



Latitude:33.90333, Longitude:-93.29643

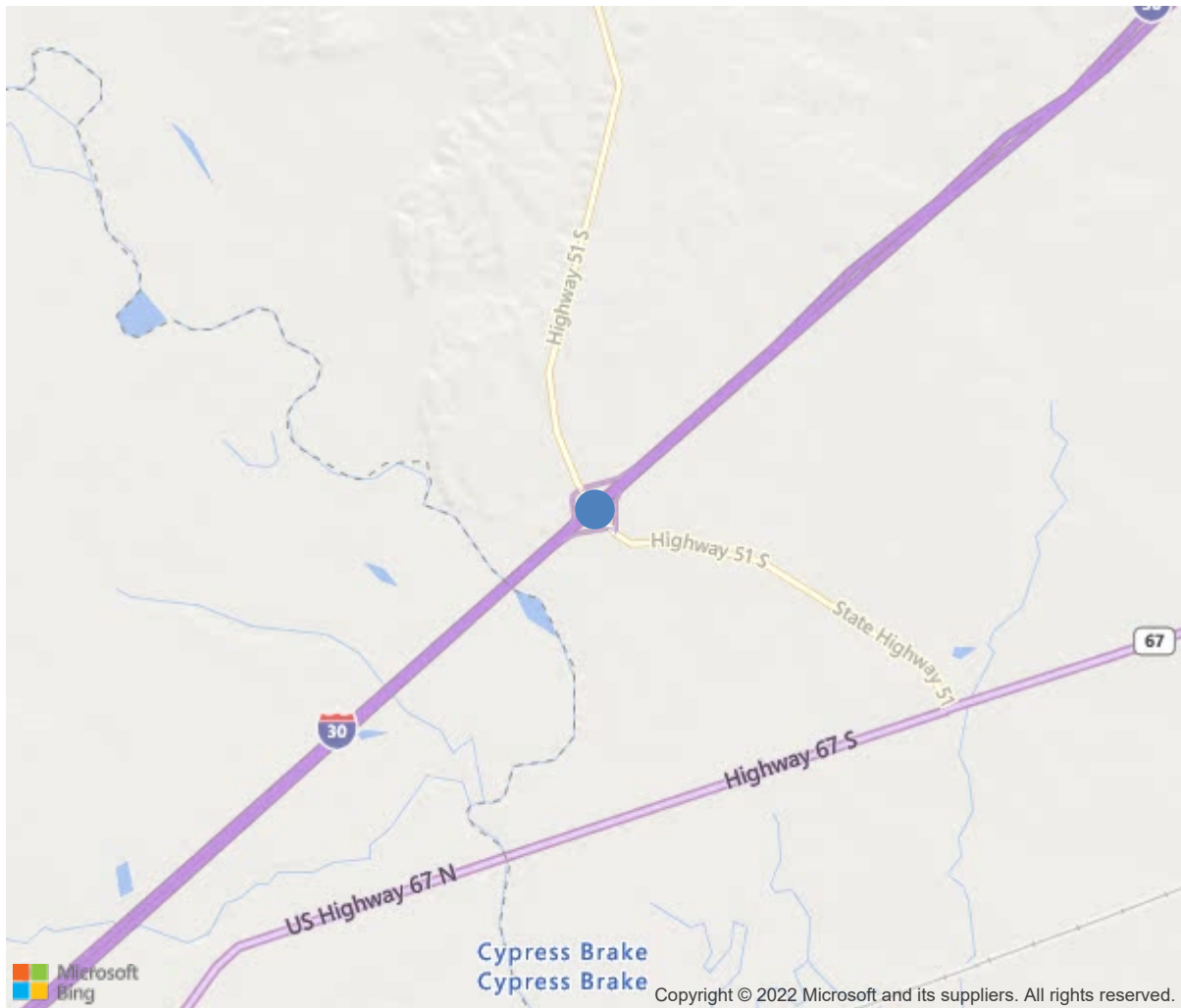
Route:51 Section:01 Log:2.17

Arnold Road ID:10x51x1xA, Arnold Log mile:2.131

District 07, Clark County

Owner: 1-State Highway Agency

.6 MI NE NEVADA CO LINE



33.90333, -93.29643

Inspection Direction : S to N



**Bridge #03873(Other Special Recurring)**  
**SH 51 S-1 LM 2.17 over I-30-SEC 14 LOG 53.67**

**Location: .6 MI NE NEVADA CO LINE**

**Team Lead: John Parks Inspection Date: September 06, 2022**

IDENTIFICATION	
(1) State Names	Arkansas
(8) Structure Number	03873
(5) Inventory Route	51
(2) Highway Agency District	07
(3) County Code	19-Clark County, Arkansas
(4) Place Code	0
(6) Features Intersected	I-30-SEC 14 LOG 53.67
(7) Facility Carried	SH 51 S-1 LM 2.17
(9) Location	.6 MI NE NEVADA CO LINE
(11) Mile Point	2.17 mi
(12) Base Highway Network	No
(13) LRS Inventory Rte & Subrte	0000000000
(16) Latitude	33.90333
(17) Longitude	-93.29643
(98) Border Bridge State Code	
(99) Border Bridge Structure No.	
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	32
Material	3-Steel
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	4
(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	1965
(106) Year Reconstructed	0
(42) Type of Service	11
On	1-Highway
Under	1-Highway, with or without pedestrian
(28) Lane	
On	2
Under	4
(29) Average Daily Traffic	1289
(30) Year of ADT	2018
(109) Truck ADT	1 %
(19) Bypass, Detour Length	10 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	66 ft
(49) Structure Length	214 ft
(50) Curb or Sidewalk Width	
Left	0 ft
Right	0 ft
(51) Bridge Roadway Width Curb to Curb	26 ft
(52) Deck Width Out to Out	31.5 ft
(32) Approach Roadway Width (W/Shoulders)	32.2 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	29.2 ft
(53) Min Vert Clear Over Bridge Rdwy	99.99 ft
(54) Min Vert Underclear	17.06 ft
Ref:	
(55) Min Lat Underclear RT	10.5 ft
Ref:	
(56) Min Lat Underclear LT	28.5 ft
NAVIGATION DATA	
(38) Navigation Control	N-Not applicable, no waterway.
(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	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	4
(59) Superstructure	5
(60) Substructure	5
(61) Channel & Channel Protection	N
(62) Culverts	N
LOAD RATING AND POSTING	
(31) Design Load	4-M 18 / H 20
(63) Operating Rating Method	1
(64) Operating Rating	
Type	1-Load Factor(LF)
Rating	55
(65) Inventory Rating Method	1-Load Factor(LF)
(66) Inventory Rating	
Type	4
Rating	33
(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	5
(69) Clearances, Vertical/Horizontal	4
(71) Waterway Adequacy	N
(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	0-Inspected feature does not meet cur
(113) Scour Critical Bridges	N-Bridge not over waterway.
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	133
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date			09/2021
(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		09/2022
* 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:** John Parks, **Inspection Date:** September 06, 2022

ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	5999	107	0	5892	0
1080	Delamination/Spall/Patched Area	SF	1768	0	0	1768	0
1120	Efflorescence/Rust Staining	SF	1178	0	0	1178	0
1130	Cracking (RC and Other)	SF	2946	0	0	2946	0
510	Wearing Surfaces	SF	5570	0	0	5570	0
3220	Crack (Wearing Surface)	SF	2785	0	0	2785	0
3210	Delam/Spall/Patched Area/Pothole	SF	1671	0	0	1671	0
3230	Effectiveness (Wearing Surface)	SF	1114	0	0	1114	0
(12)							
<p>Numerous patched areas , including skin patches, asphalt hot mix. Bridge was overlaid and many of the defects are showing up as cracked depressions . See pictures. In addition the soffit has a large area of cracks with heavily stained efflorescent straws. These are leaking water soaked sediment. Lowered deck rating to 4 (NBI) and set 12 month special for deck with special attention to the soffit condition. RHS</p>							
107	Steel Open Girder/Beam	LF	1060	0	895	165	0
1000	Corrosion	LF	1060	0	895	165	0
515	Steel Protective Coating	SF	2608	0	2132	0	476
3410	Chalking (Steel Protective Coatings)	SF	2132	0	2132	0	0
3440	Effectiveness (Steel Protective Coatings)	SF	476	0	0	0	476
(107)							
<p>Girder ends are rusty at bearing areas. In addition the outside top flanges have heavy pack rust @ the areas exposed to drainage near the weep holes. The pr has caused the outer soffit to break off in these areas.</p>							
205	Reinforced Concrete Column	EA	6	3	1	2	0
1080	Delamination/Spall/Patched Area	EA	2	0	0	2	0
1130	Cracking (RC and Other)	EA	1	0	1	0	0
(205)							
<p>Bt 2 columns have cracks and delamination. 03/06/2018 JPR --- Bt. 2 Column 1 also has some spalls with exposed steel. 08/12/2021 Reinforced Concrete Columns = (2 columns per bent x 3 interior bents) = 6 columns total.</p>							
215	Reinforced Concrete Abutment	LF	75	58	2	15	0
1080	Delamination/Spall/Patched Area	LF	15	0	0	15	0
1090	Exposed Rebar	LF	2	0	2	0	0
(215)							
<p>Abutment 2 has spalls and delams. 08/02/2021 JPR -- Reinforced Concrete Abutments = (((13.0 + 5.75') x 2) x 2)= ((18.75' x 2) x 2) = 75.0'</p>							





**Bridge #03873**(Other Special Recurring)  
**SH 51 S-1 LM 2.17 over I-30-SEC 14 LOG 53.67**

**Location: .6 MI NE NEVADA CO LINE**

**Team Lead: John Parks, Inspection Date: September 06, 2022**

ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
234	Reinforced Concrete Pier Cap	LF	84	61	10	13	0
1080	Delamination/Spall/Patched Area	LF	10	0	0	10	0
1090	Exposed Rebar	LF	13	0	10	3	0
(234)	Spalls with exposed steel pier cap 2 ahead side. 03/06/2018 JPR -- Bt. 3 backside, has spalls with exposed steel. 8/02/2021 JPR -- Reinforce Concrete Pier Caps = $((18.75' - 5.0') \times 5) = 137.5'$ or 138', per plans.						
304	Open Expansion Joint	LF	140	140	0	0	0
(304)	Water leaking through joints. 03/06/2018 JPR -- This bridge has an A/C overlay on it, thus making it impossible to see the joints, but caps, bearings and girder ends are getting salt contamination due to the leakage.						
311	Movable Bearing	EA	20	0	15	5	0
1000	Corrosion	EA	20	0	15	5	0
(311)	Rusty Moveable Bearings = (Bent 2 - 5 bearings, Bt. 3 - 10 bearings, Bent 4 - 5 bearings) for a total of 20 moveable bearings.						
313	Fixed Bearing	EA	20	0	15	5	0
1000	Corrosion	EA	20	0	15	5	0
(313)	Rusty Fixed Bearings = Bt. 1 - 5 bearings, Bt. 2 - 5 bearings, Bt. 4 - 5 bearings, & Bent 5 - 5 bearings, for a total of 20 Fixed Bearings.						
321	Reinforced Concrete Approach Slab	SF	2080	1872	208	0	0
1130	Cracking (RC and Other)	SF	208	0	208	0	0
(321)	General wear, cracks.						
330	Metal Bridge Railing	LF	428	418	10	0	0
1020	Connection	LF	10	0	10	0	0
(330)	Extruder post broken approach right.						
331	Reinforced Concrete Bridge Railing	LF	428	428	0	0	0



Profile



Deck span 1





Deck span 2



Spall in curb right side span 4





Soffit span 4



Soffit span 3





Soffit span 1



Overview





Underview



Roadway





Roadway



Soffit span 2 spalls cracks





Span 2 girder ends pack rust



Span 1 girder 1 pack rust with section loss





Span 1 girder 1



Spall bent 3 column 1





Spall cap bent 4 back



Spall bent 4 cap ahead side





Bent 3 cap spalled and bearings have pack rust



Abutment 1 bearings 3 4 and 5





Bent 2 bearings pack rust



Abutment 1 bearings 1 and 2





**Bridge #03873**(Other Special Recurring)  
**SH 51 S-1 LM 2.17 over I-30-SEC 14 LOG 53.67**

**Location: .6 MI NE NEVADA CO LINE**

**Team Lead:** John Parks **Inspection Date:** September 06, 2022

## Maintenance Needs

**Date Reported:** 03/11/2014

**Priority:** D- Routine

**Type of Work:** Repair

**Status:** Monitor

**Inspection Direction** S to N

**Component:** Substructure

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## Deficiency Description

Caps on Bents 2, 3, & 4 have minor spalls, cracks, and delams to the sides of the caps with some exposed steel.

## Remarks

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Bent 3 cap spalled



Bent 4, ahead side spall with exposed rebar.



Bridge #03873 (Other Special Recurring)  
SH 51 S-1 LM 2.17 over I-30-SEC 14 LOG 53.67

Location: .6 MI NE NEVADA CO LINE

Team Lead: John Parks Inspection Date: September 06, 2022

Date Reported: 03/18/2016  
Priority: D- Routine  
Type of Work: Repair  
Status: Repair Documented  
Inspection Direction S to N  
Component: Approach

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#### Deficiency Description

Right approach extruder end has a broken support post.

#### Remarks

Post has been replaced. 09/07/2022

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Post has been replaced.



**Date Reported:** 04/03/2017  
**Priority:** C - Important  
**Type of Work:** N/A  
**Status:** Monitor  
**Inspection Direction** S to N  
**Component:** Deck

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### Deficiency Description

Deck Soffit, Span 2 over EB travel lanes, between girders 2 & 3, has numerous cracks with efflorescence & some spalls with exposed steel. 03/06/2018 JPR -- Soffit span 2, looking back between girders 2 & 3 @ spall and delamn.

### Remarks

Repaired by State Forces. 08/21/2021 JPR -- the repairs that were made and completed were deck spalls, on spans 1 & 2. There are still some spalls on both spans that have been patched with cold mix.

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Soffit span 2, looking back between girders 2 & 3 @ spall and delamn.



Deck Soffit, Span 2 over EB travel lanes, between girders 2 & 3, has numerous cracks with efflorescence & some spalls with exposed steel.





Deck Soffit between girders 4 & 5 looking back.



Deck Soffit span 1, between girders 3 & 4, looking ahead.



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**Team Lead:** John Parks **Inspection Date:** September 06, 2022



Deck spalls spans 1 and 2





Bridge #03873(Other Special Recurring)  
SH 51 S-1 LM 2.17 over I-30-SEC 14 LOG 53.67

Location: .6 MI NE NEVADA CO LINE

Team Lead: John Parks Inspection Date: September 06, 2022

Date Reported: 08/16/2021  
Priority: C - Important  
Type of Work: Repair  
Status: Monitor  
Inspection Direction S to N  
Component: Deck

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#### Deficiency Description

Deck spalls spans 3 and 4. There are several spall on both spans that have been patched with cold mix.

#### Remarks

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Deck spalls spans 3 and 4



Deck span 3



**Bridge #03873**(Other Special Recurring)  
**SH 51 S-1 LM 2.17 over I-30-SEC 14 LOG 53.67**

**Location: .6 MI NE NEVADA CO LINE**

**Team Lead:** John Parks **Inspection Date:** September 06, 2022



Span 4





**Bridge #03873**(Other Special Recurring)  
**SH 51 S-1 LM 2.17 over I-30-SEC 14 LOG 53.67**

**Location: .6 MI NE NEVADA CO LINE**

**Team Lead:** John Parks **Inspection Date:** September 06, 2022

**Date Reported:** 02/07/2022  
**Priority:** D- Routine  
**Type of Work:** Clean  
**Status:** Monitor  
**Inspection Direction** S to N  
**Component:** Miscellaneous

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**Deficiency Description**

Vegetation abutment 2 slope

**Remarks**

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Vegetation abutment 2 slope



**Bridge #03873**(Other Special Recurring)  
**SH 51 S-1 LM 2.17 over I-30-SEC 14 LOG 53.67**

**Location: .6 MI NE NEVADA CO LINE**

**Team Lead:** John Parks **Inspection Date:** September 06, 2022

### **Inspection Comments**

This structure is logged from South to North.

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### **Deck Notes**

All spans have numerous deck spalls and patches, most of the patches are in the Southbound lane.

08/12/2021 JPR -- OS Recurring Inspection was scheduled due to the condition of the deck and it has a NBI rating of a 4.

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### **Superstructure Notes**

All spans have numerous girders have rust and some pack rust from salt contamination.