OKLAHOMA DEPARTMENT OF TRANSPORTATION - Bridge Inspection Report

NBI No.: **13688** Structure No.: 6602 0368EX Local ID:-1 Suff. Rating: 60.5 ND Health Index : 98.0

IDENTIFICATION

Description:
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.: -1 -1
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: 2014
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: 25,565. 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: 210.0 ft
49. Structure Length: 824.7 ft
50A. Curb/Sdwlk Wdth L: 0.8 ft
50B. Curb/Sidewalk Width R: 0.8 ft
51. Width Curb to Curb: 29.8 ft
52. Width Out to Out: 31.0 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	-1

55A/55B. Minimum Lateral Undrclearance R: H Hwy beneath struct 15.1 ft
56. Minimum Lateral Undrclearance L: 327.8 ft

INSPECTION

Type	Insp Req.	Insp Done	Freq:	Insp. Date:	Next Insp.:
NBI:		N	24	11/17/2015	11/17/2017
FC Freq.:	Y	N	24	**11/17/2015**	**11/17/2017**
UW Freq.:	N	N	NA	**NA**	**NA**
OS Freq.:	Y	Y	24	**11/16/2016**	**11/16/2018**

CLASSIFICATION

12. Base Hwy Network : Not on Base Network
20. Toll Facility: 3 On free road
21. Custodian: 01 State Highway Agency
22. Owner: 01 State Highway Agency
26. Functional Class: 17 Urban Collector
37. Historical Sig.: 2 Br 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.: 5 Fair
60. Sub.: 6 Satisfactory
62. Culvert: N N/A (NBI)
61. Channel/Channel Protection: 6 Bank Slumping
Flowline Notes:

[11/19/2015] FL=59' to top of curb in span 3, panel point L3, east truss
[12/14/2016] FL=57'1" to top of curb, Span 3, L3, east truss

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):	30.4	47.5	72.6
66. Inventory Rating (H / HS / 3-3) :	16.8	28.5	41.4

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 : 3/20/2014

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 Improvment: 825.1 ft
96. Total Cost: $8,163,557
114. Future ADT: 10800
97. Year of Cost Est.: 2009
115. Year of Future ADT: 2034

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: 5 Above Min 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: 64
200d. Weather: CLEAR
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: Metal Railing (other)
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 : NO
d. Vertical Clearance Sign: YES
Advanced Warning Sign : NO
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
225. Paint Type : _
Overcoat : Not Applicable
226. Date Painted: -1
227. Paint Coloring: -1
233. Deck Forming: Conventional Forming
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
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: No Interchange
264. Interstate Milepoint: -1.00

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NBI No.: **13688** Structure No.: 6602 0368EX Local ID:-1 Suff. Rating: 60.5 ND Health Index : 98.0

Inspection Date:	12/6/2016	Reported By:	BDIETRICH
Invoice No.:	-1	Inspected With:	FJN, LWB
		Agency :	

Brian D. Dietrich

Digitally signed by Brian D. Dietrich
DN: cn=Brian D. Dietrich, o=Infrastructure Engineers, Inc., ou, email=bdietrich@go-iei.com, c=US
Date: 2016.12.16 07:44:21 -05'00'

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.
Report revised after 7/8/2014 condition assessment of repairs to structure
Former Smart Flag 364 (Steel Out-of-Plane Compression Member) was placed in Condition State 1 with the following note:'BOTH TRUSS UPPER CHORDS SHOW LOCALIZED MISALIGNMENT NEAR PANEL POINT U3. THE NORTH TRUSS IS DISPLACED 5/8" SOUTH AT U3. THE SOUTH TRUSS IS DISPLACED 1 7/8" NORTH AT U3.' SUPER RATING RAISED FROM 4 TO 5 BY WES KELLOGG 04/12/2016 BASED ON COMPLETION OF REPAIRS AND EVALUATION OF FLOOR BEAM SWEEP.

An OS inspection was performed on November 11, 2016. All previous deficiencies were verified, and the following changes were found:

-Rocker Bearing rotation:
Span 1, Pier 1, East Bearing: 13 degrees expansion (at 60 degrees F)
Span 1, Pier 1, West Bearing: 2.5 degrees expansion
Span 2, Pier 1, East Bearing: 3 degrees expansion
Span 3, Pier 3, East Bearing: 20 degrees expansion (at 69 degrees F)
Span 3, Pier 3, West Bearing: 20 degrees expansion
Span 4, Pier 3, East Bearing: 5 degrees contraction
Span 4, Pier 3, West Bearing: 8 degrees contraction
Span 5, Pier 5, West Bearing: 3 degrees expansion (at 78 degrees F)
Span 6, Pier 5, East Bearing: 6 degrees expansion
Span 6, Pier 5, West Bearing: 8.5 degrees expansion

Section Loss to Gusset Plates:
Span 3, East Truss, L10 exhibits 1/8" section loss along the interface of the lower chord

Inspection notes continued:

-Cracks at stringer copes:

Span 2, Stringer 6, Floor Beam 2, South Face: East Face - 3/8"
Span 2, Stringer 6, Floor Beam 3, North Face: East Face - 1/2" West Face - 3/8"
Span 2, Stringer 6, Floor Beam 6, South Face: 1/2" painted over, but corrosion reactivating
Span 3, Stringer 5, Floor Beam 3, North Face: previously noted 3/4" crack not visible due to new paint
Span 3, Stringer 6, Floor Beam 0, North Face: 1/4"
Span 4, Stringer 6, Floor Beam 4, North Face: previously noted 5/8" crack not visible due to new paint

-Section loss/welded repairs in stringer and floorbeam ends:

Span 1, Floor Beam 1, East Truss connection: corrosion hole 2" L x 1.5" H, with painted over pitting up to 1/8" D
Span 1, Floor Beam 1, Stringer 1, north face: section loss on the underside of the top flange, 6" L x 1" H x up to 3/16" D
Span 2, Floor Beam 7 and Span 3, Floor Beam 0: bottom flanges between the west truss and Stringer 2 have corrosion holes throughout
Span 3, Floor Beam 1, Stringer 6: corrosion hole 1.5" L x 3" H
Span 3, Floor Beam 10: web at the west truss connection has a 7" H x 1" W area of up to 100% painted over section loss. The bottom flange near the west truss has multiple corrosion holes, and bottom of web below stringer 6 has a 1" diameter corrosion hole.
Span 4, Floor Beam 8: north bottom flange is essentially gone due to corrosion from stringer 1-2
Span 5, Floor Beam 0: below stringer 1, web has multiple pin holes and a 2" H x 1-3/4" W corrosion hole
Span 5, Floor Beam 5: corrosion hole 2" in diameter near the east truss connection

-Floor Beam Sweep:
Pier 3: The sweep of both floor beams has increased to 1/4" inward.

Additional Elements

Roadway Name : COUNTY ROAD

NBI Information Applicable To The Route Under The Structure

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

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