Other Special Bridge Inspection Report

NBI Bridge No.: 17051

Route I-40 over ARKANSAS RIVER
Sequoyah County

Prepared for:

Oklahoma Department of Transportation

Field District 01

Inspection Date:

7/14/2022

Report Prepared By:

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Engineers ■ Surveyors ■ Planners

Oklahoma Dept. of Transportation - Bridge Inspection Report

NBI No.:	Structure No.:	Local ID:	Suff. Rating:	
17051	6822 0000 X	-1	82.90	ND

IDENTIFICATION

Bridge Description:

3-125ft. P/S CONCRETE GIRDERS, 3-CONT. PLATE GIRDER SPANS (200ft. -330ft.-200), 4-125ft., 3-125ft. CONT. PLATE GIRDER SPANS

1. State: Oklahoma
2. Division: Division 1
3. County: SEQUOYAH
4. City: Unknown
Admin Area: Unknown
5a. On/Under: Route On Structure
5b. Kind of Hwy: Interstate Hwy
5c. Lvl of Srvc: Mainline
5d. Route No.: 00040
5e. Dir. Sufx: N/A (NBI)
7. Facility Carried : I-40
6. Feat. Intersect: ARKANSAS RIVER
9. Location: SEQUOYAH-MUSKOGEE CC
11. Mile Post: NA
13. LRS Inv. / Sub Rte: 6800022HX / 00
16. Latitude: 35° 29' 16.49"
17. Longitude: 095° 05' 38.05"
98. Border Brdg: Unknown (P)
% Responsible: 0.00
99. Border Brdg #: Unknown

INSPECTION

Type	Insp. Req.	Insp. Done	Freq.	Insp. Date	Next Insp.
NBI:		0	24 months	7/23/2021	07/23/2023
FC:	Y	0	24 months	7/23/2021	7/23/2023
UW:	Y	0	60 months	7/19/2020	7/19/2025
OS:	Y	1	24 months	7/14/2022	7/23/2024

CLASSIFICATION

12.Base Hwy Net.: On Base Network
20. Toll Facility: On free road
21. Custodian: State
22. Owner: State
26. Function Class: 01 Rural Interstate
37. Historical Sig.: Not eligible for NRHP
100. Def. Hwy: On Interstate STRAHNE
101. Parallel Str.: No || bridge exists
102. Traffic Dir.: 2-way traffic
103. Temp. Str.: Not Applicable (P)
104. Hwy System: On the NHS
105. Fed Land Hwy: IRR-Indian Res Rd
110. Defense Hwy: On Interstate STRAHNE
112. NBIS Length: Long Enough

STRUCTURE TYPE AND MATERIALS

43a/b. Main Span: Steel Cont. / Girder-Floorbeam
44a/b. Appr. Span: P/S Conc. / Stringer/Girder
45. # of Main Spans: 10
46. # of Appr. Spans: 3
107. Deck Type: Concrete-Cast-in-Place
108a. Wearing Surface: Low Slump Concrete
108b. Membrane: Unknown
108c. Deck protection: Unknown

CONDITION

58.Deck: 6 Satisfactory
59.Sup.: 6 Satisfactory
60.Sub: 6 Satisfactory
62.Culvert: N/A (NBI)
61.Chan./Chan. Prot.: 6 Bank Slumping

Flowline Notes

The Pier 5 footing is exposed up to 4"H x 5'L along the west face.
2020 Underwater Channel Notes: The channel in the vicinity of the bridge

AGE AND SERVICE

19. Detour Length: 5.0 mi
27. Year Built: 1967
28a/b. Lanes on/und: 4 / 0
29. ADT: 15,900
30. Year of ADT: 2020
42a/b. Type of Svc on/und: Highway / Waterway
106. Year Reconst.: 1983
109. Truck ADT: 36%

LOAD RATING AND POSTING

31. Design Load: MS 18 (HS 20)
41. Post. Status: A Open, no restriction
70. Posting: 5 At/Above Legal Loads
Date Rated: 10/01/2006
63.Op / 65.Inv. Rating Meth.: 1 LF Load Factor / 1 LF Load Factor

	H	HS	3-3	EV3	SHV
64. Operating Rating (tons):	30.40	54.70	92.80	0.00	0.00
66. Inventory Rating (tons):	18.20	32.80	55.70		

GEOMETRIC DATA

10. Vert. Clearance: 99.99 ft
32. Appr Rwy Width: 69.91 ft
33. Median: Closed Med w/o Barri
34. Skew: 0.00°
35. Struct. Flared: No flare
47Horizontal Clr: 30.00 ft
48. Length Max Span: 330.00 ft
49. Struct. Length: 1,989.00 ft
50a. Curb/Sdwlk Width L: 3.00 ft
50b. Curb/Sdwlk Width R: 3.00 ft
51. Width Curb to Curb: 60.00 ft
52. Width Out to Out: 68.50 ft
Deck Area: 136,247.76 sq. ft
53. Min.Vert.Cl.Ovr Brg: 99.99 ft
54a.Min.Vt.Undclr.Ref.: N Feature not hwy c
54b. Min. Vert. Undclr.: 0.00 ft
55a. Min.Lat.Undclr.Ref: N Feature not hwy
55. Min.Lat.Underclr. R: 99.90 ft
56. Min.Lat.Underclr. L: 99.90 ft

APPRAISAL

36a. Brdg Rail: 1 Meets Standards
36b. Transition: 1 Meets Standards
36c. Appr. Rail: 1 Meets Standards
36d. Appr.Rail Ends: 1 Meets Standarc
67. Str Evaluation: 6 Equal Min Criteria
68. Deck Geom.: 4 Tolerable
69. Vert./Horiz. Undclr: Not applicable (NB
71. Waterway Adeq: 8 Equal Desirable
72. Appr. Alignment: 7 Above Min Criteria
113. Scour Critical: 8 Stable Above Footin

PROPOSED IMPROVEMENTS

94. Bridge Cost: $20,219,922
95. Roadway Cost: $4,500,000
96. Total Cost: $26,119,163
97. Yr.of Cost Est.: 2015
75. Type of Work: 31 Repl-Load Capacity
76. Lngth of Improvement: 1,989.0 ft
114. Future ADT: 25,440
115. Yr.of Future ADT: 2040

NAVIGATION DATA

38. Nav. Control: Permit Required
39. Vert. Clearance: 52.0 ft
40. Horiz. Clearance: 300.0 ft
111. Pier Protect.: 2 In-Place, Function
116. Lift Bridge Vert. Clr.: 0.0 ft

OKLAHOMA ITEMS

200c. Temperature: 95
200d. Weather: Clear
201. Struc.Stl. ASTM Desig.: A-36 / -1
202. Waterprf.Membrane: -1
Date Installed: 01/01/1901
203. Type Exp. Device: Modular
_ _
204. Type of Railing: PTR-1 (round hand rail)
205. Material Quantity: -3.00
208a. Type of Abutment: Skeleton
b. Type of Found.: Steel Piling
209. Type of Pier/Found.: 2 / Yes
No Piling/Drilled Shaft

210. Foundation Elev.:	4,300.00	4,240.00
-1.00	4,290.00	-1.00

211. Wear.Surf.Prot.Sys: Silane
Date Installed: 01/01/1901
211c. Silane Reapplied
211d. Date :
213. Utilities Attached: Communication

214a. Posted Weight Limit: NR
b. Posted Speed Limit: 70
c. Narrow/1way Brdg Sign: NA
d. Vertical Clr. Sign: NA
Adv. Warning Sign: NA
e. Navigation Lights?: Yes
Working/Not Working: No
215. Overpass: INTERSTATE
218. Functionally Obsolete : -
220. Bridge Redecked _
221. Substr.Cond.(U/W): Satisfactory Condition
222. Fill Over RCB:
223. Appr.Slab/Rwy Cond.: 6
225. Paint Type/Ovrct: Inorganic Zinc 3Coat Sys
N/A
226. Date Painted: 2010
227. Paint Color: Gray
233. Deck Forming:
238. School Bus Rte.: Current & Desired route
240. Appr. Rwy Type.: Asphalt/Bituminous
243. Grdr Spacing/No.: /

244. Span Lengths:

125	125	125		
200	330	200	125	125

245. Girder Depth:
246a. Type of Ovelay: NA
b. Overlay Thickness: 0.00
c. Overlay Date: 01/01/1901
d. Ovly Depth Changed >1": _
247. Protective Systems: _

248. # Field Splices w/ Corrosion:
249. Scour Crit. POA Exists?: _
250. Headwall:
258. Plans w/Found.in ODOT File: _
259. Scour Eval. in ODOT File: _
263. Interchange at Intersection: No
264. Interstate Milepoint: 290.66

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17051	6822 0000 X	-1	82.90	ND

Inspection Date: 7/14/22 Shaun Fillmore

Invoice No.: 1045766 Inspected With:

Shaun Fillmore Digitally signed by Shaun Fillmore Date: 2022.10.03 15:17:34 -05'00'

BRIDGE NOTES:

3-125ft P/S Concrete girders, (200ft-330ft-200ft)4-125ft,3-125ft Continuous plate girder spans 2-30ft roadways. w/ 18 inch safety curbs & 4ft median
OS Inspection Items Include:
Monitor:
-All locations of cracks in the girders at the ends of stiffeners
-Fractured and cracked transverse separation beam in modular joint at pier 6
-Cracking of modular joint bearing boxes at pier 3
-Misaligned joint support bars and cracked/broken off equidistant control bars at piers 3, 6, and 10
-Crack in poor quality weld between the lower lateral bracing gusset plate and the vertical web stiffener for girder 3 at floor beam 5, span 6
-Lower lateral bracing gusset plate at floor beam 4, girder 3, in span 8
-Elastomeric bearings for span 4 at pier 3
-Lateral and longitudinal movement of bearings at east abutment
-Undermining/erosion of aprons at both abutments and exposed steel pile under beam 5 where undermining occurs at west abutment.

INSPECTION NOTES: **7/14/22**

PX Repair Items:
Reconnect metal bridge railing at two adjacent posts over pier 12
Replace the missing railing posts near midspan of span 13 and patch adjacent spalled concrete.
Patch spalls with exposed reinforcement in the bridge railing and curb.
Patch spalls in driving surface near pourable control joints as listed in the table in the “Driving Surface” section of the report.
Repair cracks in the bearing boxes at the modular joint supports at pier 3. Also, install shim plates or additional support below the bearing blocks to prevent future cracking.
Repair the cracked and broken modular support bars and equidistant control bars at piers 6 and 10. Install countermeasures to keep the joint supports in place to prevent further cracking.
Repair transverse separation beam at support box 2 of pier 6.
Repair/replace the modular joint seals over piers 3, 6, and 10 to prevent water from leaking into superstructure.
Replace pourable joint seal at the abutments.
Replace missing bolts at stringer connections.
Drill out end of crack in the stringer diaphragm over floor beam 5, span 6, between stringers 3 and 4.
Consider drilling out the ends of the cracks in the lower lateral bracing gusset plates at locations as listed in the “Floor Bracing System” below.
Reattach the dampener rod bolts/nuts at missing locations and replace dampener rod where fractured.
Consider patching the large spall at pier 6 at the base of the north column.
Repair the broken seismic cable anchorages as listed in the “Piers” section.
Reset the elastomeric bearings for girder 1 for span 4 at pier 3.
Remove paint from the stainless steel sliding surfaces of the elastomeric bearings at pier 3.
Removing the pack rust from below the rocker bearings to allow proper movement of the bearings.

FX Monitor Items:
Monitor full depth transverse cracking in original portion of the deck for growth and change in density.
Monitor sagging middle transverse separation beam of pier 6 joint.
Monitor the locations of cracks which have been retrofitted with drilled holes for signs of crack propagation beyond the drilled holes.
Monitor lateral bracing gusset plate connections to girder webs at undercuts and flame cuts.
Monitor possible crack at the end of the weld for the vertical stiffener under floor beam 7, girder 4, span 6.
Monitor crack in poor quality weld between the lower lateral bracing gusset plate and the vertical web stiffener for girder 3 at floor beam 5, span 6 for propagation into the girder base-metal.
Monitor lamination and/or undercut at the girder web adjacent to the end of the lower lateral bracing gusset plate weld at girder 4, south face of floor beam 2, span 6.
Monitor exposed ends of tendons for corrosion.
Monitor crack in the vertical web stiffener of girder 3 at floor beam 2, span 8.
Monitor pack rust between stringer top flanges, floor beam top flanges, and diaphragm top flanges and the deck soffit for growth and possible affects to driving surface.
Monitor gouge in floor beam 3, span 6, near girder 2 for cracking.
Monitor pack rust between floor beam webs and gusset plates, especially near piers.
Monitor the corrosion hole in the lower lateral bracing gusset plate at girder 4, span 6 over pier 6 for growth or deterioration.
Monitor the erosion beneath both abutment breastwall aprons.
Monitor corrosion to east abutment bearings.
Monitor cracking in approach slabs for potholes.
Monitor girder bottom flange splice plate for pack rust initiation.

ELEMENT CONDITION STATE DATA

Elem. / Env	Description	Unit	Total Qty	% 1	Qty. 1	% 2	Qty. 2	% 3	Qty. 3	% 4	Qty. 4

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12 / 4	Re Concrete Deck	sq.ft	119,340.00	70%	83,518.00	30%	35,802.00	0%	20.00	0%	0.00

PX – The original portion of the deck (spans 5-12 and 80 feet of span 4) has control joints at every second or third floor beam. The pourable joint sealant has typically failed, allowing water to drain onto the floor system. Small spalls are typical along control joints. Deck patches are common along these joints, and many patched areas exhibit recent spalling and heavy cracking. Multiple areas previously mentioned as being deteriorated have been patched. Locations of unrepaired spalling or deteriorated patches are as follows:
Span 4 - Pier 4 - Westbound lanes - 8-inch-wide x 6-inch-long patch in south lane and 4-foot-wide x 12-foot-long patch in north lane.
Span 4 - Floor beam 7 - Westbound lanes - Deteriorating patch in north lane.
Span 6 - Pier 6 - Westbound lanes - Failing patches near pier 6.
Span 10 - Floor beam 2 - Eastbound lanes - 3-foot-wide x 6-inch-long delamination.
Span 13 - Eastbound lanes - 3-foot-wide x 1-foot-long spall/delamination in north lane.
The newer portion of the deck (spans 1 through 3 and approximately 125-feet of span 4) exhibit isolated locations of moderate transverse cracking up to 0.020-inch-wide and spaced at 3 to 5 feet, high-density longitudinal cracking up to 0.020-inch-wide and spaced less than 1-foot, and hairline map cracking. The westbound lanes in span 3 exhibit diagonal cracking up to 0.030-inch-wide. Some of the wider cracks have been sealed.
The original portion of the deck (spans 5-12 along with approximately 80 feet of span 4) typically exhibits transverse cracking up to 0.050-inch-wide and spaced at 5 to 10 feet. Many of the cracks are full depth and are reflected in the soffit.
Pavement markers near floor beam 7, span 4 and mid-span of span 5 are broken.
The north edge of the deck at the west abutment is in contact with the backwall, causing the edge of the deck to spall.

107 / 4	Steel Opn Girder/Beam	ft	5,540.00	91%	5,036.00	9%	500.00	0%	4.00	0%	0.00

FX – Girder 4, span 6 on the south side of floor beam 2 exhibits an undercut in the web adjacent to the end of the lower lateral bracing gusset plate weld.
FX – The connection stiffener for the floor beam 4 connection to girder 3, span 6 exhibits a paint crack at the bottom flange weld.
FX – The lower lateral bracing gusset plate connection to the vertical web stiffener for floor beam 5 to girder 3, span 6 connection exhibits an approximately 3-inch-long crack through the poor-quality weld.
FX – The connection stiffener for the floor beam 7 connection to girder 4, span 6 exhibits a paint crack at the end of the weld. This crack is a paint crack but should be monitored in future inspections.
FX – The connection stiffener for the floor beam 2 connection to girder 3, span 8 exhibits a 1 1/2-inch-long crack at the toe of the top weld for the stiffener.
FX – Several lower lateral bracing gusset plates have been flame-cut and reattached to the girder webs with bolted angles. Gouges in the girder webs up to 1/4-inch-deep exist along the original lower lateral bracing weld lines.
Girder 3, span 5 exhibits one mis-drilled hole in the web splice near floor beams 3, 5, and 9.
Girder 4, span 11 exhibits one bolt not fully seated in the vertical splice plate near floor beam 4.
Tri-axial welds exist at intersections between the webs, flanges, and stiffeners. No cracked welds are noted at this time.

515 / 4	Steel Protective Coating	sq.ft	330,000.00	0%	0.00	100%	330,000.00	0%	0.00	0%	0.00

The paint system is generally in satisfactory condition with the exception of isolated areas of reactivating painted over pack rust, minor surface corrosion, and flaking or peeling paint most common near the piers.

109 / 4	Pre Opn Conc Girder/Beam	ft	4,140.00	100%	4,140.00	0%	0.00	0%	0.00	0%	0.00

No significant deficiencies were observed to the prestressed concrete girders in spans 1-3.

113 / 4	Steel Stringer	ft	5,540.00	98%	5,437.00	2%	100.00	0%	3.00	0%	0.00

PX – Bolts and/or nuts are missing in the stringer to floor beam connections at the following locations:
Span 6, west side of floor beam 1, stringer 1 exhibits two missing bolts.
Span 6, east side of floor beam 1, north face of stringer 3 exhibits a missing nut.
Span 7, floor beam 2, stringer 4 exhibits four not fully seated bolts.
Span 8, west face of floor beam 0, stringer 3 exhibits one missing bolt.
Span 10, floor beam 0, stringer 3 exhibits four missing bolts.
PX – The stringer diaphragm between stringers 3 and 4 over floor beam 5, span 6 exhibits an 8 1/2-inch-long crack. The crack was 6 inches long during the 2016 OS inspection; however, no growth was noted during this inspection.
PX – Stringer 3, span 12 between floor beams 3 and 4 has a loose bolt on the bottom flange splice.

152 / 4	Steel Floor Beam	ft	3,536.00	0%	0.00	95%	3,346.00	5%	190.00	0%	0.00

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FX – Floor beam 3, span 6 between girders 1 and 2 has a 1/2-inch-long x 3/16-inch-deep gouge in the bottom flange approximately 2 feet from girder 2. The floor beam also has an approximate 1/4-inch global lateral sweep in the bottom flange to the east. This sweep appears to be from construction, has not changed from prior inspections, and it is assumed that the cross framing provides additional support to the floor beam.
FX – Floor beam 6, span 4 between girders 3 and 4 exhibits 1/2-inch-thick painted over pack rust between the floor beam web and the connection plate at girder 4. Similar conditions exist at floor beam 8, span 6 at girder 4 over pier 6. Similar conditions occur sporadically but with less severity.
FX – Floor beam 8, span 6 between girders 3 and 4 over pier 6 exhibits up to 1-inch-thick (previously 1/2-inch-thick) pack rust between the floor beam truss lower chord and the center gusset plate with 1/16-inch-deep section loss to the gusset plate. Similar conditions exist to the floor beams in span 7 over pier 6 and the floor beams in spans 10 and 11 over pier 10.
FX – Pack rust is typically developing between the diaphragm top flange and the deck soffits, up to 1/16-inch-thick at random locations.
Floor beam 3, span 7 at girder 2 exhibits one missing and one loose bolt at the top row of connection bolts.
Fretting corrosion is present at the isolated upper floor beam connections to the girders. The movement may be due to a loose connection.
Minor construction related damage exists to the bottom strut for the floor beam connections in isolated locations.

Floor System Bracing:
PX – Fatigue cracks are present on welds for the lower lateral bracing gusset plates at the following multiple locations. Refer to the Fracture Critical report for specific locations.
PX – The lower lateral bracing dampeners exhibit fractures or deterioration at the following locations:
Span 4, between girders 1 and 2, between floor beams 5 and 6 – canister fractured and loose.
Span 4, between girders 1 and 2 and between floor beams 8 and pier 4 – canister fractured and loose.
Span 4, between girders 3 and 4 and between floor beam 7 and pier 4 – canister fractured and loose.
Span 6, between girders 1 and 2 and between floor beams 2 and 3 – Guide bar wearing into the dampener canister.
FX – A corrosion hole measuring 8 inches long x 1-3/4 inches wide exists on the lateral bracing gusset plate in span 6, girder 4, at pier 6.
Small distortions in the lower lateral bracing angles are common most likely due to erection damage.

205 / 4	Re Conc Column	each	23.00	87%	20.00	9%	2.00	4%	1.00	0%	0.00

PX – The north column of pier 6 exhibits a 5-square-foot spall with exposed and corroding reinforcing steel exists at the base of the column.
The south column of pier 6 exhibits a vertical crack in the east face.

210 / 4	Re Conc Pier Wall	ft	94.00	68%	64.00	32%	30.00	0%	0.00	0%	0.00

Minor hairline cracking exists in the concrete pier walls.
Pier 4 exhibits some water staining and vertical cracks to the stem wall.

215 / 4	Re Conc Abutment	ft	152.00	97%	147.00	3%	4.00	1%	1.00	0%	0.00

FX – Both abutment breastwalls exhibits undermining with up to 20 inches of penetration beneath the apron throughout the abutment length.
The west abutment exhibits one localized location of erosion 3-foot-wide with 18 inches of penetration beneath girder 5. Previously noted erosion hole at the south end of the east abutment apron has been repaired.
The east abutment exhibits random hairline cracking up to 0.020 inch wide.
The east abutment seat exhibits moderate debris accumulation up to 9 inches deep around girders 2 and 3 due to the failed joint above. An isolated location of rust staining exists in the abutment due to shallow rebar.
West abutment exhibits random hairline cracking along the backwall and breastwall.

234 / 4	Re Conc Pier Cap	ft	837.00	33%	280.00	66%	550.00	1%	7.00	0%	0.00

PX – Seismic restraints, consisting of cable anchorages attached between the girder bottom flanges and the pier caps, exist at piers 6 and 10.
The cable anchorages for girders 1 through 4 at piers 6 and 10 are broken and are no longer functioning.
Pier 6 cap exhibits rust staining throughout and a spall to the bottom east edge of the south cantilever.
Pier 1 cap on the west and east faces at the south end exhibits 1/16-inch-wide x 20-foot-long crack 2-feet from the top.
Pier 10 cap exhibits a wide crack and delamination to the bottom west edge between girders 3 and 4.

300 / 4	Strip Seal Exp Joint	ft	69.00	0%	0.00	0%	0.00	0%	0.00	100%	69.00

Joint at east abutment.
PX – The pourable expansion joint seal at the west abutment is missing the joint seal for 10 feet in the westbound lanes and throughout the southern lane of the eastbound lanes.

303 / 4	Assem Jnt With Seal	ft	207.00	0%	0.00	0%	0.00	0%	0.00	100%	207.00

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PX – Modular joints exist above piers 3, 6, and 10. The support boxes at pier 3 appear to be supported by a thin layer of concrete, which does not provide adequate support, the western and eastern boxes have an angle welded to the end floor beam. The following deficiencies were observed in the pier 3 joint:

Joint Support Joint Assembly Description

Joint 3 - Support Joint Assembly 3 - Both bottom plates of support boxes have fractured below the support bars.

Joint 3 - Support Joint Assembly 4 - Both bottom plates of support boxes have fractured below the support bars.

Joint 3 - Support Joint Assembly 7 - The west bottom plate of the support box has fractured below the south support bar.

Joint 3 - Support Joint Assembly 8 - The west support box is only supported by the end 6 3/4 inches over its 22 1/4-inch total length. A 7-inch diameter spall exists to the thin layer of concrete below the beam.

Joint 3 - Support Joint Assembly 14 - A 0.010-inch-wide crack exists in 3-inch-thick unreinforced concrete pour below the support beam. The weld in the bottom flange of the support beam exhibits a full width crack.

Joint 3 - Support Joint Assembly 15 - The west bottom plate of the support box has fractured below the south support bar.

Joint 3 - Support Joint Assembly 16 - The west bottom plate of the support box and the 3-inch-thick unreinforced concrete pour below the support box have fractured and are no longer supporting the south support bar.

Joint 3 - Support Joint Assembly 17 - The 3-inch thick unreinforced concrete pour below the support box is not continuous with the concrete beam top flange.

The modular joint at pier 3 was also observed to be closed and the neoprene joint seals are cracked and torn.

The joints above piers 6 and 10 have support assemblies with cantilevered equidistant control bars (used to ensure equal compression of the neoprene compression seals). These equidistant control bars and the support bar welds are cracked, broken, or dislodged at the following locations:

Joint 6 - Support Assembly 1 – One bar broken and dislodged.

Joint 6 - Support Assembly 2 – Both bars broken and missing. Transverse separation beam fractured, and previous plate repair has failed.

Joint 6 - Support Assembly 3 – One bar broken.

Joint 6 - Support Assembly 4 – Equidistant bars are missing.

Joint 6 - Support Assembly 10 – One bar dislodged.

Joint 6 - Support Assembly 11 – One bar dislodged and one bar missing.

Joint 6 - Support Assembly 12 – Both bars missing.

Joint 6 - Support Assembly 13 – One bar dislodged and one bar missing.

Joint 6 - Support Assembly 14 – Both bars dislodged.

Joint 10 - Support Assembly 4 – One bar dislodged.

Joint 10 - Support Assembly 12 – Equidistant bars are missing.

Joint 10 - Support Assembly 13 – Equidistant bars are missing

Joint 10 - Support Assembly 14

Many of these cracks have propagated from the weld to the separation bar down through the equidistant control bar until the bar has fractured. Modular joints historically have been very susceptible to fatigue cracking due to the number of cycles (one per wheel load), the intensity of the impact load and the fatigue prone weld details.

PX – The modular joint seals over piers 3, 6, and 10 are bulging and torn along the full length of the joints in the westbound lanes and along the curbs of the eastbound lanes. This deterioration allows water to drain through the joint accelerating the deterioration of the steel superstructure and the pier caps below. During this inspection, these conditions were noted at several other locations as well.

FX – The middle transverse separation beam of the modular expansion joint near the north curb at pier 6 is sagging. Similar in south eastbound lane, 5/8-inch below exterior beams.

310 / 4	Elastomeric Bearing	each	76.00	97%	74.00	0%	0.00	3%	2.00	0%	0.00

PX – The elastomeric bearing for girder 1 of span 4 at pier 3 has rotated between the Teflon pad and the steel bearing assembly. The rotation has caused the southeast corner of the elastomeric bearing to pull away from the sole plate, with up to 2 1/2 inches (1-inch increase since previous inspection) of overhang at the southeast corner of the bearing. The steel bearing assembly is at the limits of expansion with the anchor bolts bent. This condition may be due to the steel bearing assembly not being aligned parallel with the girder before being welded to the bottom flange. The twisted steel bearing assembly is restrained by the anchor bolt slots (also not parallel with the girder) causing binding against the anchor bolts. Similar misalignment between the girder and steel bearing assembly was observed at girder 3 of span 4 at pier 3.

PX – The stainless-steel sliding surface for the girder bearings of span 4 at pier 3 have been painted. This condition has compromised the low friction sliding surface of the bearings, causing longitudinal movements to be accommodated by deformation of the elastomeric bearings.

The bearing for girder 3 at pier 4 is rotated out of alignment relative to the bearings for the other girders. This rotation appears to be due to construction as no correlating signs of distress were noted. The misalignment will tend to transfer higher longitudinal forces to the pier.

Isolated anchor bolts for the elastomeric bearings exhibit loose nuts and missing washers.

311 / 4	Moveable Bearing	each	24.00	0%	0.00	63%	15.00	38%	9.00	0%	0.00

PX – The rocker bearings at piers 4, 6, 10 and at the east abutment have pack rust between the rockers and the masonry plates. The lead bearing pads below the masonry plates are extruding out from under the masonry plates, suggesting the bearings are being loaded longitudinally because of the inability of the rockers to rotate. Several rocker bearing bolts are broken or missing, especially at pier 6 and the east abutment.

FX – East abutment bearings typically exhibit surface corrosion on the rocker and the masonry plate with up to 1/16-inch-deep active corrosion and painted over pitting. Anchor bolts are typically bent and/or broken due to expansion. Girders 1 and 2 bearings have shifted 1-inch north, while girders 3 and 4 bearings have shifted 1-inch south.

The rocker bearings for span 6 at pier 6 are rocked 12 degree maximum in expansion at 91 degrees F.

The rocker bearings at pier 10 are rotated between 5 and 9 degrees degrees in expansion at 88 degrees F.

313 / 4	Fixed Bearing	each	24.00	0%	0.00	100%	24.00	0%	0.00	0%	0.00

No significant deficiencies.

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321 / 4	Re Conc Approach Slab	sq.ft	4.00	0%	0.00	75%	3.00	25%	1.00	0%	0.00
	FX – The west approach slab exhibits longitudinal and map cracking throughout up to 1/16-inch max. Minor edge spalls exists along the approach slab adjacent to the joint. Debris exists along the shoulders. East approach slab exhibits wide longitudinal cracking. Poured joint seals between the approach slab and approach roadway exhibit areas of missing joint material or depressed areas into the slab. Both approaches exhibit wide longitudinal cracking in the approach wearing surface. The asphalt concrete approach pavement in the westbound lanes exhibits longitudinal and transverse cracking with minor settlement at both ends.											
330 / 4	Metal Bridge Railing	ft	3,978.00	100%	3,973.00	0%	0.00	0%	5.00	0%	0.00
	PX – The north metal bridge railing is disconnected at two adjacent posts over pier 12. PX – The north bridge railing over floor beam 2, span 13 exhibits three missing rail posts along the top of the concrete railing. Spalls with exposed reinforcing steel exist at the locations of the old rail posts. The following railing locations exhibit gaps in the metal rail: -North railing over floor beam 1, span 5. -South railing over pier 6. -South railing over pier 7. -North railing over floor beam 4, span 9.											
919 / 4	St.(Rail) Prot. Coat	(SF)	7,500.00	0%	0.00	100%	7,500.00	0%	0.00	0%	0.00
	The paint system is generally in satisfactory condition with isolated locations of corrosion typically near locations of impact damage.											
331 / 4	Re Conc Bridge Railing	ft	5,967.00	0%	0.00	100%	5,939.00	0%	28.00	0%	0.00
	PX – Concrete bridge railing and curb typically exhibits 0.020-inch to 0.030-inch-wide cracking spaced at 3 to 5 feet with leaching and minor rust staining and isolated locations of spalling with exposed reinforcing steel. The worst spalling exists to the south curb in span 6 with a 20-foot-long x up to 6-inch-deep spall. The following locations exhibit minor impact damage with heavy cracking and/or spalling with exposed reinforcement: -North railing in spans 3 and 4. -North face of the median railing over piers 10 and 12.											
819 / 4	PS Conc.Gird.End(5Ft	(LF)	360.00	99%	356.00	1%	4.00	0%	0.00	0%	0.00
	FX – End faces of the following beams exhibit spalling with exposed tendons: -Beam 1, span 1 at pier 1 – crack extending 30 inches up the web and spall to bottom flange exposing 9 tendons. -Beam 1, span 3 at pier 2 – crack extending 31 inches down the web and spall exposing 3 tendons. -Beam 12, span 2 at pier 2 – spalling to bottom flange with 23 exposed tendons. -Beam 12, span 3 at pier 3 – spall to the bottom flange exposing 22 tendons. Some of the girder ends exhibit hairline cracking with rust and efflorescence staining from the deck. This condition has not changed from the previous inspection.											
859 / 4	Soffit	(EA)	1.00	0%	0.00	100%	1.00	0%	0.00	0%	0.00
	FX – The original portion of the deck exhibits full depth x full width transverse cracking up to 0.030-inch-wide spaced at 2 to 5 feet with minor efflorescence. Cracking is heavier over piers. Shallow spalls exist sporadically adjacent to girder top flanges throughout the main spans. Isolated areas of the soffit overhangs exhibit spalling with exposed reinforcement adjacent to the joints. Soffit between girders 2 and 3 exhibits rust staining and small pop-outs due to shallow cover of reinforcing steel chairs. The soffit below the median in span 4 over pier 3 exhibits a 2-square-foot spall with exposed and corroded reinforcing steel.											
865 / 4	St.Open Gird End(5Ft	(LF)	120.00	50%	60.00	50%	60.00	0%	0.00	0%	0.00
	FX – Pack rust up to 1/2-inch-thick exists between some girder vertical web stiffeners and floor beam truss lower chord gusset plates and between horizontal splice flanges. Minor pack rust up to 1/4-inch-thick is developing at girder bottom flange splice plates where girder ends butt up against each other. Pack rust is active in many locations and worse at expansion joints.											
870 / 4	Concrete Wingwall	(EA)	4.00	100%	4.00	0%	0.00	0%	0.00	0%	0.00
	No significant deficiencies.											
872 / 4	St.Gird Und Const.Jt	(LF)	760.00	74%	560.00	26%	200.00	0%	0.00	0%	0.00

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FX – Several cracks and possible cracks exist at the ends of the horizontal web splice. Several of these cracks have been arrested by drilled holes and the locations are as follows:
Span 4 - G2 - Near FB 5 - Two cracks: 1-inch-long and 1 1/2 inches long at the top and bottom respectively. Each has been arrested by drilled holes.
Span 4 - G4 - Near FB 5 - Two cracks: 1-inch-long and 1 1/2 inches long at the top and bottom respectively. Each has been arrested by drilled holes.
Span 4 - G4 - Near FB 5 - Lower web contains 7/16-inch-long vertical through crack arrested by a drilled hole. Upper web shows no signs of cracking though an arrest hole in place.
Span 5 - G1 - Near FB 11 - Upper web contains a 3/4-inch-long crack stopping short of the arrestor hole. Crack in bottom web is 1 1/4 inches long and is arrested by two 1/2-inch diameter drilled holes.
Span 5 - G2 - Near FB 0 - 2-inch-long area of lack of fusion on south face at end of lower lateral bracing gusset plate.
Span 5 - G2 - Near FB 11 - Upper web contains a 2-inch-long crack retrofitted with a crack arrest bushing.
Span 5 - G3 - Near FB 11 - Upper web contains a 7/8-inch-long crack stopping short of the arrestor hole.
Span 5 - G4 - Near FB 3 - Upper web contains a 5/8-inch-long crack. Lower web contains a 1-inch-long crack. Both arrested with drilled holes.
Span 5 - G4 - Near FB 11 - Lower web contains a 1-inch-long crack arrested with a drilled hole.
Span 6 - G1 - Near FB 3 - Two cracks arrested by 2-inch diameter arrestor holes.
Span 6 - G2 - Near FB 3 - Upper web contains a 1-inch-long crack retrofitted with a crack arrest bushing.
Span 6 - G3 - Near FB 3 - No change to paint crack in upper girder web.
Span 6 - G4 - Near FB 3 - 1 1/4-inch long crack arrested with drilled holes
No visible signs of crack growth or propagation beyond the drilled holes were observed.
FX – The lower lateral bracing gusset plates are welded to the girder webs with the use of 1/4-inch-thick backer bars to weld between the gaps. Many of these welds appear to have undercut the girder web base metal. Holes have been drilled in the girder webs at the ends of the lower lateral bracing gusset plates at following locations:
Span 10 - G1 - Near FB 4 - 1 1/2-inch diameter drilled hole with no visible crack.
Span 11 - G1 - Near FB 1 - 2-inch diameter drilled hole with no visible crack.
Span 11 - G2 - Near FB 3 - 1 1/2-inch diameter drilled hole with no visible crack.
Span 12 - G2 - Near FB 1 - 1 1/2-inch diameter drilled hole with no visible crack.
Span 12 - G2 - Near FB 2 - 1 1/2-inch diameter drilled hole with no visible crack.
Weld material has also spilled behind the backer bars along the girder webs. This condition does not appear to be of major concern currently.

877 / 4	St. Stringer End(5Ft)	(LF)	120.00	50%	60.00	33%	40.00	17%	20.00	0%	0.00

FX – The deck is lifting off the stringers at several locations. This separation can eventually cause an uneven riding surface increasing impact on the superstructure and further accelerating deck deterioration.
The stringers are generally in good condition with negligible surface corrosion in isolated locations.

879 / 4	St.Strng.Un Const.Jt	(LF)	760.00	100%	760.00	0%	0.00	0%	0.00	0%	0.00

FX – The deck is lifting off the stringers at several locations. This separation can eventually cause an uneven riding surface increasing impact on the superstructure and further accelerating deck deterioration.
The stringers are generally in good condition with negligible surface corrosion in isolated locations.

890 / 4	Steel SIP Form	(LF)	1.00	0%	0.00	100%	1.00	0%	0.00	0%	0.00

Stay-in-place forms typically exhibit areas of surface and laminating corrosion near the interface with the original deck surface.

906 / 4	Sealed Exp.Jt.(SEJ-3	(LF)	69.00	100%	69.00	0%	0.00	0%	0.00	0%	0.00

Joint at pier 1.
No significant deficiencies.

909 / 4	Pourable Fix Jt.Seal	(LF)	1,311.00	0%	0.00	0%	0.00	0%	0.00	100%	1,311.00

Fixed poured seal joints at west abutment, pier 2, and deck control joints.
PX – The compression joint seal at the east abutment has pushed through the full length and the joint is closed. The seal in the westbound lanes is impacted with soil and gravel in the inside shoulders and partially covered in a light amount of worn asphalt. The joint header in the westbound lanes exhibits a 24-inch-wide x 9-inch-long x 2-inch-deep spall in the northern lane. The seal in the eastbound lanes is missing causing the joint to leak and allowing drainage to pass onto the bearing seat at the east abutment. The joint armor in the eastbound lanes exhibits a 1/2-inch vertical offset with the bridge side joint armor lower than the approach joint armor.
Several of the deck control joints exhibit minor spalling adjacent to the joints and missing joint seals.

916 / 4	St.Bearing Assembly	(LF)	76.00	97%	74.00	0%	0.00	3%	2.00	0%	0.00

Bearings showed some surface corrosion and some pack rust between assemblies.

956 / 4	St. Cracking/Fatigue	(SF)	1.00	0%	0.00	0%	0.00	100%	1.00	0%	0.00

Refer to Elements 107, 865, and 872 for specific crack comments.

957 / 4	Pack Rust Smart Flag	(EA)	1.00	0%	0.00	0%	0.00	100%	1.00	0%	0.00

FX – Pack rust up to 1/2-in thick exists between some girder vertical web stiffeners and floor beam truss lower chord gusset plates and between horizontal splice flanges. Minor pack rust up to 1/4-in thick is developing at girder bottom flange splice plates where girder ends butt up against each other. Pack rust is active in many locations and worse at expansion joints.
FX – At floor beam 6 in span 4 between girders 3 and 4; 1/2-thick painted over pack rust exists between the floor beam web and the connection plate at girder 4. Similar condition at floor beam 8 at girder 4 over pier 6; in span 6. Similar conditions occur sporadically but with less severity.
FX – Floor beam 8 between girders 3 and 4 over pier 6; span 6; the floor beam truss lower chord exhibits pack rust up to 1/2 inch between the center gusset plate and the lower chord angle with 1/16-inch deep section loss to the gusset plate. Similar condition in span 7 over pier 6.
FX – Pack rust is typically developing between the diaphragm top flange and the deck soffits; up to 1/16-inch at random locations.

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958 / 4	Concrete Cracking SF	(EA)	1.00	0%	0.00	100%	1.00	0%	0.00	0%	0.00

FX – Original portion of the deck exhibits full depth; full width transverse cracking up to 0.030 inches wide spaced at 2-5 feet with minor efflorescence; heavier over piers.
The newer portion of the deck in spans 1-3 and approximately 125 feet of span 4; exhibits moderate transverse cracking up to 0.020 inches wide; spaced at 3-5 feet in isolated locations. Hairline map cracking is typical. Span 3 exhibits diagonal cracking for westbound lanes also up to 0.030 inches. Some of the wider cracks have been sealed.
Original portion of the deck (spans 5-12 along with approximately 80 feet of span 4) typically exhibits transverse cracking up to 0.030 inches spaced at 5-10 feet. Many of the cracks are full depth and can be seen in the soffit.

963 / 4	Steel Section Loss SF	(EA)	1.00	0%	0.00	100%	1.00	0%	0.00	0%	0.00

Areas of painted over pitting are present throughout the bridge primary members. Minor section loss is active at areas of pack rust, generally at deck joints.

968 / 4	Erosion SF	(EA)	1.00	100%	1.00	0%	0.00	0%	0.00	0%	0.00

FX – Both abutment breastwalls exhibits undermining with up to 20 inches of penetration beneath the apron throughout the abutment length. The west abutment exhibits one localized location of erosion 3-foot-wide with 18 inches of penetration beneath girder 5. Previously noted erosion hole at the south end of the east abutment apron has been repaired.

969 / 4	OutOfPlane Dist./Load	(EA)	1.00	0%	0.00	100%	1.00	0%	0.00	0%	0.00

FX – Floor beam 3 in span 6 between girders 1 and 2 has a 1/2-inch long x 3/16-inch deep gouge in the bottom flange approximately 2 feet from girder 2. The floor beam also has an approximate 1/4-inch global lateral sweep in the bottom flange to the east. This sweep appears to be from construction; has not changed from prior inspections; and it is assumed that the cross framing provides additional support to the floor beam.

974 / 4	Straight Gird.Diaphr	(EA)	1.00	0%	0.00	100%	1.00	0%	0.00	0%	0.00

PX – There is an 8 1/2-inch long crack in the stringer diaphragm over floor beam 5; in span 6; between stringers 3 and 4. The crack was 6 inches long during the 2016 OS inspection; however; no growth was noted during this inspection.
FX – Pack rust is typically developing between the diaphragm top flange and the deck soffits; up to 1/16-inch at random locations.

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Photograph 1 - Looking east at the bridge end view.

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Photograph 2 - Looking west at the bridge elevation.

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Photograph 3 - Looking north at the west approach slab. Note: 20-inch-diameter asphalt filled patch.

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Photograph 4 - Looking north at the west abutment pourable joint. Note: 10 feet of joint seal is missing.

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Photograph 5 - Looking north at the pier 1 expansion joint. Note: joint is filled with soil and open 1 1/2 inches.

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Photograph 6 - Looking north at the median curb at pier 3. Note: end 2 feet of curb is spalled with exposed reinforcement.

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Photograph 7 - Looking north at the pier 3 modular joint. Note: west transverse bar is lifted 1/4-inch.

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Photograph 8 - Looking northeast at the span 5 wearing surface. Note: transverse cracking spaced approximately 4 feet apart.

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Photograph 9 - Looking north at the eastbound lanes in span 5. Note: 8-inch-diameter spall in the lane centerline.

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Photograph 10 - Looking east at the south curb of span 7 near pier 6. Note: two 6-foot-long spalls in the curb.

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17051	6822 0000 X	Sequoyah	I-40	ARKANSAS RIVER	7/14/2022

Photograph 11 - Looking north at the span 10 deck top at the deck control joint. Note: 1-foot-long x 2-foot-wide x 2 1/2-inch-deep spall in south wheel line of south eastbound lane.

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Photograph 12 - Looking north at the pier 10 joint. Note: joint open 3 3/4-inch at south curb. Joint seal torn for majority of joint.

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Photograph 13 - Looking north at the span 13 deck top at the deck control joint. Note: spall in the northern eastbound lane.

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Photograph 14 - Looking north at the east abutment joint. Note: 1/2-inch vertical offset exists across the joint.

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Photograph 15 - Looking north at the underside of the pier 3 joint. Note: typical condition of joint with no equidistant bars.

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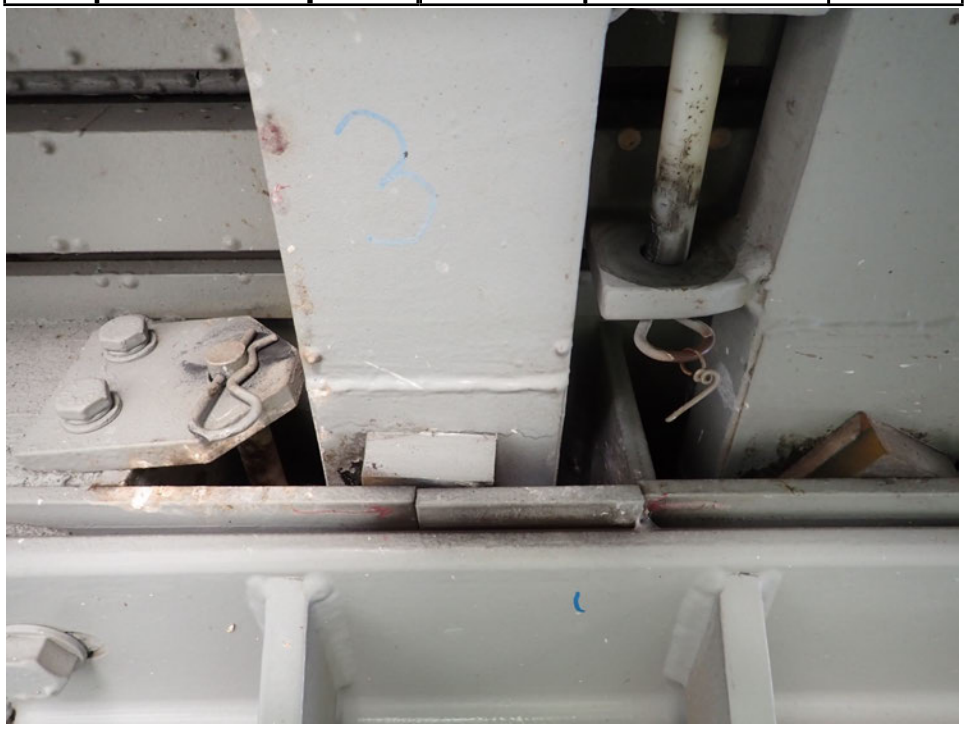
17051	6822 0000 X	Sequoyah	I-40	ARKANSAS RIVER	7/14/2022



Photograph 16 - Looking east at support joint assembly 3 at the pier 3 modular joint. Note: both bottom plates of support boxes have fractured below the support bars.

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Photograph 17 - Looking northwest at support joint assembly 16 at the pier 3 modular joint. Note: west bottom plate of the support box and the 3-inch-thick unreinforced concrete pour below the support box have fractured and are no longer supporting the south support bar.

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Photograph 18 - Looking north at support assembly 10 at the pier 6 modular joint. Note: no change to the one dislodged control bar.

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Photograph 19 - Looking north at support assembly 12 at the pier 6 modular joint. Note: no change to the missing control bars.

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Photograph 20 - Looking north at support assembly 13 at the pier 6 modular joint. Note: one control bar is dislodged and one control bar is missing the transverse separation beam is bent and fractured.

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Photograph 21 - Looking east at the underside of span 1. Note: no significant deficiencies.

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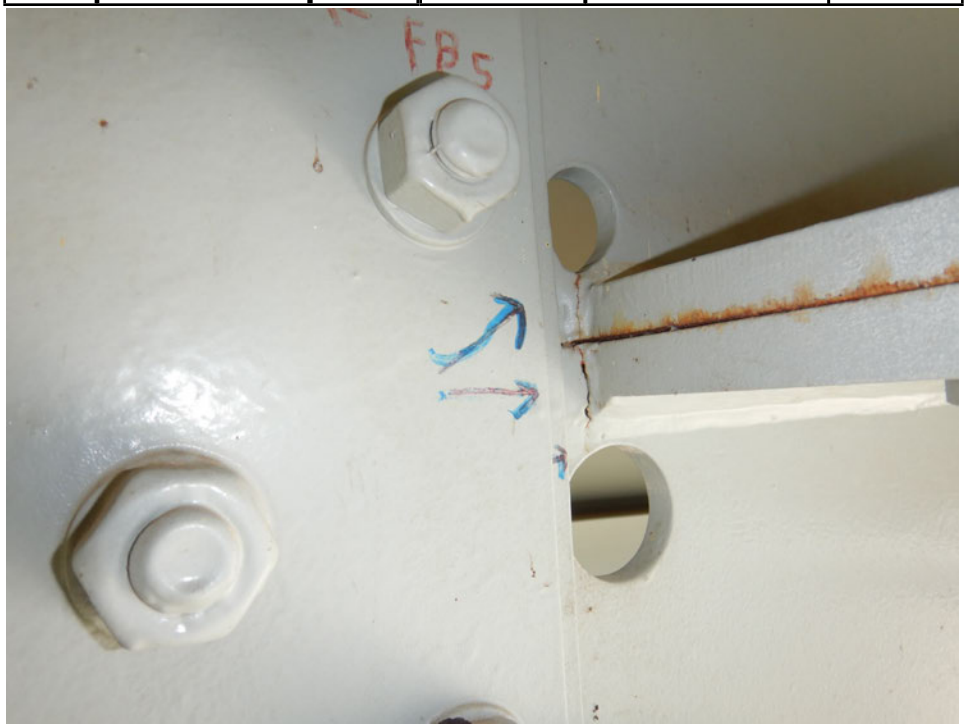
Photograph 22 - Looking south at girder 1, span 4 at end of horizontal splice near floor beam 5. Note: weld appears to be splintering. No crack observed.

NBI #	Structure #	County	Fac. Carried	Fac. Intersected	Insp. Date
17051	6822 0000 X	Sequoyah	I-40	ARKANSAS RIVER	7/14/2022



Photograph 23 - Looking northeast at girder 2, span 4 at end of horizontal splice near floor beam 5. Note: no change to crack at end of horizontal splice.

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Photograph 24 - Looking northwest at lower lateral bracing dampener in span 4 between girders 1 and 2 and between floor beams 7 and 8. Note: dampener not connected to lower lateral bracing.

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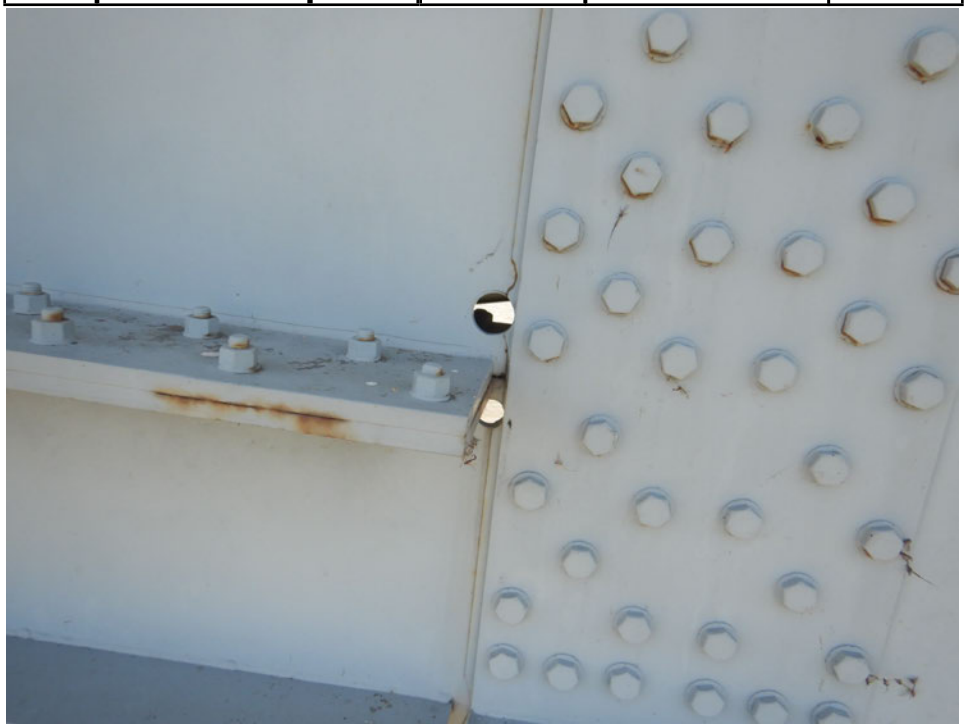
Photograph 25 - Looking north at girder 4, span 4 at end of horizontal splice near floor beam 5. Note: no change to crack in web of girder. Crack arrested by drilled holes.

NBI #	Structure #	County	Fac. Carried	Fac. Intersected	Insp. Date
17051	6822 0000 X	Sequoyah	I-40	ARKANSAS RIVER	7/14/2022



Photograph 26 - Looking south at end of the longitudinal stiffener for girder 4, span 4 near floor beam 5. Note: no change to crack in lower web arrested by drilled hole.

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Photograph 27 - Looking north at the exterior face of girder 1, span 5 at floor beam 11. Note: upper web contains a 3/4-inch-long crack stopping short of the arrestor hole. Crack in bottom web is 1 1/4-inches-long and is arrested by two 1/2-inch-diameter drilled holes.

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Photograph 28 - Looking south at the end of the longitudinal stiffener for girder 1, span 5 near floor beam 11. Note: no change to crack in upper web stopping short of the arrestor hole. No change to crack in lower web arrested by two 1/2-inch diameter drilled holes.

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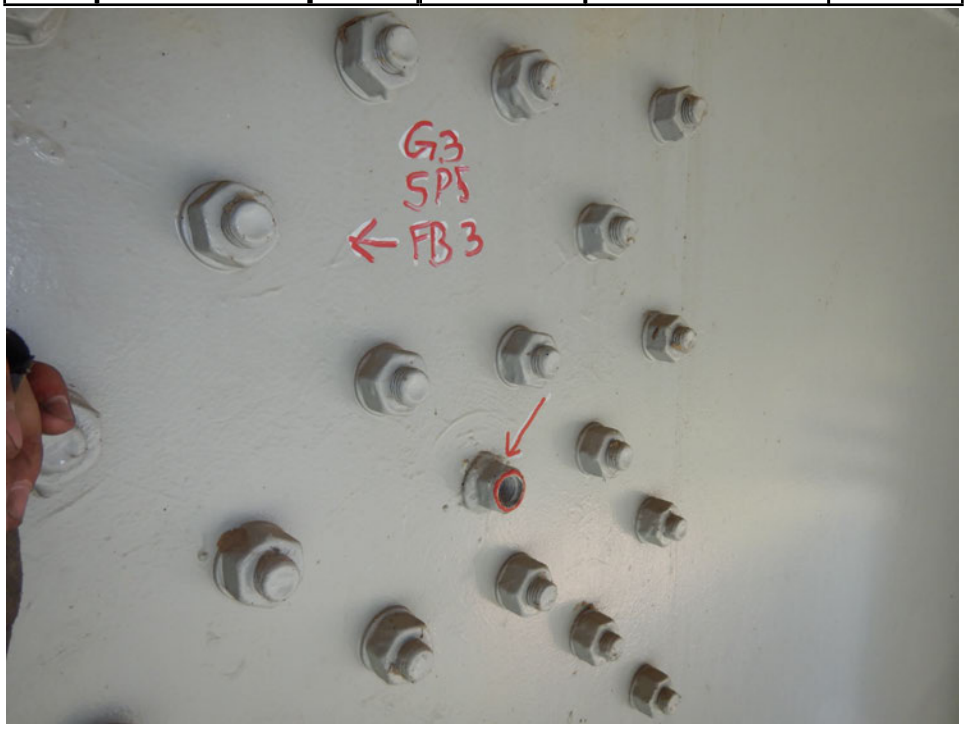
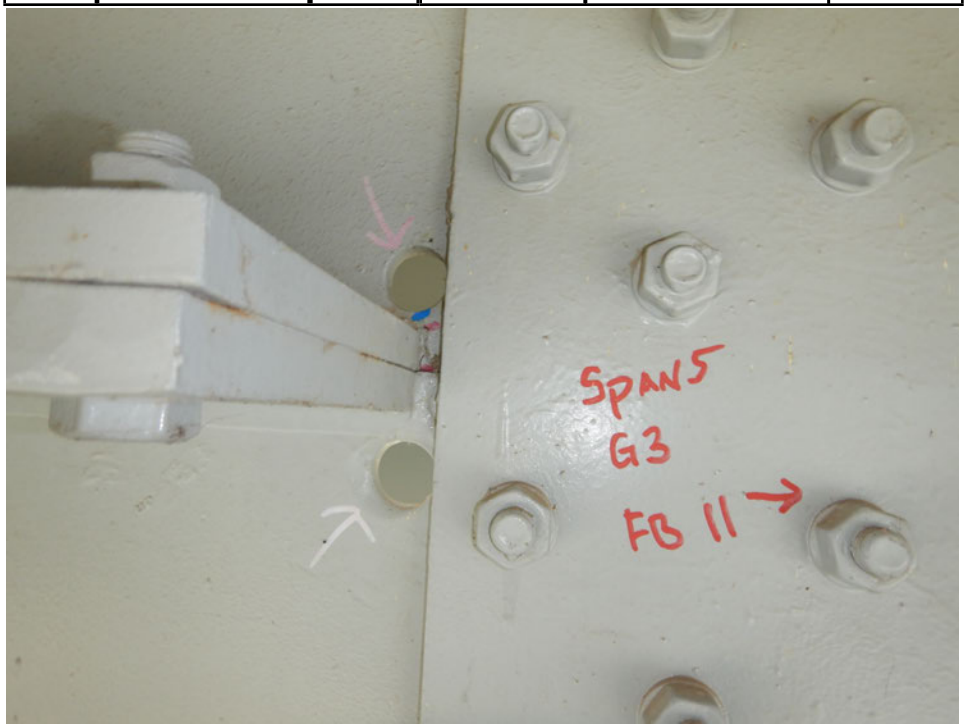
Photograph 29 - Looking north at girder 2, span 5 near floor beam 11. Note: no change to 2-inch-long crack retrofitted with crack arrested bushing in the upper web.

NBI #	Structure #	County	Fac. Carried	Fac. Intersected	Insp. Date
17051	6822 0000 X	Sequoyah	I-40	ARKANSAS RIVER	7/14/2022



Photograph 30 - Looking south at girder 3, span 5 horizontal splice near floor beam 3. Note: missing bolt in the web of the girder.

NBI #	Structure #	County	Fac. Carried	Fac. Intersected	Insp. Date
17051	6822 0000 X	Sequoyah	I-40	ARKANSAS RIVER	7/14/2022



Photograph 31 - Looking south at the interior face of girder 3, span 5 near floor beam 11. Note: no change to crack at end of horizontal web splice, crack is still stopped short of arrest hole.

NBI #	Structure #	County	Fac. Carried	Fac. Intersected	Insp. Date
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Photograph 32 - Looking north at girder 4, span 5 horizontal splice near floor beam 3. Note: crack present with arresting holes in pace. Crack has not jumped the arresting holes.

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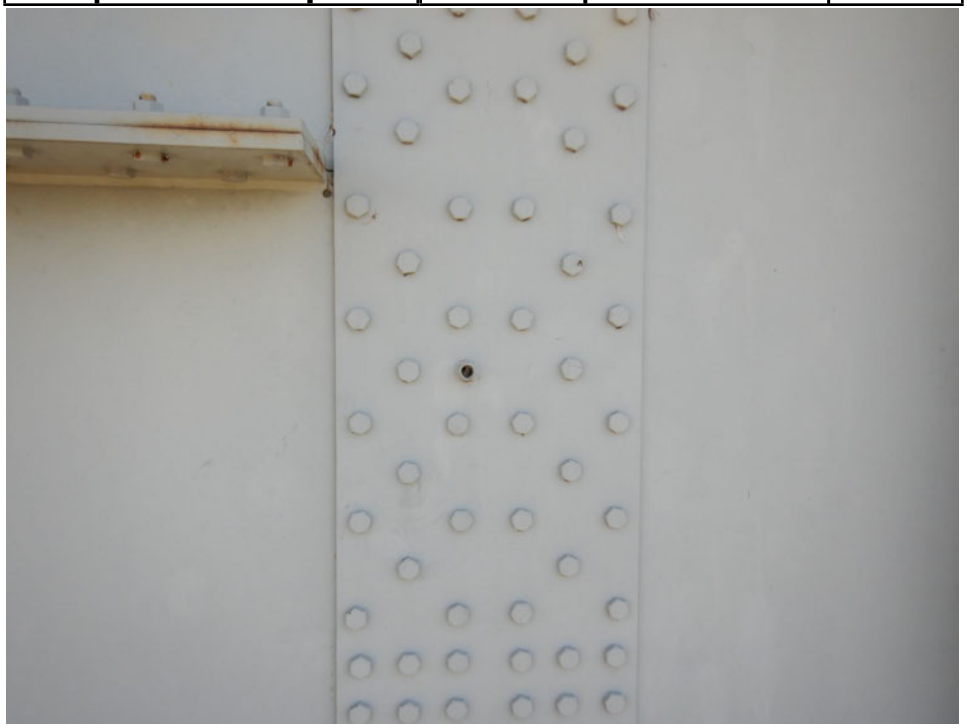
Photograph 33 - Looking north at the interior face of girder 4, span 5 near floor beam 11. Note: no change to crack with arrest hole at end of horizontal web splice.

NBI #	Structure #	County	Fac. Carried	Fac. Intersected	Insp. Date
17051	6822 0000 X	Sequoyah	I-40	ARKANSAS RIVER	7/14/2022

Photograph 34 - Looking south at end of the longitudinal stiffener for girder 4, span 5 near floor beam 11. Note: no change to crack in lower web arrested with a drilled hole.

NBI #	Structure #	County	Fac. Carried	Fac. Intersected	Insp. Date
17051	6822 0000 X	Sequoyah	I-40	ARKANSAS RIVER	7/14/2022



Photograph 35 - Looking south at the exterior face of the field splice for girder 4, span 5 near floor beam 11. Note: missing bolt in web splice.

NBI #	Structure #	County	Fac. Carried	Fac. Intersected	Insp. Date
17051	6822 0000 X	Sequoyah	I-40	ARKANSAS RIVER	7/14/2022

Photograph 36 - Looking north at the exterior face of girder 1, span 6 at floor beam 3. Note: two vertical cracks at the end of the longitudinal splice plates arrested in 2-inch-diameter holes.

NBI #	Structure #	County	Fac. Carried	Fac. Intersected	Insp. Date
17051	6822 0000 X	Sequoyah	I-40	ARKANSAS RIVER	7/14/2022

Photograph 37 - Looking south at the end of the longitudinal stiffener for girder 1, span 6 near floor beam 3. Note: no change to two cracks arrested by 2-inch-diameter arrestor holes.

NBI #	Structure #	County	Fac. Carried	Fac. Intersected	Insp. Date
17051	6822 0000 X	Sequoyah	I-40	ARKANSAS RIVER	7/14/2022

Photograph 38 - Looking north at end of the longitudinal stiffener of girder 2, span 6 near floor beam 3. Note: no change to crack in upper web retrofitted with a crack arrest bushing.

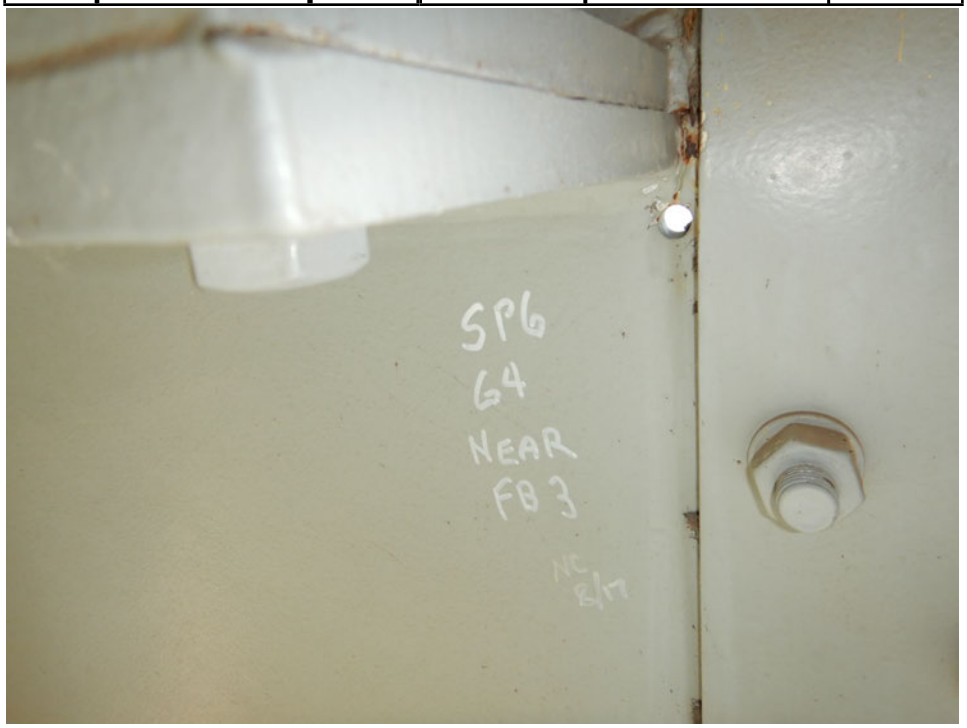
NBI #	Structure #	County	Fac. Carried	Fac. Intersected	Insp. Date
17051	6822 0000 X	Sequoyah	I-40	ARKANSAS RIVER	7/14/2022

Photograph 39 - Looking south at the interior face of girder 3, span 6 near floor beam 3. Note: no change to paint crack at end of horizontal web splice.

NBI #	Structure #	County	Fac. Carried	Fac. Intersected	Insp. Date
17051	6822 0000 X	Sequoyah	I-40	ARKANSAS RIVER	7/14/2022

Photograph 40 - Looking west at the lower lateral bracing gusset plate connection to girder 3, span 6 at floor beam 5. Note: no change to crack along weld of the east face of the vertical stiffener to the lower lateral gusset plate.

NBI #	Structure #	County	Fac. Carried	Fac. Intersected	Insp. Date
17051	6822 0000 X	Sequoyah	I-40	ARKANSAS RIVER	7/14/2022

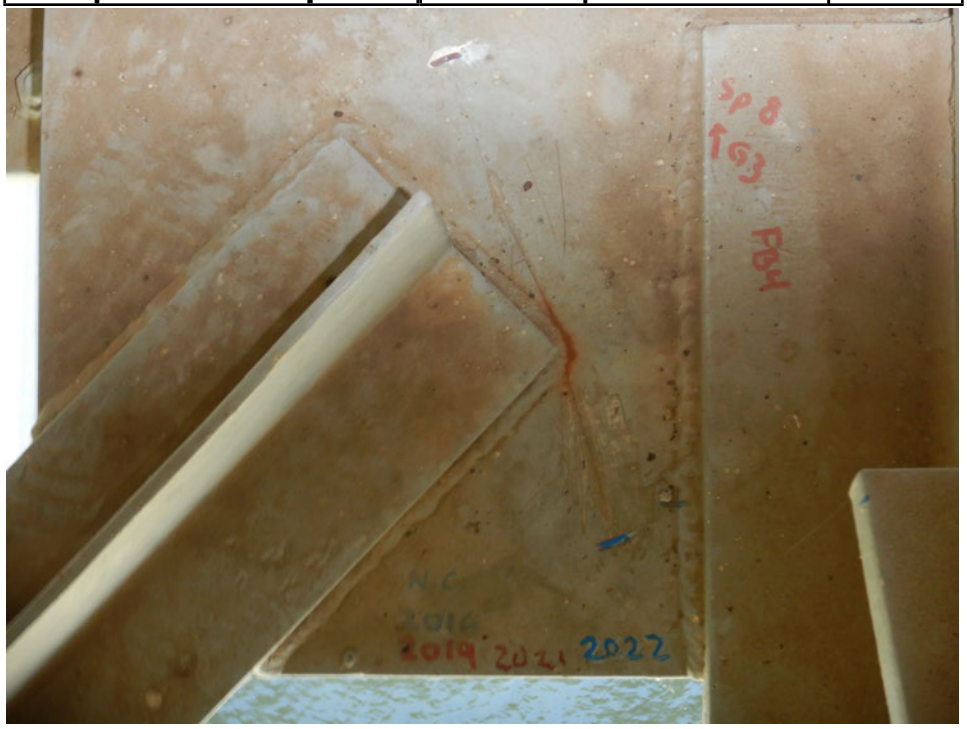


Photograph 41 - Looking north at the interior face of girder 4, span 6 near floor beam 3. Note: no change to crack with arrest hole at end of horizontal web splice.

NBI #	Structure #	County	Fac. Carried	Fac. Intersected	Insp. Date
17051	6822 0000 X	Sequoyah	I-40	ARKANSAS RIVER	7/14/2022

Photograph 42 - Looking south at the end of the longitudinal stiffener of girder 4, span 6 near floor beam 3. Note: 1 1/4-inch-long crack arrested in drilled holes.

NBI #	Structure #	County	Fac. Carried	Fac. Intersected	Insp. Date
17051	6822 0000 X	Sequoyah	I-40	ARKANSAS RIVER	7/14/2022



Photograph 43 - Looking south at the lower lateral bracing gusset plate for floor beam 4 at girder 3, span 8. Note: no change to cracks at lower lateral gusset plate connection to lateral bracing members.

NBI #	Structure #	County	Fac. Carried	Fac. Intersected	Insp. Date
17051	6822 0000 X	Sequoyah	I-40	ARKANSAS RIVER	7/14/2022

Photograph 44 - Looking west at the underside of framing in span 13. Note: no significant deficiencies.

NBI #	Structure #	County	Fac. Carried	Fac. Intersected	Insp. Date
17051	6822 0000 X	Sequoyah	I-40	ARKANSAS RIVER	7/14/2022

Photograph 45 - Looking north at beam 1 at the west abutment. Note: bent anchor bolt.

NBI #	Structure #	County	Fac. Carried	Fac. Intersected	Insp. Date
17051	6822 0000 X	Sequoyah	I-40	ARKANSAS RIVER	7/14/2022

Photograph 46 - Looking north at girder 1 bearing for span 4 at pier 3. Note: elastomeric bearing pad exhibits an overhang to the east of up to 2 1/2 inches with the anchors bolts in the full extended position. Anchor bolts also exhibit some bending, may be due to the alignment of the bearing.

NBI #	Structure #	County	Fac. Carried	Fac. Intersected	Insp. Date
17051	6822 0000 X	Sequoyah	I-40	ARKANSAS RIVER	7/14/2022

Photograph 47 - Looking north at girder 3 bearing for span 4 at pier 3. Note: elastomeric bearing pad exhibits no overhang. Anchor bolts are bent and in the fully extended position.

NBI #	Structure #	County	Fac. Carried	Fac. Intersected	Insp. Date
17051	6822 0000 X	Sequoyah	I-40	ARKANSAS RIVER	7/14/2022

Photograph 48 - Looking south at the girder 1 bearing at pier 4. Note: all bearings at pier 4 are expanded up to 4 degrees at 90F.

NBI #	Structure #	County	Fac. Carried	Fac. Intersected	Insp. Date
17051	6822 0000 X	Sequoyah	I-40	ARKANSAS RIVER	7/14/2022

Photograph 49 - Looking north at the girder 3 bearing at pier 6. Note: span 6 bearing is rotated.

NBI #	Structure #	County	Fac. Carried	Fac. Intersected	Insp. Date
17051	6822 0000 X	Sequoyah	I-40	ARKANSAS RIVER	7/14/2022

Photograph 50 - Looking north at the girder 2 rocker bearing at the east abutment. Note: bearings are 11 degrees in expansion at 90 degrees F.

NBI #	Structure #	County	Fac. Carried	Fac. Intersected	Insp. Date
17051	6822 0000 X	Sequoyah	I-40	ARKANSAS RIVER	7/14/2022

Photograph 51 - Looking northeast at the east abutment bearing seat between girders 1 and 2.
Note: soil accumulation up to 4 inches high on the bearing seat.

NBI #	Structure #	County	Fac. Carried	Fac. Intersected	Insp. Date
17051	6822 0000 X	Sequoyah	I-40	ARKANSAS RIVER	7/14/2022

Photograph 52 - Looking northeast at the east abutment. Note: no significant deficiencies.

NBI #	Structure #	County	Fac. Carried	Fac. Intersected	Insp. Date
17051	6822 0000 X	Sequoyah	I-40	ARKANSAS RIVER	7/14/2022

Photograph 53 - Looking north at the west abutment breastwall. Note: multiple erosion holes undermine the abutment up to 3 feet under beams 3, 5, and 7.

NBI #	Structure #	County	Fac. Carried	Fac. Intersected	Insp. Date
17051	6822 0000 X	Sequoyah	I-40	ARKANSAS RIVER	7/14/2022

Photograph 54 - Looking west at the west abutment under beam 3. Note: 26-inch-deep erosion hole with 3 feet of penetration.

NBI #	Structure #	County	Fac. Carried	Fac. Intersected	Insp. Date
17051	6822 0000 X	Sequoyah	I-40	ARKANSAS RIVER	7/14/2022

Photograph 55 - Looking west at the west abutment under beam 5. Note: 2-foot-deep erosion hole with 3 feet of penetration.

NBI #	Structure #	County	Fac. Carried	Fac. Intersected	Insp. Date
17051	6822 0000 X	Sequoyah	I-40	ARKANSAS RIVER	7/14/2022

Photograph 56 - Looking west at the west abutment under beam 7. Note: 2-foot-deep erosion hole with 18 inches of penetration, and a 3-foot-wide x 2 1/2-foot-tall x 3/4-inch-deep spall with exposed reinforcement at the top corner of the breastwall.