



NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STRUCTURE MANAGEMENT UNIT

ATTENTION: TEMPORARY REPAIRS; PRIORITY MAINTENANCE

Structure Safety Report

Routine Element Inspection - Contract

COUNTY: ROWAN STRUCTURE NUMBER: 790063 FREQUENCY: 24 MONTHS

FACILITY CARRIED: NC150 NC 150 MILE POST:

LOCATION: 0.5 MI. W. JCT. SR1350 0.5 MILE WEST OF JUNCTION WITH SR 1350

FEATURE INTERSECTED: KERR CREEK

LATITUDE: 35° 38' 34.07" LONGITUDE: 80° 38' 59.11"

SUPERSTRUCTURE: REINFORCED CONCRETE DECK ON I-BEAMS

SUBSTRUCTURE: E.BENTS:RC CAPS ON STEEL PILES,INT.BENTS:RCP&W ON SPREAD FTG

1@41'-0", 1@40'-3", 1@41'-0"

SPANS: 1@41"0", 1@40"0", 1@41"0"

☐ FRACTURE CRITICAL ☐ TEMPORARY SHORING ☐ SCOUR CRITICAL ☒ SCOUR PLAN OF ACTION

PRESENT CONDITION: Fair INSPECTION DATE: 07/16/2015

POSTED SV: Not Posted POSTED TTST: Not Posted

OTHER SIGNS PRESENT: (12) DELINEATORS



LOOKING EAST

Sign noticed issued for	Number Required
NO WEIGHT LIMIT	0
NO DELINEATORS	0
NO NARROW BRIDGE	0
NO ONE LANE BRIDGE	0
NO LOW CLEARANCE	0

INSPECTED BY MARK E. GUSTAFSON	SIGNATURE <i>Mark E. Gustafson</i>	ASSISTED BY MICHAEL R. MEYER
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Span Element Report

Structure Number: 790063

Inspection Date: 07/16/2015

Span Number 1

Span Length 41 Feet

Number of Beams/Girders: 4

Element Number	Parent Number	Element Name	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity	Maint. Quantity	Maint. Code
12		Reinforced Concrete Deck	1,374	1,374	0	0	0	0	3326
107		Steel Open Girder/Beam	152	0	152	0	0	152	3314
515	107	Steel Protective Coating	1192	596	0	0	596	596	3342
215		Reinforced Concrete Abutment	48	48	0	0	0	0	3350
234		Reinforced Concrete Pier Cap	51	31	0	20	0	20	3348
311		Movable Bearing	4	4	0	0	0	0	3334
515	311	Steel Protective Coating	8	8	0	0	0	0	3342
313		Fixed Bearing	4	0	4	0	0	4	3334
515	313	Steel Protective Coating	8	4	0	0	4	4	3342
331		Reinforced Concrete Bridge Railing	82	68	14	0	0	14	3318
510		Wearing Surface	1,148	791	0	357	0	357	2816

"Near" Approach and Substructure quantities have been include for reporting purposes. The last span will also include End Bent 2 and Far Approach quantities where applicable

Span Number 2

Span Length 40.25 Feet

Number of Beams/Girders: 4

Element Number	Parent Number	Element Name	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity	Maint. Quantity	Maint. Code
12		Reinforced Concrete Deck	1,349	1,349	0	0	0	0	3326
107		Steel Open Girder/Beam	160	8	152	0	0	152	3314
515	107	Steel Protective Coating	1236	616	0	0	620	620	3342
205		Reinforced Concrete Column	2	1	0	1	0	8	3348
210		Reinforced Concrete Pier Wall	28	27	1	0	0	3	3348
234		Reinforced Concrete Pier Cap	38	22	0	8	8	16	3348
301		Pourable Joint Seal	48	48	0	0	0	0	3310
311		Movable Bearing	4	4	0	0	0	0	3334
515	311	Steel Protective Coating	8	8	0	0	0	0	3342
313		Fixed Bearing	4	4	0	0	0	0	3334
515	313	Steel Protective Coating	8	8	0	0	0	0	3342
331		Reinforced Concrete Bridge Railing	82	61	21	0	0	21	3318
510		Wearing Surface	1,127	805	0	322	0	322	2816

"Near" Approach and Substructure quantities have been include for reporting purposes. The last span will also include End Bent 2 and Far Approach quantities where applicable

Span Number 3

Span Length 41 Feet

Number of Beams/Girders: 4

Element Number	Parent Number	Element Name	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity	Maint. Quantity	Maint. Code
12		Reinforced Concrete Deck	1,374	1,326	0	48	0	48	3326
107		Steel Open Girder/Beam	152	0	150	2	0	152	3314
515	107	Steel Protective Coating	1192	596	0	0	596	596	3342
205		Reinforced Concrete Column	2	0	1	1	0	10	3348
210		Reinforced Concrete Pier Wall	28	27	1	0	0	5	3348
215		Reinforced Concrete Abutment	48	45	2	1	0	3	3350
234		Reinforced Concrete Pier Cap	89	32	28	29	0	58	3348
301		Pourable Joint Seal	48	48	0	0	0	0	3310

Structure Number: 790063

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311		Movable Bearing	4	3	0	1	0	1	3334
515	311	Steel Protective Coating	8	6	0	0	2	2	3342
313		Fixed Bearing	4	2	2	0	0	2	3334
515	313	Steel Protective Coating	8	5	0	0	3	3	3342
331		Reinforced Concrete Bridge Railing	82	62	20	0	0	20	3318
510		Wearing Surface	1,148	785	6	357	0	363	2816

"Near" Approach and Substructure quantities have been include for reporting purposes. The last span will also include End Bent 2 and Far Approach quantities where applicable

Superstructure Detailed Element Quantities

Structure Number: 790063

Inspection Date: 07/16/2015

Span Number 1

Element Location	Location Number	Element Number	Element Name	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity	Maint. Quantity	Maint. Code	Priority Maintenance
☒ Deck	1	12	Reinforced Concrete Deck	1374	1374	0	0	0	0	3326	☐ Requested
☒ Bridge Rail	1	331	Reinforced Concrete Bridge Railing	41	34	7	0	0	7	3318	☐ Requested
☒ Bridge Rail	2	331	Reinforced Concrete Bridge Railing	41	34	7	0	0	7	3318	☐ Requested
☒ Wearing Surfaces		510	Wearing Surface	1148	791	0	357	0	357	2816	☐ Requested
☒ Beam	1	107	Steel Open Girder/Beam	38	0	38	0	0	38	3314	☐ Requested
Protective System		515	Steel Protective Coating	298	149	0	0	149	149	3342	
☒ Beam	2	107	Steel Open Girder/Beam	38	0	38	0	0	38	3314	☐ Requested
Protective System		515	Steel Protective Coating	298	149	0	0	149	149	3342	
☒ Beam	3	107	Steel Open Girder/Beam	38	0	38	0	0	38	3314	☐ Requested
Protective System		515	Steel Protective Coating	298	149	0	0	149	149	3342	
☒ Beam	4	107	Steel Open Girder/Beam	38	0	38	0	0	38	3314	☐ Requested
Protective System		515	Steel Protective Coating	298	149	0	0	149	149	3342	
☒ Bearing Device	1	313	Fixed Bearing	1	0	1	0	0	1	3334	☐ Requested
Protective System		515	Steel Protective Coating	2	1	0	0	1	1	3342	
☒ Bearing Device	1	311	Movable Bearing	1	1	0	0	0	0	3334	☐ Requested
Protective System		515	Steel Protective Coating	2	2	0	0	0	0	3342	
☒ Bearing Device	2	313	Fixed Bearing	1	0	1	0	0	1	3334	☐ Requested
Protective System		515	Steel Protective Coating	2	1	0	0	1	1	3342	
☒ Bearing Device	2	311	Movable Bearing	1	1	0	0	0	0	3334	☐ Requested
Protective System		515	Steel Protective Coating	2	2	0	0	0	0	3342	
☒ Bearing Device	3	313	Fixed Bearing	1	0	1	0	0	1	3334	☐ Requested
Protective System		515	Steel Protective Coating	2	1	0	0	1	1	3342	
☒ Bearing Device	3	311	Movable Bearing	1	1	0	0	0	0	3334	☐ Requested
Protective System		515	Steel Protective Coating	2	2	0	0	0	0	3342	
☒ Bearing Device	4	313	Fixed Bearing	1	0	1	0	0	1	3334	☐ Requested
Protective System		515	Steel Protective Coating	2	1	0	0	1	1	3342	
☒ Bearing Device	4	311	Movable Bearing	1	1	0	0	0	0	3334	☐ Requested
Protective System		515	Steel Protective Coating	2	2	0	0	0	0	3342	

Structure Number: 790063

Inspection Date: 07/16/2015

Span Number 2

Element Location	Location Number	Element Number	Element Name	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity	Maint. Quantity	Maint. Code	Priority Maintenance
☒ Deck	1	12	Reinforced Concrete Deck	1349	1349	0	0	0	0	3326	☐ Requested
☒ Bridge Rail	1	331	Reinforced Concrete Bridge Railing	41	29	12	0	0	12	3318	☐ Requested
☒ Bridge Rail	2	331	Reinforced Concrete Bridge Railing	41	32	9	0	0	9	3318	☐ Requested
☒ Wearing Surfaces		510	Wearing Surface	1127	805	0	322	0	322	2816	☐ Requested
☒ Beam	1	107	Steel Open Girder/Beam	40	2	38	0	0	38	3314	☐ Requested
Protective System		515	Steel Protective Coating	309	154	0	0	155	155	3342	
☒ Beam	2	107	Steel Open Girder/Beam	40	2	38	0	0	38	3314	☐ Requested
Protective System		515	Steel Protective Coating	309	154	0	0	155	155	3342	
☒ Beam	3	107	Steel Open Girder/Beam	40	2	38	0	0	38	3314	☐ Requested
Protective System		515	Steel Protective Coating	309	154	0	0	155	155	3342	
☒ Beam	4	107	Steel Open Girder/Beam	40	2	38	0	0	38	3314	☐ Requested
Protective System		515	Steel Protective Coating	309	154	0	0	155	155	3342	
☒ Bearing Device	1	313	Fixed Bearing	1	1	0	0	0	0	3334	☐ Requested
Protective System		515	Steel Protective Coating	2	2	0	0	0	0	3342	
☒ Bearing Device	1	311	Movable Bearing	1	1	0	0	0	0	3334	☐ Requested
Protective System		515	Steel Protective Coating	2	2	0	0	0	0	3342	
☒ Bearing Device	2	313	Fixed Bearing	1	1	0	0	0	0	3334	☐ Requested
Protective System		515	Steel Protective Coating	2	2	0	0	0	0	3342	
☒ Bearing Device	2	311	Movable Bearing	1	1	0	0	0	0	3334	☐ Requested
Protective System		515	Steel Protective Coating	2	2	0	0	0	0	3342	
☒ Bearing Device	3	313	Fixed Bearing	1	1	0	0	0	0	3334	☐ Requested
Protective System		515	Steel Protective Coating	2	2	0	0	0	0	3342	
☒ Bearing Device	3	311	Movable Bearing	1	1	0	0	0	0	3334	☐ Requested
Protective System		515	Steel Protective Coating	2	2	0	0	0	0	3342	
☒ Bearing Device	4	313	Fixed Bearing	1	1	0	0	0	0	3334	☐ Requested
Protective System		515	Steel Protective Coating	2	2	0	0	0	0	3342	
☒ Bearing Device	4	311	Movable Bearing	1	1	0	0	0	0	3334	☐ Requested
Protective System		515	Steel Protective Coating	2	2	0	0	0	0	3342	
☒ Expansion Joints	1	301	Pourable Joint Seal	48	48	0	0	0	0	3310	☐ Requested

Structure Number: 790063

Inspection Date: 07/16/2015

Span Number 3

Element Location	Location Number	Element Number	Element Name	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity	Maint. Quantity	Maint. Code	Priority Maintenance
☒ Deck	1	12	Reinforced Concrete Deck	1374	1326	0	48	0	48	3326	☐ Requested
☒ Bridge Rail	1	331	Reinforced Concrete Bridge Railing	41	30	11	0	0	11	3318	☐ Requested
☒ Bridge Rail	2	331	Reinforced Concrete Bridge Railing	41	32	9	0	0	9	3318	☐ Requested
☒ Wearing Surfaces		510	Wearing Surface	1148	785	6	357	0	363	2816	☐ Requested
☒ Beam	1	107	Steel Open Girder/Beam	38	0	36	2	0	38	3314	☐ Requested
Protective System		515	Steel Protective Coating	298	149	0	0	149	149	3342	
☒ Beam	2	107	Steel Open Girder/Beam	38	0	38	0	0	38	3314	☐ Requested
Protective System		515	Steel Protective Coating	298	149	0	0	149	149	3342	
☒ Beam	3	107	Steel Open Girder/Beam	38	0	38	0	0	38	3314	☐ Requested
Protective System		515	Steel Protective Coating	298	149	0	0	149	149	3342	
☒ Beam	4	107	Steel Open Girder/Beam	38	0	38	0	0	38	3314	☐ Requested
Protective System		515	Steel Protective Coating	298	149	0	0	149	149	3342	
☒ Bearing Device	1	313	Fixed Bearing	1	0	1	0	0	1	3334	☐ Requested
Protective System		515	Steel Protective Coating	2	0	0	0	2	2	3342	
☒ Bearing Device	1	311	Movable Bearing	1	0	0	1	0	1	3334	☐ Requested
Protective System		515	Steel Protective Coating	2	0	0	0	2	2	3342	
☒ Bearing Device	2	311	Movable Bearing	1	1	0	0	0	0	3334	☐ Requested
Protective System		515	Steel Protective Coating	2	2	0	0	0	0	3342	
☒ Bearing Device	2	313	Fixed Bearing	1	1	0	0	0	0	3334	☐ Requested
Protective System		515	Steel Protective Coating	2	2	0	0	0	0	3342	
☒ Bearing Device	3	313	Fixed Bearing	1	1	0	0	0	0	3334	☐ Requested
Protective System		515	Steel Protective Coating	2	2	0	0	0	0	3342	
☒ Bearing Device	3	311	Movable Bearing	1	1	0	0	0	0	3334	☐ Requested
Protective System		515	Steel Protective Coating	2	2	0	0	0	0	3342	
☒ Bearing Device	4	313	Fixed Bearing	1	0	1	0	0	1	3334	☐ Requested
Protective System		515	Steel Protective Coating	2	1	0	0	1	1	3342	
☒ Bearing Device	4	311	Movable Bearing	1	1	0	0	0	0	3334	☐ Requested
Protective System		515	Steel Protective Coating	2	2	0	0	0	0	3342	
☒ Expansion Joints	1	301	Pourable Joint Seal	48	48	0	0	0	0	3310	☐ Requested

Superstructure Element Defect Descriptions

Structure Number: 790063

Inspection Date: 07/16/2015

Span Number 1

Span 1	Bridge Rail	1	Component Name:		Concrete Railing							
Element: 331	Name	Reinforced Concrete Bridge Ra	Qty:	41	Lvl 2:	7	Lvl 3	0	Lvl 4	0	Maint. Qty	7
Defect Description:												

RAIL IS WEATHERED WITH EXPOSED AGGREGATE.

(7) 2" DIAMETER X 1/2" POP OUTS WITH EXPOSED REINFORCING, INSIDE FACE OF RAIL AT RANDOM.

Span	1	Bridge Rail	2	Component Name:					Concrete Railing				
Element:	331	Name	Reinforced Concrete Bridge Ra	Qty:	41	Lvl 2:	7	Lvl 3	0	Lvl 4	0	Maint. Qty	7
Defect Description:													

RAIL IS WEATHERED WITH EXPOSED AGGREGATE.

(7) 2" DIAMETER X 1/2" POP OUTS WITH EXPOSED REINFORCING, INSIDE FACE OF RAIL AT RANDOM.

Span 1	Wearing Surfaces			Component Name:		Asphalt Wearing Surface						
Element: 510	Name	Wearing Surface	Qty:	1148	Lvl 2:	0	Lvl 3	357	Lvl 4	0	Maint. Qty	357
Defect Description:												

30' TRANSVERSE CRACK UP TO 1/8" IN ASPHALT WEARING SURFACE, OVER END BENT 1.

40' LONGITUDINAL CRACK UP TO 1/8" AT CENTERLINE.

UP TO 25% OF AREA HAS HAIRLINE MAP CRACKING UP TO 1/16" AT 5' SPACING, WEST BOUND LANE.

Span 1	Beam 1	Component Name: Plate Girder									
Element: 107	Name Steel Open Girder/Beam	Qty: 38	Lvl 2: 38	Lvl 3: 0	Lvl 4: 0	Maint. Qty: 38					
Defect Description:											

CORROSION ON UP TO 50% OF BEAM SURFACE AT RANDOM THROUGHOUT, EXCEPT PAINTED ENDS.

Span 1	Beam 2	Component Name:	Plate Girder						
Element: 107	Name Steel Open Girder/Beam	Qty: 38	Lvl 2: 38	Lvl 3: 0	Lvl 4: 0	Maint. Qty: 38			
Defect Description:									

CORROSION ON UP TO 50% OF BEAM SURFACE AT RANDOM THROUGHOUT, EXCEPT PAINTED ENDS.

Span 1	Beam 3	Component Name:		Plate Girder							
Element: 107	Name Steel Open Girder/Beam	Qty:	38	Lvl 2:	38	Lvl 3	0	Lvl 4	0	Maint. Qty	38
Defect Description:											

CORROSION ON UP TO 50% OF BEAM SURFACE AT RANDOM THROUGHOUT, EXCEPT PAINTED ENDS.

Span 1	Beam 4	Component Name: Plate Girder									
Element: 107	Name Steel Open Girder/Beam	Qty: 38	Lvl 2: 38	Lvl 3: 0	Lvl 4: 0	Maint. Qty: 38					
Defect Description:											

CORROSION ON UP TO 50% OF BEAM SURFACE AT RANDOM THROUGHOUT, EXCEPT PAINTED ENDS.

Span 1	Bearing Device	1	Component Name: Fixed Bearing									
Element: 313	Name	Fixed Bearing	Qty:	1	Lvl 2:	1	Lvl 3	0	Lvl 4	0	Maint. Qty	1
Defect Description:												

CORROSION ON NEAR BEARING ASSEMBLY UP TO 50%.

Span 1		Bearing Device		2		Component Name:		Fixed Bearing																	
Element: 313		Name		Fixed Bearing		Qty:		1		Lvl 2:		1		Lvl 3		0		Lvl 4		0		Maint. Qty		1	
Defect Description:																									

CORROSION ON NEAR BEARING ASSEMBLY UP TO 50%.

Span	1	Bearing Device	3	Component Name:		Fixed Bearing							
Element:	313	Name	Fixed Bearing	Qty:	1	Lvl 2:	1	Lvl 3	0	Lvl 4	0	Maint. Qty	1
Defect Description:													

CORROSION ON NEAR BEARING ASSEMBLY UP TO 50%.

Span	1	Bearing Device	4	Component Name:		Fixed Bearing							
Element:	313	Name	Fixed Bearing	Qty:	1	Lvl 2:	1	Lvl 3	0	Lvl 4	0	Maint. Qty	1
Defect Description:													

CORROSION ON NEAR BEARING ASSEMBLY UP TO 50%.

Span Number 2

Span	2	Bridge Rail	1	Component Name:		Concrete Railing							
Element:	331	Name	Reinforced Concrete Bridge Ra	Qty:	41	Lvl 2:	12	Lvl 3	0	Lvl 4	0	Maint. Qty	12
Defect Description:													

RAIL IS WEATHERED WITH EXPOSED AGGREGATE.

(12) 2" DIAMETER X 1/2" POP OUTS WITH EXPOSED REINFORCING, INSIDE FACE OF RAIL AT RANDOM.

Span	2	Bridge Rail	2	Component Name:		Concrete Railing							
Element:	331	Name	Reinforced Concrete Bridge Ra	Qty:	41	Lvl 2:	9	Lvl 3	0	Lvl 4	0	Maint. Qty	9
Defect Description:													

RAIL IS WEATHERED WITH EXPOSED AGGREGATE.

(9) 2" DIAMETER X 1/2" POP OUTS WITH EXPOSED REINFORCING, INSIDE FACE OF RAIL AT RANDOM.

Span	2	Wearing Surfaces		Component Name:		Asphalt Wearing Surface							
Element:	510	Name	Wearing Surface	Qty:	1127	Lvl 2:	0	Lvl 3	322	Lvl 4	0	Maint. Qty	322
Defect Description:													

40' LONGITUDINAL CRACK UP TO 1/8" AT CENTERLINE.

UP TO 25% OF AREA HAS HAIRLINE MAP CRACKING UP TO 1/16" AT 5' SPACING, WEST BOUND LANE.

Span	2	Beam	1	Component Name:		Plate Girder							
Element:	107	Name	Steel Open Girder/Beam	Qty:	40	Lvl 2:	38	Lvl 3	0	Lvl 4	0	Maint. Qty	38
Defect Description:													

CORROSION ON UP TO 50% OF BEAM SURFACE AT RANDOM THROUGHOUT, EXCEPT PAINTED ENDS.

Span	2	Beam	2	Component Name:		Plate Girder							
Element:	107	Name	Steel Open Girder/Beam	Qty:	40	Lvl 2:	38	Lvl 3	0	Lvl 4	0	Maint. Qty	38
Defect Description:													

CORROSION ON UP TO 50% OF BEAM SURFACE AT RANDOM THROUGHOUT, EXCEPT PAINTED ENDS.

Span	2	Beam	3	Component Name:		Plate Girder							
Element:	107	Name	Steel Open Girder/Beam	Qty:	40	Lvl 2:	38	Lvl 3	0	Lvl 4	0	Maint. Qty	38
Defect Description:													

CORROSION ON UP TO 50% OF BEAM SURFACE AT RANDOM THROUGHOUT, EXCEPT PAINTED ENDS.

Span	2	Beam	4	Component Name:		Plate Girder							
Element:	107	Name	Steel Open Girder/Beam	Qty:	40	Lvl 2:	38	Lvl 3	0	Lvl 4	0	Maint. Qty	38
Defect Description:													

CORROSION ON UP TO 50% OF BEAM SURFACE AT RANDOM THROUGHOUT, EXCEPT PAINTED ENDS.

CORROSION ON UP TO 50% OF BEAM SURFACE AT RANDOM THROUGHOUT, EXCEPT PAINTED ENDS.

Span	3	Beam	4	Component Name:		Plate Girder							
Element:	107	Name	Steel Open Girder/Beam	Qty:	38	Lvl 2:	38	Lvl 3	0	Lvl 4	0	Maint. Qty	38
Defect Description:													

CORROSION ON UP TO 50% OF BEAM SURFACE AT RANDOM THROUGHOUT, EXCEPT PAINTED ENDS.

Span	3	Bearing Device	1	Component Name: Fixed Bearing									
Element:	313	Name	Fixed Bearing	Qty:	1	Lvl 2:	1	Lvl 3	0	Lvl 4	0	Maint. Qty	1
Defect Description:													

CORROSION ON FAR BEARING ASSEMBLY UP TO 50%, WITH RUST STAINING AND EFFLORESCENCE ON CAP BELOW.

Span	3	Bearing Device	1	Component Name:		Movable Bearing							
Element:	311	Name	Movable Bearing	Qty:	1	Lvl 2:	0	Lvl 3	1	Lvl 4	0	Maint. Qty	1
Defect Description:													

CORROSION ON NEAR BEARING ASSEMBLY WITH RUST BLOOM.

Span	3	Bearing Device	4	Component Name:		Fixed Bearing							
Element:	313	Name	Fixed Bearing	Qty:	1	Lvl 2:	1	Lvl 3	0	Lvl 4	0	Maint. Qty	1
Defect Description:													

CORROSION ON FAR BEARING ASSEMBLY UP TO 50%.

Span	3	Expansion Joints	1	Component Name:		Standard Joint							
Element:	301	Name	Pourable Joint Seal	Qty:	48	Lvl 2:	0	Lvl 3	0	Lvl 4	0	Maint. Qty	0
Defect Description:													

ASPHALTIC EXPANSION JOINT.

Substructure Detailed Element Quantities

Structure Number: 790063

Inspection Date: 07/16/2015

End Bent 1

Element Location	Location Number	Element Number	Element Name	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity	Maint. Quantity	Maint. Code	Priority Maintenance
☒ Abutments	1	215	Reinforced Concrete Abutment	48	48	0	0	0	0	3350	☐ Requested
☒ Caps	1	234	Reinforced Concrete Pier Cap	51	31	0	20	0	20	3348	☐ Requested

Bent 1

Element Location	Location Number	Element Number	Element Name	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity	Maint. Quantity	Maint. Code	Priority Maintenance
☒ Caps	1	234	Reinforced Concrete Pier Cap	38	22	0	8	8	16	3348	☒ Requested
☒ Piles and Columns	1	205	Reinforced Concrete Column	1	0	0	1	0	8	3348	☐ Requested
☒ Piles and Columns	2	210	Reinforced Concrete Pier Wall	28	27	1	0	0	3	3348	☐ Requested
☒ Piles and Columns	3	205	Reinforced Concrete Column	1	1	0	0	0	0	3348	☐ Requested

Bent 2

Element Location	Location Number	Element Number	Element Name	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity	Maint. Quantity	Maint. Code	Priority Maintenance
☒ Caps	1	234	Reinforced Concrete Pier Cap	38	0	22	16	0	39	3348	☐ Requested
☒ Piles and Columns	1	205	Reinforced Concrete Column	1	0	1	0	0	2	3348	☐ Requested
☒ Piles and Columns	2	210	Reinforced Concrete Pier Wall	28	27	1	0	0	5	3348	☐ Requested
☒ Piles and Columns	3	205	Reinforced Concrete Column	1	0	0	1	0	8	3348	☐ Requested

End Bent 2

Element Location	Location Number	Element Number	Element Name	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity	Maint. Quantity	Maint. Code	Priority Maintenance
☒ Abutments	1	215	Reinforced Concrete Abutment	48	45	2	1	0	3	3350	☐ Requested
☒ Caps	1	234	Reinforced Concrete Pier Cap	51	32	6	13	0	19	3348	☐ Requested

Substructure Element Defect Descriptions

Structure Number: 790063

Inspection Date: 07/16/2015

End Bent 1

End Bent 1	Row 1	Caps	1
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Element: 234 **Name** Reinforced Concrete Pier Cap **Qty:** 51 **Lvl 2:** 0 **Lvl 3** 20 **Lvl 4** 0 **Maint. Qty** 20

Defect Description:

20' HORIZONTAL CRACK UP TO 0.06", FACE OF CAP, BEGINNING UNDER BEAM 2, EXTENDING INTO BAY 2, NEXT TO BEAM 3.

Bent 1	Row 1	Caps	1
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Element: 234 **Name** Reinforced Concrete Pier Cap **Qty:** 38 **Lvl 2:** 0 **Lvl 3** 8 **Lvl 4** 8 **Maint. Qty** 16

Defect Description:

8' HORIZONTAL CRACK UP TO 0.06", EAST FACE, BEGINNING AT NORTH END OF CAP.

8' X 8" X 9" DELAMINATION/SPALL WITH EXPOSED REINFORCING, WEST FACE, BEGINNING UNDER BEAM 1 BEARING ASSEMBLY. (PM)

Bent 1	Row 1	Piles and Columns	1
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Element: 205 **Name** Reinforced Concrete Column **Qty:** 1 **Lvl 2:** 0 **Lvl 3** 1 **Lvl 4** 0 **Maint. Qty** 8

Defect Description:

8' VERTICAL CRACK UP TO 1/8", EAST FACE OF SOUTH COLUMN, AT SOUTHEAST CORNER.

Bent 1	Row 1	Piles and Columns	2
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Element: 210 **Name** Reinforced Concrete Pier Wall **Qty:** 28 **Lvl 2:** 1 **Lvl 3** 0 **Lvl 4** 0 **Maint. Qty** 3

Defect Description:

3' VERTICAL CRACK UP TO 0.04", WEST FACE OF PIER WALL, BELOW BEAM 2.

Bent 2	Row 1	Caps	1
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Element: 234 **Name** Reinforced Concrete Pier Cap **Qty:** 38 **Lvl 2:** 22 **Lvl 3** 16 **Lvl 4** 0 **Maint. Qty** 39

Defect Description:

5' X 1' DELAMINATION, EAST FACE, BEGINNING UNDER BEAM 1 BEARING ASSEMBLY.

7'-6" X 9" DELAMINATION OF TEMPORARY REPAIR, EAST FACE OF CAP, BELOW BAY 2.

6' X 9" DELAMINATION, WITH RUST STAINING AND EFFLORESCENCE LEAKAGE, EAST FACE OF CAP, BELOW BAY 3, BEGINNING UNDER BEAM 4 BEARING ASSEMBLY.

6' HORIZONTAL CRACK UP TO 0.06", WEST FACE, BEGINNING AT NORTH END OF CAP.

6' X 9" DELAMINATION, WEST FACE OF CAP, BELOW BEAM 2.

8' HORIZONTAL CRACK UP TO 0.06" WITH RUST STAINING AND EFFLORESCENCE, WEST FACE, BEGINNING AT SOUTH END OF CAP.

Bent 2	Row 1	Piles and Columns	1
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Element: 205 **Name** Reinforced Concrete Column **Qty:** 1 **Lvl 2:** 1 **Lvl 3** 0 **Lvl 4** 0 **Maint. Qty** 2

Defect Description:

20" X 18" X 3" CORNER DELAMINATION, NORTH FACE OF COLUMN ADD ON, 1' BELOW BOTTOM OF CAP.

Bent 2	Row 1	Piles and Columns	2
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Element: 210 **Name** Reinforced Concrete Pier Wall **Qty:** 28 **Lvl 2:** 1 **Lvl 3** 0 **Lvl 4** 0 **Maint. Qty** 5

Defect Description:

5' VERTICAL CRACK UP TO 0.03", EAST FACE OF PIER WALL, CENTERED BELOW BAY 2.

Bent 2	Row 1	Piles and	3
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Columns

Element: 205 **Name** Reinforced Concrete Column **Qty:** 1 **Lvl 2:** 0 **Lvl 3:** 1 **Lvl 4:** 0 **Maint. Qty:** 8
Defect Description:

8' VERTICAL CRACK UP TO 1/8", EAST FACE OF SOUTH COLUMN, AT SOUTHEAST CORNER.

End Bent 2 **Row** 1 **Abutments** 1

Element: 215 **Name** Reinforced Concrete Abutment **Qty:** 48 **Lvl 2:** 2 **Lvl 3:** 1 **Lvl 4:** 0 **Maint. Qty:** 3
Defect Description:

(2) 9" X 6" DELAMINATIONS, FACE OF CURTAIN WALL, SOUTH SIDE OF BEAMS 2 AND 3.

12" X 3" X 3" SPALL, FACE OF CURTAIN WALL, SOUTH SIDE OF BEAM 1.

End Bent 2 **Row** 1 **Caps** 1

Element: 234 **Name** Reinforced Concrete Pier Cap **Qty:** 51 **Lvl 2:** 6 **Lvl 3:** 13 **Lvl 4:** 0 **Maint. Qty:** 19
Defect Description:

13' HORIZONTAL CRACK UP TO 0.06", FACE OF CAP, BEGINNING UNDER MIDDLE OF BAY 1, EXTENDING INTO BAY 2.

5'-6" X 10" X 6" DELAMINATION, TOP CORNER, BELOW BAY 1, 1' FROM BEAM 1.

National Bridge and NC Inspection Items

Structure Number: 790063

Inspection Date: 07/16/2015

National Bridge Inventory Items

Item	Grade Scale	Grade
Item 58: Deck	0 - 9 , N	5
Item 59: Superstructure	0 - 9 , N	5
Item 60: Substructure	0 - 9 , N	5
Item 61: Channel and Channel Protection	0 - 9 , N	5
Item 62: Culvert	0 - 9 , N	
Item 71: Waterway Adequacy	0 - 9 , N	7
Item 72: Approach Roadway Alignment	0 - 9 , N	8

Note: If NBI Inspection Item is not present, code NBI item with "N"

NC SMU Inspection Items

Item	Grade Scale	Grade	Maint. Qty.	Maint. Code
Deck Debris	G, F, P, or C	F	245	3376
Drainage System	G, F, P, or C	P	36	3332
Utilities	G, F, P, or C			
Slope Protection	G, F, P, or C	G	0	3352
Wingwall	G, F, P, or C	F	3	3350
Scour	G, F, P, or C	F		
Field Scour Evaluation		Z		
Drift	G, F, P, or C	G	0	3366
Fender System	G, F, P, or C		0	3364
Response to Live Load	G, F, P, or C	G		
Estimated Remaining Life	0 - 100 Years	8		

Note: If NC SMU Inspection Item is not present, leave NC SMU item blank

Inspection Information

Item	Grade Scale	Grade
Regulatory Sign Noticed Issued	YES/NO	N
Priority Maintenance Request Submitted	YES/NO	Y
Inspection Time	Hours	9
Traffic Control Time	Hours	0
Snooper Time	Hours	0
Ladder Used	YES/NO	N
Bucket Truck Used	YES/NO	N
Boat Used	YES/NO	N
Other Equipment Used	YES/NO	N

National Bridge and NC SMU Inspection Item Details

Structure Number: 790063

Inspection Date: 07/16/2015

Item	Channel and Channel Protection - Item 61	Grade	5	Maint Code		Qty.	0
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Details

SOFT MUD AROUND BASE OF INTERIOR BENTS, WATER BEGINNING TO FLOW BEHIND BENT 2.

Item	Deck Debris	Grade	F	Maint Code	3376	Qty.	245
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Details

VEGETATION GROWTH ALONG BOTH CURBS.

Item	Drainage System	Grade	P	Maint Code	3332	Qty.	36
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Details

100% OF DRAINS ARE CLOGGED BY VEGETATION GROWTH.

Item	Scour	Grade	F	Maint Code		Qty.	0
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Details

2' X 3'-4" AREA BELOW SOUTH END OF BENT 2 PIER ADDITION IS COMPLETELY UNDERMINED.

Item	Wingwalls	Grade	F	Maint Code	3350	Qty.	3
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Details

32" X 6" X 4" SPALL, TOP CORNER OF NORTHWEST WINGWALL.

SOUTHWEST WINGWALL IS COVERED IN VEGETATION.



Span 1 Wearing Surface: 30' TRANSVERSE CRACK UP TO 1/8", OVER END BENT 1.



Deck Debris: VEGETATION GROWTH ALONG BOTH CURBS.



Span 1 Wearing Surface: 40' LONGITUDINAL CRACK UP TO 1/8" AT CENTERLINE.



Span 1 Left Bridge Rail: (7) 2" DIAMETER X 1/2" POP OUTS WITH EXPOSED REINFORCING, INSIDE FACE OF RAIL AT RANDOM.



Span 3 Wearing Surface: 2' X 3' ASPHALT PATCH, 2' FROM LEFT FOG LINE, 18' FROM BENT 2.



Span 3 Left Bridge Rail: 21" X 10" X 8" TEMPORARY REPAIR TO EAST END OF BRIDGE RAIL, AT END BENT 2.



Span 3 Deck: 8 SQ FT OF HAIRLINE MAP CRACKING WITH EFFLORESCENCE, UNDERSIDE OF DECK, BAY 1, 10' FROM BENT 2.



Span 3 Beam 2: CORROSION ON UP TO 50% OF BEAM SURFACE AT RANDOM THROUGHOUT, EXCEPT PAINTED ENDS.



Span 3 Deck: 40 SQ FT OF HAIRLINE MAP CRACKING WITH EFFLORESCENCE STALACTITES, UNDERSIDE OF DECK, BAY 3, 10' FROM BENT 2.



Span 3 Beam 1 Near Bearing : CORROSION ON NEAR BEARING ASSEMBLY WITH RUST BLOOM.



Span 3 Beam 1: 16" OF CORROSION ON WEB AND BEARING STIFFENER, EFFLORESCENCE ACCUMULATION FROM DECK ABOVE, AT NEAR BEARING.



End Bent 2 Cap : 13' CRACK UP TO 0.06", FACE OF CAP, BEGINNING UNDER MIDDLE OF BAY 1, EXTENDING INTO BAY 2.



End Bent 2 Cap : 5'-6" X 10" X 6" DELAMINATION, TOP CORNER, BELOW BAY 1, 1' FROM BEAM 1.



Bent 2 Pile 1: 20" X 18" X 3" CORNER DELAMINATION, NORTH FACE OF COLUMN ADD ON, 1' BELOW BOTTOM OF CAP.



Span 3 Beam 1 Far Bearing : CORROSION ON FAR BEARING ASSEMBLY UP TO 50%, WITH RUST STAINING AND EFFLORESCENCE ON CAP BELOW.



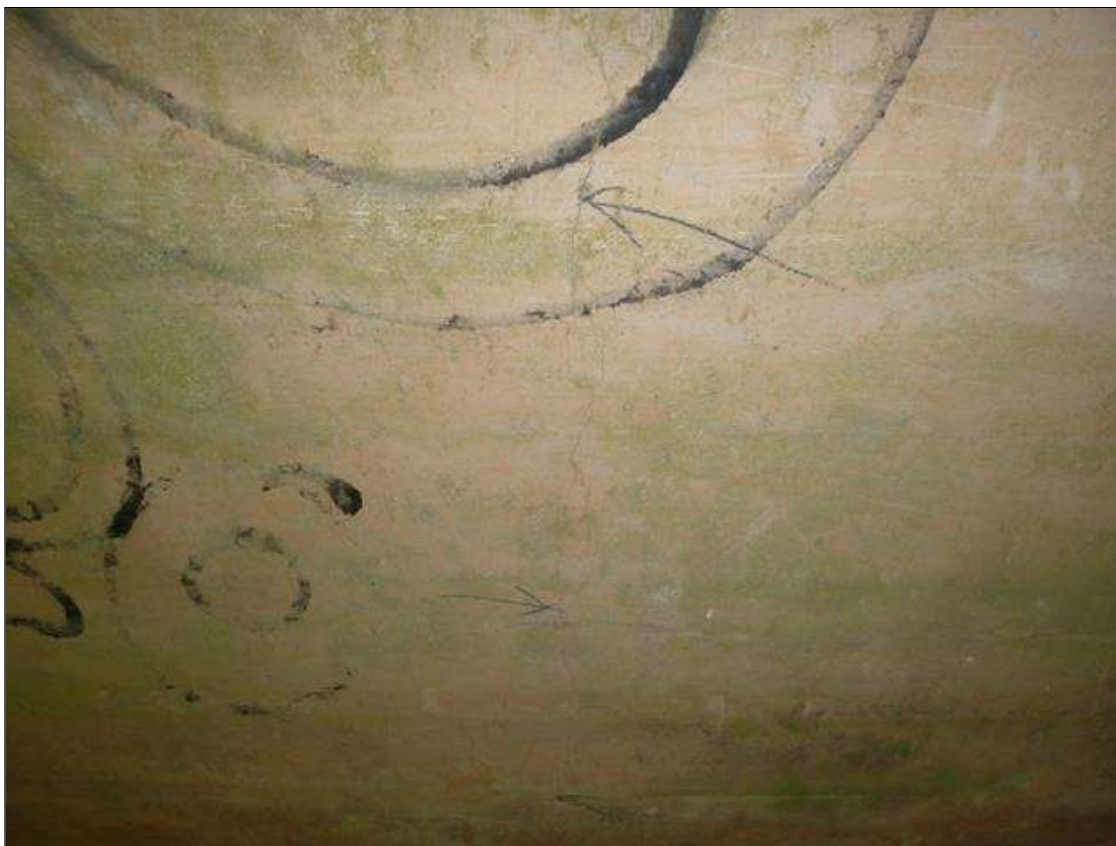
Bent 2 Cap : 5' X 1' DELAMINATION, EAST FACE, BEGINNING UNDER BEAM 1 BEARING ASSEMBLY.



Bent 2 Cap : 7'-6" X 9" DELAMINATION OF TEMPORARY REPAIR, EAST FACE OF CAP, BELOW BAY 2.



Bent 2 Cap : 6' X 9" DELAMINATION WITH RUST STAINING AND EFFLORESCENCE LEAKAGE, EAST FACE OF CAP, BELOW BAY 3, BEGINNING UNDER BEAM 4 BEARING ASSEMBLY.



Bent 2 Pile 2: 5' VERTICAL CRACK UP TO 0.03", EAST FACE OF PIER WALL, CENTERED BELOW BAY 2.



Scour: 2' X 3'-4" AREA BELOW SOUTH END OF BENT 2 PIER ADDITION IS COMPLETELY UNDERMINED.



Bent 2 Cap : 6' X 9" DELAMINATION, WEST FACE OF CAP, BELOW BEAM 2.



Bent 1 Cap : 8' HORIZONTAL CRACK UP TO 0.06", EAST FACE, BEGINNING AT NORTH END OF CAP.



Bent 1 Pile 2: 3' VERTICAL CRACK UP TO 0.04", WEST FACE, BELOW BEAM 2.



Bent 1 Cap : 8' X 8" X 9" DELAMINATION/SPALL WITH EXPOSED REINFORCING, WEST FACE, BEGINNING UNDER BEAM 1 BEARING ASSEMBLY. (PM)



End Bent 2 Abutment/Backwall : 12" X 3" X 3" SPALL, FACE OF CURTAIN WALL, SOUTH SIDE OF BEAM 1.



Wingwalls: 32" X 6" X 4" SPALL, TOP CORNER OF NORTHWEST WINGWALL.



Drainage System: 100% OF DRAINS ARE CLOGGED BY VEGETATION GROWTH.



LOOKING EAST



WEST APPROACH, LOOKING EAST



NORTH BRIDGE RAIL



SOUTH BRIDGE RAIL



ASPHALT WEARING SURFACE, SPAN 1, LOOKING SOUTH



CRACK IN ASPHALT WEARING SURFACE OVER END BENT 1, LOOKING SOUTH



JOINT OVER BENT 1, LOOKING SOUTH



DOWNSTREAM VIEW FROM BRIDGE DECK, LOOKING NORTH



JOINT OVER BENT 2, LOOKING SOUTH



UPSTREAM VIEW FROM BRIDGE DECK, LOOKING SOUTH



CRACK IN ASPHALT WEARING SURFACE OVER END BENT 2, LOOKING SOUTH



EAST APPROACH, LOOKING WEST



NORTHEAST WINGWALL



SOUTHEAST WINGWALL



SOUTHWEST WINGWALL



NORTHWEST WINGWALL



END BENT 2 ELEVATION, LOOKING EAST



END BENT 2 SLOPE PROTECTION, LOOKING EAST



INTERMEDIATE DIAPHRAGM, SPAN 3, BETWEEN BEAMS 2 AND 3, LOOKING WEST



BEARING ASSEMBLY, END BENT 2, BEAM 3, LOOKING EAST



END DIAPHRAGM, BENT 2, BETWEEN BEAMS 1 AND 2, LOOKING EAST



SUPERSTRUCTURE UNDERSIDE, SPAN 2, LOOKING WEST



BENT 1 ELEVATION, LOOKING WEST



DOWNSTREAM PROFILE, LOOKING SOUTH



BENT 2 ELEVATION, LOOKING EAST



BEARING ASSEMBLY OVER BENT 1, BEAM 4, LOOKING NORTH



UPSTREAM PROFILE, LOOKING NORTH



BEARING ASSEMBLY, BEAM 4, BENT 1, LOOKING EAST



END BENT 1 SLOPE PROTECTION, LOOKING WEST



END BENT 1 ELEVATION, LOOKING WEST