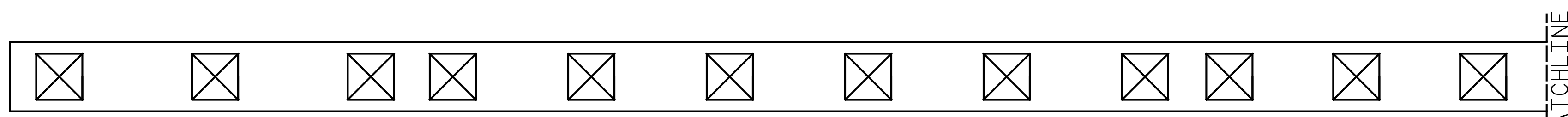


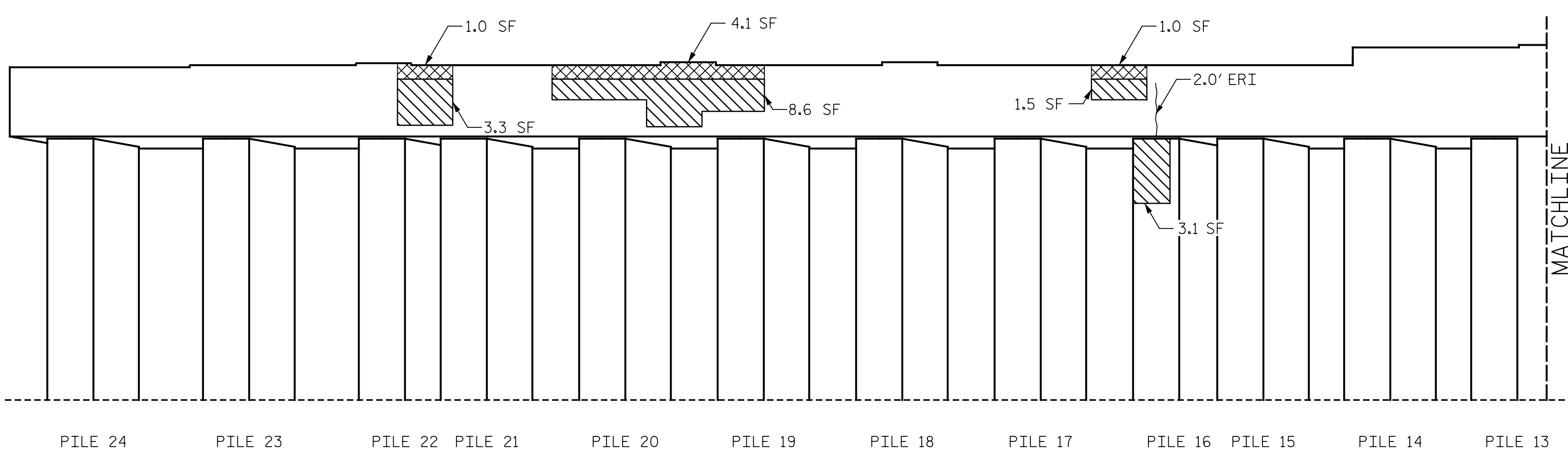
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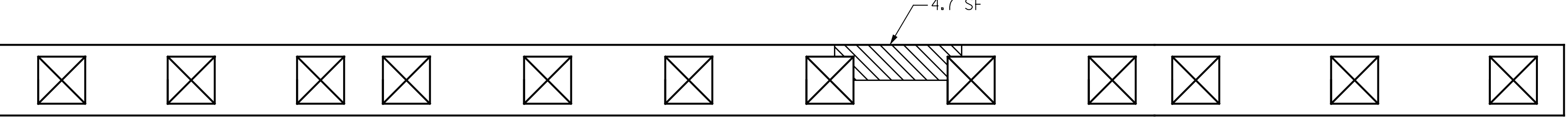
SPAN B

SPAN C

BOTTOM OF CAP



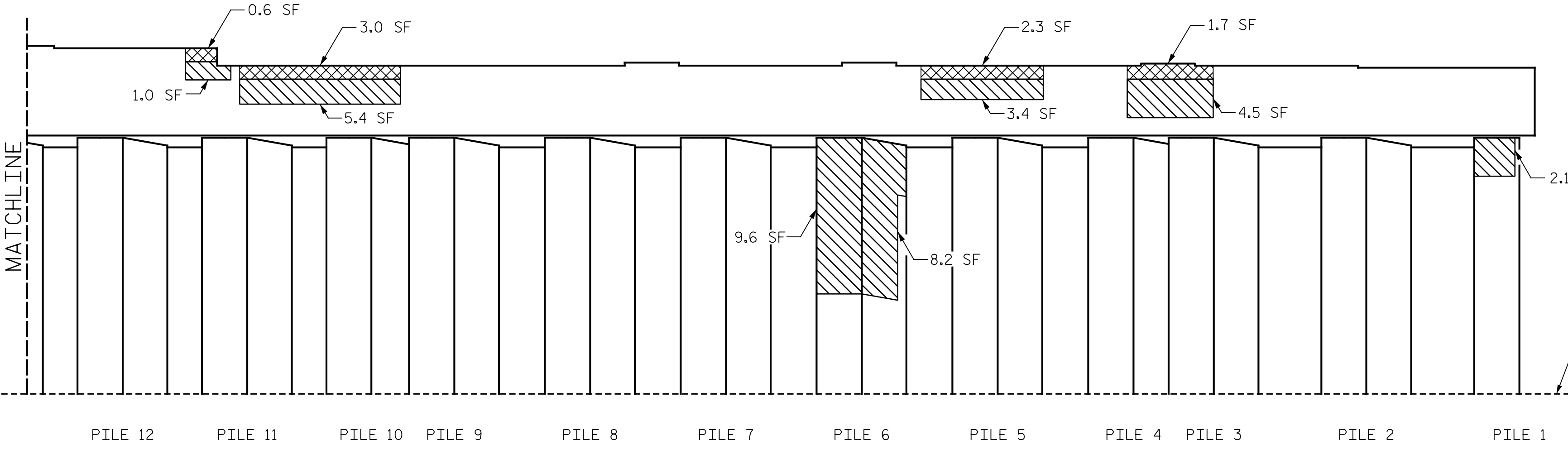
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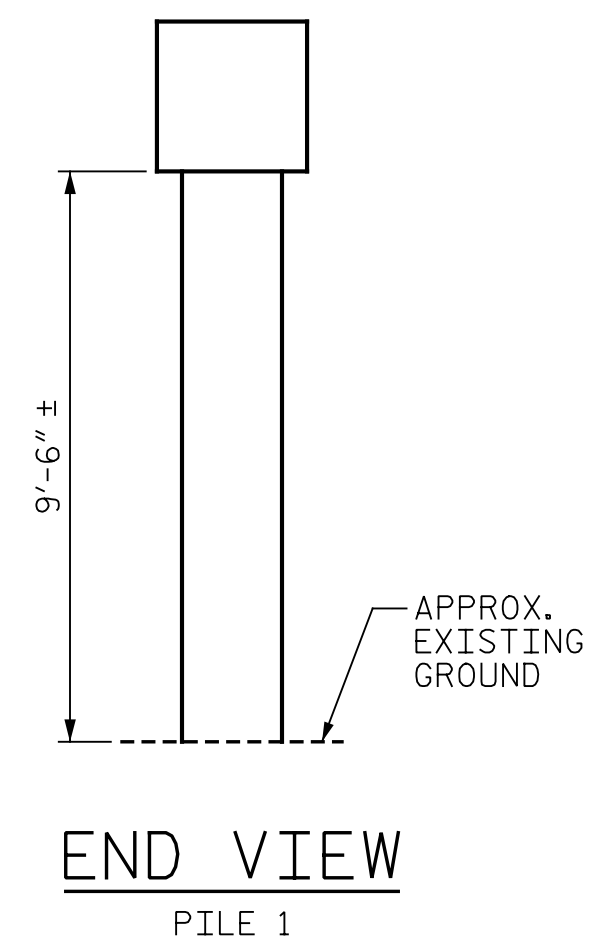
SPAN B

SPAN C

BOTTOM OF CAP



ELEVATION



END VIEW
PILE 1

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 REPAIRS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.
FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.
SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.




CONTRACTOR SHALL SAW CUT TO A MINIMUM DEPTH OF 1/2" BUT REINFORCING STEEL SHALL NOT BE DAMAGED. CONTRACTOR SHALL REMOVE SURFACE CONCRETE TO VERIFY THAT SAW CUT DEPTH WILL NOT DAMAGE EXISTING REINFORCING STEEL.

CONTRACTOR SHALL SAW CUT THE REPAIR AREAS SO THAT THE CORNERS ARE SQUARE AS INDICATED ON THE DETAILS.

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.

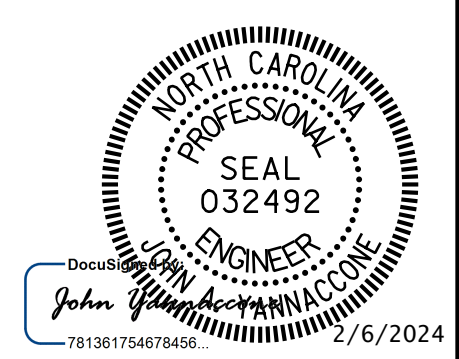
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
WHEN COLUMN REPAIRS ARE INDICATED TO GROUND LINE, EXTEND REPAIR ONE (1) FOOT MIN. BELOW GROUND LINE.

FOR REMOVAL OF VEGETATION, SEE EPOXY COATING AND DEBRIS REMOVAL SPECIAL PROVISION.

-  SHOTCRETE REPAIR
-  CONCRETE REPAIR (FORM & POUR)
-  ERI - EPOXY RESIN INJECTION

PROJECT NO. I-5955A
GUILFORD COUNTY
BRIDGE NO. 400299

SHEET 2 OF 2



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**BENT 2
SPAN C SIDE**

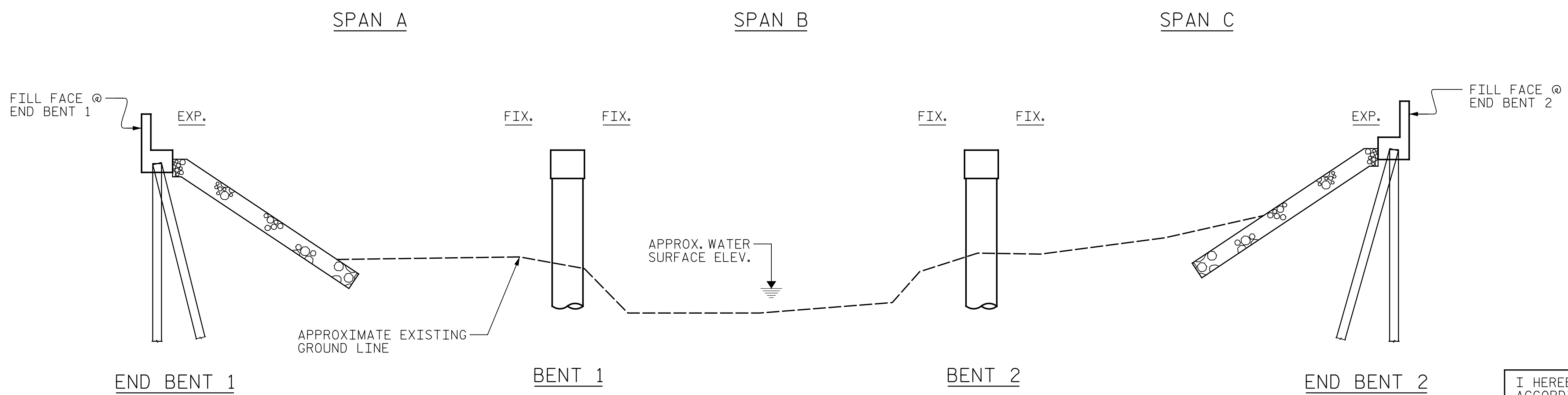
DRAWN BY : J. HARRIS DATE : 10/2022
CHECKED BY : J. YANNACCONE DATE : 10/2022



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2			4			127

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SECTION ALONG Q BRIDGE

(SECTION AT BENTS AND END BENTS ARE AT RIGHT ANGLES)

NOTE:
 GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 07/26/2022.

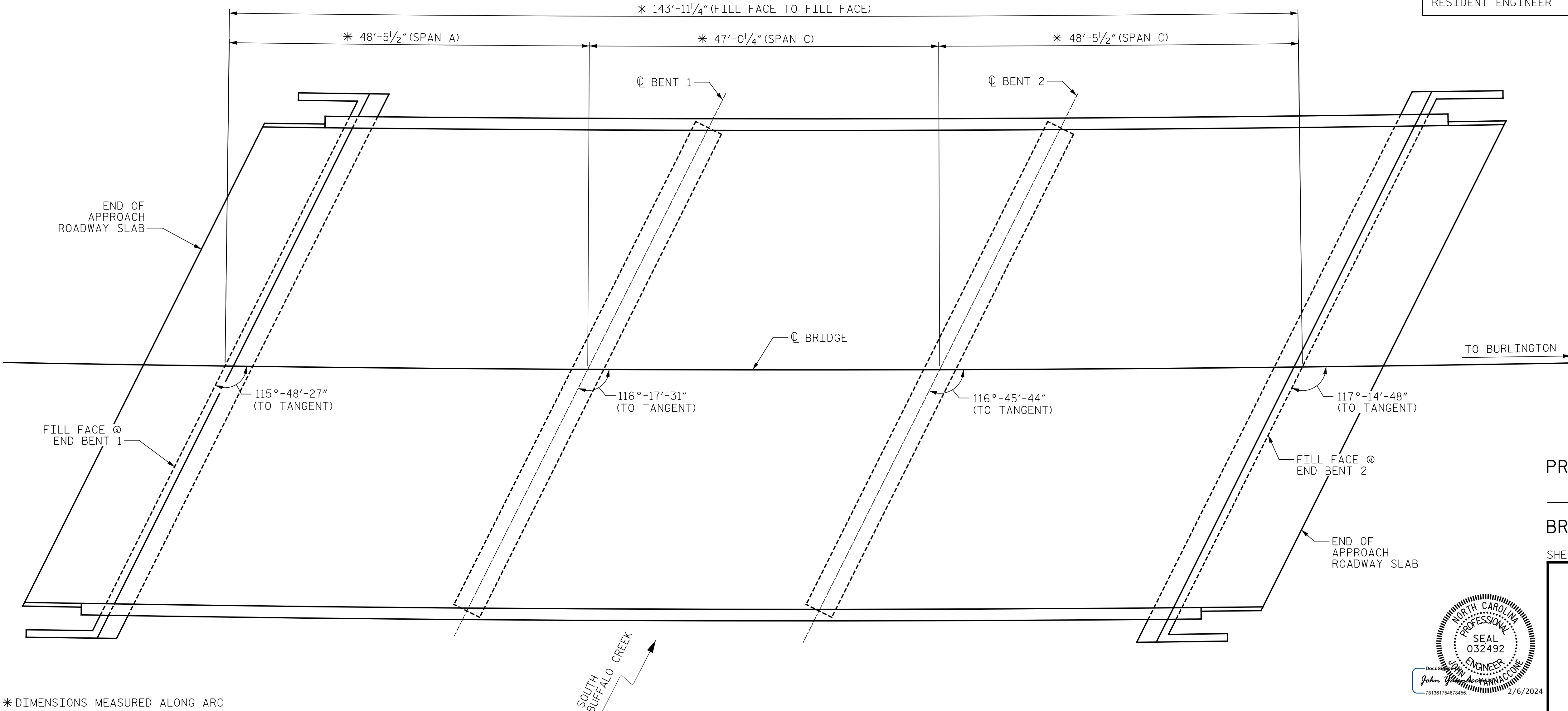
BRIDGE ORIENTATION CONFORMS TO THE EXISTING BRIDGE PLANS AND ROUTINE INSPECTION REPORT.

SCOPE OF WORK

- PARTIALLY REMOVE TOP OF BRIDGE DECK CONCRETE BY FINE MILLING AND SHOTBLASTING METHODS.
- OVERLAY PREPARED TOP OF BRIDGE DECK WITH POLYMER CONCRETE (PC).
- REPLACE EXISTING JOINT GLAND OF EXPANSION JOINT SEALS.
- GROOVE PC BRIDGE DECK.
- REMOVE DEBRIS FROM TOP OF EXISTING END BENT CAPS AND APPLY EPOXY COATING.
- REMOVE VEGETATION FROM STRUCTURE.

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

RESIDENT ENGINEER _____ DATE _____



PLAN

(PILES NOT SHOWN FOR CLARITY)

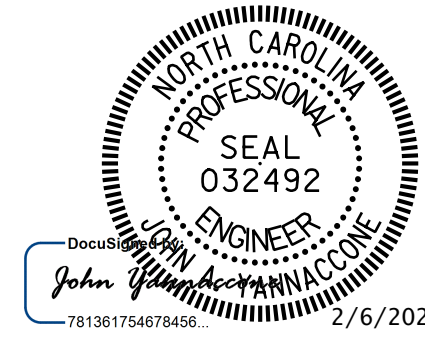
* DIMENSIONS MEASURED ALONG ARC

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400327

SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 FOR BRIDGE ON I-40 EBL
 OVER SOUTH BUFFALO CREEK



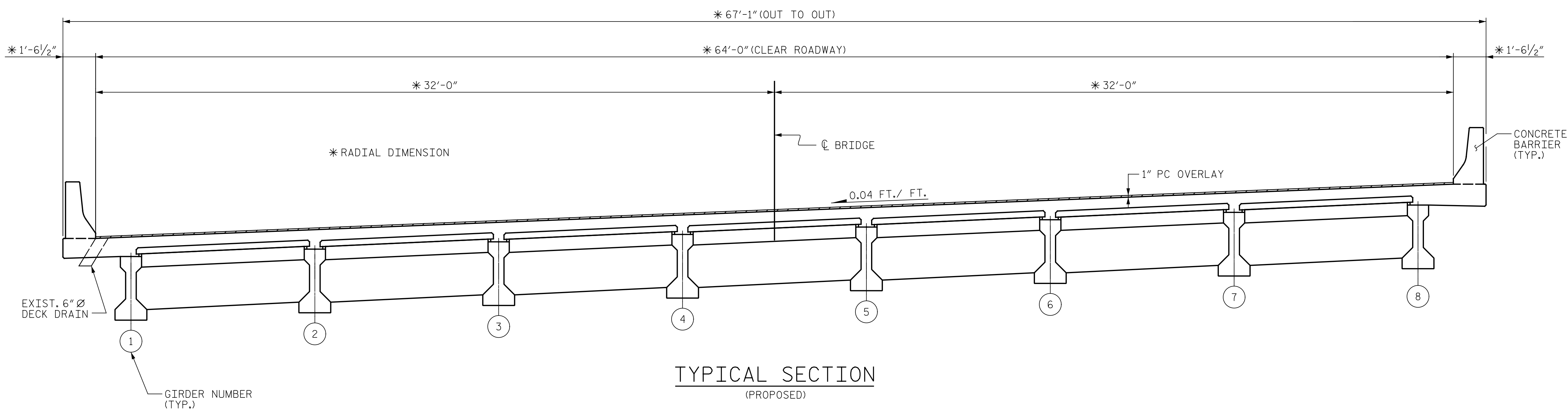
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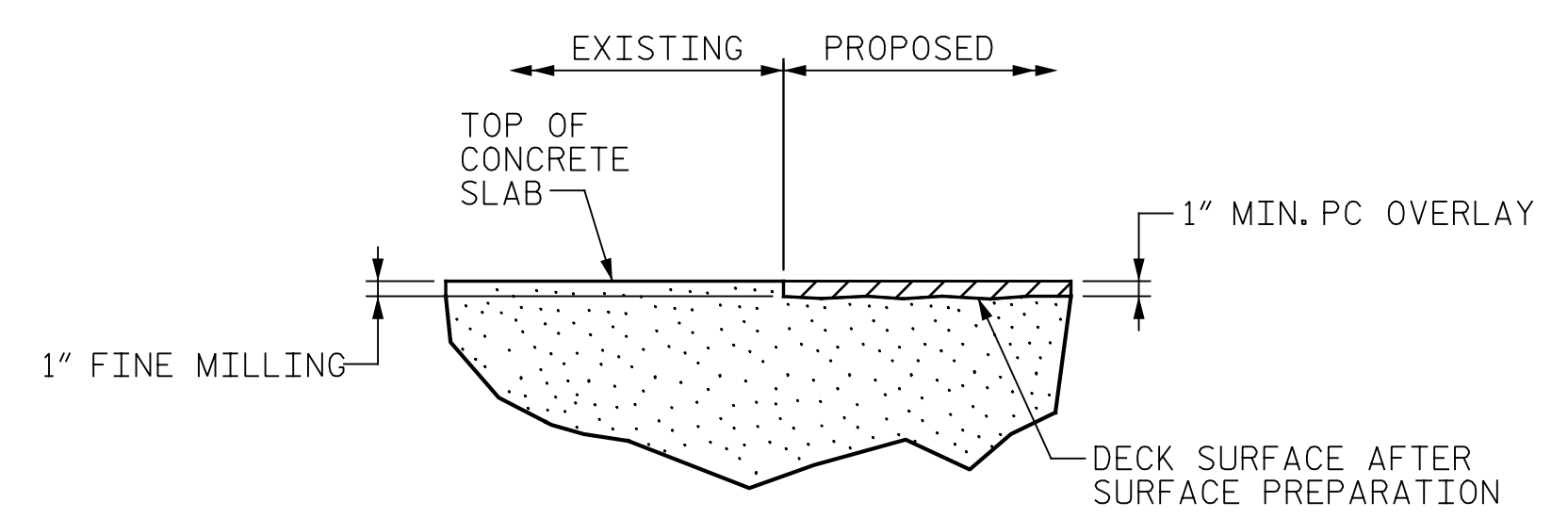
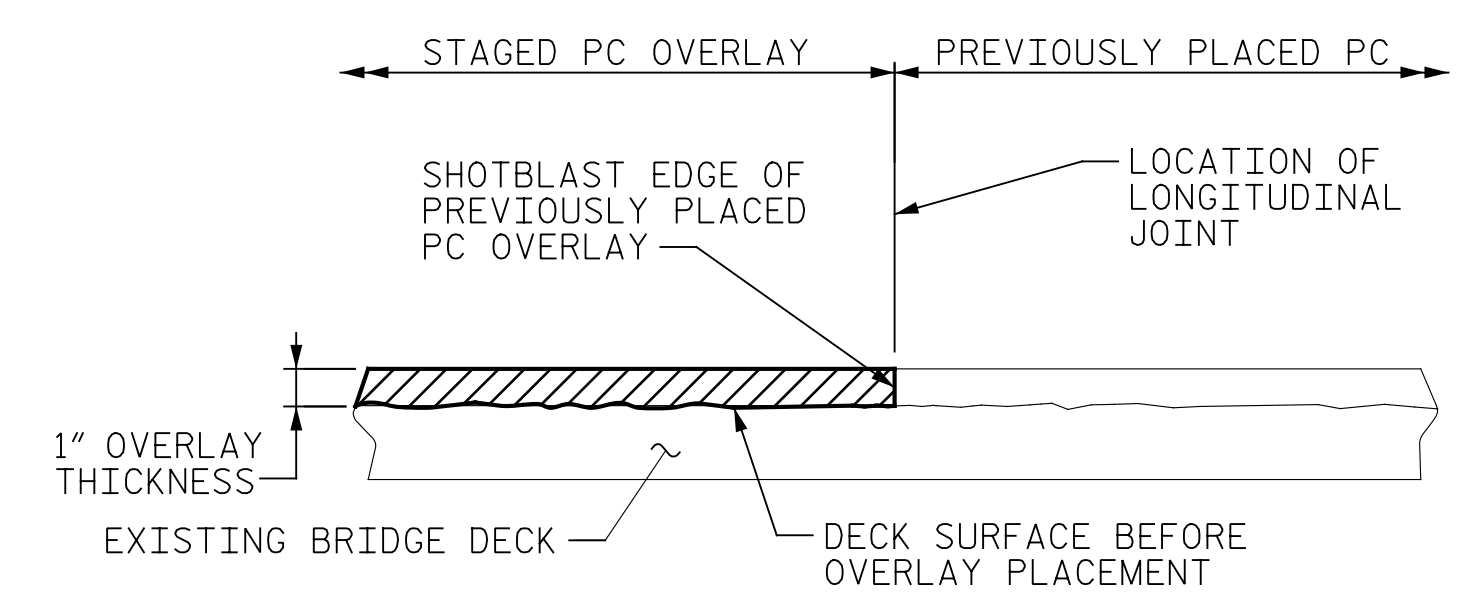
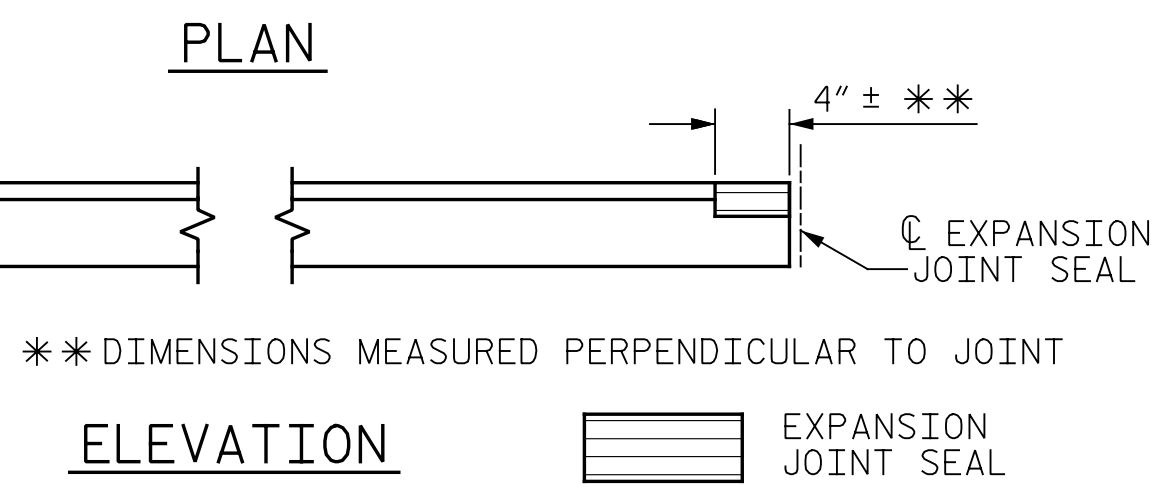
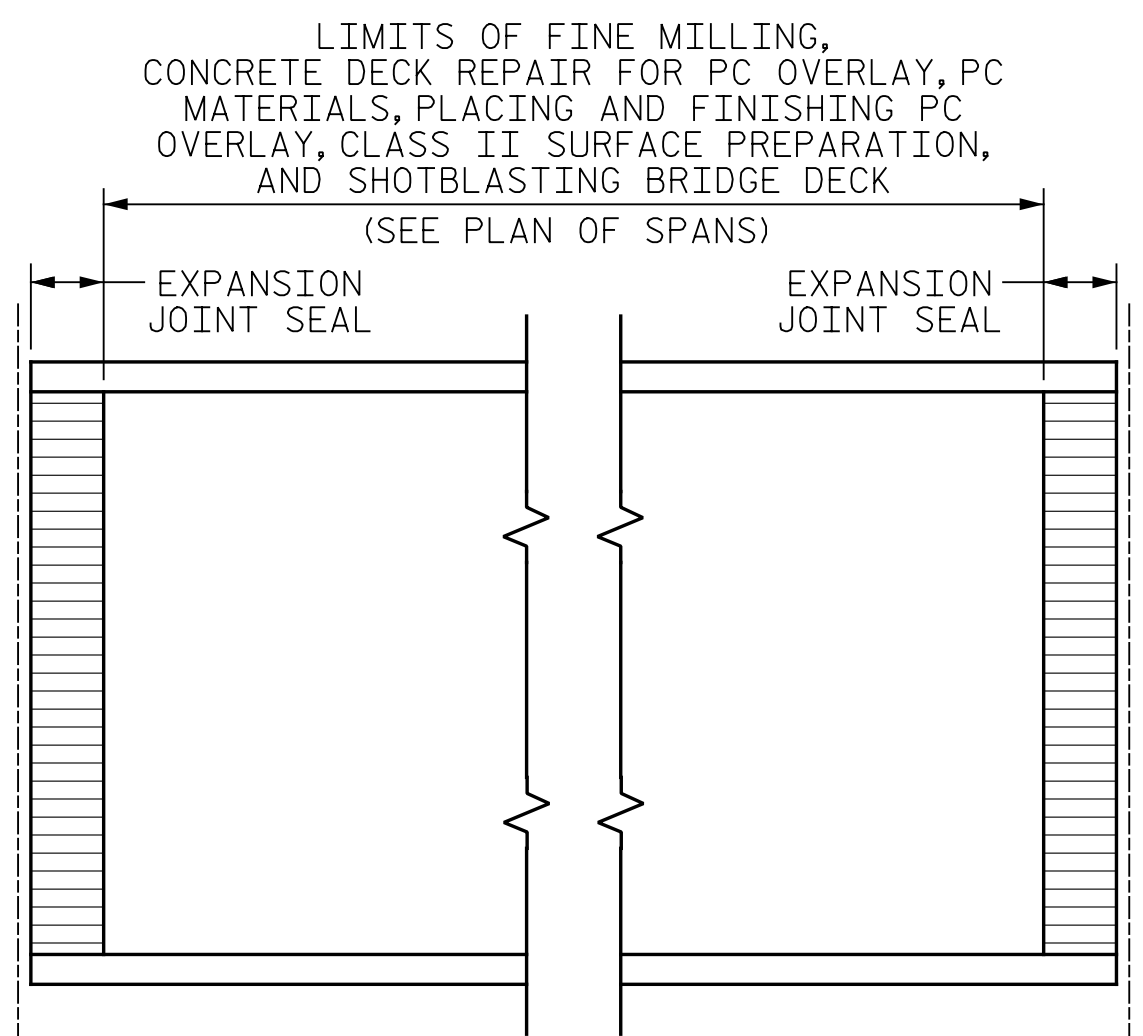
DRAWN BY: J. MYA DATE: 10/2022
 CHECKED BY: J. YANNAACONE DATE: 1/2024

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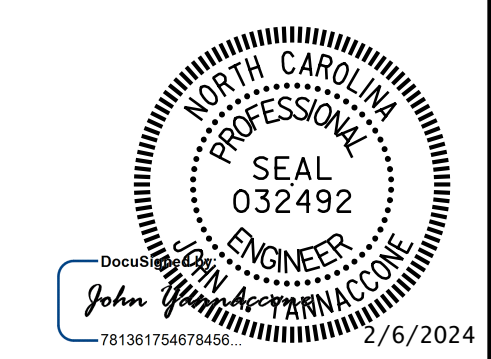
NOTES:
 SEE TRANSPORTATION MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION AND PC PLACEMENT.



TYPICAL SECTION (PROPOSED)



PROJECT NO. I-5955A
 GUILFORD COUNTY
 BRIDGE NO. 400327



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

PAY LIMITS FOR OVERLAY BID ITEMS

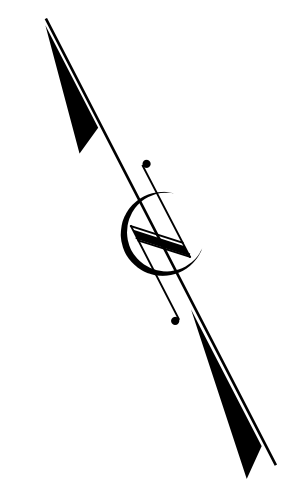
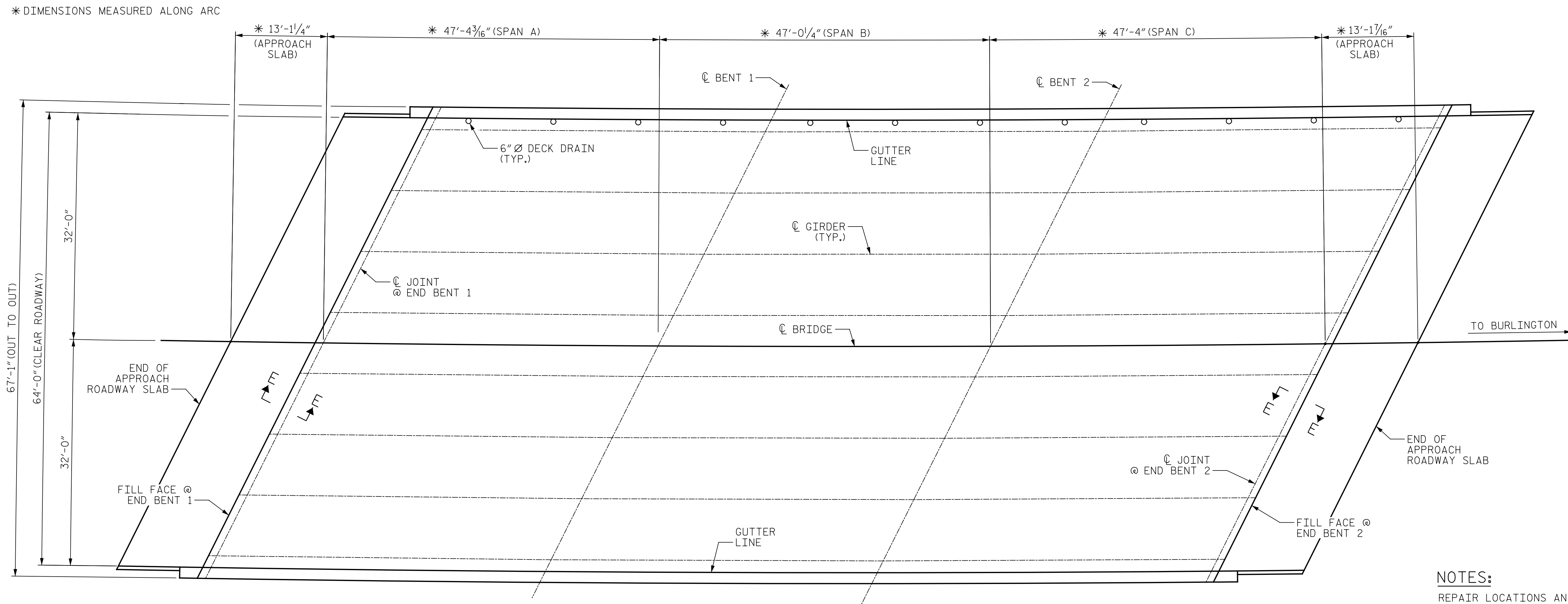
DRAWN BY: J. HARRIS DATE: 10/2022
 CHECKED BY: J. YANNAACONE DATE: 10/2022



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APPROACH SLAB @ END BENT 1 SPAN A SPAN B SPAN C APPROACH SLAB @ END BENT 2
PLAN

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 REPAIR QUANTITY TABLE.

PAYMENT FOR CLASS II SURFACE PREPARATION IS BASED UPON SQUARE YARDS OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING FINE MILLING OF BRIDGE DECK. SEE "OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE" SPECIAL PROVISION.

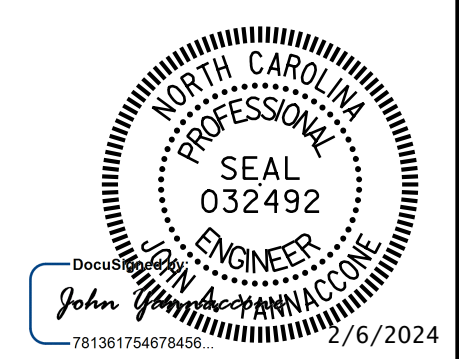
CONCRETE COVER FOR TOP BARS IN THE DECK SLAB IS 2 1/2" PER FIELD MEASUREMENTS.

FOR SECTION E-E, SEE "EXPANSION JOINT SEAL DETAILS" SHEET.

- FINE MILLING AND SHOTBLASTING OF BRIDGE DECK
- CLASS II SURFACE PREPARATION
- UNDERSIDE OF DECK REPAIR

REPAIR QUANTITY TABLE							
	TOP OF DECK REPAIR			UNDERSIDE OF DECK REPAIR			
		ESTIMATE	ACTUAL	ESTIMATE		ACTUAL	
				AREA SF	VOLUME CF	AREA SF	VOLUME CF
FINE MILLING	APPR. SLAB @ EB1	93.2 SY		SHOTCRETE REPAIRS			
	SPAN A	336.7 SY					
	SPAN B	334.4 SY					
	SPAN C	336.6 SY					
CLASS II SURFACE PREPARATION	APPR. SLAB @ EB2	93.3 SY		UNDERSIDE OF DECK			
	SPAN A	0.0 SY					
	SPAN B	0.0 SY					
	SPAN C	0.0 SY					
PC MATERIALS	APPR. SLAB @ EB1	3.0 CY		OVERHANG DIAPHRAGMS			
	SPAN A	11.6 CY					
	SPAN B	11.6 CY					
	SPAN C	11.6 CY					
PLACING AND FINISHING PC OVERLAY	APPR. SLAB @ EB2	3.0 CY		UNDERSIDE OF OVERHANG			
	SPAN A	11.6 CY					
	SPAN B	11.6 CY					
	SPAN C	11.6 CY					
GROOVING BRIDGE FLOORS	APPR. SLAB @ EB1	719 SF		INTERIOR DIAPHRAGMS			
	SPAN A	2846 SF					
	SPAN B	2868 SF					
	SPAN C	2844 SF					
UNDERSIDE EPOXY RESIN INJECTION	APPR. SLAB @ EB2	840 SF		UNDERSIDE EPOXY RESIN INJECTION			
	SPAN A	2846 SF					
	SPAN B	2868 SF					
	SPAN C	2844 SF					

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400327



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PLAN OF SPANS

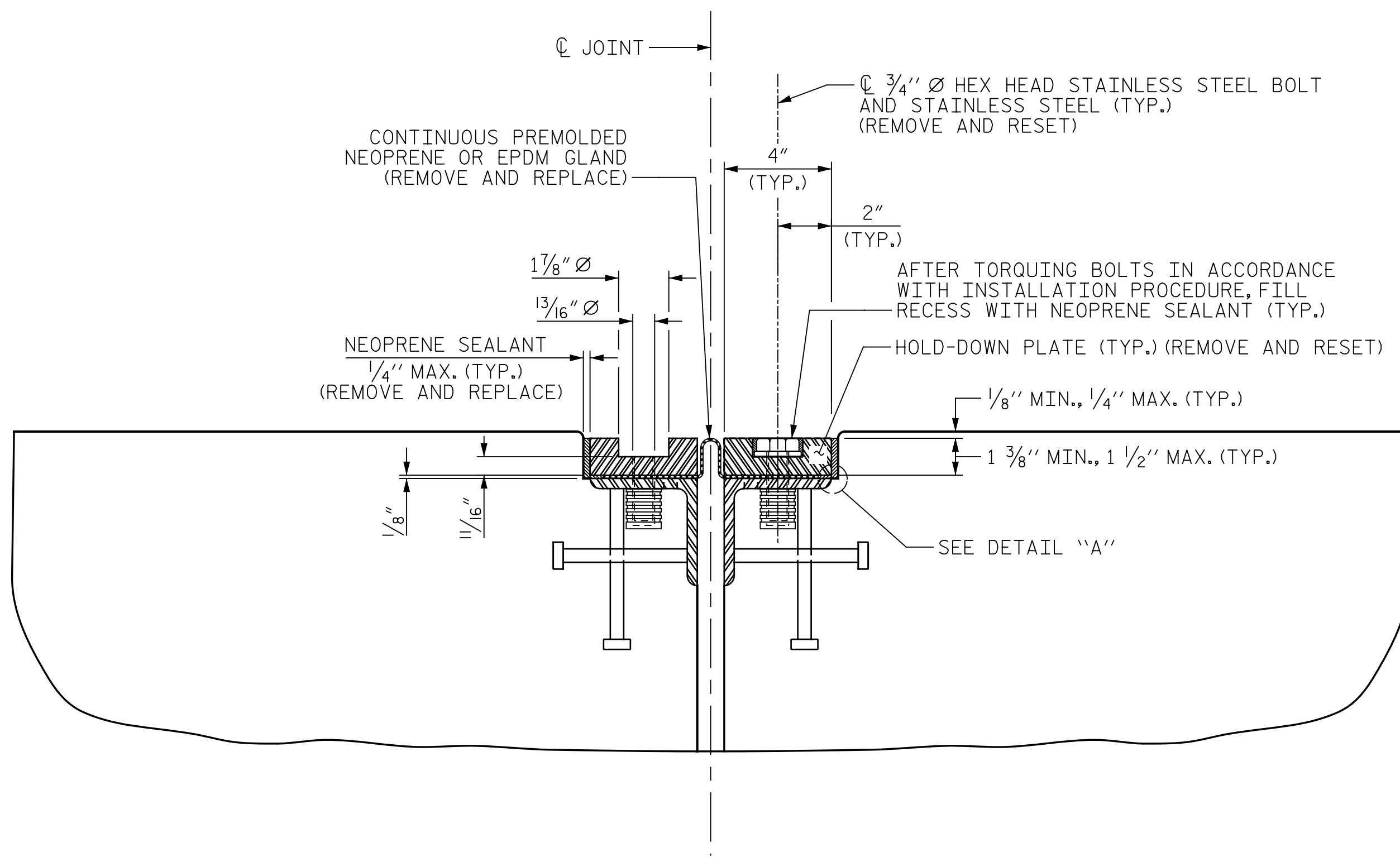
DRAWN BY: J. MYA DATE: 10/2022
 CHECKED BY: J. YANACCONI DATE: 10/2022



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SECTION E-E

SECTION NORMAL TO JOINT -- STEEL SUPERSTRUCTURE

REPAIR INSTALLATION PROCEDURE

LOOSEN THE EXISTING BOLTS AND HOLD-DOWN PLATES TO REMOVE AND REPLACE THE EXISTING GLAND. REMOVE THE EXISTING NEOPRENE SEALANT AND CLEAN THE EXISTING BASE ANGLE OF OIL, GREASE AND OTHER LATENTS.

LAY THE NEW GLAND ON THE BASE ANGLE AND FIELD MARK THE NEW GLAND FOR THE BOLT HOLES. HOLES IN THE NEW GLAND SHALL BE PUNCHED 7/8" IN DIAMETER WITH A HAND PUNCH.

IN ORDER TO CHECK FOR PROPER ALIGNMENT, PLACE THE NEW GLAND HOLD-DOWN PLATES ON THE BASE ANGLE. DO NOT APPLY NEW NEOPRENE SEALANT. BOLT THE HOLD-DOWN PLATES TO THE BASE ANGLE, BUT DO NOT TIGHTEN. THE ENGINEER WILL INSPECT THE JOINT SEAL DEVICE FOR PROPER ALIGNMENT.

AFTER INSPECTION, REMOVE THE HOLD-DOWN PLATES AND NEW GLAND. APPLY NEW NEOPRENE SEALANT TO THE BASE ANGLE IN ACCORDANCE WITH THE "INSTALLATION SKETCH". PLACE NEW GLAND AND HOLD-DOWN PLATES ON THE BASE ANGLE. BOLT THE HOLD-DOWN PLATES TO THE BASE ANGLE ASSEMBLY AND TORQUE THE BOLTS TO 88 FT-LBS WITH A TORQUE WRENCH. CHECK THE TORQUE AFTER THREE (3) HOURS AND, IF NECESSARY, RETIGHTEN TO 88 FT-LBS. A FINAL CHECK SHALL BE MADE AT SEVEN (7) DAYS. TORQUE SHALL NOT BE LESS THAN 80 FT-LBS AFTER SEVEN (7) DAYS.

AFTER PROPER TORQUING, CLEAN THE BOLT HOLE RECESSES AND THE RECESS BETWEEN THE JOINT SEAL DEVICE AND CONCRETE. COMPLETELY FILL THESE RECESSES WITH NEW NEOPRENE SEALANT.

GENERAL NOTES

ALL HOLD-DOWN BOLTS SHALL CONFORM TO ASTM F593 ALLOY 304 STAINLESS STEEL AND WASHERS SHALL CONFORM TO ASTM F844 EXCEPT THEY SHALL BE MADE FROM ALLOY 304 STAINLESS STEEL.

A PREMOLDED CORRUGATED OR NON-CORRUGATED GLAND SHALL BE USED FOR JOINTS SKEWED BETWEEN 50° THRU 130°. FOR JOINTS SKEWED LESS THAN 50° OR MORE THAN 130°, ONLY A CORRUGATED GLAND SHALL BE USED.

THE FINISHED EXPANSION SEAL DEVICE SHALL BE A MINIMUM "AND A MAXIMUM OF "BELOW THE TOP OF SLAB.

FOR EXPANSION JOINT SEAL REPAIR, SEE SPECIAL PROVISIONS.

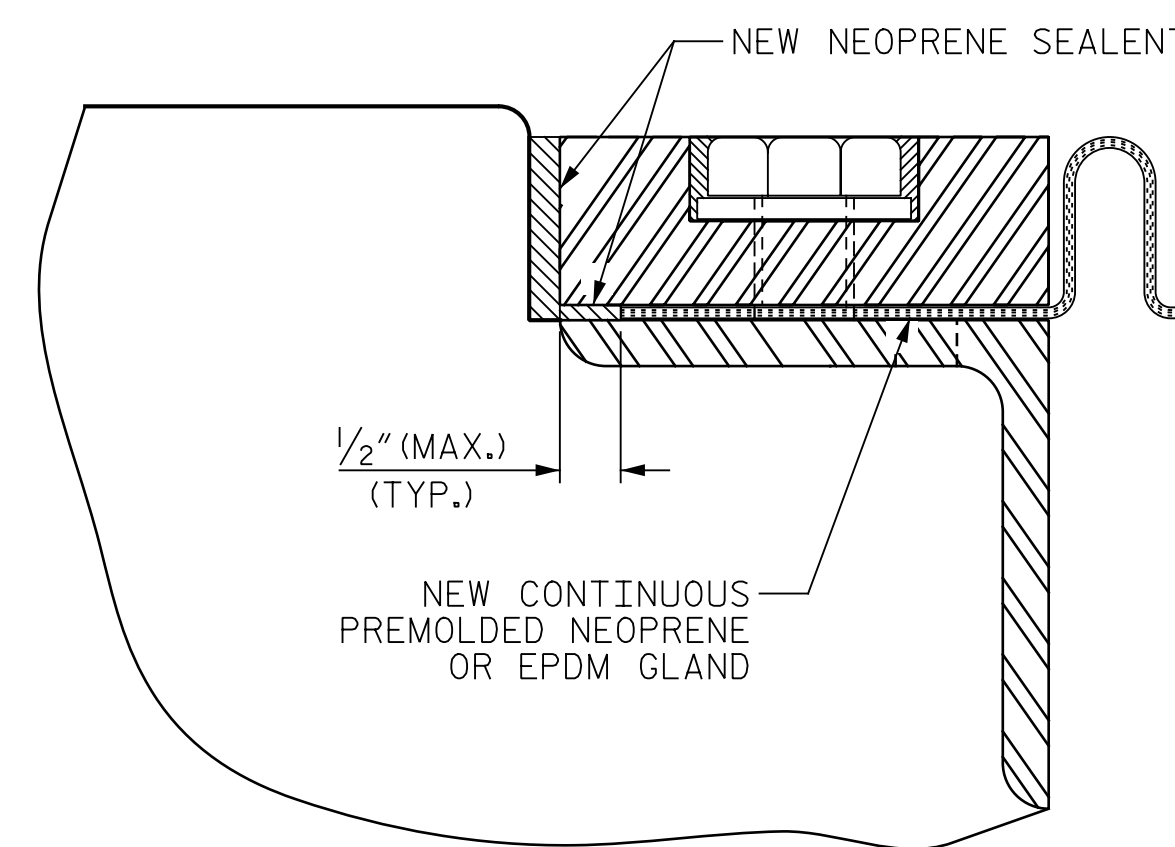
NO SEPARATE PAYMENT WILL BE MADE FOR REMOVING AND REINSTALLING MEDIAN AND BARRIER RAIL COVER PLATES. THE ENTIRE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR "EXPANSION JOINT SEAL REPAIR".

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE END BENT CAPS AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAPS. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAPS BENEATH THE ELASTOMERIC BEARINGS. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

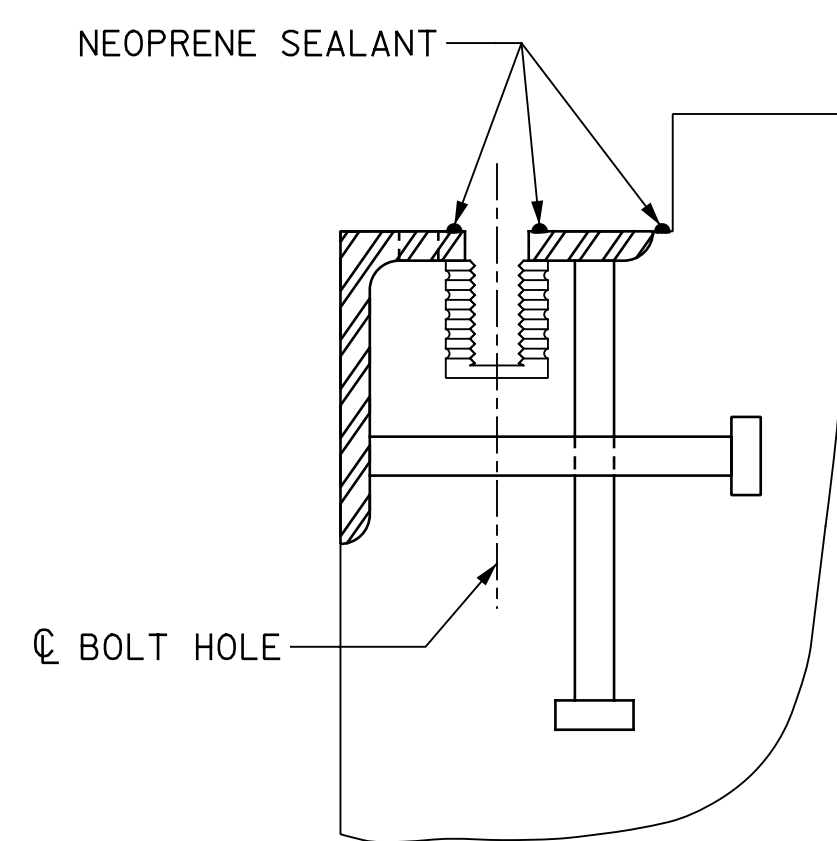
MOVEMENT AND SETTING AT JOINT					
LOCATION	SKEW ANGLE	TOTAL MOVEMENT (ALONG CL RDWY)	PERPENDICULAR JOINT OPENING AT 45° F	PERPENDICULAR JOINT OPENING AT 60° F	PERPENDICULAR JOINT OPENING AT 90° F
END BENT 1	115°-48'-27"	7/16"	1 1/16"	1 3/8"	1 3/16"
END BENT 2	117°-14'-48"	7/16"	1 5/16"	7/8"	1 1/16"

SUMMARY OF QUANTITIES

LOCATION	EXPANSION JOINT SEAL REPAIRS		EPOXY COATING	
	ESTIMATED (LIN. FT)	ACTUAL (LIN. FT)	ESTIMATED (SQ. FT)	ACTUAL (SQ. FT)
END BENT 1	73.0		182	
END BENT 2	74.0		184	

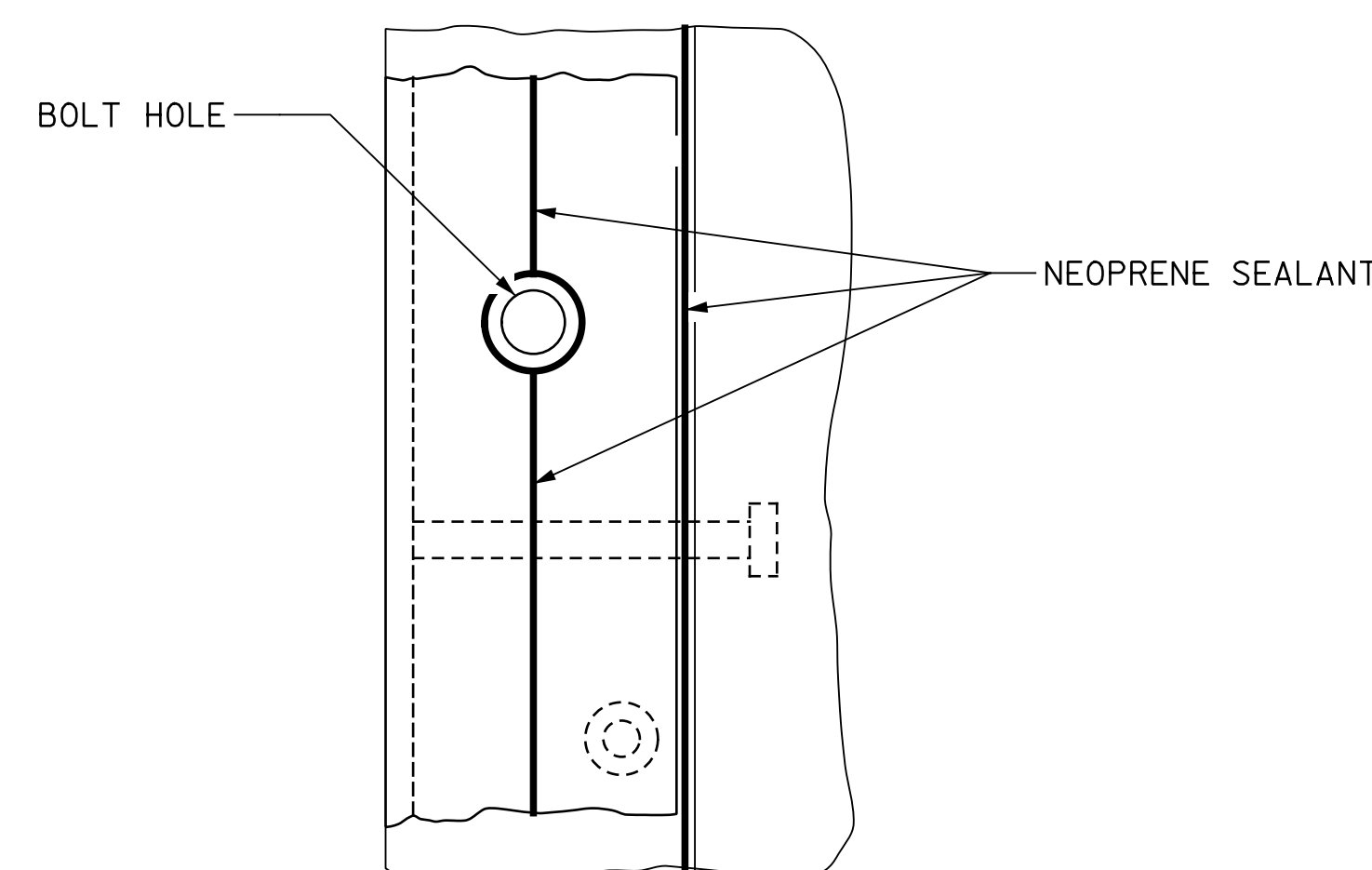


DETAIL A



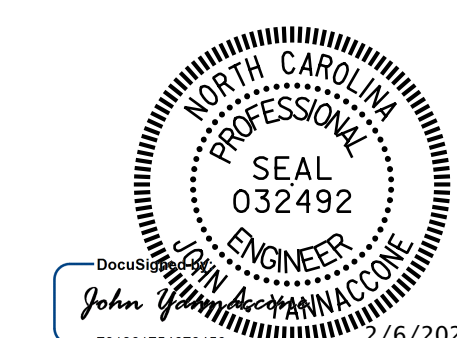
CROSS SECTION

INSTALLATION SKETCH



CROSS SECTION

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400327



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

EXPANSION JOINT SEAL DETAILS

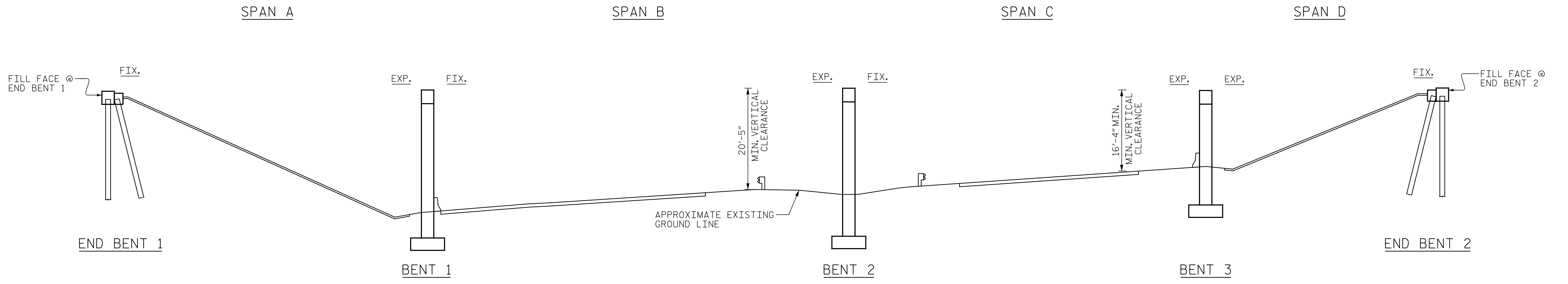
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 CHECKED BY : J. YANNAACONE DATE : 10/2022



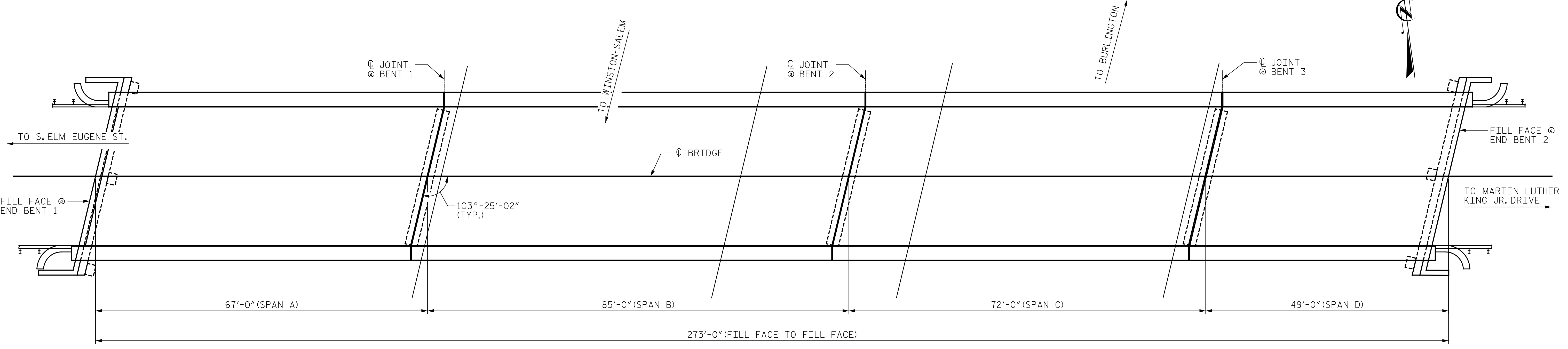
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SECTION ALONG C BRIDGE
 (SECTION AT BENTS AND END BENTS ARE AT RIGHT ANGLES)



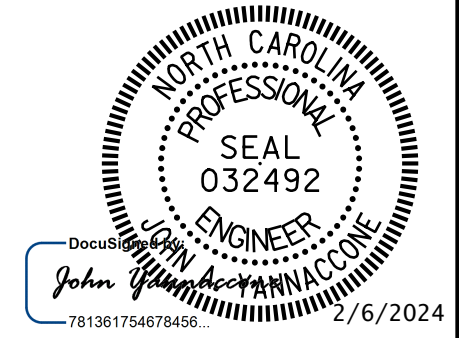
PLAN
 (PILES NOT SHOWN FOR CLARITY)

NOTE:
 GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 02/22/2023.
 BRIDGE ORIENTATION CONFORMS TO THE EXISTING BRIDGE PLANS AND ROUTINE INSPECTION REPORT.

- SCOPE OF WORK**
- REMOVE ASPHALT WEARING SURFACE AND PARTIALLY REMOVE TOP OF BRIDGE DECK CONCRETE BY SCARIFICATION.
 - OVERLAY PREPARED TOP OF BRIDGE DECK WITH ASPHALT WEARING SURFACE (AWS).
 - REMOVE EXISTING JOINT AND INSTALL PLUG JOINTS.
 - MILL AND REPAVE ASPHALT APPROACH ROADWAYS.
 - REMOVE DEBRIS FROM TOP OF EXISTING BENT CAPS AND APPLY EPOXY COATING.
 - EPOXY RESIN INJECTION OF CONCRETE CRACKS.
 - REMOVE UNSOUND CONCRETE AND PROPERLY PREPARE EXISTING END BENT AND BENT AREAS FOR SHOTCRETE AND CONCRETE REPAIRS.

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

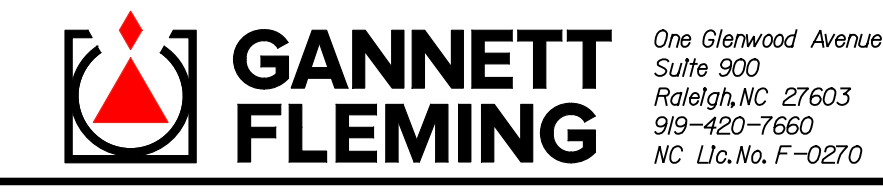
RESIDENT ENGINEER _____ DATE _____



PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400329
 SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING
 FOR BRIDGE ON PATTON
 AVENUE OVER I-40

DRAWN BY: J. MYA DATE: 10/2022
 CHECKED BY: J. YANNAACONE DATE: 1/2024

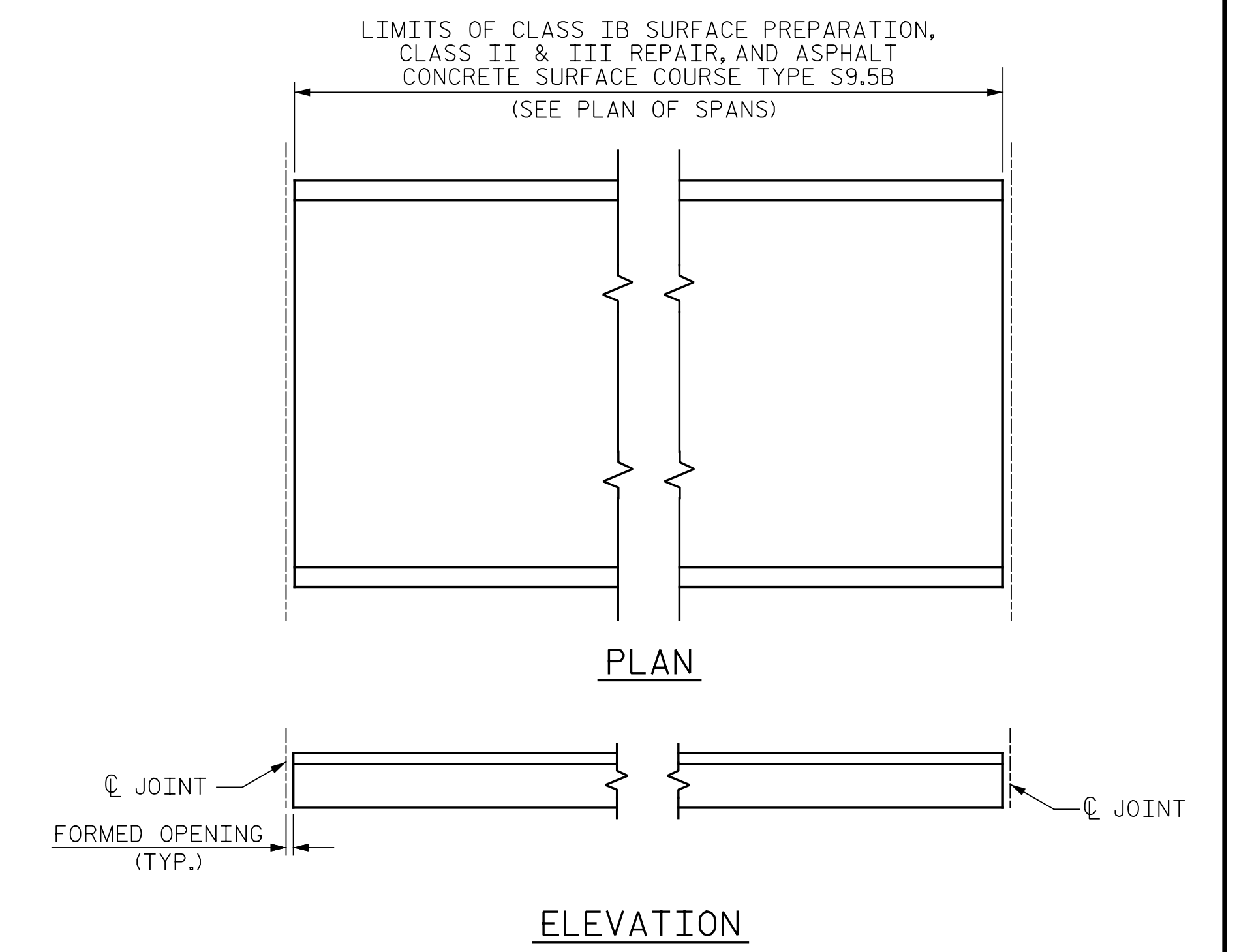
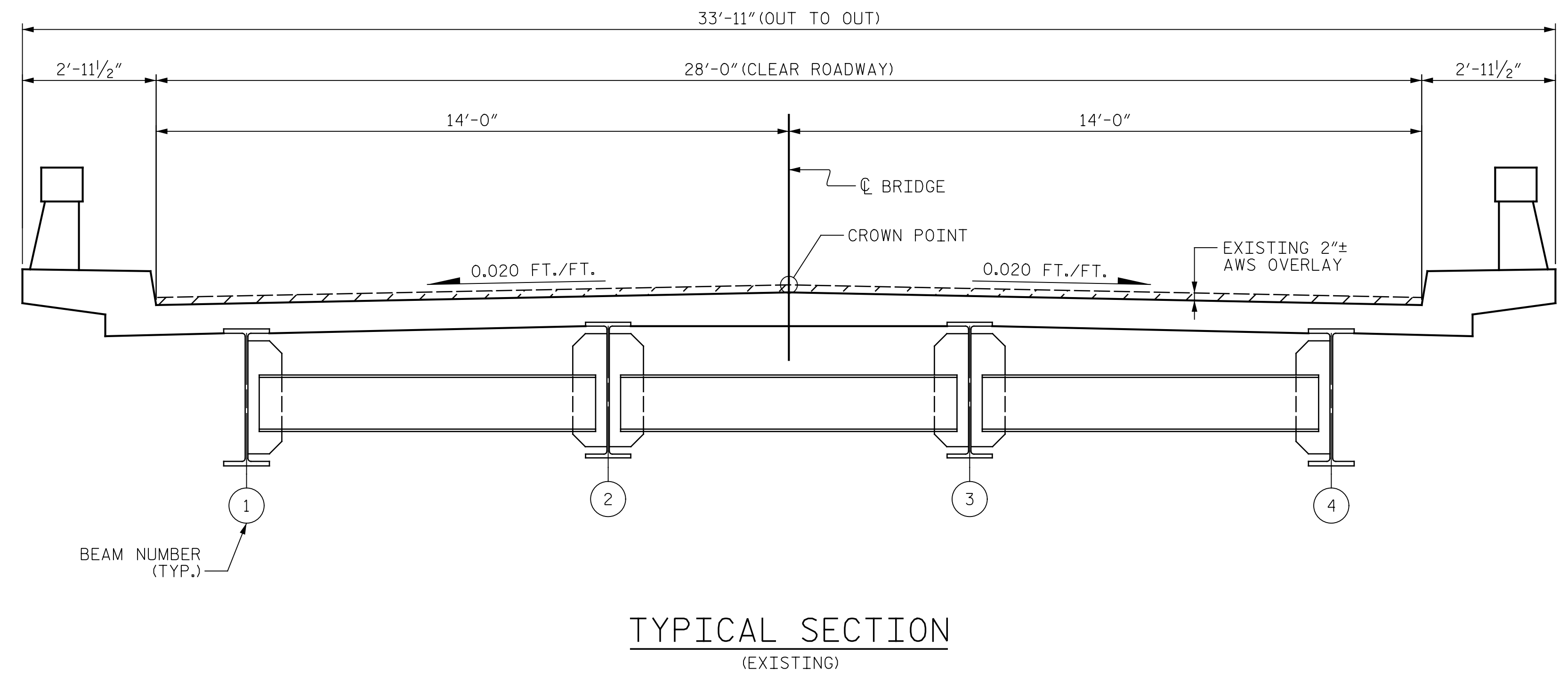


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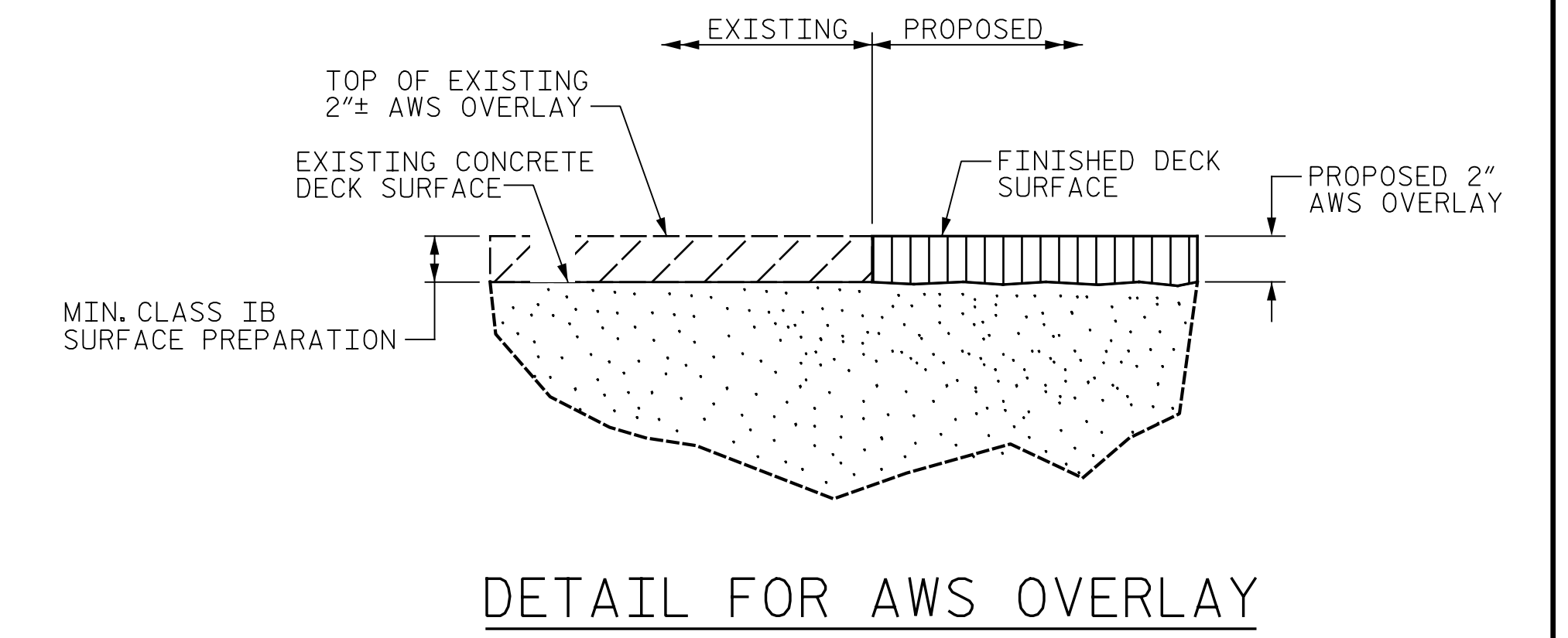
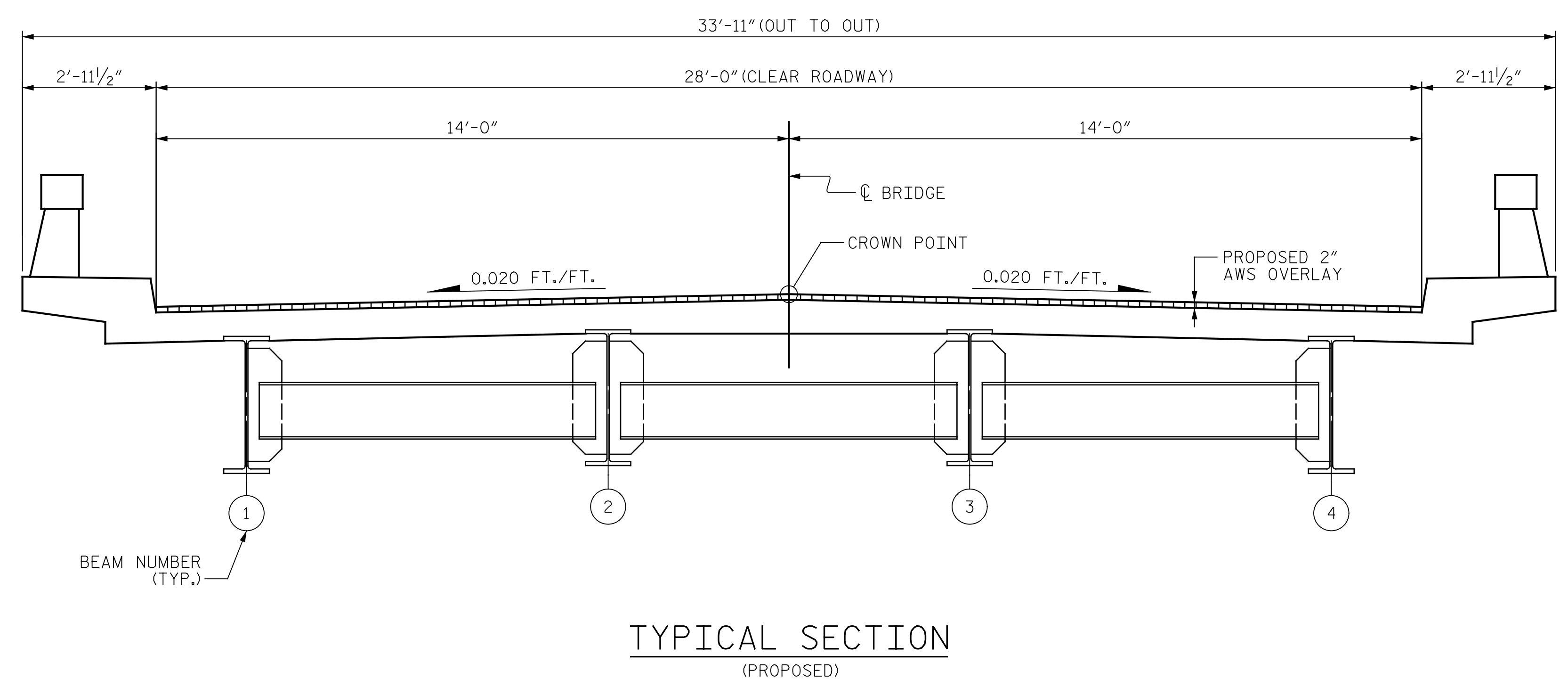
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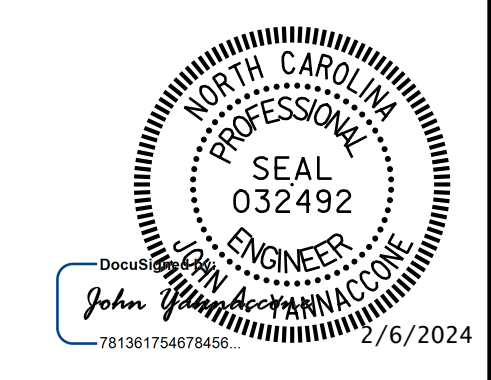
NOTES:
 SEE TRAFFIC MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING, AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION AND ASPHALT WEARING SURFACE (AWS) PLACEMENT.



PAY LIMITS FOR OVERLAY BID ITEMS



PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400329



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

TYPICAL SECTION AND SURFACE PREPARATION DETAILS

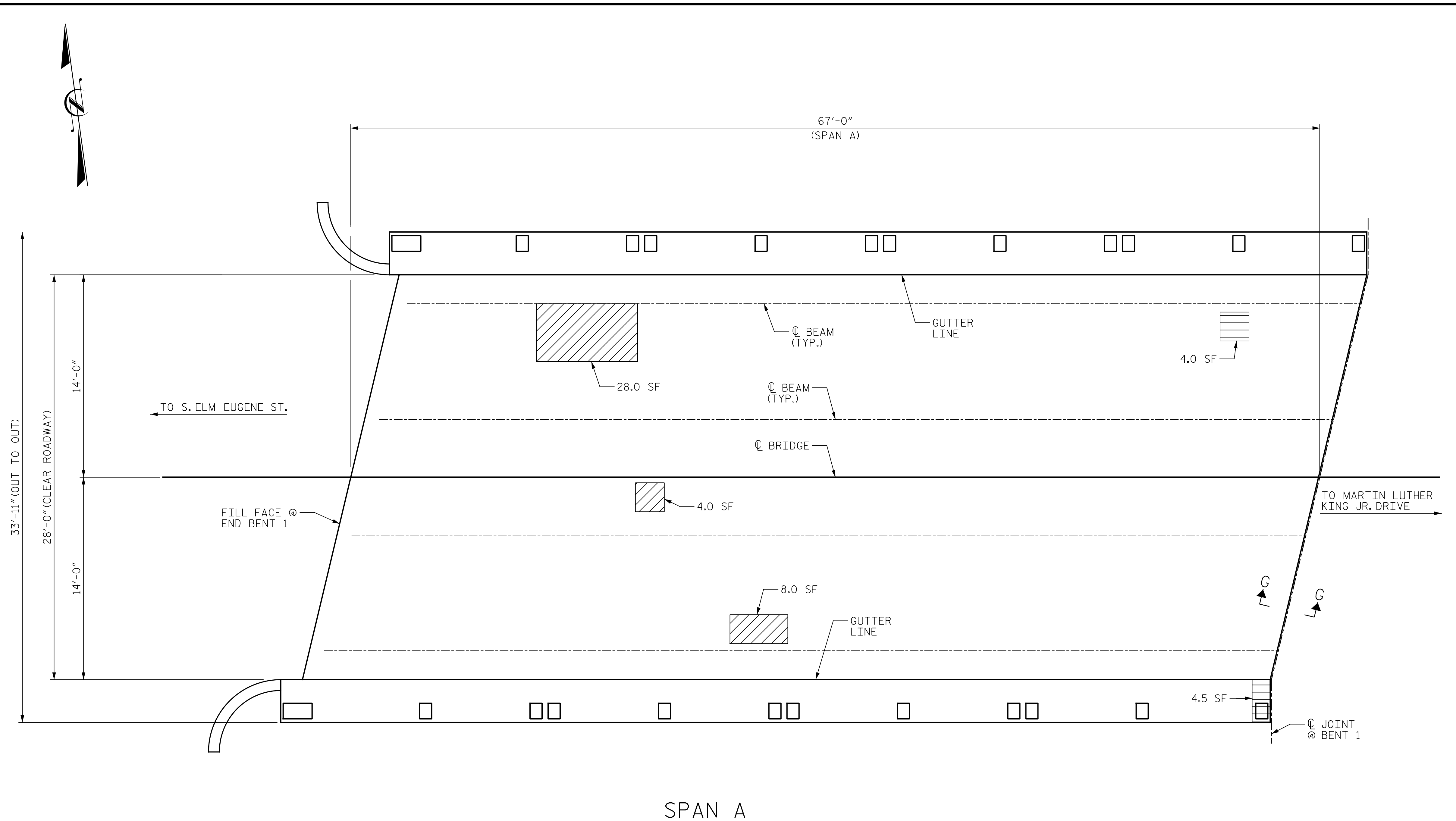
DRAWN BY : J. HARRIS DATE : 10/2022
 CHECKED BY : J. YANNACCONE DATE : 10/2022



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REPAIR QUANTITY TABLE				
TOP OF DECK REPAIR				
	ESTIMATE		ACTUAL	
CLASS IB SURFACE PREPARATION		208 SY		
CONCRETE DECK REPAIR FOR ASPHALT OVERLAY		40.0 SF		
ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B		23 TONS		
ASPHALT BINDER FOR PLANT MIX		2 TONS		
UNDERSIDE OF DECK REPAIR				
SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	4.0	1.0		
OVERHANG DIAPHRAGMS	4.5	1.6		
UNDERSIDE OF OVERHANG	0.0	0.0		
INTERIOR DIAPHRAGMS	0.0	0.0		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION		0.0 LF		

- CLASS IB SURFACE PREPARATION
- CONCRETE DECK REPAIR FOR ASPHALT OVERLAY
- UNDERSIDE OF DECK REPAIR

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 REPAIR QUANTITY TABLE.

CONCRETE COVER FOR TOP BARS IN THE DECK SLAB IS 1 7/8" ± PER THE EXISTING BRIDGE PLANS.

FOR SECTION G-G, SEE "ASPHALT PLUG JOINT DETAILS" SHEET.

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

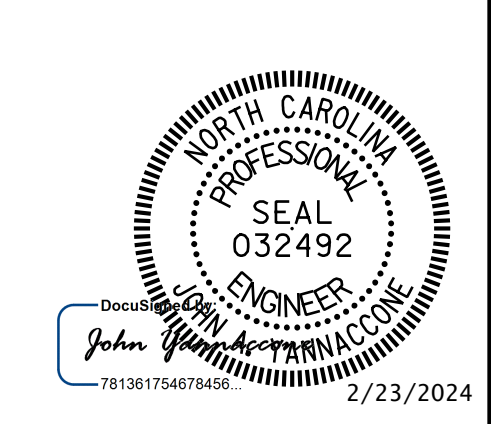
CONTRACTOR SHALL SAWCUT TO A NOMINAL DEPTH OF 1/2" BUT REINFORCING STEEL SHALL NOT BE DAMAGED. CONTRACTOR SHALL REMOVE SURFACE CONCRETE TO VERIFY THAT SAWCUT DEPTH WILL NOT DAMAGE EXISTING REINFORCING STEEL.

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

FOR CONCRETE DIAPHRAGM REPAIR, SEE SPECIAL PROVISIONS.

FOR CLASS IB SURFACE PREPARATION, SEE BRIDGE DECK ASPHALT OVERLAY SPECIAL PROVISION.

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400329
 SHEET 1 OF 4



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**PLAN OF SPANS
 SPAN A**

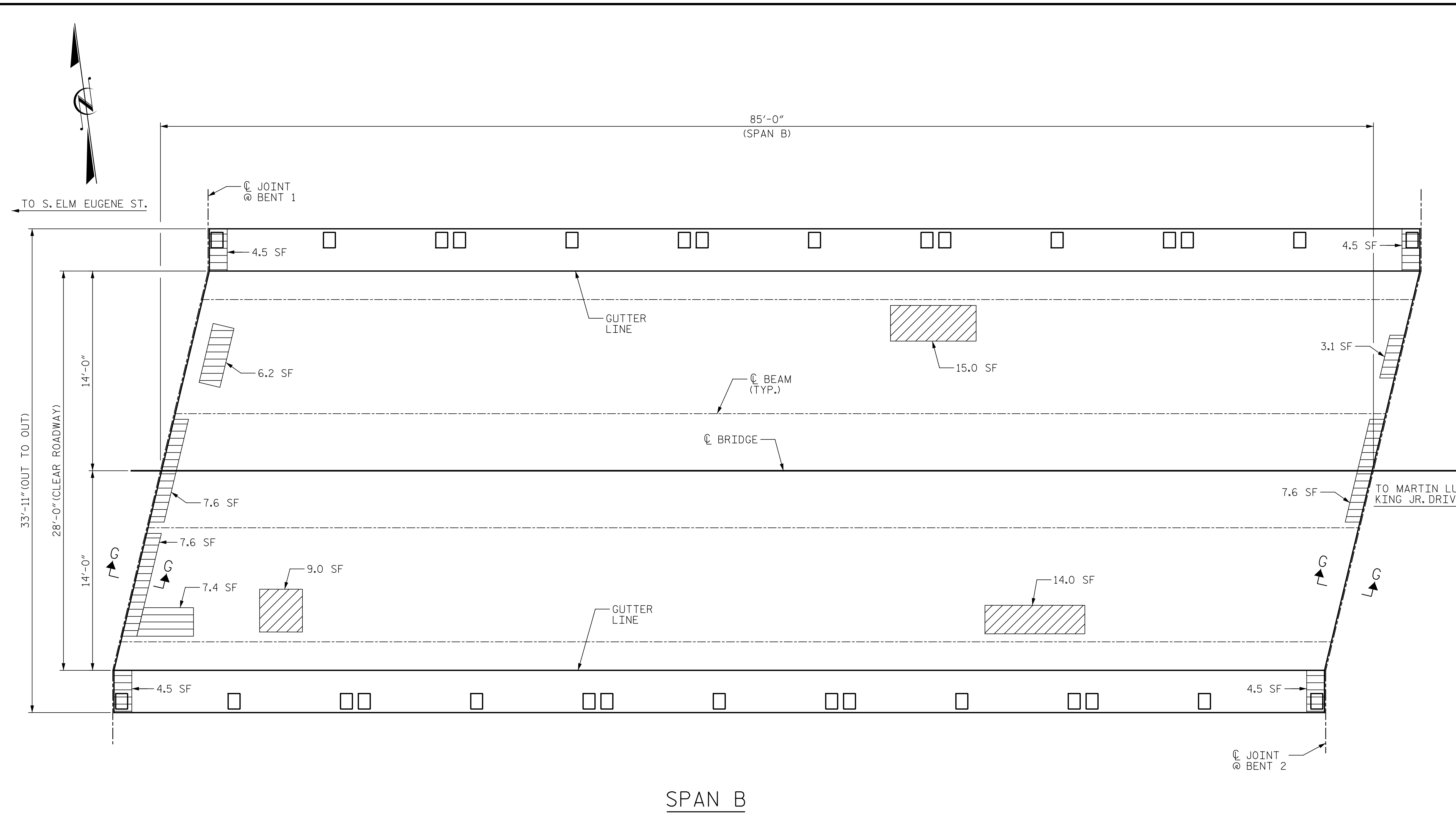
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REPAIR QUANTITY TABLE				
TOP OF DECK REPAIR				
	ESTIMATE		ACTUAL	
CLASS IB SURFACE PREPARATION		264 SY		
CONCRETE DECK REPAIR FOR ASPHALT OVERLAY		38.0 SF		
ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B		29 TONS		
ASPHALT BINDER FOR PLANT MIX		2 TONS		
UNDERSIDE OF DECK REPAIR				
SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	13.6	3.4		
OVERHANG DIAPHRAGMS	18.0	6.4		
UNDERSIDE OF OVERHANG	0.0	0.0		
INTERIOR DIAPHRAGMS	25.9	16.2		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION		0.0 LF		

- CLASS IB SURFACE PREPARATION
- CONCRETE DECK REPAIR FOR ASPHALT OVERLAY
- UNDERSIDE OF DECK REPAIR

NOTES:

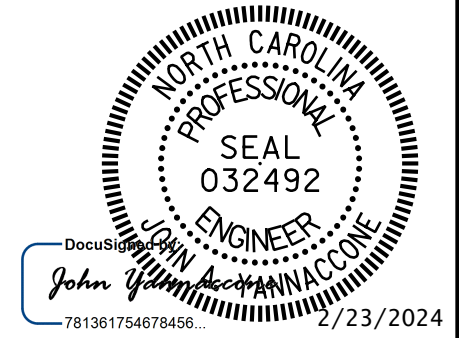
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- FOR CONCRETE DECK REPAIR FOR ASPHALT OVERLAY, SEE SPECIAL PROVISIONS.
- FOR OVERHANG AND UNDERSIDE OF DECK REPAIRS, SEE "OVERHANG AND UNDERSIDE REPAIR DETAILS" SHEET.
- FOR CONCRETE DIAPHRAGM REPAIR, SEE SPECIAL PROVISIONS.
- FOR CLASS IB SURFACE PREPARATION, SEE BRIDGE DECK ASPHALT OVERLAY SPECIAL PROVISION.

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400329

SHEET 2 OF 4

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PLAN OF SPANS
 SPAN B

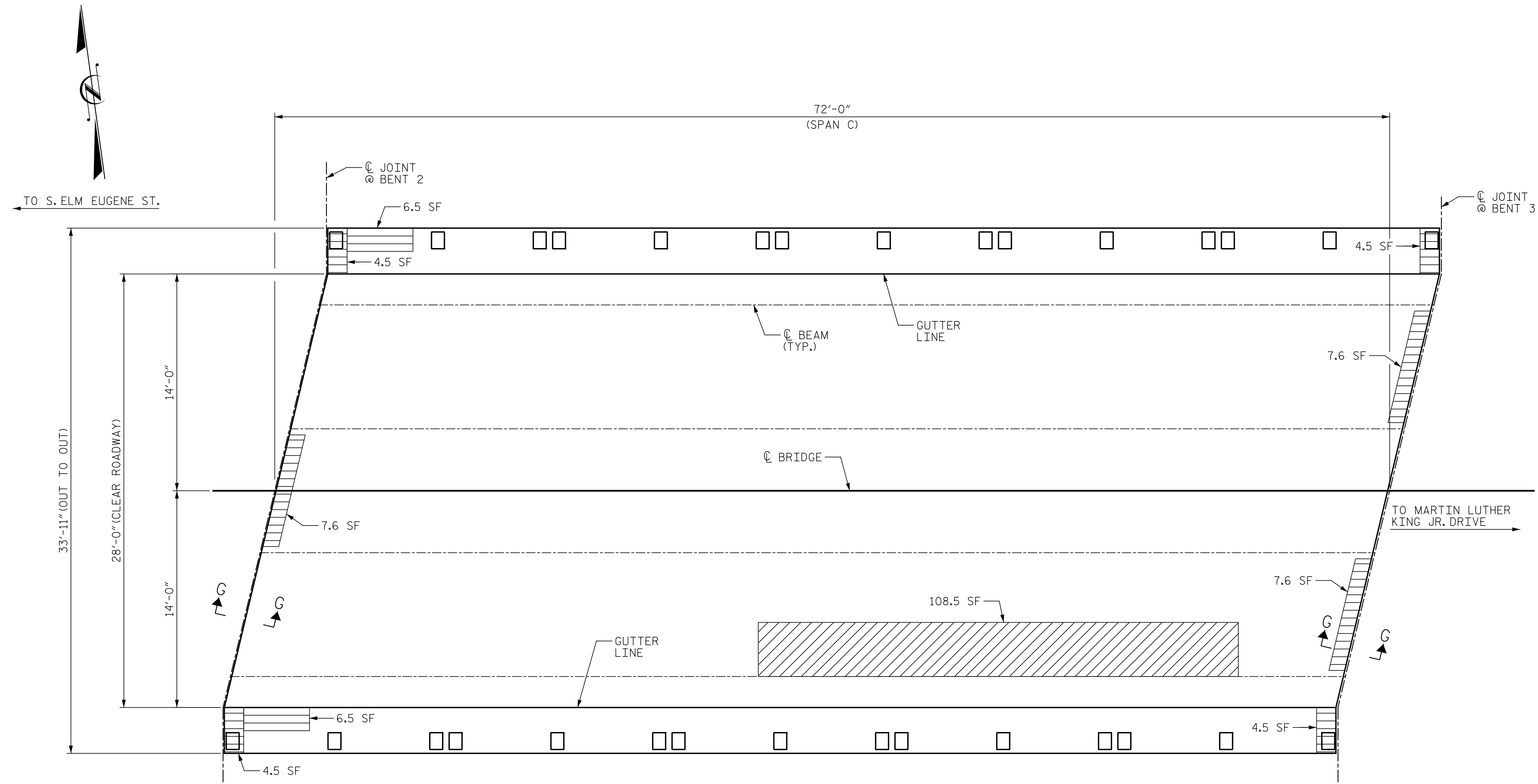


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 CHECKED BY: J. YANNAACONE DATE: 10/2022

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SPAN C

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 REPAIR QUANTITY TABLE.
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- FOR CONCRETE DECK REPAIR FOR ASPHALT OVERLAY, SEE SPECIAL PROVISIONS.
- FOR OVERHANG AND UNDERSIDE OF DECK REPAIRS, SEE "OVERHANG AND UNDERSIDE REPAIR DETAILS" SHEET.
- FOR CONCRETE DIAPHRAGM REPAIR, SEE SPECIAL PROVISIONS.
- FOR CLASS IB SURFACE PREPARATION, SEE BRIDGE DECK ASPHALT OVERLAY SPECIAL PROVISION.

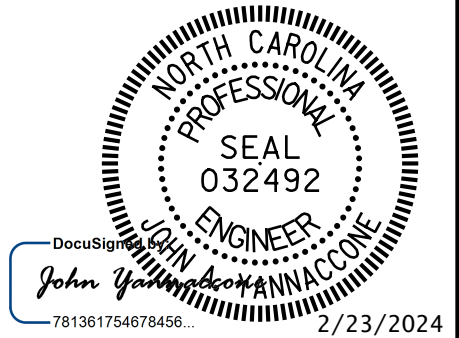
REPAIR QUANTITY TABLE

TOP OF DECK REPAIR				
	ESTIMATE		ACTUAL	
CLASS IB SURFACE PREPARATION	224	SY		
CONCRETE DECK REPAIR FOR ASPHALT OVERLAY	108.5	SF		
ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B	25	TONS		
ASPHALT BINDER FOR PLANT MIX	2	TONS		
UNDERSIDE OF DECK REPAIR				
SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	0.0	0.0		
OVERHANG DIAPHRAGMS	18.0	6.4		
UNDERSIDE OF OVERHANG	13.0	6.5		
INTERIOR DIAPHRAGMS	22.8	14.3		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	0.0	LF		

- CLASS IB SURFACE PREPARATION
- CONCRETE DECK REPAIR FOR ASPHALT OVERLAY
- UNDERSIDE OF DECK REPAIR

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400329

SHEET 3 OF 4



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**PLAN OF SPANS
 SPAN C**

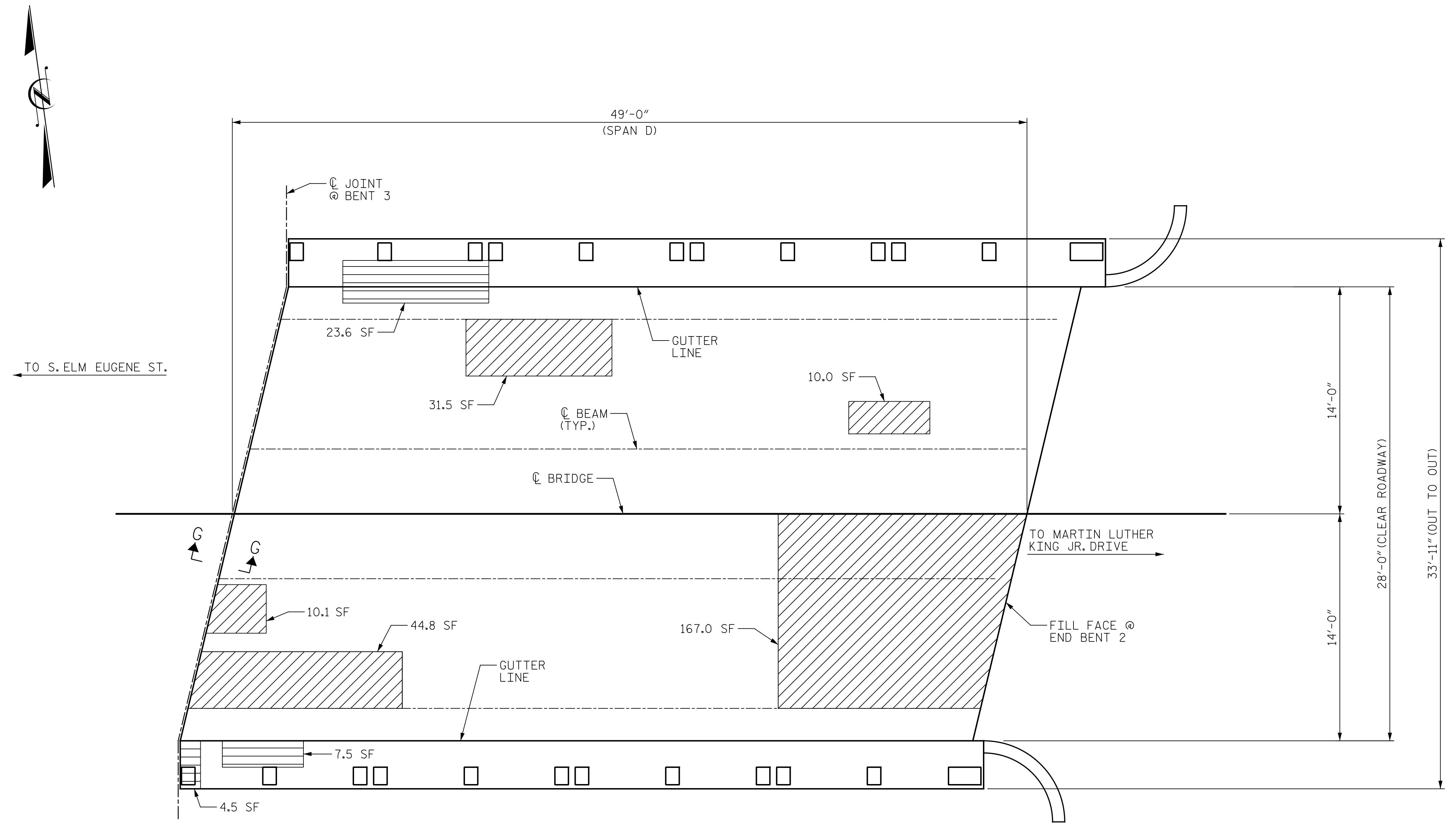
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SPAN D

NOTES:

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FOR SECTION G-G, SEE "ASPHALT PLUG JOINT DETAILS" SHEET.

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

CONTRACTOR SHALL SAWCUT TO A NOMINAL DEPTH OF 1/2" BUT REINFORCING STEEL SHALL NOT BE DAMAGED. CONTRACTOR SHALL REMOVE SURFACE CONCRETE TO VERIFY THAT SAWCUT DEPTH WILL NOT DAMAGE EXISTING REINFORCING STEEL.

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

FOR CONCRETE DIAPHRAGM REPAIR, SEE SPECIAL PROVISIONS.

FOR CLASS IB SURFACE PREPARATION, SEE BRIDGE DECK ASPHALT OVERLAY SPECIAL PROVISION.

REPAIR QUANTITY TABLE				
TOP OF DECK REPAIR				
	ESTIMATE		ACTUAL	
CLASS IB SURFACE PREPARATION	152 SY			
CONCRETE DECK REPAIR FOR ASPHALT OVERLAY	263.4 SF			
ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B	17 TONS			
ASPHALT BINDER FOR PLANT MIX	1 TONS			
UNDERSIDE OF DECK REPAIR				
SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	0.0	0.0		
OVERHANG DIAPHRAGMS	4.5	1.6		
UNDERSIDE OF OVERHANG	31.1	15.6		
INTERIOR DIAPHRAGMS	0.0	0.0		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	0.0 LF			

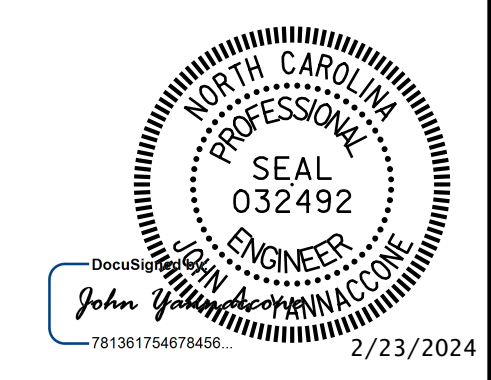
- CLASS IB SURFACE PREPARATION
- CONCRETE DECK REPAIR FOR ASPHALT OVERLAY
- UNDERSIDE OF DECK REPAIR

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400329

SHEET 4 OF 4

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**PLAN OF SPANS
 SPAN D**

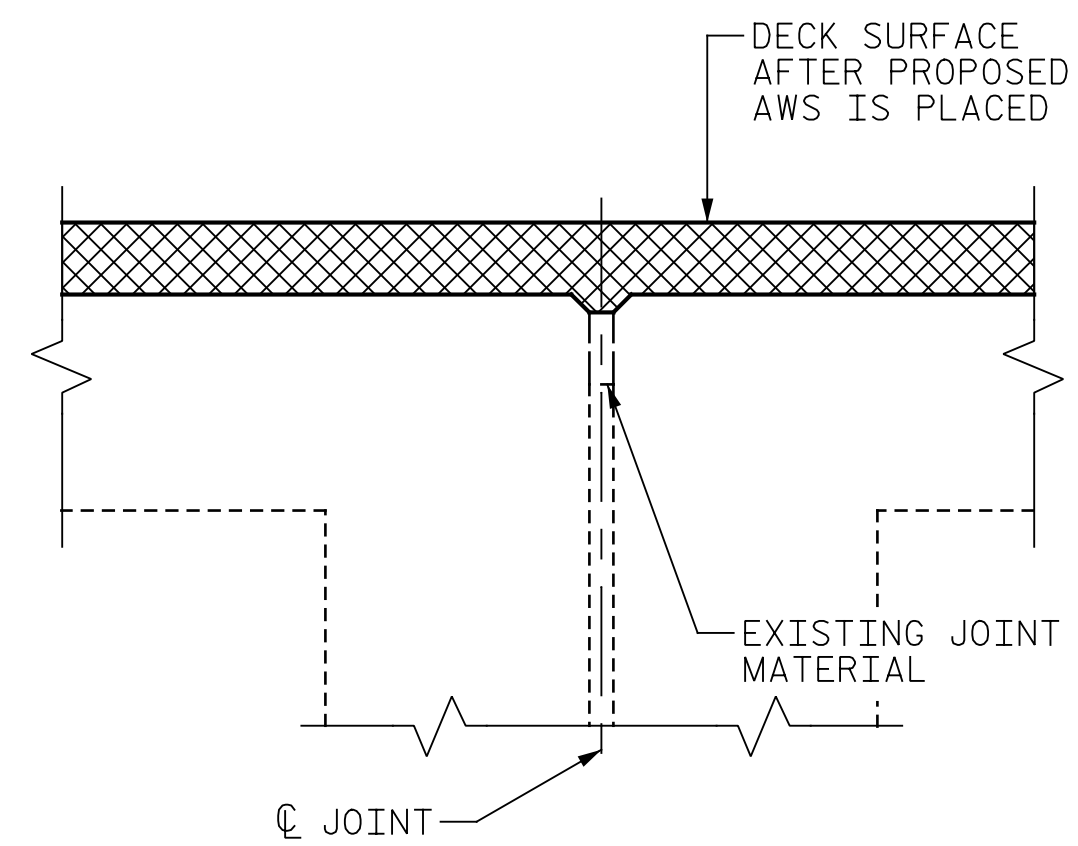


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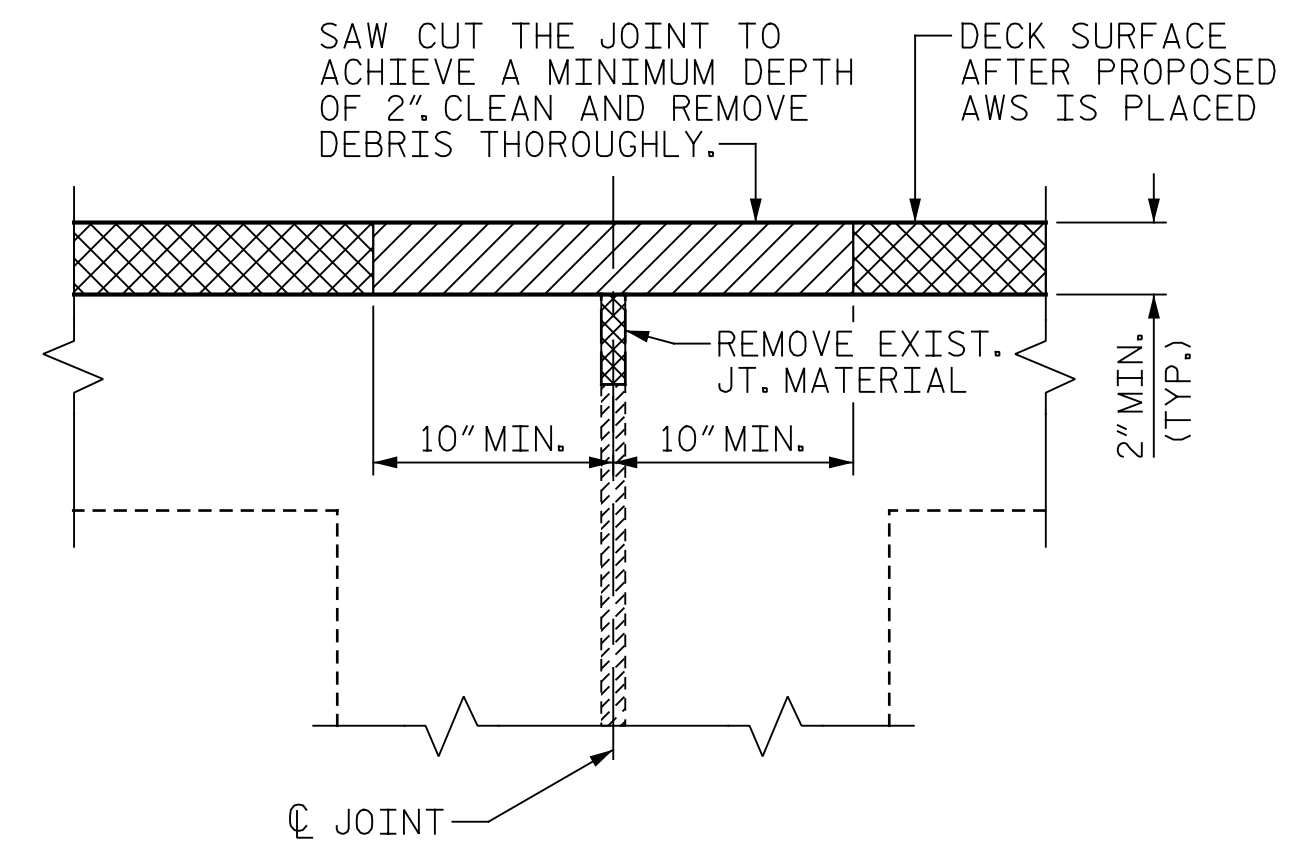
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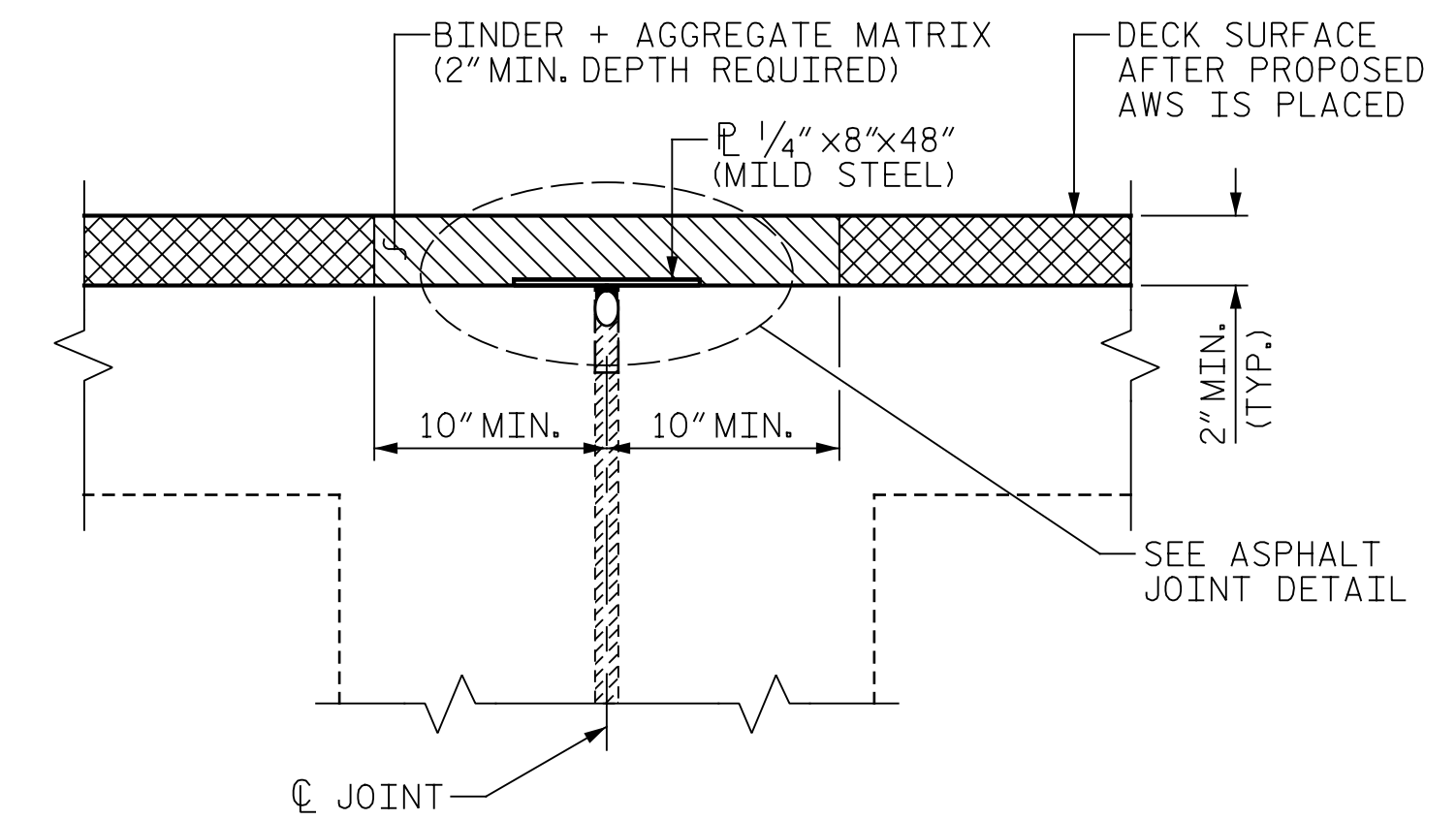
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EXISTING JOINT AFTER
AWS PLACEMENT

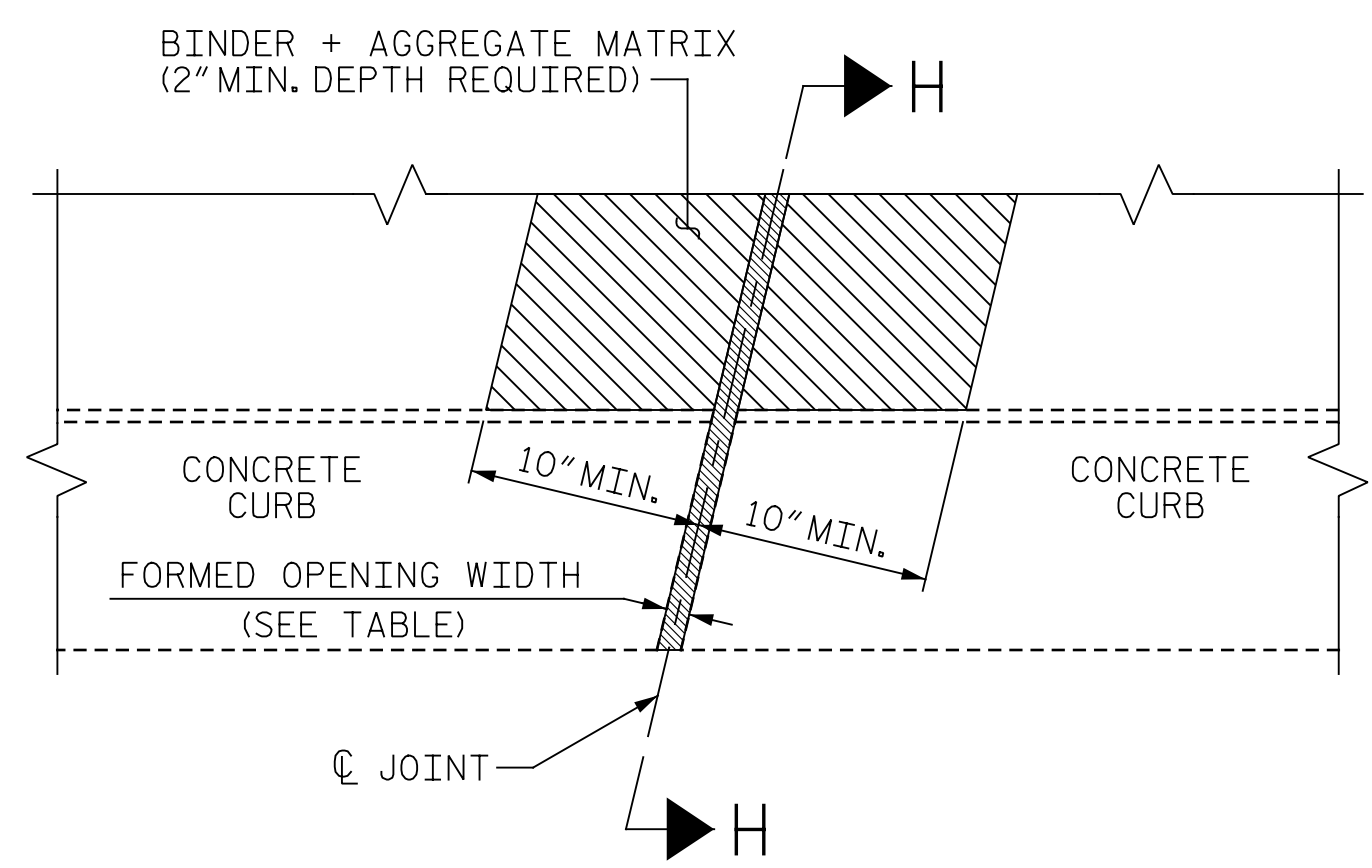


DEMOLITION PREPARATION

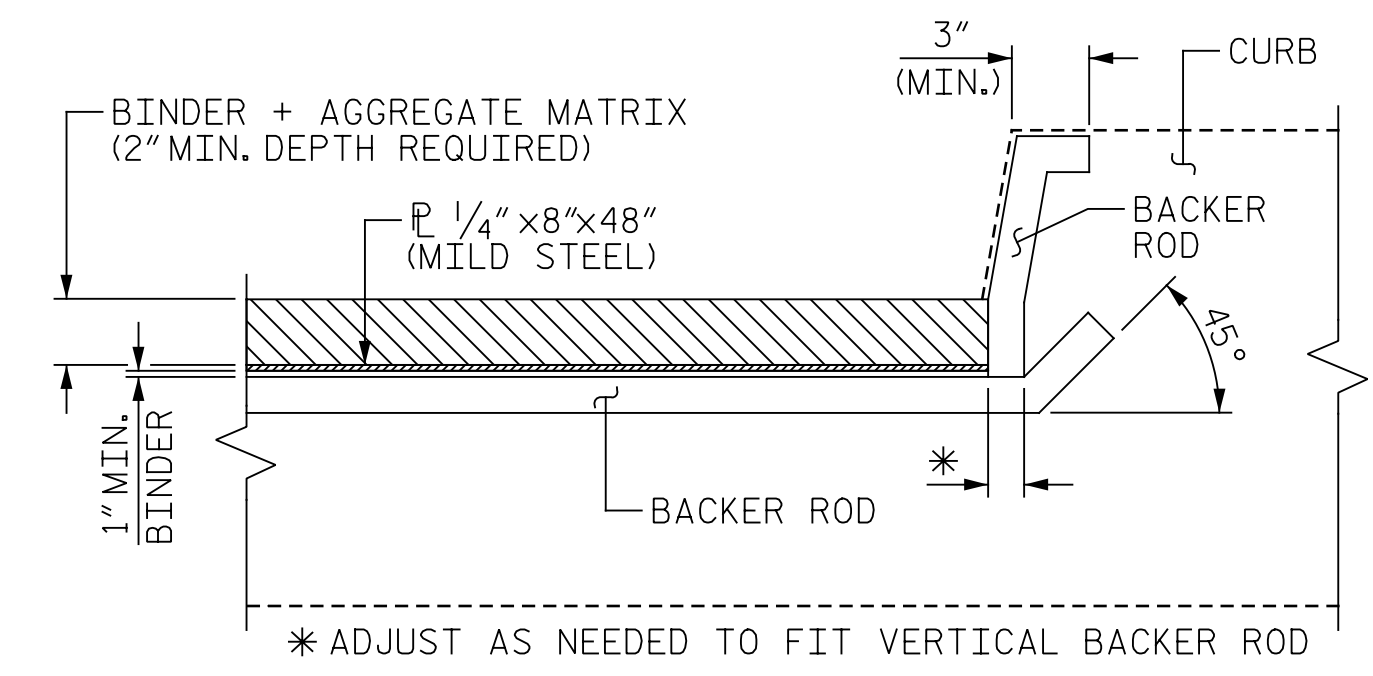


PROPOSED JOINT

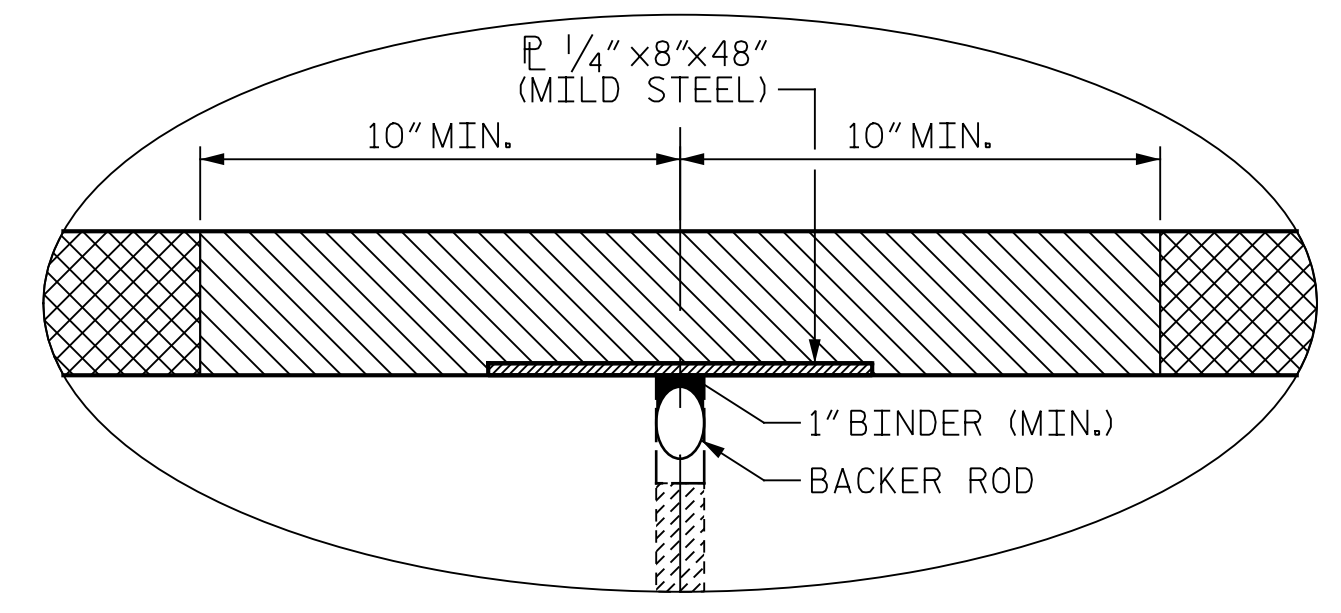
SECTION G-G
(TYP. AT BENTS)



PLAN AT BARRIER
(PROPOSED JOINT SEAL, STEEL \bar{P} NOT SHOWN FOR CLARITY)



SECTION H-H
(PROPOSED JOINT SEAL)



ASPHALT JOINT DETAIL

NOTES:

THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING JOINT OPENING PRIOR TO ORDERING JOINT SEAL MATERIAL. IF THE ACTUAL OPENING VARIES FROM TO OPENING INDICATED IN THE DETAIL BY MORE THAN 1/4", NOTIFY THE ENGINEER. REVISION OF THE JOINT SEAL SIZE MIGHT BE NECESSARY.

THE CONTRACTOR SHALL TAKE CARE DURING JOINT REPAIR OPERATIONS NOT TO DROP ANY MATERIAL THAT FALLS 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 BACKER ROD AND SILICONE SEALANT SHALL BE WATER TIGHT.

FOR EXCAVATION BELOW THE BOTTOM OF THE PLANNED JOINT DECK DEMOLITION, CONCRETE FOR DECK REPAIRS SHALL BE PLACED IN THE EXCAVATED AREA TO THE ELEVATION AT BOTTOM OF THE PROPOSED ASPHALT JOINT DETAIL SHOWN.

DEMOLISH BRIDGE JOINT AREA SUCH THAT THE BOTTOM OF THE EXCAVATION SHALL BE REASONABLY FLAT AND LEVEL AND TO THE NECESSARY DEPTH, SUCH THAT ASPHALT JOINT SHALL BE FOUNDED ON CONCRETE OR REPAIR CONCRETE SUBSTRATE.

PRIOR TO ASPHALT JOINT REPAIR/REPLACEMENT, PERFORM DECK SURFACE REPAIR IN ACCORDANCE WITH "PLAN OF SPAN" SHEETS.

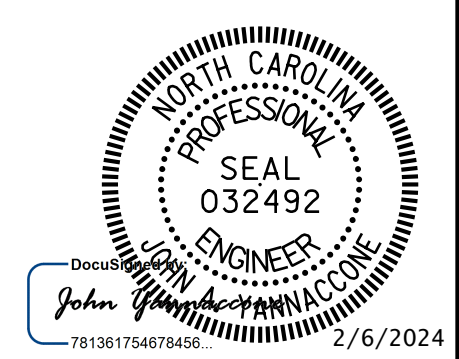
BACKER ROD SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.

FOR ASPHALT PLUG JOINTS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

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

LOCATION	ASPHALT PLUG JOINT FOR PRESERVATION (LIN. FT.)	FORMED OPENING WIDTH PER EXISTING BRIDGE PLANS	TOTAL THEORETICAL MOVEMENT PERPENDICULAR TO THE JOINT
BENT 1	31.0	1"	1/2"
BENT 2	31.0	1"	5/8"
BENT 3	31.0	1 1/4"	15/16"

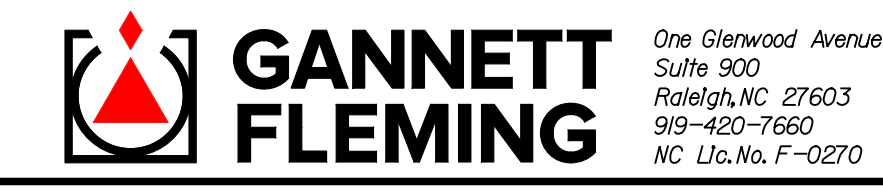
PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400329



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 DEPARTMENT OF TRANSPORTATION
 RALEIGH

ASPHALT PLUG JOINT DETAILS

DRAWN BY : J. HARRIS DATE : 10/2022
 CHECKED BY : J. YANNACCONE DATE : 10/2022



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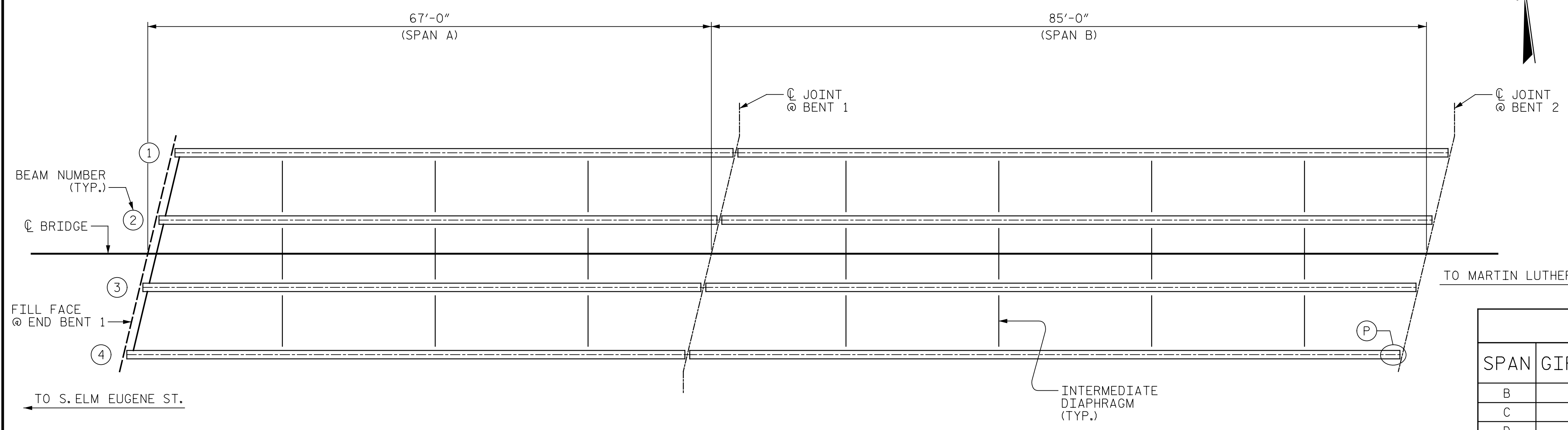
REPAIR QUANTITY TABLE		
GIRDER REPAIR		
BEAM PLATING REPAIR	ESTIMATE	ACTUAL
	120 LBS	

Ⓟ BEAM PLATING REPAIR

NOTES

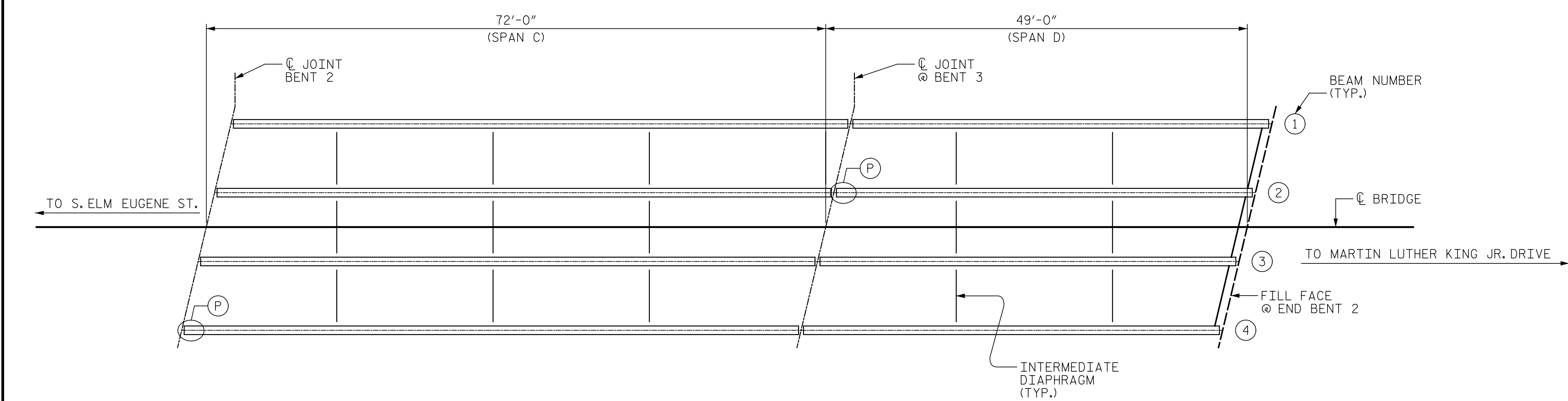
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FOR BEAM PLATING REPAIR, SEE SPECIAL PROVISIONS.
 FOR BEAM REPAIR, SEE "BEAM PLATING REPAIR DETAILS" SHEET.



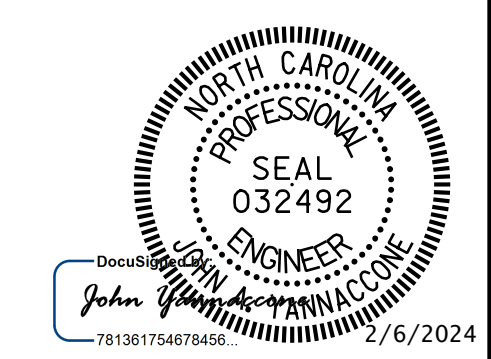
BEAM REPAIR LOCATIONS
 (OTHER LOCATIONS MAY EXIST, SEE NOTES)

ANTICIPATED REPAIR LOCATIONS						
SPAN	GIRDER	LOCATION	DIM "A"	DIM "B"	DIM "C"	DIM "D"
B	4	BENT 2	1"	10"	1"	-
C	4	BENT 2	3"	11"	23"	-
D	2	BENT 3	3"	11"	1"	-
D	2	BENT 3	3"	10"	23"	-



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

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400329



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BEAM REPAIR LOCATIONS

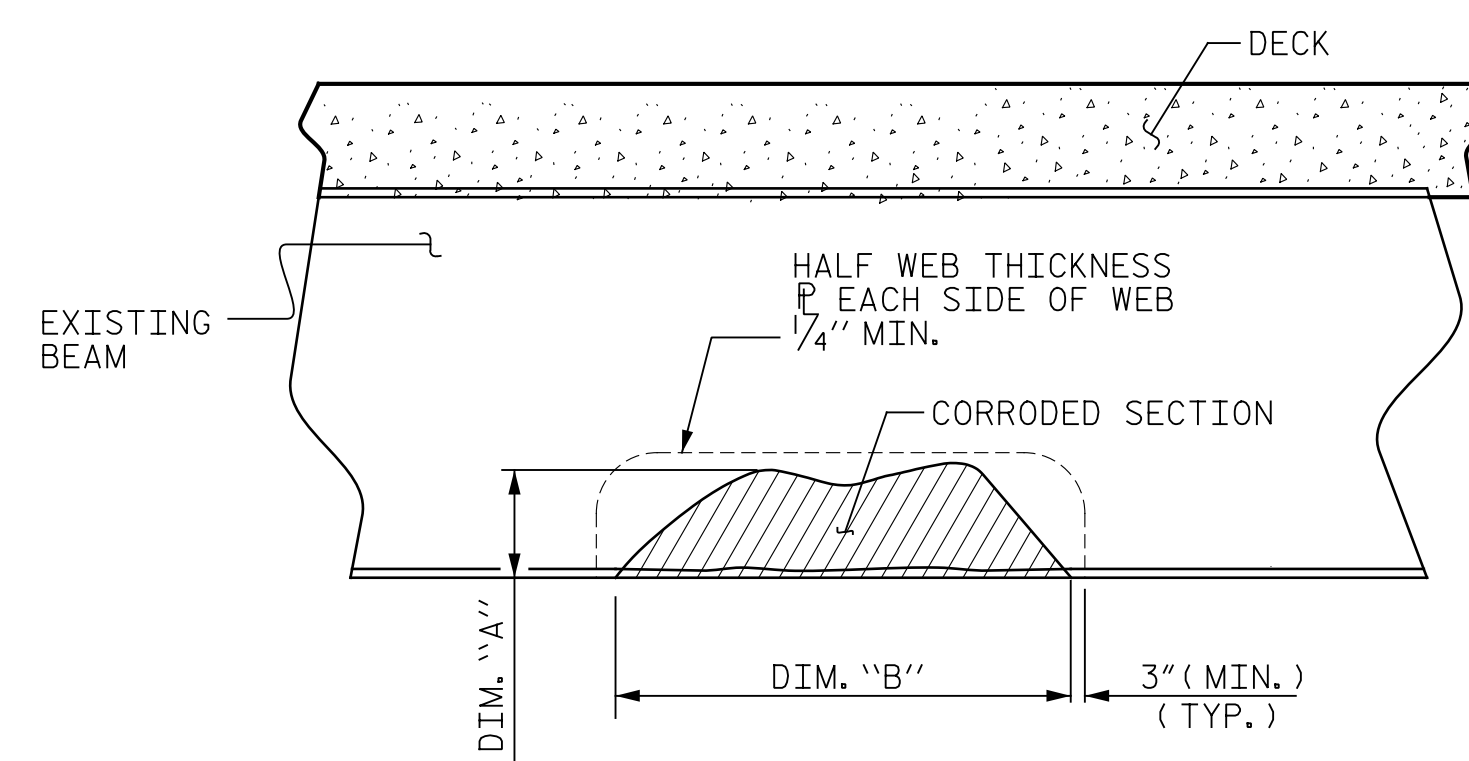
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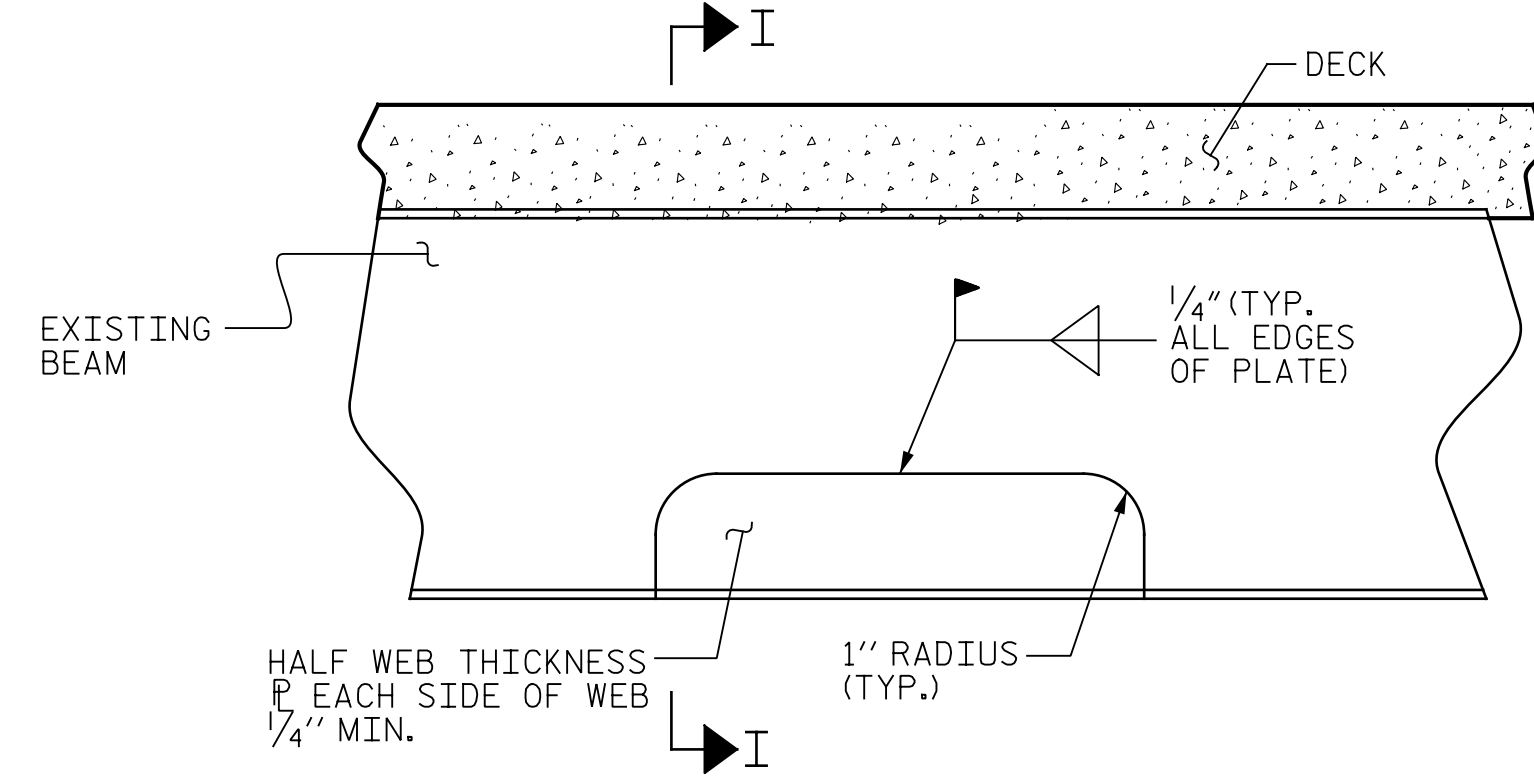
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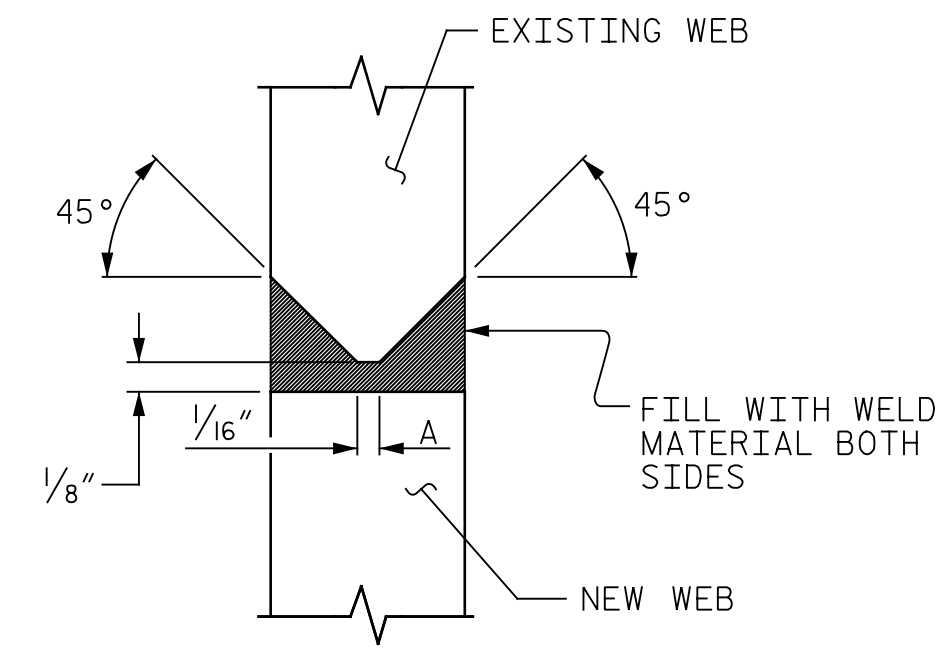
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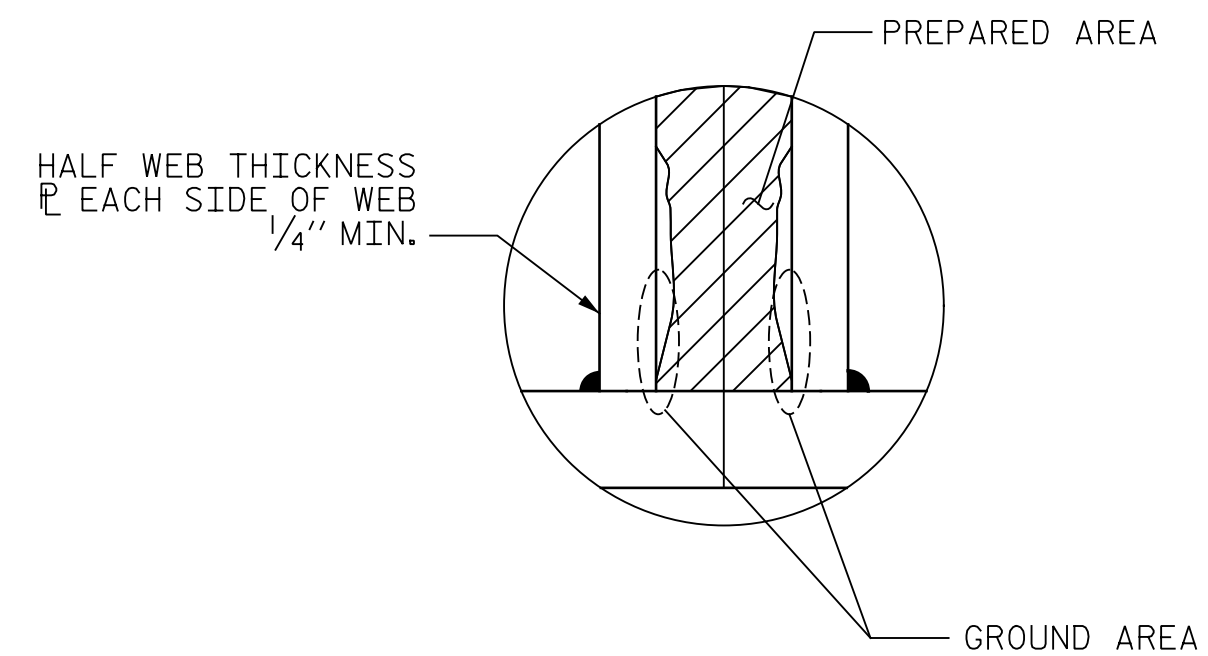
INTERMEDIATE SECTION LOSS
BEAM PLATING REPAIR



INTERMEDIATE BEAM
PLATING REPAIR

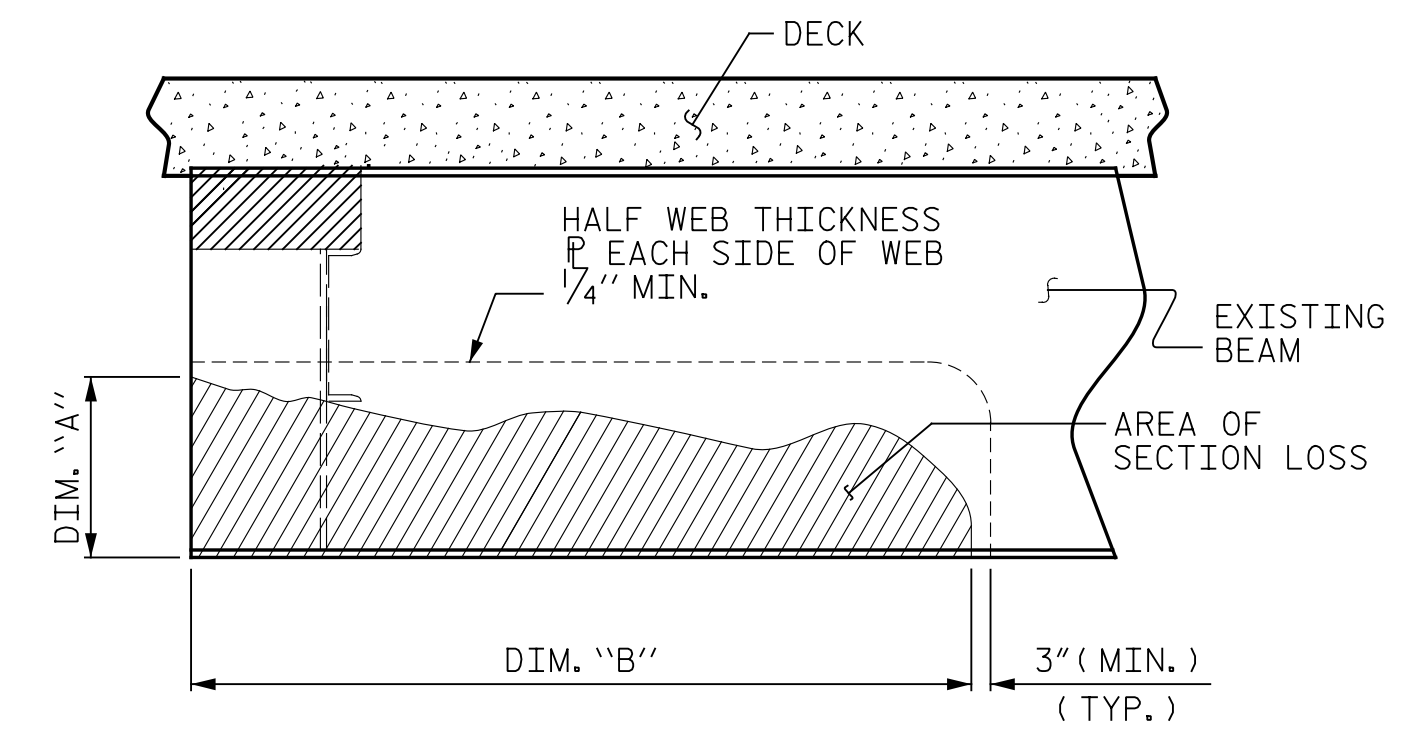


DETAIL "A"

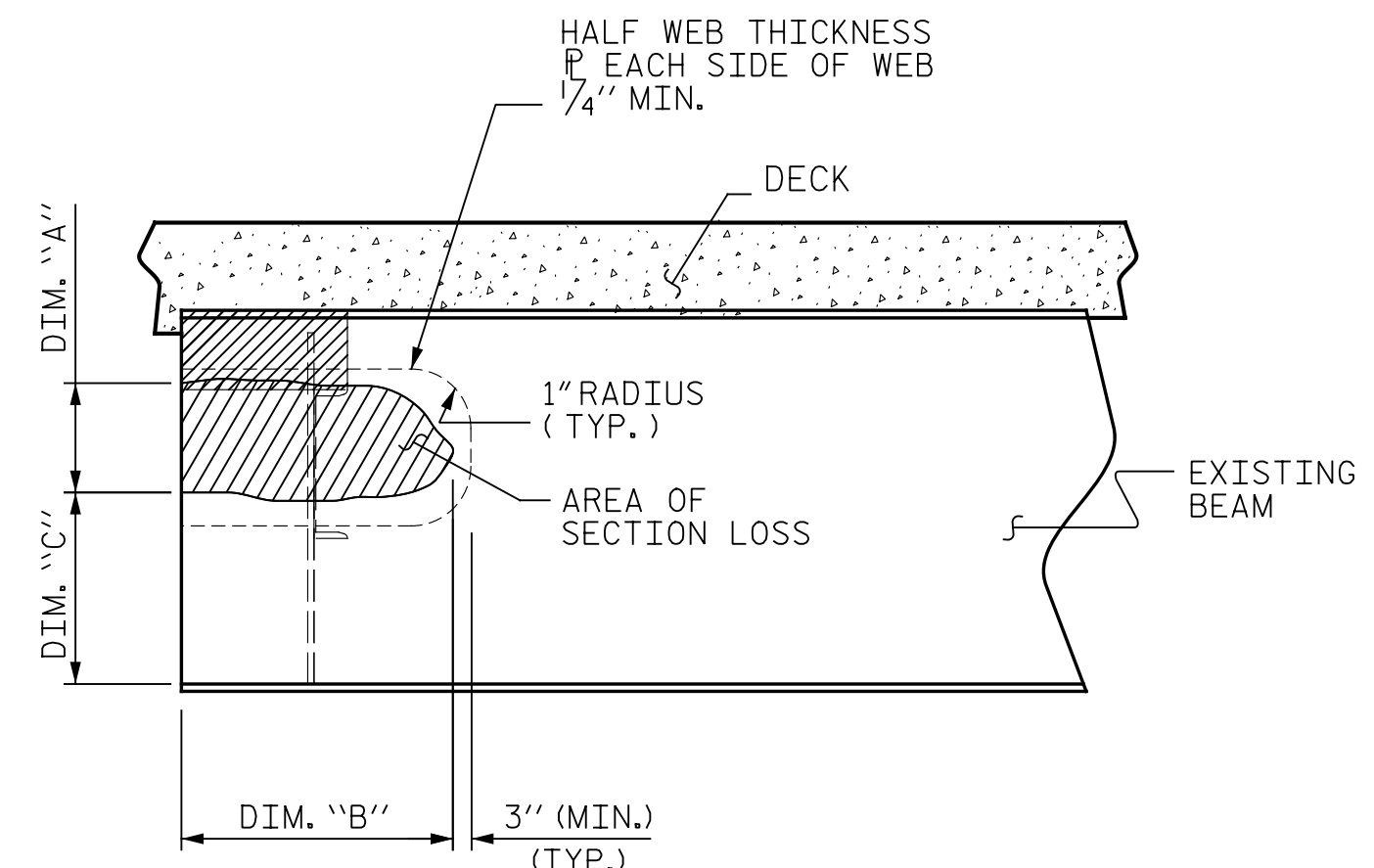


DETAIL "B"

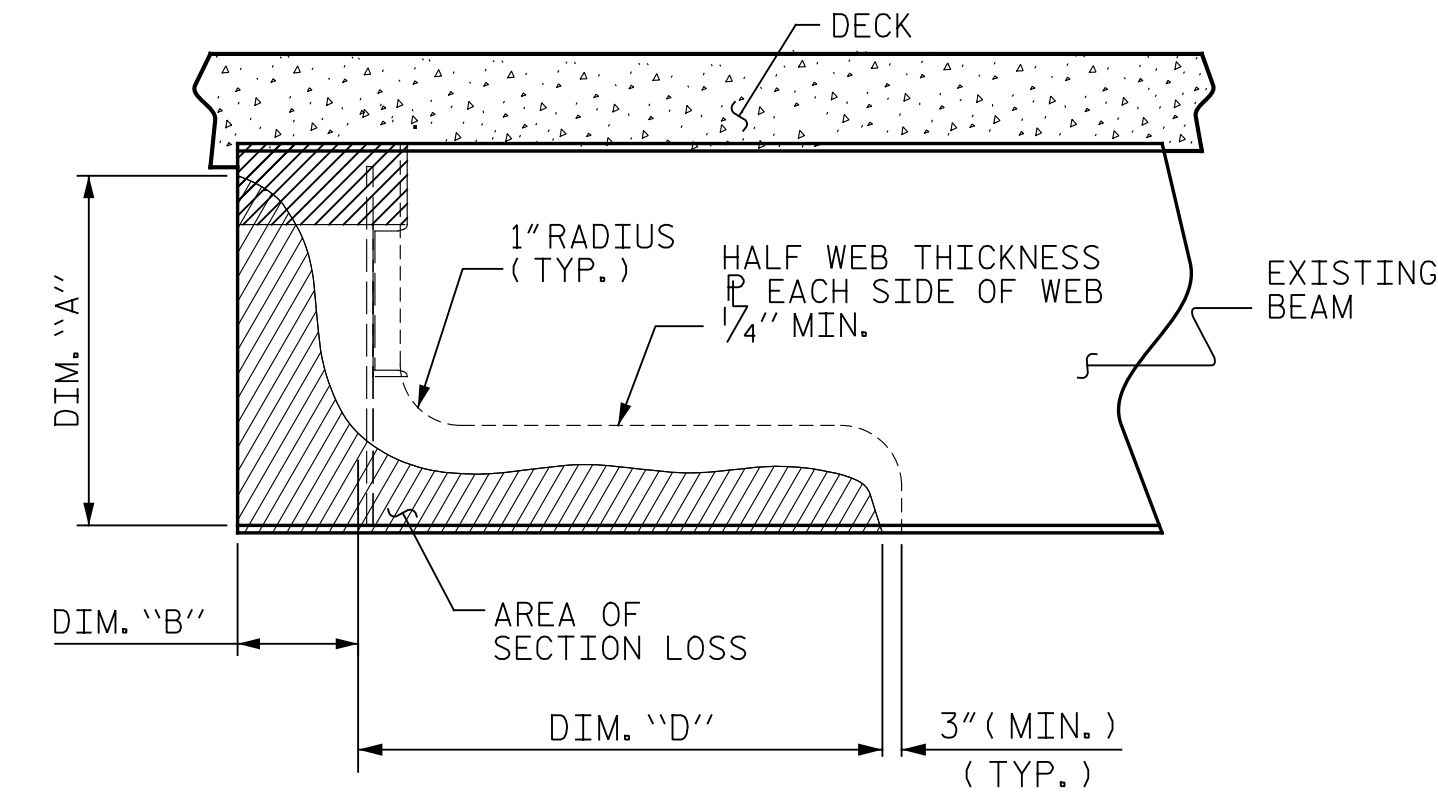
INTERMEDIATE BEAM
PLATING REPAIR



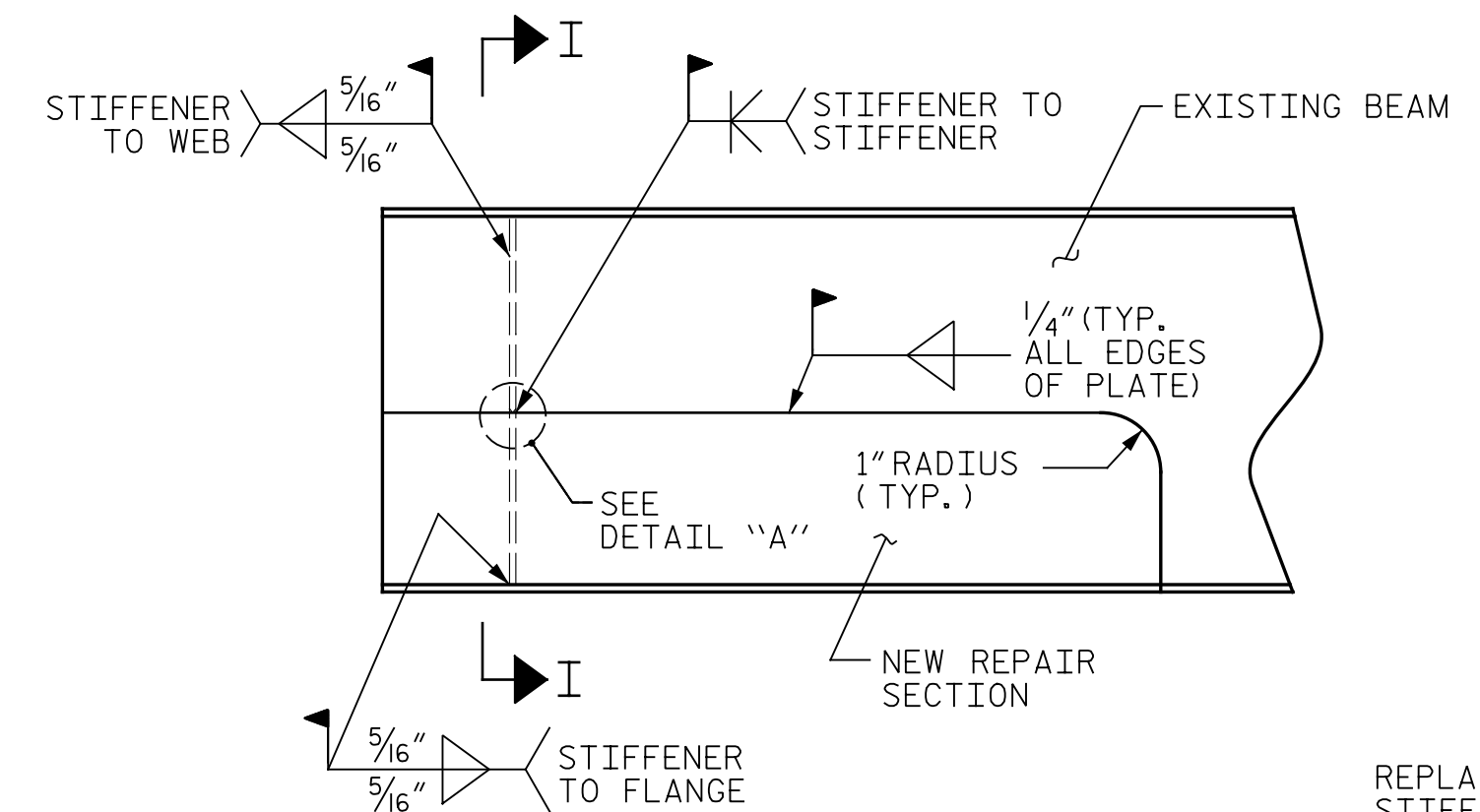
BEAM END SECTION LOSS



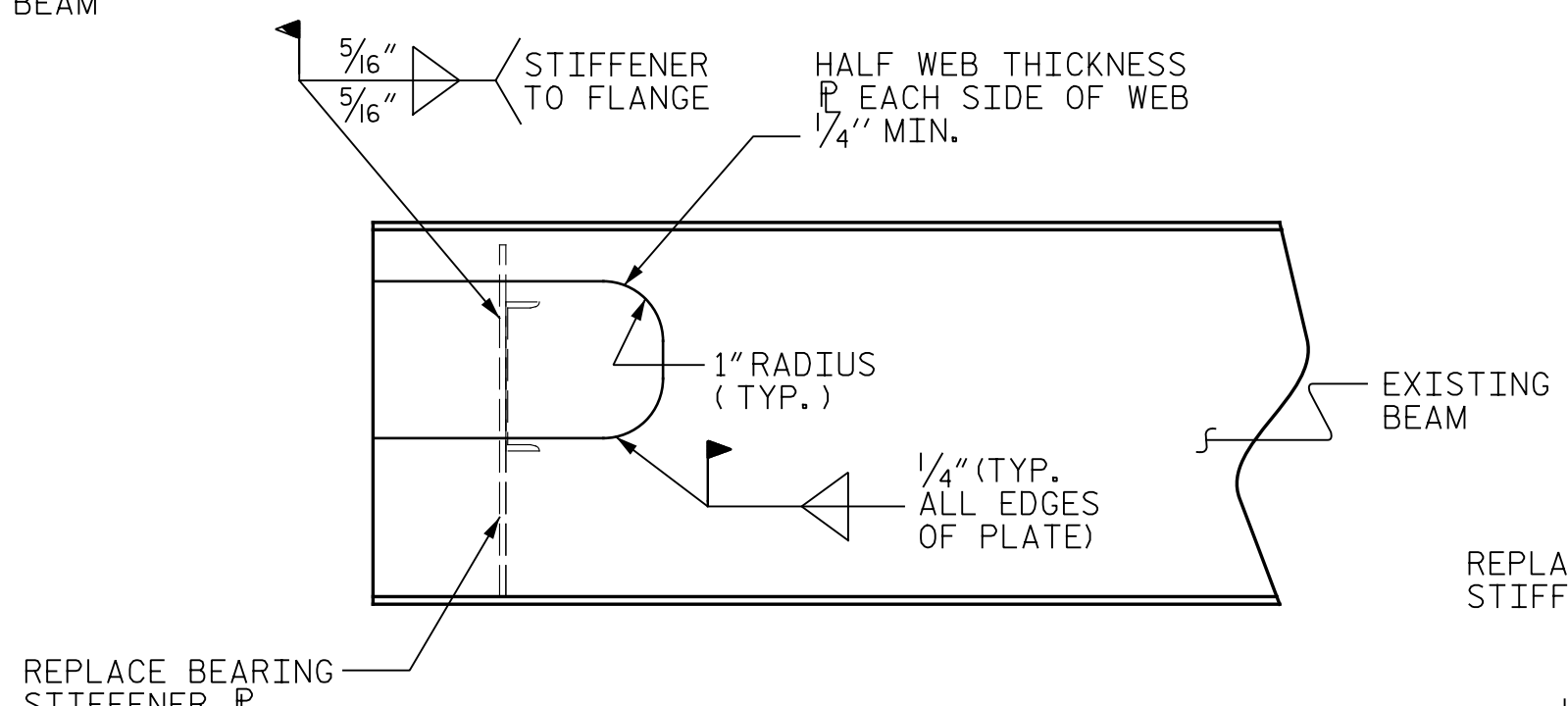
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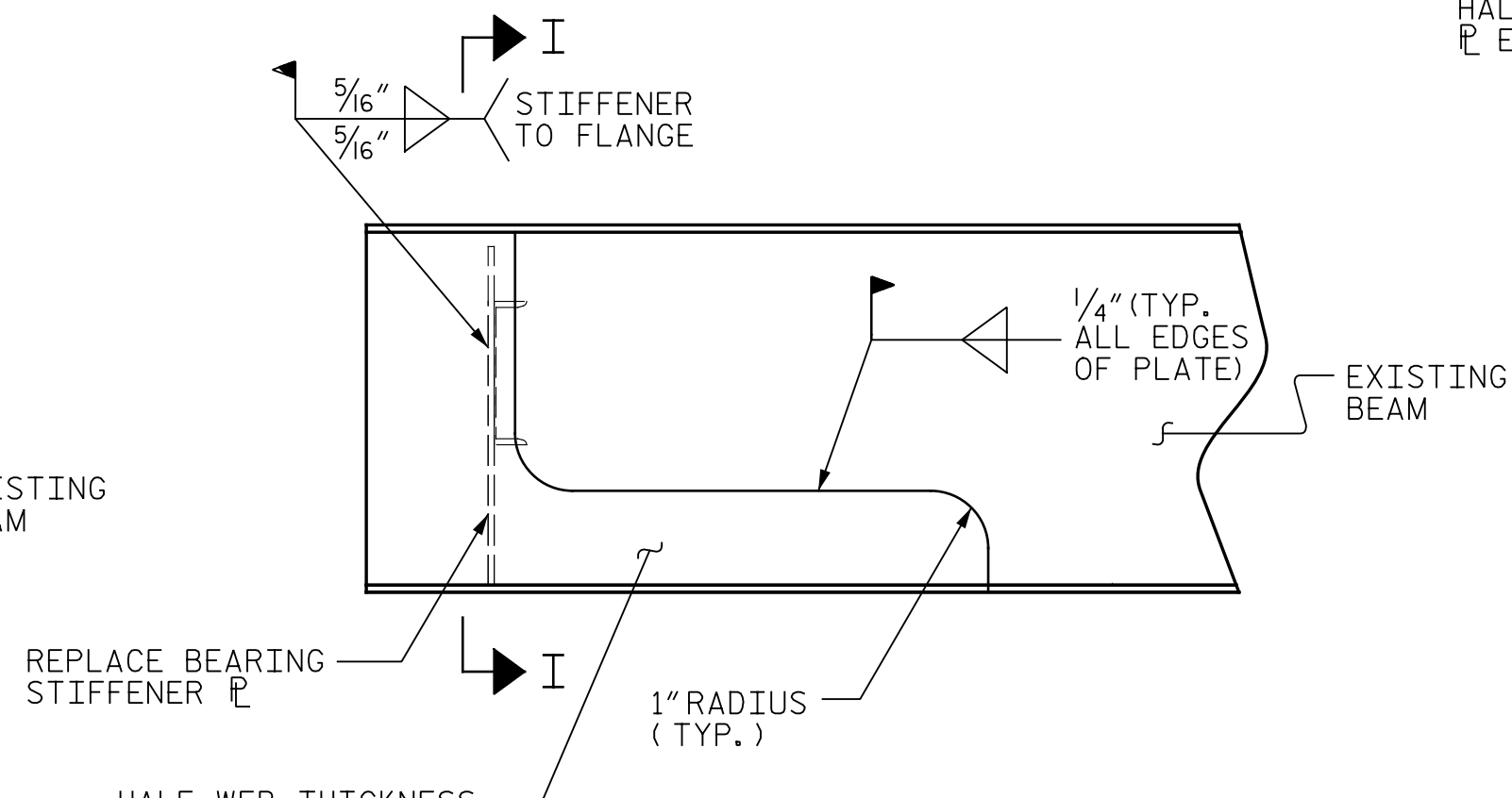
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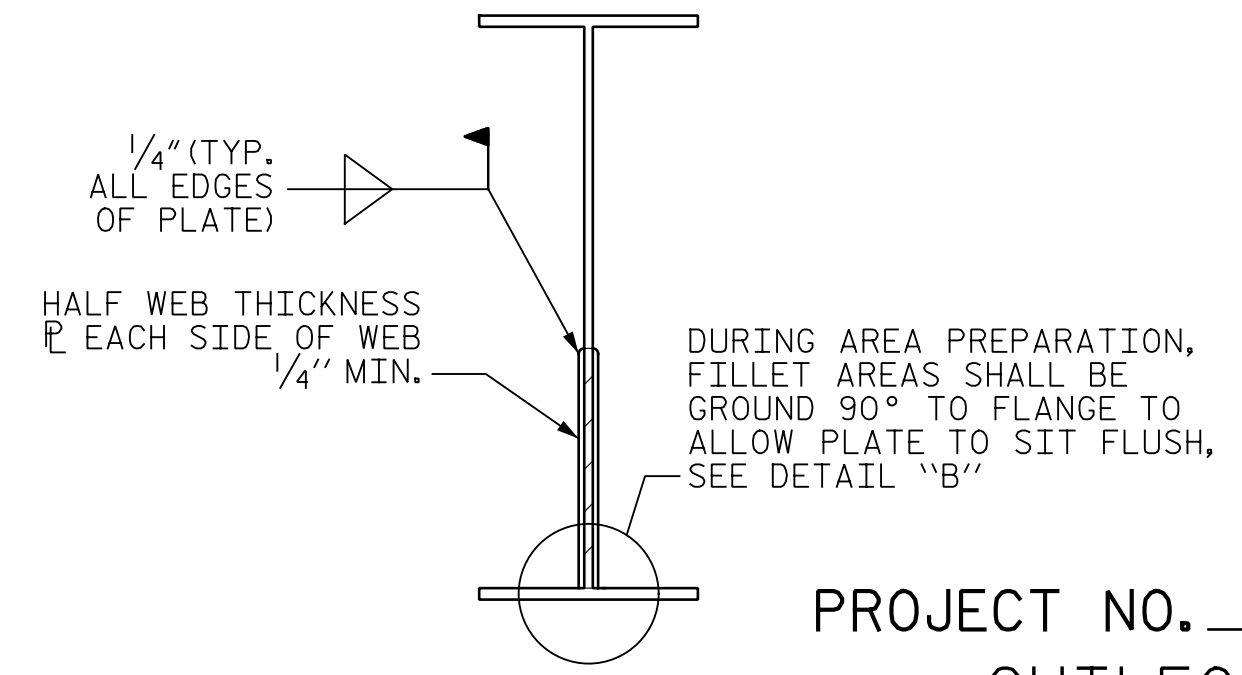
BEAM END
PLATING REPAIR



BEAM END
PLATING REPAIR



BEAM END
PLATING REPAIR



SECTION I-I

BEAM PLATING REPAIR NOTES:

ALL CONDITIONS AND DIMENSIONS SHALL BE FIELD VERIFIED PRIOR TO FABRICATION OR INSTALLATION OF ANY COMPONENTS.

REPAIR PLATES SHALL BE MINIMUM 36 KSI STEEL. USE NEW OR SALVAGED "LIKE NEW" STEEL ONLY.

ALL WELDING SHALL BE IN ACCORDANCE WITH CURRENT APPLICABLE AWS AND NCDOT STANDARD SPECIFICATIONS.

ALL WELDS SHALL BE INSPECTED AND TESTED BY THE NCDOT MATERIALS AND TESTS UNIT IN ACCORDANCE WITH THE CURRENT AWS BRIDGE WELDING CODE AND STANDARD SPECIFICATIONS.

BEAM PLATING REPAIR SEQUENCE:

COORDINATE SCHEDULE WITH MATERIALS AND TESTS UNIT WELD INSPECTOR AT LEAST FOUR DAYS PRIOR TO ANTICIPATED WORK.

REMOVE TRAFFIC LOAD FROM REPAIR AREA BY EITHER CLOSING BRIDGE TO TRAFFIC OR SHIFTING TRAFFIC AWAY FROM REPAIR AREA.

MECHANICALLY CLEAN RUST, SCALE AND EXISTING PAINT TO AT LEAST 3" BEYOND REPAIR AREA.

IF NECESSARY, REMOVE EXISTING STIFFENER TO INSTALL WELDED PLATE REPAIR. REPLACE WITH A NEW STIFFENER PLATE OF SIMILAR SIZE. FOR STIFFENER/CONNECTOR PLATE REPAIR DETAILS, SEE "BEAM REPAIR DETAILS" SHEET.

IF BEAM DETERIORATION EXTENDS INTO THE CONCRETE DIAPHRAGM THEN CHIP AWAY CONCRETE TO DETERMINE THE EXTENT OF THE DAMAGE.

PRIME ENTIRE REPAIR AREA AND REPAIR PLATES WITH AN ORGANIC ZINC PRIMER PRIOR TO WELDING NEW PLATES. REMOVE PRIMER IN WELD AREA.

ONE PLATE SHALL BE PLACED, AS INDICATED, ON EACH SIDE OF THE BEAM WEB.

EACH PLATE SHALL BE APPROXIMATELY ONE-HALF THE ORIGINAL THICKNESS OF THE BEAM WEB.

FULLY WELD ALONG TOP AND SIDES OF PLATE.

ONCE THE REPAIR IS COMPLETE, GRIND ALL WELDS FLUSH. ANY GOUGES OR INDENTATIONS FROM IMPACT ON BEAMS SHALL BE GROUND SMOOTH. CLEAN AREA TO REMOVE DEBRIS AND OILS FROM REPAIR PROCESS PRIOR TO PAINTING.

FOR PAINTING STEEL STRUCTURES, SEE SECTION 442 OF THE STANDARD SPECIFICATIONS.

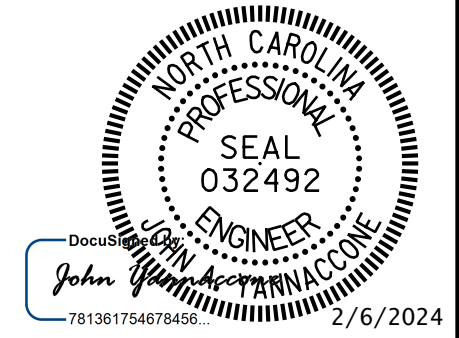
THOROUGHLY CLEAN BEAM PLATING LOCATIONS BY WIRE BRUSHING THE DAMAGED AREAS AND REMOVING ALL LOOSE AND CRACKED COATING, AFTER WHICH GIVE THE CLEANED AREA 2 COATS OF NON-AEROSOL ORGANIC ZINC REPAIR PAINT, IN ACCORDANCE WITH ARTICLE 1076-7 OF THE STANDARD SPECIFICATIONS.

SPOT PAINTING OF BEAM PLATING REPAIR LOCATIONS WILL BE INCLUDED IN THE UNIT PRICE BID FOR BEAM PLATING REPAIR.

AFTER BEAMS AND/OR STIFFENERS/CONNECTOR PLATES ARE REPAIRED AND PAINTED, ANY CONCRETE REMOVED FROM THE BENT DIAPHRAGMS SHALL BE CAST BACK. ANY REINFORCING STEEL CUT DURING THE REMOVAL PROCESS SHALL BE SPLICED WITH A SIMILAR SIZE BAR WITH AT LEAST A ONE FOOT SPLICE TO THE EXISTING STEEL. NO SEPARATE PAYMENT SHALL BE MADE FOR CONCRETE AND REINFORCING STEEL AS THIS IS CONSIDERED INCIDENTAL TO THE PAY ITEM "BEAM PLATING REPAIR". FOR BEAM PLATING REPAIR, SEE SPECIAL PROVISIONS.

RETURN TRAFFIC TO NORMAL PATTERN.

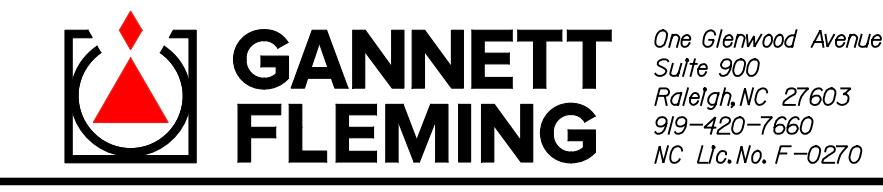
PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400329



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BEAM PLATING
 REPAIR DETAILS

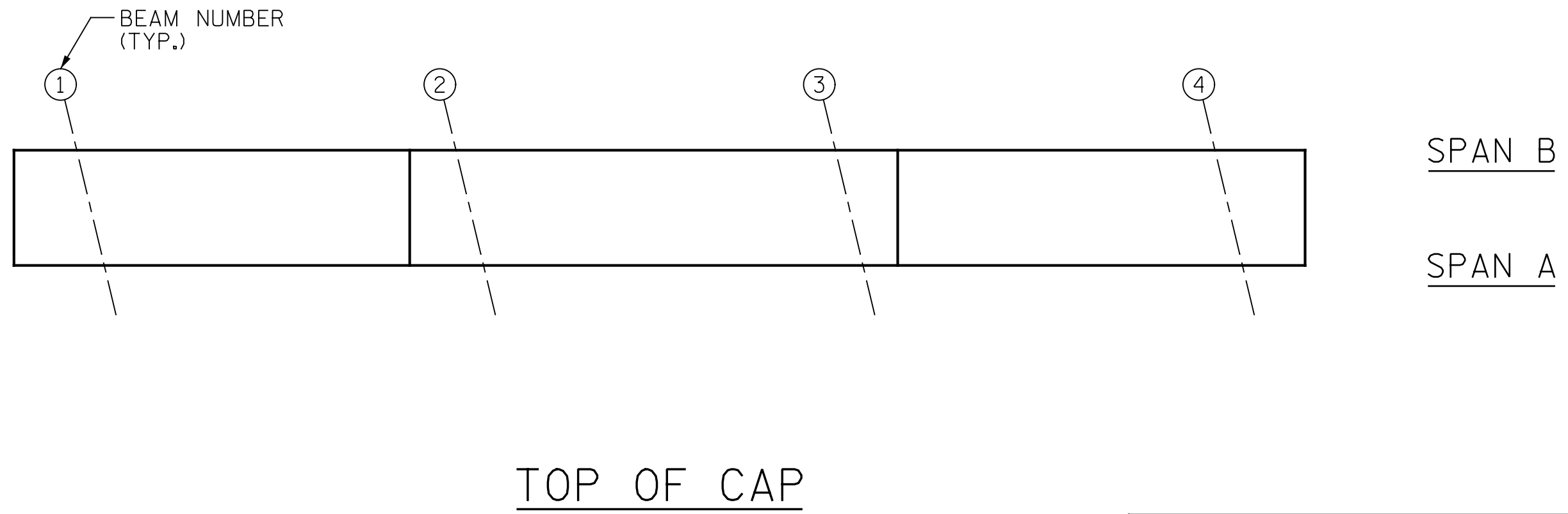
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 CHECKED BY: J. YANACCONE DATE: 10/2022



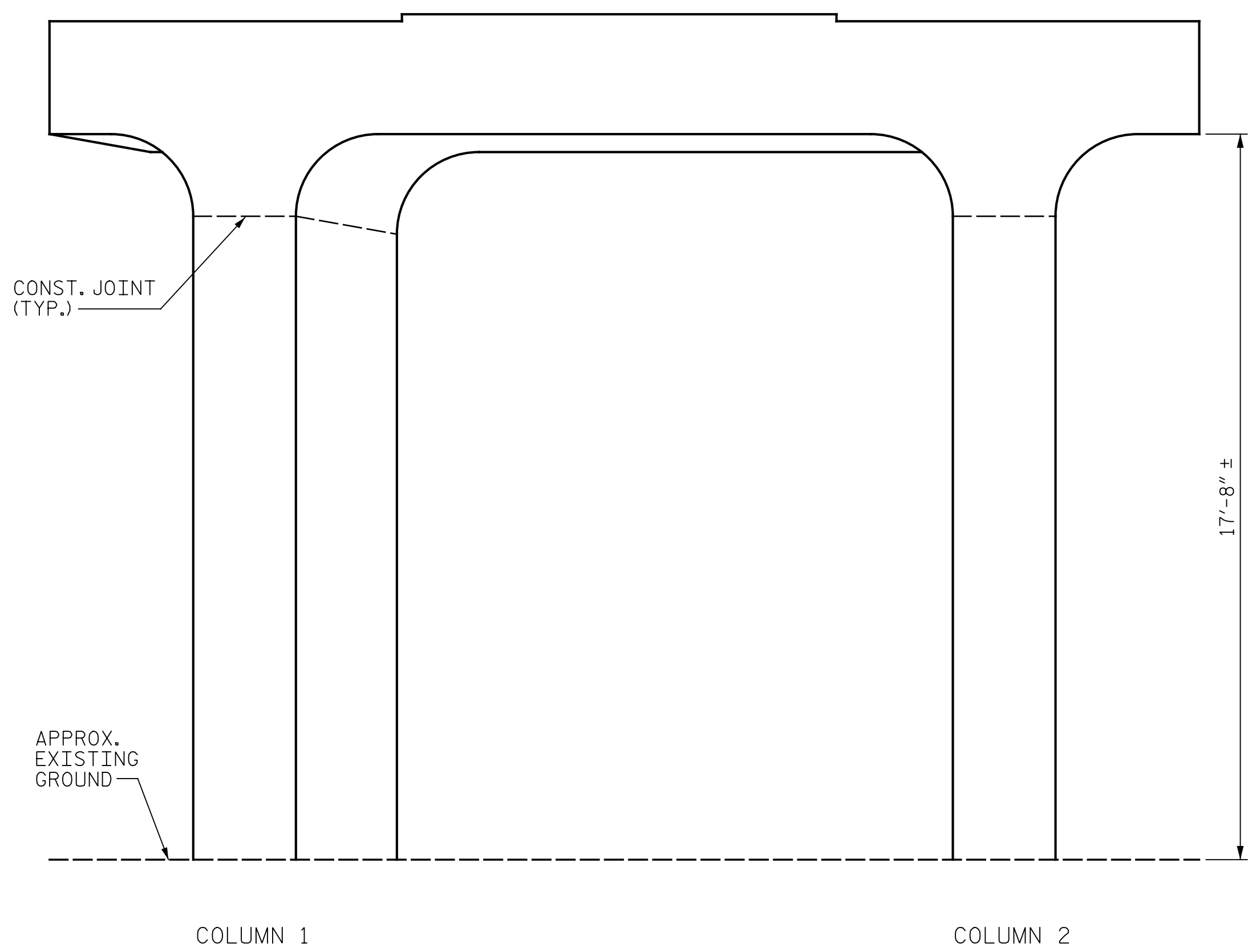
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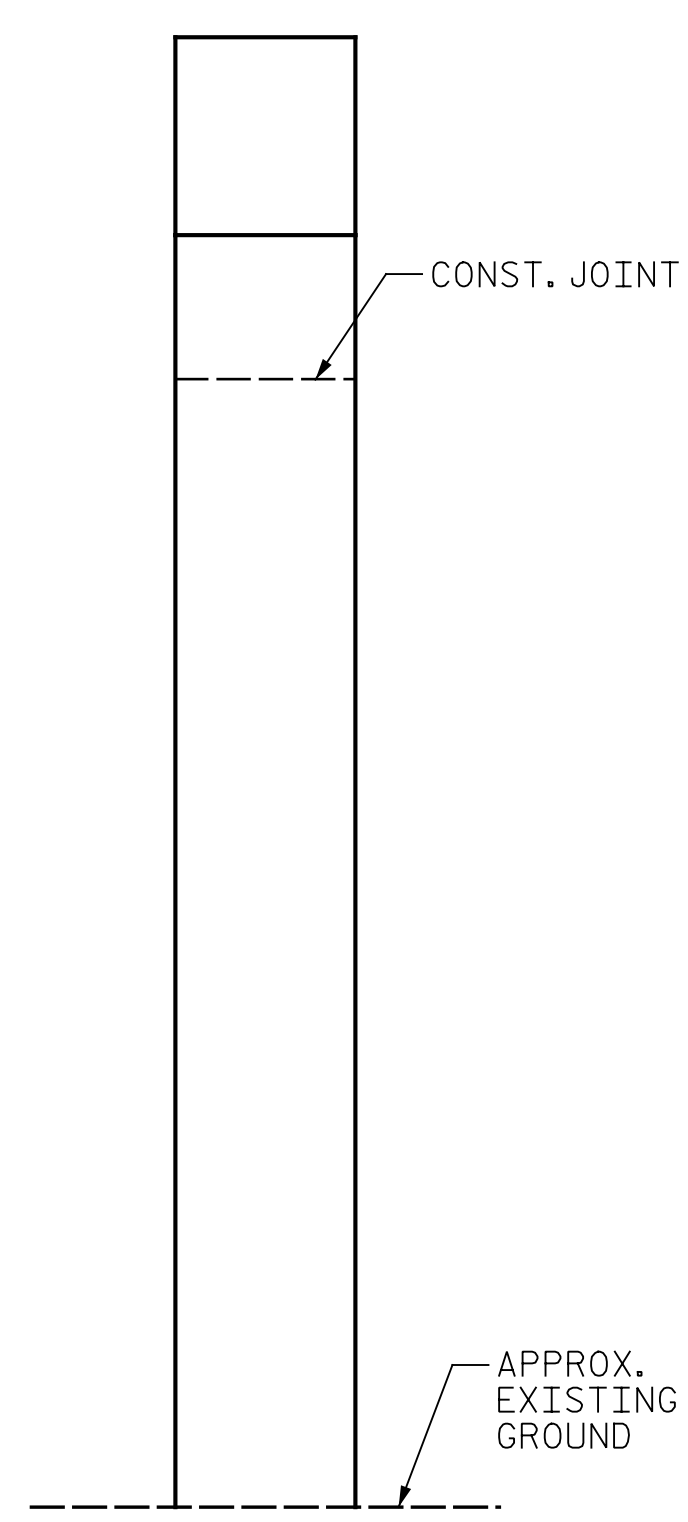
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NO REPAIRS WERE NOTED FOR BENT 1 DURING FIELD SCOPING. THE CONTRACTOR AND ENGINEER SHALL INSPECT BENT 1 PRIOR TO BEGINNING WORK.



ELEVATION



END VIEW
COLUMN 2

AS-BUILT REPAIR QUANTITY TABLE

BENT 1 REPAIRS	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP	0.0	0.0			
COLUMN	0.0	0.0			
CONCRETE REPAIRS	0.0	0.0			
EPOXY RESIN INJECTION		LENGTH LF	LENGTH LF		
CAP		0.0			
COLUMN		0.0			
EPOXY COATING		SQ. FT	SQ. FT		
TOP OF BENT CAP		64			

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

NOTES:

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

FOR REPAIRS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.
 FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.
 FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.
 SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

CONTRACTOR SHALL SAW CUT TO A MINIMUM DEPTH OF 1/2" BUT REINFORCING STEEL SHALL NOT BE DAMAGED. CONTRACTOR SHALL REMOVE SURFACE CONCRETE TO VERIFY THAT SAW CUT DEPTH WILL NOT DAMAGE EXISTING REINFORCING STEEL.

CONTRACTOR SHALL SAW CUT THE REPAIR AREAS SO THAT THE CORNERS ARE SQUARE AS INDICATED ON THE DETAILS.

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.

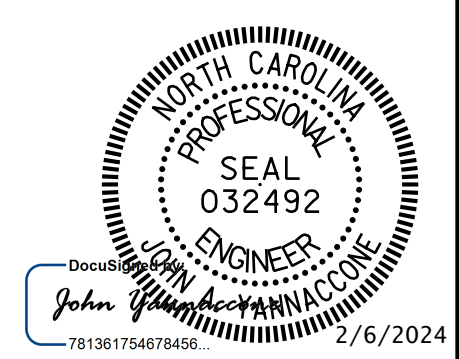
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

WHEN COLUMN REPAIRS ARE INDICATED TO GROUND LINE, EXTEND REPAIR ONE (1) FOOT MIN. BELOW GROUND LINE.

- SHOTCRETE REPAIR
- CONCRETE REPAIR (FORM & POUR)
- ERI - EPOXY RESIN INJECTION

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400329

SHEET 1 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 1
SPAN A SIDE

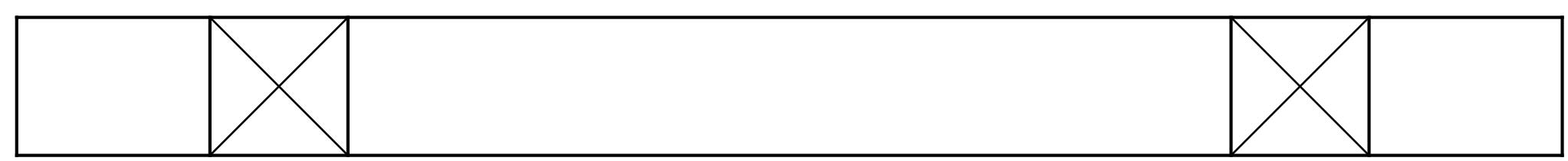
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 CHECKED BY : J. YANACCONE DATE : 10/2022



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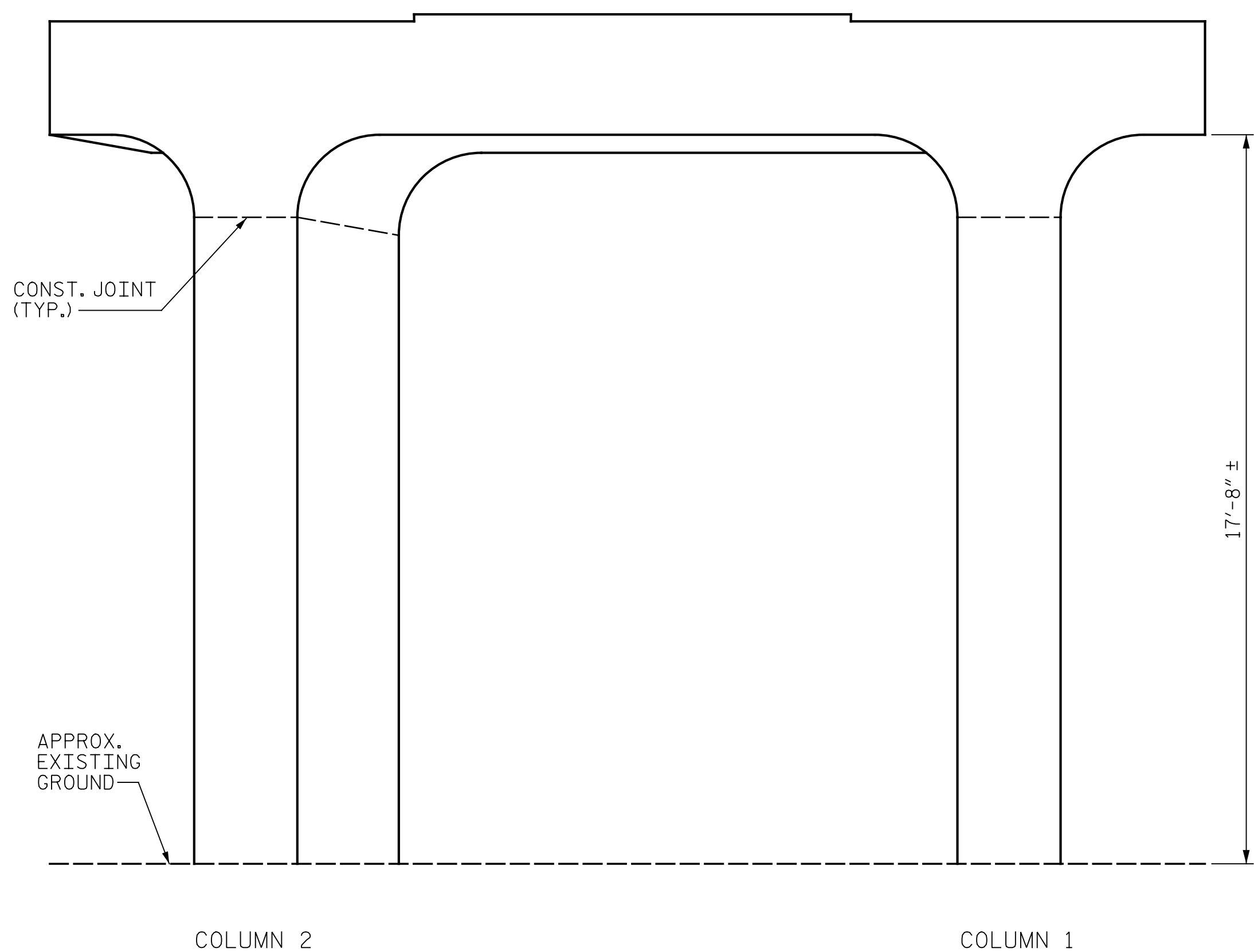


SPAN A

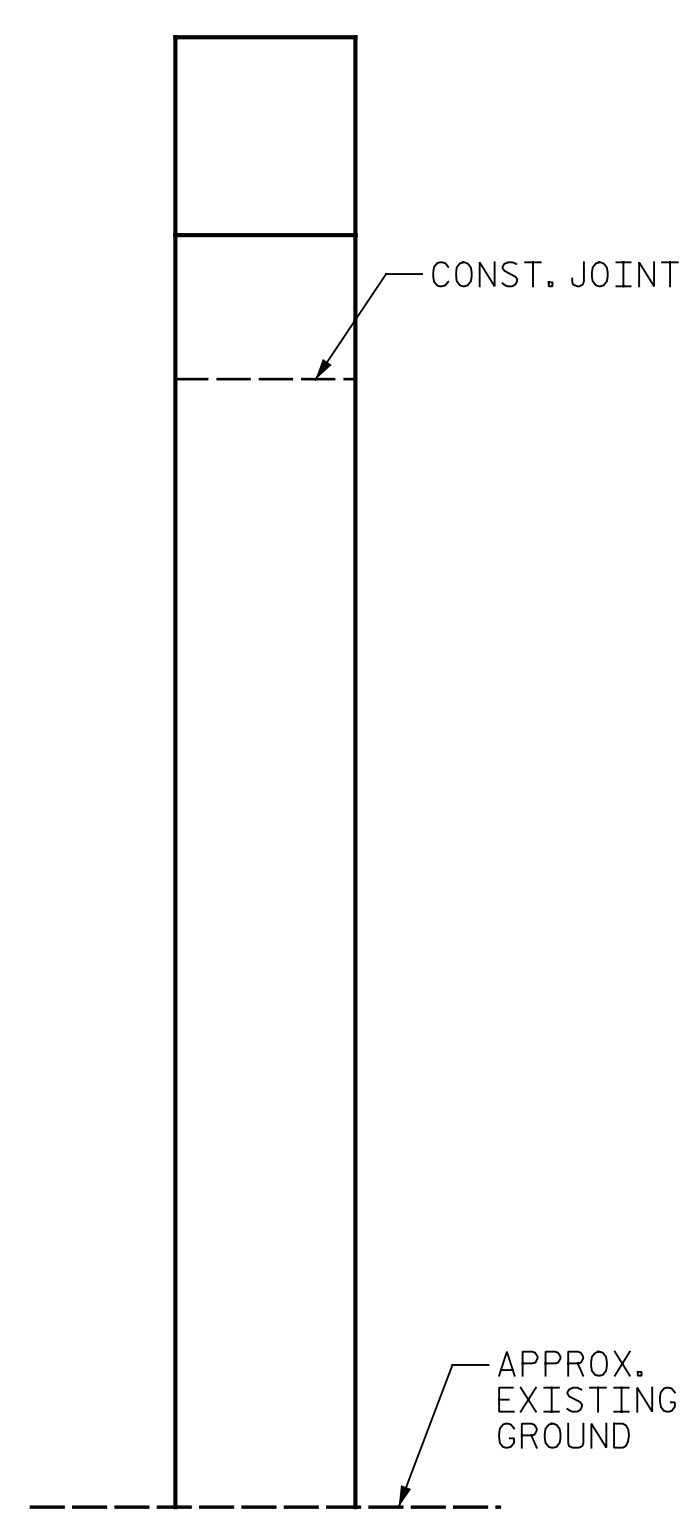
SPAN B

BOTTOM OF CAP

NO REPAIRS WERE NOTED FOR BENT 1 DURING FIELD SCOPING. THE CONTRACTOR AND ENGINEER SHALL INSPECT BENT 1 PRIOR TO BEGINNING WORK.



ELEVATION



END VIEW
COLUMN 1

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

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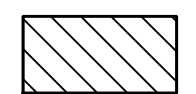
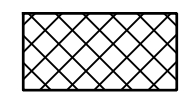

CONTRACTOR SHALL SAW CUT TO A MINIMUM DEPTH OF 1/2" BUT REINFORCING STEEL SHALL NOT BE DAMAGED. CONTRACTOR SHALL REMOVE SURFACE CONCRETE TO VERIFY THAT SAW CUT DEPTH WILL NOT DAMAGE EXISTING REINFORCING STEEL.

CONTRACTOR SHALL SAW CUT THE REPAIR AREAS SO THAT THE CORNERS ARE SQUARE AS INDICATED ON THE DETAILS.

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.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

WHEN COLUMN REPAIRS ARE INDICATED TO GROUND LINE, EXTEND REPAIR ONE (1) FOOT MIN. BELOW GROUND LINE.

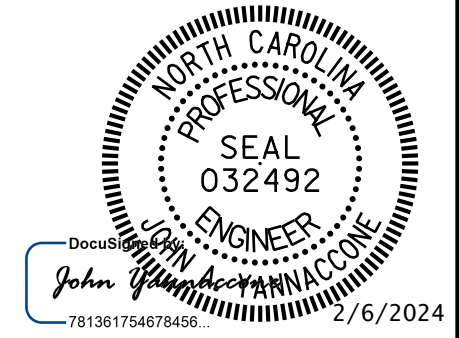
-  SHOTCRETE REPAIR
-  CONCRETE REPAIR (FORM & POUR)
-  ERI - EPOXY RESIN INJECTION

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400329

SHEET 2 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 1
SPAN B SIDE



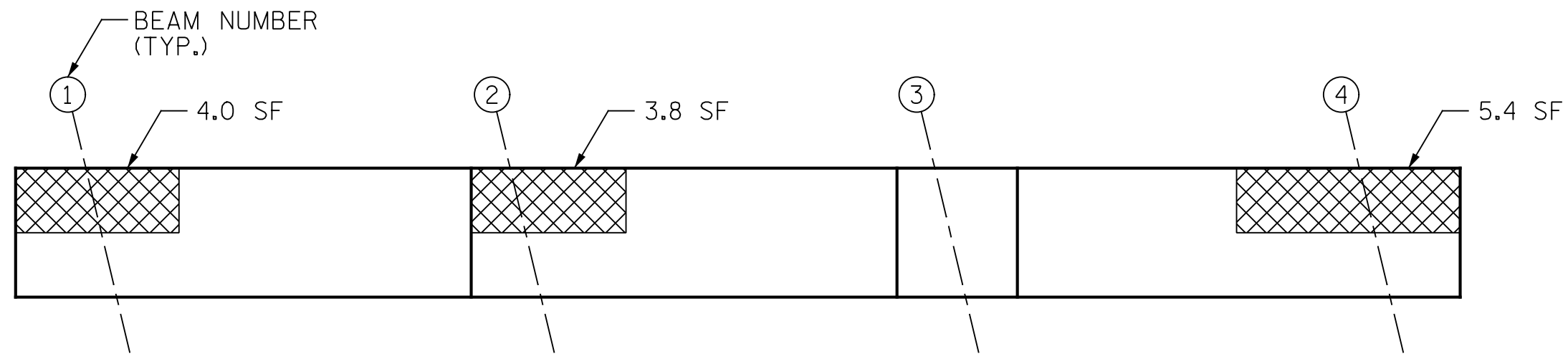
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 CHECKED BY : J. YANACCONO DATE : 10/2022



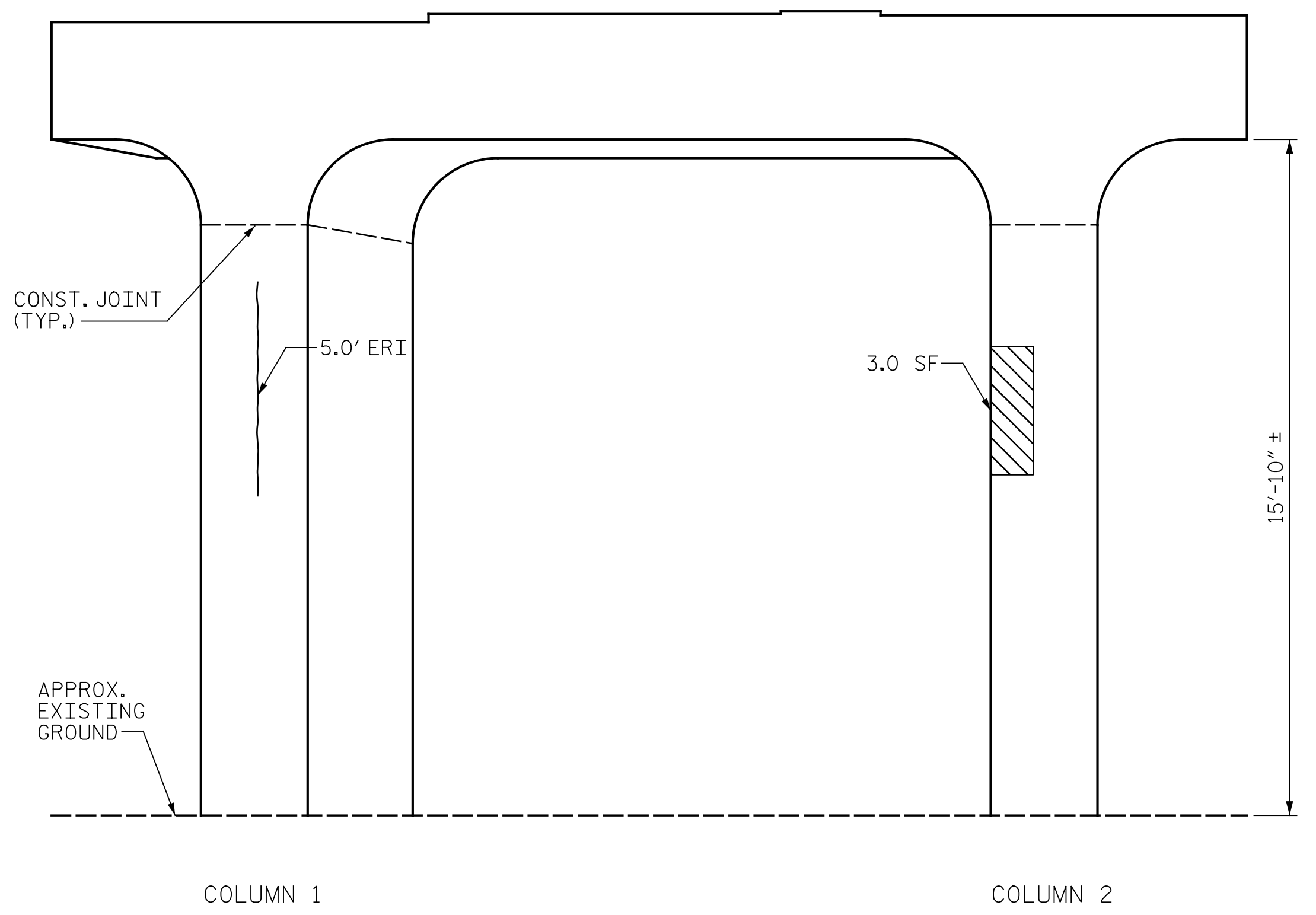
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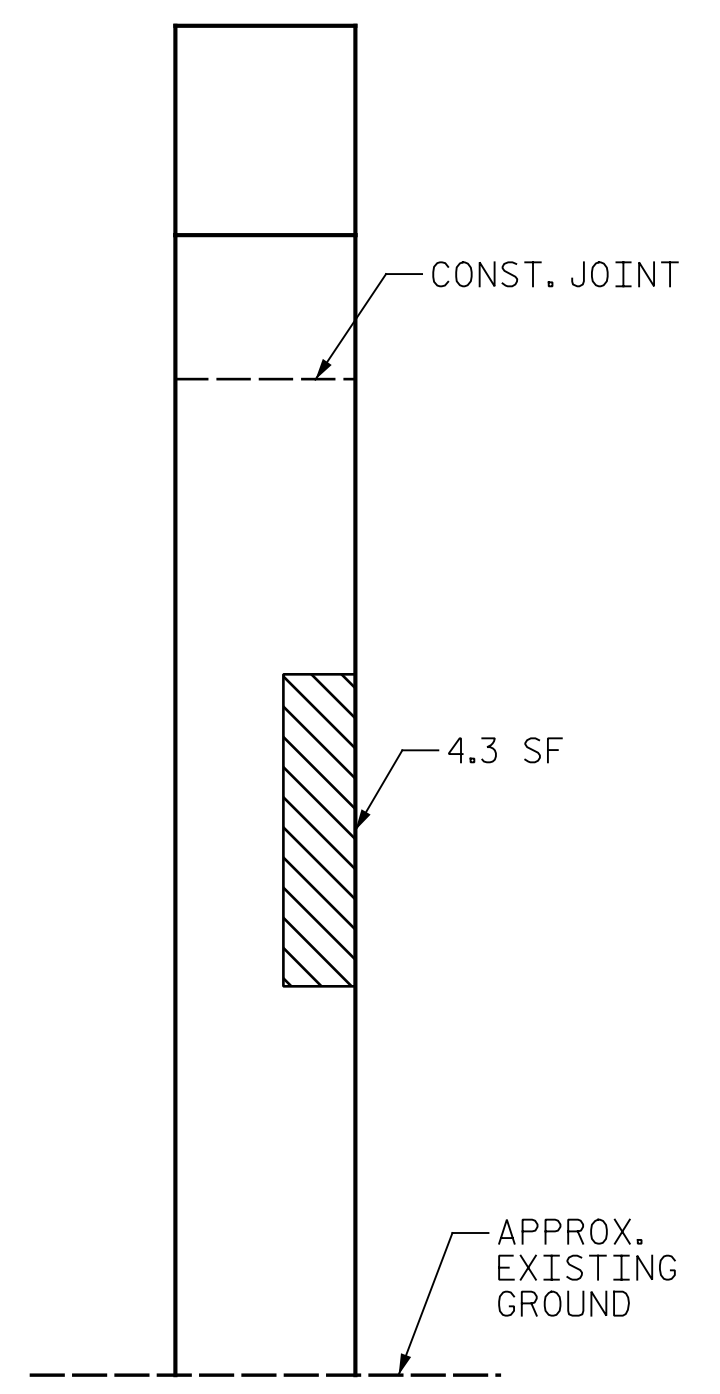
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TOP OF CAP



ELEVATION



END VIEW
COLUMN 2

AS-BUILT REPAIR QUANTITY TABLE

BENT 2 REPAIRS	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP	13.8	6.9			
COLUMN	14.6	7.3			
CONCRETE REPAIRS	18.5	9.3			
EPOXY RESIN INJECTION		LENGTH LF	LENGTH LF		
CAP		0.0			
COLUMN		5.0			
EPOXY COATING		SQ. FT	SQ. FT		
TOP OF BENT CAP		64			

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

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CONTRACTOR SHALL SAW CUT TO A MINIMUM DEPTH OF 1/2" BUT REINFORCING STEEL SHALL NOT BE DAMAGED. CONTRACTOR SHALL REMOVE SURFACE CONCRETE TO VERIFY THAT SAW CUT DEPTH WILL NOT DAMAGE EXISTING REINFORCING STEEL.

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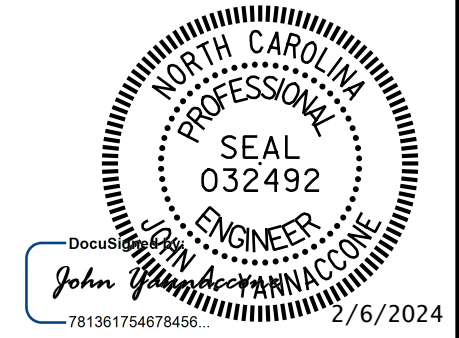
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

WHEN COLUMN REPAIRS ARE INDICATED TO GROUND LINE, EXTEND REPAIR ONE (1) FOOT MIN. BELOW GROUND LINE.

- SHOTCRETE REPAIR
- CONCRETE REPAIR (FORM & POUR)
- ERI - EPOXY RESIN INJECTION

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400329

SHEET 1 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 2
SPAN B SIDE

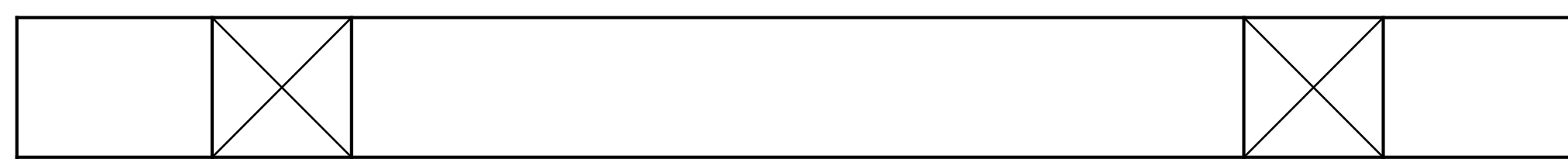
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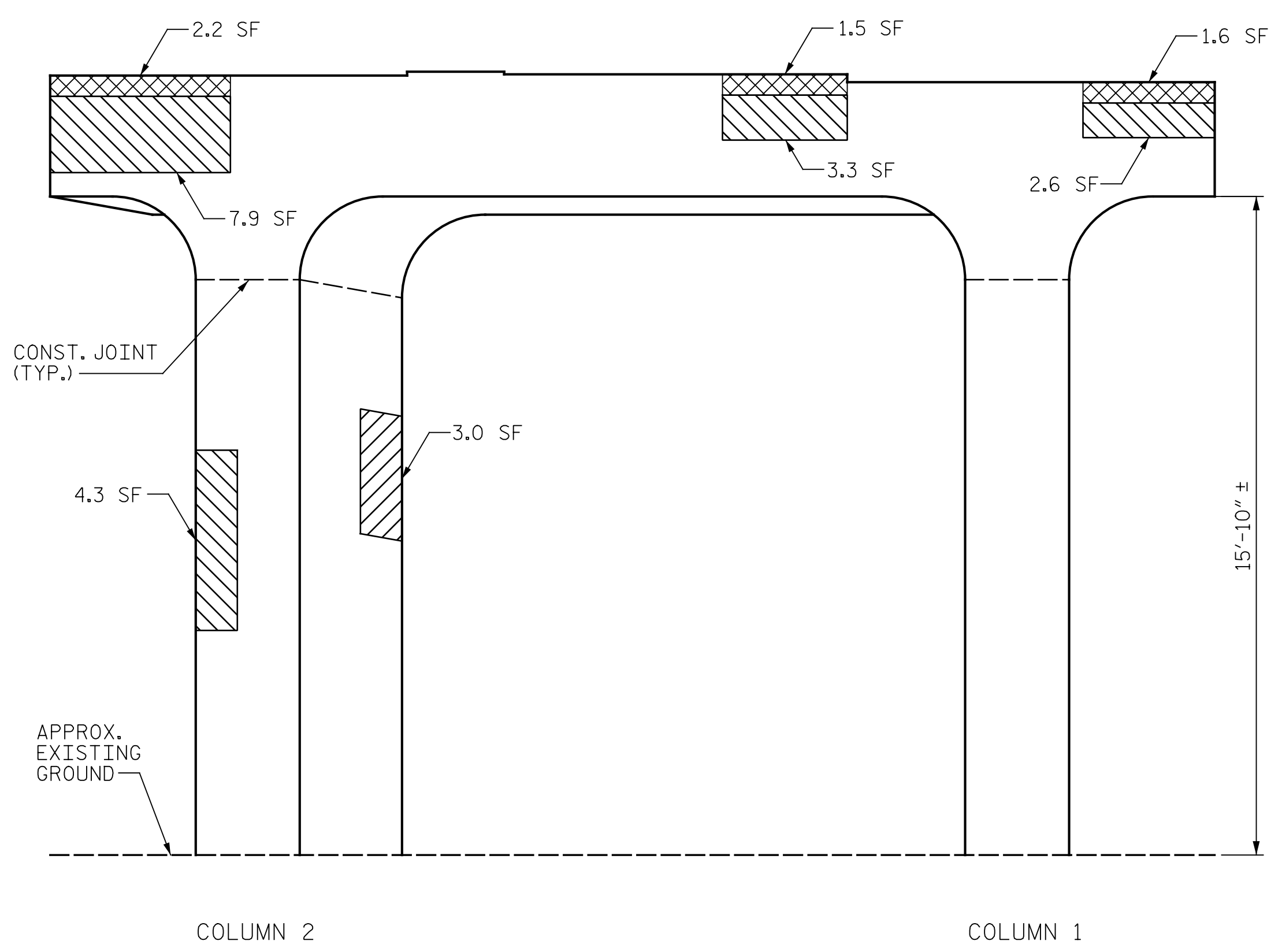
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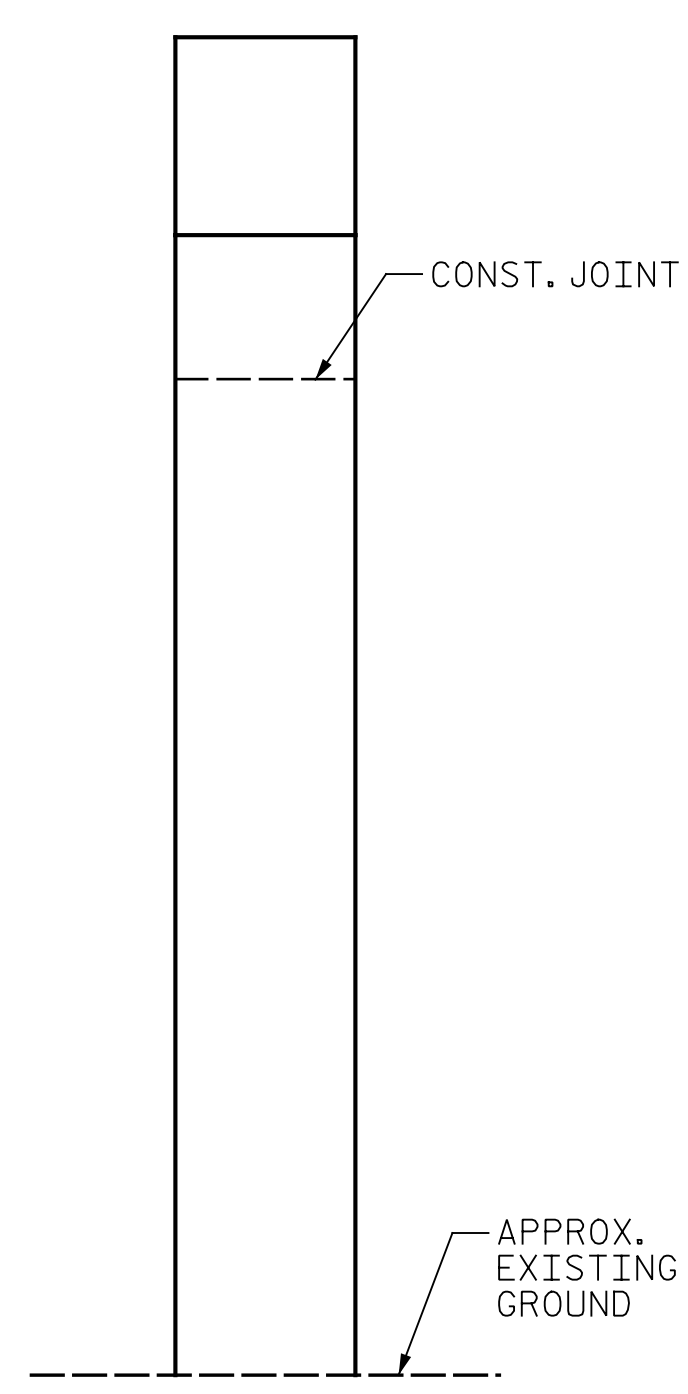
SPAN B

SPAN C

BOTTOM OF CAP



ELEVATION



END VIEW
COLUMN 1

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.

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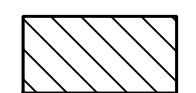
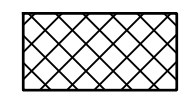

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CONTRACTOR SHALL SAW CUT THE REPAIR AREAS SO THAT THE CORNERS ARE SQUARE AS INDICATED ON THE DETAILS.

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.

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WHEN COLUMN REPAIRS ARE INDICATED TO GROUND LINE, EXTEND REPAIR ONE (1) FOOT MIN. BELOW GROUND LINE.

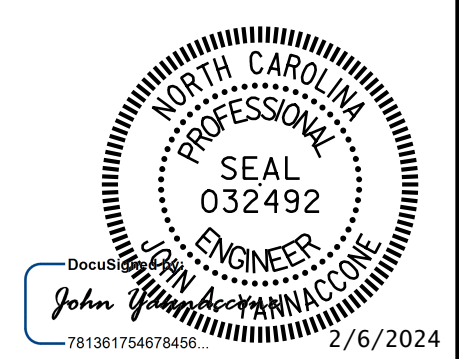
-  SHOTCRETE REPAIR
-  CONCRETE REPAIR (FORM & POUR)
-  ERI - EPOXY RESIN INJECTION

PROJECT NO. I-5955A
GUILFORD COUNTY
BRIDGE NO. 400329

SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 2
SPAN C SIDE



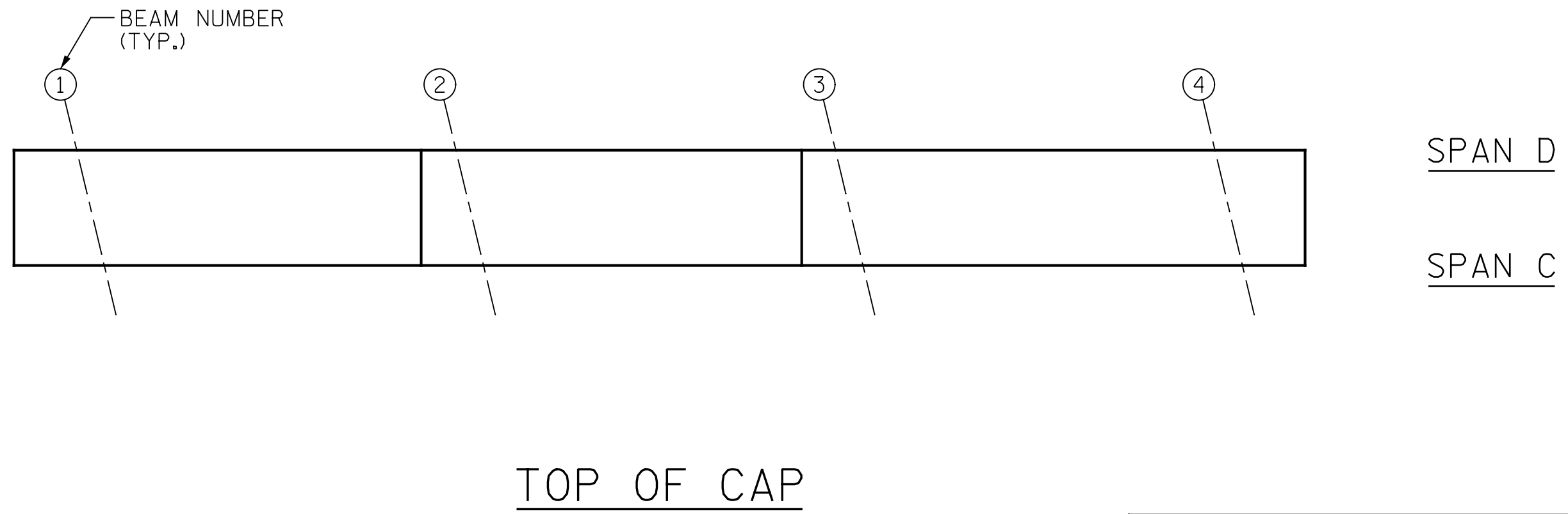
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CHECKED BY : J. YANACCONO DATE : 10/2022

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One Glenwood Avenue
Suite 500
Raleigh, NC 27603
919-420-7660
NC Lic. No. F-0270

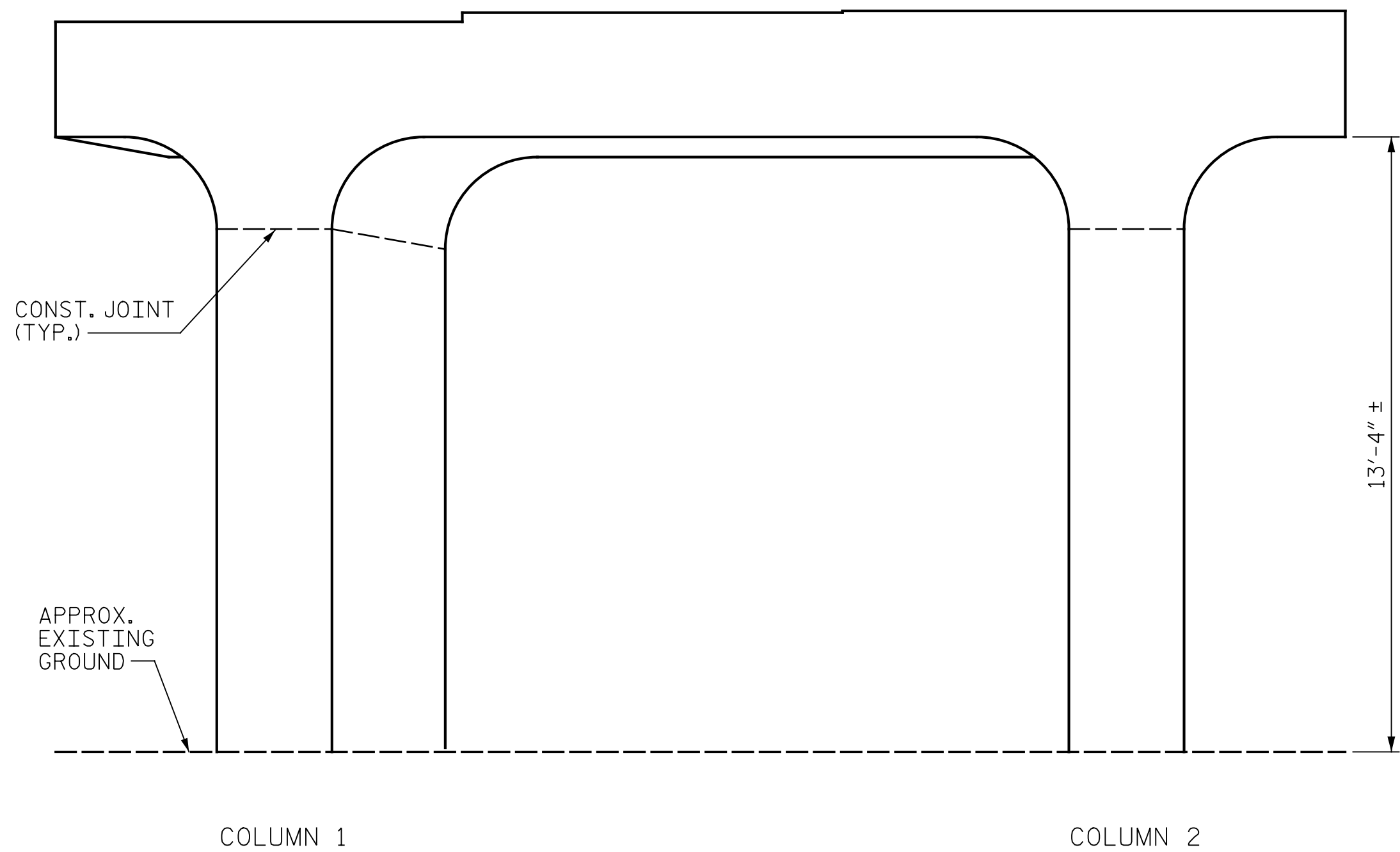
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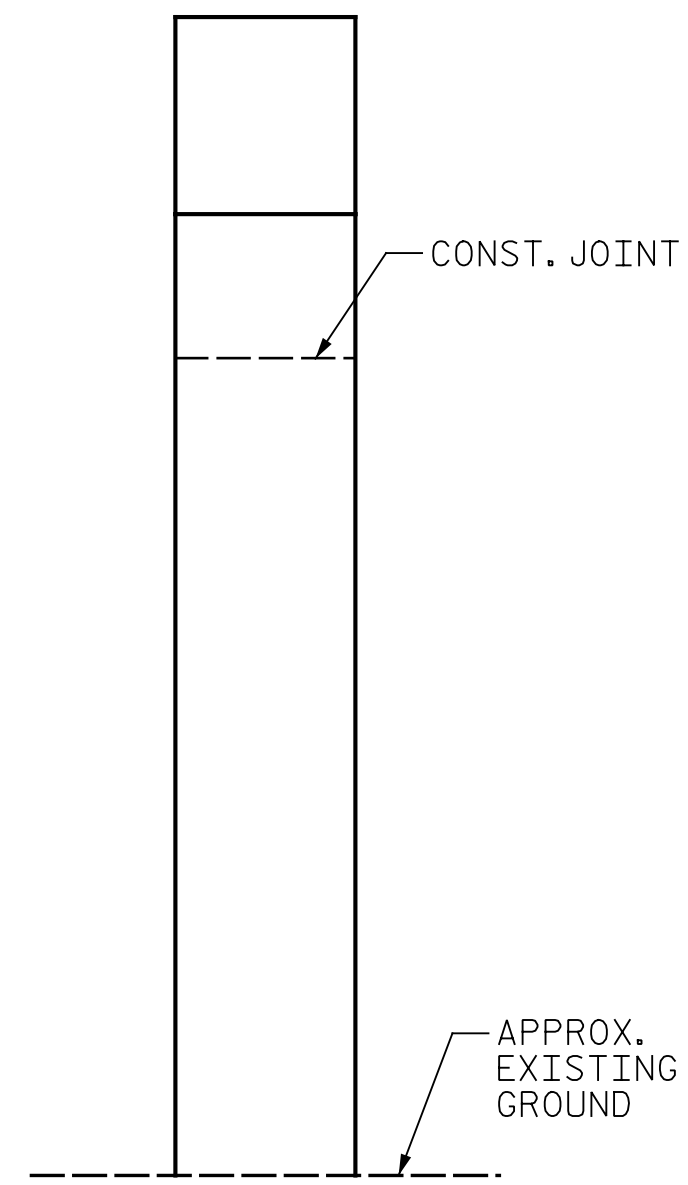
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NO REPAIRS WERE NOTED FOR BENT 3 DURING FIELD SCOPING. THE CONTRACTOR AND ENGINEER SHALL INSPECT BENT 3 PRIOR TO BEGINNING WORK.



ELEVATION



END VIEW
COLUMN 2

AS-BUILT REPAIR QUANTITY TABLE					
BENT 3 REPAIRS	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP	0.0	0.0			
COLUMN	0.0	0.0			
CONCRETE REPAIRS	0.0	0.0			
EPOXY RESIN INJECTION		LENGTH LF	LENGTH LF		
CAP		0.0			
COLUMN		0.0			
EPOXY COATING		SQ. FT	SQ. FT		
TOP OF BENT CAP		64			

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

NOTES:

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

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

CONTRACTOR SHALL SAW CUT TO A MINIMUM DEPTH OF 1/2" BUT REINFORCING STEEL SHALL NOT BE DAMAGED. CONTRACTOR SHALL REMOVE SURFACE CONCRETE TO VERIFY THAT SAW CUT DEPTH WILL NOT DAMAGE EXISTING REINFORCING STEEL.

CONTRACTOR SHALL SAW CUT THE REPAIR AREAS SO THAT THE CORNERS ARE SQUARE AS INDICATED ON THE DETAILS.

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.

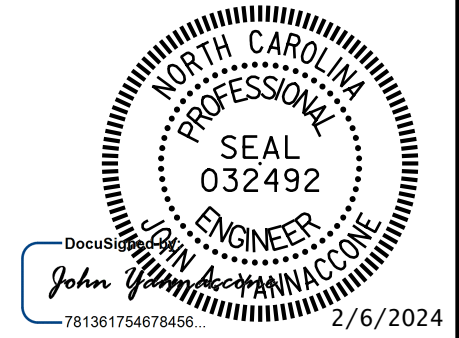
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

WHEN COLUMN REPAIRS ARE INDICATED TO GROUND LINE, EXTEND REPAIR ONE (1) FOOT MIN. BELOW GROUND LINE.

- SHOTCRETE REPAIR
- CONCRETE REPAIR (FORM & POUR)
- ERI - EPOXY RESIN INJECTION

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400329

SHEET 1 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**BENT 3
 SPAN C SIDE**

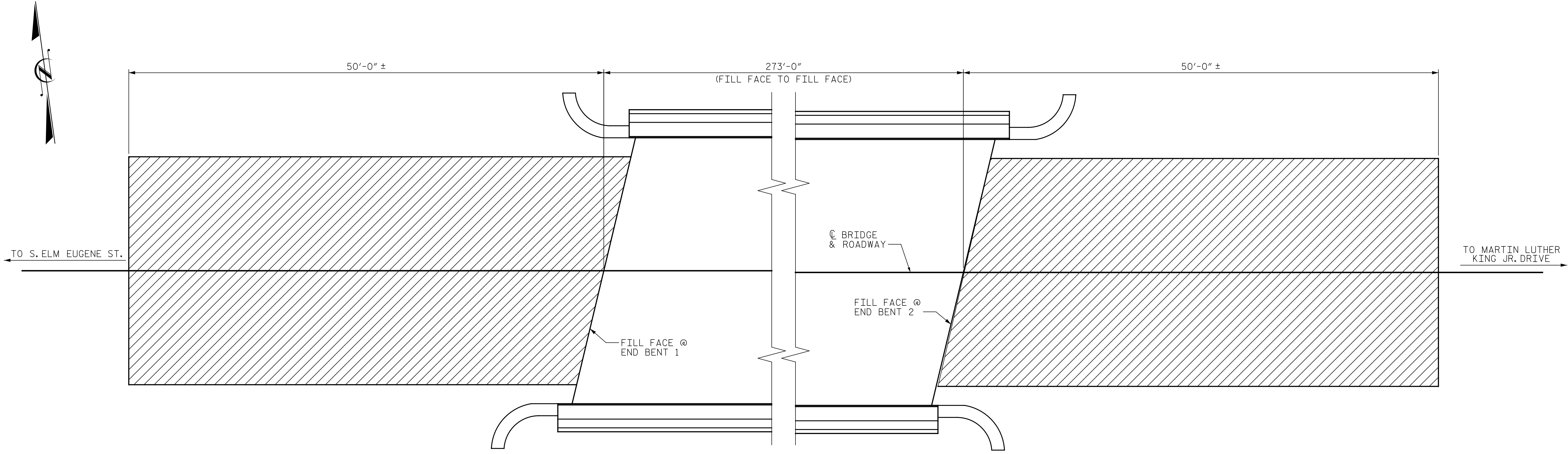
DRAWN BY : J. HARRIS DATE : 10/2022
 CHECKED BY : J. YANNACCONE DATE : 10/2022



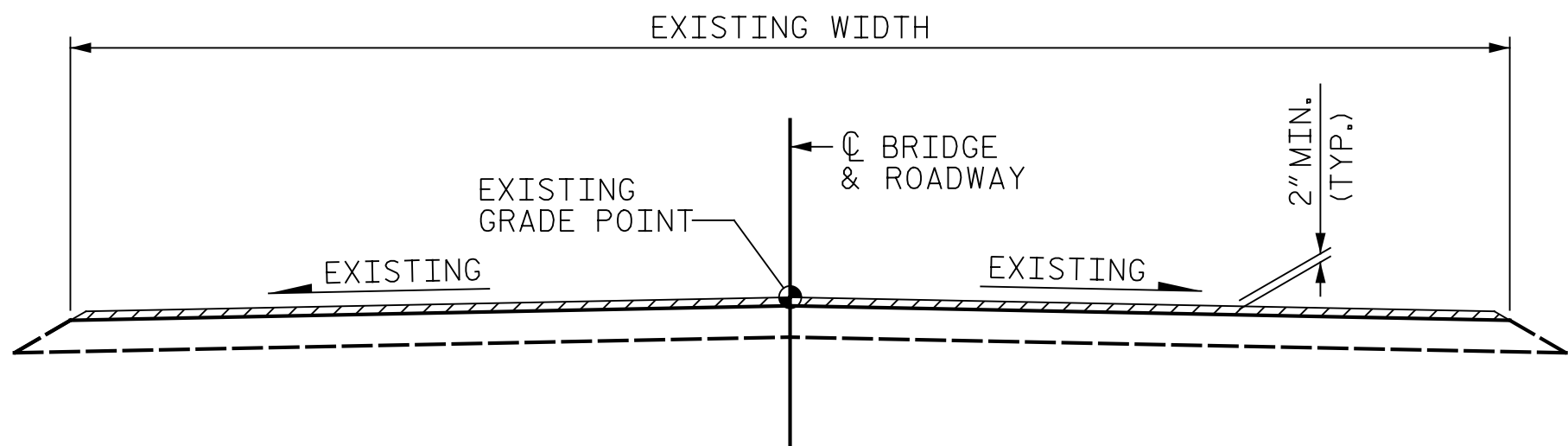
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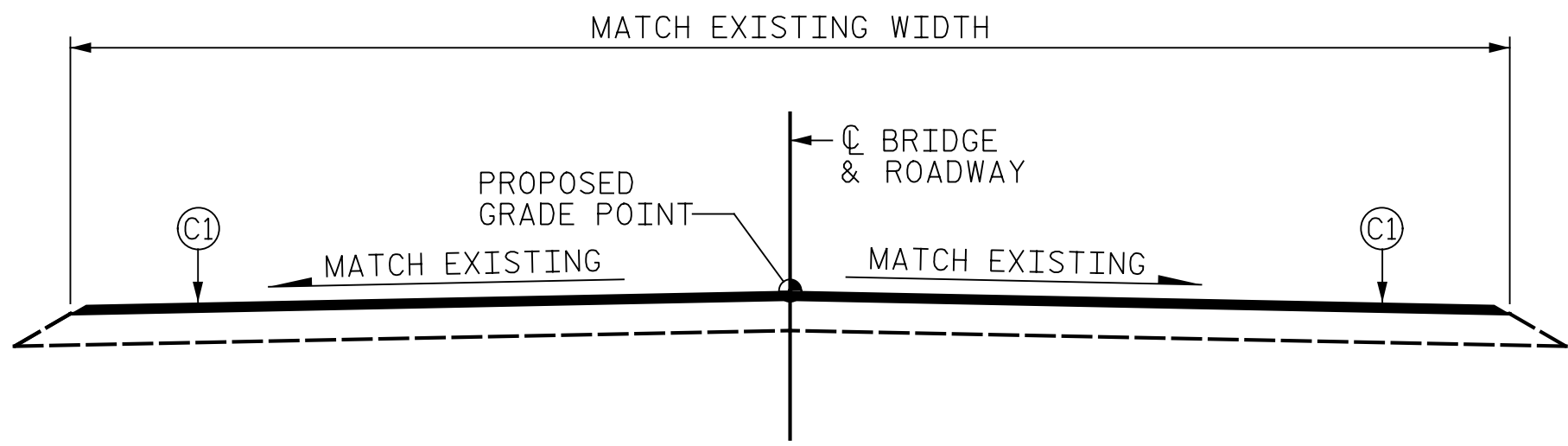


PLAN



TYPICAL ROADWAY MILLING SECTION

(MILLING DEPTH VARIES, SEE NOTES)



TYPICAL FINAL ROADWAY SECTION

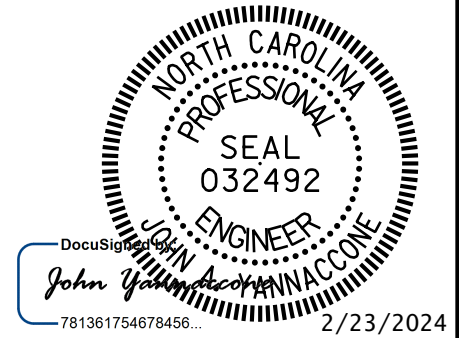
NOTES:
 INCIDENTAL MILLING - EXISTING APPROACH ASPHALT PAVEMENT TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM 2" DEPTH OF NEW ASPHALT PAVEMENT. NEW ASPHALT PAVEMENT SHALL BE OF THICKNESS NECESSARY TO CREATE A SMOOTH TRANSITION BETWEEN THE ROADWAY AND THE BRIDGE DECK.

- INCIDENTAL MILLING

C1 PROPOSED VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 1/2" IN DEPTH OR GREATER THAN 2" IN DEPTH.

SUMMARY OF QUANTITIES		
DESCRIPTION	ESTIMATE	ACTUAL
INCIDENTAL MILLING	270 SY	
ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B	35 TONS	
ASPHALT BINDER FOR PLANT MIX	3 TONS	

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400329



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**APPROACH MILLING
 AND TYPICAL ROADWAY
 SECTIONS**

DRAWN BY : J. HARRIS DATE : 10/2022
 CHECKED BY : J. YANNAACONE DATE : 10/2022



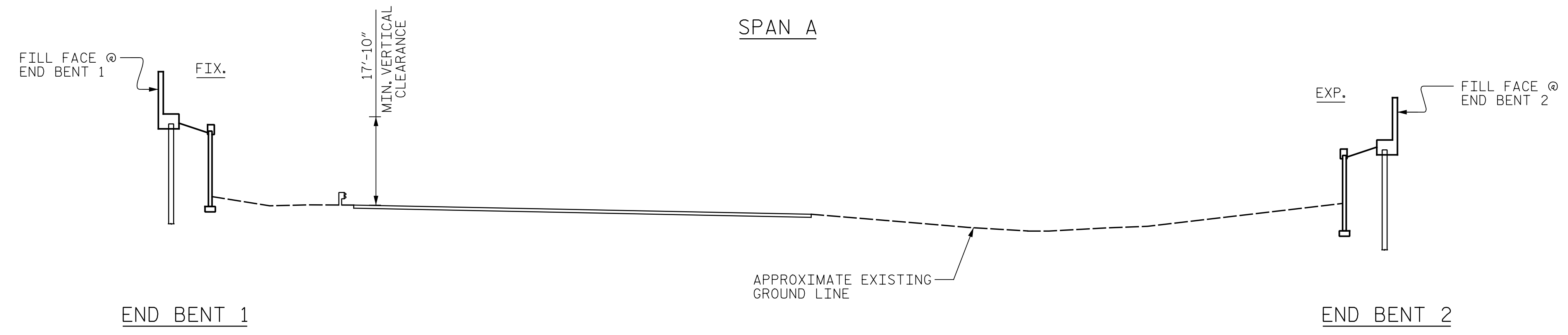
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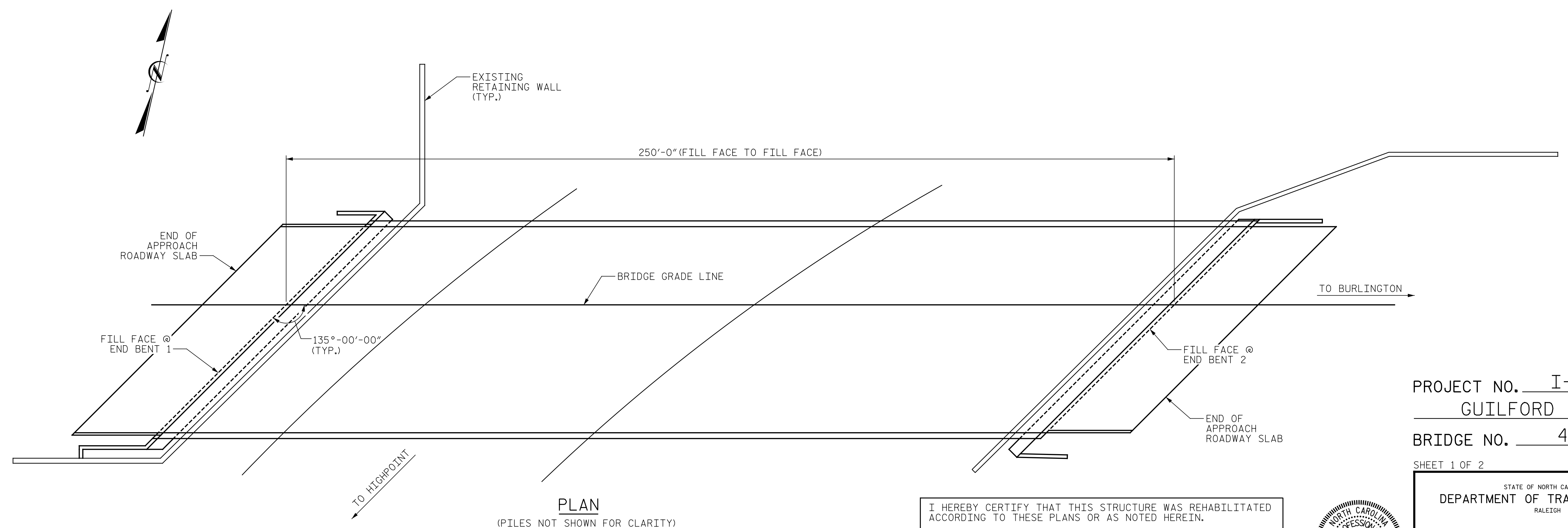
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NOTE:
GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 02/17/2023.
BRIDGE ORIENTATION CONFORMS TO THE EXISTING BRIDGE PLANS AND ROUTINE INSPECTION REPORT.

SCOPE OF WORK
- APPLY DECK SEALANT TO PREPARED TOP OF BRIDGE DECK.



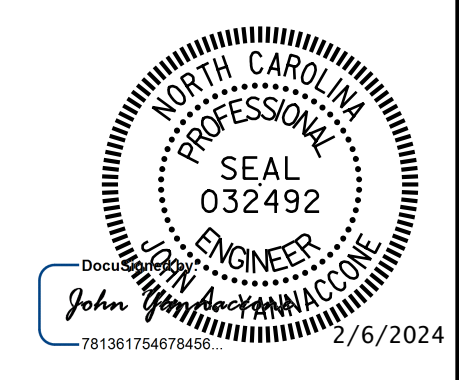
SECTION ALONG BRIDGE GRADE LINE
(SECTION AT END BENTS ARE AT RIGHT ANGLES)



PLAN
(PILES NOT SHOWN FOR CLARITY)

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

RESIDENT ENGINEER _____ DATE _____



PROJECT NO. I-5955A
GUILFORD COUNTY
BRIDGE NO. 400336

SHEET 1 OF 2
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
**GENERAL DRAWING
FOR BRIDGE ON I-40 EBL
OVER US 29 SBL/US 70 WBL**

DRAWN BY : J. MYA DATE : 10/2022
CHECKED BY : J. YANNACCONE DATE : 1/2024



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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LOCATION SKETCH

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

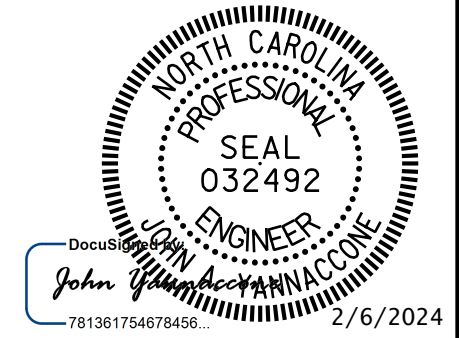
BRIDGE COORDINATES	
LATITUDE	LONGITUDE
36°-01'-54.97"	79°-48'-22.99"

GENERAL NOTES

- SEE TRANSPORTATION MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION AND SILANE DECK TREATMENT.
- FOR CONTROL OF TRAFFIC AND LIMITS OF PHASING OF CONSTRUCTION, SEE TRANSPORTATION 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.
- FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.
- FOR MAINTENANCE AND PROTECTION OF TRAFFIC BENEATH BRIDGES, SEE SPECIAL PROVISIONS.
- ALL PAVEMENT MARKING WILL BE IN ACCORDANCE WITH THE PAVEMENT MARKING NOTES.
- EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING SURFACE PREPARATIONS OF THE BRIDGE DECK. THE CONTRACTOR SHALL TAKE CARE THAT ANY CONSTRUCTION DEBRIS THAT COLLECTS IN THE DRAINS IS CONTAINED. DRAINS IN SHOULDERS OF ADJACENT TRAVEL LANES SHALL BE KEPT FREE AND CLEAR OF DEBRIS.
- LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG THE CENTERLINE OR EDGE OF TRAVEL LANES.
- FOR SHOTBLASTING BRIDGE DECK AND SILANE DECK TREATMENT, SEE SPECIAL PROVISIONS.
- THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT DUE TO THE NATURE OF PRESERVATION PROJECTS, THE EXTENT OF WORK CANNOT ALWAYS BE ACCURATELY DETERMINED PRIOR TO COMMENCEMENT OF WORK. REPAIR LOCATIONS AND ESTIMATES OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIR.
- 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.
- THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN WHAT IS SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.
- WORK ON THE BRIDGE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL BELOW, EXCEPT WHERE THE CONTRACTOR'S PLAN USED PLATFORMS, NETS, SCREEN OR OTHER PROTECTIVE DEVICES TO CATCH THE MATERIAL. THE CONTRACTOR SHALL SUBMIT PLANS FOR CONSTRUCTION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS 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.

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400336

SHEET 2 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 FOR BRIDGE ON I-40 EBL
 OVER US 29 SBL/US 70 WBL

DRAWN BY : J. MYA DATE : 10/2022
 CHECKED BY : J. YANNACCONE DATE : 10/2022

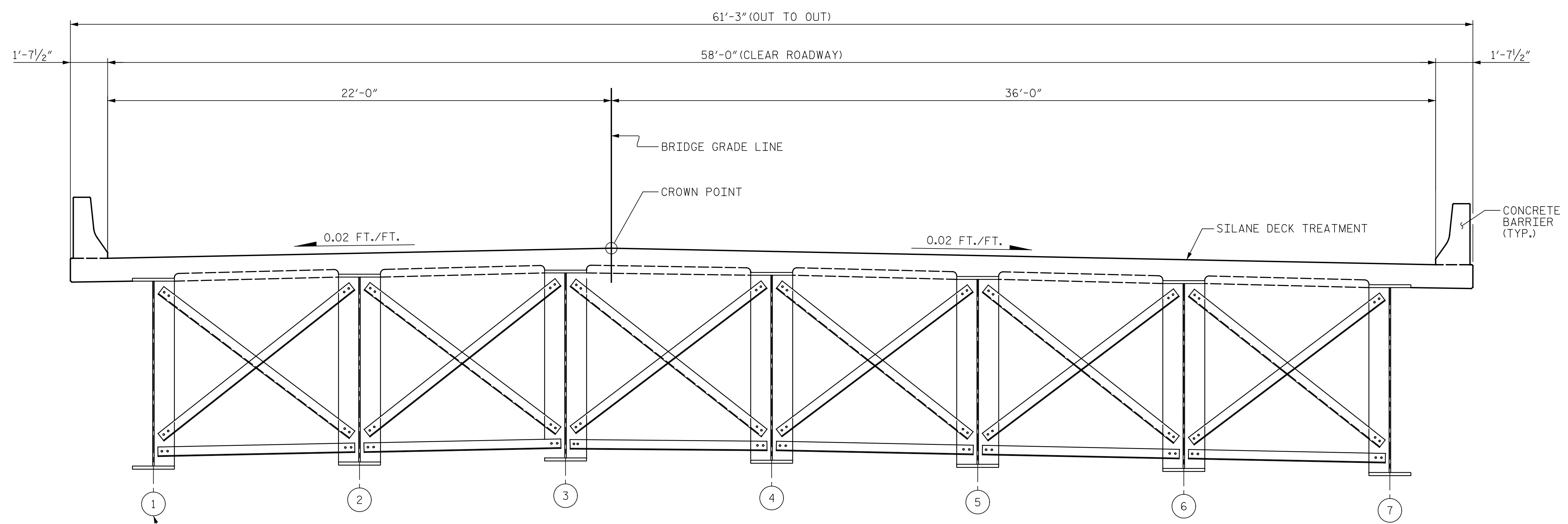


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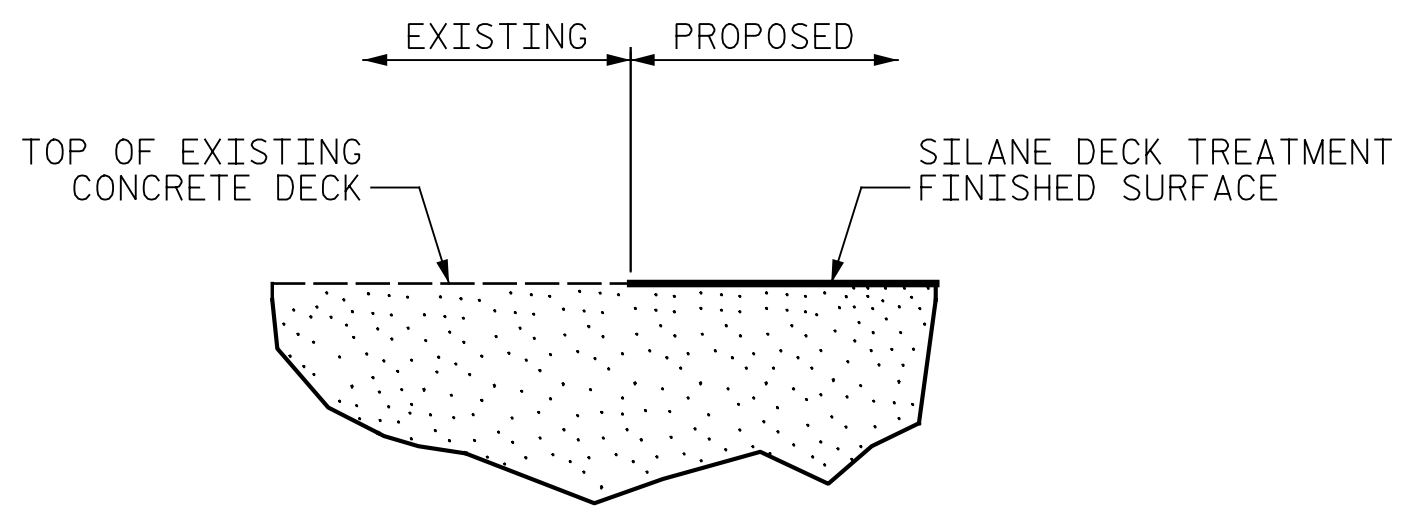
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NOTES:
 SEE TRAFFIC MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING, AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION FOR SILANE DECK TREATMENT.

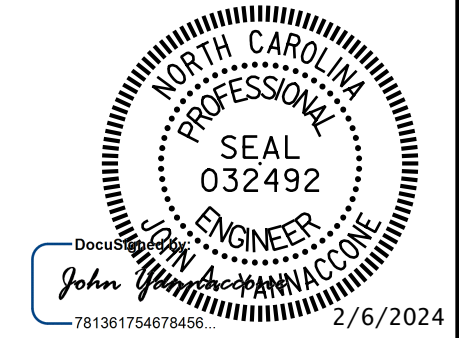


TYPICAL SECTION
(PROPOSED)



DETAIL OF SILANE DECK TREATMENT

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400336



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

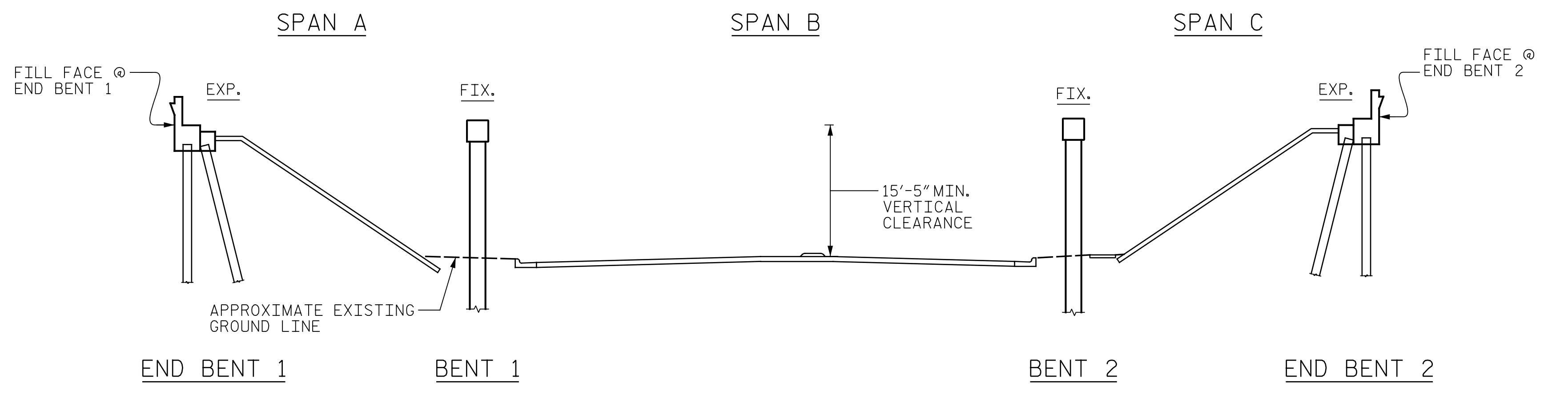
DRAWN BY: J. HARRIS DATE: 10/2022
 CHECKED BY: J. YANNACCONE DATE: 10/2022



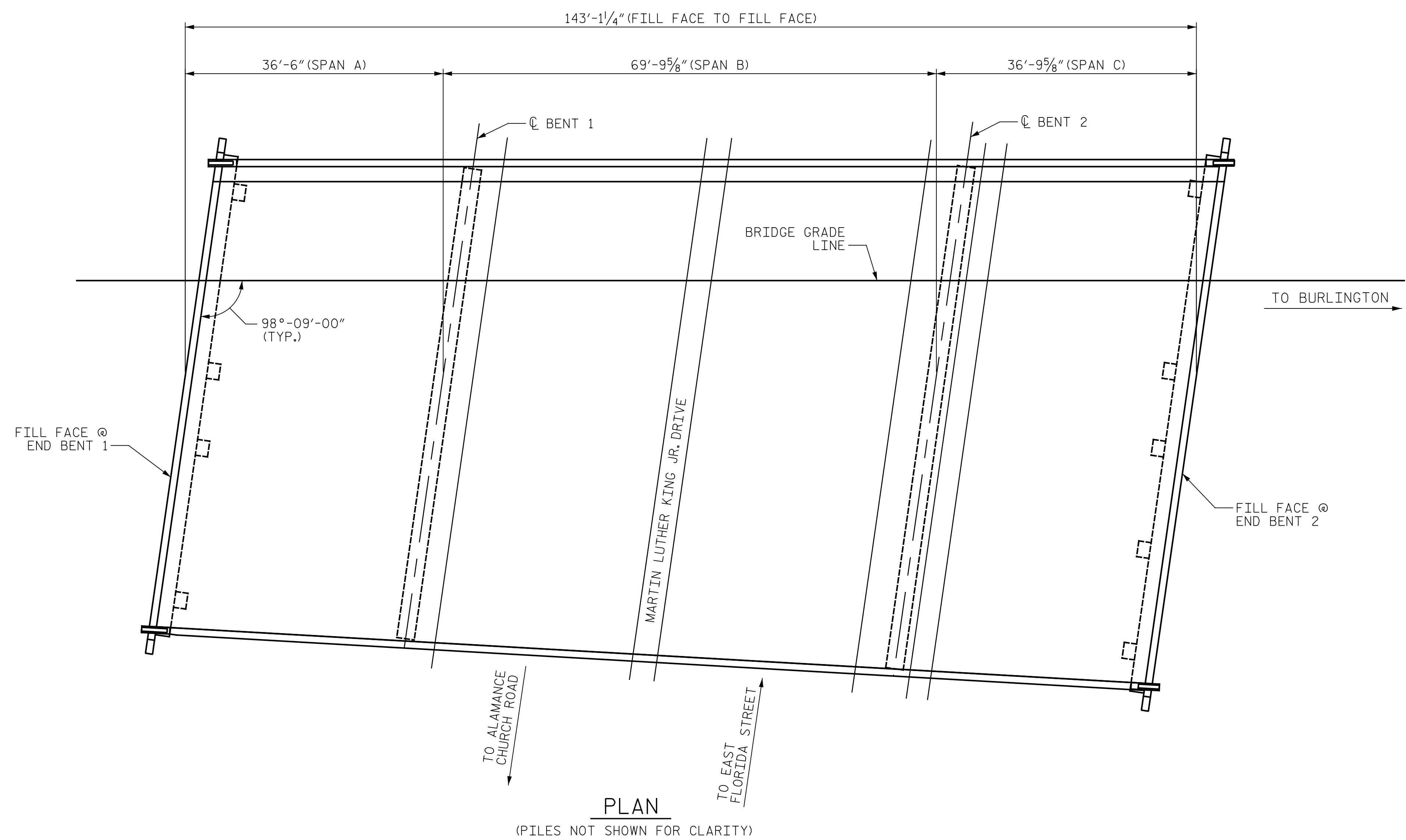
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SECTION ALONG C BRIDGE
(SECTION AT BENTS AND END BENTS ARE AT RIGHT ANGLES)



PLAN
(PILES NOT SHOWN FOR CLARITY)

NOTE:
GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 12/16/2022.
BRIDGE ORIENTATION CONFORMS TO THE EXISTING BRIDGE PLANS AND ROUTINE INSPECTION REPORT.

- SCOPE OF WORK**
- REMOVE EXISTING JOINT AND INSTALL PLUG JOINTS.
 - REMOVE DEBRIS FROM TOP OF EXISTING END BENT CAPS AND APPLY EPOXY COATING.
 - EPOXY RESIN INJECTION OF CONCRETE CRACKS
 - REMOVE UNSOUND CONCRETE AND PROPERLY PREPARE EXISTING END BENT AND BENT AREAS FOR SHOTCRETE AND CONCRETE REPAIRS.
 - REMOVE AND REPLACE DAMAGED PORTIONS OF TUBULAR STEEL BEAM BRIDGE RAIL.

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

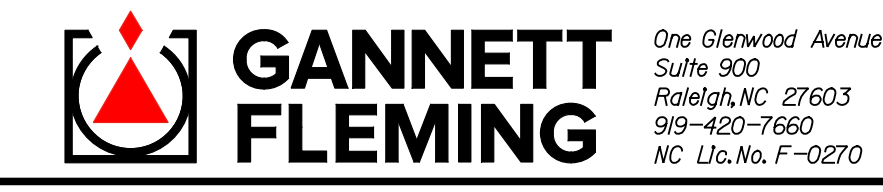
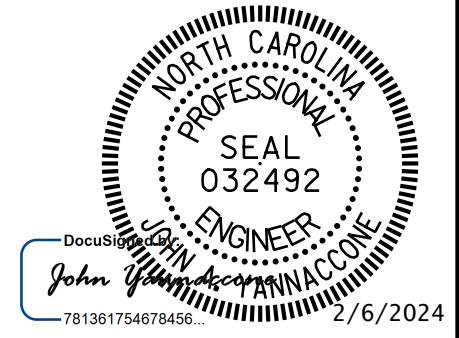
RESIDENT ENGINEER _____ DATE _____

PROJECT NO. I-5955A
GUILFORD COUNTY
BRIDGE NO. 400339

SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR BRIDGE ON I-40 EBL
OVER SR 3762 (MARTIN LUTHER
KING JR. DRIVE)



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DRAWN BY: J. MYA DATE: 10/2022
CHECKED BY: J. YANNACCONE DATE: 1/2024

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LOCATION SKETCH

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

BRIDGE COORDINATES	
LATITUDE	LONGITUDE
36°-02'-39.85"	79°-46'-26.70"

GENERAL NOTES

SEE TRANSPORTATION MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF ASPHALT PLUG JOINTS FOR PRESERVATION.

THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT DUE TO THE NATURE OF PRESERVATION PROJECTS, THE EXTENT OF WORK CANNOT ALWAYS BE ACCURATELY DETERMINED PRIOR TO COMMENCEMENT OF WORK. REPAIR LOCATIONS AND ESTIMATES OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS.

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.

THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN WHAT IS SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

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

WORK ON THE BRIDGE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL BELOW, EXCEPT WHERE THE CONTRACTOR'S PLAN USES PLATFORMS, NETS, SCREENS OR OTHER PROTECTIVE DEVICES TO CATCH THE MATERIAL. 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.

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.

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

FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR MAINTENANCE AND PROTECTION OF TRAFFIC BENEATH EXISTING STRUCTURE, SEE SPECIAL PROVISIONS.

ALL PAVEMENT MARKING WILL BE IN ACCORDANCE WITH THE PAVEMENT MARKING NOTES.

EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING SURFACE PREPARATIONS OF THE BRIDGE DECK. THE CONTRACTOR SHALL TAKE CARE THAT ANY CONSTRUCTION DEBRIS THAT COLLECTS IN THE DRAINS IS CONTAINED. DRAINS IN SHOULDERS OF ADJACENT TRAVEL LANE(S) SHALL BE KEPT FREE AND CLEAR OF DEBRIS.

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

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 PROTECTIVE DEVICES ARE NOT ADEQUATE OR NOT BEING EMPLOYED, THE WORK SHALL BE SUSPENDED UNTIL ADEQUATE PROTECTION IS PROVIDED.

FOR ASPHALT PLUG JOINTS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

FOR REMOVAL AND REPLACEMENT OF TUBULAR STEEL BEAM GUARDRAIL, SEE SPECIAL PROVISIONS.

FOR CONCRETE DIAPHRAGM REPAIR, SEE SPECIAL PROVISIONS.

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

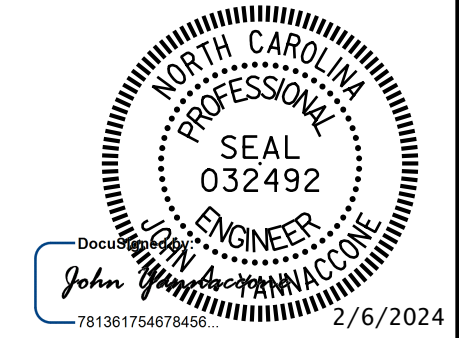
THE CONTRACTOR SHALL ENSURE THAT ALL DECK DRAINS ARE CLEAR AND FREE OF DEBRIS. PAYMENT FOR THIS WORK WILL BE INCIDENTAL TO THE WORK COVERED BY THE VARIOUS CONTRACT ITEMS.

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400339

SHEET 2 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 FOR BRIDGE ON I-40 EBL
 OVER SR 3762 (MARTIN LUTHER
 KING JR. DRIVE)



DRAWN BY : J. MYA DATE : 10/2022
 CHECKED BY : J. YANNACCONE DATE : 10/2022

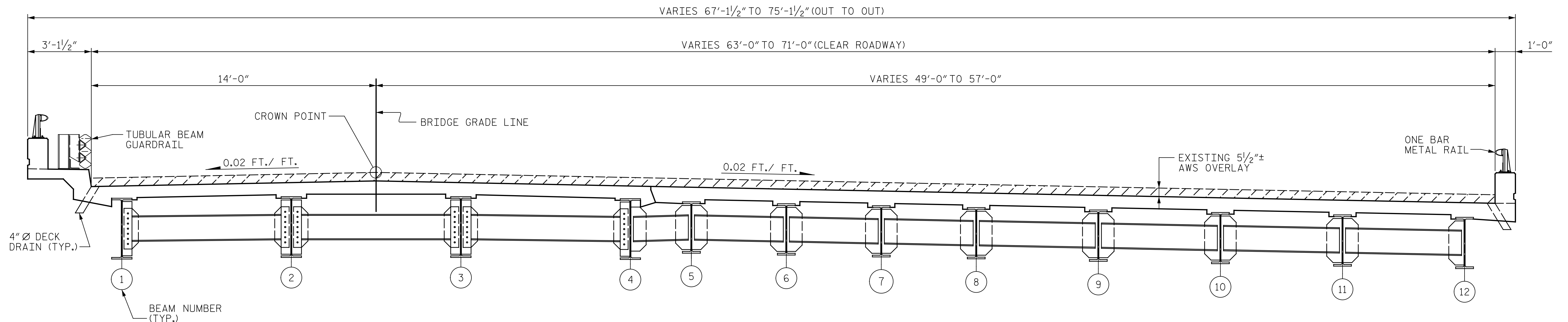


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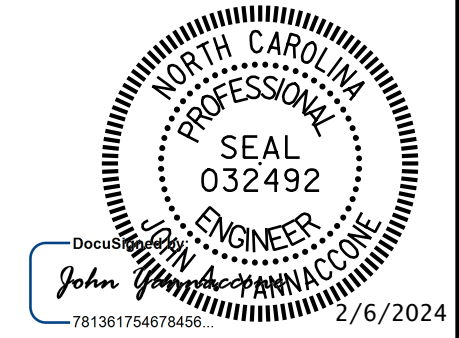
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NOTES:
 SEE TRAFFIC MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING, AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF ASPHALT PLUG JOINTS FOR PRESERVATION.
 THE CONTRACTOR SHALL ENSURE THAT THE EXISTING DECK DRAINS ARE OPEN AND FULLY FUNCTIONAL. PAYMENT FOR THIS WORK WILL BE INCIDENTAL TO THE WORK COVERED BY THE VARIOUS CONTRACT ITEMS.



TYPICAL SECTION
 (EXISTING)

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400339



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

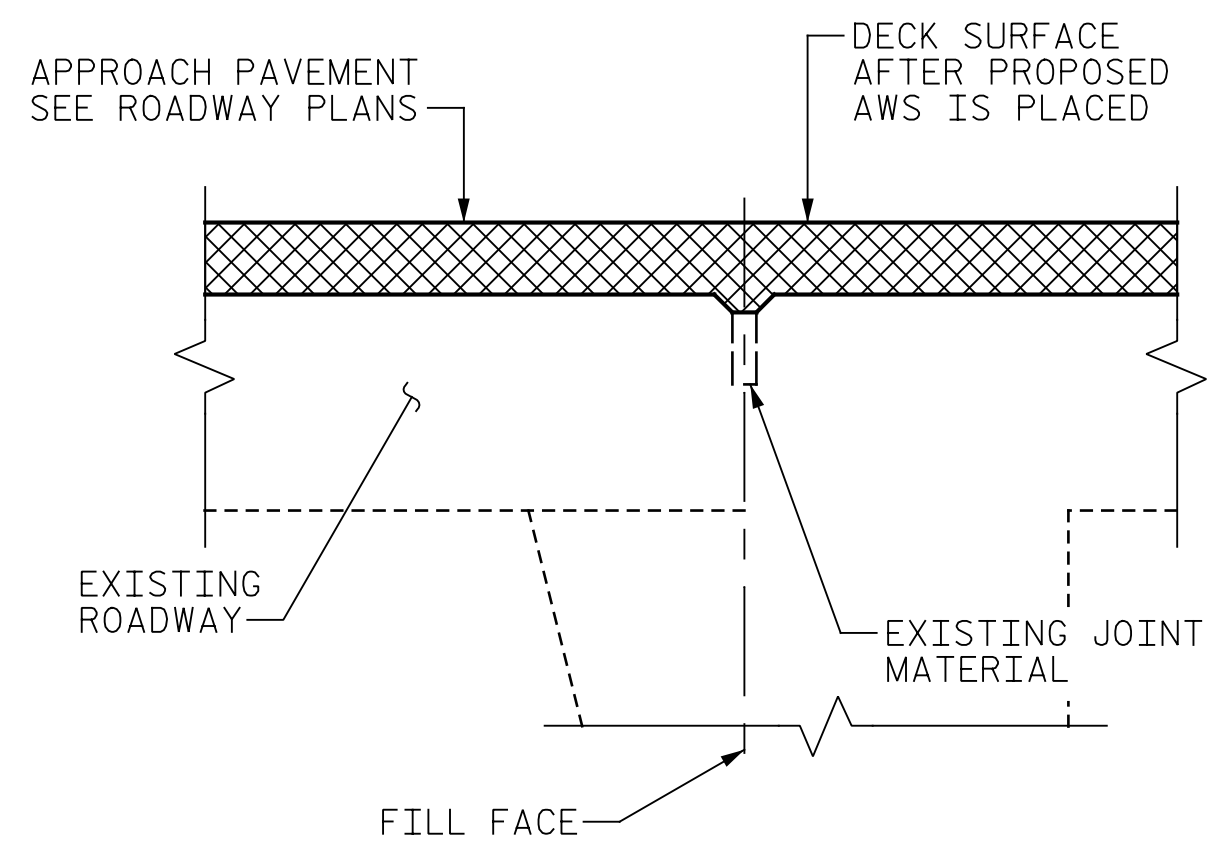
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 CHECKED BY : J. YANNAACONE DATE : 10/2022



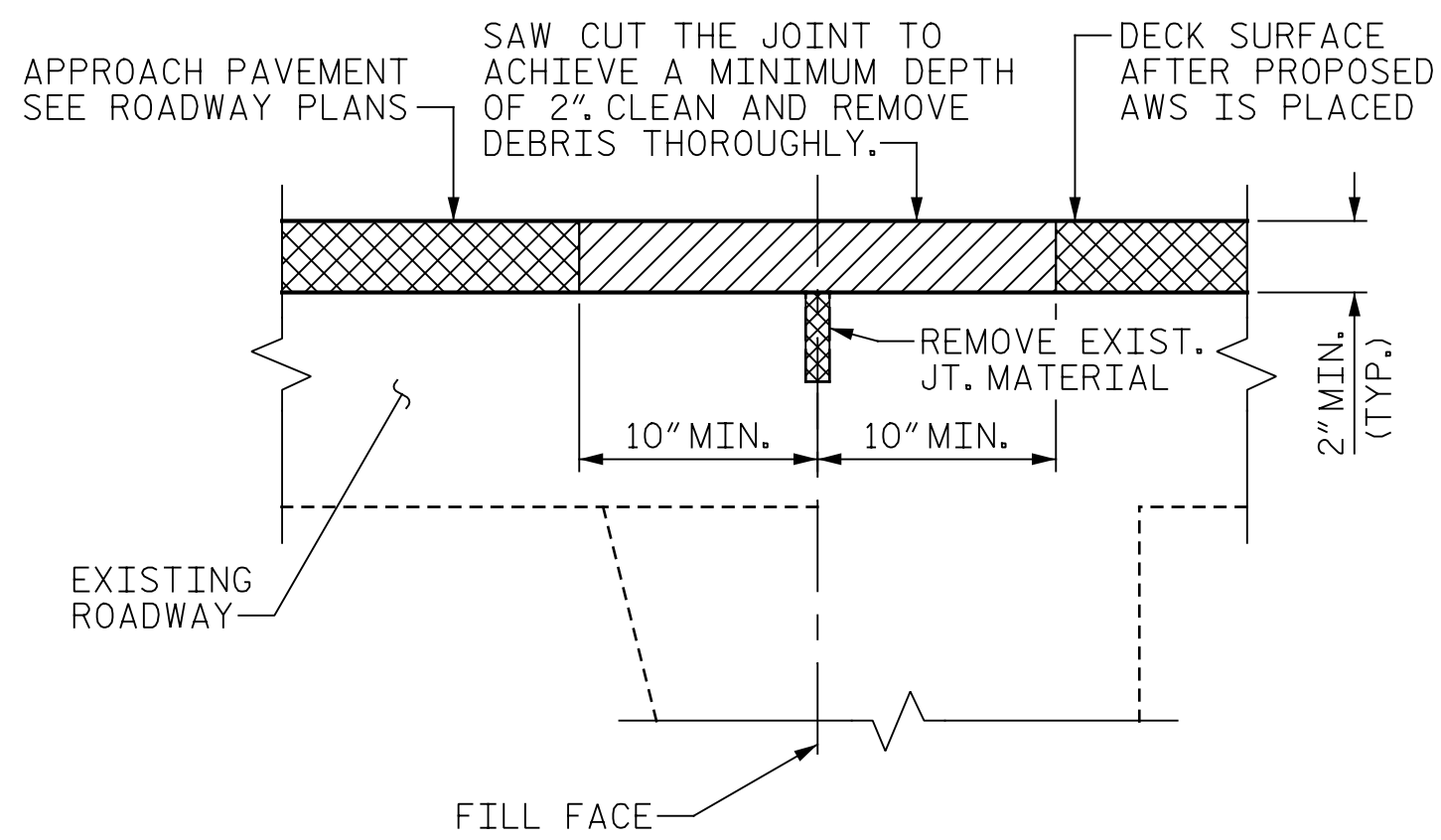
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2			4			127

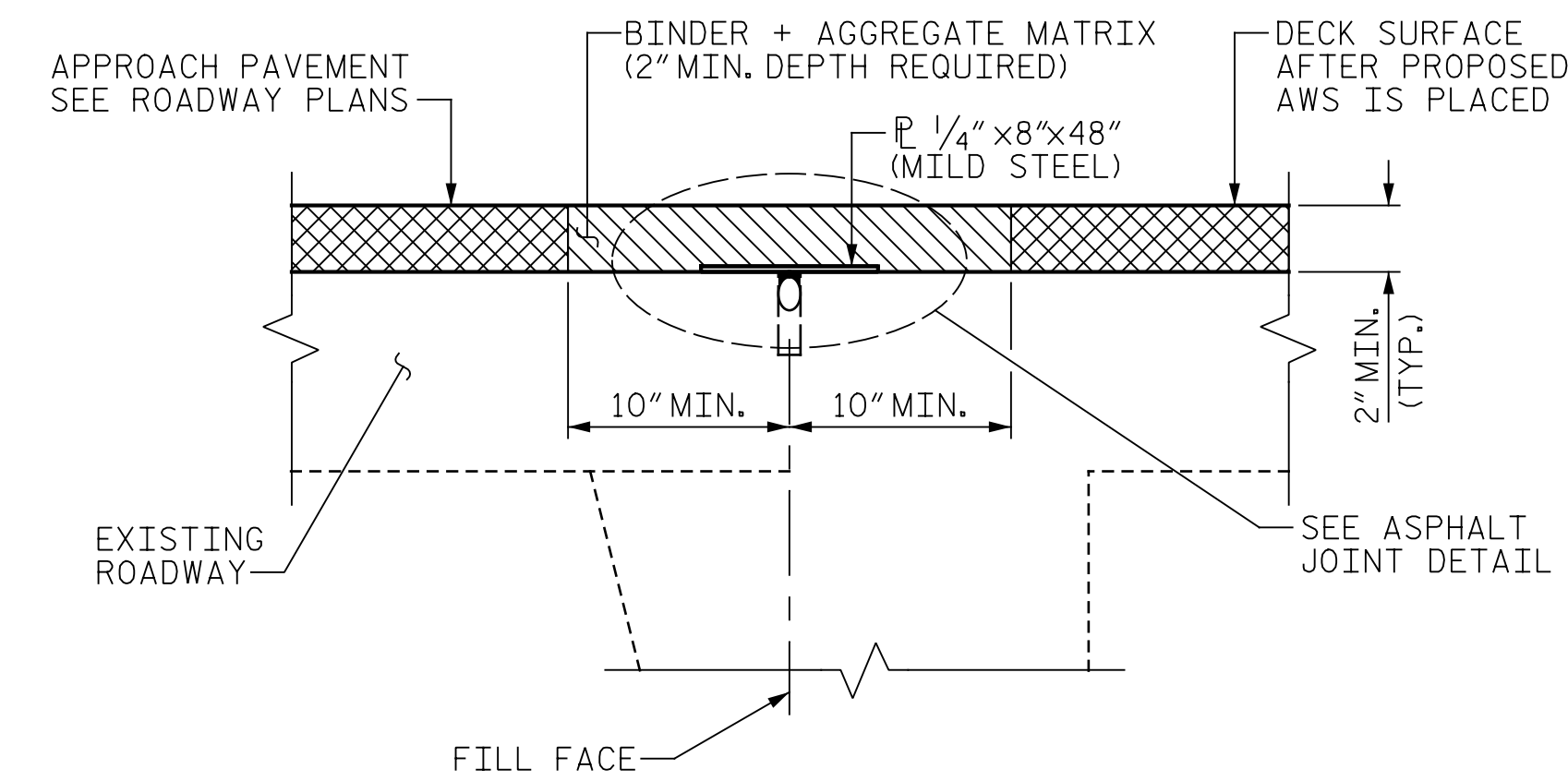
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EXISTING JOINT AFTER AWS PLACEMENT



DEMOLITION PREPARATION

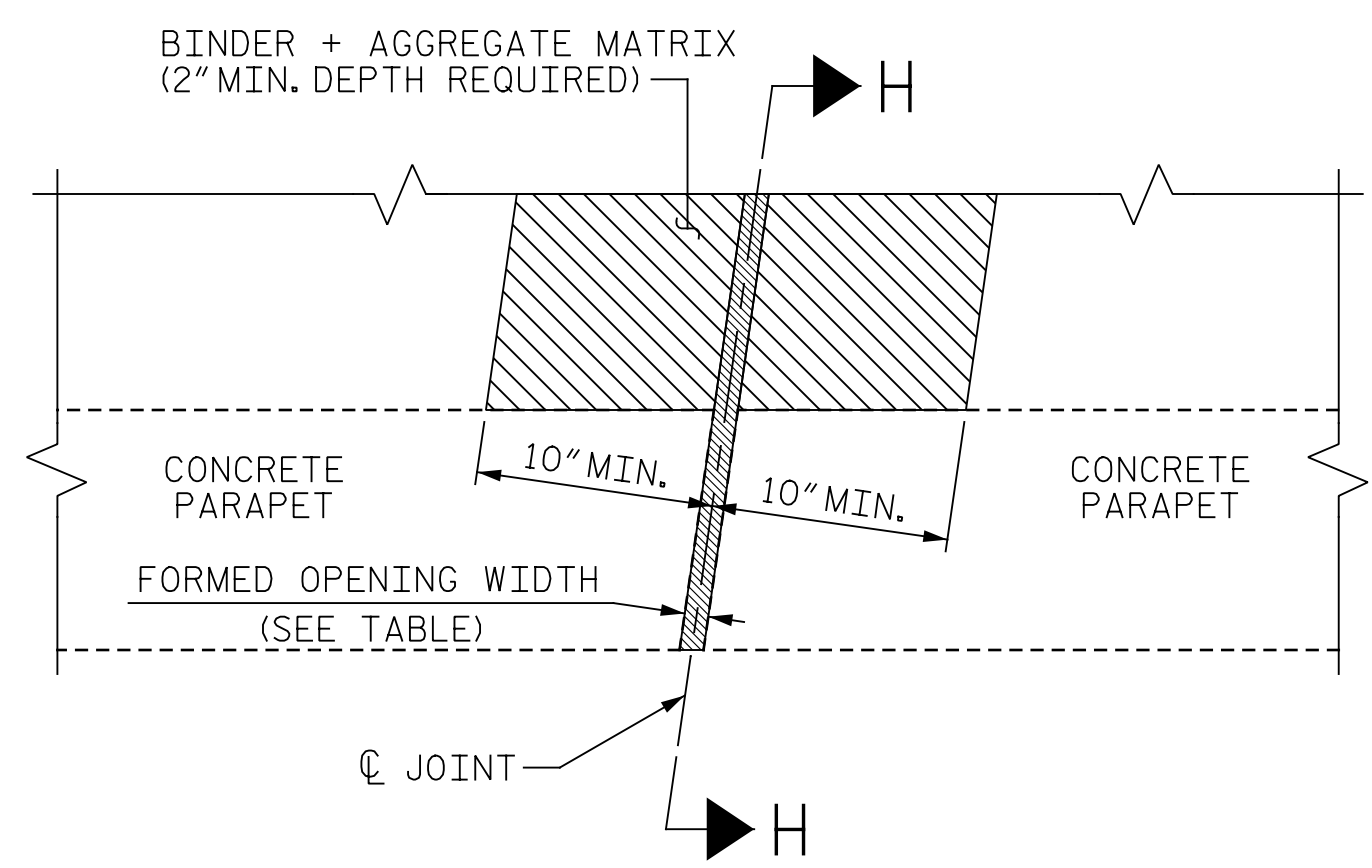


PROPOSED JOINT

SECTION F-F
(TYP. AT END BENTS)

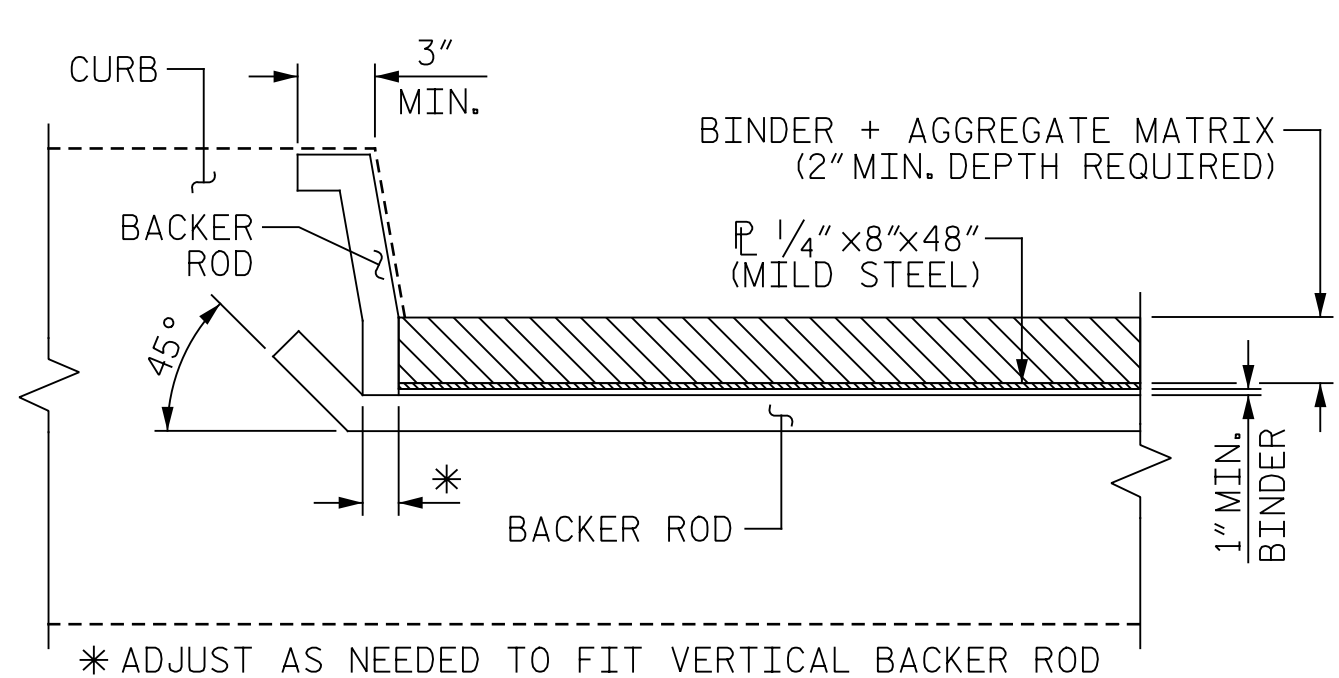
NOTES:

- THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING JOINT OPENING PRIOR TO ORDERING JOINT SEAL MATERIAL. IF THE ACTUAL OPENING VARIES FROM TO OPENING INDICATED IN THE DETAIL BY MORE THAN 1/4", NOTIFY THE ENGINEER. REVISION OF THE JOINT SEAL SIZE MIGHT BE NECESSARY.
- THE CONTRACTOR SHALL TAKE CARE DURING JOINT REPAIR OPERATIONS NOT TO DROP ANY MATERIAL THAT FALLS 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 BACKER ROD AND SILICONE SEALANT SHALL BE WATER TIGHT.
- FOR EXCAVATION BELOW THE BOTTOM OF THE PLANNED JOINT DECK DEMOLITION, CONCRETE FOR DECK REPAIRS SHALL BE PLACED IN THE EXCAVATED AREA TO THE ELEVATION AT BOTTOM OF THE PROPOSED ASPHALT JOINT DETAIL SHOWN.
- DEMOLISH BRIDGE JOINT AREA SUCH THAT THE BOTTOM OF THE EXCAVATION SHALL BE REASONABLY FLAT AND LEVEL AND TO THE NECESSARY DEPTH, SUCH THAT ASPHALT JOINT SHALL BE FOUNDED ON CONCRETE OR REPAIR CONCRETE SUBSTRATE.
- PRIOR TO ASPHALT JOINT REPAIR/REPLACEMENT, PERFORM DECK SURFACE REPAIR IN ACCORDANCE WITH "PLAN OF SPAN" SHEETS.
- BACKER ROD SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.
- FOR ASPHALT PLUG JOINTS FOR PRESERVATION, SEE SPECIAL PROVISIONS.
- FOR CONCRETE DECK REPAIR FOR ASPHALT OVERLAY, SEE SPECIAL PROVISIONS.



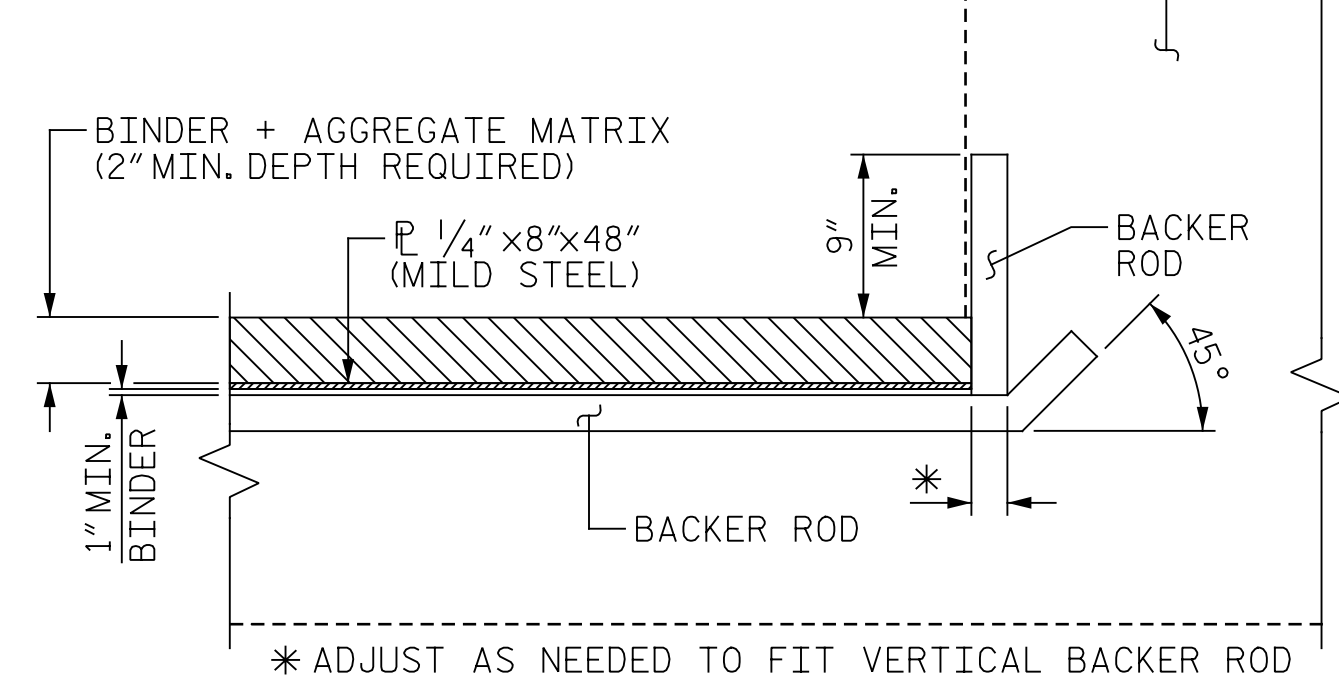
PLAN AT BARRIER

(PROPOSED JOINT SEAL, STEEL P NOT SHOWN FOR CLARITY)
(RIGHT EDGE OF DECK SHOWN, LEFT EDGE OF DECK SIMILAR.)



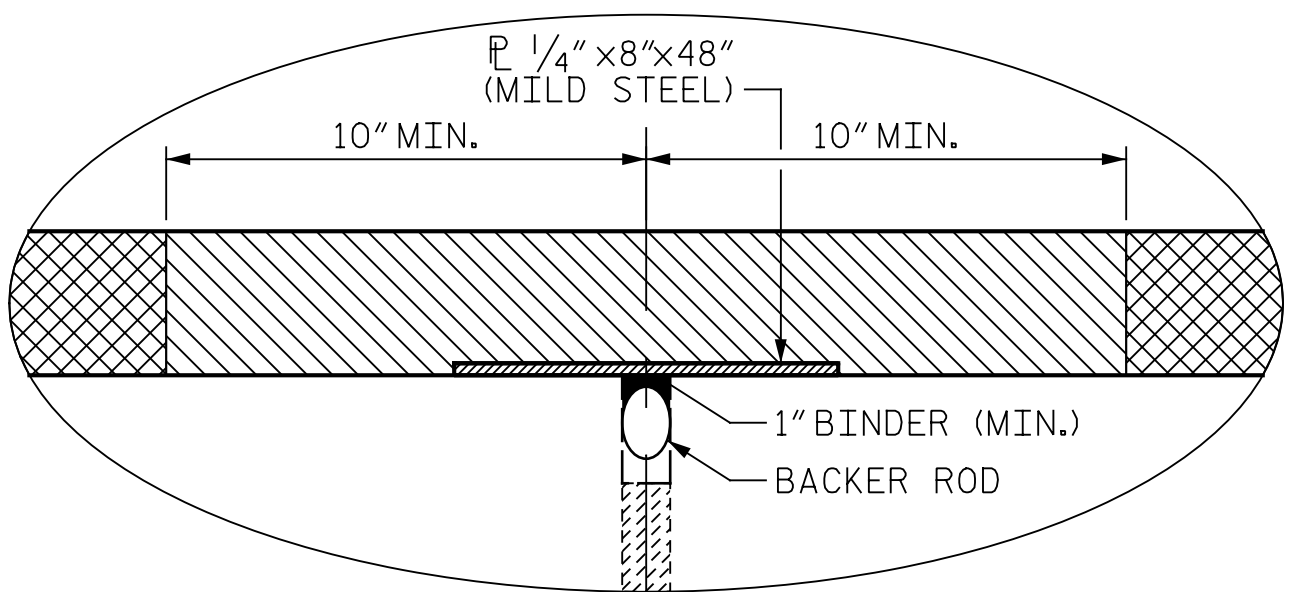
SECTION H-H

(PROPOSED JOINT SEAL ALONG LEFT EDGE OF DECK)



SECTION H-H

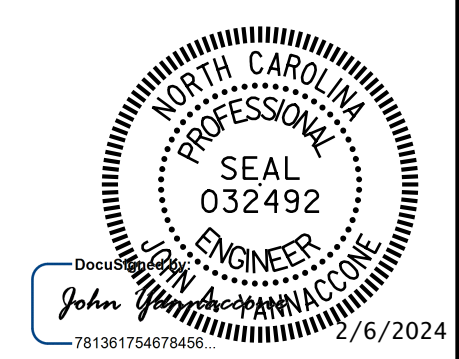
(PROPOSED JOINT SEAL ALONG RIGHT EDGE OF DECK)



ASPHALT JOINT DETAIL

LOCATION	ASPHALT PLUG JOINT FOR PRESERVATION (LIN. FT.)	FORMED OPENING WIDTH PER EXISTING BRIDGE PLANS	TOTAL THEORETICAL MOVEMENT PERPENDICULAR TO THE JOINT
END BENT 1	66.0	1"	3/16"
END BENT 2	73.0	1"	3/16"

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 BRIDGE NO. 400339



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

ASPHALT PLUG JOINT DETAILS

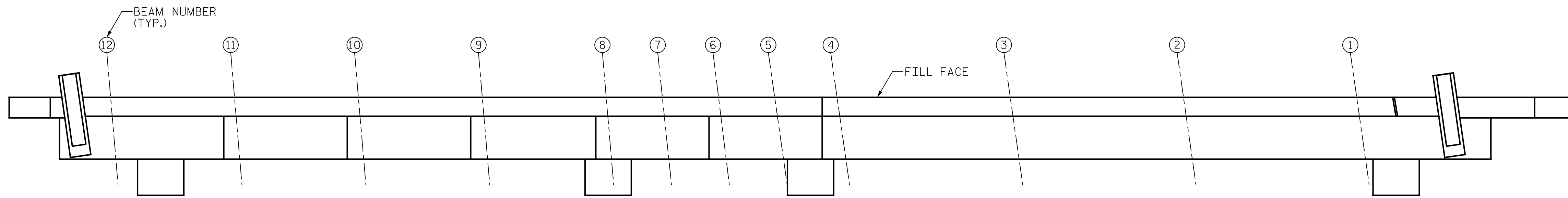
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 CHECKED BY : J. YANNACCONE DATE : 10/2022



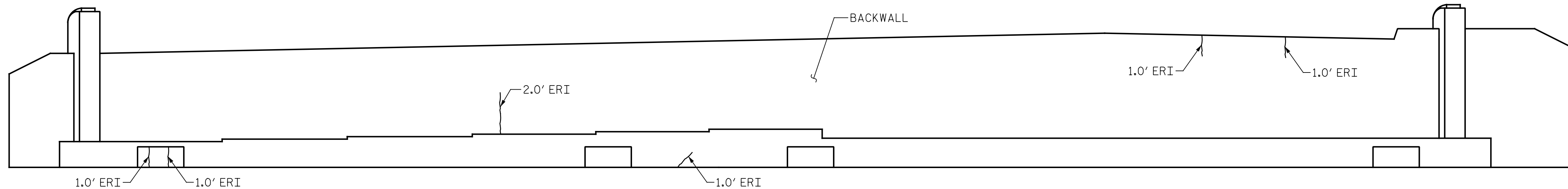
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PLAN



ELEVATION
END BENT 1

AS-BUILT REPAIR QUANTITY TABLE

END BENT 1 REPAIRS	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP	0.0	0.0			
BACKWALL	0.0	0.0			
CONCRETE REPAIRS	0.0	0.0			
EPOXY RESIN INJECTION	LENGTH LF		LENGTH LF		
CAP	3.0				
BACKWALL	4.0				
EPOXY COATING	SQ. FT		SQ. FT		
TOP OF BENT CAP	150				

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

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 QUALITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

CONTRACTOR SHALL SAW CUT TO A MINIMUM DEPTH OF 1/2" BUT REINFORCING STEEL SHALL NOT BE DAMAGED

CONTRACTOR SHALL REMOVE SURFACE CONCRETE TO VERIFY THAT SAW CUT DEPTH WILL NOT DAMAGE EXISTING REINFORCING STEEL.

CONTRACTOR SHALL SAW CUT THE REPAIR AREAS SO THAT THE CORNERS ARE SQUARE AS INDICATED ON THE DETAILS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

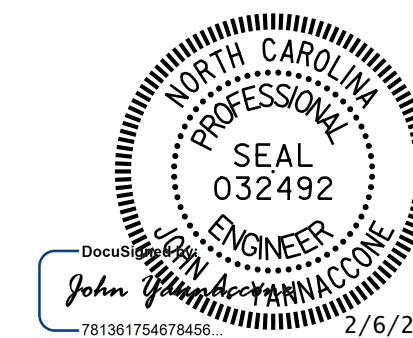
SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

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

- SHOTCRETE REPAIR
- CONCRETE REPAIR (FORM & POUR)
- ERI - EPOXY RESIN INJECTION

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GUILFORD COUNTY
 BRIDGE NO. 400339



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

END BENT 1

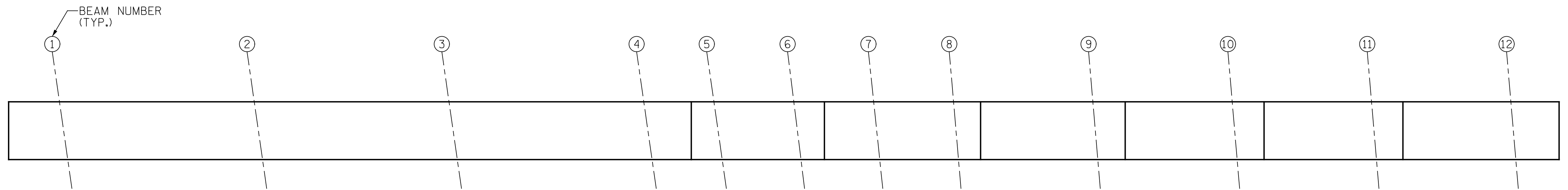
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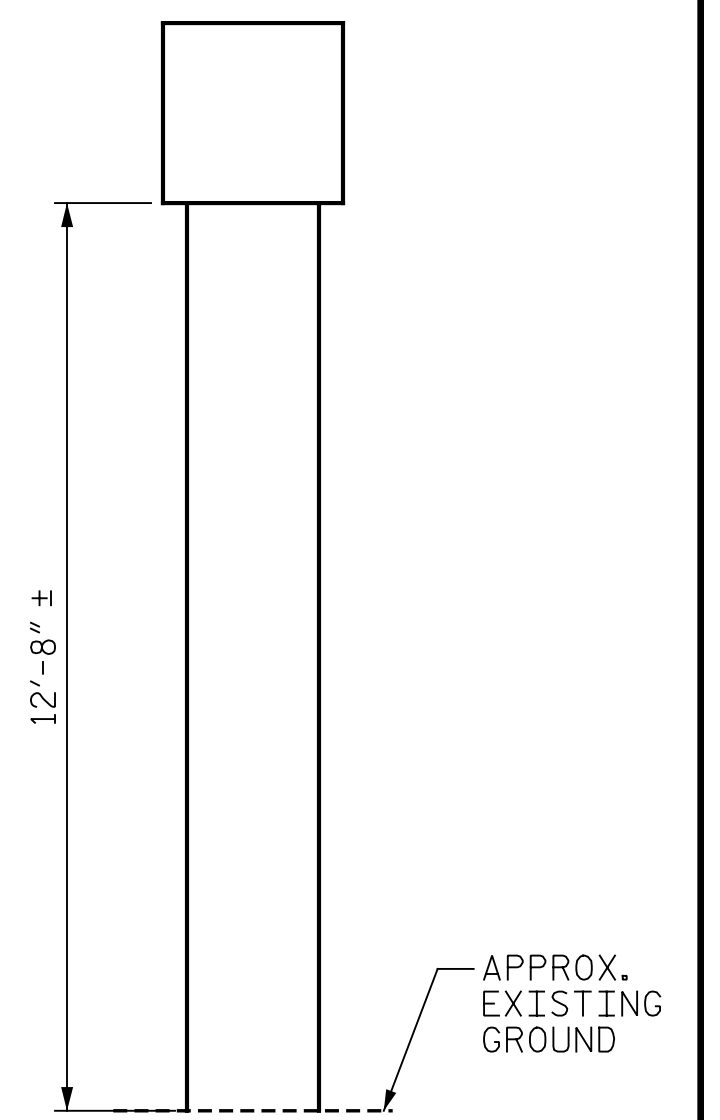
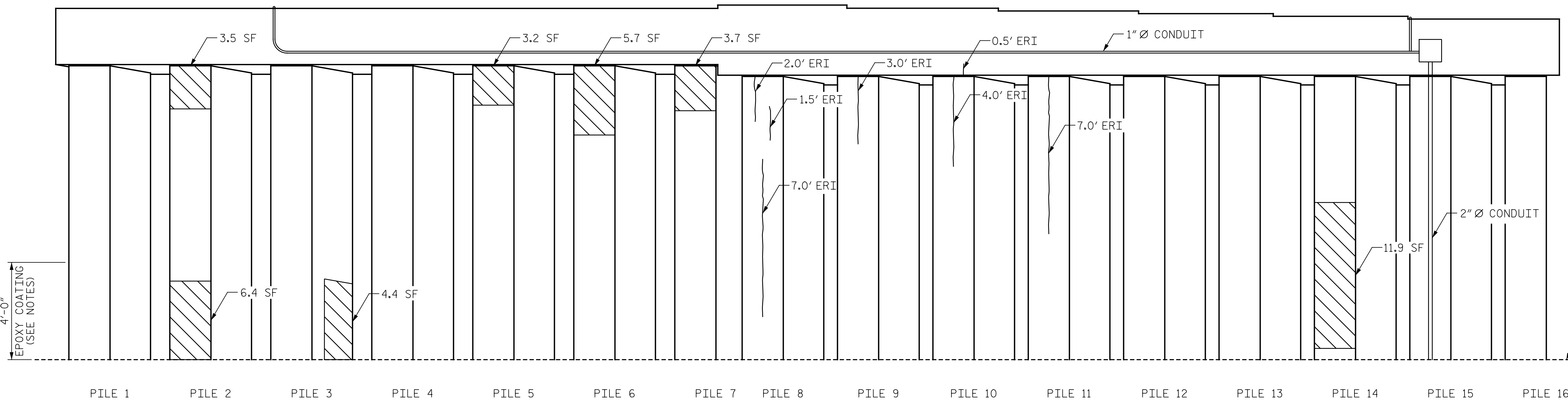
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TOP OF CAP



**END VIEW
PILE 16**

ELEVATION

AS-BUILT REPAIR QUANTITY TABLE					
BENT 1 REPAIRS	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP	0.0	0.0			
COLUMN	77.2	38.6			
CONCRETE REPAIRS	0.0	0.0			
EPOXY RESIN INJECTION	LENGTH LF		LENGTH LF		
CAP	0.0				
COLUMN	27.5				
EPOXY COATING	SQ. FT		SQ. FT		
CONCRETE PILES	470				

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

NOTES:

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

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

CONTRACTOR SHALL SAW CUT TO A MINIMUM DEPTH OF 1/2" BUT REINFORCING STEEL SHALL NOT BE DAMAGED. CONTRACTOR SHALL REMOVE SURFACE CONCRETE TO VERIFY THAT SAW CUT DEPTH WILL NOT DAMAGE EXISTING REINFORCING STEEL.

CONTRACTOR SHALL SAW CUT THE REPAIR AREAS SO THAT THE CORNERS ARE SQUARE AS INDICATED ON THE DETAILS.

APPLY EPOXY PROTECTIVE COATING TO ALL SIDES OF THE CONCRETE PILES. EPOXY COATING SHALL BE APPLIED 4 FEET UP THE PILES FROM THE GROUND LINE. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

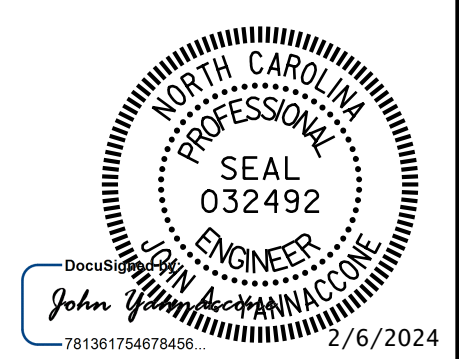
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

WHEN COLUMN REPAIRS ARE INDICATED TO GROUND LINE, EXTEND REPAIR ONE (1) FOOT MIN. BELOW GROUND LINE.

- SHOTCRETE REPAIR
- CONCRETE REPAIR (FORM & POUR)
- ERI - EPOXY RESIN INJECTION

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 BRIDGE NO. 400339

SHEET 1 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**BENT 1
SPAN A SIDE**

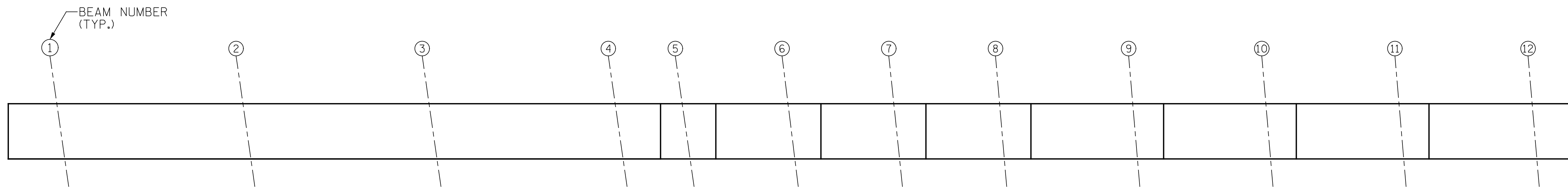
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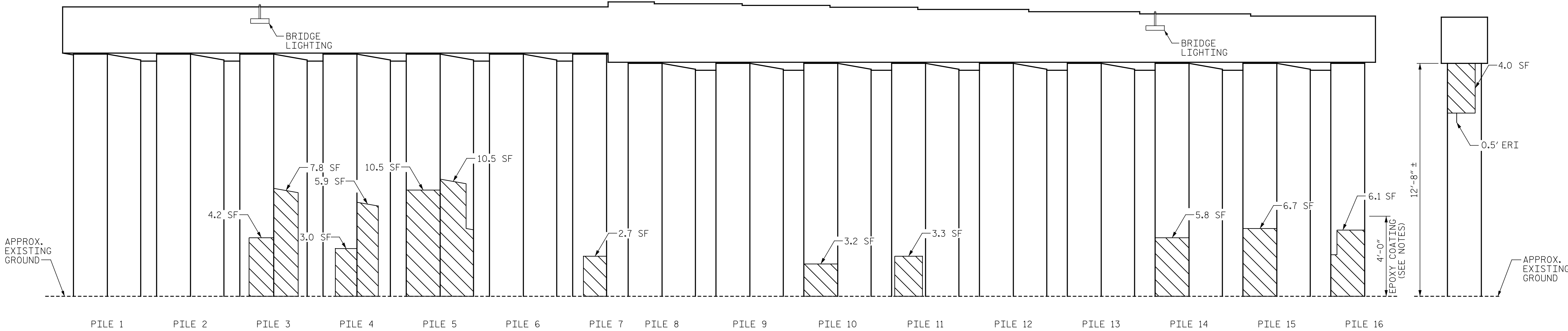
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TOP OF CAP



ELEVATION

END VIEW

PILE 16

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

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CONTRACTOR SHALL SAW CUT THE REPAIR AREAS SO THAT THE CORNERS ARE SQUARE AS INDICATED ON THE DETAILS.

APPLY EPOXY PROTECTIVE COATING TO ALL SIDES OF THE CONCRETE PILES. EPOXY COATING SHALL BE APPLIED 4 FEET UP THE PILES FROM THE GROUND LINE. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

WHEN COLUMN REPAIRS ARE INDICATED TO GROUND LINE, EXTEND REPAIR ONE (1) FOOT MIN. BELOW GROUND LINE.

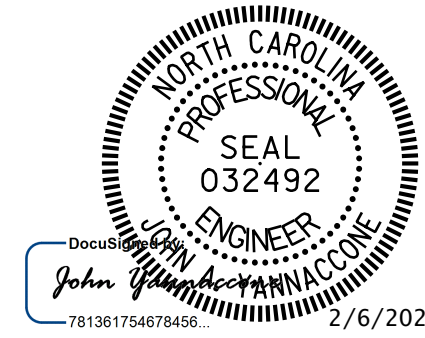
- SHOTCRETE REPAIR
- CONCRETE REPAIR (FORM & POUR)
- ERI - EPOXY RESIN INJECTION

AS-BUILT REPAIR QUANTITY TABLE					
BENT 2 REPAIRS	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP	0.0	0.0			
COLUMN	125.8	62.9			
CONCRETE REPAIRS	0.0	0.0			
EPOXY RESIN INJECTION	LENGTH LF		LENGTH LF		
CAP	0.0				
COLUMN	0.5				
EPOXY COATING	SQ. FT		SQ. FT		
CONCRETE PILES	470				

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

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SHEET 1 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 2
SPAN B SIDE

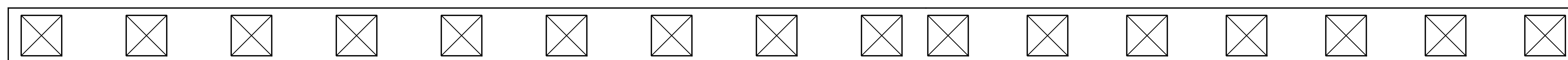
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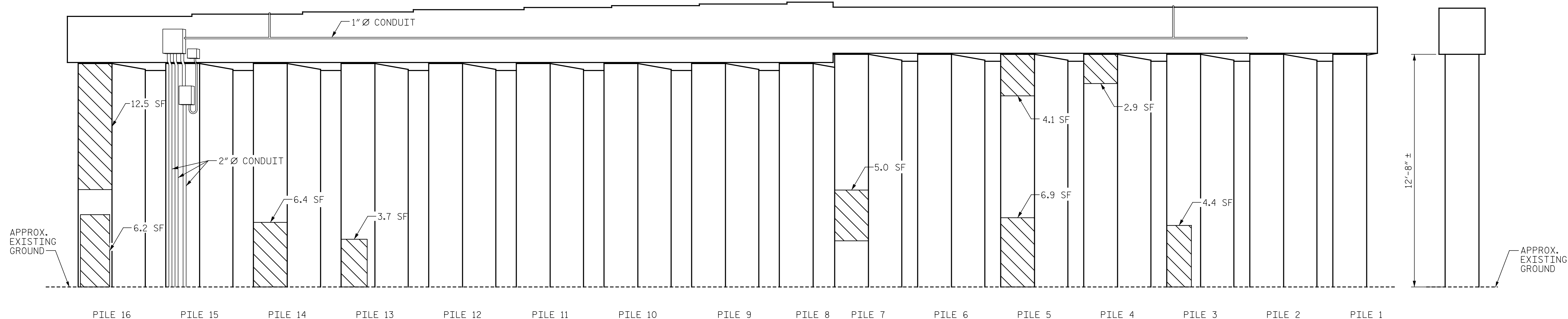
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SPAN B
SPAN C

BOTTOM OF CAP



END VIEW
PILE 1

ELEVATION

NOTES:

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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CONTRACTOR SHALL SAW CUT THE REPAIR AREAS SO THAT THE CORNERS ARE SQUARE AS INDICATED ON THE DETAILS.

APPLY EPOXY PROTECTIVE COATING TO ALL SIDES OF THE CONCRETE PILES. EPOXY COATING SHALL BE APPLIED 4 FEET UP THE PILES FROM THE GROUND LINE. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

WHEN COLUMN REPAIRS ARE INDICATED TO GROUND LINE, EXTEND REPAIR ONE (1) FOOT MIN. BELOW GROUND LINE.

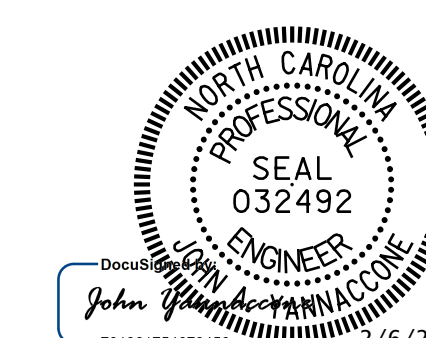
- SHOTCRETE REPAIR
- CONCRETE REPAIR (FORM & POUR)
- ERI - EPOXY RESIN INJECTION

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 BRIDGE NO. 400339

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 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 2
 SPAN C SIDE

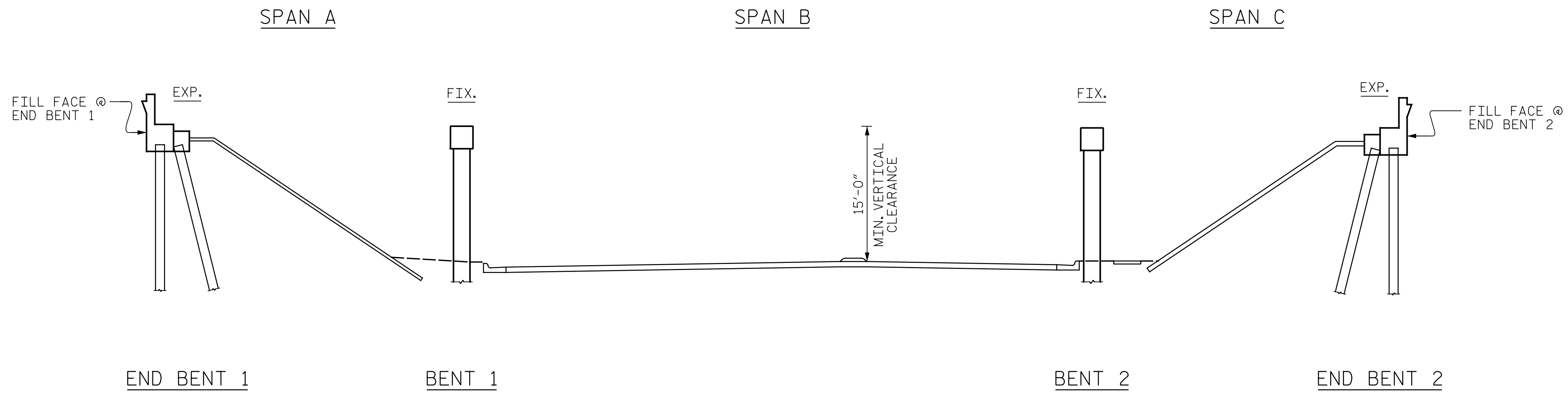


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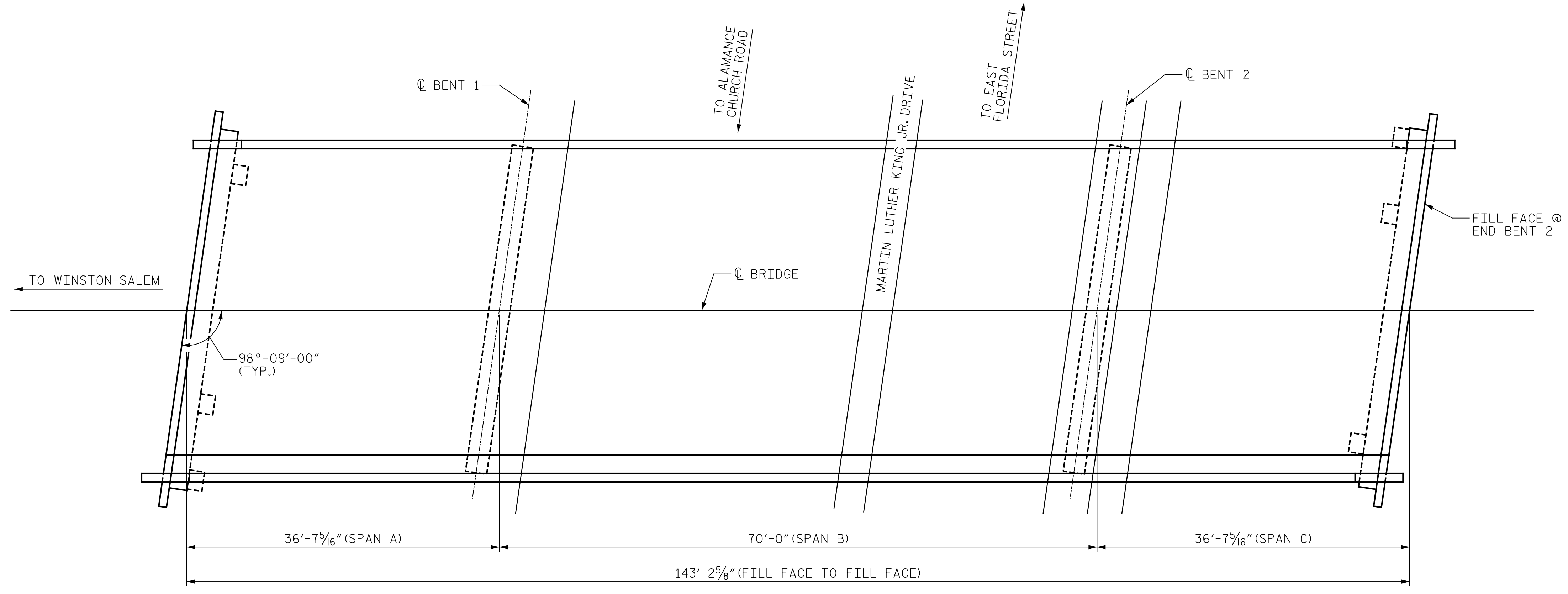
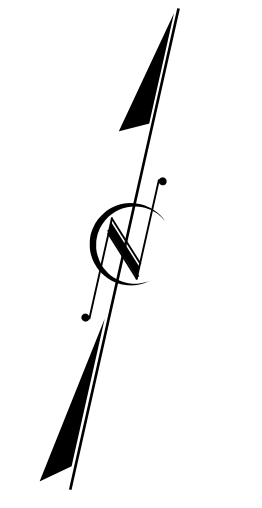


NOTE:
GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 12/13/2022.

BRIDGE ORIENTATION CONFORMS TO THE EXISTING BRIDGE PLANS AND ROUTINE INSPECTION REPORT.

SCOPE OF WORK

- REMOVE EXISTING JOINT AND INSTALL PLUG JOINTS.
- REMOVE DEBRIS FROM TOP OF EXISTING END BENT CAPS AND APPLY EPOXY COATING.
- EPOXY RESIN INJECTION OF CONCRETE CRACKS.
- REMOVE UNSOUND CONCRETE AND PROPERLY PREPARE EXISTING END BENT AND BENT AREAS FOR SHOTCRETE AND CONCRETE REPAIRS.
- REMOVE AND REPLACE DAMAGED PORTIONS OF TUBULAR STEEL BEAM BRIDGE RAIL.



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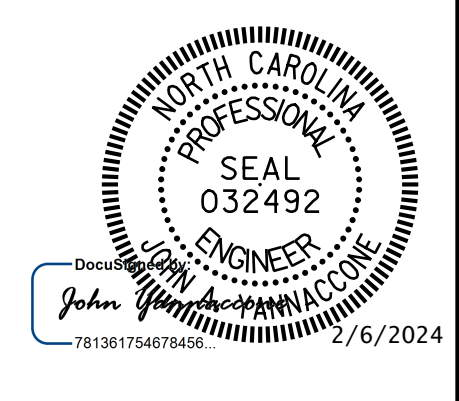
SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR BRIDGE ON I-40 WBL
OVER SR 3762 (MARTIN LUTHER
KING JR. DRIVE)

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

RESIDENT ENGINEER _____ DATE _____



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CHECKED BY : J. YANNAACONE DATE : 1/2024

