



Latitude:35.87143, Longitude:-89.93260

Route:312 Section:01 Log:4.13

Arnold Road ID:47x312x1xA, Arnold Log mile:4.125

District 10, Mississippi County

Owner: 1-State Highway Agency

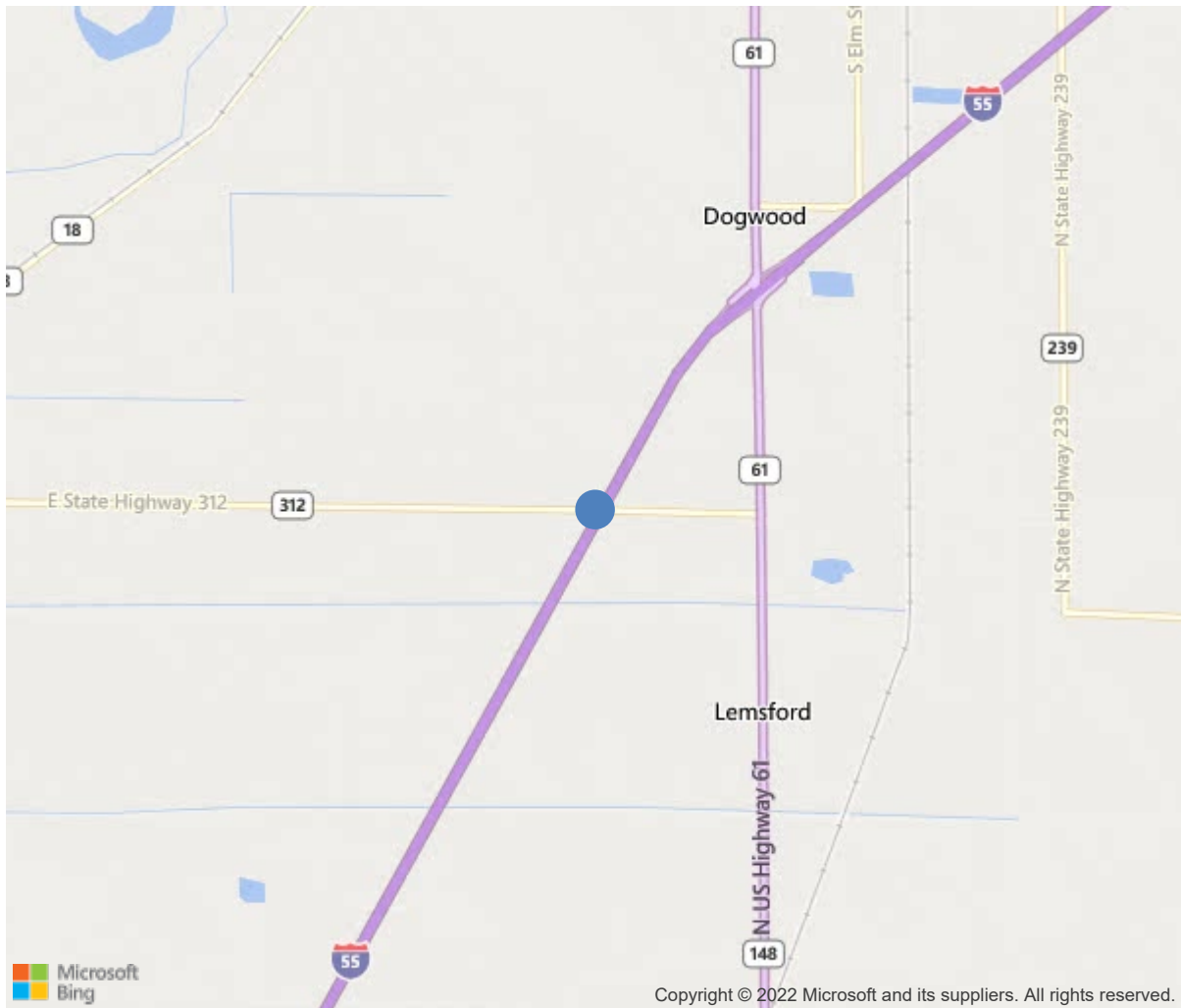


Bridge #03287 (Routine)
SH 312-01- LM 4.13 over I 55-SEC 12

Location: 4.13 MI E SH 18 JCT

Team Lead: Tim Myrick Inspection Date: October 14, 2020

4.13 MI E SH 18 JCT



35.87143, -89.93260



Bridge #03287(Routine)

SH 312-01- LM 4.13 over I 55-SEC 12

Location: 4.13 MI E SH 18 JCT

Team Lead: Tim Myrick Inspection Date: October 14, 2020

IDENTIFICATION	
(1) State Names	Arkansas
(8) Structure Number	03287
(5) Inventory Route	312
(2) Highway Agency District	10
(3) County Code	93-Mississippi County, Arkansa
(4) Place Code	0
(6) Features Intersected	I 55-SEC 12
(7) Facility Carried	SH 312-01- LM 4.13
(9) Location	4.13 MI E SH 18 JCT
(11) Mile Point	4.13 mi
(12) Base Highway Network	No
(13) LRS Inventory Rte & Subrte	0000000000
(16) Latitude	35.87143
(17) Longitude	-89.9326
(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	1960
(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	1300
(30) Year of ADT	2018
(109) Truck ADT	1 %
(19) Bypass, Detour Length	5 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	76 ft
(49) Structure Length	255 ft
(50) Curb or Sidewalk Width	
Left	1.5 ft
Right	1.5 ft
(51) Bridge Roadway Width Curb to Curb	25.9 ft
(52) Deck Width Out to Out	31 ft
(32) Approach Roadway Width (W/Shoulders)	29.9 ft
(33) Bridge Median	0-No median
(34) Skew	30 Deg
(35) Structure Flared	No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	28.9 ft
(53) Min Vert Clear Over Bridge Rdwy	99.99 ft
(54) Min Vert Underclear	15.09 ft
Ref:	
(55) Min Lat Underclear RT	13.2 ft
Ref:	
(56) Min Lat Underclear LT	8 ft
NAVIGATION DATA	
(38) Navigation Control	N-Not applicable, no waterway.
(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	6
(59) Superstructure	6
(60) Substructure	7
(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	54
(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	6
(68) Deck Geometry	4
(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	2196
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date			10/2020
(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.			



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ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	7756	4550	2132	1074	0
1080	Delamination/Spall/Patched Area	SF	830	0	0	830	0
1090	Exposed Rebar	SF	1	0	0	1	0
1120	Efflorescence/Rust Staining	SF	243	0	0	243	0
1130	Cracking (RC and Other)	SF	2132	0	2132	0	0
107	Steel Open Girder/Beam	LF	1255	0	1212	43	0
1000	Corrosion	LF	1252	0	1212	40	0
7000	Damage	LF	3	0	0	3	0
515	Steel Protective Coating	SF	10966	2034	2032	6580	320
3440	Effectiveness (Steel Protective Coatings)	SF	8932	0	2032	6580	320
205	Reinforced Concrete Column	EA	6	6	0	0	0
215	Reinforced Concrete Abutment	LF	116	102	14	0	0
1130	Cracking (RC and Other)	LF	14	0	14	0	0
234	Reinforced Concrete Pier Cap	LF	105	82	12	11	0
1080	Delamination/Spall/Patched Area	LF	4	0	0	4	0
1090	Exposed Rebar	LF	4	0	0	4	0
1120	Efflorescence/Rust Staining	LF	3	0	0	3	0
1130	Cracking (RC and Other)	LF	12	0	12	0	0
305	Assembly Joint without Seal	LF	174	69	0	105	0
2360	Adjacent Deck or Header	LF	105	0	0	105	0
311	Movable Bearing	EA	20	0	0	19	1
1000	Corrosion	EA	19	0	0	19	0
1020	Connection	EA	1	0	0	0	1
313	Fixed Bearing	EA	20	0	0	20	0
1000	Corrosion	EA	20	0	0	20	0
330	Metal Bridge Railing	LF	511	498	0	13	0
7000	Damage	LF	13	0	0	13	0
331	Reinforced Concrete Bridge Railing	LF	511	511	0	0	0





Maintenance Needs

Date Reported: 10/04/2012
Priority: C - Important
Type of Work: Clean
Status: Monitor
Component: Superstructure

Deficiency Description

Bents 1 thru 5 has majority of bearings rusted with pitting and some have up to 1/8 in section loss.
Bents 1, 2, 4 & 5 has majority of bearing plates have pack rust between bearing plate and masonry plate.

Span 2 Bent 2 Bearing 4 Girder plate connection dog ear weld is broke, see 2016 photo. 1 Cap bolt between bearing & girder is broke, see 2018 photo.

Remarks



Span 2 bearing 3 at bent 3





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SH 312-01- LM 4.13 over I 55-SEC 12

Location: 4.13 MI E SH 18 JCT

Team Lead: Tim Myrick Inspection Date: October 14, 2020

Date Reported: 10/04/2012
Priority: D- Routine
Type of Work: Repair
Status: Monitor
Component: Superstructure

Deficiency Description

Several Anchor Bolts missing:
Span 2 Bent 2 Bearings 2&5 has 1 each
Span 2 Bent 2 Bearing 3 has 2
Span 2 Bent 2 bearing 4 has 2.
Span 3 Bent 4 Bearing 2 has 1
Span 3 Bent 4 Bearings 3&4 has 2 each

Remarks

Date Reported: 10/04/2012
Priority: D- Routine
Type of Work: Repair
Status: Monitor
Component: Miscellaneous

Deficiency Description

Concrete slope protection near Bt's 1 & 5
some settlement, cracking and separating from abutment, 3 inches typical.

Remarks



Date Reported: 10/04/2012
Priority: C - Important
Type of Work: Repair
Status: Monitor
Component: Deck

Deficiency Description

Concrete Deck, adjacent to road irons, Bents 2, 3 & 4 has a few spalled areas and delamination, see 2016 photo.

Remarks





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Team Lead: Tim Myrick Inspection Date: October 14, 2020

Date Reported: 10/04/2012
Priority: C - Important
Type of Work: Repair
Status: Monitor
Component: Deck

Deficiency Description

Top of Deck has minor size sealable cracks and some delamination with a few small spalled areas, 8in diameter up to 1in. deep typical.

Bottom of Deck has some cracking with some efflorescence and delaminated areas.

Remarks



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Team Lead: Tim Myrick Inspection Date: October 14, 2020

Date Reported: 10/04/2012
Priority: D- Routine
Type of Work: Clean
Status: Monitor
Component: Superstructure

Deficiency Description

Girders are rusted with pitting and 60% paint deterioration.
Ends of Girders have rust with initial section loss, especially near concrete haunch.

Remarks

Date Reported: 10/04/2012
Priority: C - Important

Type of Work: Repair
Status: Monitor
Component: Superstructure

Deficiency Description

Span 2 Girder 1 has a 3in. bow in girder due to collision damage with a crack between cover plate and bottom flange as reported in 1992 inspection, see 2016 photo.

Span 2 Girders 2&5 has collision damage with a crack between cover plate and bottom flange, see 2016 photo.

Span 2 Bay 1 Metal Diaphragm 1 between Girders 1&2 has 3 diaphragm connection bolts missing, 1 at Girder 1 and 2 at Girder 2, see 2016 photo.

Remarks







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Date Reported: 10/04/2012
Priority: G - General/ Preventive maintenance
Type of Work: Repair
Status: Monitor
Component: Substructure

Deficiency Description

Cap Bents 2&3 and Bottom of Bent 4 Cap near Columns have small spalls and shelled out areas face of with some rebar exposed, inadequate coverage, as built condition, as previously reported.
Cap Bent 4 has 3LF of efflorescence and rust stains.

Remarks

Date Reported: 10/28/2016
Priority: D- Routine
Type of Work: Repair
Status: Monitor
Component: 330 - Metal Bridge Railing

Deficiency Description

Left & right side Span 3 Metal Railing has some collision Damage, 1 Post is cracked and Broke with some railing hanging down and loose, see 2016 photo.

Right side Span 4 Metal Railing has some collision Damage, 2 Post are cracked and Broke.

Remarks





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Location: 4.13 MI E SH 18 JCT

Team Lead: Tim Myrick Inspection Date: October 14, 2020

Inspection Comments

-

Deck Notes

Under clearance checked 2020 inspection. Both under clearance postings are in place 15'.

Left & right side Span 3 Metal Railing has some collision Damage, 1 Post is Broke,.

Right side Span 4 Metal Railing has some collision Damage 2 Post are cracked.

Top of Deck has moderate width cracks, a few asphalt patches and some delamination with a few small spalled areas, 8" diameter up to 1" deep. Concrete Deck, adjacent to road irons, Bents 2, 3 & 4 has a few spalled areas and delamination.

Bottom of Deck has some cracking with some efflorescence and delaminated areas.

Superstructure Notes

Girders are rusted with pitting and 60% paint deterioration.

Ends of Girders have rust with initial section loss, especially near concrete haunches.

Span 2 Girder 1 has a 3" bow in girder due to collision damage with a crack between cover plate and bottom flange as reported in 1992 inspection.

Span 2 Girders 2 & 5 has collision damage with a crack between cover plate and bottom flange.

Span 2 Bay 1 Metal Diaphragm 1 between Girders 1&2 has 3 diaphragm connection bolts missing, 1 at Girder 1 and 2 at Girder 2.

Bents 1 thru 5 have majority of bearings & anchor bolts rusted with pitting, some have up to 1/8 in. section loss.

Bents 1, 2, 4 & 5 has majority of bearing plates have pack rust between bearing and masonry plate.

Span 2 Bent 2 Bearing 4 Girder plate connection dog ear weld is broke.

1 Cap bolt between bearing & girder is broke.

Several Anchor Bolts missing:

Span 2 Bent 2 Bearings 2 & 5 has 1 each

Span 2 Bent 2 Bearing 3 has 2

Span 2 Bent 2 bearing 4 has 2.

Span 3 Bent 4 Bearing 2 has 1

Span 3 Bent 4 Bearings 3 & 4 has 2 each

Substructure Notes

Bents 2&3 caps have some vertical & horizontal cracking & abrasion.

Bents 2&3 caps have small spalled areas face of with some exposed rebar, inadequate coverage, as built condition, as previously reported.

Concrete Abutments Bents 1&5 has some cracking, some settlement and separating from abutment, 3 inches typical.