



NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 STRUCTURE MANAGEMENT UNIT

ATTENTION: **SKETCHES UPDATED**

Structure Safety Report

Routine Element Inspection - Contract

INSPECTION DATE: 11/05/2018

DIVISION: 6 COUNTY: CUMBERLAND STRUCTURE NUMBER: 250005 FREQUENCY: 24 MONTHS

FACILITY CARRIED: NC59 MILE POST: _____

LOCATION: 0.2 MI. E. OF JCT SR 2274

FEATURE INTERSECTED: I95

LATITUDE: 34° 56' 17.02" LONGITUDE: 78° 55' 21.2"

SUPERSTRUCTURE: RC FLOOR ON PLATE GIRDERS

SUBSTRUCTURE: E.BTS:RC CAPS/STL PILES,INT.BTS.RC P&BEAM/PILE FTGS.

SPANS: 2 SPANS. SEE SPAN PROFILE SHEET FOR SPAN DETAILS

FRACTURE CRITICAL TEMPORARY SHORING SCOUR CRITICAL SCOUR PLAN OF ACTION

NBI GRADES: DECK 6 SUPERSTRUCTURE 8 SUBSTRUCTURE 6 CULVERT N

POSTED SV: Not Posted POSTED TTST: Not Posted

OTHER SIGNS PRESENT: NONE



south approach looking north

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

DIRECTION OF INSPECTION S-N

DIRECTION MATCHES PLANS _____

INSPECTED BY RICARDO CORNEJO	SIGNATURE 	ASSISTED BY HECTOR BONILLA
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Structure Element Scoring

Structure Number: 250005

Inspection Date 11/5/2018

Element Number	Parent Number	Element Name	Location	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity
12	0	Reinforced Concrete Deck	Deck	18664	16897	1766	1	0
107	0	Steel Open Girder/Beam	Beam	2367	2367	0	0	0
515	107	Steel Protective Coating	Beam	33858	33858	0	0	0
205	0	Reinforced Concrete Column	Piles and Columns	5	5	0	0	0
215	0	Reinforced Concrete Abutment	Abutments	140	140	0	0	0
234	0	Reinforced Concrete Pier Cap	Caps	222	209	0	13	0
521	234	Concrete Protective Coating	Caps	448	448	0	0	0
302	0	Compression Joint Seal	Expansion Joints	210	183	26	1	0
311	0	Movable Bearing	Bearing Device	27	25	2	0	0
515	311	Steel Protective Coating	Bearing Device	78	73	3	0	2
313	0	Fixed Bearing	Bearing Device	9	9	0	0	0
515	313	Steel Protective Coating	Bearing Device	27	27	0	0	0
321	0	Reinforced Concrete Approach Slabs	Approaches	1689	1689	0	0	0
331	0	Reinforced Concrete Bridge Railing	Bridge Rail	528	527	0	1	0
510	0	Wearing Surface	Wearing Surfaces	18293	18293	0	0	0

Summary of Maintenance Needs

Maintenance By Defect

Structure Number: 250005

Inspection Date: 11/05/2018

MMS Code	Element Name	Defect Name	Recommended Quantity
3326	Reinforced Concrete Deck	Delamination/Spall	1 Square Feet
3326	Reinforced Concrete Deck	Cracking (RC and Other)	816 Square Feet
3348	Reinforced Concrete Pier Cap	Delamination/Spall	2 Feet
3348	Reinforced Concrete Pier Cap	Cracking (RC and Other)	11 Feet
3310	Compression Joint Seal	Adjacent Deck or Header	1 Feet
3318	Reinforced Concrete Bridge Railing	Delamination/Spall	1 Feet
3342	Steel Protective Coating	Effectiveness (Steel Protective Coatings)	5 Square Feet

Element Structure Maintenance Quantities

Structure Number: **250005**

Inspection Date **11/05/2018**

Location	MMS Code	Description	Maint Quantity	Total Quantity	Severe Quantity	Poor Quantity	Fair Quantity	Good Quantity
Abutments	3350	Maintenance of Concrete Wings and Wall	0	140	0	0	0	140
Approaches	3353	Maintenance of Concrete Bridge Approach Slabs	0	1689	0	0	0	1689
Beam	3314	Maintenance Steel Superstructure Components	0	2367	0	0	0	2367
Beam	3342	Clean and Paint Steel	0	33858	0	0	0	33858
Bearing Device	3334	Bridge Bearing	0	36	0	0	2	34
Bearing Device	3342	Clean and Paint Steel	5	105	2	0	3	100
Bridge Rail	3318	Maintenance of Concrete Bridge Rail	1	528	0	1	0	527
Caps	3348	Maintenance of Concrete Substructure	13	222	0	13	0	209
Caps	5603	Partial Cleaning and Painting of Structural Steel	0	448	0	0	0	448
Deck	3326	Maintenance of Concrete Deck	817	18664	0	1	1766	16897
Expansion Joints	3310	Maintenance of Standard Bridge Expansion Joints	1	210	0	1	26	183
Piles and Columns	3348	Maintenance of Concrete Substructure	0	5	0	0	0	5
Wearing Surfaces	2816	Asphalt Surface Repair	0	18293	0	0	0	18293

Element Condition and Maintenance Data

Structure Number: 250005

Inspection Date: 11/05/2018

Span 1 Deck Reinforced Concrete Deck

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
12	Reinforced Concrete Deck	9,279	8,479	800	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
12	Cracking (RC and Other)	underside scattered throughout at all bays, multiple transverse cracks (full width x hairline) with efflorescence	2	800	800	Square Feet

General Comments

Span 1 Right Bridge Rail Concrete Railing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
331	Reinforced Concrete Bridge Railing	131	130	0	1	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
331	Delamination/Spall	base of rail at bent 1, spall (1ft x 6in x up to 3in)	3	1	1	Feet
331	Cracking (RC and Other)	scattered throughout at random, multiple vertical cracks (full height x hairline)	1	20		Feet

General Comments

Span 1 Far Bearing 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	3	2	0	0	1	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
311	Corrosion	paint failure with surface rust	2	1		Each
515	Effectiveness (Steel Protective Coatings)	paint failure with bare metal exposed (1sf)	4	1	1	Square Feet

General Comments

Span 1 Expansion Joint 1 Compression Seal

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
302	Compression Joint Seal	70	64	6	0	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
302	Debris Impaction	east shoulder, debris accumulation (3ft) (west shoulder similar)	2	6		Feet

General Comments

Span 2 Deck**Reinforced Concrete Deck**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
12	Reinforced Concrete Deck	9,385	8,418	966	1	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
12	Delamination/Spall	underside bay 8 next to beam 9 at end bent 2, edge spall (30in x 4in x 1-1/2in)	3	1	1 Square Feet
12	Cracking (RC and Other)	underside bay 2 at end bent 2, diagonal crack (10ft x 1/32in) with efflorescence	2	10	10 Square Feet
12	Cracking (RC and Other)	underside bay 8 next to beam 9 at end bent 2, diagonal crack (5-1/2ft x 1/32in) with efflorescence	2	6	6 Square Feet
12	Efflorescence/Rust Staining	underside scattered throughout at all bays, multiple transverse cracks (full width x hairline) with efflorescence	2	950	Square Feet

General Comments**Span 2 Near Bearing****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	3	2	0	0	1 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
311	Corrosion	paint failure with surface rust	2	1	Each
515	Effectiveness (Steel Protective Coatings)	paint failure with bare metal exposed (1sf)	4	1	1 Square Feet

General Comments**Span 2 Far Bearing****Movable Bearing**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
311	Movable Bearing	1	1	0	0	0 Each
515	Steel Protective Coating	3	0	3	0	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
515	Effectiveness (Steel Protective Coatings)	rust stains (3sf)	2	3	3 Square Feet

General Comments**Span 2 Expansion Joint 2****Compression Seal**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
302	Compression Joint Seal	70	59	10	1	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
302	Adjacent Deck or Header	west shoulder next to white line, broken section (1ft x 2in x up to 3in)	3	1	1 Feet
302	Debris Impaction	east shoulder, debris accumulation (5ft) (west shoulder similar)	2	10	Feet

General Comments

Span 2 Expansion Joint 3

Compression Seal

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
302	Compression Joint Seal	70	60	10	0	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
302	Debris Impaction	east shoulder, debris accumulation (5ft) (west shoulder similar)	2	10	Feet

General Comments

Bent 1 Cap 1

Reinforced Concrete Pier Cap

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
234	Reinforced Concrete Pier Cap	68	55	0	13	0 Feet
521	Concrete Protective Coating	216	216	0	0	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
234	Cracking (RC and Other)	north face at bay 8, diagonal crack (18in x 1/16in) and horizontal crack (4ft x up to 1/8in)	3	4	4 Feet
234	Cracking (RC and Other)	north face under beam 1, vertical crack (18in x 1/16in)	3	1	1 Feet
234	Cracking (RC and Other)	south face at bay 1, horizontal crack (2ft x 1/16in) and vertical crack (2ft x 1/16in)	3	2	2 Feet
234	Cracking (RC and Other)	south face at bay 3, horizontal crack (30in x 1/16in) and vertical crack (15in x 1/16in)	3	3	3 Feet
234	Cracking (RC and Other)	underside at east end, transverse crack (full width x 1/16in) and adjacent spall (6in x 3in x 1/4in)	3	1	1 Feet
234	Delamination/Spall	north face at bay 8, spall (2ft x 21in x up to 2in) with exposed rusted rebar and adjacent delamination (15in x 10in)	3	2	2 Feet

General Comments

Approach 1

Reinforced Concrete Approach Slab

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
321	Reinforced Concrete Approach Slabs	877	877	0	0	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
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General Comments

not visible, covered with epoxy wearing surface

Approach 2

Reinforced Concrete Approach Slab

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
321	Reinforced Concrete Approach Slabs	812	812	0	0	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
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General Comments

not visible, covered with epoxy wearing surface

Elements Verified

Location	Name	Component	Element Name	Amount
Span 1	Deck	Reinforced Concrete Deck	Reinforced Concrete Deck	9279
Span 1	Beam 1	Plate Girder	Steel Open Girder/Beam	131
Span 1	Beam 2	Plate Girder	Steel Open Girder/Beam	131
Span 1	Beam 3	Plate Girder	Steel Open Girder/Beam	131
Span 1	Beam 4	Plate Girder	Steel Open Girder/Beam	131
Span 1	Beam 5	Plate Girder	Steel Open Girder/Beam	131
Span 1	Beam 6	Plate Girder	Steel Open Girder/Beam	131
Span 1	Beam 7	Plate Girder	Steel Open Girder/Beam	131
Span 1	Beam 8	Plate Girder	Steel Open Girder/Beam	131
Span 1	Beam 9	Plate Girder	Steel Open Girder/Beam	131
Span 1	Left Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	131
Span 1	Right Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	131
Span 1	Expansion Joint 1	Compression Seal	Compression Joint Seal	70
Span 1	Wearing Surface	Epoxy Wearing Surface	Wearing Surface	8908
Span 1	Far Bearing	Movable Bearing	Movable Bearing	1
Span 1	Near Bearing	Fixed Bearing	Fixed Bearing	1
Span 1	Near Bearing	Fixed Bearing	Fixed Bearing	1
Span 1	Far Bearing	Movable Bearing	Movable Bearing	1
Span 1	Far Bearing	Movable Bearing	Movable Bearing	1
Span 1	Near Bearing	Fixed Bearing	Fixed Bearing	1
Span 1	Near Bearing	Fixed Bearing	Fixed Bearing	1
Span 1	Far Bearing	Movable Bearing	Movable Bearing	1
Span 1	Far Bearing	Movable Bearing	Movable Bearing	1
Span 1	Near Bearing	Fixed Bearing	Fixed Bearing	1
Span 1	Near Bearing	Fixed Bearing	Fixed Bearing	1
Span 1	Far Bearing	Movable Bearing	Movable Bearing	1
Span 1	Far Bearing	Movable Bearing	Movable Bearing	1
Span 1	Near Bearing	Fixed Bearing	Fixed Bearing	1
Span 1	Near Bearing	Fixed Bearing	Fixed Bearing	1
Span 1	Far Bearing	Movable Bearing	Movable Bearing	1
Span 1	Near Bearing	Fixed Bearing	Fixed Bearing	1
Span 1	Far Bearing	Movable Bearing	Movable Bearing	1
Span 2	Deck	Reinforced Concrete Deck	Reinforced Concrete Deck	9385
Span 2	Beam 1	Plate Girder	Steel Open Girder/Beam	132
Span 2	Beam 2	Plate Girder	Steel Open Girder/Beam	132
Span 2	Beam 3	Plate Girder	Steel Open Girder/Beam	132
Span 2	Beam 4	Plate Girder	Steel Open Girder/Beam	132
Span 2	Beam 5	Plate Girder	Steel Open Girder/Beam	132
Span 2	Beam 6	Plate Girder	Steel Open Girder/Beam	132
Span 2	Beam 7	Plate Girder	Steel Open Girder/Beam	132
Span 2	Beam 8	Plate Girder	Steel Open Girder/Beam	132
Span 2	Beam 9	Plate Girder	Steel Open Girder/Beam	132
Span 2	Left Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	133
Span 2	Right Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	133
Span 2	Expansion Joint 2	Compression Seal	Compression Joint Seal	70

Elements Verified

Location	Name	Component	Element Name	Amount
Span 2	Expansion Joint 3	Compression Seal	Compression Joint Seal	70
Span 2	Wearing Surface	Epoxy Wearing Surface	Wearing Surface	9385
Span 2	Near Bearing	Movable Bearing	Movable Bearing	1
Span 2	Far Bearing	Movable Bearing	Movable Bearing	1
Span 2	Near Bearing	Movable Bearing	Movable Bearing	1
Span 2	Far Bearing	Movable Bearing	Movable Bearing	1
Span 2	Near Bearing	Movable Bearing	Movable Bearing	1
Span 2	Far Bearing	Movable Bearing	Movable Bearing	1
Span 2	Near Bearing	Movable Bearing	Movable Bearing	1
Span 2	Far Bearing	Movable Bearing	Movable Bearing	1
Span 2	Near Bearing	Movable Bearing	Movable Bearing	1
Span 2	Far Bearing	Movable Bearing	Movable Bearing	1
Span 2	Near Bearing	Movable Bearing	Movable Bearing	1
Span 2	Far Bearing	Movable Bearing	Movable Bearing	1
Span 2	Near Bearing	Movable Bearing	Movable Bearing	1
Span 2	Far Bearing	Movable Bearing	Movable Bearing	1
Span 2	Near Bearing	Movable Bearing	Movable Bearing	1
Span 2	Far Bearing	Movable Bearing	Movable Bearing	1
Span 2	Near Bearing	Movable Bearing	Movable Bearing	1
Span 2	Far Bearing	Movable Bearing	Movable Bearing	1
Bent 1	Cap 1	Reinforced Concrete Pier Cap	Reinforced Concrete Pier Cap	68
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
Bent 1	Pile 4	Reinforced Concrete Column	Reinforced Concrete Column	1
Bent 1	Pile 5	Reinforced Concrete Column	Reinforced Concrete Column	1
End Bent 1	Cap 1	Reinforced Concrete Pier Cap	Reinforced Concrete Pier Cap	77
End Bent 1	Abutment	Reinforced Concrete Abutment	Reinforced Concrete Abutment	70
End Bent 2	Cap 1	Reinforced Concrete Pier Cap	Reinforced Concrete Pier Cap	77
End Bent 2	Abutment	Reinforced Concrete Abutment	Reinforced Concrete Abutment	70

General Inspection Notes

National Bridge and NC Inspection Items

Structure Number: 250005

Inspection Date: 11/05/2018

National Bridge Inventory Items

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

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

NC SMU Inspection Items

Item	Grade Scale	Grade	Maint. Qty.	Maint. Code
Deck Debris	G, F, P, or C	F	18664	3376
Drainage System	G, F, P, or C	F	2	3332
Utilities	G, F, P, or C			
Slope Protection	G, F, P, or C	G	0	3352
Scour	G, F, P, or C			
Wingwall	G, F, P, or C	F	20	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	G		
Estimated Remaining Life	0 - 100 Years			
Superstructure Paint Code		W		

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

Inspection Information

Item	Grade Scale	Grade
Sign Noticed Issued	YES/NO	N
Priority Maintenance Request Submitted	YES/NO	N
Inspection Time	Hours	5
Traffic Control Time	Hours	0
Snooper Time	Hours	0
Ladder Used	YES/NO	Y
Bucket Truck Used	YES/NO	N
Boat Used	YES/NO	N
Other Equipment Used	YES/NO	N

National Bridge and NC SMU Inspection Item Details

Structure Number: 250005

Inspection Date: 11/05/2018

Item	Deck Debris	Grade	F	Maint Code	3376	Qty.	18664
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Details east shoulder, debris accumulation (full length x 3ft) (west shoulder similar)

Item	Drainage System	Grade	F	Maint Code	3332	Qty.	2
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Details end bent 1 weepage holes under beams 4 and 5, partially blocked

Item	Wingwalls	Grade	F	Maint Code	3350	Qty.	20
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Details all wingwalls, missing joint material (full height)

Item	General Comments and Misc Items	Grade		Maint Code		Qty.	0
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Details west shoulder between approach slab and left bridge rail at 2ft from end bent 1, erosion hole (2ft x up to 5in x up to 21in)



east shoulder, debris accumulation (full length x 3ft)



Expansion Joint 1 : east shoulder, debris accumulation (3ft)



Expansion Joint 2 : west shoulder next to white line, broken section (1ft x 2in x up to 3in)



Span 2 Left Bridge Rail: scattered throughout at random, multiple vertical cracks (full height x hairline)



west shoulder between approach slab and left bridge rail at 2ft from end bent 1, erosion hole (2ft x up to 5in x up to 21in) (photo 1 of 2)



west shoulder between approach slab and left bridge rail at 2ft from end bent 1, erosion hole (2ft x up to 5in x up to 21in) (photo 2 of 2)



all wingwalls, missing joint material (full height)



end bent 1 weepage holes under beams 4 and 5, partially blocked



Span 1 Right Bridge Rail: base of rail at bent 1, spall (1ft x 6in x up to 3in)



Span 2 Beam 9 Far Bearing: rust stains (3sf)



Span 2 Deck: underside bay 8 next to beam 9 at end bent 2, edge spall (30in x 4in x 1-1/2in) and adjacent diagonal crack (5-1/2ft x 1/32in) with efflorescence (photo 1 of 2)



Span 2 Deck: underside bay 8 next to beam 9 at end bent 2, edge spall (30in x 4in x 1-1/2in) and adjacent diagonal crack (5-1/2ft x 1/32in) with efflorescence (photo 2 of 2)



Span 2 Deck: underside bay 2 at end bent 2, diagonal crack (10ft x 1/32in) with efflorescence



Span 2 Deck: underside scattered throughout at all bays, multiple transverse cracks (full width x hairline) with efflorescence



Bent 1 Cap 1: north face under beam 1, vertical crack (18in x 1/16in)



Bent 1 Cap 1: north face at bay 8, diagonal crack (18in x 1/16in) and horizontal crack (4ft x up to 1/8in)



Bent 1 Cap 1: north face at bay 8, spall (2ft x 21in x up to 2in) with exposed rusted rebar and adjacent delamination (15in x 10in)



Bent 1 Cap 1: underside at east end, transverse crack (full width x 1/16in) and adjacent spall (6in x 3in x 1/4in)



Bent 1 Cap 1: south face at bay 3, horizontal crack (30in x 1/16in) and vertical crack (15in x 1/16in)



Bent 1 Cap 1: south face at bay 1, horizontal crack (2ft x 1/16in) and vertical crack (2ft x 1/16in)



Span 2 Beam 2 Near Bearing: paint failure with surface rust



ladder on bent



interior bearing assembly



end bent 1 and slope protection



end bent 2 and slope protection



intermediate diaphragm



looking west through span 2



east profile, looking west



beams over bent 1



west profile, looking east



looking east through span 1



bent 1



southeast wingwall



southwest wingwall



south approach looking north



southeast guardrail termination



southeast guardrail



southeast guardrail attachment



east bridge rail



west bridge rail



end bent 1 joint



northeast wingwall



end bearing assembly



northwest wingwall



northwest guardrail attachment



northwest guardrail



end bent 2 joint



bent 1 joint



deck drain



looking west from deck



looking east from deck



north approach looking south



northwest guardrail termination



epoxy wearing surface



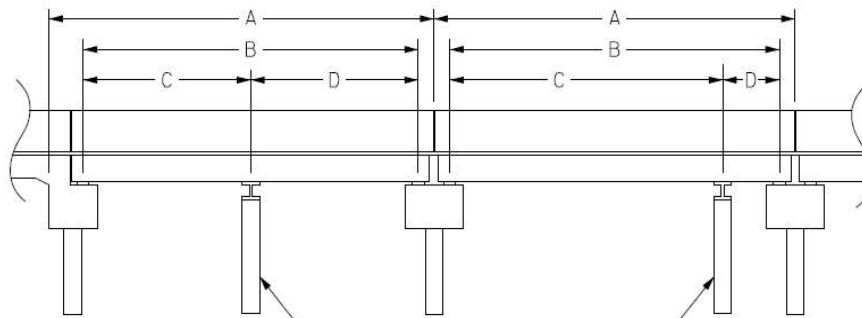
end diaphragm

Structure Data Worksheet

Span Profile

County: **CUMBERLAN**
D

Structure Number: **250005**



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

Span Number	Span Length	Bearing to Bearing	Crutch/ Helper Bent	Distance to Near Bearing	Distance to Far Bearing
1	131.000	128.750			
2	132.500	130.583			

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

Run Date: 08/15/2019

IDENTIFICATION

(1) STATE NAME -NORTH CAROLINA BRIDGE **250005**
 (8) STRUCTURE NUMBER(FEDERAL) 00000000510005
 (5) INVENTORY ROUTE (ON/UNDER) - ON 31000590
 (2) STATE HIGHWAY DEPARTMENT DISTRICT 2
 (3) COUNTY CODE 51 (4) PLACE CODE 32640
 (6) FEATURE INTERSECTED - I95
 (7) FACILITY CARRIED NC59
 (9) LOCATION 0.2 MI. E. OF JCT SR 2274
 (11)MILEPOINT 0
 (16)LAT 34° 56' 17.02" (17)LONG 78° 55' 21.20"
 (98)BORDER BRIDGE STATE CODE PCT SHARE
 (99)BORDER BRIDGE STRUCTURE NO

SUFFICIENCY RATING = 100
 STATUS = Not Deficient

CLASSIFICATION **CODE**

(112)NBIS BRIDGE SYSTEM - YES
 (104)HIGHWAY SYSTEM Is on the NHS 1
 (26) FUNCTIONAL CLASS - Other Principal Arterial 14
 (100)STRAHNET HIGHWAY - Not a STRAHNET Route 0
 (101)PARALLEL STRUCTURE - No Parallel Structure N
 (102)DIRECTION OF TRAFFIC - 2-way Traffic 2
 (103)TEMPORARY STRUCTURE -
 (110)DESIGNATED NATIONAL NETWORK - Not on the National Network 0
 (20) TOLL On Free Road 3
 (31) MAINTAIN - State Highway Agency 01
 (22) OWNER - State Highway Agency 01
 (37) HISTORICAL SIGNIFICANCE - Not Eligible 5

STRUCTURE TYPE AND MATERIAL

(43) STRUCTURE TYPE MAIN: Steel
 TYPE - Stringer Mutlibeam or Girder CODE 302
 (44) STRUCTURE TYPE APPR :
 TYPE - CODE 000
 (45) NUMBER OF SPANS IN MAIN UNIT 2
 (46) NUMBER OF APPROACH SPANS
 (107)DECK STRUCTURE TYPE - 1 CODE
 (108)WEARING SURFACE / PROTECTIVE SYSTEM :
 (A) TYPE OF WEARING SURFACE - Concrete CODE 1
 (B) TYPE OF MEMBRANE - None CODE 0
 (C) TYPE OF DECK PROTECTION - None CODE 0

CONDITION **CODE**

(58) DECK 6
 (59) SUPERSTRUCTURE 8
 (60) SUBSTRUCTURE 6
 (61) CHANNEL & CHANNEL PROTECTION N
 (62) CULVERTS N

LOAD RATING AND POSTING **CODE**

(31) DESIGN LOAD HS 20 + MOD 6
 (63) OPERATING RATING METHOD - Load Factor 1
 (64) OPERATING RATING - HS-55 99
 (65) INVENTORY RATING METHOD - Load Factor 1
 (66) INVENTORY RATING - HS-42 75
 (70) BRIDGE POSTING - No Posting Required 5
 (41) STRUCTURE OPEN, POSTED ,OR CLOSED A
 DESCRIPTION - Open, No Restriction

AGE AND SERVICE

(27) YEAR BUILT 1979
 (106)YEAR RECONSTRUCTED
 (42) TYPE OF SERVICE : ON - Overpass - Interchange
 UNDER - Highway CODE 61
 (28) LANES: ON STRUCTURE 2 UNDER STRUCTURE 4
 (29) AVERAGE DAILY TRAFFIC 17000
 (30) YEAR OF ADT 2012 (109) TRUCK ADT PCT 12%
 (19) BYPASS OR DETOUR LENGTH 0 MI

APPRAISAL **CODE**

(67) STRUCTURAL EVALUATION 6
 (68) DECK GEOMETRY 9
 (69) UNDERCLEARANCES,VERTI & HORIZ 6
 (71) WATERWAY ADEQUACY N
 (72) APPROACH ROADWAY ALIGNMENT 8
 (36) TRAFFIC SAFETY FEATURES 1111
 (113)SCOUR CRITICAL BRIDGES N

GEOMETRIC DATA

(48) LENGTH OF MAXIMUM SPAN 131 FT
 (49) STRUCTURE LENGTH 264 FT
 (50)CURB OR SIDEWALK: LEFT 0 FT RIGHT 0 FT
 (51) BRIDGE ROADWAY WIDTH CURB TO CURB 68 FT
 (52) DECK WIDTH OUT TO OUT 70.833 FT
 (32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 66 FT
 (33) BRIDGE MEDIAN - No Median CODE 0
 (34) SKEW 3° (35) STRUCTURE FLARED 0
 (10) INVENTORY ROUTE MIN VERT CLEAR 999.9 FT
 (47) INVENTORY ROUTE TOTAL HORIZ CLEAR 68 FT
 (53) MIN VERT CLEAR OVER BRIDGE RDWY 999.9 FT
 (54) MIN VERT UNDERCLEAR REF Highway 16.8 FT
 (55) MIN LAT UNDERCLEAR RT REF Highway 18.667 FT
 (56) MIN LAT UNDERCLEAR LT REF - 46.833 FT

PROPOSED IMPROVEMENTS

(75) TYPE OF WORK - CODE
 (76) LENGTH OF STRUCTURE IMPROVEMENT
 (94) BRIDGE IMPROVEMENT COST
 (95) ROADWAY IMPROVEMENT COST
 (96) TOTAL PROJECT COST
 (97) YEAR OF IMPROVEMENT COST ESTIMATE
 (114)FUTURE ADT 34000 (115) YEAR FUTURE ADT 2025

INSPECTIONS

(90) INSPECTION DATE 11/05/2018
 (92) CRITICAL FEATURE INSPECTION : (93) CFI DATE
 A) FRACTURE CRIT DETAIL - NO A)
 B) UNDERWATER INSP - NO B)
 C) OTHER SPECIAL INSP NO C)
 SCOUR

NAVIGATION DATA

(38) NAVIGATION CONTROL - Not Applicable CODE N
 (111)PIER PROTECTION - CODE
 (39) NAVIGATION VERTICAL CLEARANCE 0
 (116)VERT - LIFT BRIDGE NAV MIN VERT CLEAR FT
 (40) NAVIGATION HORIZONTAL CLEARANCE 0 FT

Structure No: 250005

County: CUMBERLAN
D

Run Date:

Span Number	Feature Intersected	Inventory Route	Minimum Maximum Vertical Clearance	Milepoint	Base Highway Network	LRS Inventory Route	Toll	Functional Classification	Numer of Lanes	Average Daily Traffic	Year of Average Daily Traffic	Total Horizontal Clearance	See Note 1							
													Reference Feature	Minimum Vertical Underclearance	Right Lateral Underclearance	Left Lateral Underclearance	Underclearance Appraisal Grade	STRAHNET Highway Designator	Direction of Traffic	Highway System of Route
	6	5	10	11	12	13	20	26	28	29	30	47	54A	54	55	56	69	100	102	104
1	I95NBL	11000950	17.5	41.30	1	10095		11	2	15500	2013	84.67	H	17.2	14.58	46.33	9	1	1	1
2	I95SBL	11000950	16.9	41.30	1	10095		11	2	15500	2013	89	H	16.8	18.67	46.83	9	1	1	1

Note 1: 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. The under route that generates the lowest Underclearance Appraisal value will be reported on the Facility Carried record.

BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE

Run Date: 08/15/2019

COUNTY : CUMBERLAND DIVISION : 6 DISTRICT : 2 STRUCTURE NUMBER : 250005 LENGTH : 264 FEET

ROUTE CARRIED : NC59 FEATURE INTERSECTED : I95

LOCATED : 0.2 MI. E. OF JCT SR 2274 BRIDGE NAME : CITY : * HOPE MILLS

FUNC. CLASS : 14 SYST.ON : FA SYST.UNDER : NFA ADT & YR : 17000 2012 RAIL TYPE : LT 41 RT 41

BUILT : 1979 BY : DOH PROJ : 8.1347406 FED.AID PROJ : I-95-2(42)40 DESIGN LOAD : HS 20 + MOD

REHAB : BY : DBM PROJ : ALIGNMENT : TAN SKEW : 93 LANES : ON 2 UNDER 4

NAVIGATION : VC 0 FT HC 0 FT HT. CRN. TO BED : 0 FT WATER DEPTH : 0 FT

SUPERSTRUCTURE : RC FLOOR ON PLATE GIRDERS

SUBSTRUCTURE : E.BTS:RC CAPS/STL PILES,INT.BTS.RC P&BEAM/PILE FTGS.

SPANS : 1@131'-0 , 1@132'-6"

BEAMS OR GIRDERS : 9 LINES 58" PLATE GIRDERS @ 8' CENTERS

FLOOR : 8.5 RC/3/8" EPOXY AND STONE OVERLAY ENCROACHMENT : DECK (OUT TO OUT) : 70.833 FT

CLEAR ROADWAY : 68 FT BETWEEN RAILS : 68 FT SIDEWALK OR CURB : LT 0 FT RT 0 FT

VERT.CL.OVER : 999.9 FT

INV.RTG. : HS-42 OPE.RTG. : HS-55 CONTR.MEMBER : int.gdrB POSTED : SV TTST DATE

SYSTEM : Primary N.C. Route GREEN LINE ROUTE : Y

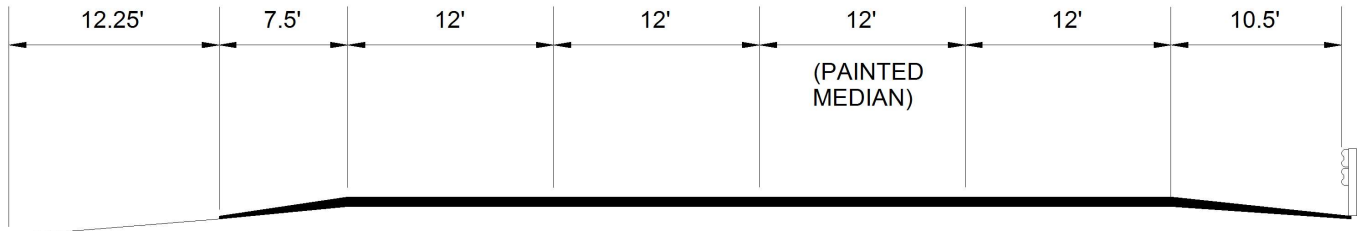
UNDER ROUTES AND CLEARANCES

Span	Route Description	Vertical Clearances		Horizontal Clearances		
		MMVC	MVC	Total	Left	Right
1	I95NBL	17.50	17.20	84.6670	46.3340	14.5830
2	I95SBL	16.90	16.80	89	46.8330	18.6670

Note: All measurements are in feet.

REMARKS :

Bridge Inspection Field Sketch



Roadway	48ft Wide	4 Paved Lanes	Looking North
Left Shoulder	19.75ft Wide	7.5ft Paved	12.25ft Unpaved
Right Shoulder	10.5ft Wide	10.5ft Paved	
Left Guardrail			
Right Guardrail	10.5ft from road		

MEASUREMENTS TAKEN APPROXIMATELY 25FT FROM END BENT 1

Title

APPROACH ROADWAY SKETCH

Description

DATA WORKSHEET

Bridge No: 250005

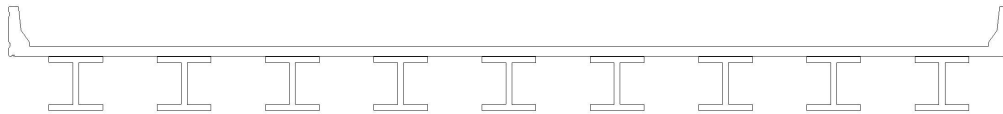
Drawn By: H. BONILLA

Date: 11/5/2018

File Name: S0234000993

Bridge Inspection Field Sketch

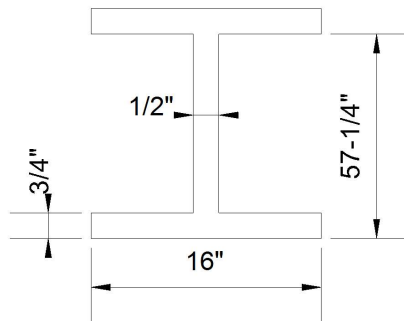
Deck Width/Out to Out	70.833ft	Between Rails	68ft		
Clear Roadway	68ft	Wearing Surface	*0.016ft		
Median Width		Median Height			
Curb Height		Left	Right		
Sidewalk Width		Left	Right		
Clear Roadway (Rail to Median)		Left	Right		
Guardrail Width		Left	1.417ft	Right	1.4167ft
Top of Rail to Deck/Wearing Surface		Left	2.667ft	Right	2.667ft
Bridge Rail		Left	Type 4	Right	Type 4



Measurements for Span #	1	ALL SPANS SIMILAR	
Deck Thickness	0.708ft	Left Overhang	3.417ft
Top of Rail to Bottom of Beam	8.417ft	Right Overhang	3.417ft

Beam Number	Beam Type	Spacing	Comments
1	Steel Buildup Beam	8ft	
2	Steel Buildup Beam	8ft	
3	Steel Buildup Beam	8ft	
4	Steel Buildup Beam	8ft	
5	Steel Buildup Beam	8ft	
6	Steel Buildup Beam	8ft	
7	Steel Buildup Beam	8ft	
8	Steel Buildup Beam	8ft	
9	Steel Buildup Beam		

BEAM DIMENSIONS



*REVISED BY: H. BONILLA 11/5/2018

Title

SUPERSTRUCTURE

Description

9 Lines of Steel Plate Girders

Bridge No: 250005

Drawn By: CLS

Date: 01/22/2007

File Name: S0234000994

Bridge Inspection Field Sketch



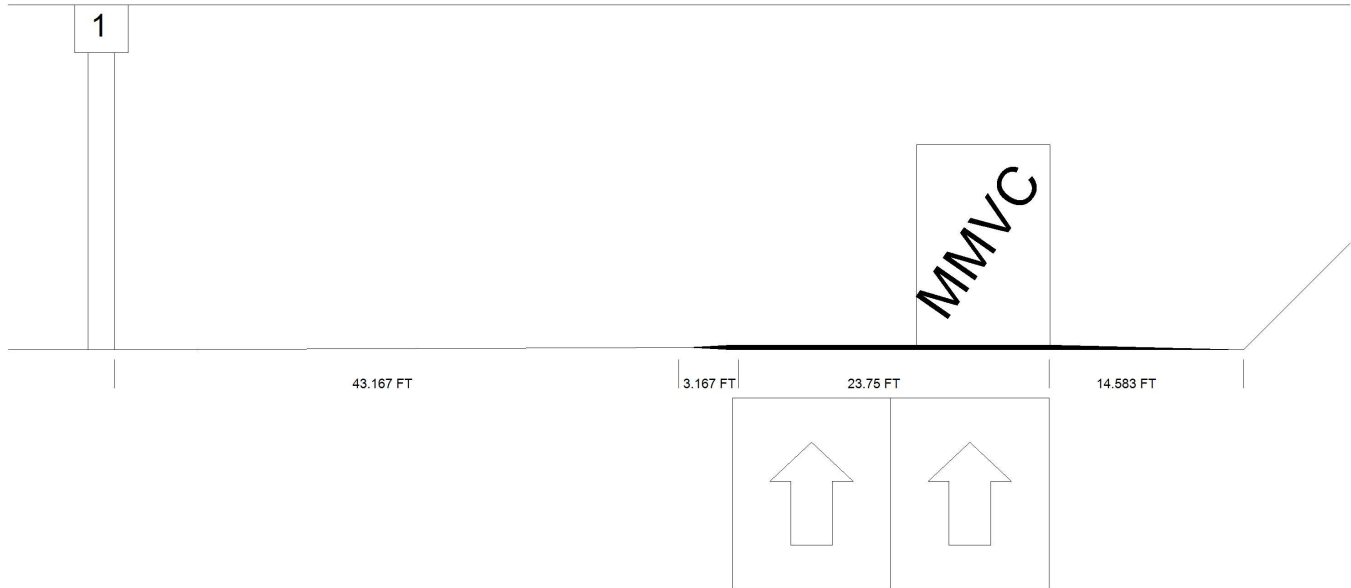
Cap Information			Material Cast-in-Place Concrete							
Length	Width	Height	Left Overhang	Right Overhang	Left Beam to End of Cap.	Right Beam to End of Cap.				
67.833 ft.	3.167 ft.	3.000 ft.	4.833 ft.	4.917 ft.	1.667 ft.	1.833 ft.				
Subcap Information			Material							
Length	Width	Height	Left Overhang	Right Overhang	Left Pile to Splice.					
Sill Information			Material							
Length	Width	Height								
Pile #	Material	Spacing	Width/Dia.	Height	Length	Orientation	Driven?	Replacement?	Removed?	Collar?
1	Concrete	14.5 ft.	3 ft.			Vertical	No	No	No	No
2	Concrete	14.583 ft.	3 ft.			Vertical	No	No	No	No
3	Concrete	14.5 ft.	3 ft.			Vertical	No	No	No	No
4	Concrete	14.5 ft.	3 ft.			Vertical	No	No	No	No
5	Concrete		3 ft.			Vertical	No	No	No	No
<p>VERIFIED BY: H. BONILLA 11/5/2018</p>										
Bent/Abutment #: 1			Similar Bents:							

Title SUBSTRUCTURE			Description BENT 1		
Bridge No: 250005	Drawn By: RLK	Date: 1/23/2009	File Name: S0098000703		

Bridge Inspection Field Sketch

NC 59 / CHICKEN FOOT ROAD

Span 1



LOOKING NORTH

Roadway 1		Direction of Traffic	I-95 N
Distance to Left Rail		Distance to Right Rail	
Distance to Left Toe of Slope		Distance to Left Bent	46.334FT
Distance to Right Toe of Slope	14.583FT	Distance to Right Bent	
MMVC	17.5 Ft at Beam 1, 10 FT from RIGHT WHITE LINE		
MVC	17.2 Ft at Beam 1, 0 FT from AT LEFT YELLOW LINE		

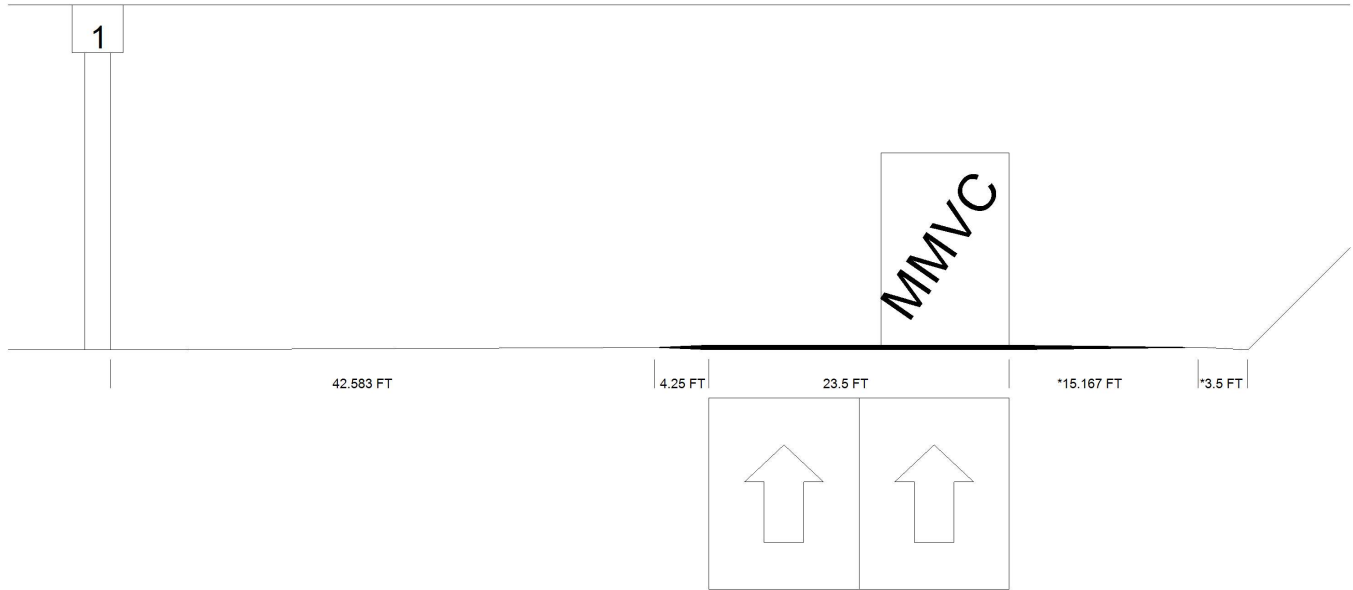
VERIFIED BY: H. BONILLA 11/5/2018

Title SPAN 1 CLEARANCE		Description I-95 SBL	
Bridge No: 250005	Drawn By: RLK	Date: 11/08/2012	File Name: S0234000995

Bridge Inspection Field Sketch

NC 59 / CHICKEN FOOT ROAD

Span 2



LOOKING SOUTH

Roadway 1		Direction of Traffic	I-95 S
Distance to Left Rail		Distance to Right Rail	
Distance to Left Toe of Slope		Distance to Left Bent	46.833FT
Distance to Right Toe of Slope	*18.667FT	Distance to Right Bent	
MMVC	16.9 Ft at Beam 1, 10 FT from RIGHT WHITE LINE		
MVC	16.8 Ft at Beam 1, 0 FT from LEFT YELLOW LINE		

*REVISED BY: H. BONILLA 11/5/2018

Title

SPAN 2 CLEARANCE

Description

I-95 NBL

Bridge No: 250005

Drawn By: RLK

Date: 11/08/2012

File Name: S0234000996