



Latitude:35.55520, Longitude:-90.41639

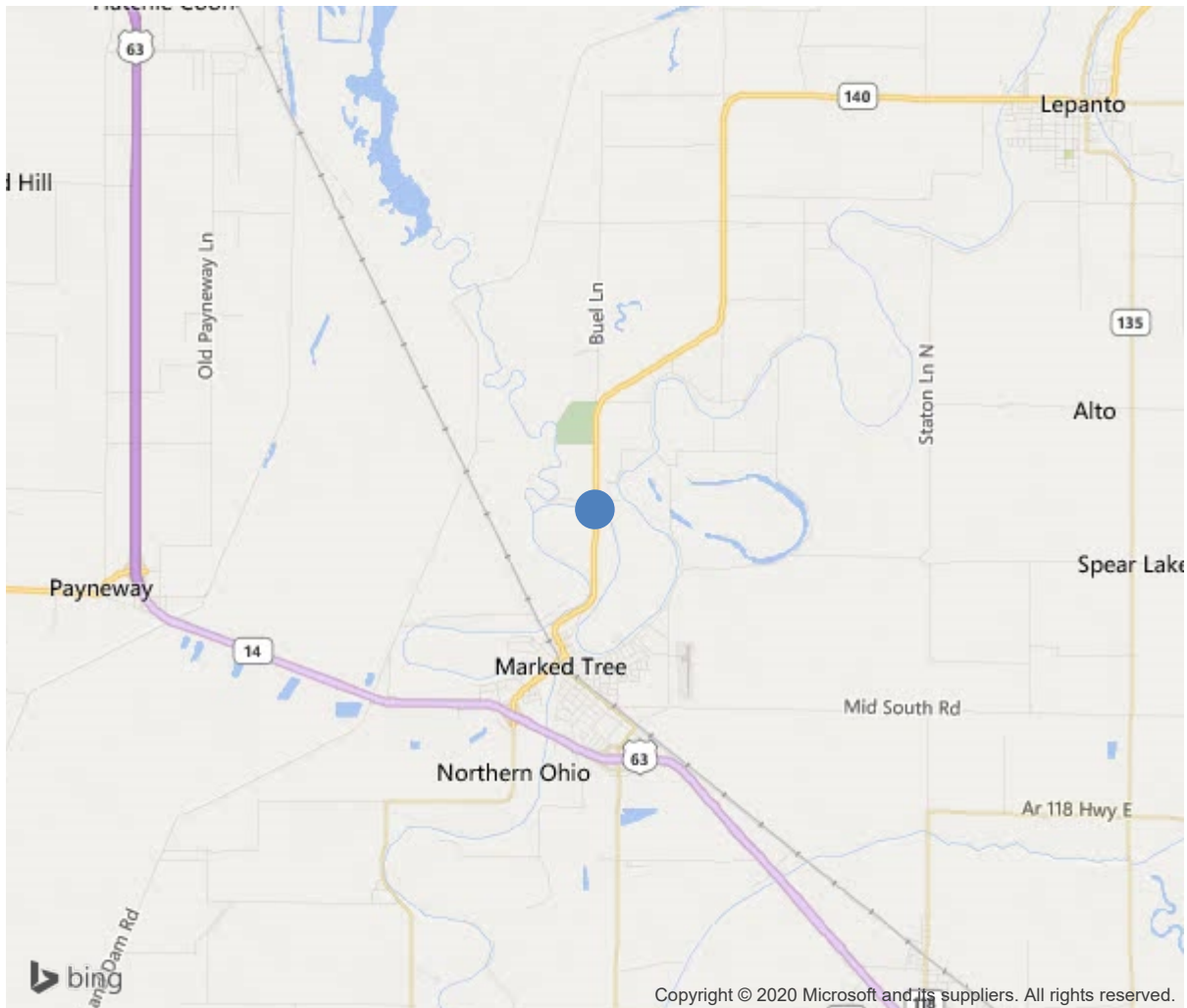
Route:140 Section:01 Log:1.74

Arnold Road ID:56x140x1xA, Arnold Log mile:1.757

District 10, Poinsett County

Owner: 1-State Highway Agency

1.74 MI N MARKED TREE AR



35.55520, -90.41639



Bridge #02502(Routine)

SH 140-01- LM 1.74 over LEFT HAND CHUTE

Location: 1.74 MI N MARKED TREE AR

Team Lead: James Adams Inspection Date: June 02, 2020

IDENTIFICATION	
(1) State Names	Arkansas
(8) Structure Number	02502
(5) Inventory Route	140
(2) Highway Agency District	10
(3) County Code	111-Poinsett County, Arkansas
(4) Place Code	0
(6) Features Intersected	LEFT HAND CHUTE
(7) Facility Carried	SH 140-01- LM 1.74
(9) Location	1.74 MI N MARKED TREE AR
(11) Mile Point	1.74 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte & Subrte	0000140010
(16) Latitude	35.55520
(17) Longitude	-90.41639
(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	9
(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	1948
(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	2700
(30) Year of ADT	2018
(109) Truck ADT	1 %
(19) Bypass, Detour Length	6 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	34 ft
(49) Structure Length	308 ft
(50) Curb or Sidewalk Width	
Left	1.5 ft
Right	1.5 ft
(51) Bridge Roadway Width Curb to Curb	24 ft
(52) Deck Width Out to Out	29.5 ft
(32) Approach Roadway Width (W/Shoulders)	27.9 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	26.9 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	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	6
(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	48
(65) Inventory Rating Method	1-Load Factor(LF)
(66) Inventory Rating	
Type	9
Rating	29
(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	2
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	8
(72) Approach Roadway Alignment	8
(36) Traffic Safety Features	0000
A) Bridge Railings	0-Inspected feature does not meet cur
B) Transitions	0-Inspected feature does not meet cur
C) Approach Guardrail	0-Inspected feature does not meet cur
D) Approach Guardrail Ends	0-Inspected feature does not meet cur
(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	344 ft
(94) Bridge Improvement Cost	\$ 0
(95) Roadway Improvement Cost	\$ 156
(96) Total Project Cost	\$ 892
(97) Year of Improvement Cost Estimate	2002
(114) Future ADT	2980
(115) Year of Future ADT	2028
INSPECTIONS	
(90) Inspection Date	202006
(91) Frequency	24 Months
(92) Critical Feature Inspection	Done Freq. (Mon) Date
A: Fracture Critical Detail	No 24
B: Underwater Inspection	Yes 0
C: Other Special Inspection	No 0

SUFFICIENCY RATING	58.9
STATUS (SD/FO/None)	Functionally Obsolete



Bridge #02502(Routine)

SH 140-01- LM 1.74 over LEFT HAND CHUTE

Location: 1.74 MI N MARKED TREE AR

Team Lead: Cory Shaw, Inspection Date: June 02, 2020

ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	7751	5603	2115	33	0
1080	Delamination/Spall/Patched Area	SF	1613	0	1584	29	0
1090	Exposed Rebar	SF	4	0	0	4	0
1120	Efflorescence/Rust Staining	SF	531	0	531	0	0
510	Wearing Surfaces	SF	7344	6966	0	378	0
3220	Crack (Wearing Surface)	SF	105	0	0	105	0
3210	Delam/Spall/Patched Area/Pothole	SF	273	0	0	273	0
107	Steel Open Girder/Beam	LF	1530	1228	31	264	7
1000	Corrosion	LF	302	0	31	264	7
515	Steel Protective Coating	SF	10686	8638	0	214	1834
3440	Effectiveness (Steel Protective Coatings)	SF	2048	0	0	214	1834
215	Reinforced Concrete Abutment	LF	67	67	0	0	0
227	Reinforced Concrete Pile	EA	32	29	3	0	0
1080	Delamination/Spall/Patched Area	EA	2	0	2	0	0
1130	Cracking (RC and Other)	EA	1	0	1	0	0
234	Reinforced Concrete Pier Cap	LF	197	183	0	14	0
1090	Exposed Rebar	LF	14	0	0	14	0
305	Assembly Joint without Seal	LF	240	192	0	12	36
2370	Metal Deterioration or Damage	LF	48	0	0	12	36
311	Movable Bearing	EA	45	0	45	0	0
1000	Corrosion	EA	45	0	45	0	0
313	Fixed Bearing	EA	45	0	45	0	0
1000	Corrosion	EA	45	0	45	0	0
331	Reinforced Concrete Bridge Railing	LF	612	606	5	1	0
1080	Delamination/Spall/Patched Area	LF	5	0	5	0	0
1090	Exposed Rebar	LF	1	0	0	1	0



Bridge #02502(Routine)

SH 140-01- LM 1.74 over LEFT HAND CHUTE

Location: 1.74 MI N MARKED TREE AR

Team Lead: James Adams **Inspection Date:** June 02, 2020



Bridge #02502(Routine)

SH 140-01- LM 1.74 over LEFT HAND CHUTE

Location: 1.74 MI N MARKED TREE AR

Team Lead: James Adams **Inspection Date:** June 02, 2020

Maintenance Needs

Date Reported: 05/21/2012
Priority: C - Important
Type of Work: None
Status: Monitor
Component:

Deficiency Description

Girders have scattered areas of surface rust. Ends of girders have rust with areas of section loss near concrete haunch and around diaphragm connections. Bearings have some pack rust and section loss.

Remarks



Bridge #02502(Routine)
SH 140-01- LM 1.74 over LEFT HAND CHUTE
Location: 1.74 MI N MARKED TREE AR

Team Lead: James Adams Inspection Date: June 02, 2020

Date Reported: 05/21/2012
Priority: C - Important
Type of Work: None
Status: Monitor
Component:

Deficiency Description

Bents 3 – 5 have dirt and debris buildup on cap.
Bent 6 cap has 3' of spalls with rebar exposed on back and ahead faces of cap.
Bent 7 cap has 8' of spalls with rebar exposed on ahead face.

Remarks

Date Reported: 05/21/2014
Priority: C - Important



Bridge #02502(Routine)
SH 140-01- LM 1.74 over LEFT HAND CHUTE

Location: 1.74 MI N MARKED TREE AR

Team Lead: James Adams **Inspection Date:** June 02, 2020

Type of Work: None
Status: Monitor
Component:

Deficiency Description



Bridge #02502 (Routine)
SH 140-01- LM 1.74 over LEFT HAND CHUTE
Location: 1.74 MI N MARKED TREE AR

Team Lead: James Adams **Inspection Date:** June 02, 2020

Span 1 bent 1 girder 3 has a 1" diameter hole in web below haunch, and moderate section loss along bottom of web at end of girder.

Span 1 bent 1 girder 4 has a 1" diameter hole in web below haunch.

Span 1 bent 1 girder 5 has a 1" diameter hole in web below haunch.

Span 2 bent 3 girder 1 has a 4" x 1" hole in web below haunch.

Span 2 bent 3 girder 5 has a 2in.x 1in.hole in web below haunch.

Span 3 bent 3 girder 5 has a 4in.x 1in.hole in web below haunch with a ½ in.crack at end of hole. See 2020 photo.

Span 4 bent 4 girder 1 has heavy section loss to web between concrete haunch and diaphragm connection.

Span 4 bent 4 girder 2 has a ½" diameter hole in web below haunch.

Span 4 bent 5 girder 3 has a 2.5" x ½" hole in web below haunch.

Span 4 bent 5 girder 5 has a 8" x 1" area of heavy section loss with holes rusted through web below haunch.

Span 5 bent 5 girder 1 has 5" x 1" hole in web below haunch. Web has moderate to heavy section loss between haunch and diaphragm connection with some out of plane bending.

Span 5 bent 5 girder 2 has a 7" x 1" hole in web below haunch.

Span 5 bent 5 girder 3 has a 3.5" x ½" hole in web below haunch.

Span 5 bent 5 girder 4 has a 6" x 1" hole in web below haunch with a 1" crack at the end of hole.

Span 5 bent 6 girder 2 has a 2" x ½" hole in web below haunch.

Span 5 bent 6 girder 3 has a 4.5" x 1" hole in web below haunch with a ½" crack at end of hole.

Span 5 bent 6 girder 4 has a 6" x 1" hole in web below haunch.

Span 6 bent 6 girder 3 has a 2" x ½" hole in web below haunch.

Span 6 bent 6 girder 4 has a 6" x ½" hole/crack in web below haunch.

Span 6 bent 6 girder 5 has a 8" x 2 1/2" hole in web below haunch. Web has heavy section loss between haunch and diaphragm connection.

Span 6 bent 7 girder 3 has a 5" x 1" hole in web below haunch.

Span 6 bent 7 girder 4 has a 2" x ½" hole in web below haunch.

Span 7 bent 7 girder 2 has a 2" x ¼" hole in web below haunch.

Span 7 bent 7 girder 3 has a 2.5" x ½" hole in web below haunch.

Span 7 bent 7 girder 4 has a 2.5" x ½" hole in web below haunch.

Span 7 bent 7 girder 5 has moderate to heavy section loss at web below haunch, at diaphragm connection, and along bottom of web.

Span 7 bent 8 girder 1 has a 1" diameter hole in web at haunch. 6" of web has moderate section loss between haunch and diaphragm connection.

Span 7 bent 8 girder 2 has a 3.5" x 1" hole in web below haunch.

Span 7 bent 8 girder 3 has a 4" x 1" hole at concrete haunch and a 3" crack from hole to end of girder.

Span 7 bent 8 girder 4 has a 3" x 1" hole in web below haunch.

Span 7 bent 8 girder 5 has 32" of moderate section loss from web below haunch down along bottom of web.

Span 8 bent 8 girder 2 has a 2" x 1" hole in web below haunch.

Span 8 bent 8 girder 3 has a ½" diameter hole in web below haunch on end of web.

Span 8 bent 8 girder 5 has a 11.5" x up to 3" hole in web below haunch. End of web has 1' of heavy section loss.

Span 8 bent 9 girder 3 has a 2.5" x 1" hole in web below haunch.

Span 8 bent 9 girder 4 has a 4.5" x 1" hole in web below haunch.

Span 8 bent 9 girder 5 has a 9.5" x 1" hole in web below haunch.

Span 9 bent 9 girder 1 has a 4" x 1" hole in web below haunch.

Span 9 bent 9 girder 5 has a 6.5" x 1" hole in web below haunch.

Span 9 bent 10 girders 2 & 3 have a ½" diameter hole in web below haunch.

Remarks

SPAN 9 GIRDER 2 OVER BENT 9 REPAIRED WITH A HAUNCH PLATE 10/27/2014
SPAN 9 GIRDER 3 OVER BENT 9 REPAIRED WITH A HAUNCH PLATE 10/27/2014
SPAN 9 GIRDER 4 OVER BENT 9 REPAIRED WITH A HAUNCH PLATE 10/27/2014
JTR



Span 2&3 bent 3 girder 5



Span 4&5 bent 5 girder 5



Span 6 bent 6 girder 5



Span 8 bent 8 girder 5

Date Reported: 06/08/2020
Priority: B - Pressing; 6 month completion goal
Type of Work: Repair
Status: Open
Component: Superstructure

Deficiency Description

Span 5 bent 5 girder 5 has a 12in.x 1in.hole in web below haunch. Web has heavy section loss between haunch and diaphragm connection & beginning to crush.

Remarks



Span 5 bent 5 girder 5 on right



Inspection Comments

-

Deck Notes

No approach guard rail.

Left and right curbs have several delaminated areas.

Rails have a few cracked and spalled posts.

Asphalt wearing surface has several spalls & cracks, especially at sliding plate joints.

Bent 3 joint has had 12ft. of slide plate removed. Remainder of plate is loose and moving under traffic. Asphalt over joint is cracked and spalled.

Bent 4 joint has had slide plate removed.

Bent 8 sliding plate joint both lanes is loose, moving under traffic, asphalt over entire joint is spalled.

Concrete deck has a few full depth patches & some concrete patches that are cracked & in poor condition.

Soffit has a few cracks with efflorescence and small spalls with rebar exposed.

Overhangs have transverse cracks with efflorescence, and a few areas of map cracking.

Span 7 in bay 4 has a 4ft. x 5ft. full depth patch.

Superstructure Notes

Girders have several areas of surface rust. Ends of girders have rust with areas of section loss near concrete haunch and around diaphragm connections. Bearings have some pack rust and section loss.

Several girders are floating over bearings, 1/8 in. gap and moving under traffic:

Span 1 bent 2 bearing 2

Span 2 bent 2 bearings 2 – 4

Span 3 bent 3 bearing 2

Span 5 bent 5 bearings 2 and 4

Span 6 bent 6 bearings 2 – 4

Span 6 bent 7 bearings 3 and 4

Span 7 bent 7 bearings 2 and 4

Span 8 bent 8 bearings 2 – 4

Span 9 bent 10 bearings 2 and 4

Span 1 bent 1 girder 1 has a welded splice at web below haunch and a T splice at bottom of web.

Span 1 bent 1 girder 2 has plates welded over holes at haunch.

Span 1 bent 1 girder 3 has a 1in.diameter hole in web below haunch at end of web & moderate section loss along bottom of web at end of girder.

Span 1 bent 1 girder 4 has a 1in.diameter hole in web below haunch in end of web.

Span 1 bent 1 girder 5 has a 1in.diameter hole in web below haunch in end of web.

Span 1 bent 2 girder 1 has a welded splice at haunch.

Span 1 bent 2 girder 2 has plates welded over holes at haunch.

Span 1 bent 2 girder 3 has plates welded over holes at haunch.

Span 1 bent 2 girder 5 has a welded splice at haunch.

Span 2 bent 2 girder 1 has a welded splice at web below haunch and a T splice at bottom of web.

Span 2 bent 2 girders 2 – 4 have plates welded over holes at web below haunch.

Span 2 bent 2 girder 5 has a welded splice at web below haunch.

Span 2 bent 3 girder 1 has a 4in.x 1in.hole in web below haunch.

Span 2 bent 3 girder 5 has a 2in.x 1in.hole in web below haunch.

Span 3 bent 3 girder 1 has a welded splice at haunch.

Span 3 bent 3 girder 5 has a 4in.x 1in.hole in web below haunch with a ½ in.crack at end of hole. See 2020 photo.

Span 3 bent 4 girders 1 – 4 have plates welded over holes at web below haunch.

Span 3 bent 4 girder 5 has a welded splice at web below haunch.



Span 4 bent 4 girder 1 has heavy section loss to web between concrete haunch and diaphragm connection with some out of plane bending of web..

Span 4 bent 4 girder 2 has a 1/2in.diameter hole in web below haunch.

Span 4 bent 4 girder 3 has plates welded over holes at web below haunch.

Span 4 bent 4 girder 5 has a welded splice at web below haunch.

Span 4 bent 5 girder 3 has a 2.5in.x 1/2in.hole in web below haunch.

Span 4 bent 5 girder 4 has plates welded over hole in web below haunch.

Span 4 bent 5 girder 5 has a 8in.x 1in.area of heavy section loss with a 1 in. x 4 in. & a 1 in. diameter hole rusted through web below haunch.

Span 5 bent 5 girder 1 has 5in.x 1in.hole in web below haunch. Web has moderate to heavy section loss between haunch and diaphragm connection with some out of plane bending.

Span 5 bent 5 girder 2 has a 7in.x 1in.hole in web below haunch.

Span 5 bent 5 girder 3 has a 3.5in.x 1/2in.hole in web below haunch.

Span 5 bent 5 girder 4 has a 6in.x 1in.hole in web below haunch with a 1in.crack at the end of hole.

Span 5 bent 5 girder 5 has a 12in.x 1in.hole in web below haunch. Web has heavy section loss between haunch and diaphragm connection & beginning to crush.

Span 5 bent 6 girder 1 & 5 have heavy section loss with out of plane bending in web near haunch.

Span 5 bent 6 girder 2 has a 2in.x 1/2in.hole in web below haunch.

Span 5 bent 6 girder 3 has a 4.5in.x 1in.hole in web below haunch with a 1/2in.crack at end of hole.

Span 5 bent 6 girder 4 has a 6in.x 1in.hole in web below haunch.

Span 6 bent 6 girder 3 has a 2in.x 1/2in.hole in web below haunch.

Span 6 bent 6 girder 4 has a 6in.x 1/2in.hole/crack in web below haunch.

Span 6 bent 6 girder 5 has a 8in.x 2 1/2 in.in.hole in web below haunch. Web has heavy section loss between haunch and diaphragm connection.

Span 6 bent 7 girder 3 has a 5in.x 1in.hole in web below haunch.

Span 6 bent 7 girder 4 has a 2in.x 1/2in.hole in web below haunch.

Span 7 bent 7 girder 2 has a 2in.x 1/4in.hole in web below haunch.

Span 7 bent 7 girder 3 has a 2.5in.x 1/2in.hole in web below haunch.

Span 7 bent 7 girder 4 has a 2.5in.x 1/2in.hole in web below haunch.

Span 7 bent 7 girder 5 has moderate to heavy section loss at web below haunch, at diaphragm connection, and along bottom of web.

Span 7 bent 8 girder 1 has a 1in.diameter hole in web at haunch. 6in.of web has moderate section loss between haunch and diaphragm connection.

Span 7 bent 8 girder 2 has a 3.5in.x 1in.hole in web below haunch.

Span 7 bent 8 girder 3 has a 4in.x 1in.hole at concrete haunch and a 3in.crack from hole to end of girder.

Span 7 bent 8 girder 4 has a 5in.x 1in.hole in web below haunch.

Span 7 bent 8 girder 5 has 32in.of moderate section loss from web below haunch down along bottom of web.

Span 8 bent 8 girder 2 has a 2in.x 1in.hole in web below haunch.

Span 8 bent 8 girder 3 has a 1/2in.diameter hole in web below haunch in end of web.

Span 8 bent 8 girder 5 has a 11.5in.x up to 3in.hole in web below haunch. End of web has 1ft. of heavy section loss.

Span 8 bent 9 girder 3 has a 2.5in.x 1in.hole in web below haunch.

Span 8 bent 9 girder 4 has a 4.5in.x 1in.hole in web below haunch.

Span 8 bent 9 girder 5 has a 9.5in.x 1in.hole in web below haunch.

Span 9 bent 9 girder 1 has a 4in.x 1in.hole in web below haunch.

Span 9 bent 9 girder 5 has a 6.5in.x 1in.hole in web below haunch.

Span 9 bent 9 girder 2 has plates welded over holes in web below haunch

Span 9 bent 9 girder 3 has plates welded over holes in web below haunch

Span 9 bent 9 girder 4 has plates welded over holes in web below haunch



Bridge #02502(Routine)
SH 140-01- LM 1.74 over LEFT HAND CHUTE
Location: 1.74 MI N MARKED TREE AR

Team Lead: James Adams **Inspection Date:** June 02, 2020

Span 9 bent 10 girders 2 & 3 have a 1/2in.diameter hole in web below haunch.

Substructure Notes

Bents 3,4,5 & 8 have dirt and debris buildup on cap.
Bent 6 cap has 3ft. of spalls with exposed rebar on both faces of cap.
Bent 6 piles 1 and 2 have minor spalls. Piles 1 and 4 were driven out of plumb.
Bent 7 cap has 8ft. of spalls with exposed rebar on span 7 face.
Bent 9 pile 4 has a hairline ring crack.
Minor embankment erosion under Span 8.