

## 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°11'11.00"      **7 Longitude:** 83°31'24.00"

**7 Facility Carried:** I-64 NC

**Milepoint:** 134.760

**6A Feature Intersected:** BULL FORK CRK & ROAD

**9 Location:** WBL 2.4 MI W OF KY32 NTRC

NBI	X
Element	X
Fracture Critical	
Underwater	
Special	

NBI CONDITION RATINGS			
<b>58 Deck:</b>	7	<b>61 Channel:</b>	6
<b>59 Superstructure:</b>	7	<b>62 Culvert:</b>	N
<b>60 Substructure:</b>	6	<b>Sufficiency Rating:</b>	78

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

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

ADMINISTRATIVE		
<b>27 Year Built:</b>		1968
<b>106 Year Reconstructed:</b>		-4
<b>42A Type of Service On:</b>		(1) Highway
<b>42B Type of Service Under:</b>		(6) Hyw - Waterway
<b>37 Historical Significance:</b>		(5) Not Eligible
<b>21 Custodian:</b>		(01) State Hwy Agency
<b>22 Owner:</b>		(01) State Hwy Agency
<b>101 Parallel Structure:</b>		(L) Left Of II Structure

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

CLEARANCES		
<b>10 Vert. Clearance:</b>		99.999 ft
<b>53 Min. Vert. Clearance Over:</b>		99.999 ft
<b>54A Vert. Under Reference:</b>		(H) Hwy beneath struct.
<b>54B Min. Vert. Underclearance:</b>		47.251 ft
<b>55A Lateral Under Reference:</b>		(H) Hwy beneath struct.
<b>55B Min. Lat. Underclearance R:</b>		11.155 ft
<b>56 Min. Lat. Underclearance L:</b>		0.000 ft

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

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

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### 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	14,931.46	99%	150.82	1%	0	0%	0	0%

Out near center of deck are several areas where it appears cement is seepage up through the concrete. This may be areas where the concrete overlay is moving and may start to crack. Otherwise, the wearing surface looks good.

### 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	13,675.48	99%	138.14	1%	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%

Out near center of deck are several areas where it appears cement is seepage up through the concrete. This may be areas where the concrete overlay is moving and may start to crack. Otherwise, the wearing surface looks good.

### 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%

Out near center of deck are several areas where it appears cement is seepage up through the concrete. This may be areas where the concrete overlay is moving and may start to crack. Otherwise, the wearing surface looks good.

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### 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	1,688	99%	11	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. At the end next to abutment #1 the lower lateral brace has broken loose from the second beam from left in the past and has since been repaired. The right outside face of right outside beam the first vertical stiffener east of pier #3 is bent down next to bottom flange. This most likely was done during construction; no repairs are needed. This is a very high bridge and this inspection is only from the ground looking up. I also used binoculars and did not see any other members bent. Any small cracks or broken welds could not be seen. All throughout the beams large areas of paint is flaking off to bare steel; this is much worse in forward span next to abutment #2. The outside face of right outside beam near abutment #2 has some thin rust along the web down along the bottom flange and is starting to get minor section loss. A few areas along the bottom flanges of outside beams around the downspouts are rusted and may be getting some section loss. A lot of paint is lying on the ground under the bridge where it has flaked off the beams. Paint on the crossframes and lower lateral bracing is still good.

### 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 left column in pier #2 has a small piece of concrete broken off the left forward corner; this area has been hit in the past. No repairs are need. They have not been sealed.

## Inspection Report with SI&A Data

### 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	60	85%	11	15%	0	0%	0	0%

This bridge is built on a lot of fill. It appears abutment #1 may have settled and tilted left slightly. The outside faces of both abutments have some random cracking; these areas have been sealed over. Abutment #1 has a 1? diameter cracked delaminated area in right half of face. Both abutments have some vertical cracking along the vertical construction joint at center; this cracking also extends on up the backwalls some. At this same vertical construction joint in abutment #4 the abutment appears to have separated; the gap is ?? wide at ground line. Both backwalls have a few long vertical cracks. Backwall #1 has been patched up along the top. The right end of #4 backwall is wet up at the top and has some random cracking.

### 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 looking up it appears both pier caps are 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	36	100%	0	0%	0	0%	0	0%

This bridge has a strip seal expansion joint at east end over abutment. It is in good condition. Measured at centerline 1 ??; temperature 70 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	36	100%	0	0%	0	0%	0	0%

Over west abutment is a compression seal expansion. The expansion is in good condition. However the steel along backwall has several very minor shallow scrapes from snow plows. Measured at centerline 1 ??; temperature 70 degrees.

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### 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%	4	33%	0	0%	4	33%

All rockers over abutment #1 are tilted west approximately 30 degrees. Over abutment #4 all rockers are tilted back toward backwall to max. Even with heavy truck traffic there is no movement at any of the rockers. All of these rockers are in place and there is no movement at the base plates. The ends of the beams and deck are not against the backwall. These rockers need re-set. Over pier #3 all rockers are basically straight.

### 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%

## Inspection Report with SI&A Data

### 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	880	99%	10	1%	0	0%	0	0%

The concrete parapets along both sides have wide spread pop out type spalls along the inside faces and top surfaces. This spalling is worse along the short approach section at west end of deck. The inside face of the short approach section on left side has random cracking down along the bottom. Both sides have the usual vertical cracks scattered here and there along the inside and outside faces found in this type railing. They have been sealed and the sealant is still in fairly good condition.

### 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. At the end next to abutment #1 the lower lateral brace has broken loose from the second beam from left in the past and has since been repaired. 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%

There are scuppers and downspouts along the right side only. All of the scuppers on top are clean and there is only a very small amount of minor debris along the deck edges. Many of the downspouts are rusty with section loss.

### 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 not to be considered thorough, complete, exact, or a NBIS inspection. A NBIS inspection needs to be completed of this bridge using a snooper.

### INSPECTION NOTES

The asphalt approach pavement along the east end of deck has some minor random cracking. Otherwise, the approaches are in good condition. This bridge has galvanized deep beam approach guardrail along the left side at west end of bridge and both sides at east end. There are a few very minor dings but the railing is still in good condition. 12" x 36" obstruction markers have been installed at the east end along both sides; the right marker is leaning over and needs re-set.

## Inspection Report with SI&A Data

WORK	
<b>Action:</b>	-1 - Converted Work Candidates
Generated by erichmond on 06/18/2014	

<b>Action:</b>	-1 - Converted Work Candidates
Generated by erichmond on 06/18/2014. Rockers over abutments need re-set.	

103B00054L



Right face of #1 abutment



Showing narrow space between  
2nd beam from right and  
backwall over abutment #1



Paint flaking off interior beam  
near abutment #1



2nd rocker from right over  
abutment #1; typical of all over  
abutment

103B00054L



Looking left along abutment #1



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



Lower lateral bracing repaired  
next to abutment #1



Vertical cracking in backwall #1

103B00054L



Looking east from west slope protection



Looking east along bottom of deck in span #1



Bottom of deck in center span



West face of pier #3

103B00054L



Superstructure in span #2



Bent vertical stiffener on outside face of right outside beam



East face of #3 pier



East slope protection

103B00054L



Left face of #3 pier



Abutment #4



Paint lying on ground around  
abutment #4 that has flaked off  
beams



Looking right along abutment #4

103B00054L



Looking west along left outside face of bridge



Looking west along left face of superstructure



Left face of #4 abutment



Looking right along rockers over #4 abutment

103B00054L



2nd rocker from left over #4 abutment; typical of all over this abutment



IMCenter of #4 abutmentG\_0140



Right end of #4 backwall



Outside face of right outside beam near east end; slight section loss to web down along

103B00054L



West end looking east over  
bridge



Looking east along left side of  
bridge



Looking east along right side of  
bridge



Fairly deep pop out spalls on top  
surface of right side parapet

103B00054L



Looking left along expansion joint over # 1 abutment



West end of right side parapet



Pop out type spalls along inside face of left parapet; typical



Tight longitudinal crack in w.s.

103B00054L



Debris lying along right edge of deck



Looking left along expansion over #4 abutment



East end looking west back over bridge



Obstruction marker at s-east corner of bridge

103B00054L



Looking west along right side of  
bridge