** D- Routine  
**Type of Work:** None  
**Status:** Assigned  
**Component:**

---

### Deficiency Description

The deck soffit in the left and right overhangs of span #1 and span #2 has spalling with exposed rebar. The deck undersurface has a spall with rebar exposed in bay #1 of span #1 at abutment #1.

### Remarks

---





**Date Reported:** 04/10/2012  
**Priority:** D- Routine  
**Type of Work:** None  
**Status:** Assigned  
**Component:**

---

**Deficiency Description**

The left curb of all spans has deterioration with spalled areas, some areas have rebar exposed.

**Remarks**

---



Deteriorated curb areas at left side of structure



Deterioration at the left curb of structure typical of several locations.





**Bridge #A0339**(Routine)  
**SH 14 Marion over CAMPGROUND CREEK**  
**Location: 0.81 MI SO JCT of US 62**

**Team Lead:** Benjamin Smith **Inspection Date:** April 05, 2021



Deterioration in the left curb section.



**Date Reported:** 04/15/2014  
**Priority:** D- Routine  
**Type of Work:** None  
**Status:** Assigned  
**Component:**

---

**Deficiency Description**

The deck soffit in span #2 bay #1 has heavy efflorescence cracking with rust staining between tee beams #1 and #2

**Remarks**

---



Undersurface of deck in span #2 between beams 1,2 showing efflorescence cracking.



**Date Reported:** 04/05/2017  
**Priority:** D- Routine  
**Type of Work:** None  
**Status:** Monitor  
**Component:**

---

### Deficiency Description

The left cap ends of bents #1,2 have large areas of deteriorated concrete, these areas have not yet affected the bearing area

### Remarks

---



The left cap end of bent #1 showing deterioration for 1'.







Map cracking with efflorescence on the underside of tee beam #1 at the beginning of span #3. The tee beam was sound under hammer blows.



Left end of bent cap 2 showing spalling with rebar exposed.





**Bridge #A0339**(Routine)  
**SH 14 Marion over CAMPGROUND CREEK**  
**Location: 0.81 MI SO JCT of US 62**

**Team Lead:** Benjamin Smith **Inspection Date:** April 05, 2021

**Date Reported:** 04/06/2021

**Priority:** D- Routine

**Type of Work:** Repair

**Status:** Open

**Component:**

---

#### **Deficiency Description**

Span #2- Tee beam #1 has 1' of cs3 spalling at the end of the span. Tee beam #2 has 1' of cs3 spalling at the beginning and end of the span.

Span #3- Tee beam #1 has 1' of cs3 spalling at the beginning of the span.

#### **Remarks**

---





**Bridge #A0339**(Routine)

**SH 14 Marion over CAMPGROUND CREEK**

**Location: 0.81 MI SO JCT of US 62**

**Team Lead:** Benjamin Smith **Inspection Date:** April 05, 2021

### **Inspection Comments**

Structure is logged from North to South, and is accessible from the ground in spans #2,3. Span #1 requires a small ladder. No bat activity was noted.