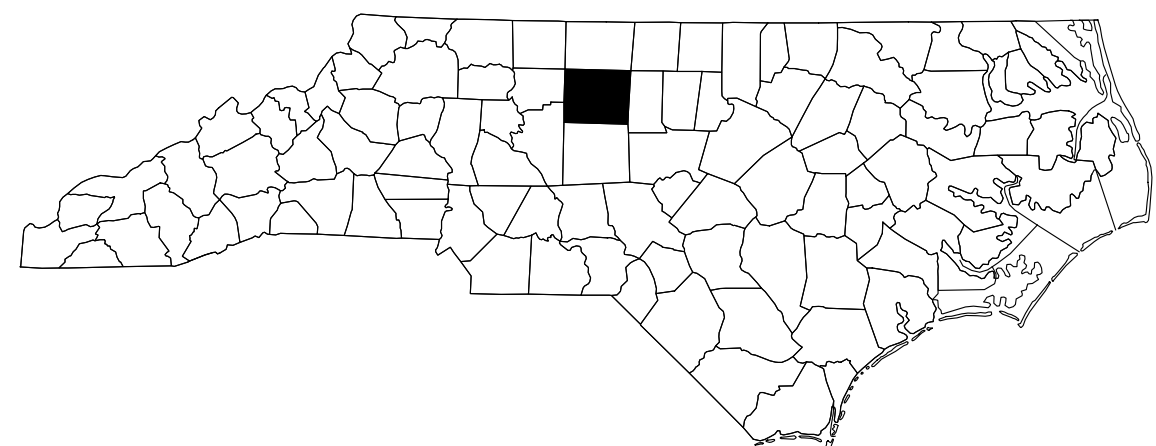


**PROJECT: I-5955A**

**CONTRACT NO: C204921**



STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

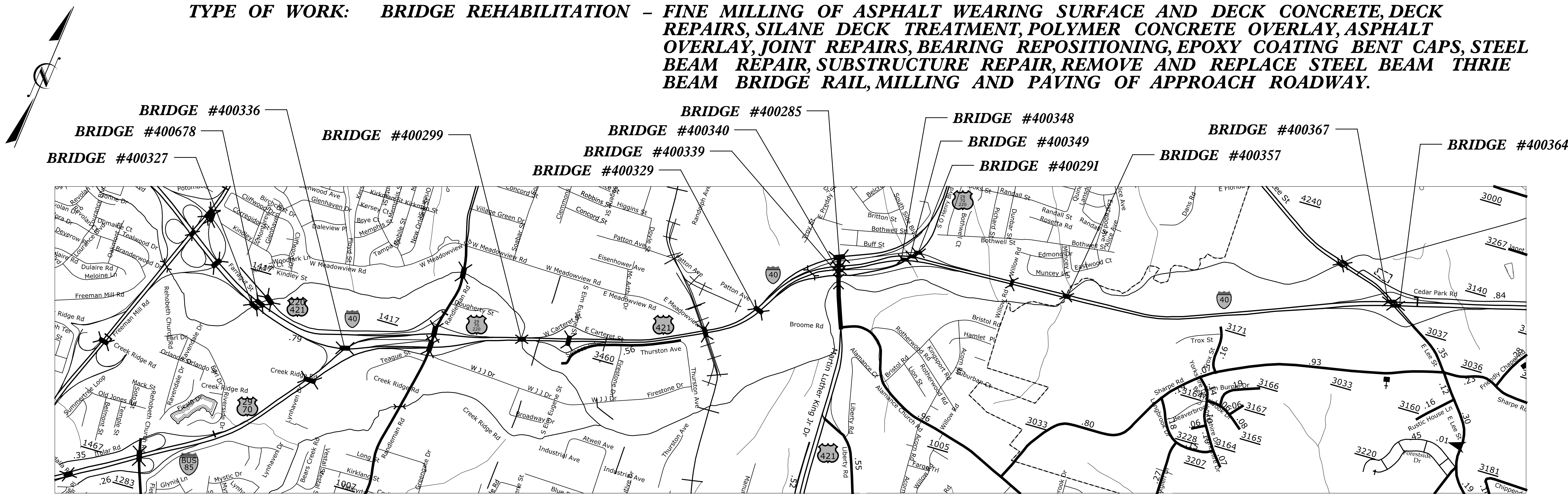
**GUILFORD COUNTY**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5955A	1	127
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45908.1.2	4590801	P.E.	
45908.3.2	4590801	CONST.	

**LOCATION: GUILFORD COUNTY:**

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

**TYPE OF WORK: BRIDGE REHABILITATION - FINE MILLING OF ASPHALT WEARING SURFACE AND 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.**



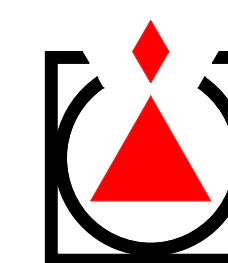
**VICINITY MAP - GUILFORD COUNTY**

**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



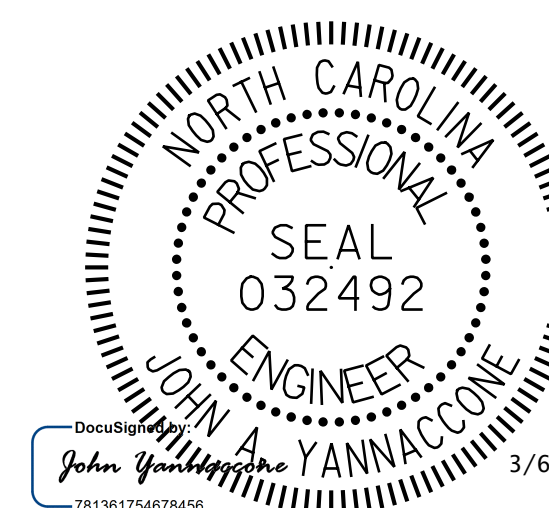
**GANNETT  
FLEMING**

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

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

2024 STANDARD SPECIFICATIONS

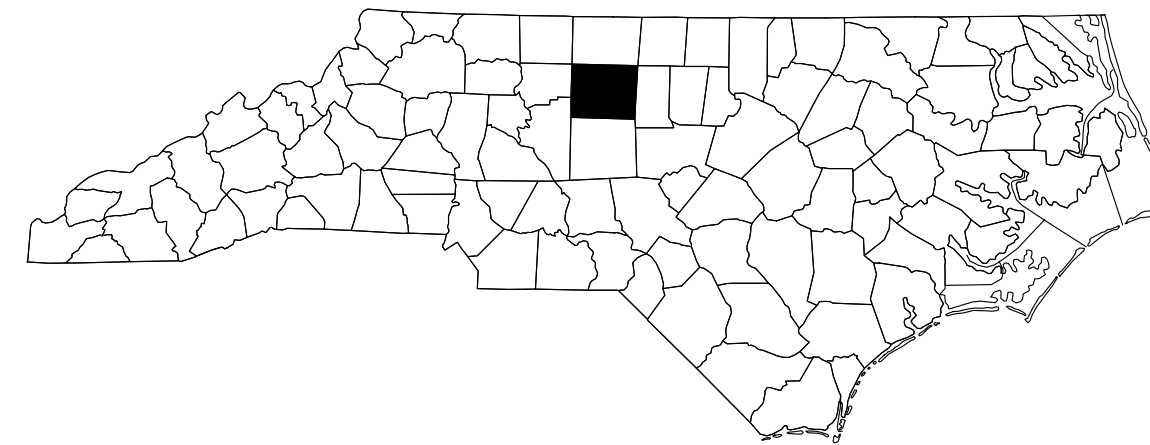
LETTING DATE:  
APRIL 16, 2024



**JOHN A. YANNACONE, P.E.**  
PROJECT DESIGN ENGINEER

**PROJECT: I-5955A**

**CONTRACT NO: C204921**



STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**GUILFORD COUNTY**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5955A	1A	127
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45908.1.2	4590801	P.E.	
45908.3.2	4590801	CONST.	

**LOCATION: GUILFORD COUNTY:**

- |   |  |
|---|--|
| <b>BRIDGE #400285 ON US29 SBL OVER SR 3762 (MARTIN LUTHER KING JR. DRIVE)</b>         | <b>BRIDGE #400340 ON I-40 WBL OVER SR 3762 (MARTIN LUTHER KING JR. DRIVE)</b>    |
| <b>BRIDGE #400291 ON I-40 WBL RAMP OVER US29N/US70E/US220N (SOUTH O. HENRY BLVD.)</b> | <b>BRIDGE #400348 ON I-40 EBL OVER US29N/US70E/US220N (SOUTH O. HENRY BLVD.)</b> |
| <b>BRIDGE #400299 ON I-40 OVER SOUTH BUFFALO CREEK</b>                                | <b>BRIDGE #400349 ON I-40 WBL OVER US29N/US70E/US220N (SOUTH O. HENRY BLVD.)</b> |
| <b>BRIDGE #400327 ON I-40 EBL OVER SOUTH BUFFALO CREEK</b>                            | <b>BRIDGE #400357 ON I-40 OVER SOUTH BUFFALO CREEK</b>                           |
| <b>BRIDGE #400329 ON PATTON AVENUE OVER I-40</b>                                      | <b>BRIDGE #400364 ON I-40 EBL OVER SR 4240 (EAST GATE CITY BOULEVARD)</b>        |
| <b>BRIDGE #400336 ON I-40 EBL OVER US 29 SBL/US 70 WBL</b>                            | <b>BRIDGE #400367 ON I-40 WBL OVER SR 4240 (EAST GATE CITY BOULEVARD)</b>        |
| <b>BRIDGE #400339 ON I-40 EBL OVER SR 3762 (MARTIN LUTHER KING JR. DRIVE)</b>         | <b>BRIDGE #400678 ON I-40 WBL OVER SOUTH BUFFALO CREEK</b>                       |

**TYPE OF WORK: BRIDGE REHABILITATION - FINE MILLING OF ASPHALT WEARING SURFACE AND 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.**

INDEX OF DRAWINGS

SHEET NO.	DESCRIPTION
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
PM NOTES	PAVEMENT MARKING NOTES AND BILL OF MATERIAL

TOTAL BILL OF MATERIAL

Table with 20 columns: BRIDGE NO., INCIDENTAL MILLING, ASPHALT CONC SURFACE COURSE, ASPHALT BINDER FOR PLANT MIX, 20" TUBULAR TRIPLE CORRUGATED STEEL BEAM GUARDRAIL, CLASS II SURFACE PREPARATION, CONCRETE REPAIRS, SHOTCRETE REPAIRS, EPOXY RESIN INJECTION, CLEANING AND PAINTING WEATHERING STEEL FOR BRIDGE #\_\_, POLLUTION CONTROL, PAINTING CONTAINMENT FOR BRIDGE #\_\_, REMOVAL OF EXISTING 20" TUBULAR TRIPLE CORRUGATED STEEL BEAM GUARDRAIL, FOAM JOINT SEALS FOR PRESERVATION, EXPANSION JOINT SEAL REPAIR, ASPHALT PLUG JOINTS FOR PRESERVATION, POLYESTER POLYMER CONCRETE MATERIALS, EPOXY POLYMER CONCRETE MATERIALS (ALTERNATE), BEAM PLATING REPAIR, EPOXY COATING. Rows include individual bridge entries and a TOTAL row.

TOTAL BILL OF MATERIAL

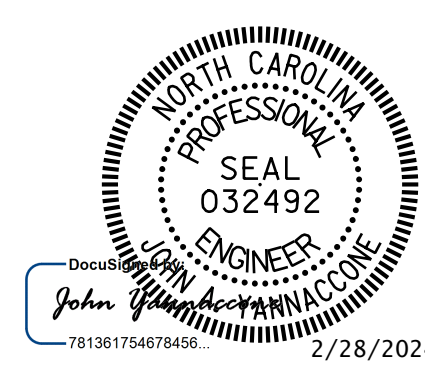
Table with 14 columns: BRIDGE NO., GROOVING BRIDGE FLOORS, CONCRETE DECK REPAIR FOR ASPHALT OVERLAY, CONCRETE WORK FOR JOINT REPLACEMENT, FINE MILLING, SHOTBLASTING BRIDGE DECK, SILANE DECK TREATMENT, CONCRETE DECK REPAIR FOR PC OVERLAY, PLACING & FINISHING PC OVERLAY, CLASS IB SURFACE PREPARATION, TYPE I BRIDGE JACKING BRIDGE NO. \_\_, REPOSITIONING SOLE PLATES, REPOSITIONING BEARING PADS, PORTABLE LIGHTING. Rows include individual bridge entries and a TOTAL row.

NOTE:

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

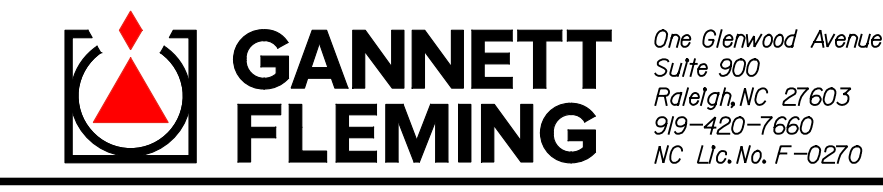
UNANTICIPATED ITEMS:  
CLASS III SURFACE PREPARATION VOLUMETRIC MIXER TYPE II BRIDGE JACKING BRIDGE NO. \_\_

PROJECT NO. I-5955A  
GUILFORD COUNTY  
BRIDGE NO. 400285, 400291, 400299, 400327, 400329, 400336, 400339, 400340, 400348, 400349, 400357, 400364, 400367 & 400678



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
TOTAL BILL OF MATERIAL

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

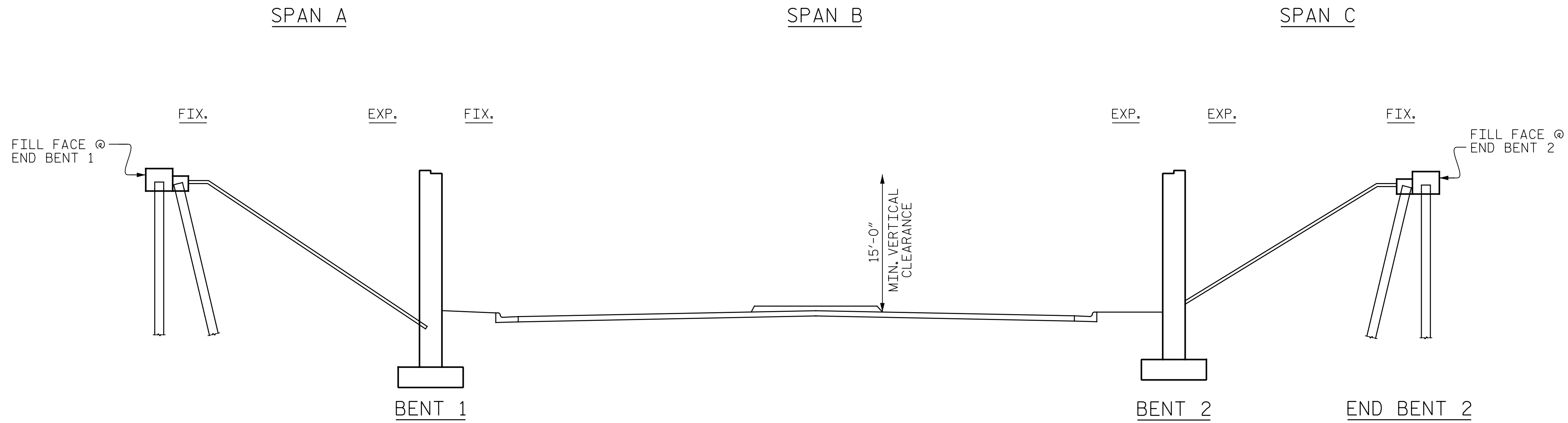


DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Table with 2 columns: REVISIONS (NO., BY, DATE) and SHEET NO. (S-1, TOTAL SHEETS 127)

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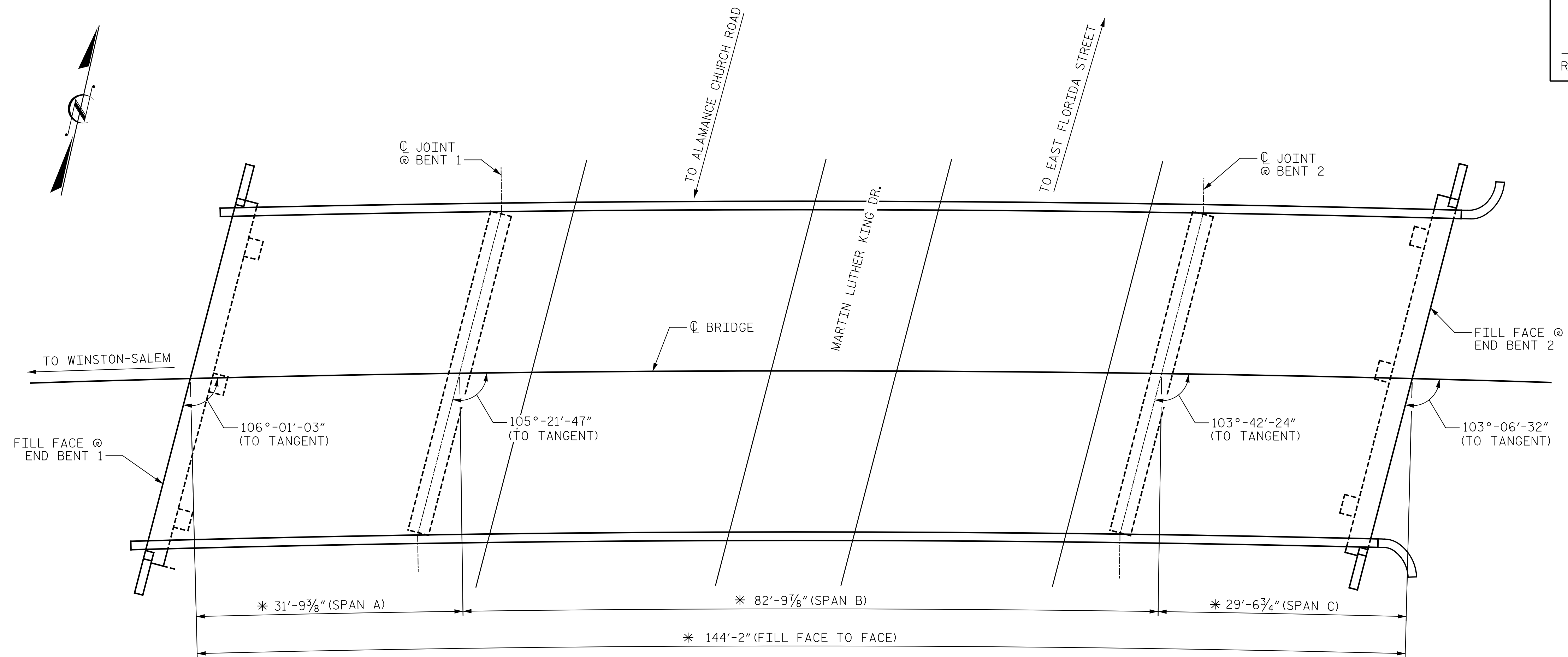
SECTION ALONG Q BRIDGE  
(SECTION AT BENTS AND END BENTS ARE AT RIGHT ANGLES)

**NOTE:**  
 GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 02/14/2023.  
 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.

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

RESIDENT ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

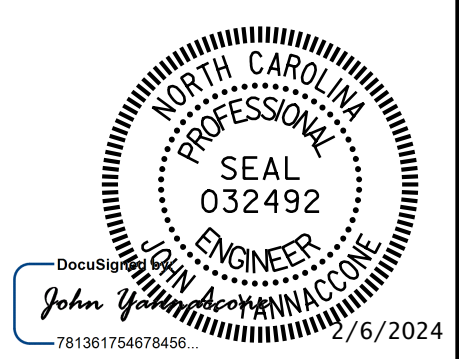


PLAN  
(PILES NOT SHOWN FOR CLARITY)

\* DIMENSIONS MEASURED ALONG ARC

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

SHEET 1 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. YANNAACONE DATE : 1/2024



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-1
1			3			TOTAL SHEETS
2			4			127

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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 PLUG JOINTS FOR PRESERVATION.

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 PAVEMENT MARKING NOTES.

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.

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.

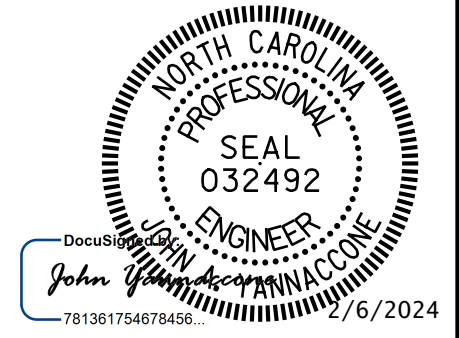
ANY DAMAGE TO EXISTING REINFORCING STEEL, DURING CONTRACTOR'S OPERATIONS, SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER AND PERFORMED AT NO ADDITIONAL COST TO THE DEPARTMENT.

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.

PROJECT NO. I-5955A  
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

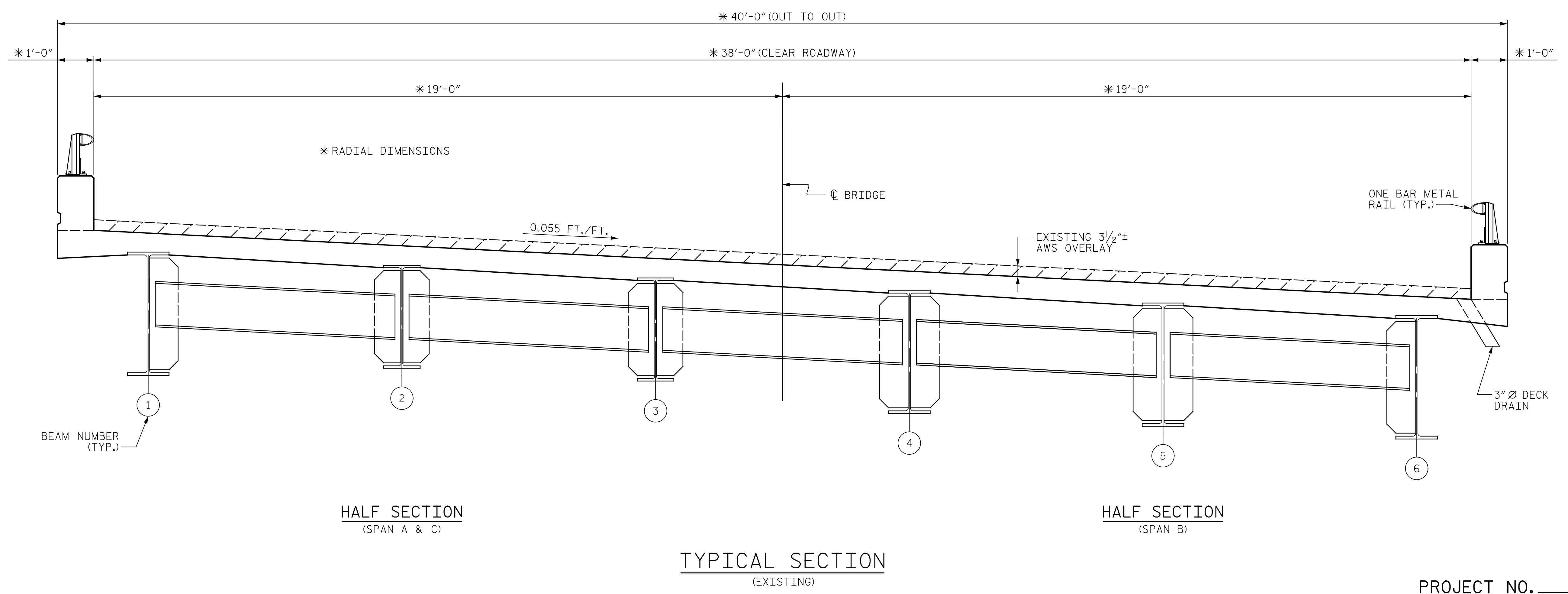


DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
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1			3			S1-2
2			4			TOTAL SHEETS 127

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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.



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



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

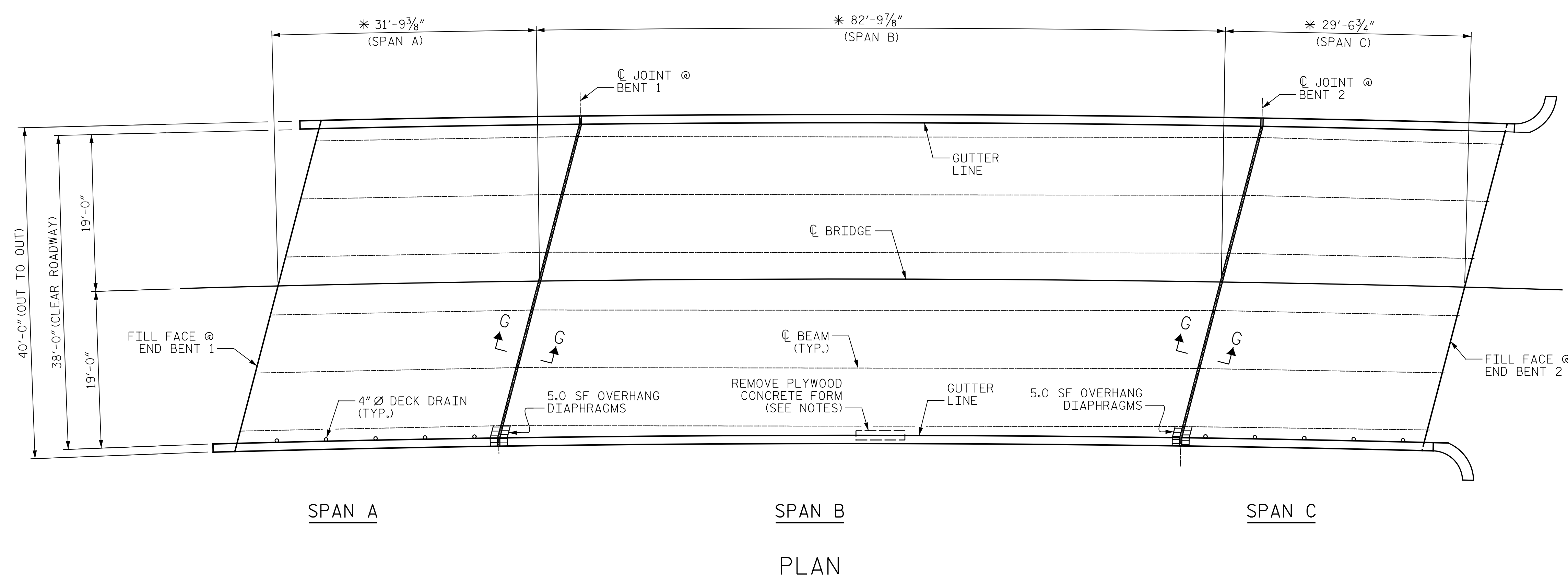
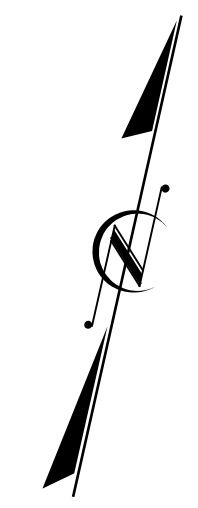
DRAWN BY : J. HARRIS DATE : 10/2022  
CHECKED BY : J. YANNACCONE DATE : 10/2022



DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S1-3
2			4			TOTAL SHEETS 127

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\* 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 1/2" PER THE EXISTING PLANS.

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

THE CONTRACTOR SHALL TAKE CARE TO REMOVE THE PLYWOOD CONCRETE FORM WITHOUT DAMAGING THE CONCRETE PARAPET. PAYMENT FOR THIS WORK IS INCIDENTAL TO THE OTHER PAY ITEMS.

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.

IF THE ENGINEER DETERMINES THAT THE UNCOVERED CONCRETE FACE IS UNSATISFACTORY, THE CONTRACTOR SHALL REPAIR THE FACE AS DIRECTED BY THE ENGINEER. PAYMENT FOR THIS WORK WILL BE PAID FOR AS PART OF THE CONTRACT UNIT PRICE BID FOR CONCRETE REPAIR.

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.

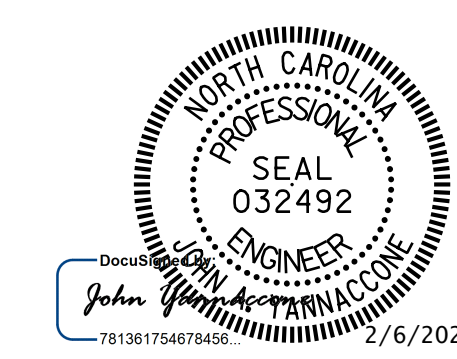
FOR CONCRETE DIAPHRAGM REPAIR, SEE SPECIAL PROVISIONS.

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

REPAIR QUANTITY TABLE				
TOP OF DECK REPAIR				
	ESTIMATE		ACTUAL	
CONCRETE DECK REPAIR FOR ASPHALT OVERLAY		0.0 SY		
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	10.0	5.0		
UNDERSIDE OF OVERHANG	0.0	0.0		
INTERIOR DIAPHRAGMS	0.0	0.0		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION		0.0 LF		

- CONCRETE DECK REPAIR FOR ASPHALT OVERLAY
- UNDERSIDE OF DECK REPAIR

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



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
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PLAN OF SPANS

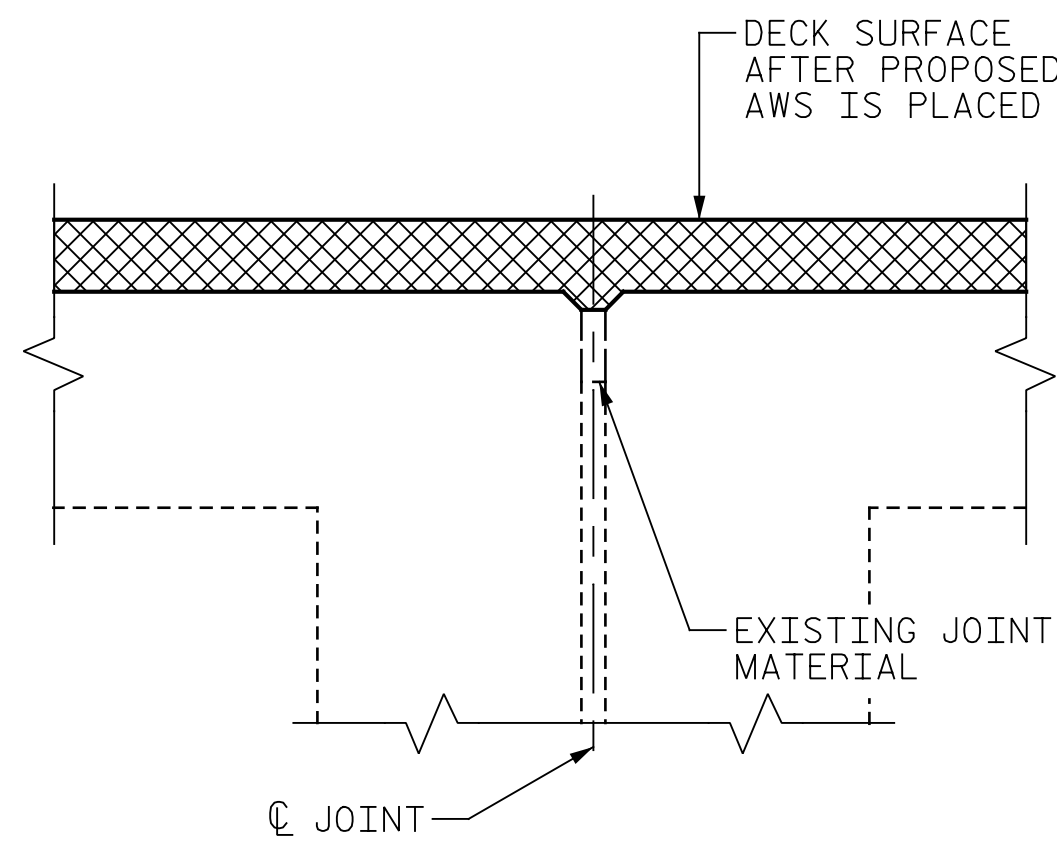
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 CHECKED BY : J. YANNACCONE      DATE : 10/2022



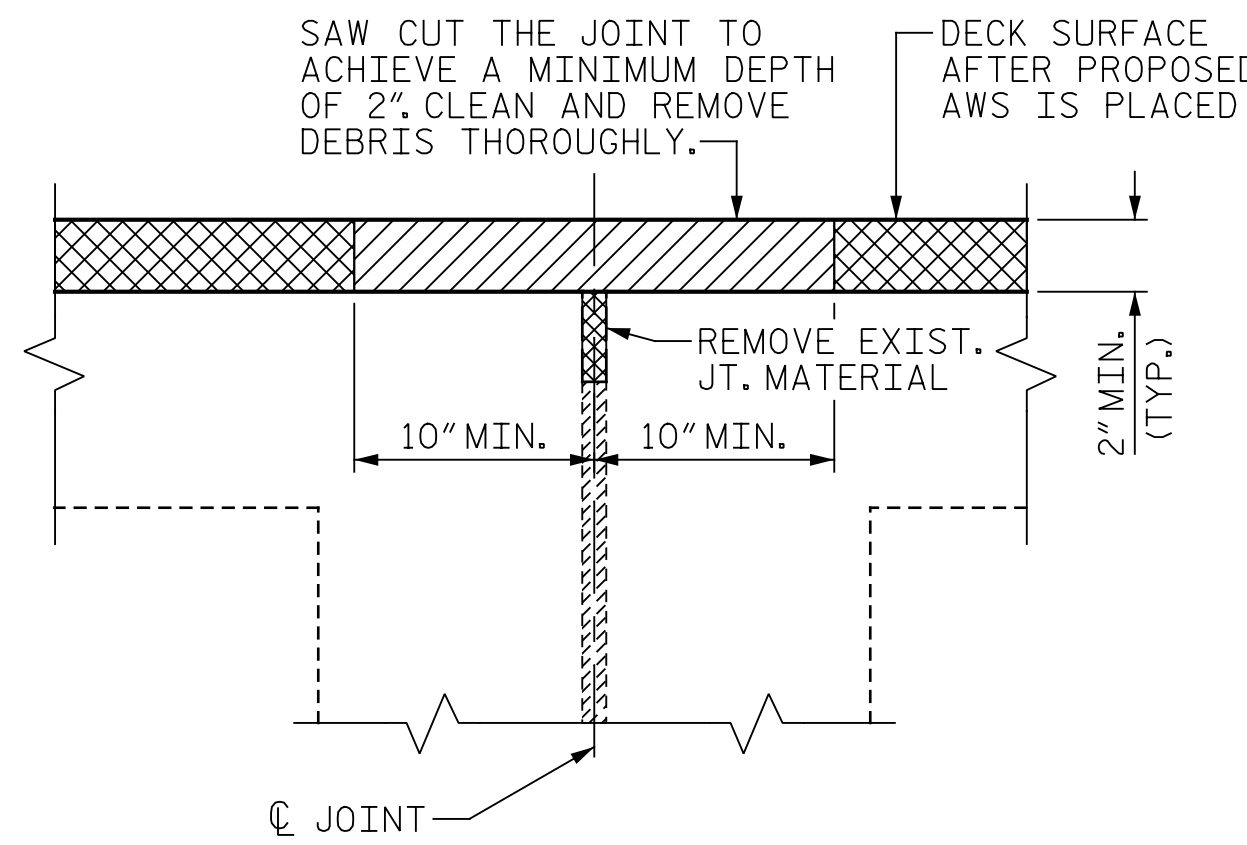
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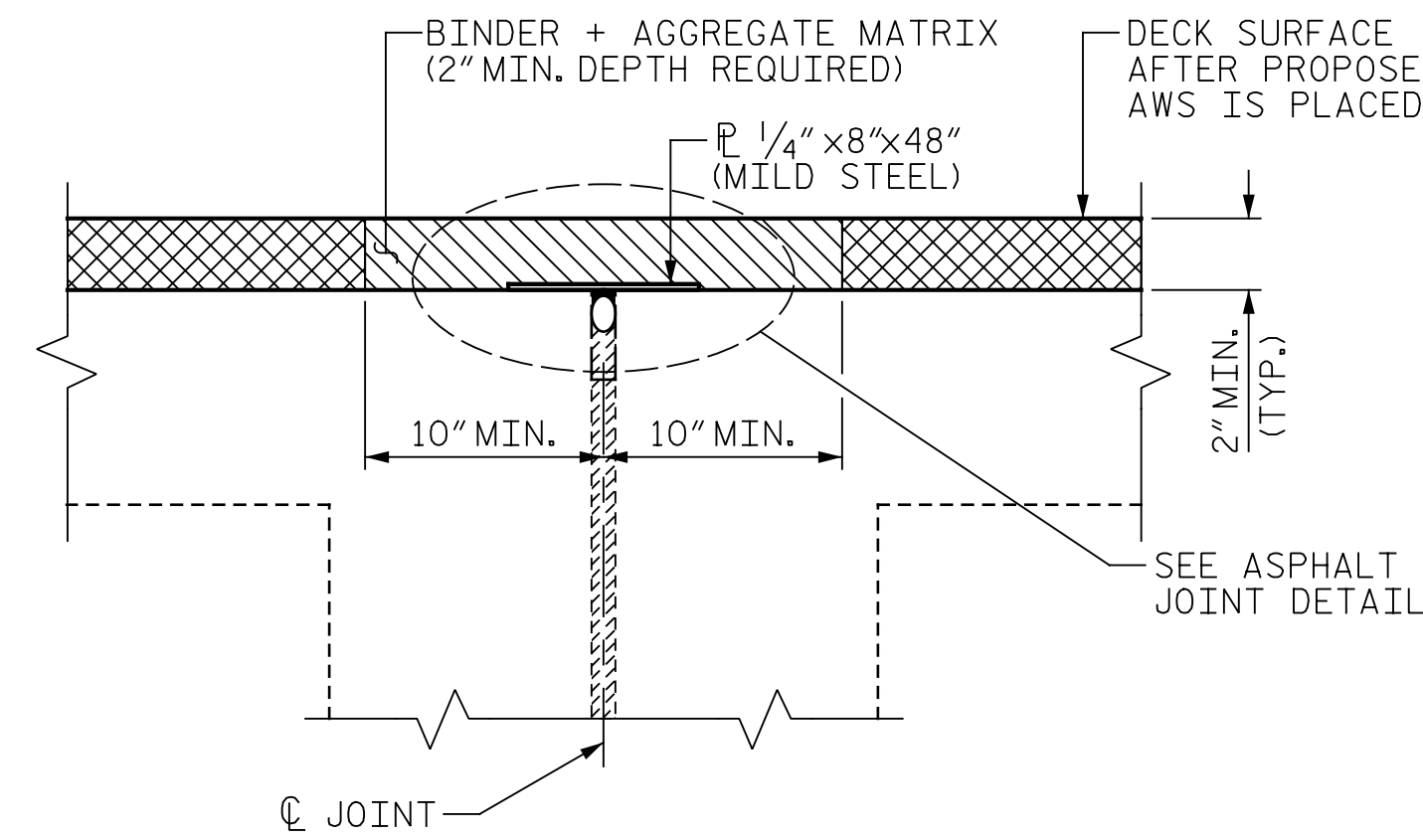
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EXISTING JOINT AFTER  
AWS PLACEMENT

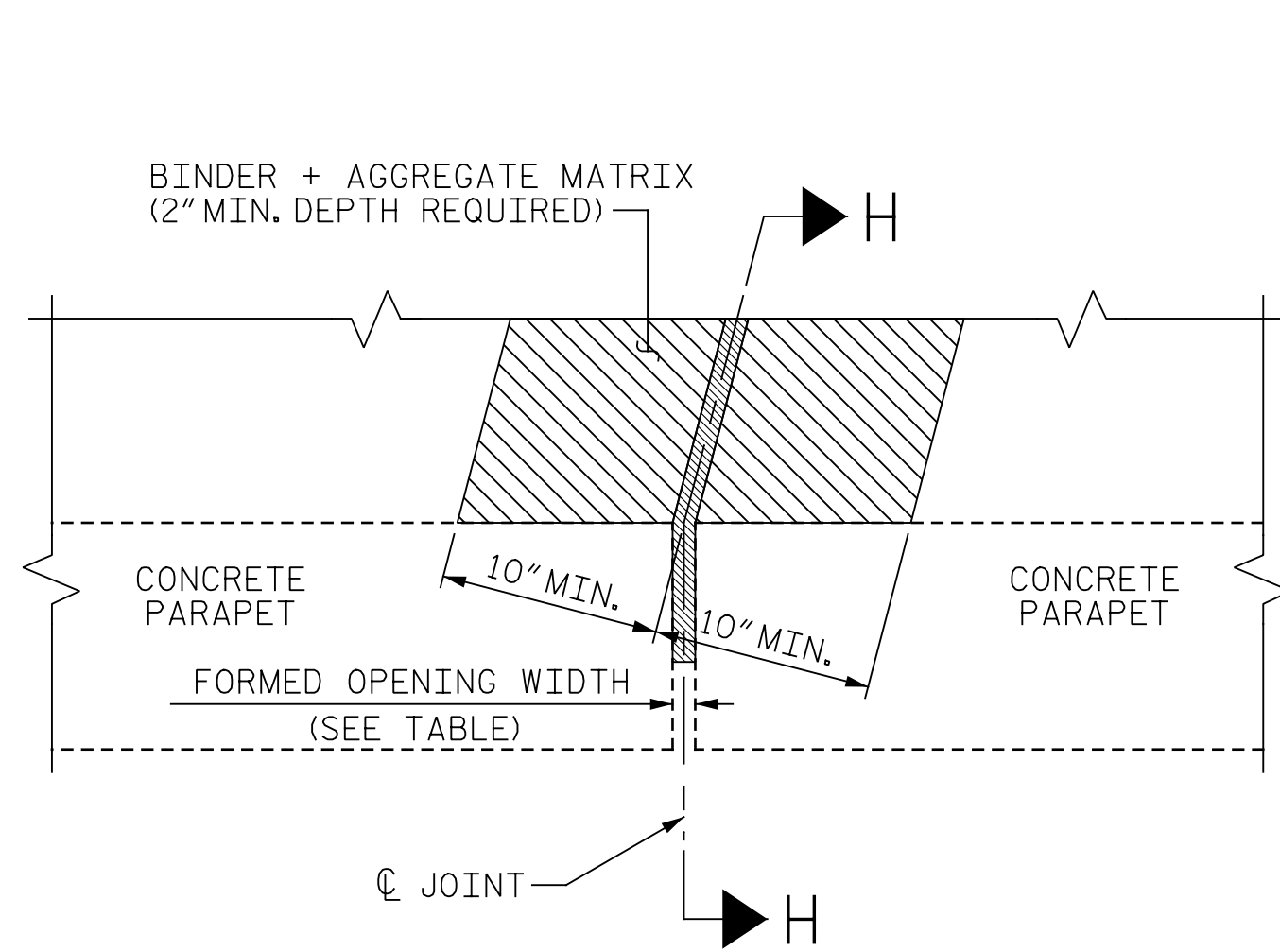


DEMOLITION PREPARATION



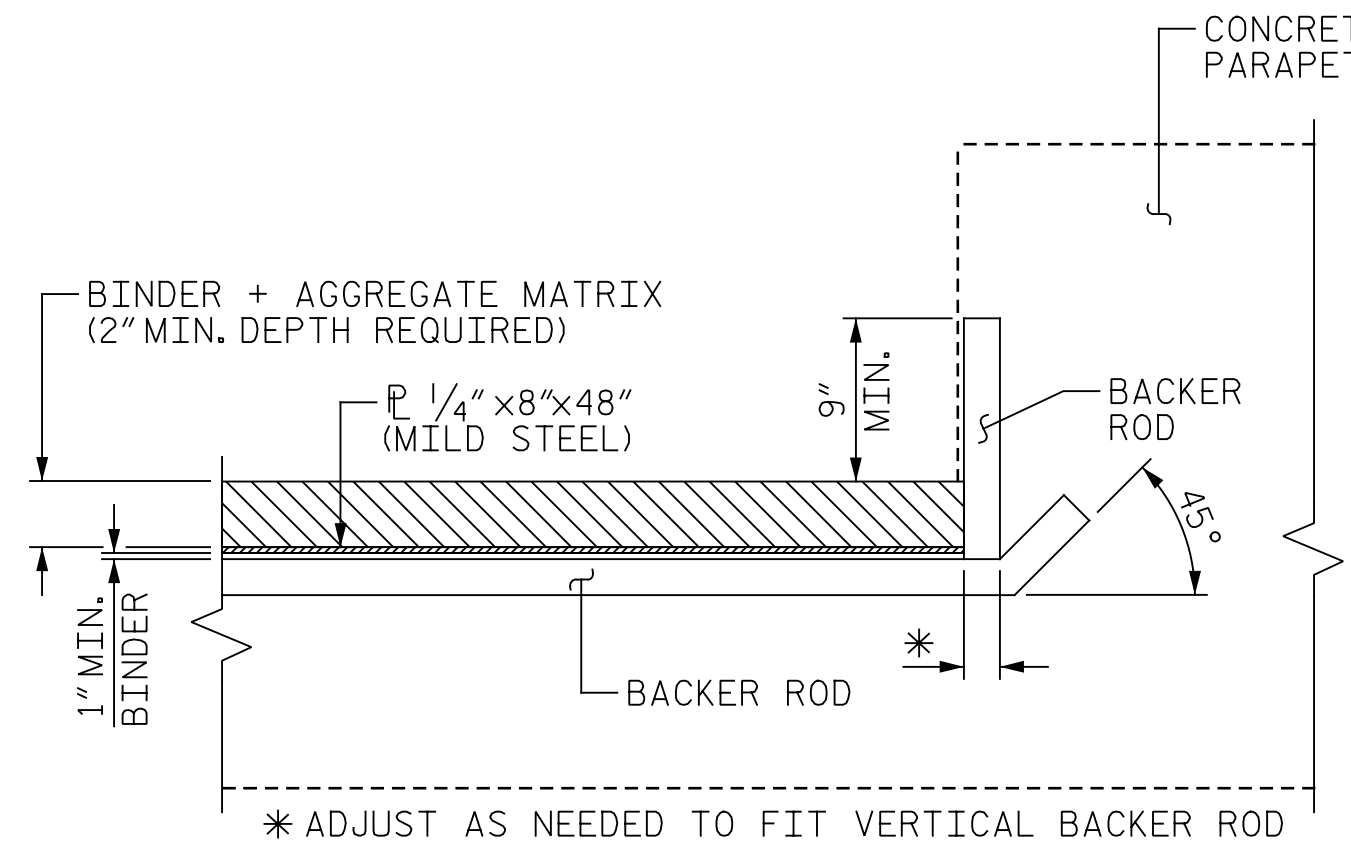
PROPOSED JOINT

SECTION G-G  
(TYP. AT BENTS)

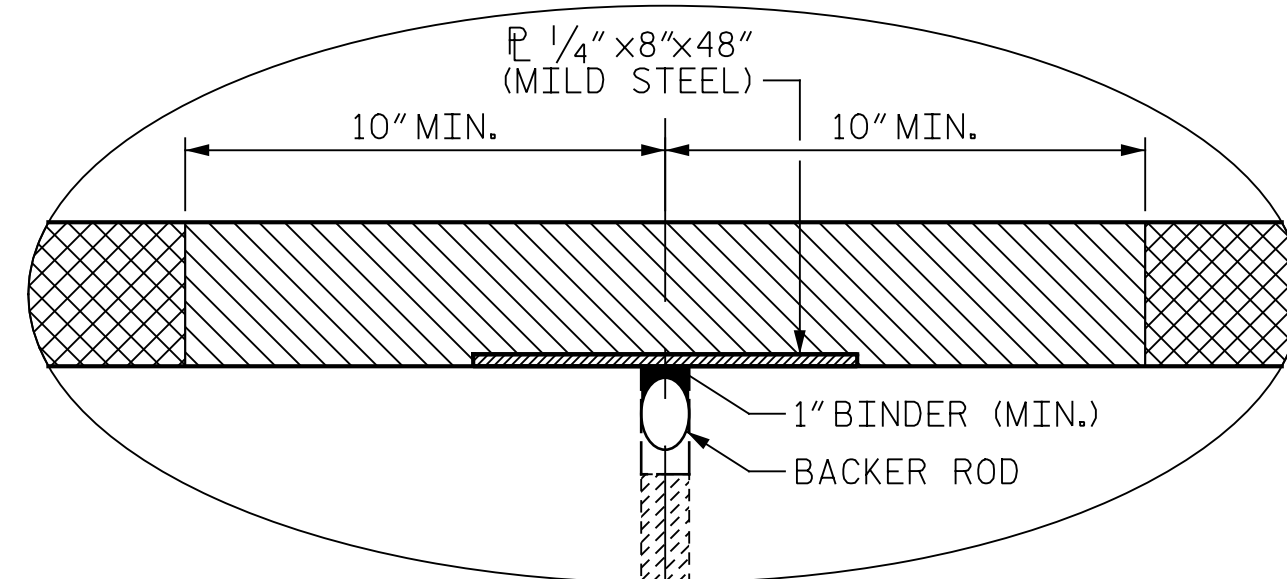


PLAN AT BARRIER

(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.

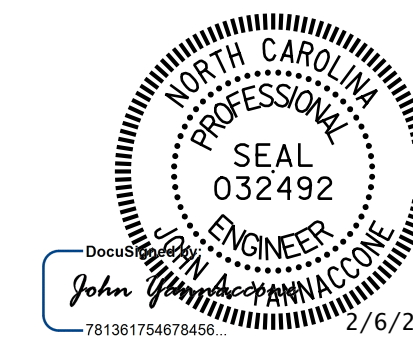
BACKER ROD SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.

FOR ASPHALT PLUG JOINTS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

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

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"

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 DEPARTMENT OF TRANSPORTATION  
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ASPHALT PLUG  
 JOINT DETAILS

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

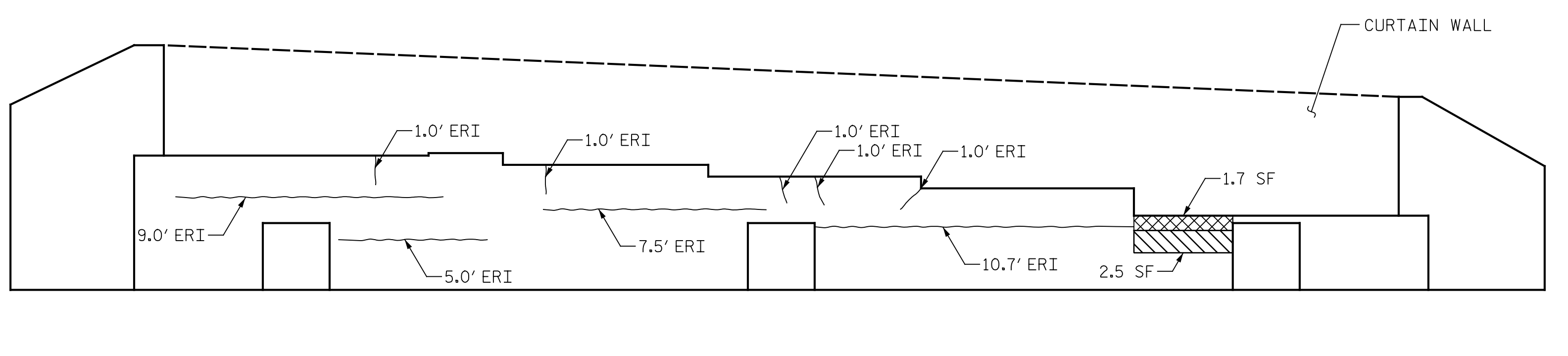
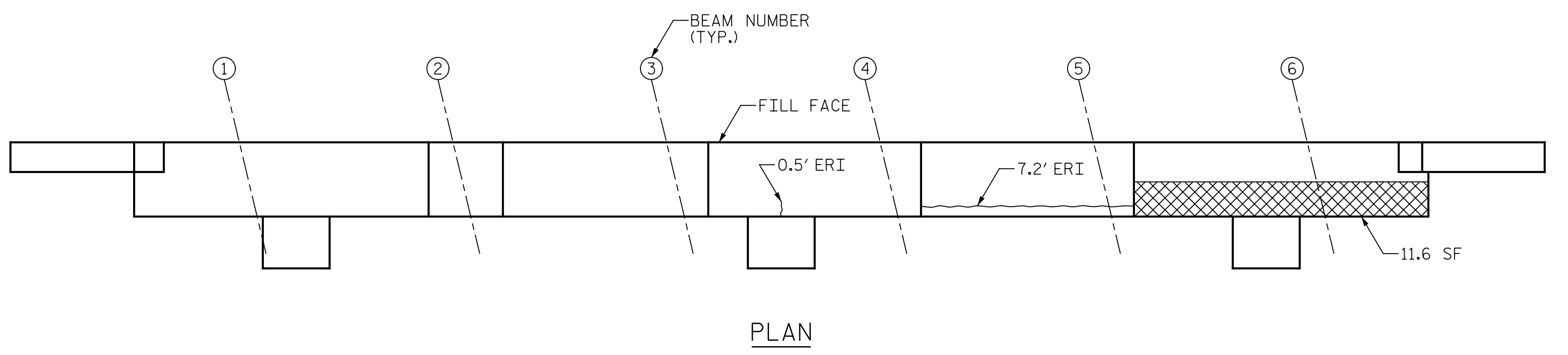
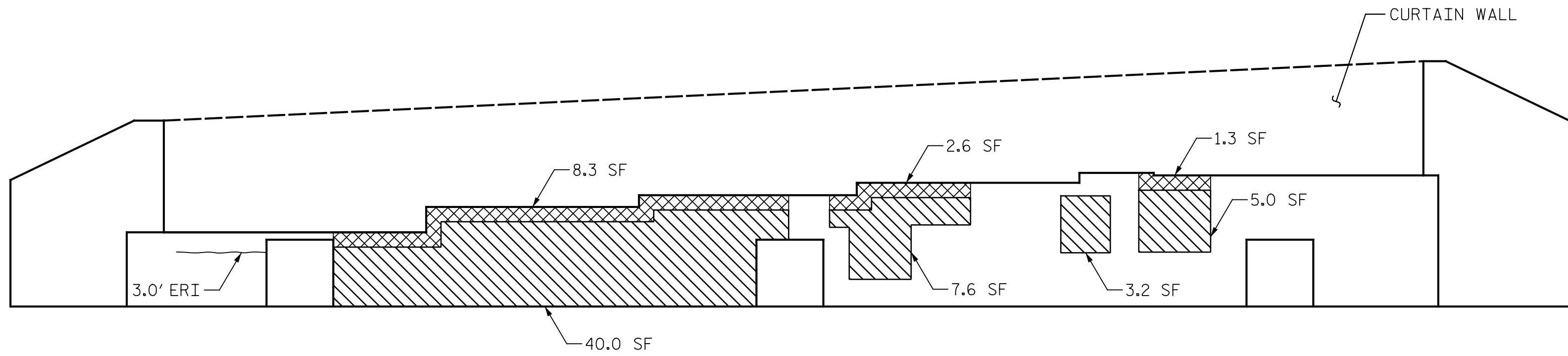
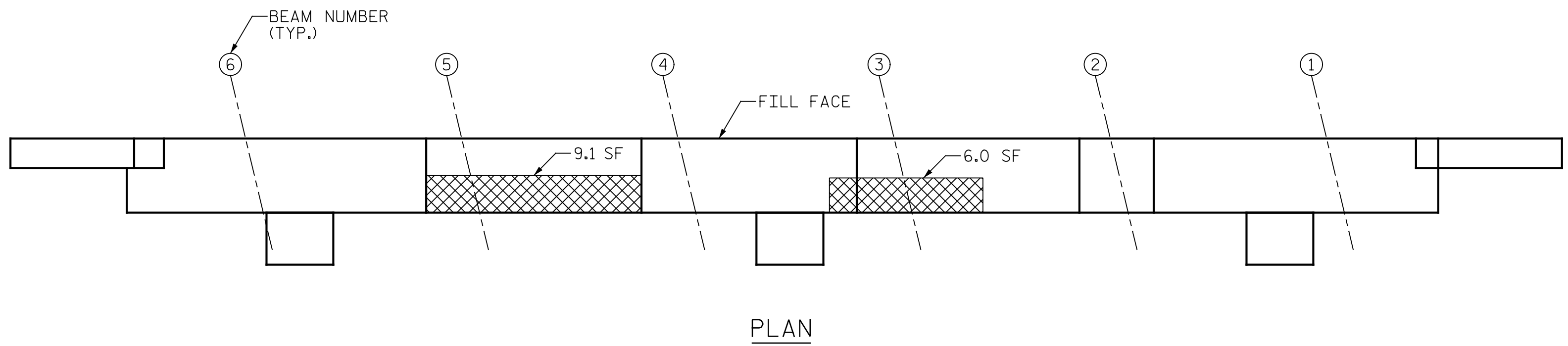


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- SHOTCRETE REPAIR
- CONCRETE REPAIR (FORM & POUR)
- ERI - EPOXY RESIN INJECTION

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.

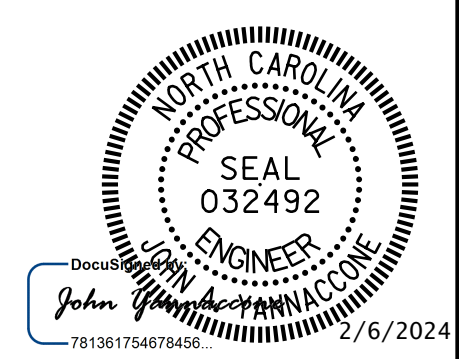
FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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.

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 BRIDGE NO. 400285



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

END BENT 1 & 2

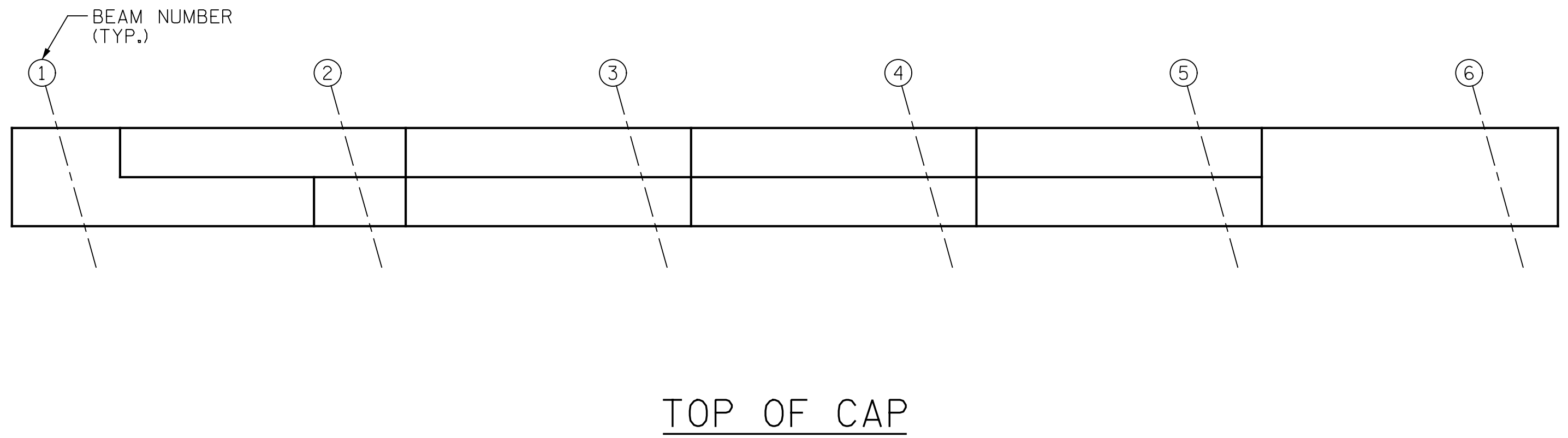
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 CHECKED BY : J. YANNAACONE DATE : 10/2022



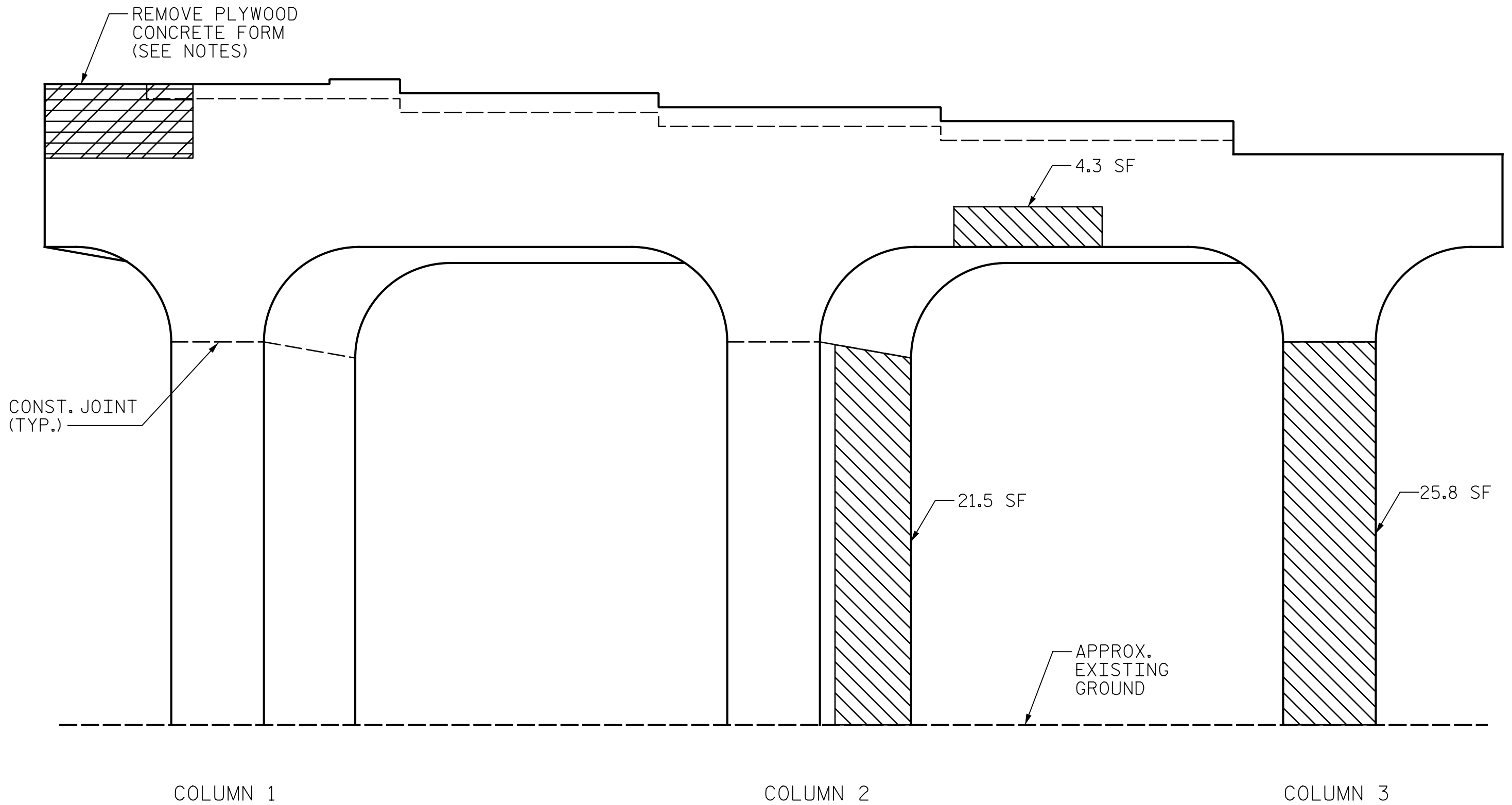
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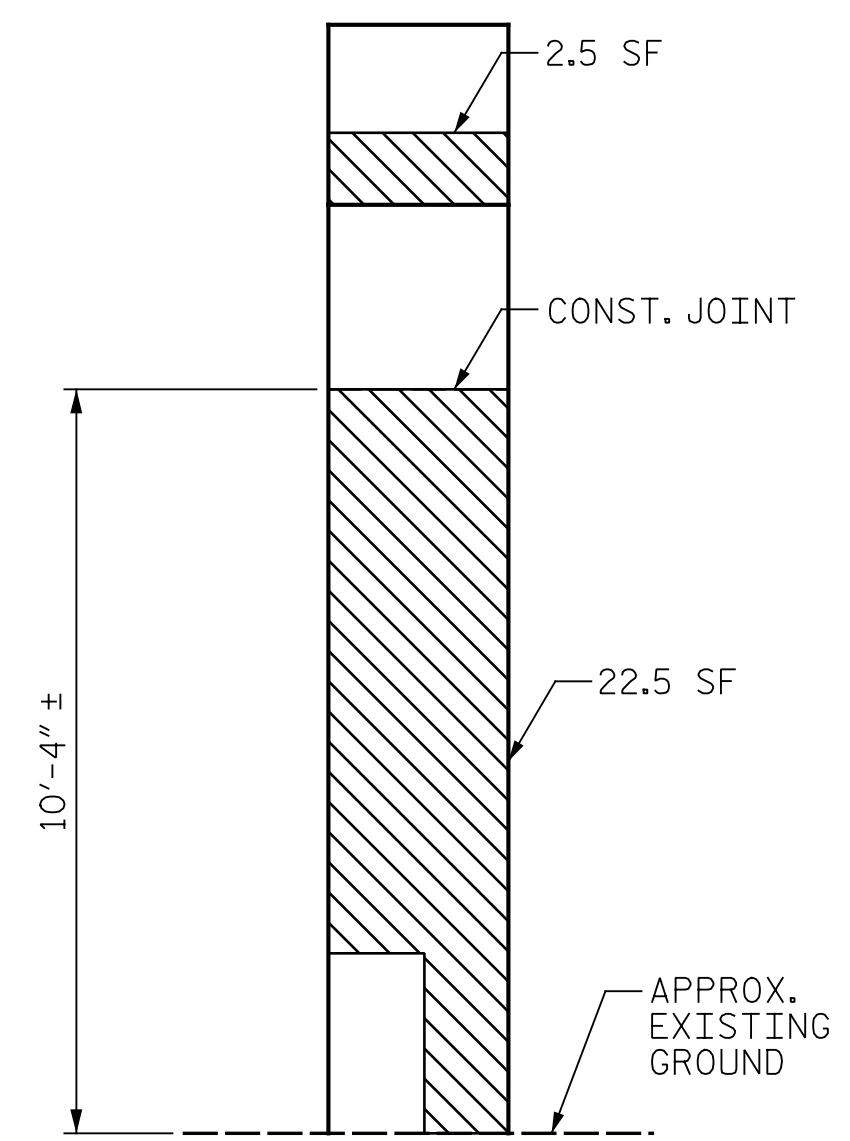
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SPAN B  
SPAN A



ELEVATION



END VIEW  
COLUMN 3

AS-BUILT REPAIR QUANTITY TABLE					
BENT 1 REPAIRS	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP	6.8	3.4			
COLUMN	137.8	68.9			
CONCRETE REPAIRS	0.0	0.0			
EPOXY RESIN INJECTION		LENGTH LF	LENGTH LF		
CAP		0.0			
COLUMN		2.0			
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.

THE CONTRACTOR SHALL TAKE CARE TO REMOVE THE PLYWOOD CONCRETE FORM WITHOUT DAMAGING THE CONCRETE BENT CAP. PAYMENT FOR THIS WORK IS INCIDENTAL TO THE OTHER PAY ITEMS.

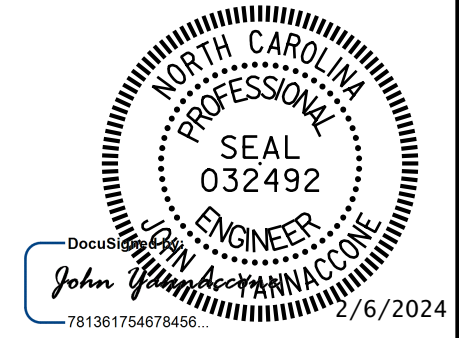
- SHOTCRETE REPAIR
- CONCRETE REPAIR (FORM & POUR)
- ERI - EPOXY RESIN INJECTION

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

SHEET 1 OF 2

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

BENT 1  
SPAN A SIDE

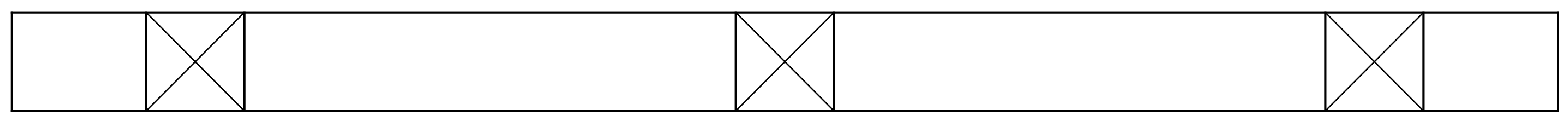


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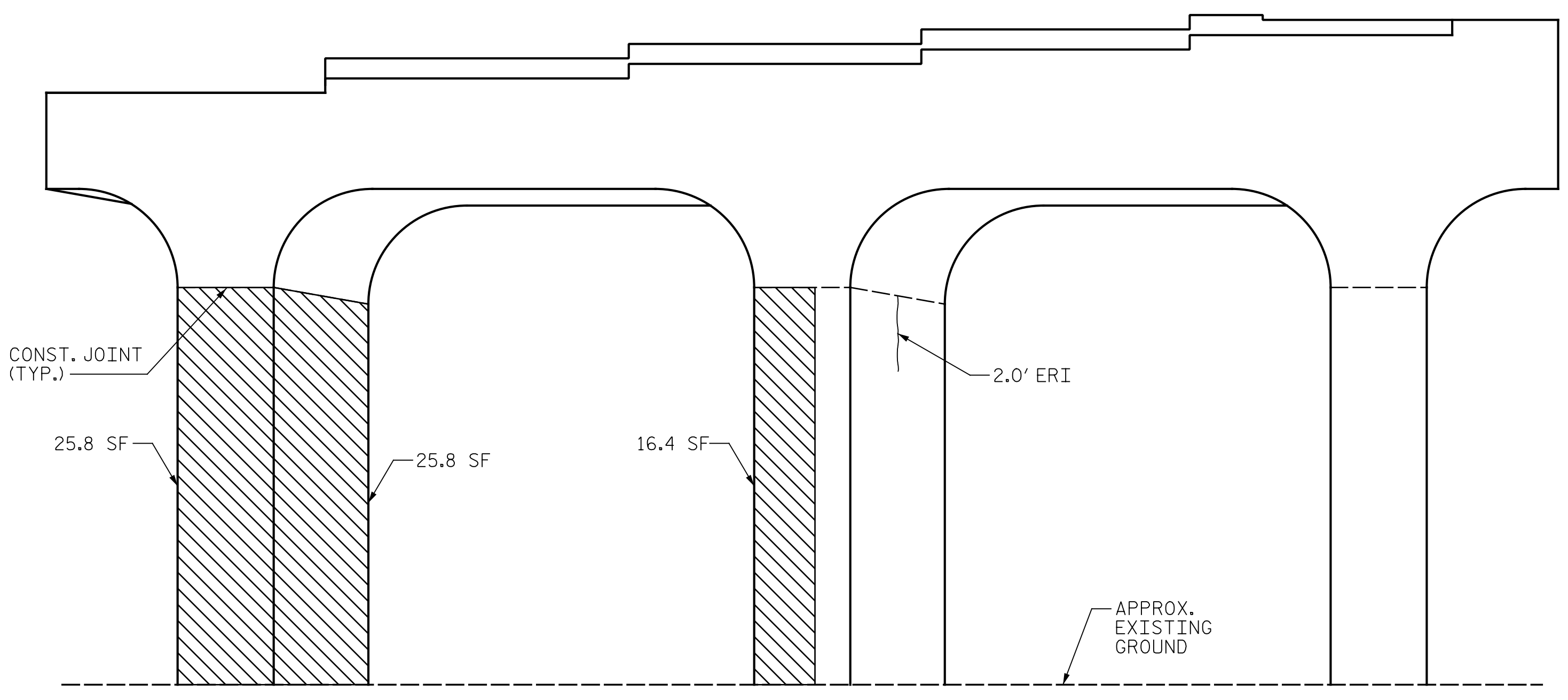
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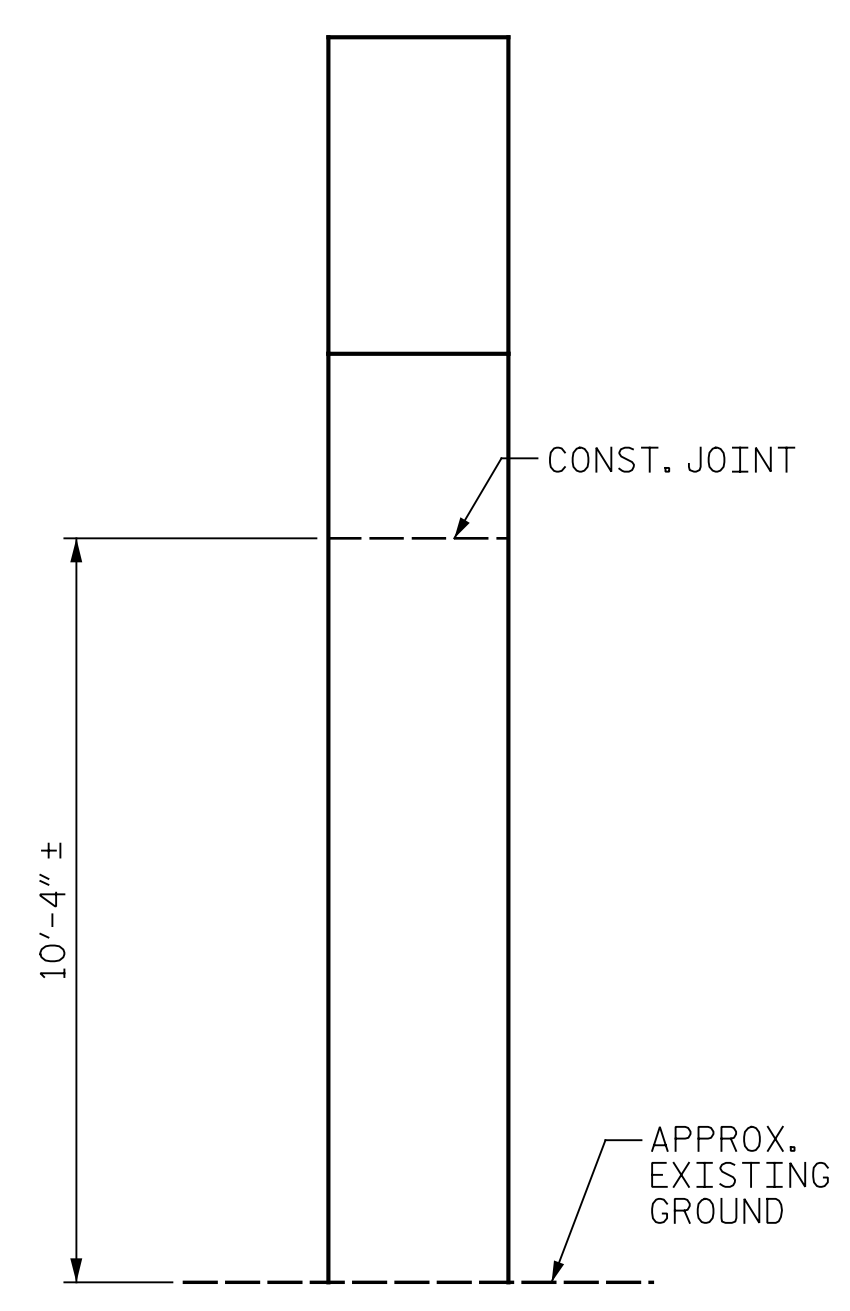
BOTTOM OF CAP

SPAN A

SPAN B



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.

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.

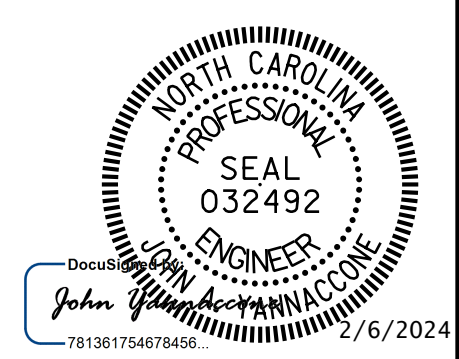
- SHOTCRETE REPAIR
- CONCRETE REPAIR (FORM & POUR)
- ERI - EPOXY RESIN INJECTION

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GUILFORD COUNTY  
 BRIDGE NO. 400285

SHEET 2 OF 2

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**BENT 1  
 SPAN B SIDE**

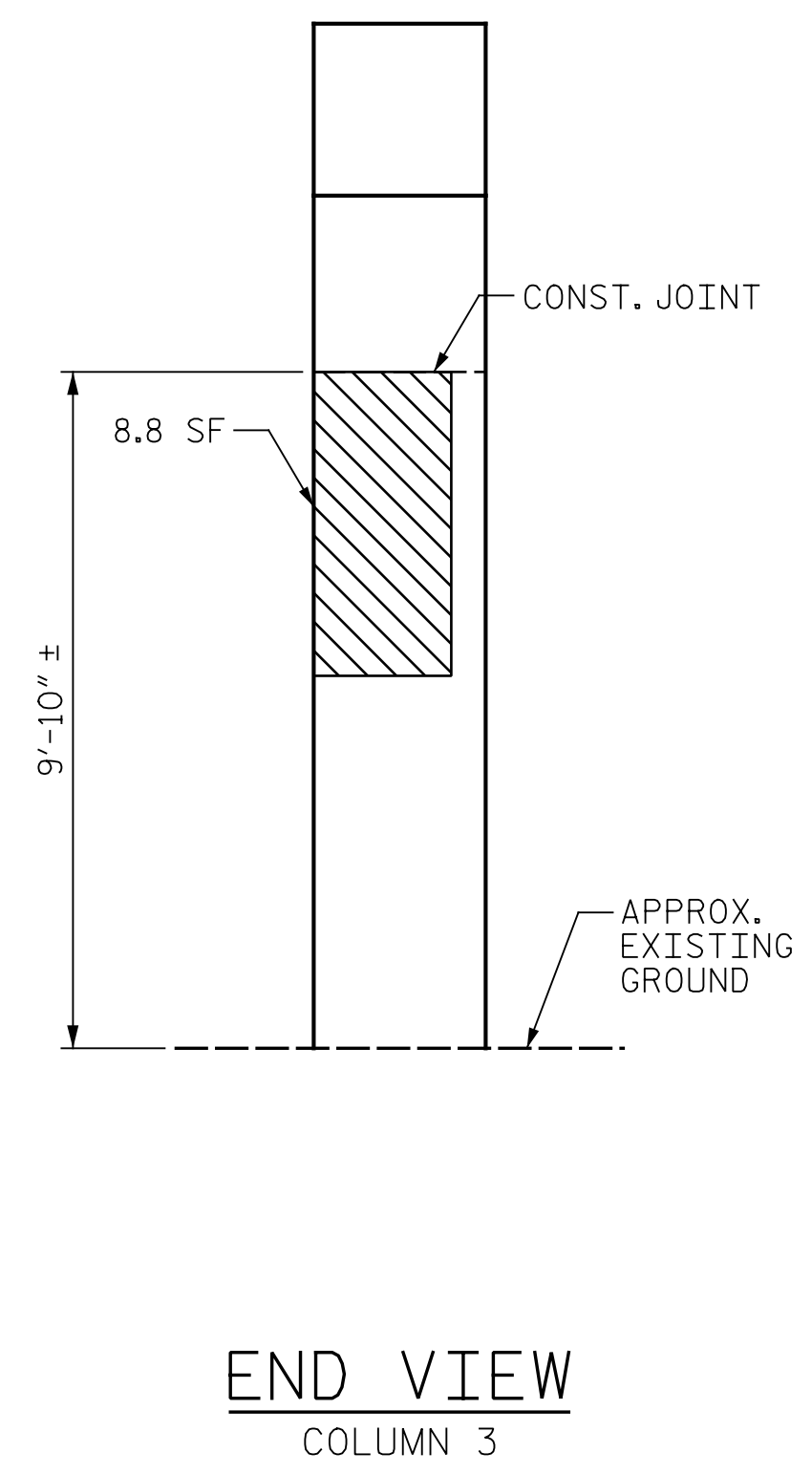
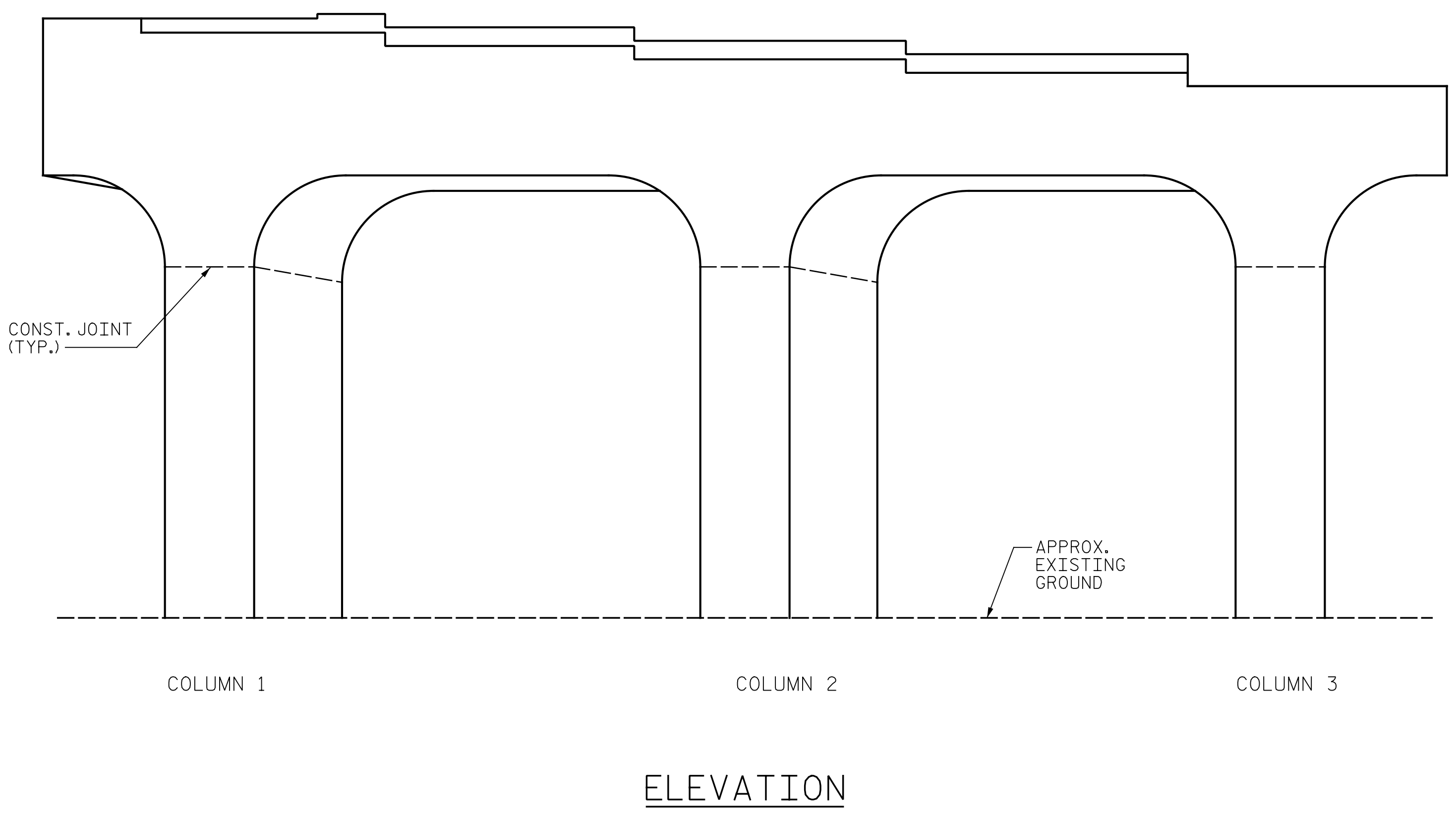
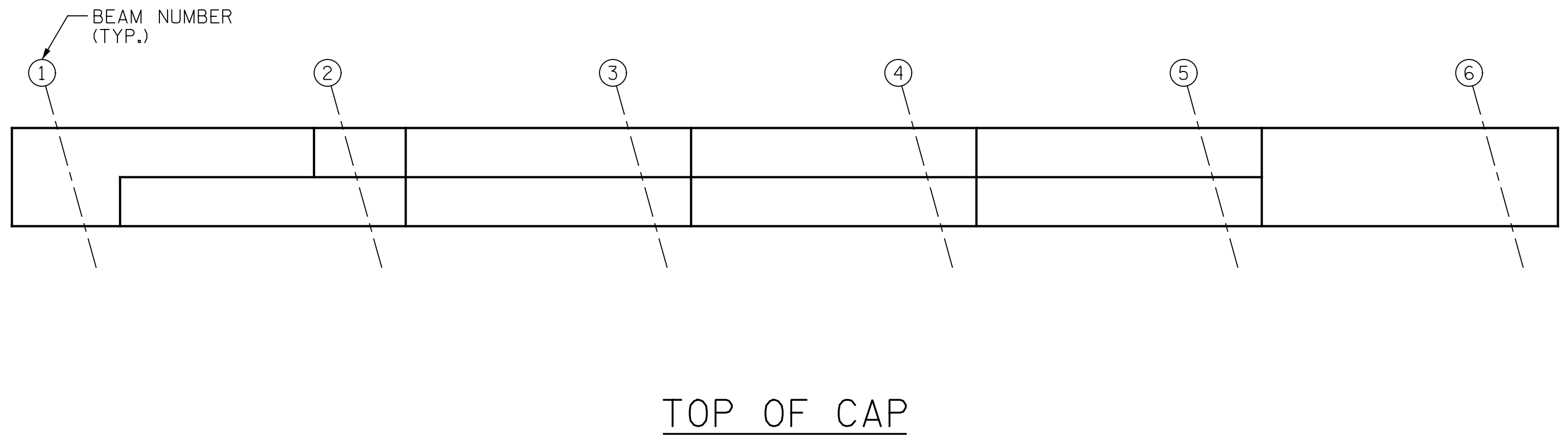


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AS-BUILT REPAIR QUANTITY TABLE					
BENT 2 REPAIRS	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP	0.0	0.0			
COLUMN	8.8	4.4			
CONCRETE REPAIRS	0.0	0.0			
EPOXY RESIN INJECTION		LENGTH LF	LENGTH 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:**  
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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.  
 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.

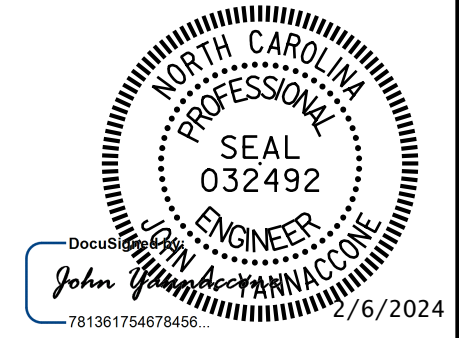
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

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. 400285

SHEET 1 OF 2



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**BENT 2**  
**SPAN B SIDE**

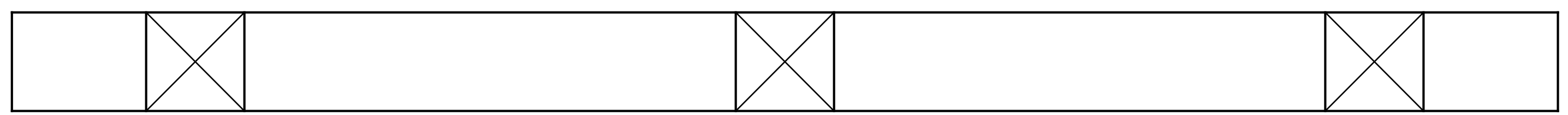
DRAWN BY : J. HARRIS DATE : 10/2022  
 CHECKED BY : J. YANNAACONE DATE : 10/2022



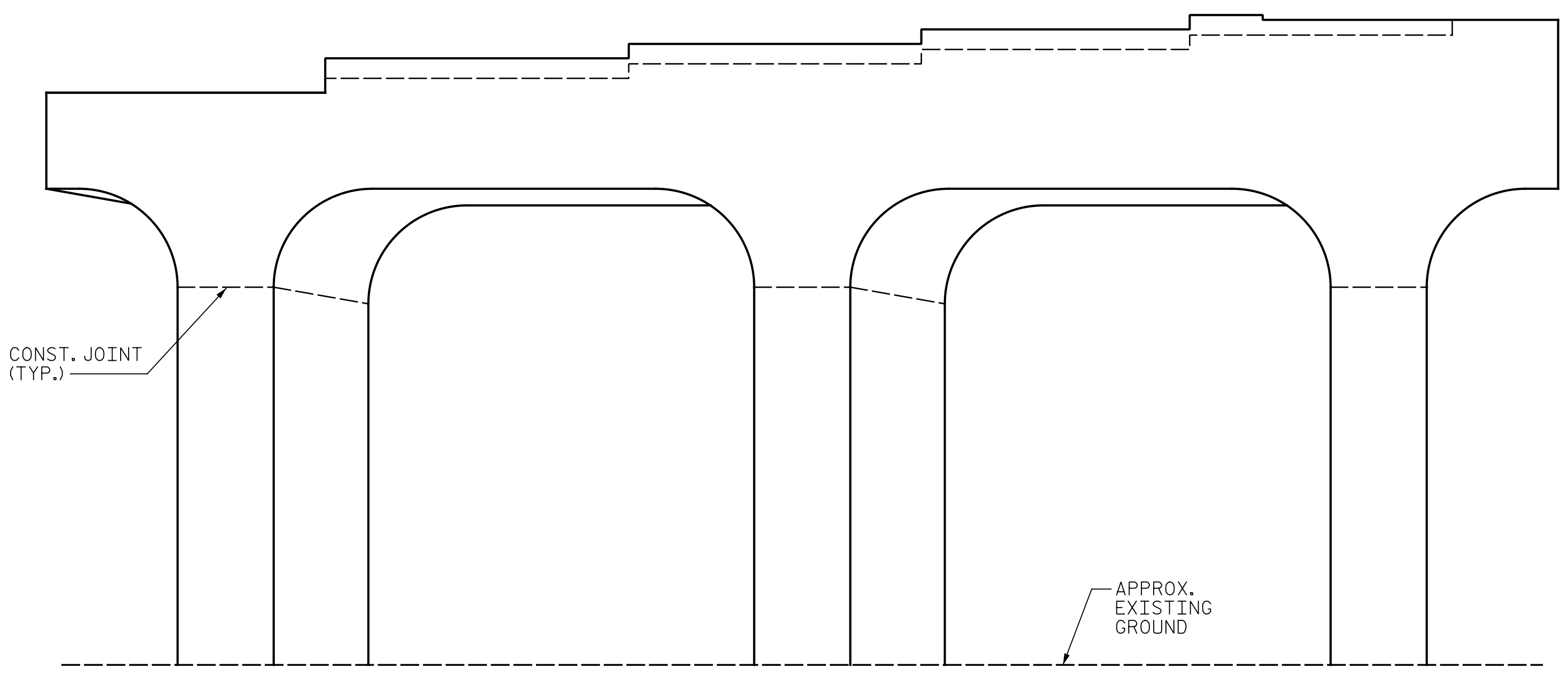
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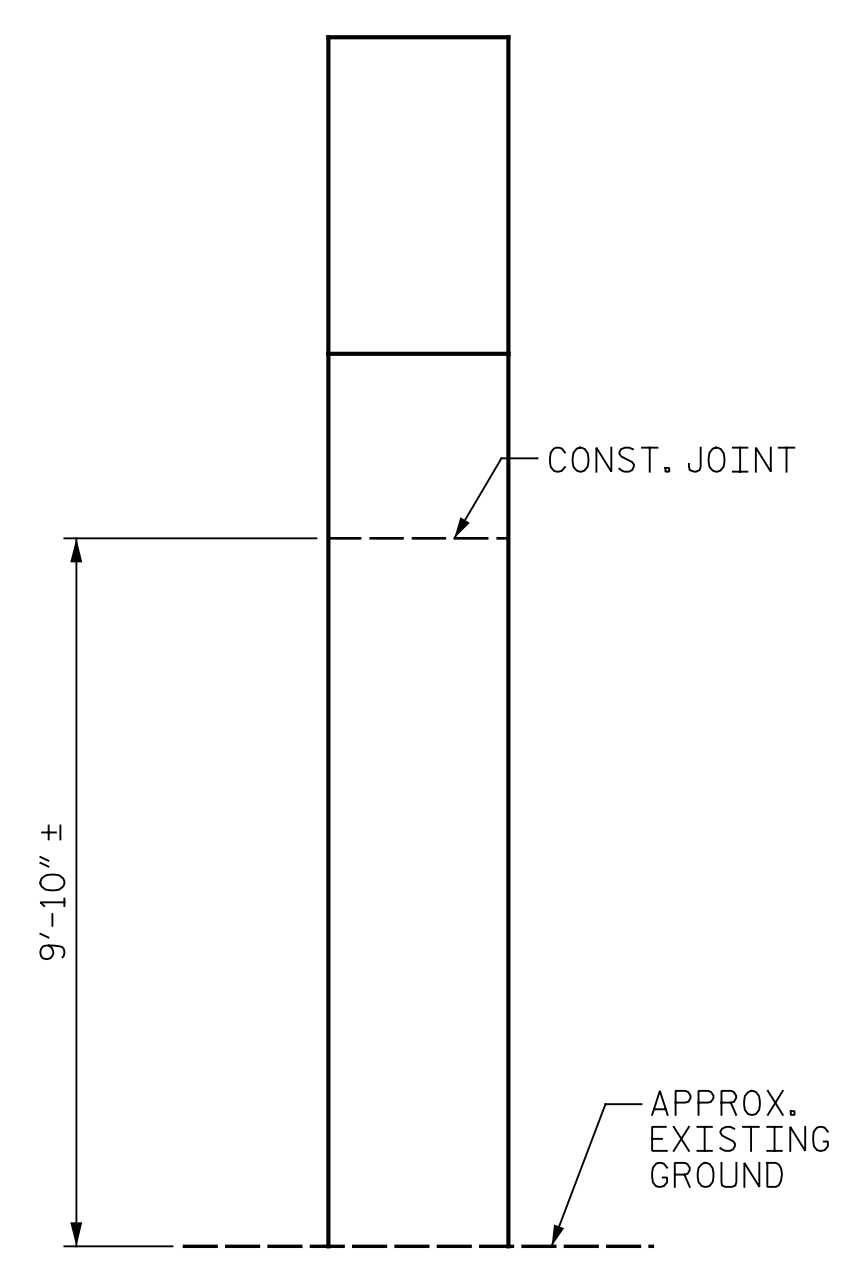
BOTTOM OF CAP



ELEVATION

SPAN B

SPAN C



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.

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

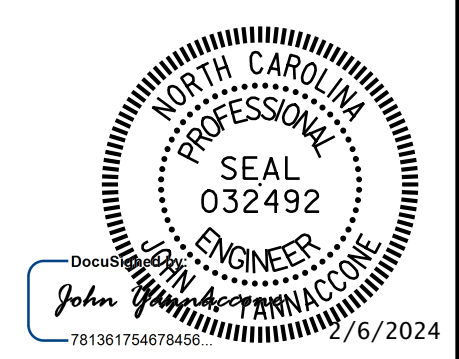


CONCRETE REPAIR (FORM & POUR)



ERI - EPOXY RESIN INJECTION

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



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

BENT 2  
SPAN C SIDE

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



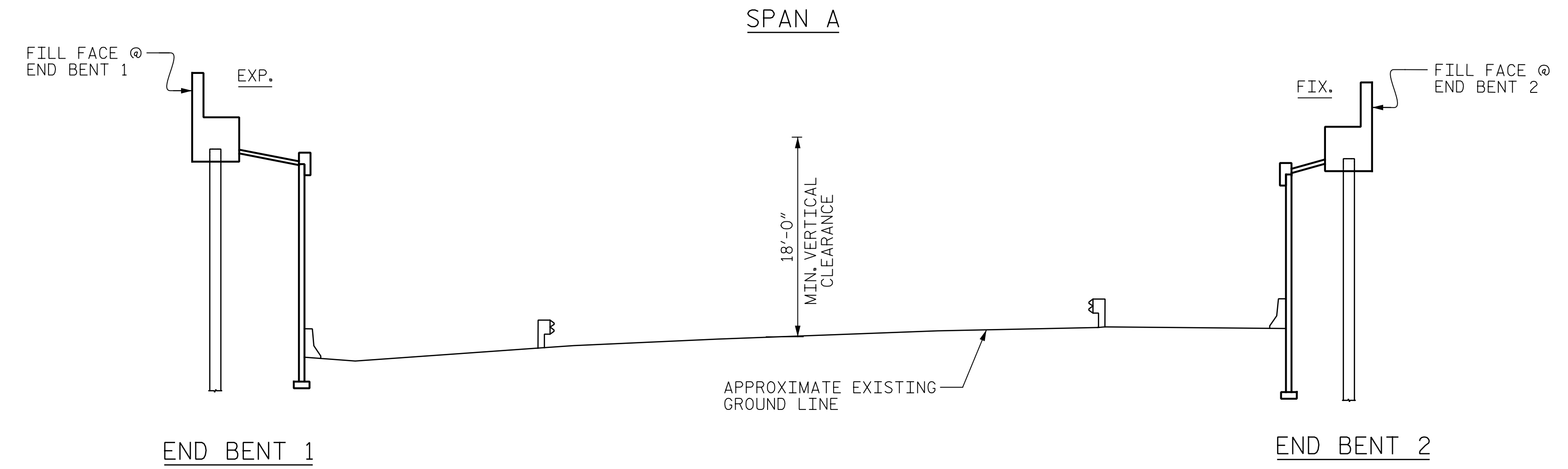
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**NOTE:**  
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BRIDGE ORIENTATION CONFORMS TO ROUTINE INSPECTION REPORT.

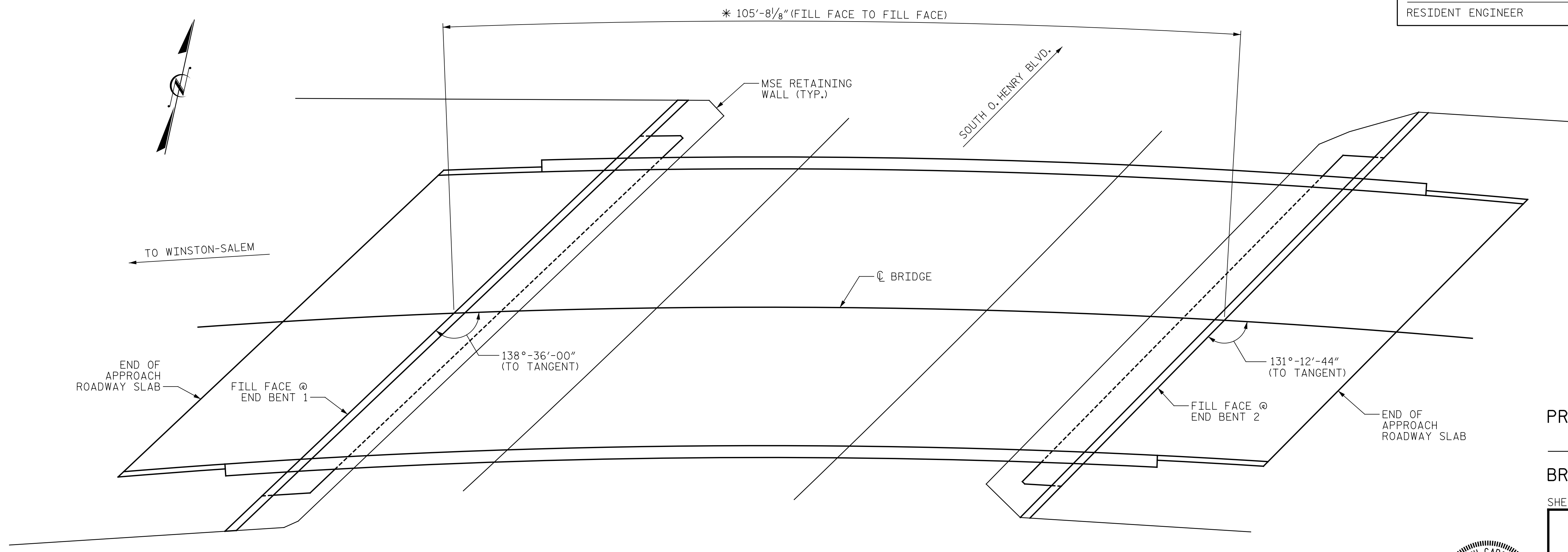
**SCOPE OF WORK**  
- APPLY DECK SEALANT TO PREPARED TOP OF BRIDGE DECK.



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

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

RESIDENT ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



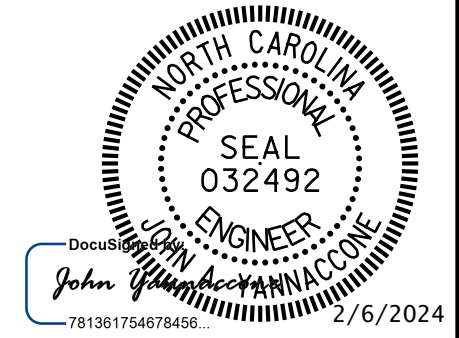
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(PILES NOT SHOWN FOR CLARITY)

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

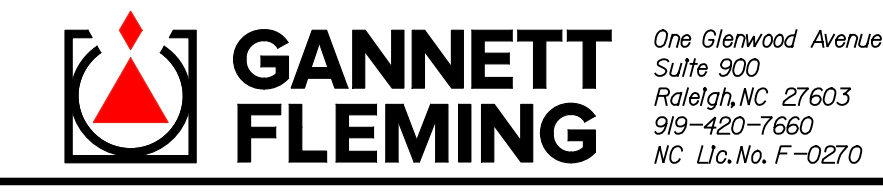
SHEET 1 OF 2

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. YANNAACONE 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'-48.04"	79°-46'-08.28"

### 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.

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.

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.

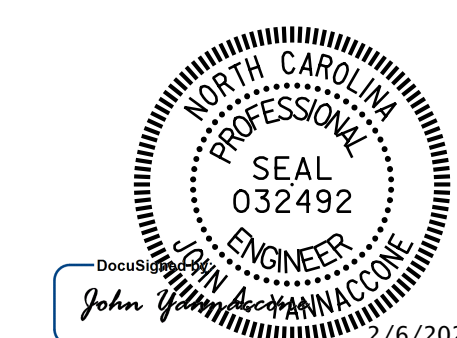
EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING SURFACE PREPARATIONS OF THE BRIDGE DECK. THE CONTRACTOR SHALL TAKE CARE THAT ANY CONSTRUCTION DEBRIS THAT COLLECTS IN THE DRAINS IS CONTAINED. DRAINS IN SHOULDERS OF ADJACENT TRAVEL LANES SHALL BE KEPT FREE AND CLEAR OF DEBRIS.

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.

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

SHEET 2 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



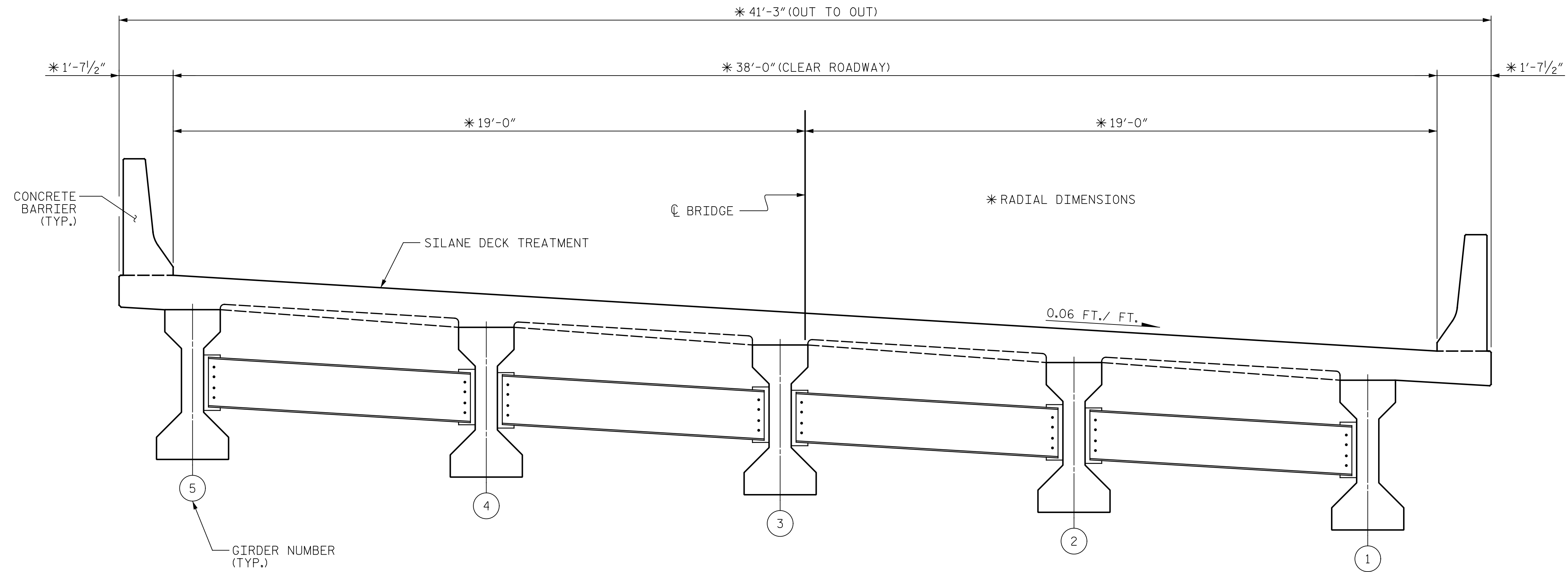
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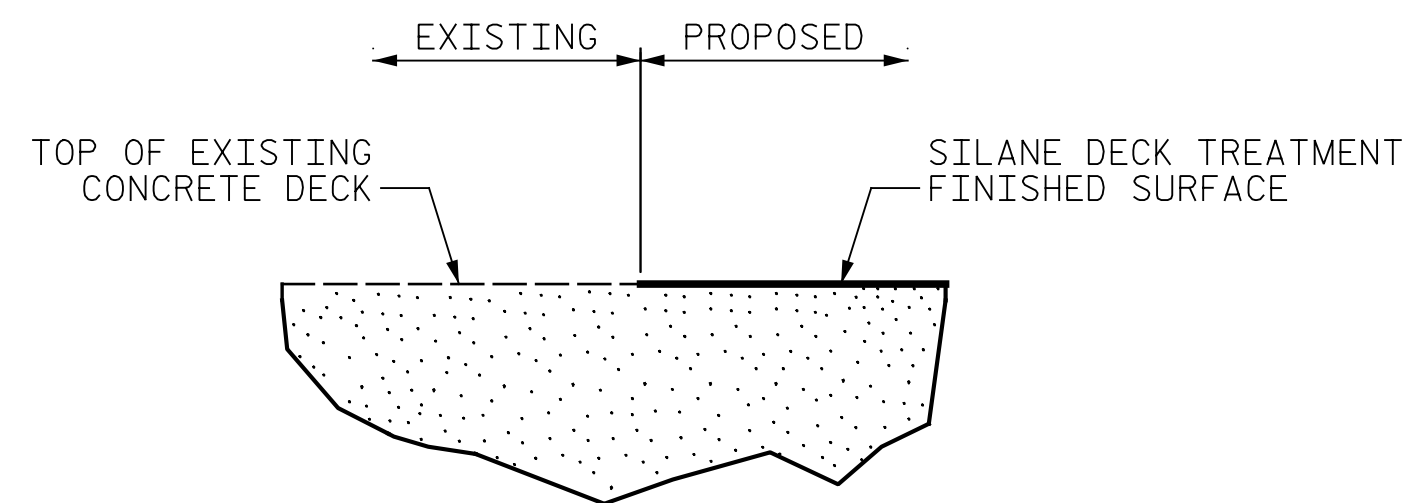
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**NOTES:**

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

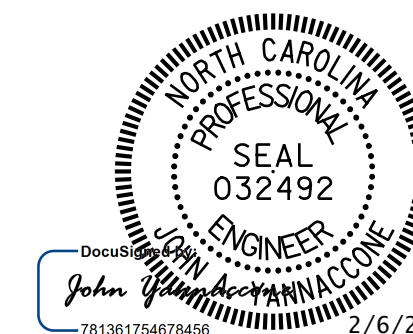


**TYPICAL SECTION**  
(PROPOSED)



**DETAIL OF SILANE DECK TREATMENT**

PROJECT NO. I-5955A  
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. YANNAACONE DATE : 10/2022



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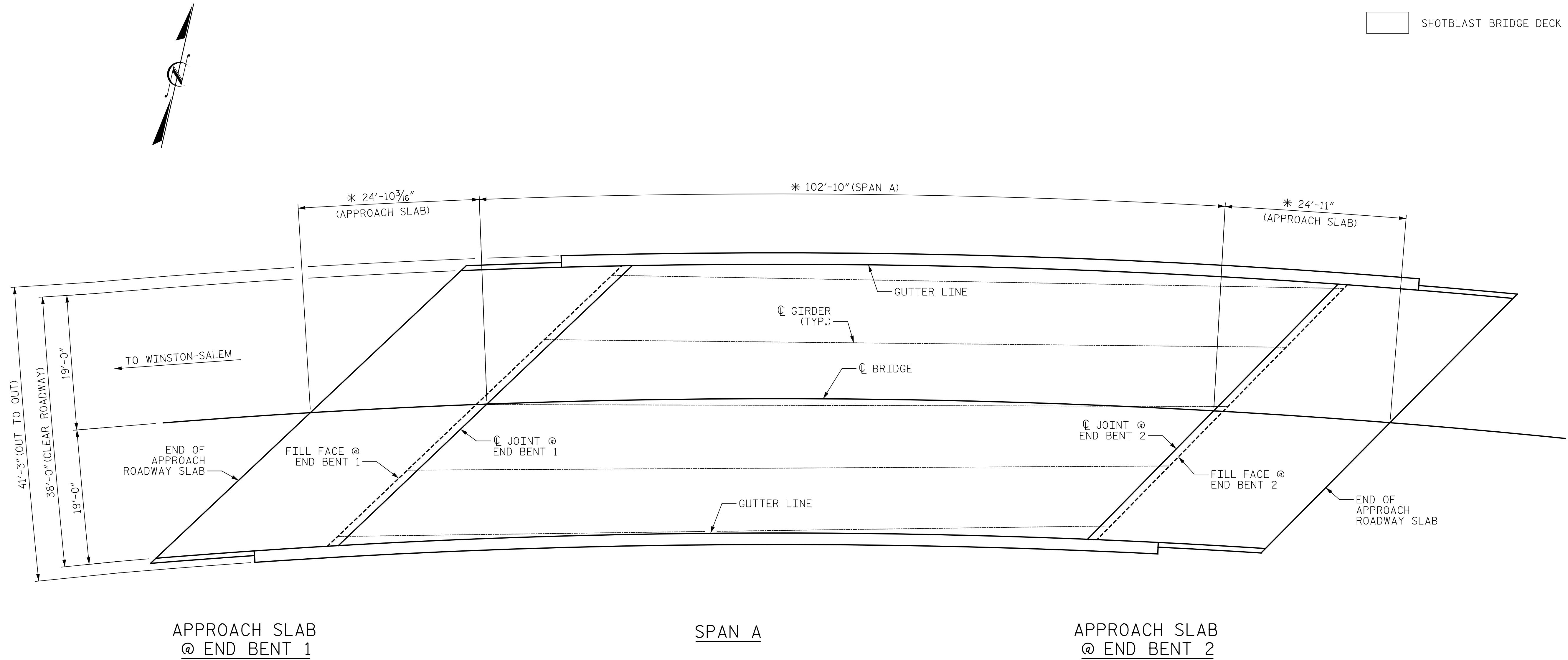
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SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
SHOTBLASTING BRIDGE DECK	645 SQ. YDS.	
SILANE DECK TREATMENT	645 SQ. YDS.	

 SHOTBLAST BRIDGE DECK & SILANE DECK TREATMENT



APPROACH SLAB @ END BENT 1

SPAN A

APPROACH SLAB @ END BENT 2

PLAN

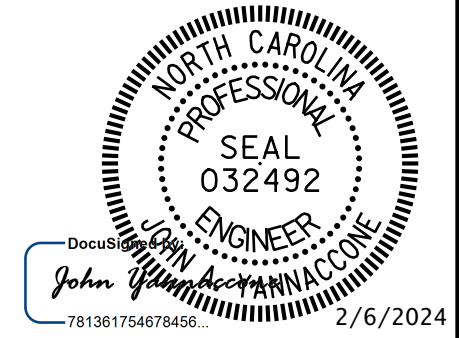
\* DIMENSIONS MEASURED ALONG ARC

**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.

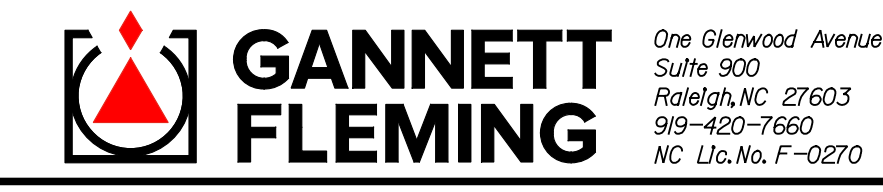
PROJECT NO. I-5955A  
GUILFORD COUNTY  
 BRIDGE NO. 400291



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**PLAN OF SPANS**

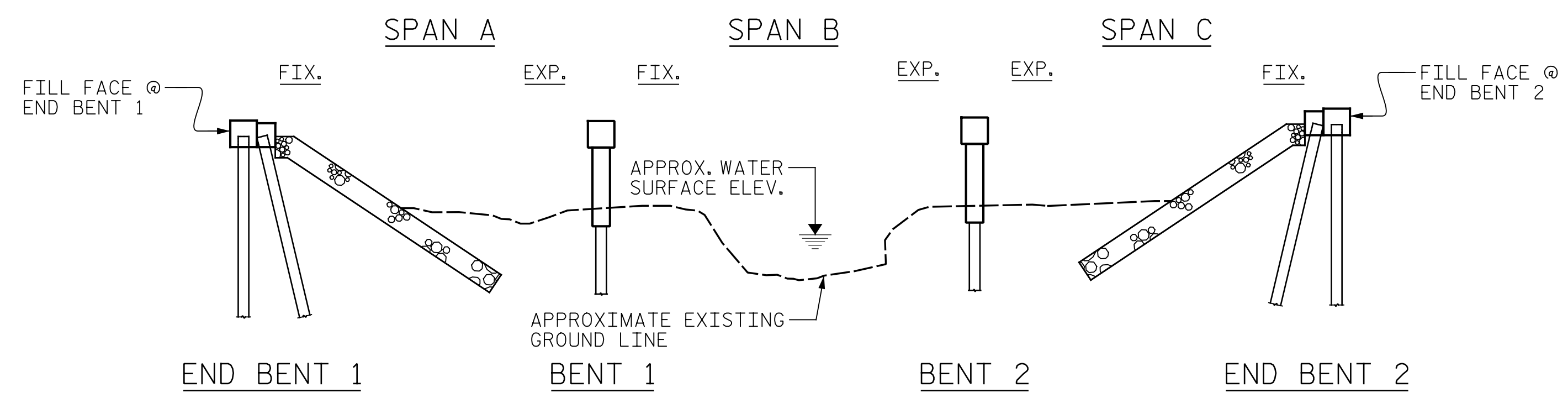
DRAWN BY : J. MYA DATE : 10/2022  
 CHECKED BY : J. YANACCONE DATE : 10/2022



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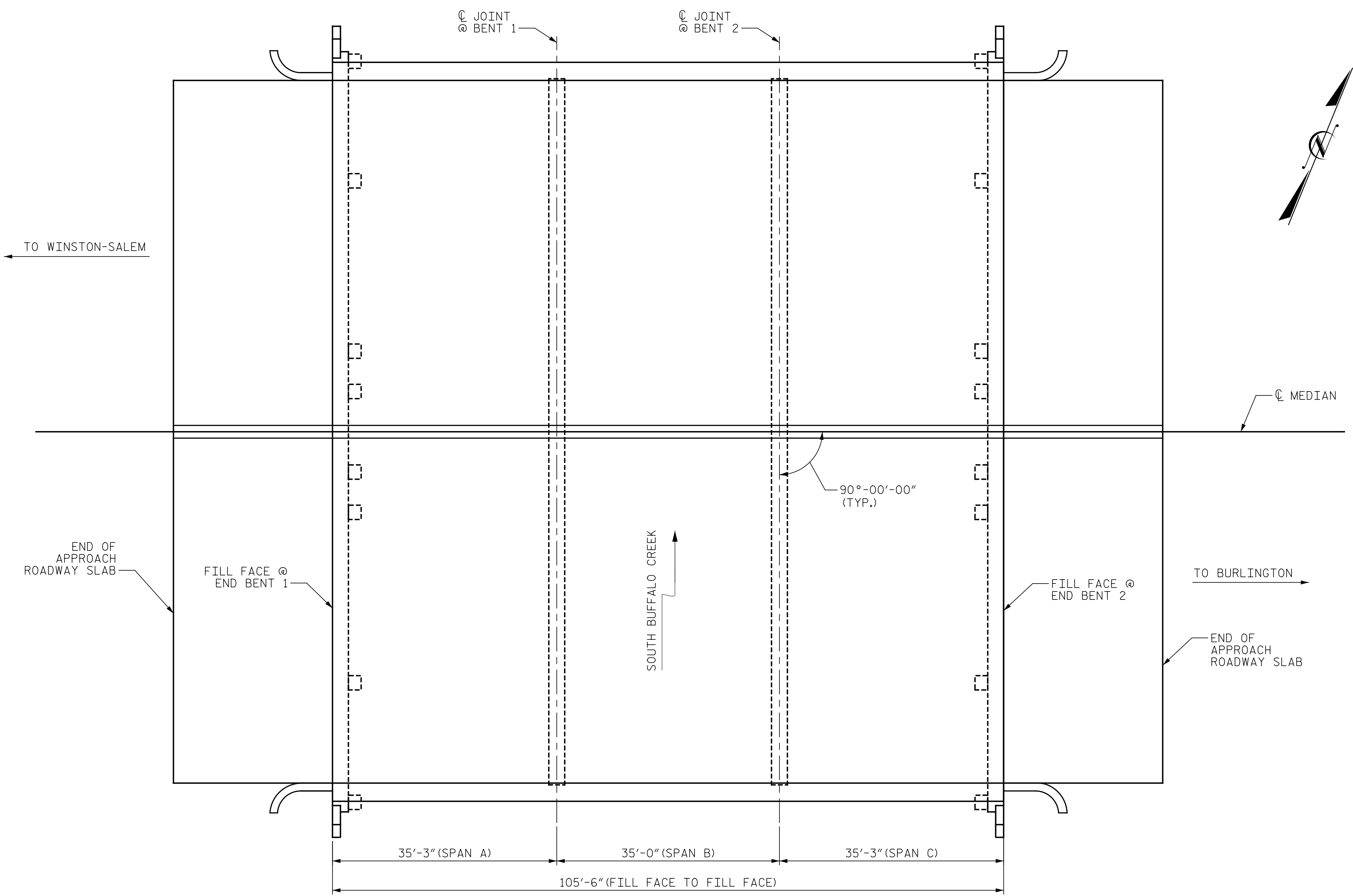
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### SECTION ALONG C BRIDGE

(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 03/15/2023.

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

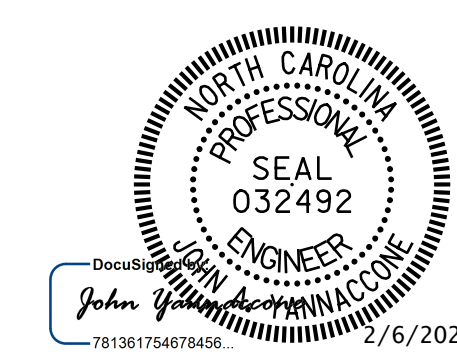
DATE

PROJECT NO. I-5955A  
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



DRAWN BY: J. MYA DATE: 10/2022  
 CHECKED BY: J. YANNAACONE 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'-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 PLUG JOINTS FOR PRESERVATION.

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 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 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.

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.

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.

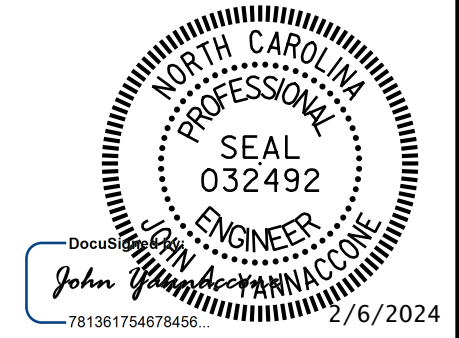
ANY DAMAGE TO EXISTING REINFORCING STEEL, DURING CONTRACTOR'S OPERATIONS, SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER AND PERFORMED AT NO ADDITIONAL COST TO THE DEPARTMENT.

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.

PROJECT NO. I-5955A  
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

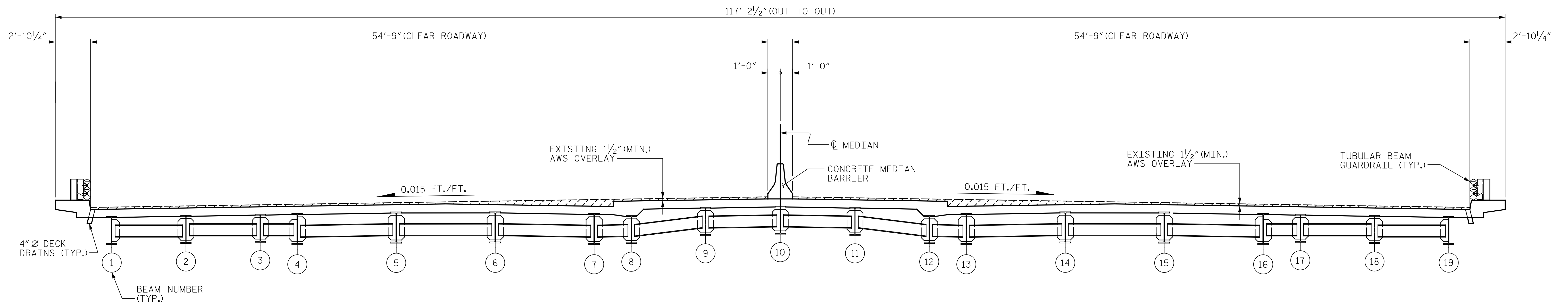


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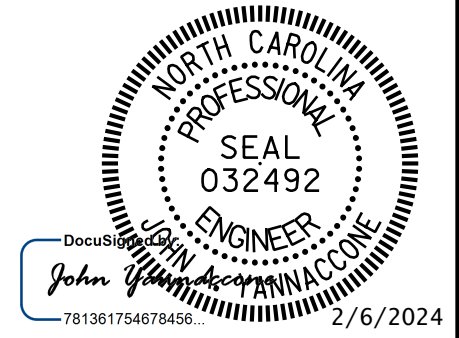
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**NOTES:**  
 SEE TRAFFIC MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF ASPHALT PLUG JOINTS FOR PRESERVATION.  
 THE CONTRACTOR SHALL ENSURE THAT THE EXISTING DECK DRAINS ARE OPEN AND FULLY FUNCTIONAL. 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. 400299



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

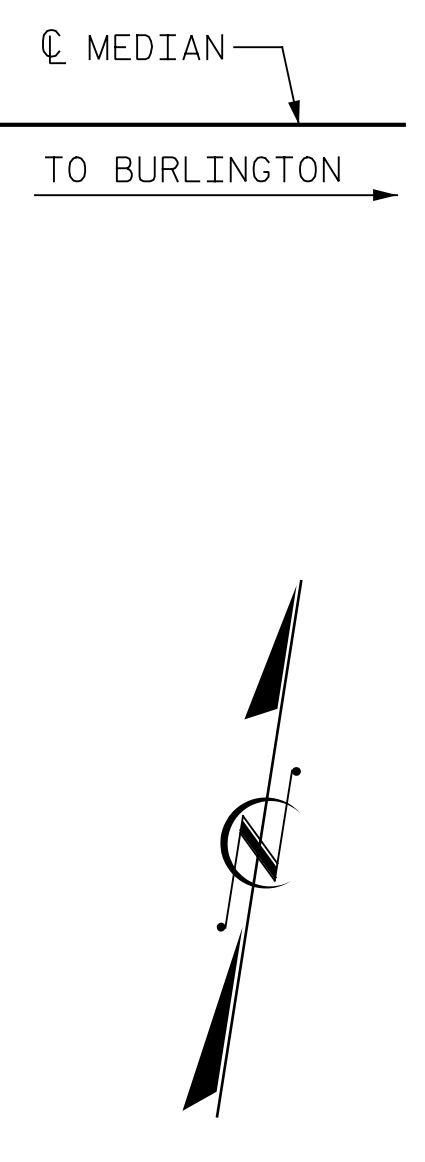
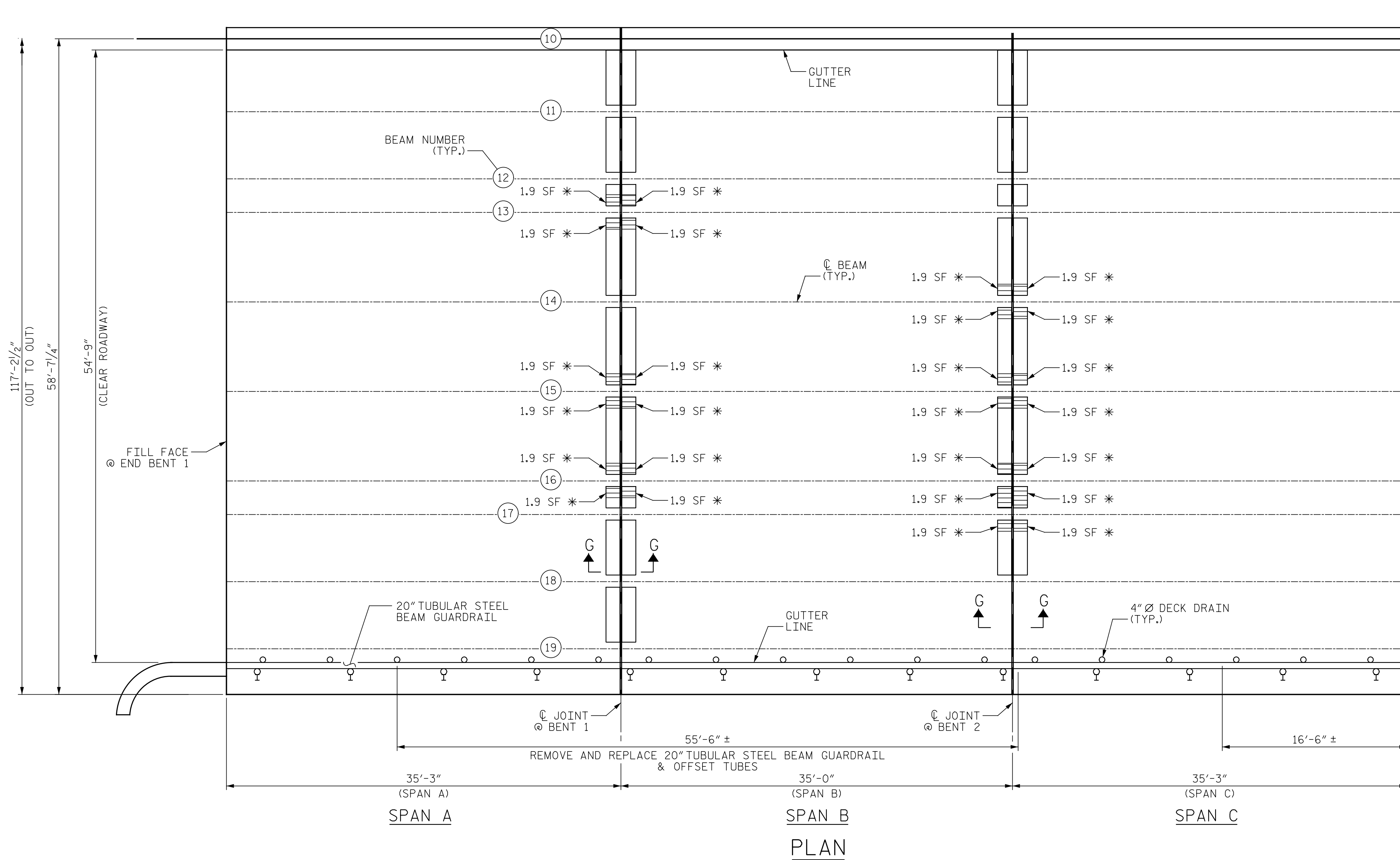


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**NOTES:**

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.

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		
				OVERHANG DIAPHRAGMS	SPAN A	0.0	0.0		
					SPAN B	0.0	0.0		
					SPAN C	0.0	0.0		
				UNDERSIDE OF OVERHANG	SPAN A	0.0	0.0		
					SPAN B	0.0	0.0		
					SPAN C	0.0	0.0		
				INTERIOR DIAPHRAGMS	SPAN A	11.4	4.8		
					SPAN B	24.7	11.2		
					SPAN C	13.3	6.4		
				UNDERSIDE EPOXY RESIN INJECTION	ESTIMATE		ACTUAL		
					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



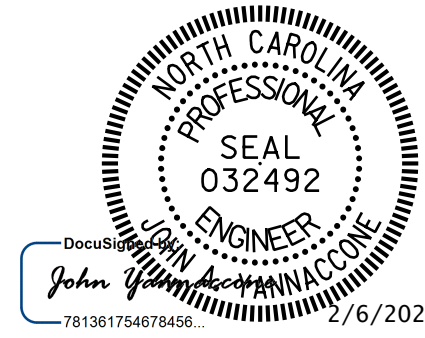
TYP. INTERIOR DIAPHRAGM REPAIR SITE

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

SHEET 2 OF 2

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**PLAN OF SPANS  
 EAST BOUND**

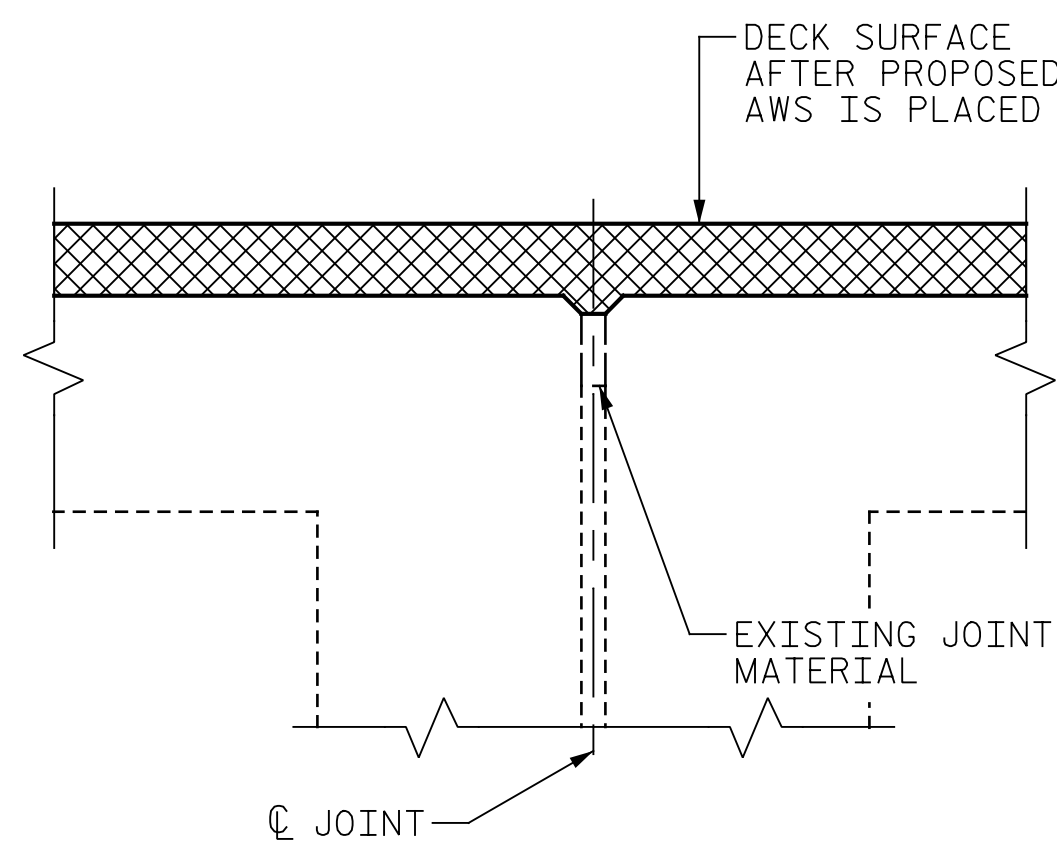


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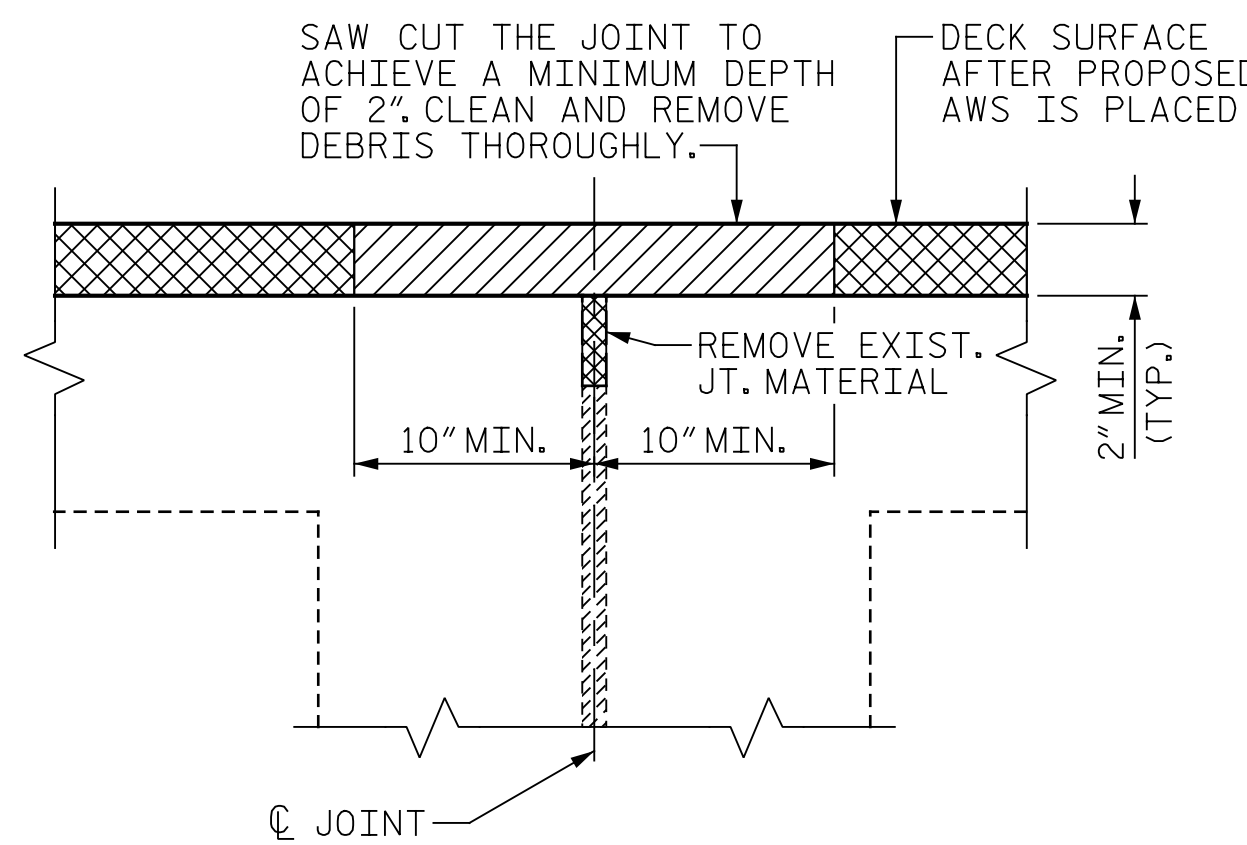
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 CHECKED BY: J. YANNAACONE DATE: 10/2022

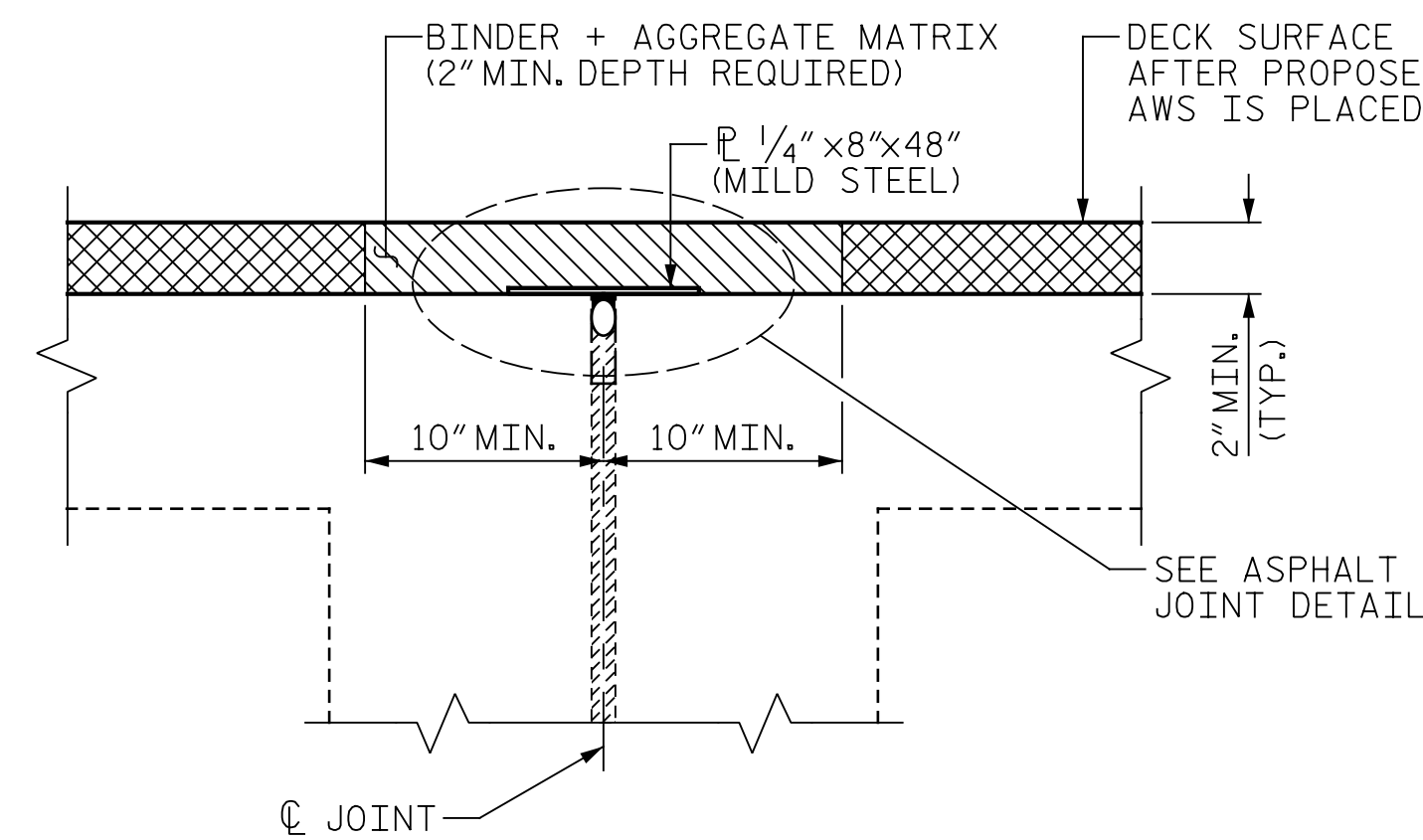
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EXISTING JOINT AFTER  
AWS PLACEMENT

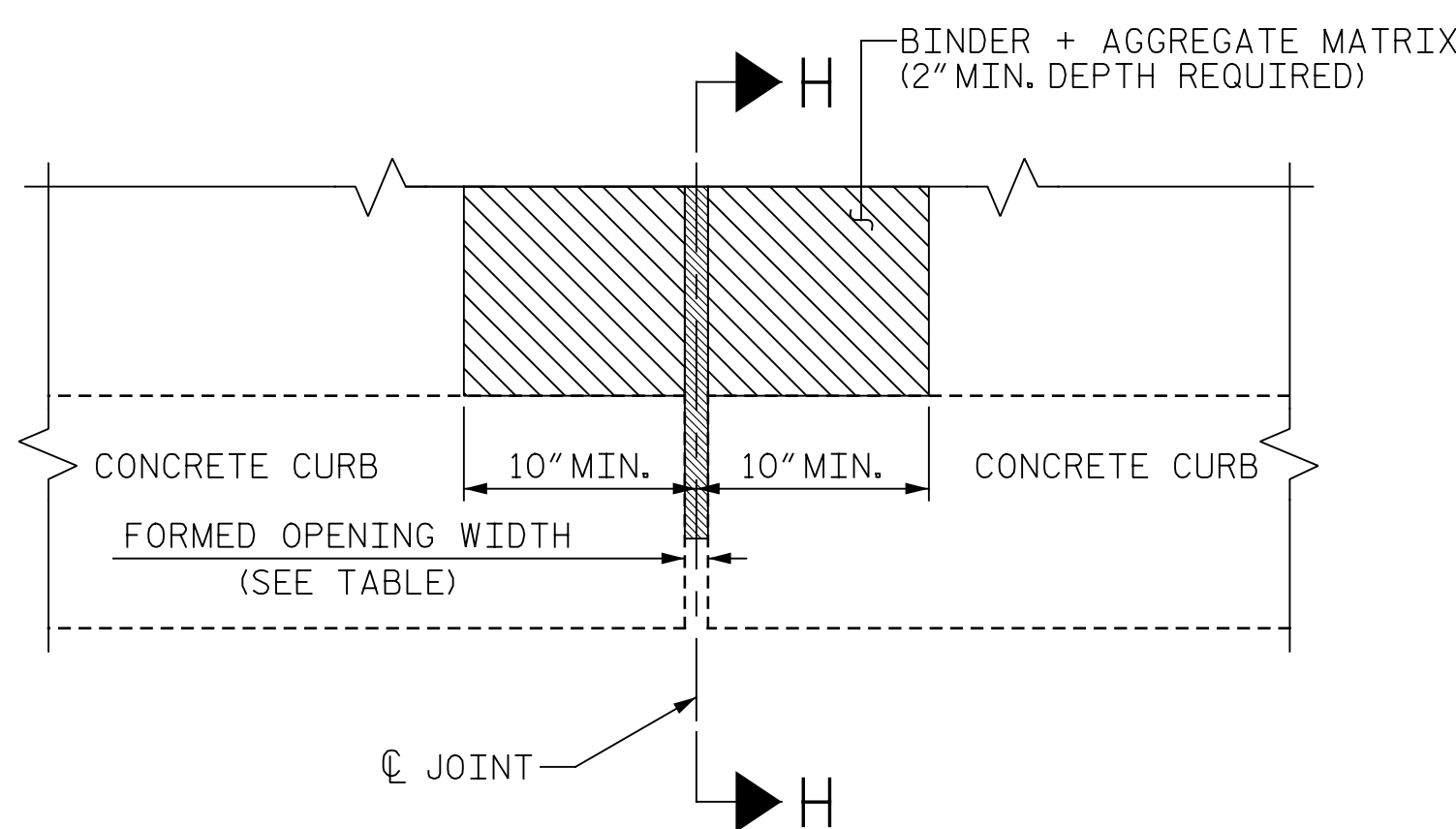


DEMOLITION PREPARATION

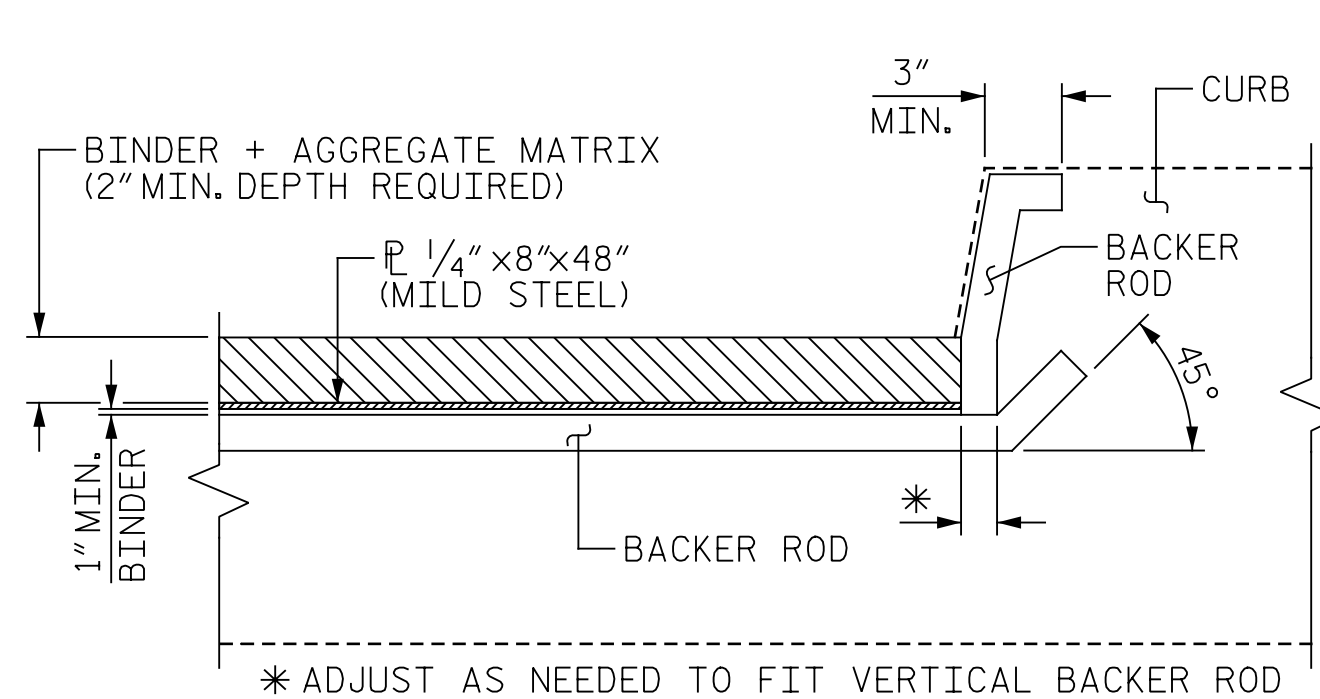


PROPOSED JOINT

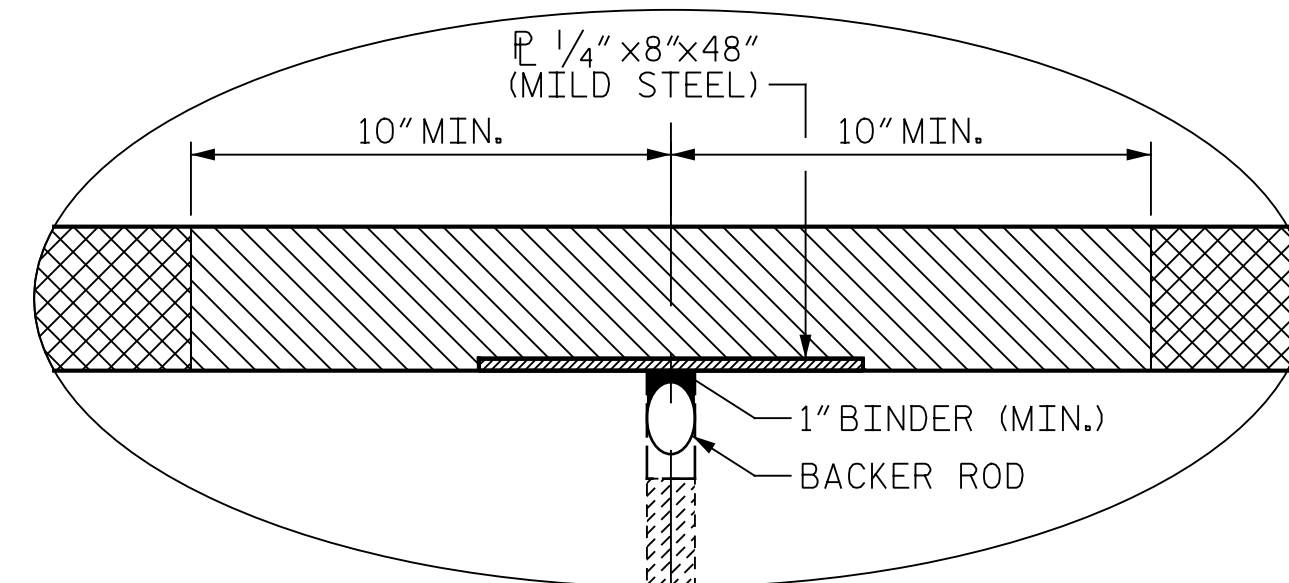
**SECTION G-G**  
(TYP. AT BENTS)



**PLAN AT BARRIER**  
(PROPOSED JOINT SEAL, STEEL 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.

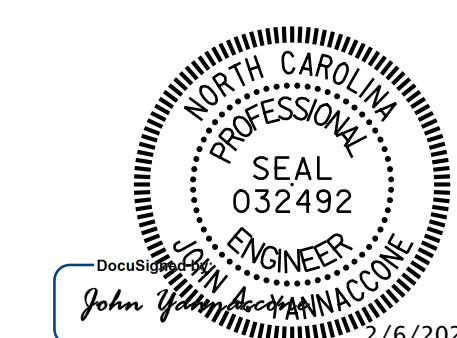
BACKER ROD SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.

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	113.5	1"	1/4"
BENT 2	113.5	1"	3/16"

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STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**ASPHALT PLUG JOINT DETAILS**

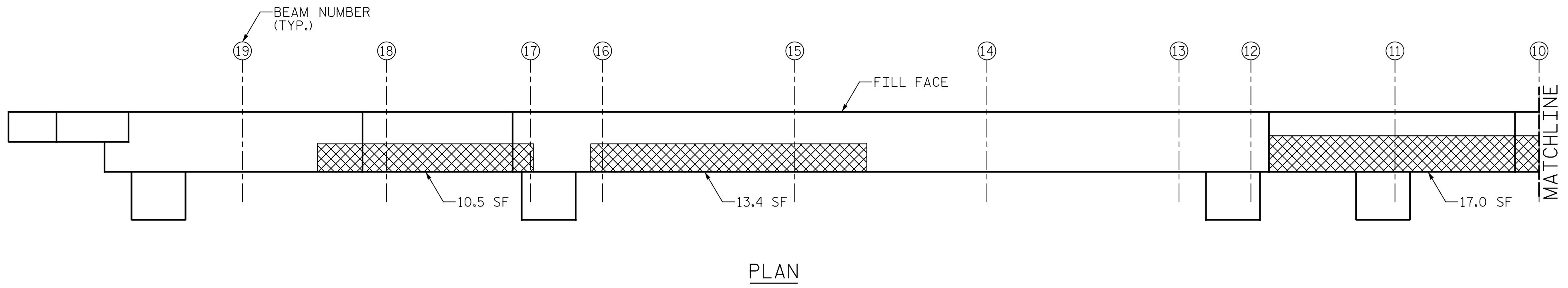
DRAWN BY : J. HARRIS DATE : 10/2022  
 CHECKED BY : J. YANNAACONE DATE : 10/2022



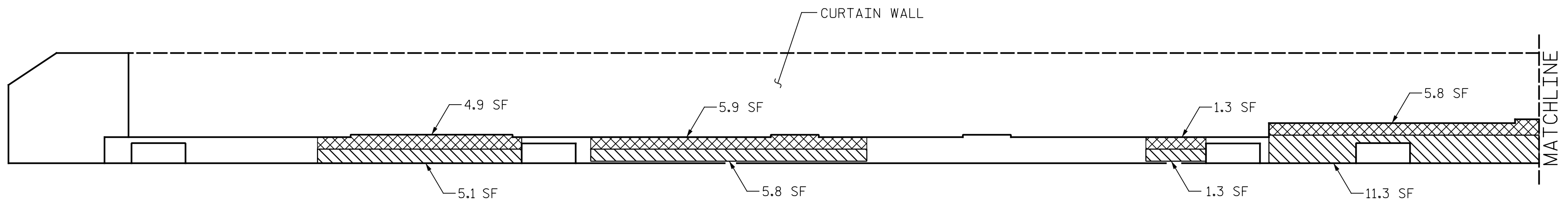
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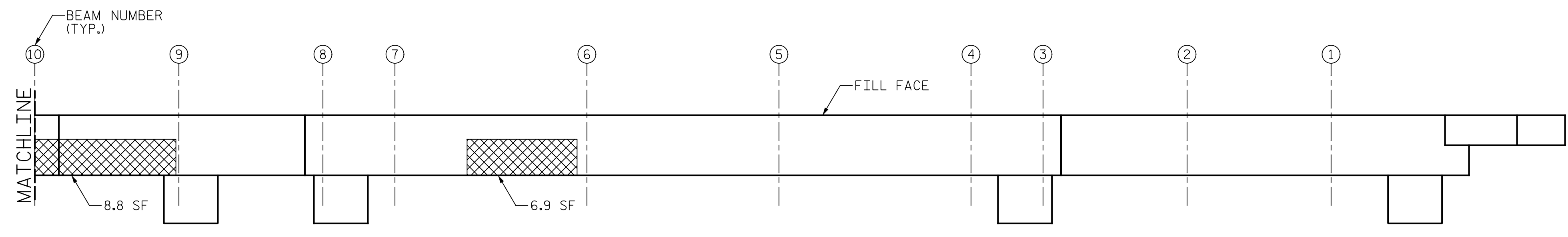
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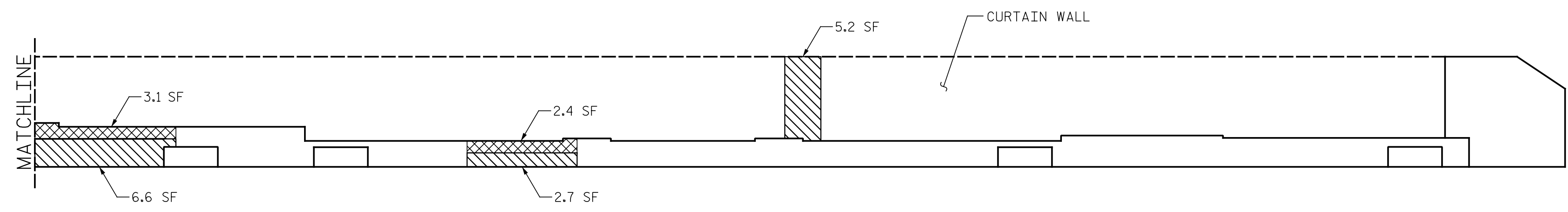
PLAN



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.

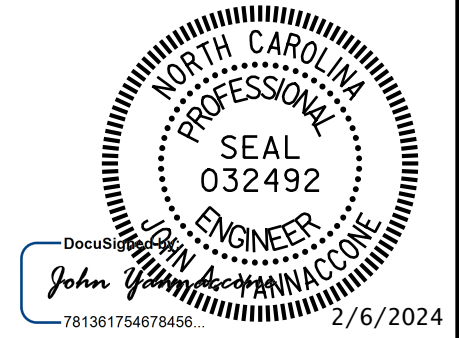
CONTRACTOR SHALL SAW CUT TO A MINIMUM DEPTH OF 1/2" BUT REINFORCING STEEL SHALL NOT BE DAMAGED  
 CONTRACTOR SHALL REMOVE SURFACE CONCRETE TO VERIFY THAT SAW CUT DEPTH WILL NOT DAMAGE EXISTING REINFORCING STEEL.  
 CONTRACTOR SHALL SAW CUT THE REPAIR AREAS SO THAT THE CORNERS ARE SQUARE AS INDICATED 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.

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

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

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

END BENT 1



DRAWN BY : J. HARRIS DATE : 10/2022  
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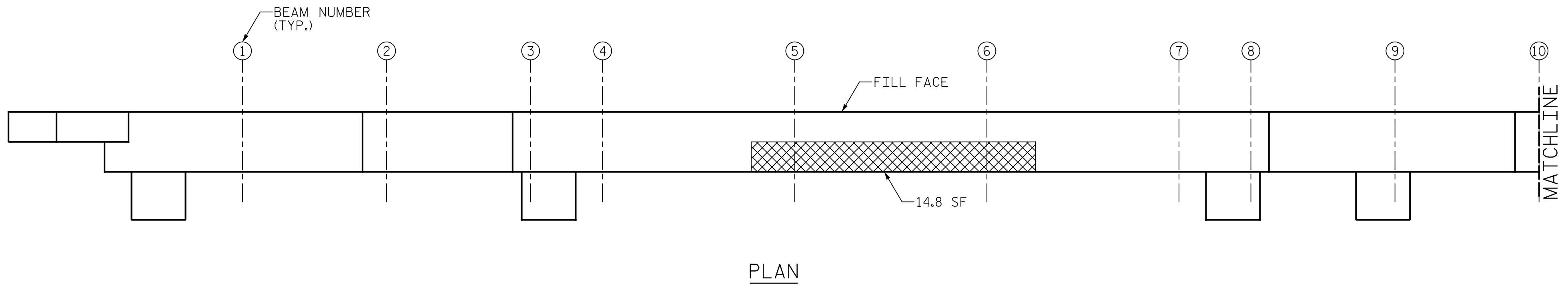


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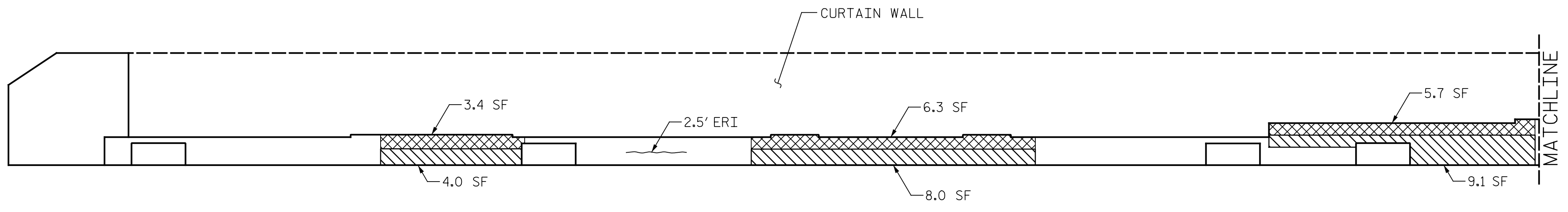
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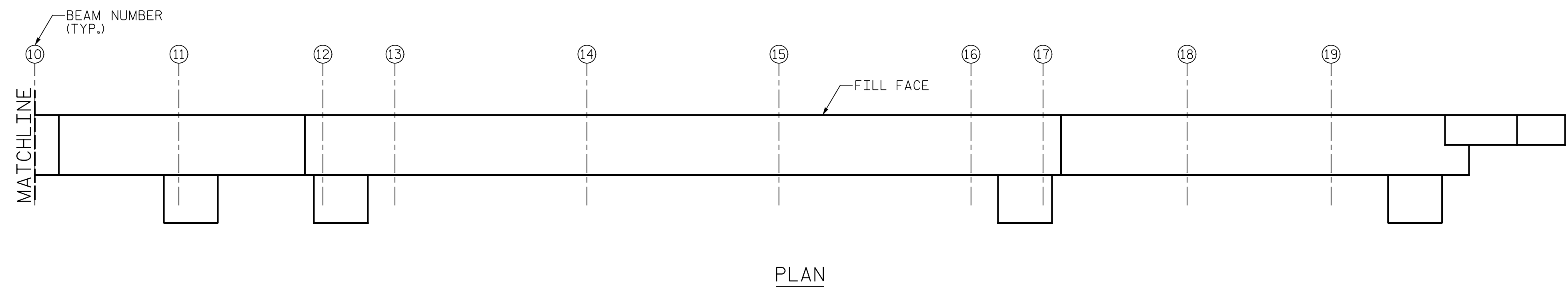
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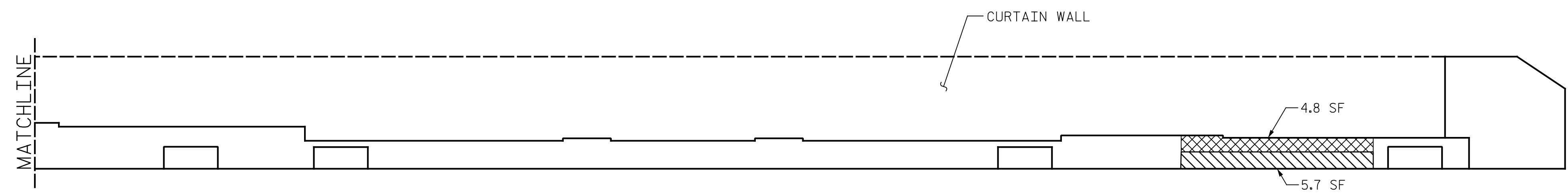
PLAN



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				

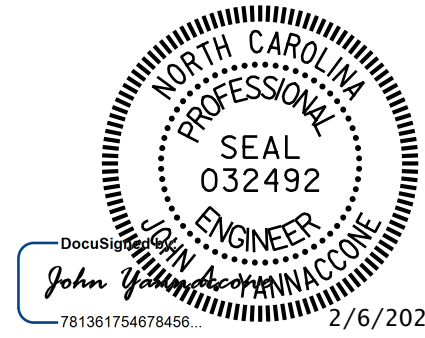
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEARANCE TO SAWCUT. FOR REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

**NOTES:**  
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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-5955A  
GUILFORD COUNTY  
 BRIDGE NO. 400299



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

END BENT 2

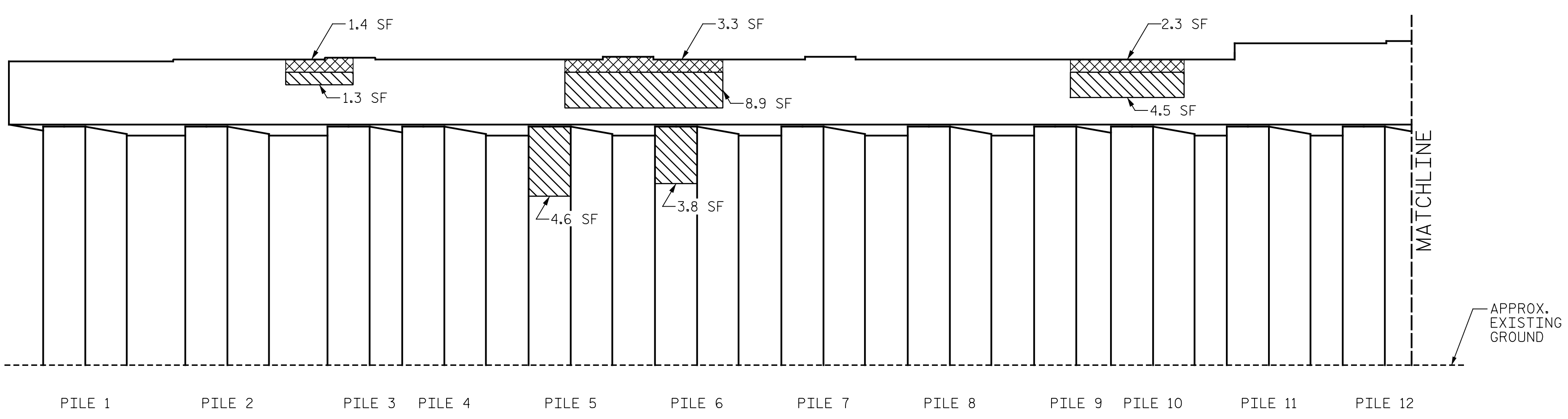
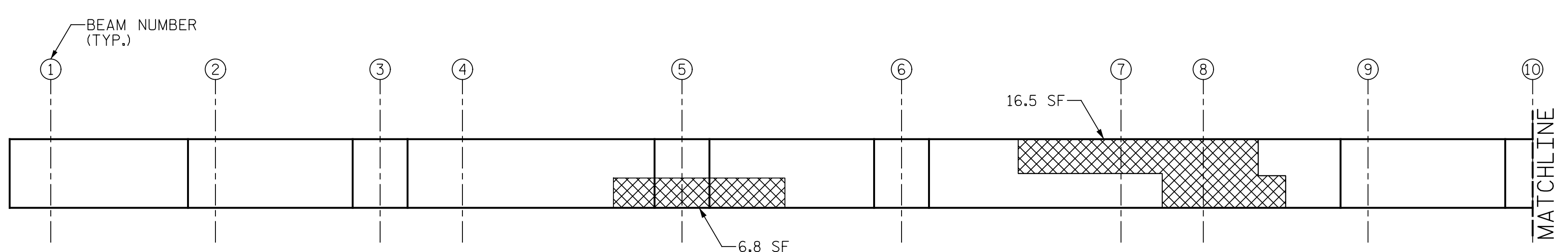
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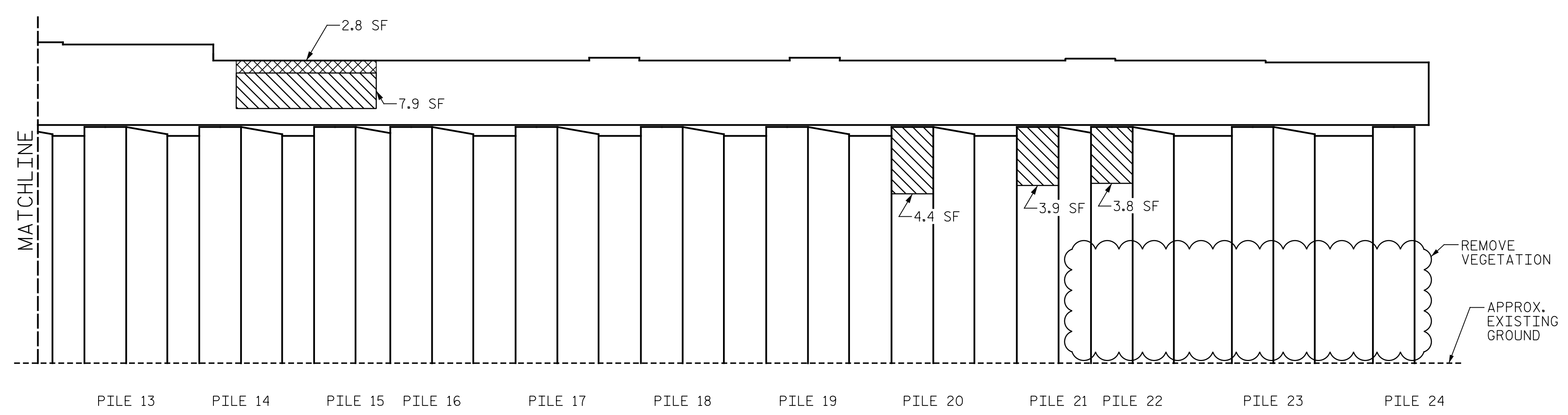
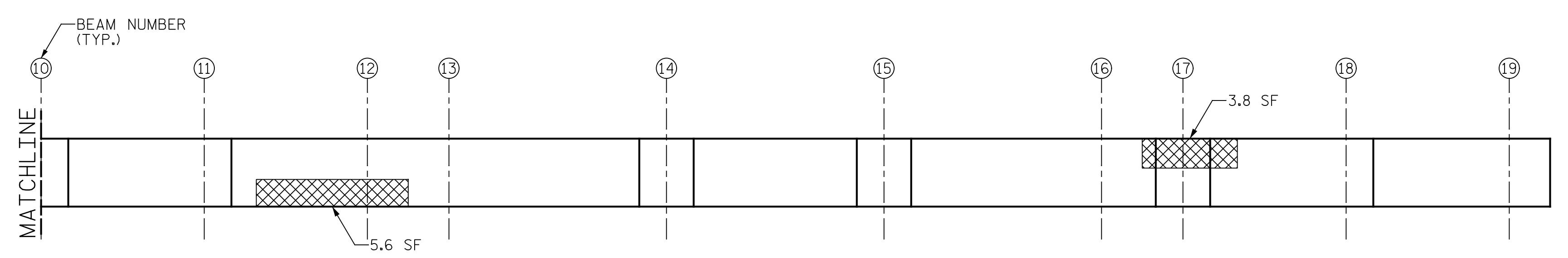
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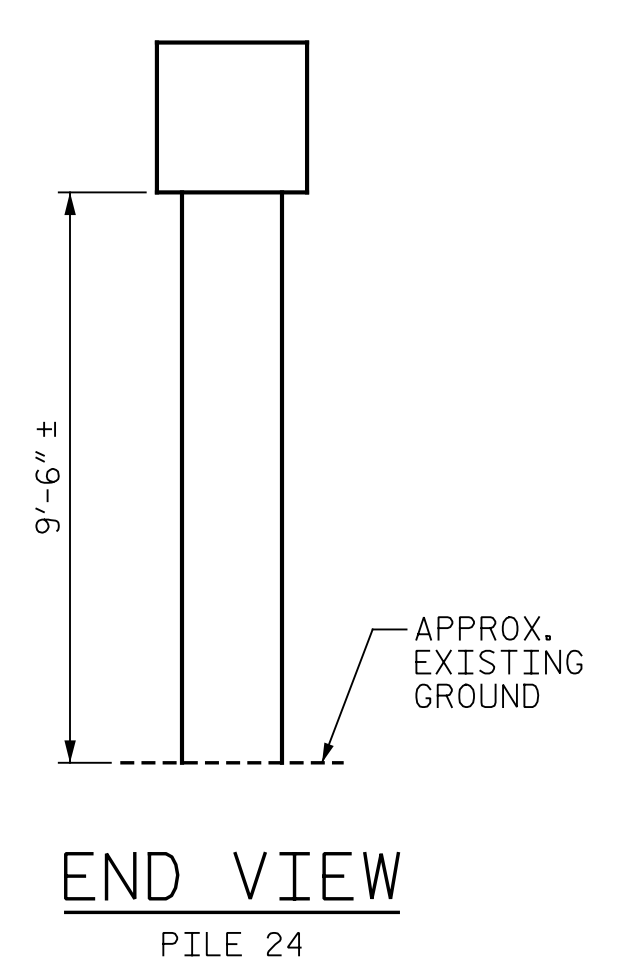
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ELEVATION



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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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.

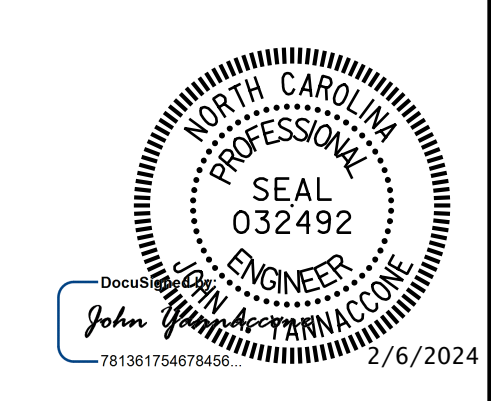
WHEN COLUMN REPAIRS ARE INDICATED TO GROUND LINE, EXTEND REPAIR ONE (1) FOOT MIN. BELOW GROUND LINE.

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 1 OF 2



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**BENT 1  
 SPAN A SIDE**

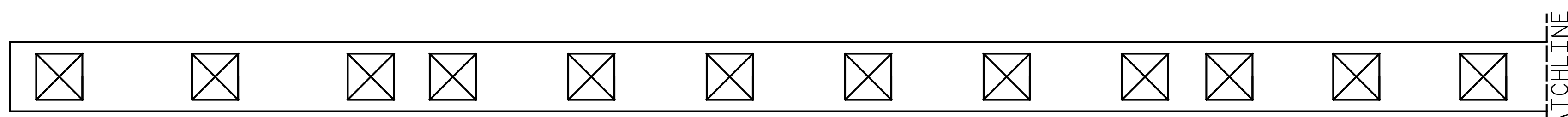
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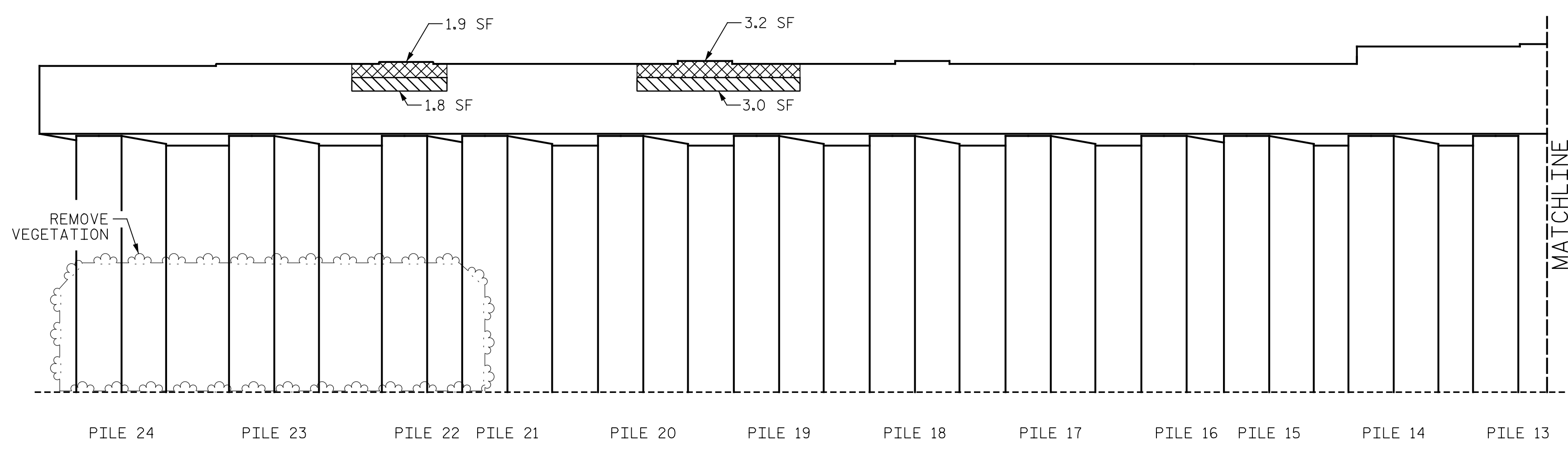
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SPAN A

SPAN B

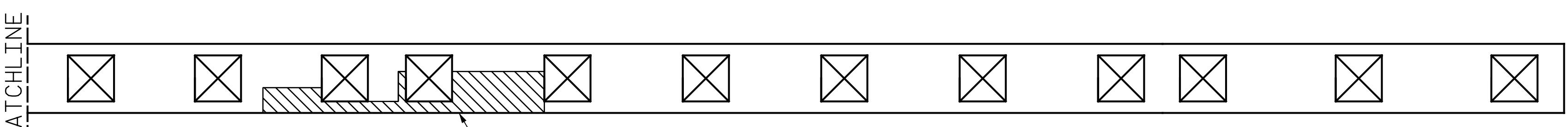
BOTTOM OF CAP



APPROX. EXISTING GROUND

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

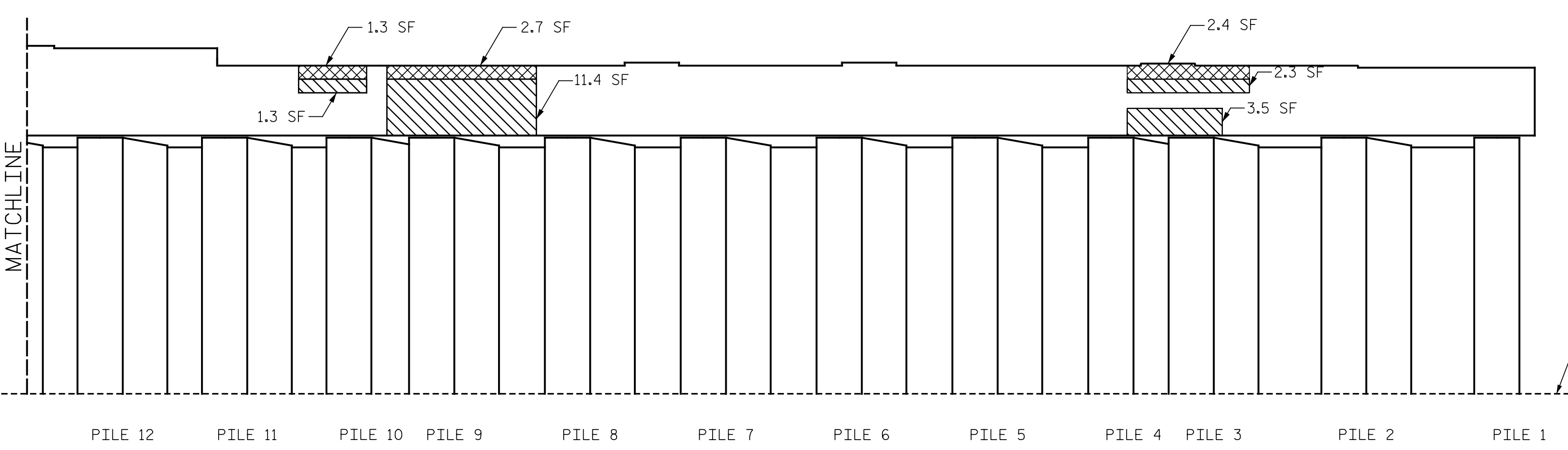
ELEVATION



SPAN A

SPAN B

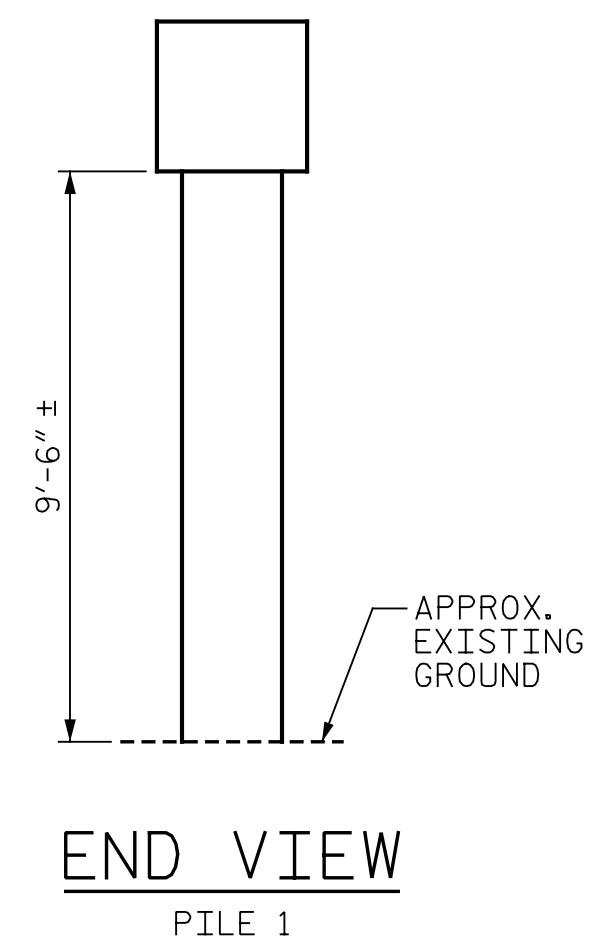
BOTTOM OF CAP



APPROX. EXISTING GROUND

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.

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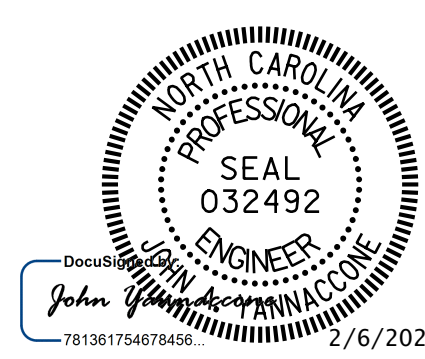
WHEN COLUMN REPAIRS ARE INDICATED TO GROUND LINE, EXTEND REPAIR ONE (1) FOOT MIN. BELOW GROUND LINE.

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 1  
 SPAN B SIDE**

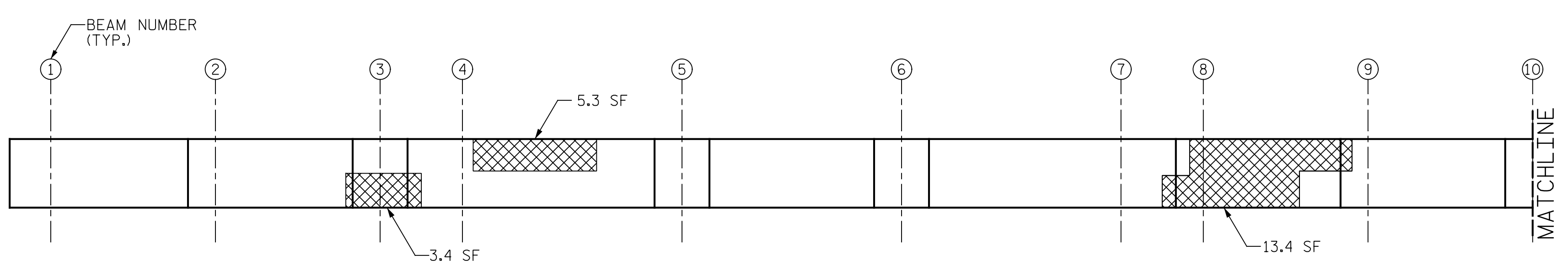
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 CHECKED BY: J. YANNACCONE DATE: 10/2022



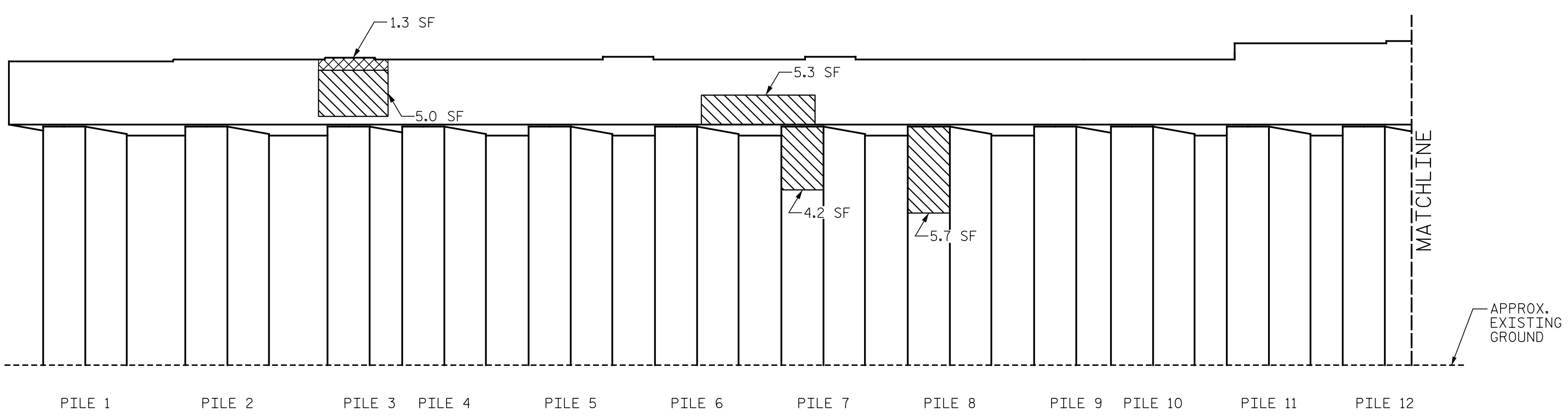
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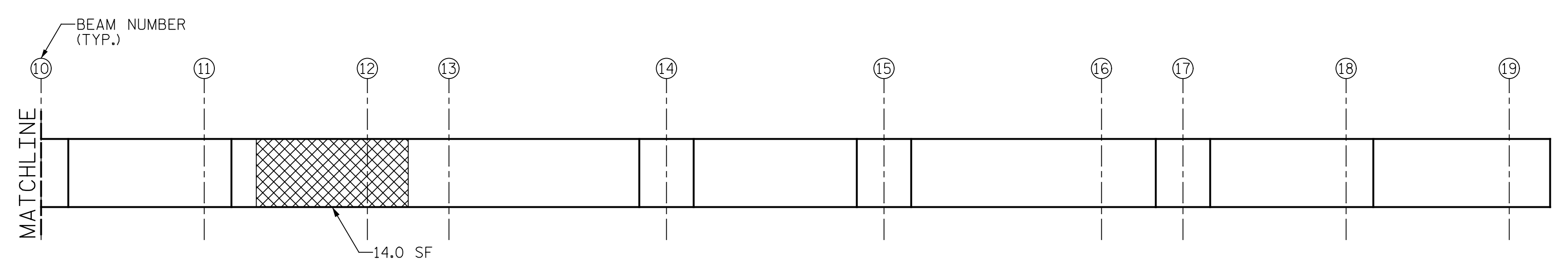
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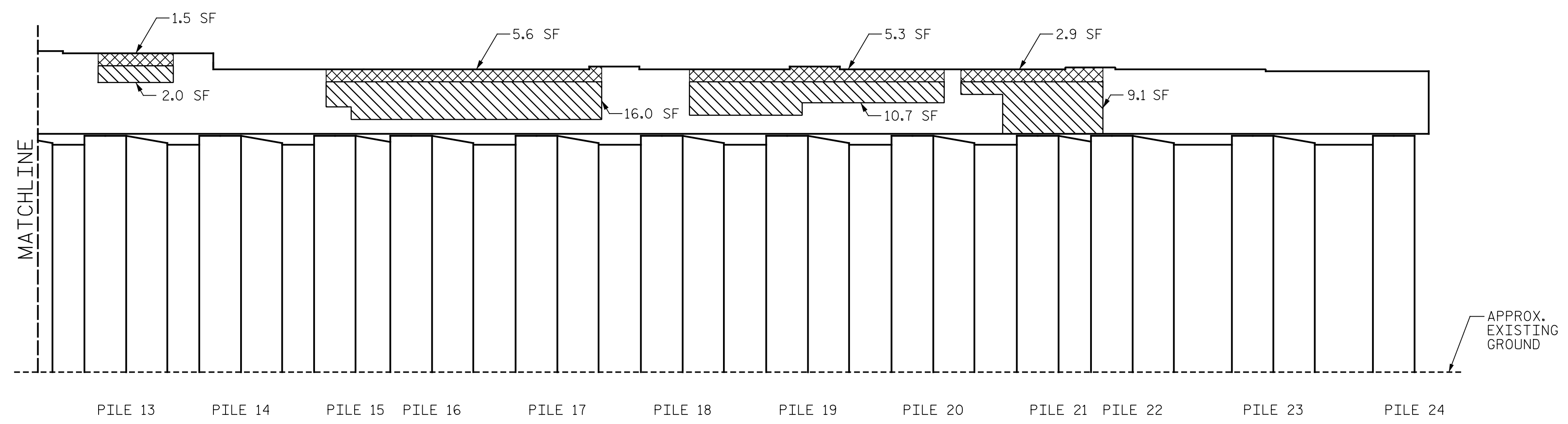
TOP OF CAP



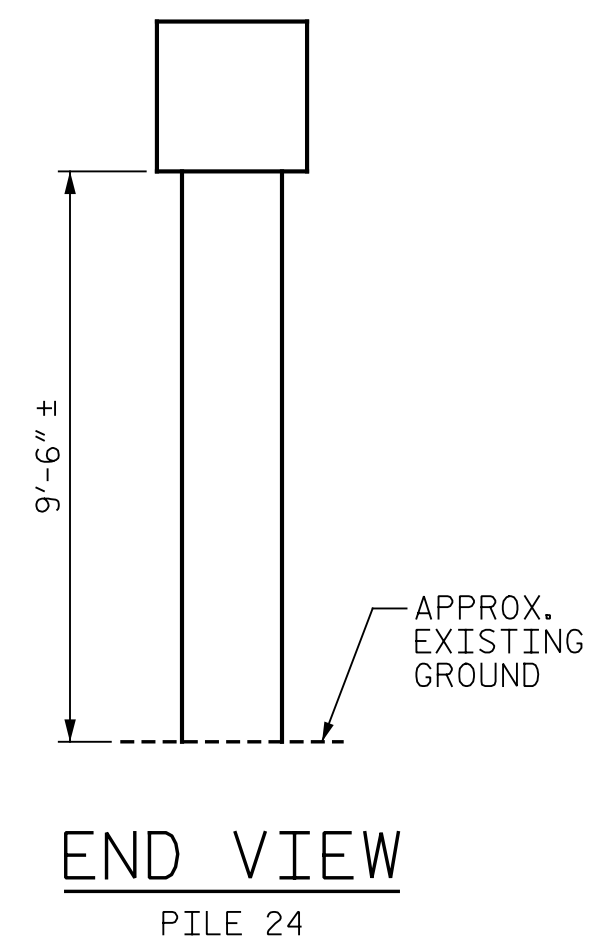
ELEVATION



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	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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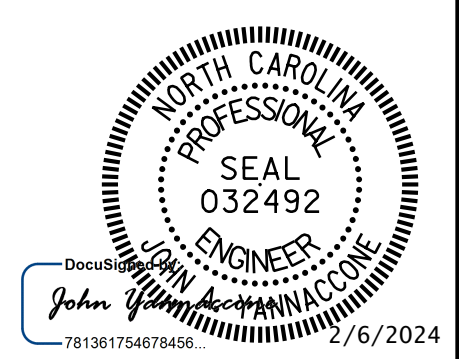
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PROJECT NO. I-5955A  
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SHEET 1 OF 2



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**BENT 2  
 SPAN B SIDE**

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



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1			3			127
2			4			