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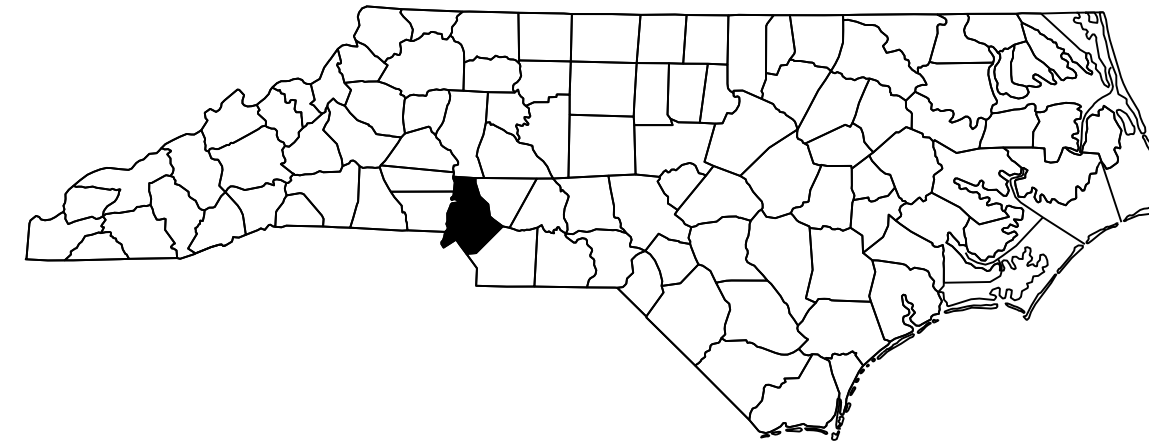
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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

MECKLENBURG COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5746C	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
52024.1.4	NHPIM-0277(19)	P.E.	
52024.1.5	NHPIM-0277(19)	P.E.	
52024.3.4	NHPIM-0277(19)	CONST.	



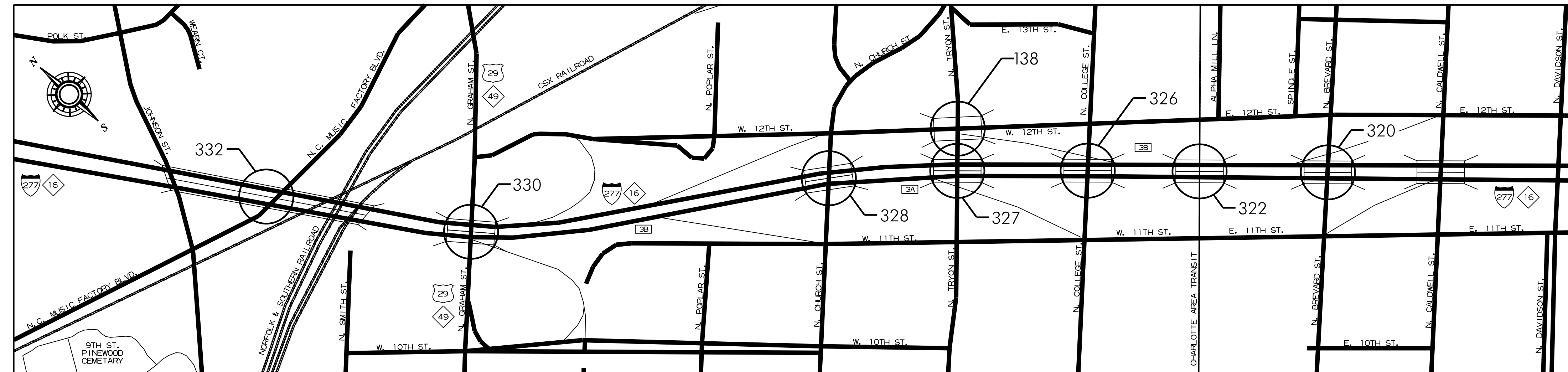
LOCATION:

MECKLENBURG COUNTY:

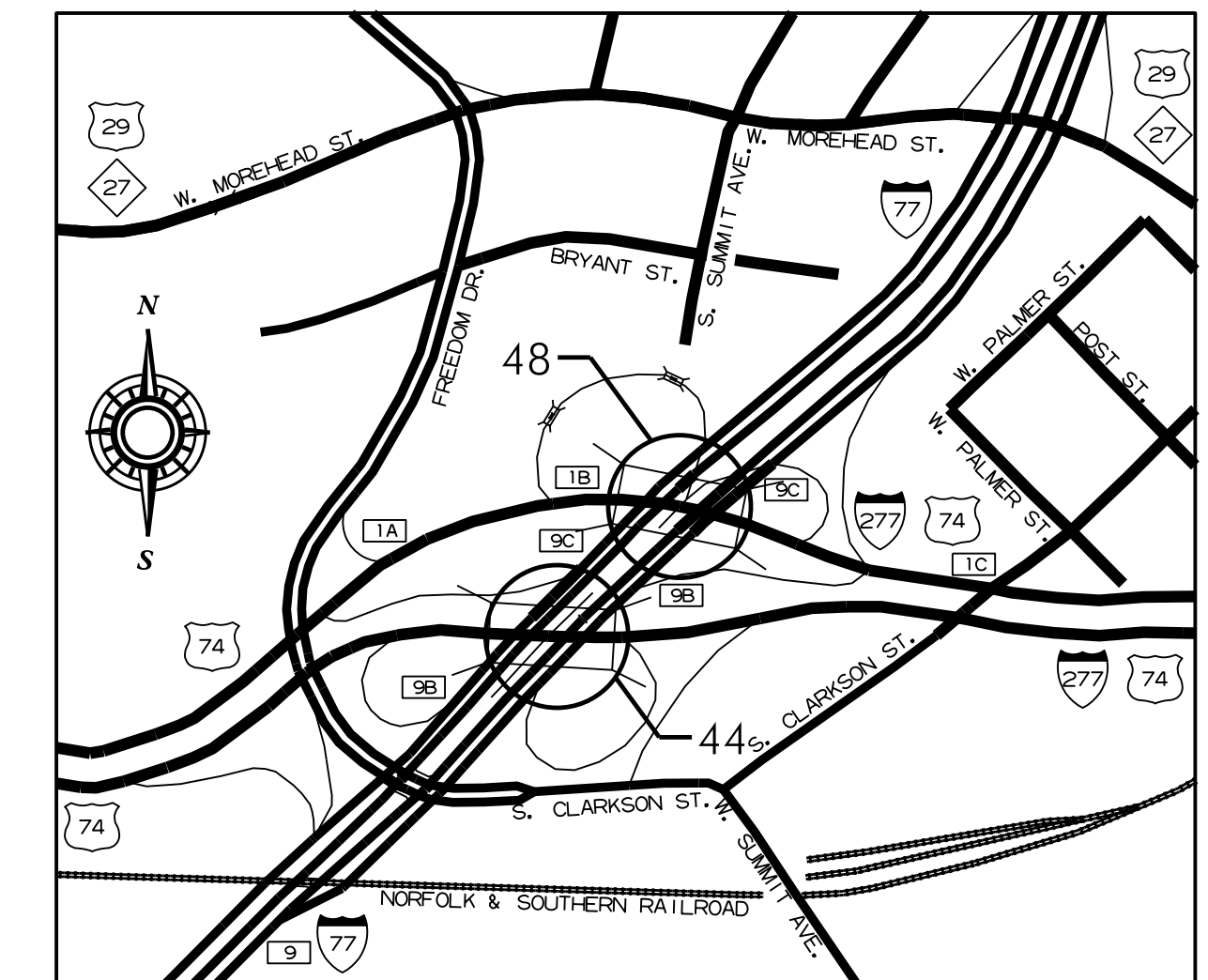
- BRIDGE #590044 ON INTERSTATE 277 (US HWY 74) OVER INTERSTATE 77
- BRIDGE #590048 ON INTERSTATE 277 (US HWY 74) OVER INTERSTATE 77
- BRIDGE #590138 ON EAST 12TH STREET OVER TRYON STREET
- BRIDGE #590320 ON INTERSTATE 277 (NC HWY 16) OVER N. BREVARD STREET
- BRIDGE #590322 ON INTERSTATE 277 (NC HWY 16) OVER CHARLOTTE AREA TRANSIT
- BRIDGE #590326 ON INTERSTATE 277 (NC HWY 16) OVER N. COLLEGE STREET
- BRIDGE #590327 ON INTERSTATE 277 (NC HWY 16) OVER N. TRYON STREET
- BRIDGE #590328 ON INTERSTATE 277 (NC HWY 16) OVER N. CHURCH STREET
- BRIDGE #590330 ON INTERSTATE 277 (NC HWY 16) OVER US HWY 29 / NC HWY 49 (N. GRAHAM ST.)
- BRIDGE #590332 ON INTERSTATE 277 (NC HWY 16) OVER NC MUSIC FACTORY BLVD. JOHNSON ST. (CSX AND NORFOLK & SOUTHERN RAILROADS)

TYPE OF WORK:

BRIDGE PRESERVATION - DECK REPAIR, SUBSTRUCTURE REPAIR, AND PAINTING OF EXISTING BRIDGE STRUCTURES.



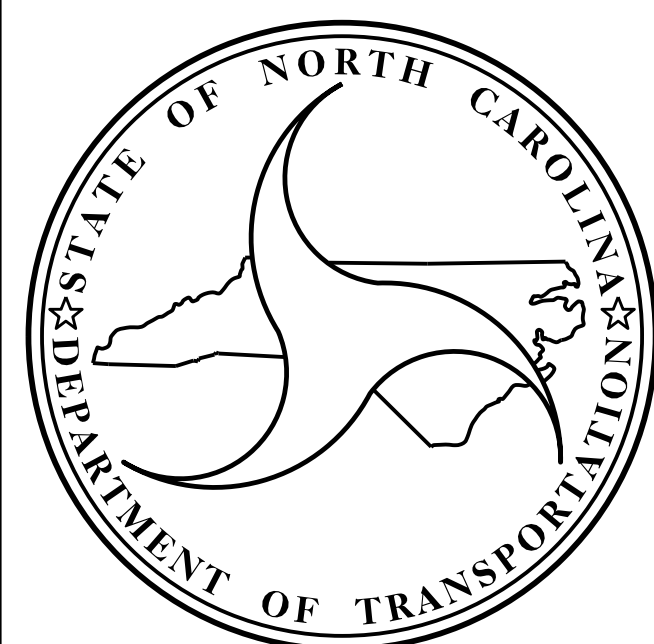
VICINITY MAP - MECKLENBURG CO.



VICINITY MAP - MECKLENBURG CO.

PROJECT: I-5746C

CONTRACT: C204027



DESIGN DATA	
#590044	ADT 2015 = 47,500
#590048	ADT 2015 = 47,500
#590138	ADT 2012 = 8,500
#590320	ADT 2013 = 86,000
#590322	ADT 2013 = 86,000
#590326	ADT 2013 = 86,000
#590327	ADT 2013 = 96,500
#590328	ADT 2013 = 107,000
#590330	ADT 2013 = 107,000
#590332	ADT 2013 = 116,000

PROJECT LENGTH	
MECKLENBURG COUNTY	
- #590044	= 0.071 MILE
- #590048	= 0.076 MILE
- #590138	= 0.032 MILE
- #590320	= 0.023 MILE
- #590322	= 0.038 MILE
- #590326	= 0.026 MILE
- #590327	= 0.035 MILE
- #590328	= 0.029 MILE
- #590330	= 0.036 MILE
- #590332	= 0.225 MILE

Prepared in the Office of:
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STRUCTURES MANAGEMENT UNIT - PRESERVATION & REPAIR GROUP
1000 BIRCH RIDGE DR. RALEIGH, N.C. 27610

A. KEITH PASCHAL, P.E.
PROJECT ENGINEER

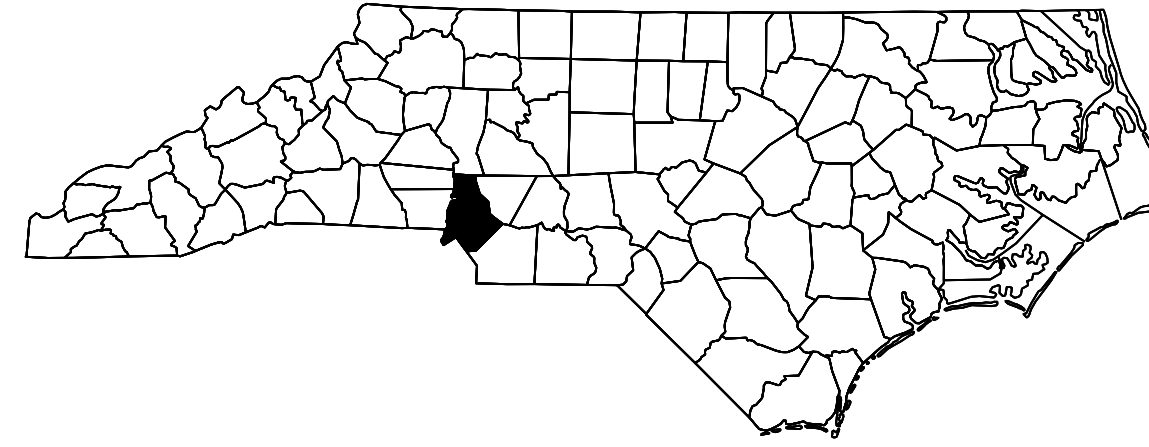
2018 STANDARD SPECIFICATIONS

LETTING DATE:
OCTOBER 21, 2021

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

ADAM A. COLE, P.E.
PROJECT DESIGN ENGINEER

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS



MECKLENBURG COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5746C	1A	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
52024.1.4	NHPIM-0277(19)	P.E.	
52024.1.5	NHPIM-0277(19)	P.E.	
52024.3.4	NHPIM-0277(19)	CONST.	

LOCATION:

MECKLENBURG COUNTY:

- BRIDGE #590044 ON INTERSTATE 277 (US HWY 74) OVER INTERSTATE 77**
- BRIDGE #590048 ON INTERSTATE 277 (US HWY 74) OVER INTERSTATE 77**
- BRIDGE #590138 ON EAST 12TH STREET OVER TRYON RD.**
- BRIDGE #590320 ON INTERSTATE 277 (NC HWY 16) OVER N. BREVARD STREET**
- BRIDGE #590322 ON INTERSTATE 277 (NC HWY 16) OVER CHARLOTTE AREA TRANSIT**
- BRIDGE #590326 ON INTERSTATE 277 (NC HWY 16) OVER N. COLLEGE STREET**
- BRIDGE #590327 ON INTERSTATE 277 (NC HWY 16) OVER N. TRYON STREET**
- BRIDGE #590328 ON INTERSTATE 277 (NC HWY 16) OVER N. CHURCH STREET**
- BRIDGE #590330 ON INTERSTATE 277 (NC HWY 16) OVER US HWY 29 / NC HWY 49 (N. GRAHAM ST.)**
- BRIDGE #590332 ON INTERSTATE 277 (NC HWY 16) OVER NC MUSIC FACTORY BLVD. JOHNSON ST. CSX & NORFOLK SOUTHERN RAILROAD**

TYPE OF WORK:

BRIDGE PRESERVATION - DECK REPAIR, SUBSTRUCTURE REPAIR, AND PAINTING OF EXISTING BRIDGE STRUCTURES.

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- S2-1 THRU S2-12**
- S3-1 THRU S3-14**
- S4-1 THRU S4-16**
- S5-1 THRU S5-19**
- S6-1 THRU S6-16**
- S7-1 THRU S7-20**
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- SN**

- TITLE SHEET**
- INDEX OF SHEETS**
- TOTAL BILL OF MATERIAL**
- STRUCTURAL PLANS - BRIDGE NO. 590044**
- STRUCTURAL PLANS - BRIDGE NO. 590048**
- STRUCTURAL PLANS - BRIDGE NO. 590138**
- STRUCTURAL PLANS - BRIDGE NO. 590320**
- STRUCTURAL PLANS - BRIDGE NO. 590322**
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- STRUCTURAL PLANS - BRIDGE NO. 590330**
- STRUCTURAL PLANS - BRIDGE NO. 590332**
- STANDARD REPAIR DETAILS**
- STANDARD NOTES**

PROJECT: I-5746C

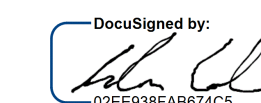
CONTRACT: C204027

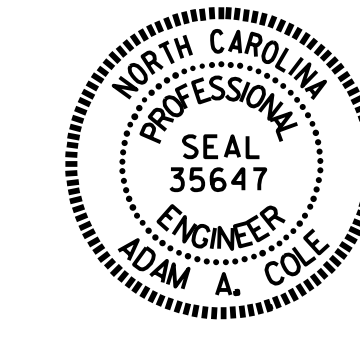
TOTAL BILL OF MATERIAL

BRIDGE NO.	GROOVING BRIDGE FLOORS	POLLUTION CONTROL	CLASS II, SURFACE PREPARATION	CONCRETE REPAIRS	SHOTCRETE REPAIRS	EPOXY RESIN INJECTION	FOAM JOINT SEALS FOR PRESERVATION	CLEANING & PAINTING OF BRIDGE #..	PAINTING CONTAINMENT FOR BRIDGE #..	VOLUMETRIC MIXER	SPOT PAINTING OF STEEL STRUCTURE REPAIR AREAS	CONTAINMENT OVER CHARLOTTE AREA TRANSIT SYSTEM RAIL LINE	MURAL PAINT REPAIR	POLYESTER POLYMER CONCRETE MATERIALS	EPOXY POLYMER CONCRETE MATERIALS (ALTERNATE)	LATEX MODIFIED CONCRETE-EARLY STRENGTH MATERIALS
	SQ. FT.	LUMP SUM	SQ. YDS.	CU. FT.	CU. FT.	LIN. FT.	LIN. FT.	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	CU. YDS.	CU. YDS.	CU. YDS.
590044	—	LUMP SUM	—	16.0	38.2	24.0	123.6	—	—	LUMP SUM	—	—	—	—	—	—
590048	—	LUMP SUM	—	10.8	57.0	129.5	131.3	—	—	LUMP SUM	—	—	—	—	—	—
590138	8,246	LUMP SUM	15.4	15.3	25.1	14.0	249.3	—	—	—	—	—	—	—	—	43.1
590320	13,391	LUMP SUM	8.5	82.1	331.3	64.4	240.8	LUMP SUM	LUMP SUM	—	—	—	—	76.9	76.9	—
590322	20,174	LUMP SUM	23.0	35.6	360.3	42.5	212.0	—	LUMP SUM	—	—	LUMP SUM	LUMP SUM	116.3	116.3	—
590326	16,616	LUMP SUM	35.7	124.9	361.3	65.0	266.2	—	LUMP SUM	—	LUMP SUM	—	—	92.8	92.8	—
590327	21,858	LUMP SUM	1.6	13.4	140.5	26.5	251.0	—	LUMP SUM	—	LUMP SUM	—	—	229.7	229.7	—
590328	14,346	LUMP SUM	—	17.4	108.4	92.0	208.6	—	LUMP SUM	—	LUMP SUM	—	—	83.9	83.9	—
590330	23,903	LUMP SUM	2.2	56.8	138.7	74.5	274.9	LUMP SUM	LUMP SUM	—	—	—	—	255.9	255.9	—
590332	146,309	LUMP SUM	11.8	217.3	2,107.8	376.4	1,836.5	—	LUMP SUM	—	LUMP SUM	—	—	1,142.4	1,142.4	—
TOTALS	264,863	LUMP SUM	98.2	589.6	3,668.6	908.8	3,794.2	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	1,997.9	1,997.9	43.1

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 44,48,138,320,322
326,327,328,330,332

SHEET 1 OF 2

DocuSigned by:

 02E839FAB014C5...



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

TOTAL BILL OF MATERIAL

DRAWN BY : REZA KOUCHEKE 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:	S-1
1			3			TOTAL SHEETS
2			4			274

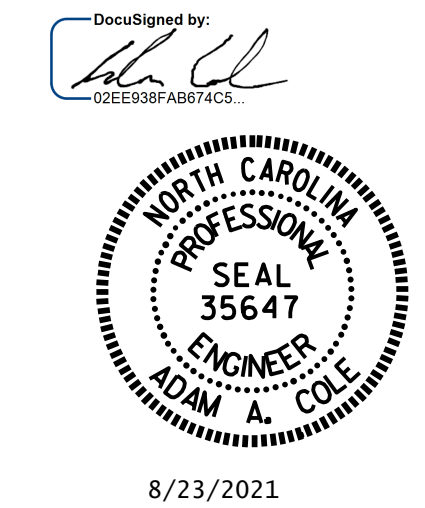
TOTAL BILL OF MATERIAL

BRIDGE NO.	CONCRETE FOR DECK REPAIR	ELASTOMERIC CONCRETE FOR PRESERVATION	BEAM REPAIR CUT-OUT	BEAM REPAIR PLATING	BRIDGE JOINT DEMOLITION	EPOXY COATING	SILANE DECK TREATMENT	CONCRETE DECK REPAIR FOR POLYMER CONCRETE OVERLAY	PLACING & FINISHING POLYMER CONCRETE OVERLAY	PLACING & FINISHING LATEX MODIFIED CONCRETE-EARLY STRENGTH OVERLAY	SCARIFYING BRIDGE DECK	SHOTBLASTING BRIDGE DECK	BEARING PLATE REPOSITIONING	BEARING REPLACEMENT	TYPE 1 BRIDGE JACKING	CLEANING & PAINTING EXISTING BEARINGS WITH HIGH RATIO CALCIUM SULFONATE	STEEL BEARING KEEPER ANGLE ASSEMBLY
	CU. FT.	CU. FT.	LBS.	LBS.	SO. FT.	SO. FT.	SO. YDS.	SO. YDS.	SO. YDS.	SO. YDS.	SO. YDS.	SO. YDS.	EA.	EA.	EA.	EA.	EA.
590044	2.0	27.9	—	—	122.3	758	1,672	—	—	—	—	1,672	—	—	—	72	—
590048	19.3	32.8	—	—	130.1	796	1,845	—	—	—	—	1,845	—	—	—	78	—
590138	—	83.3	—	—	232.4	324	—	—	—	1,035	1,035	1,035	—	—	1	48	—
590320	—	—	434	75	—	1,118	—	8.5	1,582	—	1,582	1,582	—	—	1	96	—
590322	—	—	—	—	—	1,810	—	23.0	2,391	—	2,391	2,391	—	—	—	68	—
590326	—	—	104	262	—	1,726	—	35.7	1,953	—	1,953	1,953	—	—	1	106	—
590327	—	—	5	615	—	2,358	—	1.6	2,545	—	2,545	2,545	—	—	1	102	—
590328	—	—	15	150	—	1,142	—	—	1,727	—	1,727	1,727	—	—	1	84	—
590330	—	—	275	25	—	1,310	—	2.2	2,835	—	2,835	2,835	—	—	1	142	25
590332	—	—	4,207	2,889	—	10,598	—	11.8	17,166	—	17,166	17,166	1	2	7	540	12
TOTALS	21.3	144.0	5,040	4,016	484.8	21,940	3,517	82.8	30,199	1,035	31,234	34,751	1	2	13	1,336	37

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 44,48,138,320,322
326,327,328,330,332

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

TOTAL BILL OF MATERIAL



8/23/2021

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

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

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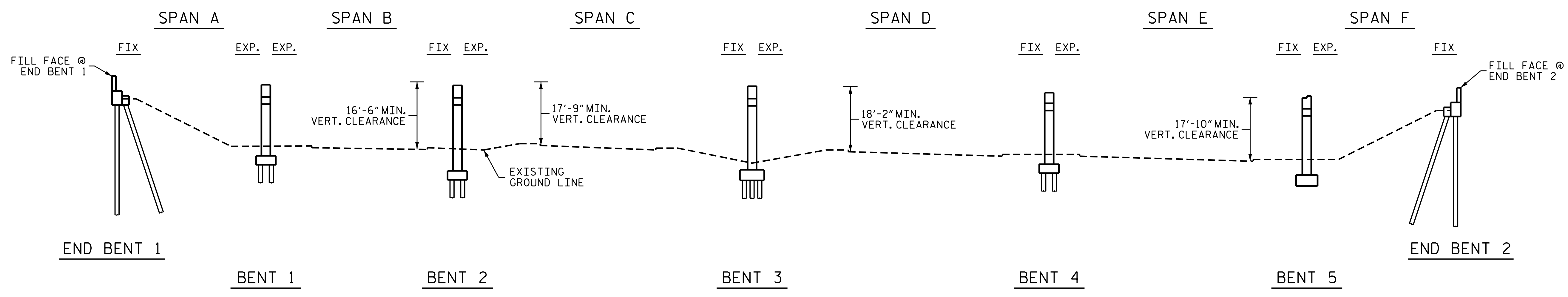
NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 09/16/2020.

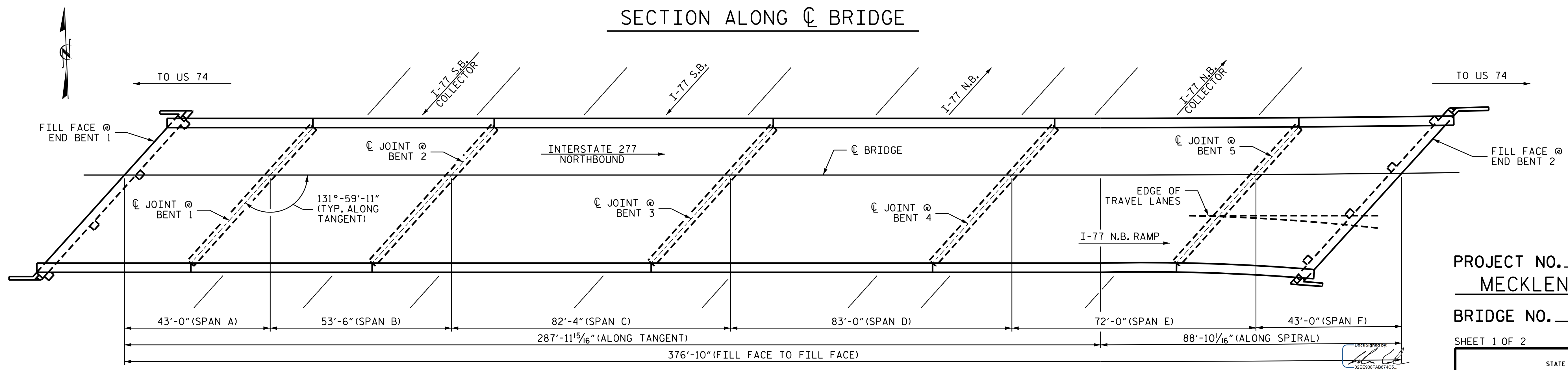
BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

SCOPE OF WORK

- DEMOLISH EXISTING END BENT JOINTS.
- RECONSTRUCT END BENT JOINTS, AND INSTALL FOAM JOINT SEALS.
- SHOTBLAST EXISTING CONCRETE DECK.
- APPLY SILANE FOR DECK TREATMENT.
- REMOVE UNSOUNDED CONCRETE AND PROPERLY PREPARE CONCRETE REPAIR AREAS.
- PERFORM CONCRETE REPAIRS IN PREPARED AREAS.
- CLEAN END BENT AND BENT CAPS AND APPLY EPOXY COATING.
- CLEAN AND PAINT BEARINGS WITH HRCSA.
- PERFORM SHOTCRETE AND CONCRETE REPAIRS IN PREPARED AREAS.
- REMOVE DEBRIS FROM TOP OF END BENT AND BENT CAPS AND APPLY EPOXY COATING.



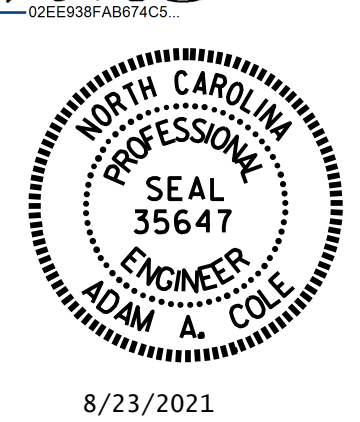
SECTION ALONG CL BRIDGE



PLAN

PROJECT NO. I-5746C
 MECKLENBURG COUNTY
 BRIDGE NO. 590044

SHEET 1 OF 2



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

RESIDENT ENGINEER _____ DATE _____

DRAWN BY : REZA KOUCHEKI DATE : 05/2021
 CHECKED BY : ASRA YASMEEN DATE : 05/2021

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
GENERAL DRAWING FOR BRIDGE ON I-277 OVER INTERSTATE 77					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					S1-1
					TOTAL SHEETS 274



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

BRIDGE COORDINATES

LATITUDE: 35°-13'-27.78"
LONGITUDE: 80°-51'-55.9"

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.

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.

EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING SURFACE PREPARATION OF BRIDGE DECK.

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

FOR SHOTBLASTING BRIDGE DECK SEE SPECIAL PROVISIONS.

FOR SILANE DECK TREATMENT SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR FOR SILANE DECK TREATMENT, SEE SPECIAL PROVISIONS.

FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

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 BRIDGE JACKING SEE SPECIAL PROVISIONS.

FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

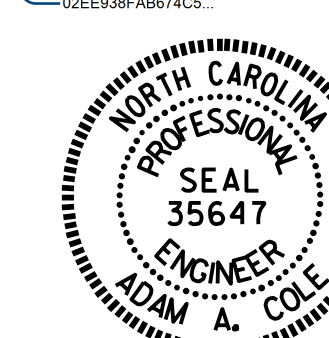
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR EXTERIOR CONCRETE DIAPHRAGM REMOVAL, REMOVE CONCRETE FLUSH WITH DECK AND GIRDER AND EPOXY COAT ANY EXPOSED REBAR. THIS WORK WILL BE CONSIDERED INCIDENTAL TO OTHER PAY ITEMS.

PROJECT NO. I-5746C
MECKLENBURG COUNTY
BRIDGE NO. 590044

SHEET 2 OF 2

DocuSigned by:
ADAM A. COLE



8/23/2021

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

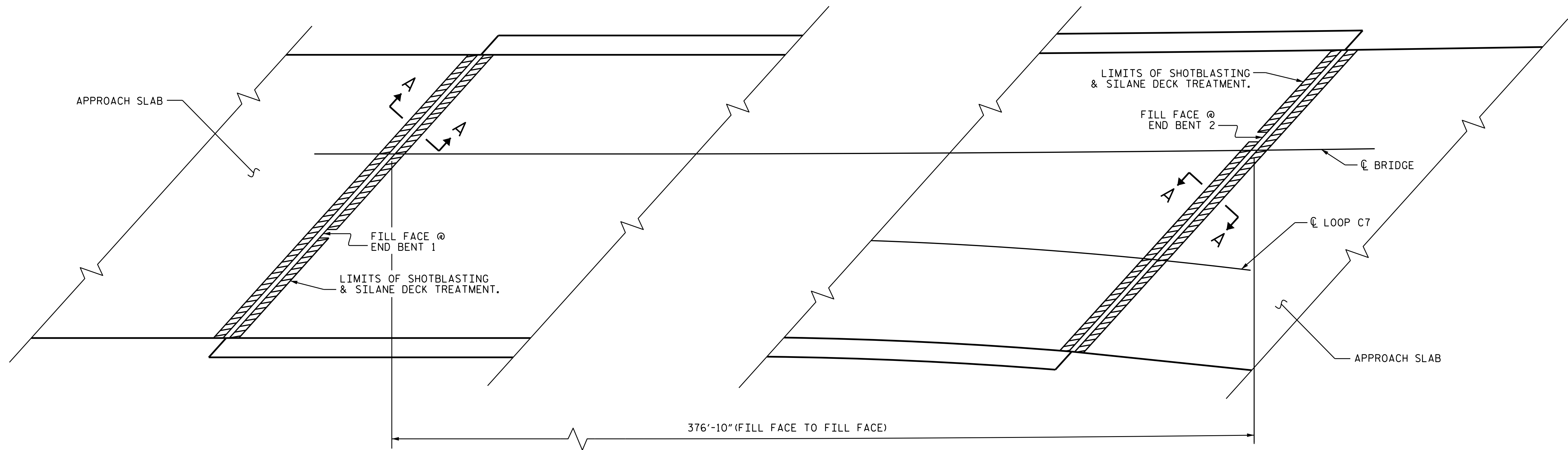
GENERAL DRAWING
FOR BRIDGE ON I-277
OVER INTERSTATE 77

REVISIONS

NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.
1			3			S1-2
2			4			TOTAL SHEETS 274

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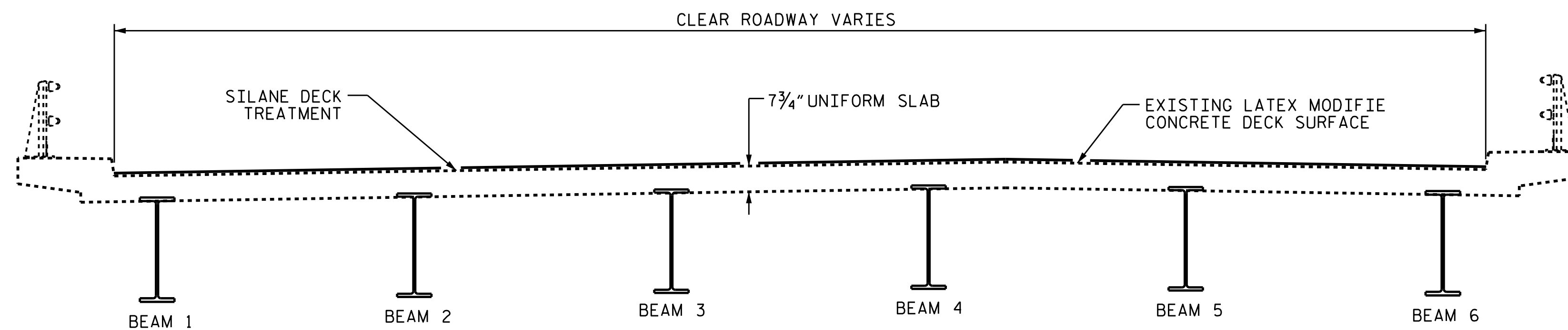
DRAWN BY : REZA KOUCHEKI DATE : 07/2021
CHECKED BY : H.A. LOCKLEAR DATE : 07/2021



PLAN

FOR JOINT DETAILS AND SECTION A-A, SEE "JOINT DETAILS" SHEET

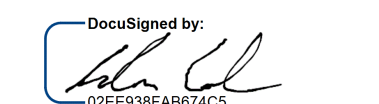
 BRIDGE JOINT DEMOLITION

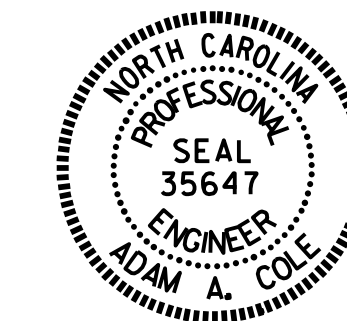


EXISTING TYPICAL SECTION

SPAN C SHOWN, OTHER SPANS SIMILAR

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590044

DocuSigned by:




8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**TYPICAL SECTION
 AND DECK CRACK
 SEAL PREPARATION**

SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
SHOTBLASTING BRIDGE DECK	1,672 SQ. YDS.	
CONCRETE FOR DECK REPAIR	2.0 CU. FT.	
SILANE DECK TREATMENT	1,672 SQ. YDS.	
BRIDGE JOINT DEMOLITION	122.3 SQ. FT.	

DRAWN BY : REZA KOUCHEKI DATE : 05/2021
 CHECKED BY : ASRA YASMEEN DATE : 05/2021

23-AUG-2021 11:54
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DOCUMENT NOT CONSIDERED
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 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-3
1			3			TOTAL SHEETS
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		
UNDERSIDE OF OVERHANG	2.50	0.9		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	0.0 LIN. FT.			

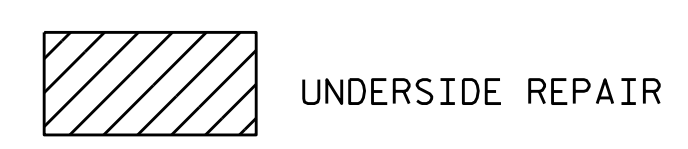
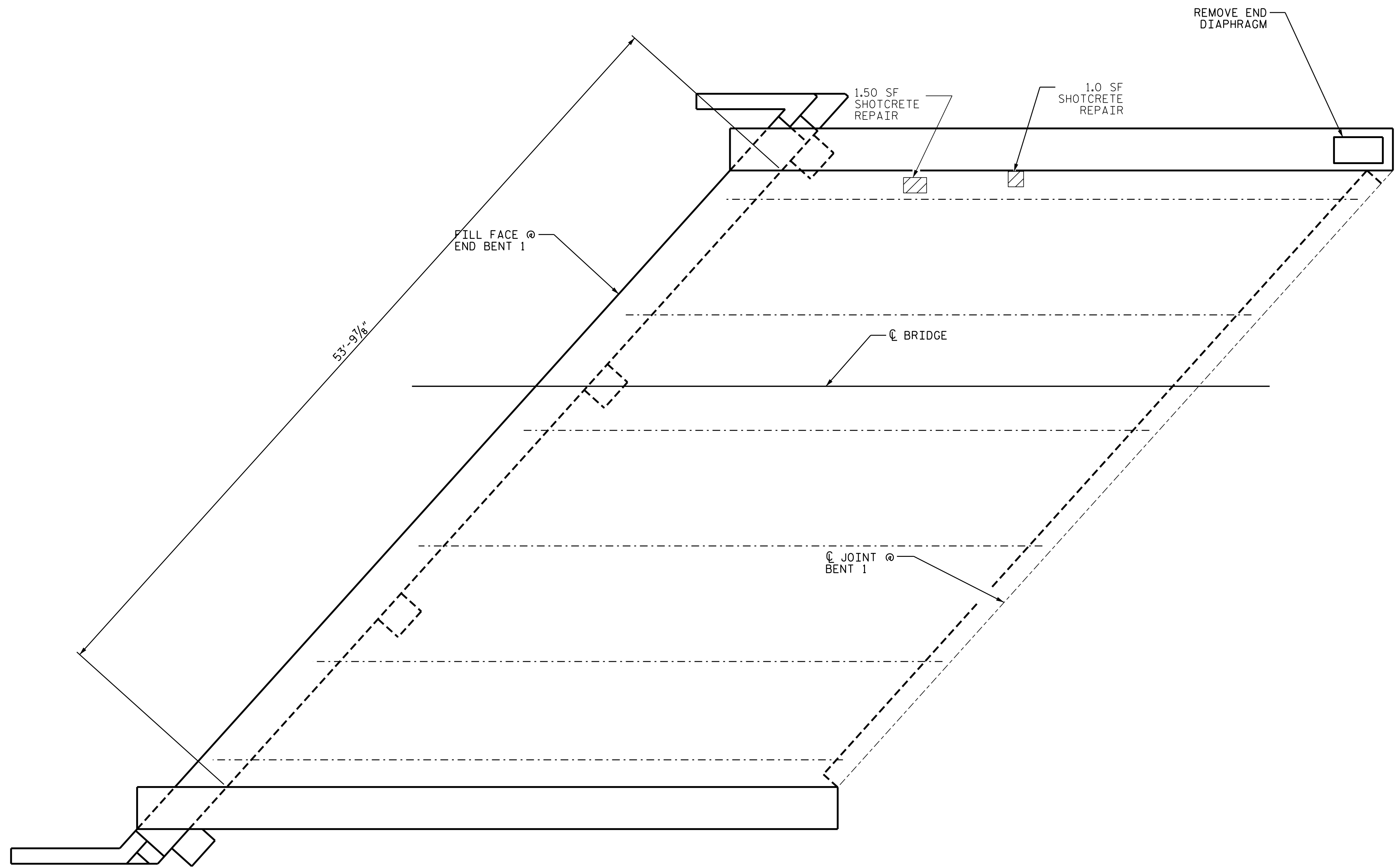
UNDERSIDE OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

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.

AT LOCATIONS INDICATED, CONCRETE, REINFORCING STEEL AND OTHER COMPONENTS OF EXTERIOR END DIAPHRAGMS SHALL BE REMOVED FLUSH TO THE BOTTOM OF THE DECK AND THE SIDE OF THE BEAMS/GIRDERS. AFTER REMOVAL, ENDS OF EXPOSED STEEL COMPONENTS SHALL BE COATED WITH EPOXY. NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK. COSTS FOR THIS WORK SHALL BE INCLUDED IN OTHER PAY ITEMS.

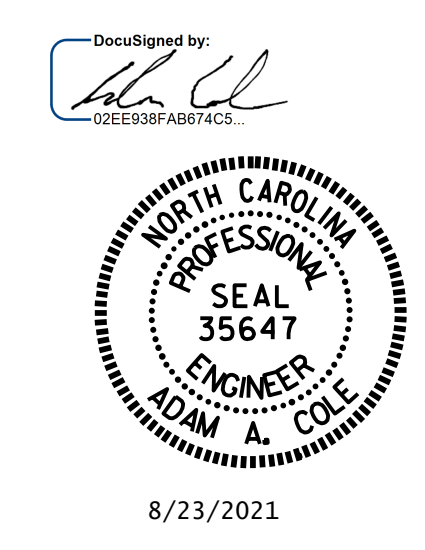
*FOR UNDERSIDE OF DECK AND DIAPHRAGM REPAIRS, SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.



PLAN

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590044

SHEET 1 OF 6



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

DRAWN BY : REZA KOUCHEKI DATE : 5/2021
 CHECKED BY : ASRA YASMEEN DATE : 5/2021

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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	4.0	1.4		
UNDERSIDE OF OVERHANG	5.50	1.8		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	0.0 LIN. FT.			

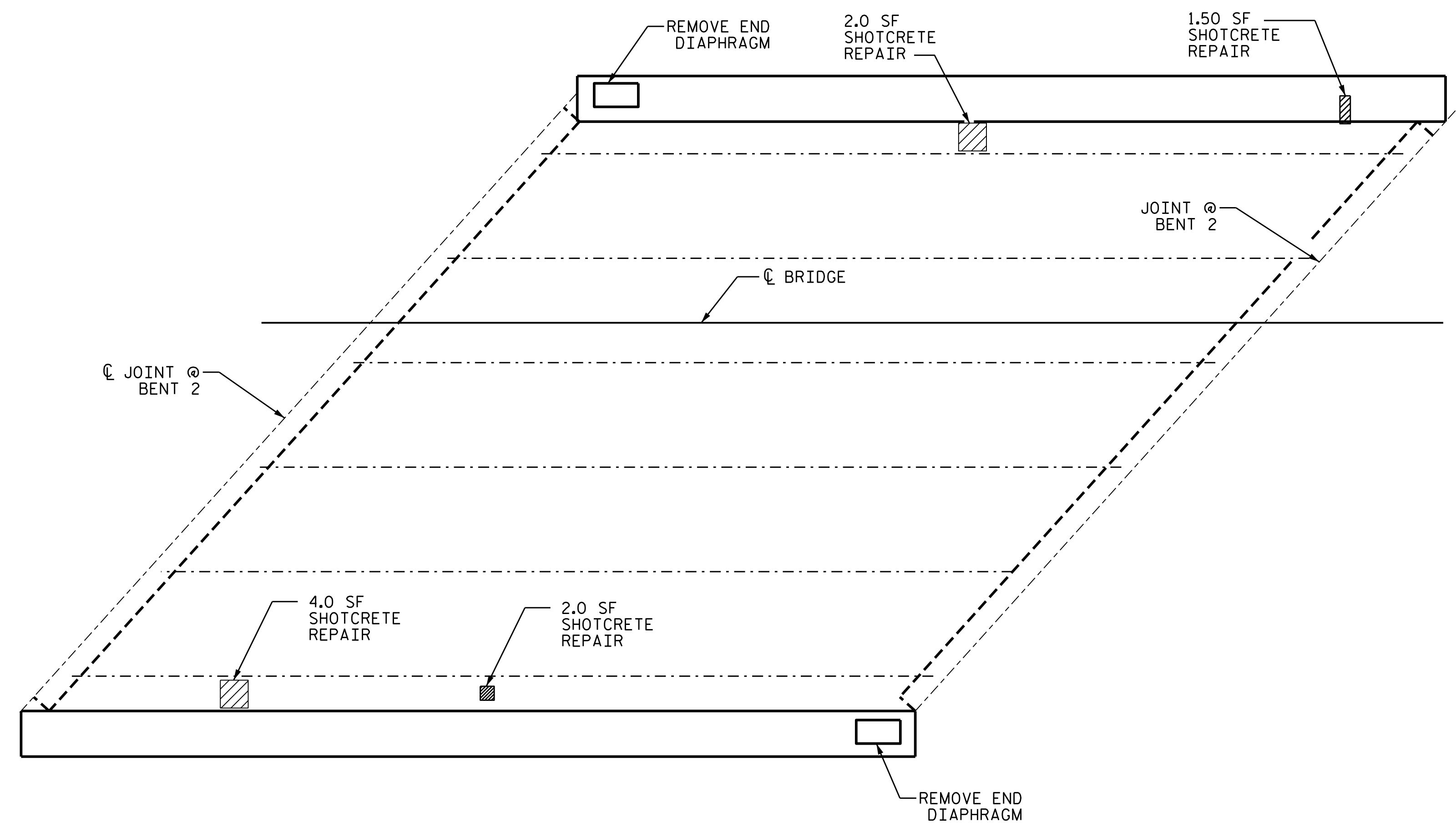
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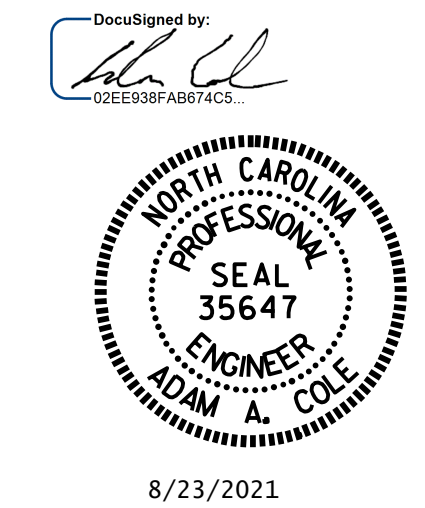
* FOR UNDERSIDE OF DECK AND DIAPHRAGM REPAIRS, SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.



PLAN

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590044

SHEET 2 OF 6



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

DRAWN BY : REZA KOUCHEKI DATE : 5/2021
 CHECKED BY : ASRA YASMEEN DATE : 5/2021

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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	4.0	1.4		
INTERIOR DIAPHRAGMS	0.0	0.0		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	0.0 LIN. FT.			

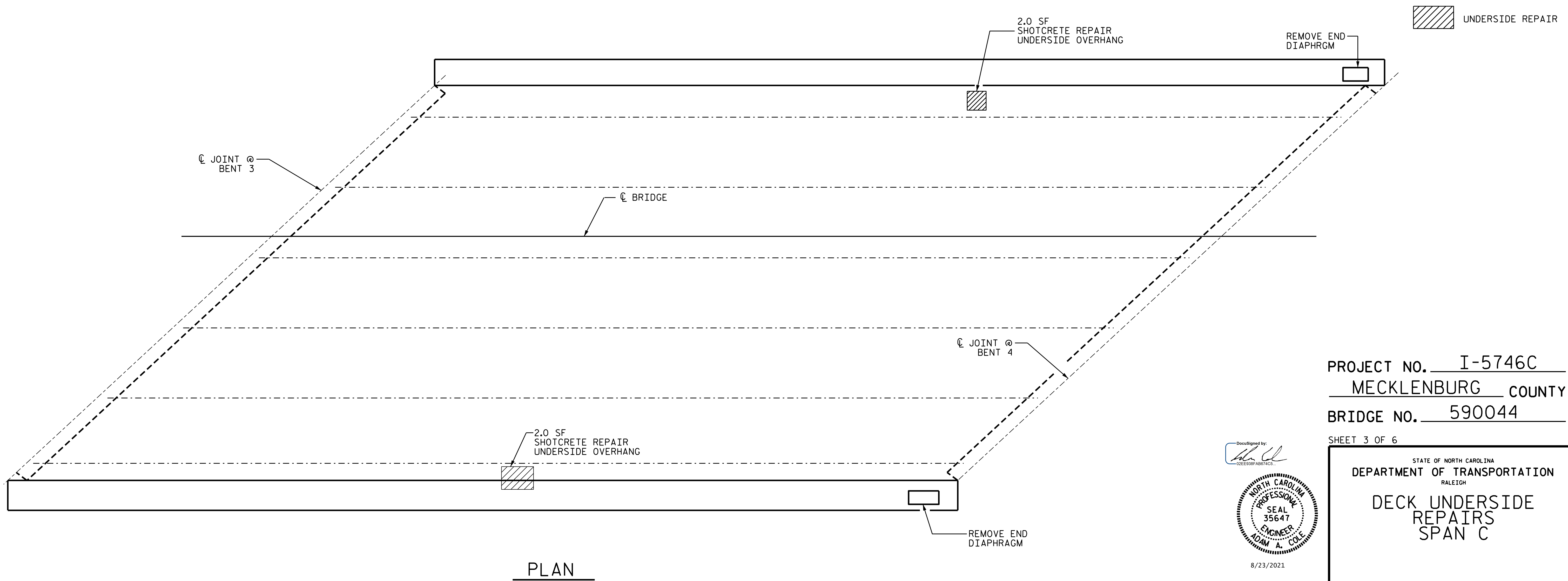
UNDERSIDE OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

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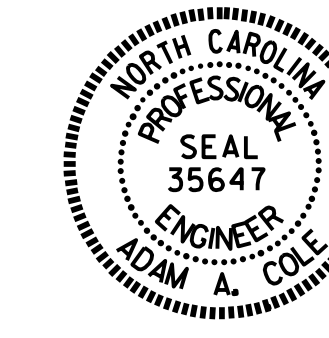
*FOR UNDERSIDE OF DECK AND DIAPHRAGM REPAIRS, SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.



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MECKLENBURG COUNTY
 BRIDGE NO. 590044

SHEET 3 OF 6

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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
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DECK UNDERSIDE
 REPAIRS
 SPAN C

DRAWN BY : REZA KOUCHEKI DATE : 5/2021
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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	12.5	4.2		
UNDERSIDE OF OVERHANG	2.0	0.7		
INTERIOR DIAPHRAGMS	0.0	0.0		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	0.0 LIN. FT.			

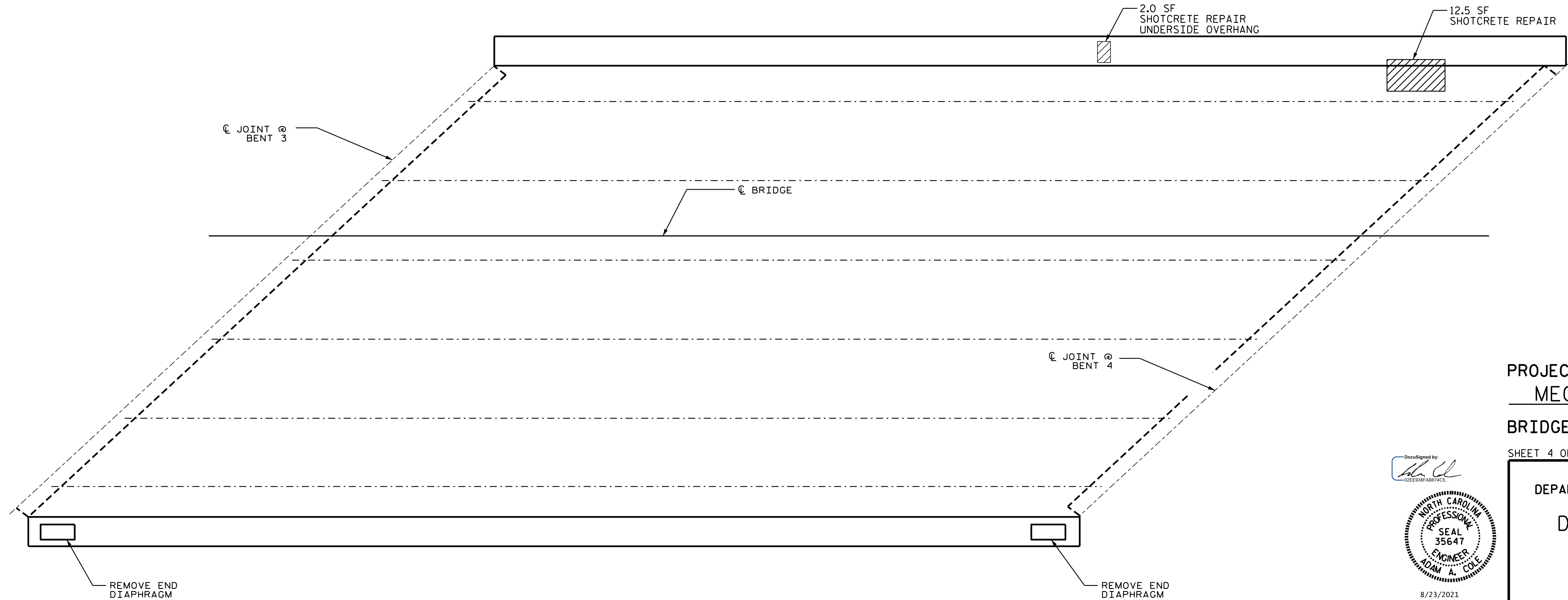
UNDERSIDE OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

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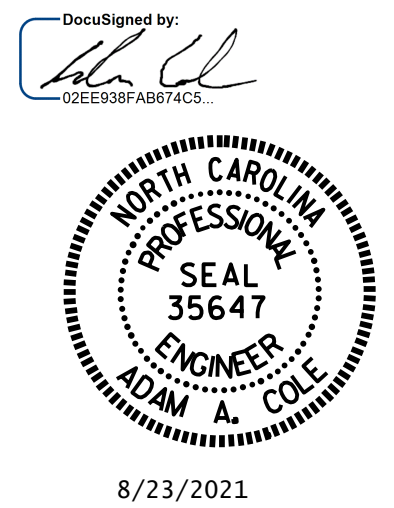
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* FOR UNDERSIDE OF DECK AND DIAPHRAGM REPAIRS, SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.



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MECKLENBURG COUNTY
 BRIDGE NO. 590044

SHEET 4 OF 6



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
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DECK UNDERSIDE REPAIRS
 SPAN D

DRAWN BY : REZA KOUCHEKI DATE : 5/2021
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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	6.0	2.0		
INTERIOR DIAPHRAGMS	0.0	0.0		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	0.0 LIN. FT.			

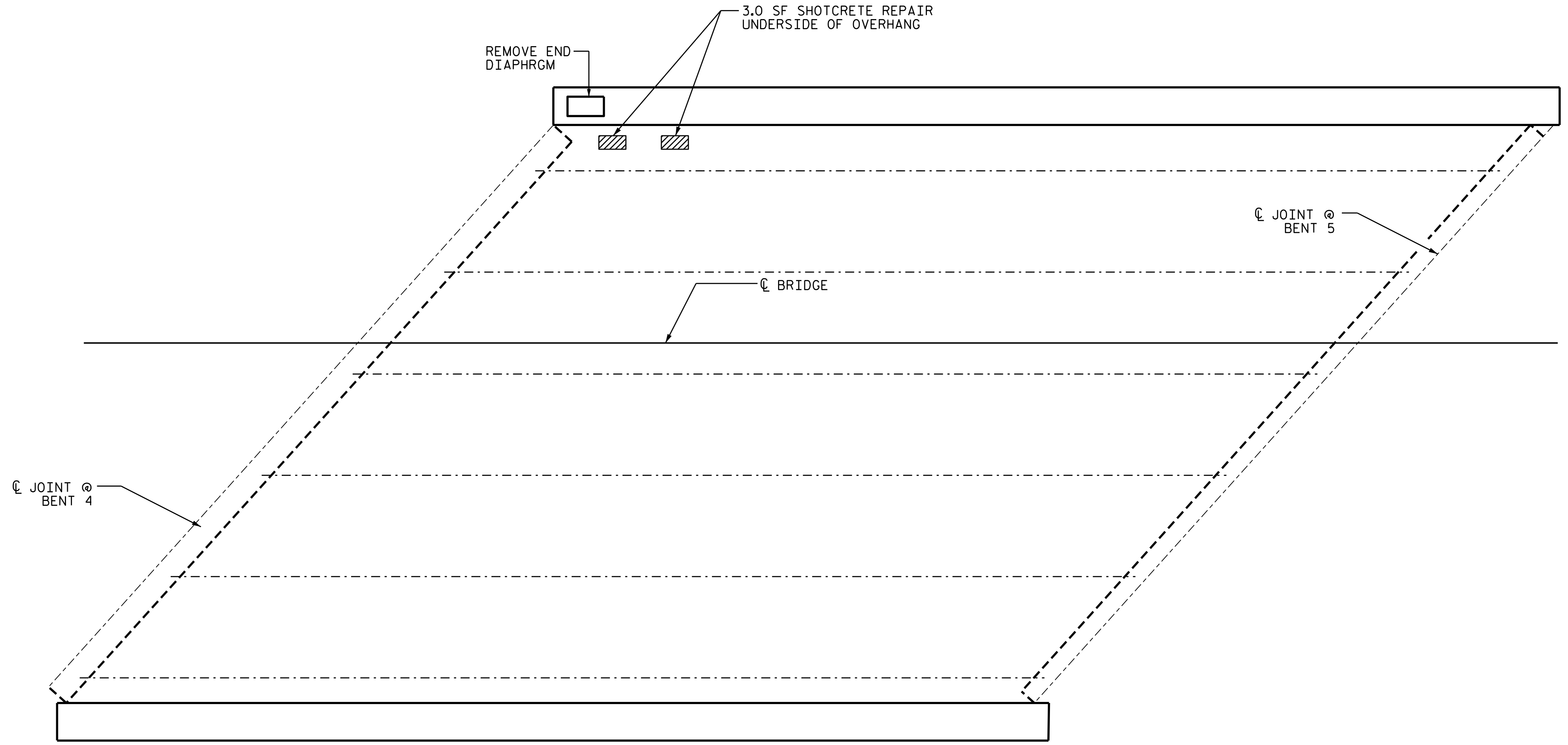
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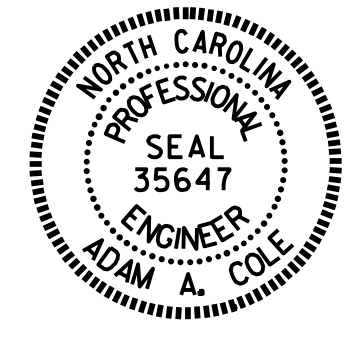


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 BRIDGE NO. 590044

SHEET 5 OF 6

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 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK UNDERSIDE REPAIRS SPAN E

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2				4			TOTAL SHEETS 274	

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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	1.5	0.5		
INTERIOR DIAPHRAGMS	0.0	0.0		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	0.0 LIN. FT.			

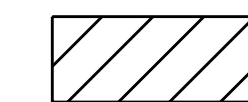
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NOTES:

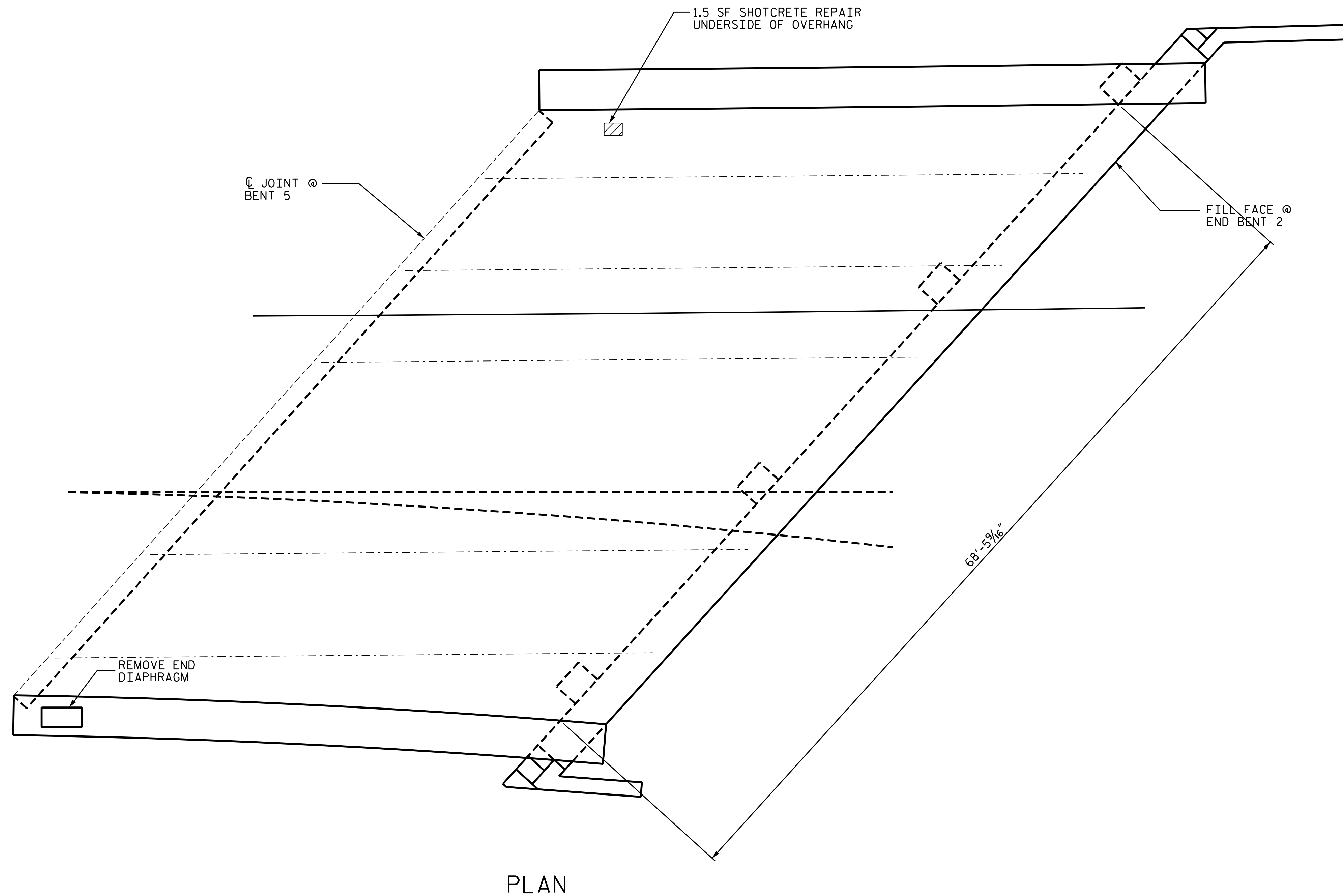
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* FOR UNDERSIDE OF DECK AND DIAPHRAGM REPAIRS, SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.



UNDERSIDE REPAIR

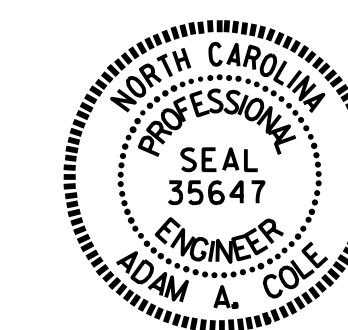


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PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590044

SHEET 6 OF 6

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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK UNDERSIDE
 REPAIRS
 SPAN F

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ELASTOMERIC CONCRETE FOR PRESERVATION		
END BENT 1	13.5	CU. FT.
END BENT 2	14.4	CU. FT.
* TOTAL	27.9	CU. FT.

* BASED ON THE MINIMUM BLOCKOUT SHOWN.

JOINT REPAIR QUANTITY TABLE		
	ESTIMATE	ACTUAL
FOAM JOINT SEALS FOR PRESERVATION		
END BENT 1	54.5 LF.	
END BENT 2	69.1 LF.	
TOTAL	123.6 LF.	

NOTES

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 RECOMMEND AND PROVIDE THE NOMINAL UNCOMPRESSED SEAL WIDTH OF FOAM JOINT SEAL FOR THE SIZE OF THE OPENING ON THE PLANS. FOAM JOINT SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS.

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

THE INSTALLED FOAM JOINT SEALS SHALL BE WATERTIGHT.

QUANTITIES SHOWN IN THE ELASTOMERIC CONCRETE FOR PERSERVATION TABLE ARE BASED ON THE MINIMUM JOINT DEMOLITION SHOWN.

FOR EXCAVATION BELOW THE BOTTOM OF THE PLANNED JOINT DEMOLITION, CONCRETE FOR DECK REPAIR SHALL BE PLACED IN THE EXCAVATED AREA TO THE ELEVATION AT THE BOTTOM OF THE PROPOSED ELASTOMERIC CONCRETE FOR PRESERVATION HEADERS SHOWN.

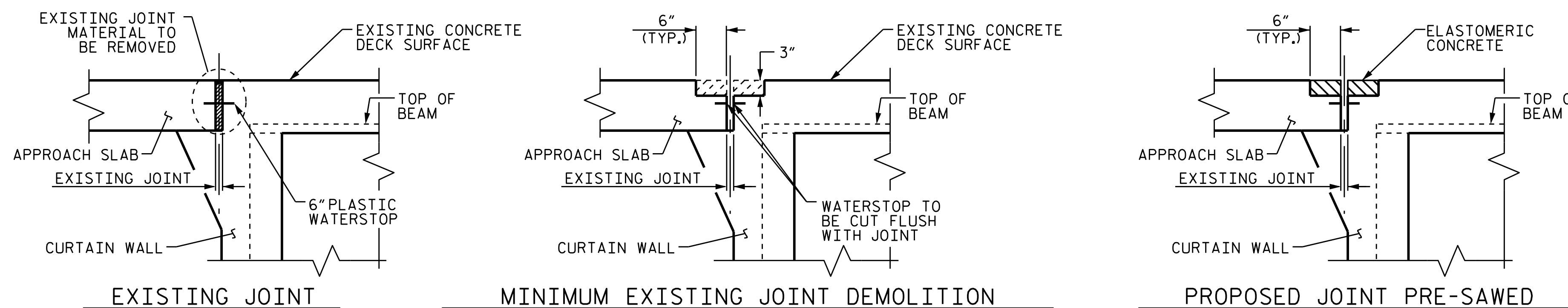
NOMINAL UNCOMPRESSED SEAL WIDTH OF FOAM JOINT SEAL SHALL BE 2".

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

FOR FOAM JOINT SEAL FOR PRESERVATION, SEE SPECIAL PROVISIONS.

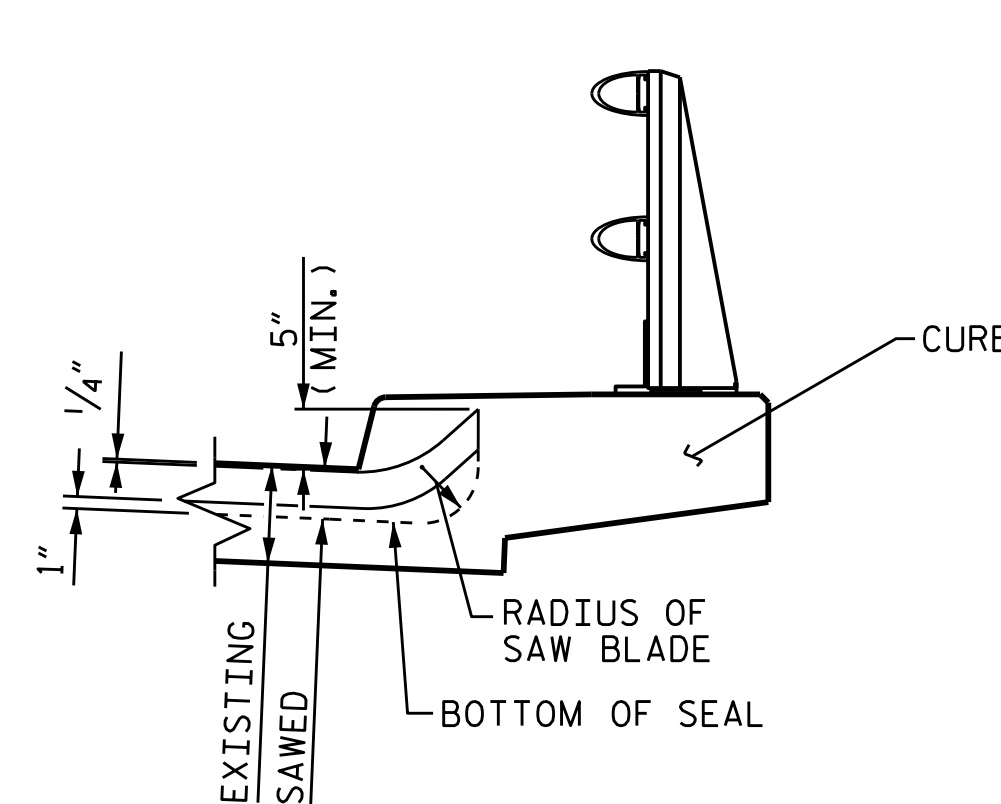
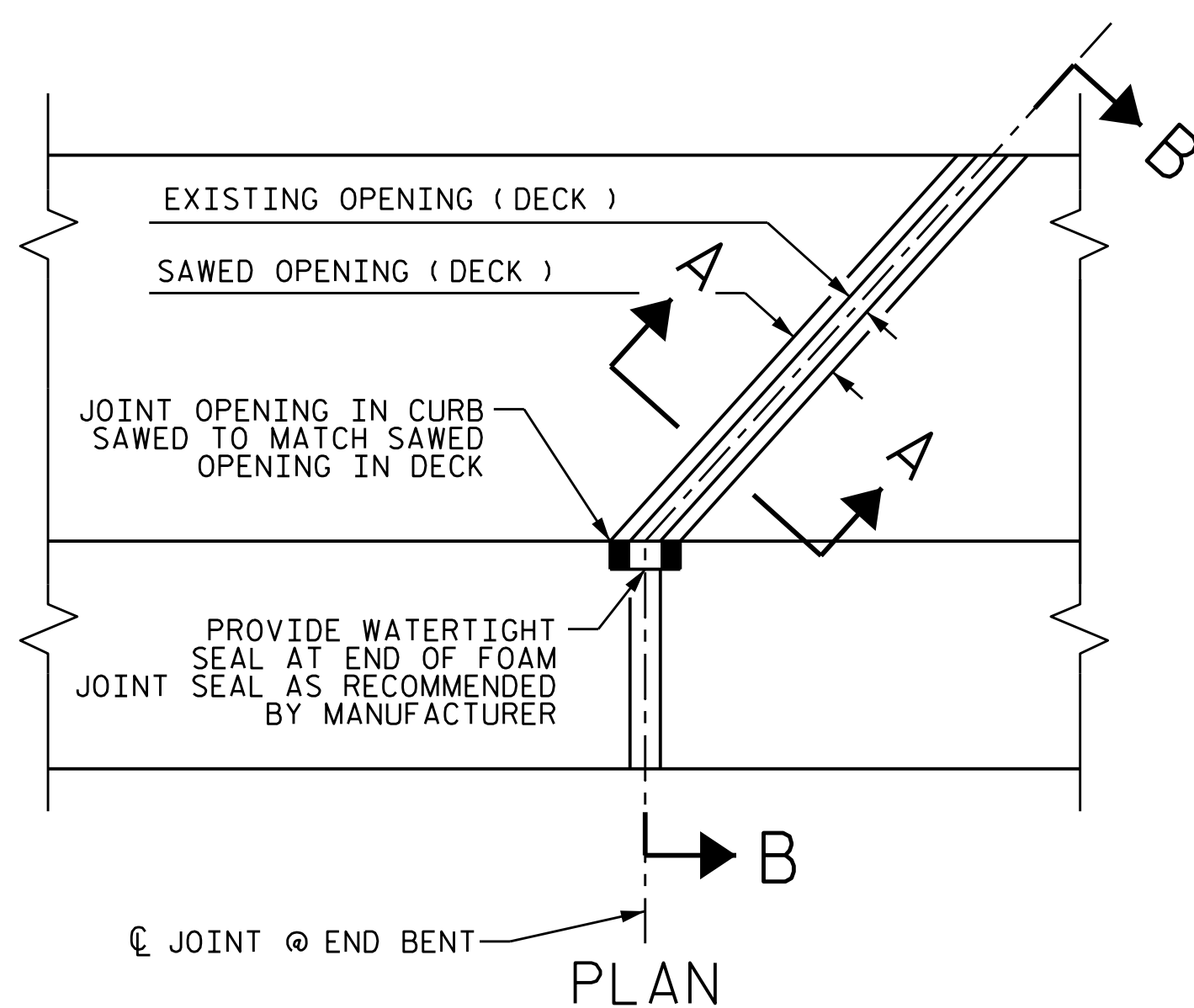
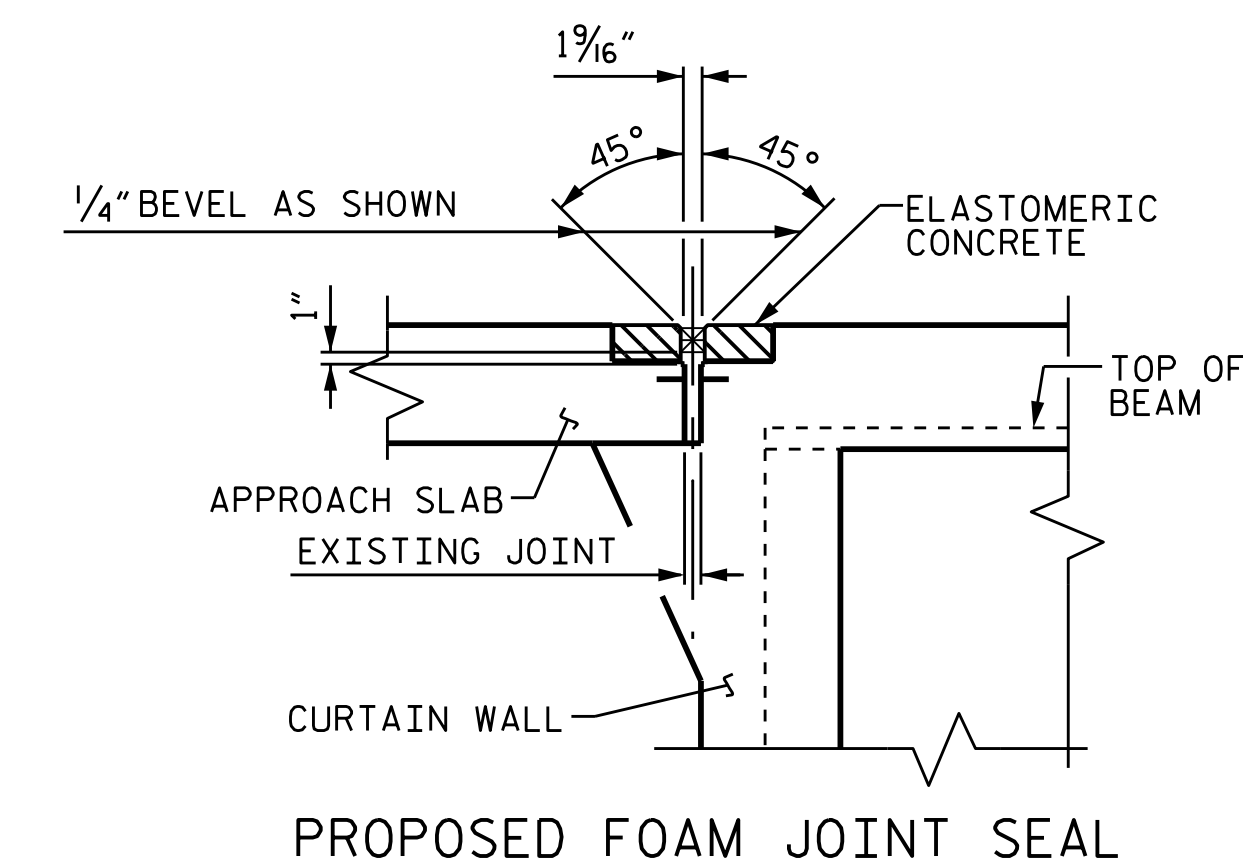
FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.



SECTION A-A

IF THE EMBEDDED PORTION OF THE EXISTING PLASTIC WATERSTOP IS EXPOSED DURING THE JOINT DEMOLITION, THE ENTIRE CONCRETE DEPTH TO THE WATERSTOP SHALL BE REMOVED. IF SUCH EXCAVATION EXTENDS MORE THAN 2" BELOW THE BOTTOM OF THE PLANNED ELASTOMERIC CONCRETE HEADER, AS SHOWN, APPROVED REPAIR CONCRETE SHALL BE PLACED IN THE EXCAVATED AREA TO THE ELEVATION AT THE BOTTOM OF THE ELASTOMERIC CONCRETE. EXCAVATION OF CONCRETE AT THE EXISTING JOINT SHALL RESULT IN THE BOTTOM OF THE EXCAVATION BEING REASONABLY FLAT AND LEVEL, TO PROVIDE SUFFICIENT SUBSTRATE FOR PLACEMENT AND SUPPORT OF ELASTOMERIC CONCRETE.

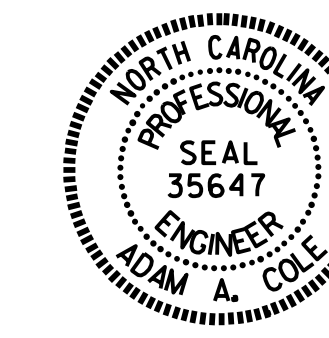


SECTION B-B

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

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MECKLENBURG COUNTY
 BRIDGE NO. 590044

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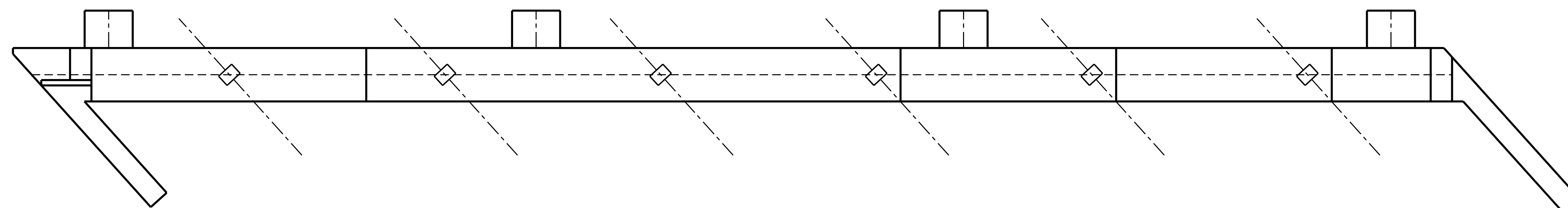
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FOAM JOINT DETAILS

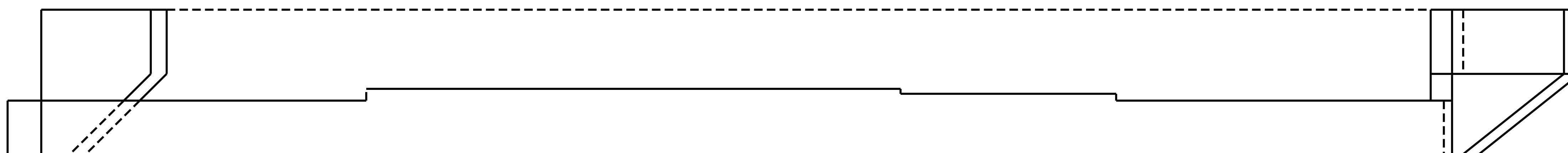
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1			3			TOTAL SHEETS
2			4			274



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	0.0	0.0		
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		0.0		
EPOXY COATING		AREA SQ. FT.		AREA SQ. FT.
CAP		175.0		




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

NOTES

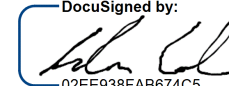
REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES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

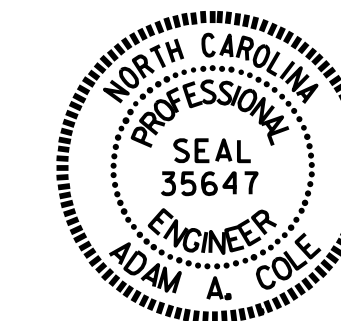
CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING 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
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STATE OF NORTH CAROLINA
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 RALEIGH

END BENT 1

DRAWN BY : REZA KOUCHEKI DATE : .06/2021
 CHECKED BY : ASRA YASMEEN DATE : .06/2021

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

AS-BUILT REPAIR QUANTITY TABLE

BENT 2 CAP	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
COLUMN	0.0	0.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		0.0		
COLUMN				
EPOXY COATING		AREA SQ. FT.		AREA 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.

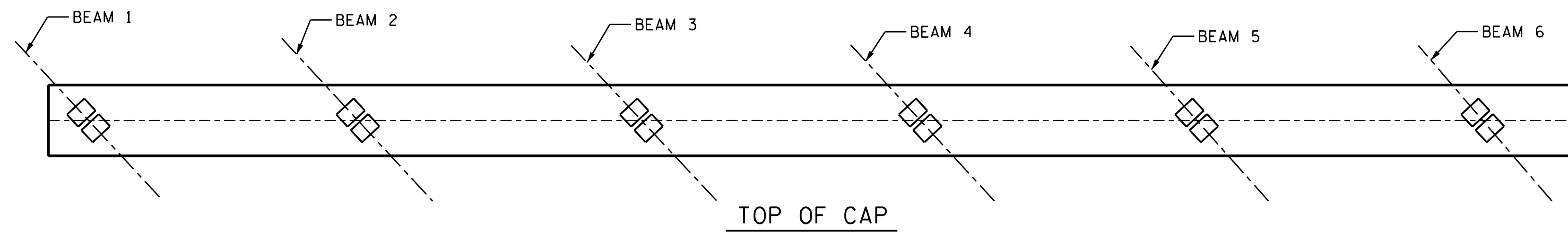
NOTES

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.

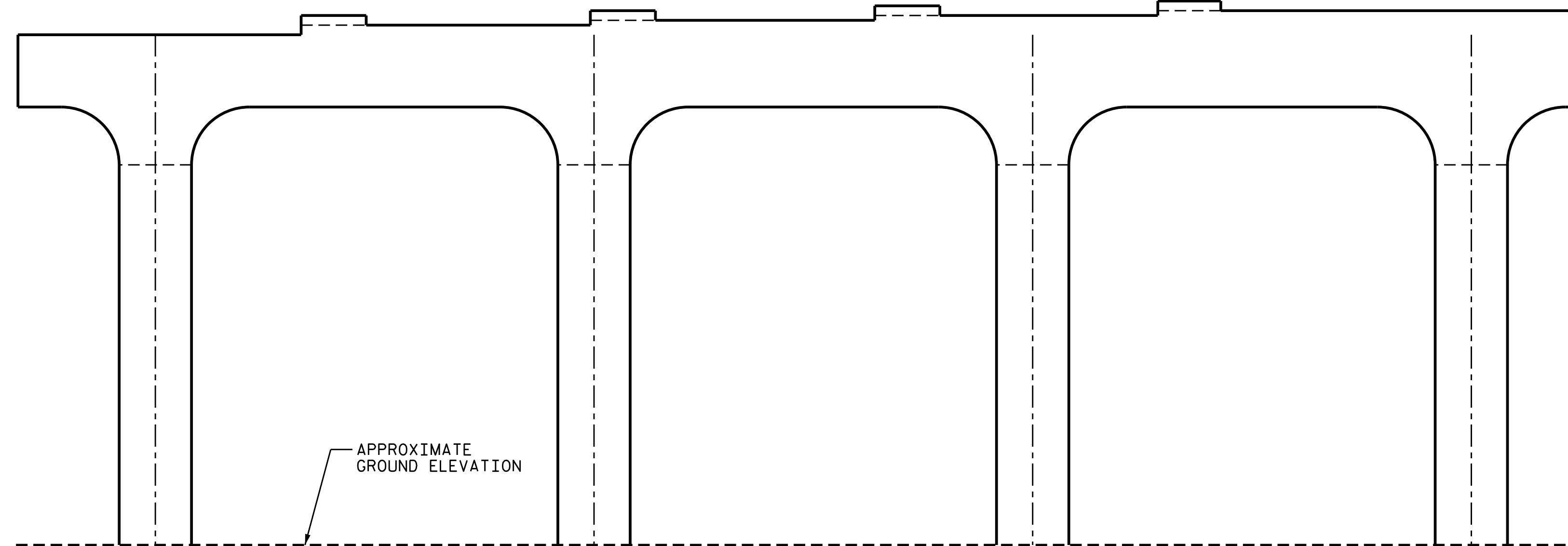
CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

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

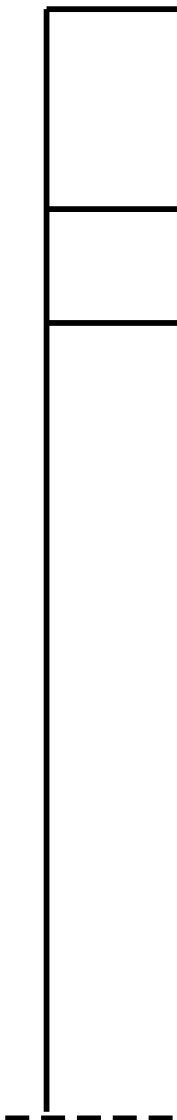
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.



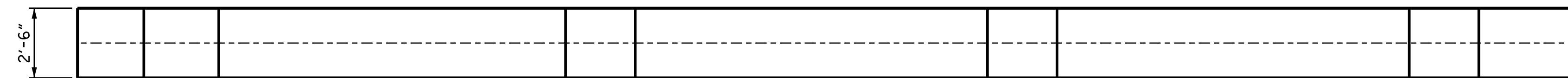
SPAN B
SPAN A



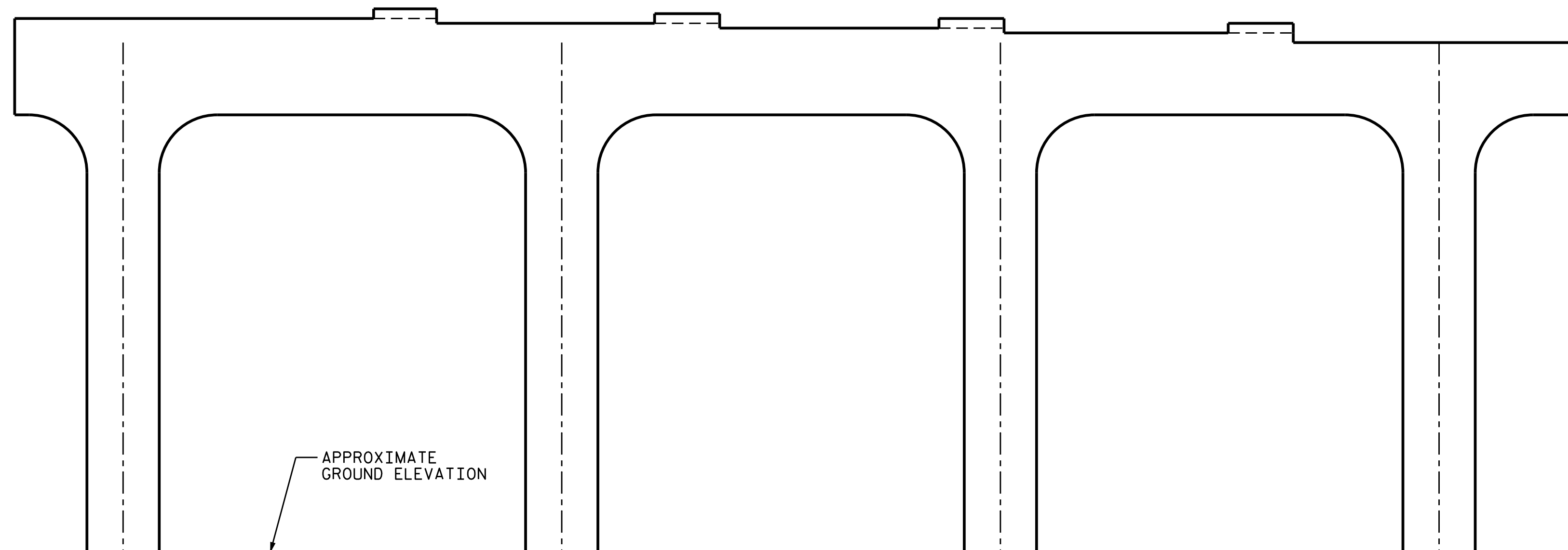
ELEVATION
SPAN A FACE



END VIEW



BOTTOM OF CAP

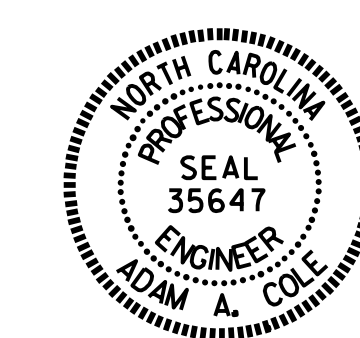


ELEVATION
SPAN B FACE

END VIEW

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590044

DocuSigned by:



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 1

DRAWN BY : REZA KOUCHEKI DATE : 07/2021
 CHECKED BY : ASRA YASMEEN DATE : 07/2021

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S1-12
2			4			TOTAL SHEETS 274

AS-BUILT REPAIR QUANTITY TABLE

BENT 2 CAP	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	3.5	1.8		
COLUMN	1.2	0.6		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	13.2	6.6		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		0.0		
COLUMN				
EPOXY COATING		AREA SQ. FT.		AREA 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.

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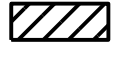

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

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

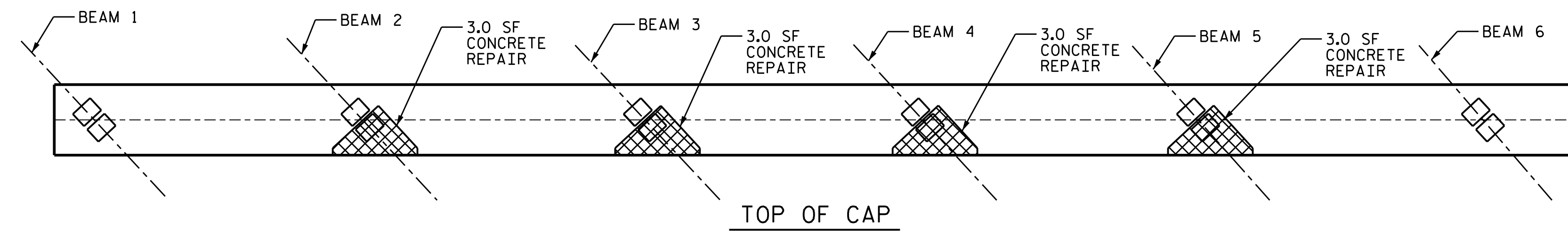
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

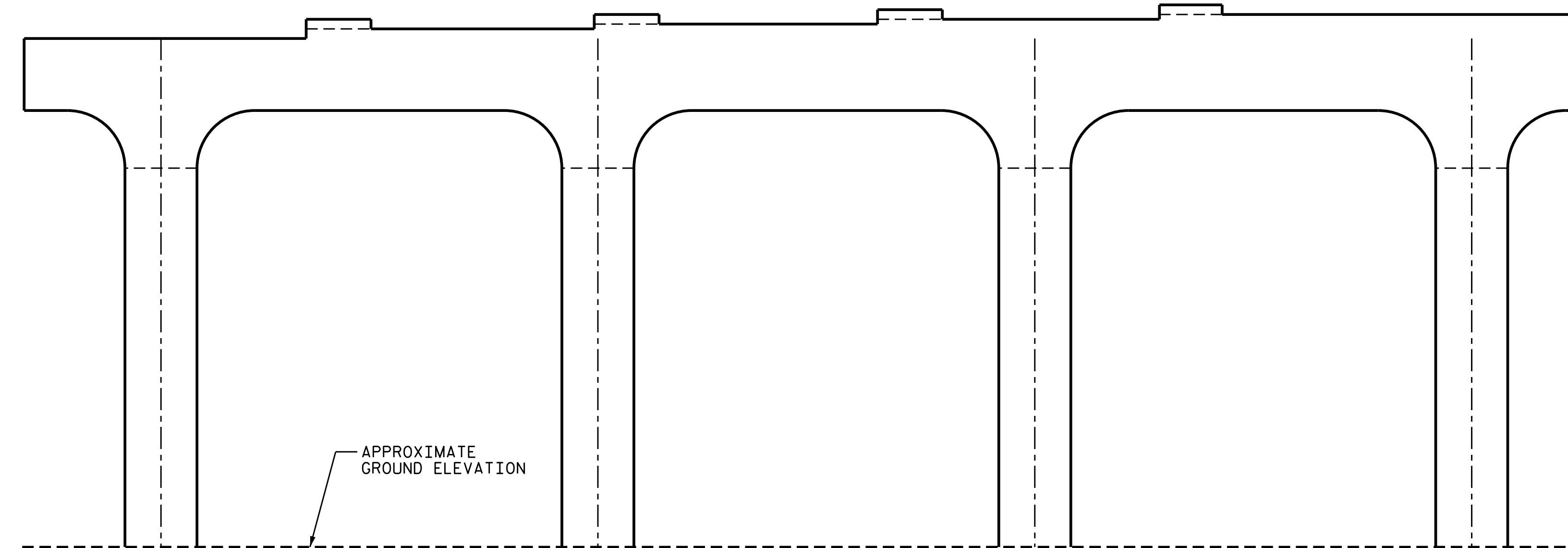
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-  CONCRETE REPAIR AREA
-  SHOTCRETE REPAIR AREA
-  EPOXY RESIN INJECTION (ERI)

PEDESTAL WALL REPAIR, SEE "TYPICAL CAP AND COLUMN REPAIR DETAIL" SHEETS.

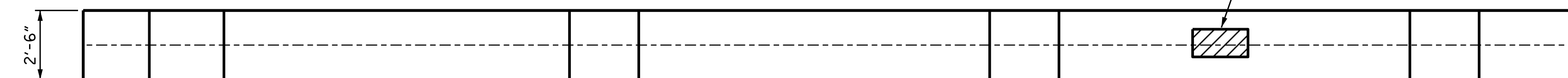


SPAN C
SPAN B

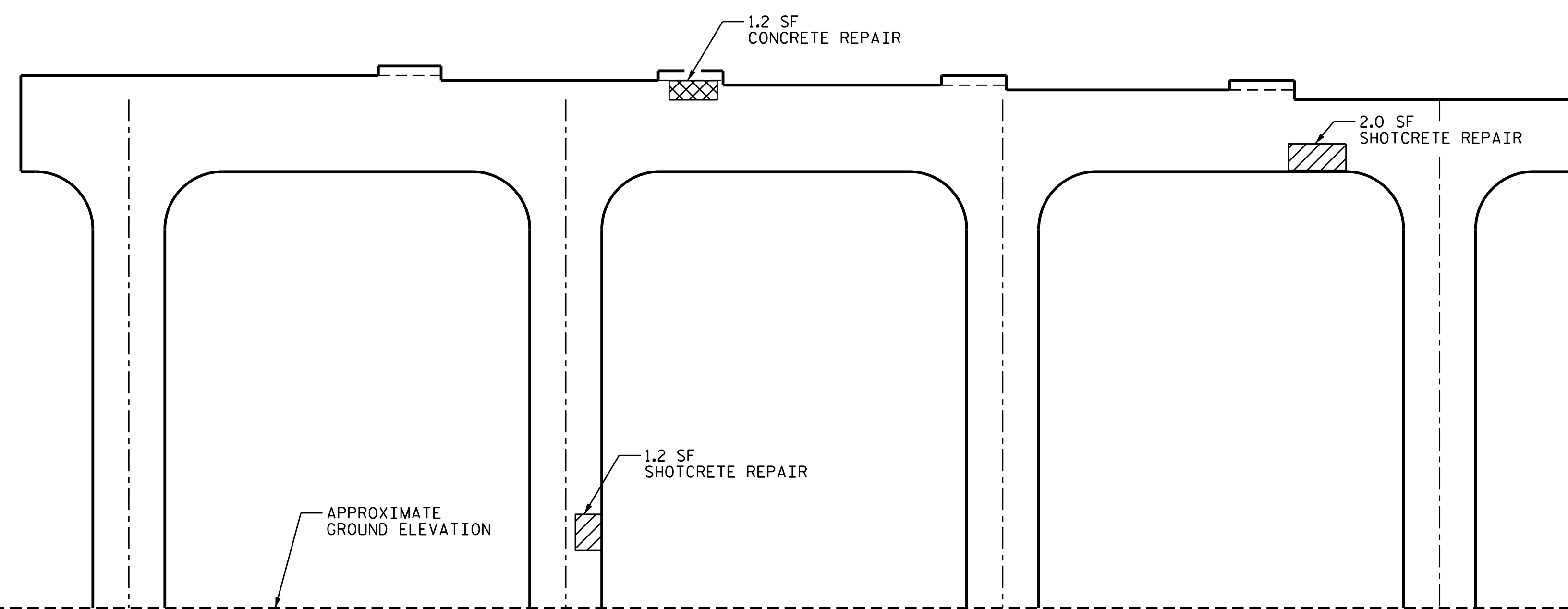


ELEVATION
SPAN B FACE

END VIEW



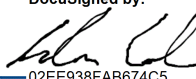
BOTTOM OF CAP

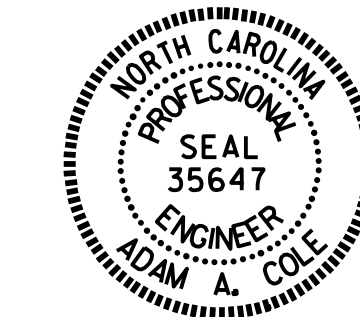


ELEVATION
SPAN C FACE

END VIEW

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590044

DocuSigned by:




8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 2

DRAWN BY : REZA KOUCHEKI DATE : .05/2021
 CHECKED BY : ASRA YASMEEN DATE : .05/2021

DOCUMENT NOT CONSIDERED
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S1-13
2			4			TOTAL SHEETS 274

AS-BUILT REPAIR QUANTITY TABLE

BENT 3 CAP	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	7.5	3.8		
COLUMN	1.0	0.5		
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	19.0			
COLUMN	0.0			
EPOXY COATING	AREA SQ. FT.		AREA SQ. FT.	
TOP OF BENT CAP	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. FOR REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

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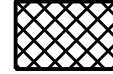
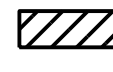

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

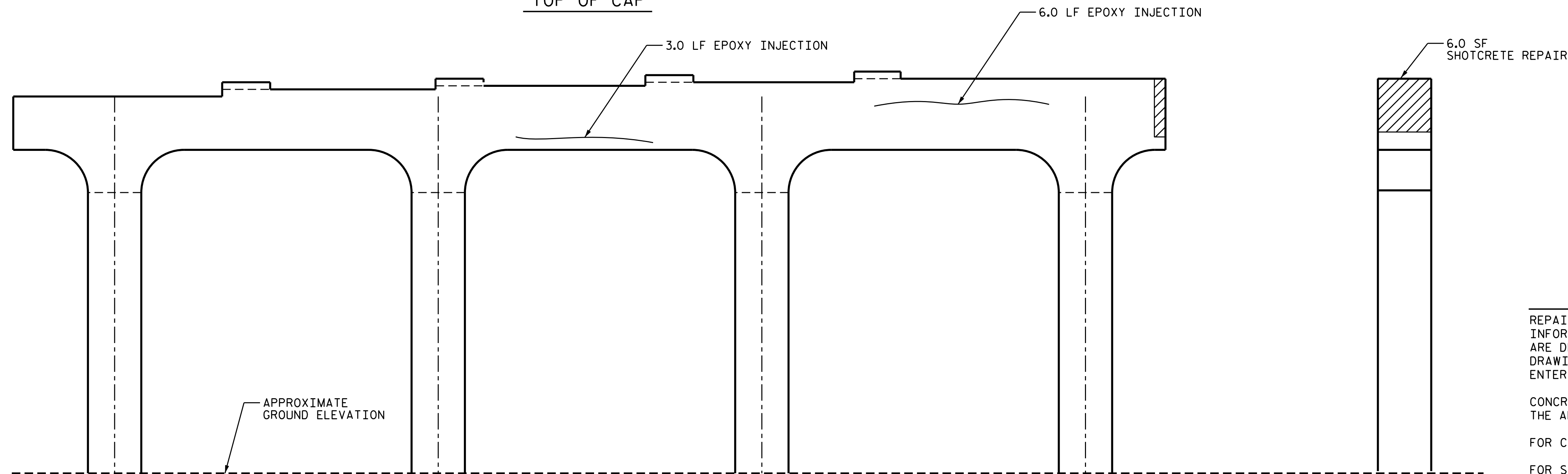
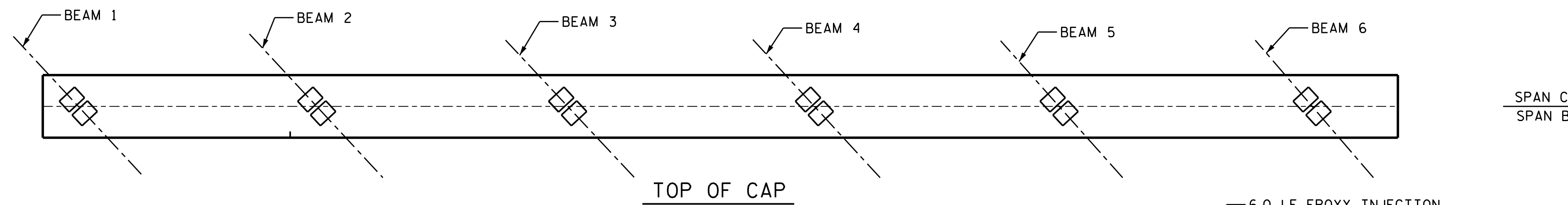
FOR CAP REPAIRS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEETS.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

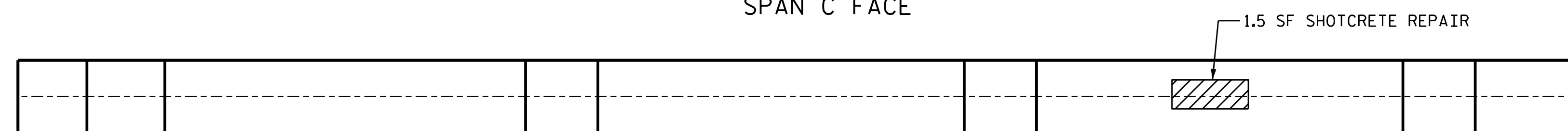
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

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

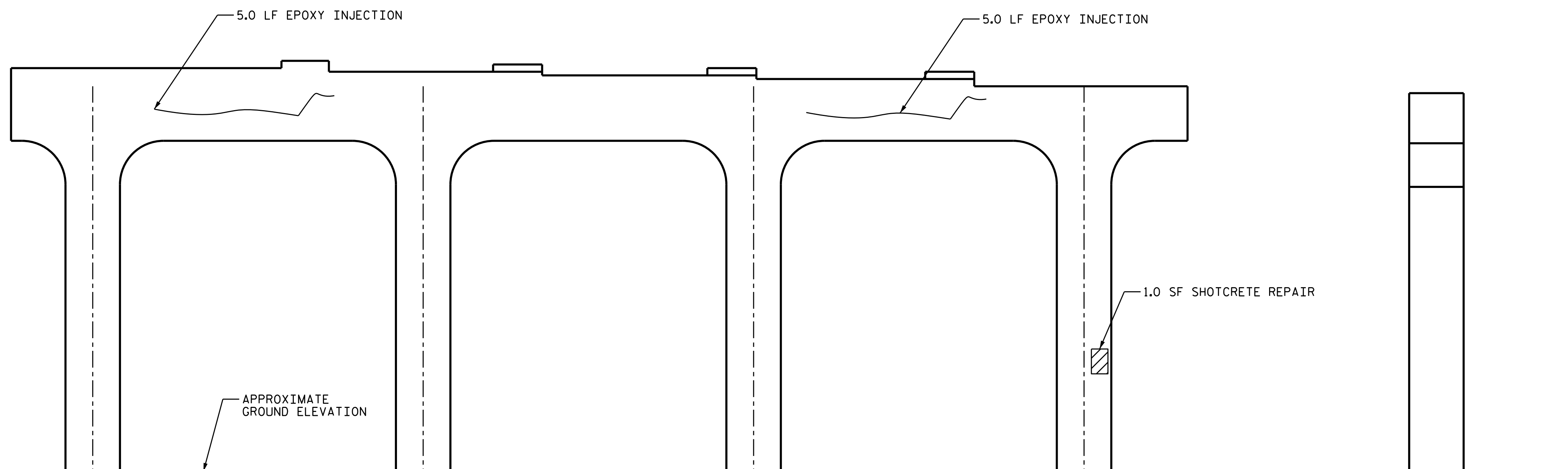


ELEVATION
SPAN C FACE

END VIEW



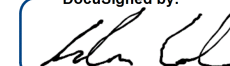
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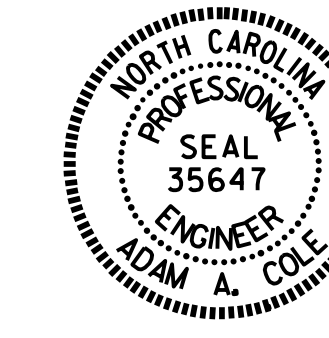


ELEVATION
SPAN D FACE

END VIEW

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590044

DocuSigned by:




8/23/2021

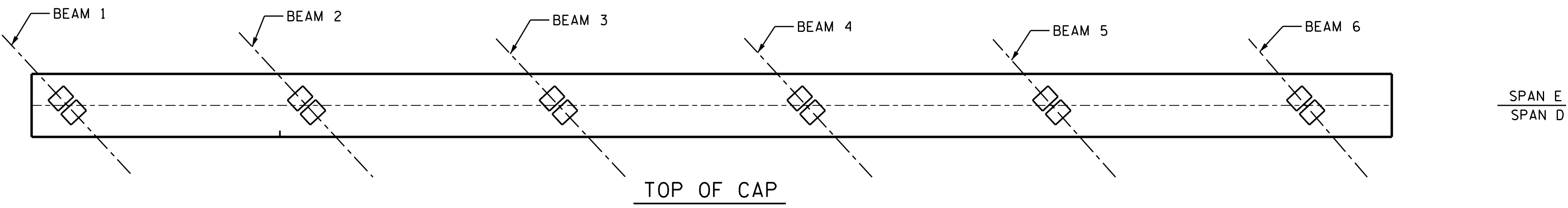
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 3

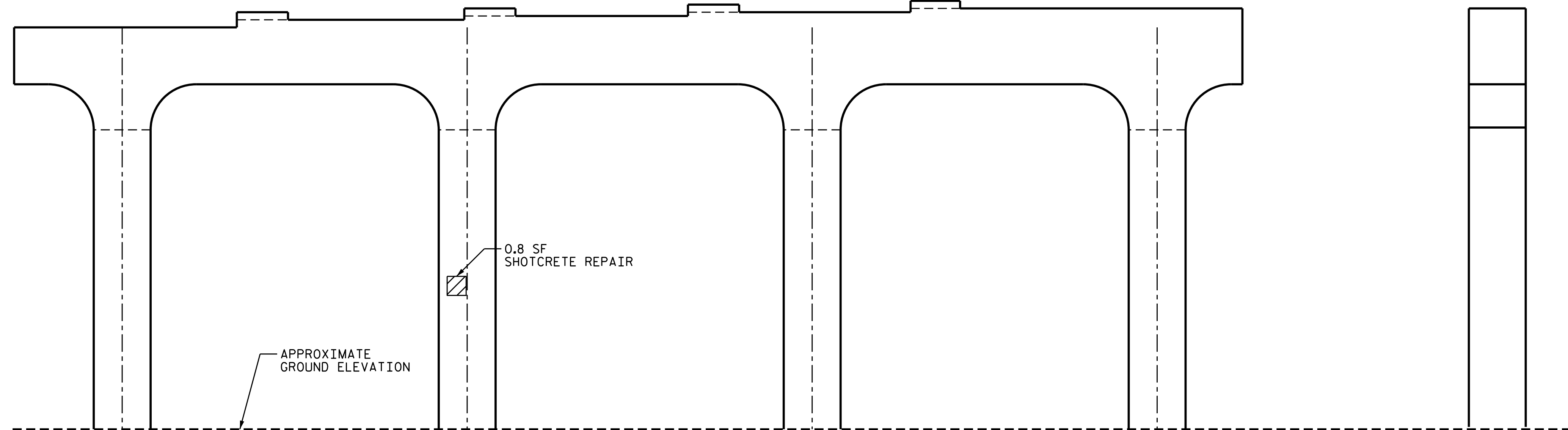
DRAWN BY : REZA KOUCHEKI DATE : .05/2021
 CHECKED BY : ASRA YASMEEN DATE : .05/2021

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S1-14
2			4			TOTAL SHEETS 274

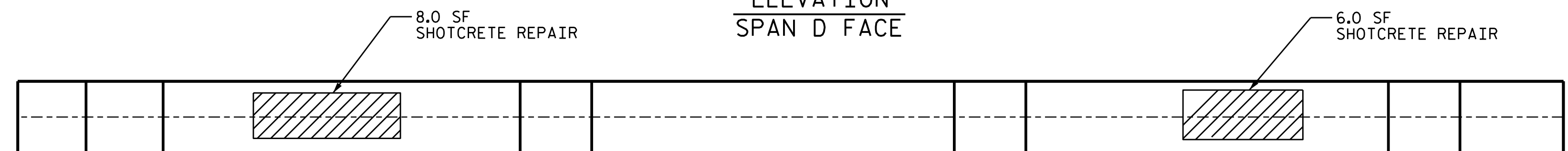


SPAN E
SPAN D

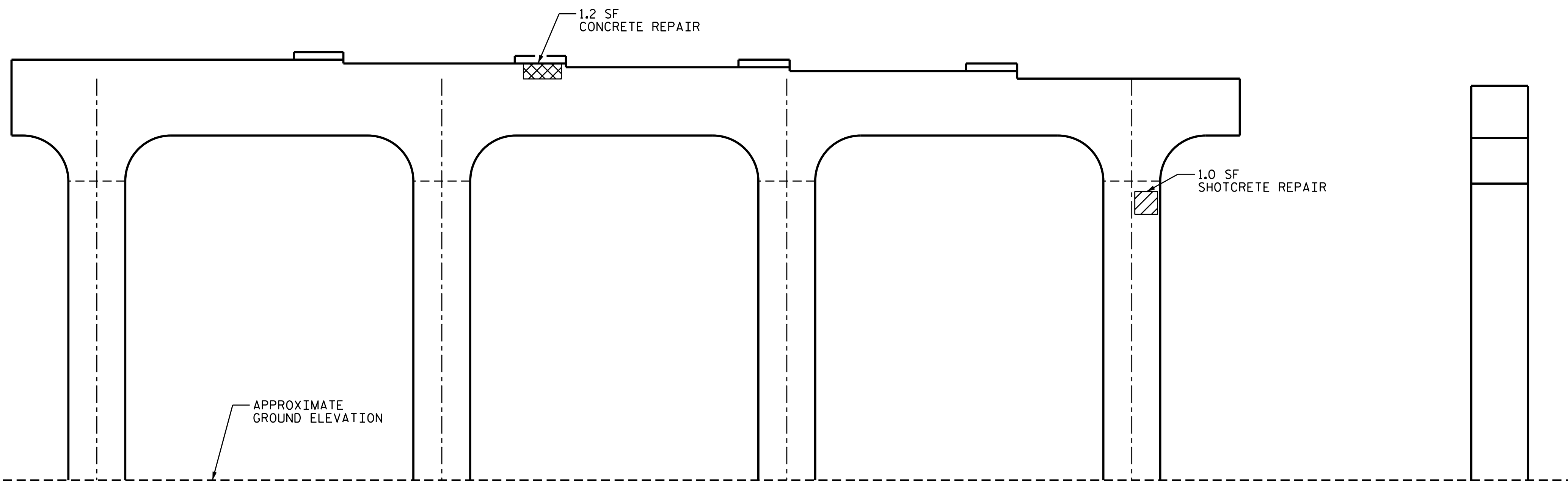


ELEVATION
SPAN D FACE

END VIEW



BOTTOM OF CAP



ELEVATION
SPAN E FACE

END VIEW

AS-BUILT REPAIR QUANTITY TABLE

BENT 4 CAP	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	14.0	7.0		
COLUMN	1.8	0.9		
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	0.0			
COLUMN	0.0			
EPOXY COATING	AREA SQ. FT.		AREA SQ. FT.	
CAP	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. 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.

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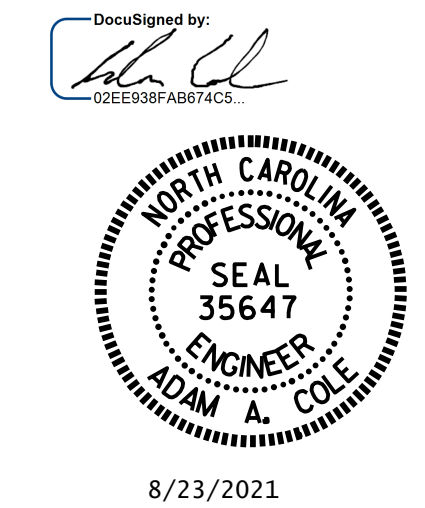
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, 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.

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

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590044



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 4

DRAWN BY : REZA KOUCHEKI DATE : 05/2021
 CHECKED BY : ASRA YASMEEN DATE : 05/2021

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.
1			3			S1-15
2			4			TOTAL SHEETS 274

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AS-BUILT REPAIR QUANTITY TABLE

BENT 5 CAP	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
	CAP	14.3	7.2	
COLUMN	8.0	2.7		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
	CAP	12.0	6.0	
EPOXY RESIN INJECTION				
CAP	LIN. FT.		LIN. FT.	
COLUMN	0.0			
EPOXY COATING				
CAP	AREA SQ. FT.		AREA SQ. FT.	
	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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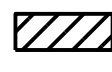

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

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

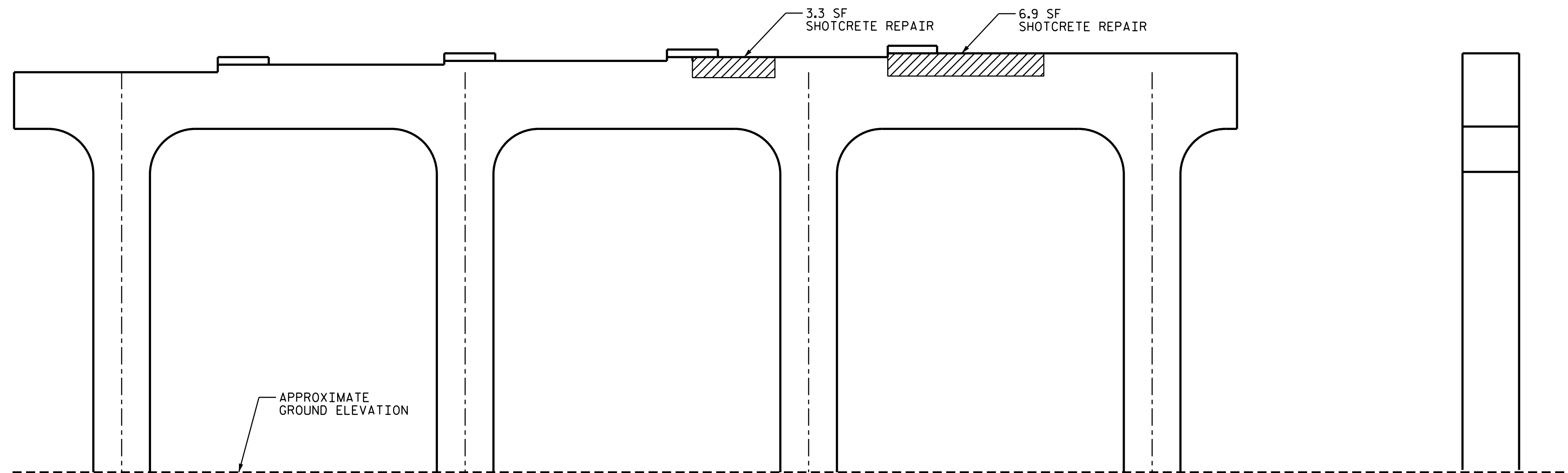
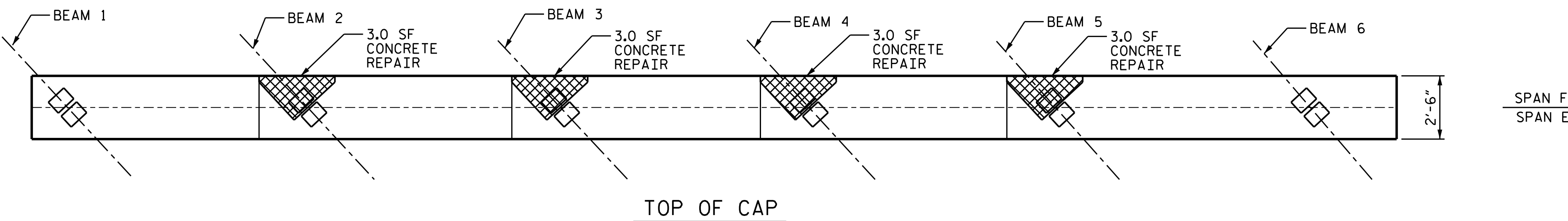
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, 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.

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

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

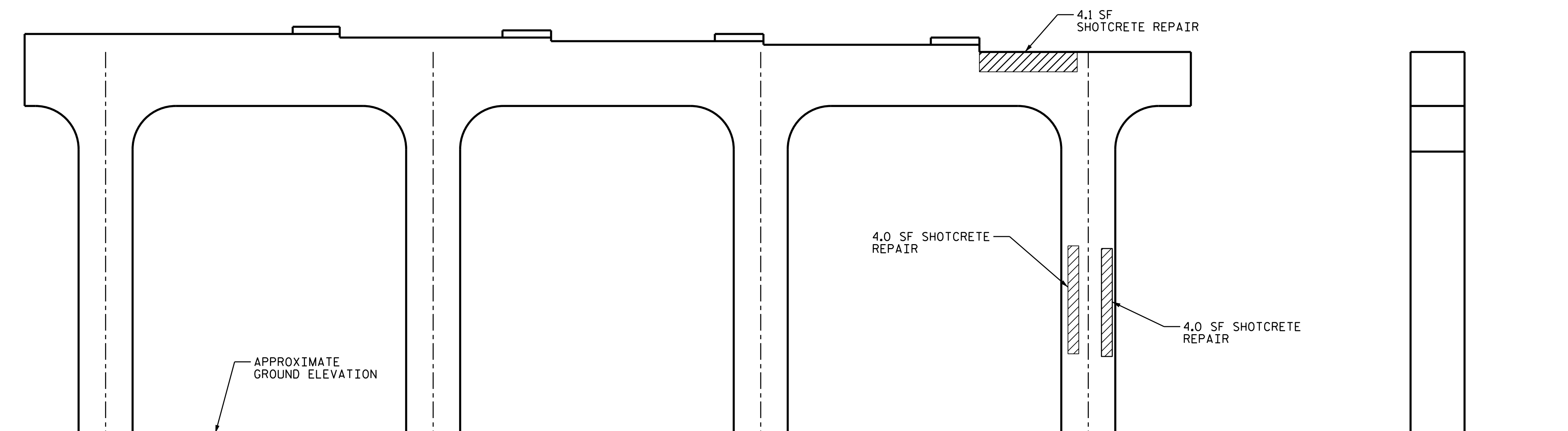


ELEVATION
SPAN E FACE

END VIEW



BOTTOM OF CAP



ELEVATION
SPAN F FACE

END VIEW

DRAWN BY : REZA KOUCHEKI DATE : .05/2021
 CHECKED BY : ASRA YASMEEN DATE : .05/2021

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590044

DocuSigned by:
 02E39FAB014CS...



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 5

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-16
1			3			TOTAL SHEETS
2			4			274

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

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		
CURTAIN WALL	1.5	0.8		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	5.6	2.8		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP & CURTAIN WALL		5.0		
EPOXY COATING		AREA SQ. FT.		AREA SQ. FT.
CAP		178.0		

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

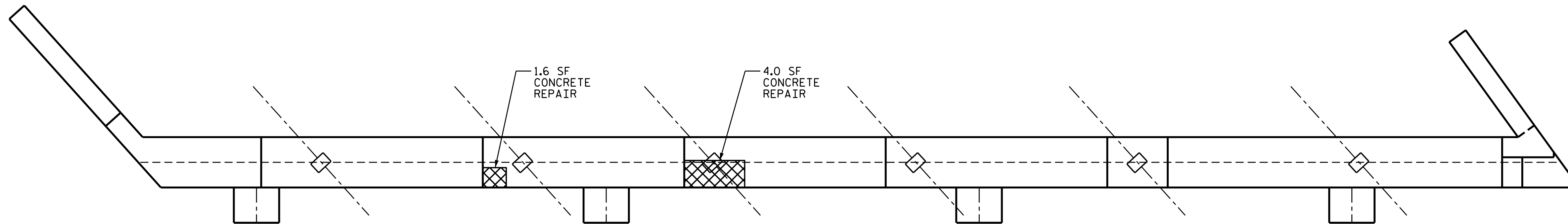
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

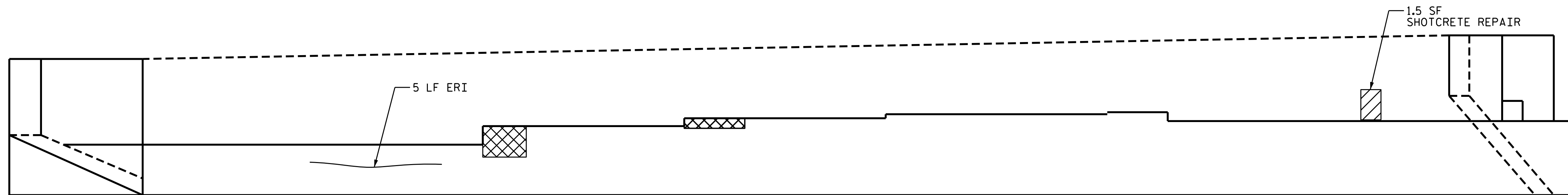
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING TO THE TOP SURFACE OF THE CAP. 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)



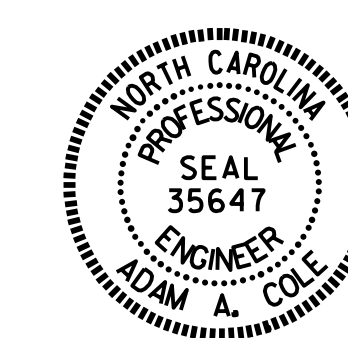
PLAN



ELEVATION

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590044

DocuSigned by:

8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

END BENT 2

DRAWN BY : REZA KOUCHEKI DATE : 6/2021
 CHECKED BY : ASRA YASMEEN DATE : 6/2021

DOCUMENT NOT CONSIDERED
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 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.
1			3			S1-17
2			4			TOTAL SHEETS 274

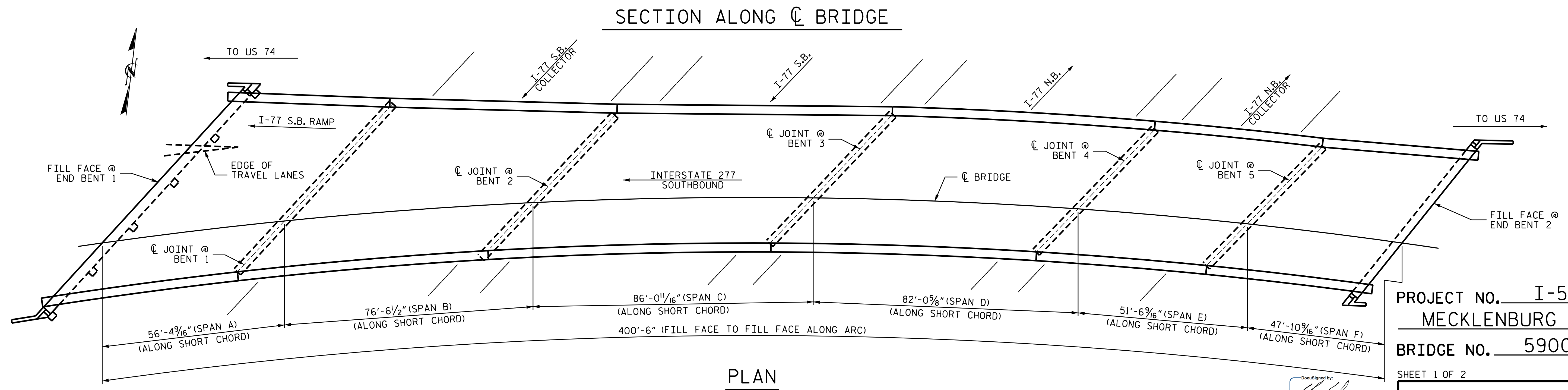
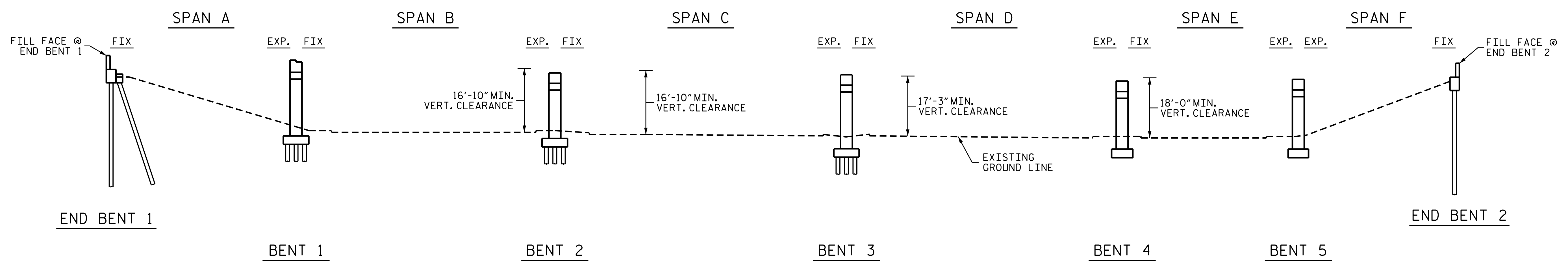
NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 09/16/2020.

BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

SCOPE OF WORK

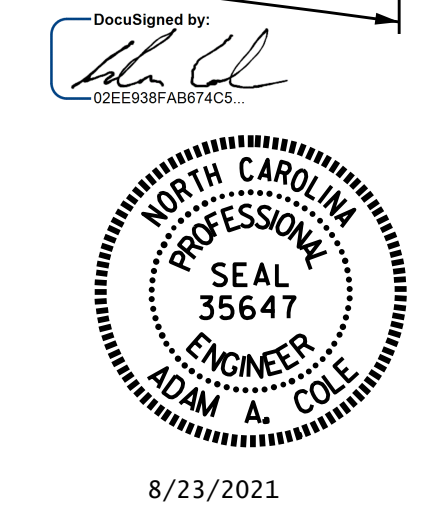
- DEMOLISH EXISTING END BENT JOINTS.
- RECONSTRUCT END BENT JOINTS, AND INSTALL FOAM JOINT SEALS.
- SHOTBLAST EXISTING CONCRETE DECK.
- APPLY SILANE FOR DECK TREATMENT.
- CLEAN END BENT AND BENT CAPS AND APPLY EPOXY COATING.
- CLEAN AND PAINT BEARINGS WITH HRCSA.
- PERFORM SHOTCRETE AND CONCRETE REPAIRS IN PREPARED AREAS
- EPOXY INJECTION OF CONCRETE CRACKS.
- REMOVE DEBRIS FROM TOP OF END BENT AND BENT CAPS AND APPLY EPOXY COATING



PLAN

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590048

SHEET 1 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 FOR BRIDGE ON I-277
 OVER INTERSTATE 77

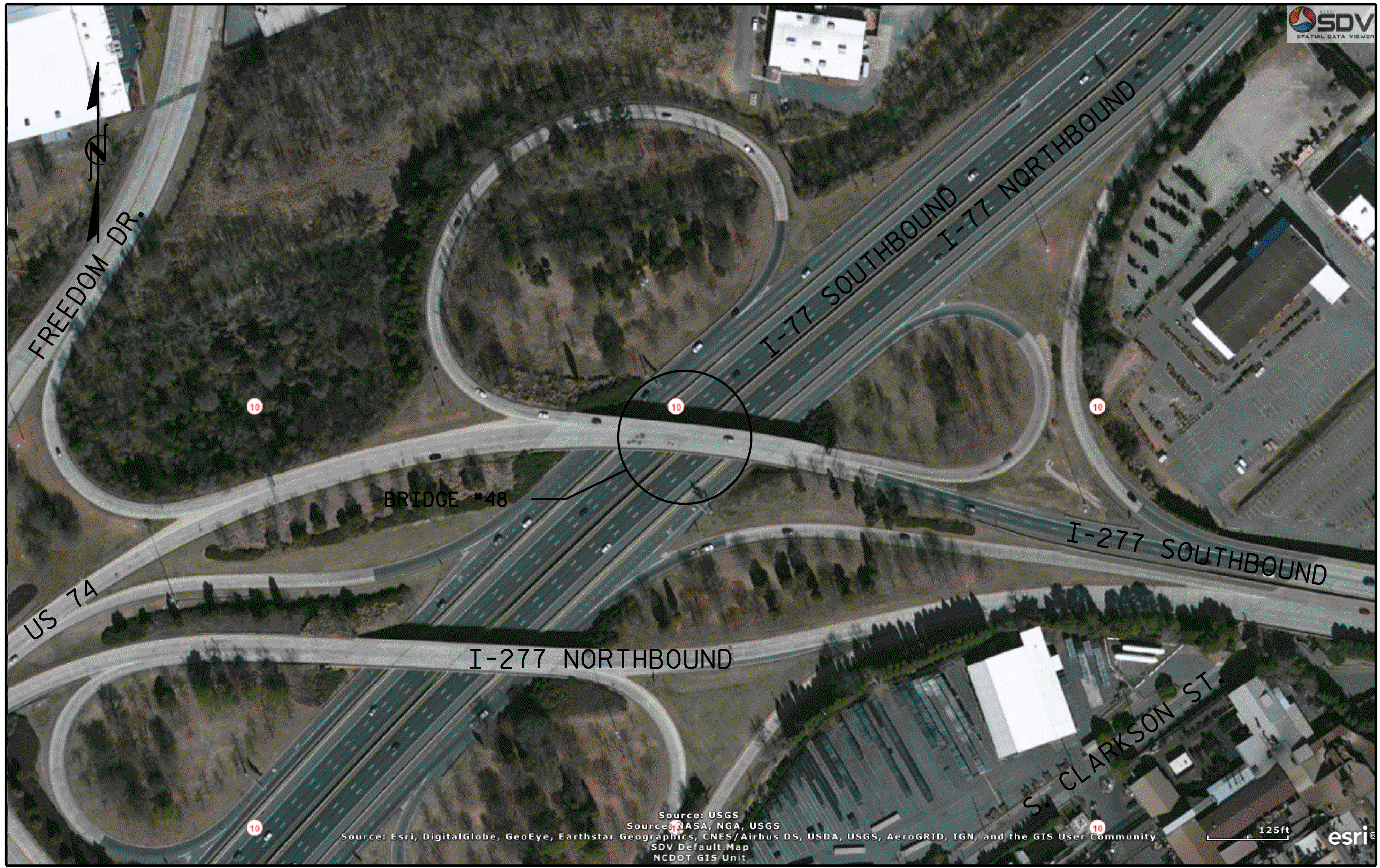
I HEREBY CERTIFY THAT THIS STRUCTURE WAS REHABILITATED ACCORDING TO THESE PLANS OR AS NOTED HEREIN.

 DATE

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:	S2-1
1			3			TOTAL SHEETS
2			4			274



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'-31.14"
LONGITUDE: 80°-51'-51.76"

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.

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.

EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING SURFACE PREPARATION OF BRIDGE DECK.

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

FOR SHOTBLASTING BRIDGE DECK, SEE SPECIAL PROVISION.

FOR SILANE DECK TREATMENT, SEE SPECIAL PROVISION.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSE WORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR BRIDGE JACKING SEE SPECIAL PROVISIONS.

FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISION.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISION.

FOR EXTERIOR CONCRETE DIAPHRAGM REMOVAL, REMOVE CONCRETE FLUSH WITH DECK AND GIRDER AND EPOXY COAT ANY EXPOSED REBAR. THIS WORK WILL BE CONSIDERED INCIDENTAL TO OTHER PAY ITEMS.

PROJECT NO. I-5746C
MECKLENBURG COUNTY
BRIDGE NO. 590048

SHEET 2 OF 2

DocuSigned by:
ADAM A. COLE



8/23/2021

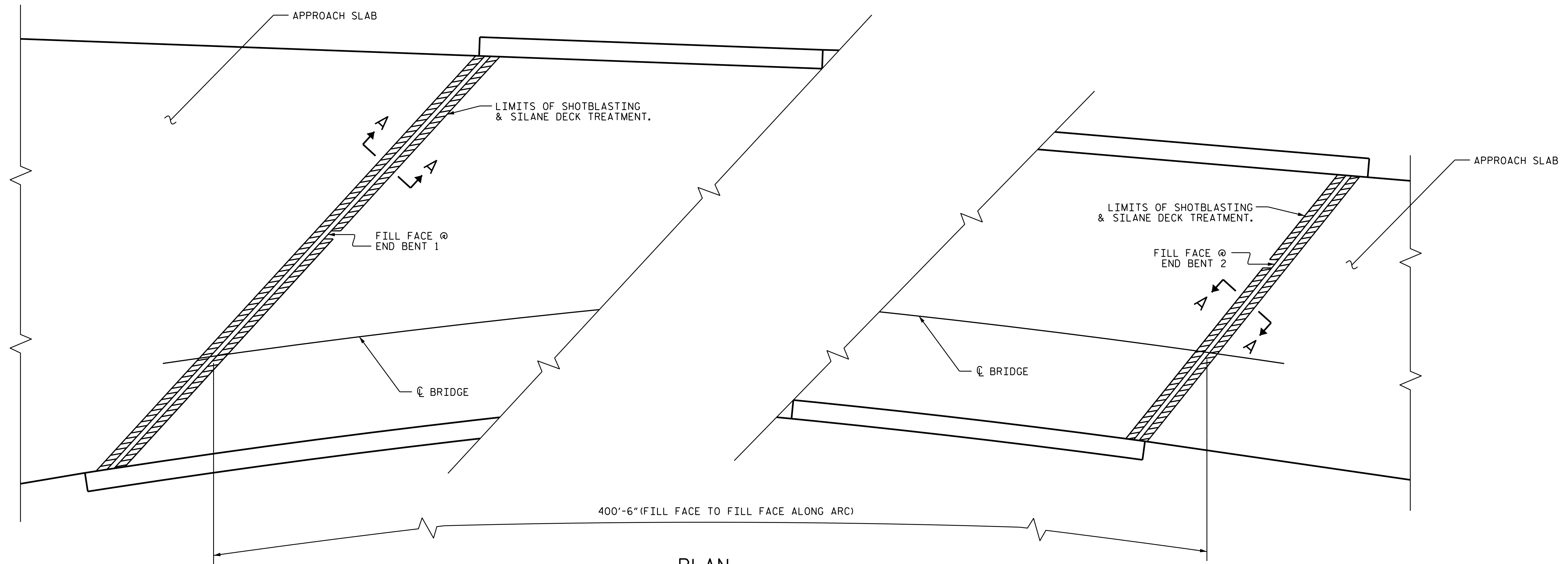
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR BRIDGE ON I-277
OVER INTERSTATE 77

DRAWN BY : REZA KOUCHEKI DATE : 06/2021
CHECKED BY : ASRA YASMEEN DATE : 06/2021

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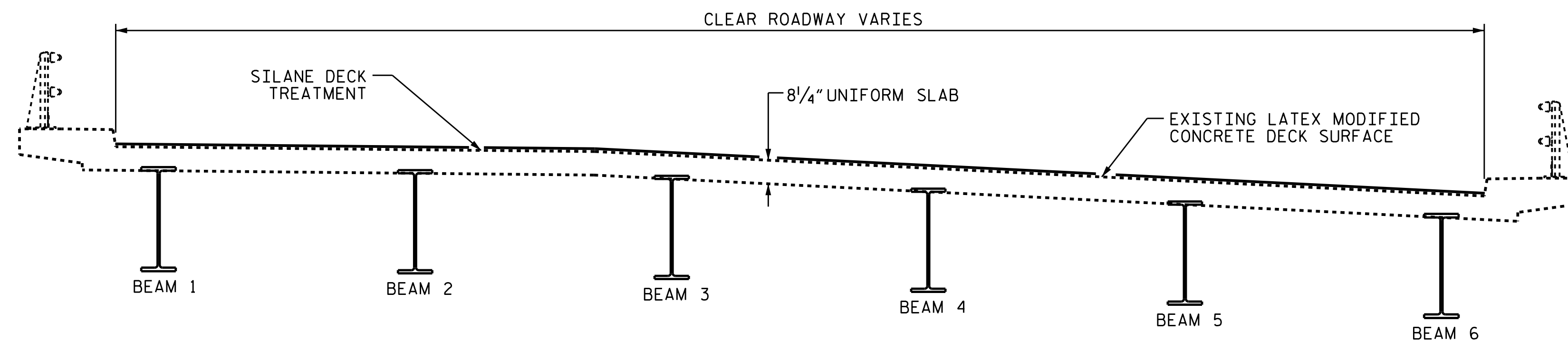
REVISIONS						SHEET NO.
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PLAN

FOR JOINT DETAILS AND SECTION A-A, SEE "JOINT DETAILS" SHEET

BRIDGE JOINT DEMOLITION



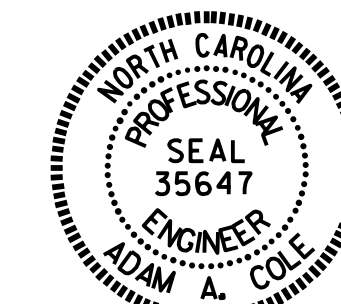
EXISTING TYPICAL SECTION

SPAN C SHOWN, OTHER SPANS SIMILAR

SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
SHOTBLASTING BRIDGE DECK	1,845 SQ. YDS.	
CONCRETE FOR DECK REPAIR	19.3 CU. FT.	
SILANE DECK TREATMENT	1,845 SQ. YDS.	
BRIDGE JOINT DEMOLITION	130.1 SQ. FT.	

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590048

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8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

TYPICAL SECTION AND DECK CRACK SEAL PREPARATION

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

23-AUG-2021 11:55
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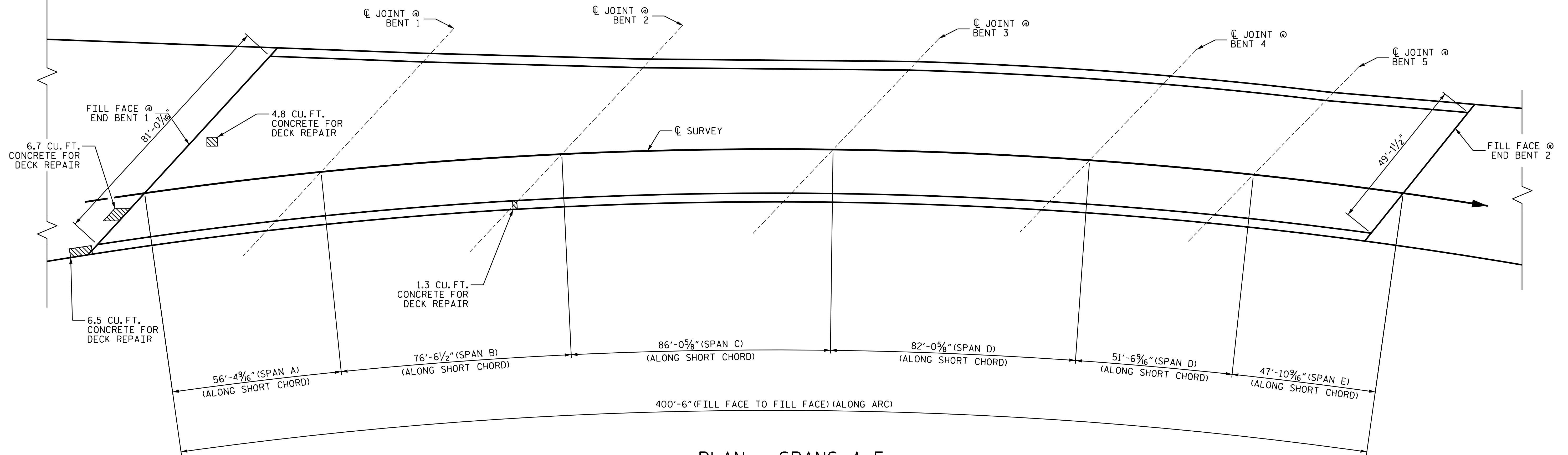
NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH 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 ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

 CONCRETE FOR DECK REPAIR

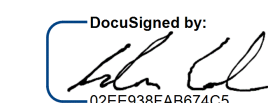
SUMMARY OF QUANTITIES

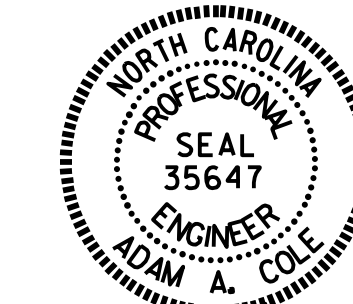
	ESTIMATE	ACTUAL
CONCRETE FOR DECK REPAIR	19.3 CU. FT.	



PLAN - SPANS A-E

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590048

DocuSigned by:

 102E08PAB074C3



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK SURFACE REPAIR

DRAWN BY : M. G. SHAIKH DATE : 05/2021
 CHECKED BY : H. LOCKLEAR DATE : 06/2021

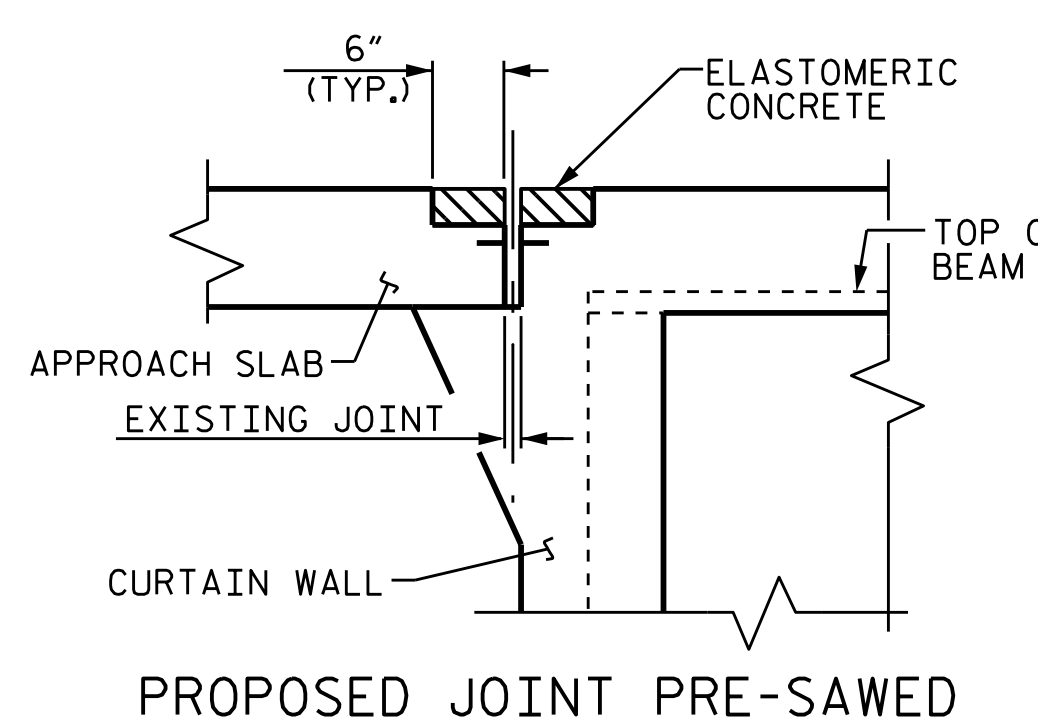
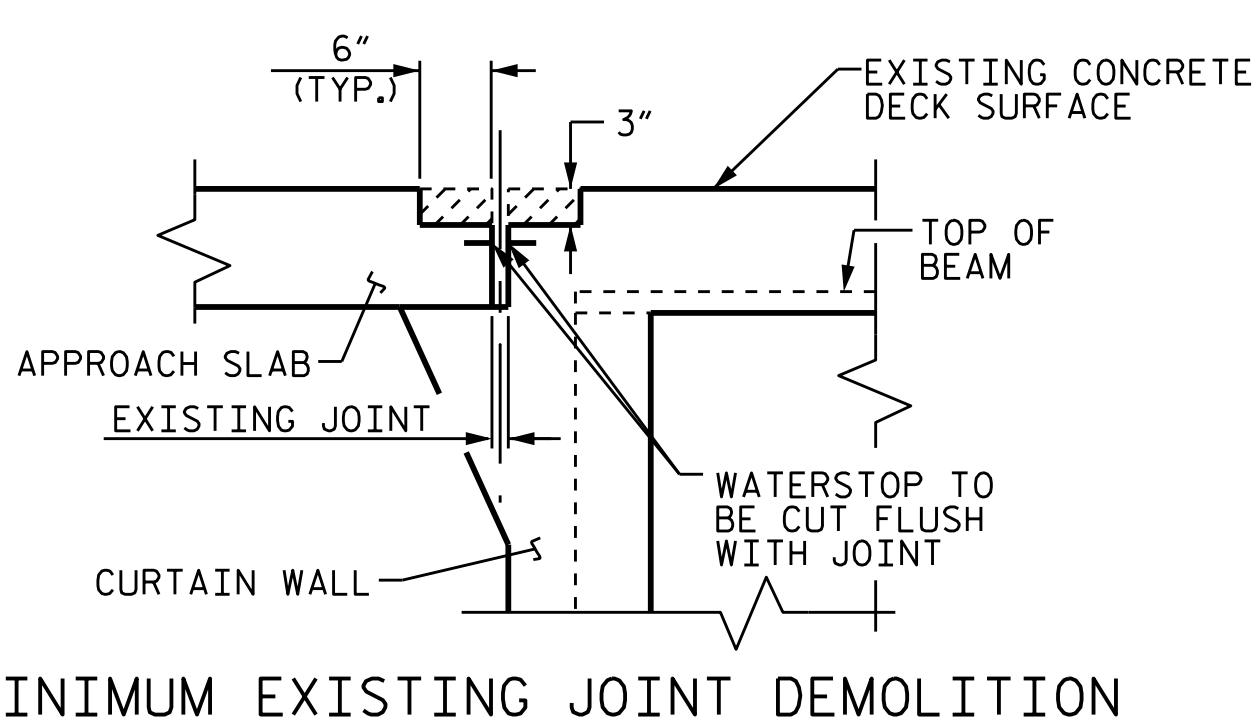
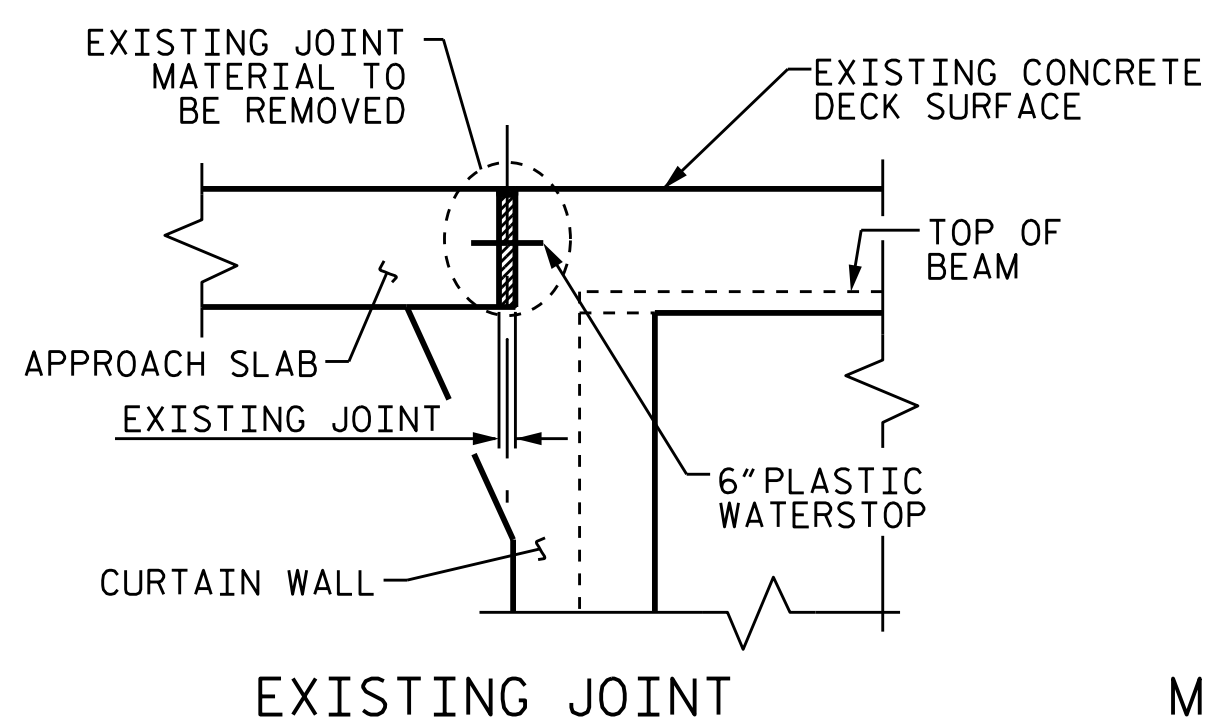
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ELASTOMERIC CONCRETE FOR PRESERVATION		
END BENT 1	20.3	CU. FT.
END BENT 2	12.5	CU. FT.
* TOTAL	32.8	CU. FT.

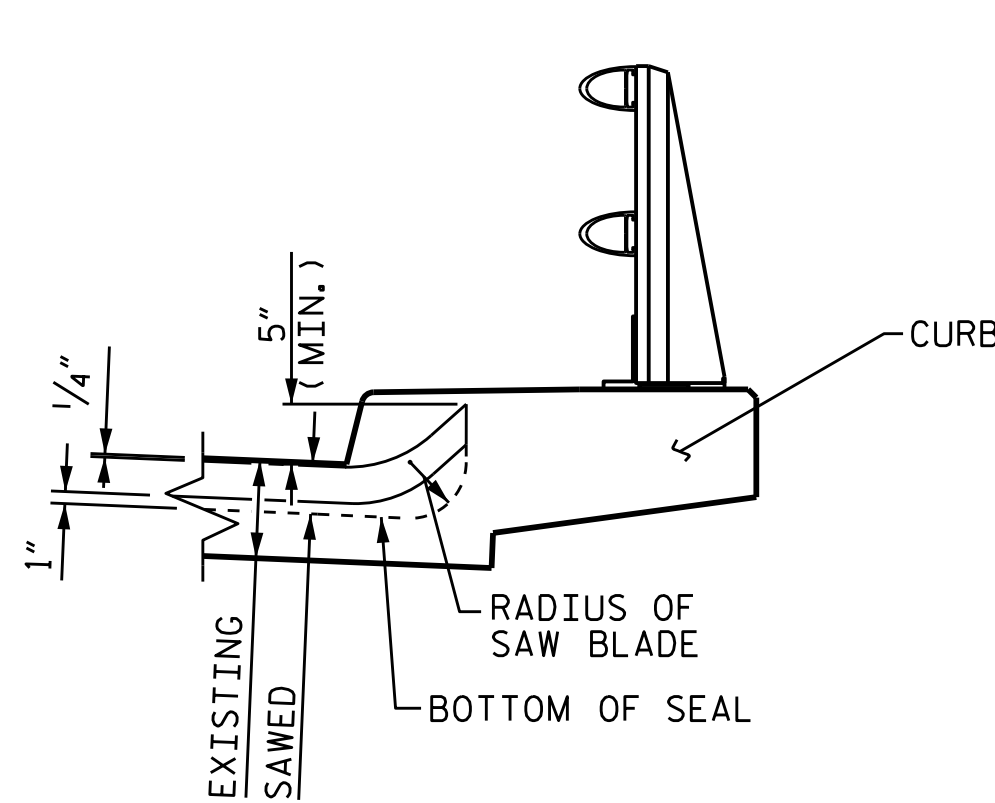
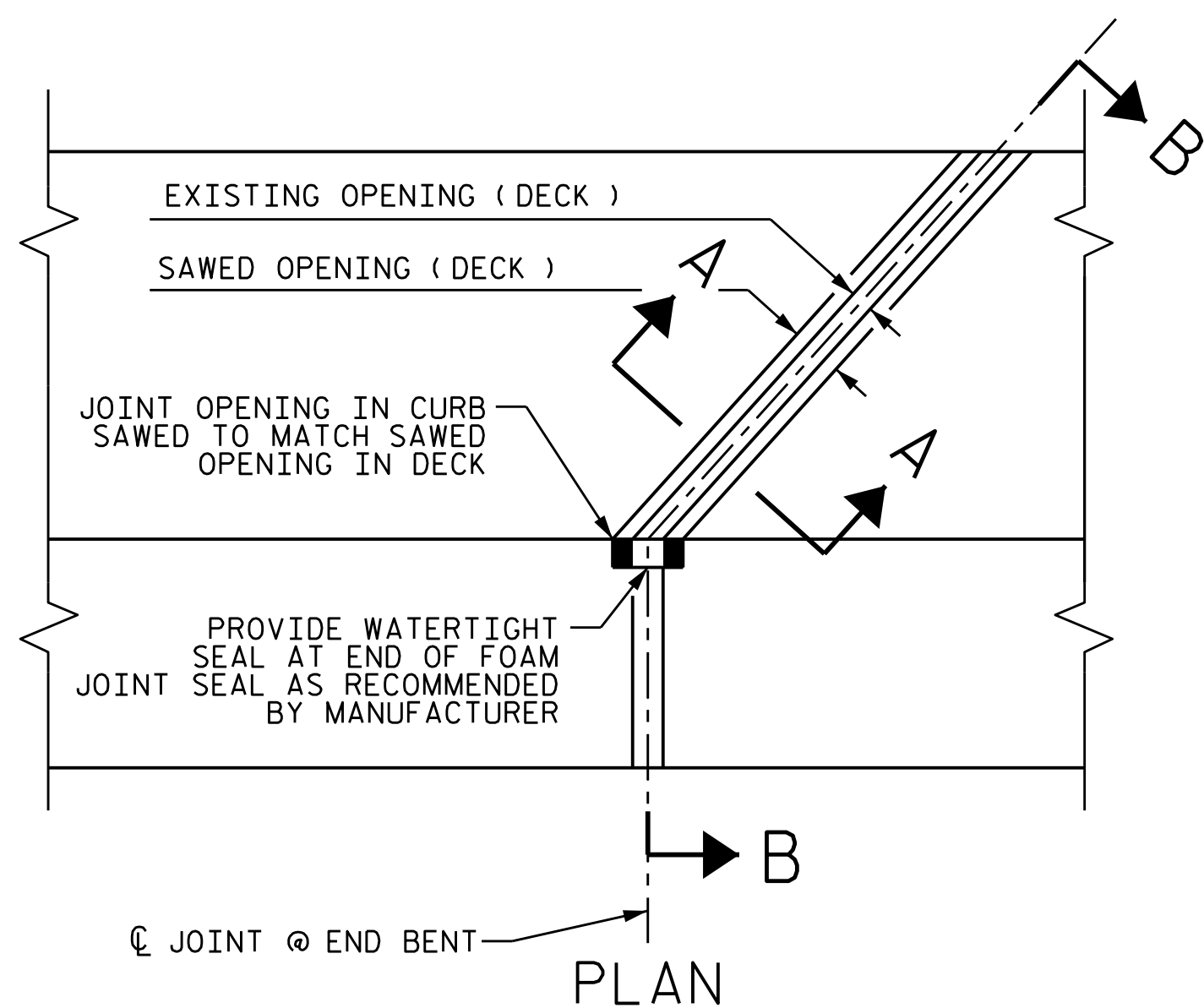
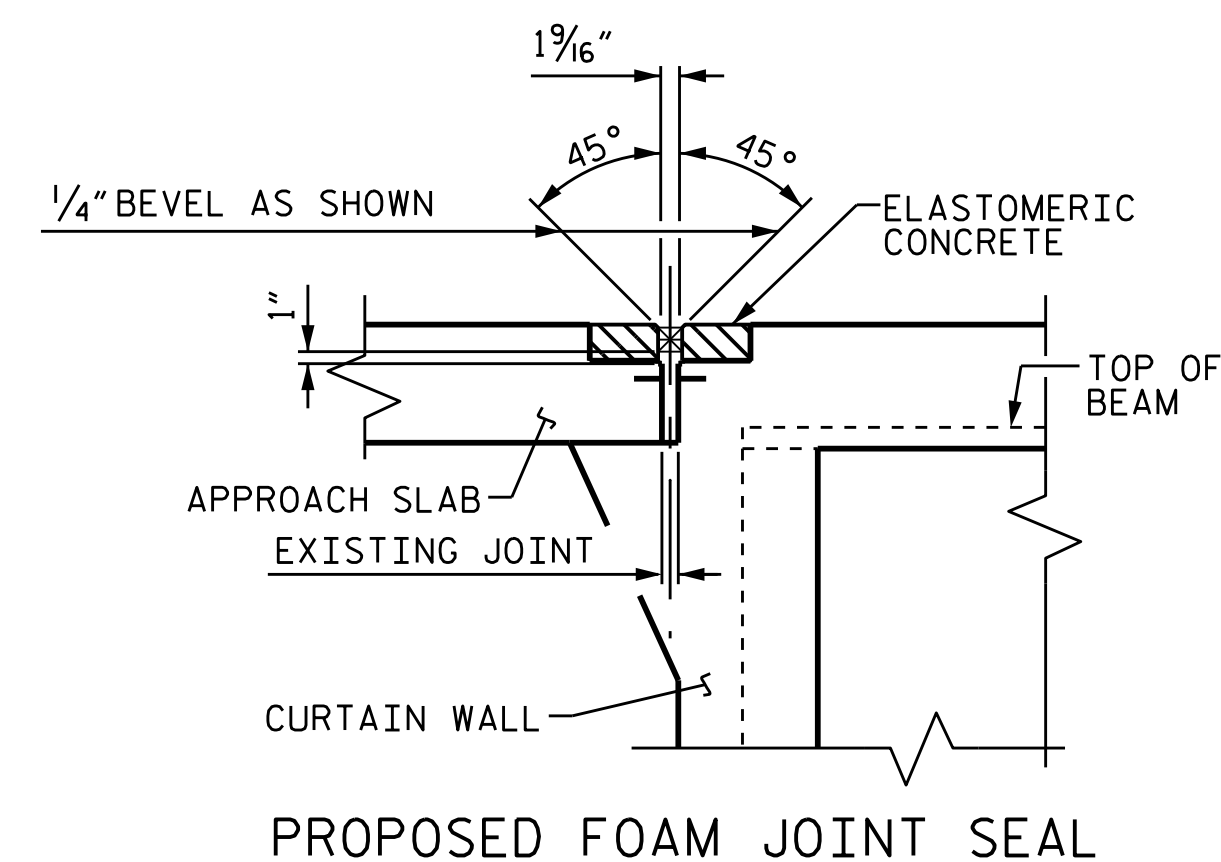
* BASED ON THE MINIMUM BLOCKOUT SHOWN.

JOINT REPIAR QUANTITY TABLE		
	ESTIMATE	ACTUAL
FOAM JOINT SEALS FOR PRESERVATION		
END BENT 1	81.6 LF.	
END BENT 2	49.7 LF.	
TOTAL	131.3 LF.	



SECTION A-A

IF THE EMBEDDED PORTION OF THE EXISTING PLASTIC WATERSTOP IS EXPOSED DURING THE JOINT DEMOLITION, THE ENTIRE CONCRETE DEPTH TO THE WATERSTOP SHALL BE REMOVED. IF SUCH EXCAVATION EXTENDS MORE THAN 2" BELOW THE BOTTOM OF THE PLANNED ELASTOMERIC CONCRETE HEADER, AS SHOWN, APPROVED REPAIR CONCRETE SHALL BE PLACED IN THE EXCAVATED AREA TO THE ELEVATION AT THE BOTTOM OF THE ELASTOMERIC CONCRETE. EXCAVATION OF CONCRETE AT THE EXISTING JOINT SHALL RESULT IN THE BOTTOM OF THE EXCAVATION BEING REASONABLY FLAT AND LEVEL, TO PROVIDE SUFFICIENT SUBSTRATE FOR PLACEMENT AND SUPPORT OF ELASTOMERIC CONCRETE.



SECTION B-B

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

NOTES

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 RECOMMEND AND PROVIDE THE NOMINAL UNCOMPRESSED SEAL WIDTH OF FOAM JOINT SEAL FOR THE SIZE OF THE OPENING ON THE PLANS. FOAM JOINT SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATION.

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

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

THE INSTALLED FOAM JOINT SEALS SHALL BE WATERTIGHT.

QUANTITIES SHOWN IN THE ELASTOMERIC CONCRETE FOR PERSERVATION TABLE ARE BASED ON THE MINIMUM JOINT DEMOLITION SHOWN.

FOR EXCAVATION BELOW THE BOTTOM OF THE PLANNED JOINT DEMOLITION, CONCRETE FOR DECK REPAIR SHALL BE PLACED IN THE EXCAVATED AREA TO THE ELEVATION AT THE BOTTOM OF THE PROPOSED ELASTOMERIC CONCRETE FOR PRESERVATION HEADERS SHOWN.

FOR FOAM JOINT SEAL FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590048

DocuSigned by:
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8/23/2021

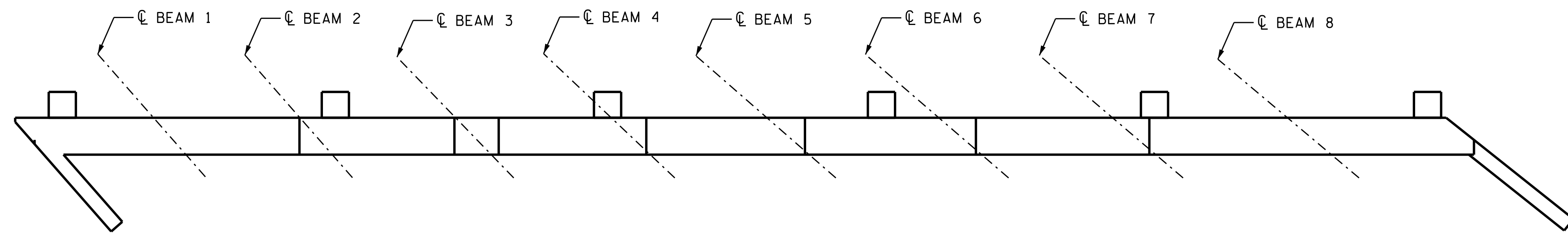
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

JOINT DETAILS

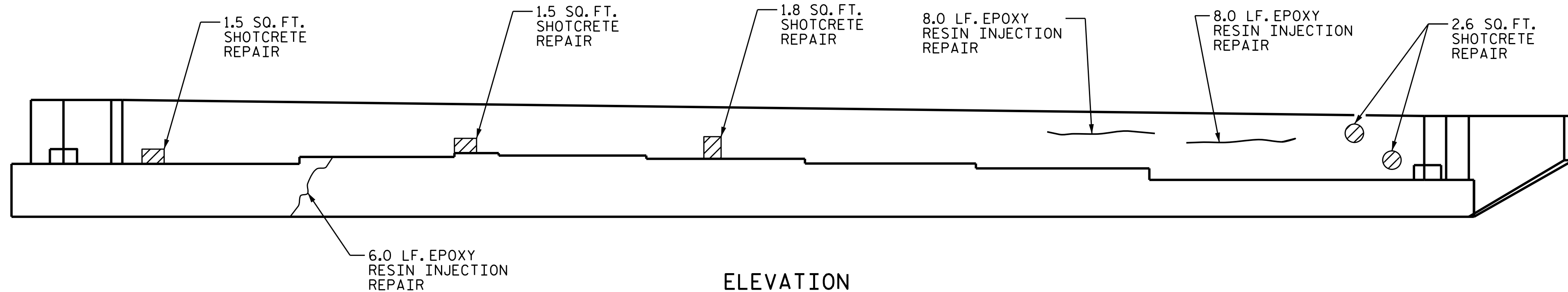
DRAWN BY : REZA KOUCHEKI DATE : 05/2021
 CHECKED BY : ASRA YASMEEN DATE : 05/2021

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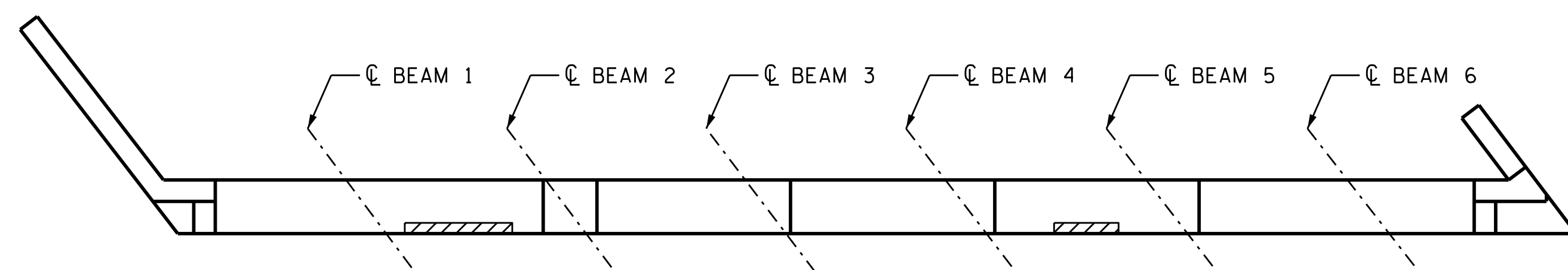


PLAN

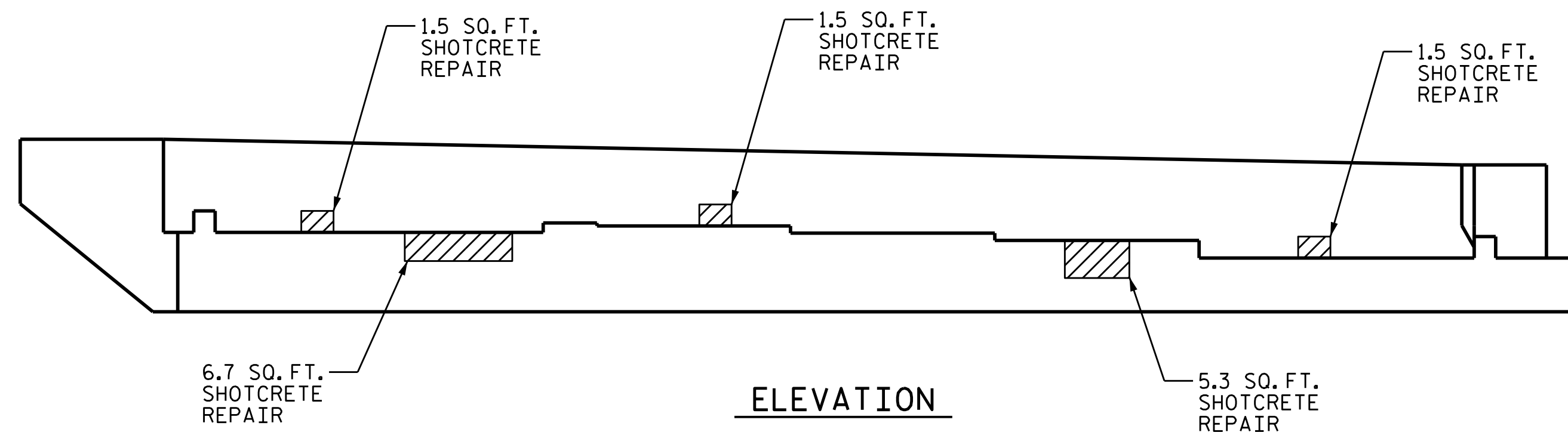


ELEVATION

END BENT 1



PLAN



ELEVATION

END BENT 2

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	0.0	0.0		
BACKWALL	7.4	3.7		
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.	
BACKWALL	16.0			
CAP	6.0			

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	12.0	6.0		
BACKWALL	4.5	2.3		
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.	
BACKWALL	0.0			
CAP	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.

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN 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.

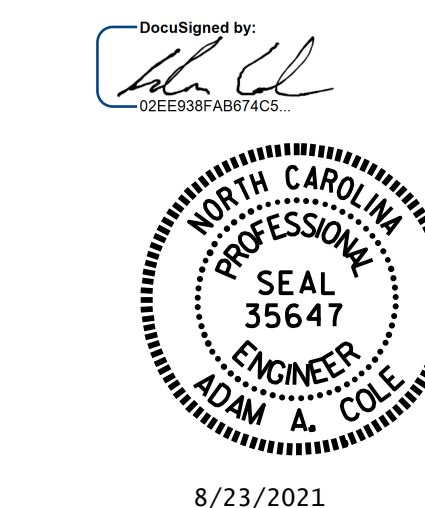
FOR CAP REPAIRS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTIONS, SEE SPECIAL PROVISIONS.

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

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590048



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

END BENTS 1 & 2

DRAWN BY : M. G. SHAIKH/REZA KOUCHEKI DATE : .05/2021
 CHECKED BY : H. LOCKLEAR DATE : .06/2021

NO.	REVISIONS			SHEET NO.
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2			4	

AS-BUILT REPAIR QUANTITY TABLE

REPAIRS BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
COLUMN	0.3	0.2		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	4.3	2.2		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		4.0		
COLUMN		0.0		
EPOXY COATING		SO. FT.		SO. FT.
TOP OF BENT CAP		194.0		

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.

NOTES:

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

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

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

FOR SHOTCRETE REPAIR SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIR SEE SPECIAL PROVISIONS.

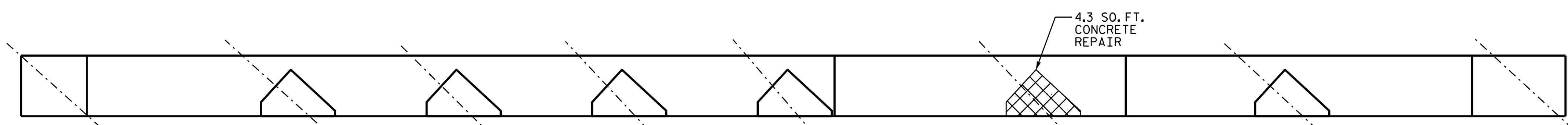
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISION.

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.

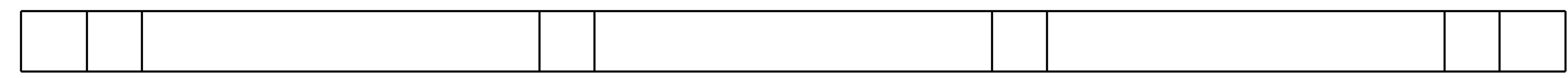
 SHOTCRETE REPAIR AREA

 CONCRETE REPAIR AREA

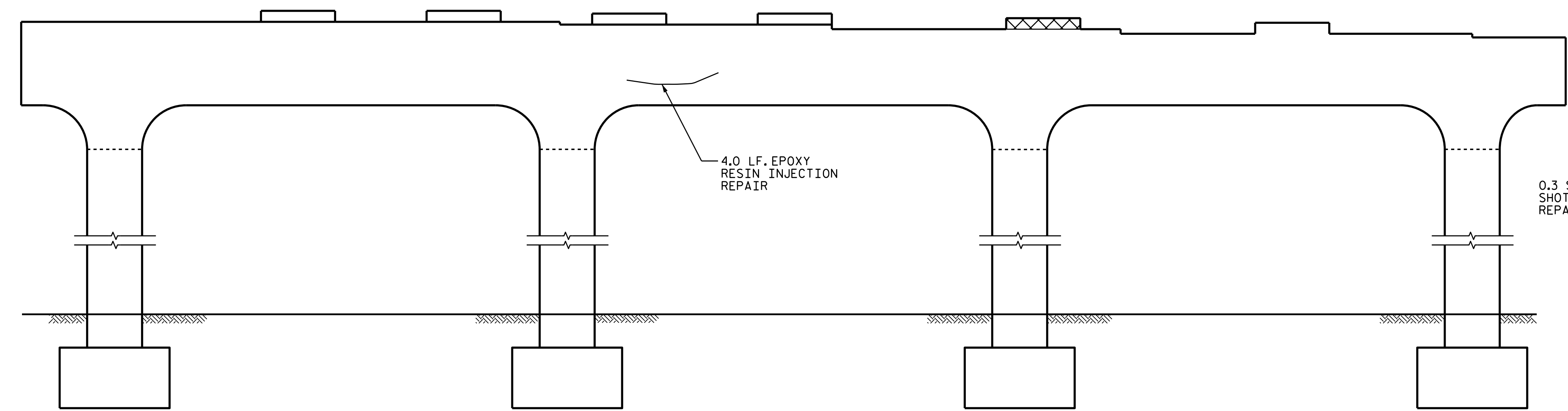
 ERI - EPOXY RESIN INJECTION



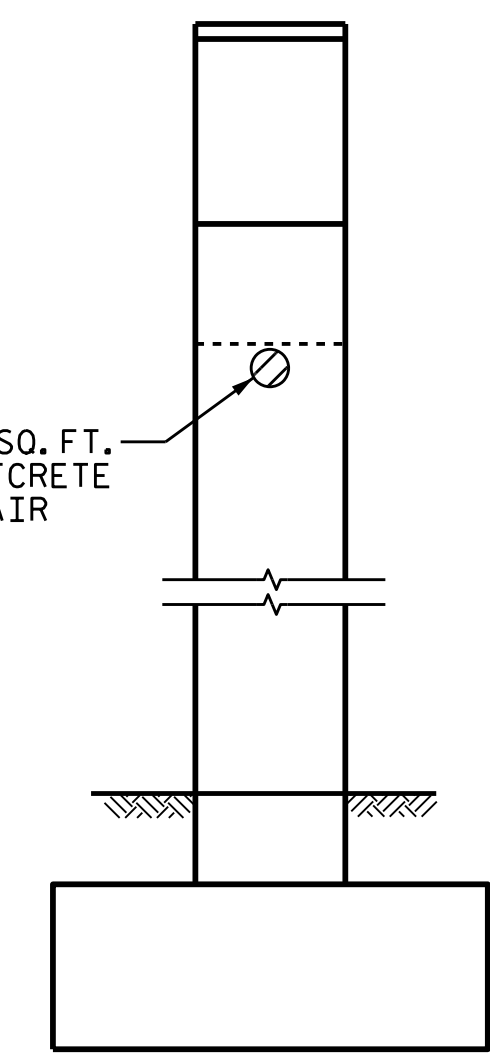
PLAN - TOP OF CAP



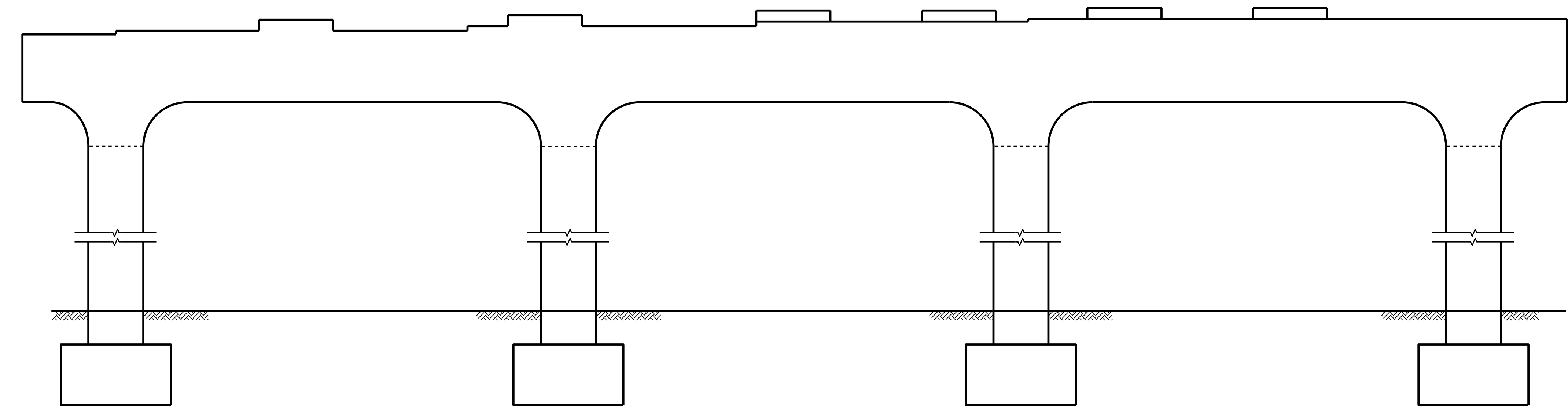
PLAN - BOTTOM OF CAP



SPAN A VIEW - ELEVATION

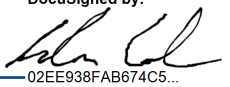


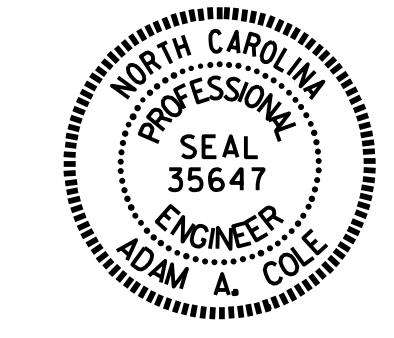
END ELEVATION



SPAN B VIEW - ELEVATION

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590048

DocuSigned by:

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8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 1

DRAWN BY : M. G. SHAIKH DATE : 05/2021
 CHECKED BY : H. LOCKLEAR DATE : 06/2021

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AS-BUILT REPAIR QUANTITY TABLE

REPAIRS BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
COLUMN	1.7	0.9		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		16.0		
COLUMN		0.0		
EPOXY COATING		SO. FT.		SO. FT.
TOP OF BENT CAP		165.0		

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.

NOTES:

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

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

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




FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

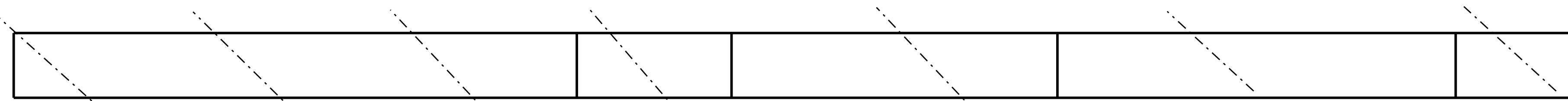
FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

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.

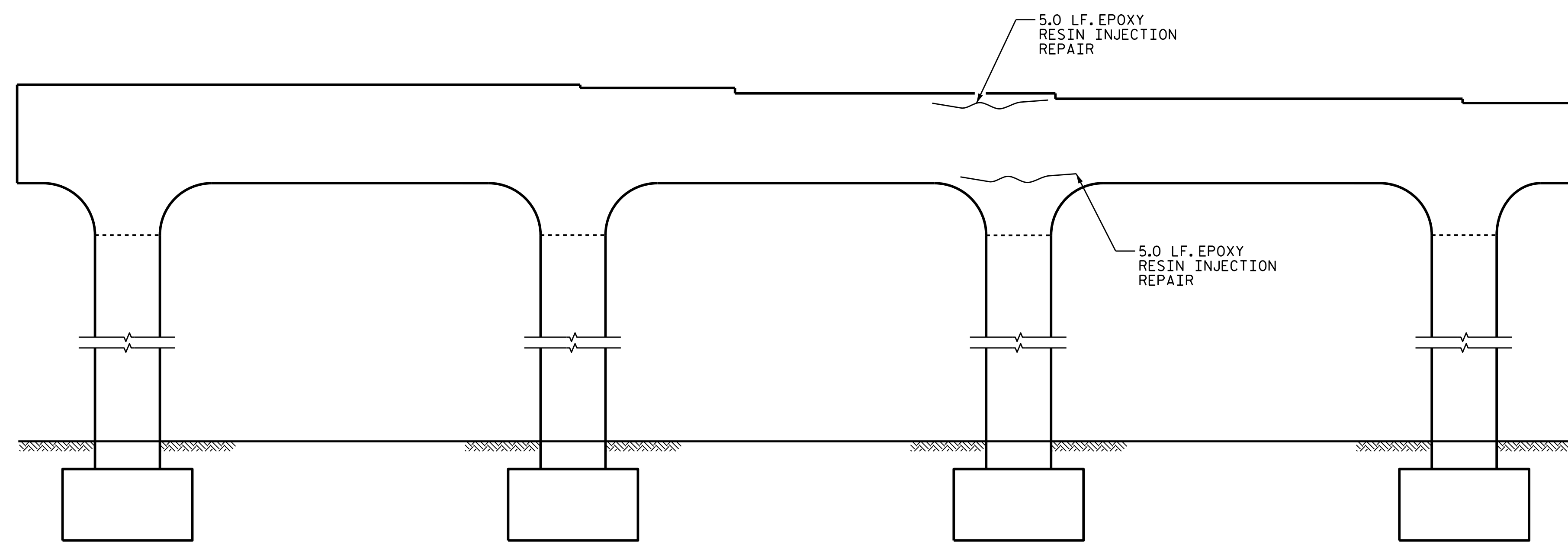
 SHOTCRETE REPAIR AREA
 CONCRETE REPAIR AREA
 ERI - EPOXY RESIN INJECTION



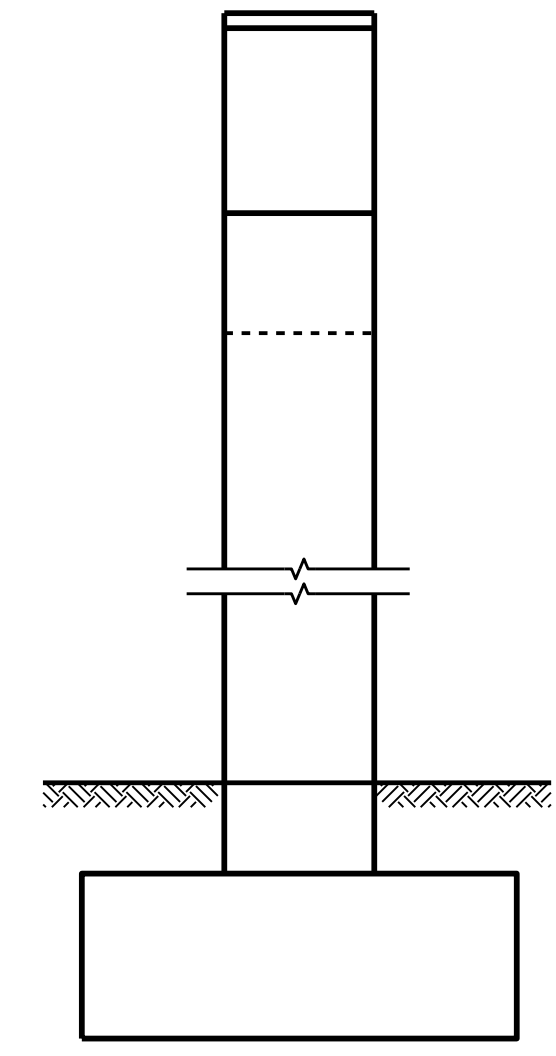
PLAN - TOP OF CAP



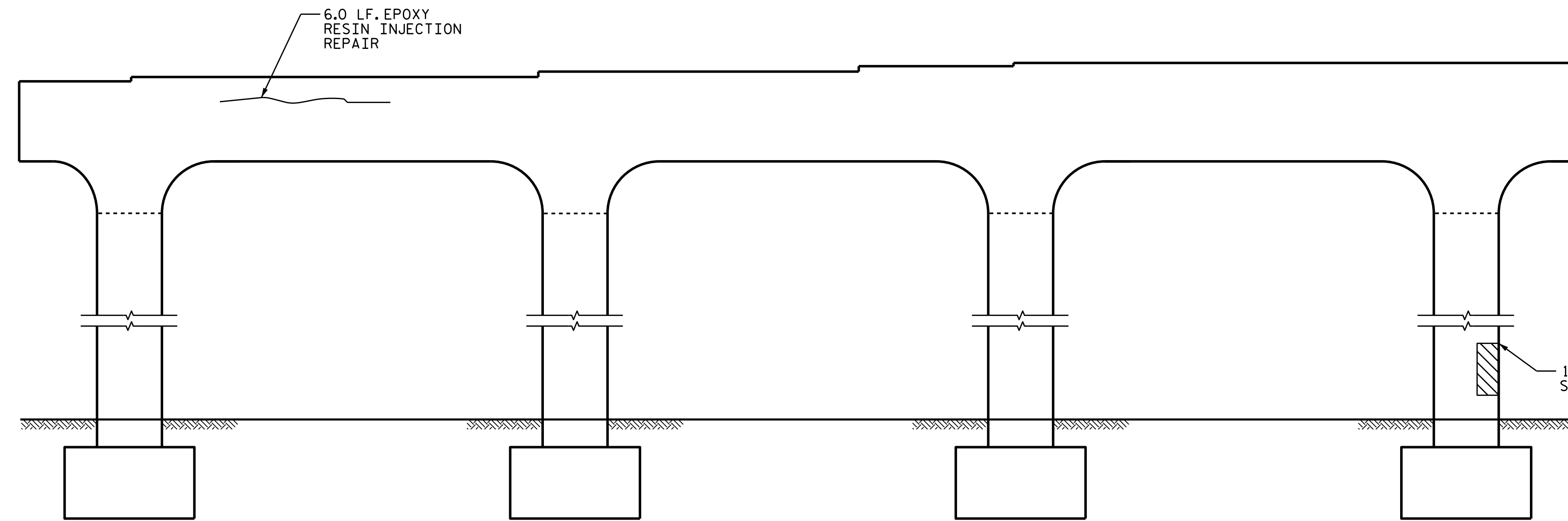
PLAN - BOTTOM OF CAP



SPAN B VIEW - ELEVATION

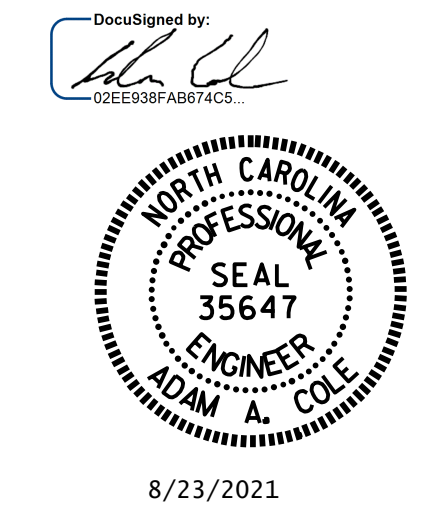


END ELEVATION



SPAN C VIEW - ELEVATION

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590048



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 2

DRAWN BY : M. G. SHAIKH DATE : .05/2021
 CHECKED BY : H. LOCKLEAR DATE : .06/2021

NO.	REVISIONS			SHEET NO.
	BY:	DATE:	NO.	
1			3	S2-9
2			4	TOTAL SHEETS 274

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

AS-BUILT REPAIR QUANTITY TABLE

REPAIRS BENT 3	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	3.8	1.9		
COLUMN	60.7	30.4		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		5.5		
COLUMN		19.0		
EPOXY COATING		SO. FT.		SO. FT.
TOP OF BENT CAP		151.0		

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.

NOTES:

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

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

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




FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

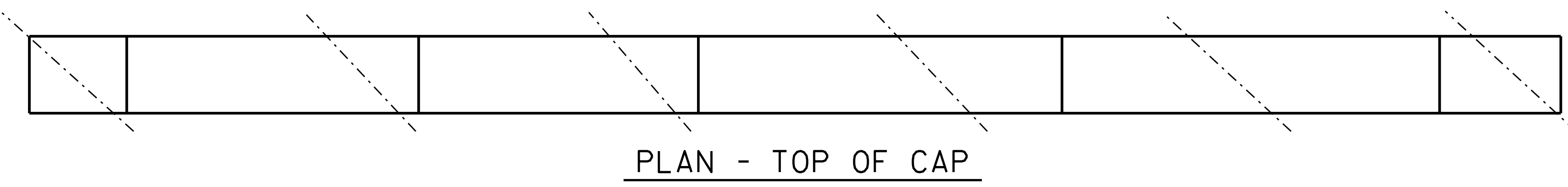
FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

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 MASONARY PLATES, FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

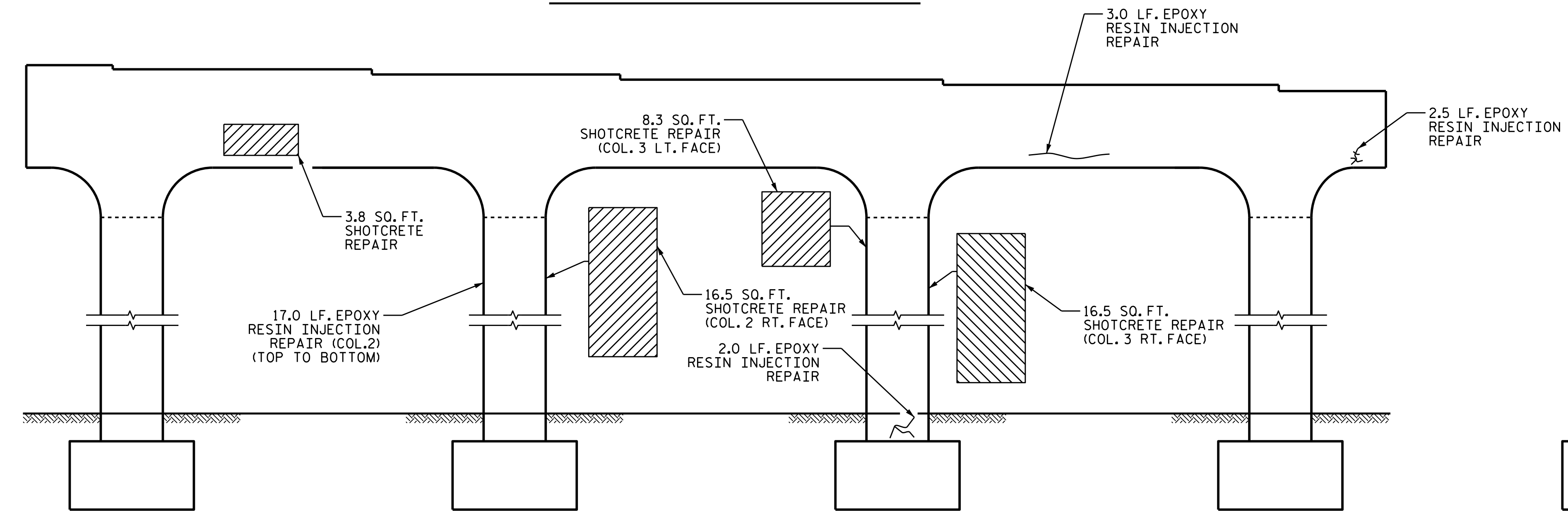
-  SHOTCRETE REPAIR AREA
-  CONCRETE REPAIR AREA
-  ERI - EPOXY RESIN INJECTION



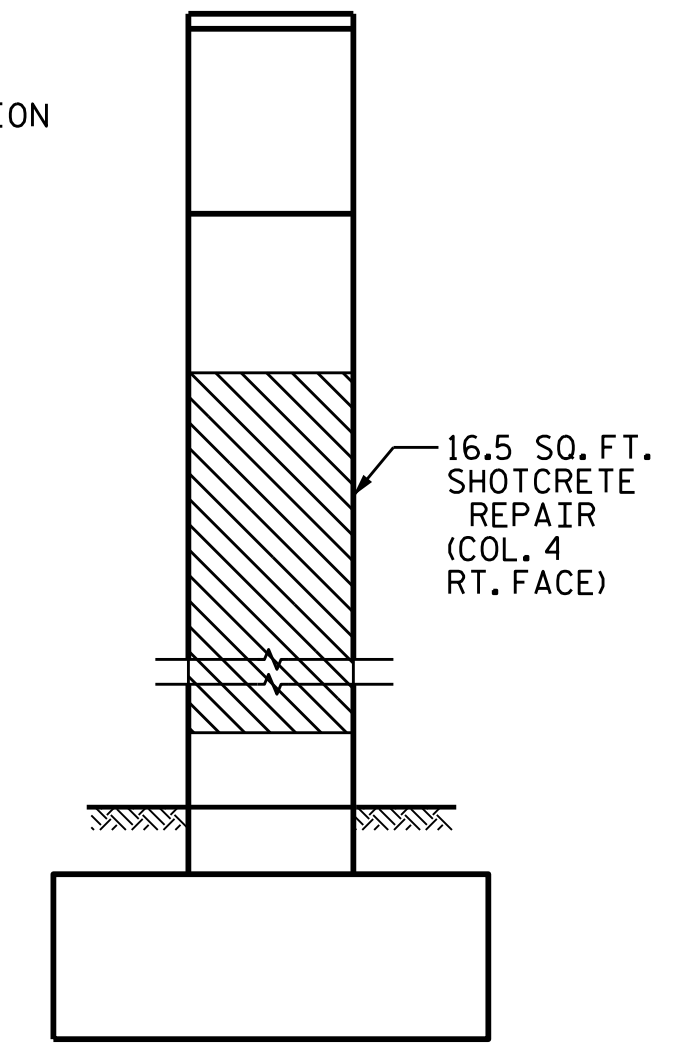
PLAN - TOP OF CAP



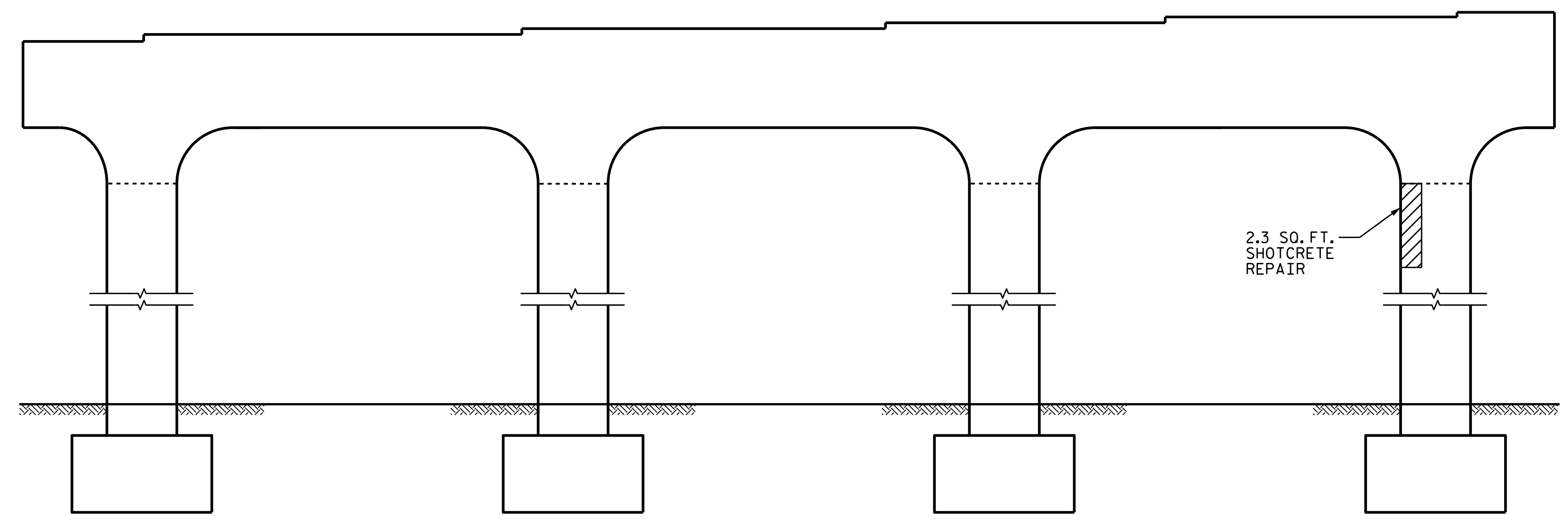
PLAN - BOTTOM OF CAP



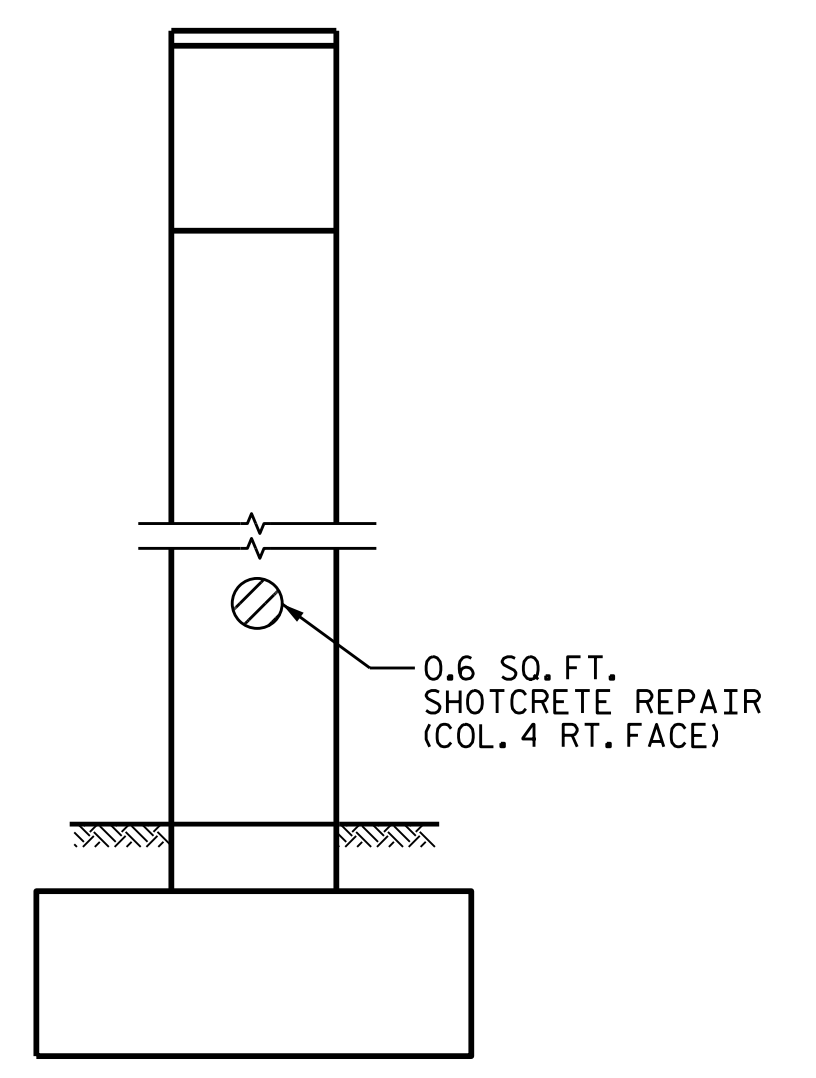
SPAN C VIEW - ELEVATION



END ELEVATION

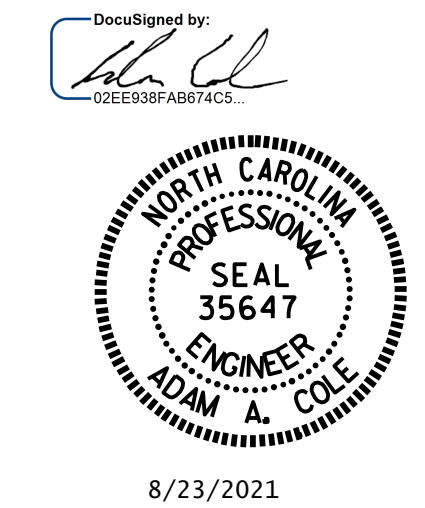


SPAN D VIEW - ELEVATION



END ELEVATION

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590048



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 3

DRAWN BY : M. G. SHAIKH DATE : .05/2021
 CHECKED BY : H. LOCKLEAR DATE : .06/2021

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S2-10
2			4			TOTAL SHEETS 274

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

AS-BUILT REPAIR QUANTITY TABLE

REPAIRS BENT 4	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	1.9	1.0		
COLUMN	0.0	0.0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	17.2	8.6		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		4.0		
COLUMN		36.0		
EPOXY COATING		SQ. FT.		SQ. FT.
TOP OF BENT CAP		145.0		

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.

NOTES:

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

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

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

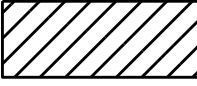


FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

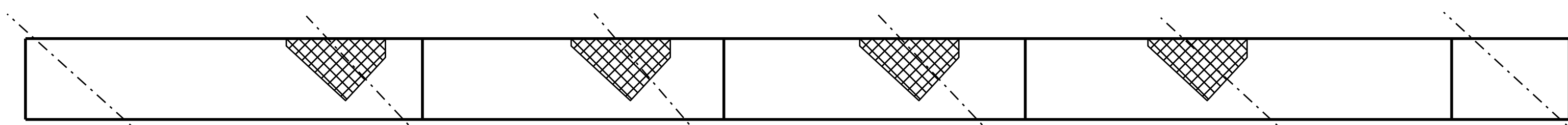
FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

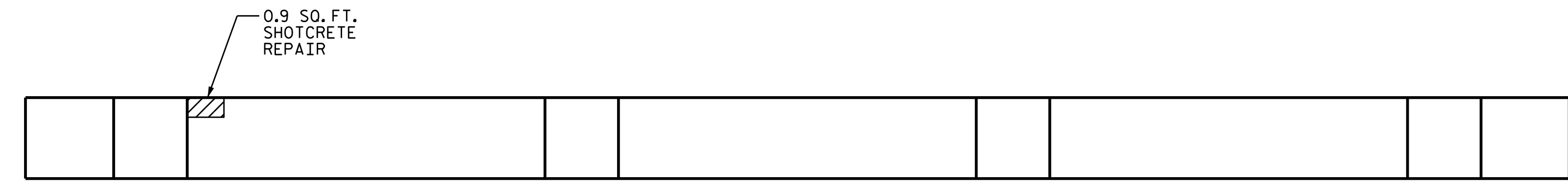
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

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 MASONARY PLATES, FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

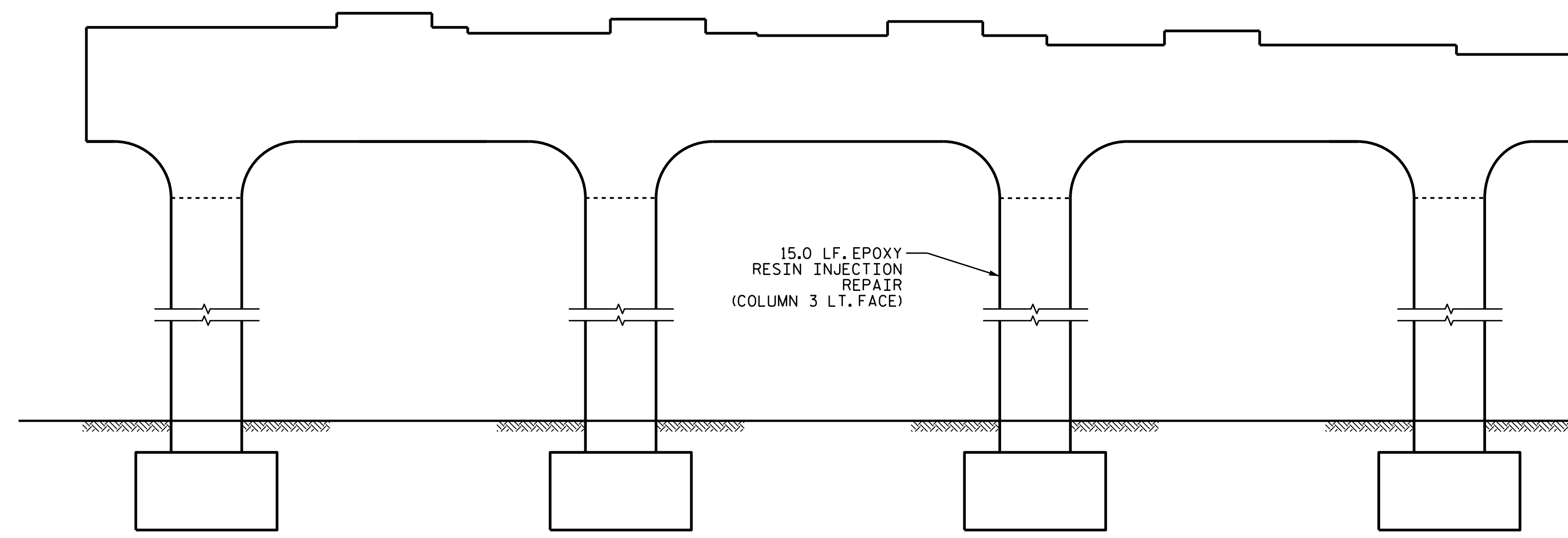
-  SHOTCRETE REPAIR AREA
-  CONCRETE REPAIR AREA
-  ERI - EPOXY RESIN INJECTION



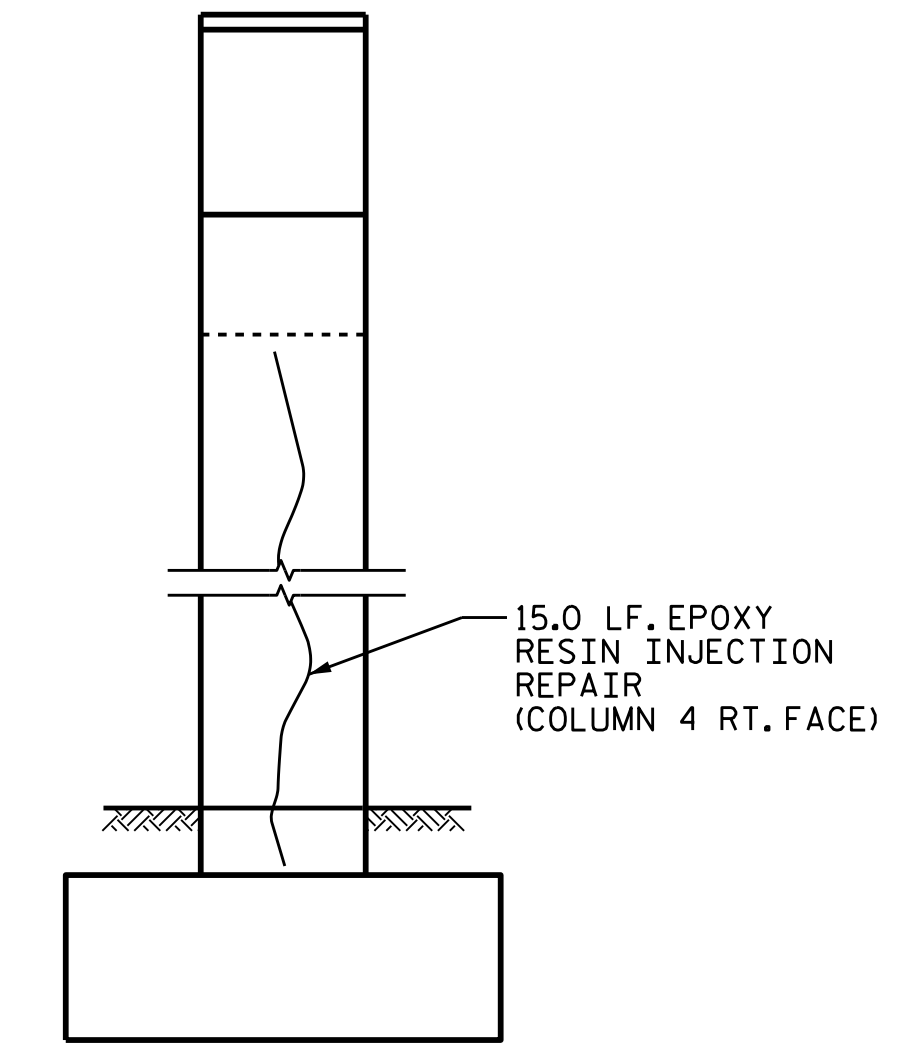
PLAN - TOP OF CAP



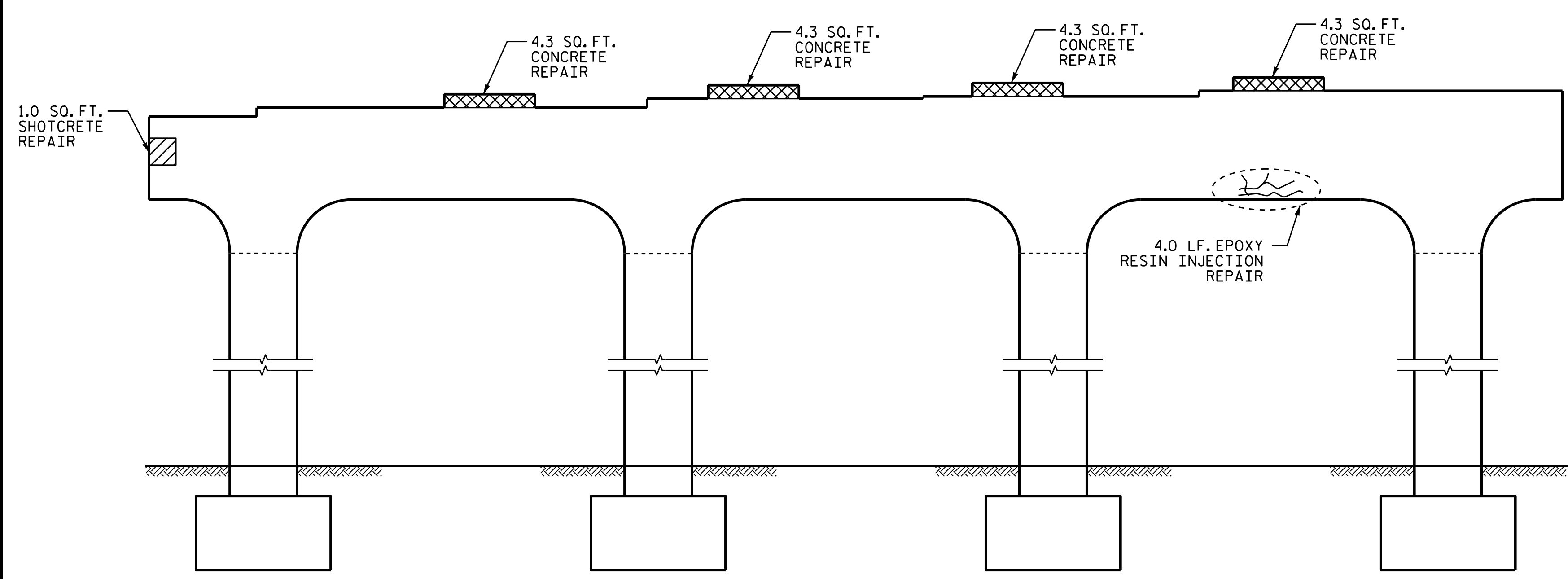
PLAN - BOTTOM OF CAP



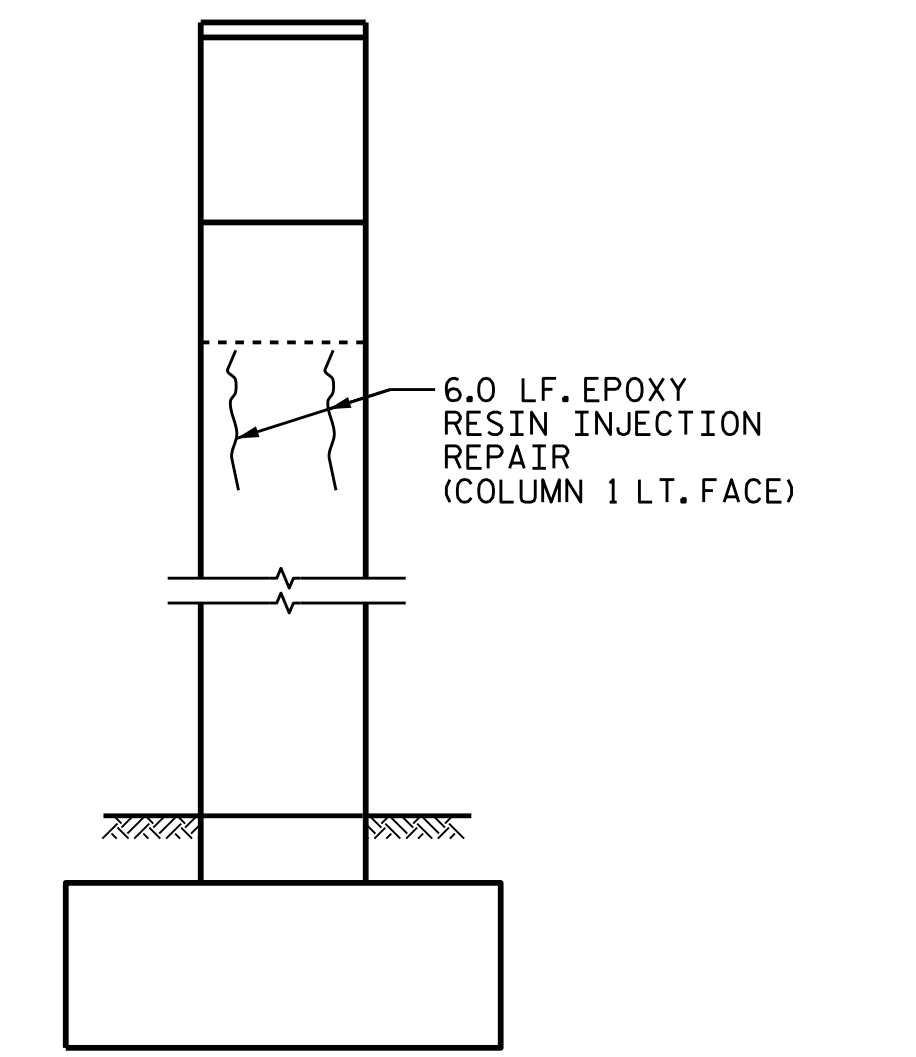
SPAN D VIEW - ELEVATION



END ELEVATION



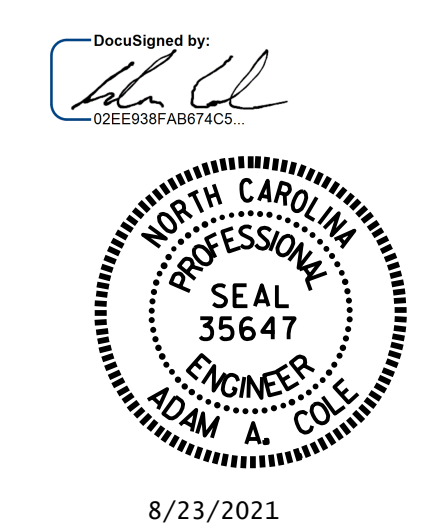
SPAN E VIEW - ELEVATION



END ELEVATION

DRAWN BY : M. G. SHAIKH DATE : .05/2021
 CHECKED BY : H. LOCKLEAR DATE : .06/2021

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590048



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 4

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S2-11
2			4			274

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

AS-BUILT REPAIR QUANTITY TABLE

REPAIRS BENT 5	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	3.9	2.0		
COLUMN	1.0	0.5		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		7.0		
COLUMN		16.0		
EPOXY COATING		SO. FT.		SO. FT.
TOP OF BENT CAP		141.0		

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.

NOTES:

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

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

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

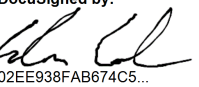
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

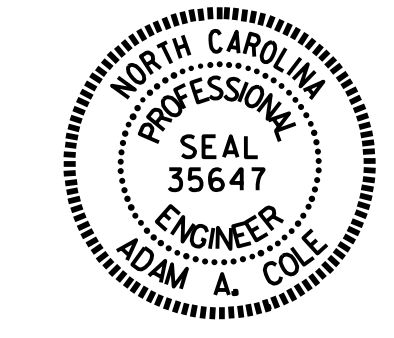
 SHOTCRETE REPAIR AREA

 CONCRETE REPAIR AREA

 ERI - EPOXY RESIN INJECTION

PROJECT NO. I-5746C
 MECKLENBURG COUNTY
 BRIDGE NO. 590048

DocuSigned by:




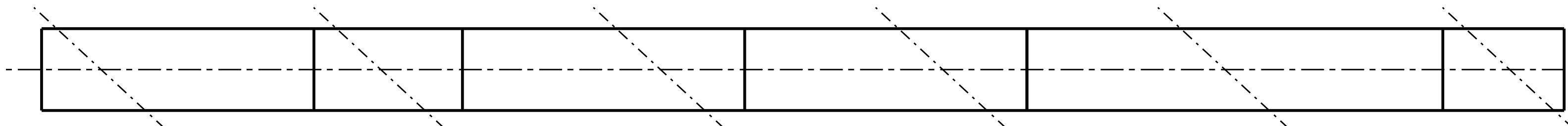
8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

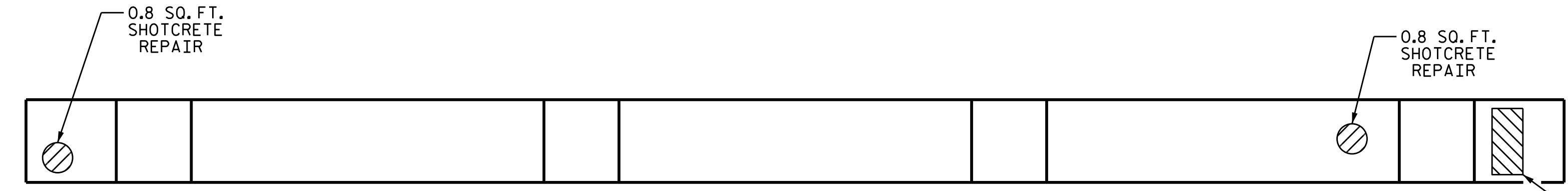
BENT 5

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

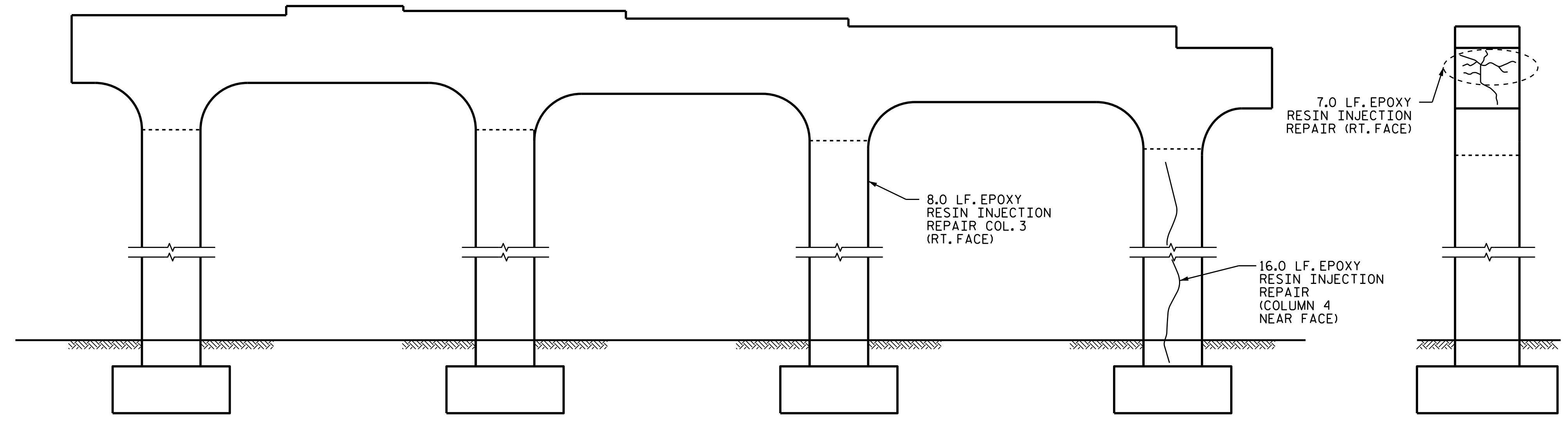
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



PLAN - TOP OF CAP

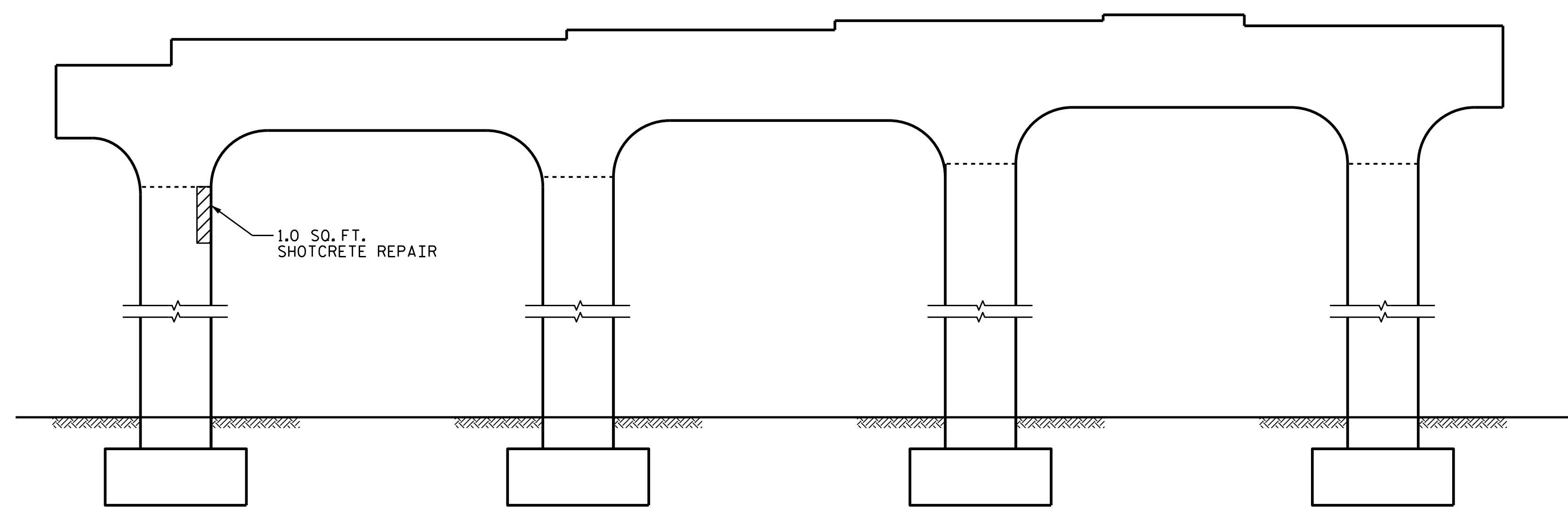


PLAN - BOTTOM OF CAP



SPAN E VIEW - ELEVATION

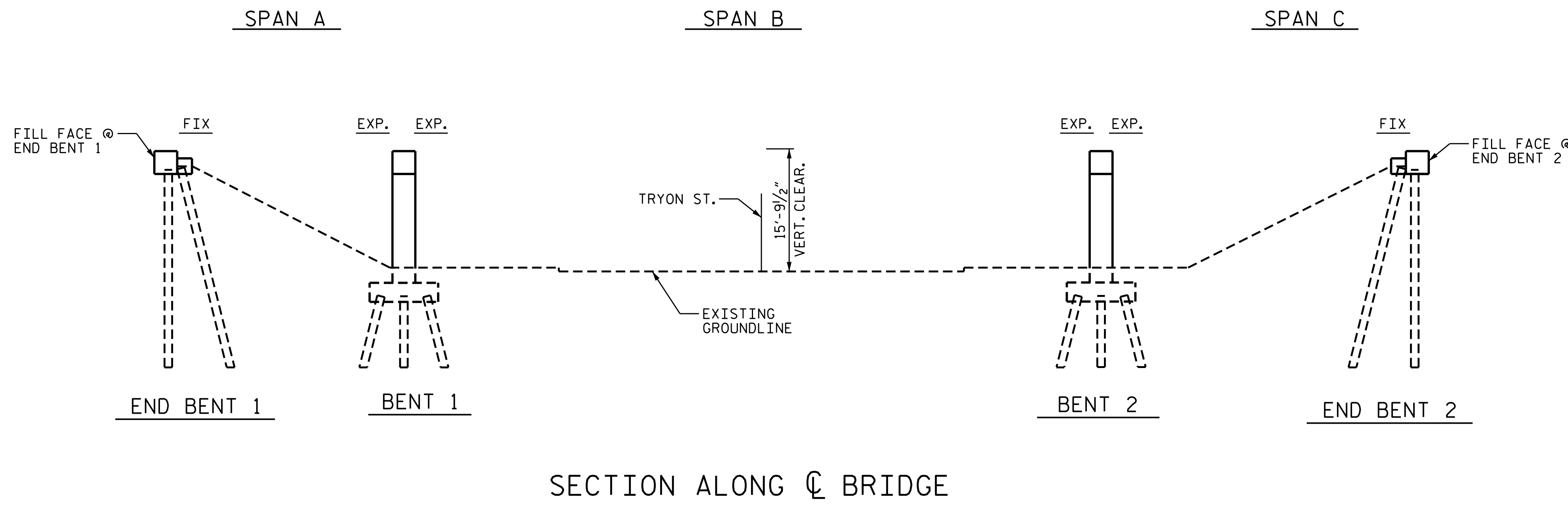
END ELEVATION



SPAN F VIEW - ELEVATION

END ELEVATION

DRAWN BY : M. G. SHAIKH DATE : .05/2021
 CHECKED BY : H. LOCKLEAR DATE : .06/2021



NOTES

PROFILE INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND ROUTINE INSPECTION REPORT DATED 05/06/2020.

BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

SCOPE OF WORK

REMOVE ASPHALT WEARING SURFACE FROM APPROACH SLABS AND PARTIALLY REMOVE BRIDGE DECK CONCRETE BY SCARIFICATION AND HYDRODEMOLITION METHODS.

OVERLAY PREPARED TOP OF BRIDGE DECK WITH LATEX MODIFIED CONCRETE-EARLY STRENGTH (LMC-ES).

GROOVE LATEX MODIFIED CONCRETE-EARLY STRENGTH BRIDGE DECK.

REMOVE AND REPLACE EXISTING FOAM JOINTS.

CLEAN AND PAINT BEARINGS WITH HRCSA.

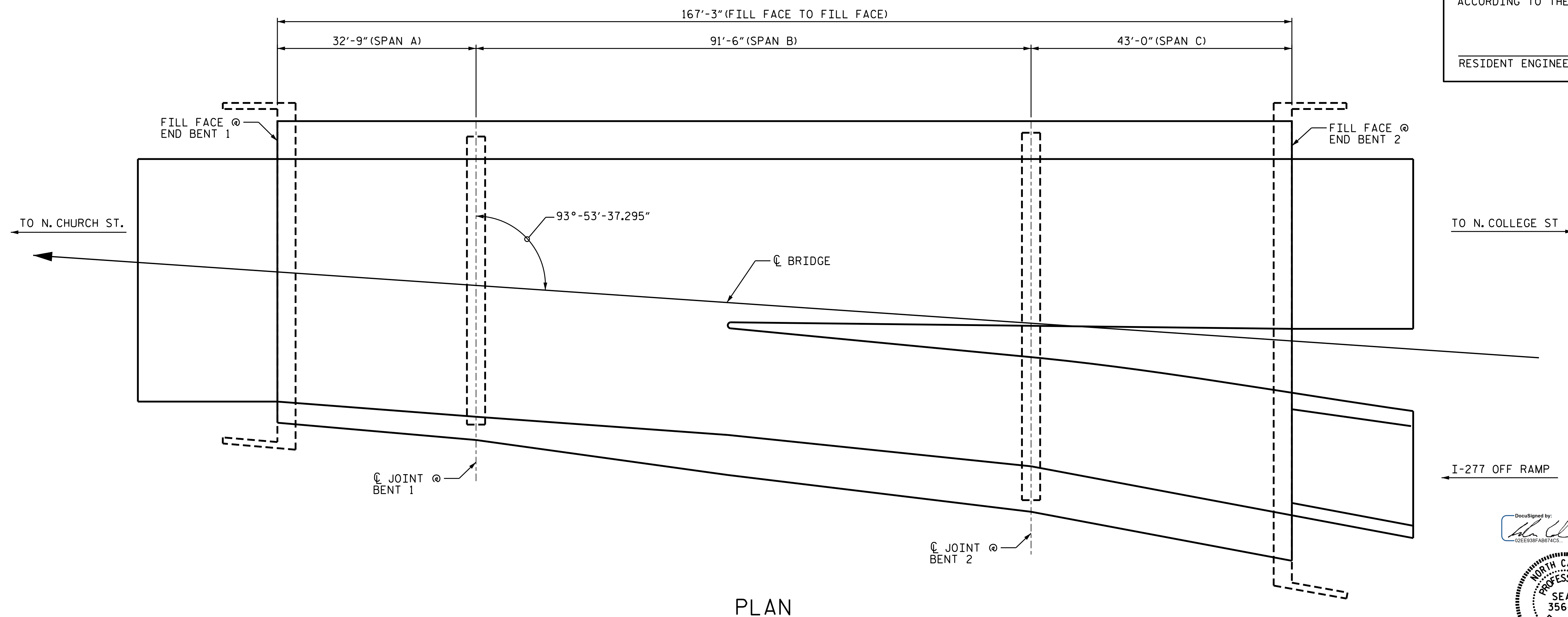
REMOVE UNSOUND CONCRETE AND PROPERLY PREPARE SHOTCRETE AND CONCRETE REPAIR AREAS.

PERFORM SHOTCRETE AND CONCRETE REPAIRS IN PREPARED AREAS.

EPOXY INJECTION OF CONCRETE CRACKS.

REMOVE DEBRIS FROM TOP OF BENT CAPS AND APPLY EPOXY COATING.

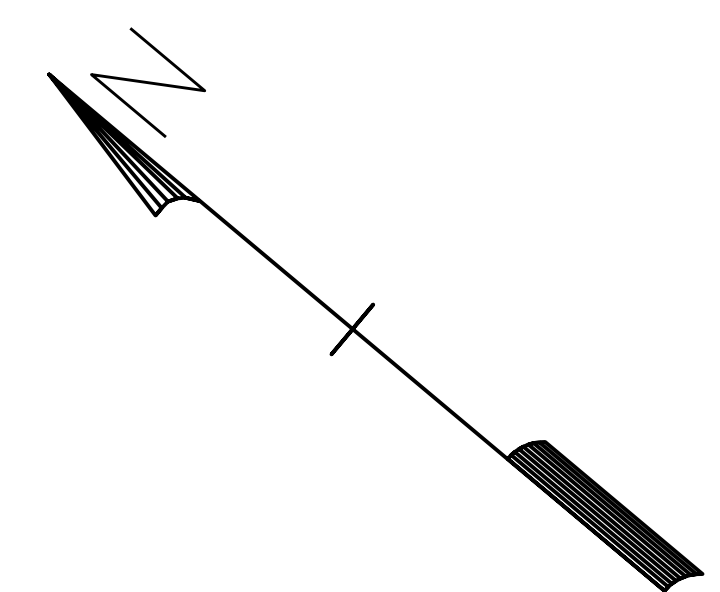
SECTION ALONG Q BRIDGE



PLAN

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

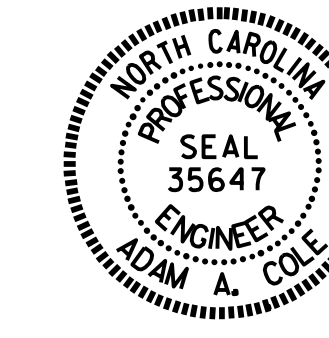
RESIDENT ENGINEER _____ DATE _____



PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590138

SHEET 1 OF 2

DocuSigned by:
 02E839FAB014CS...



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 FOR BRIDGE ON
 EAST 12TH ST.
 OVER TRYON ST.

DRAWN BY : E. BAYISSA 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:	S3-01
1			3			TOTAL SHEETS
2			4			274



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'-42.1"
 LONGITUDE: 80°-50'-50.85"

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.

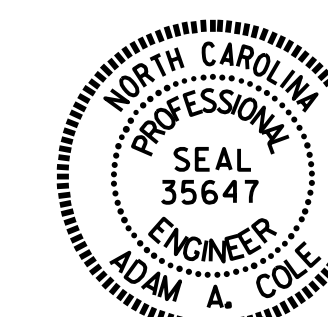
PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL A COMPLETE SEQUENCE OF TASKS FOR EACH OPERATION AFFECTING THE BRIDGE SURFACE AND/OR TRAFFIC.

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.

DocuSigned by:
 COLEMAN ABRAMS



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 HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THAT SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

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

DURING CONSTRUCTION, BERMS OR APPROPRIATE MEASURES SHALL BE USED TO ENSURE HYDRO-DEMOLITION WATER DOES NOT MIGRATE INTO ACTIVE TRAVEL LANES.

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 SPECIFICATION AND THE PROJECT SPECIAL PROVISIONS.

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

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

FOR SCARIFYING BRIDGE DECK, HYDRO-DEMOLITION OF BRIDGE DECK, AND CLASS II SURFACE PREPARATION, SEE OVERLAY SURFACE PREPARATION SPECIAL PROVISION

THE CONTRACTOR MUST COLLECT, TREAT AND DISPOSE OF RUN-OFF WATER FROM THE HYDRO-DEMOLITION PROCESS, SEE OVERLAY SURFACE PREPARATION SPECIAL PROVISIONS.

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

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR OVERLAY OF BRIDGE WITH LATEX MODIFIED CONCRETE-EARLY STRENGTH, SEE SPECIAL PROVISIONS.

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

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

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 CONCRETE FOR DECK REPAIRS, SEE SPECIAL PROVISION.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR BRIDGE JACKING, SEE SPECIAL PROVISIONS.

FOR CLEANING AND PAINTING WITH BEARINGS WITH HRCSA, SEE SPECIAL PROVISIONS.

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590138

SHEET 2 OF 2

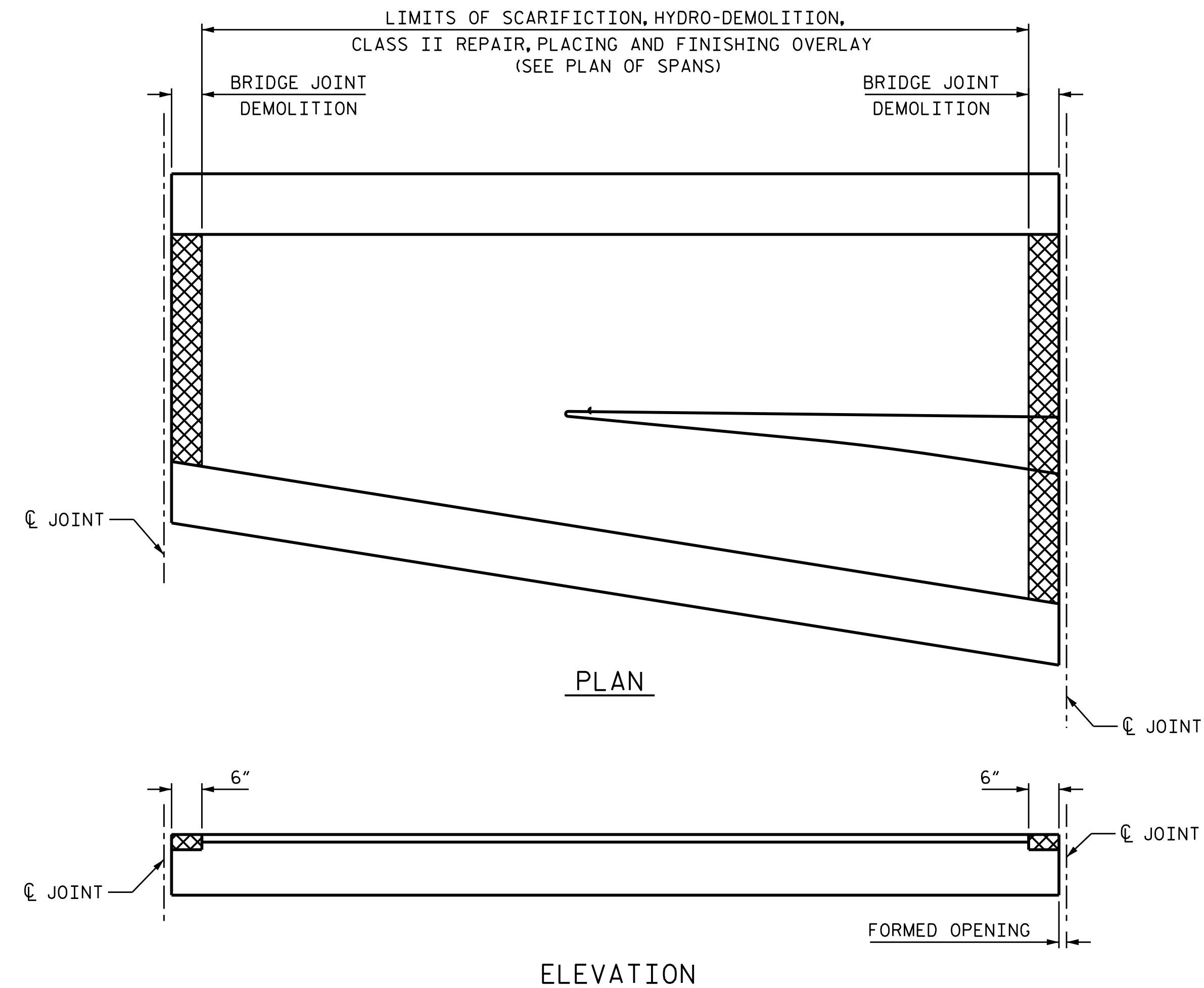
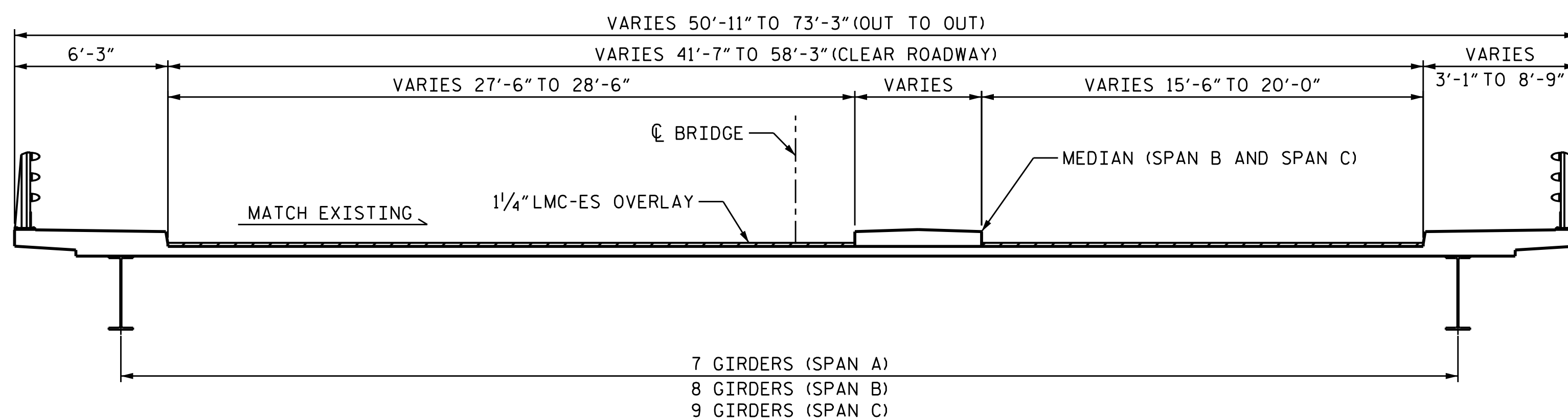
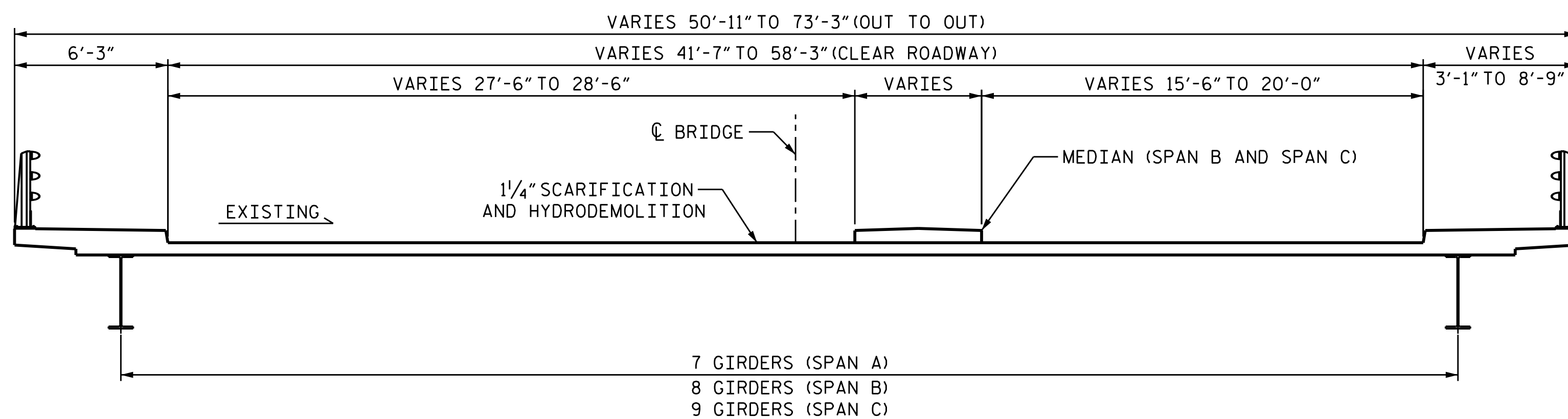
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 EAST 12TH ST.
 OVER TRYON ST.

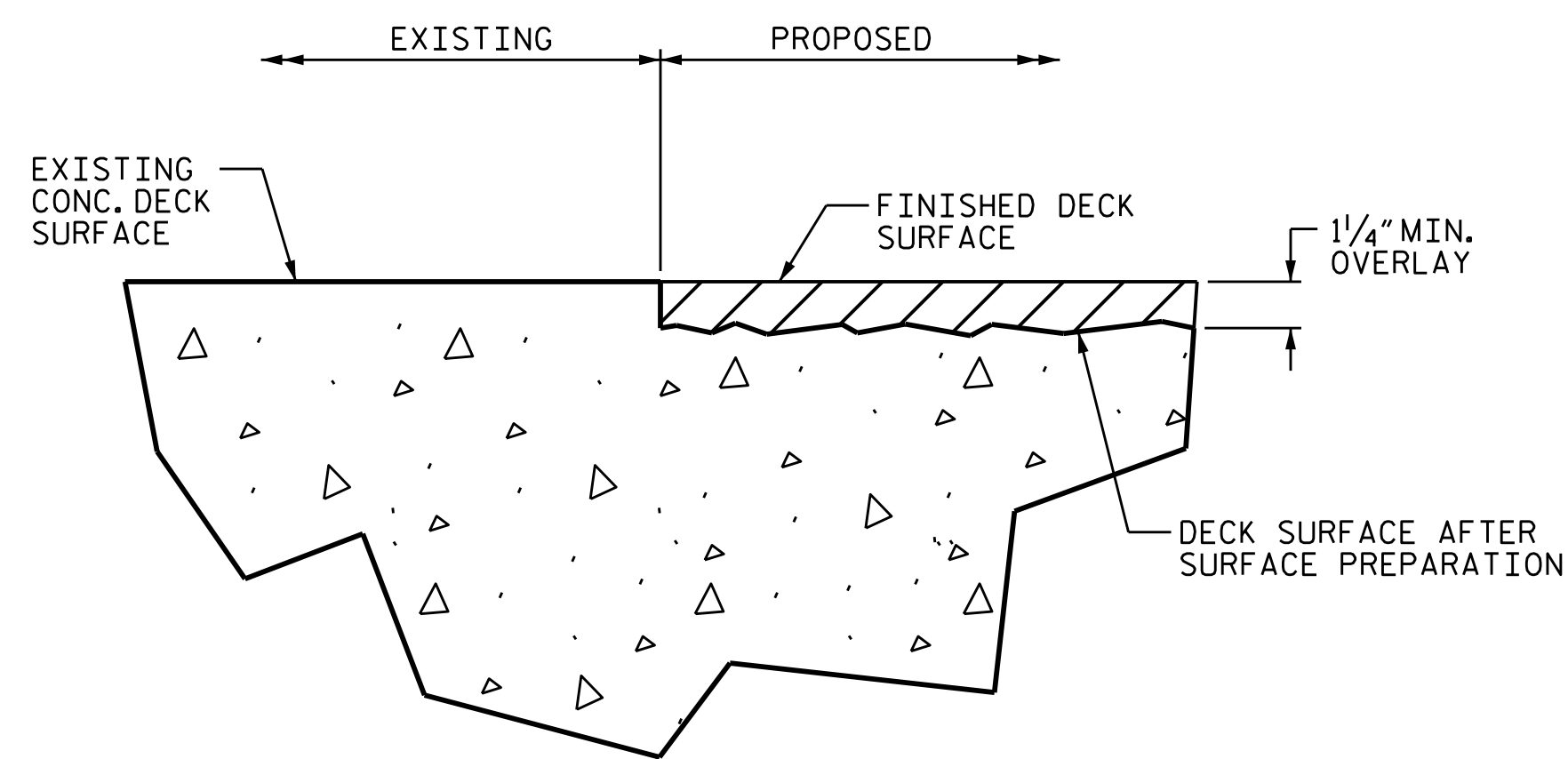
DRAWN BY : E. BAYISSA DATE : 06/2021
 CHECKED BY : H. A. LOCKLEAR DATE : 06/2021

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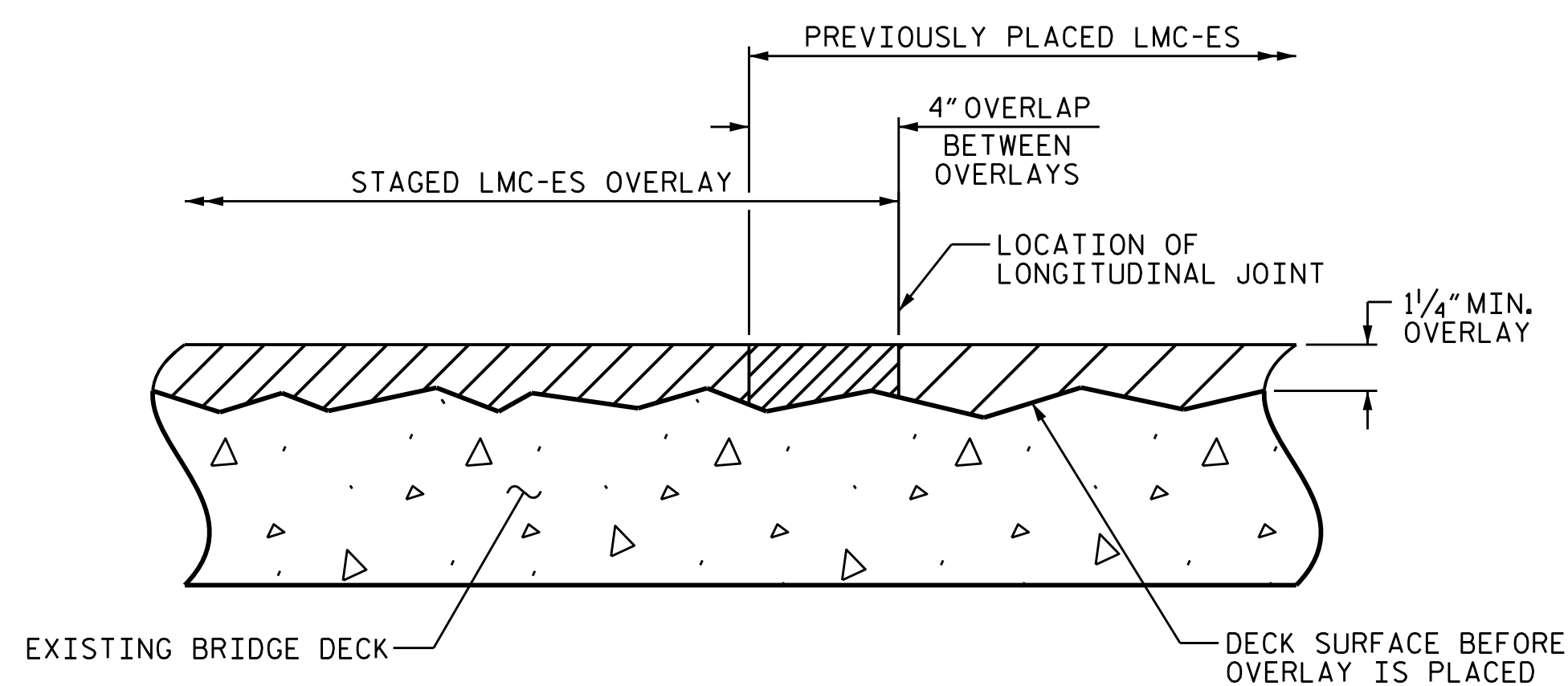
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PAY LIMITS FOR OVERLAY BID ITEMS



DETAIL OF LMC-ES OVERLAY

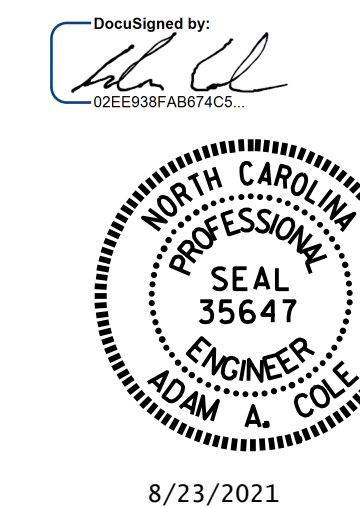


**SECTION THRU DECK
STAGED LMC-ES OVERLAY JOINT
(AS NEEDED)**

NOTES

WHEN PREPARING THE SURFACE FOR LMC-ES OVERLAY ADJACENT TO A PREVIOUSLY PLACED LMC-ES STAGE, THE PREVIOUSLY PLACED LMC-ES SHALL BE REMOVED FOR A DISTANCE OF 4 INCHES FROM THE LMC-ES EDGE. THE SURFACE OF THE NEW STAGE AREA, ALONG WITH THE 4 INCH OVERLAY AREA, SHALL BE PLACED IN THE 4 INCH OVERLAP, AS PART OF NEW LMC-ES STAGE PLACEMENT.

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



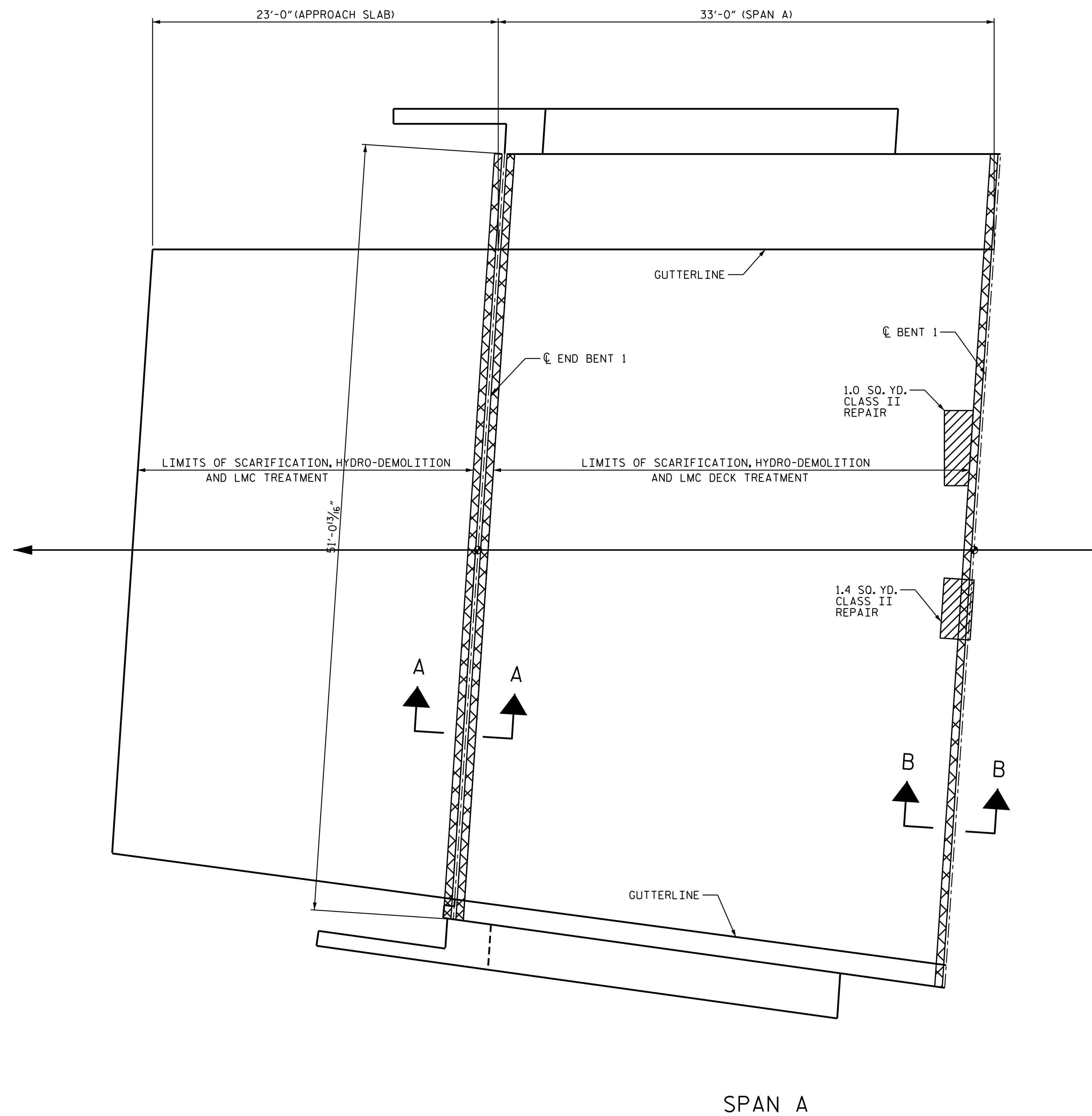
PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590138

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**TYPICAL SECTION
 AND SURFACE
 PREPARATION DETAILS**

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

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2			4			274



AS-BUILT REPAIR QUANTITY TABLE				
TOP OF DECK REPAIRS	APPROACH SLAB 1		SPAN A	
	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
CLASS II SURFACE PREPARATION	0.0 SQ. YDS.		2.4 SQ. YDS.	
SCARIFYING BRIDGE DECK	106.7 SQ. YDS.		163.1 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	106.7 SQ. YDS.		163.1 SQ. YDS.	
PLACING & FINISHING LMC-ES OVERLAY	106.7 SQ. YDS.		163.1 SQ. YDS.	
LMC-ES MATERIALS	4.4 CU. YDS.		6.8 CU. YDS.	
GROOVING BRIDGE FLOORS	866.0 SQ. FT.		1375.0 SQ. FT.	
BRIDGE JOINT DEMOLITION	51.1 SQ. FT.		27.8 SQ. FT.	

TOP OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR LATEX MODIFIED CONCRETE-EARLY STRENGTH (LMC-ES) AFTER REMOVAL OF UNSOUND CONCRETE. (MIN. 2" CLEAR TO SAWCUT). SEE OVERLAY SURFACE PREPARATION FOR LMC-ES SPECIAL PROVISION.



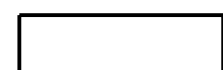
NOTES

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH 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.

PAYMENT FOR CLASS II SURFACE PREPARATION IS BASED ON THE SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF THE BRIDGE DECK. SEE SPECIAL PROVISIONS.

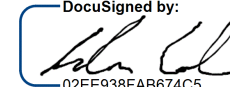
FOR SECTION A-A, AND B-B. SEE "JOINT DETAILS", SHEET.

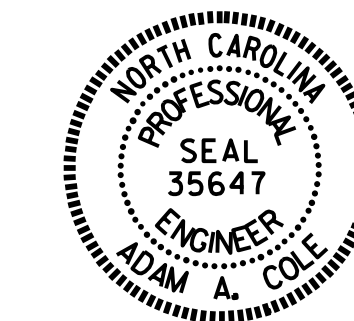
FOR LMC MATERIAL, SEE SPECIAL PROVISION.

-  CLASS II SURFACE REPAIR
-  BRIDGE JOINT DEMOLITION
-  SCARIFICATION & HYDRO-DEMOLITION

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590138

SHEET 1 OF 3

DocuSigned by:

 02E839FAB014C5...



8/23/2021

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

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

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1			3			TOTAL SHEETS
2			4			274

AS-BUILT REPAIR QUANTITY TABLE		
TOP OF DECK REPAIRS		
	ESTIMATE	ACTUAL
CLASS II SURFACE PREPARATION	12.4 SQ. YDS.	
SCARIFYING BRIDGE DECK	446.4 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	446.4 SQ. YDS.	
PLACING & FINISHING LMC-ES OVERLAY	446.4 SQ. YDS.	
LMC-ES MATERIALS	18.6 CU. YDS.	
GROOVING BRIDGE FLOORS	3508.0 SQ. FT.	
BRIDGE JOINT DEMOLITION	57.8 SQ. FT.	

TOP OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR LATEX MODIFIED CONCRETE-EARLY STRENGTH (LMC-ES) AFTER REMOVAL OF UNSOUND CONCRETE. (MIN. 2" CLEAR TO SAWCUT). SEE OVERLAY SURFACE PREPARATION FOR LMC-ES SPECIAL PROVISION.

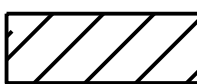

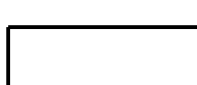
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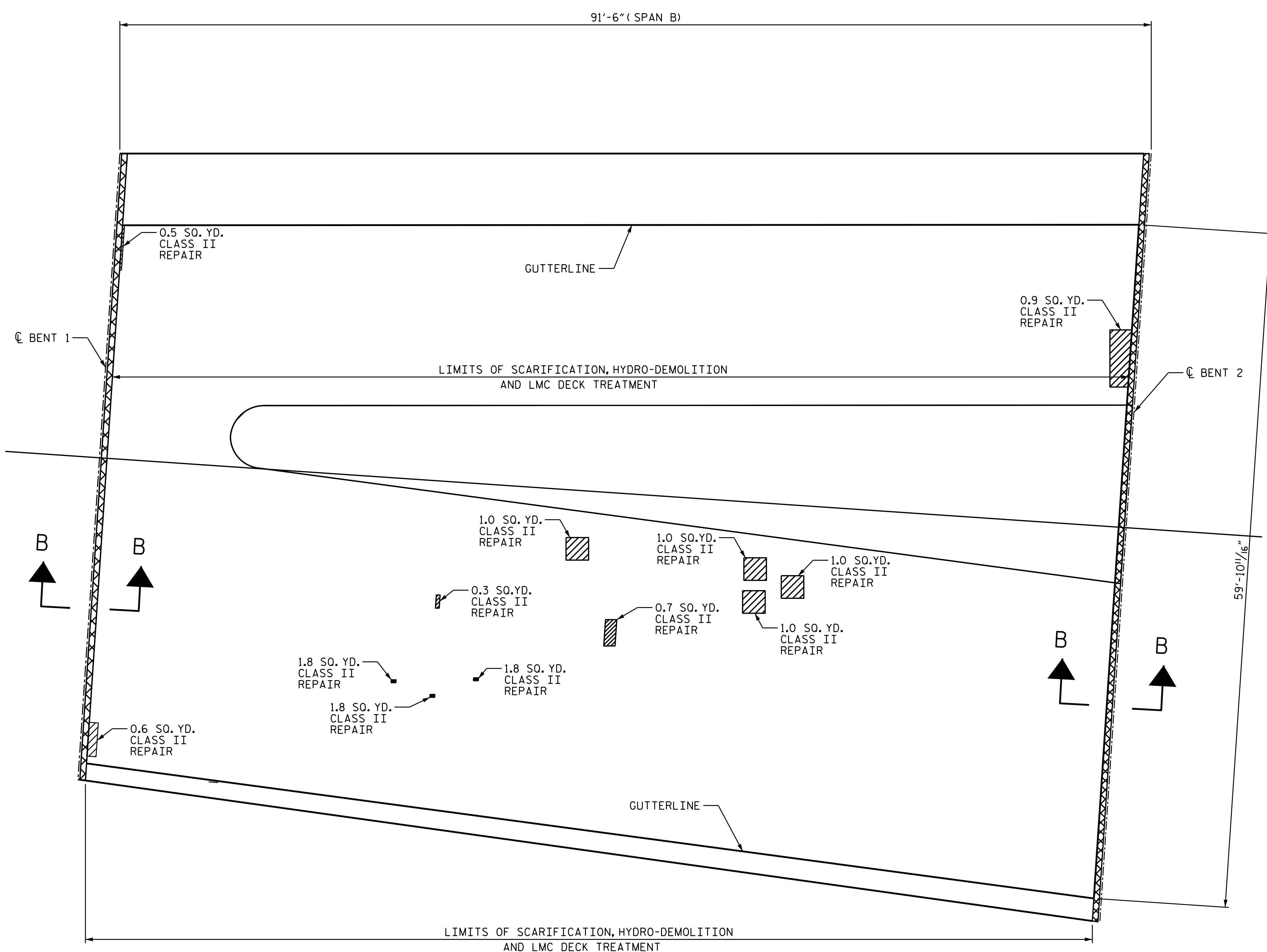
REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES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

PAYMENT FOR CLASS II SURFACE PREPARATION IS BASED ON THE SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF THE BRIDGE DECK. SEE SPECIAL PROVISIONS.

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

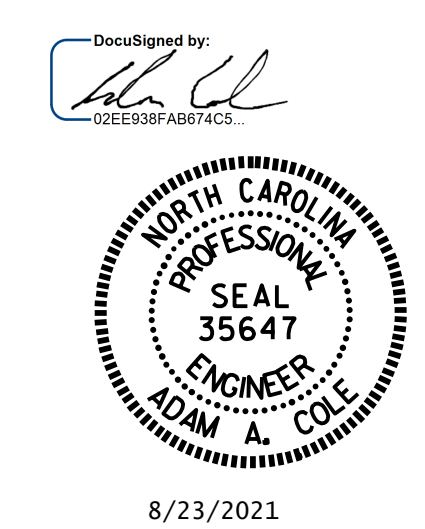
FOR LMC MATERIAL, SEE SPECIAL PROVISION.

-  CLASS II SURFACE REPAIR
-  BRIDGE JOINT DEMOLITION
-  SCARIFICATION & HYDRO-DEMOLITION



PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590138

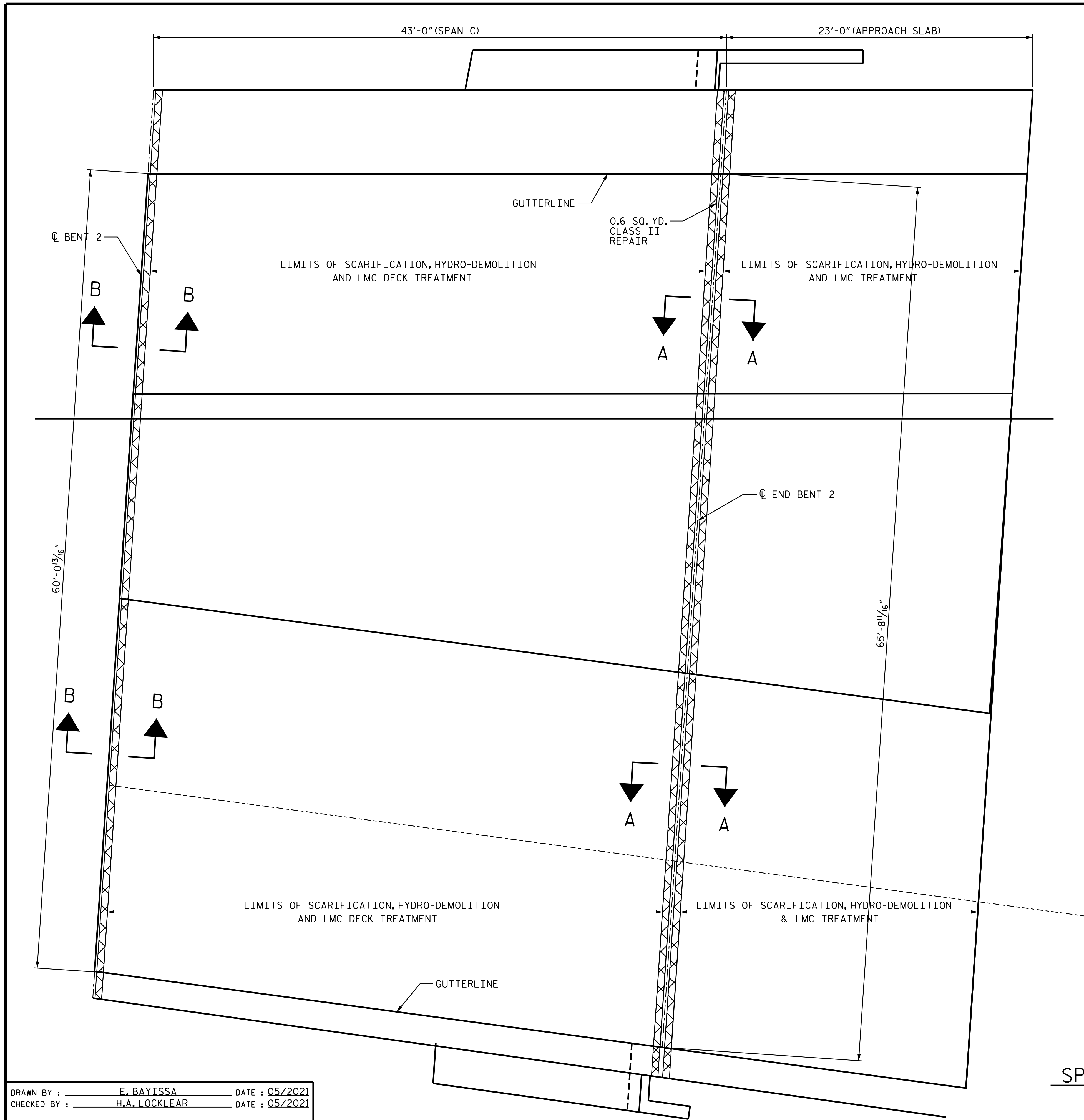
SHEET 2 OF 3



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

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

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	BY:	DATE:	DATE:	
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2			4	



AS-BUILT REPAIR QUANTITY TABLE				
TOP OF DECK REPAIRS	SPAN C		APPROACH SLAB	
	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
CLASS II SURFACE PREPARATION	0.6 SQ. YDS.		0.0 SQ. YDS.	
SCARIFYING BRIDGE DECK	208.3 SQ. YDS.		110.7 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	208.3 SQ. YDS.		110.7 SQ. YDS.	
PLACING & FINISHING LMC-ES OVERLAY	208.3 SQ. YDS.		110.7 SQ. YDS.	
LMC-ES MATERIALS	8.7 CU. YDS.		4.6 CU. YDS.	
GROOVING BRIDGE FLOORS	1635.0 SQ. FT.		862.0 SQ. FT.	
BRIDGE JOINT DEMOLITION	30.0 SQ. FT.		65.7 SQ. FT.	

TOP OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR LATEX MODIFIED CONCRETE-EARLY STRENGTH (LMC-ES) AFTER REMOVAL OF UNSOUND CONCRETE. (MIN. 2" CLEAR TO SAWCUT). SEE OVERLAY SURFACE PREPARATION FOR LMC-ES SPECIAL PROVISION.

NOTES

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH 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.

PAYMENT FOR CLASS II & CLASS III SURFACE PREPARATION IS BASED ON THE SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF THE BRIDGE DECK. SEE SPECIAL PROVISIONS.

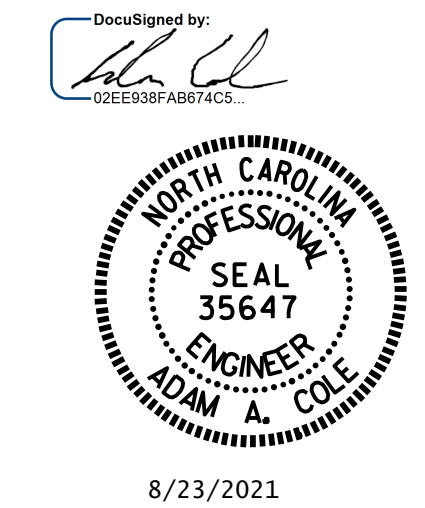
FOR SECTION A-A, AND B-B. SEE "JOINT DETAILS", SHEET.

FOR LMC MATERIALS, SEE SPECIAL PROVISION.

- CLASS II SURFACE REPAIR
- BRIDGE JOINT DEMOLITION
- SCARIFICATION & HYDRO-DEMOLITION

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590138

SHEET 3 OF 3



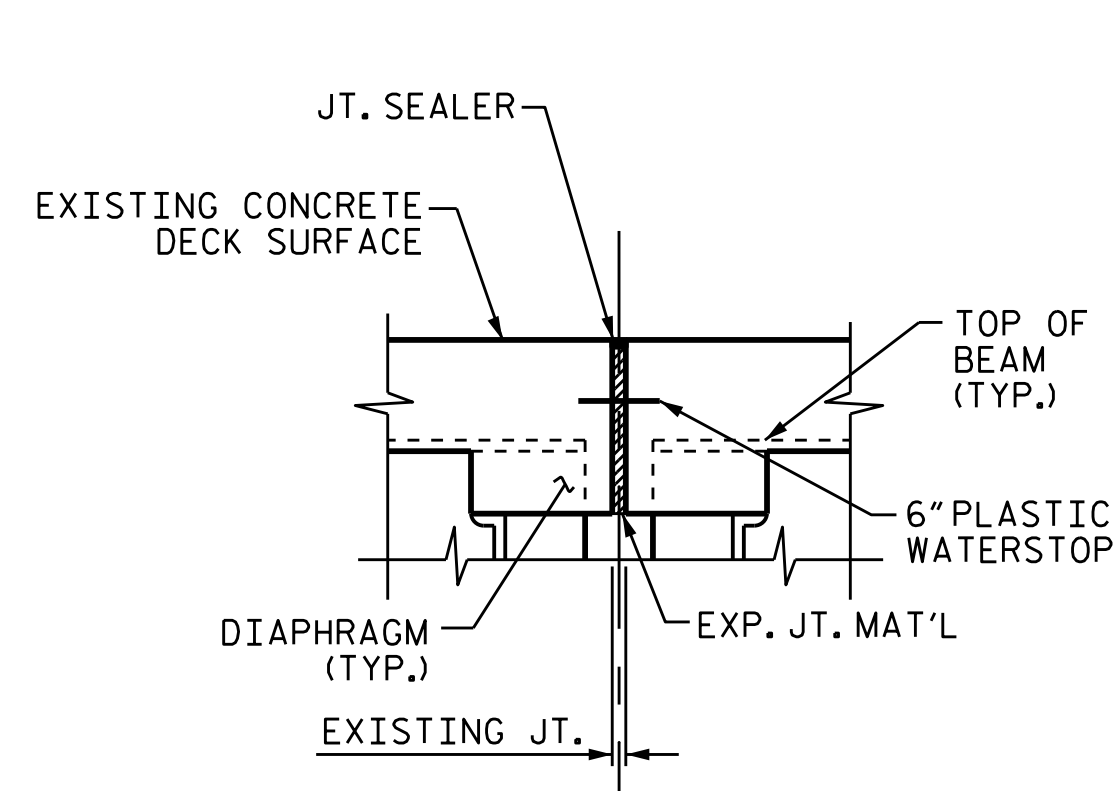
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
DECK SURFACE REPAIR
SPAN C

DRAWN BY : E. BAYTSSA DATE : 05/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 05/2021

SPAN C

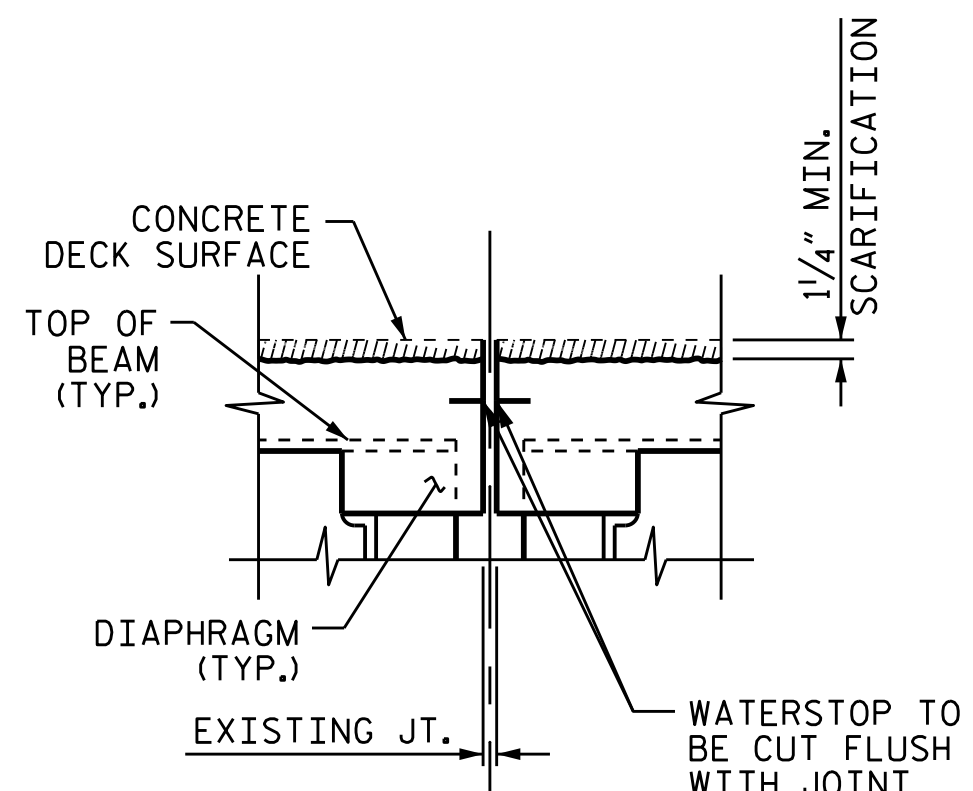
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2			4			TOTAL SHEETS 274



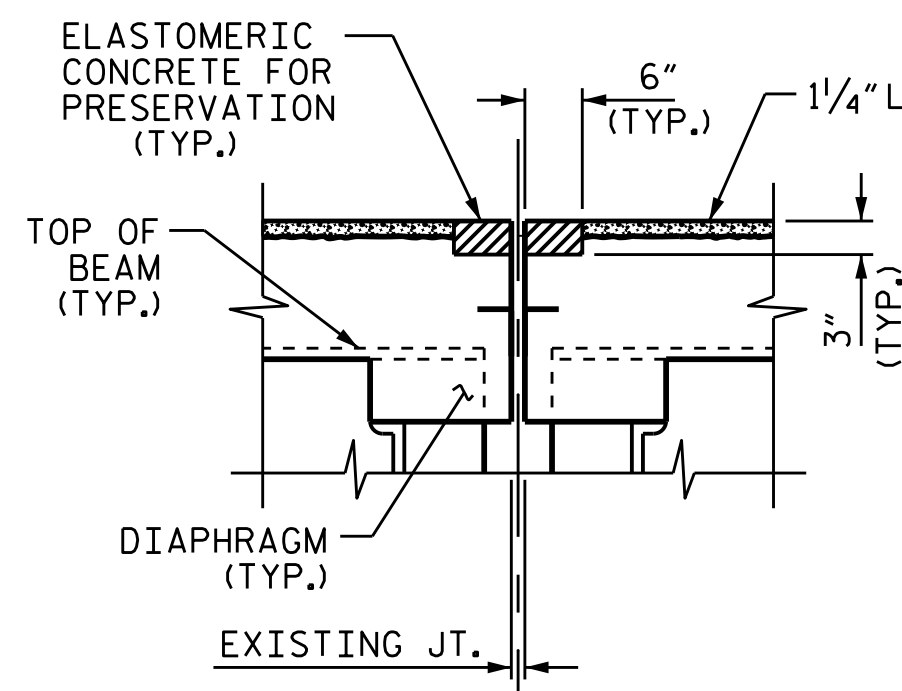
EXISTING JOINT

IF THE EMBEDDED PORTION OF THE EXISTING PLASTIC WATERSTOP IS EXPOSED DURING REMOVAL OF UNSOUND CONCRETE, OR IF UNSOUND CONCRETE IS REMOVED WITHIN 2" OF THE WATERSTOP, THE ENTIRE CONCRETE DEPTH TO THE WATERSTOP SHALL BE REMOVED. IF SUCH EXCAVATION EXTENDS MORE THAN 2" BELOW THE BOTTOM OF THE PLANNED ELASTOMERIC CONCRETE HEADER, AS SHOWN, APPROVED REPAIR CONCRETE SHALL BE PLACED IN THE EXCAVATED AREA TO THE ELEVATION AT THE BOTTOM OF THE ELASTOMERIC CONCRETE.



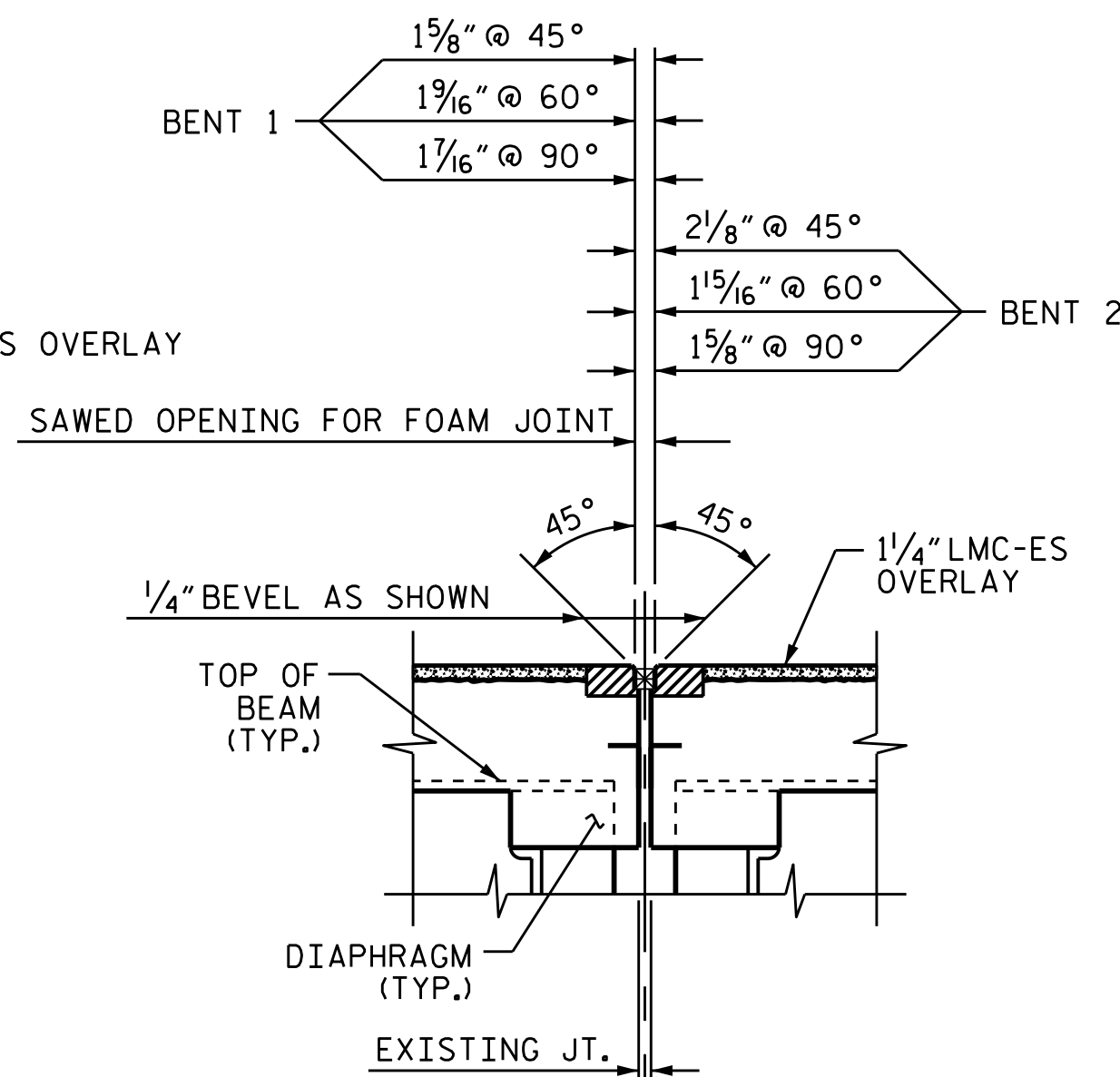
EXISTING JOINT AFTER DECK SCARIFICATION

DEMOLISH BRIDGE JOINT AREA SUCH THAT THE BOTTOM OF THE EXCAVATION SHALL BE REASONABLY FLAT AND LEVEL AND TO THE NECESSARY DEPTH, SUCH THAT ELASTOMERIC CONCRETE SHALL BE FOUNDED ON CONCRETE OR REPAIR CONCRETE SUBSTRAT, NOT LATEX MODIFIED CONCRETE.

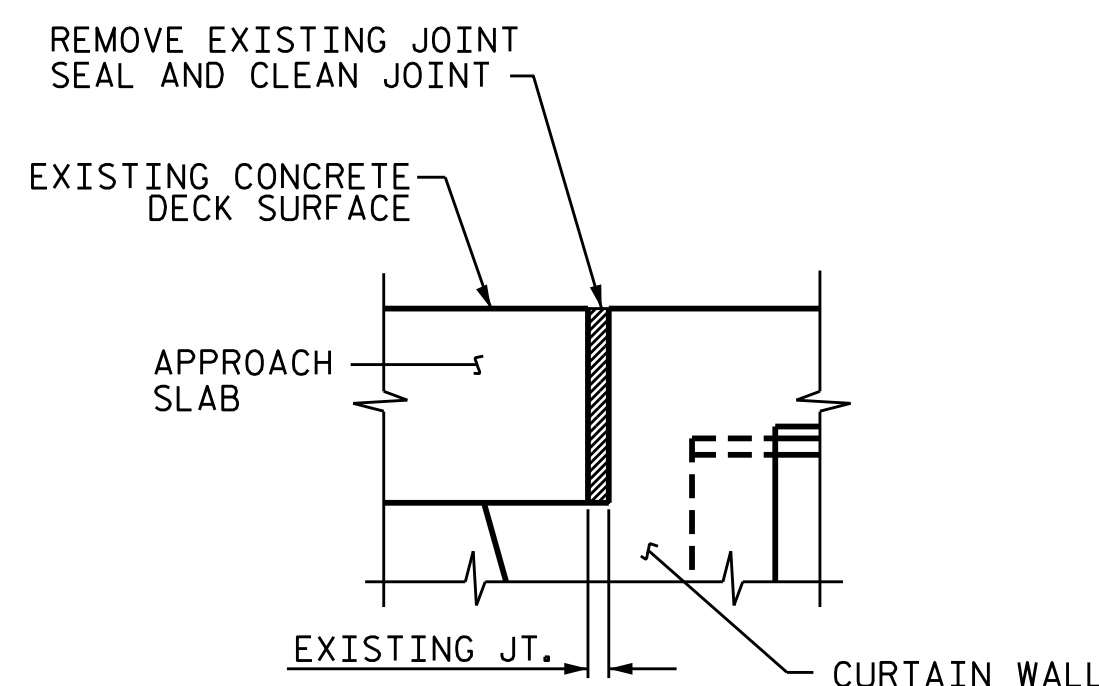


PROPOSED JOINT PRE-SAWED

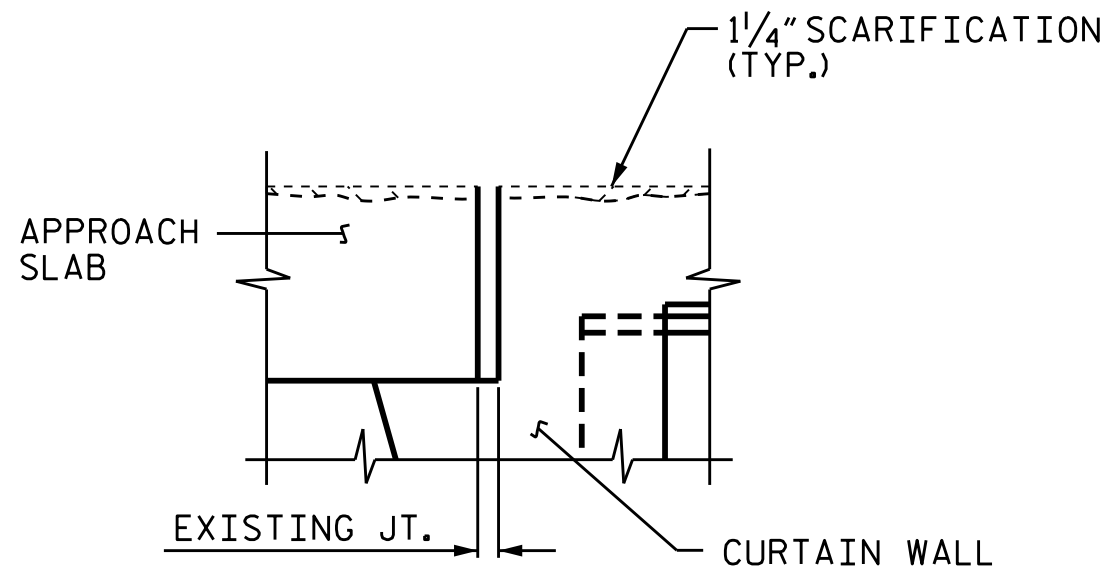
SECTION B-B



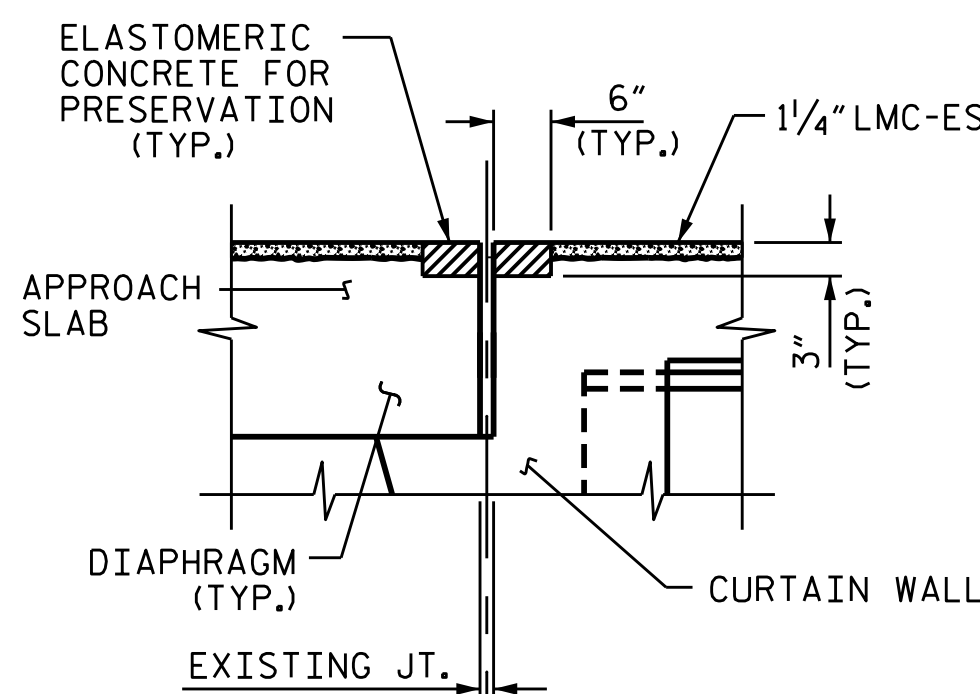
PROPOSED FOAM JOINT SEAL



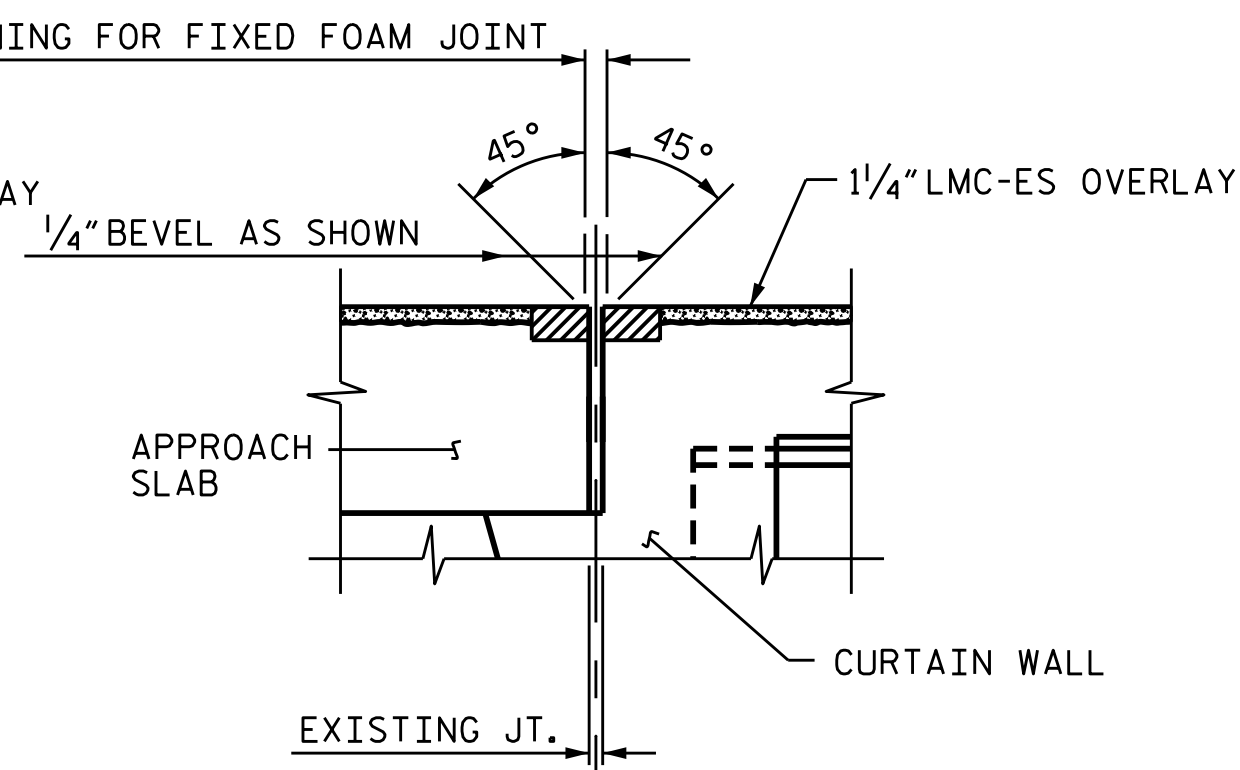
EXISTING JOINT



EXISTING JOINT AFTER DECK SCARIFICATION

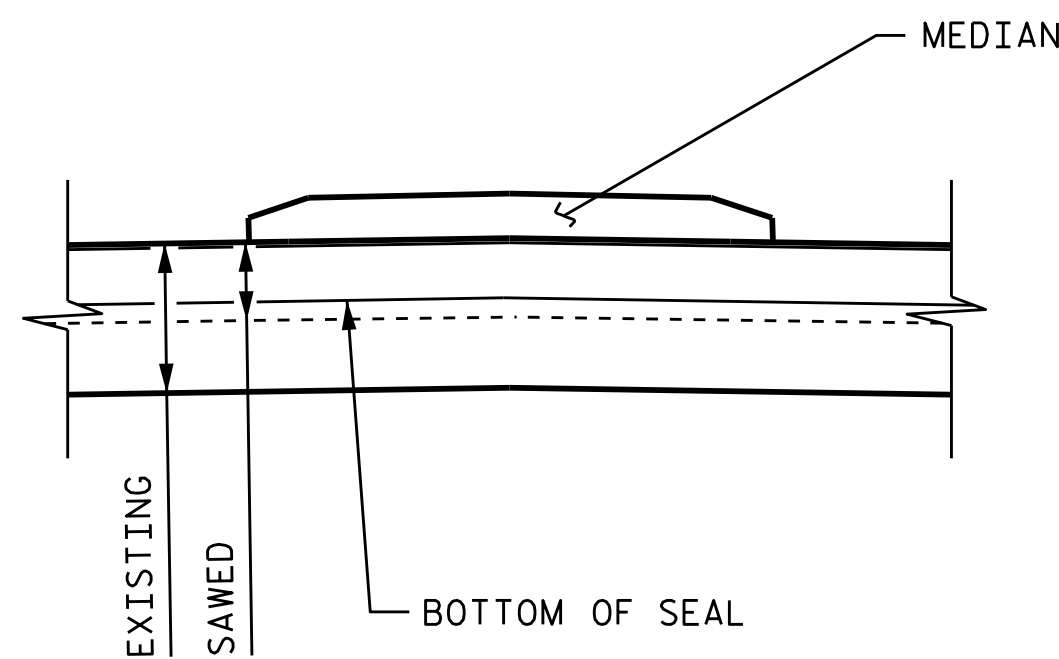


PROPOSED JOINT PRE-SAWED



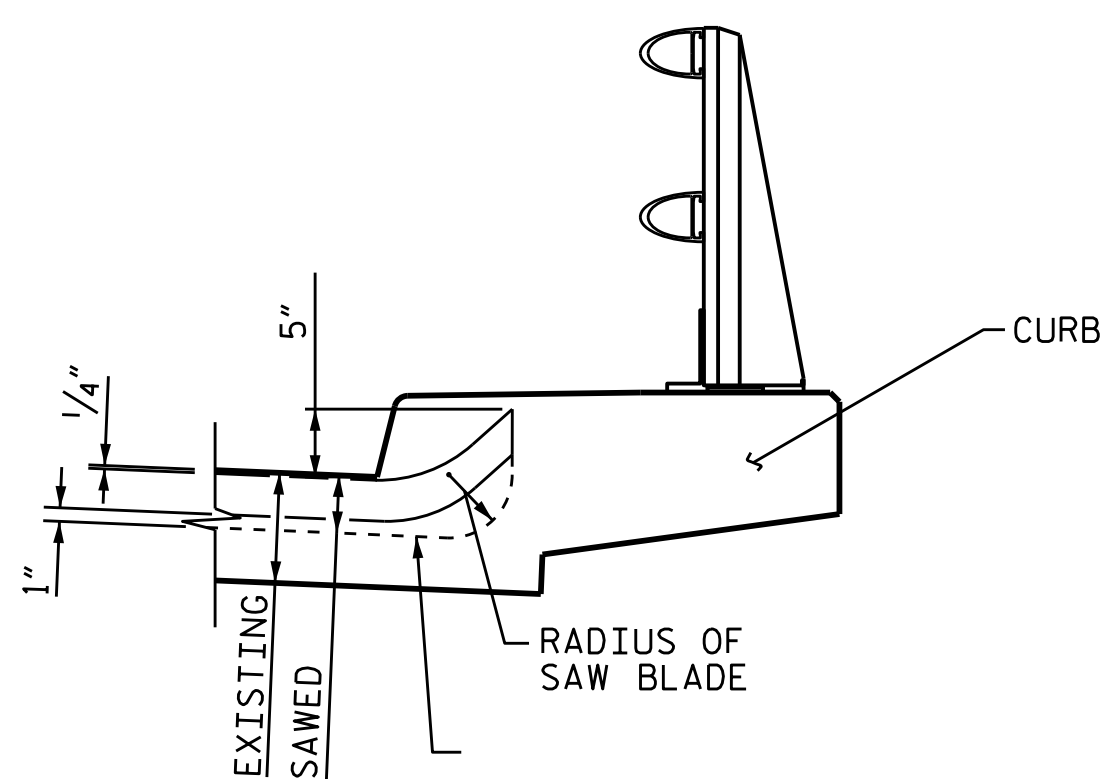
PROPOSED FOAM JOINT SEAL

SECTION A-A



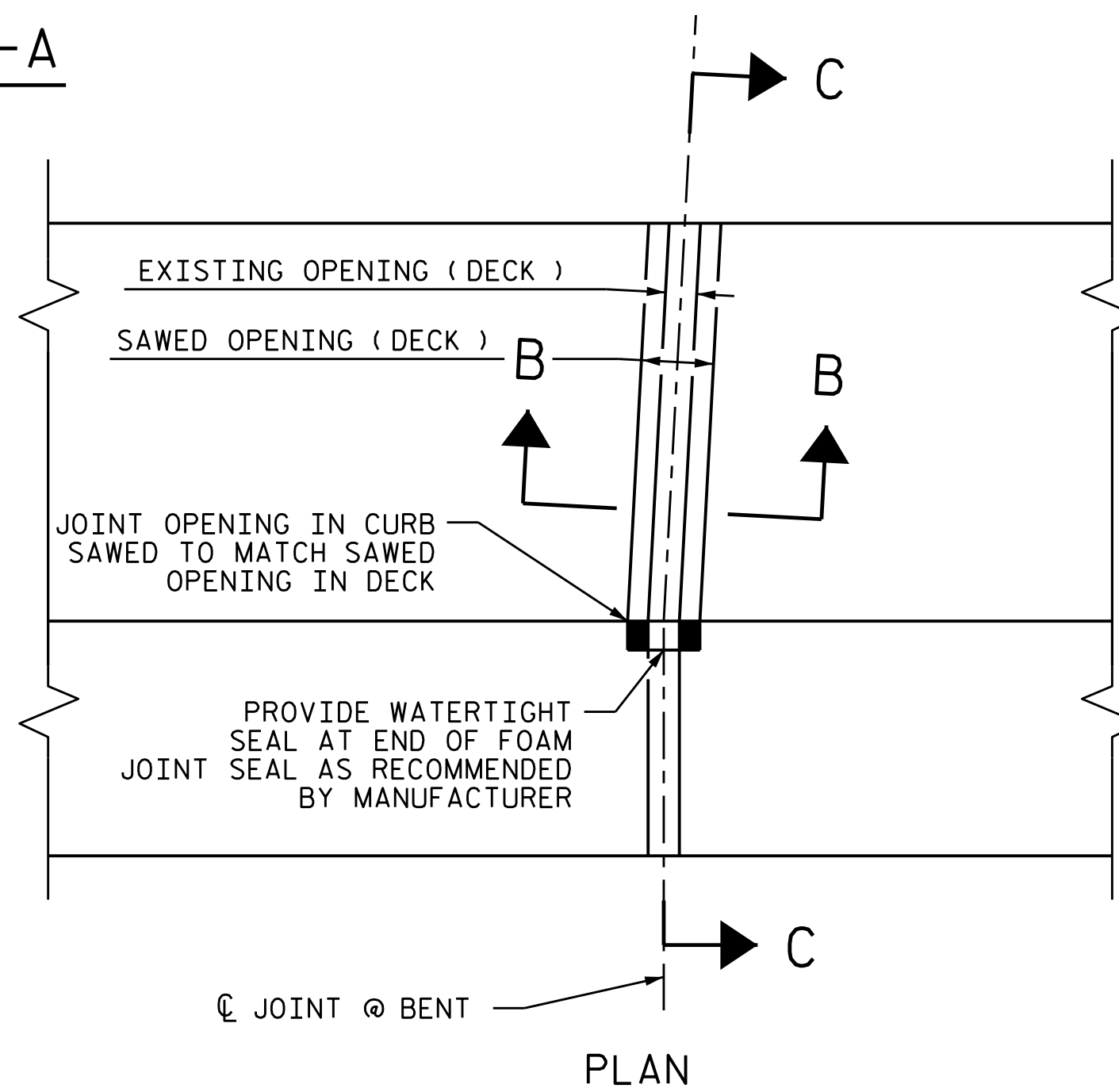
MEDIAN DETAIL

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



SECTION C-C

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



NOTES:

FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE LMC 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 RECOMMEND AND PROVIDE THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE FOAM JOINT SEAL FOR THE SIZE OF THE OPENING ON THE PLANS AND ACCOMODATE 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.

QUANTITIES SHOWN IN THE ELASTOMERIC CONCRETE FOR PRESERVATION TABLE ARE BASED ON THE MINIMUM JOINT DEMOLITION SHOWN.

FOR EXCAVATION BELOW THE BOTTOM OF THE PLANNED JOINT DEMOLITION, CONCRETE FOR DECK REPAIR SHALL BE PLACED IN THE EXCAVATION AREA TO THE ELEVATION AT THE BOTTOM OF THE PROPOSED ELASTOMERIC CONCRETE FOR PRESERVATION HEADERS SHOW.

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

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

ELASTOMERIC CONCRETE FOR PRESERVATION

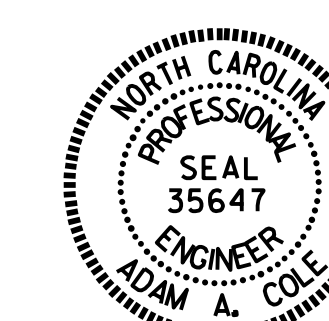
END BENT 1	17.0 CU.FT.
BENT 1	18.5 CU.FT.
BENT 2	22.8 CU.FT.
END BENT 2	25.0 CU.FT.
TOTAL	83.3 CU.FT.

JOINT REPAIR QUANTITY TABLE

	ESTIMATED	ACTUAL
FOAM JOINTS SEALS FOR PRESERVATION	249.3 LN.FT.	

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590138

DocuSigned by:
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8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

JOINT DETAILS

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

NO.	REVISIONS			SHEET NO.
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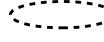

BEAM REPAIR QUANTITY TABLE									
STEEL PLATES		STIFFENER		STEEL DIAPHRAGM		BRIDGE JACKING		ANCHOR BOLT UNIT	
LBS.		LBS.		LBS.		EA.		EA.	
ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
0.0		0.0		0.0		1		1	

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH 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 ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

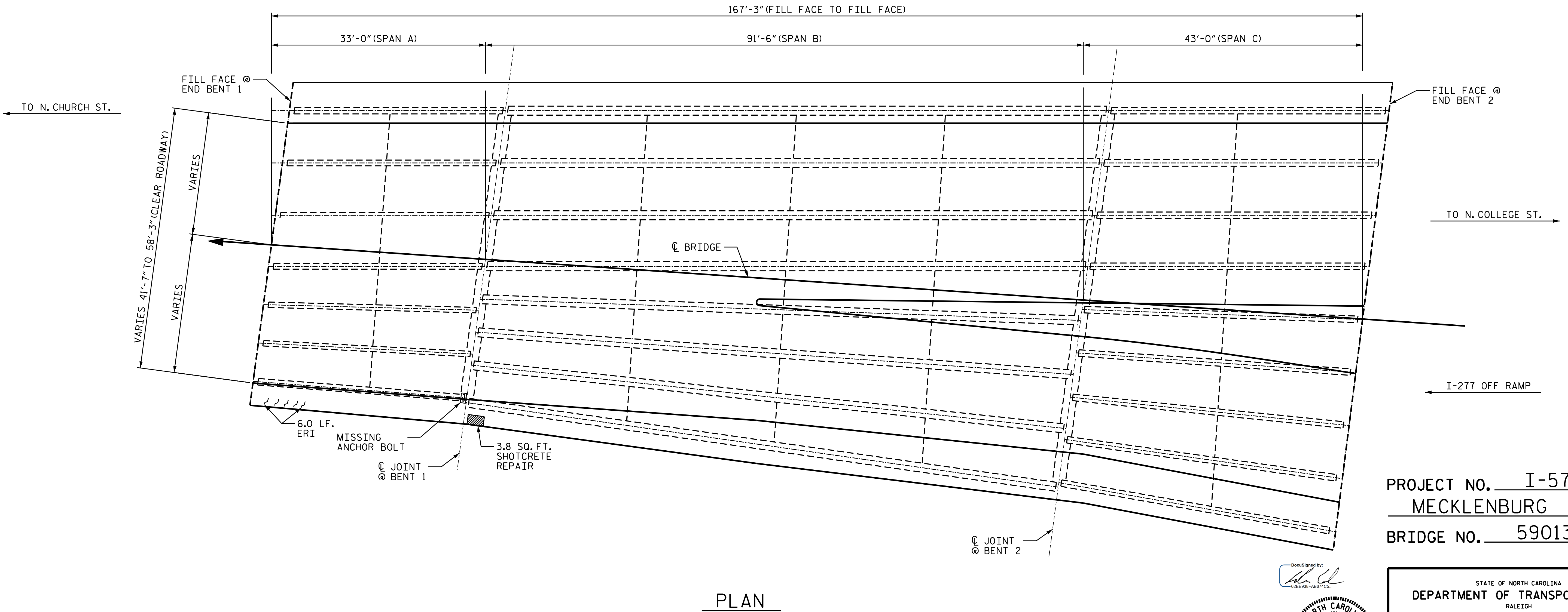
FOR UNDERSIDE OF DECK AND DIAPHRAGM REPAIRS, SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.

FOR ANCHOR BOLT REPAIR, SEE SPECIAL PROVISIONS.

-  UNDERSIDE DECK REPAIR
-  DIAPHRAGM REPAIR
-  ERI - EPOXY RESIN INJECTION

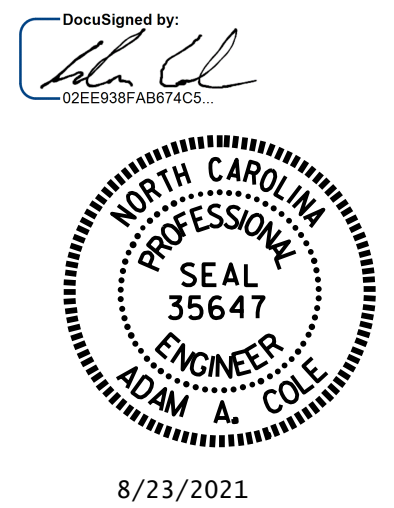
AS-BUILT REPAIR QUANTITY TABLE				
UNDERSIDE OF DECK REPAIRS				
SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	0.0	0.0		
UNDERSIDE OF OVERHANG	3.8	1.3		
DIAPHRAGMS	0.0	0.0		
GIRDERS	0.0	0.0		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	6.0 LF			

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.



PLAN

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590138



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
DECK UNDERSIDE REPAIR

DRAWN BY : E. BAYISSA DATE : 05/2021
 CHECKED BY : H. A. LOCKLEAR DATE : 06/2021

NO.	REVISIONS			NO.	REVISIONS			SHEET NO.
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1				3			3	
2				4			4	

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AS-BUILT REPAIR QUANTITY TABLE

END BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SO. FT.	VOLUME CU. FT.	AREA SO. FT.	VOLUME CU. FT.
CAP	3.4	1.7		
CURTAIN WALL	15.3	7.7		
WING WALL	0.0	0.0		
CONCRETE REPAIRS	AREA SO. FT.	VOLUME CU. FT.	AREA SO. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
CURTAIN WALL	0.0	0.0		
WING WALL	0.0	0.0		
EPOXY COATING		SO. FT.		SO. FT.
CAP		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 "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

NOTES

END BENT INFORMATION IS TAKEN FROM THE BRIDGE MAINTENANCE UNIT/DATA ON EXISTING STRUCTURE DATED 06/23/1983.

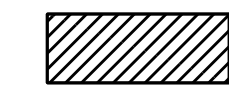

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE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

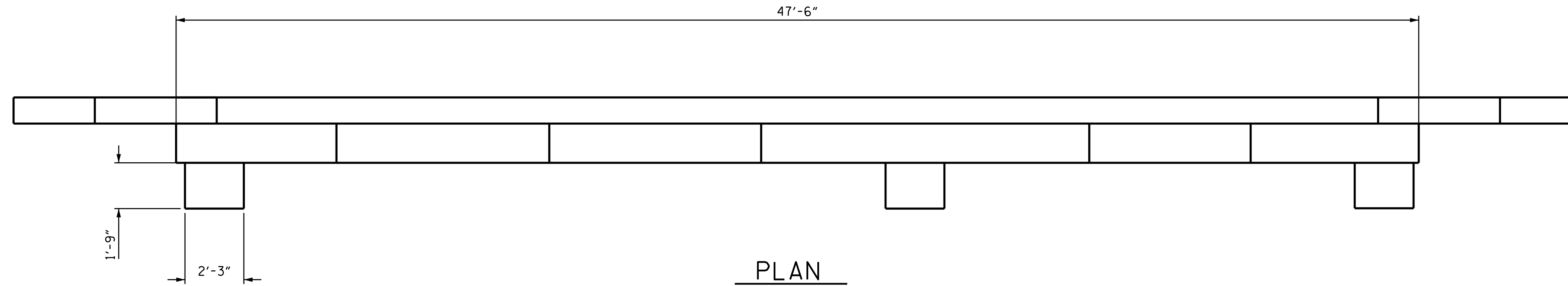
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

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

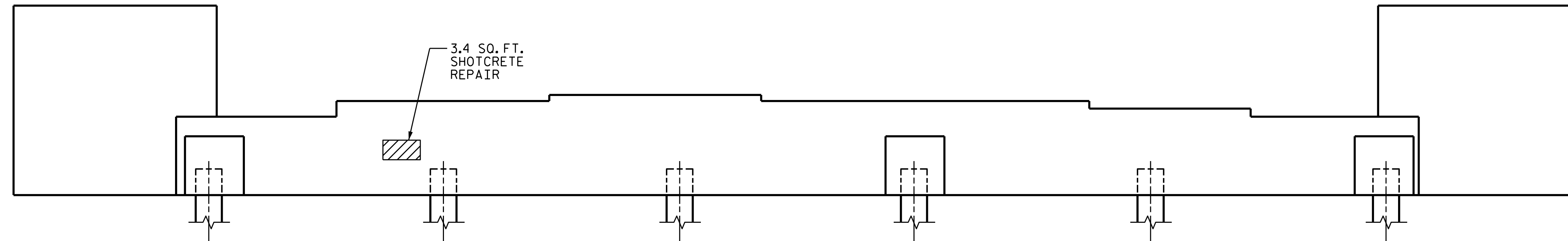
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

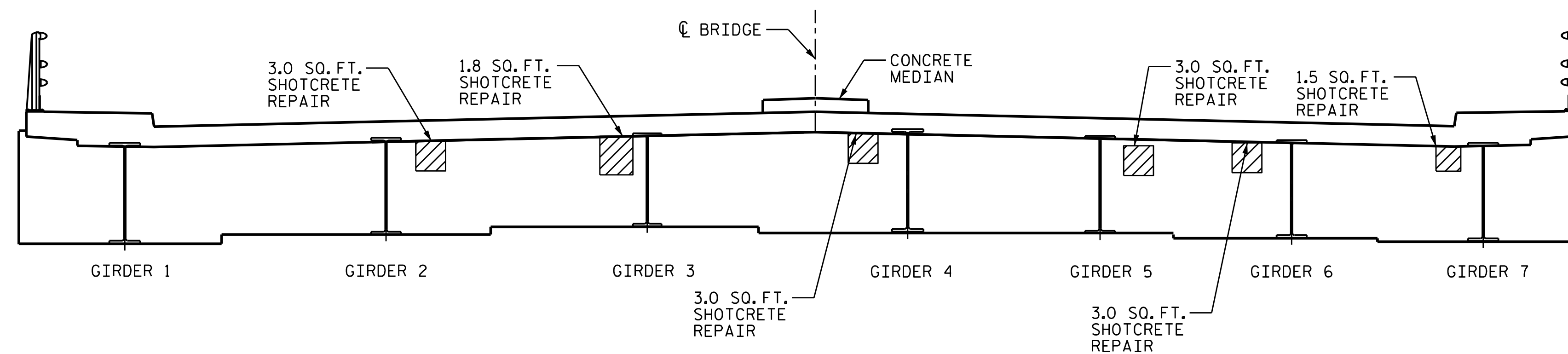
-  SHOTCRETE REPAIR AREA
-  CONCRETE REPAIR AREA



PLAN

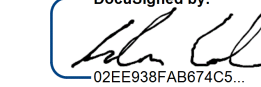


ELEVATION



TYPICAL SECTION

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590138

DocuSigned by:




8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

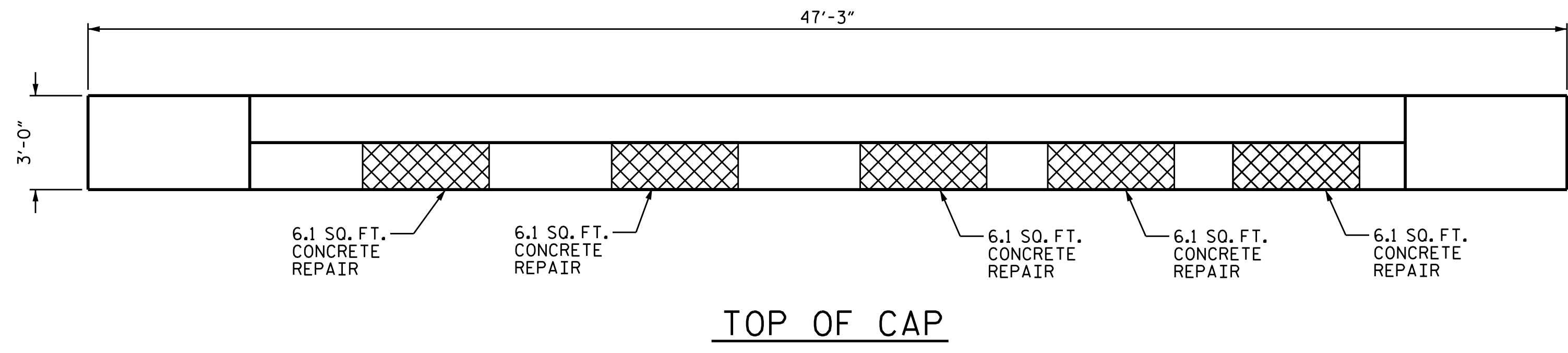
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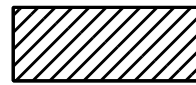
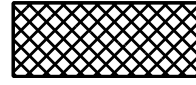

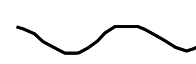
DRAWN BY : E. BAYISSA DATE : 06/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 06/2021

23-AUG-2021 11:56
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DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S3-09
2			4			TOTAL SHEETS 274



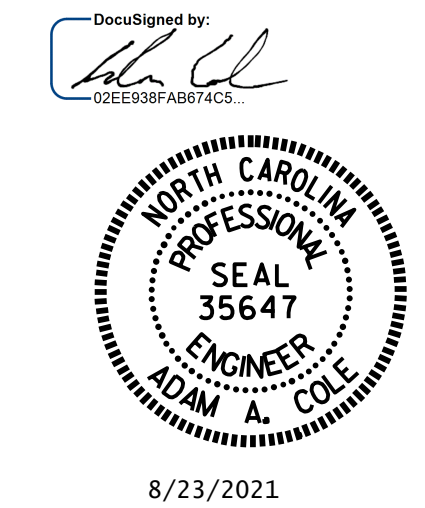
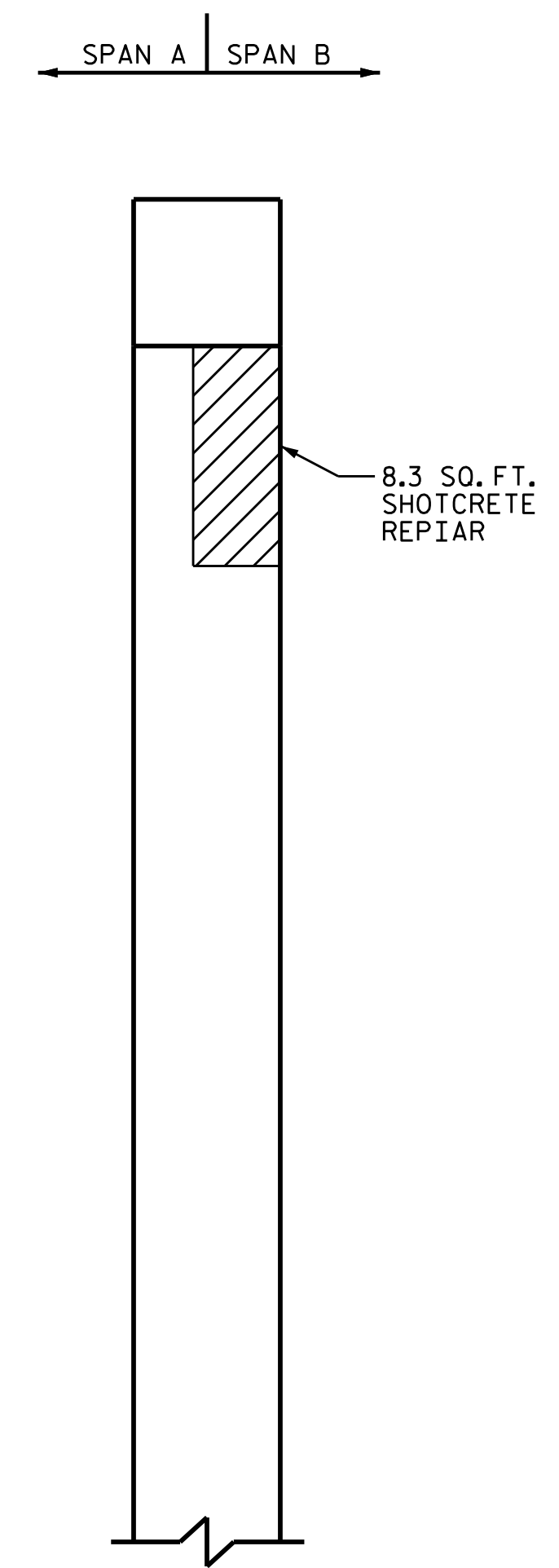
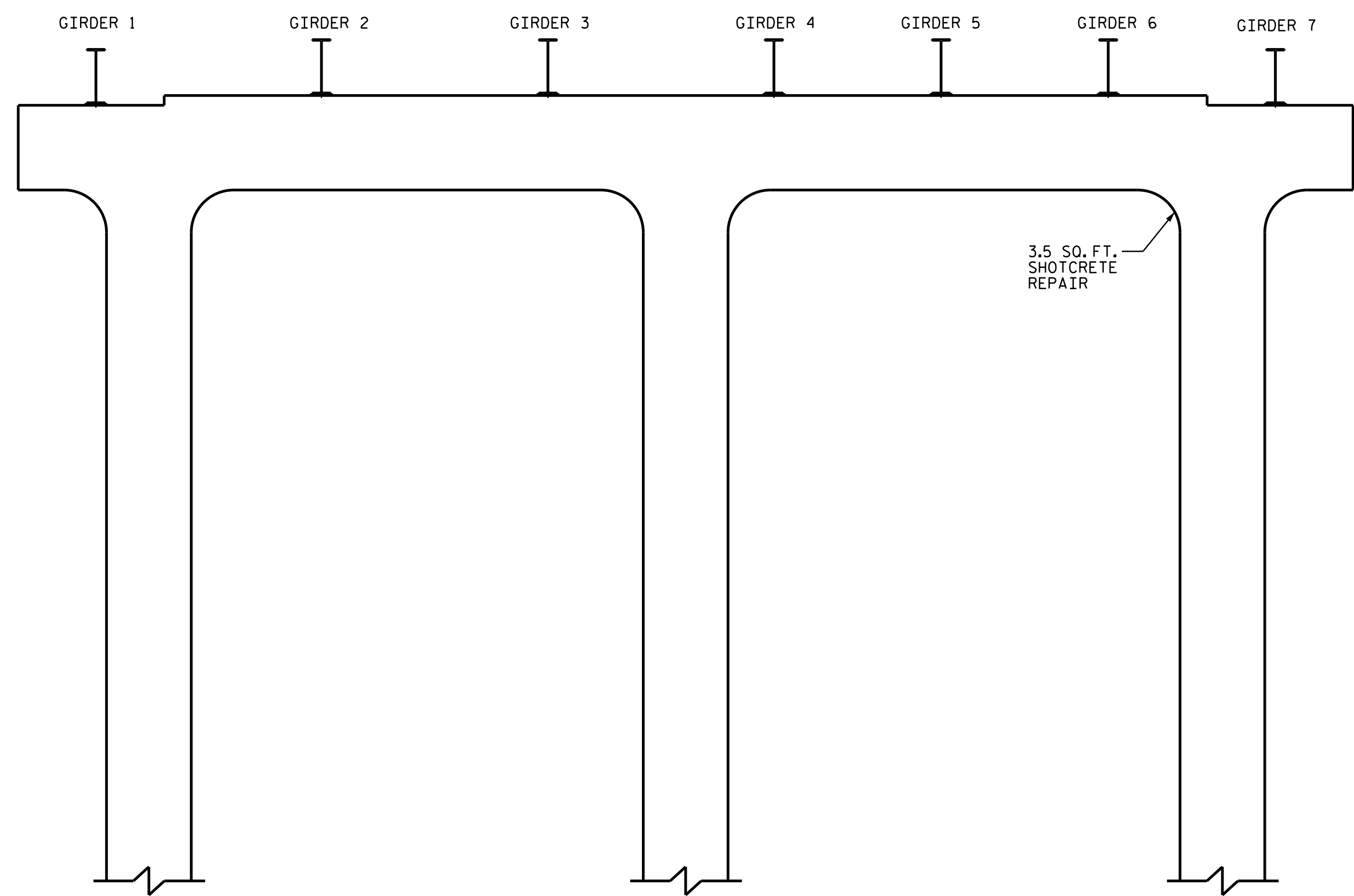
-  SHOTCRETE REPAIR AREA
-  CONCRETE REPAIR AREA
-  AREA PREVIOUSLY ACCOUNTED FOR ON ADJACENT FACE
-  ERI - EPOXY RESIN INJECTION

AS-BUILT REPAIR QUANTITY TABLE				
BENT 1 SPAN A FACE	ESTIMATE		ACTUAL	
	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
SHOTCRETE REPAIRS				
CAP	0.0	0.0		
COLUMN	11.8	5.9		
CONCRETE REPAIRS				
CAP	30.5	15.3		
COLUMN	0.0	0.0		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		0.0		
COLUMN		0.0		
EPOXY COATING		SQ. FT.		SQ. FT.
TOP OF BENT CAP		142		

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

NOTES

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



PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590138

SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**BENT 1
 SPAN A FACE**

DRAWN BY : E. BAYISSA DATE : 05/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 06/2021

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.
1			3			33-10
2			4			TOTAL SHEETS 274

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AS-BUILT REPAIR QUANTITY TABLE

BENT 1 SPAN B FACE	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SO. FT.	VOLUME CU. FT.	AREA SO. FT.	VOLUME CU. FT.
CAP	1.9	1.0		
COLUMN	3.4	1.7		
CONCRETE REPAIRS	AREA SO. FT.	VOLUME CU. FT.	AREA SO. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
COLUMN	0.0	0.0		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		8.0		
COLUMN		0.0		
EPOXY COATING		SO. FT.		SO. FT.
TOP OF BENT CAP		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 "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

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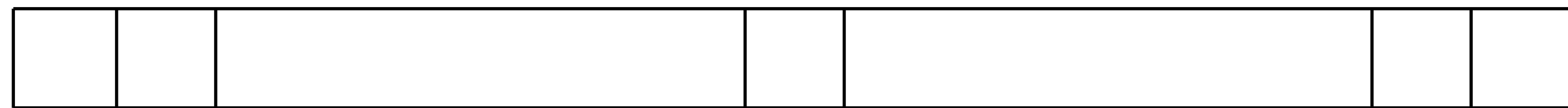
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

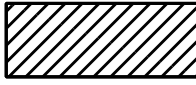


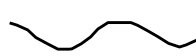
FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

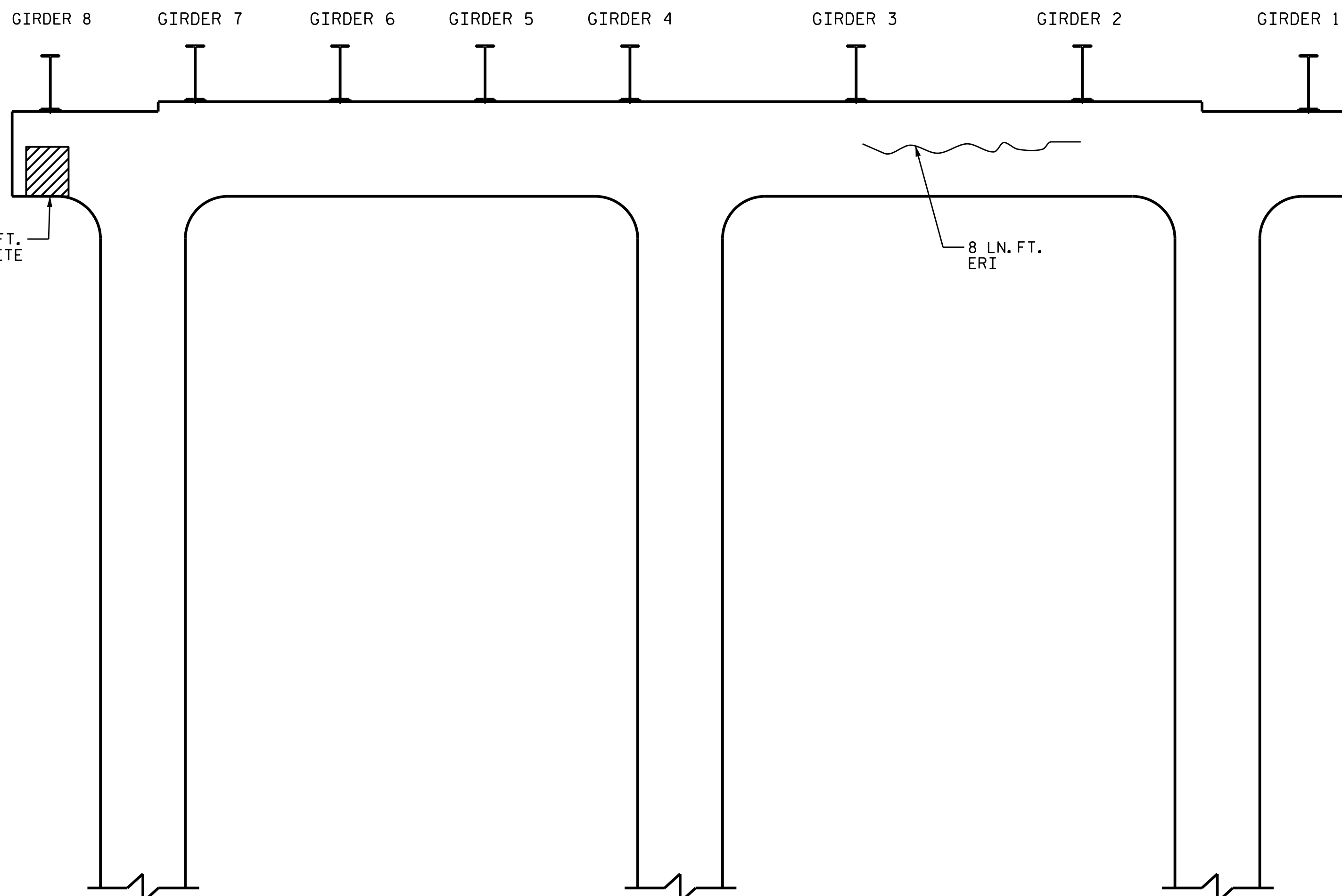
FOR CAP REPAIRS, SEE TYPICAL CAP AND COLUMN REPAIR DETAILS SHEET.



SPAN A
SPAN B

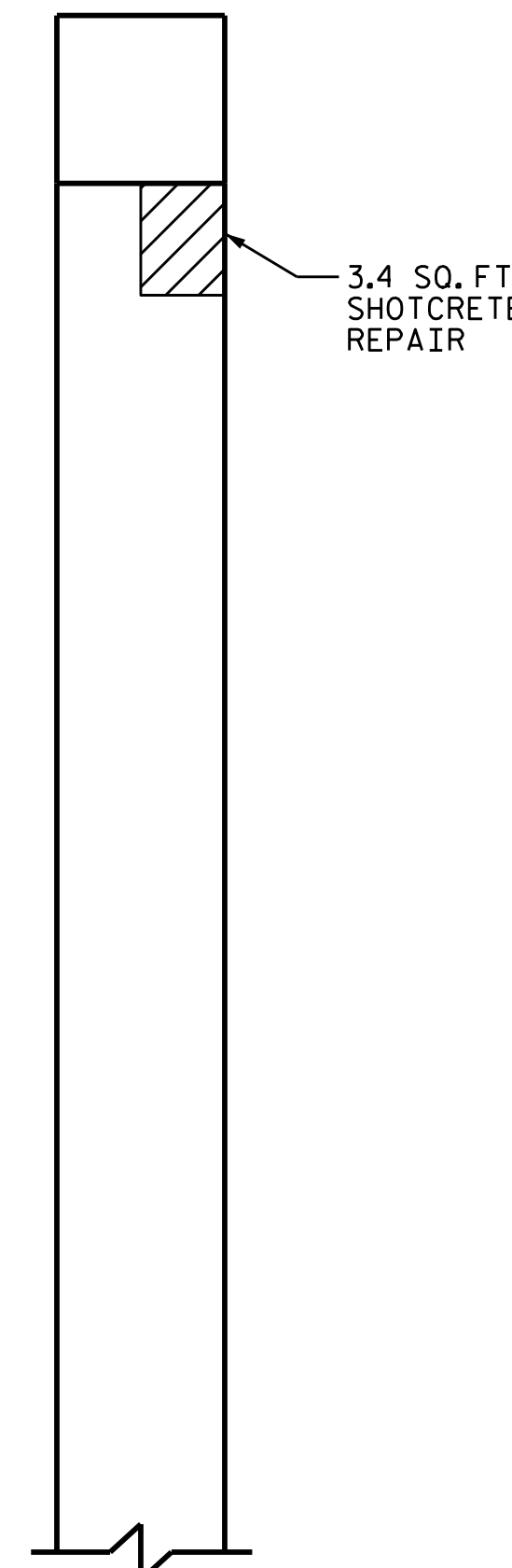
BOTTOM OF CAP

-  SHOTCRETE REPAIR AREA
-  CONCRETE REPAIR AREA
-  AREA PREVIOUSLY ACCOUNTED FOR ON ADJACENT FACE
-  ERI - EPOXY RESIN INJECTION



ELEVATION

SPAN B | SPAN A

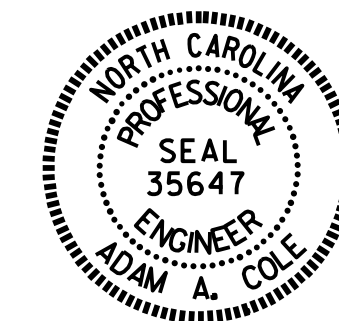


END VIEW

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590138

SHEET 2 OF 2

DocuSigned by:

8/23/2021

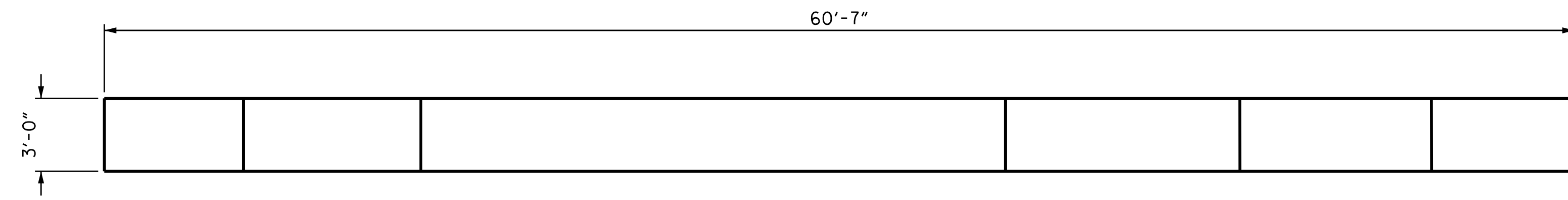
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 1
 SPAN B FACE

DRAWN BY : E. BAYISSA DATE : 05/2021
 CHECKED BY : H. A. LOCKLEAR DATE : 06/2021
 DESIGN ENGINEER OF RECORD: _____ DATE : _____

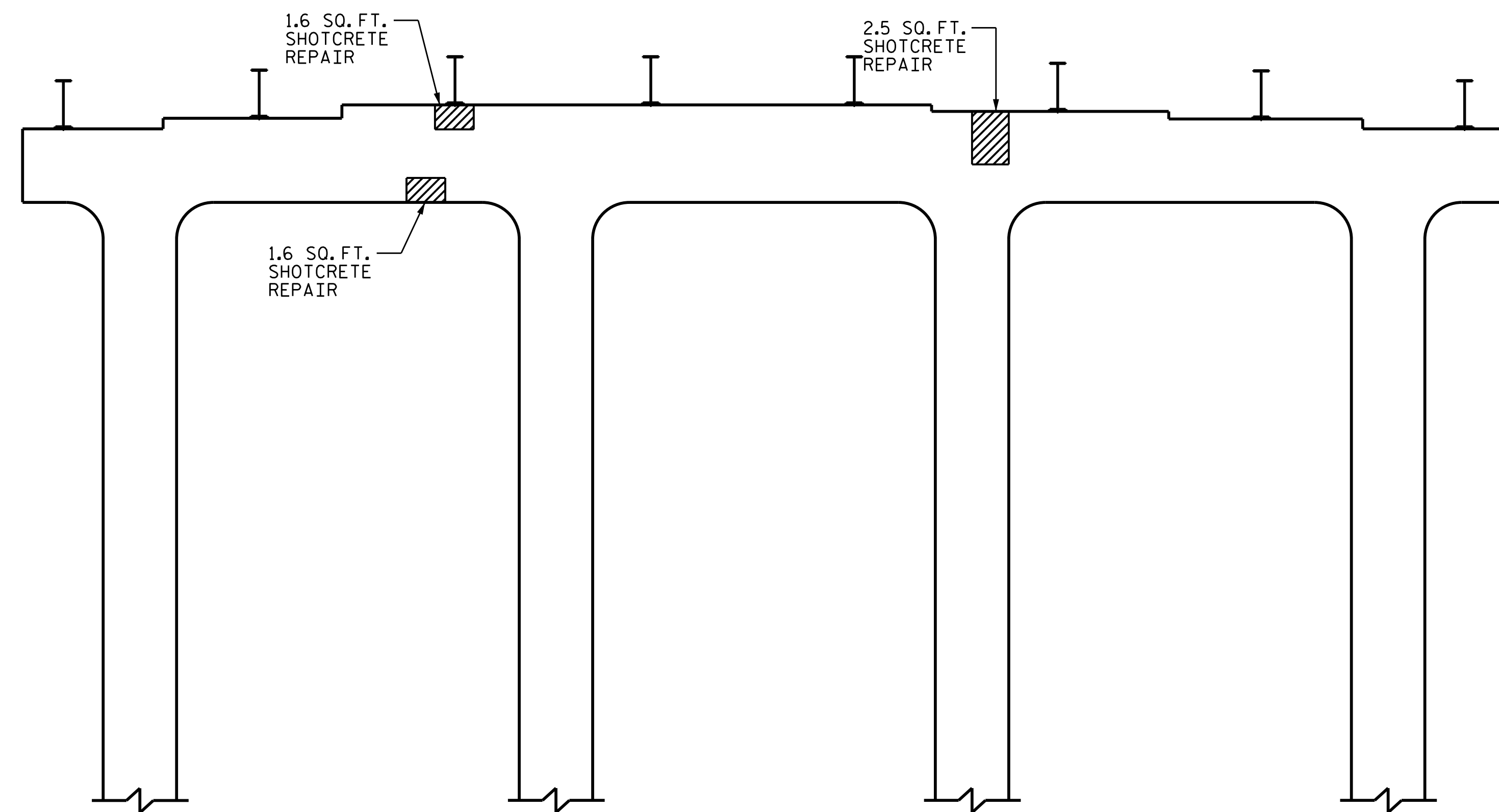
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			TOTAL SHEETS 274



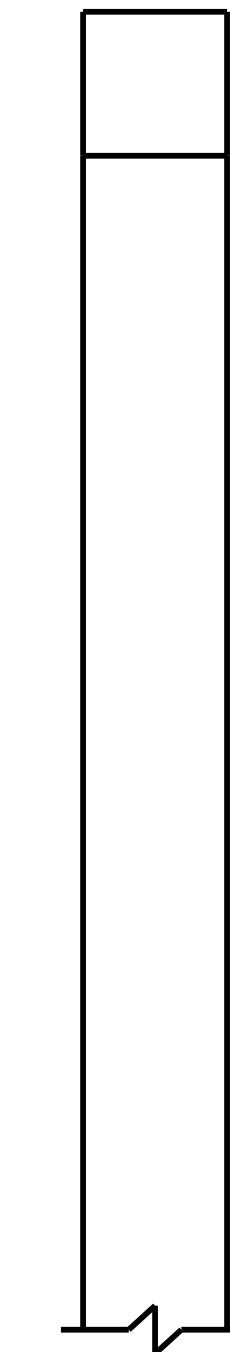
TOP OF CAP

SPAN C
SPAN B



ELEVATION

SPAN B | SPAN C



END VIEW

AS-BUILT REPAIR QUANTITY TABLE				
BENT 2 SPAN B FACE	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	5.7	2.9		
COLUMN	0.0	0.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
COLUMN	0.0	0.0		
EPOXY RESIN INJECTION		LIN. FT.	LIN. FT.	
CAP		0.0		
COLUMN		0.0		
EPOXY COATING		SQ. FT.	SQ. FT.	
TOP OF BENT CAP		182		

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

NOTES

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

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

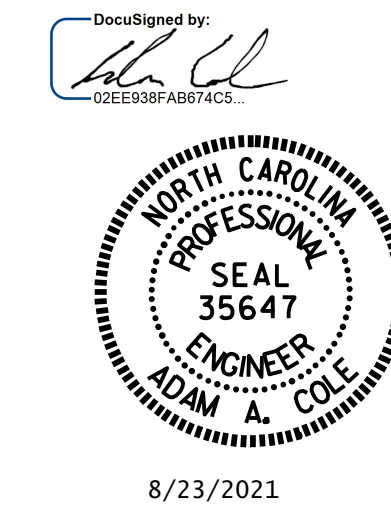
FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

- SHOTCRETE REPAIR AREA
- CONCRETE REPAIR AREA
- AREA PREVIOUSLY ACCOUNTED FOR ON ADJACENT FACE
- ERI - EPOXY RESIN INJECTION

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590138

SHEET 1 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**BENT 2
SPAN B FACE**

DRAWN BY : E. BAYISSA DATE : 05/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 06/2021

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

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AS-BUILT REPAIR QUANTITY TABLE

BENT 2 SPAN C FACE	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
COLUMN	0.0	0.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
COLUMN	0.0	0.0		
EPOXY RESIN INJECTION		LIN. FT.	LIN. FT.	
CAP		0.0		
COLUMN		0.0		
EPOXY COATING		SO. FT.	SO. FT.	
TOP OF BENT CAP		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 "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

NOTES

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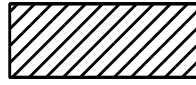


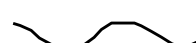
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CONCRETE REPAIRS MAYBE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

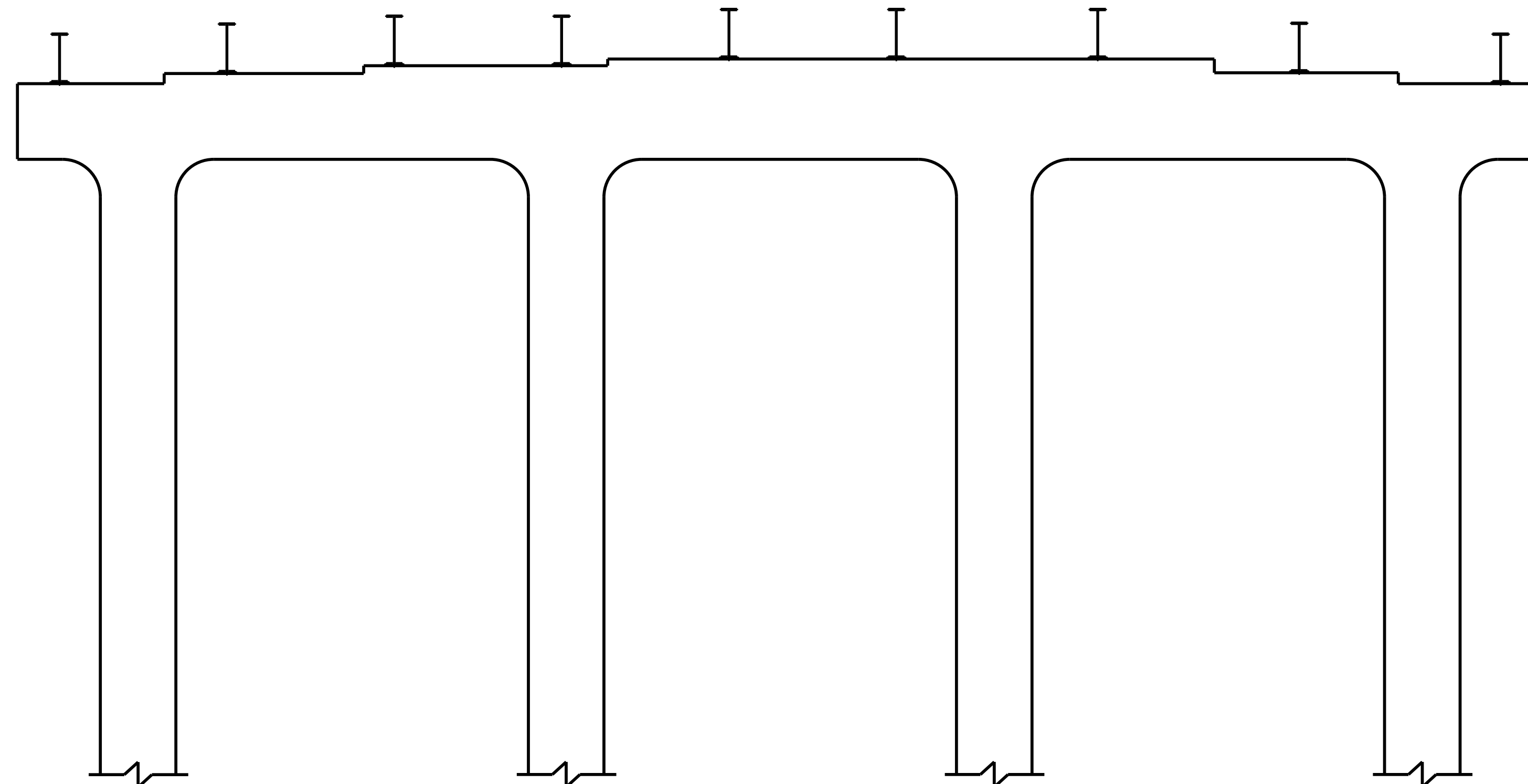
FOR CAP REPAIRS, SEE TYPICAL CAP AND COLUMN REPAIR DETAILS SHEET.

-  SHOTCRETE REPAIR AREA
-  CONCRETE REPAIR AREA
-  AREA PREVIOUSLY ACCOUNTED FOR ON ADJACENT FACE
-  ERI - EPOXY RESIN INJECTION



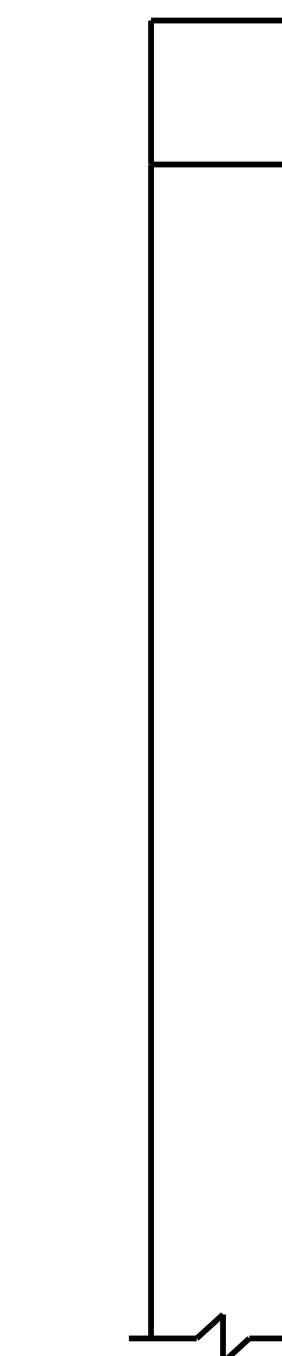
SPAN B
SPAN C

BOTTOM OF CAP



ELEVATION

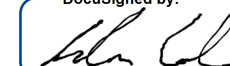
SPAN C | SPAN B

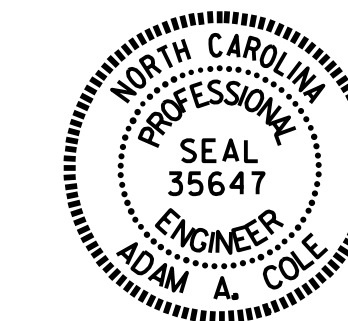


END VIEW

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590138

SHEET 2 OF 2

DocuSigned by:

 02E839FAB014C5...



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 2
 SPAN C FACE

DRAWN BY : E. BAYISSA DATE : 05/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 06/2021

DOCUMENT NOT CONSIDERED
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 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S3-13
1			3			TOTAL SHEETS
2			4			274

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		
CURTAIN WALL	5.7	2.9		
WING WALL	0.0	0.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
CURTAIN WALL	0.0	0.0		
WING WALL	0.0	0.0		
EPOXY COATING	SQ. FT.		SQ. FT.	
CAP	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 "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

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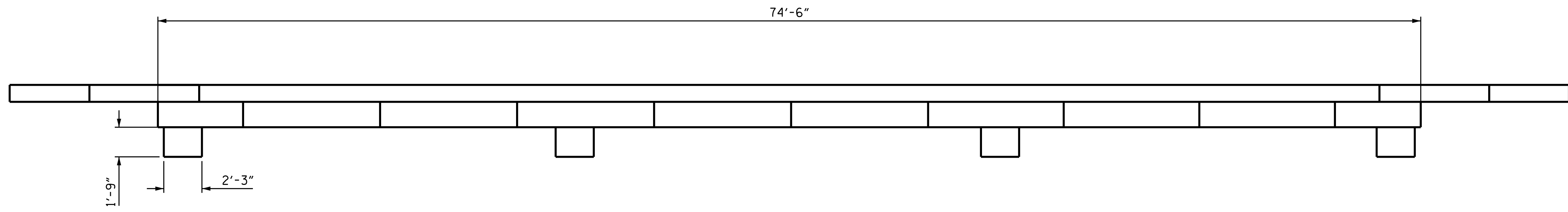
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SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

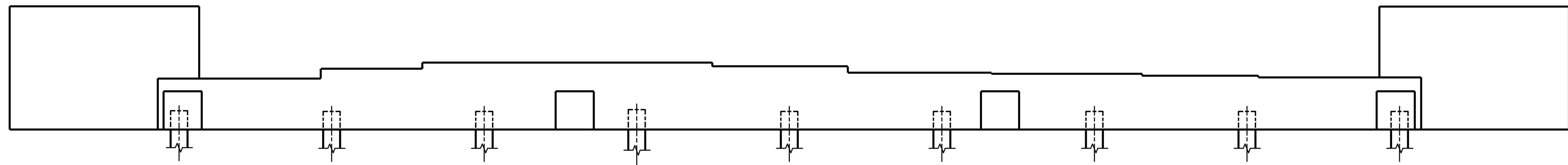
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

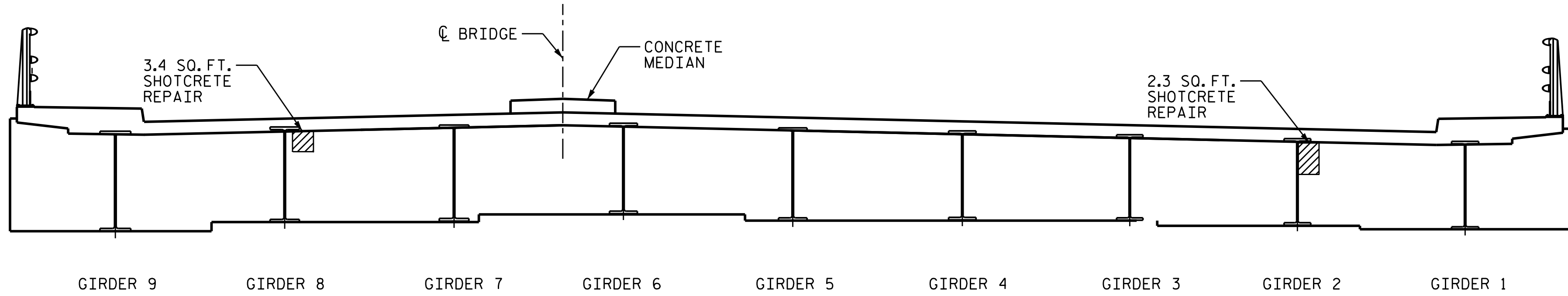
-  SHOTCRETE REPAIR AREA
-  CONCRETE REPAIR AREA



PLAN

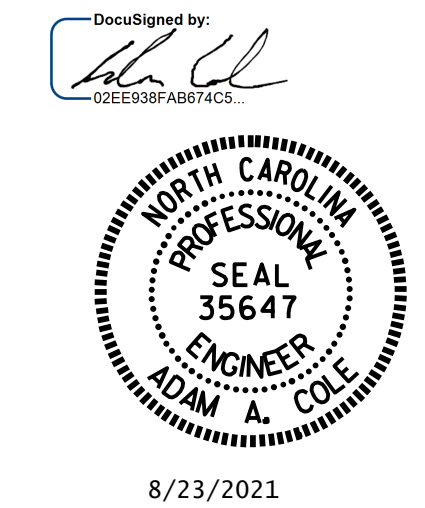


ELEVATION



TYPICAL SECTION

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590138



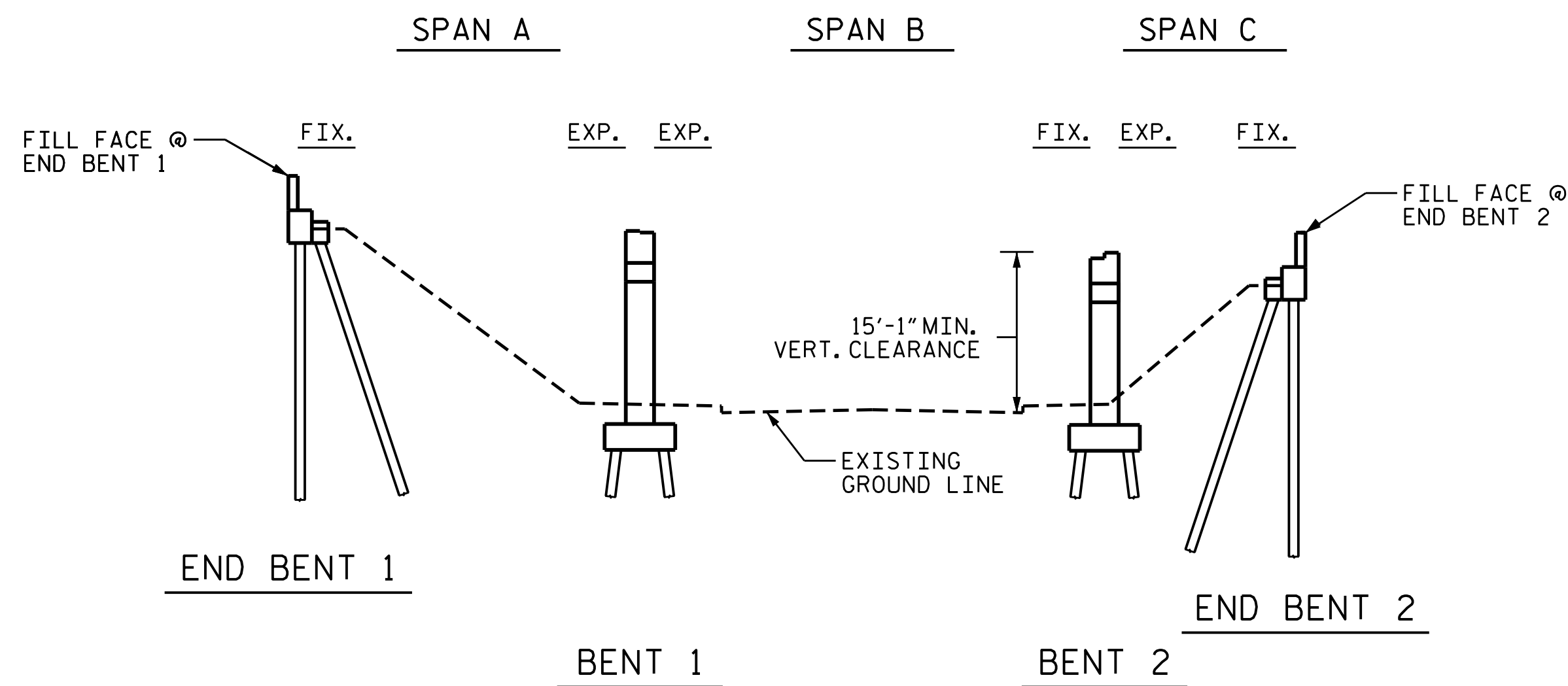
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

END BENT 2

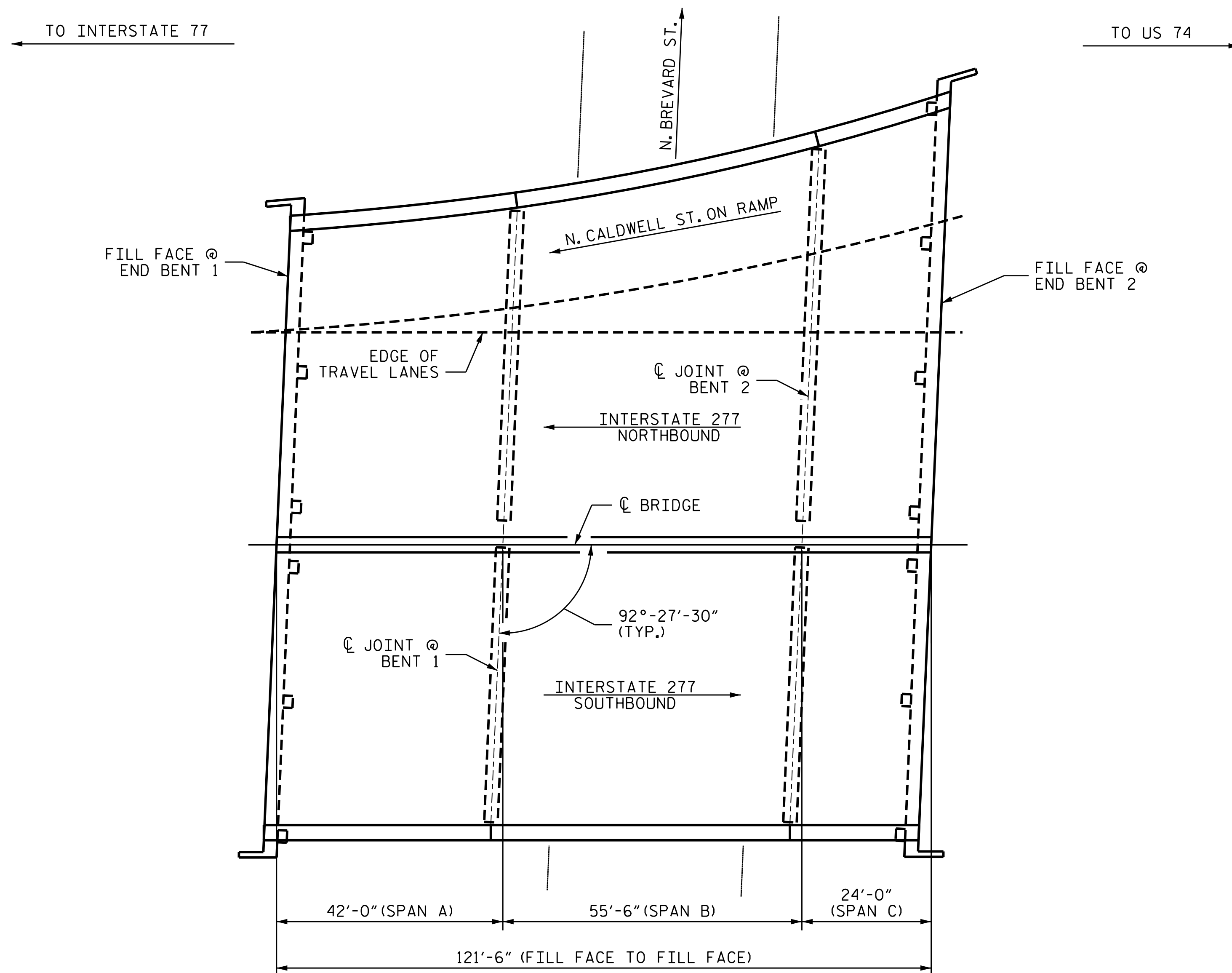
DRAWN BY : E. BAYISSA DATE : 06/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 06/2021

NO.	REVISIONS			NO.	REVISIONS			SHEET NO.
	BY:	DATE:			BY:	DATE:		
1				3			S3-14	
2				4			TOTAL SHEETS 274	

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



SECTION ALONG C BRIDGE



PLAN

NOTES:

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 07/14/2020.
BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

SCOPE OF WORK

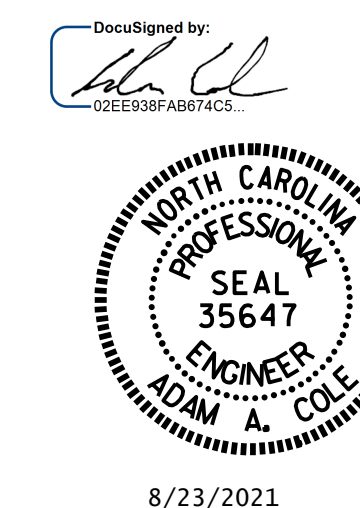
- REMOVE ASPHALT WEARING SURFACE AND PARTIALLY REMOVE BRIDGE DECK CONCRETE BY SCARIFICATION AND SHOTBLASTING METHODS.
- OVERLAY PREPARED BRIDGE DECK WITH POLYMER CONCRETE (PC).
- GROOVE POLYMER CONCRETE (PC) BRIDGE DECK.
- CLEAN AND PAINT BEARINGS WITH HRCSA.
- CLEAN, REPAIR, AND PAINT STEEL I-BEAMS.
- INSTALL FOAM JOINT SEALS.
- 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 BENT AND END BENT CAPS 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. 590320

SHEET 1 OF 2



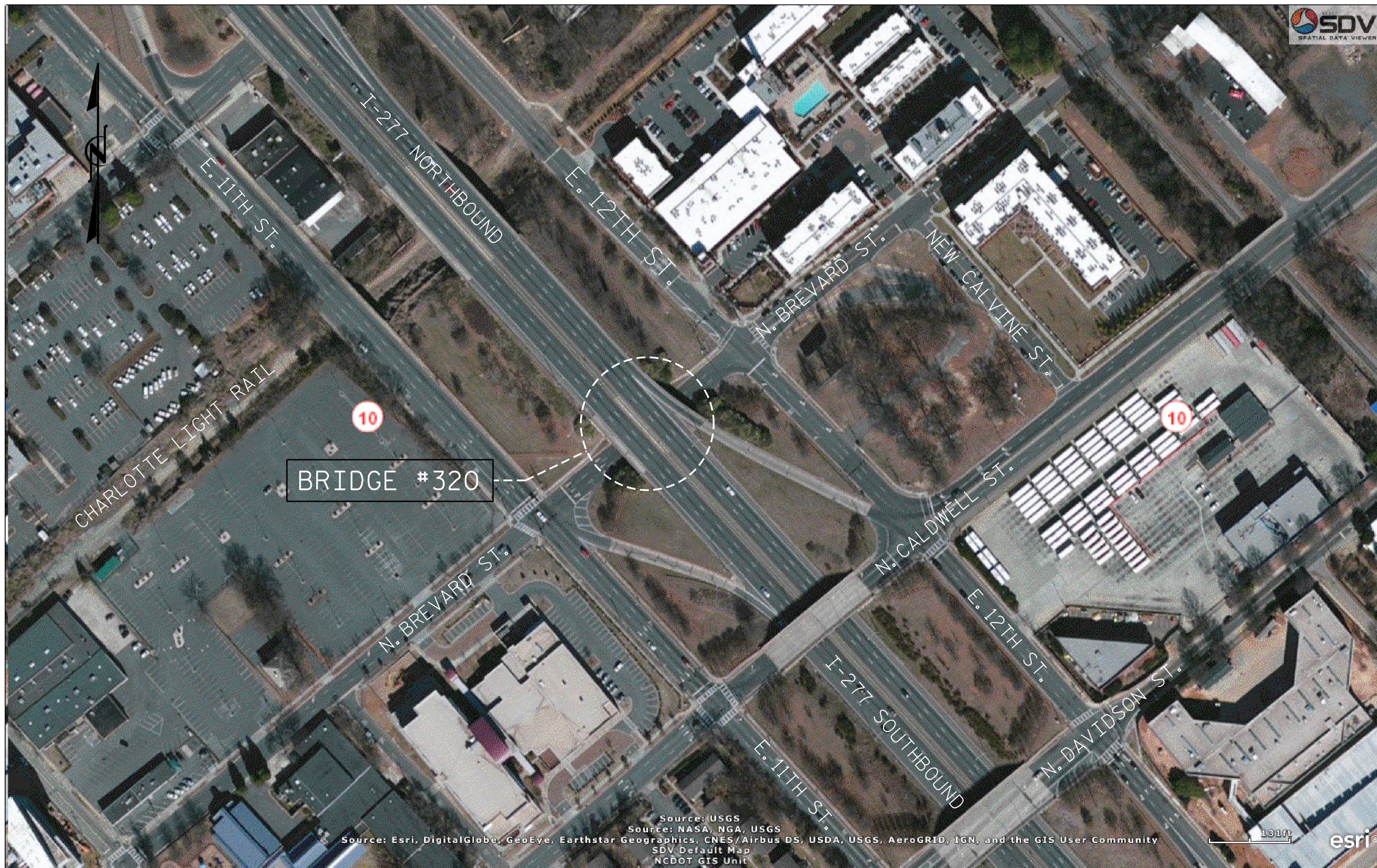
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

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

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

DOCUMENT NOT CONSIDERED
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SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S4-1
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2			4			274



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 AS 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 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 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.

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'-49.42"
 LONGITUDE: 80°-49'-54.33"

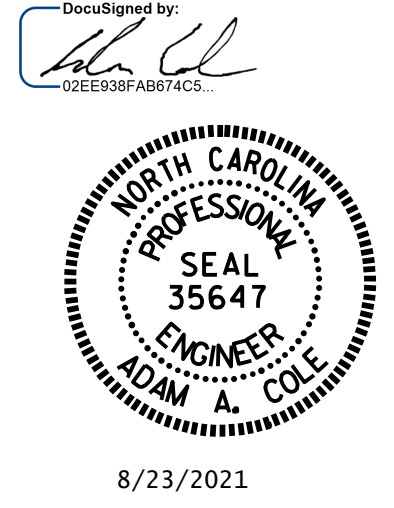
NOTES

- 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.



PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590320

SHEET 2 OF 2

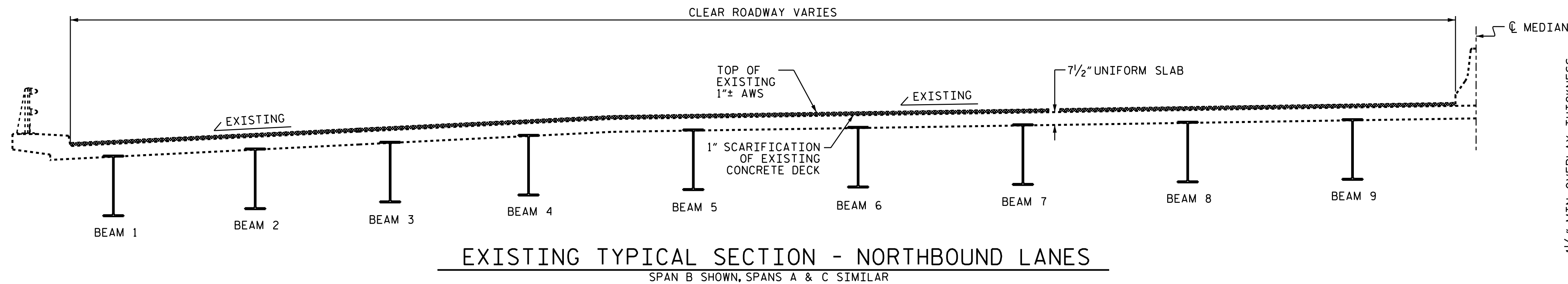
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

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

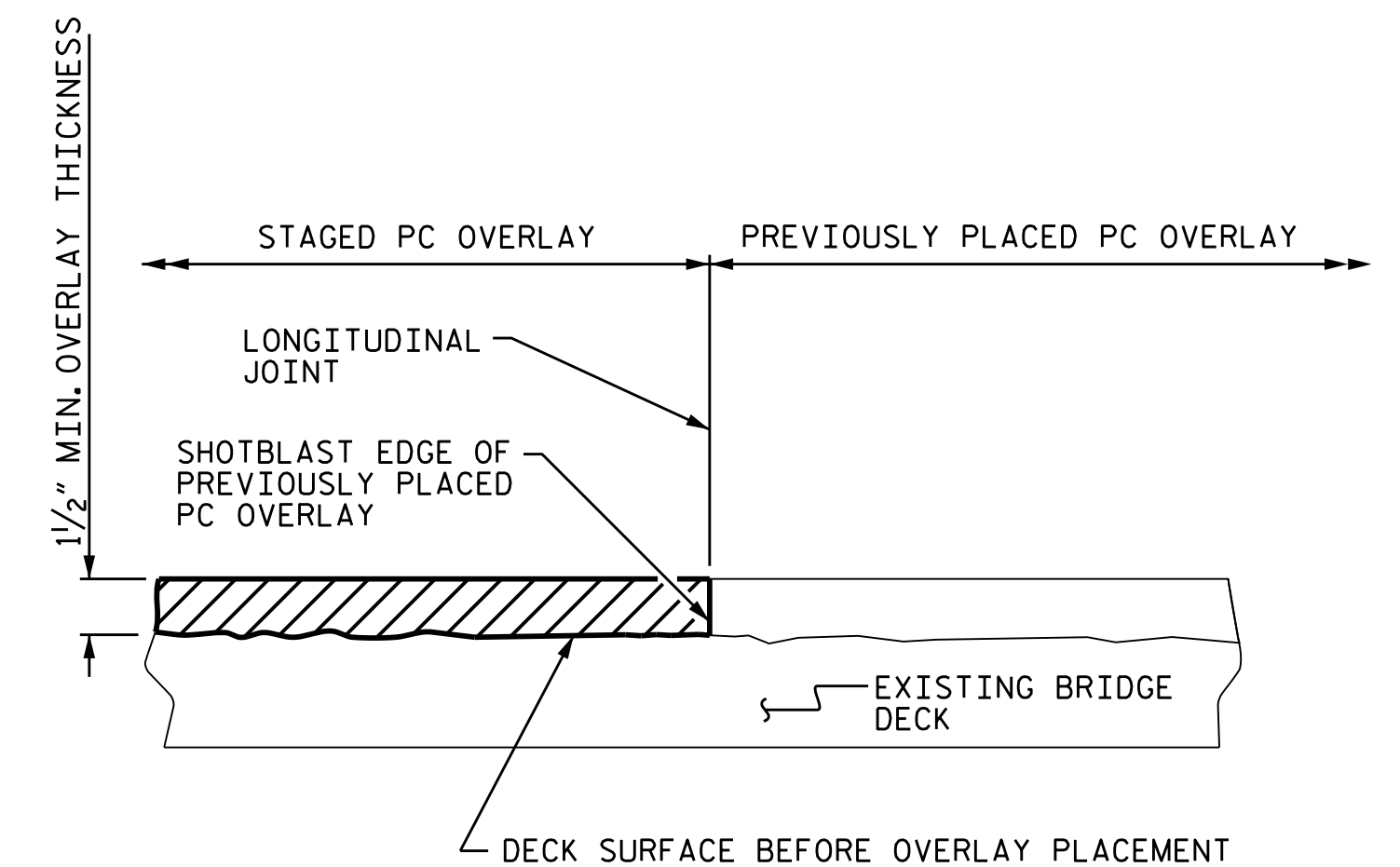
DRAWN BY : R.L.PUTEK/E.BAYISSA DATE : 05/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 07/2021

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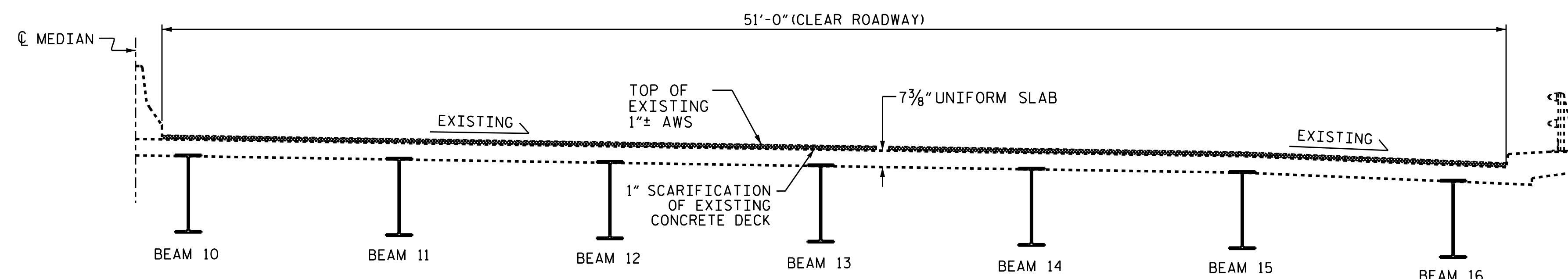
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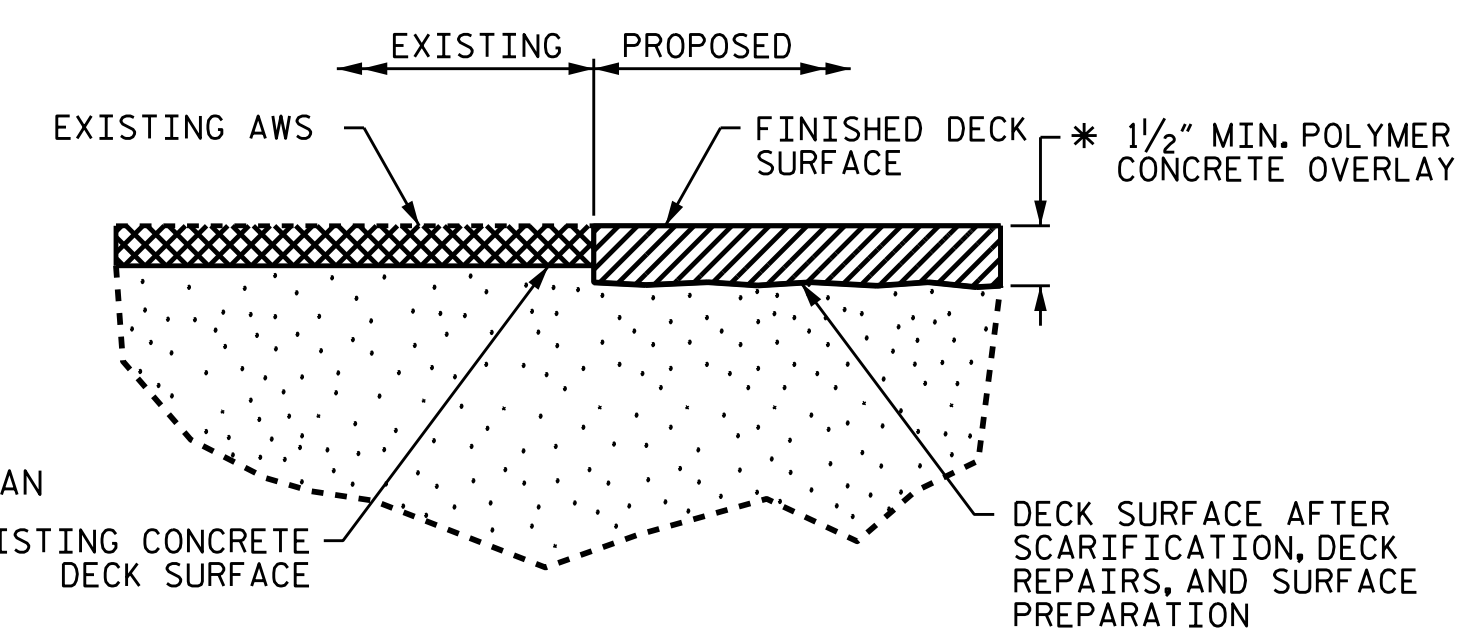
EXISTING TYPICAL SECTION - NORTHBOUND LANES
SPAN B SHOWN, SPANS A & C SIMILAR



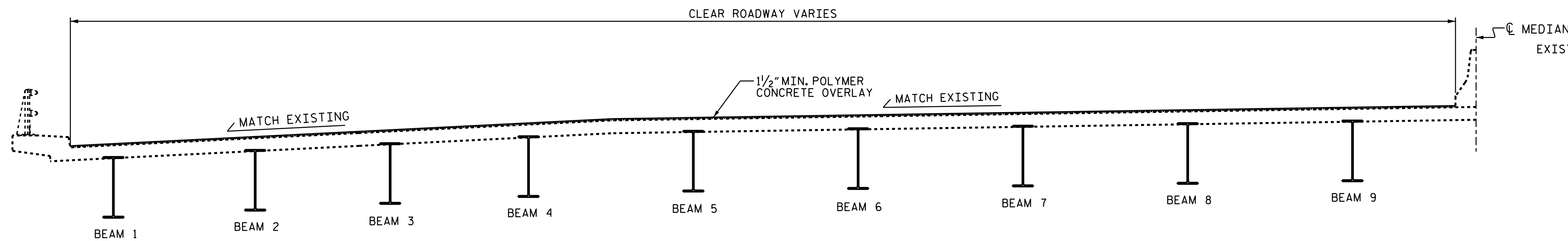
STAGED PC OVERLAY JOINT
(AS NEEDED)



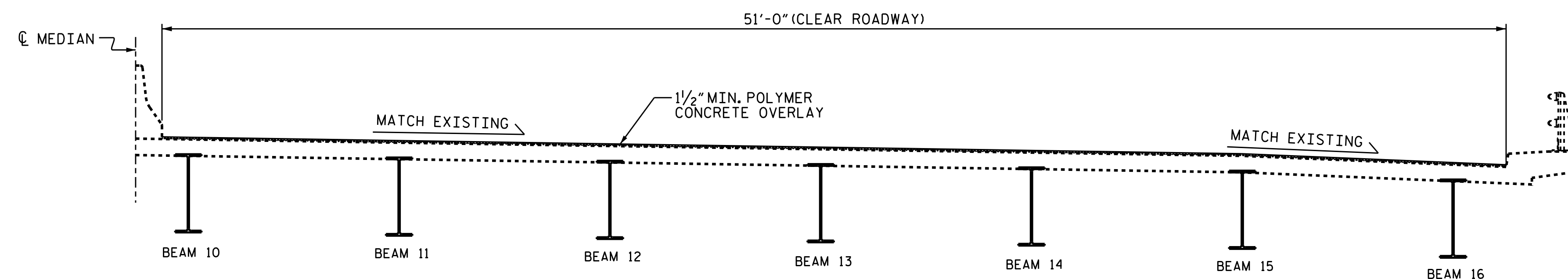
EXISTING TYPICAL SECTION - SOUTHBOUND LANES



DETAIL FOR POLYMER CONCRETE OVERLAY

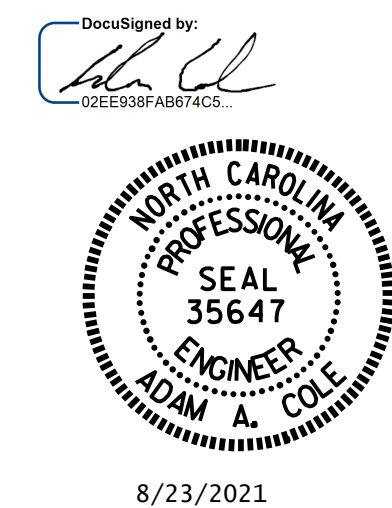


PROPOSED TYPICAL SECTION - NORTHBOUND LANES
SPAN B SHOWN, SPANS A & C SIMILAR



PROPOSED TYPICAL SECTION - SOUTHBOUND LANES

PROJECT NO. I-5746C
MECKLENBURG COUNTY
BRIDGE NO. 590320



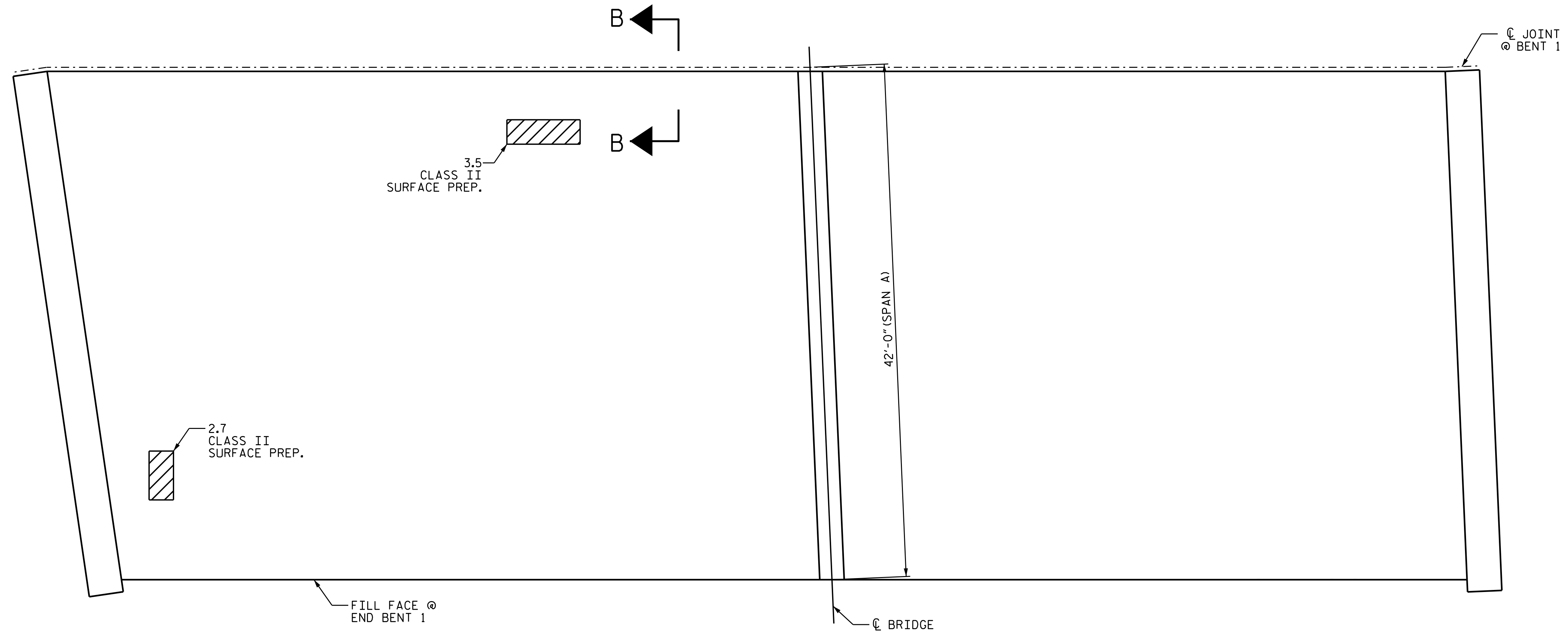
8/23/2021

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

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PLAN

AS-BUILT REPAIR QUANTITY TABLE		
TOP OF DECK REPAIRS		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	514 SQ. YDS.	
CLASS II SURFACE PREPARATION	6.2 SQ. YDS.	
CONCRETE DECK REPAIR FOR PC OVERLAY	6.2 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	514 SQ. YDS.	
PC MATERIALS	25.0 CU. YDS.	
PLACING AND FINISHING PC OVERLAY	514 SQ. YDS.	
GROOVING BRIDGE FLOORS	4342 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 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.

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

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

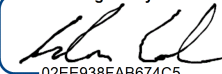
FOR PC MATERIALS, SEE SPECIAL PROVISION.

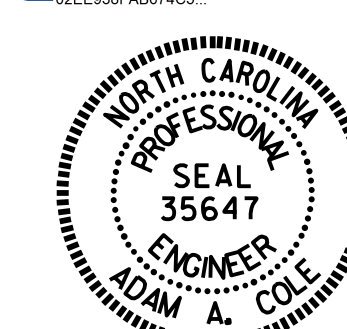
 APPROX. CLASS II SURFACE PREPARATION

 EPOXY RESIN INJECTION (ERI)

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590320

SHEET 1 OF 3

DocuSigned by:

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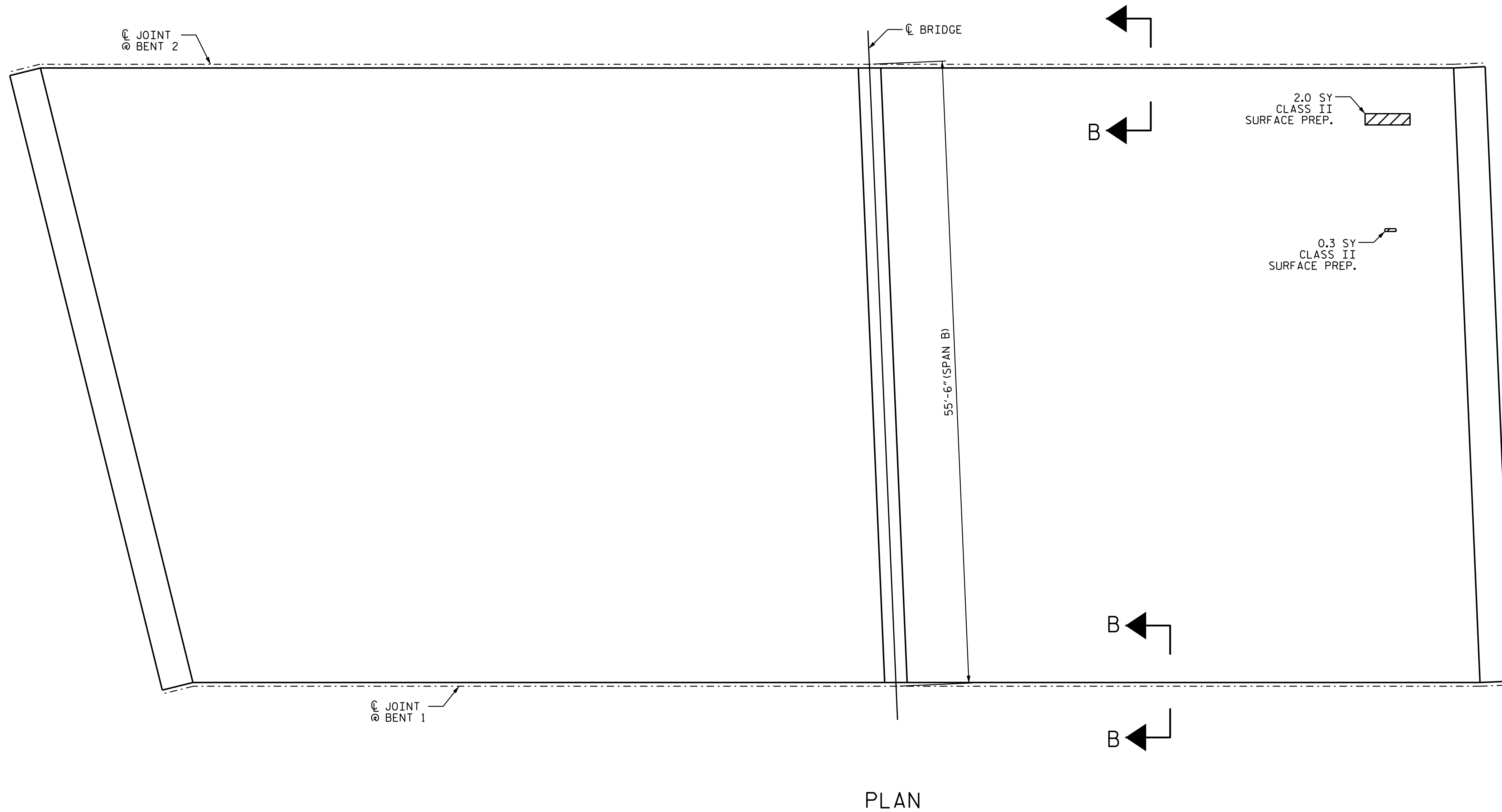
8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 DECK SURFACE 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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PLAN

AS-BUILT REPAIR QUANTITY TABLE		
TOP OF DECK REPAIRS		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	728 SQ. YDS.	
CLASS II SURFACE PREPARATION	2.3 SQ. YDS.	
CONCRETE DECK REPAIR FOR PC OVERLAY	2.3 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	728 SQ. YDS.	
PC MATERIALS	35.4 CU. YDS.	
PLACING AND FINISHING PC OVERLAY	728 SQ. YDS.	
GROOVING BRIDGE FLOORS	6181 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 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.

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

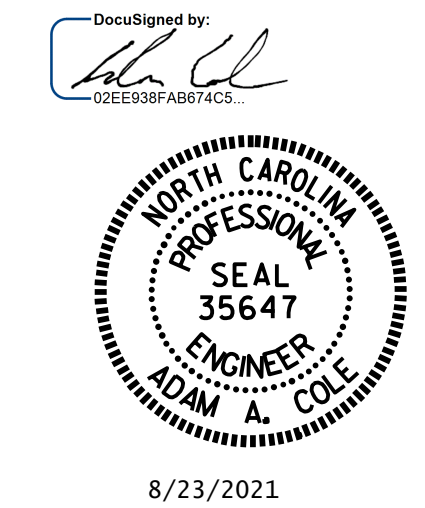
FOR CONCRETE DECK REPAIR FOR PC OVERLAY, SEE SPECIAL PROVISION.

FOR PC MATERIALS, SEE SPECIAL PROVISION.

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

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590320

SHEET 2 OF 3



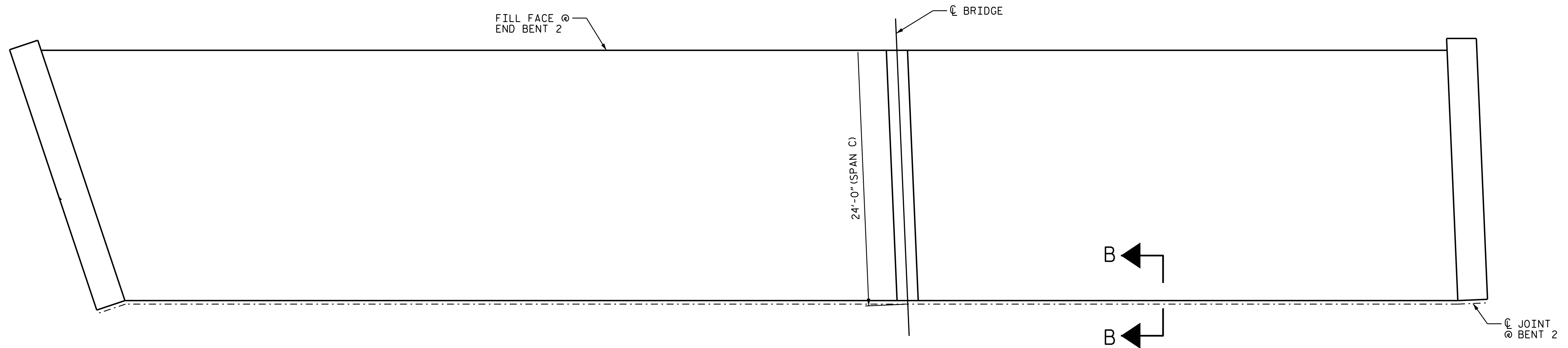
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK SURFACE 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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1			3			TOTAL SHEETS
2			4			274



PLAN

AS-BUILT REPAIR QUANTITY TABLE		
TOP OF DECK REPAIRS		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	340 SQ. YDS.	
CLASS II SURFACE PREPARATION	0.0 SQ. YDS.	
CONCRETE DECK REPAIR FOR PC OVERLAY	0.0 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	340 SQ. YDS.	
PC MATERIALS	16.5 CU YDS.	
PLACING AND FINISHING PC OVERLAY	340 SQ. YDS.	
GROOVING BRIDGE FLOORS	2868 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 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.

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

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

FOR PC MATERIALS, SEE SPECIAL PROVISION.

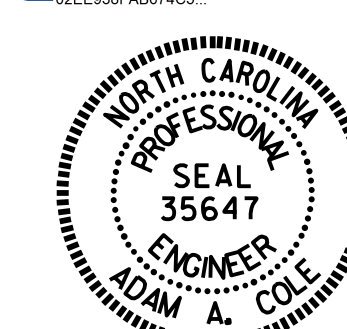
APPROX. CLASS II SURFACE PREPARATION

EPOXY RESIN INJECTION (ERI)

PROJECT NO. I-5746C
MEKLENBURG COUNTY
 BRIDGE NO. 590320

SHEET 3 OF 3

DocuSigned by:



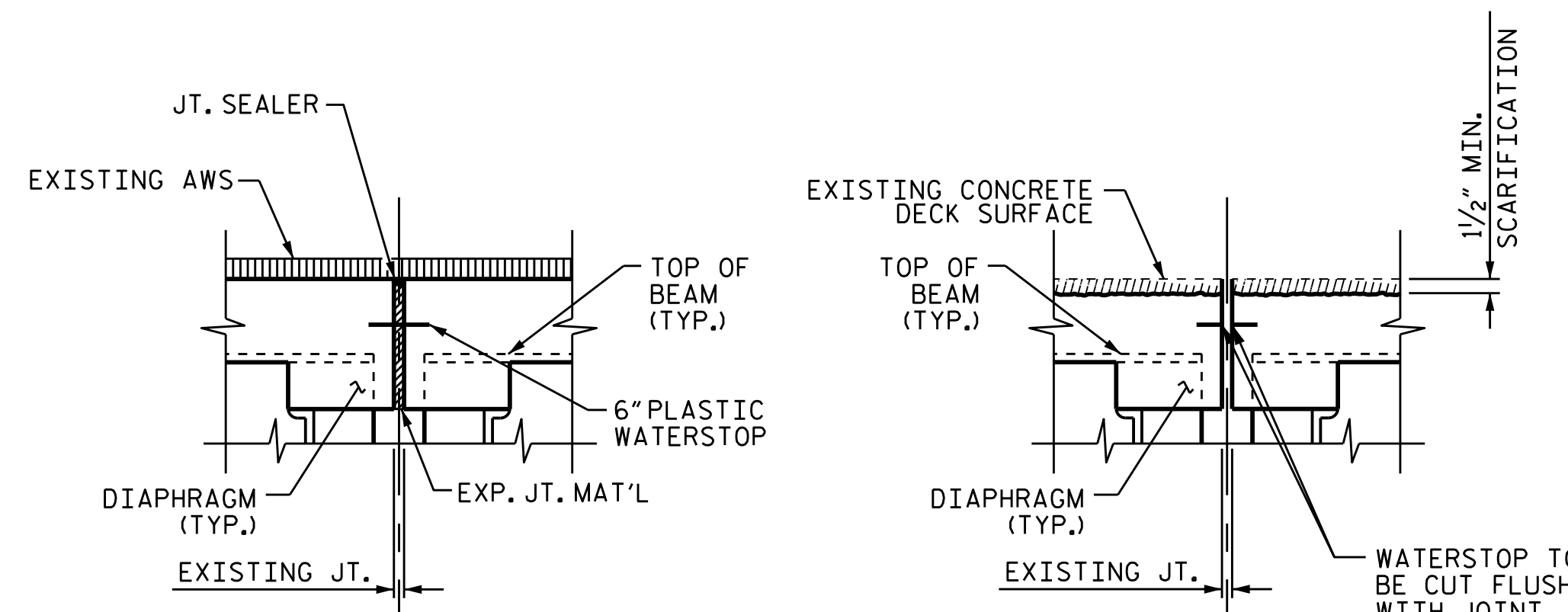
8/23/2021

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

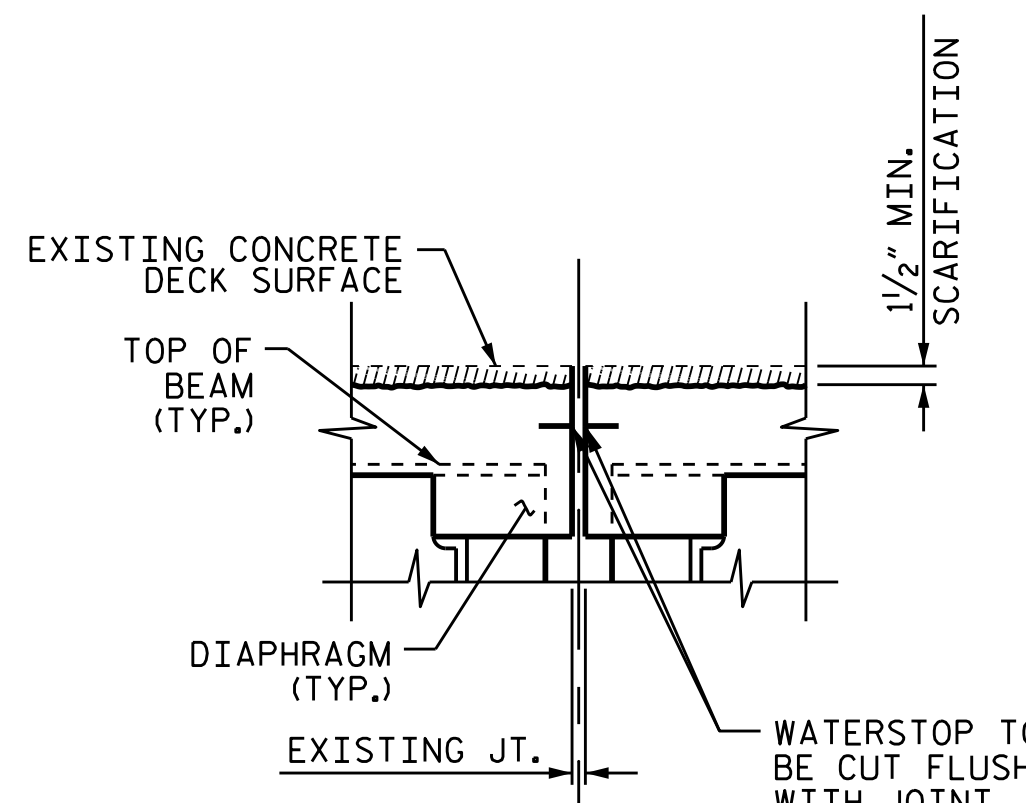
DRAWN BY : R.L. PUTEK/E. BAYISSA DATE : 07/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 07/2021

DOCUMENT NOT CONSIDERED
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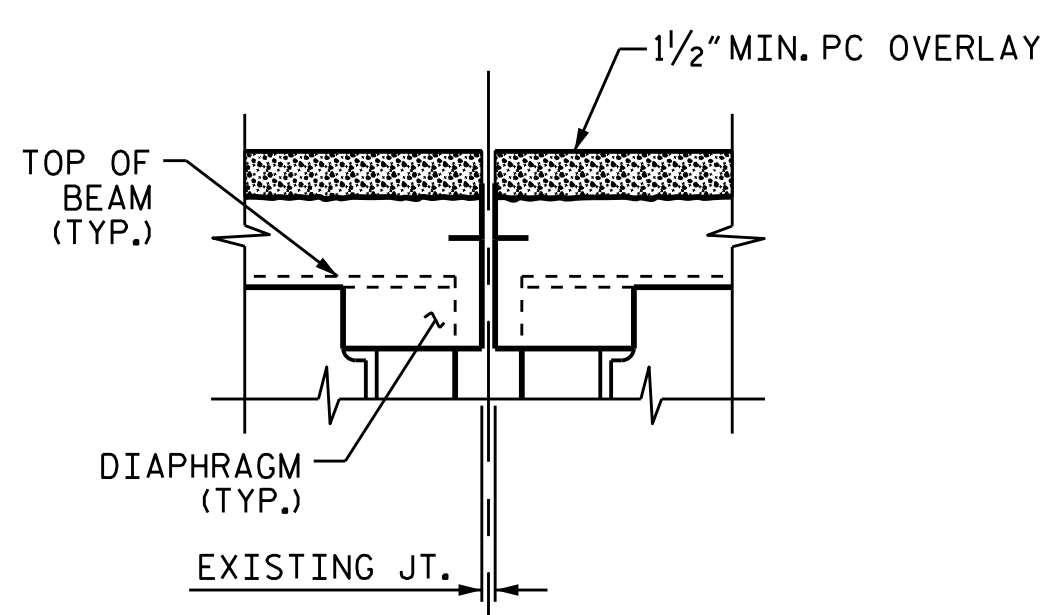
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			274



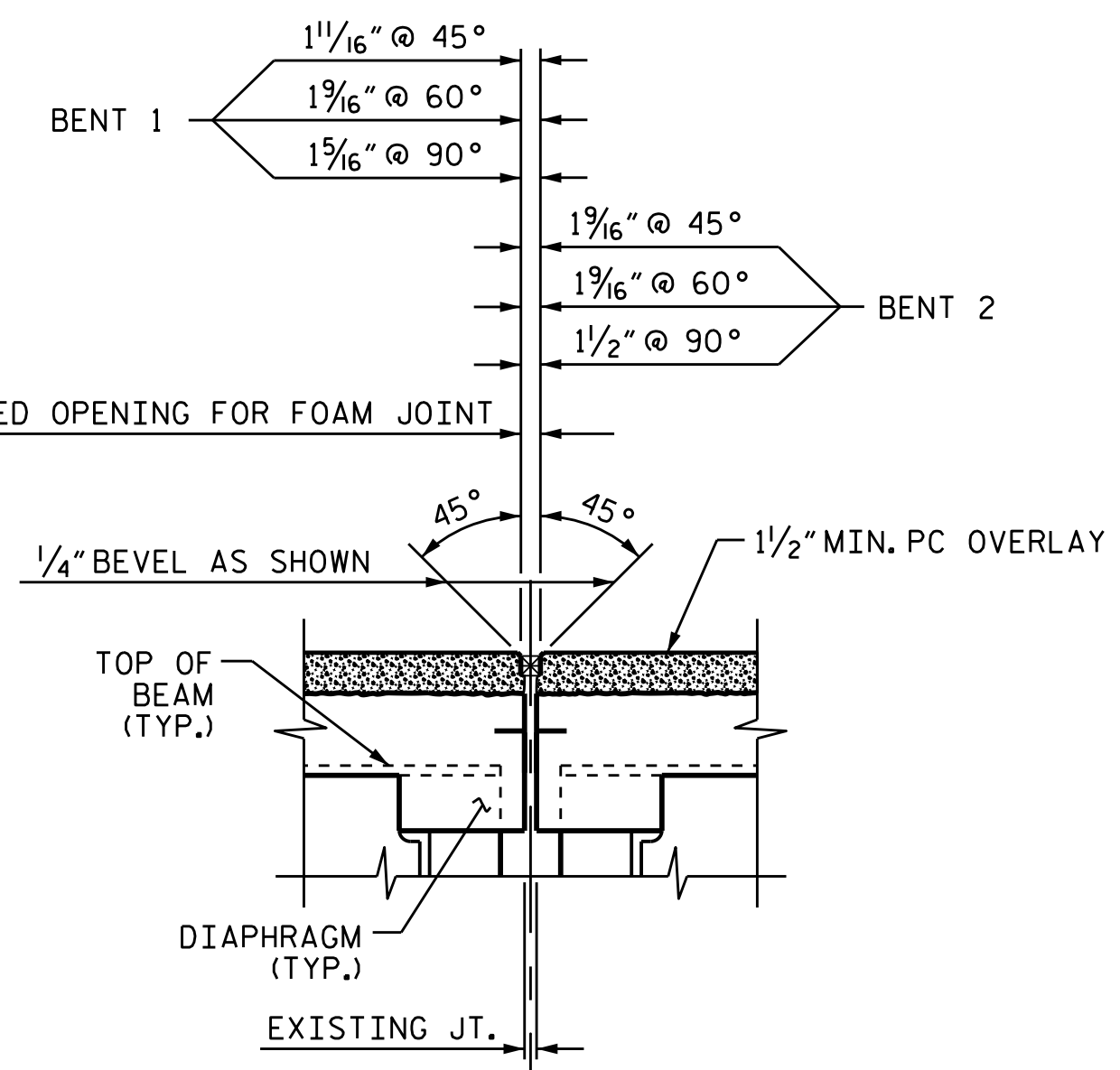
EXISTING JOINT



EXISTING JOINT AFTER DECK SCARIFICATION

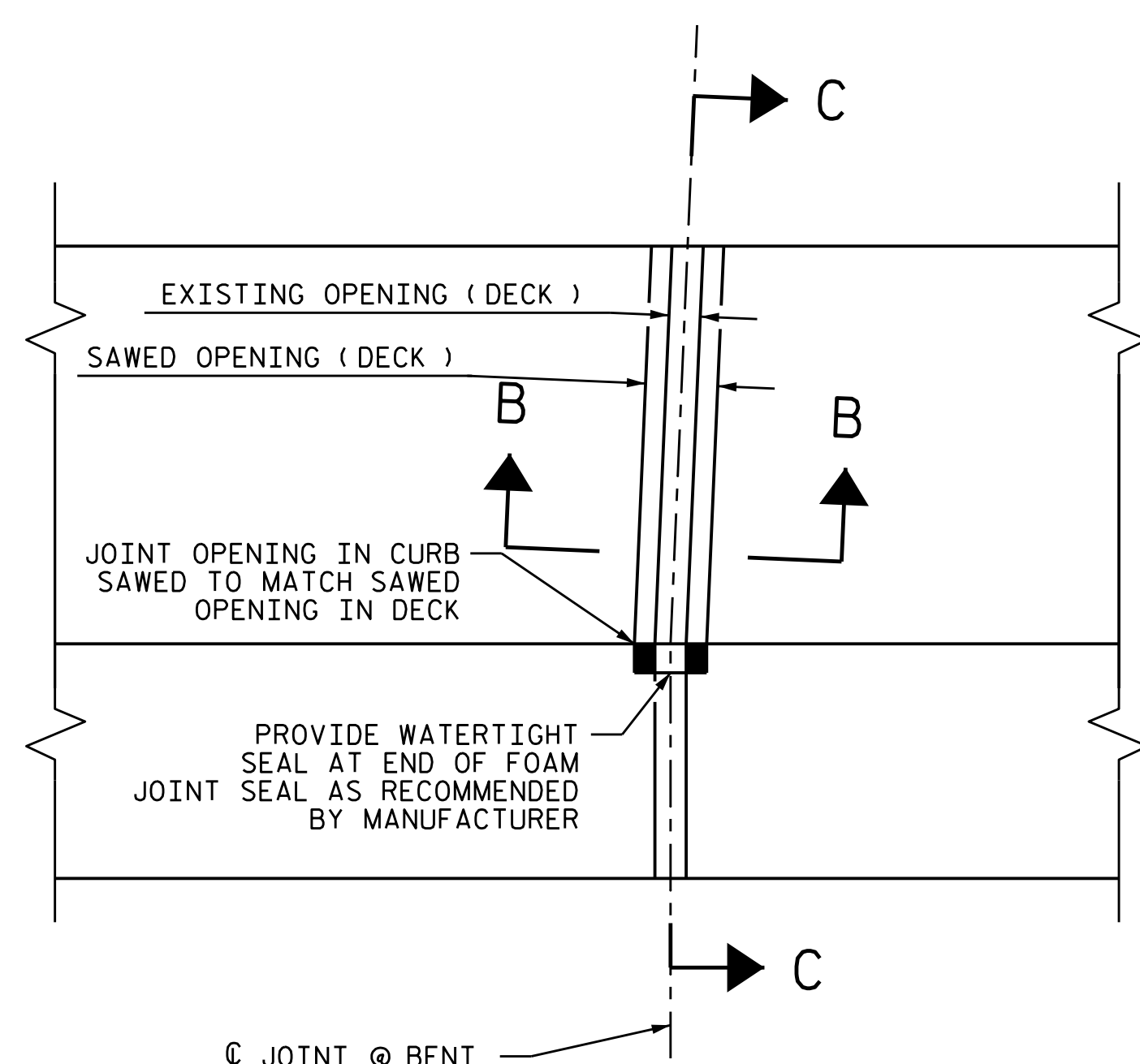


PROPOSED JOINT PRE-SAWED

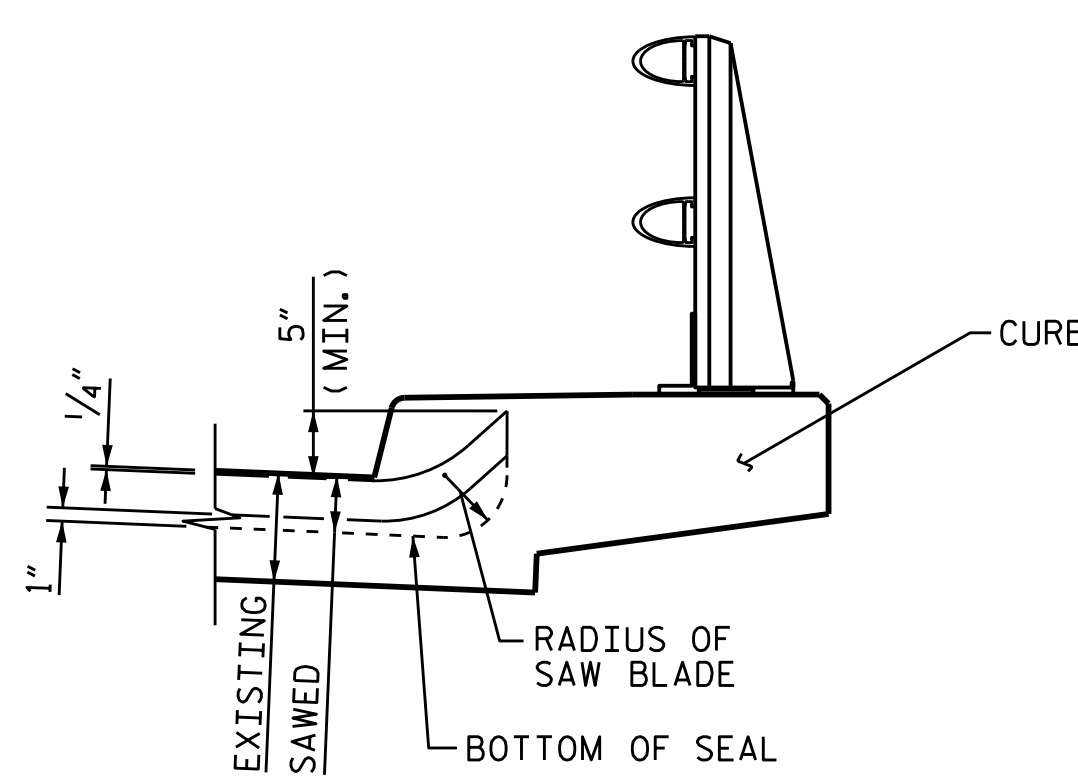


PROPOSED FOAM JOINT SEAL

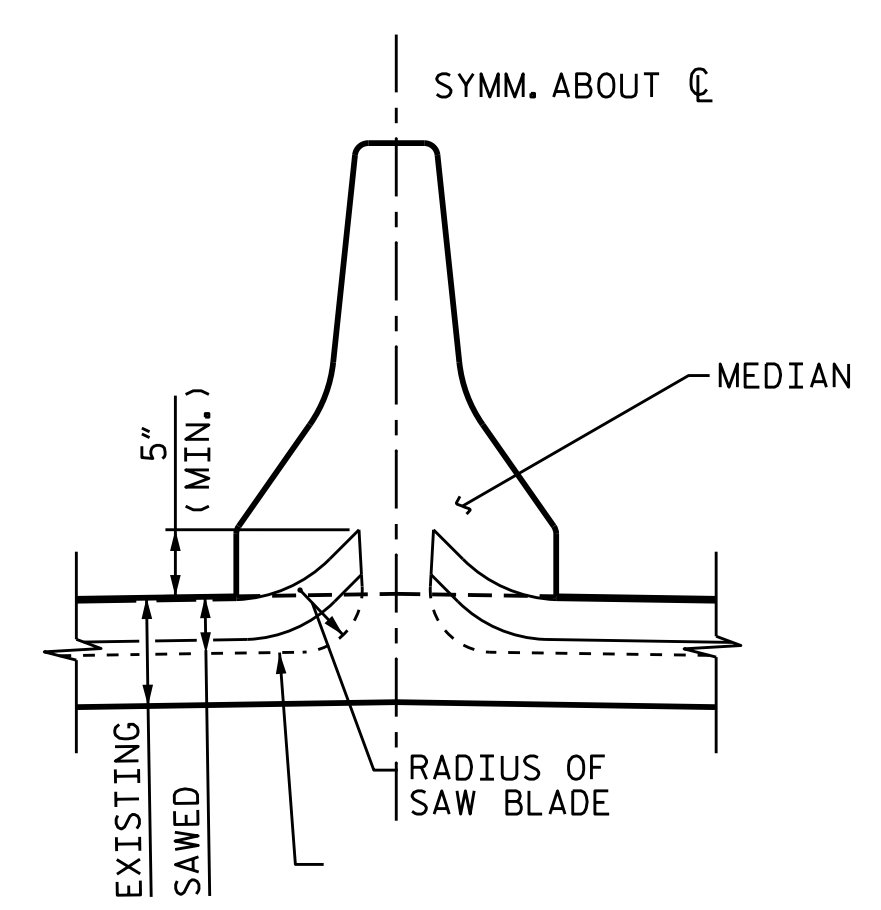
SECTION B-B



PLAN



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.

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 RECOMMEND AND PROVIDE THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE FOAM JOINT SEAL FOR THE SIZE OF THE OPENING ON THE PLANS AND ACCOMODATE 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.

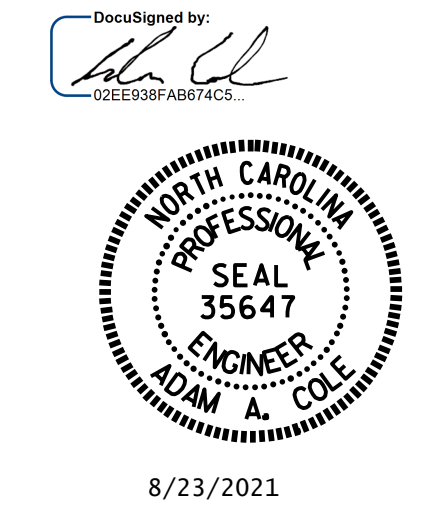
THE INSTALLED FOAM JOINTS SHALL BE WATER TIGHT.

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

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

JOINT REPAIR QUANTITY TABLE		
	ESTIMATE	ACTUAL
FOAM JOINT SEALS FOR PRESERVATION		
BENT 1	114.7 LF.	
BENT 2	126.1 LF.	
TOTAL	240.8 LF.	

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590320

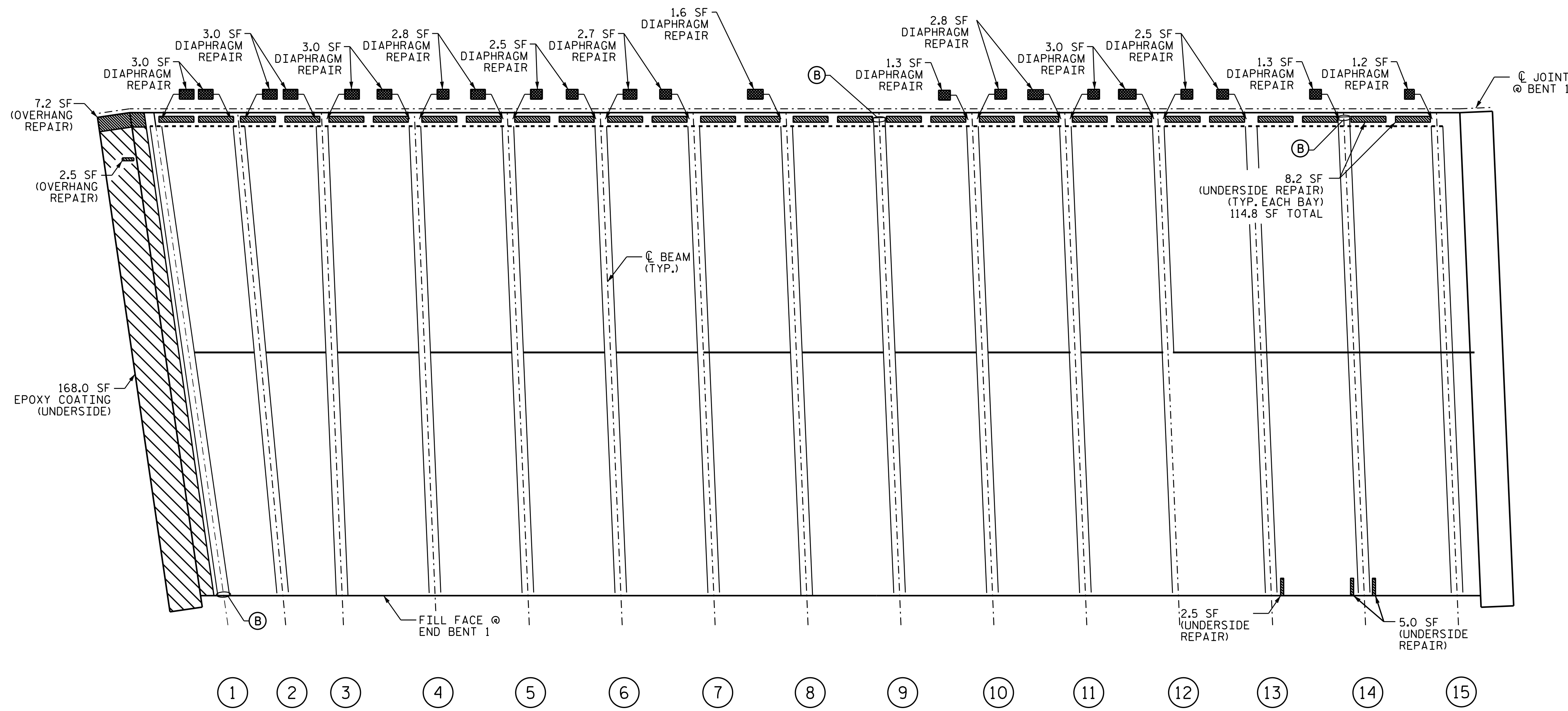


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

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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NOTES

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.

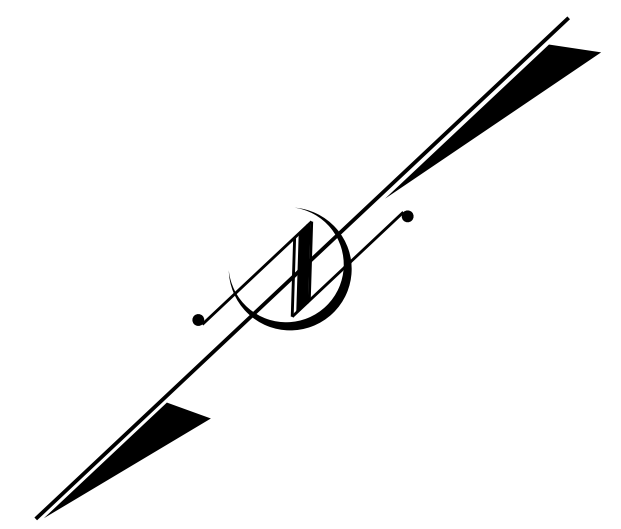
FOR UNDERSIDE OF DECK AND OVERHANG REPAIR, SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.

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

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

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

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



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	122.3	40.8		
UNDERSIDE OF OVERHANG	9.7	3.3		
INTERIOR DIAPHRAGMS	30.7	10.2		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	0.0 LIN. FT.			
UNDERSIDE EPOXY COATING	168 SQ. FT.			

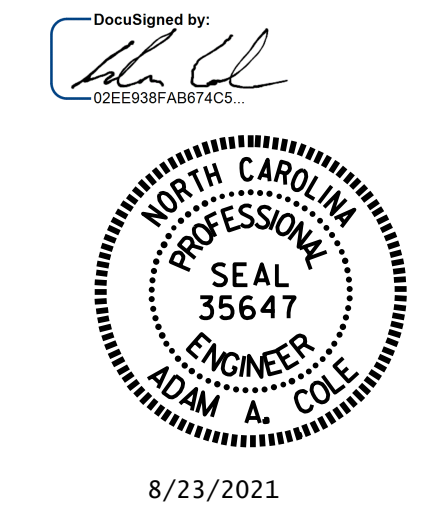
VALUES REPRESENT ESTIMATED UNDERSIDE OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

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
58.0		0		0		0	

ANTICIPATED BEAM REPAIR LOCATIONS						
SPAN	BEAM	LOCATION	DIM "A"	DIM "B"	DIM "C"	DIM "D"
A	1	END BENT 1	8"	16"	-	-
A	9	BENT 1	8"	6"	3"	6"
A	14	BENT 1	12"	9"	1"	6"

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590320

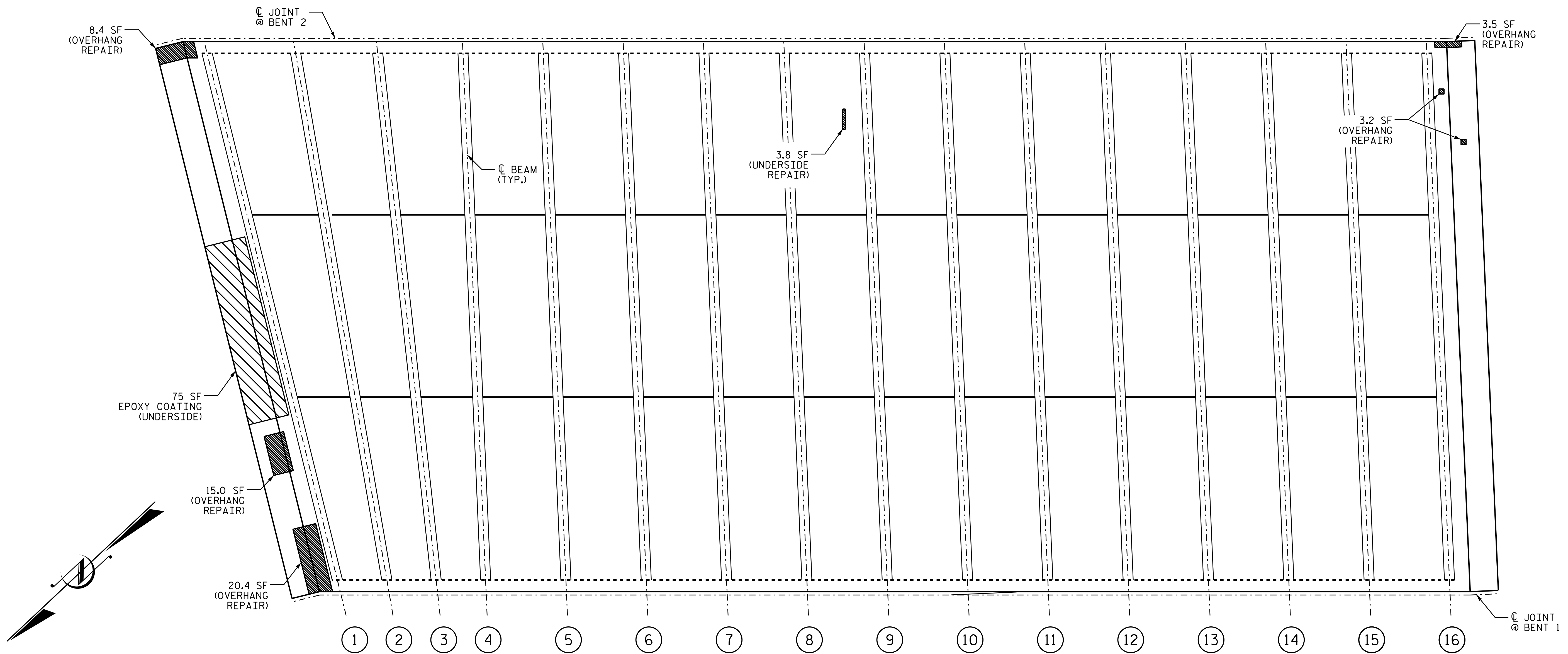
SHEET 1 OF 3



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

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S4-8
2			4			TOTAL SHEETS 274



PLAN

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.

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

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.

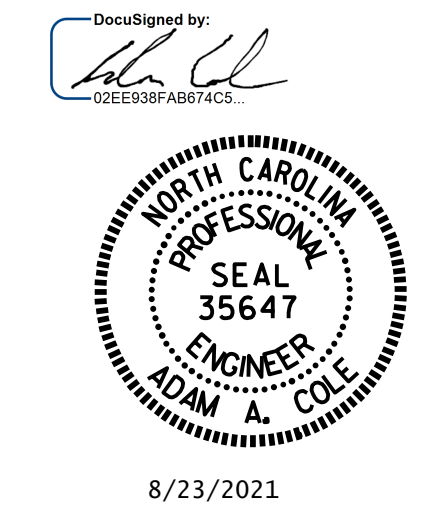
- UNDERSIDE EPOXY COATING
- UNDERSIDE REPAIR
- DIAPHRAGM REPAIR
- ① BEAM NUMBER
- Ⓑ BEAM END REPAIR
- Ⓟ PLATING REPAIR
- Ⓢ STIFFENER REPAIR
- Ⓓ STEEL DIAPHRAGM REPAIR

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	3.8	1.3		
UNDERSIDE OF OVERHANG	50.5	17.0		
INTERIOR DIAPHRAGMS	0.0	0.0		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	0.0 LIN. FT.			
UNDERSIDE EPOXY COATING	75 SQ. 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. 590320

SHEET 2 OF 3



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

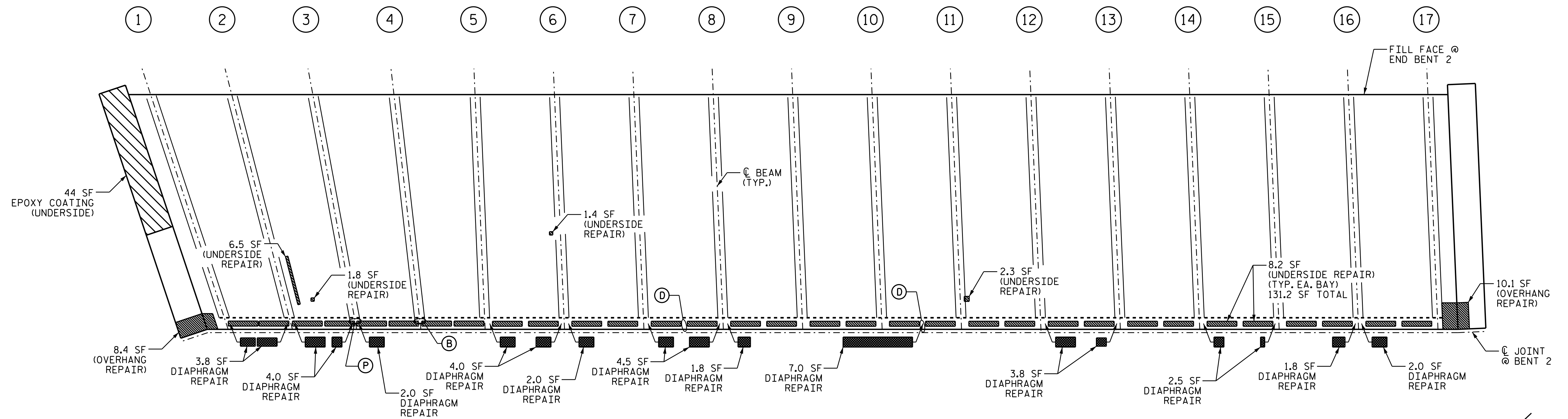
BEAM REPAIR QUANTITY TABLE							
BEAM END REPAIR		PLATING REPAIR		STIFFENER REPAIR		DIAPHRAGM REPAIR	
LBS.		LBS.		LBS.		LBS.	
ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
0		0		0		0	

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

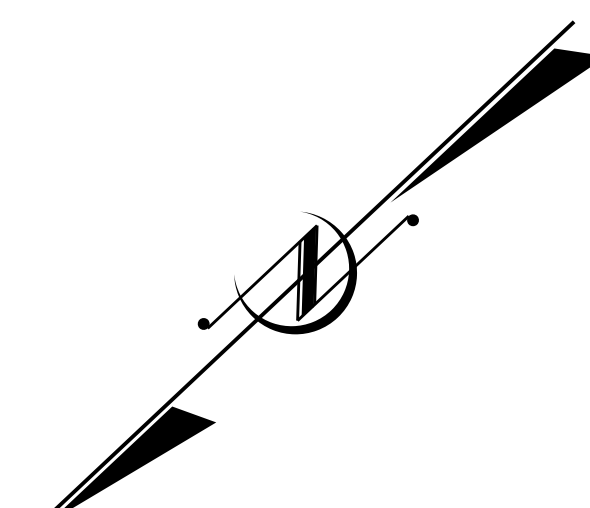
DRAWN BY : R.L. PUTEK/E. BAYISSA DATE : 07/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 07/2021

REVISIONS						SHEET NO.
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1			3			S4-9
2			4			TOTAL SHEETS 274

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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	143.2	47.7		
UNDERSIDE OF OVERHANG	18.5	6.2		
INTERIOR DIAPHRAGMS	39.2	13.1		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	0.0 LIN. FT.			
UNDERSIDE EPOXY COATING	44 SQ. 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.

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.

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

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

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

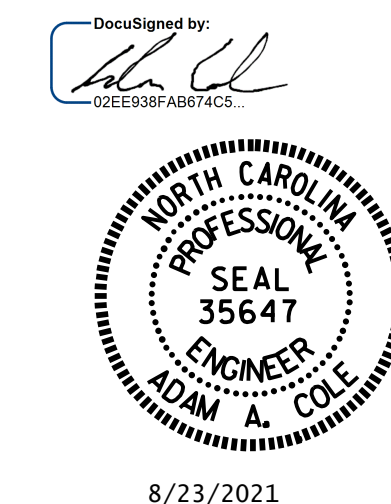
FOR BRIDGE JACKING DETAILS, SEE "JACKING DETAILS" SHEET.

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.

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

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590320

SHEET 3 OF 3



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

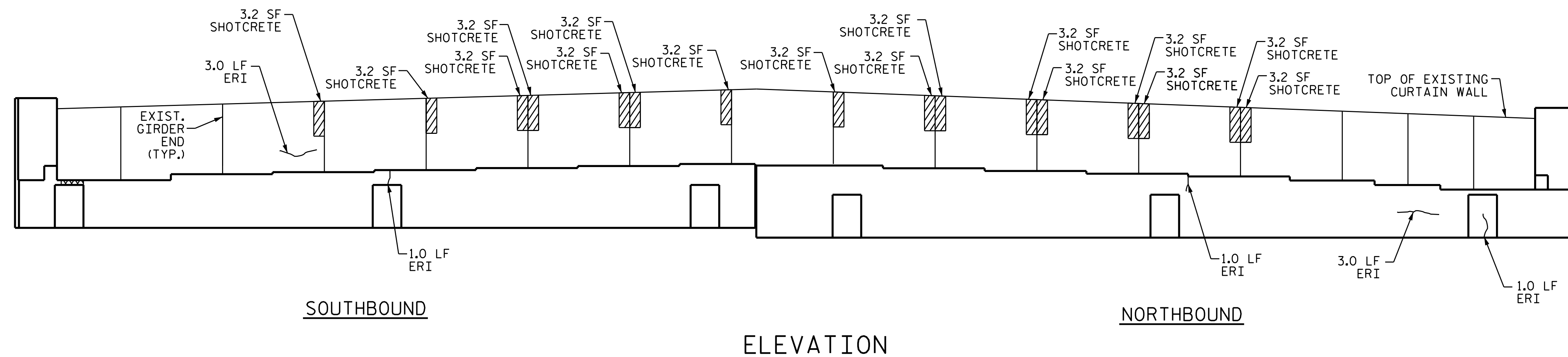
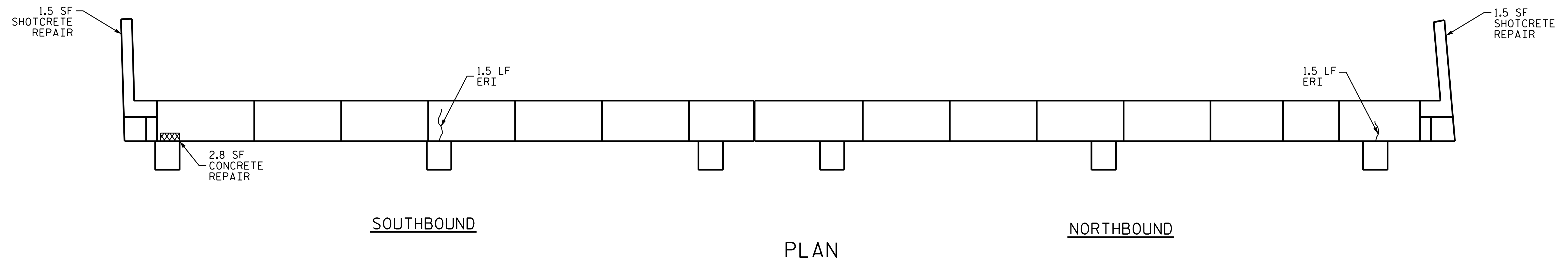
BEAM REPAIR QUANTITY TABLE							
BEAM END REPAIR		PLATING REPAIR		STIFFENER REPAIR		DIAPHRAGM REPAIR	
LBS.		LBS.		LBS.		LBS.	
ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
210		75		0		166	

ANTICIPATED BEAM REPAIR LOCATIONS						
SPAN	BEAM	LOCATION	DIM "A"	DIM "B"	DIM "C"	DIM "D"
C	4	BENT 2	2'-3"	9"	9"	3'-0"
C	3	BENT 2	1'-0"	2'-0"	-	-

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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 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S4-10
2			4			TOTAL SHEETS 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 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 REPAIRS, SEE SPECIAL PROVISIONS.

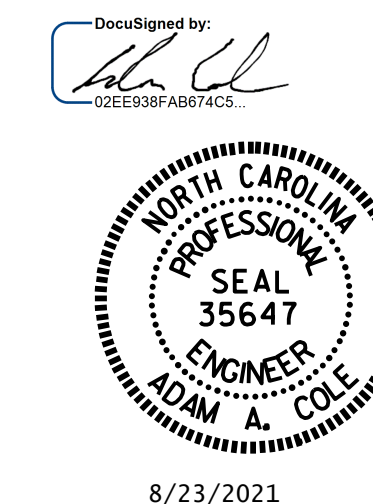
FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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 SURFACES 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				
END BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
CURTAIN WALL	51.2	25.6		
WING WALL	3.0	1.5		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	2.8	1.4		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
CAP	9.0			
CURTAIN WALL	3.0			
EPOXY COATING	SQ. FT.		SQ. FT.	
TOP OF END BENT CAP	184			

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



PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590320

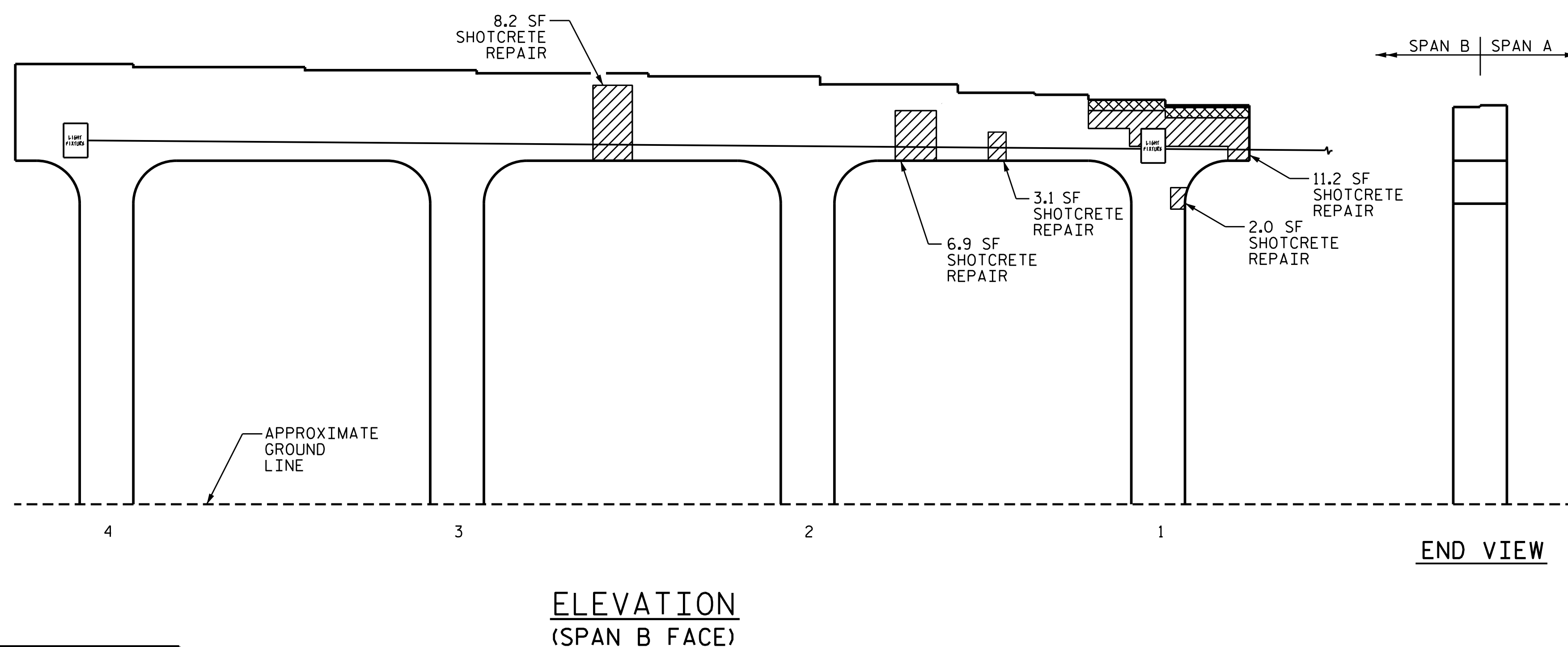
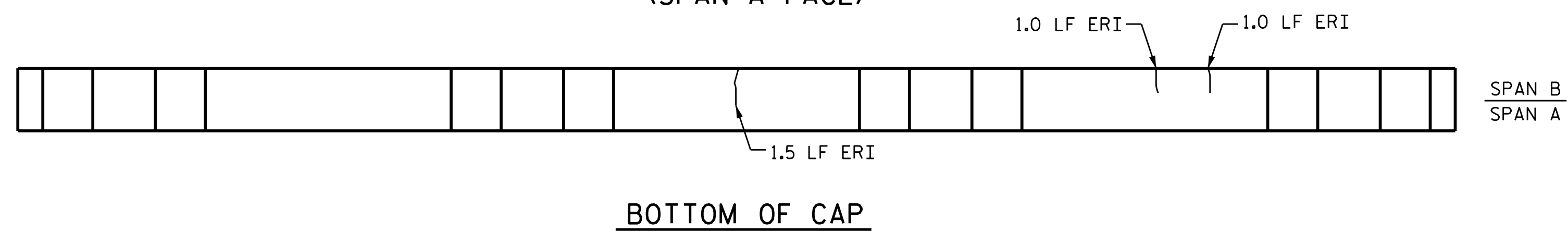
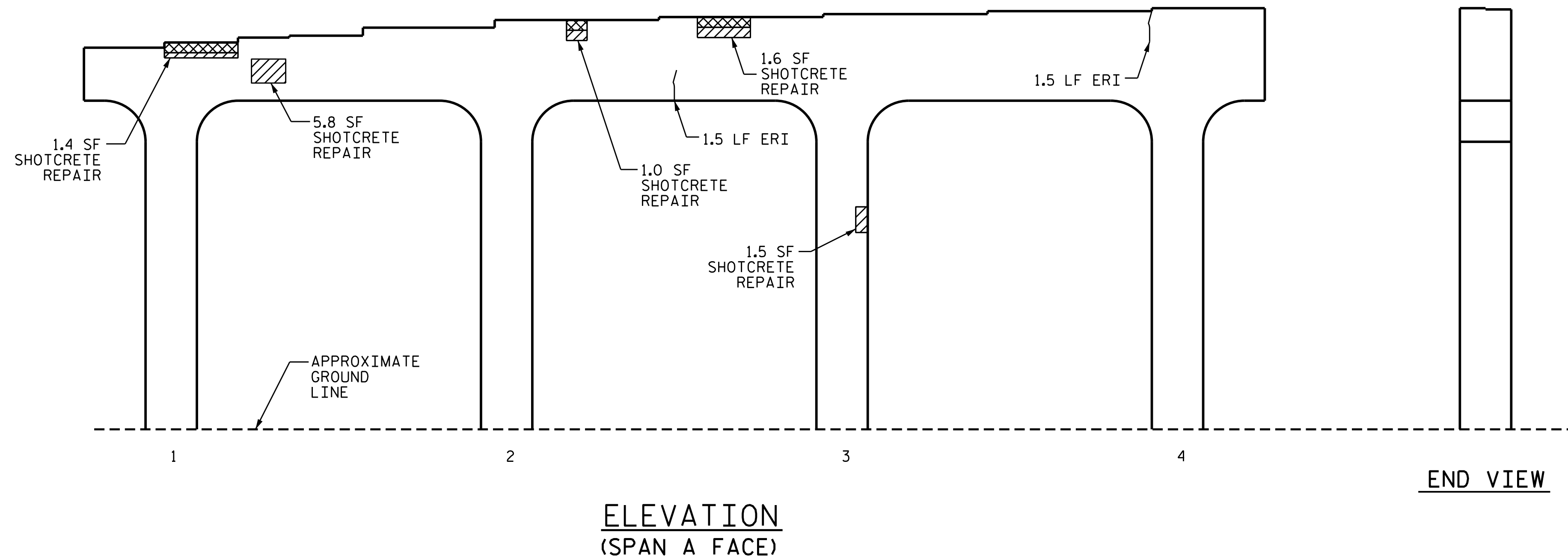
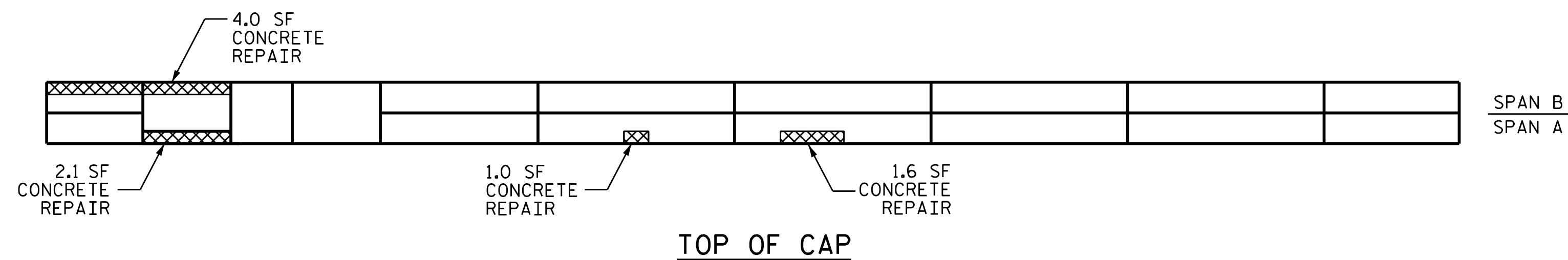
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

END BENT 1

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

NO.	REVISIONS			NO.	REVISIONS			SHEET NO.
	BY:	DATE:			BY:	DATE:		
1				3			S4-11	
2				4			TOTAL SHEETS 274	

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END VIEW

END VIEW

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	39.2	19.6		
COLUMNS	3.5	1.8		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	8.7	4.4		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
CAP	6.4			
COLUMNS	0.0			
EPOXY COATING	SQ. FT.		SQ. FT.	
TOP OF BENT CAP	149			

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.

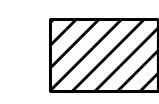
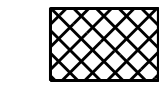

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

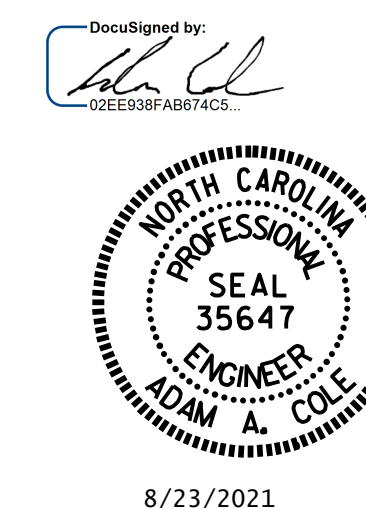
FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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)

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590320



8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**BENT 1
 (NORTHBOUND)**

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

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 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			4
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	59.7	29.9		
COLUMNS	3.6	1.8		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	12.5	6.3		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
CAP	6.0			
COLUMNS	0.0			
EPOXY COATING	SQ. FT.		SQ. FT.	
TOP OF BENT CAP	164			

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.

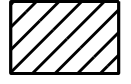


CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

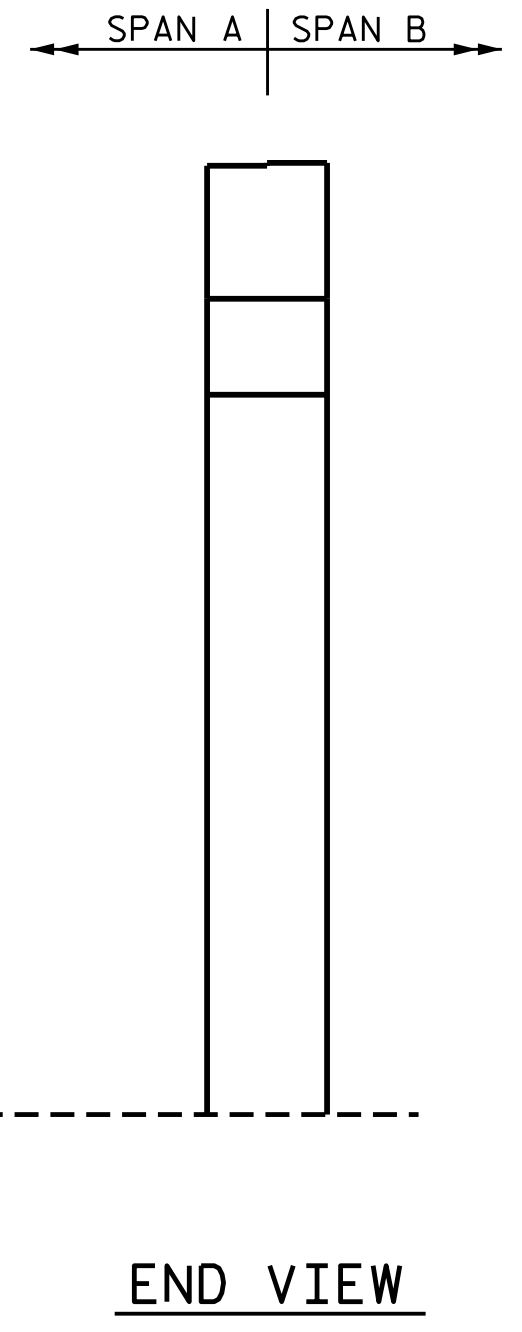
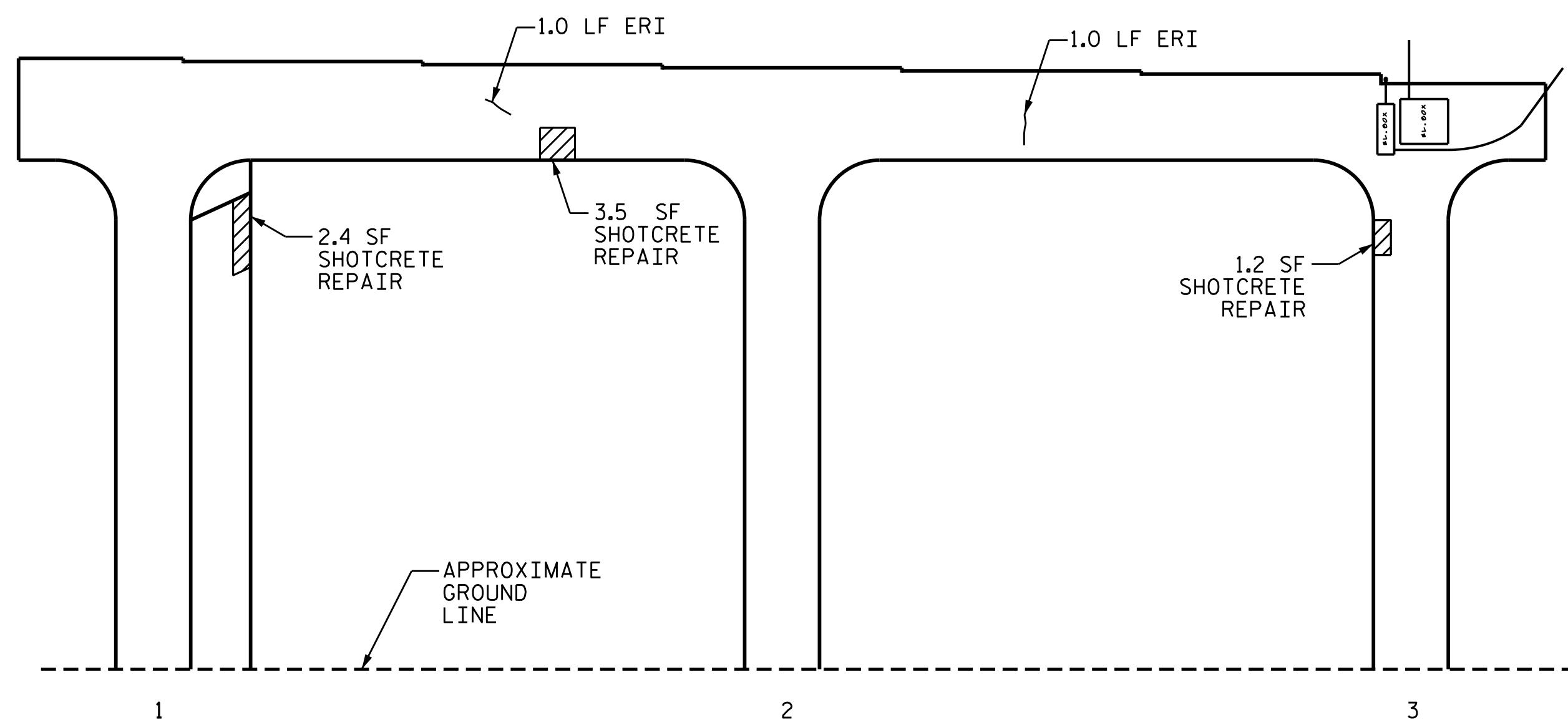
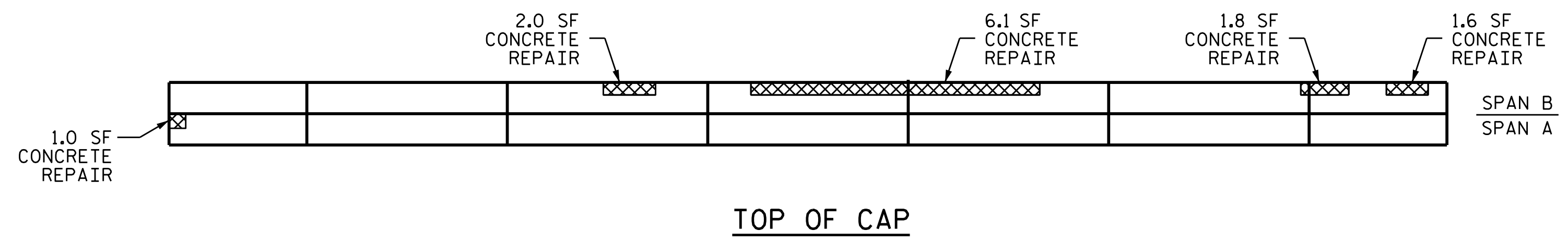
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

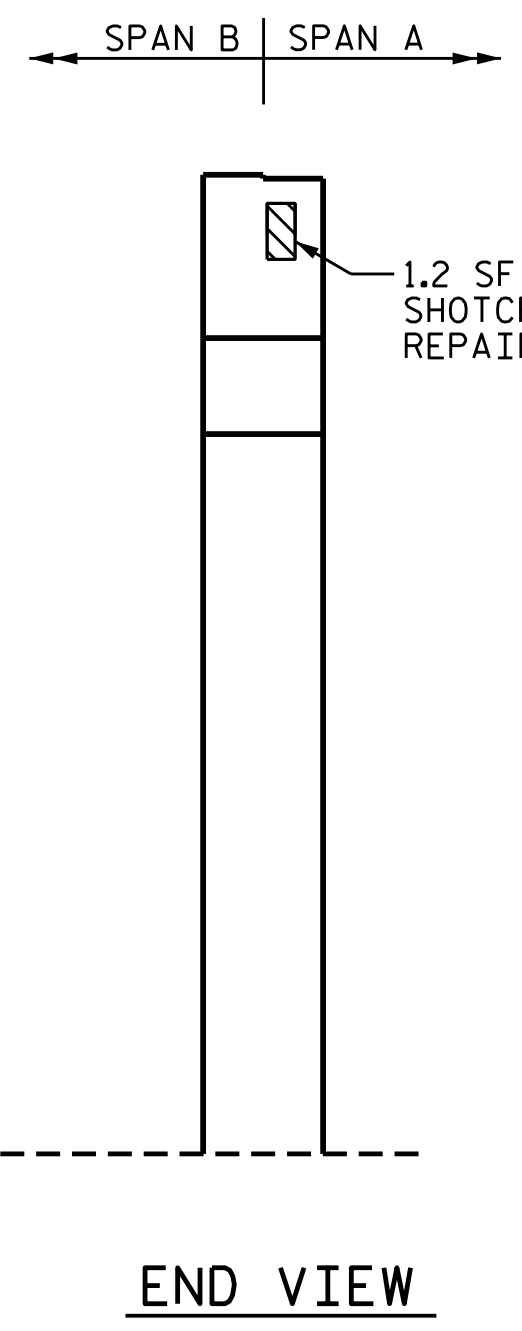
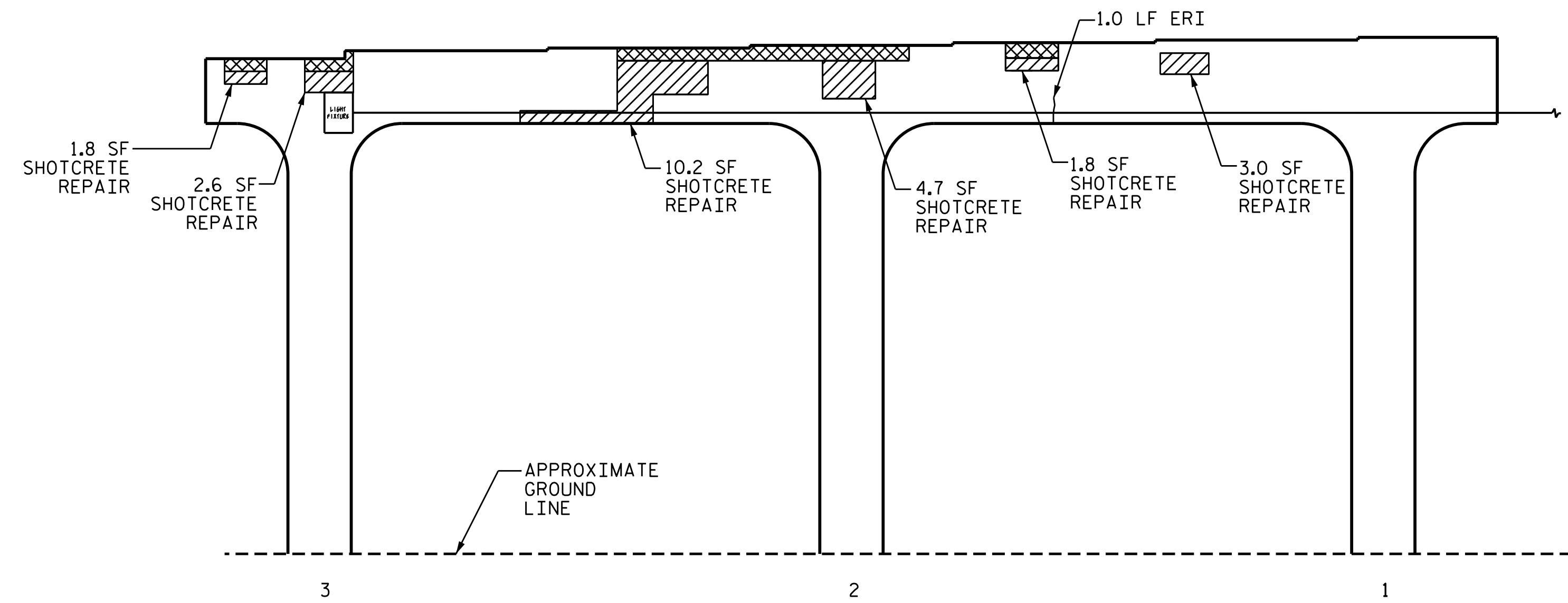
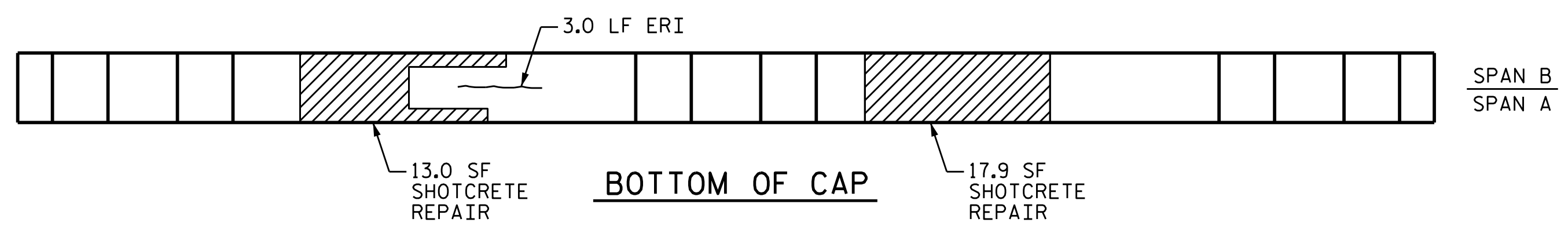
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

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



ELEVATION (SPAN A FACE)

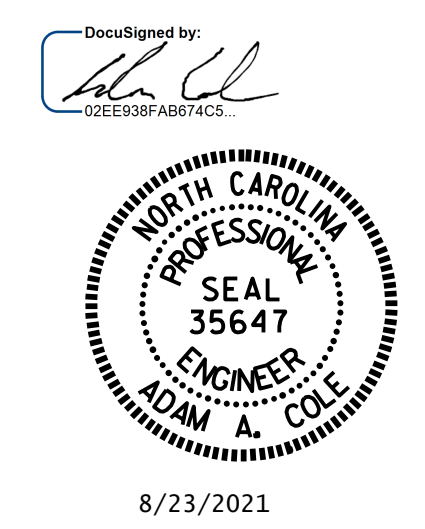
END VIEW



ELEVATION (SPAN B FACE)

END VIEW

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590320



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 1
 (SOUTHBOUND)

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

NO.	REVISIONS			SHEET NO.
	BY:	DATE:	NO.	
1			3	S4-13
2			4	TOTAL SHEETS 274

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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	89.0	44.5		
COLUMNS	12.6	6.3		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	49.2	32.8		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
CAP	3.5			
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 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 PEDESTAL WALL REPAIR, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

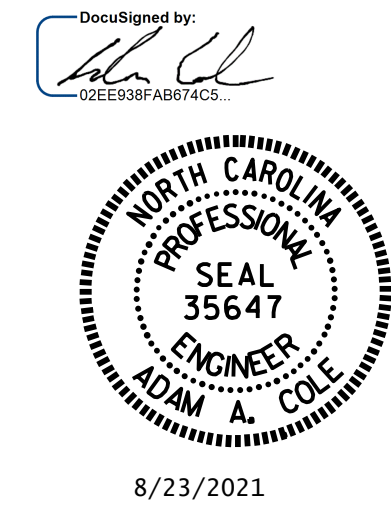
FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL 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. 590320

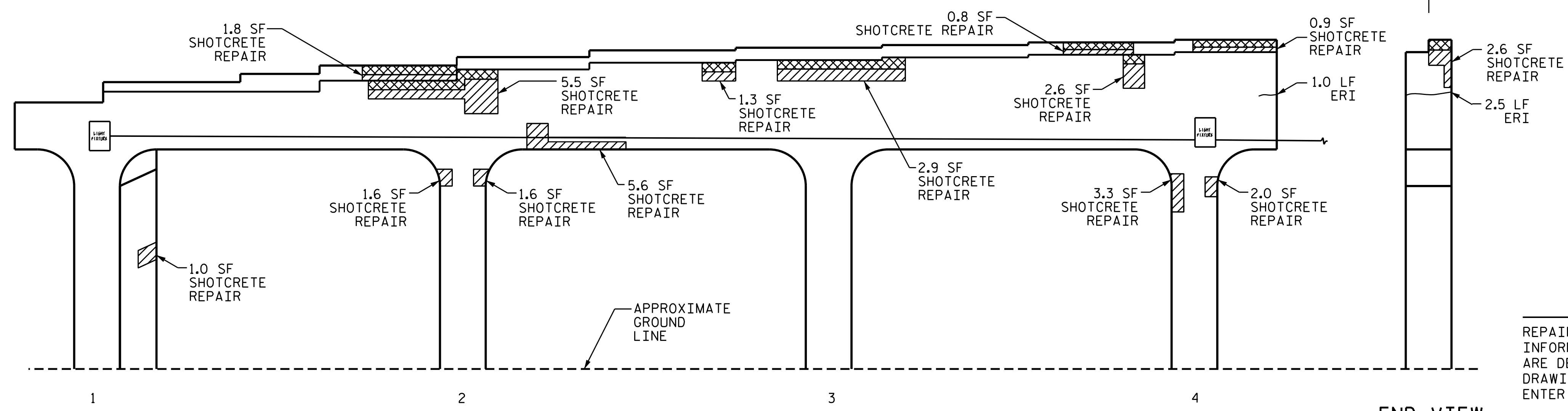
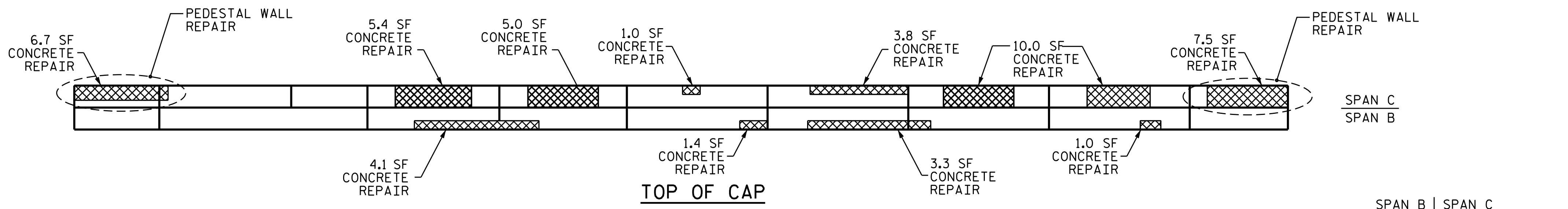


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

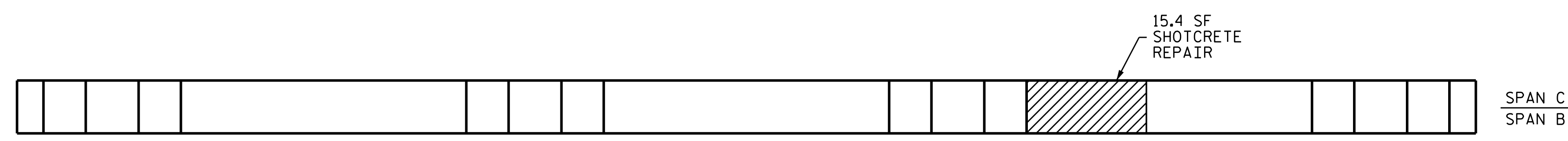
**BENT 2
 (NORTHBOUND)**

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

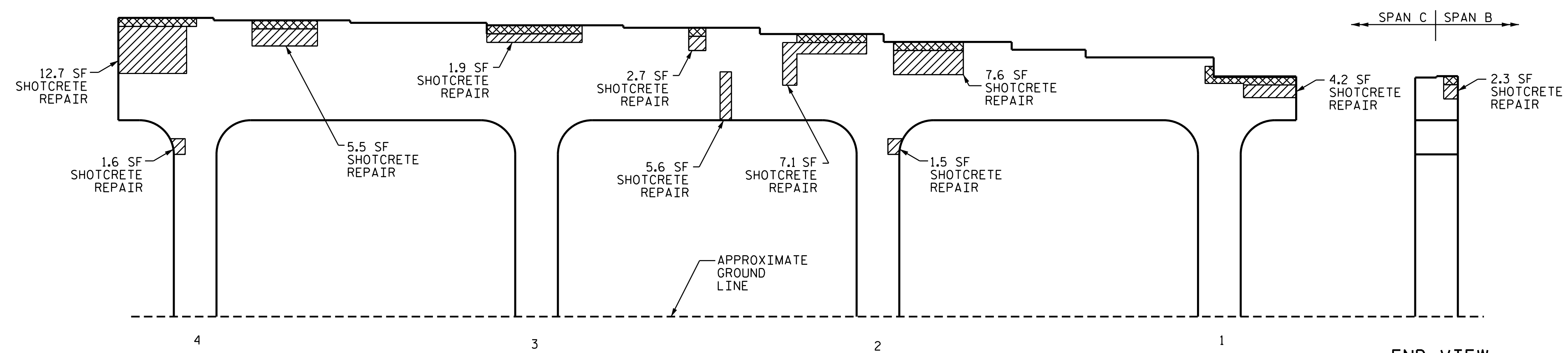
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**ELEVATION
 (SPAN B FACE)**

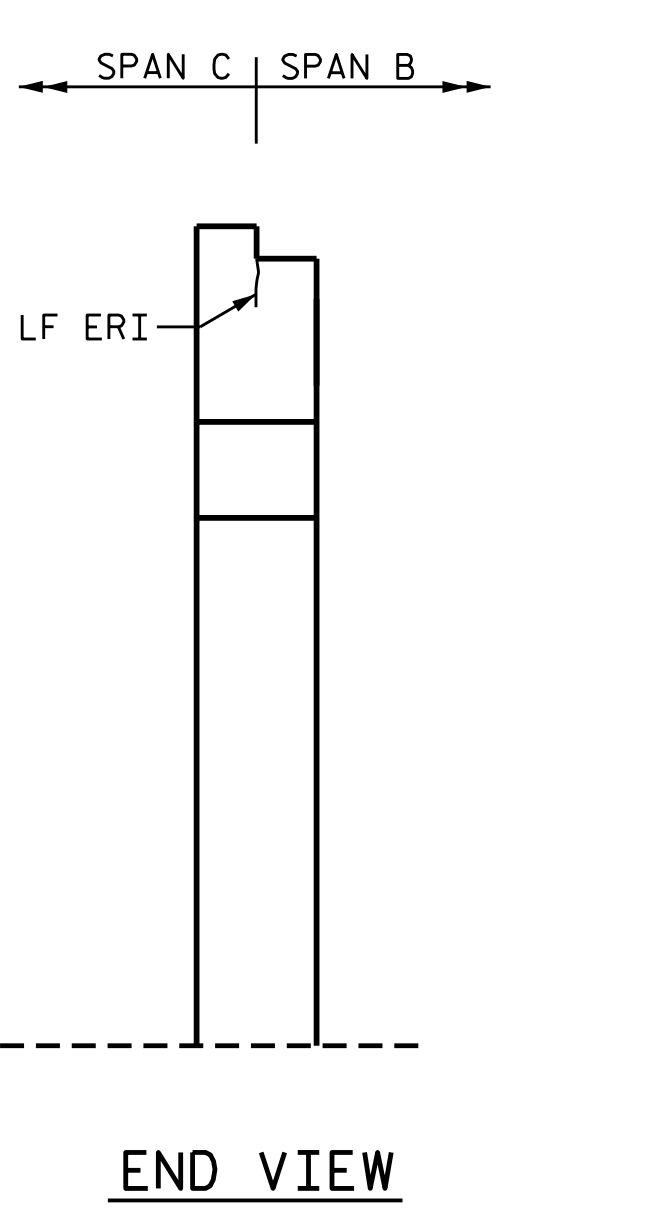
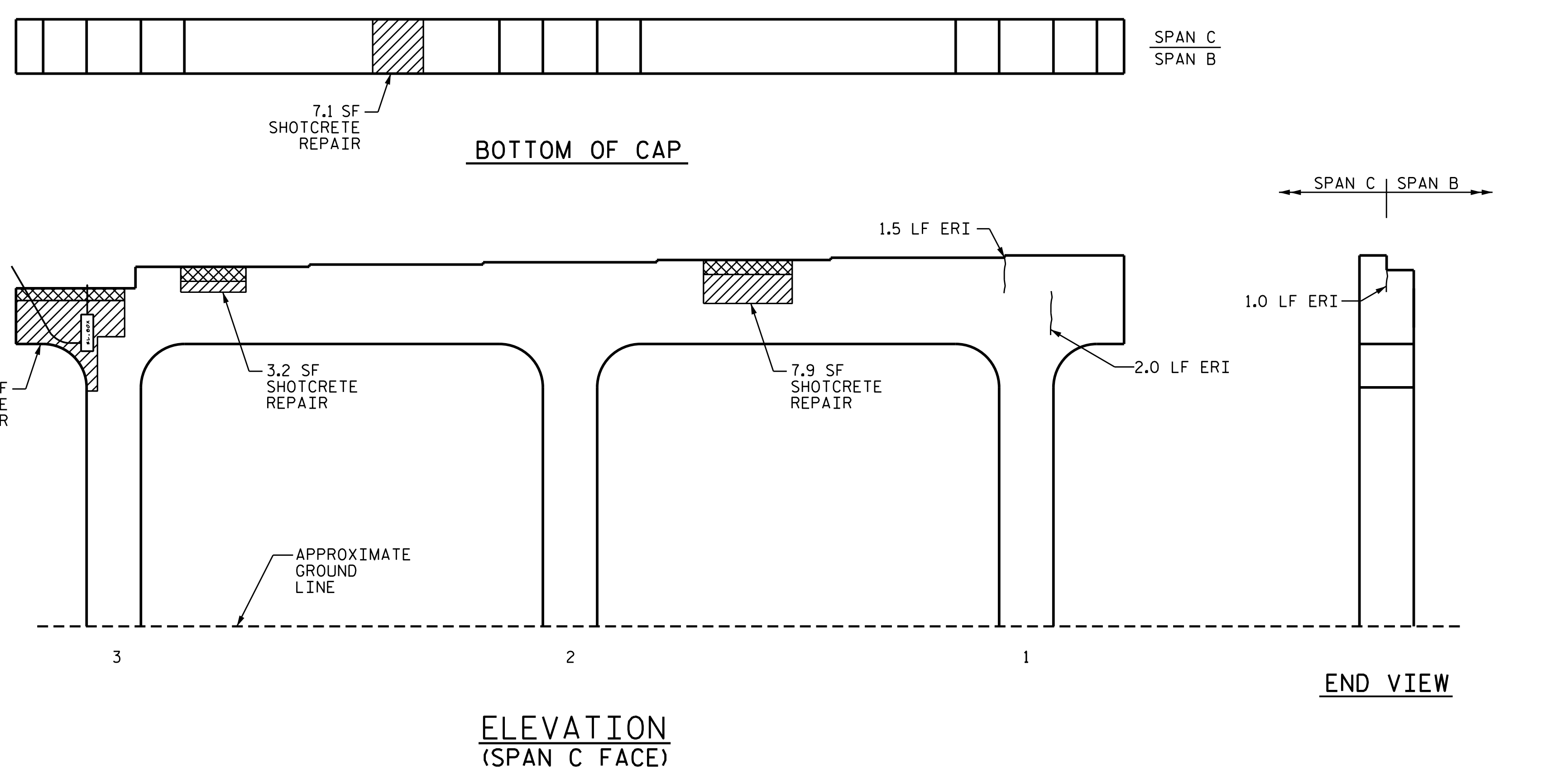
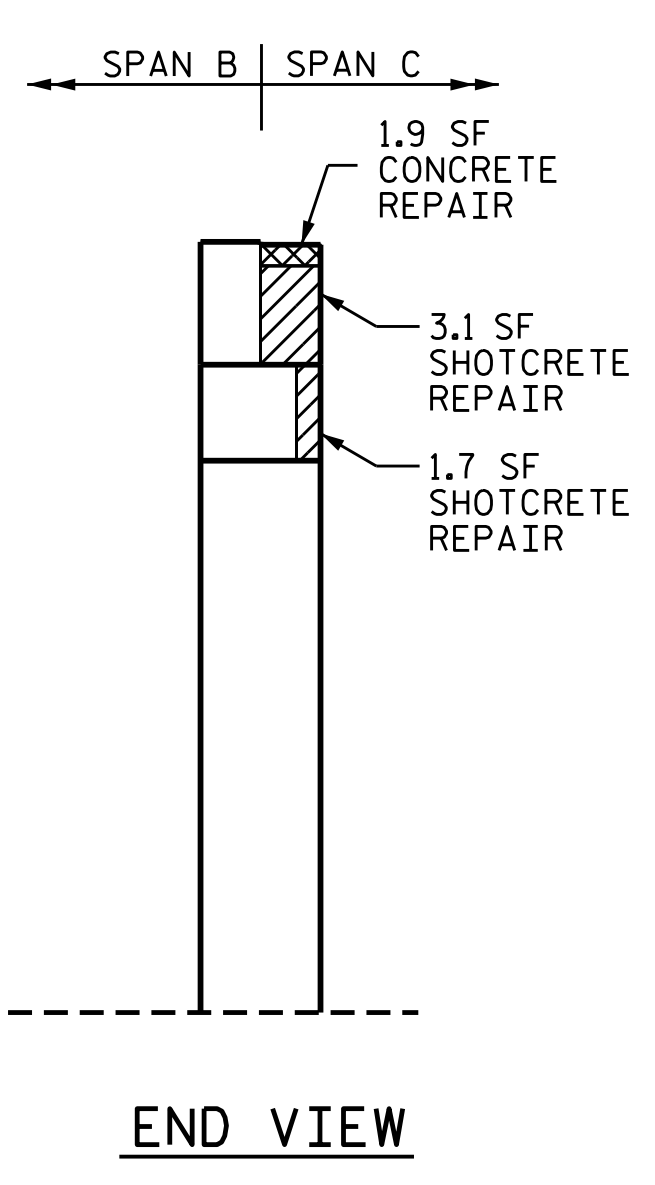
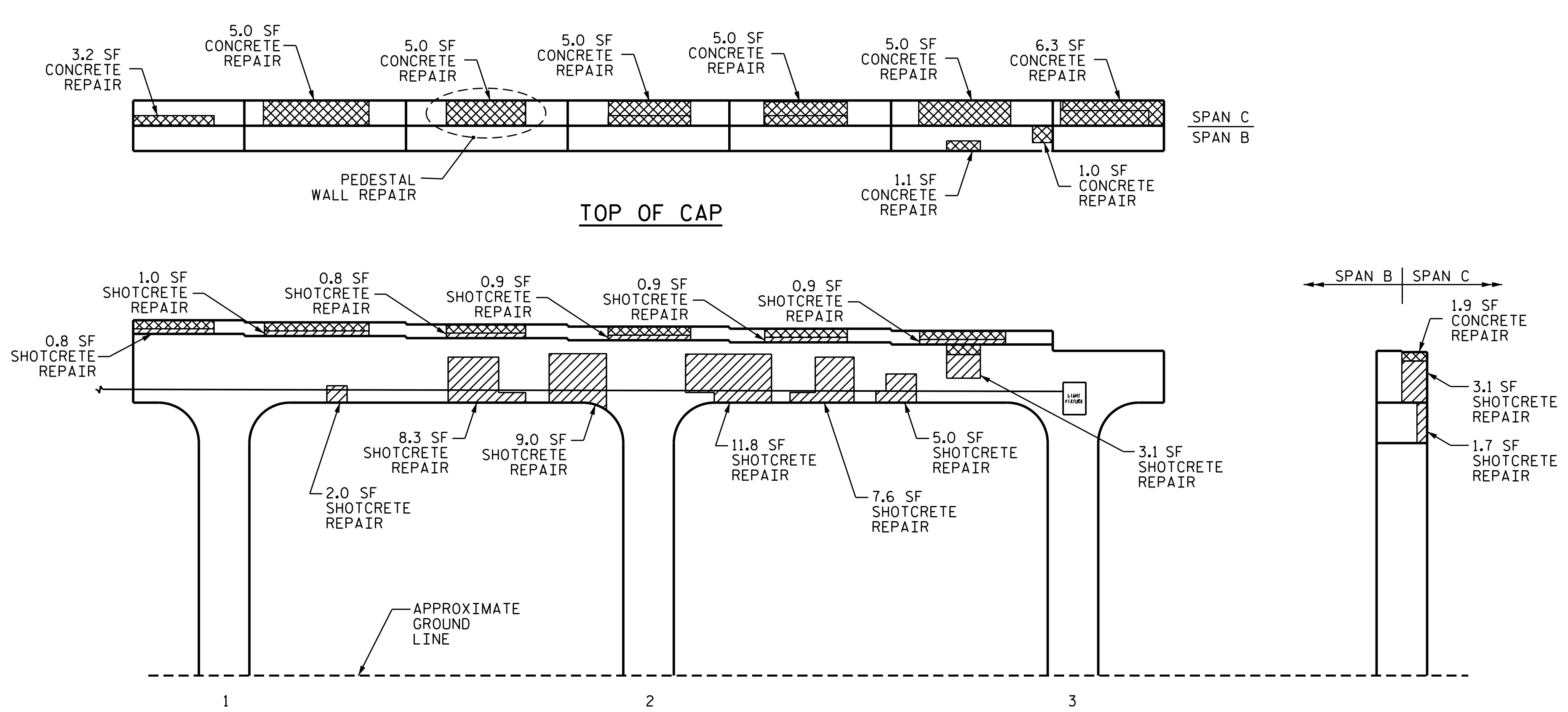


BOTTOM OF CAP



**ELEVATION
 (SPAN C FACE)**

DRAWN BY : R.L.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 SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	89.1	44.6		
COLUMNS	1.7	0.9		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	46.0	30.7		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
CAP		4.5		
COLUMNS		0.0		
EPOXY COATING	SO. FT.		SO. FT.	
TOP OF BENT CAP		128		

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

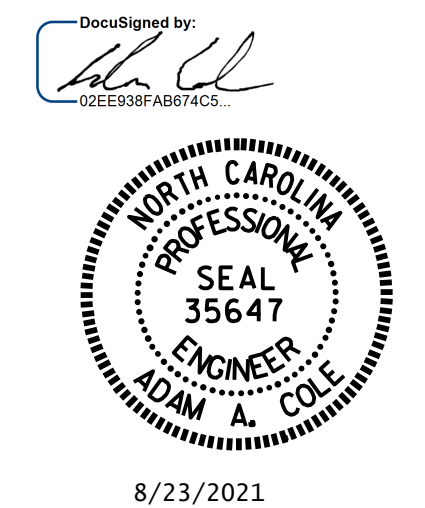
FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL 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. 590320



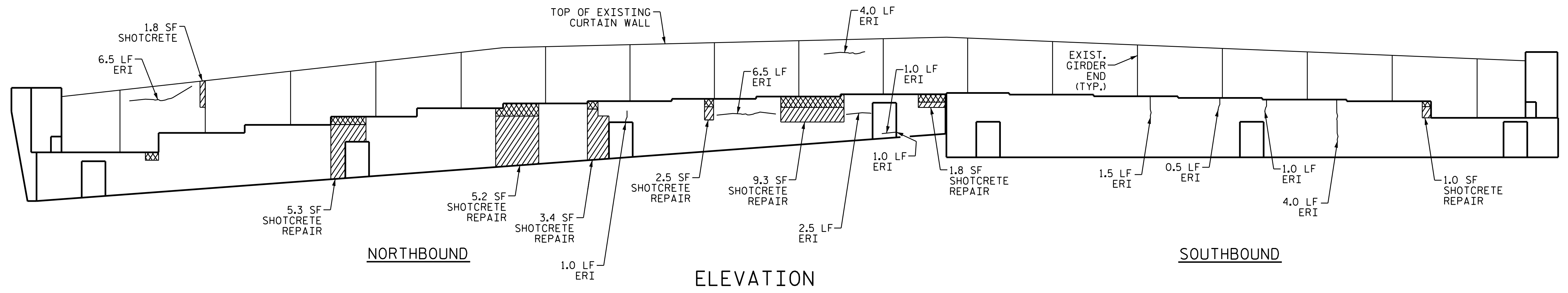
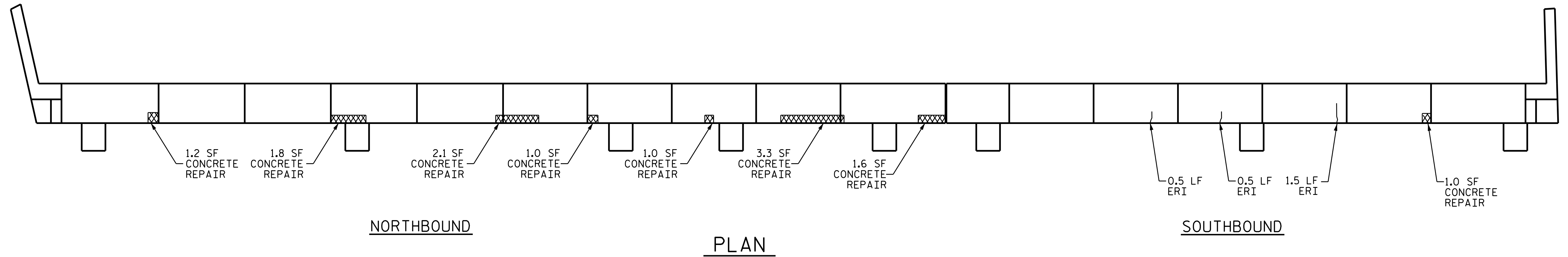
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**BENT 2
 (SOUTHBOUND)**

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	S4-15 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 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 REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

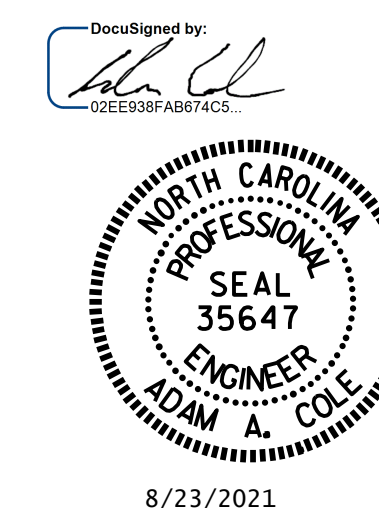
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING TO THE TOP SURFACES 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				
END BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	28.5	14.3		
CURTAIN WALL	1.8	0.9		
WING WALL	0.0	0.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	13.0	6.5		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
CAP	21.5			
CURTAIN WALL	10.5			
EPOXY COATING	SQ. FT.		SQ. FT.	
TOP OF END BENT CAP	217			

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

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590320



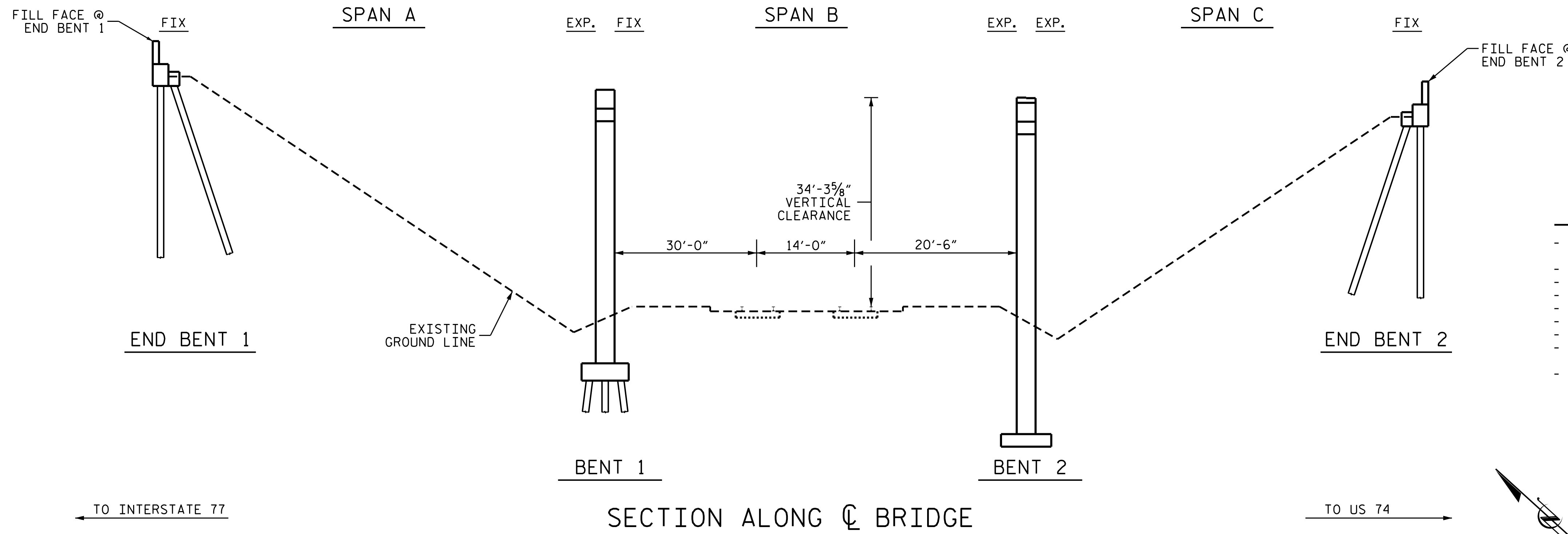
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

END BENT 2

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

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

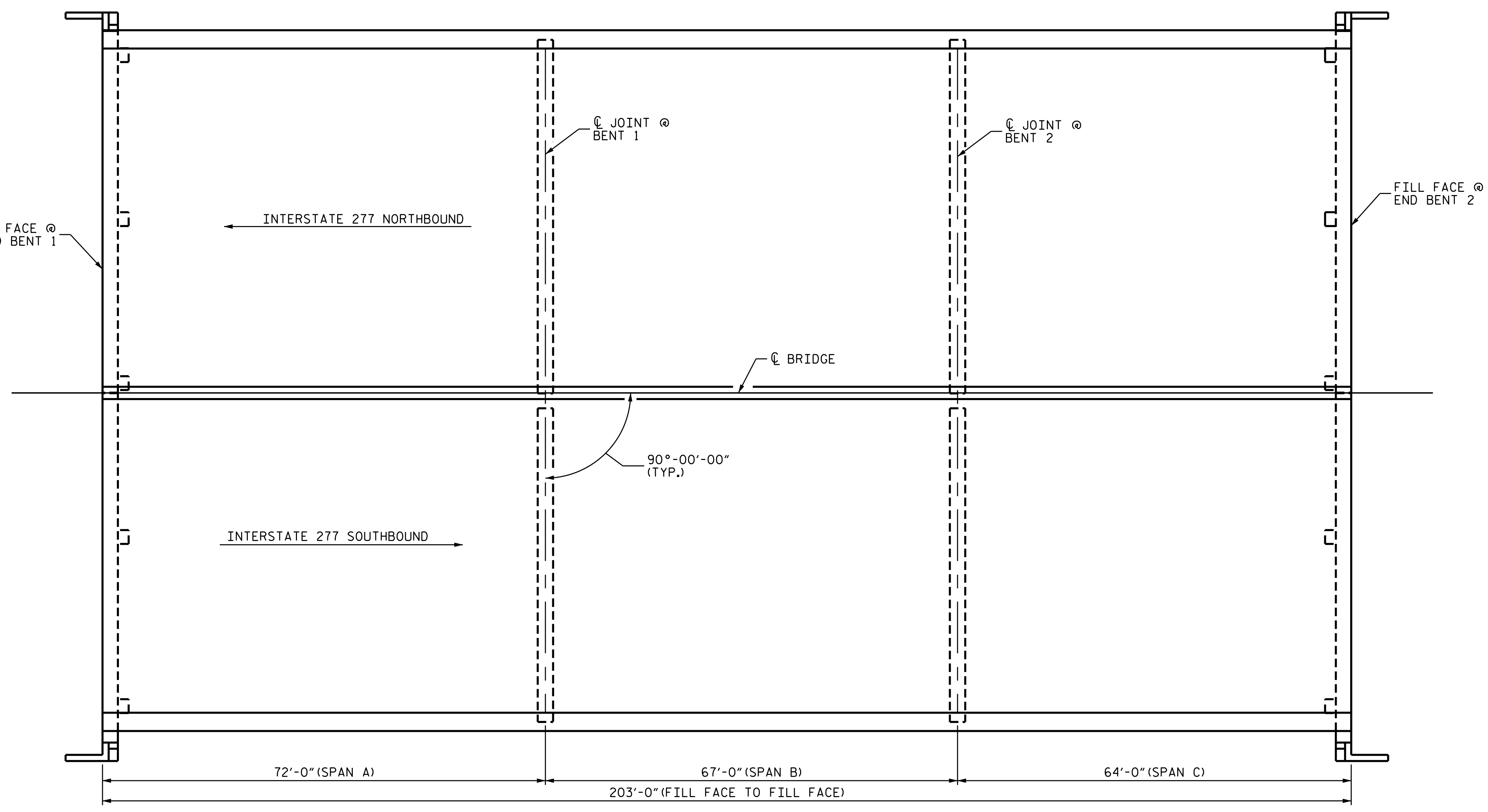
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NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S4-16
2			4			TOTAL SHEETS 274



NOTES
 GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 10/24/2020.
 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 AND PAINT BEARINGS WITH HRCSA.
 - CLEAN GIRDER ENDS AND APPLY EPOXY COATINGS.
 - REPAIR DAMAGED MURAL PAINT WITH PRIMER AND TOPCOAT.
 - REMOVE UNSOUNDED CONCRETE AND PROPERLY PREPARE SHOTCRETE AND CONCRETE REPAIR AREAS.
 - REMOVE DEBRIS FROM TOP OF END BENT AND BENT CAPS AND APPLY EPOXY COATING.

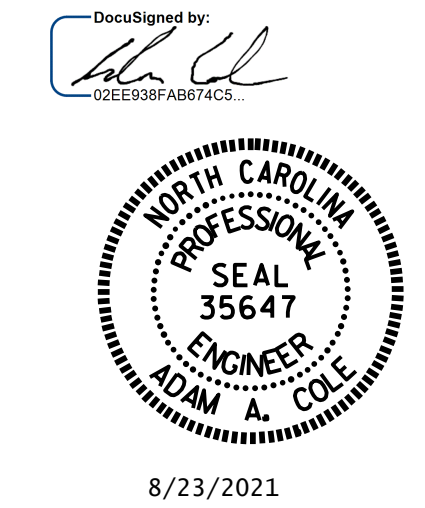
CATS MILEPOST BLN 0.61-1 12TH STREET CROSSING.



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

 RESIDENT ENGINEER DATE

PROJ. NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590322
 SHEET 1 OF 2 MILE POST: 3.25

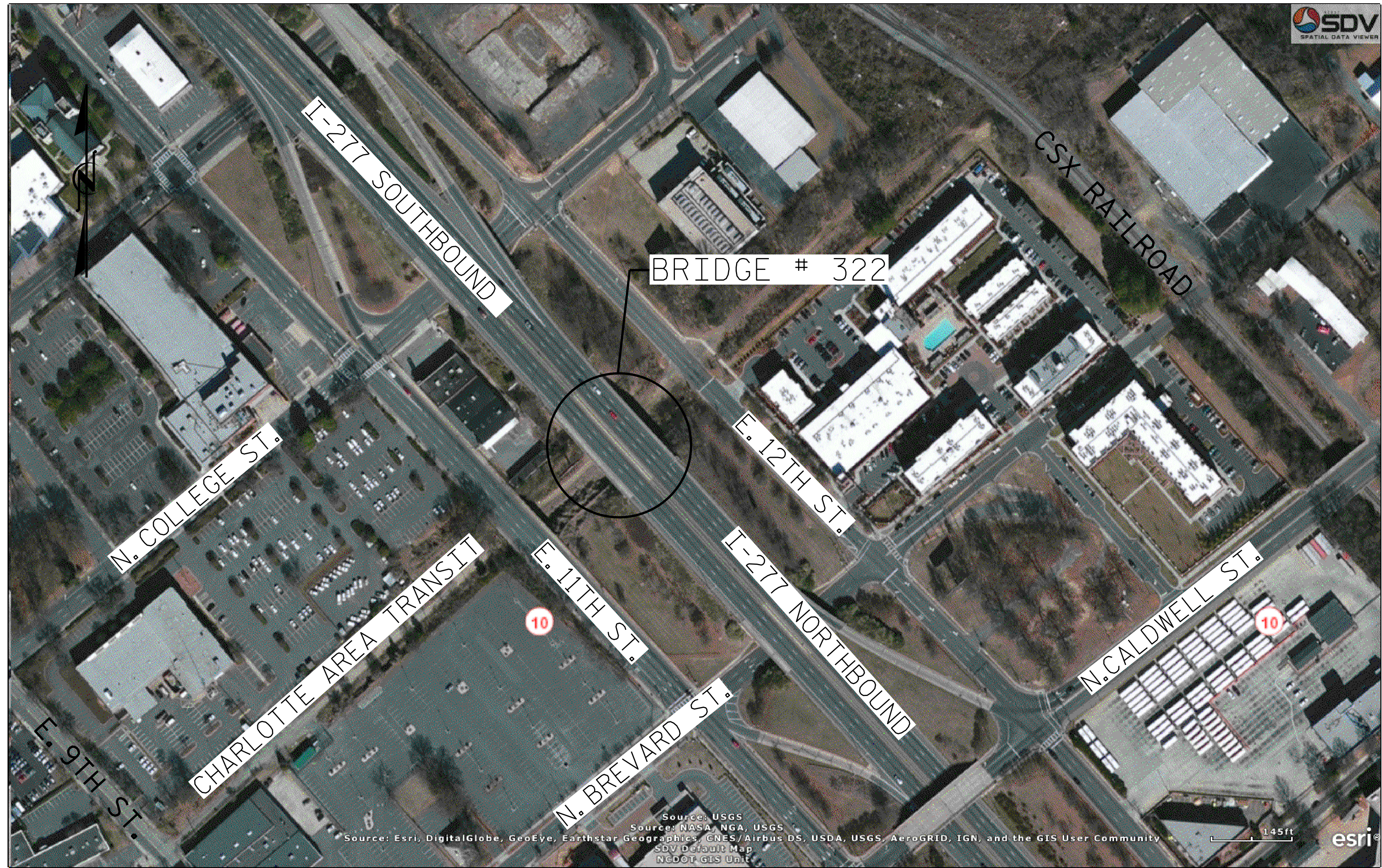


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**GENERAL DRAWING
 FOR BRIDGE
 ON I-277 OVER
 CHARLOTTE AREA TRANSIT**

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

PLAN

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S5-1
1			3			TOTAL SHEETS
2			4			274



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'-52.79"
LONGITUDE: 80°-49'-58.2"

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.

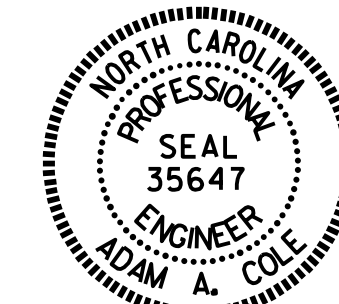
PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL A COMPLETE SEQUENCE OF TASKS FOR EACH OPERATION AFFECTING THE BRIDGE SURFACE AND/OR TRAFFIC.

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]
COLE ABRACIA



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.

FOR CONTAMINANT, PROTECTION AND OTHER REQUIREMENTS FOR WORKING ON, OVER, OR ADJACENT TO THE CHARLOTTE AREA TRANSIT SYSTEM RIGHT OF WAY, SEE RAILROAD GENERAL SPECIAL PROVISIONS.

FOR MURAL PAINT REPAIR, SEE SPECIAL PROVISIONS.

FOR MANAGEMENT AND PROTECTION OF PEDESTRIAN TRAFFIC, SEE TRAFFIC CONTROL PLANS AND RAILROAD GENERAL SPECIAL PROVISIONS.

PROJ. NO. I-5746C
MECKLENBURG COUNTY
BRIDGE NO. 590322

SHEET 2 OF 2

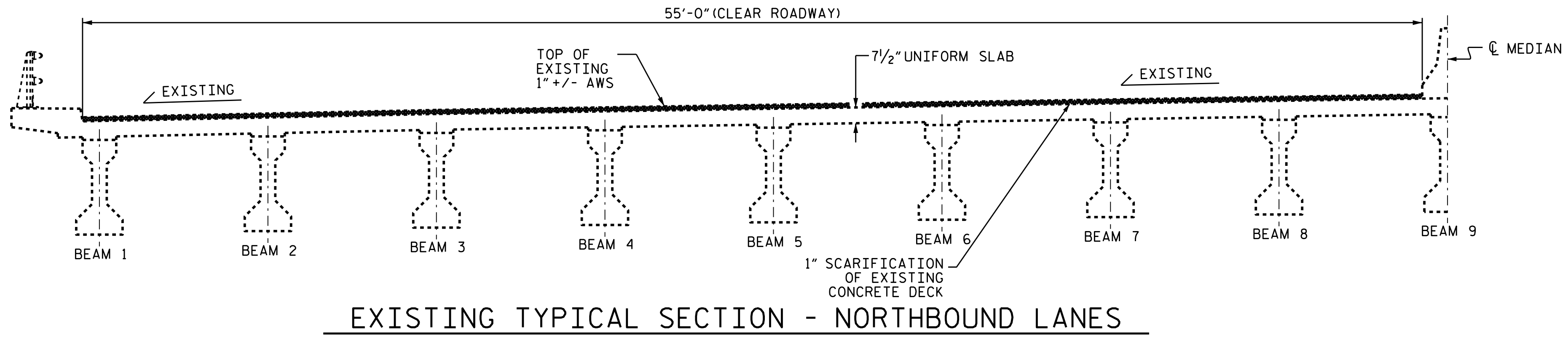
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR BRIDGE
ON I-277 OVER
CHARLOTTE AREA TRANSIT

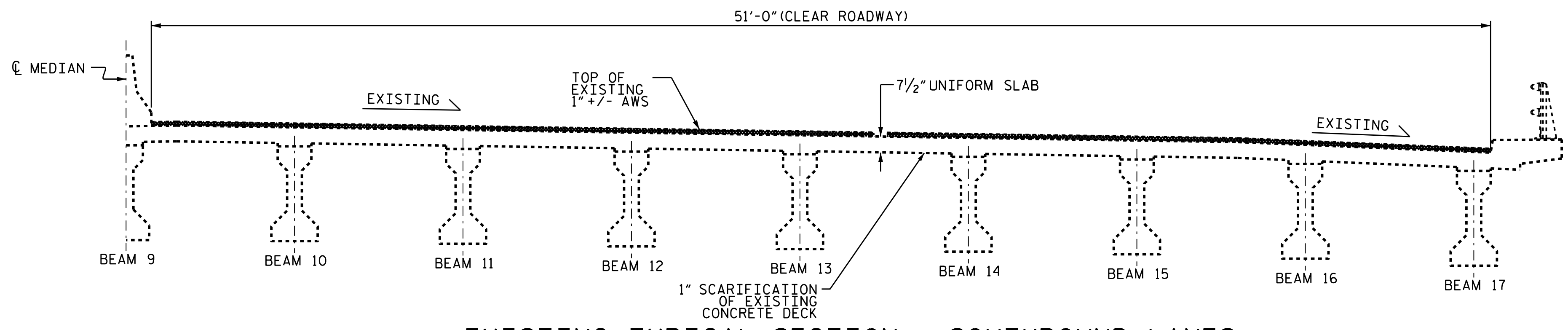
DRAWN BY : REZA KOUCHEKI DATE : 07/2021
CHECKED BY : H.A. LOCKLEAR DATE : 07/2021

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1			3			TOTAL SHEETS
2			4			274

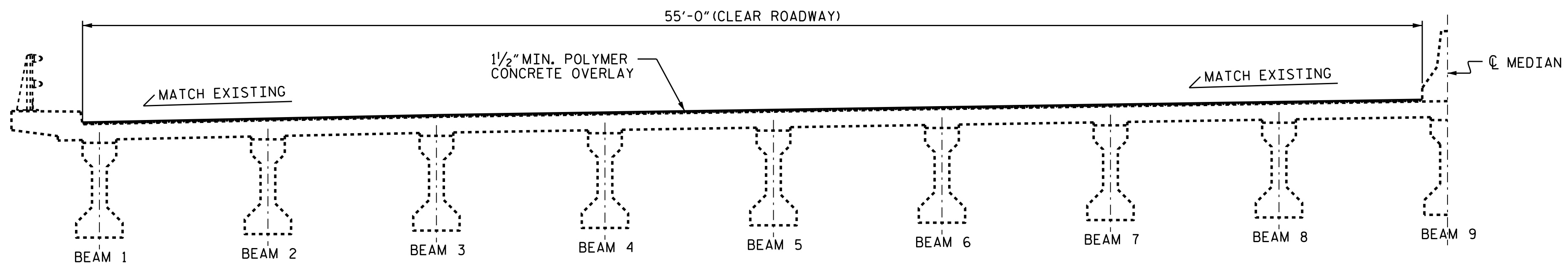
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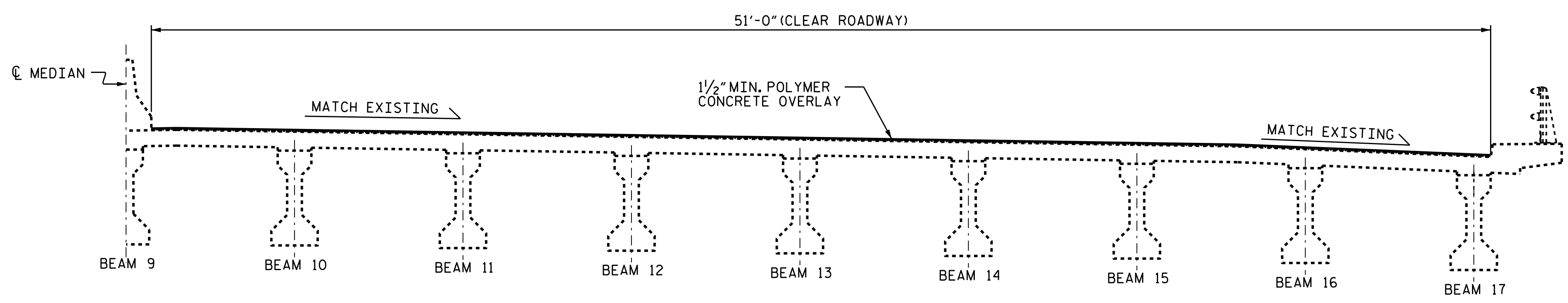
EXISTING TYPICAL SECTION - NORTHBOUND LANES



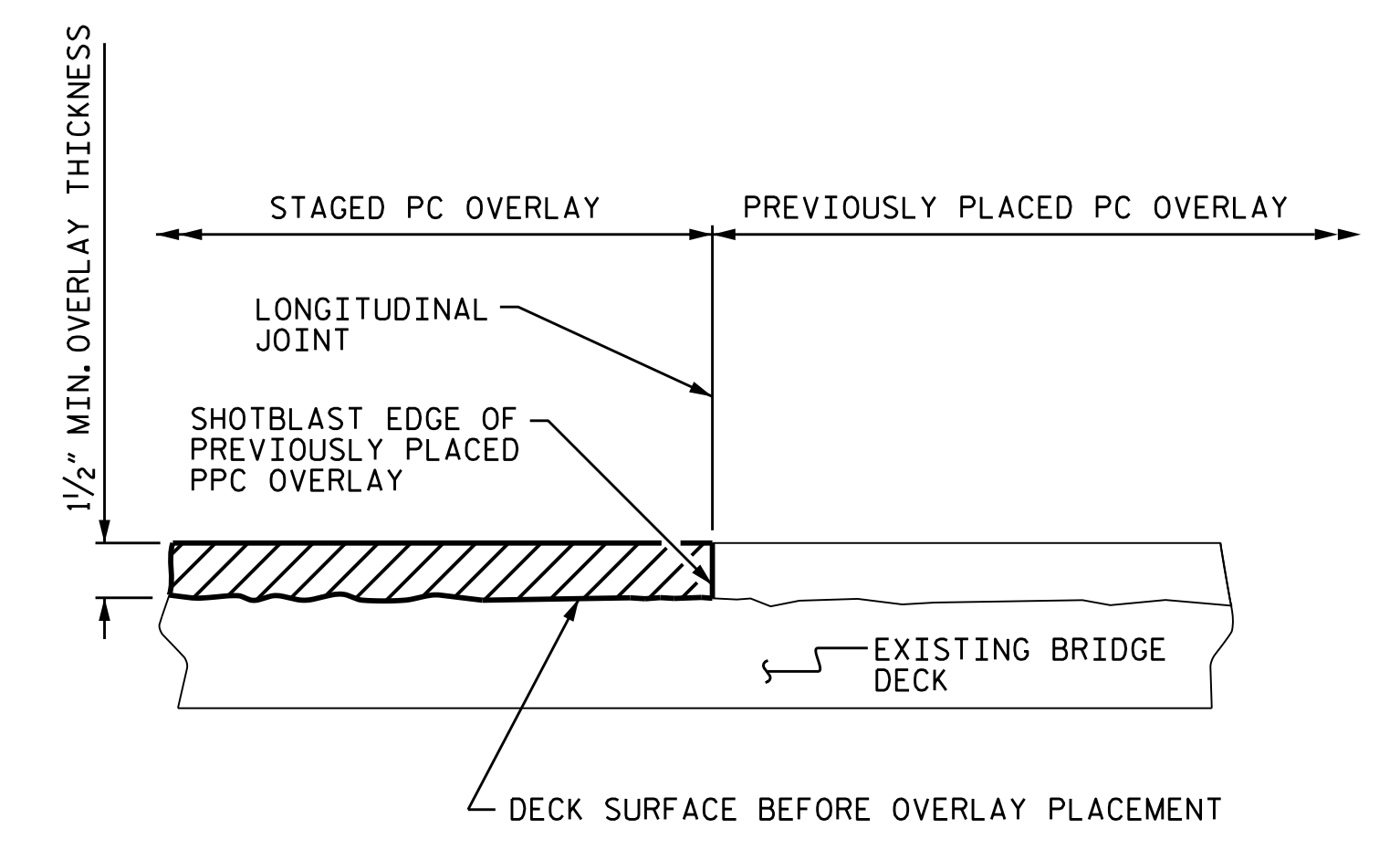
EXISTING TYPICAL SECTION - SOUTHBOUND LANES



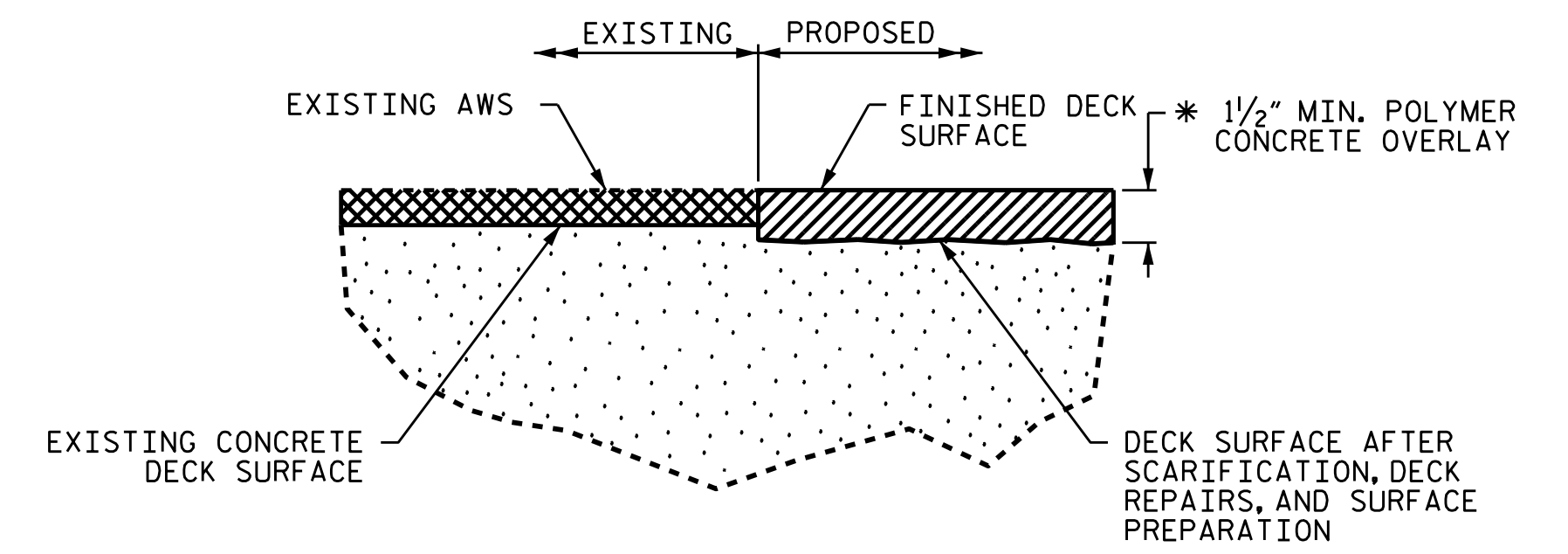
PROPOSED TYPICAL SECTION - NORTHBOUND LANES



PROPOSED TYPICAL SECTION - SOUTHBOUND LANES



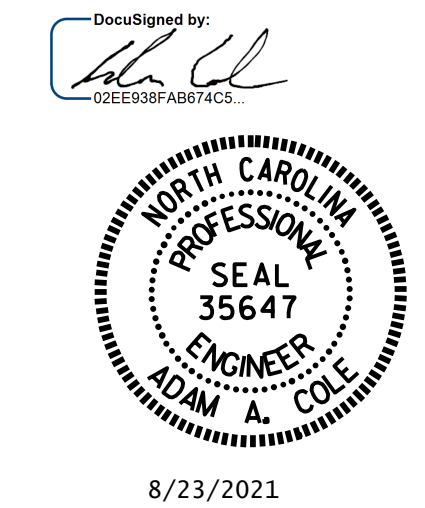
STAGED PC OVERLAY JOINT (AS NEEDED)



DETAIL FOR POLYMER CONCRETE OVERLAY

* FINISHED SURFACE ELEVATION SHALL MATCH EXISTING ASPHALT WEARING SURFACE ELEVATION. ACTUAL THICKNESS OF PC OVERLAY MAY VARY.

PROJ. NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590322



8/23/2021

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

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

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NO.	BY:	DATE:	NO.	BY:	DATE:	S5-3
1			3			TOTAL SHEETS
2			4			274

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AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS

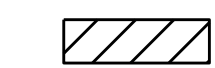
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	848 SQ. YDS.	
CLASS II SURFACE PREPARATION	15.1 SQ. YDS.	
CONCRETE DECK REPAIR FOR PC OVERLAY	15.1 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	848 SQ. YDS.	
PC MATERIALS	41.2 CU. YDS.	
PLACING AND FINISHING PC OVERLAY	848 SQ. YDS.	
GROOVING BRIDGE FLOORS	7160 SQ. FT.	

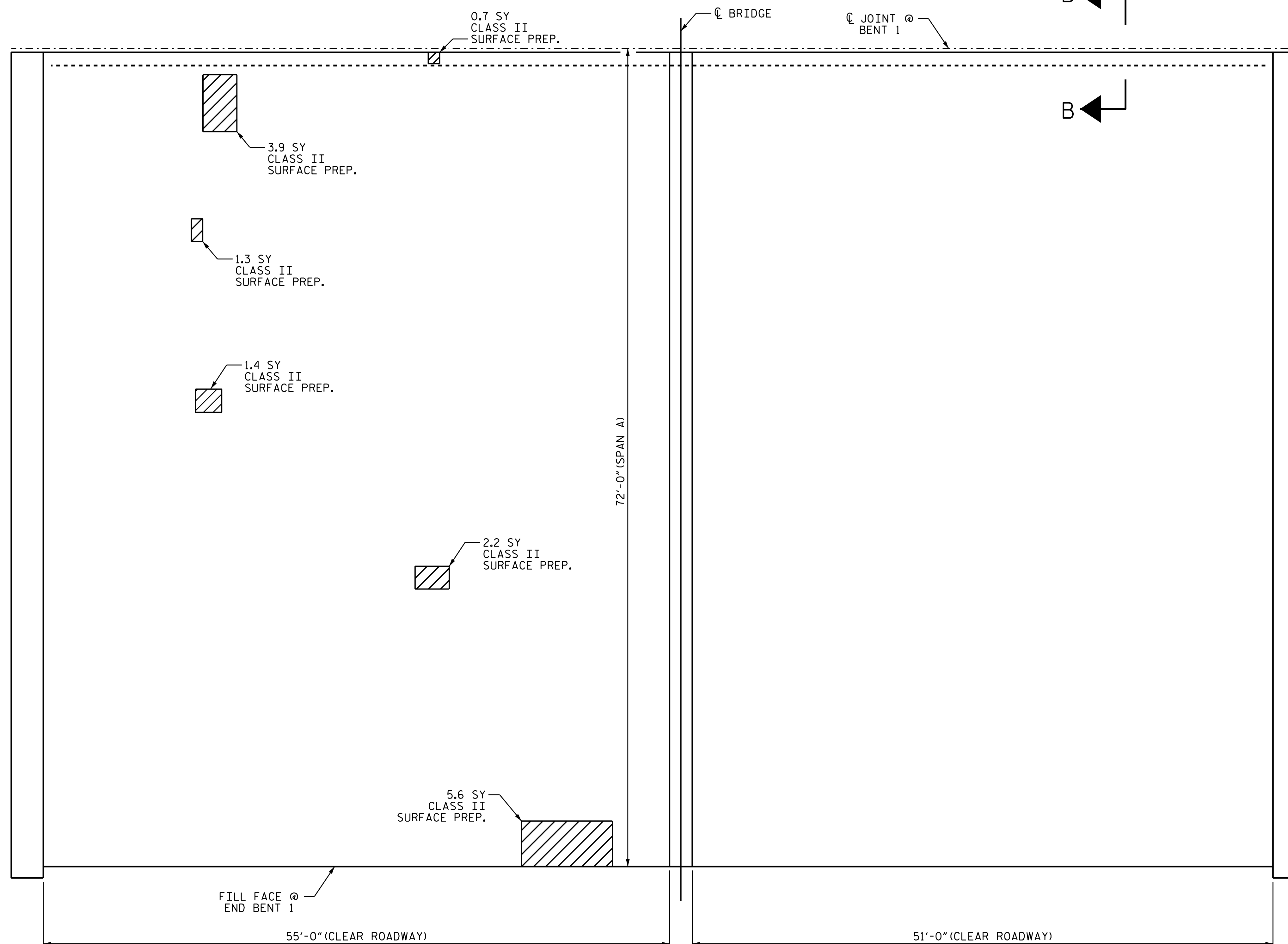
TOP OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PPC OVERLAY AFTER REMOVAL OF UNSOUND CONCRETE. (MIN. 2" CLEAR TO SAWCUT). SEE OVERLAY SURFACE PREPARATION FOR POLYESTER POLYMER CONCRETE SPECIAL PROVISION.

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.

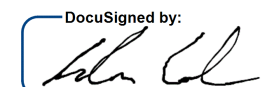
 APPROX. CLASS II SURFACE PREPARATION

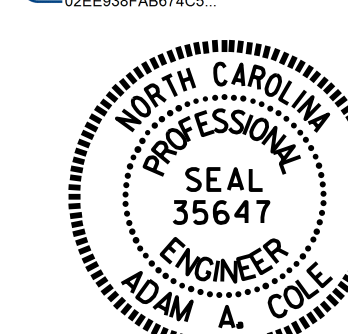


PLAN

PROJ. NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590322

SHEET 1 OF 3

DocuSigned by:

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8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK SURFACE REPAIR
 SPAN A

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

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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			55-4
2			4			274

AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS

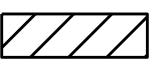
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	789 SQ. YDS.	
CLASS II SURFACE PREPARATION	5.9 SQ. YDS.	
CONCRETE DECK REPAIR FOR PC OVERLAY	5.9 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	789 SQ. YDS.	
PC MATERIALS	38.4 CU. YDS.	
PLACING AND FINISHING PC OVERLAY	789 SQ. YDS.	
GROOVING BRIDGE FLOORS	6654 SQ. FT.	

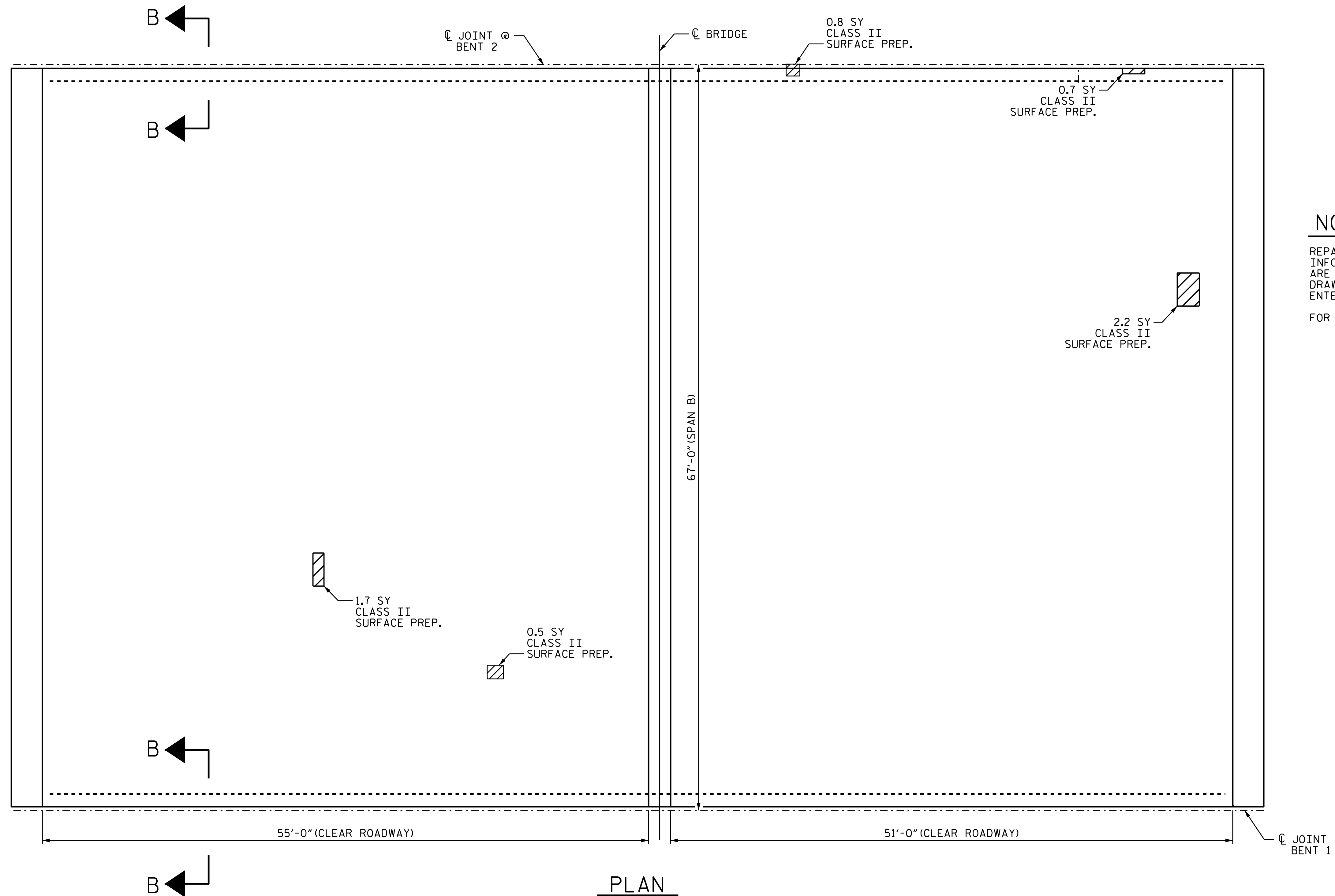
TOP OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PPC OVERLAY AFTER REMOVAL OF UNSOUND CONCRETE. (MIN. 2" CLEAR TO SAWCUT). SEE OVERLAY SURFACE PREPARATION FOR POLYESTER POLYMER CONCRETE SPECIAL PROVISION.

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.

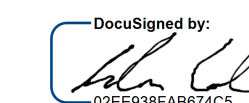
FOR SECTION B-B, SEE "JOINT DETAILS" SHEET.

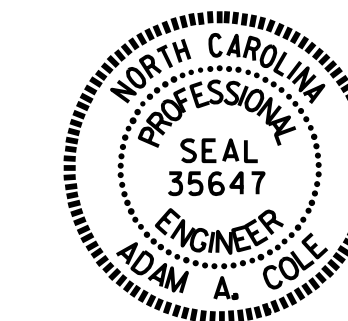
 APPROX. CLASS II SURFACE PREPARATION



PROJ. NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590322

SHEET 2 OF 3

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8/23/2021

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

DRAWN BY : REZA KOUCHEKI 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	754 SQ. YDS.	
CLASS II SURFACE PREPARATION	2.0 SQ. YDS.	
CONCRETE DECK REPAIR FOR PC OVERLAY	2.0 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	754 SQ. YDS.	
PC MATERIALS	36.7 CU. YDS.	
PLACING AND FINISHING PC OVERLAY	754 SQ. YDS.	
GROOVING BRIDGE FLOORS	6360 SQ. FT.	

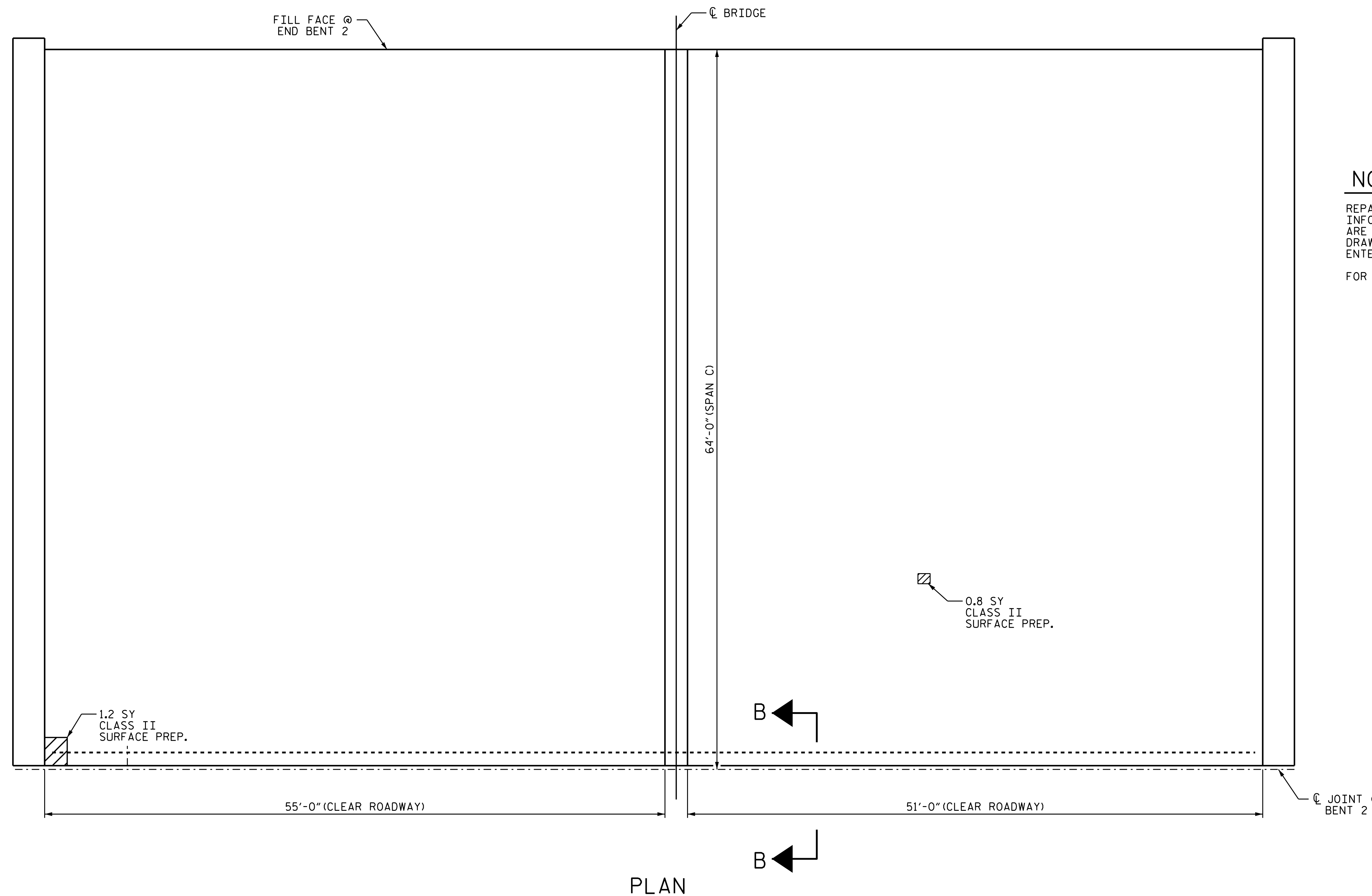
TOP OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PPC OVERLAY AFTER REMOVAL OF UNSOUND CONCRETE. (MIN. 2" CLEAR TO SAWCUT). SEE OVERLAY SURFACE PREPARATION FOR POLYESTER POLYMER CONCRETE SPECIAL PROVISION.

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.

 APPROX. CLASS II SURFACE PREPARATION



PROJ. NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590322

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 DATE : .07/2021
 CHECKED BY : H.A. LOCKLEAR DATE : .07/2021

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1			3			274
2			4			

NOTES:

FINAL JOINT SEALS 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.

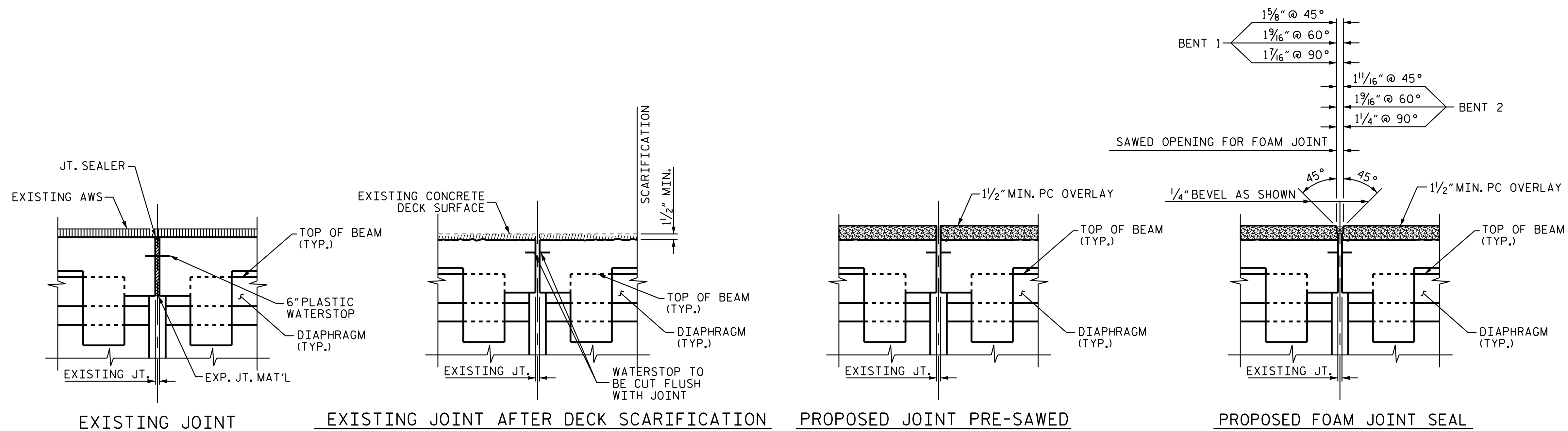
THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINTS IN LIEU OF SAWING THE JOINT.

THE INSTALLED FOAM JOINTS SHALL BE WATERTIGHT.

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

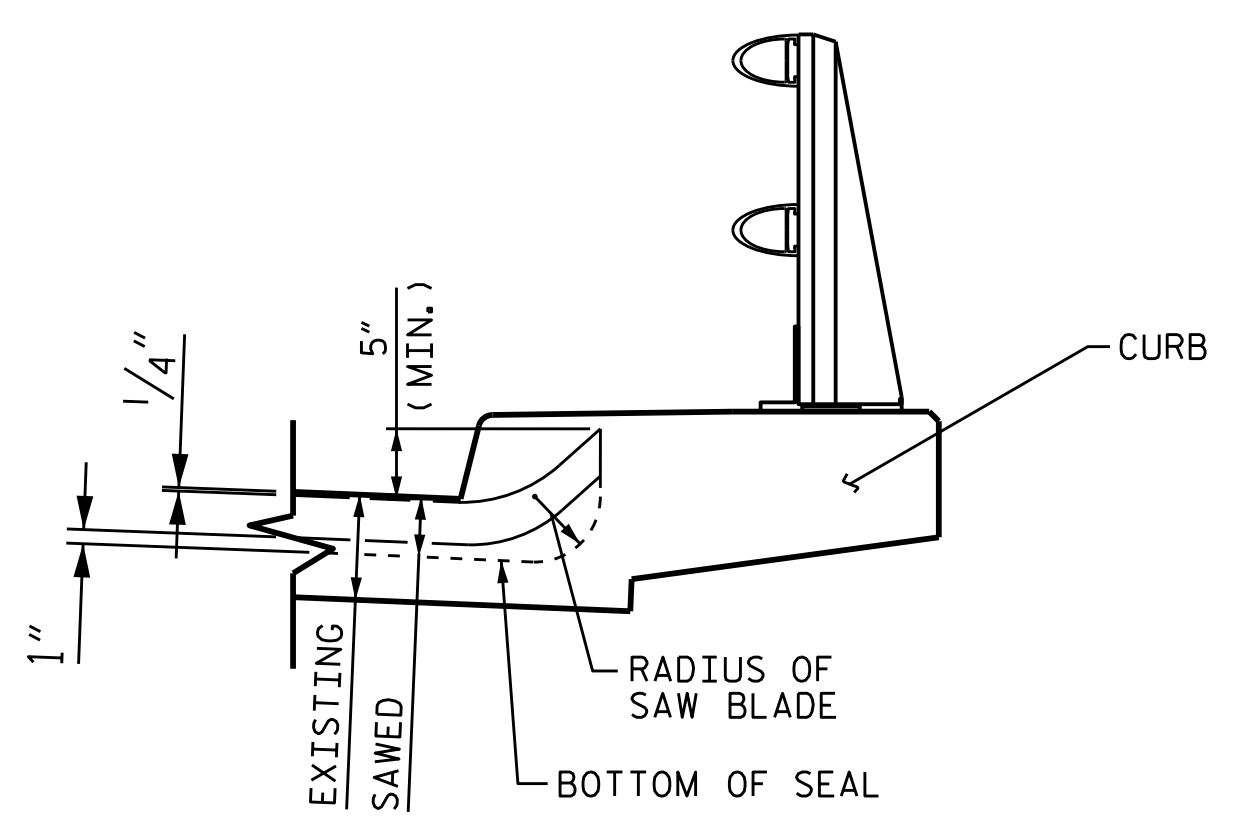
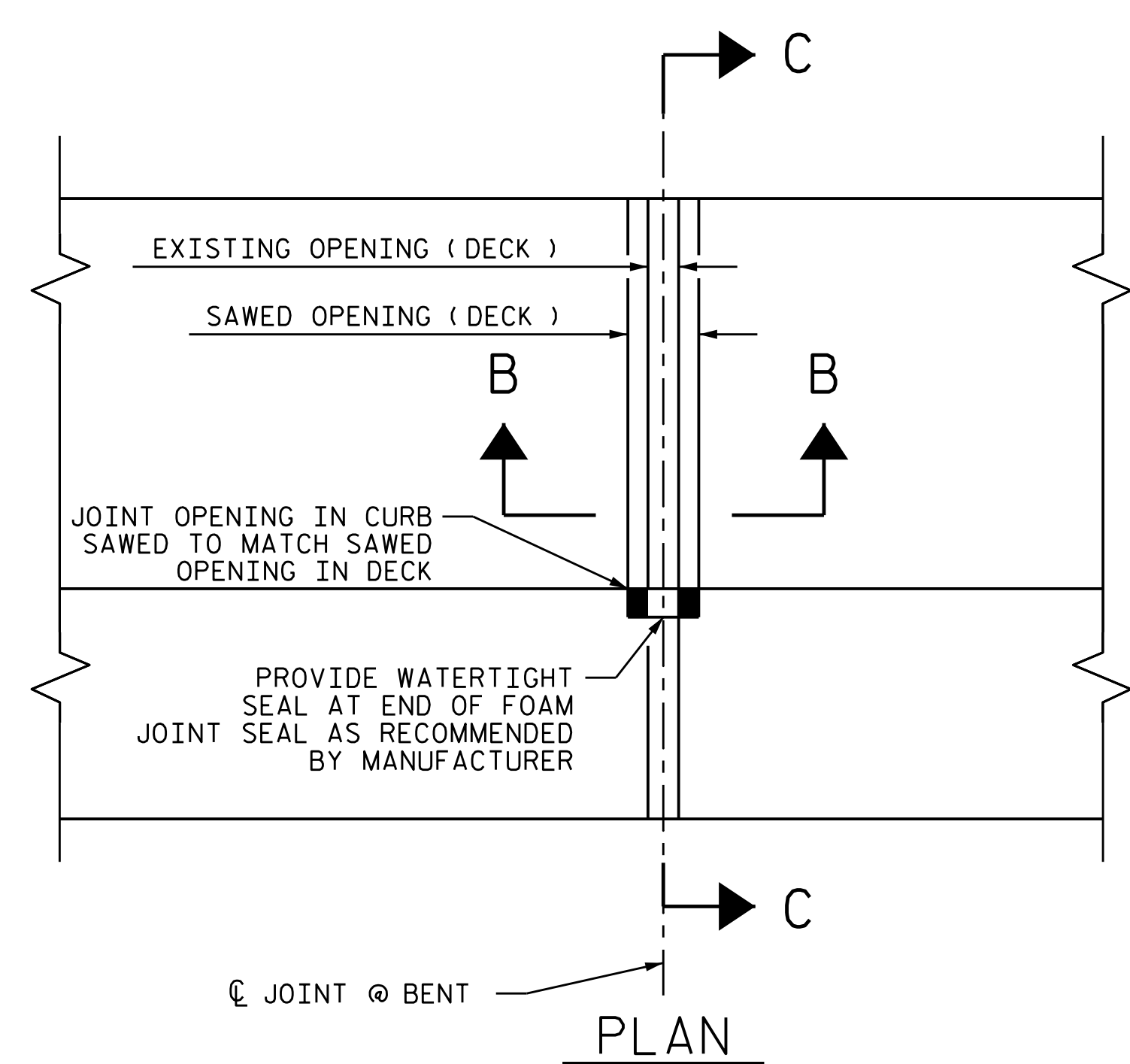
NOMINAL UNCOMPRESSED SEAL WIDTH OF FOAM JOINT SEAL SHALL BE 2".

FOR CONCRETE FOR DECK REPAIR SEE SPECIAL PROVISIONS.



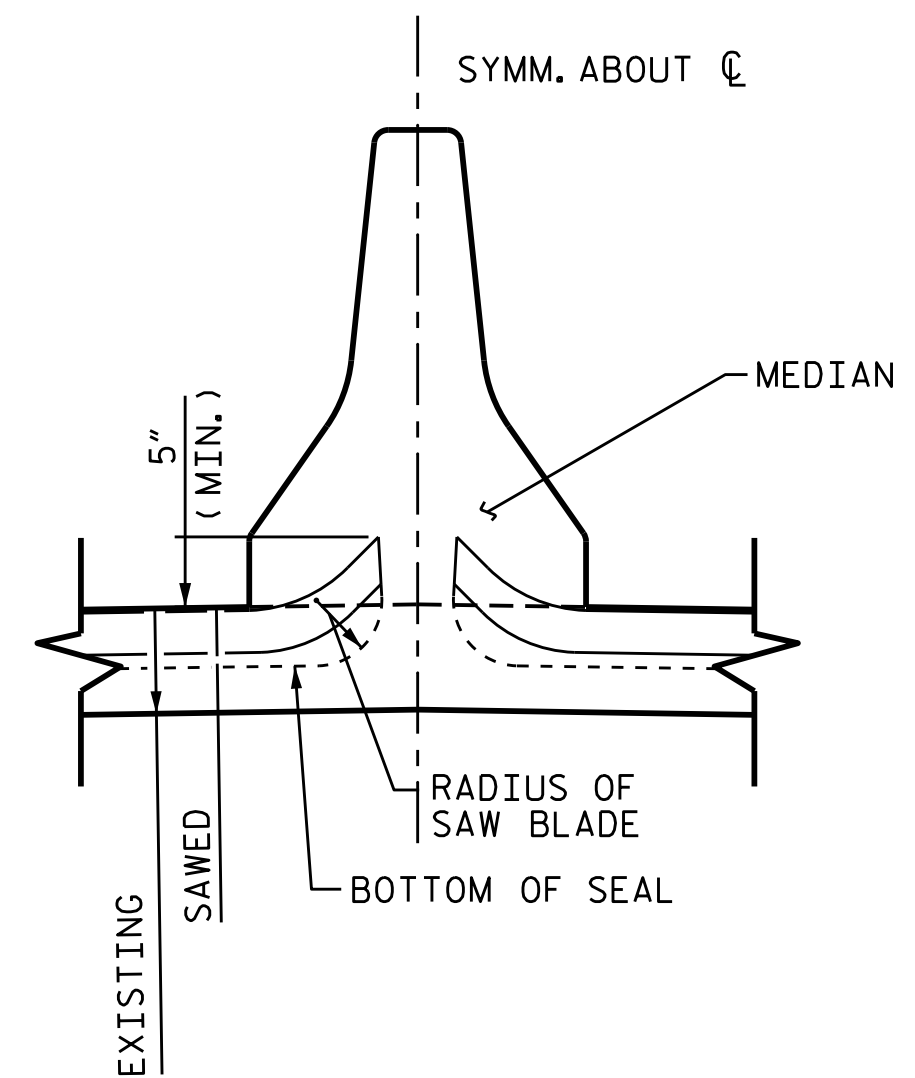
SECTION B-B

JOINT REPAIR QUANTITY TABLE		
	ESTIMATE	ACTUAL
FOAM JOINT SEALS FOR PRESERVATION		
BENT 1	106.0 LF.	
BENT 2	106.0 LF.	
TOTAL	212.0 LF.	



SECTION C-C

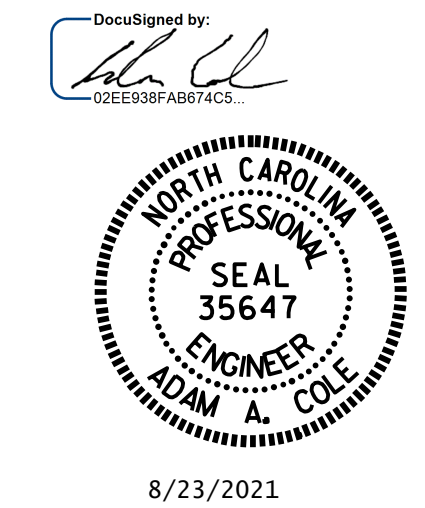
FOAM JOINT SEAL SHALL BE FACTORY FORMED OR CUT, HEAT WELDED AND TURNED UP PARALLEL TO FACE OF CURB.



MEDIAN DETAIL

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

PROJECT NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590322



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FOAM JOINT DETAILS

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

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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	16.0	8.0		
CURTAIN WALL	0.0	0.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	3.4	1.7		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
CURTAIN WALL	0.0			
EPOXY COATING	SQ. FT.		SQ. FT.	
TOP OF BENT CAP	86			

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

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN 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 PROVISION.

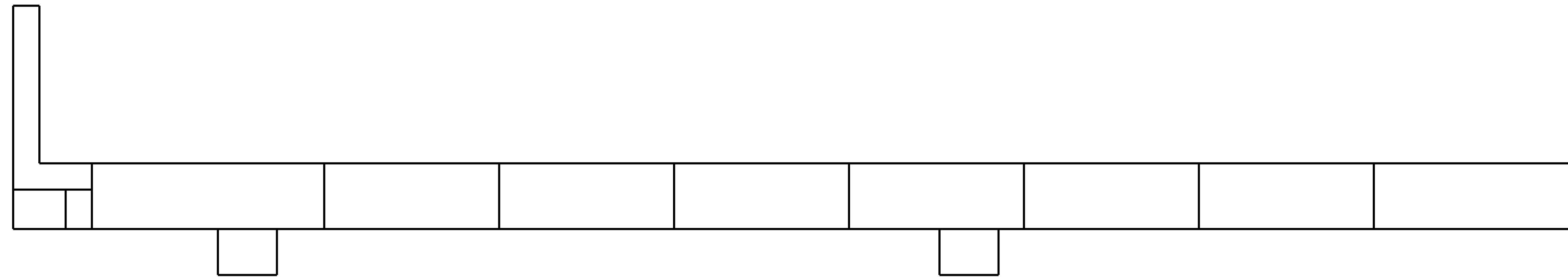
FOR CONCRETE REPAIR, SEE SPECIAL PROVISION.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISION.

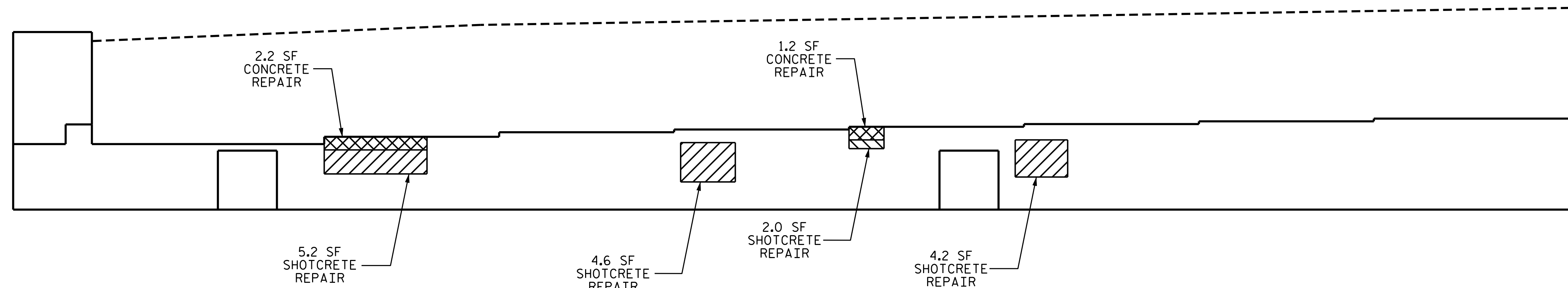
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

AFTER SATISFACTORY COMPLETION OF SHOTCRETE, CONCRETE AND ERI REPAIRS, REPAIR EXISTING MURAL PAINT ON BENTS AND GIRDERS AS APPROPRIATE.

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



PLAN



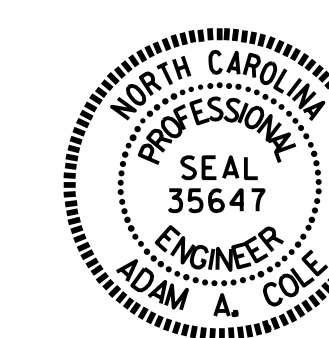
ELEVATION

PROJ. NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590322

SHEET 1 OF 2

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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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1			3			55-8
2			4			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	5.9	3.0		
CURTAIN WALL	19.3	9.7		
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.	
CURTAIN WALL	5.0			
EPOXY COATING	SQ. FT.		SQ. FT.	
TOP OF BENT CAP	88			

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

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN 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 PROVISION.

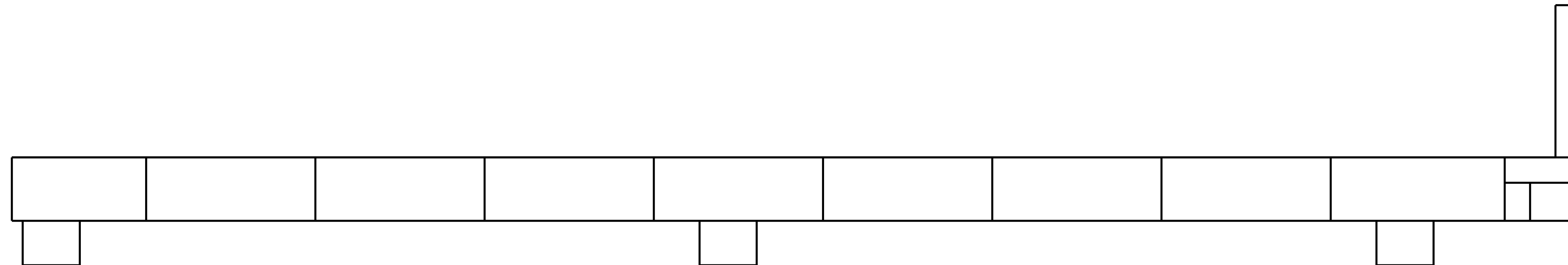
FOR CONCRETE REPAIR, SEE SPECIAL PROVISION.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISION.

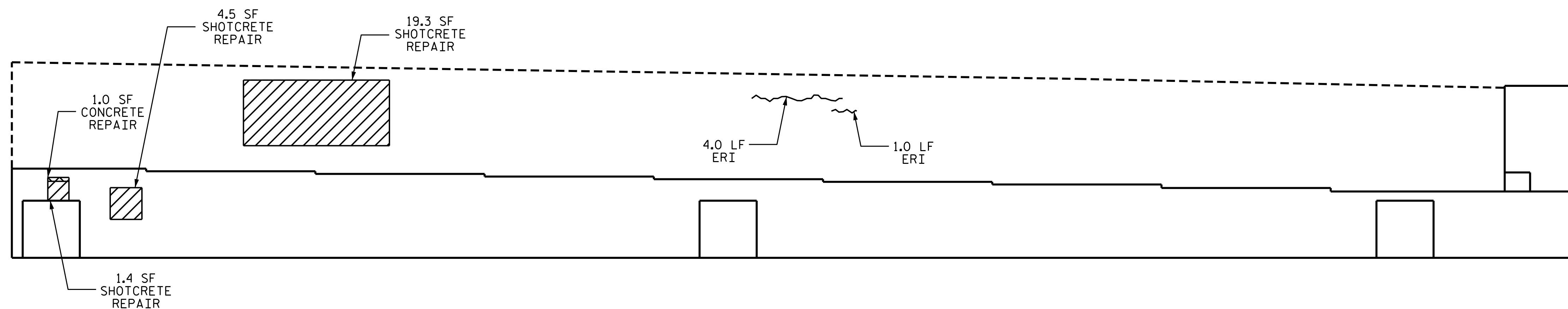
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

AFTER SATISFACTORY COMPLETION OF SHOTCRETE, CONCRETE AND ERI REPAIRS, REPAIR EXISTING MURAL PAINT ON BENTS AND GIRDERS AS APPROPRIATE.

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



PLAN



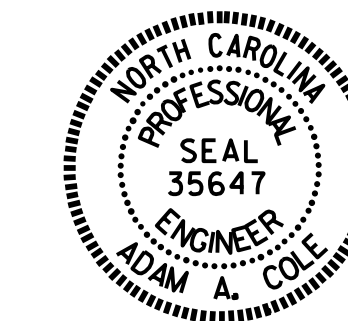
ELEVATION

PROJ. NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590322

SHEET 2 OF 2

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8/23/2021

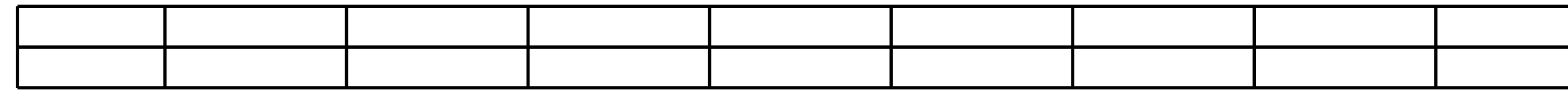
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

END BENT 1
 NORTHBOUND

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

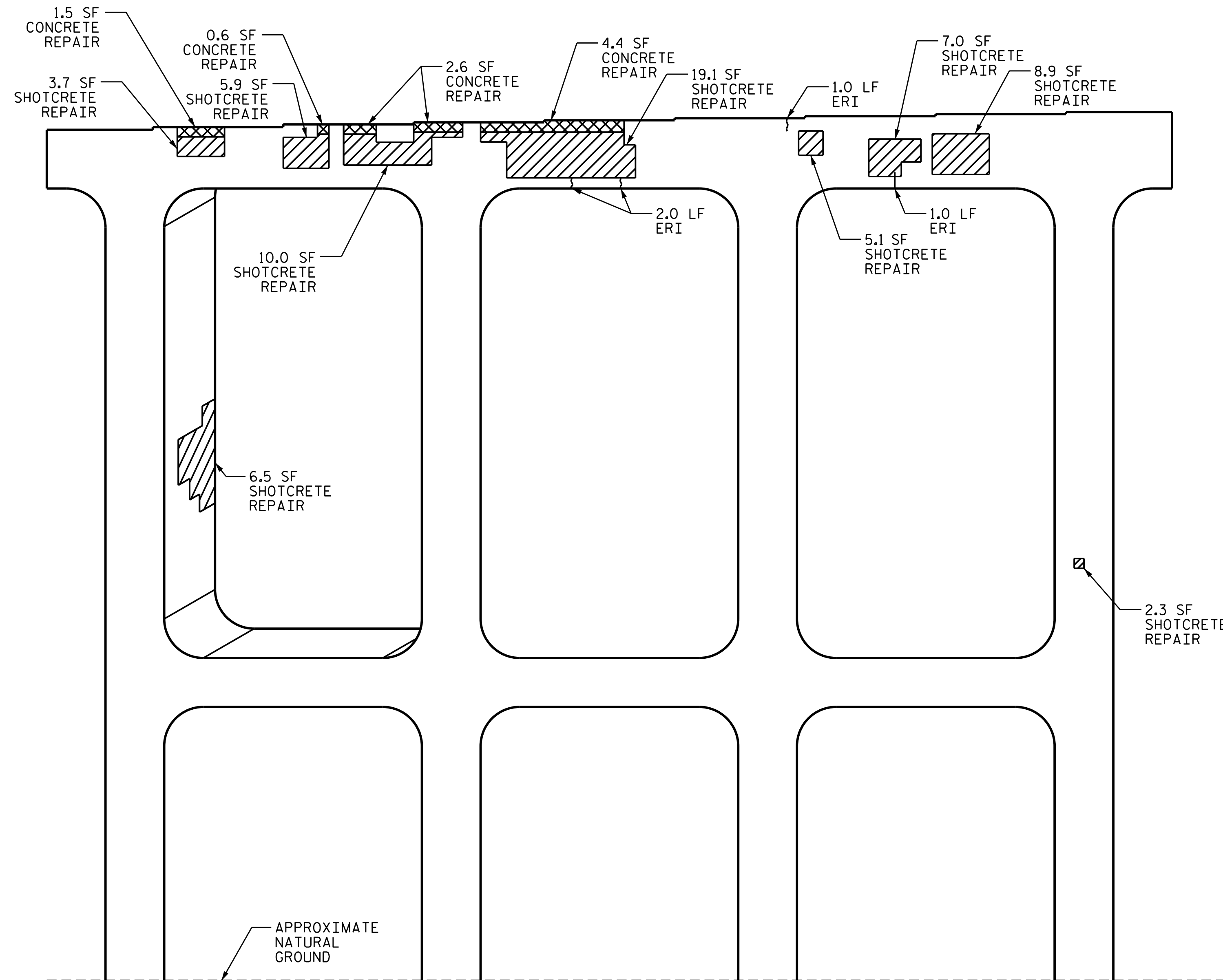
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1			3			S5-9
2			4			TOTAL SHEETS 274



SPAN B
SPAN A

TOP OF CAP



ELEVATION

BENT 1 NORTHBOUND



END VIEW

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	59.7	29.9		
COLUMN & STRUTS	13.0	6.5		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	9.1	4.6		
COLUMN & STRUTS	0.0	0.0		
EPOXY RESIN INJECTION			LIN. FT.	LIN. FT.
CAP			4.0	
COLUMN & STRUTS			1.0	
EPOXY COATING			SQ. FT.	SQ. FT.
TOP OF BENT CAP & STRUTS			316	

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

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN 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 AND STRUTS. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP AND STRUTS. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

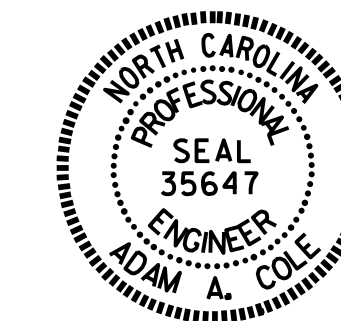
AFTER SATISFACTORY COMPLETION OF SHOTCRETE, CONCRETE AND ERI REPAIRS, REPAIR EXISTING MURAL PAINT ON BENTS AND GIRDERS, AS APPROPRIATE.

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

PROJ. NO. I-5746C
MECKLENBURG COUNTY
BRIDGE NO. 590322

SHEET 1 OF 2

DocuSigned by:
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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

NO.	REVISIONS			NO.	REVISIONS			SHEET NO.
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1				3			S5-10	
2				4			TOTAL SHEETS 274	

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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	73.1	36.7		
COLUMN & STRUTS	88.0	44.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	4.0	2.0		
COLUMN & STRUTS	0.0	0.0		
EPOXY RESIN INJECTION	AREA SQ. FT.	LIN. FT.	AREA SQ. FT.	LIN. FT.
CAP		7.0		
COLUMN & STRUTS		0.0		
EPOXY COATING	AREA SQ. FT.	LIN. FT.	AREA SQ. FT.	LIN. FT.
TOP OF BENT CAP & STRUTS	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 "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN 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 PROVISION.

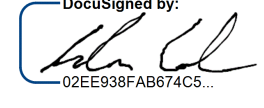
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND STRUTS. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP AND STRUTS. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

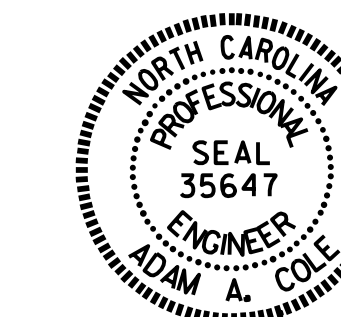
AFTER SATISFACTORY COMPLETION OF SHOTCRETE, CONCRETE AND ERI REPAIRS, REPAIR EXISTING MURAL PAINT ON BENTS AND GIRDERS, AS APPROPRIATE.

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

PROJ. NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590322

SHEET 2 OF 2

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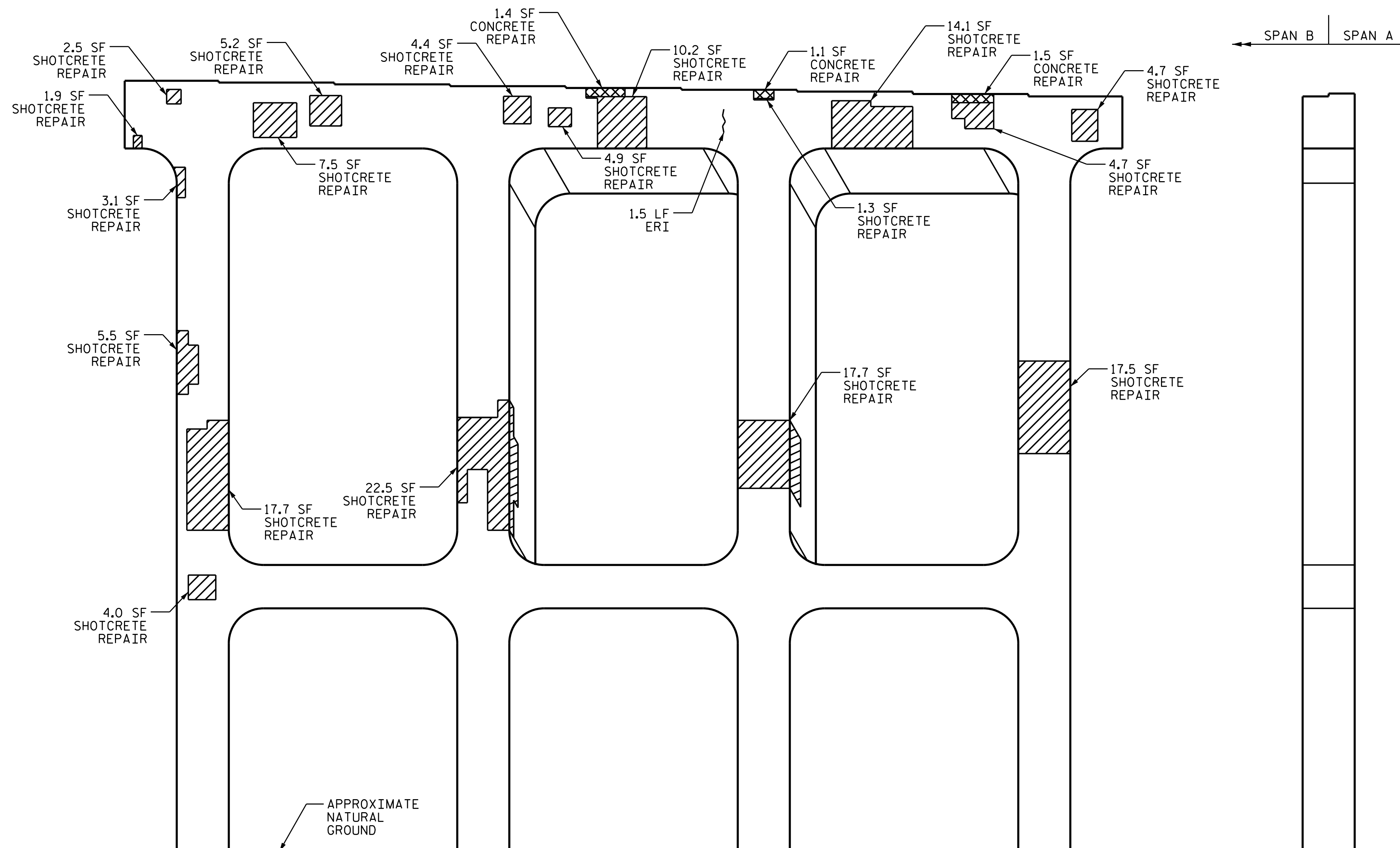
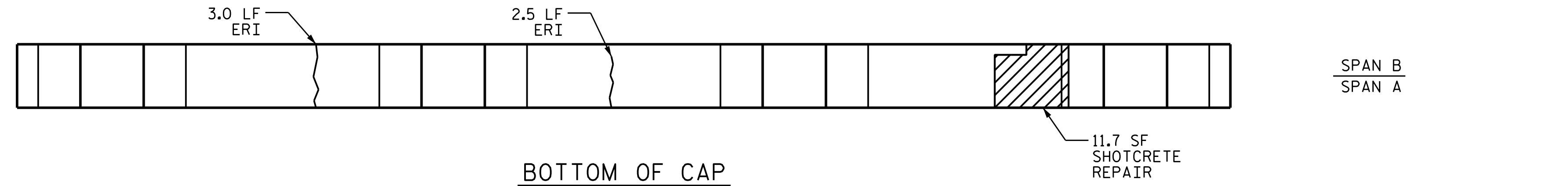


8/23/2021

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			55-11
2			4			274

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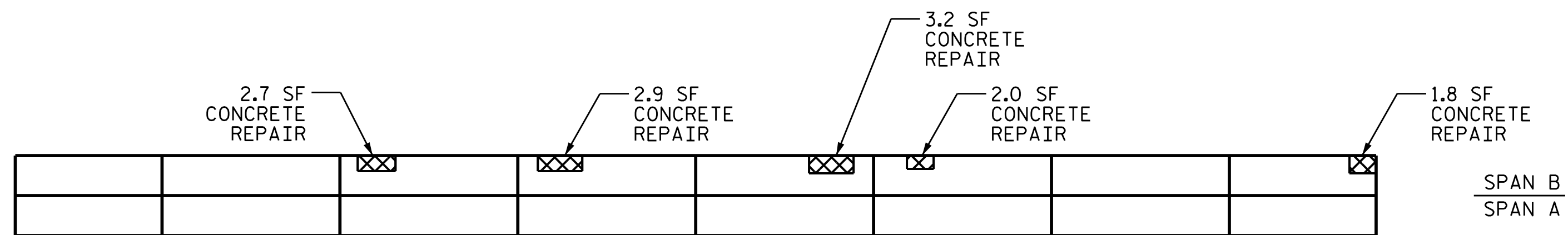


ELEVATION

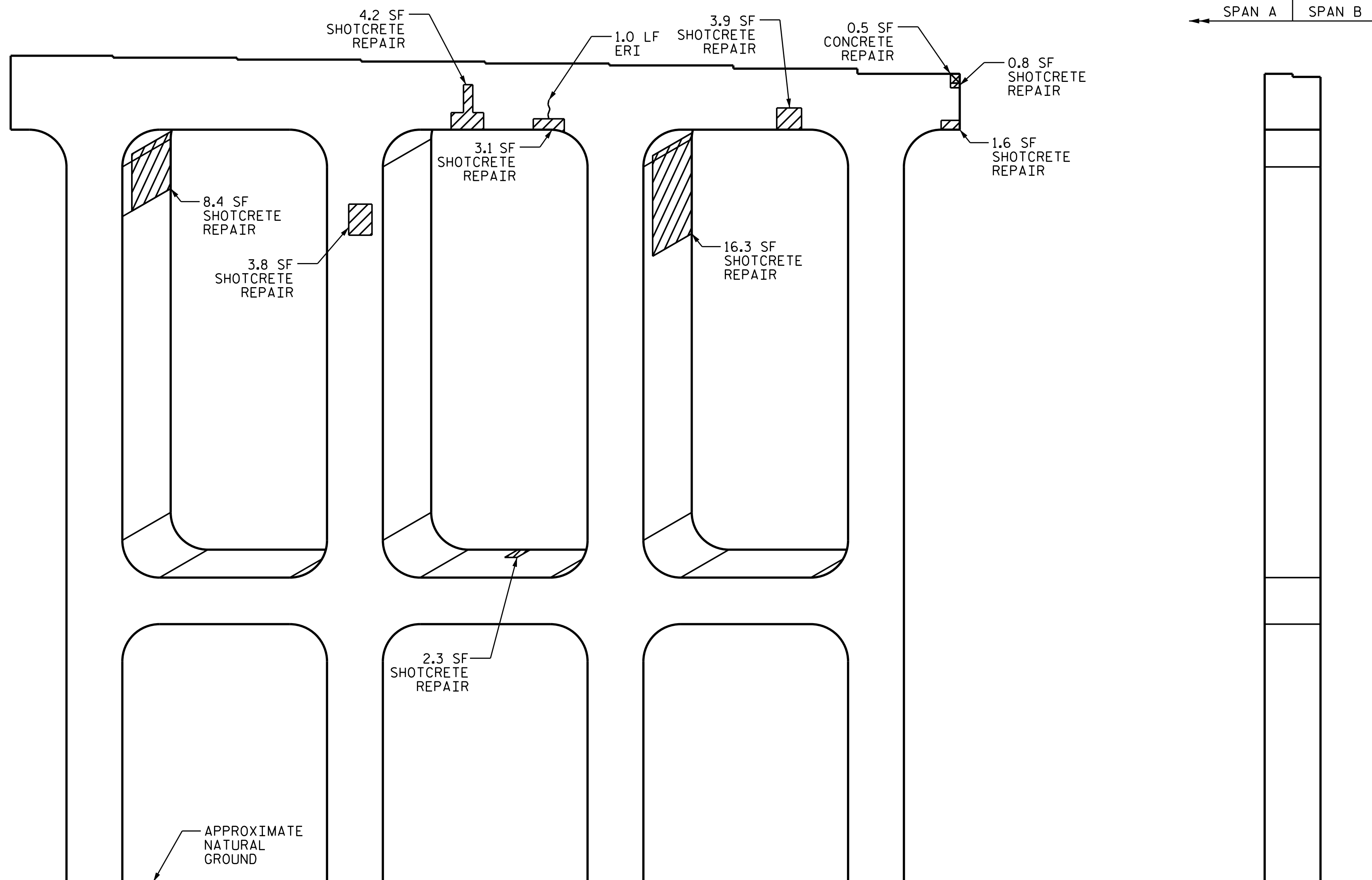
END VIEW

BENT 1 NORTHBOUND

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



TOP OF CAP



ELEVATION

END VIEW

BENT 1 SOUTHBOUND

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	13.6	6.8		
COLUMN & STRUTS	30.8	15.4		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	13.1	6.6		
COLUMN & STRUTS	0.0	0.0		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		1.0		
COLUMN & STRUTS		0.0		
EPOXY COATING		SQ. FT.		SQ. FT.
TOP OF BENT CAP & STRUTS		276		

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

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN 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 PROVISION.

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

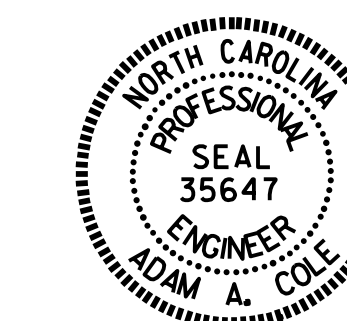
AFTER SATISFACTORY COMPLETION OF SHOTCRETE, CONCRETE AND ERI REPAIRS, REPAIR EXISTING MURAL PAINT ON BENTS AND GIRDERS, AS APPROPRIATE.

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

PROJ. NO. I-5746C
 MECKLENBURG COUNTY
 BRIDGE NO. 590322

SHEET 1 OF 2

DocuSigned by:



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

NO.	REVISIONS			NO.	REVISIONS			SHEET NO.
	BY:	DATE:			BY:	DATE:		
1				3			S5-12	
2				4			TOTAL SHEETS 274	

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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	9.2	4.6		
COLUMN & STRUTS	64.9	32.5		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
COLUMN & STRUTS	0.0	0.0		
EPOXY RESIN INJECTION	AREA SQ. FT.	LIN. FT.	AREA SQ. FT.	LIN. FT.
CAP		1.0		
COLUMN & STRUTS		0.0		
EPOXY COATING	AREA SQ. FT.	SO. FT.	AREA SQ. FT.	SO. FT.
TOP OF BENT CAP & STRUTS		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 "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN 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.




FOR SHOTCRETE REPAIR, SEE SPECIAL PROVISION.

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

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISION.

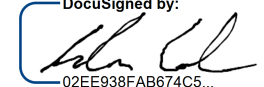
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND STRUTS. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP AND STRUTS. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

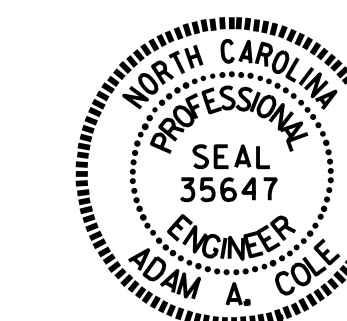
AFTER SATISFACTORY COMPLETION OF SHOTCRETE, CONCRETE AND ERI REPAIRS, REPAIR EXISTING MURAL PAINT ON BENTS AND GIRDERS, AS APPROPRIATE.

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

PROJ. NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590322

SHEET 2 OF 2

DocuSigned by:




8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 1
 SOUTHBOUND
 SPAN B FACE

REVISIONS

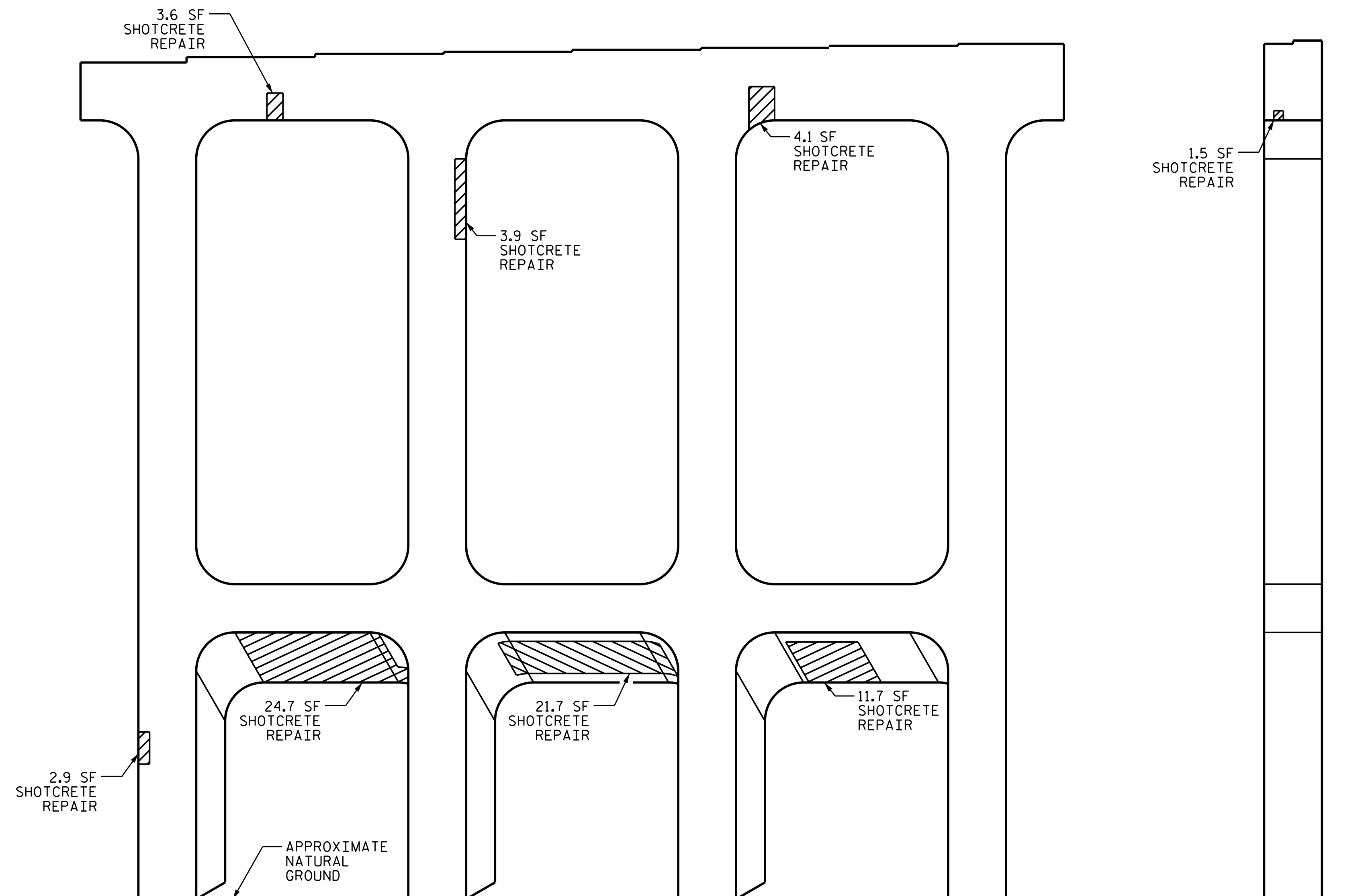
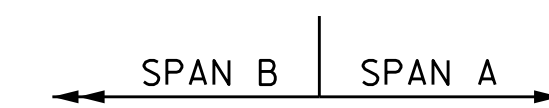
NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.
1			3			S5-13
2			4			TOTAL SHEETS 274

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SPAN B
 SPAN A

BOTTOM OF CAP



ELEVATION

END VIEW

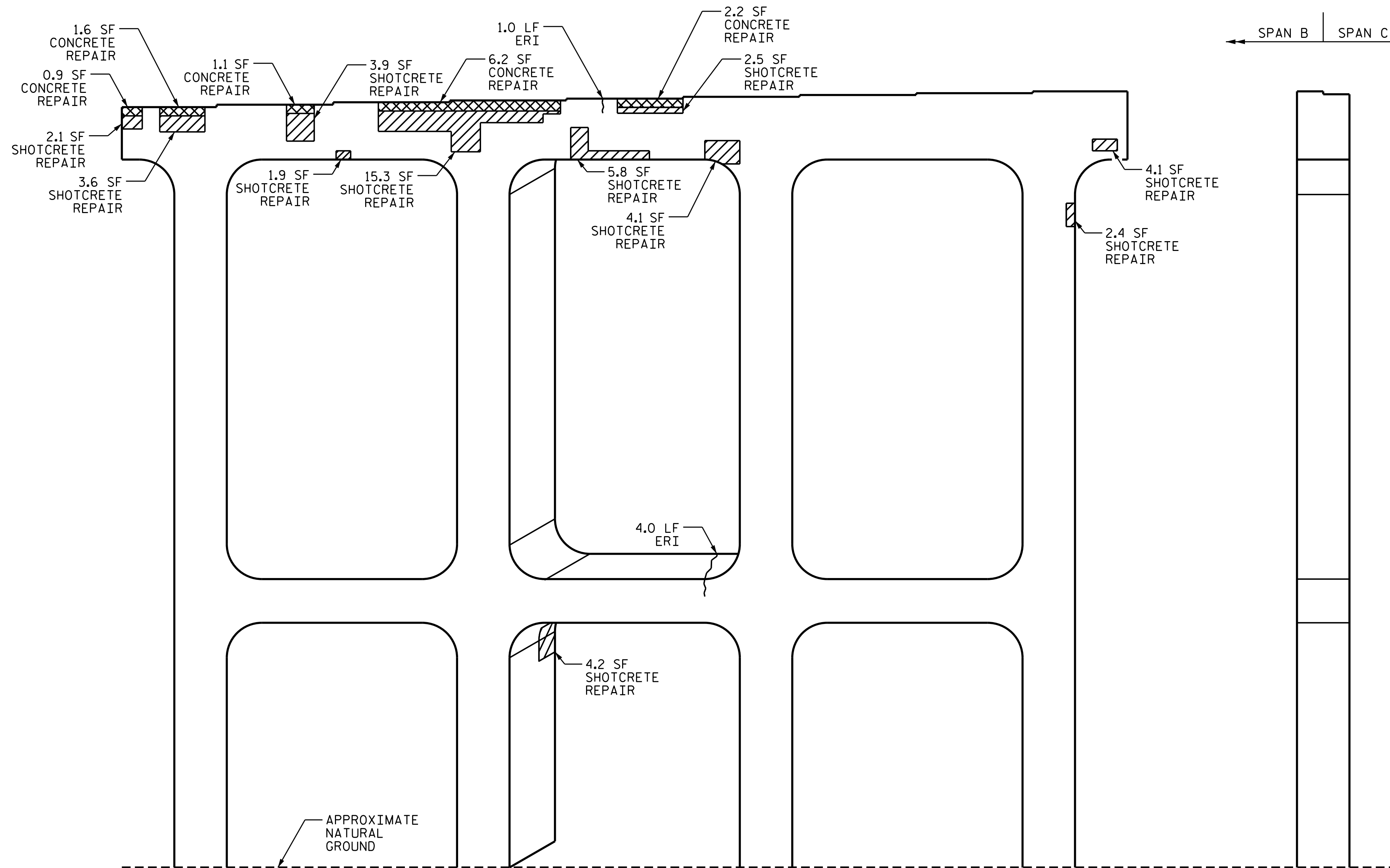
BENT 1 SOUTHBOUND

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

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SPAN C
SPAN B

TOP OF CAP



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	43.3	21.7		
COLUMN & STRUTS	6.6	3.3		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	12.0	6.0		
COLUMN & STRUTS	0.0	0.0		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		1.0		
COLUMN & STRUTS		4.0		
EPOXY COATING		SQ. FT.		SQ. FT.
TOP OF BENT CAP & STRUTS		316		

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

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REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN 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 PROVISION.

FOR CONCRETE REPAIR, SEE SPECIAL PROVISION.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISION.

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

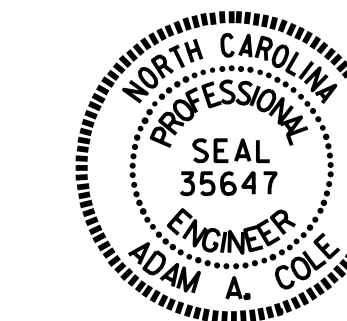
AFTER SATISFACTORY COMPLETION OF SHOTCRETE, CONCRETE AND ERI REPAIRS, REPAIR EXISTING MURAL PAINT ON BENTS AND GIRDERS, AS APPROPRIATE.

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

PROJ. NO. I-5746C
MECKLENBURG COUNTY
BRIDGE NO. 590322

SHEET 1 OF 2

DocuSigned by:
Adam A. Cole



8/23/2021

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. KOCKLEAR DATE : .05/2021

DOCUMENT NOT CONSIDERED
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SIGNATURES COMPLETED

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1			3			S5-14
2			4			TOTAL SHEETS 274

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	48.5	24.3		
COLUMN & STRUTS	60.6	30.3		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	7.2	3.6		
COLUMN & STRUTS	0.0	0.0		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		0.0		
COLUMN & STRUTS		1.0		
EPOXY COATING		SQ. FT.		SQ. FT.
TOP OF BENT CAP & STRUTS		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 "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN 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 SHOTCRET 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 STRUTS. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP AND STRUTS. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

AFTER SATISFACTORY COMPLETION OF SHOTCRETE, CONCRETE AND ERI REPAIRS, REPAIR EXISTING MURAL PAINT ON BENTS AND GIRDERS, AS APPROPRIATE.

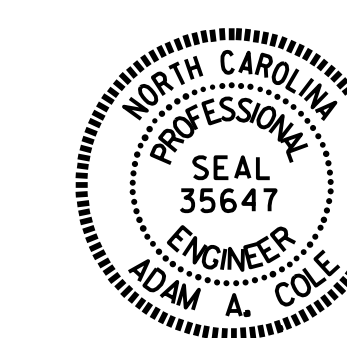
-  CONCRETE REPAIR AREA
-  SHOTCRETE REPAIR AREA
-  EPOXY RESIN INJECTION (ERI)

PROJ. NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590322

SHEET 2 OF 2

DocuSigned by:

 02E399AB014C3...



8/23/2021

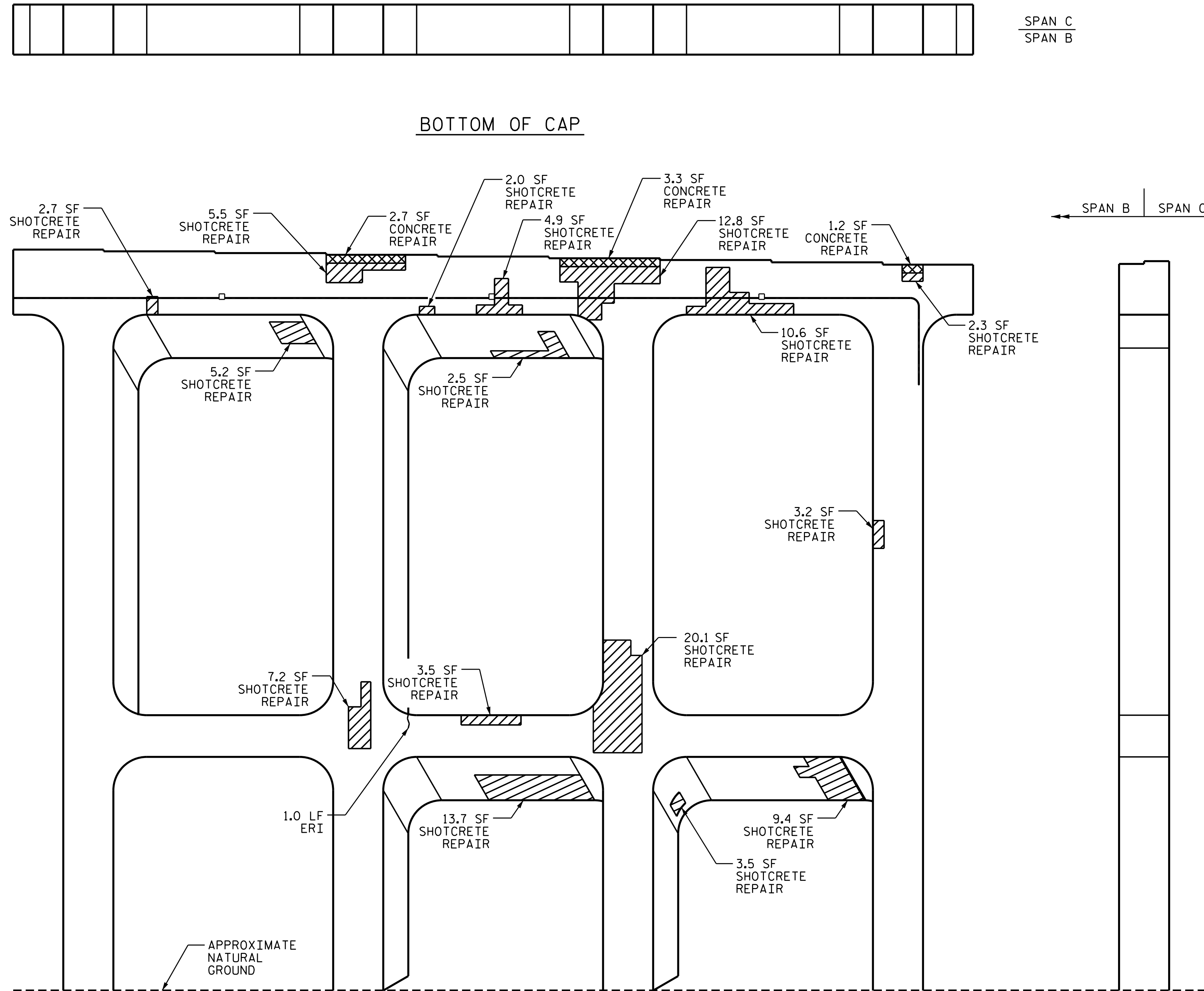
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 2
 NORTHBOUND
 SPAN C FACE

REVISIONS

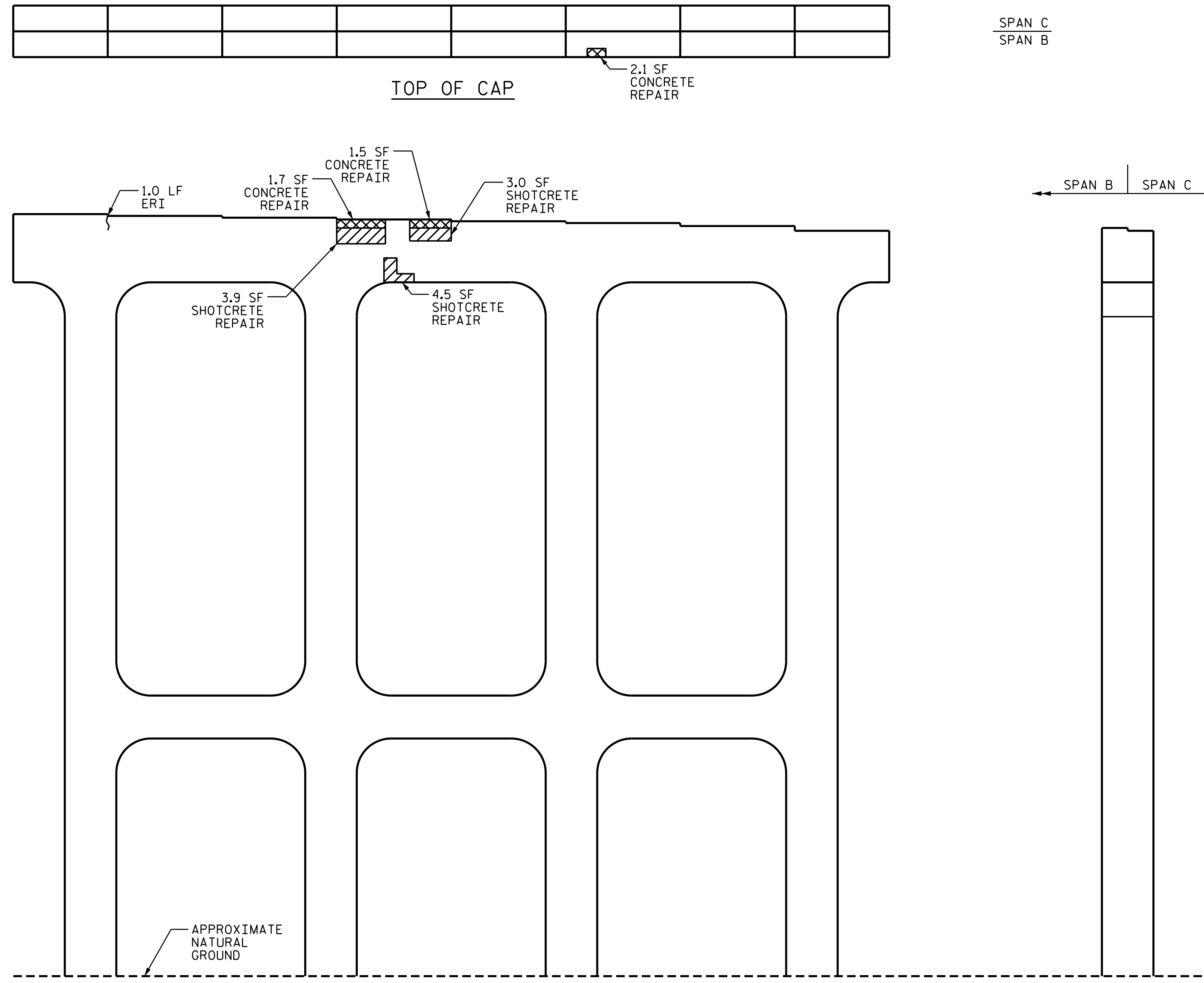
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1			3			S5-15
2			4			TOTAL SHEETS 274

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BENT 2 NORTHBOUND

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



ELEVATION

END VIEW

BENT 2 SOUTHBOUND

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	11.4	5.7		
COLUMN & STRUTS	0.0	0.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	5.3	2.7		
COLUMN & STRUTS	0.0	0.0		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		1.0		
COLUMN & STRUTS		0.0		
EPOXY COATING		SQ. FT.		SQ. FT.
TOP OF BENT CAP & STRUTS		277		

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

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REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN 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 PROVISION.

FOR CONCRETE REPAIR, SEE SPECIAL PROVISION.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISION.

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

AFTER SATISFACTORY COMPLETION OF SHOTCRETE, CONCRETE AND ERI REPAIRS, REPAIR EXISTING MURAL PAINT ON BENTS AND GIRDERS, AS APPROPRIATE.

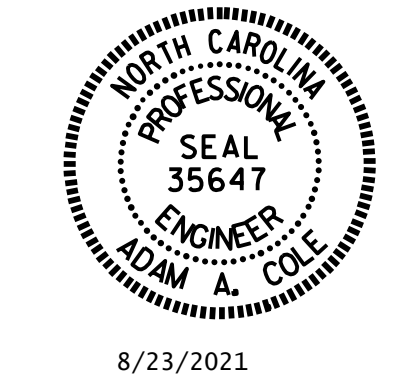
- CONCRETE REPAIR AREA
- SHOTCRETE REPAIR AREA
- EPOXY RESIN INJECTION (ERI)

PROJ. NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590322

SHEET 1 OF 2

DocuSigned by:

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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

NO.	REVISIONS			SHEET NO.
	BY:	DATE:	NO.	
1			3	S5-16 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	82.4	41.2		
COLUMN & STRUTS	17.5	8.8		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
COLUMN & STRUTS	0.0	0.0		
EPOXY RESIN INJECTION	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP		7.0		
COLUMN & STRUTS		0.0		
EPOXY COATING	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
TOP OF BENT CAP & STRUTS	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 "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN 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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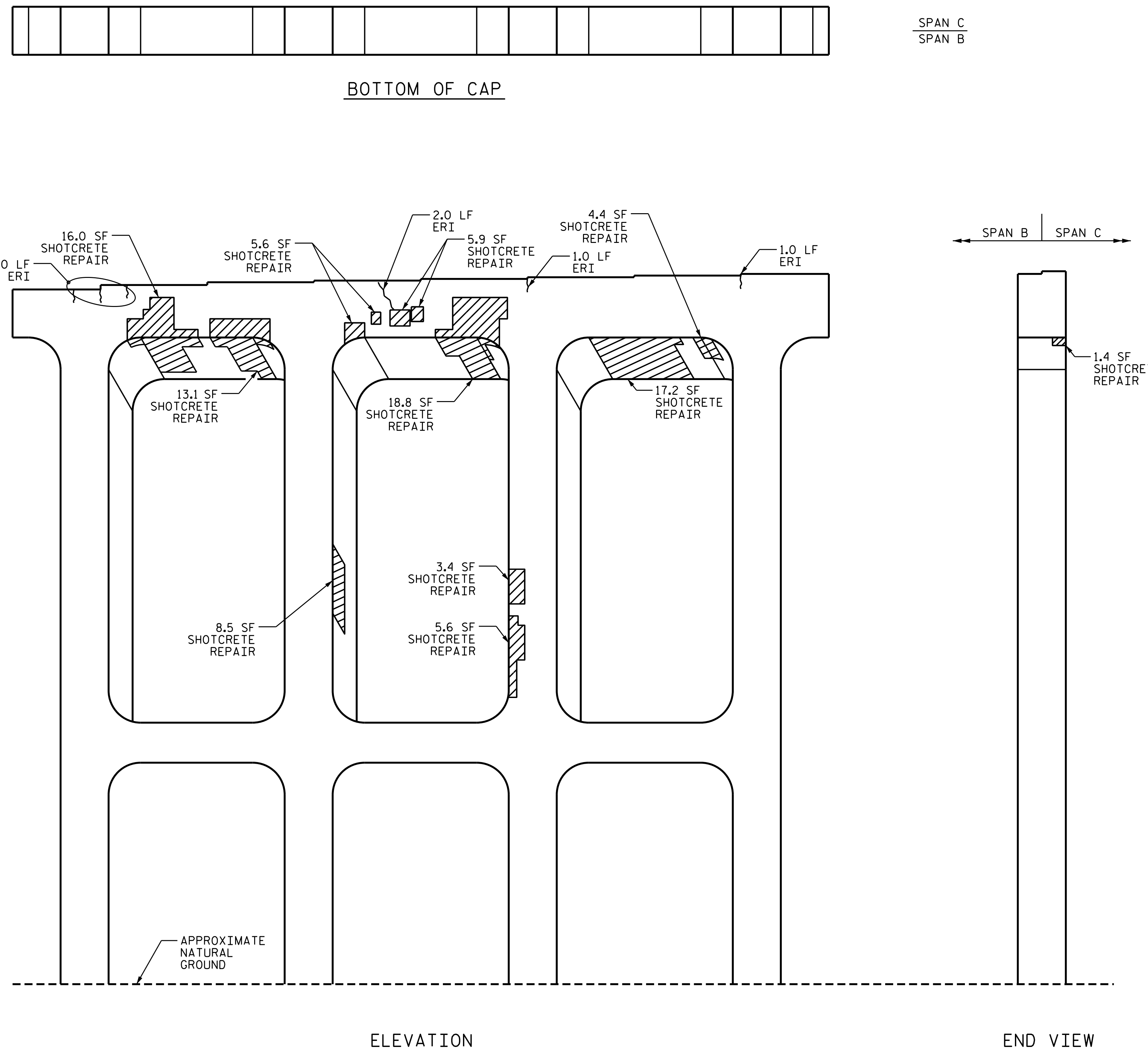
FOR SHOTCRETE REPAIR, SEE SPECIAL PROVISION.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISION.

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

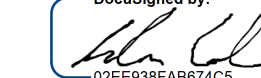
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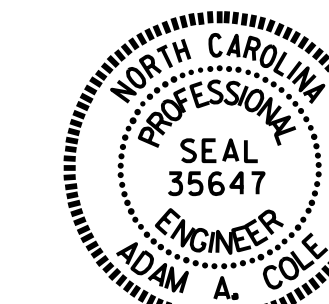
-  CONCRETE REPAIR AREA
-  SHOTCRETE REPAIR AREA
-  EPOXY RESIN INJECTION (ERI)



PROJ. NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590322

SHEET 2 OF 2

DocuSigned by:

 02E839FAB014CS...



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	S5-17 TOTAL SHEETS 274
2			4	

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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	20.4	10.2		
CURTAIN WALL	35.4	17.7		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	15.8	7.9		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
CURTAIN WALL	9.5			
EPOXY COATING	SO. FT.		SO. FT.	
TOP OF BENT CAP	88			

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

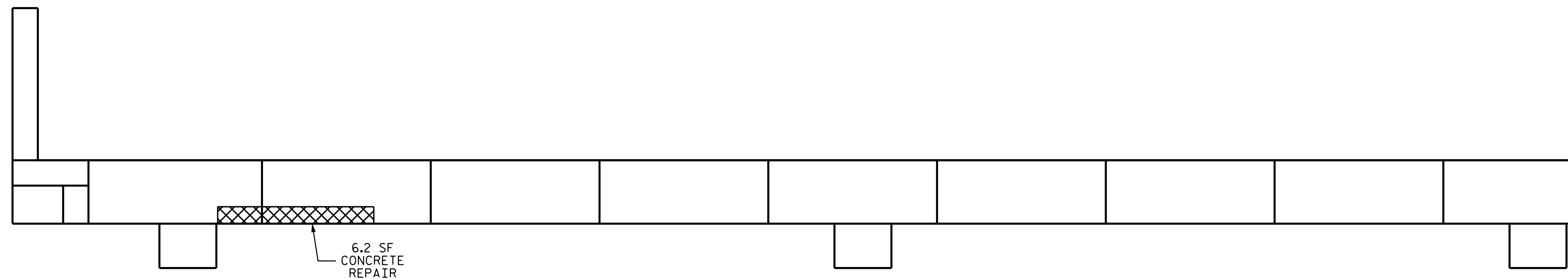
FOR CONCRETE REPAIR, SEE SPECIAL PROVISION.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISION.

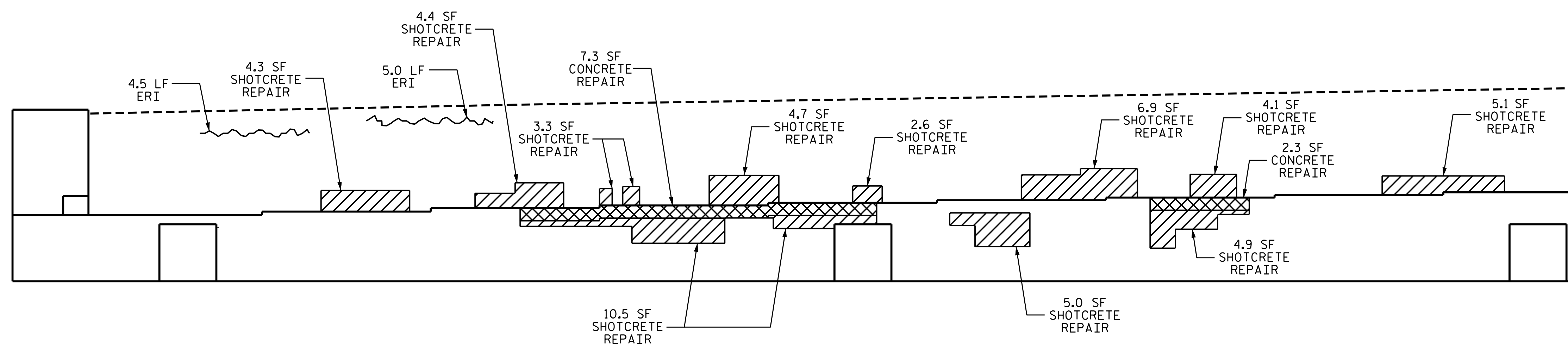
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

AFTER SATISFACTORY COMPLETION OF SHOTCRETE, CONCRETE AND ERI REPAIRS, REPAIR EXISTING MURAL PAINT ON BENTS AND GIRDERS AS APPROPRIATE.

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



PLAN

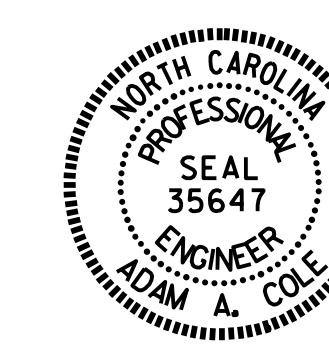


ELEVATION

PROJ. NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590322

SHEET 1 OF 2

DocuSigned by:

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

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			55-18
2			4			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	0.0	0.0		
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.
CURTAIN WALL		0.0		
EPOXY COATING		SO. FT.		SO. FT.
TOP OF BENT CAP		86		

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

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN 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 PROVISION.

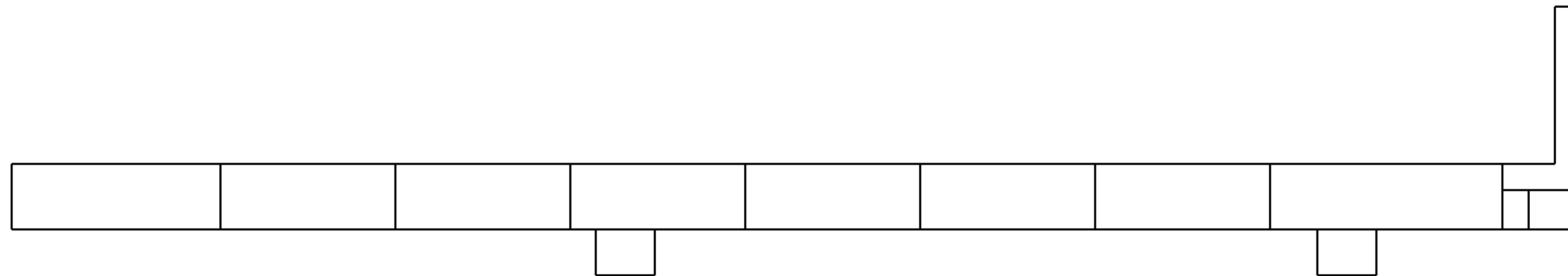
FOR CONCRETE REPAIR, SEE SPECIAL PROVISION.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISION.

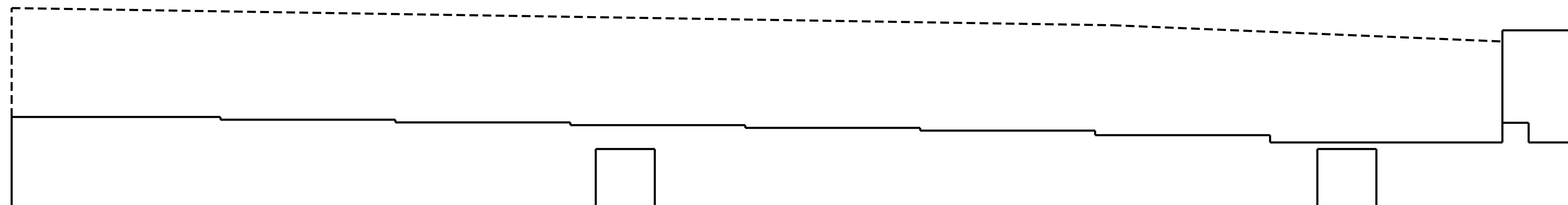
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

AFTER SATISFACTORY COMPLETION OF SHOTCRETE, CONCRETE AND ERI REPAIRS, REPAIR EXISTING MURAL PAINT ON BENTS AND GIRDERS AS APPROPRIATE.

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



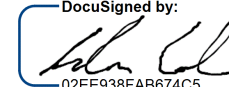
PLAN

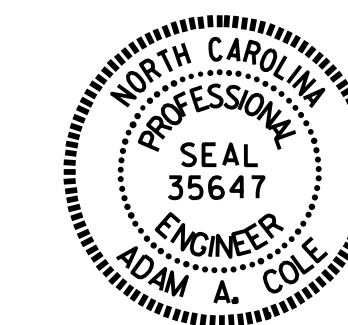


ELEVATION

PROJ. NO. I-5746C
MECKLENBURG COUNTY
 BRIDGE NO. 590322

SHEET 2 OF 2

DocuSigned by:

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8/23/2021

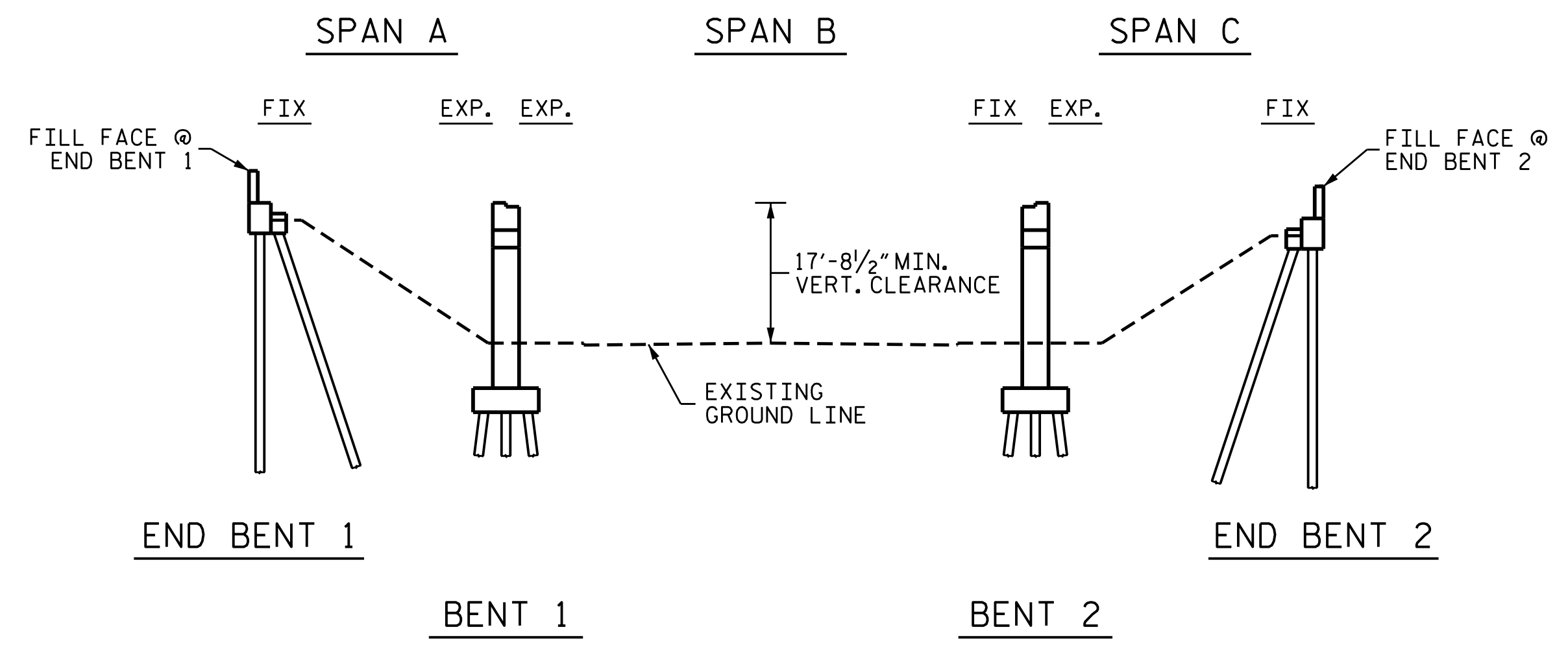
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

 END BENT 2
 SOUTHBOUND

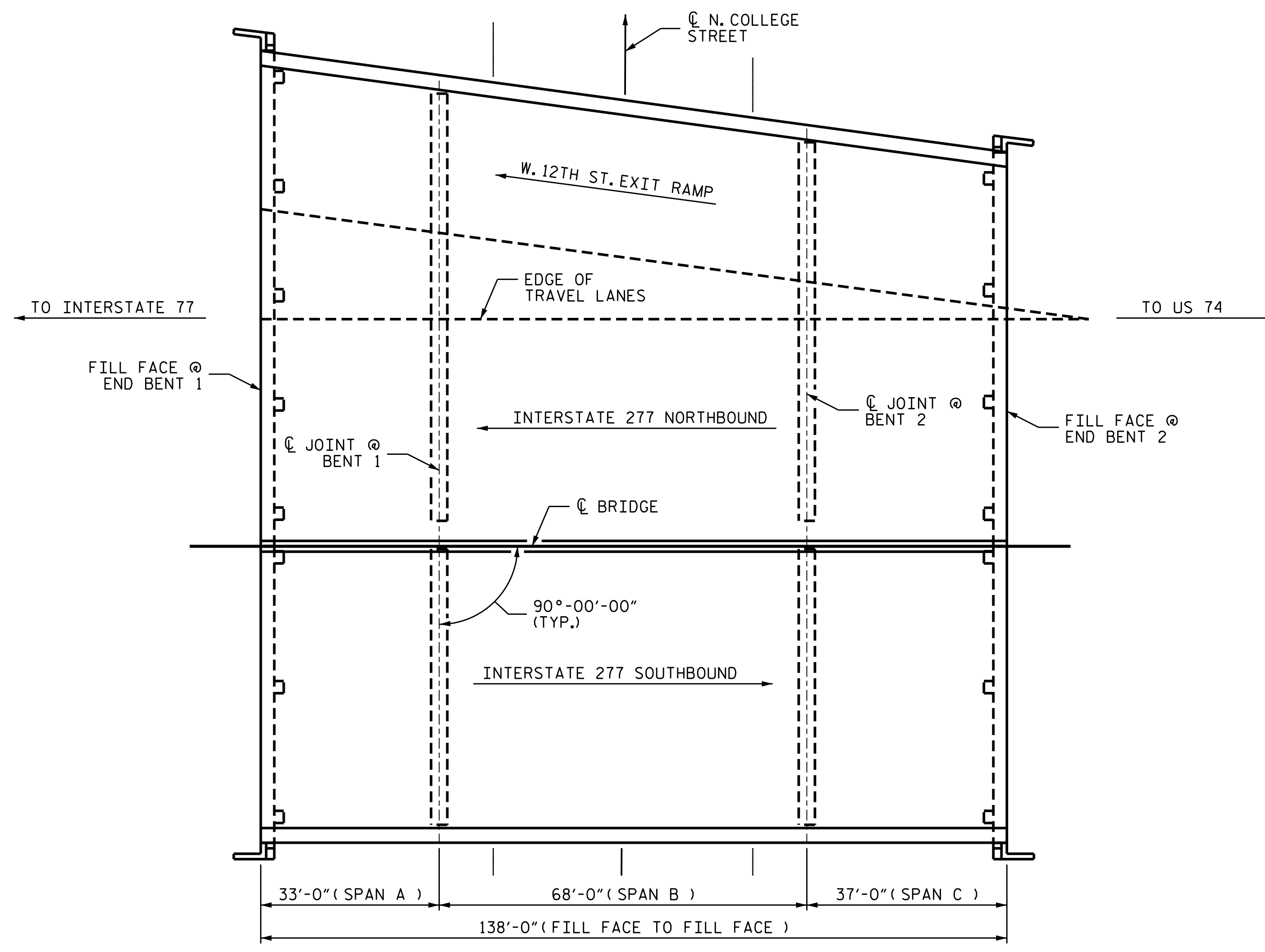
DRAWN BY : R.L. PUTEK DATE : 05/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 05/2021

DOCUMENT NOT CONSIDERED
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S5-19
1			3			TOTAL SHEETS
2			4			274



SECTION ALONG Q BRIDGE



PLAN

NOTES:
 PROFILE INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 06/30/2020.
 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 CONCRET (PC).
- GROOVE POLYMER CONCRET (PC) BRIDGE DECK.
- CLEAN BEARINGS AND APPLY HRCSA.
- CLEAN AND REPAIR STEEL I-BEAMS.
- SPOT PAINTING OF STEEL STRUCTURE REPAIR AREAS.
- INSTALL FOAM JOINT SEALS.
- 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.

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

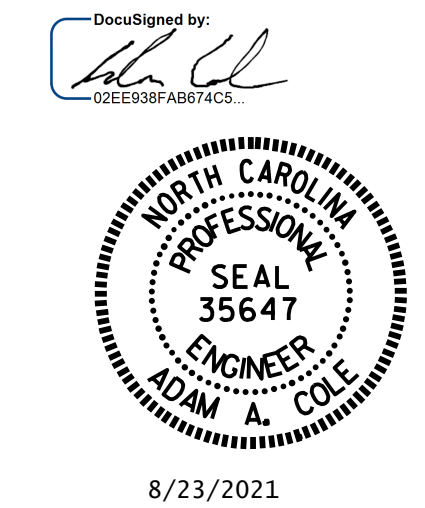
RESIDENT ENGINEER _____ DATE _____

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

SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

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



8/23/2021

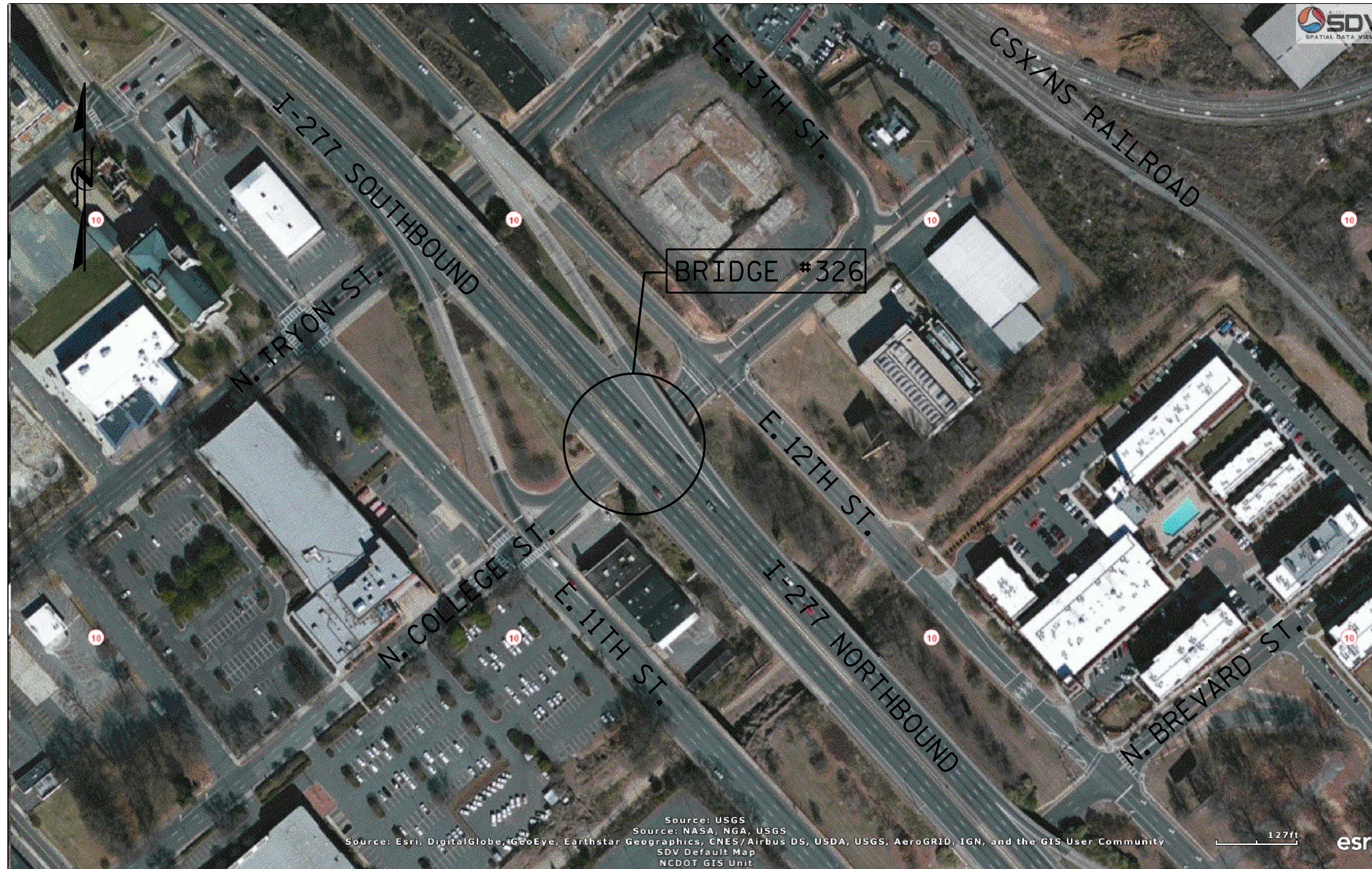
DRAWN BY : R.L.PUTEK/E. BAYISSA DATE : 07/2021
 CHECKED BY : H.A. LOCKLEAR DATE : 07/2021

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

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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.



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'-55.7"
 LONGITUDE: 80°-50'-01.5"

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.

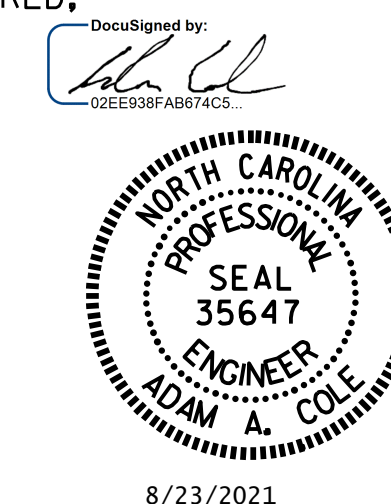
CONTRACTOR SHALL DETERMINE EXTENT OF WORKING AREA, STAGING PROCESS, AND INSTALL COVER P ASSEMBLY AS NECESSARY TO MEET THE REQUIREMENTS OF TRAFFIC MANAGEMENT PLANS.

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.



8/23/2021

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

SHEET 2 OF 2

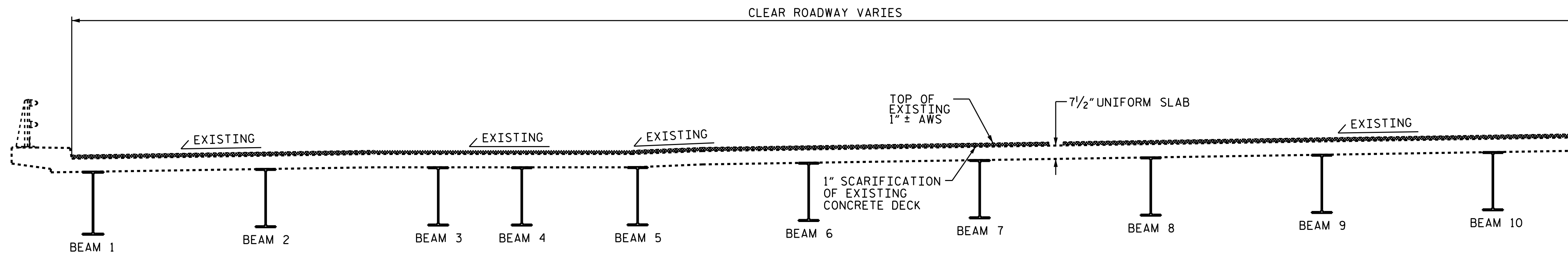
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

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

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

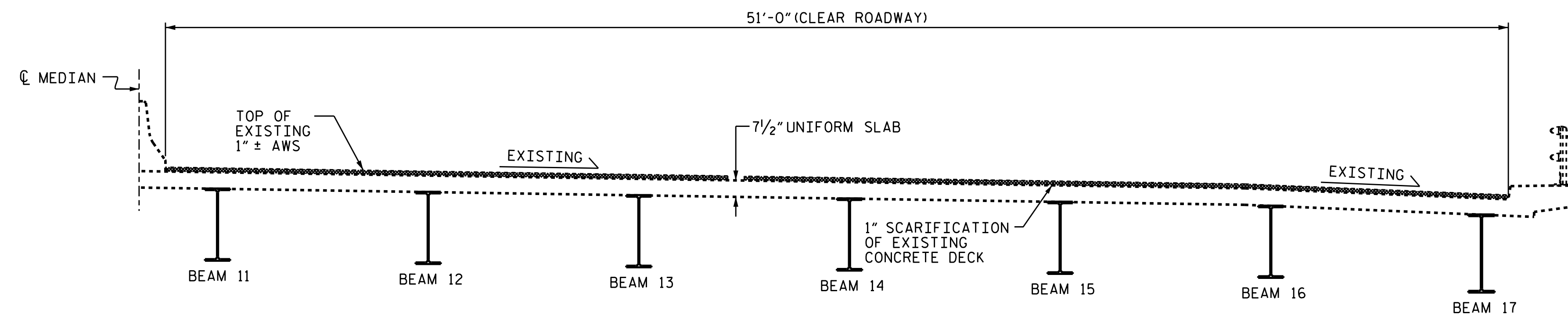
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S6-2
2			4			TOTAL SHEETS 274

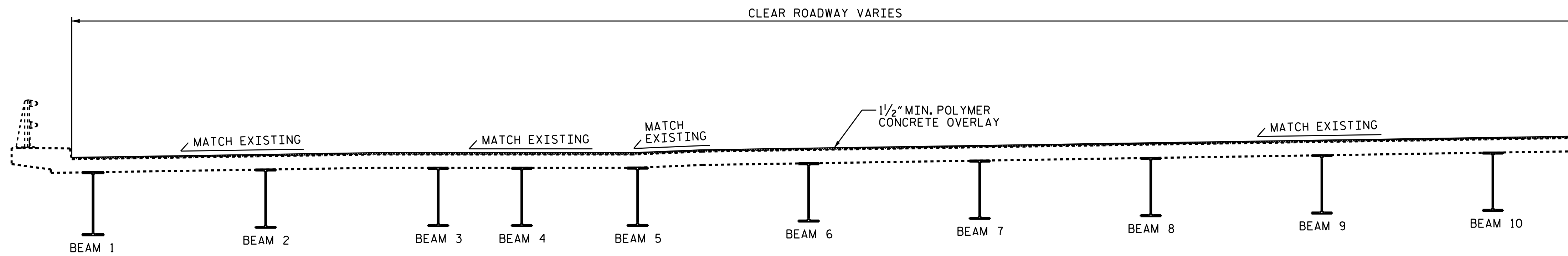


EXISTING TYPICAL SECTION - NORTHBOUND LANES

SPAN C SHOWN, SPANS A & B SIMILAR

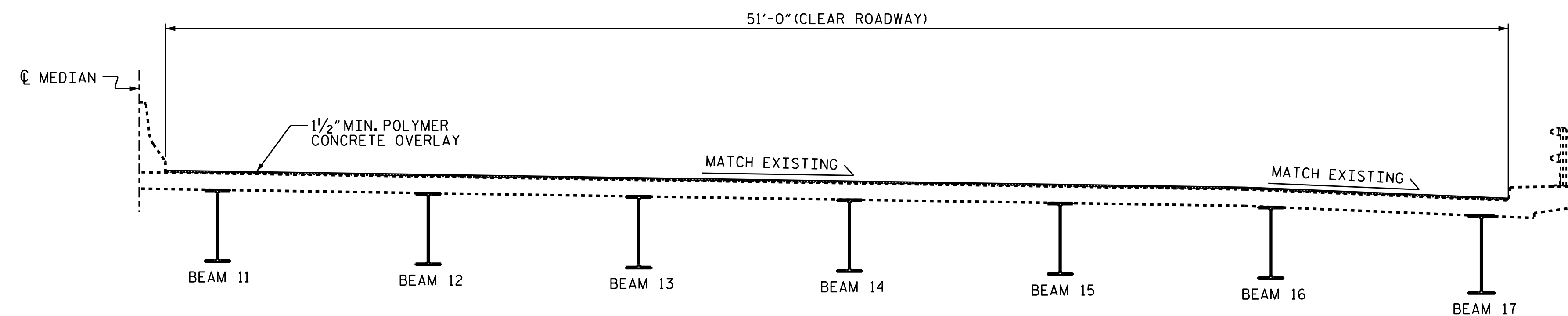


EXISTING TYPICAL SECTION - SOUTHBOUND LANES

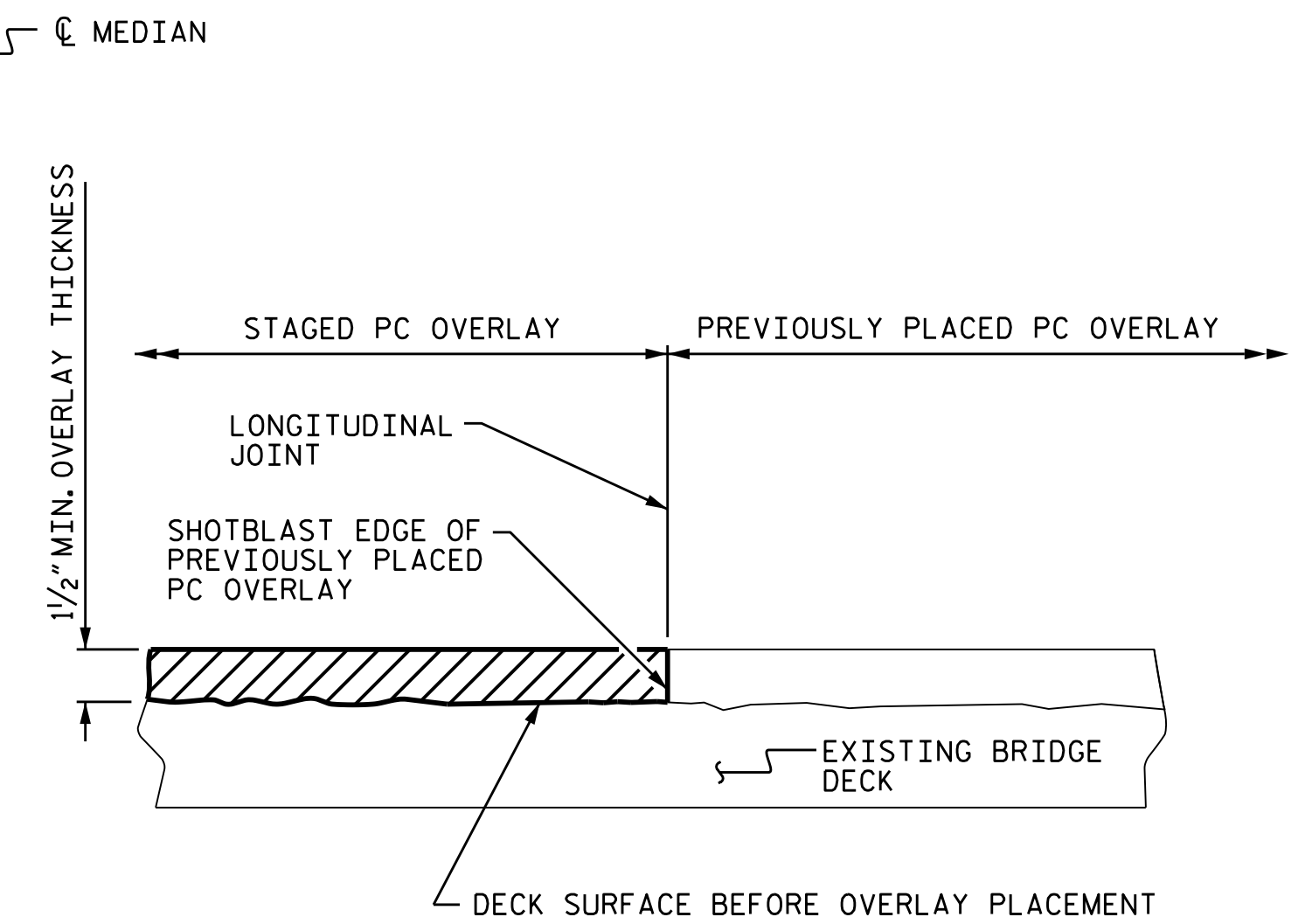


PROPOSED TYPICAL SECTION - NORTHBOUND LANES

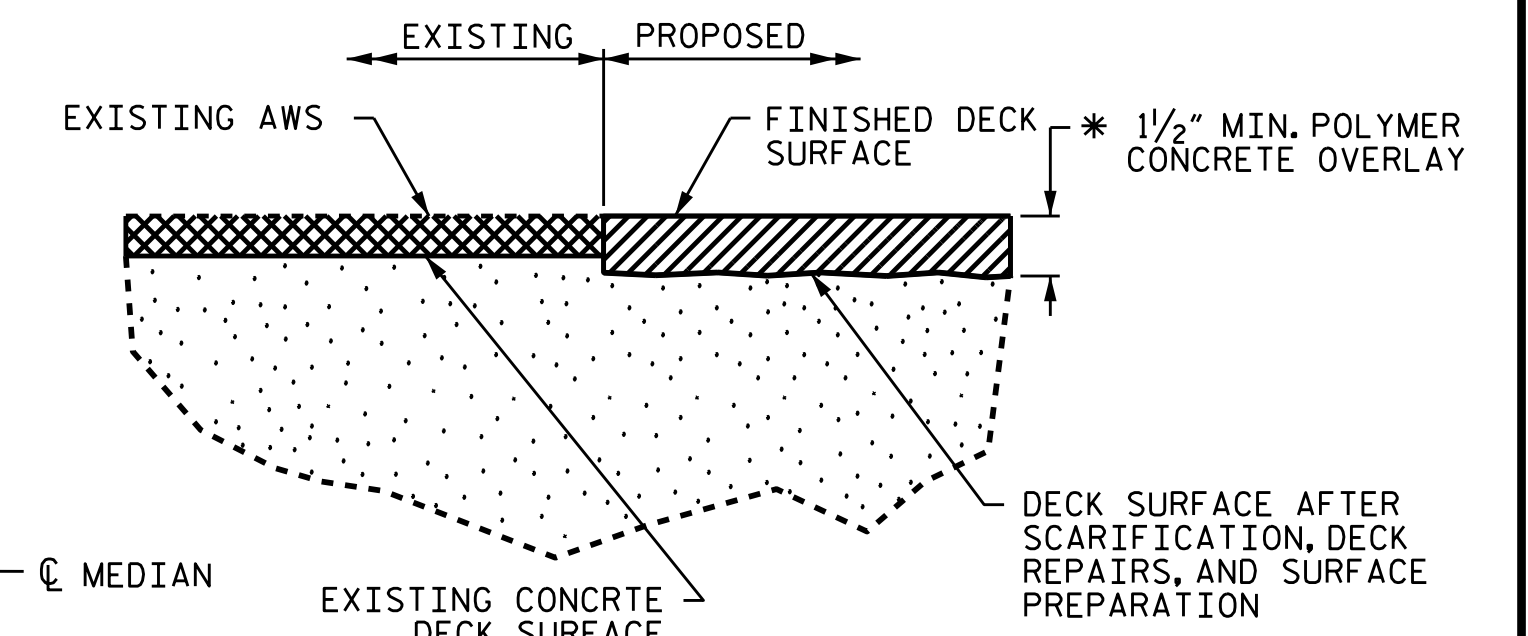
SPAN C SHOWN, SPANS A & B SIMILAR



PROPOSED TYPICAL SECTION - SOUTHBOUND LANES



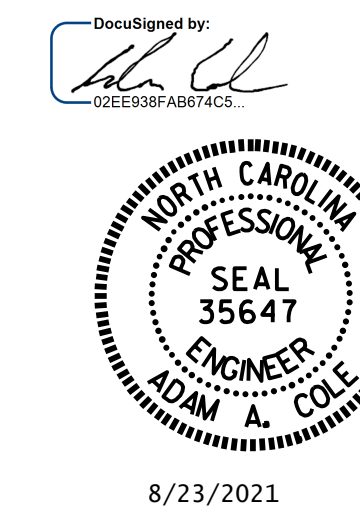
**STAGED PC OVERLAY JOINT
(AS NEEDED)**



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. 590326



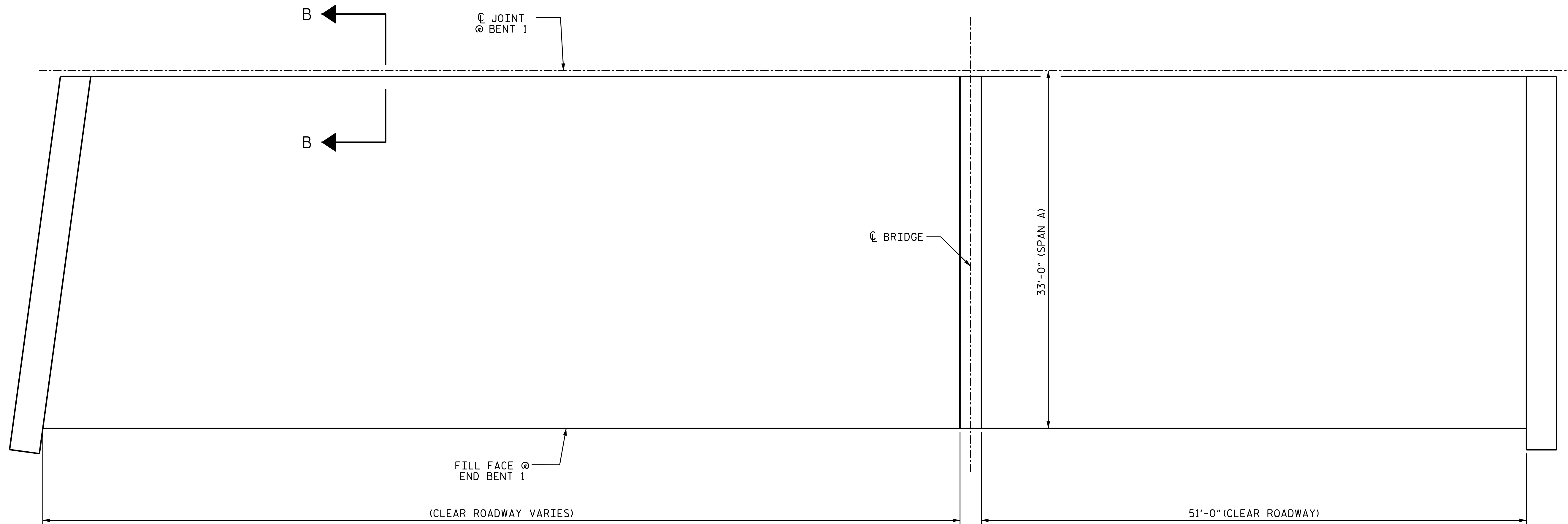
8/23/2021

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

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REVISIONS						SHEET NO.
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1			3			S6-3
2			4			274



PLAN


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

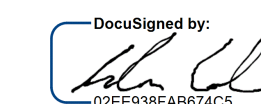
 EPOXY RESIN INJECTION (ERI)

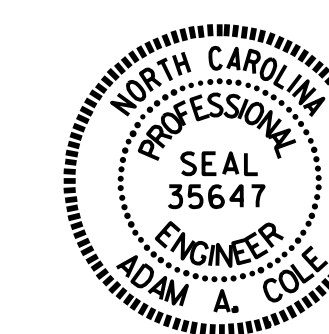
AS-BUILT REPAIR QUANTITY TABLE		
TOP OF DECK REPAIRS		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	493 SQ. YDS.	
CLASS II SURFACE PREPARATION	0.0 SQ. YDS.	
CONCRETE DECK REPAIR FOR PC OVERLAY	0.0 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	493 SQ. YDS.	
PLACING AND FINISHING PC OVERLAY	493 SQ. YDS.	
GROOVING BRIDGE FLOORS	4,195 SQ. FT.	
PC MATERIALS	23.9 CU. YDS.	

TOP OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS 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. 590326

SHEET 1 OF 3

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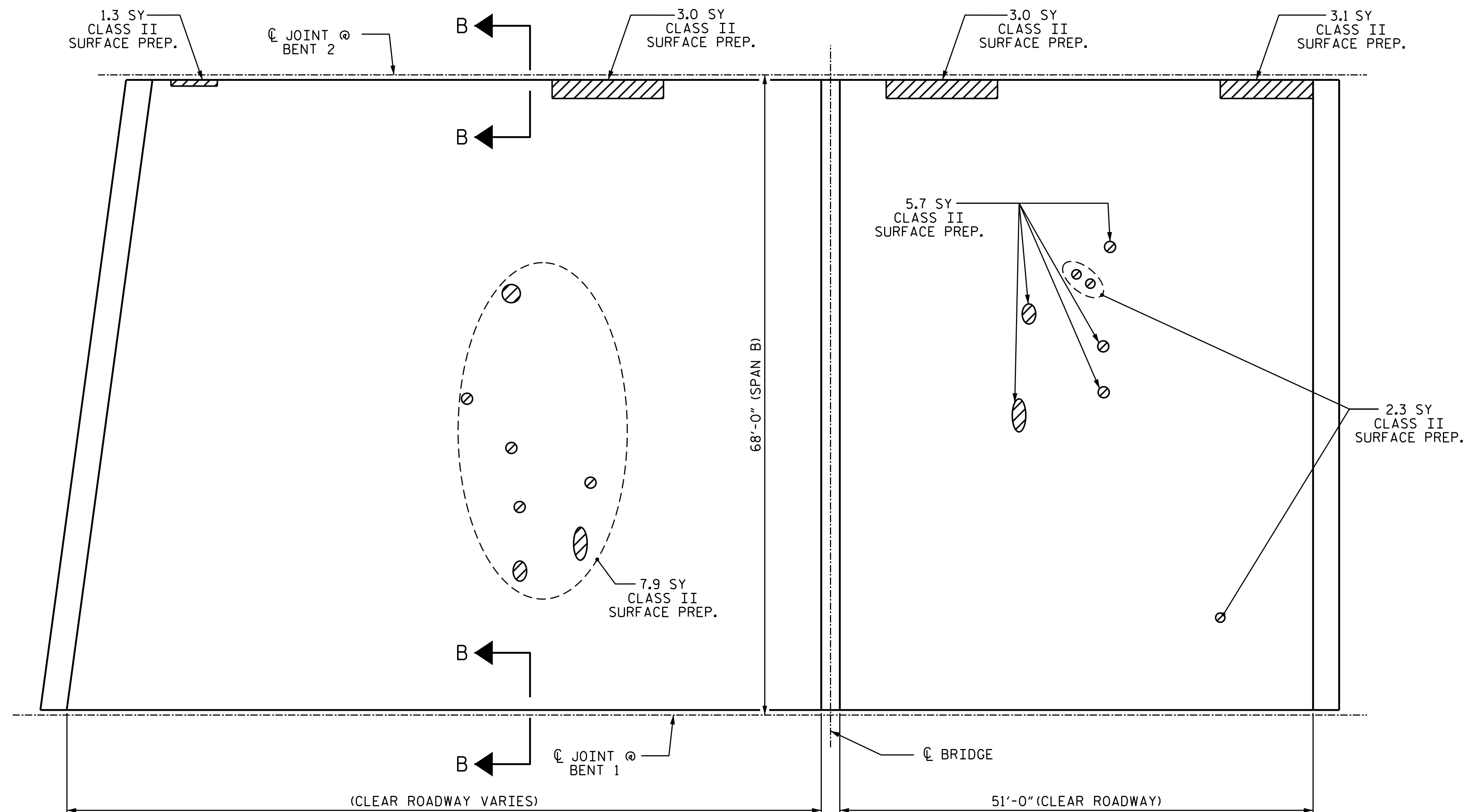
8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 DECK SURFACE 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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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S6-4
1			3			TOTAL SHEETS
2			4			274



PLAN

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

EPOXY RESIN INJECTION (ERI)

AS-BUILT REPAIR QUANTITY TABLE		
TOP OF DECK REPAIRS		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	964 SQ. YDS.	
CLASS II SURFACE PREPARATION	26.3 SQ. YDS.	
CONCRETE DECK REPAIR FOR PC OVERLAY	26.3 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	964 SQ. YDS.	
PLACING AND FINISHING PC OVERLAY	964 SQ. YDS.	
GROOVING BRIDGE FLOORS	8,225 SQ. FT.	
PC MATERIALS	44.8 CU. 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.

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

SHEET 2 OF 3

DocuSigned by:



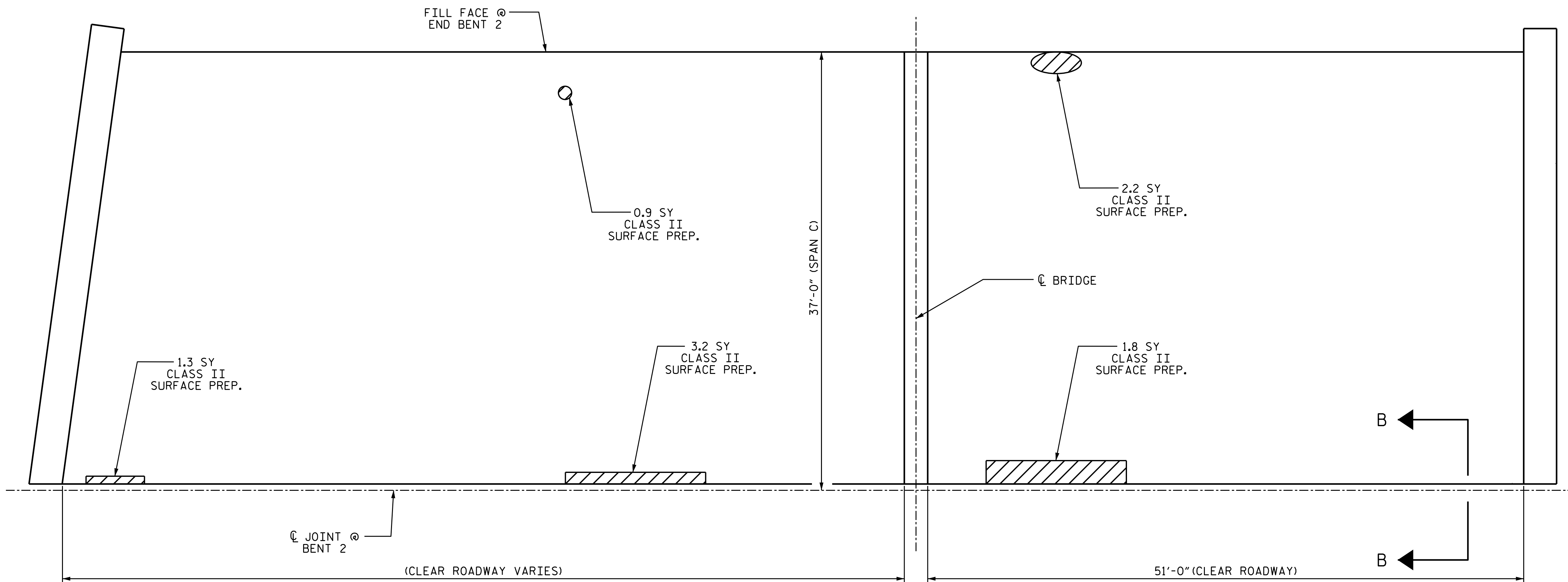
8/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
DECK SURFACE 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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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S6-5
2			4			TOTAL SHEETS 274



PLAN

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

EPOXY RESIN INJECTION (ERI)

AS-BUILT REPAIR QUANTITY TABLE		
TOP OF DECK REPAIRS		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	496 SQ. YDS.	
CLASS II SURFACE PREPARATION	9.4 SQ. YDS.	
CONCRETE DECK REPAIR FOR PC OVERLAY	9.4 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	496 SQ. YDS.	
PLACING AND FINISHING PC OVERLAY	496 SQ. YDS.	
GROOVING BRIDGE FLOORS	4,196 SQ. FT.	
PC MATERIALS	24.1 CU. YDS.	

TOP OF DECK REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS 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. 590326

SHEET 3 OF 3

DocuSigned by:



8/23/2021

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

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:	S6-6
1			3			TOTAL SHEETS
2			4			274