NC DEPARTMENT OF TRANSPORTATION



DIVISION OF HIGHWAYS

STRUCTURE MANAGEMENT UNIT

# **Structure Safety Report**

		Routine Element I	nspection	I - Contract		
STRUCTURE NUMB	ER: 110029	SAP STRUCTURE NO:	0120029	FHWA	STRUCTURE NO:	00000000230029
<b>DIVISION</b> : <u>13</u>	COUNTY: BURKE	INSPE	CTION DATE:	08/16/2023	FREQUENCY:	24 MONTHS
FACILITY CARRIED:	NC114			MI	LE POST:	
LOCATION: 0.1 MI.S	S.JCT.SR1713					
FEATURE INTERSEC	CTED: I-40					
LATITUDE: <u>35° 43'</u>	41.5"	LONGITUDE:	81° 37' 2.7"			
SUPERSTRUCTURE	RC FLOOR ON	-BEAMS				
	.BTS:RC CAPS/TIN	IBER PILES;BTS:RC POS	T&BEAM			
SPANS: 4 SPANS	S. SEE SPAN PROF	FILE SHEET FOR SPAN DE	TAILS			
FRACTURE CRI					SCOUR PLAN OF	ACTION
GRADES: (Inspector	/NBI Coding) DECK	6/6 SUPERSTRUCTU	RE 5/5	SUBSTRUCTU	RE <u>5/5</u> CUI	VERT N/N
POSTED SV: Not F	Posted		POSTED TT	ST: Not Posted	l	

#### OTHER SIGNS PRESENT: (2) vertical clearance signs



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



DIRECTION MATCHES PLANS

south approach looking north

INSPECTED BY Chris Perry



ASSISTED BY Isaiah Chapman

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

11/08/2023

IDENTIFICATION			
(1) STATE NAME NORTH CAROLINA BRIDGE 11	0029	SUFFICIENCY RATING	65.92
(8) STRUCTURE NUMBER (FEDERAL) 023	80029	STATUS =	
(5) INVENTORY ROUTE (ON/UNDER) ON 3100 (2) STATE HIGHWAY DEPARTMENT DISTRICT	1140 12	CLASSIFICATION	CODE
(3) COUNTY CODE (FEDERAL) 23 (4) PLACE CODE 6	i 3 69520	(112) NBIS BRIDGE SYSTEM	Y
(6) FEATURE INTERSECTED I-40		(104) HIGHWAY SYSTEM Inventory Route not on NHS	0
(7) FACILITY CARRIED NC114		(26) FUNCTIONAL CLASS Urban Minor Collector	16
(9) LOCATION 0.1 MI.S.JCT.SR1713		(100) STRAHNET HIGHWAY Not a STRAHNET Route	0
(11) MILEPOINT	0.0	(101) PARALLEL STRUCTURE	0
(12) DASE RIGHWAT NETWORK (13) LRS INVENTORY ROUTE & SUBROUTE	0	(102) DIRECTION OF TRAFFIC 2-way traffic	2
(16) LATITUDE <b>35° 43' 41.5</b> " (17) LONGITUDE <b>81° 37</b> "	" 2.7"	(103) TEMPORARY STRUCTURE	
(98) BORDER BRIDGE STATE CODE PERCENT SHARED		(110) DESIGNATED NATIONAL NETWORK - on national network for trucks	C
(99) BORDER BRIDGE STRUCTURE NUMBER		(20) TOLL On Free Road	3
		(21) MAINT -	01
(43) STRUCTURE TYPE MAIN	Steel	(22) OWNER -	01
TYPE Stringer/Multi-beam or girder CODE	302	(37) HISTORICAL SIGNIFICANCE -	5
(44) STRUCTURE TYPE APPROACH			CODE
TYPE CODE		(58) DECK	60002
(45) NUMBER OF SPANS IN MAIN UNIT	4	(59) SUPERSTRUCTURE	5
(46) NUMBER OF SPANS IN APPROACH	0	(60) SUBSTRUCTURE	5
(107) DECK STRUCTURE TYPE CODE	1	(61) CHANNEL & CHANNEL PROTECTION	N
(108)WEARING SURFACE/PROTECTIVE SYSTEM	•	(62) CULVERTS	N
	6		CODE
(B) TYPE OF MEMBRANE CODE	0	(31) DESIGN LOAD HS 15	3
(C) TYPE OF DECK PROTECTION CODE	0	(63) OPERATING RATING METHOD - Load Factor	1
	-	(64) OPERATING RATING - HS-28	50
(27) YEAR BUILT	1955		1
	0		30
	0		55
(42) TYPE OF SERVICE ON - OVErpass Struct	cture		5
	61	(41) STRUCTURE OPEN, POSTED, OR CLOSED	А
(28) LAINES ON STRUCTURE Z LAINES UNDER STRUCTURE	12	DESCRIPTION Open, no restriction	
	0200		CODE
(30) YEAR OF ADT 2017 (109) TRUCK ADT PCT	0		3
GEOMETRIC DATA	0.0		N
	74.0	(69) UNDERCLEARANCES, VERT & HORIZ	3
(48) STRUCTURE LENGTH	270.0		N
(50) CURB OR SIDEWALK: LEFT <b>1.6</b> RIGHT	1.6	(72) APPROACH ROADWAY ALIGNMENT	8
(51) BRIDGE ROADWAY WIDTH, CURB TO CURB	26.0	(36) TRAFFIC SAFETY FEATURES	N
(52) DECK WIDTH OUT TO OUT	31.5	(113) SCOUR CRITICAL BRIDGES	N
(32) APPROACH ROADWAY WITH (W/ SHOULDERS)	26.0	PROPOSED IMPROVEMENTS	
(33) BRIDGE MEDIAN CODE (34) SKEW 48 (35) STRUCTURE FLARED	0111	(75) TYPE OF WORK COD	θE
(10) INVENTORY ROUTE MIN VERT CLEAR	999.9	(76) LENGTH OF STRUCTURE IMPROVEMENT	
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR	0.0	(94) BRIDGE IMPROVEMENT COST	
(53) MIN VERT CLEAR OVER BRIDGE RDWY	999.9	(95) ROADWAY IMPROVEMENT COST	
(54) MIN VERT UNDERCLEAR: REFERENCE H	14.5	(96) TOTAL PROJECT COST	
(55) MIN LAT UNDERGLEARANCE RT: REFERENCE H	4.3 13.8	(97) YEAR OF IMPROVEMENT COST ESTIMATE	
	13.0	(114) FUTURE ADT <b>12,400</b> YEAR OF FUTURE ADT	2040
NAVIGATION DATA	_		
(38) NAVIGATION CONTROL - CODE	6	(90) INSPECTION DATE <b>08/23</b> (91) FREQUENCY	24
(111) PIER PROTECTION CODE		(92) CRITICAL FEATURE INSPECTION (93) CFI DA	IE
(39) NAVIGATION VERTICAL CLEARANCE	0.0	A) FRACTURE CRIT DETAIL A)	
(116) VERT - LIFT BRIDGE NAV MIN VERT CLEAR	0.0	B) UNDERWATER INSP B)	
(40) NAVIGATION HORIZONTAL CLEARANCE	0.0	C) OTHER SPECIAL INSP C)	
		SCOUR	

			Vertical				ation		0	ly Traffic	arance			See N	Note Be	low	y		/stem	ork
Span Number	Facility Carried	Inventory Route	Maximum Minimum Clearance	Milepoint	Base Highway	LRS Inventory Route	Functional Classifica	Number of Lanes	Average Daily Traffic	Year of Average Dai	Total Horizontal Clea	Reference Feature	Minimum Vertical Underclearance	Rigth Lateral Underclearance	Left Lateral Underclearance	Underclearance Appraisal Grade	STRAHNET Highwa	Direction of Traffic	National Highway Sy	National Truck Netw
	7	5	10	11	12	13	26	28	29	30	47	54A	54	55	56	69	100	102	2 104	111
2	I 40 EBL	11000400	18.8	107.5	1	10040	11	3	23000	2015	41.5	Н	17.7	9.9	13.0	4		1		
3	I 40 WBL	11000400	15.4	107.5	1	10040	11	3	23000	2015	39.8	н	14.5	7.6	13.8	3		1		

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 Length 68.000

Span Number 1

Skew 138.000

Number of Items	Type of Component	Element Name		Quantity	Protective System Applied	Quantity (Sq Ft)
4	Movable Bearing	Movable Bearing	4	Each	Unknown	4
1	Reinforced Concrete Deck	Reinforced Concrete Deck	2006	Square Feet		
4	Plate Girder	Steel Open Girder/Beam	268 Feet		Unknown	2656
1	Asphalt Wearing Surface	Wearing Surface	1768	Square Feet		
4	Fixed Bearing	Fixed Bearing	4	Each	Unknown	4
2	Concrete Railing	Reinforced Concrete Bridge Railing	136	Feet		
Span Number 2 Span Length 75.000 Skew 138.000						

Number of Items	Type of Component	Element Name		Quantity	Protective System Applied	Quantity (Sq Ft)			
2	Concrete Railing	Reinforced Concrete Bridge Railing	150	Feet					
4	Plate Girder	Steel Open Girder/Beam	300	Feet	Unknown	2960			
1	Standard Joint	Pourable Joint Seal	38 Feet						
1	Reinforced Concrete Deck	Reinforced Concrete Deck		Square Feet					
1	Asphalt Wearing Surface	Wearing Surface	1950	Square Feet					
4	Movable Bearing	Movable Bearing		Each	Unknown	4			
4	Fixed Bearing	Fixed Bearing	4	Each	Unknown	4			
Span Nu	pan Number 3 Span Length 75.000 Skew 138.000								

Number Quantity (Sq Ft) of Items Type of Component **Element Name** Quantity **Protective System Applied** 2 Concrete Railing Reinforced Concrete Bridge 150 Feet Railing 4 Fixed Bearing **Fixed Bearing** 4 Each Unknown 4 1 Asphalt Wearing Surface Wearing Surface 1950 Square Feet 2 Vertical Clearance **Regulatory Sign** 2 Each

## Superstructure Build Details

4	Plate Girder	Steel Open Girder/Beam	300 Feet		Unknown	2960
1	Standard Joint	Pourable Joint Seal	38	Feet		
4	Movable Bearing	Movable Bearing	4	Each	Unknown	4
1	Reinforced Concrete Deck	Reinforced Concrete Deck	2213	Square Feet		
Span Nu	Span Number 4 Span Length 52.000 Skew 138.000					

Number of Items	Type of Component	Element Name	Quantit	y Protective System Applied	Quantity (Sq Ft)
1	Reinforced Concrete Deck	Reinforced Concrete Deck	1534 Square	e Feet	
1	Asphalt Wearing Surface	Wearing Surface	1352 Square	e Feet	
4	Fixed Bearing	Fixed Bearing	4 Each	Unknown	4
4	Plate Girder	Steel Open Girder/Beam	204 Feet	Unknown	2028
1	Standard Joint	Pourable Joint Seal	38 Feet		
4	Movable Bearing	Movable Bearing	4 Each	Unknown	4
2	Concrete Railing	Reinforced Concrete Bridge Railing	104 Feet		

# **Structure Element Scoring**

#### Structure Number: 110029

# Inspection Date 8/16/2023

Element Number	Parent Number	Element Name	Location	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity
12		Reinforced Concrete Deck	Deck	7,966	6,014	1,360	592	0
107		Steel Open Girder/Beam	Beam	1,072	863	148	53	8
515	107	Steel Protective Coating	Beam	10,604	10,400	0	198	6
205		Reinforced Concrete Column	Piles and Columns	9	0	0	9	0
215		Reinforced Concrete Abutment	Abutments	98	57	23	18	0
220		Reinforced Concrete Pile Cap/Footing	Footing	22	22	0	0	0
228		Timber Pile	Piles and Columns	22	22	0	0	0
234		Reinforced Concrete Pier Cap	Caps	215	118	24	73	0
521	234	Concrete Protective Coating	Caps	208	208	0	0	0
301		Pourable Joint Seal	Expansion Joints	114	0	0	0	114
311		Movable Bearing	Bearing Device	16	0	4	11	1
515	311	Steel Protective Coating	Bearing Device	16	0	0	4	12
313		Fixed Bearing	Bearing Device	16	0	9	7	0
515	313	Steel Protective Coating	Bearing Device	16	0	2	11	3
331		Reinforced Concrete Bridge Railing	Bridge Rail	540	468	61	11	0
510		Wearing Surface	Wearing Surfaces	7,020	5,530	7	1,408	75
601		Regulatory Sign	Ground Mounted Signs	2	2	0	0	0

# **Summary of Maintenance Needs**

Maintenance By Defect

#### Structure Number: 110029

Inspection Date: 08/16/2023

MMS Code	Element Name	Defect Name	Recommended Quantity
3326	Reinforced Concrete Deck	Patched Areas	20 Square Feet
3326	Reinforced Concrete Deck	Cracking (RC and Other)	1339 Square Feet
3326	Reinforced Concrete Deck	Delamination/Spall	194 Square Feet
3326	Reinforced Concrete Deck	Efflorescence/Rust Staining	460 Square Feet
3326	Reinforced Concrete Deck	Exposed Rebar	4 Square Feet
3314	Steel Open Girder/Beam	Corrosion	61 Feet
3348	Reinforced Concrete Column	Efflorescence/Rust Staining	19 Each
3348	Reinforced Concrete Column	Delamination/Spall	8 Each
3348	Reinforced Concrete Column	Patched Area	31 Each
3348	Reinforced Concrete Column	Cracking (RC and Other)	69 Each
3350	Reinforced Concrete Abutment	Exposed Rebar	3 Feet
3350	Reinforced Concrete Abutment	Delamination/Spall	6 Feet
3350	Reinforced Concrete Abutment	Cracking (RC and Other)	12 Feet
3348	Reinforced Concrete Pier Cap	Patched Area	13 Feet
3348	Reinforced Concrete Pier Cap	Delamination/Spall	5 Feet
3348	Reinforced Concrete Pier Cap	Efflorescence/Rust Staining	59 Feet
3310	Pourable Joint Seal	Debris Impaction	18 Feet
3310	Pourable Joint Seal	Seal Damage	114 Feet
3334	Movable Bearing	Corrosion	12 Each
3334	Movable Bearing	Loss of Bearing Area	1 Each
3334	Fixed Bearing	Corrosion	7 Each
3318	Reinforced Concrete Bridge Railing	Exposed Rebar	12 Feet
3318	Reinforced Concrete Bridge Railing	Delamination/Spall	4 Feet
3318	Reinforced Concrete Bridge Railing	Patched Area	5 Square Feet
3318	Reinforced Concrete Bridge Railing	Cracking (RC and Other)	2 Feet
2816	Wearing Surface	Crack (Wearing Surface)	1402 Square Feet
2816	Wearing Surface	Patched Area/Pothole (Wearing Surface)	7 Square Feet
2816	Wearing Surface	Delamination/Spall (Wearing Surfaces)	74 Square Feet
3342	Steel Protective Coating	Peeling/Bubbling/Cracking (steel Protective Coatings)	1 Square Feet
3342	Steel Protective Coating	Effectiveness (Steel Protective Coatings)	235 Square Feet

# Element Structure Maintenance Quantities

Structure Number: 110	<u>029</u>				Ir	nspection D	ate <u>08/16/</u>	<u>2023</u>
Location	MMS Code	Description	Maint Quantity	Total Quantity	Severe Quantity	Poor Quantity	Fair Quantity	Good Quantity
Beam	3314	Maintenance Steel Superstructure Components	61	1072	8.000	53.000	148.000	863.000
Beam	3342	Clean and Paint Steel	204	10604	6.000	198.000	0.000	10400.000
Bearing Device	3334	Bridge Bearing	13	16	1.000	11.000	4.000	0.000
Bearing Device	3334	Bridge Bearing	7	16	0.000	7.000	9.000	0.000
Bearing Device	3342	Clean and Paint Steel	16	16	12.000	4.000	0.000	0.000
Bearing Device	3342	Clean and Paint Steel	16	16	3.000	11.000	2.000	0.000
Bridge Rail	3318	Maintenance of Concrete Bridge Rail	23	540	0.000	11.000	61.000	468.000
Deck	3326	Maintenance of Concrete Deck	2017	7966	0.000	592.000	1360.000	6014.000
Expansion Joints	3310	Maintenance of Standard Bridge Expansion Joints	132	114	114.000	0.000	0.000	0.000
Ground Mounted Signs	3250	Install or Replace Ground Mounted Signs	0	2	0.000	0.000	0.000	2.000
Wearing Surfaces	2816	Asphalt Surface Repair	1483	7020	75.000	1408.000	7.000	5530.000
Abutments	3350	Maintenance of Concrete Wings and Wall	21	98	0.000	18.000	23.000	57.000
Caps	3348	Maintenance of Concrete Substructure	77	215	0.000	73.000	24.000	118.000
Caps	5603	Partial Cleaning and Painting of Structural Steel	0	208	0.000	0.000	0.000	208.000
Footing	3348	Maintenance of Concrete Substructure	0	22	0.000	0.000	0.000	22.000
Piles and Columns	3344	Maintenance To Timber Substructure	0	22	0.000	0.000	0.000	22.000
Piles and Columns	3348	Maintenance of Concrete Substructure	127	9	0.000	9.000	0.000	0.000

Structure Nur	nber 110029	_	
Span1			
3326	Deck	Reinforced Cor	ncrete Deck
Priority Level	Defect Type	Quantity	Defect Description
1	Exposed Rebar	4	Span 1 Deck: (PAR) left and right overhangs, near end bent 1, spalls (up to 6 inch 4 inch x 1 inch deep) with exposed rusted rebar
2816	Wearing Surface	Asphalt Wearir	ng Surface
Priority Level	Defect Type	Quantity	Defect Description
2	Delamination/Spall	8	Span 1 Wearing Surface: (PAR) at bent 1, areas of missing asphalt (up to 1 foot x 4 inch)
Span2			
3326	Deck	Reinforced Cor	ncrete Deck
Priority Level	Defect Type	Quantity	Defect Description
2	Cracking (RC and	5	Span 2 Deck: (PAR) both overhangs, delaminations (approximately 1 foot diamete with cracks (up to 1/8 inch); some areas over travel lanes
2816	Wearing Surface	Asphalt Wearir	ng Surface
Priority Level	Defect Type	Quantity	Defect Description
2	Delamination/Spall	13	Span 2 Wearing Surface: (PAR) at bent 2, areas of missing asphalt (up to 2 feet x inch) at random
2	Patched Area/Pothole	1	Span 2 Wearing Surface: (PAR) along centerline of roadway, approximately 25 fee from bent 2, spall (11 inch x 6 inch x full depth)
Span3			
3326	Deck	Reinforced Cor	ncrete Deck
Priority Level	Defect Type	Quantity	Defect Description
2	Delamination/Spall	2	Span 3 Deck: (PAR) top of deck near bent 2, spall (2 feet x 15 inch x 1.5 inch deep with exposed rusted rebar at area of missing asphalt
3318	Right Bridge Rail	Concrete Railir	ng
Priority Level	Defect Type	Quantity	Defect Description
2	Patched Area	4	Span 3 Right Bridge Rail: (PAR) within patched area over left and right travel lanes of I-40, area of delamination with cracking (up to 1/16 inch), could possibly fall into traffic below

Structure Nur	nber <u>110029</u>		
2816	Wearing Surface	Asphalt Wearir	ng Surface
Priority Level	Defect Type	Quantity	Defect Description
2	Delamination/Spall	30	Span 3 Wearing Surface: (PAR) at bent 2, areas of missing asphalt (up to 3 feet x 2 inches) at random; northbound lane, at bent 3, areas of missing asphalt (up to 3.5 feet x 2 feet)
2	Delamination/Spall	6	Span 3 Wearing Surface: (PAR) centerline of roadway, near bent 2, spalls (up to 2 feet x 15 inch x full depth)

#### Span4

3326	Deck	Reinforced Co	ncrete Deck
Priority Level	Defect Type	Quantity	Defect Description
1	Efflorescence/Rust	460	Span 4 Deck: (PAR) throughout underside of deck, transverse cracks (up to 1/32 inch x full bay width) and map cracks (hairline), some with efflorescence buildup and rust stains at random

3334	Beam 2	Plate Girder	
Priority Level	Defect Type	Quantity	Defect Description
2	Corrosion	1	Span 4 Beam 2 - Near Bearing 2: (PAR) painted over section loss (up to 1/8 inch deep); left anchor bolt, approximately 50 percent section loss; pack rust
2	Corrosion	5	Span 4 Beam 2: (PAR) at bent 3, painted over section loss: web adjacent to diaphragm (7/16 inch average remaining x 7 inch x 2 inch); lower web (1/2 inch average remaining x 4.5 feet x 4 inches); bottom flange (0.71 inch average remaining x 6 inches) with corrosion reinitiated
2	Loss of Bearing Area	1	Span 4 Near Bearing 2: (PAR) northwest corner, loss of bearing (4 inch x 3 inch x up to 1/2 inch deep) due to cap spall

3314	Beam 3	Plate Girder	
Priority Level	Defect Type	Quantity	Defect Description
2	Corrosion	3	Span 4 Beam 3: (PAR) at bent 3, painted over section loss: web adjacent to diaphragm and upper web (7/16 inch average remaining x 6 inch x 2 foot); lower web (1/2 average remaining x up to 2.5 feet long x 6 inches high); bottom flange (0.77 inch average remaining x 8 inches); top flange, painted over pitting (up to 1/8 inch deep) with corrosion reinitiated

2816	Wearing Surface	Asphalt Wearir	ng Surface
Priority Level	Defect Type	Quantity	Defect Description
2	Delamination/Spall	14	Span 4 Wearing Surface: (PAR) at bent 3, areas of missing asphalt (up to 2 feet x 2 inch) at random
2	Delamination/Spall	3	Span 4 Wearing Surface: (PAR) throughout wearing surface, scattered areas of missing asphalt (up to 5 inch diameter)

Structure Nur	mber 110029		
Bent 1			
3348	Cap 1	Reinforced Co	ncrete Pier Cap
Priority Level	Defect Type	Quantity	Defect Description
2	Efflorescence/Rust	12	Bent 1 Cap 1: (PAR) BENT 1 CAP HAS SCATTERED CRACKS UP TO 1/32 INCH,
	<u>~</u>		SOME WITH RUST STAINS.
3348	Pile 3	Reinforced Co	ncrete Column
Priority Level	Defect Type	Quantity	Defect Description
2	Delamination/Spall	8	Bent 1 Pile 3: southeast and northeast corners, vertical cracks (up to 1/16 inch x 5.5 feet) with rust stains, and adjacent delaminations (up to 4 feet x 6 inch); southeast corner, at ground, spall (2 feet x 6 inch x 1.5 inch deep) with exposed rusted primary reinforcement
Bent 2			
3348	Cap 1	Reinforced Co	ncrete Pier Cap
Priority Level	Defect Type	Quantity	Defect Description
2	Efflorescence/Rust	2	Bent 2 Cap 1: (PAR) underside of cap, adjacent to column 3, patched area (2 feet x 18 inch) with cracks (up to 1/32 inch)
3348	Pile 2	Reinforced Co	ncrete Column
Priority Level	Defect Type	Quantity	Defect Description
2	Efflorescence/Rust	11	Bent 2 Pile 2: (PAR) at southeast corner, vertical cracks (up to 1/8 inch x full height) with rust stains and adjacent delaminations (up to 4 feet x 6 inch)
3348	Pile 3	Reinforced Co	ncrete Column
Priority Level	Defect Type	Quantity	Defect Description
2	Efflorescence/Rust	8	Bent 2 Pile 3: (PAR) UP TO 1/8 INCH VERTICAL CRACKS WITH RUST STAINS AT RANDOM THROUGHOUT with adjacent delaminations up to 6 feet x 1 foot
3348	Cap 1	Reinforced Co	ncrete Pier Cap
Priority Level	Defect Type	Quantity	Defect Description
1	Efflorescence/Rust	27	End Bent 2 Cap 1: (PAR) along the length of the cap, vertical and longitudinal cracks (up to 1/32 inch x 5 feet), some with rust stains at random
Bent 3			
3348	Cap 1	Reinforced Co	ncrete Pier Cap
? Priority A	Action Request (PAR)	Assigned Routine	e Maintenance 2 Assigned Priority Maintenance 3 Assigned Critical Find

Structure Numb	per 110029		
Priority Level	Defect Type	Quantity	Defect Description
2	Delamination/Spall	3	Bent 3 Cap 1: (PAR) 3 FOOT X 18 INCH X 4 INCH DEEP FAILED PATCH/SPALL WITH EXPOSED REINFORCING, CAUSING LOSS OF BEARING, AT PREVIOUSLY PATCHED AREA NORTH FACE BELOW BEAM 2.
1	Efflorescence/Rust	18	Bent 3 Cap 1: (PAR) UP TO 1/32 INCH MAP CRACKING, SOME WITH EFFLORESCENCE AND RUST STAINS, AT RANDOM THROUGHOUT
3348	Pile 2	Reinforced Co	ncrete Column
Priority Level	Defect Type	Quantity	Defect Description
2	Patched Area	7	Bent 3 Pile 2: (PAR) at Southwest corner, failed patch, 7 feet high x 22 inches wide x up to 3.5 inches deep with exposed rusted and debonded primary reinforcing
3348	Pile 3	Reinforced Co	ncrete Column
Priority Level	Defect Type	Quantity	Defect Description
2	Patched Area	8	Bent 3 Pile 3: (PAR) at Southeast corner, failed patch/delamination/spall, 8 feet x up to 2 feet x 2.5 inches deep, with exposed rusted primary reinforcing
Approach Guardrail and Barriers			
3120	Approach Guardrail and Barriers	Approach Gua	rdrail and Barriers
Priority			

Level	Defect Type	Quantity	Defect Description
2		30	(PAR) northeast guardrail and transition, areas of impact damage (up to 15 feet long, 30 feet total)
2		1	(PAR) northwest guardrail attachment, improper lap
2		5	(PAR) northwest guardrail transition, impact damage (5 feet)
2		30	(PAR) southwest guardrail, areas of impact damage (up to 15 feet long, 30 feet total)
2		200	(PAR) east side of span 1, extending from behind southeast wingwall to toe of end bent 1 slope protection, erosion channel (approximately 100 feet long x 3 feet long x 1.5 feet deep) undermining slope protection (up to 1 foot high x 1.5 foot deep)
2		35	(PAR) end bent 1 slope protection, between slope and end bent berm, gap/settled (up to 2 inches wide x 2 inches high) with undermining (up to 1 foot deep) extending along full width of slope protection

? Priority Action Request (PAR) 1 Assigned Routine Maintenance

2 Assigned Priority Maintenance 3 Assigned Critical Find

## **Element Condition and Maintenance Data**

Inspection Date: 08/16/2023

Structure N	Number: <u>110029</u>					Ins	spection Da	ate: 08/16/2023
Spa	n 1	Deck						
Rein	nforced Concrete	Deck						
Elen Num	nent nber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
12	Reinford	ced Concrete Deck	2,006	1,799	207	0	0 5	quare Feet
Element Number	t r Defect Type	Defect Descrip	tion		cs	CS Qty	Maint Qty	
<b>√</b> 12	Delamination/Spall	at bent 1, end diaphragm in all bays, spalls/delaminations (up to ful bay wi inches deep) with exposed rusted rel (up to 1/8 inch)	idth x 8 inch x 2 bar and cracks		3		24	Square Feet
<mark>√</mark> 12	Cracking (RC and Other)	left overhang, near end bent 1, longit (1/32 inch x 3 feet)	udinal crack		2	3	3	Square Feet
<mark>√</mark> 12	Cracking (RC and Other)	underside of deck, in all bays and overhangs, areas of map cracks (hairline); both overhangs (up to 1/32 nch x full width) at random			2	200	200	Square Feet
<b>√</b> 12	Exposed Rebar	(PAR) left and right overhangs, near spalls (up to 6 inch x 4 inch x 1 inch o exposed rusted rebar	end bent 1, deep) with		2	4	4	Square Feet

**General Comments** 

Sna	n 1	Boam 1						
Spa		Dealin						
Plat	e Girder							
Ele: Nur	ment nber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107	Steel O	pen Girder/Beam	67	60	6	1	0 6	Feet
515	Steel P	rotective Coating	664	657	0	6	1 \$	Square Feet
Elemen Numbe	t r Defect Type	Defect Des	cription		CS	CS Qty	Maint Qty	
∕ 107	Corrosion	at bent 1, painted over section los diaphragm (9/16 inch average rer inch); bottom flange (0.85 inch x ( corrosion reinitiated	ss: web adjacent to naining x 3 inch x 4 5 inches) with		3	1	1	Feet
∕ 107	Corrosion	along the edge of the top flange, random	surface rust at		2	5		Feet
∕ 107	Corrosion	at end bent 1, web and bottom fla	inge, rust scale		2	1		Feet
∕ 515	Effectiveness (Steel Protective Coatings)	at end bent 1, web and bottom fla	inge, rust scale		4	1	1	Square Feet
∕ 515	Effectiveness (Steel Protective Coatings)	surface rust			3	6	6	Square Feet

Span 1

Beam 2

Plate G	irder							
Element Number	Element Name		Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107	Steel Open Girder/Beam		67	65	1	1	0 Feet	
515	Steel Protective Coating		664	662	0	2	0 Square Feet	
Element Number	Defect Type	Defect Description			CS	CS Qty	Maint Qty	

Structure	Number: 110029			Inspec	ction Date: 08/16/2023
<b>√</b> 107	Corrosion	at bent 1, web adjacent to diaphragm, painted over section loss (9/16 inch average remaining x 3 inch x 1 inch) with corrosion reinitiated	3	1	1 Feet
<b>v</b> 107	Corrosion	at bent 1, edge of top flange, surface rust	2	1	Feet
<b>√</b> 515	Effectiveness (Steel Protective Coatings)	surface rust	3	2	2 Square Feet
	General Comments				

General Comments

#### Span 1

Beam 3

Plate Girde	r					
Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
107	Steel Open Girder/Beam	67	65	1	1	0 Feet
515	Steel Protective Coating	664	662	0	2	0 Square Feet

Elemen Numbe	t r Defect Type	Defect Description	cs	CS Qty	Maint Qty	
<b>V</b> 107	Corrosion	at bent 1, painted over section loss: web adjacent to diaphragm (1/2 inch average remaining x 4 inch x 3 inch) lower web (9/16 inch average remaining x 1 foot x 2 inch) with corrosion reinitiated	3	1	1	Feet
<b>√</b> 107	Corrosion	at bent 1, edge of top flange, surface rust	2	1		Feet
✓ 515	Effectiveness (Steel Protective Coatings)	surface rust	3	2	2	Square Feet
	General Comments					

Spa	n 1			Beam 4						
Plat	e Girder									
Eler Nun	nent nber		Element Name		Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107		Steel Oper	n Girder/Beam		67	53	12	2	0	Feet
515		Steel Prote	ective Coating		664	650	0	14	0	Square Feet
Elemen Numbe	t r Defect	Туре		Defect Description			CS	CS Qty	Maint Qty	
<b>√</b> 107	Corrosion	; ; ; ;	at bent 1, painted diaphragm (9/16 ir nch); lower web (§ feet x 4 inches) wi	over section loss: web nch average remaining 3 9/16 inch average rema th corrosion reinitiated	adjacent to x 4 inch x 2 ining x 2		3	2		2 Feet
<b>√</b> 107	Corrosion	i	along the edge of random	the top flange, surface i	rust at		2	12		Feet

Effectiveness (Steel Protective Coatings) ✓ 515 surface rust 3

**General Comments** 

### Span 1

### **Right Bridge Rail**

**Concrete Railing** 

Elem Num	nent Iber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
331	Reinfor	ced Concrete Bridge Railing	68	67	0	1	0 Feet
Element Number	Defect Type	Defect Description			CS	CS Qty	Maint Qty
221	Dolomination/Spall	underside of rail section 7 shall (10 in	ch v 3 inch v 1		3	1	1 Epot

14 Square Feet

14

#### **General Comments**

Spa	n 1		Near Bearing 1									
Fixe	d Bearing											
Eler Nun 313	nent nber F	Element Name		Total Qty 1	<b>CS1</b> <b>Qty</b> 0	<b>CS2</b> <b>Qty</b> 0	CS3 Qty 1	CS4 Qty 0 E	Each			
515	S	teel Protective Coating		1	0	0	1	0 5	Square Feet			
Elemen Numbe	t r Defect Ty	ре	Defect Descriptio	n		CS	CS Qty	Maint Qtv				
✓ 313	Corrosion	painted over sectio	n loss (up to 3/16 inc	h deep) with		3	1	<b>,</b>	Each			
<b>√</b> 515	Effectiveness (S Protective Coat	Steel limited effectivenes	s, corrosion initiated			3	1	1	Square Feet			
-	General Comments											
Span 1 Far Bearing 1												
Моч	able Bearing	9										
Eler Nun	nent nber	Element Name		Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty				
311	N	lovable Bearing		1	0	0	1	0 E	Each			
515	S	teel Protective Coating		1	0	0	0	1 S	Square Feet			
Elemen Numbe	t r Defect Ty	pe	Defect Descriptio	n		CS	CS Qty	Maint Qtv				
<b>√</b> 311	Corrosion	painted over sectio corrosion reinitiated	n loss (up to 1/8 inch d; pack rust	deep) with		3	1	1	Each			
<b>√</b> 515	Effectiveness ( Protective Coat	Steel surface rust/pack ru ings)	ust			4	1	1	Square Feet			
-	General Comme	ents										
Spa	n 1		Near Bearing 2									
Fixe	d Bearing											
Eler Nur	nent nber	Element Name		Total Qtv	CS1 Qtv	CS2 Qtv	CS3 Qtv	CS4 Qtv				
313	F	ixed Bearing		1	0	1	0	0 E	Each			
515	S	teel Protective Coating		1	0	1	0	0 5	Square Feet			
Elemen Numbe	t r Defect Ty	уре	Defect Descriptio	n		CS	CS Qty	Maint Qtv				
313	Corrosion	SPAN 1 NEAR BE/ FRECKLED RUST	ARING HAS SCATTI	ERED		2	1	<u> </u>	Each			
✓ 515	Effectiveness ( Protective Coat	Steel freckled rust ings)				2	1	1	Square Feet			

#### Span 1

I

Nova	ble l	Bear	ing
------	-------	------	-----

Eler Nur	ment nber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
311	Mova	able Bearing	1	0	0	1	0	Each
515	Stee	I Protective Coating	1	0	0	0	1	Square Feet
Elemen Numbe	r Defect Type	Defect Des	scription		CS	CS Qty	Maint Qty	
<b>√</b> 311	Corrosion	SPAN 1 FAR BEARING HAS RI RUST.	JST SCALE/PACK		3	1	-	1 Each
<b>√</b> 515	Effectiveness (Ster Protective Coating	el rust scale/pack rust s)			4	1		1 Square Feet
	General Comments	6						

Span 1

**Near Bearing 3** 

#### **Fixed Bearing**

CS4 Element Total CS1 CS2 CS3 Number **Element Name** Qty Qty Qty Qty Qty 313 Fixed Bearing 0 Each 0 1 0 1 **Steel Protective Coating** 0 1 0 515 1 0 Square Feet Element Maint Defect Type **Defect Description** CS CS Qty Number Qty 2 SPAN 1 NEAR BEARING HAS SCATTERED ✓ 313 Corrosion 1 Each FRECKLED RUST. ✓ 515 2 Effectiveness (Steel freckled rust 1 1 Square Feet Protective Coatings)

**General Comments** 

#### Span 1

#### Far Bearing 3

**Movable Bearing** 

Elen Nun	nent nber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
311	Movable	Bearing	1	0	0	1	0	Each
515	Steel Pr	otective Coating	1	0	0	0	1	Square Feet
Elemen Number	t r Defect Type	Defect Des	cription		CS	CS Qty	Maint Qty	
<b>√</b> 311	Corrosion	SPAN 1 FAR BEARING HAS RU RUST.	IST SCALE/PACK		3	1		1 Each
<b>√</b> 515	Effectiveness (Steel	rust scale/pack rust			4	1		1 Square Feet

Protective Coatings)

**General Comments** 

Near Bearing 4

Span 1

Fixed Be	earing							
Element Number		Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
313	Fixed B	earing	1	0	1	0	0	Each
515	Steel P	rotective Coating	1	0	0	1	0	Square Feet
Element Number	Defect Type	Defect D	escription		CS	CS Qty	Maint Qty	
✓ 313 Corre	osion	SPAN 1 NEAR BEARING HAS SURFACE RUST.	S SCATTERED		2	1		Each

✓ 515

## limited effectiveness, corrosion initiated

Inspection Date: 08/16/2023

1

3

1 Square Feet

#### Protective Coatings) General Comments

Effectiveness (Steel

Spa	n 1	Far Bearir	ng 4					
Mov	able Bearing							
Elen Nun	nent 1ber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
311	Movable	Bearing	1	0	0	1	0	Each
515	Steel Pr	otective Coating	1	0	0	0	1	Square Feet
Elemen Number	t Defect Type	Defect Des	cription		CS	CS Qty	Maint Qty	
∕ 311	Corrosion	painted over section loss (up to 3 corrosion reinitiated; pack rust	3/16 inch deep) with		3	1	1	Each
/ 515	Effectiveness (Steel Protective Coatings)	surface rust/pack rust			4	1	1	Square Fee
-	General Comments							

#### Span 1 Wearing Surface **Asphalt Wearing Surface** Element CS1 CS2 CS3 CS4 Total Qty Number **Element Name** Qty Qty Qty Qty Wearing Surface 1,768 8 Square Feet 510 4 132 1,624 Element Maint **Defect Description** CS Qty **Defect Type** CS Qty Number ✓ 510 (PAR) at bent 1, areas of missing asphalt (up to 1 8 8 Square Feet Delamination/Spall 4 (Wearing Surfaces) foot x 4 inch) ✓ 510 Crack (Wearing over end bent 1, transverse cracks, full width x up to 3 32 32 Square Feet Surface) 1/2 inch SPAN 1 WEARING SURFACE HAS SCATTERED ✓ 510 Crack (Wearing 3 100 100 Square Feet Surface) TRANSVERSE AND LONGITUDINAL CRACKS UP TO 1/8 INCH. ✓ 510 Patched Area/Pothole 2023 previously repaired, previously noted as: 1 2 4 Square Feet (Wearing Surface) FOOT X 4 FOOT AREA OF MISSING ASPHALT WEARING SURFACE IN SOUTHBOUND LANE AT BENT 1

Spa	n 2	Deck						
Reir	nforced Concrete	Deck						
Eler Nun	nent nber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
12	Reinford	Ced Concrete Deck	2,213	1,827	331	55	0 8	Square Feet
Elemen Numbe	t r Defect Type	Defect Descrip	tion		CS	CS Qty	Maint Qty	
<b>v</b> 12	Cracking (RC and Other)	(PAR) both overhangs, delaminations 1 foot diameter) with cracks (up to 1/8 areas over travel lanes	s (approximately 8 inch); some		3	5	5	Square Feet
<mark>√</mark> 12	Delamination/Spall	at bent 1, bay 1 end diaphragm, adja spall (18 inch x 6 inch x 1.5 inch deer rusted rebar	cent to beam 1, p) with exposed		3		2	Square Feet
<mark>√</mark> 12	Delamination/Spall	throughout underside of deck, areas consolidation (up to 1/2 inch deep) at	of poor t random		3	50	50	Square Feet

Structure N	ructure Number: <u>110029</u> Inspection Date: <u>08/16/2023</u>									
<b>√</b> 12	Patched Areas	at bent 1, end diaphragms in all bays, and bay 3 diaphragm at bent 2, unsound patches (up to full bay with x 8 inch) with cracks (up to 1/16 inch)	3		20	Square Feet				
<b>√</b> 12	Cracking (RC and Other)	underside of deck, in all bays and overhangs, areas of map cracks (hairline), some with efflorescence; both overhangs, transverse cracks (up to 1/32 inch x full width) at random	2	330	330	Square Feet				
✓ 12	Patched Areas	left overhang, near bent 2, formwork left in place	2	1		Square Feet				

**General Comments** 

# Span 2

## Beam 1

Ele Nu	ment mber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107	Steel 0	Dpen Girder/Beam	75	52	15	8	0 F	eet
515	Steel I	Protective Coating	740	717	0	23	05	quare Feet
Eleme	nt er Defect Type	Defect Descripti	on		cs	CS Qty	Maint Qty	
<b>√</b> 107	Corrosion	at bent 1, lower web, painted over sec inch average remaining x 5.5 feet x up with corrosion reinitiated	tion loss (9/16 to 10 inches)		3	6	6	Feet
<b>V</b> 107	Corrosion	at bent 2, painted over section loss: we diaphragm (9/16 inch average remainin inch); right stiffener (1/2 inch average i inch x 1.5 inches); bottom flange, painin (up to 1/8 inch deep x 15 inches) with reinitiated	eb adjacent to ng x 7 inch x 3 remaining x 4 ted over pitting corrosion		3	2	2	Feet
<b>√</b> 107	Corrosion	along the edge of the top flange, surface random	ce rust at		2	15		Feet
✓ 515	Effectiveness (Steel Protective Coatings)	surface rust			3	23	23	Square Feet
	<b>General Comments</b>							

Span 2

Beam 2

Plate Gi	irder							
Element Number	Element Name		Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107	Steel Open Girder/Beam		75	72	0	3	0 Feet	
515	Steel Protective Coating		740	735	0	4	1 Square Feet	
Element	Defect Type	Defect Description			CS	CS Qty	Maint	

Number	Defect Type	Defect Description	CS	CS Qty	Qty	
<b>V</b> 107	Corrosion	at bent 1, painted over section loss: web adjacent to diaphragm (9/16 inch average remaining x 14 inch x 2 inch); lower web (9/16 inch average remaining x 2 feet x 4 inch) with corrosion reinitiated	3	2	2	Feet
<b>V</b> 107	Corrosion	at bent 2, painted over section loss: web adjacent to diaphragm (5/8 inch average remaining x 5 inch x 1 inch); lower web 9/16 inch average remaining x 6 feet x 4 inches) with corrosion reinitiated; bottom flange, rust scale	3	1	1	Feet
<b>√</b> 107	Corrosion	at bent 1, edge of top flange, surface rust	2			Feet
✓ 515	Effectiveness (Steel Protective Coatings)	at bent 2, bottom flange, rust scale	4	1	1	Square Feet

	<u> </u>	
	Protective Coatings)	
🗸 515	Effectiveness (Steel	surface rust

3 4

Inspection Date: 08/16/2023

4 Square Feet

#### **General Comments**

Spar	n 2	Beam 3						
Plate	e Girder							
Elen Num	nent nber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107	Stee	l Open Girder/Beam	75	67	0	8	0	Feet
515	Stee	I Protective Coating	740	730	0	9	1	Square Feet
Element Number	t Defect Type	Defect Des	Defect Description			CS Qty	Maint Qty	
<b>√</b> 107	Corrosion	at bent 1, painted over section los diaphragm (5/8 inch average rem inch); lower web (9/16 inch avera feet x 4 inch) with corrosion reinit flange, rust scale	ss: web adjacent to laining x 10 inch x 2 lge remaining x 7 liated; bottom		3	7		7 Feet
<b>√</b> 107	Corrosion	at bent 2, web adjacent to diaphra section loss (9/16 inch average re 2 inch) with corrosion reinitiated	agm, painted over emaining x 4 inch x		3	1		1 Feet
<b>v</b> 107	Corrosion	at bent 1, edge of top flange, surf	face rust		2			Feet
✓ 515	Effectiveness (Ste Protective Coating	el at bent 1, bottom flange, rust sca s)	le		4	1		1 Square Feet
✓ 515	Effectiveness (Ste Protective Coating	el surface rust s)			3	9	9	9 Square Feet
(	General Comment	s						

### Span 2

#### Beam 4

#### Plate Girder

Ele Nu	ement mber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	_
107	Ste	el Open Girder/Beam	75	53	15	7	0 F	eet
515	Ste	el Protective Coating	740	718	0	22	0 5	Square Feet
Eleme Numbe	nt er Defect Typ	e Defect Descript	ion		CS	CS Qty	Maint Qty	
<b>√</b> 107	Corrosion	at bent 1, painted over section loss: w diaphragm (9/16 inch average remain inch); lower web (9/16 inch average re feet x 4 inch); bottom flange, painted to 1/8 inch deep x 1.5 feet) with corror	veb adjacent to ing x 8 inch x 2 emaining x 6 over pitting (up sion reinitiated		3	6	6	Feet
<b>√</b> 107	Corrosion	at bent 2, painted over section loss: w diaphragm (9/16 inch average remain inch); lower web 9/16 inch average re feet x 3 inches) with corrosion reinitiat	veb adjacent to ing x 9 inch x 2 maining x 1.5 ted		3	1	1	Feet
<b>√</b> 107	Corrosion	along the edge of the top flange, surfa random	ace rust at		2	15		Feet
✓ 515	Effectiveness (St Protective Coatin	eel surface rust gs)			3	22	22	Square Feet
	General Commen	ts						

#### Span 2

#### **Standard Joint**

Elen Num	nent 1ber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
301	Pourable	Joint Seal	38	0	0	0	38 F	eet
Element Number	t Defect Type	Defect Descri	ption		CS	CS Qty	Maint Qty	
<b>√</b> 301	Seal Damage	along the length of the joint, seal de length)	teriorated (full		4	38	38	Feet
<b>V</b> 301	Debris Impaction	EXPANSION JOINT OVER BENT 1 SCATTERED AREAS OF DEBRIS BOTH SHOULDERS.	HAS MPACTION IN		3		6	Feet

**General Comments** 

#### Span 2

#### Left Bridge Rail

#### **Concrete Railing**

Elem Num 331	nent nber Reinfor	Element Name ced Concrete Bridge Railing	Total Qty 75	<b>CS1</b> <b>Qty</b> 69	<b>CS2</b> Qty 6	<b>CS3</b> <b>Qty</b> 0	CS4 Qty 0 Feet
Element Number	t Defect Type	Defect Description			cs	CS Qty	Maint Qty
✓ 331	Cracking (RC and Other)	WEST RAIL HAS SCATTERED CRACKS INCH.	S UP TO 1/32		2	4	Feet
✓ 331	Exposed Rebar	underside of rail section at bent 2, (2) sha	allow rebars		2	2	2 Feet

**General Comments** 

#### Span 2 **Right Bridge Rail Concrete Railing** Element Total CS1 CS2 CS3 CS4 Number **Element Name** Qty Qty Qty Qty Qty 331 68 0 Feet Reinforced Concrete Bridge Railing 75 4 3 Element Maint CS Qty **Defect Description Defect Type** CS Number Qty 🗸 331 Delamination/Spall rail section 2 from bent 2, spall (27 inch x 4 inch x 1.5 3 Feet 3 3 inch deep) with exposed rusted rebar; adjacent post with diagonal crack (up to 1/32 inch x 6 inches) 🗸 331 Exposed Rebar underside of rail section, shallow rebars at random 2 4 4 Feet

Span 2 Movabl	e Bearing	Nea	Bearing 1					
Element Number	<u>t</u>	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
311	Movabl	e Bearing	1	0	1	0	0	Each
515	Steel P	rotective Coating	1	0	0	1	0	Square Feet
Element Number	Defect Type	Def	ect Description		CS	CS Qty	Maint Qty	
✓ 311 Co	rrosion	SPAN 2 NEAR BEARING SURFACE RUST.	HAS SCATTERED		2	1	-	Each

# Effectiveness (Steel limited effectiveness, corrosion initiated Protective Coatings)

Inspection Date: 08/16/2023

1

3

1 Square Feet

-	_						
Spa	n 2	Far Bearing	j 1				
Fixe	ed Bearing						
Eler	nent	Elomont Nomo	Total	CS1	CS2	CS3	CS4
313	Fixed E	Bearing	<b>Qiy</b> 1	0	0	1 1	0 Each
515	Steel P	rotective Coating	1	0	0	0	1 Square Feet
Elemen	t r Defect Type	Defect Descr	ription		CS	CS Qty	Maint Otv
∕] 313	Corrosion	SPAN 2 FAR BEARING HAS RUS	T SCALE/PACK		3	1	1 Each
∕ 515	Effectiveness (Steel Protective Coatings)	rust scale/pack rust			4	1	1 Square Feet
-	General Comments						
Spa	n 2	Near Bearin	ng 2				
Mov	able Bearing		-				
Eler Nun	nent nber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
311	Movabl	e Bearing	1	0	0	1	0 Each
515	Steel P	rotective Coating	1	0	0	0	1 Square Feet
Elemen Numbe	t r Defect Type	Defect Descr	ription		CS	CS Qty	Maint Qty
7 311	Corrosion	SPAN 2 NEAR BEARING HAS RU RUST.	IST SCALE/PACK		3	1	1 Each
7 515	Effectiveness (Steel Protective Coatings)	rust scale/pack rust			4	1	1 Square Feet
-	General Comments						
Spa	n 2	Far Bearing	J 2				
Fixe	ed Bearing						
Eler Nun	nent nber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
313 515	Fixed E Steel P	rotective Coating	1	0	0	1	0 Each 1 Square Feet
Flemen	t		•		Ŭ		Maint
Numbe	Defect Type	Defect Descr	ription		CS	CS Qty	Qty
7 313	Corrosion	SPAN 2 FAR BEARING HAS RUS RUST.	T SCALE/PACK		3	1	1 Each
							4 Courses Fast

#### Span 2

	D
Novable	Bearing

Eler Nun	nent nber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
311	Mov	able Bearing	1	0	0	1	0	Each
515	Stee	I Protective Coating	1	0	0	0	1	Square Feet
Elemen Numbe	r Defect Type	Defect Des	cription		CS	CS Qty	Maint Qty	
<b>√</b> 311	Corrosion	SPAN 2 NEAR BEARING HAS R RUST.	RUST SCALE/PACK		3	1	-	1 Each
✓ 515	Effectiveness (Ste Protective Coating	el rust scale/pack rust s)			4	1		1 Square Feet
-	General Comment	S						

Span 2

Far Bearing 3

#### **Fixed Bearing**

CS1 CS4 Element Total CS2 CS3 Number **Element Name** Qty Qty Qty Qty Qty 313 Fixed Bearing 0 Each 0 0 1 1 515 **Steel Protective Coating** 0 0 0 1 1 Square Feet Maint Element Defect Type **Defect Description** CS CS Qty Number Qty 🗸 313 painted over section loss (up to 3/16 inch deep) with 3 Corrosion 1 1 Each corrosion reinitiated; pack rust 515 Effectiveness (Steel surface rust/pack rust 4 1 1 Square Feet Protective Coatings)

**General Comments** 

#### Span 2

#### **Near Bearing 4**

#### **Movable Bearing**

Elen Num	nent 1ber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
311	Movable	Bearing	1	0	0	1	0	Each
515	Steel Pr	otective Coating	1	0	0	0	1	Square Feet
Element Number	t Defect Type	Defect Descripti	on		CS	CS Qty	Maint Qty	
<b>√</b> 311	Corrosion	painted over section loss (up to 3/16 ir corrosion reinitiated; pack rust	nch deep) with		3	1		1 Each
✓ 515	Effectiveness (Steel Protective Coatings)	surface rust/pack rust			4	1		1 Square Feet

**General Comments** 

#### Far Bearing 4

### **Fixed Bearing**

Span 2

	U							
Element Number	t	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	,
313	Fixed B	earing	1	0	1	0	0	Each
515	Steel P	rotective Coating	1	0	0	1	0	Square Feet
Element Number	Defect Type	Defect	Description		CS	CS Qty	Maint Qty	
✓ 313 Cor	rrosion	SPAN 2 FAR BEARING HAS RUST.	SCATTERED SURFACE		2	1		Each

✓ 515

# Effectiveness (Steel limited effectiveness, corrosion initiated Protective Coatings)

#### Inspection Date: 08/16/2023

3

1 Square Feet

#### **General Comments**

Spa	n 2	Wearing Surface						
Asp	halt Wearing Surfa	ace						
Elen Num	nent 1ber Wearing	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	quare Feet
510	wearing	Sunace	1,950	1,550	0	400	14 3	
Elemen <sup>:</sup> Number	t Defect Type	Defect Description			CS	CS Qty	Maint Qty	
<b>√</b> 510	Delamination/Spall (Wearing Surfaces)	(PAR) at bent 2, areas of missing asphalt feet x 3 inch) at random	(up to 2		4	13	13	Square Feet
✓ 510	Patched Area/Pothole (Wearing Surface)	(PAR) along centerline of roadway, approvide from bent 2, spall (11 inch x 6 inch x fe	(imately 25 ull depth)	5	4	1	1	Square Feet
<b>√</b> 510	Crack (Wearing Surface)	SPAN 2 WEARING SURFACE HAS SCAT TRANSVERSE AND LONGITUDINAL CR. TO 1/16 INCH.	ITERED ACKS UP		3	400	400	Square Feet

General Comments

Span 3

Deck

#### **Reinforced Concrete Deck**

Ele Nu	ment mber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
12	Reinforc	ed Concrete Deck	2,213	1,336	800	77	0 S	quare Feet
Eleme Numbe	nt Defect Type	Defect Description			CS	CS Qty	Maint Qty	
<b>√</b> 12	Delamination/Spall	(PAR) top of deck near bent 2, spall (2 feet x 1.5 inch deep) with exposed rusted rebar missing asphalt	x 15 inch at area of		3	2	2	Square Feet
<b>√</b> 12	Delamination/Spall	at bents 2 and 3, end diaphragms in all bay unsound patches/delaminations/spalls (up width x 8 inch x 1.5 inch deep), some with rusted rebar	/s, to full bay exposed		3		30	Square Feet
<b>√</b> 12	Delamination/Spall	left overhang, areas of poor consolidation ( inch deep) at random	up to 1/2		3	75	75	Square Feet
<mark>√</mark> 12	Cracking (RC and Other)	throughout underside of deck, transverse of to 1/32 inch x full bay width) and map crack (hairline), some with efflorescence at rando	racks (up ks om		2	800	800	Square Feet

**General Comments** 

Span 3		Beam 1						
Plate Gi	rder							
Element Number	Element Name	•	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107	Steel Open Girder/Beam		75	42	25	8	0	Feet
515	Steel Protective Coating		740	706	0	33	1	Square Feet
Element Number	Defect Type	Defect Description			CS	CS Qty	Maint Qty	

1

Structure	Number: 110029			Inspe	ection Da	ate: 08/16/2023
<b>√</b> 107	Corrosion	at bent 2, web adjacent to diaphragm, painted over section loss (9/16 inch average remaining x 8 inch x 3 inch); lower web, painted over pitting (up to 1/8 inch deep x 7 feet x up to 4 inch) with corrosion reinitiated; bottom flange, rust scale	3	7	7	Feet
<b>√</b> 107	Corrosion	at bent 3, web adjacent to diaphragm, painted over section loss (9/16 inch average remaining x 3 inch x 3 inch) with corrosion reinitiated	3	1	1	Feet
<b>v</b> 107	Corrosion	along the edge of the top flange, surface rust at random	2	25		Feet
✓ 515	Effectiveness (Steel Protective Coatings)	at bent 2, bottom flange, rust scale	4	1	1	Square Feet
<b>√</b> 515	Effectiveness (Steel Protective Coatings)	surface rust	3	33	33	Square Feet
	- · · ·					

General Comments

Span 3

Beam 2

#### Plate Girder

Ele Nu	ement Imber		Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107		Steel Open C	Girder/Beam	75	70	2	3	0	Feet
515		Steel Protect	ive Coating	740	735	0	5	0	Square Feet
Eleme Numb	nt er Defect T	уре	Defect Description			CS	CS Qty	Maint Qty	
<b>v</b> 107	Corrosion	at dia inc rer	bent 2, painted over section loss: web a aphragm (9/16 inch average remaining : h); lower web (5/8 inch average remair ch x 4 inches); bottom flange (1 inch aver maining x 10 inches) with corrosion rein	adjacent to x 4 inch x 2 hing x 14 erage itiated		3	2	:	2 Feet
<b>V</b> 107	Corrosion	at dia rer re to	bent 3, painted over section loss: web a aphragm and upper web (9/16 inch aver maining x 5 inch x 1 inch); lower web (9 maining x 5 inch x 3 inch) with adjacen 1/8 inch deep) with corrosion reinitiated	adjacent to age /16 average t pitting (up		3	1		1 Feet
<b>√</b> 107	Corrosion	alc rar	ong the edge of the top flange, surface indom	rust at		2	2		Feet
✓ 515	Effectiveness Protective Coa	(Steel su atings)	rface rust			3	5	:	5 Square Feet
	General Comm	nents							

Span 3

Beam 3

#### **Plate Girder**

Elen Nun	nent nber		Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107		Steel Op	ben Girder/Beam	75	69	2	4	0	Feet
515		Steel Pr	otective Coating	740	735	0	4	1	Square Feet
Elemen Number	t r Defect	Туре	Defect De	scription		CS	CS Qty	Maint Qty	
<b>√</b> 107	Corrosion		at bent 2, painted over section le diaphragm (9/16 inch average re inch); lower web 9/16 inch avera feet x 4 inches) with corrosion re flange, rust scale	oss: web adjacent to emaining x 8 inch x 2 age remaining x 1.5 einitiated; bottom		3	2		2 Feet
<b>v</b> 107	Corrosion		at bent 3, web adjacent to diaph painted over pitting (up to 1/8 in 10 inch)	ragm and lower web, ch deep x 15 inch x		3	2	:	2 Feet

Structure	Number: <u>110029</u>			Inspection Da	ate: <u>08/16/2023</u>
✓ 107	Corrosion	along the edge of the top flange, surface rust at random	2 2	2	Feet
<b>√</b> 515	Effectiveness (Steel Protective Coatings)	at bent 2, bottom flange, rust scale	4	1 1	Square Feet
<b>√</b> 515	Effectiveness (Steel Protective Coatings)	surface rust	3	4 4	Square Feet
	General Comments				

Beam 4

Plat	te (	-	der

Elen Num	nent nber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107	Steel O	pen Girder/Beam	75	57	14	4	0 F	eet
515	Steel Pr	rotective Coating	740	730	0	10	0 S	quare Feet
Elemen Number	t Defect Type	Defect Descriptio	n		CS	CS Qty	Maint Qty	
✓ 107	Corrosion	at bent 2, painted over section loss: weld diaphragm (9/16 inch average remaining inch); lower web 9/16 inch average remained inch x 3 inches); bottom flange (1 inch a remaining x 3 inches) with corrosion rein	o adjacent to g x 8 inch x 2 aining x 15 average nitiated		3	2	2	Feet
∕ 107	Corrosion	at bent 3, web adjacent to diaphragm ar painted over pitting (up to 1/8 inch deep inches) with corrosion reinitiated	nd lower web, x 2 feet x 9		3	2	2	Feet
<b>v</b> 107	Corrosion	along the edge of the top flange, surface random	e rust at		2	6		Feet
<b>v</b> 107	Damage	impact damage			2			Feet
<b>√</b> 107	Distortion	over I-40 westbound, right travel lane, b and cover plate, impact scrapes/gouges inch deep)	ottom flange s (up to 1/4		2	8		Feet
✓ 515	Effectiveness (Steel Protective Coatings)	surface rust			3	10	10	Square Feet

**General Comments** 

Bent 2 Joint

Standard Joint

Span 3

Elen Num	nent 1ber		Element Name		Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
301		Pourable	Joint Seal		38	0	0	0	38 F	eet
Element Number	t Defect	Туре	Defec	t Description			CS	CS Qty	Maint Qty	
<b>√</b> 301	Seal Damage	Э	along the length of the joint length)	, seal deteriorate	d (full		4	38	38	Feet
<b>V</b> 301	Debris Impac	ction	EXPANSION JOINT OVER SCATTERED AREAS OF D BOTH SHOULDERS.	BENT 2 HAS DEBRIS IMPACT	ION IN		3		6	Feet

#### Span 3

#### **Concrete Railing**

Elen Num	nent nber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
331	Reinford	ed Concrete Bridge Railing	75	68	7	0	0 Feet
Element Number	t Defect Type	Defect Description	n		CS	CS Qty	Maint Qty
✓ 331	Cracking (RC and Other)	WEST RAIL HAS SCATTERED CRACK INCH.	S UP TO 1/32		2	5	Feet
<b>√</b> 331	Exposed Rebar	underside of rail, and outriggers, shallow random	rebars at		2	2	2 Feet

General Comments

### Span 3

### Right Bridge Rail

### **Concrete Railing**

Eler Nun 331	<b>nent</b> nber Reinfor	Element Name ced Concrete Bridge Railing	Total Qty 75	<b>CS1</b> Qty 28	<b>CS2</b> Qty 43	CS3 Qty 4	<b>CS4</b> <b>Qty</b> 0 F	eet
Elemen Numbe	r Defect Type	Defect Description	on		CS	CS Qty	Maint Qty	
<b>√</b> 331	Patched Area	(PAR) within patched area over left and lanes of I-40, area of delamination with to 1/16 inch), could possibly fall into tra	l right travel cracking (up ffic below		3	4	4	Square Feet
<b>√</b> 331	Cracking (RC and Other)	along the safety walk, transverse crack inch) and map cracks (hairline) at rando	s (up to 1/32 om		2	18		Feet
✓ 331	Exposed Rebar	underside of rail section and outriggers rebars at random	, shallow		2	3	3	Feet
<mark>√</mark> 331	Patched Area	26 FOOT CONCRETE BRIDGE RAIL F MIDSPAN.	REPAIR NEAR		2	22		Square Feet

**General Comments** 

### Span 3

#### Near Bearing 1

#### **Movable Bearing**

Eler Nun	nent nber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
311	Mova	able Bearing	1	0	0	1	0 Each	
515	Steel	Protective Coating	1	0	0	0	1 Square Fe	et
Elemen Numbe	t r Defect Type	Defect Descri	otion		CS	CS Qty	Maint Qty	
<b>√</b> 311	Corrosion	SPAN 3 NEAR BEARING HAS SUF RUST/PACK RUST.	FACE		3	1	1 Each	
✓ 515	Effectiveness (Stee Protective Coatings	el surface rust/pack rust			4	1	1 Square	Feet
-								

#### Span 3

Fixed	Bearing	
	Douinig	

Eler Nun	nent nber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
313	Fixed B	earing	1	0	1	0	0	Each
515	Steel Pr	rotective Coating	1	0	0	1	0	Square Feet
Elemen Numbe	t r Defect Type	Defect Desc	cription		CS	CS Qty	Maint Qty	
✓ 313	Corrosion	SPAN 3 FAR BEARING HAS SC/ RUST.	ATTERED SURFACE		2	1	-	Each
✓ 515	Effectiveness (Steel Protective Coatings)	limited effectiveness, corrosion in	itiated		3	1		1 Square Feet

General Comments

#### Span 3

**Near Bearing 2** 

#### **Movable Bearing**

CS4 Element Total CS1 CS2 CS3 Number **Element Name** Qty Qty Qty Qty Qty 311 Movable Bearing 0 Each 0 0 1 1 515 **Steel Protective Coating** 0 0 0 1 1 Square Feet Maint Element Defect Type **Defect Description** CS CS Qty Number Qty SPAN 3 NEAR BEARING HAS RUST SCALE/PACK 3 🗸 311 Corrosion 1 1 Each RUST. 515 Effectiveness (Steel rust scale/pack rust 4 1 1 Square Feet Protective Coatings) **General Comments** 

#### Span 3

#### Far Bearing 2

#### **Fixed Bearing**

Elen Num	nent Iber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
313	Fixed	l Bearing	1	0	0	1	0	Each
515	Steel	Protective Coating	1	0	0	1	0	Square Feet
Element Number	Defect Type	Defect De	scription		CS	CS Qty	Maint Qty	
✓ 313	Corrosion	painted over section loss (up to corrosion reinitiated	1/8 inch deep) with		3	1	-	1 Each
✓ 515	Peeling/Bubbling/C ing (steel Protective Coatings)	rack limited effectiveness, corrosion i e	nitiated		3	1		1 Square Feet

**General Comments** 

Span 3

#### **Near Bearing 3**

#### **Movable Bearing**

515 Element	Steel Protective Coating	1	0	0	1	0 Maint	Square Feet
311	Movable Bearing	1	0	0	1	0	Each
Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	

Structure I	Number: <u>110029</u>			Inspec	ction Date: 08/16/2023
✓ 311	Corrosion	painted over section loss (up to 1/8 inch deep) with corrosion reinitiated	3	1	1 Each
<b>√</b> 515	Effectiveness (Steel Protective Coatings)	limited effectiveness, corrosion initiated	3	1	1 Square Feet

**General Comments** 

Sp: Fix	an 3 red Bearing	Far Bearir	ng 3					
Ele Nu 313	ement Imber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	Each
515	Ste	el Protective Coating	1	0	0	1	0	Square Feet
Eleme Numb	nt er Defect Type	e Defect Des	cription		CS	CS Qty	Maint Qty	
<b>√</b> 313	Corrosion	SPAN 3 FAR BEARING HAS SC RUST.	ATTERED SURFACE		2	1	-	Each
✓ 515	Effectiveness (Ste Protective Coating	eel limited effectiveness, corrosion ir gs)	nitiated		3	1		1 Square Feet
	General Commen	is in the second s						

General Comments

Spa	in 3	Near Bearing 4						
Mov	able Bearing							
Eler Nur	ment nber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
311	Movable	Bearing	1	0	0	1	0	Each
515	Steel Pr	otective Coating	1	0	0	0	1	Square Feet
Elemen Numbe	t r Defect Type	Defect Description			CS	CS Qty	Maint Qty	
✓ 311	Corrosion	SPAN 3 NEAR BEARING HAS SURFACE RUST/PACK RUST.			3	1	-	1 Each
✓ 515	Effectiveness (Steel Protective Coatings)	surface rust/pack rust			4	1		1 Square Feet
-	General Comments							

Spa	an 3	Far Bearin	ng 4					
Fixe	ed Bearing							
Ele: Nur	ment mber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
313	Fixed E	Bearing	1	0	1	0	0	Each
515	Steel P	rotective Coating	1	0	0	1	0	Square Feet
Elemer Numbe	nt Pr Defect Type	Defect Des	scription		CS	CS Qty	Maint Qty	
<b>√</b> 313	Corrosion	SPAN 3 FAR BEARING HAS SC RUST.	ATTERED SURFACE		2	1		Each
<b>√</b> 515	Effectiveness (Steel Protective Coatings)	limited effectiveness, corrosion in	nitiated		3	1		1 Square Feet
	General Comments							

Wearing Surface

#### Span 3

#### Asphalt Wearing Surface

Elen Num	nent nber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
510	Wearing	Surface	1,950	1,420	0	494	36 S	quare Feet
Elemen Number	t r Defect Type	Defect Description			CS	CS Qty	Maint Qty	
<b>√</b> 510	Delamination/Spall (Wearing Surfaces)	(PAR) at bent 2, areas of missing asphalt feet x 2 inches) at random; northbound la 3, areas of missing asphalt (up to 3.5 feet	(up to 3 ne, at bent x 2 feet)		4	30	30	Square Feet
<b>√</b> 510	Delamination/Spall (Wearing Surfaces)	(PAR) centerline of roadway, near bent 2, to 2 feet x 15 inch x full depth)	spalls (up		4	6	6	Square Feet
✓ 510	Crack (Wearing Surface)	SPAN 3 WEARING SURFACE HAS SCA MAP/TRANSVERSE AND LONGITUDIN/ UP TO 1/8 INCH.	TTERED AL CRACKS	3	3	488	488	Square Feet
<b>√</b> 510	Patched Area/Pothole (Wearing Surface)	WEARING SURFACE HAS SCATTERED AREAS WITH SOME MAP CRACKING.	PATCHED		3	6	6	Square Feet

General Comments

Span 4

Deck

#### **Reinforced Concrete Deck**

Elen Nun 12	nent nber Reinfor	Element Name ced Concrete Deck	Total Qty 1,534	<b>CS1</b> <b>Qty</b> 1,052	<b>CS2</b> <b>Qty</b> 22	<b>CS3</b> <b>Qty</b> 460	<b>CS4</b> Qty 0 S	quare Feet
Elemen Number	t Defect Type	Defect Descript	tion		cs	CS Qty	Maint Qty	
<b>√</b> 12	Delamination/Spall	at bent 3, end diaphragms in all bays, patches/delaminations/spalls (3.5 fee inches deep) with exposed rusted reb	, failed t x 10 inch x 2 ear		3		10	Square Feet
<b>√</b> 12	Efflorescence/Rust Staining	(PAR) throughout underside of deck, cracks (up to 1/32 inch x full bay widtl cracks (hairline), some with effloresce and rust stains at random	transverse h) and map ence buildup		3	460	460	Square Feet
<mark>√</mark> 12	Cracking (RC and Other)	top of deck, northbound lane, near en transverse crack (up to 1/32 inch) at a asphalt	id bent 2, area of missing		2	1	1	Square Feet
<mark>√</mark> 12	Delamination/Spall	right overhang, near midspan, delami x 6 inch)	nation (10 inch		2	1	1	Square Feet
<mark>√</mark> 12	Patched Areas	MULTIPLE SOUND PATCHES UP TO FEET IN UNDERSIDE OF WEST OV RANDOM THROUGHOUT.	O 2.5 FEET x 2 ERHANG AT		2	20		Square Feet

Span 4		Beam 1						
Plate Gi	rder							
Element Number	Element Name		Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107	Steel Open Girder/Beam		51	29	21	1	0	Feet
515	Steel Protective Coating		507	485	0	21	1	Square Feet
Element Number	Defect Type	Defect Description			CS	CS Qty	Maint Qty	

Structure	Number: 110029			Inspe	ection Date: 08/16/2023
<b>v</b> 107	Corrosion	at bent 3, painted over section loss: web adjacent to diaphragm (1/2 inch average remaining x 7 inch x 2 inch); lower web (1/2 inch average remaining x 5 inch x 5 inch); bottom flange (0.86 inch average remaining x 1 foot) with corrosion reinitiated	3	1	1 Feet
<b>v</b> 107	Corrosion	along the edge of the top flange, surface rust at random	2	20	Feet
<b>√</b> 107	Corrosion	at end bent 2, bottom flange, rust scale	2	1	Feet
<b>√</b> 515	Effectiveness (Steel Protective Coatings)	at end bent 2, bottom flange, rust scale	4	1	1 Square Feet
<b>√</b> 515	Effectiveness (Steel Protective Coatings)	surface rust	3	21	21 Square Feet
	General Comments				

Span 4

Plate Girder

#### Beam 2

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
107	Steel Open Girder/Beam	51	40	5	1	5 Feet
515	Steel Protective Coating	507	496	0	11	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
<b>√</b> 107	Corrosion	(PAR) at bent 3, painted over section loss: web adjacent to diaphragm (7/16 inch average remaining x 7 inch x 2 inch); lower web (1/2 inch average remaining x 4.5 feet x 4 inches); bottom flange (0.71 inch average remaining x 6 inches) with corrosion reinitiated	4	5	5	Feet
<b>√</b> 107	Corrosion	at end bent 2, bottom flange, behind bearing, painted over section loss (0.83 inch average remaining x 2 inches) with corrosion reinitiated	3	1	1	Feet
<b>√</b> 107	Corrosion	along the edge of the top flange, surface rust at random	2	5		Feet
<b>√</b> 515	Effectiveness (Steel Protective Coatings)	surface rust	3	11	11	Square Feet

Spai	n 4	Beam 3						
Plate	e Girder							
Elem Num 107	nent nber Steel O	Element Name pen Girder/Beam	Total Qty 51	<b>CS1</b> Qty 44	CS2 Qty 4	<b>CS3</b> <b>Qty</b> 0	CS4 Qty 3	Feet
515	Steel P	rotective Coating	507	500	0	7	0	Square Feet
Element Number	t Defect Type	Defect Descr	iption		CS	CS Qty	Maint Qty	
<b>√</b> 107	Corrosion	(PAR) at bent 3, painted over section adjacent to diaphragm and upper we average remaining x 6 inch x 2 foot average remaining x up to 2.5 feet high); bottom flange (0.77 inch ave inches); top flange, painted over painted inch deep) with corrosion reinitiated	on loss: web yeb (7/16 inch ); lower web (1/2 long x 6 inches rage remaining x 8 tting (up to 1/8		4	3		3 Feet
<b>v</b> 107	Corrosion	along the edge of the top flange, su random	Irface rust at		2	4		Feet
✓ 515	Effectiveness (Steel Protective Coatings)	surface rust			3	7		7 Square Feet

#### **General Comments**

-								
Spa	n 4	Beam 4						
Plat	e Girder							
Elen Nun	nent nber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107	Steel C	Open Girder/Beam	51	25	25	1	0	Feet
515	Steel F	Protective Coating	507	482	0	25	0	Square Feet
Elemen Number	t r Defect Type	Defect Descri	ption		CS	CS Qty	Maint Qty	
<b>v</b> 107	Corrosion	at bent 3, web adjacent to diaphrage section loss (1/2 inch average rema inch), partially covered with epoxy	m, painted over ining x 6 inch x 6		3	1	1	Feet
<b>v</b> 107	Corrosion	along the edge of the top flange, sur random	rface rust at		2	25		Feet
<b>√</b> 107	Damage	6 FOOT IMPACT DAMAGE TO BO AND COVER PLATE WITH SCRAP SPAN not found at this location, m beam 4	TTOM FLANGE PES NEAR MID- noved to Span 3		1			Feet
✓ 515	Effectiveness (Steel Protective Coatings)	along the edge of the top flange, sur random	rface rust at		3	25	25	Square Feet
-	General Comments							
Spa	n 4	Bent 3 Joint						

Sta	ndard Joint							
Ele Nu 301	<b>ment</b> mber Pourab	Element Name	Total Qty 38	<b>CS1</b> <b>Qty</b> 0	<b>CS2</b> <b>Qty</b> 0	<b>CS3</b> <b>Qty</b> 0	<b>CS4</b> Qty 38 F	eet
Elemer Numbe	nt Defect Type	Defect Descri	ption		cs	CS Qty	Maint Qty	
<b>√</b> 301	Seal Damage	along the length of the joint, seal de length)	eteriorated (full		4	38	38	Feet
<b>√</b> 301	Debris Impaction	EXPANSION JOINT OVER BENT 3 SCATTERED AREAS OF DEBRIS BOTH SHOULDERS.	3 HAS IMPACTION IN		3		6	Feet

<b>Name</b> ridge Railing	Total Qty 52	CS1 Qty	CS2 Qty	CS3 Otv	CS4	
Name ridge Railing	Total Qty 52	CS1 Qty	CS2 Qty	CS3 Otv	CS4	
5 5	02	51	1	0	Qty 0	Feet
Defect Descr	iption		CS	CS Qty	Maint Qty	
, spall (5 inch x 3 inch x d rusted rebar	x 1/2 inch deep)		2	1	- 1	Feet
, scattered cracks, hair	line		1	10		Feet
	d rusted rebar , scattered cracks, hair	d rusted rebar , scattered cracks, hairline	d rusted rebar 1, scattered cracks, hairline	d rusted rebar I, scattered cracks, hairline 1	d rusted rebar , scattered cracks, hairline 1 10	d rusted rebar , scattered cracks, hairline 1 10

#### Right Bridge Rail

### Span 4

#### **Concrete Railing**

Elen Nun	nent 1ber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
331	Reinfor	ced Concrete Bridge Railing	52	49	0	3	0	Feet
Elemen Number	t Defect Type	Defect Descrip	otion		CS	CS Qty	Maint Qty	
<b>√</b> 331	Cracking (RC and Other)	at rail post 2, cracks (up to 1/16 inch rail section, vertical crack (up to 1/32	wide); adjacent ? inch)		3	2	2	2 Feet
<b>√</b> 331	Patched Area	rail post 3, patched area (8 inch x 10 hairline cracks	inch) with		3	1		1 Square Feet
<b>√</b> 331	Cracking (RC and Other)	along length, scattered cracks, hairlin	ne		1	11		Feet
Ī	General Comments							

#### Span 4

#### Near Bearing 1

#### Movable Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
311	Movable Bearing	1	0	1	0	0 Each
515	Steel Protective Coating	1	0	0	0	1 Square Feet

Elemen Numbe	t r Defect Type	Defect Description	CS	CS Qty	Maint Qty
<b>V</b> 311	Corrosion	SPAN 4 NEAR BEARING HAS SURFACE RUST/RUST SCALE.	2	1	Each
<b>√</b> 515	Effectiveness (Steel Protective Coatings)	surface rust/rust scale	4	1	1 Square Feet

General Comments

#### Span 4 Far Bearing 1 **Fixed Bearing** CS1 CS2 CS4 Element Total CS3 **Element Name** Number Qty Qty Qty Qty Qty 313 **Fixed Bearing** 0 Each 1 0 0 1 **Steel Protective Coating** 0 515 1 0 1 0 Square Feet Element Maint Defect Type Defect Description cs CS Qtv

Numbe	er Delect Type	Delect Description	63	CS QLY	Qty	
<b>√</b> 313	Corrosion	painted over section loss (up to 1/4 inch deep) with corrosion reinitiated	3	1	1 Each	
<b>√</b> 515	Effectiveness (Steel Protective Coatings)	limited effectiveness, corrosion initiated	3	1	1 Square Feet	
	General Comments					

General Comments

#### Near Bearing 2

#### **Movable Bearing**

Span 4

Element	Defect Type	Defect Description			CS	CS Qty	Maint	
515	Steel Protective Coating		1	0	0	0	1	Square Feet
311	Movable Bearing		1	0	0	0	1	Each
Element Number	Element Name		Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	

Structure	Number: <u>110029</u>			Inspectio	on D	ate: 08/16/2023
<b>√</b> 311	Corrosion	(PAR) painted over section loss (up to 1/8 inch deep); left anchor bolt, approximately 50 percent section loss; pack rust	4	1	1	Each
<b>√</b> 311	Loss of Bearing Area	(PAR) northwest corner, loss of bearing (4 inch x 3 inch x up to 1/2 inch deep) due to cap spall	2		1	Each
✓ 515	Effectiveness (Steel Protective Coatings)	pack rust/corrosion with section loss	4	1	1	Square Feet
	General Comments					

General Comments

#### Span 4

Far Bearing 2

#### **Fixed Bearing**

Eleme Numb	ent oer	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
313	Fixed	Bearing	1	0	0	1	0	Each
515	Steel	Protective Coating	1	0	0	1	0	Square Feet
Element Number	Defect Type	Defect D	escription		CS	CS Qty	Maint Qty	
<b>√</b> 313 (	Corrosion	painted over section loss (up to corrosion reinitiated	o 1/8 inch deep) with		3	1		1 Each

1 Square Feet

3

1

Protective Coatings) **General Comments** 

Span 4

✓ 515

#### **Near Bearing 3**

limited effectiveness, corrosion initiated

#### **Movable Bearing**

Effectiveness (Steel

#### Element Total CS1 CS2 CS3 CS4 Number **Element Name** Qty Qty Qty Qty Qty 311 Movable Bearing 1 0 1 0 0 Each 515 0 0 1 0 Square Feet Steel Protective Coating 1 Element Maint **Defect Type Defect Description** CS CS Qty Number Qty 🗸 311 Corrosion SPAN 4 NEAR BEARING HAS SCATTERED 2 1 Each SURFACE RUST. ✓ 515 Effectiveness (Steel limited effectiveness, corrosion initiated 3 1 1 Square Feet Protective Coatings) **General Comments**

Span 4 Far Bearing 3 **Fixed Bearing** Element Total CS1 CS2 CS3 CS4 Number **Element Name** Qty Qty Qty Qty Qty 313 **Fixed Bearing** 0 0 Each 1 0 1 515 **Steel Protective Coating** 0 0 1 0 Square Feet 1 Maint Element cs **Defect Type Defect Description** CS Qty Number Qty SPAN 4 FAR BEARING HAS SCATTERED SURFACE 2 1 🗸 313 Corrosion Each RUST. Effectiveness (Steel limited effectiveness, corrosion initiated 3 1 1 Square Feet ✓ 515 Protective Coatings)

#### Span 4

wovable bearing	Movable	Bearing
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Elen Nun	nent nber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
311	Movable	e Bearing	1	0	1	0	0	Each
515	Steel Pr	rotective Coating	1	0	0	1	0	Square Feet
Elemen Number	t r Defect Type	Defect Des	cription		CS	CS Qty	Maint Qty	
311	Corrosion	SPAN 4 NEAR BEARING HAS S SURFACE RUST.	SCATTERED		2	1		Each
515	Effectiveness (Steel Protective Coatings)	limited effectiveness, corrosion in	nitiated		3	1		1 Square Feet

General Comments

Far Bearing 4

#### **Fixed Bearing**

#### CS4 Element Total CS1 CS2 CS3 Number **Element Name** Qty Qty Qty Qty Qty 313 **Fixed Bearing** 0 Each 0 1 0 1 515 **Steel Protective Coating** 0 0 0 Square Feet 1 1 Element Maint Defect Type **Defect Description** CS CS Qty Number Qty SPAN 4 FAR BEARING HAS SCATTERED SURFACE 2 ✓ 313 Corrosion 1 Each RUST. 3 ✓ 515 Effectiveness (Steel limited effectiveness, corrosion initiated 1 1 Square Feet Protective Coatings)

**General Comments** 

#### Span 4

#### Wearing Surface

#### **Asphalt Wearing Surface**

Eler Nur	nent nber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
510	Wearing	Surface	1,352	950	3	382	17 S	quare Feet
Elemen Numbe	t r Defect Type	Defect Description			CS	CS Qty	Maint Qty	
<mark>√</mark> 510	Delamination/Spall (Wearing Surfaces)	(PAR) at bent 3, areas of missing asphalt ( feet x 2 inch) at random	up to 2		4	14	14	Square Feet
<mark>√</mark> 510	Delamination/Spall (Wearing Surfaces)	(PAR) throughout wearing surface, scattered missing asphalt (up to 5 inch diameter)	ed areas of		4	3	3	Square Feet
✓ 510	Crack (Wearing Surface)	over end bent 2, transverse crack (1/4 inch width of roadway)	ı x full		3	32	32	Square Feet
✓ 510	Crack (Wearing Surface)	SPAN 4 WEARING SURFACE HAS SCAT MAP/TRANSVERSE AND LONGITUDINAL UP TO 1/8 INCH.	TERED L CRACKS		3	350	350	Square Feet
✓ 510	Patched Area/Pothole (Wearing Surface)	2023 previously repaired, previously noted midspan Northbound lane near shoulder, p inch x 4 inch x full depth	as: oothole, 3		2	1		Square Feet
✓ 510	Patched Area/Pothole (Wearing Surface)	right shoulder, near end bent 2, patched ar inch x 16 inch)	ea (22		2	2		Square Feet
-	General Comments							

Structure Number: 110029

#### End Bent 1

#### Abutment

#### **Reinforced Concrete Abutment**

Poinfor		-	QUY	QLY	Qty	Qty	
Keinion	ced Concrete Abutment	49	37	0	12	0	Feet
t Defect Type	Defect Desci	ription		CS	CS Qty	Maint Qty	
Cracking (RC and Other)	right side of beam 4, delamination foot, with cracks up to 1/16 inch	3.5 feet x up to 1		3	4	2	4 Feet
Cracking (RC and Other)	UP TO 1/16 INCH DIAGONAL CR ABUTMENT AT BEAM PENETRA	ACKS IN TIONS.		3	8	8	3 Feet
	Defect Type Cracking (RC and Other) Cracking (RC and Other)	Defect Type Defect Desc   Cracking (RC and Other) right side of beam 4, delamination foot, with cracks up to 1/16 inch   Cracking (RC and Other) UP TO 1/16 INCH DIAGONAL CR   Other) ABUTMENT AT BEAM PENETRA	Defect Type Defect Description   Cracking (RC and Other) right side of beam 4, delamination 3.5 feet x up to 1 foot, with cracks up to 1/16 inch   Cracking (RC and Other) UP TO 1/16 INCH DIAGONAL CRACKS IN ABUTMENT AT BEAM PENETRATIONS.	Defect Type Defect Description   Cracking (RC and Other) right side of beam 4, delamination 3.5 feet x up to 1 foot, with cracks up to 1/16 inch   Cracking (RC and Other) UP TO 1/16 INCH DIAGONAL CRACKS IN ABUTMENT AT BEAM PENETRATIONS.	Defect TypeDefect DescriptionCSCracking (RC and Other)right side of beam 4, delamination 3.5 feet x up to 13foot, with cracks up to 1/16 inch3Cracking (RC and Other)UP TO 1/16 INCH DIAGONAL CRACKS IN ABUTMENT AT BEAM PENETRATIONS.3	Defect TypeDefect DescriptionCSCS QtyCracking (RC and Other)right side of beam 4, delamination 3.5 feet x up to 134Cracking (RC and Other)UP TO 1/16 INCH DIAGONAL CRACKS IN ABUTMENT AT BEAM PENETRATIONS.38	Defect TypeDefect DescriptionCSCSMaint QtyCracking (RC and Other)right side of beam 4, delamination 3.5 feet x up to 1344Cracking (RC and Other)UP TO 1/16 INCH DIAGONAL CRACKS IN ABUTMENT AT BEAM PENETRATIONS.388

General Comments

#### End Bent 1

Cap 1

Reir	nforced Concrete	Pier Cap						
Eler Nun	nent nber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
234	Reinfor	ced Concrete Pier Cap	52	42	10	0	0	Feet
521	Concre	te Protective Coating	104	104	0	0	0	Square Feet
Elemen Number	t r Defect Type	Defect Des	cription		CS	CS Qty	Maint Qty	
✓ 234	Cracking (RC and Other)	UP TO 1/64 INCH VERTICAL CF THROUGHOUT.	ACKS AT RANDOM		2	10	Ē	Feet
	Conoral Commonts							

General Comments

Ben	t 1	Cap 1						
Rein	nforced Concrete	Pier Cap						
Elen Num	nent 1ber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
234	Reinfor	ced Concrete Pier Cap	37	16	0	21	0 F	eet
Element Number	t Defect Type	Defect Descr	iption		CS	CS Qty	Maint Qty	
✓ 234	Efflorescence/Rust Staining	(PAR) BENT 1 CAP HAS SCATTE TO 1/32 INCH, SOME WITH RUST	) BENT 1 CAP HAS SCATTERED CRACKS UP 32 INCH, SOME WITH RUST STAINS.				12	Feet
✓ 234	Patched Area	SOUTH FACE AND BOTTOM OF BETWEEN COLUMNS 2 AND 3. H AREAS UP TO 3 FEET X 15 INCH HAIRLINE CRACKS AND EFFLOR VISIBLE.	OUTH FACE AND BOTTOM OF WEST END, AND ETWEEN COLUMNS 2 AND 3. HAS PATCHED REAS UP TO 3 FEET X 15 INCHES WITH SOME IAIRLINE CRACKS AND EFFLORESCENCE ISIBLE.			5	5	Feet
<mark>√</mark> 234	Patched Area	southwest corner, failed patch (full up to 2 inches deep) with exposed	height x 18 inch x rusted rebar		3	2	2	Feet
<b>v</b> 234	Patched Area	underside, at east end, unsound pa 2 feet x 1 foot x 1 inch deep) with e rebar	atched areas (up to exposed rusted		3	2	2	Feet
✔ 234	Delamination/Spall	(combined with other notes 2023) \$ below failed patch, spall 13 inch x 8 inch deep with exposed rusted rein	Southwest corner 3 inch x up to 3 forcing		1			Feet

Structure Number: 110029

Ber	nt 1	Pile 1						
Rei	nforced Concr	ete Column						
Ele Nu	ment mber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
205	Re	inforced Concrete Column	1	0	0	1	0 Each	
Elemer Numbe	nt er Defect Typ	e Defect De	scription		CS	CS Qty	Maint Qty	
<b>√</b> 205	Cracking (RC an Other)	cking (RC and west and east faces, UP TO 1/16 INCH VERTICAL er) CRACKS AT RANDOM THROUGHOUT with adjacent delaminations up to to 24 inch vertical 8 inch			3	1	8 Each	
	General Commer	ts						-
Ber	nt 1	Pile 2						
Rei	nforced Concr	ete Column						
Ele Nu	ment mber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
205	Re	inforced Concrete Column	1	0	0	1	0 Each	
Elemer Numbe	nt er Defect Typ	e Defect De	scription		cs	CS Qty	Maint Qty	
<mark>√</mark> 205	Cracking (RC and	d West face at top, vertical crack	9 feet x up to 1/16		3	1	10 Each	

<b>√</b> 205	Cracking (RC and Other)	West face at top, vertical crack 9 feet x up to 1/16 inch with adjacent delamination 5 feet x 8 inches	3	1	10 Each
<b>√</b> 205	Cracking (RC and Other)	SOUTH AND EAST FACES HAVE UP TO 1/32 INCH VERTICAL CRACK AND DELAMINATED AREA. AREA IS: 18 INCH x 6 INCH.	2		Each

Bent	1	Pile 3						
Reinf	orced Concrete	Column						
Eleme Numb	ent er	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
205	Reinfor	ced Concrete Column	1	0	0	1	0 Each	
lement lumber	Defect Type	Defect Des	cription		CS	CS Qty	Maint Qty	
<b>205</b> [	Delamination/Spall	(PAR) southeast and northeast co cracks (up to 1/16 inch x 5.5 feet) and adjacent delaminations (up to southeast corner, at ground, spal 5 inch deep) with exposed rusted reinforcement	orners, vertical ) with rust stains, o 4 feet x 6 inch); I (2 feet x 6 inch x 1. I primary		3	1	8 Each	
<b>205</b>	Cracking (RC and Dther)	(combined with other notes 2023) VERTICAL CRACKS AT RANDO	) UP TO 1/16 INCH M THROUGHOUT.		1		Each	
Ge	eneral 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		37	19	14	4	0 Feet			
Element Number	Defect Type	Defect Description			CS	CS Qty	Maint Qty			
Structure	Number: <u>110029</u>			Inspe	ction Date: 08/16/202	<u>3</u>				
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<mark>√</mark> 234	Efflorescence/Rust Staining	(PAR) underside of cap, adjacent to column 3, patched area (2 feet x 18 inch) with cracks (up to 1/32 inch) and rust stains	3	2	2 Feet					
<b>√</b> 234	Patched Area	Northeast corner, failed patch with adjacent delamination, 14 inch x 14 inch, and transverse crack, 1/16 inch x full width, on underside of cap	3	2	4 Feet					
<b>√</b> 234	Delamination/Spall	North face over column 2, vertical crack, 1/32 inch x full height, extends up from vertical crack on column 2, with adjacent delamination, 26 inch x 15 inch	2	1	1 Feet					
<mark>√</mark> 234	Delamination/Spall	north face, below bay 3, spall (4 inch diameter x 1 inch deep) with exposed rusted rebar	2	1	1 Feet					
✓ 234	Efflorescence/Rust Staining	south and north face, areas of map cracks (hairline) at random	2	12	Feet					
	General Comments									
Be	nt 2	Pile 1								

Reinfor	ced Concrete Column					
Element Number	Element Name		Total Qty	CS1 Qty	CS2 Qty	CS3 Qty
205	Reinforced Concrete Column		1	0	0	1
Element	Defect Type	Defect Description			CS	CS Otv

Numbe	er Delect Type	Delect Description	63	CS QIY	Qty	
<b>√</b> 205	Cracking (RC and Other)	WEST AND EAST FACES, UP TO 1/16 INCH VERTICAL CRACKS AT RANDOM THROUGHOUT.	3	1	9 Each	
	General Comments					_

CS4 Qty

Maint

0 Each

General	Comments

Ben	t 2	Pile 2							
Reir	nforced Concrete	Column							
Elen Num	nent nber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty		
205	Reinford	ed Concrete Column	1	0	0	1	0 E	ach	
Elemen Number	t Defect Type	Defect Description	on		cs	CS Qty	Maint Qty		-
<b>√</b> 205	Cracking (RC and Other)	6 FOOT X UP TO 1/16 INCH VERTICA WITH EFFLORESCENCE EAST FACE OF CAP. (SIMILAR ON WEST FACE)	AL CRACK E AT BOTTOM		3		16	Each	
<mark>√</mark> 205	Efflorescence/Rust Staining	(PAR) at southeast corner, vertical cra inch x full height) with rust stains and a delaminations (up to 4 feet x 6 inch)	cks (up to 1/8 adjacent		3	1	11	Each	

**General Comments** 

Bent 2

### Pile 3

### **Reinforced Concrete Column**

Elen Num	nent iber	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
205	Reinfor	ced Concrete Column	1	0	0	1	0 E	Each
Element Number	Defect Type	Defect Desc	cription		CS	CS Qty	Maint Qty	
<b>V</b> 205	Efflorescence/Rust Staining	(PAR) UP TO 1/8 INCH VERTICA RUST STAINS AT RANDOM THE adjacent delaminations up to 6 fee	AL CRACKS WITH ROUGHOUT with et x 1 foot		3	1	8	Each

**General Comments** 

End	Bent 2		Abutment							
Reir	nforced Cor	crete Abutment								
Eler Nun 215	ment nber	Element Name Reinforced Concrete Abutmen	t	Total Qty 49	<b>CS1</b> <b>Qty</b> 20	<b>CS2</b> Qty 23	<b>CS3</b> Qty 6	<b>CS4</b> <b>Qty</b> 0	Feet	
Elemen Numbe	nt Pr Defect T	уре	Defect Description			cs	CS Qty	Maint Qty		
✔ 215	Delamination/	Spall adjacent to beams, inch x 10 inch x 1/2 cracks (up to 1/16 ir	spalls/delaminations (u inch deep) with associ nch)	up to 18 ated		3	6	6	Feet	
<mark>√</mark> 215	Cracking (RC Other)	and along the abutment random	, areas of map cracks (	hairline) at		2	20		Feet	
<b>√</b> 215	Exposed Reba	ar below right overhan loss noted	g, exposed rusted rein	forcing, no		2	3	3	Feet	
	General Comn	nents								
End	I Bent 2		Cap 1							
Reir	Reinforced Concrete Pier Cap									
Eler Nun 234	ment nber	Element Name Reinforced Concrete Pier Cap		Total Qty 52	<b>CS1</b> Qty 25	<b>CS2</b> <b>Qty</b> 0	<b>CS3</b> Qty 27	<b>CS4</b> <b>Qty</b> 0	Feet	
521		Concrete Protective Coating		104	104	0	0	0 \$	Square Feet	

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
<b>√</b> 234	Efflorescence/Rust Staining	(PAR) along the length of the cap, vertical and longitudinal cracks (up to 1/32 inch x 5 feet), some with rust stains at random	3	27	27 Feet	

**General Comments** 

Bent 3

Cap 1

## **Reinforced Concrete Pier Cap**

Elem Num 234	ent ber Reinforc	Element Name ed Concrete Pier Cap	Total Qty 37	<b>CS1</b> Qty 16	<b>CS2</b> <b>Qty</b> 0	<b>CS3</b> <b>Qty</b> 21	CS4 Qty 0 Fo	eet
Element Number	Defect Type	Defect Description			CS	CS Qty	Maint Qty	
✓ 234	Delamination/Spall	(PAR) 3 FOOT X 18 INCH X 4 INCH DEEL PATCH/SPALL WITH EXPOSED REINFO CAUSING LOSS OF BEARING, AT PREV PATCHED AREA NORTH FACE BELOW	P FAILED PRCING, VIOUSLY BEAM 2.		3	3	3	Feet
<mark>√</mark> 234	Efflorescence/Rust Staining	(PAR) UP TO 1/32 INCH MAP CRACKING WITH EFFLORESCENCE AND RUST ST RANDOM THROUGHOUT	B, SOME AINS, AT		3	18	18	Feet

**General Comments** 

Structure Number: 110029

Bent 3

### **Reinforced Concrete Column**

Elem Num 205	nent Iber Reinfor	Element Name ced Concrete Column	Total Qty 1	<b>CS1</b> <b>Qty</b> 0	<b>CS2</b> Qty 0	CS3 Qty 1	<b>CS4</b> Qty 0 Each	
Element Number	Defect Type	Defect Desc	ription		CS	CS Qty	Maint Qty	
<b>√</b> 205	Cracking (RC and Other)	UP TO 1/8 INCH x 6 FOOT VERT UP TO 1/32 INCH MAP CRACKS THROUGHOUT, some with efflore adjacent delamination, up to 4 foot	CAL CRACKS AND AT RANDOM scence, some with a x 1 foot		3	1	22 Each	

**General Comments** 

Bent 3

Pile 2

Pile 1

#### **Reinforced Concrete Column**

Elen Nun 205	nent hber Reinfor	Element Name rced Concrete Column	Total Qty 1	<b>CS1</b> Qty 0	<b>CS2</b> Qty 0	<b>CS3</b> Qty 1	CS4 Qty 0 Each	
Elemen <sup>:</sup> Number	t Defect Type	Defect Des	cription		CS	CS Qty	Maint Qty	
<b>v</b> 205	Cracking (RC and Other)	south, north and east faces, mult up to 4 feet x 1/16 inch wide with delaminations (4 feet x 10 inch)	iple vertical cracks, adjacent		3		4 Each	
<b>√</b> 205	Patched Area	(PAR) at Southwest corner, failed 22 inches wide x up to 3.5 inche rusted and debonded primary re	d patch, 7 feet high x s deep with exposed inforcing		3	1	7 Each	

**General Comments** 

Bent 3

Pile 3

#### **Reinforced Concrete Column**

Elen Nun 205	<b>nent</b> n <b>ber</b> Reinfo	Element Name rced Concrete Column	Total Qty 1	<b>CS1</b> <b>Qty</b> 0	<b>CS2</b> <b>Qty</b> 0	CS3 Qty 1	<b>CS4</b> Qty 0 E	ach
Elemen Number	t r Defect Type	Defect Descriptio	n		CS	CS Qty	Maint Qty	
<b>√</b> 205	Patched Area	(PAR) at Southeast corner, failed patch/delamination/spall, 8 feet x up to 2 inches deep, with exposed rusted prima	2 feet x 2.5 ary reinforcing		3	1	8	Each
<b>V</b> 205	Patched Area	WEST FACE AND SOUTHWEST AND CORNERS HAVE PATCHED AREAS L FEET X 1 FOOT WITH SCATTERED M CRACKING UP TO 1/32 INCH.	NORTHWEST JP TO 8.5 IAP		3		16	Each

General Comments

# **Elements Verfied**

Location	Name	Component	Element Name	Amount
Span 1	Deck	Reinforced Concrete Deck	Reinforced Concrete Deck	2006
Span 1	Beam 1	Plate Girder	Steel Open Girder/Beam	67
Span 1	Beam 2	Plate Girder	Steel Open Girder/Beam	67
Span 1	Beam 3	Plate Girder	Steel Open Girder/Beam	67
Span 1	Beam 4	Plate Girder	Steel Open Girder/Beam	67
Span 1	Left Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	68
Span 1	Right Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	68
Span 1	Wearing Surface	Asphalt Wearing Surface	Wearing Surface	1768
Span 1	Near Bearing 1	Fixed Bearing	Fixed Bearing	1
Span 1	Far Bearing 1	Movable Bearing	Movable Bearing	1
Span 1	Far Bearing 2	Movable Bearing	Movable Bearing	1
Span 1	Near Bearing 2	Fixed Bearing	Fixed Bearing	1
Span 1	Near Bearing 3	Fixed Bearing	Fixed Bearing	1
Span 1	Far Bearing 3	Movable Bearing	Movable Bearing	1
Span 1	Far Bearing 4	Movable Bearing	Movable Bearing	1
Span 1	Near Bearing 4	Fixed Bearing	Fixed Bearing	1
Span 2	Deck	Reinforced Concrete Deck	Reinforced Concrete Deck	2213
Span 2	Beam 1	Plate Girder	Steel Open Girder/Beam	75
Span 2	Beam 2	Plate Girder	Steel Open Girder/Beam	75
Span 2	Beam 3	Plate Girder	Steel Open Girder/Beam	75
Span 2	Beam 4	Plate Girder	Steel Open Girder/Beam	75
Span 2	Left Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	75
Span 2	Right Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	75
Span 2	Bent 1 Joint	Standard Joint	Pourable Joint Seal	38
Span 2	Wearing Surface	Asphalt Wearing Surface	Wearing Surface	1950
Span 2	Near Bearing 1	Movable Bearing	Movable Bearing	1
Span 2	Far Bearing 1	Fixed Bearing	Fixed Bearing	1
Span 2	Far Bearing 2	Fixed Bearing	Fixed Bearing	1
Span 2	Near Bearing 2	Movable Bearing	Movable Bearing	1
Span 2	Near Bearing 3	Movable Bearing	Movable Bearing	1
Span 2	Far Bearing 3	Fixed Bearing	Fixed Bearing	1
Span 2	Far Bearing 4	Fixed Bearing	Fixed Bearing	1
Span 2	Near Bearing 4	Movable Bearing	Movable Bearing	1
Span 3	Deck	Reinforced Concrete Deck	Reinforced Concrete Deck	2213
Span 3	Beam 1	Plate Girder	Steel Open Girder/Beam	75
Span 3	Beam 2	Plate Girder	Steel Open Girder/Beam	75
Span 3	Beam 3	Plate Girder	Steel Open Girder/Beam	75
Span 3	Beam 4	Plate Girder	Steel Open Girder/Beam	75
Span 3	Left Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	75
Span 3	Right Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	75
Span 3	Bent 2 Joint	Standard Joint	Pourable Joint Seal	38
Span 3	Wearing Surface	Asphalt Wearing Surface	Wearing Surface	1950
Span 3	Near Bearing 1	Movable Bearing	Movable Bearing	1
Span 3	Far Bearing 1	Fixed Bearing	Fixed Bearing	1
Span 3	Far Bearing 2	Fixed Bearing	Fixed Bearing	1
•			•	

# **Elements Verfied**

Location	Name	Component	Element Name	Amount
Span 3	Near Bearing 2	Movable Bearing	Movable Bearing	1
Span 3	Near Bearing 3	Movable Bearing	Movable Bearing	1
Span 3	Far Bearing 3	Fixed Bearing	Fixed Bearing	1
Span 3	Far Bearing 4	Fixed Bearing	Fixed Bearing	1
Span 3	Near Bearing 4	Movable Bearing	Movable Bearing	1
Span 3	Left Vertical Clearance Sign	Vertical Clearance	Regulatory Sign	1
Span 3	Right Vertical Clearance Sign	Vertical Clearance	Regulatory Sign	1
Span 4	Deck	Reinforced Concrete Deck	Reinforced Concrete Deck	1534
Span 4	Beam 1	Plate Girder	Steel Open Girder/Beam	51
Span 4	Beam 2	Plate Girder	Steel Open Girder/Beam	51
Span 4	Beam 3	Plate Girder	Steel Open Girder/Beam	51
Span 4	Beam 4	Plate Girder	Steel Open Girder/Beam	51
Span 4	Left Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	52
Span 4	Right Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	52
Span 4	Bent 3 Joint	Standard Joint	Pourable Joint Seal	38
Span 4	Wearing Surface	Asphalt Wearing Surface	Wearing Surface	1352
Span 4	Near Bearing 1	Movable Bearing	Movable Bearing	1
Span 4	Far Bearing 1	Fixed Bearing	Fixed Bearing	1
Span 4	Far Bearing 2	Fixed Bearing	Fixed Bearing	1
Span 4	Near Bearing 2	Movable Bearing	Movable Bearing	1
Span 4	Near Bearing 3	Movable Bearing	Movable Bearing	1
Span 4	Far Bearing 3	Fixed Bearing	Fixed Bearing	1
Span 4	Far Bearing 4	Fixed Bearing	Fixed Bearing	1
Span 4	Near Bearing 4	Movable Bearing	Movable Bearing	1
Bent 1	Cap 1	Reinforced Concrete Pier Cap	Reinforced Concrete Pier Cap	37
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	49
Bent 2	Cap 1	Reinforced Concrete Pier Cap	Reinforced Concrete Pier Cap	37
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	49
Bent 3	Cap 1	Reinforced Concrete Pier Cap	Reinforced Concrete Pier Cap	37
Bent 3	Pile 1	Reinforced Concrete Column	Reinforced Concrete Column	1
Bent 3	Pile 2	Reinforced Concrete Column	Reinforced Concrete Column	1
Bent 3	Pile 3	Reinforced Concrete Column	Reinforced Concrete Column	1

# **General Inspection Notes**

# **National Bridge and NC Inspection Items**

Structure Number: 110029

Inspection Date: 08/16/2023

#### National Bridge Inventory Items

Item	Grade Scale	Grade	
Item 58: Deck	0 - 9 , N	6	Note
Item 59: Superstructure	0 - 9 , N	5	Items
Item 60: Substructure	0 - 9 , N	5	Порес
Item 61: Channel and Channel Protection	0 - 9 , N	N	see c
Item 62: Culvert	0 - 9 , N	N	
Item 71: Waterway Adequacy	0 - 9 , N	N	
Item 72: Approach Roadway Alignment	0 - 9 , N	8	

tems 58,59,60,62 reflect this nspection only.

or overall NBI coding grade, ee cover sheet.

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	7966	3376
Drainage System	G, F, P, or C	Р	0	3332
Utilities	G, F, P, or C			
Slope Protection	G, F, P, or C	Р	235	3352
Scour	G, F, P, or C			
Wingwall	G, F, P, or C	G	0	3350
Field Scour Evaluation				
Drift	G, F, P, or C		0	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	F		
Superstructure Paint Code		U		

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	9
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	N
Portion of Structure in > 3' of water	YES/NO	N

# National Bridge and NC SMU Inspection Item Details

Item	Deck Debris	Grade	F	Maint Code 3376	Qty.	7966
Details	along the curblines, debris accumulation (up	o to 1.5 feet wide x 3 in	nches h	igh) with vegetation, obstru	ucting de	eck drainag
ltem	Drainage System	Grade	Р	Maint Code 3332	Qty.	0
Details	see deck debris notes					
ltem	Slope Protection	Grade	Р	Maint Code 3352	Qty.	235
Details	(PAR) east side of span 1, extending from b	ehind southeast wing	wall to t	toe of end bent 1 slope pro	tection, e	erosion
	foot deep) (PAR) end bent 1 slope protection, between with undermining (up to 1 foot deep) extend	slope and end bent b ing along full width of	) under erm, ga slope p	mining slope protection (up ap/settled (up to 2 inches w rotection	vide x 2 i	nches high)
Item	(PAR) end bent 1 slope protection, between with undermining (up to 1 foot deep) extend	slope and end bent b ing along full width of Grade	erm, ga slope p F	mining slope protection (u) ap/settled (up to 2 inches w rotection Maint Code	vide x 2 i Qty.	nches high)
ltem Details	(PAR) end bent 1 slope protection, between with undermining (up to 1 foot deep) extend Response to live load vibrations felt under heavy vehicle loads	slope and end bent b ing along full width of Grade	) under erm, ga slope p F	mining slope protection (u ap/settled (up to 2 inches w rotection Maint Code	vide x 2 i	nches high
ltem Details Item	(PAR) end bent 1 slope protection, between with undermining (up to 1 foot deep) extend Response to live load vibrations felt under heavy vehicle loads General Comments and Misc Items	slope and end bent b ing along full width of Grade	) under erm, ga slope p F	mining slope protection (u ap/settled (up to 2 inches v rotection Maint Code Maint Code	Qty.	nches high) 0

Date: 08/16/2023

**Condition Photos** 



Bent 3 Pile 1: UP TO 1/8 INCH x 6 FOOT VERTICAL CRACKS AND UP TO 1/32 INCH MAP CRACKS AT RANDOM THROUGHOUT, some with efflorescence, some with adjacent delamination, up to 4 foot x 1 foot



Bent 3 Pile 1: UP TO 1/8 INCH x 6 FOOT VERTICAL CRACKS AND UP TO 1/32 INCH MAP CRACKS AT RANDOM THROUGHOUT, some with efflorescence, some with adjacent delamination, up to 4 foot x 1 foot



Bent 3 Pile 2: (PAR) at Southwest corner, failed patch, 7 feet high x 22 inches wide x up to 3.5 inches deep with exposed rusted and debonded primary reinforcing



Bent 3 Pile 2: (PAR) at Southwest corner, failed patch, 7 feet high x 22 inches wide x up to 3.5 inches deep with exposed rusted and debonded primary reinforcing

Date: 08/16/2023

**Condition Photos** 



Bent 3 Pile 2: south, north and east faces, multiple vertical cracks, up to 4 feet x 1/16 inch wide with adjacent delaminations (4 feet x 10 inch)



Bent 3 Pile 3: (PAR) at Southeast corner, failed patch/delamination/spall, 8 feet x up to 2 feet x 2.5 inches deep, with exposed rusted primary reinforcing

County: BURKE

Date: 08/16/2023

**Condition Photos** 



Bent 3 Pile 3: WEST FACE AND SOUTHWEST AND NORTHWEST CORNERS HAVE PATCHED AREAS UP TO 8.5 FEET X 1 FOOT WITH SCATTERED MAP CRACKING UP TO 1/32 INCH.



Bent 3 Cap 1: (PAR) UP TO 1/32 INCH MAP CRACKING, SOME WITH EFFLORESCENCE AND RUST STAINS, AT RANDOM THROUGHOUT

Date: 08/16/2023

**Condition Photos** 



Bent 3 Cap 1: (PAR) UP TO 1/32 INCH MAP CRACKING, SOME WITH EFFLORESCENCE AND RUST STAINS, AT RANDOM THROUGHOUT



Bent 3 Cap 1: (PAR) UP TO 1/32 INCH MAP CRACKING, SOME WITH EFFLORESCENCE AND RUST STAINS, AT RANDOM THROUGHOUT

Date: 08/16/2023

**Condition Photos** 



Span 4 Beam 4: at bent 3, web adjacent to diaphragm, painted over section loss (1/2 inch average remaining x 6 inch x 6 inch), partially covered with epoxy



Span 3 Beam 4: at bent 3, web adjacent to diaphragm and lower web, painted over pitting (up to 1/8 inch deep x 2 feet x 9 inches) with corrosion reinitiated

Date: 08/16/2023

#### **Condition Photos**



Span 4 Beam 3: (PAR) at bent 3, painted over section loss: web adjacent to diaphragm and upper web (7/16 inch average remaining x 6 inch x 2 foot); lower web (1/2 average remaining x up to 2.5 feet long x 6 inches high); bottom flange (0.77 inch average remaining x 8 inches); top flange, painted over pitting (up to 1/8 inch deep) with corrosion reinitiated

Date: 08/16/2023

#### **Condition Photos**



Span 4 Beam 3: (PAR) at bent 3, painted over section loss: web adjacent to diaphragm and upper web (7/16 inch average remaining x 6 inch x 2 foot); lower web (1/2 average remaining x up to 2.5 feet long x 6 inches high); bottom flange (0.77 inch average remaining x 8 inches); top flange, painted over pitting (up to 1/8 inch deep) with corrosion reinitiated

Date: 08/16/2023



Span 4 Deck: at bent 3, end diaphragms in all bays, failed patches/delaminations/spalls (3.5 feet x 10 inch x 2 inches deep) with exposed rusted rebar

County: BURKE

Date: 08/16/2023

#### **Condition Photos**



Span 4 Beam 2: (PAR) at bent 3, painted over section loss: web adjacent to diaphragm (7/16 inch average remaining x 7 inch x 2 inch); lower web (1/2 inch average remaining x 4.5 feet x 4 inches); bottom flange (0.71 inch average remaining x 6 inches) with corrosion reinitiated

County: BURKE

Date: 08/16/2023

**Condition Photos** 



Span 4 Beam 2 - Near Bearing 2: (PAR) painted over section loss (up to 1/8 inch deep); left anchor bolt, approximately 50 percent section loss; pack rust



Span 4 Beam 2 - Near Bearing 2: (PAR) northwest corner, loss of bearing (4 inch x 3 inch x up to 1/2 inch deep) due to cap spall

County: BURKE

Date: 08/16/2023

#### **Condition Photos**



Span 3 Beam 2: at bent 3, painted over section loss: web adjacent to diaphragm and upper web (9/16 inch average remaining x 5 inch x 1 inch); lower web (9/16 average remaining x 5 inch x 3 inch) with adjacent pitting (up to 1/8 inch deep) with corrosion reinitiated

County: BURKE

Date: 08/16/2023

#### **Condition Photos**



Bent 3 Cap 1: (PAR) 3 FOOT X 18 INCH X 4 INCH DEEP FAILED PATCH/SPALL WITH EXPOSED REINFORCING, CAUSING LOSS OF BEARING, AT PREVIOUSLY PATCHED AREA NORTH FACE BELOW BEAM 2.



Span 4 Beam 1: at bent 3, painted over section loss: web adjacent to diaphragm (1/2 inch average remaining x 7 inch x 2 inch); lower web (1/2 inch average remaining x 5 inch x 5 inch); bottom flange (0.86 inch average remaining x 1 foot) with corrosion reinitiated

County: BURKE

Date: 08/16/2023

**Condition Photos** 



Span 4 Deck: MULTIPLE SOUND PATCHES UP TO 2.5 FEET x 2 FEET IN UNDERSIDE OF WEST OVERHANG AT RANDOM THROUGHOUT.



Span 4 Deck: (PAR) throughout underside of deck, transverse cracks (up to 1/32 inch x full bay width) and map cracks (hairline), some with efflorescence buildup and rust stains at random

Date: 08/16/2023



Span 4 Deck: right overhang, near midspan, delamination (10 inch x 6 inch)



Span 4 Beam 4: along the edge of the top flange, surface rust at random

Date: 08/16/2023



Span 4 Beam 1: at end bent 2, bottom flange, rust scale



Span 4 Beam 1 - Far Bearing 1: painted over section loss (up to 1/4 inch deep) with corrosion reinitiated

Date: 08/16/2023



End Bent 2 Abutment: adjacent to beams, spalls/delaminations (up to 18 inch x 10 inch x 1/2 inch deep) with associated cracks (up to 1/16 inch)



End Bent 2 Abutment: along the abutment, areas of map cracks (hairline) at random

Date: 08/16/2023

#### **Condition Photos**



End Bent 2 Cap 1: (PAR) along the length of the cap, vertical and longitudinal cracks (up to 1/32 inch x 5 feet), some with rust stains at random



Span 4 Beam 2: at end bent 2, bottom flange, behind bearing, painted over section loss (0.83 inch average remaining x 2 inches) with corrosion reinitiated

Date: 08/16/2023

#### **Condition Photos**



Span 4 Deck: (PAR) throughout underside of deck, transverse cracks (up to 1/32 inch x full bay width) and map cracks (hairline), some with efflorescence buildup and rust stains at random



End Bent 2 Abutment: adjacent to beams, spalls/delaminations (up to 18 inch x 10 inch x 1/2 inch deep) with associated cracks (up to 1/16 inch)

**Condition Photos** 



Span 3 Right Bridge Rail: (PAR) within patched area over left and right travel lanes of I-40, area of delamination with cracking (up to 1/16 inch) and rust stain, could possibly fall into traffic below



Span 3 Right Bridge Rail: underside of rail section and outriggers, shallow rebars at random

County: BURKE

Date: 08/16/2023

**Condition Photos** 



Span 3 Deck: left overhang, areas of poor consolidation (up to 1/2 inch deep) at random



Span 3 Beam 4: over I-40 westbound, right travel lane, bottom flange and cover plate, impact scrapes/gouges (up to 1/4 inch deep)

Date: 08/16/2023

**Condition Photos** 



Span 3 Beam 1: along the edge of the top flange, surface rust at random



Span 3 Deck: at bents 2 and 3, end diaphragms in all bays, unsound patches/delaminations/spalls (up to full bay width x 8 inch x 1.5 inch deep), some with exposed rusted rebar

Date: 08/16/2023



Span 3 Deck: at bents 2 and 3, end diaphragms in all bays, unsound patches/delaminations/spalls (up to full bay width x 8 inch x 1.5 inch deep), some with exposed rusted rebar



(PAR) southwest guardrail, areas of impact damage (up to 15 feet long, 30 feet total)

County: BURKE

Date: 08/16/2023



(PAR) southwest guardrail, areas of impact damage (up to 15 feet long, 30 feet total)



(PAR) northwest guardrail attachment, improper lap

Date: 08/16/2023

#### **Condition Photos**



(PAR) northwest guardrail transition, impact damage (5 feet)



(PAR) northeast guardrail and transition, areas of impact damage (up to 15 feet long, 30 feet total)

County: BURKE

Date: 08/16/2023

#### **Condition Photos**



behind northeast approach curb, area of erosion (7 feet x 4 feet x 1.5 feet deep)



along the curblines, debris accumulation (up to 1.5 feet wide x 3 inches high) with vegetation, obstructing deck drainage

Date: 08/16/2023

**Condition Photos** 



Span 1 Right Bridge Rail: underside of rail section 7, spall (10 inch x 3 inch x 1.5 inch deep) with exposed rusted rebar



Span 1 Wearing Surface: SPAN 1 WEARING SURFACE HAS SCATTERED TRANSVERSE AND LONGITUDINAL CRACKS UP TO 1/8 INCH.
Date: 08/16/2023



Span 1 Wearing Surface: over end bent 1, transverse cracks, full width x up to 1/2 inch



Span 1 Wearing Surface: 2023 previously repaired, previously noted as: 1 FOOT X 4 FOOT AREA OF MISSING ASPHALT WEARING SURFACE IN SOUTHBOUND LANE AT BENT 1

Date: 08/16/2023



Span 1 Wearing Surface: (PAR) at bent 1, areas of missing asphalt (up to 1 foot x 4 inch)



Span 2 Bent 1 Joint: along the length of the joint, seal deteriorated (full length)

Date: 08/16/2023



Span 2 Wearing Surface: (PAR) along centerline of roadway, approximately 25 feet from bent 2, spall (11 inch x 6 inch x full depth)



Span 2 Wearing Surface: (PAR) at bent 2, areas of missing asphalt (up to 2 feet x 3 inch) at random

Date: 08/16/2023



Span 3 Wearing Surface: (PAR) at bent 2, areas of missing asphalt (up to 3 feet x 2 inches) at random; northbound lane, at bent 3, areas of missing asphalt (up to 3.5 feet x 2 feet)



Span 2 Left Bridge Rail: WEST RAIL HAS SCATTERED CRACKS UP TO 1/32 INCH.

Date: 08/16/2023

**Condition Photos** 



Span 3 Wearing Surface: SPAN 3 WEARING SURFACE HAS SCATTERED MAP/TRANSVERSE AND LONGITUDINAL CRACKS UP TO 1/8 INCH.



Span 2 Right Bridge Rail: rail section 2 from bent 2, spall (27 inch x 4 inch x 1.5 inch deep) with exposed rusted rebar; adjacent post with diagonal crack (up to 1/32 inch x 6 inches)

Date: 08/16/2023

**Condition Photos** 



Span 3 Wearing Surface: WEARING SURFACE HAS SCATTERED PATCHED AREAS WITH SOME MAP CRACKING.



Span 3 Wearing Surface: (PAR) at bent 2, areas of missing asphalt (up to 3 feet x 2 inches) at random; northbound lane, at bent 3, areas of missing asphalt (up to 3.5 feet x 2 feet)

Date: 08/16/2023

# **Condition Photos**



Span 3 Deck: (PAR) top of deck near bent 2, spall (2 feet x 15 inch x 1.5 inch deep) with exposed rusted rebar at area of missing asphalt



Span 3 Right Bridge Rail: along the safety walk, transverse cracks (up to 1/32 inch) and map cracks (hairline) at random

County: BURKE

Date: 08/16/2023

**Condition Photos** 



Span 3 Right Bridge Rail: 26 FOOT CONCRETE BRIDGE RAIL REPAIR NEAR MIDSPAN.



Span 3 Right Bridge Rail: (PAR) within patched area over left and right travel lanes of I-40, area of delamination with cracking (up to 1/16 inch), could possibly fall into traffic below

Date: 08/16/2023

**Condition Photos** 



Span 3 Right Bridge Rail: (PAR) within patched area over left and right travel lanes of I-40, area of delamination with cracking (up to 1/16 inch), could possibly fall into traffic below



Span 3 Wearing Surface: (PAR) at bent 2, areas of missing asphalt (up to 3 feet x 2 inches) at random; northbound lane, at bent 3, area of missing asphalt (3.5 feet x 2 feet)

Date: 08/16/2023

### **Condition Photos**



Span 4 Wearing Surface: (PAR) at bent 3, areas of missing asphalt (up to 2 feet x 2 inch) at random



Span 4 Wearing Surface: 2023 previously repaired, previously noted as: midspan Northbound lane near shoulder, pothole, 3 inch x 4 inch x full depth

Date: 08/16/2023

# **Condition Photos**



Span 4 Wearing Surface: (PAR) throughout wearing surface, scattered areas of missing asphalt (up to 5 inch diameter)



Span 4 Deck: top of deck, northbound lane, near end bent 2, transverse crack (up to 1/32 inch) at area of missing asphalt

County: BURKE

Date: 08/16/2023

**Condition Photos** 



Span 4 Left Bridge Rail: at rail post 1, spall (5 inch x 3 inch x 1/2 inch deep) with exposed rusted rebar



Span 4 Right Bridge Rail: at rail post 2, cracks (up to 1/16 inch wide); adjacent rail section, vertical crack (up to 1/32 inch)

County: BURKE

Date: 08/16/2023

**Condition Photos** 



Span 4 Right Bridge Rail: rail post 3, patched area (8 inch x 10 inch) with hairline cracks

County: BURKE

Date: 08/16/2023

**Condition Photos** 



(PAR) east side of span 1, extending from behind southeast wingwall to toe of end bent 1 slope protection, erosion channel (approximately 100 feet long x 3 feet long x 1.5 feet deep) undermining slope protection (up to 1 foot high x 1.5 foot deep)

County: BURKE

Date: 08/16/2023

# **Condition Photos**



(PAR) east side of span 1, extending from behind southeast wingwall to toe of end bent 1 slope protection, erosion channel (approximately 100 feet long x 3 feet long x 1.5 feet deep) undermining slope protection (up to 1 foot high x 1.5 foot deep)



(PAR) east side of span 1, extending from behind southeast wingwall to toe of end bent 1 slope protection, erosion channel (approximately 100 feet long x 3 feet long x 1.5 feet deep) undermining slope protection (up to 1 foot high x 1.5 foot deep)

Date: 08/16/2023

### **Condition Photos**



(PAR) end bent 1 slope protection, between slope and end bent berm, gap/settled (up to 2 inches wide x 2 inches high) with undermining (up to 1 foot deep) extending along full width of slope protection



End Bent 1 Abutment: right side of beam 4, delamination 3.5 feet x up to 1 foot, with cracks up to 1/16 inch

Date: 08/16/2023

**Condition Photos** 



Span 1 Deck: (PAR) left and right overhangs, near end bent 1, spalls (up to 6 inch x 4 inch x 1 inch deep) with exposed rusted rebar



Span 1 Beam 1 - Near Bearing 1: painted over section loss (up to 3/16 inch deep) with corrosion reinitiated

Date: 08/16/2023



Span 1 Beam 1: at end bent 1, web and bottom flange, rust scale



Span 1 Deck: left overhang, near end bent 1, longitudinal crack (1/32 inch x 3 feet)

Date: 08/16/2023

**Condition Photos** 



Span 1 Deck: (PAR) left and right overhangs, near end bent 1, spalls (up to 6 inch x 4 inch x 1 inch deep) with exposed rusted rebar



Bent 1 Pile 2: West face at top, vertical crack 9 feet x up to 1/16 inch with adjacent delamination 5 feet x 8 inches

Date: 08/16/2023

### **Condition Photos**



Bent 1 Pile 3: (PAR) southeast and northeast corners, vertical cracks (up to 1/16 inch x 5.5 feet) with rust stains, and adjacent delaminations (up to 4 feet x 6 inch); southeast corner, at ground, spall (2 feet x 6 inch x 1.5 inch deep) with exposed rusted primary reinforcement

Date: 08/16/2023

**Condition Photos** 



Bent 1 Cap 1: SOUTH FACE AND BOTTOM OF WEST END, AND BETWEEN COLUMNS 2 AND 3. HAS PATCHED AREAS UP TO 3 FEET X 15 INCHES WITH SOME HAIRLINE CRACKS AND EFFLORESCENCE VISIBLE.



Bent 1 Cap 1: (PAR) BENT 1 CAP HAS SCATTERED CRACKS UP TO 1/32 INCH, SOME WITH RUST STAINS.

Date: 08/16/2023



Bent 1 Cap 1: underside, at east end, unsound patched areas (up to 2 feet x 1 foot x 1 inch deep) with exposed rusted rebar



Span 1 Deck: at bent 1, end diaphragm in all bays, spalls/delaminations (up to ful bay width x 8 inch x 2 inches deep) with exposed rusted rebar and cracks (up to 1/8 inch)

Date: 08/16/2023

#### **Condition Photos**



Span 1 Beam 1: at bent 1, painted over section loss: web adjacent to diaphragm (9/16 inch average remaining x 3 inch x 4 inch); bottom flange (0.85 inch x 6 inches) with corrosion reinitiated



Span 1 Beam 1 - Far Bearing 1: painted over section loss (up to 1/8 inch deep) with corrosion reinitiated; pack rust

County: BURKE

Date: 08/16/2023

**Condition Photos** 



Span 2 Beam 1: at bent 1, lower web, painted over section loss (9/16 inch average remaining x 5.5 feet x up to 10 inches) with corrosion reinitiated



Bent 1 Cap 1: southwest corner, failed patch (full height x 18 inch x up to 2 inches deep) with exposed rusted rebar

Date: 08/16/2023

### **Condition Photos**



Span 2 Beam 2: at bent 1, painted over section loss: web adjacent to diaphragm (9/16 inch average remaining x 14 inch x 2 inch); lower web (9/16 inch average remaining x 2 feet x 4 inch) with corrosion reinitiated



Span 2 Beam 3: at bent 1, painted over section loss: web adjacent to diaphragm (5/8 inch average remaining x 10 inch x 2 inch); lower web (9/16 inch average remaining x 7 feet x 4 inch) with corrosion reinitiated; bottom flange, rust scale

Date: 08/16/2023

### **Condition Photos**



Span 2 Deck: underside of deck, in all bays and overhangs, areas of map cracks (hairline), some with efflorescence; both overhangs, transverse cracks (up to 1/32 inch x full width) at random



Span 2 Deck: (PAR) both overhangs, delaminations (approximately 1 foot diameter) with cracks (up to 1/8 inch); some areas over travel lanes

County: BURKE

Date: 08/16/2023

**Condition Photos** 



Span 2 Deck: left overhang, near bent 2, formwork left in place



Span 2 Deck: throughout underside of deck, areas of poor consolidation (up to 1/2 inch deep) at random

Date: 08/16/2023

# **Condition Photos**



Span 2 Deck: at bent 1, end diaphragms in all bays, and bay 3 diaphragm at bent 2, unsound patches (up to full bay with x 8 inch) with cracks (up to 1/16 inch)



Bent 2 Pile 1: WEST AND EAST FACES, UP TO 1/16 INCH VERTICAL CRACKS AT RANDOM THROUGHOUT.

Date: 08/16/2023

### **Condition Photos**



Bent 2 Pile 2: (PAR) at southeast corner, vertical cracks (up to 1/8 inch x full height) with rust stains and adjacent delaminations (up to 4 feet x 6 inch)



Bent 2 Pile 2: 6 FOOT X UP TO 1/16 INCH VERTICAL CRACK WITH EFFLORESCENCE EAST FACE AT BOTTOM OF CAP. (SIMILAR ON WEST FACE)

Date: 08/16/2023



Bent 2 Pile 3: (PAR) UP TO 1/8 INCH VERTICAL CRACKS WITH RUST STAINS AT RANDOM THROUGHOUT with adjacent delaminations up to 6 feet x 1 foot



Bent 2 Pile 3: (PAR) UP TO 1/8 INCH VERTICAL CRACKS WITH RUST STAINS AT RANDOM THROUGHOUT with adjacent delaminations up to 6 feet x 1 foot

Date: 08/16/2023

### **Condition Photos**



Bent 2 Cap 1: Northeast corner, failed patch with adjacent delamination, 14 inch x 14 inch, and transverse crack, 1/16 inch x full width, on underside of cap



Bent 2 Cap 1: (PAR) underside of cap, adjacent to column 3, patched area (2 feet x 18 inch) with cracks (up to 1/32 inch) and rust stains

Date: 08/16/2023



Bent 2 Cap 1: north face, below bay 3, spall (4 inch diameter x 1 inch deep) with exposed rusted rebar



Bent 2 Cap 1: Northeast corner, failed patch with adjacent delamination, 14 inch x 14 inch, and transverse crack, 1/16 inch x full width, on underside of cap

County: BURKE

Date: 08/16/2023

**Condition Photos** 



Bent 2 Cap 1: south and north face, areas of map cracks (hairline) at random



Span 2 Beam 4: at bent 2, painted over section loss: web adjacent to diaphragm (9/16 inch average remaining x 9 inch x 2 inch); lower web (9/16 inch average remaining x 1.5 feet x 3 inches) with corrosion reinitiated

County: BURKE

Date: 08/16/2023

### **Condition Photos**



Span 3 Beam 4: at bent 2, painted over section loss: web adjacent to diaphragm (9/16 inch average remaining x 8 inch x 2 inch); lower web (9/16 inch average remaining x 15 inch x 3 inches); bottom flange (1 inch average remaining x 3 inches) with corrosion reinitiated

Date: 08/16/2023

# **Condition Photos**



Span 2 Beam 3 - Far Bearing 3: painted over section loss (up to 3/16 inch deep) with corrosion reinitiated; pack rust
County: BURKE

Date: 08/16/2023

**Condition Photos** 



Span 3 Beam 2: at bent 2, painted over section loss: web adjacent to diaphragm (9/16 inch average remaining x 4 inch x 2 inch); lower web (5/8 inch average remaining x 14 inch x 4 inches); bottom flange (1 inch average remaining x 10 inches) with corrosion reinitiated

Date: 08/16/2023

#### **Condition Photos**



Span 3 Beam 1: at bent 2, web adjacent to diaphragm, painted over section loss (9/16 inch average remaining x 8 inch x 3 inch); lower web, painted over pitting (up to 1/8 inch deep x 7 feet x up to 4 inch) with corrosion reinitiated; bottom flange, rust scale

Date: 08/16/2023

#### **Condition Photos**



Span 3 Left Bridge Rail: underside of rail, and outriggers, shallow rebars at random



Bent 2 Cap 1: North face over column 2, vertical crack, 1/32 inch x full height, extends up from vertical crack on column 2, with adjacent delamination, 26 inch x 15 inch

# Structure Data Worksheet



Span Number	Span Length	Bearing to Bearing	Crutch/ Helper Bent	Distance to Near Bearing	Distance to Far Bearing
1	68.000	65.000			
2	75.000	74.333			
3	75.000	74.333			
4	52.000	49.500			



roadway under span 2, looking east (I-40 eastbound)

Route Number: 11000	400	Route Nar	me: I	40 EBL	Reference Feature:	Н		
Minimum Vertical Clear								
Total Horizontal Clearance 41.470   feet   Lateral Clearances: Left: 12.950   feet   Right 9.900   feet								
✓ Base Highway Netwo	LRS Inve	entory R	Route, Sub Route Num	<b>ber</b> 10040				
Milepost: 107.470	Number	of Lanes: 3	3	ADT: 23000	Year of ADT: 2015		Percentage of Trucks:	16
✓ National Highway System								
Functional Classification   11   Local Principal Arterial - Interstate   Direction of Traffic:   1   1 - way traffic								



roadway under span 3, looking west (I-40 westbound)

Route Number: 11000	400	Route Nam	ne: I	40 WBL	Reference Feature:	Н		
Minimum Vertical Clear								
Total Horizontal Clearance 39.810 feet Lateral Clearances: Left: 13.840 feet Right 7.600 feet								
✓ Base Highway Netwo	LRS Inven	ntory R	oute, Sub Route Num	<b>ber</b> 10040				
Milepost: 107.470	Number	of Lanes: 3		ADT: 23000	Year of ADT: 2015		Percentage of Trucks:	23
✓ National Highway System								
Functional Classification   11   Local Principal Arterial - Interstate   Direction of Traffic:   1   1 - way traffic								

Bri	idge Inspec	tion	Field S	Sketch	
Roadway	19ft Wide	2 Paved	Lanes	Looking North	
Left Shoulder	7.5ft Wide	0.5ft Pav	red	7ft Unpaved	
Right Shoulder	6.25ft Wide	1.25ft Pa	ived	5ft Unpaved	
Left Guardrail					
Right Guardrail					
Measurements taken	approximately 400 feet from end	bent 1			
Title APPROACH ROADWAY		Descriptio LOOKIN	n G NORTH		
Structure No: 110029	Drawn By: ITChapman	1	Date: 8/16/2023	Filename: S0009180	000451.wes

# Bridge Inspection Field Sketch

veck Width/Out to Out 31.5ft Between Rails 2				29.25ft		
Clear Roadway	26ft	Wearing	Wearing Surface			2.5in
Median Width		Median	Height			
Curb Height			8in	Right	8in	
Sidewalk Width		Left	1.62ft	Right	1.62ft	
Clear Roadway (Rail to Median)				Right		
Guardrail Width		Left	11in	Right	11ir	ı
Top of Rail to Deck/Wearing Surface		Left	2.375ft	Right	2.37	75ft
Bridge Rail Type		Left	Type 11	Right	Тур	e 11

Measurements for Span #	1-4		
Deck Thickness	6.75in	Left Overhang	4.5ft
Top of Rail to Bottom of Beam (Avg)	5.937ft	Right Overhang	4.5ft

Beam #	Beam Type	Width	Height	Spacing	From
1	Plate Girder	12in	36in	4.5ft	Left Edge of Deck
2	Plate Girder	12in	36in	7.5ft	Beam 1
3	Plate Girder	12in	36in	7.5ft	Beam 2
4	Plate Girder	12in	36in	7.5ft	Beam 3

#### BEAMS:

Span 1 (W36x160): 34" between flanges, 12" x 1" flange, 5/8" web Spans 2 & 3 (W36x170): 33-7/8" between flanges, 12" x 1-1/8" flange, 11/16" web Span 4 (W36x150): 34-1/8" between flanges, 12" x 15/16" flange, 5/8" web

COVER PLATES: Span 1: 34' long x 10-1/2" wide x 1" thick Spans 2 & 3: 45' long x 10-1/2" wide x 1" thick

Title TYPICAL SECTION			Descriptio LOOKIN	n g Nor	ТН		
Structure No: 110029	Drawn By:	ITChapman		Date:	8/16/2023	Filename:	S000918000452.wes

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	L	ווכ	uye ms		CL	LI				JNC	こし		
					Ţ								
Cap	s												
# N	Name	Туре		Le	ngth	Widt	h H	leight	Left Beam to	End of Ca	ap R	ight Beam	to End of Cap
1 C Piles	Cap 1	Reinf	orced Concrete Pier Cap	36	.5ft	30in	12	32in	1#		2	.5ft	
# N	Name		Туре		Spacin	g	From			Height/D	iam. V	Width	Length
1 F	Pile 1		Reinforced Concrete Colun	nn	4ft	Left Er		ind of Bent		30in		30in	
2 F	Pile 2		Reinforced Concrete Colun	nn	14ft	Pile 1				30in		30in	
3 F	Pile 3		Reinforced Concrete Colun	nn	14ft		Pile 2			30in		30in	
Title BENTS	5 1-3					De	scriptio OOKIN	on Ng Nort	ГН				



approximately 0.1 miles east of span 3, along I-40 westbound, vertical clearance signs (14 feet-5 inches)



superstructure underside, span 4

Date: 08/16/2023

Structure Photos



ladder used



bent 3

County: BURKE

Date: 08/16/2023



superstructure underside, span 3 (spans 1 and 2 similar)



typical bottom flange cover plate end

Date: 08/16/2023

#### Structure Photos



# intermediate diaphragm



end diaphragm

Date: 08/16/2023



bent 2



roadway under span 3, looking west (I-40 westbound)



east profile looking west



interior bearing assembly

County: BURKE

Date: 08/16/2023

Structure Photos



beams over bent



end bent 2 slope protection



northwest wingwall



end bent 2

Date: 08/16/2023

Structure Photos



end bearing assembly



northeast wingwall

County: BURKE

Date: 08/16/2023

Structure Photos



southeast guardrail termination



southeast guardrail

Date: 08/16/2023

Structure Photos



southwest guardrail termination



southwest guardrail

#### Structure Photos



south approach looking north



southwest guardrail attachment

County: BURKE

Date: 08/16/2023



end bent 1 asphalt



left bridge rail



right bridge rail



asphalt wearing surface

County: BURKE

Date: 08/16/2023

Structure Photos



southeast guardrail transition



southeast guardrail attachment

County: BURKE

Date: 08/16/2023



bridge ID



bridge plaque



south approach looking south



County: BURKE

Date: 08/16/2023



bent 2 joint



roadway looking east

Date: 08/16/2023

Structure Photos



roadway looking west



north approach looking north

Date: 08/16/2023



bent 3 joint



northwest guardrail attachment

County: BURKE

Date: 08/16/2023

Structure Photos



northwest guardrail transition



northwest guardrail

Date: 08/16/2023

#### Structure Photos



northeast guardrail attachment



northeast guardrail

Date: 08/16/2023

#### Structure Photos



northwest guardrail termination



northeast guardrail termination

Date: 08/16/2023

Structure Photos



north approach looking south



southeast wingwall

County: BURKE

Date: 08/16/2023

## Structure Photos



end bent 1



southwest wingwall

Date: 08/16/2023

Structure Photos



## west profile looking east



roadway under span 2, looking east (I-40 eastbound)

County: BURKE

Date: 08/16/2023



end bent 1 slope protection

