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NOTES:

FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE PC OVERLAY IS COMPLETE.

THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING JOINT OPENING PRIOR TO ORDERING JOINT SEAL MATERIAL. IF THE ACTUAL JOINT OPENING VARIES FROM THE OPENING INDICATED IN THE DETAILS BY MORE THAN 1/4", NOTIFY THE ENGINEER.

THE MANUFACTURER IS TO PROVIDE THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE FOAM JOINT SEAL FOR THE SIZE OF THE OPENING ON THE PLANS AND ACCOMMODATE THE MINIMUM EXPANSION SHOWN ON THE PLANS.

FOAM JOINTS SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS.

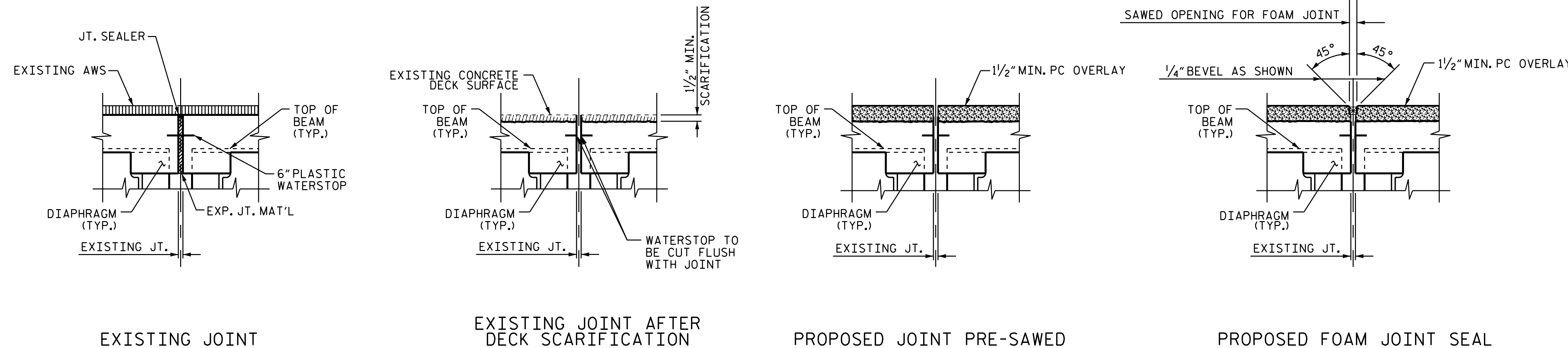
THE CONTRACTOR SHALL TAKE CARE DURING JOINT REHAB OPERATIONS NOT TO DROP ANY MATERIAL BELOW THE BRIDGE, WITHOUT PROTECTIVE DEVICES BELOW TO CATCH THE MATERIAL. ANY MATERIAL THAT FALLS BELOW THE BRIDGE SHALL BE CONTAINED, REMOVED AND DISPOSED OF BY THE CONTRACTOR AT NO EXTRA COST TO THE DEPARTMENT. IF THE ENGINEER DETERMINES THAT THE PROTECTIVE DEVICES ARE NOT ADEQUATE OR NOT BEING EMPLOYED, THE WORK SHALL BE SUSPENDED UNTIL ADEQUATE PROTECTION IS PROVIDED.

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINTS IN LIEU OF SAWING THE JOINT.

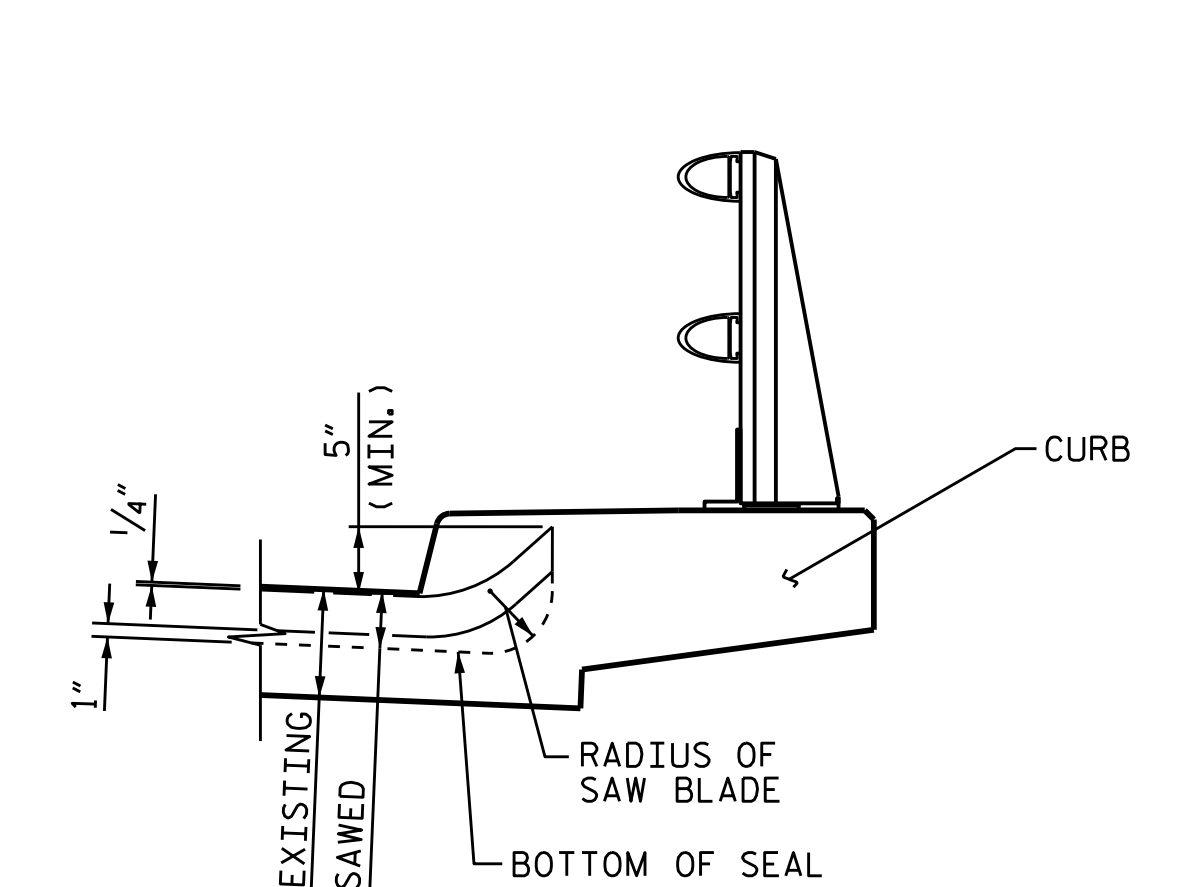
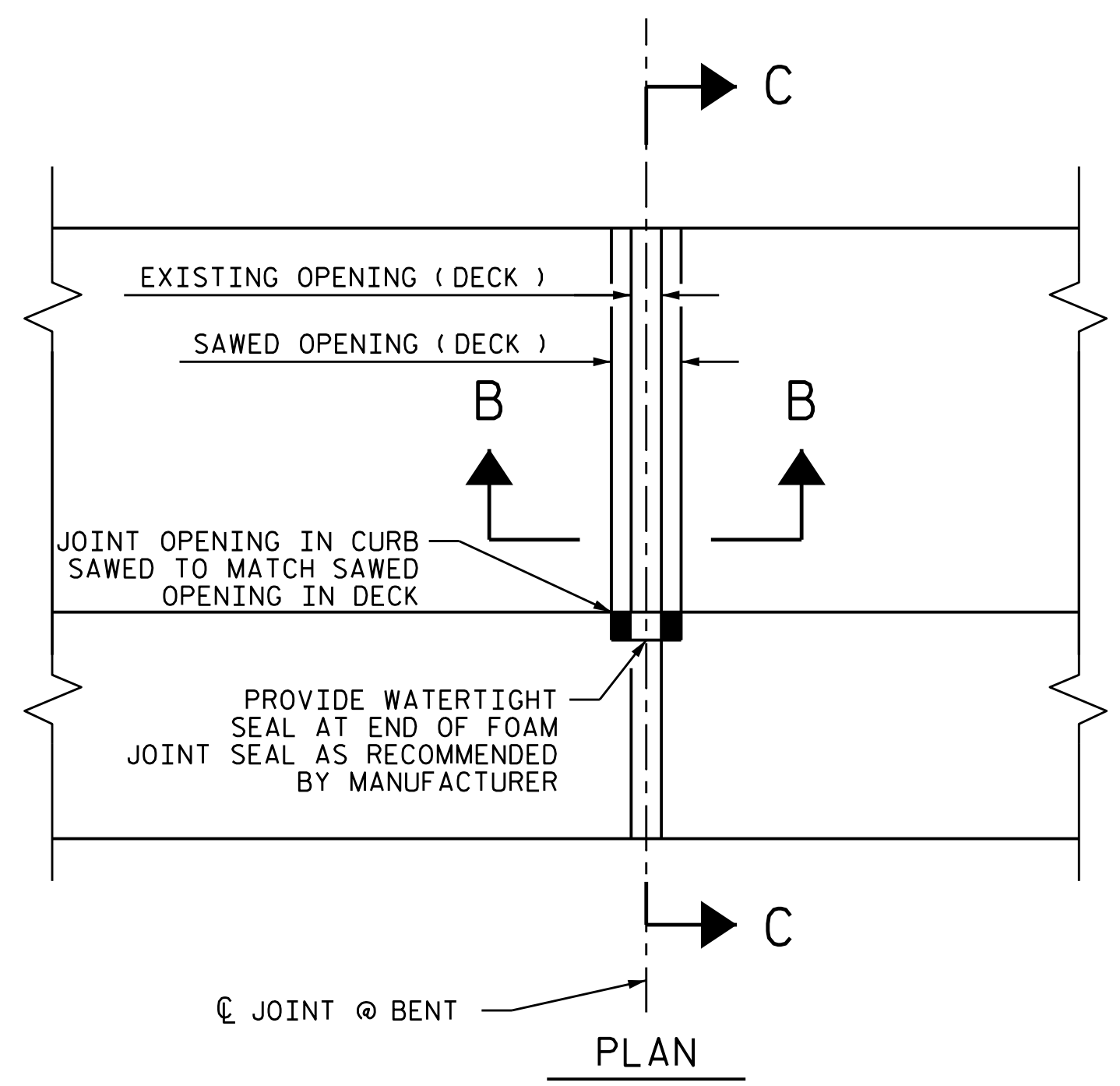
THE INSTALLED FOAM JOINTS SHALL BE WATER TIGHT.

NOMINAL UNCOMPRESSED SEAL WIDTH OF FOAM JOINT SEAL SHALL BE 2".

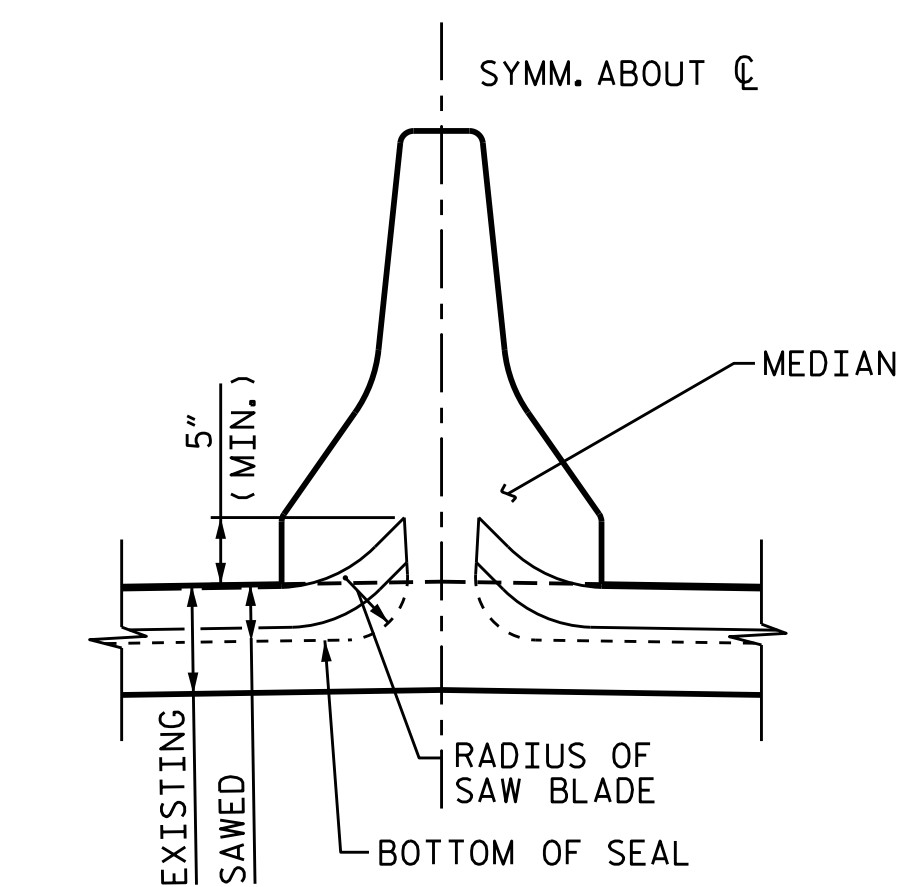
FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.



SECTION B-B



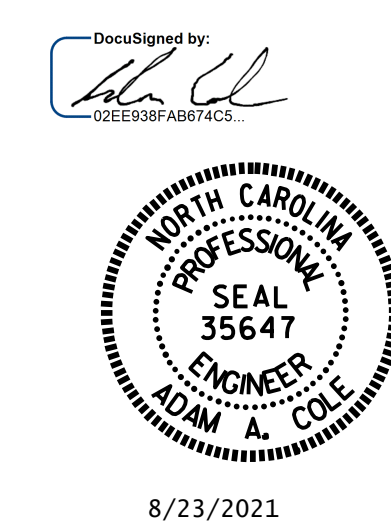
SECTION C-C
FOAM JOINT SEAL SHALL BE FACTORY FORMED OR CUT, HEAT WELDED AND TURNED UP PARALLEL TO FACE OF CURB.



MEDIAN DETAIL
FOAM JOINT SEAL SHALL BE FACTORY FORMED OR CUT, HEAT WELDED AND TURNED UP PARALLEL TO FACE OF MEDIAN.

JOINT REPAIR QUANTITY TABLE		
	ESTIMATE	ACTUAL
FOAM JOINT SEALS FOR PRESERVATION		
BENT 1	137.7 LF.	
BENT 2	128.5 LF.	
TOTAL	266.2 LF.	

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590326



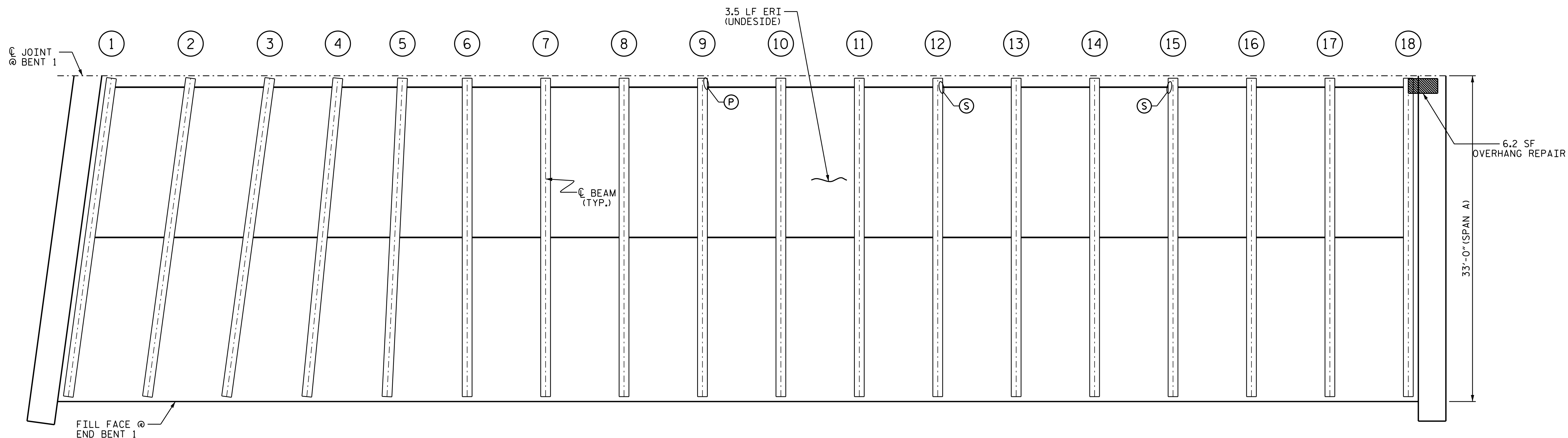
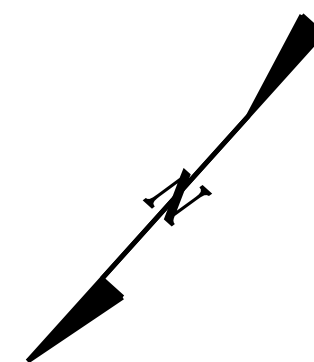
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FOAM JOINT DETAILS

DRAWN BY : R.L. PUTEK/E. BAYISSA DATE : 07/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 07/2021

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PLAN

NOTES

FOR BEAM REPAIR DETAILS, SEE "BEAM SECTION REPAIR DETAILS" SHEET.

FOR BEAM PLATING DETAILS, SEE "BEAM PLATING REPAIR DETAILS" SHEET.

FOR BRIDGE JACKING DETAILS, SEE "JACKING DETAILS" SHEET.

THE LOCATIONS AND DIMENSIONS OF THE AREAS FOR REPAIR ARE BASED ON THE BEST INFORMATION AVAILABLE. THE CONTRACTOR, IN CONJUNCTION WITH THE ENGINEER, SHALL VERIFY THE LOCATION AND EXTENT OF REPAIR AREAS PRIOR TO STEEL FABRICATION. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

FOR UNDERSIDE OF DECK AND DIAPHRAGM REPAIRS, SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR" SHEET.

- UNDERSIDE REPAIR
- EPOXY RESIN INJECTION (ERI)

- ① BEAM NUMBER
- ⓑ BEAM END REPAIR
- ⓐ PLATING REPAIR
- Ⓢ STIFFENER REPAIR
- ⓓ DIAPHRAGM REPAIR

AS-BUILT REPAIR QUANTITY TABLE

UNDERSIDE OF DECK REPAIRS				
SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
UNDERSIDE OF DECK	0.0	0.0		
UNDERSIDE OF OVERHANG	6.2	2.1		
INTERIOR DIAPHRAGMS	0.0	0.0		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	3.5 LIN. FT.			

UNDERSIDE OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

ANTICIPATED BEAM REPAIR LOCATIONS

SPAN	BEAM	LOCATION	DIM "A"	DIM "B"	DIM "C"	DIM "D"
A	9	BENT 1	9"	4"		
A	12	BENT 1	4"	-		
A	15	BENT 1	7"	-		

BEAM REPAIR QUANTITY TABLE

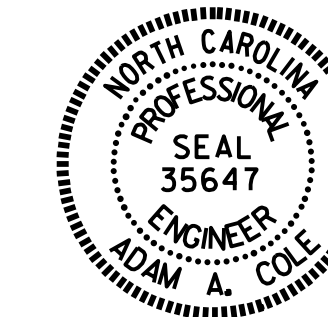
BEAM END REPAIR		PLATING REPAIR		STIFFENER REPAIR		DIAPHRAGM REPAIR	
LBS.		LBS.		LBS.		LBS.	
ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
0		12		11		0	

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590326

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8/23/2021

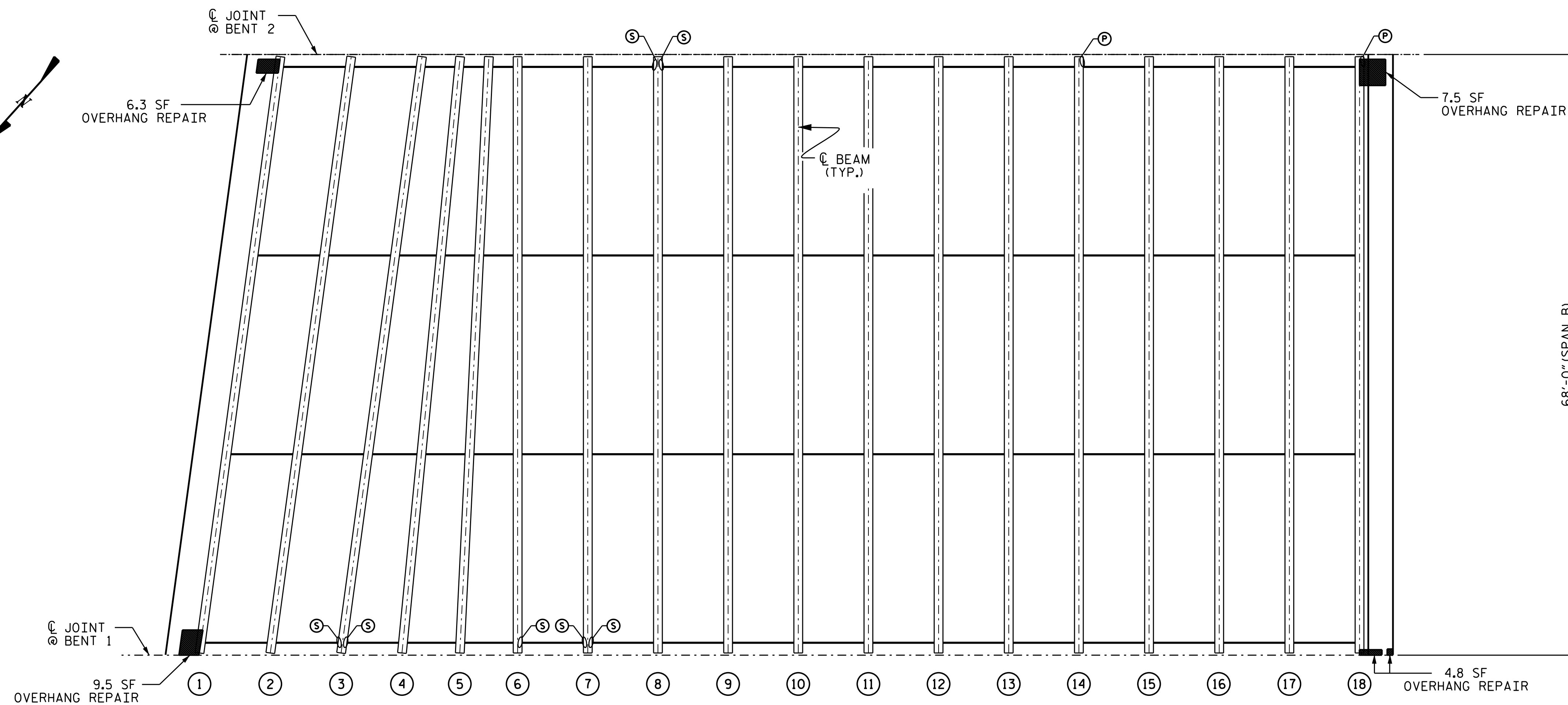
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

UNDERSIDE DECK REPAIR
 SPAN A

DRAWN BY : R.L. PUTEK/E. BAYISSA DATE : .07/2021
 CHECKED BY : H.A. LOCKLEAR DATE : .07/2021

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NOTES

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 FOR BEAM PLATING DETAILS, SEE "BEAM PLATING REPAIR DETAILS" SHEET.
 FOR BRIDGE JACKING DETAILS, SEE "JACKING DETAILS" SHEET.
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- UNDERSIDE REPAIR
- ~ EPOXY RESIN INJECTION (ERI)
- ① BEAM NUMBER
- B BEAM END REPAIR
- P PLATING REPAIR
- S STIFFENER REPAIR
- D STEEL DIAPHRAGM REPAIR

ANTICIPATED BEAM REPAIR LOCATIONS						
SPAN	BEAM	LOCATION	DIM "A"	DIM "B"	DIM "C"	DIM "D"
B	3	BENT 1	6"	-	-	-
B	3	BENT 1	6"	-	-	-
B	6	BENT 1	8"	-	-	-
B	7	BENT 1	6"	-	-	-
B	7	BENT 1	6"	-	-	-
B	8	BENT 2	8"	-	-	-
B	8	BENT 2	9"	-	-	-
B	14	BENT 2	9"	6"	-	-
B	18	BENT 2	9"	2'-10"	-	-

BEAM REPAIR QUANTITY TABLE							
BEAM END REPAIR		PLATING REPAIR		STIFFENER REPAIR		DIAPHRAGM REPAIR	
LBS.		LBS.		LBS.		LBS.	
ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
0		100		45		0	

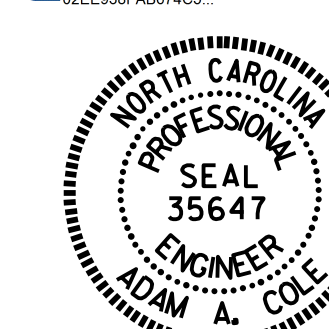
AS-BUILT REPAIR QUANTITY TABLE				
UNDERSIDE OF DECK REPAIRS				
SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
UNDERSIDE OF DECK	0.0	0.0		
UNDERSIDE OF OVERHANG	28.1	9.4		
INTERIOR DIAPHRAGMS	0.0	0.0		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	0.0 LIN. FT.			

UNDERSIDE OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590326

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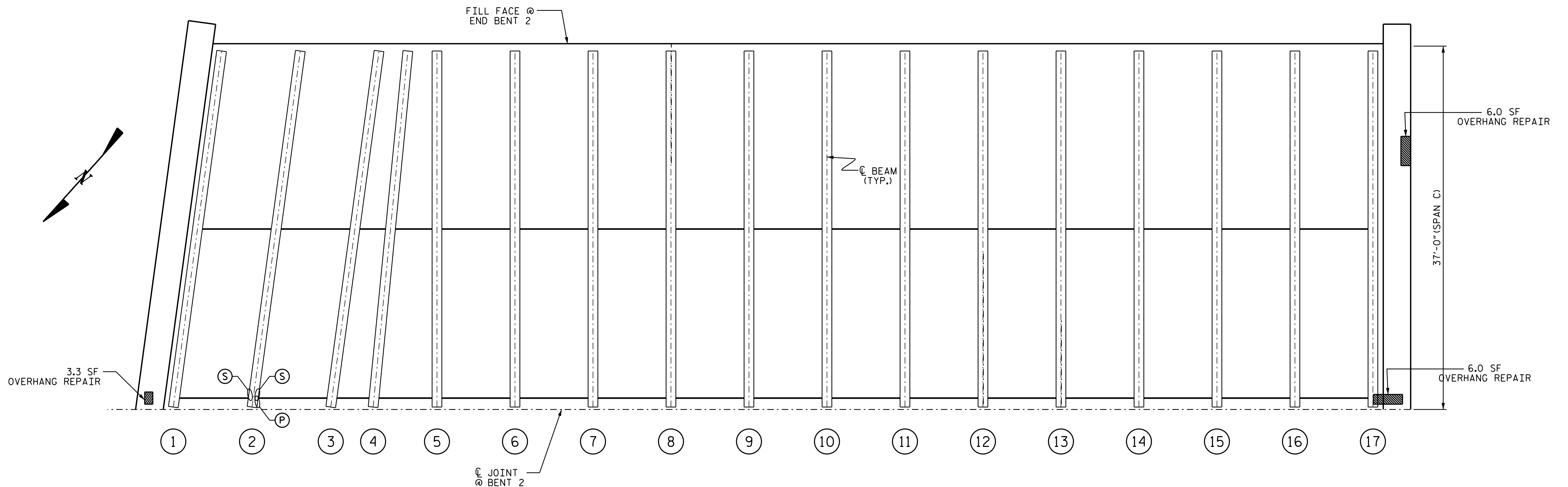
8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 UNDERSIDE DECK REPAIR
 SPAN B

DRAWN BY : R.L. PUTEK/E. BAYISSA DATE : 07/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 07/2021

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NOTES

FOR BEAM REPAIR DETAILS, SEE "BEAM SECTION REPAIR DETAILS" SHEET.

FOR BEAM PLATING DETAILS, SEE "BEAM PLATING REPAIR DETAILS" SHEET.

FOR BRIDGE JACKING DETAILS, SEE "JACKING DETAILS" SHEET.

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FOR UNDERSIDE OF DECK AND DIAPHRAGM REPAIRS, SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR" SHEET.

- UNDERSIDE REPAIR
- EPOXY RESIN INJECTION (ERI)

- ① BEAM NUMBER
- Ⓑ BEAM END REPAIR
- Ⓟ PLATING REPAIR
- Ⓢ STIFFENER REPAIR
- Ⓓ STEEL DIAPHRAGM REPAIR

AS-BUILT REPAIR QUANTITY TABLE				
UNDERSIDE OF DECK REPAIRS				
SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
UNDERSIDE OF DECK	0.0	0.0		
OVERHANG DIAPHRAGMS	0.0	0.0		
UNDERSIDE OF OVERHANG	15.3	5.1		
INTERIOR DIAPHRAGMS	0.0	0.0		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	0.0 LIN. FT.			

UNDERSIDE OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

BEAM REPAIR QUANTITY TABLE							
BEAM END REPAIR		PLATING REPAIR		STIFFENER REPAIR		DIAPHRAGM REPAIR	
LBS.		LBS.		LBS.		LBS.	
ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
0		150		48		0	

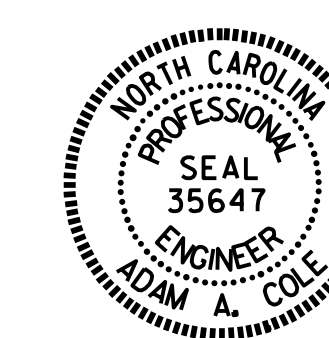
ANTICIPATED BEAM REPAIR LOCATIONS						
SPAN	BEAM	LOCATION	DIM "A"	DIM "B"	DIM "C"	DIM "D"
C	2	BENT 2	2'-10"	-	-	-
C	2	BENT 2	2'-10"	-	-	-
C	2	BENT 2	1'-4"	2'-8"	5"	3'-10"

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590326

SHEET 3 OF 3

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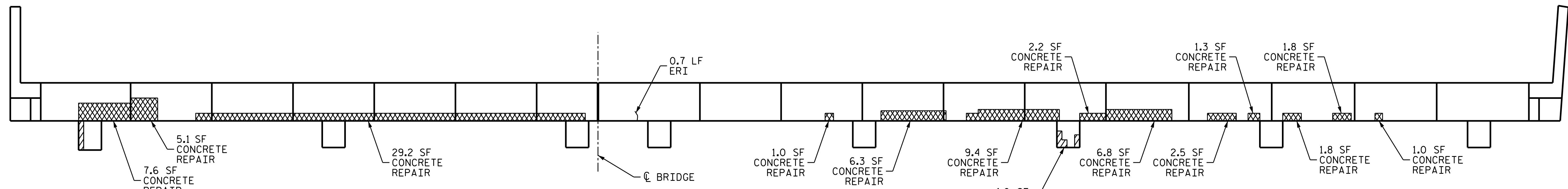


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
UNDERSIDE DECK REPAIR
 SPAN C

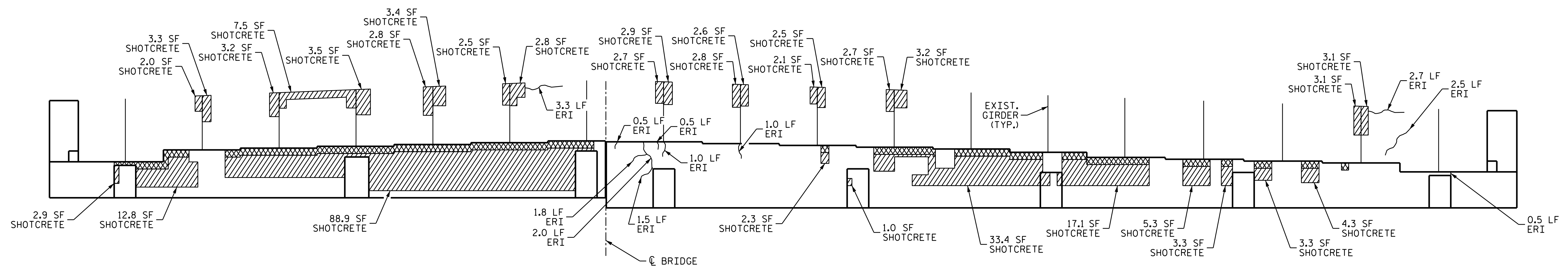
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PLAN



END BENT 1 SOUTHBOUND

END BENT 1 NORTHBOUND

ELEVATION

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 SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

FOR CAP AND COLUMN REPAIRS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISION.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISION.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISION.

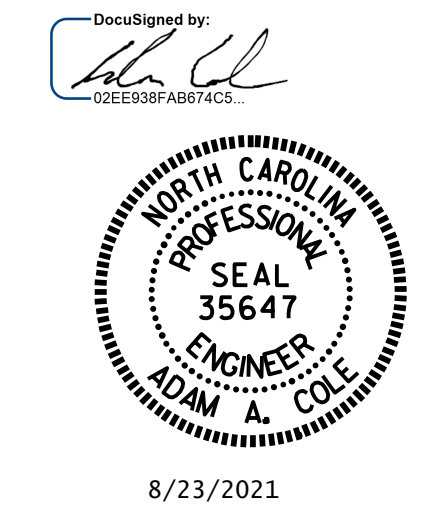
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA BENEATH THE MASONARY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

AS-BUILT REPAIR QUANTITY TABLE

END BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP & CURTAIN WALL	237.3	118.7		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	76.0	38.0		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
CAP & CURTAIN WALL	18.0			
EPOXY COATING	AREA SQ. FT.	AREA SQ. FT.		
CAP	382			

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

PROJECT NO. I-5746C
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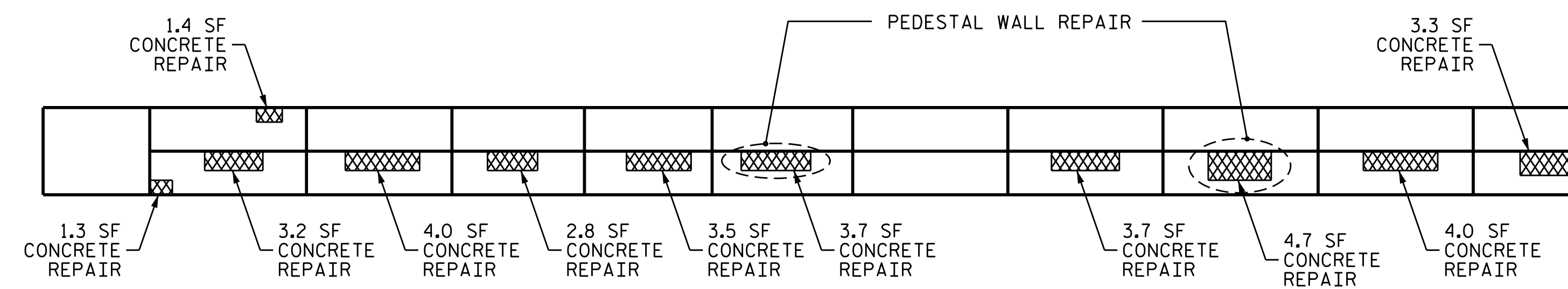
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

END BENT 1

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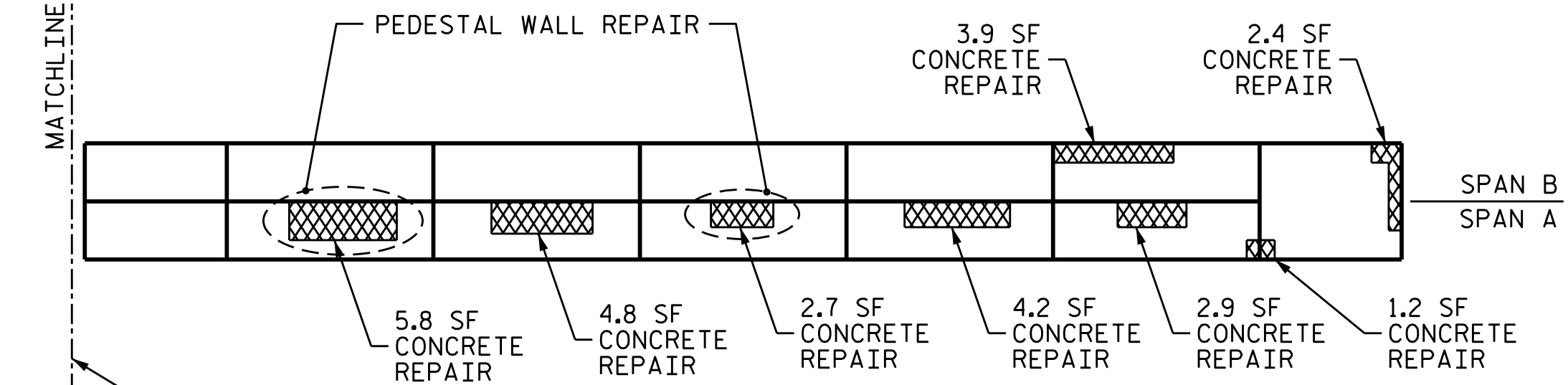
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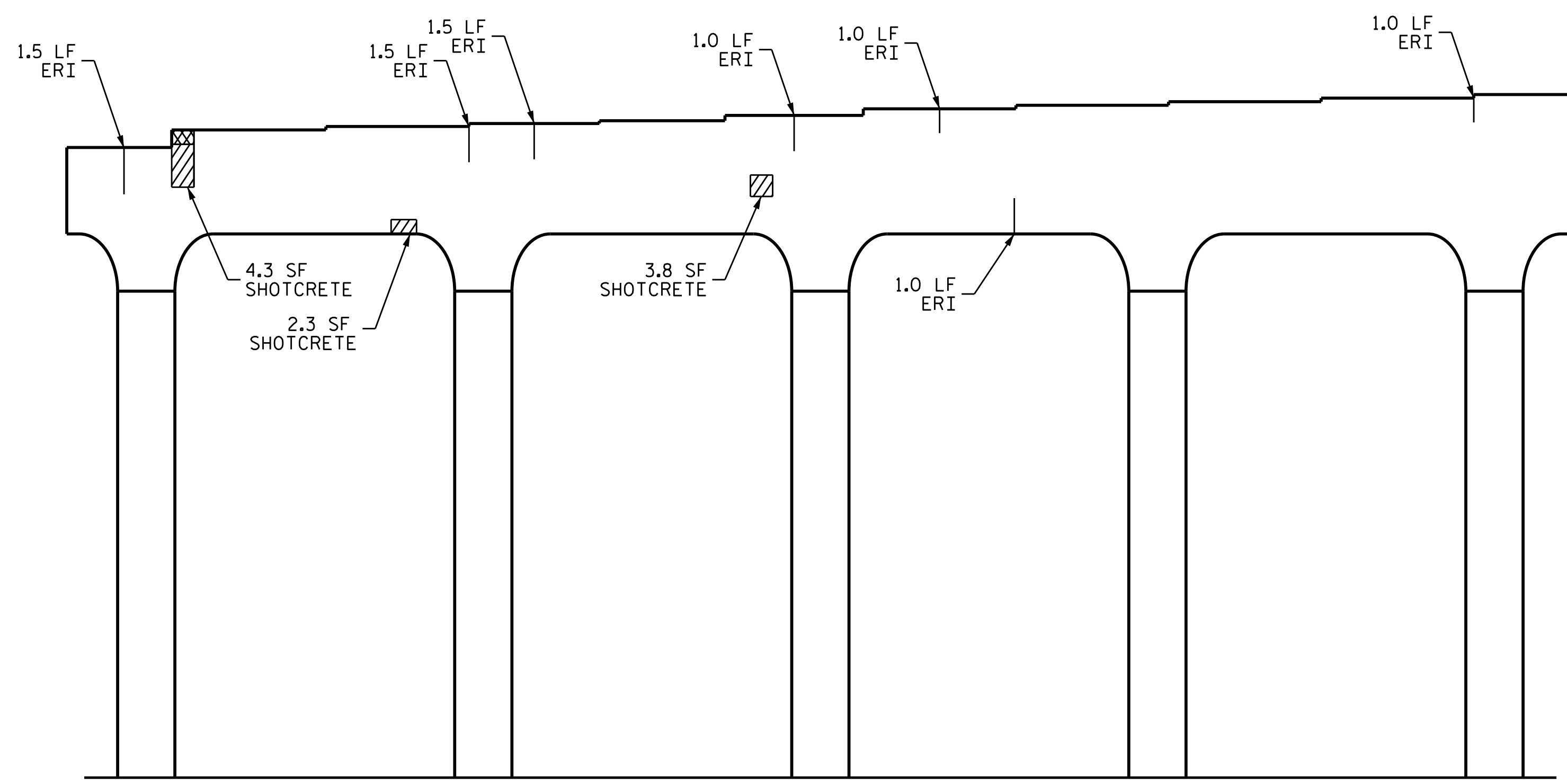


TOP OF CAP

PLAN

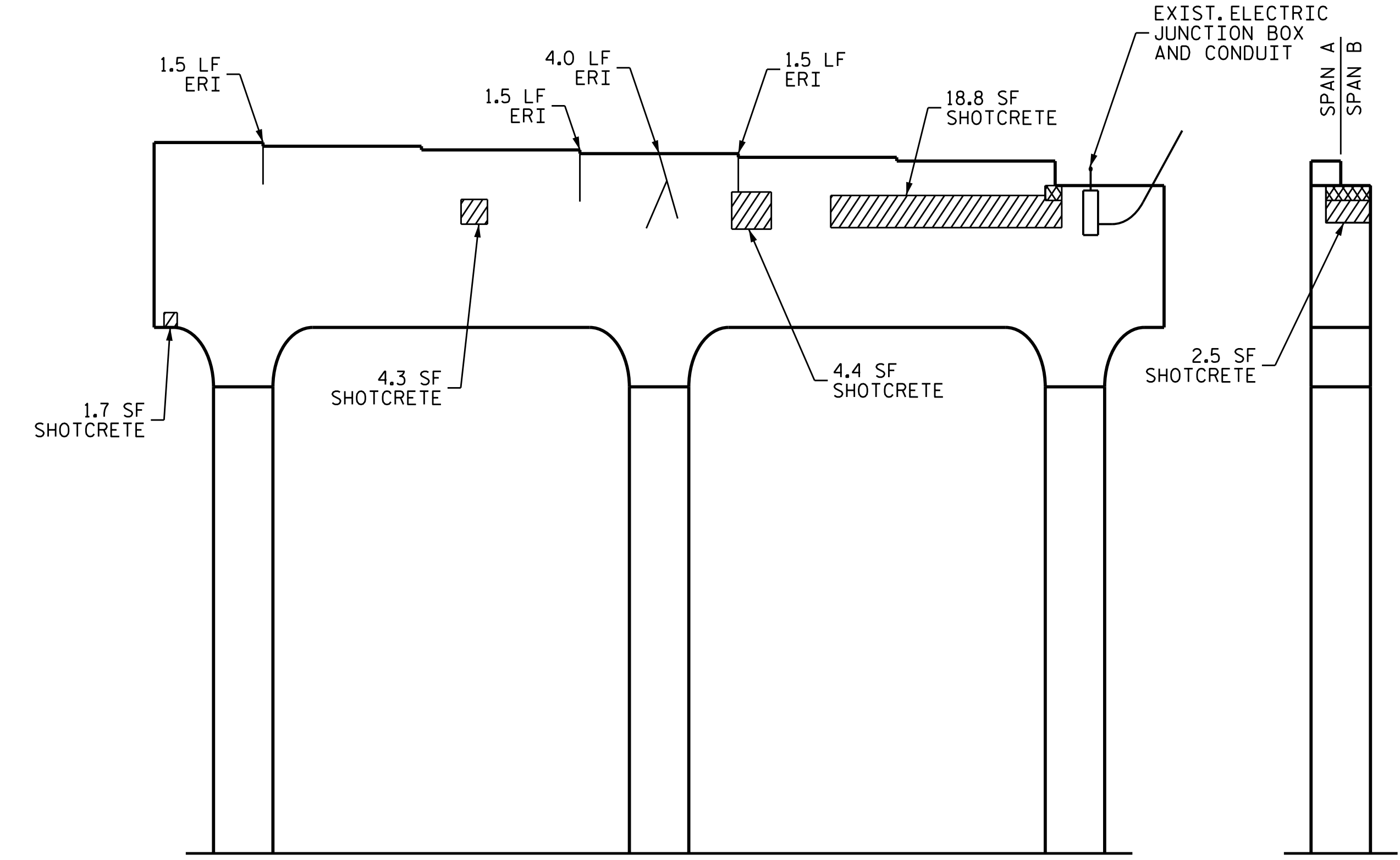


TOP OF CAP



ELEVATION
 BENT 1 NORTHBOUND
 SPAN A FACE

END VIEW



ELEVATION
 BENT 1 SOUTHBOUND
 SPAN A FACE

END VIEW

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.

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FOR CAP REPAIRS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

PEDESTAL WALL REPAIR, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISION.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISION.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISION.

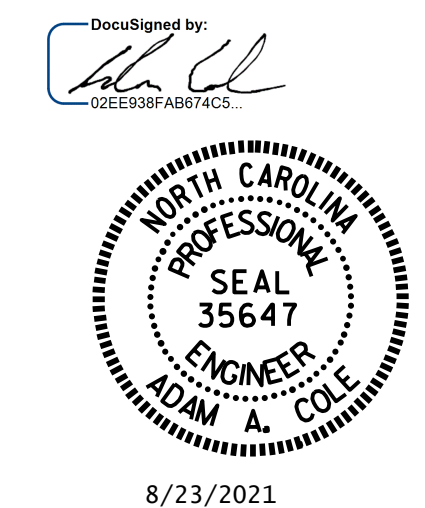
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

AS-BUILT REPAIR QUANTITY TABLE

BENT 1 SPAN A	QUANTITIES			
	ESTIMATE		ACTUAL	
	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
SHOTCRETE REPAIRS				
CAP	42.1	21.1		
COLUMNS	0.0	0.0		
CONCRETE REPAIRS				
CAP	63.5	31.8		
EPOXY RESIN INJECTION				
CAP		17.0		
COLUMNS		0.0		
EPOXY COATING				
CAP	585			

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

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



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 MECKLENBURG COUNTY
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SHEET 1 OF 2

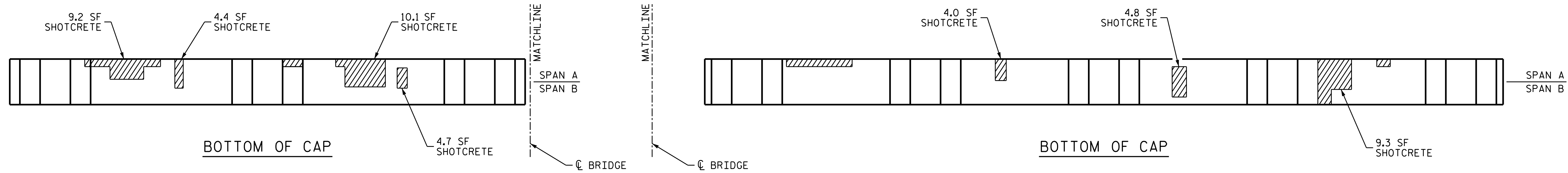
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**BENT 1
 SPAN A FACE**

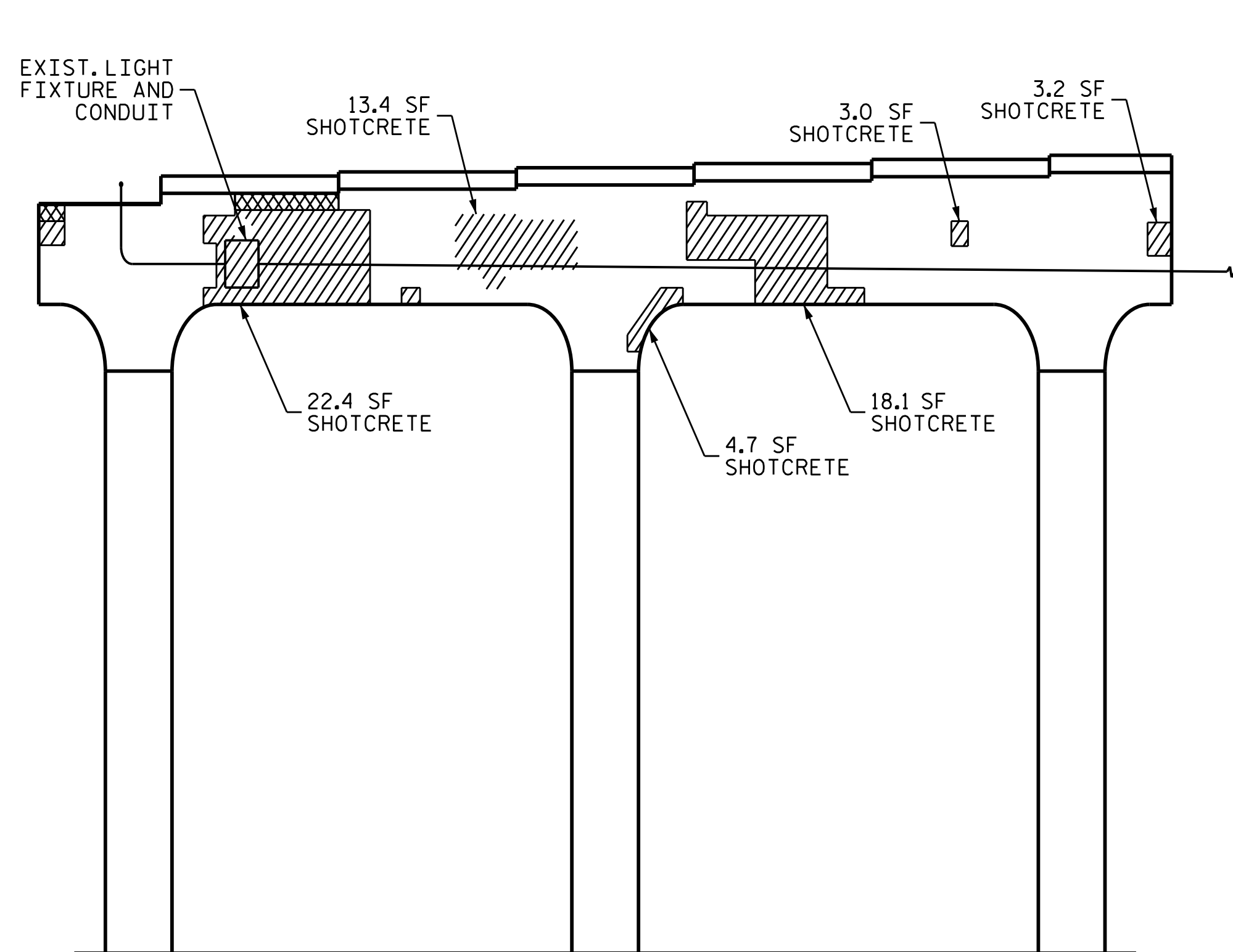
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2			4	

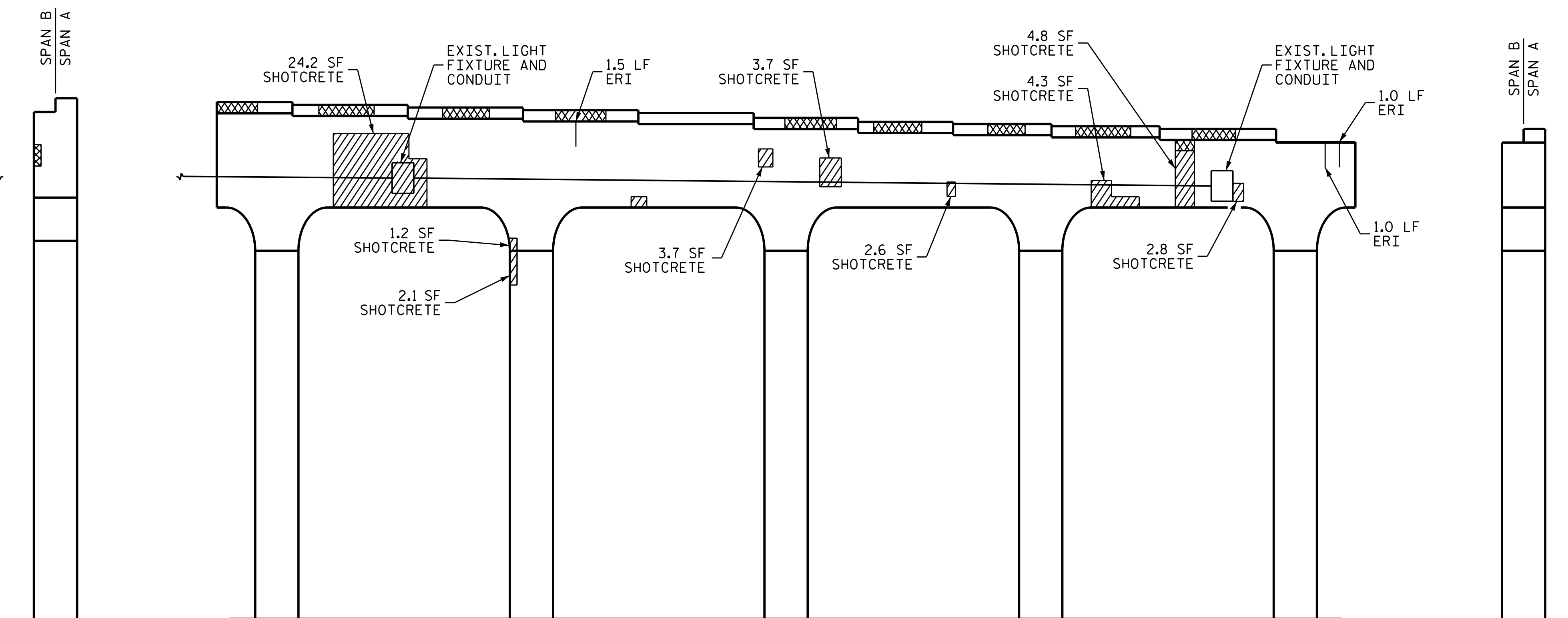
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PLAN



ELEVATION
BENT 1 SOUTHBOUND
SPAN B FACE



ELEVATION
BENT 1 NORTHBOUND
SPAN B FACE

END VIEW

END VIEW

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.

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FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISION.
FOR CONCRETE REPAIRS, SEE SPECIAL PROVISION.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISION.

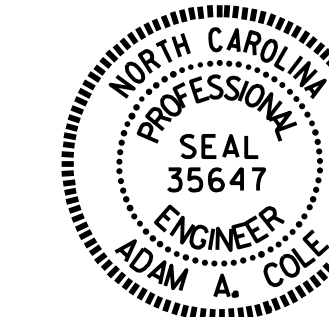
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

AS-BUILT REPAIR QUANTITY TABLE					
BENT 1 SPAN B	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.	
CAP	158.6	79.3			
COLUMNS	2.1	1.1			
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		3.5			
COLUMNS		0.0			

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

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

DocuSigned by:
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8/23/2021

PROJECT NO. I-5746C
MECKLENBURG COUNTY
BRIDGE NO. 590326

SHEET 2 OF 2

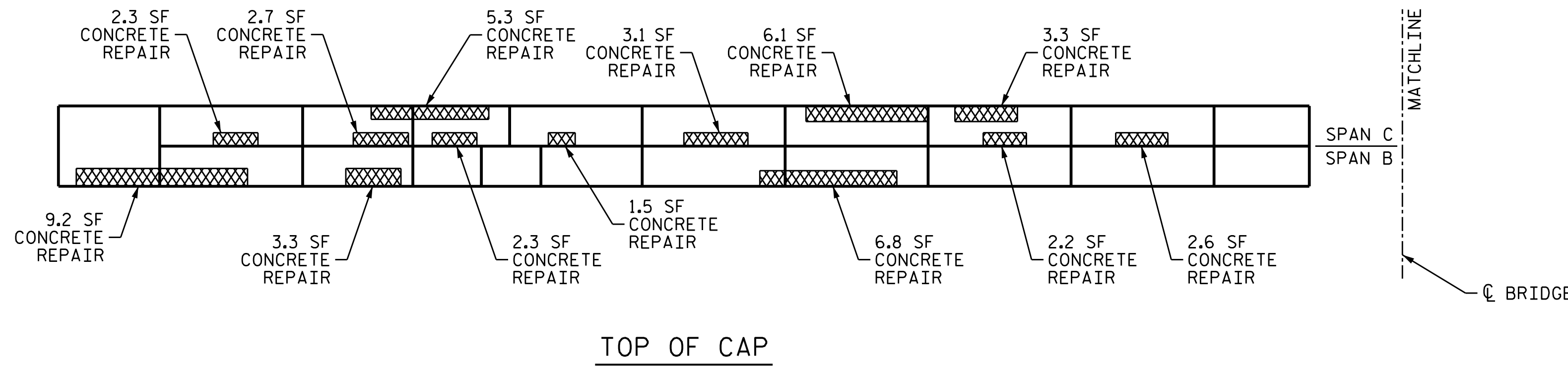
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 1
SPAN B FACE

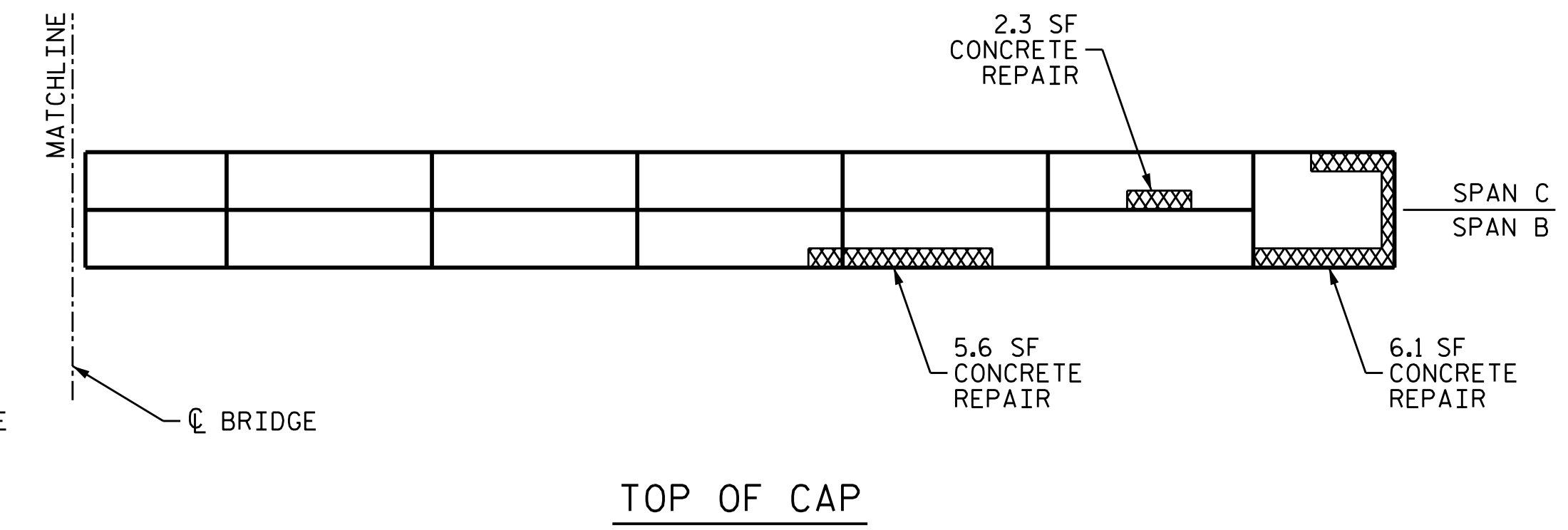
DRAWN BY : R.L. PUTEK DATE : 05/2021
CHECKED BY : H.A. LOCKLEAR DATE : 05/2021

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO. S6-13 TOTAL SHEETS 274
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			
2			4			

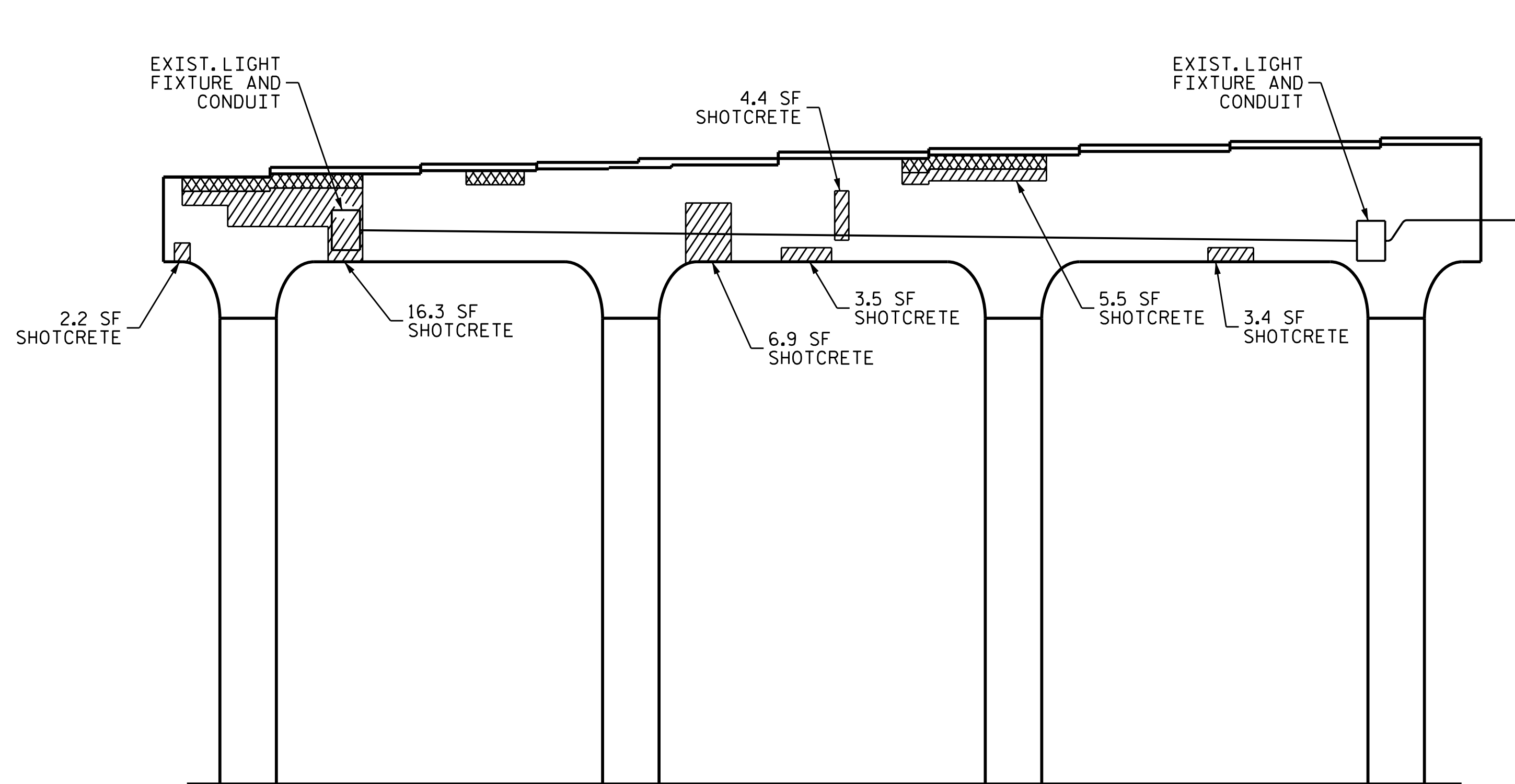


TOP OF CAP

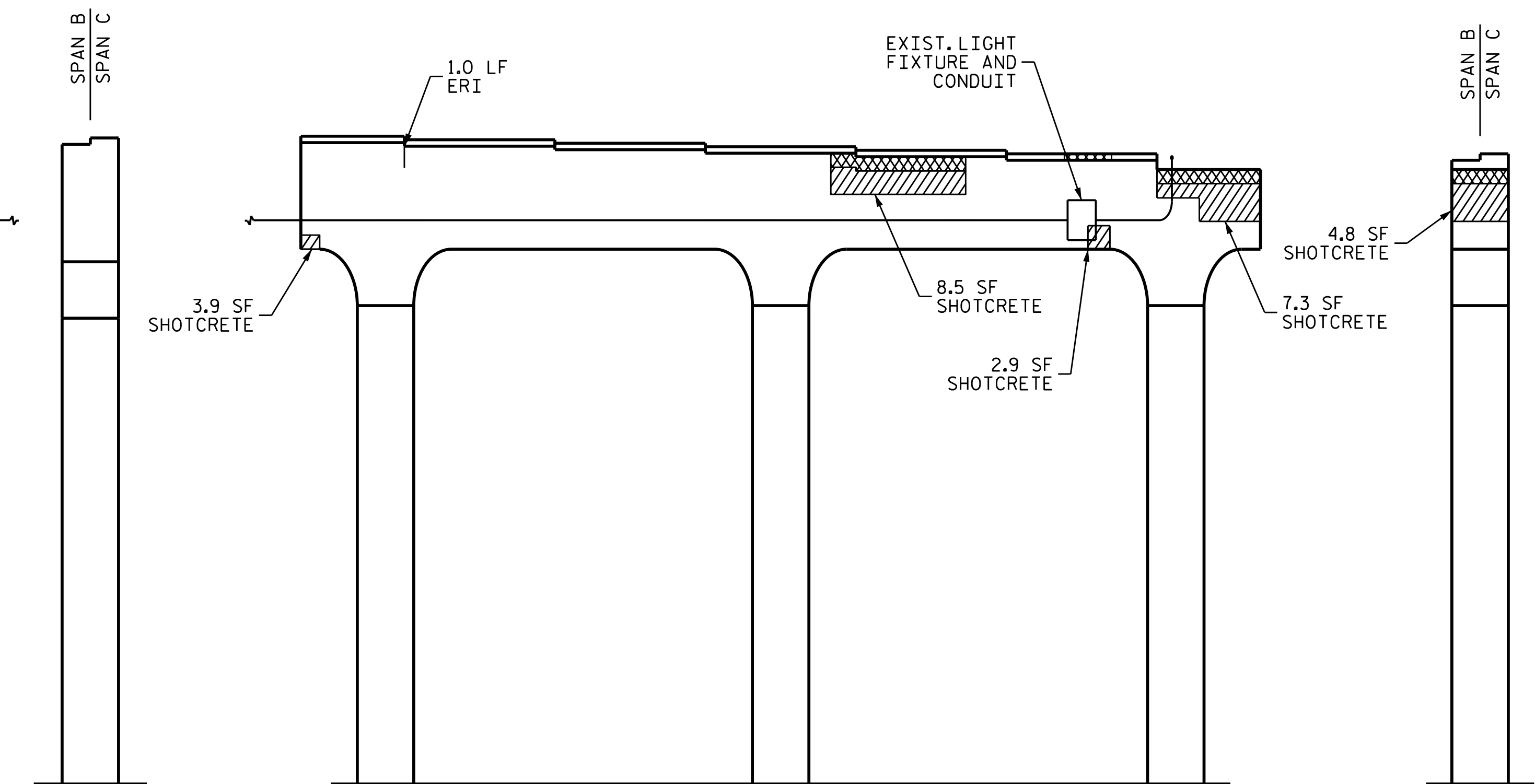


TOP OF CAP

PLAN



ELEVATION
BENT 2 NORTHBOUND
SPAN B FACE



ELEVATION
BENT 2 SOUTHBOUND
SPAN B FACE

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.

FOR CAP REPAIRS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

PEDESTAL WALL REPAIR, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISION.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP. 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.

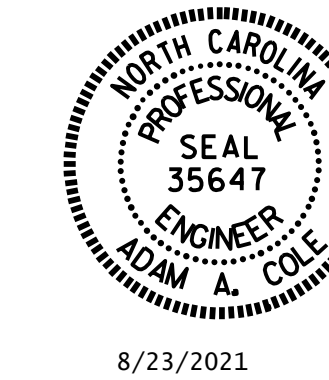
AS-BUILT REPAIR QUANTITY TABLE

BENT 2 SPAN B	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	69.6	34.8		
COLUMNS	0.0	0.0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	64.7	32.4		
EPOXY RESIN INJECTION	LN. FT.		LN. FT.	
CAP	1.0			
COLUMNS	0.0			
EPOXY COATING	AREA SQ. FT.		AREA SQ. FT.	
CAP	424			

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

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

DocuSigned by:
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PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590326

SHEET 1 OF 2

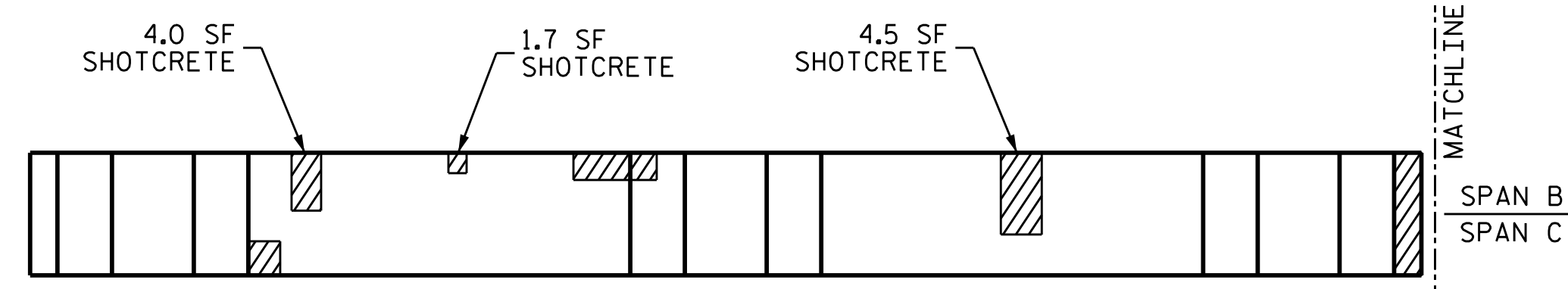
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 2
 SPAN B FACE

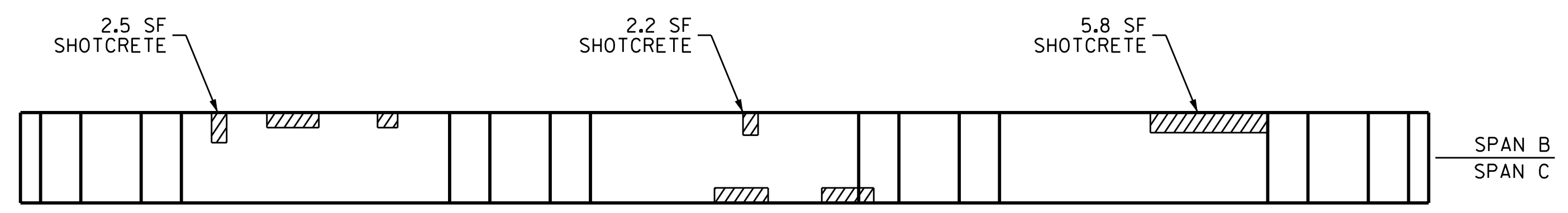
DRAWN BY : R.L. PUTEK DATE : 05/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 05/2021

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			274

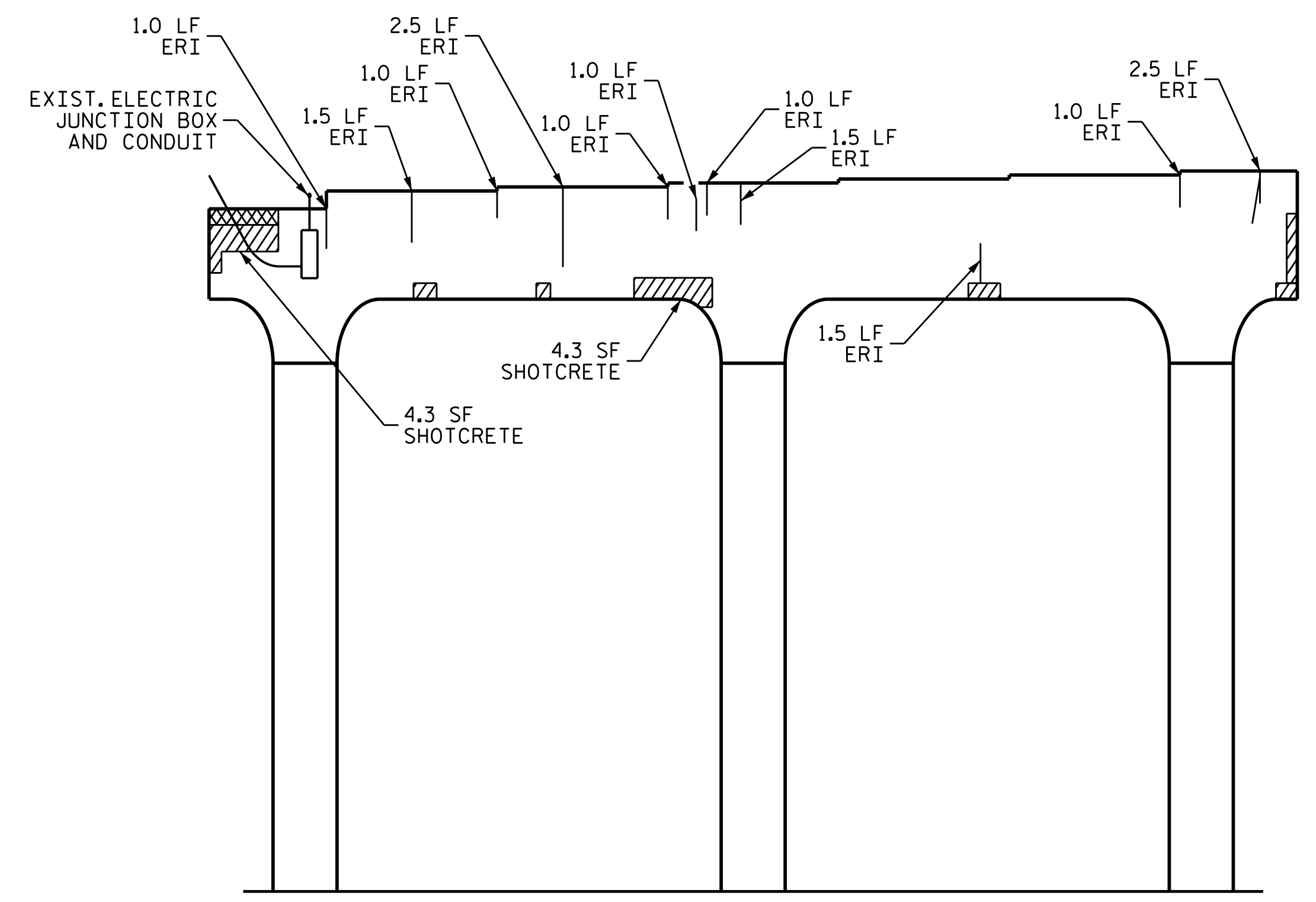


BOTTOM OF CAP

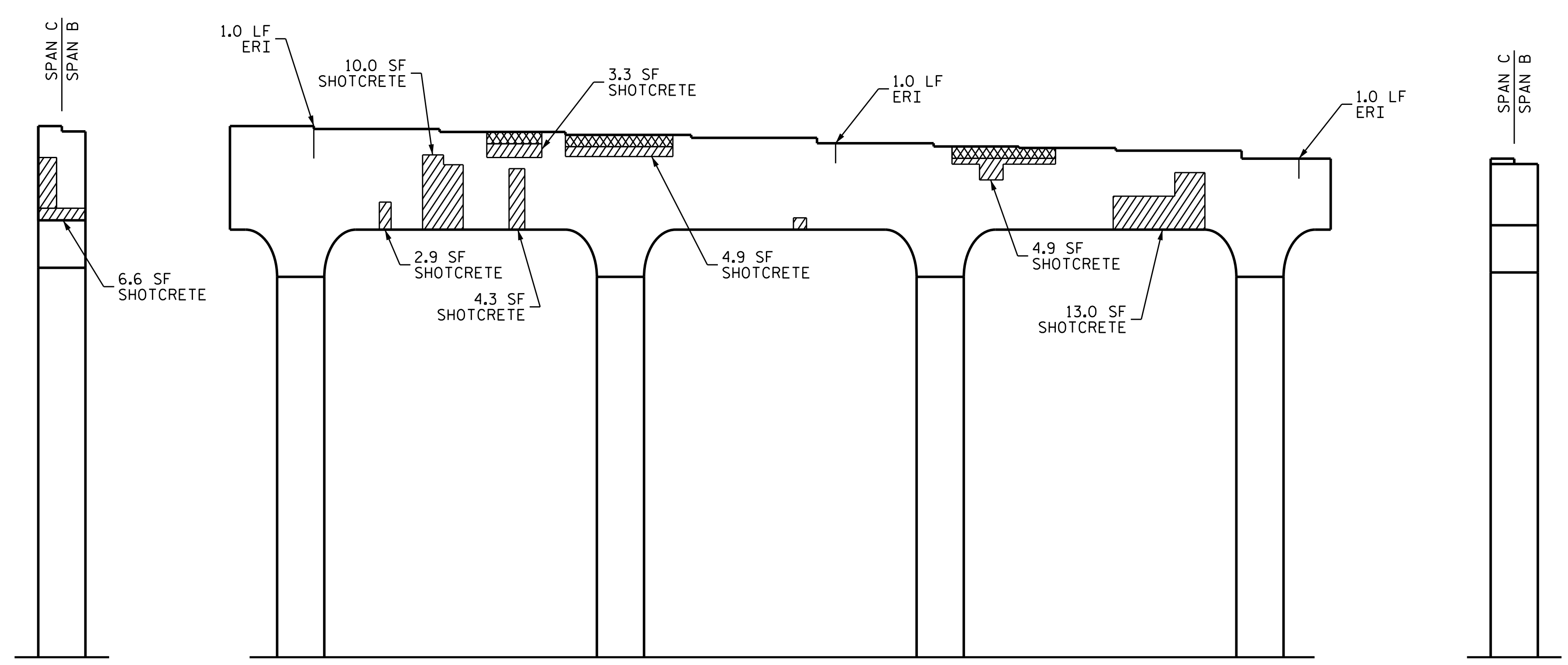


BOTTOM OF CAP

PLAN



ELEVATION
BENT 2 SOUTHBOUND
SPAN C FACE



ELEVATION
BENT 2 NORTHBOUND
SPAN C FACE

END VIEW

END VIEW

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.

FOR CAP REPAIRS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

PEDESTAL WALL REPAIR, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

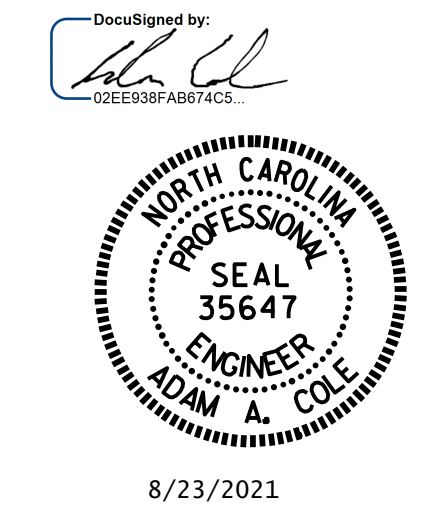
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISION.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP. 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.

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	79.2	39.6		
COLUMNS	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		18.5		
COLUMNS		0.0		

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

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



PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590326

SHEET 2 OF 2

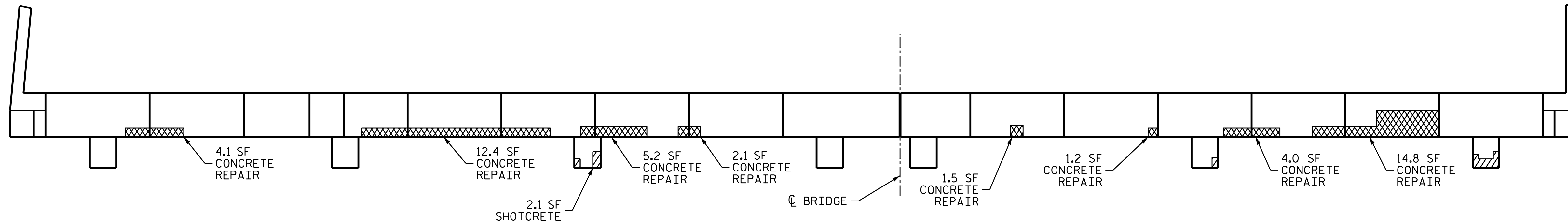
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 2
 SPAN C FACE

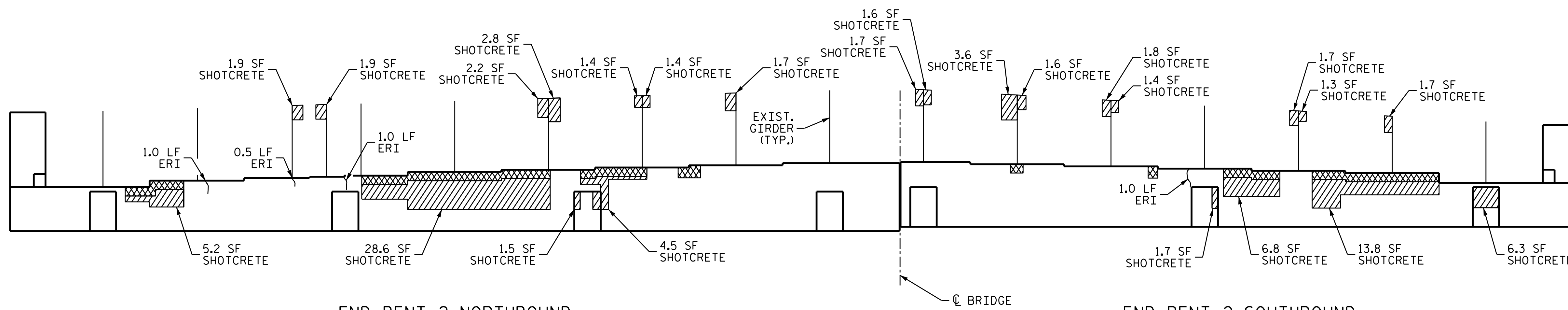
DRAWN BY : R.L. PUTEK DATE : 05/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 05/2021

NO.	REVISIONS			SHEET NO.
	BY:	DATE:	NO.	
1			3	S6-15 TOTAL SHEETS 274
2			4	

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PLAN



END BENT 2 NORTHBOUND

END BENT 2 SOUTHBOUND

ELEVATION

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 SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

FOR CAP AND COLUMN REPAIRS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISION.

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 BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

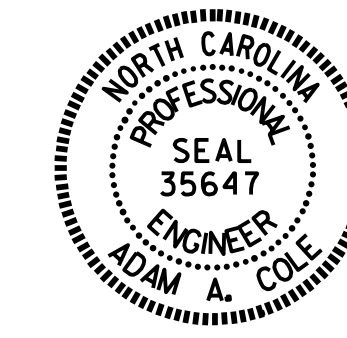
AS-BUILT REPAIR QUANTITY TABLE				
END BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP & CURTAIN WALL	100.2	50.1		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	45.3	22.7		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
CAP & CURTAIN WALL	3.5			
EPOXY COATING	AREA SQ. FT.	AREA SQ. FT.		AREA SQ. FT.
CAP	335			

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

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590326

DocuSigned by:

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8/23/2021

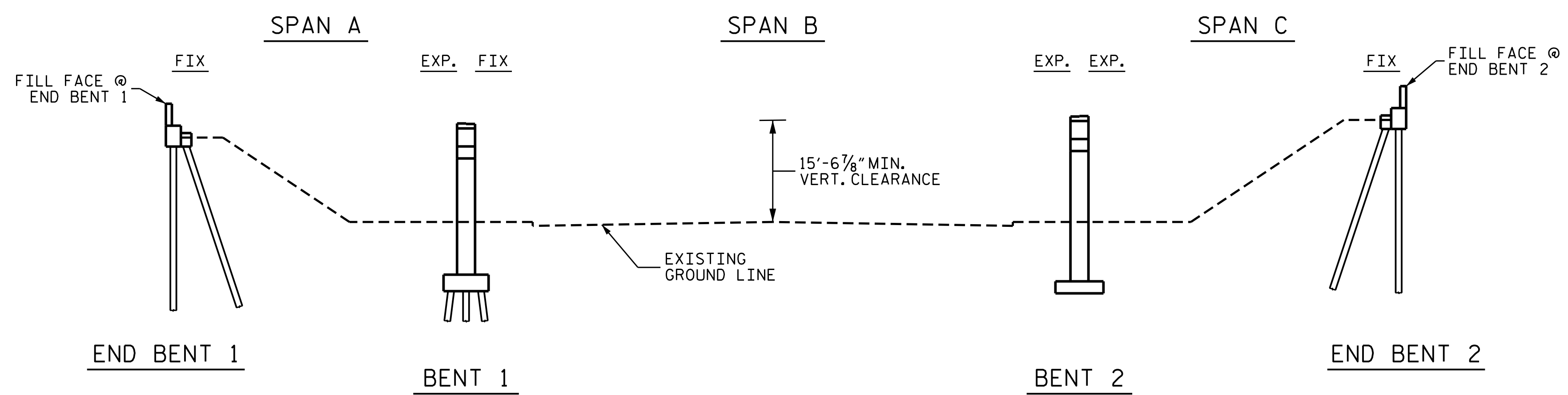
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

END BENT 2

DRAWN BY : R.L. PUTEK DATE : 05/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 05/2021

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			56-16
2			4			TOTAL SHEETS 274



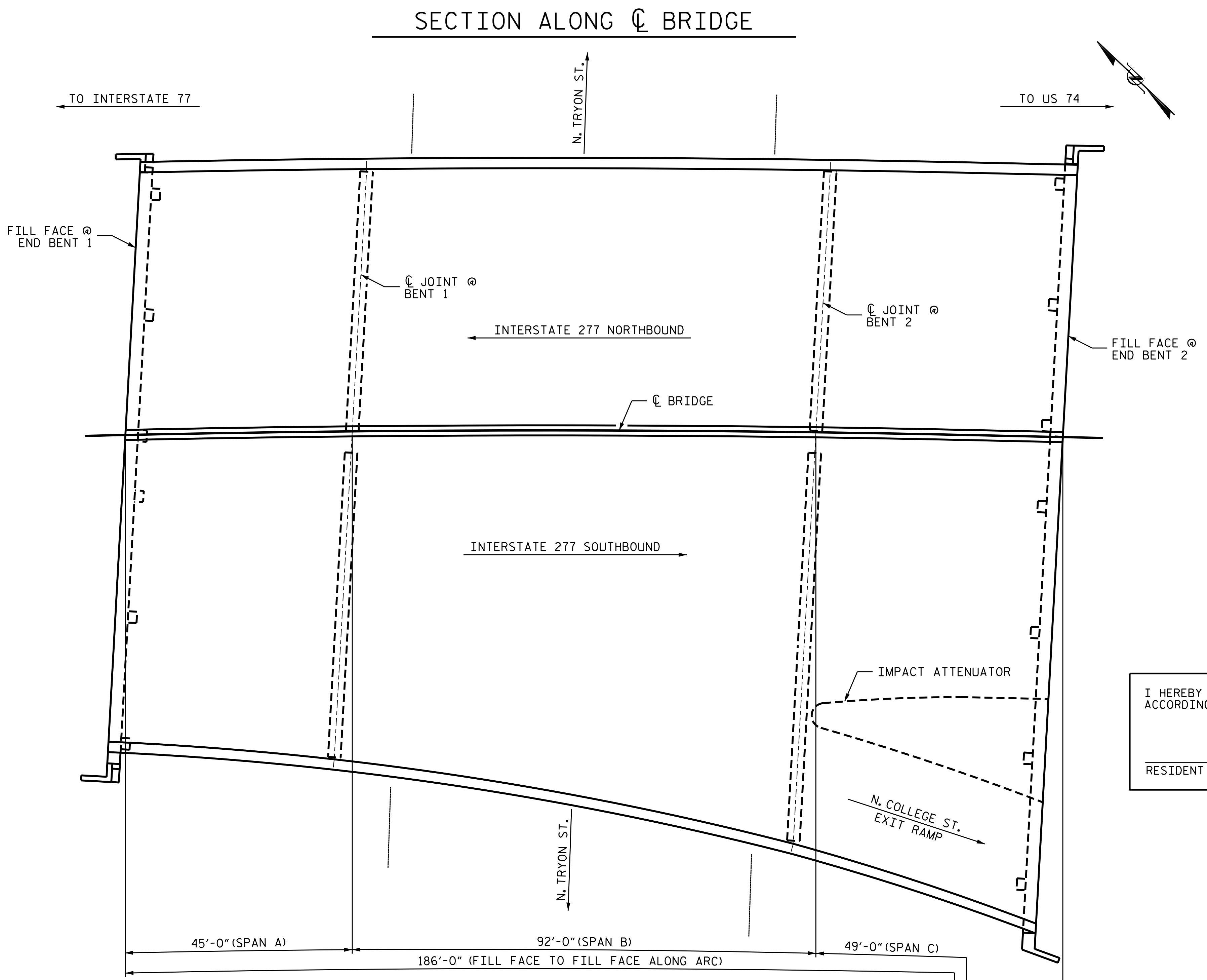
NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 07/24/2020.

BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

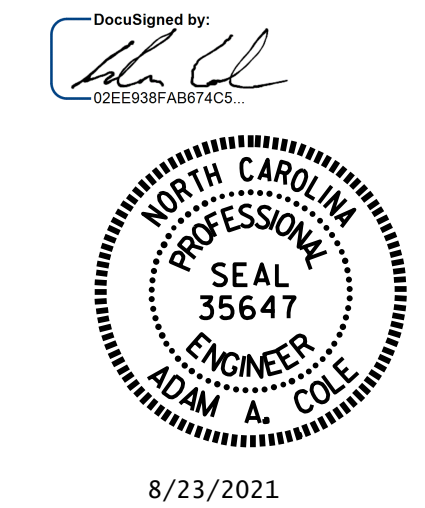
SCOPE OF WORK

- REMOVE ASPHALT WEARING SURFACE AND PARTIALLY REMOVE BRIDGE DECK CONCRETE BY SCARIFICATION AND SHOTBLASTING METHODS.
- OVERLAY PREPARED BRIDGE DECK WITH POLYMER CONCRETE (PC).
- GROOVE POLYMER CONCRETE (PC) BRIDGE DECK.
- CLEAN AND REPAIR STEEL I-BEAMS.
- CLEAN BEARINGS AND APPLY HRCSA.
- INSTALL FOAM JOINT SEALS.
- SPOT PAINTING OF STEEL STRUCTURE REPAIR AREAS.
- REMOVE UNSOUND CONCRETE AND PROPERLY PREPARE SHOTCRETE AND CONCRETE REPAIR AREAS.
- PERFORM SHOTCRETE AND CONCRETE REPAIRS IN PREPARED AREAS.
- EPOXY INJECTION OF CONCRETE CRACKS.
- REMOVE DEBRIS FROM TOP OF END BENT AND BENT CAPS AND END BENT BACKWALLS, AND APPLY EPOXY COATING.



I HEREBY CERTIFY THAT THIS STRUCTURE WAS REHABILITATED ACCORDING TO THESE PLANS OR AS NOTED HEREIN.

RESIDENT ENGINEER DATE



PROJECT NO. I-5746C

MECKLENBURG COUNTY

BRIDGE NO. 590327

SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

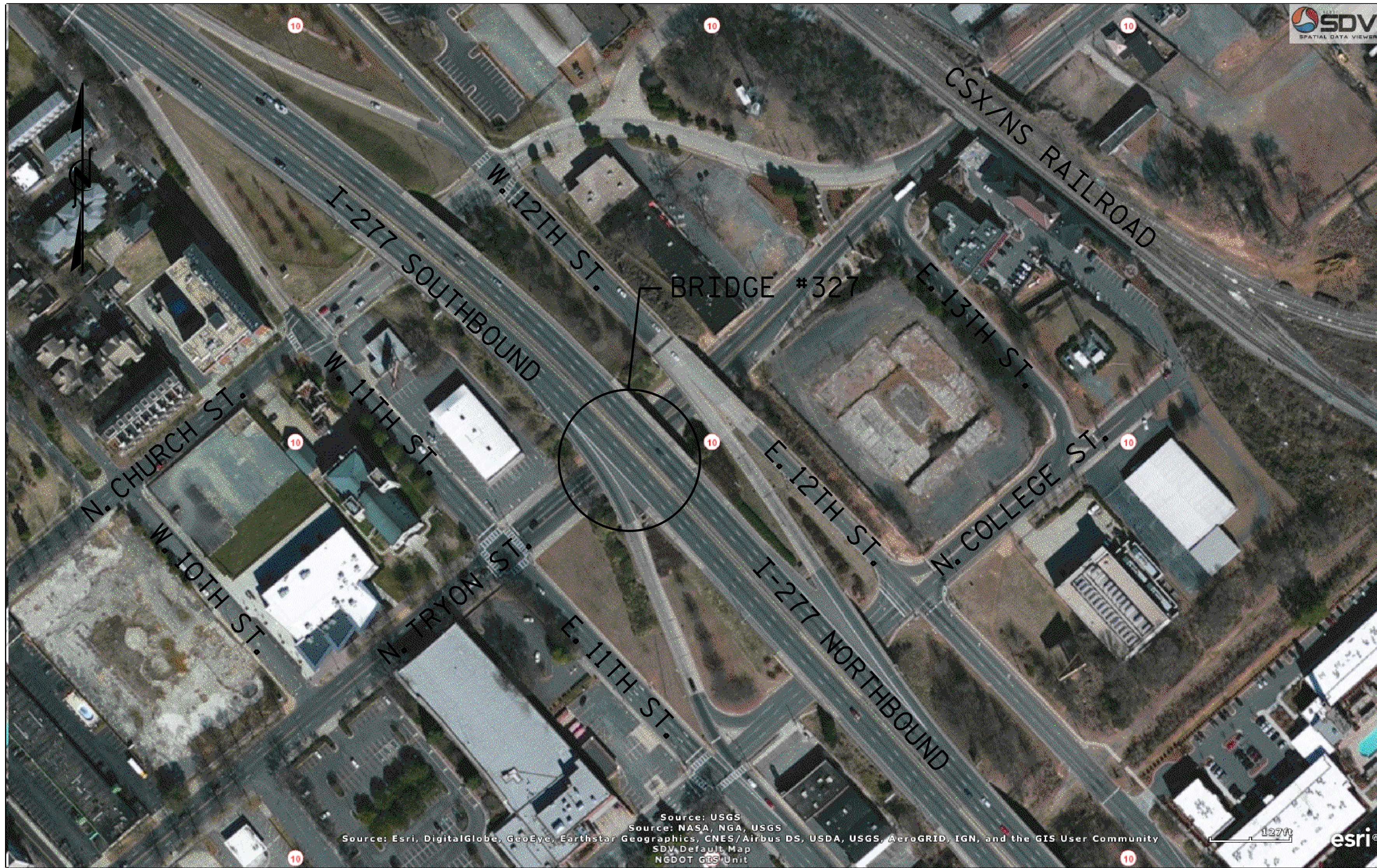
GENERAL DRAWING
FOR BRIDGE ON I-277
OVER N. TRYON STREET

DRAWN BY : REZA KOUCHEKI / R.L. PUTEK DATE : .05/2021

CHECKED BY : H.A. LOCKLEAR DATE : .05/2021

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.
1			3			S7-1
2			4			TOTAL SHEETS 274

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



LOCATION SKETCH

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

BRIDGE COORDINATES

LATITUDE: 35°-13'-58.98"
LONGITUDE: 80°-50'-5.34"

NOTES

THE CONTRACTOR SHALL PROVIDE INDEPENDENT ASSURANCE SAMPLES OF REINFORCING STEEL AS FOLLOWS: FOR PROJECTS REQUIRING UP TO 400 TONS OF REINFORCING STEEL, ONE 30 INCH SAMPLE OF EACH SIZE BAR USED, AND FOR PROJECTS REQUIRING OVER 400 TONS OF REINFORCING STEEL, TWO 30 INCH SAMPLES OF EACH SIZE BAR USED. THE BARS FROM WHICH THE SAMPLES ARE TAKEN MUST THEN BE SPLICED WITH REPLACEMENT BARS OF THE SIZE AND LENGTH OF THE SAMPLE, PLUS A MINIMUM LAP SPLICE OF THIRTY BAR DIAMETERS. PAYMENT FOR THE SAMPLES OF REINFORCING STEEL SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.

WORK ON THE BRIDGES SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL BELOW. THE CONTRACTOR SHALL SUBMIT PLANS FOR CONSTRUCTION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS AND THE PROJECT SPECIAL PROVISIONS.

THE CONTRACTOR SHALL PERFORM ALL WORK WITH CARE SO THAT THE EXISTING STRUCTURE WHICH IS TO REMAIN IN PLACE WILL NOT BE DAMAGED. IF THE CONTRACTOR DAMAGES ANY PART OF THE EXISTING STRUCTURE WHICH IS TO REMAIN IN PLACE, THE DAMAGED AREA SHALL BE REPAIRED OR REPLACED IN A MANNER SATISFACTORY TO THE ENGINEER AT NO ADDITIONAL COST TO THE DEPARTMENT.

CONTRACTOR SHALL DETERMINE EXTENT OF WORKING AREA, STAGING PROCESS, AND INSTALL COVER P ASSEMBLY AS NECESSARY TO MEET THE REQUIREMENTS OF TRAFFIC MANAGEMENT PLANS.

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

AT THE TIME OF PREPARATION OF THESE PLANS, IT WAS NOT ANTICIPATED THAT ITEMS SHOWN BELOW WOULD BE REQUIRED. HOWEVER, IT MAY BE DETERMINED IN THE FIELD THAT THESE ITEMS, OR OTHER WORK WILL BE NECESSARY TO PROPERLY COMPLETE THE INTENDED BRIDGE PRESERVATION/REHABILITATION WORK. THE CONTRACTOR SHALL BE PREPARED TO PERFORM SUCH WORK IN A TIMELY MANNER, AS DETERMINED IN THE FIELD. SUCH WORK SHALL BE CONSIDERED EXTRA WORK AND SHALL BE ADDRESSED AS PER ARTICLE 104-7 OF THE STANDARD SPECIFICATIONS. PROJECT SPECIAL PROVISIONS THAT OUTLINE REQUIREMENTS FOR THESE POTENTIAL ADDITIONAL WORK ITEMS HAVE BEEN PROVIDED IN PROJECT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES, AND COSTS WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

UNANTICIPATED ITEMS:

ITEM NO.	DESCRIPTION	UNIT
1	CLASS III SURFACE PREPARATION	LIN. FT.

DocuSign by:



8/23/2021

NOTES

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM THE 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.

THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THROUGH OF THE DECK.

FOR SCARIFYING BRIDGE DECK, SHOTBLASTING BRIDGE DECK, AND CLASS II SURFACE PREPARATION, SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.

EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING REPAIR OF BRIDGE DECKS.

THE EXISTING BRIDGE DECK SHALL BE REPAIRED AT LOCATIONS SHOWN OF THE PLANS OR AS DETERMINED BY THE ENGINEER AFTER SCARIFICATION AND PRIOR TO THE SURFACE PREPARATION AND APPLICATION OF THE PC OVERLAY. UNLESS OTHERWISE APPROVED, SUCH LOCATIONS SHALL BE REPAIRED WITH PC.

FOR CONCRETE DECK REPAIR FOR PC OVERLAY, PC MATERIALS, AND PLACING & FINISHING PC OVERLAY, SEE POLYMER CONCRETE BRIDGE DECK OVERLAY SPECIAL PROVISION.

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

LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG THE CENTERLINE OR EDGE OF TRAVEL LANES.

FOR FOAM JOINT SEALS FOR PERSERVATION, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR POLLUTION CONTROL AND SPOT PAINTING OF STEEL STRUCTURE REPAIR AREAS, SEE SPOT PAINTING OF STEEL STRUCTURE REPAIR AREAS SPECIAL PROVISION.

FOR PAINTING CONTAINMENT, POLLUTION CONTROL AND CLEANING & PAINTING EXISTING BEARINGS WITH HRCSA, SEE CLEANING & PAINTING EXISTING BEARINGS WITH HRCSA SPECIAL PROVISION.

FOR BEAM REPAIR, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

SHOTCRETE REPAIR MAY BE REPLACED WITH CONCRETE REPAIR WITH THE APPROVAL OF THE ENGINEER.

PROJECT NO. I-5746C
MECKLENBURG COUNTY
BRIDGE NO. 590327

SHEET 2 OF 2

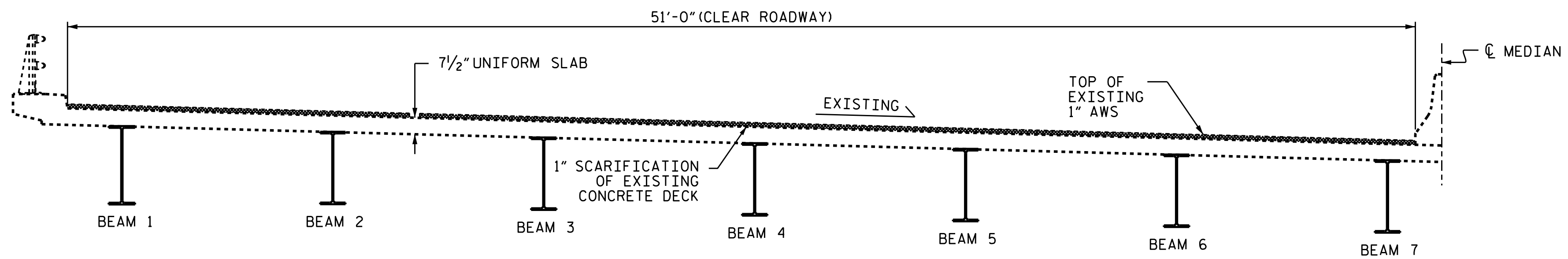
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR BRIDGE ON I-277
OVER N. TRYON STREET

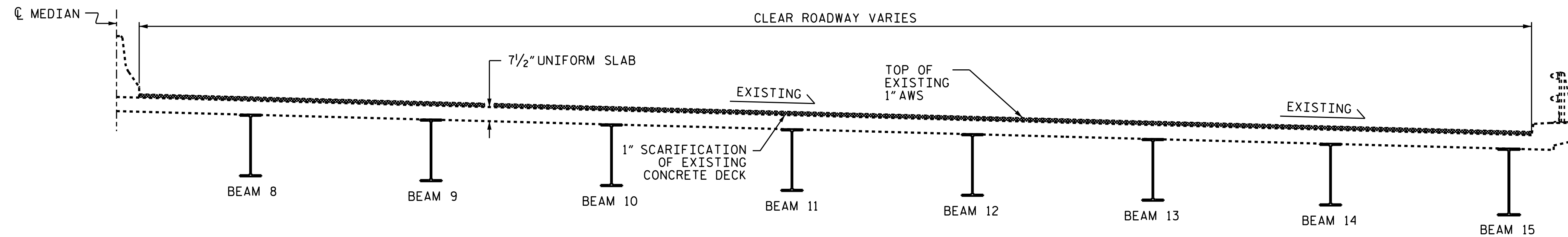
DRAWN BY : REZA KOUCHEKI/ R.L. PUTEK DATE : 07/2021
CHECKED BY : H.A. LOCKLEAR DATE : 07/2021

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

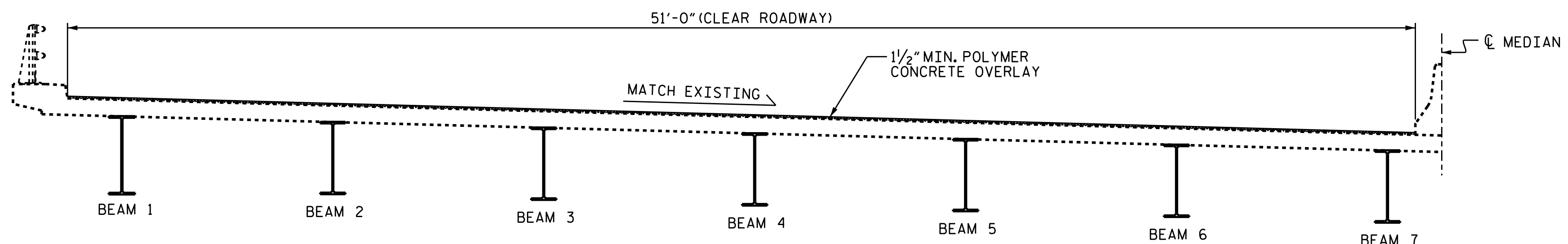
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S7-2
1			3			TOTAL SHEETS
2			4			274



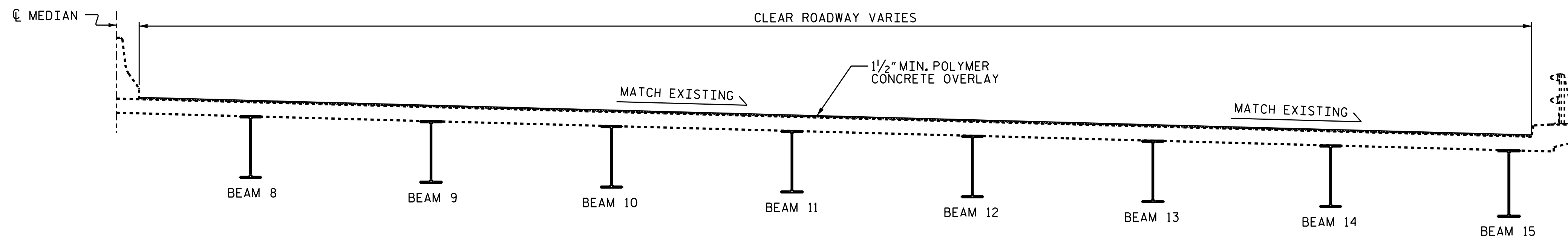
EXISTING TYPICAL SECTION - NORTHBOUND LANES



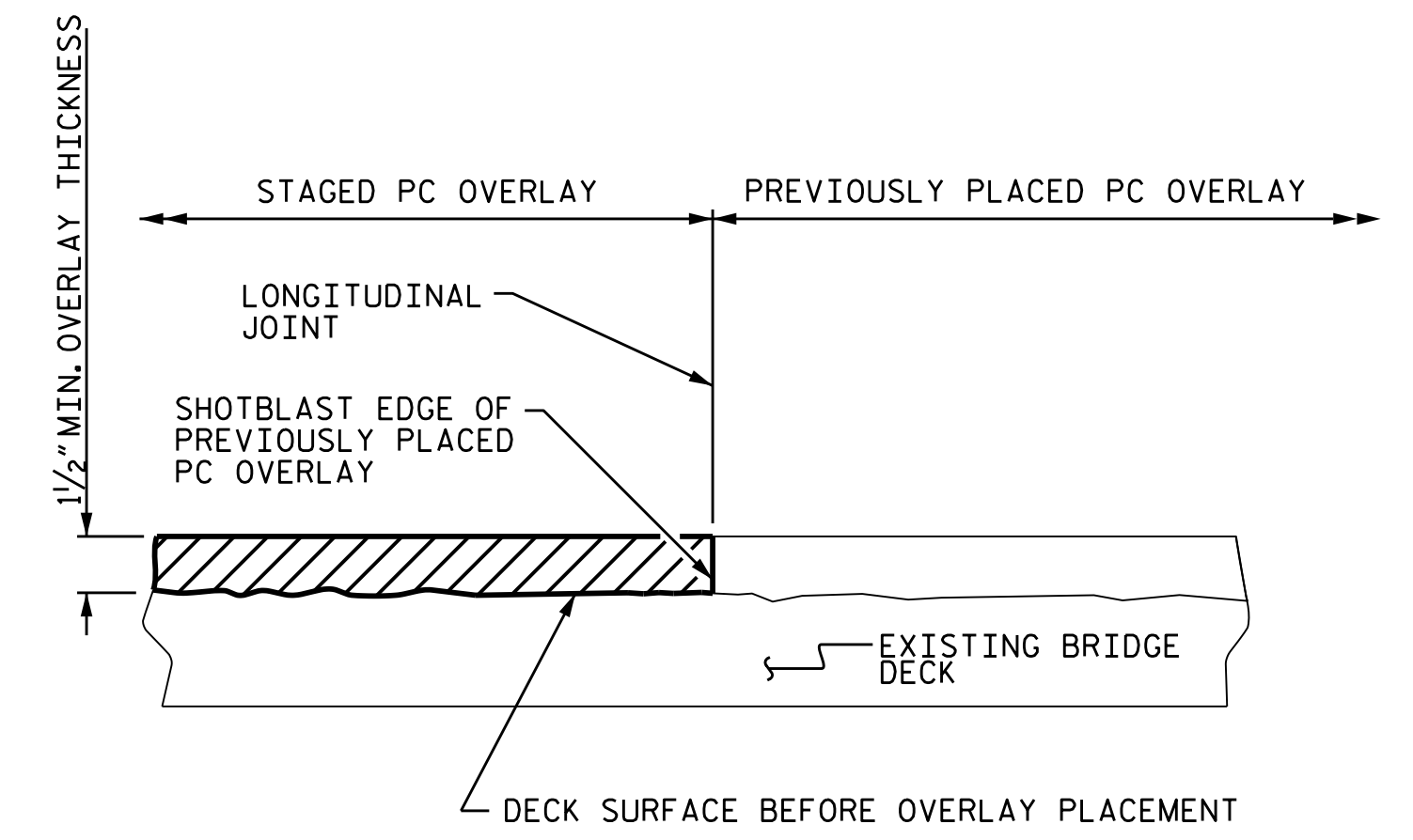
EXISTING TYPICAL SECTION - SOUTHBOUND LANES
SPAN A SHOWN, SPANS B & C SIMILAR



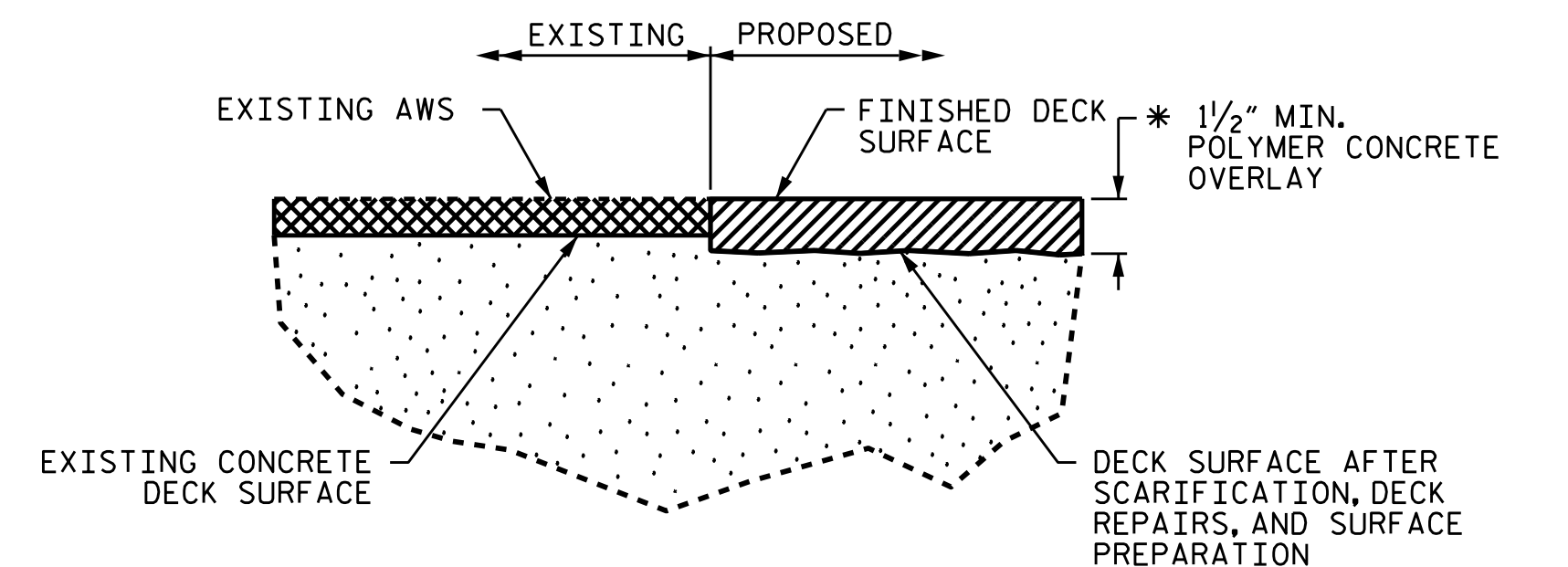
EXISTING TYPICAL SECTION - NORTHBOUND LANES



EXISTING TYPICAL SECTION - SOUTHBOUND LANES
SPAN A SHOWN, SPANS B & C SIMILAR



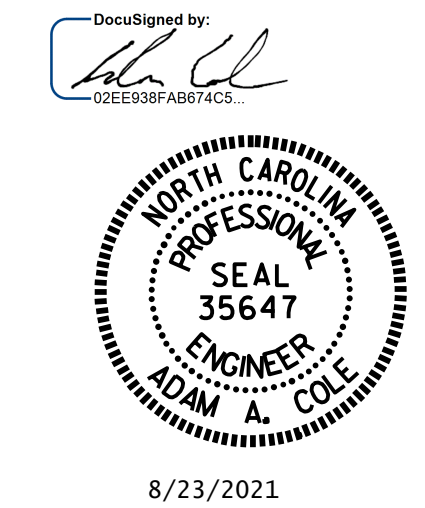
STAGED PC OVERLAY JOINT
(AS NEEDED)



DETAIL FOR POLYMER CONCRETE OVERLAY

* FINISHED SURFACE ELEVATION SHALL MATCH EXISTING ASPHALT WEARING SURFACE ELEVATION, ACTUAL THICKNESS OF PC OVERLAY SHALL BE 1/2".

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO.: 590327



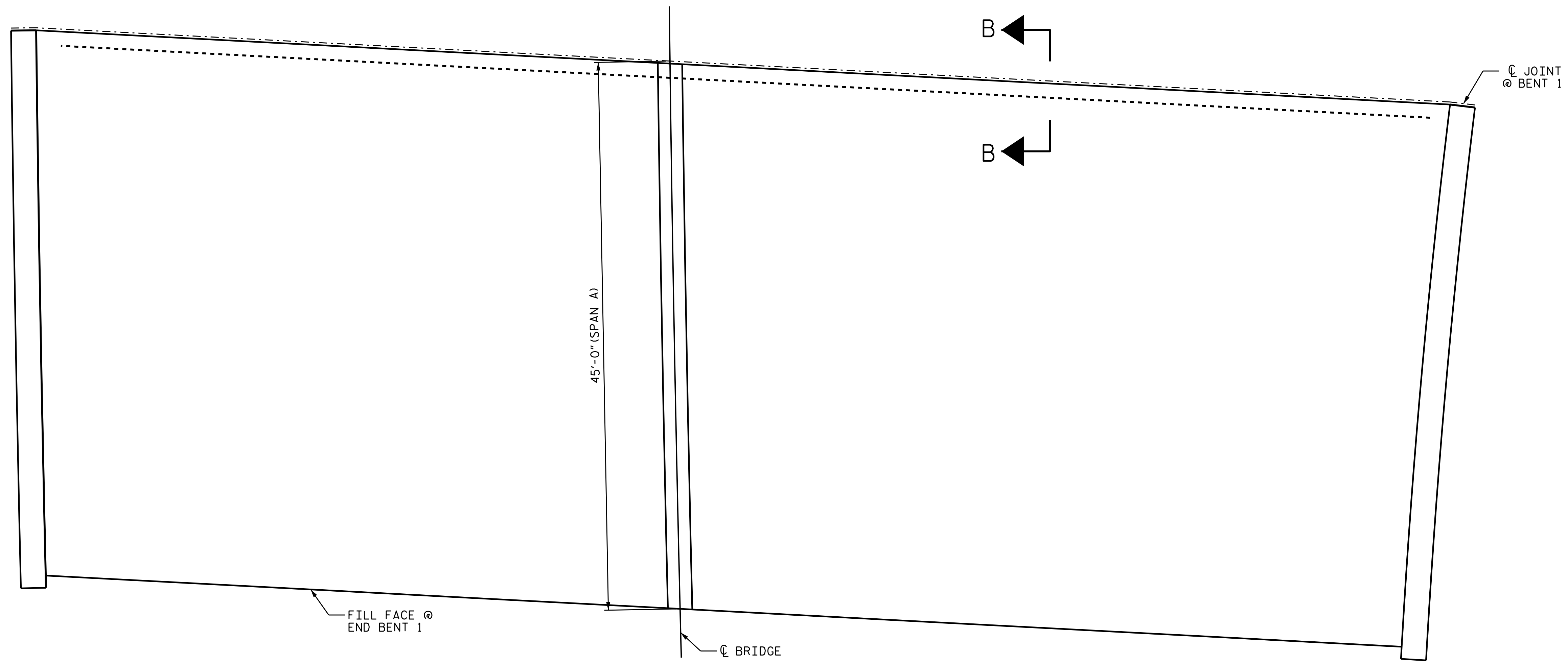
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

TYPICAL SECTION
 AND
 PC OVERLAY
 DETAILS

DRAWN BY : REZA KOUCHEKI/ RL, PUTEK DATE : 07/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 07/2021

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			274
2			4			

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PLAN

AS-BUILT REPAIR QUANTITY TABLE		
TOP OF DECK REPAIRS		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	556 SQ. YDS.	
CLASS II SURFACE PREPARATION	0.0 SQ. YDS.	
CONCRETE DECK REPAIR FOR PC OVERLAY	0.0 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	556 SQ. YDS.	
POLYMER CONCRETE MATERIALS	50.2 CU. YDS.	
PLACING AND FINISHING PC OVERLAY	556 SQ. YDS.	
GROOVING BRIDGE FLOORS	4726 SQ. FT.	

TOP OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PPC OVERLAY AFTER REMOVAL OF UNSOUND CONCRETE. (MIN. 2" CLEAR TO SAWCUT). SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.

VALUES REPRESENT ESTIMATED UNDERSIDE OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

NOTES:

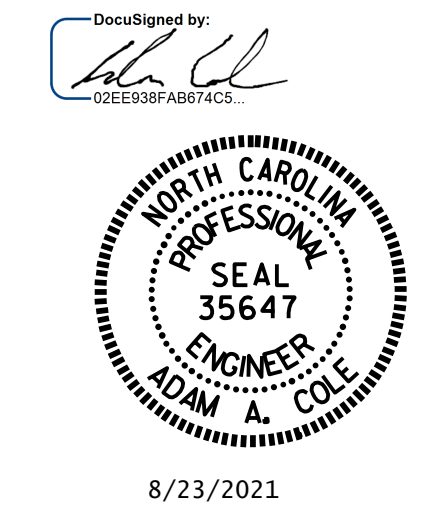
REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES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

FOR SECTION B-B, SEE "JOINT DETAILS" SHEET.

FOR CONCRETE DECK REPAIR FOR PC MATERIALS SEE SPECIAL PROVISIONS.

FOR PC MATERIALS SEE SPECIAL PROVISIONS.

- APPROX. CLASS II SURFACE PREPARATION
- EPOXY RESIN INJECTION (ERI)



PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590327

SHEET 1 OF 3

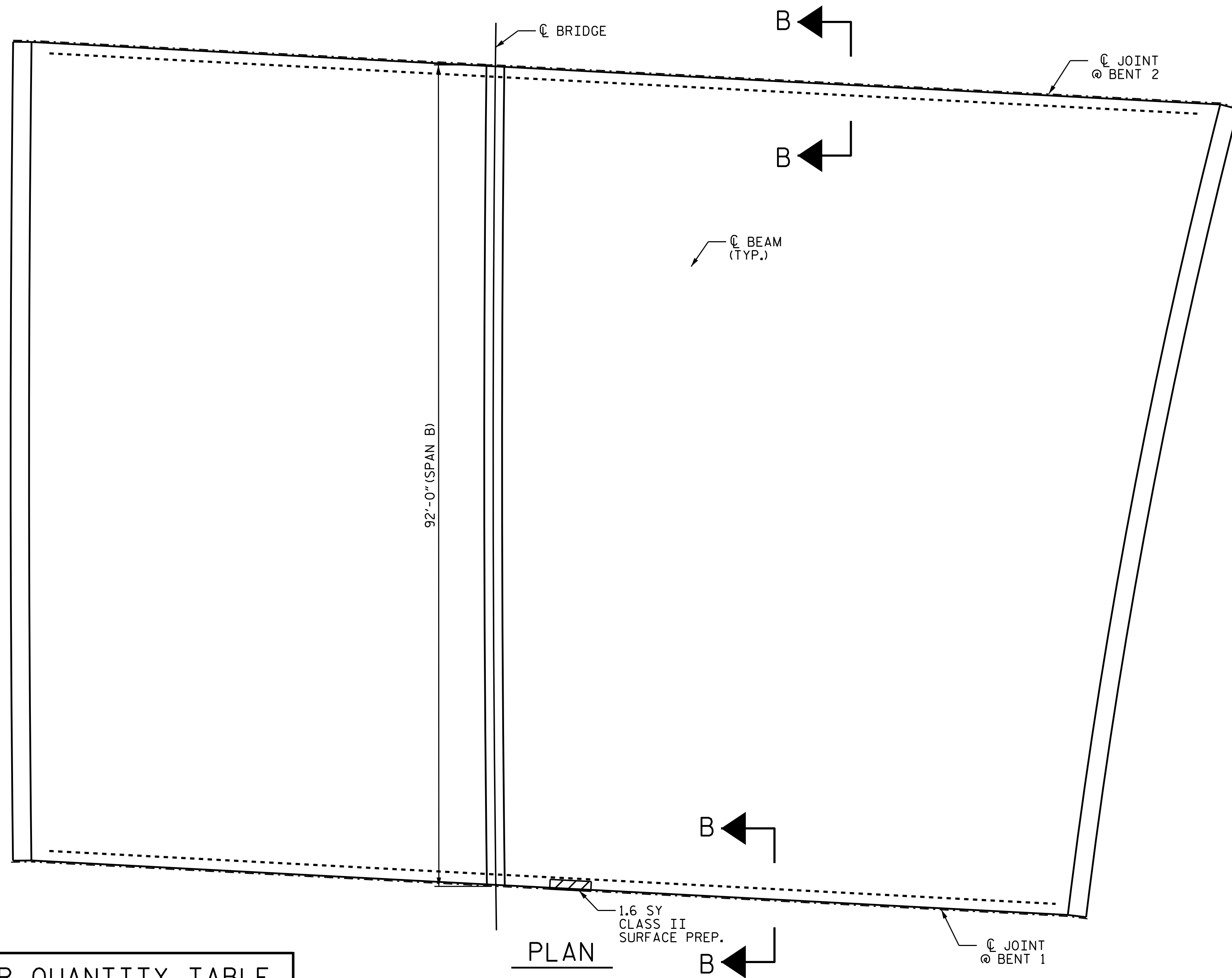
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK SURFACE REPAIR
 SPAN A

DRAWN BY : REZA KOUCHEKI / R.L. PUTEK DATE : 07/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 07/2021

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	BY:	DATE:			BY:	DATE:		
1				3				S7-4
2				4				TOTAL SHEETS 274

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AS-BUILT REPAIR QUANTITY TABLE		
TOP OF DECK REPAIRS		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	1240 SQ. YDS.	
CLASS II SURFACE PREPARATION	1.6 SQ. YDS.	
CONCRETE DECK REPAIR FOR PC OVERLAY	1.6 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	1240 SQ. YDS.	
POLYMER CONCRETE MATERIALS	111.9 CU. YDS.	
PLACING AND FINISHING PC OVERLAY	1240 SQ. YDS.	
GROOVING BRIDGE FLOORS	10,707 SQ. FT.	

NOTES:

REPAIR LOCATIONS AND ESTIMATED 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 LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

FOR SECTION B-B, SEE "JOINT DETAILS" SHEET.

FOR CONCRETE REPAIR FOR PC OVERLAY SEE SPECIAL PROVISIONS.

FOR PC MATERIALS SEE SPECIAL PROVISIONS.

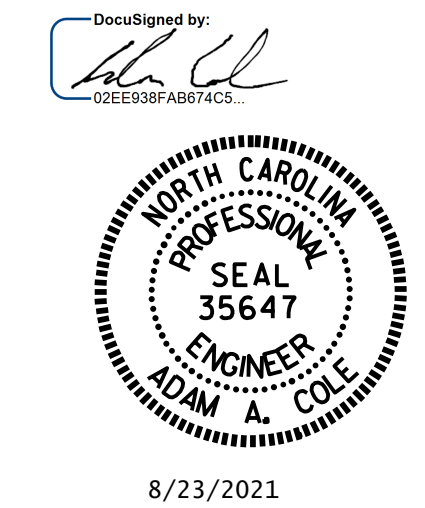
- APPROX. CLASS II SURFACE PREPARATION
- EPOXY RESIN INJECTION (ERI)

TOP OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PC OVERLAY AFTER REMOVAL OF UNSOUND CONCRETE. (MIN. 2" CLEAR TO SAWCUT). SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.

VALUES REPRESENT ESTIMATED UNDERSIDE OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590327

SHEET 2 OF 3



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

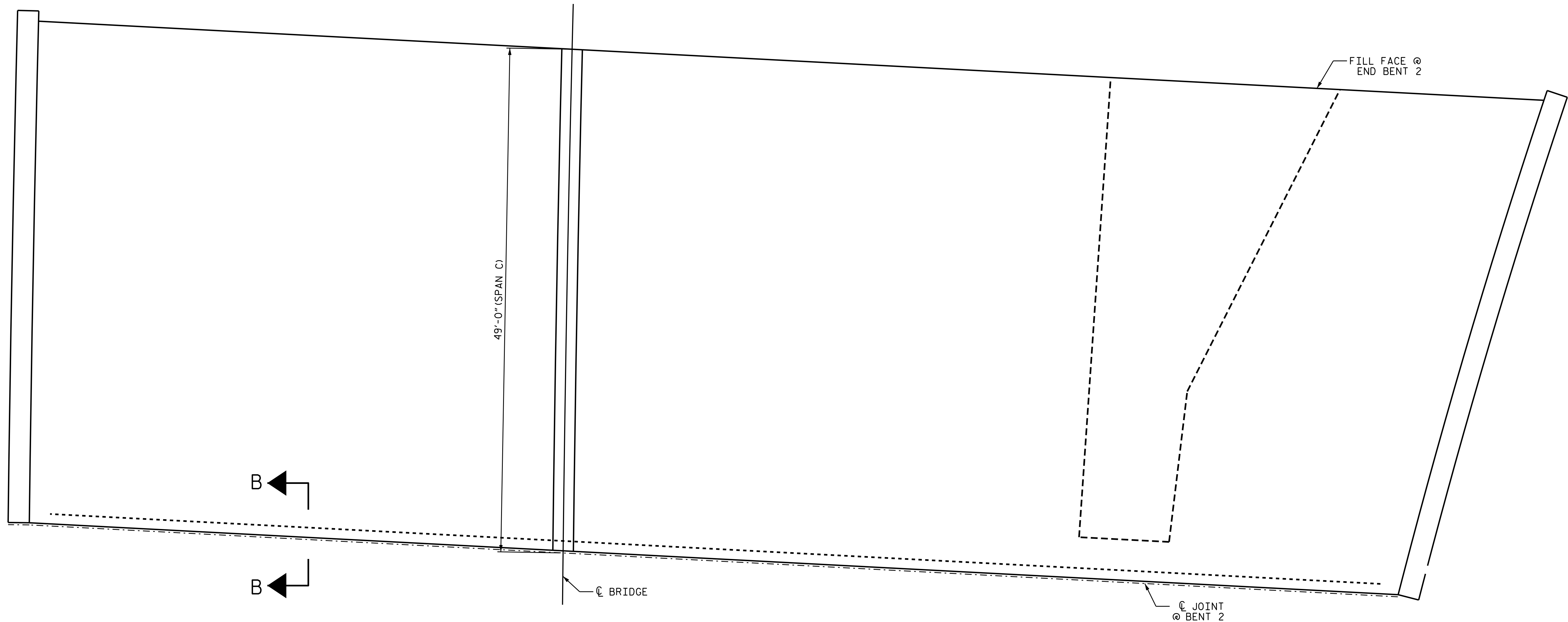
DECK SURFACE REPAIR

SPAN B

DRAWN BY : REZA KOUCHEKI / R.L. PUTEK DATE : .07/2021
 CHECKED BY : H.A. LOCKLEAR DATE : .07/2021

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1			3			274
2			4			274



PLAN

AS-BUILT REPAIR QUANTITY TABLE		
TOP OF DECK REPAIRS		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	749 SQ. YDS.	
CLASS II SURFACE PREPARATION	0.0 SQ. YDS.	
CONCRETE DECK REPAIR FOR PC OVERLAY	0.0 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	749 SQ. YDS.	
POLYMER CONCRETE MATERIALS	67.6 CU. YDS.	
PLACING AND FINISHING PC OVERLAY	749 SQ. YDS.	
GROOVING BRIDGE FLOORS	6425 SQ. FT.	

TOP OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PC OVERLAY AFTER REMOVAL OF UNSOUND CONCRETE. (MIN. 2" CLEAR TO SAWCUT). SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.

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

NOTES:

REPAIR LOCATIONS AND ESTIMATED 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 LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

FOR SECTION B-B, SEE "JOINT DETAILS" SHEET.

THE EXISTING IMPACT ATTENUATOR ATTACHED TO THE EXISTING BRIDGE DECK SHALL REMAIN IN PLACE. THE EXISTING BRIDGE DECK IN THE AREA OF THE IMPACT ATTENUATOR SHALL NOT BE DISTURBED. THE LIMITS OF THE BRIDGE DECK SCARIFICATION SHALL EXTEND TO THE EXISTING ASPHALT OVERLAY IN THE VICINITY OF THE IMPACT ATTENUATOR, OR AS DIRECTED BY THE ENGINEER.

FOR CONCRETE REPAIR FOR PC OVERLAY, SEE SPECIAL PROVISIONS.

FOR PC MATERIALS, SEE SPECIAL PROVISIONS.

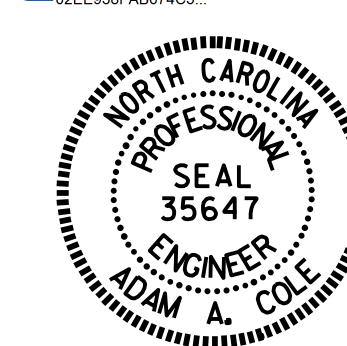
APPROX. CLASS II SURFACE PREPARATION

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590327

SHEET 3 OF 3

DocuSigned by:

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8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 DECK SURFACE REPAIR
 SPAN C

DRAWN BY : REZA KOUCHEKI / R.L. PUTK DATE : 07/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 07/2021

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REVISIONS						SHEET NO.
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1			3			274
2			4			274

JOINT REPAIR QUANTITY TABLE		
	ESTIMATE	ACTUAL
FOAM JOINT SEALS FOR PRESERVATION		
BENT 1	117.0 LF.	
BENT 2	134.0 LF.	
TOTAL	251.0 LF.	

NOTES:

FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE PC OVERLAY IS COMPLETE.

THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING JOINT SEAL MATERIAL. IF THE ACTUAL JOINT SEAL OPENING VARIES FROM THE OPENING INDICATED IN THE DETAILS BY MORE THAN 1/4", NOTIFY THE ENGINEER.

THE MANUFACTURER IS TO PROVIDE THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE FOAM JOINT SEAL FOR THE SIZE OF THE OPENING ON THE PLANS AND ACCOMMODATE THE MINIMUM EXPANSION SHOWN ON THE PLANS.

FOAM JOINTS SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS.

THE CONTRACTOR SHALL TAKE CARE DURING JOINT REHAB OPERATIONS NOT TO DROP ANY MATERIAL BELOW THE BRIDGE, WITHOUT PROTECTIVE DEVICES BELOW TO CATCH THE MATERIAL. ANY MATERIAL THAT FALLS BELOW THE BRIDGE SHALL BE CONTAINED, REMOVED AND DISPOSED OF BY THE CONTRACTOR AT NO EXTRA COST TO THE DEPARTMENT. IF THE ENGINEER DETERMINES THAT THE PROTECTIVE DEVICES ARE NOT ADEQUATE OR NOT BEING EMPLOYED, THE WORK SHALL BE SUSPENDED UNTIL ADEQUATE PROTECTION IS PROVIDED.

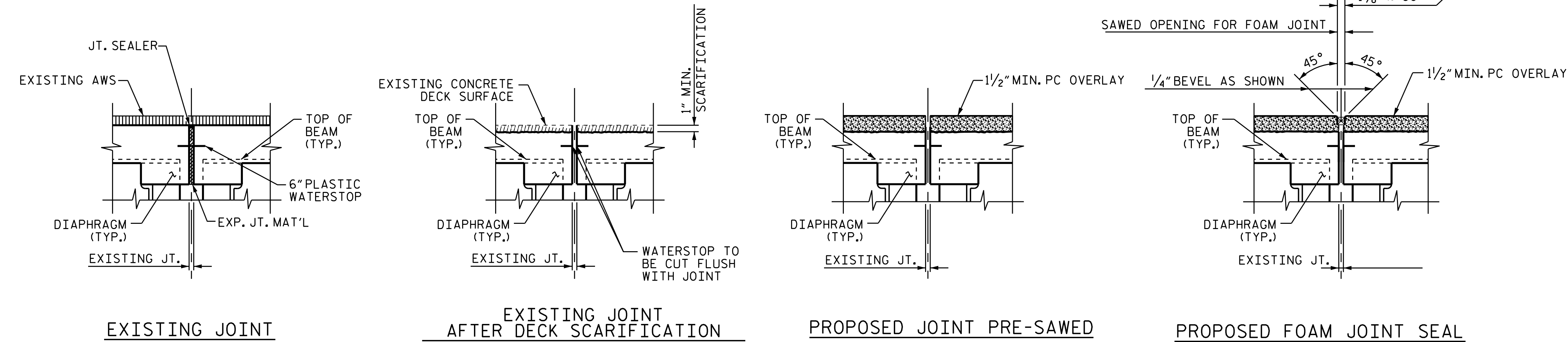
THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINTS IN LIEU OF SAWING THE JOINT.

THE INSTALLED FOAM JOINTS SHALL BE WATER TIGHT.

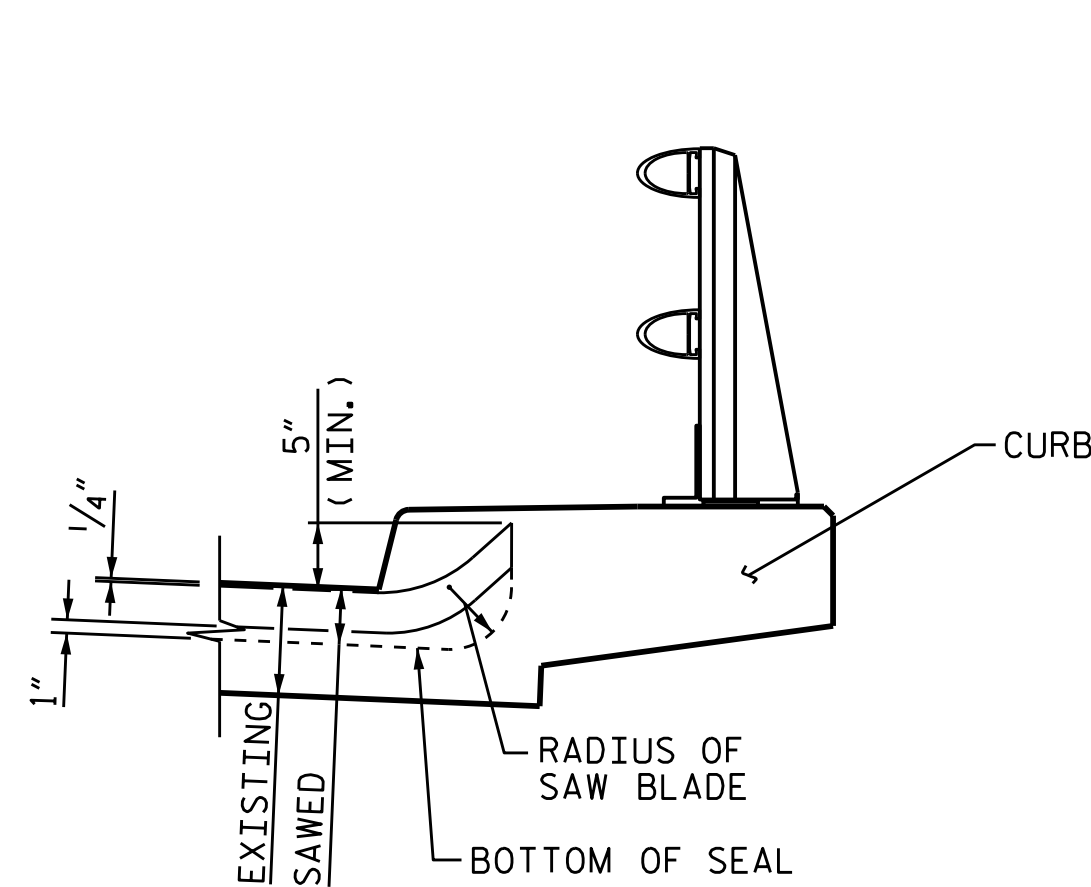
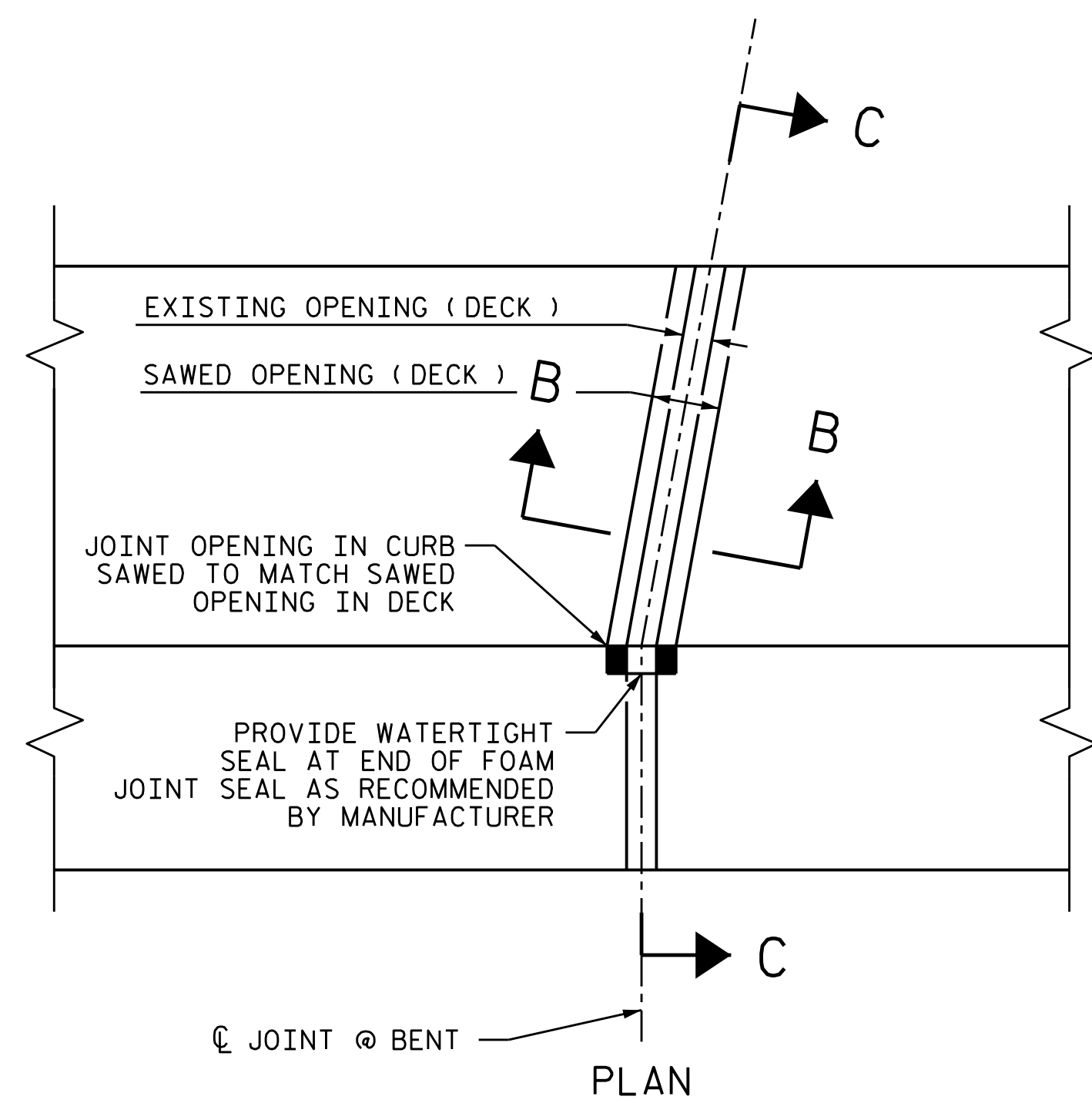
NOMINAL UNCOMPRESSED SEAL WIDTH OF FOAM JOINT SEAL SHALL BE 2".

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR SEE SPECIAL PROVISIONS.

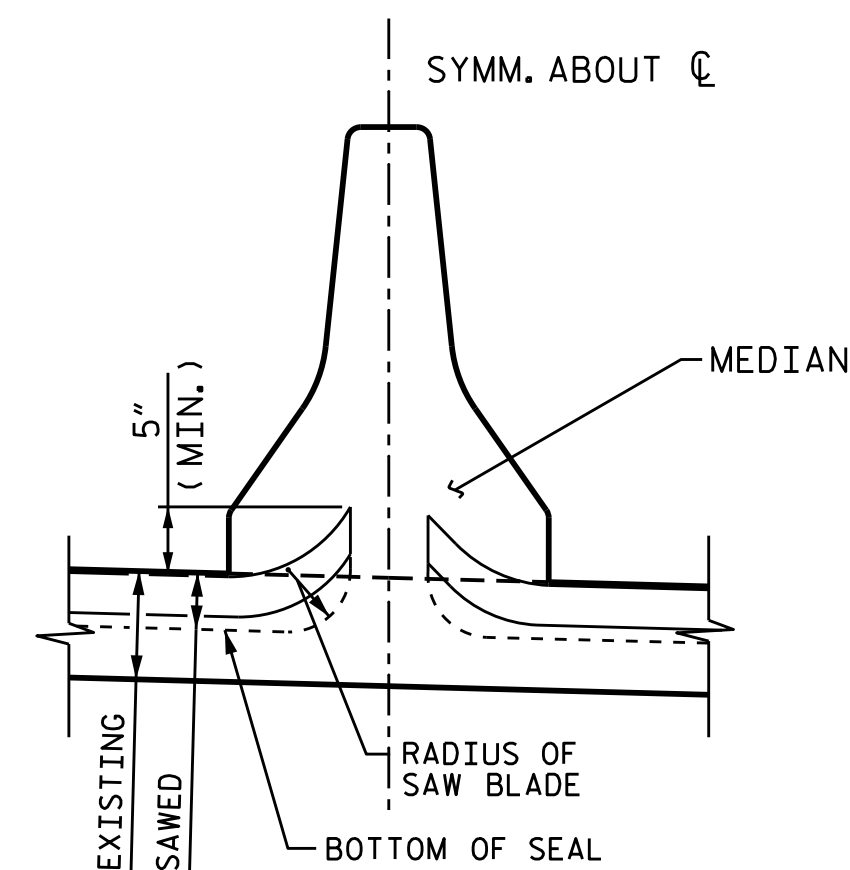


SECTION B-B



SECTION C-C

FOAM JOINT SEAL SHALL BE FACTORY FORMED OR CUT, HEAT WELDED AND TURNED UP PARALLEL TO FACE OF CURB.



MEDIAN DETAIL

FOAM JOINT SEAL SHALL BE FACTORY FORMED OR CUT, HEAT WELDED AND TURNED UP PARALLEL TO FACE OF MEDIAN.

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590327

DocuSigned by:
 [Signature]



8/23/2021

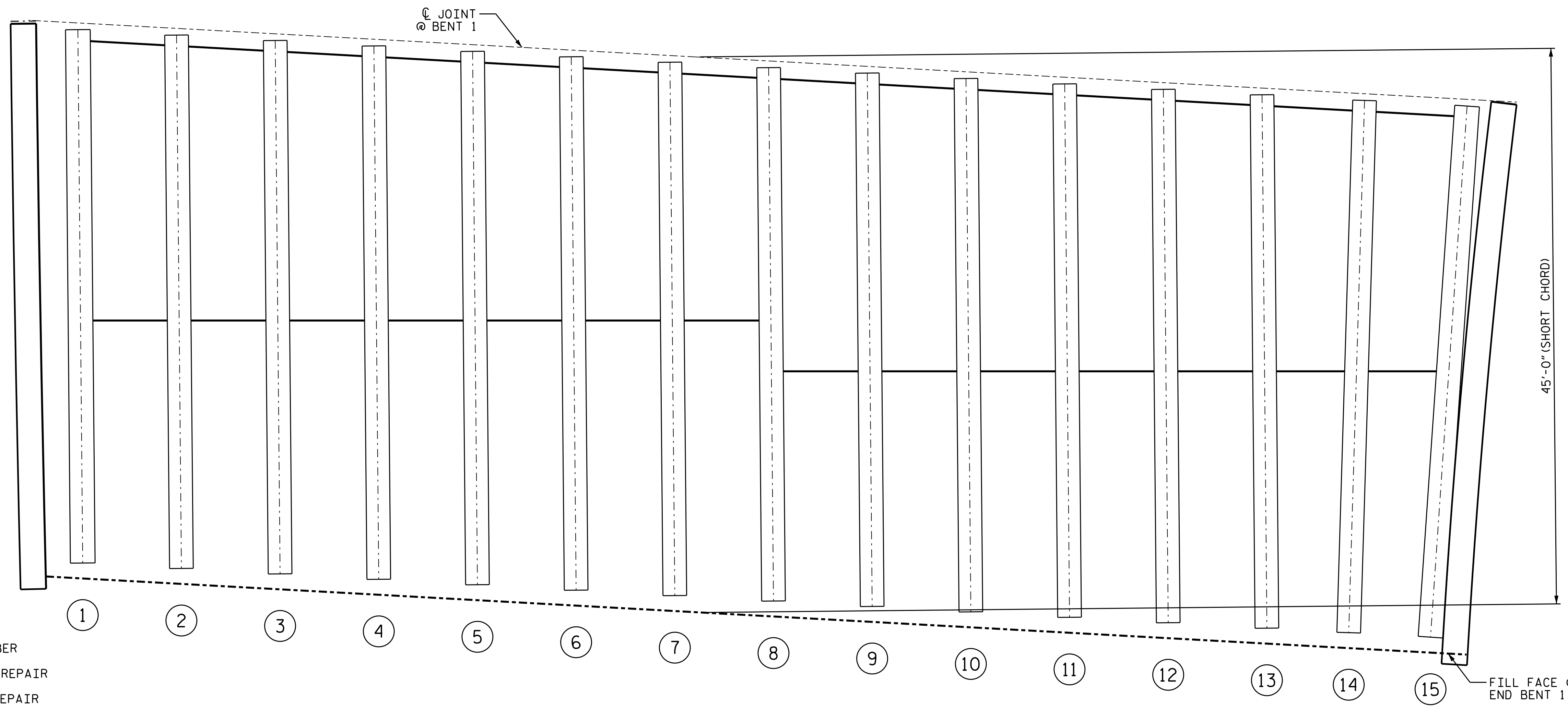
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FOAM JOINT DETAILS

DRAWN BY : R.L.PUTEK/REZA KOUCHEKI DATE : 08/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 08/2021

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1			3			S7-7
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- ① BEAM NUMBER
- ⓑ BEAM END REPAIR
- Ⓟ PLATING REPAIR
- Ⓢ STIFFENER REPAIR
- Ⓣ STEEL DIAPHRAGM REPAIR

NOTES

FOR BEAM REPAIR DETAILS, SEE "BEAM SECTION REPAIR DETAILS" SHEET.

FOR BEAM PLATING DETAILS, SEE "BEAM PLATING REPAIR DETAILS" SHEET.

FOR BRIDGE JACKING DETAILS, SEE "JACKING DETAILS" SHEET.

FOR UNDERSIDE OF DECK AND DIAPHRAGM REPAIRS, SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.

THE LOCATIONS AND DIMENSIONS OF THE AREAS FOR REPAIR ARE BASED ON THE BEST INFORMATION AVAILABLE. THE CONTRACTOR, IN CONJUNCTION WITH THE ENGINEER, SHALL VERIFY THE LOCATION AND EXTENT OF REPAIR AREAS PRIOR TO STEEL FABRICATION. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

- UNDERSIDE EPOXY COATING
- UNDERSIDE REPAIR
- DIAPHRAGM REPAIR
- EPOXY RESIN INJECTION (ERI)

PLAN

AS-BUILT REPAIR QUANTITY TABLE				
UNDERSIDE OF DECK REPAIRS				
SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
UNDERSIDE OF DECK	0.0	0.0		
UNDERSIDE OF OVERHANG	0.0	0.0		
INTERIOR DIAPHRAGMS	0.0	0.0		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	0.0 LIN. FT.			
UNDERSIDE EPOXY COATING	0 SQ. FT.			

UNDERSIDE OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

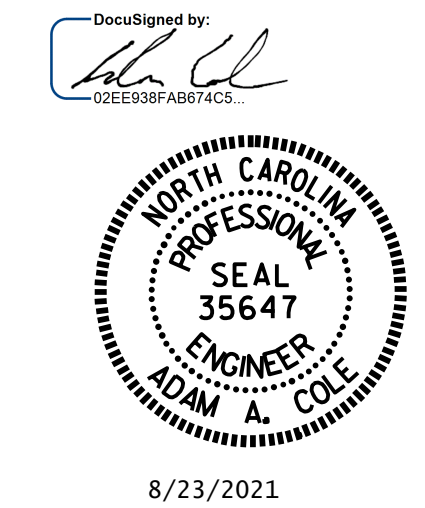
BEAM REPAIR LOCATIONS

(OTHER LOCATIONS MAY EXIST, SEE NOTES)

BEAM REPAIR QUANTITY TABLE							
BEAM END REPAIR		PLATING REPAIR		STIFFENER REPAIR		DIAPHRAGM REPAIR	
LBS.		LBS.		LBS.		LBS.	
ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
0		0		0		0	

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590327

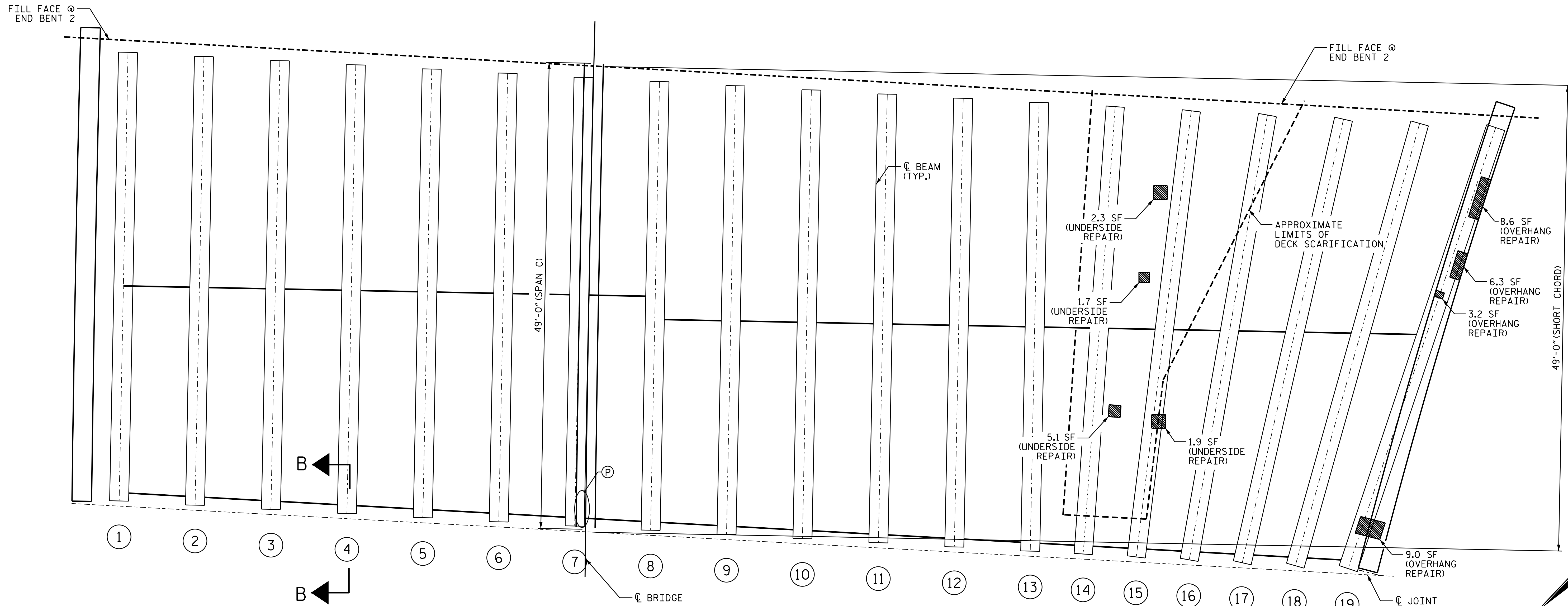
SHEET 1 OF 3



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
UNDERSIDE DECK REPAIR
 SPAN A

DRAWN BY : REZA KOUCHEKI / R.L. PUTEK DATE : 07/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 07/2021

NO.	BY:	DATE:	REVISIONS			SHEET NO.
			NO.	BY:	DATE:	
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2			4			TOTAL SHEETS 274



AS-BUILT REPAIR QUANTITY TABLE				
UNDERSIDE OF DECK REPAIRS				
SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
UNDERSIDE OF DECK	11.0	3.7		
UNDERSIDE OF OVERHANG	27.1	9.1		
INTERIOR DIAPHRAGMS	0.0	0.0		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	0.0 LIN. FT.			
UNDERSIDE EPOXY COATING	0 SQ. FT.			

UNDERSIDE OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

ANTICIPATED BEAM REPAIR LOCATIONS						
SPAN	BEAM	LOCATION	DIM "A"	DIM "B"	DIM "C"	DIM "D"
C	7	BENT 2	4"	9"	-	-

BEAM REPAIR LOCATIONS

(OTHER LOCATIONS MAY EXIST, SEE NOTES)

- ① BEAM NUMBER
- Ⓑ BEAM END REPAIR
- Ⓟ PLATING REPAIR
- Ⓢ STIFFENER REPAIR
- Ⓣ STEEL DIAPHRAGM REPAIR

- UNDERSIDE EPOXY COATING
- UNDERSIDE REPAIR
- DIAPHRAGM REPAIR
- EPOXY RESIN INJECTION (ERI)

FOR UNDERSIDE OF DECK AND DIAPHRAGM REPAIRS, SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.

NOTES

FOR BEAM REPAIR DETAILS, SEE "BEAM SECTION REPAIR DETAILS" SHEET.

FOR BEAM PLATING DETAILS, SEE "BEAM PLATING REPAIR DETAILS" SHEET.

FOR UNDERSIDE OF DECK AND DIAPHRAGM REPAIRS, SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.

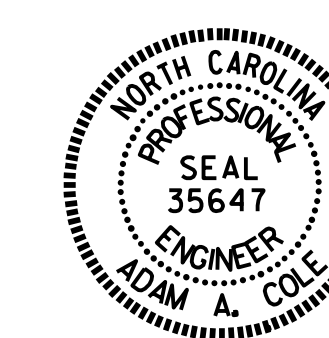
FOR BRIDGE JACKING DETAILS, SEE "JACKING DETAILS" SHEET.

THE LOCATIONS AND DIMENSIONS OF THE AREAS FOR REPAIR ARE BASED ON THE BEST INFORMATION AVAILABLE. THE CONTRACTOR, IN CONJUNCTION WITH THE ENGINEER, SHALL VERIFY THE LOCATION AND EXTENT OF REPAIR AREAS PRIOR TO STEEL FABRICATION. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

BEAM REPAIR QUANTITY TABLE							
BEAM END REPAIR		PLATING REPAIR		STIFFENER REPAIR		DIAPHRAGM REPAIR	
LBS.		LBS.		LBS.		LBS.	
ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
0		15		0		0	

DRAWN BY : REZA KOUCHEKI / R.L. PUTEK DATE : .07/2021
 CHECKED BY : H.A. LOCKLEAR DATE : .07/2021

DocuSigned by:
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8/23/2021

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 MECKLENBURG COUNTY
 BRIDGE NO. 590327

SHEET 3 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

UNDERSIDE DECK
 REPAIR
 SPAN C

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			57-10
2			4			274

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 SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

FOR CAP REPAIRS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

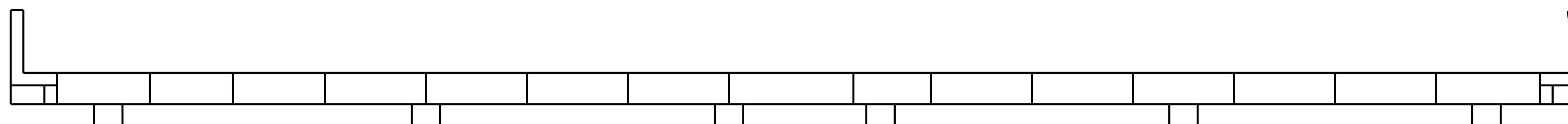
CONCRETE REPAIRS MAYBE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIR SEE SPECIAL PROVISIONS.

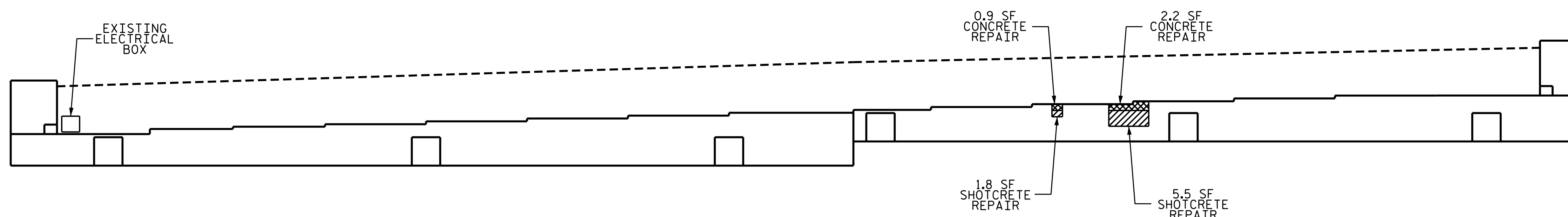
FOR CONCRETE REPAIR SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

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



PLAN

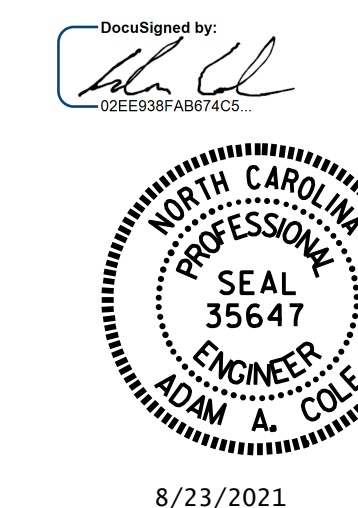


ELEVATION

AS-BUILT REPAIR QUANTITY TABLE				
END BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	7.3	3.7		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	3.1	1.6		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		0.0		
EPOXY COATING		SQ. FT.		SQ. FT.
TOP OF END BENT CAP		188		
CURTAIN WALL		440		

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

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590327



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

END BENT 1

DRAWN BY : R.L. PUTEK DATE : 07/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 07/2021

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.

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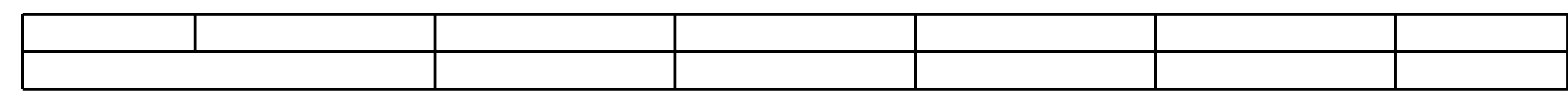
AS-BUILT REPAIR QUANTITY TABLE				
BENT 1 NORTHBOUND	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SO. FT.	VOLUME CU. FT.	AREA SO. FT.	VOLUME CU. FT.
CAP	20.6	10.3		
COLUMNS	0.0	0.0		
CONCRETE REPAIRS	AREA SO. FT.	VOLUME CU. FT.	AREA SO. FT.	VOLUME CU. FT.
CAP	1.0	0.5		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		6.0		
COLUMNS		0.0		
EPOXY COATING		SO. FT.		SO. FT.
TOP OF BENT CAP		147		

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 SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

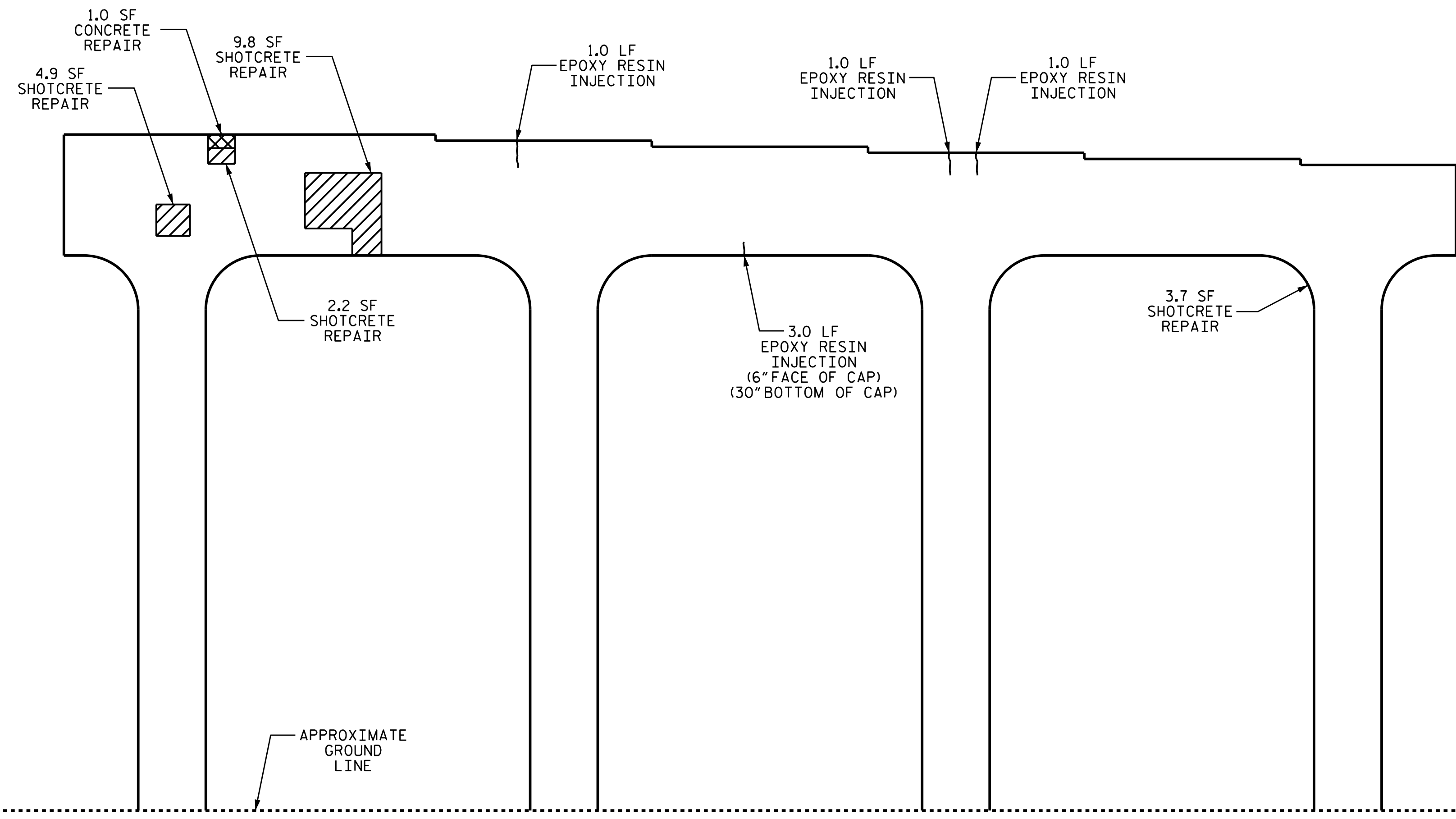
CONCRETE REPAIRS MAYBE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.
 FOR SHOTCRETE REPAIR SEE SPECIAL PROVISIONS.
 FOR CONCRETE REPAIR SEE SPECIAL PROVISIONS.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISION.
 CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY 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)

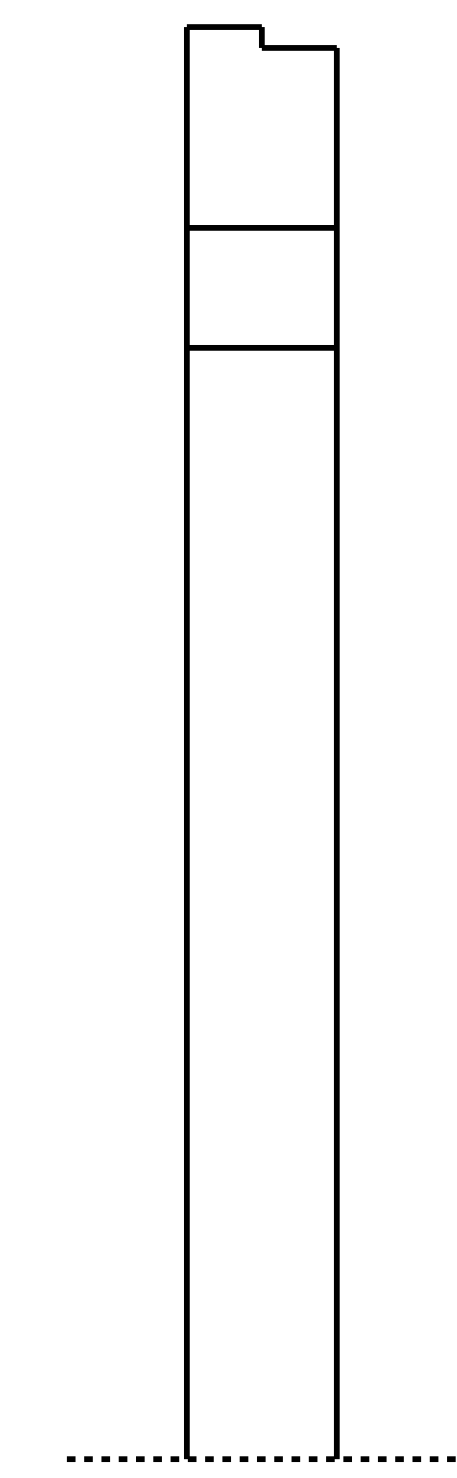


SPAN B
SPAN A

TOP OF CAP



ELEVATION

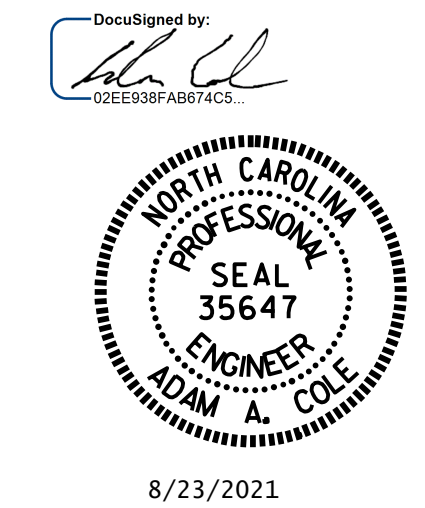


END VIEW

BENT 1 - NORTHBOUND

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590327

SHEET 1 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**BENT 1
 NORTHBOUND
 SPAN A FACE**

DRAWN BY : R.L. PUTEK DATE : 05/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 07/2021

NO.	REVISIONS			SHEET NO.
	BY:	DATE:	NO.	
1			3	S7-12 TOTAL SHEETS 274
2			4	

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

AS-BUILT REPAIR QUANTITY TABLE				
BENT 1 NORTHBOUND	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SO. FT.	VOLUME CU. FT.	AREA SO. FT.	VOLUME CU. FT.
CAP	18.7	9.4		
COLUMNS	3.7	1.9		
CONCRETE REPAIRS	AREA SO. FT.	VOLUME CU. FT.	AREA SO. FT.	VOLUME CU. FT.
CAP	2.5	1.3		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		0.0		
COLUMNS		0.0		
EPOXY COATING		SO. FT.		SO. FT.
TOP OF BENT CAP		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.

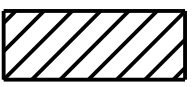


NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES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

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

FOR SHOTCRETE REPAIR SEE SPECIAL PROVISIONS.

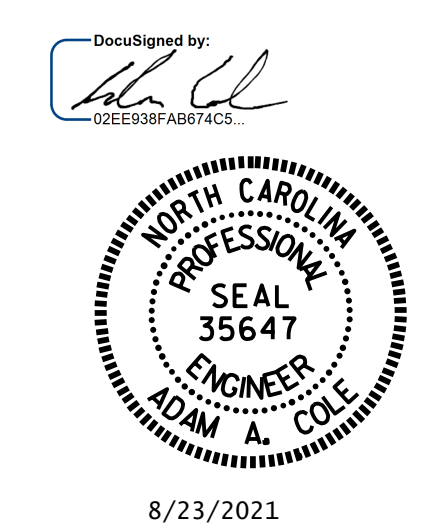
FOR CONCRETE REPAIR SEE SPECIAL PROVISIONS.

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. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590327

SHEET 2 OF 2

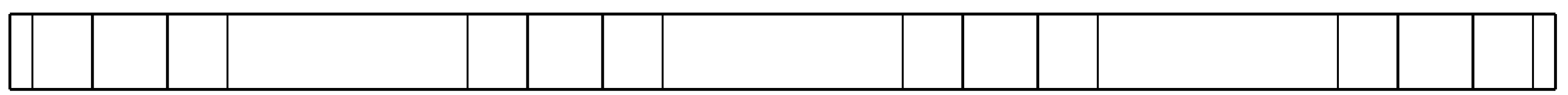


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

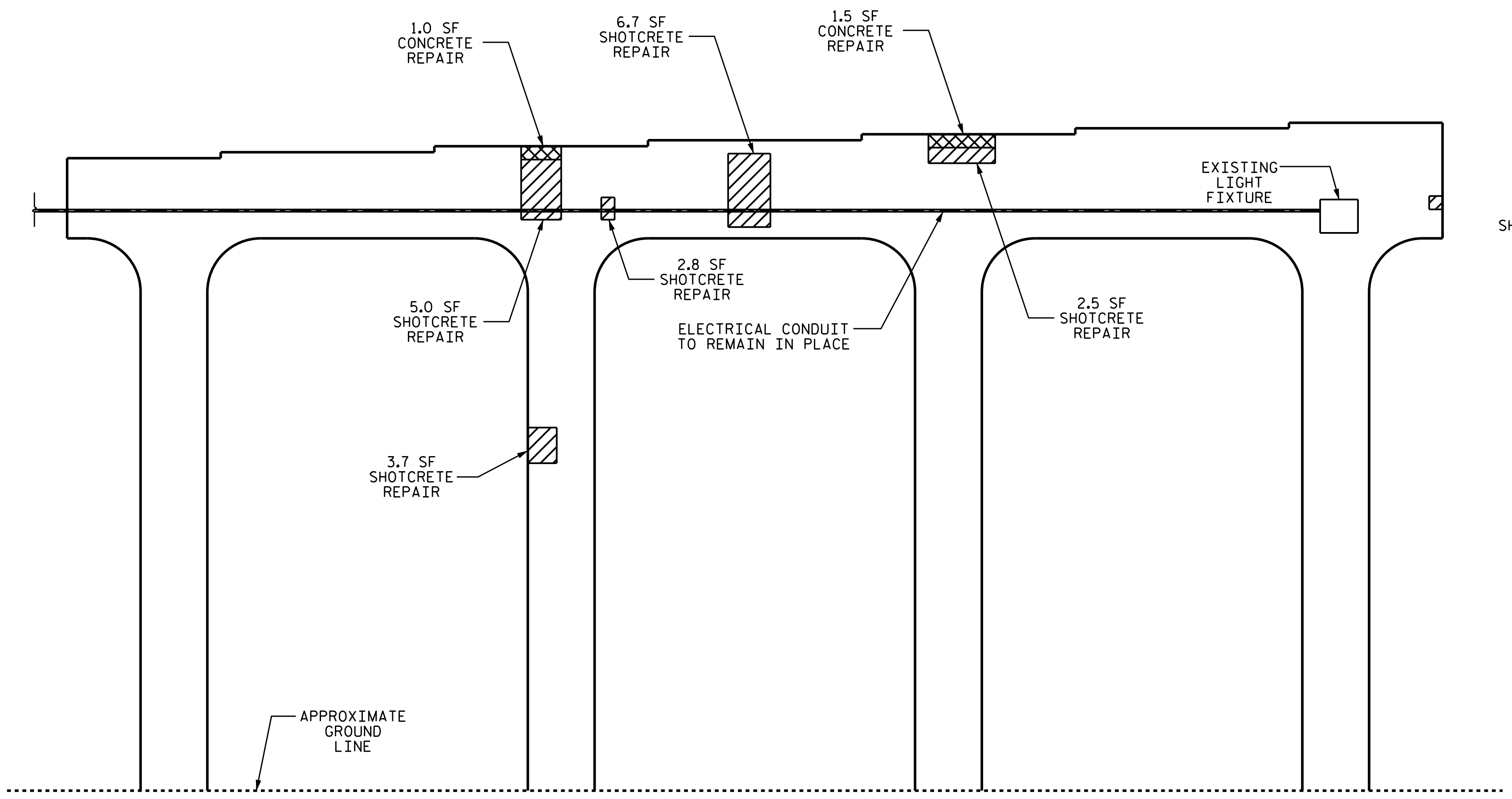
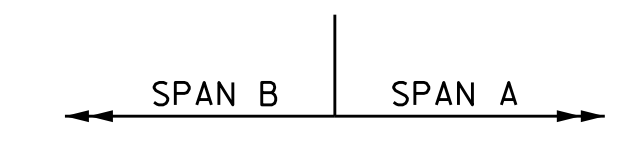
**BENT 1
 NORTHBOUND
 SPAN B FACE**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			274
2			4			

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BOTTOM OF CAP



ELEVATION

END VIEW

BENT 1 - NORTHBOUND




DRAWN BY : R.L. PUTEK DATE : 05/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 07/2021

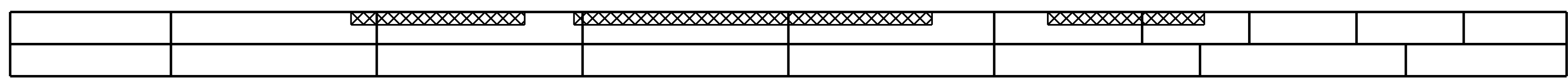
AS-BUILT REPAIR QUANTITY TABLE				
BENT 1 SOUTHBOUND	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	12.3	6.2		
COLUMNS	3.9	2.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		1.0		
COLUMNS		0.0		
EPOXY COATING		SQ. FT.		SQ. FT.
TOP OF BENT CAP		173		

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 SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

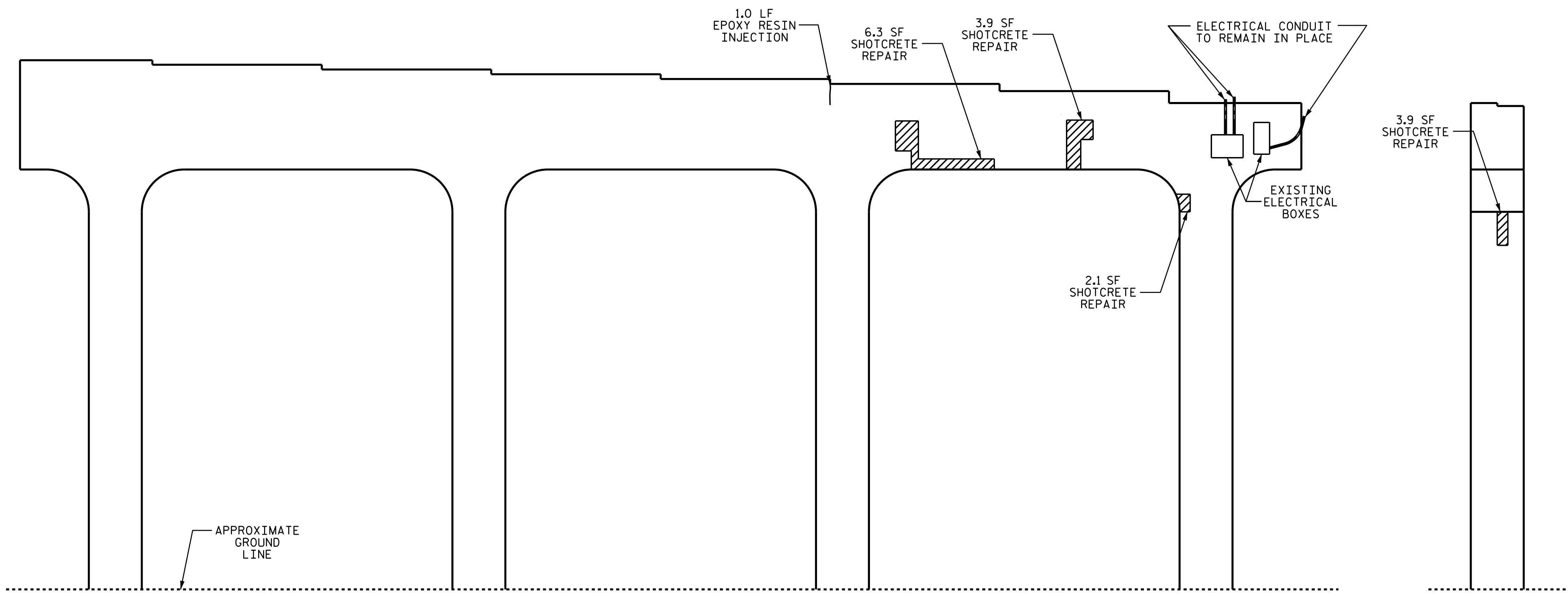
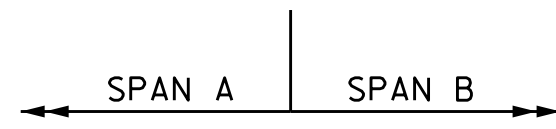
CONCRETE REPAIRS MAYBE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.
 FOR SHOTCRETE REPAIR SEE SPECIAL PROVISIONS.
 FOR CONCRETE REPAIR SEE SPECIAL PROVISIONS.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY 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)



SPAN B
SPAN A

TOP OF CAP



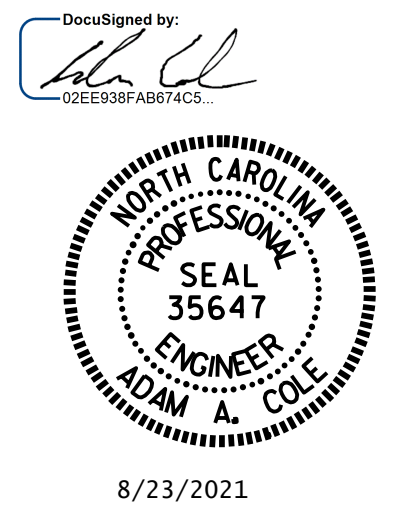
ELEVATION

END VIEW

BENT 1 - SOUTHBOUND

PROJ. NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590327

SHEET 1 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**BENT 1
 SOUTHBOUND
 SPAN A FACE**

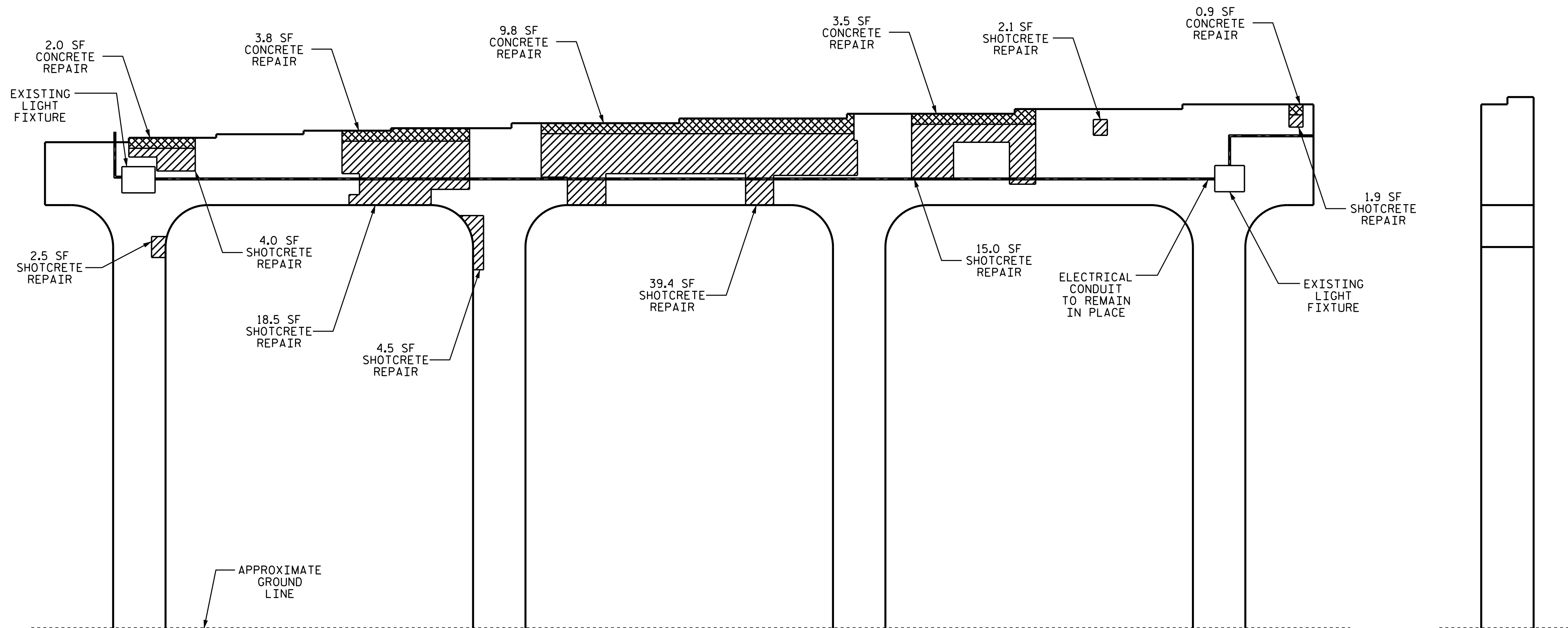
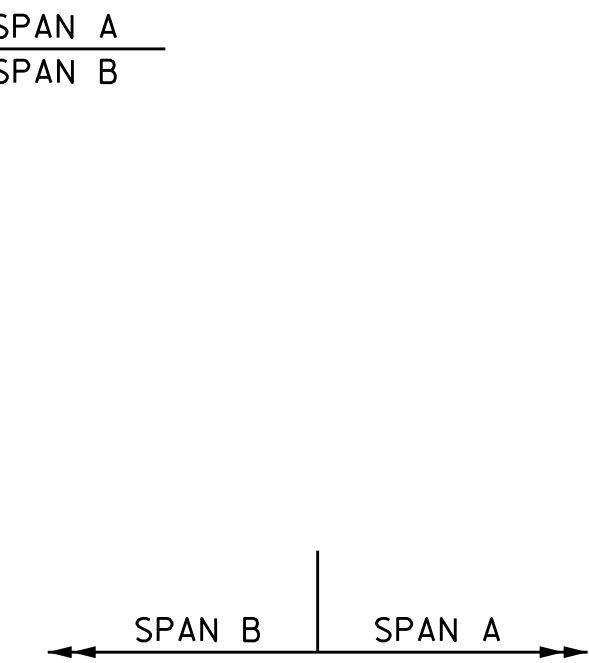
DRAWN BY : R.L. PUTEK DATE : 05/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 07/2021

NO.	REVISIONS			SHEET NO.
	BY:	DATE:	NO.	
1			3	S7-14 TOTAL SHEETS 274
2			4	

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11.1 SF SHOTCRETE REPAIR
BOTTOM OF CAP



ELEVATION

END VIEW

BENT 1 - SOUTHBOUND

AS-BUILT REPAIR QUANTITY TABLE				
BENT 1 SOUTHBOUND	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SO. FT.	VOLUME CU. FT.	AREA SO. FT.	VOLUME CU. FT.
CAP	99.0	49.5		
COLUMNS	0.0	0.0		
CONCRETE REPAIRS	AREA SO. FT.	VOLUME CU. FT.	AREA SO. FT.	VOLUME CU. FT.
CAP	20.0	10.0		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		0.0		
COLUMNS		0.0		
EPOXY COATING		SO. FT.		SO. FT.
TOP OF BENT CAP		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.

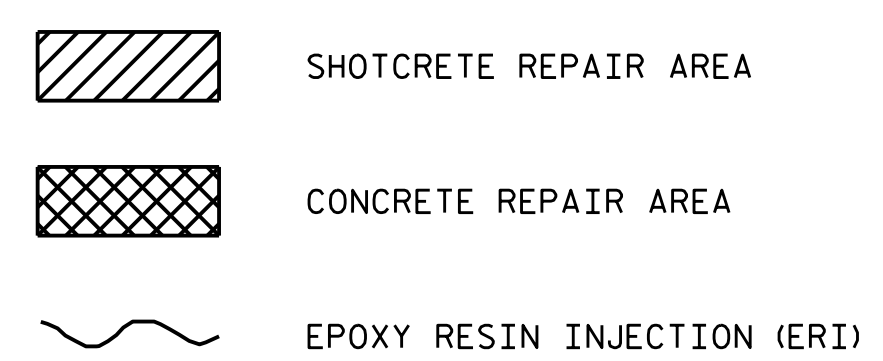
NOTES:
REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES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

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

FOR SHOTCRETE REPAIR SEE SPECIAL PROVISIONS.

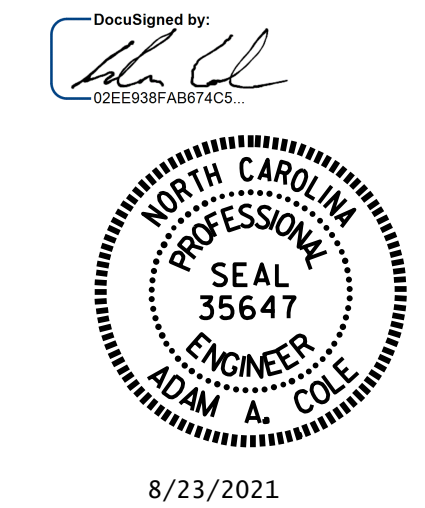
FOR CONCRETE REPAIR SEE SPECIAL PROVISIONS.

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.



PROJ. NO. I-5746C
MECKLENBURG COUNTY
BRIDGE NO. 590327

SHEET 2 OF 2



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**BENT 1
SOUTHBOUND
SPAN B FACE**

DRAWN BY : R.L. PUTK DATE : 05/2021
CHECKED BY : H.A. LOCKLEAR DATE : 05/2021

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S7-15
2			4			TOTAL SHEETS 274




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AS-BUILT REPAIR QUANTITY TABLE				
BENT 2 NORTHBOUND	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SO. FT.	VOLUME CU. FT.	AREA SO. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
COLUMNS	0.0	0.0		
CONCRETE REPAIRS	AREA SO. FT.	VOLUME CU. FT.	AREA SO. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		1.5		
COLUMNS		0.0		
EPOXY COATING		SO. FT.		SO. FT.
TOP OF BENT CAP		141		

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.

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CONCRETE REPAIRS MAYBE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.
 FOR SHOTCRETE REPAIR SEE SPECIAL PROVISIONS.
 FOR CONCRETE REPAIR SEE SPECIAL PROVISIONS.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 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.

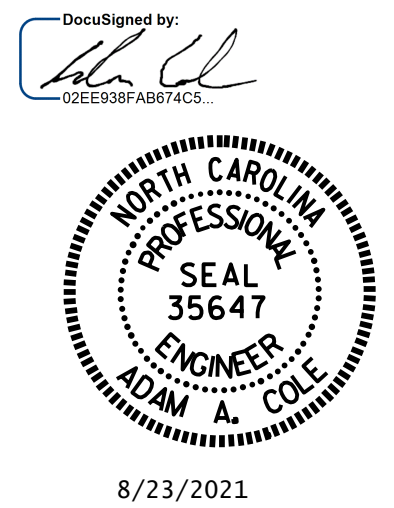
-  SHOTCRETE REPAIR AREA
-  CONCRETE REPAIR AREA
-  EPOXY RESIN INJECTION (ERI)

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590327

SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

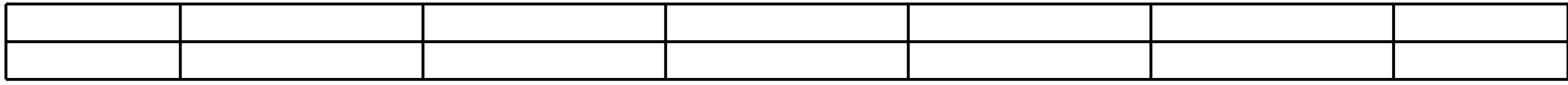
**BENT 2
 NORTHBOUND
 SPAN B FACE**



8/23/2021

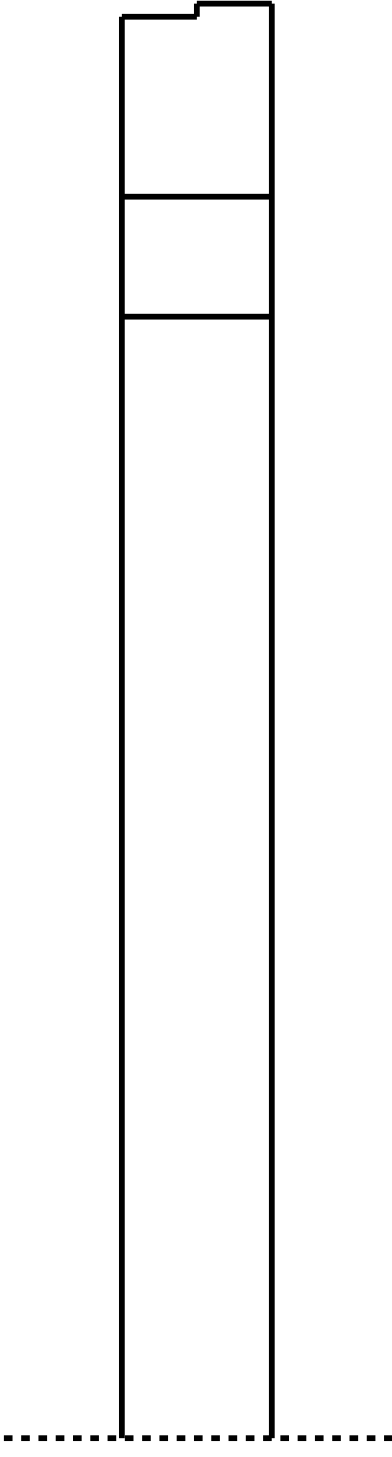
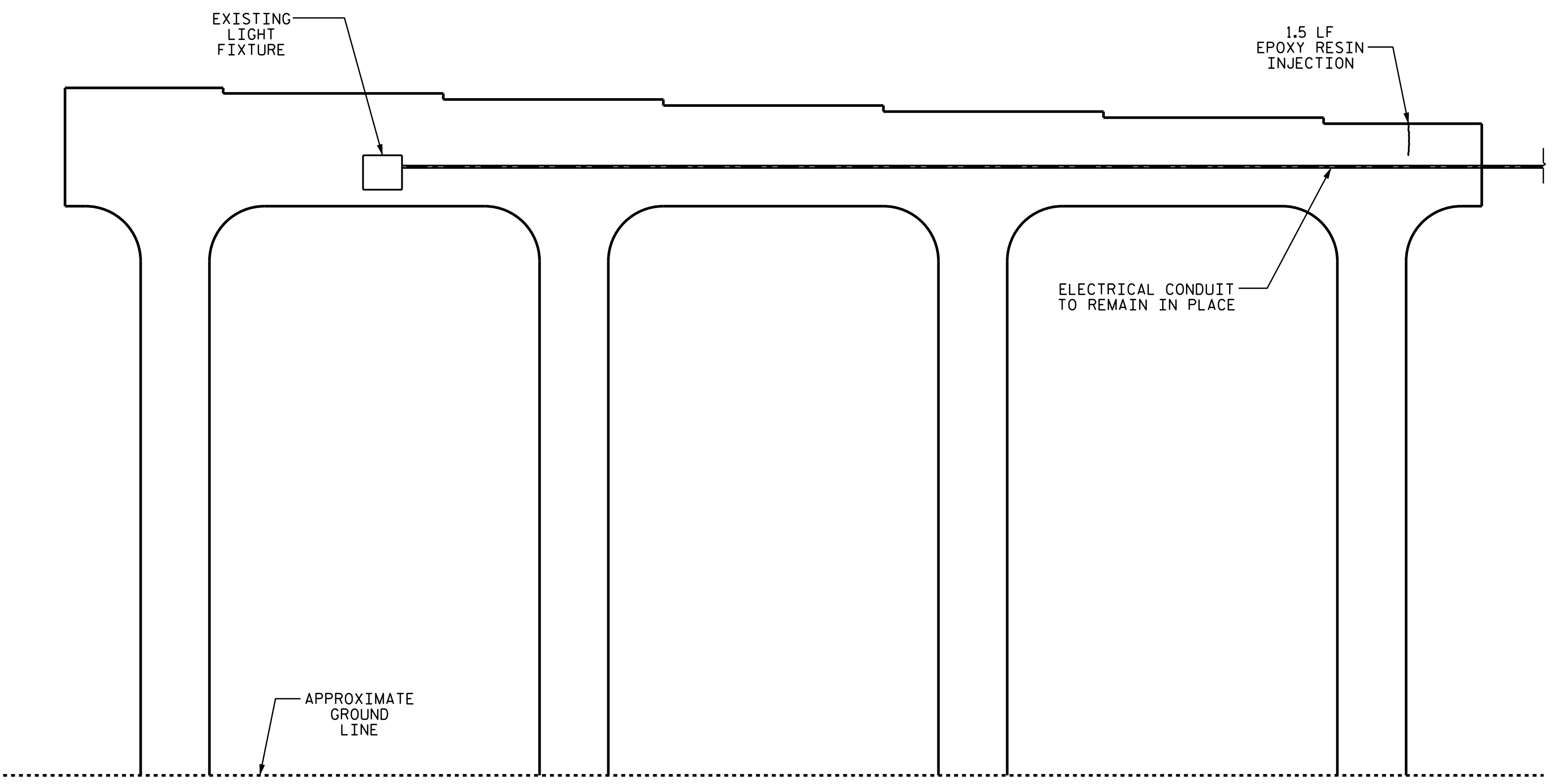
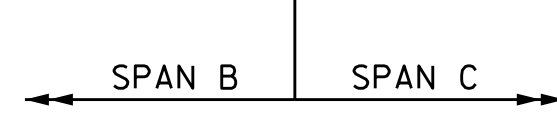
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			274
2			4			

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



SPAN C
 SPAN B

TOP OF CAP



ELEVATION

END VIEW

BENT 2 - NORTHBOUND

DRAWN BY : R.L. PUTEK DATE : 05/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 07/2021

AS-BUILT REPAIR QUANTITY TABLE				
BENT 2 NORTHBOUND	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SO. FT.	VOLUME CU. FT.	AREA SO. FT.	VOLUME CU. FT.
CAP	2.5	1.3		
COLUMNS	0.0	0.0		
CONCRETE REPAIRS	AREA SO. FT.	VOLUME CU. FT.	AREA SO. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
CAP	5.5			
COLUMNS	0.0			
EPOXY COATING	SQ. FT.		SQ. FT.	
TOP OF BENT CAP	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.

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

FOR SHOTCRETE REPAIR AREA SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIR AREA SEE SPECIAL PROVISIONS.

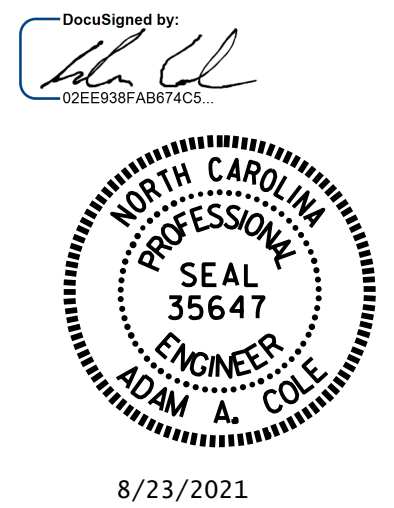
FOR EXPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

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)

PROJ. NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590327

SHEET 2 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**BENT 2
 NORTHBOUND
 SPAN C FACE**

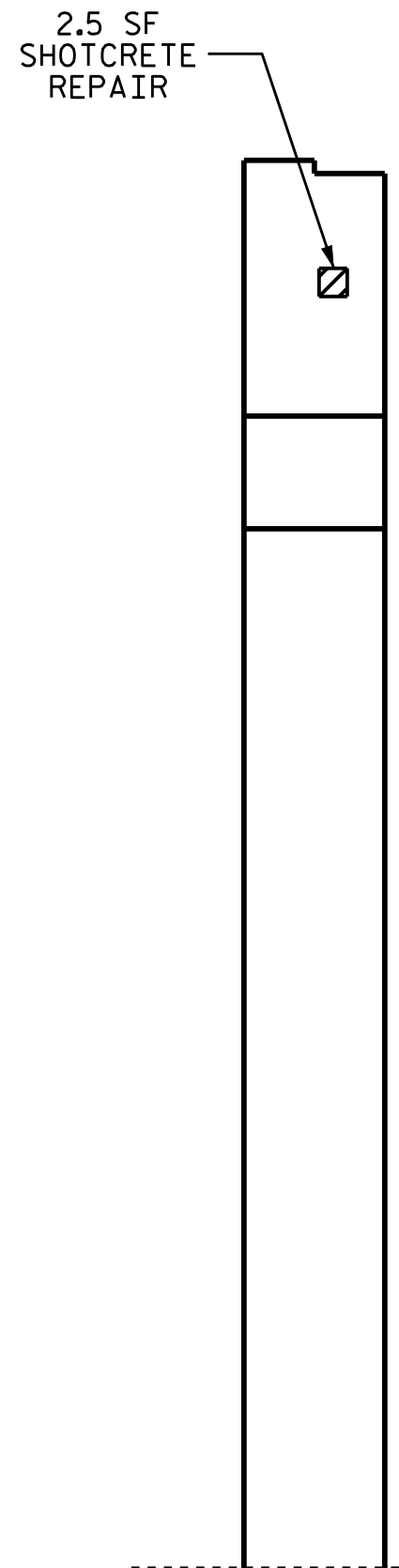
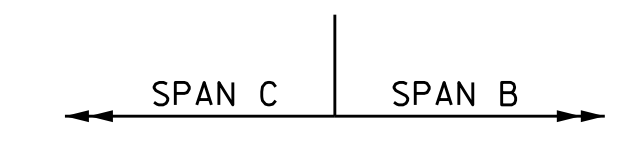
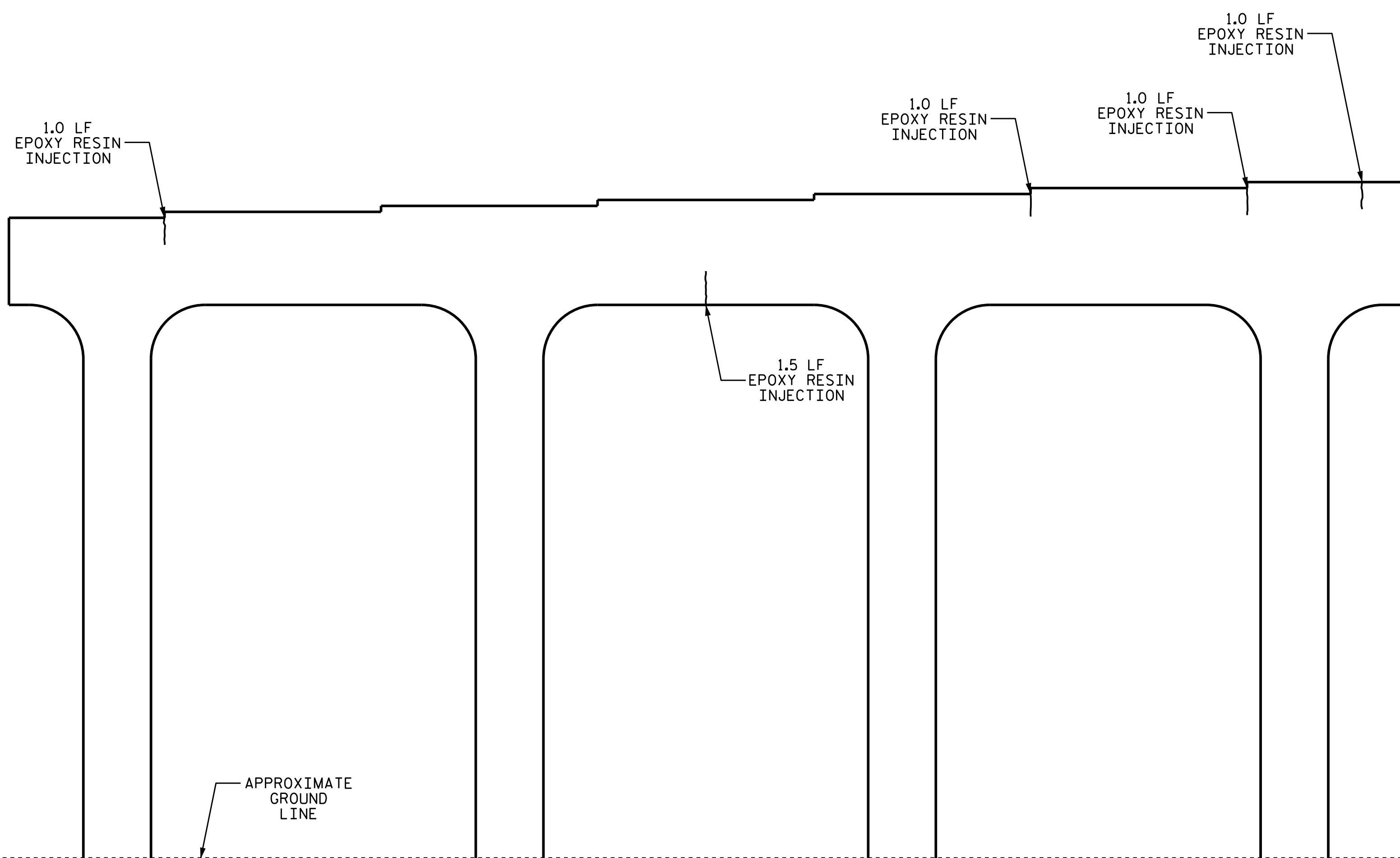
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			17
2			4			274

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SPAN B
 SPAN C

BOTTOM OF CAP



ELEVATION

END VIEW

BENT 2 - NORTHBOUND

DRAWN BY : RL. PUTEK DATE : 05/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 07/2021

AS-BUILT REPAIR QUANTITY TABLE				
BENT 2 SOUTHBOUND	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SO. FT.	VOLUME CU. FT.	AREA SO. FT.	VOLUME CU. FT.
CAP	13.2	6.6		
COLUMNS	36.9	18.5		
CONCRETE REPAIRS	AREA SO. FT.	VOLUME CU. FT.	AREA SO. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		0.0		
COLUMNS		0.0		
EPOXY COATING		SO. FT.		SO. FT.
TOP OF BENT CAP		212		

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.

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

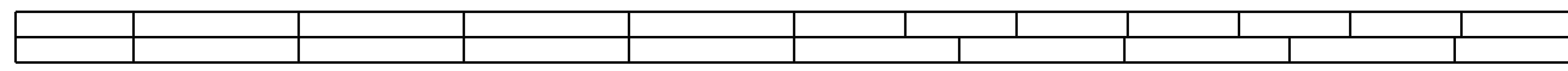
FOR SHOTCRETE REPAIRS SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

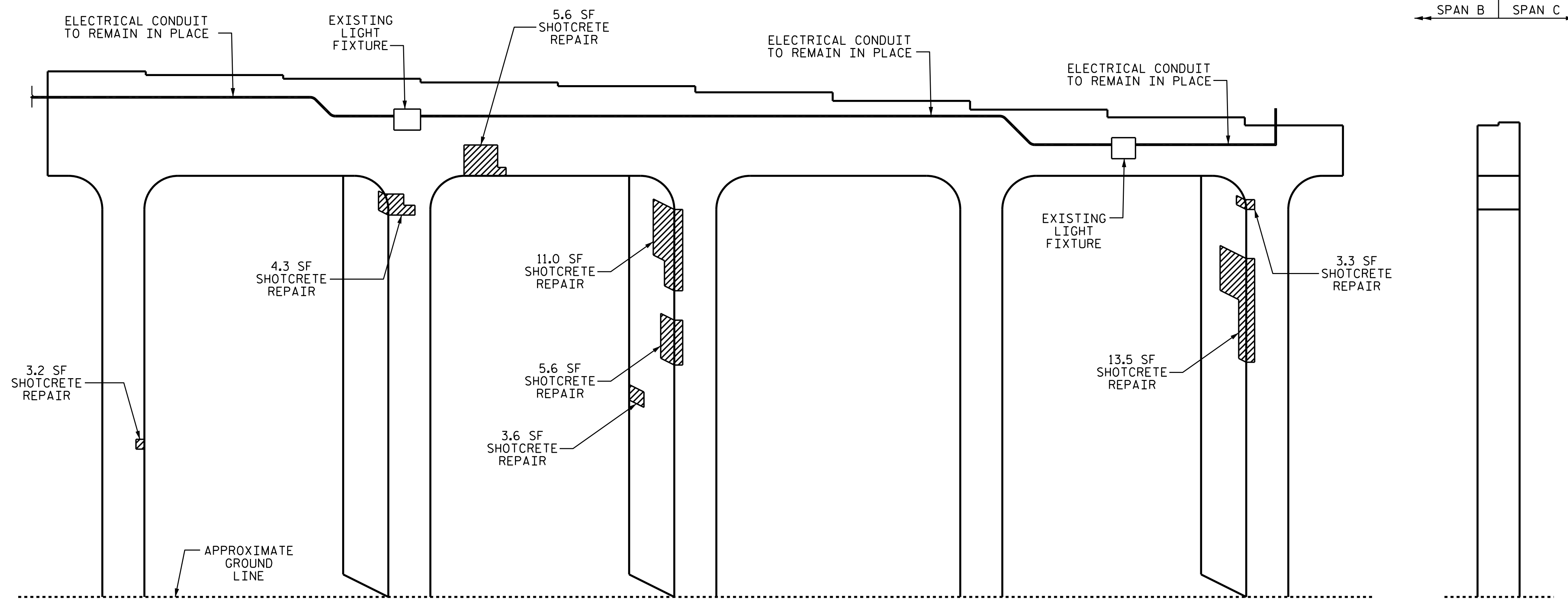
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

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



SPAN C
SPAN B

TOP OF CAP



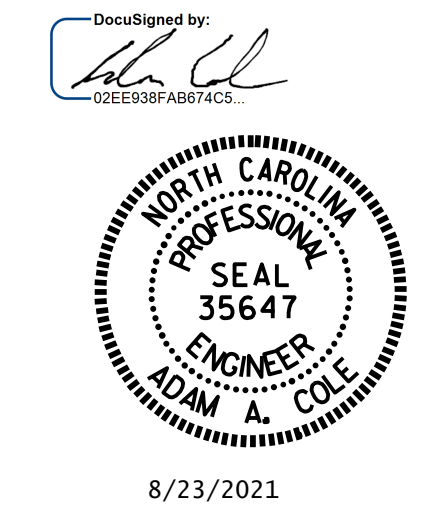
ELEVATION

END VIEW

BENT 2 - SOUTHBOUND

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590327

SHEET 1 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**BENT 2
 SOUTHBOUND
 SPAN B FACE**

DRAWN BY : R.L. PUTEK DATE : 05/2021
 CHECKED BY : HEARBRT LOCKLEAR DATE : 07/2021

NO.	REVISIONS			SHEET NO.
	BY:	DATE:	NO.	
1			3	S7-18 TOTAL SHEETS 274
2			4	




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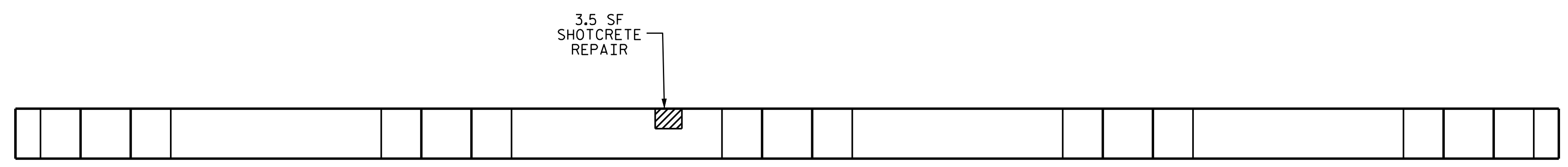
AS-BUILT REPAIR QUANTITY TABLE				
BENT 2 SOUTHBOUND	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SO. FT.	VOLUME CU. FT.	AREA SO. FT.	VOLUME CU. FT.
CAP	14.9	7.5		
COLUMNS	7.6	3.8		
CONCRETE REPAIRS	AREA SO. FT.	VOLUME CU. FT.	AREA SO. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		8.5		
COLUMNS		0.0		
EPOXY COATING		SO. FT.		SO. FT.
TOP OF BENT CAP		212		

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 SHALL 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 MAYBE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.
 FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.
 FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

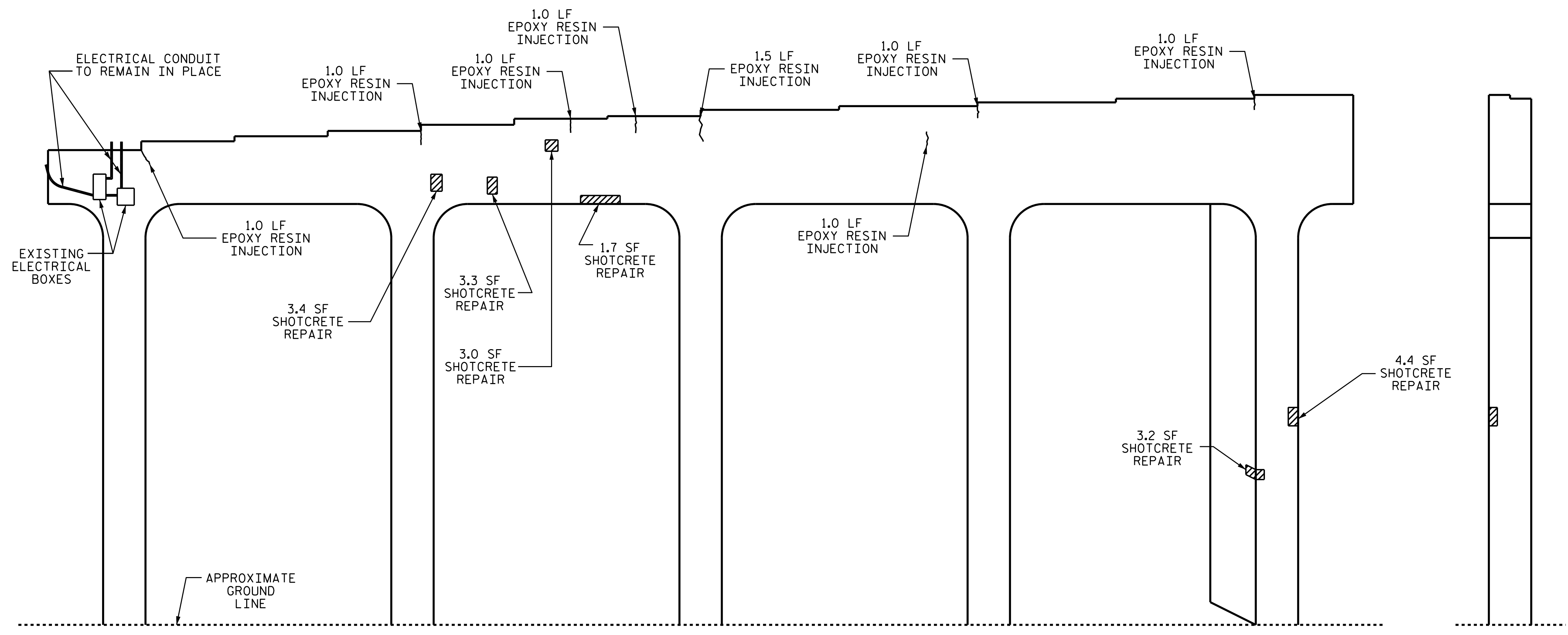
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

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



SPAN B
SPAN C

BOTTOM OF CAP



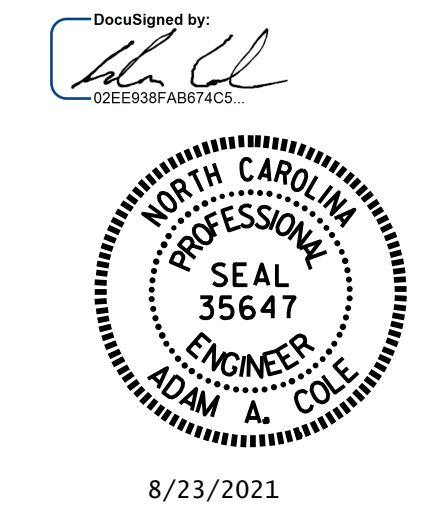
ELEVATION

END VIEW

BENT 2 - SOUTHBOUND

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590327

SHEET 2 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**BENT 2
 SOUTHBOUND
 SPAN C FACE**

DRAWN BY : R.L. PUTEK DATE : 05/2021
 CHECKED BY : HEARBRT LOCKLEAR DATE : 07/2021

NO.	REVISIONS			SHEET NO.
	BY:	DATE:	NO.	
1			3	S7-19 TOTAL SHEETS 274
2			4	

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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 SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

FOR CAP REPAIRS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

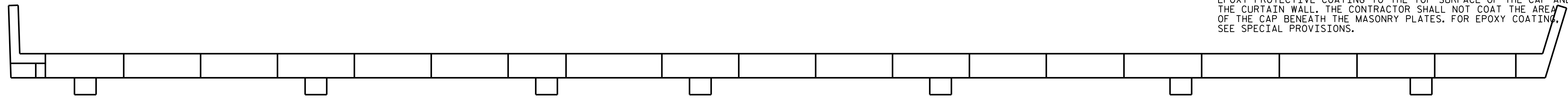
CONCRETE REPAIRS MAYBE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

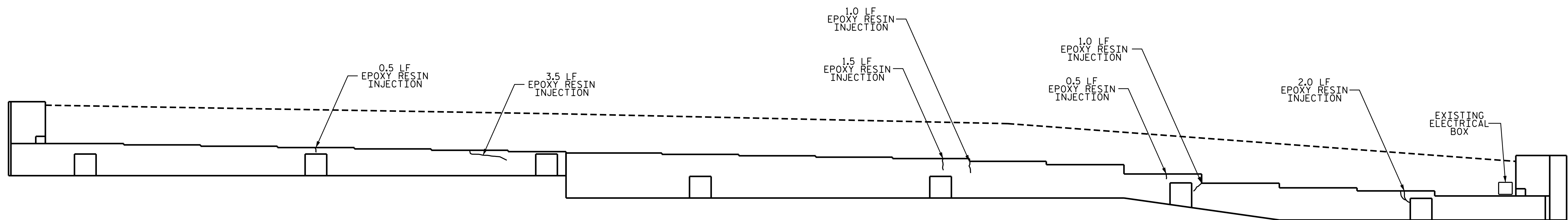
FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

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



PLAN

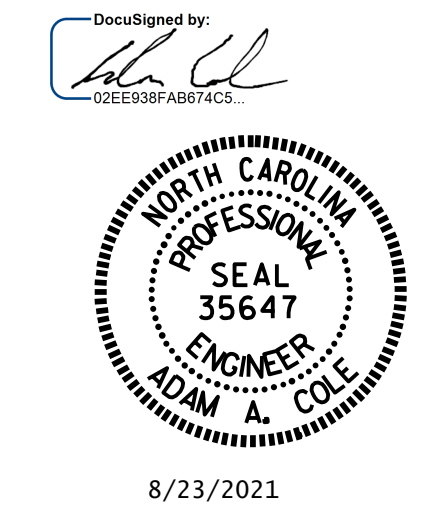


ELEVATION

AS-BUILT REPAIR QUANTITY TABLE				
END BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	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		10.0		
EPOXY COATING		SQ. FT.		SQ. FT.
TOP OF END BENT CAP		240		
CURTAIN WALL		605		

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

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590327



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

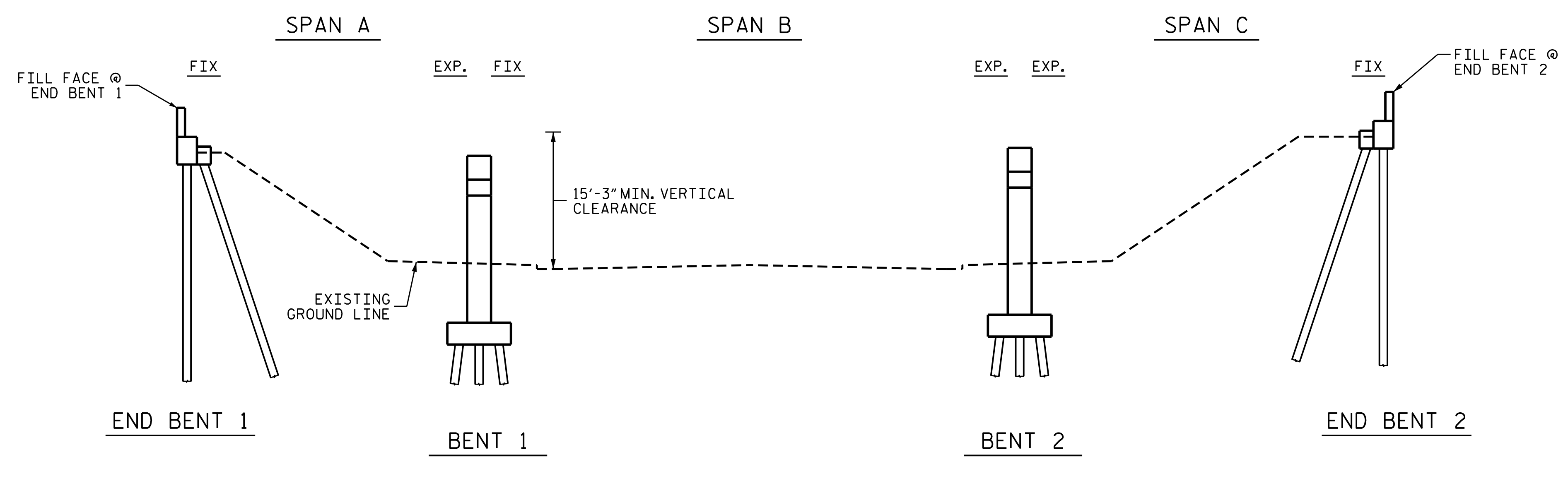
END BENT 2

DRAWN BY : R.L. PUTEK DATE : 05/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 07/2021

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.

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S7-20
1			3			TOTAL SHEETS
2			4			274

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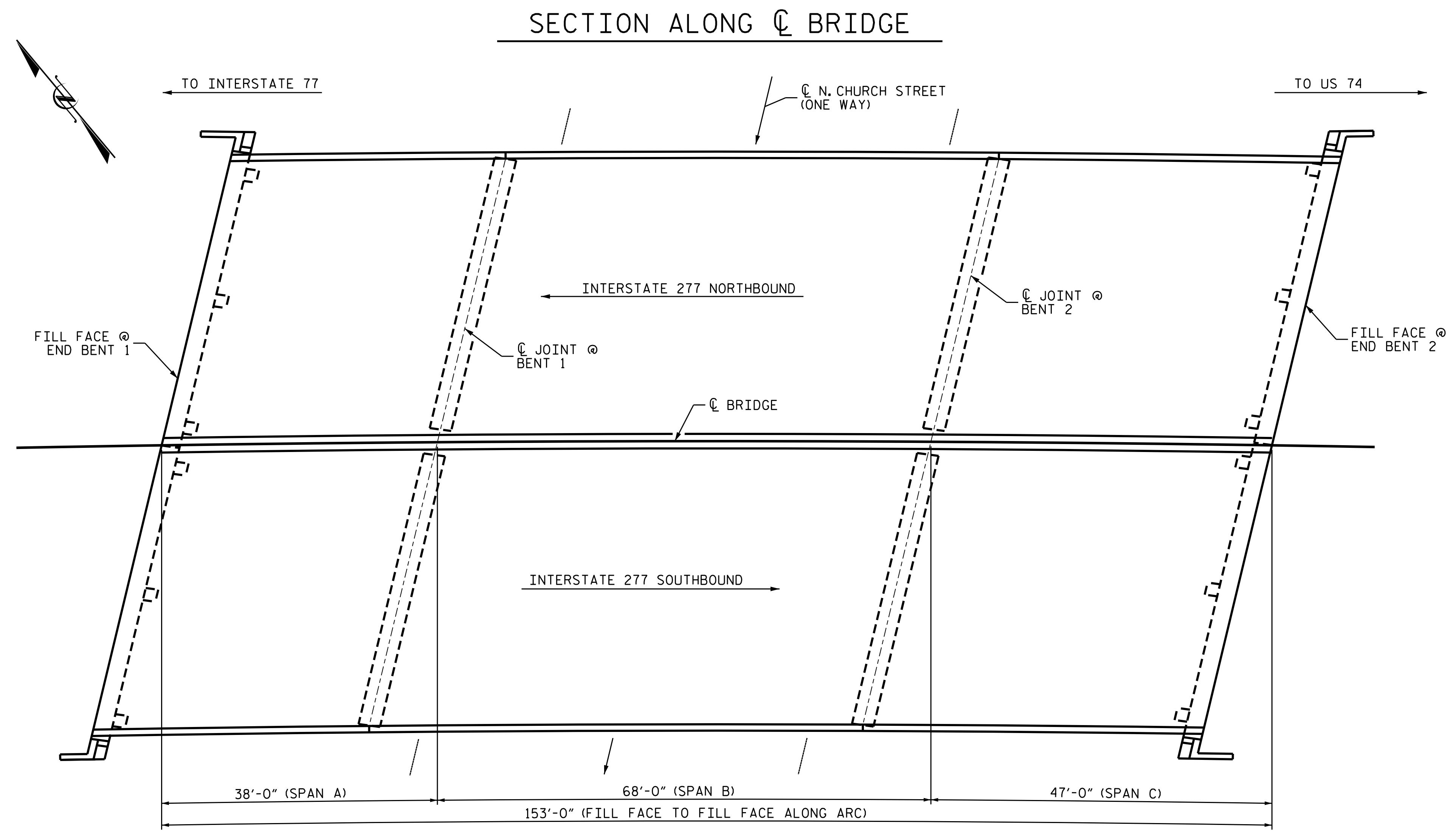
NOTES

PROFILE INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 07/24/2020.

BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

SCOPE OF WORK

- REMOVE ASPHALT WEARING SURFACE AND PARTIALLY REMOVE BRIDGE DECK CONCRETE BY SCARIFICATION AND SHOTBLASTING METHODS.
- OVERLAY PREPARED BRIDGE DECK WITH POLYMER CONCRETE (PC).
- GROOVE POLYMER CONCRETE (PC) BRIDGE DECK.
- INSTALL FOAM JOINT SEALS.
- CLEAN BEARINGS AND APPLY HRCSA.
- CLEAN AND REPAIR STEEL I-BEAMS.
- SPOT PAINTING OF STEEL STRUCTURE REPAIR AREAS.
- REMOVE UNSOUND CONCRETE AND PROPERLY PREPARE SHOTCRETE AND CONCRETE REPAIR AREAS.
- PERFORM SHOTCRETE AND CONCRETE REPAIRS IN PREPARED AREAS.
- EPOXY INJECTION OF CONCRETE CRACKS.
- REMOVE DEBRIS FROM TOP OF END BENT AND BENT CAPS AND APPLY EPOXY COATING.



PLAN

I HEREBY CERTIFY THAT THIS STRUCTURE WAS REHABILITATED ACCORDING TO THESE PLANS OR AS NOTED HEREIN.

RESIDENT ENGINEER _____ DATE _____



PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590328

SHEET 1 OF 2

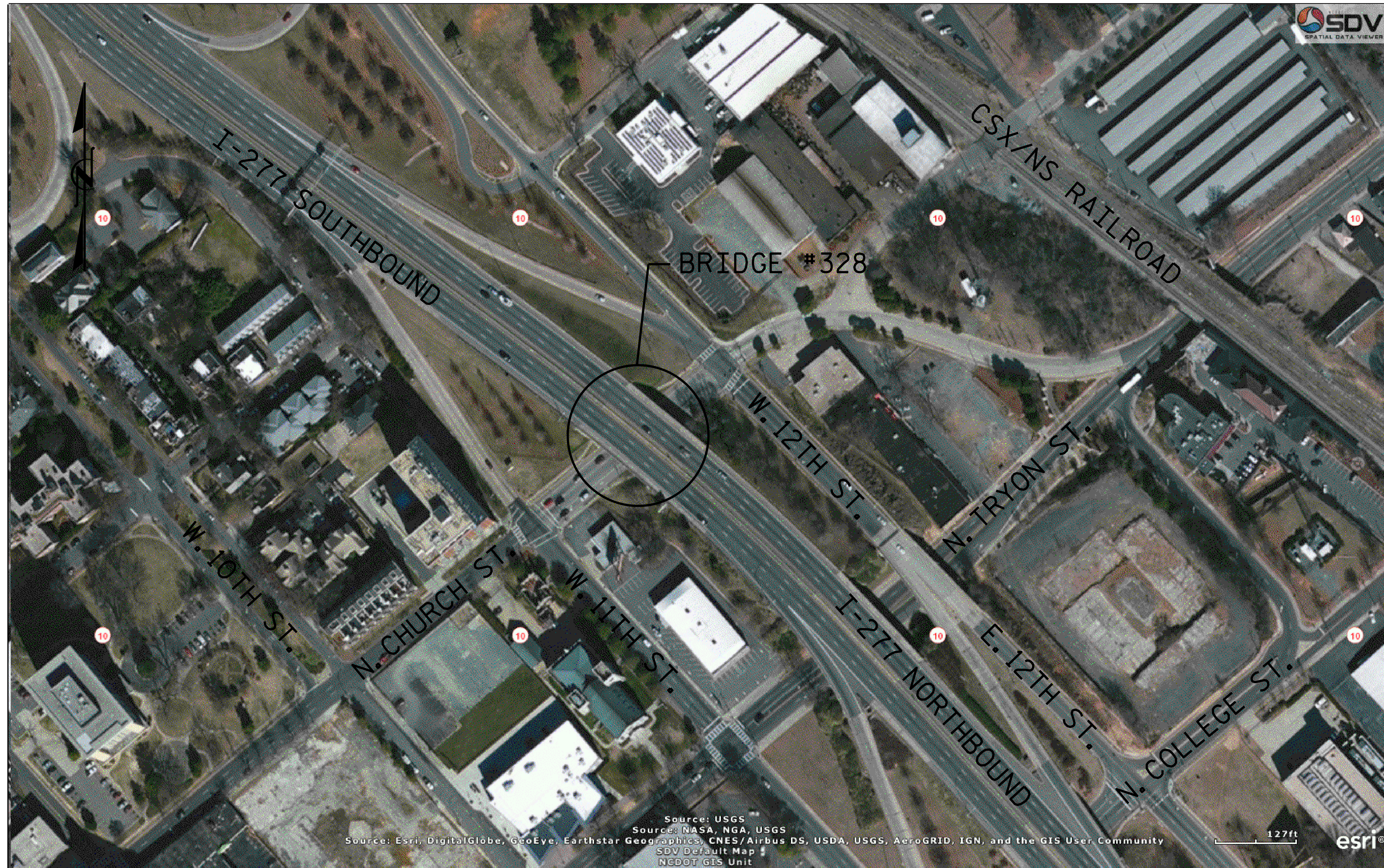
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**GENERAL DRAWING
 FOR BRIDGE ON I-277
 OVER N. CHURCH STREET**

DRAWN BY : R.L. PUTEK/E. BAYISSA DATE : 07/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 07/2021

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S8-1
1			3			TOTAL SHEETS
2			4			274

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LOCATION SKETCH

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

BRIDGE COORDINATES

LATITUDE: 35°-14'-2.02"
LONGITUDE: 80°-50'-9.4"

NOTES

THE CONTRACTOR SHALL PROVIDE INDEPENDENT ASSURANCE SAMPLES OF REINFORCING STEEL AS FOLLOWS: FOR PROJECTS REQUIRING UP TO 400 TONS OF REINFORCING STEEL, ONE 30 INCH SAMPLE OF EACH SIZE BAR USED, AND FOR PROJECTS REQUIRING OVER 400 TONS OF REINFORCING STEEL, TWO 30 INCH SAMPLES OF EACH SIZE BAR USED. THE BARS FROM WHICH THE SAMPLES ARE TAKEN MUST THEN BE SPLICED WITH REPLACEMENT BARS OF THE SIZE AND LENGTH OF THE SAMPLE, PLUS A MINIMUM LAP SPLICE OF THIRTY BAR DIAMETERS. PAYMENT FOR THE SAMPLES OF REINFORCING STEEL SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.

WORK ON THE BRIDGES SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL BELOW. THE CONTRACTOR SHALL SUBMIT PLANS FOR CONSTRUCTION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS AND THE PROJECT SPECIAL PROVISIONS.

THE CONTRACTOR SHALL PERFORM ALL WORK WITH CARE SO THAT THE EXISTING STRUCTURE WHICH IS TO REMAIN IN PLACE WILL NOT BE DAMAGED. IF THE CONTRACTOR DAMAGES ANY PART OF THE EXISTING STRUCTURE WHICH IS TO REMAIN IN PLACE, THE DAMAGED AREA SHALL BE REPAIRED OR REPLACED IN A MANNER SATISFACTORY TO THE ENGINEER AT NO ADDITIONAL COST TO THE DEPARTMENT.

CONTRACTOR SHALL DETERMINE EXTENT OF WORKING AREA, STAGING PROCESS, AND INSTALL COVER ASSEMBLY AS NECESSARY TO MEET THE REQUIREMENTS OF TRAFFIC MANAGEMENT PLANS.

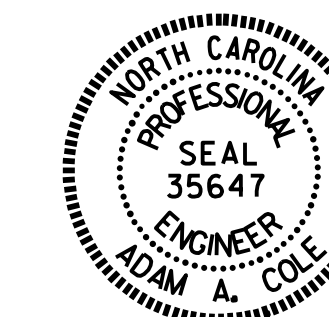
PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL A COMPLETE SEQUENCE OF TASKS FOR EACH OPERATION AFFECTING THE BRIDGE SURFACE AND/OR TRAFFIC.

AT THE TIME OF PREPARATION OF THESE PLANS, IT WAS NOT ANTICIPATED THAT ITEMS SHOWN BELOW WOULD BE REQUIRED. HOWEVER, IT MAY BE DETERMINED IN THE FIELD THAT THESE ITEMS, OR OTHER WORK WILL BE NECESSARY TO PROPERLY COMPLETE THE INTENDED BRIDGE PRESERVATION/REHABILITATION WORK. THE CONTRACTOR SHALL BE PREPARED TO PERFORM SUCH WORK IN A TIMELY MANNER, AS DETERMINED IN THE FIELD. SUCH WORK SHALL BE CONSIDERED EXTRA WORK AND SHALL BE ADDRESSED AS PER ARTICLE 104-7 OF THE STANDARD SPECIFICATIONS. PROJECT SPECIAL PROVISIONS THAT OUTLINE REQUIREMENTS FOR THESE POTENTIAL ADDITIONAL WORK ITEMS HAVE BEEN PROVIDED IN PROJECT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES, AND COSTS WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

UNANTICIPATED ITEMS:

ITEM NO.	DESCRIPTION	UNIT
1	CLASS III SURFACE PREPARATION	LIN. FT.

DocuSigned by:
02E898FAB074CS...



8/23/2021

NOTES

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

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

THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THROUGH OF THE DECK.

FOR SCARIFYING BRIDGE DECK, SHOTBLASTING BRIDGE DECK, AND CLASS II SURFACE PREPARATION, SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.

EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING REPAIR OF BRIDGE DECKS.

THE EXISTING BRIDGE DECK SHALL BE REPAIRED AT LOCATIONS SHOWN ON THE PLANS OR AS DETERMINED BY THE ENGINEER AFTER SCARIFICATION AND PRIOR TO THE SURFACE PREPARATION AND APPLICATION OF THE PC OVERLAY. UNLESS OTHERWISE APPROVED, SUCH LOCATIONS SHALL BE REPAIRED WITH PC.

FOR CONCRETE DECK REPAIR FOR PC OVERLAY, PC MATERIALS AND PLACING & FINISHING PC OVERLAY, SEE POLYMER CONCRETE BRIDGE DECK OVERLAY SPECIAL PROVISION.

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

LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG THE CENTERLINE OR EDGE OF TRAVEL LANES.

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR POLLUTION CONTROL AND SPOT PAINTING OF STEEL STRUCTURE REPAIR AREAS, SEE SPOT PAINTING OF STEEL STRUCTURE REPAIR AREAS SPECIAL PROVISION.

FOR PAINTING CONTAINMENT, POLLUTION CONTROL, AND CLEANING & PAINTING EXISTING BEARINGS WITH HRCSA, SEE CLEANING & PAINTING EXISTING BEARINGS WITH HRCSA SPECIAL PROVISION.

FOR BEAM REPAIR, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

FOR BRIDGE JACKING, SEE SPECIAL PROVISIONS.

SHOTCRETE REPAIRS MAY BE REPLACE WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

PROJECT NO. I-5746C
MECKLENBURG COUNTY
BRIDGE NO. 590328

SHEET 2 OF 2

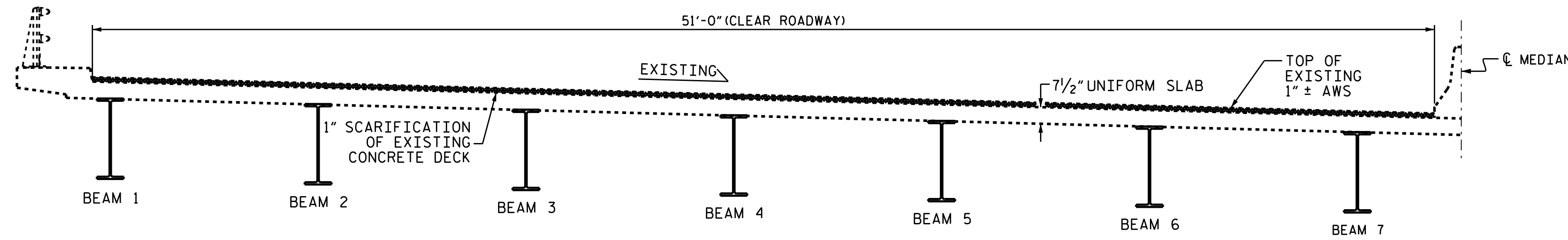
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR BRIDGE ON I-277
OVER N. CHURCH STREET

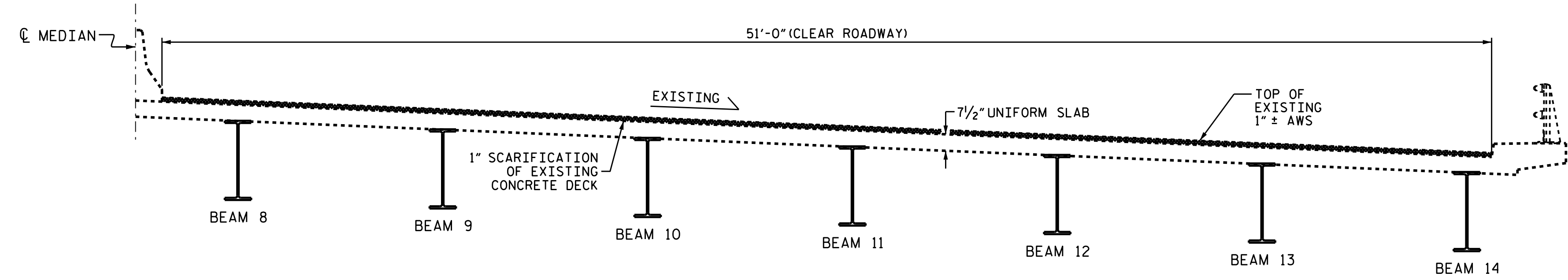
DRAWN BY : R.L.PUTEK/E. BAYISSA DATE : .05/2021
CHECKED BY : H.A. LOCKLEAR DATE : .05/2021

DOCUMENT NOT CONSIDERED
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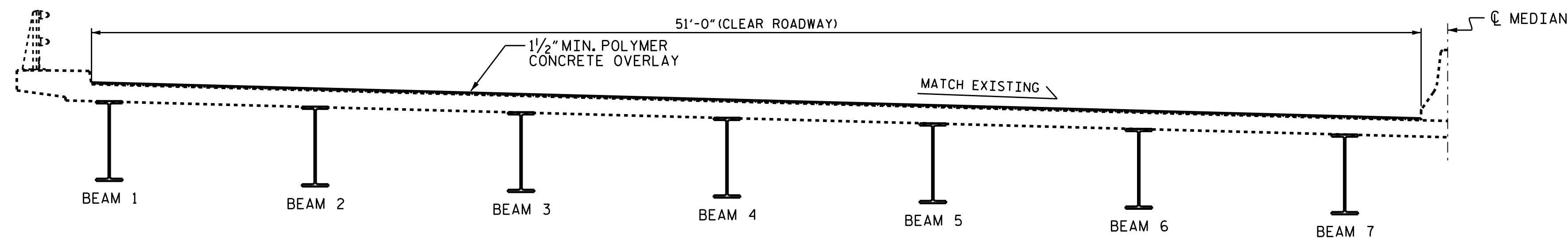
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S8-2
1			3			TOTAL SHEETS
2			4			274



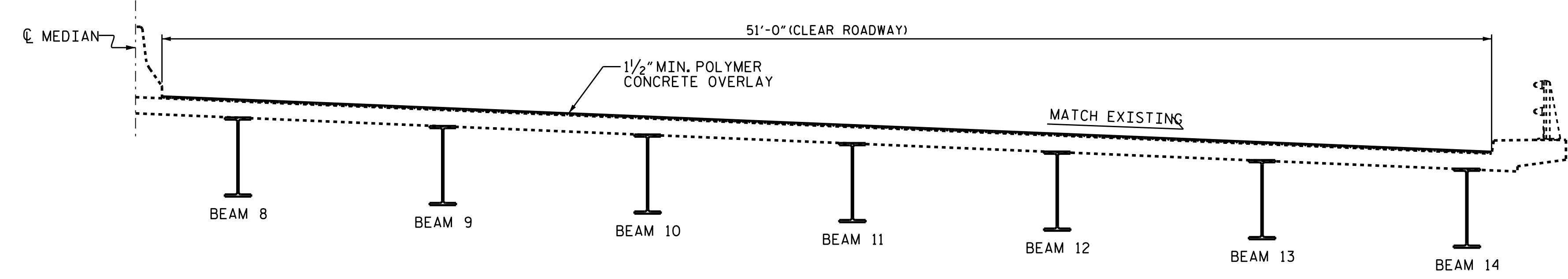
EXISTING TYPICAL SECTION - NORTHBOUND LANES



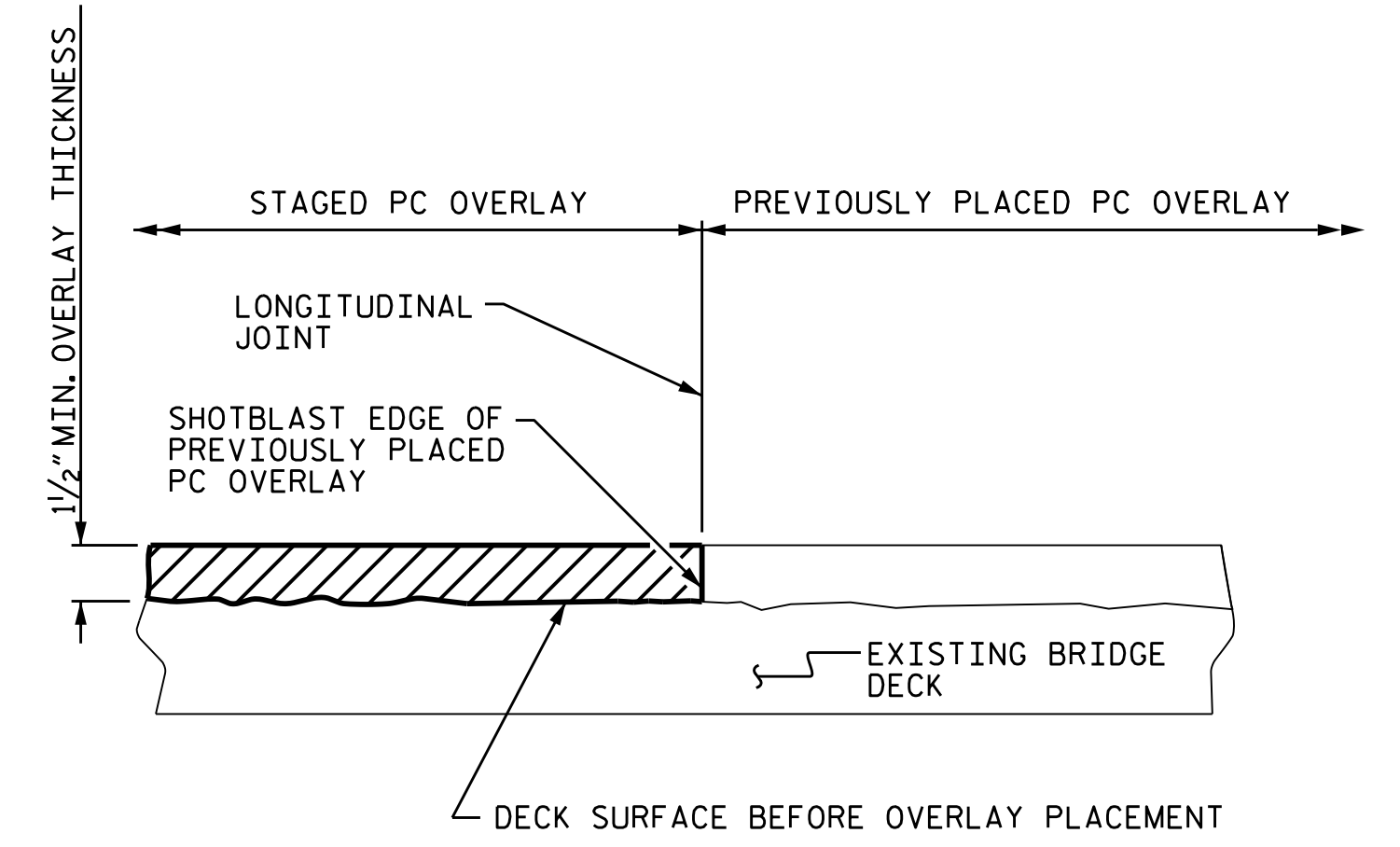
EXISTING TYPICAL SECTION - SOUTHBOUND LANES



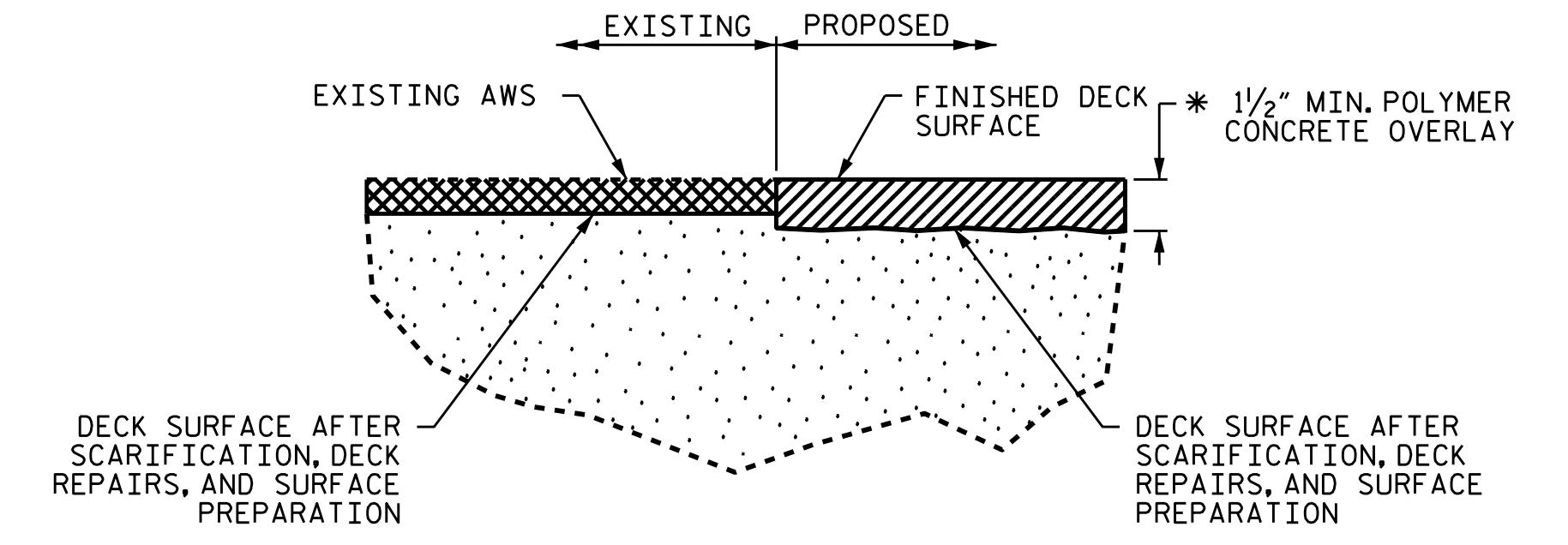
PROPOSED TYPICAL SECTION - NORTHBOUND LANES



PROPOSED TYPICAL SECTION - SOUTHBOUND LANES



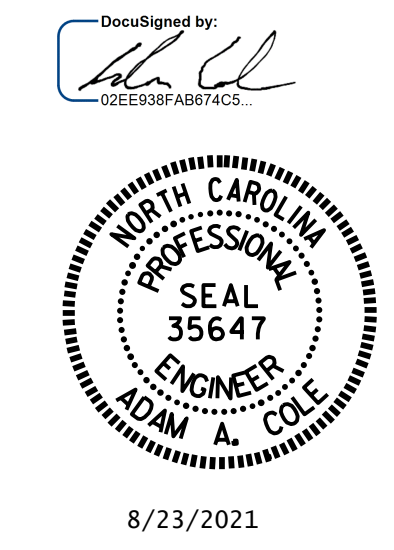
STAGED PC OVERLAY JOINT (AS NEEDED)



DETAIL FOR POLYMER CONCRETE OVERLAY

* FINISHED SURFACE ELEVATION SHALL MATCH EXISTING ASPHALT WEARING SURFACE ELEVATION, ACTUAL THICKNESS OF PC OVERLAY SHALL BE 1/2".

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO.: 590328

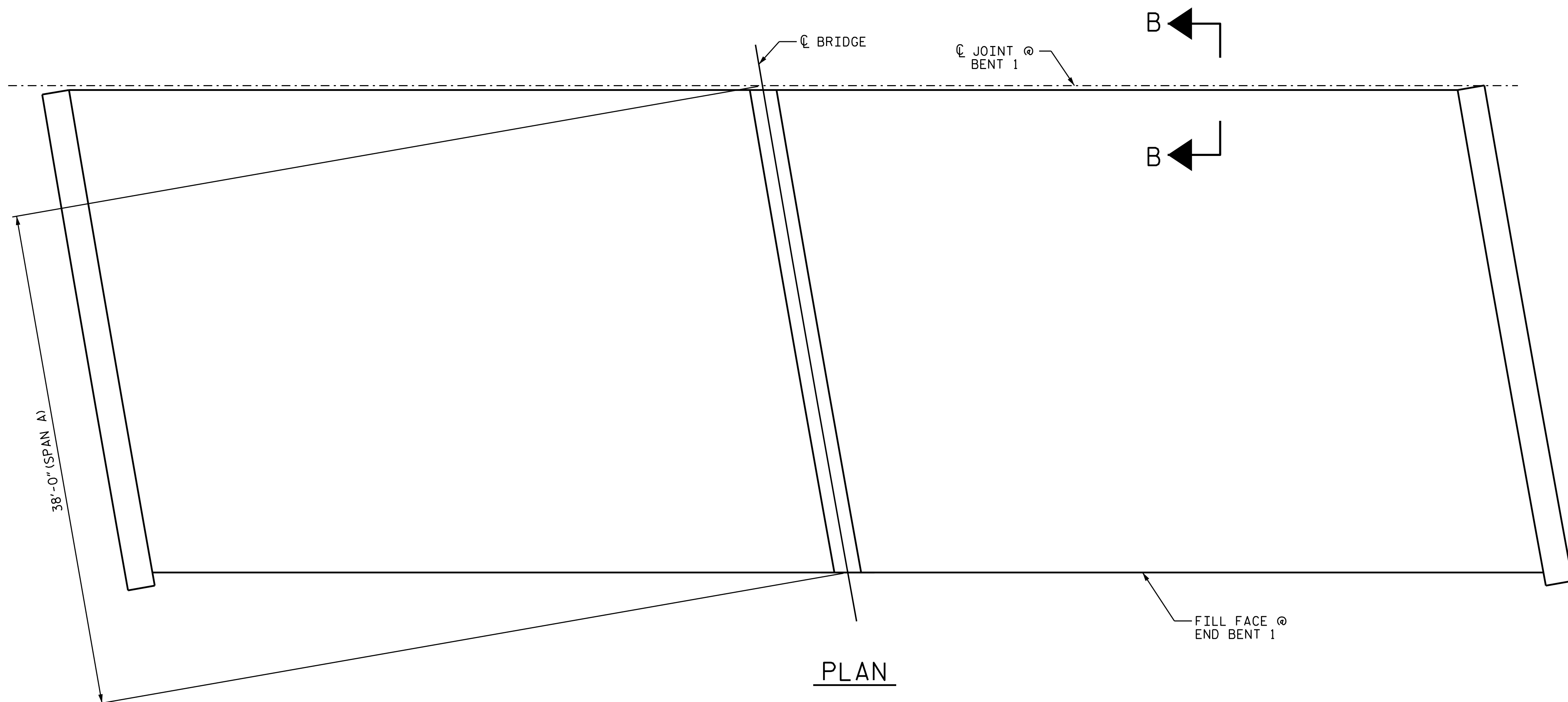


8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 TYPICAL SECTION
 AND
 PC OVERLAY
 DETAILS

DRAWN BY : R.L.PUTEK/E. BAYISSA DATE : 05/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 05/2021

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S8-3
1			3			TOTAL SHEETS
2			4			274



PLAN

AS-BUILT REPAIR QUANTITY TABLE		
TOP OF DECK REPAIRS		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	431 SQ. YDS.	
CLASS II SURFACE PREPARATION	0.0 SQ. YDS.	
CONCRETE DECK REPAIR FOR PC OVERLAY	0.0 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	431 SQ. YDS.	
PC MATERIALS	20.9 CU. YDS.	
PLACING AND FINISHING PC OVERLAY	431 SQ. YDS.	
GROOVING BRIDGE FLOORS	3498 SQ. FT.	

TOP OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PC OVERLAY AFTER REMOVAL OF UNSOUND CONCRETE. (MIN. 2" CLEAR TO SAWCUT). SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.

NOTES:

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FOR SECTION B-B, SEE "JOINT DETAILS" SHEET.

FOR CONCRETE DECK REPAIR FOR PC OVERLAY, SEE SPECIAL PROVISION.

FOR PC MATERIALS, SEE SPECIAL PROVISION.

 APPROX. CLASS II SURFACE PREPARATION

 EPOXY RESIN INJECTION (ERI)

DocuSigned by:
02E838FAB074C3



8/23/2021

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590328

SHEET 1 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK SURFACE REPAIR
 SPAN A

DRAWN BY : R.L.PUTEK/E. BAYISSA DATE : .05/2021
 CHECKED BY : H.A. LOCKLEAR DATE : .05/2021

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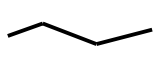
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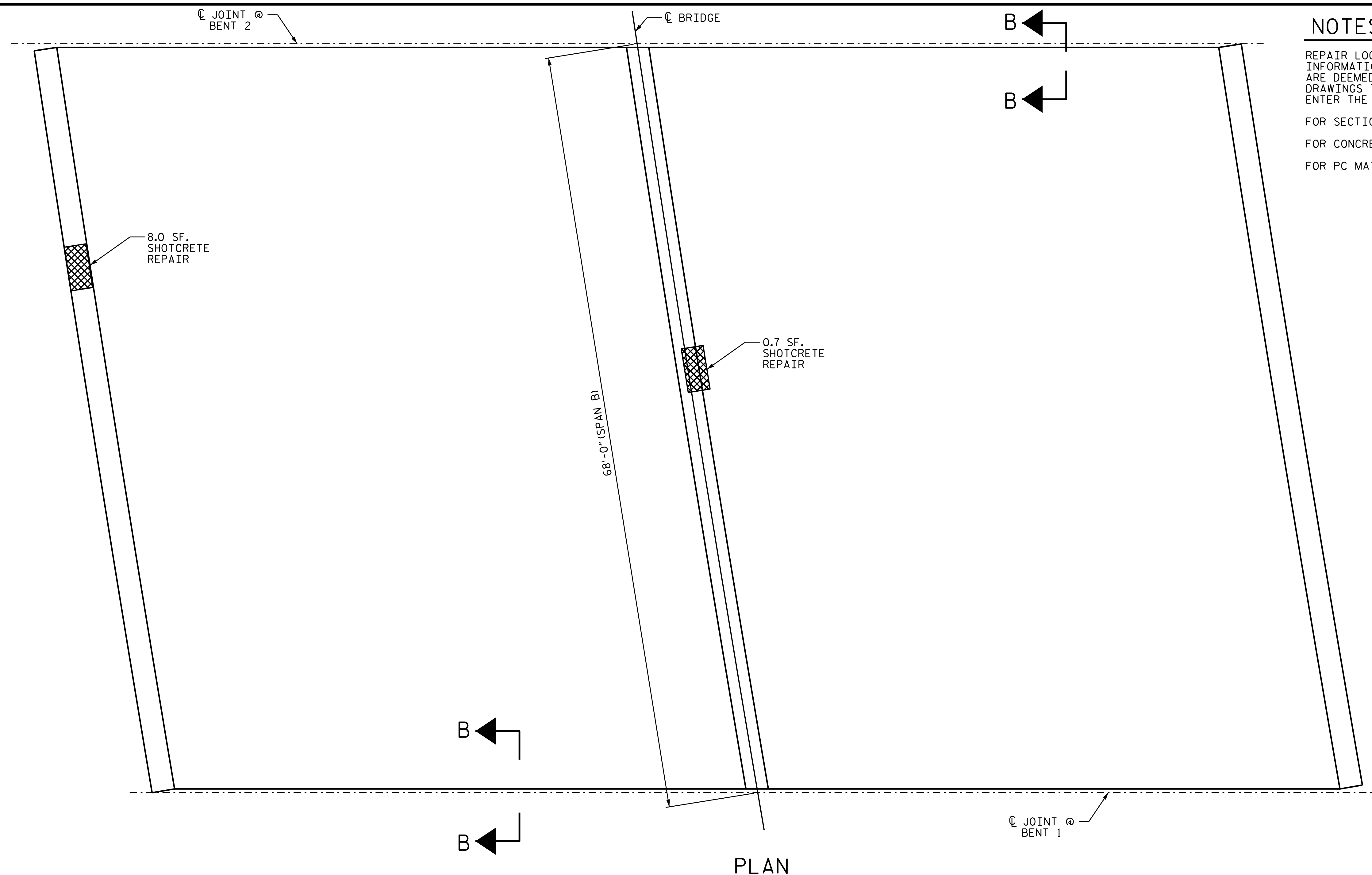
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FOR SECTION B-B, SEE "JOINT DETAILS" SHEET.

FOR CONCRETE DECK REPAIR FOR PC OVERLAY, SEE SPECIAL PROVISION.

FOR PC MATERIALS, SEE SPECIAL PROVISION.

-  APPROX. CLASS II SURFACE PREPARATION
-  SHOTCRETE REPAIR
-  EPOXY RESIN INJECTION (ERI)



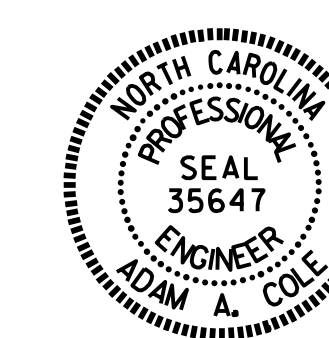
PLAN

AS-BUILT REPAIR QUANTITY TABLE		
TOP OF DECK REPAIRS		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	771 SQ. YDS.	
CLASS II SURFACE PREPARATION	0.0 SQ. YDS.	
CONCRETE DECK REPAIR FOR PC OVERLAY	0.0 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	771 SQ. YDS.	
PC MATERIALS	37.5 CU. YDS.	
PLACING AND FINISHING PC OVERLAY	771 SQ. YDS.	
GROOVING BRIDGE FLOORS	6484 SQ. FT.	
CONCRETE RAIL REPAIR	8.7 SQ. FT.	

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590328

SHEET 2 OF 3

DocuSigned by:
 02E838FAB074C3



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
DECK SURFACE REPAIR
SPAN B

DRAWN BY : R.L.PUTEK/E.BAYISSA DATE : 05/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 05/2021

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S8-5
1			3			TOTAL SHEETS
2			4			274


NOTES:

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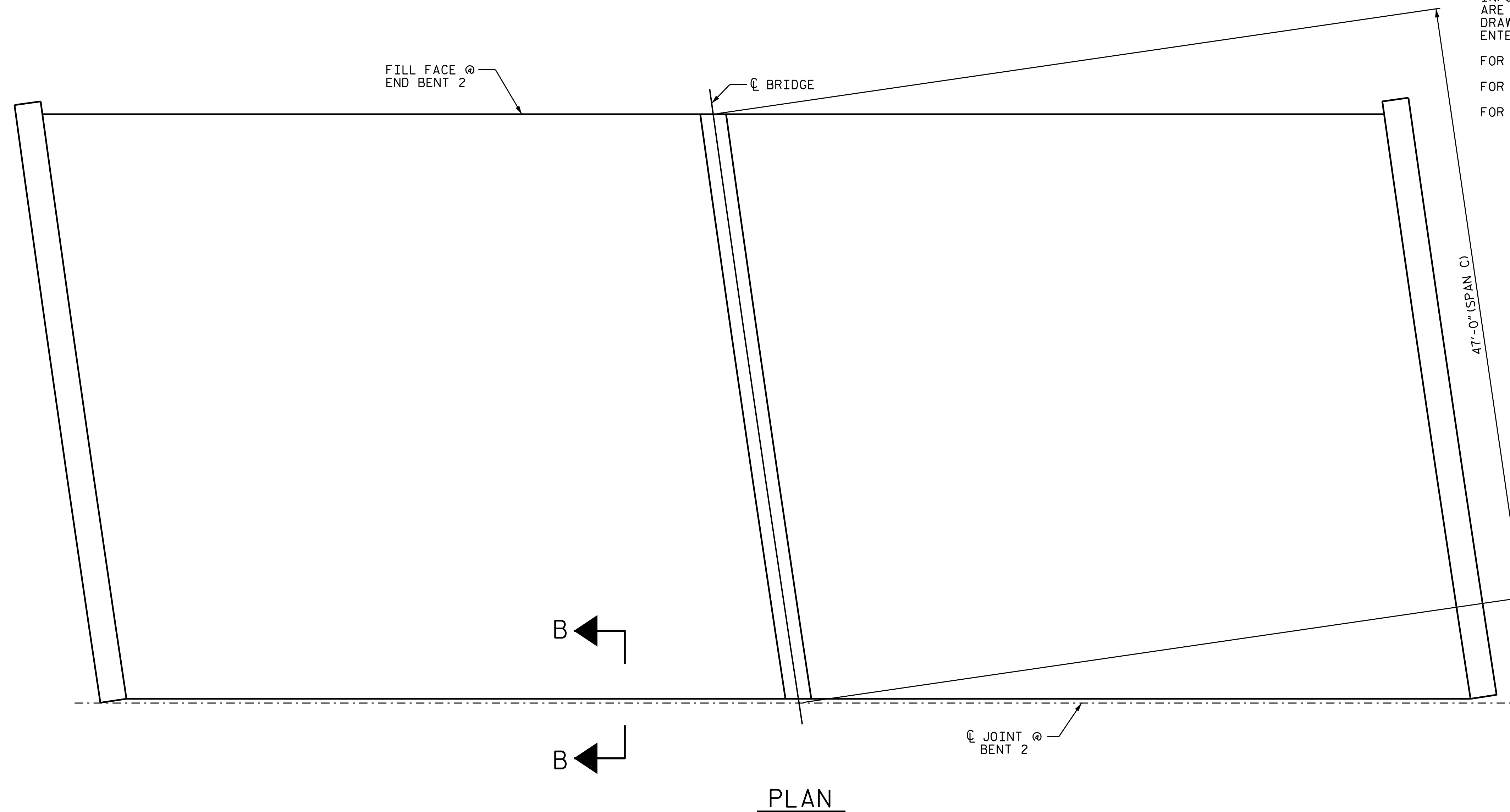
FOR SECTION B-B, SEE "JOINT DETAILS" SHEET.

FOR CONCRETE DECK REPAIR FOR PC OVERLAY, SEE SPECIAL PROVISION.

FOR PC MATERIALS, SEE SPECIAL PROVISION.

 APPROX. CLASS II SURFACE PREPARATION

 EPOXY RESIN INJECTION (ERI)



PLAN

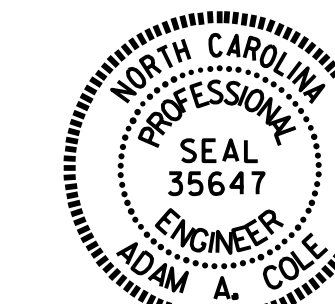
AS-BUILT REPAIR QUANTITY TABLE		
TOP OF DECK REPAIRS		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	525 SQ. YDS.	
CLASS II SURFACE PREPARATION	0.0 SQ. YDS.	
CONCRETE DECK REPAIR FOR PC OVERLAY	0.0 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	525 SQ. YDS.	
PC MATERIALS	25.5 CU. YDS.	
PLACING AND FINISHING PC OVERLAY	525 SQ. YDS.	
GROOVING BRIDGE FLOORS	4364 SQ. FT.	

TOP OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PC OVERLAY AFTER REMOVAL OF UNSOUND CONCRETE. (MIN. 2" CLEAR TO SAWCUT). SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590328

SHEET 3 OF 3

DocuSigned by:
 02E838FAB074C3



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 DECK SURFACE REPAIR
 SPAN C

DRAWN BY : R.L. PUTEK/E. BAYISSA DATE : 05/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 05/2021

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S8-6
1			3			TOTAL SHEETS
2			4			274

NOTES:

FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE PC OVERLAY IS COMPLETE.

THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING JOINT SEAL MATERIAL. IF THE ACTUAL JOINT SEAL MATERIAL VARIES FROM THE OPENING INDICATED IN THE DETAILS BY MORE THAN 1/4", NOTIFY THE ENGINEER.

THE MANUFACTURER IS TO PROVIDE THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE FOAM JOINT SEAL FOR THE SIZE OF THE OPENING ON THE PLANS AND ACCOMMODATE THE MINIMUM EXPANSION SHOWN ON THE PLANS.

FOAM JOINTS SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS.

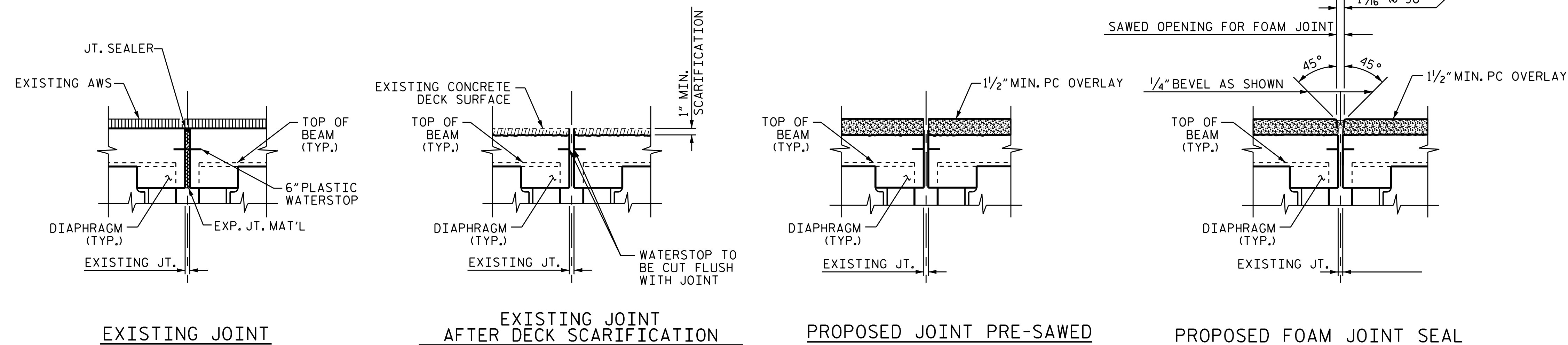
THE CONTRACTOR SHALL TAKE CARE DURING JOINT REHAB OPERATIONS NOT TO DROP ANY MATERIAL BELOW THE BRIDGE, WITHOUT PROTECTIVE DEVICES BELOW TO CATCH THE MATERIAL. ANY MATERIAL THAT FALLS BELOW THE BRIDGE SHALL BE CONTAINED, REMOVED AND DISPOSED OF BY THE CONTRACTOR AT NO EXTRA COST TO THE DEPARTMENT. IF THE ENGINEER DETERMINES THAT THE PROTECTIVE DEVICES ARE NOT ADEQUATE OR NOT BEING EMPLOYED, THE WORK SHALL BE SUSPENDED UNTIL ADEQUATE PROTECTION IS PROVIDED.

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINTS IN LIEU OF SAWING THE JOINT.

THE INSTALLED FOAM JOINTS SHALL BE WATER TIGHT.

NOMINAL UNCOMPRESSED SEAL WIDTH OF FOAM JOINT SEAL SHALL BE 2".

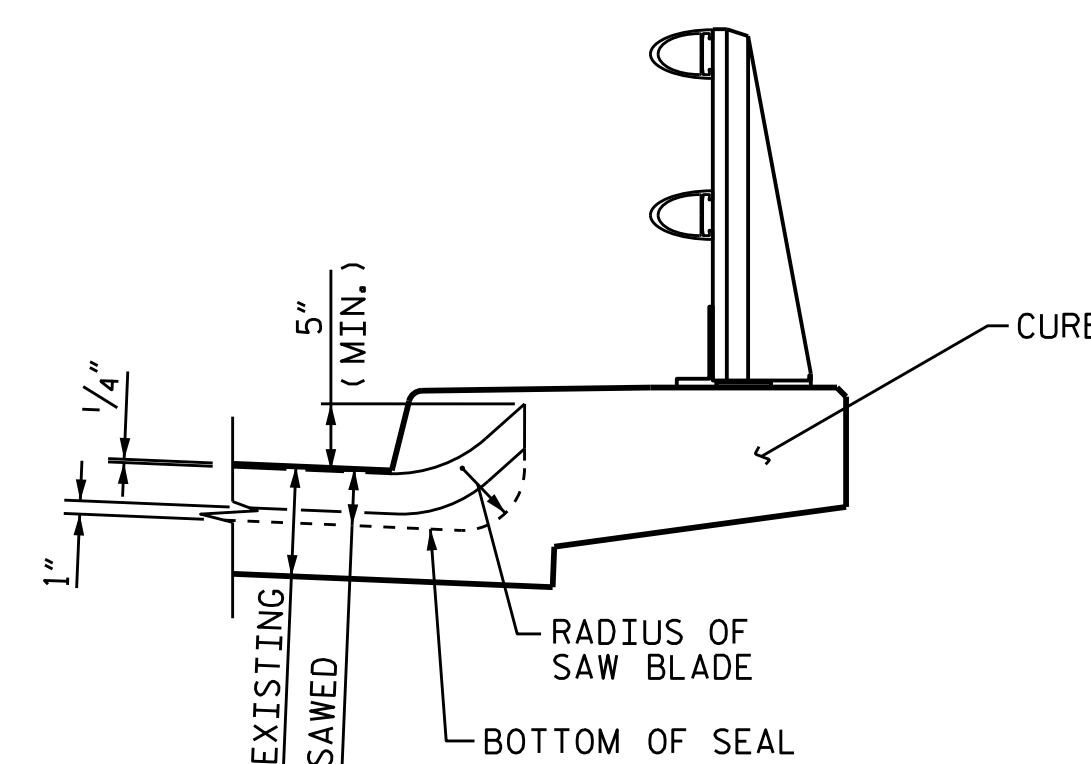
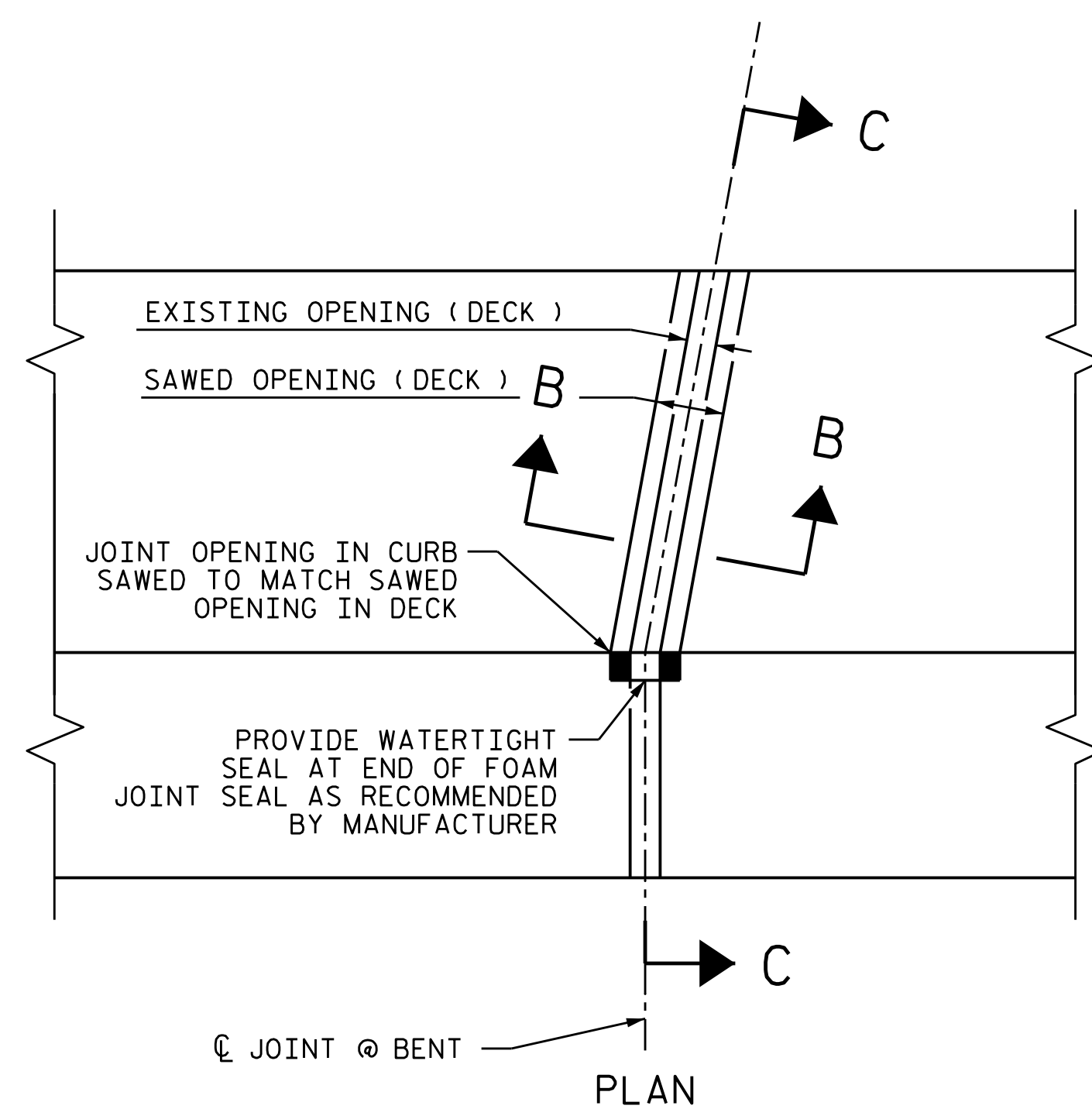
FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.



SECTION B-B

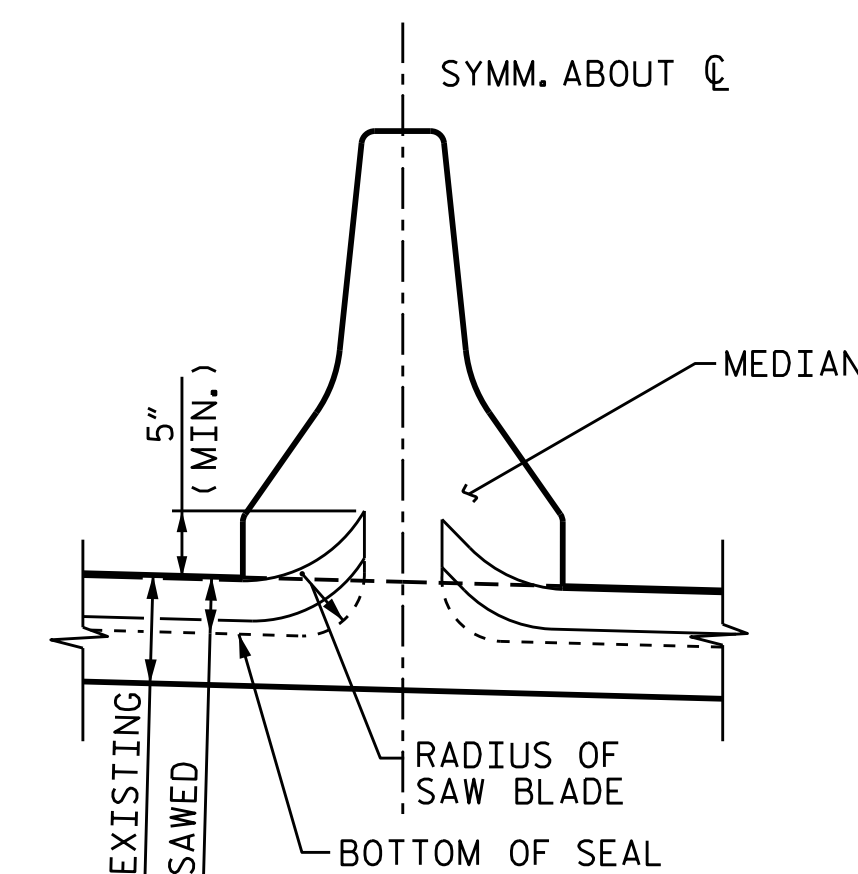
JOINT REPAIR QUANTITY TABLE

	ESTIMATE	ACTUAL
FOAM JOINT SEALS FOR PRESERVATION		
BENT 1	104.3 LF.	
BENT 2	104.3 LF.	
TOTAL	208.6 LF.	



SECTION C-C

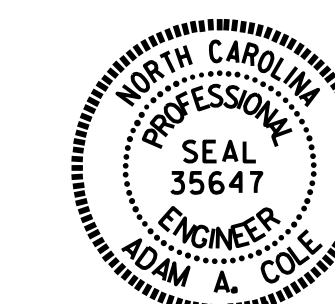
FOAM JOINT SEAL SHALL BE FACTORY FORMED OR CUT, HEAT WELDED AND TURNED UP PARALLEL TO FACE OF CURB.



MEDIAN DETAIL

FOAM JOINT SEAL SHALL BE FACTORY FORMED OR CUT, HEAT WELDED AND TURNED UP PARALLEL TO FACE OF MEDIAN.

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02EE938FAB074C0



8/23/2021

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590328

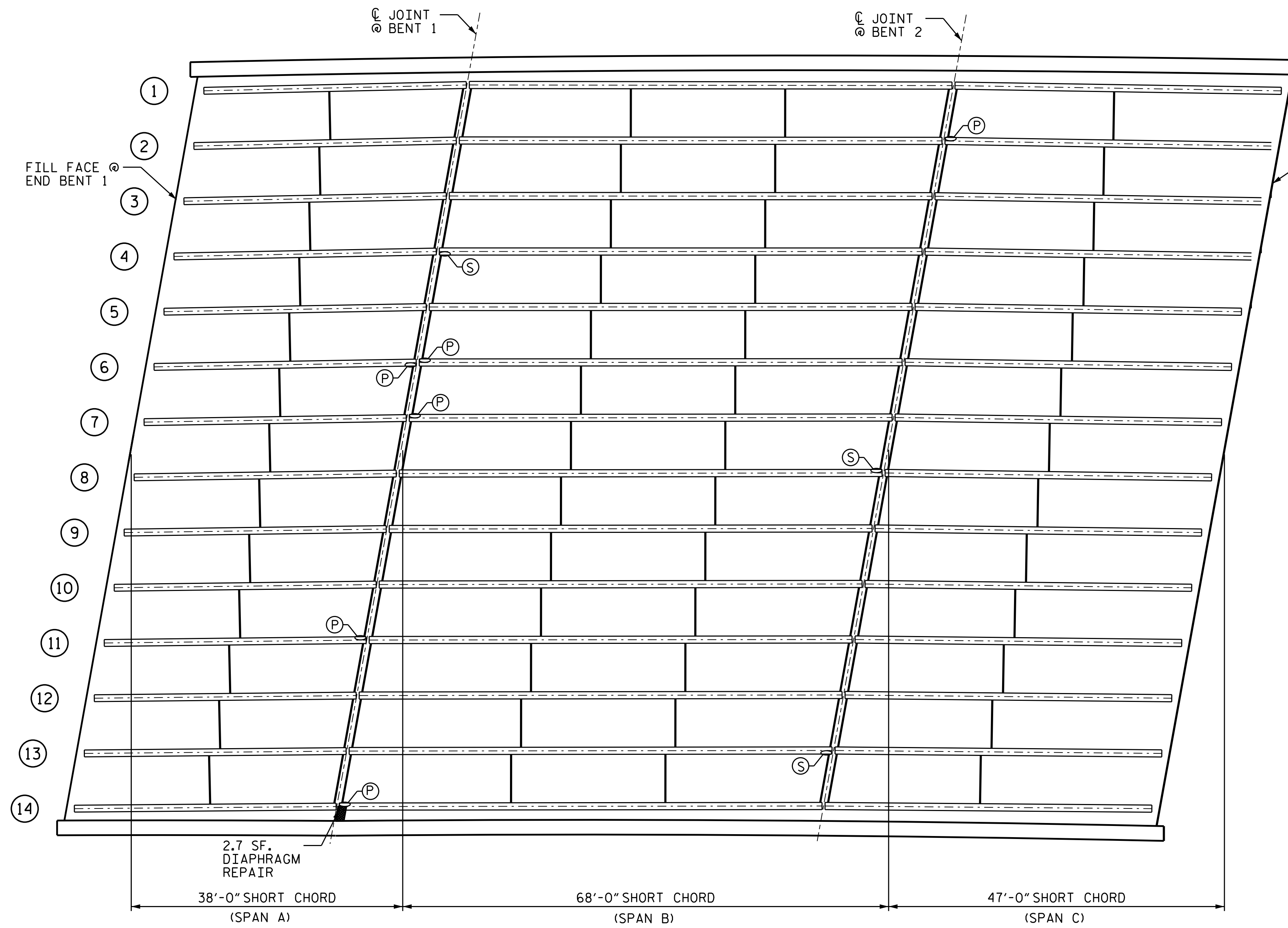
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FOAM JOINT DETAILS

DRAWN BY : R.L.PUTEK/E. BAYISSA DATE : 05/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 05/2021

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REVISIONS						SHEET NO.
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1			3			TOTAL SHEETS
2			4			274



BEAM REPAIR LOCATIONS
(OTHER LOCATIONS MAY EXIST, SEE NOTES)

- UNDERSIDE EPOXY COATING
- UNDERSIDE REPAIR
- DIAPHRAGM REPAIR

NOTES
 FOR BEAM REPAIR DETAILS, SEE "BEAM SECTION REPAIR DETAILS" SHEET.
 FOR BEAM PLATING REPAIR, SEE "BEAM PLATING REPAIR DETAILS" SHEET.
 FOR BRIDGE JACKING DETAILS, SEE "JACKING DETAILS" SHEET.
 FOR UNDERSIDE OF DECK AND OVERHANG REPAIRS, SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.

THE LOCATIONS AND DIMENSIONS OF THE AREAS FOR REPAIR ARE BASED ON THE BEST INFORMATION AVAILABLE. THE CONTRACTOR, IN CONJUNCTION WITH THE ENGINEER, SHALL VERIFY THE LOCATION AND EXTENT OF REPAIR AREAS PRIOR TO STEEL FABRICATION. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

- ① BEAM NUMBER
- Ⓟ BEAM END REPAIR
- Ⓟ PLATING REPAIR
- Ⓟ STIFFENER REPAIR
- Ⓟ STEEL DIAPHRAGM REPAIR

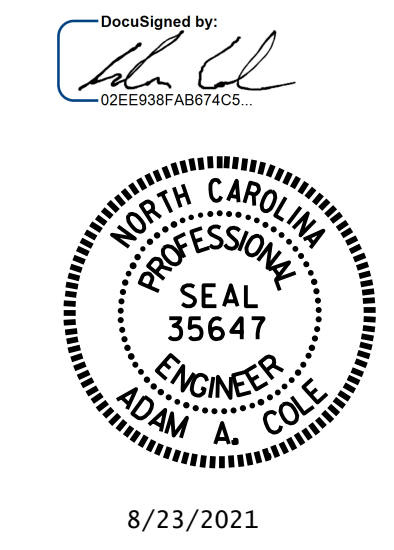
BEAM END REPAIR		PLATING REPAIR		STIFFENER REPAIR		DIAPHRAGM REPAIR	
LBS.		LBS.		LBS.		LBS.	
ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
0		150		15		0	

SPAN	BEAM	LOCATION	DIM "A"	DIM "B"	DIM "C"	DIM "D"
A	6	BENT 1	3"	9"	-	-
A	11	BENT 1	4"	9"	-	-
B	4	BENT 1	6"	-	-	-
B	6	BENT 1	6"	9"	-	-
B	7	BENT 1	27"	9"	-	-
B	8	BENT 2	3"	-	-	-
B	13	BENT 2	3"	-	-	-
B	14	BENT 1	6"	9"	-	-
C	2	BENT 2	6"	9"	-	-

	UNDERSIDE OF DECK REPAIR											
	SPAN A				SPAN B				SPAN C			
	ESTIMATE		ACTUAL		ESTIMATE		ACTUAL		ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
UNDERSIDE OF DECK	0.0	0.0			0.0	0.0			0.0	0.0		
UNDERSIDE OF OVERHANG	0.0	0.0			2.7	0.9			0.0	0.0		
INTERIOR DIAPHRAGMS	0.0	0.0			0.0	0.0			0.0	0.0		
	ESTIMATE		ACTUAL		ESTIMATE		ACTUAL		ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	0.0 LIN. FT.				0.0 LIN. FT.				0.0 LIN. FT.			

VALUES REPRESENT ESTIMATED UNDERSIDE OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590328



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
DECK UNDERSIDE DERAIR

DRAWN BY : R.L. PUTEK/E. BAYISSA DATE : 05/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 05/2021

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S8-8
2			4			TOTAL SHEETS 274

AS-BUILT REPAIR QUANTITY TABLE

END BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP & CURTAIN WALL	8.1	4.1		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	4.9	2.5		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP & CURTAIN WALL		8.5		
EPOXY COATING		SQ. FT.		SQ. FT.
TOP OF BENT CAP		151		

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.





FOR ANCHOR BOLT NUT REPLACEMENT, SEE SPECIAL PROVISIONS.

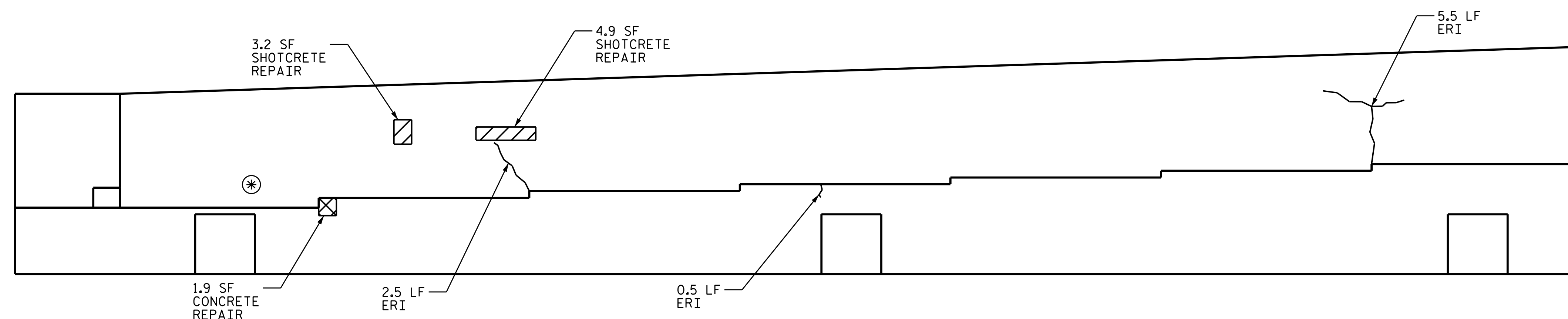
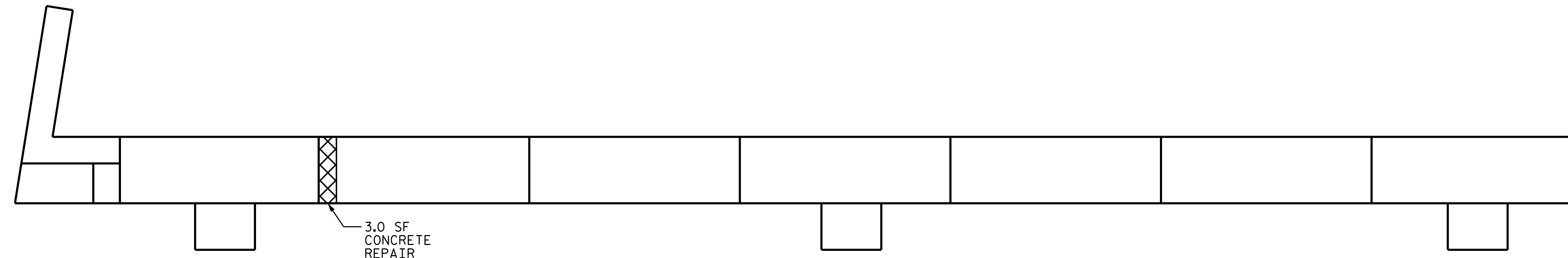
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISION.

FOR CONCRETE REPAIR, SEE SPECIAL PROVISION.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISION.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP. 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.

-  CONCRETE REPAIR AREA
-  SHOTCRETE REPAIR AREA
-  EPOXY RESIN INJECTION (ERI)
-  REPLACE MISSING ANCHOR BOLT NUT



PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO.: 590328

SHEET 1 OF 2

DocuSigned by:
 02E838FAB074C3



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

END BENT 1
 SOUTHBOUND

DRAWN BY : R.L. PUTEK DATE : 05/2021
 CHECKED BY : H. A. LOCKLEAR DATE : 05/2021

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 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			274
2			4			

AS-BUILT REPAIR QUANTITY TABLE

END BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP & CURTAIN WALL	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 & CURTAIN WALL		20.0		
EPOXY COATING		SQ. FT.		SQ. FT.
TOP OF BENT CAP		150		

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.





FOR ANCHOR BOLT NUT REPLACEMENT, SEE SPECIAL PROVISIONS.

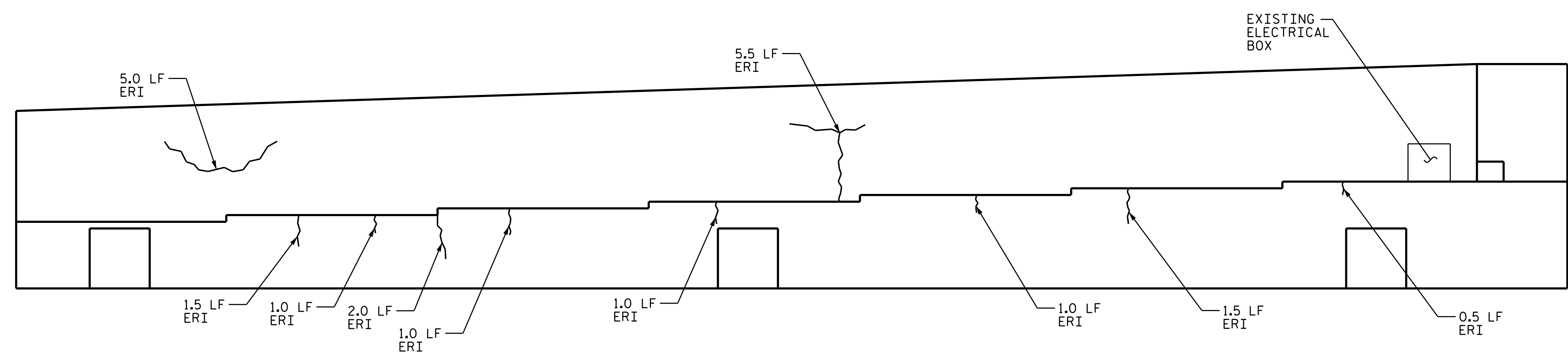
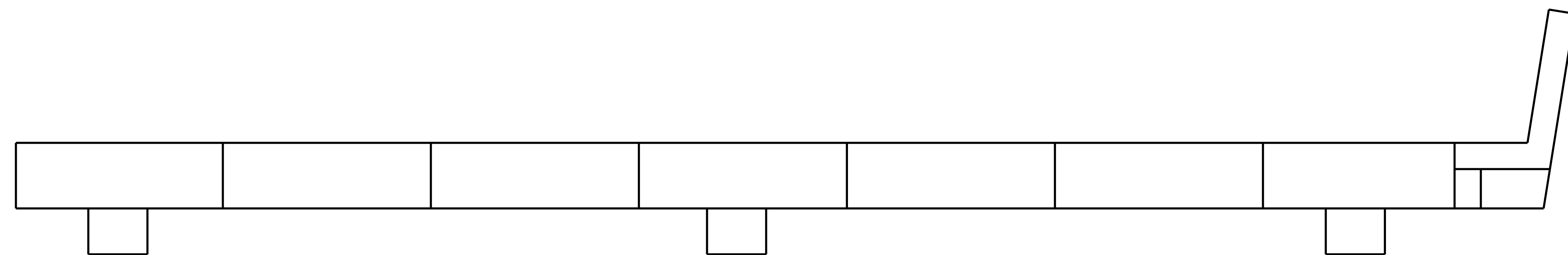
FOR SHOTCRETE REPAIR, SEE SPECIAL PROVISION.

FOR CONCRETE REPAIR, SEE SPECIAL PROVISION.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISION.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP. 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.

-  CONCRETE REPAIR AREA
-  SHOTCRETE REPAIR AREA
-  EPOXY RESIN INJECTION (ERI)
-  REPLACE MISSING ANCHOR BOLT NUT



PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO.: 328590

SHEET 2 OF 2

DocuSigned by:
 02E838FAB074C3



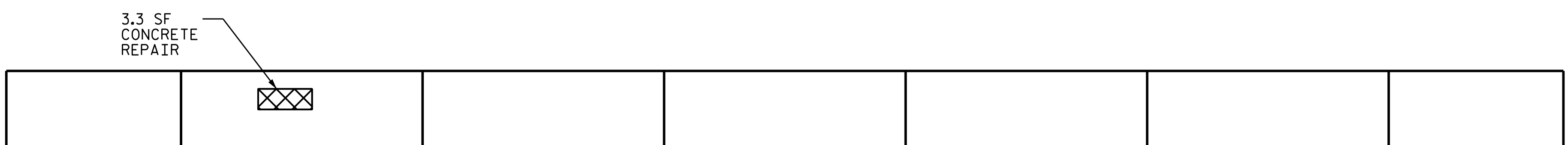
8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

END BENT 1
 NORTHBOUND

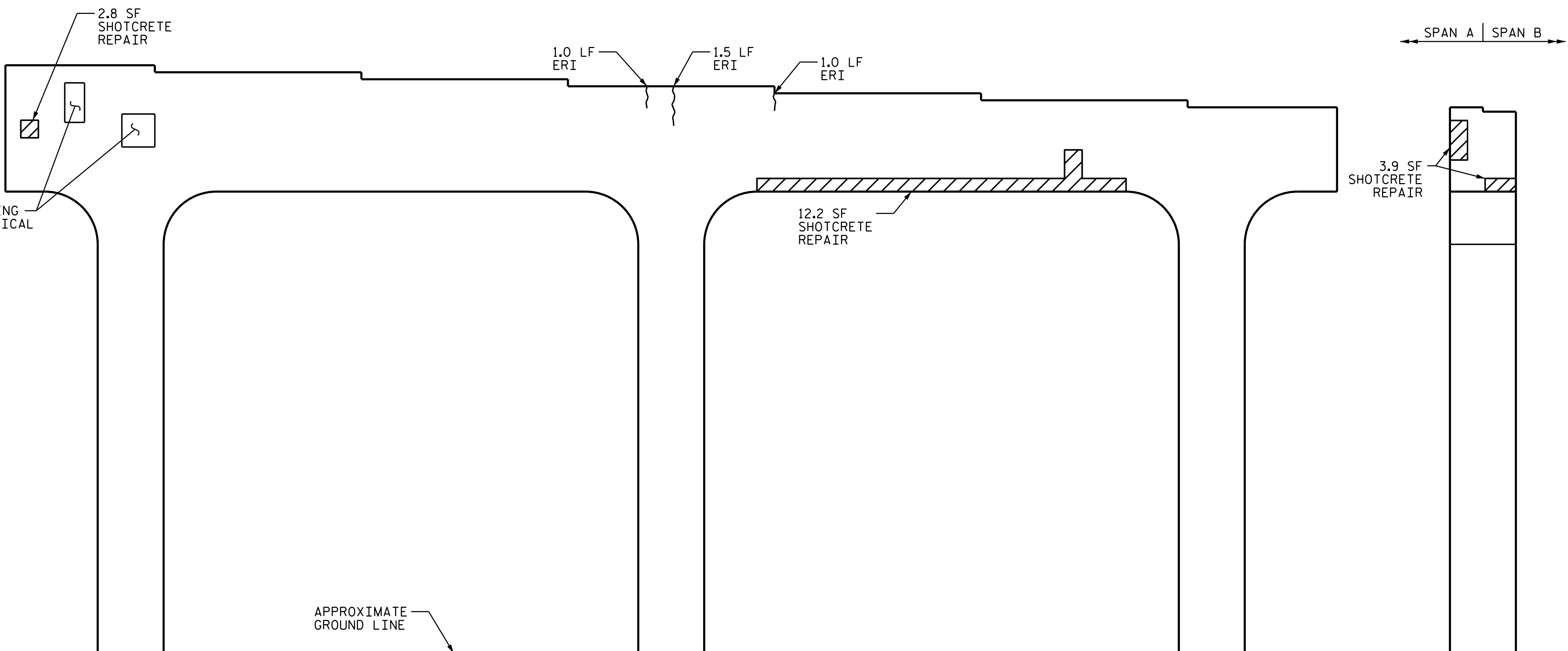
DRAWN BY : R.L. PUTEK DATE : 05/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 05/2021

NO.	REVISIONS			NO.	REVISIONS			SHEET NO.
	BY:	DATE:			BY:	DATE:		
1				3			S8-10	
2				4			TOTAL SHEETS 274	



SPAN B
SPAN A

TOP OF CAP



ELEVATION

END VIEW

BENT 1 NORTHBOUND

AS-BUILT REPAIR QUANTITY TABLE				
BENT 2 NORTHBOUND	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	18.9	9.5		
COLUMNS	0.0	0.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	3.3	1.7		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
CAP	3.5			
COLUMNS	0.0			
EPOXY COATING	SQ. FT.		SQ. FT.	
TOP OF BENT CAP	135			

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 DETAIL, 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.

FOR CAP REPAIRS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

FOR SHOTCRETE REPAIR, SEE SPECIAL PROVISION.

FOR CONCRETE REPAIR, SEE SPECIAL PROVISION.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISION.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP. 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.

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

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO.: 590328

SHEET 1 OF 2

DocuSigned by:
02E88F8A8074C3



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**BENT 1
 NORTHBOUND
 SPAN A FACE**

DRAWN BY : R.L. PUTEK/E. BAYISSA DATE : 05/2021
 CHECKED BY : H. A. LOCKLEAR DATE : 05/2021

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	NO.	BY:	DATE:	NO.	BY:	DATE:	
	1			3			
	2			4			

AS-BUILT REPAIR QUANTITY TABLE				
BENT 2 NORTHBOUND	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	89.4	44.7		
COLUMNS	0.0	0.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	1.9	1.0		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		1.0		
COLUMNS		0.0		
EPOXY COATING		SO. FT.		SO. FT.
TOP OF BENT CAP		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 DETAIL, 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.




FOR CAP REPAIRS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

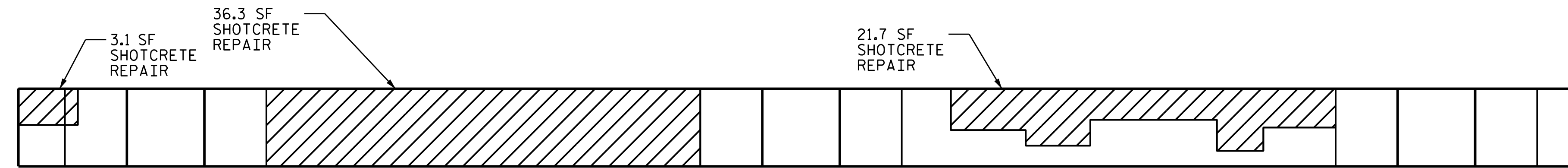
FOR SHOTCRETE REPAIR, SEE SPECAIL PROVISION.

FOR CONCRETE REPAIR, SEE SPECIAL PROVISION.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISION.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP. 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.

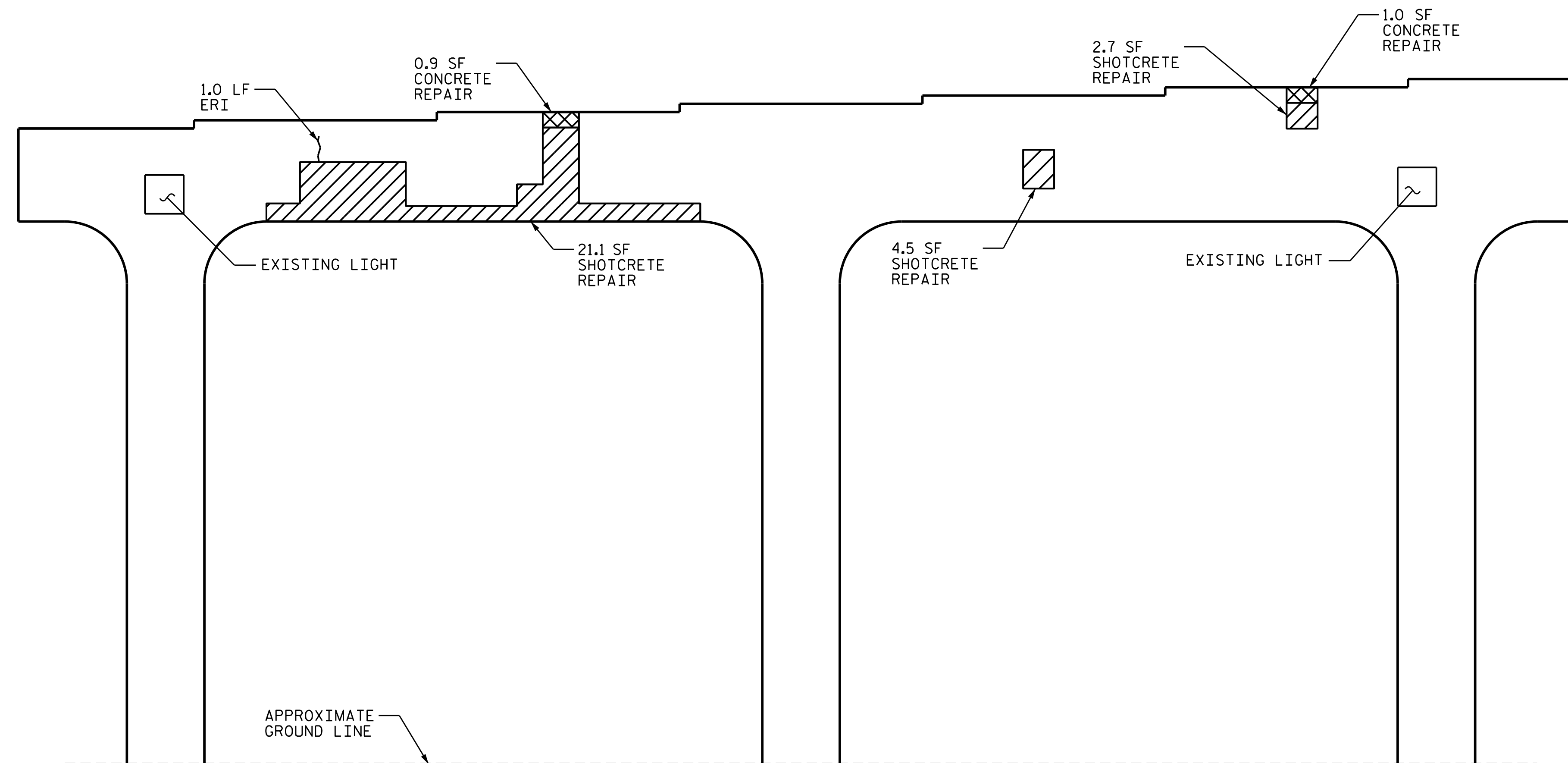
-  CONCRETE REPAIR AREA
-  SHOTCRETE REPAIR AREA
-  EPOXY RESIN INJECTION (ERI)



SPAN A
SPAN B

BOTTOM OF CAP

← SPAN B | SPAN A →



ELEVATION

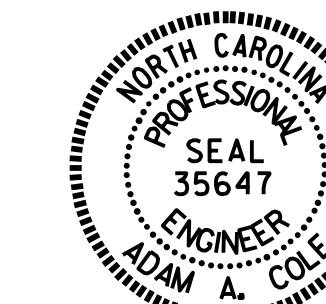
END VIEW

BENT 1 NORTHBOUND

PROJECT NO. I-5746C
MECKLENBURG COUNTY
BRIDGE NO.: 590328

SHEET 2 OF 2

DocuSigned by:
02E838FAB074C3



8/23/2021

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
BENT 1
NORTHBOUND
SPAN B FACE

DRAWN BY : R.L. PUTEK DATE : 05/2021
CHECKED BY : H. A. LOCKLEAR DATE : 05/2021

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S8-12
2			4			TOTAL SHEETS 274

AS-BUILT REPAIR QUANTITY TABLE

BENT 1 SOUTHBOUND	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	2.2	1.1		
COLUMNS	15.4	7.7		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	1.0	0.5		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
CAP	15.5			
COLUMNS	0.0			
EPOXY COATING	SQ. FT.		SQ. FT.	
TOP OF BENT CAP	135			

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.




FOR CAP REPAIRS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

FOR SHOTCRETE REPAIR, SEE SPECIAL PROVISION.

FOR CONCRETE REPAIR, SEE SPECIAL PROVISION.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISION.

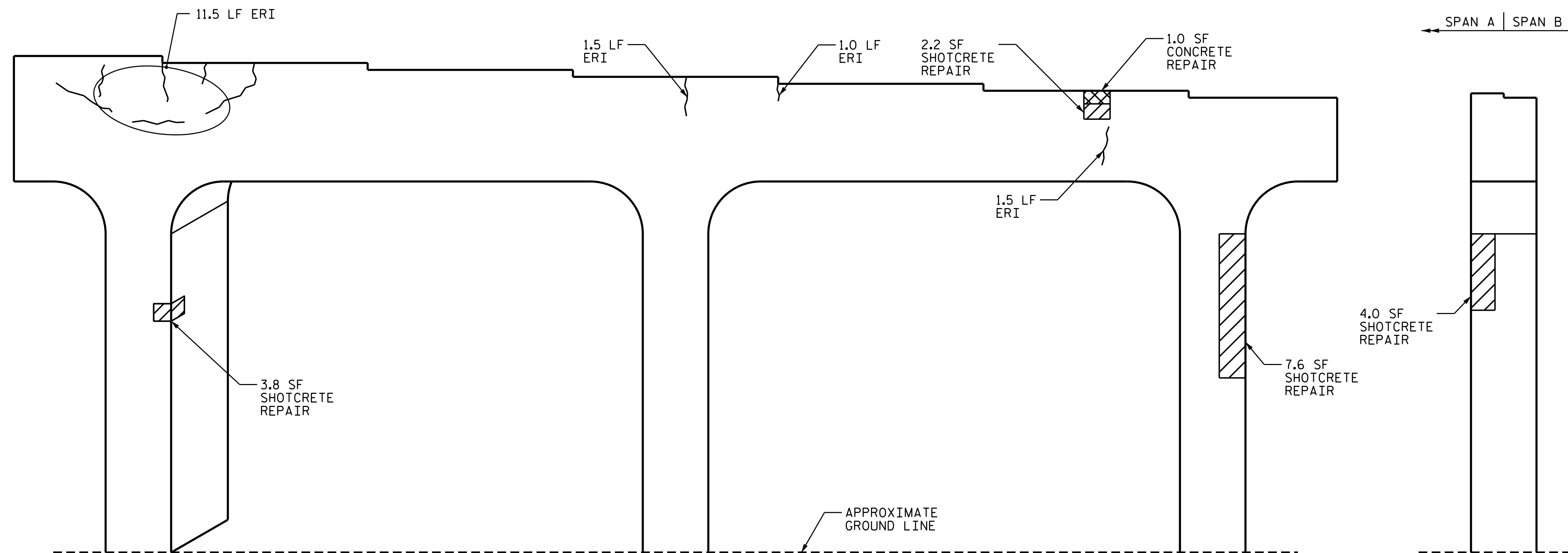
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

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



SPAN B
SPAN A

TOP OF CAP



ELEVATION

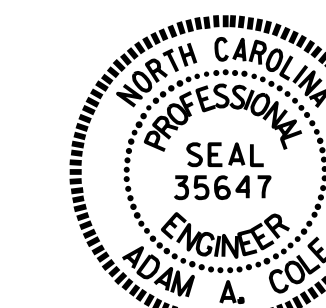
END VIEW

BENT 1 SOUTHBOUND

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO.: 590328

SHEET 1 OF 2

DocuSigned by:
02E838FAB074C3



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 1
 SOUTHBOUND
 SPAN A FACE

DRAWN BY : R.L. PUTEK DATE : 05/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 05/2021

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S8-13
1			3			TOTAL SHEETS
2			4			274

AS-BUILT REPAIR QUANTITY TABLE

BENT 1 SOUTHBOUND	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	21.7	10.9		
COLUMNS	0.0	0.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	1.5	0.8		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		1.0		
COLUMNS		0.0		
EPOXY COATING		SO. FT.		SO. FT.
TOP OF BENT CAP		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.

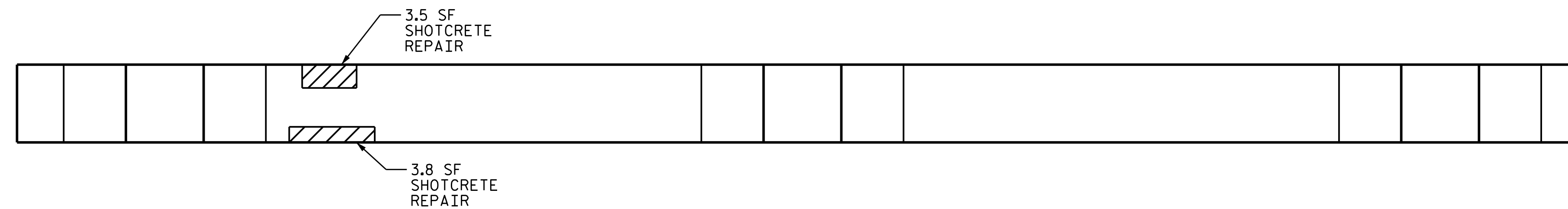
FOR CAP REPAIRS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

FOR SHOTCRETE REPAIR, SEE SPECIAL PROVISION.

FOR CONCRETE REPAIR, SEE SPECIAL PROVISION.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISION.
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP. 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.

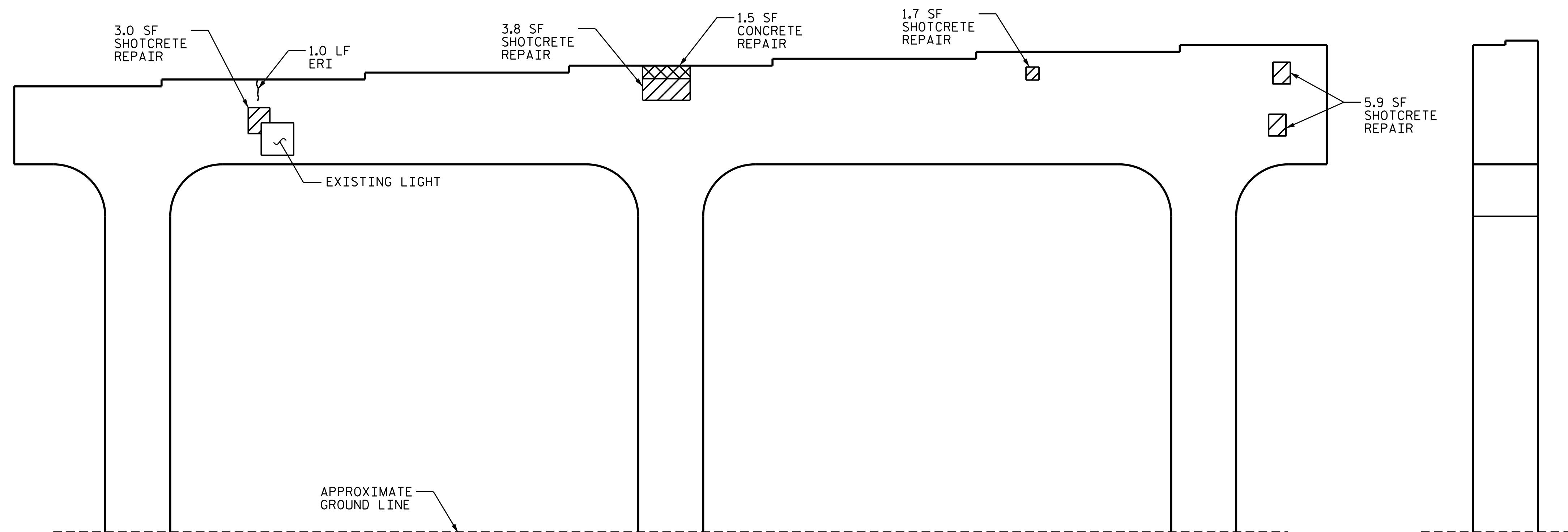
-  CONCRETE REPAIR AREA
-  SHOTCRETE REPAIR AREA
-  EPOXY RESIN INJECTION (ERI)



BOTTOM OF CAP

SPAN A
SPAN B

SPAN B | SPAN A



ELEVATION

BENT 1 SOUTHBOUND

END VIEW

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO.: 590328

SHEET 2 OF 2

DocuSigned by:
02E838FAB074C3



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**BENT 1
 SOUTHBOUND
 SPAN B FACE**

DRAWN BY : R.L. PUTEK DATE : 05/2021
 CHECKED BY : H. A. LOCKLEAR DATE : 05/2021

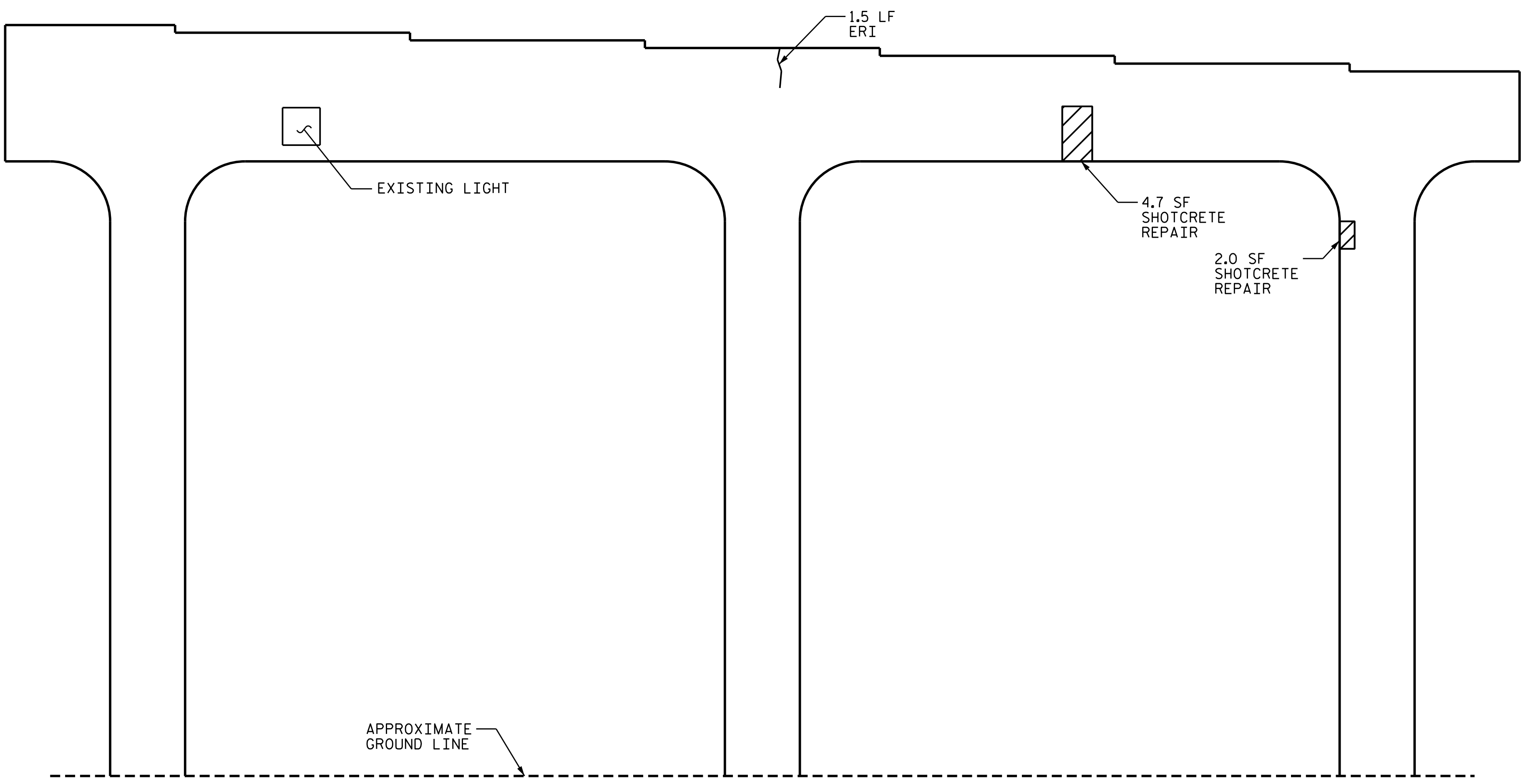
DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.
1			3			88-14
2			4			TOTAL SHEETS 274



SPAN C
SPAN B

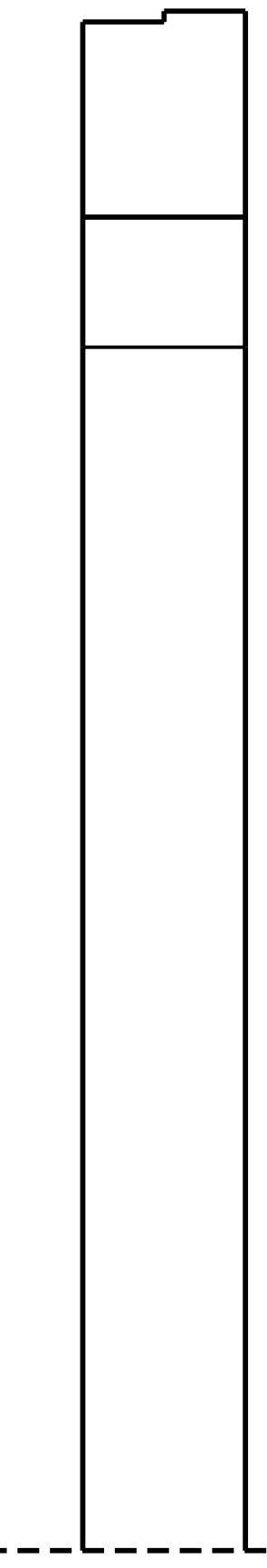
TOP OF CAP



ELEVATION

BENT 2 NORTHBOUND

SPAN B | SPAN C



END VIEW

AS-BUILT REPAIR QUANTITY TABLE

BENT 2 NORTHBOUND	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	4.7	2.4		
COLUMNS	2.0	1.0		
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		1.5		
COLUMNS		0.0		
EPOXY COATING		SO. FT.		SO. FT.
TOP OF BENT CAP		135		

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.

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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.

FOR CAP REPAIRS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

FOR SHOTCRETE REPAIR, SEE SPECIAL PROVISION.

FOR CONCRETE REPAIR, SEE SPECIAL PROVISION.

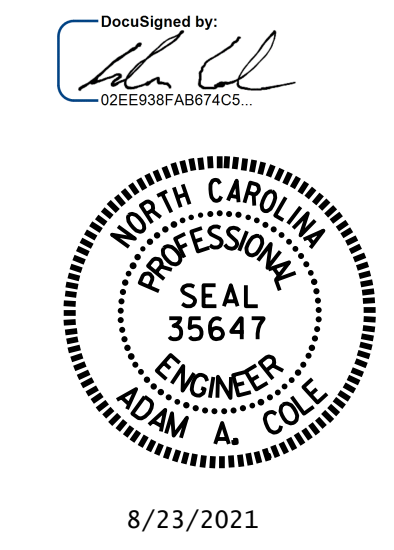
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISION.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP. 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.

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

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO.: 590328

SHEET 1 OF 2



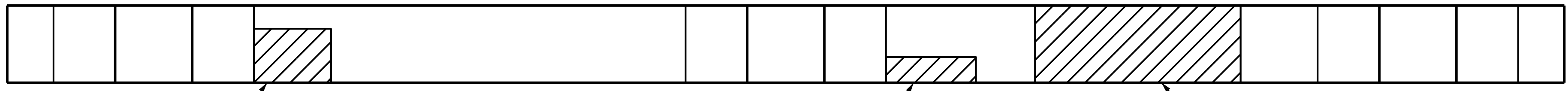
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 2
 NORTHBOUND
 SPAN B FACE

DRAWN BY : R.L. PUTEK DATE : .05/2021
 CHECKED BY : H. A. LOCKLEAR DATE : .05/2021

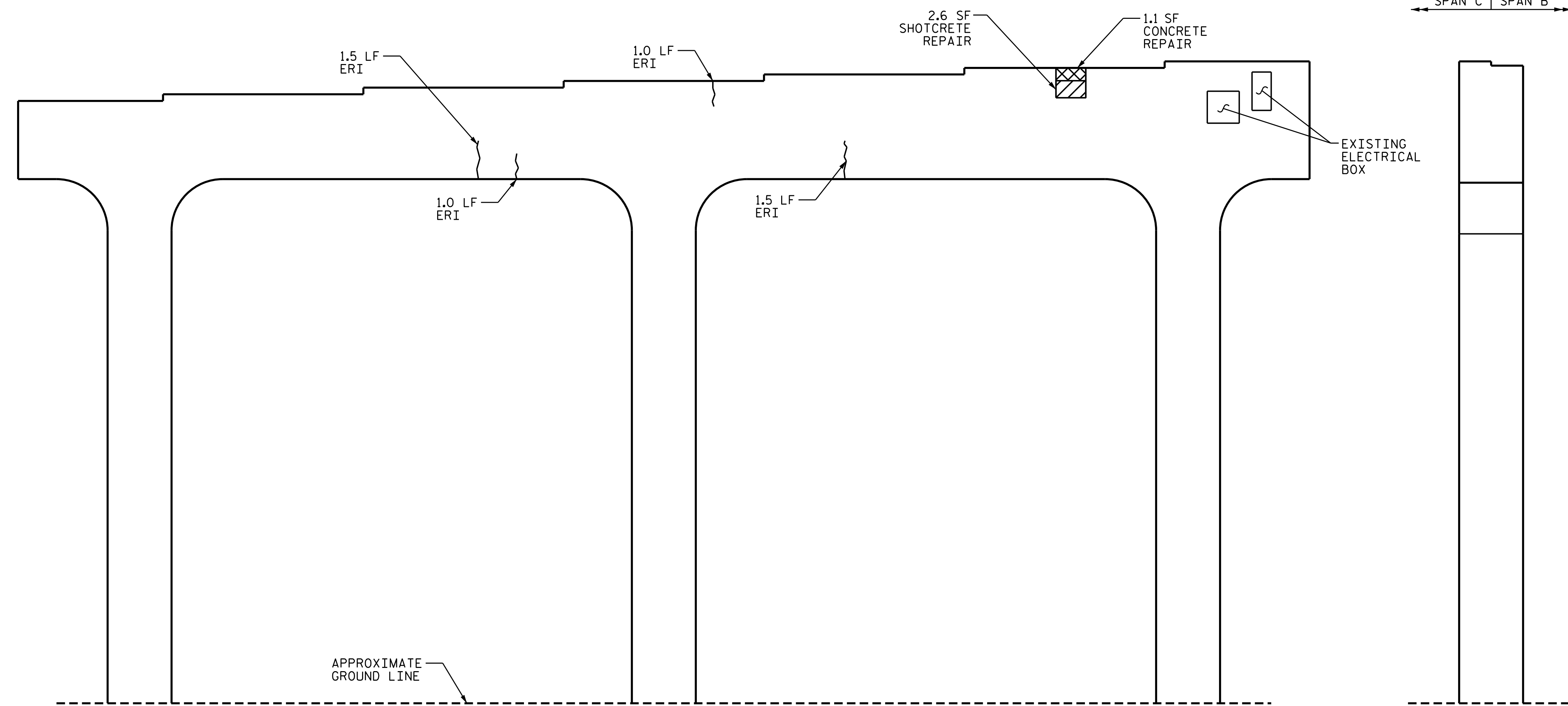
NO.	BY:	DATE:	REVISIONS			SHEET NO.
			NO.	BY:	DATE:	
1			3			S8-15 TOTAL SHEETS 274
2			4			

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6.0 SF SHOTCRETE REPAIR
 3.8 SF SHOTCRETE REPAIR
 18.0 SF SHOTCRETE REPAIR

BOTTOM OF CAP



APPROXIMATE GROUND LINE

ELEVATION

END VIEW

BENT 2 NORTHBOUND

AS-BUILT REPAIR QUANTITY TABLE				
BENT 2 NORTHBOUND	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	30.4	15.2		
COLUMNS	0.0	0.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	1.1	0.6		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		5.0		
COLUMNS		0.0		
EPOXY COATING		SO. FT.		SO. FT.
TOP OF BENT CAP		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.

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FOR CONCRETE REPAIR, SEE SPECIAL PROVISION.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISION.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP. 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.

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

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO.: 590328

SHEET 2 OF 2

DocuSigned by:
 02E838FAB074C3



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 2
 NORTHBOUND
 SPAN C FACE

DRAWN BY : R.L.PUTEK DATE : 05/2021
 CHECKED BY : H.A.LOCKLEAR DATE : 05/2021

NO.	BY:	DATE:	REVISIONS			SHEET NO.
			NO.	BY:	DATE:	
1			3			S8-16 TOTAL SHEETS 274
2			4			

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AS-BUILT REPAIR QUANTITY TABLE				
BENT 2 SOUTHBOUND	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	7.1	3.6		
COLUMNS	0.0	0.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	1.7	0.9		
EPOXY RESIN INJECTION	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP		0.0		
COLUMNS		0.0		
EPOXY COATING	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
TOP OF BENT CAP		135		

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.

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FOR SHOTCRETE REPAIR, SEE SPECIAL PROVISION.

FOR CONCRETE REPAIR, SEE SPECIAL PROVISION.

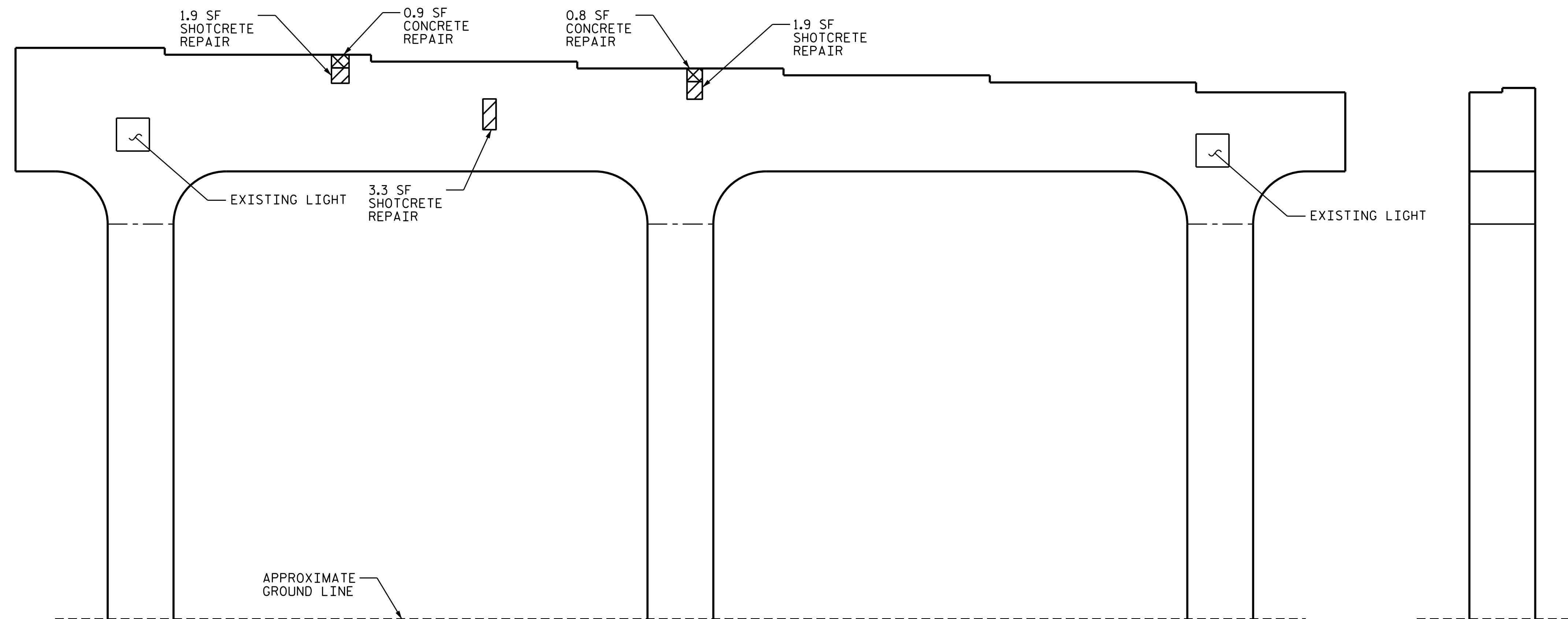
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

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



SPAN C
SPAN B

TOP OF CAP



← SPAN B | SPAN C →

ELEVATION

BENT 2 SOUTHBOUND

END VIEW

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO.: 590328

SHEET 1 OF 2

DocuSigned by:

 02E838FAB074C3



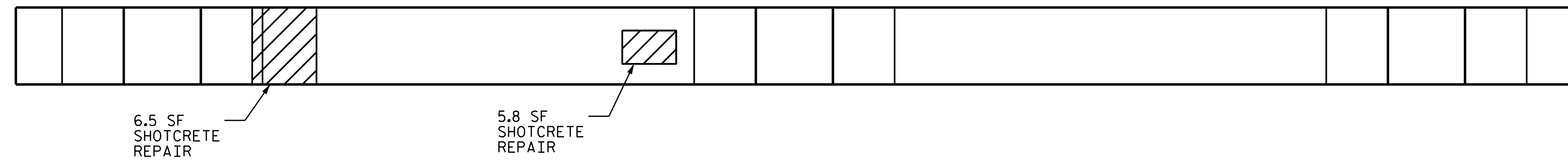
8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 BENT 2
 SOUTHBOUND
 SPAN B FACE

DRAWN BY : R.L. PUTEK DATE : 05/2021
 CHECKED BY : H. A. LOCKLEAR DATE : 05/2021

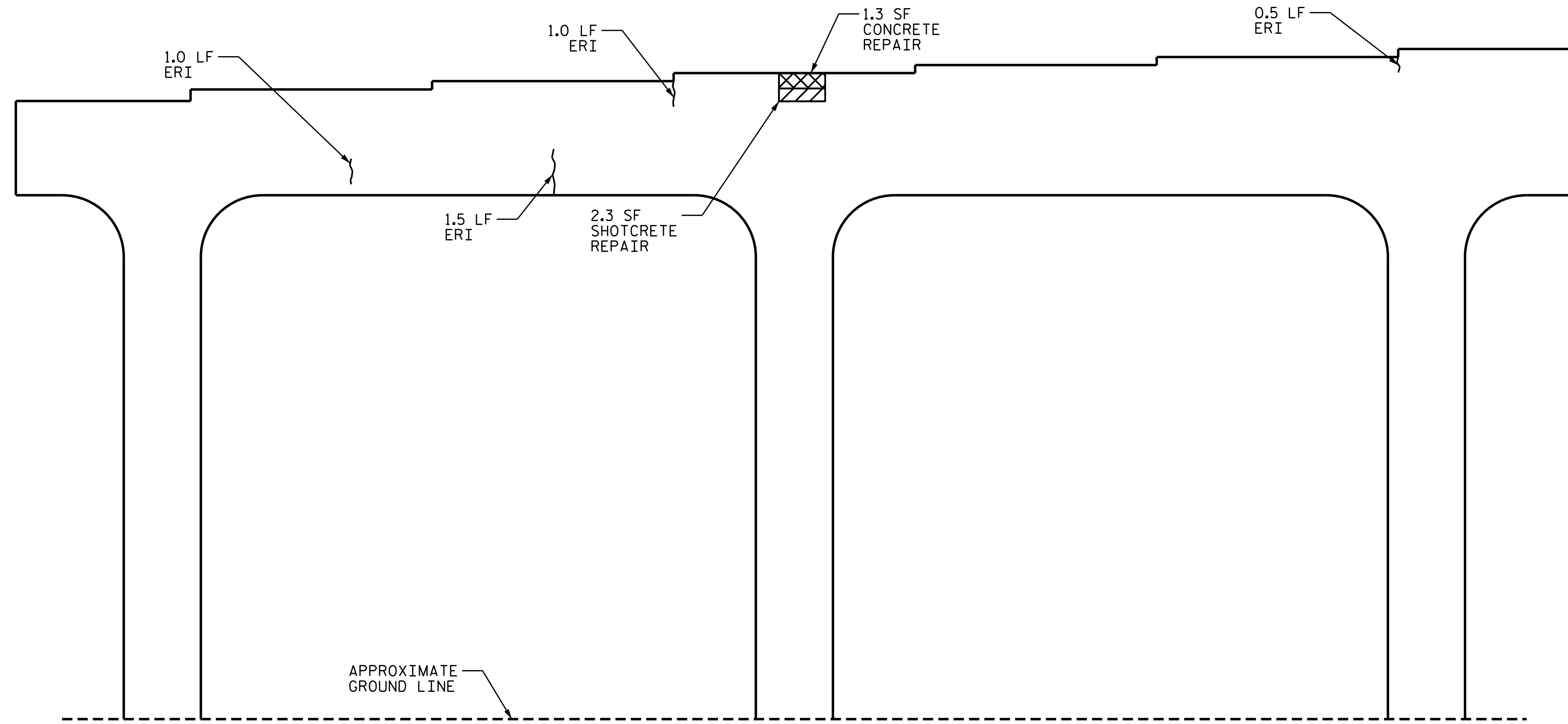
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.
1			3			S8-17
2			4			TOTAL SHEETS 274



BOTTOM OF CAP

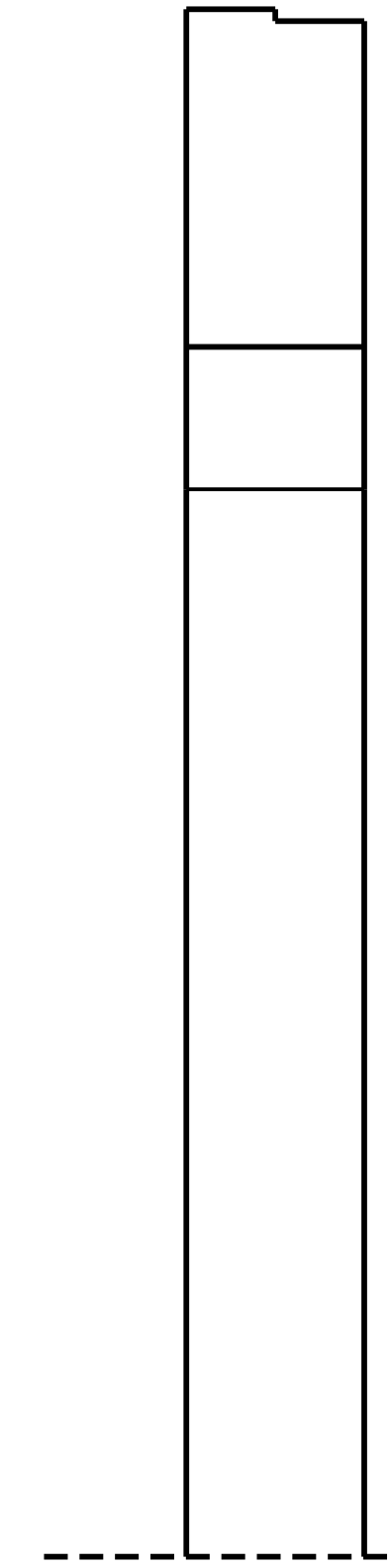
SPAN B
SPAN C



ELEVATION

BENT 2 SOUTHBOUND

← SPAN C | SPAN B →



END VIEW

AS-BUILT REPAIR QUANTITY TABLE

BENT 2 SOUTHBOUND	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	14.6	7.3		
COLUMNS	0.0	0.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	1.3	0.7		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		4.0		
COLUMNS		0.0		
EPOXY COATING		SO. FT.		SO. FT.
TOP OF BENT CAP		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.

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FOR SHOTCRETE REPAIR, SEE SPECIAL PROVISION.

FOR CONCRETE REPAIR, SEE SPECIAL PROVISION.

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

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO.: 590328

SHEET 2 OF 2

DocuSigned by:
02E838FAB074C3



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**BENT 2
 SOUTHBOUND
 SPAN C FACE**

DRAWN BY : R.L. PUTEK DATE : 05/2021
 CHECKED BY : H. A. LOCKLEAR DATE : 05/2021

NO.	REVISIONS			SHEET NO.
	BY:	DATE:	NO.	
1			3	S8-18 TOTAL SHEETS 274
2			4	

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AS-BUILT REPAIR QUANTITY TABLE

END BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP & CURTAIN WALL	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 & CURTAIN WALL		11.5		
EPOXY COATING		SQ. FT.		SQ. FT.
TOP OF BENT CAP		150		

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.

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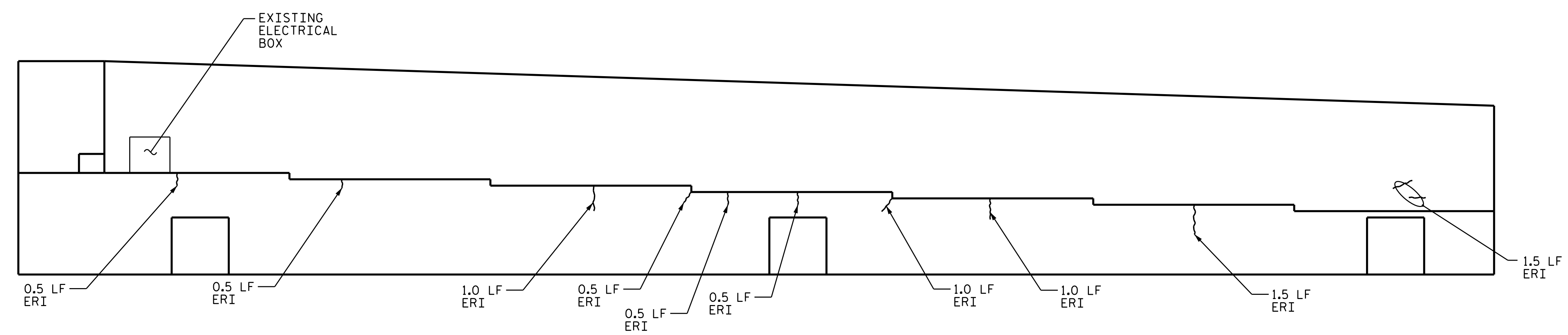
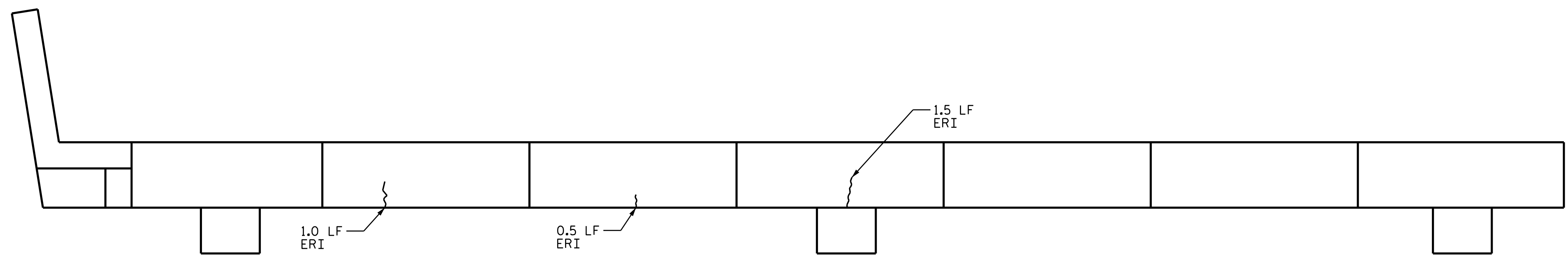
FOR SHOTCRETE REPAIR, SEE SPECIAL PROVISION.

FOR CONCRETE REPAIR, SEE SPECIAL PROVISION.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISION.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP. 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.

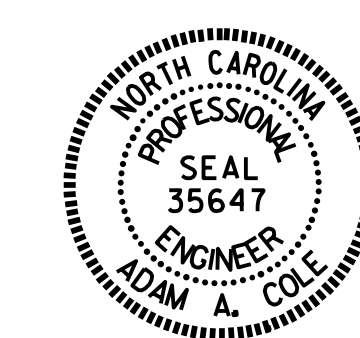
-  CONCRETE REPAIR AREA
-  SHOTCRETE REPAIR AREA
-  EPOXY RESIN INJECTION (ERI)



PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO.: 590328

SHEET 1 OF 2

DocuSigned by:
 02E838FAB074C3



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

END BENT 2
 NORTHBOUND

DRAWN BY : R.L. PUTEK DATE : 05/2021
 CHECKED BY : H. A. LOCKLEAR DATE : 05/2021

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			274
2			4			

AS-BUILT REPAIR QUANTITY TABLE

END BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP & CURTAIN WALL	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 & CURTAIN WALL		20.5		
EPOXY COATING		SQ. FT.		SQ. FT.
TOP OF BENT CAP		151		

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.

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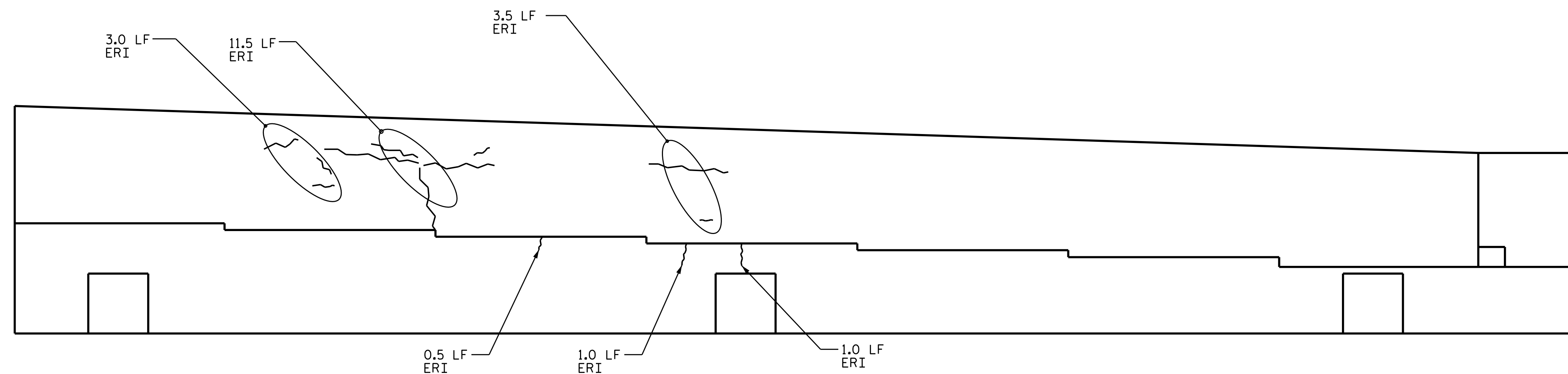
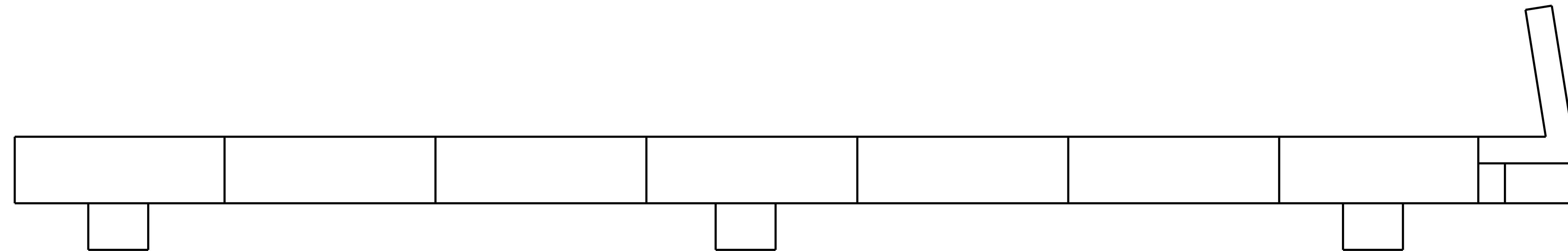
FOR SHOTCRETE REPAIR, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIR, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP. 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.

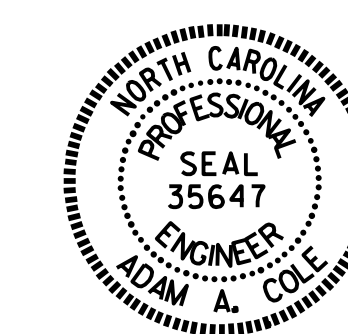
-  CONCRETE REPAIR AREA
-  SHOTCRETE REPAIR AREA
-  EPOXY RESIN INJECTION (ERI)



PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO.: 590328

SHEET 2 OF 2

DocuSigned by:
 02E838FAB074C3



8/23/2021

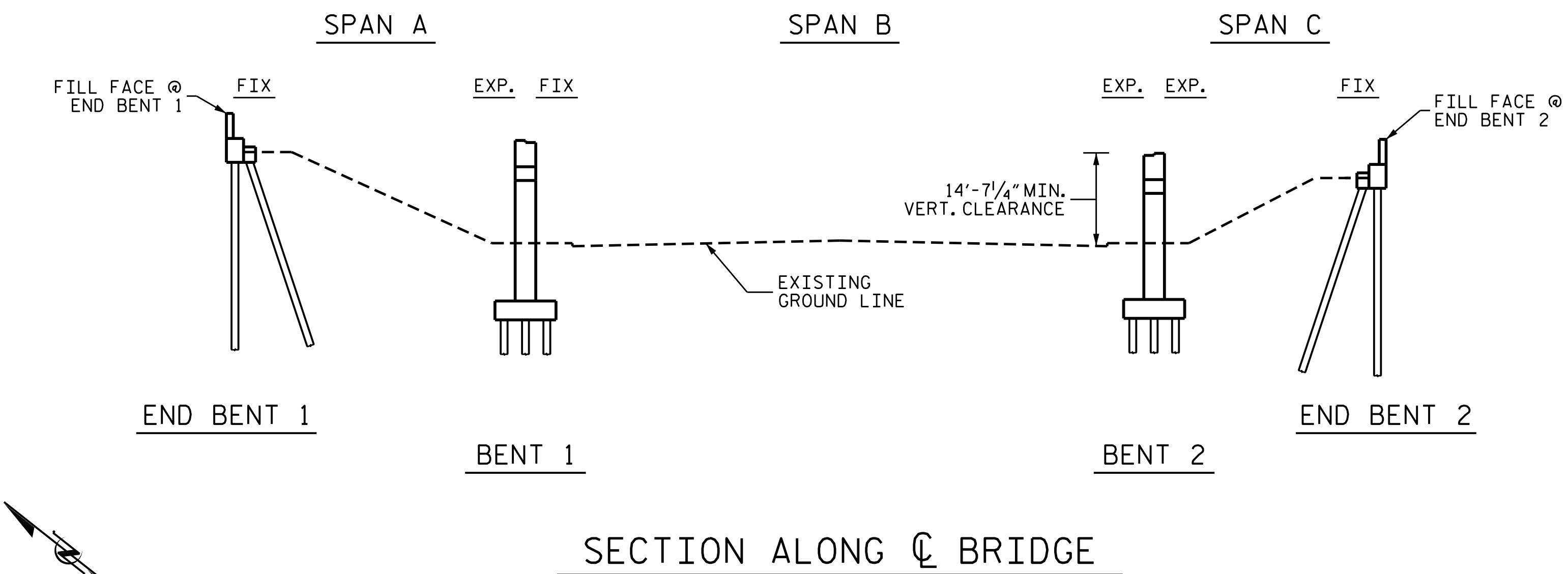
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

END BENT 2
 SOUTHBOUND

DRAWN BY : R.L. PUTEK DATE : 05/2021
 CHECKED BY : H. A. LOCKLEAR DATE : 05/2021

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1			3			S8-20
2			4			TOTAL SHEETS 274

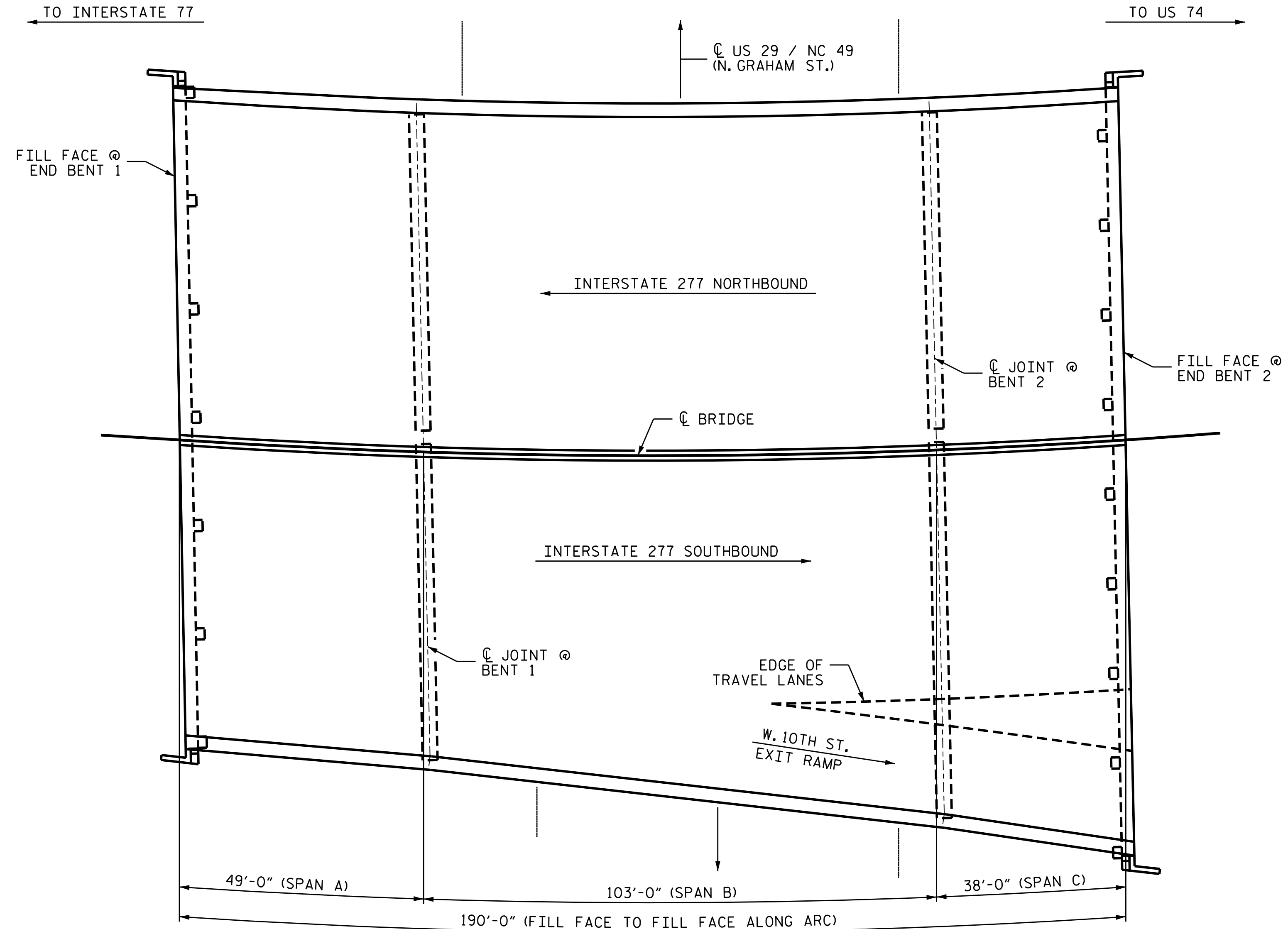


NOTES

PROFILE INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 07/25/2020.

BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

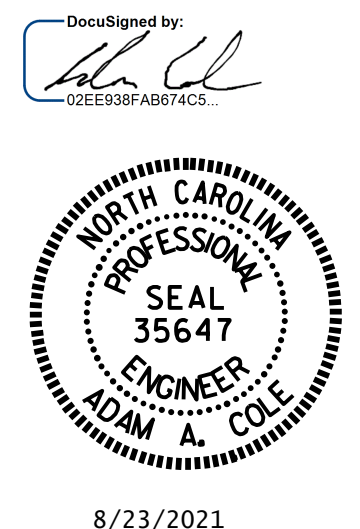
- SCOPE OF WORK**
- REMOVE ASPHALT WEARING SURFACE AND PARTIALLY REMOVE BRIDGE DECK CONCRETE BY SCARIFICATION AND SHOTBLASTING METHODS.
 - OVERLAY PREPARED BRIDGE DECK WITH POLYMER CONCRETE (PC).
 - GROOVE POLYMER CONCRETE (PC) BRIDGE DECK.
 - INSTALL FOAM JOINT SEALS.
 - CLEAN, REPAIR AND PAINT STEEL I-BEAMS.
 - INSTALL STEEL KEEPER ANGLE ASSEMBLIES AT BENT 2.
 - CLEAN BEARINGS AND APPLY HRCSA.
 - REMOVE UNSOUND CONCRETE AND PROPERLY PREPARE SHOTCRETE AND CONCRETE REPAIR AREAS.
 - EPOXY INJECTION OF CONCRETE CRACKS.
 - PERFORM SHOTCRETE AND CONCRETE REPAIRS IN PREPARED AREAS.
 - OVERLAY PREPARED BRIDGE DECK WITH POLYMER CONCRETE (PC).
 - REMOVE DEBRIS FROM TOP OF END BENT AND BENT CAPS AND APPLY EPOXY COATING.



I HEREBY CERTIFY THAT THIS STRUCTURE WAS REHABILITATED ACCORDING TO THESE PLANS OR AS NOTED HEREIN.

_____ DATE

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590330



SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 FOR BRIDGE ON I-277
 OVER US 29 / NC 49
 (N. GRAHAM STREET)

DRAWN BY : REZA KOUCHEKI/R.L.PUTEK DATE : 07/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 07/2021

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S9-1
1			3			TOTAL SHEETS
2			4			274

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LOCATION SKETCH

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

NOTES

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

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

THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THROUGH OF THE DECK.

FOR SCARIFYING BRIDGE DECK, SHOTBLASTING BRIDGE DECK, AND CLASS II SURFACE PREPARATION, SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE (PC) SPECIAL PROVISION.

EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING REPAIR OF BRIDGE DECKS.

THE EXISTING BRIDGE DECK SHALL BE REPAIRED AT LOCATIONS SHOWN ON THE PLANS OR AS DETERMINED BY THE ENGINEER AFTER SCARIFICATION AND PRIOR TO THE SURFACE PREPARATION AND APPLICATION OF THE PC OVERLAY. UNLESS OTHERWISE APPROVED, SUCH LOCATIONS SHALL BE REPAIRED WITH PC.

FOR CONCRETE DECK REPAIR FOR PC OVERLAY, PC MATERIALS, AND PLACING & FINISHING PC OVERLAY, SEE POLYMER CONCRETE BRIDGE DECK OVERLAY SPECIAL PROVISION.

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

LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG THE CENTERLINE OR EDGE OF TRAVEL LANES.

FOR PAINTING CONTAINMENT, POLLUTION CONTROL, AND CLEANING & PAINTING EXISTING BRIDGE, SEE CLEANING & PAINTING OF EXISTING STRUCTURE SPECIAL PROVISION.

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR POLLUTION CONTROL, SEE PAINTING EXISTING STRUCTURE SPECIAL PROVISION.

FOR STEEL KEEPER ANGLE ASSEMBLY, SEE SPECIAL PROVISIONS.

FOR PAINTING CONTAINMENT, POLLUTION CONTROL, AND CLEANING & PAINTING EXISTING BEARINGS WITH HRCSA, SEE CLEANING & PAINTING EXISTING BEARINGS WITH HRCSA SPECIAL PROVISION.

FOR BEAM REPAIR, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIR, SEE SPECIAL PROVISIONS.

FOR BRIDGE JACKING, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

BRIDGE COORDINATES

LATITUDE: 35°-14'-9.94"
LONGITUDE: 80°-50'-21.57"

NOTES

THE CONTRACTOR SHALL PROVIDE INDEPENDENT ASSURANCE SAMPLES OF REINFORCING STEEL AS FOLLOWS: FOR PROJECTS REQUIRING UP TO 400 TONS OF REINFORCING STEEL, ONE 30 INCH SAMPLE OF EACH SIZE BAR USED, AND FOR PROJECTS REQUIRING OVER 400 TONS OF REINFORCING STEEL, TWO 30 INCH SAMPLES OF EACH SIZE BAR USED. THE BARS FROM WHICH THE SAMPLES ARE TAKEN MUST THEN BE SPICED WITH REPLACEMENT BARS OF THE SIZE AND LENGTH OF THE SAMPLE, PLUS A MINIMUM LAP SPLICE OF THIRTY BAR DIAMETERS. PAYMENT FOR THE SAMPLES OF REINFORCING STEEL SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.

WORK ON THE BRIDGES SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL BELOW. THE CONTRACTOR SHALL SUBMIT PLANS FOR CONSTRUCTION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS AND THE PROJECT SPECIAL PROVISIONS.

THE CONTRACTOR SHALL PERFORM ALL WORK WITH CARE SO THAT THE EXISTING STRUCTURE WHICH IS TO REMAIN IN PLACE WILL NOT BE DAMAGED. IF THE CONTRACTOR DAMAGES ANY PART OF THE EXISTING STRUCTURE WHICH IS TO REMAIN IN PLACE, THE DAMAGED AREA SHALL BE REPAIRED OR REPLACED IN A MANNER SATISFACTORY TO THE ENGINEER AT NO ADDITIONAL COST TO THE DEPARTMENT.

CONTRACTOR SHALL DETERMINE EXTENT OF WORKING AREA, STAGING PROCESS, AND INSTALL COVER & ASSEMBLY AS NECESSARY TO MEET THE REQUIREMENTS OF TRAFFIC MANAGEMENT PLANS.

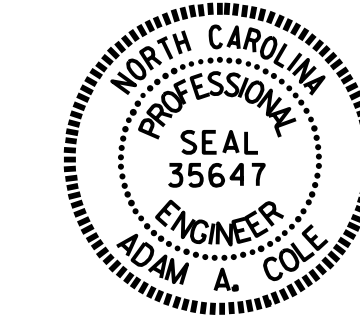
PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL A COMPLETE SEQUENCE OF TASKS FOR EACH OPERATION AFFECTING THE BRIDGE SURFACE AND/OR TRAFFIC.

AT THE TIME OF PREPARATION OF THESE PLANS, IT WAS NOT ANTICIPATED THAT ITEMS SHOWN BELOW WOULD BE REQUIRED. HOWEVER, IT MAY BE DETERMINED IN THE FIELD THAT THESE ITEMS, OR OTHER WORK WILL BE NECESSARY TO PROPERLY COMPLETE THE INTENDED BRIDGE PRESERVATION/REHABILITATION WORK. THE CONTRACTOR SHALL BE PREPARED TO PERFORM SUCH WORK IN A TIMELY MANNER, AS DETERMINED IN THE FIELD. SUCH WORK SHALL BE CONSIDERED EXTRA WORK AND SHALL BE ADDRESSED AS PER ARTICLE 104-7 OF THE STANDARD SPECIFICATIONS. PROJECT SPECIAL PROVISIONS THAT OUTLINE REQUIREMENTS FOR THESE POTENTIAL ADDITIONAL WORK ITEMS HAVE BEEN PROVIDED IN PROJECT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES, AND COSTS WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

UNANTICIPATED ITEMS:

ITEM NO.	DESCRIPTION	UNIT
1	CLASS III SURFACE PREPARATION	LIN. FT.

DocuSigned by:
[Signature]



8/23/2021

PROJECT NO. I-5746C
MECKLENBURG COUNTY
BRIDGE NO. 590330

SHEET 2 OF 2

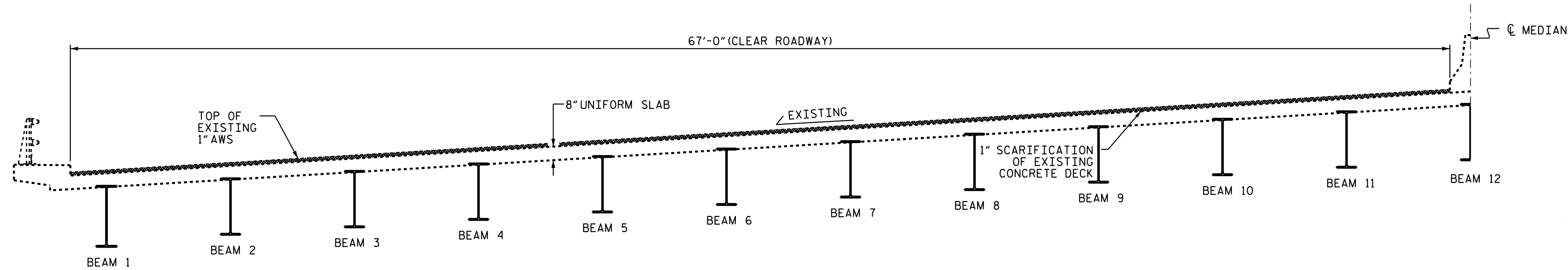
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR BRIDGE ON I-277
OVER US 29 / NC 49
(N. GRAHAM STREET)

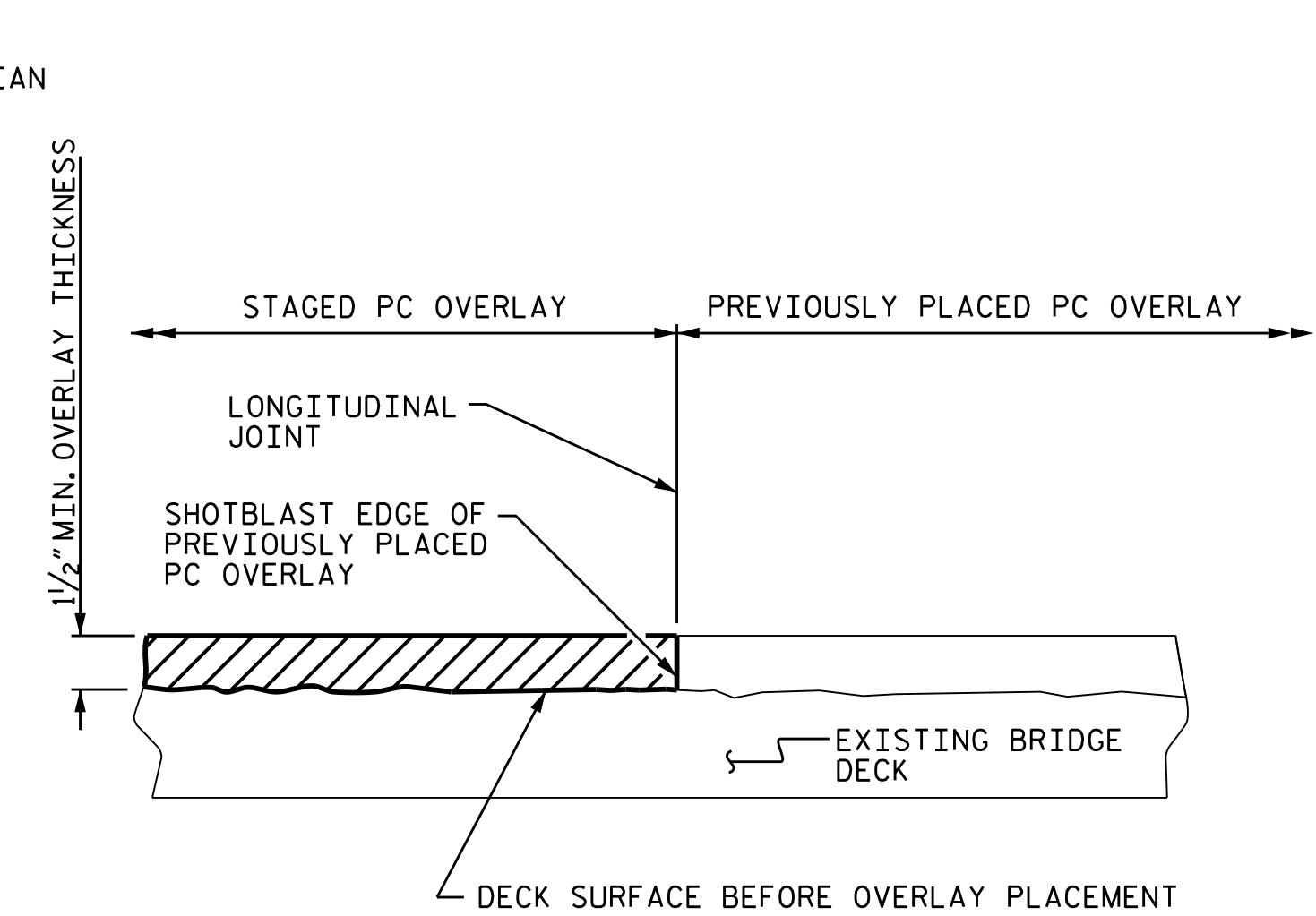
DRAWN BY : REZA KOUCHEKI / R.L. PUTEK DATE : 07/2021
CHECKED BY : H.A. LOCKLEAR DATE : 07/2021

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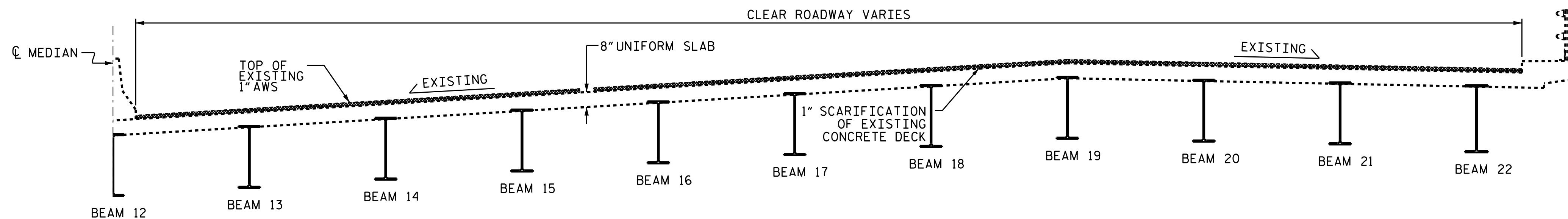
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EXISTING TYPICAL SECTION - NORTHBOUND LANES

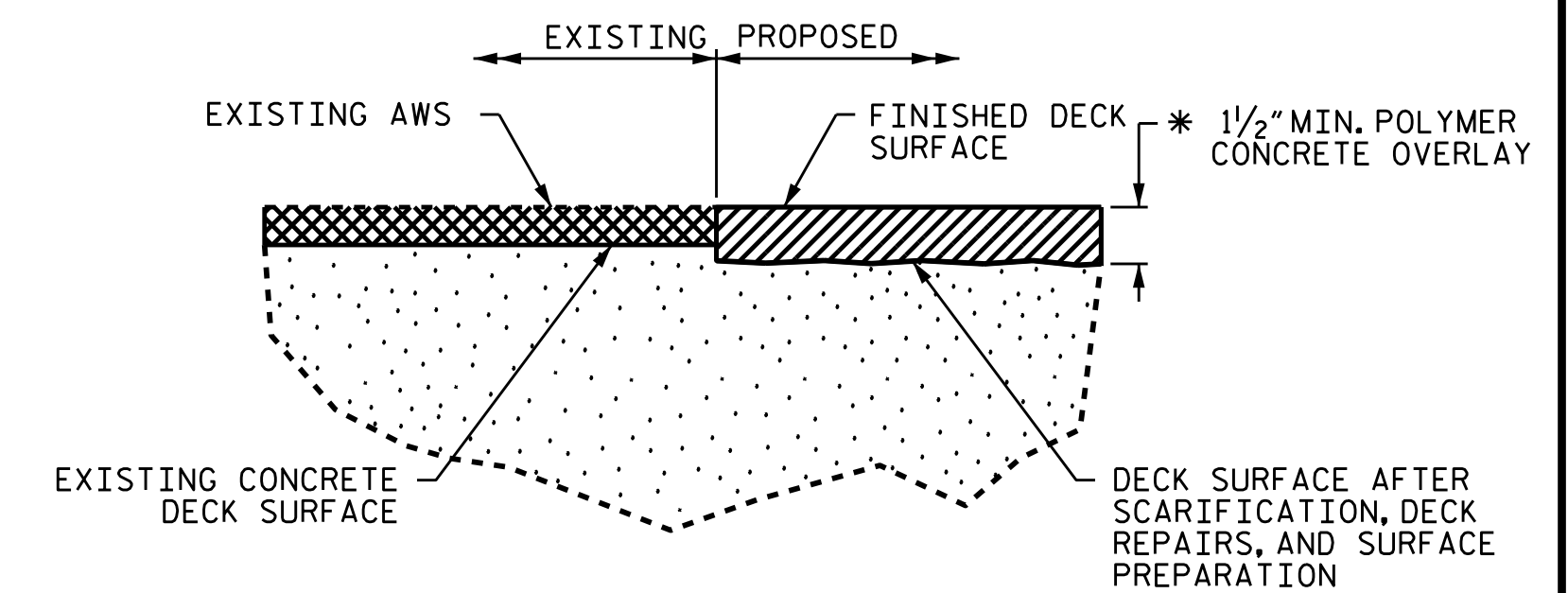


STAGED PC OVERLAY JOINT
(AS NEEDED)



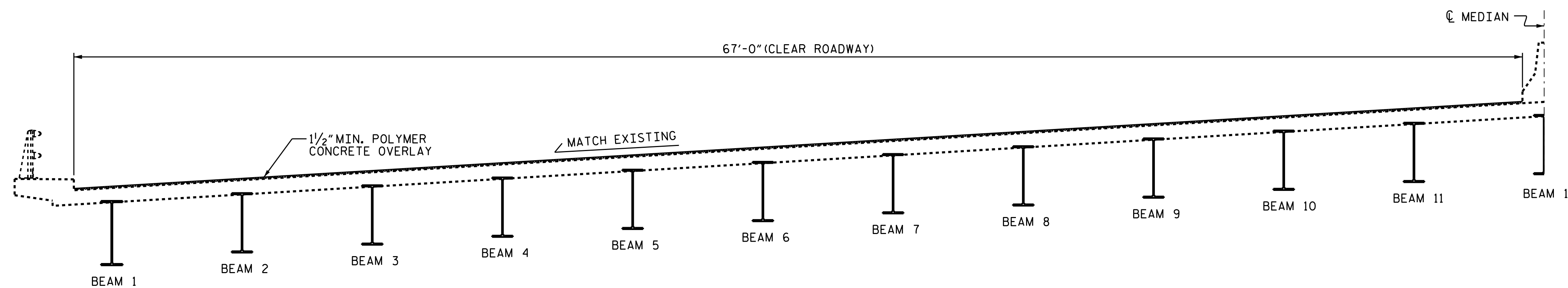
EXISTING TYPICAL SECTION - SOUTHBOUND LANES

SPAN A SHOWN, SPANS B & C SIMILAR

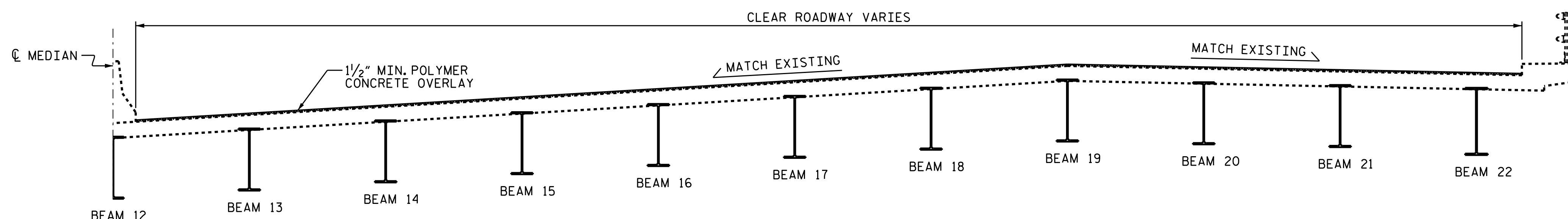


DETAIL FOR POLYMER CONCRETE OVERLAY

* FINISHED SURFACE ELEVATION SHALL MATCH EXISTING ASPHALT WEARING SURFACE ELEVATION, ACTUAL THICKNESS OF PC OVERLAY SHALL BE 1/2".



PROPOSED TYPICAL SECTION - NORTHBOUND LANES

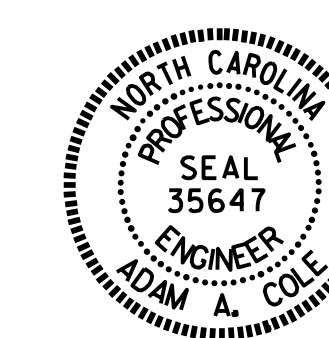


PROPOSED TYPICAL SECTION - SOUTHBOUND LANES

SPAN A SHOWN, SPANS B & C SIMILAR

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO.: 590330

DocuSigned by:
02E838FAB74C5



8/23/2021

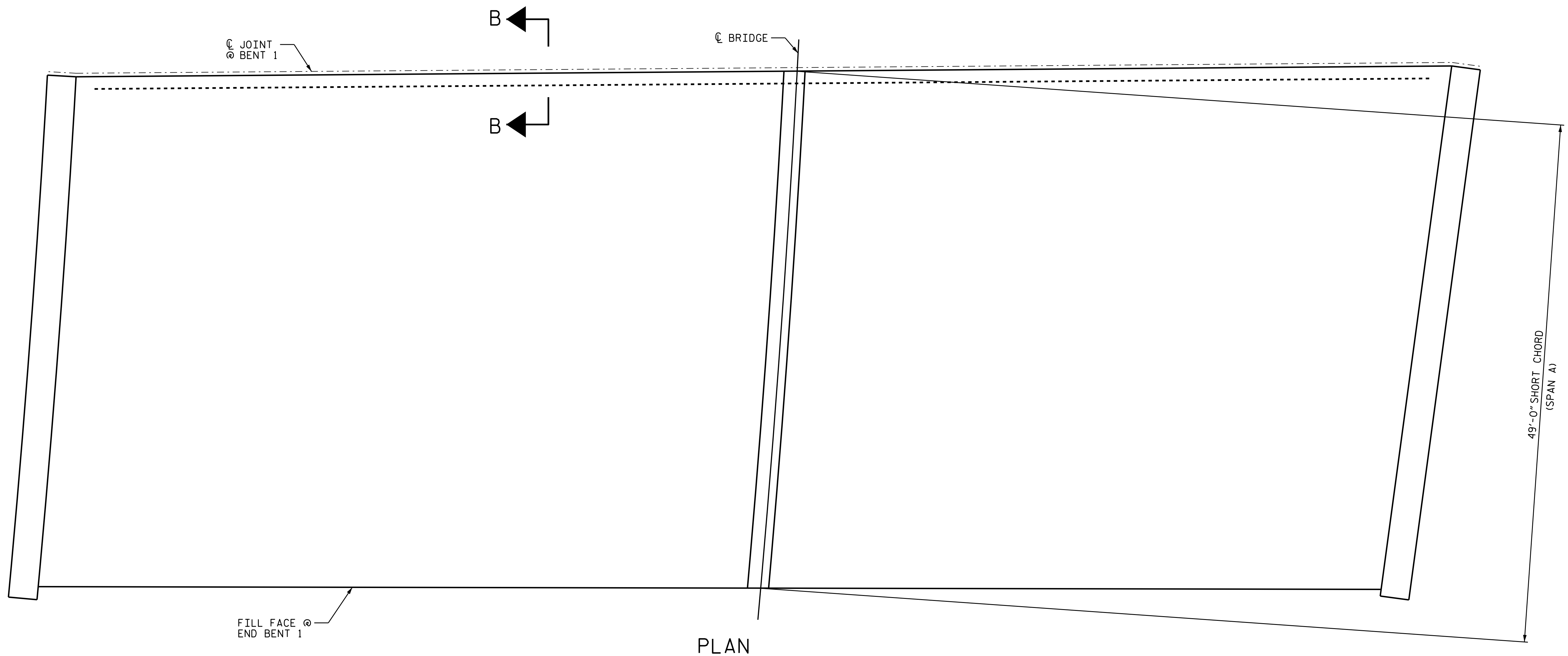
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

TYPICAL SECTION
 AND
 PC OVERLAY
 DETAILS

DRAWN BY : REZA KOUCHEKI/ R.L. PUTEK DATE : 07/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 07/2021

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AS-BUILT REPAIR QUANTITY TABLE		
TOP OF DECK REPAIRS		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	691 SQ. YDS.	
CLASS II SURFACE PREPARATION	0.0 SQ. YDS.	
CONCRETE DECK REPAIR FOR PC OVERLAY	0.0 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	691 SQ. YDS.	
PC MATERIALS	62.4 CU. YDS.	
PLACING AND FINISHING PC OVERLAY	691 SQ. YDS.	
GROOVING BRIDGE FLOORS	5722 SQ. FT.	

TOP OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PC OVERLAY AFTER REMOVAL OF UNSOUND CONCRETE. (MIN. 2" CLEAR TO SAWCUT). SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.

VALUES REPRESENT ESTIMATED UNDERSIDE OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

NOTES:

REPAIR LOCATIONS AND ESTIMATED 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 LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

FOR SECTION B-B, SEE "JOINT DETAILS" SHEET.

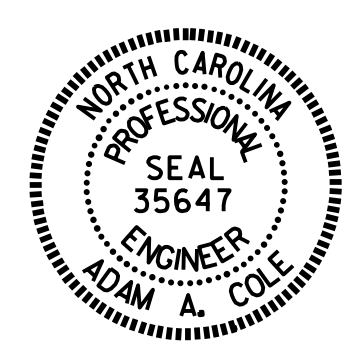
FOR UNDERSIDE OF DECK AND DIAPHRAGM REPAIRS, SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.

FOR CONCRETE DECK REPAIR FOR PC OVERLAY, SEE SPECIAL PROVISIONS.

FOR PC MATERIALS, SEE SPECIAL PROVISIONS.

 APPROX. CLASS II SURFACE PREPARATION

DocuSigned by:
02E838FAB074C3



8/23/2021

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590330

SHEET 1 OF 3

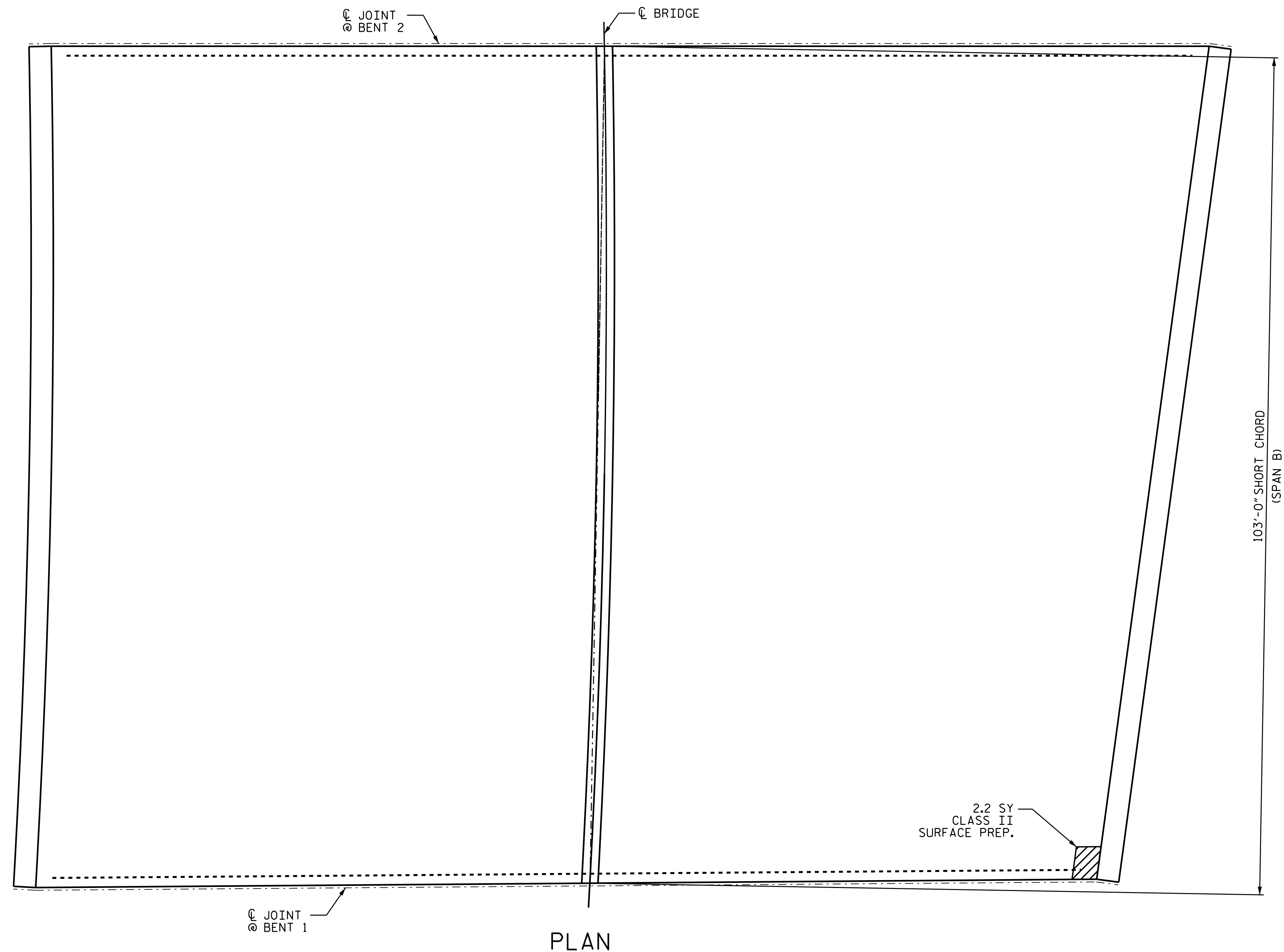
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK SURFACE REPAIR
 SPAN A

DRAWN BY : REZA KOUCHEKI / R.L. PUTEK DATE : 07/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 07/2021

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NOTES:

REPAIR LOCATIONS AND ESTIMATED 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 LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

FOR SECTION B-B, SEE "JOINT DETAILS" SHEET.

FOR CONCRETE DECK REPAIR FOR PC OVERLAY, SEE SPECIAL PROVISIONS.

FOR PC MATERIALS, SEE SPECIAL PROVISIONS.

AS-BUILT REPAIR QUANTITY TABLE		
TOP OF DECK REPAIRS		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	1538 SQ. YDS.	
CLASS II SURFACE PREPARATION	2.2 SQ. YDS.	
CONCRETE DECK REPAIR FOR PC OVERLAY	2.2 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	1538 SQ. YDS.	
PC MATERIALS	138.8 CU. YDS.	
PLACING AND FINISHING PC OVERLAY	1538 SQ. YDS.	
GROOVING BRIDGE FLOORS	13160 SQ. FT.	

TOP OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PC OVERLAY AFTER REMOVAL OF UNSOUND CONCRETE. (MIN. 2" CLEAR TO SAWCUT). SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.

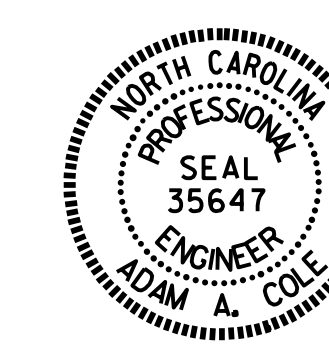
VALUES REPRESENT ESTIMATED UNDERSIDE OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

APPROX. CLASS II SURFACE PREPARATION

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590330

SHEET 2 OF 3

DocuSigned by:
 02E888F8A874C3



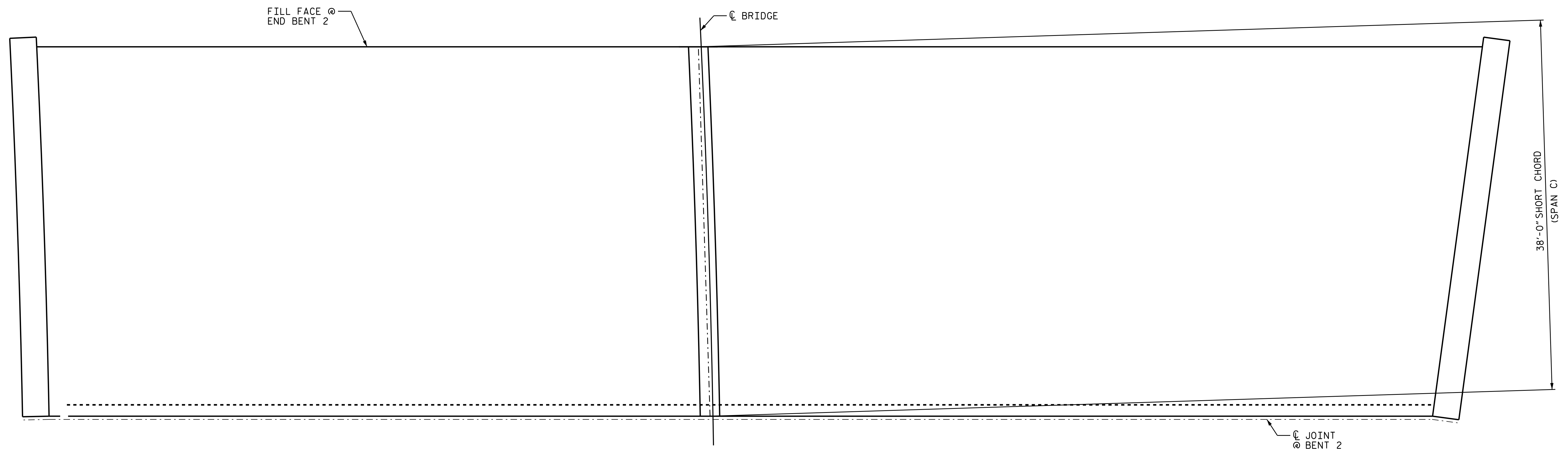
8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 DECK SURFACE REPAIR
 SPAN B

DRAWN BY : REZA KOUCHEKI / R.L. PUTEK DATE : 07/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 07/2021

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1			3			TOTAL SHEETS
2			4			274



PLAN

AS-BUILT REPAIR QUANTITY TABLE		
TOP OF DECK REPAIRS		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	606 SQ. YDS.	
CLASS II SURFACE PREPARATION	0.0 SQ. YDS.	
CONCRETE DECK REPAIR FOR PC OVERLAY	0.0 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	606 SQ. YDS.	
PC MATERIALS	54.7 CU. YDS.	
PLACING AND FINISHING PC OVERLAY	606 SQ. YDS.	
GROOVING BRIDGE FLOORS	5021 SQ. FT.	

TOP OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PC OVERLAY AFTER REMOVAL OF UNSOUND CONCRETE. (MIN. 2" CLEAR TO SAWCUT). SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.

VALUES REPRESENT ESTIMATED UNDERSIDE OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

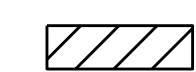
NOTES:

REPAIR LOCATIONS AND ESTIMATED 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 LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

FOR SECTION B-B, SEE "JOINT DETAILS" SHEET.

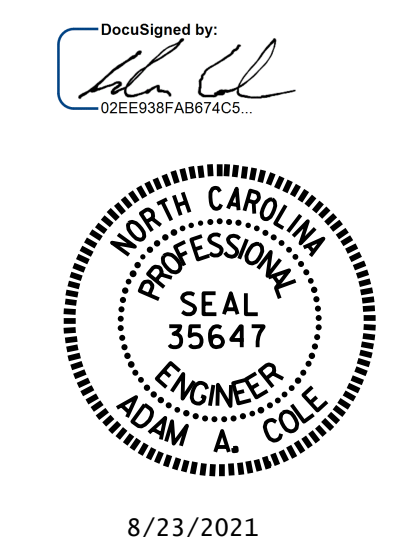
FOR CONCRETE DECK REPAIR FOR PC OVERLAY, SEE SPECIAL PROVISIONS.

FOR PC MATERIALS, SEE SPECIAL PROVISIONS.

 APPROX. CLASS II SURFACE PREPARATION

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590330

SHEET 3 OF 3



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 DECK SURFACE REPAIR
 SPAN C

DRAWN BY : REZA KOUCHEKI / R.L. PUTK DATE : 07/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 07/2021

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1			3			S9-6
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NOTES:

FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE PC OVERLAY IS COMPLETE.

THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING JOINT OPENING PRIOR TO ORDERING JOINT SEAL MATERIAL. IF THE ACTUAL JOINT OPENING VARIES FROM THE OPENING INDICATED IN THE DETAILS BY MORE THAN 1/4", NOTIFY THE ENGINEER.

THE MANUFACTURER IS TO PROVIDE THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE FOAM JOINT SEAL FOR THE SIZE OF THE OPENING ON THE PLANS AND ACCOMMODATE THE MINIMUM EXPANSION SHOWN ON THE PLANS.

FOAM JOINTS SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS.

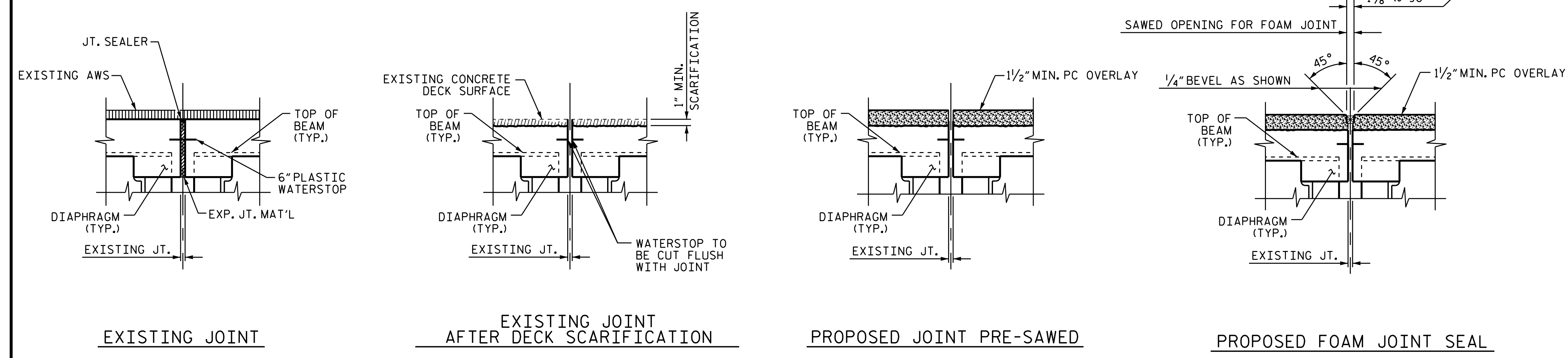
THE CONTRACTOR SHALL TAKE CARE DURING JOINT REHAB OPERATIONS NOT TO DROP ANY MATERIAL BELOW THE BRIDGE, WITHOUT PROTECTIVE DEVICES BELOW TO CATCH THE MATERIAL. ANY MATERIAL THAT FALLS BELOW THE BRIDGE SHALL BE CONTAINED, REMOVED AND DISPOSED OF BY THE CONTRACTOR AT NO EXTRA COST TO THE DEPARTMENT. IF THE ENGINEER DETERMINES THAT THE PROTECTIVE DEVICES ARE NOT ADEQUATE OR NOT BEING EMPLOYED, THE WORK SHALL BE SUSPENDED UNTIL ADEQUATE PROTECTION IS PROVIDED.

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINTS IN LIEU OF SAWING THE JOINT.

THE INSTALLED FOAM JOINTS SHALL BE WATER TIGHT.

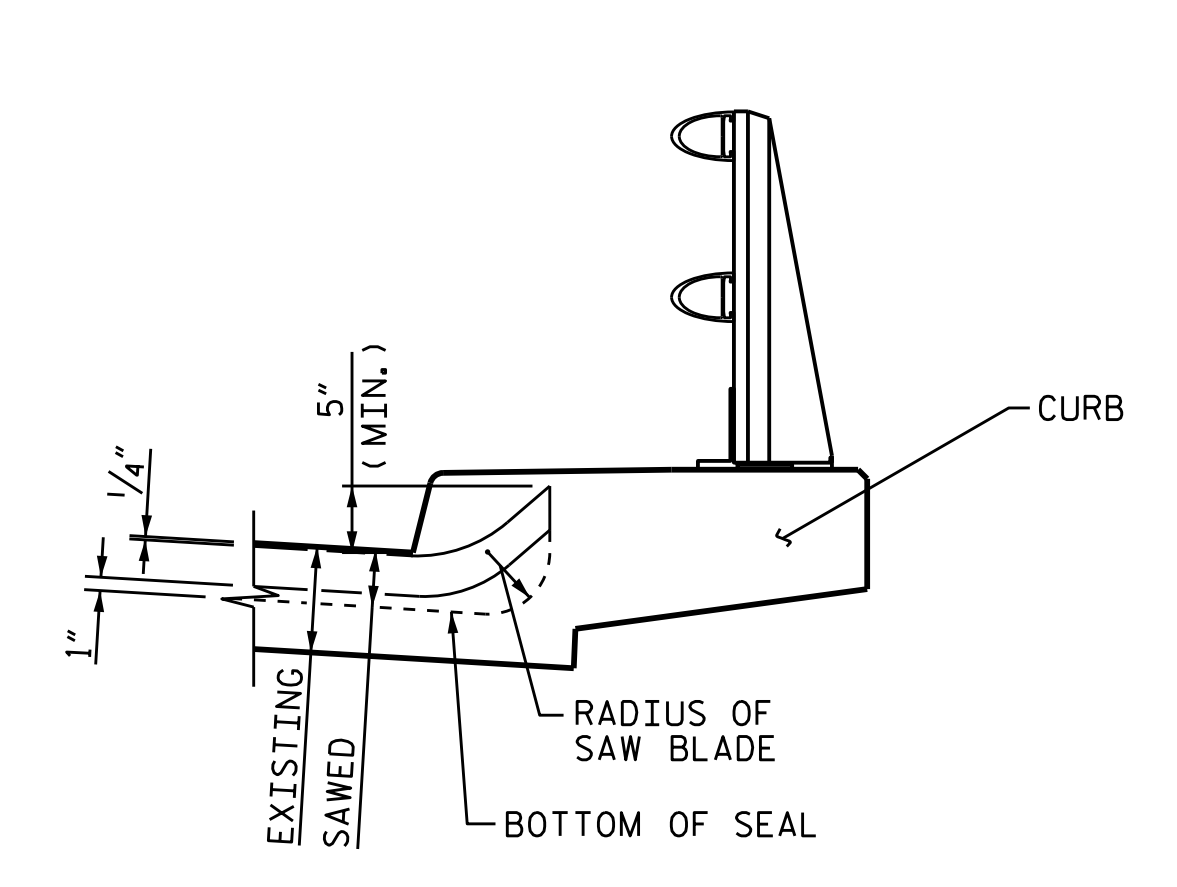
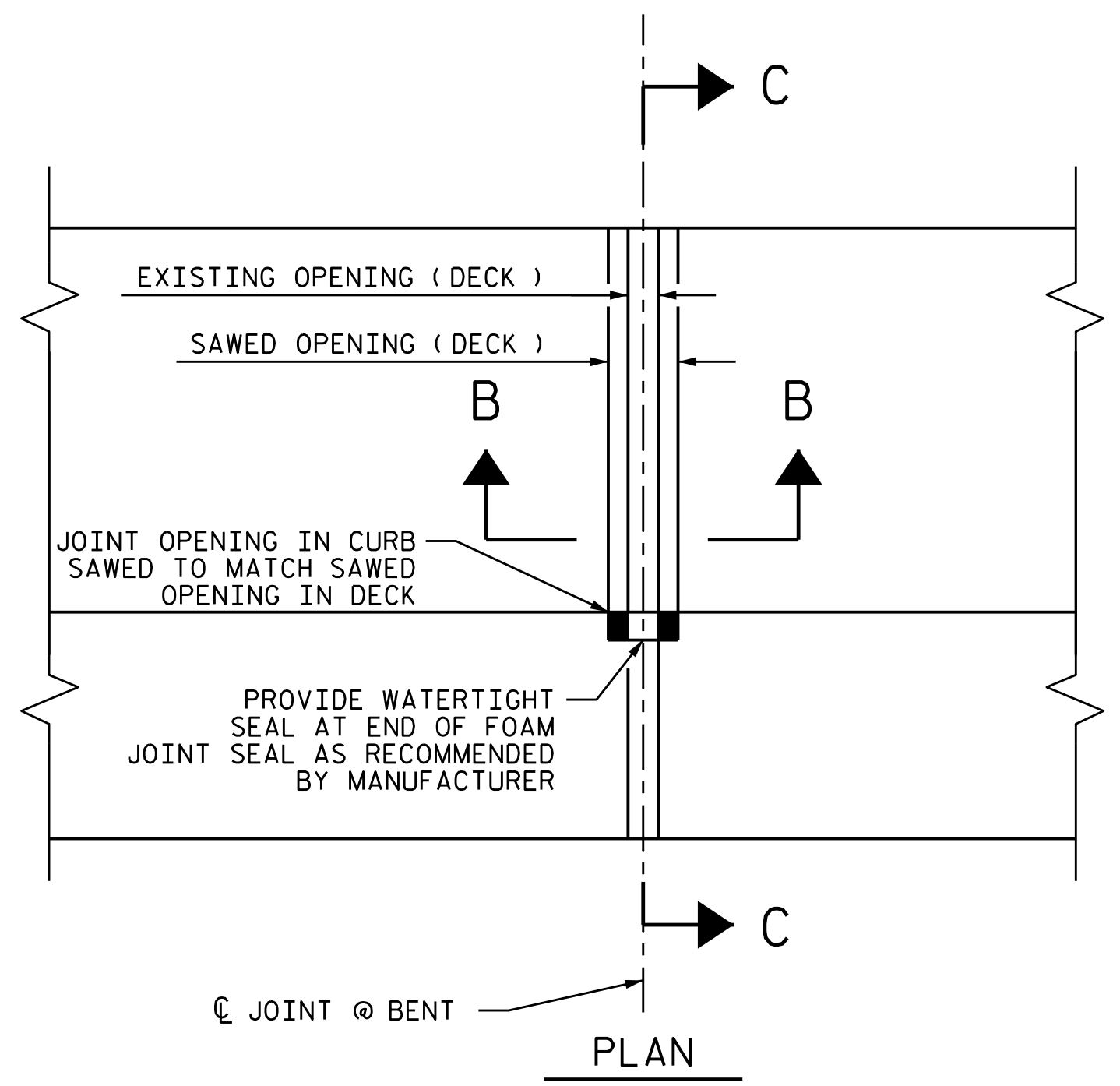
NOMINAL UNCOMPRESSED SEAL WIDTH OF FOAM JOINT SEAL SHALL BE 2".

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

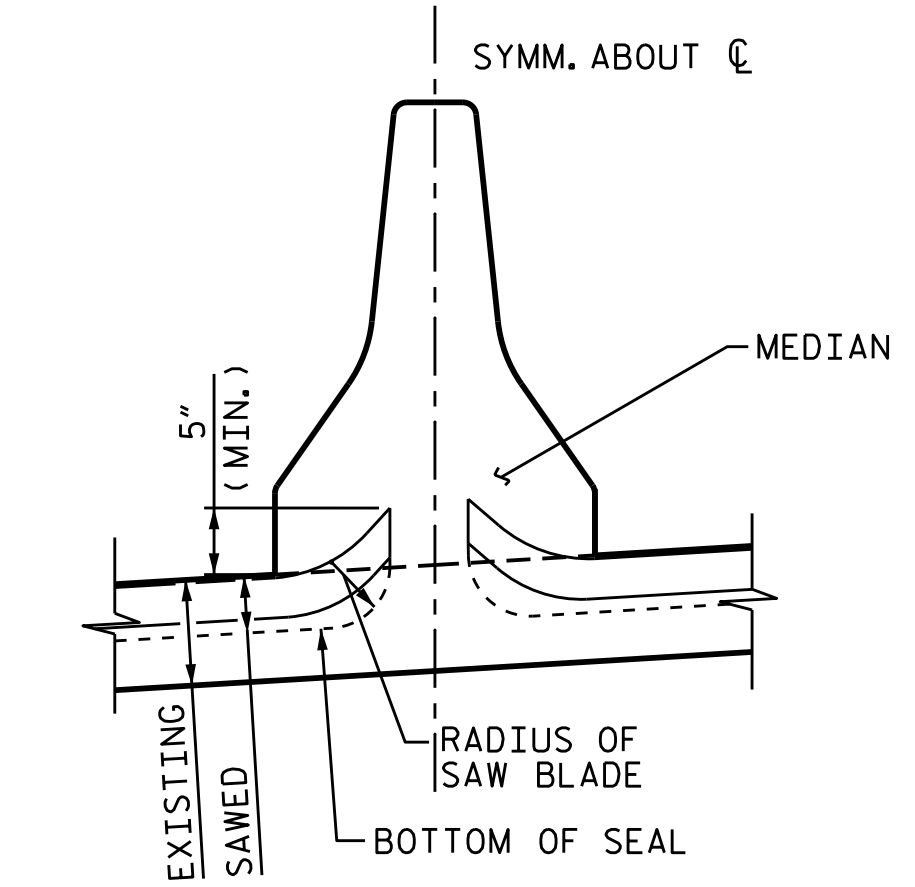


SECTION B-B

JOINT REPAIR QUANTITY TABLE		
	ESTIMATE	ACTUAL
FOAM JOINT SEALS FOR PRESERVATION		
BENT 1	131.6 LF.	
BENT 2	143.3 LF.	
TOTAL	274.9 LF.	



SECTION C-C
FOAM JOINT SEAL SHALL BE FACTORY FORMED OR CUT, HEAT WELDED AND TURNED UP PARALLEL TO FACE OF CURB.



MEDIAN DETAIL
FOAM JOINT SEAL SHALL BE FACTORY FORMED OR CUT, HEAT WELDED AND TURNED UP PARALLEL TO FACE OF MEDIAN.

DocuSigned by:
Adam A. Cole
02EE938FA8074C0
ADAM A. COLE
NORTH CAROLINA
PROFESSIONAL
SEAL
35647
ENGINEER
8/23/2021

PROJECT NO. I-5746C
MECKLENBURG COUNTY
BRIDGE NO. 590330

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
FOAM JOINT DETAILS

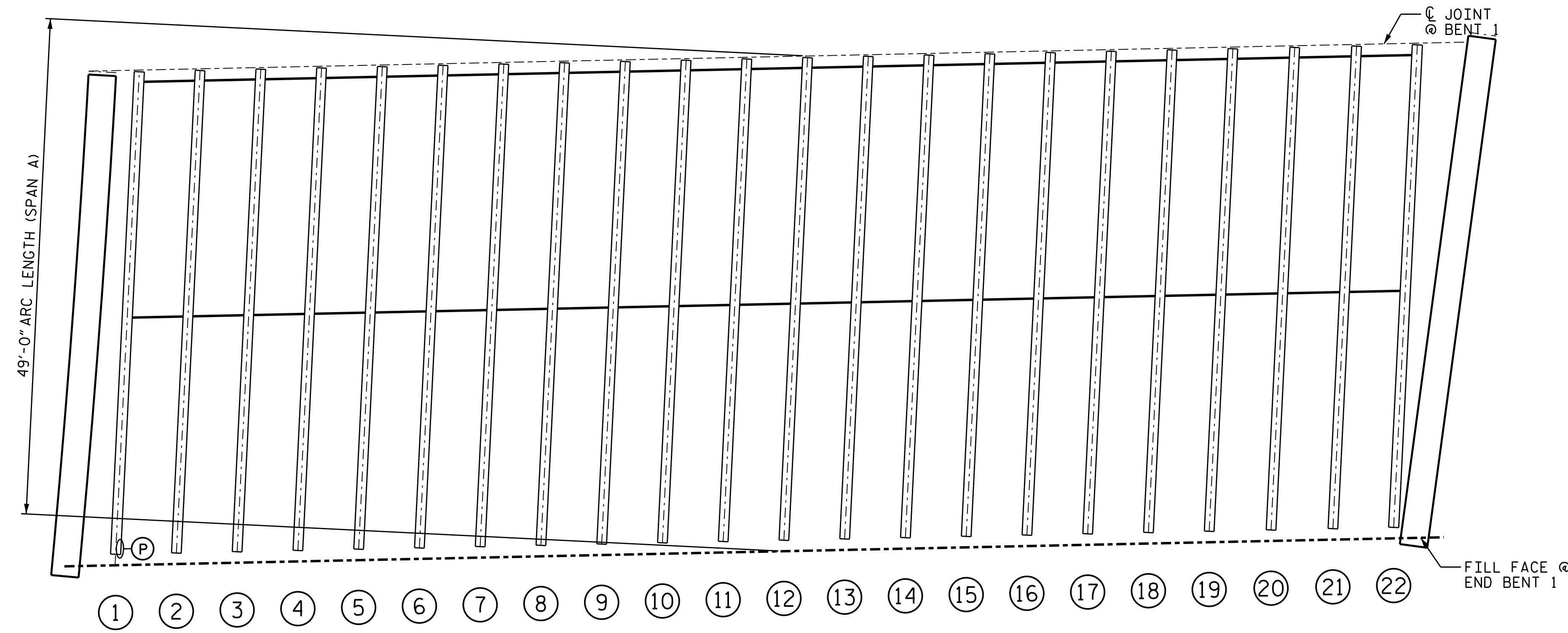
DRAWN BY : R.L.PUTEK/REZA KOUCHEKI DATE : 05/2021
CHECKED BY : H.A. LOCKLEAR DATE : 05/2021

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

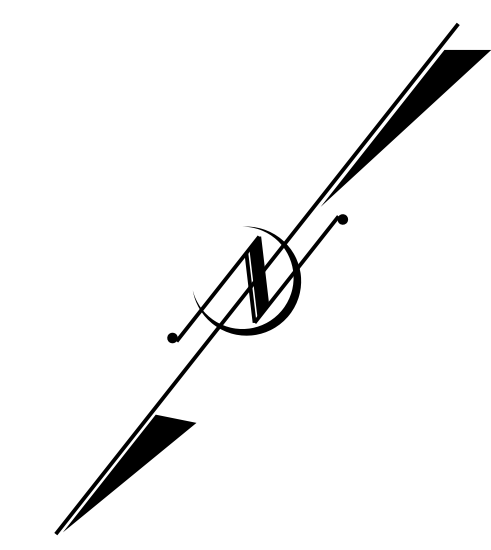
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S9-7
2			4			TOTAL SHEETS 274

NOTES

FOR BEAM REPAIR DETAILS, SEE "BEAM SECTION REPAIR DETAILS" SHEET.
 FOR BEAM PLATING REPAIR, "BEAM PLATING REPAIR DETAILS" SHEET.
 FOR BRIDGE JACKING DETAILS, SEE "JACKING DETAILS" SHEET.
 THE LOCATIONS AND DIMENSIONS OF THE AREAS FOR REPAIR ARE BASED ON THE BEST INFORMATION AVAILABLE. THE CONTRACTOR, IN CONJUNCTION WITH THE ENGINEER, SHALL VERIFY THE LOCATION AND EXTENT OF REPAIR AREAS PRIOR TO STEEL FABRICATION. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.



- ① BEAM NUMBER
- ⓑ BEAM END REPAIR
- Ⓟ PLATING REPAIR
- Ⓢ STIFFENER REPAIR
- Ⓣ STEEL DIAPHRAGM REPAIR



PLAN

ANTICIPATED BEAM REPAIR LOCATIONS						
SPAN	BEAM	LOCATION	DIM "A"	DIM "B"	DIM "C"	DIM "D"
A	1	END BENT 1	2"	1'-2"	-	-

UNDERSIDE OF DECK REPAIRS				
SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
UNDERSIDE OF DECK	0.0	0.0		
UNDERSIDE OF OVERHANG	0.0	0.0		
INTERIOR DIAPHRAGMS	0.0	0.0		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	0.0 LIN. FT.			

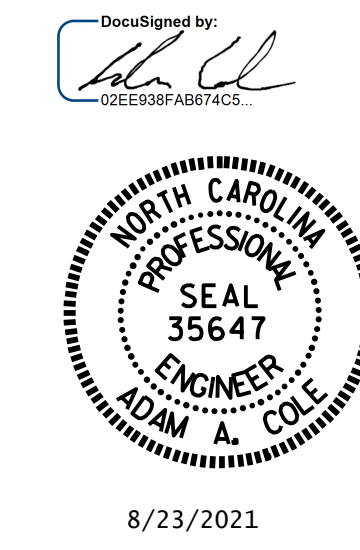
BEAM REPAIR QUANTITY TABLE							
BEAM END REPAIR		PLATING REPAIR		STIFFENER REPAIR		DIAPHRAGM REPAIR	
LBS.		LBS.		LBS.		LBS.	
ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
0		25		0		0	

UNDERSIDE OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

- UNDERSIDE EPOXY COATING
- UNDERSIDE REPAIR
- DIAPHRAGM REPAIR
- EPOXY RESIN INJECTION (ERI)

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590330

SHEET 1 OF 3



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
UNDERSIDE DECK REPAIR
 SPAN A

DRAWN BY : REZA KOUCHEKI / R.L. PUTEK DATE : 07/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 07/2021

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S9-8
1			3			TOTAL SHEETS
2			4			274

NOTES

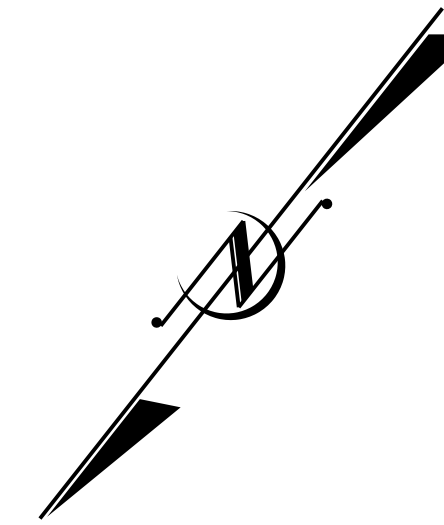
FOR BEAM REPAIR DETAILS, SEE "BEAM SECTION REPAIR DETAILS" SHEET.

FOR BEAM PLATING REPAIR, "BEAM PLATING REPAIR DETAILS" SHEET.

FOR BRIDGE JACKING DETAILS, SEE "JACKING DETAILS" SHEET.

THE LOCATIONS AND DIMENSIONS OF THE AREAS FOR REPAIR ARE BASED ON THE BEST INFORMATION AVAILABLE. THE CONTRACTOR, IN CONJUNCTION WITH THE ENGINEER, SHALL VERIFY THE LOCATION AND EXTENT OF REPAIR AREAS PRIOR TO STEEL FABRICATION. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

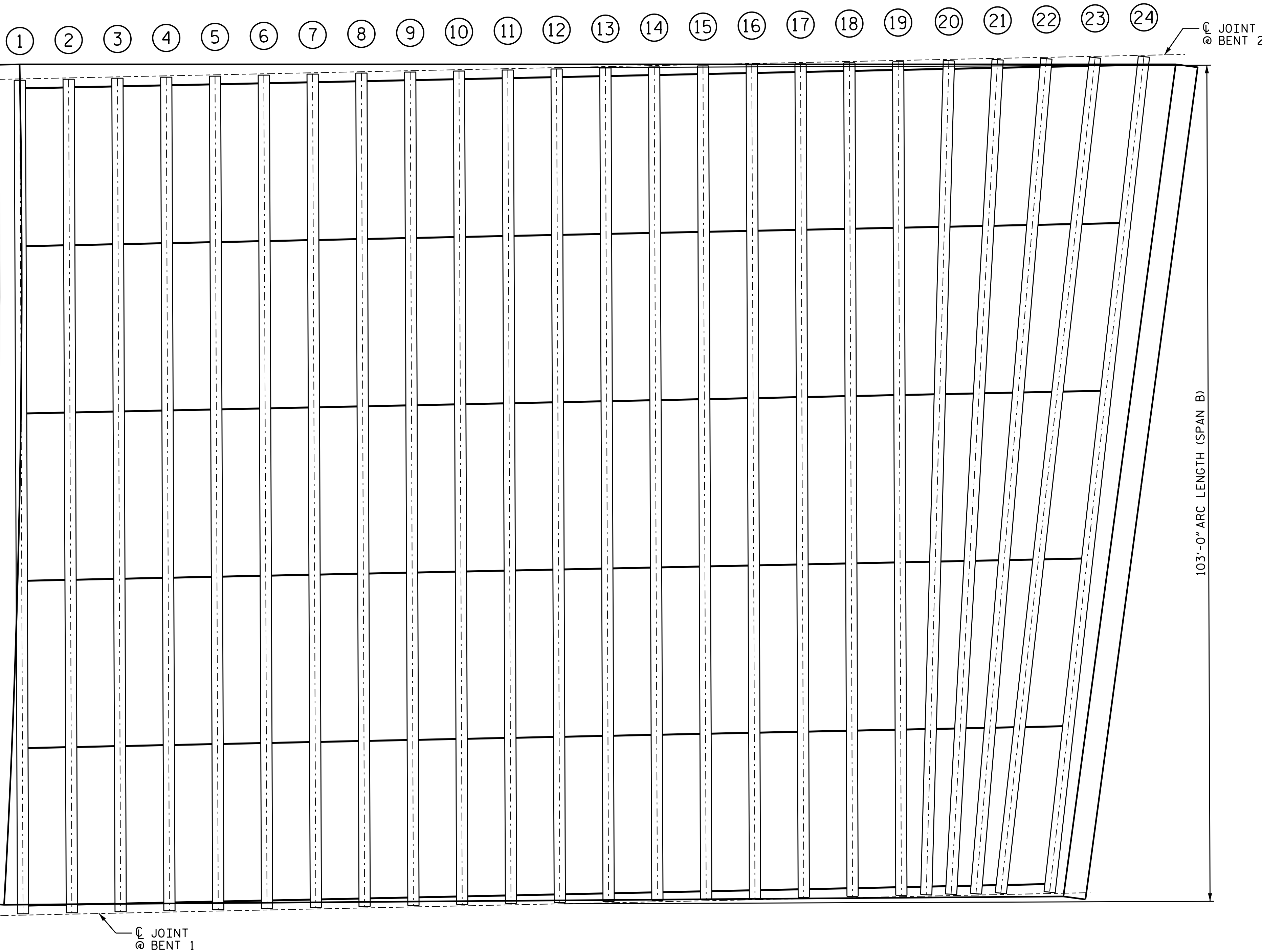
- ① BEAM NUMBER
- ⓑ BEAM END REPAIR
- Ⓟ PLATING REPAIR
- Ⓢ STIFFENER REPAIR
- Ⓣ STEEL DIAPHRAGM REPAIR



BEAM REPAIR QUANTITY TABLE							
BEAM END REPAIR		PLATING REPAIR		STIFFENER REPAIR		DIAPHRAGM REPAIR	
LBS.		LBS.		LBS.		LBS.	
ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
0		0		0		0	

AS-BUILT REPAIR QUANTITY TABLE				
UNDERSIDE OF DECK REPAIRS				
SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
UNDERSIDE OF DECK	0.0	0.0		
UNDERSIDE OF OVERHANG	0.0	0.0		
INTERIOR DIAPHRAGMS	0.0	0.0		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	0.0 LIN. FT.			

UNDERSIDE OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.



PLAN

ANTICIPATED BEAM REPAIR LOCATIONS						
SPAN	BEAM	LOCATION	DIM "A"	DIM "B"	DIM "C"	DIM "D"
-	-	-	-	-	-	-

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590330

SHEET 2 OF 3

DocuSigned by:
 02E838FAB74C3



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
UNDERSIDE DECK REPAIR
SPAN B

DRAWN BY : REZA KOUCHEKI / R.L. PUTEK DATE : .07/2021
 CHECKED BY : H.A. LOCKLEAR DATE : .07/2021

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S9-9
2			4			TOTAL SHEETS 274

NOTES

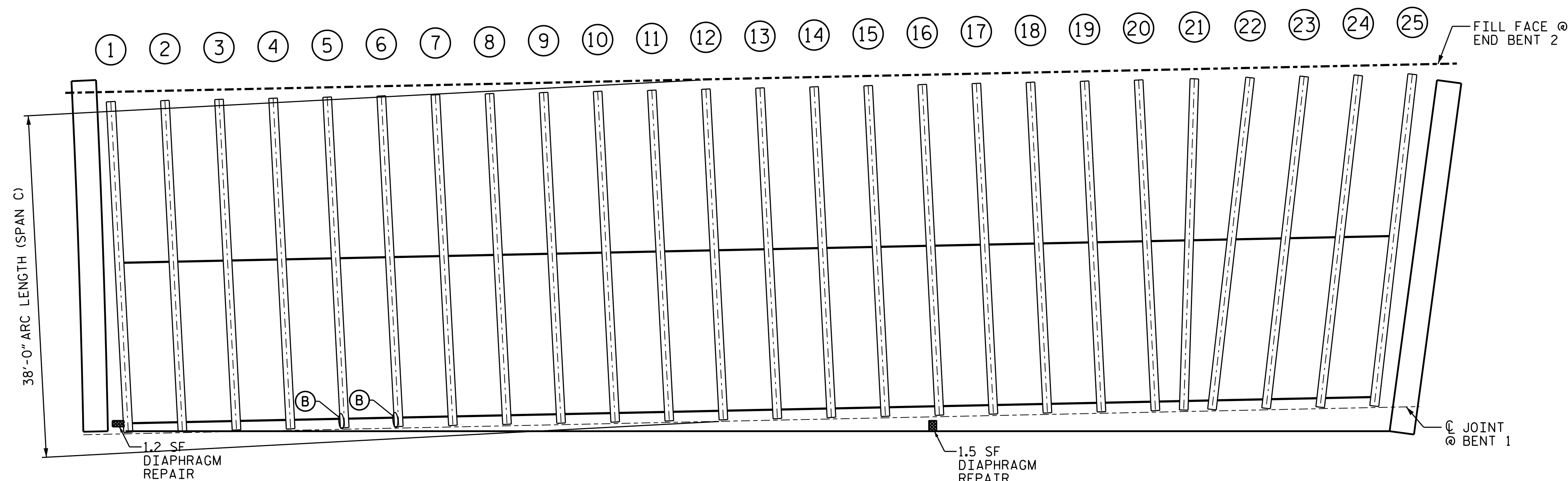
FOR BEAM REPAIR DETAILS, SEE "BEAM SECTION REPAIR DETAILS" SHEET.

FOR BEAM PLATING REPAIR, "BEAM PLATING REPAIR DETAILS" SHEET.

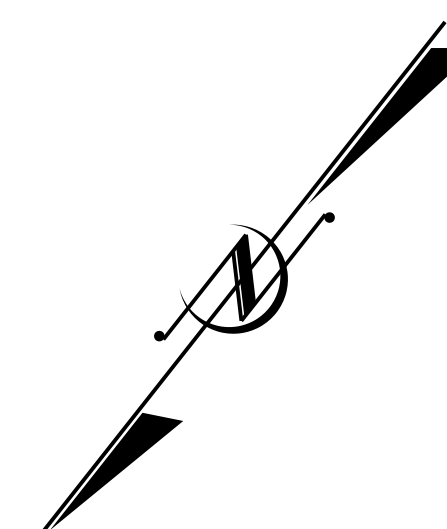
FOR BRIDGE JACKING DETAILS, SEE "JACKING DETAILS" SHEET.

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- ① BEAM NUMBER
- ⓑ BEAM END REPAIR
- Ⓟ PLATING REPAIR
- Ⓢ STIFFENER REPAIR
- Ⓣ STEEL DIAPHRAGM REPAIR



PLAN



ANTICIPATED BEAM REPAIR LOCATIONS

SPAN	BEAM	LOCATION	DIM "A"	DIM "B"	DIM "C"	DIM "D"
C	5	BENT 2	3'-0"	11"	-	-
C	6	BENT 2	3'-0"	11"	-	-

AS-BUILT REPAIR QUANTITY TABLE

UNDERSIDE OF DECK REPAIRS				
SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
UNDERSIDE OF DECK	0.0	0.0		
OVERHANG DIAPHRAGMS	1.2	0.4		
UNDERSIDE OF OVERHANG	0.0	0.0		
INTERIOR DIAPHRAGMS	1.5	0.5		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	0.0 LIN. FT			

BEAM REPAIR QUANTITY TABLE

BEAM END REPAIR		PLATING REPAIR		STIFFENER REPAIR		DIAPHRAGM REPAIR	
LBS.		LBS.		LBS.		LBS.	
ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
275		0		0		0	

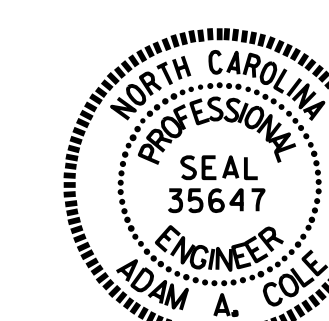
UNDERSIDE OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590330

SHEET 3 OF 3

DocuSigned by:

 02E838FAB074C3



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

UNDERSIDE DECK REPAIR
 SPAN C

DRAWN BY : REZA KOUCHEKI / R.L. PUTEK DATE : .07/2021
 CHECKED BY : H.A. LOCKLEAR DATE : .07/2021

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.
1			3			S9-10
2			4			TOTAL SHEETS 274

NOTES

STRUCTURAL STEEL SHALL BE AASHTO GRADE 36 OR GREATER.

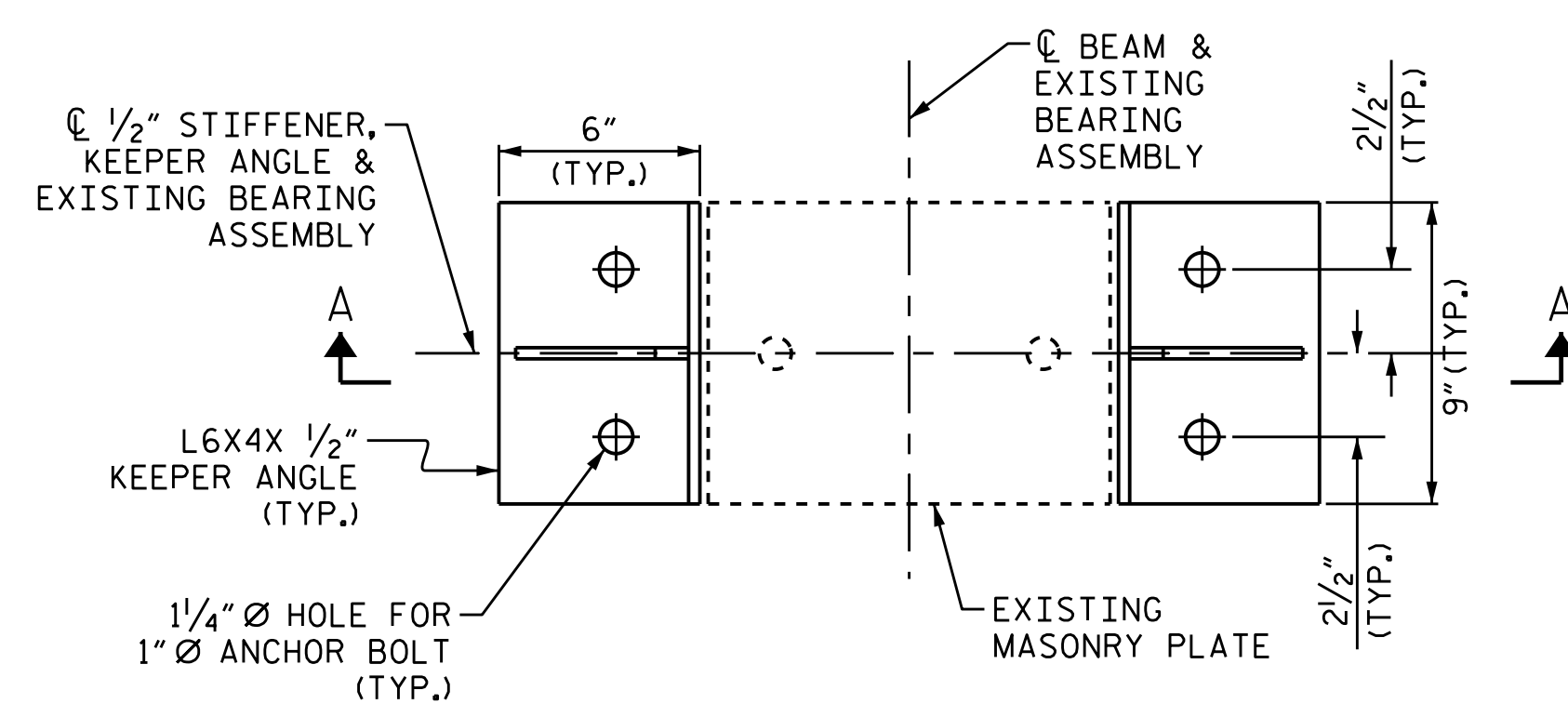
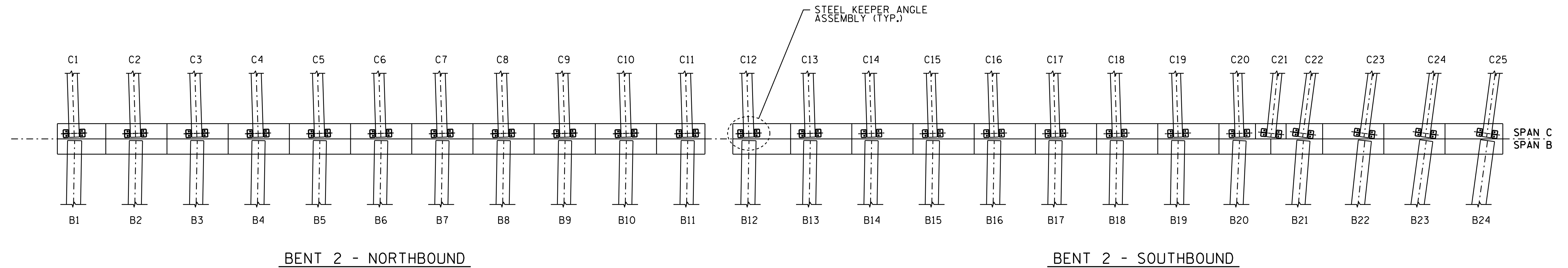
STRUCTURAL STEEL, ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

ANCHOR BOLTS SHALL MEET THE REQUIREMENTS OF ASTM A449. NUTS SHALL MEET THE REQUIREMENTS OF AASHTO M291-DH OR AASHTO M292-2H. WASHERS SHALL MEET THE REQUIREMENTS OF AASHTO M293. SHOP DRAWINGS ARE REQUIRED FOR ANCHOR BOLTS, NUTS AND WASHERS. SHOP INSPECTION IS REQUIRED.

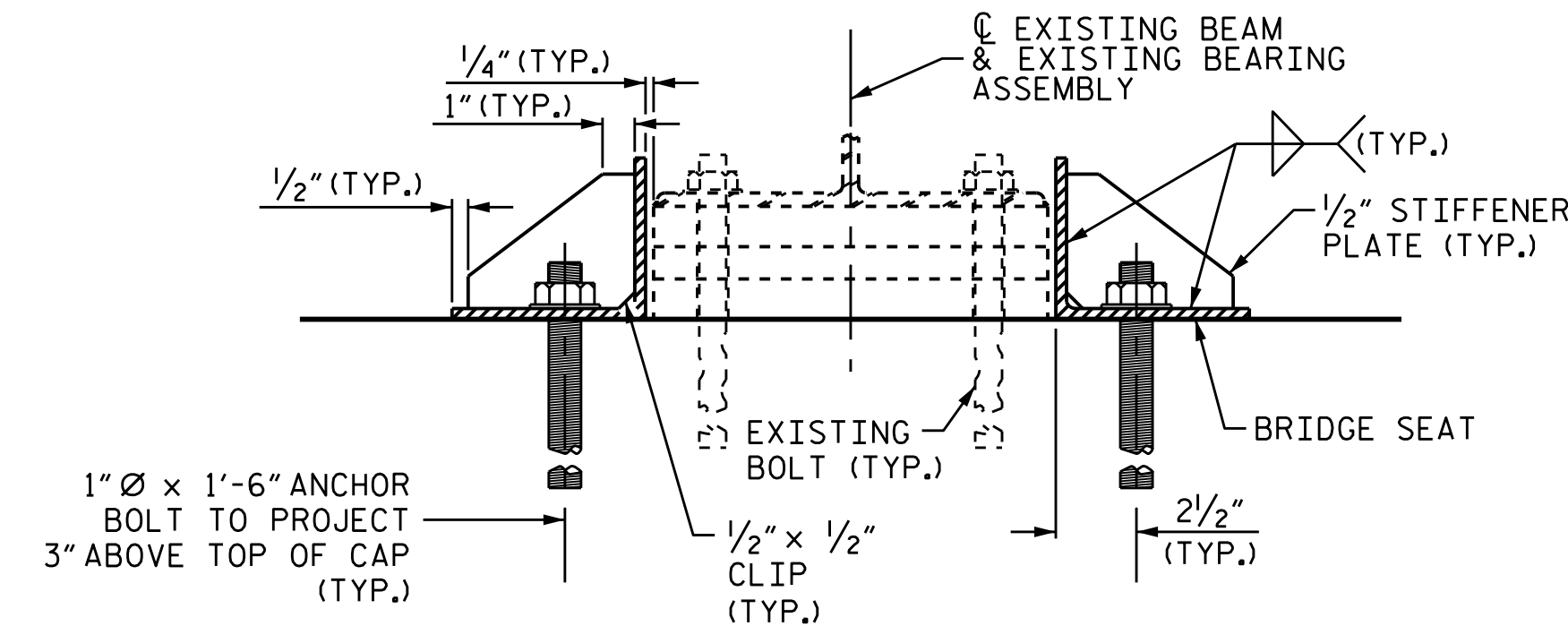
THE CONTRACTOR MAY USE ADHESIVELY ANCHORED ANCHOR BOLTS. NO FIELD TESTING IS REQUIRED. FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE SECTION 420 OF THE STANDARD SPECIFICATIONS.

FOR STEEL KEEPER ANGLE ASSEMBLY, SEE SPECIAL PROVISIONS.

NUTS FOR ANCHOR BOLTS ARE TO BE TIGHTENED FINGER TIGHT AND THEN BACKED OFF 1/2 TURN. THE THREAD OF THE NUT AND BOLT SHALL THEN BE BURR WITH A SHARP POINTED TOOL.



PLAN



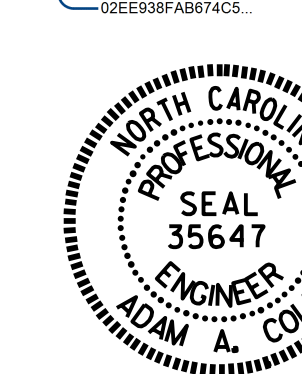
SECTION A-A

STEEL KEEPER ANGLE ASSEMBLY DETAILS

STEEL KEEPER ANGLE ASSEMBLY	
EACH	
ESTIMATE	ACTUAL
25	

PROJ. NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590330

DocuSigned by:
02E838FAB074C5



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

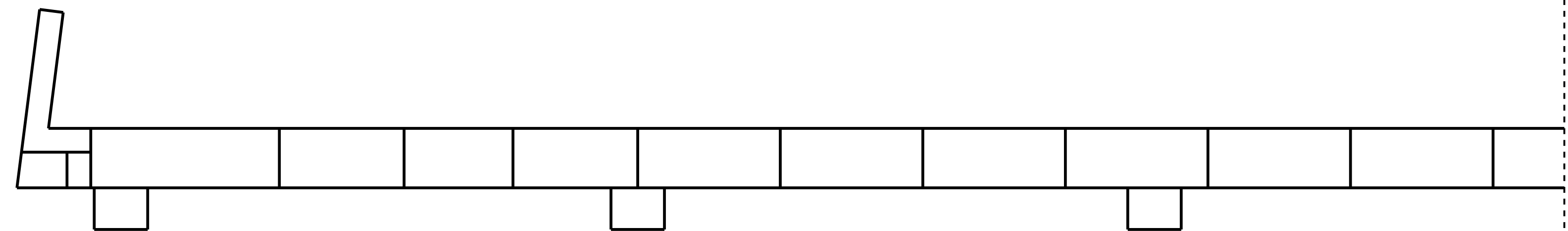
STEEL KEEPER ANGLE ASSEMBLY DETAILS

DRAWN BY : R.L. PUTEK DATE : 05/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 05/2021

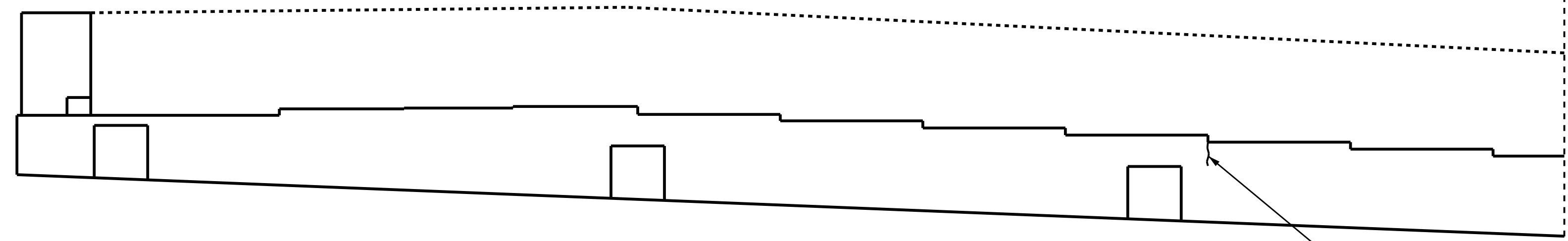
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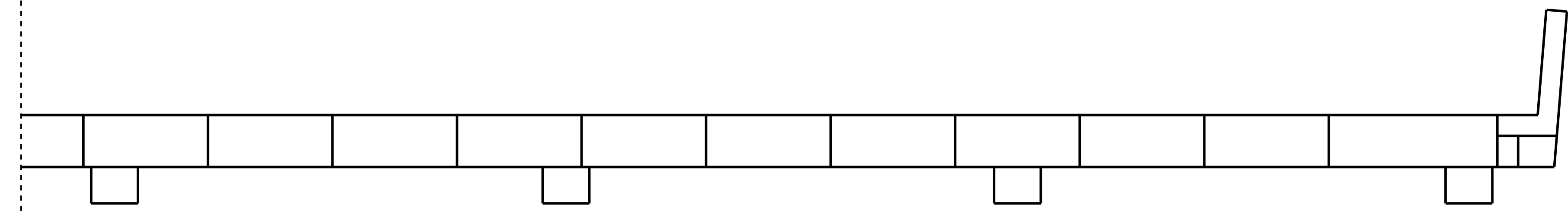
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NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S9-11
2			4			TOTAL SHEETS 274



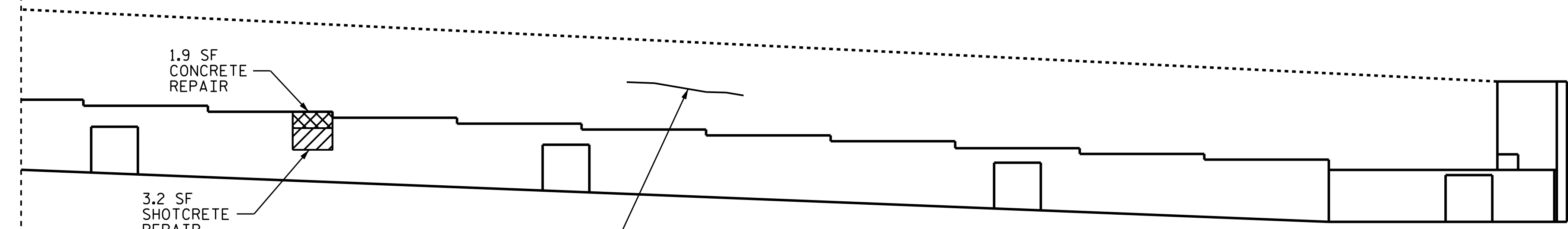
PLAN



ELEVATION



PLAN



ELEVATION

AS-BUILT REPAIR QUANTITY TABLE

END BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP & CURTAIN WALL	3.2	1.6		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	1.9	1.0		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
CAP & CURTAIN WALL	7.0			
EPOXY COATING	SQ. FT.		SQ. FT.	
TOP OF BENT CAP	210			

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 SHALL 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.

FOR SHOTCRETE REPAIR, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIR, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

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. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590330



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

END BENT 1

DRAWN BY : R.L. PUTEK DATE : 05/2021
 CHECKED BY : H. A. LOCKLEAR DATE : 05/2021

NO.	REVISIONS			SHEET NO.
	BY:	DATE:	NO.	
1			3	S9-12 TOTAL SHEETS 274
2			4	

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AS-BUILT REPAIR QUANTITY TABLE				
BENT 1 NORTHBOUND	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	12.6	6.3		
COLUMNS	6.3	3.2		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	6.6	3.3		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
CAP	0.0			
COLUMNS	0.0			
EPOXY COATING	SO. FT.		SO. FT.	
TOP OF BENT CAP	202			

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.

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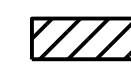


CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

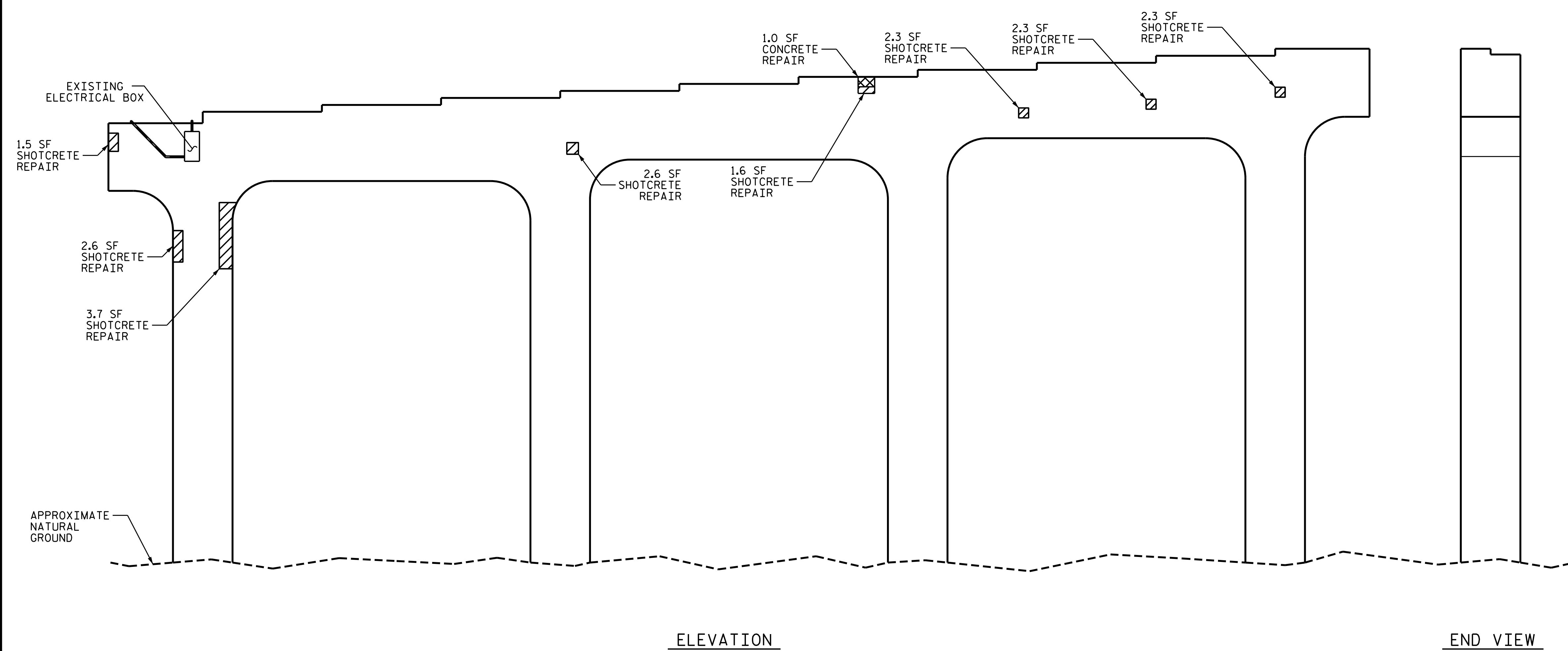
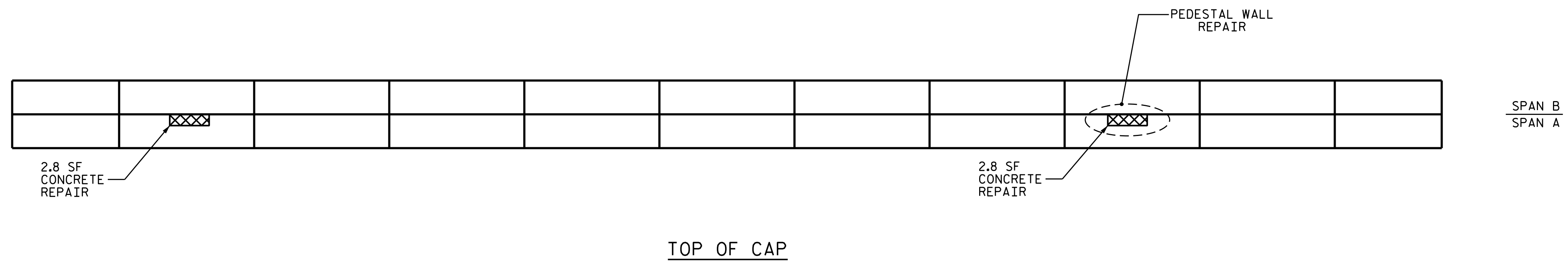
FOR SHOTCRETE REPAIR, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIR, SEE SPECIAL PROVISIONS.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP. 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.

FOR PEDESTAL WALL REPAIR, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

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



BENT 1 NORTHBOUND

PROJ. NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE No. 590330

SHEET 1 OF 2

DocuSigned by:
 02E838FAB074C5



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**BENT 1
 NORTHBOUND
 SPAN A FACE**

DRAWN BY : R.L. PUTEK DATE : 05/2021
 CHECKED BY : H. A. LOCKLEAR DATE : 05/2021

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S9-13
2			4			TOTAL SHEETS 274

AS-BUILT REPAIR QUANTITY TABLE

BENT 1 NORTHBOUND	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	18.2	9.1		
COLUMNS	58.2	29.1		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	1.9	1.0		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
CAP	0.0			
COLUMNS	0.0			
EPOXY COATING	SO. FT.		SO. FT.	
TOP OF BENT CAP	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.

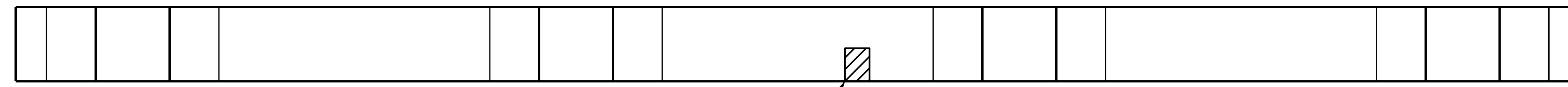
FOR SHOTCRETE REPAIR, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIR, SEE SPECIAL PROVISIONS.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP. 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.

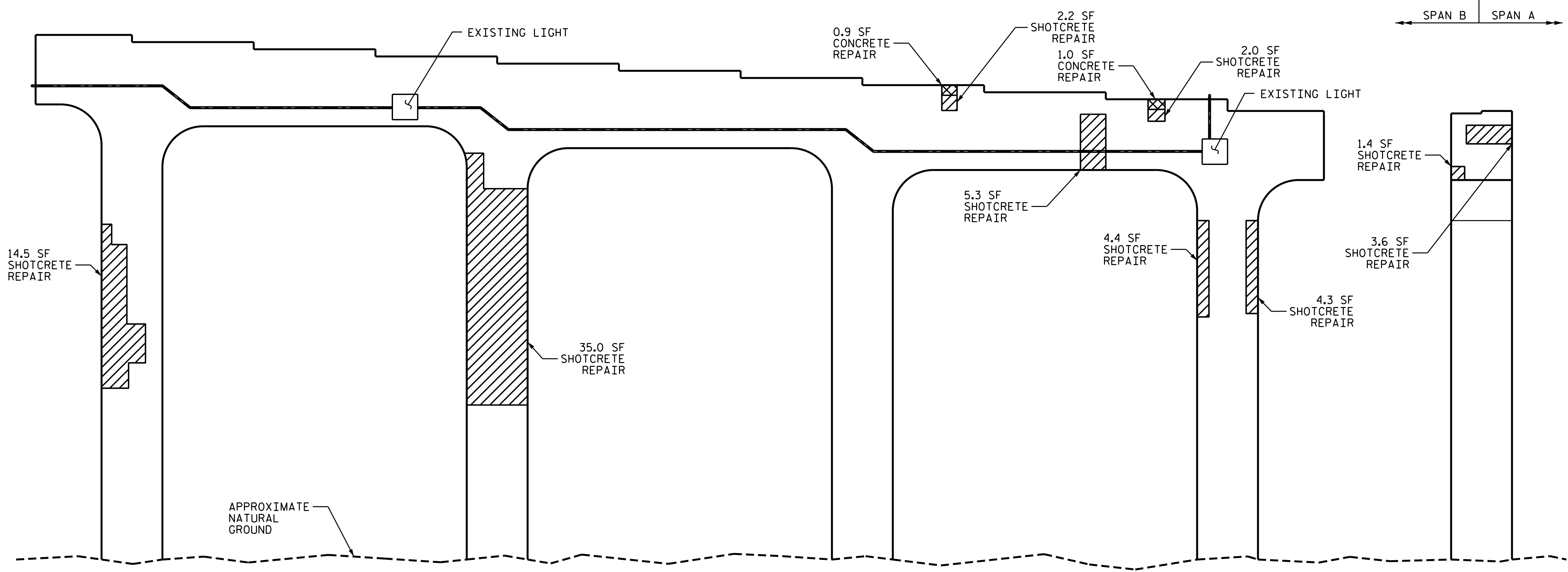
FOR PEDESTAL WALL REPAIR, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

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



3.7 SF SHOTCRETE REPAIR
BOTTOM OF CAP

SPAN B
SPAN A



ELEVATION

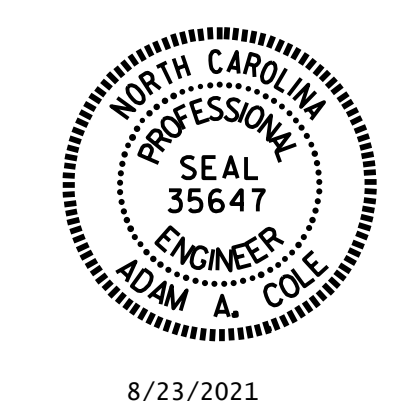
END VIEW

BENT 1 NORTHBOUND

PROJECT NO. I-5746C
MECKLENBURG COUNTY
BRIDGE No. 590330

SHEET 2 OF 2

DocuSigned by:
02E838FAB074C3



8/23/2021

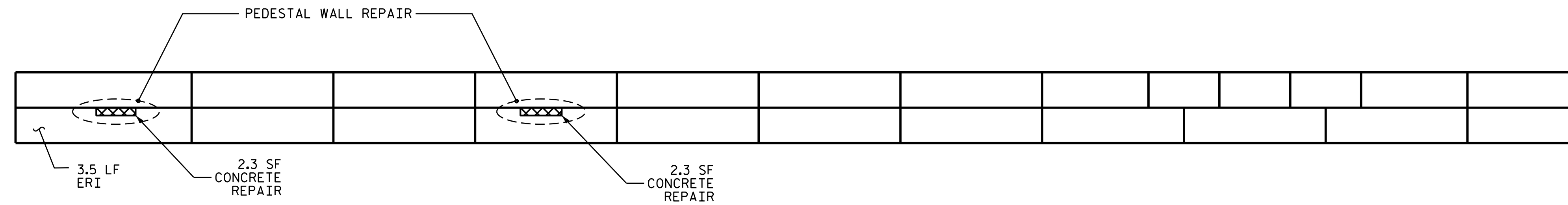
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**BENT 1
NORTHBOUND
SPAN B FACE**

DRAWN BY : R.L. PUTEK DATE : 05/2021
CHECKED BY : H. A. LOCKLEAR DATE : 05/2021

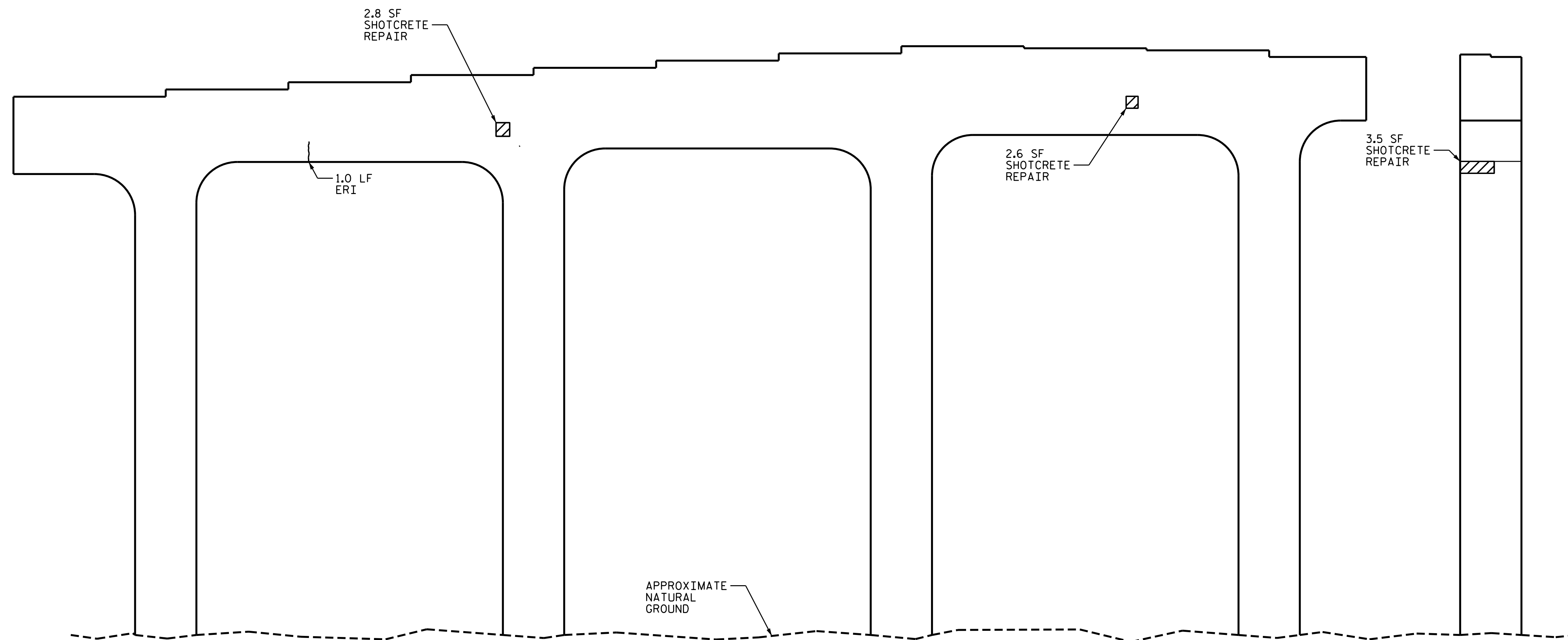
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SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S9-14
2			4			TOTAL SHEETS 274



TOP OF CAP

SPAN B
SPAN A



APPROXIMATE
NATURAL
GROUND

ELEVATION

END VIEW

BENT 1 SOUTHBOUND

AS-BUILT REPAIR QUANTITY TABLE				
BENT 1 SOUTHBOUND	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SO. FT.	VOLUME CU. FT.	AREA SO. FT.	VOLUME CU. FT.
CAP	5.4	2.7		
COLUMNS	3.5	1.8		
CONCRETE REPAIRS	AREA SO. FT.	VOLUME CU. FT.	AREA SO. FT.	VOLUME CU. FT.
CAP	4.6	2.3		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
CAP	4.5			
COLUMNS	0.0			
EPOXY COATING	SO. FT.		SO. FT.	
TOP OF BENT CAP	211			

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.

FOR SHOTCRETE REPAIR, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIR, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP. 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.

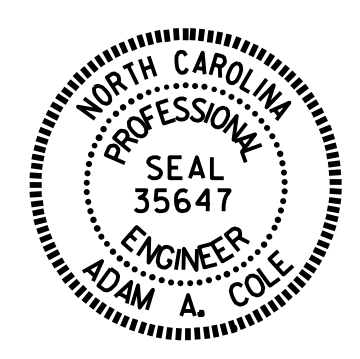
FOR PEDESTAL WALL REPAIR, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

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

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE No. 590330

SHEET 1 OF 2

DocuSigned by:
02E838FAB074C3



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**BENT 1
 SOUTHBOUND
 SPAN A FACE**

DRAWN BY : R.L. PUTEK DATE : 05/2021
 CHECKED BY : H. A. LOCKLEAR DATE : 05/2021

DOCUMENT NOT CONSIDERED
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S9-15
2			4			TOTAL SHEETS 274

AS-BUILT REPAIR QUANTITY TABLE

BENT 1 SOUTHBOUND	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	6.9	3.5		
COLUMNS	11.4	5.7		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	1.2	0.6		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
CAP	2.5			
COLUMNS	0.0			
EPOXY COATING	SO. FT.		SO. FT.	
TOP OF BENT CAP	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.




FOR SHOTCRETE REPAIR, SEE SPECIAL PROVISIONS.

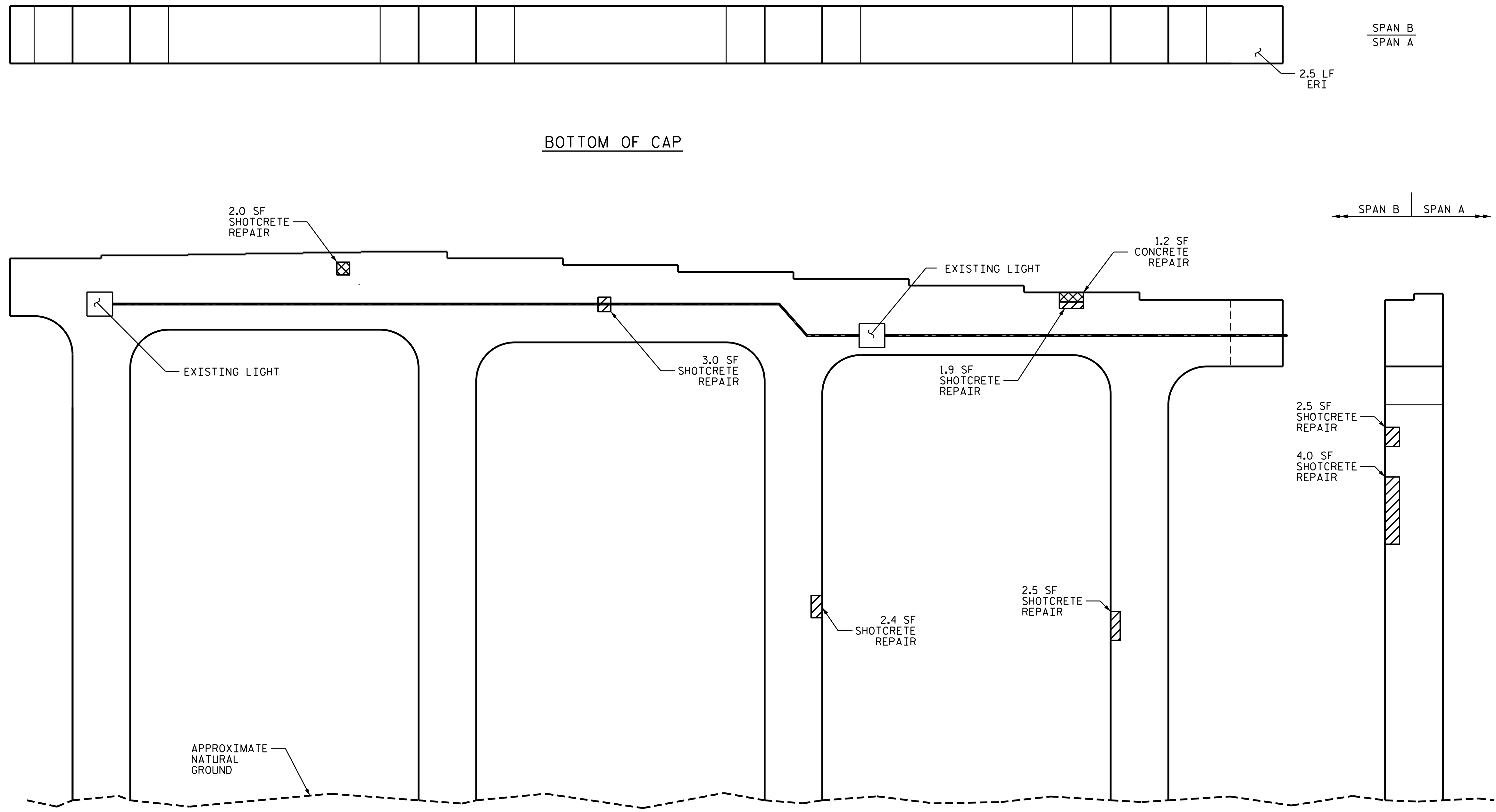
FOR CONCRETE REPAIR, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP. 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.

FOR PEDESTAL WALL REPAIR, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

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



BOTTOM OF CAP

ELEVATION

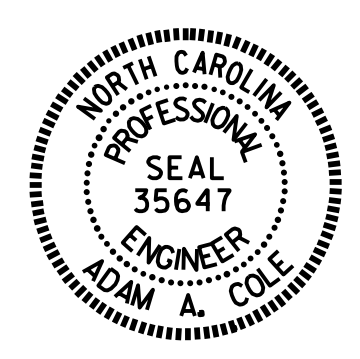
END VIEW

BENT 1 SOUTHBOUND

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE No. 590330

SHEET 2 OF 2

DocuSigned by:
 02E838FAB074C3



8/23/2021

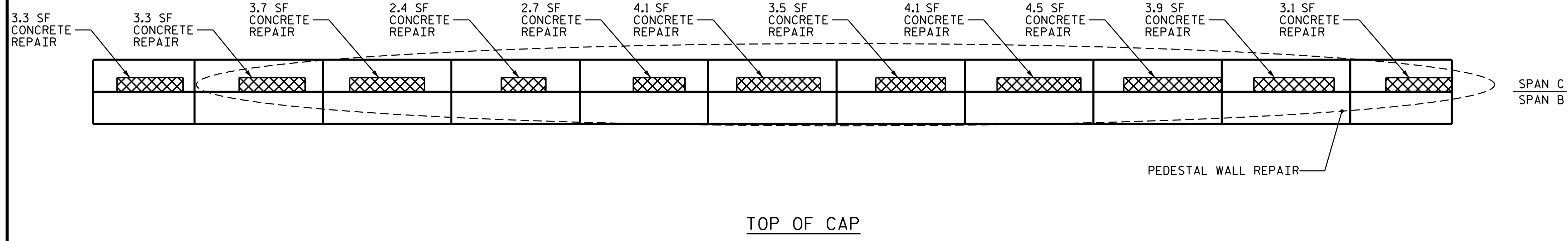
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**BENT 1
 SOUTHBOUND
 SPAN B FACE**

DRAWN BY : R.L. PUTEK DATE : 05/2021
 CHECKED BY : H. A. LOCKLEAR DATE : 05/2021

DOCUMENT NOT CONSIDERED
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REVISIONS						SHEET NO.
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1			3			S9-16
2			4			TOTAL SHEETS 274



AS-BUILT REPAIR QUANTITY TABLE				
BENT 2 NORTHBOUND	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SO. FT.	VOLUME CU. FT.	AREA SO. FT.	VOLUME CU. FT.
CAP	4.2	2.1		
COLUMNS	8.9	4.5		
CONCRETE REPAIRS	AREA SO. FT.	VOLUME CU. FT.	AREA SO. FT.	VOLUME CU. FT.
CAP	38.6	19.3		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
CAP	0.0			
COLUMNS	0.0			
EPOXY COATING	SO. FT.		SO. FT.	
TOP OF BENT CAP	202			

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.

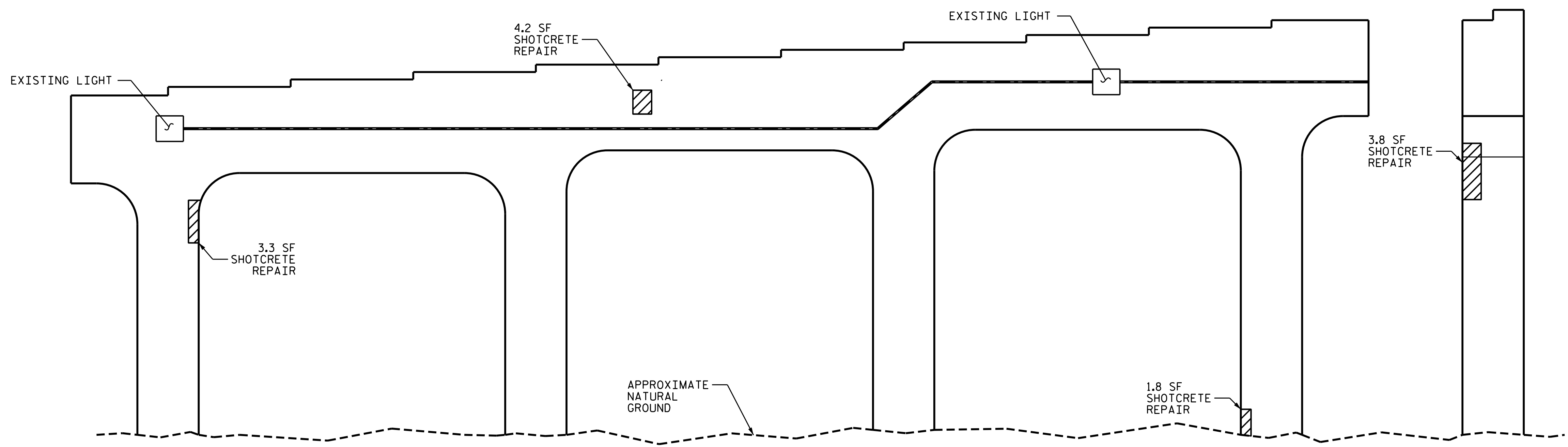
FOR SHOTCRETE REPAIR, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIR, SEE SPECIAL PROVISIONS.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP. 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.

FOR PEDESTAL WALL REPAIR, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

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



ELEVATION

END VIEW

BENT 2 NORTHBOUND

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE No. 590330

SHEET 1 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**BENT 2
 NORTHBOUND
 SPAN B FACE**

DRAWN BY : R.L. PUTEK DATE : 05/2021
 CHECKED BY : H. A. LOCKLEAR DATE : 05/2021

NO.	REVISIONS			SHEET NO.
	BY:	DATE:	NO.	
1			3	S9-17 TOTAL SHEETS 274
2			4	

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AS-BUILT REPAIR QUANTITY TABLE

BENT 2 NORTHBOUND	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SO. FT.	VOLUME CU. FT.	AREA SO. FT.	VOLUME CU. FT.
CAP	9.5	4.8		
COLUMNS	15.3	7.7		
CONCRETE REPAIRS	AREA SO. FT.	VOLUME CU. FT.	AREA SO. FT.	VOLUME CU. FT.
CAP	0.9	0.5		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
CAP	0.0			
COLUMNS	0.0			
EPOXY COATING	SO. FT.		SO. FT.	
TOP OF BENT CAP	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.

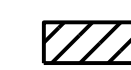


CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIR, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIR, SEE SPECIAL PROVISIONS.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP. 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.

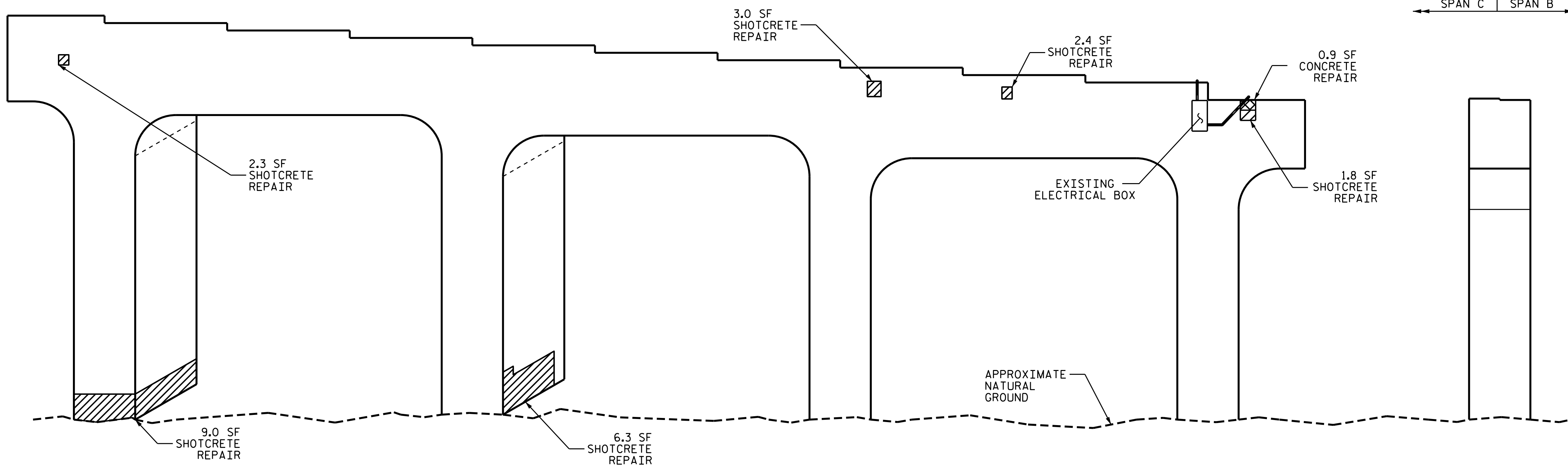
FOR PEDESTAL WALL REPAIR, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

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



SPAN C
SPAN B

BOTTOM OF CAP



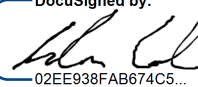
ELEVATION

END VIEW

BENT 2 NORTHBOUND

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE No. 590330

SHEET 2 OF 2

DocuSigned by:

 02E838FAB074C5



8/23/2021

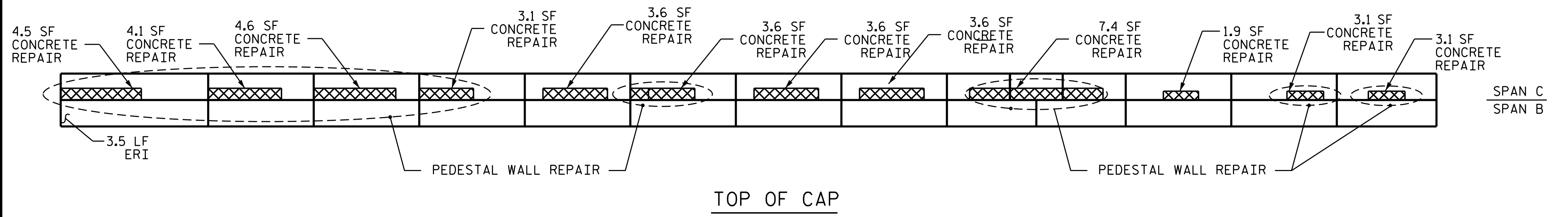
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**BENT 2
 NORTHBOUND
 SPAN C FACE**

DRAWN BY : R.L. PUTEK DATE : 05/2021
 CHECKED BY : H. A. LOCKLEAR DATE : 05/2021

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S9-18
2			4			TOTAL SHEETS 274



AS-BUILT REPAIR QUANTITY TABLE				
BENT 2 SOUTHBOUND	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	9.0	4.5		
COLUMNS	21.0	10.5		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	48.8	24.4		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
CAP	3.5			
COLUMNS	0.0			
EPOXY COATING	SQ. FT.		SQ. FT.	
TOP OF BENT CAP	245			

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.

FOR SHOTCRETE REPAIR, SEE SPECIAL PROVISIONS.

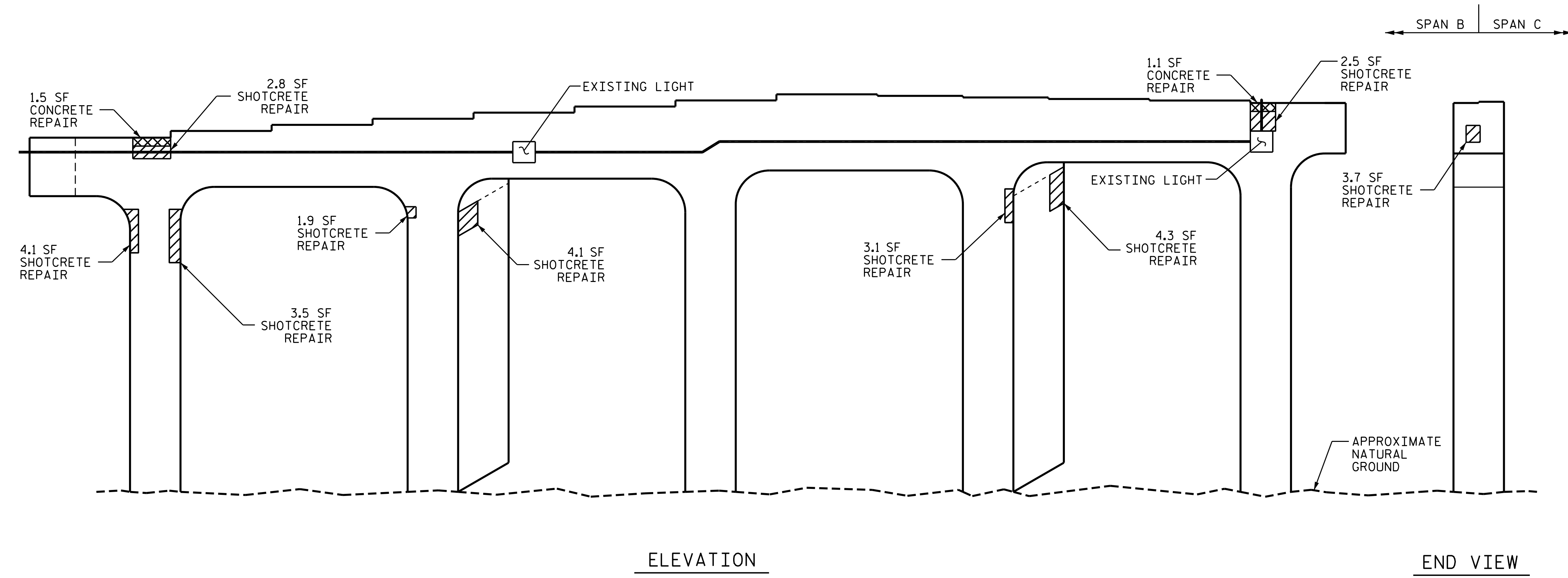
FOR CONCRETE REPAIR, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP. 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.

FOR PEDESTAL WALL REPAIR, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

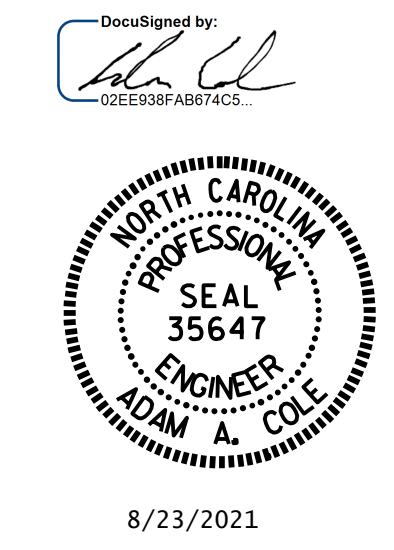
- SHOTCRETE REPAIR AREA
- CONCRETE REPAIR AREA
- EPOXY RESIN INJECTION (ERI)



BENT 2 SOUTHBOUND

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO.: 590330

SHEET 1 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**BENT 2
 SOUTHBOUND
 SPAN B FACE**

DRAWN BY : R.L. PUTK DATE : 05/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 05/2021

NO.	REVISIONS			SHEET NO.
	BY:	DATE:	NO.	
1			3	S9-19 TOTAL SHEETS 274
2			4	

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AS-BUILT REPAIR QUANTITY TABLE

BENT 2 SOUTHBOUND	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	14.9	7.5		
COLUMNS	9.6	4.8		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	1.2	0.6		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		2.5		
COLUMNS		0.0		
EPOXY COATING		SQ. FT.		SQ. FT.
TOP OF BENT CAP		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.




FOR SHOTCRETE REPAIR, SEE SPECIAL PROVISIONS.

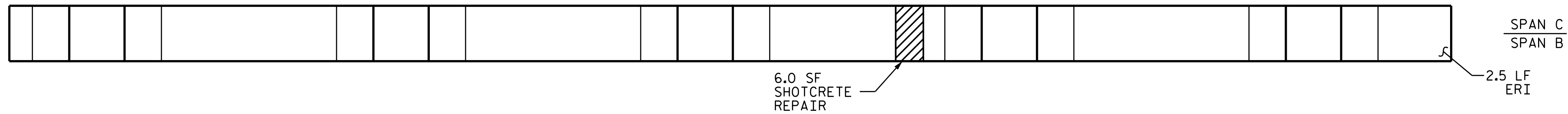
FOR CONCRETE REPAIR, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

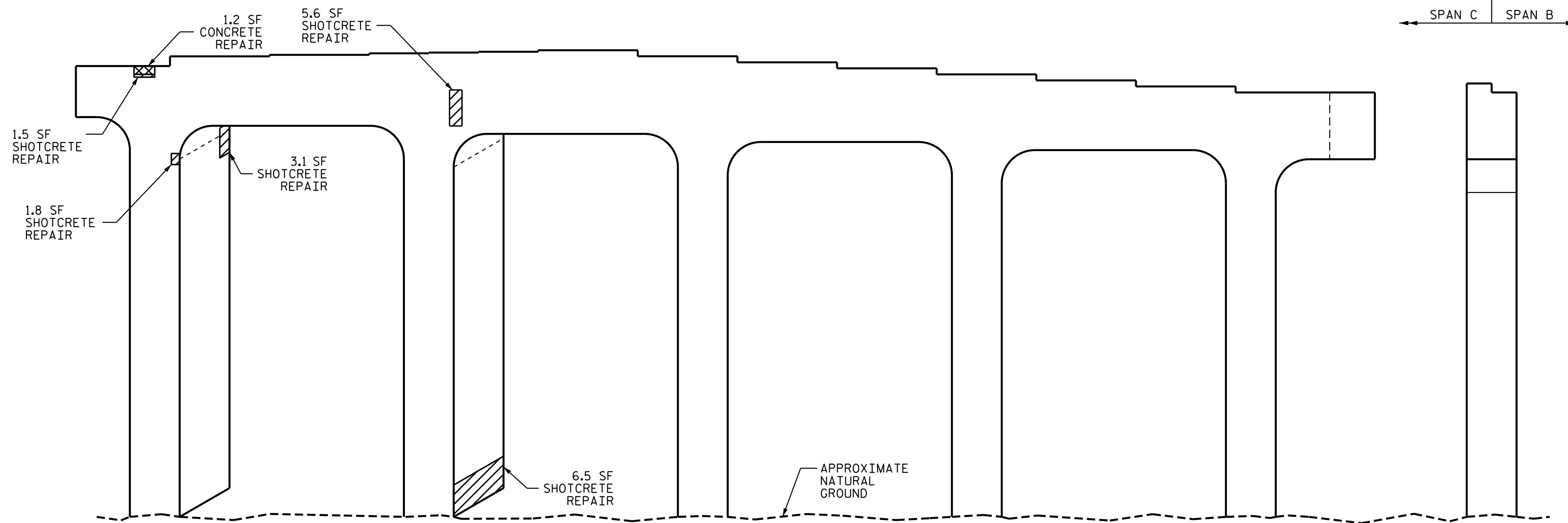
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

FOR PEDESTAL WALL REPAIR, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

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



BOTTOM OF CAP



ELEVATION

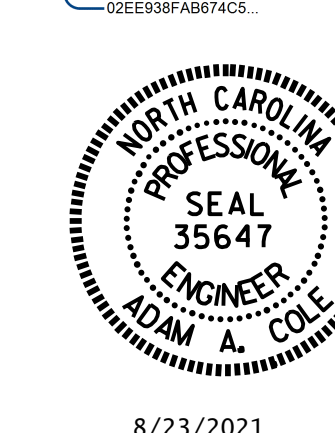
END VIEW

BENT 2 SOUTHBOUND

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO.: 590330

SHEET 2 OF 2

DocuSigned by:
 02E838FAB074C3



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 2
 SOUTHBOUND
 SPAN C FACE

DRAWN BY : R.L. PUTK DATE : 05/2021
 CHECKED BY : H. A. LOCKLEAR DATE : 05/2021

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	NO.	BY:	DATE:	NO.	BY:	DATE:	
	1			3			
	2			4			

AS-BUILT REPAIR QUANTITY TABLE

END BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP & CURTAIN WALL	56.8	28.4		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	7.6	3.8		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
CAP & CURTAIN WALL	54.5			
EPOXY COATING	SQ. FT.		SQ. FT.	
TOP OF BENT CAP	240			

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.

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

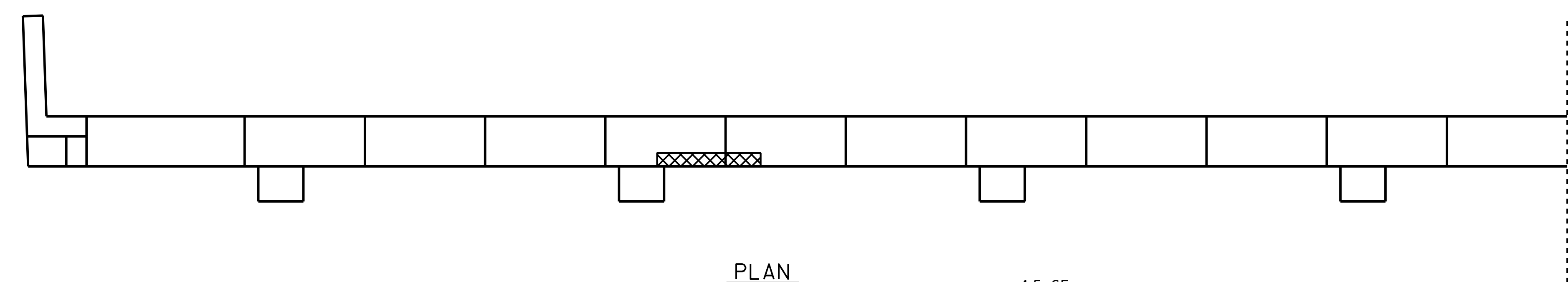
FOR SHOTCRETE REPAIR, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIR, SEE SPECIAL PROVISIONS.

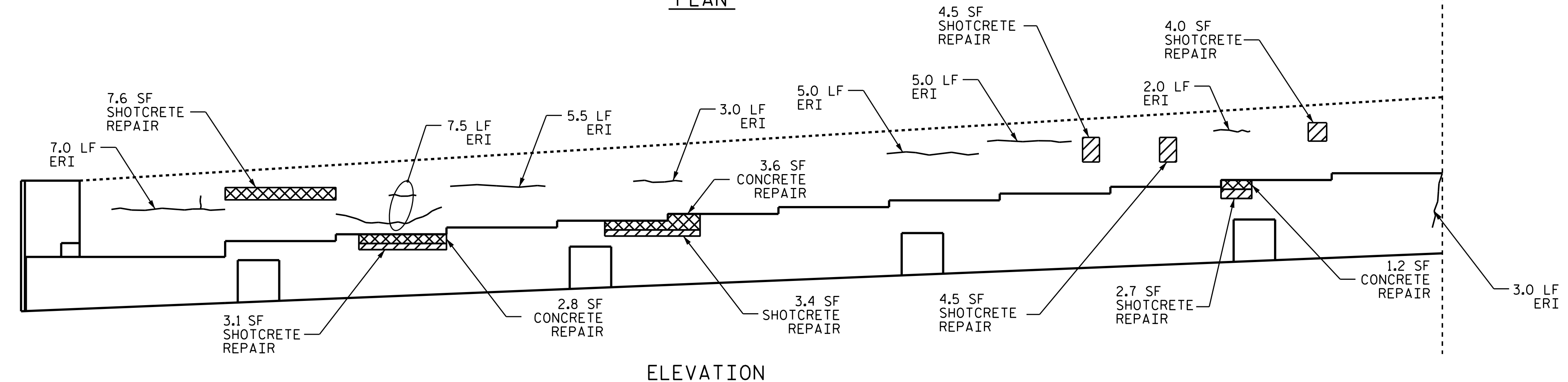
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY COATING 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.

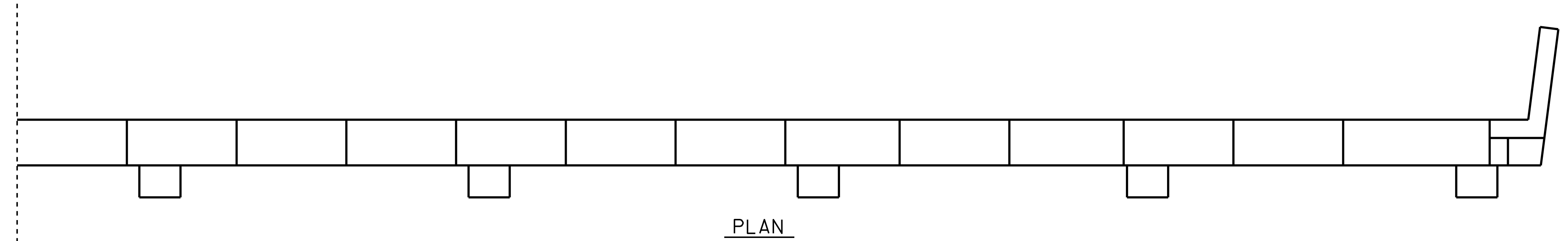
-  SHOTCRETE REPAIR AREA
-  CONCRETE REPAIR AREA
-  EPOXY RESIN INJECTION (ERI)



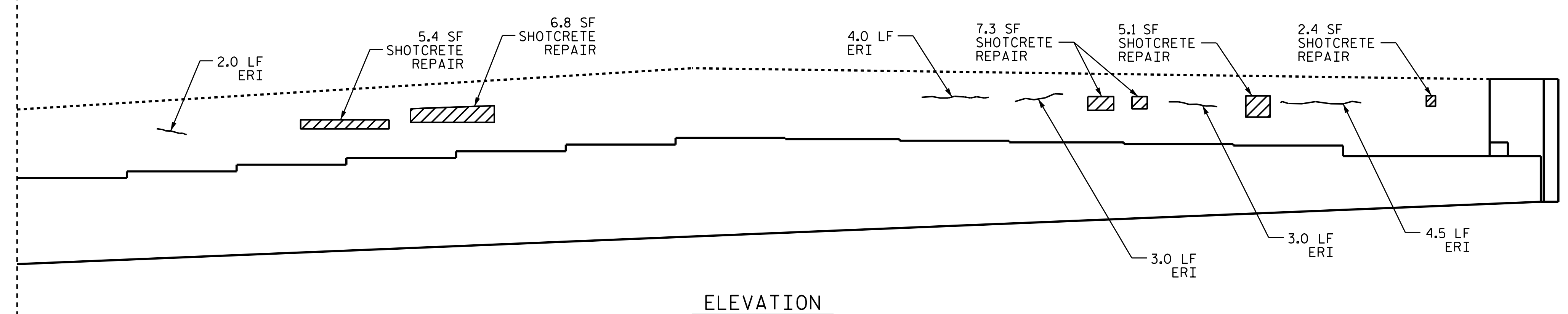
PLAN



ELEVATION



PLAN



ELEVATION

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590330



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

END BENT 2

DRAWN BY : R.L. PUTEK DATE : 05/2021
 CHECKED BY : H. A. LOCKLEAR DATE : 05/2021

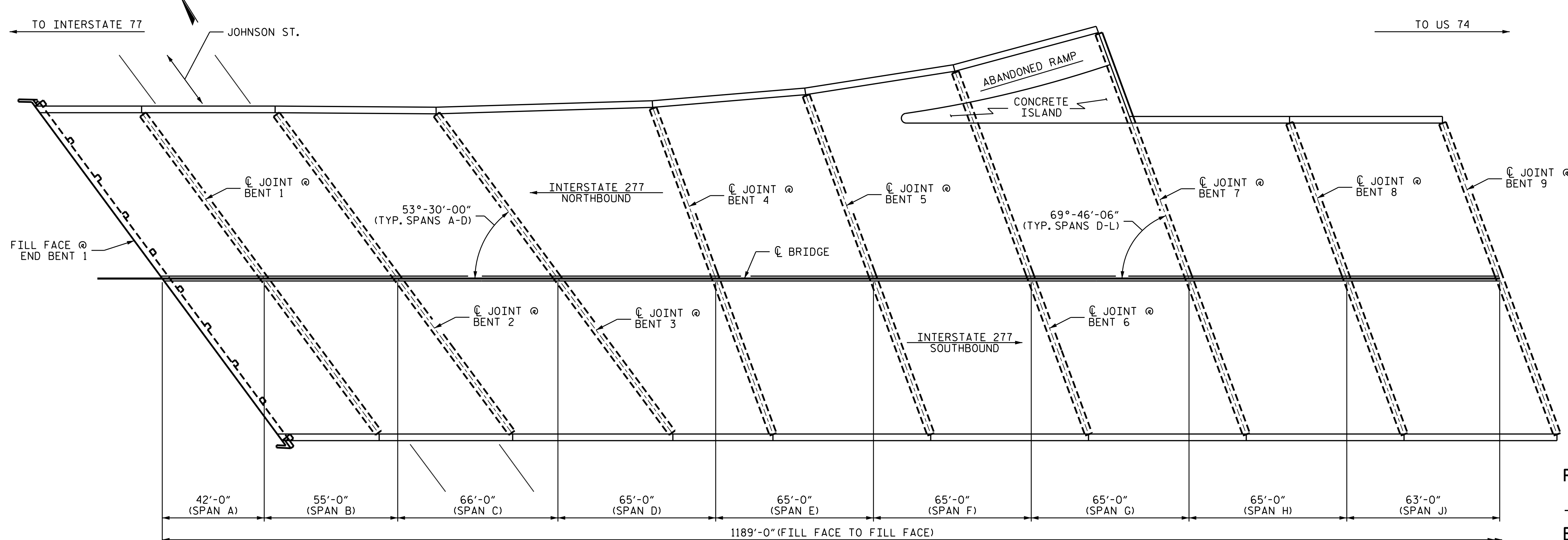
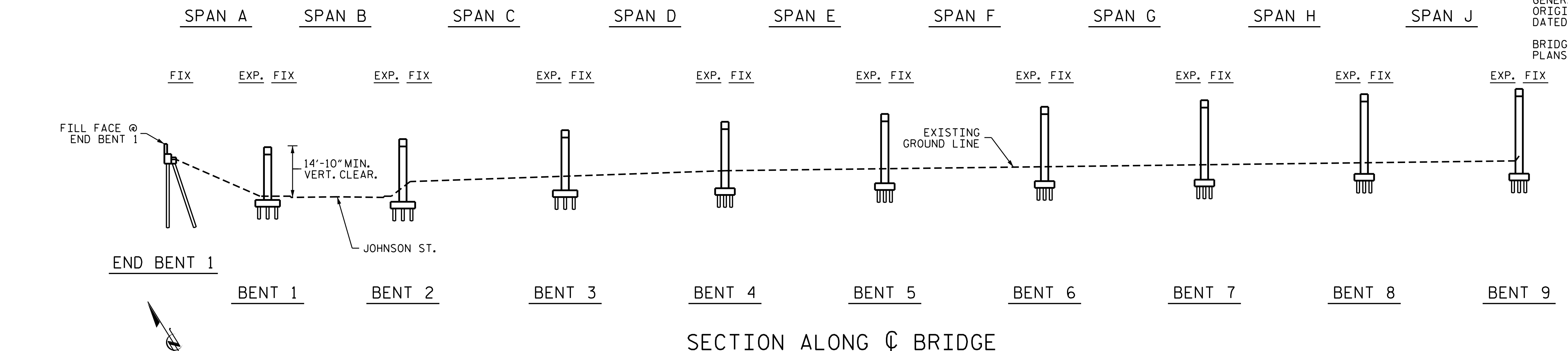
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	BY:	DATE:	NO.	
1			3	S9-21 TOTAL SHEETS 274
2			4	

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NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 08/26/2020.

BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.



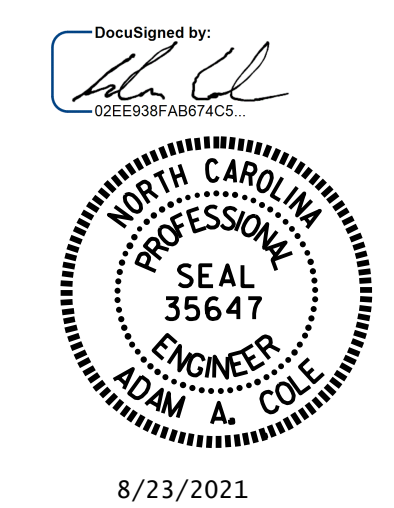
SCOPE OF WORK

- REMOVE ASPHALT WEARING SURFACE AND PARTIALLY REMOVE BRIDGE DECK CONCRETE BY SCARIFICATION AND SHOTBLASTING METHODS.
- OVERLAY PREPARED BRIDGE DECK WITH POLYMER CONCRETE (PC).
- GROOVE POLYMER CONCRETE (PC) BRIDGE DECK.
- INSTALL FOAM JOINT SEALS.
- CLEAN BEARINGS AND APPLY HRCSA.
- CLEAN AND REPAIR STEEL I-BEAMS, AND SPOT PAINTING OF STEEL STRUCTURE REPAIR AREAS.
- REMOVE UNSOUND CONCRETE AND PROPERLY PREPARE SHOTCRETE AND CONCRETE REPAIR AREAS.
- PERFORM SHOTCRETE AND CONCRETE REPAIRS IN PREPARED AREAS.
- EPOXY INJECTION OF CONCRETE CRACKS.
- REMOVE DEBRIS FROM TOP OF END BENT AND BENT CAPS AND APPLY EPOXY COATING.

PLAN

I HEREBY CERTIFY THAT THIS STRUCTURE WAS REHABILITATED ACCORDING TO THESE PLANS OR AS NOTED HEREIN.

RESIDENT ENGINEER _____ DATE _____



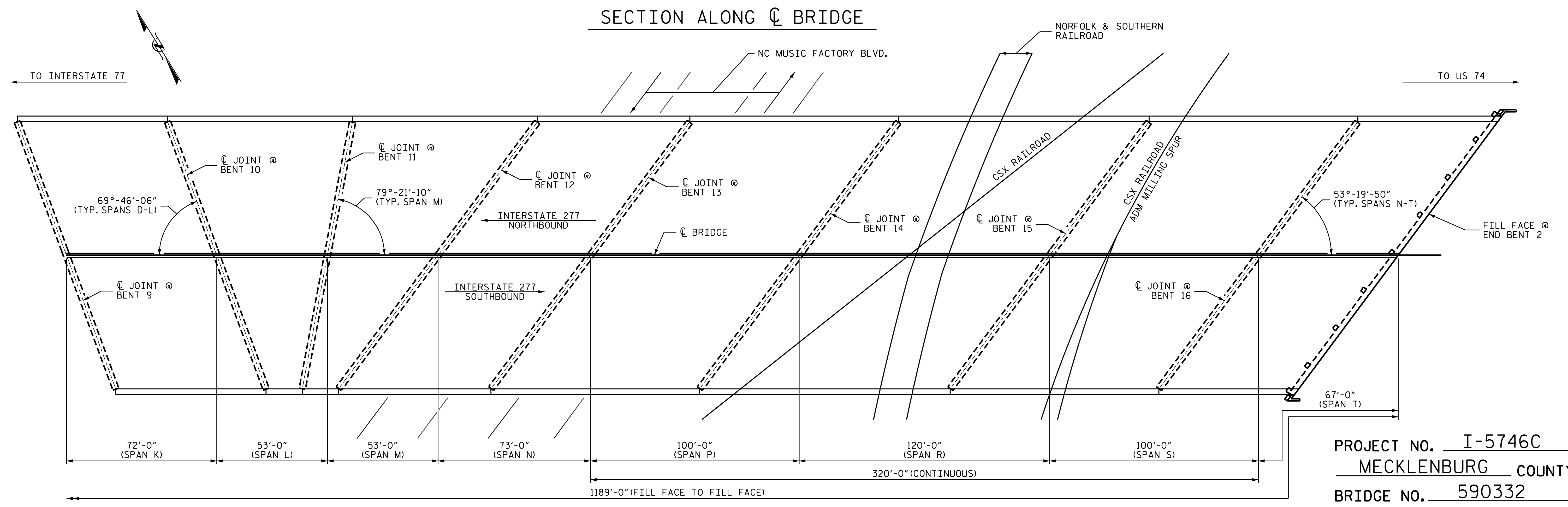
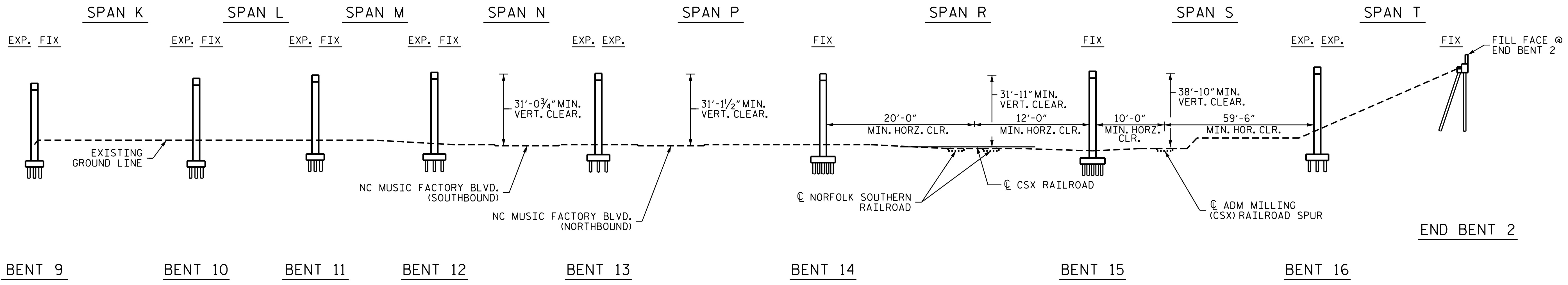
PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590332

SHEET 1 OF 3 MILE POST 4

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 FOR BRIDGE ON I-277
 OVER JOHNSON STREET,
 N.C. MUSIC FACTORY BLVD.,
 CSX RAILROAD, AND
 NORFOLK SOUTHERN RAILROAD

DRAWN BY : R.L.PUTEK/E. BAYISSA DATE : 07/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 07/2021

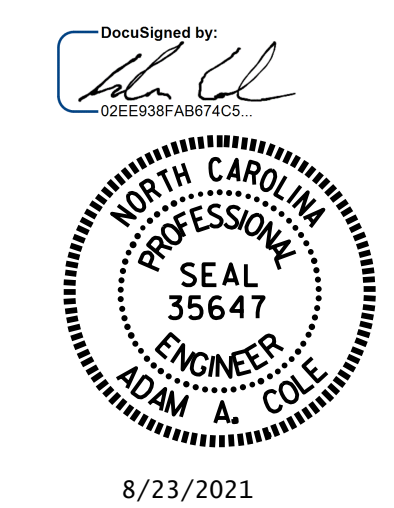
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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PLAN

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590332

SHEET 2 OF 3 MILE POST 4



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING
 FOR BRIDGE ON I-277
 OVER JOHNSON STREET,
 N.C. MUSIC FACTORY BLVD.,
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DRAWN BY : R.L. PUTEK/E. BAYISSA DATE : .07/2021
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LOCATION SKETCH

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

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

NOTES

THE CONTRACTOR SHALL PROVIDE INDEPENDENT ASSURANCE SAMPLES OF REINFORCING STEEL AS FOLLOWS: FOR PROJECTS REQUIRING UP TO 400 TONS OF REINFORCING STEEL, ONE 30 INCH SAMPLE OF EACH SIZE BAR USED, AND FOR PROJECTS REQUIRING OVER 400 TONS OF REINFORCING STEEL, TWO 30 INCH SAMPLES OF EACH SIZE BAR USED. THE BARS FROM WHICH THE SAMPLES ARE TAKEN MUST THEN BE SPICED WITH REPLACEMENT BARS OF THE SIZE AND LENGTH OF THE SAMPLE, PLUS A MINIMUM LAP SPLICE OF THIRTY BAR DIAMETERS. PAYMENT FOR THE SAMPLES OF REINFORCING STEEL SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.

WORK ON THE BRIDGES SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL BELOW. THE CONTRACTOR SHALL SUBMIT PLANS FOR CONSTRUCTION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS AND THE PROJECT SPECIAL PROVISIONS.

THE CONTRACTOR SHALL PERFORM ALL WORK WITH CARE SO THAT THE EXISTING STRUCTURE WHICH IS TO REMAIN IN PLACE WILL NOT BE DAMAGED. IF THE CONTRACTOR DAMAGES ANY PART OF THE EXISTING STRUCTURE WHICH IS TO REMAIN IN PLACE, THE DAMAGED AREA SHALL BE REPAIRED OR REPLACED IN A MANNER SATISFACTORY TO THE ENGINEER AT NO ADDITIONAL COST TO THE DEPARTMENT.

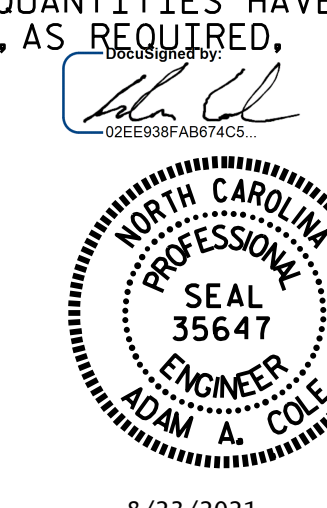
CONTRACTOR SHALL DETERMINE EXTENT OF WORKING AREA, STAGING PROCESS, AND INSTALL COVER P ASSEMBLY AS NECESSARY TO MEET THE REQUIREMENTS OF TRAFFIC MANAGEMENT PLANS.

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

AT THE TIME OF PREPARATION OF THESE PLANS, IT WAS NOT ANTICIPATED THAT ITEMS SHOWN BELOW WOULD BE REQUIRED. HOWEVER, IT MAY BE DETERMINED IN THE FIELD THAT THESE ITEMS, OR OTHER WORK WILL BE NECESSARY TO PROPERLY COMPLETE THE INTENDED BRIDGE PRESERVATION/REHABILITATION WORK. THE CONTRACTOR SHALL BE PREPARED TO PERFORM SUCH WORK IN A TIMELY MANNER, AS DETERMINED IN THE FIELD. SUCH WORK SHALL BE CONSIDERED EXTRA WORK AND SHALL BE ADDRESSED AS PER ARTICLE 104-7 OF THE STANDARD SPECIFICATIONS. PROJECT SPECIAL PROVISIONS THAT OUTLINE REQUIREMENTS FOR THESE POTENTIAL ADDITIONAL WORK ITEMS HAVE BEEN PROVIDED IN PROJECT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES, AND COSTS WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

UNANTICIPATED ITEMS:

ITEM NO.	DESCRIPTION	UNIT
1	CLASS III SURFACE PREPARATION	LIN. FT.



8/23/2021

NOTES

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

THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THROUGH OF THE DECK.

FOR SCARIFYING BRIDGE DECK, SHOTBLASTING BRIDGE DECK, AND CLASS II SURFACE PREPARATION, SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.

EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING REPAIR OF BRIDGE DECKS.

THE EXISTING BRIDGE DECK SHALL BE REPAIRED AT LOCATIONS SHOWN ON THE PLANS OR AS DETERMINED BY THE ENGINEER AFTER SCARIFICATION AND PRIOR TO THE SURFACE PREPARATION AND APPLICATION OF THE PC OVERLAY. UNLESS OTHERWISE APPROVED, SUCH LOCATIONS SHALL BE REPAIRED WITH PC.

FOR CONCRETE DECK REPAIR FOR PC OVERLAY, PC MATERIALS, AND PLACING & FINISHING PC OVERLAY, SEE POLYMER CONCRETE BRIDGE DECK OVERLAY SPECIAL PROVISION.

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

LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG THE CENTERLINE OR EDGE OF TRAVEL LANES.

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR POLLUTION CONTROL AND SPOT PAINTING OF STEEL STRUCTURE REPAIR AREAS, SEE SPOT PAINTING OF STEEL STRUCTURE REPAIR AREAS SPECIAL PROVISION.

FOR PAINTING CONTAINMENT, POLLUTION CONTROL, AND CLEANING & PAINTING EXISTING BEARINGS WITH HRCSA, SEE CLEANING & PAINTING EXISTING BEARINGS WITH HRCSA SPECIAL PROVISION.

FOR BEAM REPAIR, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

FOR BRIDGE JACKING, SEE SPECIAL PROVISIONS.

FOR BEARING PLATE REPOSITIONING, SEE SPECIAL PROVISIONS.

FOR STEEL KEEPER ANGLE ASSEMBLY, SEE SPECIAL PROVISIONS.

FOR BEARING REPLACEMENT, SEE SPECIAL PROVISIONS.

FOR RAILROAD GENERAL SPECIAL PROVISIONS - CSX TRANSPORTATION, INC., SEE SPECIAL PROVISIONS.

FOR SPECIAL PROVISIONS FOR PROTECTION OF RAILROAD INTEREST, SEE SPECIAL PROVISIONS.

THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT THE ROCKER BEARING ASSEMBLIES AT BENT 14 AND 15 ARE NOT REQUIRED TO BE CLEANED AND PAINTED WITH HRCSA.

BRIDGE COORDINATES

LATITUDE: 35°-14'-17.48"
LONGITUDE: 80°-50'-27.77"

DRAWN BY : R.L. PUTEK/E. BAYISSA DATE : 07/2021
CHECKED BY : H. A. LOCKLEAR DATE : 07/2021

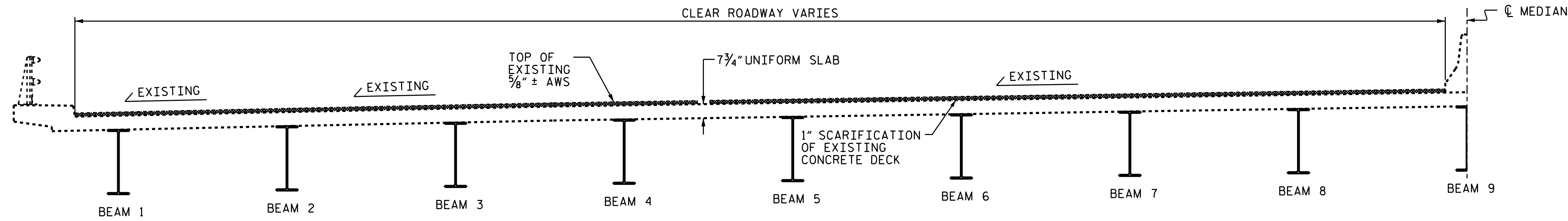
PROJECT NO. I-5746C
MECKLENBURG COUNTY
BRIDGE NO. 590332

SHEET 3 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
GENERAL DRAWING
FOR BRIDGE ON I-277
OVER JOHNSON STREET,
N.C. MUSIC FACTORY BLVD.,
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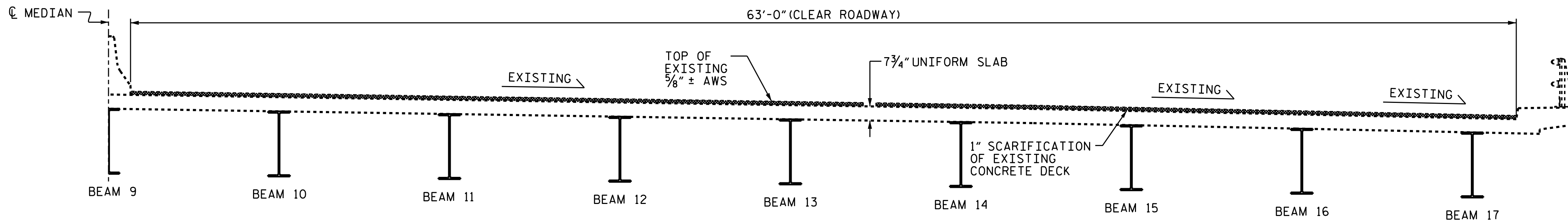
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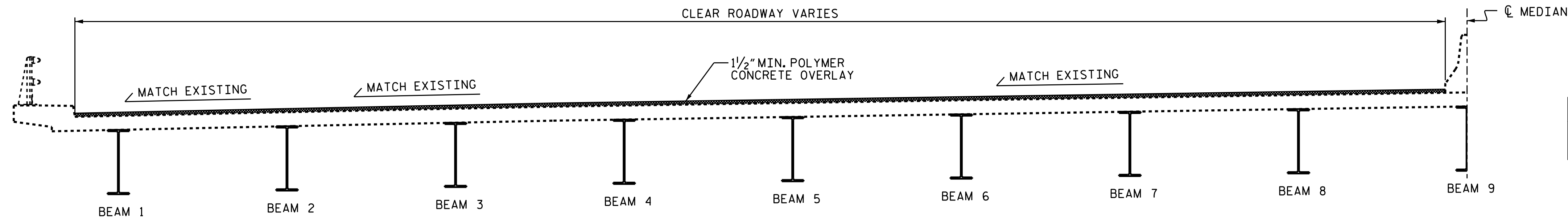


EXISTING TYPICAL SECTION - SOUTHBOUND LANES

SPAN R SHOWN, ALL OTHER SPANS SIMILAR

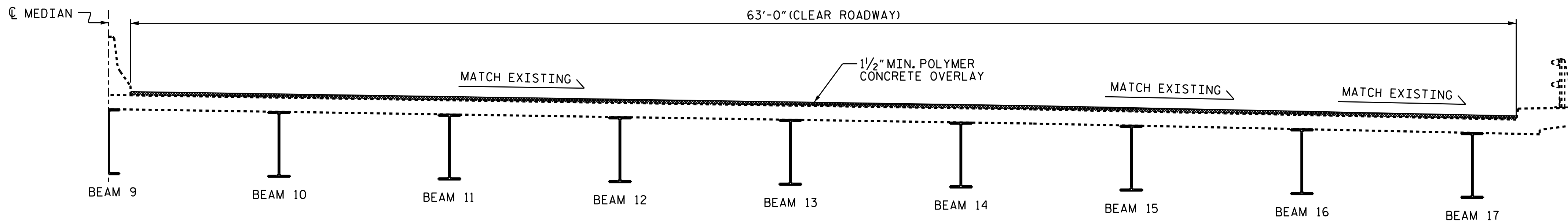


EXISTING TYPICAL SECTION - NORTHBOUND LANES

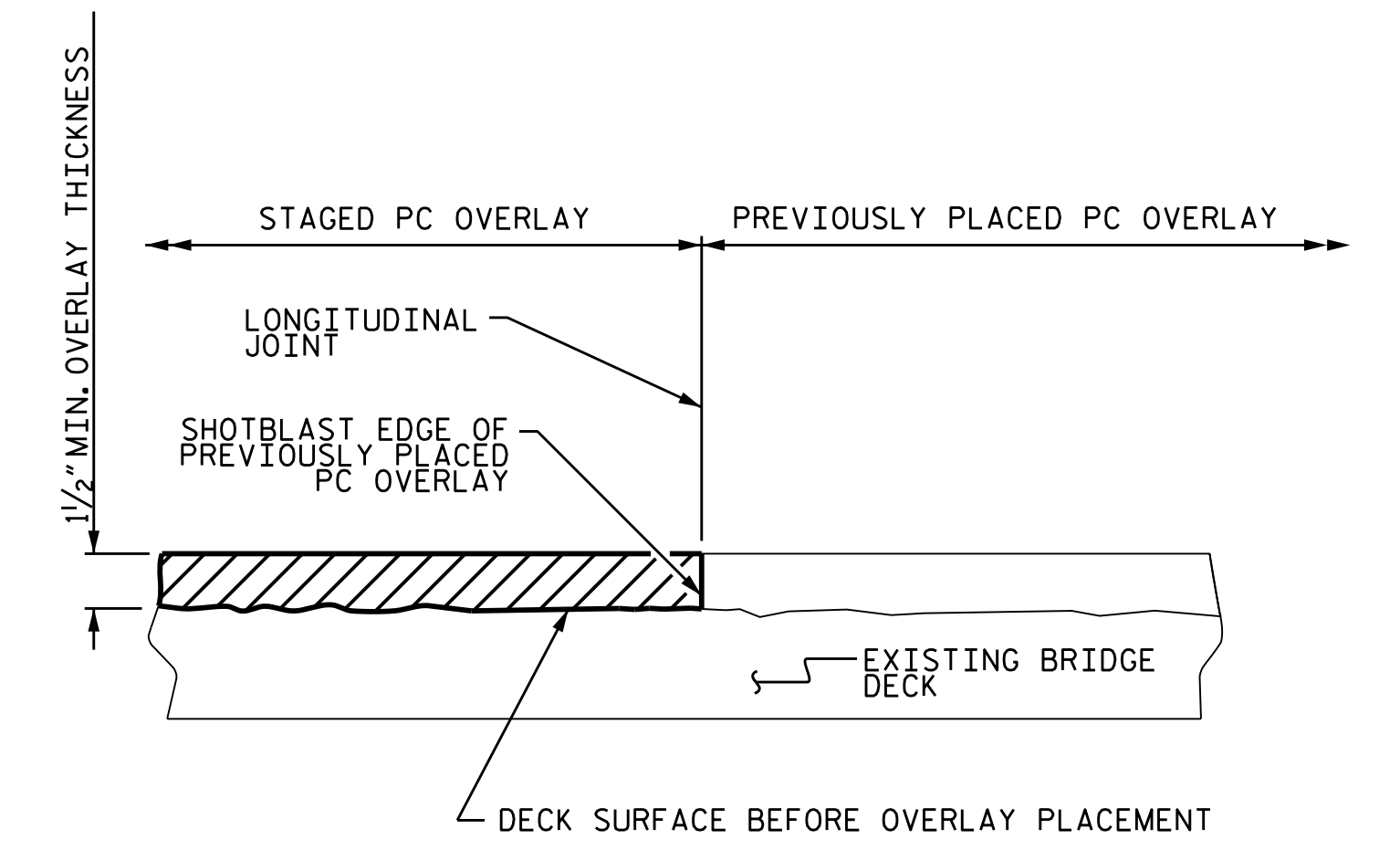


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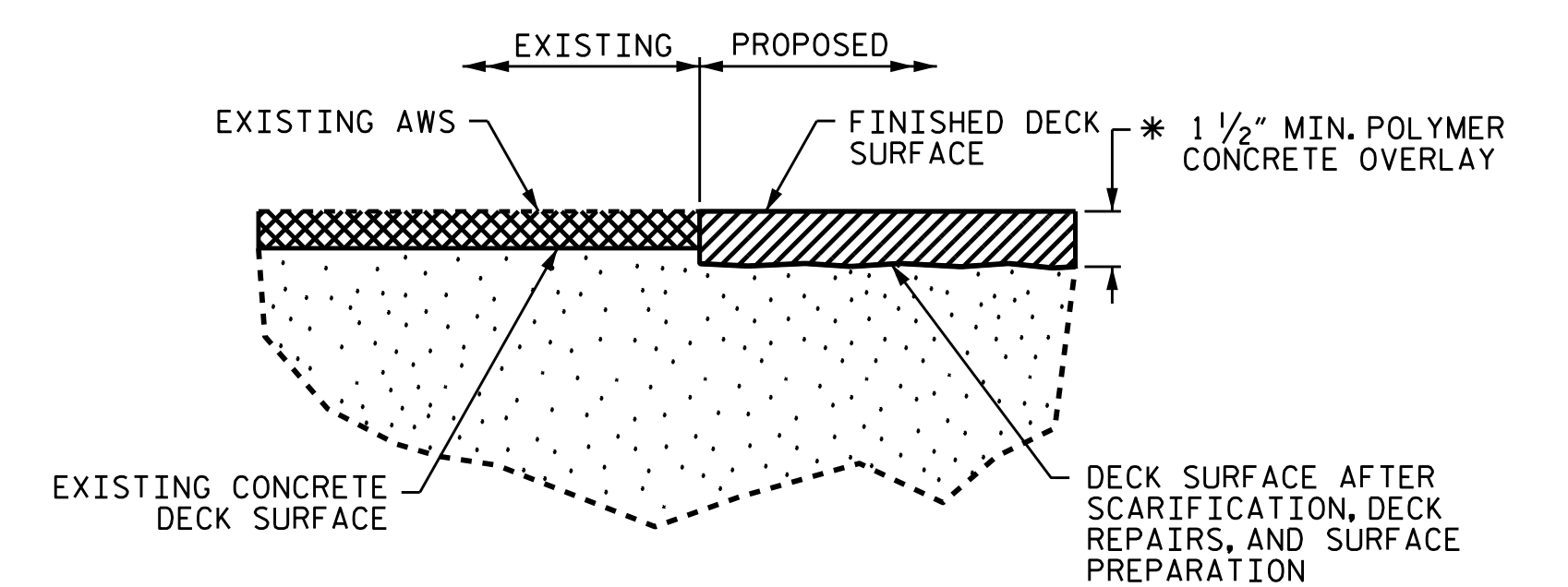
SPAN R SHOWN, ALL OTHER SPANS SIMILAR



PROPOSED TYPICAL SECTION - NORTHBOUND LANES

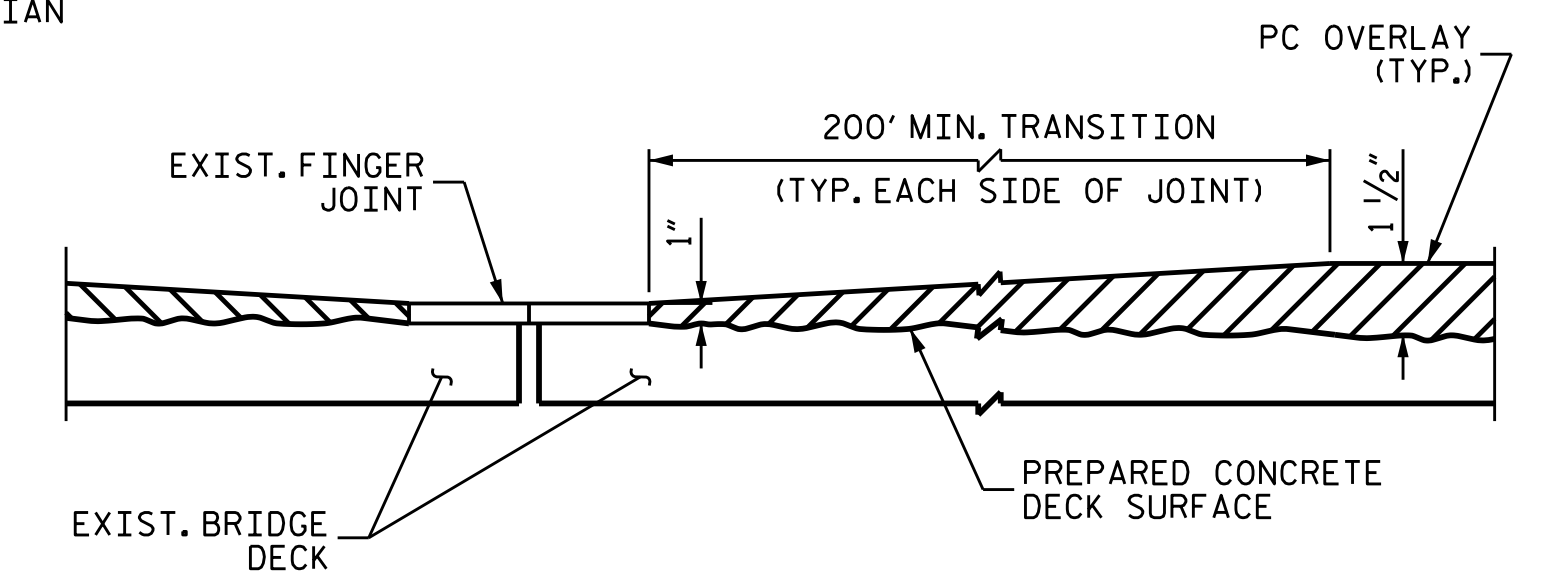


STAGED PC OVERLAY JOINT
(AS NEEDED)



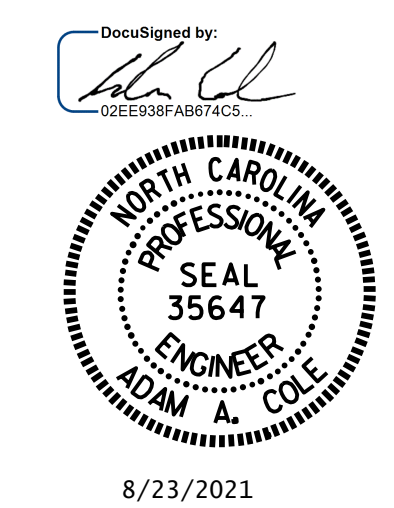
DETAIL FOR POLYMER CONCRETE OVERLAY

* FINISHED SURFACE ELEVATION SHALL MATCH EXISTING ASPHALT WEARING SURFACE ELEVATION. ACTUAL THICKNESS OF PC OVERLAY SHALL BE 1 1/2".



DETAIL FOR PC OVERLAY AT EXISTING FINGER JOINTS

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590332



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

TYPICAL SECTION AND PC OVERLAY DETAILS

DRAWN BY : R.L.PUTEK/E. BAYISSA DATE : 07/2021
 CHECKED BY : H. A. LOCKLEAR DATE : 07/2021

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AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	1401 SQ. YDS.	
CLASS II SURFACE PREPARATION	0.0 SQ. YDS.	
CONCRETE DECK REPAIR FOR PC OVERLAY	0.0 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	1401 SQ. YDS.	
PC MATERIALS	68.1 CU. YDS.	
PLACING AND FINISHING PC OVERLAY	1401 SQ. YDS.	
GROOVING BRIDGE FLOORS	11945 SQ. FT.	

TOP OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PC OVERLAY AFTER REMOVAL OF UNSOUND CONCRETE. (MIN. 2" CLEAR TO SAWCUT). SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.

NOTES:

REPAIR LOCATIONS AND ESTIMATED 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 LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

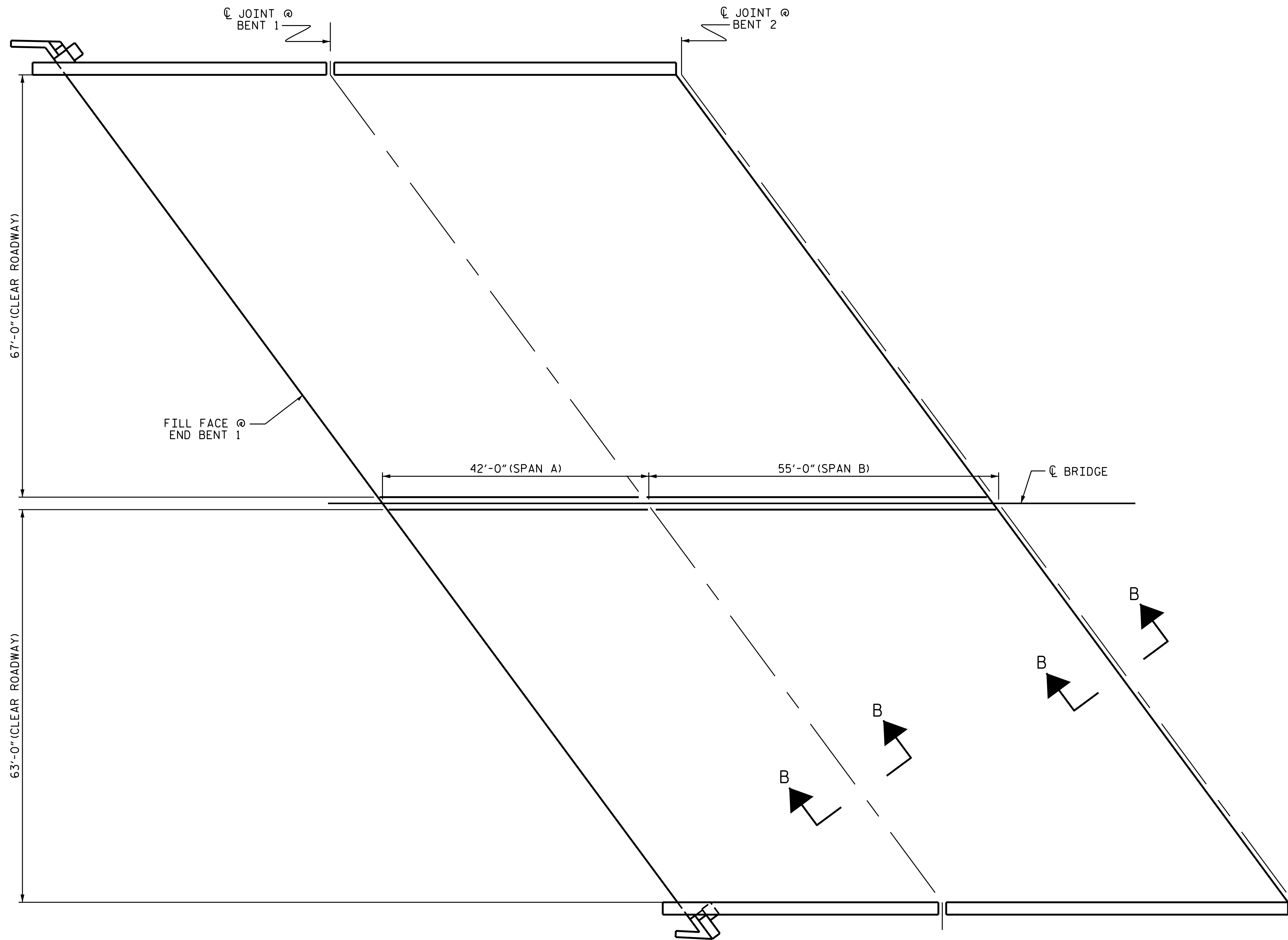
FOR SECTION B-B, SEE "JOINT DETAILS" SHEET.

FOR CONCRETE DECK REPAIR FOR PC OVERLAY, SEE SPECAIL PROVISION.

FOR PC MATERIALS, SEE SPECIAL PROVISION.

 APPROX. CLASS II SURFACE PREPARATION

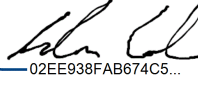
 EPOXY RESIN INJECTION (ERI)

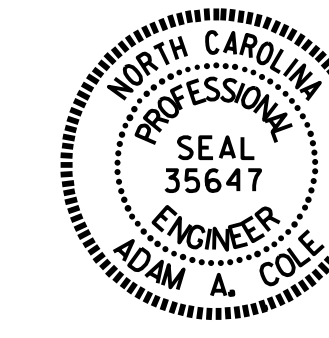


PLAN

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590332

SHEET 1 OF 11

DocuSigned by:

 02E939FAB074C0



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK SURFACE REPAIR
 SPAN A & B

DRAWN BY : R.L.PUTEK/E. BAYISSA DATE : 07/2021
 CHECKED BY : H. A. LOCKLEAR DATE : 07/2021

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AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	1915 SQ. YDS.	
CLASS II SURFACE PREPARATION	0.0 SQ. YDS.	
CONCRETE DECK REPAIR FOR PC OVERLAY	0.0 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	1915 SQ. YDS.	
PC MATERIALS	93.1 CU. YDS.	
PLACING AND FINISHING PC OVERLAY	1915 SQ. YDS.	
GROOVING BRIDGE FLOORS	16296 SQ. FT.	

TOP OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PC OVERLAY AFTER REMOVAL OF UNSOUND CONCRETE. (MIN. 2" CLEAR TO SAWCUT). SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.

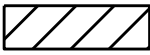
NOTES:

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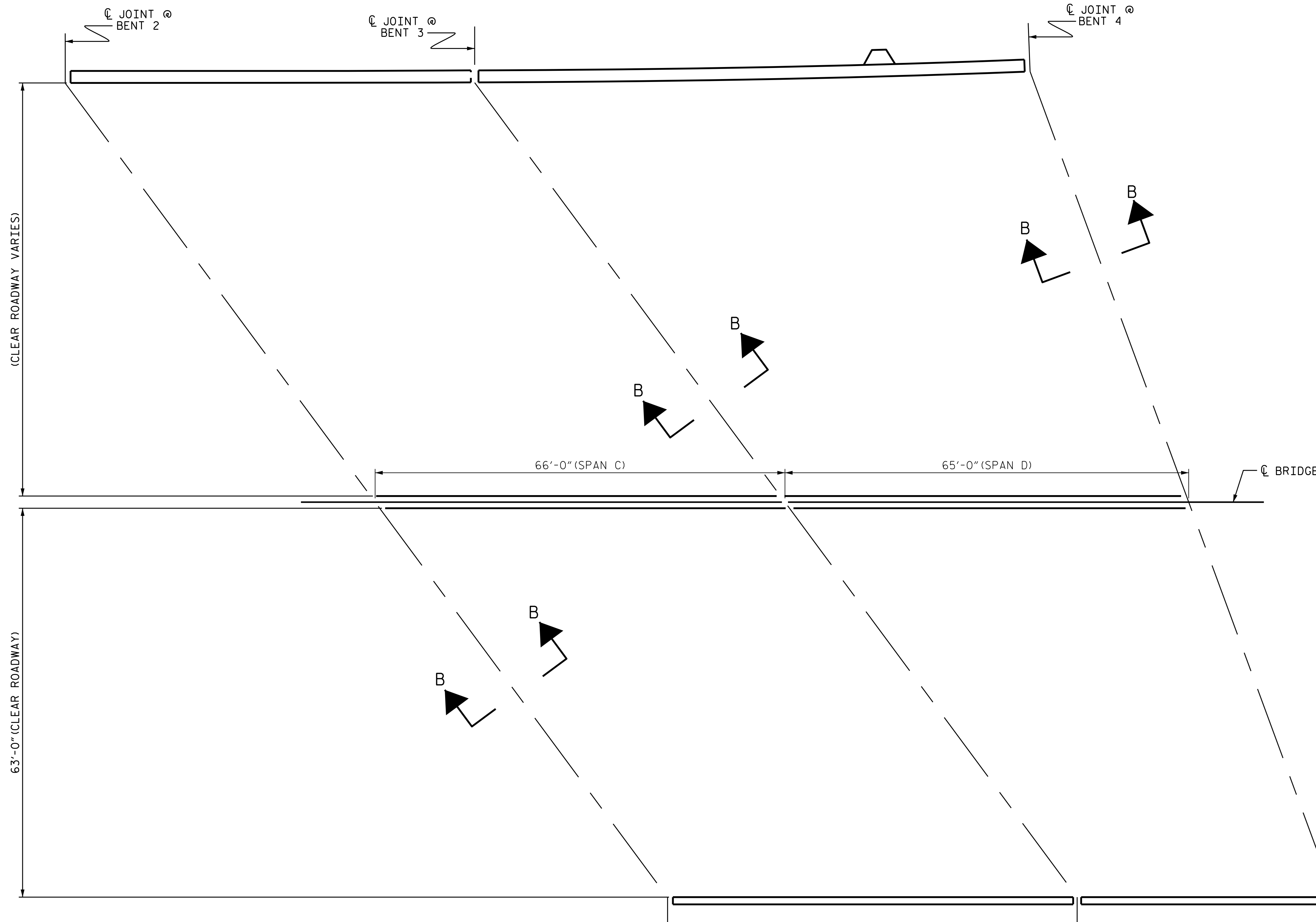
FOR SECTION B-B, SEE "JOINT DETAILS" SHEET.

FOR CONCRETE DECK REPAIR FOR PC OVERLAY, SEE SPECIAL PROVISION.

FOR PC MATERIALS, SEE SPECIAL PROVISION.

 APPROX. CLASS II SURFACE PREPARATION

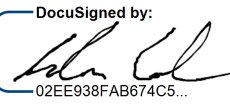
 EPOXY RESIN INJECTION (ERI)

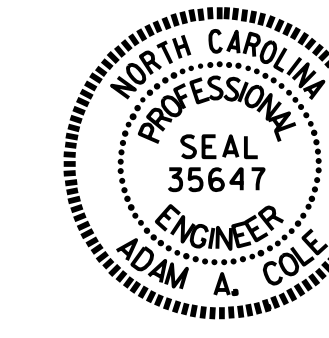


PLAN

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590332

SHEET 2 OF 11

DocuSigned by:

 02EE98FAB074C3



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK SURFACE REPAIR
 SPAN C & D

DRAWN BY : R.L. PUTEK/E. BAYISSA DATE : .07/2021
 CHECKED BY : H. A. LOCKLEAR DATE : .07/2021

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AS-BUILT REPAIR QUANTITY TABLE

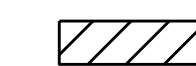
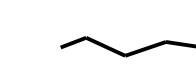
TOP OF DECK REPAIRS		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	2004 SQ. YDS.	
CLASS II SURFACE PREPARATION	1.0 SQ. YDS.	
CONCRETE DECK REPAIR FOR PC OVERLAY	1.0 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	2004 SQ. YDS.	
PC MATERIALS	97.4 CU. YDS.	
PLACING AND FINISHING PC OVERLAY	2004 SQ. YDS.	
GROOVING BRIDGE FLOORS	17130 SQ. FT.	

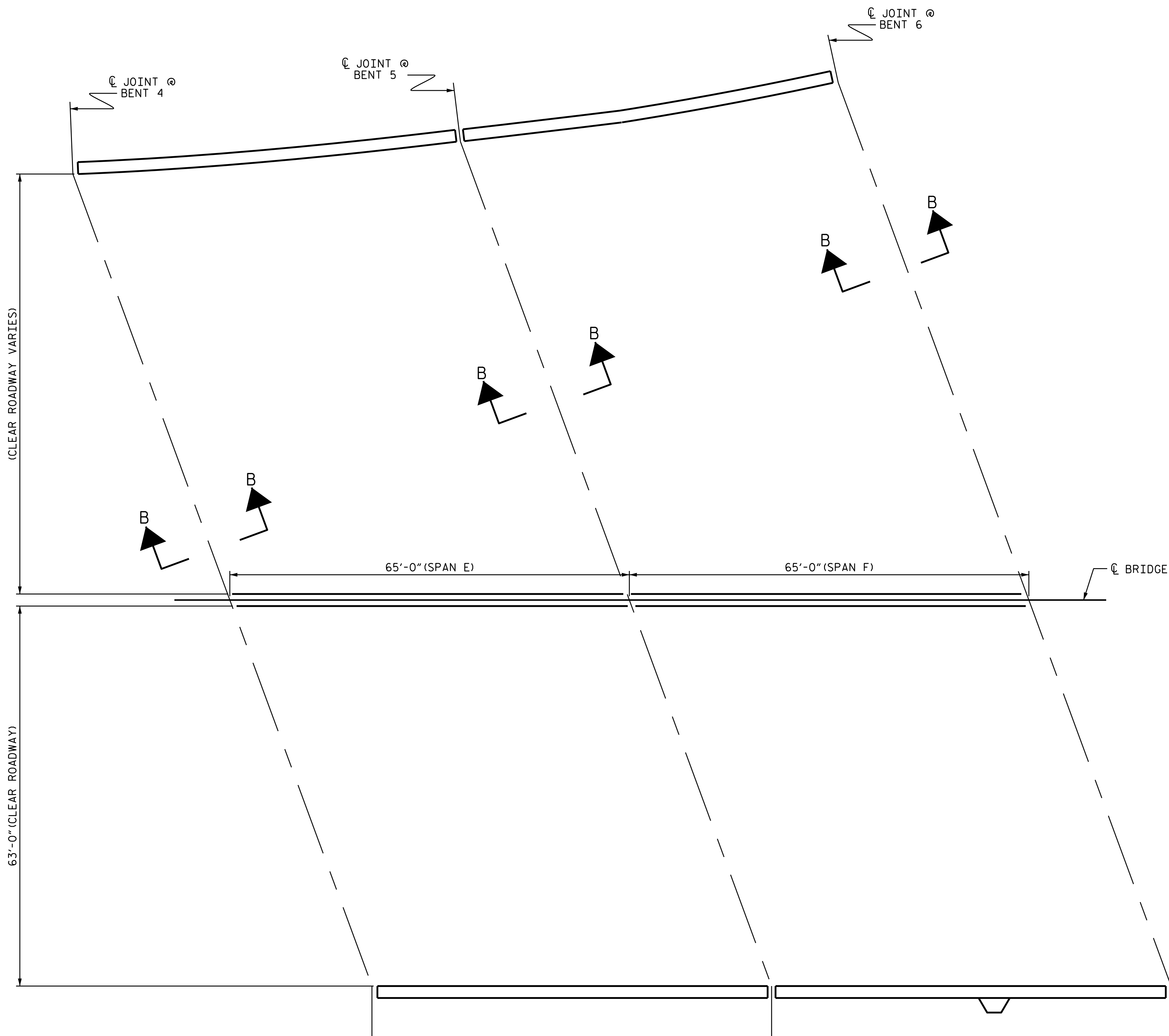
TOP OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PC OVERLAY AFTER REMOVAL OF UNSOUND CONCRETE. (MIN. 2" CLEAR TO SAWCUT). SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.

NOTES:

REPAIR LOCATIONS AND ESTIMATED 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 LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

- FOR SECTION B-B, SEE "JOINT DETAILS" SHEET.
- THE EXISTING CONCRETE ISLAND ON SPAN F SHALL BE REMOVED.
- FOR CONCRETE DECK REPAIR FOR PC OVERLAY, SEE SPECIAL PROVISION.
- FOR PC MATERIALS, SEE SPECIAL PROVISION.

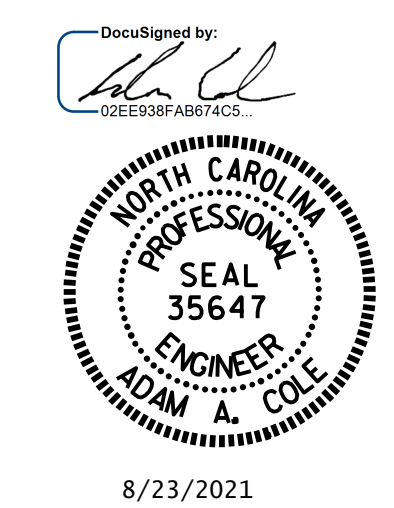
-  APPROX. CLASS II SURFACE PREPARATION
-  EPOXY RESIN INJECTION (ERI)



PLAN

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590332

SHEET 3 OF 11



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
DECK SURFACE REPAIR
SPAN E & F

DRAWN BY : R.L. PUTEK/E. BAYISSA DATE : .07/2021
 CHECKED BY : H. A. LOCKLEAR DATE : .07/2021

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2				4			TOTAL SHEETS 274	

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AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	2032 SQ. YDS.	
CLASS II SURFACE PREPARATION	2.9 SQ. YDS.	
CONCRETE DECK REPAIR FOR PC OVERLAY	2.9 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	2032 SQ. YDS.	
PC MATERIALS	98.8 CU. YDS.	
PLACING AND FINISHING PC OVERLAY	2032 SQ. YDS.	
GROOVING BRIDGE FLOORS	17376 SQ. FT.	

TOP OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PC OVERLAY AFTER REMOVAL OF UNSOUND CONCRETE. (MIN. 2" CLEAR TO SAWCUT). SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.


NOTES:

REPAIR LOCATIONS AND ESTIMATED 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 LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

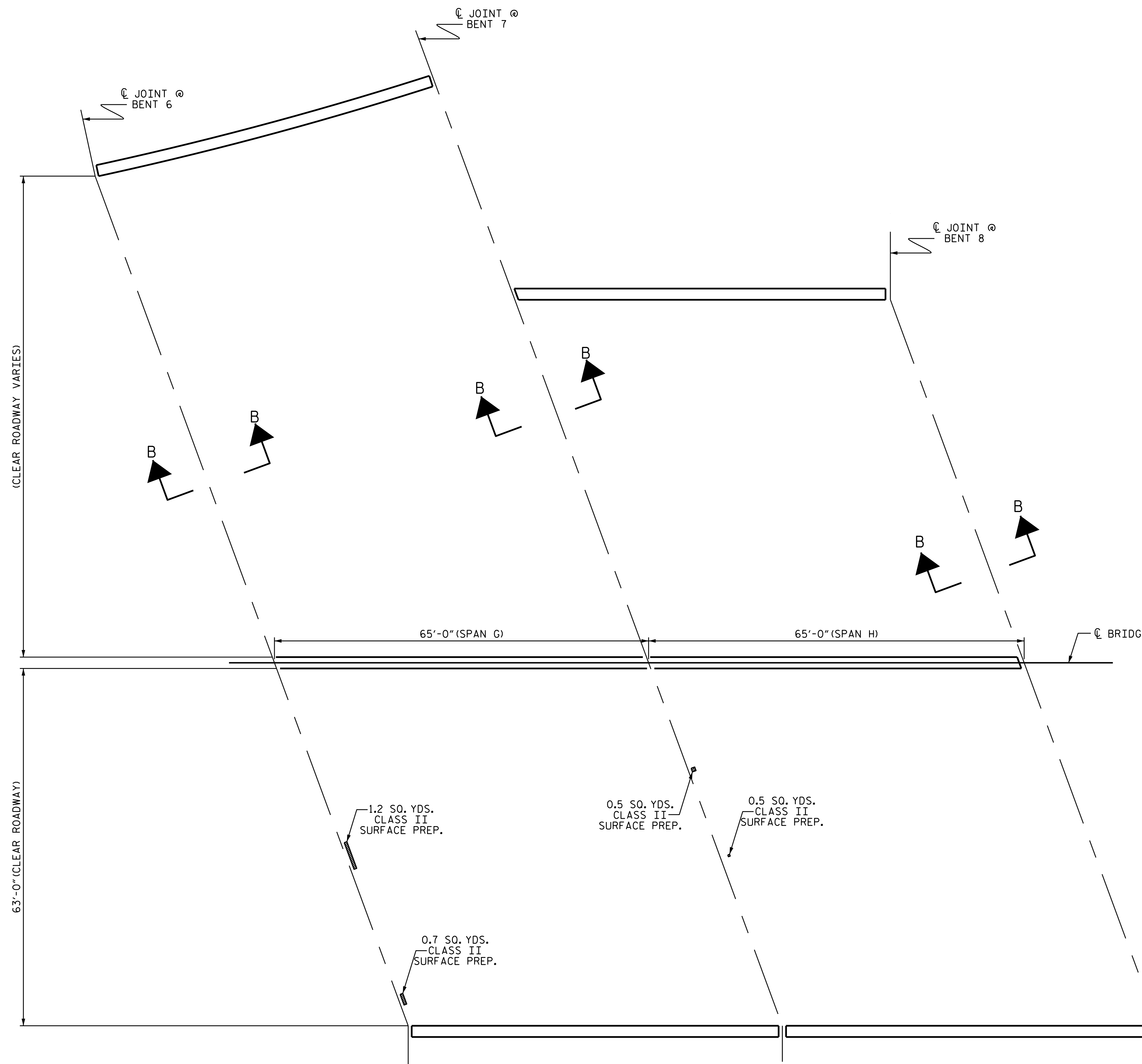
FOR SECTION B-B, SEE "JOINT DETAILS" SHEET.

FOR CONCRETE DECK REPAIR FOR PC OVERLAY, SEE SPECIAL PROVISION.

FOR PC MATERIAL, SEE SPECIAL PROVISION.

 APPROX. CLASS II SURFACE PREPARATION

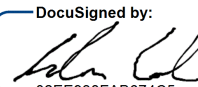
 EPOXY RESIN INJECTION (ERI)

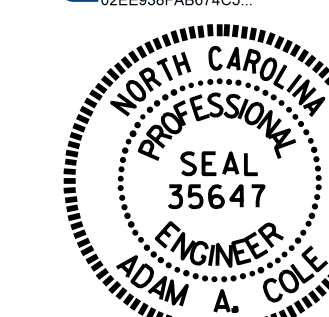


PLAN

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590332

SHEET 4 OF 11

DocuSigned by:

 02EE98FAB074C3



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK SURFACE REPAIR
 SPAN G & H

DRAWN BY : R.L. PUTEK/E. BAYISSA DATE : .07/2021
 CHECKED BY : H. A. LOCKLEAR DATE : .07/2021

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.
1			3			S10-8
2			4			TOTAL SHEETS 274

AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	1890 SQ. YDS.	
CLASS II SURFACE PREPARATION	0.0 SQ. YDS.	
CONCRETE DECK REPAIR FOR PC OVERLAY	0.0 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	1890 SQ. YDS.	
PC MATERIALS	170.6 CU. YDS.	
PLACING AND FINISHING PC OVERLAY	1890 SQ. YDS.	
GROOVING BRIDGE FLOORS	16072 SQ. FT.	

TOP OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PC OVERLAY AFTER REMOVAL OF UNSOUND CONCRETE. (MIN. 2" CLEAR TO SAWCUT). SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISIONS.

NOTES:

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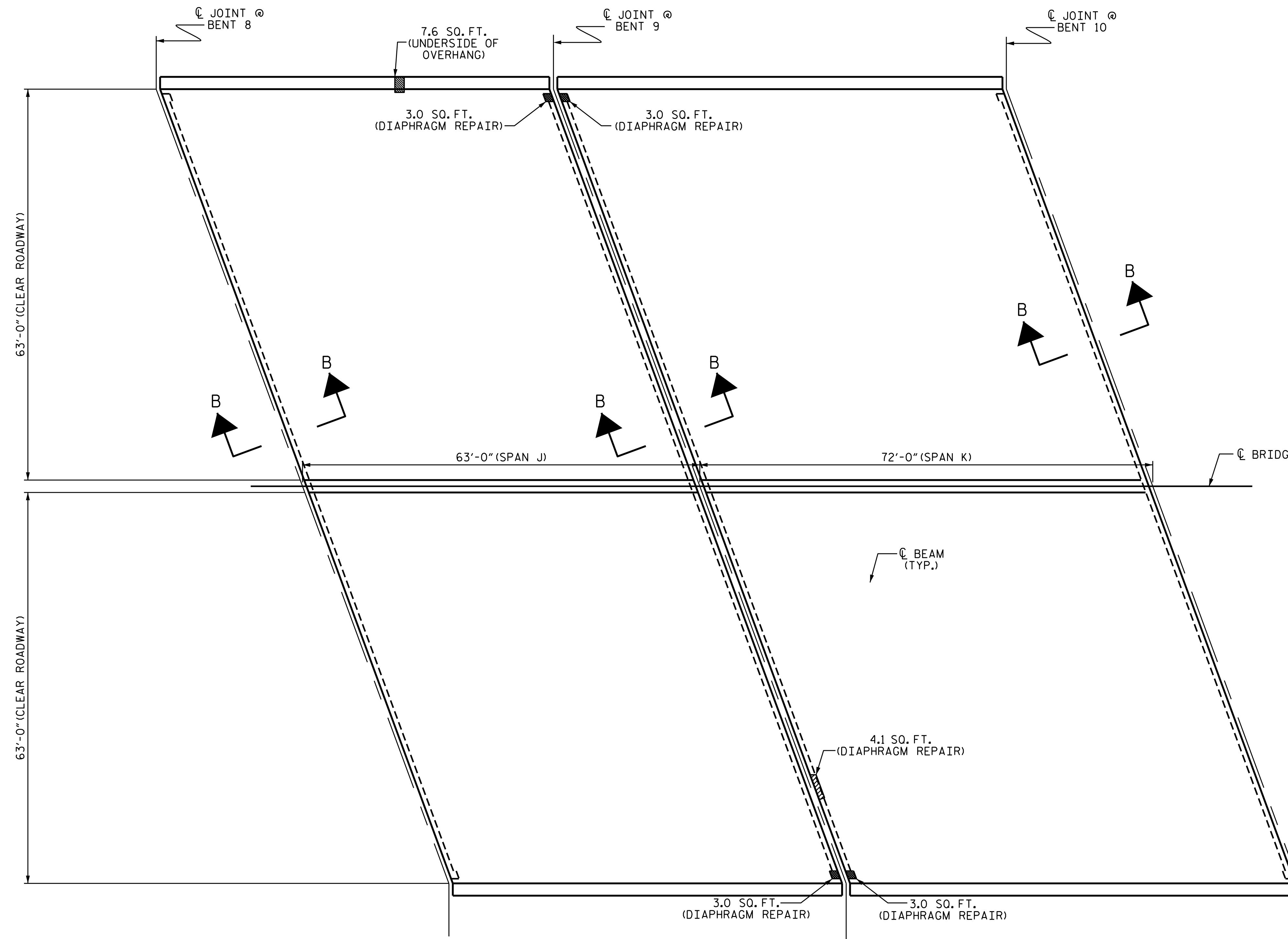
FOR SECTION B-B, SEE "JOINT DETAILS" SHEET.

FOR CONCRETE DECK REPAIR FOR PC OVERLAY, SEE SPECIAL PROVISIONS.

FOR PC MATERIALS, SEE SPECIAL PROVISIONS.

 APPROX. CLASS II SURFACE PREPARATION

 EPOXY RESIN INJECTION (ERI)

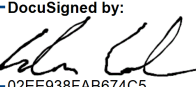


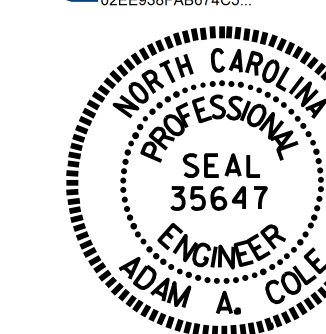
PLAN

 APPROX. CLASS II SURFACE PREPARATION

PROJ. NO. I-5746C
MECKLENBURG COUNTY
 STATION: 590332

SHEET 5 OF 11

DocuSigned by:

 02E939FAB074C0



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK SURFACE REPAIR
 SPAN J & K

DRAWN BY : REZA KOUCHEKI DATE : 07/2021
 CHECKED BY : H. A. LOCKLEAR DATE : 07/2021

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REVISIONS						SHEET NO.
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1			3			S10-9
2			4			TOTAL SHEETS 274

AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	1484 SQ. YDS.	
CLASS II SURFACE PREPARATION	1.8 SQ. YDS.	
CONCRETE DECK REPAIR FOR PC OVERLAY	1.8 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	1484 SQ. YDS.	
PC MATERIALS	72.1 CU. YDS.	
PLACING AND FINISHING PC OVERLAY	1484 SQ. YDS.	
GROOVING BRIDGE FLOORS	12590 SQ. FT.	

TOP OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PC OVERLAY AFTER REMOVAL OF UNSOUND CONCRETE, (MIN. 2" CLEAR TO SAWCUT), SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.


NOTES:

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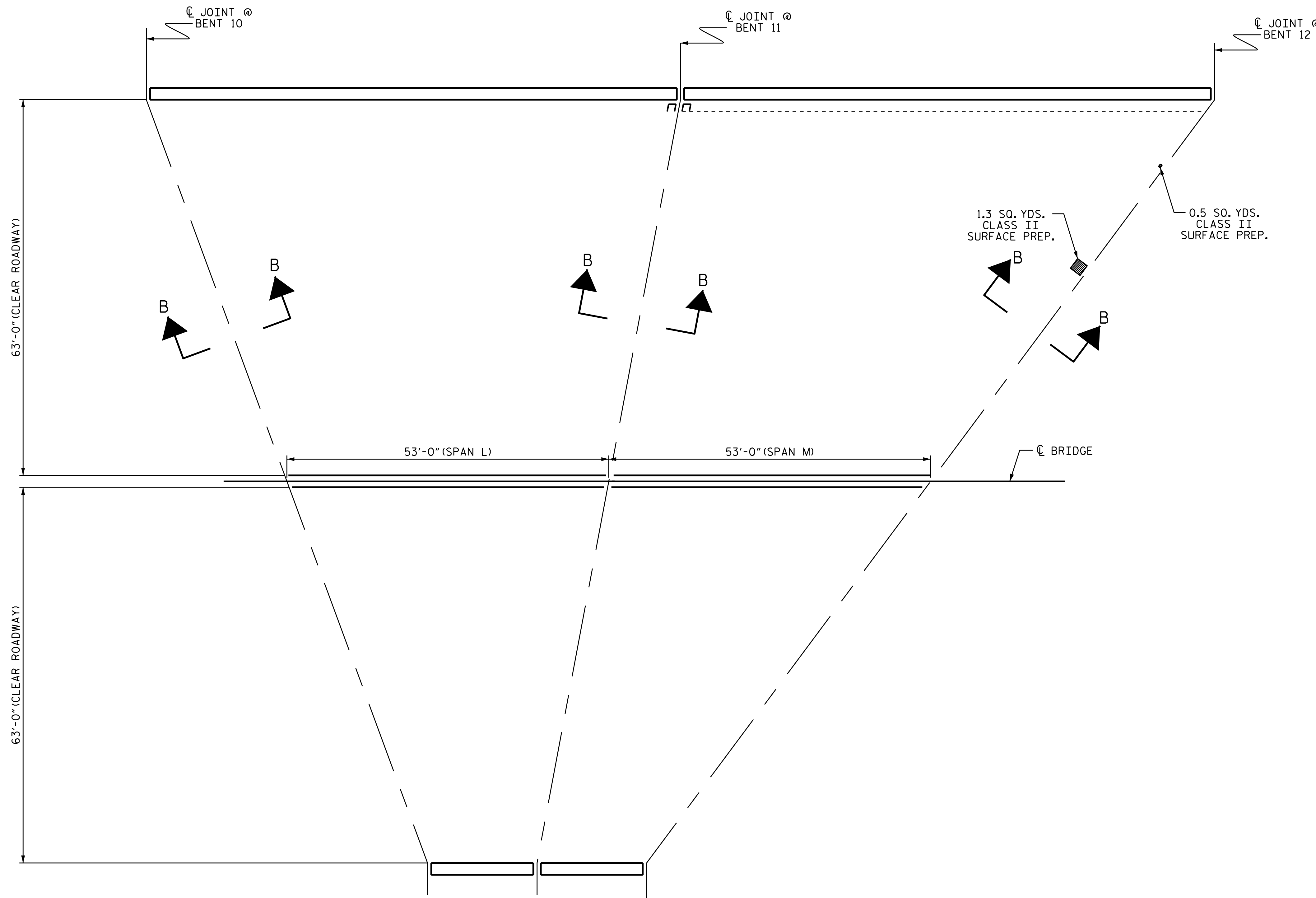
FOR SECTION B-B, SEE "JOINT DETAILS" SHEET.

FOR CONCRETE DECK REPAIR FOR PC OVERLAY, SEE SPECIAL PROVISION.

FOR PC MATERIALS, SEE SPECIAL PROVISION.

 APPROX. CLASS II SURFACE PREPARATION

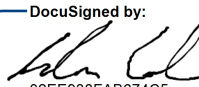
 EPOXY RESIN INJECTION (ERI)

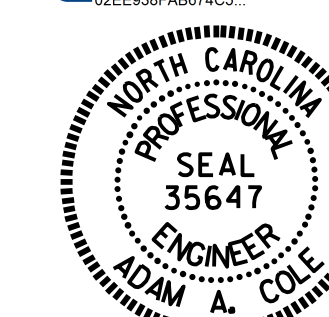


PLAN

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590332

SHEET 6 OF 11

DocuSigned by:

 02E939FAB074C0



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK SURFACE REPAIR
 SPAN L & M

DRAWN BY : R.L. PUTEK/E. BAYISSA DATE : 07/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 07/2021

DOCUMENT NOT CONSIDERED
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NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S10-10
2			4			TOTAL SHEETS 274

AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	1022 SQ. YDS.	
CLASS II SURFACE PREPARATION	4.3 SQ. YDS.	
CONCRETE DECK REPAIR FOR PC OVERLAY	4.3 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	1022 SQ. YDS.	
PC MATERIALS	92.3 CU. YDS.	
PLACING AND FINISHING PC OVERLAY	1022 SQ. YDS.	
GROOVING BRIDGE FLOORS	8685 SQ. FT.	

TOP OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PC OVERLAY AFTER REMOVAL OF UNSOUND CONCRETE. (MIN. 2" CLEAR TO SAWCUT). SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.

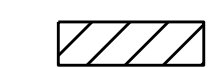
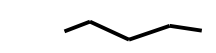
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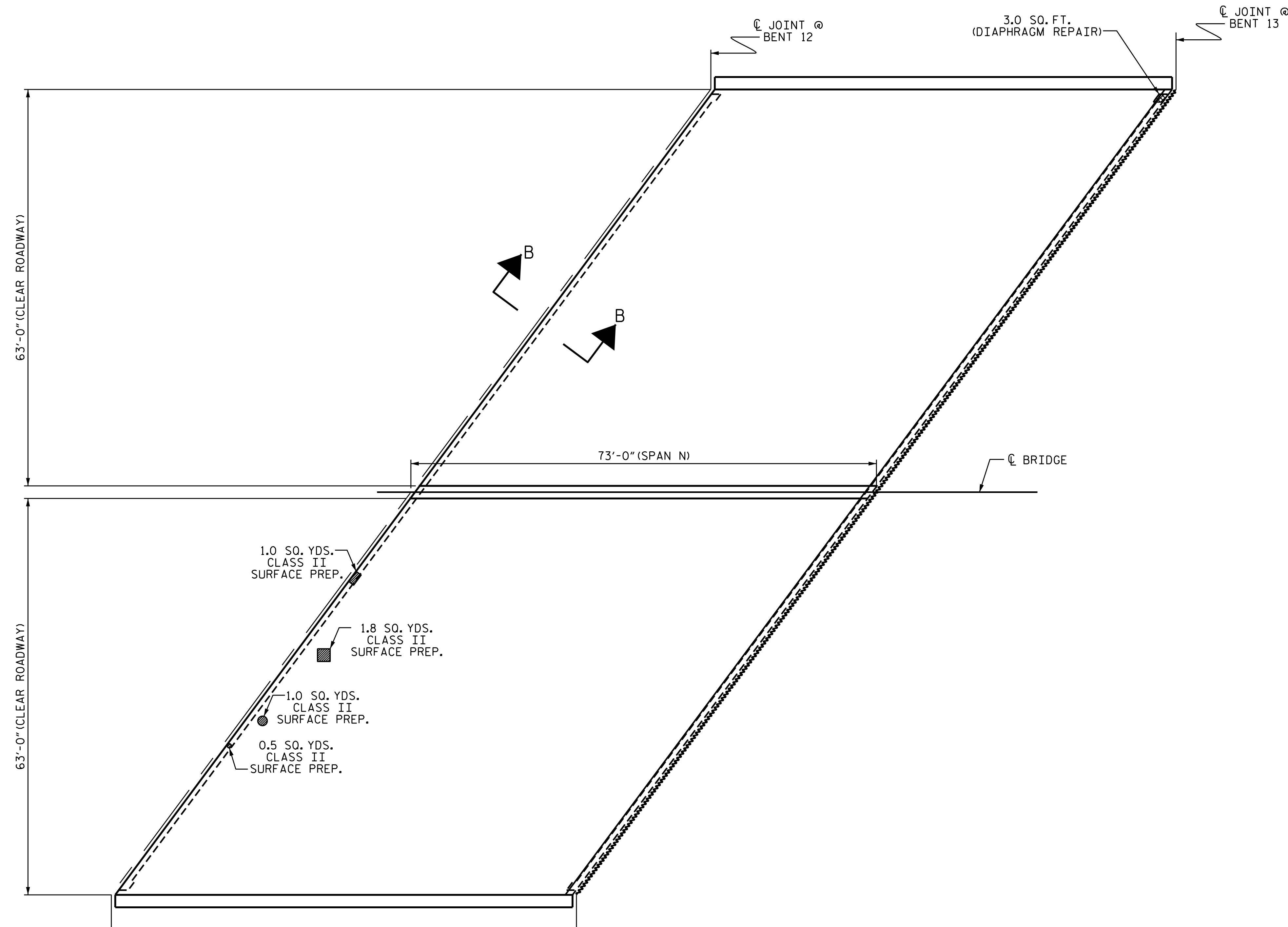
REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES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

FOR SECTION B-B, SEE "JOINT DETAILS" SHEET.

FOR CONCRETE DECK REPAIR FOR PC OVERLAY, SEE SPECIAL PROVISIONS.

FOR PC MATERIALS, SEE SPECIAL PROVISIONS.

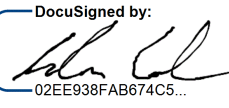
-  APPROX. CLASS II SURFACE PREPARATION
-  EPOXY RESIN INJECTION (ERI)

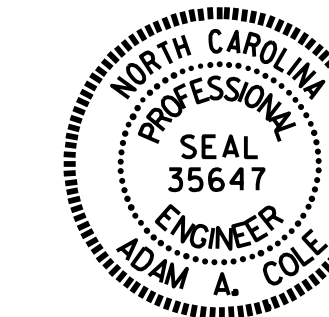


PLAN

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 STATION: 590332

SHEET 7 OF 11

DocuSigned by:

 02EE98FAB074C3



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK SURFACE REPAIR
 SPAN N

DRAWN BY : REZA KOUCHEKI DATE : 07/2021
 CHECKED BY : H. A. LOCKLEAR DATE : 07/2021

DOCUMENT NOT CONSIDERED
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			10-11
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AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	1400 SQ. YDS.	
CLASS II SURFACE PREPARATION	0.0 SQ. YDS.	
CONCRETE DECK REPAIR FOR PC OVERLAY	0.0 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	1400 SQ. YDS.	
PC MATERIALS	126.4 CU. YDS.	
PLACING AND FINISHING PC OVERLAY	1400 SQ. YDS.	
GROOVING BRIDGE FLOORS	11925 SQ. FT.	

TOP OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PPC OVERLAY AFTER REMOVAL OF UNSOUND CONCRETE. (MIN. 2" CLEAR TO SAWCUT). SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.

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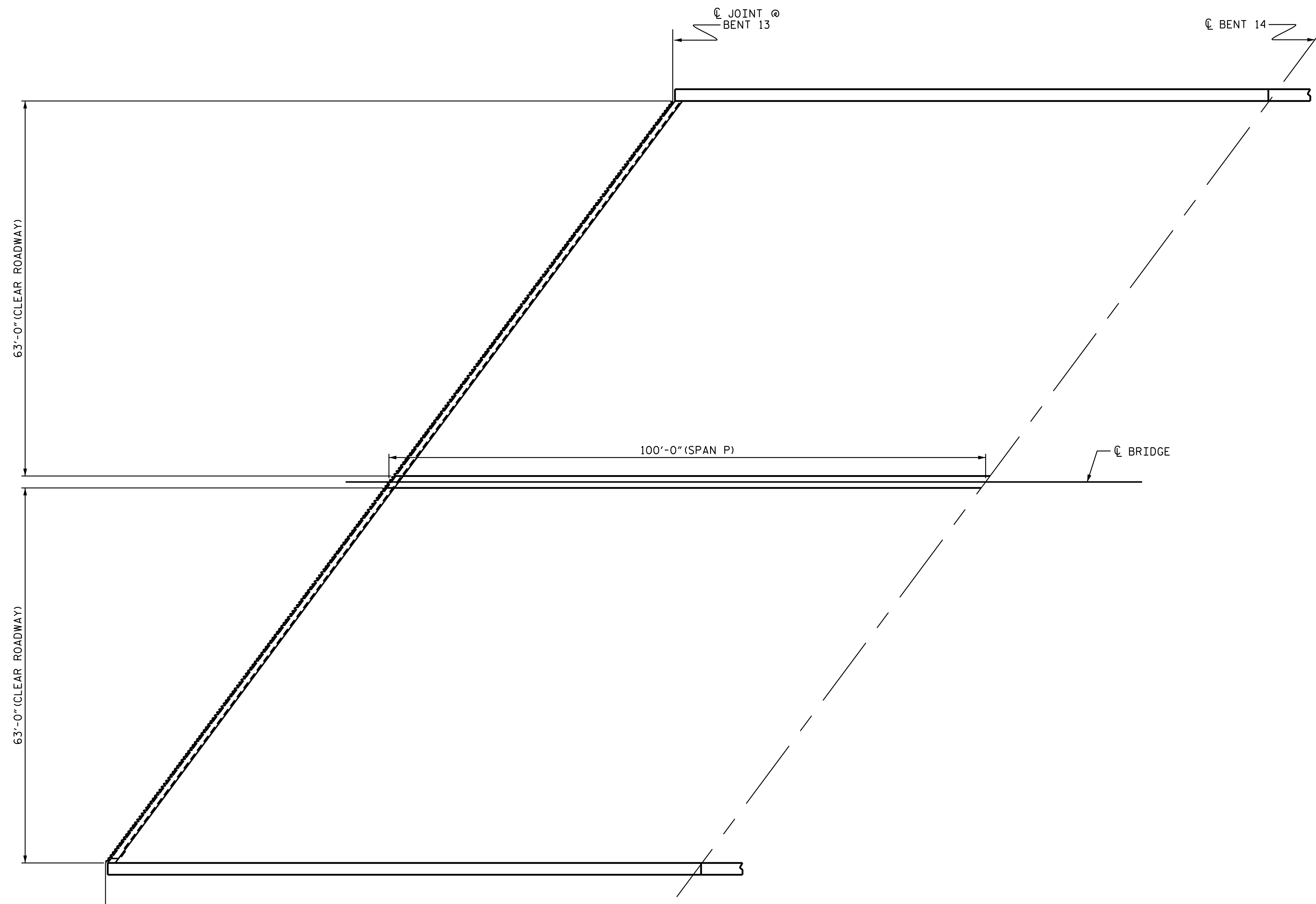
FOR SECTION B-B, SEE "JOINT DETAILS" SHEET.

FOR CONCRETE DECK REPAIR FOR PC OVERLAY, SEE SPECIAL PROVISIONS.

FOR PC MATERIALS, SEE SPECIAL PROVISIONS.

 APPROX. CLASS II SURFACE PREPARATION

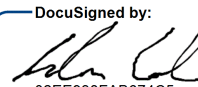
 EPOXY RESIN INJECTION (ERI)

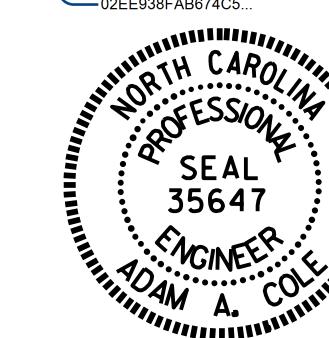


PLAN

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 STATION: 590332

SHEET 8 OF 11

DocuSigned by:

 02EE98FAB074C3



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK SURFACE REPAIR
 SPAN P

DRAWN BY : REZA KOUCHEKI DATE : 07/2021
 CHECKED BY : H. A. LOCKLEAR DATE : 07/2021

DOCUMENT NOT CONSIDERED
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			274
2			4			274

AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	1680 SQ. YDS.	
CLASS II SURFACE PREPARATION	0.0 SQ. YDS.	
CONCRETE DECK REPAIR FOR PC OVERLAY	0.0 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	1680 SQ. YDS.	
PC MATERIALS	151.6 CU. YDS.	
PLACING AND FINISHING PC OVERLAY	1680 SQ. YDS.	
GROOVING BRIDGE FLOORS	14400 SQ. FT.	

TOP OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PC OVERLAY AFTER REMOVAL OF UNSOUND CONCRETE. (MIN. 2" CLEAR TO SAWCUT). SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.

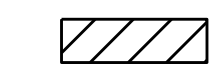
NOTES:

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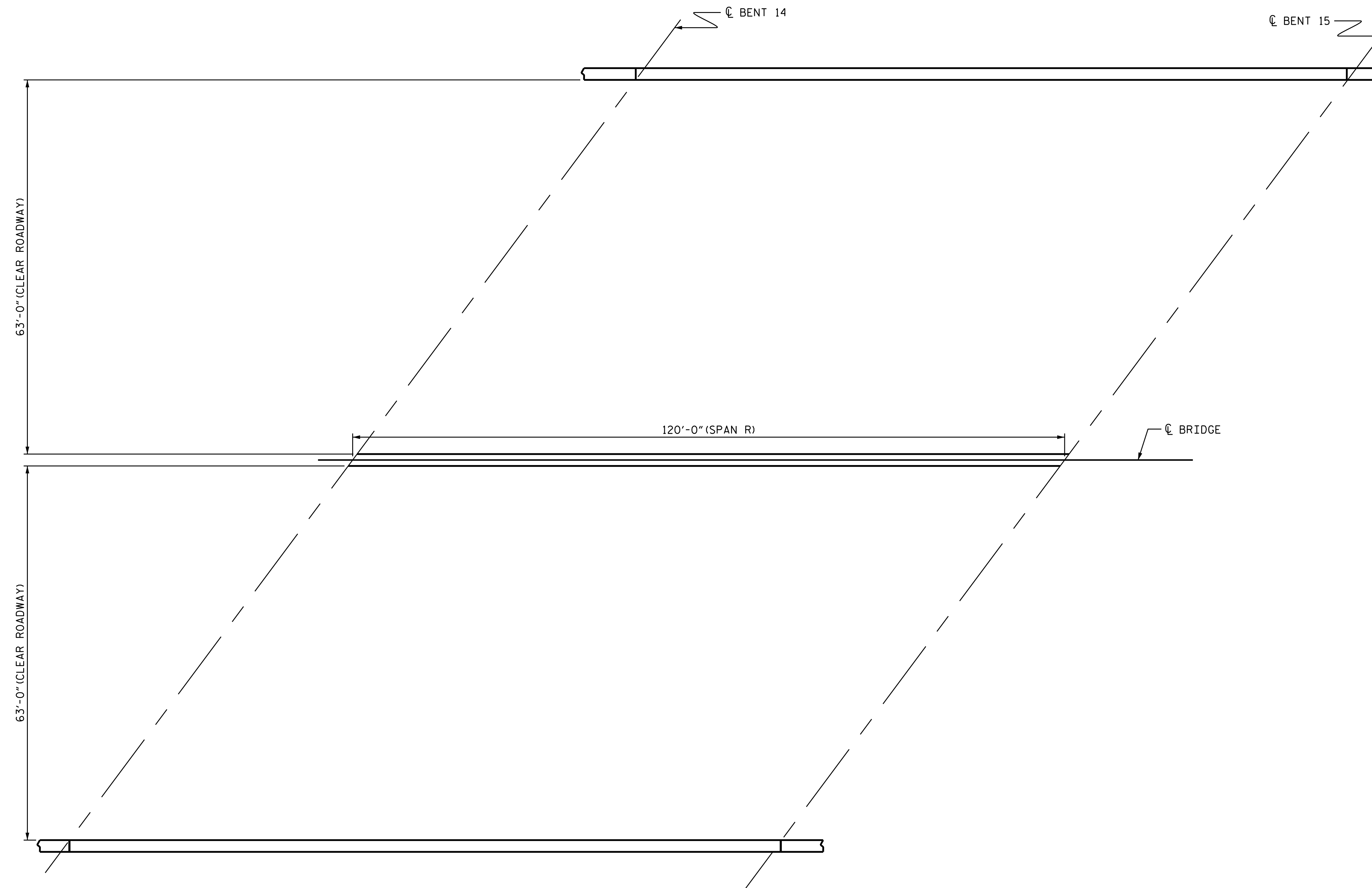
FOR SECTION B-B, SEE "JOINT DETAILS" SHEET.

FOR CONCRETE DECK REPAIR FOR PC OVERLAY, SEE SPECIAL PROVISIONS.

FOR PC MATERIALS, SEE SPECIAL PROVISIONS.

 APPROX. CLASS II SURFACE PREPARATION

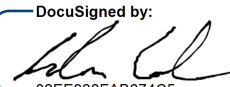
 EPOXY RESIN INJECTION (ERI)



PLAN

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 STATION: 590332

SHEET 9 OF 11

DocuSigned by:

 02EE98FAB074C3



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK SURFACE REPAIR
 SPAN R

DRAWN BY : REZA KOUCHEKI DATE : 07/2021
 CHECKED BY : H. A. LOCKLEAR DATE : 07/2021

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			10-13
2			4			274

AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	1400 SQ. YDS.	
CLASS II SURFACE PREPARATION	1.8 SQ. YDS.	
CONCRETE DECK REPAIR FOR PC OVERLAY	1.8 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	1400 SQ. YDS.	
PC MATERIALS	126.4 CU. YDS.	
PLACING AND FINISHING PC OVERLAY	1400 SQ. YDS.	
GROOVING BRIDGE FLOORS	11925 SQ. FT.	

TOP OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PC OVERLAY AFTER REMOVAL OF UNSOUND CONCRETE. (MIN. 2" CLEAR TO SAWCUT). SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.

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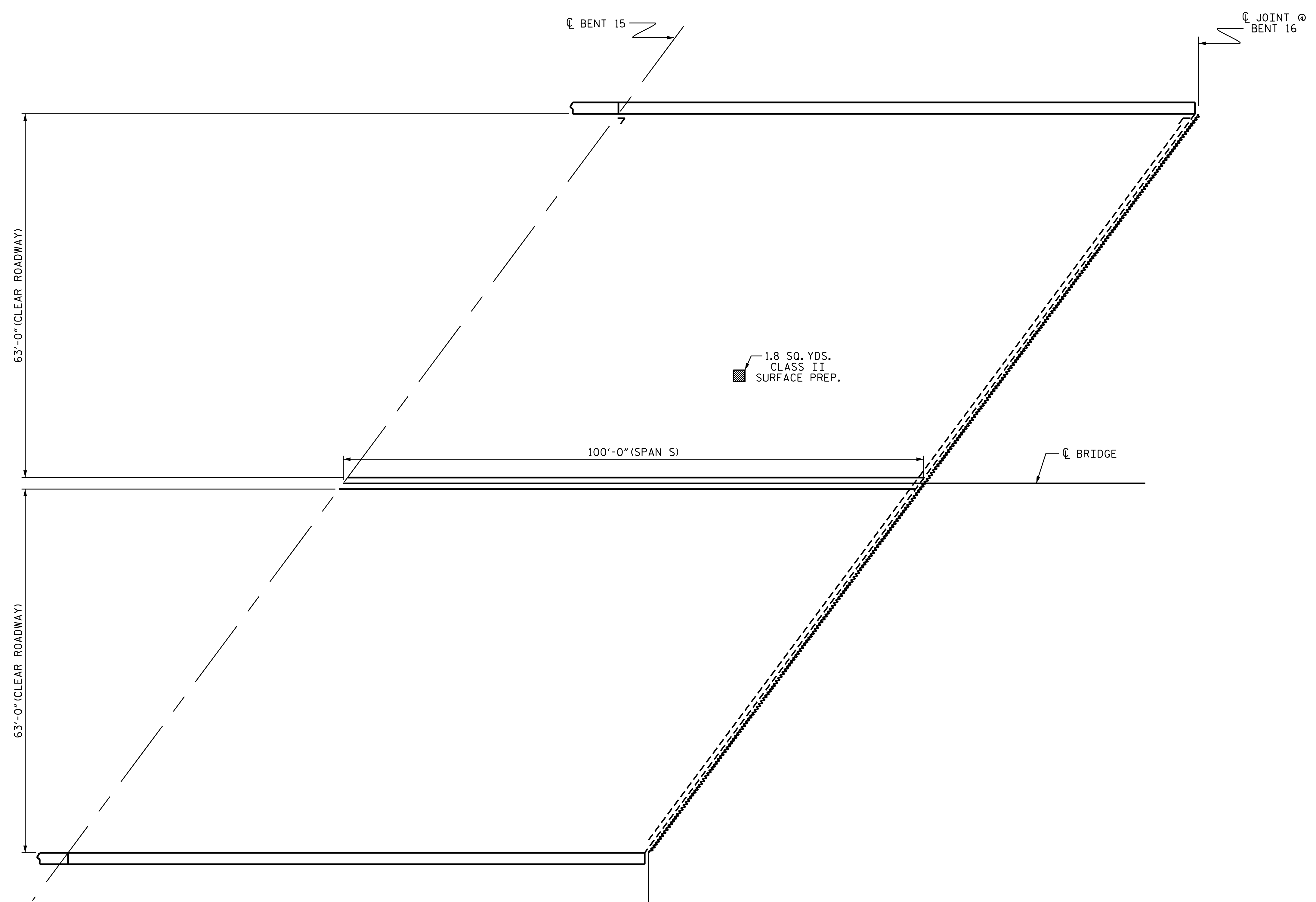
FOR SECTION B-B, SEE "JOINT DETAILS" SHEET.

FOR CONCRETE DECK REPAIR FOR PC OVERLAY, SEE SPECIAL PROVISIONS.

FOR PC MATERIALS, SEE SPECIAL PROVISIONS.

 APPROX. CLASS II SURFACE PREPARATION

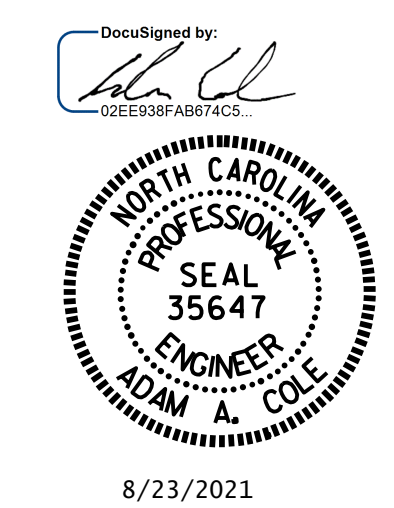
 EPOXY RESIN INJECTION (ERI)



PLAN

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 STATION: 590332

SHEET 10 OF 11



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
DECK SURFACE REPAIR
SPAN S

DRAWN BY : REZA KOUCHEKI DATE : .07/2021
 CHECKED BY : H. A. LOCKLEAR DATE : .07/2021

NO.	REVISIONS			NO.	REVISIONS			SHEET NO.
	BY:	DATE:			BY:	DATE:		
1				3				S10-14 TOTAL SHEETS 274
2				4				

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 FINAL UNLESS ALL
 SIGNATURES COMPLETED

AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	938 SQ. YDS.	
CLASS II SURFACE PREPARATION	0.0 SQ. YDS.	
CONCRETE DECK REPAIR FOR PC OVERLAY	0.0 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	0.0 SQ. YDS.	
PC MATERIALS	45.6 SQ. YDS.	
PLACING AND FINISHING PC OVERLAY	84.7 CU. YDS.	
GROOVING BRIDGE FLOORS	938 SQ. YDS.	

TOP OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PC OVERLAY AFTER REMOVAL OF UNSOUND CONCRETE. (MIN. 2" CLEAR TO SAWCUT). SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.


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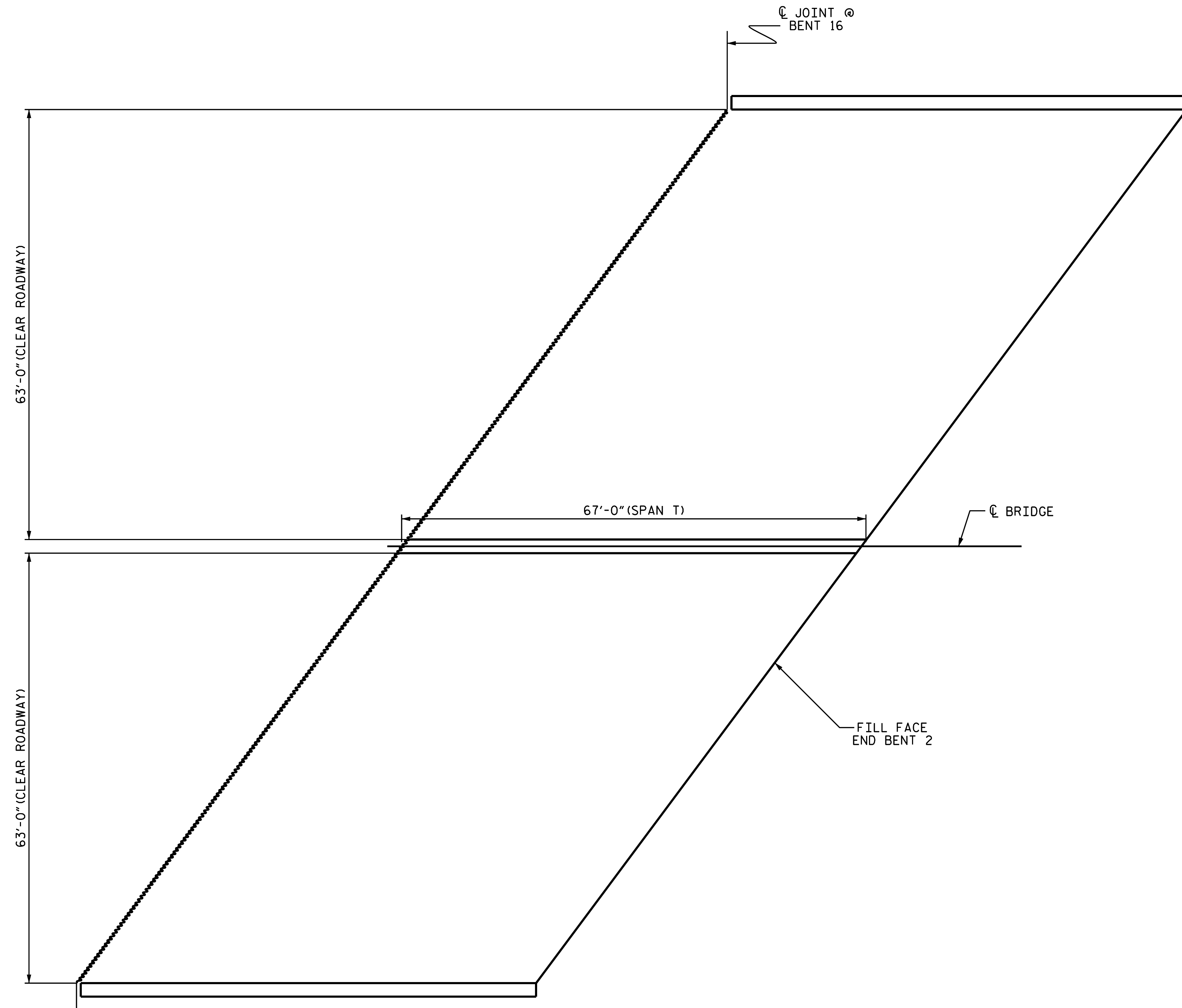
FOR SECTION B-B, SEE "JOINT DETAILS" SHEET.

FOR CONCRETE DECK REPAIR FOR PC OVERLAY, SEE SPECIAL PROVISION.

FOR PC MATERIAL, SEE SPECIAL PROVISION.

 APPROX. CLASS II SURFACE PREPARATION

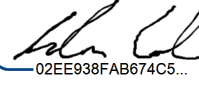
 EPOXY RESIN INJECTION (ERI)



PLAN

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 STATION: 590332

SHEET 11 OF 11

DocuSigned by:

 02E898FAB074C3



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK SURFACE REPAIR
 SPAN T

DRAWN BY : R.L. PUTEK/E. BAYISSA DATE : 06/2021
 CHECKED BY : H. A. LOCKLEAR DATE : 06/2021

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			15
2			4			274

AS-BUILT REPAIR QUANTITY TABLE

UNDERSIDE OF DECK REPAIRS

SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
UNDERSIDE OF DECK	0.0	0.0		
OVERHANG DIAPHRAGMS	2.0	0.7		
UNDERSIDE OF OVERHANG	16.2	5.4		
INTERIOR DIAPHRAGMS	2.1	0.7		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	0.0 LIN. FT.			
UNDERSIDE EPOXY COATING	0 SQ. FT.			

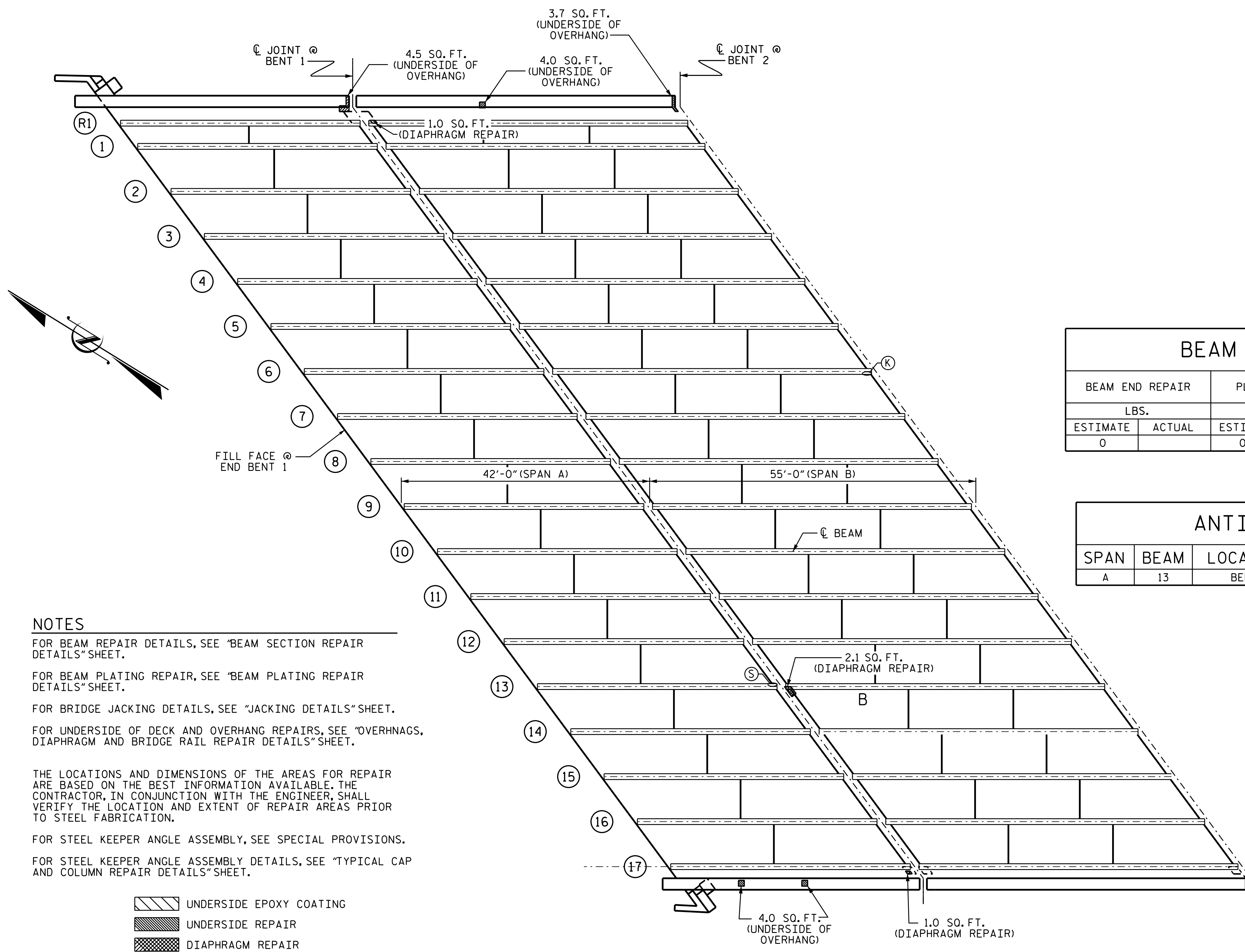
UNDERSIDE OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

BEAM REPAIR QUANTITY TABLE

BEAM END REPAIR		PLATING REPAIR		STIFFENER REPAIR		DIAPHRAGM REPAIR		STEEL KEEPER ANGLE ASSEMBLY	
LBS.		LBS.		LBS.		LBS.		EA.	
ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
0		0		6		0		1	

ANTICIPATED BEAM REPAIR LOCATIONS

SPAN	BEAM	LOCATION	DIM "A"	DIM "B"	DIM "C"	DIM "D"
A	13	BENT 1	5"	-	-	-



PLAN

NOTES

- FOR BEAM REPAIR DETAILS, SEE "BEAM SECTION REPAIR DETAILS" SHEET.
- FOR BEAM PLATING REPAIR, SEE "BEAM PLATING REPAIR DETAILS" SHEET.
- FOR BRIDGE JACKING DETAILS, SEE "JACKING DETAILS" SHEET.
- FOR UNDERSIDE OF DECK AND OVERHANG REPAIRS, SEE "OVERHANGS, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.
- THE LOCATIONS AND DIMENSIONS OF THE AREAS FOR REPAIR ARE BASED ON THE BEST INFORMATION AVAILABLE. THE CONTRACTOR, IN CONJUNCTION WITH THE ENGINEER, SHALL VERIFY THE LOCATION AND EXTENT OF REPAIR AREAS PRIOR TO STEEL FABRICATION.
- FOR STEEL KEEPER ANGLE ASSEMBLY, SEE SPECIAL PROVISIONS.
- FOR STEEL KEEPER ANGLE ASSEMBLY DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

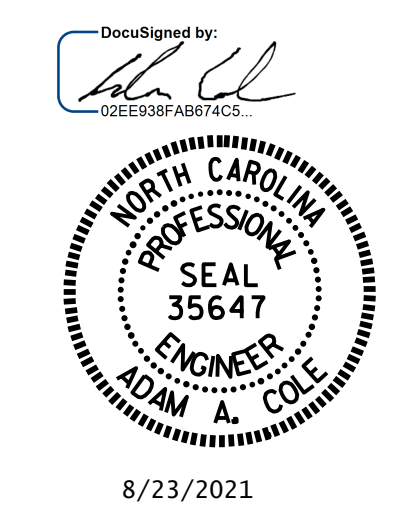
- UNDERSIDE EPOXY COATING
- UNDERSIDE REPAIR
- DIAPHRAGM REPAIR

- ① BEAM NUMBER
- ⓑ BEAM END REPAIR
- Ⓟ PLATING REPAIR
- Ⓢ STIFFENER REPAIR
- Ⓣ STEEL DIAPHRAGM REPAIR
- Ⓚ STEEL KEEPER ANGLE ASSEMBLY
- Ⓡ EXISTING BEAM

DRAWN BY : R.L. PUTEK/E. BAYISSA DATE : 07/2021
 CHECKED BY : H. A. LOCKLEAR DATE : 07/2021

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590332

SHEET 1 OF 11



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
DECK UNDERSIDE REPAIR
SPAN A & B

NO.	BY:	DATE:	REVISIONS			SHEET NO.
			NO.	BY:	DATE:	
1			3			S10-17 TOTAL SHEETS 274
2			4			

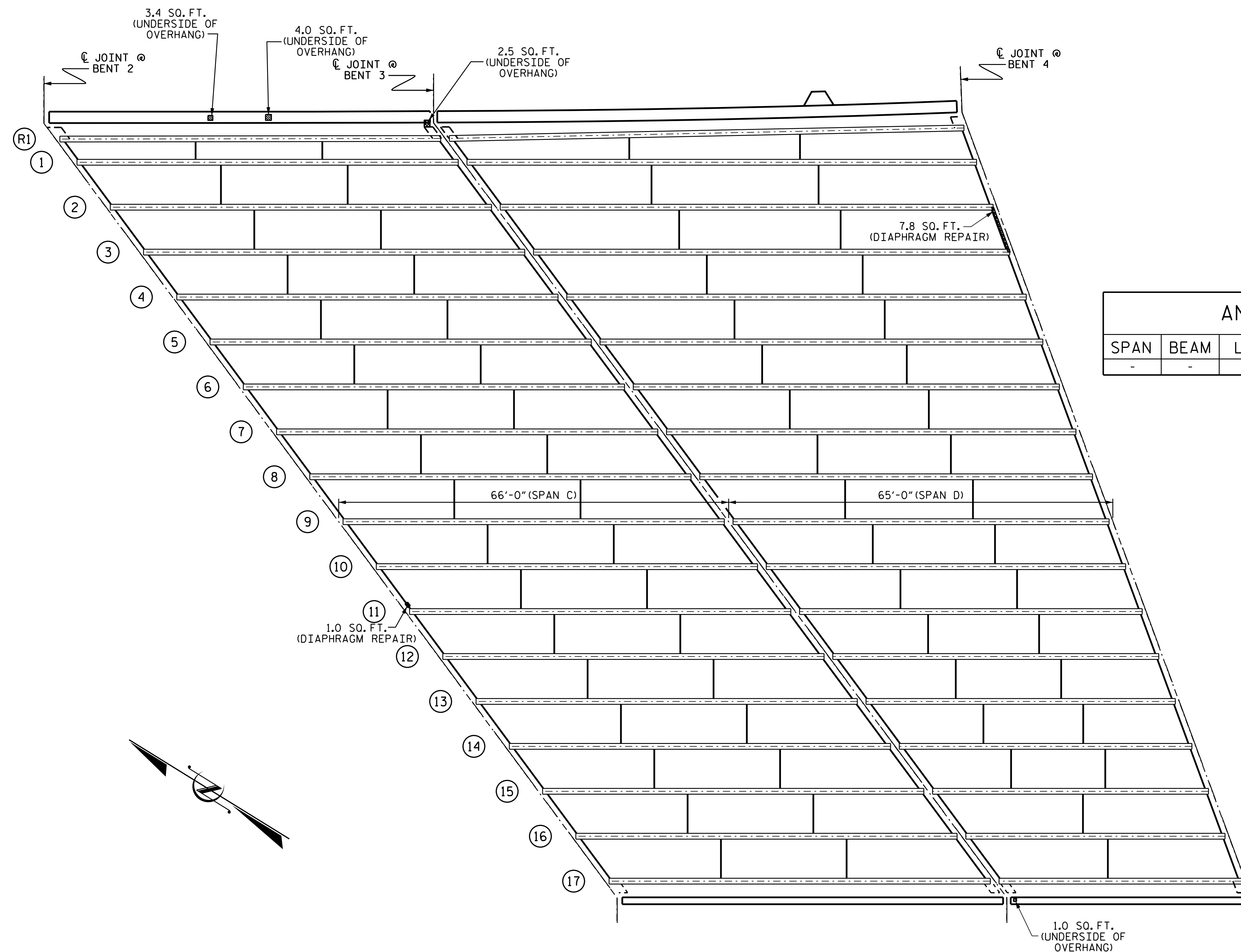
DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

AS-BUILT REPAIR QUANTITY TABLE

UNDERSIDE OF DECK REPAIRS

SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
UNDERSIDE OF DECK	0.0	0.0		
OVERHANG DIAPHRAGMS	0.0	0.0		
UNDERSIDE OF OVERHANG	10.9	3.6		
INTERIOR DIAPHRAGMS	8.8	2.9		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	0.0 LIN. FT.			
UNDERSIDE EPOXY COATING	0 SQ. FT.			

UNDERSIDE OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.



SPAN	BEAM	LOCATION	DIM "A"	DIM "B"	DIM "C"	DIM "D"
-	-	-	-	-	-	-

NOTES

FOR BEAM REPAIR DETAILS, SEE "BEAM SECTION REPAIR DETAILS" SHEET.

FOR BEAM PLATING REPAIR, SEE "BEAM PLATING REPAIR DETAILS" SHEET.

FOR BRIDGE JACKING DETAILS, SEE "JACKING DETAILS" SHEET.

FOR UNDERSIDE OF DECK AND OVERHANG REPAIRS, SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.

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- UNDERSIDE EPOXY COATING
- UNDERSIDE REPAIR
- DIAPHRAGM REPAIR

- ① BEAM NUMBER
- Ⓟ BEAM END REPAIR
- Ⓟ PLATING REPAIR
- Ⓢ STIFFENER REPAIR
- Ⓣ STEEL DIAPHRAGM REPAIR
- Ⓡ EXISTING BEAM

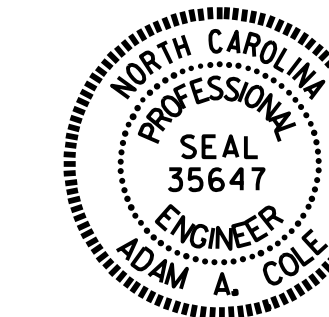
BEAM END REPAIR		PLATING REPAIR		STIFFENER REPAIR		DIAPHRAGM REPAIR	
LBS.		LBS.		LBS.		LBS.	
ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
0		0		0		0	

PLAN

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590332

SHEET 2 OF 11

DocuSigned by:
02EE98FAB074C2



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK UNDERSIDE REPAIR
 SPAN C & D

DRAWN BY : R.L. PUTEK/E. BAYISSA DATE : 07/2021
 CHECKED BY : H. A. LOCKLEAR DATE : 07/2021

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			18
2			4			274

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

AS-BUILT REPAIR QUANTITY TABLE

UNDERSIDE OF DECK REPAIRS

SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	
UNDERSIDE OF DECK	0.0	0.0		
OVERHANG DIAPHRAGMS	0.0	0.0		
UNDERSIDE OF OVERHANG	15.8	5.2		
INTERIOR DIAPHRAGMS	0.0	0.0		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	0.0 LIN. FT.			
UNDERSIDE EPOXY COATING	0 SQ. FT.			

UNDERSIDE OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

NOTES

FOR BEAM REPAIR DETAILS, SEE "BEAM SECTION REPAIR DETAILS" SHEET.

FOR BEAM PLATING REPAIR, SEE "BEAM PLATING REPAIR DETAILS" SHEET.

FOR BRIDGE JACKING DETAILS, SEE "JACKING DETAILS" SHEET.

FOR UNDERSIDE OF DECK AND OVERHANG REPAIRS, SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.

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- UNDERSIDE EPOXY COATING
- UNDERSIDE REPAIR
- DIAPHRAGM REPAIR

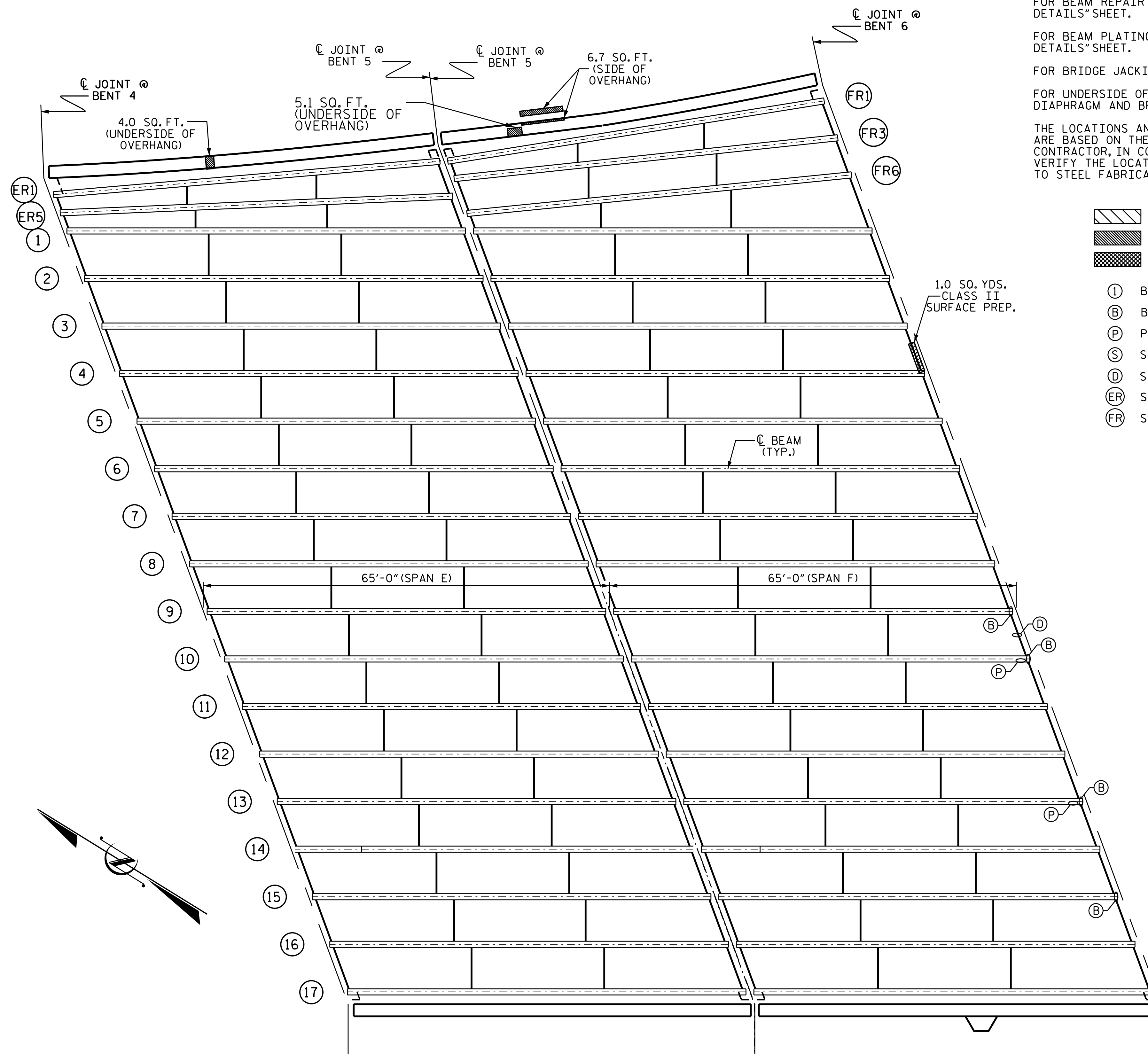
- ① BEAM NUMBER
- ⓑ BEAM END REPAIR
- Ⓟ PLATING REPAIR
- Ⓢ STIFFENER REPAIR
- Ⓣ STEEL DIAPHRAGM REPAIR
- ⓔⓇ STEEL DIAPHRAGM REPAIR
- ⓕⓇ STEEL DIAPHRAGM REPAIR

ANTICIPATED BEAM REPAIR LOCATIONS

SPAN	BEAM	LOCATION	DIM "A"	DIM "B"	DIM "C"	DIM "D"
F	9	BENT 6	3'-0"	1'-6"	5"	3'-6"
F	10	BENT 6	3'-0"	1'-4"	5"	3'-7"
F	10	BENT 6	5"	9'-0"	-	-
F	13	BENT 6	3'-0"	1'-6"	6"	4'-2"
F	13	BENT 6	5"	6'-0"	-	-
F	15	BENT 6	3'-0"	1'-0"	6"	5'-0"

BEAM REPAIR QUANTITY TABLE

BEAM END REPAIR		PLATING REPAIR		STIFFENER REPAIR		DIAPHRAGM REPAIR	
LBS.		LBS.		LBS.		LBS.	
ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
1110		320		0		280	

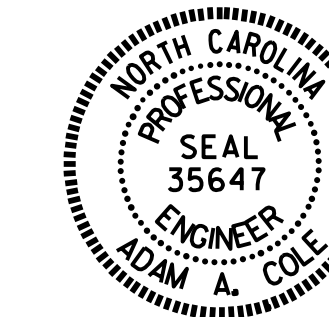


PLAN

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590332

SHEET 3 OF 11

DocuSigned by:
 02EE98FAB074C3



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK UNDERSIDE REPAIR SPAN E & F

REVISIONS

NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.
1			3			S10-19
2			4			TOTAL SHEETS 274

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DRAWN BY : R.L.PUTEK/E.BAYISSA DATE : 07/2021
 CHECKED BY : H.A.LOCKLEAR DATE : 07/2021

AS-BUILT REPAIR QUANTITY TABLE

UNDERSIDE OF DECK REPAIRS

SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
UNDERSIDE OF DECK	0.0	0.0		
OVERHANG DIAPHRAGMS	6.2	2.1		
UNDERSIDE OF OVERHANG	2.3	0.8		
INTERIOR DIAPHRAGMS	2.6	0.9		
DIAPHRAGM REPAIR	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	0.0 LIN. FT.			
UNDERSIDE EPOXY COATING	0 SQ. FT.			

UNDERSIDE OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

NOTES

FOR BEAM REPAIR DETAILS, SEE "BEAM SECTION REPAIR DETAILS" SHEET.

FOR BEAM PLATING REPAIR, SEE "BEAM PLATING REPAIR DETAILS" SHEET.

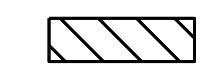


FOR BRIDGE JACKING DETAILS, SEE "JACKING DETAILS" SHEET.

FOR UNDERSIDE OF DECK AND OVERHANG REPAIRS, SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.

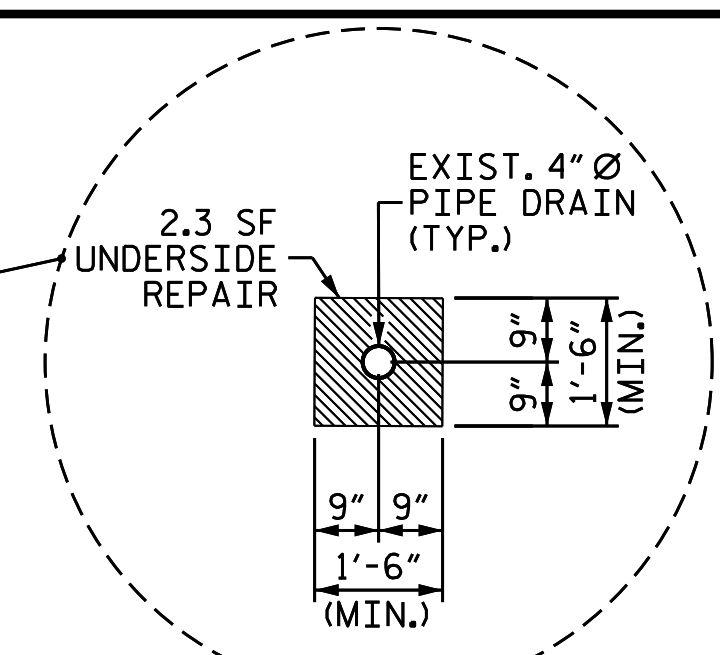
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FOR STEEL KEEPER ANGLE ASSEMBLY, SEE SPECIAL PROVISIONS.

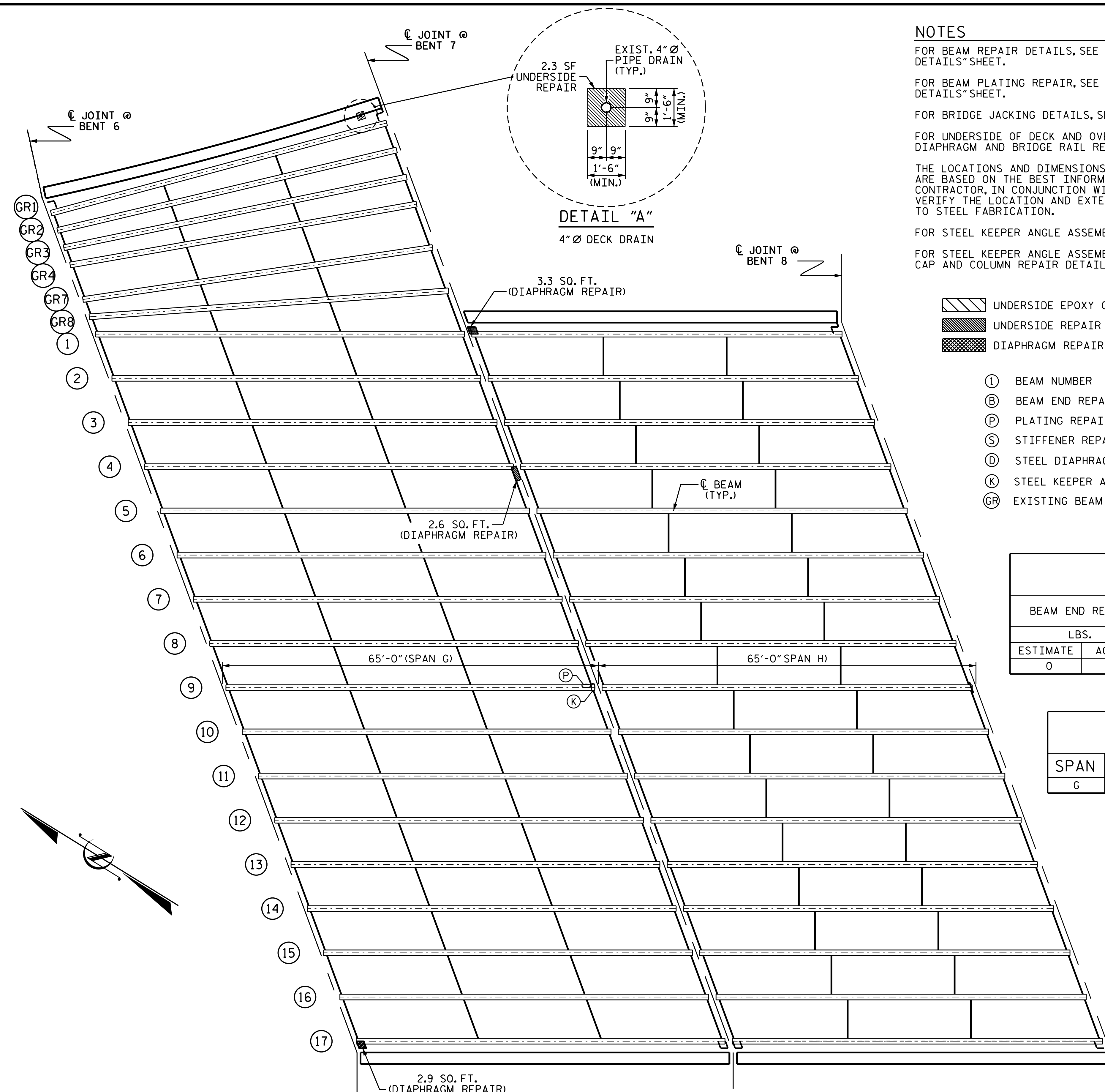
FOR STEEL KEEPER ANGLE ASSEMBLY DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

-  UNDERSIDE EPOXY COATING
-  UNDERSIDE REPAIR
-  DIAPHRAGM REPAIR

- ① BEAM NUMBER
- Ⓟ BEAM END REPAIR
- Ⓟ PLATING REPAIR
- Ⓞ STIFFENER REPAIR
- Ⓞ STEEL DIAPHRAGM REPAIR
- Ⓚ STEEL KEEPER ANGLE ASSEMBLY
- Ⓜ EXISTING BEAM



DETAIL "A"
4" Ø DECK DRAIN



PLAN

BEAM REPAIR QUANTITY TABLE

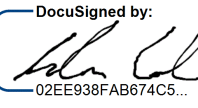
BEAM END REPAIR		PLATING REPAIR		STIFFENER REPAIR		DIAPHRAGM REPAIR		STEEL KEEPER ANGLE ASSEMBLY	
LBS.		LBS.		LBS.		LBS.		EA.	
ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
0		36		0		0		1	

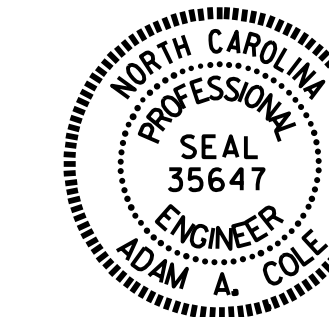
ANTICIPATED BEAM REPAIR LOCATIONS

SPAN	BEAM	LOCATION	DIM "A"	DIM "B"	DIM "C"	DIM "D"
G	9	BENT 7	10"	10"	-	-

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590332

SHEET 4 OF 11

DocuSigned by:

 02EE98FAB074C3



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK UNDERSIDE REPAIR SPAN G & H

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			274
2			4			

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

DRAWN BY : R.L. PUTEK/E.BAYISSA DATE : 07/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 07/2021

ANTICIPATED BEAM REPAIR LOCATIONS

SPAN	BEAM	LOCATION	DIM "A"	DIM "B"	DIM "C"	DIM "D"
J	8	BENT 9	3'-0"	1'-6"	9"	2'-7"
J	13	BENT 9	6"	10"	-	-

BEAM REPAIR QUANTITY TABLE

BEAM END REPAIR		PLATING REPAIR		STIFFENER REPAIR		DIAPHRAGM REPAIR	
LBS.		LBS.		LBS.		LBS.	
ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
280		25		0		0	

NOTES

- ① BEAM NUMBER
- ⓑ BEAM END REPAIR
- Ⓟ PLATING REPAIR
- Ⓢ STIFFENER REPAIR
- Ⓣ STEEL DIAPHRAGM REPAIR

FOR BEAM REPAIR DETAILS, SEE "BEAM SECTION REPAIR DETAILS" SHEET.

FOR BEAM PLATING REPAIR, SEE "BEAM PLATING REPAIR DETAILS" SHEET.

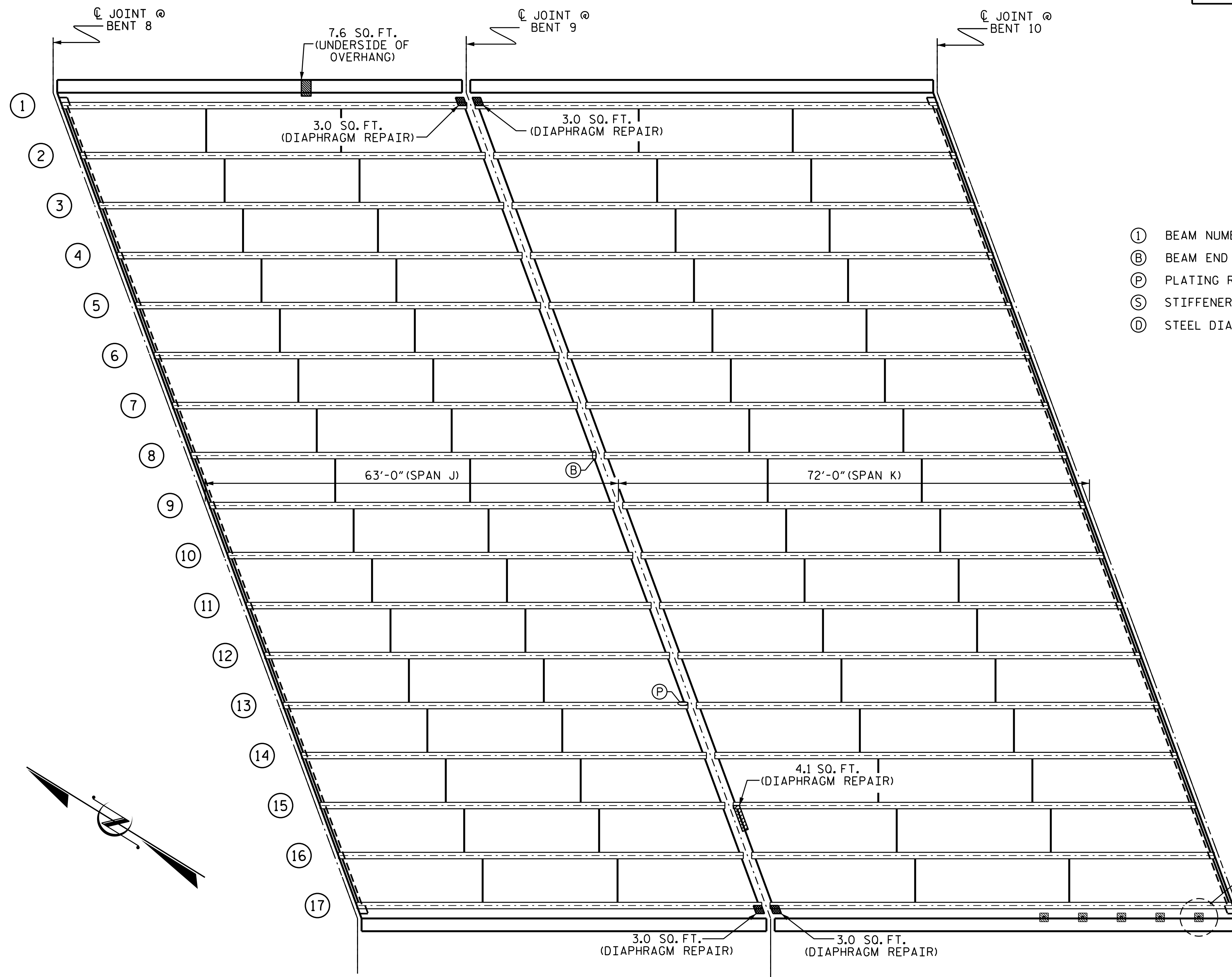
FOR BRIDGE JACKING DETAILS, SEE "JACKING DETAILS" SHEET.

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UNDERSIDE OF DECK REPAIRS

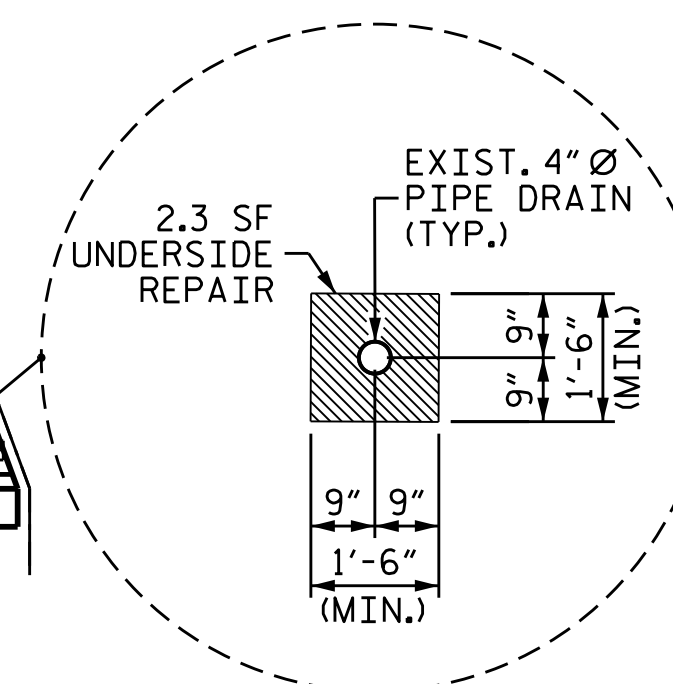
SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
UNDERSIDE OF DECK	0.0	0.0		
OVERHANG DIAPHRAGMS	12.0	4.0		
UNDERSIDE OF OVERHANG	19.1	6.4		
INTERIOR DIAPHRAGMS	4.1	1.4		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	0.0 LIN. FT.			
UNDERSIDE EPOXY COATING	0 SQ. FT.			

UNDERSIDE OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.



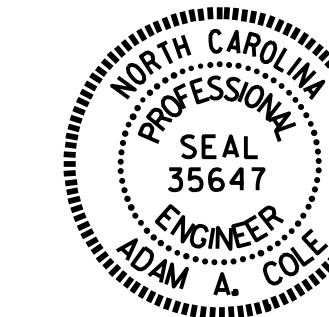
PLAN

- UNDERSIDE EPOXY COATING
- UNDERSIDE REPAIR
- DIAPHRAGM REPAIR
- EPOXY RESIN INJECTION (ERI)



DETAIL "A"
4" Ø DECK DRAIN
(SPANS K - 5 IN SPAN)
(11.5 SQ. FT. TOTAL
UNDERSIDE REPAIR)

DocuSigned by:
02EE98FAB074C3



8/23/2021

PROJ. NO. I-5746C
MECKLENBURG COUNTY
STATION: 590332

SHEET 5 OF 11

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
DECK UNDERSIDE REPAIR
SPAN J & K

DRAWN BY : REZA KOUCHEKI DATE : 06/2021
CHECKED BY : H. A. LOCKLEAR DATE : 06/2021

23-AUG-2021 12:02
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aacole

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SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			510-21
2			4			274

AS-BUILT REPAIR QUANTITY TABLE

UNDERSIDE OF DECK REPAIRS

SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
UNDERSIDE OF DECK	0.0	0.0		
OVERHANG DIAPHRAGMS	0.0	0.0		
UNDERSIDE OF OVERHANG	0.0	0.0		
INTERIOR DIAPHRAGMS	0.0	0.0		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	0.0 LIN. FT.			
UNDERSIDE EPOXY COATING	0 SQ. FT.			

UNDERSIDE OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

NOTES

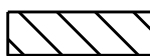


FOR BEAM REPAIR DETAILS, SEE "BEAM SECTION REPAIR DETAILS" SHEET.

FOR BEAM PLATING REPAIR, SEE "BEAM PLATING REPAIR DETAILS" SHEET.

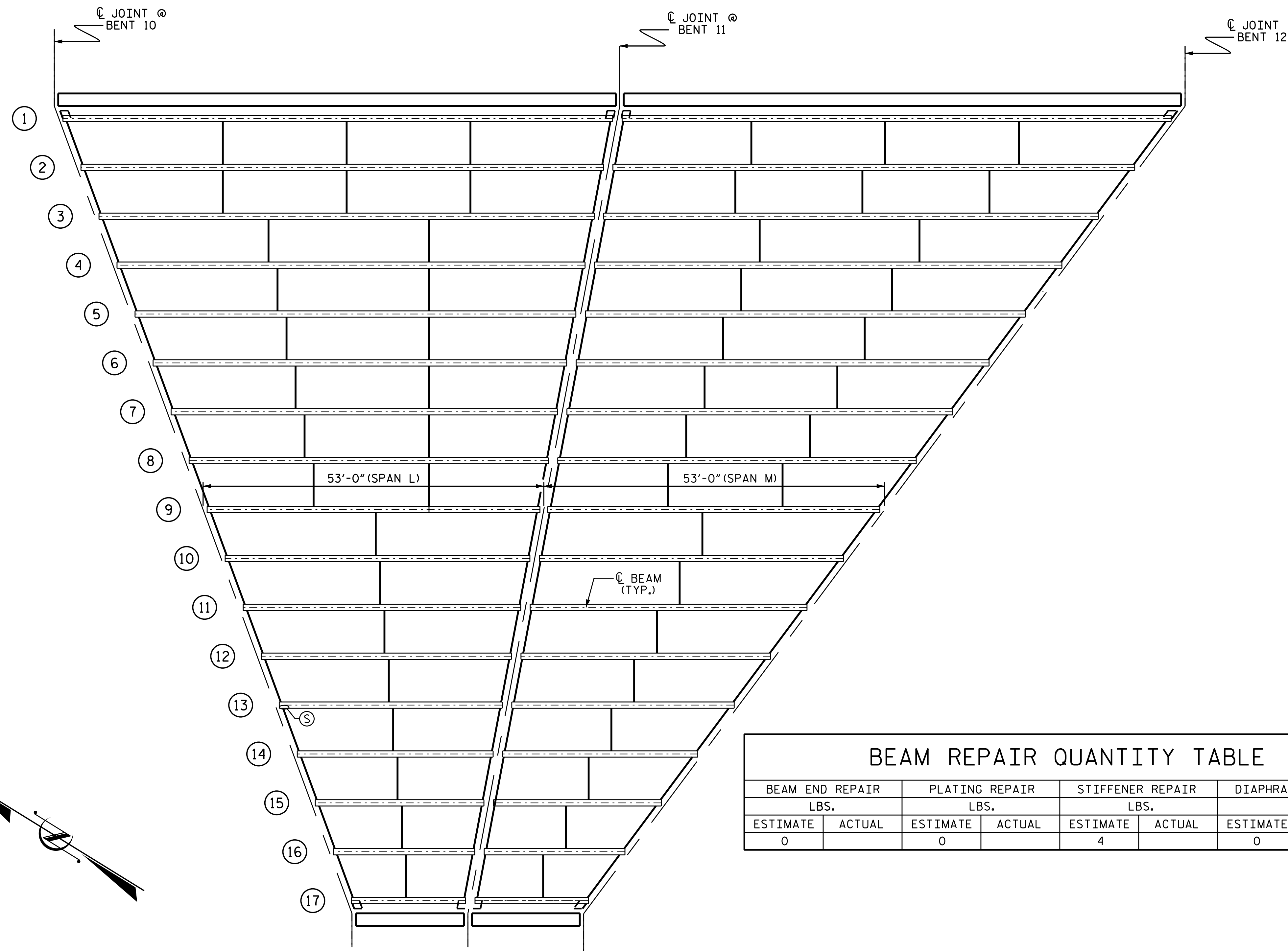
FOR BRIDGE JACKING DETAILS, SEE "JACKING DETAILS" SHEET.

FOR UNDERSIDE OF DECK AND OVERHANG REPAIRS, SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.

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-  UNDERSIDE EPOXY COATING
-  UNDERSIDE REPAIR
-  DIAPHRAGM REPAIR

- ① BEAM NUMBER
- ⓑ BEAM END REPAIR
- ⓐ PLATING REPAIR
- Ⓢ STIFFENER REPAIR
- Ⓣ STEEL DIAPHRAGM REPAIR



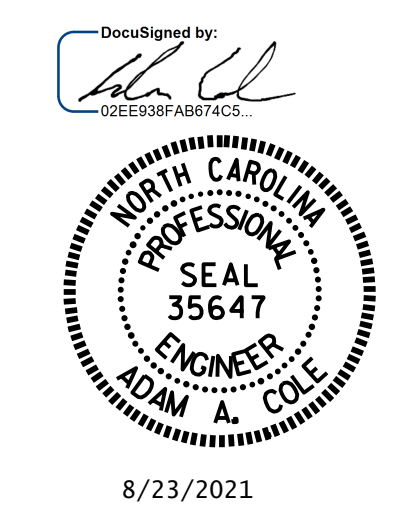
BEAM END REPAIR		PLATING REPAIR		STIFFENER REPAIR		DIAPHRAGM REPAIR	
LBS.		LBS.		LBS.		LBS.	
ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
0		0		4		0	

SPAN	BEAM	LOCATION	DIM "A"	DIM "B"	DIM "C"	DIM "D"
L	13	BENT 10	4"	-	-	-

PLAN

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590332

SHEET 6 OF 11



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
DECK UNDERSIDE REPAIR
SPAN L & M

DRAWN BY : R.L.PUTEK/E.BAYISSA DATE : 07/2021
 CHECKED BY : H.A.LOCKLEAR DATE : 07/2021

NO.	REVISIONS			SHEET NO.
	BY:	DATE:	NO.	
1			3	S10-22 TOTAL SHEETS 274
2			4	

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

UNDERSIDE OF DECK REPAIRS				
SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
UNDERSIDE OF DECK	0.0	0.0		
OVERHANG DIAPHRAGMS	3.0	1.0		
UNDERSIDE OF OVERHANG	0.0	0.0		
INTERIOR DIAPHRAGMS	0.0	0.0		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	0.0 LIN. FT.			
UNDERSIDE EPOXY COATING	0 SQ. FT.			

UNDERSIDE OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

NOTES

FOR BEAM REPAIR DETAILS, SEE "BEAM SECTION REPAIR DETAILS" SHEET.

FOR BEAM PLATING REPAIR, SEE "BEAM PLATING REPAIR DETAILS" SHEET.

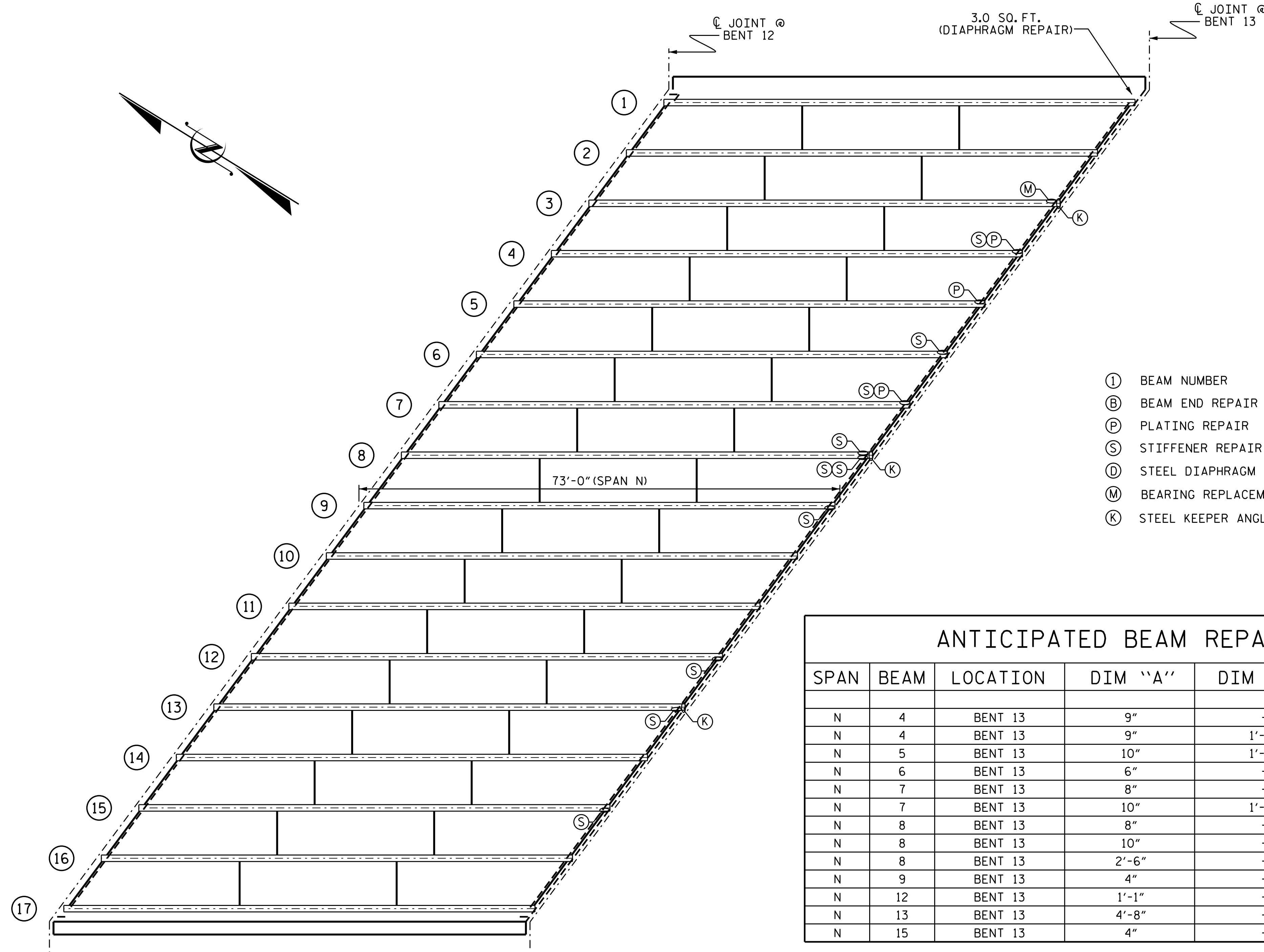
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FOR BEARING REPLACEMENT, SEE "BEARING REPLACEMENT DETAILS" SHEET.

FOR STEEL KEEPER ANGLE ASSEMBLY, SEE SPECIAL PROVISIONS.

FOR STEEL KEEPER ANGLE ASSEMBLY DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.



- ① BEAM NUMBER
- Ⓟ BEAM END REPAIR
- Ⓟ PLATING REPAIR
- Ⓢ STIFFENER REPAIR
- Ⓧ STEEL DIAPHRAGM REPAIR
- Ⓜ BEARING REPLACEMENT
- Ⓚ STEEL KEEPER ANGLE ASSEMBLY

ANTICIPATED BEAM REPAIR LOCATIONS						
SPAN	BEAM	LOCATION	DIM "A"	DIM "B"	DIM "C"	DIM "D"
N	4	BENT 13	9"	-	-	-
N	4	BENT 13	9"	1'-0"	-	-
N	5	BENT 13	10"	1'-0"	-	-
N	6	BENT 13	6"	-	-	-
N	7	BENT 13	8"	-	-	-
N	7	BENT 13	10"	1'-0"	-	-
N	8	BENT 13	8"	-	-	-
N	8	BENT 13	10"	-	-	-
N	8	BENT 13	2'-6"	-	-	-
N	9	BENT 13	4"	-	-	-
N	12	BENT 13	1'-1"	-	-	-
N	13	BENT 13	4'-8"	-	-	-
N	15	BENT 13	4"	-	-	-

PLAN

BEAM REPAIR QUANTITY TABLE

BEAM END REPAIR		PLATING REPAIR		STIFFENER REPAIR		DIAPHRAGM REPAIR		BEARING REPLACEMENT		STEEL KEEPER ANGLE ASSEMBLY	
LBS.		LBS.		LBS.		LBS.		EA.		EA.	
ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
0		122		115		0		1		3	

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 STATION: 590332

SHEET 7 OF 11

DocuSigned by:
 02EE98FBAB074C3



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK UNDERSIDE REPAIR
 SPAN N

DRAWN BY : REZA KOUCHEKI DATE : 06/2021
 CHECKED BY : H. A. LOCKLEAR DATE : 06/2021

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			10-23
2			4			274

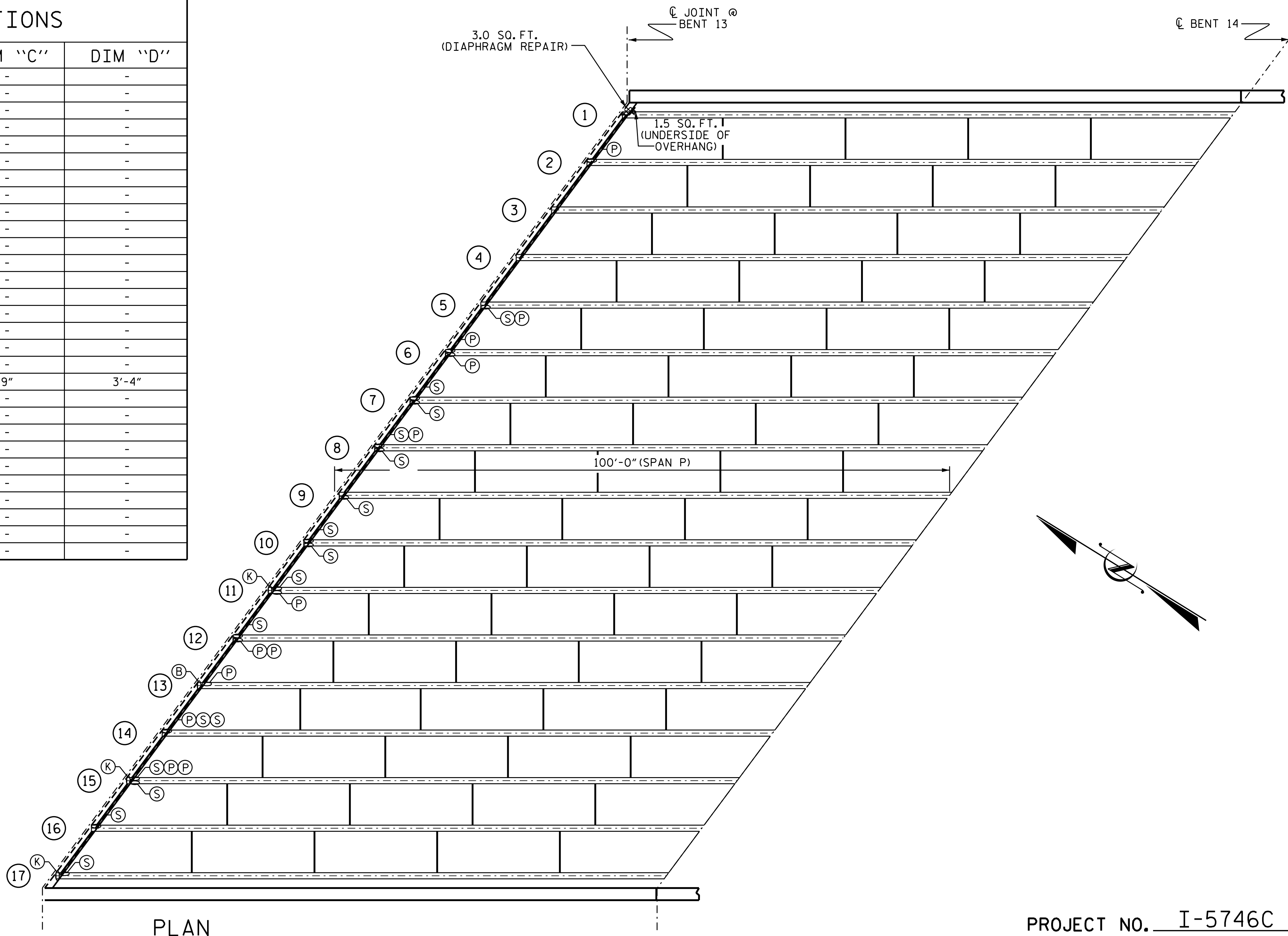
ANTICIPATED BEAM REPAIR LOCATIONS

SPAN	BEAM	LOCATION	DIM "A"	DIM "B"	DIM "C"	DIM "D"
P	2	BENT 13	1'-2"	1'-10"	-	-
P	5	BENT 13	1'-10"	-	-	-
P	5	BENT 13	1'-2"	1'-10"	-	-
P	6	BENT 13	10"	1'-2"	-	-
P	6	BENT 13	10"	1'-10"	-	-
P	7	BENT 13	10"	-	-	-
P	7	BENT 13	3'-3"	-	-	-
P	8	BENT 13	3'-3"	-	-	-
P	8	BENT 13	3'-3"	-	-	-
P	8	BENT 13	1'-2"	1'-10"	-	-
P	9	BENT 13	4"	-	-	-
P	10	BENT 13	3'-3"	-	-	-
P	10	BENT 13	3'-3"	-	-	-
P	11	BENT 13	1'-2"	1'-10"	-	-
P	11	BENT 13	8"	-	-	-
P	12	BENT 13	8"	-	-	-
P	12	BENT 13	1'-10"	1'-2"	-	-
P	12	BENT 13	8"	3'-7"	-	-
P	13	BENT 13	4'-8"	1'-2"	9"	3'-4"
P	13	BENT 13	2"	3'-0"	-	-
P	14	BENT 13	1'-4"	2'-3"	-	-
P	14	BENT 13	3'-3"	-	-	-
P	14	BENT 13	1'-11"	-	-	-
P	15	BENT 13	7"	1'-1"	-	-
P	15	BENT 13	7"	3'-0"	-	-
P	15	BENT 13	3'-3"	-	-	-
P	15	BENT 13	3'-3"	-	-	-
P	16	BENT 13	1'-0"	-	-	-
P	17	BENT 13	6"	-	-	-

NOTES

- FOR BEAM REPAIR DETAILS, SEE "BEAM SECTION REPAIR DETAILS" SHEET.
- FOR BEAM PLATING REPAIR, SEE "BEAM PLATING REPAIR DETAILS" SHEETS.
- FOR BRIDGE JACKING DETAILS, SEE "JACKING DETAILS" SHEET.
- THE LOCATIONS AND DIMENSIONS OF THE AREAS FOR REPAIR ARE BASED ON THE BEST INFORMATION AVAILABLE. THE CONTRACTOR, IN CONJUNCTION WITH THE ENGINEER, SHALL VERIFY THE LOCATION AND EXTENT OF REPAIR AREAS PRIOR TO STEEL FABRICATION.
- FOR STEEL KEEPER ANGLE ASSEMBLY, SEE SPECIAL PROVISIONS.
- FOR STEEL KEEPER ANGLE ASSEMBLY DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

- ① BEAM NUMBER
- Ⓑ BEAM END REPAIR
- Ⓟ PLATING REPAIR
- Ⓢ STIFFENER REPAIR
- Ⓣ STEEL DIAPHRAGM REPAIR
- Ⓚ STEEL KEEPER ANGLE ASSEMBLY



PLAN

BEAM REPAIR QUANTITY TABLE

BEAM END REPAIR		PLATING REPAIR		STIFFENER REPAIR		DIAPHRAGM REPAIR		STEEL KEEPER ANGLE ASSEMBLY	
LBS.		LBS.		LBS.		LBS.		EA.	
ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
426		665		400		0		3	

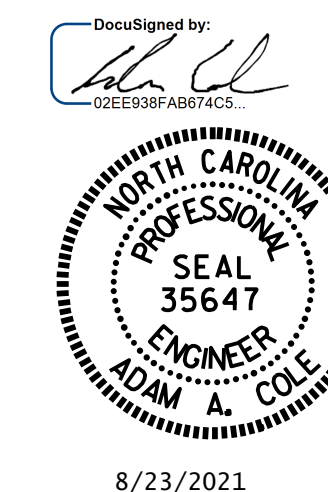
- UNDERSIDE EPOXY COATING
- UNDERSIDE REPAIR
- DIAPHRAGM REPAIR
- EPOXY RESIN INJECTION (ERI)

UNDERSIDE OF DECK REPAIRS				
SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SO. FT.	VOLUME CU. FT.	AREA SO. FT.	VOLUME CU. FT.
UNDERSIDE OF DECK	0.0	0.0		
OVERHANG DIAPHRAGMS	3.0	1.0		
UNDERSIDE OF OVERHANG	1.5	0.5		
INTERIOR DIAPHRAGMS	0.0	0.0		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	0.0 LIN. FT.			
UNDERSIDE EPOXY COATING	0 SQ. FT.			

UNDERSIDE OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 STATION: 590332

SHEET 8 OF 11



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK UNDERSIDE REPAIR SPAN P

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			274
2			4			

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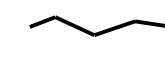
DRAWN BY : REZA KOUCHEKI DATE : 07/2021
 CHECKED BY : H. A. LOCKLEAR DATE : 07/2021

UNDERSIDE OF DECK REPAIRS				
SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
UNDERSIDE OF DECK	2.2	0.7		
OVERHANG DIAPHRAGMS	0.0	0.0		
UNDERSIDE OF OVERHANG	0.0	0.0		
INTERIOR DIAPHRAGMS	0.0	0.0		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	0.0 LIN. FT.			
UNDERSIDE EPOXY COATING	0 SQ. FT.			

UNDERSIDE OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

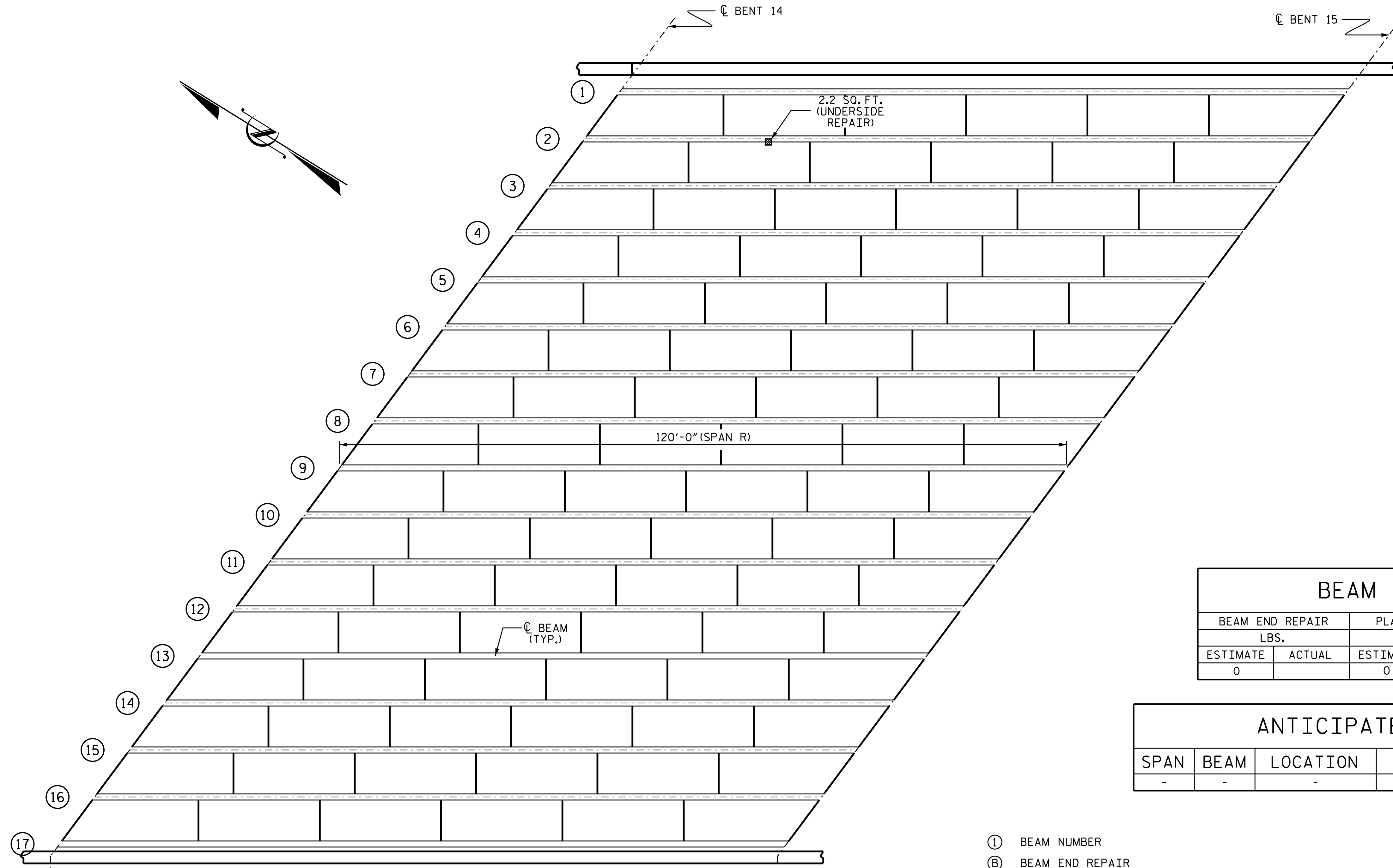
NOTES

- FOR BEAM REPAIR DETAILS, SEE "BEAM SECTION REPAIR DETAILS" SHEET.
- FOR BEAM PLATING REPAIR, SEE "BEAM PLATING REPAIR DETAILS" SHEET.
- FOR BRIDGE JACKING DETAILS, SEE "JACKING DETAILS" SHEET.
- THE LOCATIONS AND DIMENSIONS OF THE AREAS FOR REPAIR ARE BASED ON THE BEST INFORMATION AVAILABLE. THE CONTRACTOR, IN CONJUNCTION WITH THE ENGINEER, SHALL VERIFY THE LOCATION AND EXTENT OF REPAIR AREAS PRIOR TO STEEL FABRICATION.

-  UNDERSIDE REPAIR
-  DIAPHRAGM REPAIR
-  EPOXY RESIN INJECTION (ERI)

BEAM REPAIR QUANTITY TABLE							
BEAM END REPAIR		PLATING REPAIR		STIFFENER REPAIR		DIAPHRAGM REPAIR	
LBS.		LBS.		LBS.		LBS.	
ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
0		0		0		0	

ANTICIPATED BEAM REPAIR LOCATIONS						
SPAN	BEAM	LOCATION	DIM "A"	DIM "B"	DIM "C"	DIM "D"
-	-	-	-	-	-	-

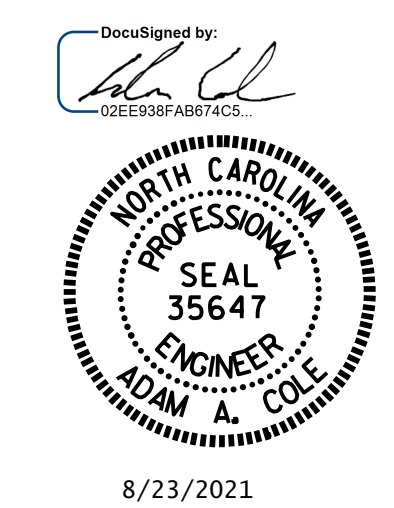


- ① BEAM NUMBER
- ⓑ BEAM END REPAIR
- ⓐ PLATING REPAIR
- Ⓢ STIFFENER REPAIR
- Ⓣ STEEL DIAPHRAGM REPAIR

PLAN

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 STATION: 590332

SHEET 9 OF 11



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
DECK UNDERSIDE REPAIR
SPAN R

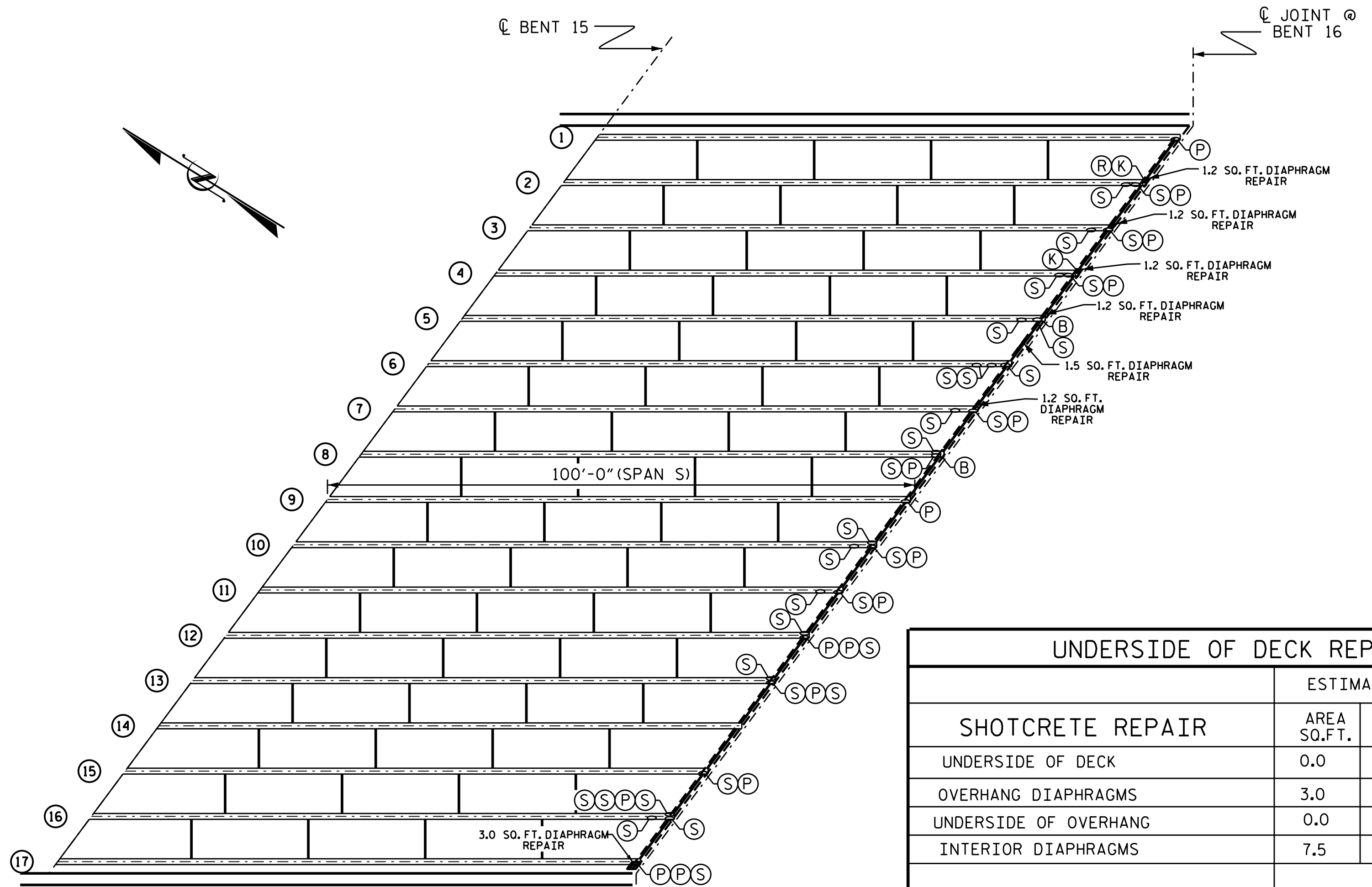
DRAWN BY : REZA KOUCHEKI DATE : 07/2021
 CHECKED BY : H. A. LOCKLEAR DATE : 07/2021

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			10-25
2			4			274

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ANTICIPATED BEAM REPAIR LOCATIONS

SPAN	BEAM	LOCATION	DIM "A"	DIM "B"	DIM "C"	DIM "D"
S	1	BENT 16	2'-5"	1'-4"	-	-
S	2	BENT 16	7"	5"	8"	9"
S	2	BENT 16	3'-3"	-	-	-
S	2	BENT 16	6"	-	-	-
S	3	BENT 16	2'-5"	1'-0"	-	-
S	3	BENT 16	9"	-	-	-
S	3	BENT 16	6"	-	-	-
S	4	BENT 16	1'-9"	11"	-	-
S	4	BENT 16	3'-3"	-	-	-
S	4	BENT 16	6"	-	-	-
S	5	BENT 16	9"	3'-9"	-	-
S	5	BENT 16	9"	-	-	-
S	5	BENT 16	9"	-	-	-
S	6	BENT 16	3'-3"	-	-	-
S	6	BENT 16	6"	-	-	-
S	6	BENT 16	3"	-	-	-
S	7	BENT 16	2'-0"	10"	-	-
S	7	BENT 16	3'-3"	-	-	-
S	7	BENT 16	10"	-	-	-
S	8	BENT 16	3'-3"	-	-	-
S	8	BENT 16	7"	3'-6"	-	-
S	8	BENT 16	3'-3"	-	-	-
S	8	BENT 16	1'-8"	10"	-	-
S	9	BENT 16	1'-7"	10"	-	-
S	10	BENT 16	2'-3"	1'-0"	-	-
S	10	BENT 16	3'-3"	-	-	-
S	10	BENT 16	8"	-	-	-
S	11	BENT 16	3'-3"	-	-	-
S	11	BENT 16	6"	-	-	-
S	11	BENT 16	1'-8"	10"	-	-
S	12	BENT 16	3'-3"	-	-	-
S	12	BENT 16	1'-8"	11"	-	-
S	12	BENT 16	8"	2'-0"	-	-
S	12	BENT 16	3'-3"	-	-	-
S	13	BENT 16	3'-3"	-	-	-
S	13	BENT 16	1'-7"	10"	-	-
S	13	BENT 16	3'-3"	-	-	-
S	13	BENT 16	9"	-	-	-
S	15	BENT 16	1'-7"	10"	-	-
S	15	BENT 16	3'-3"	-	-	-
S	16	BENT 16	2'-3"	1'-2"	-	-
S	16	BENT 16	3"	-	-	-
S	16	BENT 16	4"	-	-	-
S	16	BENT 16	3'-3"	-	-	-
S	16	BENT 16	3'-3"	-	-	-
S	16	BENT 16	6"	-	-	-
S	17	BENT 16	1'-8"	11"	-	-
S	17	BENT 16	7"	-	-	-
S	17	BENT 16	11"	1'-0"	-	-



PLAN

- ① BEAM NUMBER
- ⓑ BEAM END REPAIR
- Ⓟ PLATING REPAIR
- Ⓢ STIFFENER REPAIR
- Ⓣ STEEL DIAPHRAGM REPAIR
- Ⓡ BEARING PLATE REPOSITIONING
- Ⓚ STEEL KEEPER ANGLE ASSEMBLY

NOTES

FOR BEAM REPAIR DETAILS, SEE "BEAM SECTION REPAIR DETAILS" SHEET.
 FOR BEAM PLATING REPAIR, SEE "BEAM PLATING REPAIR DETAILS" SHEET.
 FOR BRIDGE JACKING DETAILS, SEE "JACKING DETAILS" SHEET.
 THE LOCATIONS AND DIMENSIONS OF THE AREAS FOR REPAIR ARE BASED ON THE BEST INFORMATION AVAILABLE. THE CONTRACTOR, IN CONJUNCTION WITH THE ENGINEER, SHALL VERIFY THE LOCATION AND EXTENT OF REPAIR AREAS PRIOR TO STEEL FABRICATION. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.
 FOR BEARING PLATE REPOSITIONING, SEE SPECIAL PROVISIONS.
 FOR STEEL KEEPER ANGLE ASSEMBLY, SEE SPECIAL PROVISIONS.
 FOR STEEL KEEPER ANGLE ASSEMBLY DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

UNDERSIDE OF DECK REPAIR				
	ESTIMATE		ACTUAL	
	AREA SQ.FT.	AREA SQ.FT.	AREA SQ.FT.	AREA SQ.FT.
SHOTCRETE REPAIR				
UNDERSIDE OF DECK	0.0	0.0		
OVERHANG DIAPHRAGMS	3.0	1.0		
UNDERSIDE OF OVERHANG	0.0	0.0		
INTERIOR DIAPHRAGMS	7.5	2.5		
			ESTIMATE	ACTUAL
UNDERSIDE EPOXY RESIN INJECTION	0.0	0.0	0.0	0.0
UNDERSIDE EPOXY COATING	0	0	0	0

UNDERSIDE OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

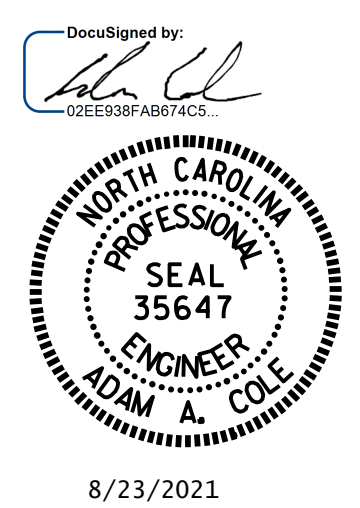
- ▨ UNDERSIDE EPOXY COATING
- UNDERSIDE REPAIR
- ▩ DIAPHRAGM REPAIR
- ~ EPOXY RESIN INJECTION (ERI)

BEAM REPAIR QUANTITY TABLE

BEAM END REPAIR		PLATING REPAIR		STIFFENER REPAIR		DIAPHRAGM REPAIR		BEARING PLATE REPOSITIONING		STEEL KEEPER ANGLE ASSEMBLY	
LBS.		LBS.		LBS.		LBS.		EA.		EA.	
ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
521		1184		726		0		1		2	

PROJECT NO. I-5746C
 MECKLENBURG COUNTY
 BRIDGE NO. 590332

SHEET 10 OF 11



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
DECK UNDERSIDE REPAIR
 SPAN S

DRAWN BY : REZA KOUCHEKI DATE : 07/2021
 CHECKED BY : H. A. LOCKLEAR DATE : 07/2021

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			10-26
2			4			274

ANTICIPATED BEAM REPAIR LOCATIONS

SPAN	BEAM	LOCATION	DIM "A"	DIM "B"	DIM "C"	DIM "D"
T	1	BENT 16	9"	1'-3"	-	-
T	1	BENT 16	4'-8"	-	-	-
T	2	BENT 16	6"	9"	-	-
T	2	BENT 16	3'-3"	-	-	-
T	4	BENT 16	4"	-	-	-
T	6	BENT 16	6"	-	-	-
T	7	BENT 16	10"	-	-	-
T	8	BENT 16	7"	1'-9"	-	-
T	9	BENT 16	2"	-	-	-
T	10	BENT 16	3'-3"	-	-	-
T	10	BENT 16	10"	1'-0"	-	-
T	11	BENT 16	1'-8"	10"	-	-
T	11	BENT 16	8"	-	-	-
T	11	BENT 16	4"	-	-	-
T	12	BENT 16	8"	1'-4"	-	-
T	12	BENT 16	8"	-	-	-
T	12	BENT 16	8"	-	-	-
T	12	BENT 16	1'-8"	10"	-	-
T	13	BENT 16	2'-3"	1'-0"	-	-
T	13	BENT 16	3'-3"	-	-	-
T	13	BENT 16	10"	1'-6"	-	-
T	14	BENT 16	1'-9"	10"	-	-
T	14	BENT 16	5"	-	-	-
T	15	BENT 16	7"	-	-	-
T	15	BENT 16	10"	1'-4"	-	-
T	16	BENT 16	1'-7"	9"	-	-
T	16	BENT 16	3'-3"	-	-	-
T	17	BENT 16	7"	1'-4"	-	-
T	17	BENT 16	7"	-	-	-

AS-BUILT REPAIR QUANTITY TABLE

UNDERSIDE OF DECK REPAIRS

SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	
UNDERSIDE OF DECK	0.0	0.0		
OVERHANG DIAPHRAGMS	0.0	0.0		
UNDERSIDE OF OVERHANG	0.0	0.0		
INTERIOR DIAPHRAGMS	0.0	0.0		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	75.0	LIN. FT.		
UNDERSIDE EPOXY COATING	0	SQ. FT.		

UNDERSIDE OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

BEAM REPAIR QUANTITY TABLE

BEAM END REPAIR		PLATING REPAIR		STIFFENER REPAIR		DIAPHRAGM REPAIR		BEARING REPAIR		STEEL KEEPER ANGLE ASSEMBLY	
LBS.		LBS.		LBS.		LBS.		EA.		EA.	
ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
0		547		292		47		1		2	

BEAM REPAIR QUANTITY TABLE

BEAM END REPAIR		PLATING REPAIR		STIFFENER REPAIR		DIAPHRAGM REPAIR	
LBS.		LBS.		LBS.		LBS.	
ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
0		547		292		47	

NOTES

FOR BEAM REPAIR DETAILS, SEE "BEAM SECTION REPAIR DETAILS" SHEET.

FOR BEAM PLATING REPAIR, SEE "BEAM PLATING REPAIR DETAILS" SHEET.

FOR BRIDGE JACKING DETAILS, SEE "JACKING DETAILS" SHEET.

FOR UNDERSIDE OF DECK AND DIAPHRAGM REPAIRS, SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.

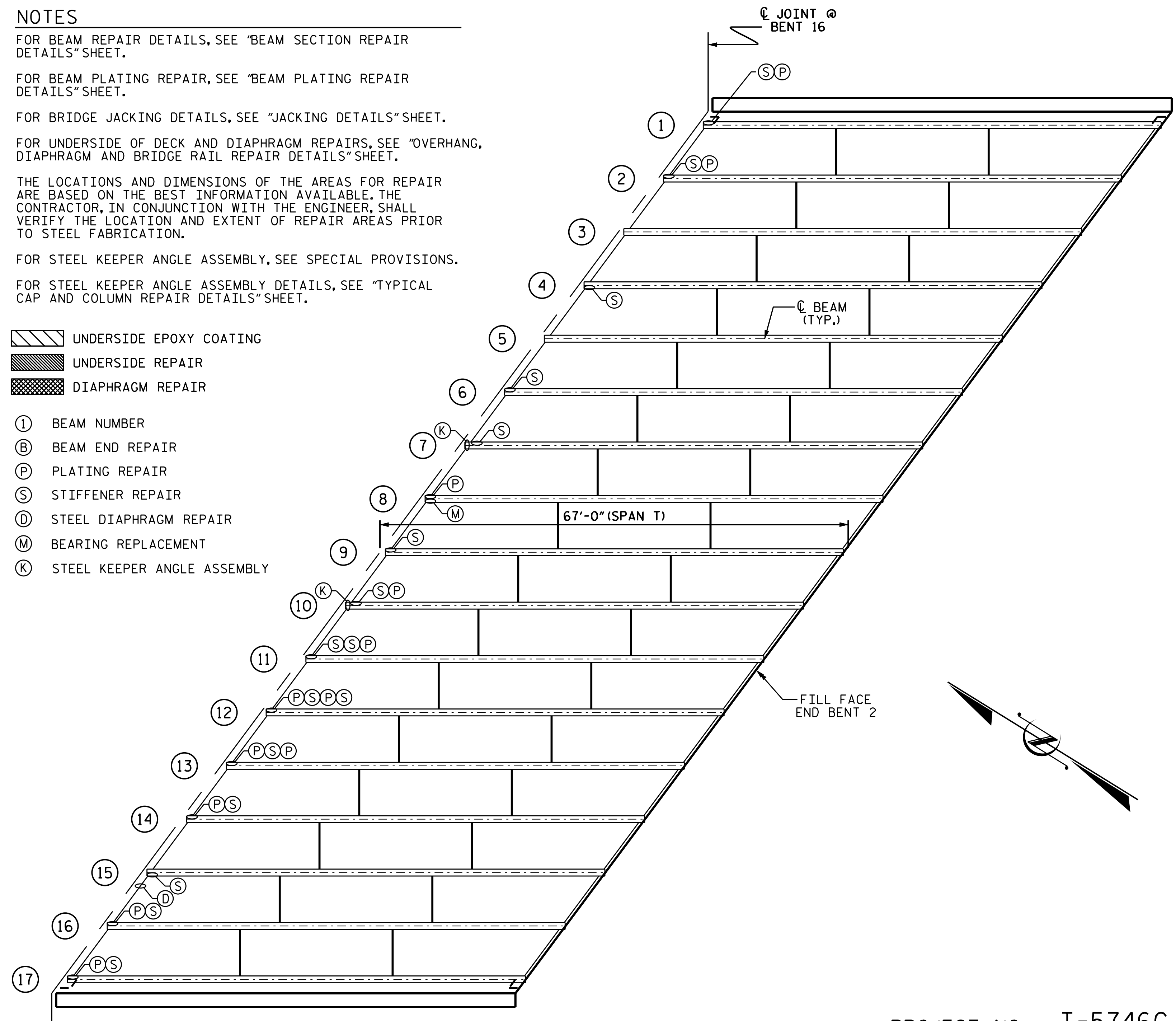
THE LOCATIONS AND DIMENSIONS OF THE AREAS FOR REPAIR ARE BASED ON THE BEST INFORMATION AVAILABLE. THE CONTRACTOR, IN CONJUNCTION WITH THE ENGINEER, SHALL VERIFY THE LOCATION AND EXTENT OF REPAIR AREAS PRIOR TO STEEL FABRICATION.

FOR STEEL KEEPER ANGLE ASSEMBLY, SEE SPECIAL PROVISIONS.

FOR STEEL KEEPER ANGLE ASSEMBLY DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

- UNDERSIDE EPOXY COATING
- UNDERSIDE REPAIR
- DIAPHRAGM REPAIR

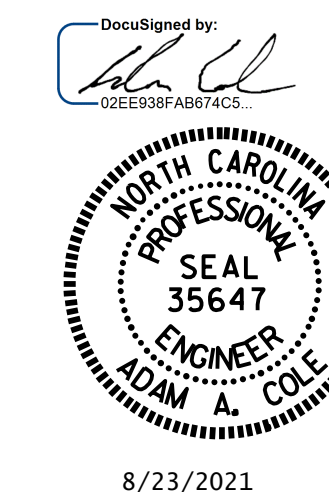
- ① BEAM NUMBER
- Ⓟ BEAM END REPAIR
- Ⓟ PLATING REPAIR
- Ⓢ STIFFENER REPAIR
- Ⓣ STEEL DIAPHRAGM REPAIR
- Ⓜ BEARING REPLACEMENT
- Ⓚ STEEL KEEPER ANGLE ASSEMBLY



PLAN

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 STATION: 590332

SHEET 11 OF 11



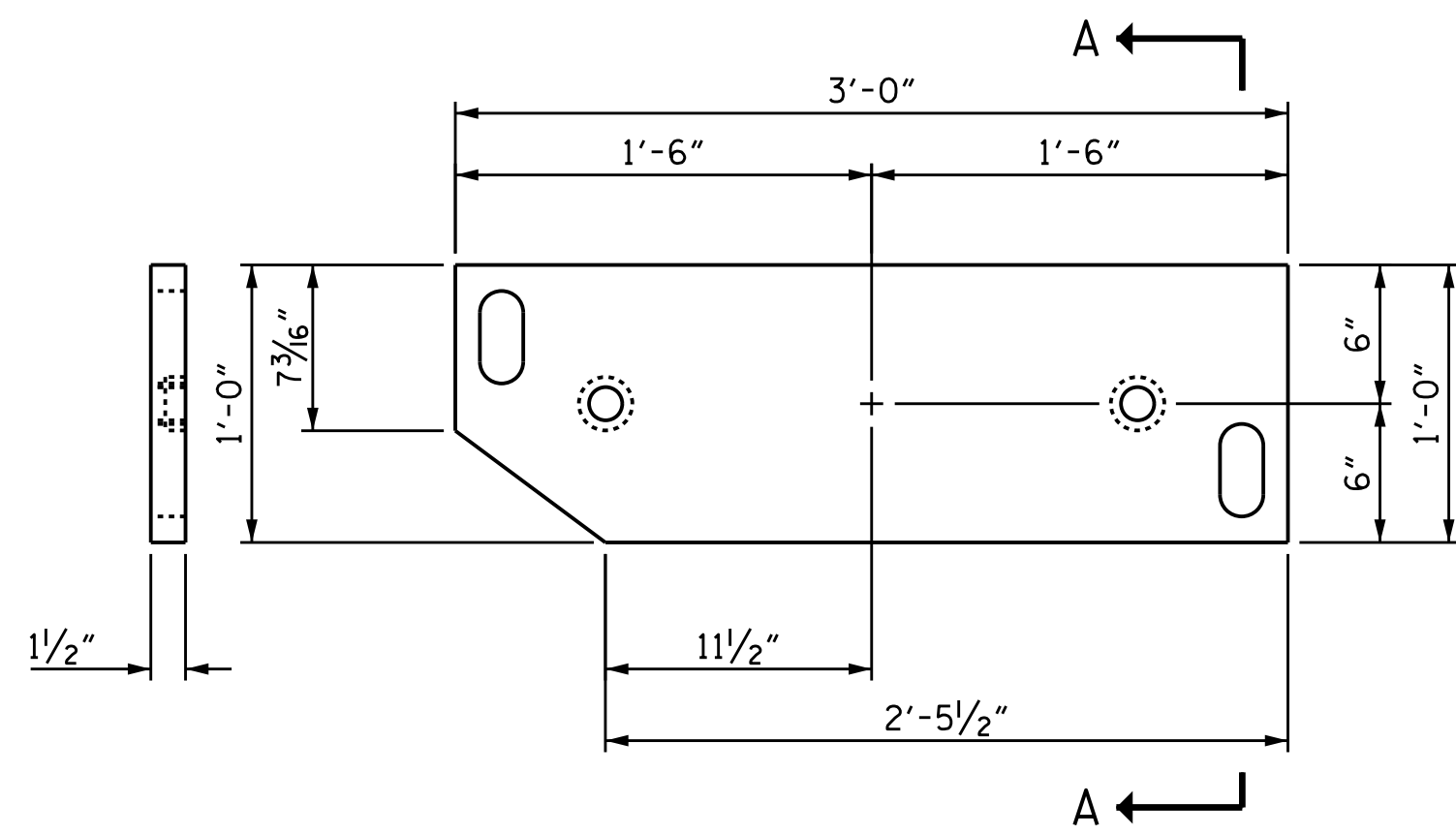
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK UNDERSIDE REPAIR SPAN T

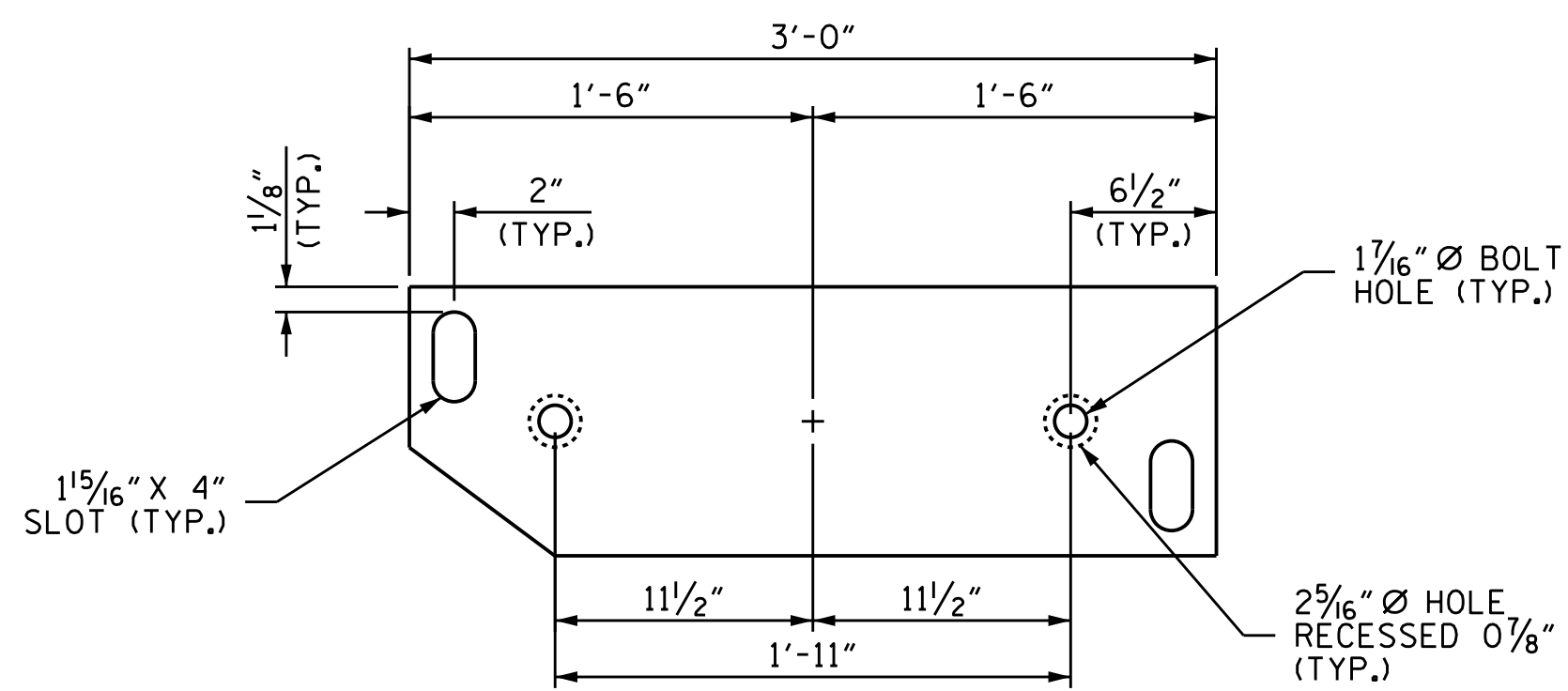
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S10-27
2			4			TOTAL SHEETS 274

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

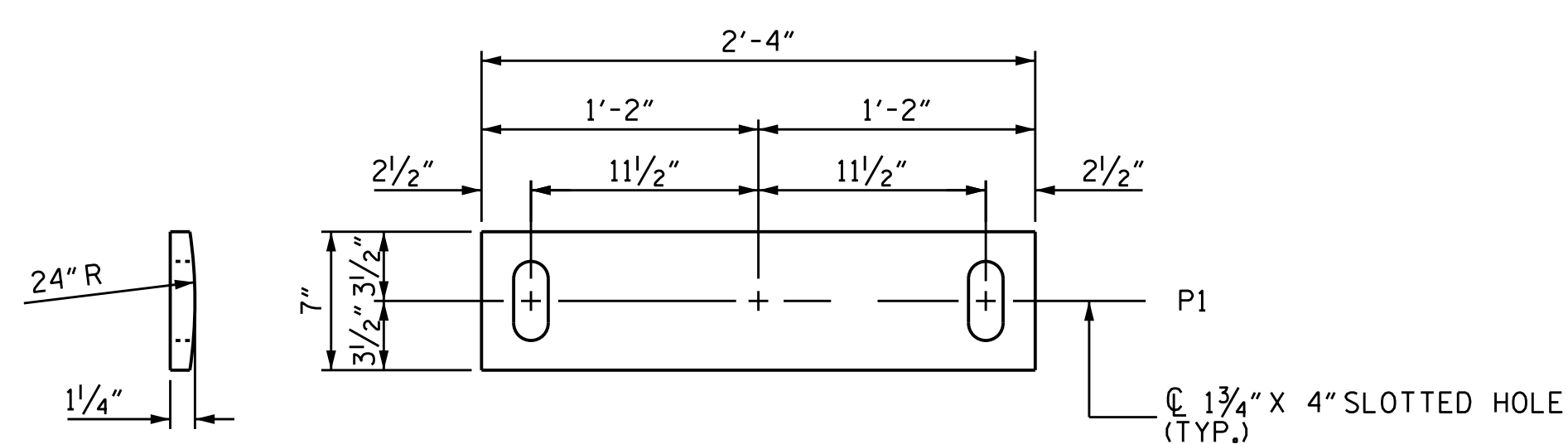
DRAWN BY : R.L. PUTEK/E. BAYISSA DATE : 06/2021
 CHECKED BY : H. A. LOCKLEAR DATE : 06/2021



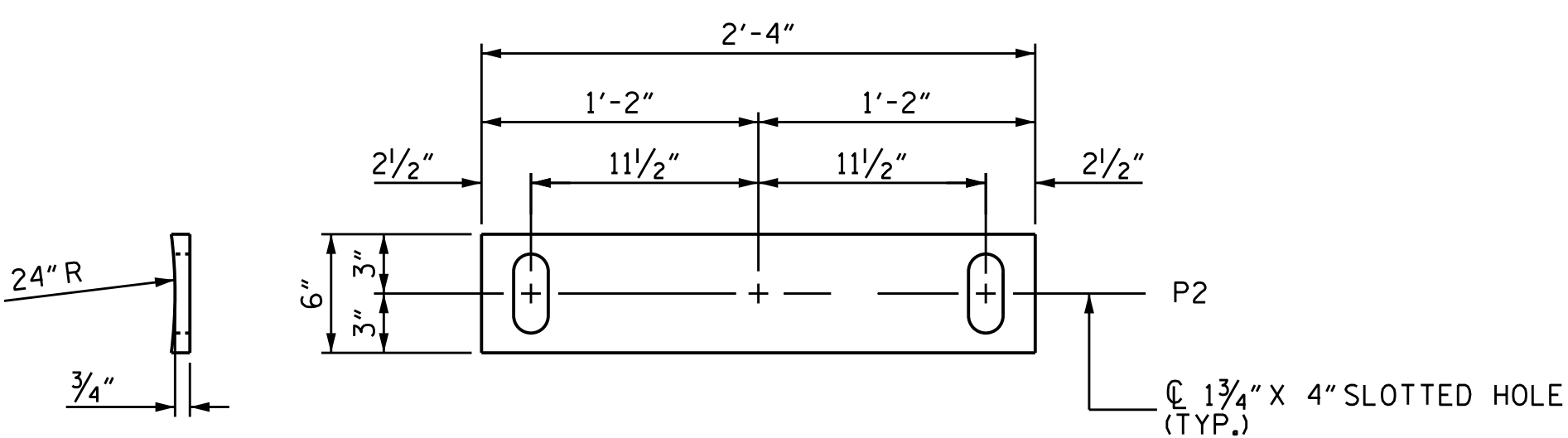
MASONRY PLATE



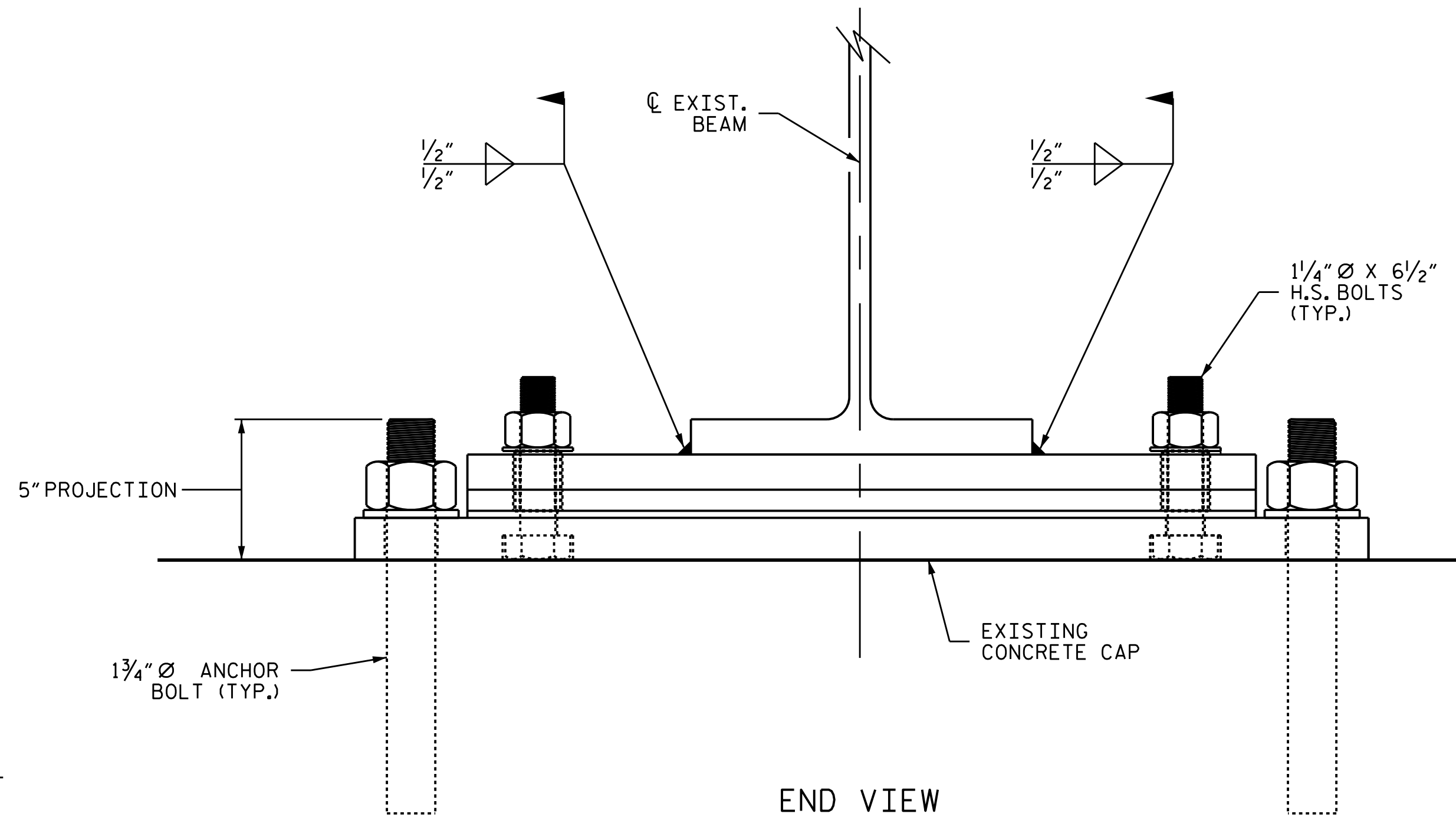
MASONRY PLATE PLAN



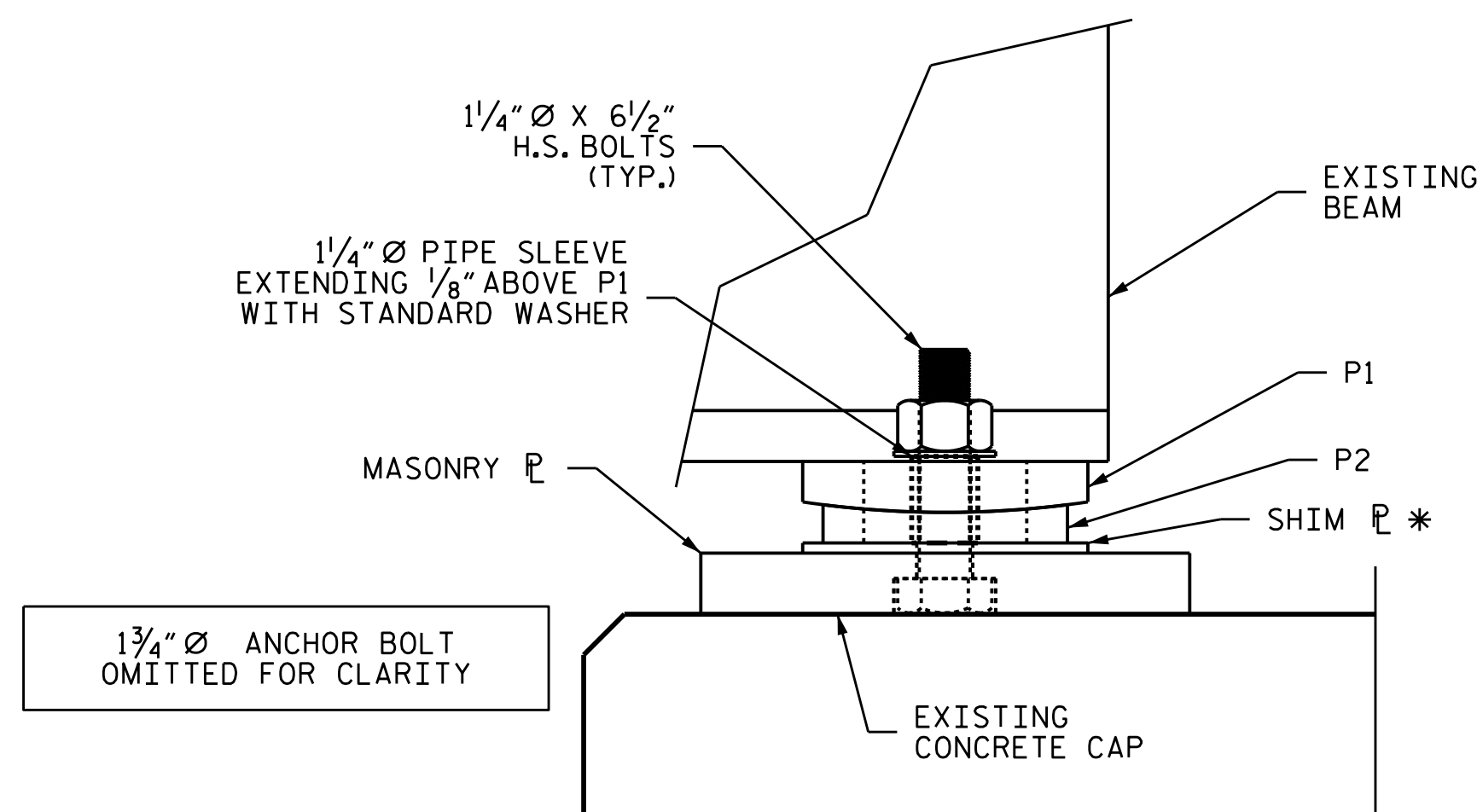
EXPANSION BEARING PLATE P1



EXPANSION BEARING PLATE P2



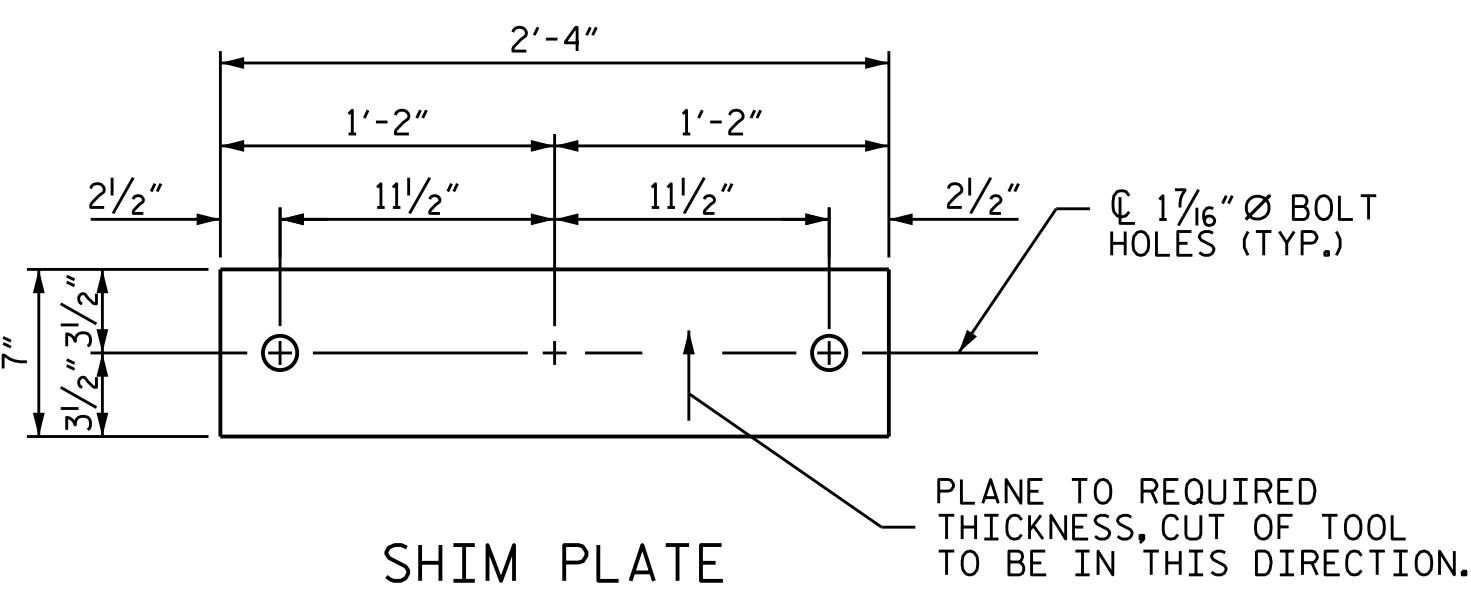
END VIEW



SECTION A-A

* CONTRACTOR TO FIELD VERIFY DIMENSIONS BETWEEN TOP OF BENT CAP AND BOTTOM FLANGE OF EXISTING BEAM PRIOR TO FABRICATION OF SHIM PLATE.

* THICKNESS DETERMINED BY FIELD VERIFICATION

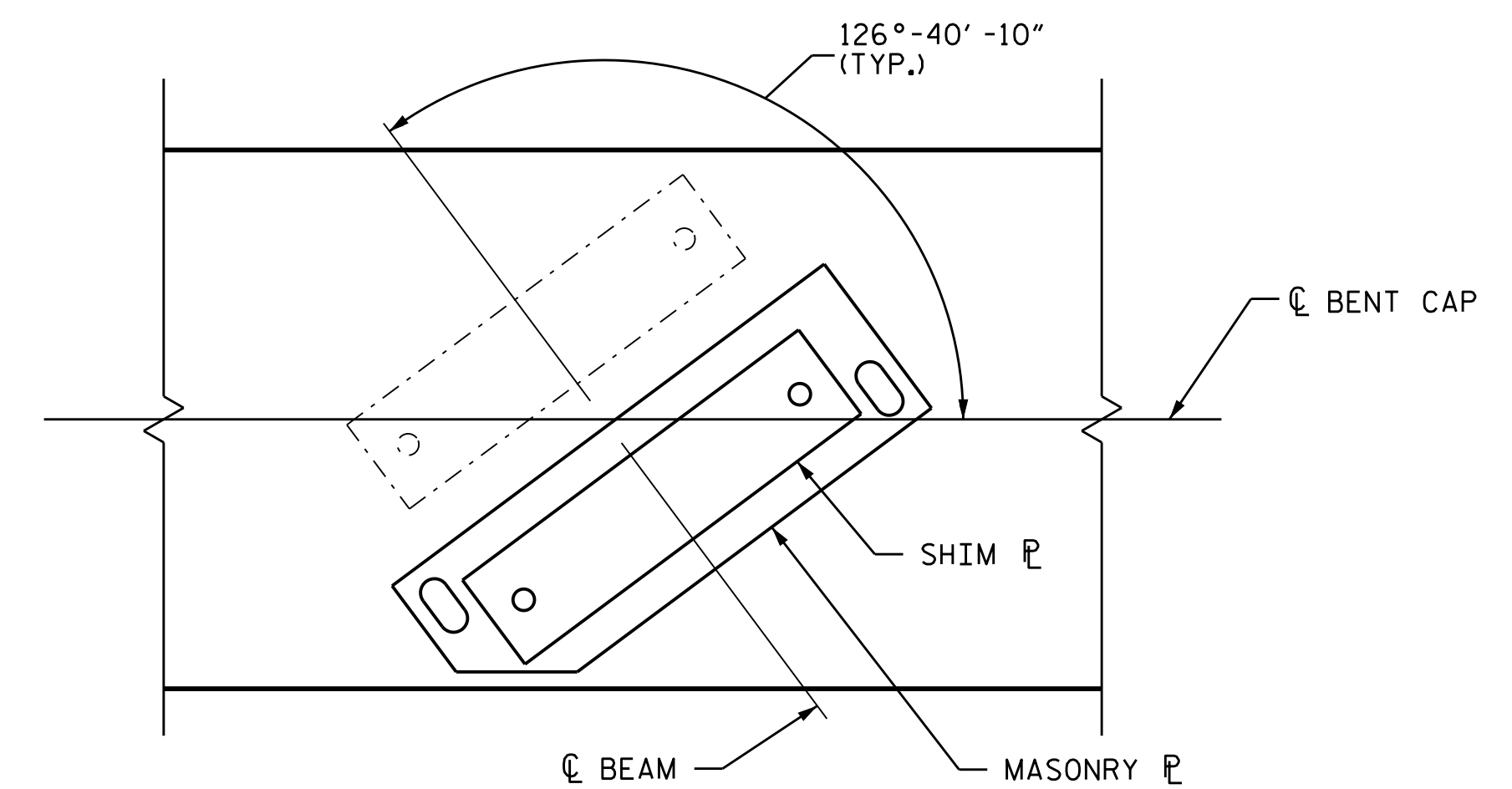


SHIM PLATE

PLANE TO REQUIRED THICKNESS, CUT OF TOOL TO BE IN THIS DIRECTION.

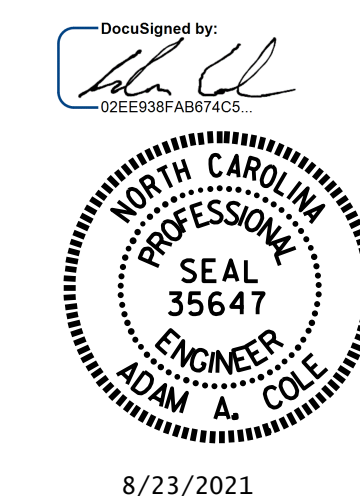
NOTES:

- THE EXISTING BEARINGS DETERMINED FOR REPLACEMENT SHALL BE REMOVED AND REPLACED WITH BEARINGS AS SHOWN.
- FOR BEARING REPLACEMENT, SEE SPECIAL PROVISIONS.
- THE CONTRACTOR SHALL CORE INTO THE EXISTING BENT CAP TO INSTALL 1 3/4" Ø ANCHOR BOLTS. BOLTS SHALL BE ADHESIVELY ANCHORED; SEE STANDARD SPECIFICATIONS. ADHESIVE FOR NEW ANCHOR BOLTS SHALL BE AN NCDOT-APPROVED PRODUCT. FIELD TESTING WILL NOT BE REQUIRED FOR INSTALLATION OF ADHESIVELY ANCHORED BOLTS.
- NUTS FOR ANCHOR BOLTS ARE TO BE TIGHTENED FINGER TIGHT AND THEN BACKED OFF 1/2 TURN. THE THREAD OF THE NUT AND BOLT SHALL BE BURRED WITH A SHARP TOOL.
- MASONRY PLATES, BEARING PLATES, SHIM PLATES, ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
- ANCHOR BOLTS SHALL MEET THE REQUIREMENTS OF ASTM A449. NUTS SHALL MEET THE REQUIREMENTS OF AASHTO M291-DH OR AASHTO M292-2H. WASHERS SHALL MEET THE REQUIREMENTS OF AASHTO M293. SHOP DRAWINGS ARE NOT REQUIRED FOR ANCHOR BOLTS, NUTS, AND WASHERS. SHOP INSPECTION IS REQUIRED.
- THE 1/4" Ø PIPE SLEEVE SHALL BE CUT FROM SCHEDULE 40 PVC PLASTIC PIPE. THE PVC PLASTIC PIPE SHALL MEET THE REQUIREMENTS OF ASTM D1785. THE PAYMENT FOR THE PIPE SLEEVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR BEARING REPLACEMENT.
- REMOVE GALVANIZING OR ANY OTHER COATING AT THE LOCATION OF FIELD WELDS AND PREPARE THE WELD AREAS AS PER ARTICLE 440-7 OF THE STANDARD SPECIFICATIONS.
- AFTER COMPLETION OF FIELD WELDING, THE WELDS AND AREAS WHERE GALVANIZING HAS BEEN REMOVED OR DAMAGED, SHALL BE REPAIRED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
- ALL WELDING SHALL BE IN ACCORDANCE WITH CURRENT APPLICABLE AWS AND NCDOT STANDARD SPECIFICATIONS.
- ALL WELDS WILL BE INSPECTED AND TESTED BY THE NCDOT MATERIALS AND TEST UNIT IN ACCORDANCE WITH THE CURRENT AWS BRIDGE WELDING CODE AND STANDARD SPECIFICATIONS.
- ALL SURFACES OF BEARING PLATES SHALL BE SMOOTH AND STRAIGHT.



MASONRY PLATE ORIENTATION

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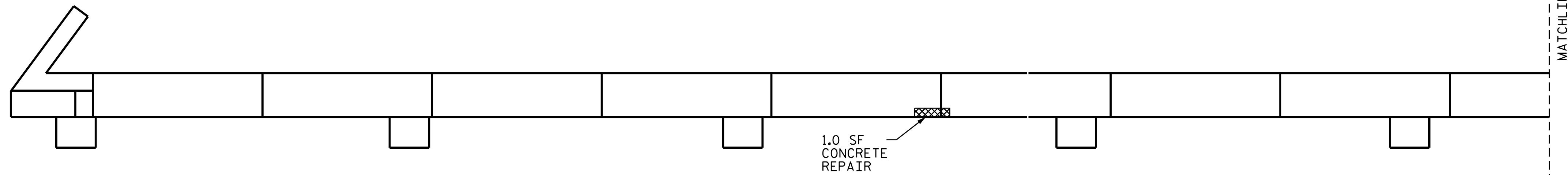


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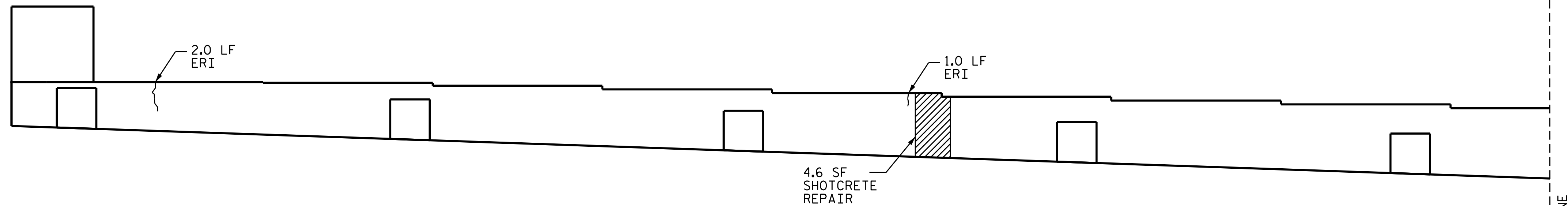
**BEARING REPLACEMENT
 DETAILS**

DRAWN BY : R.L. PUTEK DATE : .07/2021
 CHECKED BY : H. A. LOCKLEAR DATE : .07/2021

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PLAN



ELEVATION

AS-BUILT REPAIR QUANTITY TABLE				
END BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP & CURTAIN WALL	4.6	1.5		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	1.0	0.3		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP & CURTAIN WALL		3.0		
EPOXY COATING		SQ. FT.		SQ. FT.
CAP		132		

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 LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

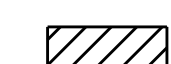


CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIR, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIR, SEE SPECIAL PROVISIONS.

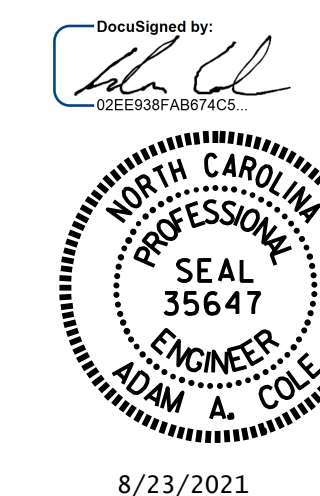
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

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. I-5746C
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8/23/2021

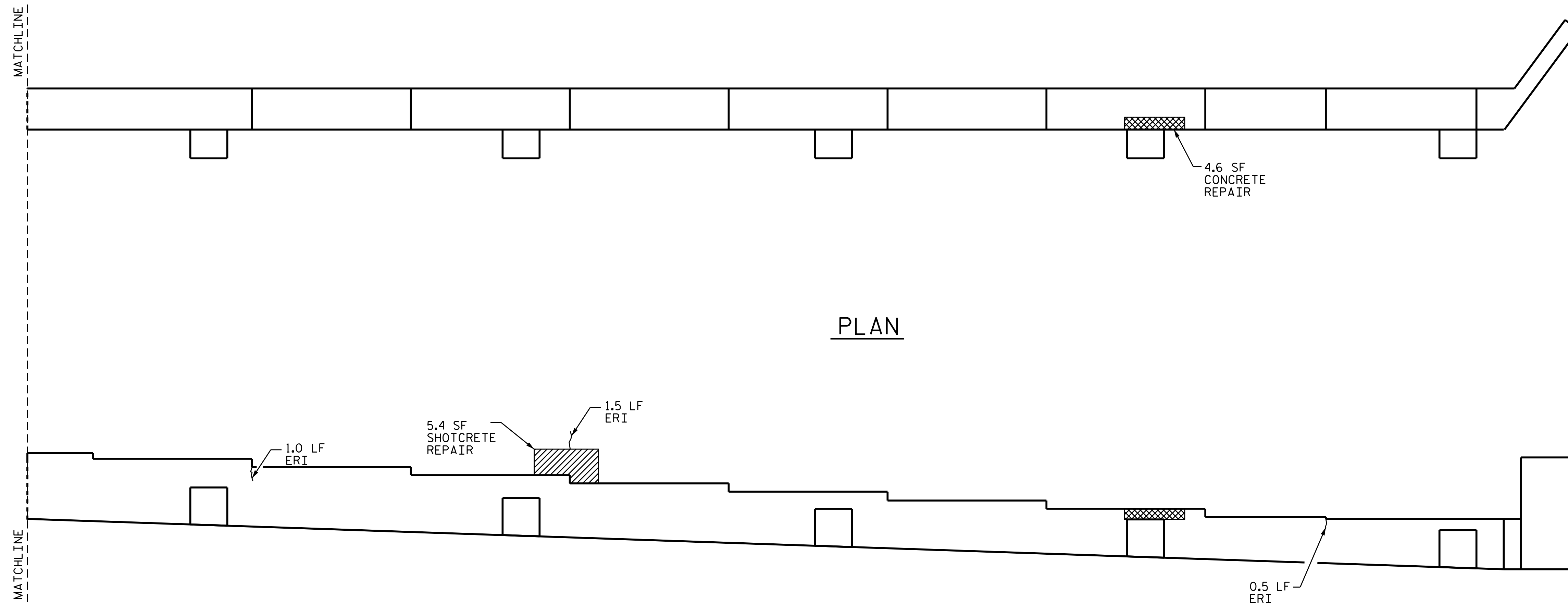
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END BENT 1

DRAWN BY : R.L. PUTEK DATE : 06/2021
 CHECKED BY : H. A. LOCKLEAR DATE : 06/2021

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ELEVATION

AS-BUILT REPAIR QUANTITY TABLE				
END BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP & CURTAIN WALL	5.4	1.8		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	4.6	1.5		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP & CURTAIN WALL		3.0		
EPOXY COATING		SQ. FT.		SQ. FT.
CAP		135		

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.

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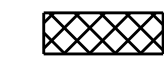

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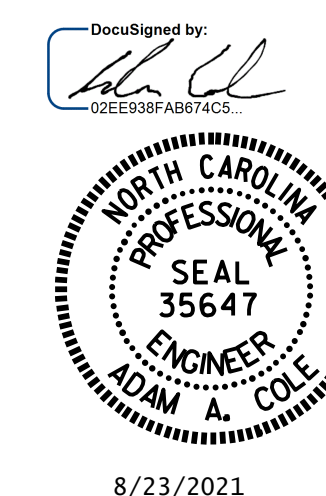
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

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. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590332

SHEET 2 OF 2



8/23/2021

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END BENT 1

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FOR CONCRETE REPAIR, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

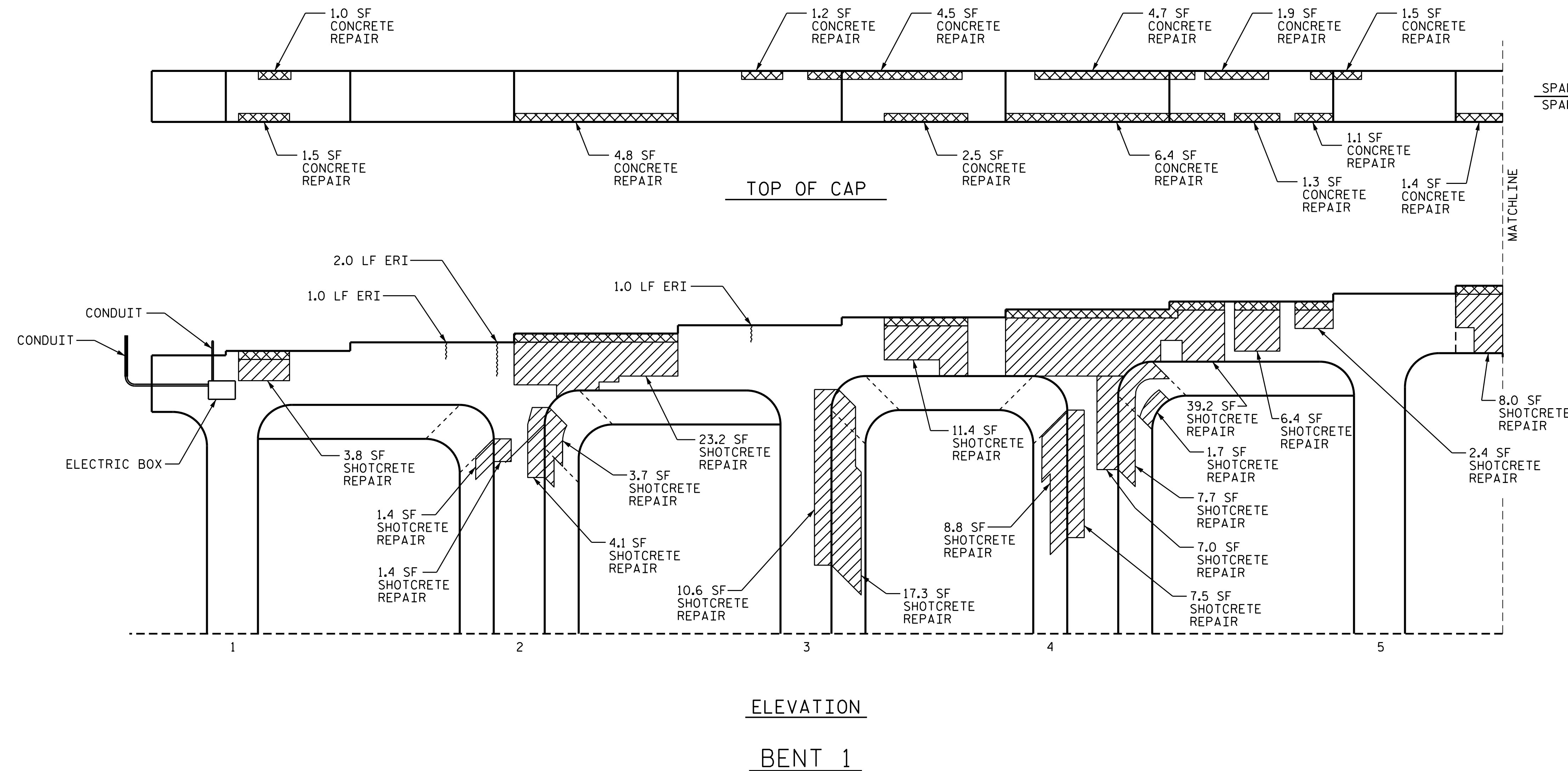
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

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

AS-BUILT REPAIR QUANTITY TABLE

BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SO. FT.	VOLUME CU. FT.	AREA SO. FT.	VOLUME CU. FT.
CAP	99.8	49.9		
COLUMNS	65.8	32.9		
CONCRETE REPAIRS	AREA SO. FT.	VOLUME CU. FT.	AREA SO. FT.	VOLUME CU. FT.
CAP	33.8	16.9		
EPOXY RESIN INJECTION		LIN. FT		LIN. FT
CAP		4.0		
COLUMNS		0.0		
EPOXY COATING		SO. FT.		SO. FT.
TOP OF BENT CAP		239		

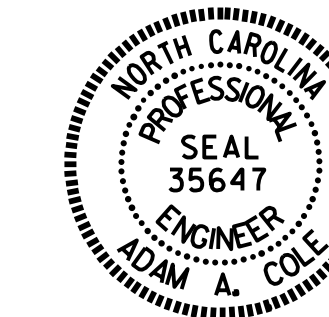
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND 2" MIN. CLEAR TO SAWCUT. FOR REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.



PROJECT NO. I-5746C
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SHEET 1 OF 4

DocuSigned by:
 02EE98FAB074C3



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BENT 1
SPAN A FACE

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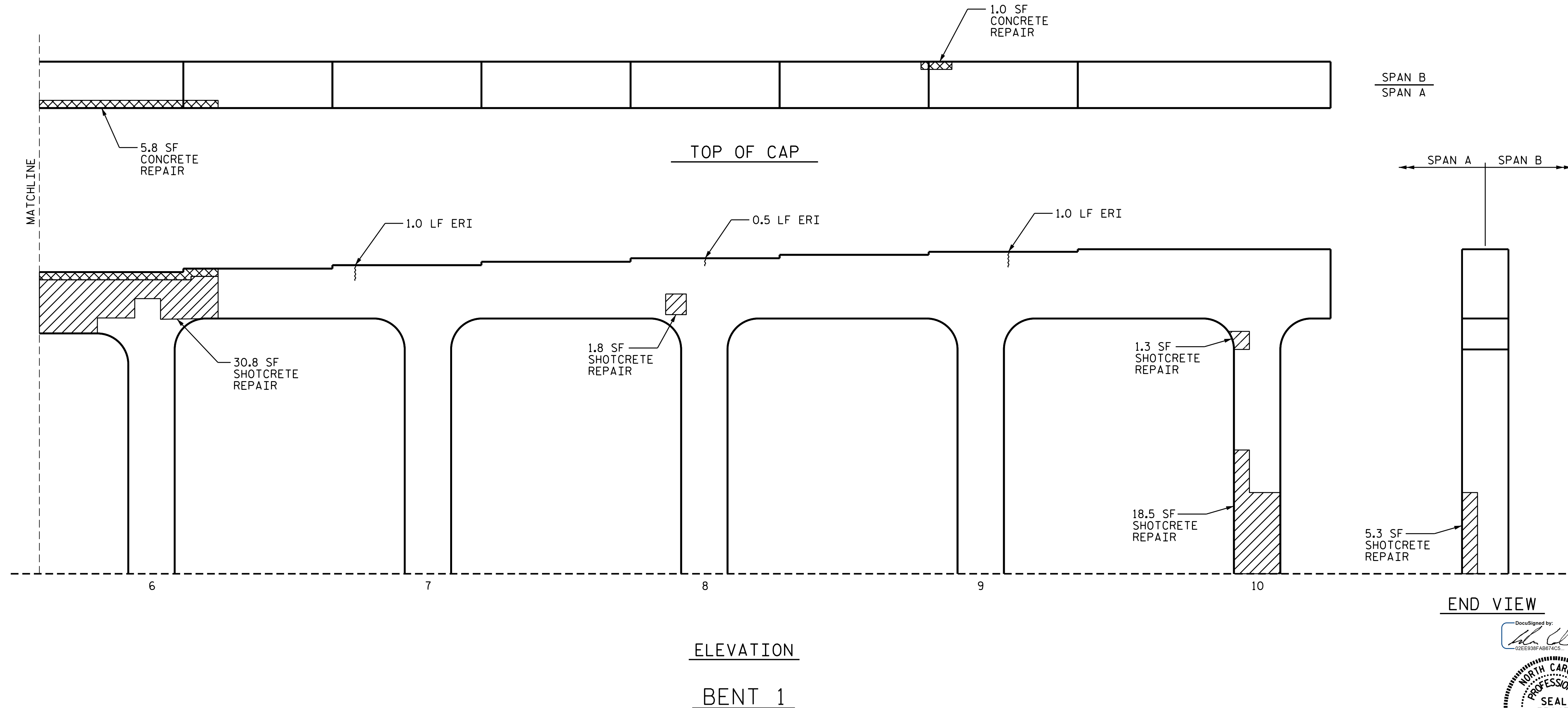
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-  SHOTCRETE REPAIR AREA
-  CONCRETE REPAIR AREA
-  EPOXY RESIN INJECTION (ERI)

AS-BUILT REPAIR QUANTITY TABLE				
BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	33.9	16.7		
COLUMNS	23.8	11.9		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	6.8	3.4		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		2.5		
COLUMNS		0.0		
EPOXY COATING		SO. FT.		SO. FT.
TOP OF BENT CAP		251		

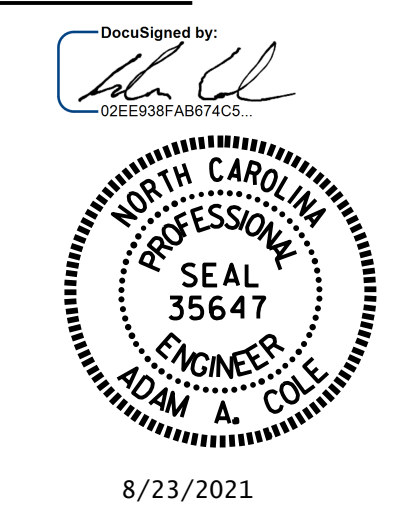
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BENT 1

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SHEET 2 OF 4



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BENT 1
SPAN A FACE

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