

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CUMBERLAND COUNTY

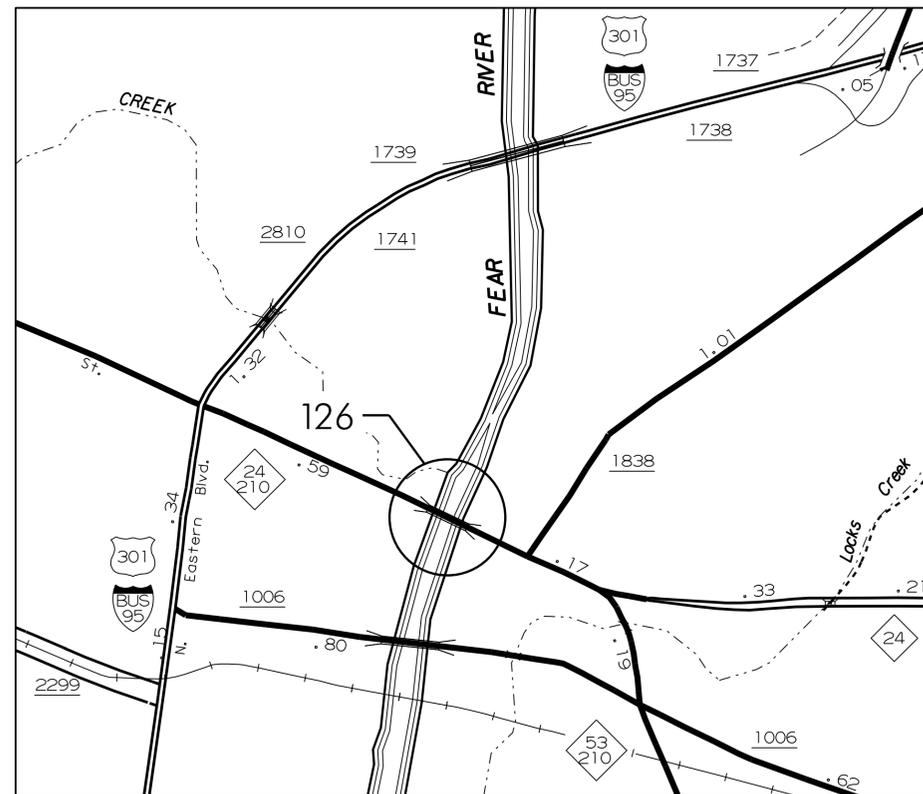
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	15BPR.6		
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
15BPR.6	-	P.E.	
15BPR.6	-	CONST.	



PROJECT: 15BPR.6

CONTRACT: DF00190

LOCATION: CUMBERLAND COUNTY
BRIDGE #126 ON NC HWY 24 OVER THE CAPE FEAR RIVER
TYPE OF WORK: BRIDGE PRESERVATION - SUBSTRUCTURE REPAIR AND JOINT REPAIR.



VICINITY MAP - CUMBERLAND CO.



DESIGN DATA

CUMBERLAND COUNTY
 #126 ADT 2012 = 25,000

PROJECT LENGTH

CUMBERLAND COUNTY
 - #126 = 0.117 MILE

Prepared in the Office of:
DIVISION OF HIGHWAYS
 STRUCTURES MANAGEMENT UNIT
 1000 BIRCH RIDGE DR.
 RALEIGH, N.C. 27610

2012 STANDARD SPECIFICATIONS

LETTING DATE :
 DECEMBER 6, 2017

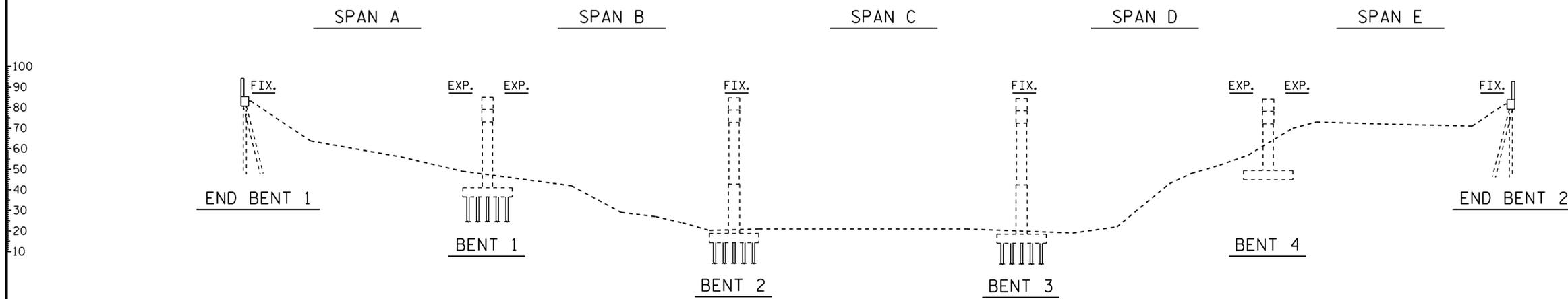
A. KEITH PASCHAL, P.E.
 PROJECT ENGINEER

A. M. LEE, P.E.
 PROJECT DESIGN ENGINEER

NOTES

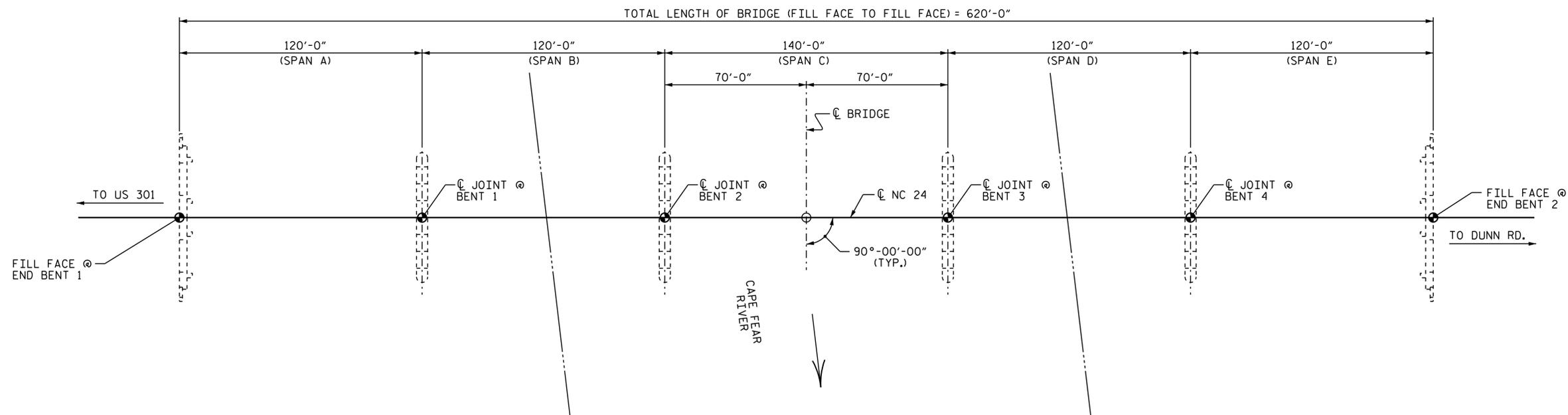
PROFILE INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND ROUTINE INSPECTION REPORT DATED 3/3/2016.

BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.



SECTION ALONG C ROADWAY

SECTIONS AT BENTS AND END BENTS ARE AT RIGHT ANGLES



PLAN

SCOPE OF WORK

- EPOXY INJECTING OF CONCRETE CRACKS.
- REMOVE UNSOUND CONCRETE AND PROPERLY PREPARE FOR SHOTCRETE AND CONCRETE REPAIR AREAS OF INTERIOR BENTS.
- PERFORM SHOTCRETE AND CONCRETE REPAIRS IN PREPARED AREAS.
- REMOVE DEBRIS FROM TOP OF BENT CAPS AND APPLY EPOXY COATING.
- PREPARE BRIDGE JOINTS AND INSTALL SILICONE JOINT SEALANT AT END BENTS AND MODULAR EXPANSION JOINTS AT INTERIOR BENTS 1 AND 4.

I hereby certify that this structure was rehabilitated according to these plans or as noted therein.

Resident Engineer _____ Date _____



DocuSigned by:
Amber M. Lee
B0B5A4F2FAD484
11/3/2017

PROJECT NO. 15BPR.6
CUMBERLAND COUNTY
 BRIDGE NO.: 126

SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 FOR BRIDGE
 ON NC 24 OVER
 CAPE FEAR RIVER

DRAWN BY : D.V. JOYNER DATE : 10/2017
 CHECKED BY : A.M. LEE DATE : 10/2017

DOCUMENT NOT CONSIDERED
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-1
1			3			TOTAL SHEETS
2			4			15



LOCATION SKETCH

GENERAL NOTES:

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION, ONLY. CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING THE BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLAN.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

FOR SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIRS, SEE SPECIAL PROVISIONS.

EXISTING MODULAR JOINT AND DECK REINFORCING STEEL SHOWN IS BASED ON BEST INFORMATION AVAILABLE.

ALL PROPOSED EXPANSION JOINT DIMENSIONS, OPENINGS AND BLOCKOUTS ARE SHOWN AT 60° F. CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTALLATION GUIDELINES AND MAKE ANY NECESSARY ADJUSTMENTS.

ADHESIVE ANCHOR BOLTS AND HARDWARE FOR THE PROPOSED EXPANSION JOINT SHALL BE GALVANIZED PER ASTM A153 AND INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.

WORK ON BRIDGE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL INTO THE WATER. THE CONTRACTOR SHALL SUBMIT PLANS FOR CONSTRUCTION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.

PRIOR TO BEGINNING WORK, CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL A COMPLETE SEQUENCE OF TASKS FOR EACH OPERATION AFFECTING THE BRIDGE SURFACE AND/OR TRAFFIC.

ANY DAMAGE TO EXISTING REINFORCING STEEL, DURING CONTRACTOR'S OPERATIONS, SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER AND PERFORMED AT NO ADDITIONAL COST.

CONTRACTOR SHALL HAVE A REPRESENTATIVE FROM THE JOINT MANUFACTURER PRESENT DURING INSTALLATION OF PROPOSED MOLDED RUBBER SEGMENTAL EXPANSION JOINT.

FOR EPOXY COATED REINFORCING STEEL, SEE 2012 NORTH CAROLINA STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, SECTION 425.

FOR JOINT REPAIR, SEE SPECIAL PROVISIONS.

FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

TOTAL BILL OF MATERIAL										
BRIDGE NO. 126	EPOXY COATED REINFORCING STEEL	CONCRETE REPAIRS	SHOTCRETE REPAIRS	EPOXY RESIN INJECTION	MOLDED RUBBER SEGMENTAL EXPANSION JOINT	VOLUMETRIC MIXER	SILICONE JOINT SEALANT	CONCRETE FOR DECK REPAIR	EPOXY COATING	JOINT REPAIR
	LBS.	CU. FT.	CU. FT.	LIN. FT.	LUMP SUM	LUMP SUM	LIN. FT.	CU. FT.	SQ. FT.	SQ. FT.
TOTALS	1907	89.9	89.0	530.9	LUMP SUM	LUMP SUM	136.92	793.8	1594	858.8

PROJECT NO. 15BPR.6
CUMBERLAND COUNTY
 BRIDGE NO. 126

SHEET 2 OF 2



DocuSigned by:
 Amber M. Lee
 B04B5A8F2FAD484
 11/3/2017

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING
 FOR BRIDGE
 ON NC 24 OVER
 CAPE FEAR RIVER

DRAWN BY : M. WELDON DATE : 10/2017
 CHECKED BY : A.M. LEE DATE : 10/2017

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-2
1			3			TOTAL SHEETS
2			4			15

NOTE:

EXISTING MODULAR EXPANSION JOINT DETAIL ARE SHOWN FOR INFORMATION ONLY. ACTUAL FIELD CONDITIONS MAY VARY. THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT IF ACTUAL CONDITIONS VARY FROM WHAT IS SHOWN IN THESE PLANS.

THE CONTRACTOR SHALL HAVE A REPRESENTATIVE FROM THE JOINT MANUFACTURER PRESENT DURING INSTALLATION OF PROPOSED EXPANSION JOINT SEAL.

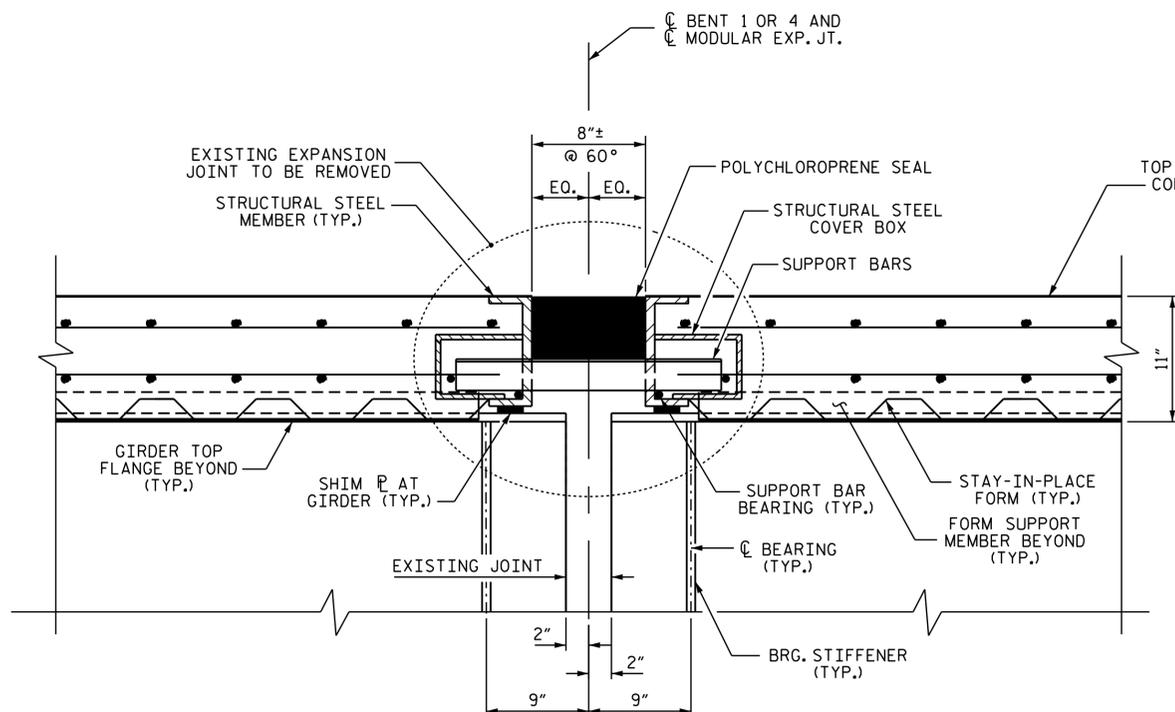
ALL EXPOSED ENDS OF CUT BARS SHALL BE COATED WITH EPOXY PRIOR TO THE NEW JOINT MATERIAL INSTALLATION.

THE CONTRACTOR SHALL PREPARE THE BOTTOM SURFACE OF BLOCKOUT TO BE PARALLEL WITH THE PLANE OF THE ROADWAY AND PROVIDE A UNIFORM SURFACE.

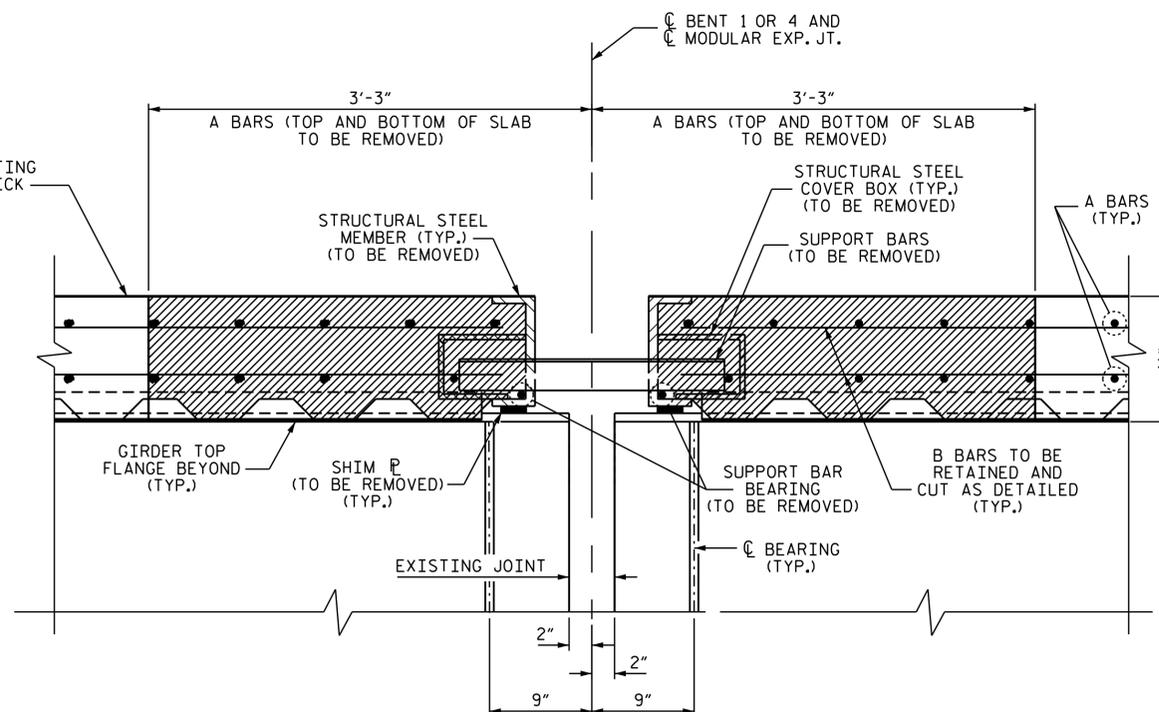
 EXISTING CONCRETE TO BE REMOVED

 NEW CONCRETE FOR DECK REPAIR.

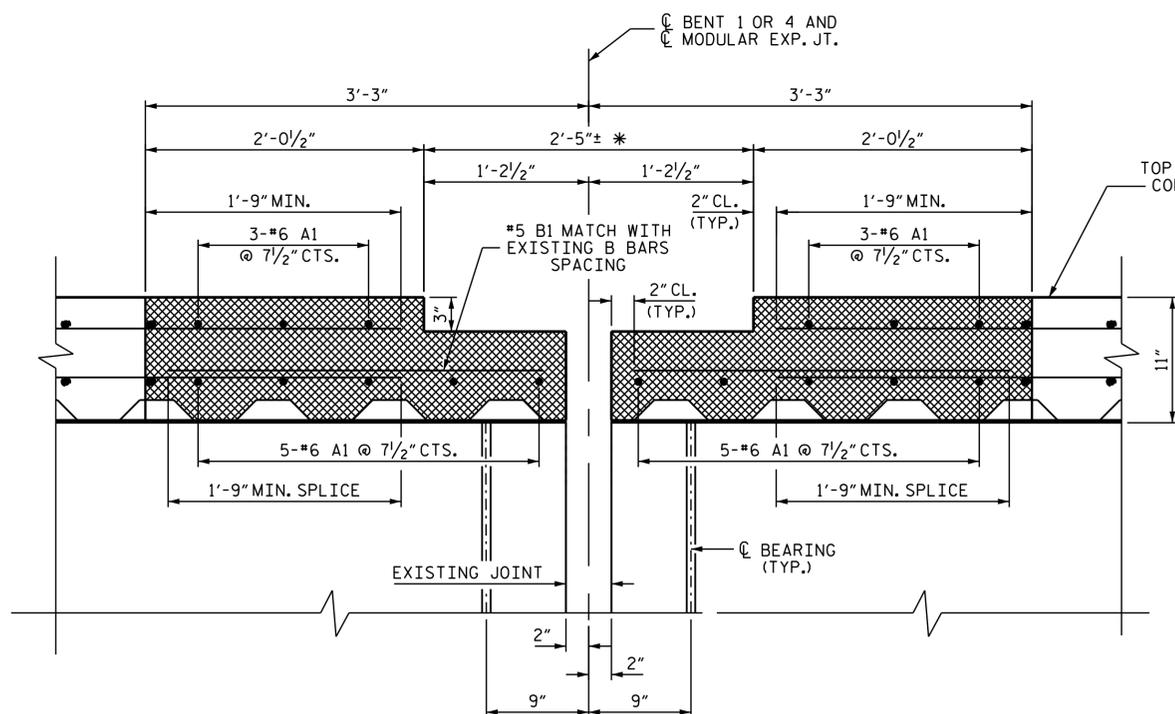
* TO BE VERIFIED BY MANUFACTURER



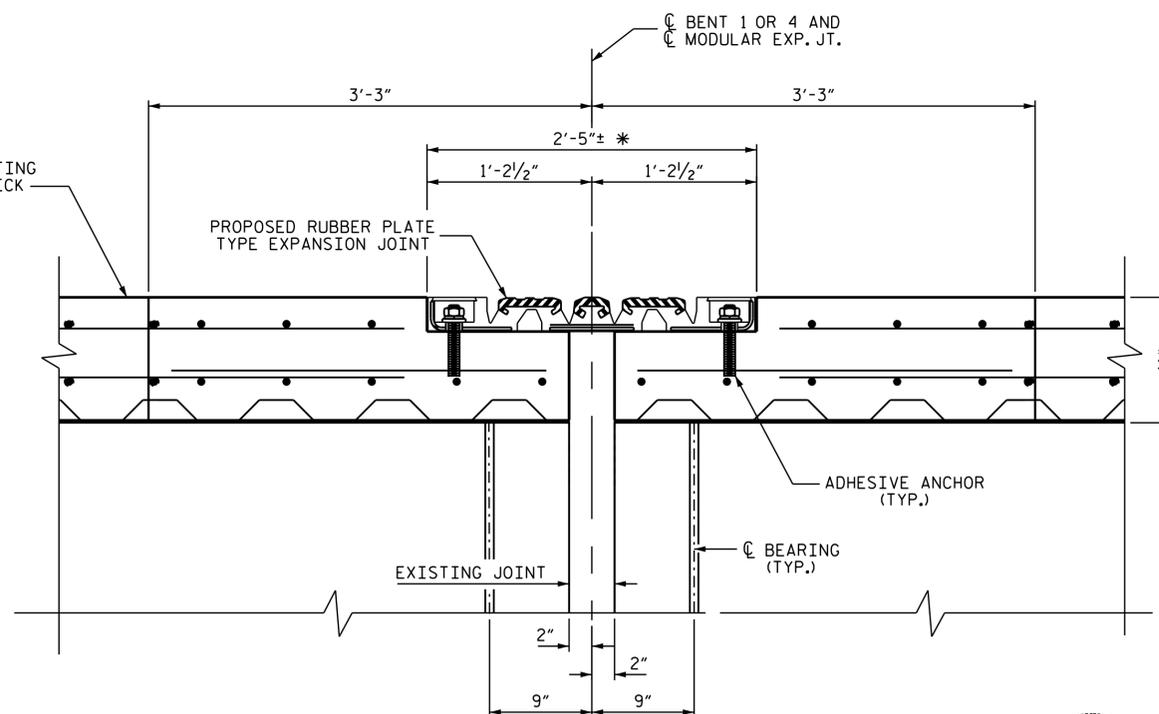
EXISTING MODULAR EXPANSION JOINT DETAIL AT ROADWAY



MODULAR EXPANSION JOINT DEMOLITION



CONCRETE AND REINFORCING STEEL REPLACEMENT



PROPOSED MODULAR EXPANSION JOINT REPAIR

PROJECT NO. 15BPR.6
CUMBERLAND COUNTY
 BRIDGE NO. 126

SHEET 1 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

MODULAR JOINT REPLACEMENT FOR BENT 1 AND 4



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 11/3/2017

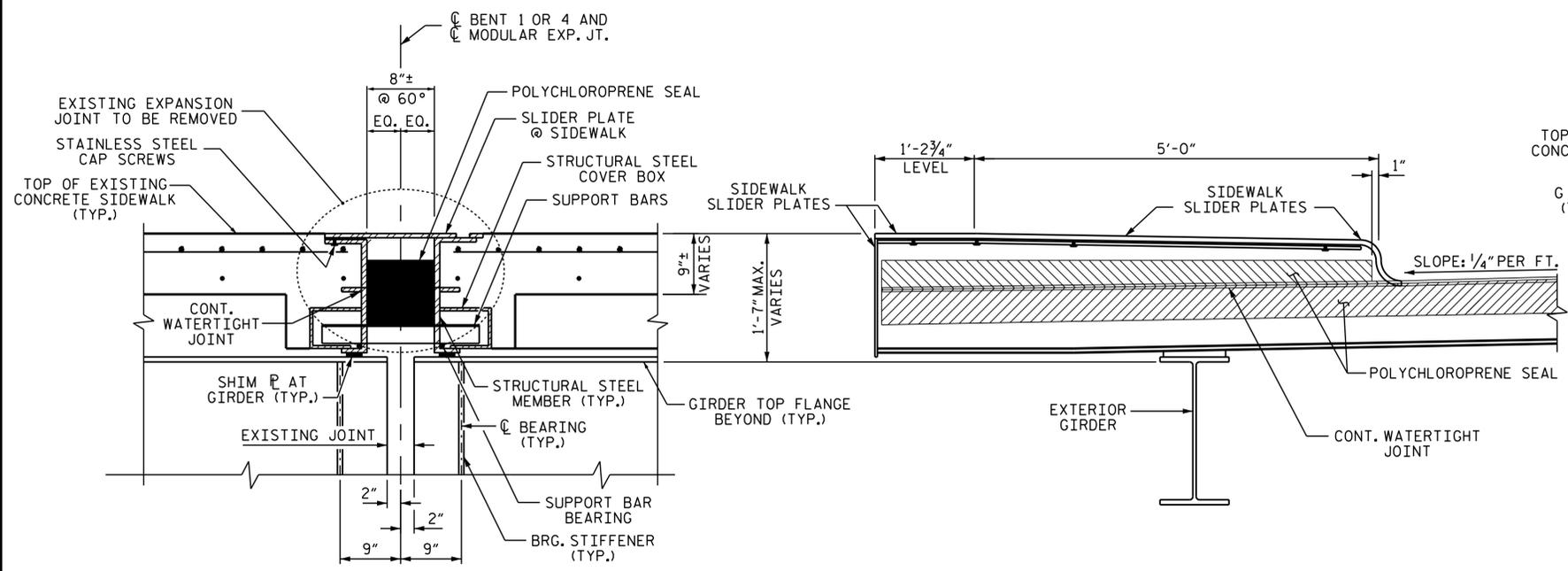
SECTION A-A

SEE SHEET S-5, PARTIAL PLAN MODULAR JOINT REPLACEMENT FOR BENT 1 OR 4"

DRAWN BY : A. SORSENGIN/H.M. WELDON DATE : 10/2017
 CHECKED BY : R.L. PUTEK DATE : 10/2017

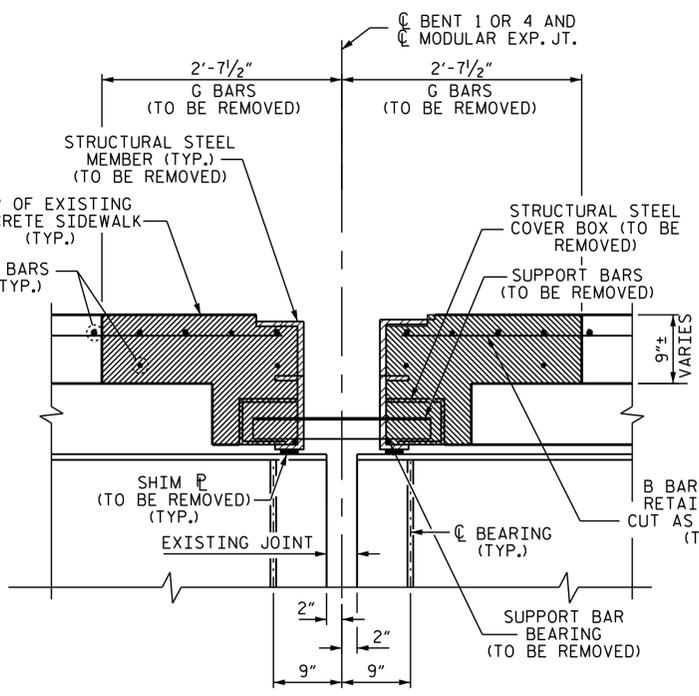
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NO.	BY:	DATE:	NO.	BY:	DATE:	S-3
1			3			TOTALS
2			4			15



EXISTING MODULAR EXPANSION JOINT DETAIL AT SIDEWALK

DETAIL AT SIDEWALK



MODULAR EXPANSION JOINT DEMOLITION

NOTE:
EXISTING MODULAR EXPANSION JOINT DETAIL ARE SHOWN FOR INFORMATION ONLY. ACTUAL FIELD CONDITIONS MAY VARY. THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT IF ACTUAL CONDITIONS VARY FROM WHAT IS SHOWN IN THESE PLANS

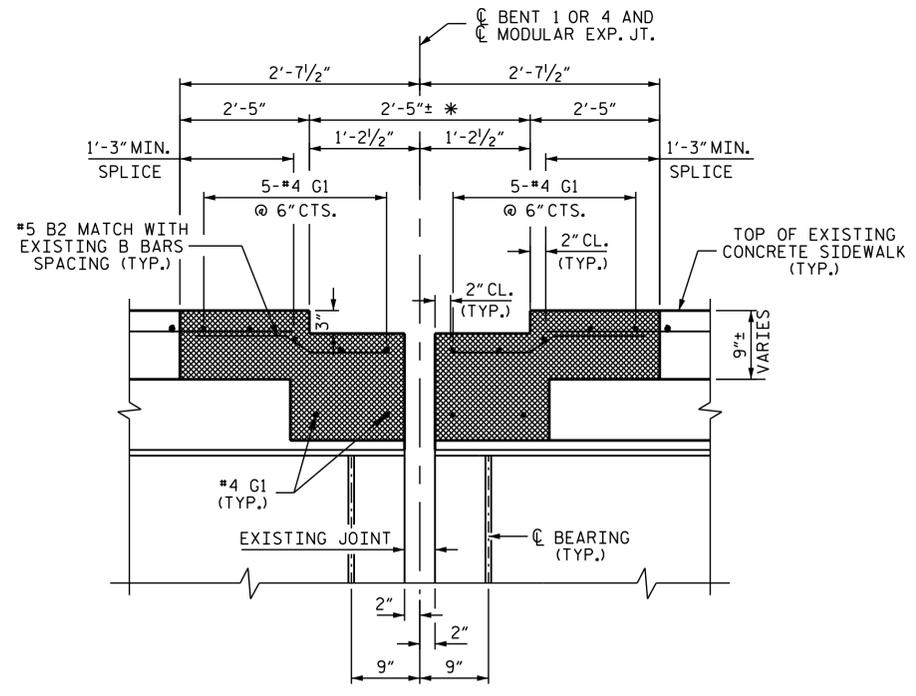
THE CONTRACTOR SHALL HAVE A REPRESENTATIVE FROM THE JOINT MANUFACTURER PRESENT DURING INSTALLATION OF PROPOSED EXPANSION JOINT SEAL

ALL EXPOSED ENDS OF CUT BARS SHALL BE COATED WITH EPOXY PRIOR TO THE NEW JOINT MATERIAL INSTALLATION.

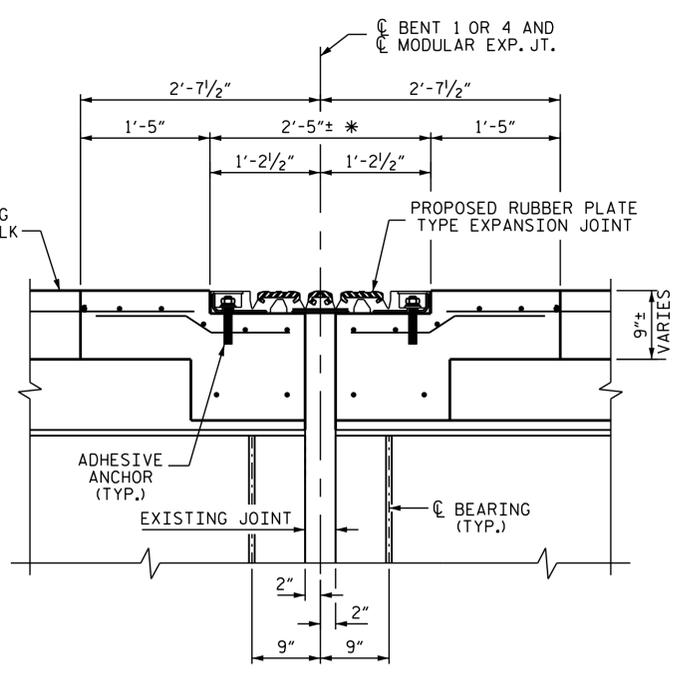
THE CONTRACTOR SHALL PREPARE THE BOTTOM SURFACE OF BLOCKOUT TO BE PARALLEL WITH THE PLANE OF THE ROADWAY AND PROVIDE A UNIFORM SURFACE

EXISTING CONCRETE TO BE REMOVED
 NEW CONCRETE FOR DECK REPAIR.

* TO BE VERIFIED BY MANUFACTURER



CONCRETE AND REINFORCING STEEL REPLACEMENT



PROPOSED MODULAR EXPANSION JOINT REPAIR
(THE REINFORCING MAY BE SHIFTED SLIGHTLY)

SECTION B-B
SEE SHEET S-5, PARTIAL PLAN MODULAR JOINT REPLACEMENT FOR BENT 1 OR 4

PROJECT NO. 15BPR.6
CUMBERLAND COUNTY
BRIDGE NO. 126

SHEET 2 OF 3

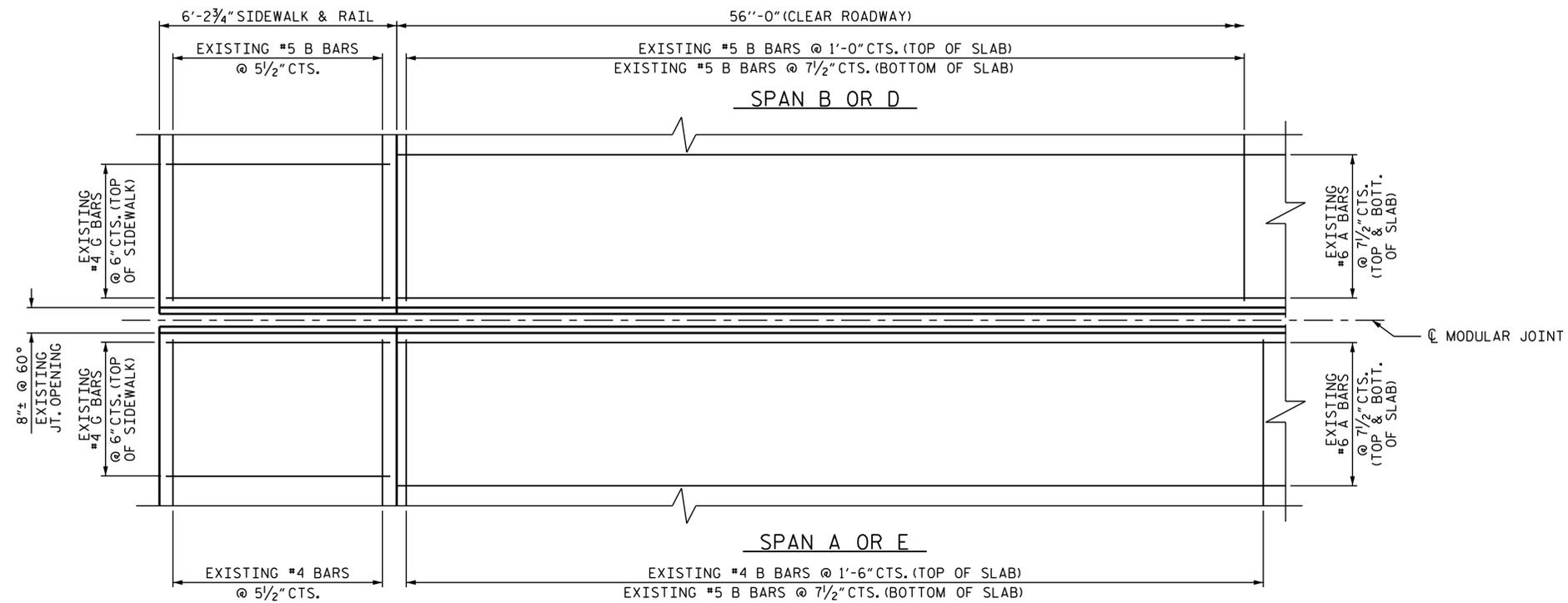


STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
MODULAR JOINT REPLACEMENT FOR BENT 1 AND 4 AT SIDEWALK

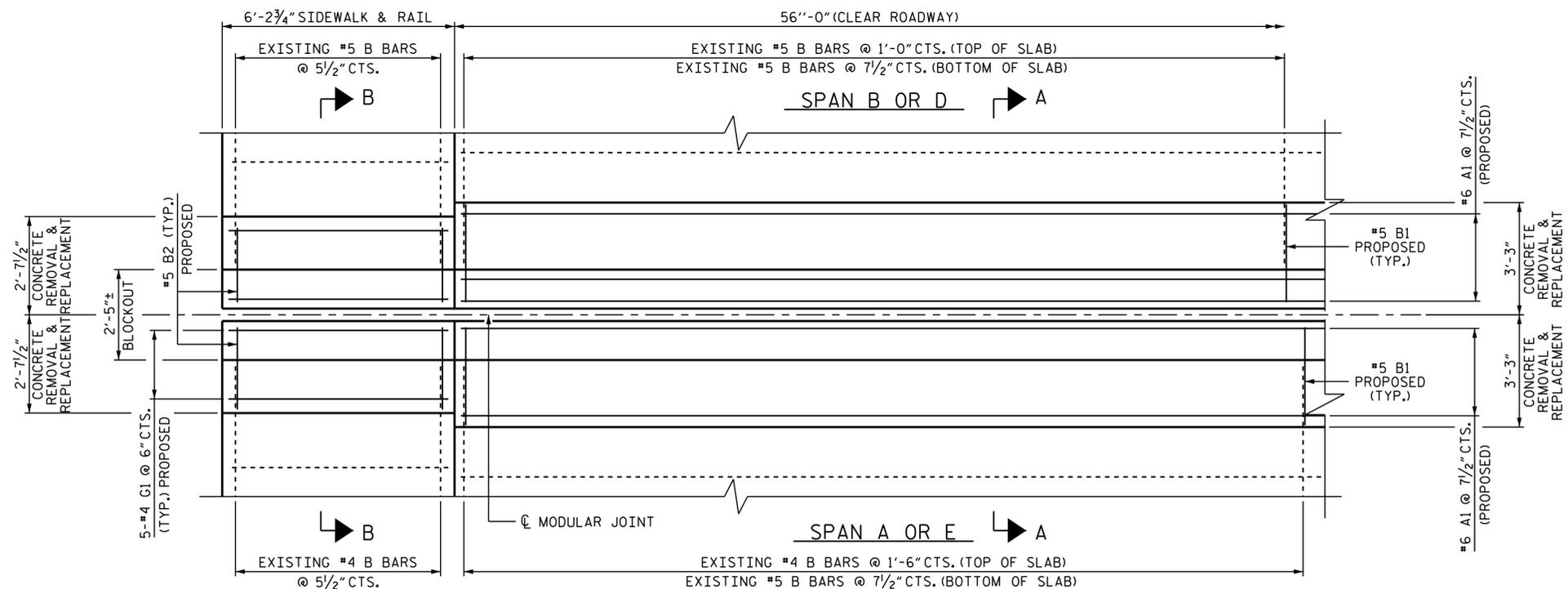
DRAWN BY : A. SORSENGINH/M. WELDON DATE : 10/2017
CHECKED BY : R. L. PUTEK DATE : 10/2017

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-4
1			3			TOTAL SHEETS
2			4			15

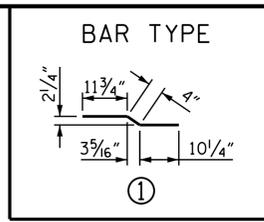
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EXISTING PARTIAL PLAN



PROPOSED PARTIAL PLAN



BILL OF MATERIAL					
FOR BENT 1 OR 4					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
* A1	16	#6	STR	55'-8"	1338
* B1	154	#5	STR	2'-10"	455
* B2	26	#5	1	2'-2"	59
* G1	14	#4	STR	5'-10"	55
REINFORCING STEEL				LBS.	1907
CONCRETE FOR DECK REPAIR					793.8 C.F.
JOINT REPAIR					858.8 S.F.

* EPOXY COATED REINFORCING STEEL

PROJECT NO. 15BPR.6
 CUMBERLAND COUNTY
 BRIDGE NO. 126

SHEET 3 OF 3

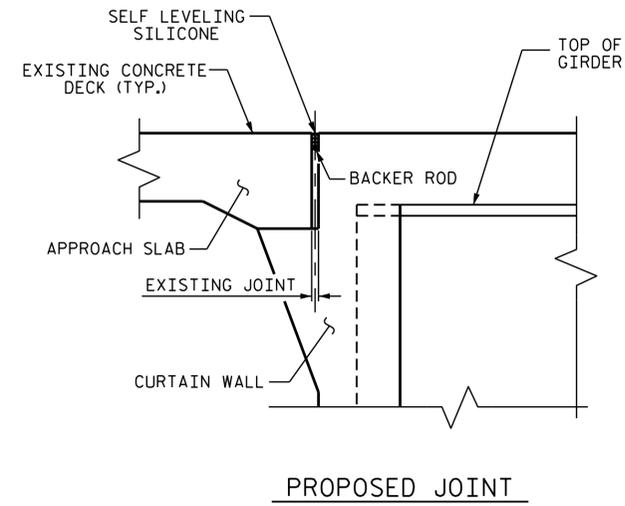
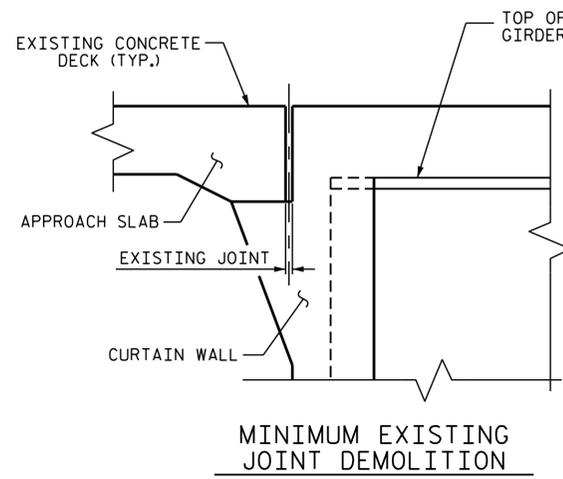
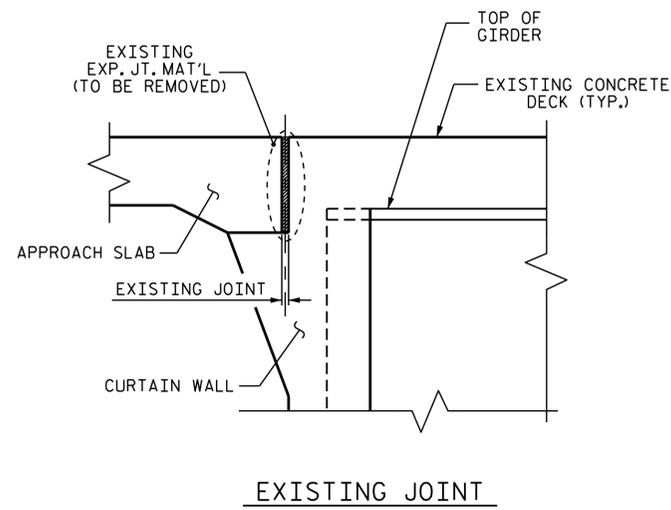


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PARTIAL PLAN
 MODULAR JOINT
 REPLACEMENT FOR
 BENT 1 AND 4

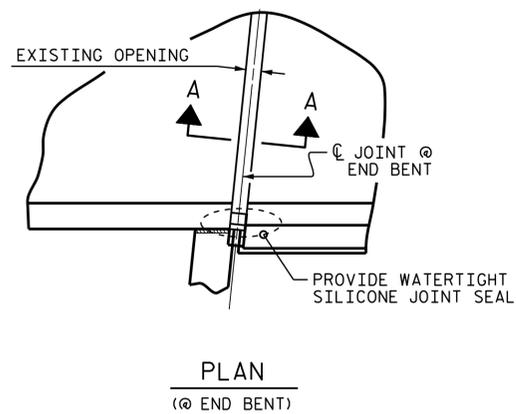
DRAWN BY : A. SORSENGINH DATE : 10/2017
 CHECKED BY : R. L. PUTEK DATE : 10/2017

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SECTION A-A



PROJECT NO. 15BPR.6
CUMBERLAND COUNTY
 BRIDGE NO. 126



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 11/3/2017

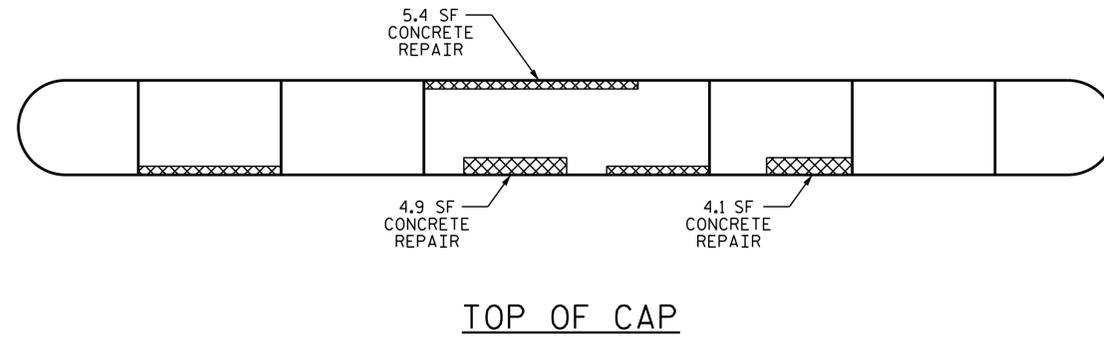
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

JOINT DETAILS
 AT END BENTS

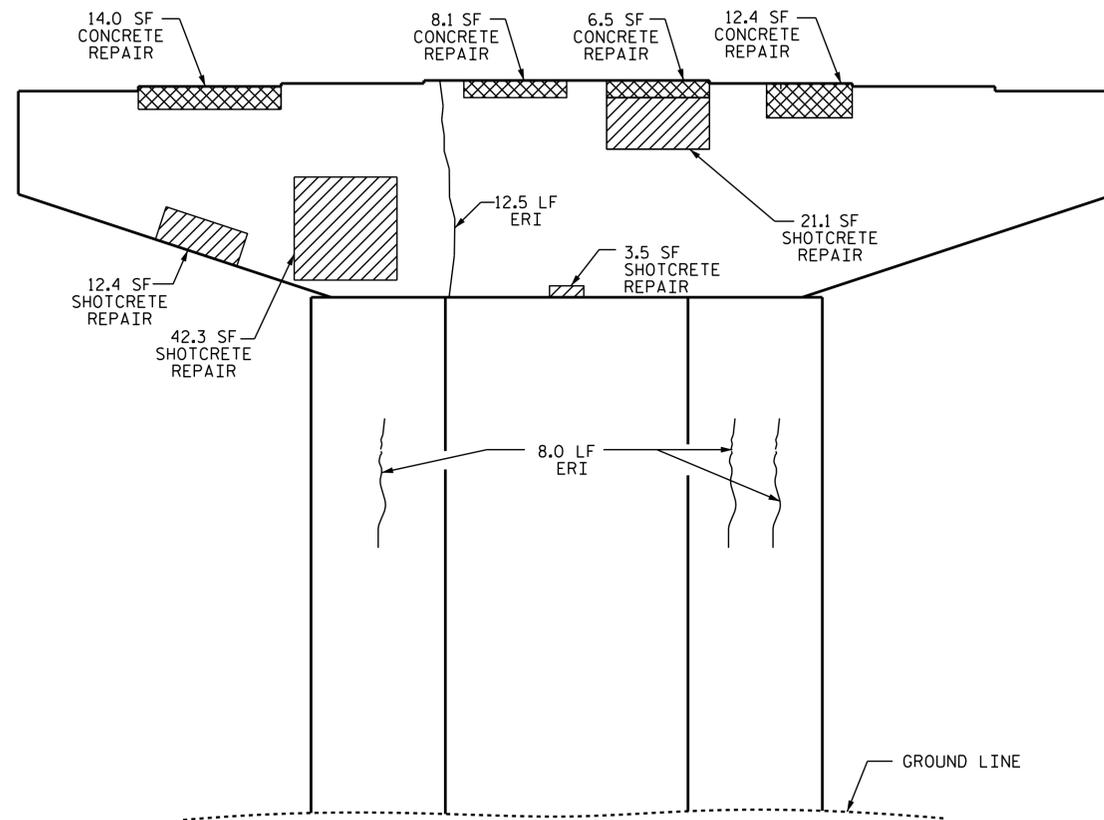
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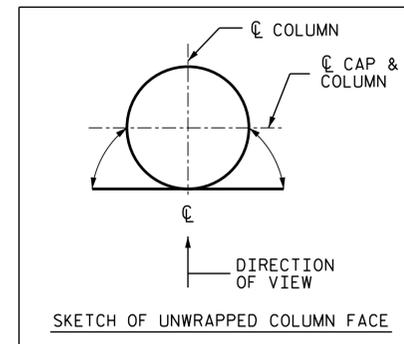
DRAWN BY : A. SORSENGINH DATE : 10/2017
 CHECKED BY : R. L. PUTEK DATE : 10/2017



SPAN B
SPAN A



ELEVATION



AS-BUILT REPAIR QUANTITY TABLE

BENT 1 (SPAN A)	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	79.3	39.7		
COLUMN	0.0	0.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	55.4	27.7		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		12.4		
COLUMN		24.0		
EPOXY COATING		SO. FT.		SO. FT.
TOP OF BENT CAP		346		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM 2" CLEARANCE TO SAWCUT. FOR REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

- SHOTCRETE REPAIR AREA
- CONCRETE REPAIR AREA
- EPOXY RESIN INJECTION (ERI)

PROJECT NO. 15BPR.6
CUMBERLAND COUNTY
 BRIDGE NO.: 126



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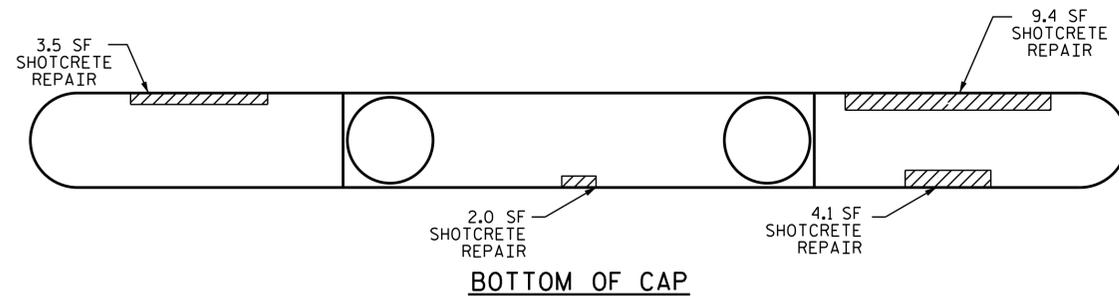
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**BENT 1
 SPAN A FACE**

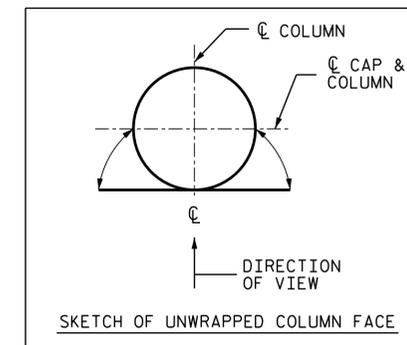
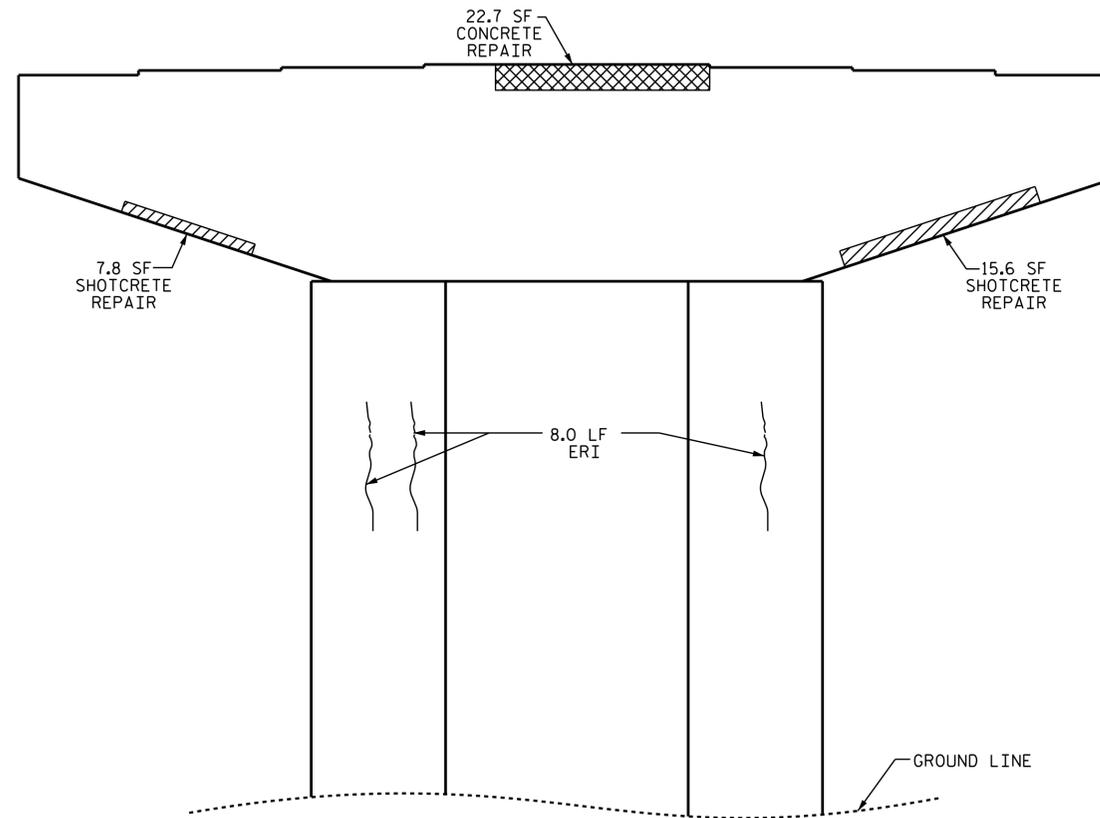
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NO.	BY:	DATE:	NO.	BY:	DATE:	S-7
1			3			TOTAL SHEETS
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DRAWN BY : REZA KOUICHEKI DATE : 10/17
 CHECKED BY : M.WELDON DATE : 10/17

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SPAN B
SPAN A



AS-BUILT REPAIR QUANTITY TABLE

BENT 1 (SPAN B)	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SO. FT.	VOLUME CU. FT.	AREA SO. FT.	VOLUME CU. FT.
CAP	42.4	21.2		
COLUMN	0.0	0.0		
CONCRETE REPAIRS	AREA SO. FT.	VOLUME CU. FT.	AREA SO. FT.	VOLUME CU. FT.
CAP	22.7	11.4		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
CAP	0.0			
COLUMN	24.0			

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM 2" CLEARANCE TO SAWCUT. FOR REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

- SHOTCRETE REPAIR AREA
- CONCRETE REPAIR AREA
- EPOXY RESIN INJECTION (ERI)

PROJECT NO. 15BPR.6
CUMBERLAND COUNTY
 BRIDGE NO.: 126



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Amber M. Lee
B04B5A62FAD484
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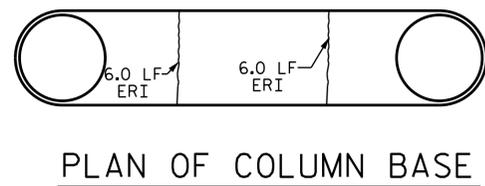
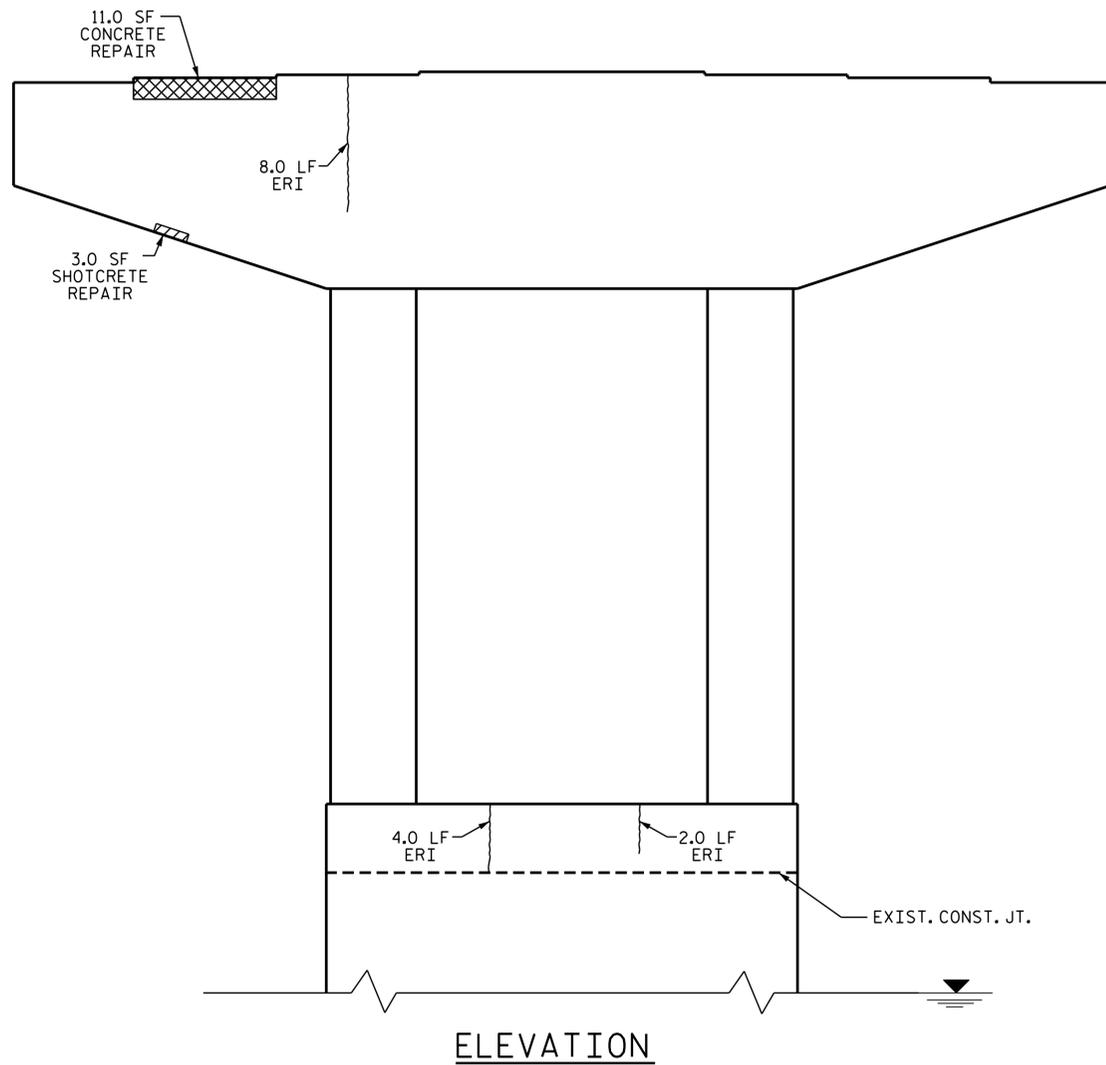
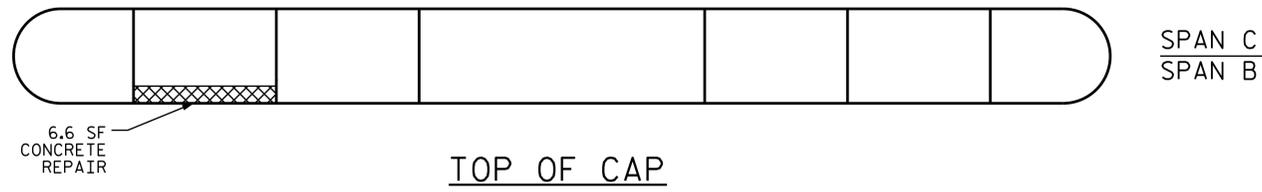
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 1
 SPAN B FACE

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-8
1			3			TOTAL SHEETS
2			4			15

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DRAWN BY : REZA KOUCHEKI DATE : 10/17
 CHECKED BY : M.WELDON DATE : 10/17



AS-BUILT REPAIR QUANTITY TABLE

BENT 2 (SPAN B)	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SO. FT.	VOLUME CU. FT.	AREA SO. FT.	VOLUME CU. FT.
CAP	3.0	1.5		
COLUMN	0.0	0.0		
CONCRETE REPAIRS	AREA SO. FT.	VOLUME CU. FT.	AREA SO. FT.	VOLUME CU. FT.
CAP	17.6	8.8		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
CAP	8.0			
COLUMN & COLUMN BASE	18.0			
EPOXY COATING	SQ. FT.		SQ. FT.	
TOP OF BENT CAP & COLUMN BASE	451			

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM 2" CLEARANCE TO SAWCUT. FOR REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

- SHOTCRETE REPAIR AREA
- CONCRETE REPAIR AREA
- EPOXY RESIN INJECTION (ERI)

PROJECT NO. 15BPR.6
CUMBERLAND COUNTY
 BRIDGE NO.: 126



DocuSigned by:
 Amber M. Lee
 B04B5A4F2FAD484
 11/3/2017

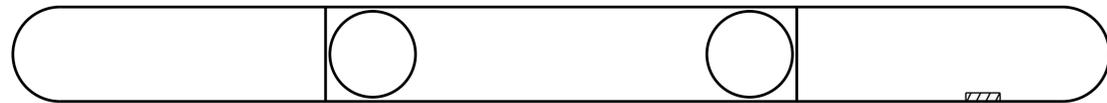
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 2
 SPAN B FACE

DRAWN BY : REZA KOUCHEKI DATE : 10/17
 CHECKED BY : M.WELDON DATE : 10/17

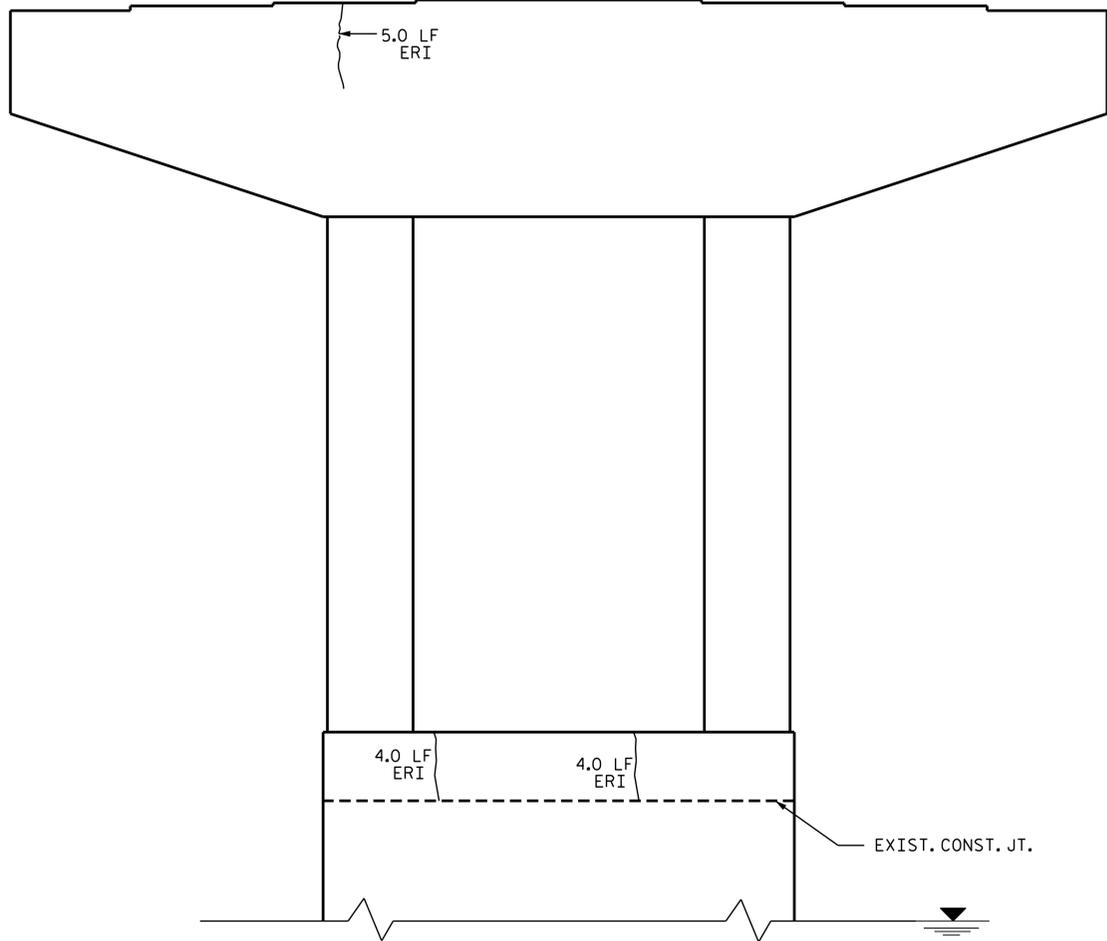
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-9
1			3			TOTAL SHEETS
2			4			15



SPAN C
SPAN B

BOTTOM OF CAP



ELEVATION

AS-BUILT REPAIR QUANTITY TABLE

BENT 2 (SPAN C)	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
COLUMN	0.0	0.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		5.0		
COLUMN & COLUMN BASE		8.0		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM 2" CLEARANCE TO SAWCUT. FOR REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

- SHOTCRETE REPAIR AREA
- CONCRETE REPAIR AREA
- EPOXY RESIN INJECTION (ERI)

PROJECT NO. 15BPR.6
CUMBERLAND COUNTY
 BRIDGE NO.: 126



DocuSigned by:
 Amber M. Lee
 B04B5A62FAD484
 11/3/2017

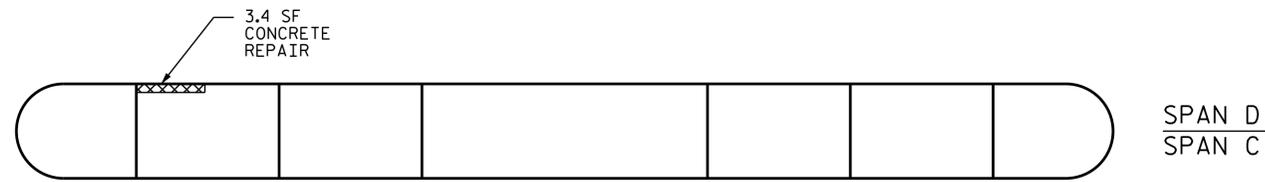
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**BENT 2
 SPAN C FACE**

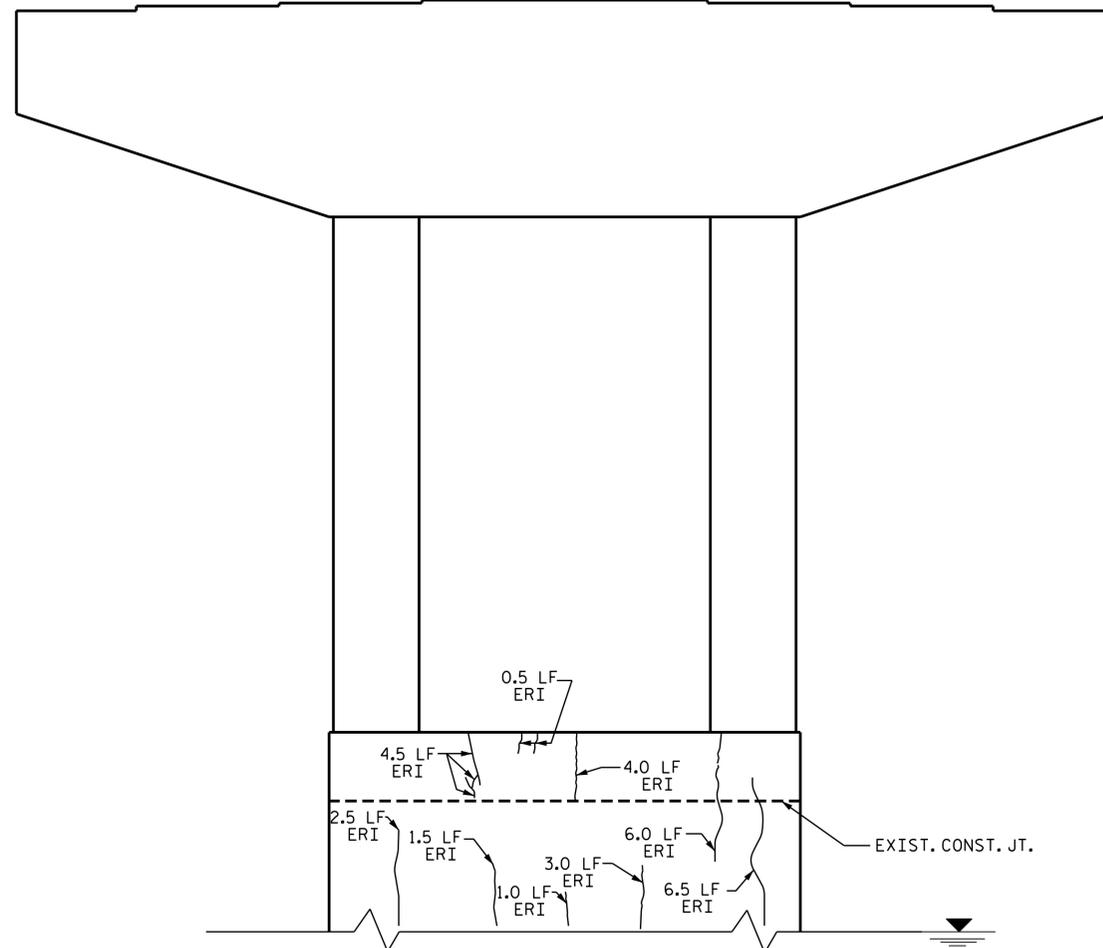
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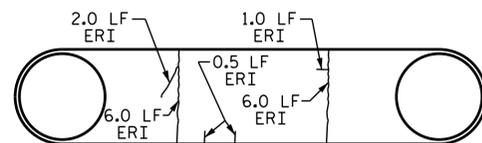
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NO.	BY:	DATE:	NO.	BY:	DATE:	S-10
1			3			TOTAL SHEETS
2			4			15



TOP OF CAP



ELEVATION



PLAN OF COLUMN BASE

AS-BUILT REPAIR QUANTITY TABLE

BENT 3 (SPAN C)	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SO. FT.	VOLUME CU. FT.	AREA SO. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
COLUMN	0.0	0.0		
CONCRETE REPAIRS	AREA SO. FT.	VOLUME CU. FT.	AREA SO. FT.	VOLUME CU. FT.
CAP	3.4	1.7		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		0.0		
COLUMN & COLUMN BASE		46.0		
EPOXY COATING		SO. FT.		SO. FT.
TOP OF BENT CAP & COLUMN BASE		451		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM 2" CLEARANCE TO SAWCUT. FOR REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

- SHOTCRETE REPAIR AREA
- CONCRETE REPAIR AREA
- EPOXY RESIN INJECTION (ERI)

PROJECT NO. 15BPR.6
CUMBERLAND COUNTY
 BRIDGE NO.: 126



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 Amber M. Lee
 B04B5A6F2FAD484
 11/3/2017

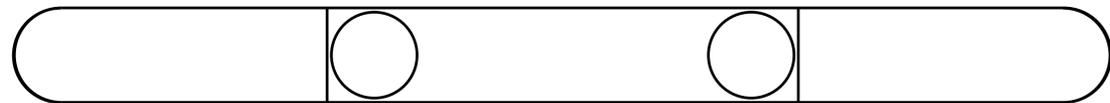
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**BENT 3
 SPAN C FACE**

DRAWN BY : REZA KOUCHEKI DATE : 10/17
 CHECKED BY : M.WELDON DATE : 10/17

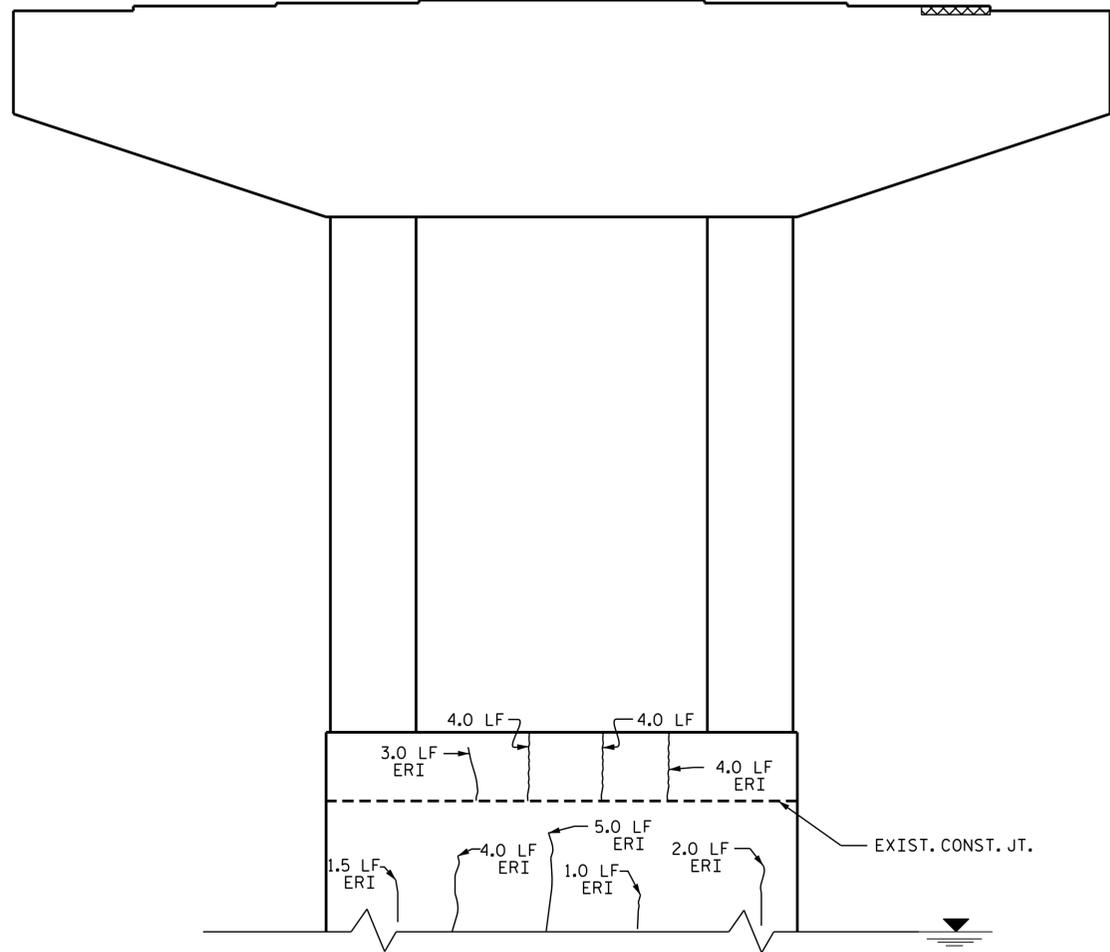
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NO.	BY:	DATE:	NO.	BY:	DATE:	S-11
1			3			TOTAL SHEETS
2			4			15

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SPAN D
SPAN C

BOTTOM OF CAP



ELEVATION

AS-BUILT REPAIR QUANTITY TABLE

BENT 3 (SPAN D)	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
COLUMN	0.0	0.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
CAP	0.0			
COLUMN & COLUMN BASE	28.5			

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM 2" CLEARANCE TO SAWCUT. FOR REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

NOTES

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CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

- SHOTCRETE REPAIR AREA
- CONCRETE REPAIR AREA
- EPOXY RESIN INJECTION (ERI)

PROJECT NO. 15BPR.6
CUMBERLAND COUNTY
 BRIDGE NO.: 126



DocuSigned by:
Amber M. Lee
B04B5A62FAD484
11/3/2017

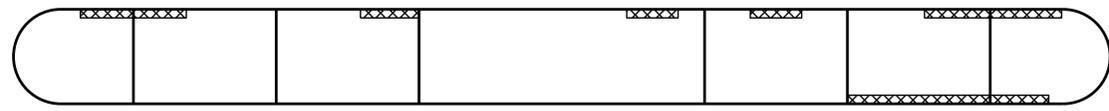
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 3
 SPAN D FACE

DRAWN BY : REZA KOUCHEKI DATE : 10/17
 CHECKED BY : M.WELDON DATE : 10/17

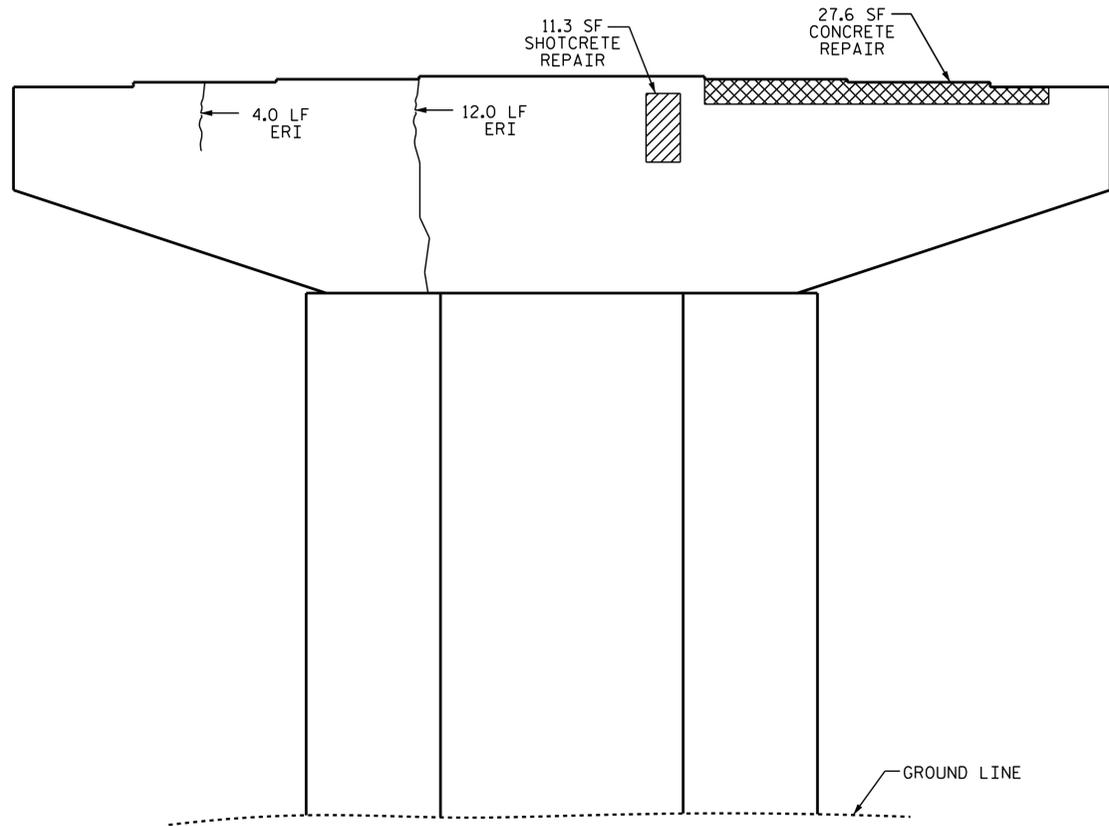
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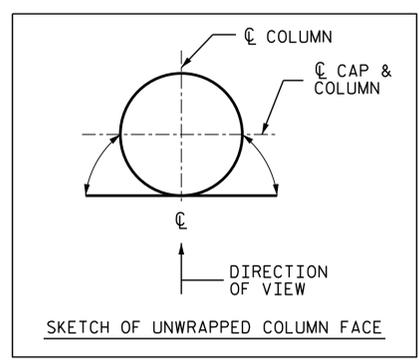


SPAN E
SPAN D

TOP OF CAP



ELEVATION



AS-BUILT REPAIR QUANTITY TABLE

BENT 4 (SPAN D)	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	11.3	5.7		
COLUMN	0.0	0.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	26.7	13.4		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
*CAP		157.0		
COLUMN		0.0		
EPOXY COATING		SO. FT.		SO. FT.
TOP OF BENT CAP & COLUMN BASE		346		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM 2" CLEARANCE TO SAWCUT. FOR REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

*FOR CLARITY, THIS QUANTITY IS NOT SHOWN ON THIS FACE. THE QUANTITY IS APPROXIMATED FROM THE INSPECTION REPORT DATED 3/3/2016 AND FIELD NOTES. THE EPOXY RESIN INJECTION SHALL BE FIELD VERIFIED BY THE ENGINEER AND CONTRACTOR.

NOTES

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- SHOTCRETE REPAIR AREA
- CONCRETE REPAIR AREA
- EPOXY RESIN INJECTION (ERI)

PROJECT NO. 15BPR.6
CUMBERLAND COUNTY
 BRIDGE NO.: 126



DocuSigned by:
 Amber M. Lee
 B04B5A62FAD484
 11/3/2017

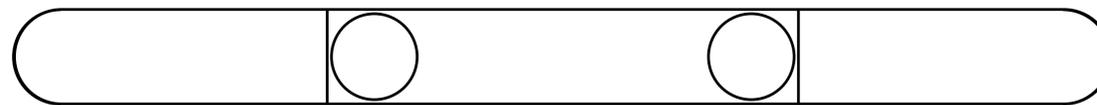
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 4
 SPAN D FACE

DRAWN BY : REZA KOUCHEKI DATE : 10/17
 CHECKED BY : M.WELDON DATE : 10/17

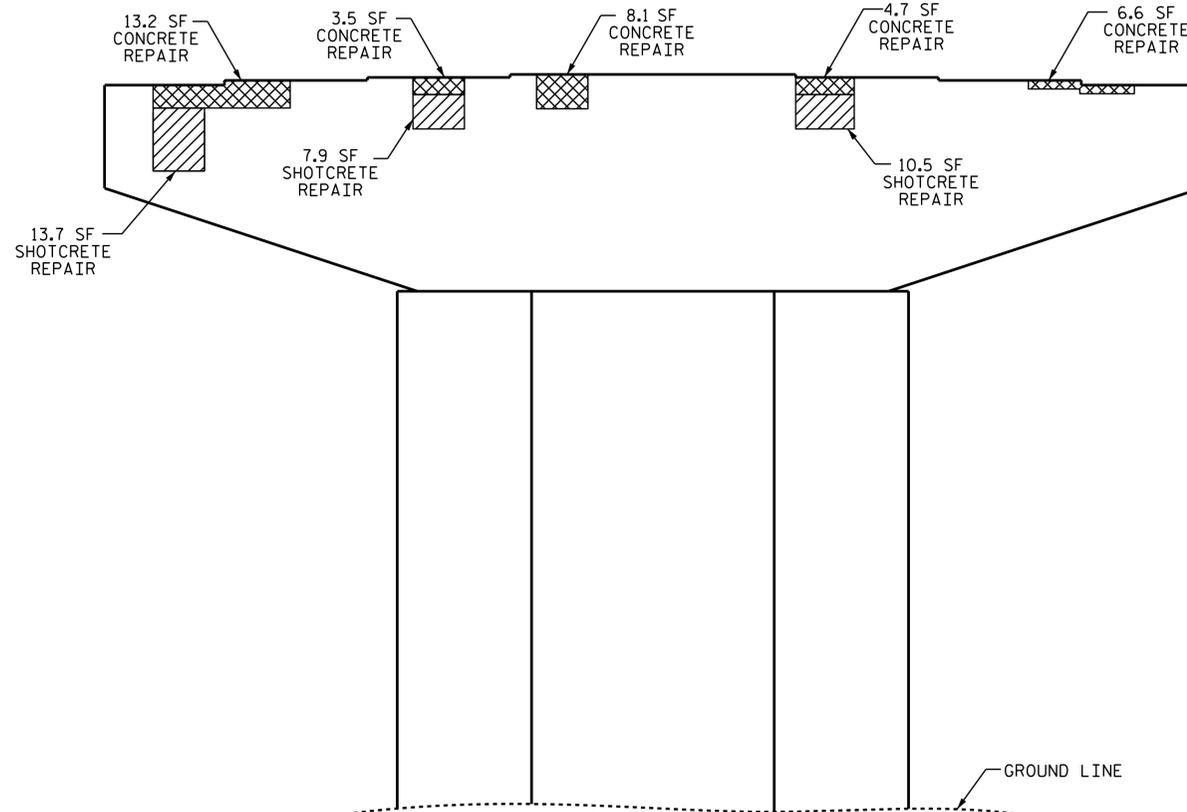
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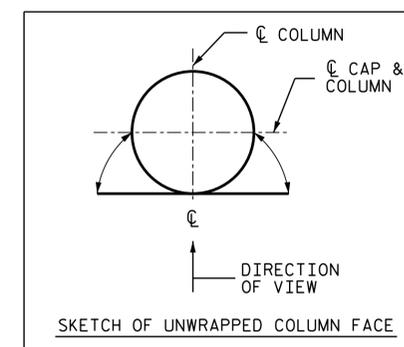


SPAN E
SPAN D

BOTTOM OF CAP



ELEVATION



AS-BUILT REPAIR QUANTITY TABLE

BENT 4 (SPAN E)	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	41.7	20.9		
COLUMN	0.0	0.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	53.7	26.9		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
*CAP		200.0		
COLUMN & COLUMN BASE		0.0		

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- SHOTCRETE REPAIR AREA
- CONCRETE REPAIR AREA
- EPOXY RESIN INJECTION (ERI)

PROJECT NO. 15BPR.6
CUMBERLAND COUNTY
 BRIDGE NO.: 126



DocuSigned by:
Amber M. Lee
B04B5A62FAD484
11/3/2017

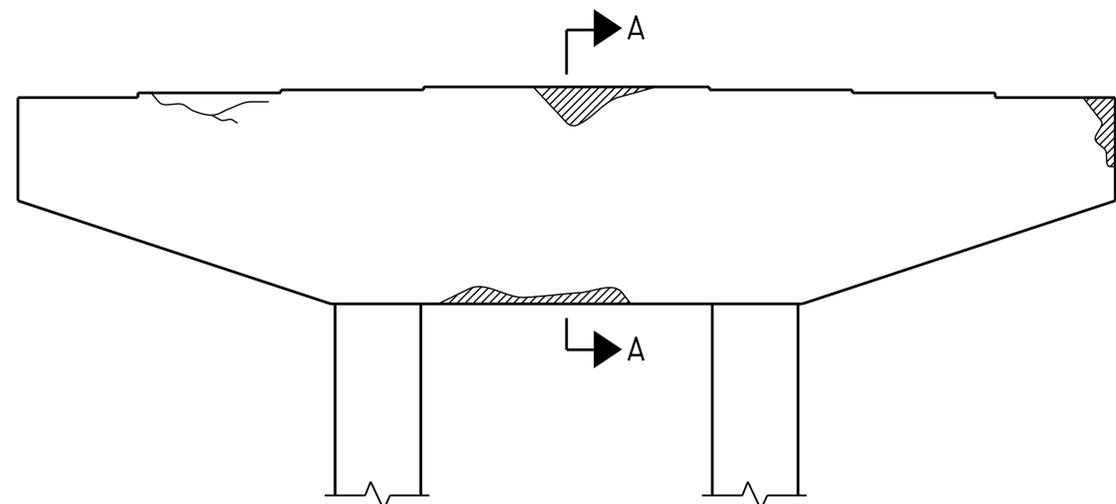
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 4
 SPAN E FACE

DRAWN BY : REZA KOUCHEKI DATE : 10/17
 CHECKED BY : M.WELDON DATE : 10/17

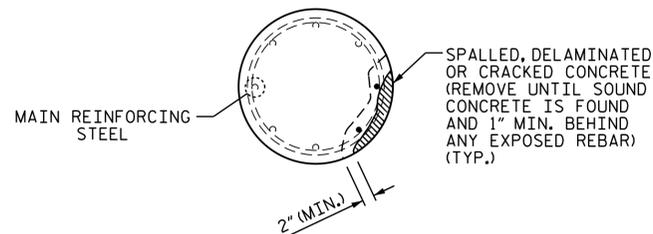
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NO.	BY:	DATE:	NO.	BY:	DATE:	S-14
1			3			TOTAL SHEETS
2			4			15



SPALLED, DELAMINATED OR CRACKED CONCRETE (REMOVE UNTIL SOUND CONCRETE IS FOUND AND 1" MIN. BEHIND ANY EXPOSED REBAR) (TYP.)

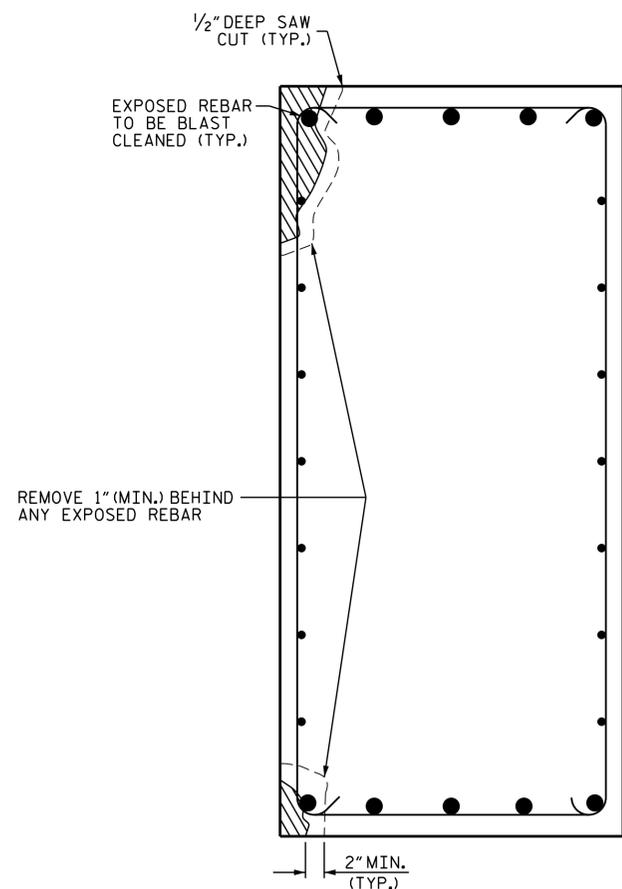
BENT CAP REPAIRS



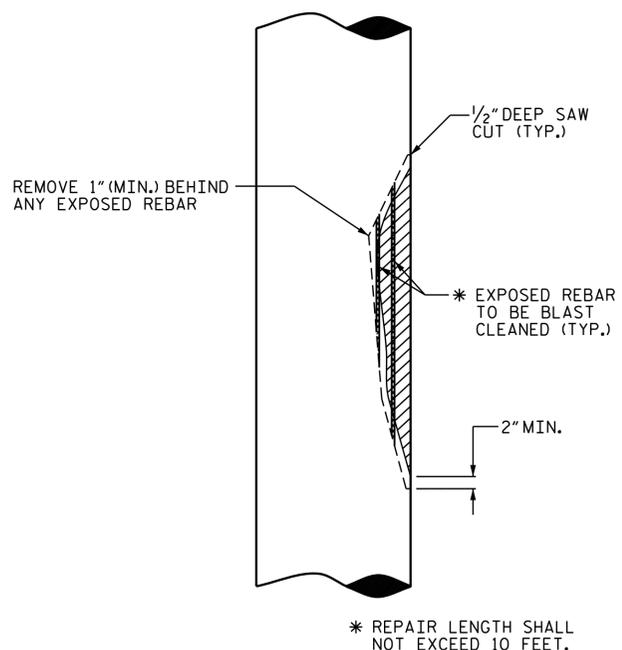
MAIN REINFORCING STEEL

SPALLED, DELAMINATED OR CRACKED CONCRETE (REMOVE UNTIL SOUND CONCRETE IS FOUND AND 1" MIN. BEHIND ANY EXPOSED REBAR) (TYP.)

PLAN OF COLUMN



SECTION A-A
CAP AND PEDESTAL REPAIR



ELEVATION OF CAP

COLUMN REPAIR

NOTE

TYPICAL REPAIRS FOR ROUND-COLUMNED BENTS ARE SHOWN. REPAIR DETAILS SIMILAR FOR END BENT CAPS AND SQUARE-COLUMNED BENTS.

PROJECT NO. 15BPR.6
CUMBERLAND COUNTY
 BRIDGE NO. 126



DocuSigned by:
 Amber M. Lee
 B0B5A4F2FAD484
 11/3/2017

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

TYPICAL CAP,
 COLUMN AND PEDESTAL
 REPAIR DETAILS

DRAWN BY : D.V. JOYNER DATE : 10/2017
 CHECKED BY : A. M. LEE DATE : 6/2017

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-15
1			3			TOTAL SHEETS
2			4			15

STANDARD NOTES

DESIGN DATA:

SPECIFICATIONS	- - - - -	A.A.S.H.T.O. (CURRENT)
LIVE LOAD	- - - - -	SEE PLANS
IMPACT ALLOWANCE	- - - - -	SEE A.A.S.H.T.O.
STRESS IN EXTREME FIBER OF		
STRUCTURAL STEEL - AASHTO M270 GRADE 36	-	20,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50W	-	27,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50	-	27,000 LBS. PER SQ. IN.
REINFORCING STEEL IN TENSION		
GRADE 60	- -	24,000 LBS. PER SQ. IN.
CONCRETE IN COMPRESSION	- - - - -	1,200 LBS. PER SQ. IN.
CONCRETE IN SHEAR	- - - - -	SEE A.A.S.H.T.O.
STRUCTURAL TIMBER - TREATED OR		
UNTREATED - EXTREME FIBER STRESS	- - - - -	1,800 LBS. PER SQ. IN.
COMPRESSION PERPENDICULAR TO GRAIN OF TIMBER	- - - - -	375 LBS. PER SQ. IN.
EQUIVALENT FLUID PRESSURE OF EARTH	- - - - -	30 LBS. PER CU. FT. (MINIMUM)

MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2012 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N. C. DEPARTMENT OF TRANSPORTATION.

STEEL SHEET PILING FOR PERMANENT OR TEMPORARY APPLICATIONS SHALL BE HOT ROLLED.

CONCRETE:

UNLESS OTHERWISE REQUIRED ON PLANS, CLASS A CONCRETE SHALL BE USED FOR ALL PORTIONS OF ALL STRUCTURES WITH THE EXCEPTION THAT; CLASS AA CONCRETE SHALL BE USED IN BRIDGE SUPERSTRUCTURES, ABUTMENT BACKWALLS, AND APPROACH SLABS; AND CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP.

CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED 3/4" WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO 1-1/2" RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A 1/4" FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A 1/4" RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

DOWELS:

DOWELS WHEN INDICATED ON PLANS AS FOR CULVERT EXTENSIONS, SHALL BE EMBEDDED AT LEAST 12" INTO THE OLD CONCRETE AND GROUTED INTO PLACE WITH 1:2 CEMENT MORTAR.

ALLOWANCE FOR DEAD LOAD DEFLECTION, SETTLEMENT, ETC. IN CASTING SUPERSTRUCTURES:

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE.

ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.

IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.

WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE 7/8" Ø SHEAR STUDS FOR THE 3/4" Ø STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF 7/8" Ø STUDS ALONG THE BEAM AS SHOWN FOR 3/4" Ø STUDS BASED ON THE RATIO OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0".

EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST 5/16" IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.

WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY 1/16 INCH OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.

METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINIS AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

SPECIAL NOTES:

GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE SPECIFICATIONS ARTICLE 105-4.

ENGLISH

JANUARY, 1990

STD. NO. SN