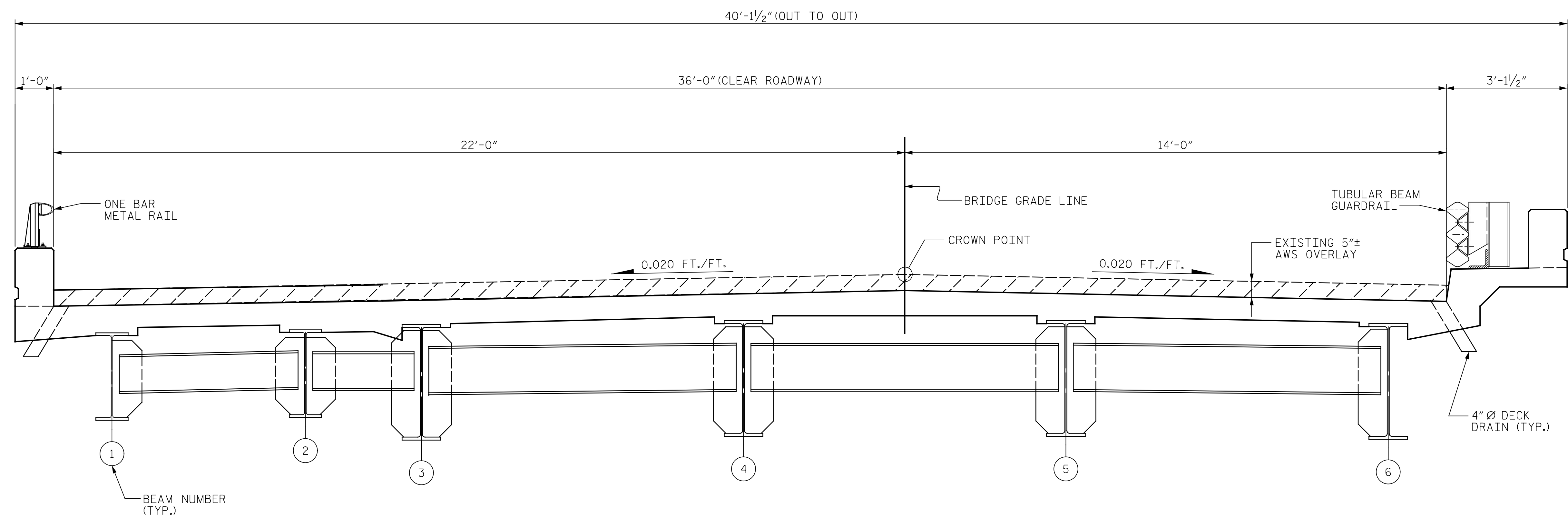


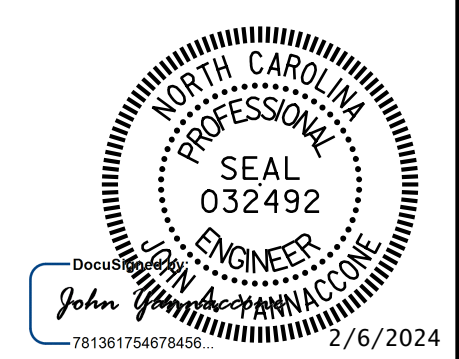
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NOTES:
 SEE TRAFFIC MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING, AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF ASPHALT PLUG JOINTS FOR PRESERVATION.
 THE CONTRACTOR SHALL ENSURE THAT THE EXISTING DECK DRAINS ARE OPEN AND FULLY FUNCTIONAL. PAYMENT 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. 400340



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

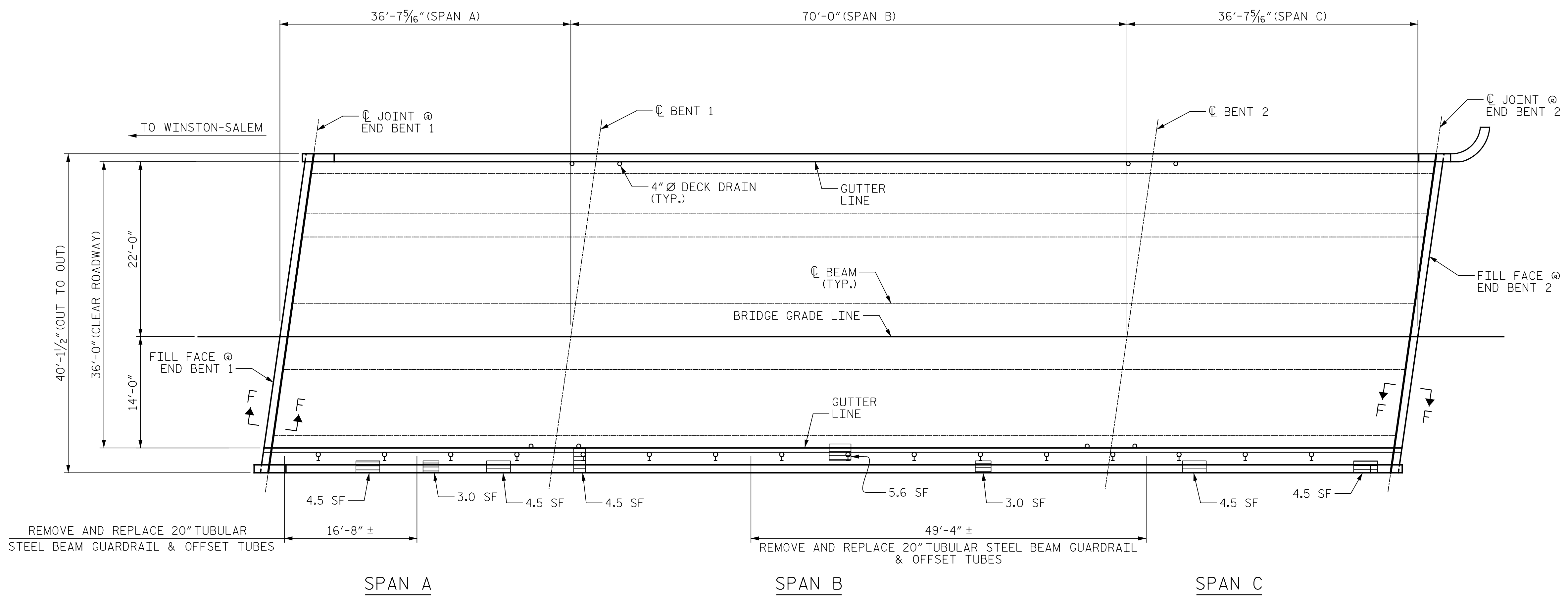
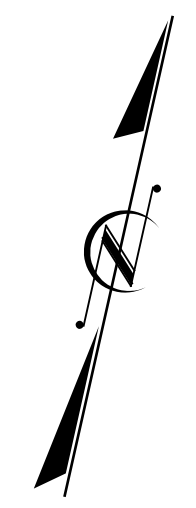
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 CHECKED BY : J. YANNACCONE DATE : 10/2022



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PLAN

NOTES:

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

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

FOR SECTION F-F, 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.

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 AFTER PLACEMENT OF THE ASPHALT WEARING SURFACE.

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.

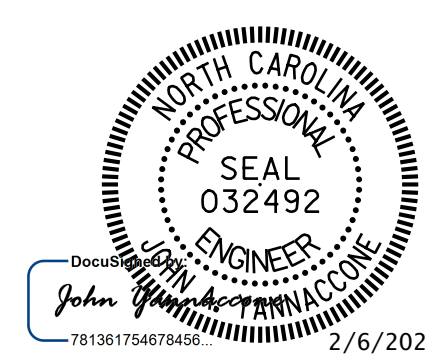
FOR REMOVAL AND REPLACEMENT OF TUBULAR STEEL BEAM GUARDRAIL, SEE SPECIAL PROVISIONS.

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	0.0	0.0		
UNDERSIDE OF OVERHANG	31.1	15.6		
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

BRIDGE RAIL QUANTITIES	
REMOVE 20" TUBULAR STEEL BEAM GUARDRAIL	66.0 LF
20" TUBULAR STEEL BEAM GUARDRAIL	66.0 LF

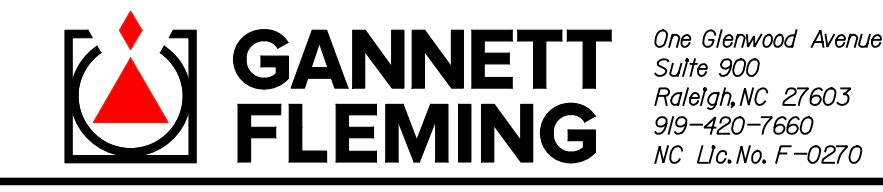
PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400340



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PLAN OF SPANS

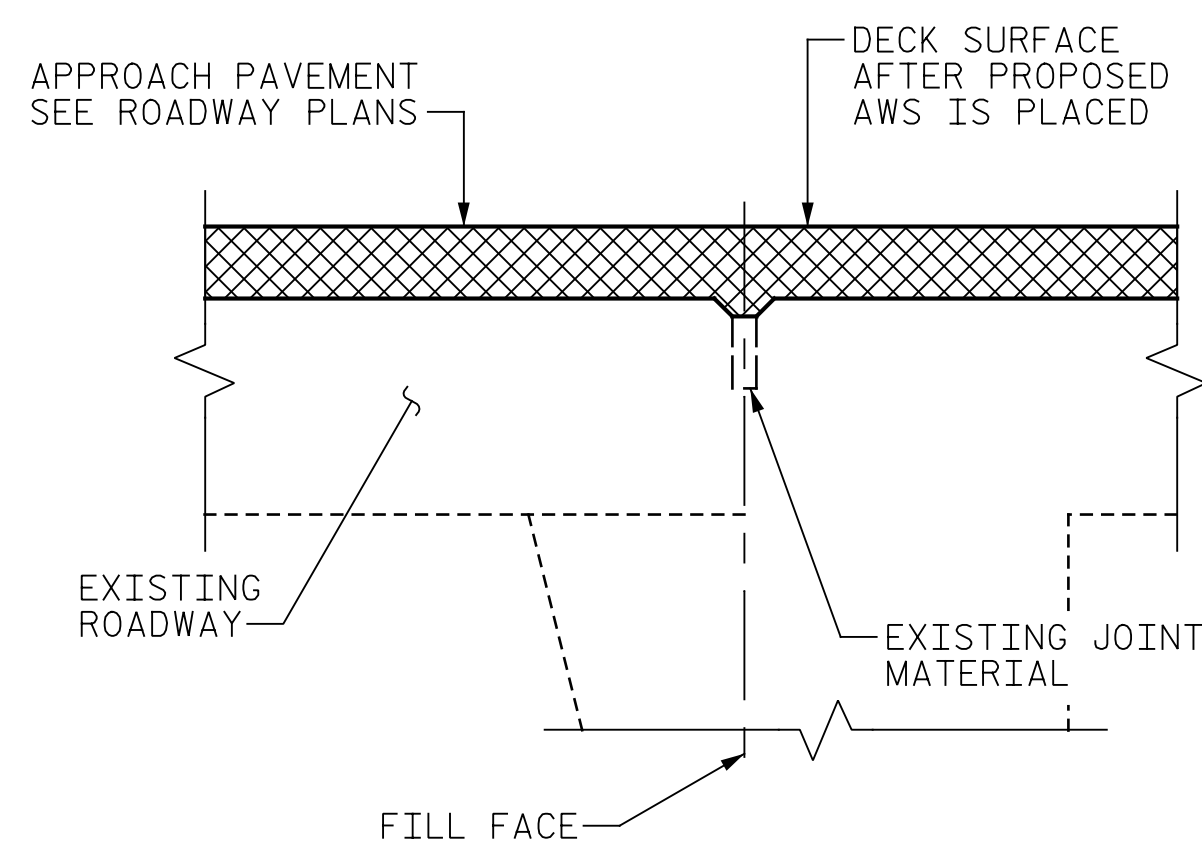
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 CHECKED BY: J. YANACCONE DATE: 10/2022



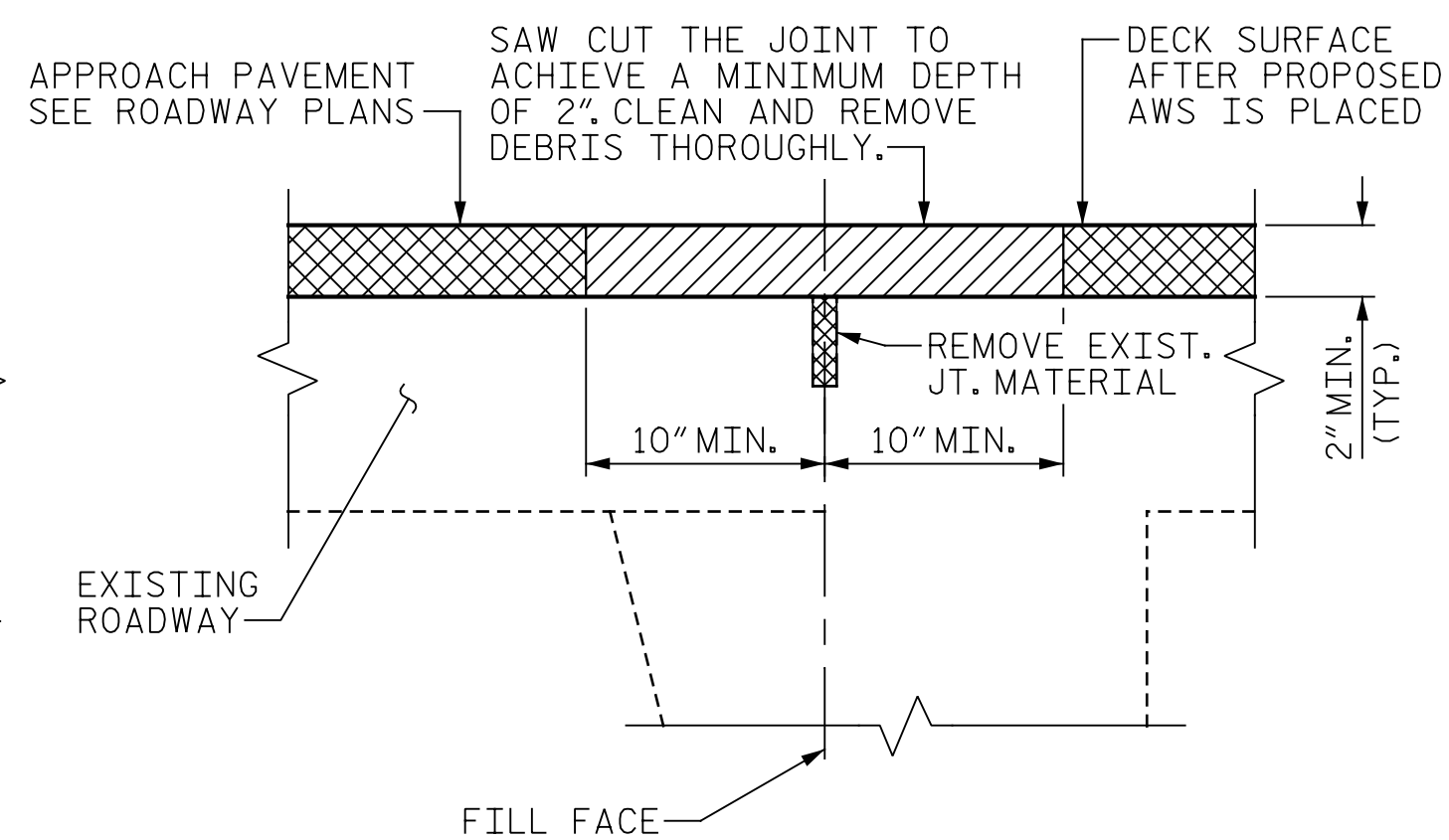
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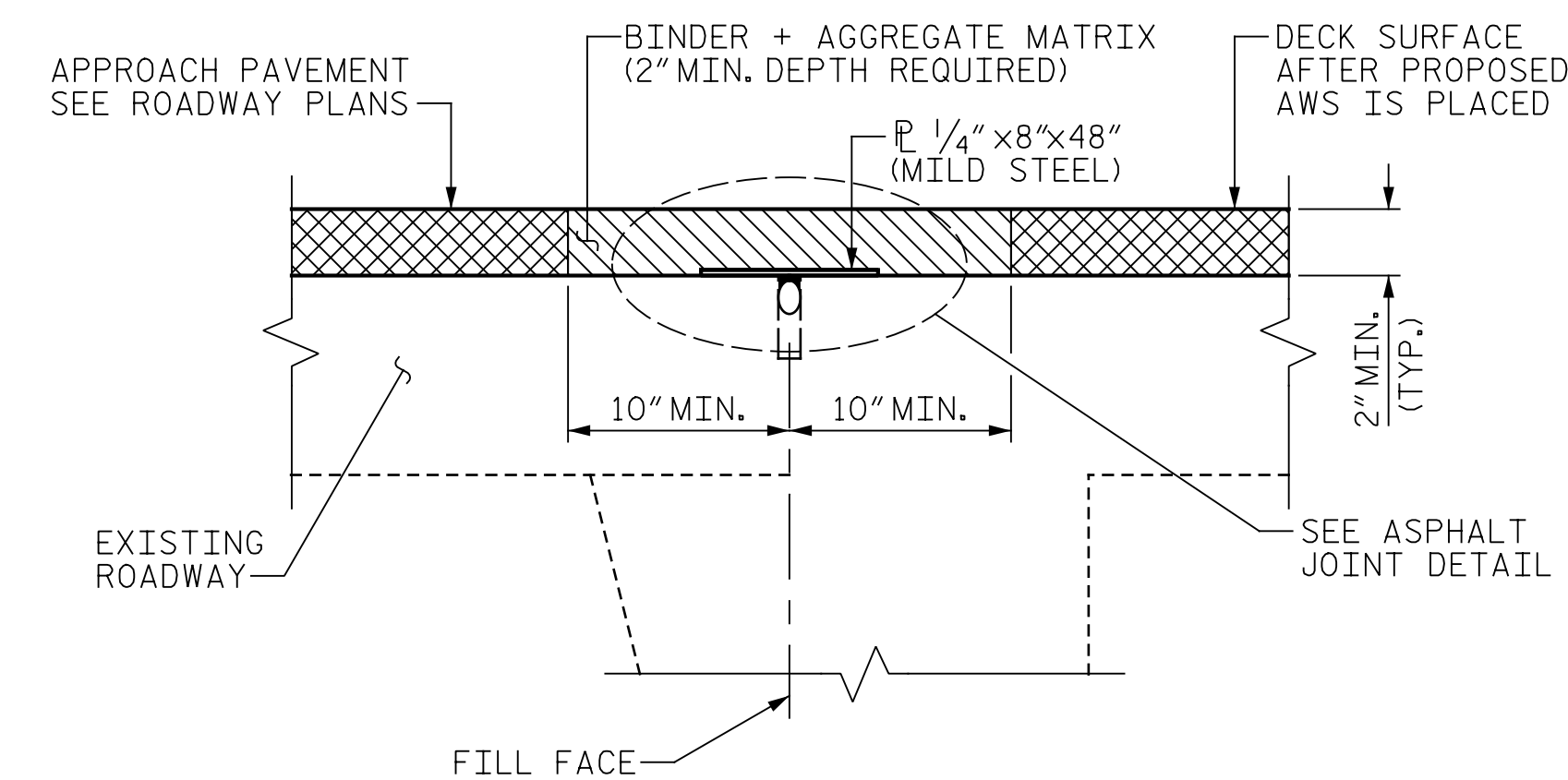
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EXISTING JOINT AFTER AWS PLACEMENT



DEMOLITION PREPARATION



PROPOSED JOINT

NOTES:

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

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

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

THE INSTALLED BACKER ROD AND SILICONE SEALANT SHALL BE WATER TIGHT.

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

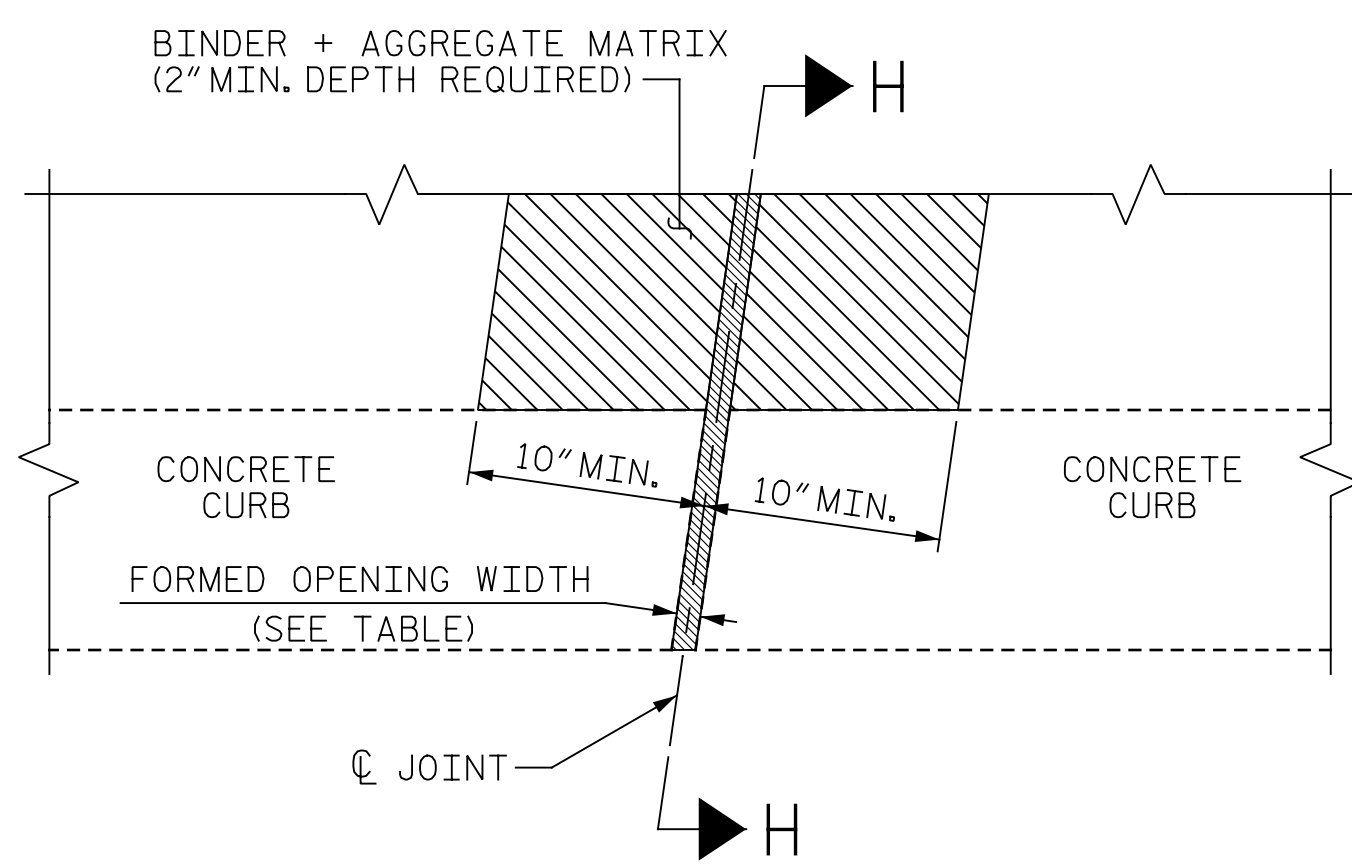
DEMOLISH BRIDGE JOINT AREA SUCH THAT THE BOTTOM OF THE EXCAVATION SHALL BE REASONABLY FLAT AND LEVEL AND TO THE NECESSARY DEPTH, SUCH THAT ASPHALT JOINT SHALL BE FOUNDED ON CONCRETE OR REPAIR CONCRETE SUBSTRATE.

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

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

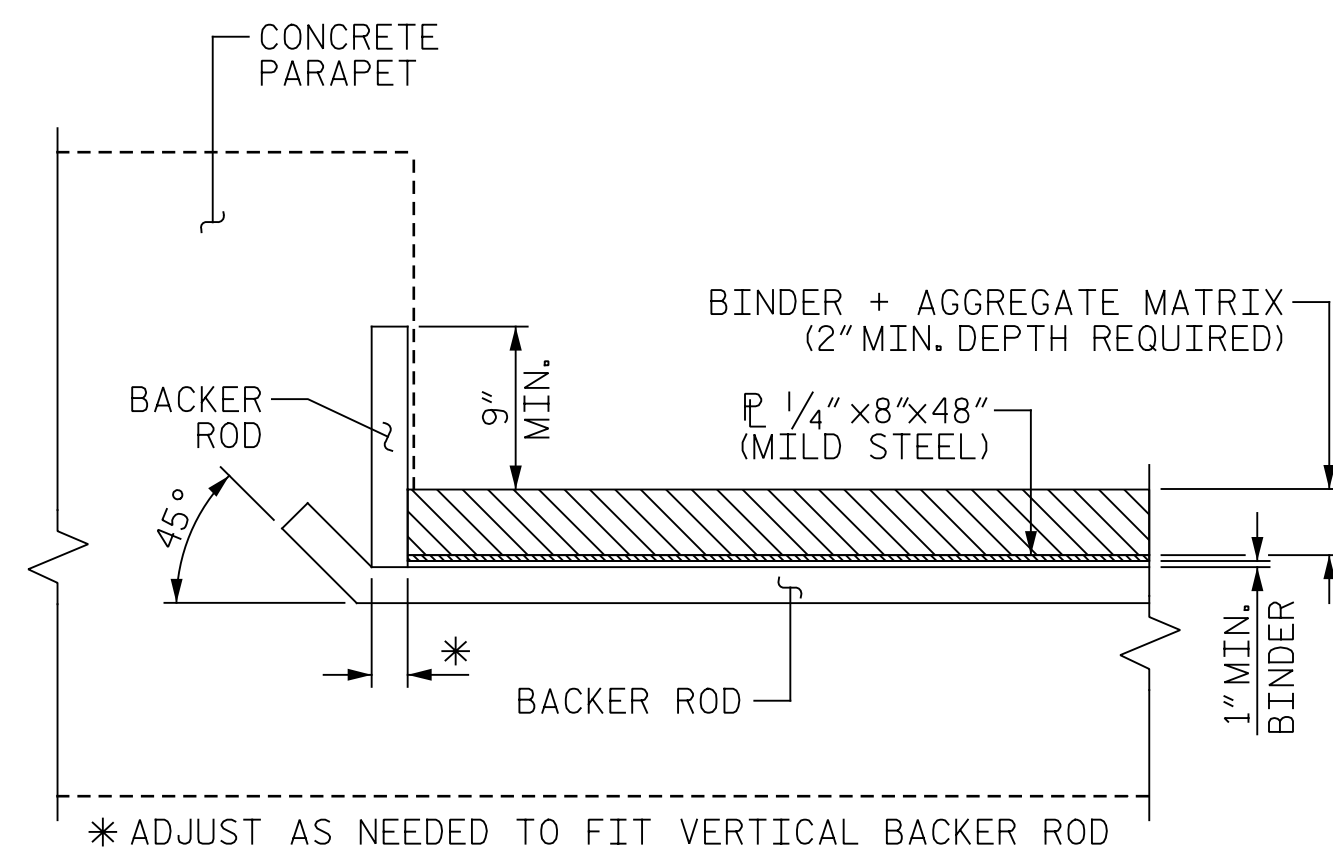
FOR ASPHALT PLUG JOINTS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

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



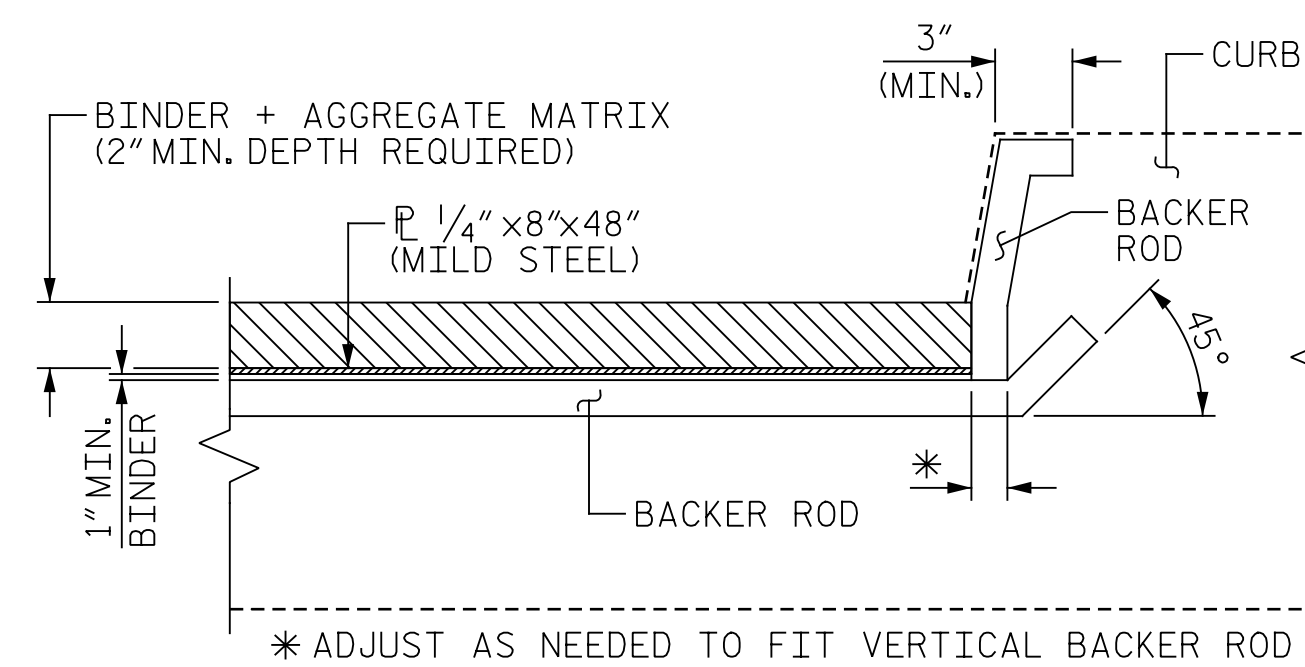
PLAN AT BARRIER

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



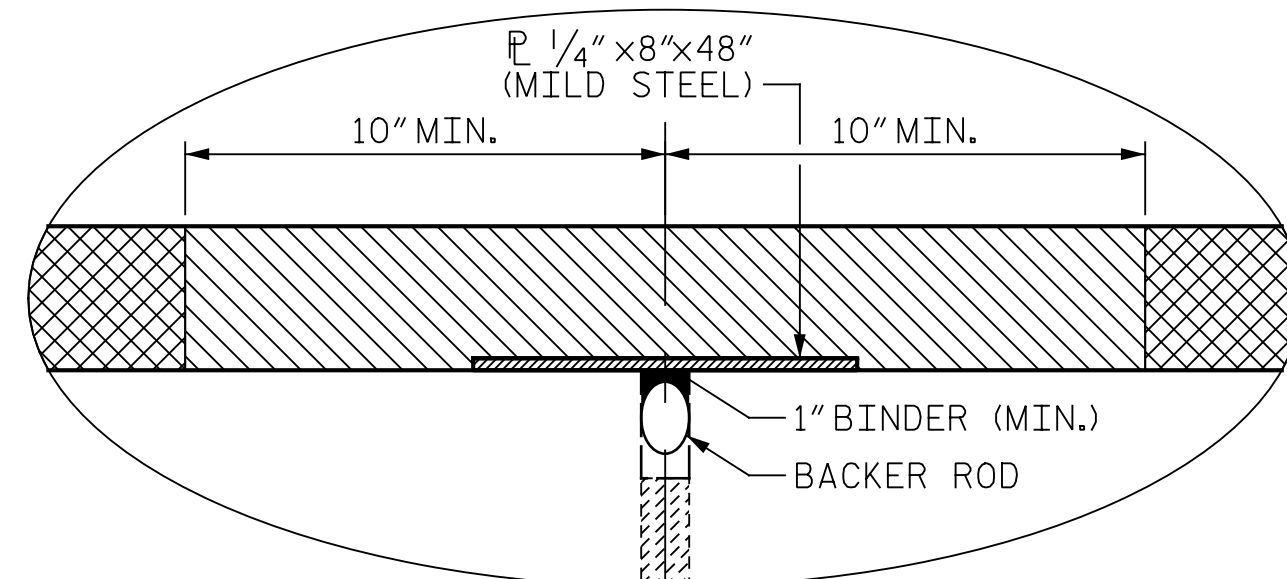
SECTION H-H

(PROPOSED JOINT SEAL ALONG LEFT EDGE OF DECK)



SECTION H-H

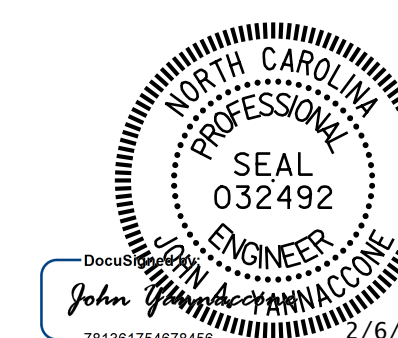
(PROPOSED JOINT SEAL ALONG RIGHT EDGE OF DECK)



ASPHALT JOINT DETAIL

LOCATION	ASPHALT PLUG JOINT FOR PRESERVATION (LIN. FT.)	FORMED OPENING WIDTH PER EXISTING BRIDGE PLANS	TOTAL THEORETICAL MOVEMENT PERPENDICULAR TO THE JOINT
END BENT 1	38.5	1"	3/16"
END BENT 2	38.5	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. YANNACCONE DATE : 10/2022

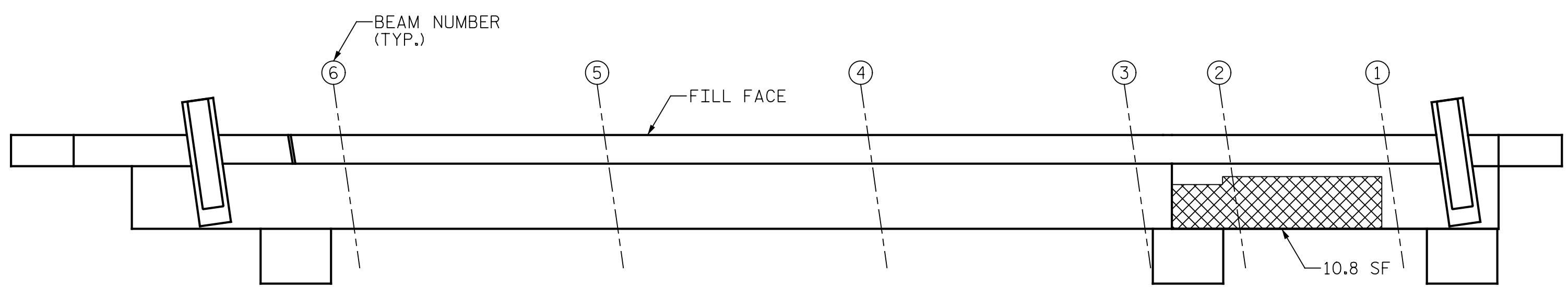


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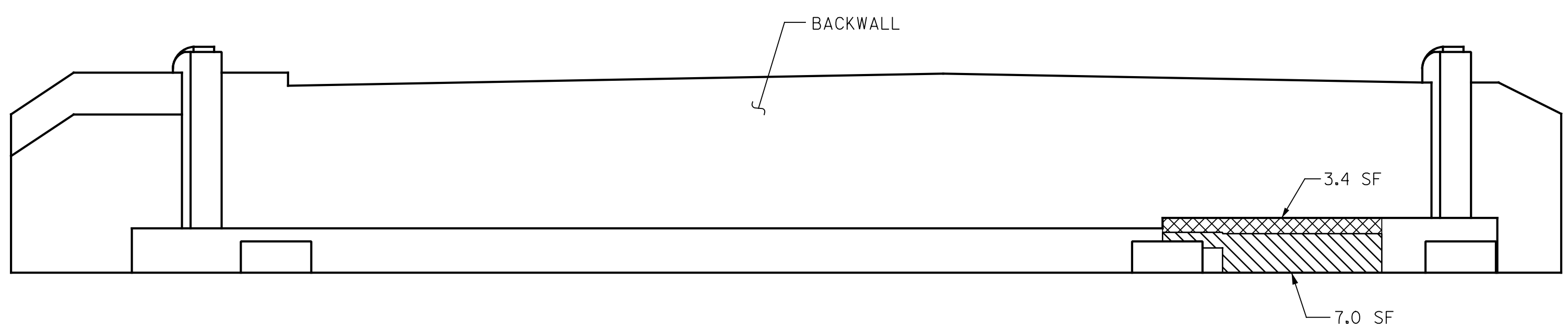
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TOTAL SHEETS: 127

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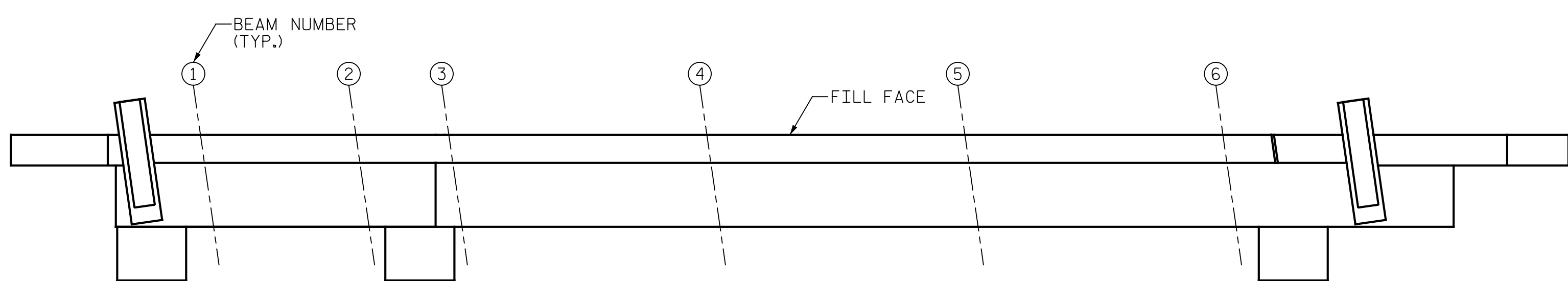


PLAN

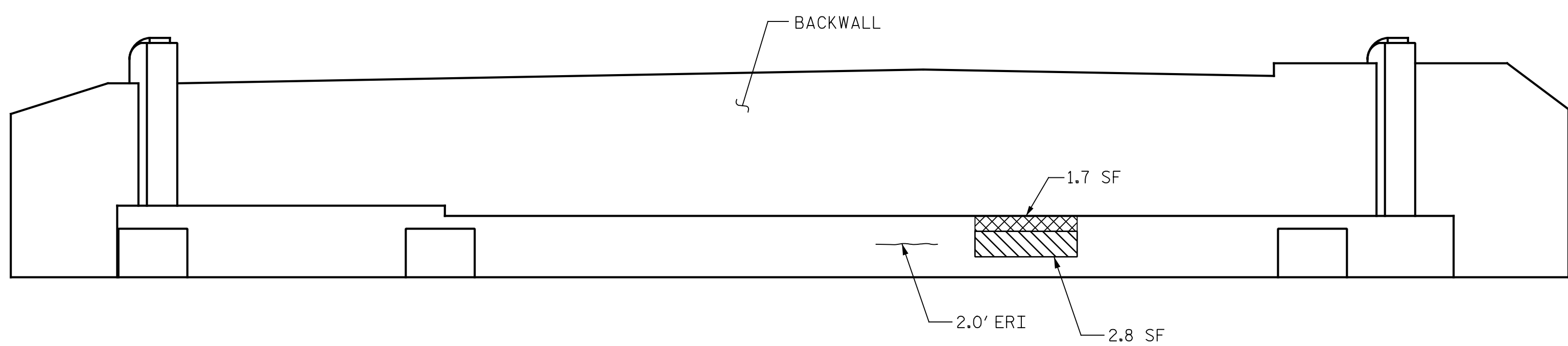


ELEVATION
END BENT 1

- 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	7.0	3.5			
BACKWALL	0.0	0.0			
CONCRETE REPAIRS	14.2	7.1			
EPOXY RESIN INJECTION		LENGTH LF		LENGTH LF	
CAP		0.0			
BACKWALL		0.0			
EPOXY COATING		SQ. FT		SQ. FT	
TOP OF BENT CAP		82			

END BENT 2 REPAIRS	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP	2.8	1.4			
BACKWALL	0.0	0.0			
CONCRETE REPAIRS	1.7	0.9			
EPOXY RESIN INJECTION		LENGTH LF		LENGTH LF	
CAP		2.0			
BACKWALL		0.0			
EPOXY COATING		SQ. FT		SQ. FT	
TOP OF BENT CAP		82			

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

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

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

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

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

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

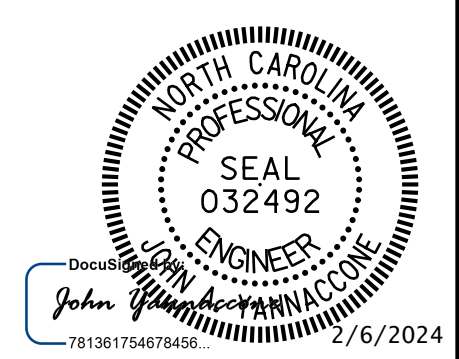
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

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

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 BRIDGE NO. 400340



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
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END BENT 1 & 2

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 CHECKED BY: J. YANNAACONE DATE: 10/2022

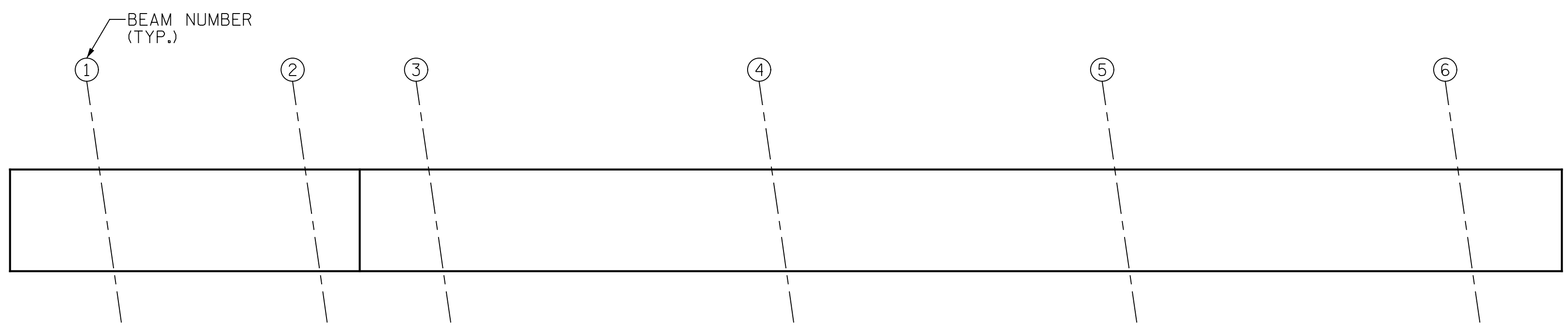


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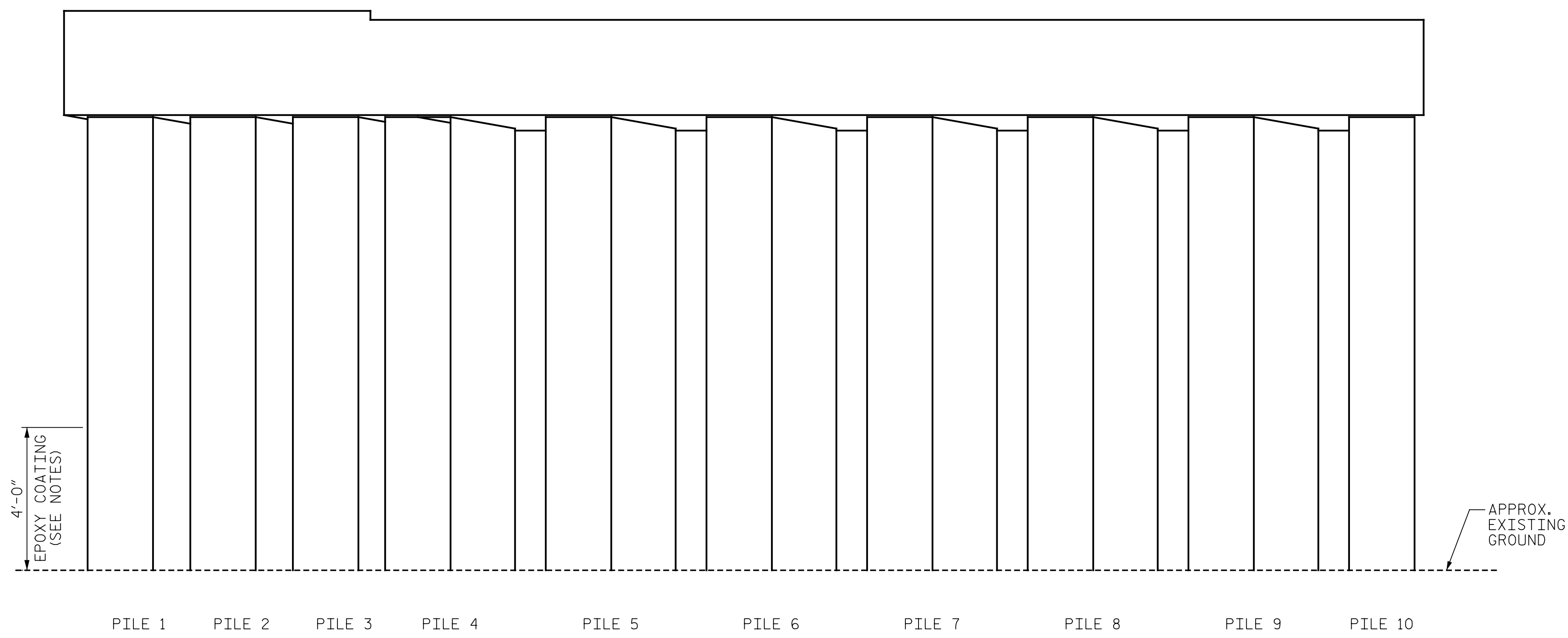
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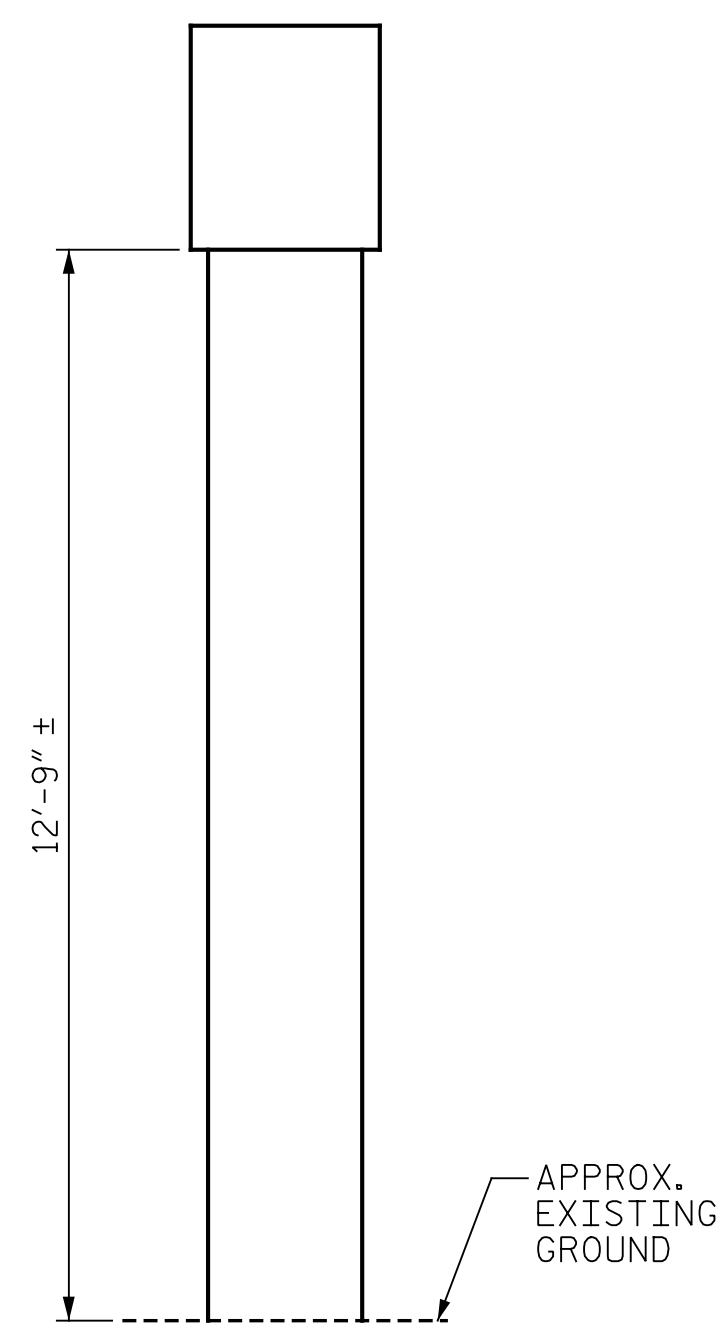


SPAN B
SPAN A

TOP OF CAP



ELEVATION



END VIEW
PILE 10

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

AS-BUILT REPAIR QUANTITY TABLE					
BENT 1 REPAIRS	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH FT	VOLUME CF
CAP	0.0	0.0			
COLUMN	25.8	12.9			
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		
CONCRETE PILES		294			

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

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

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

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

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

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

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400340

SHEET 1 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**BENT 1
 SPAN A SIDE**

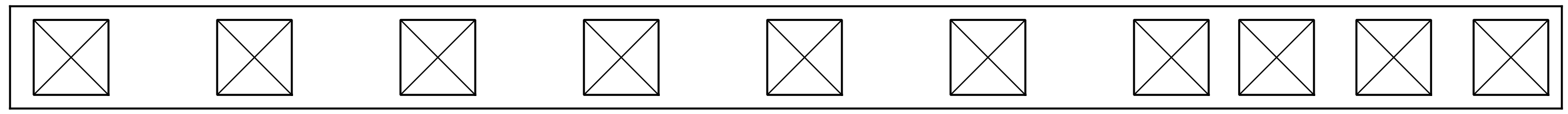
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 CHECKED BY : J. YANNAACONE DATE : 10/2022



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SPAN A

SPAN B

BOTTOM OF CAP

NOTES:

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

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

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

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

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

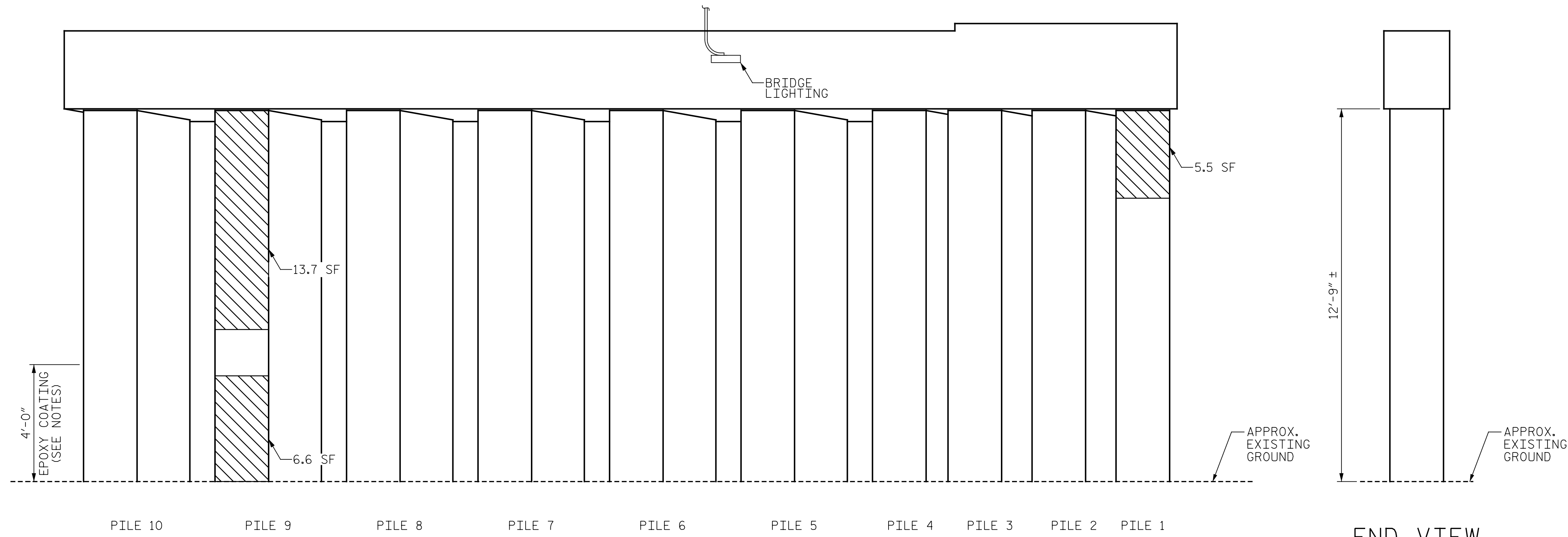
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

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

SHOTCRETE REPAIR

CONCRETE REPAIR (FORM & POUR)

ERI - EPOXY RESIN INJECTION



ELEVATION

END VIEW
PILE 1

PROJECT NO. I-5955A
GUILFORD COUNTY
BRIDGE NO. 400340

SHEET 2 OF 2



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 1
SPAN B SIDE

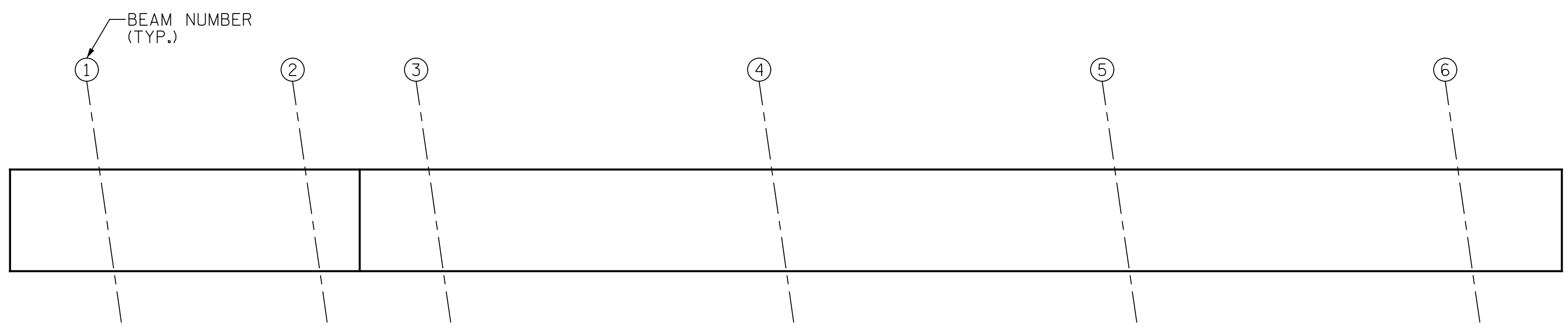
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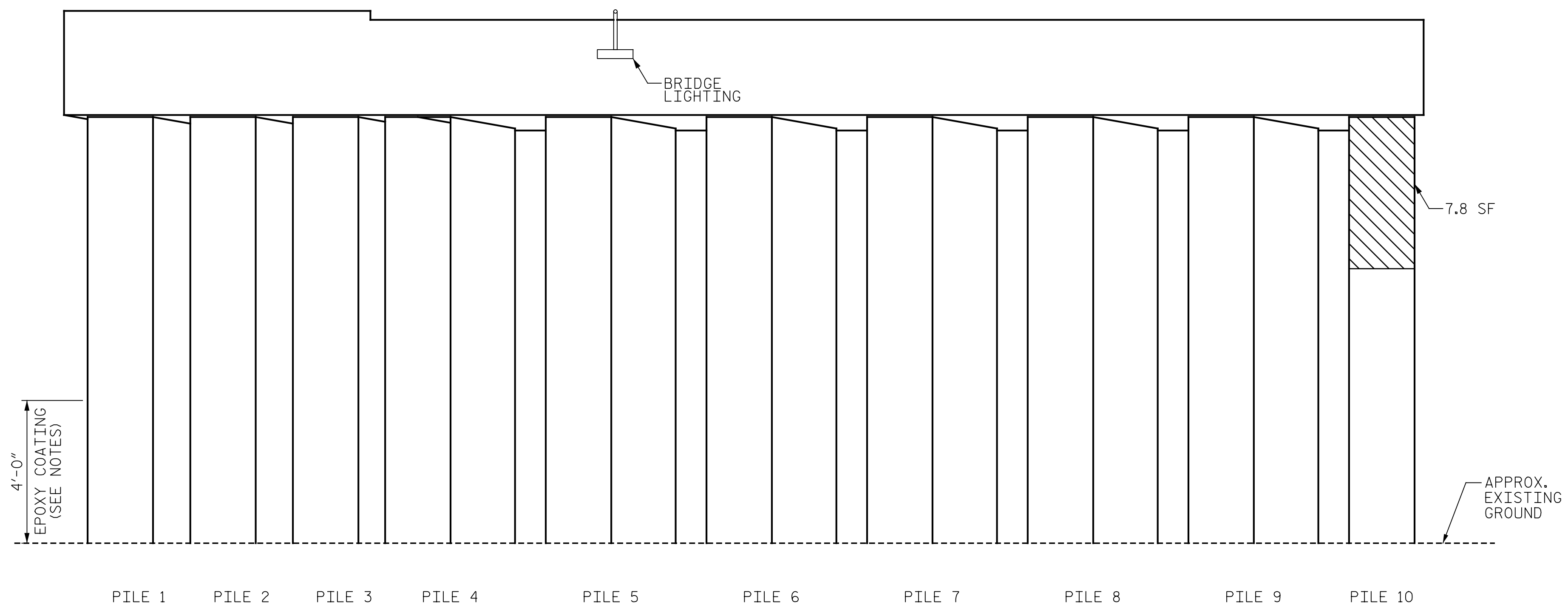
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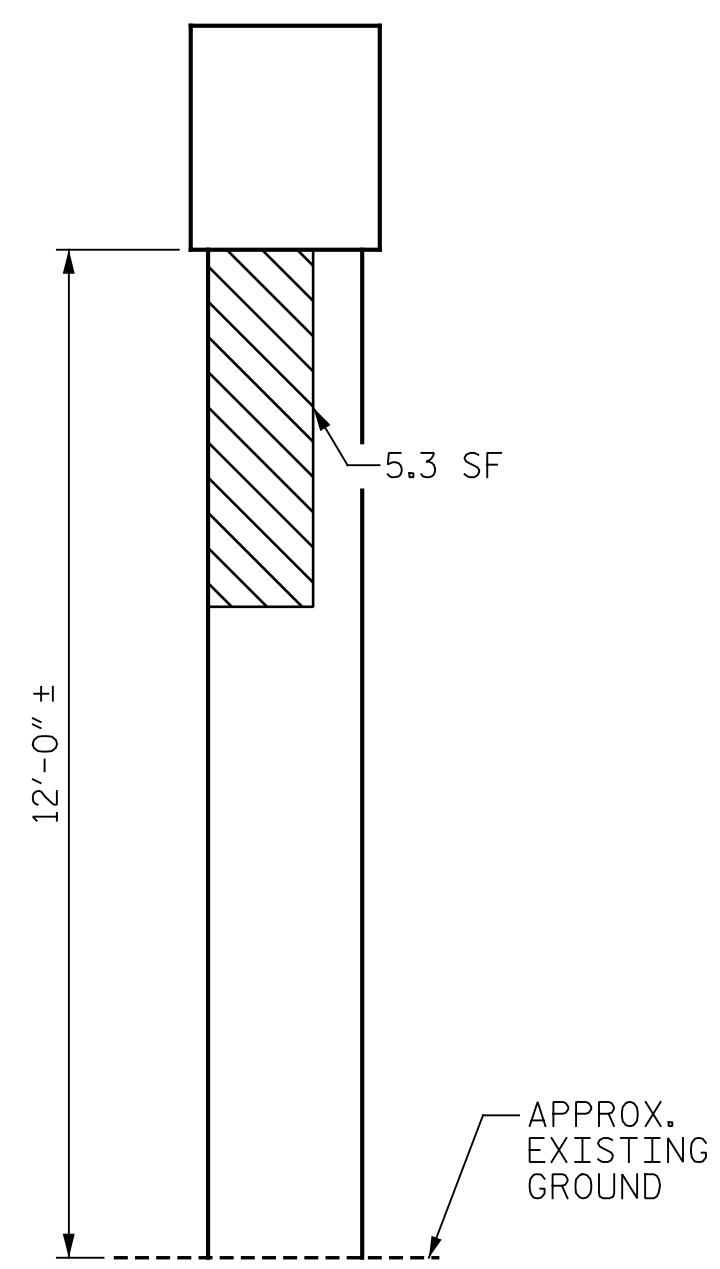
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TOP OF CAP



ELEVATION



END VIEW
PILE 10

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	13.1	6.6			
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		
CONCRETE PILES		294			

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

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

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

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

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

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

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

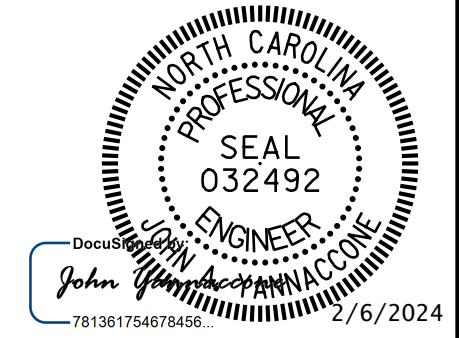
- SHOTCRETE REPAIR
- CONCRETE REPAIR (FORM & POUR)
- ERI - EPOXY RESIN INJECTION

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400340

SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**BENT 2
SPAN B SIDE**



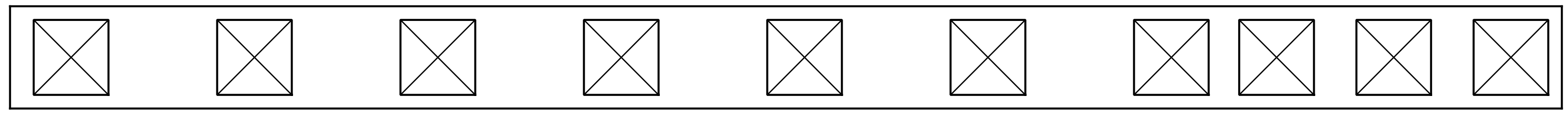
DRAWN BY : J. HARRIS DATE : 10/2022
 CHECKED BY : J. YANNAACONE DATE : 10/2022



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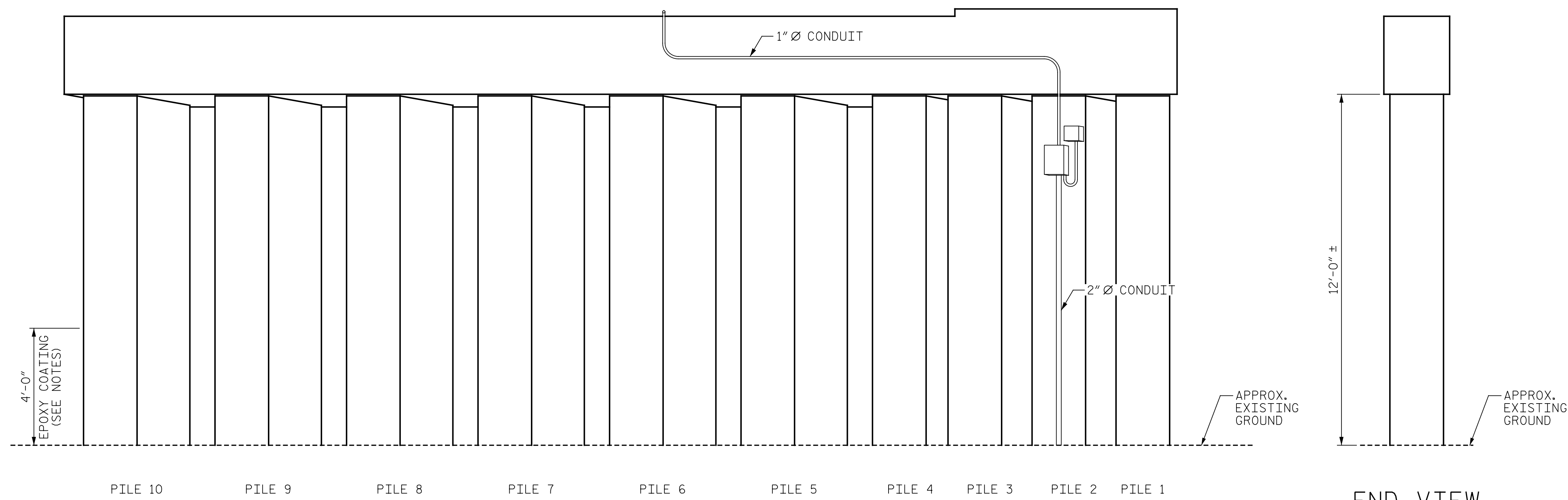
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SPAN B

SPAN C

BOTTOM OF CAP



ELEVATION

END VIEW
PILE 1

NOTES:

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

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

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

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

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

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

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

SHOTCRETE REPAIR

CONCRETE REPAIR (FORM & POUR)

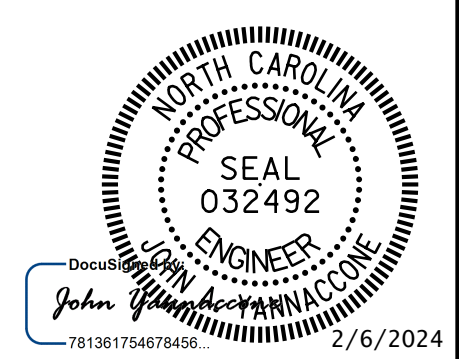
ERI - EPOXY RESIN INJECTION

PROJECT NO. I-5955A
GUILFORD COUNTY
BRIDGE NO. 400340

SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 2
SPAN C SIDE



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



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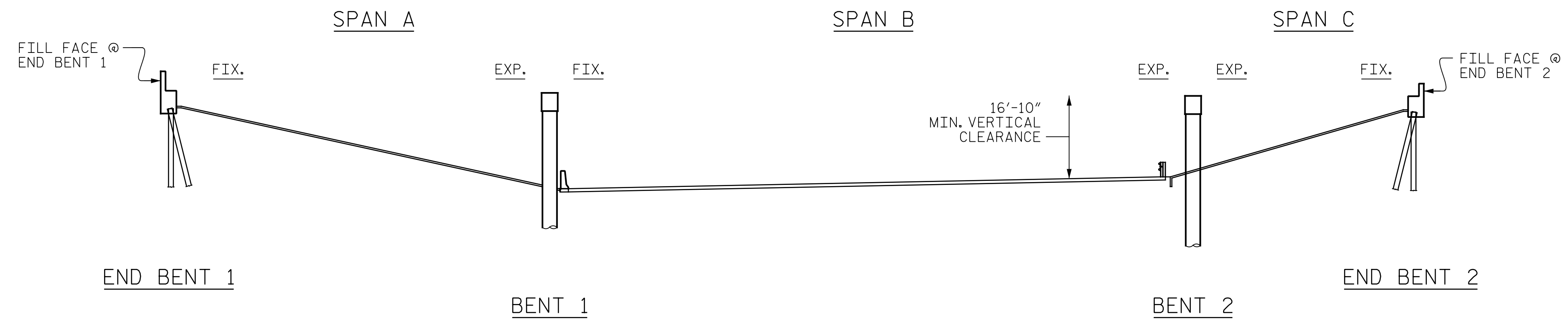
NOTE:

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 12/19/2022.

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

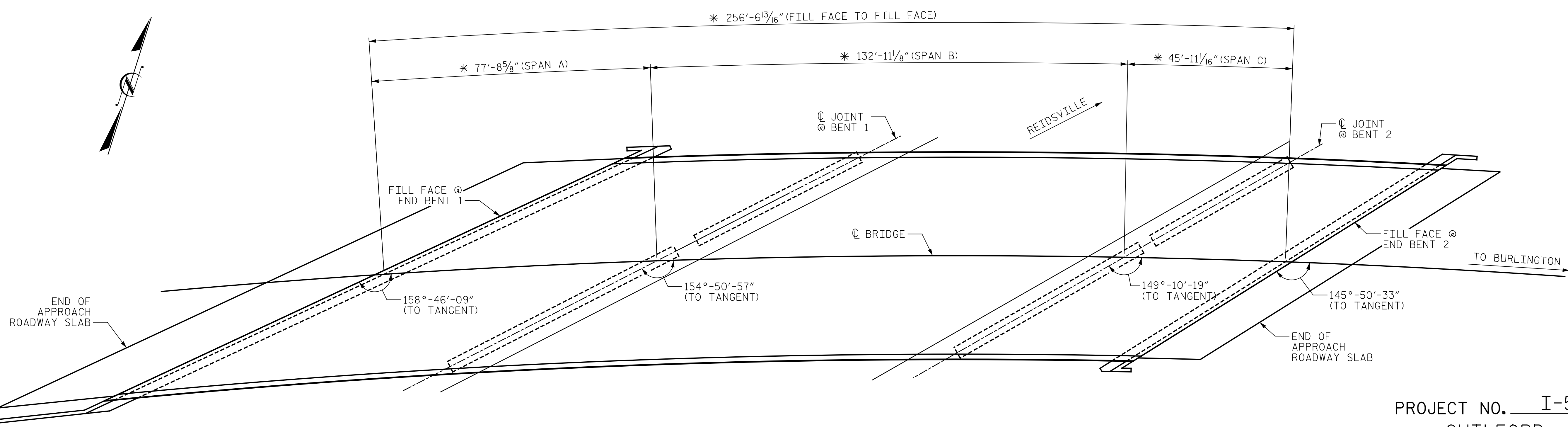
SCOPE OF WORK

- PARTIALLY REMOVE TOP OF BRIDGE DECK CONCRETE BY FINE MILLING AND SHOTBLASTING METHODS.
- OVERLAY PREPARED TOP OF BRIDGE DECK WITH POLYMER CONCRETE (PC).
- REPLACE EXISTING JOINT GLAND OF EXPANSION JOINT SEAL.
- REMOVE EXISTING EXPANSION JOINT SEAL AND INSTALL FOAM JOINT SEAL.
- REMOVE EXISTING COMPRESSION JOINT SEALS AND INSTALL FOAM JOINT SEALS.
- GROOVE PC BRIDGE DECK.
- CLEAN AND PAINT EXISTING WEATHERING STEEL BEAM ENDS.
- REMOVE DEBRIS FROM TOP OF EXISTING END BENT AND BENT CAPS AND APPLY EPOXY COATING.



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

* DIMENSIONS MEASURED ALONG ARC



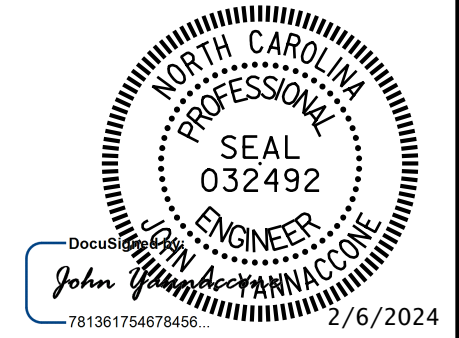
PLAN

(PILES NOT SHOWN FOR CLARITY)

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

RESIDENT ENGINEER

DATE



PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400348

SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 FOR BRIDGE ON I-40 EBL
 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'-45.66"	79°-46'-10.79"

GENERAL NOTES

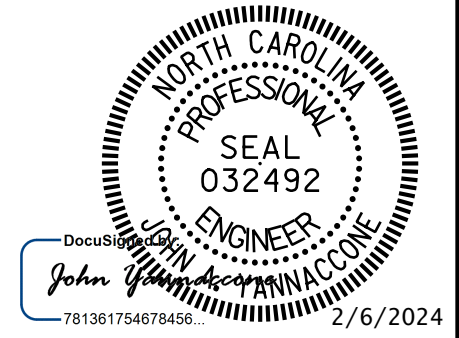
- SEE TRANSPORTATION MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION AND POLYMER CONCRETE (PC) PLACEMENT.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.
- THE ELEVATIONS AND CLEARANCES SHOWN ON THE PLANS AT THE POINTS OF MINIMUM VERTICAL CLEARANCE ARE FROM THE BEST INFORMATION AVAILABLE. PRIOR TO BEGINNING BRIDGE CONSTRUCTION, VERIFY THE ELEVATIONS ON THE EXISTING PAVEMENT AND CHECK THE CLEARANCE. REPORT ANY VARIATIONS TO THE ENGINEER. ANY PLAN REVISIONS NECESSARY TO ACHIEVE THE REQUIRED MINIMUM VERTICAL CLEARANCE WILL BE PROVIDED BY THE DEPARTMENT.
- 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 CLASS II SURFACE PREPARATION, SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.
- FOR FINE MILLING, SEE SPECIAL PROVISIONS.
- FOR CONCRETE DECK REPAIR FOR PC OVERLAY, PC MATERIALS, AND PLACING AND FINISHING PC OVERLAY, SEE POLYMER CONCRETE BRIDGE DECK OVERLAY SPECIAL PROVISION.
- FOR EXPANSION JOINT SEAL REPAIR, SEE SPECIAL PROVISIONS.
- FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.
- FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.
- FOR PAINTING EXISTING WEATHERING STEEL STRUCTURE, SEE SPECIAL PROVISIONS.
- FOR PAINTING CONTAINMENT AND POLLUTION CONTROL, SEE PAINTING EXISTING WEATHERING STEEL STRUCTURE SPECIAL PROVISION.
- 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.

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400348

SHEET 2 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

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



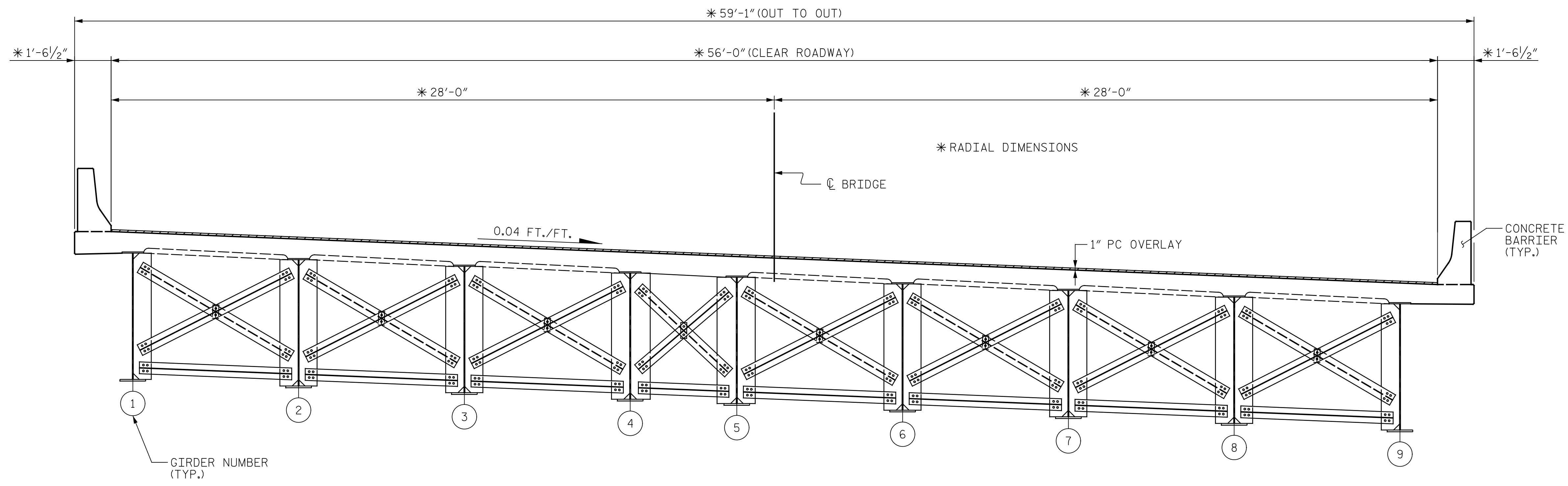
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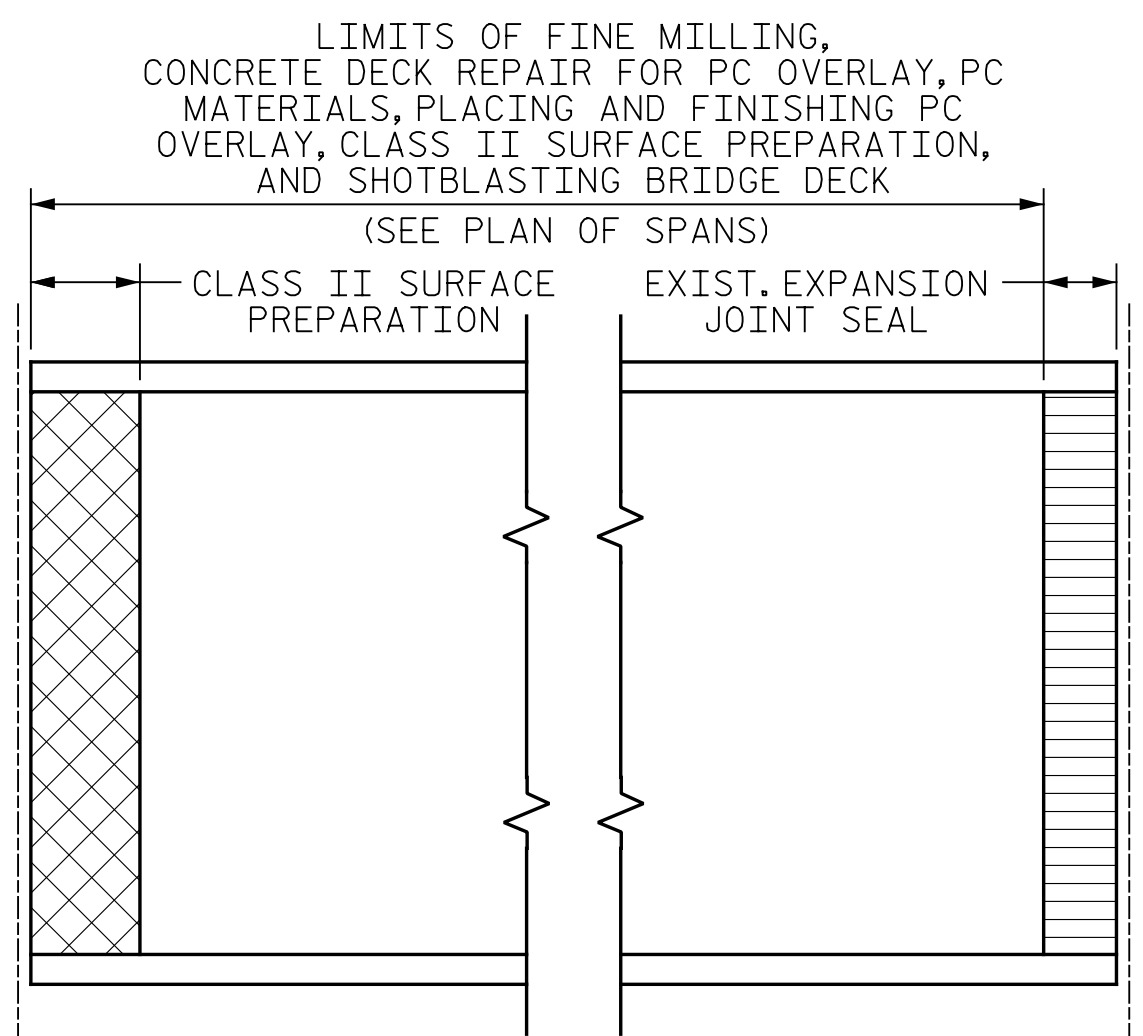
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 CHECKED BY : J. YANNACCONE DATE : 10/2022

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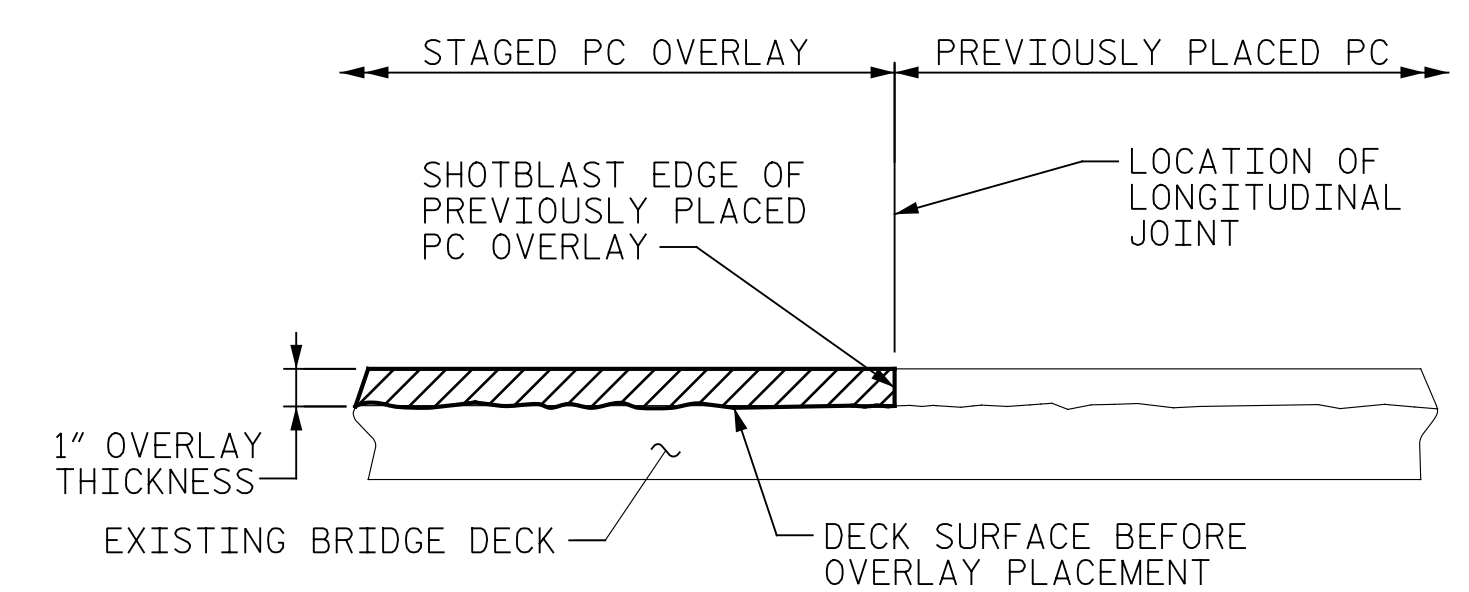
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 SEE TRANSPORTATION MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION AND PC PLACEMENT.



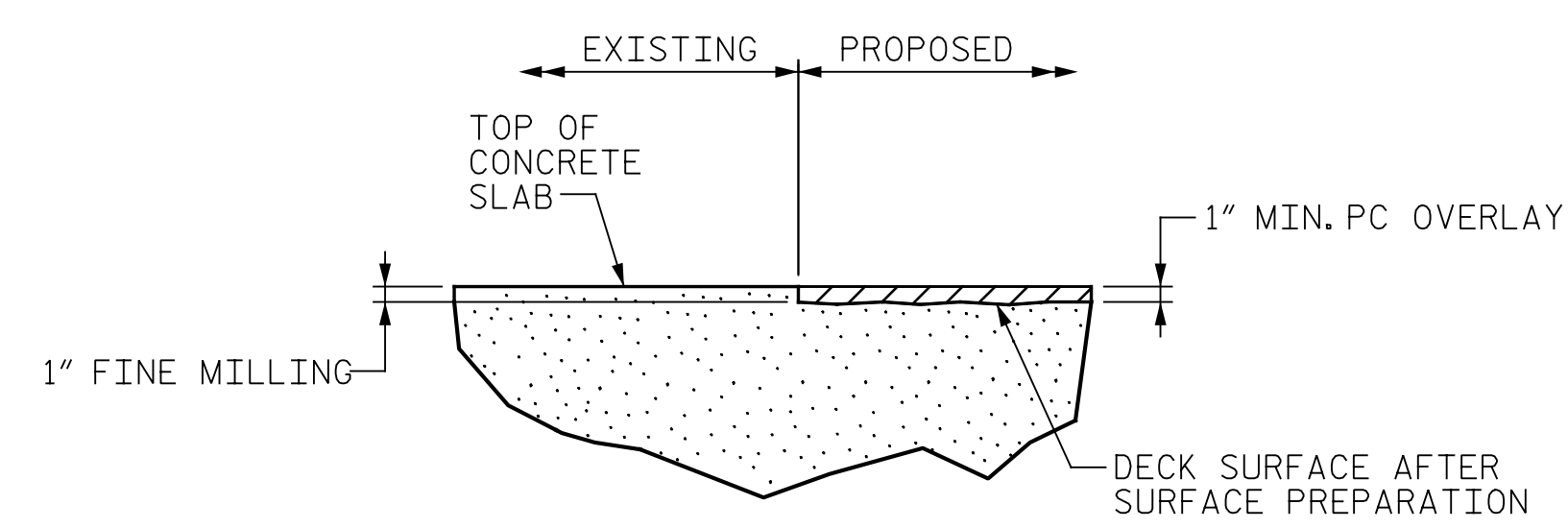
TYPICAL SECTION
(PROPOSED)



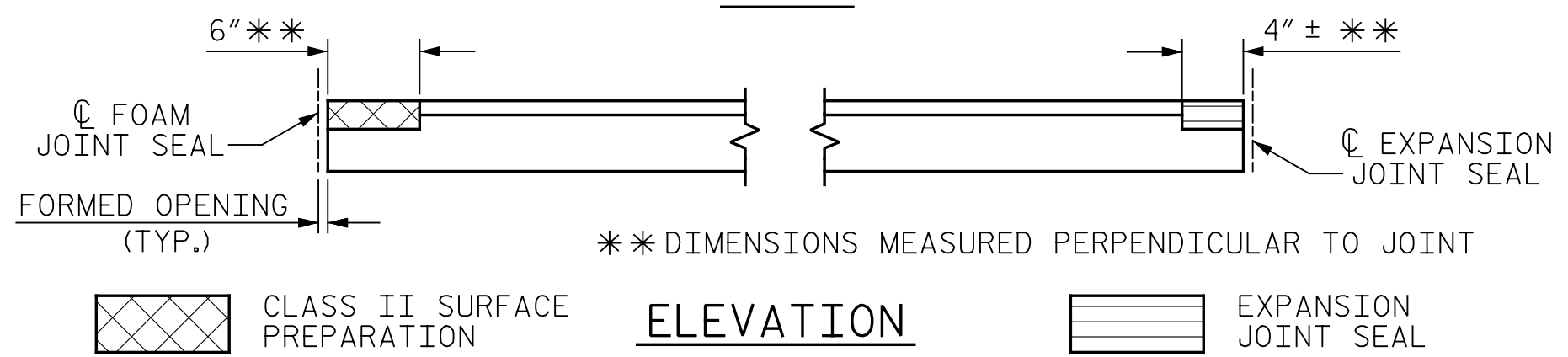
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STAGED PC OVERLAY CONSTRUCTION JOINT



DETAIL OF POLYMER CONCRETE OVERLAY

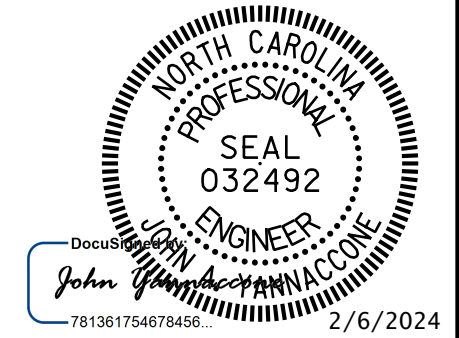


** DIMENSIONS MEASURED PERPENDICULAR TO JOINT

ELEVATION

PAY LIMITS FOR OVERLAY BID ITEMS

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400348



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

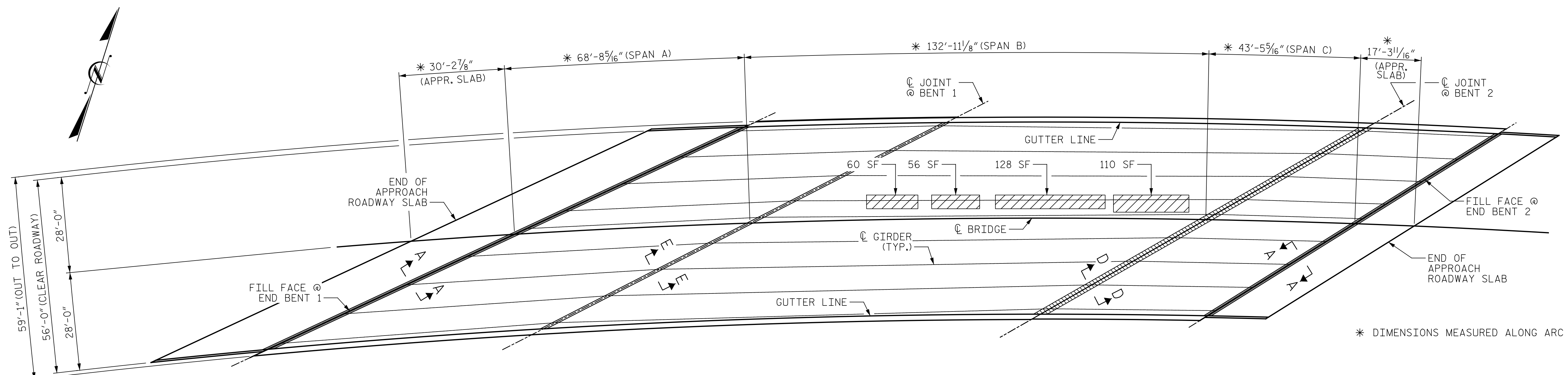
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APPROACH SLAB @ END BENT 1 SPAN A SPAN B SPAN C APPROACH SLAB @ END BENT 2
PLAN

REPAIR QUANTITY TABLE							
TOP OF DECK REPAIR				UNDERSIDE OF DECK REPAIR			
		ESTIMATE	ACTUAL	ESTIMATE		ACTUAL	
FINE MILLING	APPR. SLAB @ EB1	182.8 SY		UNDERSIDE OF DECK	SPAN A	0.0	0.0
	SPAN A	478.6 SY			SPAN B	0.0	0.0
	SPAN B	822.2 SY			SPAN C	0.0	0.0
	SPAN C	284.8 SY					
	APPR. SLAB @ EB2	101.9 SY		OVERHANG DIAPHRAGMS	SPAN A	0.0	0.0
CLASS II SURFACE PREPARATION	SPAN A	8.6 SY			SPAN B	0.0	0.0
	SPAN B	39.4 SY			SPAN C	0.0	0.0
	SPAN C	5.6 SY			UNDERSIDE OF OVERHANG	SPAN A	0.0
	APPR. SLAB @ EB2	5.5 SY		SPAN B	0.0	0.0	
CONCRETE WORK FOR JOINT REPLACEMENT	SPAN C	110 SF		SPAN C	0.0	0.0	
	APPR. SLAB @ EB1	0 SF		INTERIOR DIAPHRAGMS	SPAN A	0.0	0.0
	SPAN A	0 SF			SPAN B	0.0	0.0
	SPAN B	110 SF			SPAN C	0.0	0.0
SPAN C	110 SF						
	APPR. SLAB @ EB2	0 SF			ESTIMATE	ACTUAL	
PC MATERIALS	APPR. SLAB @ EB1	6.3 CY		UNDERSIDE EPOXY RESIN INJECTION	SPAN A	0.0 LF	
	SPAN A	16.6 CY			SPAN B	0.0 LF	
	SPAN B	31.9 CY			SPAN C	0.0 LF	
	SPAN C	9.9 CY					
	APPR. SLAB @ EB2	3.5 CY					
PLACING AND FINISHING PC OVERLAY	APPR. SLAB @ EB1	182.8 SY					
	SPAN A	478.6 SY					
	SPAN B	822.2 SY					
	SPAN C	284.8 SY					
	APPR. SLAB @ EB2	101.9 SY					
GROOVING BRIDGE FLOORS	APPR. SLAB @ EB1	1433 SF					
	SPAN A	3956 SF					
	SPAN B	6913 SF					
	SPAN C	2293 SF					
	APPR. SLAB @ EB2	790 SF					

NOTES:

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

CONCRETE COVER FOR TOP BARS IN THE DECK SLAB IS 1/2" PER THE EXISTING BRIDGE PLANS.

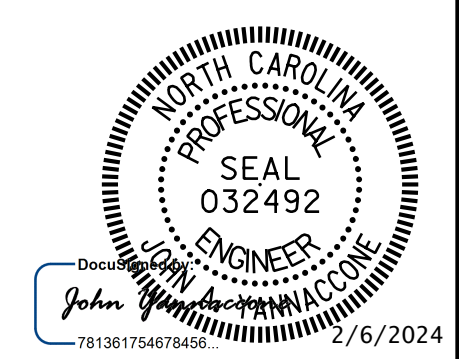
FOR SECTION A-A AND D-D, SEE "FOAM JOINT SEAL DETAILS" SHEET.

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

FOR CONCRETE WORK FOR JOINT REPLACEMENT, SEE SPECIAL PROVISIONS.

- FINE MILLING AND SHOTBLASTING OF BRIDGE DECK
- CLASS II SURFACE PREPARATION
- UNDERSIDE OF DECK REPAIR
- CONCRETE WORK FOR JOINT REPLACEMENT

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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PLAN OF SPANS

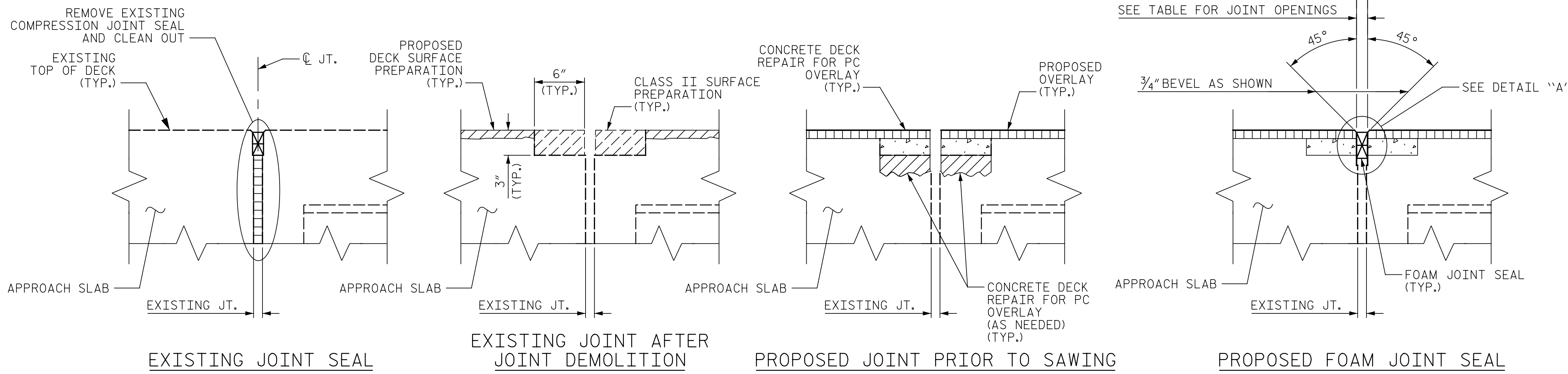
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 CHECKED BY: J. YANNAACONE DATE: 10/2022



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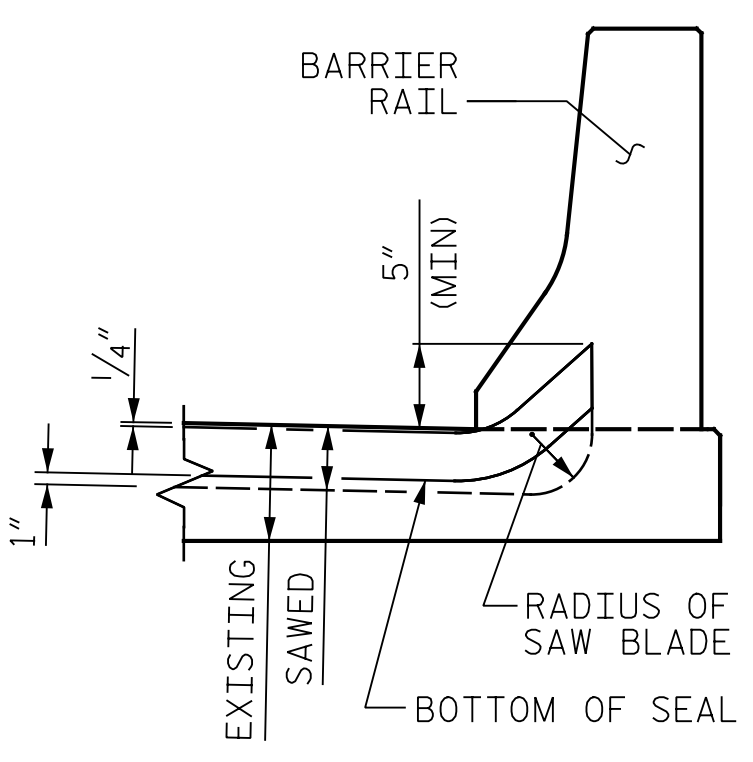
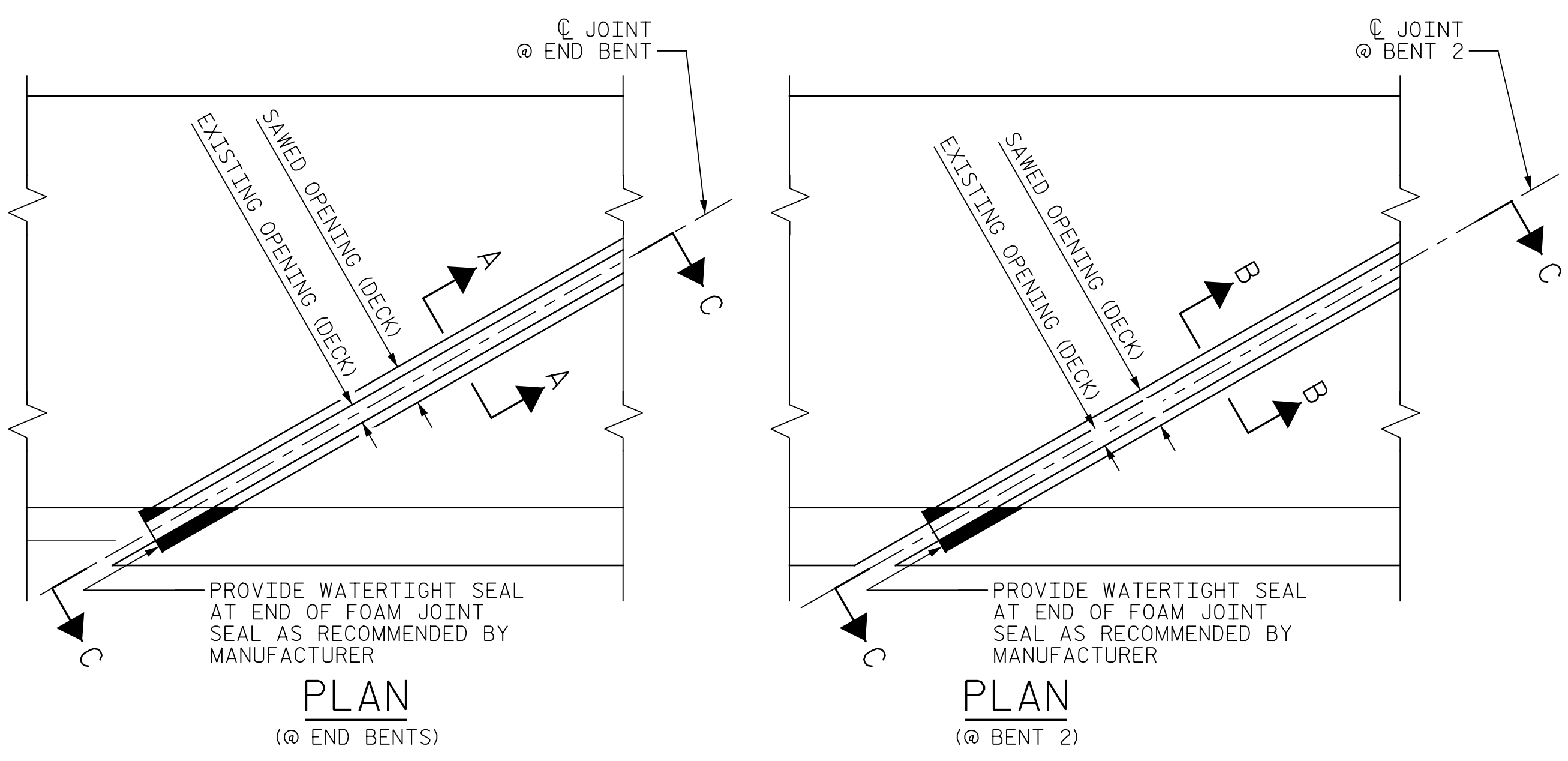
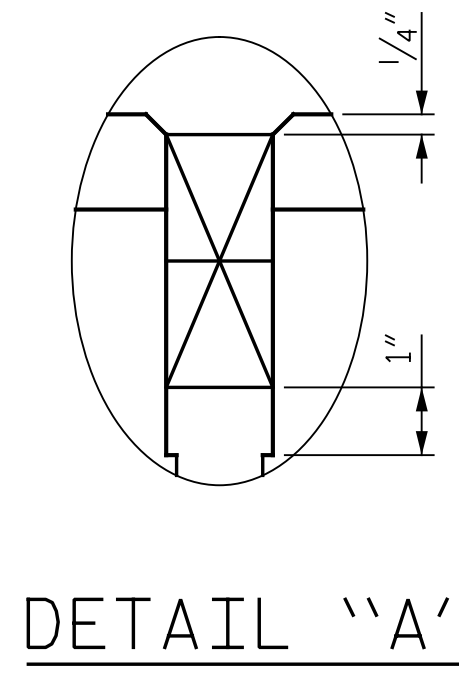
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SECTION A-A
(TYP. AT END BENTS)

LOCATION	FOAM JOINT SEALS FOR PRESERVATION		CONCRETE DECK REPAIR FOR PC OVERLAY		EPOXY COATING	
	ESTIMATED (LIN. FT.)	ACTUAL (LIN. FT.)	ESTIMATED (SQ. YDS.)	ACTUAL (SQ. YDS.)	ESTIMATED (SQ. FT.)	ACTUAL (SQ. FT.)
END BENT 1	157.0		17.2		392	
END BENT 2	102.0		11.1		253	

LOCATION	SAWED JT. OPENING TABLE (PERPENDICULAR TO JT.)		
	AT 45°	AT 60°	AT 90°
END BENT 1	2 5/16"	2 5/16"	2 5/16"
END BENT 2	2 5/16"	2 5/16"	2 5/16"



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

NOTES:
 FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY OR SEALANT WORK IS COMPLETE.
 THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING JOINT SEAL MATERIAL. IF THE ACTUAL JOINT OPENING VARIES FROM THE OPENING INDICATED IN THE DETAILS BY MORE THAN 1/4", NOTIFY THE ENGINEER.
 THE MANUFACTURER IS TO PROVIDE THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE FOAM JOINT SEAL FOR THE SIZE OF THE OPENING ON THE PLANS AND ACCOMMODATE THE MINIMUM EXPANSION SHOWN ON THE PLANS.
 FOAM JOINTS SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS.
 THE CONTRACTOR SHALL TAKE CARE DURING JOINT REHAB OPERATIONS NOT TO DROP ANY MATERIAL BELOW THE BRIDGE WITHOUT PROTECTIVE DEVICES BELOW TO CATCH THE MATERIAL. ANY MATERIAL THAT FALLS BELOW THE BRIDGE SHALL BE CONTAINED, REMOVED AND DISPOSED OF BY THE CONTRACTOR AT NO EXTRA COST TO THE DEPARTMENT. IF THE ENGINEER DETERMINES THAT THE PROTECTIVE DEVICES ARE NOT ADEQUATE OR NOT BEING EMPLOYED, THE WORK SHALL BE SUSPENDED UNTIL ADEQUATE PROTECTION IS PROVIDED.

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT IN LIEU OF SAWING THE JOINT.
 THE INSTALLED FOAM JOINTS SHALL BE WATERTIGHT.
 THE CONTRACTOR SHALL SAW CUT 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.

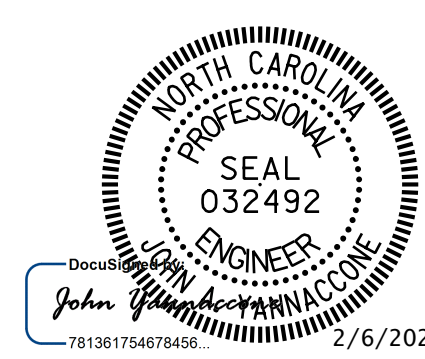
QUANTITIES SHOWN IN THE ELASTOMERIC CONCRETE FOR PRESERVATION TABLE ARE BASED ON THE MINIMUM JOINT DEMOLITION SHOWN.
 FOR EXCAVATION BELOW THE BOTTOM OF PLANNED JOINT DEMOLITION, CONCRETE FOR DECK REPAIR SHALL BE PLACED IN THE EXCAVATED AREA TO THE ELEVATION AT THE BOTTOM OF THE PROPOSED ELASTOMERIC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

FOR CLASS II SURFACE PREPARATION, SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.
 FOR CONCRETE DECK REPAIR FOR PC OVERLAY, SEE SPECIAL PROVISIONS.
 NO SEPARATE PAYMENT WILL BE MADE FOR REMOVING THE EXISTING EXPANSION JOINT SEAL, AND MEDIAN AND BARRIER RAIL COVER PLATES. THE ENTIRE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR "FOAM JOINT SEALS FOR PRESERVATION".
 FOR SECTION D-D, SEE SHEET 2 OF 2.

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

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400348

SHEET 1 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
FOAM JOINT SEALS

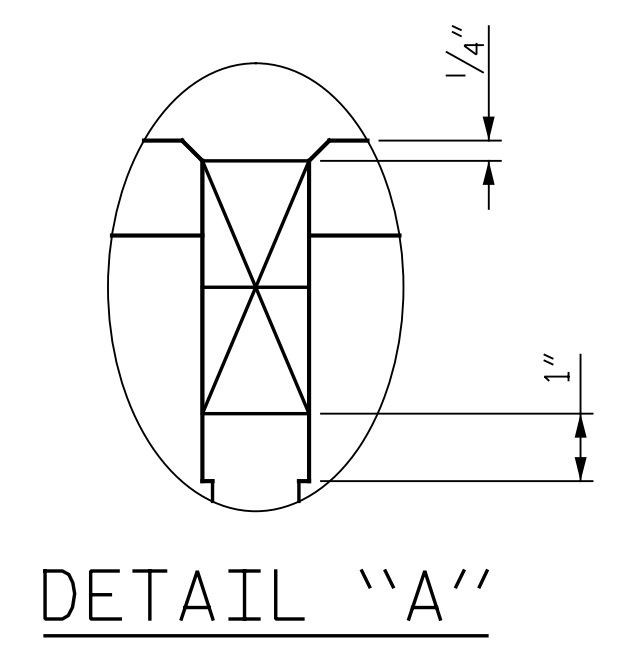
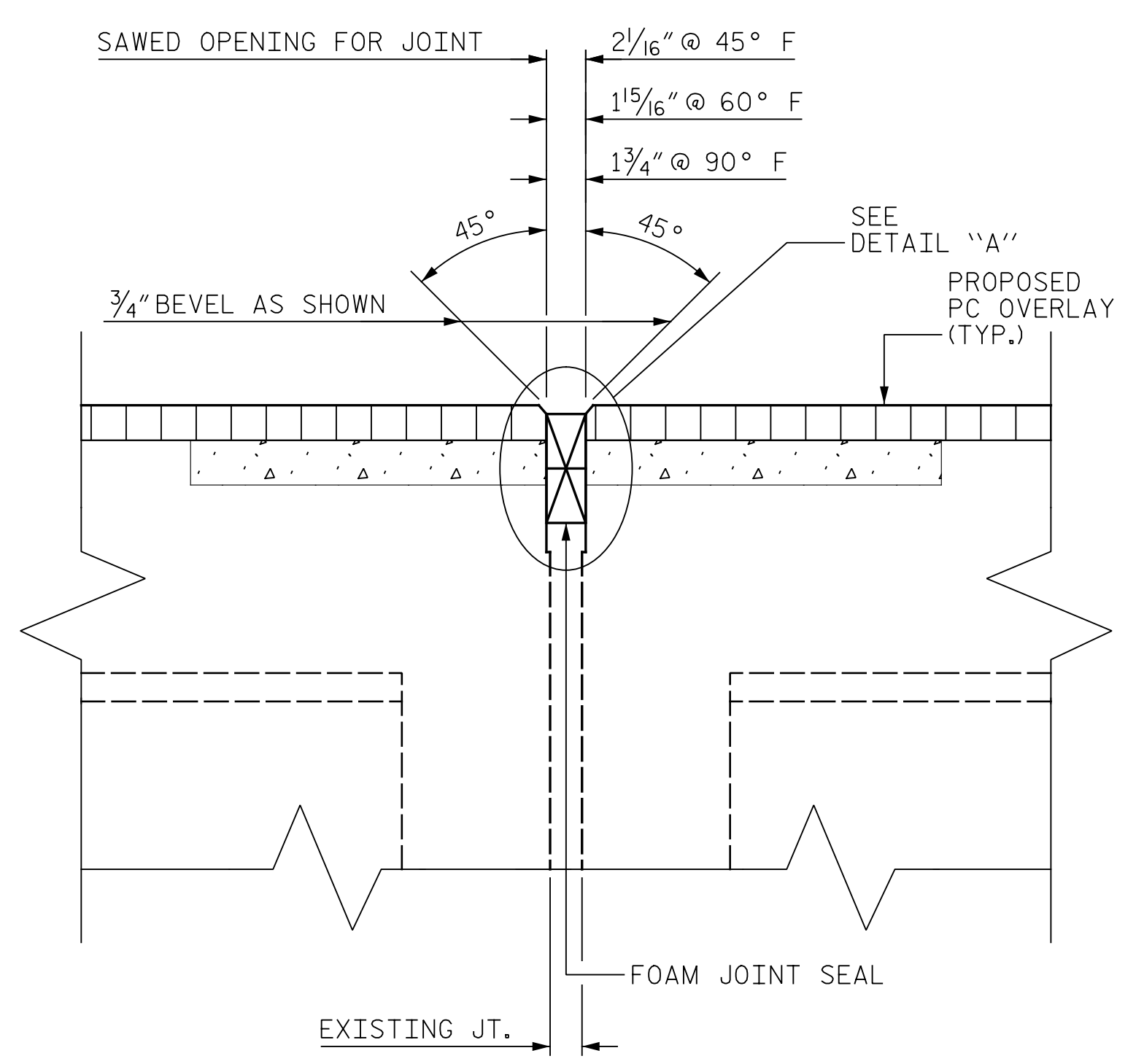
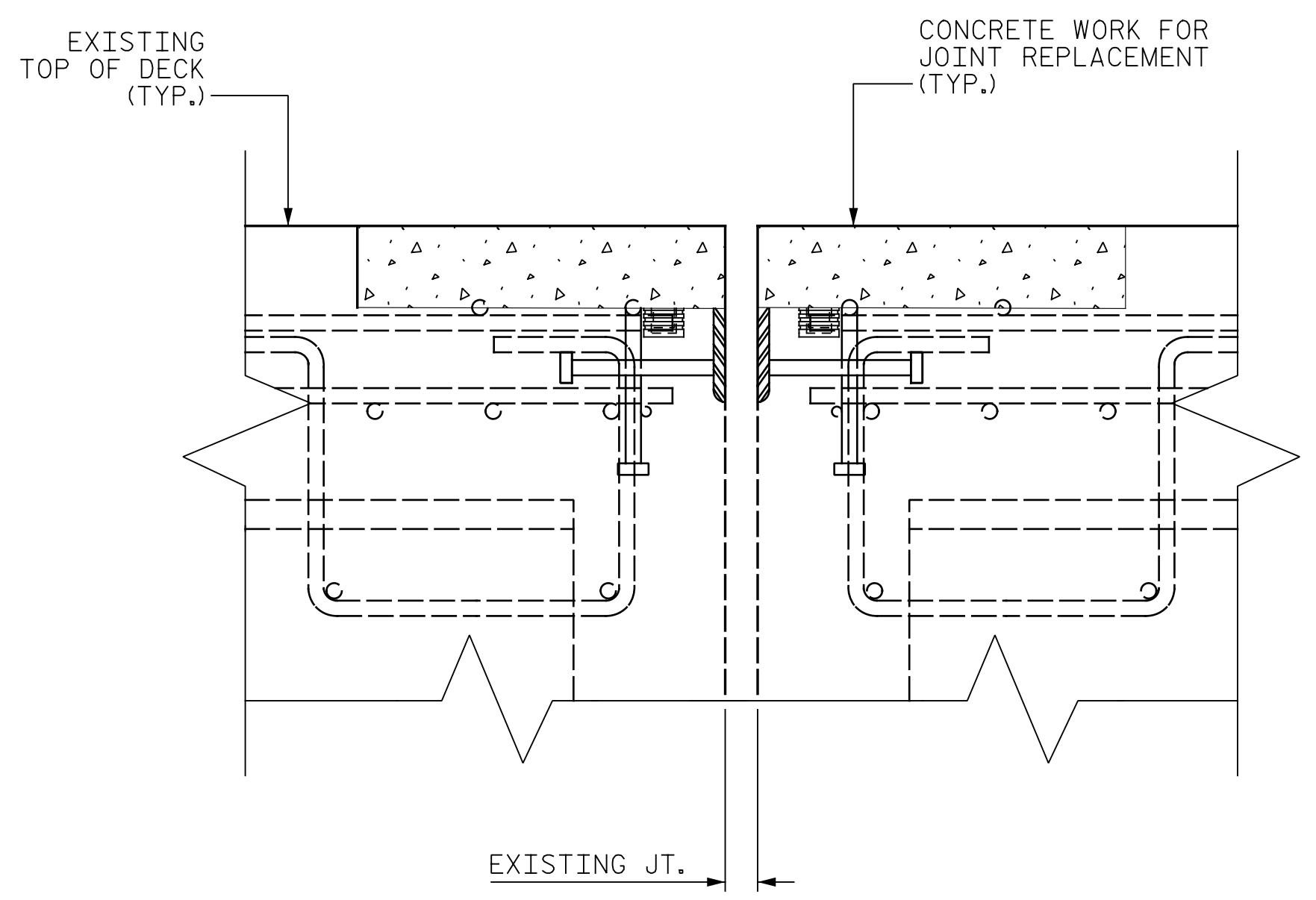
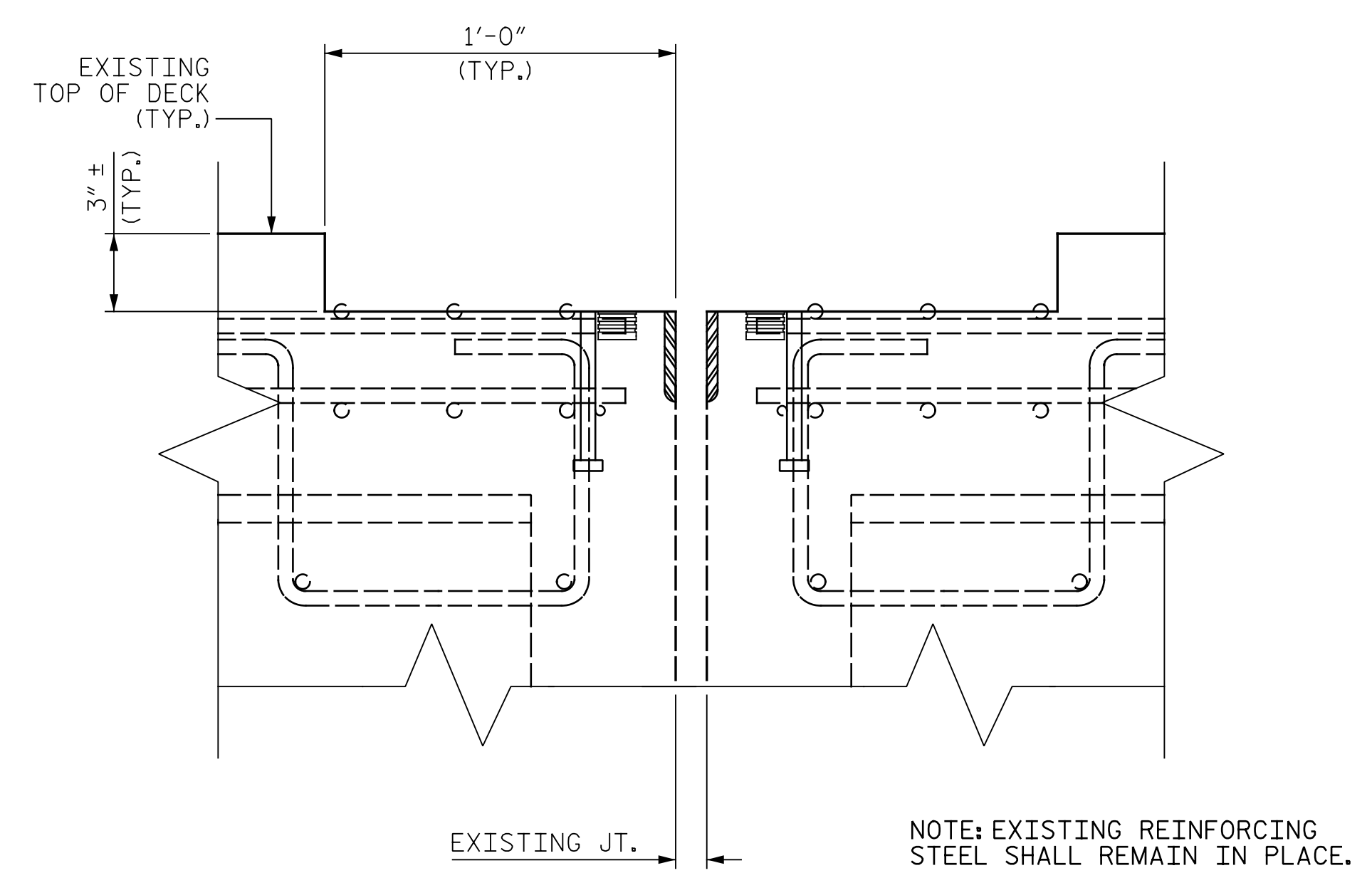
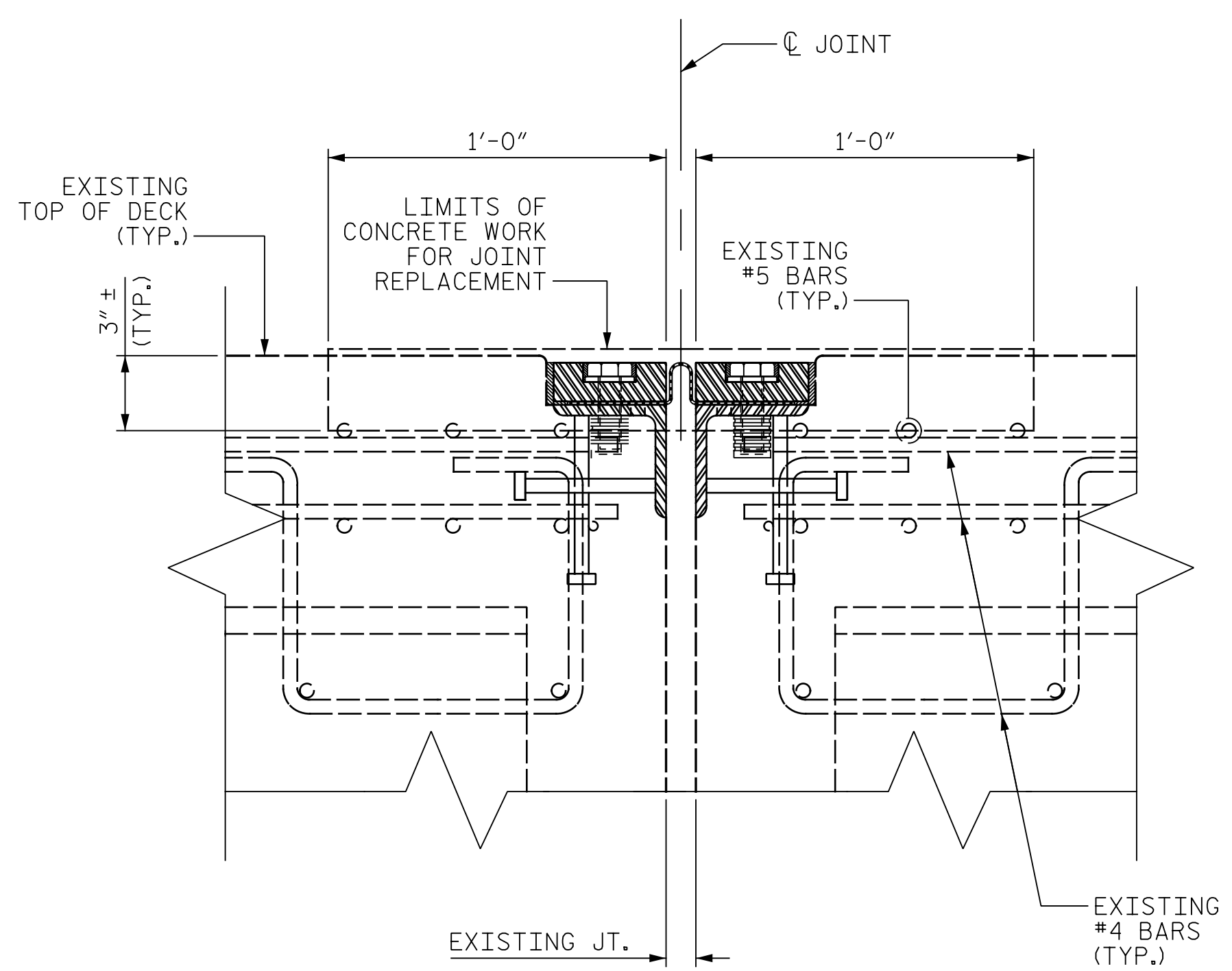
DRAWN BY: J. MYA DATE: 10/2022
 CHECKED BY: J. YANNAACONE DATE: 10/2022



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NOTES

ALL HORIZONTAL DIMENSIONS ARE MEASURED PERPENDICULAR TO THE JOINT UNLESS NOTED OTHERWISE.

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

FOR ADDITIONAL NOTES, SEE SHEET 1 OF 2.

SUMMARY OF QUANTITIES				
LOCATION	FOAM JOINT SEALS FOR PRESERVATION		EPOXY COATING	
	ESTIMATED (LIN. FT)	ACTUAL (LIN. FT)	ESTIMATED (SQ. FT)	ACTUAL (SQ. FT)
BENT 2	111.5		347	

SECTION D-D
(BENT 2)

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400348
 SHEET 2 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

FOAM JOINT SEALS

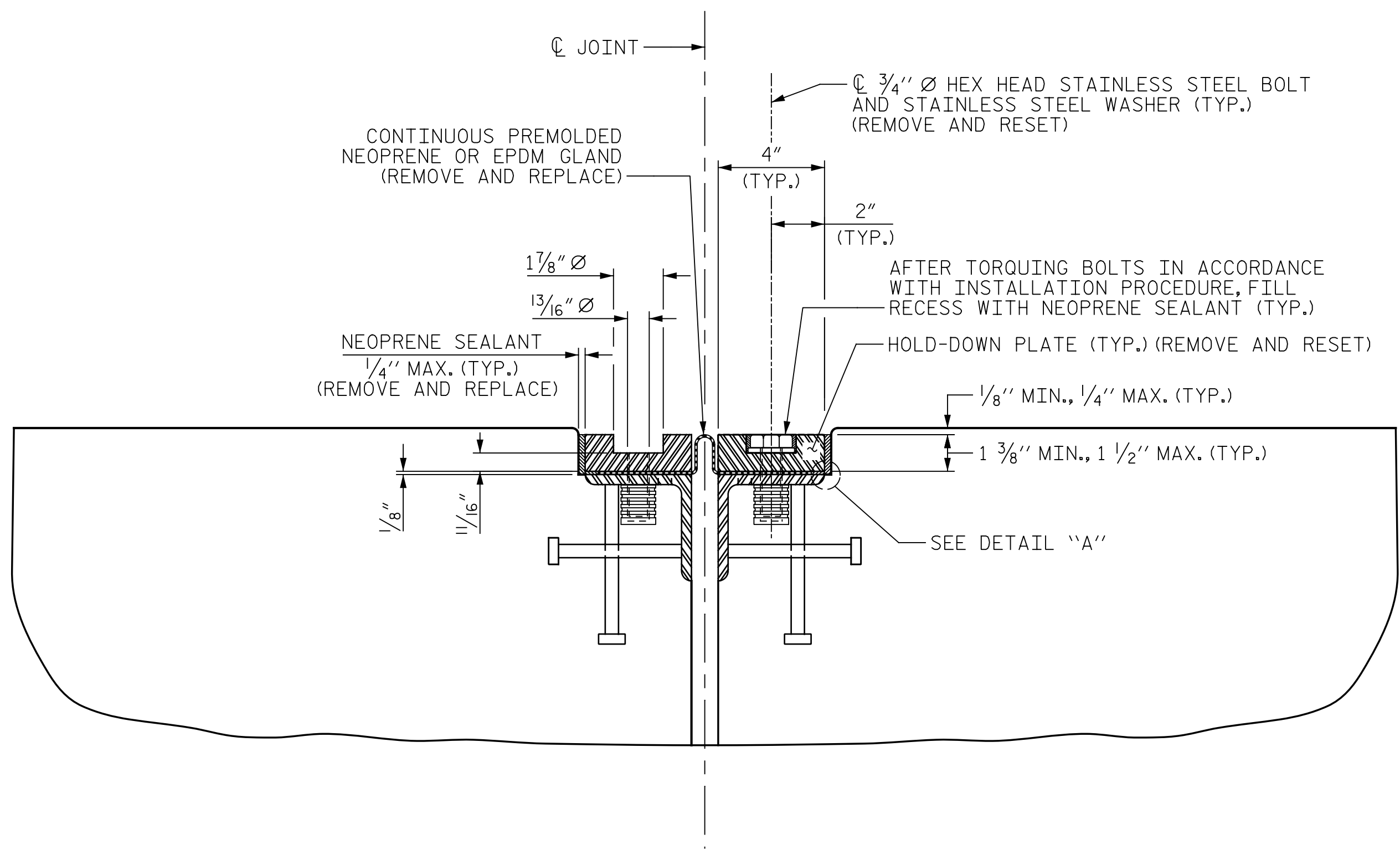
DRAWN BY: J. MYA DATE: 10/2022
 CHECKED BY: J. YANNACCONE DATE: 10/2022



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SECTION E-E

SECTION NORMAL TO JOINT -- STEEL SUPERSTRUCTURE

REPAIR INSTALLATION PROCEDURE

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

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

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

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

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

GENERAL NOTES

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

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

THE FINISHED EXPANSION SEAL DEVICE SHALL BE A MINIMUM 1/8" AND A MAXIMUM OF 1/4" BELOW THE TOP OF SLAB.

FOR EXPANSION JOINT SEAL REPAIR, SEE SPECIAL PROVISIONS.

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

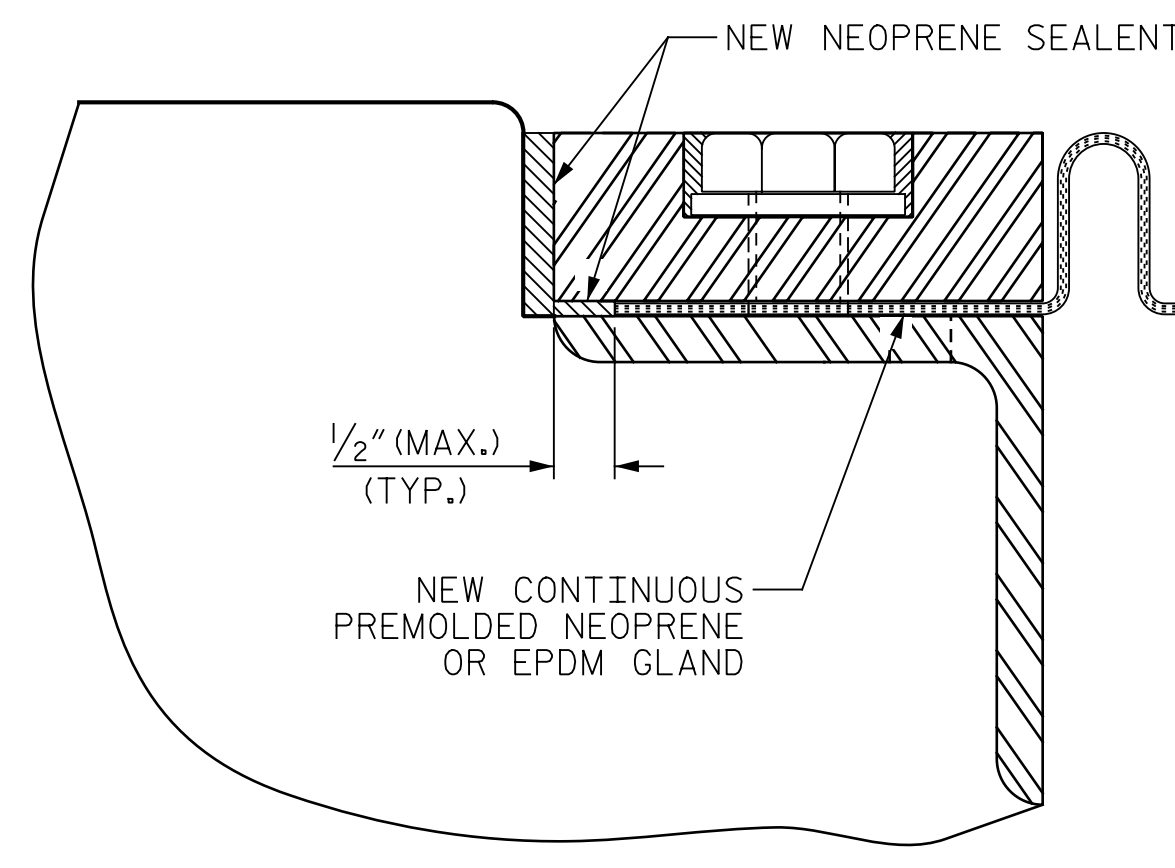
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE BENT CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE ELASTOMERIC BEARINGS AND MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

MOVEMENT AND SETTING AT JOINT

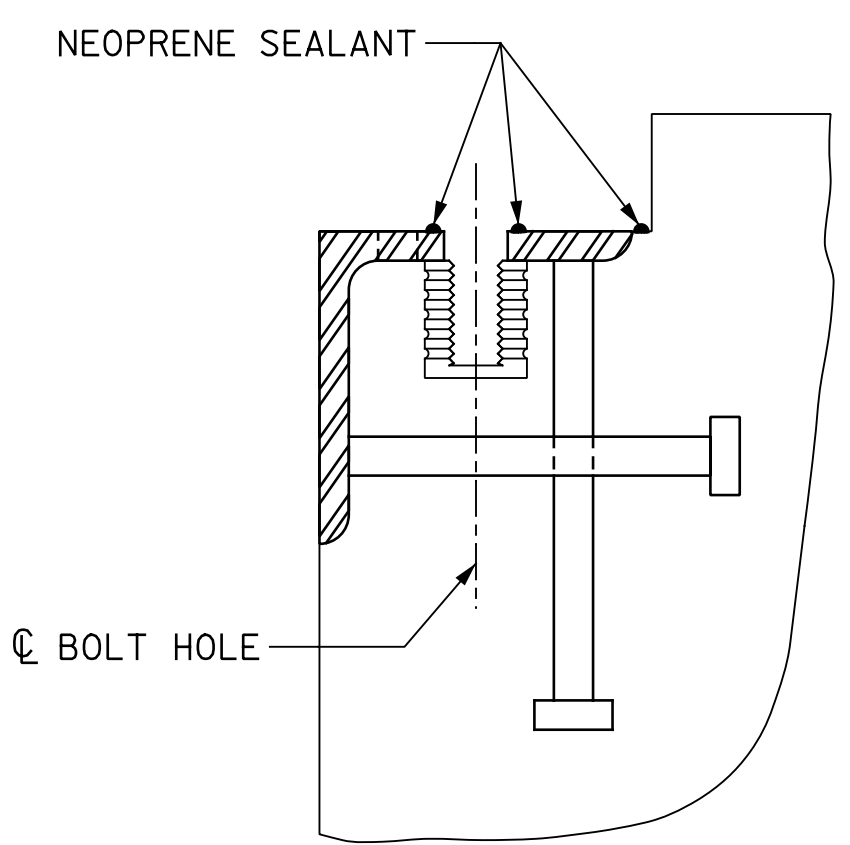
LOCATION	SKEW ANGLE	TOTAL MOVEMENT (ALONG CL RDWY)	PERPENDICULAR JOINT OPENING AT 45° F	PERPENDICULAR JOINT OPENING AT 60° F	PERPENDICULAR JOINT OPENING AT 90° F
BENT 1	154°-50'-57"	9/16"	1 1/8"	1 13/16"	1 3/4"

SUMMARY OF QUANTITIES

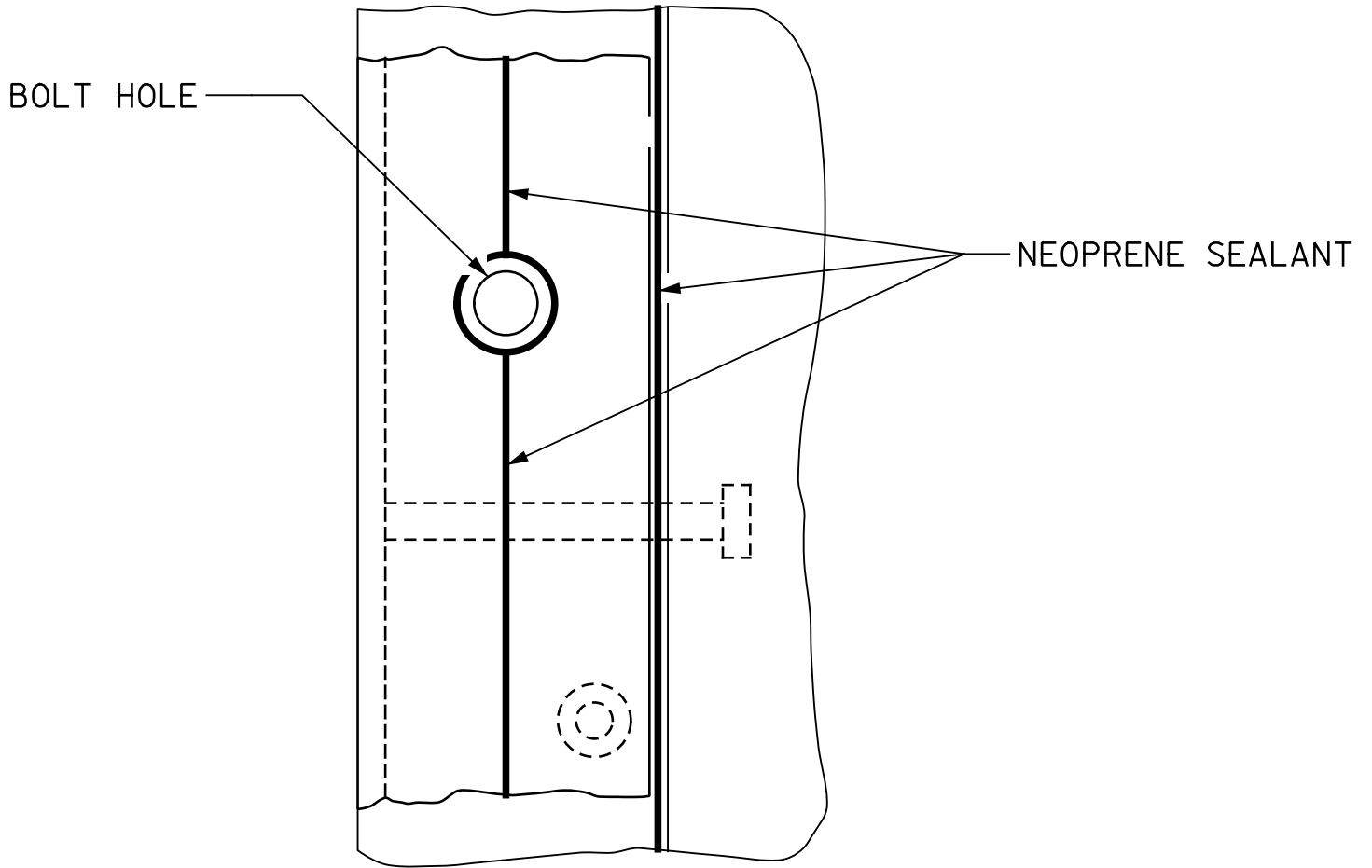
LOCATION	EXPANSION JOINT SEAL REPAIRS		EPOXY COATING	
	ESTIMATED (LIN. FT)	ACTUAL (LIN. FT)	ESTIMATED (SQ. FT)	ACTUAL (SQ. FT)
BENT 1	134.0		395	



DETAIL A

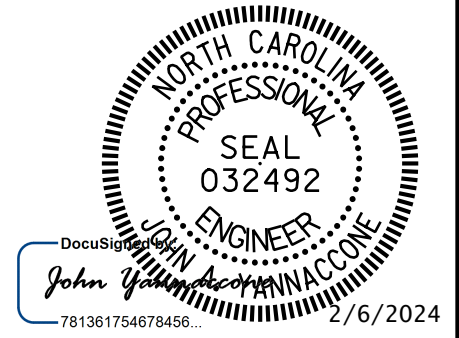


CROSS SECTION



INSTALLATION SKETCH

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400348



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

EXPANSION JOINT SEAL DETAILS

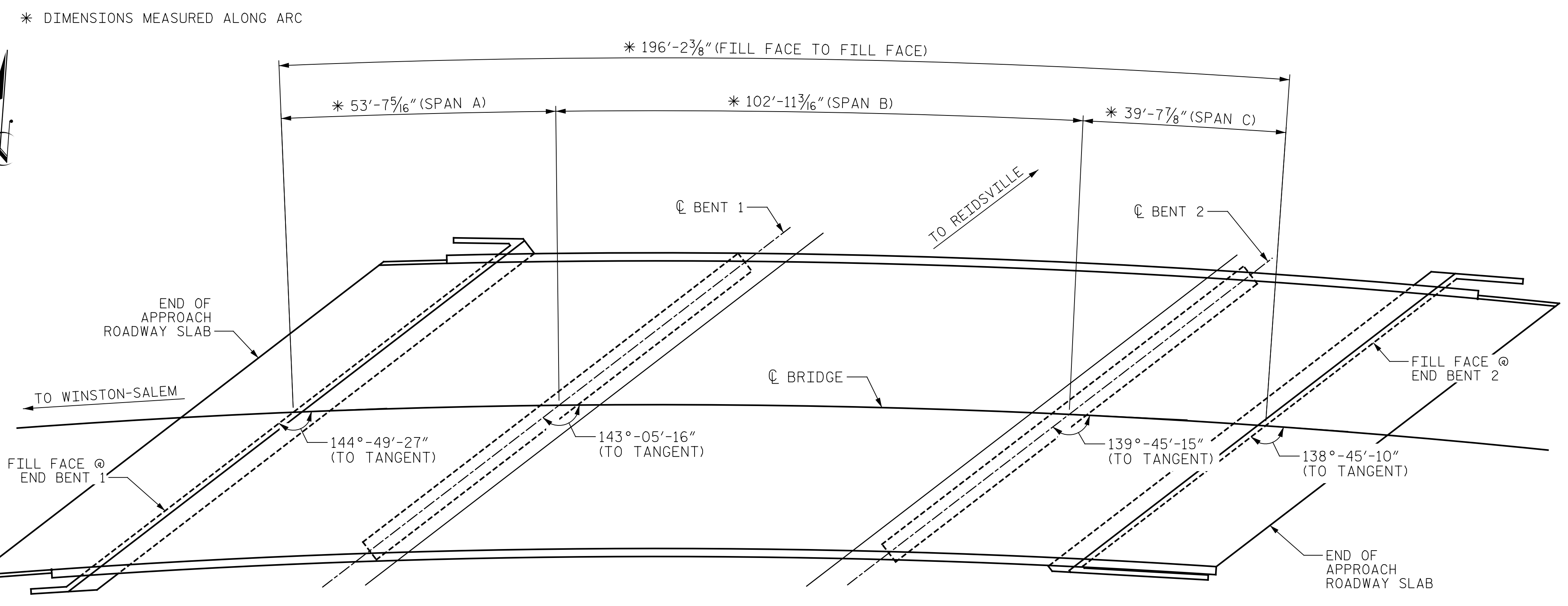
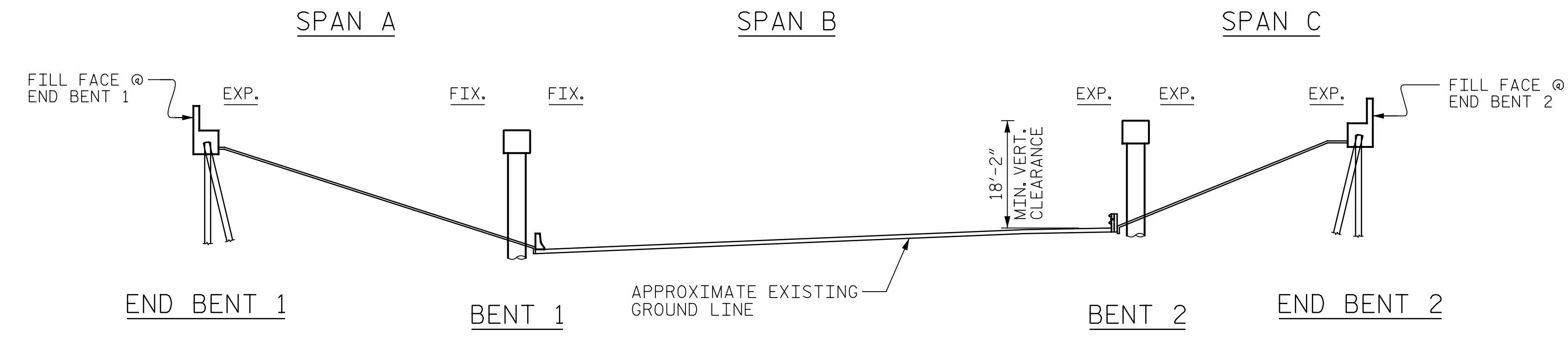
DRAWN BY : J. MYA DATE : 10/2022
 CHECKED BY : J. YANNAACONE DATE : 10/2022



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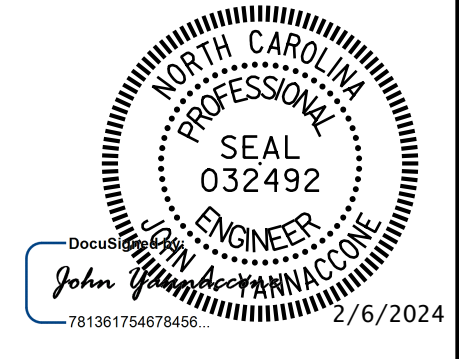
NOTE:
GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 09/25/2023.

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

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

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. 400349

SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR BRIDGE ON I-40 WBL 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'-46.90"	79°-46'-09.29"

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.

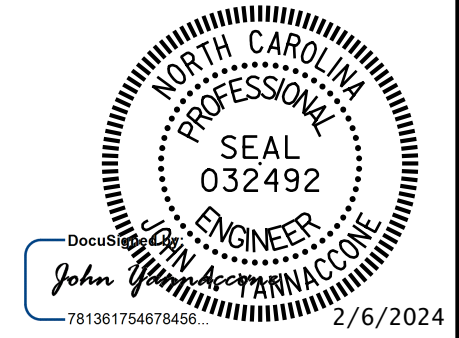
EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING SURFACE PREPARATIONS OF THE BRIDGE DECK. THE CONTRACTOR SHALL TAKE CARE THAT ANY CONSTRUCTION DEBRIS THAT COLLECTS IN THE DRAINS IS CONTAINED. DRAINS IN SHOULDERS OF ADJACENT TRAVEL LANES SHALL BE KEPT FREE AND CLEAR OF DEBRIS.

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. 400349

SHEET 2 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 FOR BRIDGE ON I-40 WBL 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 : 10/2022

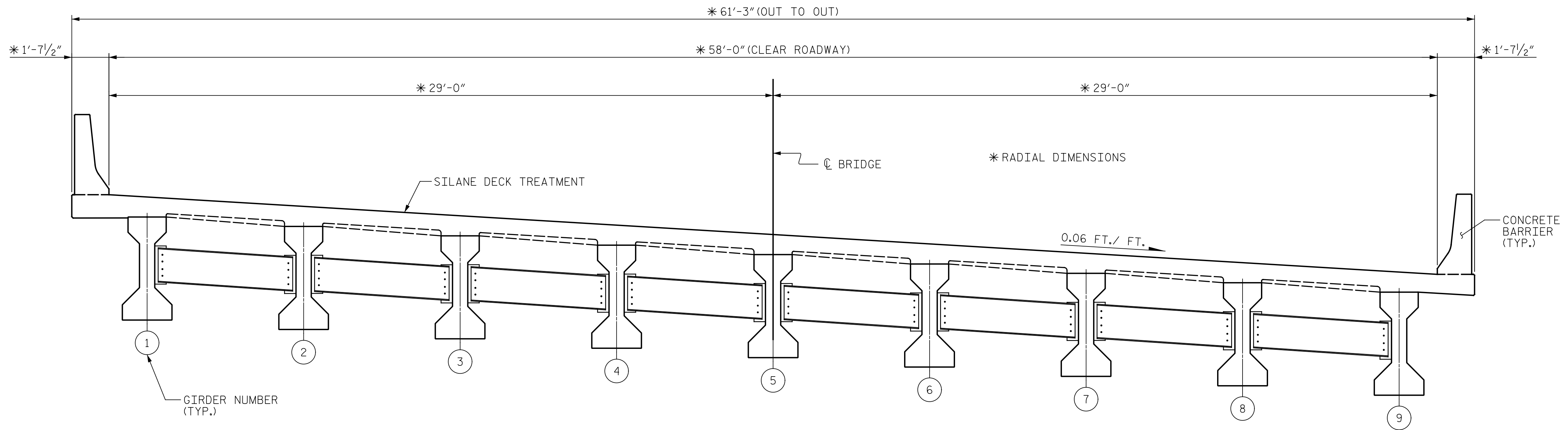


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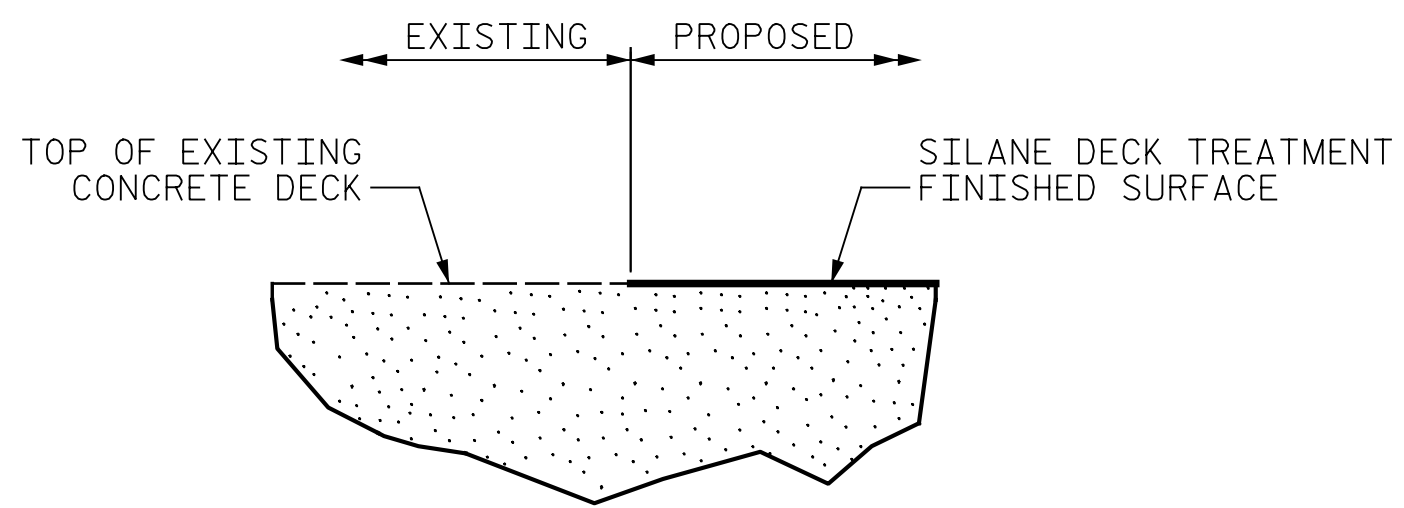
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NOTES:
SEE TRAFFIC MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING, AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION FOR SILANE DECK TREATMENT.

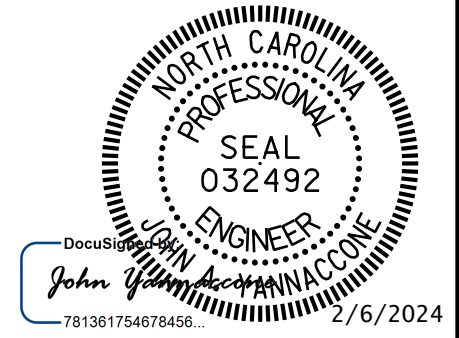


TYPICAL SECTION
(PROPOSED)



DETAIL OF SILANE DECK TREATMENT

PROJECT NO. I-5955A
GUILFORD COUNTY
BRIDGE NO. 400349



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

DRAWN BY : J. HARRIS DATE : 10/2022
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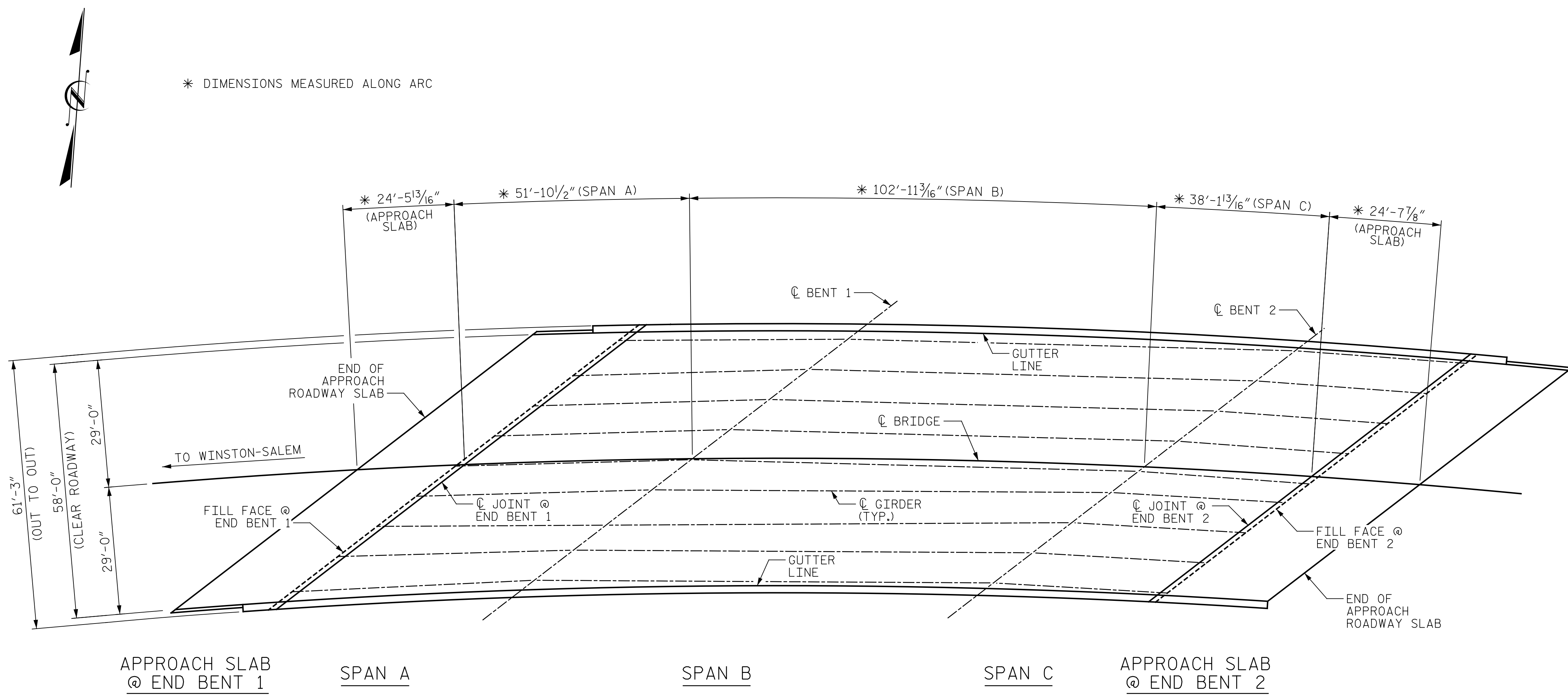
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SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
SHOTBLASTING BRIDGE DECK	1561 SQ. YDS.	
SILANE DECK TREATMENT	1561 SQ. YDS.	

 SHOTBLAST BRIDGE DECK & SILANE DECK TREATMENT



* DIMENSIONS MEASURED ALONG ARC

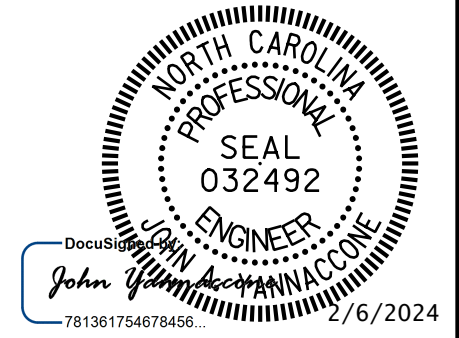
PLAN

NOTES:

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

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. 400349



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PLAN OF SPANS

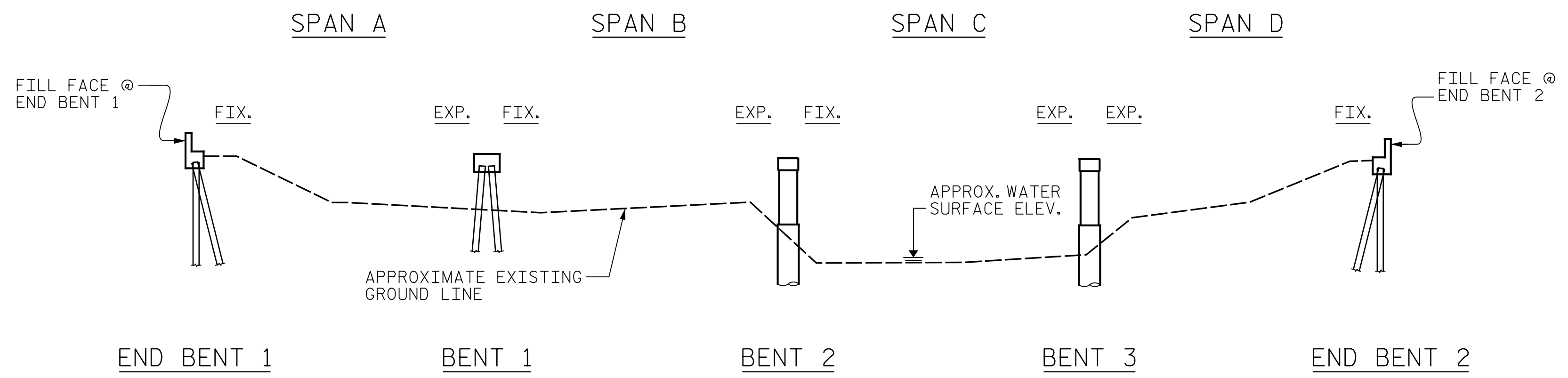
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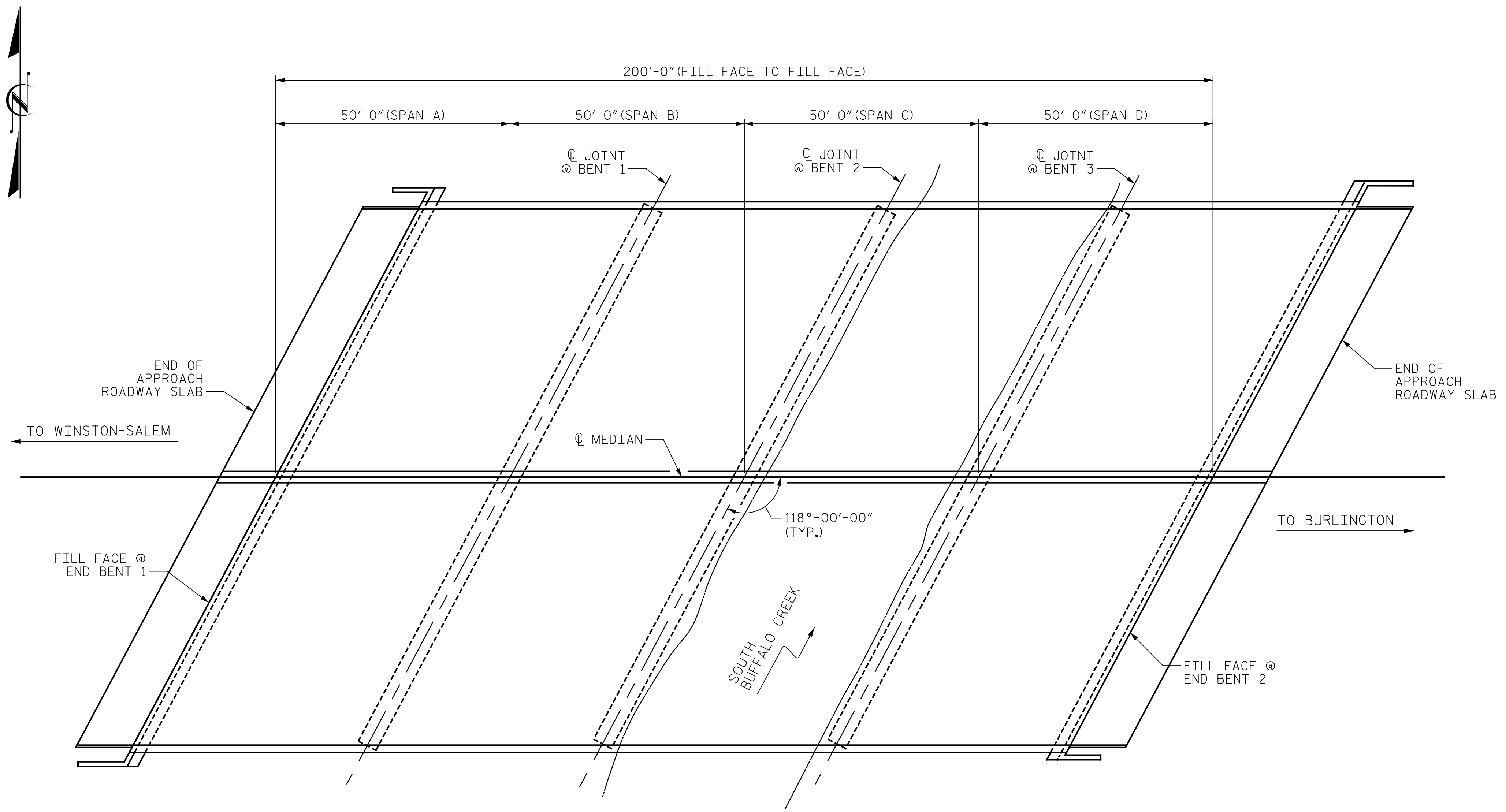
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SECTION ALONG C MEDIAN
(SECTION AT BENTS AND END BENTS ARE AT RIGHT ANGLES)



PLAN
(PILES NOT SHOWN FOR CLARITY)

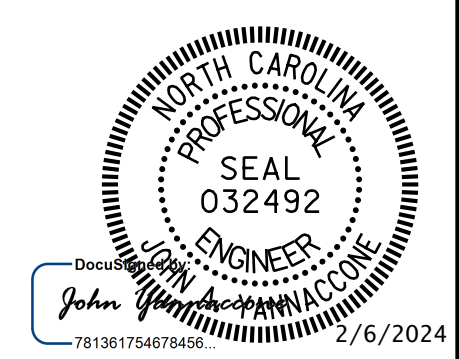
NOTE:
GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 07/11/2022.
BRIDGE ORIENTATION CONFORMS TO THE EXISTING BRIDGE PLANS AND ROUTINE INSPECTION REPORT.

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

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. 400357
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. YANNACCONE DATE : 1/2024



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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LOCATION SKETCH

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

BRIDGE COORDINATES	
LATITUDE	LONGITUDE
36°-02'-47.82"	79°-45'-28.47"

GENERAL NOTES

SEE TRANSPORTATION MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION AND POLYMER CONCRETE (PC) PLACEMENT.

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.

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 CLASS II SURFACE PREPARATION, SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.

FOR FINE MILLING, SEE SPECIAL PROVISIONS.

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

FOR EXPANSION JOINT SEAL REPAIR, SEE SPECIAL PROVISIONS.

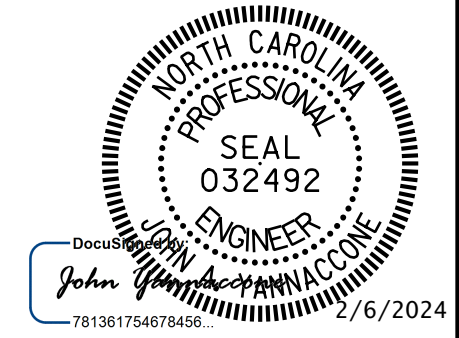
FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

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

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400357

SHEET 2 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 FOR BRIDGE ON I-40 OVER
 SOUTH BUFFALO CREEK

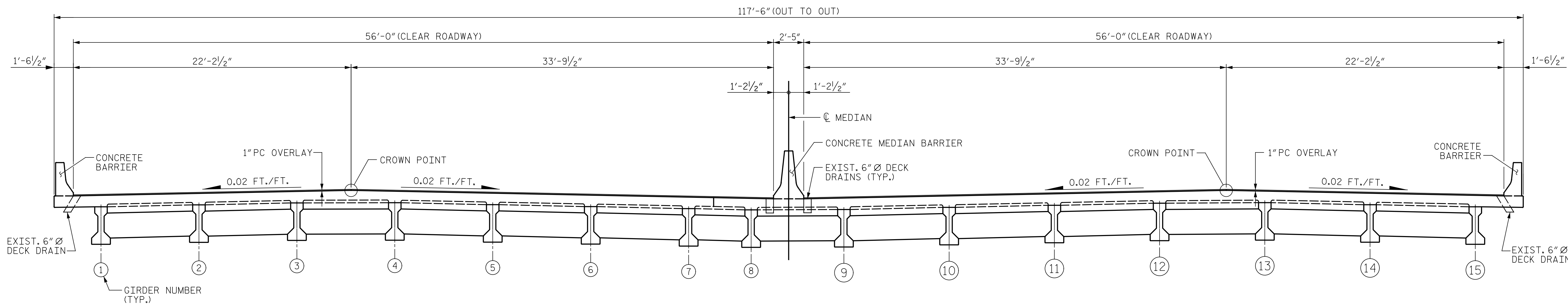
DRAWN BY : J. MYA DATE : 10/2022
 CHECKED BY : J. YANNACCONE DATE : 10/2022



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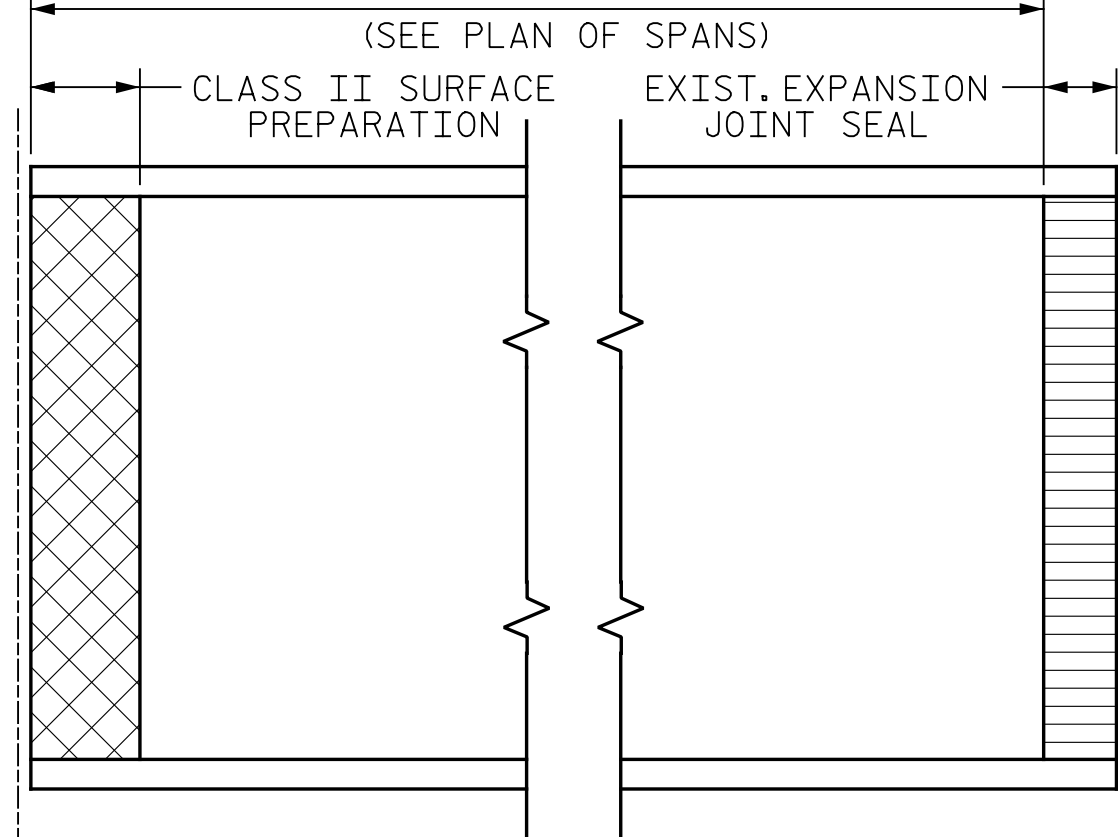
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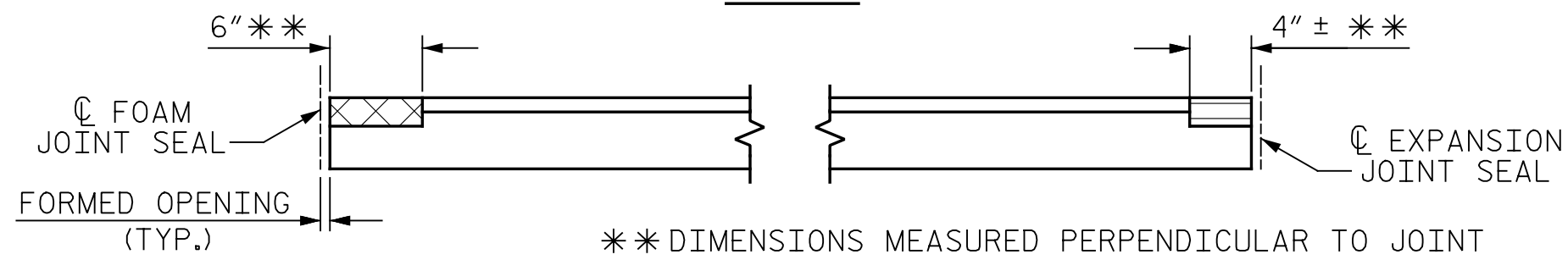
HALF SECTION
(WESTBOUND LANES)
(PROPOSED)

HALF SECTION
(EASTBOUND LANES)
(PROPOSED)

LIMITS OF FINE MILLING,
CONCRETE DECK REPAIR FOR PC OVERLAY, PC
MATERIALS, PLACING AND FINISHING PC
OVERLAY, CLASS II SURFACE PREPARATION,
AND SHOTBLASTING BRIDGE DECK
(SEE PLAN OF SPANS)



PLAN

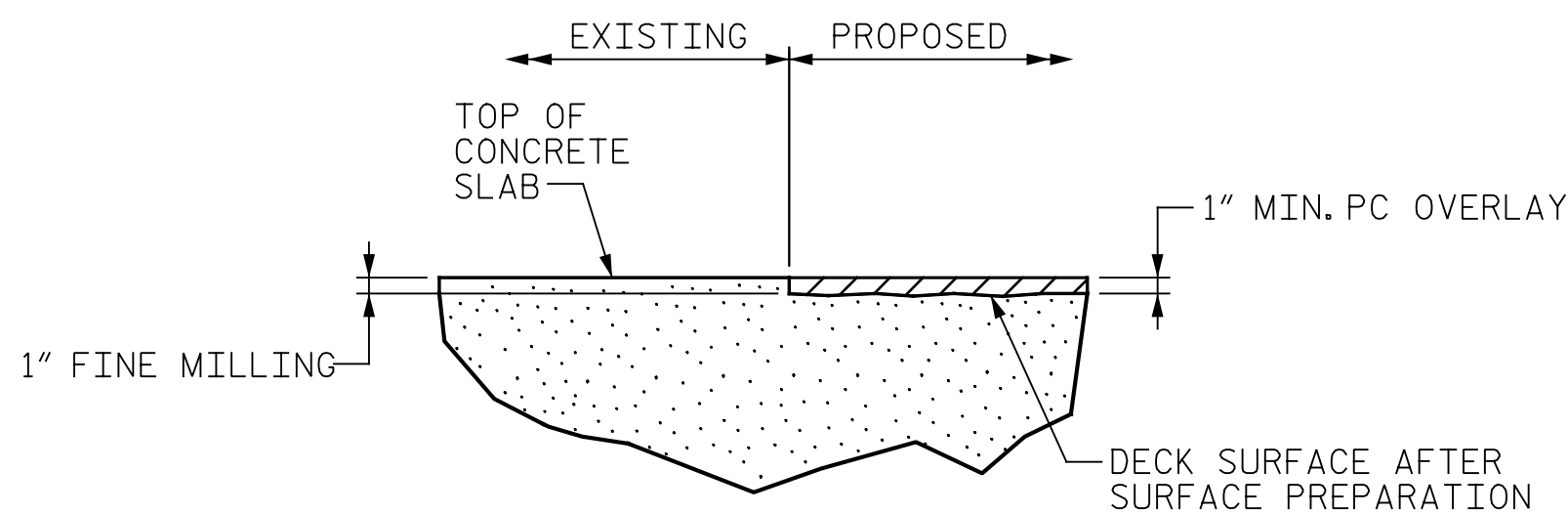


**DIMENSIONS MEASURED PERPENDICULAR TO JOINT

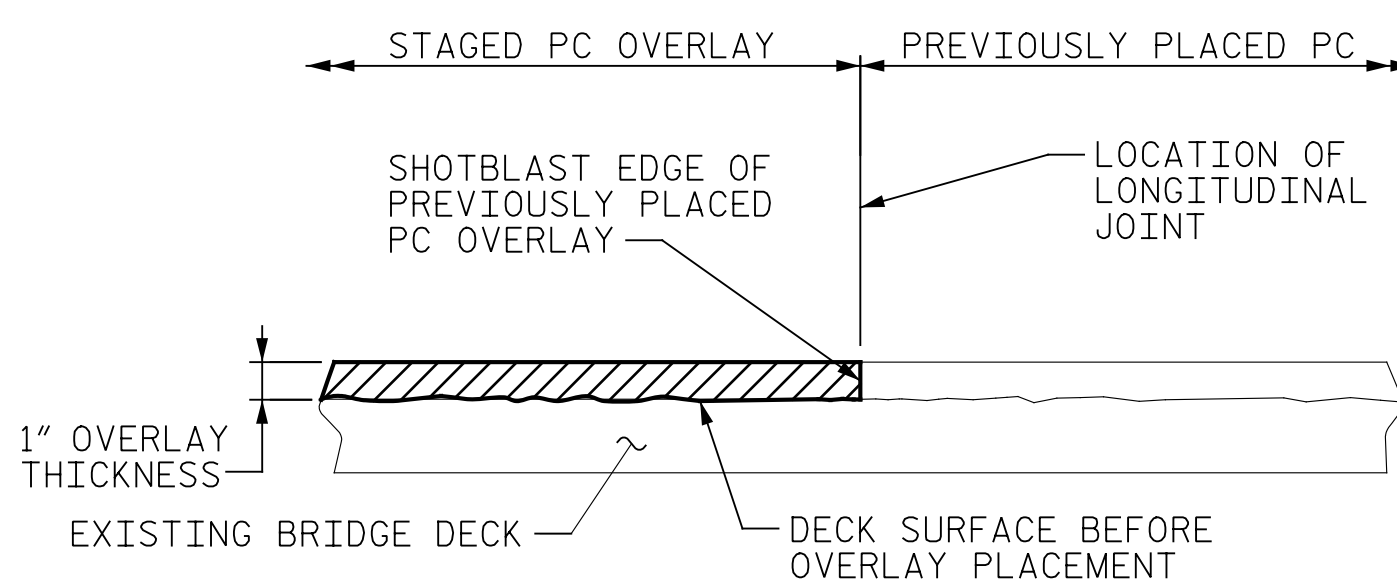


ELEVATION

PAY LIMITS FOR OVERLAY BID ITEMS



**DETAIL OF POLYMER
CONCRETE OVERLAY**

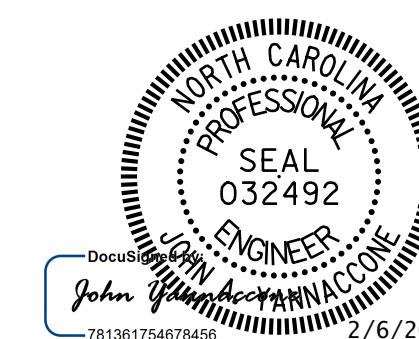


**STAGED PC OVERLAY
CONSTRUCTION JOINT**

NOTES:

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

PROJECT NO. I-5955A
GUILFORD COUNTY
BRIDGE NO. 400357



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

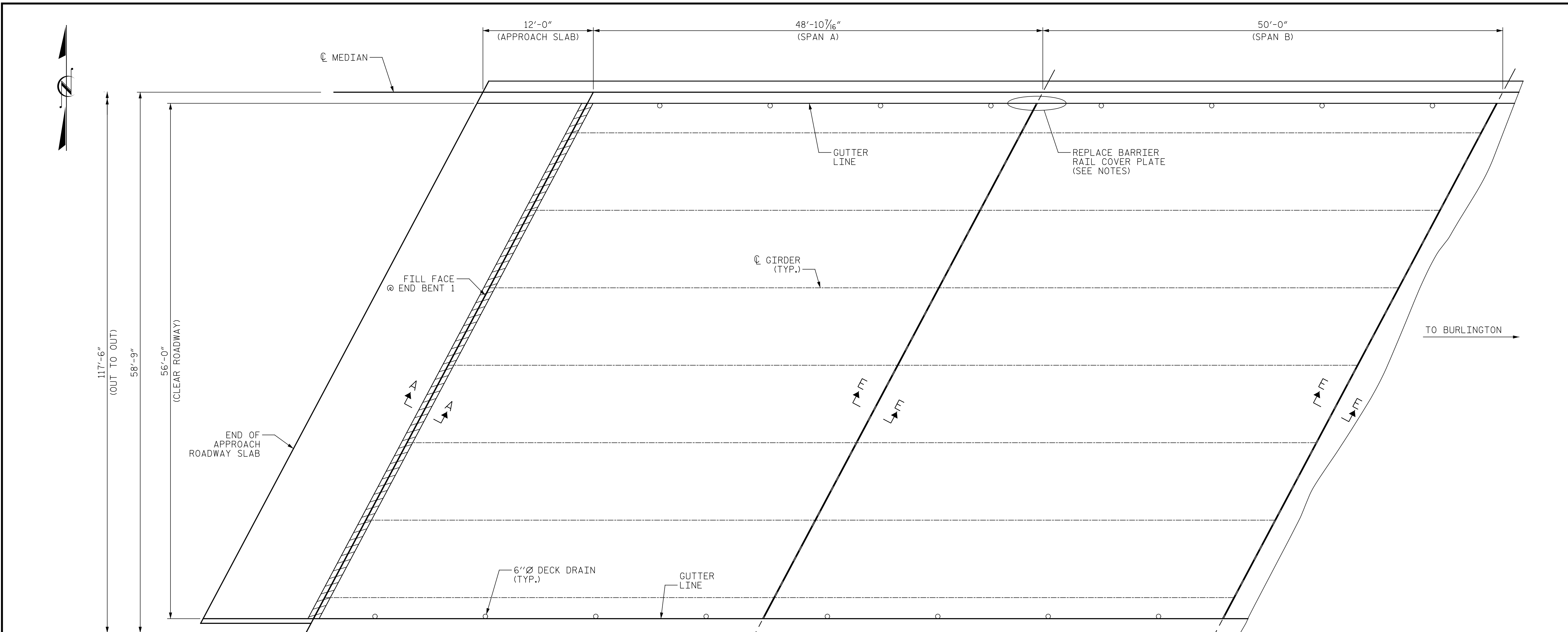
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PLAN

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

NOTES:

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

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

CONCRETE COVER FOR TOP BARS IN THE DECK SLAB IS 2 1/2" PER THE EXISTING BRIDGE PLANS.

FOR SECTION A-A, SEE "FOAM JOINT SEALS" SHEET.

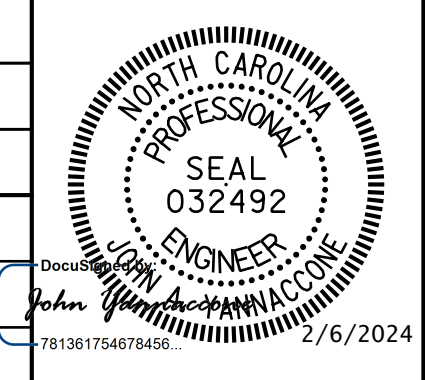
FOR SECTION E-E, SEE "EXPANSION JOINT SEAL DETAILS" SHEET.

PAYMENT FOR REPLACEMENT OF BARRIER RAIL COVER PLATE WILL BE INCLUDED IN THE PAY ITEM "EXPANSION JOINT SEAL REPAIR". FOR COVER PLATE DETAILS, SEE "EXPANSION JOINT SEAL DETAILS" SHEET.

REPAIR QUANTITY TABLE											
UNDERSIDE OF DECK REPAIR					TOP OF DECK REPAIR						
SHOTCRETE REPAIRS		ESTIMATE		ACTUAL		FINE MILLING		ESTIMATE		ACTUAL	
		AREA SF	VOLUME CF	AREA SF	VOLUME CF			APPR. SLAB @ EB1		APPR. SLAB @ EB1	
UNDERSIDE OF DECK	SPAN A	0.0	0.0			PLACING AND FINISHING PC OVERLAY	APPR. SLAB @ EB1	71.1 SY		APPR. SLAB @ EB1	71.1 SY
	SPAN B	0.0	0.0				SPAN A	301.0 SY		SPAN A	301.0 SY
OVERHANG DIAPHRAGMS	SPAN A	0.0	0.0			GROOVING BRIDGE FLOORS	APPR. SLAB @ EB1	3.5 SY		APPR. SLAB @ EB1	556 SF
	SPAN B	0.0	0.0				SPAN A	3.5 SY		SPAN A	2514 SF
UNDERSIDE OF OVERHANG	SPAN A	0.0	0.0			CONCRETE REPAIR	SPAN B	0.0 SY		SPAN B	2587 SF
	SPAN B	0.0	0.0				APPR. SLAB @ EB1	2.5 CY		APPR. SLAB @ EB1	0.0 CF
INTERIOR DIAPHRAGMS	SPAN A	0.0	0.0			PC MATERIALS	SPAN A	10.5 CY		SPAN A	0.0 CF
	SPAN B	0.0	0.0				SPAN B	10.6 CY		SPAN B	0.0 CF
		ESTIMATE		ACTUAL							
UNDERSIDE EPOXY RESIN INJECTION	SPAN A		0.0 LF								
	SPAN B		0.0 LF								

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400357

SHEET 1 OF 4



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PLAN OF SPANS
 SPAN A AND B
 AND APPROACH SLAB
 EAST BOUND

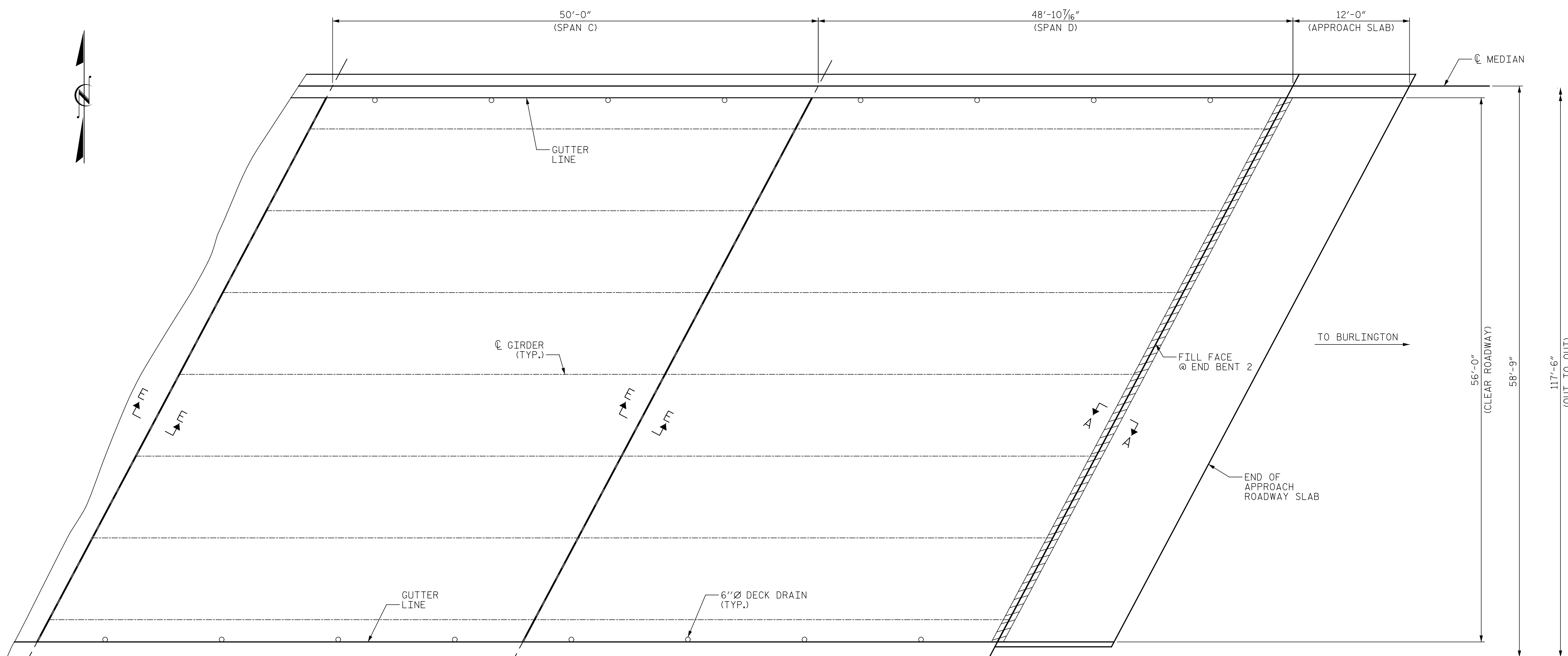
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 CHECKED BY: J. YANNACCONE DATE: 10/2022



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PLAN

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

NOTES:

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

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

CONCRETE COVER FOR TOP BARS IN THE DECK SLAB IS 2 1/2" PER THE EXISTING BRIDGE PLANS.

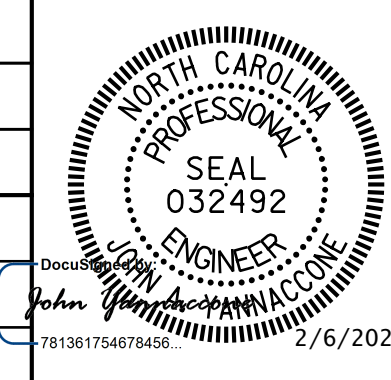
FOR SECTION A-A, SEE "FOAM JOINT SEALS" SHEET.

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

REPAIR QUANTITY TABLE														
UNDERSIDE OF DECK REPAIR					TOP OF DECK REPAIR									
SHOTCRETE REPAIRS		ESTIMATE		ACTUAL		FINE MILLING		ESTIMATE	ACTUAL	PLACING AND FINISHING PC OVERLAY		ESTIMATE	ACTUAL	
		AREA SF	VOLUME CF	AREA SF	VOLUME CF									SPAN C
UNDERSIDE OF DECK	SPAN C	0.0	0.0			FINE MILLING	SPAN C	306.1 SY		PLACING AND FINISHING PC OVERLAY	SPAN C	306.1 SY		
	SPAN D	0.0	0.0				SPAN D	301.0 SY			SPAN D	301.0 SY		
							APP. SLAB @ EB2	71.1 SY			APP. SLAB @ EB2	71.1 SY		
OVERHANG DIAPHRAGMS	SPAN C	0.0	0.0			CLASS II SURFACE PREPARATION	SPAN C	0.0 SY		GROOVING BRIDGE FLOORS	SPAN C	2587 SF		
	SPAN D	0.0	0.0				SPAN D	3.5 SY			SPAN D	2514 SF		
							APP. SLAB @ EB2	3.5 SY			APP. SLAB @ EB2	556 SF		
UNDERSIDE OF OVERHANG	SPAN C	0.0	0.0			PC MATERIALS	SPAN C	10.6 CY		CONCRETE REPAIR	SPAN C	0.0 CF		
	SPAN D	0.0	0.0				SPAN D	10.5 CY			SPAN D	0.0 CF		
							APP. SLAB @ EB2	2.5 CY			APP. SLAB @ EB2	0.0 CF		
		ESTIMATE		ACTUAL										
UNDERSIDE EPOXY RESIN INJECTION	SPAN C		0.0 LF											
	SPAN D		0.0 LF											

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400357

SHEET 2 OF 4



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PLAN OF SPANS
 SPAN C AND D
 AND APPROACH SLAB
 EAST BOUND

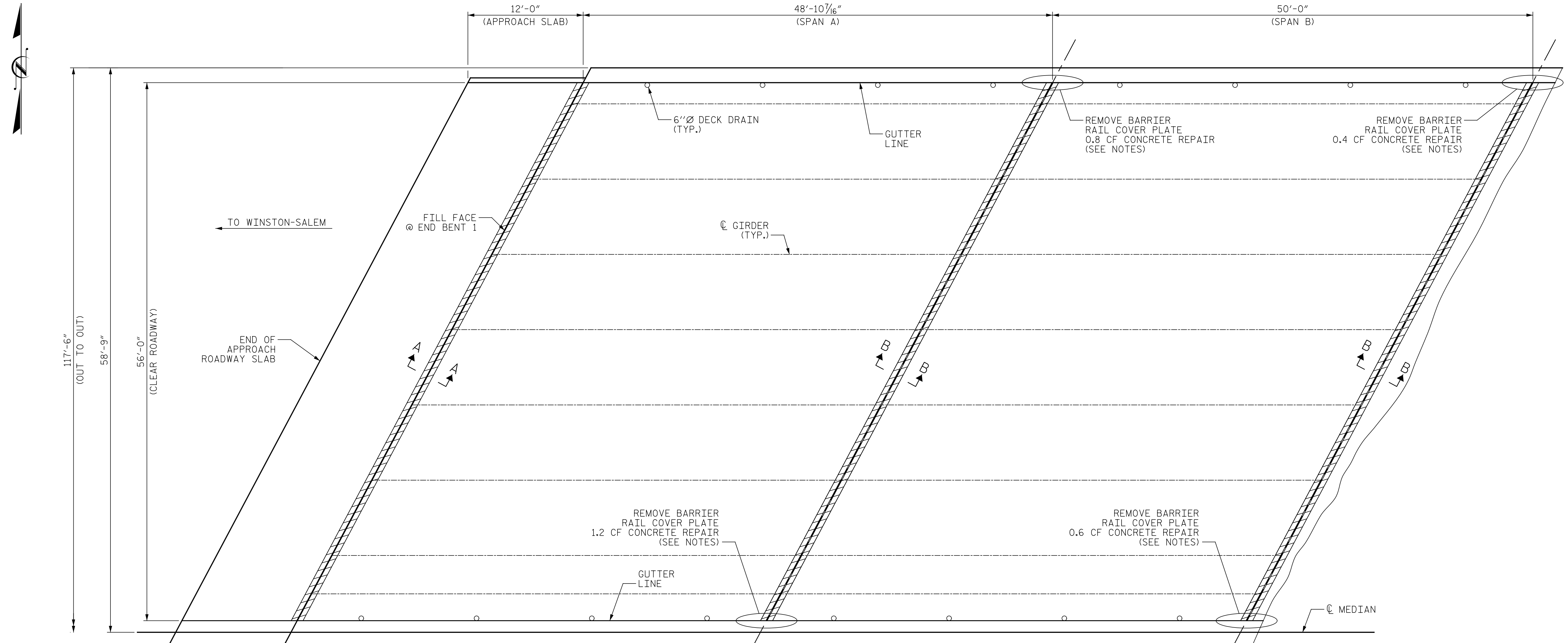
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PLAN

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

NOTES:

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

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

CONCRETE COVER FOR TOP BARS IN THE DECK SLAB IS 2 1/2" PER THE EXISTING BRIDGE PLANS.

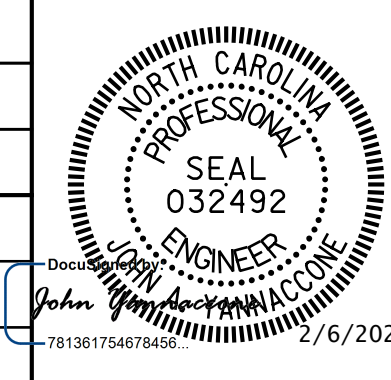
FOR SECTION A-A AND B-B, SEE "FOAM JOINT SEALS" SHEET.

AFTER REMOVAL OF THE BARRIER RAIL COVER PLATE, FILL THE RECESS IN THE BARRIER WITH A POLYMER MODIFIED CEMENT MORTAR CONFORMING TO THE CONCRETE REPAIR SPECIAL PROVISION. SHAPE THE SURFACE OF THE REPAIR TO CONFORM TO THE GEOMETRY OF THE BARRIER RAIL.

REPAIR QUANTITY TABLE													
UNDERSIDE OF DECK REPAIR					TOP OF DECK REPAIR								
SHOTCRETE REPAIRS		ESTIMATE		ACTUAL		FINE MILLING		ESTIMATE		ACTUAL			
		AREA SF	VOLUME CF	AREA SF	VOLUME CF			APP. SLAB @ EB1		PLACING AND FINISHING PC OVERLAY		ESTIMATE	ACTUAL
UNDERSIDE OF DECK	SPAN A	0.0	0.0			CLASS II SURFACE PREPARATION	APP. SLAB @ EB1	3.5 SY		GROOVING BRIDGE FLOORS	APP. SLAB @ EB1	556 SF	
	SPAN B	0.0	0.0				SPAN A	7.0 SY			SPAN A	2502 SF	
OVERHANG DIAPHRAGMS	SPAN A	0.0	0.0			PC MATERIALS	APP. SLAB @ EB1	2.5 CY		CONCRETE REPAIR	APP. SLAB @ EB1	0.0 CF	
	SPAN B	0.0	0.0				SPAN A	10.5 CY			SPAN A	1.0 CF	
UNDERSIDE OF OVERHANG	SPAN A	0.0	0.0				SPAN B	10.8 CY			SPAN B	2.0 CF	
	SPAN B	0.0	0.0										
INTERIOR DIAPHRAGMS	SPAN A	0.0	0.0										
	SPAN B	0.0	0.0										
		ESTIMATE		ACTUAL									
UNDERSIDE EPOXY RESIN INJECTION	SPAN A		0.0 LF										
	SPAN B		0.0 LF										

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400357

SHEET 3 OF 4



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PLAN OF SPANS
 SPAN A AND B
 AND APPROACH SLAB
 WEST BOUND

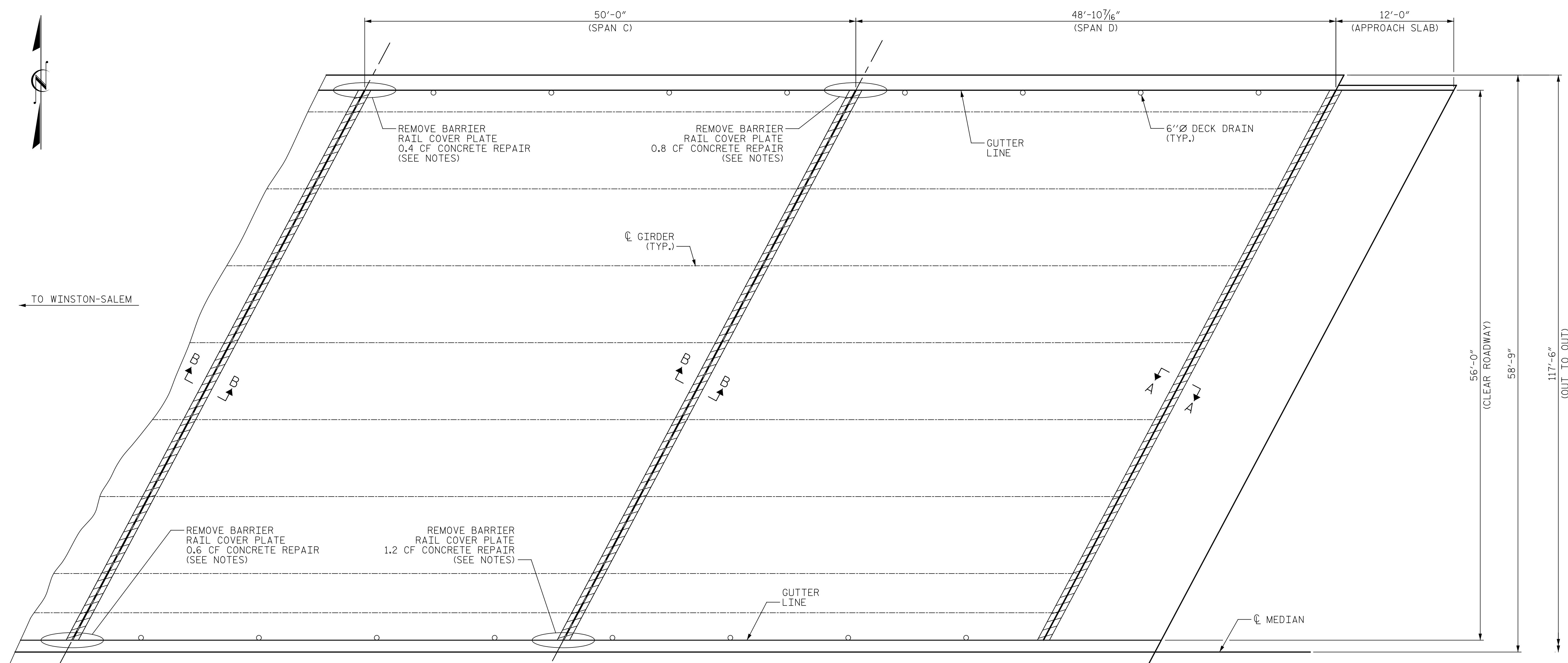
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PLAN

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

NOTES:

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

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

CONCRETE COVER FOR TOP BARS IN THE DECK SLAB IS 2 1/2" FOR THE EXISTING BRIDGE PLANS.

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

AFTER REMOVAL OF THE BARRIER RAIL COVER PLATE, FILL THE RECESS IN THE BARRIER WITH A POLYMER MODIFIED CEMENT MORTAR CONFORMING TO THE CONCRETE REPAIR SPECIAL PROVISION. SHAPE THE SURFACE OF THE REPAIR TO CONFORM TO THE GEOMETRY OF THE BARRIER RAIL.

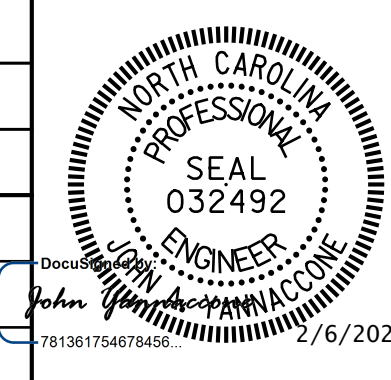
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UNDERSIDE OF DECK REPAIR					TOP OF DECK REPAIR								
SHOTCRETE REPAIRS		ESTIMATE		ACTUAL		FINE MILLING		ESTIMATE	ACTUAL	PLACING AND FINISHING PC OVERLAY		ESTIMATE	ACTUAL
		AREA SF	VOLUME CF	AREA SF	VOLUME CF								
UNDERSIDE OF DECK	SPAN C	0.0	0.0					310.5				310.5	
	SPAN D	0.0	0.0					303.2				303.2	
	APP. SLAB @ EB2							71.1				71.1	
OVERHANG DIAPHRAGMS	SPAN C	0.0	0.0					7.0				2565	
	SPAN D	0.0	0.0					7.0				2502	
	APP. SLAB @ EB2							3.5				556	
UNDERSIDE OF OVERHANG	SPAN C	0.0	0.0					10.8				2.0	
	SPAN D	0.0	0.0					10.5				1.0	
	APP. SLAB @ EB2							2.5				0.0	
INTERIOR DIAPHRAGMS	SPAN C	0.0	0.0										
	SPAN D	0.0	0.0										
	APP. SLAB @ EB2												
		ESTIMATE		ACTUAL									
UNDERSIDE EPOXY RESIN INJECTION	SPAN C		0.0	LF									
	SPAN D		0.0	LF									

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400357

SHEET 4 OF 4

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PLAN OF SPANS
 SPAN C AND D
 AND APPROACH SLAB
 WEST BOUND



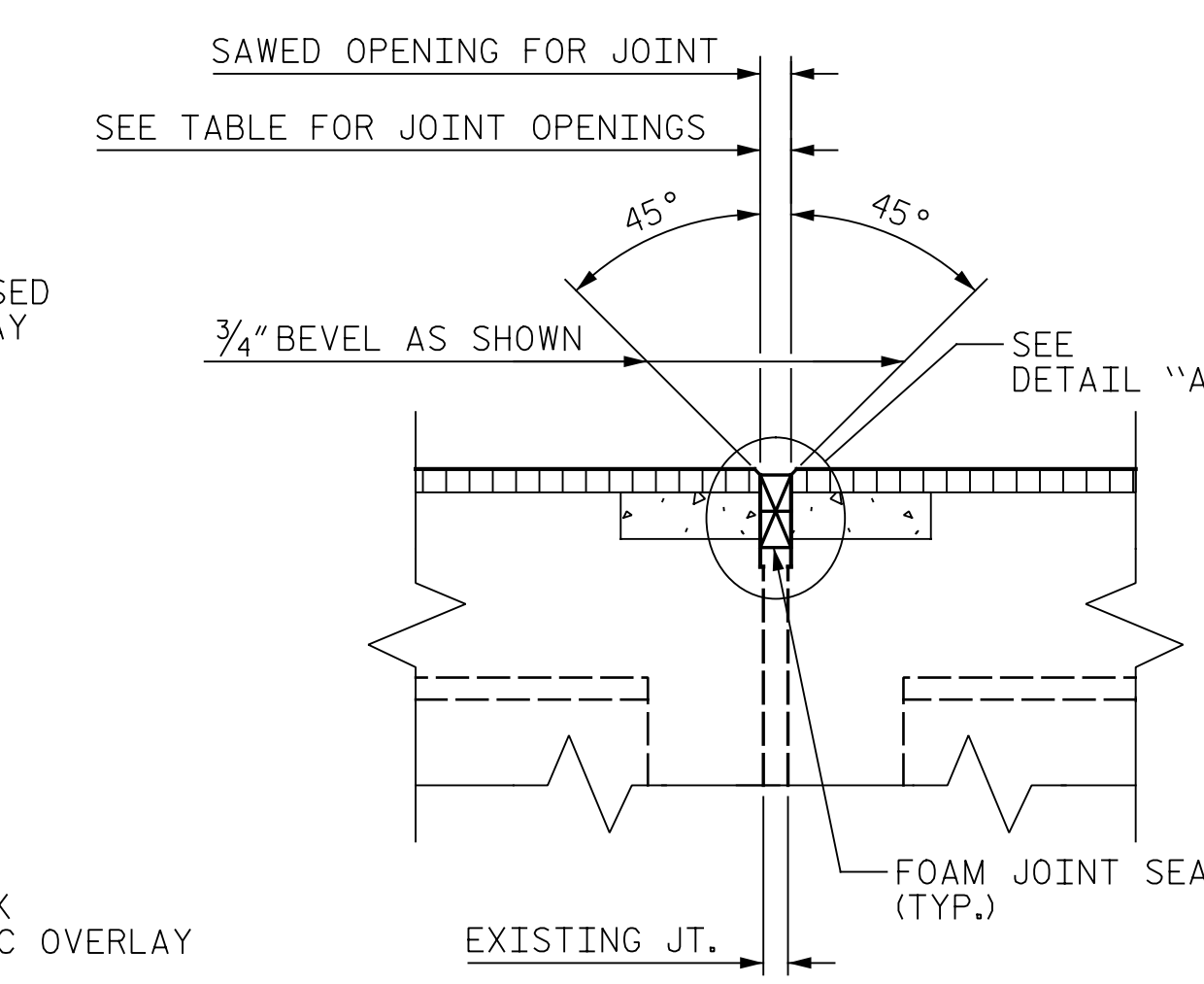
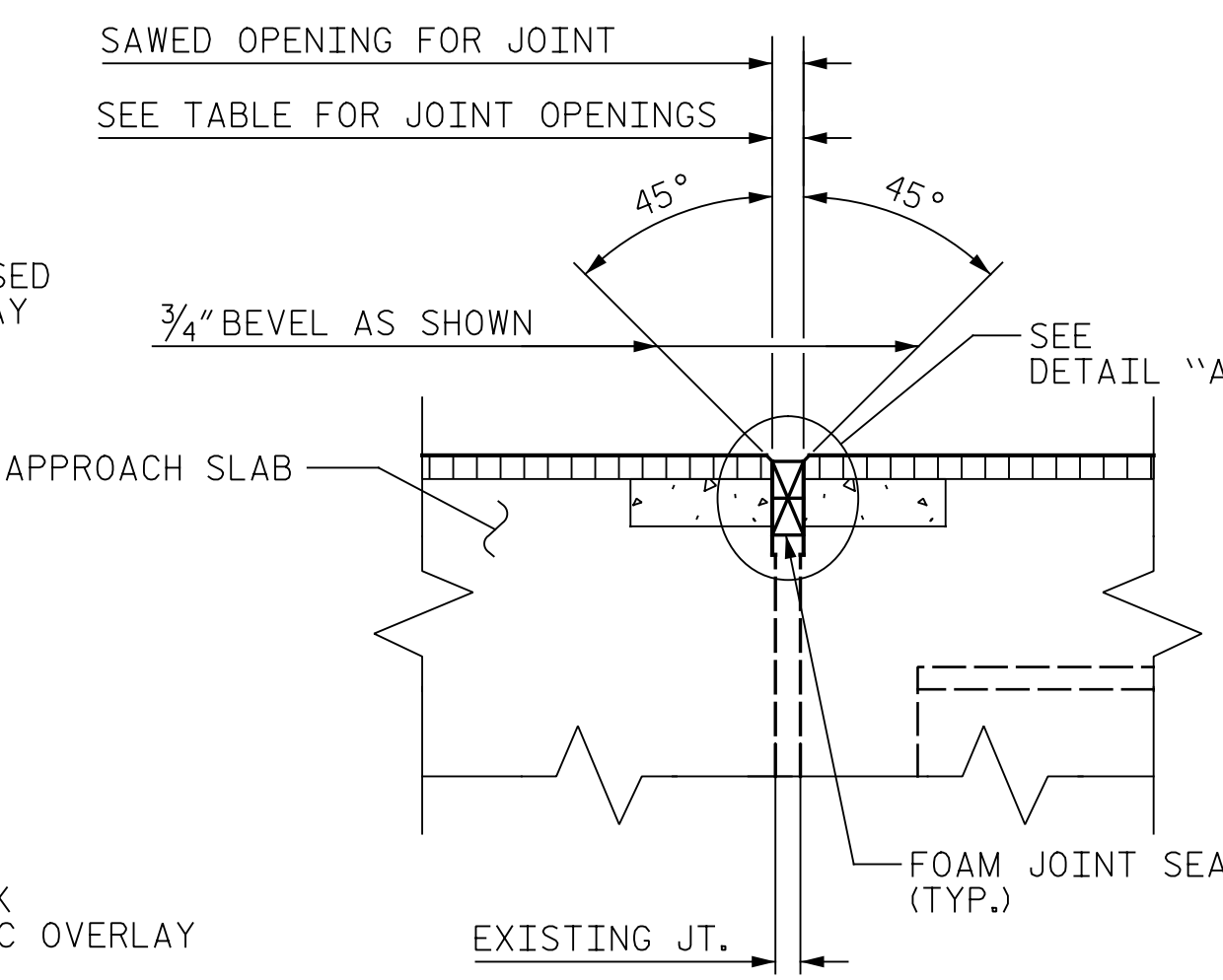
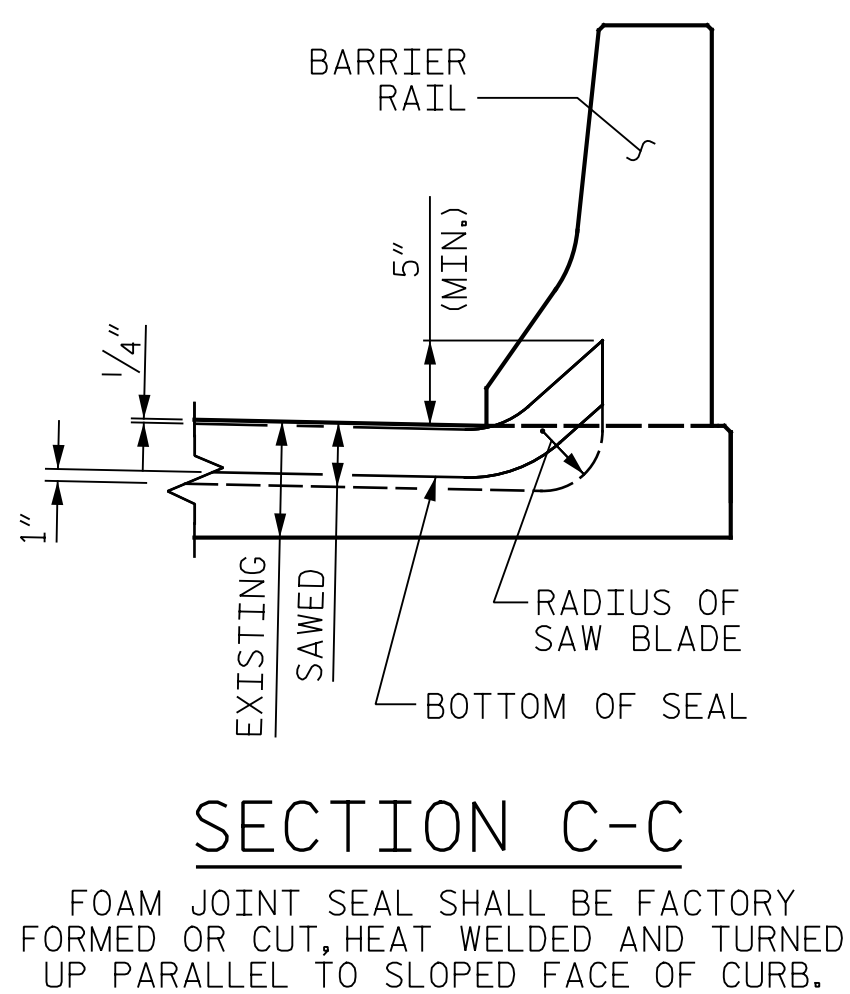
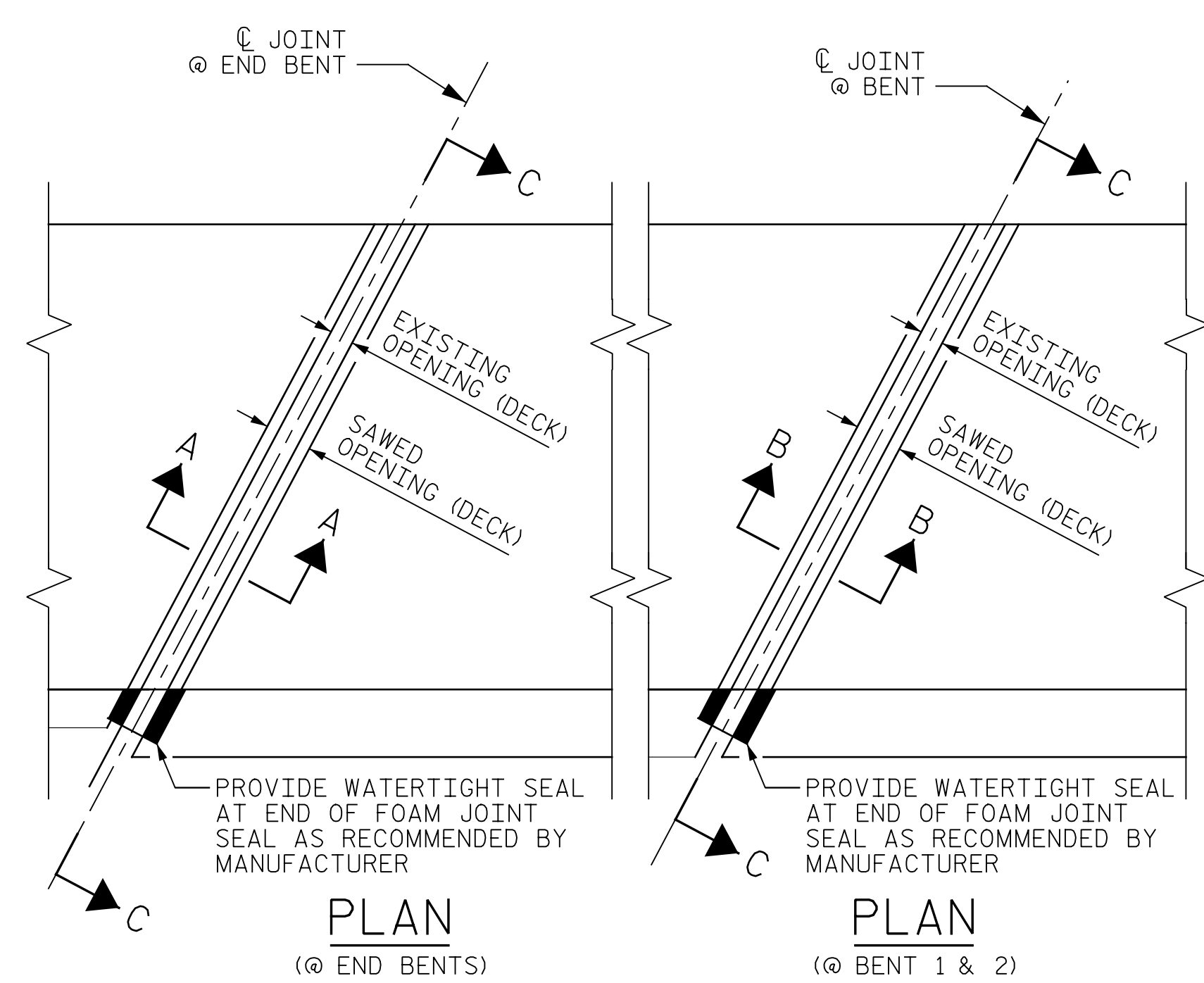
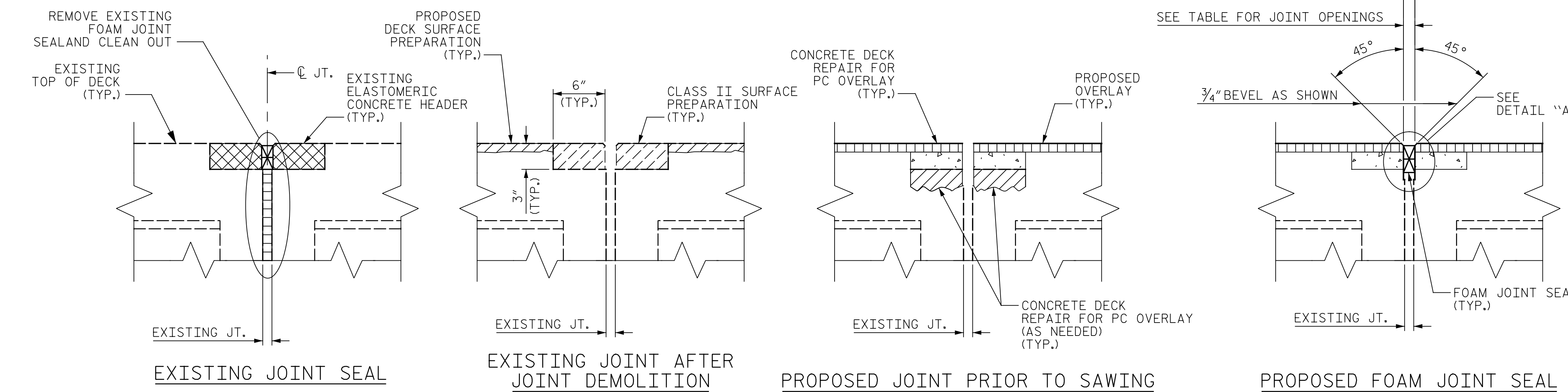
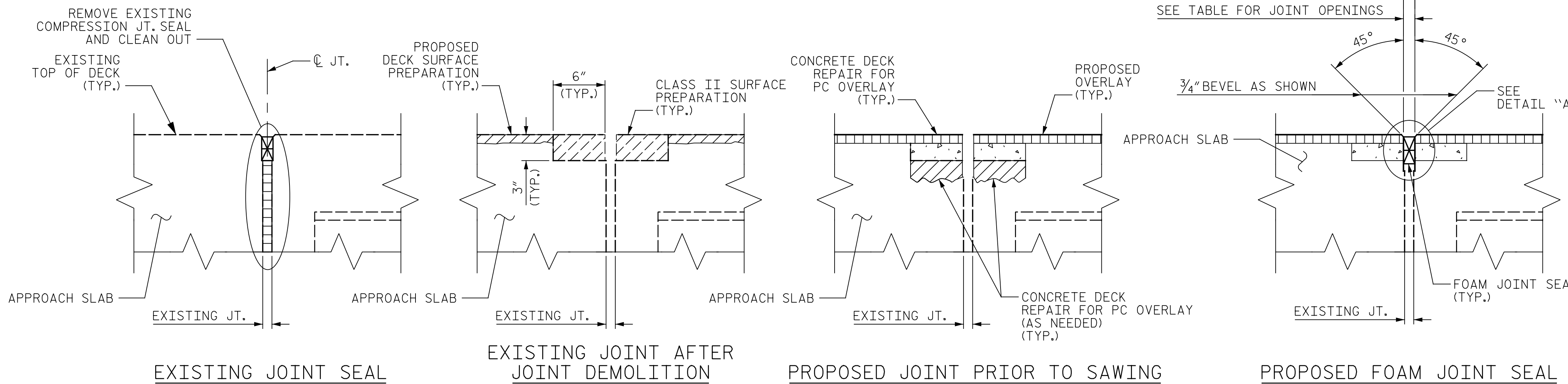
DRAWN BY: J. MYA DATE: 10/2022
 CHECKED BY: J. YANNAACONE DATE: 10/2022



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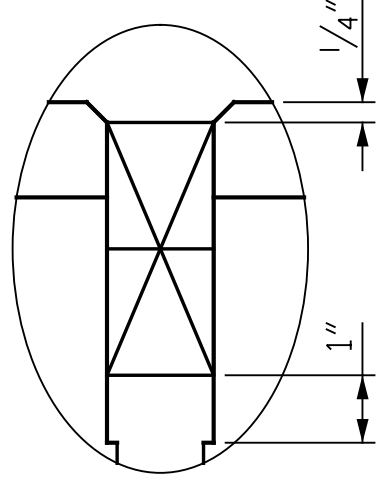
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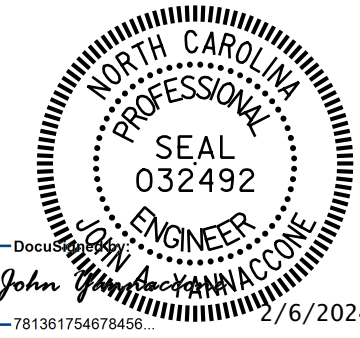
NOTES:
 FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY OR SEALANT WORK IS COMPLETE.
 THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING JOINT OPENING PRIOR TO ORDERING JOINT SEAL MATERIAL. IF THE ACTUAL JOINT OPENING VARIES FROM THE OPENING INDICATED IN THE DETAILS BY MORE THAN 1/4", NOTIFY THE ENGINEER.
 THE MANUFACTURER IS TO PROVIDE THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE FOAM JOINT SEAL FOR THE SIZE OF THE OPENING ON THE PLANS AND ACCOMMODATE THE MINIMUM EXPANSION SHOWN ON THE PLANS.
 FOAM JOINTS SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS.
 THE CONTRACTOR SHALL TAKE CARE DURING JOINT REHAB OPERATIONS NOT TO DROP ANY MATERIAL BELOW THE BRIDGE WITHOUT PROTECTIVE DEVICES BELOW TO CATCH THE MATERIAL. ANY MATERIAL THAT FALLS BELOW THE BRIDGE SHALL BE CONTAINED, REMOVED AND DISPOSED OF BY THE CONTRACTOR AT NO EXTRA COST TO THE DEPARTMENT. IF THE ENGINEER DETERMINES THAT THE PROTECTIVE DEVICES ARE NOT ADEQUATE OR NOT BEING EMPLOYED, THE WORK SHALL BE SUSPENDED UNTIL ADEQUATE PROTECTION IS PROVIDED.
 THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT IN LIEU OF SAWING THE JOINT.
 THE INSTALLED FOAM JOINTS SHALL BE WATERTIGHT.
 THE CONTRACTOR SHALL SAW CUT 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.

QUANTITIES SHOWN IN THE ELASTOMERIC CONCRETE FOR PRESERVATION TABLE ARE BASED ON THE MINIMUM JOINT DEMOLITION SHOWN.
 FOR EXCAVATION BELOW THE BOTTOM OF PLANNED JOINT DEMOLITION, CONCRETE FOR DECK REPAIR SHALL BE PLACED IN THE EXCAVATED AREA TO THE ELEVATION AT THE BOTTOM OF THE PROPOSED ELASTOMERIC CONCRETE FOR PRESERVATION HEADERS SHOWN.
 FOR CLASS II SURFACE PREPARATION, SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.
 FOR CONCRETE DECK REPAIR FOR PC OVERLAY, SEE SPECIAL PROVISIONS.
 NO SEPARATE PAYMENT WILL BE MADE FOR REMOVING THE EXISTING MEDIAN AND BARRIER RAIL COVER PLATES. THE ENTIRE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR "FOAM JOINT SEALS FOR PRESERVATION".
 CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAPS AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAPS. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAPS BENEATH THE ELASTOMERIC BEARINGS. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.



LOCATION		SAWED JT. OPENING TABLE (PERPENDICULAR TO JT.)		
		AT 45°	AT 60°	AT 90°
EAST BOUND LANES	END BENT 1	1 9/16"	1 9/16"	1 9/16"
	END BENT 2	1 9/16"	1 9/16"	1 9/16"
WEST BOUND LANES	END BENT 1	1 15/16"	1 15/16"	1 15/16"
	BENT 1	2"	1 15/16"	1 7/8"
	BENT 2	2"	1 15/16"	1 3/4"
	BENT 3	2 1/16"	1 15/16"	1 3/4"
	END BENT 2	1 15/16"	1 15/16"	1 15/16"

SUMMARY OF QUANTITIES							
LOCATION		FOAM JOINT SEALS FOR PRESERVATION		CONCRETE DECK REPAIR FOR PC OVERLAY		EPOXY COATING	
		ESTIMATED (LIN. FT.)	ACTUAL (LIN. FT.)	ESTIMATED (SQ. YDS.)	ACTUAL (SQ. YDS.)	ESTIMATED (SQ. FT.)	ACTUAL (SQ. FT.)
EAST BOUND LANES	END BENT 1	65.5		7.0		134	
	END BENT 2	65.5		7.0		134	
WEST BOUND LANES	END BENT 1	65.5		7.0		134	
	BENT 1	65.5		7.0		266	
	BENT 2	65.5		7.0		266	
	BENT 3	65.5		7.0		266	
	END BENT 2	65.5		7.0		134	



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



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REPAIR INSTALLATION PROCEDURE

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

LAY THE NEW GLAND ON THE BASE ANGLE AND FIELD MARK THE NEW GLAND FOR THE BOLT HOLES. HOLES IN THE NEW GLAND SHALL BE PUNCHED $\frac{1}{8}$ " IN DIAMETER WITH A HAND PUNCH.

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

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

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

GENERAL NOTES

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

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

THE FINISHED EXPANSION SEAL DEVICE SHALL BE A MINIMUM $\frac{1}{8}$ " AND A MAXIMUM OF $\frac{1}{4}$ " BELOW THE TOP OF SLAB.

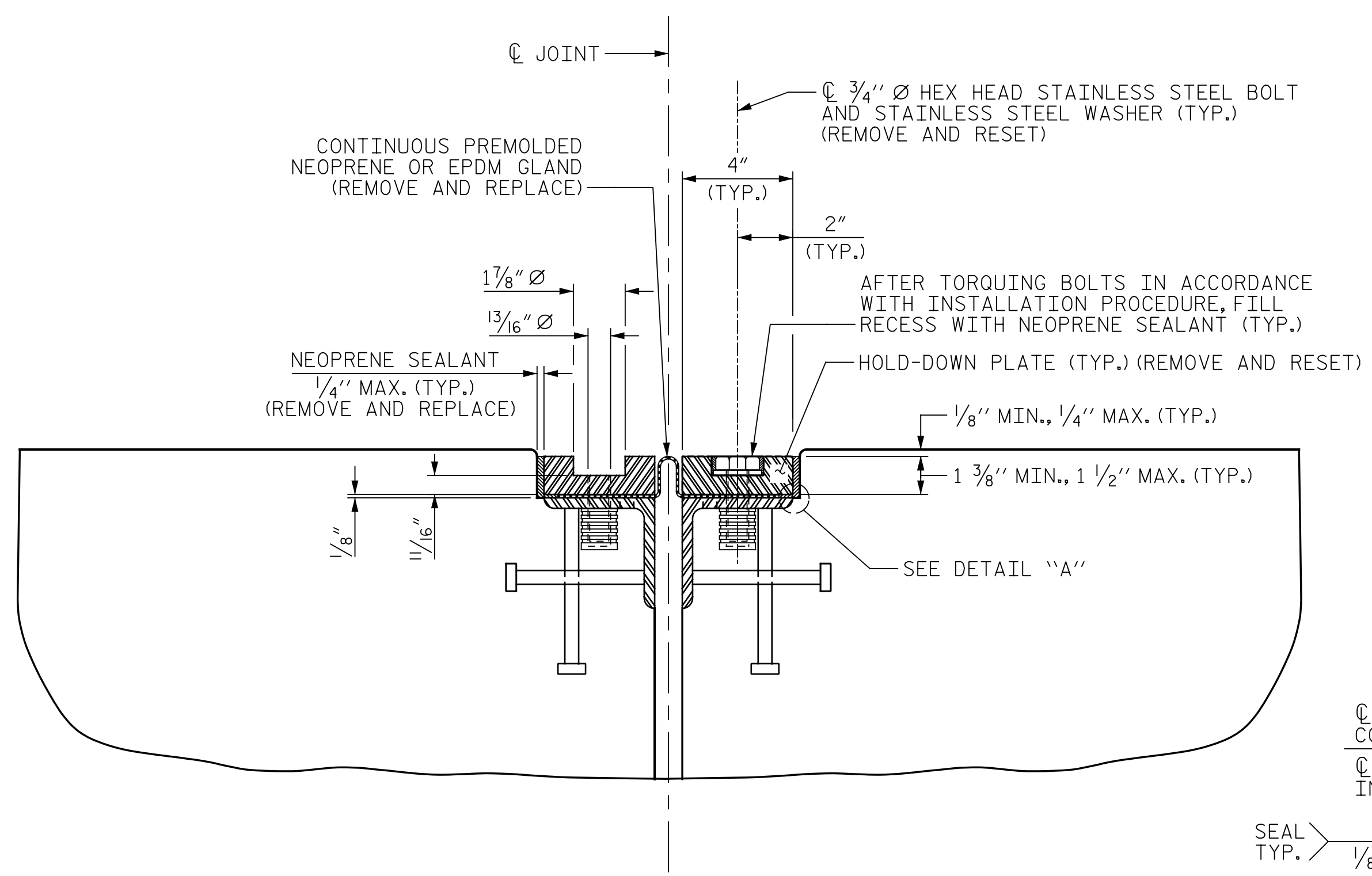
FOR EXPANSION JOINT SEAL REPAIR, SEE SPECIAL PROVISIONS.

FOR COVER PLATE REPLACEMENT LOCATIONS, SEE "PLAN OF SPAN" SHEETS.

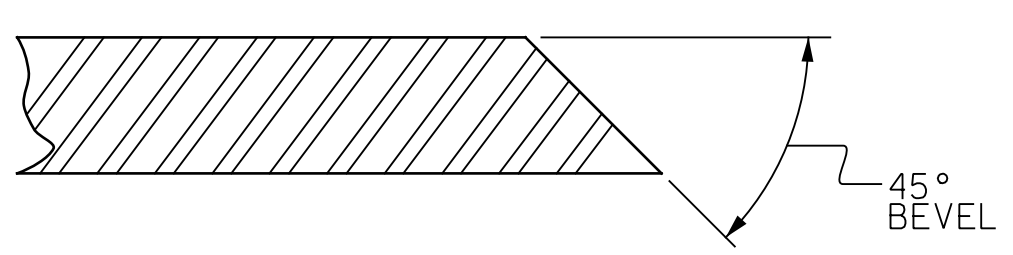
NO SEPARATE PAYMENT WILL BE MADE FOR REMOVING AND REINSTALLING OR REPLACING THE MEDIAN RAIL COVER PLATES AND BACKING PLATE. THE ENTIRE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR "EXPANSION JOINT SEAL REPAIR".

THE PROPOSED COVER PLATE SHALL BE BOLTED INTO PLACE USING THE EXISTING CONCRETE INSERTS. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE INSERTS AFTER THE EXISTING COVER PLATE IS REMOVED. IF THE INSERTS ARE UNSUITABLE FOR REUSE, THE CONTRACTOR SHALL BE PREPARED TO REMOVE THE EXISTING CONCRETE INSERTS AND PATCH THE RESULTING VOIDS, THEN DRILL, INSERT AND ADHESIVELY ANCHOR $\frac{3}{4}$ " THREADED BOLTS FOR ATTACHMENT OF THE PROPOSED COVER PLATE.

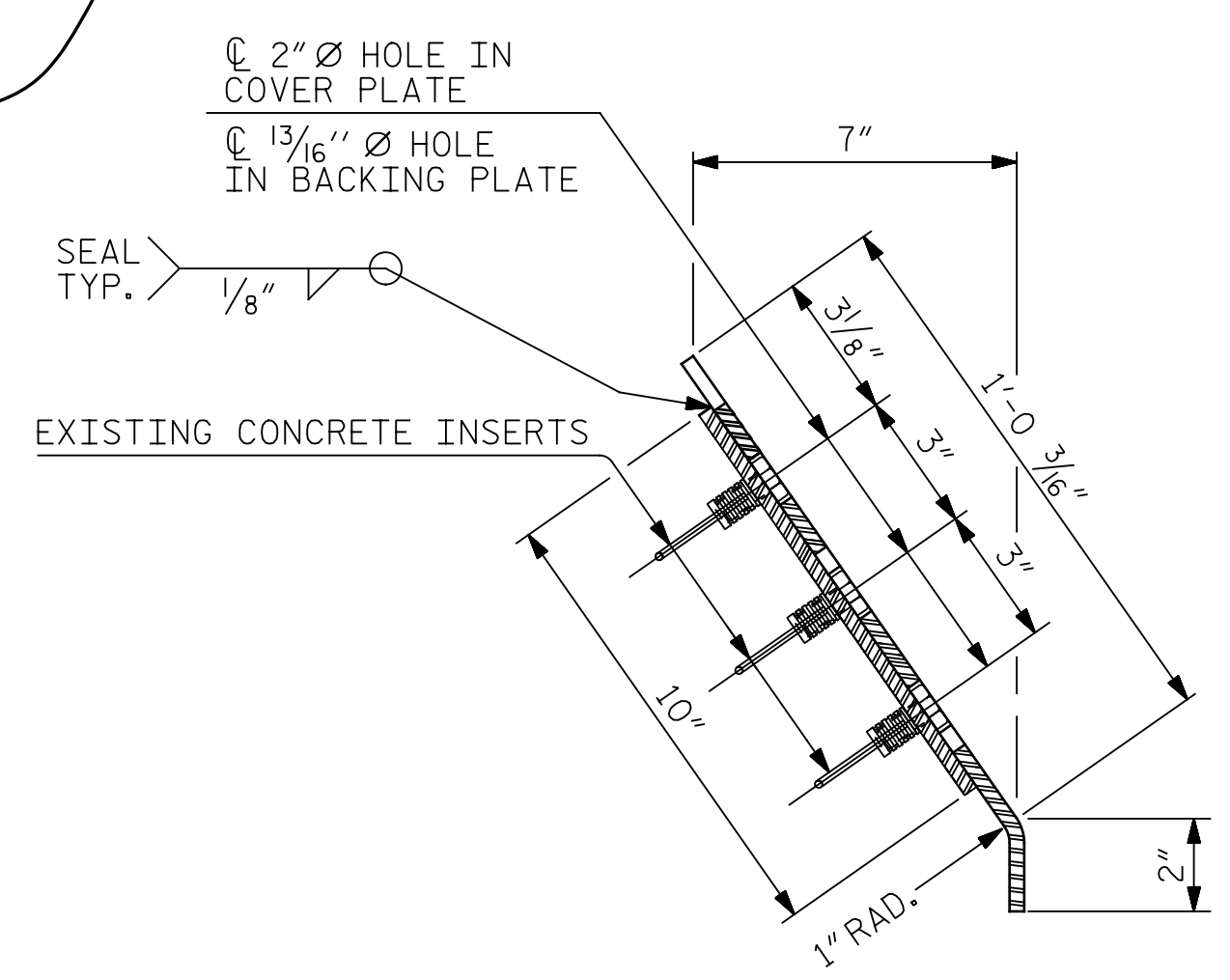
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAPS AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAPS. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAPS BENEATH THE ELASTOMERIC BEARINGS. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.



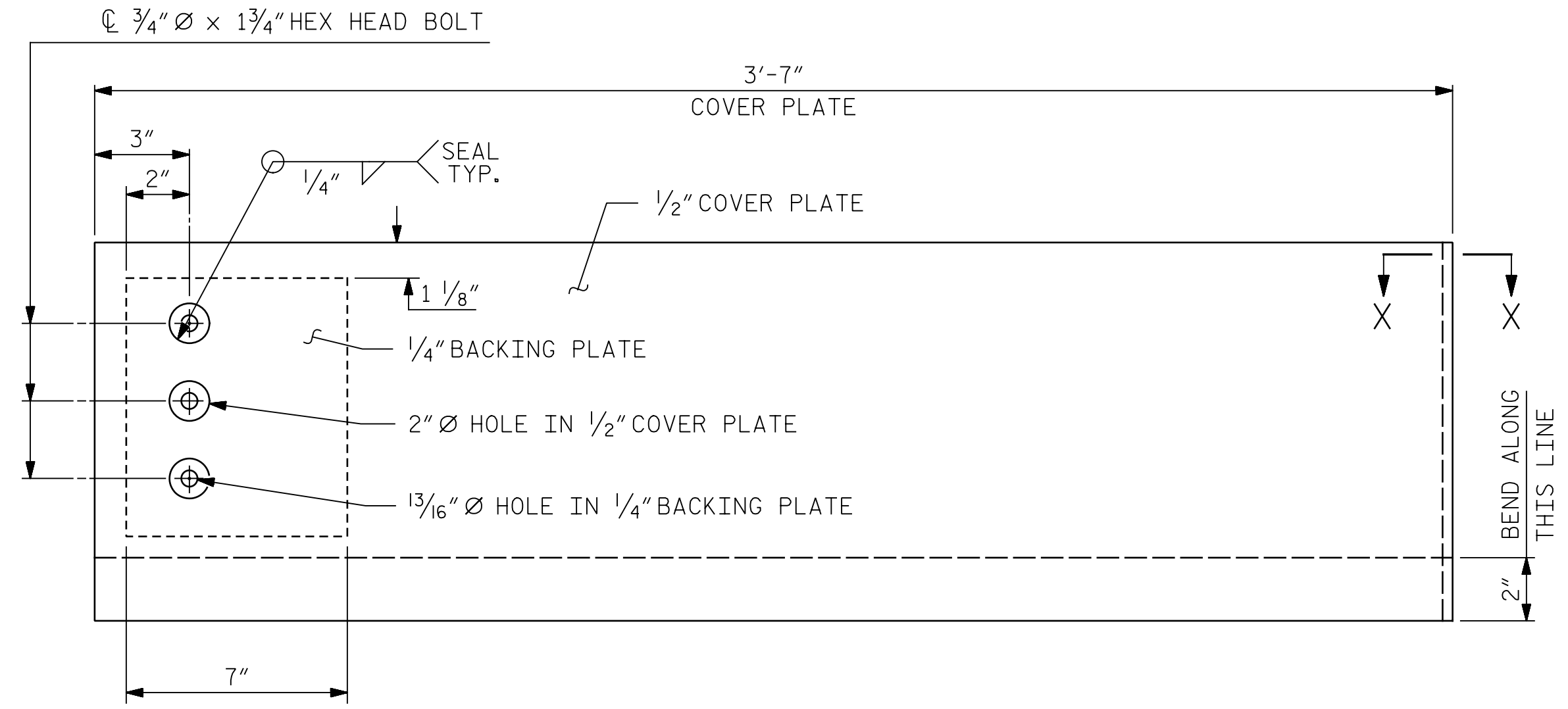
SECTION E-E
SECTION NORMAL TO JOINT -- STEEL SUPERSTRUCTURE



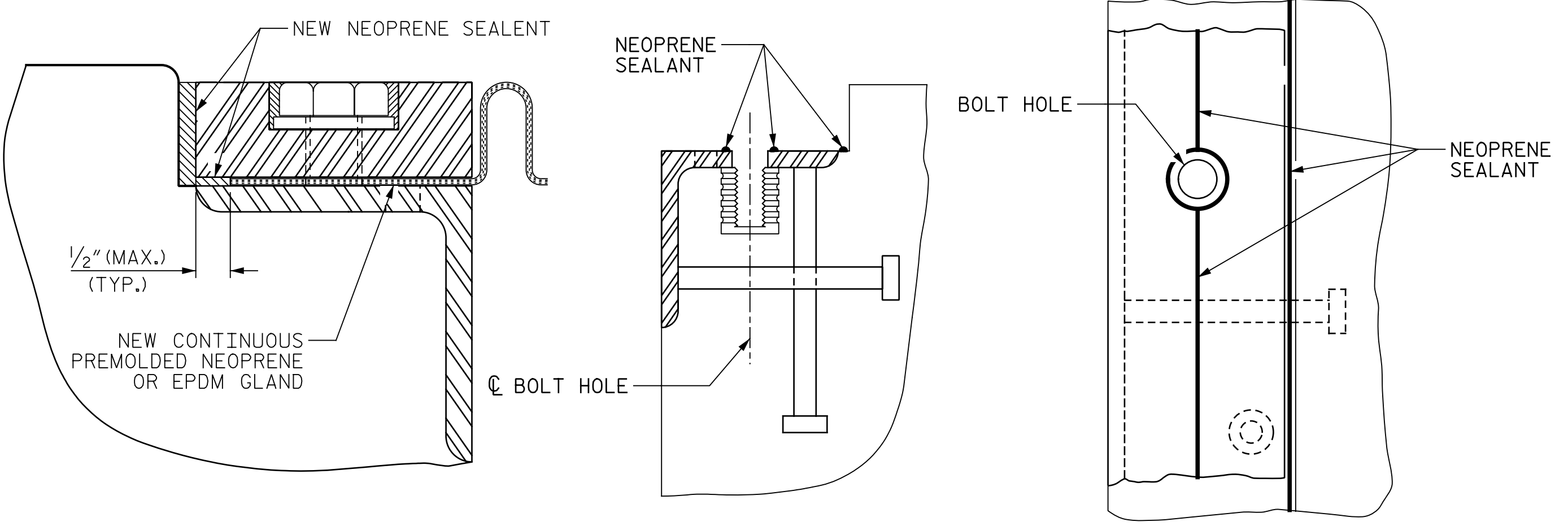
SECTION X-X



END VIEW



COVER PLATE DETAILS



DETAIL A

CROSS SECTION

CROSS SECTION

INSTALLATION SKETCH

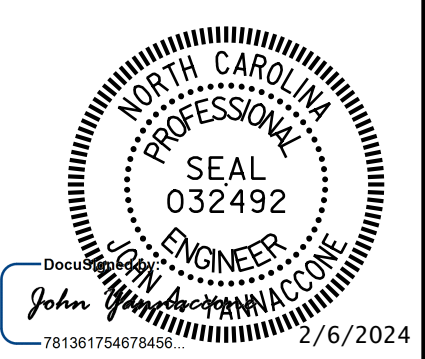
MOVEMENT AND SETTING AT JOINT

	SKW ANGLE	TOTAL MOVEMENT (ALONG CL RDWY)	PERPENDICULAR JOINT OPENING AT 45° F	PERPENDICULAR JOINT OPENING AT 60° F	PERPENDICULAR JOINT OPENING AT 90° F
BENT 1	118°-00'-00"	5/16"	1 5/8"	1 9/16"	1 1/2"
BENT 2	118°-00'-00"	5/16"	1 3/8"	1 5/16"	1 1/4"
BENT 2	118°-00'-00"	5/8"	1 1/2"	1 7/16"	1 1/4"

SUMMARY OF QUANTITIES

LOCATION (EAST BOUND LANES)	EXPANSION JOINT SEAL REPAIR		EPOXY COATING	
	ESTIMATED (LIN. FT)	ACTUAL (LIN. FT)	ESTIMATED (SQ. FT)	ACTUAL (SQ. FT)
BENT 1	65.5		266	
BENT 2	65.5		266	
BENT 3	65.5		266	

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400357



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

EXPANSION JOINT SEAL DETAILS

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



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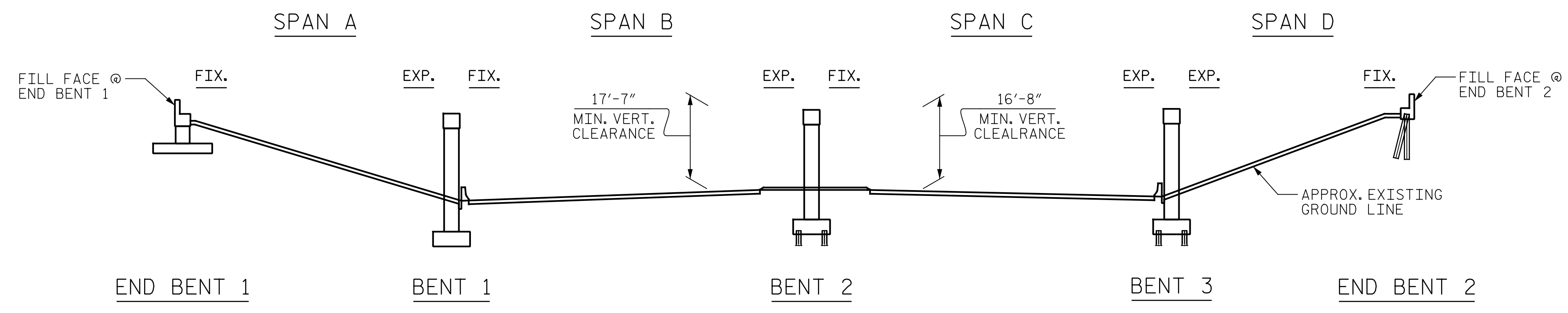
NOTE:
 GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 07/19/2022.
 BRIDGE ORIENTATION CONFORMS TO THE EXISTING BRIDGE PLANS AND ROUTINE INSPECTION REPORT.

- SCOPE OF WORK**
- REPOSITION SOLE PLATES AND BEARING PADS.
 - PARTIALLY REMOVE TOP OF BRIDGE DECK CONCRETE BY FINE MILLING AND SHOTBLASTING METHODS.
 - OVERLAY PREPARED TOP OF BRIDGE DECK WITH POLYMER CONCRETE (PC).
 - GROOVE PC BRIDGE DECK.
 - REPLACE EXISTING JOINT GLAND OF EXPANSION JOINT SEAL.
 - REMOVE EXISTING COMPRESSION JOINT SEALS AND INSTALL FOAM JOINT SEALS.
 - CLEAN AND PAINT EXISTING WEATHERING STEEL BEAM ENDS.
 - REMOVE DEBRIS FROM TOP OF EXISTING END BENT AND BENT CAPS AND APPLY EPOXY COATING.

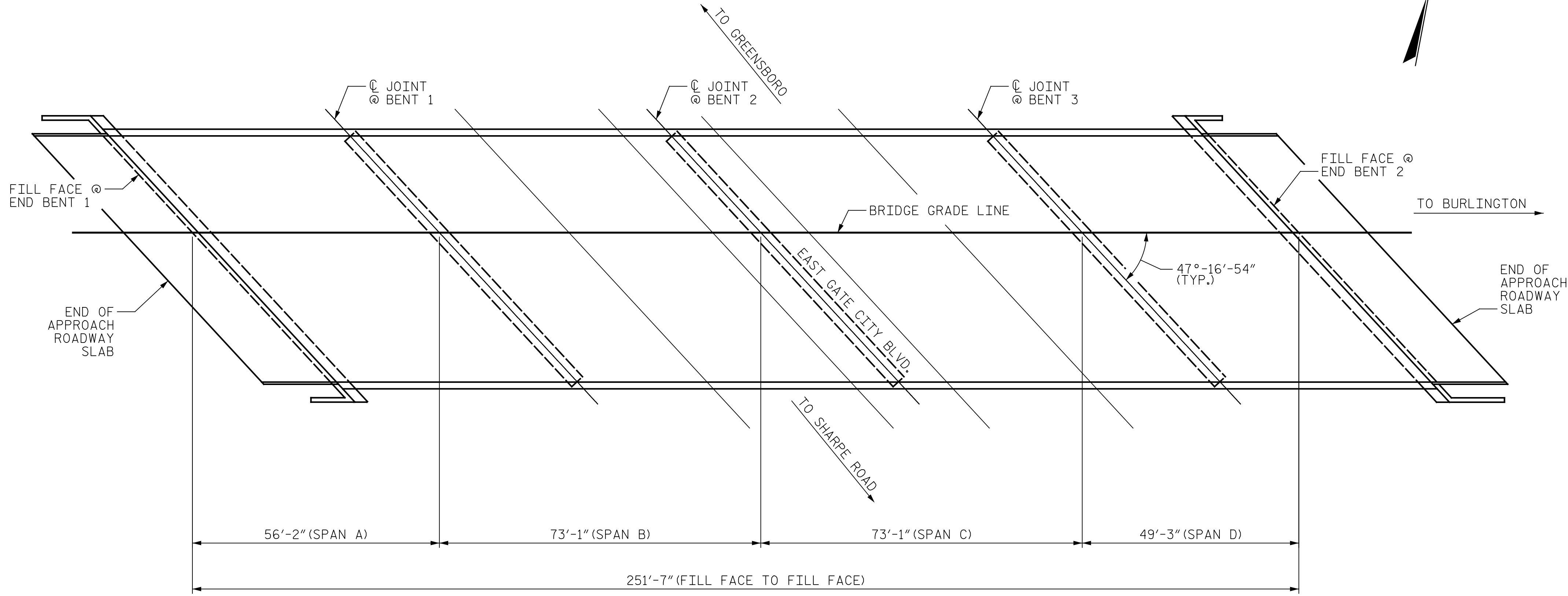
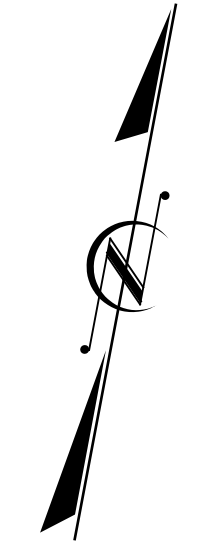
CONSTRUCTION SEQUENCE
 ALL WORK REQUIRING BRIDGE JACKING SHALL BE COMPLETED BEFORE ANY JOINT REPAIRS OR GIRDER END PAINTING BEGINS.

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

RESIDENT ENGINEER _____ DATE _____



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



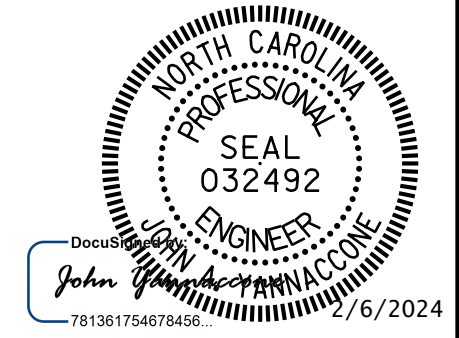
PLAN
 (PILES NOT SHOWN FOR CLARITY)

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400364

SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 FOR BRIDGE ON I-40 EBL OVER
 SR 4240 (EAST GATE CITY
 BOULEVARD)



DRAWN BY : T. HARTLEY 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.

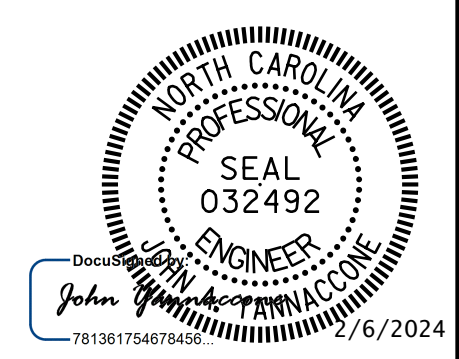
BRIDGE COORDINATES	
LATITUDE	LONGITUDE
36°-03'-06.13"	79°-44'-05.24"

GENERAL NOTES

- SEE TRANSPORTATION MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION AND POLYMER CONCRETE (PC) PLACEMENT.
- 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.
- THE ELEVATIONS AND CLEARANCES SHOWN ON THE PLANS AT THE POINTS OF MINIMUM VERTICAL CLEARANCE ARE FROM THE BEST INFORMATION AVAILABLE. PRIOR TO BEGINNING BRIDGE CONSTRUCTION, VERIFY THE ELEVATIONS ON THE EXISTING PAVEMENT AND CHECK THE CLEARANCE. REPORT ANY VARIATIONS TO THE ENGINEER. ANY PLAN REVISIONS NECESSARY TO ACHIEVE THE REQUIRED MINIMUM VERTICAL CLEARANCE WILL BE PROVIDED BY THE DEPARTMENT.
- 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 CLASS II SURFACE PREPARATION, SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.
- FOR FINE MILLING, SEE SPECIAL PROVISIONS.
- FOR CONCRETE DECK REPAIR FOR PC OVERLAY, PC MATERIALS, AND PLACING AND FINISHING PC OVERLAY, SEE POLYMER CONCRETE BRIDGE DECK OVERLAY SPECIAL PROVISION.
- FOR EXPANSION JOINT SEAL REPAIRS, SEE SPECIAL PROVISIONS.
- FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.
- FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.
- FOR PAINTING EXISTING WEATHERING STEEL STRUCTURE, SEE SPECIAL PROVISIONS.
- FOR PAINTING CONTAINMENT AND POLLUTION CONTROL, SEE PAINTING EXISTING WEATHERING STEEL STRUCTURE SPECIAL PROVISION.
- FOR REPOSITIONING BEARINGS, SEE SPECIAL PROVISIONS.

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400364

SHEET 2 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 FOR BRIDGE ON I-40 EBL OVER
 SR 4240 (EAST GATE CITY
 BOULEVARD)

DRAWN BY : T. HARTLEY DATE : 10/2022
 CHECKED BY : J. YANNACCONE DATE : 10/2022

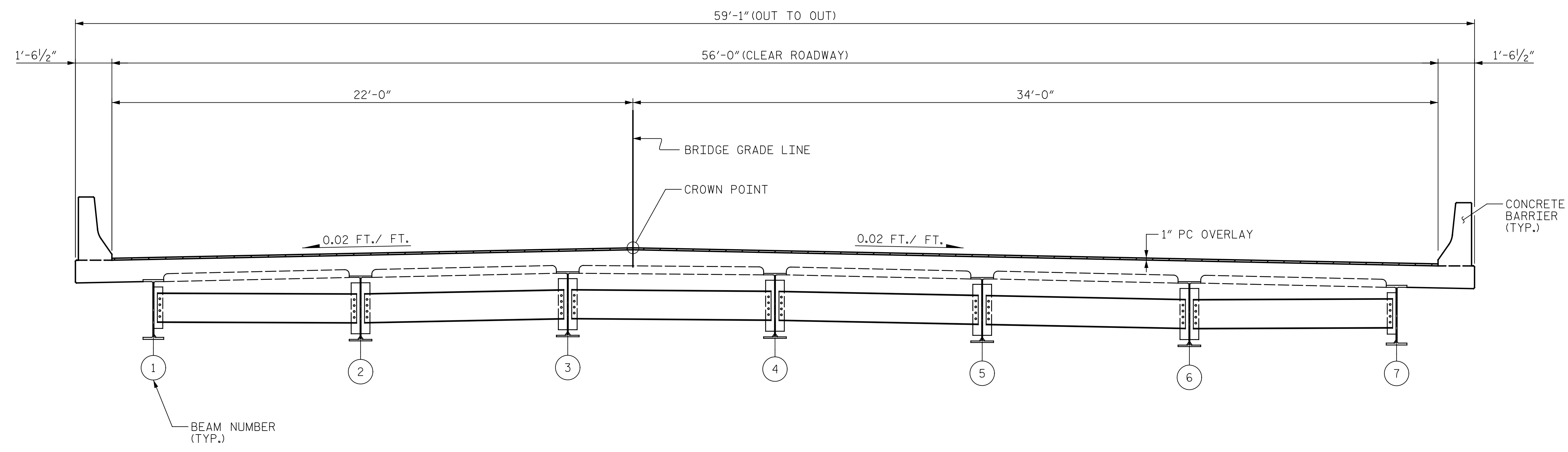


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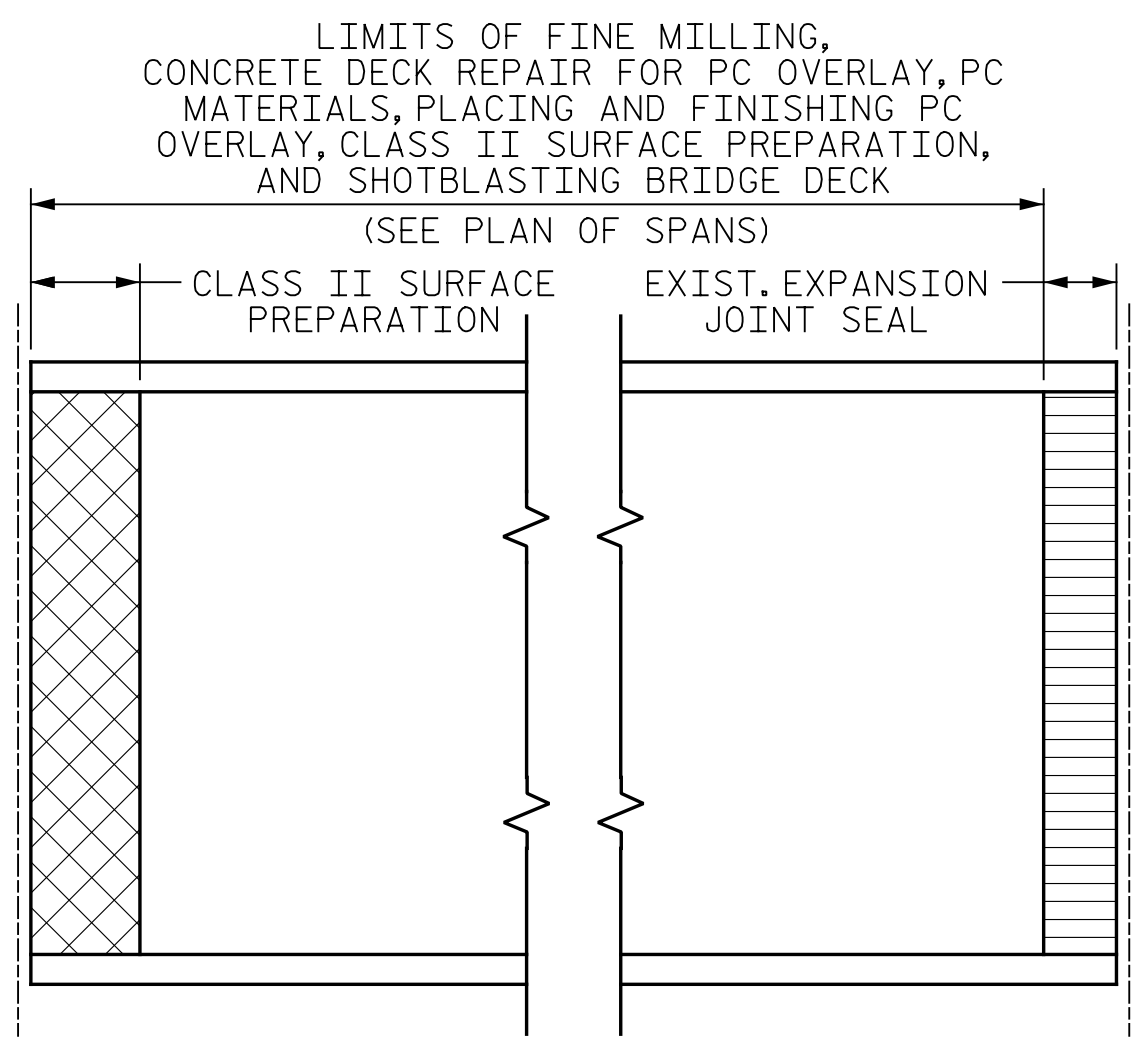
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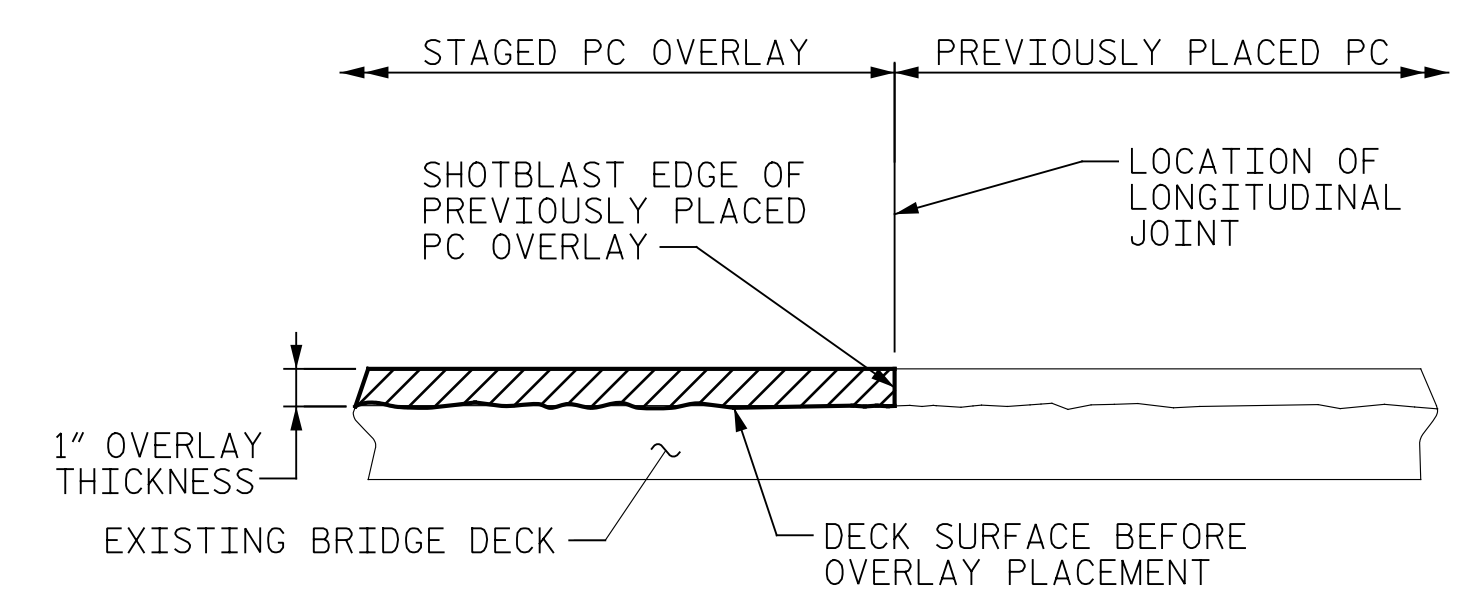
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 SEE TRANSPORTATION MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION AND PC PLACEMENT.



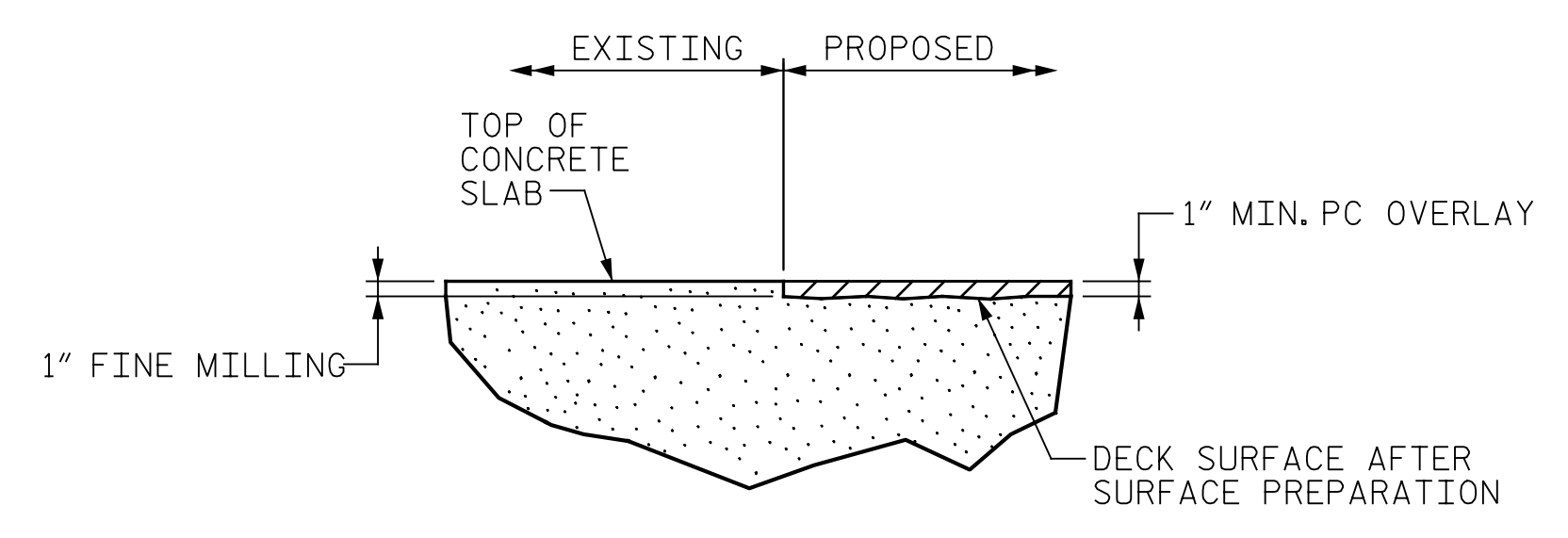
TYPICAL SECTION
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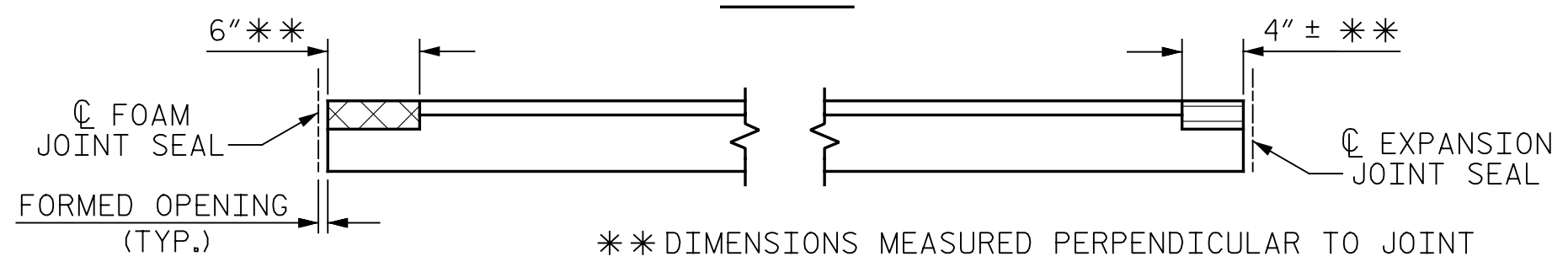
PLAN



STAGED PC OVERLAY CONSTRUCTION JOINT



DETAIL OF POLYMER CONCRETE OVERLAY

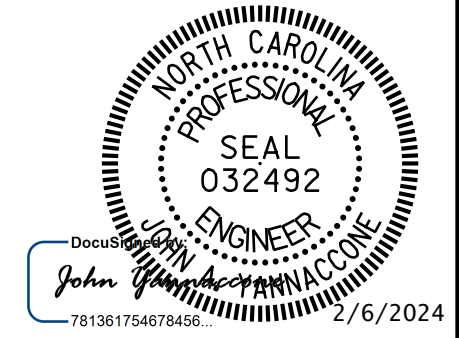


** DIMENSIONS MEASURED PERPENDICULAR TO JOINT



ELEVATION

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400364



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

PAY LIMITS FOR OVERLAY BID ITEMS

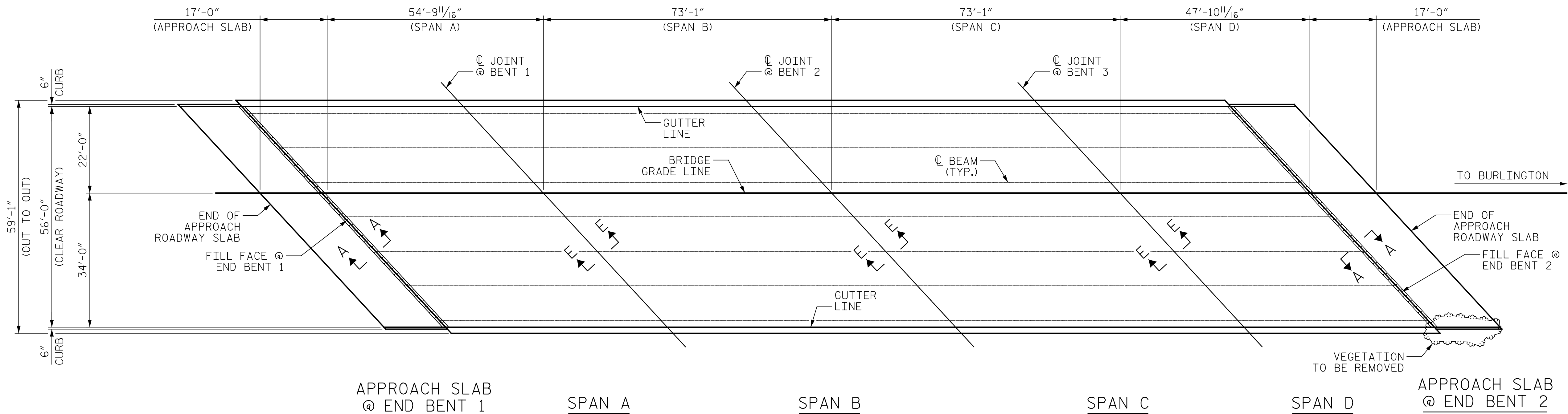
DRAWN BY: J. HARRIS DATE: 10/2022
 CHECKED BY: J. YANNAACONE DATE: 10/2022



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PLAN

REPAIR QUANTITY TABLE								
TOP OF DECK REPAIR				UNDERSIDE OF DECK REPAIR				
		ESTIMATE	ACTUAL		ESTIMATE		ACTUAL	
				SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
FINE MILLING	APPR. SLAB @ EB1	101.5 SY		UNDERSIDE OF DECK	SPAN A	0.0	0.0	
	SPAN A	336.9 SY			SPAN B	0.0	0.0	
	SPAN B	447.9 SY			SPAN C	0.0	0.0	
	SPAN C	447.9 SY			SPAN D	0.0	0.0	
	APPR. SLAB @ EB2	101.5 SY			SPAN A	0.0	0.0	
CLASS II SURFACE PREPARATION	APPR. SLAB @ EB1	4.2 SY		OVERHANG DIAPHRAGMS	SPAN B	0.0	0.0	
	SPAN A	4.2 SY			SPAN C	0.0	0.0	
	SPAN B	0.0 SY			SPAN D	0.0	0.0	
	SPAN C	0.0 SY			SPAN A	0.0	0.0	
	SPAN D	4.2 SY			SPAN B	0.0	0.0	
PC MATERIALS	APPR. SLAB @ EB2	4.2 SY		UNDERSIDE OF OVERHANG	SPAN C	0.0	0.0	
	APPR. SLAB @ EB1	3.5 CY			SPAN D	0.0	0.0	
	SPAN A	11.7 CY			SPAN A	0.0	0.0	
	SPAN B	15.6 CY			SPAN B	0.0	0.0	
	SPAN C	15.6 CY			SPAN C	0.0	0.0	
PLACING AND FINISHING PC OVERLAY	SPAN D	10.2 CY		INTERIOR DIAPHRAGMS	SPAN D	0.0	0.0	
	APPR. SLAB @ EB2	3.5 CY			SPAN A	0.0	0.0	
	APPR. SLAB @ EB1	101.5 SY			SPAN B	0.0	0.0	
	SPAN A	336.9 SY			SPAN C	0.0	0.0	
	SPAN B	447.9 SY			SPAN D	0.0	0.0	
GROOVING BRIDGE FLOORS	SPAN C	447.9 SY		UNDERSIDE EPOXY RESIN INJECTION	SPAN A	0.0 LF		
	SPAN D	293.8 SY			SPAN B	0.0 LF		
	APPR. SLAB @ EB2	101.5 SY			SPAN C	0.0 LF		
	APPR. SLAB @ EB1	805 SF			SPAN D	0.0 LF		
	SPAN A	2810 SF						
	SPAN B	3791 SF						
	SPAN C	3791 SF						
	SPAN D	2443 SF						
	APPR. SLAB @ EB2	805 SF						

NOTES:

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

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

CONCRETE COVER FOR TOP BARS IN THE DECK SLAB IS 2 1/2" PER THE EXISTING BRIDGE PLANS.

FOR SECTION A-A, SEE "FOAM JOINT SEALS" SHEET.

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

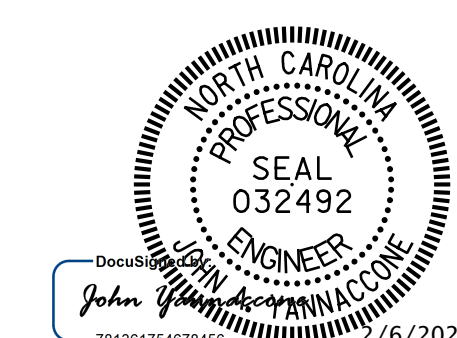
FOR REMOVAL OF VEGETATION, SEE EPOXY COATING AND DEBRIS REMOVAL SPECIAL PROVISION.

FINE MILLING AND SHOTBLASTING OF BRIDGE DECK

CLASS II SURFACE PREPARATION

UNDERSIDE OF DECK REPAIR

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400364



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PLAN OF SPANS

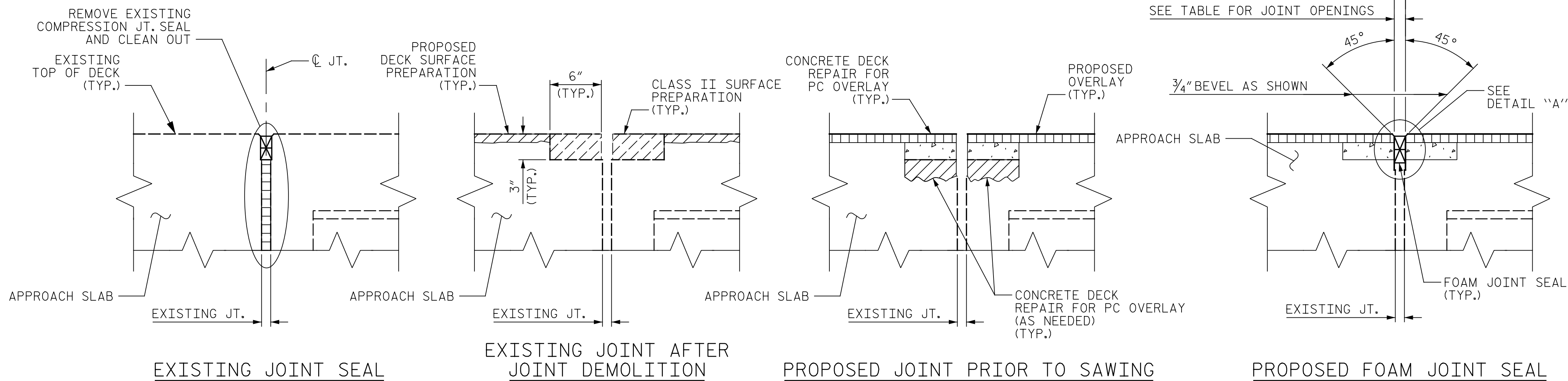
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 CHECKED BY: J. YANNAACONE DATE: 10/2022



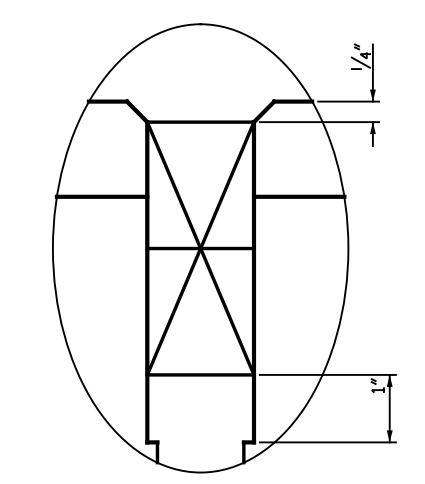
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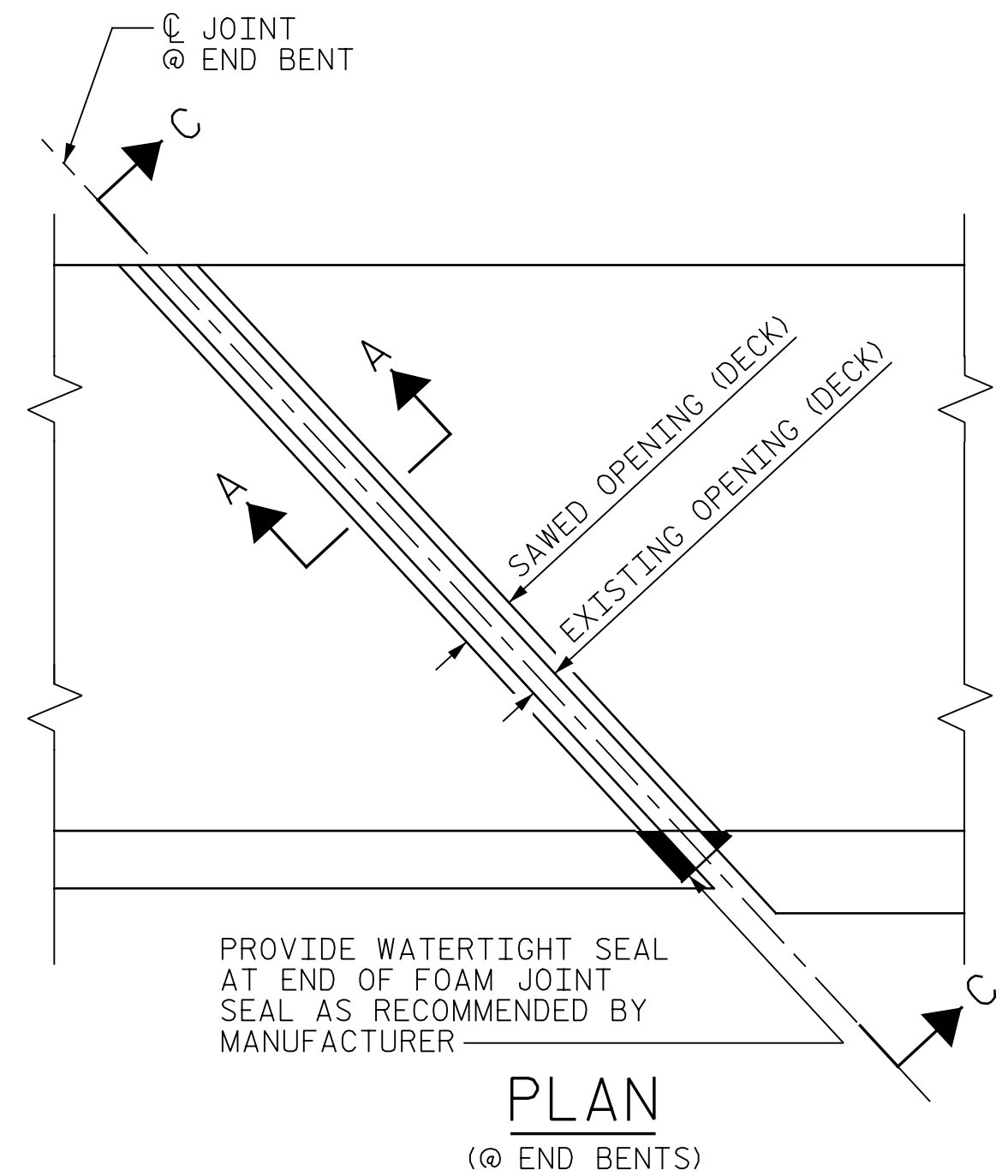
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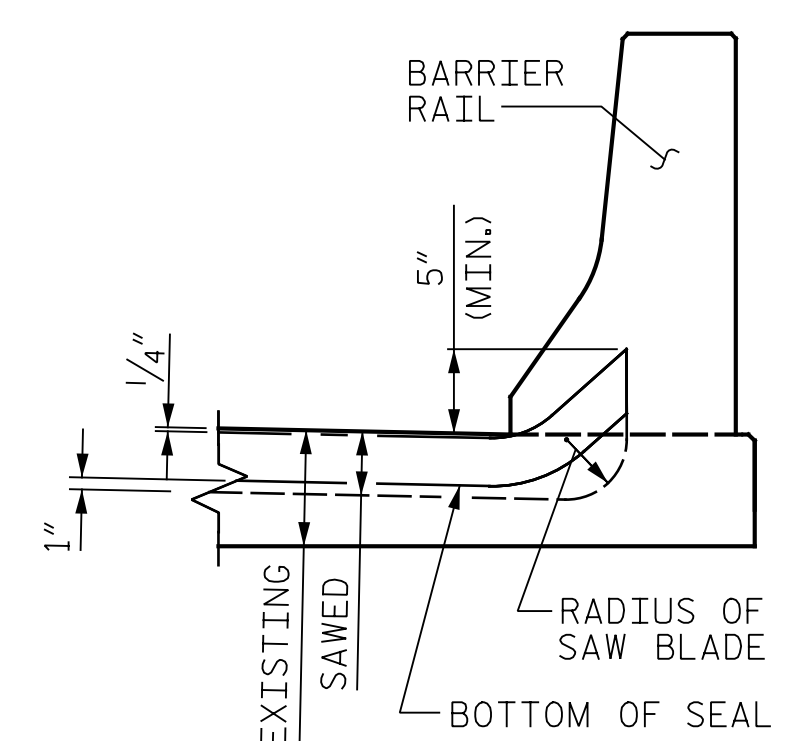
SECTION A-A
(TYP. AT END BENTS)



DETAIL "A"



PLAN
(@ END BENTS)



SECTION C-C

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

LOCATION	FOAM JOINT SEALS FOR PRESERVATION		CONCRETE DECK REPAIR FOR PC OVERLAY		EPOXY COATING	
	ESTIMATED (LIN. FT.)	ACTUAL (LIN. FT.)	ESTIMATED (SQ. YDS.)	ACTUAL (SQ. YDS.)	ESTIMATED (SQ. FT.)	ACTUAL (SQ. FT.)
END BENT 1	78.5		8.4		184	
END BENT 2	78.5		8.4		184	

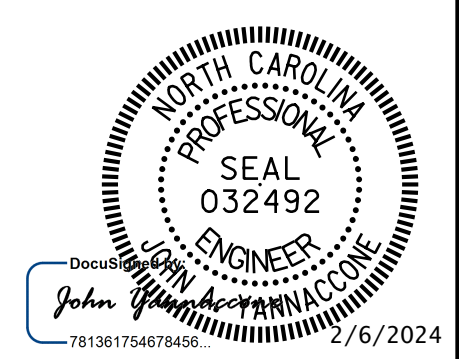
LOCATION	SAWED JT. OPENING TABLE (PERPENDICULAR TO JT.)		
	AT 45°	AT 60°	AT 90°
END BENT 1	1 1/16"	1 9/16"	1 3/16"
END BENT 2	1 1/16"	1 9/16"	1 3/16"

NOTES:
 FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY OR SEALANT WORK IS COMPLETE.
 THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING JOINT OPENING PRIOR TO ORDERING JOINT SEAL MATERIAL. IF THE ACTUAL JOINT OPENING VARIES FROM THE OPENING INDICATED IN THE DETAILS BY MORE THAN 1/4", NOTIFY THE ENGINEER.
 THE MANUFACTURER IS TO PROVIDE THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE FOAM JOINT SEAL FOR THE SIZE OF THE OPENING ON THE PLANS AND ACCOMMODATE THE MINIMUM EXPANSION SHOWN ON THE PLANS.
 FOAM JOINTS SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS.
 THE CONTRACTOR SHALL TAKE CARE DURING JOINT REHAB OPERATIONS NOT TO DROP ANY MATERIAL BELOW THE BRIDGE WITHOUT PROTECTIVE DEVICES BELOW TO CATCH THE MATERIAL. ANY MATERIAL THAT FALLS BELOW THE BRIDGE SHALL BE CONTAINED, REMOVED AND DISPOSED OF BY THE CONTRACTOR AT NO EXTRA COST TO THE DEPARTMENT. IF THE ENGINEER DETERMINES THAT THE PROTECTIVE DEVICES ARE NOT ADEQUATE OR NOT BEING EMPLOYED, THE WORK SHALL BE SUSPENDED UNTIL ADEQUATE PROTECTION IS PROVIDED.

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT IN LIEU OF SAWING THE JOINT.
 THE INSTALLED FOAM JOINTS SHALL BE WATERTIGHT.
 THE CONTRACTOR SHALL SAW CUT 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.
 QUANTITIES SHOWN IN THE ELASTOMERIC CONCRETE FOR PRESERVATION TABLE ARE BASED ON THE MINIMUM JOINT DEMOLITION SHOWN.
 FOR EXCAVATION BELOW THE BOTTOM OF PLANNED JOINT DEMOLITION, CONCRETE FOR DECK REPAIR SHALL BE PLACED IN THE EXCAVATED AREA TO THE ELEVATION AT THE BOTTOM OF THE PROPOSED ELASTOMERIC CONCRETE FOR PRESERVATION HEADERS SHOWN.

FOR CLASS II SURFACE PREPARATION, SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISIONS.
 FOR CONCRETE DECK REPAIR FOR PC OVERLAY, SEE SPECIAL PROVISIONS.
 CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE END BENT CAPS AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAPS. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAPS BENEATH THE ELASTOMERIC BEARINGS. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400364



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
FOAM JOINT SEALS

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



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REPAIR INSTALLATION PROCEDURE

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

LAY THE NEW GLAND ON THE BASE ANGLE AND FIELD MARK THE NEW GLAND FOR THE BOLT HOLES. HOLES IN THE NEW GLAND SHALL BE PUNCHED 1/8" IN DIAMETER WITH A HAND PUNCH.

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

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

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

GENERAL NOTES

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

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

THE FINISHED EXPANSION SEAL DEVICE SHALL BE A MINIMUM 1/8" AND A MAXIMUM OF 1/4" BELOW THE TOP OF SLAB.

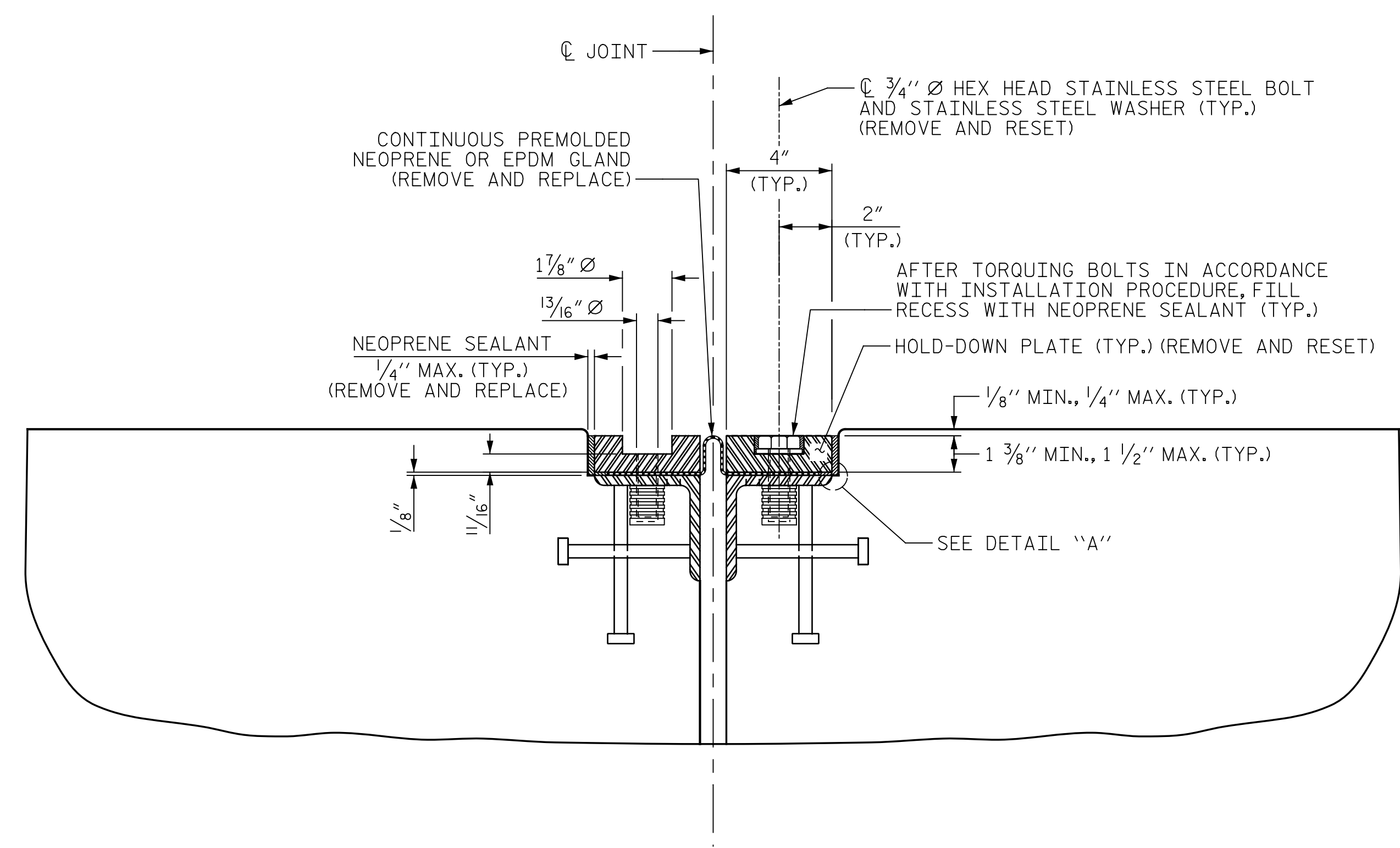
FOR EXPANSION JOINT SEAL REPAIR, SEE SPECIAL PROVISIONS.

FOR COVER PLATE REPLACEMENT LOCATIONS, SEE "PLAN OF SPAN" SHEETS.

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

FOR BARRIER RAIL COVER PLATE RECESS DETAILS, SEE SHEET 2 OF 2.

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



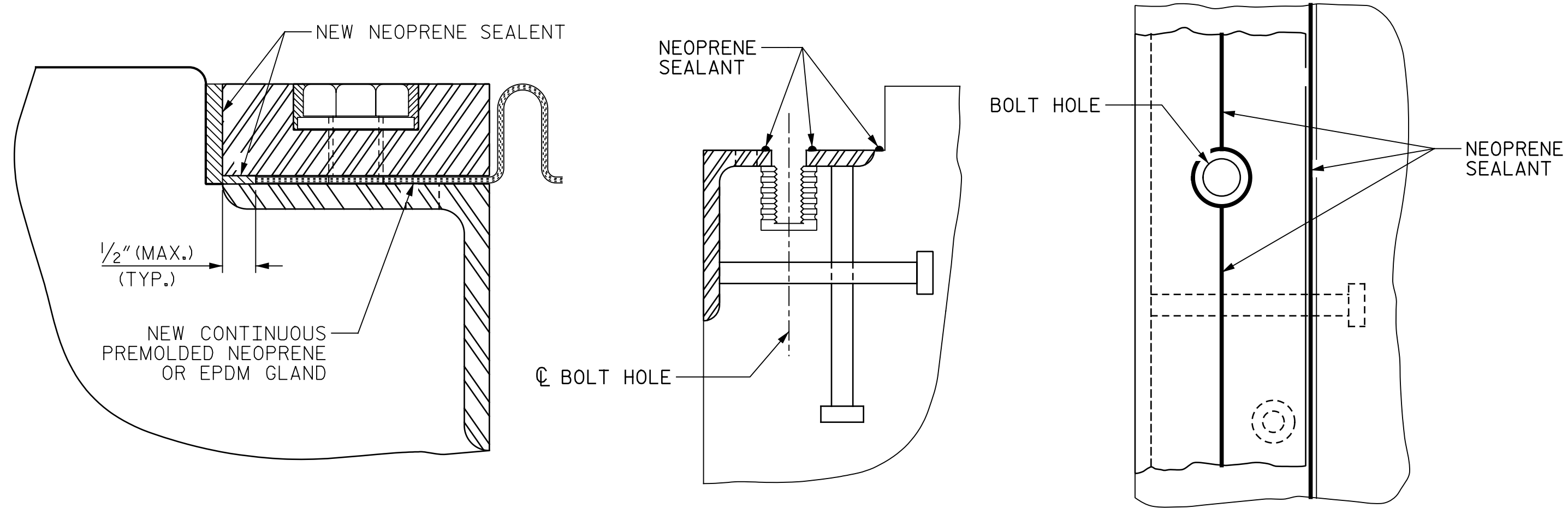
SECTION E-E

SECTION NORMAL TO JOINT -- STEEL SUPERSTRUCTURE

MOVEMENT AND SETTING AT JOINT					
LOCATION	SKEW ANGLE	TOTAL MOVEMENT (ALONG CL RDWY)	PERPENDICULAR JOINT OPENING AT 45° F	PERPENDICULAR JOINT OPENING AT 60° F	PERPENDICULAR JOINT OPENING AT 90° F
BENT 1	47°-16'-54"	7/16"	1 5/8"	1 9/16"	1 1/2"
BENT 2	47°-16'-54"	9/16"	1 3/8"	1 5/16"	1 3/16"
BENT 2	47°-16'-54"	1 5/16"	1 1/2"	1 3/8"	1 3/16"

SUMMARY OF QUANTITIES

LOCATION (EAST BOUND LANES)	EXPANSION JOINT SEAL REPAIRS		EPOXY COATING	
	ESTIMATED (LIN. FT)	ACTUAL (LIN. FT)	ESTIMATED (SQ. FT)	ACTUAL (SQ. FT)
BENT 1	78.5		237	
BENT 2	78.5		237	
BENT 3	78.5		237	



DETAIL A

CROSS SECTION

CROSS SECTION

INSTALLATION SKETCH

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400364

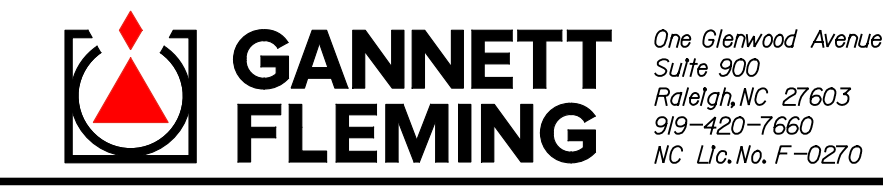
SHEET 1 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

EXPANSION JOINT SEAL DETAILS

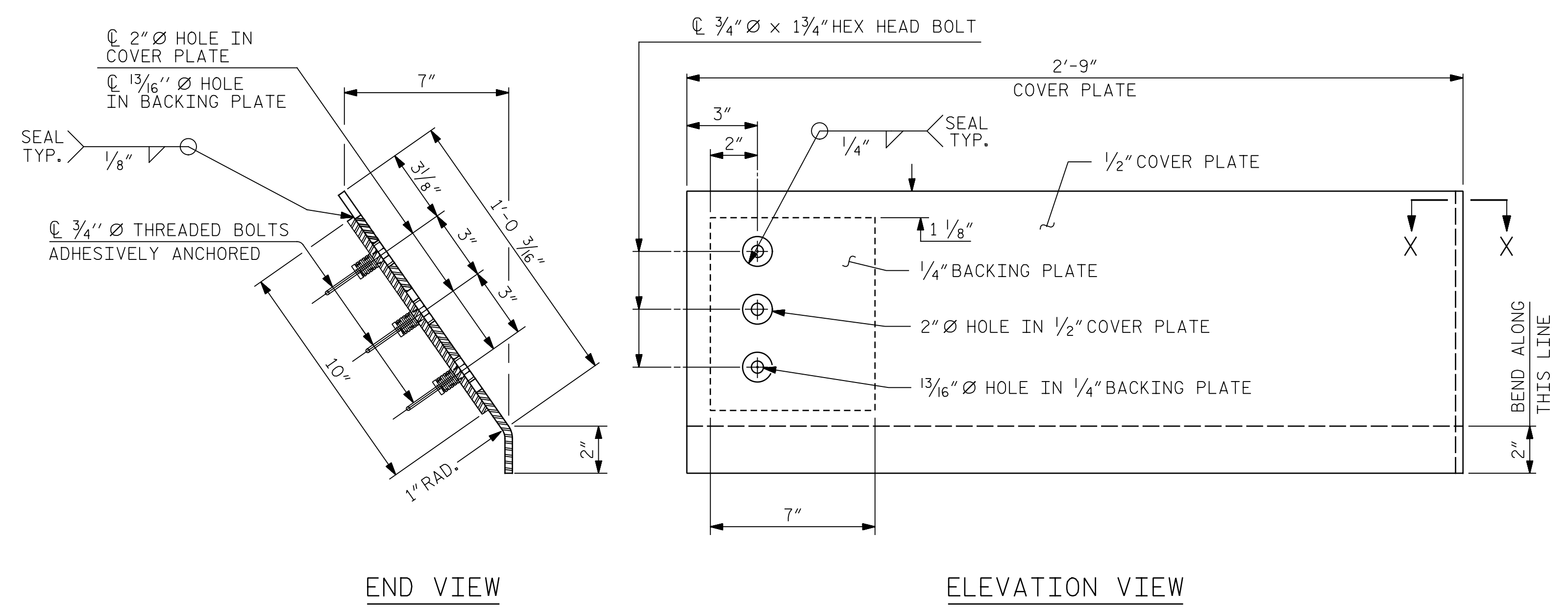
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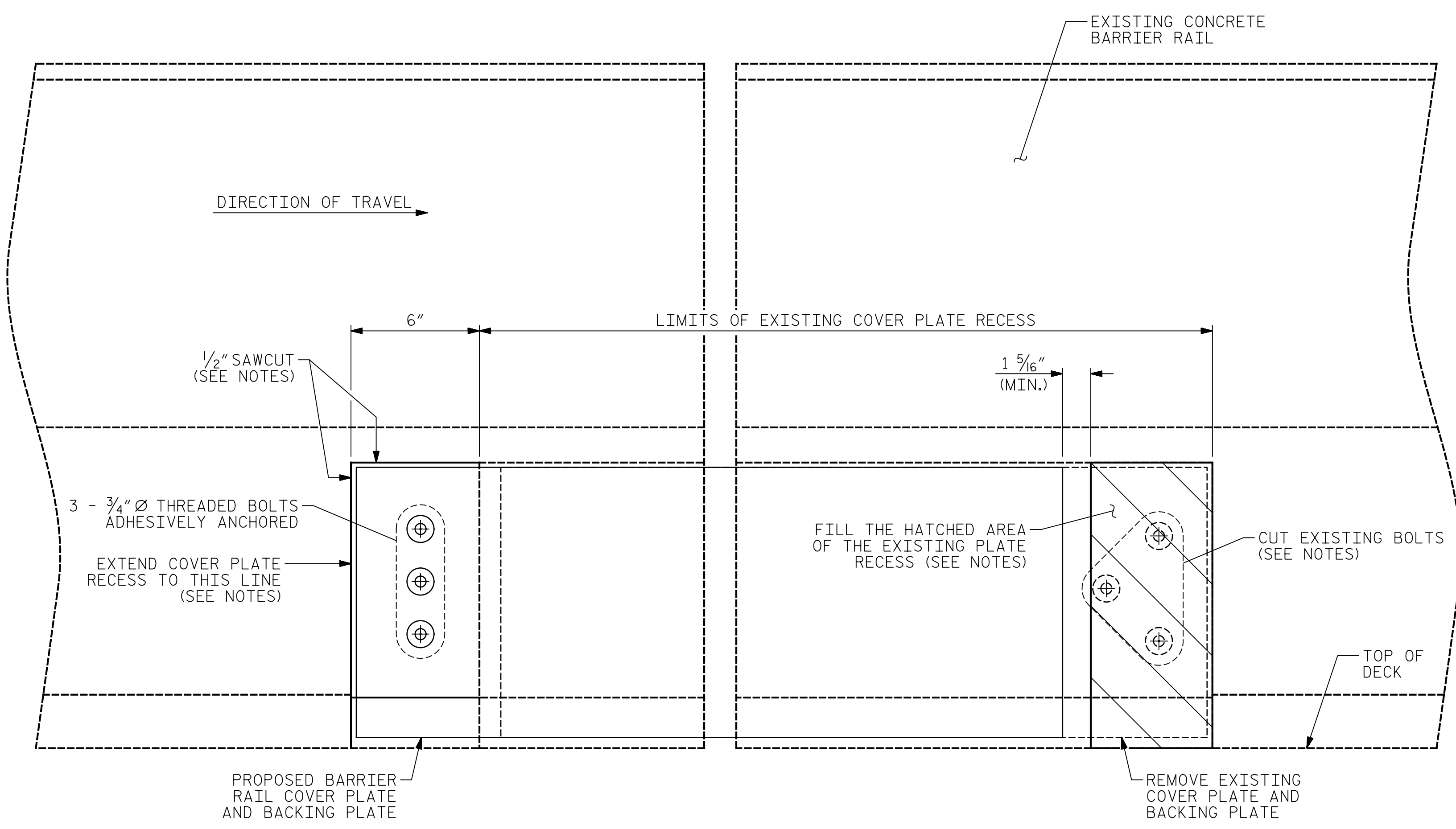
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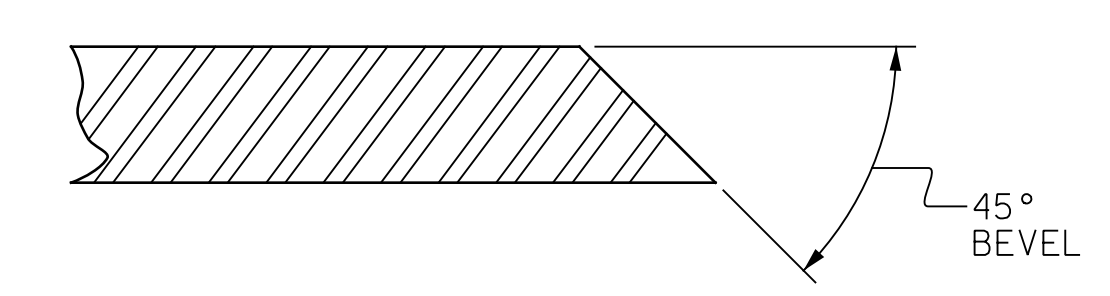
COVER PLATE DETAILS

NOTES

- ALL PLATES SHALL CONFORM TO AASHTO M270 GRADE 36 STEEL OR APPROVED EQUAL. ALL HOLD-DOWN BOLTS SHALL CONFORM TO ASTM F593 ALLOY 304 STAINLESS STEEL AND WASHERS SHALL CONFORM TO ASTM F844 EXCEPT THEY SHALL BE MADE FROM ALLOY 304 STAINLESS STEEL.
- SAW CUT AROUND EXTENDED COVER PLATE RECESS AREA TO A NOMINAL DEPTH OF 1/2". REMOVE CONCRETE WITHIN SAW CUT AREA TO MINIMUM 1/2" DEPTH.
- CUT THE BOLTS IN THE EXISTING COVER PLATE FLUSH WITH THE SURFACE OF THE COVER PLATE RECESS.
- FILL THE EXISTING COVER PLATE RECESS WITH A POLYMER MODIFIED CONCRETE REPAIR MATERIAL. CONTOUR THE FACE OF THE REPAIR MATERIAL TO MATCH THE GEOMETRY OF THE CONCRETE BARRIER RAIL.
- THE CONTRACTOR SHALL DRILL OR CORE INTO THE EXISTING BARRIER RAIL TO INSTALL COVER PLATE ANCHORS. THE ANCHORS SHALL BE ADHESIVELY ANCHORED. ADHESIVE FOR ANCHORING SHALL BE ON THE NCDOT APPROVED PRODUCTS LIST. FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE ARTICLE 420-13 OF THE STANDARD SPECIFICATIONS.
- THE EMBEDMENT DEPTH OF THE THREADED ANCHORS SHALL BE 7" OR THE DEPTH RECOMMENDED BY THE ADHESIVE MANUFACTURER TO ATTAIN THE PULL-OUT STRENGTH OF THE DESIGN LOAD BELOW, WHICHEVER IS GREATER. FIELD TESTING OF THE ADHESIVE BONDING SYSTEM IS NOT REQUIRED.
- ANCHOR DESIGN YIELD LOAD: 15 KIPS.
- FOR EXPANSION JOINT SEAL REPAIR, SEE SPECIAL PROVISIONS.
- FOR COVER PLATE REPLACEMENT LOCATIONS, SEE "PLAN OF SPAN" SHEETS.
- NO SEPARATE PAYMENT WILL BE MADE FOR REMOVING AND REPLACING BARRIER RAIL COVER PLATES, INSTALLATION OF THE ADHESIVELY ANCHORED THREADED BOLTS, AND PLACEMENT OF REPAIR MATERIAL TO FILL THE EXISTING PLATE RECESS. THE ENTIRE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR "EXPANSION JOINT SEAL REPAIR".



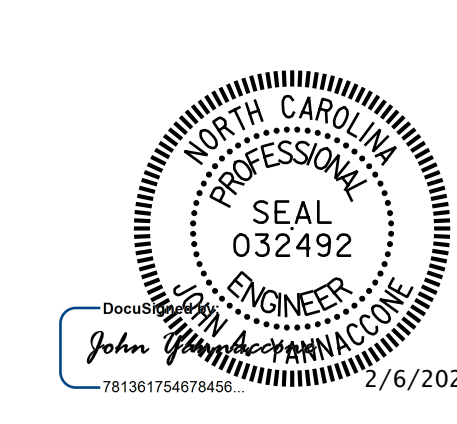
BARRIER RAIL COVER PLATE RECESS DETAILS



SECTION X-X

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400364

SHEET 2 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BARRIER RAIL COVER PLATE RECESS DETAILS

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REPAIR QUANTITY TABLE		
REPOSITIONING BEARINGS		
	ESTIMATE	ACTUAL
REPOSITIONING SOLE PLATES	3 EA	
REPOSITIONING BEARING PADS	3 EA	

(R*) REPOSITIONING SOLE PLATE/ BEARING PAD

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.

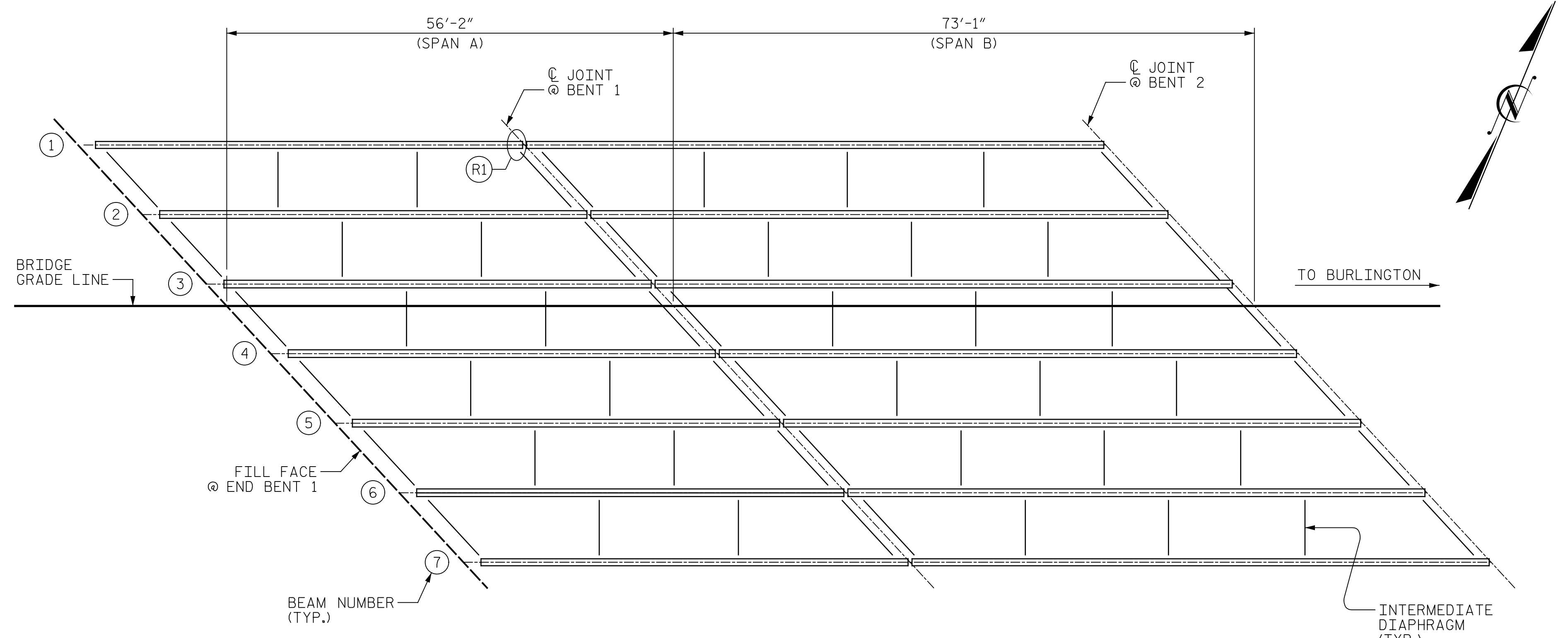
FOR REPOSITIONING BEARINGS, SEE SPECIAL PROVISIONS AND "BEARING REPOSITIONING DETAILS" SHEET.

FOR BRIDGE JACKING, SEE SPECIAL PROVISIONS.

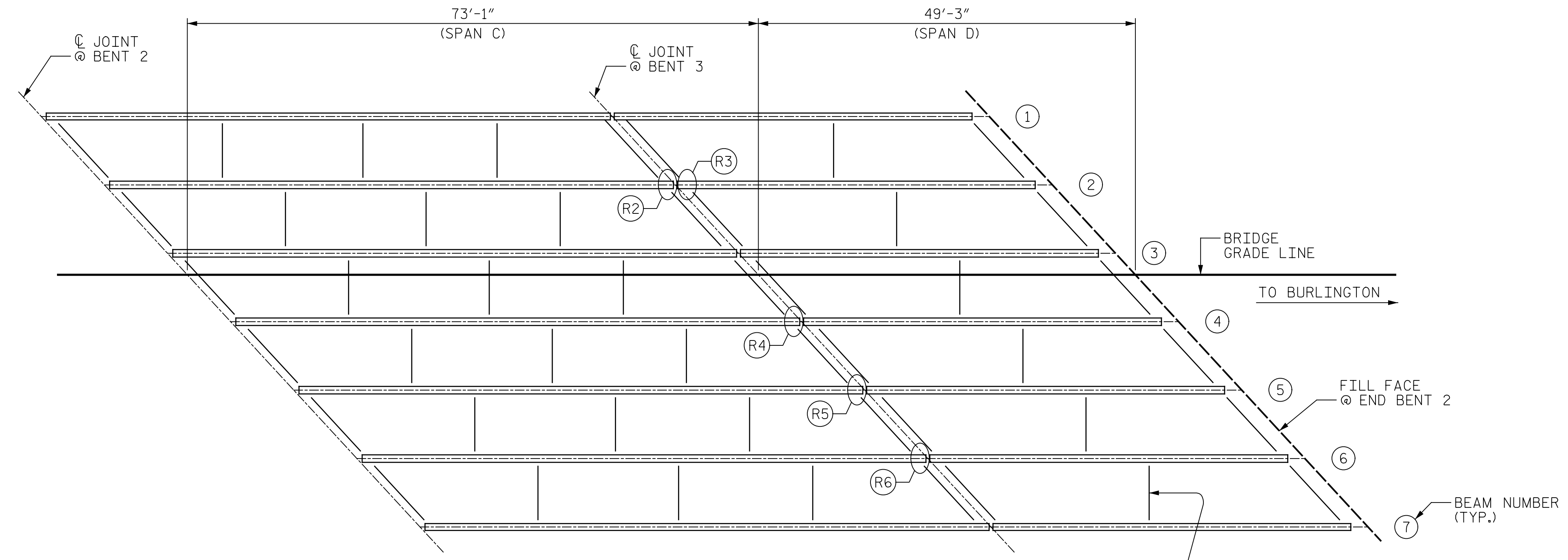
FOR BRIDGE JACKING DETAILS, SEE "JACKING DETAILS" SHEET.

THE REPAIR QUANTITIES REPORTED IN THE TABLE ARE ONLY AN ESTIMATE. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE BEARINGS TO DETERMINE THE BEST REPAIR OPTION AND CORRESPONDING PAY ITEM FOR EACH BEARING THAT REQUIRES REPOSITIONING.

SOLE PLATES AND BEARING PADS SHALL BE REPOSITIONED BEFORE ANY JOINT REPAIRS OR GIRDER END PAINTING BEGINS.

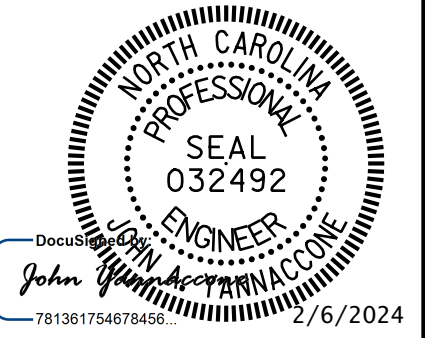


BEARING REPOSITIONING LOCATIONS
(OTHER LOCATIONS MAY EXIST, SEE NOTES)



BEARING REPOSITIONING LOCATIONS
(OTHER LOCATIONS MAY EXIST, SEE NOTES)

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400364



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BEARING REPOSITIONING LOCATIONS

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 CHECKED BY : J. YANNACCONE DATE : 10/2022



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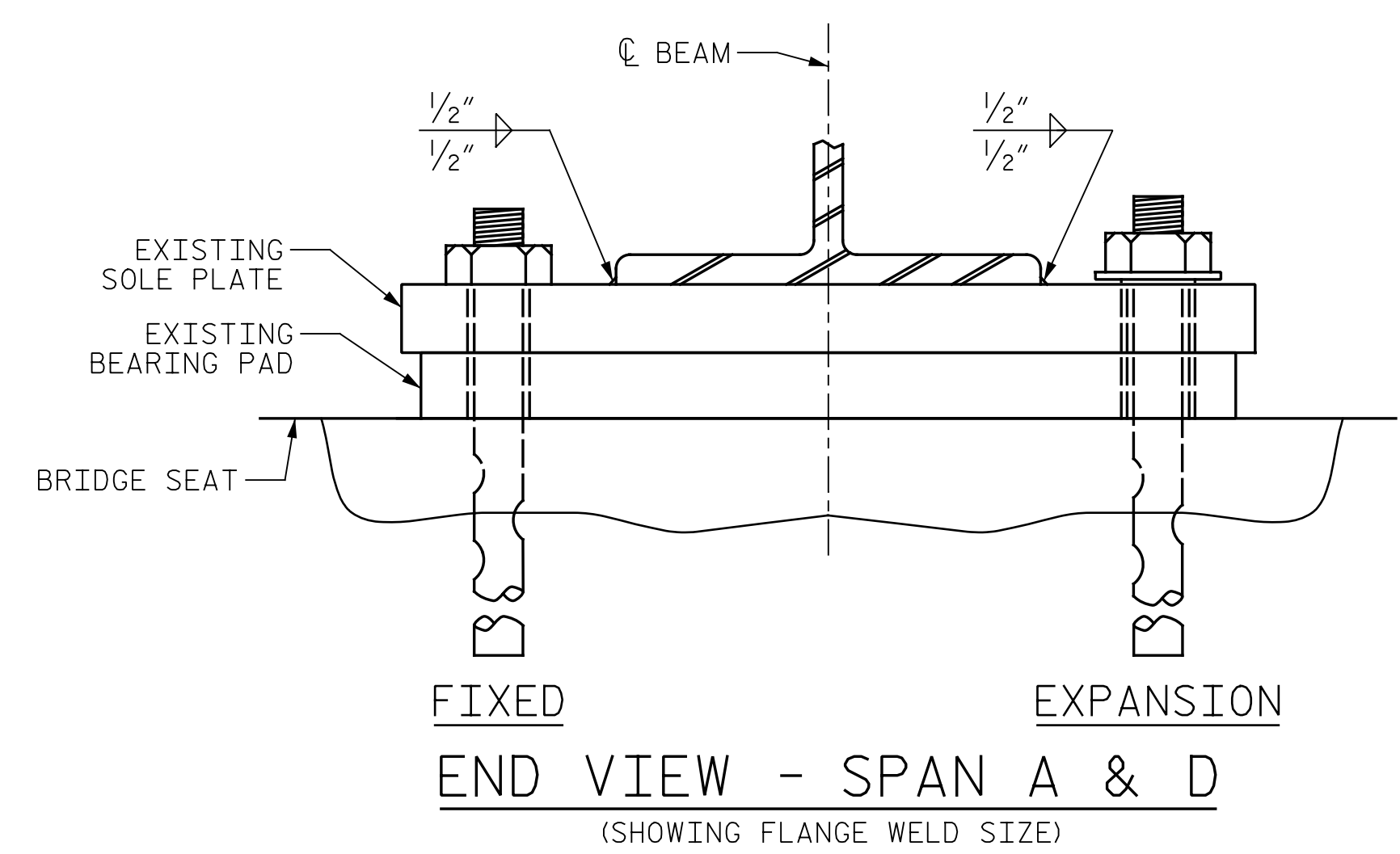
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1				S12-8
2				TOTAL SHEETS 127

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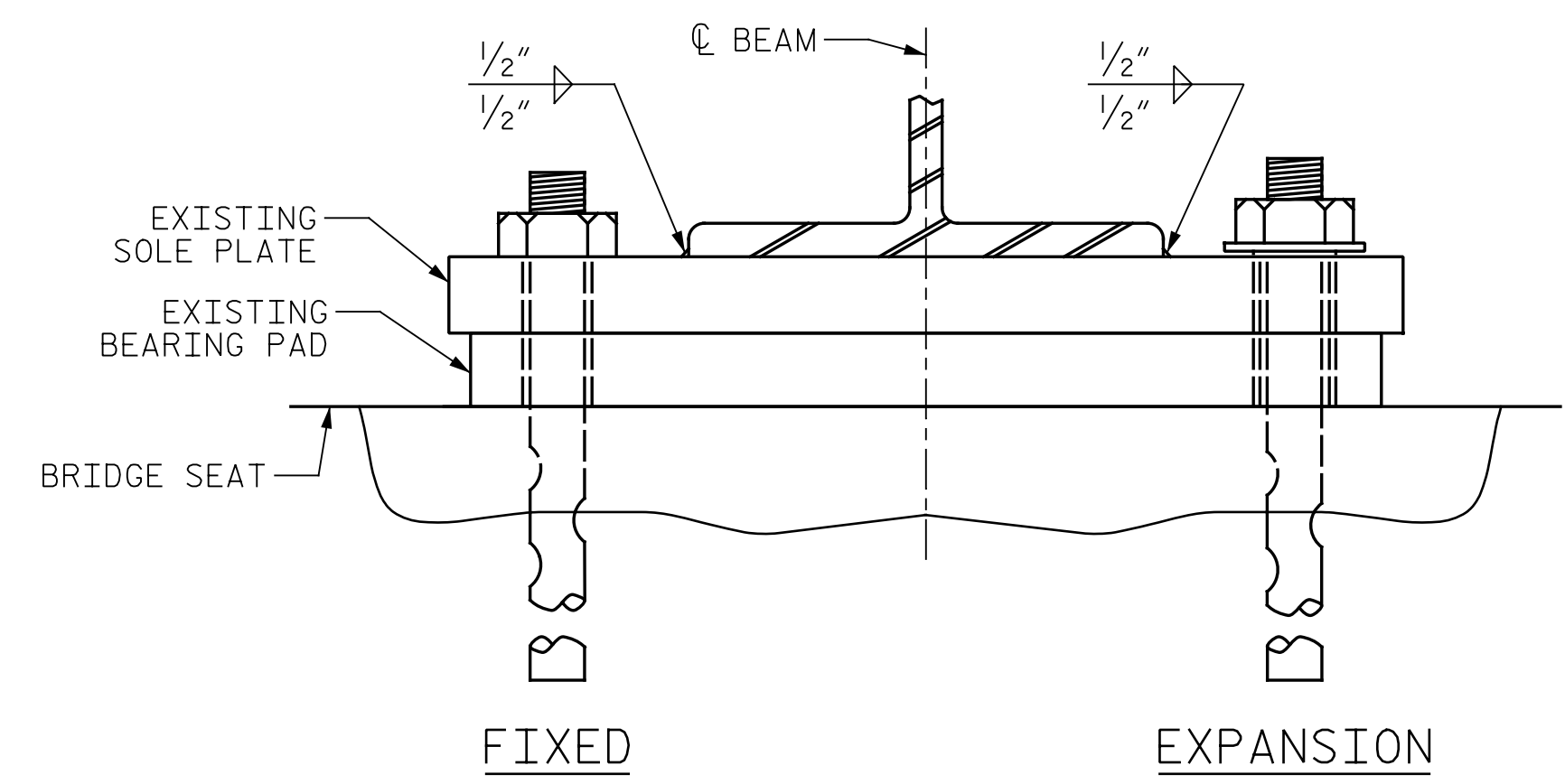


BEARING PHOTOGRAPHS

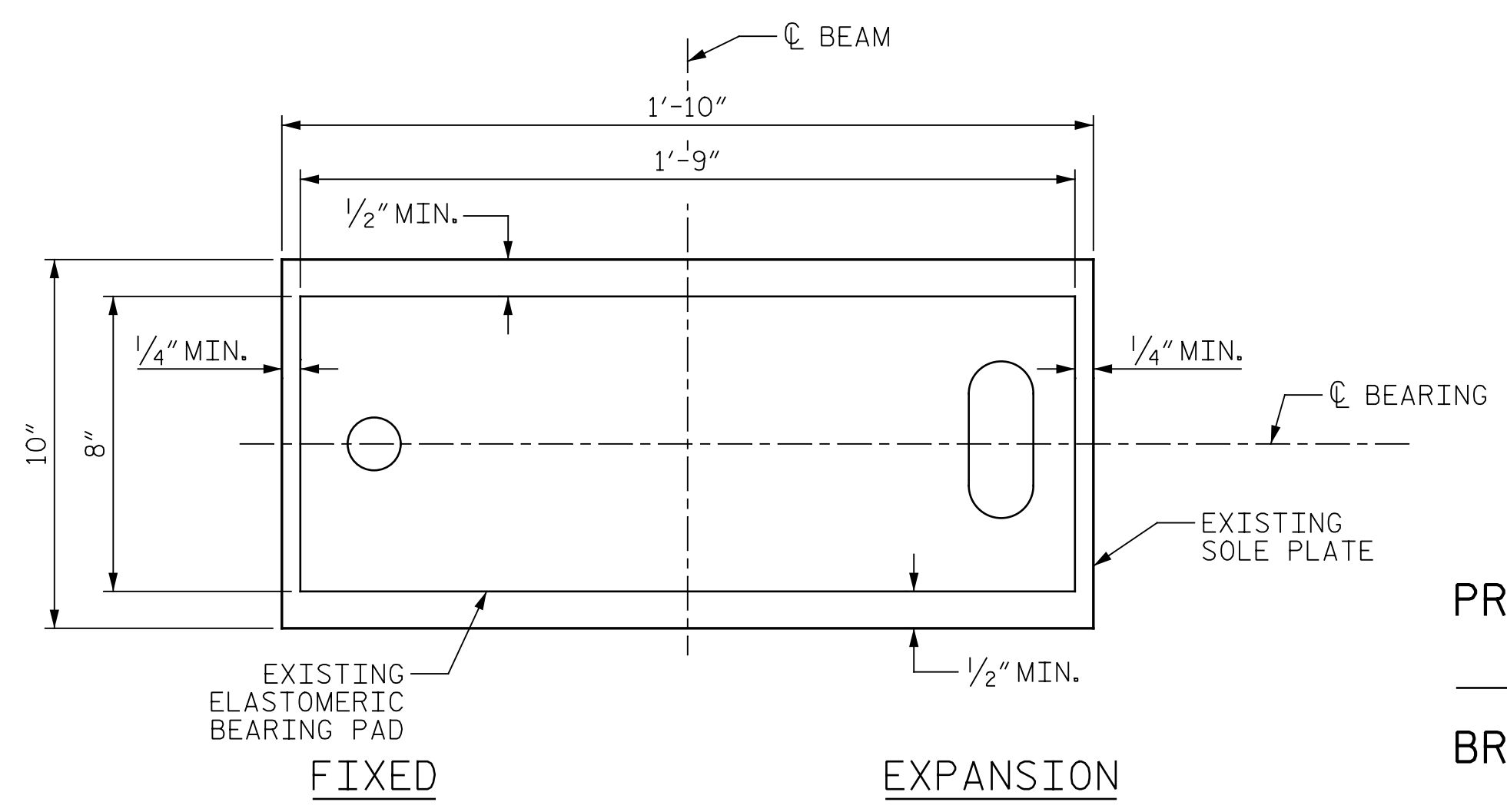
(FOR BEARING LOCATIONS, SEE "BEARING REPOSITIONING LOCATIONS" SHEET)



END VIEW - SPAN A & D
(SHOWING FLANGE WELD SIZE)



END VIEW - SPAN B & C
(SHOWING FLANGE WELD SIZE)



BEARING ORIENTATION DETAIL
(SHOWING MINIMUM REQUIRED CLEARANCES)

NOTES:
 THE GIRDERS SHALL BE JACKED AND THE BEARING PAD SHALL BE REPOSITIONED IN ORDER TO MEET THE MINIMUM CLEARANCES SHOWN IN THE BEARING ORIENTATION DETAIL. DUE TO THE DEFORMED ANCHOR BOLTS, ONE THE FOLLOWING MEANS MAY BE REQUIRED TO ACCOMPLISH THIS TASK:

1. DETACH THE EXISTING SOLE PLATE FROM THE GIRDER AND REPOSITION THE SOLE PLATE.
2. REPOSITIONING THE BEARING PAD.

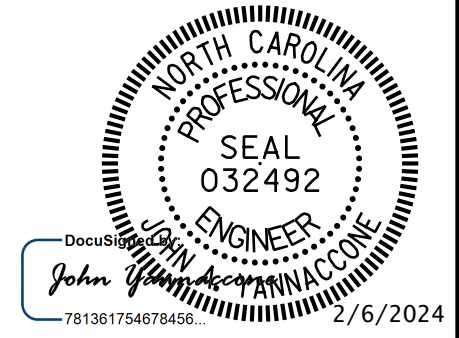
THE CONTRACTOR MAY PROPOSE ALTERNATE METHODS, PROVIDED DETAILS ARE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.

WHEN FIELD WELDING THE SOLE PLATE TO THE GIRDER FLANGE, USE TEMPERATURE INDICATING WAX PENS, OR OTHER SUITABLE MEANS, TO ENSURE THAT THE TEMPERATURE OF THE SOLE PLATE DOES NOT EXCEED 300oF. TEMPERATURES ABOVE THIS MAY DAMAGE THE ELASTOMER.

FOR REPOSITIONING BEARINGS, SEE SPECIAL PROVISIONS.

SOLE PLATES AND BEARING PADS SHALL BE REPOSITIONED BEFORE ANY JOINT REPAIRS OR GIRDER END PAINTING BEGINS.

PROJECT NO. I-5955A
GUILFORD COUNTY
 BRIDGE NO. 400364



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BEARING REPOSITIONING DETAILS

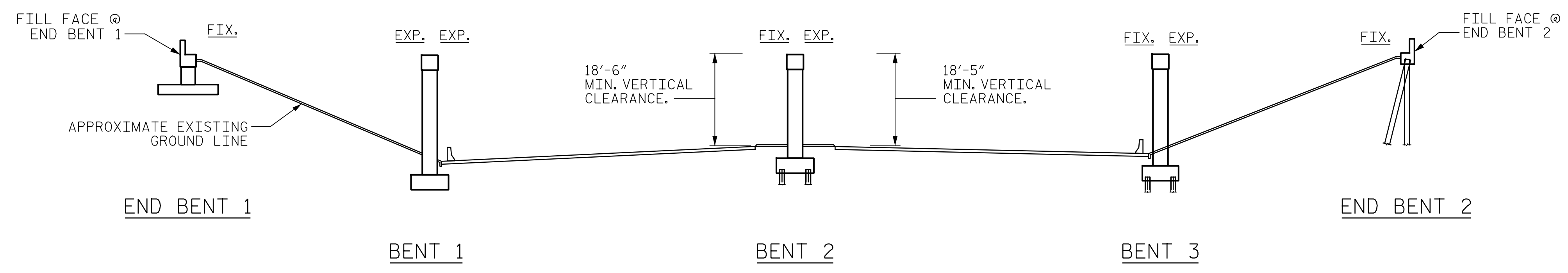
DRAWN BY: J. MYA DATE: 10/2022
 CHECKED BY: J. YANNAACONE DATE: 10/2022



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S12-9
2			4			TOTAL SHEETS 127

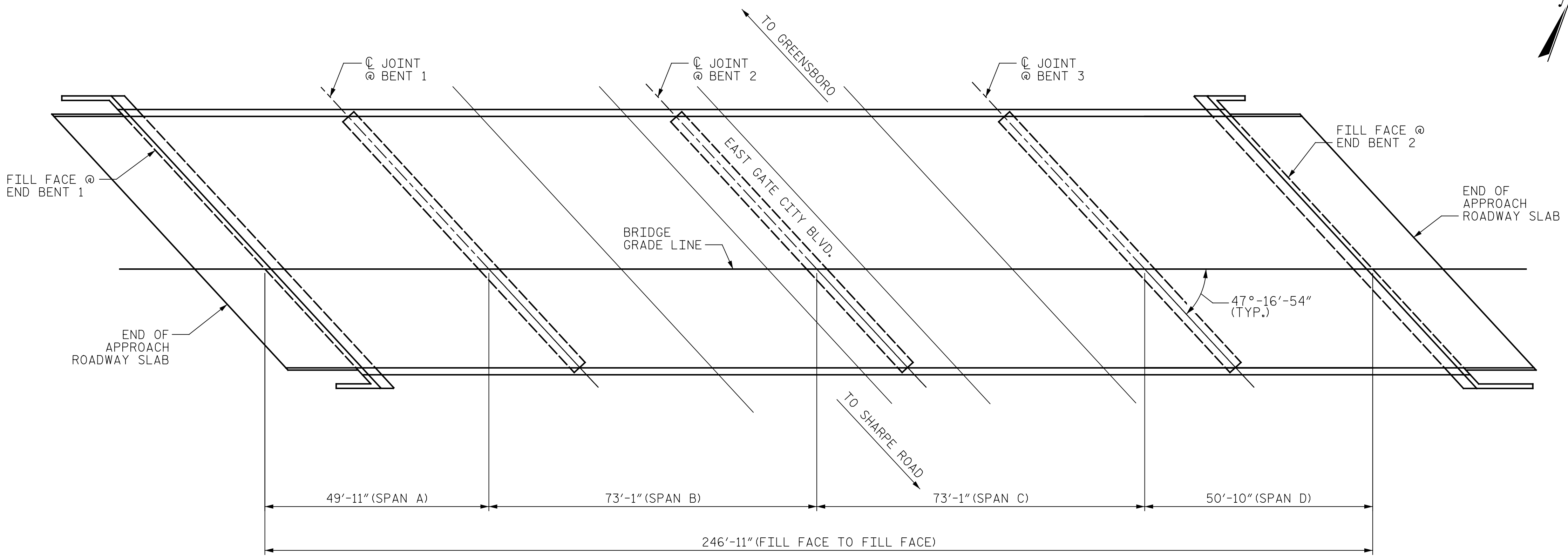
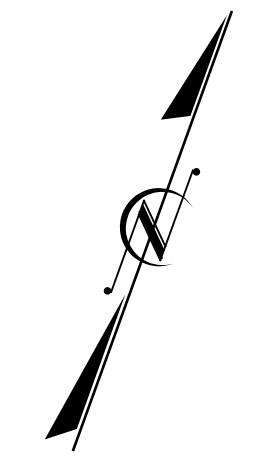
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SECTION ALONG BRIDGE GRADE LINE
(SECTION AT BENTS AND END BENTS ARE AT RIGHT ANGLES)

- NOTE:**
GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 07/20/2020.
- BRIDGE ORIENTATION CONFORMS TO THE EXISTING BRIDGE PLANS AND ROUTINE INSPECTION REPORT.
- SCOPE OF WORK**
- REPOSITION SOLE PLATES AND BEARING PADS.
 - 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 SEAL.
 - REMOVE EXISTING EXPANSION JOINT SEAL AND INSTALL FOAM JOINT SEAL.
 - REMOVE EXISTING COMPRESSION JOINT SEALS AND INSTALL FOAM JOINT SEALS.
 - GROOVE PC BRIDGE DECK.
 - CLEAN AND PAINT EXISTING WEATHERING STEEL BEAM ENDS.
 - REMOVE DEBRIS FROM TOP OF EXISTING END BENT AND BENT CAPS AND APPLY EPOXY COATING.

CONSTRUCTION SEQUENCE
ALL WORK REQUIRING BRIDGE JACKING SHALL BE COMPLETED BEFORE ANY JOINT REPAIRS OR GIRDER END PAINTING BEGINS.



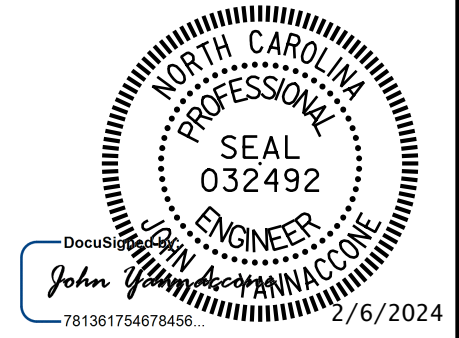
PLAN
(PILES NOT SHOWN FOR CLARITY)

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

RESIDENT ENGINEER _____ DATE _____

PROJECT NO. I-5955A
GUILFORD COUNTY
BRIDGE NO. 400367

SHEET 1 OF 2



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**GENERAL DRAWING
FOR BRIDGE ON I-40 WBL
OVER SR 4240 (EAST GATE
CITY BOULEVARD)**

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



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S13-1
1			3			TOTAL SHEETS
2			4			127