

Inspection Report with SI&A Data

Structure Description: 305.12 Foot - 3 Span Steel continuous Stringer/Multi-beam or Girder

2 District: 09 **3 County:** Bath **16 Latitude:** 38°09'21.00" **7 Longitude:** 83°37'07.00"

7 Facility Carried: I-64-10 NC

Milepoint: 128.930

6A Feature Intersected: LICKING RIVER

9 Location: WBL ON ROWAN - BATH CL

NBI	X
Element	X
Fracture Critical	
Underwater	
Special	

NBI CONDITION RATINGS			
58 Deck:	7	61 Channel:	7
59 Superstructure:	6	62 Culvert:	N
60 Substructure:	6	Sufficiency Rating:	96

GEOMETRIC DATA		
48 Max Length Span:		120.079 ft
49 Structure Length:		305.118 ft
32 Approach Roadway:		37.073 ft
33 Median:		(0) No Median
34 Skew:		20°
35 Flare:		No Flare
50A Curb/Sidewalk Width L:		0.000 ft
50B Curb/Sidewalk Width R:		0.000 ft
47 Horiz. Clearance:		35.000 ft
51 Width Curb to Curb:		35.000 ft
52 Width Out to Out:		37.999 ft

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:	(3) Latex Concrete/Similar
108B Membrane:	(0) None
108C Deck Protection:	(0) None
Overlay Y/N:	Yes
Overlay Type:	Latex
Overlay Thickness:	1.000 in
Overlay Date:	

ADMINISTRATIVE		
27 Year Built:		1967
106 Year Reconstructed:		-4
42A Type of Service On:		(1) Highway
42B Type of Service Under:		(5) Waterway
37 Historical Significance:		(5) Not Eligible
21 Custodian:		(01) State Hwy Agency
22 Owner:		(01) State Hwy Agency
101 Parallel Structure:		(L) Left Of II Structure

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

CLEARANCES		
10 Vert. Clearance:		99.999 ft
53 Min. Vert. Clearance Over:		99.999 ft
54A Vert. Under Reference:		(N) Feature not hwy or RR
54B Min. Vert. Underclearance:		0.000 ft
55A Lateral Under Reference:		(N) Feature not hwy or RR
55B Min. Lat. Underclearance R:		0.000 ft
56 Min. Lat. Underclearance L:		0.000 ft

LOAD RATINGS	
63 Operating Type:	(1) Load Factor (LF)
64 Operating Rating:	110.0 tons
65 Inventory Type:	(1) Load Factor (LF)
66 Inventory Rating:	51.0 tons
Truck Capacity Type I:	66 tons
Truck Capacity Type II:	67 tons
Truck Capacity Type III:	70 tons
Truck Capacity Type IV:	79 tons

POSTINGS	
41 Posting Status:	(A) Open, No Restriction
Signs Posted Cardinal:	No
Signs Posted Non-Cardinal:	No
Field Postings Gross:	tons
Field Postings Type I:	tons
Field Postings Type II:	tons
Field Postings Type III:	tons
Field Postings Type IV:	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	11,594.09	11,474.09	99%	120	1%	0	0%	0	0%

The deck underside and overhangs have areas of minor cracking with efflorescence. The concrete fillet over the interior top flange of the upstream girder near abutments 1 and 4 is moderately spalled. See photos.

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	10,684.52	10,577.67	99%	106.85	1%	0	0%	0	0%

The latex overlay has some areas of minor cracking, but, is in overall good condition. Minor transverse cracking is present over pier 2. See photos.

1130: Cracking (RC and Other)

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	1	1	100%	0	0%	0	0%	0	0%

See element 510 for details.

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	1,220	1,220	100%	0	0%	0	0%	0	0%

All of the steel beams have areas of widespread paint failure. A large amount of paint is lying on the slopes in front of the abutments. The paint failure is more widespread in spans 1 and 3. This paint has recently popped off and the exposed steel has only some minor surface rust. The exposed steel at previous noted areas of localized paint failure is completely rusty. The ends of the exterior beams at the abutments have some flaking, peeling, bubbling paint with minor to moderate rust and corrosion. See photos.

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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	7,010.4	4,998.72	71%	609.6	9%	0	0%	1,402.08	20%
<p>All of the steel beams have areas of widespread paint failure. A large amount of paint is lying on the slopes in front of the abutments. The paint failure is more widespread in spans 1 and 3. This paint has recently popped off and the exposed steel has only some minor surface rust. The exposed steel at previous noted areas of localized paint failure is completely rusty. The ends of the exterior beams at the abutments have some flaking, peeling, bubbling paint with minor to moderate rust and corrosion. See photos.</p>									

210: Re Conc Pier Wall									
Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	72	72	100%	0	0%	0	0%	0	0%
<p>The portions of the piers that are above the water are in good condition at this time. Probing was not possible during this inspection due to elevated water levels. See photos.</p>									

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	81	69	85%	12	15%	0	0%	0	0%
<p>The exterior ends of the backwalls have some minor cracking with efflorescence and discoloration. Some minor cracking was noted in a few bearing pedestals. See photos.</p>									

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	40.5	0	0%	40.5	100%	0	0%	0	0%
<p>This bridge has a strip seal expansion joint over abutment 4. It is mostly full of debris. The temperature was ~ 73 degrees during this inspection and 5 in. was measured from back edge of steel anchor to back edge of steel anchor at the roadway centerline. See photos.</p>									

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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	40.5	0	0%	40.5	100%	0	0%	0	0%

This bridge has a compression seal expansion joint over abutment 1. Measured at centerline was 1-1/2 in. and the temperature was 73 degrees. This joint seal is impacted with debris and has some adhesion failure allowing minor seepage onto abutment cap. See photos.

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%

The exterior moveable bearings at abutment 1 and 4 have flaking paint and the exposed steel is rusted with minor to moderate corrosion. Bearings at these locations need to be cleaned and painted. The bearings at the abutments are slightly tilted toward the backwall. See photos.

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	5.57	0	0%	4.83	87%	0	0%	0.74	13%

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%

The fixed bearings appear to be in good condition at this time. See photos.

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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	1.86	1.86	100%	0	0%	0	0%	0	0%
<p>The coatings on the fixed bearings appears to be in good condition at this time.</p>									

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	665	655	99%	10	2%	0	0%	0	0%
<p>The concrete railing has typical vertical cracking throughout but is in good condition at this time. See photos.</p>									

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%
<p>Some of the diaphragms at the abutments have some rust and corrosion, but overall the crossframes are in good condition. See photos.</p>									

859: Vegetation									
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%
<p>Vegetation around and under structure needs to be cut and sprayed. See photos.</p>									

STRUCTURE NOTES

INSPECTION NOTES
<p>This is a standard 24 month walk over inspection and the NBI ratings reflect only what can be reasonably observed during this type of inspection. Binoculars were utilized for a better visual inspection. Inspected by A.Greiner.</p>

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WORK

Action: 1009 - Bearings-Clean Assemblies / Paint

The bearing should be cleaned and coated. Generated by user "agreiner" on 5/12/2015

Action: 1047 - Joints-Replace

The joint seal at abutment 1 should be replaced. Generated by user "agreiner" on 5/12/2015

Action: 7 - Paint Bridge

The girders should be cleaned and painted. Generated by user "agreiner" on 5/12/2015



Approach to abutment 1.



View from upstream near abutment 1.



View of the stamps on the upstream barrier near abutment 1.



Typical view of the transverse joint at abutment 1; it is partially full of debris, and has some adhesion failures.



Typical view of the wearing surface near abutment 1.



View of the transverse joint at abutment 4. It is mostly full of dirt and debris.



Approach to abutment 4.



Large area of paint failure on the exterior face of the downstream girder near abutment 4.



Large area of paint failure on the downstream face of girder 3 from upstream near abutment 4.



View of paint lying on the ground near abutment 4.



Downstream bearing at abutment 4; Flaking paint with some minor to moderate corrosion.



Large areas of paint failure on the upstream face of the downstream girder in span 3.



Large areas of paint failure on the downstream face of girder 2 in span 3.



Moderate spalling along the fillet on the top interior flange on the upstream girder at abutment 4.



View of minor cracking with efflorescence in the upstream backwall of abutment 4.



Typical view of span 3 and pier 3.



View of minor cracking with efflorescence in the deck underside at pier 3.



Typical view of span 2 and pier 2 from downstream.



Typical view of span 2 and pier 2 from upstream



View of minor sized transverse cracking in the wearing surface near pier 2.



Upstream bearing at abutment 1; flaking paint and moderate corrosion.



View of several large areas of paint failure on the downstream face of the upstream girder in span 1.



View of several large areas of paint failure on the upstream face of girder 2 from upstream in span 1.



View of several large areas of paint failure on the upstream face of girder 3 from upstream in span 1.



View of some minor cracking of pedestal 2 from upstream at abutment 1.



View of flaking paint and moderate corrosion at the end of the upstream girder at abutment 1.



View of moderate cracking and spalling of the fillet above the upstream girder in span 1.



View of the downstream bearing at abutment 1.



View of minor cracking with efflorescence along the downstream backwall of abutment 1.



Typical view of span 1 and pier 2.