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PROJECT: I-5839

CONTRACT: C203931



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

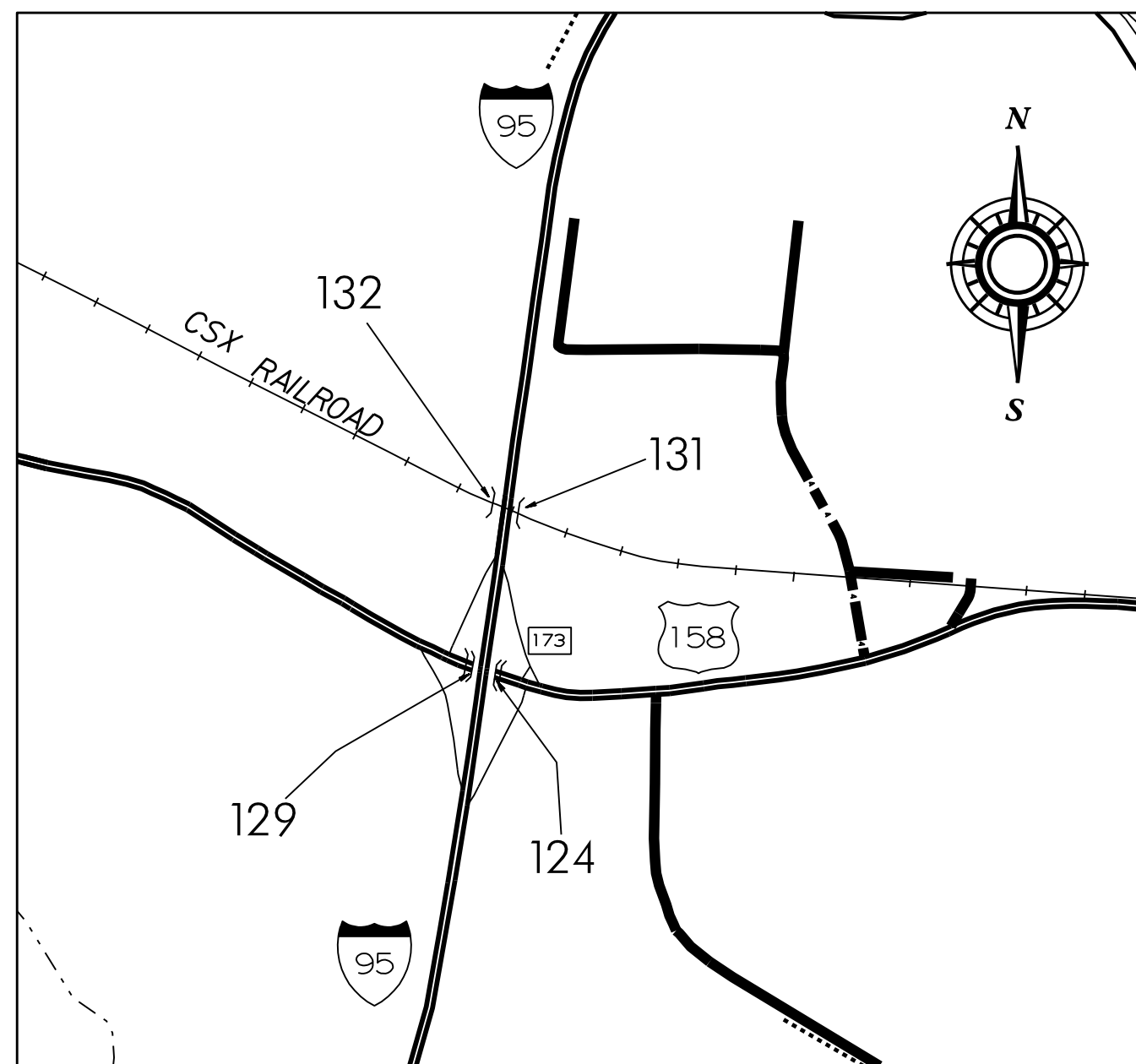
HALIFAX & NORTHAMPTON COUNTIES

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5839	1	42
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
53045.1.1	NHPIM-0095(036)	P.E.	
53045.3.1	NHPIM-0095(036)	CONST.	

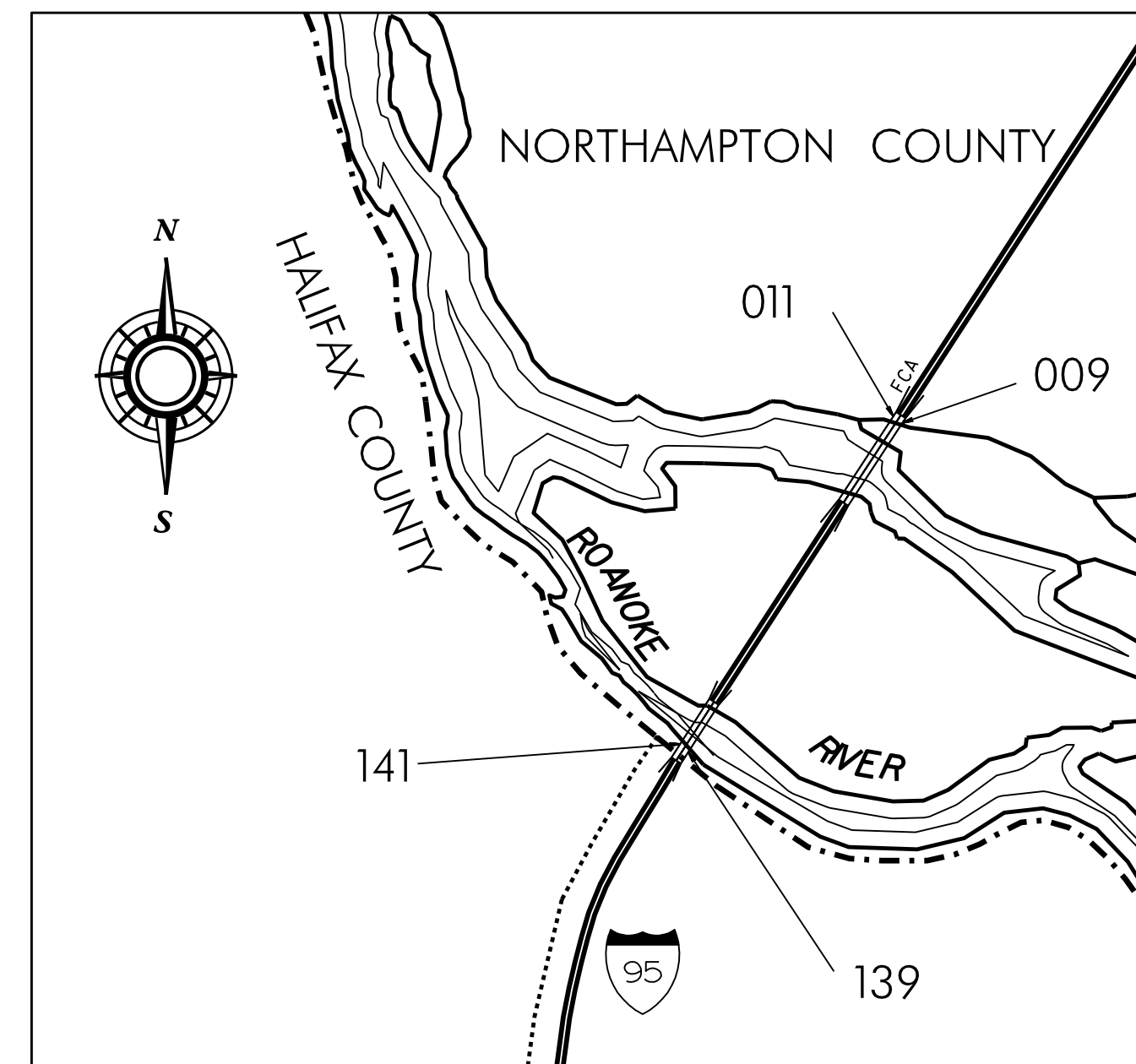
LOCATION: HALIFAX COUNTY:
 BRIDGE #124 ON I-95 NBL OVER US 158
 BRIDGE #129 ON I-95 SBL OVER US 158
 BRIDGE #131 ON I-95 NBL OVER CSX RAILROAD AND SR 1742 (BECKER DRIVE).
 BRIDGE #132 ON I-95 SBL OVER CSX RAILROAD AND SR 1742 (BECKER DRIVE).
 BRIDGE #139 ON I-95 NBL OVER ROANOKE RIVER
 BRIDGE #141 ON I-95 SBL OVER ROANOKE RIVER

NORTHAMPTON COUNTY:
 BRIDGE #009 ON I-95 NBL OVER ROANOKE RIVER
 BRIDGE #011 ON I-95 SBL OVER ROANOKE RIVER

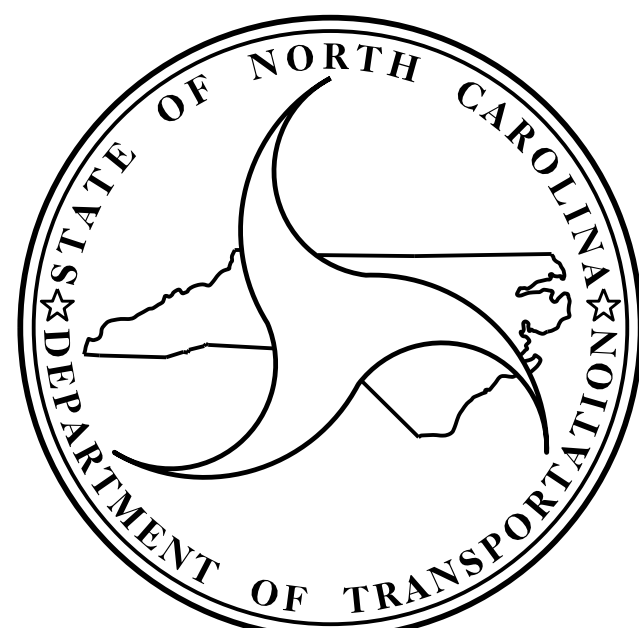
TYPE OF WORK: BRIDGE PRESERVATION WITH EPOXY OVERLAY SYSTEM, JOINT DEMOLITION, CONCRETE BRIDGE DECK CRACK SEALING, SILANE BARRIER RAIL TREATMENT, MODULAR JOINT REPLACEMENT, SUPERSTRUCTURE REPAIRS, AND SUBSTRUCTURE REPAIRS.



VICINITY MAP : HALIFAX COUNTY



VICINITY MAP : HALIFAX COUNTY - NORTHAMPTON COUNTY



DESIGN DATA

HALIFAX COUNTY

BRIDGE #124 ADT 2013	=	17,500
BRIDGE #129 ADT 2013	=	17,500
BRIDGE #131 ADT 2013	=	17,500
BRIDGE #132 ADT 2013	=	17,500
BRIDGE #139 ADT 2013	=	17,500
BRIDGE #141 ADT 2013	=	17,500

NORTHAMPTON COUNTY

BRIDGE #009 ADT 2013	=	17,500
BRIDGE #011 ADT 2013	=	17,500

PROJECT LENGTH

HALIFAX COUNTY

BRIDGE #124	=	0.035 MILES
BRIDGE #129	=	0.035 MILES
BRIDGE #131	=	0.041 MILES
BRIDGE #132	=	0.041 MILES
BRIDGE #139	=	0.042 MILES
BRIDGE #141	=	0.042 MILES

NORTHAMPTON COUNTY

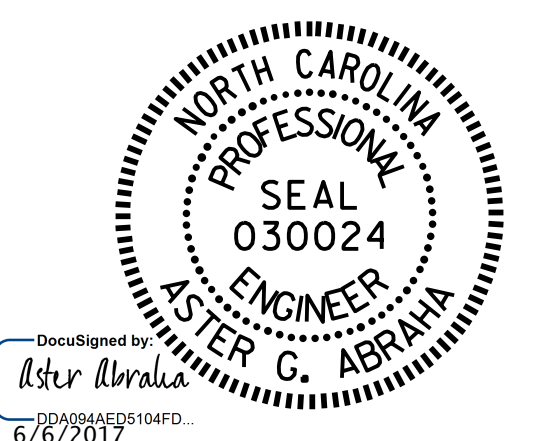
BRIDGE #009	=	0.215 MILES
BRIDGE #011	=	0.215 MILES

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

GREG DICKEY, P.E.
 PROJECT ENGINEER

2012 STANDARD SPECIFICATIONS

LETTING DATE:
 JULY 18, 2017



ASTER G. ABRAHA, P.E.
 PROJECT DESIGN ENGINEER

PROJECT: I-5839

CONTRACT: C203931

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS



HALIFAX & NORTHAMPTON COUNTIES

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5839	1A	42
STATE PROJ. NO.	P.A. PROJ. NO.	DESCRIPTION	
53045.1.1	NHPIM-0095(036)	P.E.	
53045.3.1	NHPIM-0095(036)	CONST.	

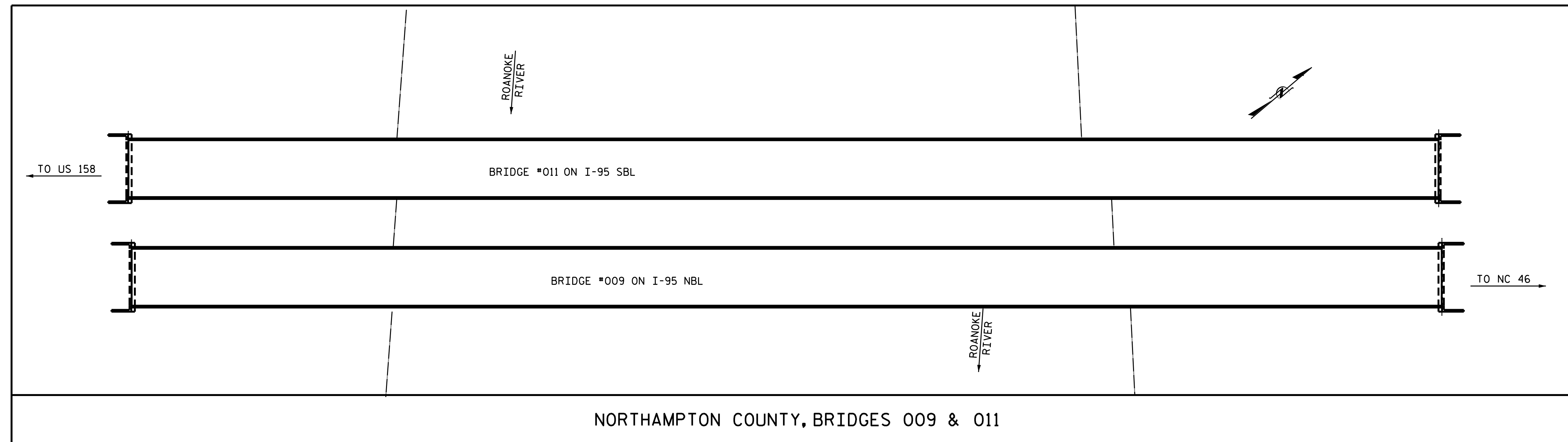
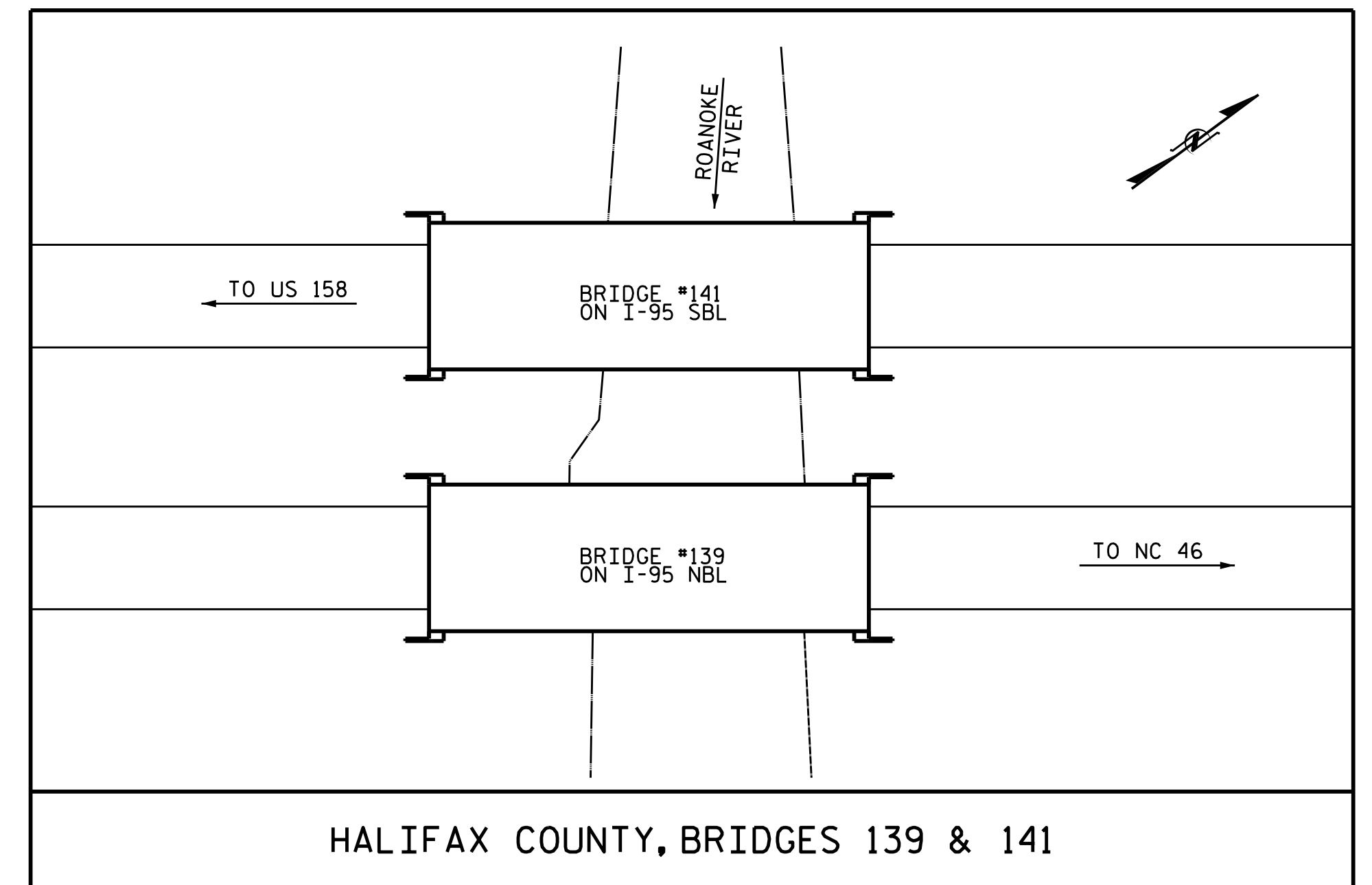
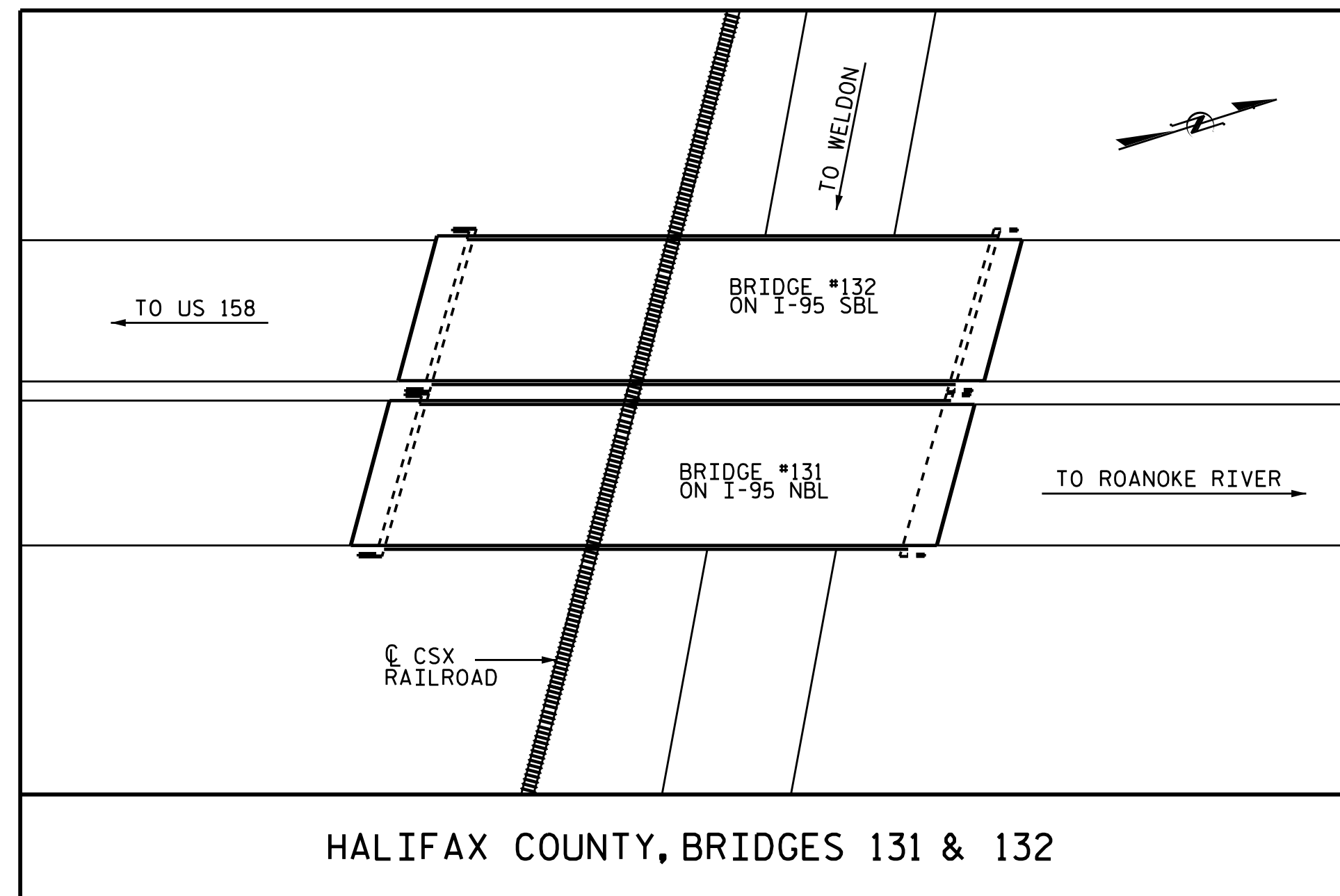
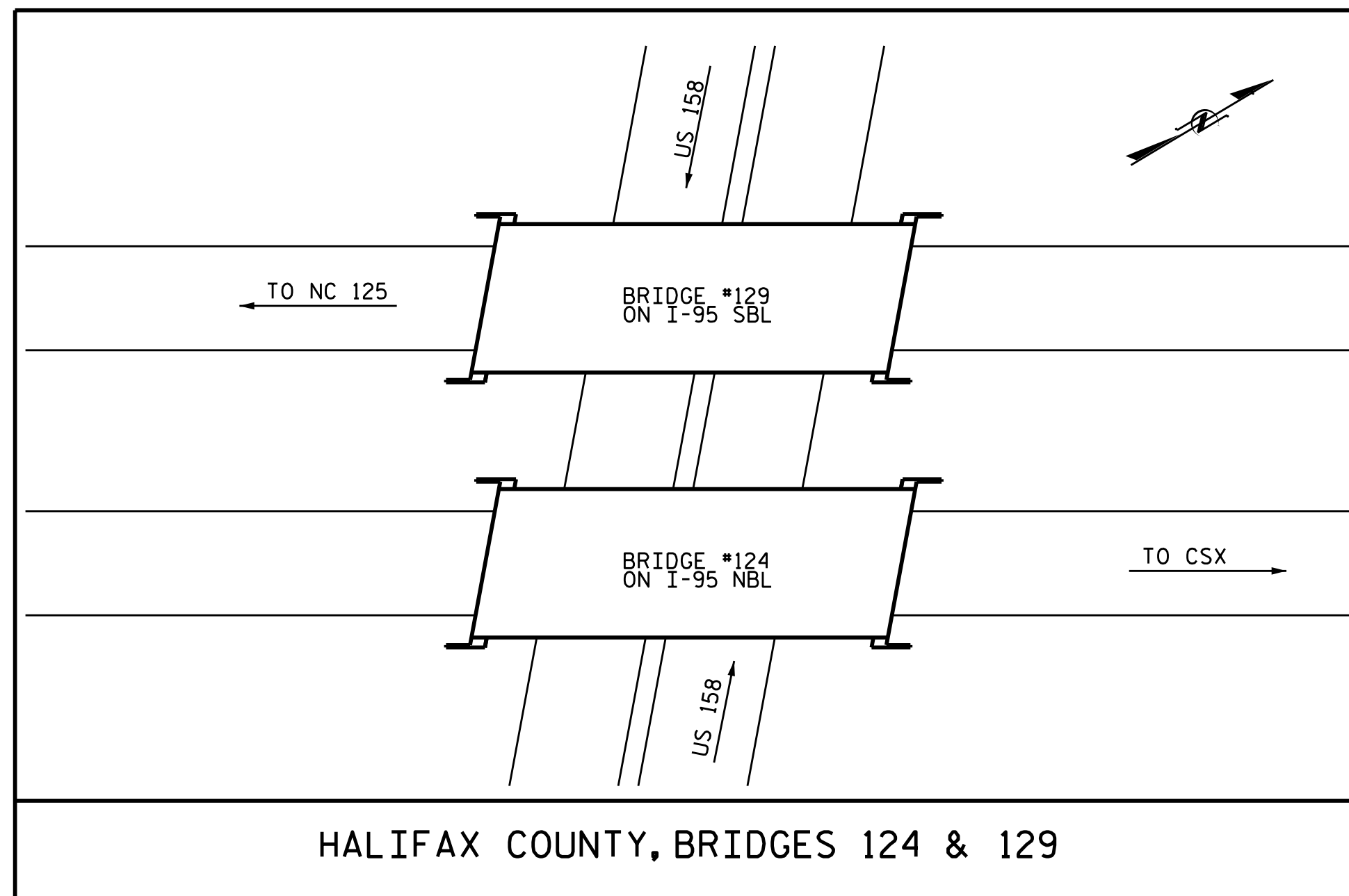
LOCATION: HALIFAX COUNTY: BRIDGE #124 ON I-95 NBL OVER US 158
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BRIDGE #141 ON I-95 SBL OVER ROANOKE RIVER

NORTHAMPTON COUNTY: BRIDGE #009 ON I-95 NBL OVER ROANOKE RIVER
BRIDGE #011 ON I-95 SBL OVER ROANOKE RIVER

TYPE OF WORK: BRIDGE PRESERVATION WITH EPOXY OVERLAY SYSTEM, JOINT DEMOLITION,
CONCRETE BRIDGE DECK CRACK SEALING, SILANE BARRIER RAIL TREATMENT, MODULAR
JOINT REPLACEMENT, SUPERSTRUCTURE REPAIRS, AND SUBSTRUCTURE REPAIRS.

INDEX OF SHEETS

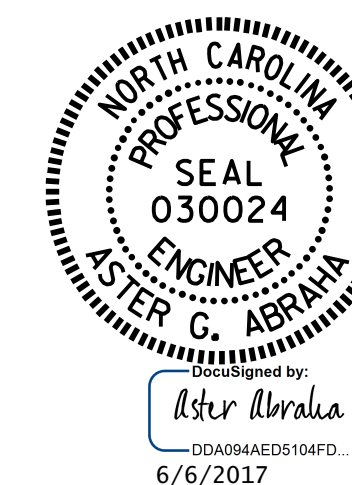
<u>SHEET NO.</u>	<u>DESCRIPTION</u>
1	TITLE SHEET
1A	INDEX OF SHEETS
S-1	LOCATION SKETCHES
S-2	TOTAL BILL OF MATERIALS
S-3 THRU S-8	STRUCTURAL PLANS - BRIDGES #124 & #129
S-9	JOINT DETAILS - BRIDGES #124 & #129
S-10 THRU S-23	STRUCTURAL PLANS - BRIDGES #131 & #132
S-24	JOINT DETAILS - BRIDGES #131 & #132
S-25	CAP & COLUMN REPAIRS - BRIDGES #131 & #132
S-26 THRU S-29	STRUCTURAL PLANS - BRIDGES #139 & #141
S-30 THRU S-34	STRUCTURAL PLANS - BRIDGES #009 & #011
S-35 THRU S-38	MODULAR END BENT JOINT DETAILS - BRIDGES #009, #011, #139 & #141
S-39 THRU S-42	MODULAR BENT JOINT DETAILS - BRIDGES #009 & #011
SN	STANDARD NOTES



LOCATION SKETCHES

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

PROJECT NO. I-5839
HALIFAX &
NORTHAMPTON COUNTIES
 BRIDGE NO. 124, 129, 131, 132,
139, 141, 009 & 011



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING
 LOCATION SKETCHES

DRAWN BY : S. T. SANDOR DATE : 03/2017
 CHECKED BY : W. C. SMITH DATE : 04/2017

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-1
2			4			42

TOTAL BILL OF MATERIAL

COUNTY	BRIDGE NO.	CONCRETE REPAIRS	EPOXY COATED REINFORCING STEEL	POLLUTION CONTROL	*57 STONE	GEOTEXTILE FOR DRAINAGE	SHOTCRETE REPAIRS	CONCRETE FOR DECK REPAIR	CONCRETE DECK REPAIR FOR EPOXY OVERLAY & CRACK SEALING	CLEANING AND PAINTING BEARINGS WITH HRCSA BRIDGE NO.---	SHOT-BLASTING BRIDGE DECK	CONCRETE BRIDGE DECK CRACK SEALING	BRIDGE JOINT DEMOLITION	EPOXY RESIN INJECTION	EPOXY OVERLAY SYSTEM	ELASTOMERIC CONCRETE	EPOXY COATING	MODULAR JOINT REPAIR	MOLDED RUBBER SEGMENTAL EXPANSION JOINT	PARTIAL REMOVAL OF EXISTING STRUCTURE	PAINT CONTAINMENT FOR BRIDGE NO.---	SILICONE JOINT SEALANT	VOLUMETRIC MIXER	SURFACE PREPARATION FOR CONCRETE BARRIER	SILANE BARRIER RAIL TREATMENT
		CU. FT.	LBS.	LUMP SUM	TON	SQ. YD.	CU. FT.	CU. FT.	SQ. FT.	EACH	SQ. YD.	SQ. YD.	SQ. FT.	LN. FT.	SQ. FT.	CU. FT.	SQ. FT.	SQ. YD.	LUMP SUM	SQ. YD.	LUMP SUM	LN. FT.	LUMP SUM	SQ. FT.	SQ. FT.
HALIFAX	124	-	-	-	-	-	-	-	* 10.0	-	813.2	813.2	81.5	-	-	20.4	-	-	-	-	-	220.0	-	987	987
	129	84.0	-	-	4.34	18.7	-	-	* 10.0	-	813.2	813.2	81.5	-	-	20.4	-	-	-	18.67	-	220.0	-	987	987
	131	-	-	LUMP SUM	-	-	12.5	-	* 10.0	48	-	-	295.0	13.0	11,941	73.8	922.7	-	-	-	LUMP SUM	295.0	-	-	-
	132	-	-	LUMP SUM	-	-	11.2	-	* 10.0	48	-	-	295.0	-	11,941	73.8	922.7	-	-	-	LUMP SUM	295.0	-	-	-
	139	-	1,932	-	-	-	-	264.0	* 10.0	-	3,053.0	3,053.0	232.0	-	-	-	-	25.8	LUMP SUM	-	-	-	LUMP SUM	2084	2084
	141	-	1,932	-	-	-	-	264.0	* 10.0	-	3,053.0	3,053.0	232.0	-	-	-	-	25.8	LUMP SUM	-	-	-	LUMP SUM	2084	2084
NORTHAMPTON	009	-	2,963	-	-	-	-	455.0	37.0	-	6,015.0	6,015.0	348.0	-	-	-	-	38.7	LUMP SUM	-	-	-	LUMP SUM	6053	6053
	011	-	2,963	-	-	-	-	455.0	* 10.0	-	6,015.0	6,015.0	348.0	-	-	-	-	38.7	LUMP SUM	-	-	-	LUMP SUM	6053	6053
TOTAL		84.0	9,790	LUMP SUM	4.34	18.7	23.7	1,438.0	107.0	96	19,762.4	19,762.4	1,913.0	13.0	23,882	188.4	1845.4	129.0	LUMP SUM	18.67	LUMP SUM	1,030.0	LUMP SUM	18,248	18,248

* CONCRETE DECK REPAIR FOR EPOXY OVERLAY AND CRACK SEALING IS NOT ANTICIPATED, TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSE IN CASE UNANTICIPATED REPAIR AREAS ARE ENCOUNTERED.

GENERAL 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 SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

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

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

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

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

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

FOR EPOXY OVERLAY SYSTEM, SEE SPECIAL PROVISIONS.

FOR CONCRETE DECK REPAIR FOR EPOXY OVERLAY AND CRACK SEALING, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR PAINT CONTAINMENT, SEE SPECIAL PROVISIONS.

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

FOR POLLUTION CONTROL, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

EXISTING MODULAR JOINT AND DECK REINFORCING STEEL SHOWN IS BASED ON BEST INFORMATION AVAILABLE.

ALL PROPOSED EXPANSION JOINT DIMENSIONS, OPENINGS AND BLOCKOUTS ARE SHOWN AT 60°F. CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTALLATION GUIDELINES AND MAKE ANY NECESSARY ADJUSTMENTS.

ADHESIVE ANCHOR BOLTS AND HARDWARE FOR THE PROPOSED EXPANSION JOINT SHALL BE GALVANIZED PER ASTM A153 AND INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.

WORK ON BRIDGE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL BELOW. THE CONTRACTOR SHALL SUBMIT PLANS FOR CONSTRUCTION IN ACCORDANCE TO ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS AND THE PROJECT SPECIAL PROVISIONS.

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

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

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

CONCRETE FOR DECK REPAIR SHALL BE A MATERIAL SUITABLE FOR CONCRETE BRIDGE DECK REPAIRS UNDER FAST SETTING CONDITIONS.

CONCRETE FOR DECK REPAIR SHALL REACH A MINIMUM COMPRESSIVE STRENGTH OF 4500 PSI IN 3 HOURS OR LESS. CONTRACTOR SHALL SUBMIT PROPOSED MATERIAL DOCUMENTATION TO THE ENGINEER FOR APPROVAL, SEE 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.

CONTRACTOR SHALL HAVE A REPRESENTATIVE FROM THE JOINT MANUFACTURER PRESENT DURING INSTALLATION OF PROPOSED RUBBER PLATE TYPE EXPANSION JOINT.

FOR *57 STONE, SEE SPECIAL PROVISIONS.

FOR EPOXY COATED REINFORCING STEEL, SEE 2012 NORTH CAROLINA STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, SECTION 425.

FOR MODULAR JOINT REPAIR, SEE SPECIAL PROVISIONS.

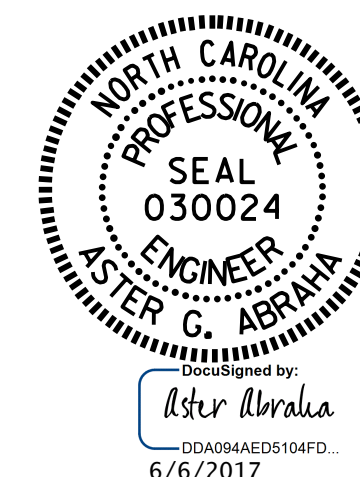
FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

FOR PARTIAL REMOVAL OF EXISTING STRUCTURE, SEE SPECIAL PROVISIONS.

FOR CONCRETE BRIDGE DECK CRACK SEALING, SEE SPECIAL PROVISIONS.

FOR SILANE BARRIER RAIL TREATMENT, SEE SPECIAL PROVISIONS.

PROJECT NO. I-5839
HALIFAX &
NORTHAMPTON COUNTIES
 BRIDGE NO. 124, 129, 131, 132,
139, 141, 009 & 011



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**GENERAL NOTES
 &
 TOTAL BILL OF MATERIAL**

DRAWN BY : S. T. SANDOR DATE : 04/2017
 CHECKED BY : W. C. SMITH DATE : 05/2017

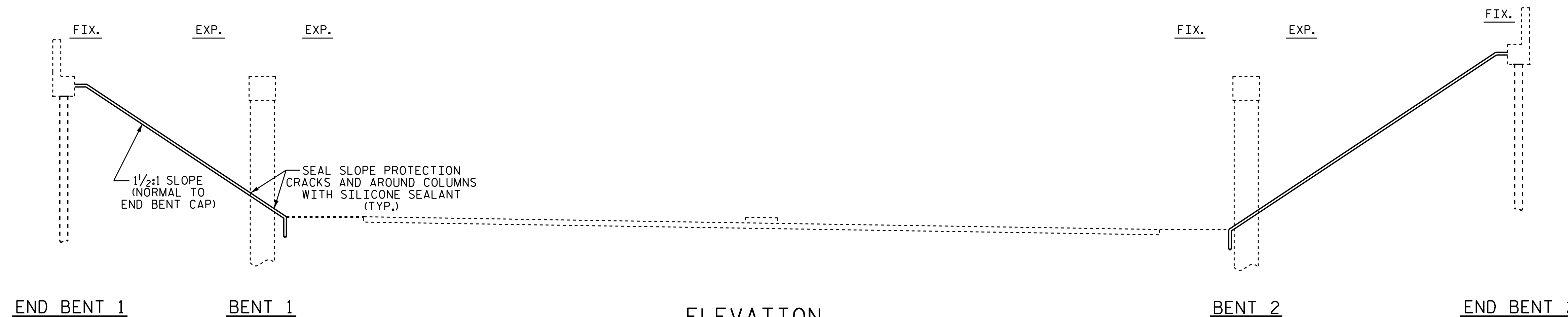
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-2
1			3			TOTAL SHEETS
2			4			42

SPAN A

SPAN B

SPAN C



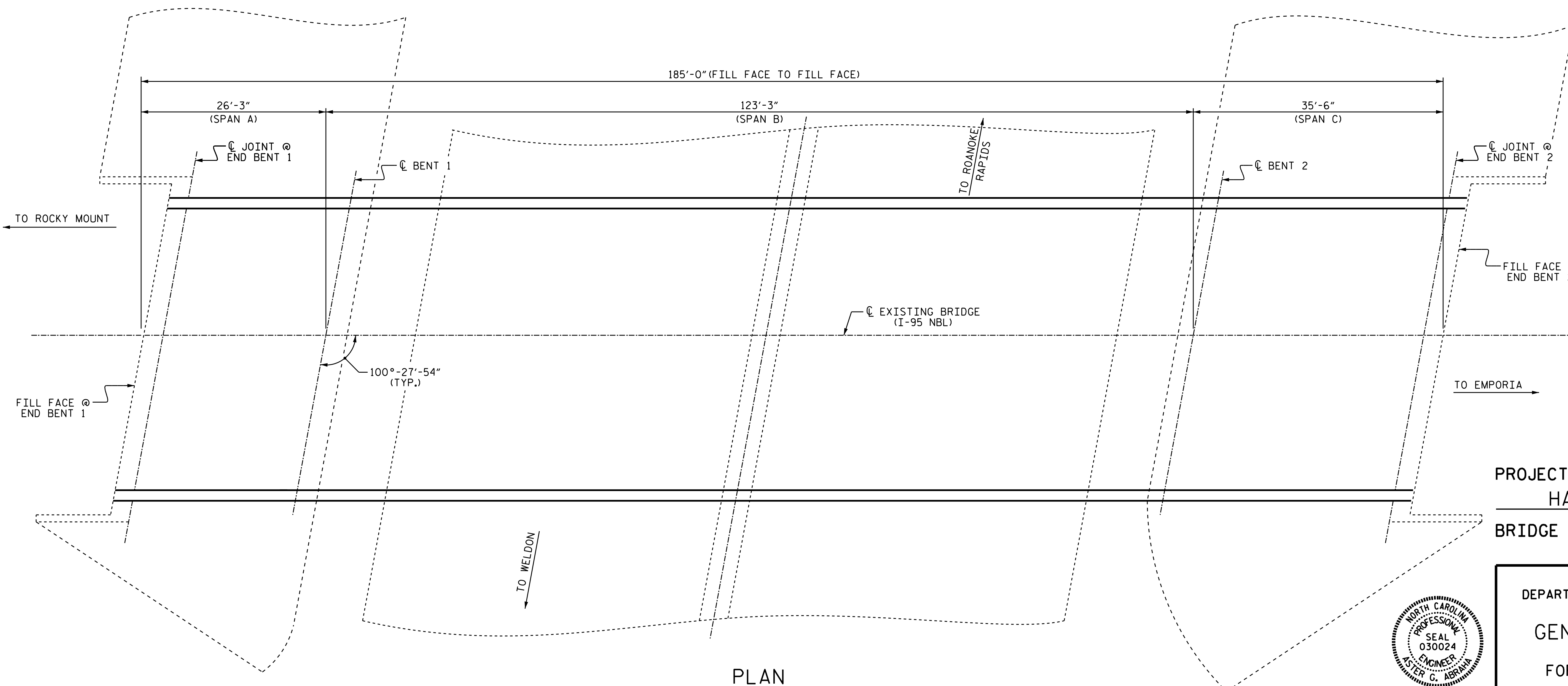
ELEVATION

(SECTION ALONG C ROADWAY)

- SCOPE OF WORK
- JOINT DEMOLITION OF EXISTING JOINTS
 - CONCRETE BRIDGE DECK CRACK SEALING
 - SEALING JOINT IN CONCRETE SLOPE PROTECTION
 - SILANE BARRIER RAILS TREATMENT

I hereby certify that this structure was rehabilitated according to these plans or as noted therein.

Resident Engineer _____ Date _____



PLAN

(COLUMNS & FOOTINGS NOT SHOWN IN PLAN VIEW FOR CLARITY)

PROJECT NO. I-5839
 HALIFAX COUNTY
 BRIDGE No. 124



DocuSigned by:
 Aster Abramo
 00A09AED6104FD...
 6/6/2017

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING

FOR BRIDGE ON I-95
 OVER US 158
 (NBL)

REVISIONS

NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO.

S-3
 TOTAL SHEETS
 42

DRAWN BY : M. K. BEARD / S. T. SANDOR DATE : 03/2017
 CHECKED BY : W. C. SMITH DATE : 05/2017

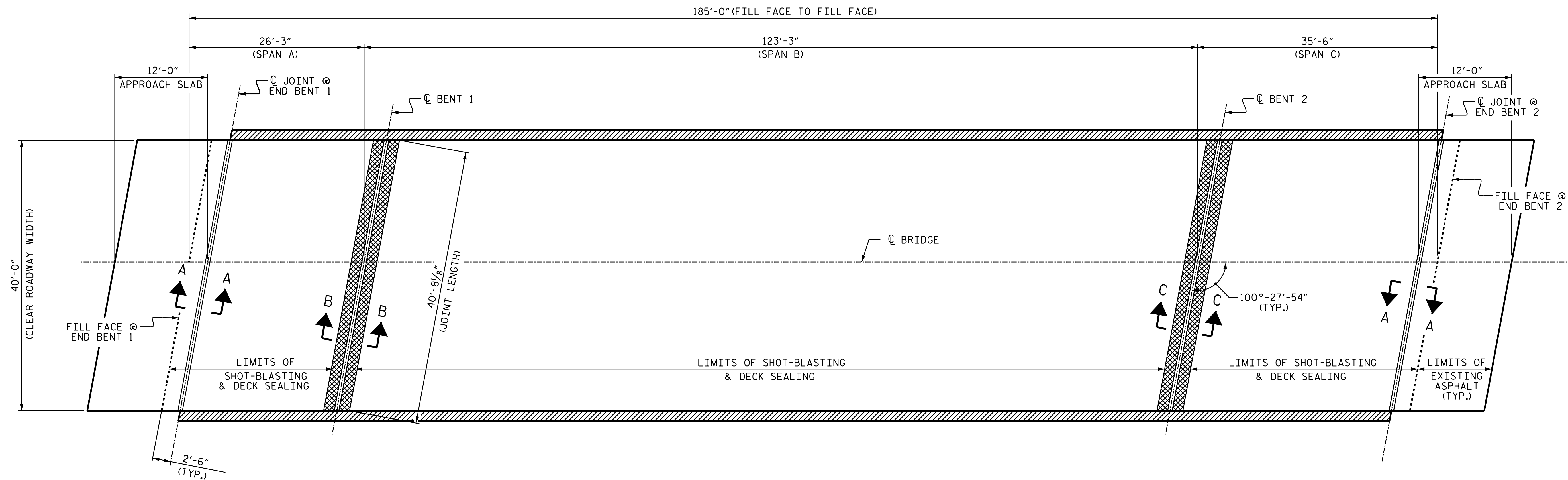
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NOTE

* CONCRETE DECK REPAIR FOR DECK CRACK SEALING IS NOT ANTICIPATED. TOKEN PAY ITEM IS INDICATED FOR PRICING PURPOSE IN CASE UNANTICIPATED REPAIR AREAS ARE ENCOUNTERED.

SUMMARY OF QUANTITIES

	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR CRACK SEALING	* 10 SQ.FT.	
SHOTBLASTING BRIDGE DECK	813.2 SQ.YD.	
CONCRETE BRIDGE DECK CRACK SEALING	813.2 SQ.YD.	
BRIDGE JOINT DEMOLITION	81.5 SQ.FT.	
SURFACE PREPARATION FOR CONCRETE BARRIER	987 SQ.FT.	
SILANE BARRIER RAIL TREATMENT	987 SQ.FT.	



PLAN OF SPANS A, B AND C

(FOR SECTIONS A-A, B-B & C-C, SEE "JOINT DETAILS" SHEET S-9)

- CONCRETE DECK CRACK SEALING
- BRIDGE JOINT DEMOLITION
- SILANE BARRIER RAIL TREATMENT

PROJECT NO. I-5839
HALIFAX COUNTY
 BRIDGE No.: 124



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**SUPERSTRUCTURE
 DECK CRACK SEALING &
 SILANE BARRIER RAIL
 TREATMENT
 (NBL)**

DRAWN BY : M. K. BEARD / S. T. SANDOR DATE : 2/28/17
 CHECKED BY : W. C. SMITH DATE : 04/2017

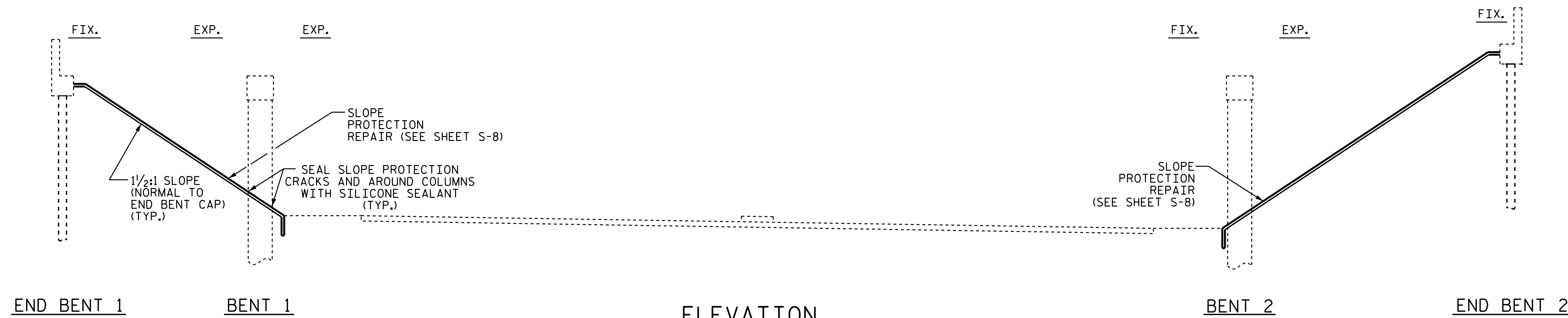
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-5
2			4			42

SPAN A

SPAN B

SPAN C



ELEVATION

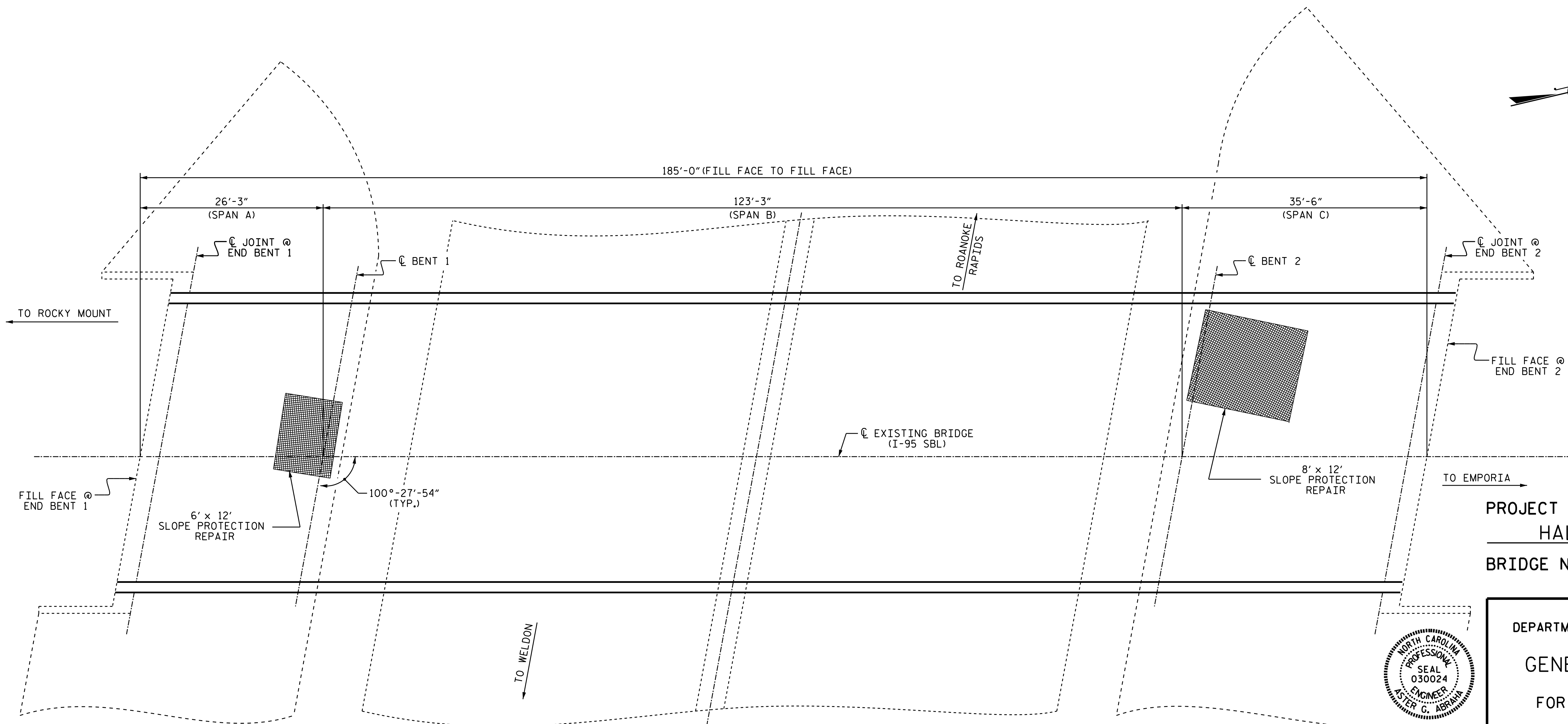
(SECTION ALONG CL ROADWAY)

SCOPE OF WORK

- JOINT DEMOLITION OF EXISTING JOINTS
- CONCRETE BRIDGE DECK CRACK SEALING
- SLOPE PROTECTION REPAIR
- SILANE BARRIER RAILS TREATMENT
- SEALING JOINT IN CONCRETE SLOPE PROTECTION

I hereby certify that this structure was rehabilitated according to these plans or as noted therein.

Resident Engineer Date



PLAN

(COLUMNS & FOOTINGS NOT SHOWN IN PLAN VIEW FOR CLARITY)

PROJECT NO. I-5839
 HALIFAX COUNTY
 BRIDGE No. 129



DocuSigned by:
 Aster Abramo
 000000AED5104FD...
 6/6/2017

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING

FOR BRIDGE ON I-95
 OVER US 158
 (SBL)

REVISIONS

NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO.
S-6
TOTAL SHEETS
42

DRAWN BY : M. K. BEARD / S. T. SANDOR DATE : 2/28/17
 CHECKED BY : W. C. SMITH DATE : 04/2017

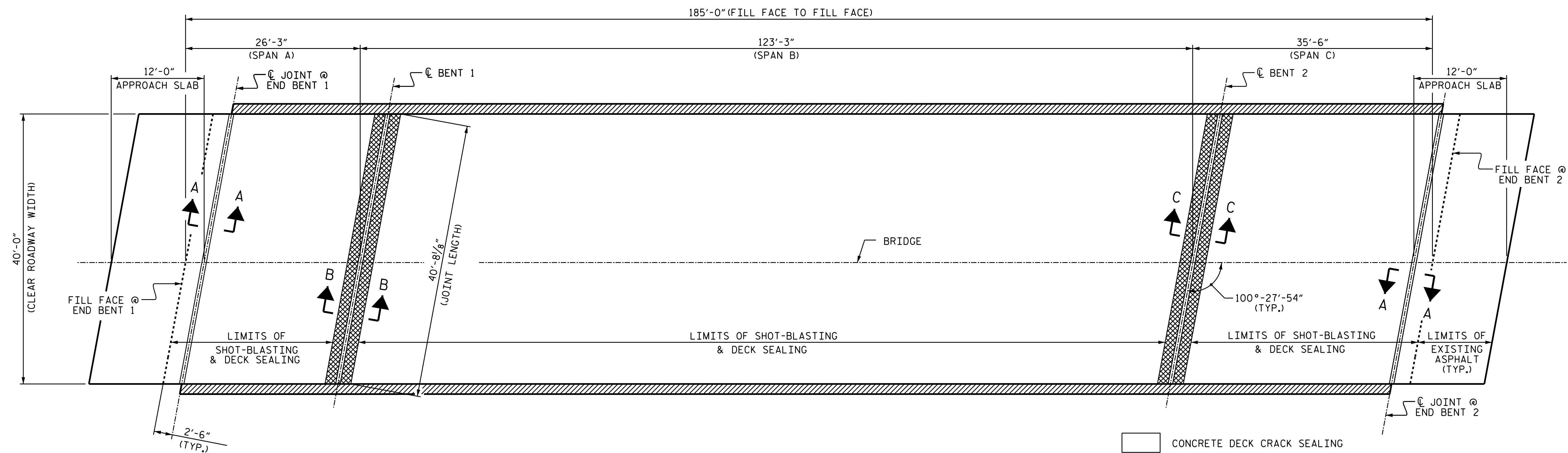
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SUMMARY OF QUANTITIES

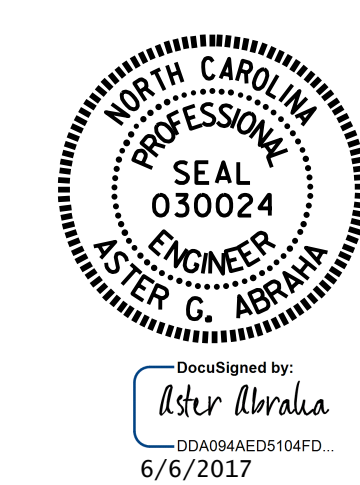
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BRIDGE JOINT DEMOLITION	81.5 SQ.FT.	
SURFACE PREPARATION FOR CONCRETE BARRIER	987 SQ.FT.	
SILANE BARRIER RAIL TREATMENT	987 SQ.FT.	



PLAN OF SPANS A, B AND C
(FOR SECTIONS A-A, B-B & C-C, SEE "JOINT DETAILS" SHEET S-9)

- CONCRETE DECK CRACK SEALING
- BRIDGE JOINT DEMOLITION
- SILANE BARRIER RAIL TREATMENT

PROJECT NO. I-5839
 HALIFAX COUNTY
 BRIDGE No.: 129

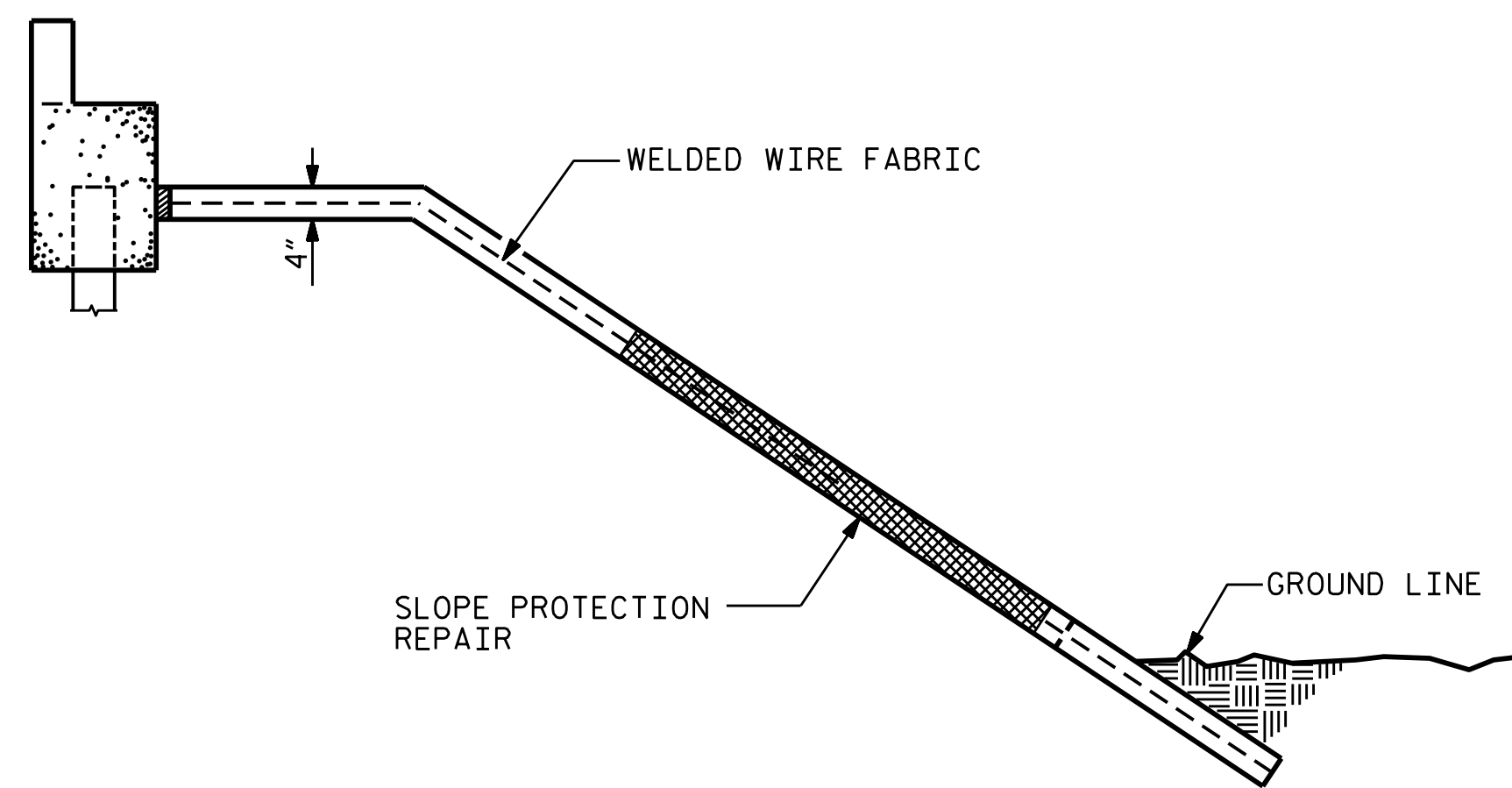


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**SUPERSTRUCTURE
 DECK CRACK SEALING &
 SILANE BARRIER RAIL
 TREATMENT
 (SBL)**

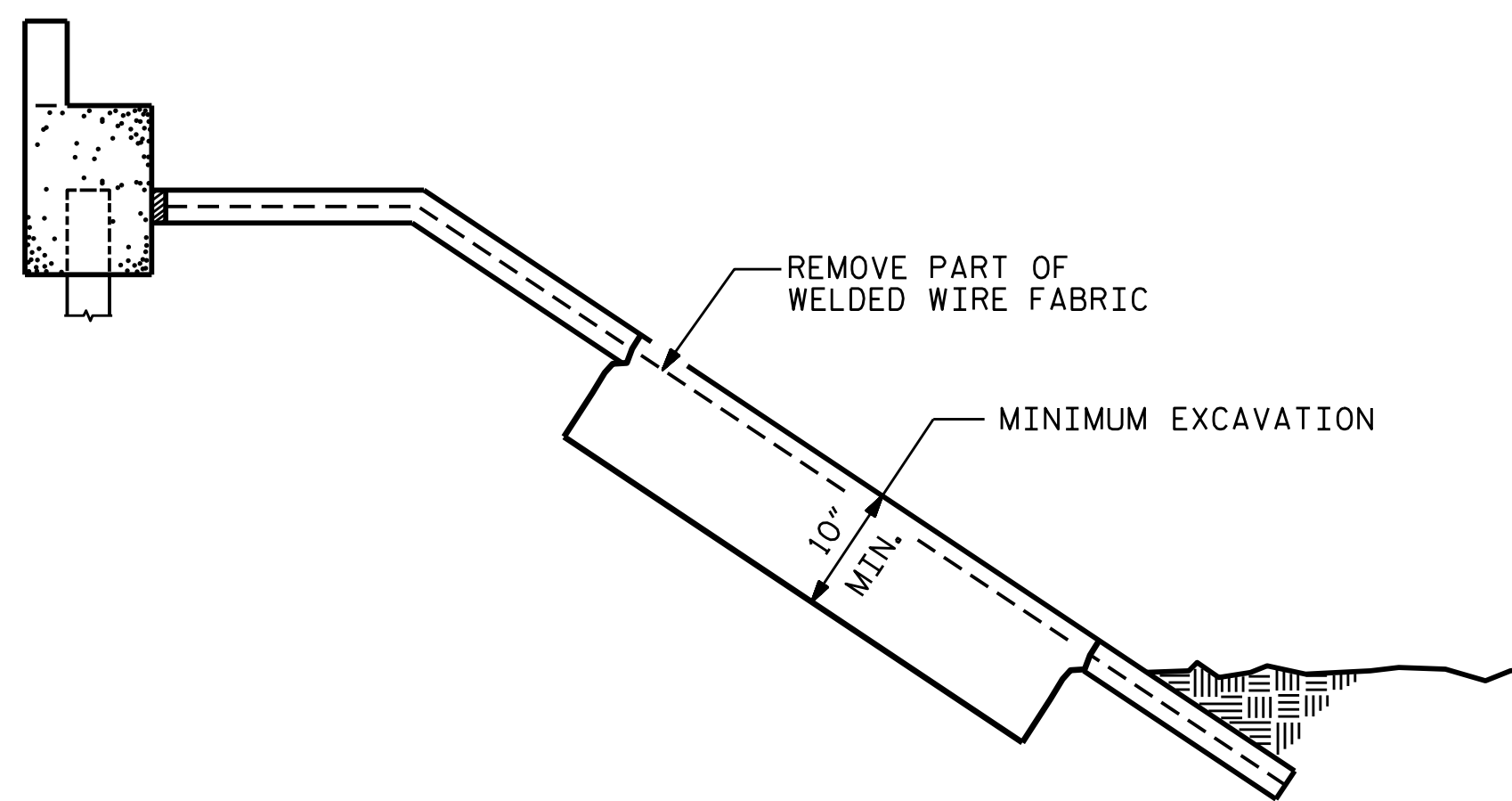
DRAWN BY : M. K. BEARD / S. T. SANDOR DATE : 04/2017
 CHECKED BY : W. C. SMITH DATE : 04/2017

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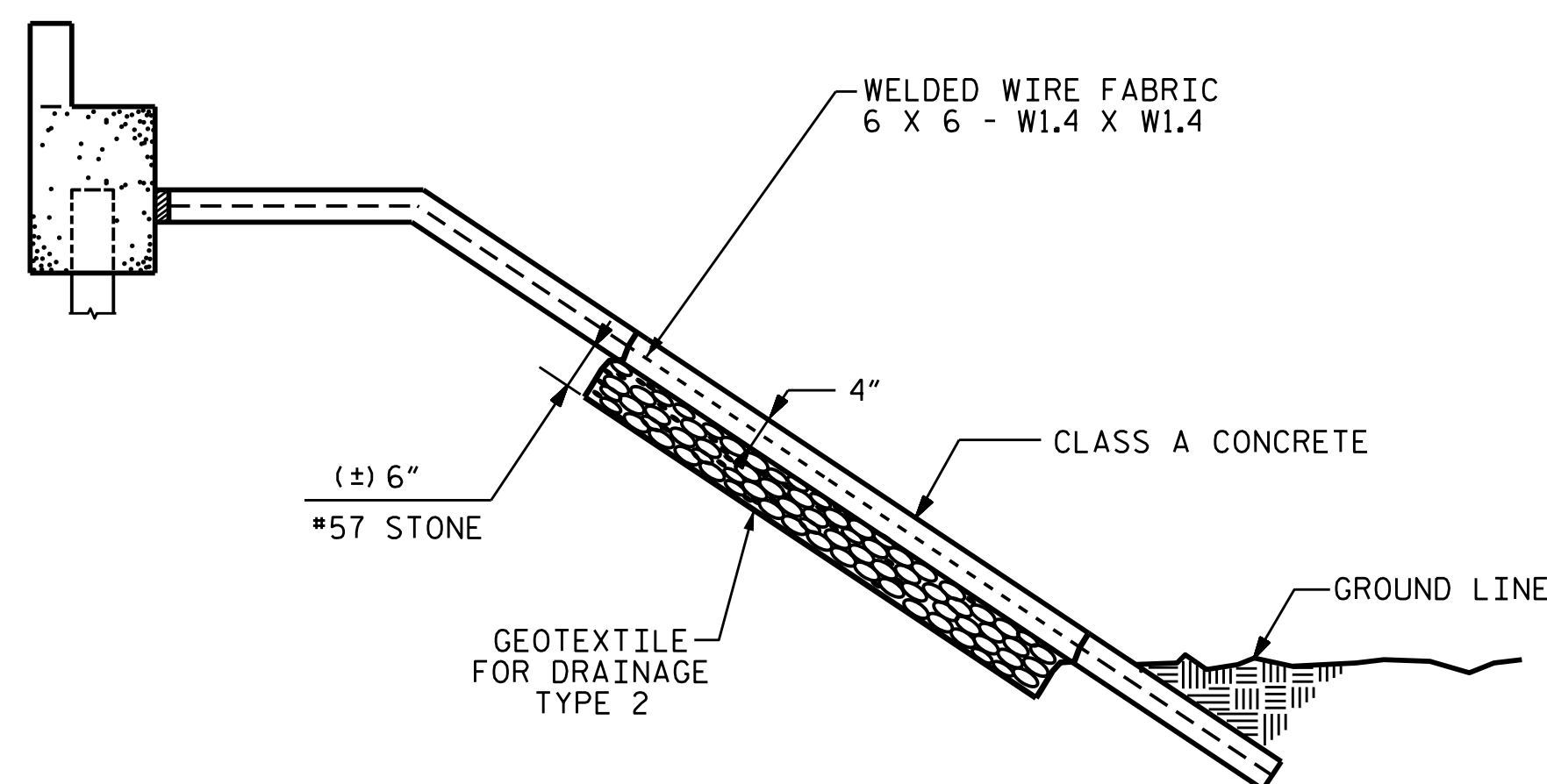
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NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			
2			4			



EXISTING



DETAILS OF EXCAVATION



DETAILS OF REPAIR

NOTES

EXCAVATION FOR REPAIRS OF SLOPE PROTECTION SHALL BE DONE AFTER THE THOROUGH REMOVAL OF ALL LOOSE CONCRETE OF EXISTING SLOPE PROTECTION.

DEPTH OF EXCAVATION IS FOR REFERENCE ONLY. EXCAVATE UNTIL STABLE SOIL IS ENCOUNTERED, AS APPROVED BY THE ENGINEER.

GEOTEXTILE FILTER FABRIC SHALL BE PLACED OVER THE EXCAVATED AREA AND A LAYER OF #57 (OR SIMILAR) STONE SHALL BE PLACED ON TOP OF FABRIC TO A DEPTH OF APPROXIMATELY SIX INCHES.

WHERE EXISTING SLOPE PROTECTION HAS BEEN REMOVED CLASS A CONCRETE SHALL BE PLACED IN THE AREA TO A LEVEL THAT MATCHES THE TOP OF THE REMAINING CONCRETE SLOPE PROTECTION.

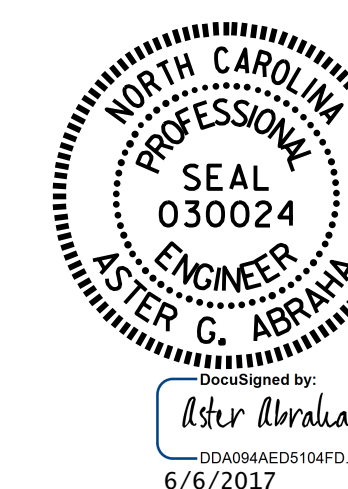
GEOTEXTILE FILTER FABRIC SHALL BE TYPE 2 IN ACCORDANCE WITH JANUARY 2012 NORTH CAROLINA STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, SECTION 1056, TABLE 1056-1 (GEOTEXTILE REQUIREMENTS).

CLASS A CONCRETE SHALL BE IN ACCORDANCE WITH JANUARY 2012 NORTH CAROLINA STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, SECTION 1000, TABLE 1000-1 (REQUIREMENTS FOR CONCRETE).

BRIDGE #124	SILICONE JOINT SEALANT
	LN. FT.
BOTTOM OF BENT 1 COLUMNS	28.3
BOTTOM OF BENT 2 COLUMNS	28.3

BRIDGE #129	#57 STONE	GEOTEXTILE FOR DRAINAGE TYPE 2	CLASS A CONCRETE REPAIRS	SILICONE JOINT SEALANT
	TON	SQUARE YARDS	CUBIC YARDS	LN. FT.
END BENT 1	1.86	8.0	1.33	
END BENT 2	2.48	10.67	1.78	
BOTTOM OF BENT 1 COLUMNS				28.3
BOTTOM OF BENT 2 COLUMNS				28.3

PROJECT NO. I-5839
HALIFAX COUNTY
 BRIDGE NO. 124 & 129



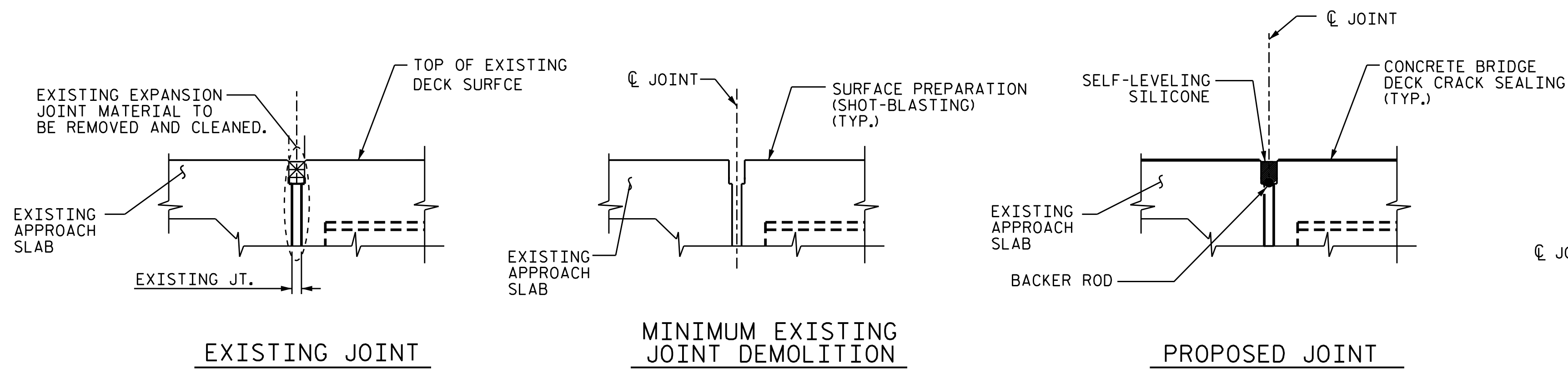
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUBSTRUCTURE
SLOPE PROTECTION REPAIRS

DRAWN BY : S. T. SANDOR DATE : 03/2017
 CHECKED BY : W. C. SMITH DATE : 05/2017

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 R:\S+structures\Plans\Final DGN's\402.019_I5839.SMU_410124_SPR_S8.DGN
 jdnawk

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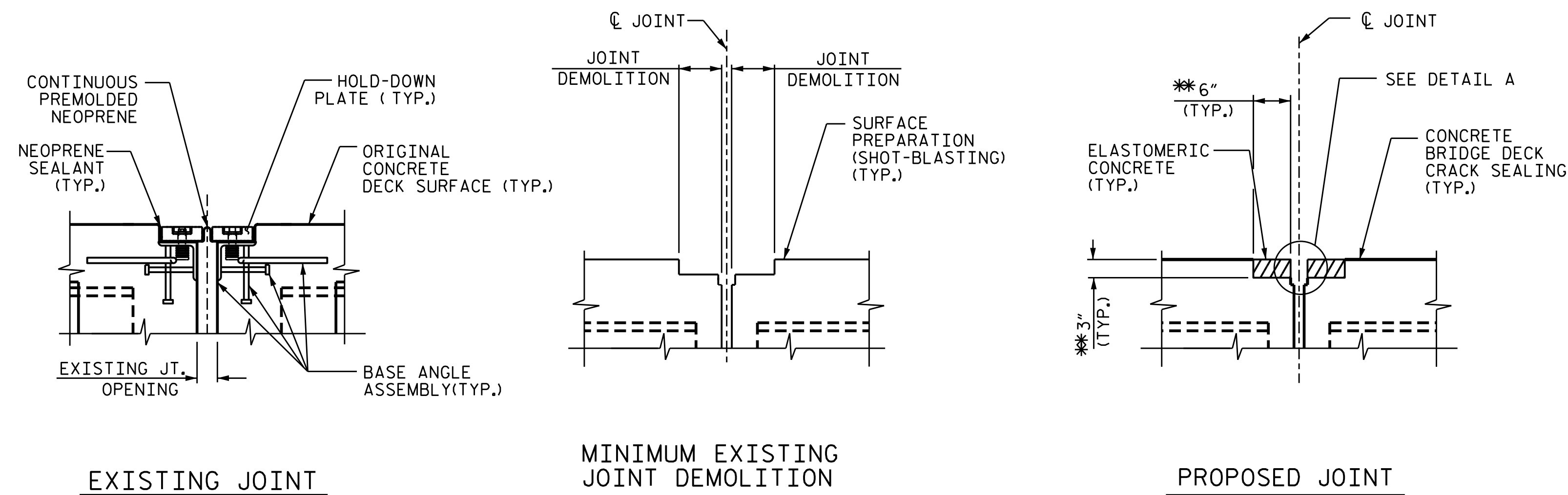
EXISTING JOINT

MINIMUM EXISTING JOINT DEMOLITION

PROPOSED JOINT

JOINT INSTALLATION SEQUENCE AT END BENTS

SECTION A-A



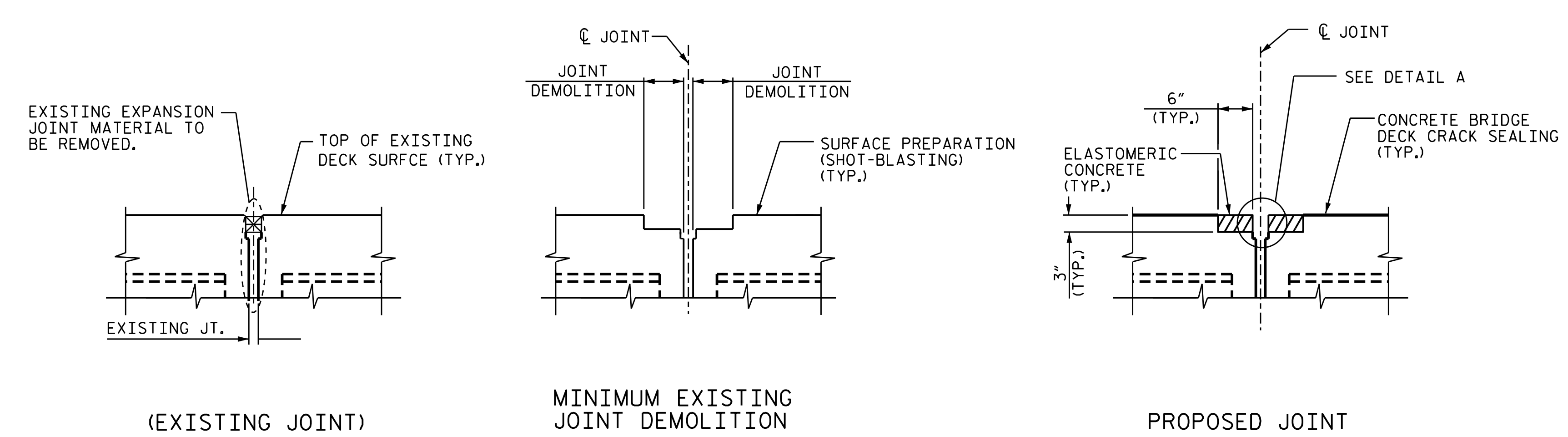
EXISTING JOINT

MINIMUM EXISTING JOINT DEMOLITION

PROPOSED JOINT

JOINT INSTALLATION SEQUENCE AT BENT 1

SECTION B-B



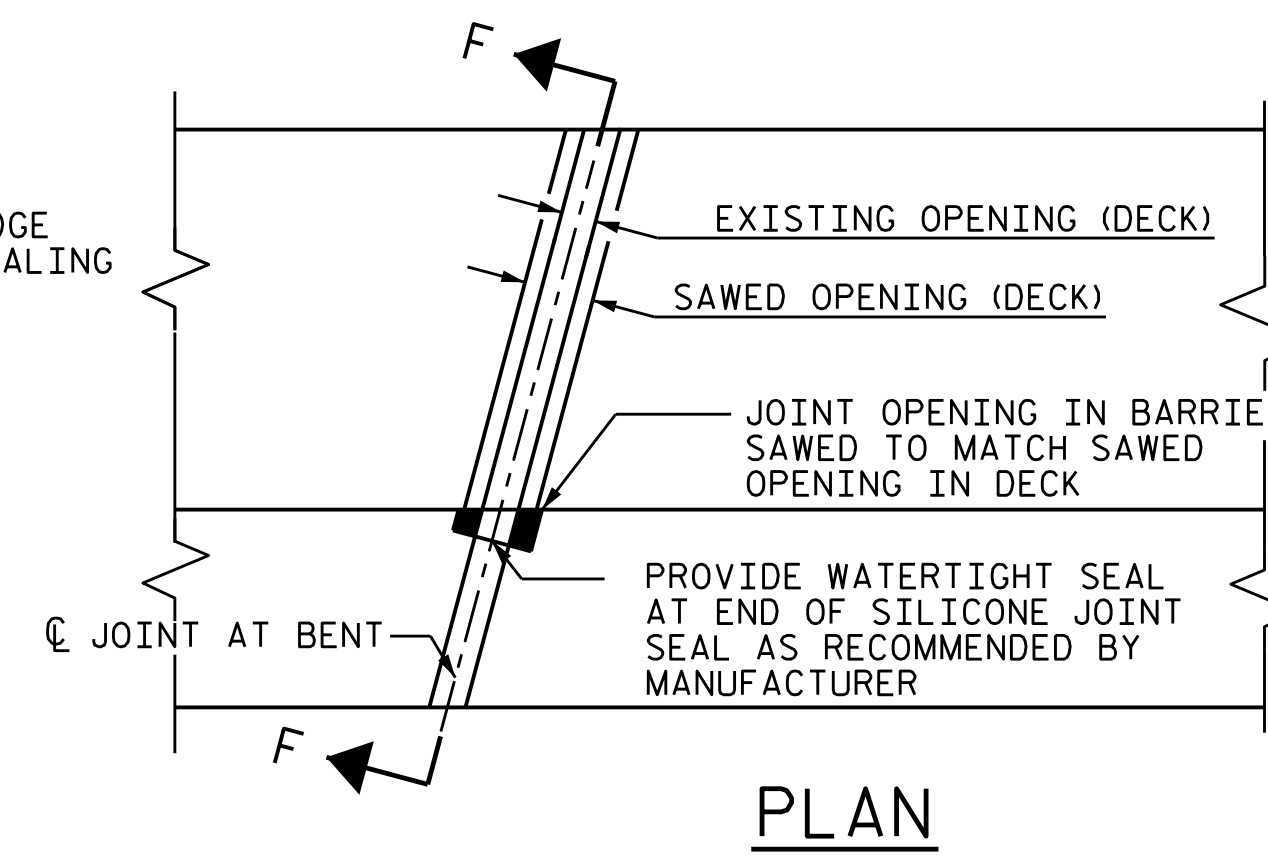
(EXISTING JOINT)

MINIMUM EXISTING JOINT DEMOLITION

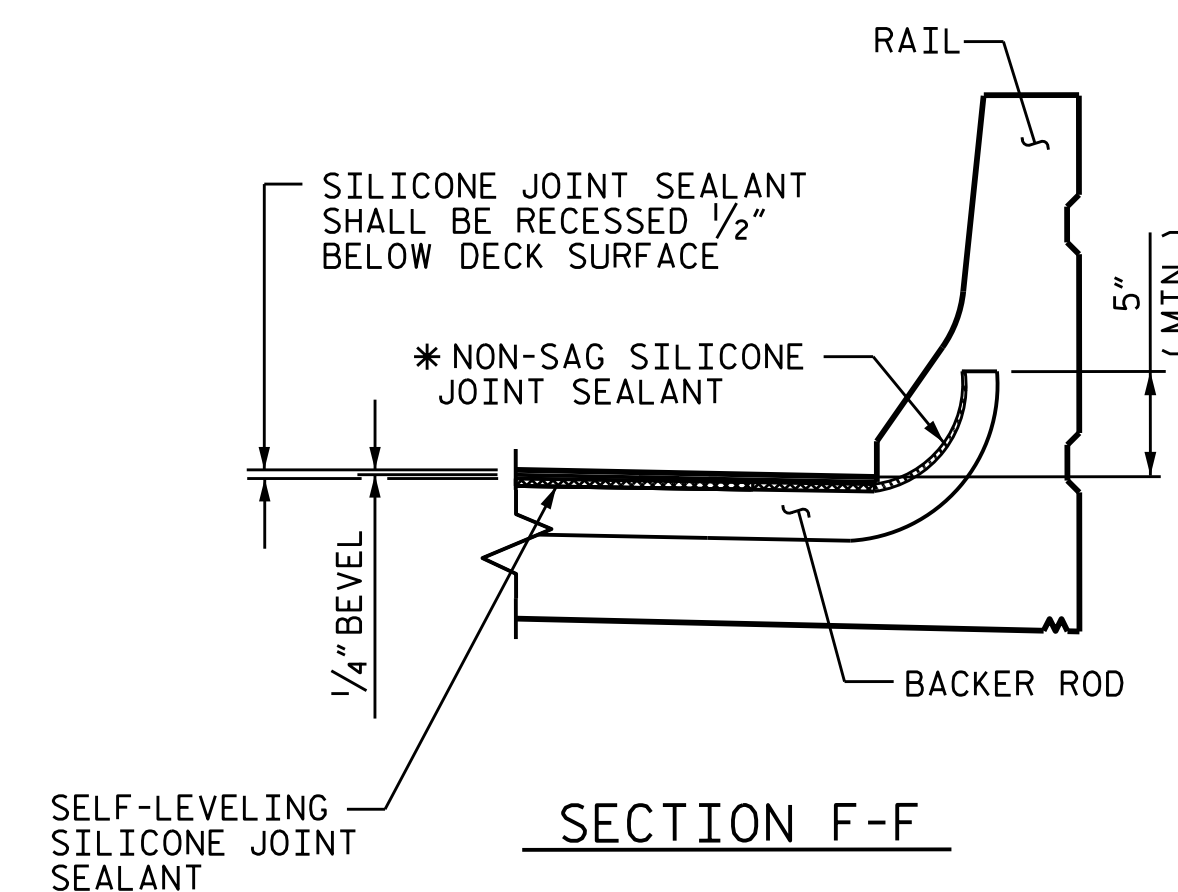
PROPOSED JOINT

JOINT INSTALLATION SEQUENCE AT BENT 2

SECTION C-C

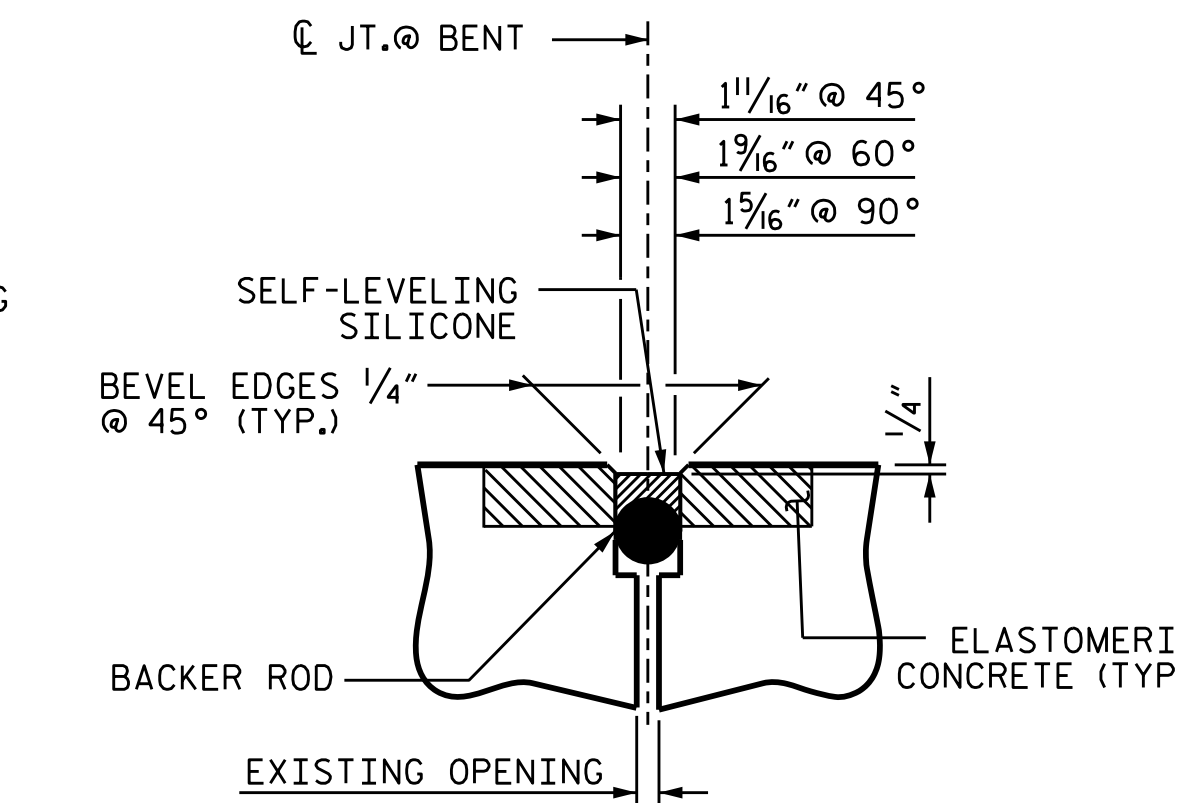


PLAN



SECTION F-F

*NON-SAG SILICONE JOINT SEALANT TO BE PLACED AND ALLOWED TO SET, PRIOR TO PLACEMENT OF SELF-LEVELING SILICONE JOINT SEALANT.



DETAIL A (PROPOSED)

NOTES:

- CONTRACTOR SHALL FIELD VERIFY THE EXISTING FORMED OPENING PRIOR TO OBTAINING JOINT MATERIAL.
- FOR SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.
- FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.
- UNLESS NOTED OTHERWISE RETAIN ALL EXISTING REINFORCING STEEL. CLEAN AND REPAIR AS NEEDED.
- ALL EXPOSED ENDS OF CUT BARS SHALL BE COATED WITH EPOXY PRIOR TO THE NEW JOINT MATERIAL INSTALLATION.
- JOINT DEMOLITION EXCAVATION OF CONCRETE AT THE EXISTING JOINT SHALL RESULT IN THE BOTTOM OF THE EXCAVATION BEING REASONABLY FLAT, TO PROVIDE SUFFICIENT SUBSTRATE FOR PLACEMENT AND SUPPORT OF ELASTOMERIC CONCRETE.
- MAXIMUM DEPTH OF ELASTOMERIC CONCRETE SHALL BE 4". IF DEPTH OF JOINT DEMOLITION EXCAVATION EXCEEDS 1" BELOW THE PLANNED 3" DEPTH OF ELASTOMERIC CONCRETE HEADER, PLACE CONCRETE FOR DECK REPAIR TO BOTTOM OF THE ELASTOMERIC CONCRETE HEADER.
- **DIMENSIONS INDICATED ARE GENERIC. ACTUAL DEMOLITION DIMENSIONS SHALL BE SUFFICIENT TO REMOVE THE HOLD-DOWN PLATE AND BASE ANGLES. BASE ANGLE STUDS MAY REMAIN, BUT SHALL BE CUT FLUSH WITH BOTTOM OF EXCAVATION.

PROJECT NO. I-5839
HALIFAX COUNTY
 BRIDGE No.: 124 & 129



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUPERSTRUCTURE
 JOINT DETAILS

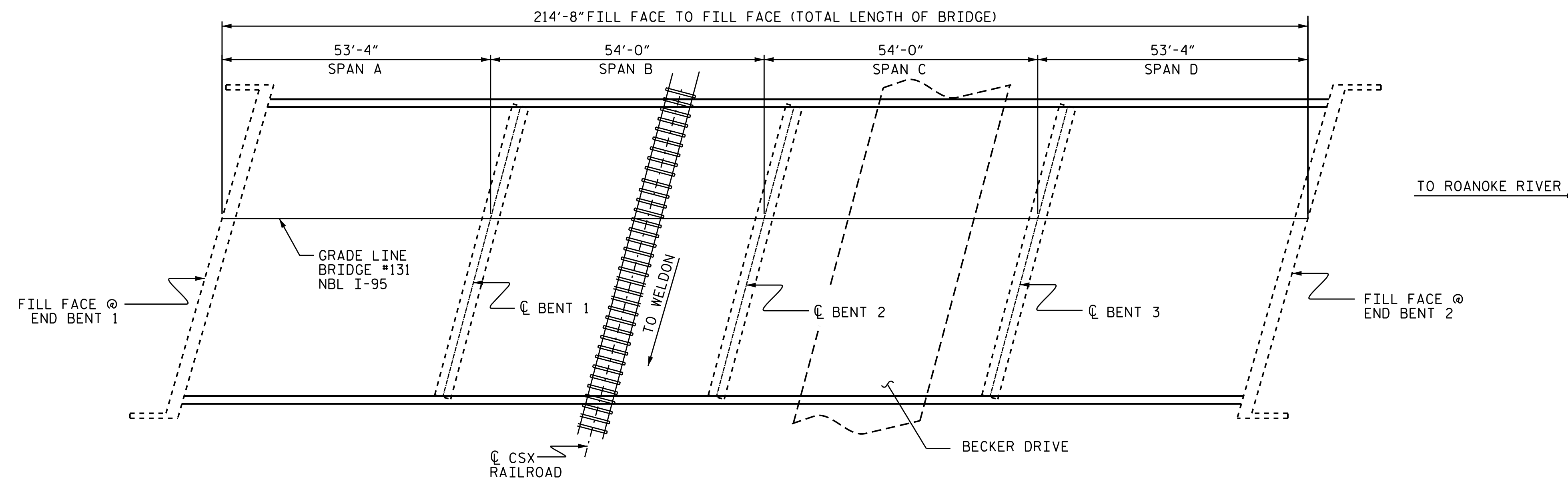
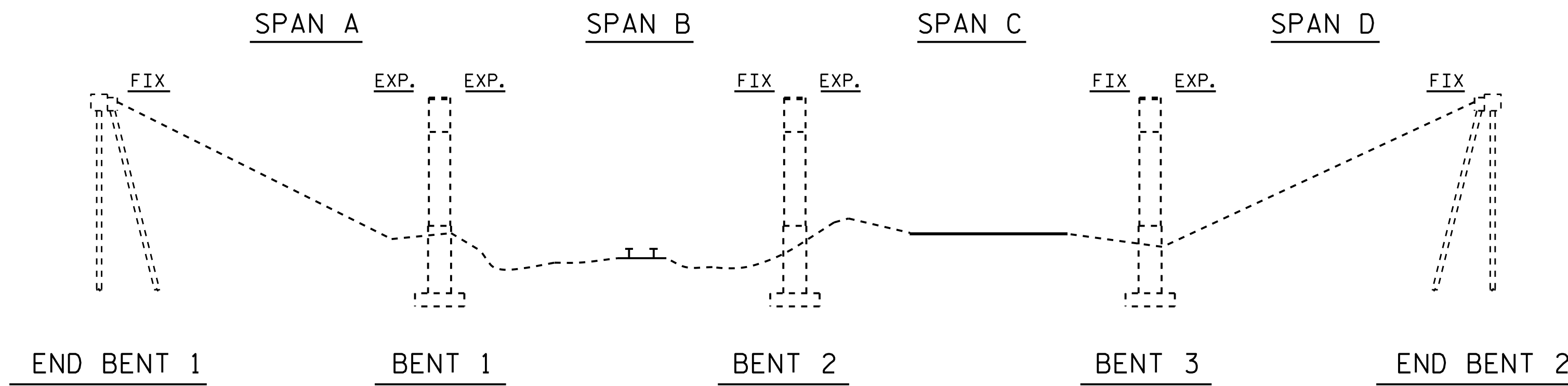
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2			4			

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 CHECKED BY: W. C. SMITH DATE: 05/2017

SCOPE OF WORK

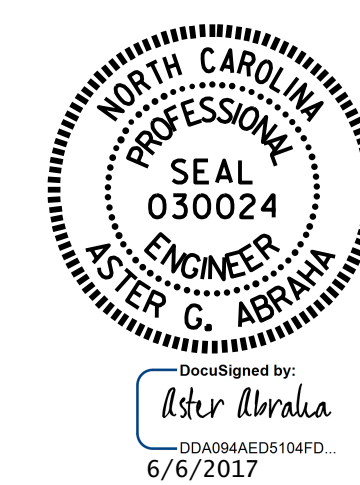
- BRIDGE DECK PREPARATION.
- EPOXY OVERLAY.
- JOINT DEMOLITION AND REPLACEMENT.
- CLEAN AND PAINT ORIGINAL BEARINGS.
- SUBSTRUCTURE REPAIR.
- EPOXY COAT TOP OF BENT CAPS.



I hereby certify that this structure was rehabilitated according to these plans or as noted therein.

Resident Engineer _____ Date _____

PROJECT NO. I-5839
HALIFAX COUNTY
 BRIDGE NO.: 131



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 BRIDGE OVER CSX RAILROAD
 ON I-95 NBL BETWEEN
 US 158 AND
 THE ROANOKE RIVER

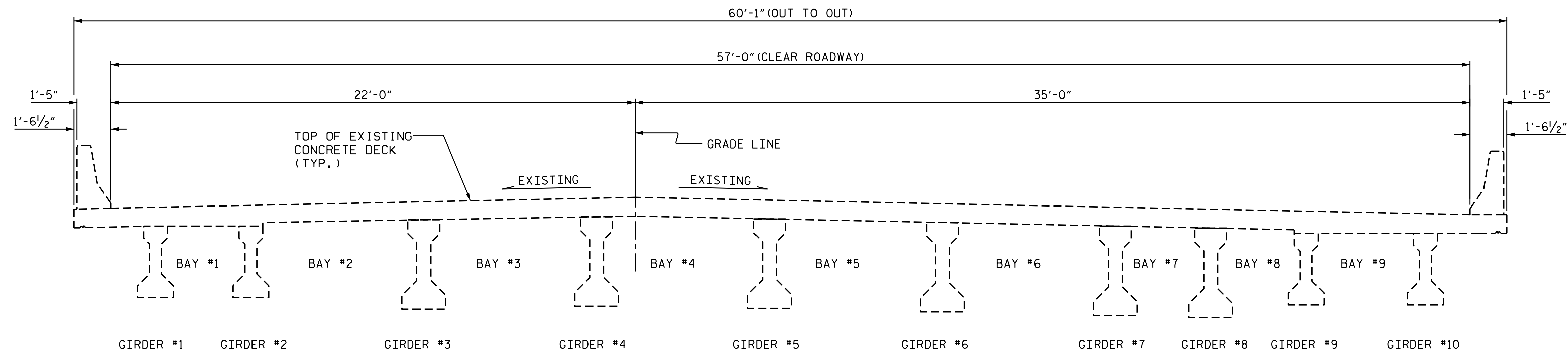
DRAWN BY : S. T. SANDOR DATE : 02/2017
 CHECKED BY : W. C. SMITH DATE : 04/2017

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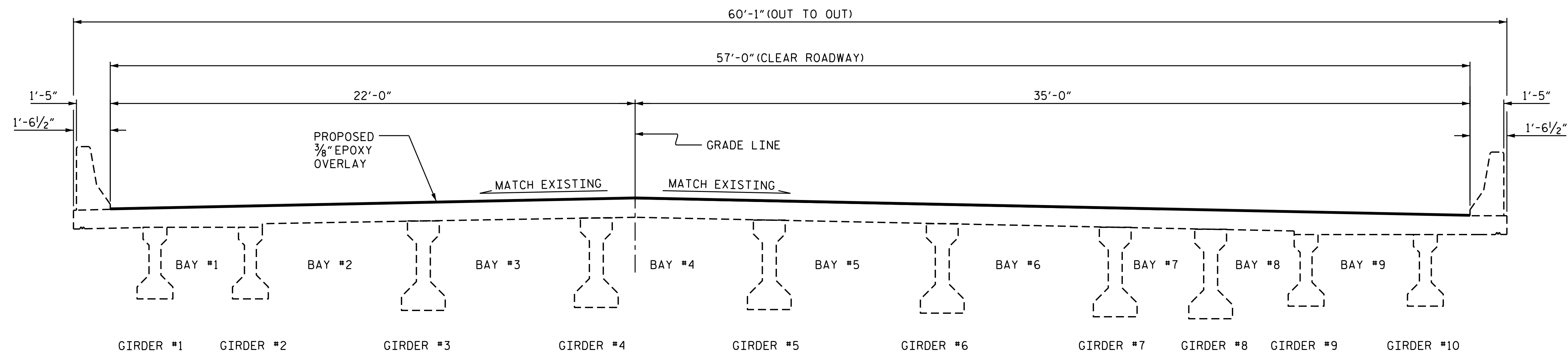
NOTE

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



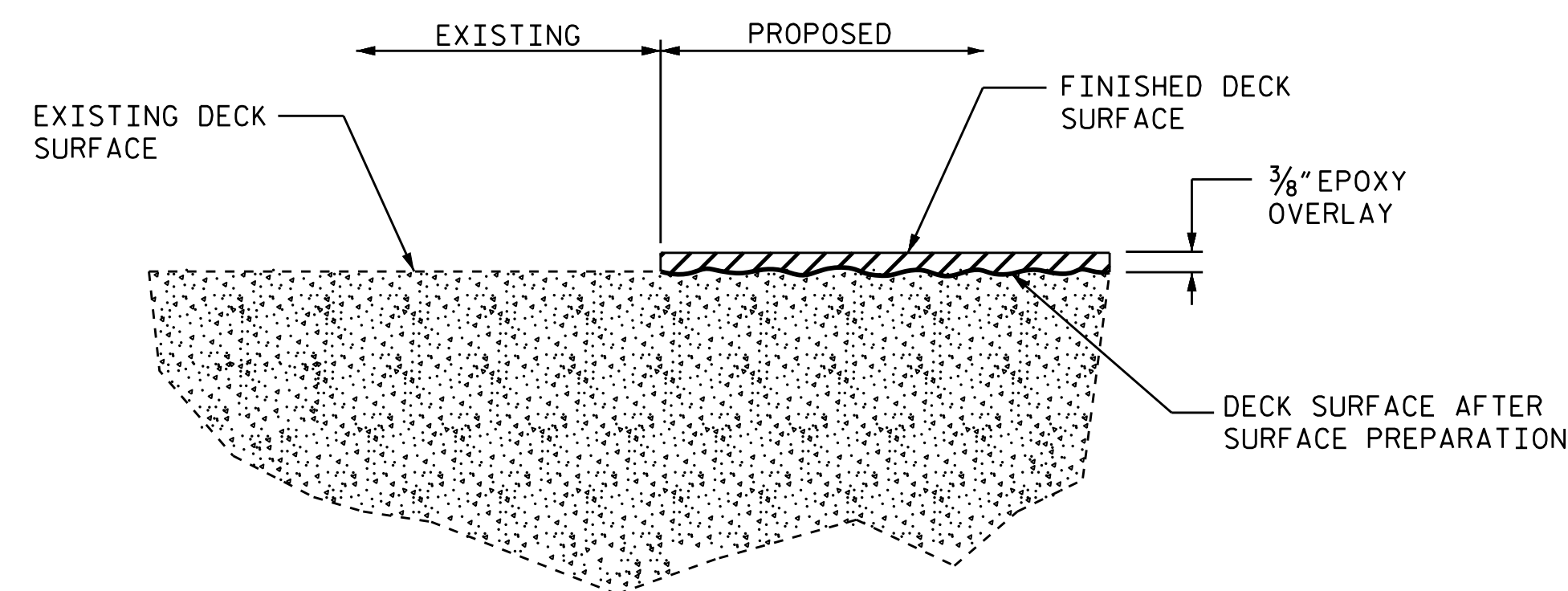
TYPICAL SECTION

(EXISTING)



TYPICAL SECTION

(PROPOSED)



DETAIL OF EPOXY OVERLAY

PROJECT NO. I-5839
HALIFAX COUNTY
 BRIDGE NO. 131

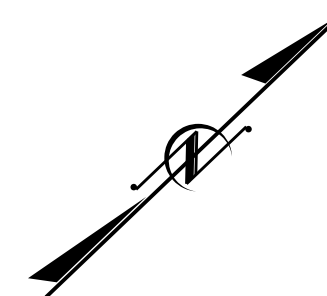


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUPERSTRUCTURE
 TYPICAL SECTIONS &
 EPOXY OVERLAY DETAILS

DRAWN BY : S. T. SANDOR DATE : 02/2017
 CHECKED BY : W. C. SMITH DATE : 05/2017

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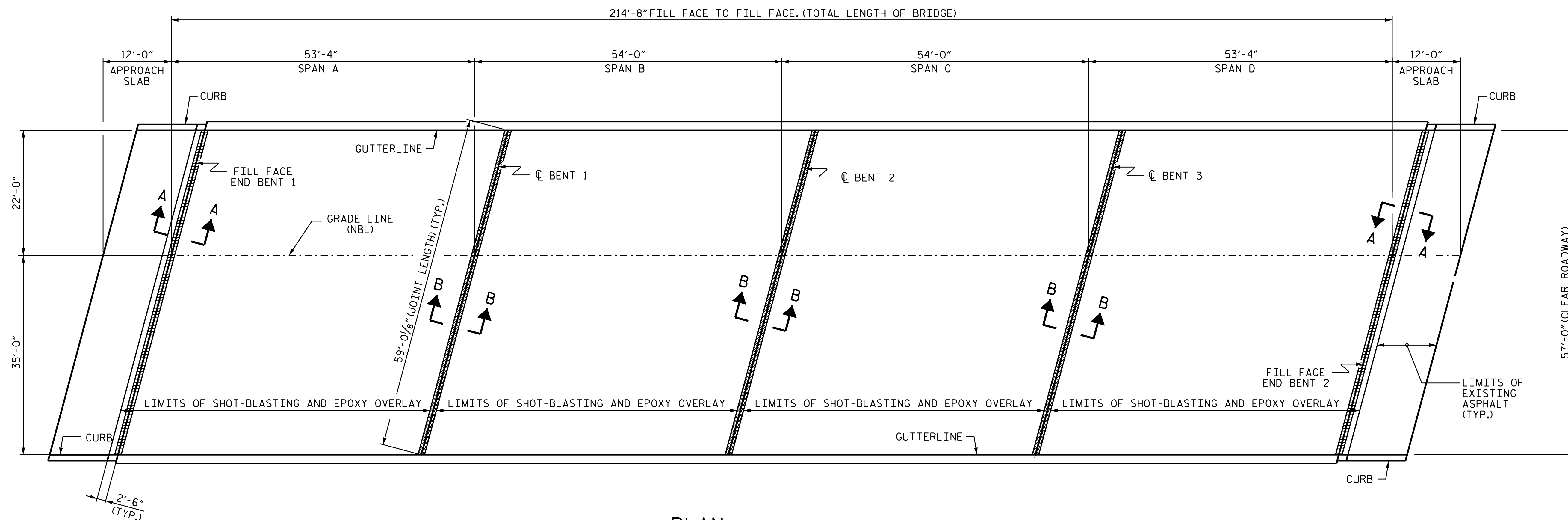


NOTE:

* CONCRETE DECK REPAIR FOR EPOXY OVERLAY IS NOT ANTICIPATED. TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSE IN CASE UNANTICIPATED REPAIR AREAS ARE ENCOUNTERED.

SUMMARY OF QUANTITIES

	ESTIMATE	ACTUAL
EPOXY OVERLAY SYSTEM	11,941 SQ. FT.	
CONCRETE DECK REPAIR FOR EPOXY OVERLAY	* 10 SQ. FT.	
BRIDGE JOINT DEMOLITION	295 SQ. FT.	



PLAN

(FOR SECTION A-A & B-B, SEE JOINT DETAIL SHEET S-24)

- EPOXY OVERLAY
- BRIDGE JOINT DEMOLITION

PROJECT NO. I-5839
HALIFAX COUNTY
 BRIDGE NO. 131



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUPERSTRUCTURE
SURFACE PREPARATION
& EPOXY OVERLAY

DRAWN BY : S. T. SANDOR DATE : 02/2017
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2			4			42

REPAIR QUANTITY TABLE

REPAIRS END BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	6.4	3.2		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP				
EPOXY COATING	AREA SF			LN. FT.
TOP OF CAP	171.3			

REPAIRS END BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP				
EPOXY COATING	AREA SF			LN. FT.
TOP OF CAP	171.3			

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 INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

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

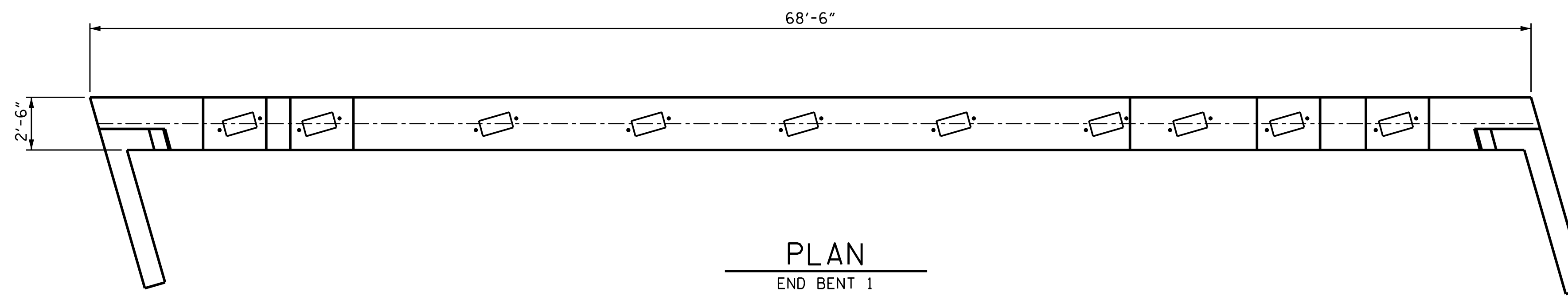
FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

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

 - SHOTCRETE REPAIR

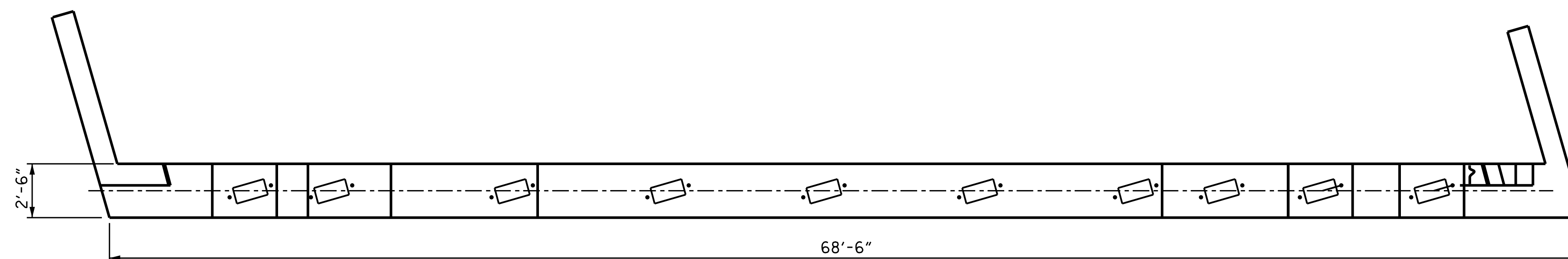
ERI - EPOXY RESIN INJECTION



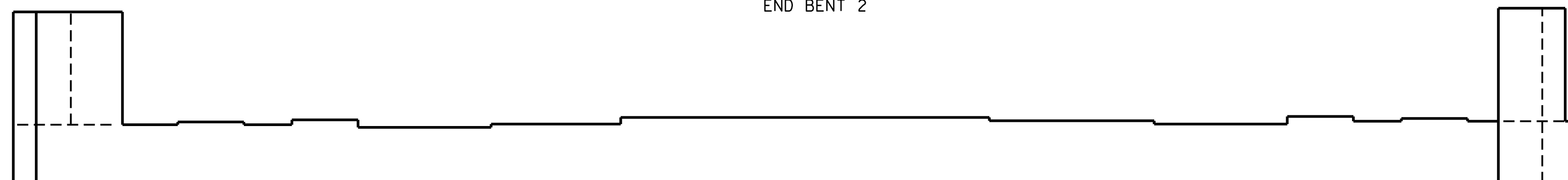
PLAN
END BENT 1



ELEVATION
END BENT 1



PLAN
END BENT 2



ELEVATION
END BENT 2

PROJECT NO. I-5839
HALIFAX COUNTY
 BRIDGE NO. 131



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

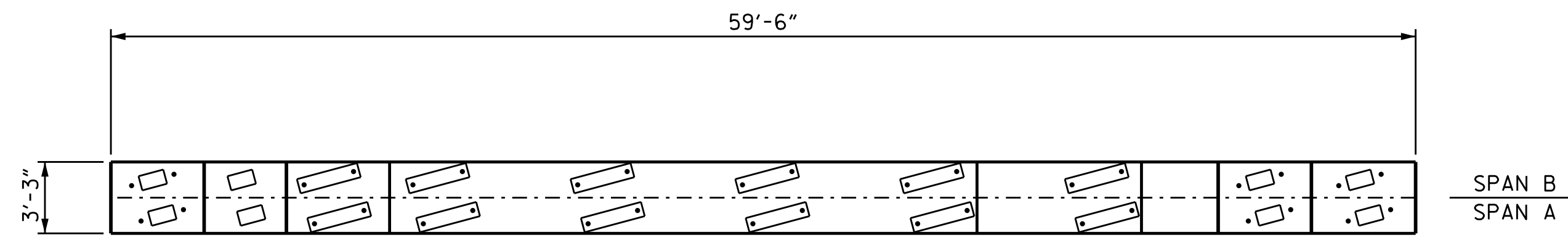
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END BENTS

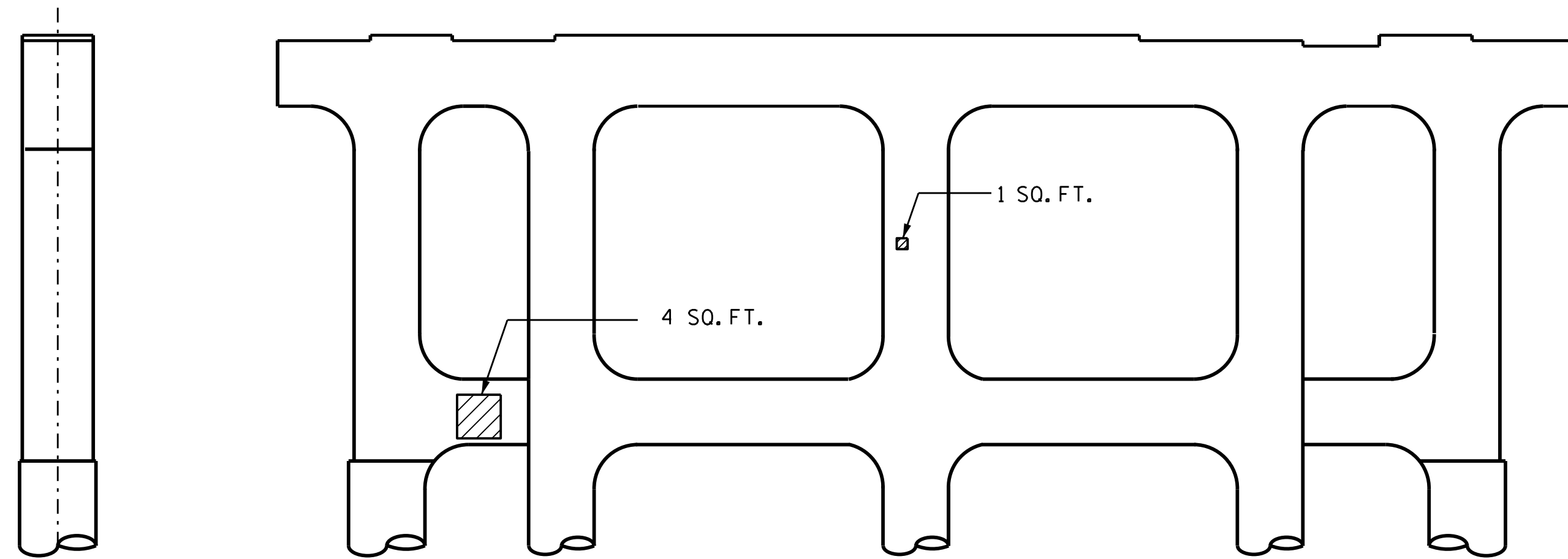
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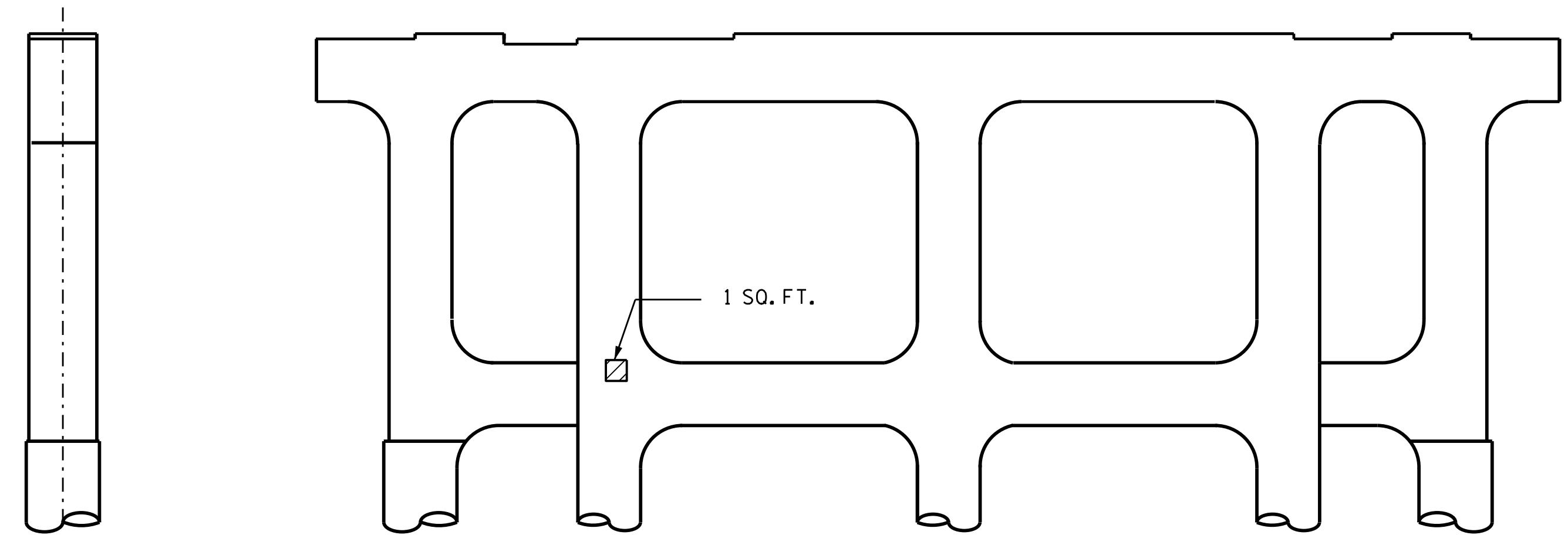
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PLAN
TOP OF CAP

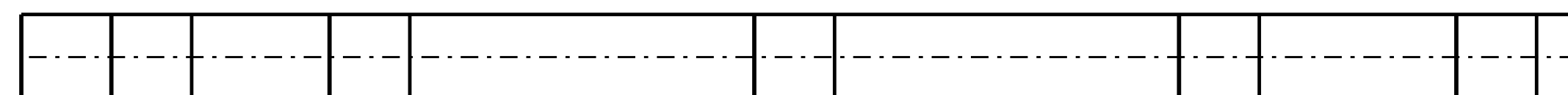


ELEVATION
SPAN A SIDE



ELEVATION
SPAN B SIDE

▨ - SHOTCRETE REPAIR
ERI - EPOXY RESIN INJECTION



PLAN
BOTTOM OF CAP

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 INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

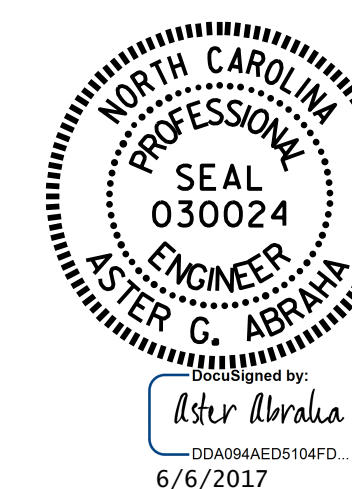
FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

REPAIRS BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	2.0	1.0		
STRUT	4.0	2.0		
FOOTER	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		0.0		
COLUMN		0.0		
STRUT		0.0		
FOOTER		0.0		
EPOXY COATING	AREA SF			
TOP OF CAP	193.4			

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 1" CL TO SAWCUT. SEE REPAIR DETAILS.

PROJECT NO. I-5839
HALIFAX COUNTY
 BRIDGE NO. 131

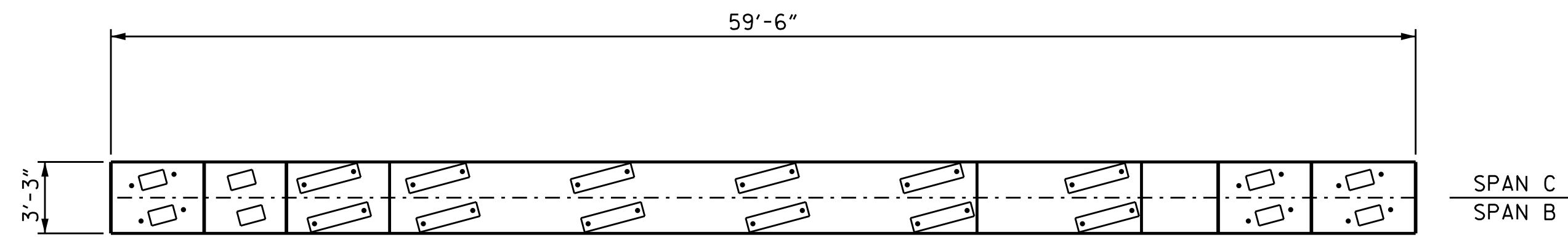


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE
 BENT 1

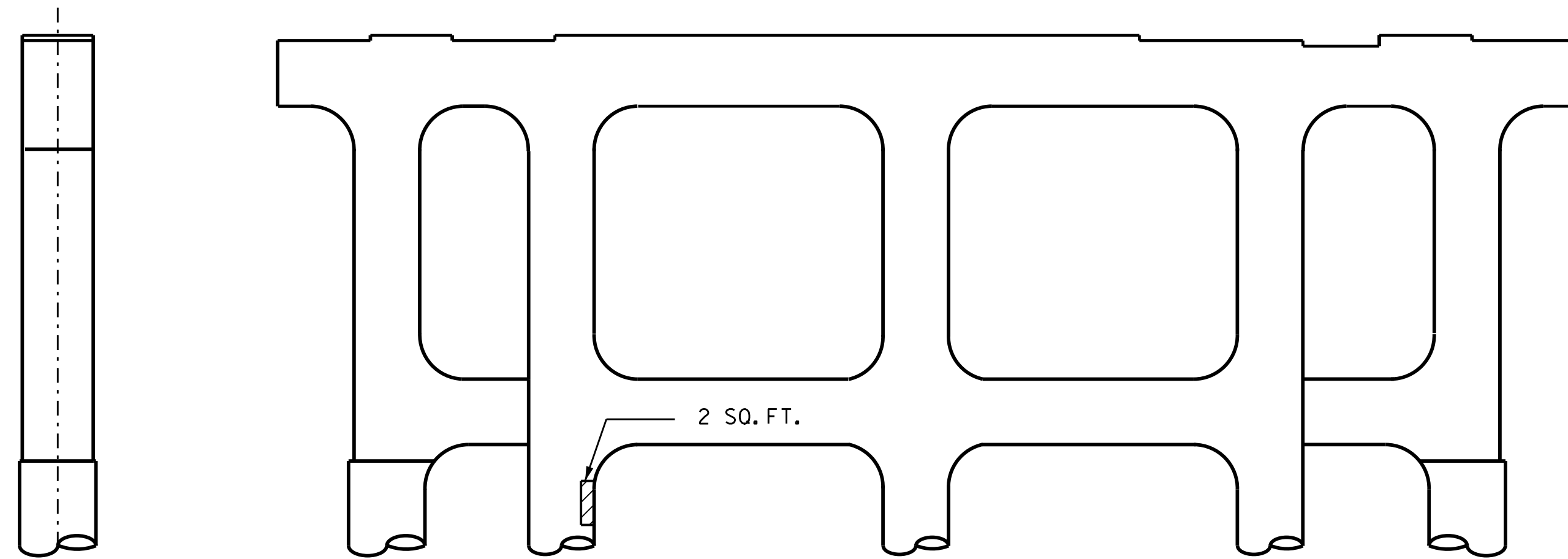
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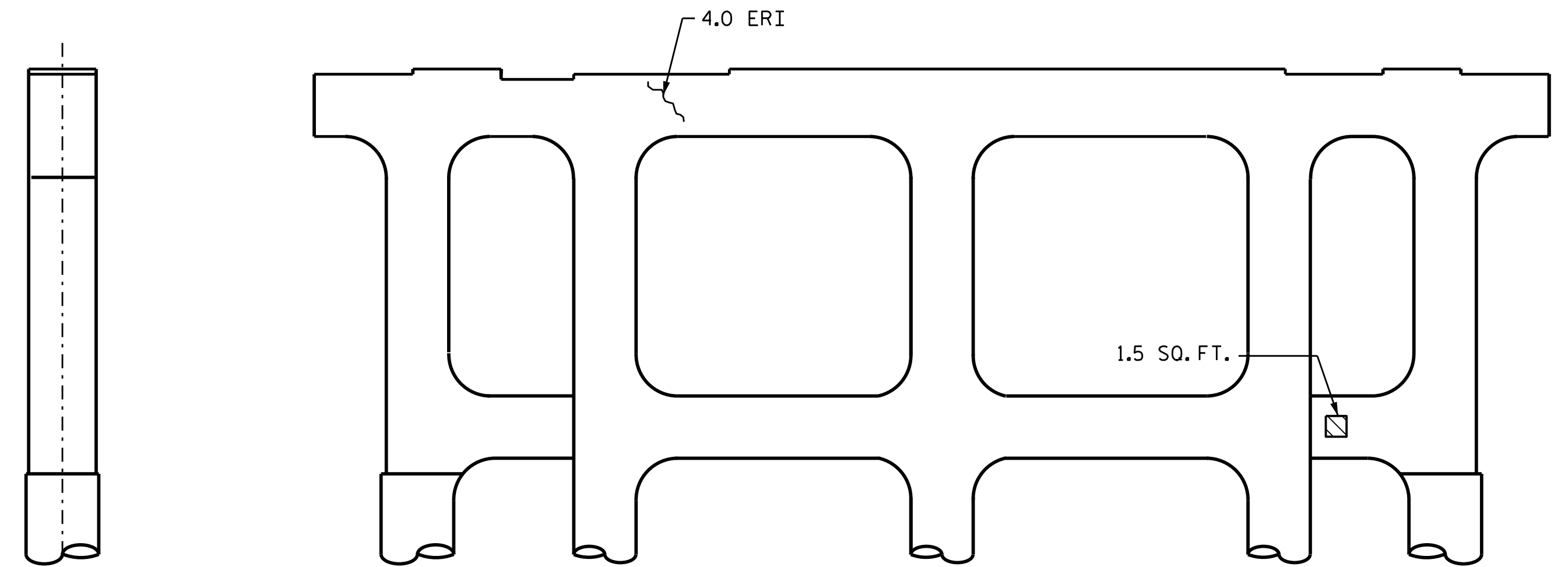
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PLAN
TOP OF CAP

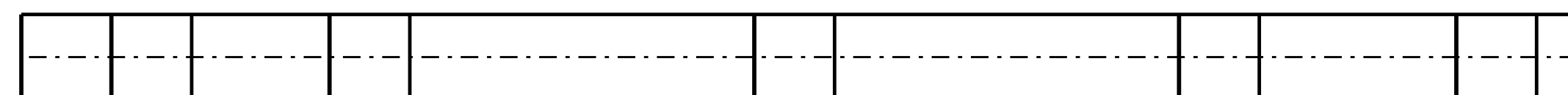


ELEVATION
SPAN B SIDE



ELEVATION
SPAN C SIDE

▨ - SHOTCRETE REPAIR
ERI - EPOXY RESIN INJECTION



PLAN
BOTTOM OF CAP

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 INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

REPAIRS BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	2.0	1.0		
STRUT	1.5	0.8		
FOOTER	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		4.0		
COLUMN		0.0		
STRUT		0.0		
FOOTER		0.0		
EPOXY COATING	AREA SF			
TOP OF CAP	193.4			

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 1" CL TO SAWCUT. SEE REPAIR DETAILS.

PROJECT NO. I-5839
HALIFAX COUNTY
 BRIDGE NO. 131



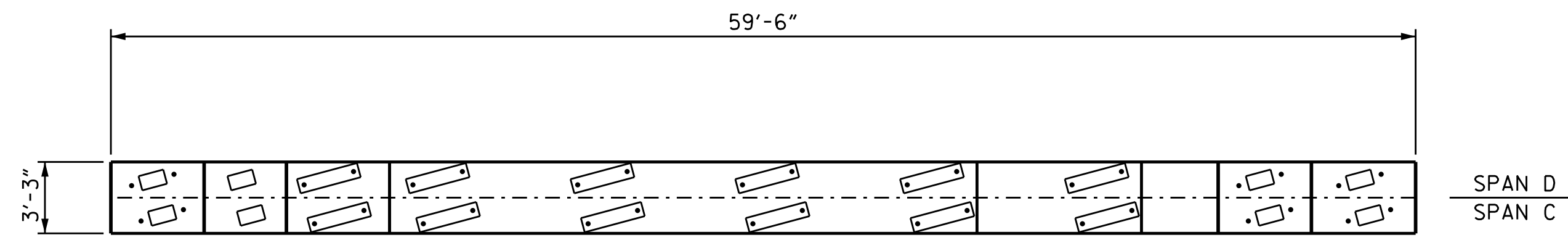
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 BENT 2**

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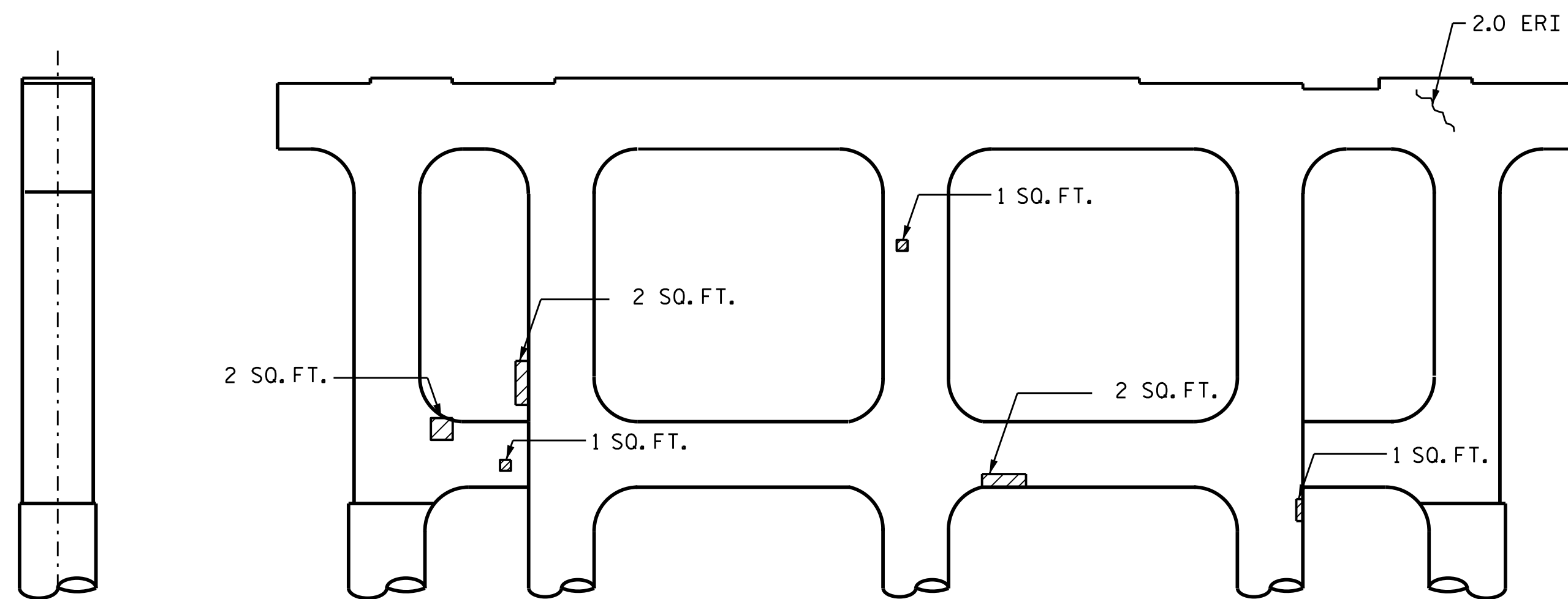


PLAN
TOP OF CAP

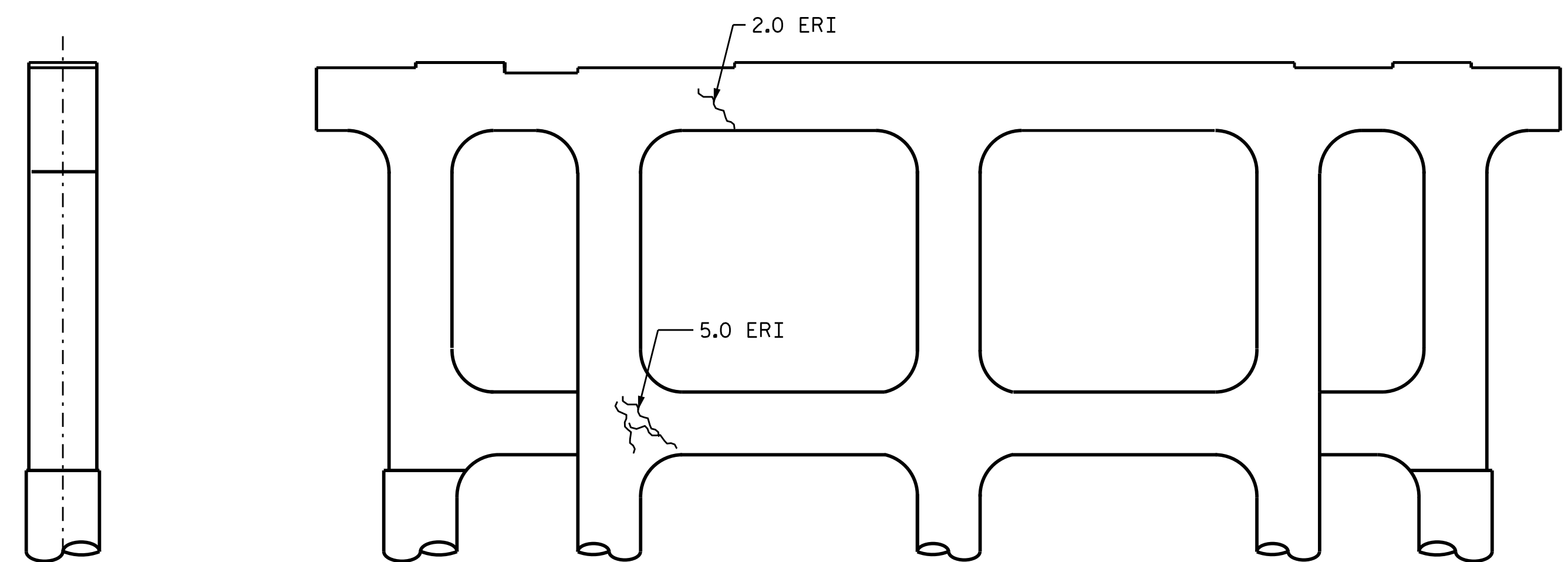
NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.
 FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.
 FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE				
REPAIRS BENT 3	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	3.0	1.5		
STRUT	5.0	2.5		
FOOTER	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		4.0		
COLUMN		5.0		
STRUT		0.0		
FOOTER		0.0		
EPOXY COATING	AREA SF			
TOP OF CAP	193.4			

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 1" CL TO SAWCUT. SEE REPAIR DETAILS.

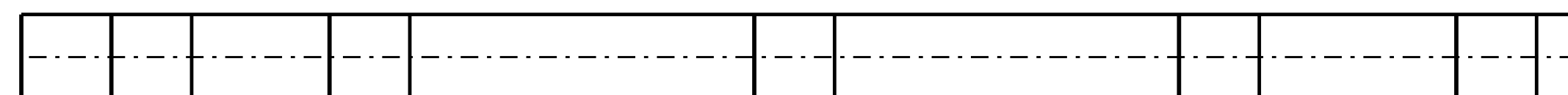


ELEVATION
SPAN C SIDE



ELEVATION
SPAN D SIDE

▨ - SHOTCRETE REPAIR
 ERI - EPOXY RESIN INJECTION



PLAN
BOTTOM OF CAP

PROJECT NO. I-5839
HALIFAX COUNTY
 BRIDGE NO. 131



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**SUBSTRUCTURE
 BENT 3**

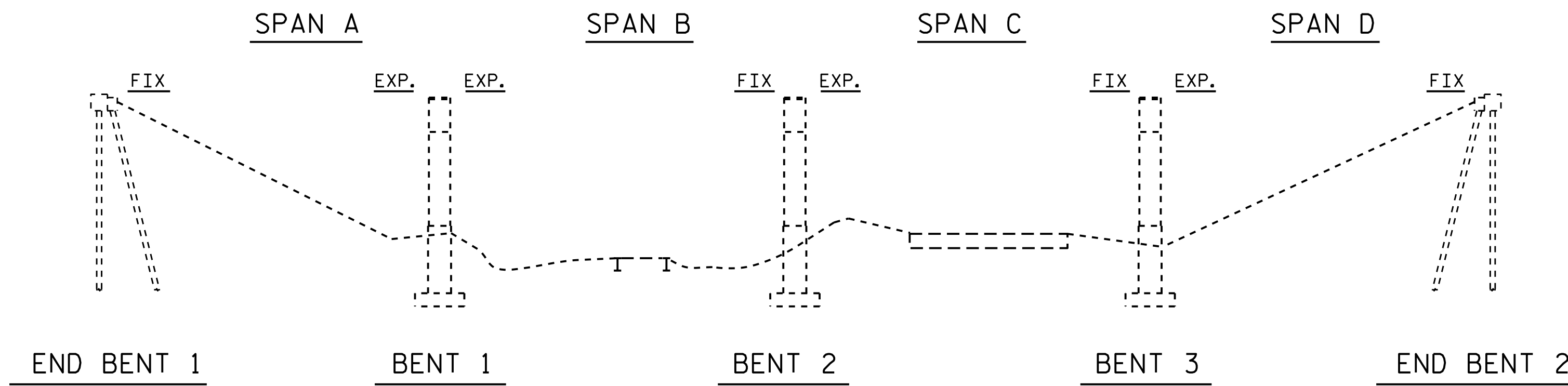
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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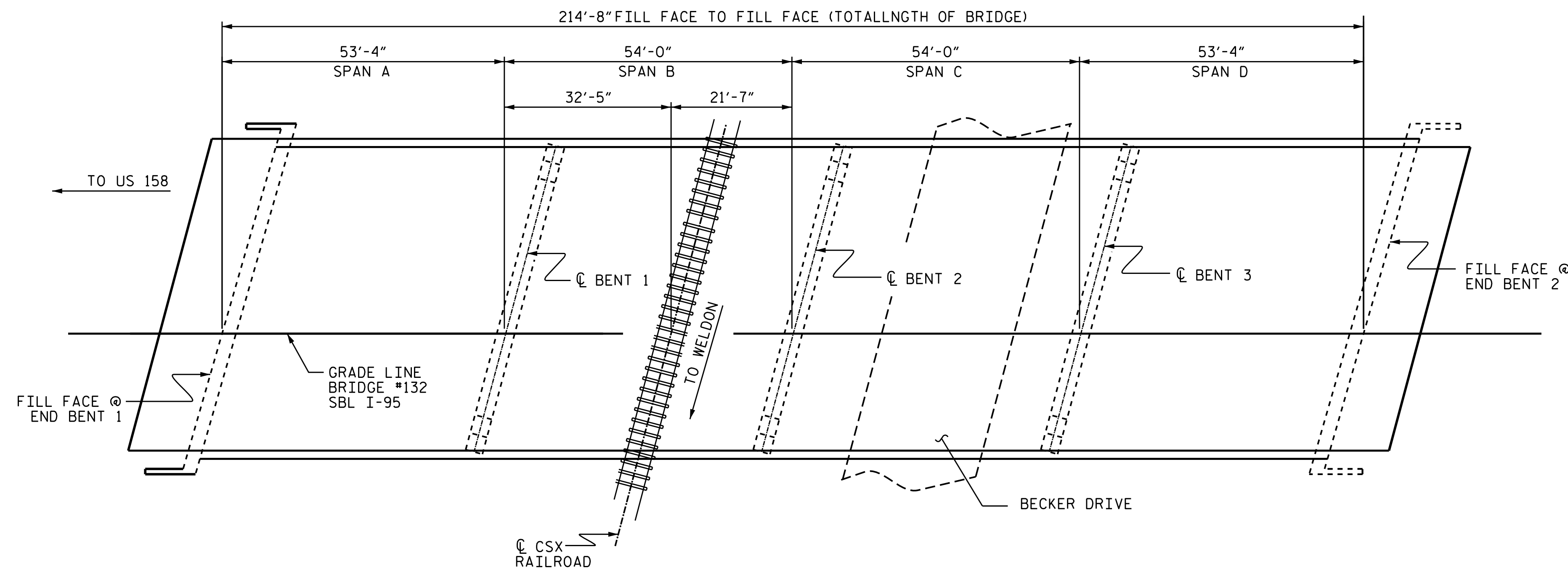
DRAWN BY : S. T. SANDOR DATE : 02/2017
 CHECKED BY : W. C. SMITH DATE : 03/2017

SCOPE OF WORK

- BRIDGE DECK PREPARATION.
- EPOXY OVERLAY.
- JOINT DEMOLITION AND REPLACEMENT.
- CLEAN AND PAINT ORIGINAL BEARINGS.
- SUBSTRUCTURE REPAIR.
- EPOXY COAT TOP OF BENT CAPS.



ELEVATION
(SECTION ALONG C ROADWAY)



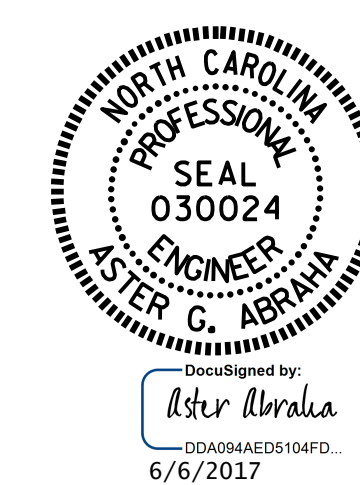
PLAN

COLUMNS AND FOOTINGS NOT SHOWN IN PLAN VIEW FOR CLARITY

I hereby certify that this structure was rehabilitated according to these plans or as noted therein.

Resident Engineer _____ Date _____

PROJECT NO. I-5839
HALIFAX COUNTY
 BRIDGE NO. 132



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 BRIDGE OVER CSX RAILROAD
 ON I-95 SBL BETWEEN
 US 158 AND
 THE ROANOKE RIVER

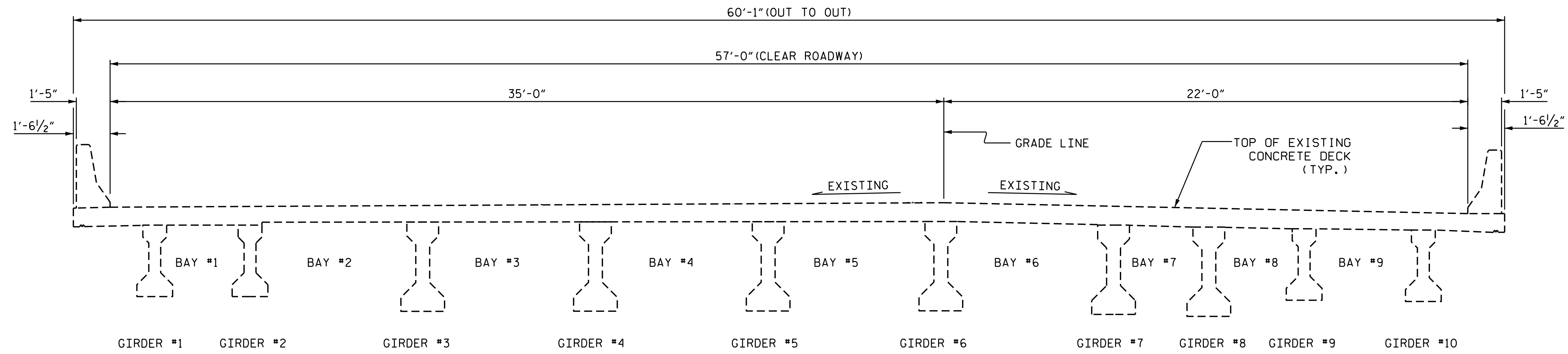
DRAWN BY : S. T. SANDOR DATE : 02/2017
 CHECKED BY : W. C. SMITH DATE : 03/2017

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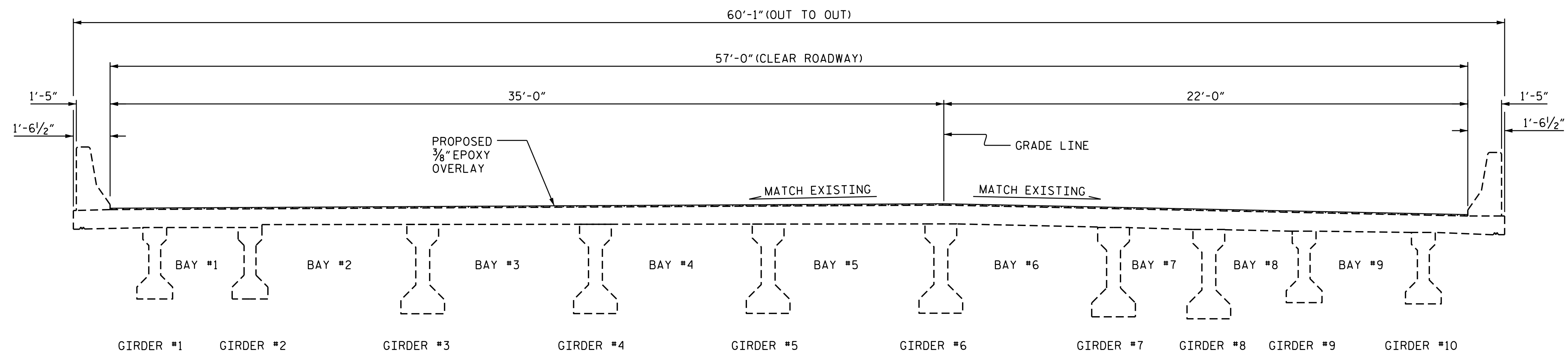
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NOTE

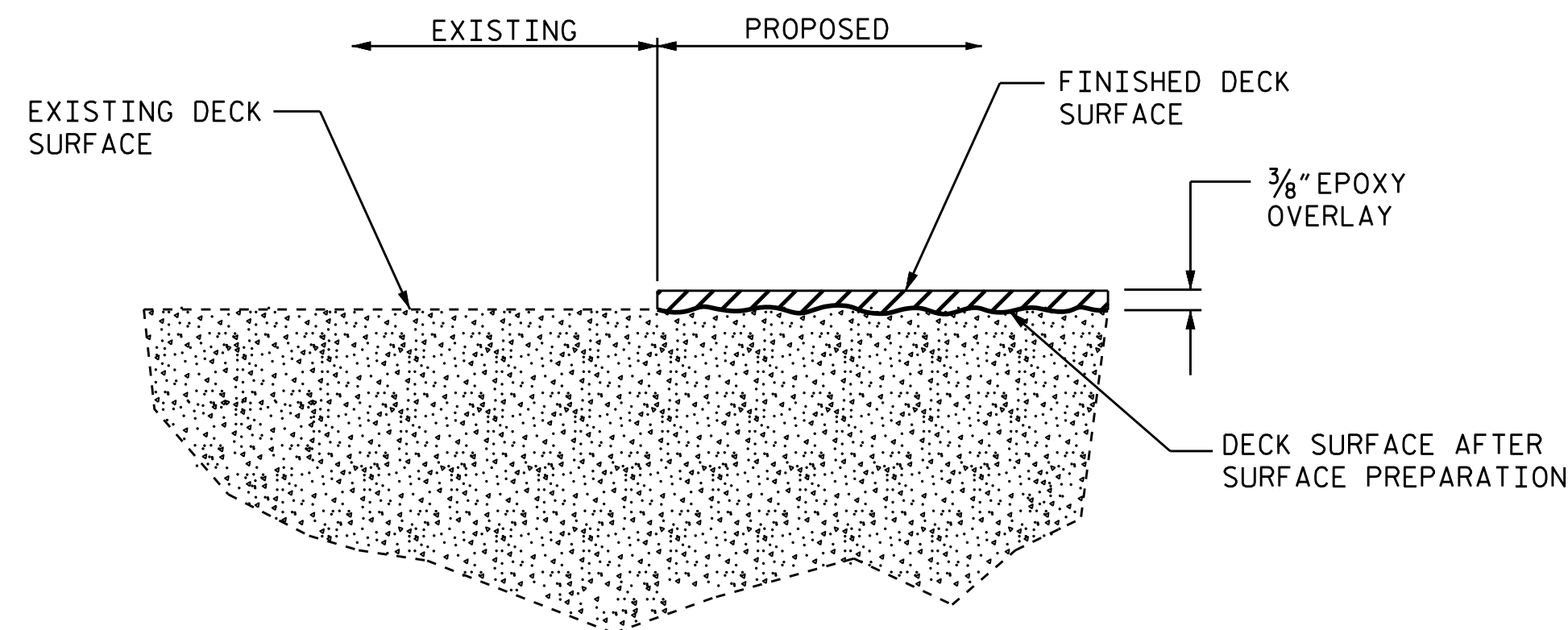
SEE TRAFFIC MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCE, AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION AND EPOXY OVERLAY PLACEMENT.



TYPICAL SECTION
(EXISTING)



TYPICAL SECTION
(PROPOSED)



DETAIL OF EPOXY OVERLAY

PROJECT NO. I-5839
HALIFAX COUNTY
BRIDGE NO. 132



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
TYPICAL SECTIONS &
EPOXY OVERLAY DETAILS

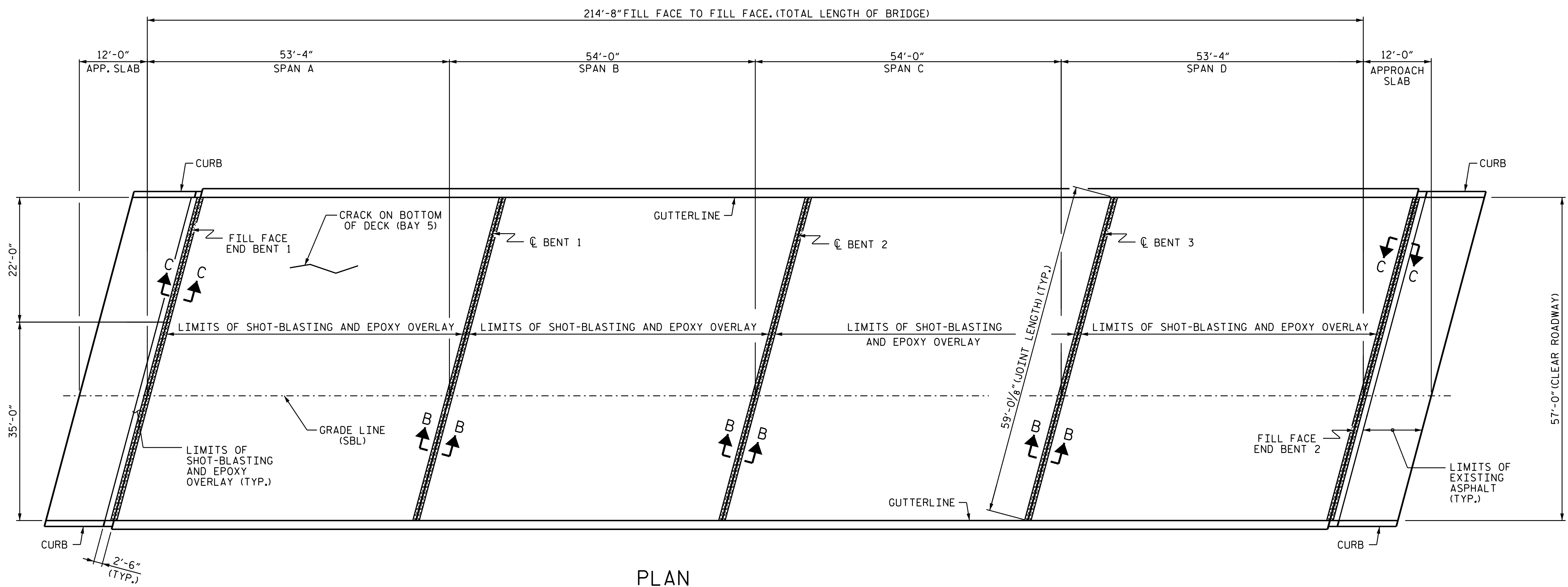
DRAWN BY : S. T. SANDOR DATE : 02/2017
CHECKED BY : W. C. SMITH DATE : 03/2017

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SIGNATURES COMPLETED



REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-18
2			4			42

SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
EPOXY OVERLAY SYSTEM	11,941 SQ. FT.	
CONCRETE DECK REPAIR FOR EPOXY OVERLAY	* 10 SQ. FT.	
BRIDGE JOINT DEMOLITION	295 SQ. FT.	

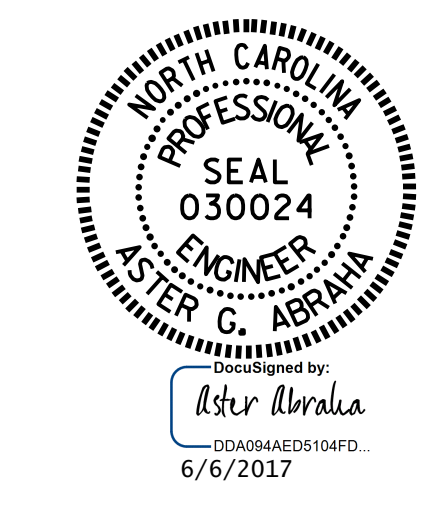
NOTE:
 * CONCRETE DECK REPAIR FOR EPOXY OVERLAY IS NOT ANTICIPATED, TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSE IN CASE UNANTICIPATED REPAIR AREAS ARE ENCOUNTERED.



PLAN
 (FOR SECTION B-B & C-C, SEE JOINT DETAIL SHEET S-24)

-  EPOXY OVERLAY
-  BRIDGE JOINT DEMOLITION

PROJECT NO. I-5839
 HALIFAX COUNTY
 BRIDGE NO. 132



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUPERSTRUCTURE
 SURFACE PREPARATION
 & EPOXY OVERLAY**

DRAWN BY : S. T. SANDOR DATE : 02/2017
 CHECKED BY : A. G. ABRAHA DATE : 04/2017

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REVISIONS						SHEET NO.
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1			3			S-19
2			4			42

REPAIR QUANTITY TABLE

REPAIRS END BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	6.4	3.2		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
EPOXY RESIN INJECTION			LN. FT.	LN. FT.
CAP				
EPOXY COATING	AREA SF			LN. FT.
TOP OF CAP	171.3			
REPAIRS END BENT 2	QUANTITIES			
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
EPOXY RESIN INJECTION			LN. FT.	LN. FT.
CAP				
EPOXY COATING	AREA SF			LN. FT.
TOP OF CAP	171.3			

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 INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

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

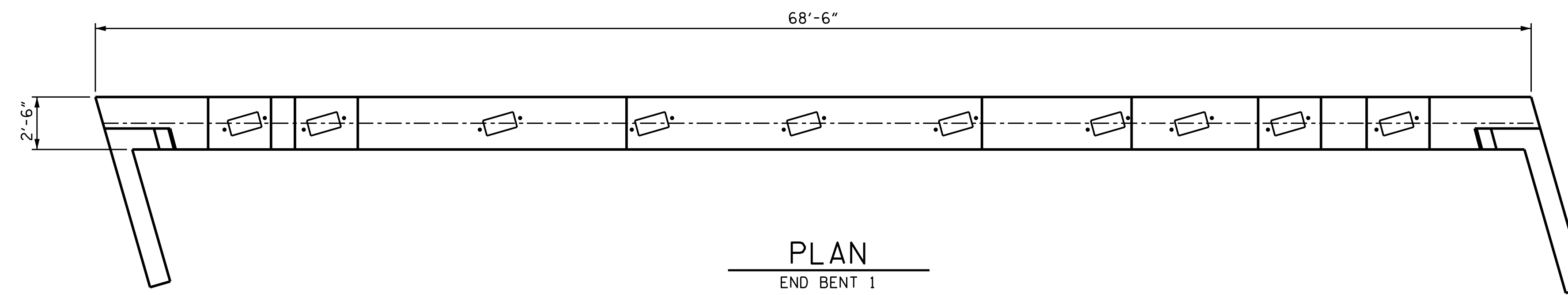
FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

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

▨ - SHOTCRETE REPAIR

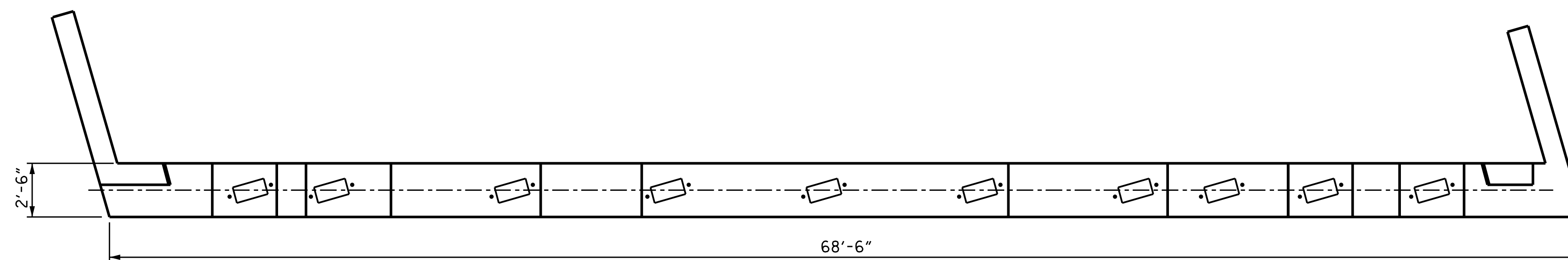
ERI - EPOXY RESIN INJECTION



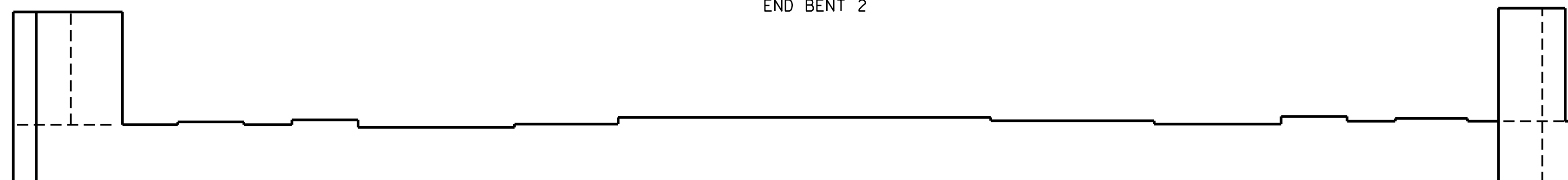
PLAN
END BENT 1



ELEVATION
END BENT 1



PLAN
END BENT 2



ELEVATION
END BENT 2

PROJECT NO. I-5839
HALIFAX COUNTY
 BRIDGE NO. 132



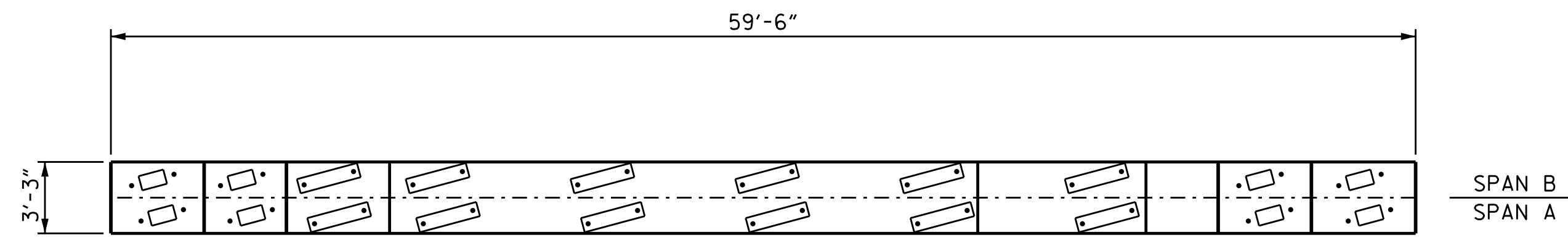
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUBSTRUCTURE
END BENTS

DRAWN BY : S. T. SANDOR DATE : 02/2017
 CHECKED BY : W. C. SMITH DATE : 05/2017

06-JUN-2017 08:43
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 jdnaw

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 FINAL UNLESS ALL
 SIGNATURES COMPLETED

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2			4			42

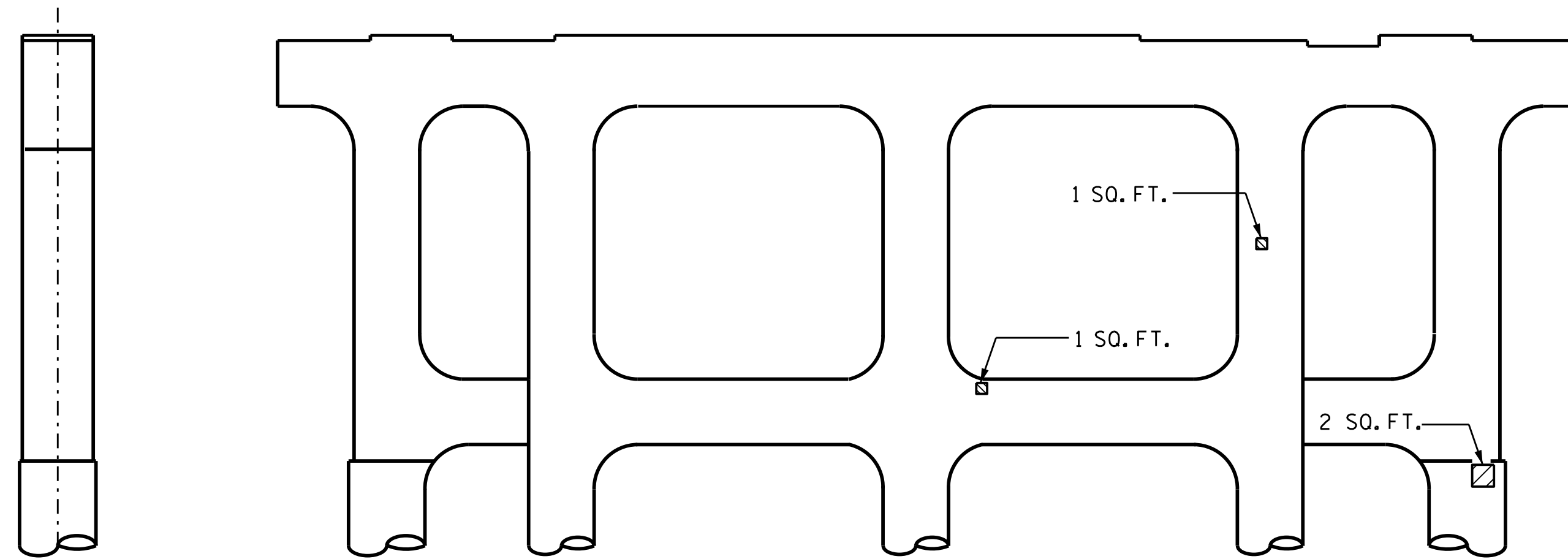


PLAN
TOP OF CAP

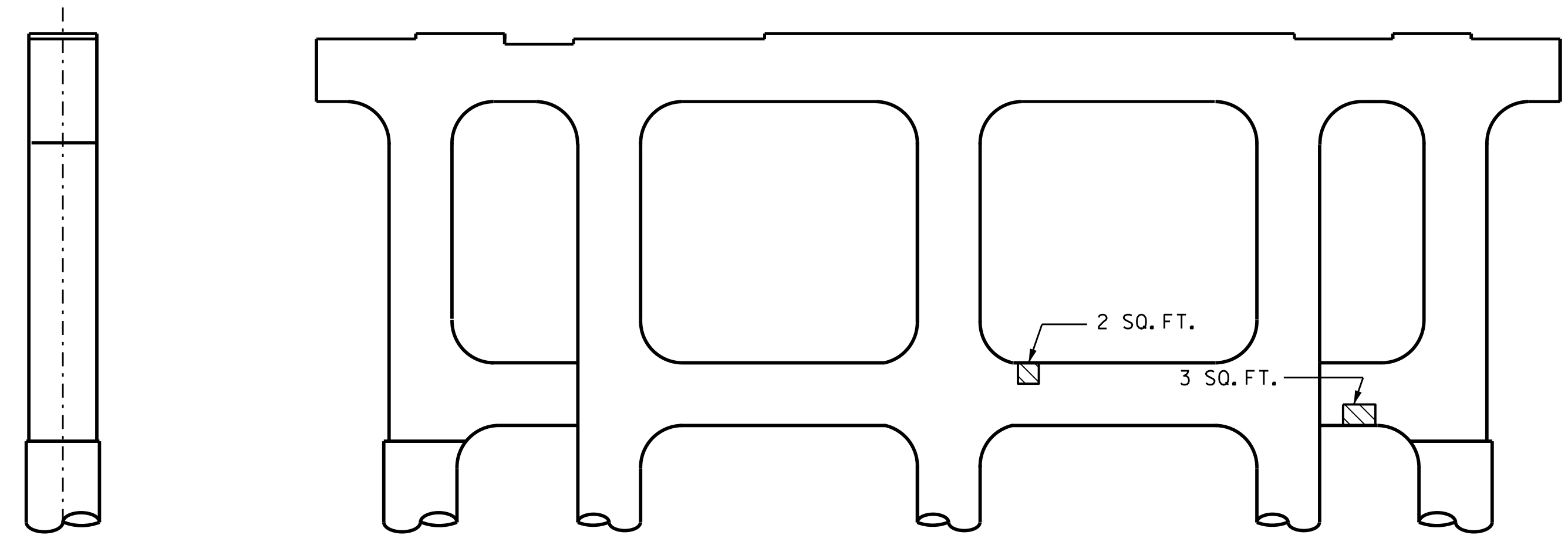
NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.
 FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.
 FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.
 FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE				
REPAIRS BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	3.0	1.5		
STRUT	6.0	3.0		
FOOTER	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		0.0		
COLUMN		0.0		
STRUT		0.0		
FOOTER		0.0		
EPOXY COATING	AREA SF			
TOP OF CAP	193.4			

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 1" CL TO SAWCUT. SEE REPAIR DETAILS.

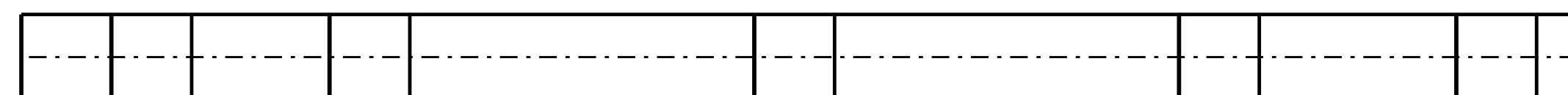


ELEVATION
SPAN A SIDE



ELEVATION
SPAN B SIDE

▨ - SHOTCRETE REPAIR
 ERI - EPOXY RESIN INJECTION



PLAN
BOTTOM OF CAP

PROJECT NO. I-5839
HALIFAX COUNTY
 BRIDGE NO. 132



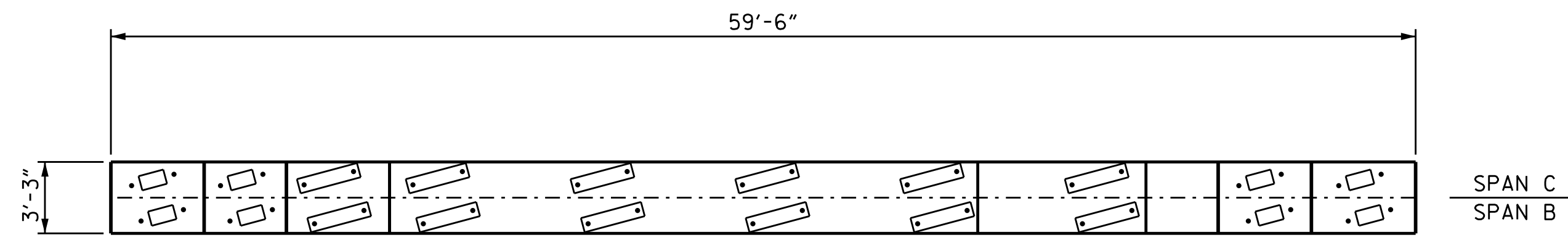
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 BENT 1**

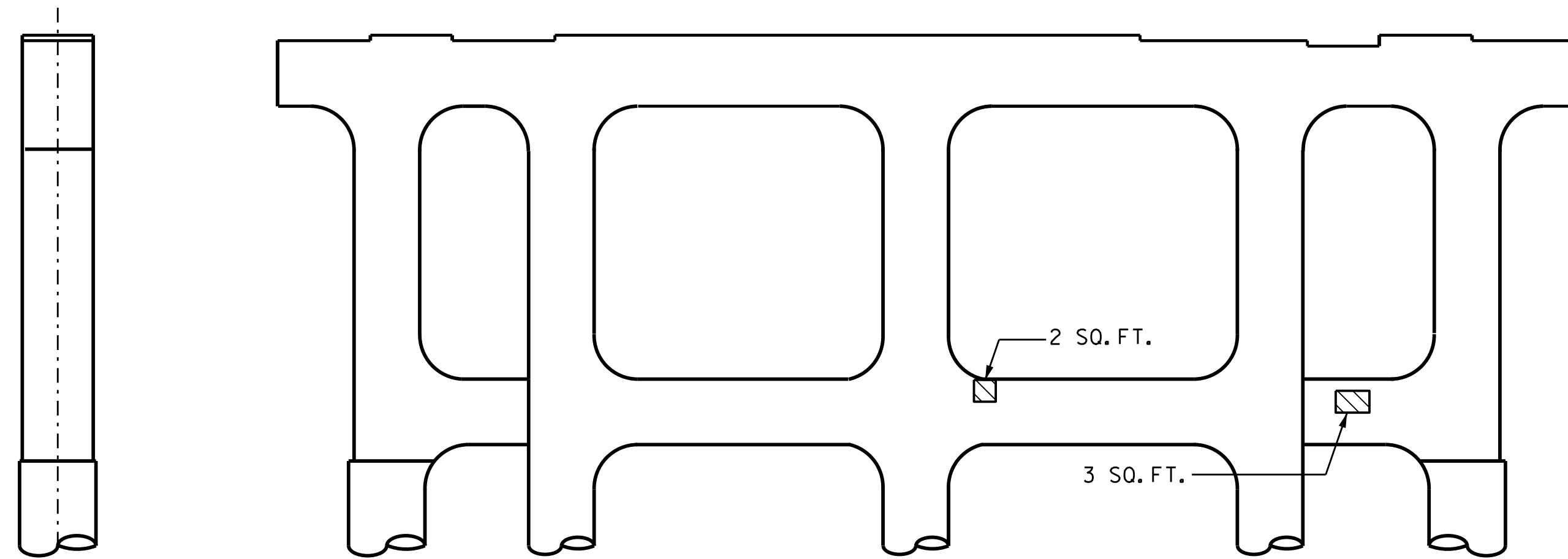
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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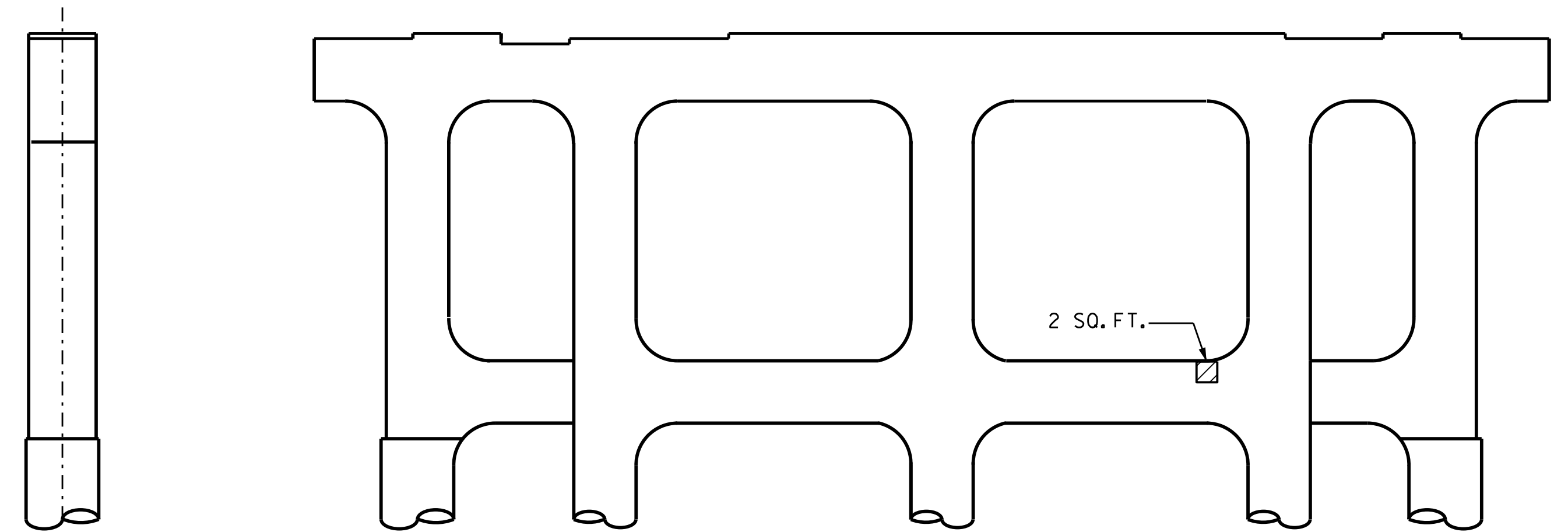
DRAWN BY : S. T. SANDOR DATE : 02/2017
 CHECKED BY : W. C. SMITH DATE : 03/2017



PLAN
TOP OF CAP

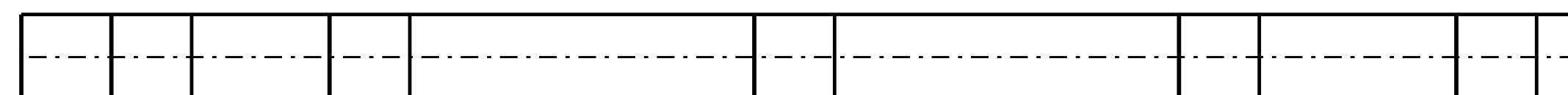


ELEVATION
SPAN B SIDE



ELEVATION
SPAN C SIDE

▨ - SHOTCRETE REPAIR
ERI - EPOXY RESIN INJECTION



PLAN
BOTTOM OF CAP

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 INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

REPAIRS BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	0.0	0.0		
STRUT	7.0	3.5		
FOOTER	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		0.0		
COLUMN		0.0		
STRUT		0.0		
FOOTER		0.0		
EPOXY COATING	AREA SF			
TOP OF CAP	193.4			

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 1" CL TO SAWCUT. SEE REPAIR DETAILS.

PROJECT NO. I-5839
HALIFAX COUNTY
 BRIDGE NO. 132



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 BENT 2**

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1			3			S-22
2			4			42

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DRAWN BY : S. T. SANDOR DATE : 02/2017
 CHECKED BY : W. C. SMITH DATE : 03/2017

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE SUBSTRUCTURE FOR POTENTIAL REPAIRS.

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 INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

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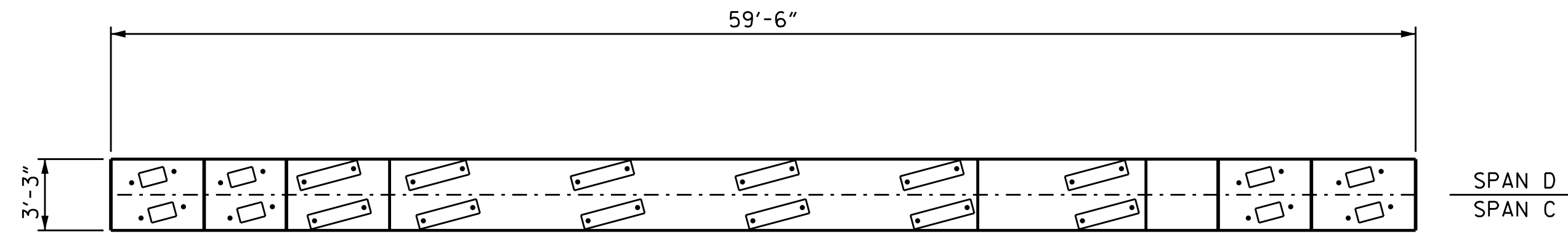
FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

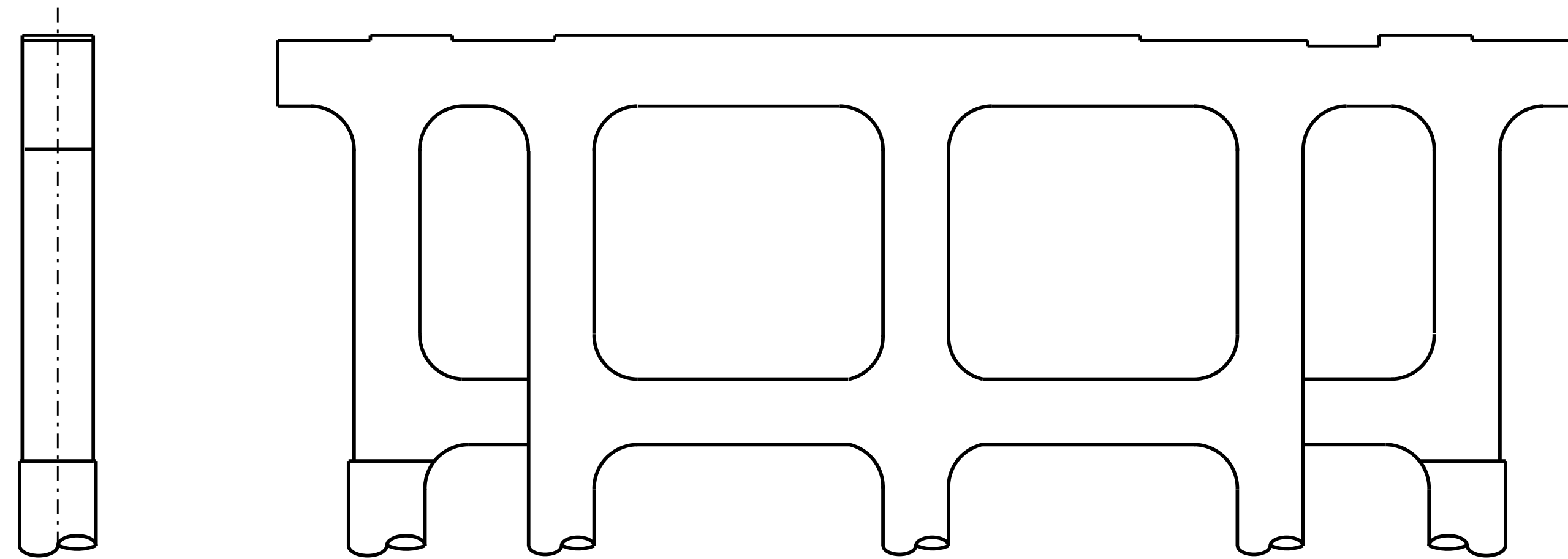
REPAIR QUANTITY TABLE

REPAIRS BENT 3	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	0.0	0.0		
STRUT	0.0	0.0		
FOOTER	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		0.0		
COLUMN		0.0		
STRUT		0.0		
FOOTER		0.0		
EPOXY COATING	AREA SF			
TOP OF CAP	193.4			

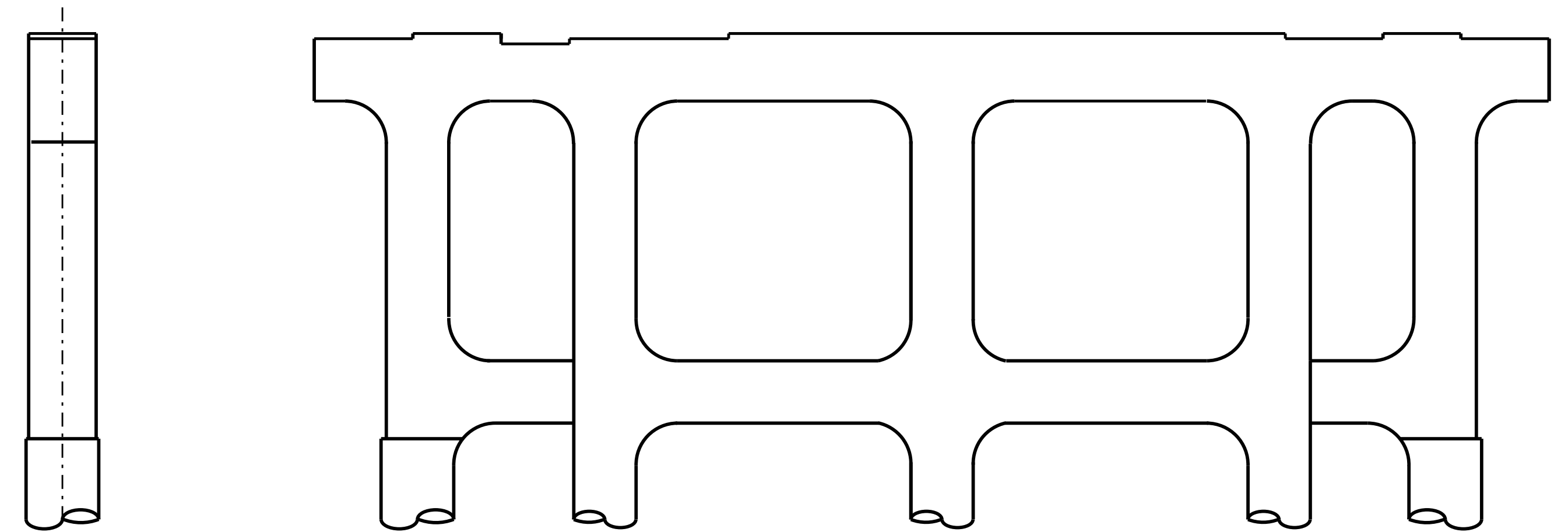
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 1" CL TO SAWCUT. SEE REPAIR DETAILS.



PLAN
TOP OF CAP

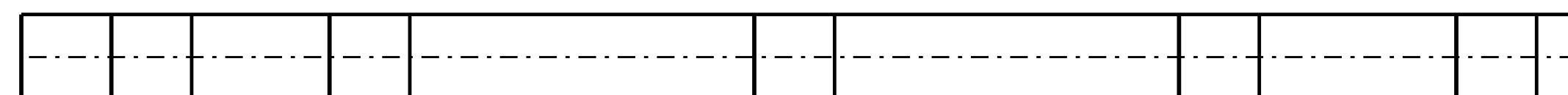


ELEVATION
SPAN C SIDE



ELEVATION
SPAN D SIDE

▨ - SHOTCRETE REPAIR
ERI - EPOXY RESIN INJECTION



PLAN
BOTTOM OF CAP

PROJECT NO. I-5839
HALIFAX COUNTY
BRIDGE NO. 132



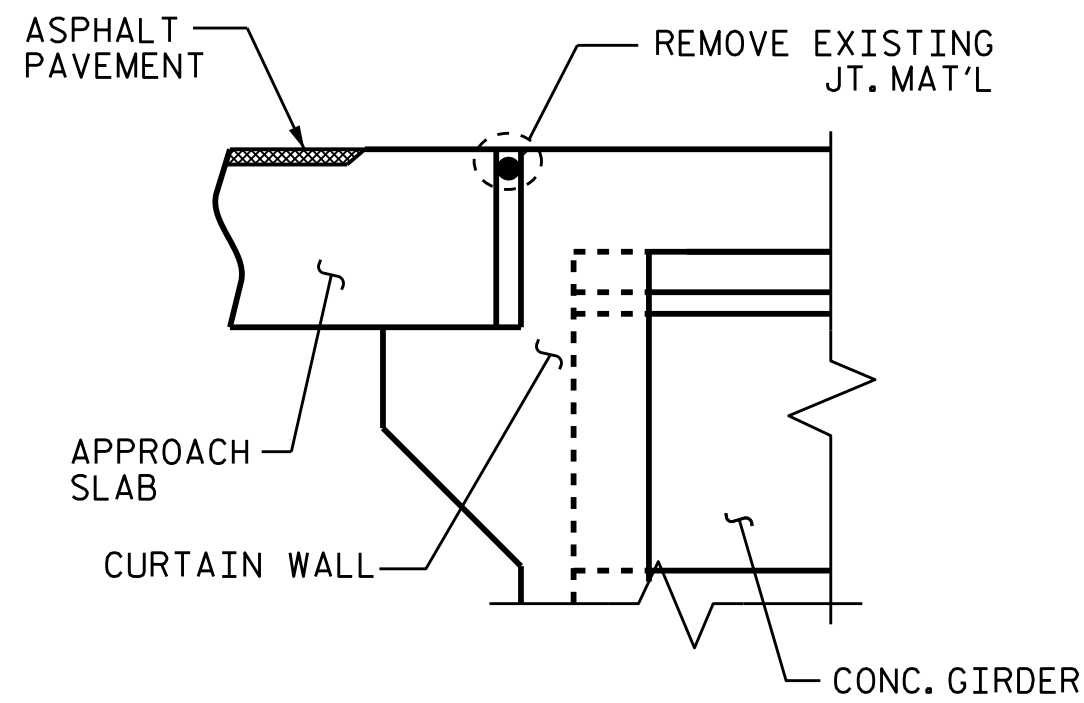
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 3**

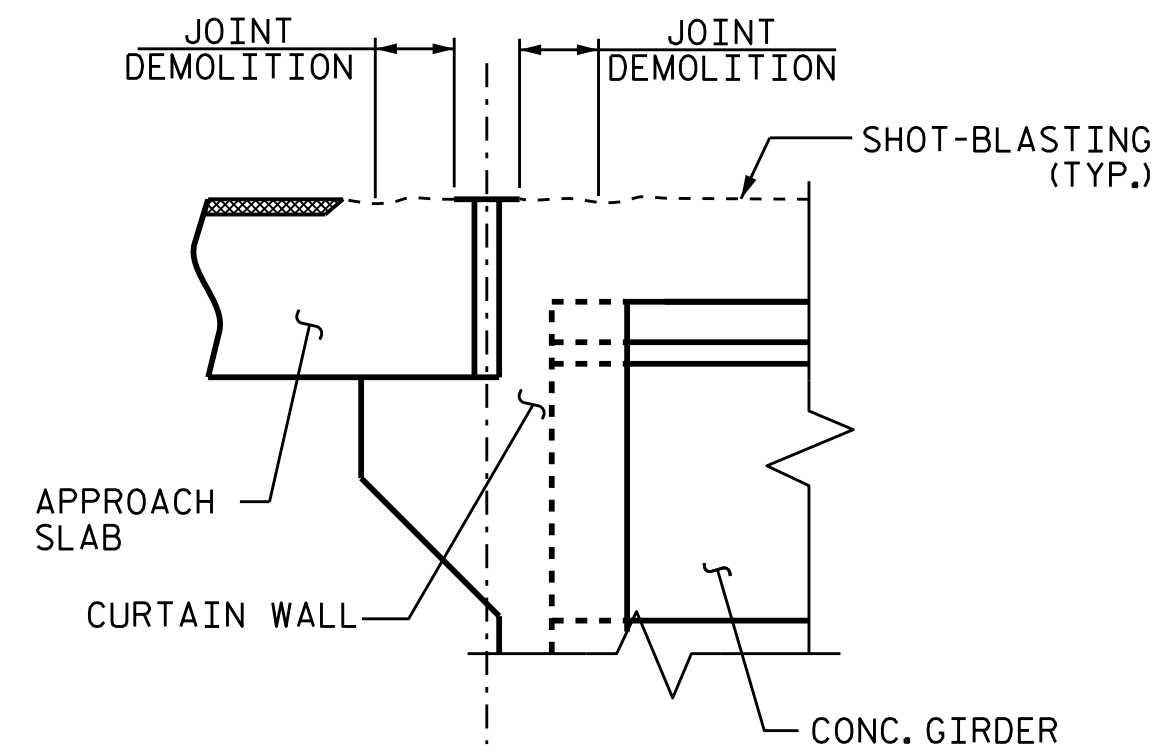
DRAWN BY : S. T. SANDOR DATE : 02/2017
CHECKED BY : W. C. SMITH DATE : 03/2017

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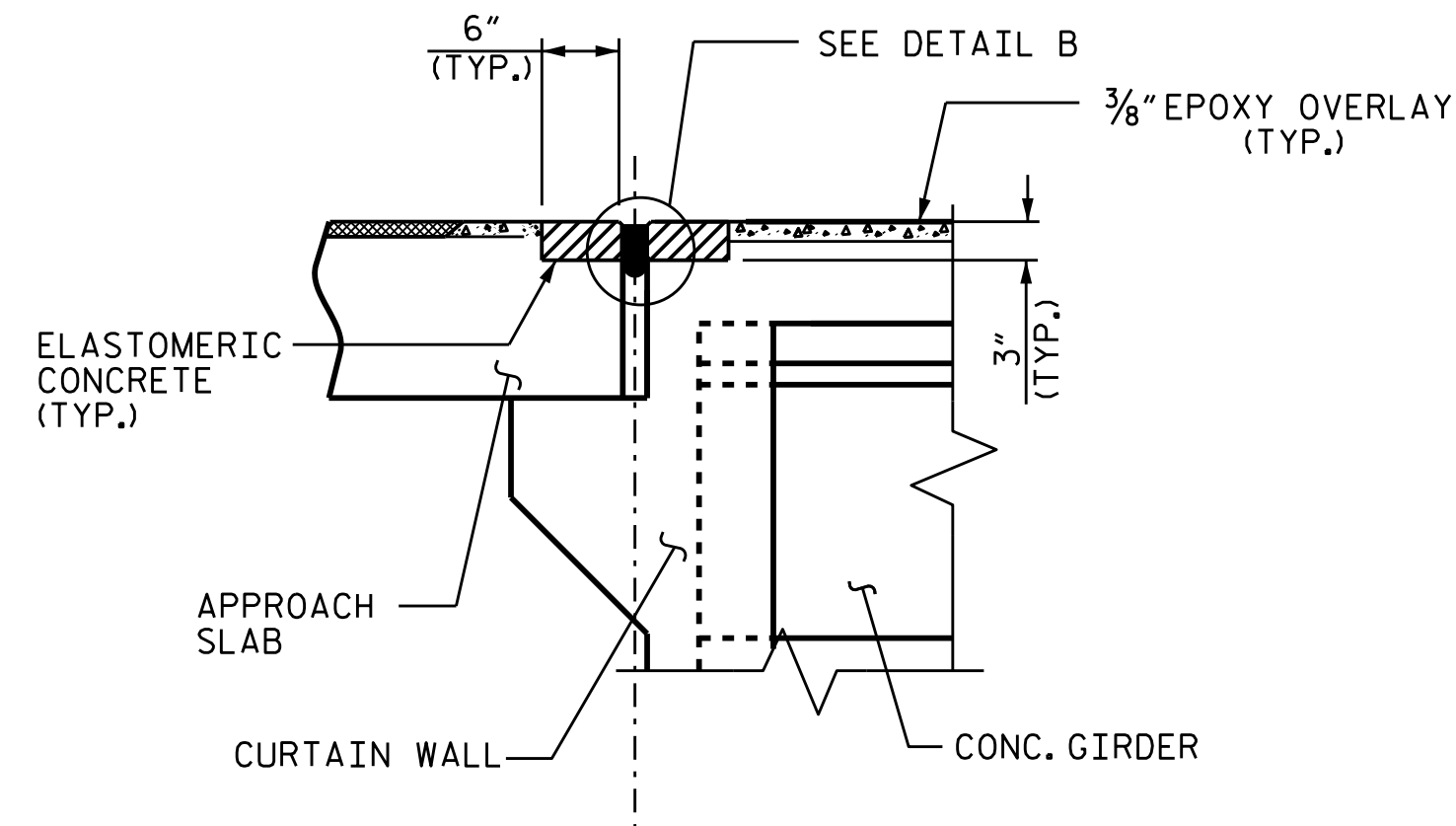
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-23
2			4			42



EXISTING JOINT



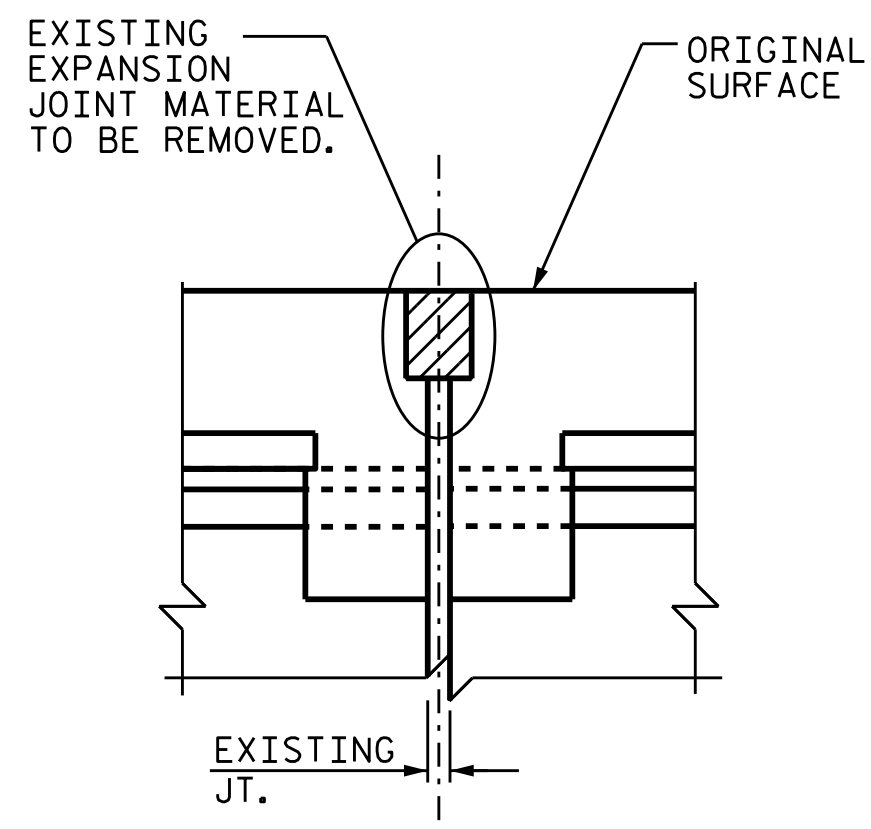
MINIMUM EXISTING JOINT DEMOLITION



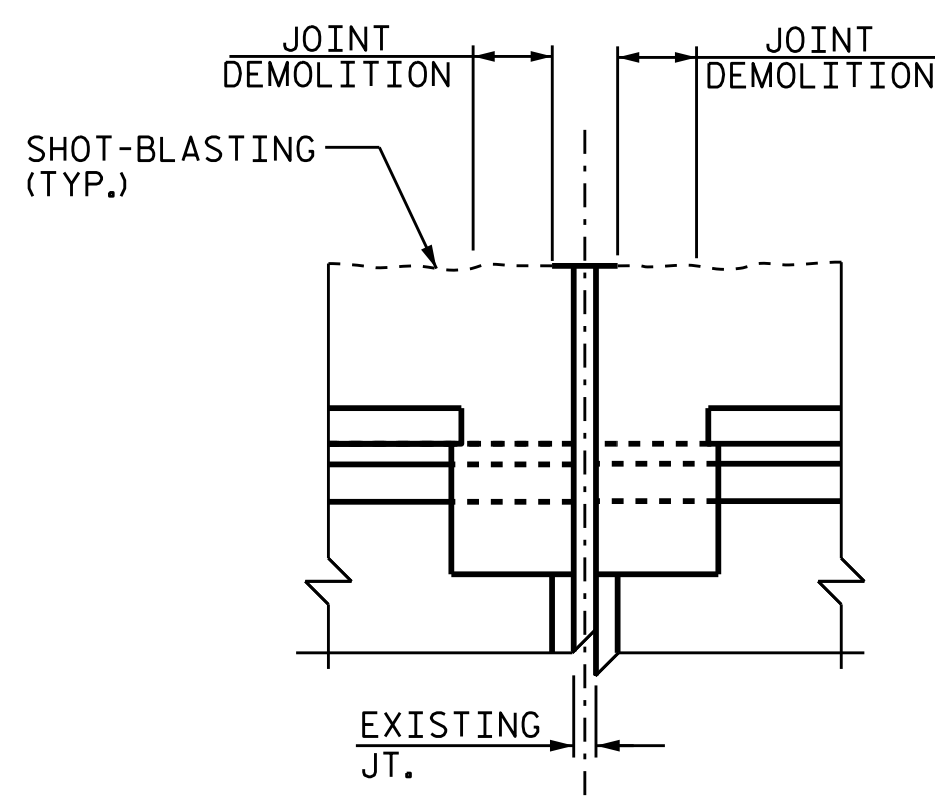
PROPOSED JOINT

JOINT INSTALLATION SEQUENCE AT END BENTS

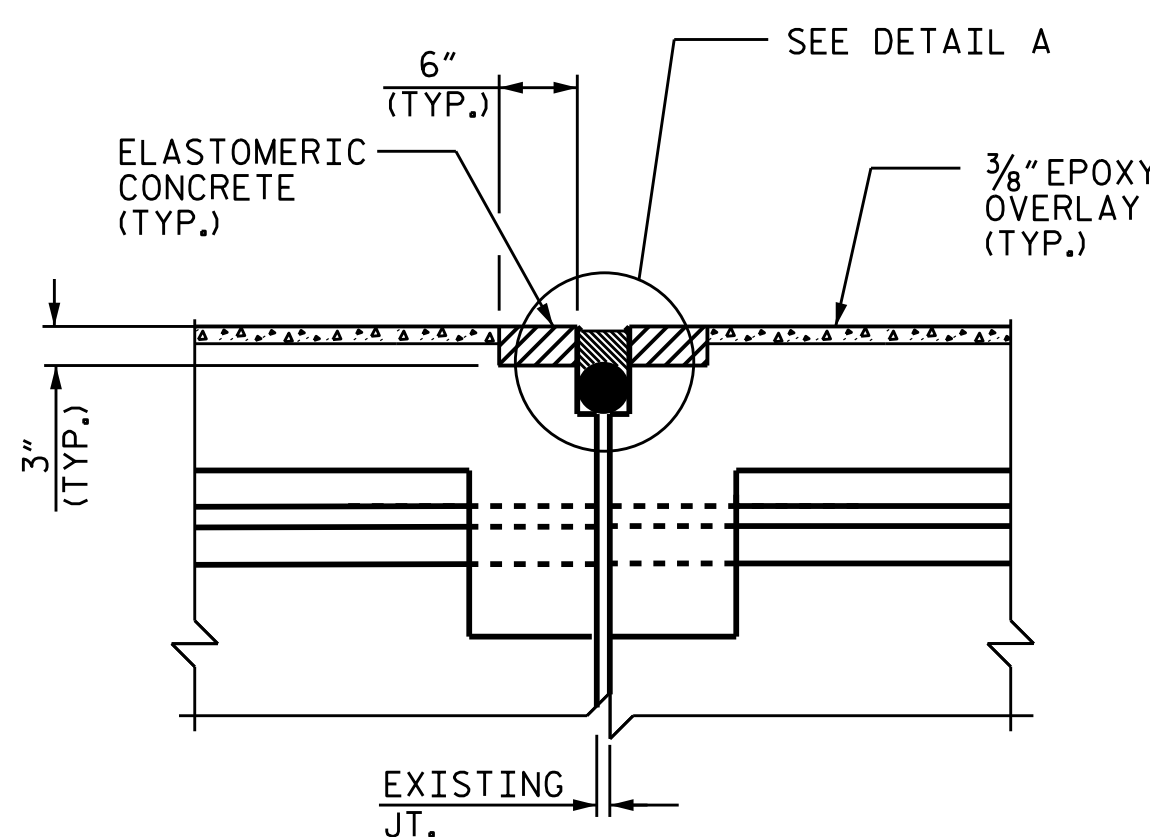
SECTION A-A



EXISTING JOINT



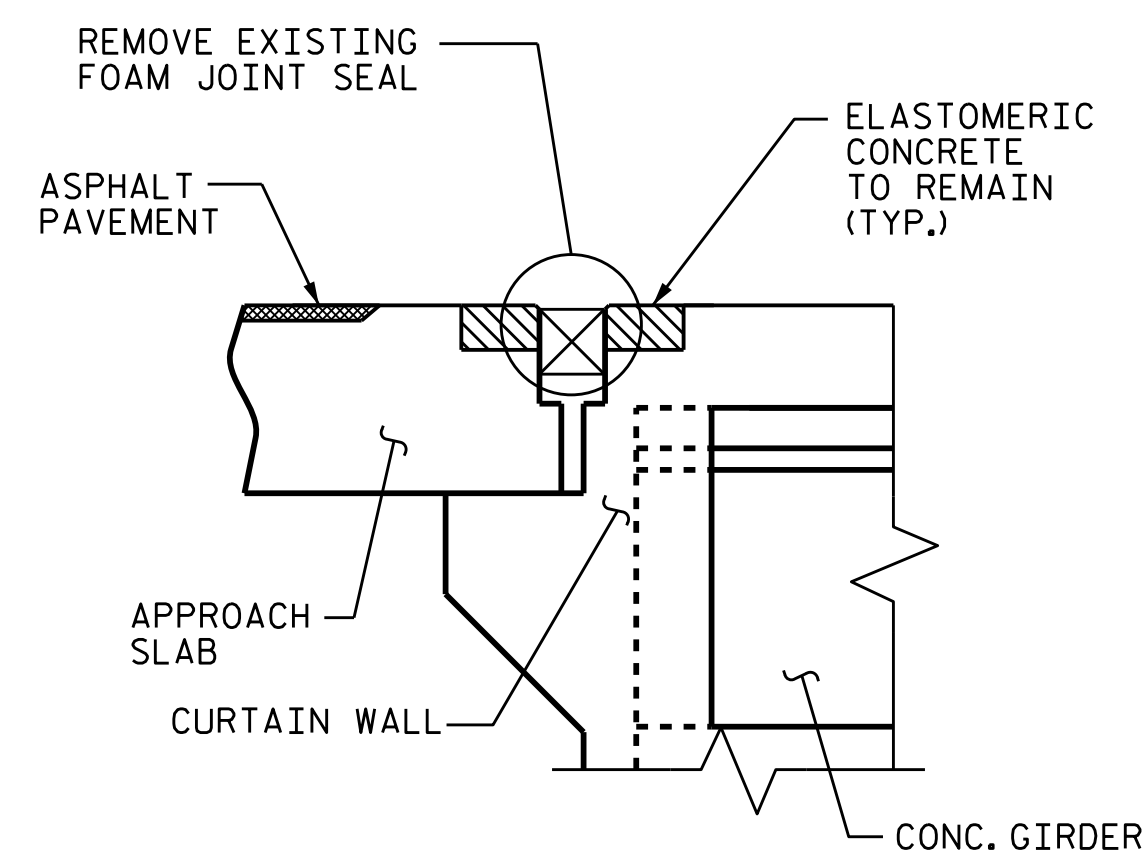
MINIMUM EXISTING JOINT DEMOLITION



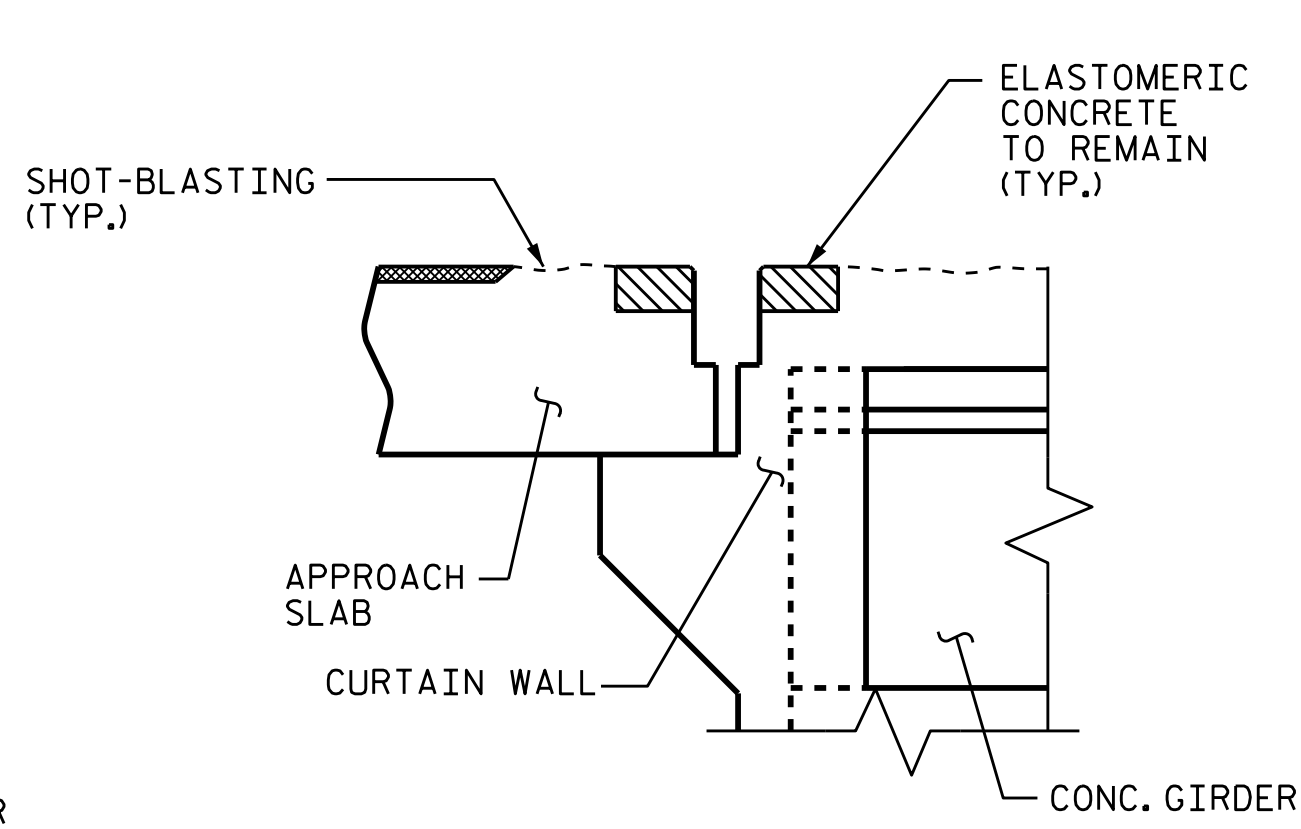
PROPOSED JOINT

JOINT INSTALLATION SEQUENCE AT BENTS

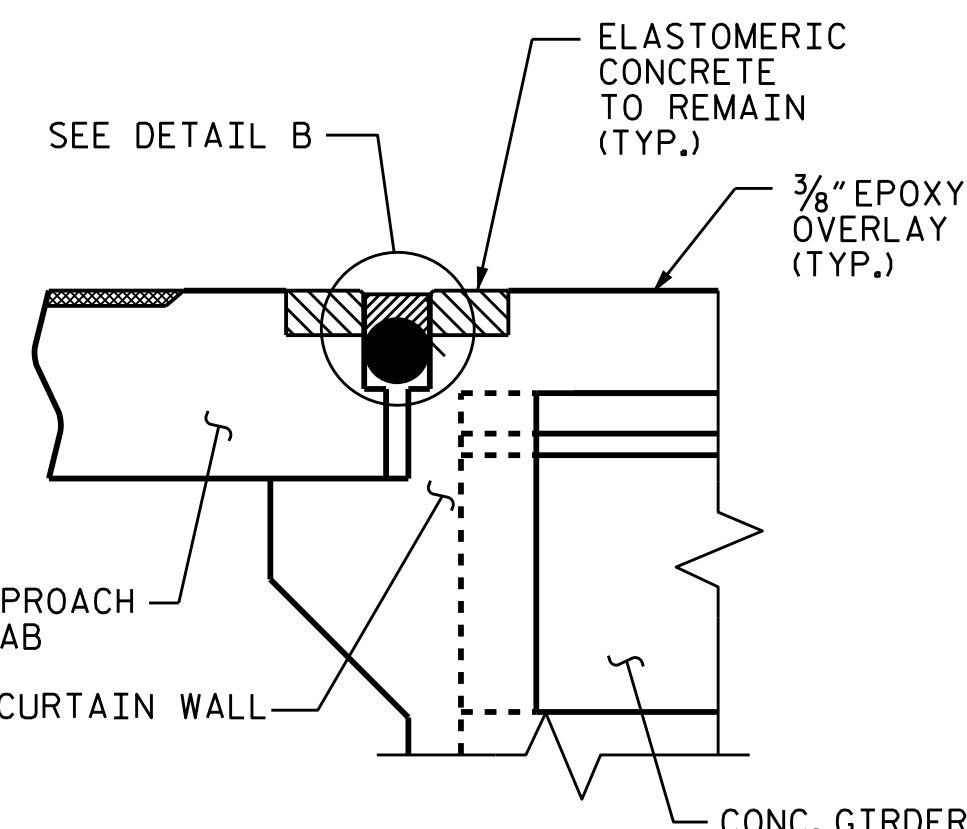
SECTION B-B



EXISTING JOINT



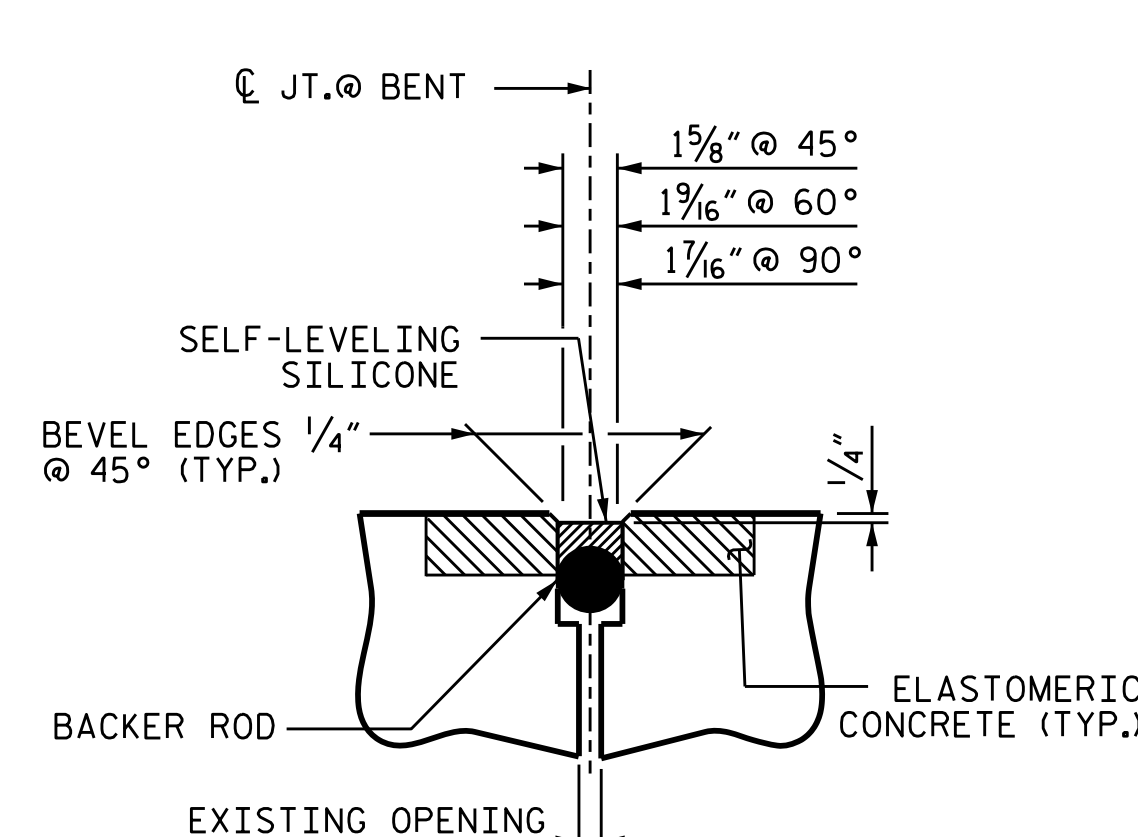
MINIMUM EXISTING JOINT DEMOLITION



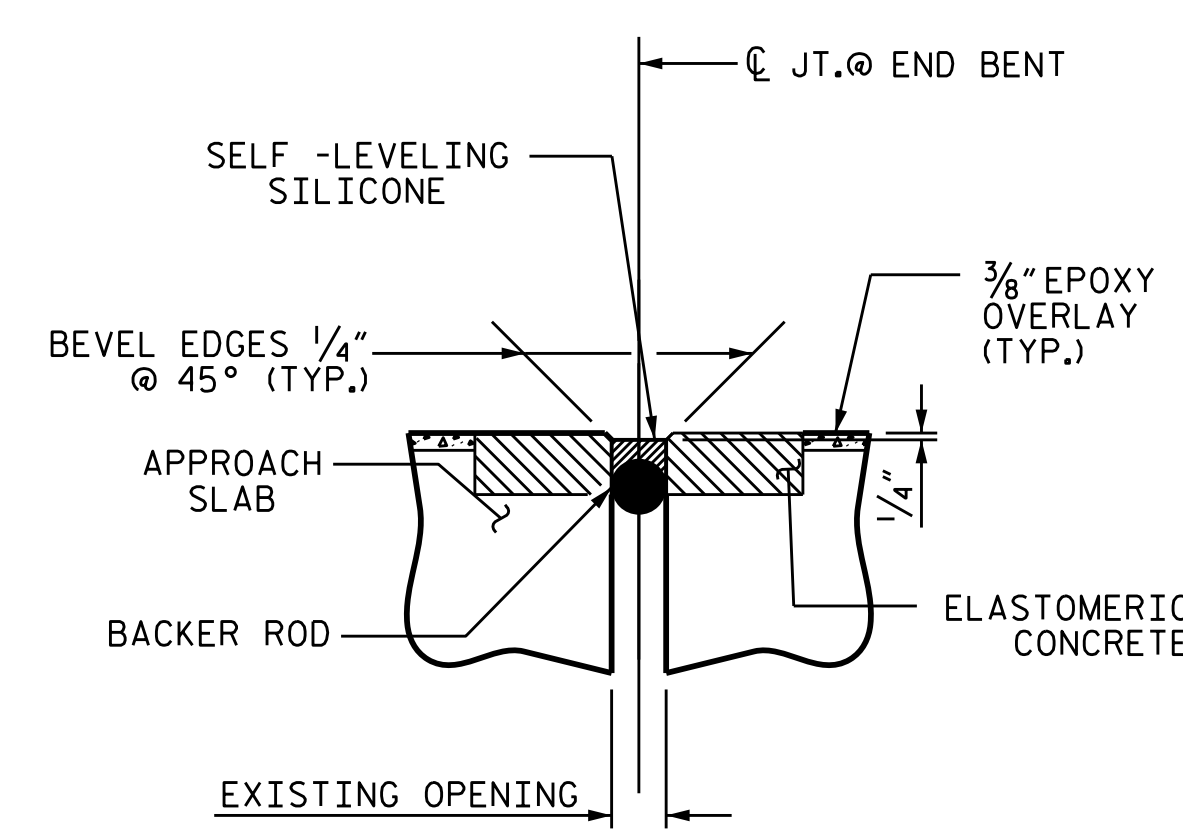
PROPOSED JOINT

JOINT INSTALLATION SEQUENCE AT END BENTS

SECTION C-C

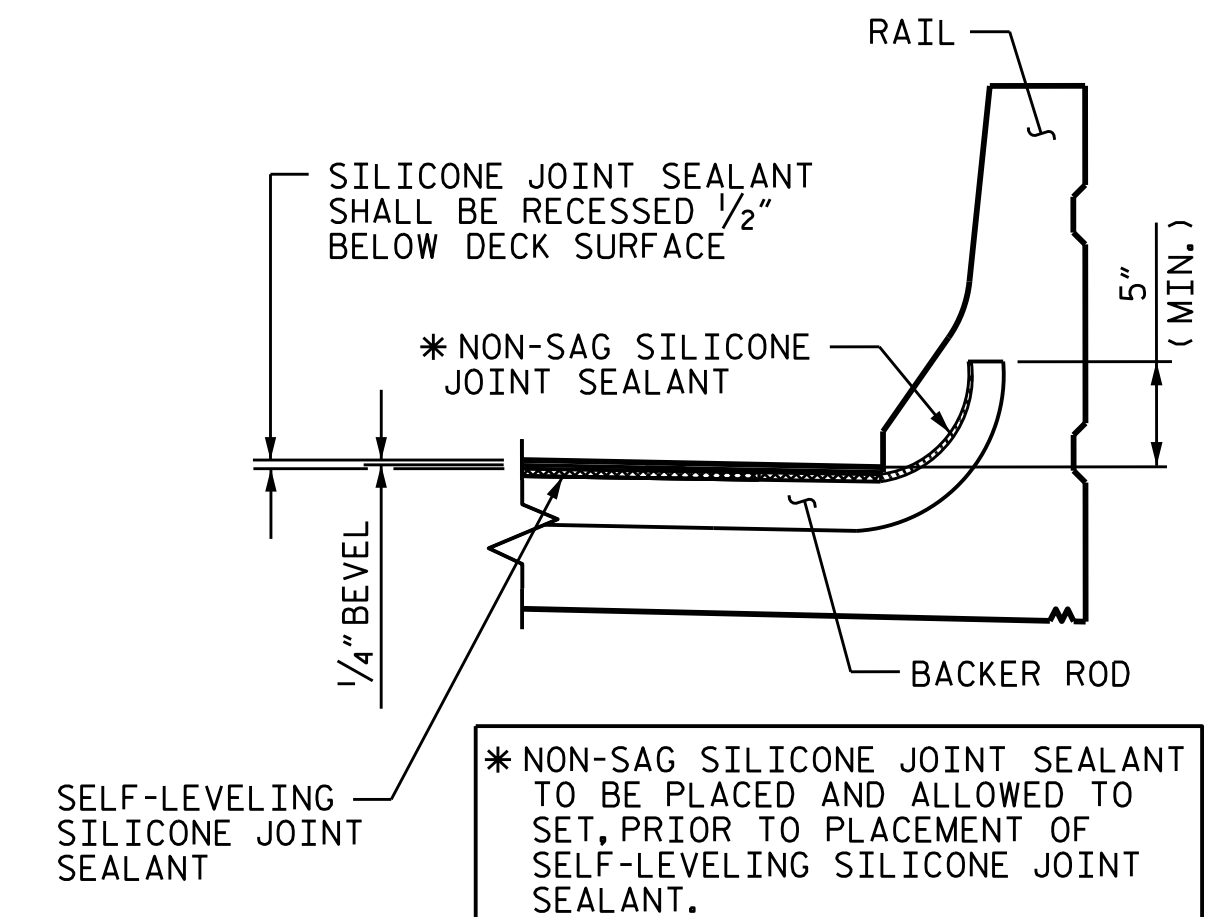


DETAIL A (PROPOSED)

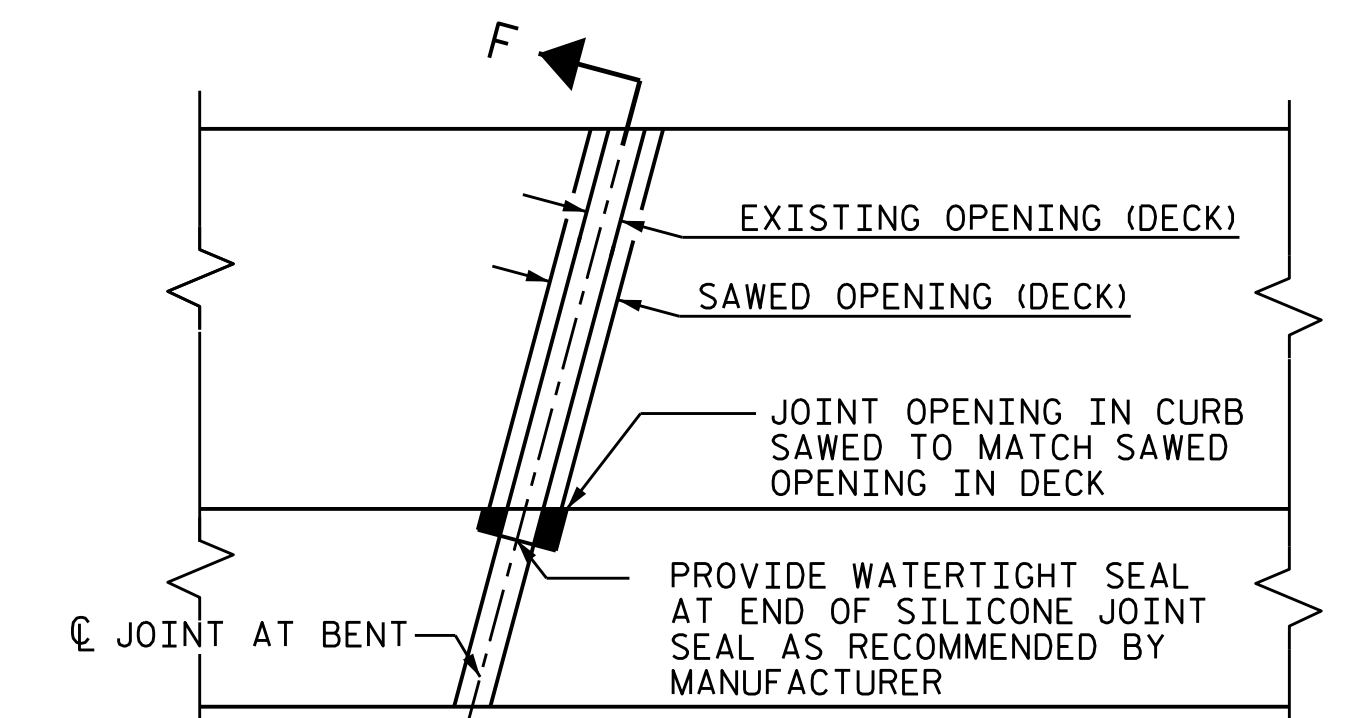


DETAIL B (PROPOSED)

NOTES:
 CONTRACTOR SHALL FIELD VERIFY THE EXISTING FORMED OPENING PRIOR TO OBTAINING JOINT MATERIAL.
 FOR SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.
 FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.
 UNLESS NOTED OTHERWISE RETAIN ALL EXISTING REINFORCING STEEL. CLEAN AND REPAIR AS NEEDED.
 ALL EXPOSED ENDS OF CUT BARS SHALL BE COATED WITH EPOXY PRIOR TO THE NEW JOINT MATERIAL INSTALLATION.
 JOINT DEMOLITION EXCAVATION OF CONCRETE AT THE EXISTING JOINT SHALL RESULT IN THE BOTTOM OF THE EXCAVATION BEING REASONABLY FLAT, TO PROVIDE SUFFICIENT SUBSTRATE FOR PLACEMENT AND SUPPORT OF ELASTOMERIC CONCRETE.
 MAXIMUM DEPTH OF ELASTOMERIC CONCRETE SHALL BE 4". IF DEPTH OF JOINT DEMOLITION EXCAVATION EXCEEDS 1" BELOW THE PLANNED 3" DEPTH OF ELASTOMERIC CONCRETE HEADER PLACE CONCRETE FOR DECK REPAIR TO BOTTOM OF THE ELASTOMERIC CONCRETE HEADER.



SECTION F-F



PLAN

PROJECT NO. I-5839
 HALIFAX COUNTY
 BRIDGE NO. 131 & 132



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

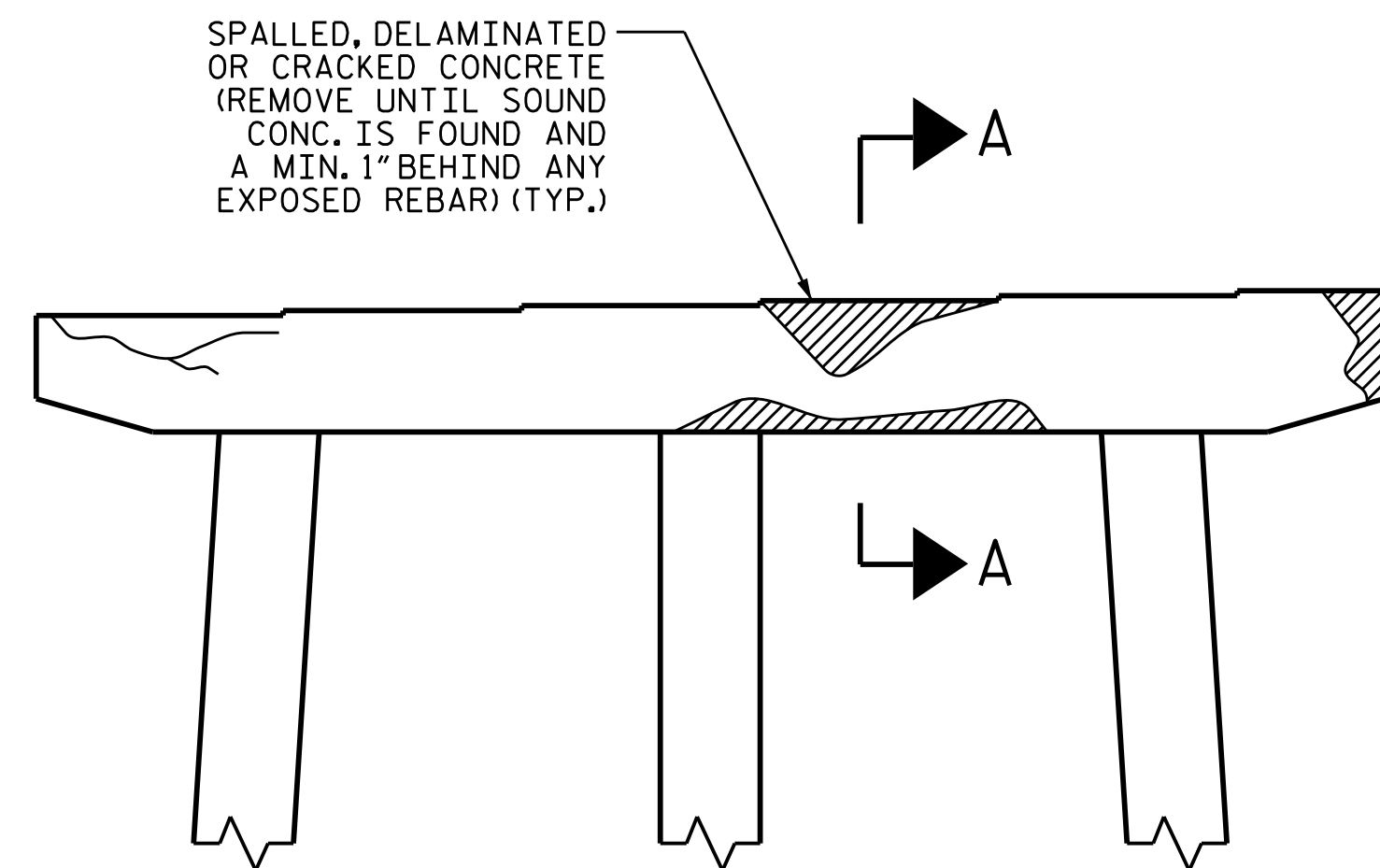
JOINT DETAILS

DRAWN BY : S. T. SANDOR DATE : 02/2017
 CHECKED BY : W. C. SMITH DATE : 05/2017

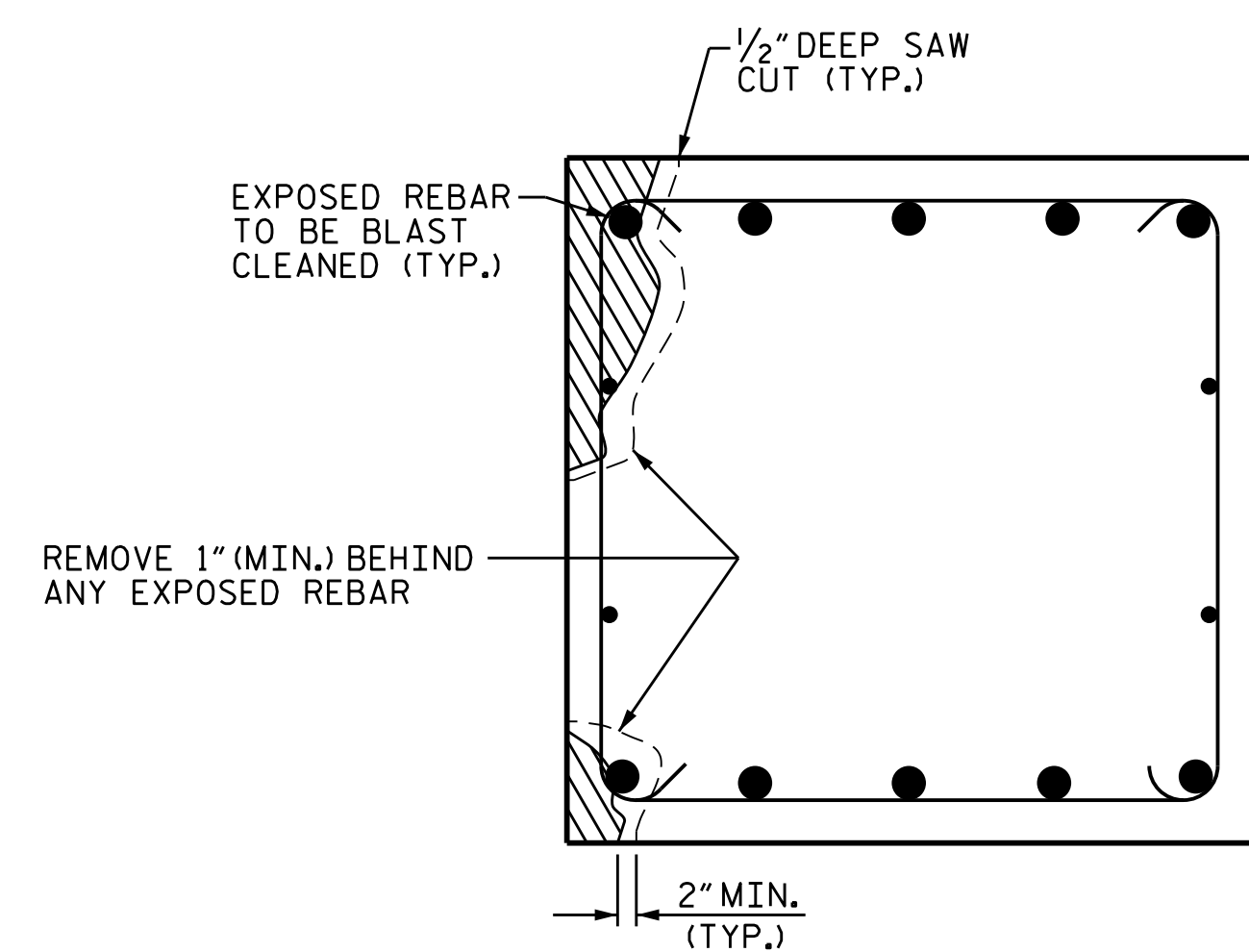
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

S-24
TOTAL SHEETS 42

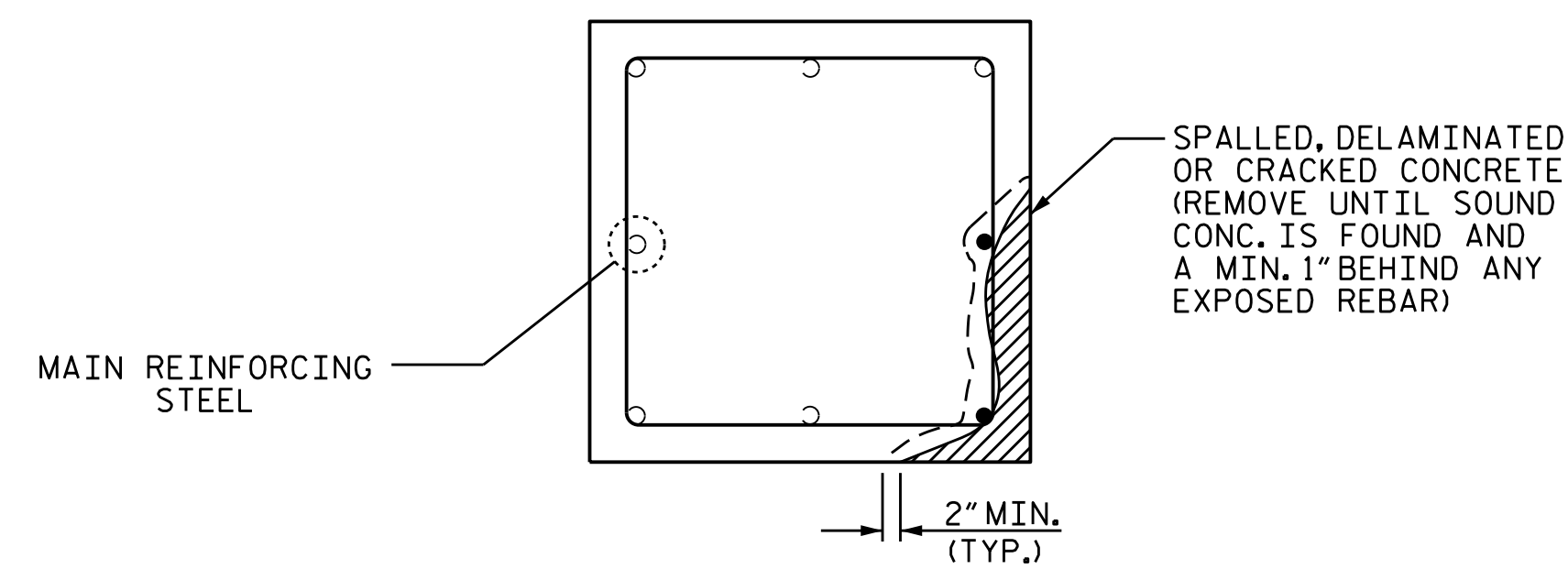


BENT CAP REPAIRS

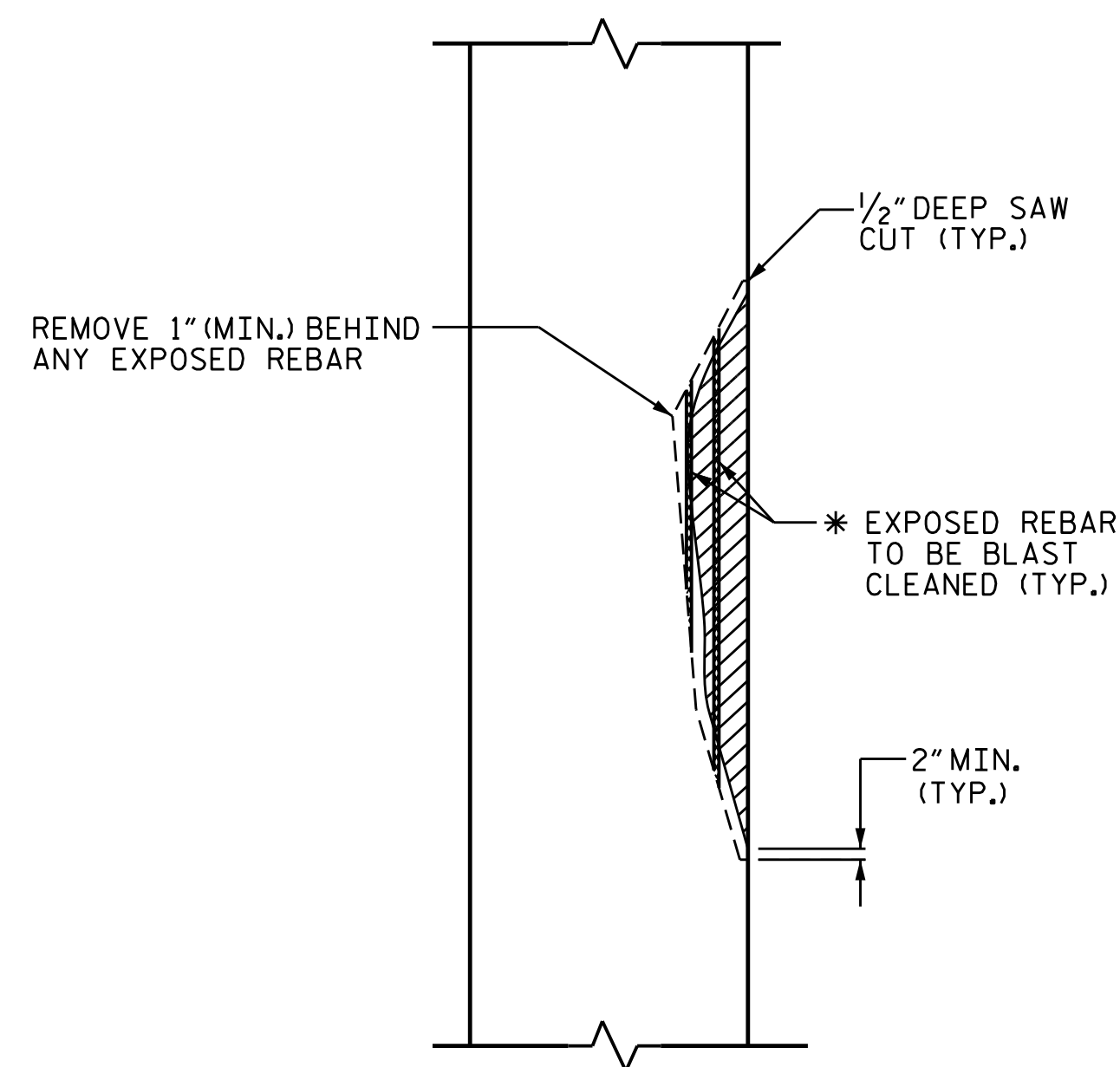


SECTION THRU CAP

CAP REPAIR



PLAN OF COLUMN



ELEVATION OF COLUMN

COLUMN REPAIR

* DUE TO LACK OF CONFINEMENT STEEL, REPAIR LENGTH SHALL NOT EXCEED 10'-0" AT ONE TIME, UNLESS APPROVED BY THE ENGINEER.

PROJECT NO. I-5839
HALIFAX COUNTY
 BRIDGE NO. 131 & 132



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE
 TYPICAL CAP AND COLUMN
 REPAIR DETAILS

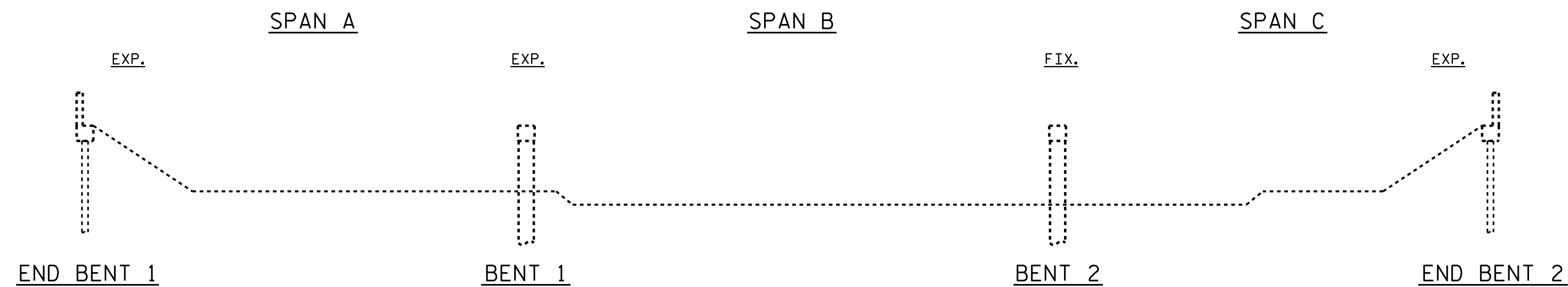
DRAWN BY : S. T. SANDOR DATE : 03/2017
 CHECKED BY : W. C. SMITH DATE : 03/2017

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

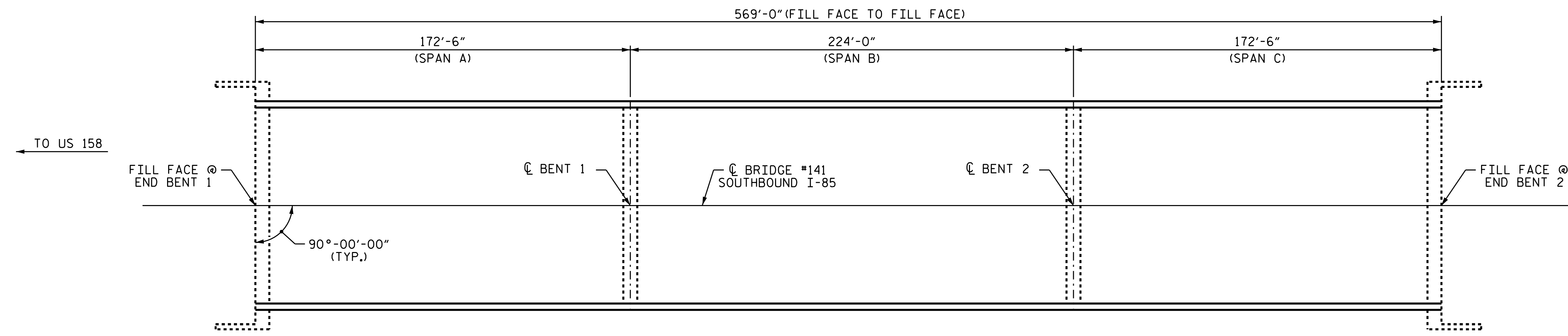
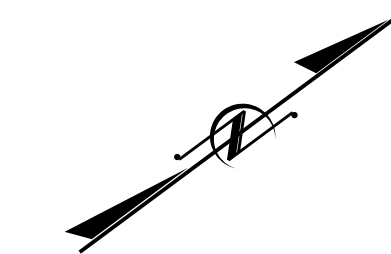
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			42
2			4			

SCOPE OF WORK

- MODULAR JOINT REPLACEMENT
- CONCRETE BRIDGE DECK CRACK SEALING
- SILANE BARRIER RAIL TREATMENT
- DRAINAGE REPAIR
- CONCRETE FOR DECK REPAIR

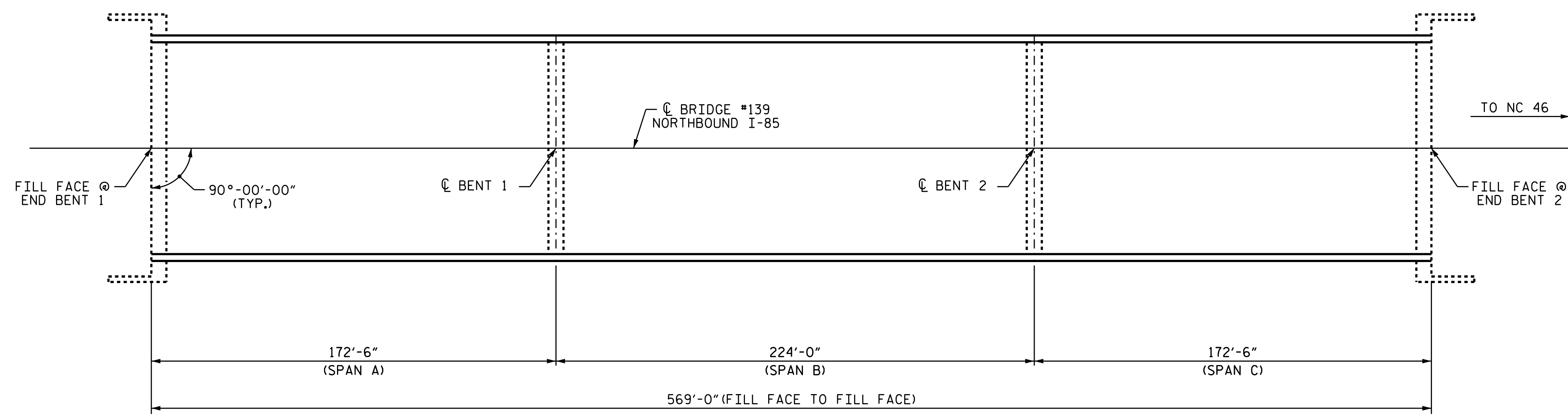


ELEVATION
(SECTION ALONG $\text{\textcircled{C}}$ ROADWAY)



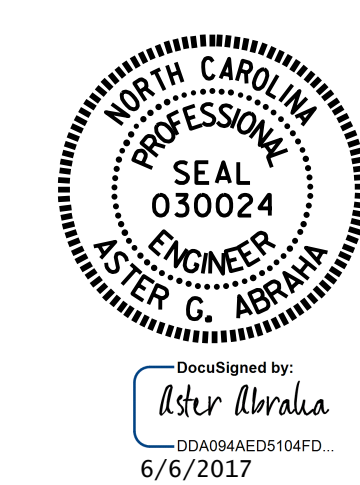
I hereby certify that this structure was rehabilitated according to these plans or as noted therein.

Resident Engineer _____ Date _____



PLAN
(COLUMNS & FOOTINGS NOT SHOWN IN PLAN VIEW FOR CLARITY)

PROJECT NO. I-5839
HALIFAX COUNTY
BRIDGE No.: 139 & 141



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
BRIDGES OVER ROANOKE RIVER ON I-95 BETWEEN US 158 & NC 46

DRAWN BY : M. K. BEARD / S. T. SANDOR DATE : 03/2017
CHECKED BY : W. C. SMITH DATE : 04/2017

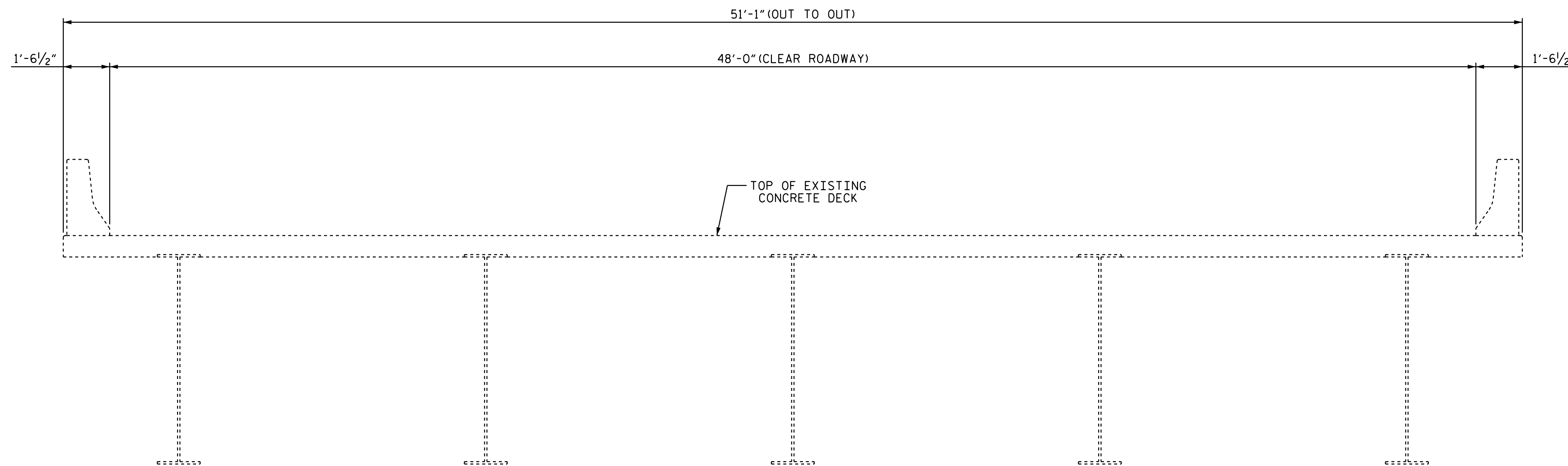
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			42

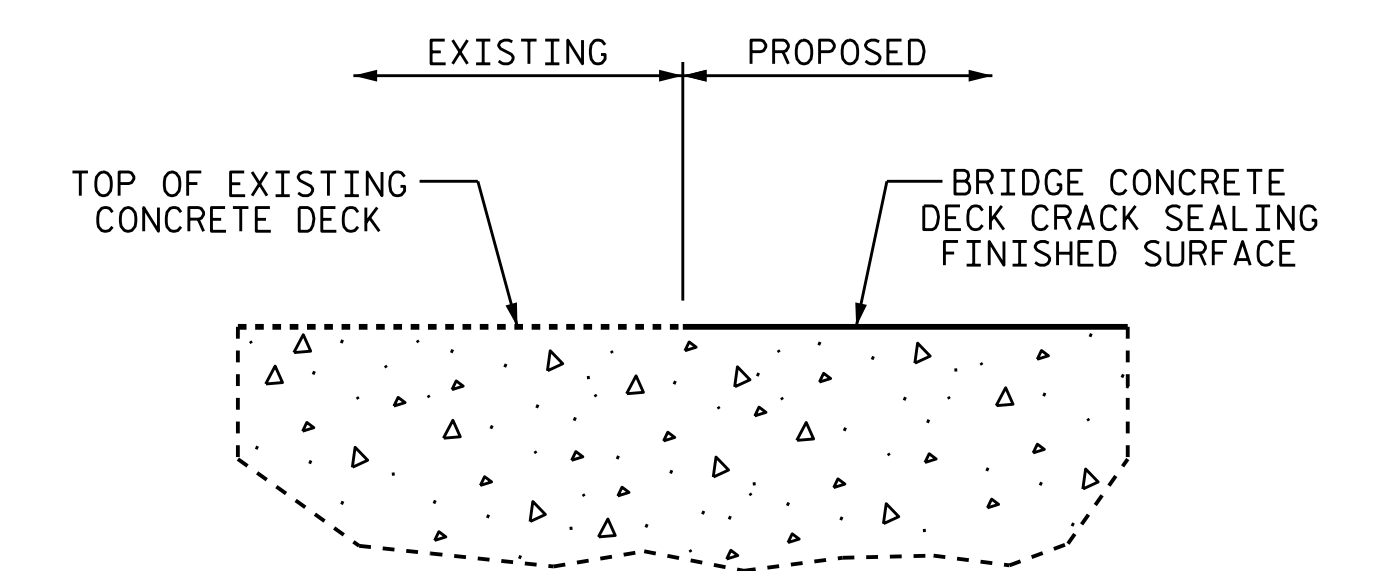
NOTE

SEE TRAFFIC MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCE, AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION AND DECK SEAL PLACEMENT.

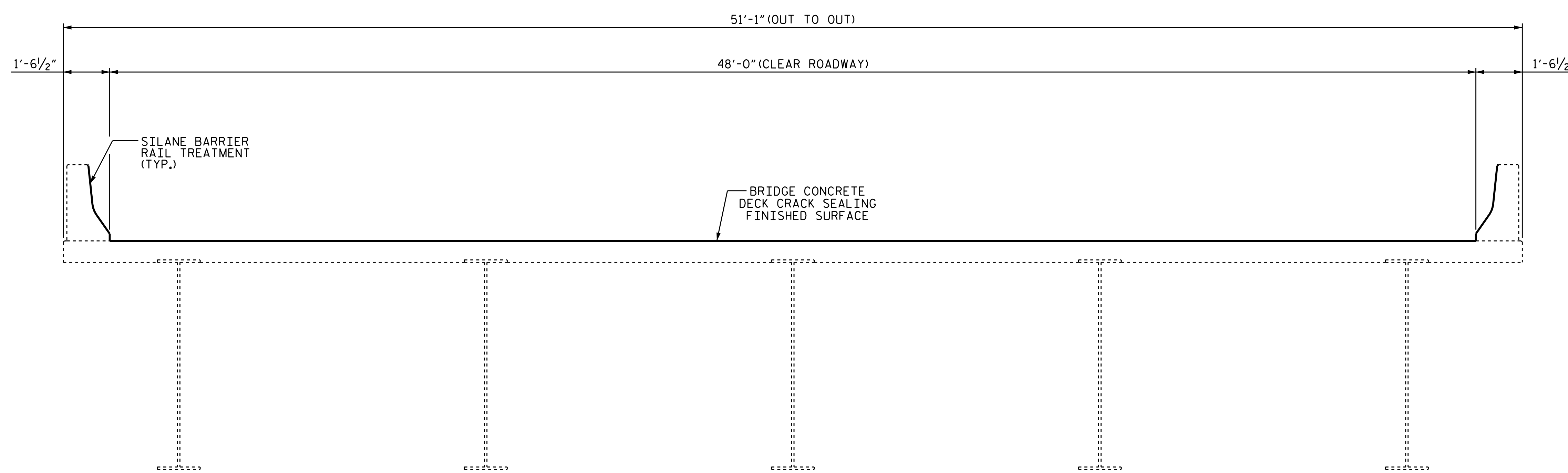
SHOWING BRIDGE #139 NORTHBOUND, BRIDGE #141 SOUTHBOUND SIMILAR.



TYPICAL SECTION
(EXISTING)

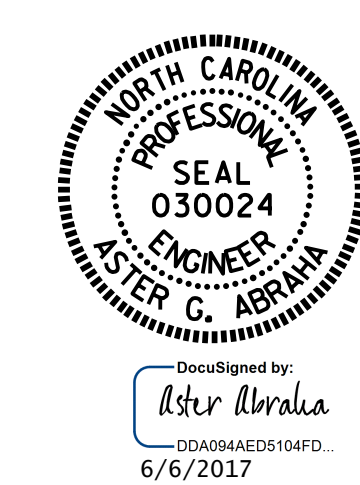


DETAIL OF CONCRETE DECK CRACK SEALING



TYPICAL SECTION
(PROPOSED)

PROJECT NO. I-5839
HALIFAX COUNTY
BRIDGE No.: 139 & 141



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE

TYPICAL SECTION &
DECK CRACK SEAL
DETAIL

DRAWN BY : M. K. BEARD / S. T. SANDOR DATE : 2/21/17
CHECKED BY : W. C. SMITH DATE : 05/2017

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

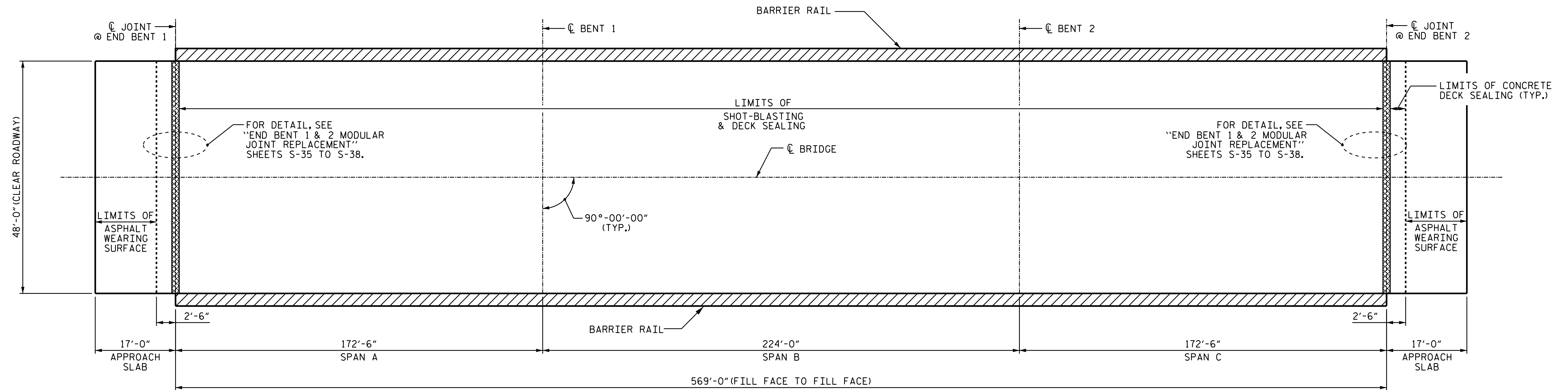
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-27
2			4			42

SUMMARY OF QUANTITIES




	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR CRACK SEALING	* 10 SQ.FT.	
SHOTBLASTING BRIDGE DECK	3,053 SQ.YD.	
CONCRETE BRIDGE DECK CRACK SEALING	3,053 SQ.YD.	
BRIDGE JOINT DEMOLITION	96 SQ.FT.	
SURFACE PREPARATION FOR CONCRETE BARRIER	2,084 SQ.FT.	
SILANE BARRIER RAIL TREATMENT	2,084 SQ.FT.	

NOTES

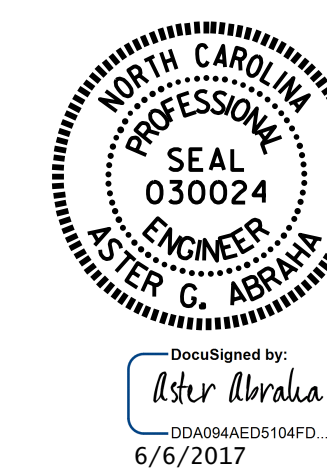
* CONCRETE DECK REPAIR FOR CRACK SEALING IS NOT ANTICIPATED. TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSE IN CASE UNANTICIPATED REPAIR AREAS ARE ENCOUNTERED.



PLAN OF SPANS - DECK REPAIR

-  CONCRETE DECK CRACK SEALING
-  BRIDGE JOINT DEMOLITION
-  SILANE BARRIER RAIL TREATMENT

PROJECT NO. I-5839
HALIFAX COUNTY
 BRIDGE No.: 139



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUPERSTRUCTURE
 DECK CRACK SEALING &
 SILANE BARRIER RAIL
 TREATMENT

DRAWN BY : M. K. BEARD / S. T. SANDOR DATE : 03/2017
 CHECKED BY : W. C. SMITH DATE : 03/2017

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

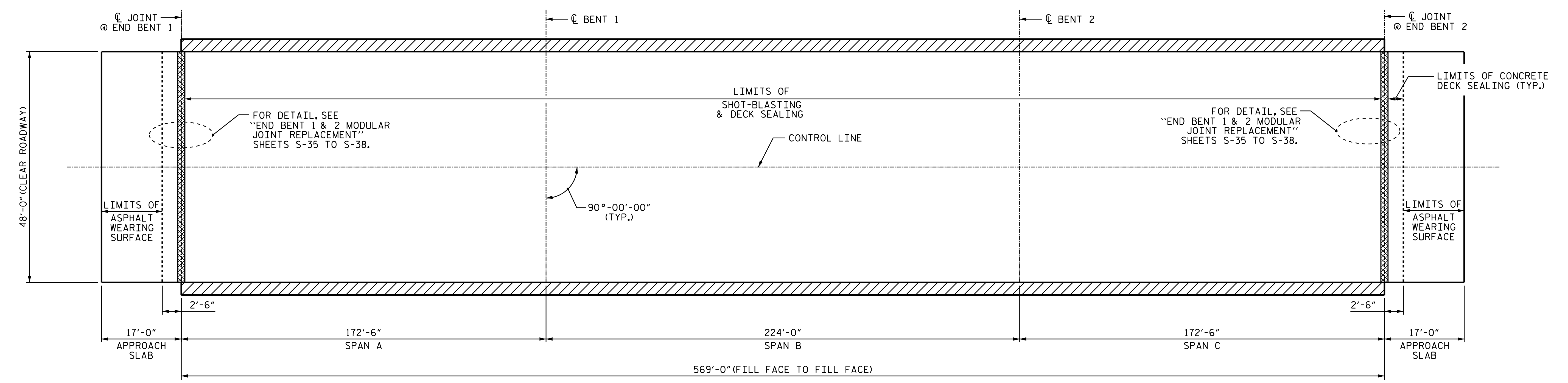
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-28
2			4			42

NOTES




* CONCRETE DECK REPAIR FOR CRACK SEALING IS NOT ANTICIPATED. TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSE IN CASE UNANTICIPATED REPAIR AREAS ARE ENCOUNTERED.

SUMMARY OF QUANTITIES

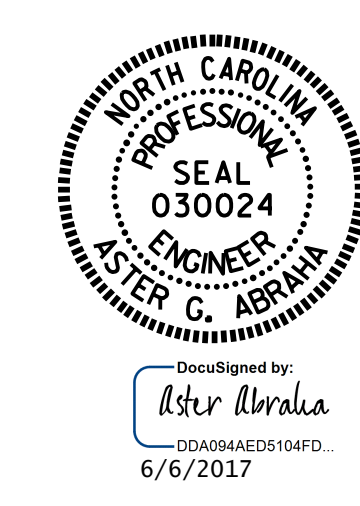
	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR CRACK SEALING	* 10 SQ.FT.	
SHOTBLASTING BRIDGE DECK	3,053 SQ.YD.	
CONCRETE BRIDGE DECK CRACK SEALING	3,053 SQ.YD.	
BRIDGE JOINT DEMOLITION	96 SQ.FT.	
SURFACE PREPARATION FOR CONCRETE BARRIER	2,084 SQ.FT.	
SILANE BARRIER RAIL TREATMENT	2,084 SQ.FT.	



PLAN OF SPANS - DECK REPAIR

-  CONCRETE DECK CRACK SEALING
-  BRIDGE JOINT DEMOLITION
-  SILANE BARRIER RAIL TREATMENT

PROJECT NO. I-5839
HALIFAX COUNTY
 BRIDGE No.: 141



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUPERSTRUCTURE
 DECK CRACK SEALING &
 SILANE BARRIER RAIL
 TREATMENT

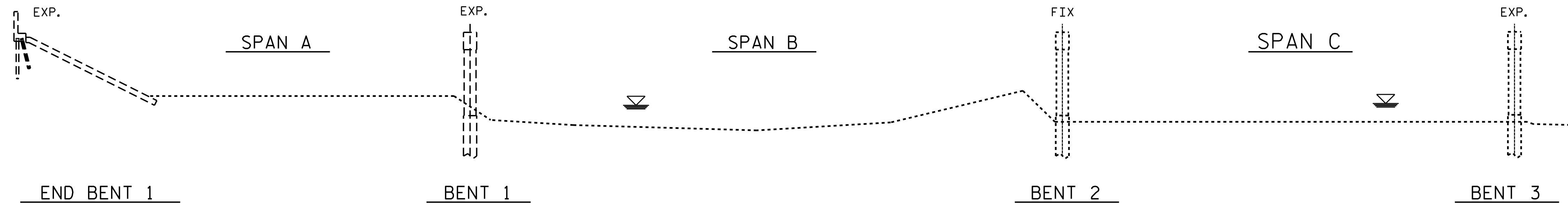
DRAWN BY : M. K. BEARD / S. T. SANDOR DATE : 03/2017
 CHECKED BY : W. C. SMITH DATE : 03/2017

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			42

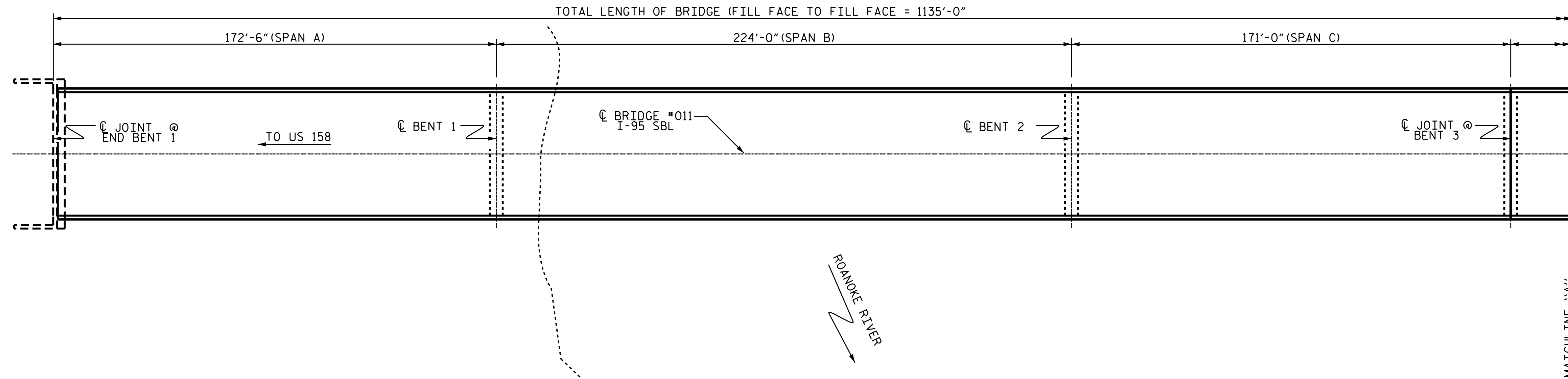
SCOPE OF WORK

- MODULAR JOINT REPLACEMENT
- CONCRETE BRIDGE DECK CRACK SEALING
- SILANE BARRIER RAILS TREATMENT
- CONCRETE FOR DECK REPAIR



ELEVATION

(SECTION ALONG C OF ROADWAY)



PLAN

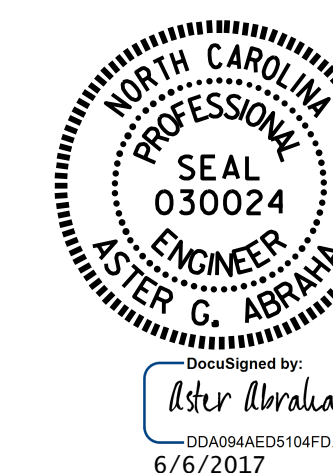
(COLUMNS AND FOOTINGS NOT SHOWN IN PLAN VIEW FOR CLARITY)

I hereby certify that this structure was rehabilitated according to these plans or as noted therein.

Resident Engineer _____ Date _____

PROJECT NO. I-5839
 NORTHAMPTON COUNTY
 BRIDGE NO. 009 & 011

SHEET 1 OF 2



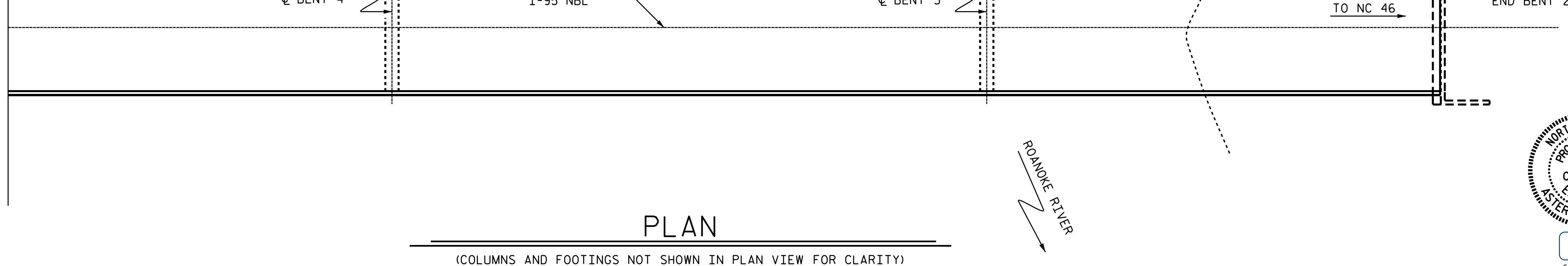
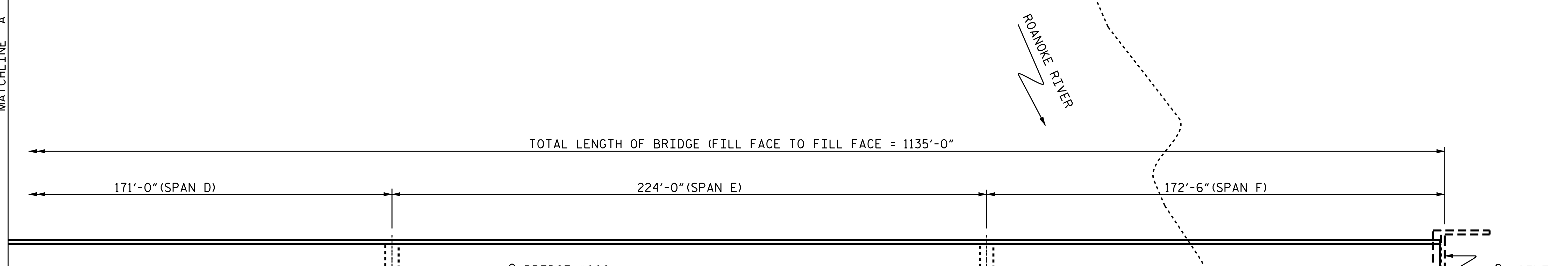
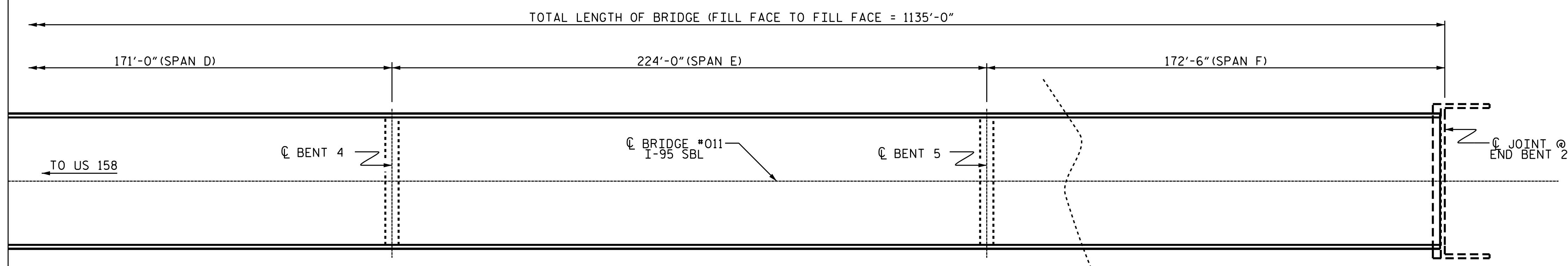
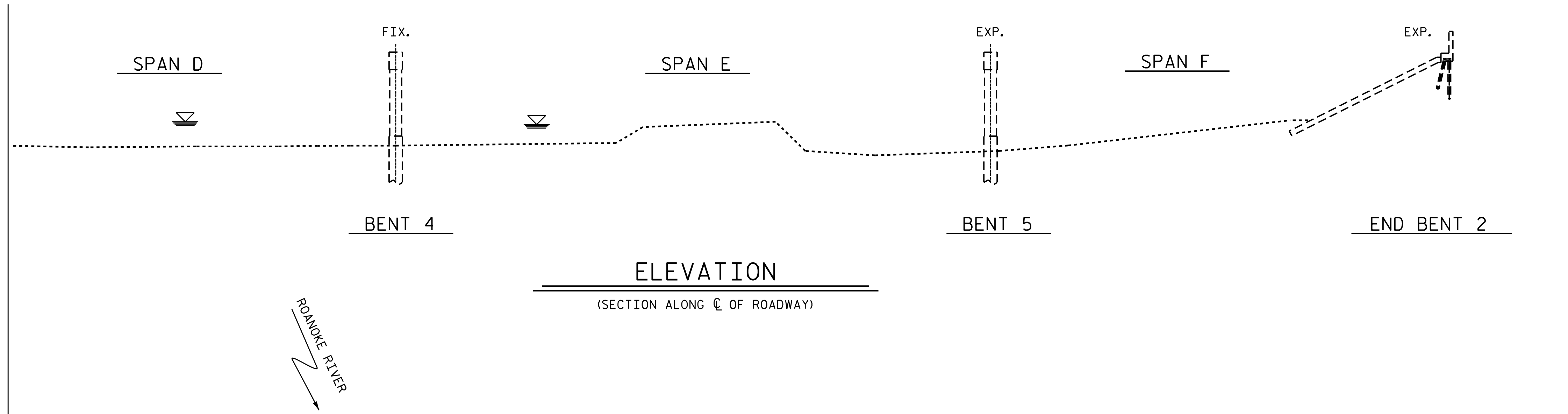
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 BRIDGES OVER ROANOKE RIVER ON I-95 BETWEEN US 158 AND NC 46

DRAWN BY : S. B. WILLIAMS / S. T. SANDOR DATE : 03/2017
 CHECKED BY : W. C. SMITH DATE : 03/2017

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO. S-30
 TOTAL SHEETS 42

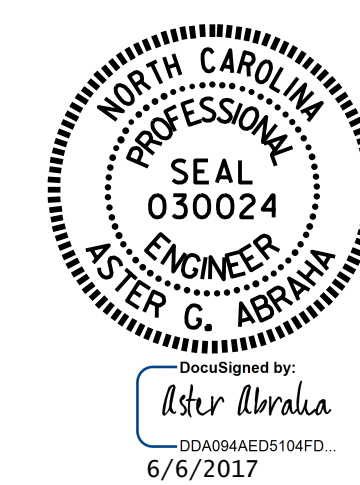


PLAN

(COLUMNS AND FOOTINGS NOT SHOWN IN PLAN VIEW FOR CLARITY)

PROJECT NO. I-5839
NORTHAMPTON COUNTY
 BRIDGE NO. 009 & 011

SHEET 2 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 BRIDGES OVER ROANOKE
 RIVER ON I-95 BETWEEN
 US 158 AND NC 46

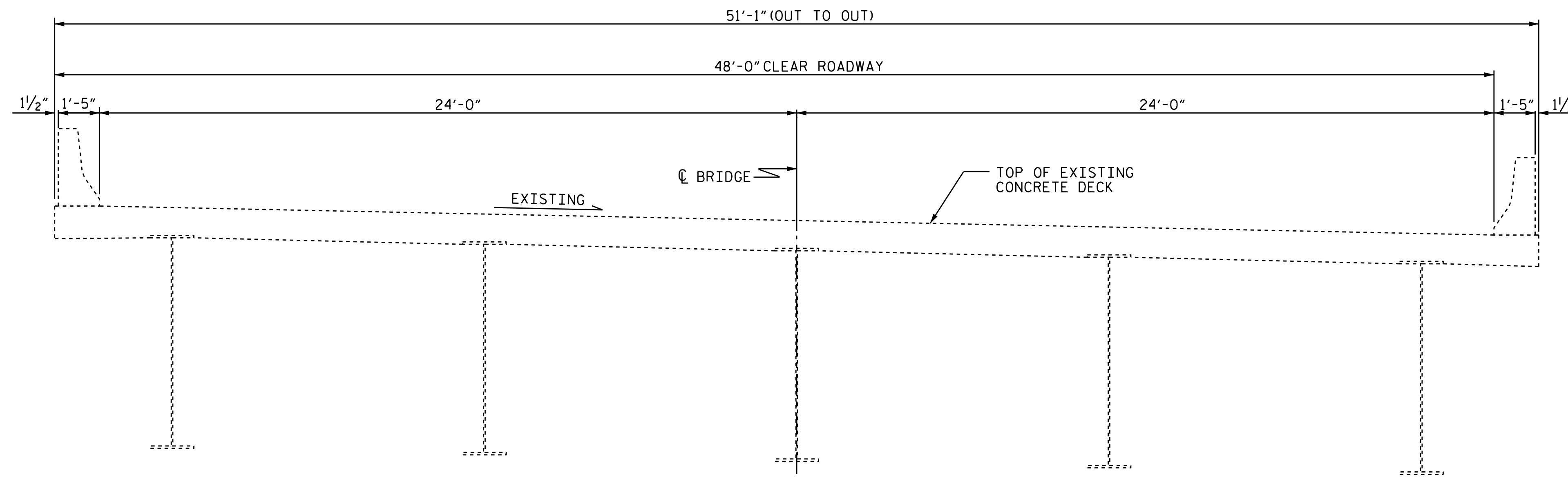
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DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

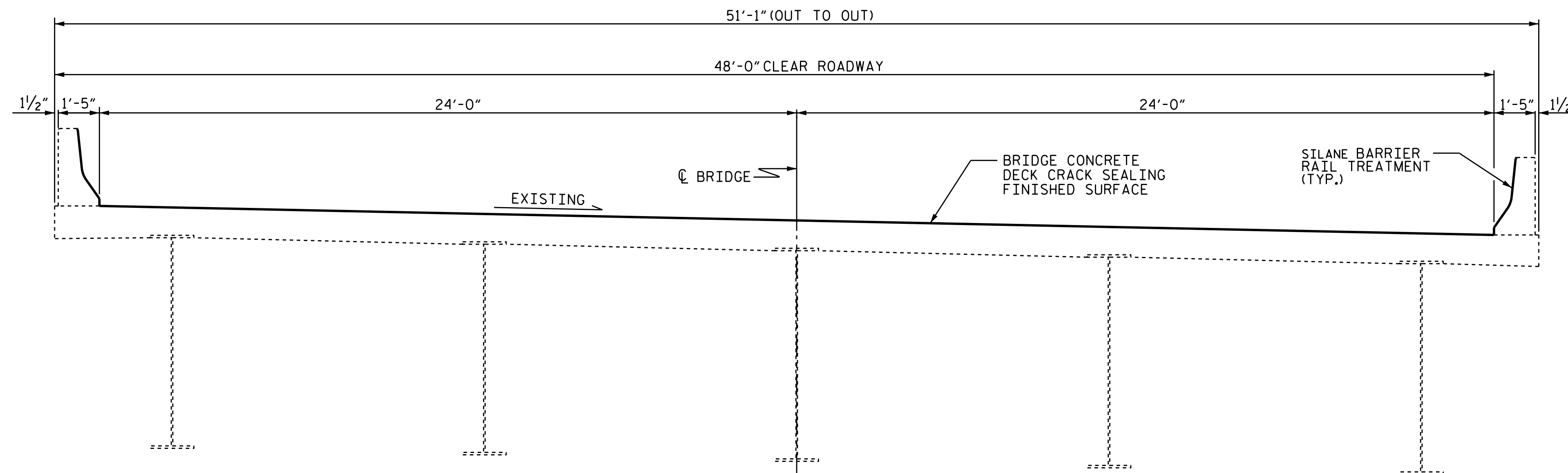
DRAWN BY : S. B. WILLIAMS / S. T. SANDOR DATE : 03/2017
 CHECKED BY : W. C. SMITH DATE : 03/2017

06-JUN-2017 08:44
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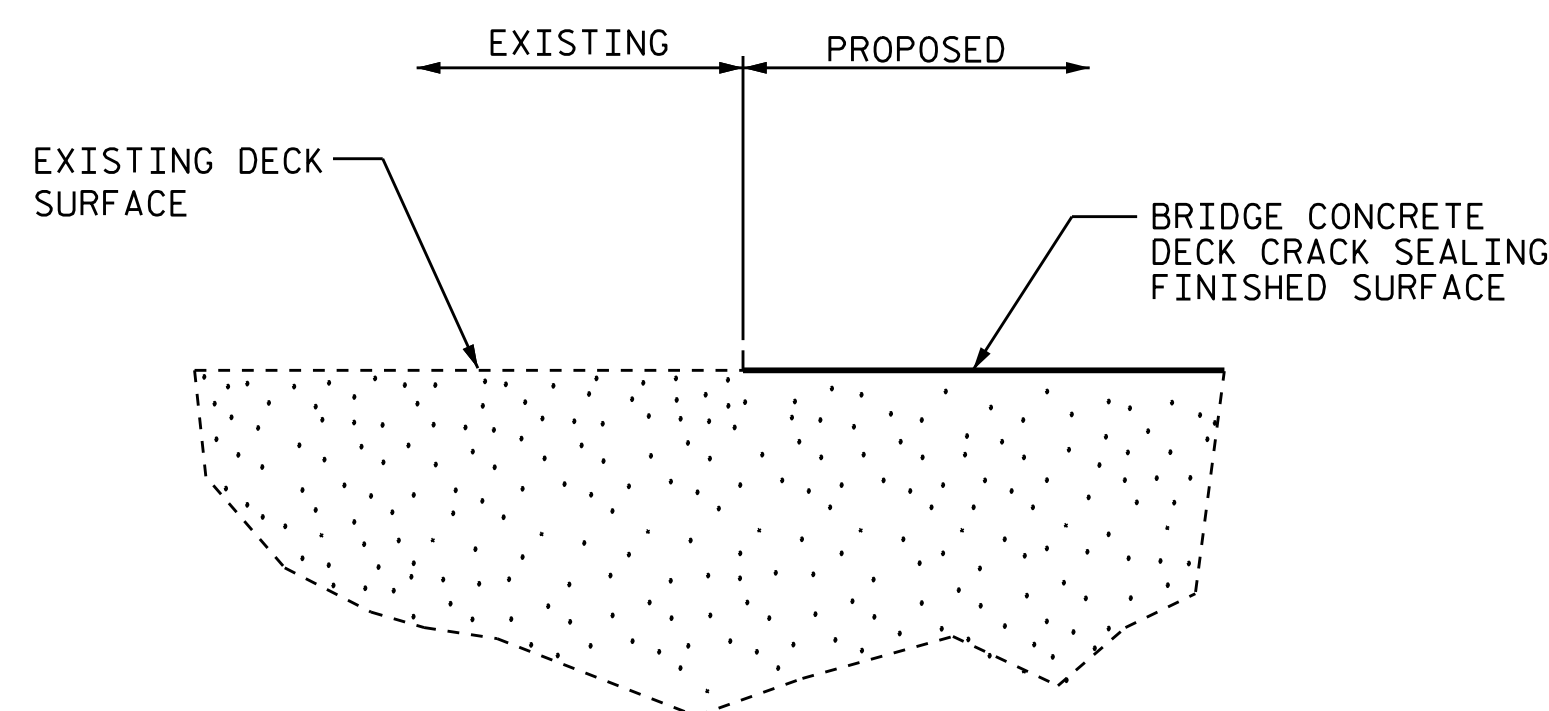
NOTE:
 SHOWING BRIDGE #009 NORTHBOUND, BRIDGE #011 SOUTHBOUND SIMILAR.
 SEE TRAFFIC MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING, AND OTHER TRAFFIC CONTROL



TYPICAL SECTION
 (EXISTING)



TYPICAL SECTION
 (PROPOSED)



DETAIL OF CONCRETE DECK CRACK SEALING

PROJECT NO. I-5839
NORTHAMPTON COUNTY
 BRIDGE NO. 009 & 011



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUPERSTRUCTURE
 TYPICAL SECTION &
 DECK CRACK SEAL
 DETAIL

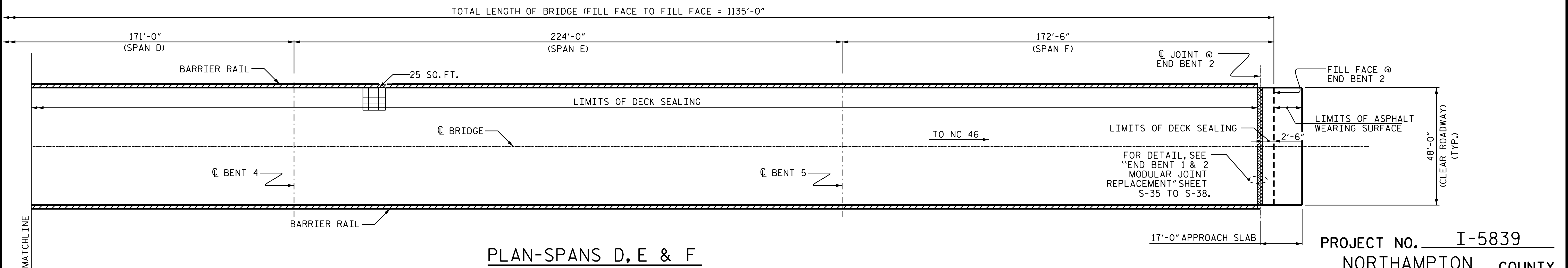
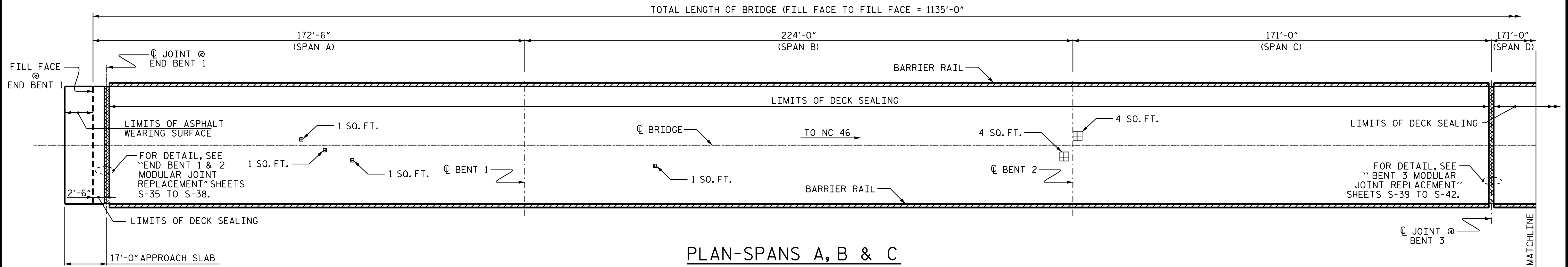
DRAWN BY : S. B. WILLIAMS / S. T. SANDOR DATE : 03/2017
 CHECKED BY : W. C. SMITH DATE : 03/2017

DOCUMENT NOT CONSIDERED
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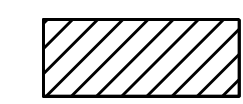
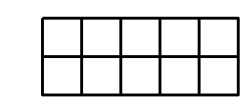

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-32
2			4			42

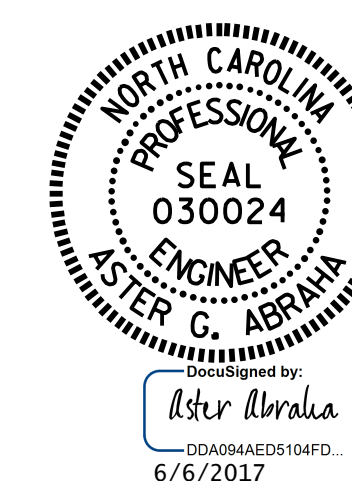
SUMMARY OF QUANTITIES

	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR CRACK SEALING	37 SQ. FT.	
SHOTBLASTING BRIDGE DECK	6,015 SQ. YD.	
CONCRETE BRIDGE DECK CRACK SEALING	6,015 SQ. YD.	
BRIDGE JOINT DEMOLITION	348 SQ. FT.	
SURFACE PREPARATION FOR CONCRETE BARRIER	6,053 SQ. FT.	
SILANE BARRIER RAIL TREATMENT	6,053 SQ. FT.	



PROJECT NO. I-5839
 NORTHAMPTON COUNTY
 BRIDGE NO. 009

-  SILANE BARRIER RAIL TREATMENT
-  BRIDGE DECK REPAIR
-  BRIDGE JOINT DEMOLITION



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUPERSTRUCTURE
 DECK CRACK SEALING &
 SILANE BARRIER RAIL
 TREATMENT

DRAWN BY : S. B. WILLIAMS / S. T. SANDOR DATE : 03/2017
 CHECKED BY : W. C. SMITH DATE : 04/2017

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

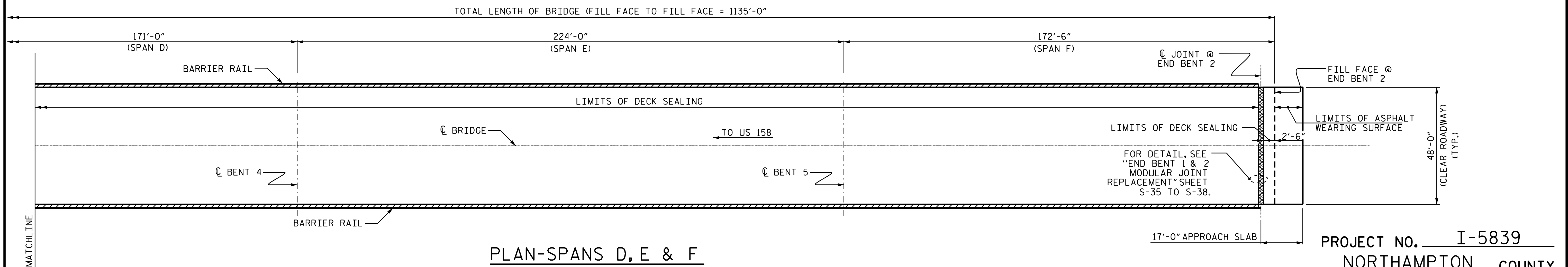
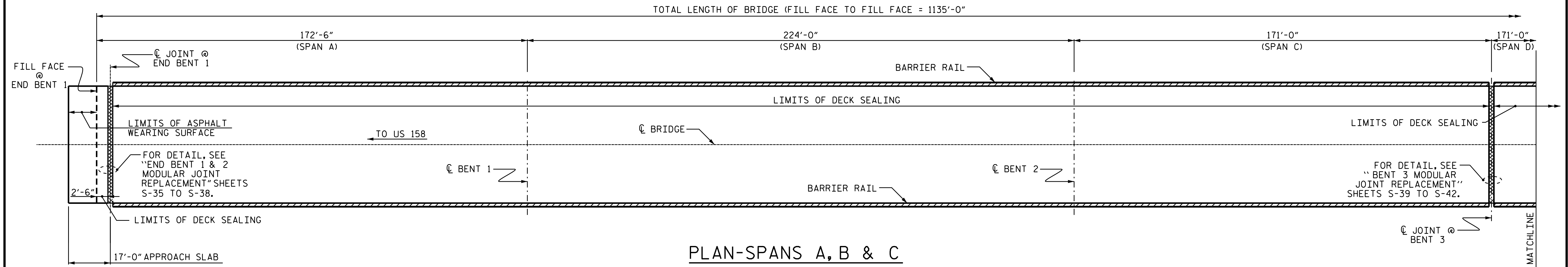
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-33
2			4			42

NOTE:

* CONCRETE DECK REPAIR FOR CRACK SEALING IS NOT ANTICIPATED. TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSE IN CASE UNANTICIPATED REPAIR AREAS ARE ENCOUNTERED.

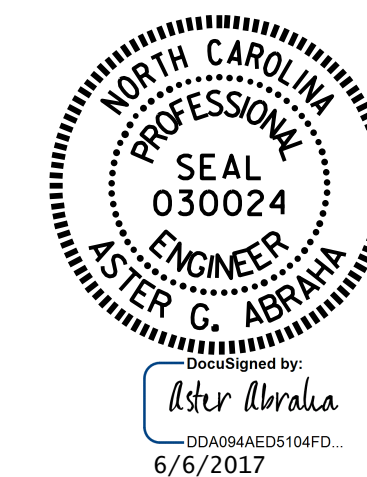
SUMMARY OF QUANTITIES

	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR CRACK SEALING	* 10 SQ.FT.	
SHOTBLASTING BRIDGE DECK	6,015 SQ. YD.	
CONCRETE BRIDGE DECK CRACK SEALING	6,015 SQ. YD.	
BRIDGE JOINT DEMOLITION	348 SQ. FT.	
SURFACE PREPARATION FOR CONCRETE BARRIER	6,053 SQ. FT.	
SILANE BARRIER RAIL TREATMENT	6,053 SQ. FT.	



PROJECT NO. I-5839
 NORTHAMPTON COUNTY
 BRIDGE NO. 011

- SILANE BARRIER RAIL TREATMENT
- BRIDGE DECK REPAIR
- BRIDGE JOINT DEMOLITION

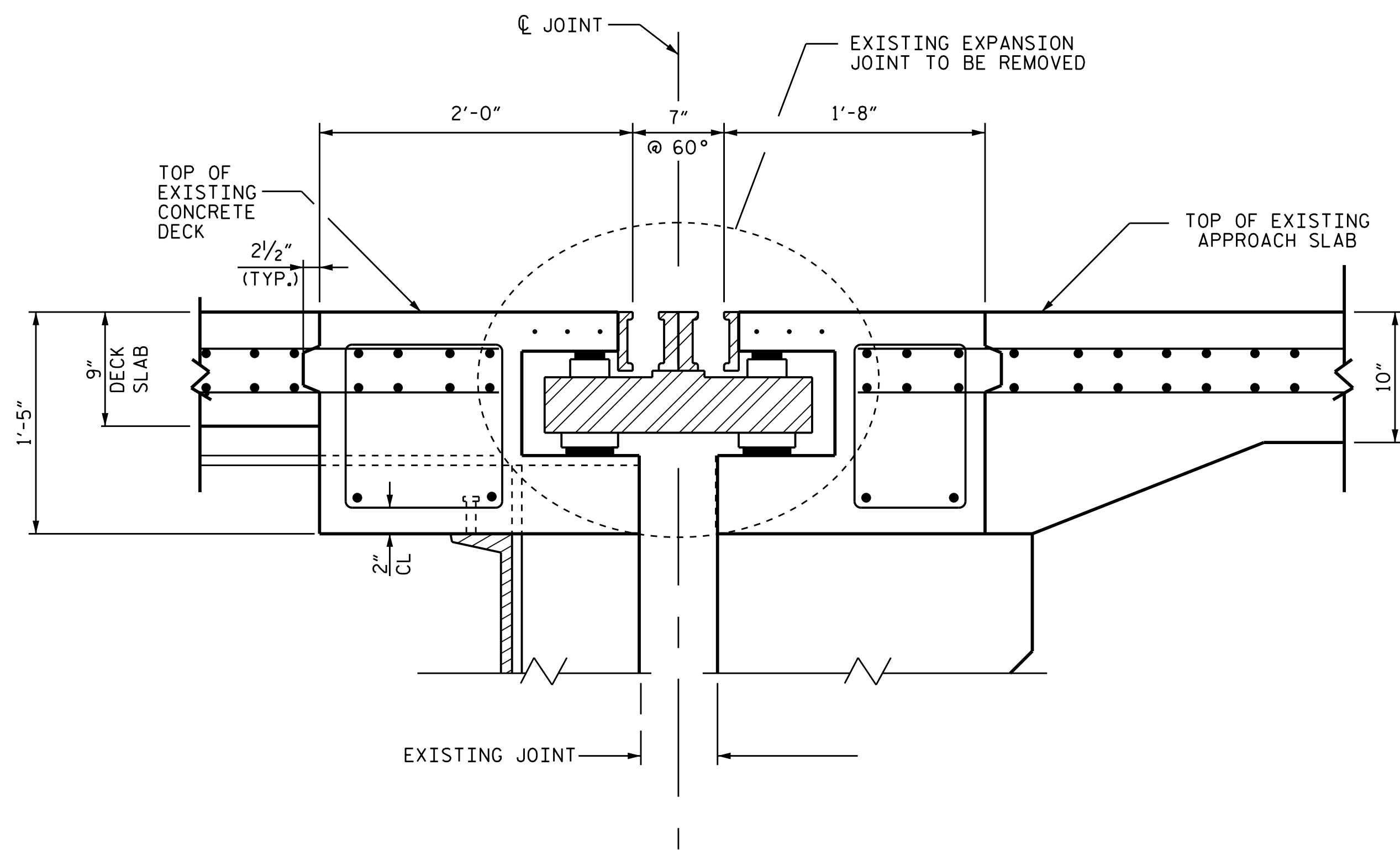


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUPERSTRUCTURE
 DECK CRACK SEALING &
 SILANE BARRIER RAIL
 TREATMENT

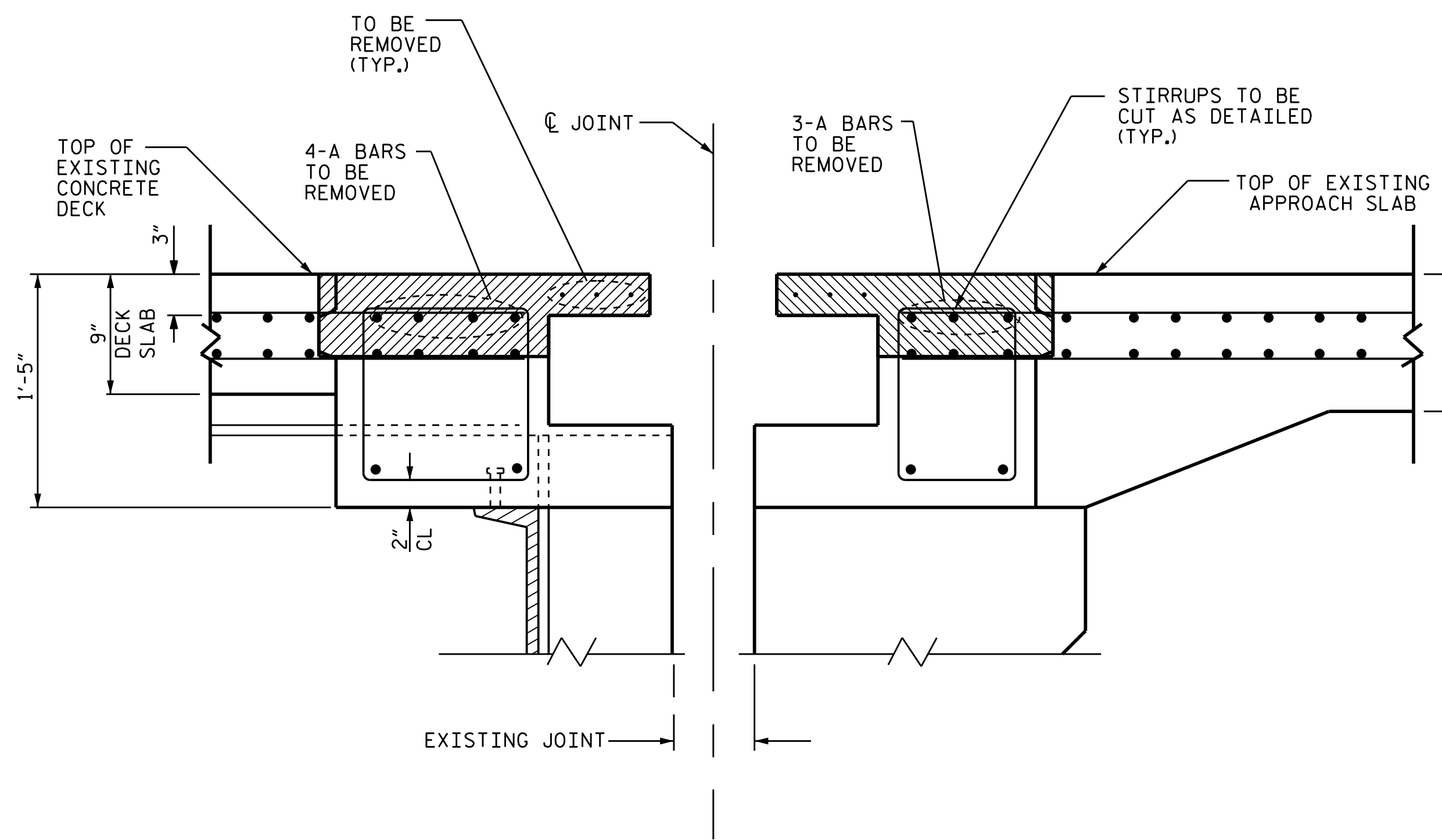
DRAWN BY : S. B. WILLIAMS / S. T. SANDOR DATE : 03/2017
 CHECKED BY : W. C. SMITH DATE : 03/2017

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

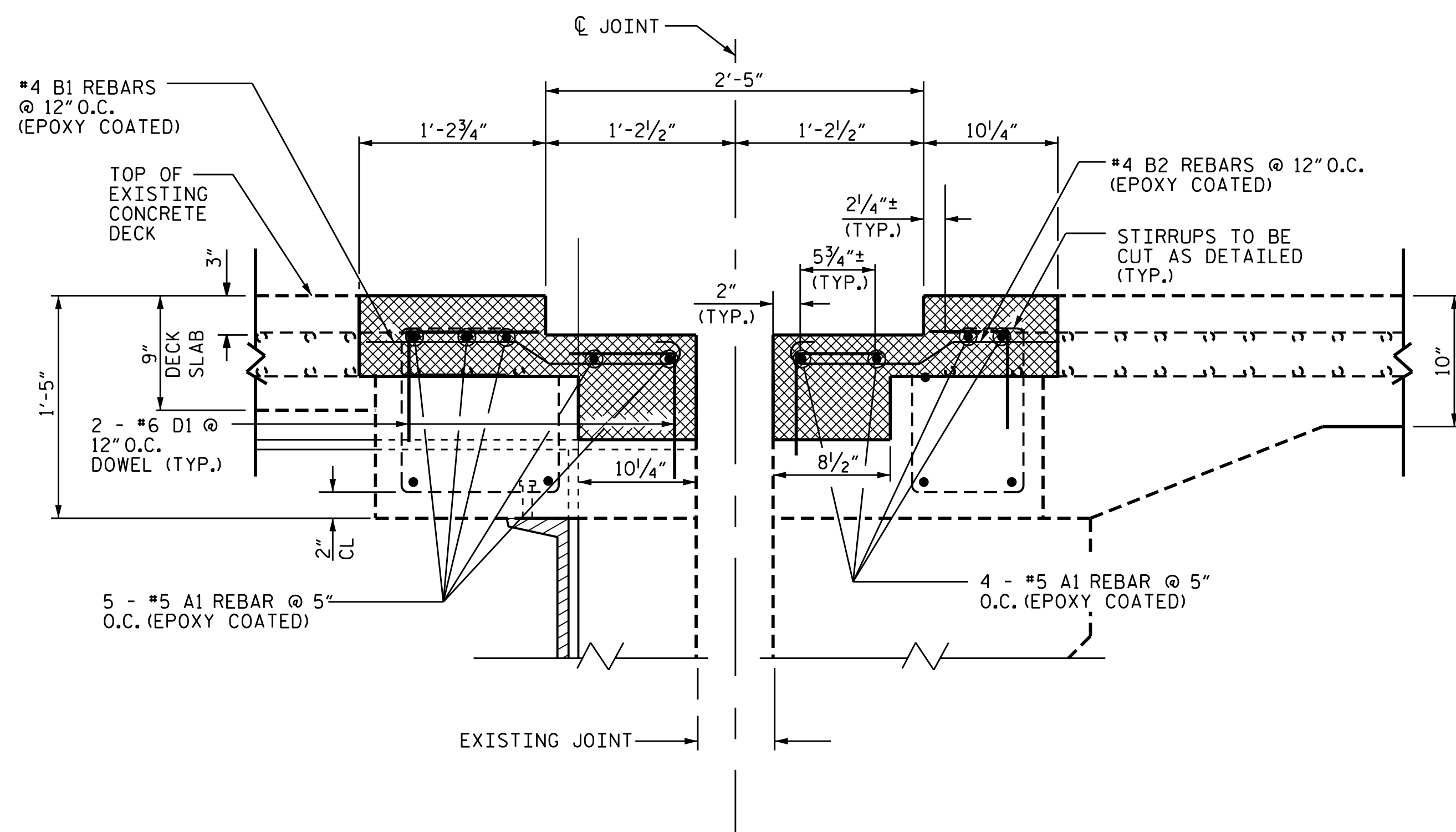
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			42



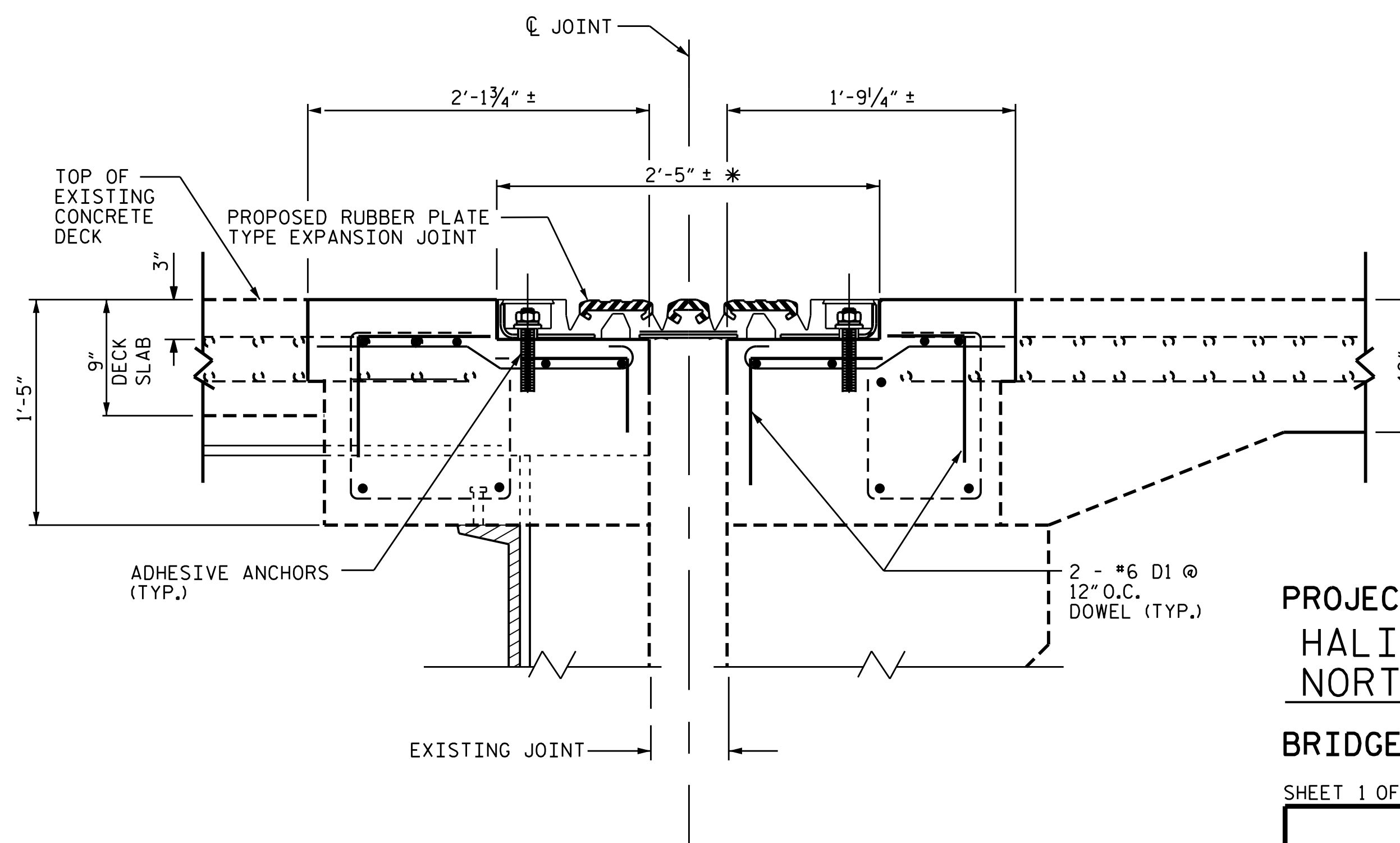
EXISTING MODULAR JOINT
(AT MODULAR JT. BOXES)



MODULAR JOINT REMOVED
(AT MODULAR JT. BOXES)



CONCRETE AND REBAR REMOVED
(AT MODULAR JT. BOXES)



PROPOSED JOINT REPAIR
(AT MODULAR JT. BOXES)
(THE REINFORCING MAY BE SHIFTED SLIGHTLY)

NOTE:
EXISTING MODULAR EXPANSION JOINT DETAIL ARE SHOWN FOR INFORMATION ONLY. ACTUAL FIELD CONDITIONS MAY VARY. THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT IF ACTUAL CONDITIONS VARY FROM WHAT IS SHOWN IN THESE PLANS.

THE CONTRACTOR SHALL HAVE A REPRESENTATIVE FROM THE JOINT MANUFACTURER PRESENT DURING INSTALLATION OF PROPOSED EXPANSION JOINT SEAL.

ALL EXPOSED ENDS OF CUT BARS SHALL BE COATED WITH EPOXY PRIOR TO THE NEW JOINT MATERIAL INSTALLATION.

THE CONTRACTOR SHALL PREPARE THE BOTTOM SURFACE OF BLOCKOUT TO BE PARALLEL WITH THE PLANE OF THE ROADWAY AND PROVIDE A UNIFORM SURFACE.

FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE ARTICLE 420-13 OF THE STANDARD SPECIFICATIONS. PERFORM LEVEL 1 FIELD TESTING AT A TEST LOAD OF 10,000 LBS.

EXISTING CONCRETE TO BE REMOVED

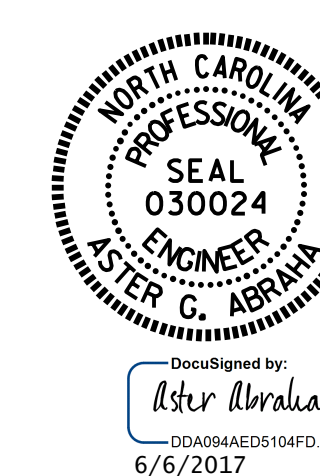
NEW CONCRETE FOR DECK BUILD UP.

* TO BE VERIFIED BY MANUFACTURER

PROJECT NO. I-5839
HALIFAX &
NORTHAMPTON COUNTIES
BRIDGE NO. 139, 141, 009
& 011
SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

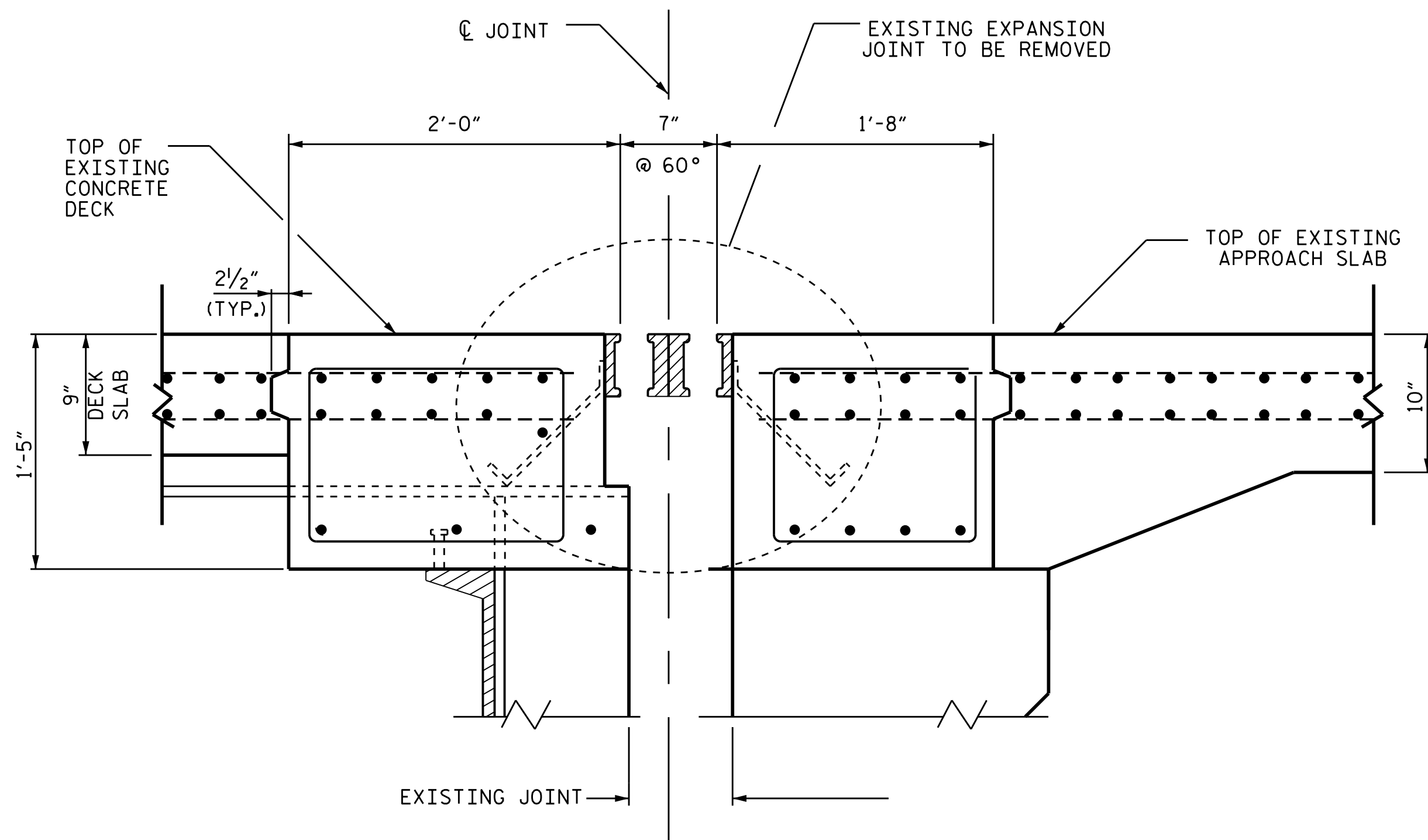
END BENT 1 & 2
MODULAR JOINT
REPLACEMENT



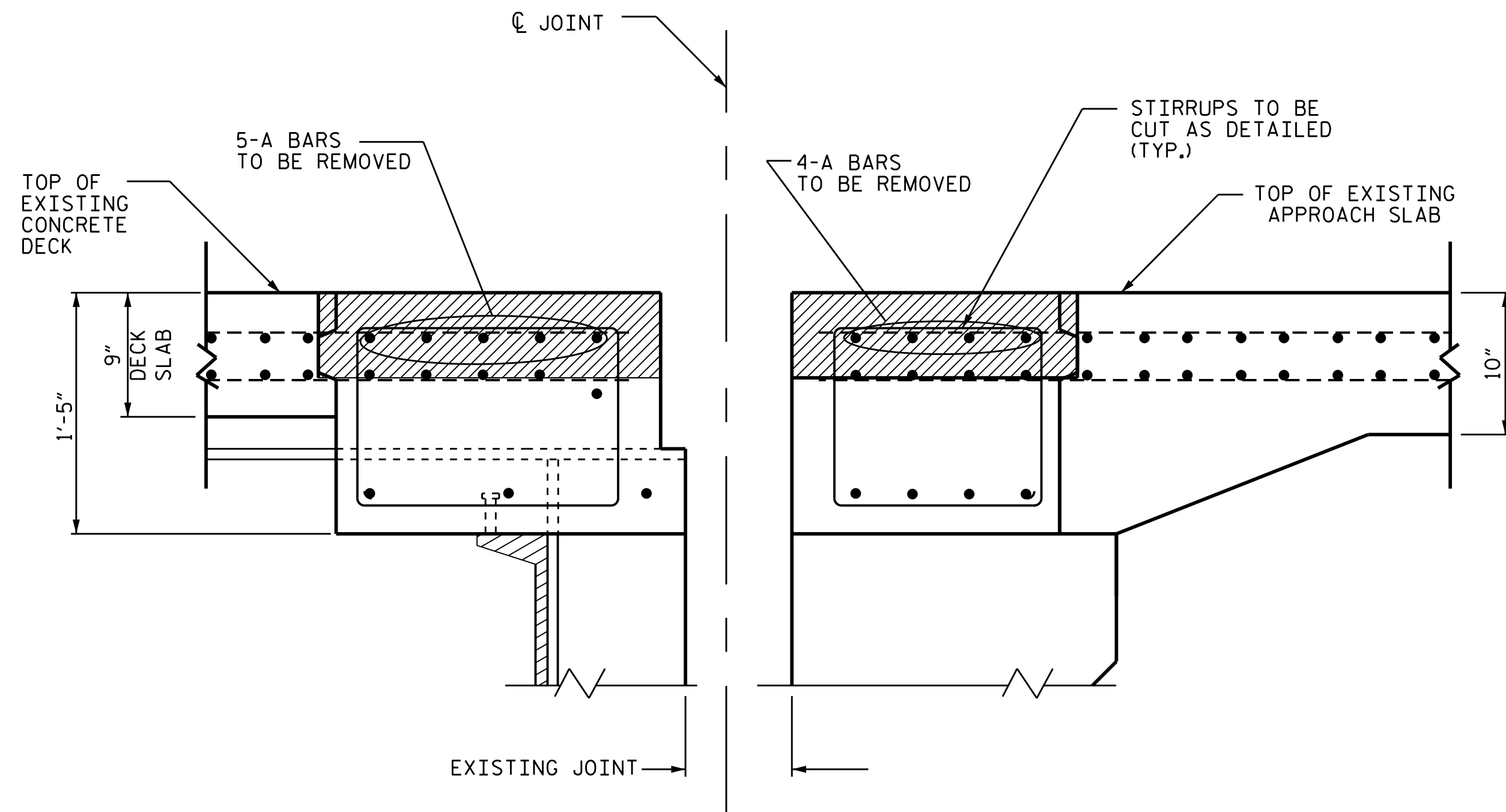
DRAWN BY : S. T. SANDOR DATE : 03/2017
CHECKED BY : W. C. SMITH DATE : 03/2017

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

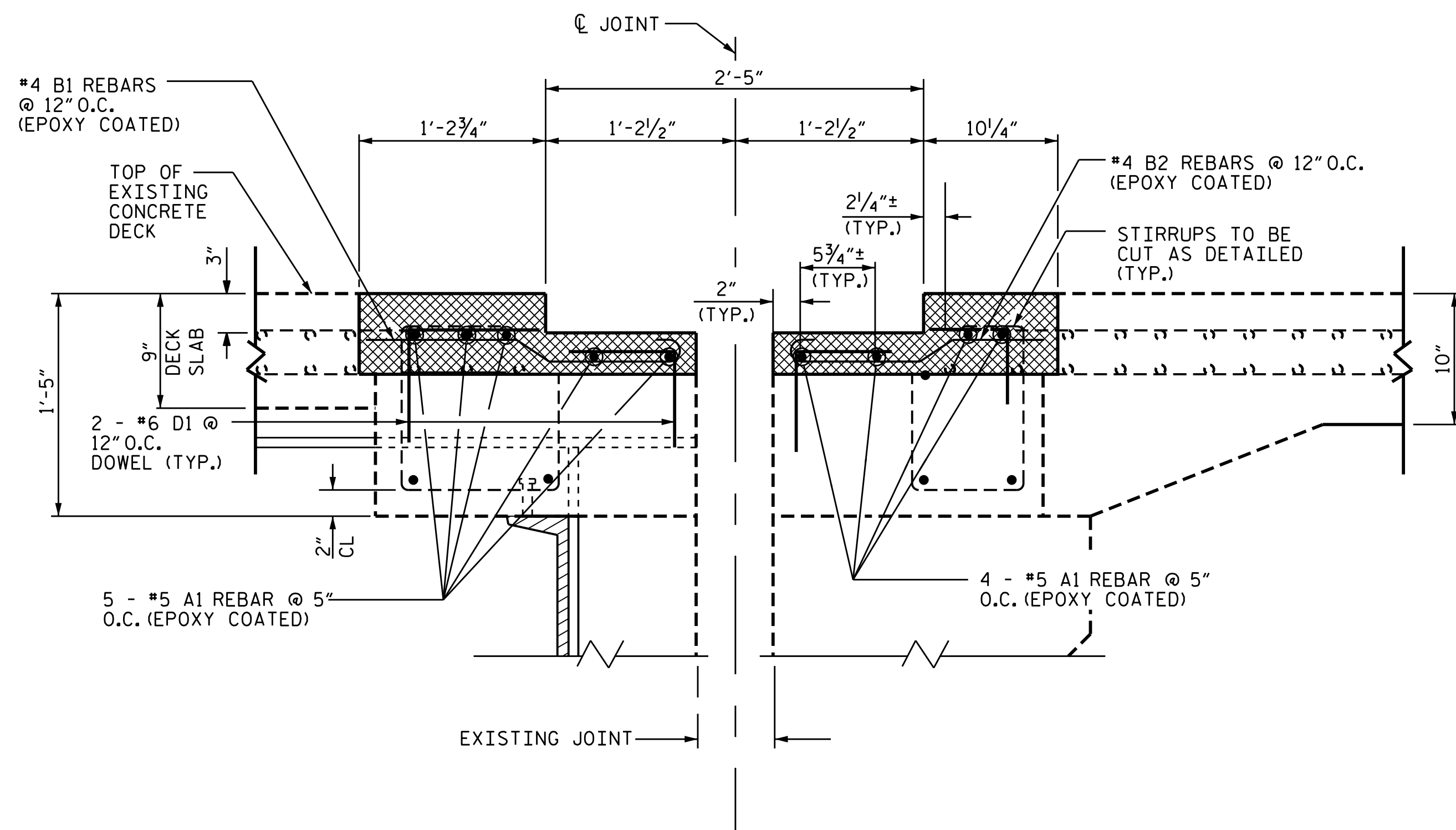
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			42



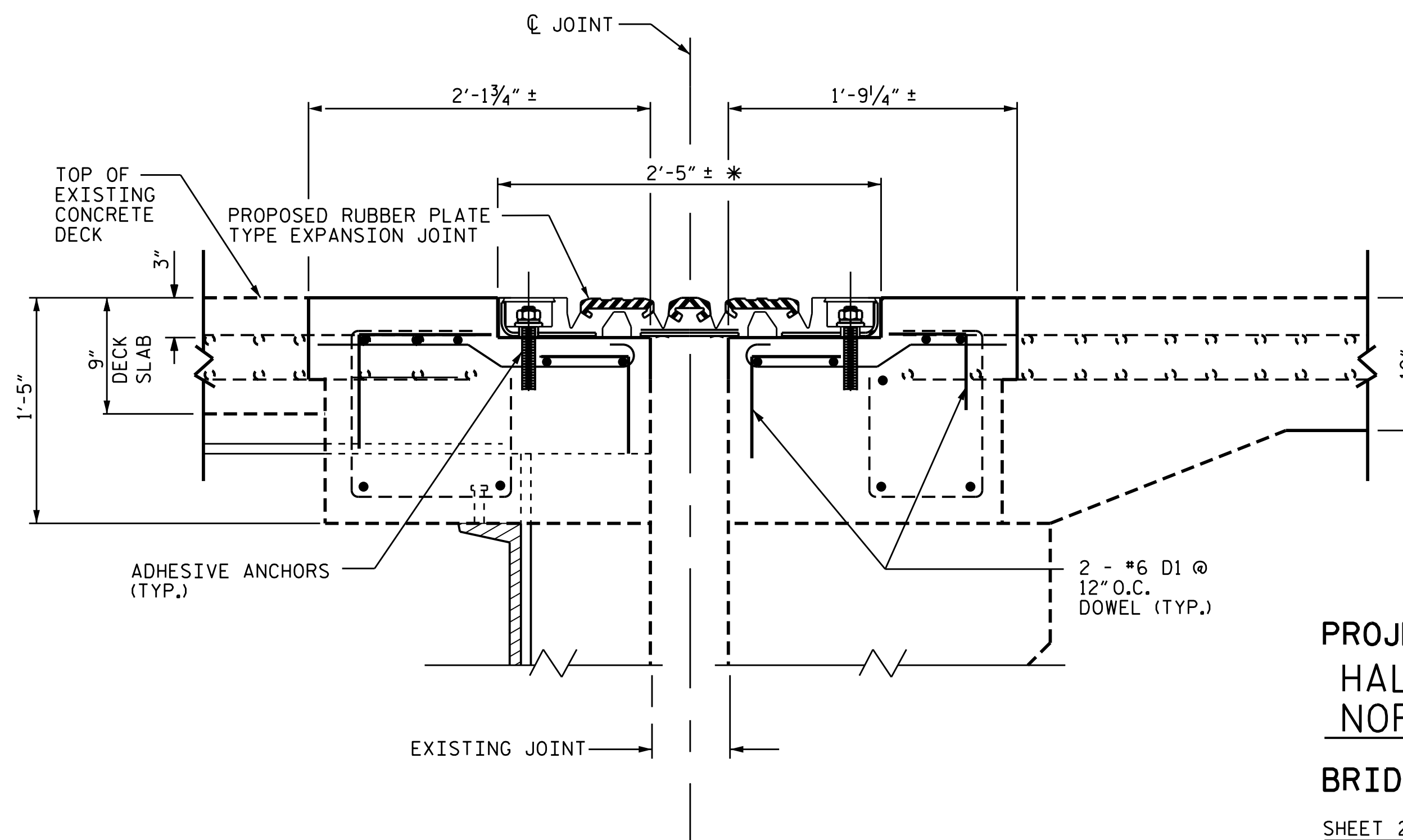
EXISTING MODULAR JOINT
(BETWEEN MODULAR JT. BOXES)



MODULAR JOINT REMOVED
(BETWEEN MODULAR JT. BOXES)



CONCRETE AND REBAR REMOVED
(BETWEEN MODULAR JT. BOXES)



PROPOSED JOINT REPAIR
(BETWEEN MODULAR JT. BOXES)
(THE REINFORCING MAY BE SHIFTED SLIGHTLY)

NOTE:
EXISTING MODULAR EXPANSION JOINT DETAIL ARE SHOWN FOR INFORMATION ONLY. ACTUAL FIELD CONDITIONS MAY VARY. THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT IF ACTUAL CONDITIONS VARY FROM WHAT IS SHOWN IN THESE PLANS.

THE CONTRACTOR SHALL HAVE A REPRESENTATIVE FROM THE JOINT MANUFACTURER PRESENT DURING INSTALLATION OF PROPOSED EXPANSION JOINT SEAL.

ALL EXPOSED ENDS OF CUT BARS SHALL BE COATED WITH EPOXY PRIOR TO THE NEW JOINT MATERIAL INSTALLATION.

THE CONTRACTOR SHALL PREPARE THE BOTTOM SURFACE OF BLOCKOUT TO BE PARALLEL WITH THE PLANE OF THE ROADWAY AND PROVIDE A UNIFORM SURFACE.

FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE ARTICLE 420-13 OF THE STANDARD SPECIFICATIONS. PERFORM LEVEL 1 FIELD TESTING AT A TEST LOAD OF 10,000 LBS.

EXISTING CONCRETE TO BE REMOVED

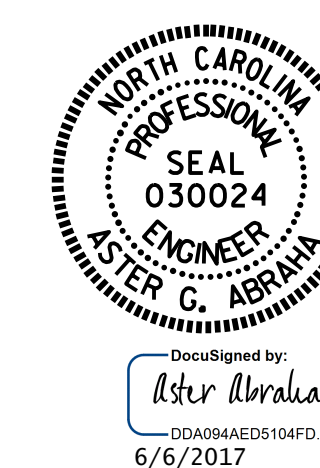
NEW CONCRETE FOR DECK BUILD UP.

* TO BE VERIFIED BY MANUFACTURER

PROJECT NO. I-5839
HALIFAX &
NORTHAMPTON COUNTIES
BRIDGE NO. 139, 141, 009
& 011
SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

END BENT 1 & 2
MODULAR JOINT
REPLACEMENT

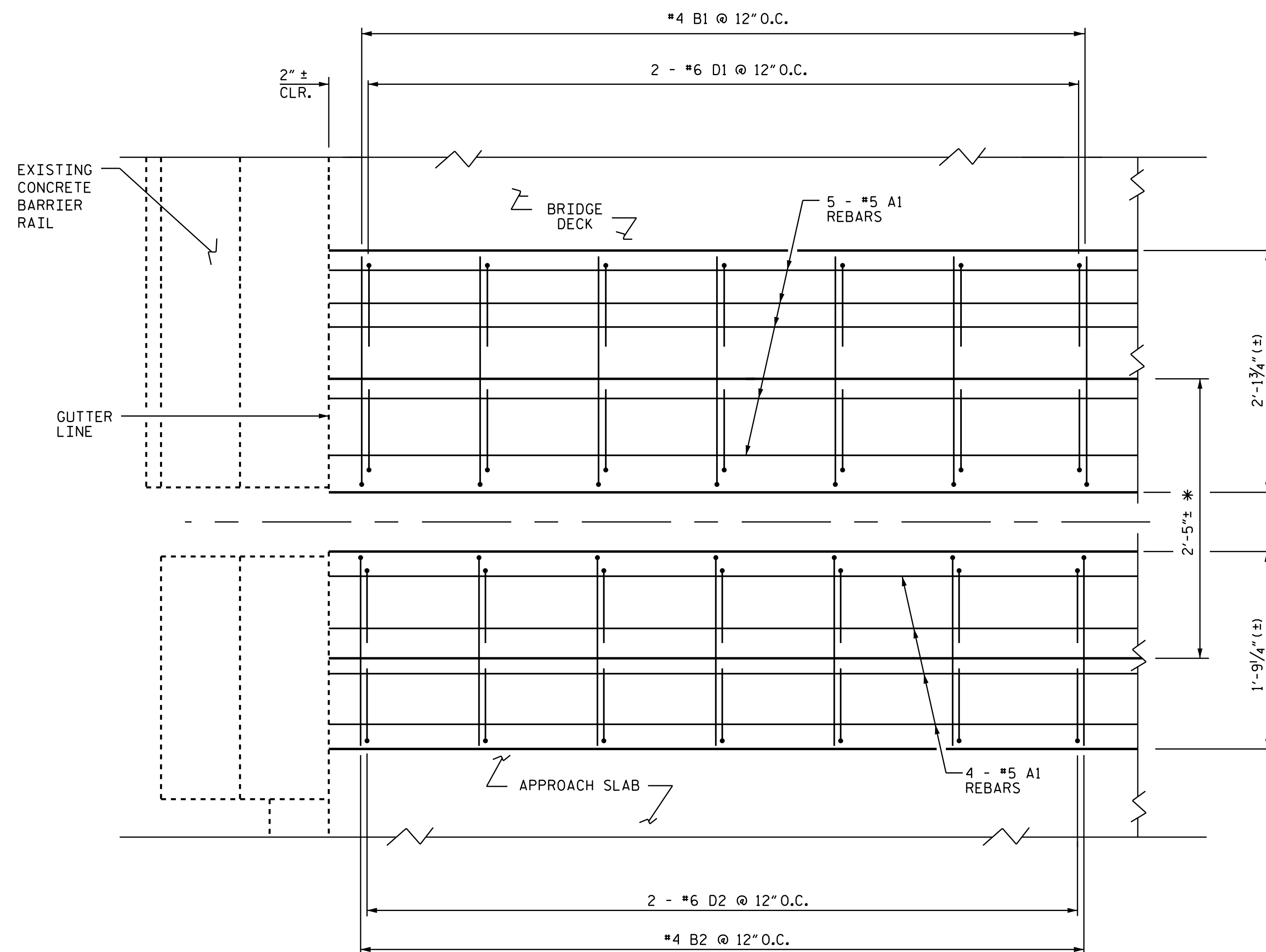


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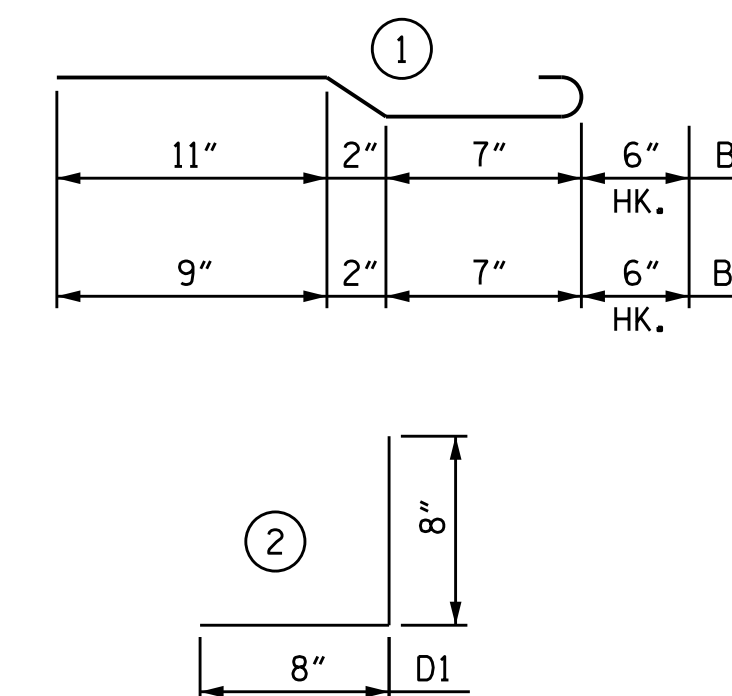
DRAWN BY : S. T. SANDOR DATE : 04/2017
CHECKED BY : W. C. SMITH DATE : 04/2017

06-JUN-2017 08:44
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jdnaw



TYPICAL PLAN OF PROPOSED TOP REINFORCING (DECK SIDE) AND APPROACH (ROADWAY SIDE)

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIAL

FOR END BENT 1 & APP. SLAB

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
* A1	9	5	STR	47'-8"	448
* B1	48	4	1	2'-2"	70
* B2	48	4	1	2'-0"	64
* D1	192	6	2	1'-4"	384

* EPOXY COATED REINFORCING STEEL

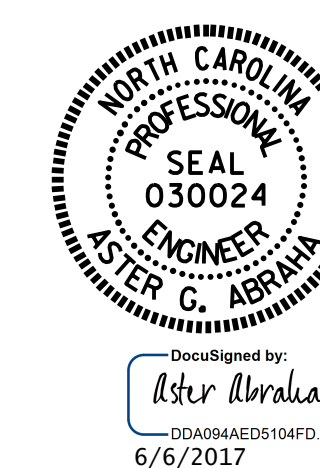
REINFORCING STEEL TOTAL	LBS.	966
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CONCRETE QUANTITIES

CONCRETE FOR DECK REPAIR	CU. FT.	132
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NOTE:
FOR EPOXY COATED REINFORCING STEEL, SEE 2012 NORTH CAROLINA STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, SECTION 425.

PROJECT NO. I-5839
HALIFAX &
NORTHAMPTON COUNTIES
BRIDGE NO. 139, 141, 009
& 011



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
END BENT 1 MODULAR
JOINT REPLACEMENT
(END BENT 2 SIMILAR
BY ROTATION)

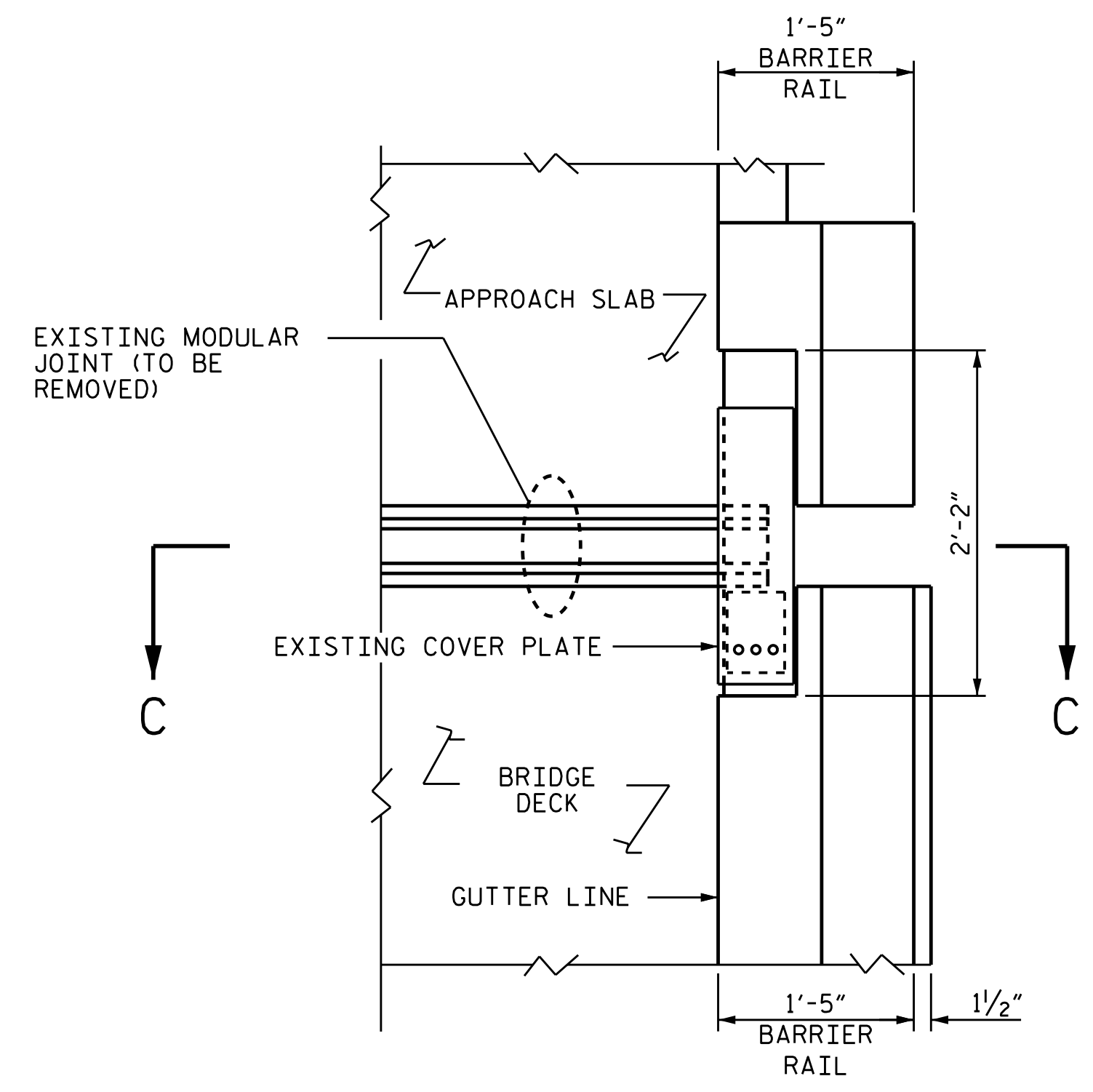
REVISIONS

NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.
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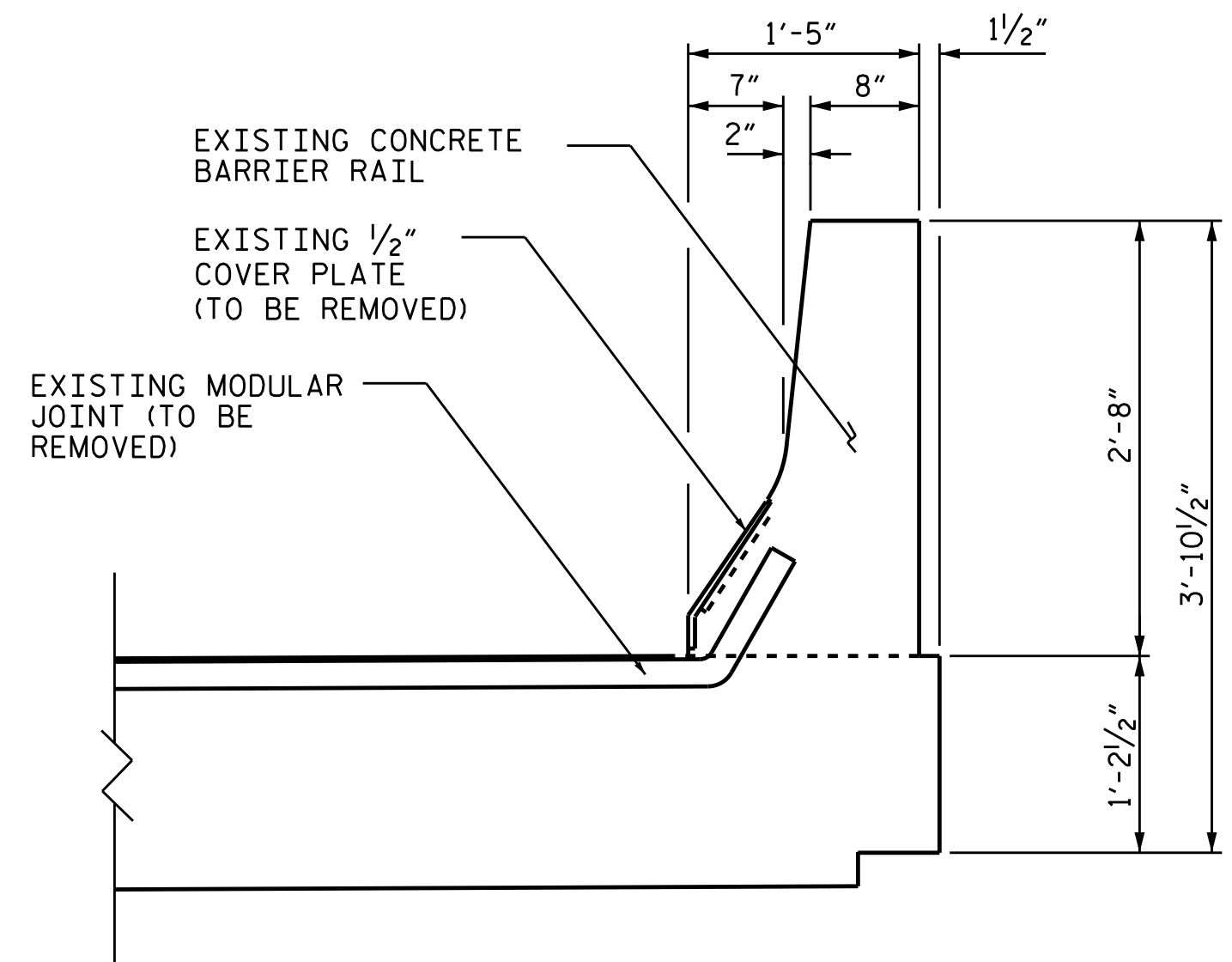
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : S. T. SANDOR DATE : 03/2017
CHECKED BY : W. C. SMITH DATE : 04/2017

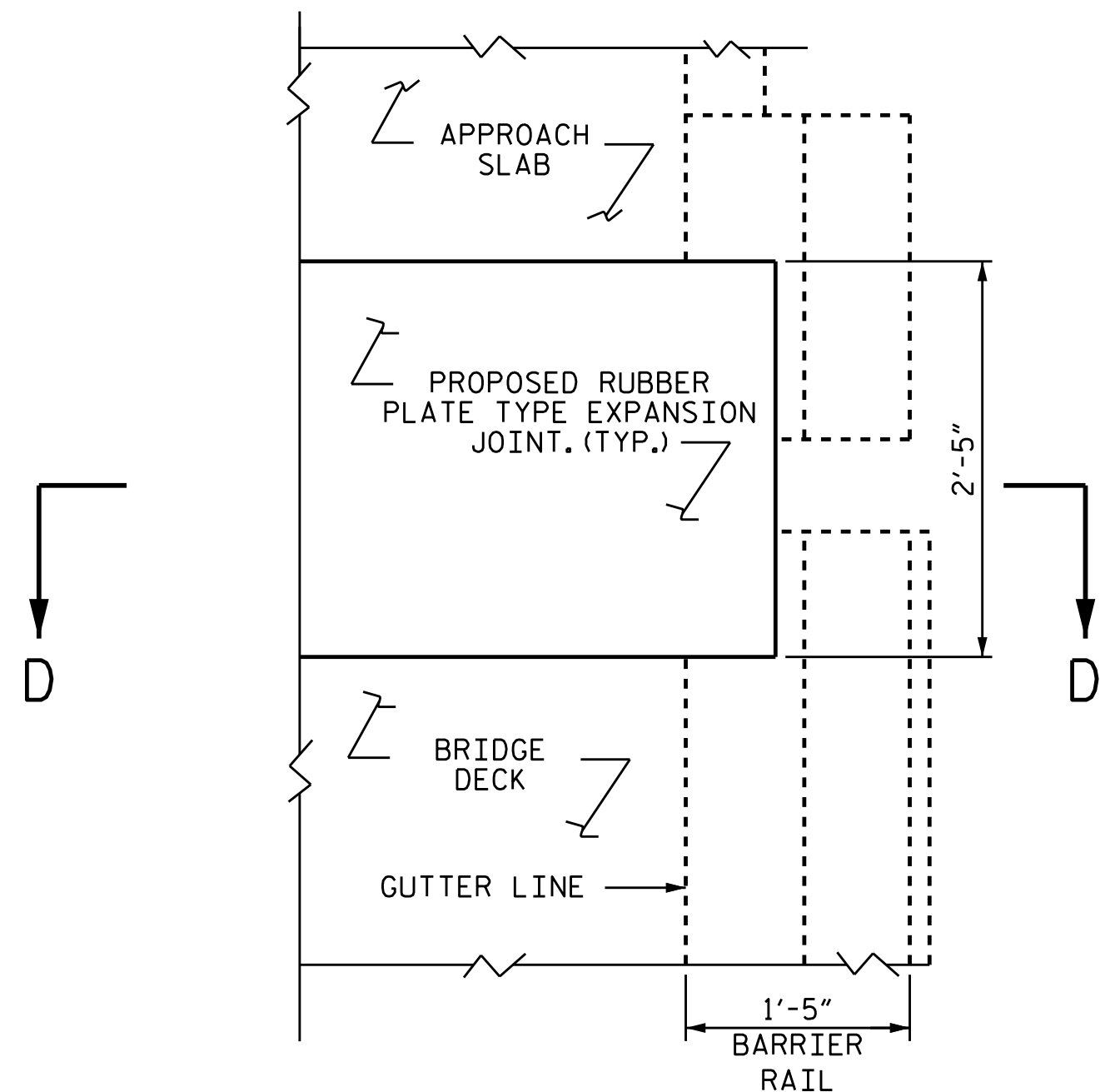
NOTES:
 THE CONTRACTOR SHALL CUT THE EXISTING #5 "S1" REBARS EXTENDING INTO THE BARRIER FROM THE DECK AND THE LONGITUDINAL #5 REBAR WITHIN THE LIMIT OF THE PROPOSED RUBBER PLATE JOINT. ALL EXPOSED ENDS OF THESE BARS SHALL BE COATED WITH EPOXY PRIOR TO THE NEW JOINT MATERIAL INSTALLATION.



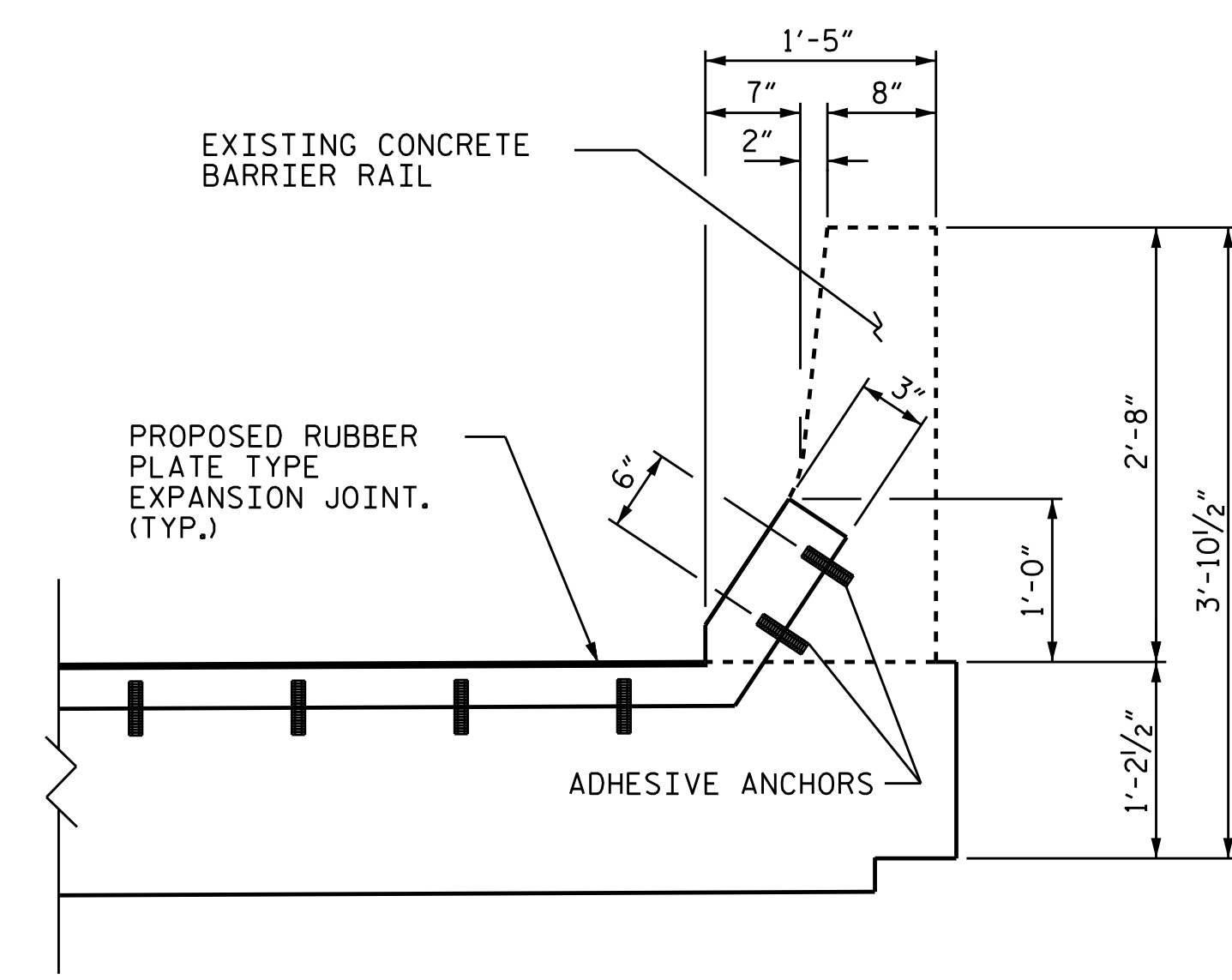
PLAN OF EXISTING MODULAR EXPANSION JOINT SEAL



SECTION C-C



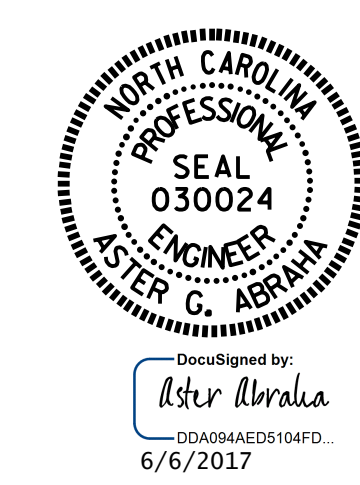
PLAN OF PROPOSED EXPANSION JOINT SEAL



SECTION D-D

(THE NEW RUBBER PLATE BRIDGE JOINT SHALL BE TURNED UP AND FLUSH WITH THE FACE OF THE BARRIER)

PROJECT NO. I-5839
 HALIFAX &
 NORTHAMPTON COUNTIES
 BRIDGE NO. 139, 141, 009
 & 011

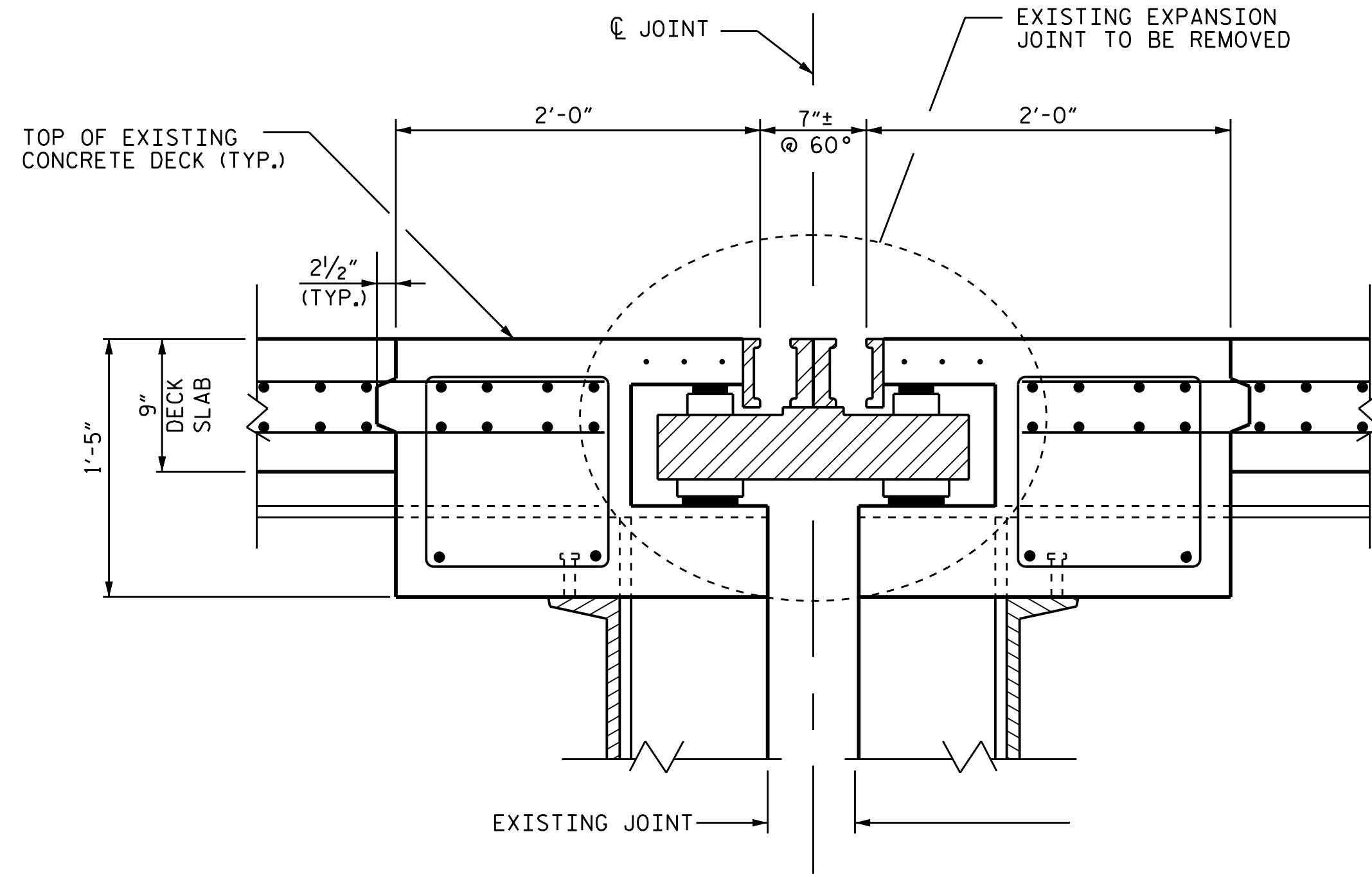


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**JOINT DETAIL
 AT
 THE BARRIER RAIL
 END BENT 1 & 2**

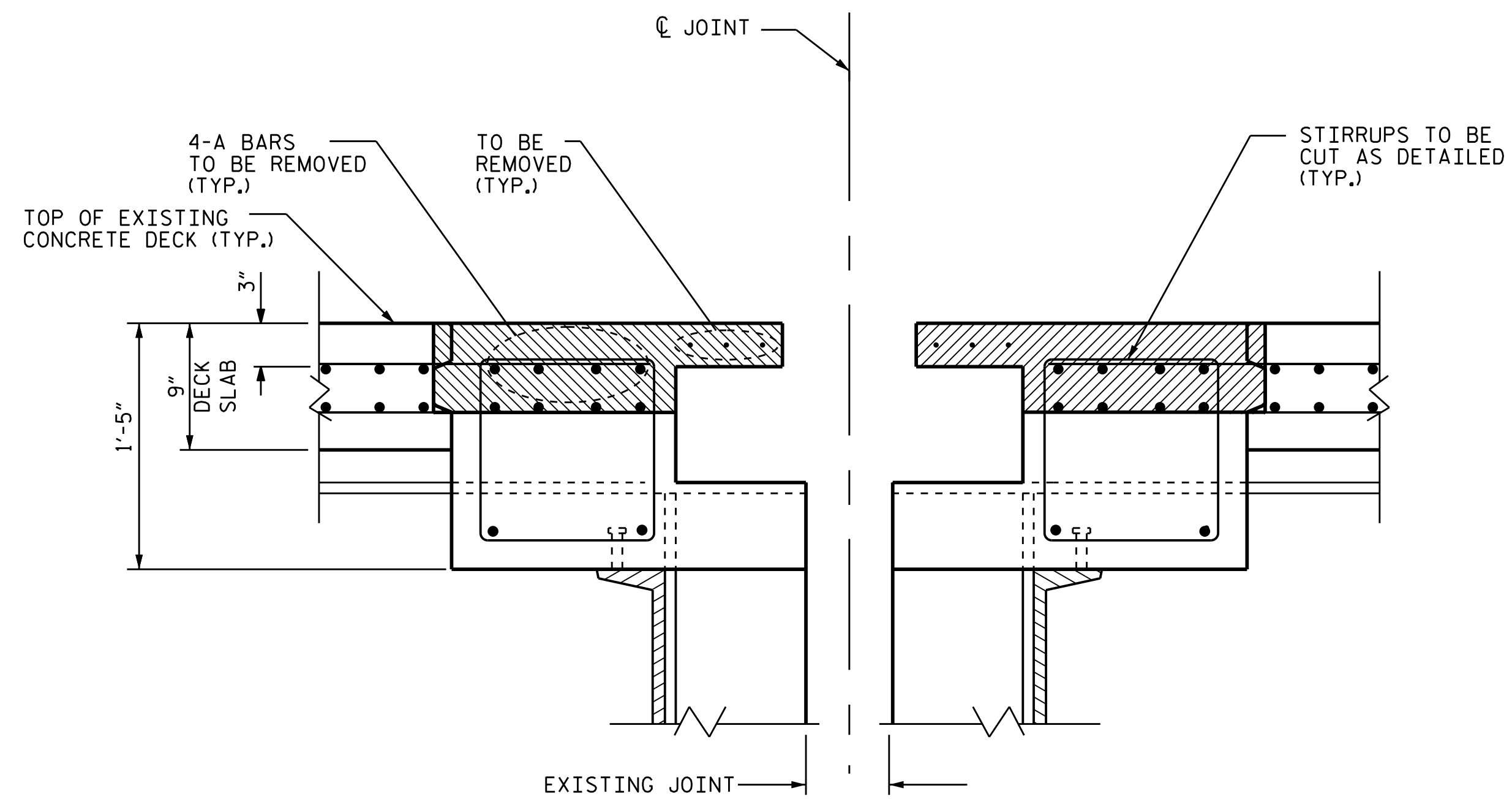
DRAWN BY : M. K. BEARD DATE : 3/2/17
 CHECKED BY : W. C. SMITH DATE : 03/2017

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

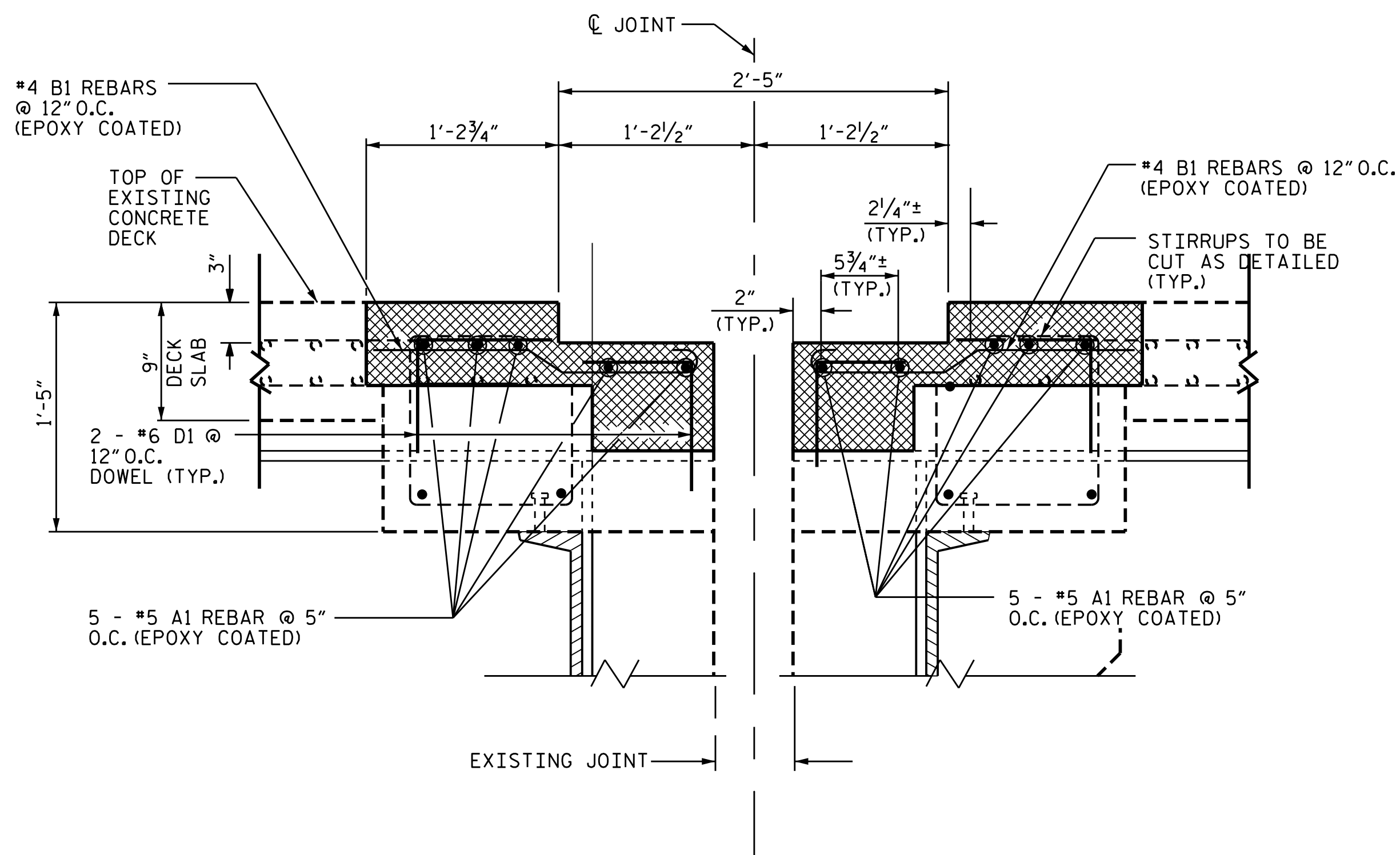
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			42



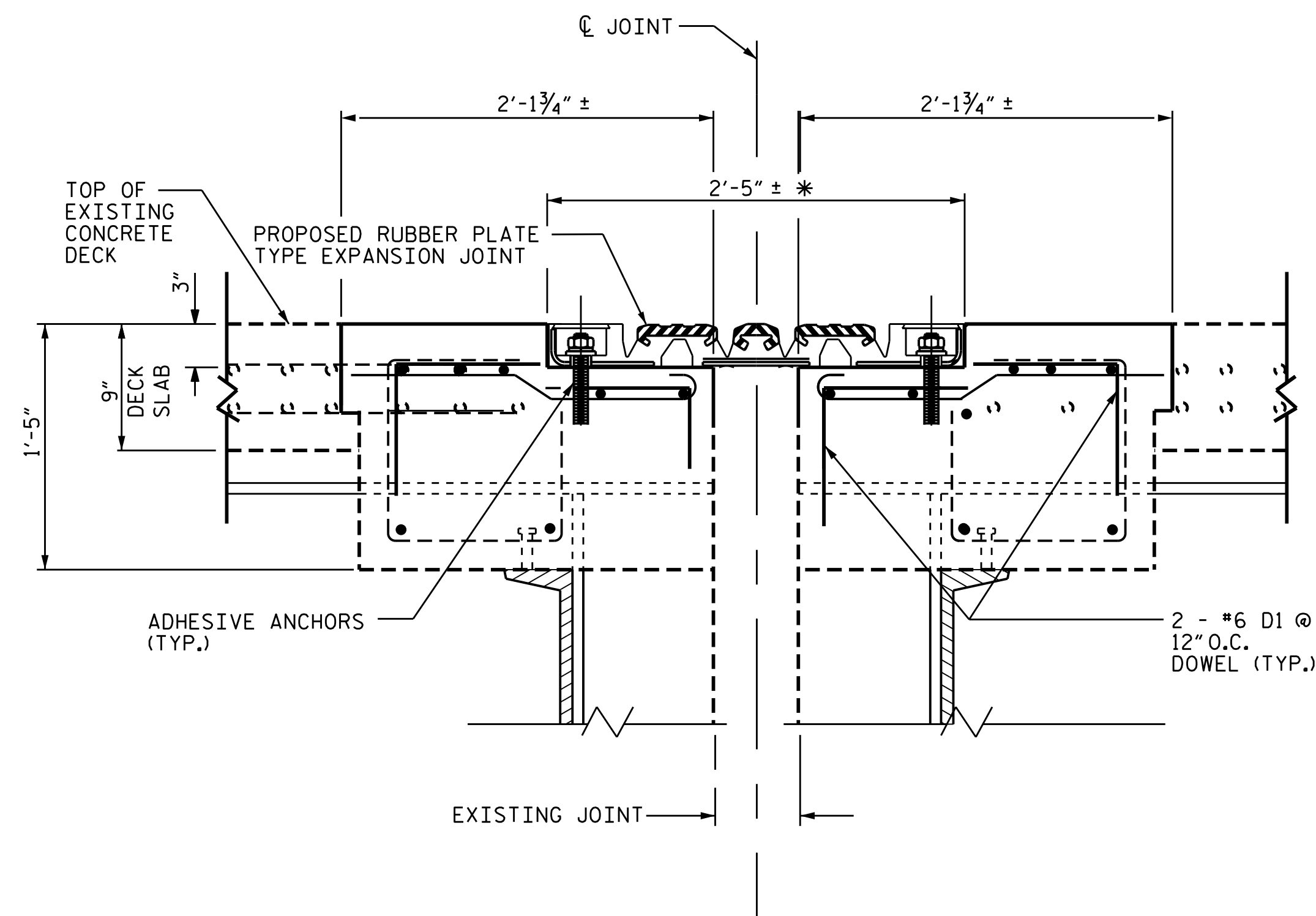
EXISTING MODULAR JOINT
(AT MODULAR JT. BOXES)



MODULAR JOINT REMOVED
(AT MODULAR JT. BOXES)



CONCRETE AND REBAR REMOVED
(AT MODULAR JT. BOXES)



PROPOSED JOINT REPAIR
(AT MODULAR JT. BOXES)
(THE REINFORCING MAY BE SHIFTED SLIGHTLY)

NOTE:
EXISTING MODULAR EXPANSION JOINT DETAIL ARE SHOWN FOR INFORMATION ONLY. ACTUAL FIELD CONDITIONS MAY VARY. THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT IF ACTUAL CONDITIONS VARY FROM WHAT IS SHOWN IN THESE PLANS.

THE CONTRACTOR SHALL HAVE A REPRESENTATIVE FROM THE JOINT MANUFACTURER PRESENT DURING INSTALLATION OF PROPOSED EXPANSION JOINT SEAL.

ALL EXPOSED ENDS OF CUT BARS SHALL BE COATED WITH EPOXY PRIOR TO THE NEW JOINT MATERIAL INSTALLATION.

THE CONTRACTOR SHALL PREPARE THE BOTTOM SURFACE OF BLOCKOUT TO BE PARALLEL WITH THE PLANE OF THE ROADWAY AND PROVIDE A UNIFORM SURFACE.

FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE ARTICLE 420-13 OF THE STANDARD SPECIFICATIONS. PERFORM LEVEL 1 FIELD TESTING AT A TEST LOAD OF 10,000 LBS.

EXISTING CONCRETE TO BE REMOVED

NEW CONCRETE FOR DECK BUILD UP.

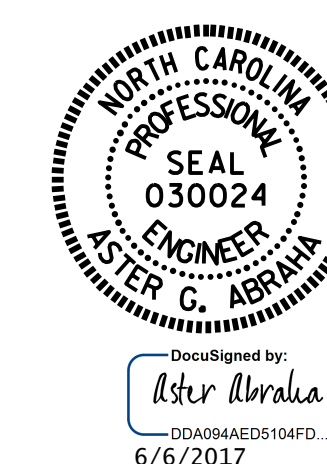
* TO BE VERIFIED BY MANUFACTURER

PROJECT NO. I-5839
NORTHAMPTON COUNTY
BRIDGE NO. 009 & 011

SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT #3
MODULAR JOINT
REPLACEMENT

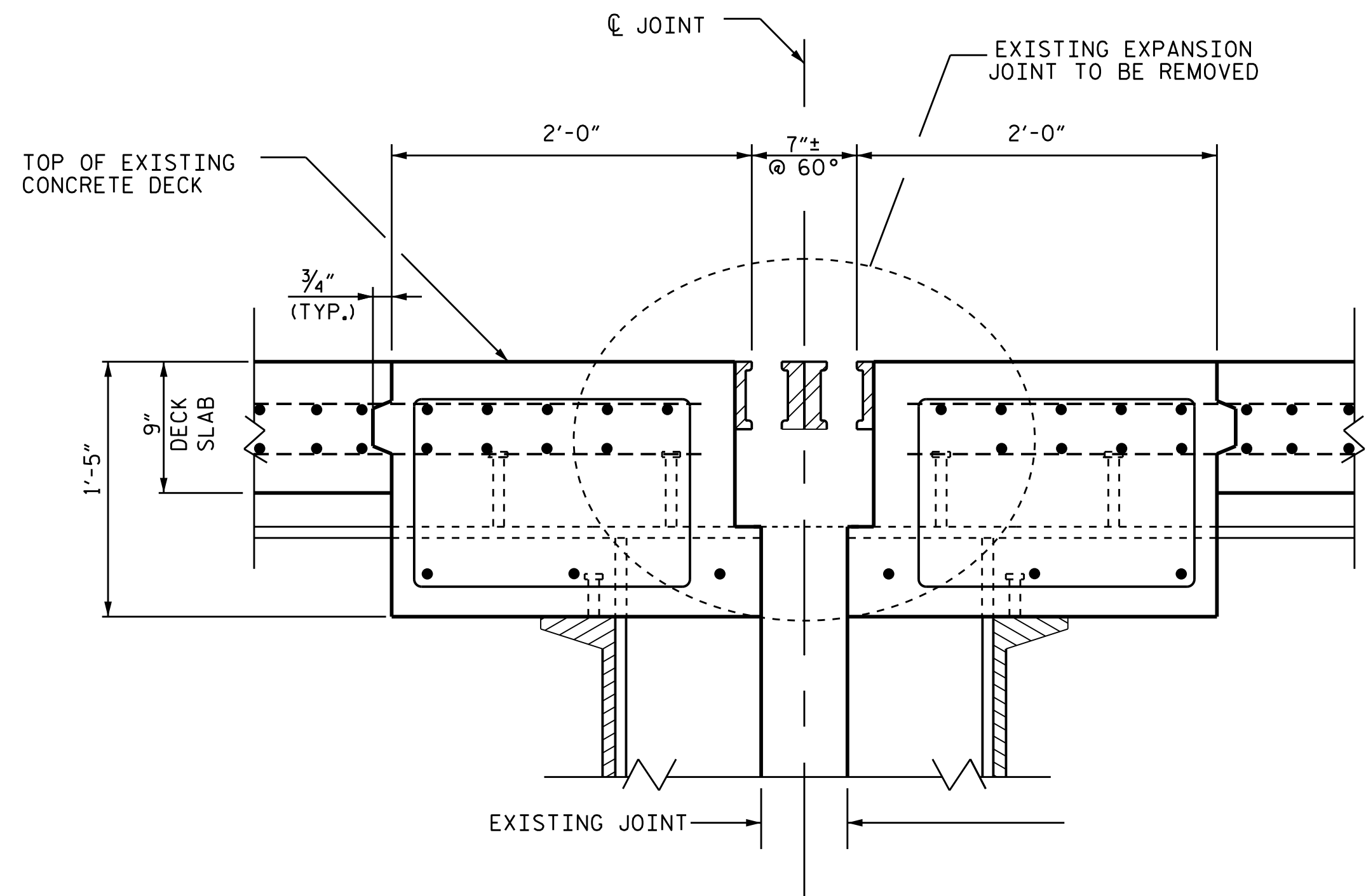


DRAWN BY : S. T. SANDOR DATE : 04/2017
CHECKED BY : W. C. SMITH DATE : 04/2017

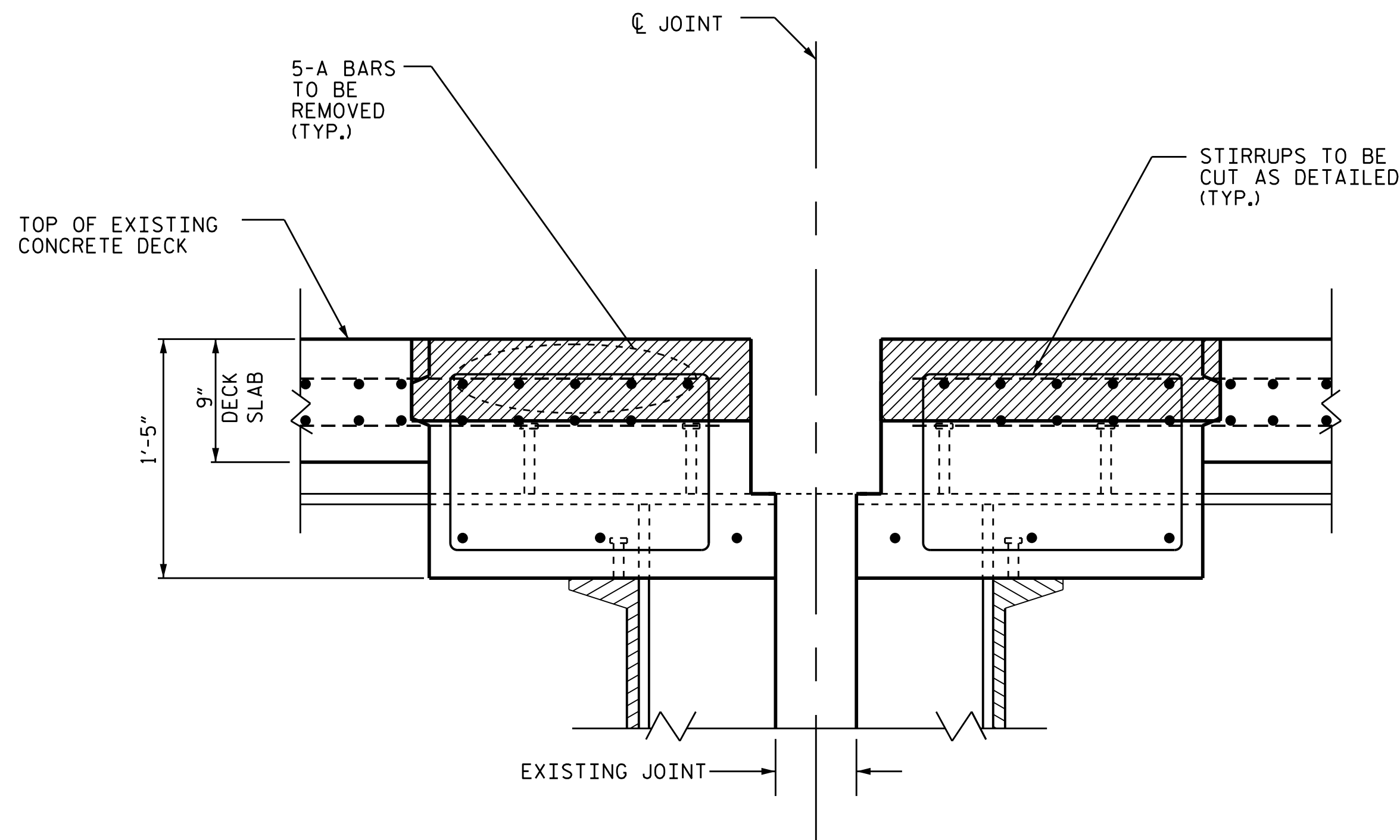
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DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

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NO.	BY:	DATE:	NO.	BY:	DATE:	S-39
1			3			TOTAL SHEETS
2			4			42

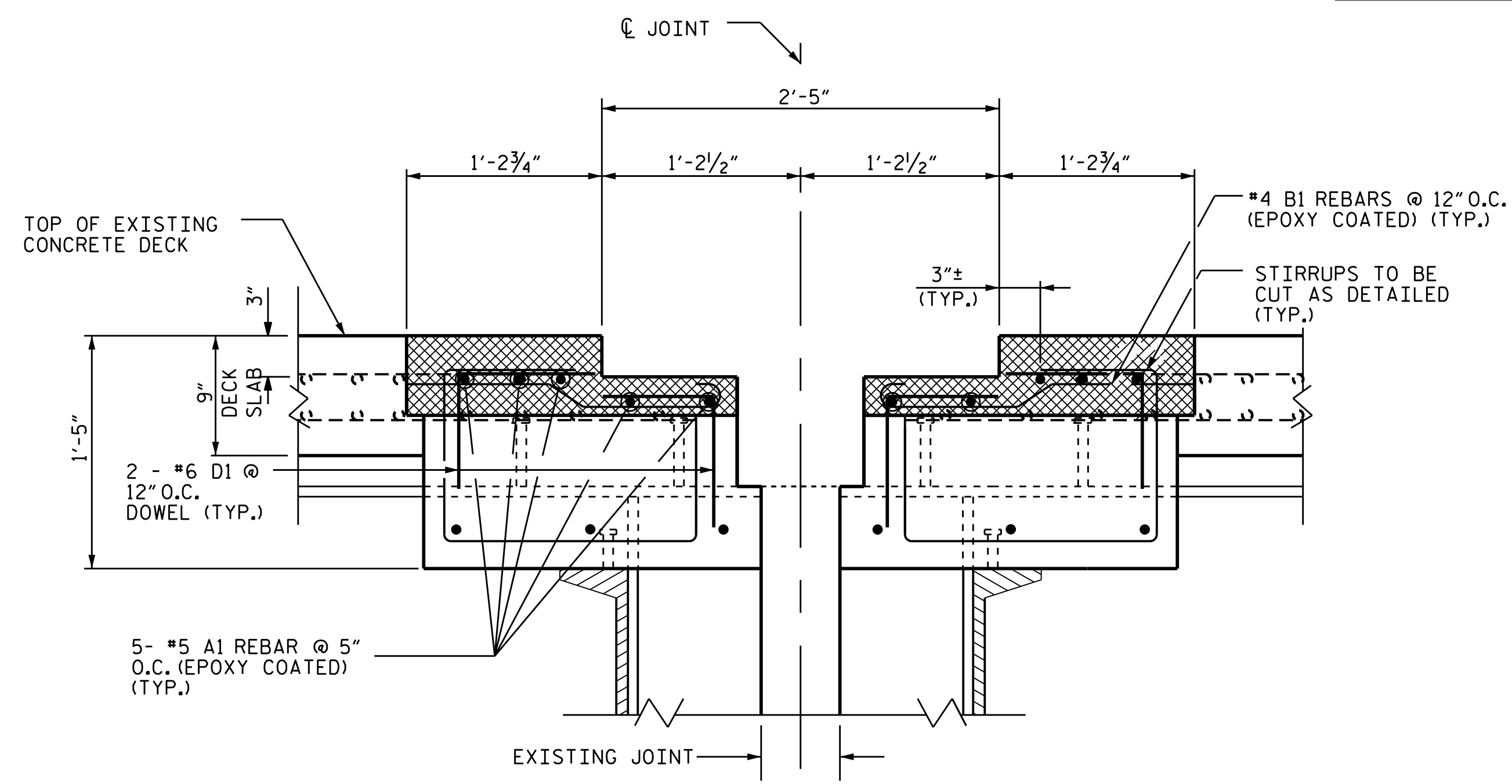


EXISTING MODULAR JOINT
(BETWEEN MODULAR JT. BOXES)

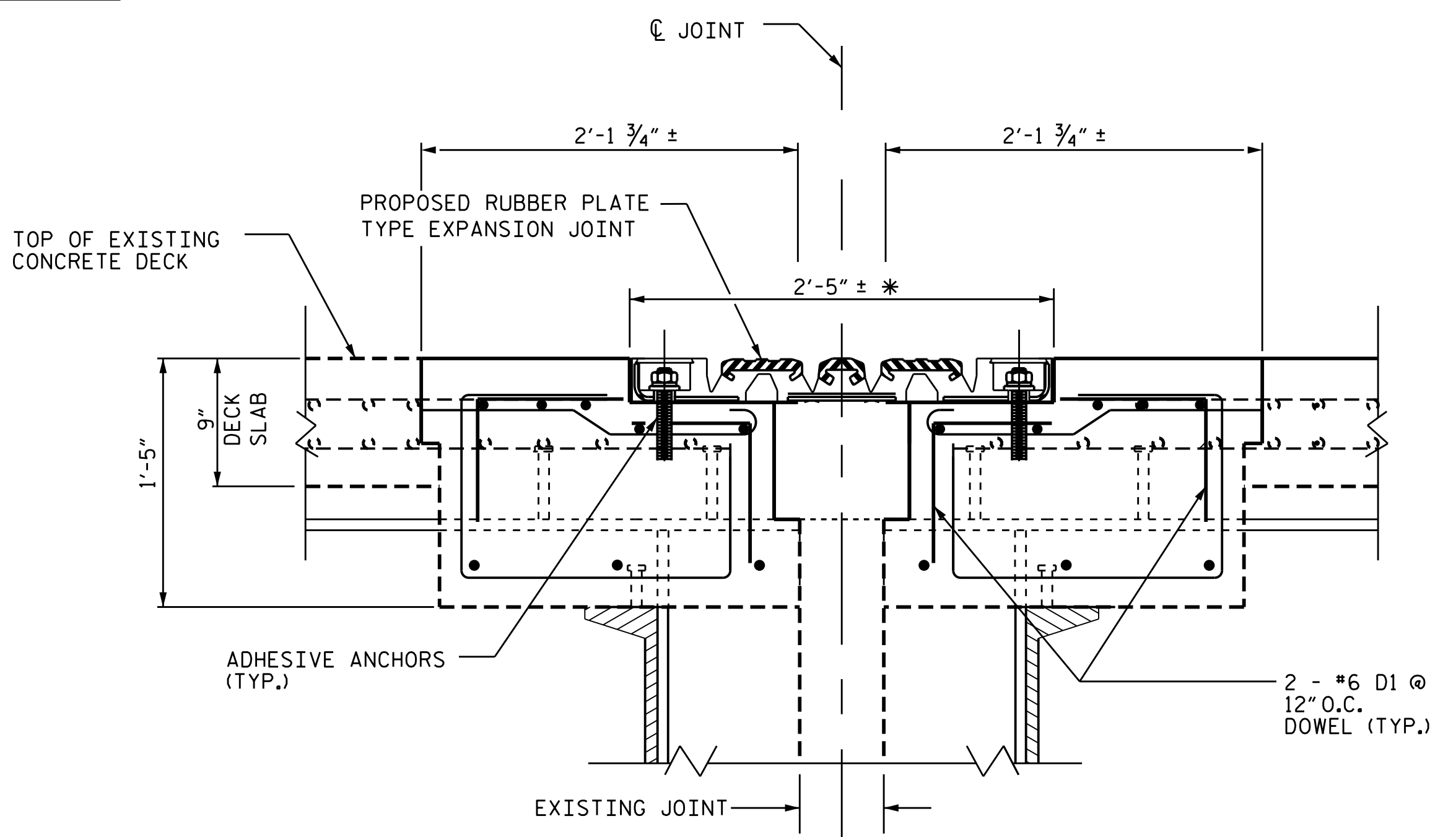


MODULAR JOINT REMOVED
(BETWEEN MODULAR JT. BOXES)

SECTION A-A



CONCRETE AND REBAR REMOVED
(BETWEEN MODULAR JT. BOXES)



PROPOSED JOINT REPAIR
(BETWEEN MODULAR JT. BOXES)
(THE REINFORCING MAY BE SHIFTED SLIGHTLY)

NOTE:

EXISTING MODULAR EXPANSION JOINT DETAIL ARE SHOWN FOR INFORMATION ONLY. ACTUAL FIELD CONDITIONS MAY VARY. THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT IF ACTUAL CONDITIONS VARY FROM WHAT IS SHOWN IN THESE PLANS

THE CONTRACTOR SHALL HAVE A REPRESENTATIVE FROM THE JOINT MANUFACTURER PRESENT DURING INSTALLATION OF PROPOSED EXPANSION JOINT SEAL

ALL EXPOSED ENDS OF CUT BARS SHALL BE COATED WITH EPOXY PRIOR TO THE NEW JOINT MATERIAL INSTALLATION.

THE CONTRACTOR SHALL PREPARE THE BOTTOM SURFACE OF BLOCKOUT TO BE PARALLEL WITH THE PLANE OF THE ROADWAY AND PROVIDE A UNIFORM SURFACE

FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE ARTICLE 420-13 OF THE STANDARD SPECIFICATIONS. PERFORM LEVEL 1 FIELD TESTING AT A TEST LOAD OF 10,000 LBS.

 EXISTING CONCRETE TO BE REMOVED

 NEW CONCRETE FOR DECK BUILD UP.

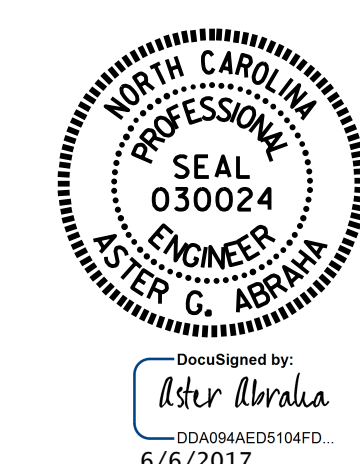
* TO BE VERIFIED BY MANUFACTURER

PROJECT NO. I-5839
NORTHAMPTON COUNTY
 BRIDGE NO. 009 & 011

SHEET 2 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT #3
 MODULAR JOINT
 REPLACEMENT



DocuSigned by:
 Aster Abraham
 00A894ED5104FD
 6/6/2017

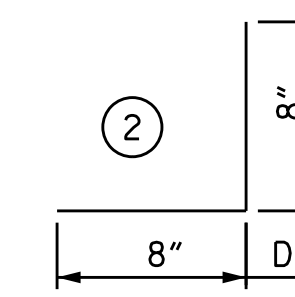
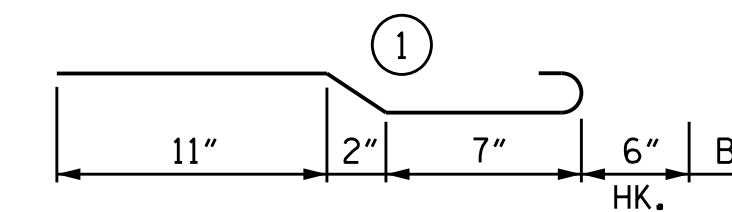
DRAWN BY : S. T. SANDOR DATE : 04/2017
 CHECKED BY : W. C. SMITH DATE : 04/2017

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REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

S-40
 TOTAL SHEETS
 42

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT.

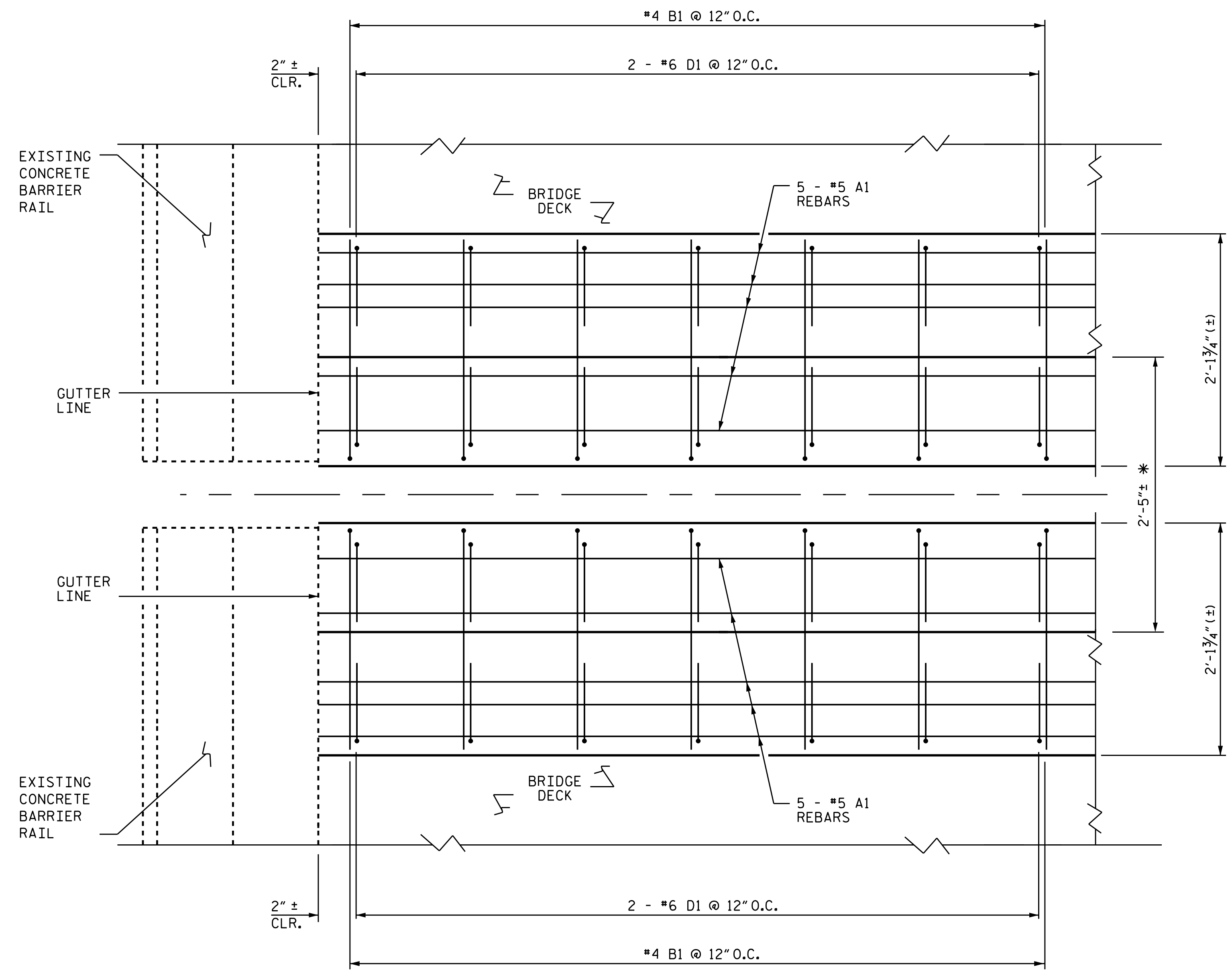
BILL OF MATERIAL FOR BENT 3

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
* A1	10	5	STR	47'-8"	497
* B1	96	4	1	2'-2"	139
* D1	192	6	2	1'-4"	395

* EPOXY COATED REINFORCING STEEL
REINFORCING STEEL TOTAL LBS. 1,031

CONCRETE QUANTITIES

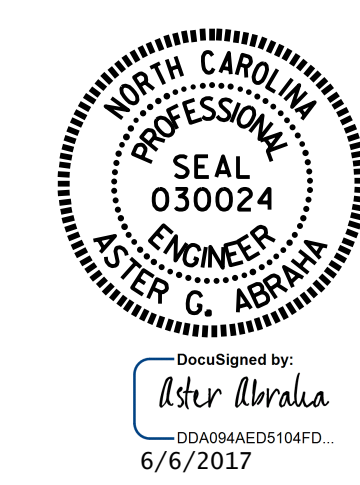
CONCRETE FOR DECK REPAIR	CU. FT.	144.0
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TYPICAL PLAN OF PROPOSED TOP REINFORCING (DECK SIDES)

NOTE:
FOR EPOXY COATED REINFORCING STEEL, SEE 2012 NORTH CAROLINA STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, SECTION 425.

PROJECT NO. I-5839
NORTHAMPTON COUNTY
BRIDGE NO. 009 & 011



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

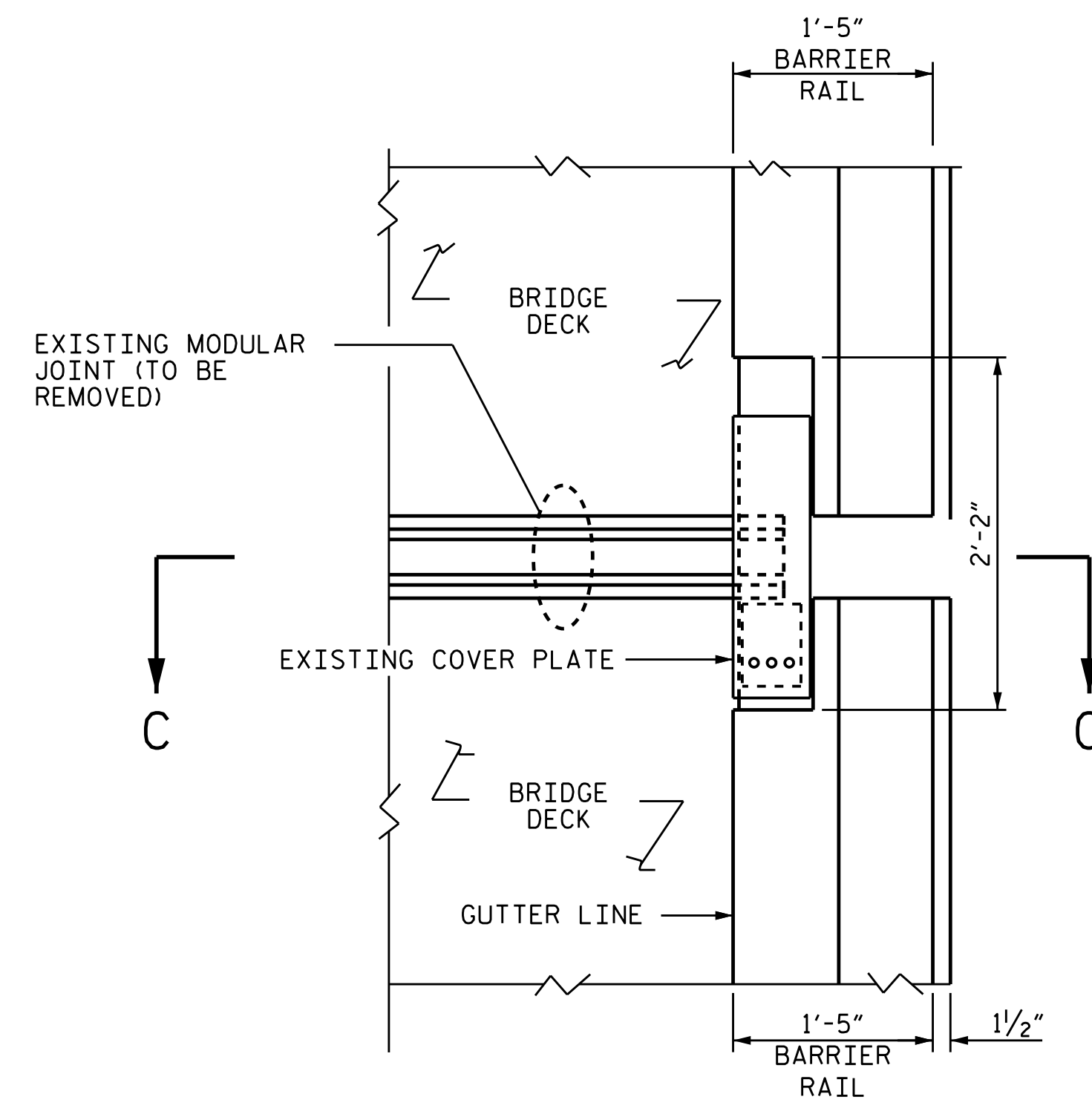
BENT 3 MODULAR
JOINT REPLACEMENT

DRAWN BY : S. T. SANDOR DATE : 03/2017
CHECKED BY : W. C. SMITH DATE : 04/2017

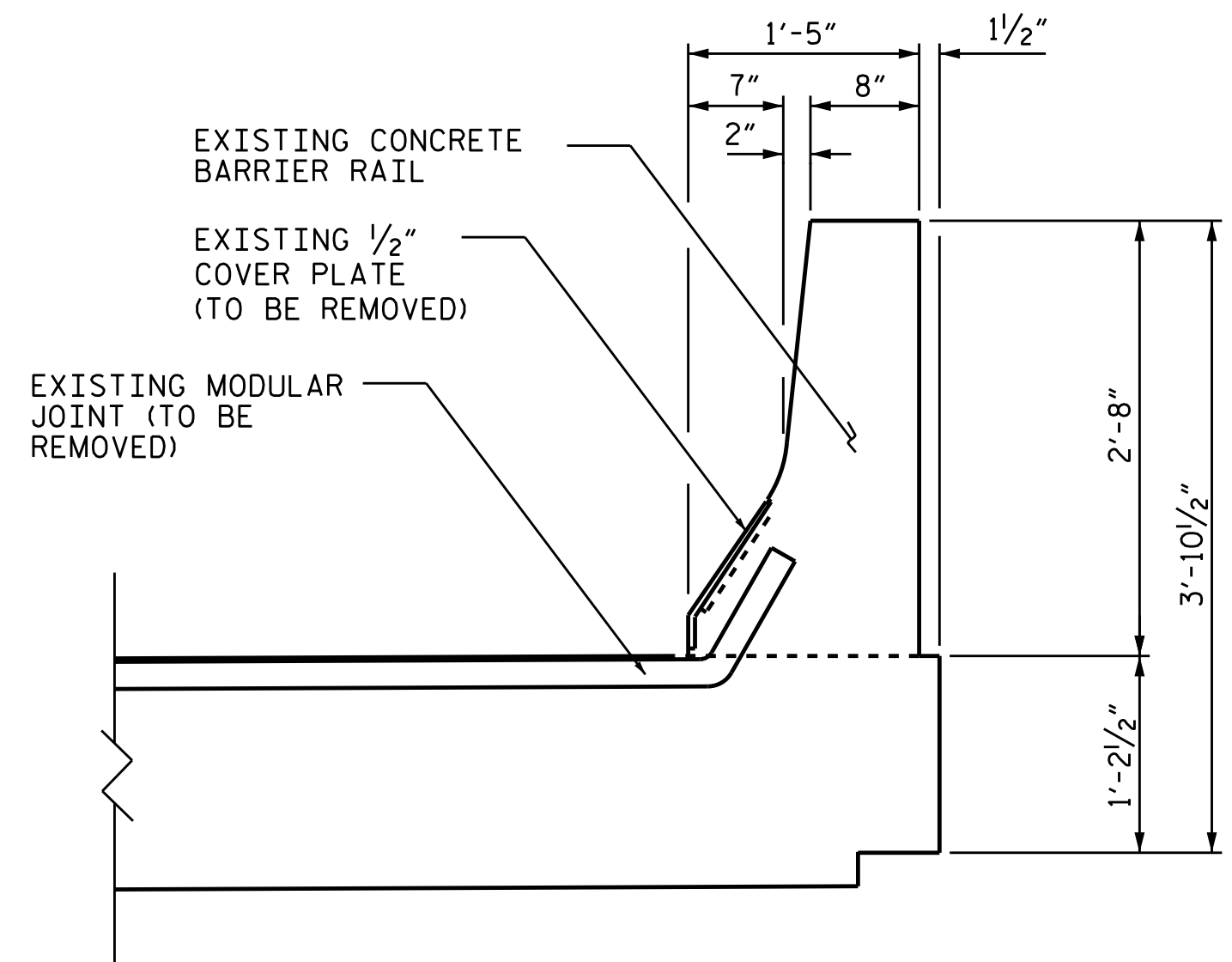
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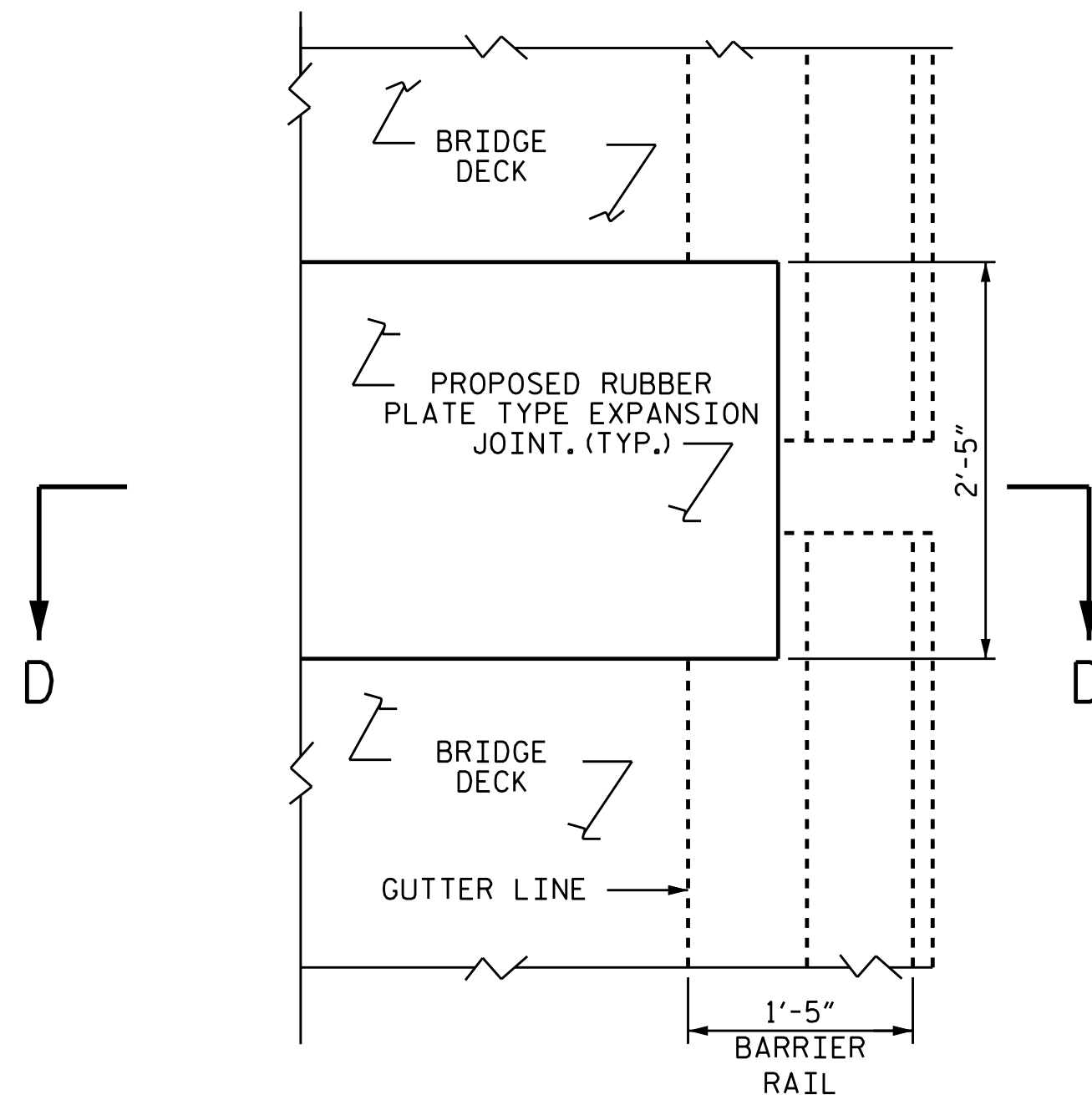
NOTES:
 THE CONTRACTOR SHALL CUT THE EXISTING #5 "S1" REBARS EXTENDING INTO THE BARRIER FROM THE DECK AND THE LONGITUDINAL #5 REBAR WITHIN THE LIMIT OF THE PROPOSED RUBBER PLATE JOINT. ALL EXPOSED ENDS OF THESE BARS SHALL BE COATED WITH EPOXY PRIOR TO THE NEW JOINT MATERIAL INSTALLATION.



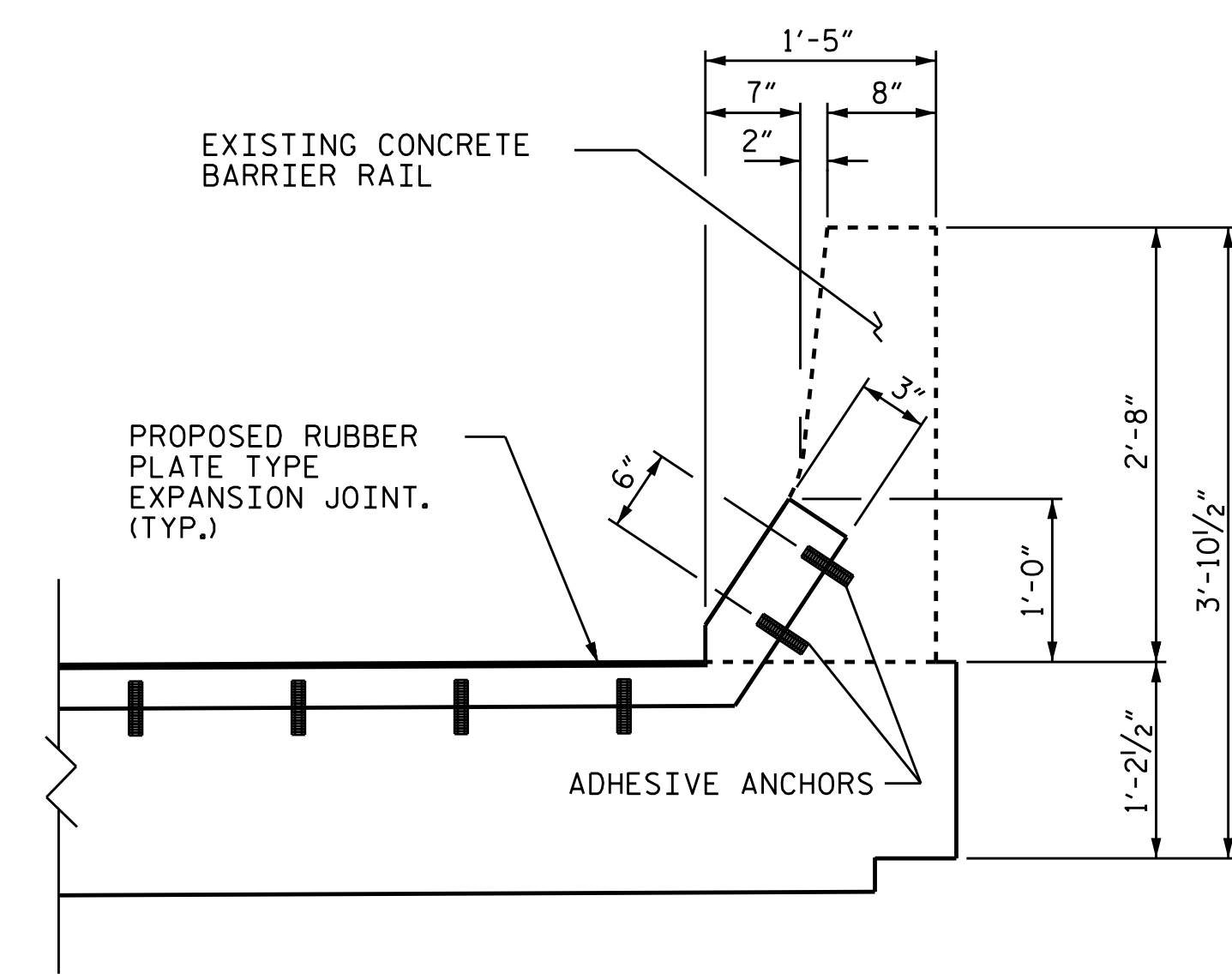
PLAN OF EXISTING MODULAR EXPANSION JOINT SEAL



SECTION C-C



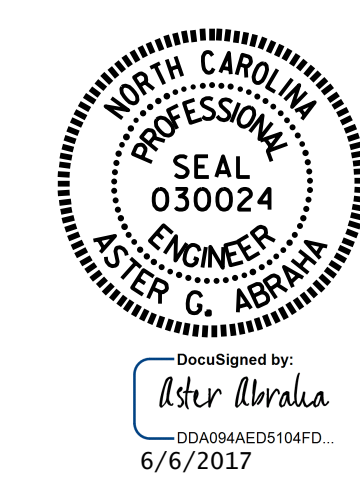
PLAN OF PROPOSED EXPANSION JOINT SEAL



SECTION D-D

(THE NEW RUBBER PLATE BRIDGE JOINT SHALL BE TURNED UP AND FLUSH WITH THE FACE OF THE BARRIER)

PROJECT NO. I-5839
HALIFAX COUNTY
 BRIDGE NO. 009 & 011



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**JOINT DETAIL
 AT
 THE BARRIER RAIL
 BENT 3**

DRAWN BY : M. K. BEARD DATE : 3/2/17
 CHECKED BY : W. C. SMITH DATE : 04/2017

DOCUMENT NOT CONSIDERED
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			42

