

Oklahoma Dept. of Transportation - Bridge Inspection Report

NBI No.: 15554	Structure No.: 5568 1146SX	Local ID: -1	Suff. Rating: 84.80	ND
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<p>Bridge Description: IDENTIFICATION</p> <div style="border: 1px solid black; padding: 2px;">55ft.-70ft.-55ft. I-BM. SPANS SK. 38 DEG.47ft.43ft.</div> <p>1. State: Oklahoma 2. Division: Division 4 3. County: OKLAHOMA 4. City: OKLA. CITY Admin Area: Unknown 5a. On/Under: Route On Structure 5b. Kind of Hwy: Interstate Hwy 5c. Lvl of Svc: Mainline 5d. Route No.: 00040 5e. Dir. Sufx: N/A (NBI)</p> <p>7. Facility Carried : I-40 EB 6. Feat. Intersect: I-240 WEST UNDER 9. Location: 11.3 MI E OF JCT I35 11. Mile Post: 11.457 mi 13. LRS Inv. / Sub Rte: 5568 0000 / 07 16. Latitude: 35° 24' 15.43" 17. Longitude: 097° 17' 31.38" 98. Border Brdg: Not Applicable (P) % Responsible: 0.00 99. Border Brdg #: Unknown</p>	<p style="text-align: center;">INSPECTION</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Type</th> <th>Insp. Req.</th> <th>Insp. Done</th> <th>Freq.</th> <th>Insp. Date</th> <th>Next Insp.</th> </tr> </thead> <tbody> <tr> <td>NBI:</td> <td></td> <td>1</td> <td>24 months</td> <td>9/27/2018</td> <td>09/27/2020</td> </tr> <tr> <td>FC:</td> <td>N</td> <td>0</td> <td></td> <td>NA</td> <td>NA</td> </tr> <tr> <td>UW:</td> <td>N</td> <td>0</td> <td></td> <td>NA</td> <td>NA</td> </tr> <tr> <td>OS:</td> <td>N</td> <td>0</td> <td></td> <td>NA</td> <td>NA</td> </tr> </tbody> </table> <p style="text-align: center;">CLASSIFICATION</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>12. Base Hwy Net.: On Base Network</td> <td>101. Parallel Str.: Right of bridge</td> </tr> <tr> <td>20. Toll Facility: On free road</td> <td>102. Traffic Dir.: 1-way traffic</td> </tr> <tr> <td>21. Custodian: State</td> <td>103. Temp. Str.: Not Applicable (P)</td> </tr> <tr> <td>22. Owner: State</td> <td>104. Hwy System: On the NHS</td> </tr> <tr> <td>26. Function Class: 11 Urban Interstate</td> <td>105. Fed Land Hwy: N/A (NBI)</td> </tr> <tr> <td>37. Historical Sig.: Not eligible for NRHP</td> <td>110. Defense Hwy: On Interstate STRAHNE</td> </tr> <tr> <td>100. Def. Hwy: On Interstate STRAHNE</td> <td>112. NBIS Length: Long Enough</td> </tr> </table>	Type	Insp. Req.	Insp. Done	Freq.	Insp. Date	Next Insp.	NBI:		1	24 months	9/27/2018	09/27/2020	FC:	N	0		NA	NA	UW:	N	0		NA	NA	OS:	N	0		NA	NA	12. Base Hwy Net.: On Base Network	101. Parallel Str.: Right of bridge	20. Toll Facility: On free road	102. Traffic Dir.: 1-way traffic	21. Custodian: State	103. Temp. Str.: Not Applicable (P)	22. Owner: State	104. Hwy System: On the NHS	26. Function Class: 11 Urban Interstate	105. Fed Land Hwy: N/A (NBI)	37. Historical Sig.: Not eligible for NRHP	110. Defense Hwy: On Interstate STRAHNE	100. Def. Hwy: On Interstate STRAHNE	112. NBIS Length: Long Enough
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<p style="text-align: center;">STRUCTURE TYPE AND MATERIALS</p> <p>43a/b. Main Span: Steel / Stringer/Girder 44a/b. Appr. Span: N/A / Not Applicable (P) 45. # of Main Spans: 3 46. # of Appr. Spans: 0 107. Deck Type: Concrete-Cast-in-Place 108a. Wearing Surface: Monolithic Concrete 108b. Membrane: None 108c. Deck protection: Epoxy Coated Reinforci</p>	<p style="text-align: center;">CONDITION</p> <p>58. Deck: 6 Satisfactory 59. Sup.: 7 Good 60. Sub: 5 Fair 62. Culvert: N/A (NBI) 61. Chan./Chan. Prot.: N/A (NBI)</p> <p>Flowline Notes</p>
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<p style="text-align: center;">AGE AND SERVICE</p> <p>19. Detour Length: 0.1 mi 27. Year Built: 1962 28a/b. Lanes on/und: 2 / 2 29. ADT: 17,950 30. Year of ADT: 2016 42a/b. Type of Svc on/und: Highway / Highway</p> <p>106. Year Reconst.: 1989 109. Truck ADT: 36%</p>	<p style="text-align: center;">LOAD RATING AND POSTING</p> <p>31. Design Load: MS 18 (HS 20) Date Rated: 11/24/2003 41. Post. Status: A Open, no restriction 70. Posting: 5 At/Above Legal Loads 63. Op / 65. Inv. Rating Meth.: 1 LF Load Factor / 1 LF Load Factor</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>H</th> <th>HS</th> <th>3-3</th> <th>EV3</th> <th>SHV</th> </tr> </thead> <tbody> <tr> <td>64. Operating Rating (tons):</td> <td>76.61</td> <td>99.89</td> <td>145.29</td> <td>-1.00</td> <td>0.00</td> </tr> <tr> <td>66. Inventory Rating (tons):</td> <td>45.97</td> <td>60.19</td> <td>87.19</td> <td>-1.00</td> <td></td> </tr> </tbody> </table>		H	HS	3-3	EV3	SHV	64. Operating Rating (tons):	76.61	99.89	145.29	-1.00	0.00	66. Inventory Rating (tons):	45.97	60.19	87.19	-1.00	
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<p style="text-align: center;">GEOMETRIC DATA</p> <p>10. Vert. Clearance: 99.99 ft 32. Appr Rwy Width: 38.00 ft 33. Median: No median 34. Skew: 51.00° 35. Struct. Flared: No flare 47. Horizontal Clr: 30.00 ft 48. Length Max Span: 70.00 ft 49. Struct. Length: 183.00 ft</p> <p>50a. Curb/Sdwk Width L: 0.00 ft 50b. Curb/Sdwk Width R: 0.00 ft 51. Width Curb to Curb: 30.00 ft 52. Width Out to Out: 41.00 ft Deck Area: 7,502.45 sq. ft 53. Min. Vert. Cl. Ovr Brg: 99.99 ft 54a. Min. Vt. Undclr. Ref.: H Hwy beneath stru 54b. Min. Vert. Undclr.: 17.40 ft 55a. Min. Lat. Undclr. Ref.: H Hwy beneath str 55. Min. Lat. Underclr. R: 10.00 ft 56. Min. Lat. Underclr. L: 7.20 ft</p>	<p style="text-align: center;">APPRAISAL</p> <p>36a. Brgd Rail: 1 Meets Standards 36b. Transition: 1 Meets Standards 36c. Appr. Rail: 1 Meets Standards 36d. Appr. Rail Ends: 1 Meets Standard 67. Str Evaluation: 5 Above Min Toler</p> <p>68. Deck Geom.: 6 Equal Min Criteria 69. Vert./Horiz. Undclr: 4 Tolerable 71. Waterway Adeq: N Not applicable 72. Appr. Alignment: 8 Equal Desirable Crit 113. Scour Critical: N Not Over Waterway</p>
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<p style="text-align: center;">OKLAHOMA ITEMS</p> <p>200c. Temperature: 62 200d. Weather: Clear 201. Struc. Stl. ASTM Desig.: -1 / -1 202. Waterprf. Membrane: -1 Date Installed: 01/01/1901 203. Type Exp. Device: Elastomeric Strip Seal Pourable 204. Type of Railing: SFP-1 205. Material Quantity: 194.00 208a. Type of Abutment: Cantilever b. Type of Found.: Bears on Natural Found. 209. Type of Pier/Found.: 4 / No No Piling/Drilled Shaft 210. Foundation Elev.: -1.00 -1.00 -1.00 -1.00 -1.00 211. Wear. Surf. Prot. Sys: Silane Date Installed: 01/01/1901 213. Utilities Attached:</p>	<p>214a. Posted Weight Limit: NR b. Posted Speed Limit: 55 c. Narrow/1way Brgd Sign: No d. Vertical Clr. Sign: Yes Adv. Warning Sign: No e. Navigation Lights?: NA Working/Not Working: NA 215. Overpass: INTERSTATE 221. Substr. Cond. (U/W): 222. Fill Over RCB: 223. Appr. Slab/Rwy Cond.: 1 225. Paint Type/Ovrct: MoisturCure(SC-MC-U)G N/A 226. Date Painted: 1993 227. Paint Color: Gray 233. Deck Forming: Conventional Forming 238. School Bus Rte.: Current & Desired route 240. Appr. Rwy Type.: Asphalt/Bituminous 243. Grdr Spacing/No.: /</p>
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<p>244. Span Lengths: 245. Girder Depth: 246a. Type of Overlay: NA b. Overlay Thickness: 0.00 c. Overlay Date: 01/01/1901 d. Ovlv Depth Changed >1": N 247. Protective Systems: DPWR/Epoxy Coated Ba</p>	<p style="text-align: center;">PROPOSED IMPROVEMENTS</p> <p>94. Bridge Cost: \$4,444,286 95. Roadway Cost: \$4,500,000 96. Total Cost: \$9,450,566 97. Yr. of Cost Est.: 2015</p> <p>75. Type of Work: 31 Repl-Load Capacity 76. Lngth of Improvement: 508.5 ft 114. Future ADT: 28,720 115. Yr. of Future ADT: 2036</p> <p style="text-align: center;">NAVIGATION DATA</p> <p>38. Nav. Control: NA-no waterway 39. Vert. Clearance: 0.0 ft 40. Horiz. Clearance: 0.0 ft 111. Pier Protect.: Not Applicable (P) 116. Lift Bridge Vert. Clr.: 0.0 ft</p>
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Inspection Date: 9/27/18 Reported By: Gary Hines
 Invoice No.: GLH918 Inspected With: Gary Richardson

BRIDGE NOTES:

7/28/2006 - THE ANNEX WAS NOTIFIED ON 7/28/2006 ON NEEDED POSTING CHANGES.
 THE 'SX' STRUCTURE CONTROLS THE UNDER CLEARANCE FOR THIS PAIR OF BRIDGES.
 * ONLY ONE BEAM IS 20 KSI - THE REST ARE 18 KSI*
 * THE ORIGINAL BRIDGE HAS SPREAD FOOTINGS ON 3 OF THE 4 COLUMNS AT THE BENTS*
 * 9/27/2018 - TEMP RAIL REDUCES CLEARANCE TO 30' AT THIS TIME *

INSPECTION NOTES: 9/27/18

G Hines inspection comments - 9/27/2018
 New asphalt approach on each end since 2014 * Satisfactory side drains * Good slopewalls * There aren't any trailing rails in place * There is only West-bound traffic under the bridge (2 lanes) * A roadway project to the east is in progress - temporary rail on the bridge restricts clearance to 30ft *

ELEMENT CONDITION STATE DATA

Elem. / Env	Description	Unit	Total Qty	% 1	Qty. 1	% 2	Qty. 2	% 3	Qty. 3	% 4	Qty. 4
12 / 4	Re Concrete Deck	sq.ft	6,954.20	39%	2,734.20	60%	4,170.00	1%	50.00	0%	0.00
FX - Initial wear noted in the wheel lanes (also see SF #958). There are several minor spalls along the nosing at bent #2 joint.											
107 / 4	Steel Opn Girder/Beam	ft	900.00	98%	880.00	2%	20.00	0%	0.00	0%	0.00
Good paint overall - some old loss < 15% noted on the 1st beam in span #2. Minor chalking started on a few areas.											
515 / 4	Steel Protective Coating	sq.ft	10,076.00	100%	0.00	0%	10,076.00	0%	0.00	0%	0.00
Good paint overall - some old loss < 15% noted on the 1st beam in span #2. Minor chalking started on a few areas.											
205 / 4	Re Conc Column	each	8.00	38%	3.00	25%	2.00	38%	3.00	0%	0.00
PX - There is a heavy vertical crack top to bottom on the SW corner of the 2nd column in bent #2 - this column also has a lighter horizontal crack at the SE area. The 4th column in bent #1 has a heavy crack with spalling. The 2nd & 3rd columns in bent #1 both have a small light crack present. Moderate delamination noted on #3 in bent #2.											
215 / 4	Re Conc Abutment	ft	186.00	46%	81.00	51%	95.00	3%	10.00	0%	0.00
PX - Lots of light to moderate horizontal cracking on the East abutment near the seat & some also present on the West. The protective coating is failed (98%) in all areas due to joint seepage.											
923 / 4	Conc Substr Prot Coa	(SF)	3,652.00	100%	0.00	0%	3,652.00	0%	0.00	0%	0.00
FX - Some defects are present in the coating on the bents (25%) & widespread deterioration exists on the abutments.											
234 / 4	Re Conc Pier Cap	ft	126.00	100%	126.00	0%	0.00	0%	0.00	0%	0.00
There is some minor deterioration present in the coating- ~ 50 sq ft. Staining is evident on bent #2 below the failed joint area.											
300 / 4	Strip Seal Exp Joint	ft	126.00	0%	0.00	100%	126.00	0%	0.00	0%	0.00
FX - The nosing material is cracked up & breaking out in most areas over bents #1 & #2. There is 3ft. of the gland failed over bent #2. Lots of soil build-up along the shoulder areas with exfoliation of the armor started. One spall in the nosing over bent #2 noted. Standing water along at the bent #1 joint needs drained.											
310 / 4	Elastomeric Bearing	each	36.00	100%	36.00	0%	0.00	0%	0.00	0%	0.00
-1											
321 / 4	Re Conc Approach Slab	sq.ft	2.00	0%	0.00	0%	0.00	100%	2.00	0%	0.00
PX - Each approach has what appears to be full-depth cracking in 3-4 areas (West app is worst). No movement noted at this time - still functioning as intended. The end armor is damaged on each slab.											
331 / 4	Re Conc Bridge Railing	ft	367.50	76%	257.50	24%	110.00	0%	0.00	0%	0.00
Several light vertical cracks noted in scattered areas. Lots of light pattern cracking noted on the south rail.											
924 / 4	Conc Rail Prot Coat	(SF)	1,835.00	100%	0.00	0%	0.00	0%	0.00	0%	1,835.00
FX - The rail coating is ineffective in most areas.											
859 / 4	Soffit	(EA)	1.00	0%	0.00	100%	1.00	0%	0.00	0%	0.00
There are numerous transverse cracks with light efflorescence in each span - approximately 5% of the total area is affected.											
865 / 4	St.Open Gird End(5Ft	(LF)	180.40	94%	170.40	6%	10.00	0%	0.00	0%	0.00
Good paint overall - some old inactive loss < 15% noted on the 1st beam in span #2. Light surface rust @ #1 at the East abutment. Minor defects noted at the bent #2 ends. Minor chalking started on a few other areas.											
870 / 4	Concrete Wingwall	(EA)	4.00	100%	4.00	0%	0.00	0%	0.00	0%	0.00
909 / 4	Pourable Fix Jt.Seal	(LF)	126.00	0%	0.00	0%	0.00	0%	0.00	100%	126.00
PX - The sealant has failed in the wheel lanes of each joint over the abutments with loss of adhesion starting in some other areas.											
916 / 4	St.Bearing Assembly	(LF)	36.00	89%	32.00	11%	4.00	0%	0.00	0%	0.00
Some surface rust developing on a few abutment anchor bolts.											
956 / 4	St. Cracking/Fatigue	(SF)	1.00	0%	0.00	100%	1.00	0%	0.00	0%	0.00
PX - There are some areas of the webs which appear to have possible fatigue cracking due to out-of-plane bending. Areas are at beams #3, 5, & 6 (span #1) and two others are on beams #1 & 5 in span #3 (2010 photo @ #5 - span #1). All are where the diagrams are fastened to the webs of the main beams. Needs checked with die-penetrant or magnaflux method soon. No change 10/2014. 2016 - Lack of advancement of deterioration lends credence that the defects are in the paint surface only.											

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958 / 4	Concrete Cracking SF	(EA)	1.00	0%	0.00	0%	0.00	0%	0.00	100%	1.00	
PX - Light to heavy transverse cracks of moderate to heavy density - some are only 3ft. to 4ft. apart. There is also some light to moderate pattern cracking - all need sealed soon. Approximately 60% of the total area is affected (2016 photo in span #3).												