

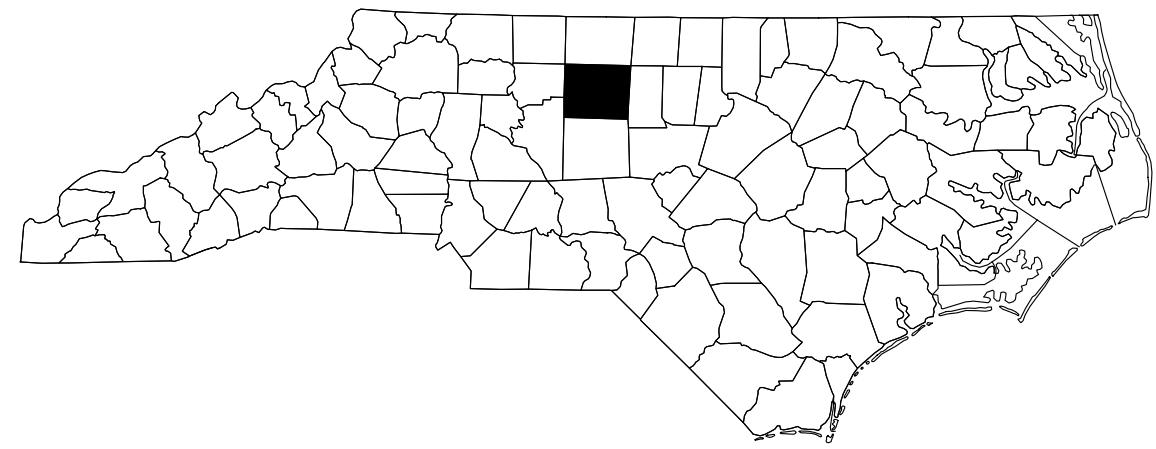
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PROJECT: I-5955

CONTRACT NO: C204736



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

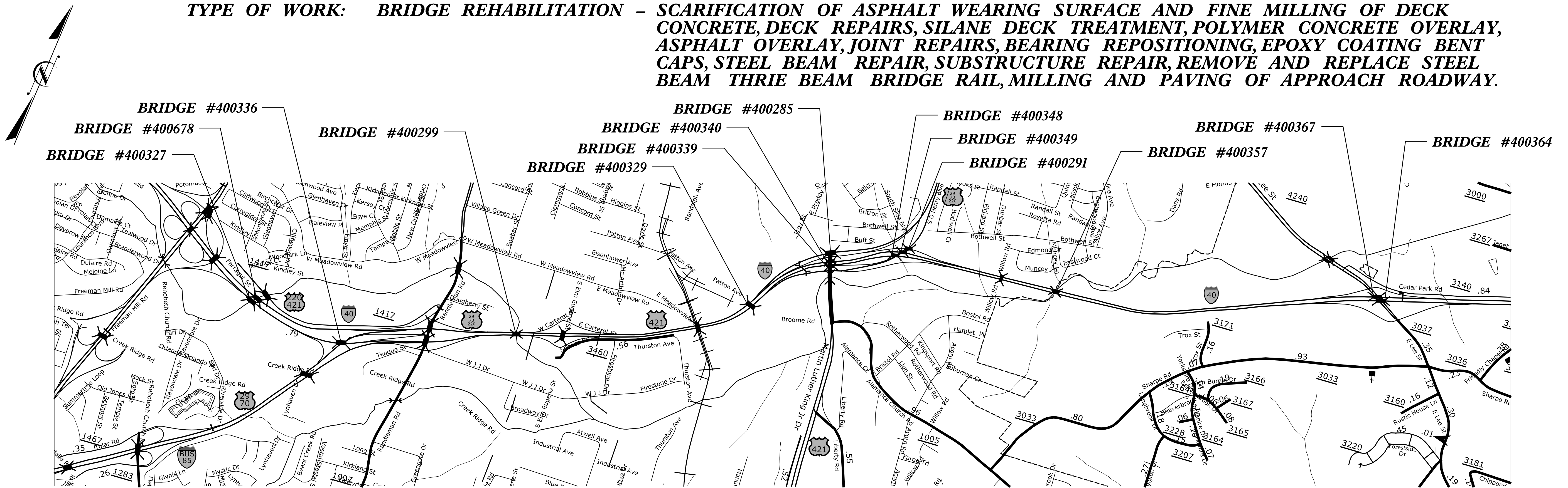
GUILFORD COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5955	1	127
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45908.3.1	0040115	P.E.	
45908.3.3	0040115	CONST.	

LOCATION: GUILFORD COUNTY:

- | | |
|--|---|
| BRIDGE #400285 ON US29 SBL OVER SR 3762 (MARTIN LUTHER KING JR. DRIVE) | BRIDGE #400340 ON I-40 WBL OVER SR 3762 (MARTIN LUTHER KING JR. DRIVE) |
| BRIDGE #400291 ON I-40 WBL RAMP OVER US29/US70E/US220N (SOUTH O. HENRY BLVD.) | BRIDGE #400348 ON I-40 EBL OVER US29/US70E/US220N (SOUTH O. HENRY BLVD.) |
| BRIDGE #400299 ON I-40 OVER SOUTH BUFFALO CREEK | BRIDGE #400349 ON I-40 WBL OVER US29/US70E/US220N (SOUTH O. HENRY BLVD.) |
| BRIDGE #400327 ON I-40 EBL OVER SOUTH BUFFALO CREEK | BRIDGE #400357 ON I-40 OVER SOUTH BUFFALO CREEK |
| BRIDGE #400329 ON PATTON AVENUE OVER I-40 | BRIDGE #400364 ON I-40 EBL OVER SR 4240 (EAST GATE CITY BOULEVARD) |
| BRIDGE #400336 ON I-40 EBL OVER US 29 SBL/US 70 WBL | BRIDGE #400367 ON I-40 WBL OVER SR 4240 (EAST GATE CITY BOULEVARD) |
| BRIDGE #400339 ON I-40 EBL OVER SR 3762 (MARTIN LUTHER KING JR. DRIVE) | BRIDGE #400678 ON I-40 WBL OVER SOUTH BUFFALO CREEK |

TYPE OF WORK: BRIDGE REHABILITATION - SCARIFICATION OF ASPHALT WEARING SURFACE AND FINE MILLING OF DECK CONCRETE, DECK REPAIRS, SILANE DECK TREATMENT, POLYMER CONCRETE OVERLAY, ASPHALT OVERLAY, JOINT REPAIRS, BEARING REPOSITIONING, EPOXY COATING BENT CAPS, STEEL BEAM REPAIR, SUBSTRUCTURE REPAIR, REMOVE AND REPLACE STEEL BEAM THRIE BEAM BRIDGE RAIL, MILLING AND PAVING OF APPROACH ROADWAY.



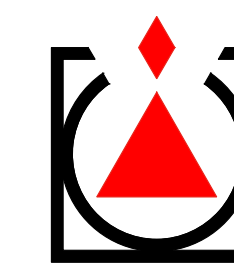
VICINITY MAP - GUILFORD COUNTY

**DESIGN DATA
GUILFORD COUNTY**

#400285 ADT 2019 = 34,000	#400340 ADT 2017 = 70,000
#400291 ADT 2019 = 36,750	#400348 ADT 2017 = 70,000
#400299 ADT 2018 = 138,000	#400349 ADT 2019 = 68,000
#400327 ADT 2018 = 50,000	#400357 ADT 2018 = 33,250
#400329 ADT 2019 = 8,300	#400364 ADT 2015 = 34,500
#400336 ADT 2019 = 52,500	#400367 ADT 2018 = 33,250
#400339 ADT 2017 = 70,000	#400678 ADT 2015 = 49,000

**PROJECT LENGTH
GUILFORD COUNTY**

#400285 = 0.02 MILE	#400340 = 0.03 MILE
#400291 = 0.03 MILE	#400348 = 0.06 MILE
#400299 = 0.02 MILE	#400349 = 0.05 MILE
#400327 = 0.04 MILE	#400357 = 0.04 MILE
#400329 = 0.07 MILE	#400364 = 0.05 MILE
#400336 = 0.06 MILE	#400367 = 0.05 MILE
#400339 = 0.03 MILE	#400678 = 0.03 MILE



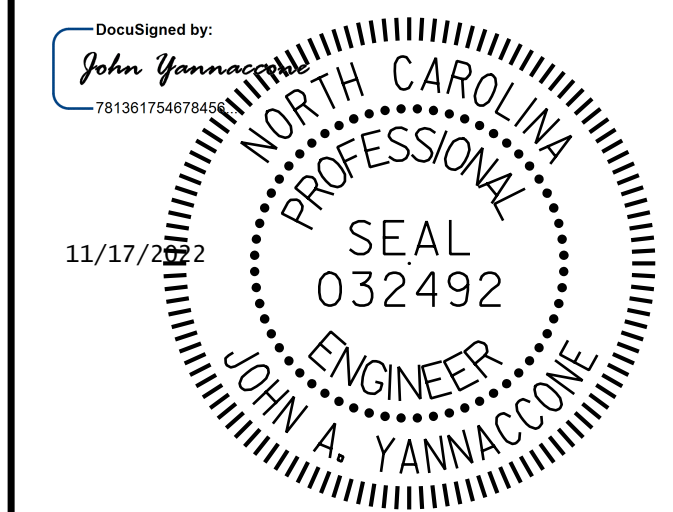
**GANNETT
FLEMING**

One Glenwood Avenue
Suite 900
Raleigh, NC 27603
919-420-7660
NC Lic. No. F-0270

TIMOTHY M. SHERRILL, P.E.
NCDOT PROJECT ENGINEER

2018 STANDARD SPECIFICATIONS

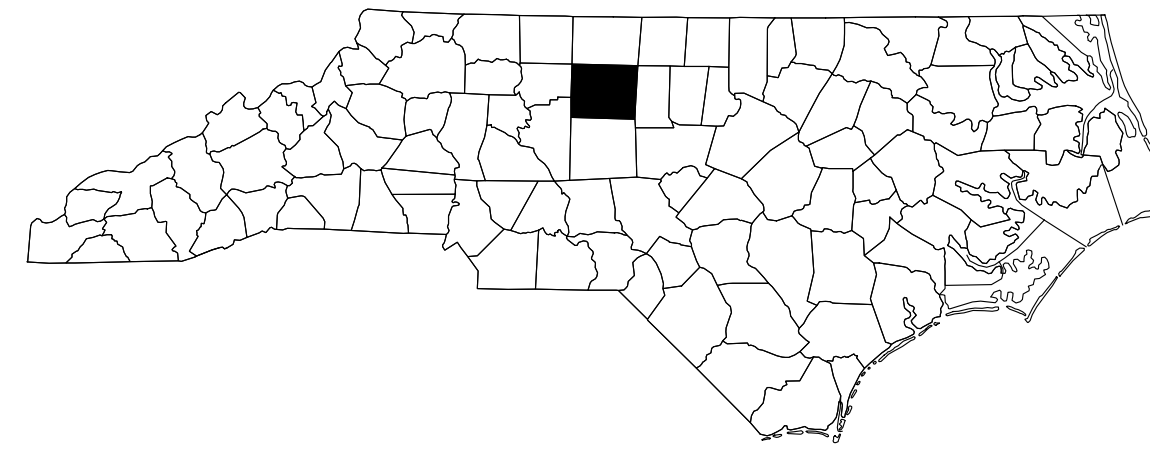
LETTING DATE:
JANUARY 17, 2023



JOHN A. YANNACCONE, P.E.
PROJECT DESIGN ENGINEER

PROJECT: I-5955

CONTRACT NO: C204736



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

GUILFORD COUNTY

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STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45908.3.1	0040115	P.E.	
45908.3.3	0040115	CONST.	

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INDEX OF DRAWINGS

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
1	TITLE SHEET
1A	INDEX OF DRAWINGS
S-1	TOTAL BILL OF MATERIAL
S1-1 TO S1-10	STRUCTURAL PLANS - BRIDGE NO. 400285
S2-1 TO S2-4	STRUCTURAL PLANS - BRIDGE NO. 400291
S3-1 TO S3-12	STRUCTURAL PLANS - BRIDGE NO. 400299
S4-1 TO S4-5	STRUCTURAL PLANS - BRIDGE NO. 400327
S5-1 TO S5-18	STRUCTURAL PLANS - BRIDGE NO. 400329
S6-1 TO S6-4	STRUCTURAL PLANS - BRIDGE NO. 400336
S7-1 TO S7-11	STRUCTURAL PLANS - BRIDGE NO. 400339
S8-1 TO S8-10	STRUCTURAL PLANS - BRIDGE NO. 400340
S9-1 TO S9-7	STRUCTURAL PLANS - BRIDGE NO. 400348
S10-1 TO S10-4	STRUCTURAL PLANS - BRIDGE NO. 400349
S11-1 TO S11-9	STRUCTURAL PLANS - BRIDGE NO. 400357
S12-1 TO S12-8	STRUCTURAL PLANS - BRIDGE NO. 400364
S13-1 TO S13-9	STRUCTURAL PLANS - BRIDGE NO. 400367
S14-1 TO S14-5	STRUCTURAL PLANS - BRIDGE NO. 400678
SD-1 TO SD-4	TUBULAR BEAM GUARDRAIL DETAILS
SD-5	OVERHANG AND UNDERSIDE REPAIR DETAILS
SD-6	TYPICAL CAP AND COLUMN REPAIR DETAILS
SD-7	JACKING DETAILS
SN	STANDARD NOTES

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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'-42.37"	79°-46'-27.51"

GENERAL NOTES

SEE TRANSPORTATION MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF ASPHALT WEARING SURFACE (AWS).

SEE ROADWAY PLANS FOR MILLING AND OVERLAY OF THE BRIDGE DECK.

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.

ALL PAVEMENT MARKING WILL BE IN ACCORDANCE WITH THE TRANSPORTATION MANAGEMENT PLANS.

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

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.

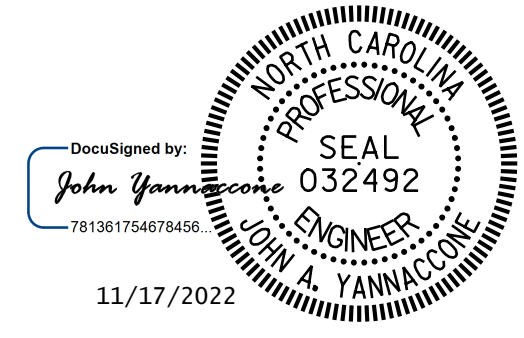
FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

AFTER MILLING THE ASPHALT WEARING SURFACE OF THE BRIDGE DECK, THE ENGINEER WILL LOCATE AND MARK DECK REPAIR AREAS. AREAS MARKED FOR DECK REPAIR SHALL BE PREPARED AND REPAIRED IN ACCORDANCE WITH THE CONCRETE DECK REPAIR FOR ASPHALT OVERLAY SPECIAL PROVISION.

THE ASPHALT PLUG JOINTS FOR PRESERVATION SHALL BE INSTALLED AFTER PLACEMENT OF THE PROPOSED ASPHALT WEARING SURFACE.

PROJECT NO. I-5955
GUILFORD COUNTY
 BRIDGE NO. 400285

SHEET 2 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 FOR BRIDGE ON US 29 SBL
 OVER SR 3762 (MARTIN LUTHER
 KING JR. DRIVE)

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

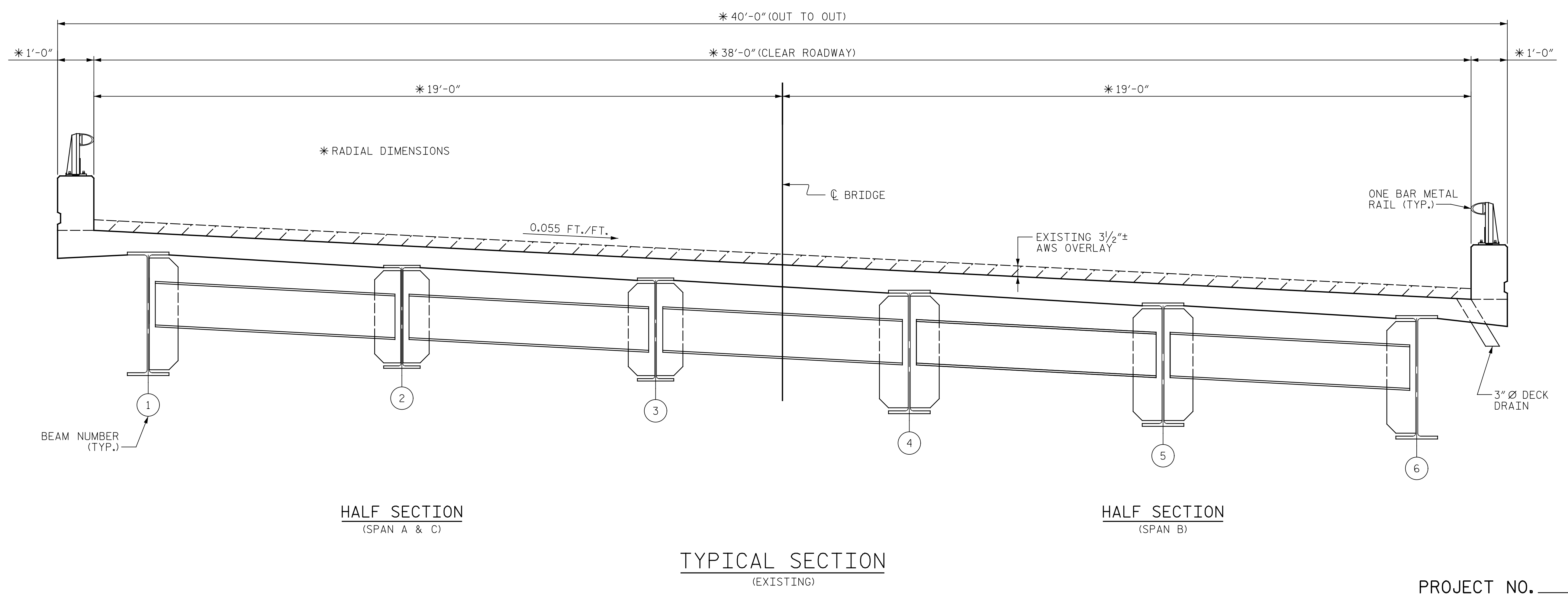


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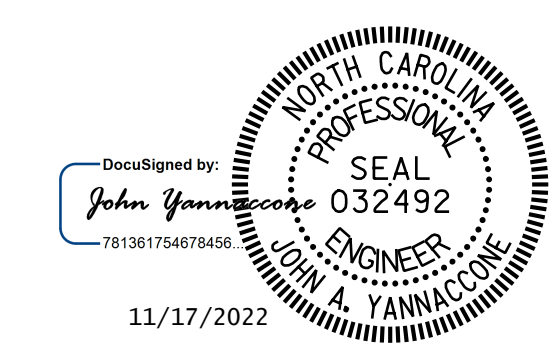
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1			3			TOTAL SHEETS
2			4			127

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NOTES:
 SEE TRAFFIC MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING, AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF ASPHALT WEARING SURFACE (AWS) PLACEMENT.
 SEE ROADWAY PLANS FOR MILLING AND OVERLAY OF THE BRIDGE DECK.
 THE CONTRACTOR SHALL ENSURE THAT THE EXISTING DECK DRAINS ARE OPEN AND FULLY FUNCTIONAL AFTER PLACEMENT OF THE ASPHALT WEARING SURFACE.



PROJECT NO. I-5955
GUILFORD COUNTY
 BRIDGE NO. 400285



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

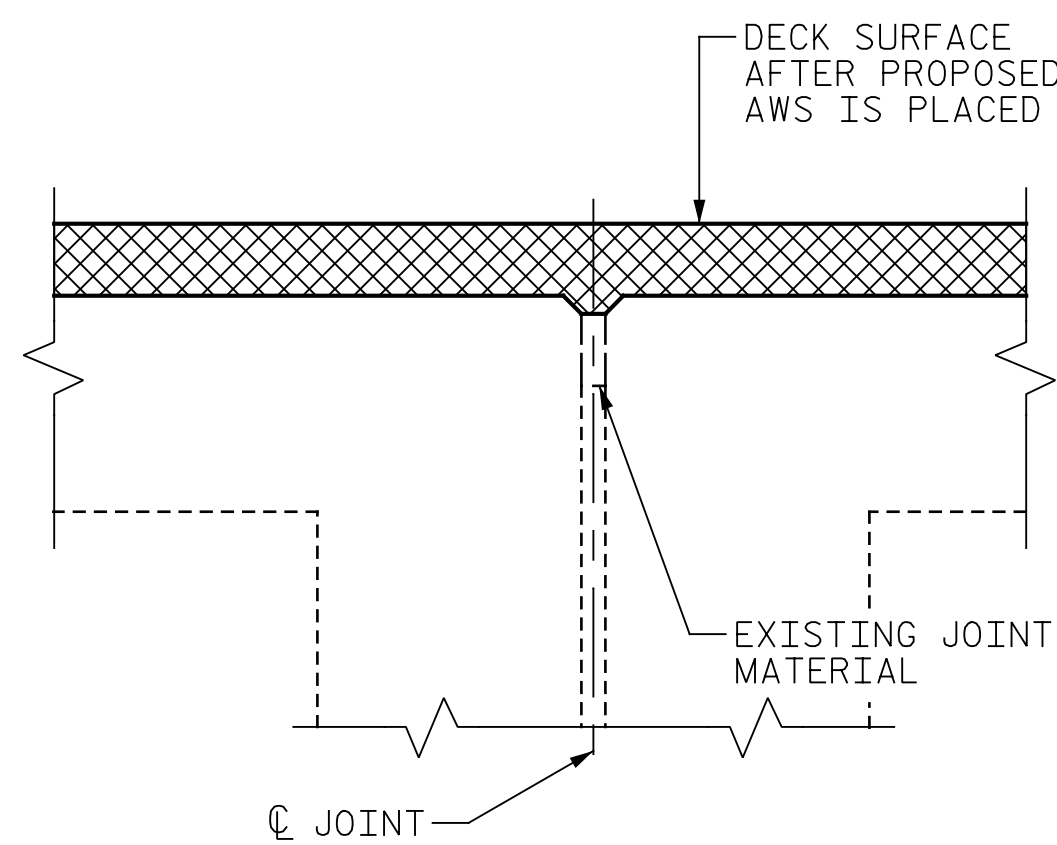
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 CHECKED BY : J. YANNACCONE DATE : 10/2022



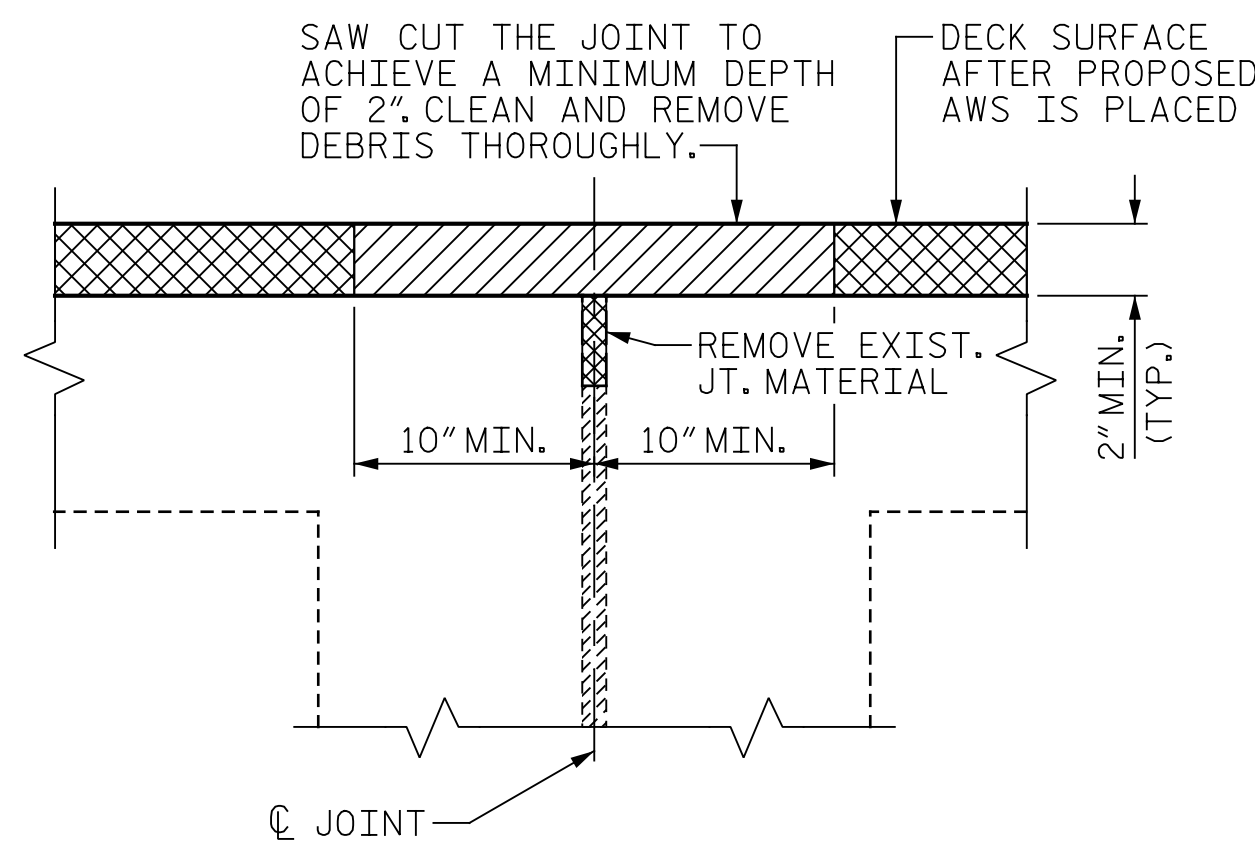
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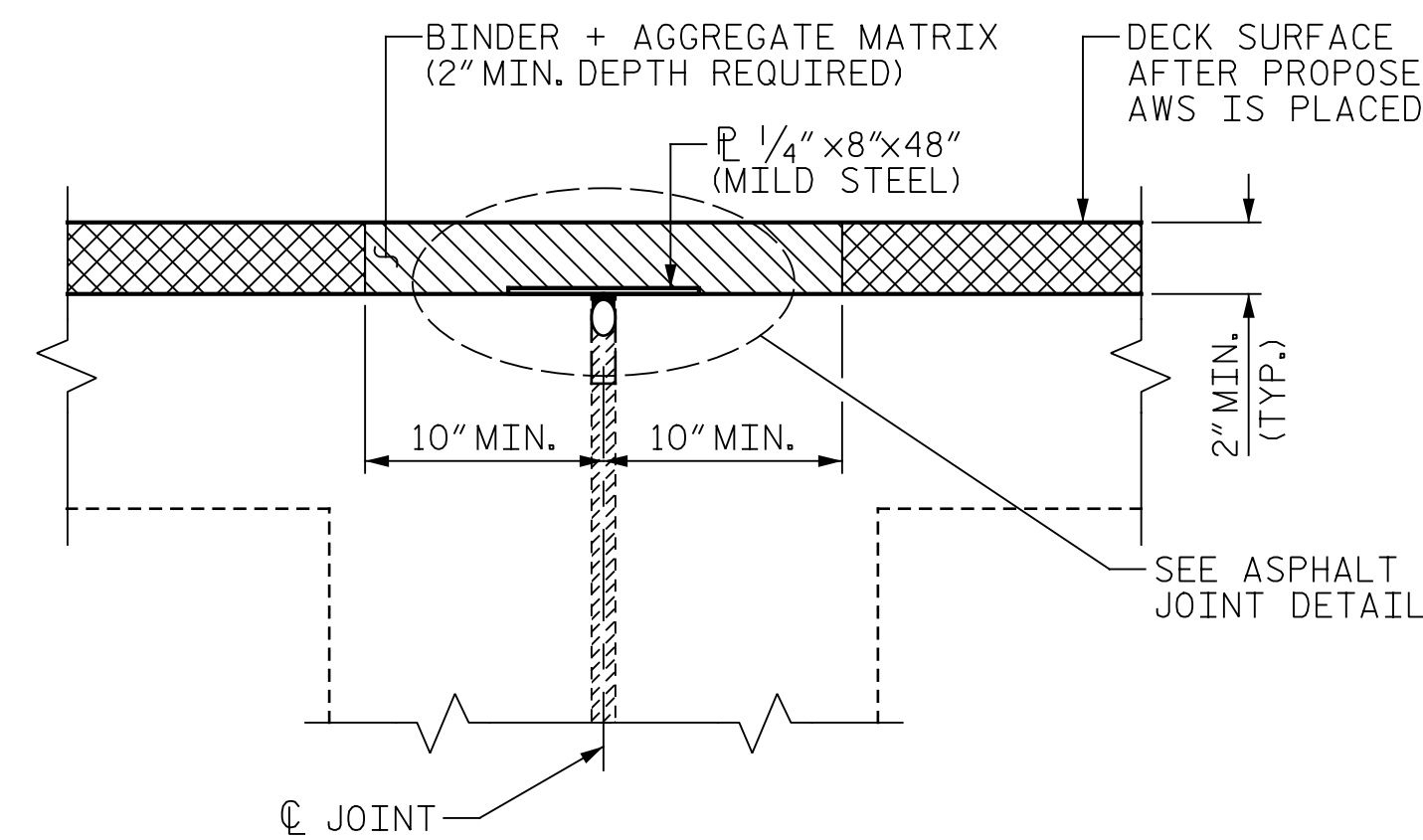
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EXISTING JOINT AFTER
AWS PLACEMENT

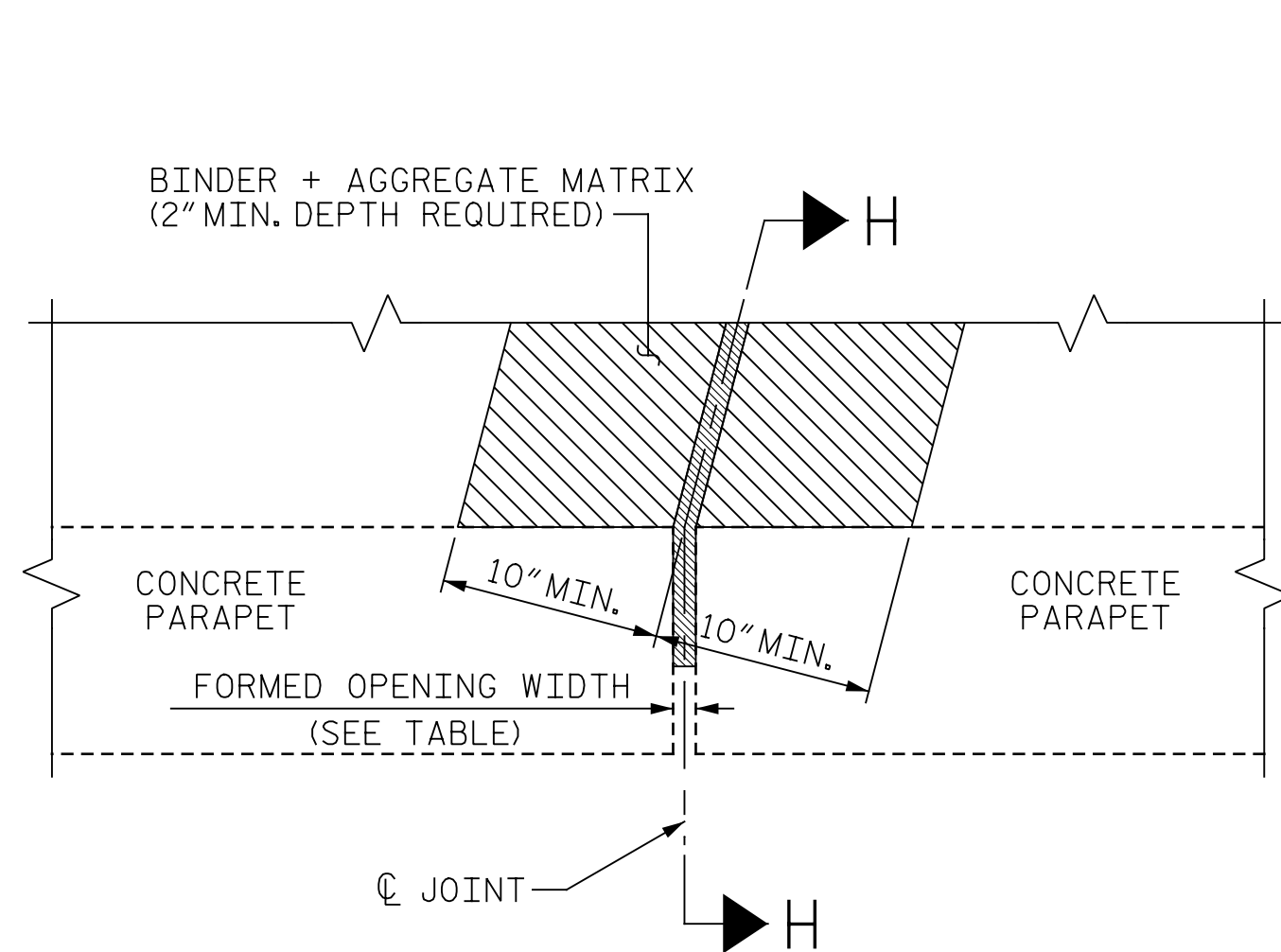


DEMOLITION PREPARATION



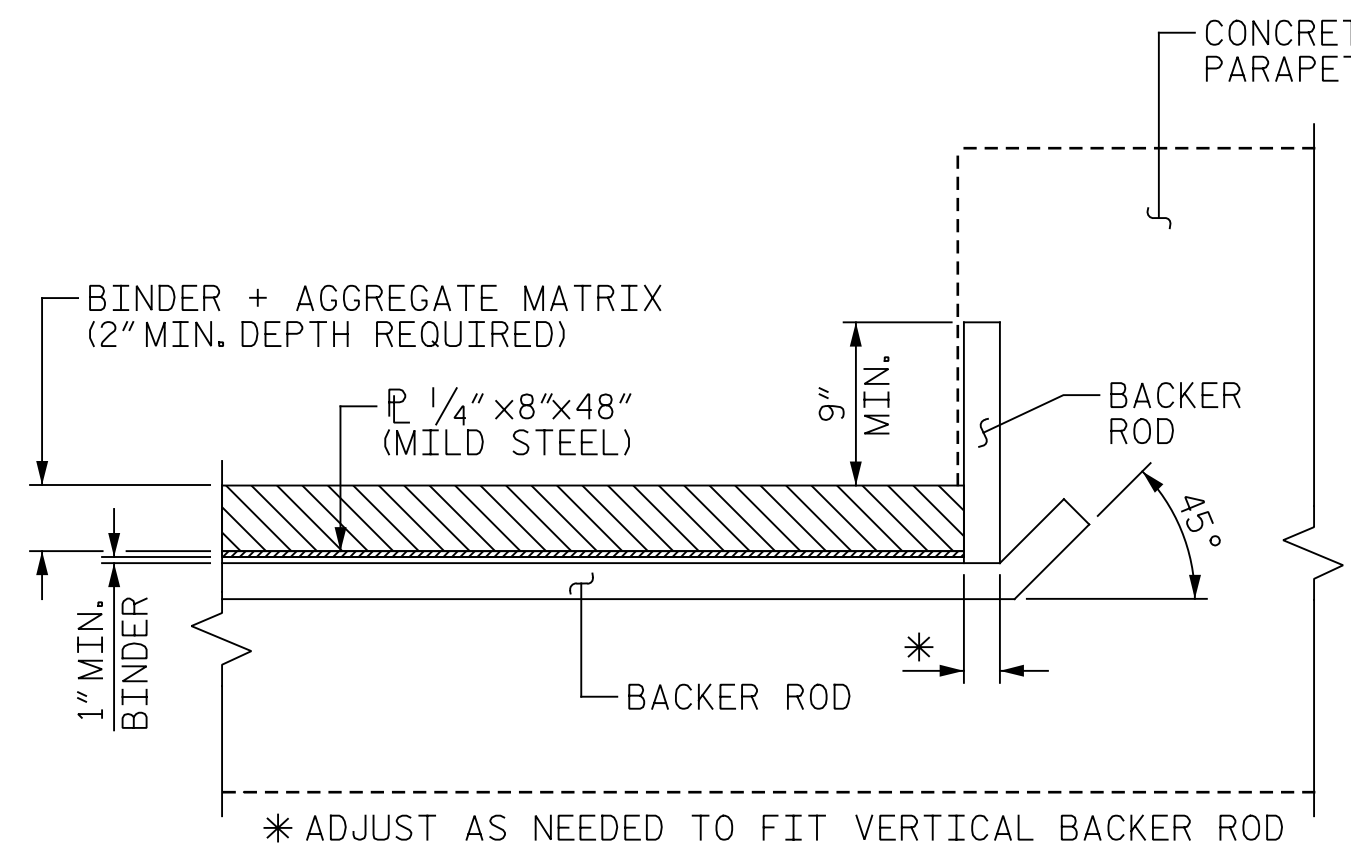
PROPOSED JOINT

SECTION G-G
(TYP. AT BENTS)

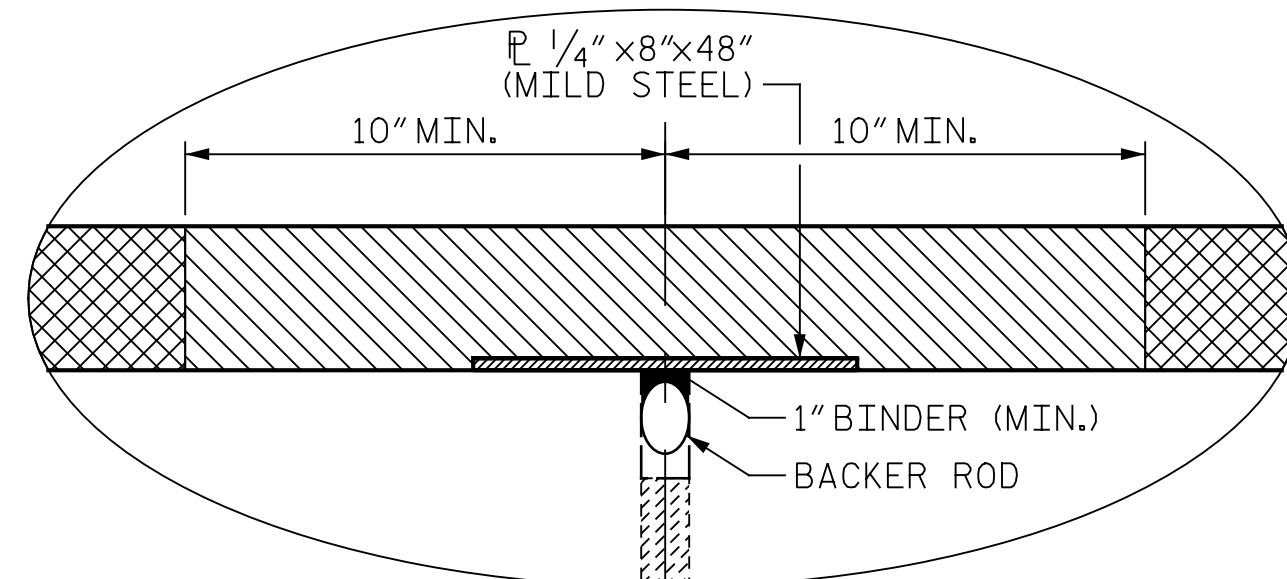


PLAN AT BARRIER

(PROPOSED JOINT SEAL, STEEL C 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.

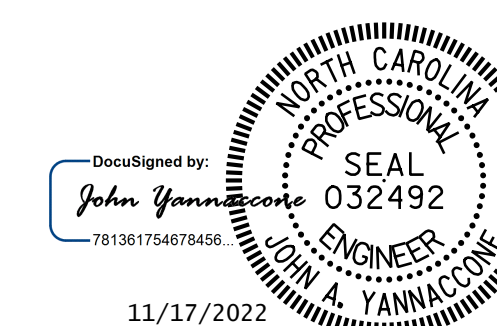
FOR ASPHALT PLUG JOINTS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

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

SEE ROADWAY PLANS FOR MILLING AND OVERLAY OF THE BRIDGE DECK.

LOCATION	ASPHALT PLUG JOINT FOR PRESERVATION (LIN. FT.)	FORMED OPENING WIDTH PER EXISTING BRIDGE PLANS	TOTAL THEORETICAL MOVEMENT PERPENDICULAR TO THE JOINT
BENT 1	41.5	1"	1/4"
BENT 2	41.5	1/2"	7/8"

PROJECT NO. I-5955
GUILFORD COUNTY
 BRIDGE NO. 400285



11/17/2022

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

ASPHALT PLUG JOINT DETAILS

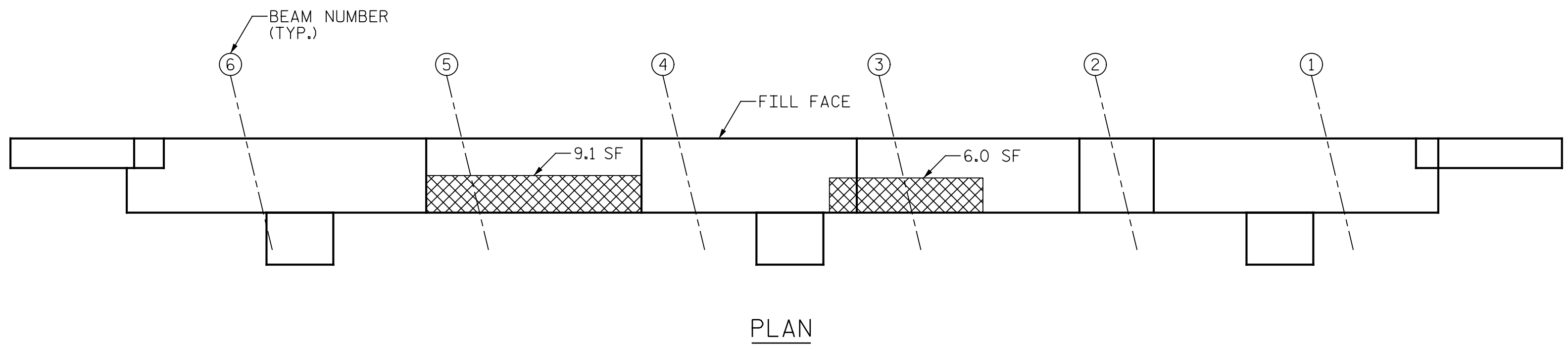
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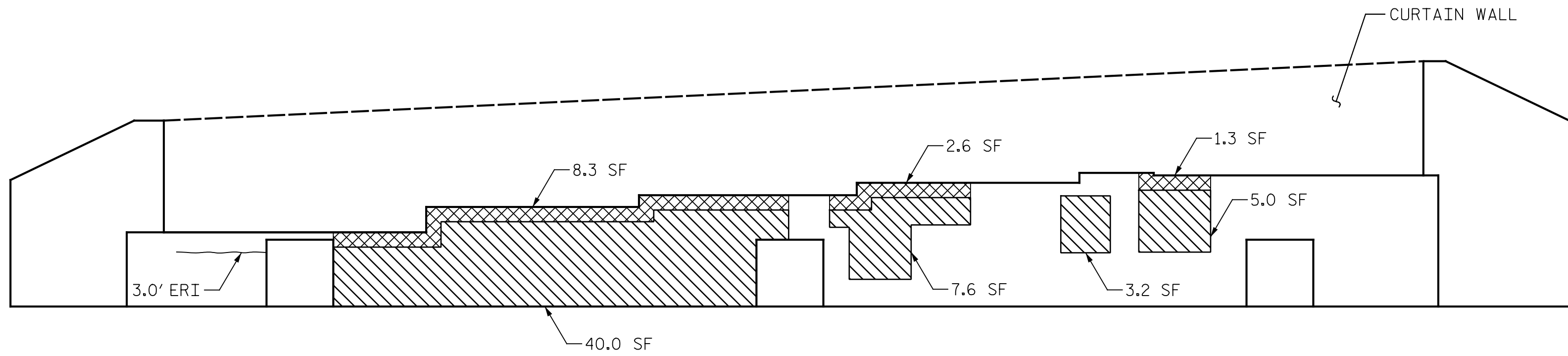
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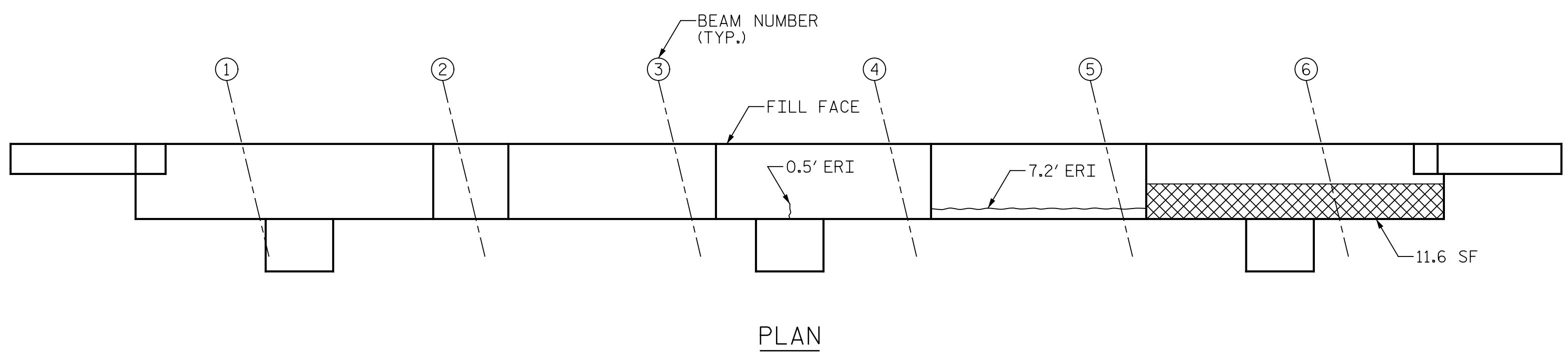


PLAN

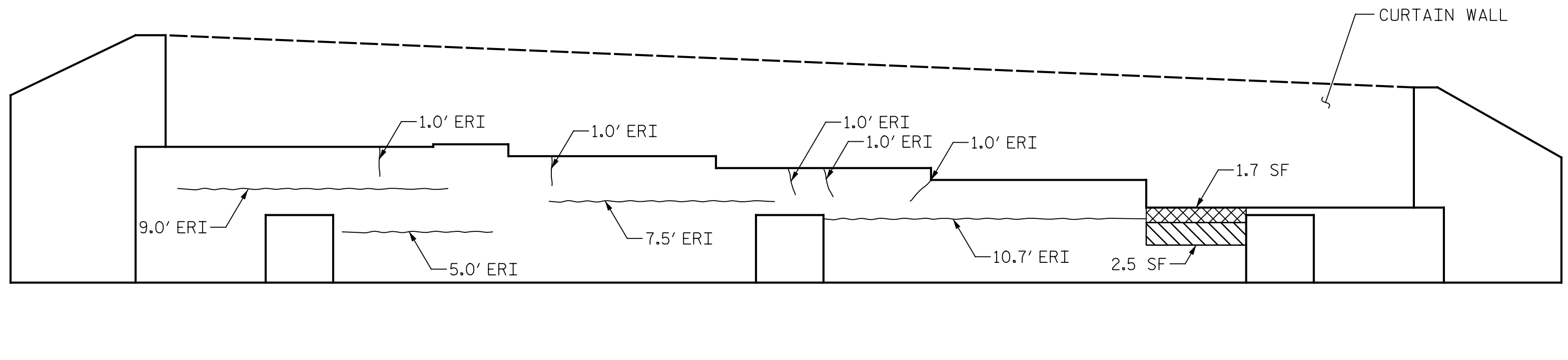


ELEVATION
END BENT 1

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



PLAN



ELEVATION
END BENT 2

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	55.8	27.9			
CURTAIN WALL	0.0	0.0			
CONCRETE REPAIRS	27.3	13.6			
EPOXY RESIN INJECTION		LENGTH LF		LENGTH LF	
CAP		3.0			
CURTAIN WALL		0.0			
EPOXY COATING		SQ. FT		SQ. FT	
TOP OF BENT CAP		0			

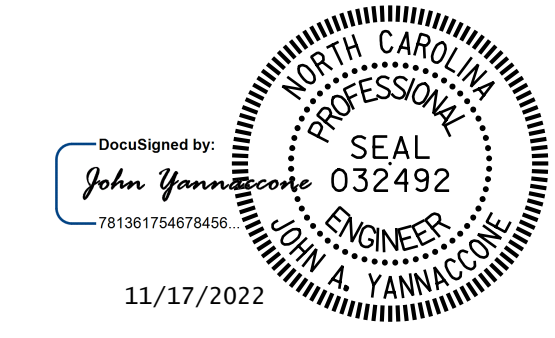
END BENT 2 REPAIRS	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP	2.5	1.3			
CURTAIN WALL	0.0	0.0			
CONCRETE REPAIRS	13.3	6.7			
EPOXY RESIN INJECTION		LENGTH LF		LENGTH LF	
CAP		44.9			
CURTAIN WALL		0.0			
EPOXY COATING		SQ. FT		SQ. FT	
TOP OF BENT CAP		0			

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM 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 QUANTITIES 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.

PROJECT NO. I-5955
GUILFORD COUNTY
 BRIDGE NO. 400285



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

 END BENT 1 & 2

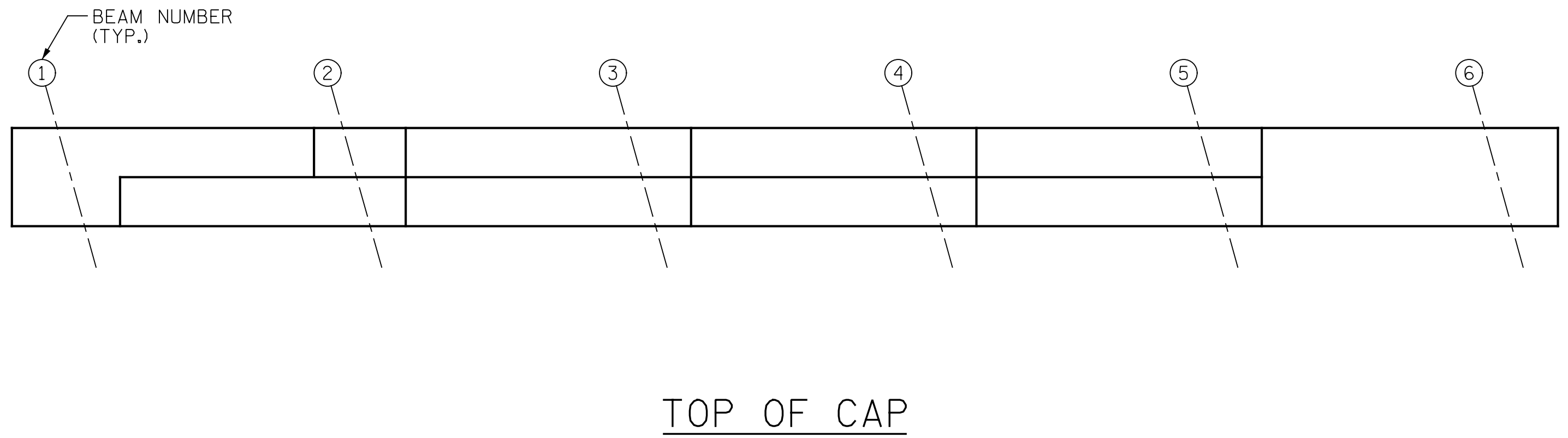
DRAWN BY : J. HARRIS DATE : 10/2022
 CHECKED BY : J. YANNACCONE DATE : 10/2022



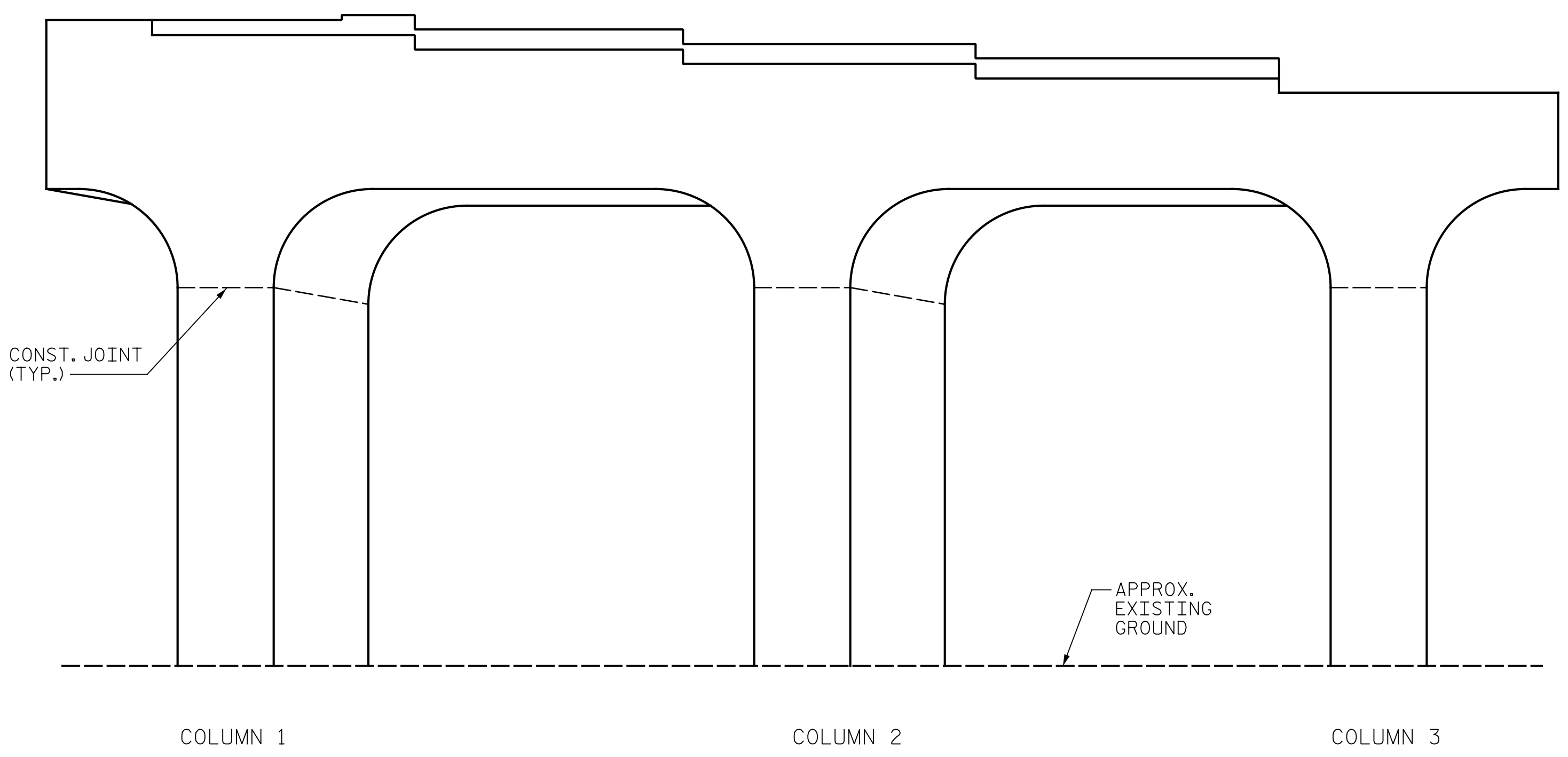
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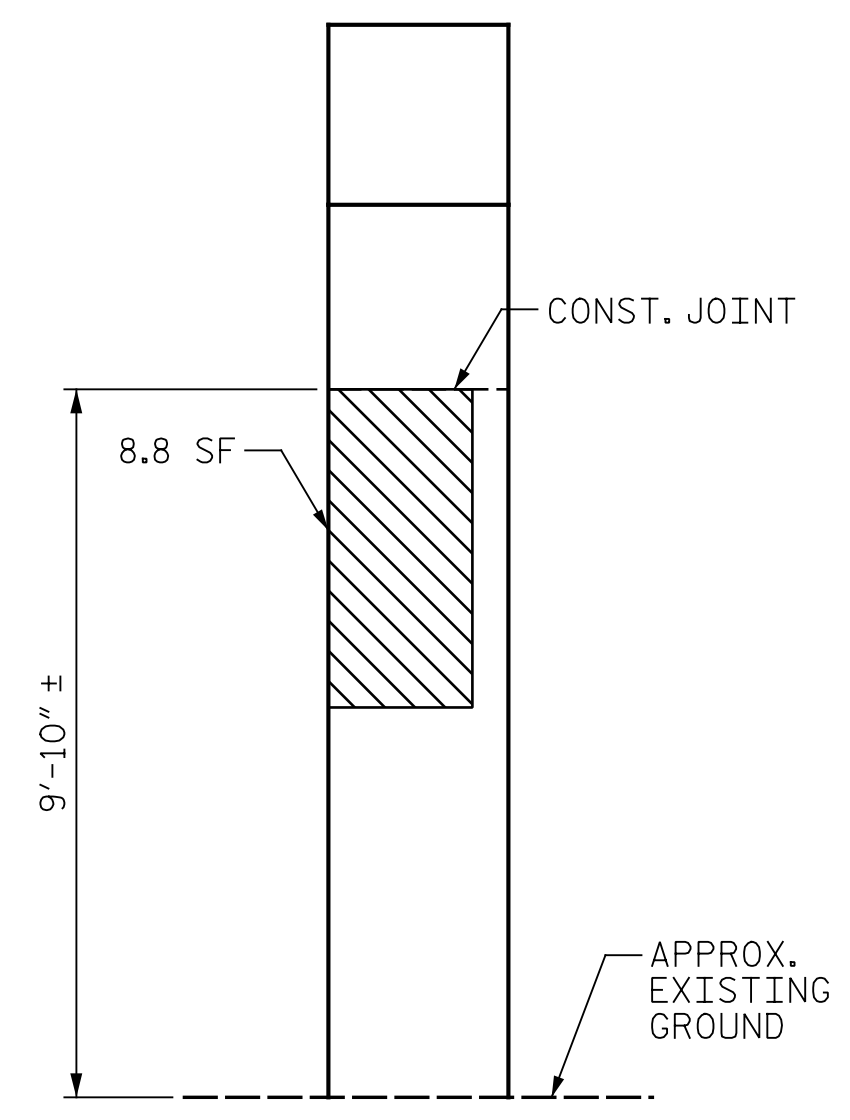
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SPAN C
SPAN B



ELEVATION



END VIEW
COLUMN 3

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	8.8	4.4			
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		90			

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.

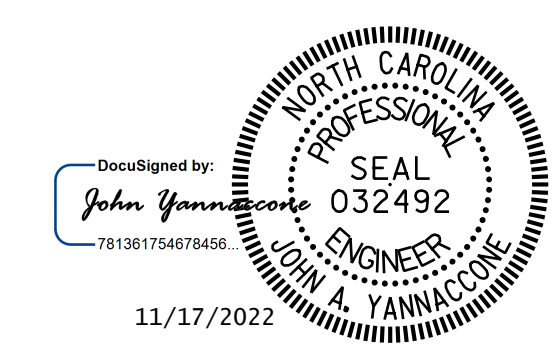
- SHOTCRETE REPAIR
- CONCRETE REPAIR (FORM & POUR)
- ERI - EPOXY RESIN INJECTION

PROJECT NO. I-5955
GUILFORD COUNTY
 BRIDGE NO. 400285

SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 2
SPAN B SIDE

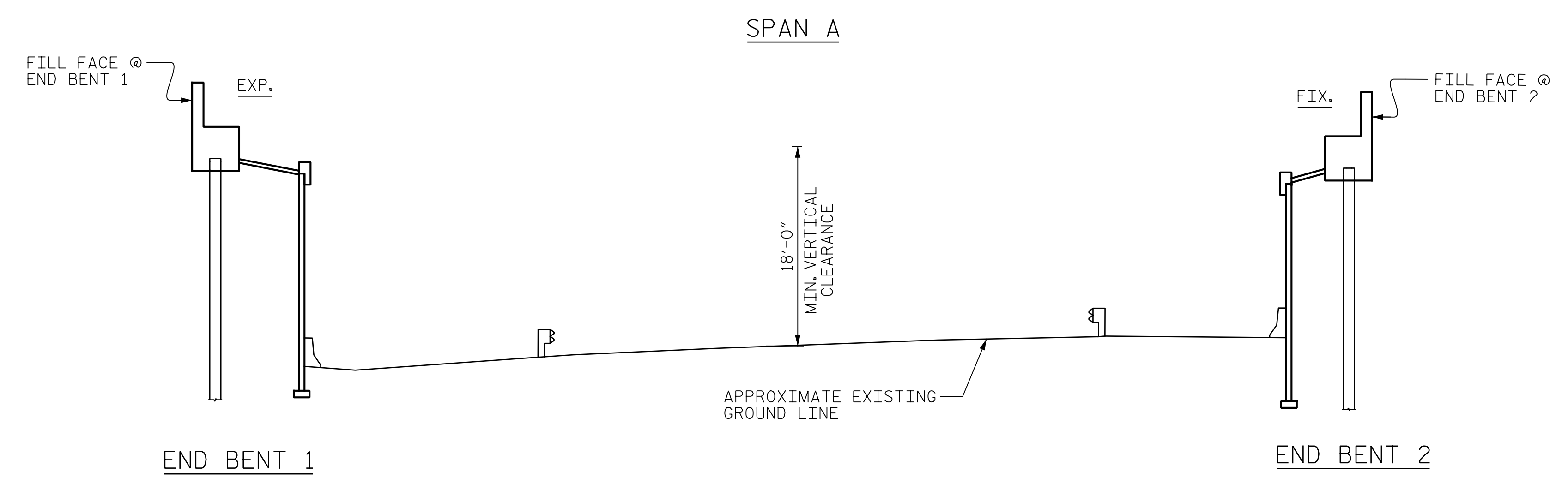


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 CHECKED BY : J. YANNACCONE DATE : 10/2022

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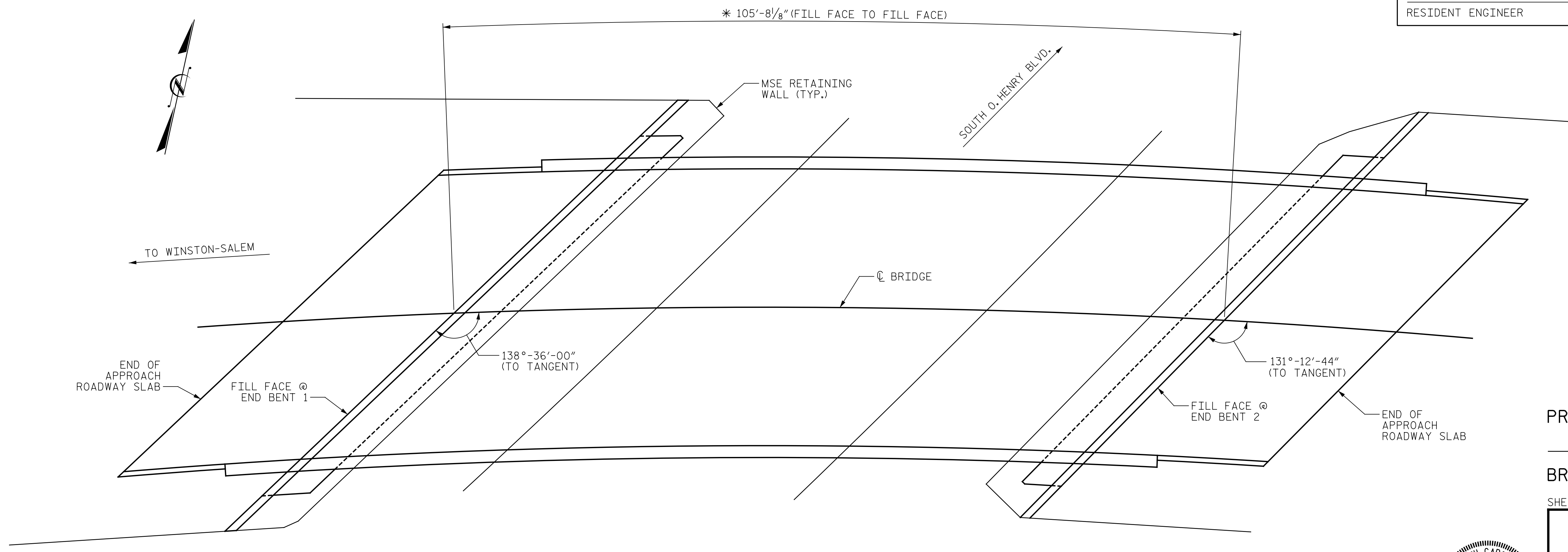


NOTE:
GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 01/13/2021
BRIDGE ORIENTATION CONFORMS TO ROUTINE INSPECTION REPORT.

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

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

RESIDENT ENGINEER _____ DATE _____



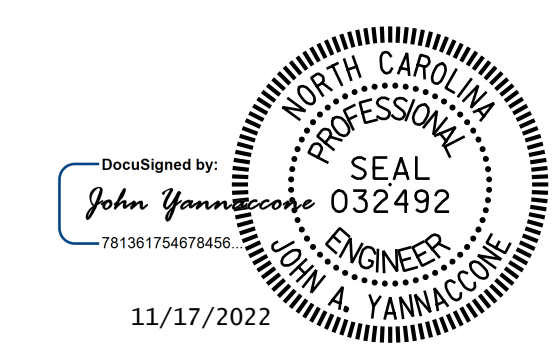
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PROJECT NO. I-5955
GUILFORD COUNTY
BRIDGE NO. 400291

SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR BRIDGE ON I-40 WBL RAMP
OVER US 29 NBL/US 70 EBL/
US 220 NBL (SOUTH O. HENRY
BOULEVARD)



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

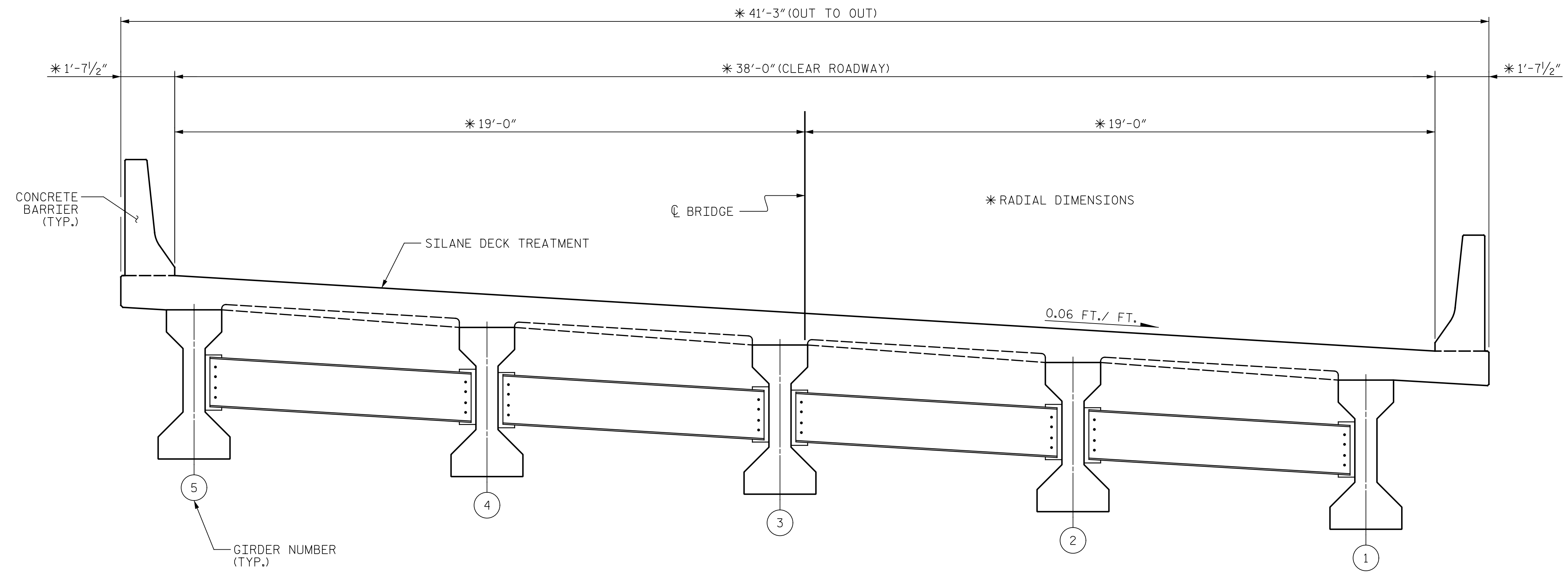


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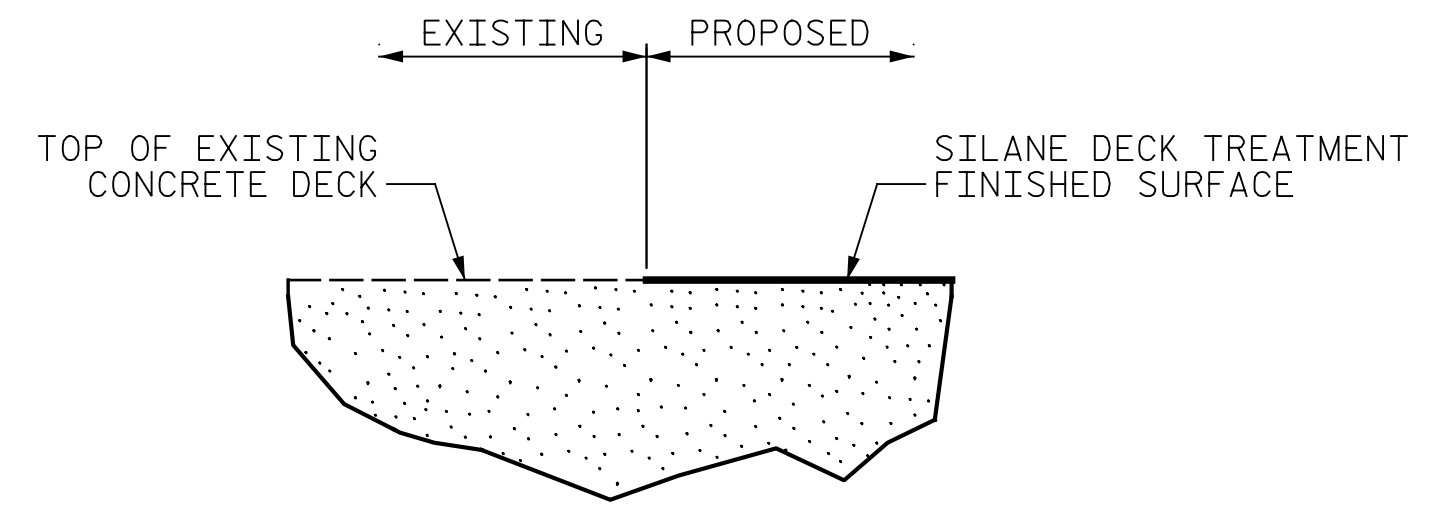
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NOTES:
 SEE TRAFFIC MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING, AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION FOR SILANE DECK TREATMENT.

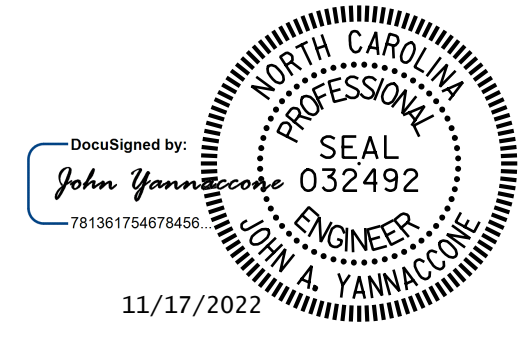


TYPICAL SECTION
(PROPOSED)



DETAIL OF SILANE DECK TREATMENT

PROJECT NO. I-5955
GUILFORD COUNTY
 BRIDGE NO. 400291



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



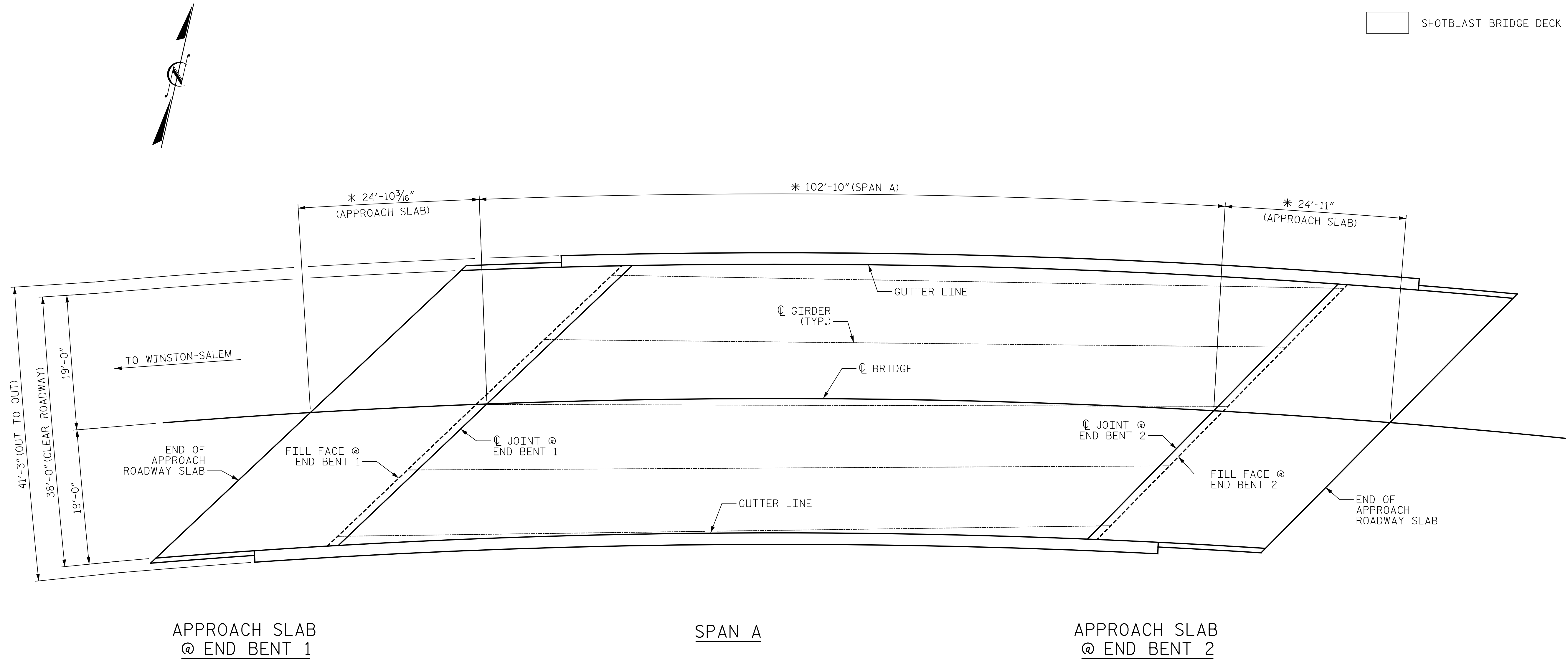
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SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
SHOTBLASTING BRIDGE DECK	645 SQ. YDS.	
SILANE DECK TREATMENT	645 SQ. YDS.	

 SHOTBLAST BRIDGE DECK & SILANE DECK TREATMENT



APPROACH SLAB
@ END BENT 1

SPAN A

APPROACH SLAB
@ END BENT 2

PLAN

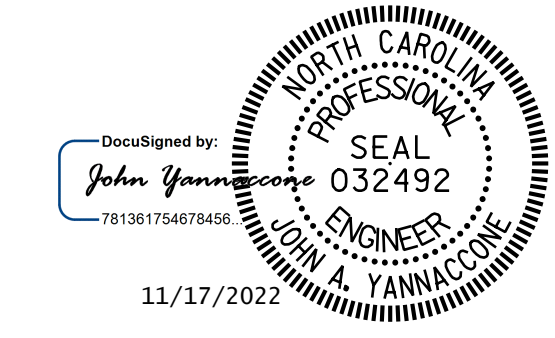
* DIMENSIONS MEASURED ALONG ARC

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 2 1/2" PER THE EXISTING BRIDGE PLANS.

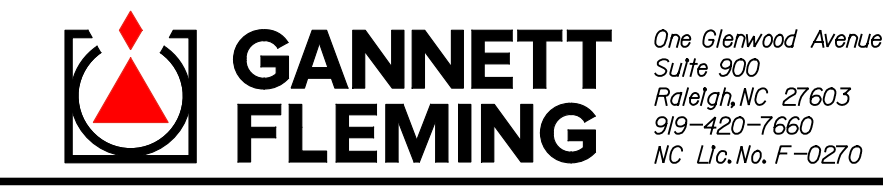
PROJECT NO. I-5955
GUILFORD COUNTY
 BRIDGE NO. 400291



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PLAN OF SPANS

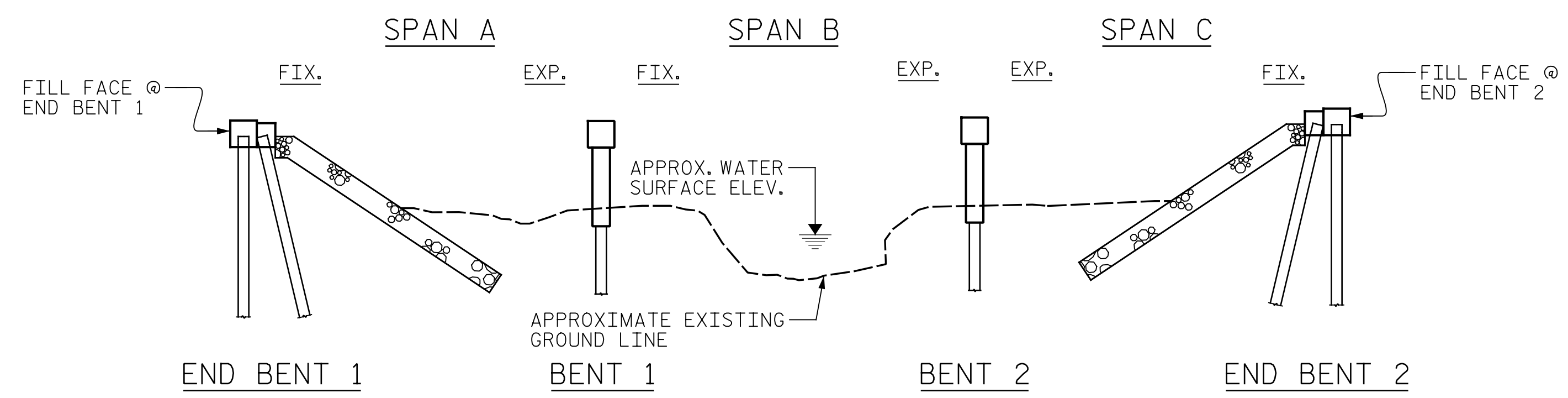
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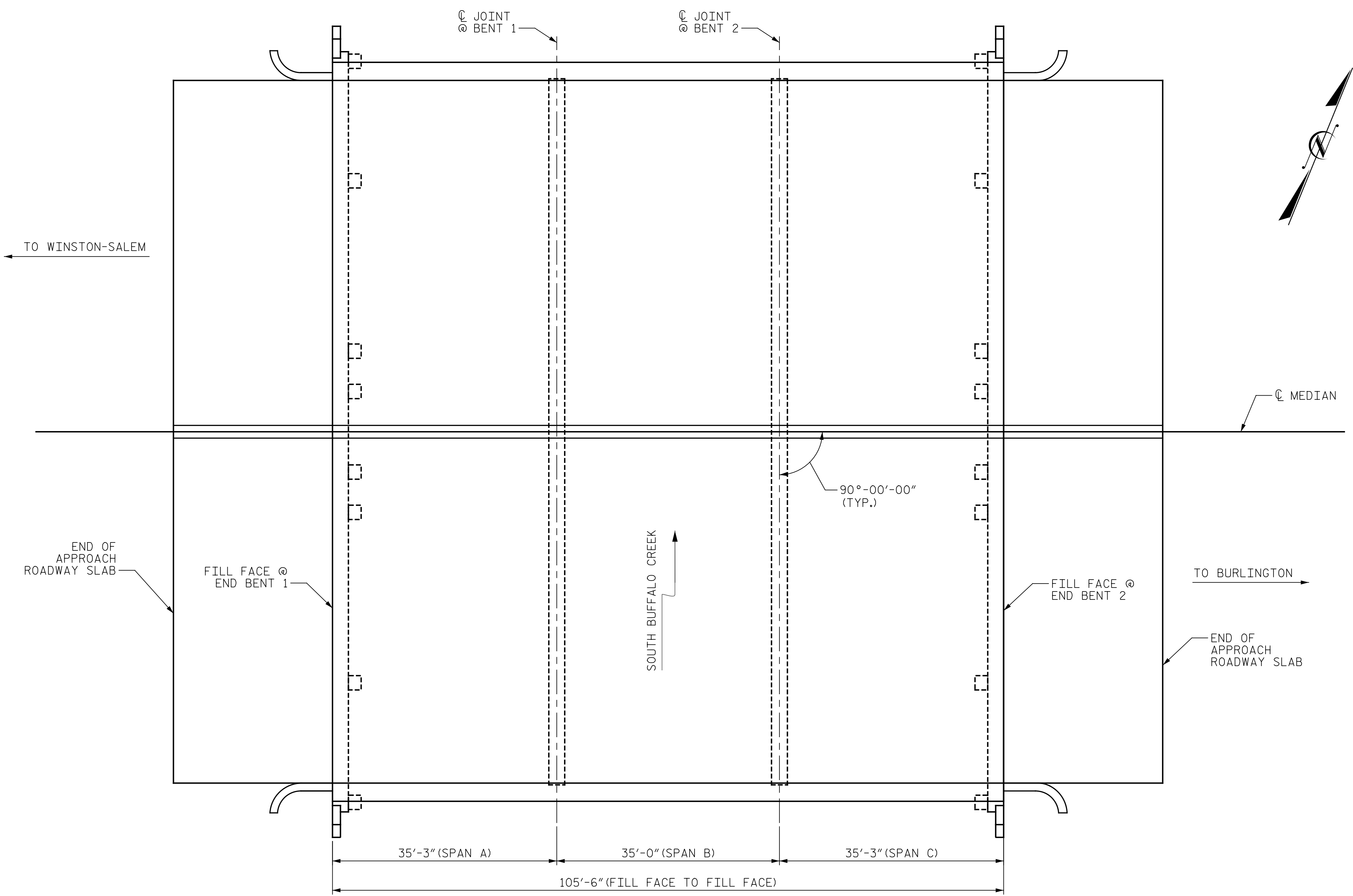
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SECTION ALONG C BRIDGE
 (SECTION AT BENTS AND END BENTS ARE AT RIGHT ANGLES)



PLAN
 (PILES NOT SHOWN FOR CLARITY)

- NOTE:**
- GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 03/08/2021.
- 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 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 VEGETATION FROM STRUCTURE.
 - REMOVE AND REPLACE EXISTING TUBULAR TRIPLE CORRUGATED STEEL BEAM BRIDGE RAIL.

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

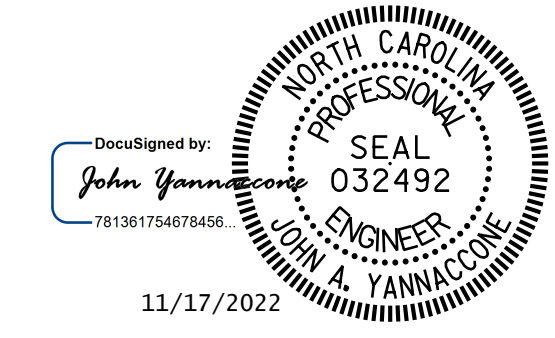
RESIDENT ENGINEER _____ DATE _____

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

SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

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



11/17/2022

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



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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'-06.16"	79°-47'-40.81"

GENERAL NOTES

SEE TRANSPORTATION MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF ASPHALT WEARING SURFACE (AWS).

SEE ROADWAY PLANS FOR MILLING AND OVERLAY OF THE BRIDGE DECK.

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.

ALL PAVEMENT MARKING WILL BE IN ACCORDANCE WITH THE TRANSPORTATION MANAGEMENT PLANS.

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 PROVISION.

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.

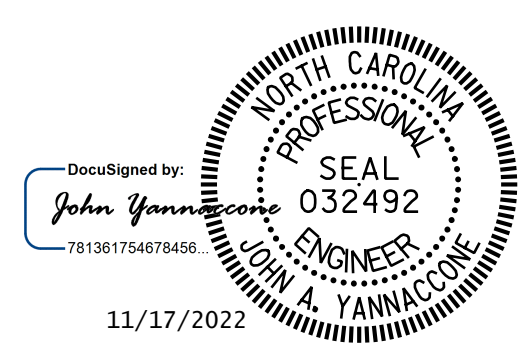
FOR CONCRETE DECK REPAIR FOR ASPHALT OVERLAY, SEE SPECIAL PROVISIONS.

AFTER MILLING THE ASPHALT WEARING SURFACE OF THE BRIDGE DECK, THE ENGINEER WILL LOCATE AND MARK DECK REPAIR AREAS. AREAS MARKED FOR DECK REPAIR SHALL BE PREPARED AND REPAIRED IN ACCORDANCE WITH THE CONCRETE DECK REPAIR FOR ASPHALT OVERLAY SPECIAL PROVISION.

THE ASPHALT PLUG JOINTS FOR PRESERVATION SHALL BE INSTALLED AFTER PLACEMENT OF THE PROPOSED ASPHALT WEARING SURFACE.

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

SHEET 2 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

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

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

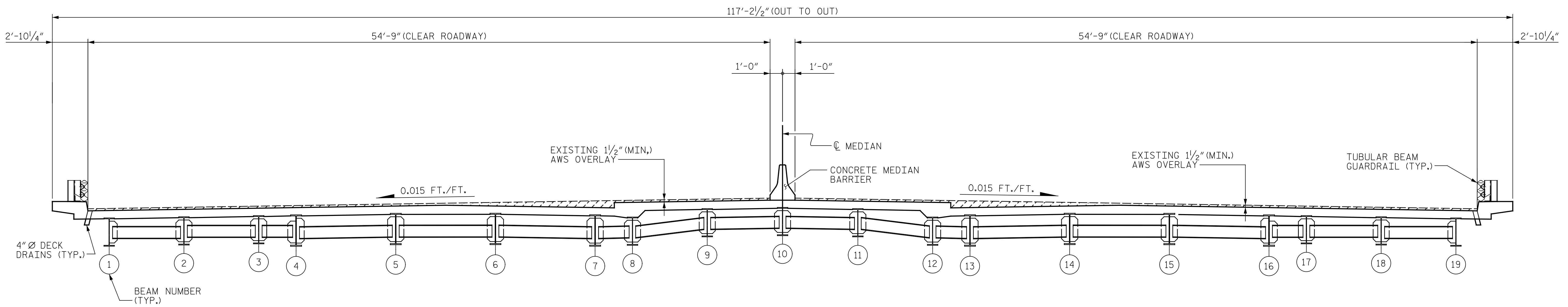


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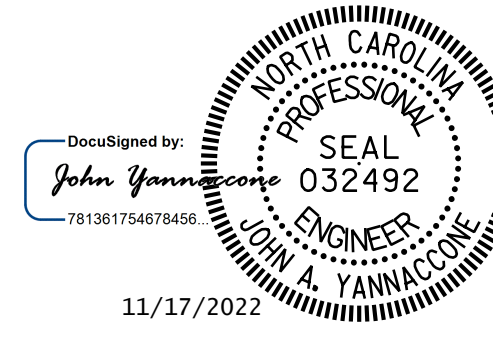
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NOTES:
 SEE TRAFFIC MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF ASPHALT WEARING SURFACE (AWS) PLACEMENT.
 SEE ROADWAY PLANS FOR MILLING AND OVERLAY OF THE BRIDGE DECK.
 THE CONTRACTOR SHALL ENSURE THAT THE EXISTING DECK DRAINS ARE OPEN AND FULLY FUNCTIONAL AFTER PLACEMENT OF THE ASPHALT WEARING SURFACE.



TYPICAL SECTION
(EXISTING)

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



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

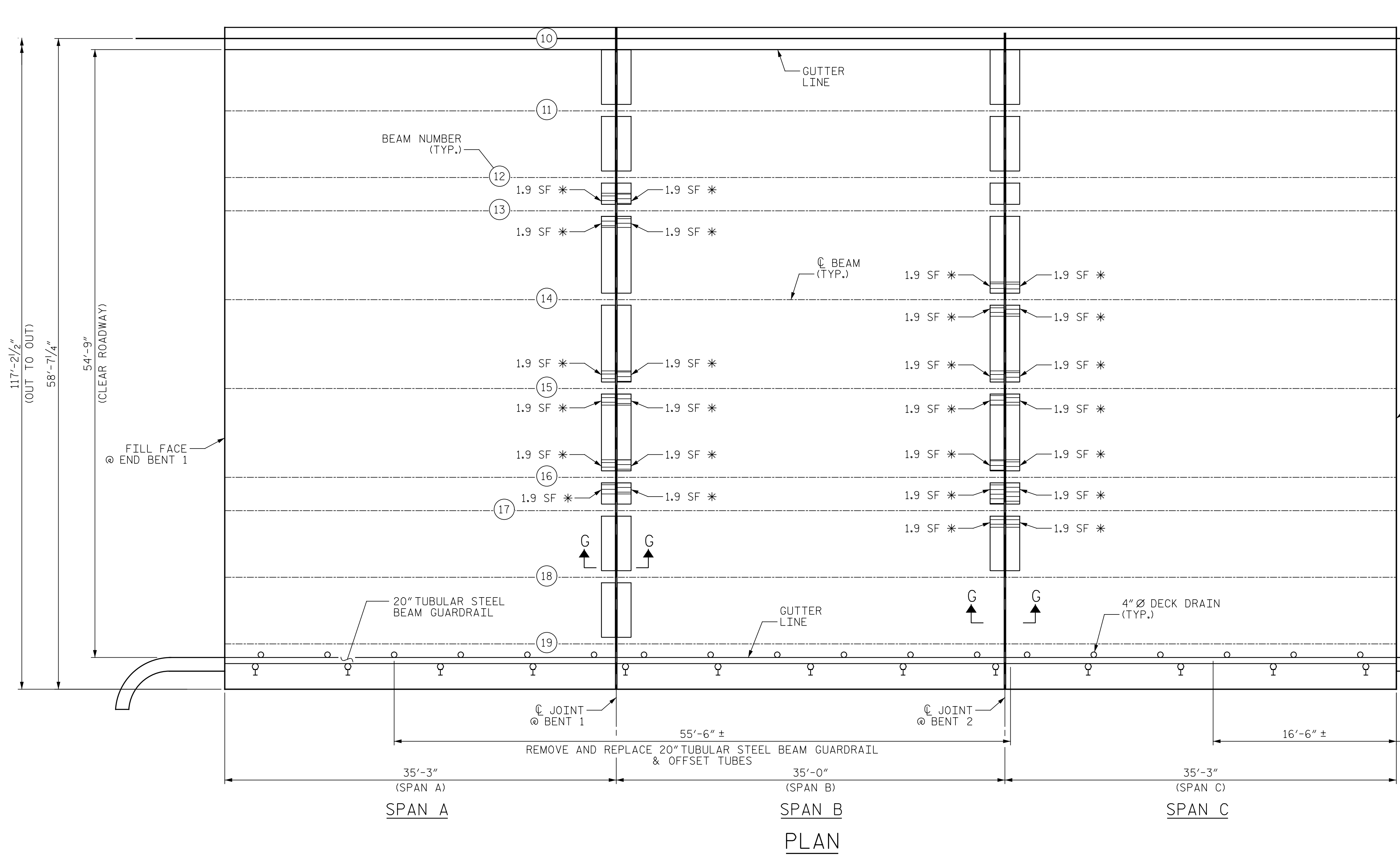
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NOTES:

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

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.

THE BOUNDARIES OF AREAS IDENTIFIED FOR CLASS II SURFACE PREPARATION ARE APPROXIMATE AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED AT THE PROJECT SITE.

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

THE CONTRACTOR SHALL REMOVE AND REPLACE THE 20" TUBULAR STEEL BEAM GUARDRAIL AS NOTED ON THE PLANS AND AS DIRECTED BY THE ENGINEER. THE SECTIONS OF GUARDRAIL WHICH ARE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE PROJECT.

FOR DIMENSIONS OF TUBULAR BEAM GUARDRAIL AND OFFSET TUBES, SEE "TUBULAR BEAM GUARDRAIL DETAILS" SHEET.

FOR CONCRETE DIAPHRAGM REPAIR, SEE SPECIAL PROVISIONS.

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

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

THE CONTRACTOR SHALL ENSURE THAT THE EXISTING DECK DRAINS ARE OPEN AND FULLY FUNCTIONAL AFTER PLACEMENT OF THE ASPHALT WEARING SURFACE.

* SEE TYPICAL INTERIOR DIAPHRAGM REPAIR SITE DETAIL

PLAN

REPAIR QUANTITY TABLE									
TOP OF DECK REPAIR				UNDERSIDE OF DECK REPAIR					
CONCRETE DECK REPAIR FOR ASPHALT OVERLAY	SPAN	ESTIMATE	ACTUAL	SHOTCRETE REPAIRS	ESTIMATE		ACTUAL		
		S.F.			AREA S.F.	VOLUME CF	AREA S.F.	VOLUME CF	
	SPAN A	0.0	S.Y.	UNDERSIDE OF DECK	SPAN A	0.0	0.0		
	SPAN B	0.0	S.Y.		SPAN B	0.0	0.0		
	SPAN C	0.0	S.Y.		SPAN C	0.0	0.0		
	SPAN	ESTIMATE	ACTUAL	OVERHANG DIAPHRAGMS	SPAN A	0.0	0.0		
				UNDERSIDE OF OVERHANG	SPAN B	0.0	0.0		
					SPAN C	0.0	0.0		
	SPAN	ESTIMATE	ACTUAL	INTERIOR DIAPHRAGMS	SPAN A	11.4	4.8		
					SPAN B	24.7	11.2		
					SPAN C	13.3	6.4		
	SPAN	ESTIMATE	ACTUAL	UNDERSIDE EPOXY RESIN INJECTION	SPAN A	0.0	LF		
				SPAN B	0.0	LF			
				SPAN C	0.0	LF			

CONCRETE DECK REPAIR FOR ASPHALT OVERLAY
 UNDERSIDE OF DECK REPAIR



TYP. INTERIOR DIAPHRAGM REPAIR SITE

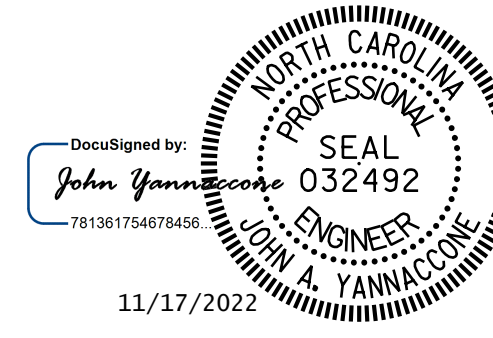
PROJECT NO. I-5955
GUILFORD COUNTY
 BRIDGE NO. 400299

SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PLAN OF SPANS
EAST BOUND

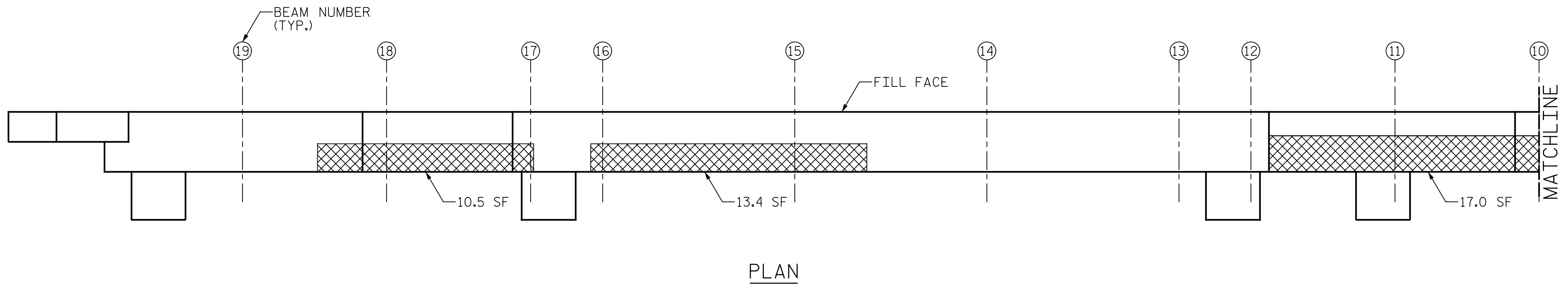
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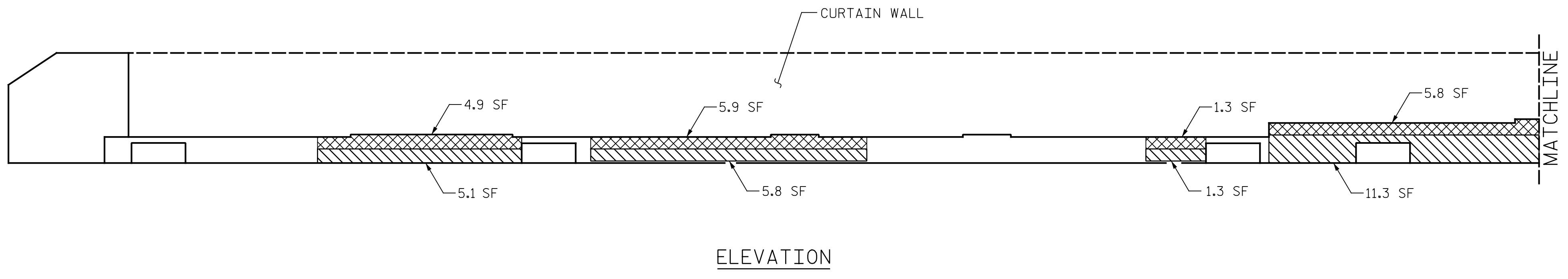
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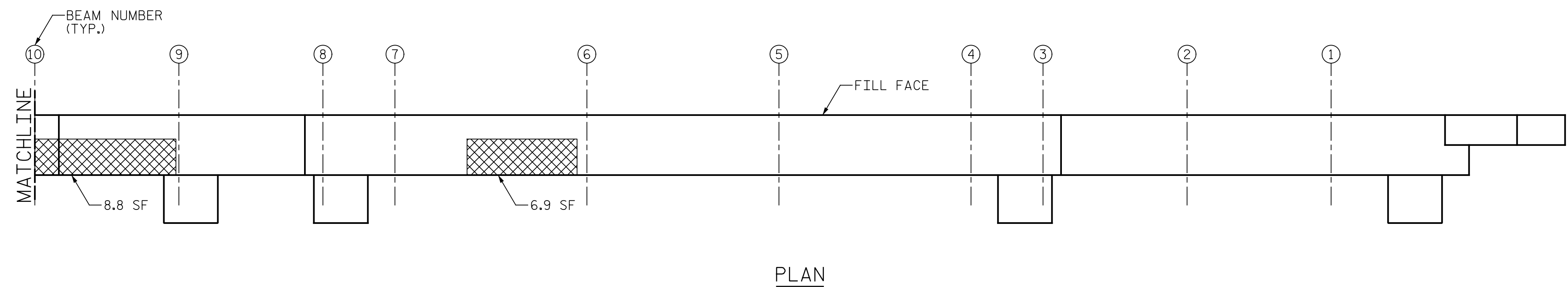
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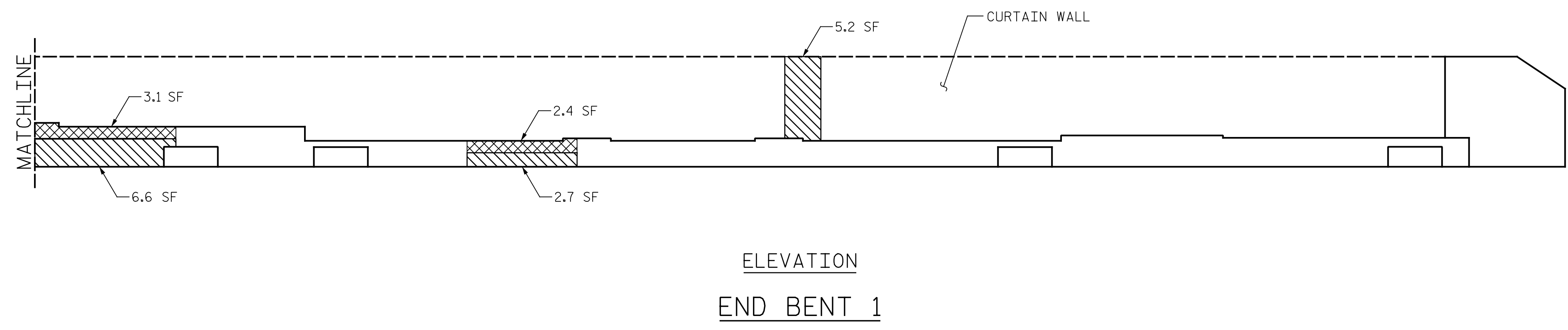
PLAN



ELEVATION
END BENT 1



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	32.8	16.4			
CURTAIN WALL	5.2	2.6			
CONCRETE REPAIRS	80.0	40.0			
EPOXY RESIN INJECTION	LENGTH LF		LENGTH LF		
CAP	0.0				
CURTAIN WALL	0.0				
EPOXY COATING	SQ. FT		SQ. FT		
TOP OF BENT CAP	0				

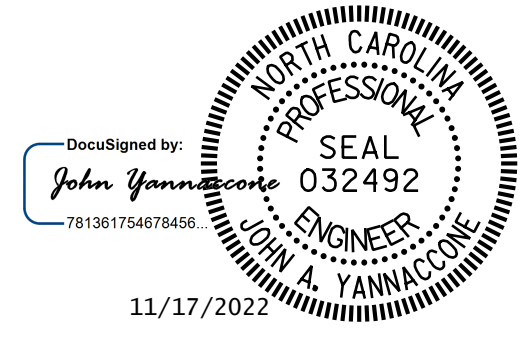
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEARANCE TO SAWCUT. FOR REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

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 QUANTITIES 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
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 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.

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

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



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

 END BENT 1

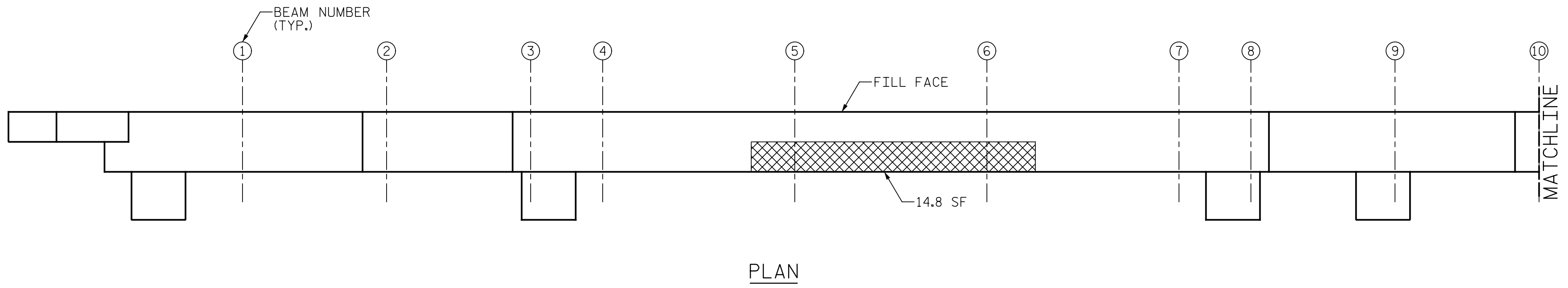
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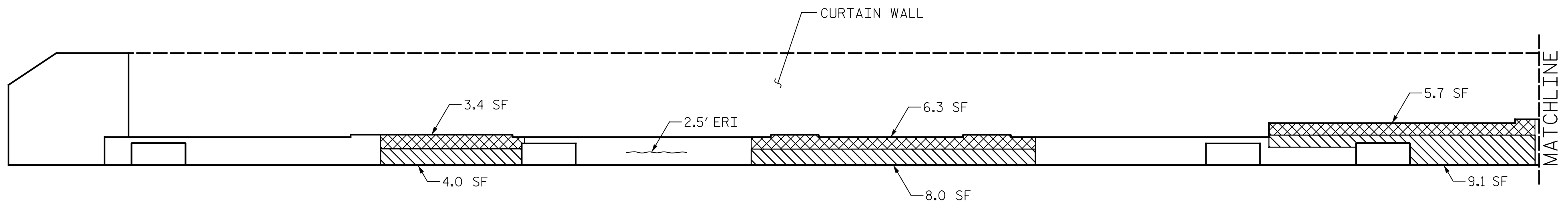
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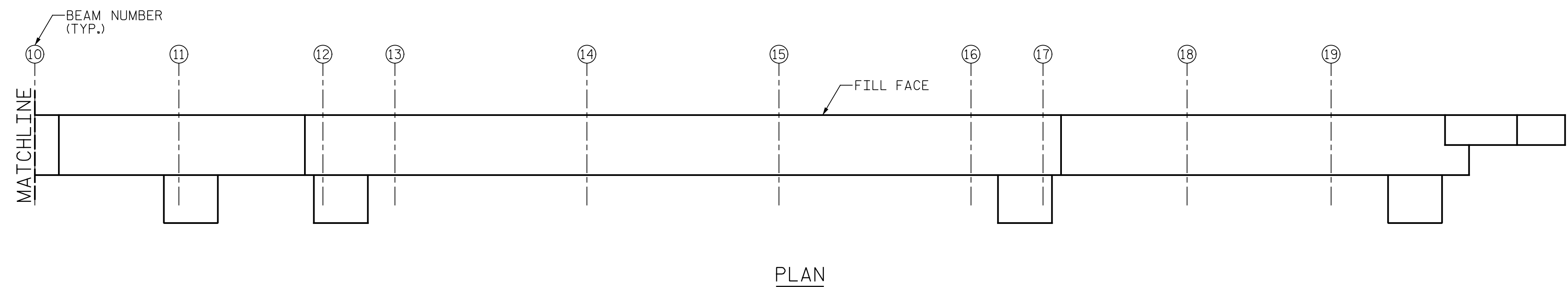
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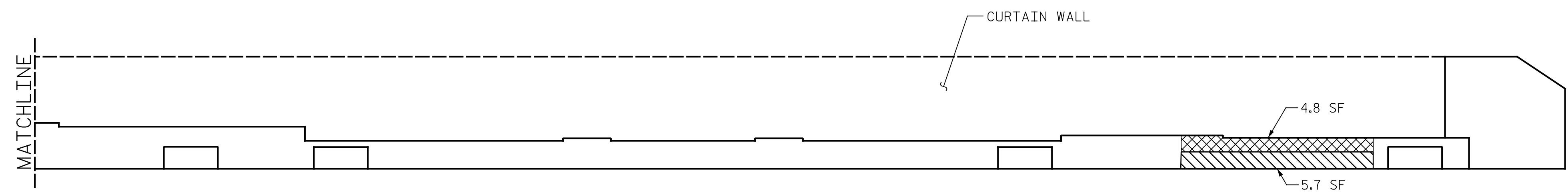
PLAN



ELEVATION
END BENT 2



PLAN



ELEVATION
END BENT 2

AS-BUILT REPAIR QUANTITY TABLE

END BENT 2 REPAIRS	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP	26.8	13.4			
CURTAIN WALL	0.0	0.0			
CONCRETE REPAIRS	35.0	17.5			
EPOXY RESIN INJECTION	LENGTH LF		LENGTH LF		
CAP	2.5				
CURTAIN WALL	0.0				
EPOXY COATING	SQ. FT		SQ. FT		
TOP OF BENT CAP	0				

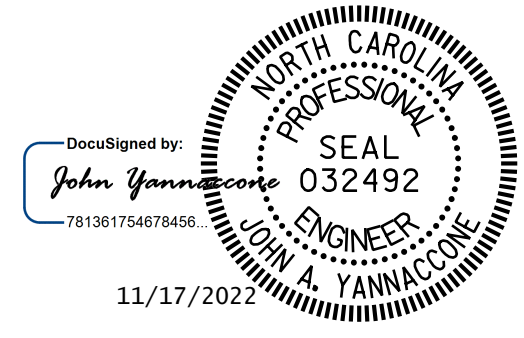
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEARANCE TO SAWCUT. FOR REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

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 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.

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

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 BRIDGE NO. 400299



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

END BENT 2

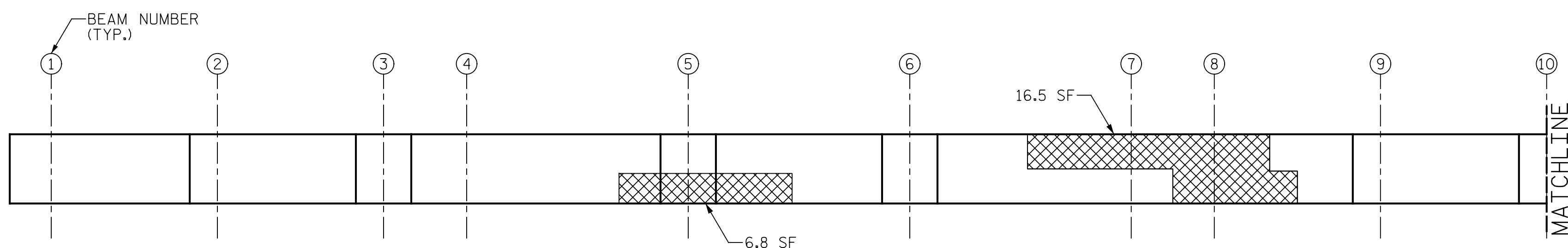
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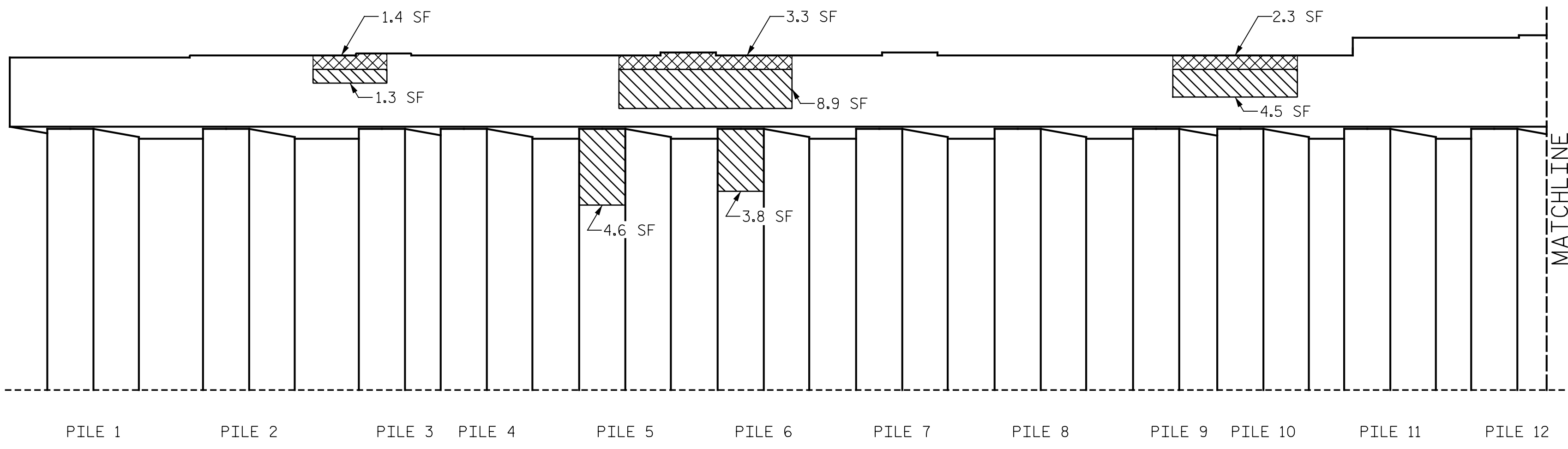
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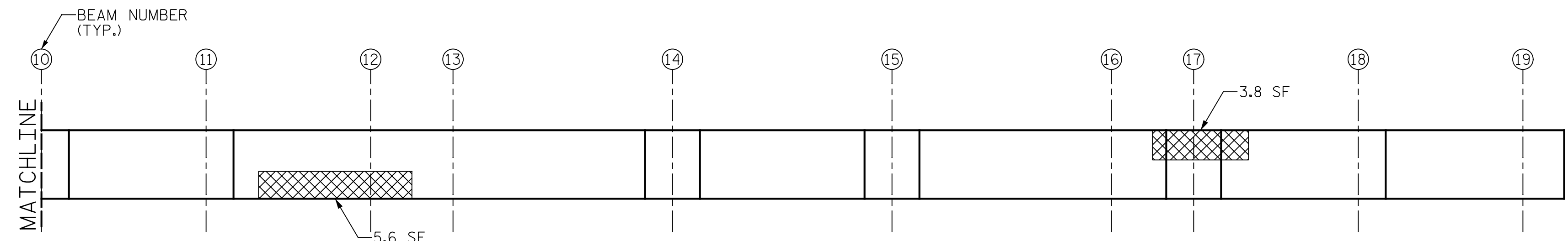
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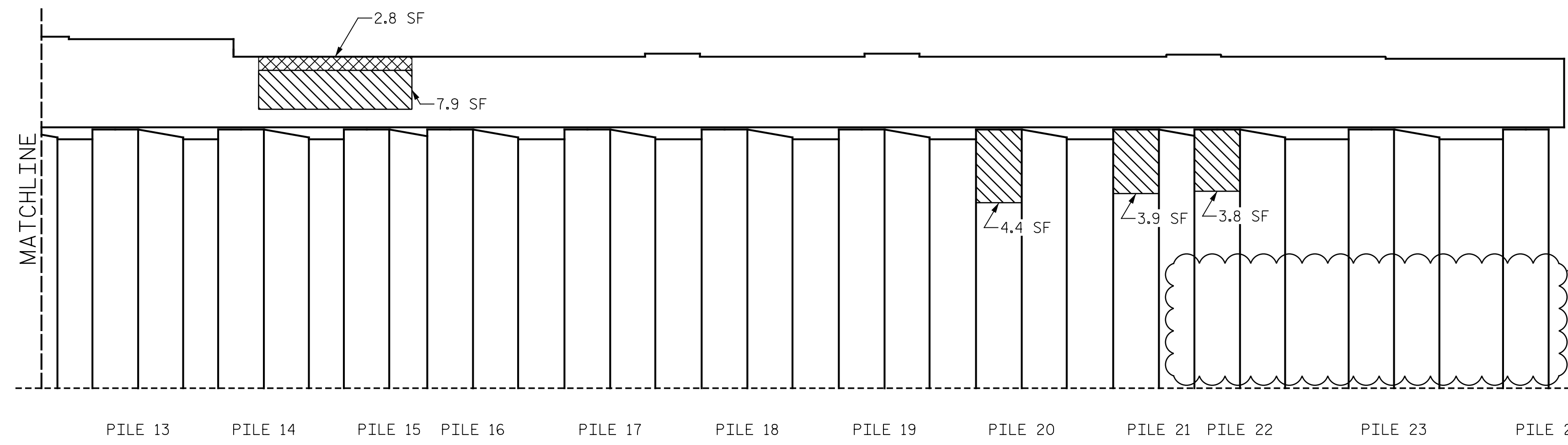
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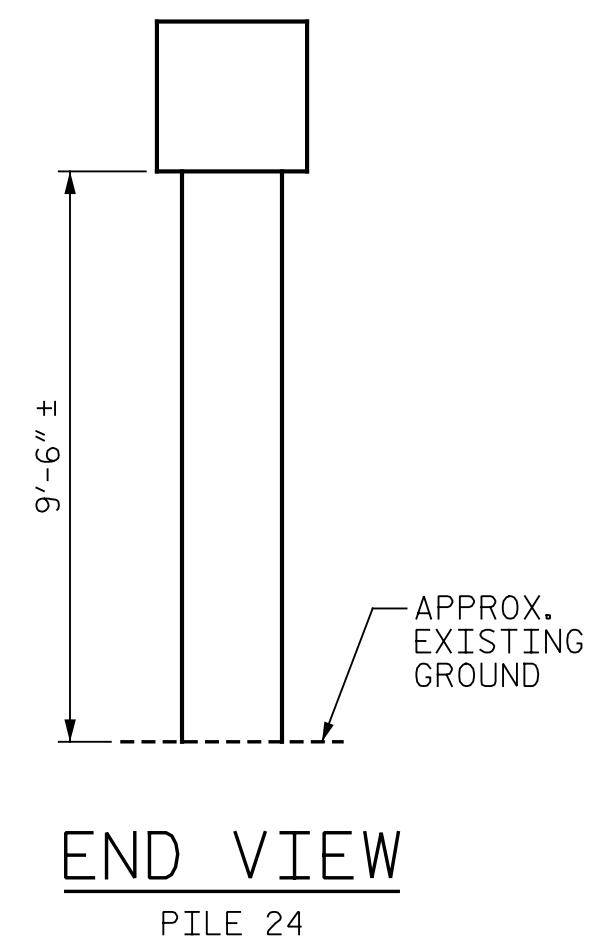
ELEVATION



TOP OF CAP



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	55.1	27.6			
COLUMN	20.5	10.3			
CONCRETE REPAIRS	54.0	27.0			
EPOXY RESIN INJECTION	LENGTH LF		LENGTH LF		
CAP	0.0				
COLUMN	0.0				
EPOXY COATING	SQ. FT		SQ. FT		
TOP OF BENT CAP	265				

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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 FOR SHOTCRETE 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.

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.

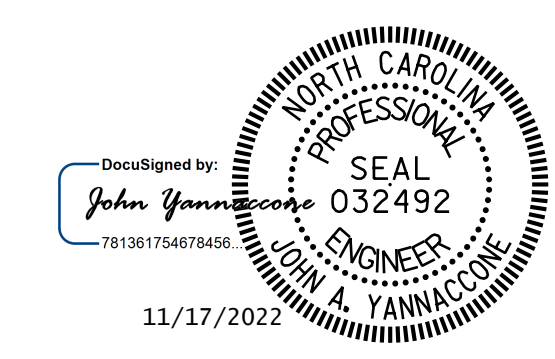
- SHOTCRETE REPAIR
- CONCRETE REPAIR (FORM & POUR)
- ERI - EPOXY RESIN INJECTION

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

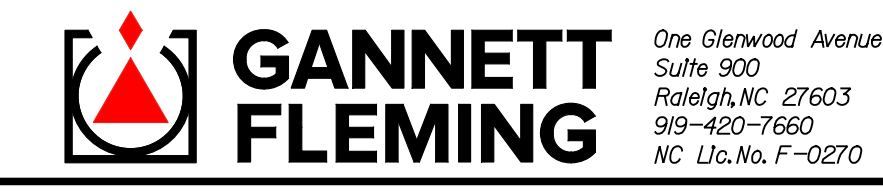
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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**BENT 1
 SPAN A SIDE**



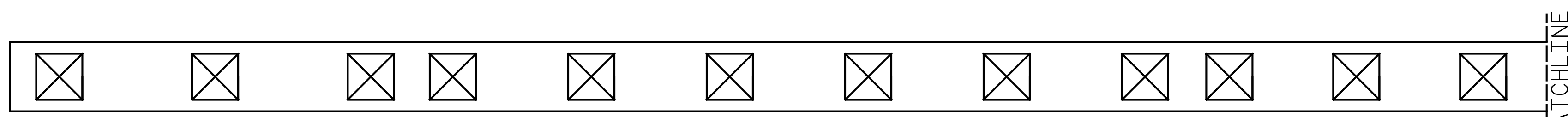
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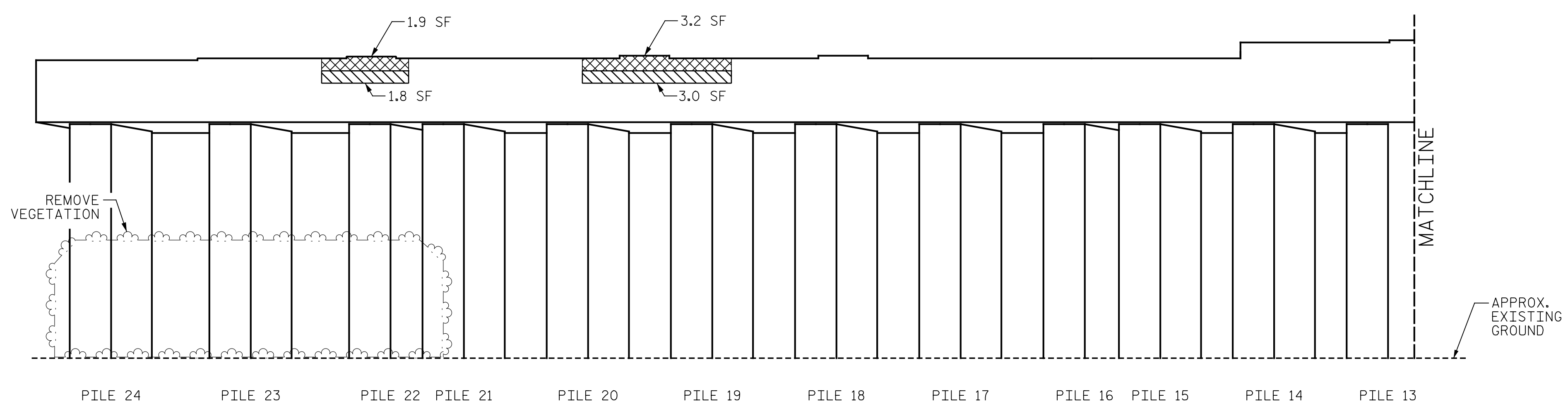
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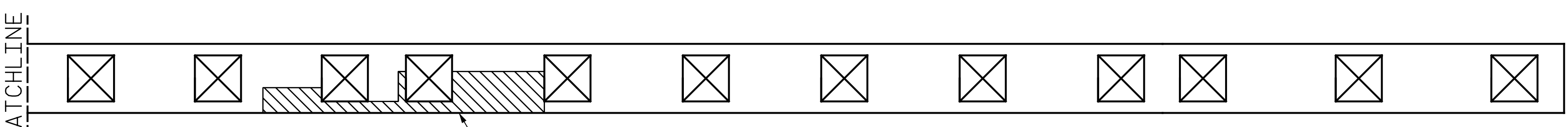
SPAN A

SPAN B

BOTTOM OF CAP



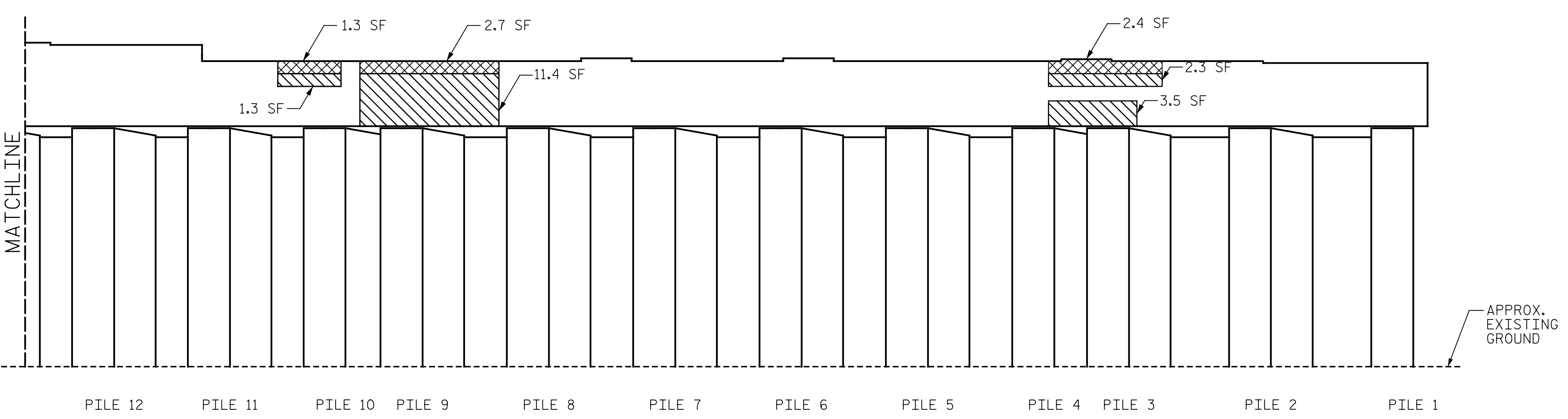
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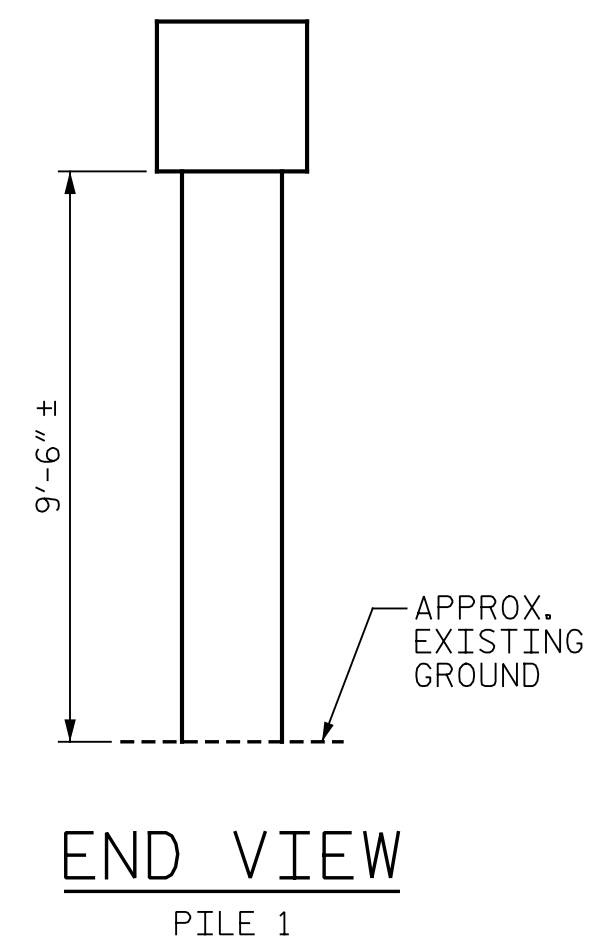
SPAN A

SPAN B

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.

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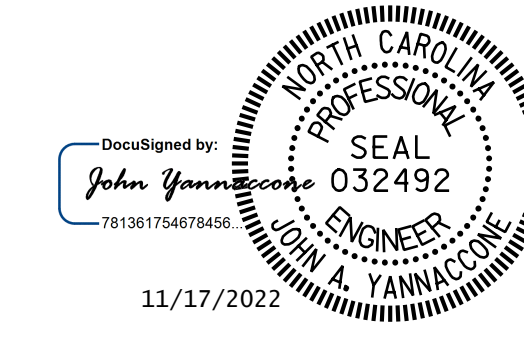
- SHOTCRETE REPAIR
- CONCRETE REPAIR (FORM & POUR)
- ERI - EPOXY RESIN INJECTION

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GUILFORD COUNTY
 BRIDGE NO. 400299

SHEET 2 OF 2

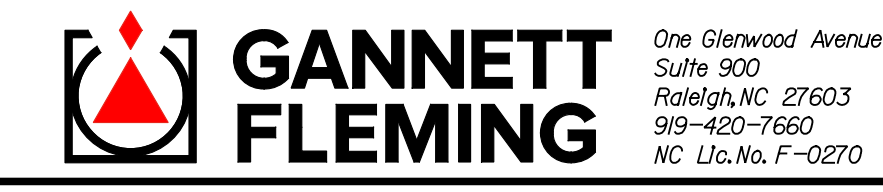
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 1
 SPAN B SIDE



11/17/2022

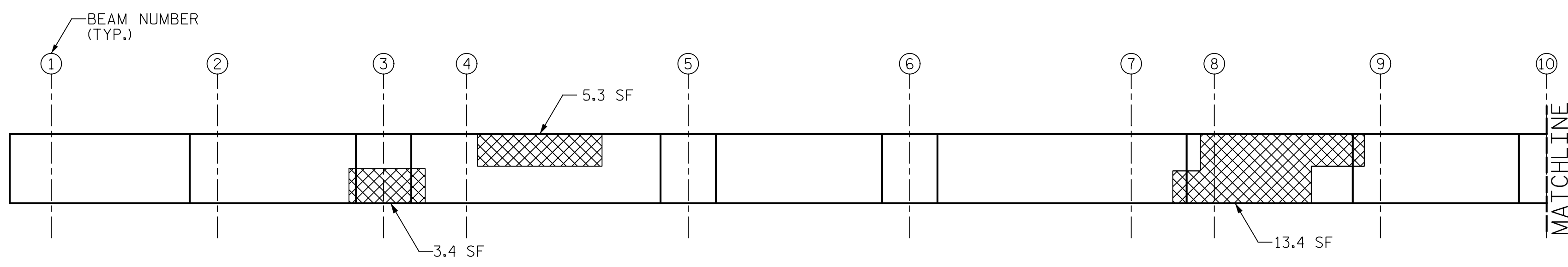
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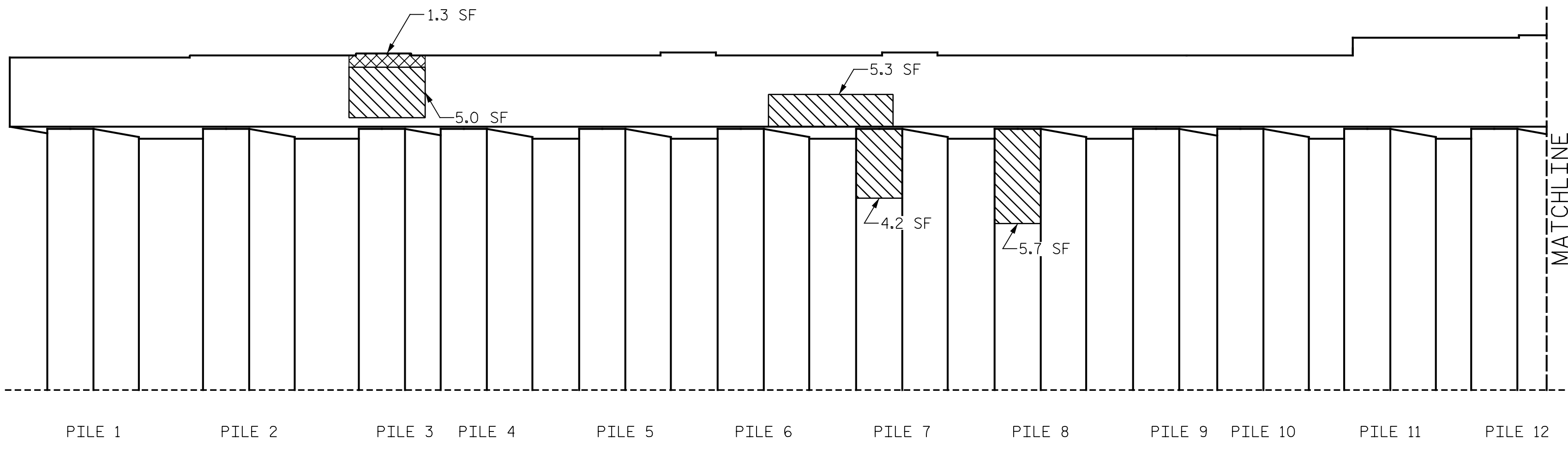
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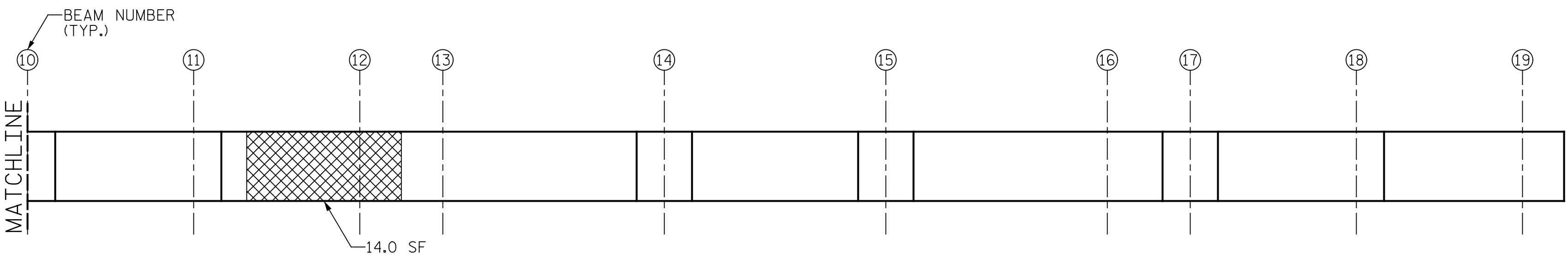
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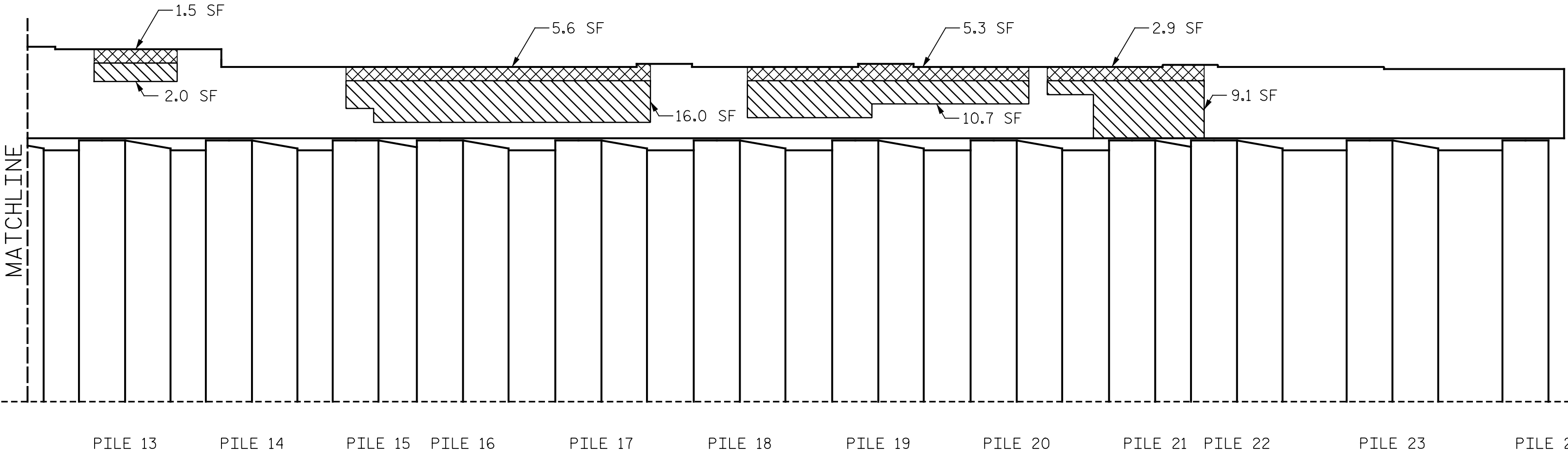
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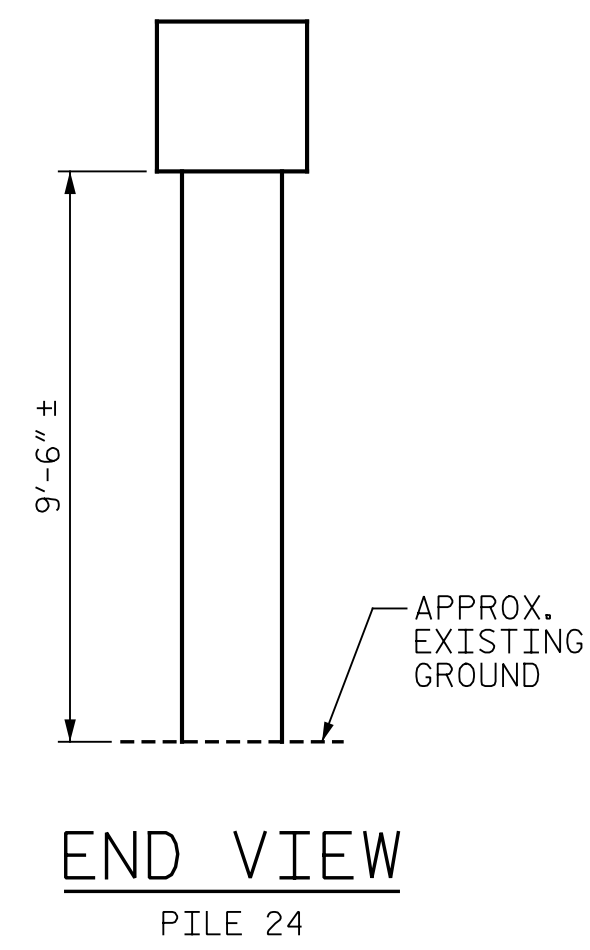
ELEVATION



TOP OF CAP



ELEVATION



AS-BUILT REPAIR QUANTITY TABLE					
BENT 2 REPAIRS	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP	80.5	40.3			
COLUMN	32.9	16.5			
CONCRETE REPAIRS	AREA SF	VOLUME CF			
CAP	66.4	33.2			
EPOXY RESIN INJECTION	LENGTH LF		LENGTH LF		
CAP	2.0				
COLUMN	0.0				
EPOXY COATING	SQ. FT		SQ. FT		
TOP OF BENT CAP	265				

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 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.

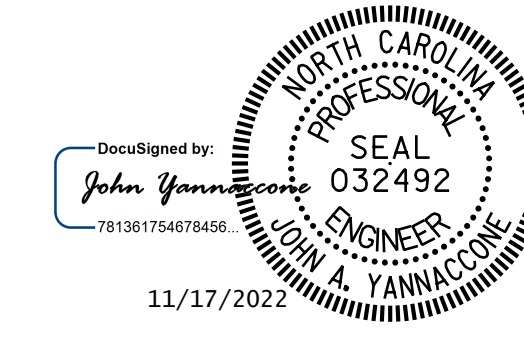
- SHOTCRETE REPAIR
- CONCRETE REPAIR (FORM & POUR)
- ERI - EPOXY RESIN INJECTION

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

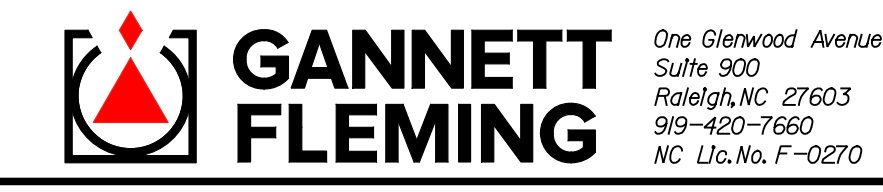
SHEET 1 OF 2

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 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 2
SPAN B SIDE



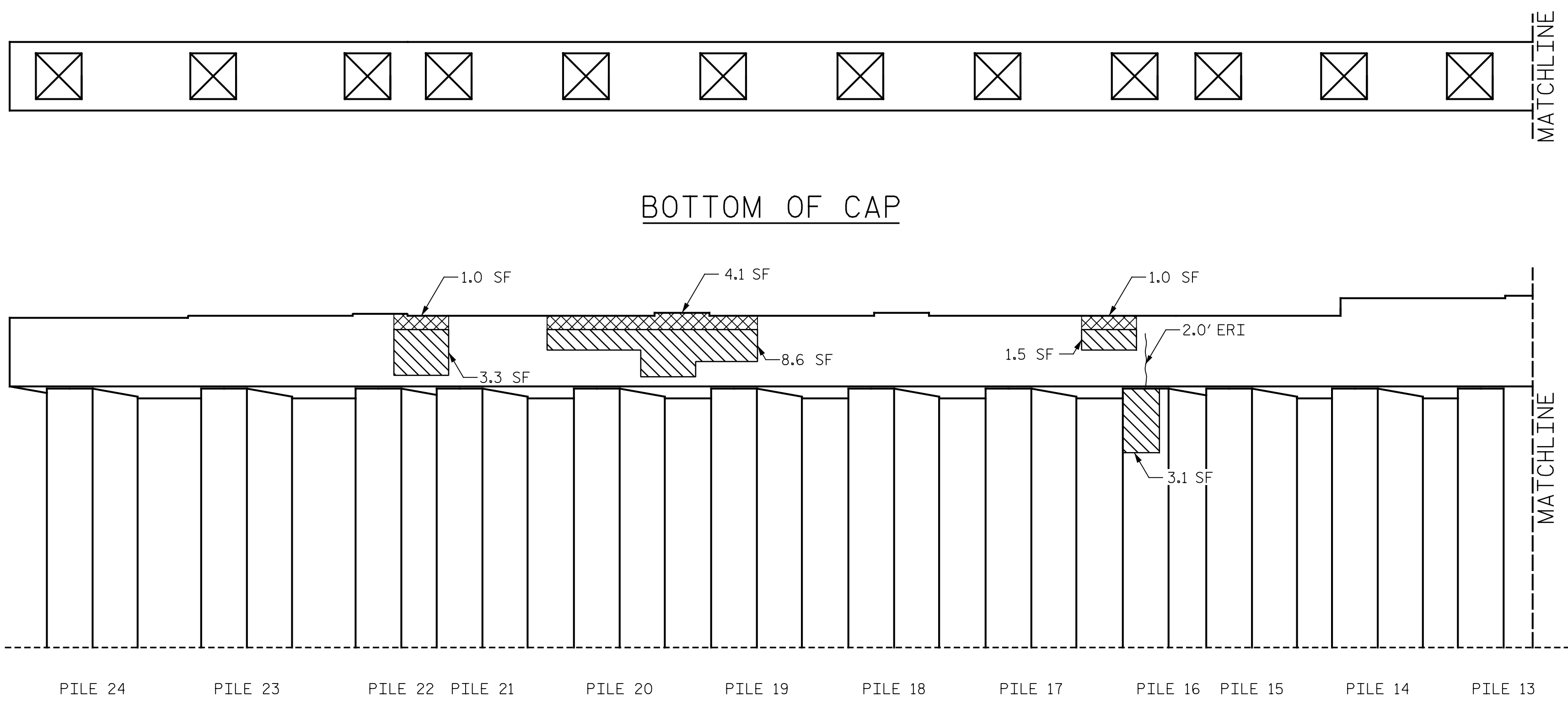
DRAWN BY : J. HARRIS DATE : 10/2022
 CHECKED BY : J. YANACCONE DATE : 10/2022



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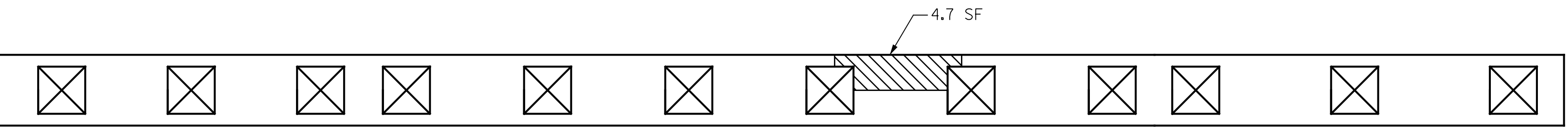


SPAN B
SPAN C

BOTTOM OF CAP

PILE 24 PILE 23 PILE 22 PILE 21 PILE 20 PILE 19 PILE 18 PILE 17 PILE 16 PILE 15 PILE 14 PILE 13

ELEVATION

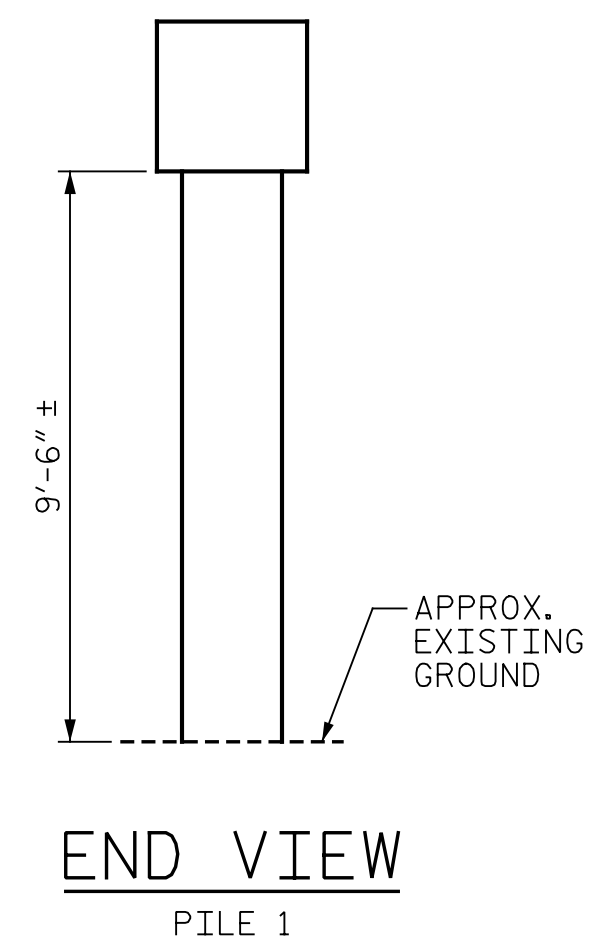


SPAN B
SPAN C

BOTTOM OF CAP

PILE 12 PILE 11 PILE 10 PILE 9 PILE 8 PILE 7 PILE 6 PILE 5 PILE 4 PILE 3 PILE 2 PILE 1

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-5955
 GUILFORD COUNTY
 BRIDGE NO. 400299

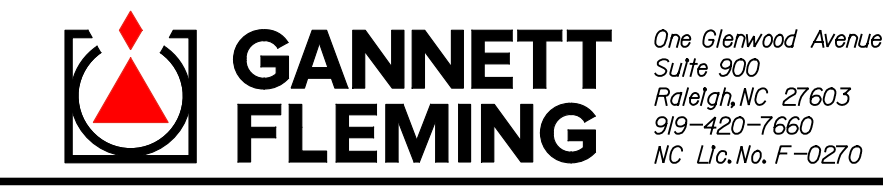
SHEET 2 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

 BENT 2
 SPAN C SIDE

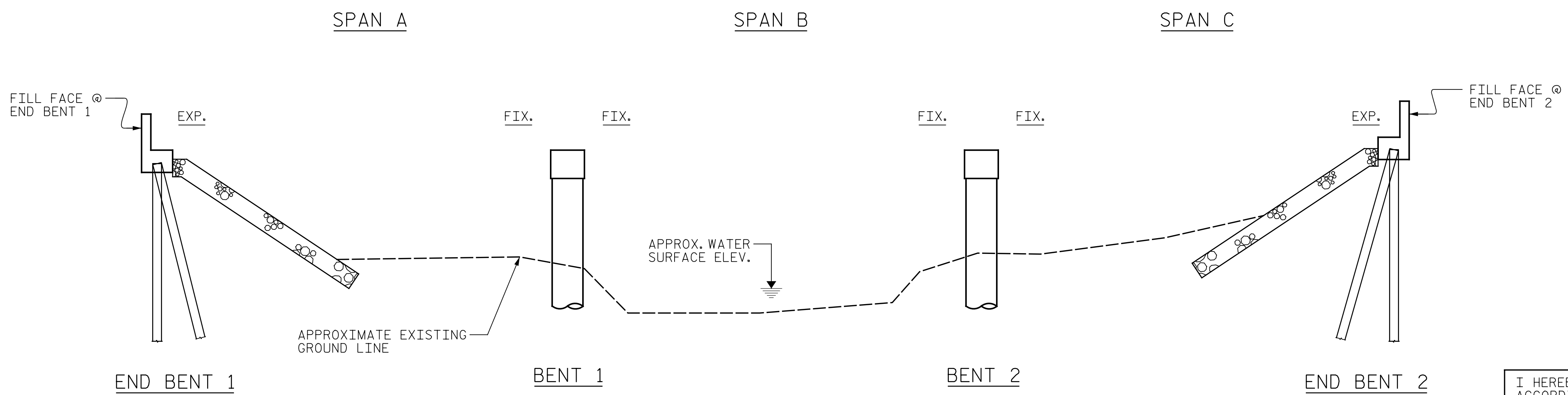
DRAWN BY: J. HARRIS DATE: 10/2022
 CHECKED BY: J. YANACCONO DATE: 10/2022



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NOTE:
 GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 07/15/2020.

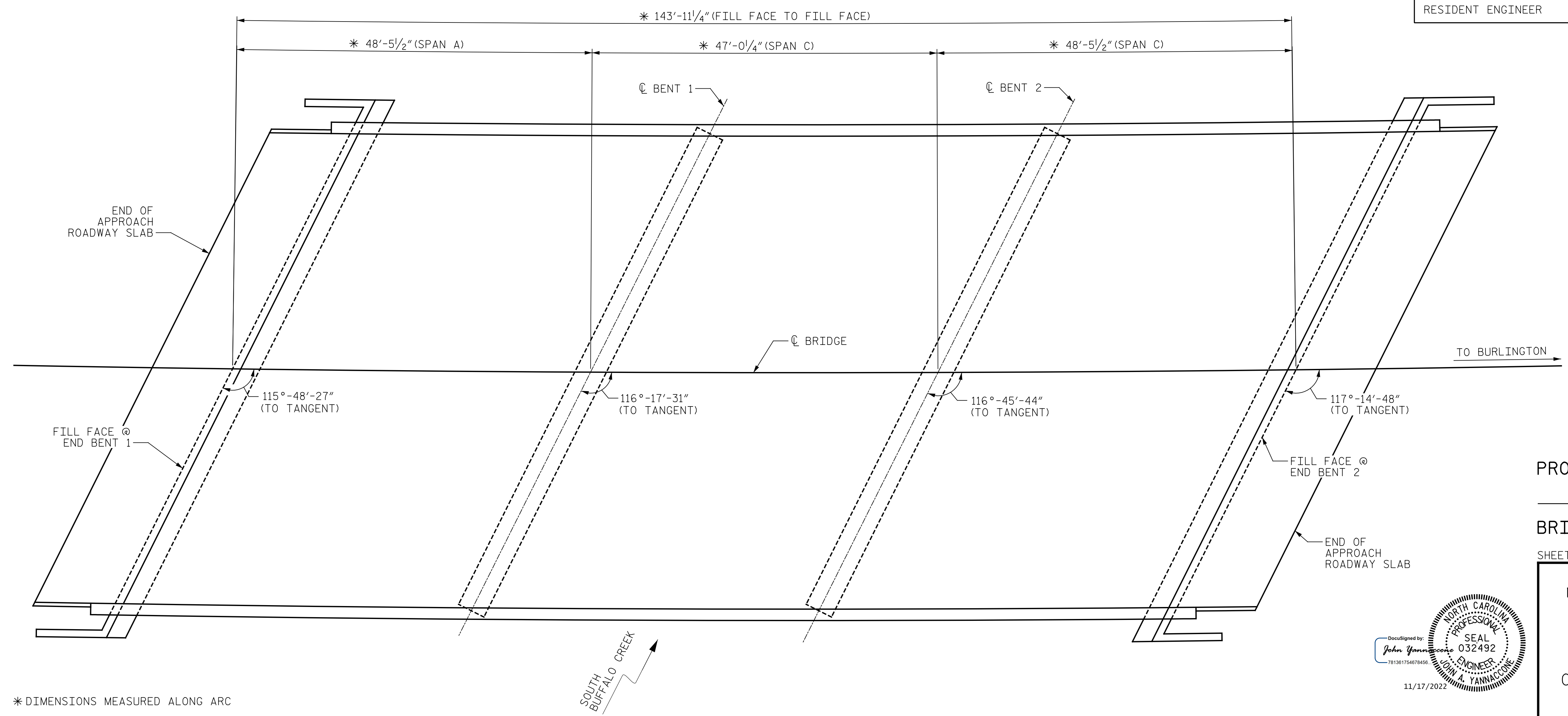
BRIDGE ORIENTATION CONFORMS TO THE EXISTING BRIDGE PLANS AND ROUTINE INSPECTION REPORT.

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.

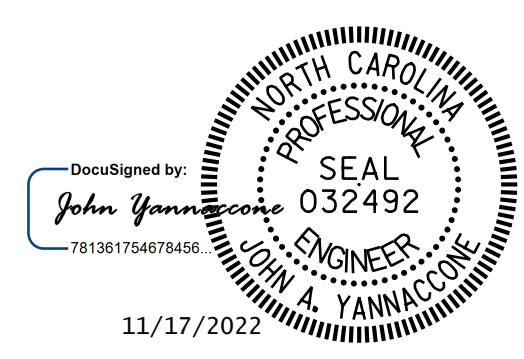
I HEREBY CERTIFY THAT THIS STRUCTURE WAS REHABILITATED ACCORDING TO THESE PLANS OR AS NOTED HEREIN.

RESIDENT ENGINEER _____ DATE _____



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

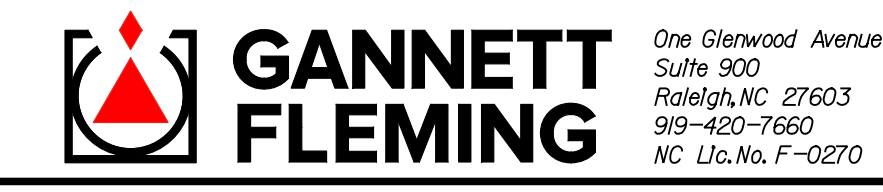
SHEET 1 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

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

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



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