



NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 STRUCTURE MANAGEMENT UNIT

ATTENTION: **PAR SUBMITTED, CHANGE IN STRUCTURE DATA,
 CHANGE IN UNDERCLEARANCE.**

Structure Safety Report

Routine Element Inspection - Contract

INSPECTION DATE: 07/15/2021

DIVISION: 5 COUNTY: WAKE STRUCTURE NUMBER: 911021 FREQUENCY: 24 MONTHS

FACILITY CARRIED: US401N MILE POST: _____

LOCATION: 0.2 MI. S. SR2224

FEATURE INTERSECTED: NEUSE RIVER

LATITUDE: 35° 53' 2.81" LONGITUDE: 78° 31' 40.54"

SUPERSTRUCTURE: _____

SUBSTRUCTURE: _____

SPANS: 4 SPANS. SEE SPAN PROFILE SHEET FOR SPAN DETAILS

FRACTURE CRITICAL TEMPORARY SHORING SCOUR CRITICAL SCOUR PLAN OF ACTION

GRADES: (Inspector/NBI Coding) DECK 7/7 SUPERSTRUCTURE 8/8 SUBSTRUCTURE 8/8 CULVERT N/N

POSTED SV: Not Posted POSTED TTST: Not Posted

OTHER SIGNS PRESENT: NONE



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

DIRECTION OF INSPECTION S-N

DIRECTION MATCHES PLANS _____

LOOKING NORTH

INSPECTED BY ZAKARIA KADI	SIGNATURE 	ASSISTED BY KEITH G WAEGERLE
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NATIONAL BRIDGE INVENTORY ----- STRUCTURE INVENTORY AND APPRAISAL

09/20/2021

IDENTIFICATION

(1) STATE NAME NORTH CAROLINA BRIDGE 911021
 (8) STRUCTURE NUMBER (FEDERAL) 1831021
 (5) INVENTORY ROUTE (ON/UNDER) ON 121004010
 (2) STATE HIGHWAY DEPARTMENT DISTRICT 5
 (3) COUNTY CODE (FEDERAL) 183 (4) PLACE CODE 55000
 (6) FEATURE INTERSECTED NEUSE RIVER
 (7) FACILITY CARRIED US401N
 (9) LOCATION 0.2 MI. S. SR2224
 (11) MILEPOINT 0.0
 (12) BASE HIGHWAY NETWORK 1
 (13) LRS INVENTORY ROUTE & SUBROUTE 20401
 (16) LATITUDE 35° 53' 2.81" (17) LONGITUDE 78° 31' 40.54"
 (98) BORDER BRIDGE STATE CODE PERCENT SHARED
 (99) BORDER BRIDGE STRUCTURE NUMBER

SUFFICIENCY RATING 76.34
 STATUS = Functionally Obsolete

CLASSIFICATION **CODE**

(112) NBIS BRIDGE SYSTEM YES
 (104) HIGHWAY SYSTEM Inventory Route is on NHS 1
 (26) FUNCTIONAL CLASS Urban Other Principal Arterial 14
 (100) STRAHNET HIGHWAY Non-Interstate STRAHNET Route 2
 (101) PARALLEL STRUCTURE No parallel structure exists N
 (102) DIRECTION OF TRAFFIC 2-way traffic 2
 (103) TEMPORARY STRUCTURE
 (110) DESIGNATED NATIONAL NETWORK - on national network for trucks 0
 (20) TOLL On Free Road 3
 (21) MAINT - 01
 (22) OWNER - 01
 (37) HISTORICAL SIGNIFICANCE - 5

STRUCTURE TYPE AND MATERIAL

(43) STRUCTURE TYPE MAIN Prestressed Concrete continuous
 TYPE Stringer/Multi-beam or girder CODE 602
 (44) STRUCTURE TYPE APPROACH
 TYPE CODE
 (45) NUMBER OF SPANS IN MAIN UNIT 4
 (46) NUMBER OF SPANS IN APPROACH 0
 (107) DECK STRUCTURE TYPE CODE 1
 (108) WEARING SURFACE/PROTECTIVE SYSTEM
 (A) TYPE OF WEARING SURFACE CODE 1
 (B) TYPE OF MEMBRANE CODE 0
 (C) TYPE OF DECK PROTECTION CODE 0

CONDITION **CODE**

(58) DECK 7
 (59) SUPERSTRUCTURE 8
 (60) SUBSTRUCTURE 8
 (61) CHANNEL & CHANNEL PROTECTION 7
 (62) CULVERTS N

LOAD RATING AND POSTING **CODE**

(31) DESIGN LOAD H 20 + Mod 6
 (63) OPERATING RATING METHOD - Load Factor 1
 (64) OPERATING RATING - HS-48 86
 (65) INVENTORY RATING METHOD - 1
 (66) INVENTORY RATING HS-26 46
 (70) BRIDGE POSTING No Posting Required 5
 (41) STRUCTURE OPEN, POSTED, OR CLOSED DESCRIPTION Open, no restriction A

AGE AND SERVICE

(27) YEAR BUILT 2000
 (106) YEAR RECONSTRUCTED 0
 (42) TYPE OF SERVICE ON - Highway
 OFF - Waterway CODE 15
 (28) LANES ON STRUCTURE 3 LANES UNDER STRUCTURE 0
 (29) AVERAGE DAILY TRAFFIC 27500
 (30) YEAR OF ADT 2019 (109) TRUCK ADT PCT 12
 (19) BYPASS OR DETOUR LENGTH 1.0

APPRAISAL **CODE**

(67) STRUCTURAL EVALUATION 8
 (68) DECK GEOMETRY 3
 (69) UNDERCLEARANCES, VERT & HORIZ N
 (71) WATERWAY ADEQUACY 8
 (72) APPROACH ROADWAY ALIGNMENT 3
 (36) TRAFFIC SAFETY FEATURES 1111
 (113) SCOUR CRITICAL BRIDGES 8

GEOMETRIC DATA

(48) LENGTH OF MAXIMUM SPAN 89.0
 (49) STRUCTURE LENGTH 299.0
 (50) CURB OR SIDEWALK: LEFT 0.0 RIGHT 4.8
 (51) BRIDGE ROADWAY WIDTH, CURB TO CURB 37.4
 (52) DECK WIDTH OUT TO OUT 47.3
 (32) APPROACH ROADWAY WITH (W/ SHOULDERS) 41.0
 (33) BRIDGE MEDIAN No median CODE 0
 (34) SKEW 0 (35) STRUCTURE FLARED 0
 (10) INVENTORY ROUTE MIN VERT CLEAR 999.9
 (47) INVENTORY ROUTE TOTAL HORIZ CLEAR 39.5
 (53) MIN VERT CLEAR OVER BRIDGE RDWY 999.9
 (54) MIN VERT UNDERCLEAR: REFERENCE 0.0
 (55) MIN LAT UNDERCLEARANCE RT: REFERENCE N 0.0
 (56) MIN LAT UNDERCLEARANCE LT: 0.0

PROPOSED IMPROVEMENTS

(75) TYPE OF WORK CODE
 (76) LENGTH OF STRUCTURE IMPROVEMENT
 (94) BRIDGE IMPROVEMENT COST
 (95) ROADWAY IMPROVEMENT COST
 (96) TOTAL PROJECT COST
 (97) YEAR OF IMPROVEMENT COST ESTIMATE
 (114) FUTURE ADT 55,000 YEAR OF FUTURE ADT 2040

NAVIGATION DATA

(38) NAVIGATION CONTROL - CODE 0
 (111) PIER PROTECTION CODE
 (39) NAVIGATION VERTICAL CLEARANCE 0.0
 (116) VERT - LIFT BRIDGE NAV MIN VERT CLEAR 0.0
 (40) NAVIGATION HORIZONTAL CLEARANCE 0.0

INSPECTION

(90) INSPECTION DATE 07/21 (91) FREQUENCY 24
 (92) CRITICAL FEATURE INSPECTION (93) CFI DATE
 A) FRACTURE CRIT DETAIL A)
 B) UNDERWATER INSP 60 B) 03/21
 C) OTHER SPECIAL INSP C)

SCOUR

Span Number	Facility Carried	Inventory Route	Maximum Minimum Vertical Clearance	Milepoint	Base Highway	LRS Inventory Route	Functional Classification	Number of Lanes	Average Daily Traffic	Year of Average Daily Traffic	Total Horizontal Clearance	See Note Below					STRAHNET Highway	Direction of Traffic	National Highway System	National Truck Network
												Reference Feature	Minimum Vertical Underclearance	Righth Lateral Underclearance	Left Lateral Underclearance	Underclearance Appraisal Grade				
	7	5	10	11	12	13	26	28	29	30	47	54A	54	55	56	69	100	102	104	110
1	Greenway	88000000		0.0							41.5	G	8.5	12.5	28.0			<input type="checkbox"/>	<input type="checkbox"/>	
4	Greenway	88000000		0.0							29.5	G	10.6	10.3	9.0			<input type="checkbox"/>	<input type="checkbox"/>	

Note: Items 54, 55, and 56 are not reported FHWA under route data points but are collected for each under route to determine the minimum value for Underclearance Appraisal Item 69.

Superstructure Build Details

Span Number 1

Span Length 91.8630

Skew 90.0000

Number of Items	Type of Component	Element Name	Quantity	Protective System Applied	Quantity (Sq Ft)
1	Concrete and Metal Railing	Other Bridge Railing	92 Feet		
10	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	10 Each	Galvanized Protective System	10
5	Prestressed Concrete Girder	Prestressed Concrete Open Girder/Beam	455 Feet		
1	Standard Joint	Pourable Joint Seal	45 Feet		
1	Reinforced Concrete Deck	Reinforced Concrete Deck	4327 Square Feet		
1	Concrete Railing	Reinforced Concrete Bridge Railing	92 Feet		

Span Number 2

Span Length 91.8630

Skew 90.0000

Number of Items	Type of Component	Element Name	Quantity	Protective System Applied	Quantity (Sq Ft)
1	Reinforced Concrete Deck	Reinforced Concrete Deck	4327 Square Feet		
5	Prestressed Concrete Girder	Prestressed Concrete Open Girder/Beam	460 Feet		
10	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	10 Each	Galvanized Protective System	10
1	Concrete Railing	Reinforced Concrete Bridge Railing	92 Feet		
1	Concrete and Metal Railing	Other Bridge Railing	92 Feet		

Span Number 3

Span Length 57.4170

Skew 90.0000

Number of Items	Type of Component	Element Name	Quantity	Protective System Applied	Quantity (Sq Ft)
1	Reinforced Concrete Deck	Reinforced Concrete Deck	2705 Square Feet		
5	Prestressed Concrete Girder	Prestressed Concrete Open Girder/Beam	285 Feet		
1	Standard Joint	Pourable Joint Seal	45 Feet		
1	Concrete Railing	Reinforced Concrete Bridge Railing	58 Feet		
1	Concrete and Metal Railing	Other Bridge Railing	58 Feet		
10	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	10 Each	Galvanized Protective System	10

Span Number 4

Span Length 57.4170

Skew 90.0000

Superstructure Build Details

Number of Items	Type of Component	Element Name	Quantity	Protective System Applied	Quantity (Sq Ft)
10	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	10 Each	Galvanized Protective System	10
1	Concrete and Metal Railing	Other Bridge Railing	58 Feet		
1	Standard Joint	Pourable Joint Seal	45 Feet		
5	Prestressed Concrete Girder	Prestressed Concrete Open Girder/Beam	280 Feet		
1	Concrete Railing	Reinforced Concrete Bridge Railing	58 Feet		
1	Reinforced Concrete Deck	Reinforced Concrete Deck	2705 Square Feet		

Structure Element Scoring

Structure Number: 911021

Inspection Date 7/15/2021

Element Number	Parent Number	Element Name	Location	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity
12	0	Reinforced Concrete Deck	Deck	14064	7261	2799	4004	0
109	0	Prestressed Concrete Open Girder/Beam	Beam	1480	1478	0	2	0
205	0	Reinforced Concrete Column	Piles and Columns	9	7	0	2	0
215	0	Reinforced Concrete Abutment	Abutments	152	136	16	0	0
233	0	Prestressed Concrete Pier Cap	Caps	54	47	5	2	0
521	233	Concrete Protective Coating	Caps	638	638	0	0	0
234	0	Reinforced Concrete Pier Cap	Caps	192	141	51	0	0
521	234	Concrete Protective Coating	Caps	1405	1405	0	0	0
301	0	Pourable Joint Seal	Expansion Joints	135	73	62	0	0
310	0	Elastomeric Bearing	Bearing Device	40	40	0	0	0
515	310	Steel Protective Coating	Bearing Device	40	40	0	0	0
321	0	Reinforced Concrete Approach Slabs	Approaches	1080	994	86	0	0
331	0	Reinforced Concrete Bridge Railing	Bridge Rail	300	278	22	0	0
333	0	Other Bridge Railing	Bridge Rail	300	300	0	0	0

Summary of Maintenance Needs

Maintenance By Defect

Structure Number: 911021

Inspection Date: 07/15/2021

MMS Code	Element Name	Defect Name	Recommended Quantity
3326	Reinforced Concrete Deck	Cracking (RC and Other)	6770 Square Feet
3326	Reinforced Concrete Deck	Efflorescence/Rust Staining	4 Square Feet
3306	Prestressed Concrete Open Girder/Bear	Delamination/Spall	1 Feet
3348	Reinforced Concrete Column	Exposed Rebar	2 Each
3350	Reinforced Concrete Abutment	Cracking (RC and Other)	2 Feet
3348	Prestressed Concrete Pier Cap	Cracking (PSC)	5 Feet
3348	Prestressed Concrete Pier Cap	Delamination/Spall	1 Feet
3348	Prestressed Concrete Pier Cap	Efflorescence/Rust Staining	1 Feet
3353	Reinforced Concrete Approach Slabs	Cracking (RC and Other)	86 Square Feet

Element Structure Maintenance Quantities

Structure Number: **911021**

Inspection Date **07/15/2021**

Location	MMS Code	Description	Maint Quantity	Total Quantity	Severe Quantity	Poor Quantity	Fair Quantity	Good Quantity
Abutments	3350	Maintenance of Concrete Wings and Wall	2	152	0	0	16	136
Approaches	3353	Maintenance of Concrete Bridge Approach Slabs	86	1080	0	0	86	994
Beam	3306	Maintenance Concrete Superstructure Components	1	1480	0	2	0	1478
Bearing Device	3334	Bridge Bearing	0	40	0	0	0	40
Bearing Device	3342	Clean and Paint Steel	0	40	0	0	0	40
Bridge Rail	3318	Maintenance of Concrete Bridge Rail	0	600	0	0	22	578
Caps	3348	Maintenance of Concrete Substructure	7	246	0	2	56	188
Caps	5603	Partial Cleaning and Painting of Structural Steel	0	2043	0	0	0	2043
Deck	3326	Maintenance of Concrete Deck	6774	14064	0	4004	2799	7261
Expansion Joints	3310	Maintenance of Standard Bridge Expansion Joints	0	135	0	0	62	73
Piles and Columns	3348	Maintenance of Concrete Substructure	2	9	0	2	0	7

Priority Actions Request

Structure Number 911021

Approach Guardrail and Barriers

3120 Approach
Guardrail and
Barriers Approach Guardrail and Barriers

Priority Level	Defect Type	Quantity	Defect Description
2		24	HEAVY IMPACT DAMAGE TO SOUTHEAST GUARDRAIL FOR 13 FROM LONG STARTING 24 FT FROM BEGINNING OF BRIDGE. RAIL IS DEFLECTED INWARD UP TO 24 INCHES AND VERTICAL POST ARE LEANING EAST AND TWISTED. (PAR)
2		13	MODERATE IMPACT DAMAGE TO NORTHEAST GUARDRAIL AT MID SPAN FOR UP TO 13 FT LONG WITH RAIL DEFLECTED INWARD FOR 4 INCHES. (PAR)

Element Condition and Maintenance Data

Structure Number: 911021

Inspection Date: 07/15/2021

Span 1 Deck Reinforced Concrete Deck

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
12	Reinforced Concrete Deck	4,327	2,327	0	2,000	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
12	Cracking (RC and Other)	SCATTERED TRANSVERSE CRACKING TO 1/16" WIDE AT AVERAGE 6' SPACING FOR FULL WIDTH.	3	2,000	2,000	Square Feet

General Comments

Span 1 Expansion Joint Standard Joint

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
301	Pourable Joint Seal	45	22	23	0	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
301	Adjacent Deck or Header	SCATTERED ALONG THE LENGTH, EDGE CHIPPING UP TO 3/4" WIDE X 3/4" DEEP WITH LOSS OF SEAL ADHESION [LOSS OF SEAL ADHESION IS ALSO PRESENT IN SCATTERED AREAS OF EDGE PATCHING]	2	23		Feet

General Comments

Span 1 Beam 1 Prestressed Concrete Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
109	Prestressed Concrete Open Girder/Beam	91	90	0	1	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
109	Delamination/Spall	RIGHT BOTTOM FLANGE AT ABUTMENT 1, SPALL APPROXIMATELY 2 IN LONG X 8 IN HIGH X UP TO 1/2 DEEP	3	1	1	Feet

General Comments

Span 1 Beam 2 Prestressed Concrete Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
109	Prestressed Concrete Open Girder/Beam	91	90	0	1	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
109	Damage	RIGHT BOTTOM FLANGE AT ABUTMENT 1, SPALL APPROXIMATELY 2 IN LONG X 8 IN HIGH X UP TO 3/4 DEEP	3	1		Feet

General Comments

Span 1 Left Bridge Rail**Concrete Railing**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
331	Reinforced Concrete Bridge Railing	92	85	7	0	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
331	Cracking (RC and Other)	(7) UP TO 1/32 IN WIDE WRAP-AROUND CRACKS, WITH EFFLORESCENCE, AT RANDOM THROUGHOUT.	2	7	Feet

General Comments

Span 2 Deck**Reinforced Concrete Deck**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
12	Reinforced Concrete Deck	4,327	2,307	20	2,000	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
12	Cracking (RC and Other)	SCATTERED TRANSVERSE CRACKING TO 1/16" WIDE AT AVERAGE 6' SPACING FOR FULL WIDTH.	3	2,000	2,000 Square Feet
12	Patched Areas	UP TO 20 SQ FT OF ASPHALT PATCHED AREAS IN SCATTERED LOCATIONS.	2	20	Square Feet

General Comments

Span 2 Left Bridge Rail**Concrete Railing**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
331	Reinforced Concrete Bridge Railing	92	83	9	0	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
331	Cracking (RC and Other)	(9) UP TO 1/32" WRAP-AROUND CRACKS, WITH EFFLORESCENCE, AT RANDOM THROUGHOUT.	2	9	Feet

General Comments

Span 3 Expansion Joint**Standard Joint**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
301	Pourable Joint Seal	45	33	12	0	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
301	Adjacent Deck or Header	SCATTERED ALONG THE LENGTH, EDGE CHIPPING UP TO 3/4" WIDE X 3/4" DEEP WITH LOSS OF SEAL ADHESION [LOSS OF SEAL ADHESION IS ALSO PRESENT IN SCATTERED AREAS OF EDGE PATCHING]. THE SEAL IS OXIDIZED ALONG THE LENGTH OF THE TOP.	2	12	Feet

General Comments

Span 3 Deck**Reinforced Concrete Deck**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
12	Reinforced Concrete Deck	2,705	1,309	1,396	0	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
12	Cracking (RC and Other)	MAP CRACKING WITH EFFLORESCENCE UP TO 1/64 IN WIDE SCATTERED ALONG THE LENGTH OF THE SIDEWALK	2	40	40 Square Feet
12	Cracking (RC and Other)	SCATTERED TRANSVERSE CRACKING TO 1/64" WIDE AT AVERAGE 6' SPACING	2	1,350	1,350 Square Feet
12	Patched Areas	UP TO 6 SQ FT OF ASPHALT PATCHED AREAS IN SCATTERED LOCATIONS.	2	6	Square Feet

General Comments

Span 3 Left Bridge Rail**Concrete Railing**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
331	Reinforced Concrete Bridge Railing	58	56	2	0	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
331	Cracking (RC and Other)	(2) UP TO 1/32" WRAP-AROUND CRACKS, WITH EFFLORESCENCE, AT RANDOM THROUGHOUT.	2	2	Feet

General Comments

Span 4 Expansion Joint**Standard Joint**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
301	Pourable Joint Seal	45	18	27	0	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
301	Adjacent Deck or Header	SCATTERED ALONG THE LENGTH, EDGE CHIPPING UP TO 3/4" WIDE X 3/4" DEEP WITH LOSS OF SEAL ADHESION [LOSS OF SEAL ADHESION IS ALSO PRESENT IN SCATTERED AREAS OF EDGE PATCHING]	2	27	Feet

General Comments

Span 4 Deck**Reinforced Concrete Deck**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
12	Reinforced Concrete Deck	2,705	1,318	1,383	4	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
12	Efflorescence/Rust Staining	(2) UP TO 20" X 1/64" TRANSVERSE CRACKS, WITH BUILDUP OF EFFLORESCENCE, DECK UNDERSIDE, LEFT OVERHANG, AT BENT 3.	3	4	4 Square Feet
12	Cracking (RC and Other)	MAP CRACKING WITH EFFLORESCENCE UP TO 1/64 IN WIDE SCATTERED ALONG THE LENGTH OF THE SIDEWALK	2	30	30 Square Feet
12	Cracking (RC and Other)	SCATTERED TRANSVERSE CRACKING TO 1/64" WIDE AT AVERAGE 6' SPACING	2	1,350	1,350 Square Feet

12 Patched Areas UP TO 3 SQ FT OF ASPHALT PATCHED AREAS IN SCATTERED LOCATIONS. 2 3 Square Feet

General Comments

Span 4 Left Bridge Rail

Concrete Railing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
331	Reinforced Concrete Bridge Railing	58	54	4	0	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
331	Cracking (RC and Other)	(4) UP TO 1/32" WRAP-AROUND CRACKS, WITH EFFLORESCENCE, AT RANDOM THROUGHOUT.	2	4	Feet

General Comments

End Bent 1 Cap 1

Reinforced Concrete Pier Cap

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
234	Reinforced Concrete Pier Cap	54	3	51	0	0 Feet
521	Concrete Protective Coating	638	638	0	0	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
234	Cracking (RC and Other)	12 IN LONG X 1/64 IN WIDE VERTICAL CRACK, NORTH FACE, BETWEEN BEAMS 3 AND 4, NEAR BEAM 3.	2	1	Feet
234	Damage	DEBRIS ON TOP OF THE CAP FOR FULL LENGTH	2	50	Feet

General Comments

End Bent 1 Abutment

Reinforced Concrete Abutment

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
215	Reinforced Concrete Abutment	76	65	11	0	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
215	Cracking (RC and Other)	48" X 1/64" DIAGONAL CRACK, WITH EFFLORESCENCE, LEFT OVERHANG.	2	4	Feet
215	Cracking (RC and Other)	60" X 1/64" DIAGONAL CRACK, RIGHT OVERHANG.	2	5	Feet
215	Cracking (RC and Other)	TWO (2) FULL HEIGHT X 1/64 IN WIDE VERTICAL CRACKS IN THE BACKWALL AT RANDOM.	2	2	Feet

General Comments

End Bent 2 Cap 1

Prestressed Concrete Pier Cap

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
233	Prestressed Concrete Pier Cap	54	47	5	2	0 Feet
521	Concrete Protective Coating	638	638	0	0	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
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Structure Number: 911021Inspection Date: 07/15/2021

233	Delamination/Spall	UP TO 10 IN WIDE X 8 IN HIGH X UP TO 3/4 IN DEEP SPALL TO THE RIGHT SIDE OF BEAM 2 BOTTOM FLANGE	3	1	1	Feet
233	Efflorescence/Rust Staining	12" X UP TO 3" AREA OF RUST STAINING, SOUTH FACE, BETWEEN BEAMS 3 AND 4, NEAR BEAM 3.	3	1	1	Feet
233	Cracking (PSC)	(2) UP TO 12" X 1/64" DIAGONAL CRACKS, SOUTH FACE, EXTENDING FROM EAST AND WEST SIDES OF BEAM 4 BEAM SEAT.	2	2	2	Feet
233	Cracking (PSC)	3' X UP TO 1/32" LONGITUDINAL CRACK, SOUTH FACE, BENEATH BEAM 3.	2	3	3	Feet

General Comments

End Bent 2**Abutment****Reinforced Concrete Abutment**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
215	Reinforced Concrete Abutment	76	71	5	0	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
215	Cracking (RC and Other)	THREEE (3) UP TO 2 FT LONG X 1/64 IN WIDE DIAGONAL CRACKS TO THE LEFT OF BEAM 1 NEAR THE TOP OF THE WALL	2	3	Feet
215	Cracking (RC and Other)	TWO (2) UP TO 36 IN LONG X 1/64 IN WIDE DIAGONAL AND VERTICAL CRACKS, SCATTERED THROUGHOUT LENGTH OF ABUTMENT.	2	2	2 Feet

General Comments

Bent 3**Pile 2****Reinforced Concrete Column**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
205	Reinforced Concrete Column	1	0	0	1	0 Each

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
205	Exposed Rebar	8 IN LONG X UP TO 4 IN WIDE X 1/2 IN DEEP SPALL, WITH EXPOSED REINFORCING, EAST FACE, 8' FROM BOTTOM OF CAP [NO MEASURABLE SECTION LOSS]	2	1	1 Each

General Comments

UNDERWATER INSPECTION: STEEL CASING HAS LIGHT SURFACE RUST FROM MUDLINE TO TOP OF CASING.

Bent 3**Pile 3****Reinforced Concrete Column**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
205	Reinforced Concrete Column	1	0	0	1	0 Each

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
205	Exposed Rebar	10 IN LONG X UP TO 3 IN WIDE X 1/2 IN DEEP SPALL, WITH EXPOSED REINFORCING, WEST FACE, AT GROUND LEVEL. 80% SECTION REMAING IN EXPOSED REBAR	3	1	1 Each

General Comments

UNDERWATER INSPECTION: STEEL CASING HAS LIGHT SURFACE RUST FROM MUDLINE TO TOP OF CASING.

Approach 1**Reinforced Concrete Approach Slab**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
321	Reinforced Concrete Approach Slabs	540	474	66	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
321	Cracking (RC and Other)	16 SQUARE FEET UP TO 1/32" LONGITUDINAL CRACKS, AT RANDOM THROUGHOUT ALL TRAVEL LANES.	2	16	16	Square Feet
321	Cracking (RC and Other)	HAIRLINE MAP CRACKING ALONG FULL LENGTH OF APPROACH.	2	50	50	Square Feet

General Comments

Approach 2**Reinforced Concrete Approach Slab**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
321	Reinforced Concrete Approach Slabs	540	520	20	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
321	Cracking (RC and Other)	20 SQUARE FEET UP TO 1/32" LONGITUDINAL CRACKS, AT RANDOM THROUGHOUT ALL TRAVEL LANES.	2	10	10	Square Feet
321	Cracking (RC and Other)	HAIRLINE MAP CRACKING ALONG FULL LENGTH OF APPROACH.	2	10	10	Square Feet

General Comments

Elements Verified

Location	Name	Component	Element Name	Amount
Span 1	Deck	Reinforced Concrete Deck	Reinforced Concrete Deck	4327
Span 1	Beam 1	Prestressed Concrete Girder	Prestressed Concrete Open Girder/Beam	91
Span 1	Beam 2	Prestressed Concrete Girder	Prestressed Concrete Open Girder/Beam	91
Span 1	Beam 3	Prestressed Concrete Girder	Prestressed Concrete Open Girder/Beam	91
Span 1	Beam 4	Prestressed Concrete Girder	Prestressed Concrete Open Girder/Beam	91
Span 1	Beam 5	Prestressed Concrete Girder	Prestressed Concrete Open Girder/Beam	91
Span 1	Left Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	92
Span 1	Right Bridge Rail	Concrete and Metal Railing	Other Bridge Railing	92
Span 1	Expansion Joint	Standard Joint	Pourable Joint Seal	45
Span 1	Far Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 1	Near Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 1	Near Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 1	Far Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 1	Far Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 1	Near Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 1	Near Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 1	Far Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 1	Far Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 1	Near Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 2	Deck	Reinforced Concrete Deck	Reinforced Concrete Deck	4327
Span 2	Beam 1	Prestressed Concrete Girder	Prestressed Concrete Open Girder/Beam	92
Span 2	Beam 2	Prestressed Concrete Girder	Prestressed Concrete Open Girder/Beam	92
Span 2	Beam 3	Prestressed Concrete Girder	Prestressed Concrete Open Girder/Beam	92
Span 2	Beam 4	Prestressed Concrete Girder	Prestressed Concrete Open Girder/Beam	92
Span 2	Beam 5	Prestressed Concrete Girder	Prestressed Concrete Open Girder/Beam	92
Span 2	Left Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	92
Span 2	Right Bridge Rail	Concrete and Metal Railing	Other Bridge Railing	92
Span 2	Near Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 2	Far Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 2	Far Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 2	Near Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 2	Near Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 2	Far Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 2	Far Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 2	Near Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 2	Near Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 2	Far Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 3	Deck	Reinforced Concrete Deck	Reinforced Concrete Deck	2705
Span 3	Beam 1	Prestressed Concrete Girder	Prestressed Concrete Open Girder/Beam	57
Span 3	Beam 2	Prestressed Concrete Girder	Prestressed Concrete Open Girder/Beam	57
Span 3	Beam 3	Prestressed Concrete Girder	Prestressed Concrete Open Girder/Beam	57
Span 3	Beam 4	Prestressed Concrete Girder	Prestressed Concrete Open Girder/Beam	57
Span 3	Beam 5	Prestressed Concrete Girder	Prestressed Concrete Open Girder/Beam	57
Span 3	Left Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	58
Span 3	Right Bridge Rail	Concrete and Metal Railing	Other Bridge Railing	58

Elements Verified

Location	Name	Component	Element Name	Amount
Span 3	Expansion Joint	Standard Joint	Pourable Joint Seal	45
Span 3	Far Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 3	Near Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 3	Near Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 3	Far Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 3	Far Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 3	Near Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 3	Near Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 3	Far Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 3	Far Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 3	Near Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 4	Deck	Reinforced Concrete Deck	Reinforced Concrete Deck	2705
Span 4	Beam 1	Prestressed Concrete Girder	Prestressed Concrete Open Girder/Beam	56
Span 4	Beam 2	Prestressed Concrete Girder	Prestressed Concrete Open Girder/Beam	56
Span 4	Beam 3	Prestressed Concrete Girder	Prestressed Concrete Open Girder/Beam	56
Span 4	Beam 4	Prestressed Concrete Girder	Prestressed Concrete Open Girder/Beam	56
Span 4	Beam 5	Prestressed Concrete Girder	Prestressed Concrete Open Girder/Beam	56
Span 4	Left Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	58
Span 4	Right Bridge Rail	Concrete and Metal Railing	Other Bridge Railing	58
Span 4	Expansion Joint	Standard Joint	Pourable Joint Seal	45
Span 4	Far Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 4	Near Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 4	Near Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 4	Far Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 4	Far Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 4	Near Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 4	Near Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 4	Far Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 4	Far Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Span 4	Near Bearing	Elastomeric Bearing with Metal Plates	Elastomeric Bearing	1
Bent 1	Cap 1	Reinforced Concrete Pier Cap	Reinforced Concrete Pier Cap	46
Bent 1	Pile 1	Reinforced Concrete Column	Reinforced Concrete Column	1
Bent 1	Pile 2	Reinforced Concrete Column	Reinforced Concrete Column	1
Bent 1	Pile 3	Reinforced Concrete Column	Reinforced Concrete Column	1
End Bent 1	Cap 1	Reinforced Concrete Pier Cap	Reinforced Concrete Pier Cap	54
End Bent 1	Abutment	Reinforced Concrete Abutment	Reinforced Concrete Abutment	76
Bent 2	Cap 1	Step Down Reinforced Concrete Cap	Reinforced Concrete Pier Cap	46
Bent 2	Pile 1	Reinforced Concrete Column	Reinforced Concrete Column	1
Bent 2	Pile 2	Reinforced Concrete Column	Reinforced Concrete Column	1
Bent 2	Pile 3	Reinforced Concrete Column	Reinforced Concrete Column	1
End Bent 2	Cap 1	Prestressed Concrete Pier Cap	Prestressed Concrete Pier Cap	54
End Bent 2	Abutment	Reinforced Concrete Abutment	Reinforced Concrete Abutment	76
Bent 3	Cap 1	Reinforced Concrete Pier Cap	Reinforced Concrete Pier Cap	46
Bent 3	Pile 1	Reinforced Concrete Column	Reinforced Concrete Column	1
Bent 3	Pile 2	Reinforced Concrete Column	Reinforced Concrete Column	1

Elements Verified

Location	Name	Component	Element Name	Amount
Bent 3	Pile 3	Reinforced Concrete Column	Reinforced Concrete Column	1
Approach1		Reinforced Concrete Approach Slab	Reinforced Concrete Approach Slabs	540
Approach2		Reinforced Concrete Approach Slab	Reinforced Concrete Approach Slabs	540

General Inspection Notes

Bent 1 Pile 1

UNDERWATER INSPECTION: STEEL CASING HAS LIGHT SURFACE RUST FROM MUDLINE TO TOP OF CASING.

Bent 1 Pile 2

UNDERWATER INSPECTION: STEEL CASING HAS LIGHT SURFACE RUST FROM MUDLINE TO TOP OF CASING.

Bent 1 Pile 3

UNDERWATER INSPECTION: STEEL CASING HAS LIGHT SURFACE RUST FROM MUDLINE TO TOP OF CASING.

Bent 2 Pile 1

UNDERWATER INSPECTION: STEEL CASING HAS LIGHT SURFACE RUST FROM MUDLINE TO TOP OF CASING.

Bent 2 Pile 2

UNDERWATER INSPECTION: STEEL CASING HAS LIGHT SURFACE RUST FROM MUDLINE TO TOP OF CASING.

Bent 2 Pile 3

UNDERWATER INSPECTION: STEEL CASING HAS LIGHT SURFACE RUST FROM MUDLINE TO TOP OF CASING.

Bent 3 Pile 1

UNDERWATER INSPECTION: STEEL CASING HAS LIGHT SURFACE RUST FROM MUDLINE TO TOP OF CASING.

National Bridge and NC Inspection Items

Structure Number: 911021

Inspection Date: 07/15/2021

National Bridge Inventory Items

Item	Grade Scale	Grade
Item 58: Deck	0 - 9, N	7
Item 59: Superstructure	0 - 9, N	8
Item 60: Substructure	0 - 9, N	8
Item 61: Channel and Channel Protection	0 - 9, N	7
Item 62: Culvert	0 - 9, N	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	14000	3376
Drainage System	G, F, P, or C	G	0	3332
Utilities	G, F, P, or C	G		
Slope Protection	G, F, P, or C	F	400	3352
Scour	G, F, P, or C	F		
Wingwall	G, F, P, or C		0	3350
Field Scour Evaluation		G		
Drift	G, F, P, or C	F	3	3366
Fender System	G, F, P, or C		0	3364
Movable Span Machinery	G, F, P, or C			
Response to Live Load	G, F, P, or C	G		
Superstructure Paint Code				

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

Inspection Information

Item	Grade Scale	Grade
Sign Noticed Issued	YES/NO	N
Priority Maintenance Request Submitted	YES/NO	Y
Inspection Time	Hours	6
Traffic Control Time	Hours	0
Snooper Time	Hours	0
Ladder Used	YES/NO	Y
Bucket Truck Used	YES/NO	N
Boat Used	YES/NO	N
Other Equipment Used	YES/NO	N
Portion of Structure in > 3' of water	YES/NO	Y

National Bridge and NC SMU Inspection Item Details

Structure Number: 911021

Inspection Date: 07/15/2021

Item	Substructure - Item 60	Grade	8	Maint Code		Qty.	0
Details	DEBRIS ON TOP OF CAP FOR FULL LENGTH						
Item	Channel and Channel Protection - Item 61	Grade	7	Maint Code		Qty.	0
Details	SLUMPING UP TO 40 FT LONG X 2 FT HIGH X 1 FT DEEP IN THE RIGHT BANK AT THE DOWNSTREAM END, STARTING 50 FT FROM THE BRIDGE						
Item	Deck Debris	Grade	F	Maint Code	3376	Qty.	14000
Details	MINOR DECK DEBRIS ALONG THE EDGE OF THE SIDEWALK FOR FULL LENGTH IN ALL SPANS. MINOR DECK DEBRIS ALONG THE RIGHT CRUB AND LEFT BRIDGE RAIL IN ALL SPANS.						
Item	Drift	Grade	F	Maint Code	3366	Qty.	3
Details	DRIFT UP TO 60 FT LONG X 10 FT HIGH X 6 FT WIDE AT THE DOWNSTREAM END OF BRIDGE, STARTING APPROX. 50 FT FROM THE BRIDGE						
Item	Utilities	Grade	G	Maint Code		Qty.	0
Details	3 IN DIAMETER UTILITY PIPE IN RIGHT OVERHANG						
Item	Scour	Grade	F	Maint Code		Qty.	0
Details	SOIL EROSION AROUND BENT 3 PILE 2 UP TO 7 FT IN DIAMETER X 2 FT DEEP DUE TO SCOUR.						
Item	General Comments and Misc Items	Grade		Maint Code		Qty.	0
Details	MINOR IMPACT DAMGE TO SOUTHWEST GUARDRAIL FOR UP TO 6 FT LONG APPROXIMATLY 40 FT FROM START OF BRIDGE. MODERATE IMPACT DAMAGE TO NORTHEAST GUARDRAIL AT MID SPAN FOR UP TO 13 FT LONG WITH RAIL DEFLECTED INWARD FOR 4 INCHES. HEAVY IMPACT DAMAGE TO SOUTHEAST GUARDRAIL FOR 13 FROM LONG STARTING 24 FT FROM BEGINNING OF BRIDGE. RAIL IS DEFLECTED INWARD UP TO 24 INCHES AND VERTICAL POST ARE LEANING EAST AND TWISTED. (PAR)						



MODERATE IMPACT DAMAGE TO NORTHEAST GUARDRAIL AT MID SPAN FOR UP TO 13 FT LONG WITH RAIL DEFLECTED INWARD FOR 4 INCHES. (PAR)



HEAVY IMPACT DAMAGE TO SOUTHEAST GUARDRAIL FOR 13 FROM LONG STARTING 24 FT FROM BEGINNING OF BRIDGE. RAIL IS DEFLECTED INWARD UP TO 24 INCHES AND VERTICAL POST ARE LEANING EAST AND TWISTED. (PAR)



HEAVY IMPACT DAMAGE TO SOUTHEAST GUARDRAIL FOR 13 FROM LONG STARTING 24 FT FROM BEGINNING OF BRIDGE. RAIL IS DEFLECTED INWARD UP TO 24 INCHES AND VERTICAL POST ARE LEANING EAST AND TWISTED. (PAR)



Approach 1 : 16 SQUARE FEET UP TO 1/32" LONGITUDINAL CRACKS, AT RANDOM THROUGHOUT ALL TRAVEL LANES.



Approach 1 : HAIRLINE MAP CRACKING ALONG FULL LENGTH OF APPROACH.



Span 1 Expansion Joint: SCATTERED ALONG THE LENGTH, EDGE CHIPPING UP TO 3/4" WIDE X 3/4" DEEP WITH LOSS OF SEAL ADHESION [LOSS OF SEAL ADHESION IS ALSO PRESENT IN SCATTERED AREAS OF EDGE PATCHING]



Span 1 Left Bridge Rail: (7) UP TO 1/32 IN WIDE WRAP-AROUND CRACKS, WITH EFFLORESCENCE, AT RANDOM THROUGHOUT.



Span 1 Deck: SCATTERED TRANSVERSE CRACKING TO 1/16" WIDE AT AVERAGE 6' SPACING FOR FULL WIDTH.



MINOR DECK DEBRIS ALONG THE EDGE OF THE SIDEWALK IN ALL SPANS



MINOR DECK DEBRIS ALONG THE RIGHT CRUB AND LEFT BRIDGE RAIL IN ALL SPANS



Span 2 Deck: UP TO 20 SQ FT OF ASPHALT PATCHED AREAS IN SCATTERED LOCATIONS.



Span 3 Deck: MAP CRACKING WITH EFFLORESCENCE UP TO 1/64 IN WIDE SCATTERED ALONG THE LENGTH OF THE SIDEWALK



Span 4 Expansion Joint: SCATTERED ALONG THE LENGTH, EDGE CHIPPING UP TO 3/4" WIDE X 3/4" DEEP WITH LOSS OF SEAL ADHESION [LOSS OF SEAL ADHESION IS ALSO PRESENT IN SCATTERED AREAS OF EDGE PATCHING]



End Bent 1 Cap 1: 12 IN LONG X 1/64 IN WIDE VERTICAL CRACK, NORTH FACE, BETWEEN BEAMS 3 AND 4, NEAR BEAM 3.



Span 1 Beam 1: RIGHT BOTTOM FLANGE AT ABUTMENT 1, SPALL APPROXIMATELY 2 IN LONG X 8 IN HIGH X UP TO 1/2 DEEP



Span 1 Beam 2: RIGHT BOTTOM FLANGE AT ABUTMENT 1, SPALL APPROXIMATELY 2 IN LONG X 8 IN HIGH X UP TO 3/4 DEEP



DEBRIS ON TOP OF THE CAP FOR FULL LENGTH



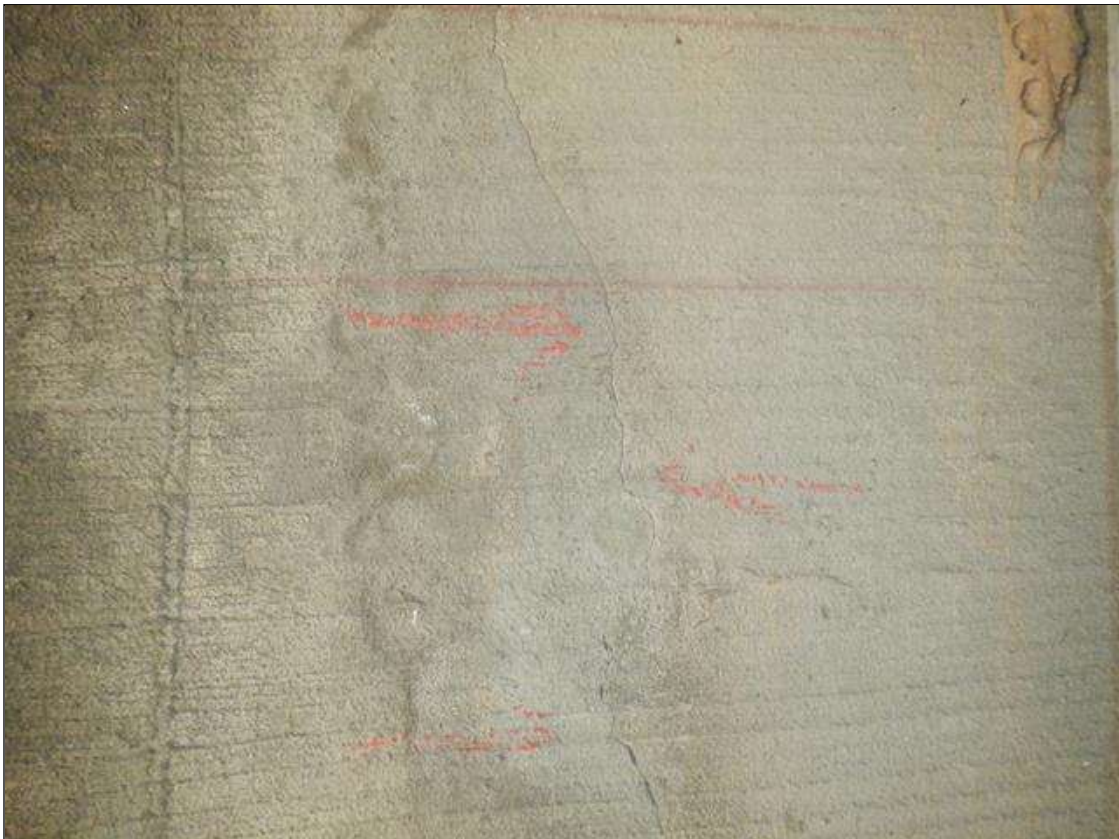
End Bent 1 Abutment: TWO (2) FULL HEIGHT X 1/64 IN WIDE VERTICAL CRACKS IN THE BACKWALL AT RANDOM.



End Bent 2 Cap 1: 3' X UP TO 1/32" LONGITUDINAL CRACK, SOUTH FACE, BENEATH BEAM 3.



End Bent 2 Cap 1: (2) UP TO 12" X 1/64" DIAGONAL CRACKS, SOUTH FACE, EXTENDING FROM EAST AND WEST SIDES OF BEAM 4 BEAM SEAT.



End Bent 2 Abutment: TWO (2) UP TO 36 IN LONG X 1/64 IN WIDE DIAGONAL AND VERTICAL CRACKS, SCATTERED THROUGHOUT LENGTH OF ABUTMENT.



End Bent 2 Cap 1: UP TO 10 IN WIDE X 8 IN HIGH X UP TO 3/4 IN DEEP SPALL TO THE RIGHT SIDE OF BEAM 2
BOTTOM FLANGE



End Bent 2 Abutment: THREEE (3) UP TO 2 FT LONG X 1/64 IN WIDE DIAGONAL CRACKS TO THE LEFT OF
BEAM 1 NEAR THE TOP OF THE WALL



Bent 3 Pile 2: 8 IN LONG X UP TO 4 IN WIDE X 1/2 IN DEEP SPALL, WITH EXPOSED REINFORCING, EAST FACE, 8' FROM BOTTOM OF CAP [NO MEASURABLE SECTION LOSS]



Bent 3 Pile 3: 10 IN LONG X UP TO 3 IN WIDE X 1/2 IN DEEP SPALL, WITH EXPOSED REINFORCING, WEST FACE AT GROUND LEVEL



SOIL EROSION AROUND BENT 3 PILE 2 UP TO 7 FT IN DIAMETER X 2 FT DEEP DUE TO SCOUR.



DRIFT UP TO 60 FT LONG X 10 FT HIGH X 6 FT WIDE AT THE DOWNSTREAM END OF BRIDGE, STARTING APPROX. 50 FT FROM THE BRIDGE



SLUMPING UP TO 40 FT LONG X 2 FT HIGH X 1 FT DEEP IN THE RIGHT BANK AT THE DOWNSTREAM END,
STARTING 50 FT FROM THE BRIDGE

Stream Bed Soundings

(Profile diagram on following sheet)

County **WAKE**

Structure Number: **911021**

Inspection Date **07/21/2021**

Sounding recorded from: **Top of Bridge Rail**

Highwater Mark Distance **16**

Location of Highwater Mark **STANNING ON COLUMNS**

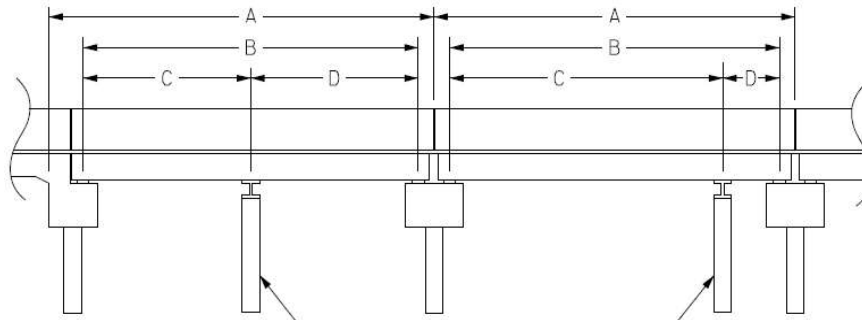
Distance (Station) ft.	Downstream Sounding ft.	Upstream Sounding ft.	Description
0.000	3.600	0.000	FILL FACE
1.500	10.000	0.000	RAIL TO CAP
3.500	10.980	10.100	GROUND AT CAP
27.000	17.900	0.000	GROUND
36.000	18.200	0.000	GREENWAY
46.000	18.500	0.000	GREENWAY
91.000	27.300	0.000	WSWE
93.000	30.100	29.900	BENT 1
100.000	33.800	0.000	SOUNDING
130.000	35.500	0.000	SOUNDING
170.000	32.600	0.000	SOUNDING
183.670	31.000	29.500	BENT 2
186.000	27.900	0.000	WSWE
241.500	20.700	19.300	BENT 3
276.000	19.000	0.000	TOE OF RIP RAP
295.000	11.500	10.100	GROUND AT CAP
297.000	9.400	0.000	RAIL TO CAP
298.670	3.600	0.000	FILL FACE

Structure Data Worksheet

Span Profile

County: **WAKE**

Structure Number: **911021**



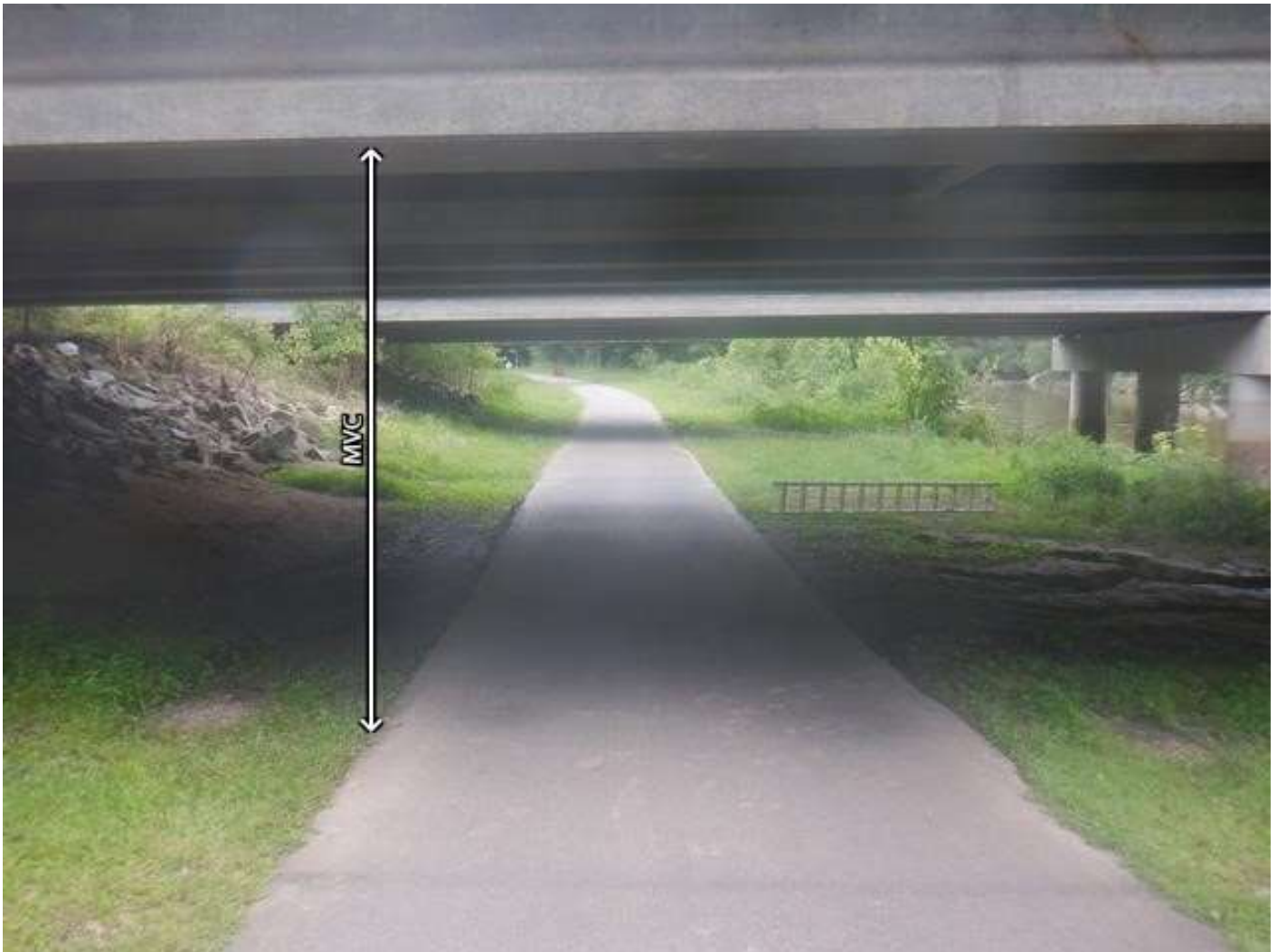
A: SPAN LENGTH
 B: BEARING TO BEARING
 C: DISTANCE FROM NEAR BEARING
 D: DISTANCE TO FAR BEARING

Span Number	Span Length	Bearing to Bearing	Crutch/ Helper Bent	Distance to Near Bearing	Distance to Far Bearing
1	91.863	89.000			
2	91.863	89.330			
3	57.417	55.500			
4	57.417	54.167			

Structure Number: 911021

Span: 1

Route Name: Greenway



EAST UNDERCLEARANCE PROFILE LOOKING WEST IN SPAN 1

Route Number: 88000000		Route Name: Greenway			Reference Feature: G	
Minimum Vertical Clearance 8.500 feet		Maximum Minimum Vertical Clearance feet				
Total Horizontal Clearance 41.500 feet		Lateral Clearances: Left: 28.000 feet Right 12.500 feet				
<input type="checkbox"/> Base Highway Network		LRS Inventory Route, Sub Route Number				
Milepost: 0.000	Number of Lanes:	ADT:	Year of ADT:	Percentage of Trucks: 0		
<input type="checkbox"/> National Highway System		<input type="checkbox"/> STRAHNET Highway Designator				
Functional Classification		Direction of Traffic:				

Structure Number: 911021

Span: 4

Route Name: Greenway



EAST UNDERCLEARANCE PROFILE LOOKING WEST IN SPAN 4

Route Number: 88000000		Route Name: Greenway			Reference Feature: G	
Minimum Vertical Clearance 10.583 feet		Maximum Minimum Vertical Clearance feet				
Total Horizontal Clearance 29.500 feet		Lateral Clearances: Left: 9.000 feet Right 10.250 feet				
<input type="checkbox"/> Base Highway Network		LRS Inventory Route, Sub Route Number				
Milepost: 0.000	Number of Lanes:	ADT:	Year of ADT:	Percentage of Trucks: 0		
<input type="checkbox"/> National Highway System		<input type="checkbox"/> STRAHNET Highway Designator				
Functional Classification		Direction of Traffic:				



NORTHWEST GUARDRAIL END TERMINAL



TYPICAL POST SPACING AT MID LENGTH AT NORTHWEST GUARDRAIL



LOOKING SOUTH



DRIANAGE INLET AT NORTHEAST CORNER. SIMILAR AT SOUTHEAST CORNER



APPROACH SLAB AT END BENT 2



APPROACH 2 LOOKING NORTH



EXPANSION JOINT AT END BENT 2



TYPICAL POST SPACING AT BRIDGE AT NORTHEAST CORNER.



GUARDRAIL TO BRIDGE RAIL CONNECTION AT NORTHEAST CORNER SIMILAR AT SOUTHEAST CORNER



GUARDRAIL TO BRIDGE RAIL CONNECTION AT NORTHWEST CORNER. SIMILAR AT SOUTHWEST CORNER



WEST BRIDGE RAIL



EAST BRIDGE RAIL AND SIDEWALK



LOOKING EAST/DOWNSTREAM FROM TOP OF BRIDGE



LOOKING WEST/UPSTREAM FROM TOP OF BRIDGE. NOTE SOUTH BOUND LANE BRIDGE.



DECK OVER BENT 1



EXPANSION JOINT OVER BENT 2



STEEL PLATE IN SIDEWALK AT BENT 2



TOP OF DECK OVER BENT 3



APPROACH 1 LOOKING SOUTH



EXPANSION JOINT AT END BENT 1



APPROACH SLAB AT END BENT 1



LOOKING NORTH



TOP OF DECK



WEST PROFILE



EAST PROFILE



END BENT 1 PROFILE



SLOPE PROTECTION AT END BENT 1



TYPICAL END BENT DIAPHRAGM AT END BENT 1 BAY 3



TYPICAL BEARING AT END BENT 1, AT GIRDER 3



SUPERSTRUCTURE UNDERSIDE IN SPAN 1



TYPICAL INTERMEDIATE DIAPHRAGM IN SPAN 1, BAY 2.



BENT 1 PROFILE



LADDER USED



TYPICAL BEARING AT BENT 1, GIRDER 2



TYPICAL BENT DIAPHRAGM AT BENT 1, BAY 3



TYPICAL BEAM AND CAP ENDS AT BENT 1



EAST UNDERCLEARANCE PROFILE LOOKING WEST IN SPAN 1



WEST UNDERCLEARANCE PROFILE LOOKING EAST IN SPAN 1



TYPICAL DRAINAGE PIPES IN FRONT FACE OF CAP



3 IN DIAMETER UTILITY PIPE IN RIGHT OVERHANG.



TYPICAL UTILITY HANGER



TYPICAL ABUTMENT EXTENSION WALL AT SOUTHWEST CORNER



BEAM AND CAP ENDS AT BENT 2



BENT 2 PROFILE



SUPERSTRUCTURE UNDERSIDE IN SPAN 4. SIMILAR IN SPAN 3



INTERMEDIATE DIAPHRAGM IN SPAN 4, BAY 2. SIMILAR IN SPAN 3.



END BENT 2 PROFILE



SLOPE PROTECTION AT END BENT 2



BENT 3 PROFILE



EAST UNDERCLEARANCE PROFILE LOOKING WEST IN SPAN 4



WEST UNDERCLEARANCE PROFILE LOOKING EAST IN SPAN 4



END DIAPHRAGM AT BENT 3, BAY 3.



TYPICAL DRAINAGE PIPES IN SPAN 3 BAY 4



BRIDGE INSPECTOR'S RECOMMENDATION FOR MAINTENANCE REPAIRS

Bridge: 911021

County WAKE

Date:


These Repairs Should Be Made Within Twelve Months From Date Of This Inspection

MMS Code	Description of Function	Unit	Quantity	Remarks	Est. Cost
 3120	Repair/Maintain Barriers	LF	24	HEAVY IMPACT DAMAGE TO SOUTHEAST GUARDRAIL FOR 13 FROM LONG STARTING 24 FT FROM BEGINNING OF BRIDGE. RAIL IS DEFLECTED INWARD UP TO 24 INCHES AND VERTICAL POST ARE LEANING EAST AND TWISTED. (PAR)	
 3120	Repair/Maintain Barriers	LF	13	MODERATE IMPACT DAMAGE TO NORTHEAST GUARDRAIL AT MID SPAN FOR UP TO 13 FT LONG WITH RAIL DEFLECTED INWARD FOR 4 INCHES. (PAR)	

Key

 Priority Maintenance Item

 Critical Finding Item

 Priority Maintenance Level Not Determined

BRIDGE INSPECTOR'S RECOMMENDATION FOR PRIORITY MAINTENANCE REPAIRS

Bridge: 911021 County WAKE

THE FOLLOWING MAINTENANCE ITEMS HAVE BEEN SUBMITTED IN CONJUNCTION WITH A PRIORITY MAINTENANCE REQUEST

MMS Code	MMS Description	Quantity
3120	Repair/Maintain Barriers	24 LF
Location:		
Bent/Span No.		
Priority Level	Status	
	Request Awaiting Assignment	
Submitted Date:	Submitted By:	Assisted By:
07/16/2021	ZAKARIA KADI	
Details		
HEAVY IMPACT DAMAGE TO SOUTHEAST GUARDRAIL FOR 13 FROM LONG STARTING 24 FT FROM BEGINNING OF BRIDGE. RAIL IS DEFLECTED INWARD UP TO 24 INCHES AND VERTICAL POST ARE LEANING EAST AND TWISTED. (PAR)		

MMS Code	MMS Description	Quantity
3120	Repair/Maintain Barriers	13 LF
Location:		
Bent/Span No.		
Priority Level	Status	
	Request Awaiting Assignment	
Submitted Date:	Submitted By:	Assisted By:
07/16/2021	ZAKARIA KADI	
Details		
MODERATE IMPACT DAMAGE TO NORTHEAST GUARDRAIL AT MID SPAN FOR UP TO 13 FT LONG WITH RAIL DEFLECTED INWARD FOR 4 INCHES. (PAR)		

Bridge Inspection Field Sketch



MEASUREMENTS TAKEN 40 FEET SOUTH OF BRIDGE LOOKING NORTH

Roadway	36ft Wide	3 Paved Lanes	Looking North
Left Shoulder	2.5ft Wide	2.5ft Paved (C&G)	
Right Shoulder	8.5ft Wide	2.5ft Paved (C&G)	6ft Unpaved
Left Guardrail	2.5ft from road		
Right Guardrail	8.5ft from road		

MODIFIED BY ZK ON 7/15/21

Title
APPROACH

Description
SOUTH APPROACH

Bridge No: 911021

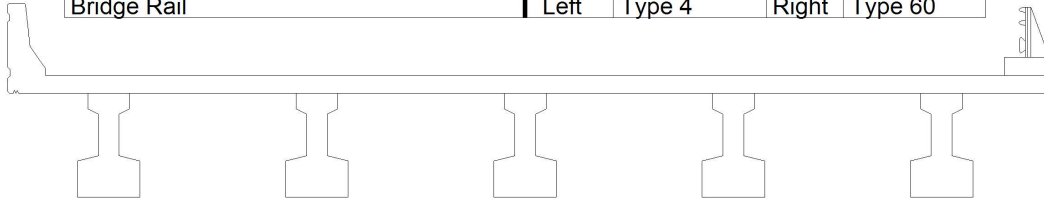
Drawn By: TFM

Date: 7/7/2009

File Name: S0006002805

Bridge Inspection Field Sketch

Deck Width/Out to Out	47.25ft	Between Rails	44.33ft
Clear Roadway	39.5ft	Wearing Surface	
Median Width		Median Height	
Curb Height		Left	Right 0.5ft
Sidewalk Width		Left	Right 4.83ft
Clear Roadway (Rail to Median)		Left	Right
Guardrail Width		Left 1.42ft	Right 1.33ft
Top of Rail to Deck/Wearing Surface		Left 2.67ft	Right 3.5ft
Bridge Rail		Left Type 4	Right Type 60

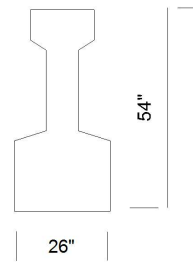


Measurements for Span #	1	SPAN 2 SIMILAR	
Deck Thickness	0.7	Left Overhang	3.25
Top of Rail to Bottom of Beam	8.5 (LT)	Right Overhang	3.16

Beam Number	Beam Type	Spacing	Comments
1	PPC Girder	10.21ft	TYPE 4 GIRDERS
2	PPC Girder	10.21ft	TYPE 4 GIRDERS
3	PPC Girder	10.21ft	TYPE 4 GIRDERS
4	PPC Girder	10.21ft	TYPE 4 GIRDERS
5	PPC Girder	ft	TYPE 4 GIRDERS

Top of Rail to Bottom of Beam = 10.041 (RT)

TYP GIRDER



VERIFIED BY ZK ON 7/15/21

Title
SUPERSTRUCTURE-1

Description
TYPICAL SECTION, SPANS 1-2

Bridge No: 911021

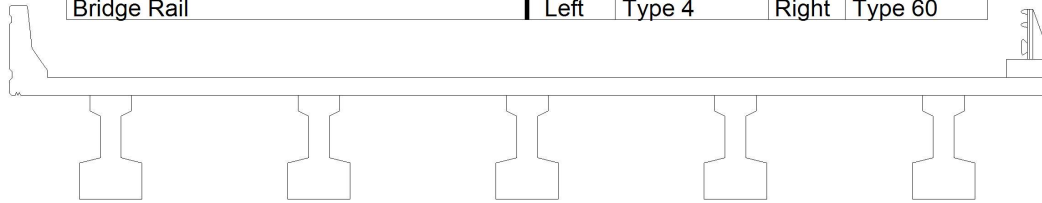
Drawn By: TFM

Date: 7/7/2009

File Name: S0006002806

Bridge Inspection Field Sketch

Deck Width/Out to Out	47.25ft	Between Rails	44.33ft
Clear Roadway	39.5ft	Wearing Surface	
Median Width		Median Height	
Curb Height		Left	Right 0.5ft
Sidewalk Width		Left	Right 4.83ft
Clear Roadway (Rail to Median)		Left	Right
Guardrail Width		Left 1.42ft	Right 1.33ft
Top of Rail to Deck/Wearing Surface		Left 2.67ft	Right 3.5ft
Bridge Rail		Left Type 4	Right Type 60

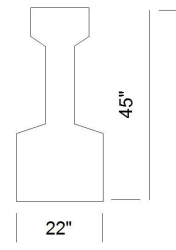


Measurements for Span #	3	SPAN 4 SIMILAR	
Deck Thickness	0.7	Left Overhang	3.25
Top of Rail to Bottom of Beam	7.58(LT)	Right Overhang	3.16

Beam Number	Beam Type	Spacing	Comments
1	PPC Girder	10.21ft	
2	PPC Girder	10.21ft	
3	PPC Girder	10.21ft	
4	PPC Girder	10.21ft	
5	PPC Girder	ft	

Top of Rail to Bottom of Beam = 9.12(RT)

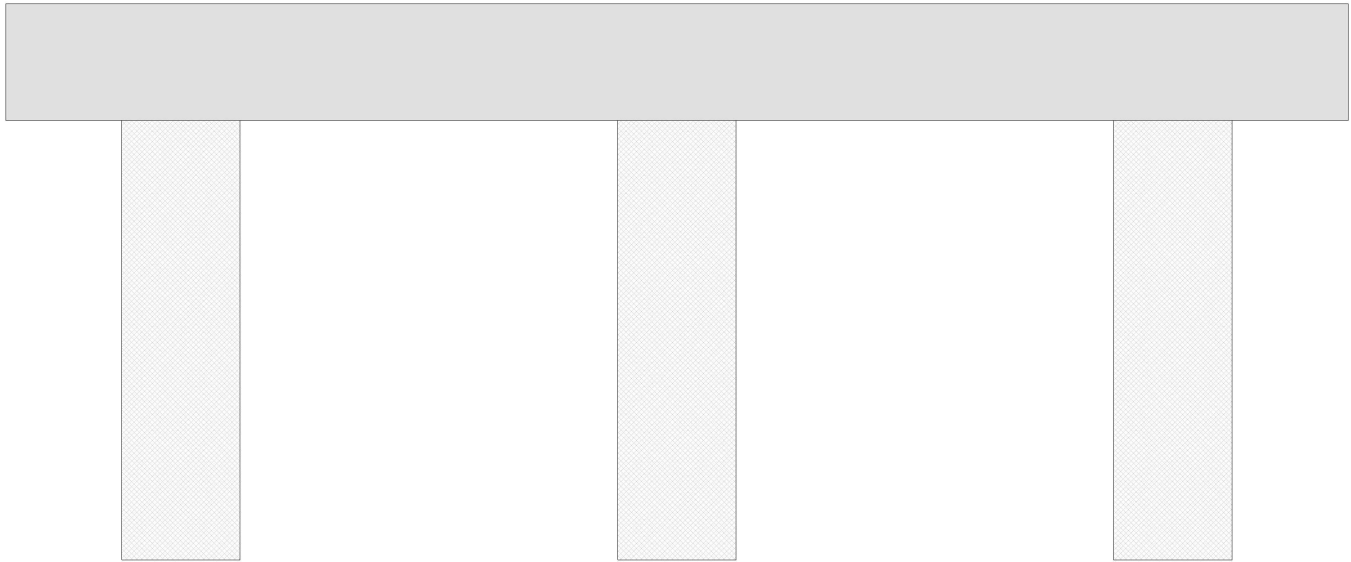
TYP GIRDER



VERIFIED BY ZK ON 7/15/21

Title SUPERSTRUCTURE-2	Description TYPICAL SECTION, SPANS 3-4
Bridge No: 911021	Drawn By: RJF
Date: 7/20/2015	File Name: S0598000122

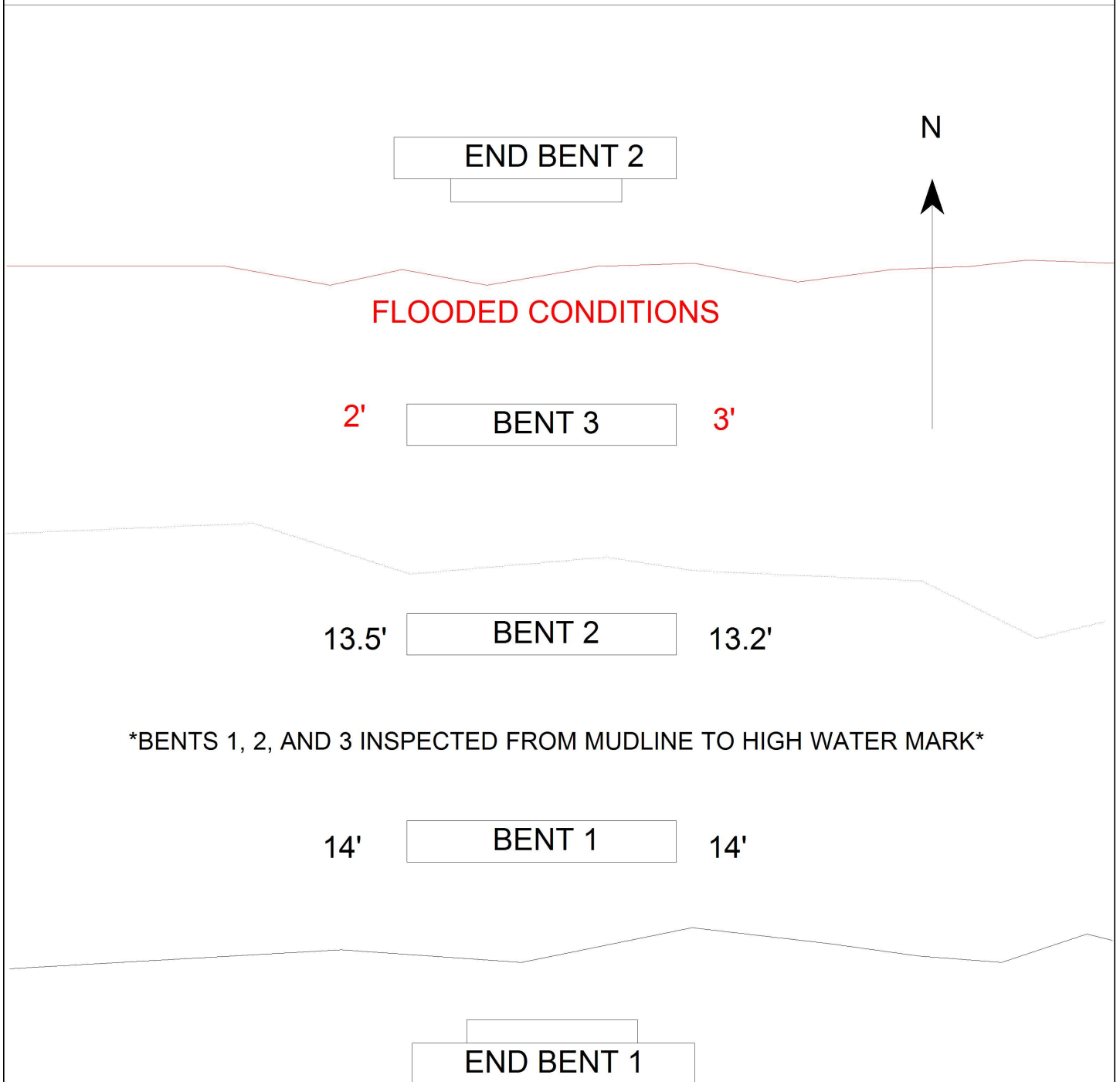
Bridge Inspection Field Sketch



Cap Information			Material Cast-in-Place Concrete							
Length	Width	Height	Left Overhang	Right Overhang	Left Beam to End of Cap.	Right Beam to End of Cap.				
45.333 ft.	4.160 ft.	4.164 ft.	6.000 ft.	6.000 ft.	2.250 ft.	2.250 ft.				
Subcap Information			Material							
Length	Width	Height	Left Overhang	Right Overhang	Left Pile to Splice.					
Sill Information			Material							
Length	Width	Height								
Pile #	Material	Spacing	Width/Dia.	Height	Length	Orientation	Driven?	Replacement?	Removed?	Collar?
1	Concrete	16.67 ft.	4 ft.			Vertical	No	No	No	No
2	Concrete	16.67 ft.	4 ft.			Vertical	No	No	No	No
3	Concrete		4 ft.			Vertical	No	No	No	No
VERIFIED BY ZK ON 7/15/21										
Bent/Abutment #: 1			Similar Bents: 2 and 3							

Title SUBSTRUCTURE-1				Description BENTS 1&2 PROFILE			
Bridge No: 911021	Drawn By: RJF	Date: 7/20/2015	File Name: S0598000123				

Bridge Inspection Field Sketch



BENTS 1, 2, AND 3 INSPECTED FROM MUDLINE TO HIGH WATER MARK

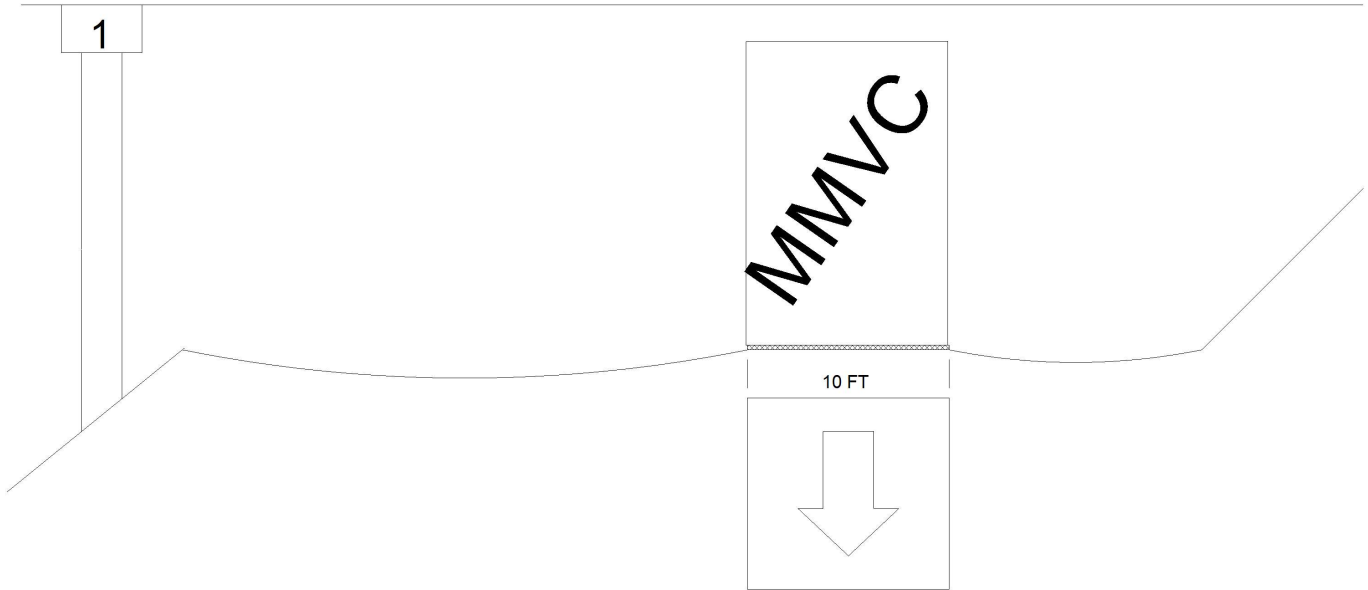
WATER SURFACE: 17.9FT @ BENT 1 EAST SIDE
 BOTTOM COMP: SAND, CLAY W/1FT PROBE

MODIFIED BY JM MCCAULEY 3/2/2021

Title		Description	
PLAN VIEW		WATERWAY	
Bridge No: 911021	Drawn By: JCB	Date: 3/15/2017	File Name: S0158001334

Bridge Inspection Field Sketch

Span 1



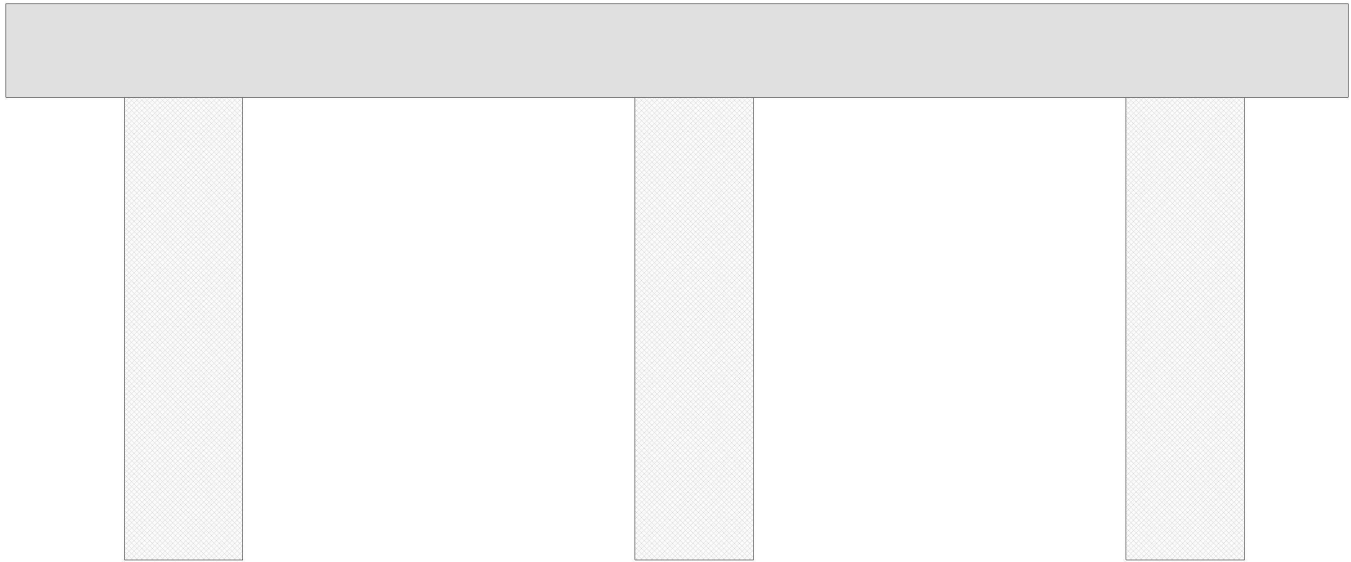
Roadway 1	10 FT	Direction of Traffic	East West
Distance to Left Rail		Distance to Right Rail	
Distance to Left Toe of Slope	28FT	Distance to Left Bent	42.25FT
Distance to Right Toe of Slope	12.5FT	Distance to Right Bent	
MMVC	8.5 Ft at Beam 5, 10FT FROM RIGHT EDGE OF TRAIL		
MVC	8.5 Ft at Beam 5, AT RIGHT EDGE OF TRAIL		

UPDATED CLEARANCE SKETCH CAN BE FOUND ON THE ELEMENTS PORTION OF THE REPORT - ZK 7/15/21

NO CHANGE: KEITH PROCTOR ON 18-JUL-2019

Title UNDERCLEARANCE-1		Description LOOKING EAST	
Bridge No: 911021	Drawn By: BT	Date: 7/19/2017	File Name: S0614000064

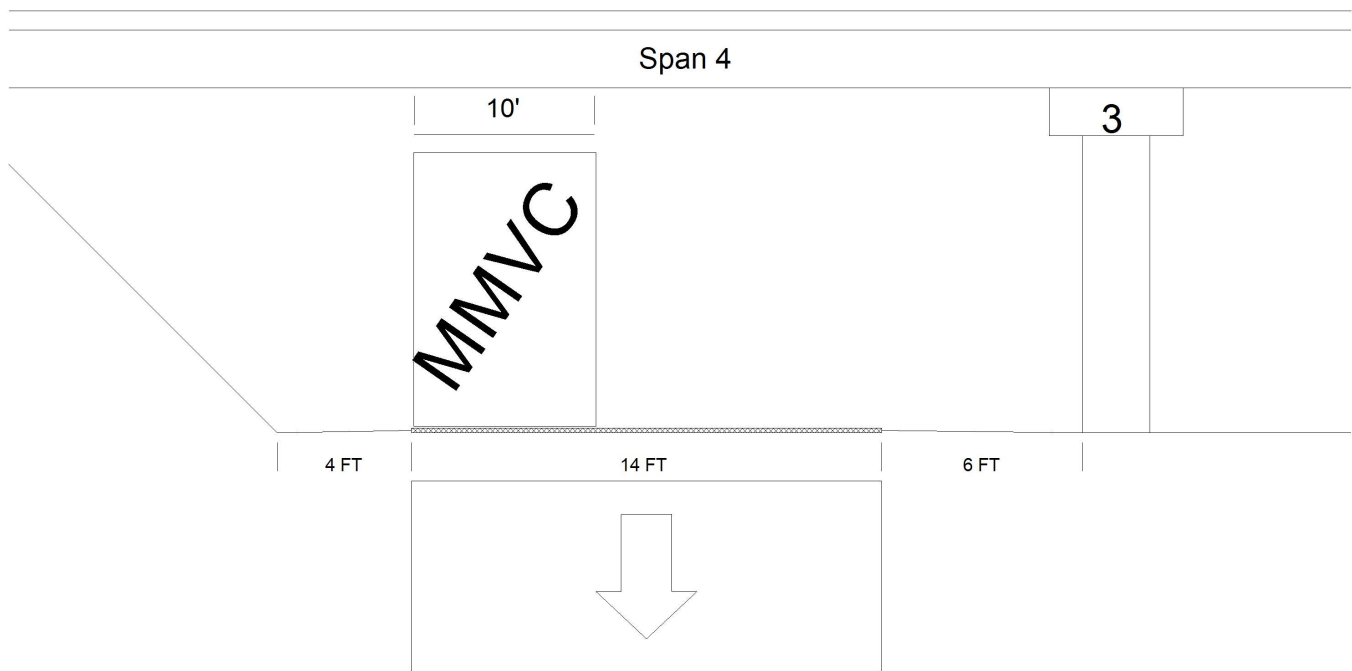
Bridge Inspection Field Sketch



Cap Information			Material Cast-in-Place Concrete							
Length	Width	Height	Left Overhang	Right Overhang	Left Beam to End of Cap.	Right Beam to End of Cap.				
45.333 ft.	4.167 ft.	3.167 ft.	6.000 ft.	5.500 ft.	2.250 ft.	2.250 ft.				
Subcap Information			Material							
Length	Width	Height	Left Overhang	Right Overhang	Left Pile to Splice.					
Sill Information			Material							
Length	Width	Height								
Pile #	Material	Spacing	Width/Dia.	Height	Length	Orientation	Driven?	Replacement?	Removed?	Collar?
1	Concrete	17.25 ft.	4 ft.			Vertical	No	No	No	No
2	Concrete	16.583 ft.	4 ft.			Vertical	No	No	No	No
3	Concrete		4 ft.			Vertical	No	No	No	No
VERIFIED BY ZK ON 7-15-21										
Bent/Abutment #: 3			Similar Bents:							

Title SUBSTRUCTURE-2				Description BENT 3 PROFILE			
Bridge No: 911021	Drawn By: BT	Date: 7/20/2017	File Name: S0614000066				

Bridge Inspection Field Sketch



Roadway 1		Direction of Traffic	East West
Distance to Left Rail		Distance to Right Rail	
Distance to Left Toe of Slope	4FT	Distance to Left Bent	
Distance to Right Toe of Slope		Distance to Right Bent	6FT
MMVC	11.33 Ft at Beam 1, 10 FT from LT EDGE OF CONSTRUCTION ROAD		
MVC	11.33 Ft at Beam 1, 11FT FROM LT TOE OF SLOPE		

UPDATED CLEARANCE SKETCH CAN BE FOUND ON THE ELEMENTS PORTION OF THE REPORT - ZK 7/15/21

Title UNDERCLEARANCE-2		Description VERTICAL CLEARANCE, SPAN 4	
Bridge No: 911021	Drawn By: ERIC A. PATTERSON	Date: 7/25/2019	File Name: S0438000285