NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STRUCTURE MANAGEMENT UNIT

ATTENTION: PAR Submitted, Newly structure deficient, Change to structure data

Structure Safety Report

Routine Element Inspection - Contract

INSPECTION DATE: 05/05/2021

DIVISION: 10 **COUNTY:** CABARRUS **STRUCTURE NUMBER:** 120057 **FREQUENCY:** 24 MONTHS

FACILITY CARRIED: US29 & US601 NBL **MILE POST:**

LOCATION: 0.1 MI. N. JCT. SR1394

FEATURE INTERSECTED: IRISH BUFFALO CREEK

LATITUDE: 35° 24' 54.37" **LONGITUDE:** 80° 36' 48.02"

SUPERSTRUCTURE:

SUBSTRUCTURE:

SPANS: 3 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** 7 / 7 **SUBSTRUCTURE** 4 / 4 **CULVERT** N / N

POSTED SV: Not Posted **POSTED TTST:** Not Posted

OTHER SIGNS PRESENT: NONE

looking north

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

DIRECTION OF INSPECTION S-N

DIRECTION MATCHES PLANS NO PLANS

INSPECTED BY	SIGNATURE	ASSISTED BY
Thomas Graham, PE		M. Ferguson

NATIONAL BRIDGE INVENTROY ----- STRUCTURE INVENTORY AND APPRAISAL

06/23/2021

IDENTIFICATION

(1) STATE NAME	NORTH CAROLINA	BRIDGE	120057
(8) STRUCTURE NUMBER (FEDERAL)			0250057
(5) INVENTORY ROUTE (ON/UNDER)	ON		121000290
(2) STATE HIGHWAY DEPARTMENT DISTRICT			10
(3) COUNTY CODE (FEDERAL)	25	(4) PLACE CODE	14100
(6) FEATURE INTERSECTED	IRISH BUFFALO CREEK		
(7) FACILITY CARRIED	US29 & US601 NBL		
(9) LOCATION	0.1 MI. N. JCT. SR1394		
(11) MILEPOINT			0.0
(12) BASE HIGHWAY NETWORK			1
(13) LRS INVENTORY ROUTE & SUBROUTE			20029
(16) LATITUDE	35° 24' 54.37"	(17) LONGITUDE	80° 36' 48.02"
(98) BORDER BRIDGE STATE CODE		PERCENT SHARED	
(99) BORDER BRIDGE STRUCTURE NUMBER			

STRUCTURE TYPE AND MATERIAL

(43) STRUCTURE TYPE MAIN			Concrete
TYPE	Tee Beam	CODE	104
(44) STRUCTURE TYPE APPROACH			
TYPE		CODE	
(45) NUMBER OF SPANS IN MAIN UNIT			3
(46) NUMBER OF SPANS IN APPROACH			0
(107) DECK STRUCTURE TYPE		CODE	1
(108)WEARING SURFACE/PROTECTIVE SYSTEM			
(A) TYPE OF WEARING SURFACE		CODE	6
(B) TYPE OF MEMBRANE		CODE	0
(C) TYPE OF DECK PROTECTION		CODE	0

AGE AND SERVICE

(27) YEAR BUILT			1951
(106) YEAR RECONSTRUCTED			0
(42) TYPE OF SERVICE ON -			Highway
OFF -	Waterway	CODE	15
(28) LANES ON STRUCTURE	2	LANES UNDER STRUCTURE	0
(29) AVERAGE DAILY TRAFFIC			14750
(30) YEAR OF ADT	2018	(109) TRUCK ADT PCT	12
(19) BYPASS OR DETOUR LENGTH			1.0

GEOMETRIC DATA

(48) LENGTH OF MAXIMUM SPAN			56.0
(49) STRUCTURE LENGTH			172.0
(50) CURB OR SIDEWALK: LEFT	1.6	RIGHT	1.6
(51) BRIDGE ROADWAY WIDTH, CURB TO CURB			28.1
(52) DECK WIDTH OUT TO OUT			33.3
(32) APPROACH ROADWAY WITH (W/ SHOULDERS)			27.0
(33) BRIDGE MEDIAN	Open median	CODE	1
(34) SKEW	45	(35) STRUCTURE FLARED	0
(10) INVENTORY ROUTE MIN VERT CLEAR			999.9
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR			28.0
(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

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

SUFFICIENCY RATING	49.29
STATUS =	Structurally Deficient

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	The right structure of parallel bridges	R
(102) DIRECTION OF TRAFFIC	1-way traffic	1
(103) TEMPORARY STRUCTURE		
(110) DESIGNATED NATIONAL NETWORK -	on natiional network for trucks	1
(20) TOLL	On Free Road	3
(21) MAINT -		01
(22) OWNER -		01
(37) HISTORICAL SIGNIFICANCE -		5

CONDITION

	CODE
(58) DECK	7
(59) SUPERSTRUCTURE	7
(60) SUBSTRUCTURE	4
(61) CHANNEL & CHANNEL PROTECTION	5
(62) CULVERTS	N

LOAD RATING AND POSTING

		CODE
(31) DESIGN LOAD	HS20	5
(63) OPERATING RATING METHOD -	Load Factor	1
(64) OPERATING RATING -	HS-32	58
(65) INVENTORY RATING METHOD -		1
(66) INVENTORY RATING	HS-19	35
(70) BRIDGE POSTING	No Posting Required	5
(41) STRUCTURE OPEN, POSTED, OR CLOSED		A
DESCRIPTION	Open, no restriction	

APPRAISAL

	CODE
(67) STRUCTURAL EVALUATION	4
(68) DECK GEOMETRY	2
(69) UNDERCLEARANCES, VERT & HORIZ	N
(71) WATERWAY ADEQUACY	4
(72) APPROACH ROADWAY ALIGNMENT	2
(36) TRAFFIC SAFETY FEATURES	0111
(113) SCOUR CRITICAL BRIDGES	8

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 29,500	YEAR OF FUTURE ADT 2040

INSPECTION

(90) INSPECTION DATE	05/21	(91) FREQUENCY	24
(92) CRITICAL FEATURE INSPECTION		(93) CFI DATE	
A) FRACTURE CRIT DETAIL		A)	
B) UNDERWATER INSP		B)	
C) OTHER SPECIAL INSP		C)	
SCOUR			

Superstructure Build Details

Span Number 1 **Span Length** 57.3330 **Skew** 135.0000

Number of Items	Type of Component	Element Name	Quantity	Protective System Applied	Quantity (Sq Ft)
2	Concrete Railing	Reinforced Concrete Bridge Railing	116 Feet		
1	Asphalt Wearing Surface	Wearing Surface	1606 Square Feet		
1	Reinforced Concrete Deck	Reinforced Concrete Deck	1907 Square Feet		
4	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	232 Feet		

Span Number 2 **Span Length** 57.1670 **Skew** 135.0000

Number of Items	Type of Component	Element Name	Quantity	Protective System Applied	Quantity (Sq Ft)
4	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	232 Feet		
2	Concrete Railing	Reinforced Concrete Bridge Railing	116 Feet		
1	Asphalt Wearing Surface	Wearing Surface	1601 Square Feet		
1	Reinforced Concrete Deck	Reinforced Concrete Deck	1901 Square Feet		

Span Number 3 **Span Length** 57.3330 **Skew** 135.0000

Number of Items	Type of Component	Element Name	Quantity	Protective System Applied	Quantity (Sq Ft)
4	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	232 Feet		
1	Reinforced Concrete Deck	Reinforced Concrete Deck	1907 Square Feet		
1	Asphalt Wearing Surface	Wearing Surface	1606 Square Feet		
2	Concrete Railing	Reinforced Concrete Bridge Railing	116 Feet		

Structure Element Scoring

Structure Number: **120057**

Inspection Date **5/5/2021**

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	5715	5692	0	23	0
110	0	Reinforced Concrete Open Girder/Beam	Beam	696	680	9	7	0
205	0	Reinforced Concrete Column	Piles and Columns	6	0	3	2	1
215	0	Reinforced Concrete Abutment	Abutments	104	92	2	10	0
228	0	Timber Pile	Piles and Columns	18	18	0	0	0
234	0	Reinforced Concrete Pier Cap	Caps	188	143	10	25	10
331	0	Reinforced Concrete Bridge Railing	Bridge Rail	348	333	3	12	0
510	0	Wearing Surface	Wearing Surfaces	4813	4673	0	140	0

Summary of Maintenance Needs

Maintenance By Defect

Structure Number: **120057** Inspection Date: **05/05/2021**

MMS Code	Element Name	Defect Name	Recommended Quantity
3326	Reinforced Concrete Deck	Delamination/Spall	23 Square Feet
3306	Reinforced Concrete Open Girder/Beam	Cracking (RC and Other)	3 Feet
3306	Reinforced Concrete Open Girder/Beam	Delamination/Spall	8 Feet
3348	Reinforced Concrete Column	Cracking (RC and Other)	23 Each
3348	Reinforced Concrete Column	Delamination/Spall	5 Each
3350	Reinforced Concrete Abutment	Cracking (RC and Other)	10 Feet
3348	Reinforced Concrete Pier Cap	Cracking (RC and Other)	20 Feet
3348	Reinforced Concrete Pier Cap	Delamination/Spall	18 Feet
3318	Reinforced Concrete Bridge Railing	Delamination/Spall	14 Feet
3318	Reinforced Concrete Bridge Railing	Exposed Rebar	1 Feet
3318	Reinforced Concrete Bridge Railing	Damage	290 Feet
2816	Wearing Surface	Crack (Wearing Surface)	140 Square Feet

Element Structure Maintenance Quantities

Structure Number: **120057** Inspection Date **05/05/2021**

Location	MMS Code	Description	Maint Quantity	Total Quantity	Severe Quantity	Poor Quantity	Fair Quantity	Good Quantity
Abutments	3350	Maintenance of Concrete Wings and Wall	10	104	0	10	2	92
Beam	3306	Maintenance Concrete Superstructure Components	11	696	0	7	9	680
Bridge Rail	3318	Maintenance of Concrete Bridge Rail	15	348	0	12	3	333
Caps	3348	Maintenance of Concrete Substructure	38	188	10	25	10	143
Deck	3326	Maintenance of Concrete Deck	23	5715	0	23	0	5692
Piles and Columns	3344	Maintenance To Timber Substrcutre	0	18	0	0	0	18
Piles and Columns	3348	Maintenance of Concrete Substructure	28	6	1	2	3	0
Wearing Surfaces	2816	Asphalt Surface Repair	140	4813	0	140	0	4673

Priority Actions Request

Structure Number 120057

Bent 1

3348 **Cap 1** Reinforced Concrete Pier Cap

Priority Level	Defect Type	Quantity	Defect Description
2	Delamination/Spall	5	Bent 1 Cap 1: [PAR] SOUTH FACE AT GIRDER 4, SPALLING WITH EXPOSED REBAR [5' x up to full height x up to 8" deep] WITH APPROXIMATELY 20% LOSS OF BEARING AREA, NO MEASURABLE SECTION LOSS

3348 **Pile 1** Reinforced Concrete Column

Priority Level	Defect Type	Quantity	Defect Description
2	Delamination/Spall	5	Bent 1 Pile 1: [PAR] North face, approximately 3' below cap, spall [32" x 4" x 1" deep] with exposed rusted reinforcing with no measurable section loss

3348 **Cap 1** Reinforced Concrete Pier Cap

Priority Level	Defect Type	Quantity	Defect Description
2	Delamination/Spall	3	End Bent 1 Cap 1: [PAR] LEFT OUTBOARD END AT THE TOP EXTENDING TO GIRDER 1, SPALLING WITH EXPOSED REBAR, DELAMINATION AND HORIZONTAL CRACKING TO 1/4" WIDE [APPROXIMATELY 3' LONG X UP TO 1' WIDE X UP TO 3" DEEP] WITH FLAKING RUST AND PITTING UP TO 1/16" DEEP, APPROXIMATELY 5% LOSS OF BEARING AREA

Bent 2

3348 **Cap 1** Reinforced Concrete Pier Cap

Priority Level	Defect Type	Quantity	Defect Description
2	Delamination/Spall	5	Bent 2 Cap 1: [PAR] north face at bay 2, spall (5' x 10" x 1.75") with exposed rusted rebar [section loss up to 1/8"]

? Priority Action Request (PAR) 1 Assigned Routine Maintenance 2 Assigned Priority Maintenance 3 Assigned Critical Find

Element Condition and Maintenance Data

Structure Number: **120057** Inspection Date: **05/05/2021**

Span 1 Deck

Reinforced Concrete Deck

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
12	Reinforced Concrete Deck	1,907	1,906	0	1	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
12	**Delamination/Spall**	**underside west overhang at 3' from end bent 1, SPALLING WITH EXPOSED REBAR [APPROXIMATELY 8" DIAMETER X UP TO 1" DEEP], NO MEASURABLE SECTION LOSS**	3	1	1	Square Feet

General Comments

Span 1 Beam 1

Reinforced Concrete Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
110	Reinforced Concrete Open Girder/Beam	58	58	0	0	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
110	**Cracking (RC and Other)**	**east face scattered throughout at random, vertical cracks (up to 2' x hairline) (west face similar)**	1	6		Feet

General Comments

Span 1 Beam 2

Reinforced Concrete Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
110	Reinforced Concrete Open Girder/Beam	58	58	0	0	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
110	**Cracking (RC and Other)**	**east face scattered throughout at random, vertical cracks (up to 2' x hairline) (west face similar)**	1	6		Feet

General Comments

Span 1 Beam 3

Reinforced Concrete Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
110	Reinforced Concrete Open Girder/Beam	58	58	0	0	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
110	**Cracking (RC and Other)**	**east face scattered throughout at random, vertical cracks (up to 2ft x hairline) (west face similar)**	1			Feet

General Comments

Span 1 — Beam 4

Reinforced Concrete Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
110	Reinforced Concrete Open Girder/Beam	58	57	1	0	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
110	**Delamination/Spall**	**left face at bent 1, delamination [8" x 16"]**	2	1	1	Feet
110	**Cracking (RC and Other)**	**east face scattered throughout at random, vertical cracks (up to 2' x hairline) (west face similar)**	1	6		Feet

General Comments

Span 1 — Wearing Surface

Asphalt Wearing Surface

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
510	Wearing Surface	1,606	1,536	0	70	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
510	**Crack (Wearing Surface)**	**AT THE SPAN ENDS, SCATTERED TRANSVERSE CRACKING UP TO 1" WIDE**	3	70	70	Square Feet

General Comments

Span 1 — Right Bridge Rail

Concrete Railing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
331	Reinforced Concrete Bridge Railing	58	55	0	3	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
331	**Delamination/Spall**	**near bent 1, (3) spalls (up to 15" x 5" x 1") with exposed rusted rebar, [loss up to 1/8"]**	3	3	3	Feet
331	Damage	at bent 1, misaligned/out of plane (3/4in)	1			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	1,901	1,887	0	14	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
12	**Delamination/Spall**	**underside east overhang at bent 1, spalls (up to 1' x 8" x 1") with exposed rusted rebar, NO MEASURABLE SECTION LOSS**	3	9	9	Square Feet
12	**Delamination/Spall**	**underside east overhang at bent 2, spalls (up to 10" diameter x 1") with exposed rusted rebar, NO MEASURABLE SECTION LOSS**	3	5	5	Square Feet

General Comments

Span 2 Beam 1

Reinforced Concrete Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
110	Reinforced Concrete Open Girder/Beam	58	52	4	2	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
110	**Delamination/Spall**	**GIRDER END AT BENT 1, LEFT SIDE AT THE TOP, SPALL WITH EXPOSED REBAR [APPROXIMATELY 18" DIAMETER X UP TO 3/4" DEEP], NO MEASURABLE SECTION LOSS. adjacent delamination [2'l x up to 18" high]**	3	2	3	Feet
110	**Cracking (RC and Other)**	**east face scattered throughout at random, vertical cracks (up to full height x 0.15") (west face similar)**	2	4		Feet

General Comments

Span 2 Beam 2

Reinforced Concrete Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
110	Reinforced Concrete Open Girder/Beam	58	56	0	2	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
110	**Delamination/Spall**	**west face at bent 1, spall (18" x 6" x 1/2" deep) with exposed rusted rebar; delamination [16" x 16"]**	3	2	2	Feet
110	**Cracking (RC and Other)**	**east face scattered throughout at random, vertical cracks (up to full height x less than 0.012") (west face similar)**	1	6		Feet

General Comments

Span 2 Beam 3

Reinforced Concrete Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
110	Reinforced Concrete Open Girder/Beam	58	58	0	0	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
110	**Cracking (RC and Other)**	**east face scattered throughout at random, vertical cracks (up to 2' x hairline) (west face similar)**	1	6		Feet

General Comments

Span 2 Beam 4

Reinforced Concrete Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
110	Reinforced Concrete Open Girder/Beam	58	57	0	1	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
110	**Delamination/Spall**	**west face at bent 1, spall (15in x 3in x 1/2in) with exposed rusted rebar**	3	1	2	Feet
110	**Cracking (RC and Other)**	**east face scattered throughout at random, vertical cracks (up to full height x less than 0.012") (west face similar)**	1	7		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	58	54	1	3	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
331	**Delamination/Spall**	**exterior face at 13ft from bent 1, (3) spalls (up to 15" x 4" x 1") with exposed rusted rebar, NO MEASURABLE SECTION LOSS**	3	3	3	Feet
331	**Exposed Rebar**	**at 16' from bent 1, [1] exposed rusted reinforcing**	2	1	1	Feet
331	**Patched Area**	**at 18ft from bent 2, repair area (2ft x full height)**	1			Square Feet

General Comments

Span 2 — Right Bridge Rail

Concrete Railing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
331	Reinforced Concrete Bridge Railing	58	55	0	3	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
331	**Delamination/Spall**	**base of posts at 10' from bent 1, (3) spalls (up to 8" x full length x 3" DEEP) with exposed rusted rebar. CKG TO 1/8" WIDE EMANATES FROM THE IMPACTED AREAS. THE REBAR ON ONE UPRIGHT HAS APPROXIMATELY 50% SECTION LOSS.**	3	3	3	Feet

General Comments

at bent 2, misaligned/out of plane (1.5")

Span 3 — Deck

Reinforced Concrete Deck

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
12	Reinforced Concrete Deck	1,907	1,899	0	8	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
12	**Delamination/Spall**	**underside east overhang at midspan, (3) spalls (up to 8" x 4" x 1") with exposed rusted rebar, NO MEASURABLE SECTION LOSS**	3	3	3	Square Feet
12	**Delamination/Spall**	**underside west overhang scattered throughout at deck drains, spalls (up to 10" x 6" x 1") with exposed rusted rebar, NO MEASURABLE SECTION LOSS**	3	5	5	Square Feet

General Comments

Span 3 — Beam 1

Reinforced Concrete Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
110	Reinforced Concrete Open Girder/Beam	58	54	4	0	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
110	**Cracking (RC and Other)**	**along exterior face multiple vertical and diagonal cracks (full height x 0.02")**	2	4		Feet
110	**Cracking (RC and Other)**	**east face scattered throughout at random, vertical cracks (up to full height x less than 0.012") (west face similar)**	1	6		Feet

General Comments

Span 3 Beam 2

Reinforced Concrete Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
110	Reinforced Concrete Open Girder/Beam	58	57	0	1	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
110	**Cracking (RC and Other)**	**east face at bent 2, vertical crack (15" x up to 1/16")**	3	1	1	Feet
110	**Cracking (RC and Other)**	**east face scattered throughout at random, vertical cracks (up to full height x less than 0.012") (west face similar)**	1	6		Feet

General Comments

Span 3 Beam 3

Reinforced Concrete Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
110	Reinforced Concrete Open Girder/Beam	58	57	0	1	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
110	**Cracking (RC and Other)**	**at bent 2, vertical crack (15" x up to 1/16")**	3	1	2	Feet
110	**Cracking (RC and Other)**	**east face scattered throughout at random, vertical cracks (up to full height x less than 0.012") (west face similar)**	1			Feet

General Comments

Span 3 Beam 4

Reinforced Concrete Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
110	Reinforced Concrete Open Girder/Beam	58	58	0	0	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
110	**Cracking (RC and Other)**	**east face scattered throughout at random, vertical cracks (up to 2' x hairline) (west face similar)**	1			Feet

General Comments

Span 3 Wearing Surface

Asphalt Wearing Surface

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
510	Wearing Surface	1,606	1,536	0	70	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
510	**Crack (Wearing Surface)**	**AT THE SPAN ENDS, SCATTERED TRANSVERSE CRACKING UP TO 1" WIDE**	3	70	70	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	55	0	3	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
331	**Delamination/Spall**	**at midspan, (3) spalls (up to 10in x 4in x 1in) with exposed rusted rebar**	3	3	3	Feet

General Comments

Span 3 — Right 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	**Delamination/Spall**	**at 8' from end bent 2, (2) spalls (up to 6" x 4" x 1/2") with exposed rusted rebar, NO MEASURABLE SECTION LOSS**	2	2	2	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	52	50	2	0	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
215	Efflorescence/Rust Staining	at east end, diagonal crack (full height x hairline) with water stains	2	2		Feet

General Comments

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	42	20	0	17	5	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
234	**Delamination/Spall**	**[PAR] SOUTH FACE AT GIRDER 4, SPALLING WITH EXPOSED REBAR [5' x up to full height x up to 8" deep] WITH APPROXIMATELY 20% LOSS OF BEARING AREA, NO MEASURABLE SECTION LOSS**	4	5	5	Feet
234	**Cracking (RC and Other)**	**CAP FACES, SCATTERED HORIZONTAL CRACKING AND MAP CRACKING UP TO 1/16"**	3	14	14	Feet
234	**Cracking (RC and Other)**	**east face, map cracking (full height x full width x 1/8")**	3		1	Feet
234	**Delamination/Spall**	**SOUTH FACE AT GIRDER 2, SCATTERED SPALLING WITH EXPOSED REBAR [UP TO 8" X 4" X 3"], NO MEASURABLE SECTION LOSS, NO BEARING UNDERMINING**	3	3	3	Feet

General Comments

Bent 1 — Pile 1

Reinforced Concrete Column

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

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
205	**Delamination/Spall**	**[PAR] North face, approximately 3' below cap, spall [32" x 4" x 1" deep] with exposed rusted reinforcing with no measurable section loss**	4	1	5	Each
205	**Cracking (RC and Other)**	**SCATTERED THROUGHOUT, MAP CRACKING UP TO 1/16" WIDE**	3		6	Each

General Comments

Bent 1 — 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	**Cracking (RC and Other)**	**far face at base, map cracking [up to 0.015" wide]**	3	1	1	Each

General Comments

Bent 1 — 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	**Cracking (RC and Other)**	**SCATTERED THROUGHOUT, MAP CRACKING UP TO 1/16" WIDE**	3	1	16	Each

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	52	49	0	3	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
234	**Delamination/Spall**	**[PAR] LEFT OUTBOARD END AT THE TOP EXTENDING TO GIRDER 1, SPALLING WITH EXPOSED REBAR, DELAMINATION AND HORIZONTAL CRACKING TO 1/4" WIDE [APPROXIMATELY 3' LONG X UP TO 1' WIDE X UP TO 3" DEEP] WITH FLAKING RUST AND PITTING UP TO 1/16" DEEP, APPROXIMATELY 5% LOSS OF BEARING AREA**	3	3	3	Feet

General Comments

Bent 2 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	42	35	2	0	5	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
234	**Delamination/Spall**	**[PAR] north face at bay 2, spall (5' x 10" x 1.75") with exposed rusted rebar [section loss up to 1/8"]**	4	5	5	Feet
234	**Delamination/Spall**	**north face under beam 2, (2) spalls (up to 4" x 5" x 1") with exposed rusted rebar, NO MEASURABLE SECTION LOSS**	2	2	2	Feet

General Comments

Bent 2 Pile 1

Reinforced Concrete Column

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

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
205	**Abrasion/Wear (PSC/RC)**	**AT THE WATERLINE, ABRASION**	2	1		Each
205	**Cracking (RC and Other)**	**south face near base, map cracking (3' x 4' x hairline)**	1			Each

General Comments

Bent 2 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	1	0	0	Each

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
205	**Abrasion/Wear (PSC/RC)**	**AT THE WATERLINE, ABRASION**	2	1		Each

General Comments

Bent 2 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	1	0	0	Each

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
205	**Abrasion/Wear (PSC/RC)**	**AT THE WATERLINE, ABRASION**	2	1		Each

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	52	42	0	10	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
215	**Cracking (RC and Other)**	**at west end, map cracking (5' x 3' x up to 1/8") (similar at east end) WITH EFFLORESCENCE STAINING**	3	10	10	Feet

General Comments

End Bent 2 — 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	52	39	8	5	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
234	**Cracking (RC and Other)**	**CAP FACE under beam 4, APPROXIMATELY 8" DOWN, horizontal crack (5' x up to 1/8")**	3	5	5	Feet
234	**Cracking (RC and Other)**	**under beam 3, (3) diagonal and horizontal cracks [up to 3' x 0.012"]**	2	8		Feet

General Comments

Elements Verfied

Location	Name	Component	Element Name	Amount
Span 1	Deck	Reinforced Concrete Deck	Reinforced Concrete Deck	1907
Span 1	Beam 1	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	58
Span 1	Beam 2	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	58
Span 1	Beam 3	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	58
Span 1	Beam 4	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	58
Span 1	Left Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	58
Span 1	Right Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	58
Span 1	Wearing Surface	Asphalt Wearing Surface	Wearing Surface	1606
Span 2	Deck	Reinforced Concrete Deck	Reinforced Concrete Deck	1901
Span 2	Beam 1	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	58
Span 2	Beam 2	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	58
Span 2	Beam 3	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	58
Span 2	Beam 4	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	58
Span 2	Left Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	58
Span 2	Right Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	58
Span 2	Wearing Surface	Asphalt Wearing Surface	Wearing Surface	1601
Span 3	Deck	Reinforced Concrete Deck	Reinforced Concrete Deck	1907
Span 3	Beam 1	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	58
Span 3	Beam 2	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	58
Span 3	Beam 3	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	58
Span 3	Beam 4	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	58
Span 3	Left Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	58
Span 3	Right Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	58
Span 3	Wearing Surface	Asphalt Wearing Surface	Wearing Surface	1606
Bent 1	Cap 1	Reinforced Concrete Pier Cap	Reinforced Concrete Pier Cap	42
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	52
End Bent 1	Abutment	Reinforced Concrete Abutment	Reinforced Concrete Abutment	52
Bent 2	Cap 1	Reinforced Concrete Pier Cap	Reinforced Concrete Pier Cap	42
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	Reinforced Concrete Pier Cap	Reinforced Concrete Pier Cap	52
End Bent 2	Abutment	Reinforced Concrete Abutment	Reinforced Concrete Abutment	52

General Inspection Notes

National Bridge and NC Inspection Items

Structure Number: 120057 **Inspection Date:** 05/05/2021

National Bridge Inventory Items

Item	Grade Scale	Grade
Item 58: Deck	0 - 9 , N	**7**
Item 59: Superstructure	0 - 9 , N	**7**
Item 60: Substructure	0 - 9 , N	**4**
Item 61: Channel and Channel Protection	0 - 9 , N	**5**
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**	**5700**	**3376**
Drainage System	G, F, P, or C	**F**	**20**	**3332**
Utilities	G, F, P, or C			
Slope Protection	G, F, P, or C	**G**	**0**	**3352**
Scour	G, F, P, or C	**F**		
Wingwall	G, F, P, or C	**F**	**6**	**3350**
Field Scour Evaluation		**L**		
Drift	G, F, P, or C	**F**	**20**	**3366**
Fender System	G, F, P, or C			
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 Insepction 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	
Snooper Time	Hours	
Ladder Used	YES/NO	**Y**
Bucket Truck Used	YES/NO	**N**
Boat Used	YES/NO	**N**
Other Equipment Used	YES/NO	**Y**
Portion of Structure in > 3' of water	YES/NO	**N**

National Bridge and NC SMU Inspection Item Details

Structure Number: 120057 **Inspection Date:** 05/05/2021

Item	Deck - Item 58	**Grade**	7	**Maint Code**		**Qty.**	0
Details	reinforced concrete rails/curbs: the rails and curbs are weathered throughout with exposed coarse aggregate						
Item	Substructure - Item 60	**Grade**	4	**Maint Code**		**Qty.**	0
Details	widespread spalling and exposed reinforcing with section loss and loss of bearing area, wide cracks in pier caps and solid stem pier walls						
Item	Channel and Channel Protection - Item 61	**Grade**	5	**Maint Code**		**Qty.**	0
Details	no slope protection in place with extensive streambank scour adjacent to interior piers						
Item	Other Equipment Used	**Grade**	Y	**Maint Code**		**Qty.**	0
Details	waders						
Item	Deck Debris	**Grade**	F	**Maint Code**	3376	**Qty.**	5700
Details	along both curblines, sand accumulation with clogged deck drains						
Item	Drainage System	**Grade**	F	**Maint Code**	3332	**Qty.**	20
Details	see deck debris						
Item	Drift	**Grade**	F	**Maint Code**	3366	**Qty.**	20
Details	drift in channel adjacent to the interior piers, up to 12" diameter						
Item	Scour	**Grade**	F	**Maint Code**		**Qty.**	0
Details	bent 2 near face from pile 2 to pile 3, localized scour along face [25' long x up to 6' wide x up to 2' deep]						
Item	Wingwalls	**Grade**	F	**Maint Code**	3350	**Qty.**	6
Details	Northwest corner, outboard end at the top, map cracking up to 1/16" wide with scaling to 0.5" deep						
Item	General Comments and Misc Items	**Grade**		**Maint Code**		**Qty.**	0
Details	extensive erosion on stream side of slope protection with gullies up to 5' deep						

Bent 1 Cap 1: [PAR] SOUTH FACE AT GIRDER 4, SPALLING WITH EXPOSED REBAR [5' x up to full height x up to 8' deep] WITH APPROXIMATELY 20% LOSS OF BEARING AREA, NO MEASURABLE SECTION LOSS

Bent 1 Pile 1: [PAR] North face, approximately 3' below cap, spall [32" x 4" x 1" deep] with exposed rusted reinforcing with no measurable section loss

End Bent 1 Cap 1: [PAR] LEFT OUTBOARD END AT THE TOP EXTENDING TO GIRDER 1, SPALLING WITH EXPOSED REBAR, DELAMINATION AND HORIZONTAL CRACKING TO 1/4" WIDE [APPROXIMATELY 3' LONG X UP TO 1' WIDE X UP TO 3" DEEP] WITH FLAKING RUST AND PITTING UP TO 1/16" DEEP, APPROXIMATELY 5% LOSS OF BEARING AREA

Bent 2 Cap 1: [PAR] north face at bay 2, spall (5' x 10" x 1.75") with exposed rusted rebar [section loss up to 1/8"]

Bent 2 Cap 1: [PAR] north face at bay 2, spall (5' x 10" x 1.75") with exposed rusted rebar [section loss up to 1/8"]

Bent 2 Cap 1: [PAR] north face at bay 2, spall (5' x 10" x 1.75") with exposed rusted rebar [section loss up to 1/8"]

deck debris

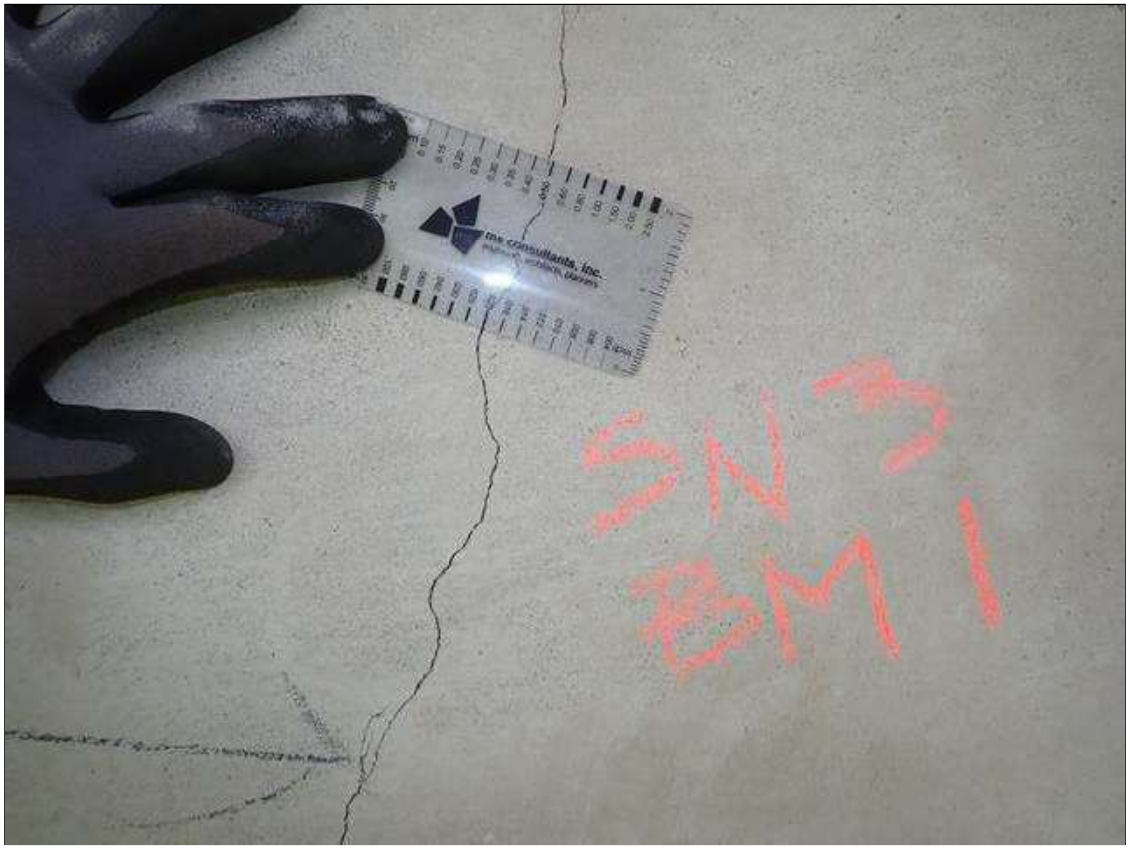
Span 1 Wearing Surface: AT THE SPAN ENDS, SCATTERED TRANSVERSE CRACKING UP TO 1" WIDE

Span 1 Right Bridge Rail: near bent 1, (3) spalls (up to 15" x 5" x 1") with exposed rusted rebar, [loss up to 1/8"]

Span 2 Deck: underside east overhang at bent 1, spalls (up to 1' x 8" x 1") with exposed rusted rebar, NO MEASURABLE SECTION LOSS

Span 2 Beam 1: GIRDER END AT BENT 1, LEFT SIDE AT THE TOP, SPALL WITH EXPOSED REBAR [APPROXIMATELY 18" DIAMETER X UP TO 3/4" DEEP], NO MEASURABLE SECTION LOSS. adjacent delamination [2'l x up to 18" high]

Span 2 Left Bridge Rail: exterior face at 13ft from bent 1, (3) spalls (up to 15" x 4" x 1") with exposed rusted rebar, NO MEASURABLE SECTION LOSS



Span 3 Beam 1: along exterior face multiple vertical and diagonal cracks (full height x 0.02")

Bent 1 Cap 1: east face, map cracking (full height x full width x 1/8")

bent 2 near face from pile 2 to pile 3, localized scour along face [25' long x up to 6' wide x up to 2' deep]

Stream Bed Soundings

(Profile diagram on following sheet)

County **CABARRUS** Structure Number: **120057** Inspection Date **05/05/2021**

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

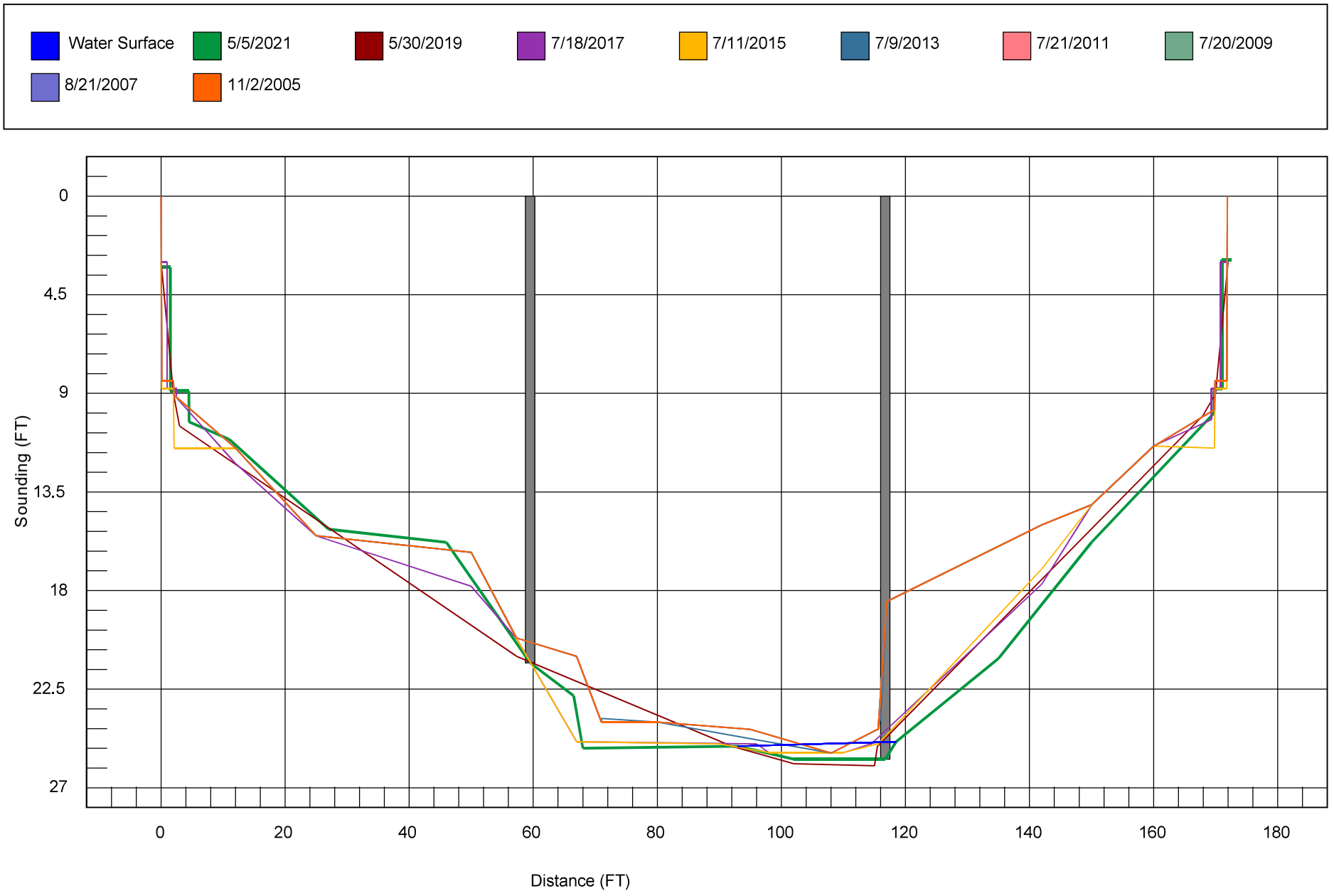
Highwater Mark Distance Location of Highwater Mark

Distance (Station) ft.	Downstream Sounding ft.	Upstream Sounding ft.	Description
0.000	3.250	0.000	fill face
1.500	3.250	0.000	face of backwall
1.510	8.900	0.000	cap at backwall
4.500	8.900	0.000	face of cap
4.510	10.300	9.400	ground at cap
11.000	11.100	0.000	slope
27.000	15.200	0.000	slope
46.000	15.800	0.000	slope
59.500	21.300	24.300	bent 1
66.500	22.800	0.000	slope
68.000	25.200	0.000	slope
93.000	25.100	0.000	wswe
102.000	25.700	25.400	streambed
116.750	25.700	25.400	bent 2
118.500	24.900	0.000	wswe
135.000	21.100	0.000	slope
150.000	15.800	0.000	slope
169.750	9.900	10.200	ground at cap
169.760	8.800	0.000	face of cap
170.990	8.800	0.000	cap at backwall
171.000	2.900	0.000	face of backwall
172.500	2.900	0.000	fill face

Bridge: 120057 County: CABARRUS Date: 05/05/2021

STREAMBED PROFILE (Downstream)

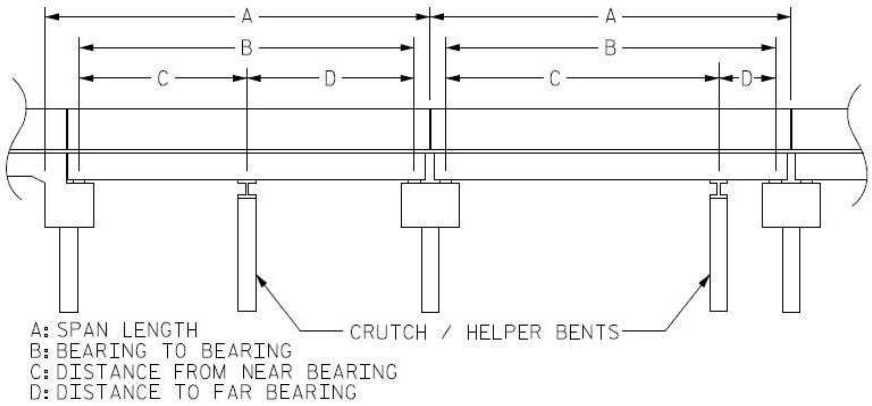
Top of Rail = 0FT (Sounding)



Structure Data Worksheet

Span Profile

County: **CABARRUS** Structure Number: **120057**



Span Number	Span Length	Bearing to Bearing	Crutch/ Helper Bent	Distance to Near Bearing	Distance to Far Bearing
1	57.333	55.330			
2	57.167	55.670			
3	57.333	55.330			

looking north

south approach roadway

looking upstream west from bridge

north appraoch roadway

looking south

left bridge rail

looking downstream east from bridge

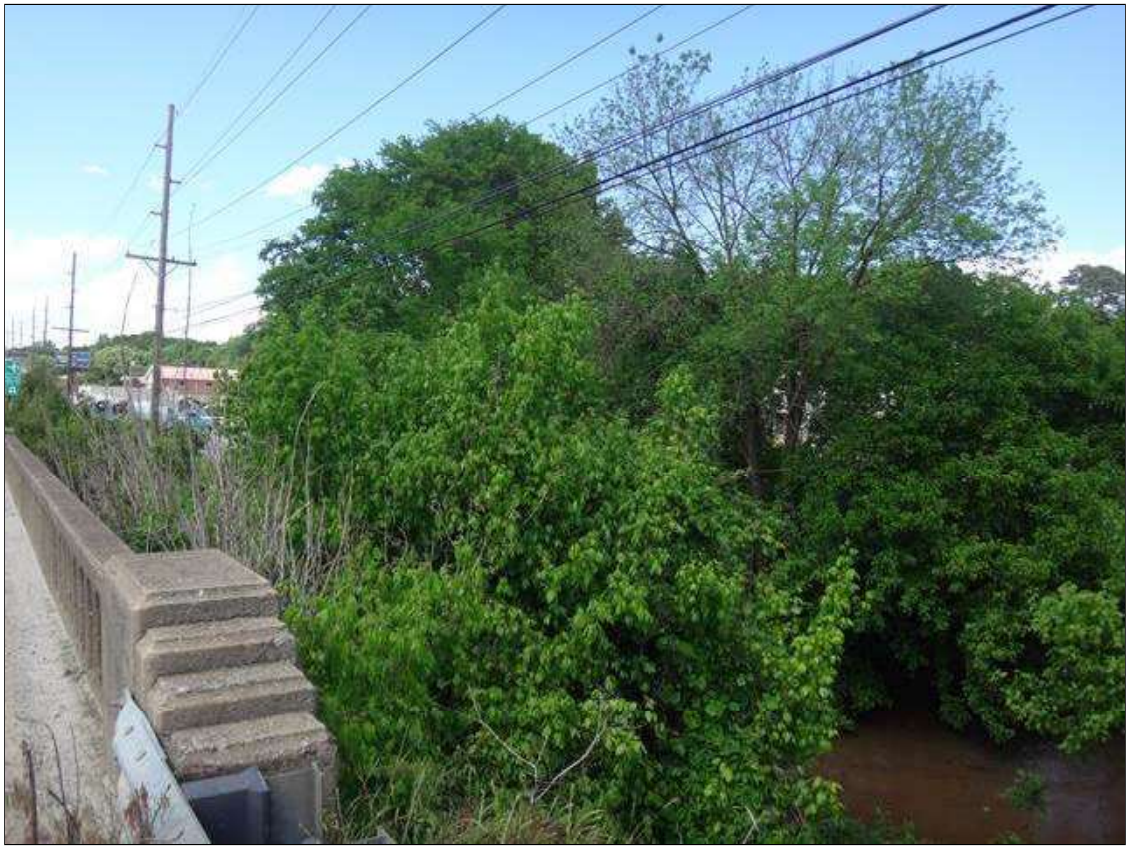
typical asphalt wearing surface

profile looking West

profile looking East

looking upstream from channel

looking downstream from channel



overhead utility at right shoulder

typical superstructure framing

typical deck drain

typical deck drain

typical underside of deck

typical interior diaphragm

typical end diaphragm

typical beam over interior bent

typical guardrail transition post spacing

Southeast guardrail continuous

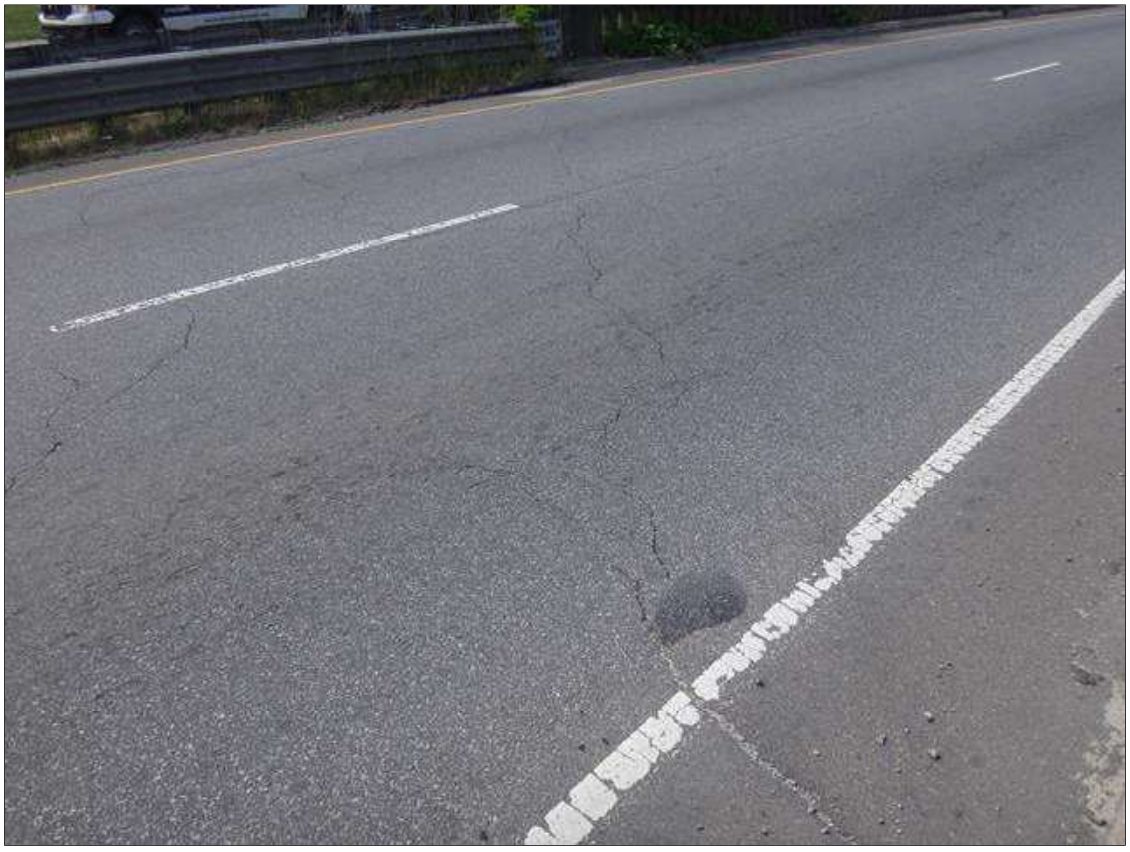
Southwest guardrail end treatment

Northwest guardrail end treatment

Northeast guardrail end treatment

Southeast guardrail attachment, typical all guardrail attachment

Southeast wingwall, typical all wingwall



asphalt over end bent 1

asphalt over bent 1

asphalt over bent 2

end bent 1

bent 1

bent 2

asphalt over end bent 2

end bent 2

BRIDGE INSPECTOR'S RECOMMENDATION FOR MAINTENANCE REPAIRS

Bridge: 120057 County CABARRUS Date:

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

MMS Code	Description of Function	Unit	Quantity	Remarks	Est. Cost
3348	Maintain Concrete Substructure Components	LF	3	End Bent 1 Cap 1: [PAR] LEFT OUTBOARD END AT THE TOP EXTENDING TO GIRDER 1, SPALLING WITH EXPOSED REBAR, DELAMINATION AND HORIZONTAL CRACKING TO 1/4" WIDE [APPROXIMATELY 3' LONG X UP TO 1' WIDE X UP TO 3" DEEP] WITH FLAKING RUST AND PITTING UP TO 1/16" DEEP, APPROXIMATELY 5% LOSS OF BEARING AREA	
3348	Maintain Concrete Substructure Components	LF	5	Bent 1 Cap 1: [PAR] SOUTH FACE AT GIRDER 4, SPALLING WITH EXPOSED REBAR [5' x up to full height x up to 8" deep] WITH APPROXIMATELY 20% LOSS OF BEARING AREA, NO MEASURABLE SECTION LOSS	
3348	Maintain Concrete Substructure Components	LF	5	Bent 1 Pile 1: [PAR] North face, approximately 3' below cap, spall [32" x 4" x 1" deep] with exposed rusted reinforcing with no measurable section loss	
3348	Maintain Concrete Substructure Components	LF	5	Bent 2 Cap 1: [PAR] north face at bay 2, spall (5' x 10" x 1.75") with exposed rusted rebar [section loss up to 1/8"]	

Key

Priority Maintenance Item Critical Finding Item Priority Maintenance Level Not Determined

BRIDGE INSPECTOR'S RECOMMENDATION FOR PRIORITY MAINTENANCE REPAIRS

Bridge: 120057 County CABARRUS

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

MMS Code	MMS Description	Quantity
3348	Maintain Concrete Substructure Components	3 LF

Location:
Bent/Span No.

Priority Level	Status
Priority Maintenance	Division Bridge Maintenance Notification

Submitted Date:	Submitted By:	Assisted By:
05/06/2021	Thomas Graham, PE	

Details
End Bent 1 Cap 1: [PAR] LEFT OUTBOARD END AT THE TOP EXTENDING TO GIRDER 1, SPALLING WITH EXPOSED REBAR, DELAMINATION AND HORIZONTAL CRACKING TO 1/4" WIDE [APPROXIMATELY 3' LONG X UP TO 1' WIDE X UP TO 3" DEEP] WITH FLAKING RUST AND PITTING UP TO 1/16" DEEP, APPROXIMATELY 5% LOSS OF BEARING AREA

MMS Code	MMS Description	Quantity
3348	Maintain Concrete Substructure Components	5 LF

Location:
Bent/Span No.

Priority Level	Status
Priority Maintenance	Division Bridge Maintenance Notification

Submitted Date:	Submitted By:	Assisted By:
05/06/2021	Thomas Graham, PE	

Details
Bent 1 Cap 1: [PAR] SOUTH FACE AT GIRDER 4, SPALLING WITH EXPOSED REBAR [5' x up to full height x up to 8" deep] WITH APPROXIMATELY 20% LOSS OF BEARING AREA, NO MEASURABLE SECTION LOSS

BRIDGE INSPECTOR'S RECOMMENDATION FOR PRIORITY MAINTENANCE REPAIRS

Bridge: 120057 County CABARRUS

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

MMS Code	MMS Description	Quantity
3348	Maintain Concrete Substructure Components	5 LF

Location:		
Bent/Span No.		
Priority Level	Status	
Priority Maintenance	Division Bridge Maintenance Notification	
Submitted Date:	Submitted By:	Assisted By:
05/06/2021	Thomas Graham, PE	

Details

Bent 1 Pile 1: [PAR] North face, approximately 3' below cap, spall [32" x 4" x 1" deep] with exposed rusted reinforcing with no measurable section loss

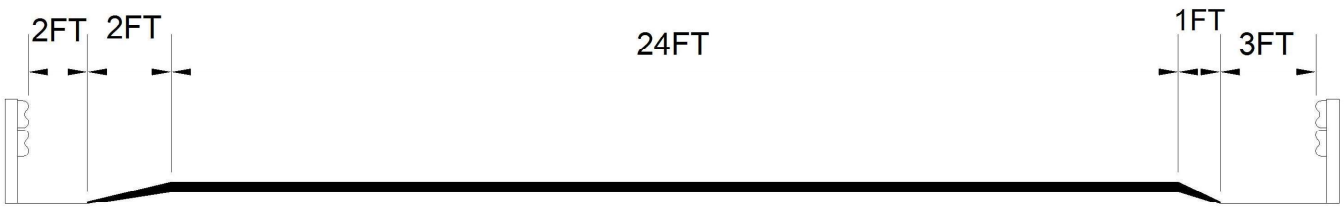
MMS Code	MMS Description	Quantity
3348	Maintain Concrete Substructure Components	5 LF

Location:		
Bent/Span No.		
Priority Level	Status	
Priority Maintenance	Division Bridge Maintenance Notification	
Submitted Date:	Submitted By:	Assisted By:
05/06/2021	Thomas Graham, PE	

Details

Bent 2 Cap 1: [PAR] north face at bay 2, spall (5' x 10" x 1.75") with exposed rusted rebar [section loss up to 1/8"]

Bridge Inspection Field Sketch



Roadway	24ft Wide	2 Paved Lanes	Looking North
Left Shoulder	4ft Wide	2ft Paved	2ft Unpaved
Right Shoulder	4ft Wide	1ft Paved	3ft Unpaved
Left Guardrail	4ft from road		
Right Guardrail	4ft from road		

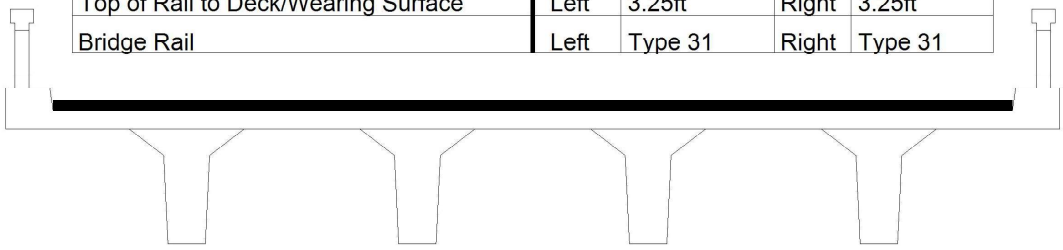
NOTE: MEASUREMENTS TAKEN AT 25FT FROM END BENT 1

VERIFIED: TDG 5/5/21

Title	**Description**		
APPROACH	SOUTH APPROACH		
Bridge No: 120057	**Drawn By:** P. GUFFEY	**Date:** 07/18/2017	**File Name:** S0082000419

Bridge Inspection Field Sketch

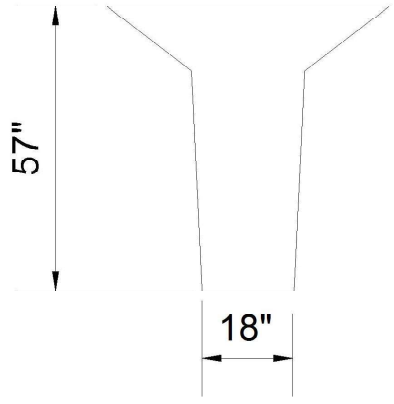
Deck Width/Out to Out	33.25ft	Between Rails				31.25ft
Clear Roadway	28ft	Wearing Surface				0.333ft
Median Width		Median Height				
Curb Height		Left	0.583ft	Right	0.583ft	
Sidewalk Width		Left		Right		
Clear Roadway (Rail to Median)		Left		Right		
Guardrail Width		Left	1ft	Right	1ft	
Top of Rail to Deck/Wearing Surface		Left	3.25ft	Right	3.25ft	
Bridge Rail		Left	Type 31	Right	Type 31	



Measurements for Span #	1	SPANS 2 AND 3 SIMILAR	
Deck Thickness	0.542	Left Overhang	4.625
Top of Rail to Bottom of Beam	8.9	Right Overhang	4.625

Beam Number	Beam Type	Spacing	Comments
1	RC Deck Girder	8ft	
2	RC Deck Girder	8ft	
3	RC Deck Girder	8ft	
4	RC Deck Girder	ft	

GIRDER DIMENSIONS

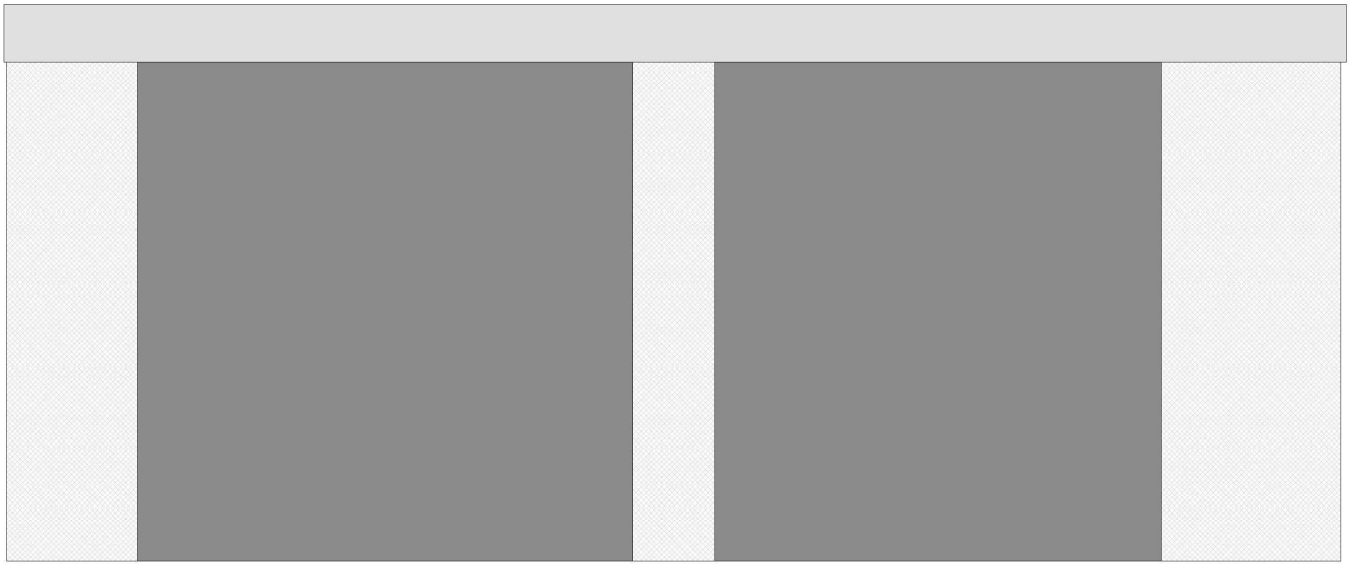


VERIFIED: TDG 5/5/21

Title	Description
SUPERSTRUCTURE	TYPICAL SECTION

Bridge No:	Drawn By:	Date:	File Name:
120057	STEVE AUSTIN	07/21/2011	S0082000420

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.
41.083 ft.	2.500 ft.	1.750 ft.	2.125 ft.	2.875 ft.	3.417 ft.	3.417 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	18.417 ft.	4 ft.	2 ft.		Vertical	No	No	No	No
2	Concrete	17.667 ft.	2.5 ft.	2 ft.		Vertical	No	No	No	No
3	Concrete		5.5 ft.	2 ft.		Vertical	No	No	No	No

VERIFIED: TDG 5/5/21

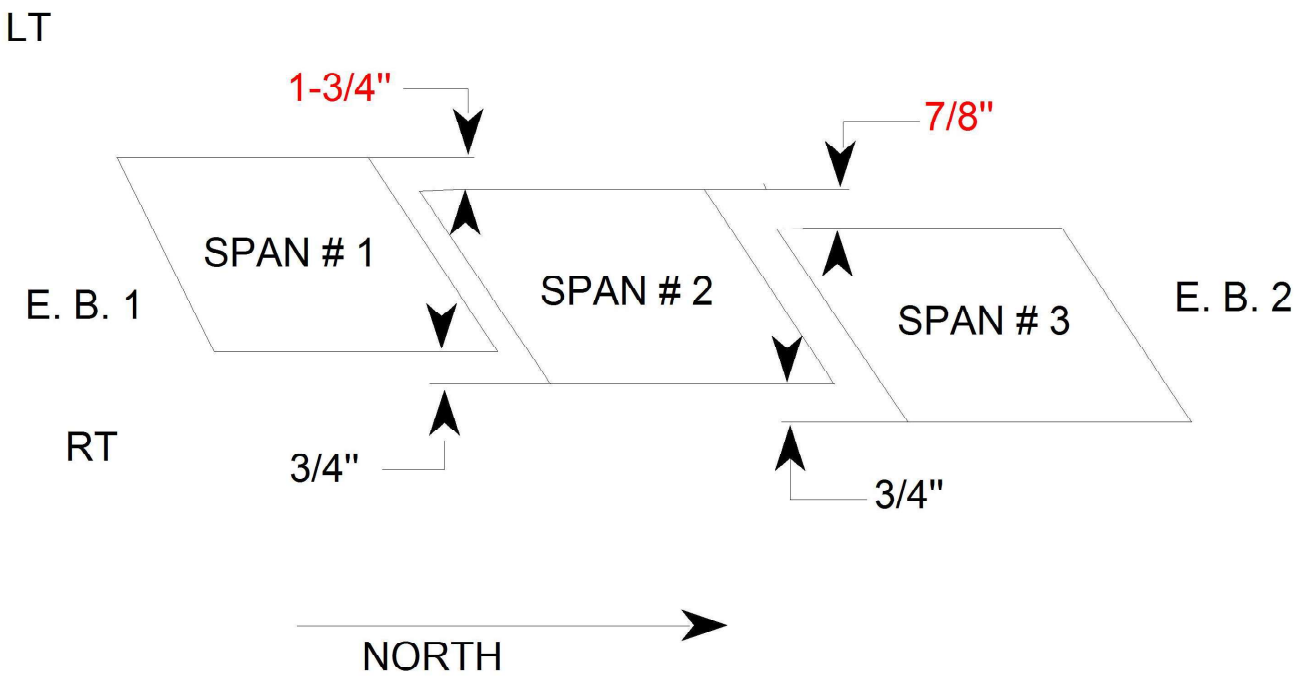
Bent/Abutment #: 1 Similar Bents: 2

Title	**Description**
SUBSTRUCTURE	BENT PROFILE

Bridge No: 120057	**Drawn By:** STEVE AUSTIN	**Date:** 7/21/2011	**File Name:** S0082002511

Bridge Inspection Field Sketch

SPAN LATERAL OFFSETS MEASUREMENTS
TAKEN AT INSIDE FACE OF BRIDGE RAILS



REVISED: TDG 5/5/21

Title	Description
STRUCTURE DATA	SHEET 4

Bridge No:	Drawn By:	Date:	File Name:
120057	STEVE AUSTIN	7/21/2011	S0082002512