90 Inspection Date - 6/14/14
Inspector - ERICHMOND (81)

103B00054R - **8 Bridge ID**
Standard -**Primary Inspection Type**

Inspection Report with SI&A Data

Structure Description: 424.87 Foot - 3 Span Steel continuous Stringer/Multi-beam or Girder
2 District: 09 **3 County:** Rowan **16 Latitude:** 38°11'10.00" **7 Longitude:** 83°31'24.00"
7 Facility Carried I-64 **Milepoint:** 134.750
6A Feature Intersected: BULL FORK CRK & ROAD
9 Location: EBL 2.4 MI W OF KY32 NTRC

NBI	X
Element	X
Fracture Critical	
Underwater	
Special	

NBI CONDITION RATINGS

58 Deck:	6	**61 Channel:**	7
59 Superstructure:	7	**62 Culvert:**	N
60 Substructure:	6	**Sufficiency Rating:**	78

DESIGN

Substandard:	No
Fracture Critical:	No
43A Main Span Material:	(4) Steel Continuous
43B Main Span Design:	(02) Stringer / Girder
45 Number of Spans Main:	3
44A Approach Span Material:	Not Applicable
44B Approach Span Design:	Not Applicable
46 Number of Approach Spans:	0
107 Deck Type:	(1) Concrete-Cast-in-Place
108A Wearing Surface:	(2) Integral Concrete
108B Membrane:	(0) None
108C Deck Protection:	(0) None
Overlay Y/N:	Yes
Overlay Type:	PCC
Overlay Thickness:	6.000 in
Overlay Date:	

APPRAISAL

36A Bridge Railings:	(1) Meets Standards
36B Transitions	(1) Meets Standards
36C Approach Guardrail:	(1) Meets Standards
36D Approach Guardrail Ends:	(1) Meets Standards
71 Waterway Adequacy:	(8) Equal Desirable
72 Approach Alignment:	(8) Equal Desirable Crit
113 Scour Critical:	(8) Stable above footing
Recommended Scour Critical:	(8) Stable above footing

LOAD RATINGS

63 Operating Type:	(1) Load Factor (LF)
64 Operating Rating:	70.0 tons
65 Inventory Type:	(1) Load Factor (LF)
66 Inventory Rating:	42.0 tons
Truck Capacity Type I:	53 tons
Truck Capacity Type II:	54 tons
Truck Capacity Type III:	55 tons
Truck Capacity Type IV:	60 tons

GEOMETRIC DATA

48 Max Length Span:	140.092 ft
49 Structure Length:	424.869 ft
32 Approach Roadway:	37.073 ft
33 Median:	(0) No Median
34 Skew:	0°
35 Flare:	No Flare
50A Curb/Sidewalk Width L:	0.000 ft
50B Curb/Sidewalk Width R:	0.000 ft
47 Horiz. Clearance:	32.500 ft
51 Width Curb to Curb:	32.500 ft
52 Width Out to Out:	35.499 ft

ADMINISTRATIVE

27 Year Built:	1968
106 Year Reconstructed:	-4
42A Type of Service On:	(1) Highway
42B Type of Service Under:	(6) Hyw - Waterway
37 Historical Significance:	(5) Not Eligible
21 Custodian:	(01) State Hwy Agency
22 Owner:	(01) State Hwy Agency
101 Parallel Structure:	(R) Right of ll Structure

CLEARANCES

10 Vert. Clearance:	99.999 ft
53 Min. Vert. Clearance Over:	99.999 ft
54A Vert. Under Reference:	(H) Hwy beneath struct.
54B Min. Vert. Underclearance:	45.417 ft
55A Lateral Under Reference:	(H) Hwy beneath struct.
55B Min. Lat. Underclearance R:	11.155 ft
56 Min. Lat. Underclearance L:	0.000 ft

POSTINGS

41 Posting Status:	(A) Open, No Restriction
Signs Posted Cardinal:	
Signs Posted Non-Cardinal:	
Field Postings Gross:	-1 tons
Field Postings Type I:	-1 tons
Field Postings Type II:	-1 tons
Field Postings Type III:	-1 tons
Field Postings Type IV:	-1 tons

Inspection Report with SI&A Data

12: Re Concrete Deck

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
SQ.FT	15,082.28	14,328.17	95%	754.11	5%	0	0%	0	0%

Rear of center in right lane is a 2? x 2? sawed out patched area and in left lane at east end of deck is a 50? long by 6? wide patched area. In right lane near center is a fairly long area of longitudinal cracking. There are numerous areas where cement is seeping up through the concrete. There would most likely be delaminated areas if the deck were sounded.

510: Wearing Surfaces

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
SQ.FT	13,813.62	13,122.94	95%	690.68	5%	0	0%	0	0%

7358: DO NOT USE Concrete Cracking

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
SQ.FT	138.08	0	0%	138.08	100%	0	0%	0	0%

Rear of center in right lane is a 2? x 2? sawed out patched area and in left lane at east end of deck is a 50? long by 6? wide patched area. In right lane near center is a fairly long area of longitudinal cracking. There are numerous areas where cement is seeping up through the concrete. There would most likely be delaminated areas if the deck were sounded.

7359: DO NOT USE Concrete Efflorescenc

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
SQ.FT	10.76	10.76	100%	0	0%	0	0%	0	0%

Rear of center in right lane is a 2? x 2? sawed out patched area and in left lane at east end of deck is a 50? long by 6? wide patched area. In right lane near center is a fairly long area of longitudinal cracking. There are numerous areas where cement is seeping up through the concrete. There would most likely be delaminated areas if the deck were sounded.

90 Inspection Date - 6/14/14

Inspector - ERICHMOND (81)

103B00054R - **8 Bridge ID**

Standard -**Primary Inspection Type**

Inspection Report with SI&A Data

107: Steel Opn Girder/Beam

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	1,699	1,683	99%	16	1%	0	0%	0	0%

The superstructure is made up of four large steel girders with vertical stiffeners. There are crossframes throughout the bridge between all the beams. Between the two center beams is lower lateral bracing. There are large areas where the paint is flaking off the beams to bare steel along the webs but the flaking is not as bad as the twin L-bridge. There are isolated areas where rust is starting to appear along the outer edges of the bottom flanges. This is a very high bridge and this inspection is only from the ground looking up; I also used binoculars. However, any small cracks or broken welds could easily be missed. At west end over abutment the top flange of left outside beam is tight against the backwall and all are tight at east end which would restrict expansion.

515: Steel Protective Coating

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	0.3	0.3	100%	0	0%	0	0%	0	0%

205: Re Conc Column

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
EACH	4	4	100%	0	0%	0	0%	0	0%

This bridge has two piers, each with two very high square concrete columns. The east face of columns in pier #3 has a lot of graffiti. This pier is next to a County Road. All the columns are in good condition. They have never been sealed.

215: Re Conc Abutment

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	71	0	0%	71	100%	0	0%	0	0%

This bridge is built on a lot of fill. Since bridge was built both abutments have settled and tilted in. Only approximately 1? of abutment #1 can be seen. Abutment #1 backwall has a 1? cracked delaminated area near the left end and a vertical spall with rebar exposed next to 2nd beam from left. There are other areas of surface cracking with slight delamination and cracking throughout the backwall. The face of abutment #4 has some spalling in front of the three left rockers; minor rebar is exposed in two of these spalled areas. Abutment #4 backwall has a vertical spall with rebar exposed near the right end next to outside beam.

Inspection Report with SI&A Data

234: Re Conc Pier Cap									
Units	**Total Qty**	**Qty. St. 1**	**% in 1**	**Qty. St. 2**	**% in 2**	**Qty. St. 3**	**% in 3**	**Qty. St. 4**	**% in 4**
FT	70	70	100%	0	0%	0	0%	0	0%

From the ground both concrete pier caps look to be in good condition. They have never been sealed.

300: Strip Seal Exp Joint									
Units	**Total Qty**	**Qty. St. 1**	**% in 1**	**Qty. St. 2**	**% in 2**	**Qty. St. 3**	**% in 3**	**Qty. St. 4**	**% in 4**
FT	36	18	50%	18	50%	0	0%	0	0%

This bridge has a strip seal expansion joint at east end over abutment #4. It is still basically in good condition. The seal in left lane has dropped down approximately ?? in areas. Joint measured at centerline 1?; however the top flanges of all the beams are tight against the backwall which would restrict any expansion. The temperature is 75 degrees.

302: Compressn Joint Seal									
Units	**Total Qty**	**Qty. St. 1**	**% in 1**	**Qty. St. 2**	**% in 2**	**Qty. St. 3**	**% in 3**	**Qty. St. 4**	**% in 4**
FT	36	18	50%	18	50%	0	0%	0	0%

Over abutment #1 is a compression seal expansion. The expansion seal is in good condition. However it has dropped down approximately ?? in most of the left lane and the edges have small gaps along the riser bars with gravel getting down in. The steel riser bars have a few nicks from snow plows. The joint measured at centerline is 2?; however the top flange of left outside beam is tight against the headwall restricting any expansion. The current temperature is 75 degrees.

311: Moveable Bearing									
Units	**Total Qty**	**Qty. St. 1**	**% in 1**	**Qty. St. 2**	**% in 2**	**Qty. St. 3**	**% in 3**	**Qty. St. 4**	**% in 4**
EACH	12	4	33%	8	67%	0	0%	0	0%

Over abutment #1 all rockers are tilted toward backwall to max; the three right rockers may have very slight room for movement yet. Since the left outside beam is tight against backwall there is no more space for expansion over abutment one. The base plates under the two interior rockers are 100% rusted with some flaking rust and section loss; 2nd from left is the worse. Over abutment #4 all four rockers are tilted back toward backwall 30 degrees. All beams over this abutment is tight against backwall restricting any further movement.

Inspection Report with SI&A Data

515: Steel Protective Coating									
Units	**Total Qty**	**Qty. St. 1**	**% in 1**	**Qty. St. 2**	**% in 2**	**Qty. St. 3**	**% in 3**	**Qty. St. 4**	**% in 4**
EACH	0.09	0.09	100%	0	0%	0	0%	0	0%

313: Fixed Bearing									
Units	**Total Qty**	**Qty. St. 1**	**% in 1**	**Qty. St. 2**	**% in 2**	**Qty. St. 3**	**% in 3**	**Qty. St. 4**	**% in 4**
EACH	4	4	100%	0	0%	0	0%	0	0%

All bolsters over pier #2 from the ground appear to be in good condition

515: Steel Protective Coating									
Units	**Total Qty**	**Qty. St. 1**	**% in 1**	**Qty. St. 2**	**% in 2**	**Qty. St. 3**	**% in 3**	**Qty. St. 4**	**% in 4**
EACH	0.09	0.09	100%	0	0%	0	0%	0	0%

331: Re Conc Bridge Railing									
Units	**Total Qty**	**Qty. St. 1**	**% in 1**	**Qty. St. 2**	**% in 2**	**Qty. St. 3**	**% in 3**	**Qty. St. 4**	**% in 4**
FT	890	885	99%	5	1%	0	0%	0	0%

The concrete parapets along both sides have wide spread shallow pop out type spalls along the inside faces and top surfaces. Both sides have the usual vertical cracks scattered here and there along the inside and outside faces found in this type railing. The east end of right side railing has a long section where the vertical cracks are worse and are spaced 2? to 3? apart. The inside face of left side has a few scrapes from traffic; minor. They have been sealed and the sealant along left side is still in fairly good condition; much is now missing from right side along inside face.

Inspection Report with SI&A Data

850: 2nd Elem

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
(EA)	1	0	0%	1	100%	0	0%	0	0%

This bridge has crossframes throughout the superstructure and a few diaphragms up next to the deck. Between the two center beams is also lower lateral bracing. From the ground looking up they all appear to be in good condition.

852: Drains

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
(EA)	1	0	0%	0	0%	1	100%	0	0%

This bridge has scuppers and downspouts along the right side only. The downspouts are very rusty with section loss. On top there is some debris lying along the inside faces of parapets and a little in the scuppers; one has a small amount of grass growing.

STRUCTURE NOTES

This structure is high and a thorough inspection can not be completed without using a snooper. This inspection was done from the ground only looking up and therefore is not to be considered a thorough NBIS inspection. A routine snooper inspection is needed for this structure.

This is a very high structure and cannot be inspected without using a snooper. Therefore, this inspection done 6/14/2014 is only a cursory inspection which was done superficially from the ground and a walk over of the deck. The information stated on this report is only easily seen from the ground. It is in no way to be considered thorough, complete, exact, or a NBIS inspection. A NBIS inspection needs to be made of this bridge using a snooper.

INSPECTION NOTES

Inspected by Emerson Richmond. The asphalt approach pavement along the ends of deck has some minor random cracking. Otherwise, the approaches are in good condition. This bridge has galvanized deep beam approach guardrail along the right side at east end of bridge and both sides at west end. There are a few minor dents but the railing is still in fairly good condition. 12? x 36? obstruction markers have been installed at the west end along both sides. Both are leaning over and needs re-set. The right marker is bent some but should be able to straighten.

WORK

Action:	-1 - Converted Work Candidates

Generated by erichmond on 06/18/2014

Action:	-1 - Converted Work Candidates

Generated by erichmond on 06/18/2014. Rockers over abutments need reset.

103B00054R

Looking east over bridge

Left side obstruction marker at abutment #1

Right side obstruction marker at abutment #1

Looking left over compression seal expansion over abutment #1

103B00054R

Looking east along inside face of right parapet showing debris

Cement seeping up through the concrete wearing surface

Looking east over main drive lane

Vertical cracks in right side parapet; typical

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2' x 2' patched area in wearing surface in right lane

Longitudinal and random cracking in right lane

Long longitudinal cracks in right lane

Vertical cracking in right parapet in east half of bridge

103B00054R

Looking left across strip seal expansion joint over abutment #4

Looking west back over bridge

East end of left side parapet

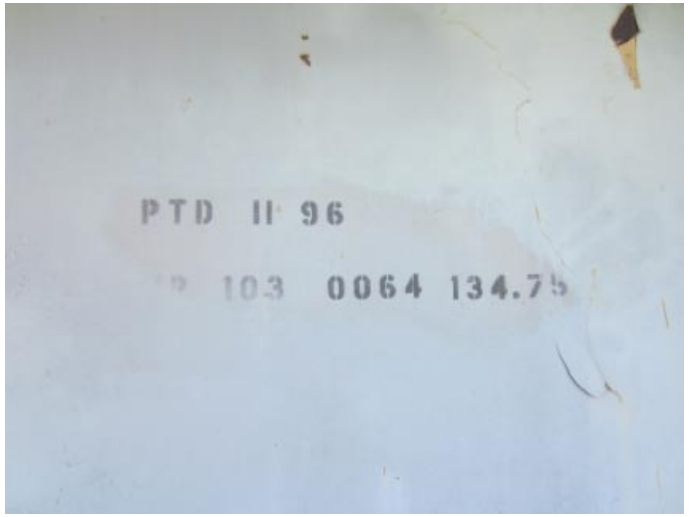
Random cracking in left lane at east end of deck

103B00054R

Long patched area in w.s. in left lane at east end of deck

Left outer end of abutment #1

Looking east along left side of bridge



Paint information on left outside face of superstructure next to abutment #1

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Left outside rocker over abutment #1

Abutment #1 backwall next to left end

Left outside beam top flange tight against backwall at abutment #1

Abutment #1 at 2nd rocker from left

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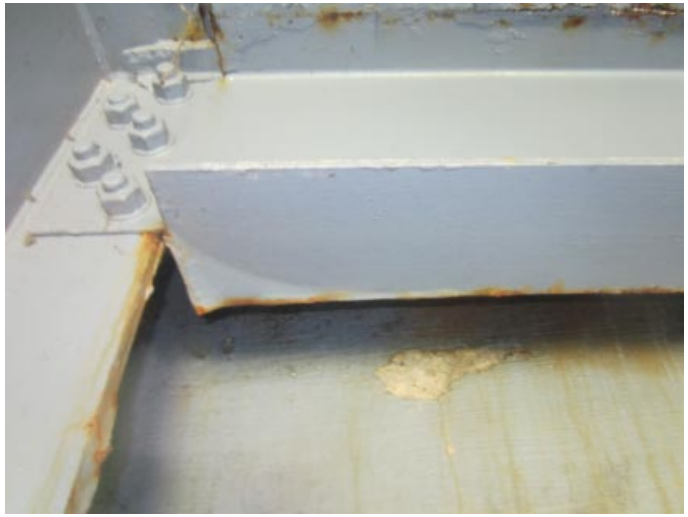
3' section of end of deck at abutment #1 has broken off lying on seat

End of deck broken lying on abutment #1

2nd rocker from left over abutment #1



End diaphragm over abutment #1 slightly bent; very minor

103B00054R

Abutment #1

Paint flaked off beams lying on ground in front of abutment #1

2nd rocker from right over abutment #1

Paint flaked off inside face of right outside beam next to abutment #1

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Looking east along span #1

Pier #2 west face

Downspout along right side rusting

Transverse cracks in deck in span #1 next to pier

103B00054R

Looking east along bottom of center span

West face of #3 pier

East stream bank under bridge in center span

Looking east along bottom of superstructure in span #3

103B00054R

Gully washing out along left side of slope protection next to abutment #4

Abutment #4

Looking west along bottom of span #3

Left outside beam tight against abutment #4 backwall

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Left outside rocker over
abutment #4

Looking back west along left face
of superstructure

Looking right along abutment #4

Face of abutment #4 spalling
under 2nd rocker from left

103B00054R

Center of abutment #4

Vertical spall in #4 backwall at right end

Paint flaking off outside face of right outside beam in span #3

Lower outside edges of deck have transverse cracks with seepage