

OKLAHOMA DEPARTMENT OF TRANSPORTATION -

Bridge Inspection Report

Suff. Rating: 42.3
SD

Health Index :
60.4

NBI No.: 13688

Structure No.: 6602 0368EX

Local ID:-1

Description: IDENTIFICATION
100'-140'-210'-160'-100'-100' HI. TRUSS SPANS
1. State: Oklahoma 2. SHD District: Division 8
3. County Code: ROGERS 4. Place Code: Unknown
Admin. Area: Unknown
5. Inventory Route (Route On Structure) : 1 - 3 - 1 - 00066 - 0
6. Feature Intersected: BIRD CREEK & RD. UNDER
7. Facility Carried: S.H. 66 NB S.H. 66 NB
9. Location: 3.3 MI N JCT I-44 11. Mile Post: 3.679 mi
13. LRS Inv. Route./ Subroute.: 6602HP0000 01
16. Latitude: 36 12 29.18 17. Longitude: 095 43 29.72
98. Border Br. Code: Unknown (P) % Resp. : 0 99. Border Br. #: Unknown

STRUCTURE TYPE AND MATERIALS
43. Main Span Material and Design Type
Steel Truss-Thru
44. Approach Span Material and Design Type
Unknown (NBI) Unknown (P)
45. No. of Spans Main Unit: 6 46. No. of Approach Spans: 0
107. Deck Type: 1 Concrete-Cast-in-Place
108A. Wearing Surface: 1 Monolithic Concrete
108B. Membrane: 8 Unknown
108C. Deck Protection: 8 Unknown

AGE AND SERVICE
27. Year Built: 1956 106. Year Reconstructed: 1979
28A. Lanes on: 2 28B. Lanes Under: 2 19. Detour Length: 0.1 mi
29. ADT: 6750 30. Year of ADT: 2011 109. Truck ADT %: 7
42A. Type of Service on: 1 Highway
42B. Type of Service under: 6 Highway-waterway

GEOMETRIC DATA
10. Inv. Rte. Min. Vert. Clr.: 15.8 ft
32. Approach Roadway Width (W/ Shoulders): 37.1 ft
Deck Area: 25,976.2 sq. ft 33. Median: 0 No median
34. Skew: 0 35. Structure Flared: 0 No flare
47. Inv. Rte. Total Horiz. Clr.: 29.8 ft
48. Length Maximum Span: 212.4 ft 49. Structure Length: 824.7 ft
50A. Curb/Sdwk Width L: 0.0 ft 50B. Curb/Sidewalk Width R: 0.0 ft
51. Width Curb to Curb: 29.8 ft 52. Width Out to Out: 31.5 ft
53. Minimum Vertical Clearance Over Bridge: 15.8 ft
54A/54B. Min. Vert. Underclearance : H Hwy beneath struct 16.6 ft
N/E S/W
Meas. N1509 -1 E1502 S1509 -1 -1
Post. DO NOT U DO NOT U DO NOT U DO NOT U DO NOT U DO NOT U
55A/55B. Minimum Lateral Underclearance R: H Hwy beneath struct 15.1 ft
56. Minimum Lateral Underclearance L: 327.8 ft

INSPECTION
Type Insp Req. Insp Done Freq: Insp. Date: Next Insp.:
NBI: Y Y 24 11/21/2013 11/21/2015
FC Freq.: Y Y 24 11/21/2013 11/21/2015
UW Freq.: N N NA NA NA
OS Freq.: Y N 24 11/8/2011 11/21/2014

CLASSIFICATION
12. Base Hwy Network : On Base Network 20. Toll Facility: 3 On free road
21. Custodian: 01State Highway Agency 22. Owner: 01State Highway Agency
26. Functional Class: 14 Urban Other Princ 37. Historical Sig.: 5 Not eligible for NRHP
100. Defense Highway: 0 Not a STRAHNET h 101. Parallel Structure: Right of || bridge
102. Dir. of Traffic: 1 1-way traffic 103. Temp. Structure: Not Applicable (P)
104. Highway System: 0 Not on NHS 105. Fed. Land Hwy 0 N/A (NBI)
110. National Truck Network: 0 Not part of na 112. NBIS Length: Long Enough

CONDITION
58. Deck: 5 Fair 59. Super.: 4 Poor 60. Sub.: 6 Satisfactory
62. Culvert: N N/A (NBI) 61. Channel/Channel Protection: 6 Bank Slumping
Flowline Notes:
Unable to take FL measurements due to painting contract

LOAD RATING AND POSTING
31. Design Load: 4 M 18 (H 20) 41. Posting status: A Open, no restriction
63. Op. Rating Method: 1 LF Load Factor-Ton Alt. Op. Rating Meth.: 1 LF Load Factor-To
64. Operating Rating (H / HS / 3-3) : 26.3 38.5 69.9
66. Inventory Rating (H / HS / 3-3) : 15.8 23.1 42.0
65. Inv. Rating Method: 1 LF Load Factor-Ton Alt. Inv. Rating Meth.: 1 LF Load Factor-To
70. Posting: 5 At/Above Legal Loads Date Rated : 10/1/2006

PROPOSED IMPROVEMENTS
94. Bridge Cost: \$3,226,224 75. Type of Work: 31 Repl-Load Capacity
95. Roadway Cost: \$4,500,000 76. Lgth. of Improvement: 825.1 ft
96. Total Cost: \$8,163,557 114. Future ADT: 10800
97. Year of Cost Est.: 2007 115. Year of Future ADT: 2031

NAVIGATION DATA
38. Navigation Control: Permit Not Required
39. Vertical Clearance: 0.0 ft 40. Horizontal Clearance: 0.0 ft
111. Pier Protection: Not Applicable (P) 116. Lift Bridge Vert. Clear.: 0.0 ft

APPRAISAL
36A. Bridge Rail: 0 Substandard 36C. Approach Rail: 1 Meets Standards
36B. Transition: 1 Meets Standards 36D. Approach Rail Ends: 1 Meets Standards
67. Str. Evaluation: 4 Minimum Tolerable 68. Deck Geometry: 4 Tolerable
69. Underclearance, Vertical and Horizontal: 9 Above Desirable
71. Waterway Adequacy: 7 Above Minimum
72. Approach Alignment: 8 Equal Desirable Crit
113. Scour Critical: 8 Stable Above Footing

200c. Temperature: 35
200d. Weather: PARTLY CLOUDY
201. Structural Steel ASTM Desig.: -1 -1
202. Waterproof Membrane : -1
Date Installed : 1/1/1901
203. Type Exp. Dev. : Modular
Pourable
204. Type of Handrail: Other Type of Handrail
205. Material and Quantity : -1.0
208. Type of Abutment : Cantilever
Type of Foundation : Natural Foundation Matl.
209. Type of Pier / Found.: 2 Piers No
Concrete Piling
210. Foundation Elev. -1.0 -1.0
-1.0 -1.0 -1.0
211. Wear. Surf. Prot. System : None
Date Installed : 1/1/1901
213. Utilities Attached : Communication
-1 -1 -1
-1 -1 -1

214a. Posted Weight Limit: NR
b. Posted Speed Limit : 45
c. Narrow/One Lane Bridge sign : N
d. Vertical Clearance Sign: YES
Advanced Warning Sign : NO
Min. Measured Clearance : 156
Max. Measured Clearance : 1509
e. Navigation Lights : NO
Working/Not Working : NO
215. Overpass : B - State Highway
221. Substructure Cond. (U/W) : -
222. Fill over RCB: -1
223. Appr. Slab/Rdwy Cond.: Satisfactory
224. Critical Feature Type: 1
225. Paint Type : -
Overcoat : 0
226. Date Painted: -1
227. Paint Coloring: -1
233. Deck Forming: Conventional Forming
236. Deck Cleaning : -1
238. School Bus Rte: Current and Desired Route
240. Appr. Roadway Type: Asphalt/Bituminous

243. Girder Spacing/Number : -1.0 / -1
244. Span Lengths :
100 160 -1
140 100 -1
210 100
245. Girder Depth : -1.000
246. Type of Overlay : -
246. Overlay Thickness : -1.0
246. Overlay Date : 1/1/1901
246. Overlay Depth Changed > 1"? No
247. Protective Systems : 1: -
2: - 3: -
4: - 5: -
248. No. of Field Splices w/ Corrosion : -1
249. Scour Crit. POA exists?: No
250. Culvert Headwall Dist.: -1.0
254. Thru Truss Type : Overhead
256. Chan. Profile Up/Down Stream?: -
257a. OkiePROS Auto. Truck Routing Yes
258. Plans w/ found. are in file at ODOT
259. Scour Eval. is in file at ODOT
263. Interchange at Intersection N
264. Interstate Milepoint -1.00

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Inspection Date: 11/21/2013

Reported By: DPOORMAN

Invoice No.: -1

Inspected With: -1

Agency :

Structure / Inspection Notes

140-foot thru-truss (span 2), 210-foot thru-truss (span 3), 160-foot thru-truss (span 4) and three 100-foot pony trusses (Spans 1,5&6)

O/S Inspection Items Include: Cracks at stringer copes; Section loss/welded repairs to stringer and floor beam ends; Section loss to lower chord truss gusset plates; Sweep in floor beams over piers; Bearing rotations.

PX – Replace the heavily corroded nuts on the bridge rail; Replace the poured seal expansion joint and the expansion plate at the west barrier over pier 1; Seal the deck flexure joints over each floor beam; Repair failed patches around these deck flexure joints as needed; Clear the clogged deck drains; Replace the broken rivets at span 2 stringer 5 connection to floor beam 2, and span 6 stringer 6 connection to floor beam 1; Repair stringers and floor beams with loss as noted in the Steel Repair Details in the appendix of the FC report; Install stiff leg repairs at piers 2 and 3; Replace the broken hanger rods for the floor bracing; Reset the bearings for span 1 at pier 1 and span 3 at pier 3; Clear the clogged drain in the south approach.

FX – Monitor for additional deterioration or growth: Cracks in the stringer web copes at the floor beams; Overcuts to the stringer web copes; Vertical crack in the floor beam 5 web between the floor beam top flange and the connection angle to the east truss in span 1; Corrosion holes and loss in the floor beam webs and floor system bracing; Bows in the gusset plates at span 1, U2 west truss, span 2, U2 east truss and L7 west truss; Section loss to bottom chord at the panel points; Section loss to the inboard gusset plates below the floor beams; L4L5 east truss, span 3 for crack development at bent flange; Section loss to the inboard flanges of truss members at the bridge railing connections; Pack rust at the middle connections on both trusses; Broken rivet head on the inboard top flange at LOU1 east truss in span 3; Spall in the north abutment under stringer 2; Spall in the south face of pier 1 and the crack in the east face of pier 1; Scour around the web wall at the east and west columns of pier 2; Bearing rotation for spans 5 and 6 at pier 5; Pack rust below the rocker at the west bearing for span 6 at pier 5 for growth.

Elm.	Env.	Description	Un.	Qty.	Qty.St. 1	% 1	Qty.St. 2	% 2	Qty.St. 3	% 3	Qty.St. 4	% 4	Qty.St. 5	% 5
12	4	Reinforced Concrete Deck	(SF)	24,750	22,275	90 %	2,475	10 %	0	0 %	0	0 %	0	0 %
113	4	Steel Stringer/Floorbeam	(LF)	2,402	0	0 %	2,402	100 %	0	0 %	0	0 %	0	0 %
120	1	Steel Truss (Pony)	(LF)	600	0	0 %	480	80 %	120	20 %	0	0 %	0	0 %
152	4	Steel Floor Beam	(LF)	1,466	0	0 %	1,319	90 %	147	10 %	0	0 %	0	0 %
162	4	Steel Gusset Plate	(EA)	384	0	0 %	334	87 %	50	13 %	0	0 %	0	0 %
205	4	Reinforced Conc Column or Pile Extension	(EA)	10	0	0 %	9	90 %	1	10 %	0	0 %	0	0 %
215	4	Reinforced Conc Abutment	(LF)	69	0	0 %	57	80 %	12	20 %	0	0 %	0	0 %
301	4	Pourable Joint Seal	(LF)	60	0	0 %	0	0 %	0	0 %	60	100 %	0	0 %
303	4	Assembly Joint With Seal	(LF)	30	0	0 %	0	0 %	0	0 %	30	100 %	0	0 %
311	4	Moveable Bearing (roller, sliding, etc.)	(EA)	12	0	0 %	10	83 %	2	17 %	0	0 %	0	0 %
313	4	Fixed Bearing	(EA)	12	0	0 %	12	100 %	0	0 %	0	0 %	0	0 %
321	4	Reinforced Conc Approach Slab w/ or w/o AC O	(EA)	2	0	0 %	2	100 %	0	0 %	0	0 %	0	0 %
330	4	Metal Bridge Railing	(LF)	1,650	0	0 %	1,617	98 %	33	2 %	0	0 %	0	0 %
356	4	Steel Cracking/Fatigue	(EA)	1	0	0 %	0	0 %	1	100 %	0	0 %	0	0 %
357	4	Pack Rust	(EA)	1	0	0 %	0	0 %	1	100 %	0	0 %	0	0 %
358	4	Concrete Cracking	(EA)	1	0	0 %	1	100 %	0	0 %	0	0 %	0	0 %
359	1	Concrete Efflorescence	(EA)	1	1	100 %	0	0 %	0	0 %	0	0 %	0	0 %
363	4	Steel Section Loss	(EA)	1	0	0 %	1	100 %	0	0 %	0	0 %	0	0 %
364	1	Steel Out-Of-Plane Compression Members	(EA)	1	0	0 %	1	100 %	0	0 %	0	0 %	0	0 %
515	4	Steel (Superstructure) Protective Coating	(EA)	1	0	0 %	0	0 %	1	100 %	0	0 %	0	0 %
659	4	Soffit of Concrete Decks and Slabs	(EA)	1	0	0 %	1	100 %	0	0 %	0	0 %	0	0 %
721	4	Steel Truss (Overhead)	(LF)	1,020	0	0 %	928	91 %	92	9 %	0	0 %	0	0 %
777	4	Steel Stringer End (5 Ft.)	(LF)	2,400	0	0 %	2,160	90 %	240	10 %	0	0 %	0	0 %
909	4	Pourable Fixed Joint Seal	(LF)	1,050	0	0 %	1,050	100 %	0	0 %	0	0 %	0	0 %
968	1	Erosion	(EA)	1	1	100 %	0	0 %	0	0 %	0	0 %	0	0 %
969	1	Out-Of-Plane Distortion/Loading	(EA)	1	0	0 %	0	0 %	1	100 %	0	0 %	0	0 %

Additional
Elements

Elem.	Element Notes (Include Size and Location of Deterioration)
12	PX: Unsealed deck flexure joints over floor beams; Numerous deck drains are clogged. Cracking, corrosion stains, spalling with exposed rebar and delaminations are typical along edges of the deck.
113	Freckling corrosion throughout.
120	FX: Isolated locations of section loss up to 1/8-inch throughout, typically at railing connections and lower chord bottom flanges. Typical pack rust up to 1/8-inch between gusset plates and truss members. Lower chord batten plates typically have corrosion holes.
152	PX: Sweeps noted in end floor beams (see 969 for comments); Corrosion and section loss on the floor beam web are common at the floor beam ends due to leakage through the flexure joints. FX: 2-inch vertical crack in floor beam 5 of span 1 at the east truss connection. Heavy section loss and rust holes exist at the bottom of a few floor beam web stiffeners. End floor beams over pier 5 have 3/8-inch gap between flanges at 55 degrees F.
162	FX: Up to 3/16-inch section loss in the shear plane of lower chord inboard gusset plates at isolated locations. Few lower chord gusset plates have bows and kinks. Inboard gusset plates in span 2 at the floor beams have isolated areas of moderate laminating corrosion with section loss up to 1/8-inch. Peeling paint is typical on the gusset plates.
205	FX: East column of pier 1 has 6-foot by 0.002-inch wide vertical crack. Superficial cracking throughout.
215	FX: Spall along the top edge of the bearing seat at the north abutment under stringer 2 and at the south abutment between stringers 1 and 3, not undermining bearings. Horizontal crack with corrosion staining in south abutment breastwall.
301	PX: Multiple locations of holes in the pourable joint seal.
303	The concrete headers near the expansion joint over pier 5 has deteriorated and appears to have worn away.
311	PX: Excessive expansion of both bearings for span 1 at pier 1 and the east truss bearing for span 3 at pier 3. FX: West bearing for span 6 at pier 5 has 3/16-inch pack rust between the base plate and rocker.

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Elem.	Element Notes (Include Size and Location of Deterioration)
313	Lead bearing pad for east bearing of span 3 at pier 2 is extruded up to 5 inches on the north side. Surface corrosion typical.
321	Asphalt overlay has numerous unsealed cracks.
330	PX: Heavy section loss to the nuts on the bottom splice plates throughout the rail. FX: Minor impact damage to east rail on the south approach. Pack rust up to 3/16-inch between rail and truss members.
356	FX: Numerous cracks at stringer top flange copes, see fracture critical report for locations. Floor beam 5 in span 1 has 2-inch vertical crack in web at east truss connection.
357	Isolated pack rust up to 1/4-inch between truss gusset plates and truss members. Pack rust typical at stringer connections to floorbeam stiffeners.
358	Minor cracking in deck. Horizontal crack in the south abutment breastwall.
359	The deck in span 1 has a crack with efflorescence near the joint over floor beam 1
363	PX: Corrosion holes in multiple floor beam webs at truss connections and stringer ends. Isolated section loss up to 3/16-inch on truss members and gusset plates.
364	Span 2, L6U6 east truss inboard gusset plate at L6 has a 1/2 inch kink, likely due to construction. Span 2, L7, west truss gusset plates are bowed in 1/4-inch. Span 1, panel point U2 west truss inboard gusset plate has a 1/8 inch bow to the east. Span 2, panel point U2, the inboard gusset plates between U2U3 and U2L2 for both the east and west truss have a 1/8 inch bow inward.
515	Bridge is currently under a paint contract. The original paint system is typically weathered with active surface corrosion.
659	In span 1, the deck has a crack with efflorescence near the joint over floor beam 1. Cracking, corrosion stains, spalling with exposed rebar and delaminations are typical on the deck soffit along the floor beam top flanges
721	FX: Isolated locations of section loss up to 1/8-inch throughout, typically at railing connections and lower chord bottom flanges. Pack rust up to 1/4-inch between gusset plates and truss members. Span 3, L0U1 east truss inboard face at U1 has one popped rivet head. Span 3, L4L5 east truss outboard channel, the bottom flange near L5 is bent down 1 1/2 inches and has a 3/16-inch gouge located 2 feet from L5. Lower chord batten plates typically have corrosion holes.
777	PX: Section loss typical on stringer ends due to leakage through flexure joints; Broken rivet heads for stringer 5 on north face of floor beam 2 in span 2 and stringer 6 on south face of floor beam 1 in span 6. FX: Cracks in stringer webs at top flange copes at multiple floor beam connections, no significant change since last inspection; Numerous overcuts in stringer copes. Pack rust up to 1-inch between stringers and connection angles.
909	PX: Unsealed deck flexure joints over each floor beam leak causing corrosion to the floor system. Several of the joints have been patched and transverse cracks are common adjacent to these joints.
968	On the east side of the bridge, on the south side of the river, there is a 2-foot deep erosion ditch under the deck drainage system.
969	PX: Span 2, floor beam 0; 3/16-inch sweep to the south. Span 2, floor beam 7; 3/16-inch sweep to the south. Span 3, floor beam 0; 5/16-inch sweep to the south. Span 3, floor beam

Roadway Name: CROWN POINT RD. NBI Information Applicable To The Route Under The Structure				
5. Inventory Route (Route Under Structure :	2	-	4	- 1 - 00000 - 0
10. Min. Vert. Clr.(ft.):	16.6	28b. Lanes Und.:	2	
12. Base Hwy Network :	Not on Base Network	29. ADT :	100	
13. LRS Inv. Rt./ Subroute :	-1 / -1	32. Appr. Roadway Width (ft.) :	37.1	
19. Detour Len.(Mi.):	0.0	47. Total Horiz. Clr.(ft.):	59.7	
20. Toll Facility :	3 On free road	51. Roadway Width (ft.) :	28.9	
26. Function Class.:	07 Rural Mjr Collector	100. Defense Highway :	0 Not a STRAHNET hwy	
102. Traffic Dir.:	2 2-way traffic			
104. Highway System :	0 Not on NHS			
105. Fed Land Hwy :	0 N/A (NBI)			
109. Truck ADT% :	15			
110. Natl. Truck Network :	0 Not part of natl netwo			
114. Future ADT :	160			
Agency Field: 1.(Under Rte.):	U	2.(Vert. X-Ref.):	-1	3.(Compass Dir.): N
				4.(Vert. Post. Inc.): 1411
				5.(Vert. Post. Dec.): 1411