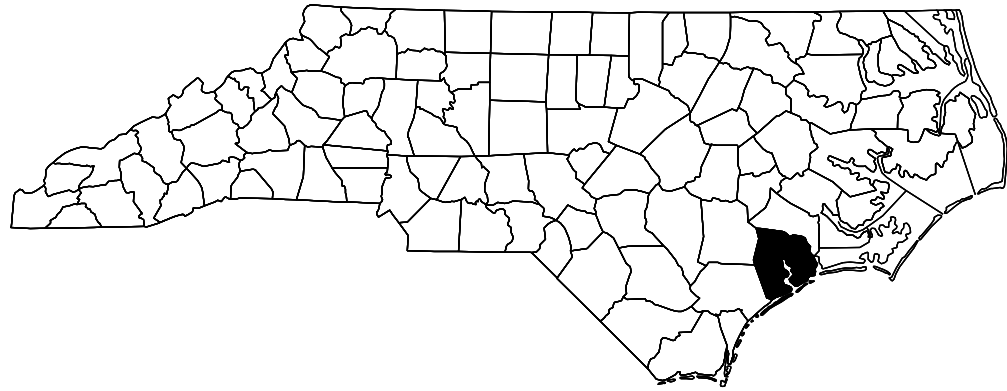


CONTRACT NO: C205220 PROJECT: 15BPR.107



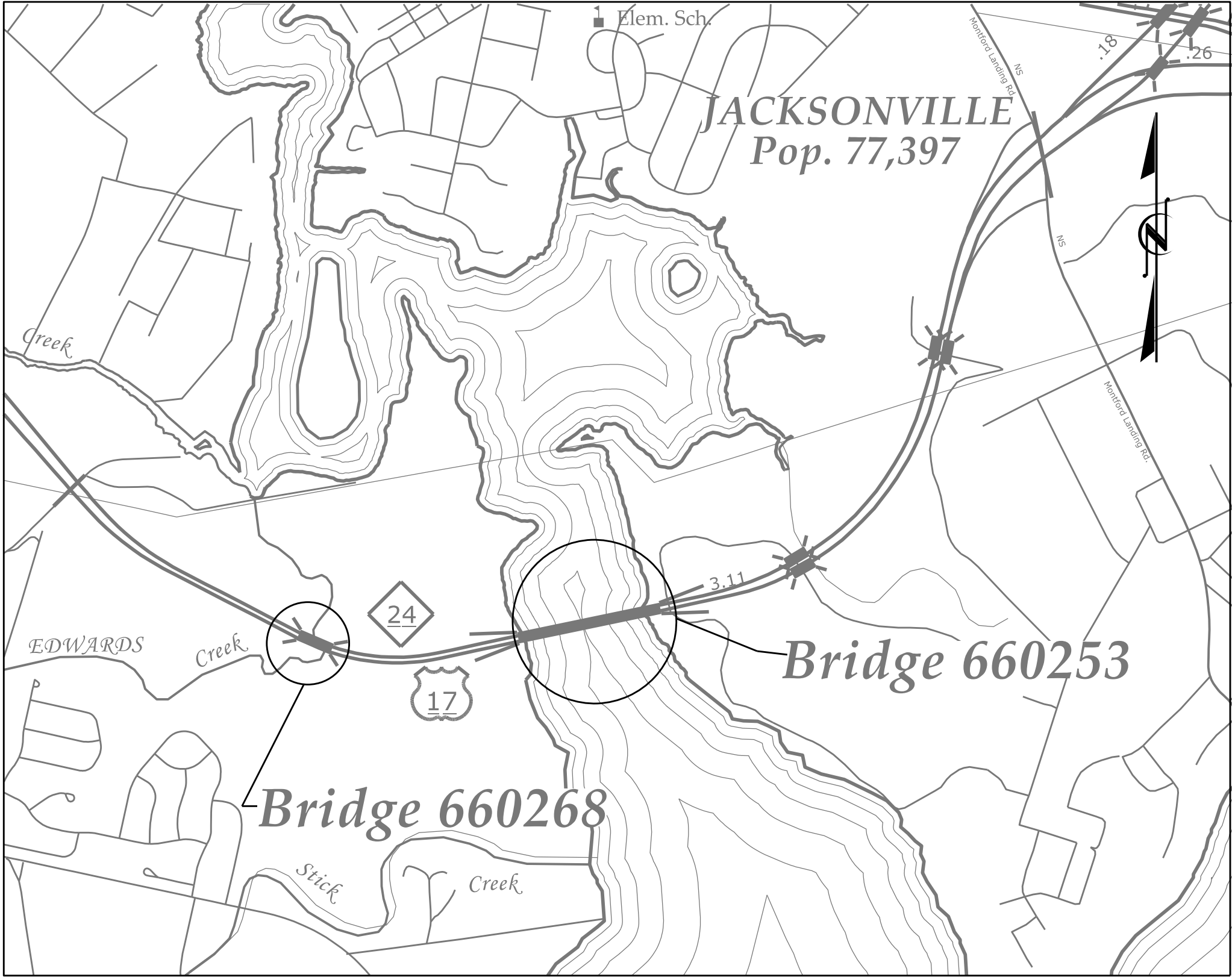
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ONSLOW COUNTY

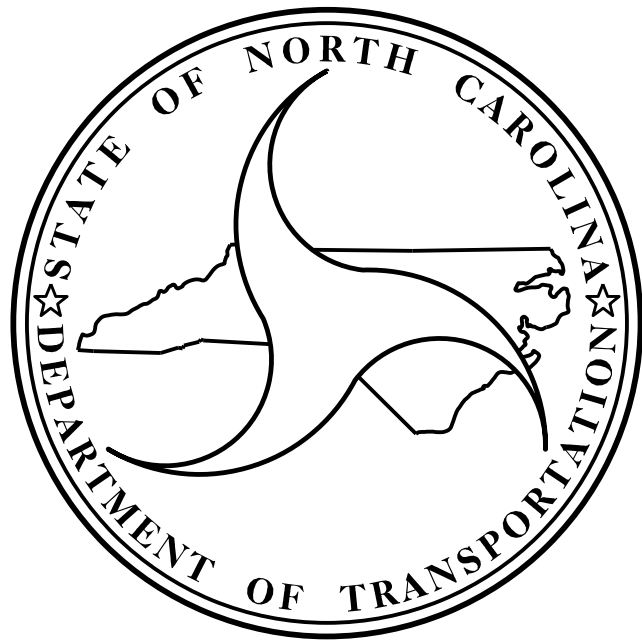
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	15BPR.107	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
15BPR.107.1	N/A	P.E.	
15BPR.107.3	N/A	CONST.	

LOCATION: BRIDGE #660253 ON US 17 OVER NEW RIVER
BRIDGE #660268 ON US 17 OVER EDWARDS CREEK

TYPE OF WORK: BRIDGE PRESERVATION – CONCRETE BRIDGE DECK REHABILITAION BY SHOTBLASTING, DECK SURFACE REPAIRS, SILANE DECK TREATMENT, DECK JOINT SEALS REPLACEMENT; EPOXY COATING OF GIRDER ENDS AND TOP OF CAPS; SUBSTRUCTURE REPAIRS WITH SHOTCRETE, CONCRETE, AND EPOXY RESIN INJECTION.



VICINITY MAP



DESIGN DATA
BRIDGE #660253 ADT 2022 = 49,000
BRIDGE #660268 ADT 2022 = 50,000

PROJECT LENGTH
BRIDGE #660253 = 0.349 MILES
BRIDGE #660268 = 0.112 MILES

Prepared In the Office of:
DIVISION OF HIGHWAYS
STRUCTURES MANAGEMENT UNIT
1000 BIRCH RIDGE DR.
RALEIGH, N.C. 27610

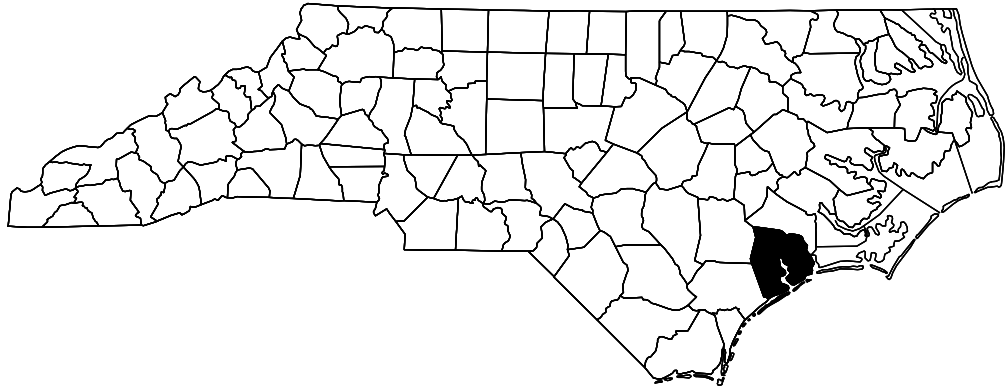
2024 STANDARD SPECIFICATIONS

LETTING DATE : AUGUST 18, 2026

Kristy W. Alford, P.E.
PROJECT ENGINEER

WILLIAM C. SMITH, P.E.
PROJECT DESIGN ENGINEER

CONTRACT NO: C205220 PROJECT: 15BPR.107



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ONSLOW COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	15BPR.107	1A	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
15BPR.107.1	N/A	P.E.	
15BPR.107.3	N/A	CONST.	

LOCATION: BRIDGE #660253 ON US 17 OVER NEW RIVER
BRIDGE #660268 ON US 17 OVER EDWARDS CREEK

TYPE OF WORK: BRIDGE PRESERVATION – CONCRETE BRIDGE DECK REHABILITATION BY SHOTBLASTING, DECK SURFACE REPAIRS, SILANE DECK TREATMENT, DECK JOINT SEALS REPLACEMENT; EPOXY COATING OF GIRDER ENDS AND TOP OF CAPS; SUBSTRUCTURE REPAIRS WITH SHOTCRETE, CONCRETE, AND EPOXY RESIN INJECTION.

INDEX OF STRUCTURE SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
1A	INDEX OF SHEETS
S-1	LOCATION SKETCHES
S-2	TOTAL BILL OF MATERIALS

SHEET NO.	DESCRIPTION
STRUCTURE	#660253
S1-01 THRU S1-03	GENERAL DRAWING
S1-04	TYPICAL SECTION
S-05 THRU S1-08	SURFACE PREPARATION
S1-09 THRU S1-10	EXPANSION JOINT SEAL REPAIR DETAILS
S1-11	MODULAR EXPANSION JOINT REPAIR DETAILS
S1-12 THRU S1-26	UNDERSIDE DECK REPAIRS
S1-27	END BENT 1
S1-28 THRU S1-41	BENTS
S1-42	END BENT 2
S1-43	DECK REPAIR DETAILS
S1-44	PRESTRESSED CONCRETE GIRDER REPAIR DETAILS
S1-45	TYPICAL CAP COLUMN REPAIR DETAILS

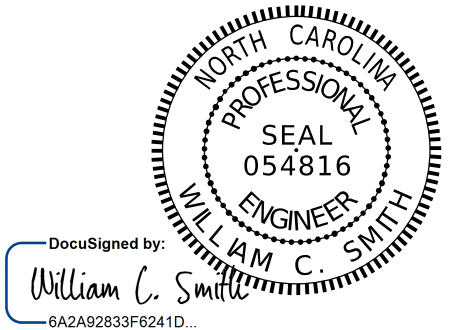
SHEET NO.	DESCRIPTION
STRUCTURE	#660268
S2-01 THRU S2-02	GENERAL DRAWING
S2-03	TYPICAL SECTION
S2-04 THRU S2-06	SURFACE PREPARATION
S2-07	FOAM JOINT SEALS FOR PRESERVATION DETAILS
S2-08 THRU S2-10	UNDERSIDE DECK REPAIRS
S2-11	END BENT 1
S2-12 THRU S2-27	BENTS
S2-28	END BENT 2
S2-29	DECK REPAIR DETAILS
S2-30	PRESTRESSED CONCRETE GIRDER REPAIR DETAILS
S2-31	TYPICAL CAP COLUMN REPAIR DETAILS



LOCATION SKETCH

INFORMATION INDICATED IN THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. CONTRACTOR SHOULD CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING THE BRIDGE, ROADWAY, UTILITIES, THE SURROUNDING AREA AND ANY OTHER ASPECT THAT MAY BE NECESSARY TO PERFOEM AND COMPLETE THE PROJECT.

PROJECT NO. **15BPR.107**
ONSLOW COUNTY
BRIDGE NO. **660253 & 660268**



05/22/2026

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.	
LOCATION SKETCH						S-1	
REVISIONS						TOTAL SHEETS	
NO.	BY:	DATE:	NO.	BY:	DATE:	2	
1			3				
2			4				

DRAWN BY :	J.J. ANDERSON	DATE :	02/2026
CHECKED BY :	WC SMITH	DATE :	05/2026
DESIGN ENGINEER OF RECORD:		DATE :	

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

TOTAL BILL OF MATERIAL											
BRIDGE NO.	SHOTCRETE REPAIRS	EPOXY RESIN INJECTION	FOAM JOINT SEALS FOR PRESERVATION	EXPANSION JOINT SEALS FOR PRESERVATION	MODULAR EXPANSION JOINT SEALS FOR PRESERVATION	EPOXY COATING	EPOXY COATING CONCRETE GIRDER ENDS	SHOTBLASTING BRIDGE DECK	SILANE DECK TREATMENT	CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	VOLUMETRIC MIXER
	CU. FT.	LIN FT.	LIN FT.	LIN FT.	LIN FT.	SQ. FT.	SQ. FT.	SQ. YD.	SQ. YD.	SQ. FT.	LUMP SUM
660253	7.3	9.0	——	238.3	357.6	9,870.7	3,067.8	22,957.0	22,957.0	17.0	LUMP SUM
660268	83.6	11.0	468.7	——	——	3,407.4	4,103.7	7,410.0	7,410.0	5.0	LUMP SUM
TOTAL	90.9	20.0	468.7	238.3	357.6	13,278.1	7,171.5	30,367.0	30,367.0	22.0	LUMP SUM

GENERAL NOTES:

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

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

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

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

WORK ON THE BRIDGE(S) SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL BELOW, EXCEPT WHERE THE CONTRACTOR'S PLAN USES PLATFORMS, NETS, SCREENS OR OTHER PROTECTIVE DEVICES TO CATCH THE MATERIAL. THE CONTRACTOR SHALL SUBMIT PLANS FOR CONSTRUCTION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS AND THE PROJECT SPECIAL PROVISIONS.

THE CONTRACTOR SHALL PERFORM ALL WORK WITH CARE SO THAT THE EXISTING STRUCTURE WHICH IS TO REMAIN IN PLACE WILL NOT BE DAMAGED. IF THE CONTRACTOR DAMAGES ANY PART OF THE EXISTING STRUCTURE WHICH IS TO REMAIN IN PLACE, THE DAMAGED AREA SHALL BE REPAIRED OR REPLACED IN A MANNER SATISFACTORY TO THE ENGINEER AT NO ADDITIONAL COST TO THE DEPARTMENT.

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

FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE ELSEWHERE IN THE CONTRACT DOCUMENTS.

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

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

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

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

ALL PAVEMENT MARKINGS WILL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR SHOTBLASTING BRIDGE DECK AND SILANE DECK TREATMENT, SEE SILANE DECK TREATMENT SPECIAL PROVISION.

FOR CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT, SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING CONCRETE GIRDER ENDS, SEE SPECIAL PROVISIONS.

FOR REPAIRS TO PRESTRESSED CONCRETE GIRDER ENDS, SEE SPECIAL PROVISIONS.

FOR EXPANSION JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR MODULAR EXPANSION JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

THE SUBSTRUCTURE OF THE EXISTING BRIDGE INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. SINCE THE INFORMATION SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRASPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING BRIDGE SUBSTRUCTURE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

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

UNANTICIPATED ITEMS:

ITEM	DESCRIPTION	UNIT
1.	REPAIRS FOR PRESTRESSED CONCRETE GIRDERS	CU. FT.
2.	CONCRETE REPAIRS	CU. FT.

PROJECT NO. **15BPR.107**

ONSLOW COUNTY

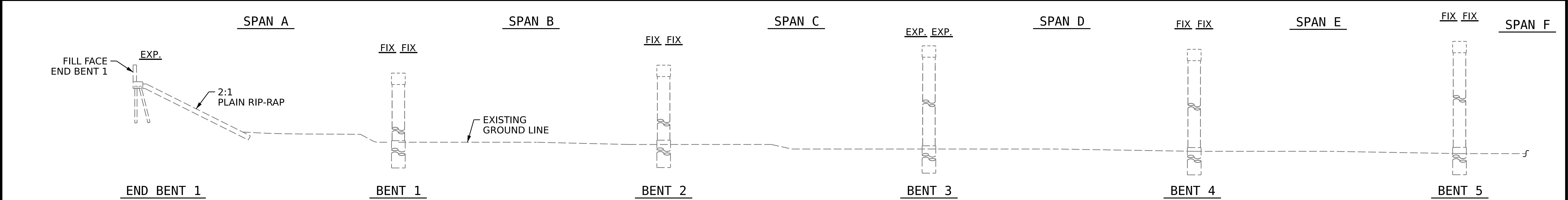
BRIDGE NO. **660253 & 660268**



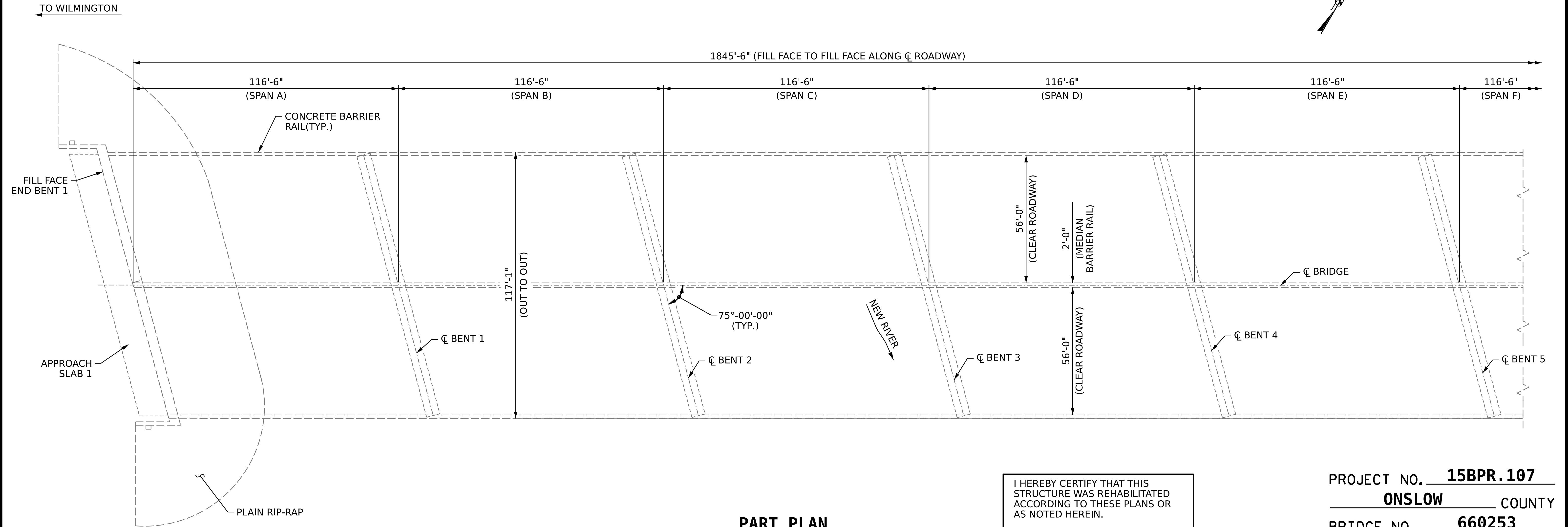
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH											
BILL OF MATERIAL AND GENERAL NOTES											
REVISIONS										SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:						S-2
1			3								TOTAL SHEETS
2			4								2

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

DRAWN BY : JJANDERSON	DATE : 04/2026
CHECKED BY : W.C.SMITH	DATE : 05/2026
DESIGN ENGINEER OF RECORD:	DATE :



PART SECTION ALONG CL BRIDGE



PART PLAN

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

RESIDENT ENGINEER

PROJECT NO. **15BPR.107**
ONSLOW COUNTY
BRIDGE NO. **660253**

SHEET 1 OF 3

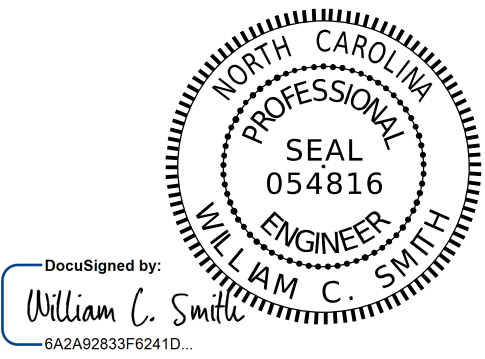
NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM
THE ORIGINAL PLANS AND THE ROUTINE INSPECTION
REPORT DATED 3/20/2026.

BRIDGE ORIENTATION CONFORMS TO THE EXISTING
BRIDGE PLANS/ROUTINE INSPECTION.

SCOPE OF WORK

- BRIDGE DECK PREPARATION WITH SHOTBLASTNG METHODS.
- CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT.
- APPLY SILANE DECK TREATMENT.
- REMOVE AND REPLACE EXISTING EXPANSION AND MODULAR JOINT SEALS MATERIAL.
- CLEAN AND EPOXY COAT EXISTING PRESTRESSED CONCRETE GIRDER ENDS.
- EPOXY RESIN INJECTION OF CONCRETE CRACKS.
- REMOVE UNSOUND CONCRETE AND PROPERLY PREPARE EXISTING END BENT AND BENT AREAS FOR SHOTCRETE AND CONCRETE REPAIRS
- REMOVE DEBRIS FROM TOP OF EXISTING END BENT AND BENT CAPS AND APPLY EPOXY COATING.



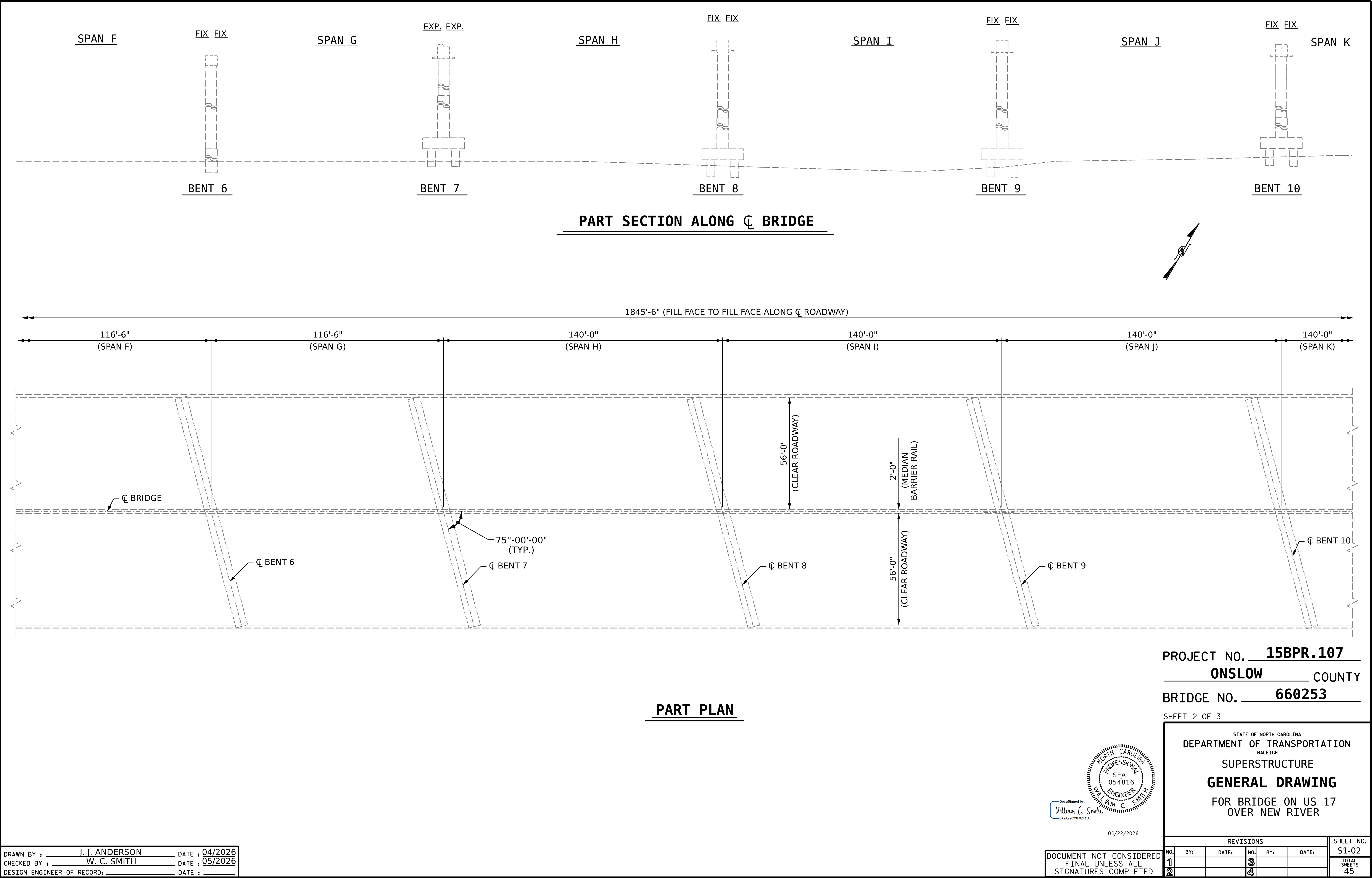
05/22/2026

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
GENERAL DRAWING
FOR BRIDGE ON US 17
OVER NEW RIVER

DRAWN BY : **J. J. ANDERSON** DATE : **04/2026**
CHECKED BY : **W.C.SMITH** DATE : **05/2026**
DESIGN ENGINEER OF RECORD: DATE :

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

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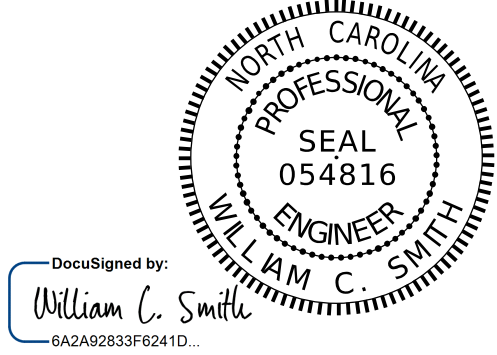
PART SECTION ALONG CL BRIDGE

PART PLAN

PROJECT NO. **15BPR.107**
ONSLOW COUNTY
BRIDGE NO. **660253**

SHEET 2 OF 3

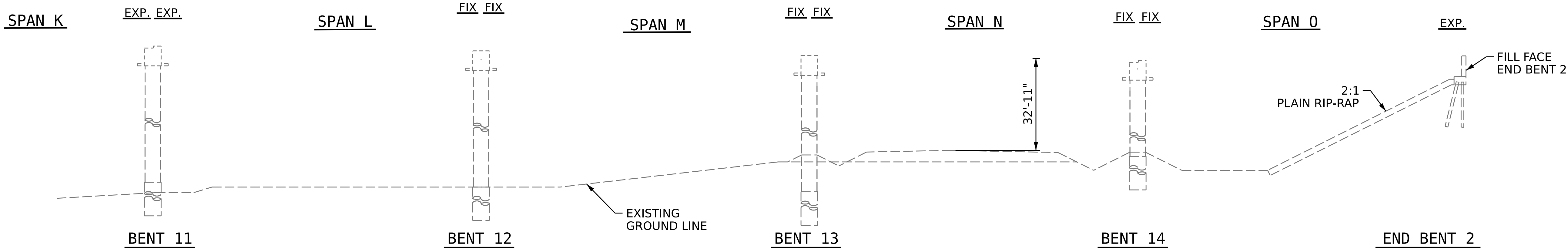
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH SUPERSTRUCTURE GENERAL DRAWING FOR BRIDGE ON US 17 OVER NEW RIVER					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED					TOTAL SHEETS 45



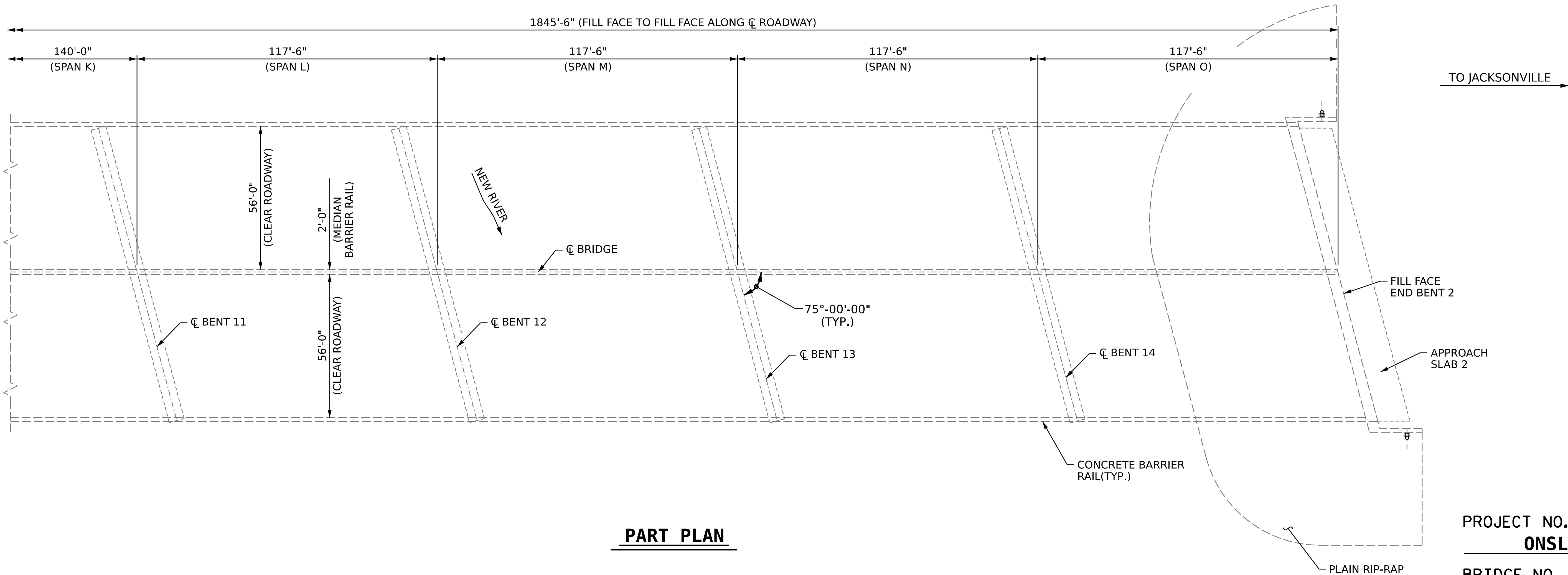
05/22/2026

DRAWN BY : **J. J. ANDERSON** DATE : **04/2026**
CHECKED BY : **W. C. SMITH** DATE : **05/2026**
DESIGN ENGINEER OF RECORD: DATE :

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wcsmith



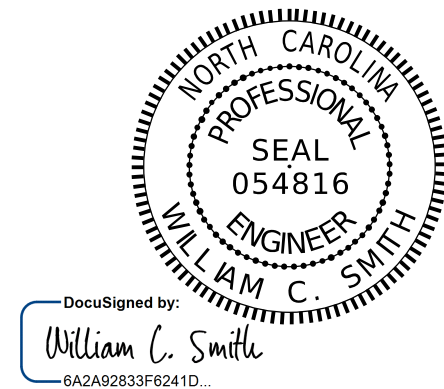
PART SECTION ALONG CL BRIDGE



PART PLAN

PROJECT NO. **15BPR.107**
ONSLOW COUNTY
BRIDGE NO. **660253**

SHEET 3 OF 3



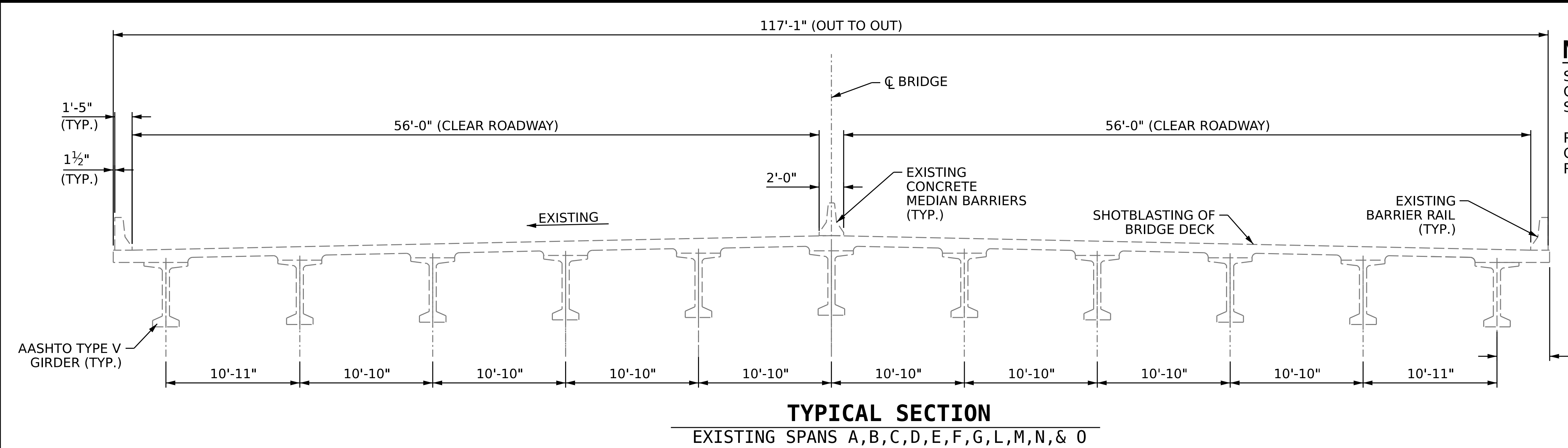
05/22/2026

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
GENERAL DRAWING
FOR BRIDGE ON US 17
OVER NEW RIVER

DRAWN BY : **J. J. ANDERSON** DATE : **04/2026**
CHECKED BY : **W.C.SMITH** DATE : **05/2026**
DESIGN ENGINEER OF RECORD: DATE :

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

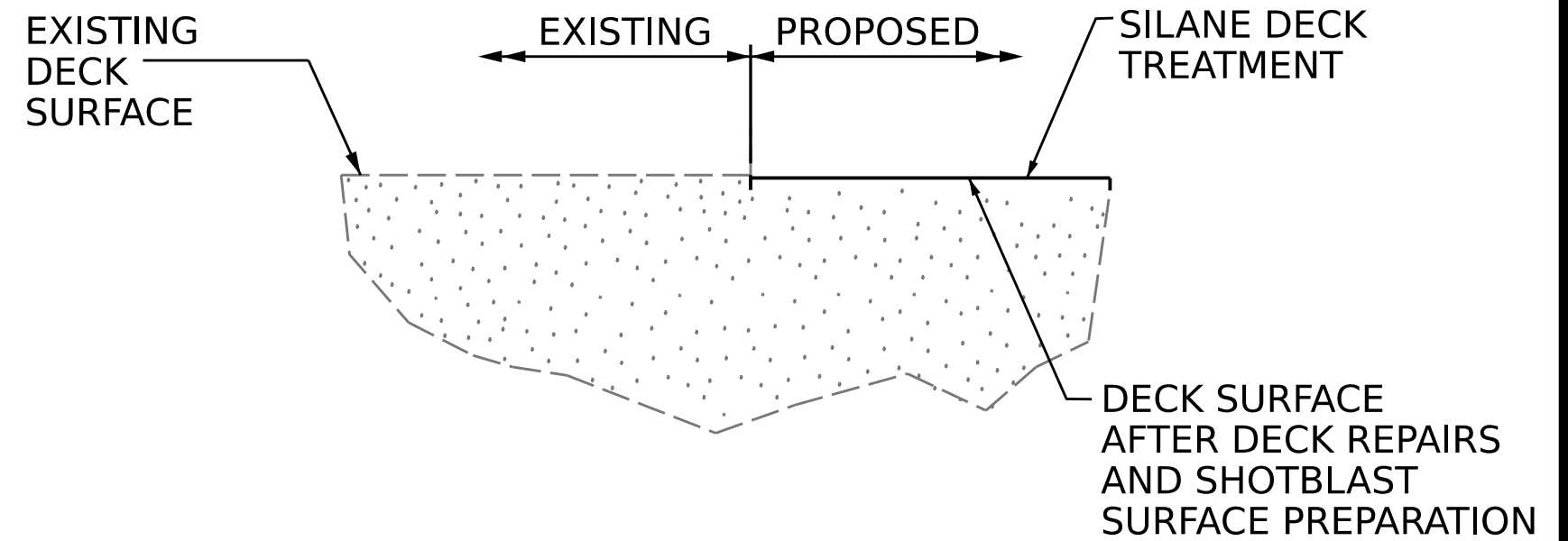
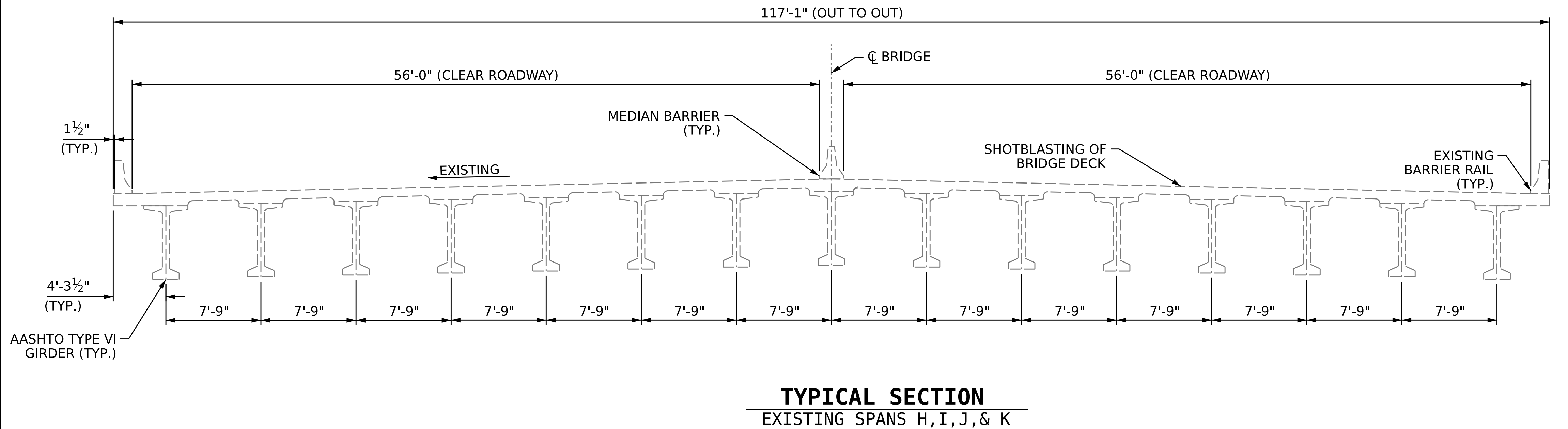
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NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			TOTAL SHEETS 45



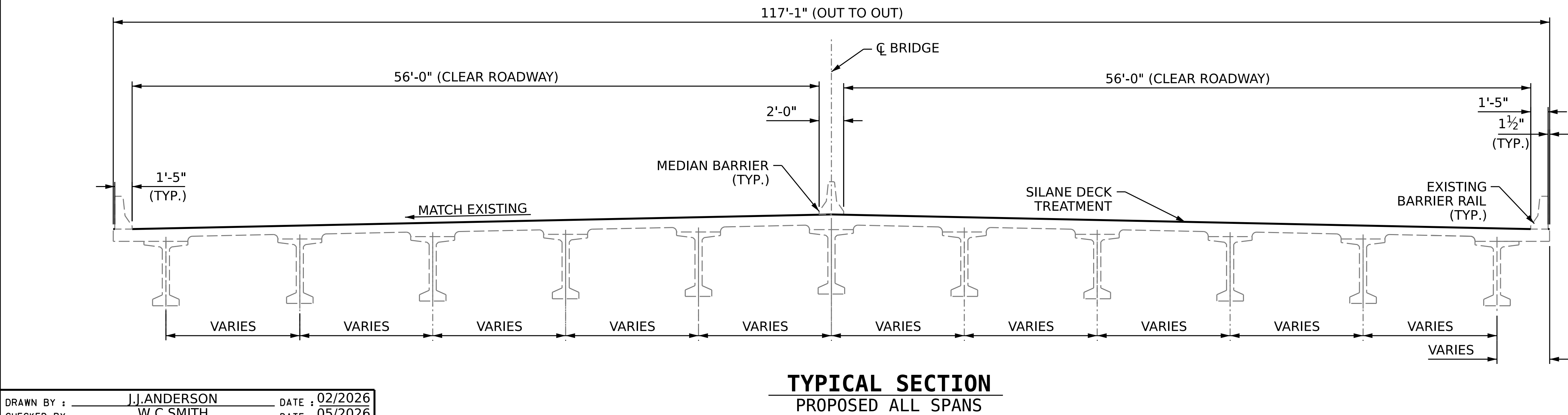
NOTES

SEE CONTRACT DOCUMENTS FOR LANE WIDTH, SEQUENCING, AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF SURFACE PREPARATION AND SILANE DECK TREATMENT.

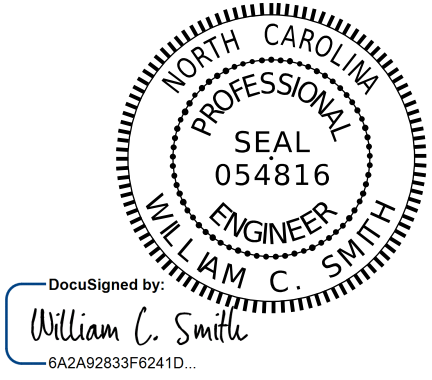
PROTECT TRAFFIC FROM REBOUND, DUST, DEBRIS, OVERSPRAY, AND CONSTRUCTION ACTIVITIES, PROVIDE APPROPRIATE SHEILDING, AS REQUIRED AND/OR DIRECTED BY ENGINEER.



SILANE DECK TREATMENT DETAIL



PROJECT NO. **15BPR.107**
ONSLow COUNTY
BRIDGE NO. **660253**



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
TYPICAL SECTION
AND
SILANE DECK TREATMENT
DETAILS

DRAWN BY : J.J.ANDERSON DATE : 02/2026
CHECKED BY : W.C.SMITH DATE : 05/2026
DESIGN ENGINEER OF RECORD: DATE :

5/20/2026
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wcsmith

DOCUMENT NOT CONSIDERED
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SIGNATURES COMPLETED

REVISIONS						SHEET NO. S1-04
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 45
2			4			

8/26/21

NOTES

FOR SECTION A-A. SEE EXPANSION JOINT DETAIL SHEET.

FOR SECTION B-B. SEE MODULAR JOINT DETAIL SHEET.

DECK SURFACE REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR AFTER REMOVAL OF UNSOUND CONCRETE (MIN. 2" CLEAR TO SAWCUT), SEE DECK REPAIR DETAIL SHEET.

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

SHOTBLASTING BRIDGE DECK AND
SILANE DECK TREATMENT AREA

CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT

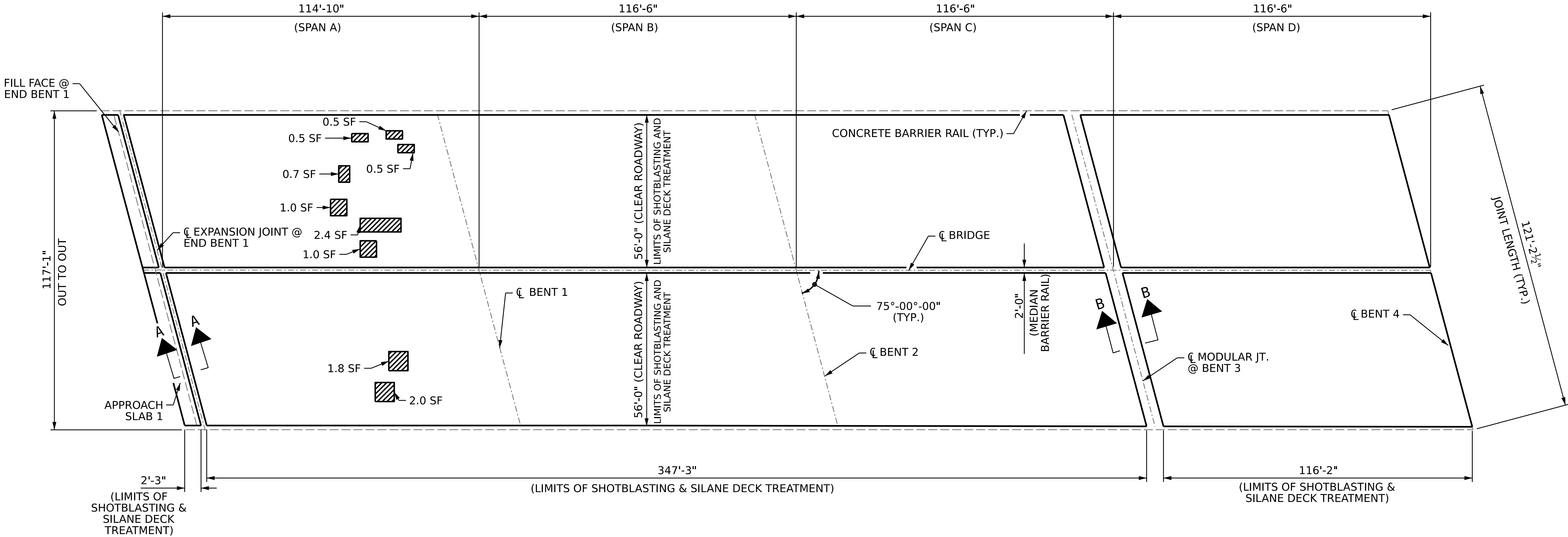
DECK SURFACE REPAIR QUANTITY TABLE

DECK SURFACE REPAIR - SPANS A-D

	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	10.4 SQ. FT.	
SHOTBLASTING BRIDGE DECK	5,767.0 SQ. YDS.	
SILANE DECK TREATMENT	5,767.0 SQ. YDS.	

APPROACH SLAB 1

	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	0.0 SQ. FT.	
SHOTBLASTING BRIDGE DECK	28.0 SQ. YDS.	
SILANE DECK TREATMENT	28.0 SQ. YDS.	



PLAN OF SPANS

PROJECT NO. **15BPR.107**
ONSLOW COUNTY
BRIDGE NO. **660253**

SHEET 1 OF 4

DocuSigned by:
William C. Smith
6A2A92833F6241D...

05/22/2026

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PROFESSIONAL
SEAL
054816
ENGINEER
WILLIAM C. SMITH

DECK REPAIR SPANS A-D
&
APPROACH SLAB 1

DRAWN BY : J.J.ANDERSON DATE : 03/2026
CHECKED BY : W.C.SMITH DATE : 05/2026
DESIGN ENGINEER OF RECORD: DATE :

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS					SHEET NO. S1-05
NO.	BY:	DATE:	NO.	BY:	
1			3		TOTAL SHEETS 45
2			4		

5/20/2026
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wcsmith

8/26/21

NOTES

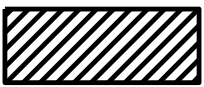
FOR SECTION B-B. SEE MODULAR JOINT DETAIL SHEET.

DECK SURFACE REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR AFTER REMOVAL OF UNSOUND CONCRETE (MIN. 2" CLEAR TO SAWCUT), SEE DECK REPAIR DETAIL SHEET.

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



SHOTBLASTING BRIDGE DECK AND SILANE DECK TREATMENT AREA

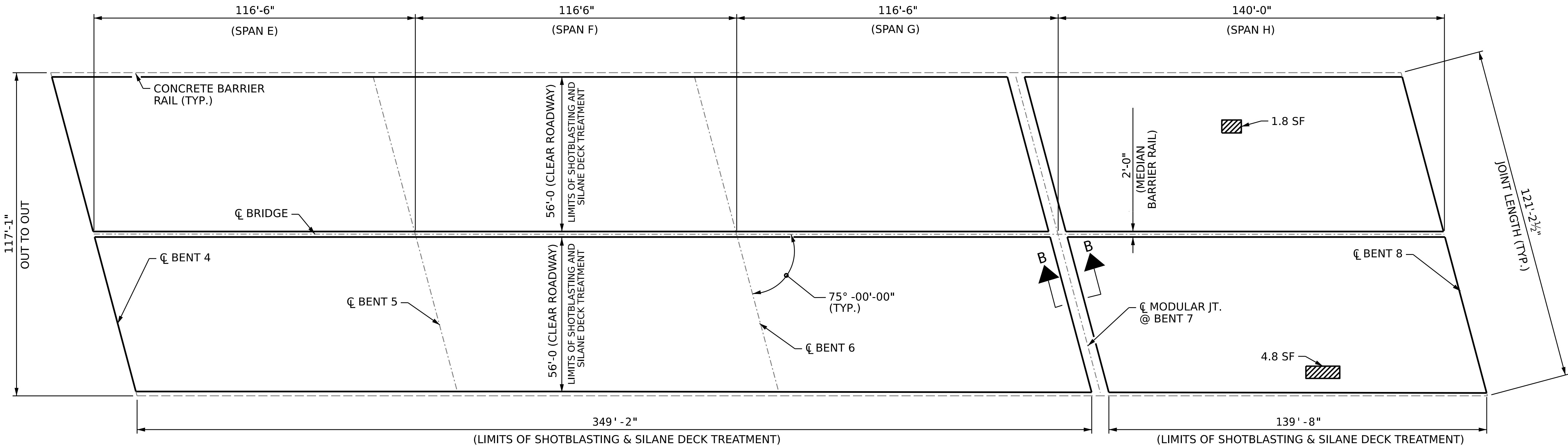


CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT

DECK SURFACE REPAIR QUANTITY TABLE

DECK SURFACE REPAIR - SPANS E-H

	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	6.6 SQ. FT	
SHOTBLASTING BRIDGE DECK	6,083.3 SQ. YDS.	
SILANE DECK TREATMENT	6,083.3 SQ. YDS.	



PLAN OF SPANS

PROJECT NO. **15BPR.107**

ONSLOW COUNTY

BRIDGE NO. **660253**

SHEET 2 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK REPAIR SPANS E-H



DocuSigned by:
William C. Smith

05/22/2026

DRAWN BY : **J.J.ANDERSON** DATE : **04/2026**
CHECKED BY : **W.C.SMITH** DATE : **05/2026**
DESIGN ENGINEER OF RECORD: DATE :

5/20/2026
S:\DPG1\Division3\15BPR.107 Onslow\Bridge #660253\PLANS\400_000_SMU_15BPR.107.XXX.EFGH.DSR.dgn
wcsmith

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SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-06
1			3			TOTAL SHEETS
2			4			45

NOTES

FOR SECTION B-B. SEE MODULAR JOINT DETAIL SHEET.

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

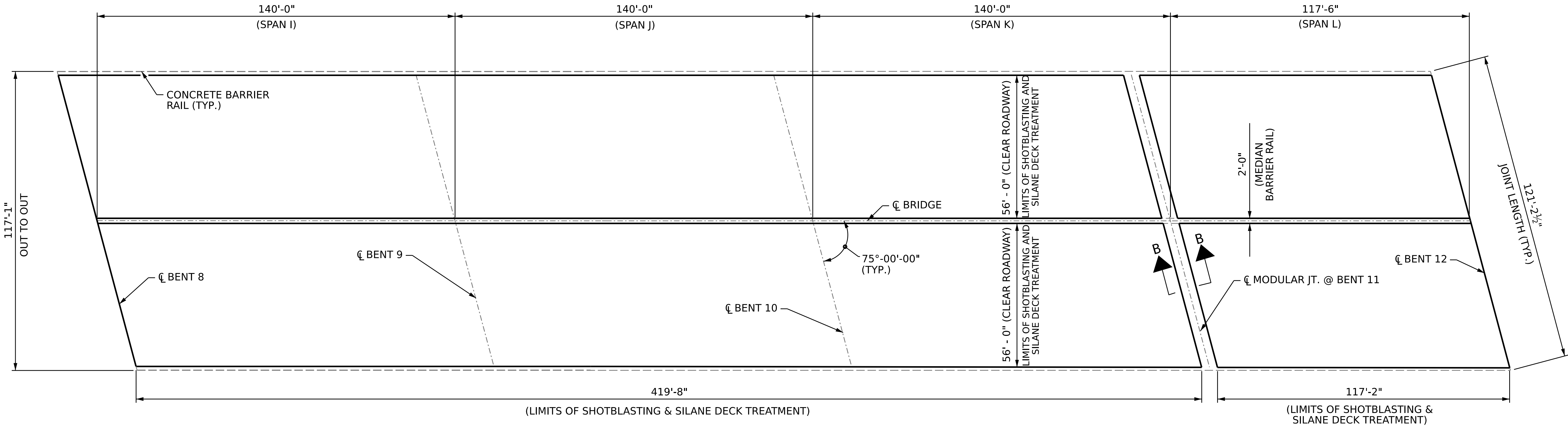
DECK SURFACE REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR AFTER REMOVAL OF UNSOUND CONCRETE (MIN. 2" CLEAR TO SAWCUT), SEE DECK REPAIR DETAIL SHEET.

- SHOTBLASTING BRIDGE DECK AND
SILANE DECK TREATMENT AREA
- CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT

DECK SURFACE REPAIR QUANTITY TABLE

DECK SURFACE REPAIR - SPANS I-L

	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	0.0 SQ. FT.	
SHOTBLASTING BRIDGE DECK	6,680.6 SQ. YDS.	
SILANE DECK TREATMENT	6,680.6 SQ. YDS.	



PLAN OF SPANS

PROJECT NO. **15BPR.107**

ONSLOW COUNTY

BRIDGE NO. **660253**

SHEET 3 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK REPAIR SPANS I-L



DocuSigned by:
William C. Smith
6A2A92833F6241D...

05/22/2026

DRAWN BY : **J.J.ANDERSON** DATE : **04/2026**
CHECKED BY : **W.C.SMITH** DATE : **05/2026**
DESIGN ENGINEER OF RECORD: DATE :

5/20/2026
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wcsmith

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-07
1			3			TOTAL SHEETS
2			4			45

NOTES

FOR SECTION A-A. SEE EXPANSION JOINT DETAIL SHEET.

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

DECK SURFACE REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR AFTER REMOVAL OF UNSOUND CONCRETE (MIN. 2" CLEAR TO SAWCUT), SEE DECK REPAIR DETAILS SHEET.

- SHOTBLASTING BRIDGE DECK AND
SILANE DECK TREATMENT AREA
- CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT

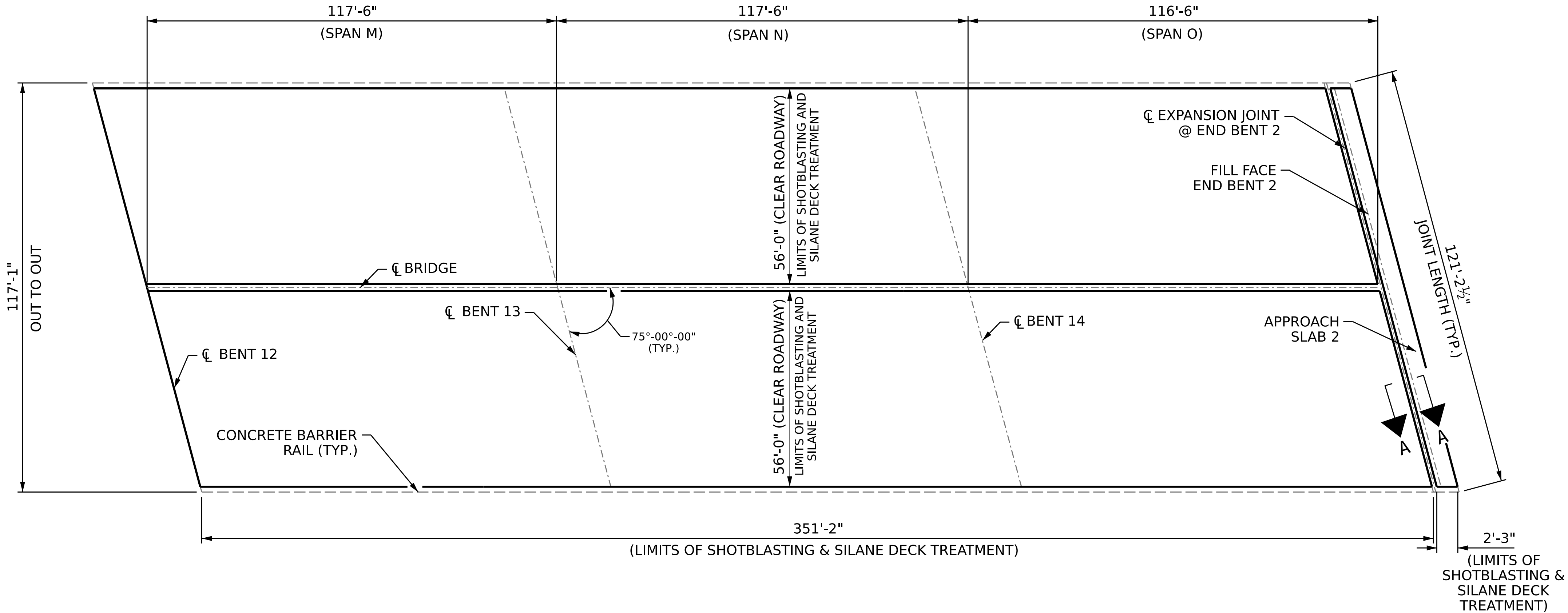
DECK SURFACE REPAIR QUANTITY TABLE

DECK SURFACE REPAIR - SPANS M - O

	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	0.0 SQ. FT	
SHOTBLASTING BRIDGE DECK	4,370.1 SQ. YDS.	
SILANE DECK TREATMENT	4,370.1 SQ. YDS.	

APPROACH SLAB 2

	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	0.0 SQ. FT.	
SHOTBLASTING BRIDGE DECK	28.0 SQ. YDS.	
SILANE DECK TREATMENT	28.0 SQ. YDS.	



PLAN OF SPANS

PROJECT NO. **15BPR.107**
ONSLOW COUNTY
BRIDGE NO. **660253**

SHEET 4 OF 4



DocuSigned by:
William C. Smith
6A2A92833F6241D

05/22/2026

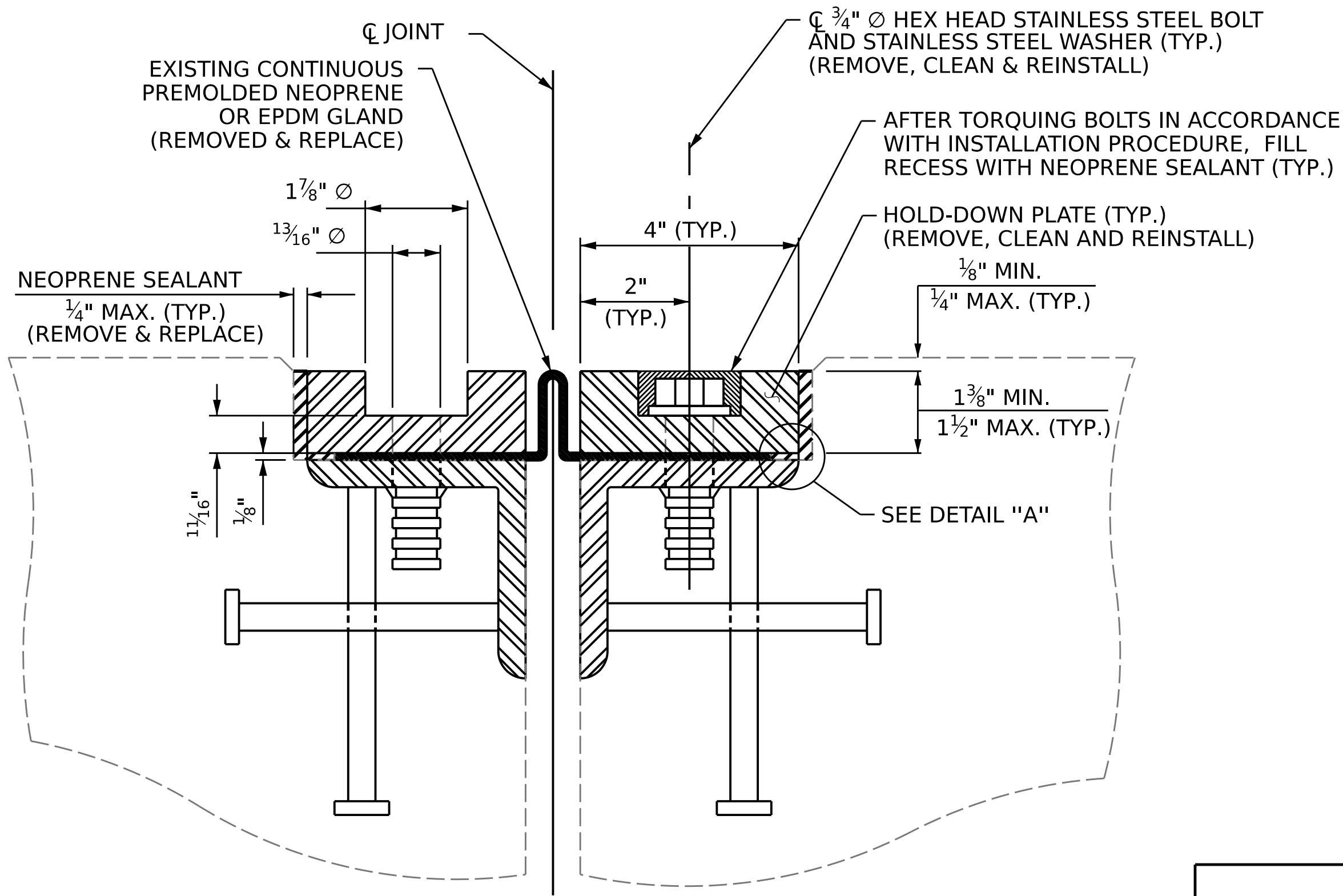
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK REPAIR SPANS M-O
&
APPROACH SLAB 2

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			45
2			4			

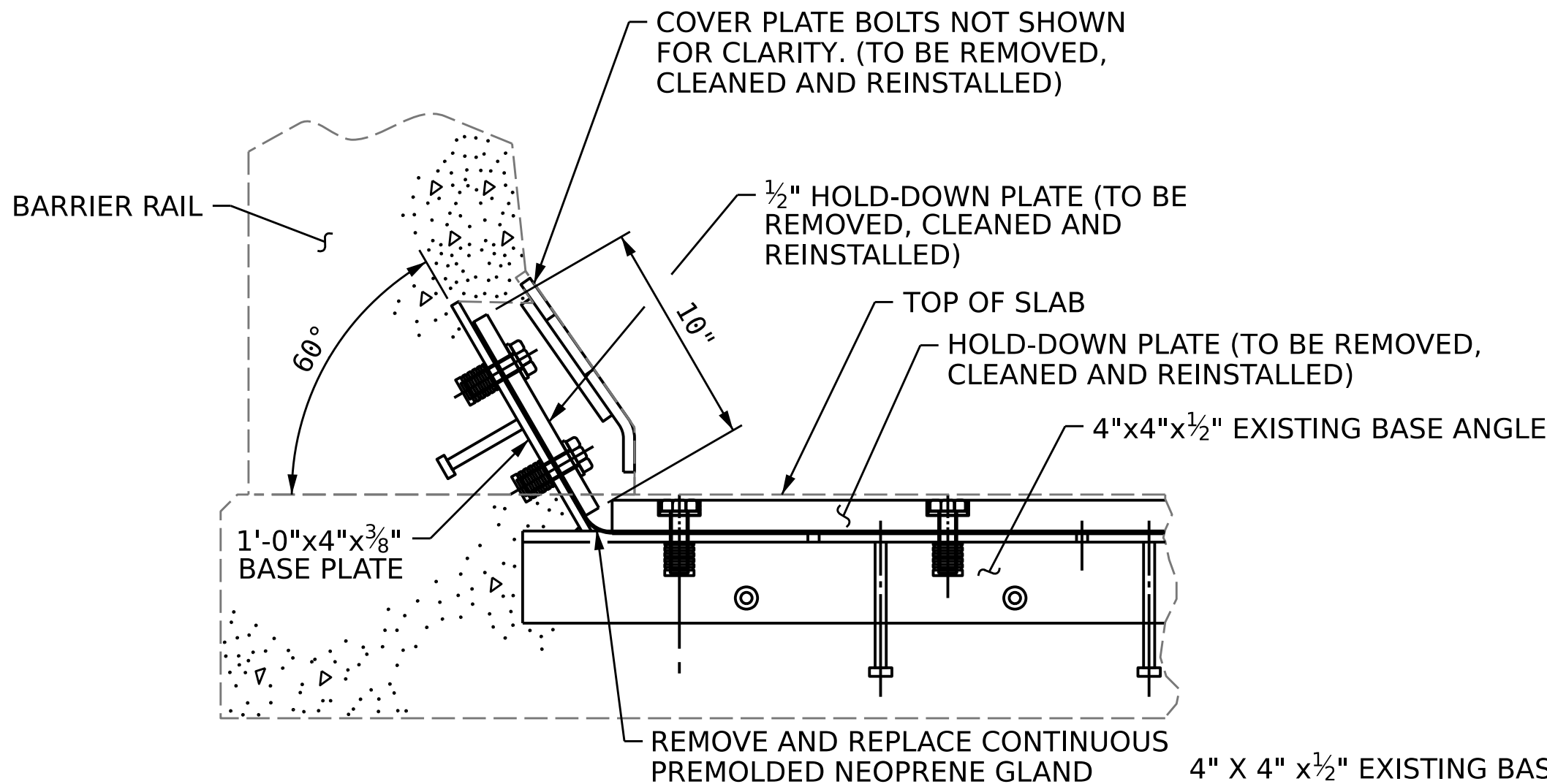
DOCUMENT NOT CONSIDERED
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SIGNATURES COMPLETED

DRAWN BY : **J.J.ANDERSON** DATE : **04/2026**
CHECKED BY : **W.C.SMITH** DATE : **05/2026**
DESIGN ENGINEER OF RECORD: DATE :



EXPANSION JOINT DETAILS
SECTION A-A

JOINT REPAIR QUANTITY TABLE		
	ESTIMATED	ACTUAL
EXPANSION JOINT SEALS FOR PRESERVATION	238.30 LF	-



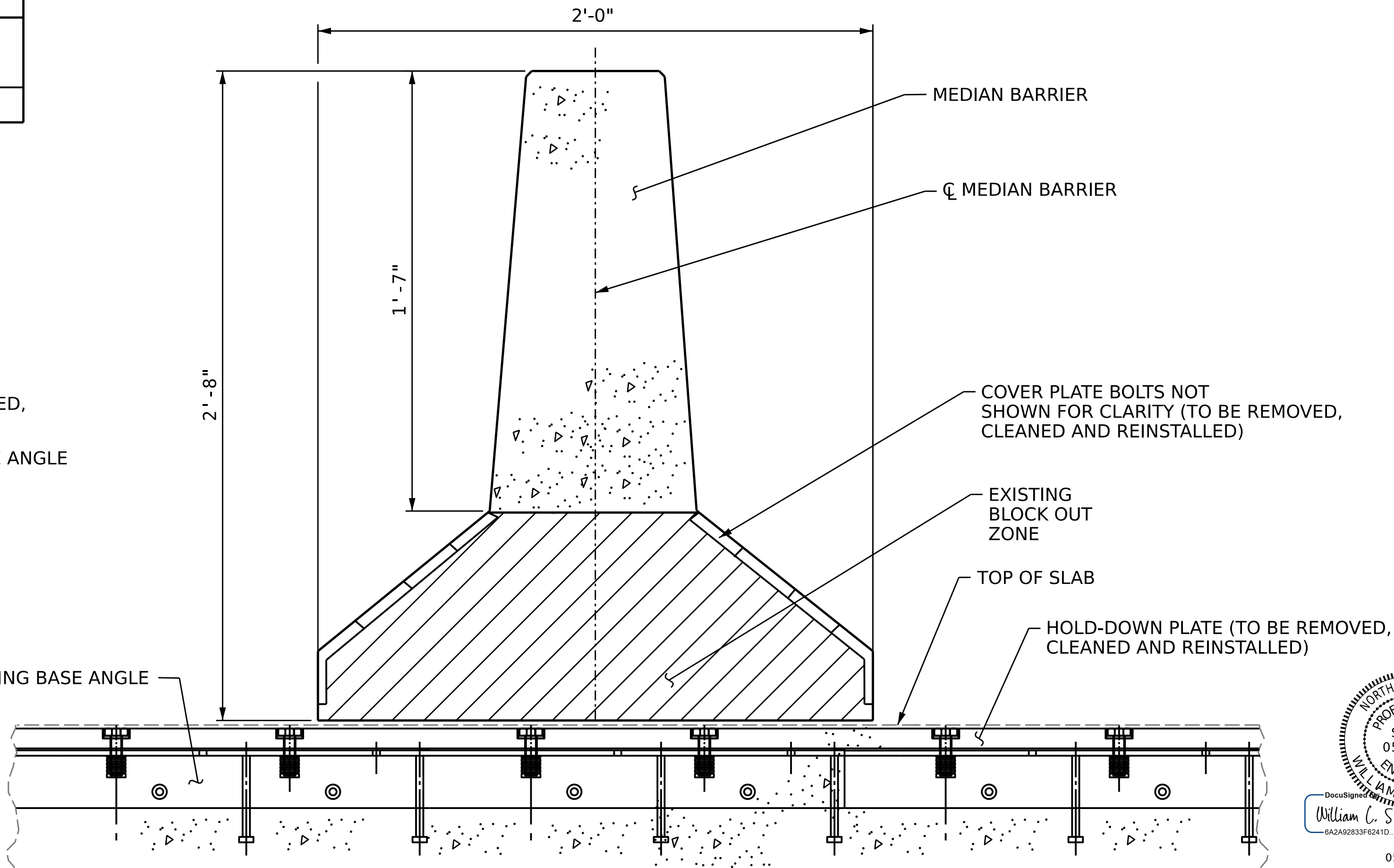
SECTION THRU RAIL NORMAL TO JOINT

SUGGESTED REPAIR INSTALLATION PROCEDURE

1. LOOSEN THE EXISTING BOLTS AND HOLD-DOWN PLATES TO REMOVE AND REPLACE THE EXISTING GLAND.
2. REMOVE THE EXISTING NEOPRENE SEALANT AND CLEAN THE EXISTING BASE ANGLE AND BOLT HOLES OF OIL, GREASE AND OTHER LATENTS.
3. LAY THE NEW GLAND ON THE BASE ANGLE AND FIELD MARK THE NEW GLAND FOR THE BOLT HOLES. HOLES IN THE NEW GLAND SHALL BE PUNCHED 7/8" IN DIAMETER WITH A HAND PUNCH.
4. IN ORDER TO CHECK FOR PROPER ALIGNMENT, PLACE THE NEW GLAND AND HOLD-DOWN PLATES ON THE BASE ANGLE. DO NOT APPLY NEW NEOPRENE SEALANT. BOLT THE HOLD-DOWN PLATES TO THE BASE ANGLE, BUT DO NOT TIGHTEN. THE ENGINEER WILL INSPECT THE JOINT SEAL DEVICE FOR PROPER ALIGNMENT.
5. AFTER INSPECTION, REMOVE THE HOLD-DOWN PLATES AND NEW GLAND. APPLY NEW NEOPRENE SEALANT TO THE BASE ANGLE IN ACCORDANCE WITH THE "INSTALLATION SKETCH". PLACE NEW GLAND AND HOLD-DOWN PLATES ON THE BASE ANGLE. BOLT THE HOLD-DOWN PLATES TO THE BASE ANGLE ASSEMBLY AND TORQUE THE BOLTS TO 88 FT-LBS WITH A TORQUE WRENCH. CHECK THE TORQUE AFTER THREE (3) HOURS AND, IF NECESSARY, RETIGHTEN TO 88 FT-LBS. A FINAL CHECK SHALL BE MADE AT SEVEN (7) DAYS. TORQUE SHALL NOT BE LESS THAN 80 FT-LBS AFTER SEVEN (7) DAYS.
6. AFTER PROPER TORQUING, CLEAN THE BOLT HOLE RECESSES AND THE RECESS BETWEEN THE JOINT SEAL DEVICE AND CONCRETE. COMPLETELY FILL THESE RECESSES WITH NEW NEOPRENE SEALANT.
7. CONDUCT WATER-TIGHTNESS TEST.

MOVEMENT AND SETTING AT JOINT

LOCATION	SKEW ANGLE	TOTAL MOVEMENT (ALONG ϕ RDWY)	PERPENDICULAR JOINT OPENING AT 30°F	PERPENDICULAR JOINT OPENING AT 60°F	PERPENDICULAR JOINT OPENING AT 90°F
END BENT 1	75°	2"	2 3/4"	2"	1 1/4"
END BENT 2	75°	2"	2 3/4"	2"	1 1/4"



SECTION THRU MEDIAN BARRIER NORMAL TO JOINT

GENERAL NOTES

CONTRACTOR SHALL FIELD VERIFY THE EXISTING JOINT OPENING PRIOR TO ORDERING JOINT SEAL MATERIAL. IF THE ACTUAL JOINT OPNEING VARIES FROM THE OPENING INDICATED IN THE DETAILS BY MORE THAN 1/4", NOTIFY THE ENGINEER.

THE MANUFACTURER IS TO PROVIDE THE NOMINAL GLAND SIZE BASED ON EXISTING JOINT OPENINGS AND ANTICIPATED MOVEMENTS.

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

RETAIN ALL EXISTING HOLD-DOWN PLATES AND HARDWARE. CLEAN AND REPAIR AS NEEDED. CONTRACTOR SHALL REPLACE DAMAGED HOLD-DOWN PLATES AND/OR HARDWARE AS NEEDED OR DIRECTED BY THE ENGINEER AT NO EXTRA COST TO THE DEPARTMENT.

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

A PREMOLDED CORRUGATED OR NON-CORRUGATED GLAND SHALL BE 130°.

FOR EXPANSION JOINT SEAL REPAIR, SEE SPECIAL PROVISIONS.

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

SEE SHEET 2 OF 2 FOR INSTALLATION SKETCH DETAILS.

PROJECT NO. **15BPR.107**
ON SLOW COUNTY
BRIDGE NO. **660253**

SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

EXPANSION JOINT
SEAL FOR
PRESERVATION

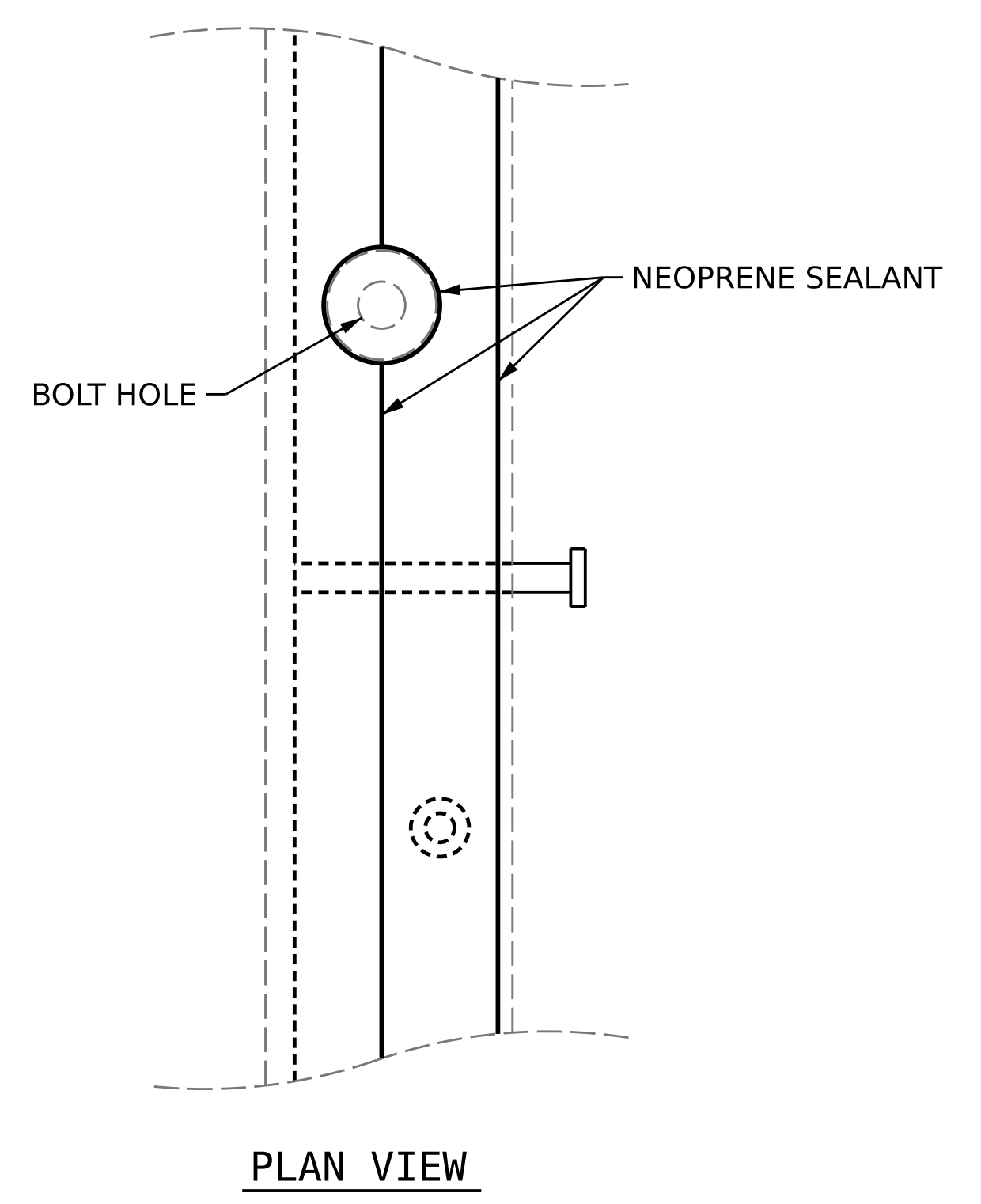
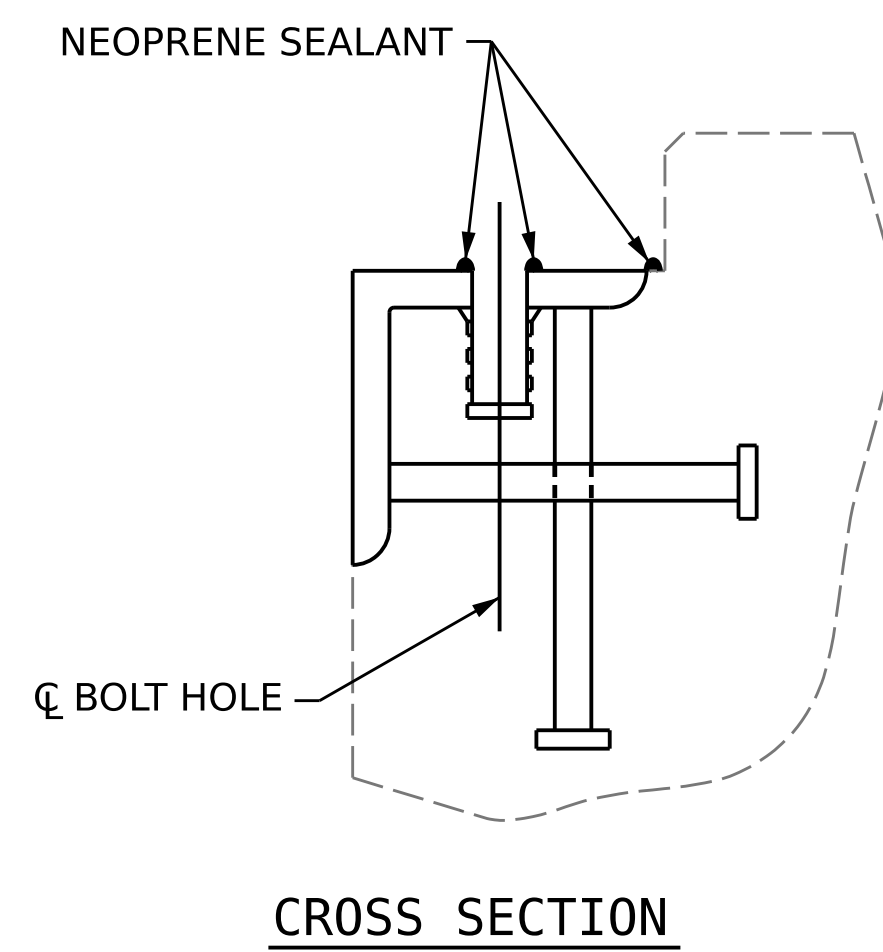
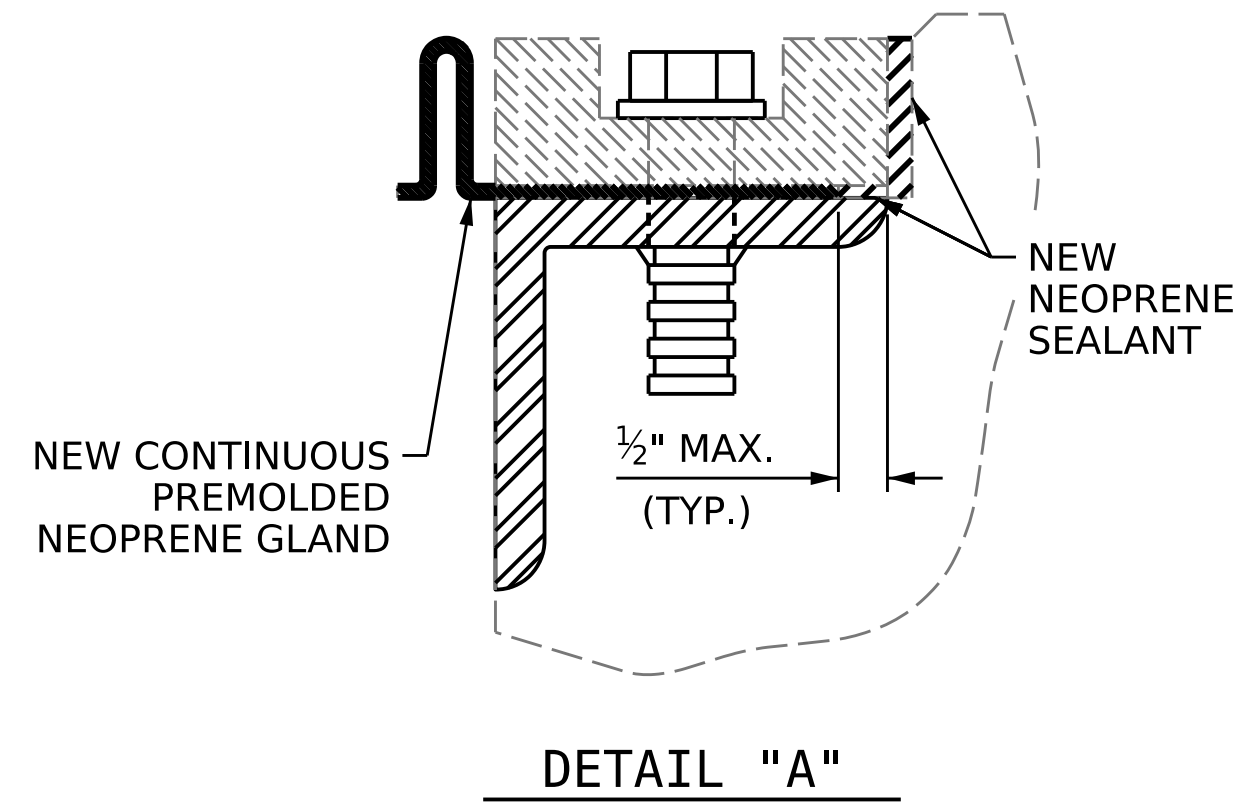
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-09
1			3			TOTALS
2			4			SHEETS
						45

ASSEMBLED BY : J.J.ANDERSON	DATE : 02/2026
CHECKED BY : W.C.SMITH	DATE : 05/2026
DRAWN BY : NAP 08/2018	
CHECKED BY : -	

DOCUMENT NOT CONSIDERED
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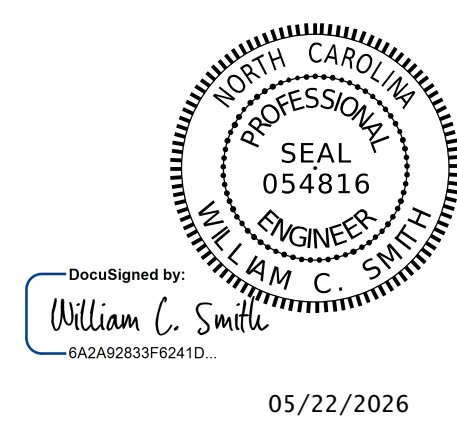
05/22/2026



INSTALLATION SKETCH

PROJECT NO. **15BPR.107**
ONSLOW COUNTY
BRIDGE NO. **660253**

SHEET 2 OF 2

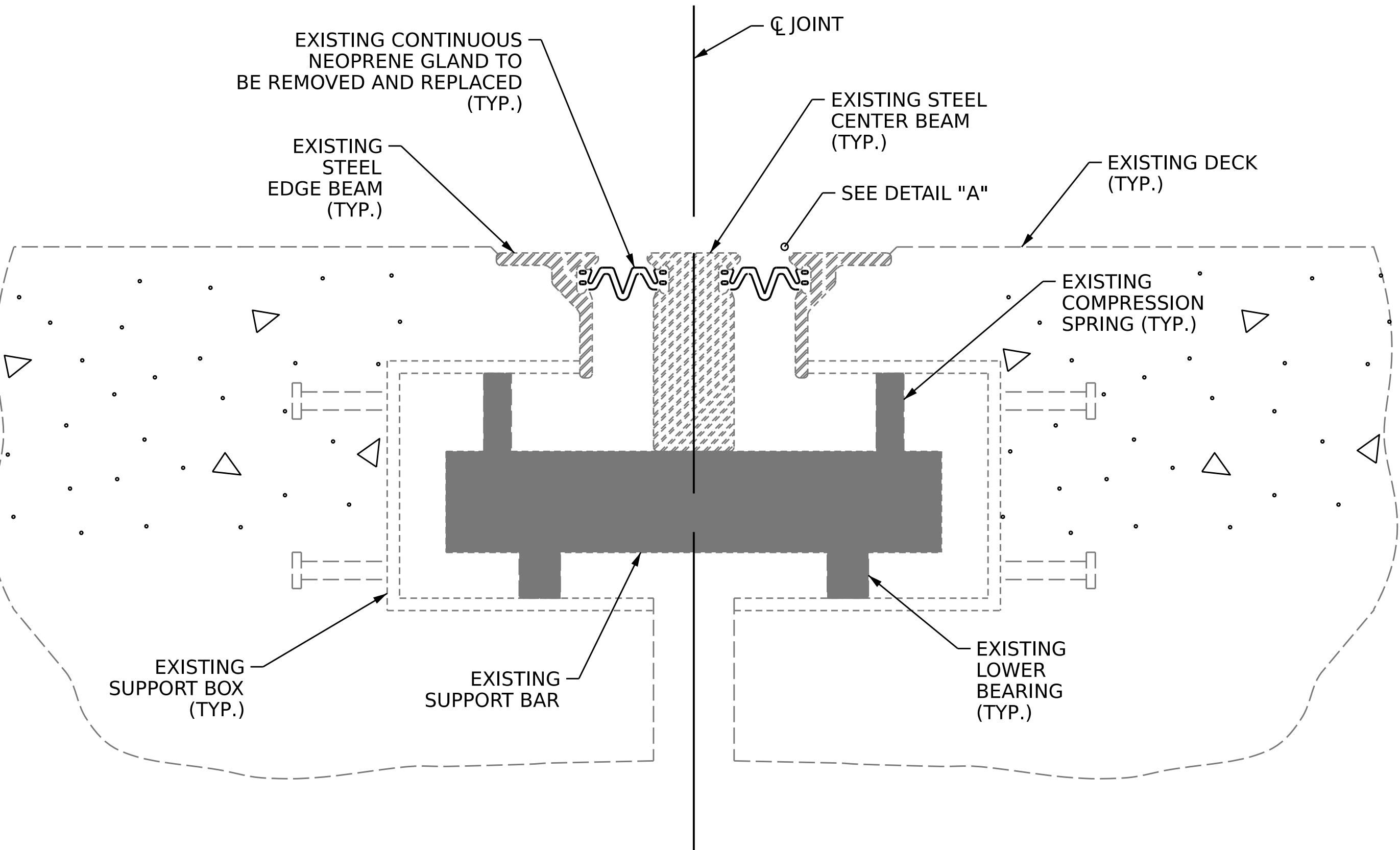


STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
EXPANSION JOINT SEAL FOR PRESERVATION					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO.
S1-10
TOTAL
SHEETS
45

ASSEMBLED BY :	J.J.ANDERSON	DATE :	02/2026
CHECKED BY :	W.C.SMITH	DATE :	03/2026
DRAWN BY :	NAP 08/2018		
CHECKED BY :	-		

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
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EXPANSION JOINT DETAILS
SECTION B-B

SUGGESTED REPAIR INSTALLATION PROCEDURE

REMOVE THE EXISTING BOLTS AT COVER PLATES AT MEDIAN AND BARRIER RAILS TO ACCESS THE EXISTING GLAND.

REMOVE DEBRIS FROM GLAND ALONG LENGTH OF JOINT.

ADJUST JOINT OPENINGS AS NEEDED TO REMOVE THE EXISTING NEOPRENE GLAND. DISENGAGE SEAL LOCKING LUG, REMOVE LOCKING LUG AND REMOVE GLANDS FROM EXTRUSIONS.

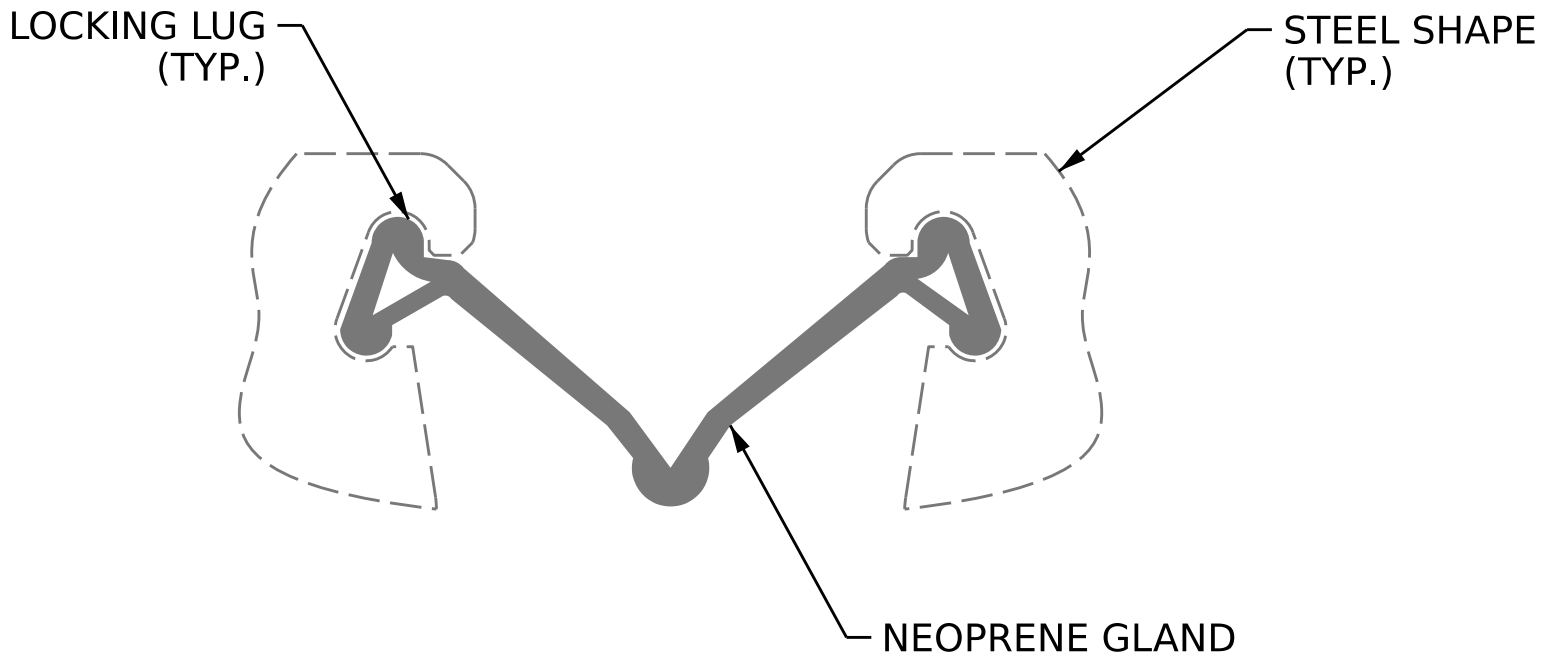
ONCE GLAND IS REMOVED CLEAN THE EXISTING EXTRUSION CAVITIES OF OIL, GREASE AND OTHER LATENTS WITH MANUFACTURER'S APPROVED SOLVENTS.

LAY THE NEW GLAND ON THE JOINT OPENING LEAVING 6" EXTENSION PAST THE END OF THE UPTURN.

AFTER INSPECTION, INSTALL THE NEW GLAND TO THE EXISTING EXTRUSION IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION GUIDE.

CONDUCT WATER-TIGHTNESS TEST.

RE-INSTALL COVER PLATES AT MEDIAN AND BARRIER RAILS.



DETAIL "A"

GENERAL NOTES

THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING JOINT OPENING PRIOR TO ORDERING JOINT SEAL MATERIAL. IF THE ACTUAL JOINT OPNEING VARIES FROM THE OPENING INDICATED IN THE DETAILS BY MORE THAN ¼", NOTIFY THE ENGINEER.

THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING MODULAR EXPANSION JOINT TO FIND THE MANUFACTURER'S STAMP TO IDENTIFY THE MANUFACTURER AND PURCHASE THE APPROPRIATE GLAND.

THE MANUFACTURER IS TO PROVIDE THE NOMINAL GLAND SIZE BASED ON EXISTING JOINT OPENINGS AND ANTICIPATED MOVEMENTS.

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

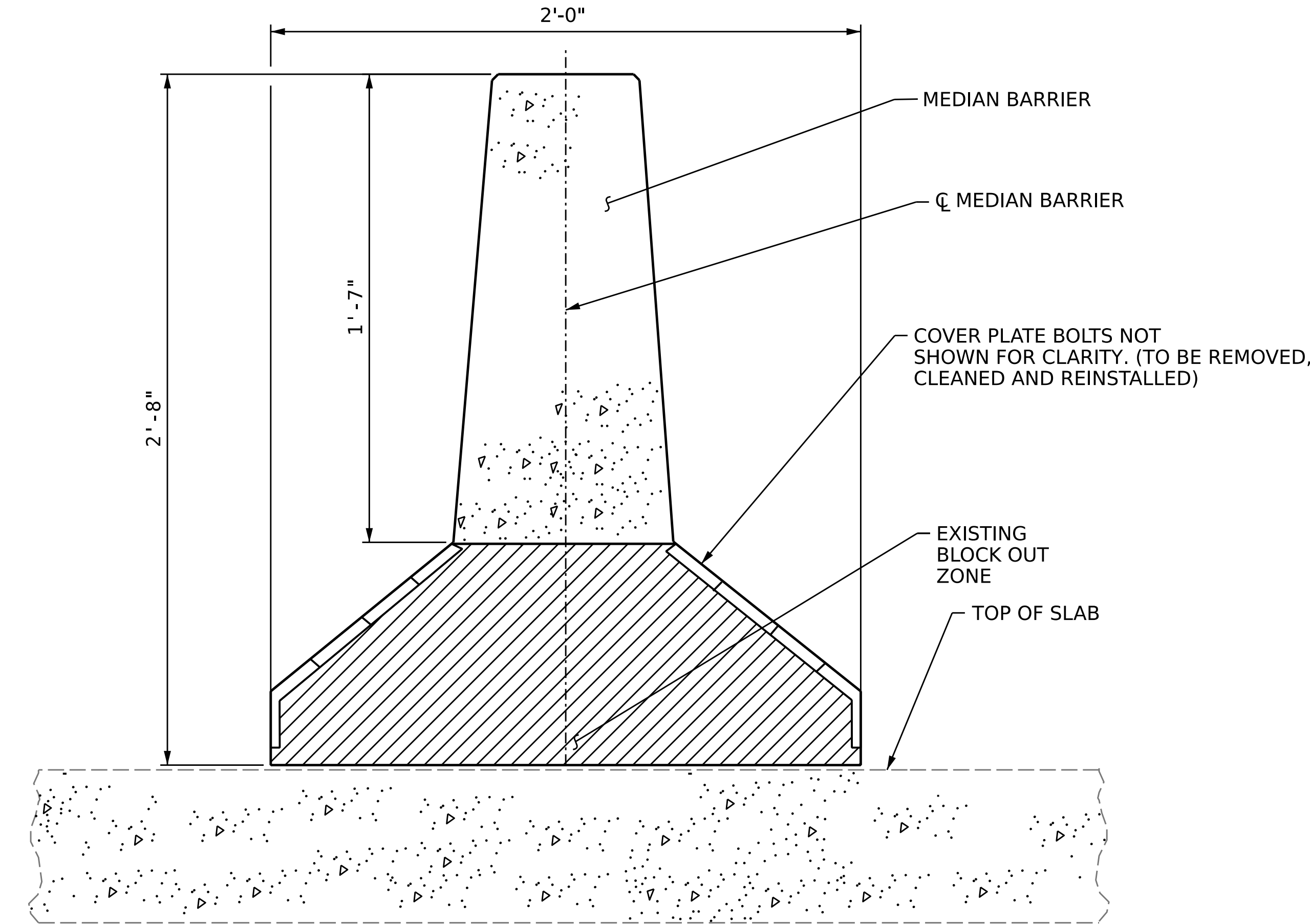
RETAIN ALL EXISTING COVER PLATES AND HARDWARE. CLEAN AND REPAIR AS NEEDED. CONTRACTOR SHALL REPLACE DAMAGED PLATES AND/OR HARDWARE AS NEEDED OR DIRECTED BY THE ENGINEER AT NO EXTRA COST TO THE DEPARTMENT.

REPLACEMENT STEEL PLATES SHALL CONFORM TO AASHTO M270 GRADE 36 OR APPROVED EQUAL. PLATE COATINGS SHALL MATCH EXISTING, UNLESS DIRECTED ELSEWISE BY ENGINEER AND BE PAINTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS OR METALLIZED AFTER FABRICATION PER THE SPECIAL PROVISION FOR THERMAL SPRAY COATINGS.

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

FOR MODULAR JOINT SEAL REPAIR, SEE SPECIAL PROVISIONS.

NO SEPARATE PAYMENT WILL BE MADE FOR REMOVING AND REINSTALLING MEDIAN AND BARRIER RAIL COVER PLATES. THE ENTIRE COST OF THIS WORK SHALL BE INCLUDED IN THE LINEAR FEET PRICE BID FOR "MODULAR JOINT SEALS FOR PRESERVATION".



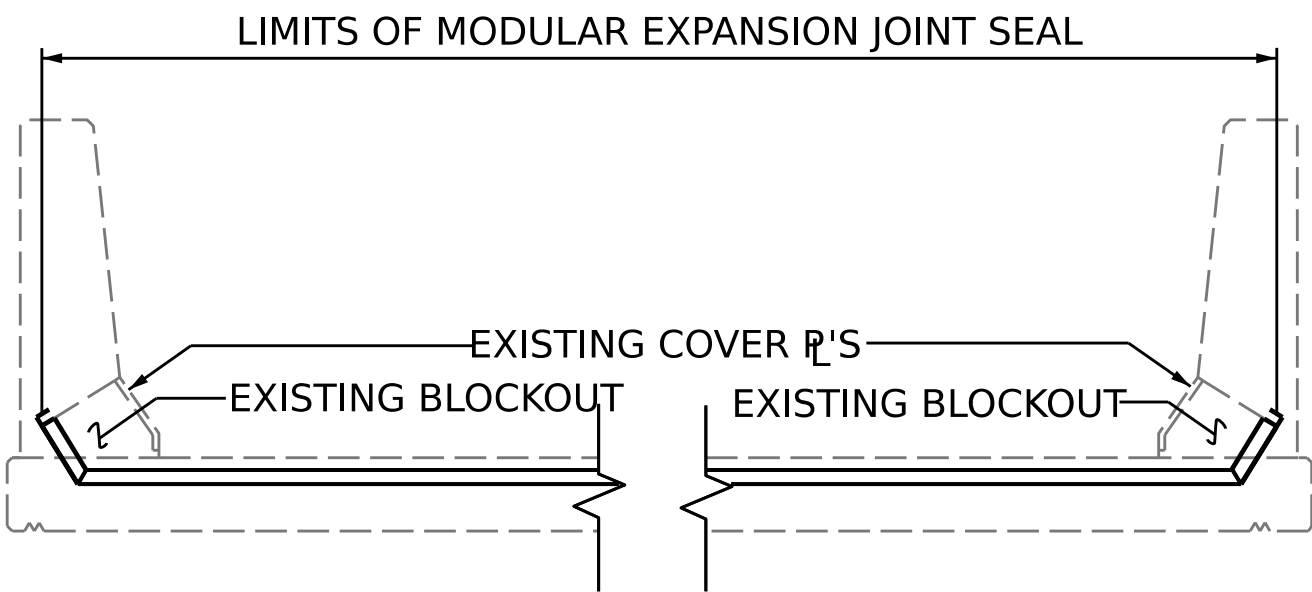
CONCRETE MEDIAN BARRIER

MOVEMENT AND SETTING AT JOINT

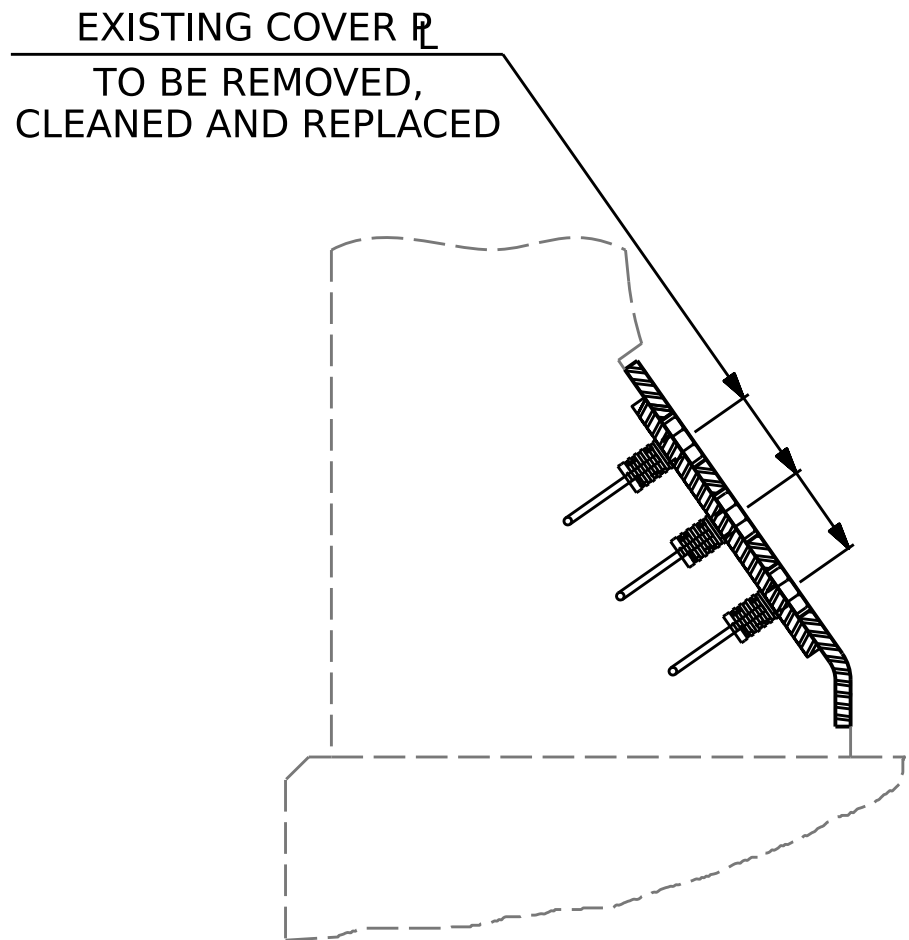
LOCATION	SKEW ANGLE	TOTAL MOVEMENT (ALONG CL RDWY)	PERPENDICULAR JOINT OPENING AT 30°F	PERPENDICULAR JOINT OPENING AT 60°F	PERPENDICULAR JOINT OPENING AT 90°F
BENT 3	75°	3¼"	7⅞"	5½"	3⅞"
BENT 7	75°	3¼"	7⅞"	5½"	3⅞"
BENT 11	75°	3¼"	7⅞"	5½"	3⅞"

JOINT REPAIR QUANTITY TABLE

	ESTIMATED	ACTUAL
MODULAR JOINT SEALS FOR PRESERVATION	357.6 LF	-



LIMITS OF MODULAR EXPANSION JOINT

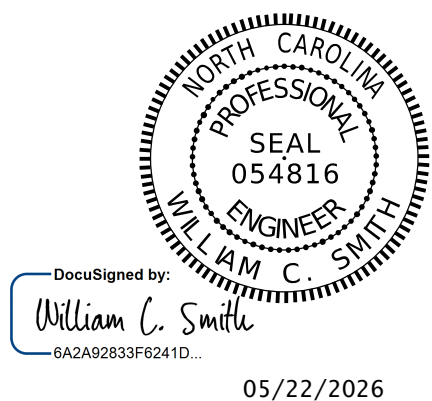


SECTION THRU RAIL NORMAL TO JOINT

PROJECT NO. **15BPR.107**
ONslow COUNTY
BRIDGE NO. **660253**

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

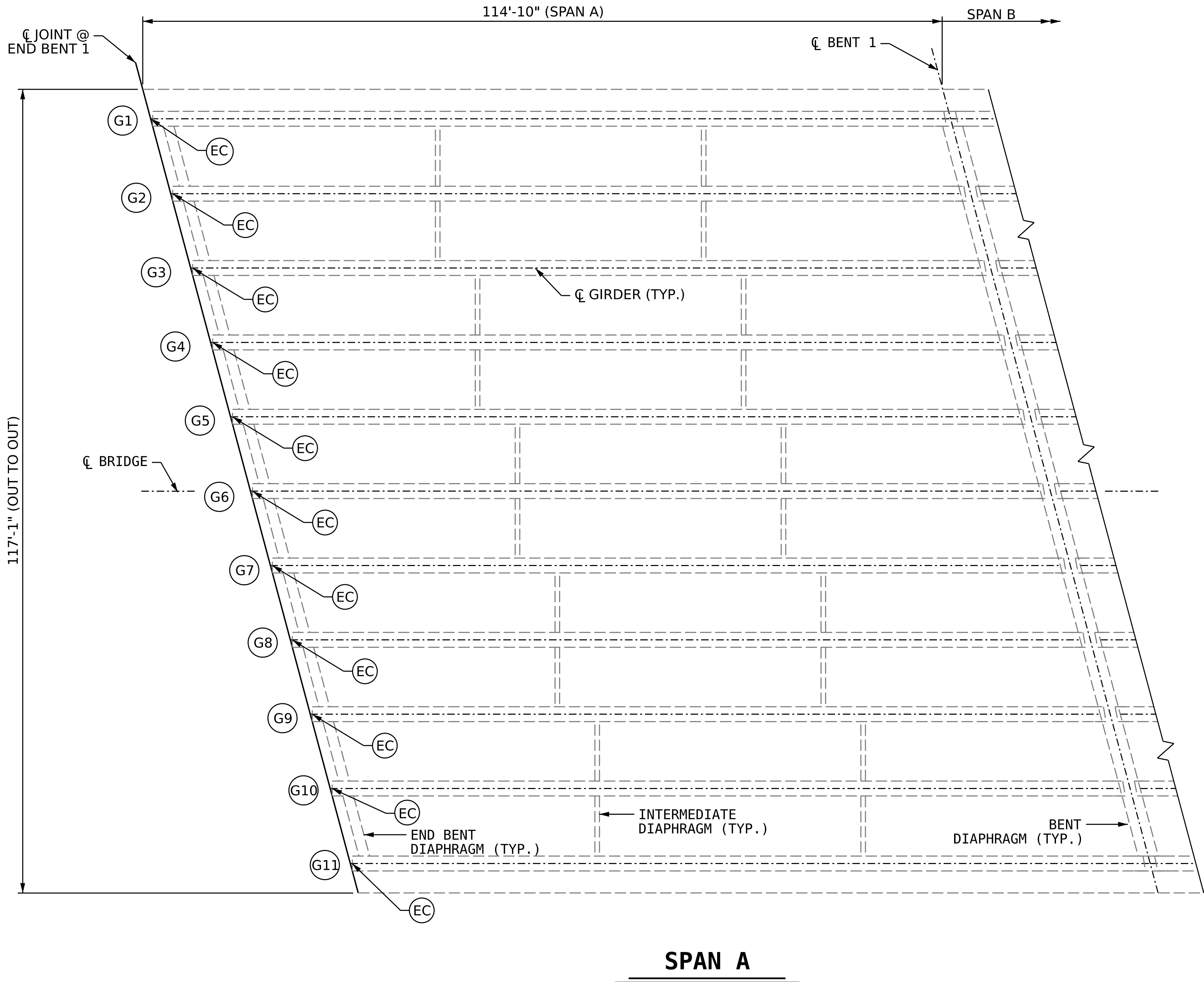
MODULAR EXPANSION
JOINT SEAL FOR
PRESERVATION



DRAWN BY : J.J.ANDERSON DATE : 03/2026
CHECKED BY : W.C.SMITH DATE : 05/2026
DESIGN ENGINEER OF RECORD: DATE :

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REVISIONS					SHEET NO. 51-11
NO.	BY:	DATE:	NO.	BY:	
1			3		TOTAL SHEETS
2			4		45



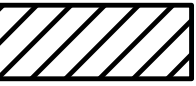
UNDERSIDE REPAIR QUANTITY TABLE				
DECK UNDERSIDE REPAIR- SPAN A				
SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA (SQ.FT.)	VOLUME (CU.FT.)	AREA (SQ.FT.)	VOLUME (CU.FT.)
UNDERSIDE OF DECK	0.0	0.0		
DIAPHRAGMS	0.0	0.0		
OVERHANG	0.0	0.0		
EPOXY COATING	AREA (SQ.FT.)		AREA (SQ.FT.)	
PRESTRESSED CONCRETE GIRDER ENDS	338.1			

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

NOTES

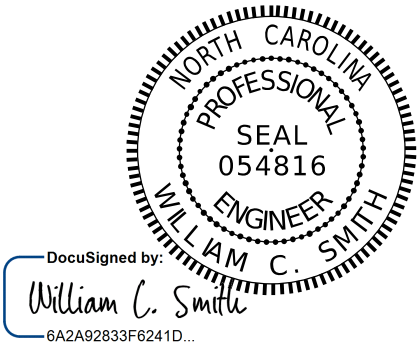
REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES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

FOR EPOXY COATING CONCRETE GIRDER ENDS, SEE PRESTRESSED CONCRETE GIRDER REPAIR DETAILS.

-  CONCRETE REPAIR AREA
-  SHOTCRETE REPAIR AREA
-  GIRDER NUMBER
-  EPOXY COATING

PROJECT NO. **15BPR.107**
ONSLOW COUNTY
BRIDGE NO. **660253**

SHEET 1 OF 15

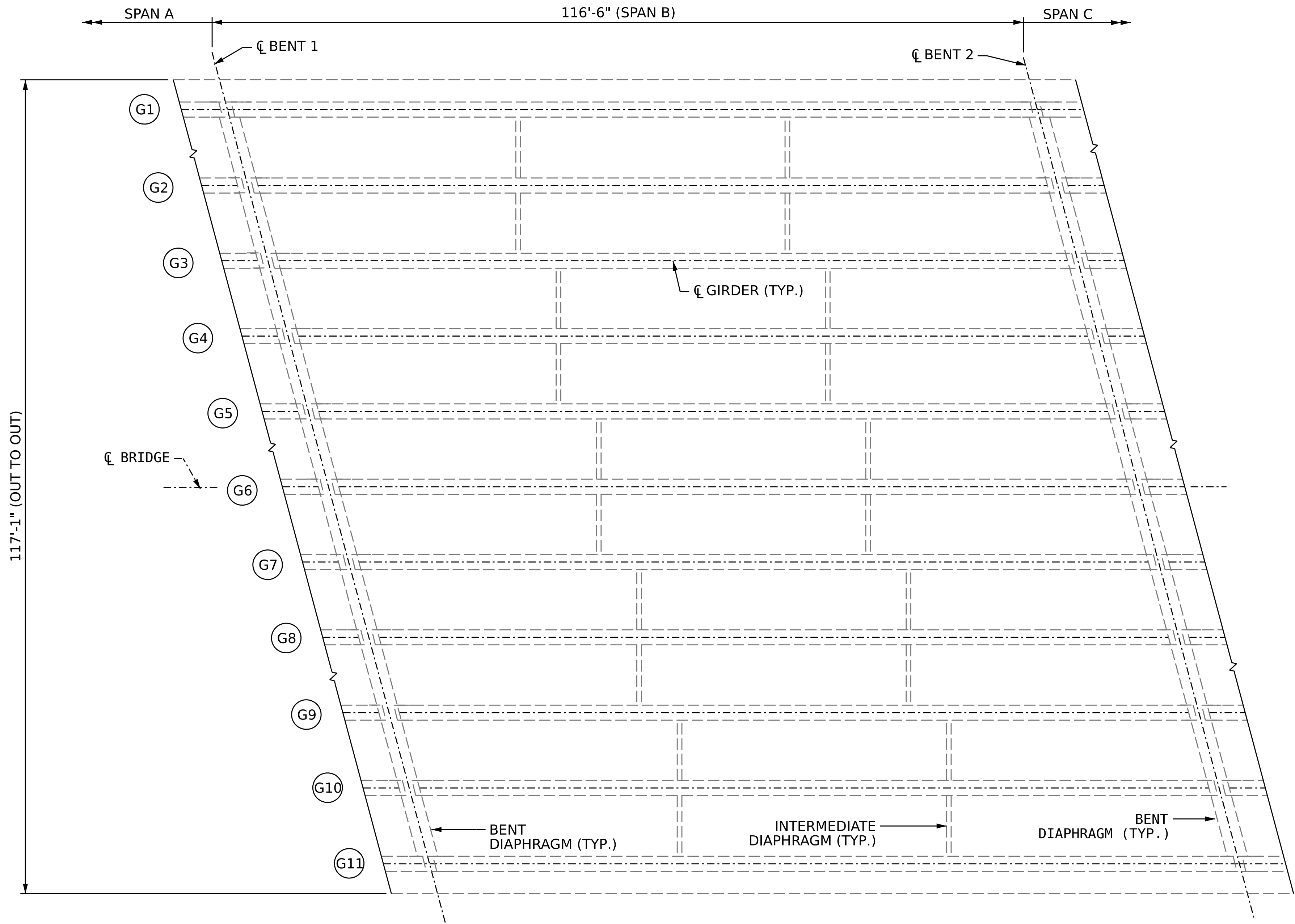


STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
**DECK UNDERSIDE REPAIR
SPAN A**

DRAWN BY : **J.J.ANDERSON** DATE : **03/2026**
CHECKED BY : **W.C.SMITH** DATE : **05/2026**
DESIGN ENGINEER OF RECORD: _____ DATE : _____

REVISIONS				SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED				TOTAL SHEETS	45

8/26/21



SPAN B

UNDERSIDE REPAIR QUANTITY TABLE

DECK UNDERSIDE REPAIR- SPAN B

SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA (SQ.FT.)	VOLUME (CU.FT.)	AREA (SQ.FT.)	VOLUME (CU.FT.)
UNDERSIDE OF DECK	0.0	0.0		
DIAPHRAGMS	0.0	0.0		
OVERHANG	0.0	0.0		

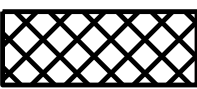
EPOXY COATING	AREA (SQ.FT.)		AREA (SQ.FT.)	
PRESTRESSED CONCRETE GIRDER ENDS	0.0			

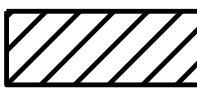
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

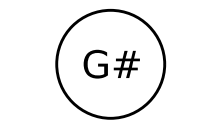
NOTES

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

FOR EPOXY COATING CONCRETE GIRDER ENDS, SEE PRESTRESSED CONCRETE GIRDER REPAIR DETAILS.

 CONCRETE REPAIR AREA

 SHOTCRETE REPAIR AREA

 GIRDER NUMBER

PROJECT NO. **15BPR.107**

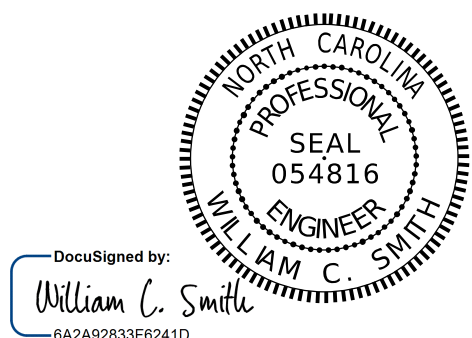
ONslow COUNTY

BRIDGE NO. **660253**

SHEET 2 OF 15

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**DECK UNDERSIDE REPAIR
SPAN B**



05/22/2026

DRAWN BY : **J.J.ANDERSON** DATE : **4/2026**
CHECKED BY : **W.C.SMITH** DATE : **4/2026**
DESIGN ENGINEER OF RECORD: DATE :

5/13/2026
S:\DPG1\Division3\15BPR.107 Onslow\Bridge #660253\PLANS\660253.DUR B.dgn
jjanderson2

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SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-13
1			3			TOTAL SHEETS
2			4			45



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

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

FOR EPOXY COATING CONCRETE GIRDER ENDS, SEE PRESTRESSED CONCRETE GIRDER REPAIR DETAILS.

- | | |
|---|-----------------------|
|  | CONCRETE REPAIR AREA |
|  | SHOTCRETE REPAIR AREA |
|  | EPOXY COATING |
|  | GIRDER NUMBER |

SHEET 3 OF 15

DECK UNDERSIDE REPAIR SPAN C

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	NO.	BY:	DATE:	NO.	BY:	DATE:	S1-14
	1			3			
	2			4			TOTAL SHEETS 45

DRAWN BY : J.J.ANDERSON DATE : 03/2026
 CHECKED BY : W.C.SMITH DATE : 05/2026
 DESIGN ENGINEER OF RECORD: _____ DATE : _____

5/13/2026
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jlganderson2



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

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EC EPOXY COATING

G# GIRDER NUMBER

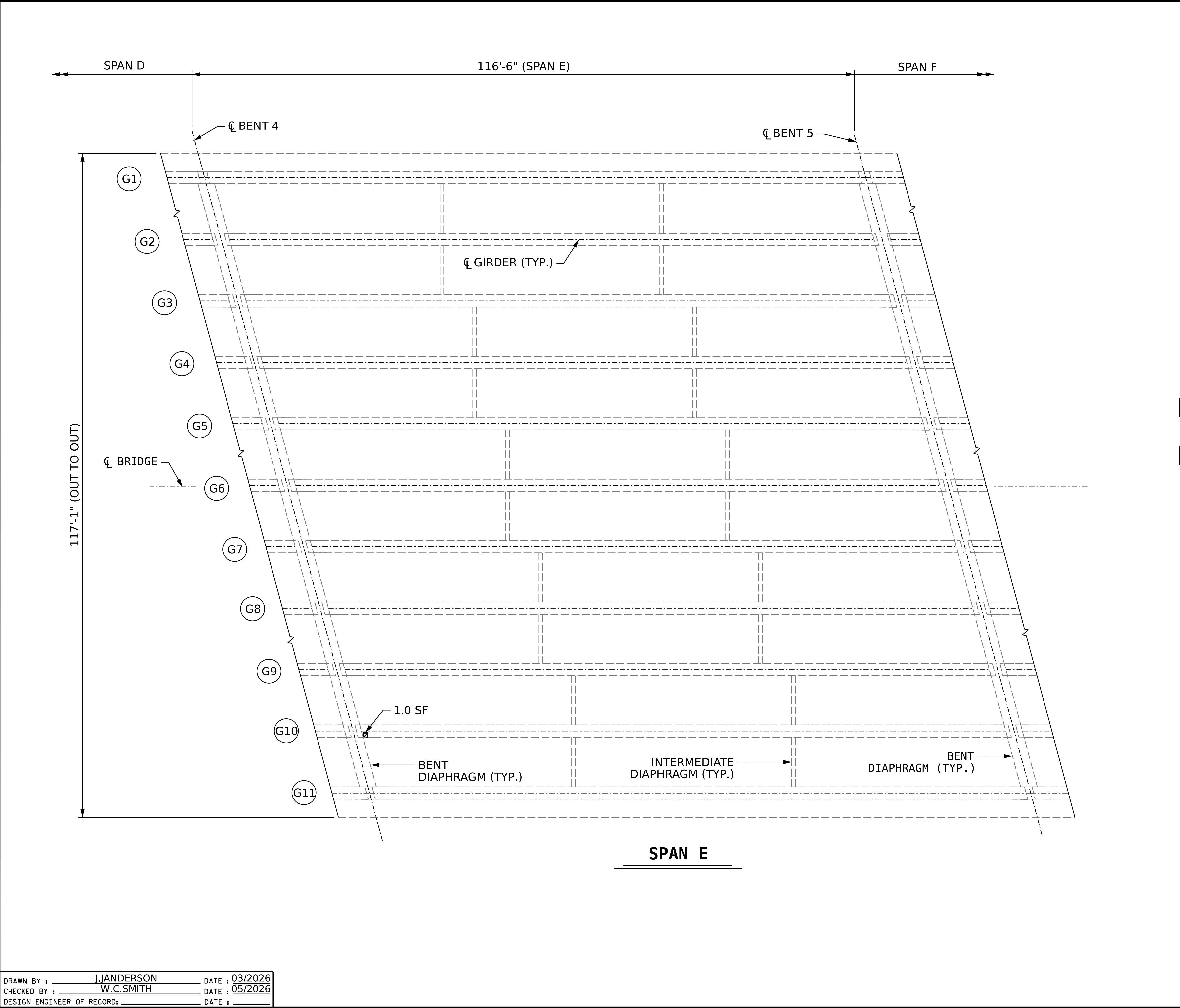
SHEET 4 OF 15

DECK UNDERSIDE REPAIR SPAN D

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FINAL UNLESS ALL
SIGNATURES COMPLETED

5/13/2026
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janderson2

8/26/21



UNDERSIDE REPAIR QUANTITY TABLE				
DECK UNDERSIDE REPAIR- SPAN E				
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA (SQ.FT.)	VOLUME (CU.FT.)	AREA (SQ.FT.)	VOLUME (CU.FT.)
UNDERSIDE OF DECK	0.0	0.0		
DIAPHRAGMS	1.0	0.5		
OVERHANG	0.0	0.0		
EPOXY COATING	AREA (SQ.FT.)		AREA (SQ.FT.)	
PRESTRESSED CONCRETE GIRDER ENDS	0.0			

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

NOTES

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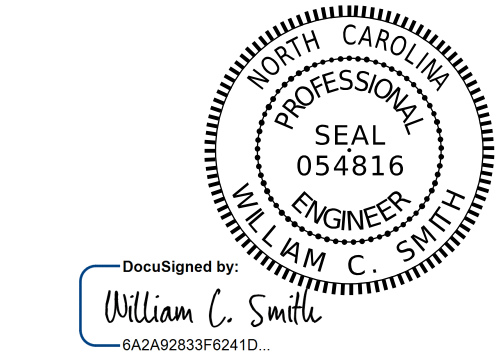
FOR EPOXY COATING CONCRETE GIRDER ENDS, SEE PRESTRESSED CONCRETE GIRDER REPAIR DETAILS.

- CONCRETE REPAIR AREA
- SHOTCRETE REPAIR AREA
- G#

GIRDER NUMBER

DRAWN BY : J.JANDERSON DATE : 03/2026
CHECKED BY : W.C.SMITH DATE : 05/2026
DESIGN ENGINEER OF RECORD: DATE :

5/13/2026
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jjanderson2



05/22/2026

REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	
1			3		S1-16
2			4		

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SIGNATURES COMPLETED

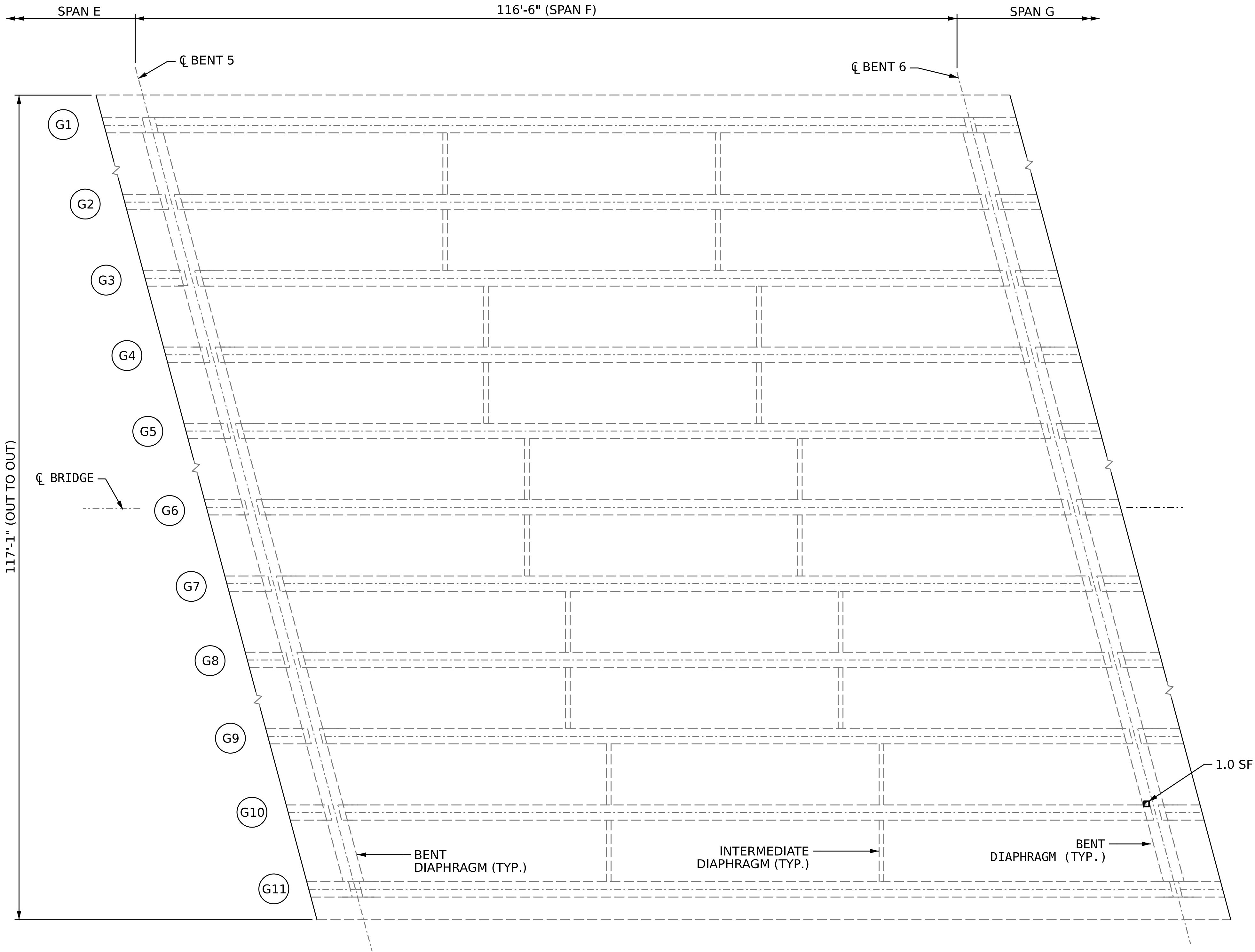
PROJECT NO. **15BPR.107**
ONSLOW COUNTY
BRIDGE NO. **660253**

SHEET 5 OF 15

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
**DECK UNDERSIDE REPAIR
SPAN E**

TOTAL
SHEETS
45

8/26/21



SPAN F

UNDERSIDE REPAIR QUANTITY TABLE				
DECK UNDERSIDE REPAIR- SPAN F				
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA (SQ.FT.)	VOLUME (CU.FT.)	AREA (SQ.FT.)	VOLUME (CU.FT.)
UNDERSIDE OF DECK	0.0	0.0		
DIAPHRAGMS	1.0	0.5		
OVERHANG	0.0	0.0		
EPOXY COATING	AREA (SQ.FT.)		AREA (SQ.FT.)	
PRESTRESSED CONCRETE GIRDER ENDS	0.0			

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

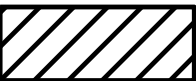
NOTES

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FOR EPOXY COATING CONCRETE GIRDER ENDS, SEE PRESTRESSED CONCRETE GIRDER REPAIR DETAILS.



CONCRETE REPAIR AREA



SHOTCRETE REPAIR AREA



GIRDER NUMBER

PROJECT NO. **15BPR.107**

ONslow COUNTY

BRIDGE NO. **660253**

SHEET 6 OF 15



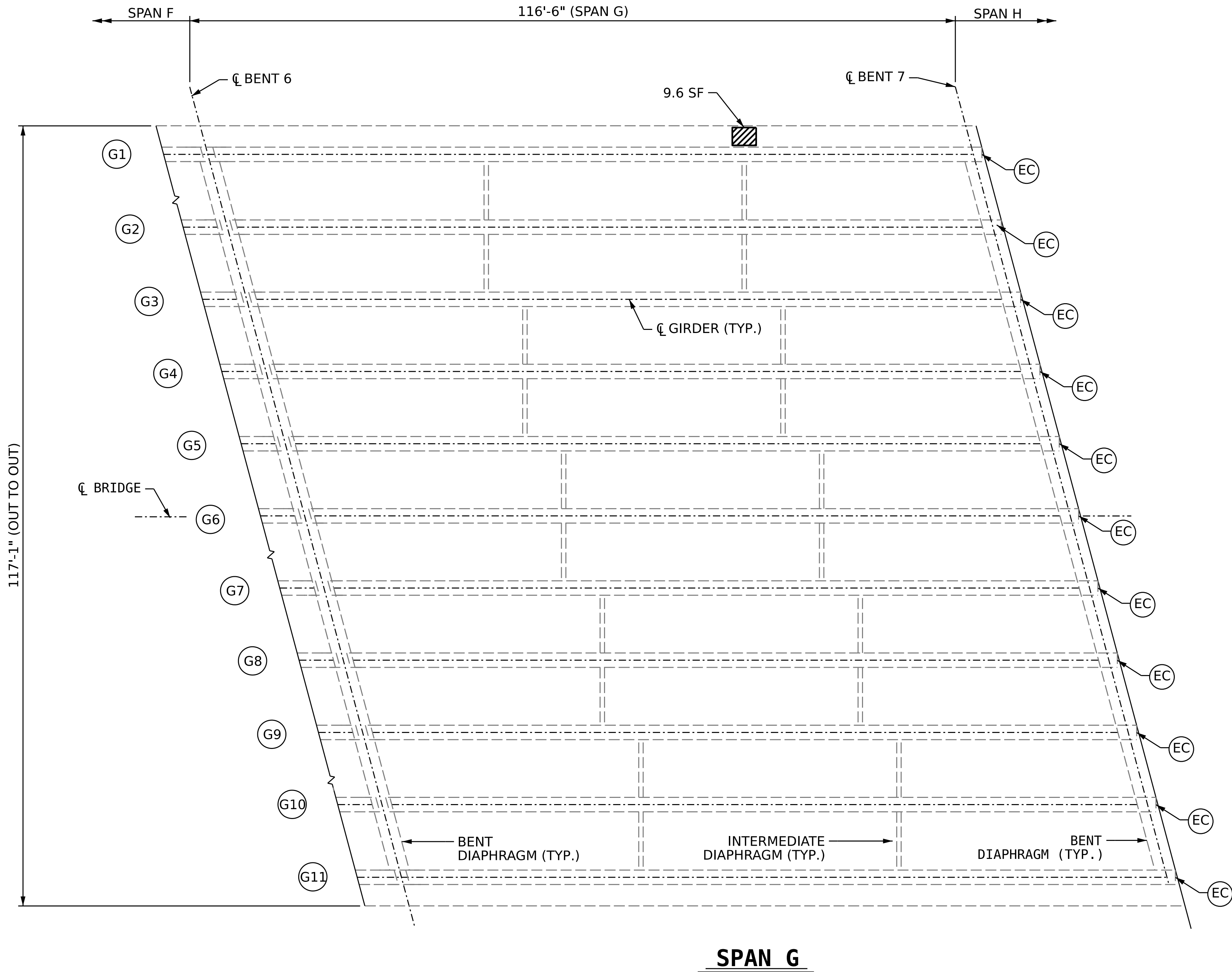
05/22/2026

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH				
DECK UNDERSIDE REPAIR SPAN F				
REVISIONS				
NO.	BY:	DATE:	NO.	BY:
1			3	
2			4	
SHEET NO.				TOTAL SHEETS
S1-17				45

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CHECKED BY : **W.C.SMITH** DATE : **05/2026**
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8/26/21



UNDERSIDE REPAIR QUANTITY TABLE

DECK UNDERSIDE REPAIR- SPAN G

SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA (SQ.FT.)	VOLUME (CU.FT.)	AREA (SQ.FT.)	VOLUME (CU.FT.)
UNDERSIDE OF DECK	0.0	0.0		
DIAPHRAGMS	0.0	0.0		
OVERHANG	9.6	4.8		

EPOXY COATING	AREA (SQ.FT.)		AREA (SQ.FT.)	
PRESTRESSED CONCRETE GIRDER ENDS	338.1			

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

NOTES

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FOR EPOXY COATING CONCRETE GIRDER ENDS, SEE PRESTRESSED CONCRETE GIRDER REPAIR DETAILS.

CONCRETE REPAIR AREA

SHOTCRETE REPAIR AREA

EPOXY COATING

GIRDER NUMBER

PROJECT NO. 15BPR.107

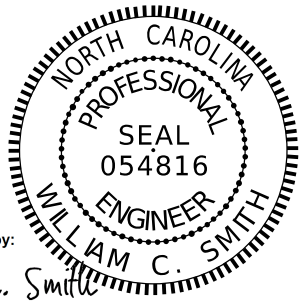
ONSLOW COUNTY

BRIDGE NO. 660253

SHEET 7 OF 15

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK UNDERSIDE REPAIR
SPAN G



05/22/2026

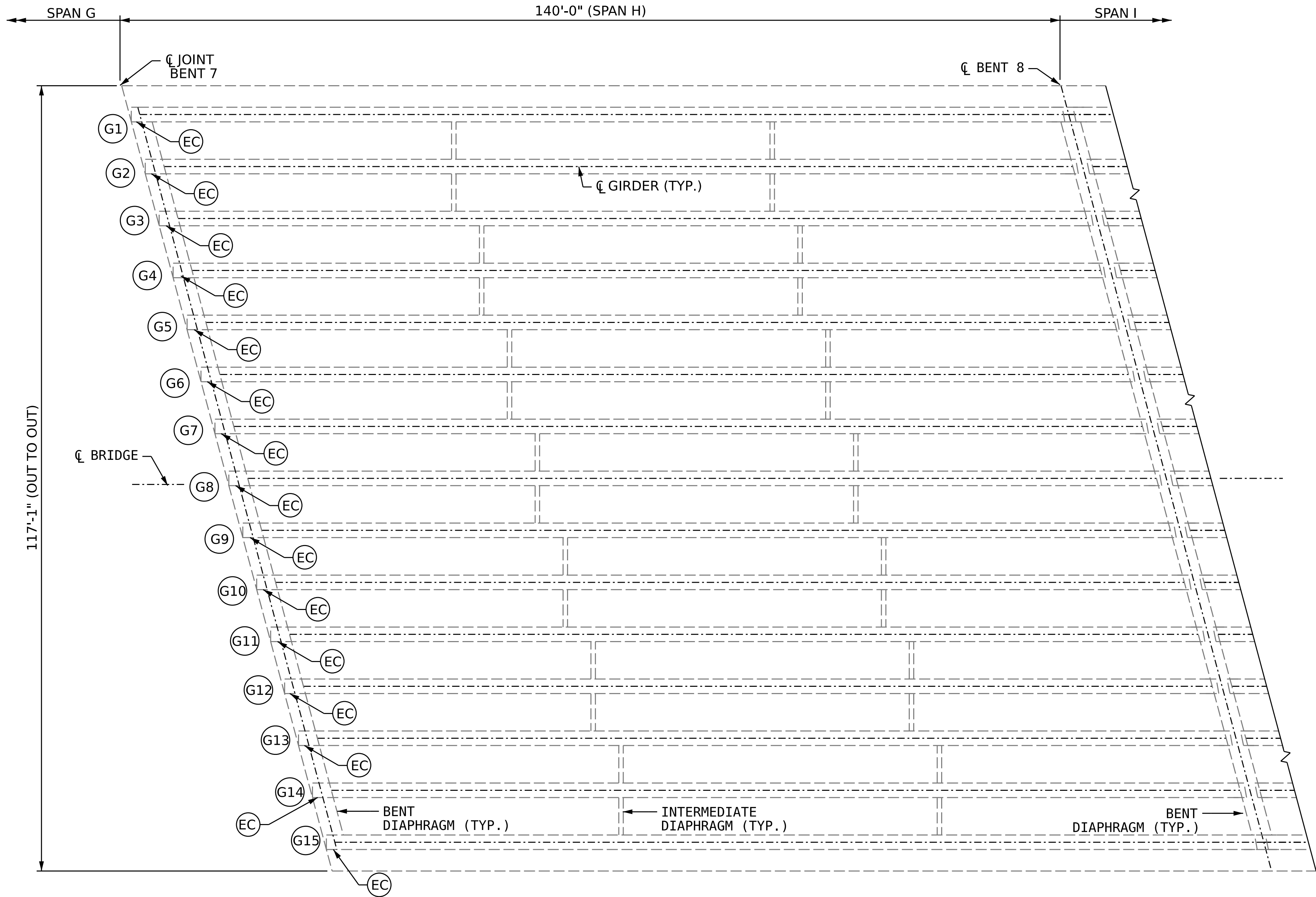
DRAWN BY : J.J.ANDERSON DATE : 03/2026
CHECKED BY : W.C.SMITH DATE : 05/2026
DESIGN ENGINEER OF RECORD: DATE :

5/13/2026
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jjanderson2

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REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
TOTAL SHEETS					45

8/26/21



SPAN H

UNDERSIDE REPAIR QUANTITY TABLE

DECK UNDERSIDE REPAIR- SPAN H

SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA (SQ.FT.)	VOLUME (CU.FT.)	AREA (SQ.FT.)	VOLUME (CU.FT.)
UNDERSIDE OF DECK	0.0	0.0		
DIAPHRAGMS	0.0	0.0		
OVERHANG	0.0	0.0		

EPOXY COATING	AREA (SQ.FT.)		AREA (SQ.FT.)	
PRESTRESSED CONCRETE GIRDER ENDS	519.6			

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

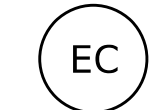
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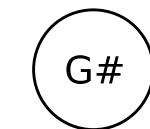
REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES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

FOR EPOXY COATING CONCRETE GIRDER ENDS, SEE PRESTRESSED CONCRETE GIRDER REPAIR DETAILS.

 CONCRETE REPAIR AREA

 SHOTCRETE REPAIR AREA

 EPOXY COATING

 GIRDER NUMBER

PROJECT NO. **15BPR.107**

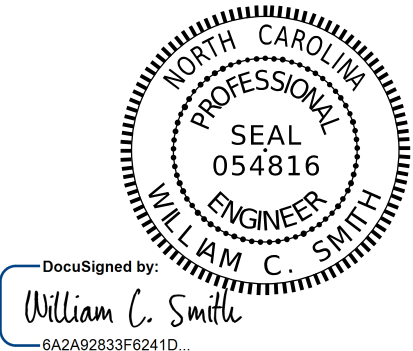
ONslow COUNTY

BRIDGE NO. **660253**

SHEET 8 OF 15

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**DECK UNDERSIDE REPAIR
SPAN H**



05/22/2026

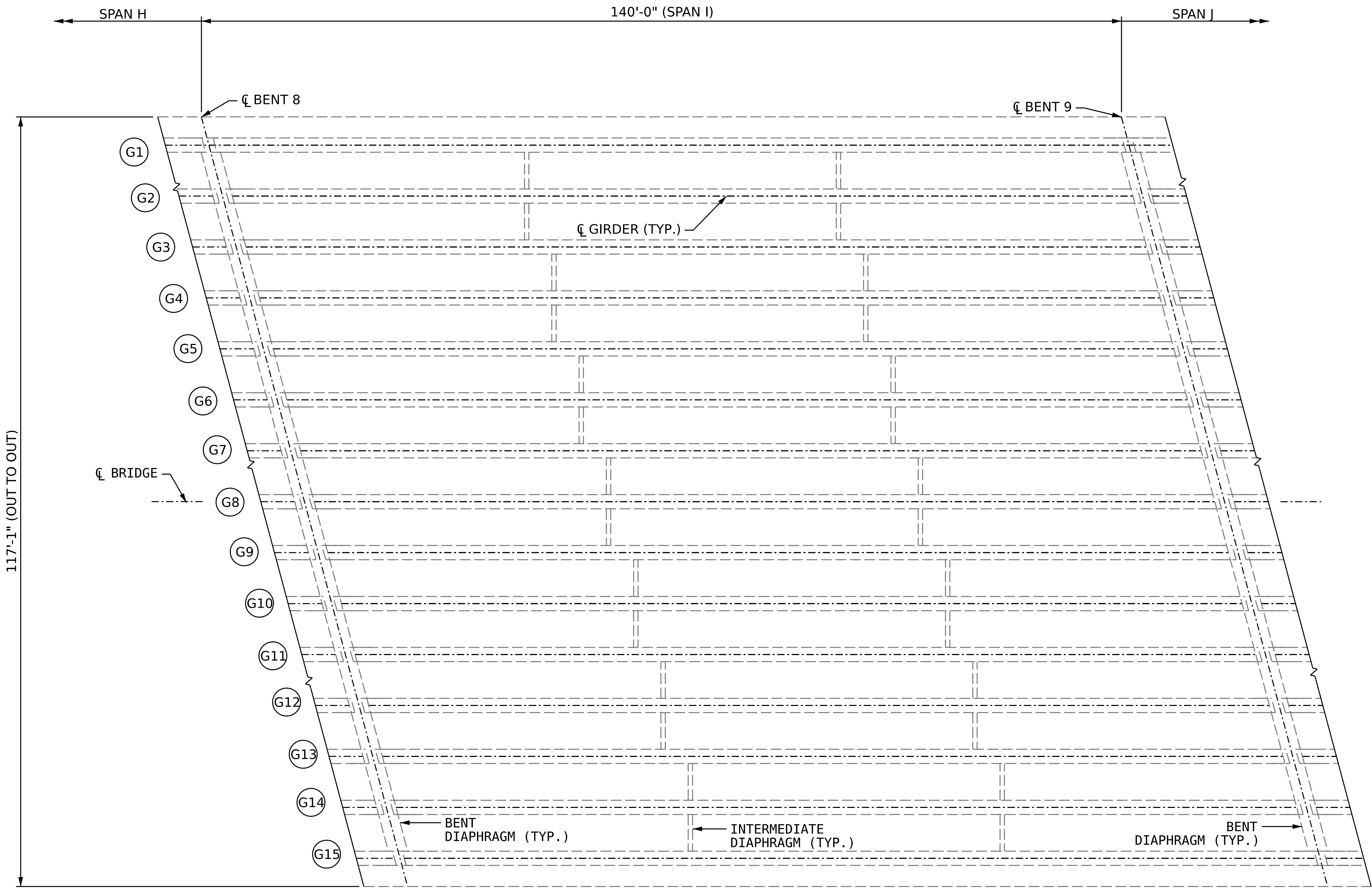
DRAWN BY : **J.J.ANDERSON** DATE : **03/2026**
CHECKED BY : **W.C.SMITH** DATE : **05/2026**
DESIGN ENGINEER OF RECORD: DATE :

5/13/2026
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jjanderson2

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REVISIONS					SHEET NO. S1-19
NO.	BY:	DATE:	NO.	BY:	
1			3		TOTAL SHEETS 45
2			4		

8/26/21



SPAN I

UNDERSIDE REPAIR QUANTITY TABLE

DECK UNDERSIDE REPAIR- SPAN I

SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA (SQ.FT.)	VOLUME (CU.FT.)	AREA (SQ.FT.)	VOLUME (CU.FT.)
UNDERSIDE OF DECK	0.0	0.0		
DIAPHRAGMS	0.0	0.0		
OVERHANG	0.0	0.0		

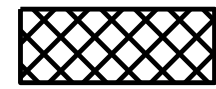
EPOXY COATING	AREA (SQ.FT.)		AREA (SQ.FT.)	
PRESTRESSED CONCRETE GIRDER ENDS	0.0			

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

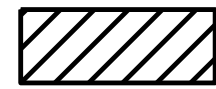
NOTES

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FOR EPOXY COATING CONCRETE GIRDER ENDS, SEE PRESTRESSED CONCRETE GIRDER REPAIR DETAILS.



CONCRETE REPAIR AREA



SHOTCRETE REPAIR AREA



GIRDER NUMBER

PROJECT NO. **15BPR.107**

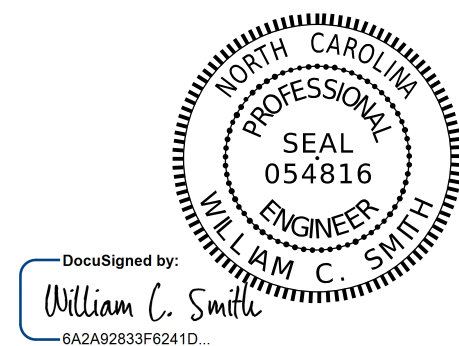
ONslow COUNTY

BRIDGE NO. **660253**

SHEET 9 OF 15

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK UNDERSIDE REPAIR SPAN I



05/22/2026

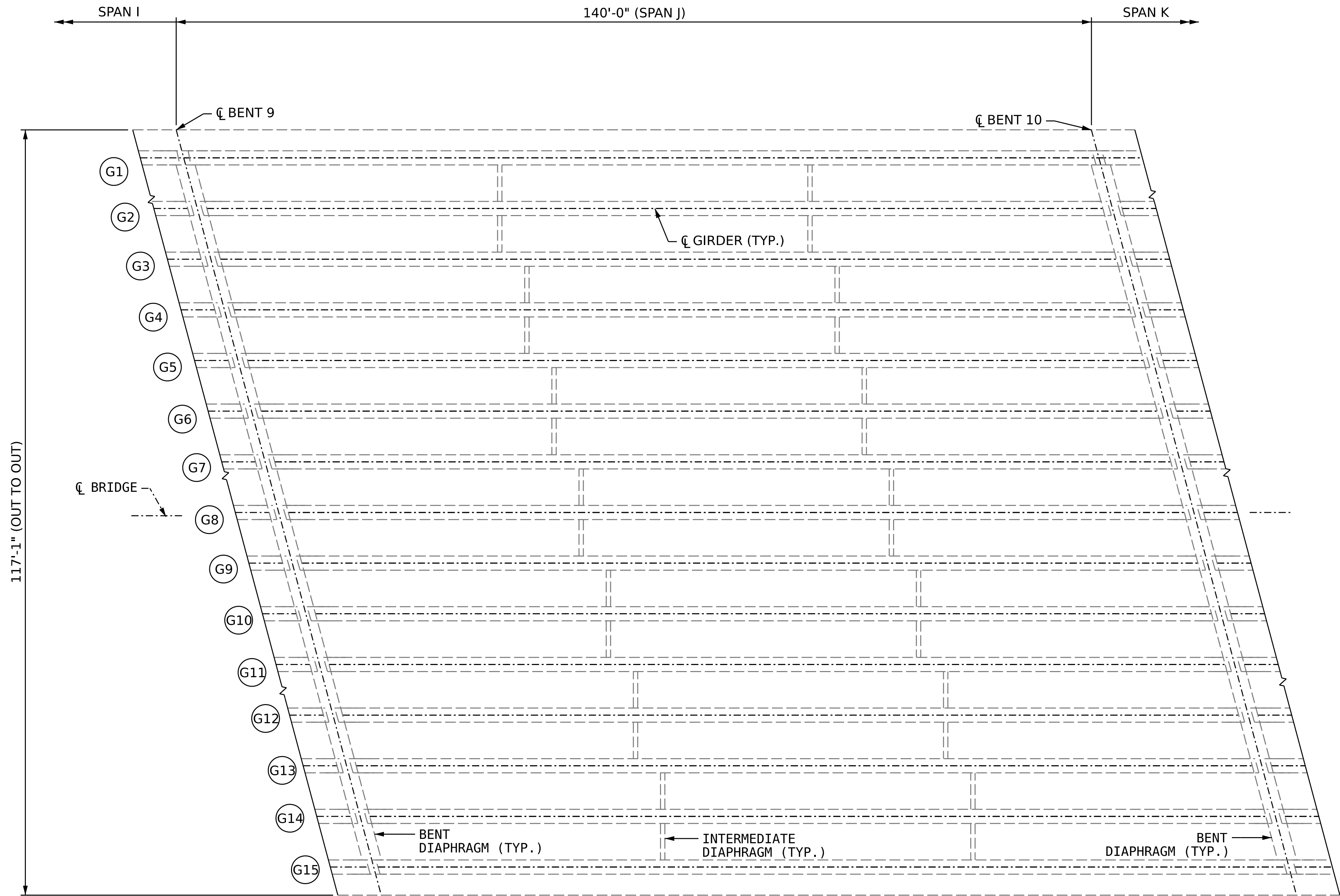
DRAWN BY : **J.J.ANDERSON** DATE : **03/2026**
CHECKED BY : **W.C.SMITH** DATE : **05/2026**
DESIGN ENGINEER OF RECORD: DATE :

5/14/2026
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wcsmith

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SIGNATURES COMPLETED

REVISIONS						SHEET NO. S1-20
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 45
2			4			

8/26/21



SPAN J

UNDERSIDE REPAIR QUANTITY TABLE				
DECK UNDERSIDE REPAIR- SPAN J				
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA (SQ.FT.)	VOLUME (CU.FT.)	AREA (SQ.FT.)	VOLUME (CU.FT.)
UNDERSIDE OF DECK	0.0	0.0		
DIAPHRAGMS	0.0	0.0		
OVERHANG	0.0	0.0		
EPOXY COATING	AREA (SQ.FT.)		AREA (SQ.FT.)	
PRESTRESSED CONCRETE GIRDER ENDS	0.0			

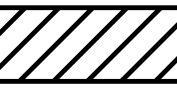
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

NOTES

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FOR EPOXY COATING CONCRETE GIRDER ENDS, SEE PRESTRESSED CONCRETE GIRDER REPAIR DETAILS.

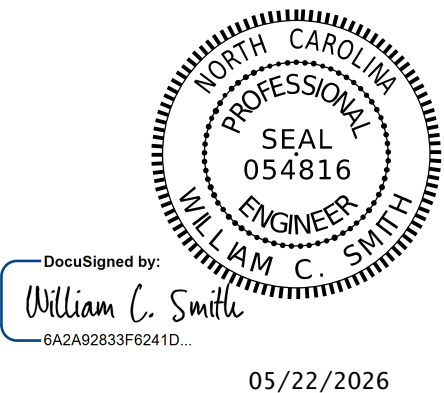
 CONCRETE REPAIR AREA

 SHOTCRETE REPAIR AREA

 GIRDER NUMBER

PROJECT NO. **15BPR.107**
ONslow COUNTY
BRIDGE NO. **660253**

SHEET 10 OF 15



STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION

RALEIGH

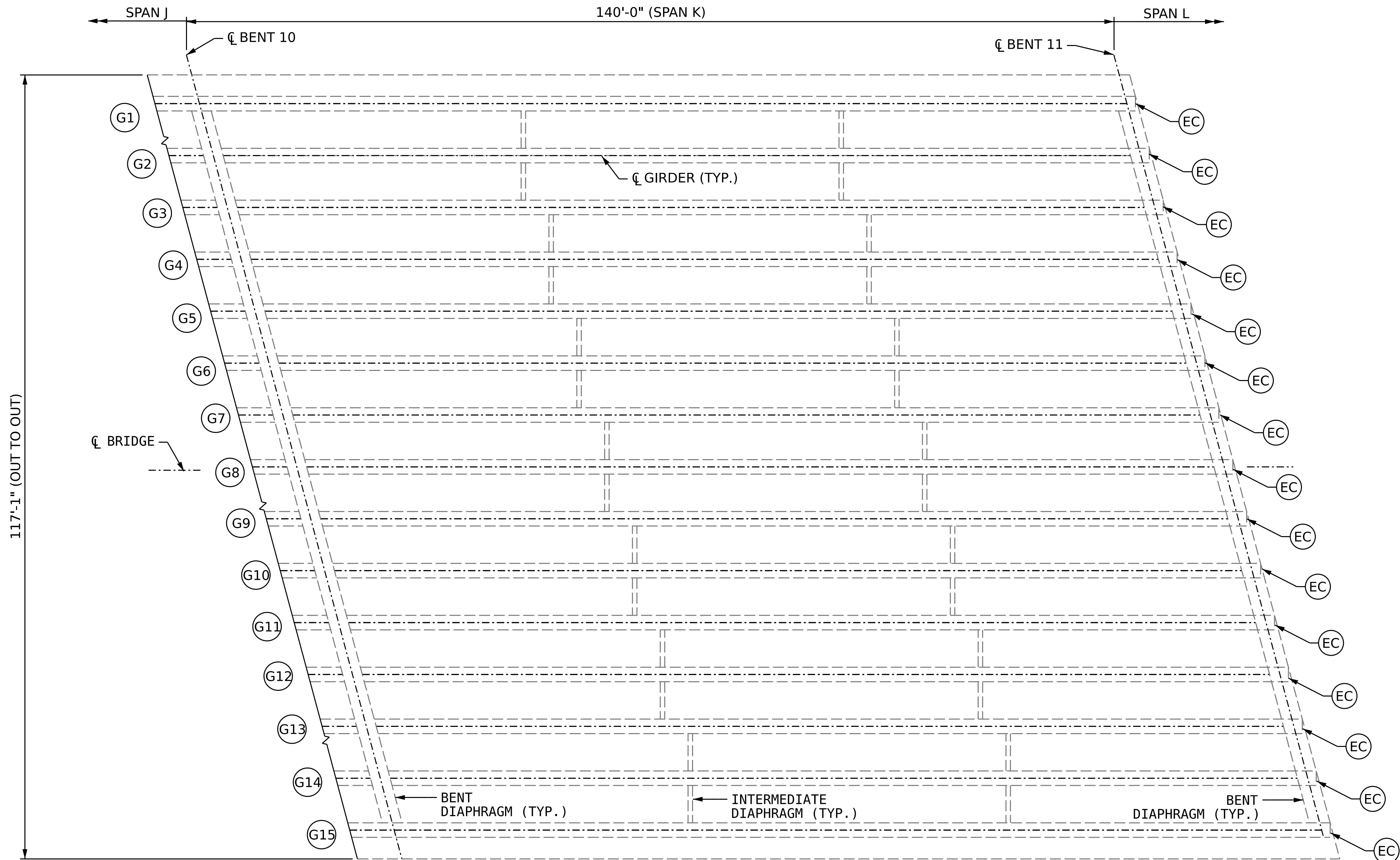
DECK UNDERSIDE REPAIR

SPAN J

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-21
1			3			TOTAL SHEETS 45
2			4			

DRAWN BY : J.J.ANDERSON DATE : 03/2026
CHECKED BY : W.C.SMITH DATE : 05/2026
DESIGN ENGINEER OF RECORD: _____ DATE : _____

8/26/21



UNDERSIDE REPAIR QUANTITY TABLE

DECK UNDERSIDE REPAIR- SPAN K

	ESTIMATE		ACTUAL	
	AREA (SQ.FT.)	VOLUME (CU.FT.)	AREA (SQ.FT.)	VOLUME (CU.FT.)
SHOTCRETE REPAIRS				
UNDERSIDE OF DECK	0.0	0.0		
DIAPHRAGMS	0.0	0.0		
OVERHANG	0.0	0.0		

EPOXY COATING	AREA (SQ.FT.)		AREA (SQ.FT.)	
PRESTRESSED CONCRETE GIRDER ENDS	519.6			

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

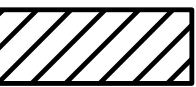
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FOR EPOXY COATING CONCRETE GIRDER ENDS, SEE PRESTRESSED CONCRETE GIRDER REPAIR DETAILS.



CONCRETE REPAIR AREA



SHOTCRETE REPAIR AREA



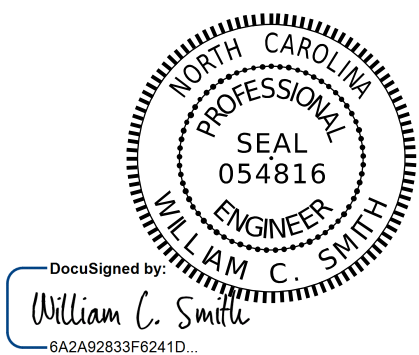
EPOXY COATING



GIRDER NUMBER

PROJECT NO. **15BPR.107**
ONSLOW COUNTY
BRIDGE NO. **660253**

SHEET 11 OF 15



05/22/2026

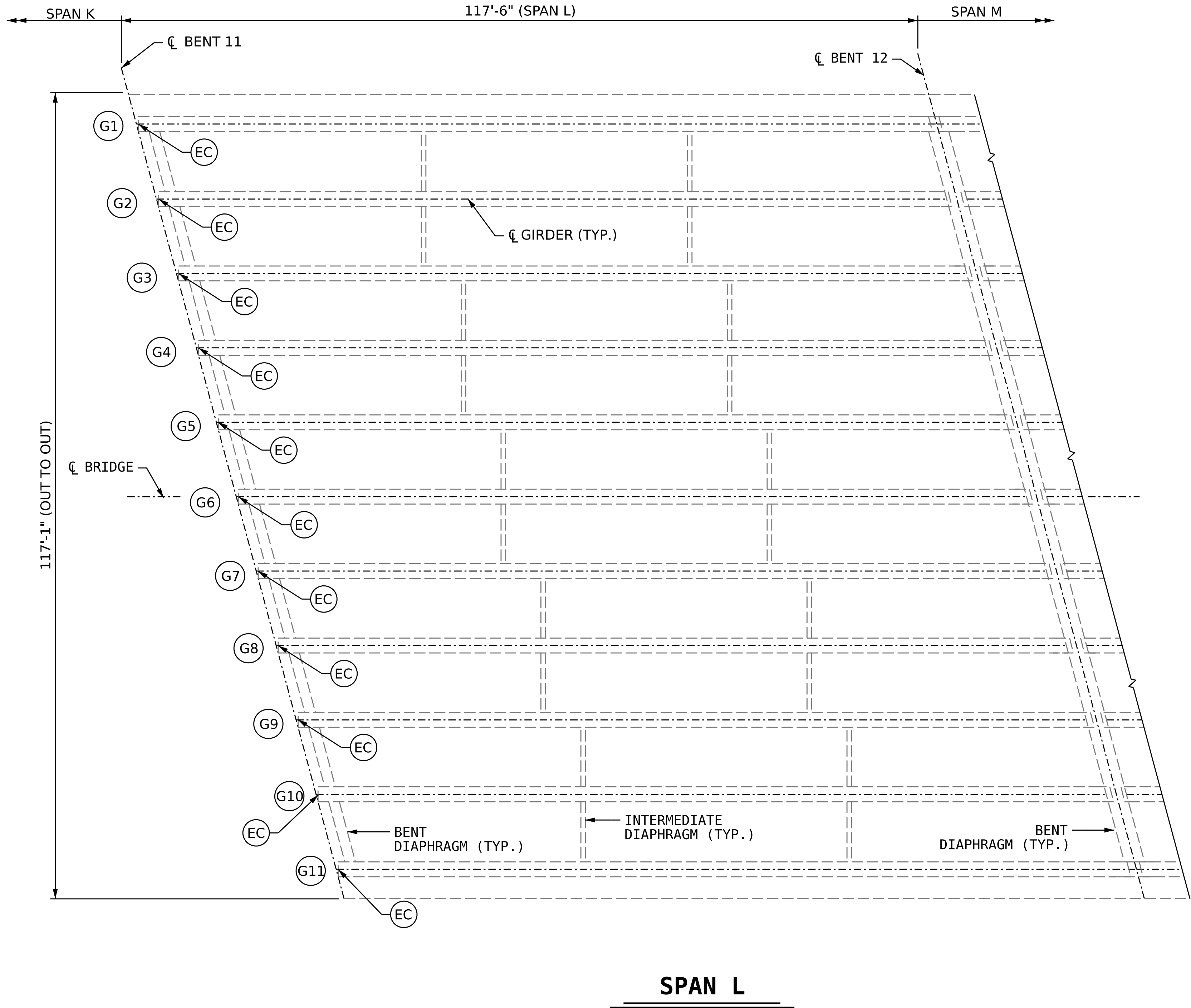
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK UNDERSIDE REPAIR SPAN K

REVISIONS					SHEET NO. S1-22
NO.	BY:	DATE:	NO.	BY:	
1			3		TOTAL SHEETS 45
2			4		

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DRAWN BY : J.J.ANDERSON DATE : 03/2026
CHECKED BY : W.C.SMITH DATE : 05/2026
DESIGN ENGINEER OF RECORD: DATE :



UNDERSIDE REPAIR QUANTITY TABLE				
DECK UNDERSIDE REPAIR- SPAN L				
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA (SQ.FT.)	VOLUME (CU.FT.)	AREA (SQ.FT.)	VOLUME (CU.FT.)
UNDERSIDE OF DECK	0.0	0.0		
DIAPHRAGMS	0.0	0.0		
OVERHANG	0.0	0.0		
EPOXT COATING	AREA (SQ.FT.)		AREA (SQ.FT.)	
PRESTRESSED CONCRETE GIRDER ENDS	338.1			

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

NOTES

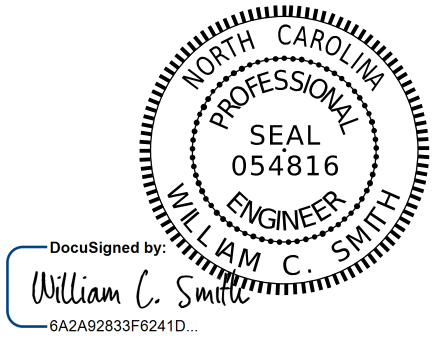
REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES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

FOR EPOXY COATING CONCRETE GIRDER ENDS, SEE PRESTRESSED CONCRETE GIRDER REPAIR DETAILS.

-  CONCRETE REPAIR AREA
-  SHOTCRETE REPAIR AREA
-  GIRDER NUMBER
-  EPOXY COATING

PROJECT NO. **15BPR.107**
ONSLOW COUNTY
BRIDGE NO. **660253**

SHEET 12 OF 15



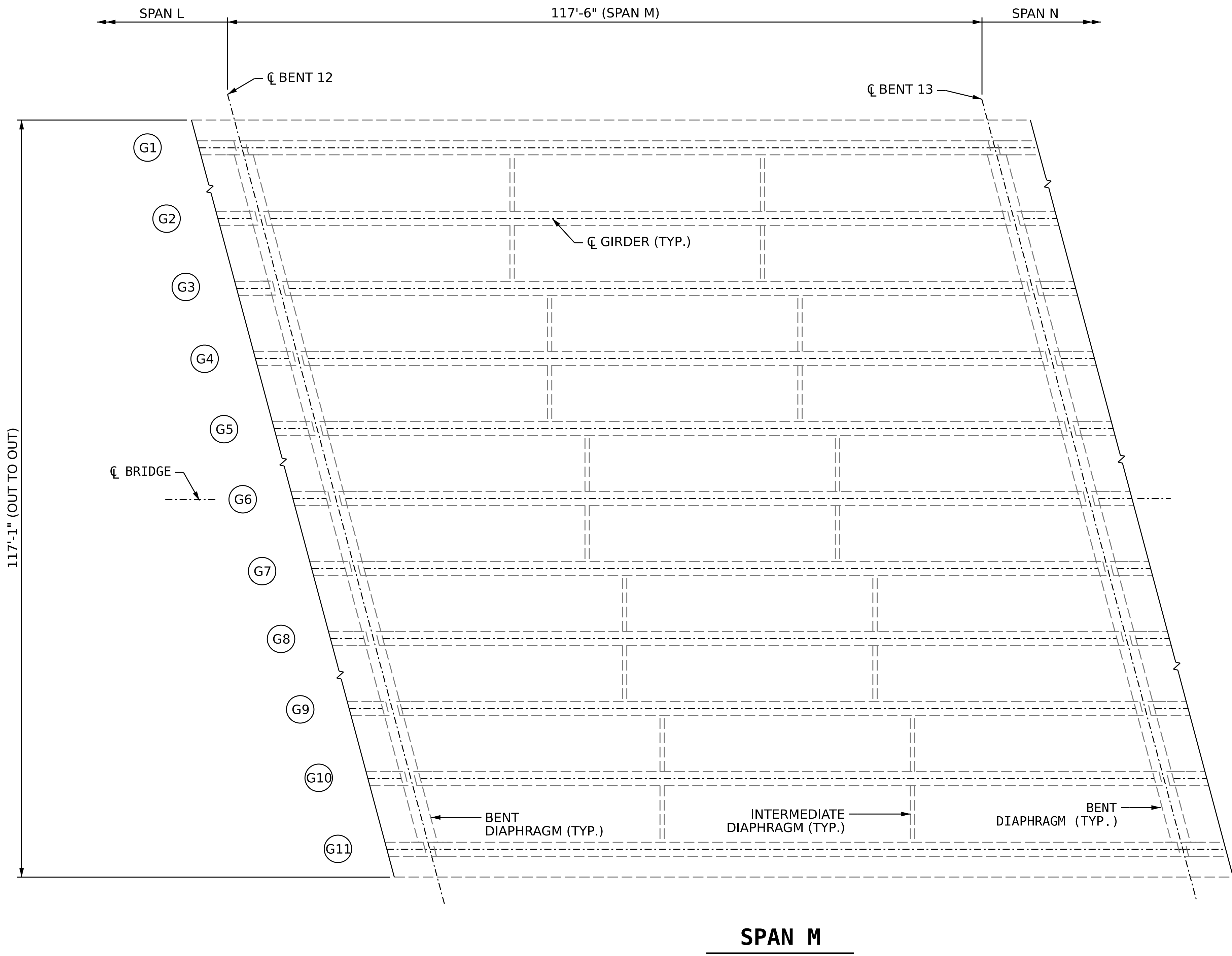
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
**DECK UNDERSIDE REPAIR
SPAN L**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			45
2			4			

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DRAWN BY : **J.J.ANDERSON** DATE : **03/2026**
CHECKED BY : **W.C.SMITH** DATE : **05/2026**
DESIGN ENGINEER OF RECORD: _____ DATE : _____

8/26/21



UNDERSIDE REPAIR QUANTITY TABLE

DECK UNDERSIDE REPAIR- SPAN M				
SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA (SQ.FT.)	VOLUME (CU.FT.)	AREA (SQ.FT.)	VOLUME (CU.FT.)
UNDERSIDE OF DECK	0.0	0.0		
DIAPHRAGMS	0.0	0.0		
OVERHANG	0.0	0.0		
EPOXY COATING	AREA (SQ.FT.)		AREA (SQ.FT.)	
PRESTRESSED CONCRETE GIRDER ENDS	0.0			

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

NOTES

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

FOR EPOXY COATING CONCRETE GIRDER ENDS, SEE PRESTRESSED CONCRETE GIRDER REPAIR DETAILS.

CONCRETE REPAIR AREA

SHOTCRETE REPAIR AREA

GIRDER NUMBER

PROJECT NO. **15BPR.107**

ONslow COUNTY

BRIDGE NO. **660253**

SHEET 13 OF 15

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK UNDERSIDE REPAIR
SPAN M



05/22/2026

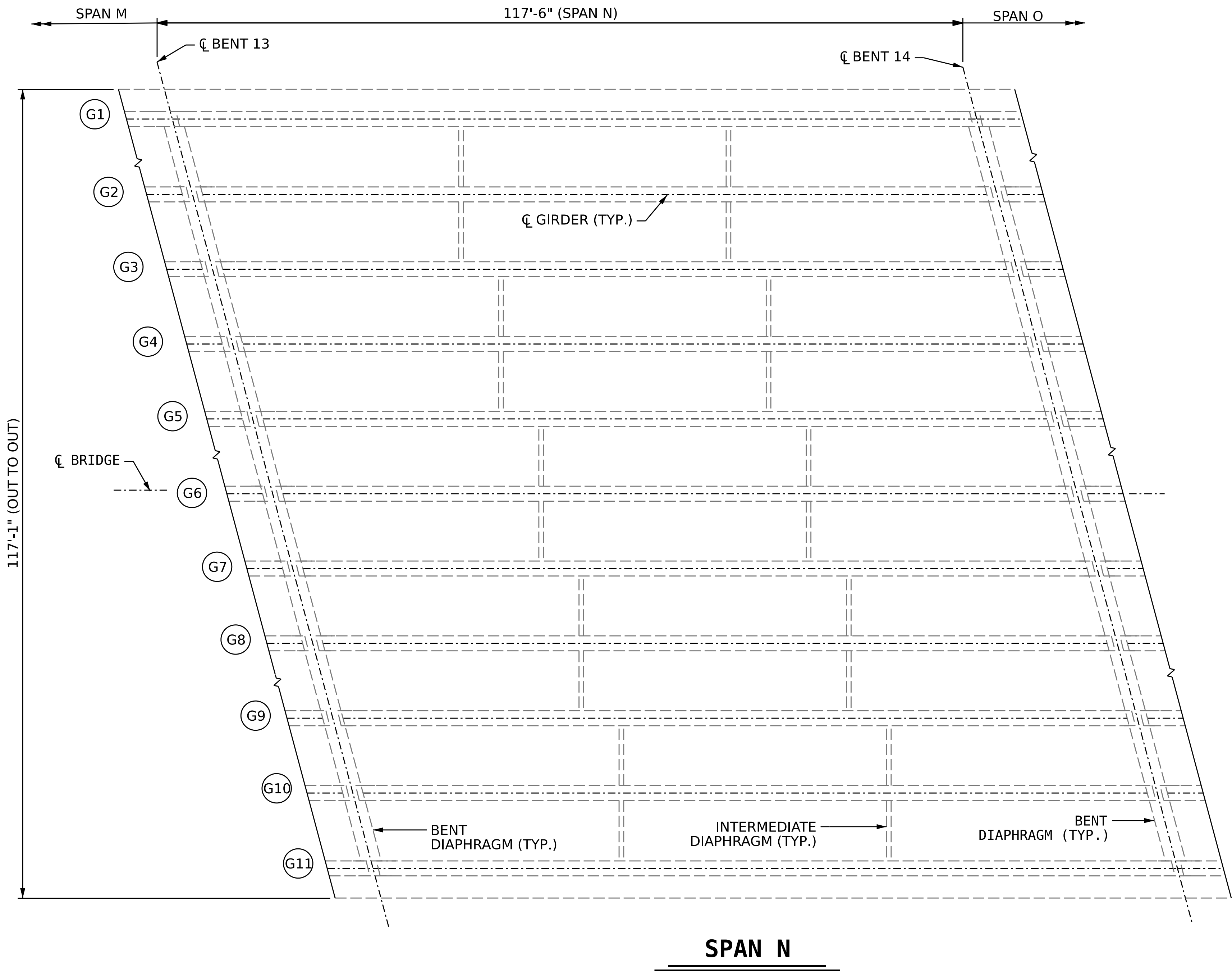
DRAWN BY : **J.J.ANDERSON** DATE : **03/2026**
CHECKED BY : **W.C.SMITH** DATE : **05/2026**
DESIGN ENGINEER OF RECORD: DATE :

5/13/2026
S:\DPG1\Division3\15BPR.107 Onslow\Bridge #660253\PLANS\660253.DUR M.dgn
jjanderson2

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS					SHEET NO. S1-24
NO.	BY:	DATE:	NO.	BY:	
1			3		TOTAL SHEETS 45
2			4		

8/26/21



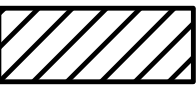
UNDERSIDE REPAIR QUANTITY TABLE				
DECK UNDERSIDE REPAIR- SPAN N				
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA (SQ.FT.)	VOLUME (CU.FT.)	AREA (SQ.FT.)	VOLUME (CU.FT.)
UNDERSIDE OF DECK	0.0	0.0		
DIAPHRAGMS	0.0	0.0		
OVERHANG	0.0	0.0		
EPOXY COATING	AREA (SQ.FT.)		AREA (SQ.FT.)	
PRESTRESSED CONCRETE GIRDER ENDS	0.0			

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

NOTES

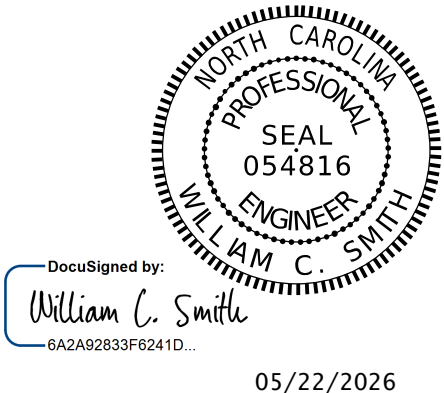
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FOR EPOXY COATING CONCRETE GIRDER ENDS, SEE PRESTRESSED CONCRETE GIRDER REPAIR DETAILS.

-  CONCRETE REPAIR AREA
-  SHOTCRETE REPAIR AREA
-  GIRDER NUMBER

PROJECT NO. **15BPR.107**
ONslow COUNTY
BRIDGE NO. **660253**

SHEET 14 OF 15



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH				
DECK UNDERSIDE REPAIR SPAN N				
REVISIONS				
NO.	BY:	DATE:	NO.	BY:
1			3	
2			4	
SHEET NO. S1-25				TOTAL SHEETS 45

DRAWN BY : J.J.ANDERSON DATE : 03/2026
CHECKED BY : W.C.SMITH DATE : 05/2026
DESIGN ENGINEER OF RECORD: DATE :

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FINAL UNLESS ALL
SIGNATURES COMPLETED



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

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FOR EPOXY COATING CONCRETE GIRDER ENDS, SEE PRESTRESSED CONCRETE GIRDER REPAIR DETAILS.

G# GIRDER NUMBER

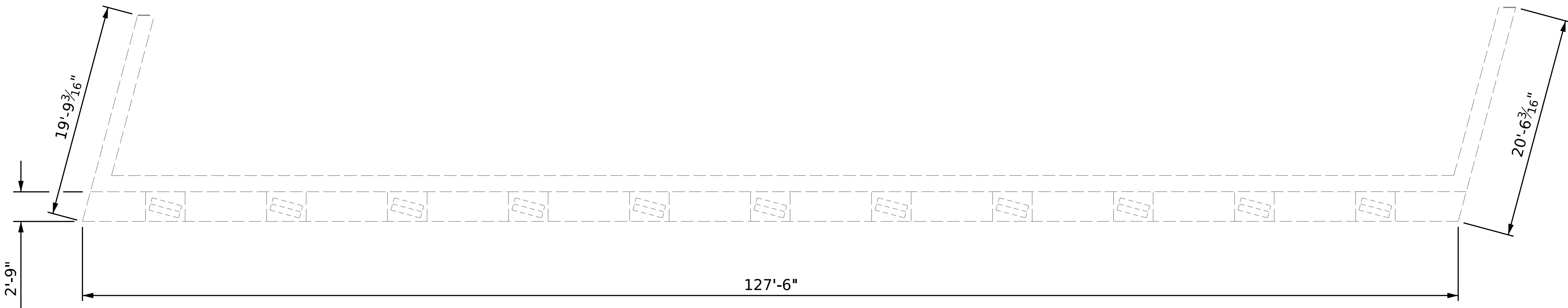
SHEET 15 OF 15

DECK UNDERSIDE REPAIR SPAN 0

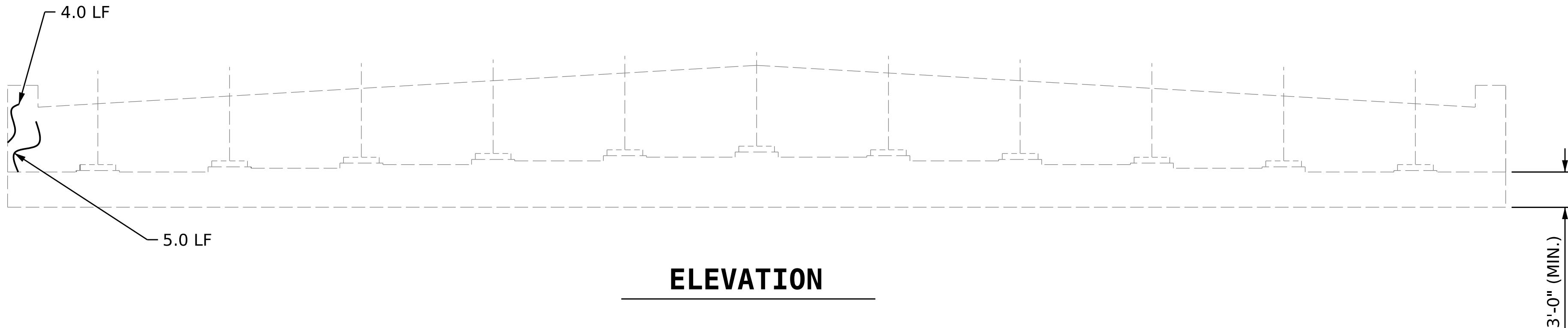
05/22/2026

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

5/13/2026
S:\DPG\Division3\15BPR.107 Onslow\Bridge #660253\PLANS\660253_DUR 0.dgn
janderson2



PLAN



ELEVATION

SUBSTRUCTURE REPAIR QUANTITY TABLE				
REPAIRS- END BENT 1 QUANTITIES				
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
BACKWALL	0.0	0.0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0			
BACKWALL	0.0			
EPOXY COATING	AREA SF		AREA SF	
TOP OF CAP	326.8			
EPOXY RESIN INJECTION	LINEAR FT		LINEAR FT	
CAP				
BACKWALL	9.0			

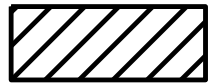
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NOTES

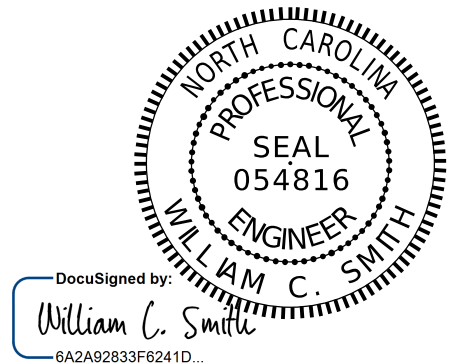
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SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES.

-  SHOTCRETE REPAIR AREA
-  CONCRETE REPAIR AREA
-  EPOXY RESIN INJECTION

PROJECT NO. **15BPR.107**
ONSLOW COUNTY
BRIDGE NO. **660253**



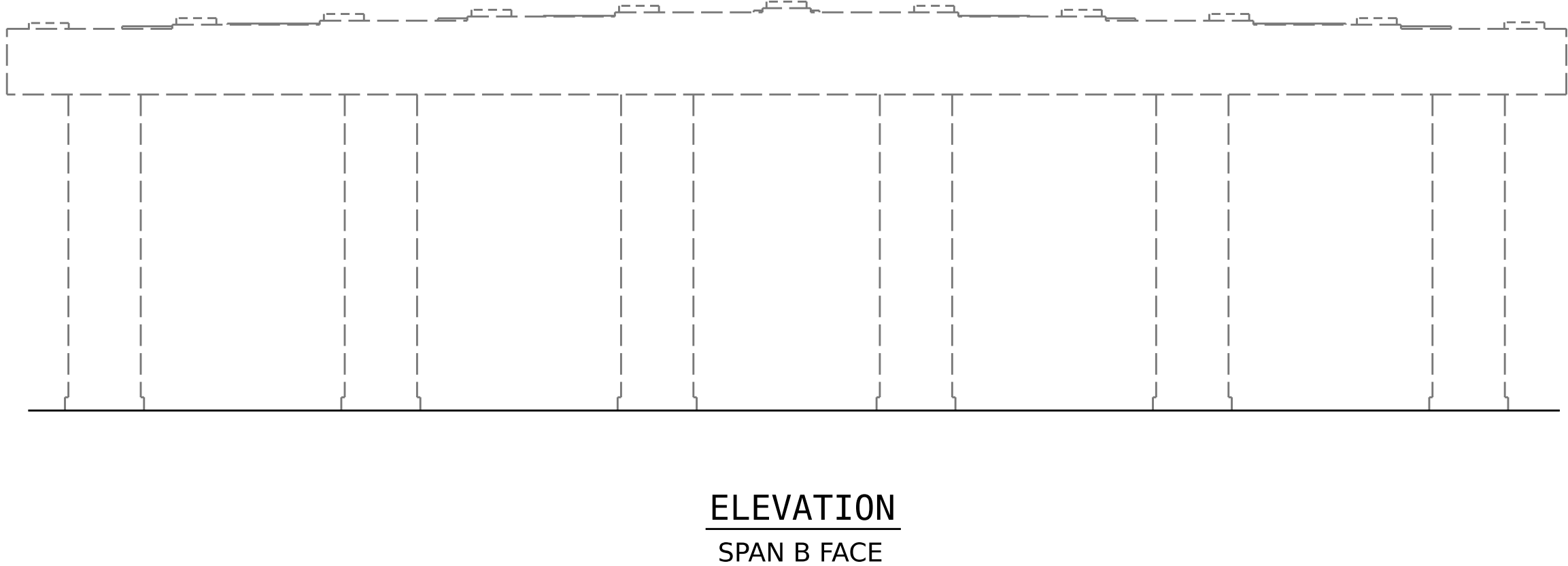
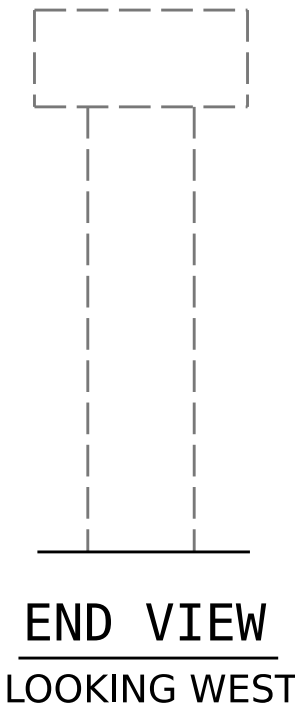
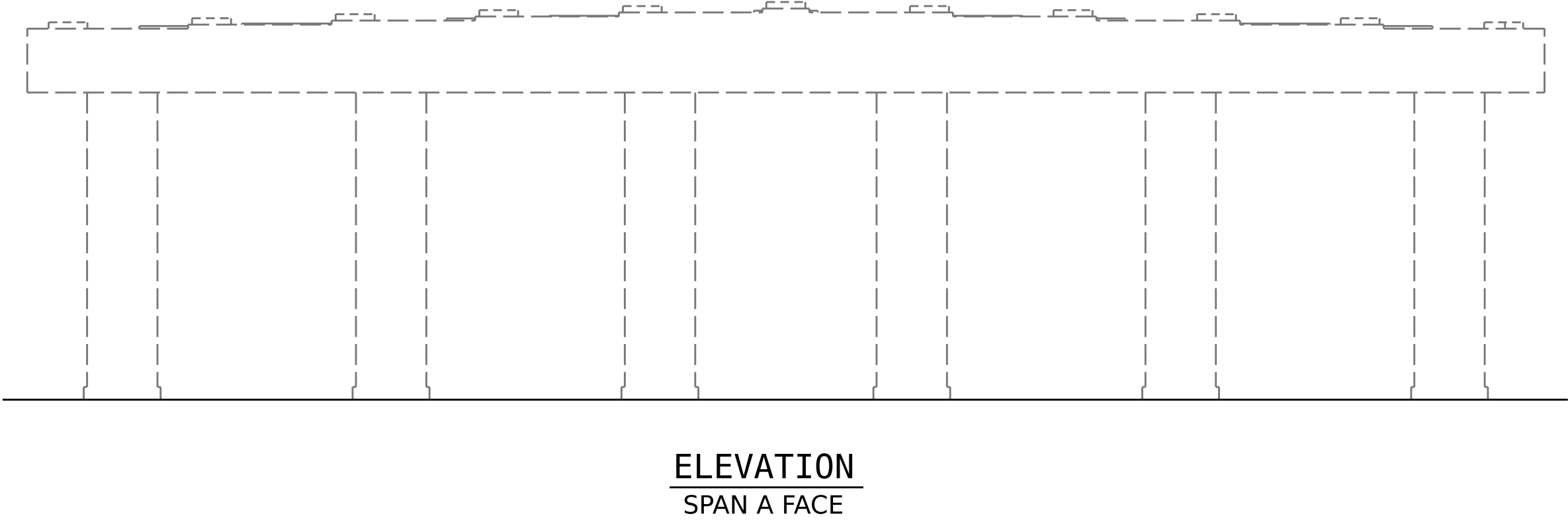
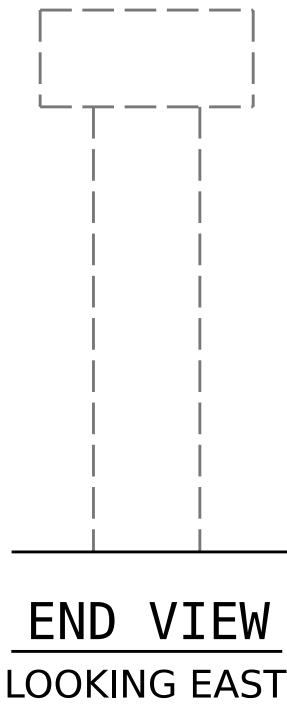
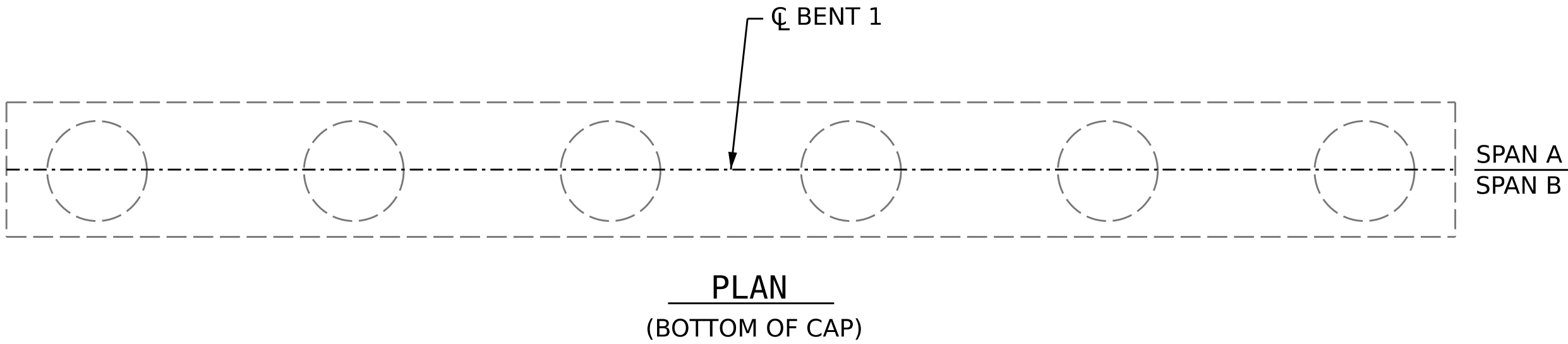
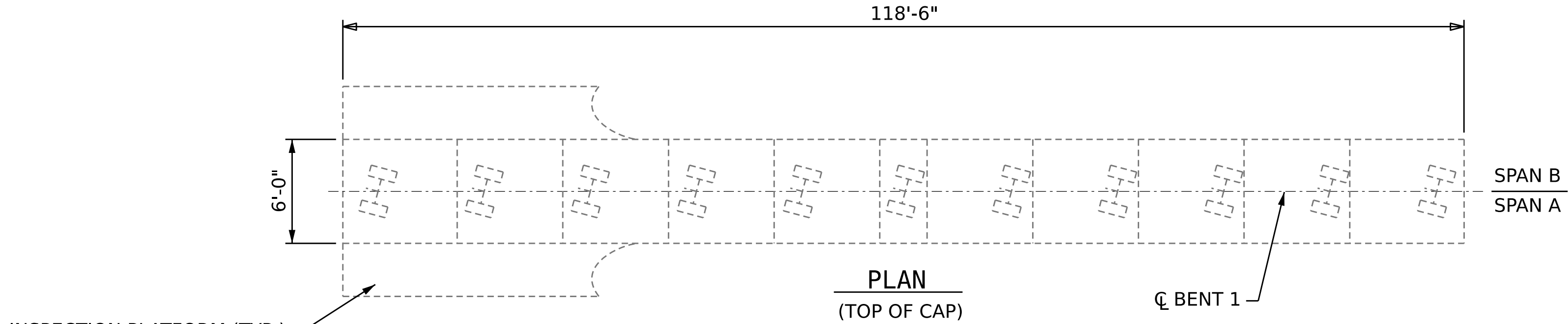
05/22/2026

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH				
SUBSTRUCTURE REPAIRS END BENT 1				
REVISIONS				
NO.	BY:	DATE:	NO.	BY:
1			3	
2			4	
				SHEET NO. S1-27
				TOTAL SHEETS 45

DRAWN BY : J.J.ANDERSON DATE : 03/2026
CHECKED BY : W.C.SMITH DATE : 05/2026
DESIGN ENGINEER OF RECORD: _____ DATE : _____

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

8/26/21



SUBSTRUCTURE REPAIR QUANTITY TABLE				
REPAIRS-BENT 1 QUANTITIES				
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
COLUMN	0.0	0.0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0			
COLUMN	0.0			
EPOXY RESIN INJECTION	LINEAR FT		LINEAR FT	
CAP				
COLUMN				
EPOXY COATING	AREA SF		AREA SF	
TOP OF CAP	663.3			

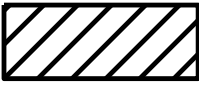
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SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

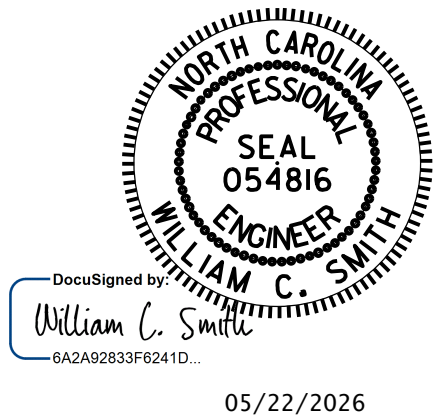
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES.

INSPECTION PLATFORMS NOT SHOWN FOR CLARITY.

-  SHOTCRETE REPAIR AREA
-  CONCRETE REPAIR AREA
-  EPOXY RESIN INJECTION

PROJECT NO. 15BPR.107
ONSLOW COUNTY
BRIDGE NO. 660253

SHEET 1 OF 14

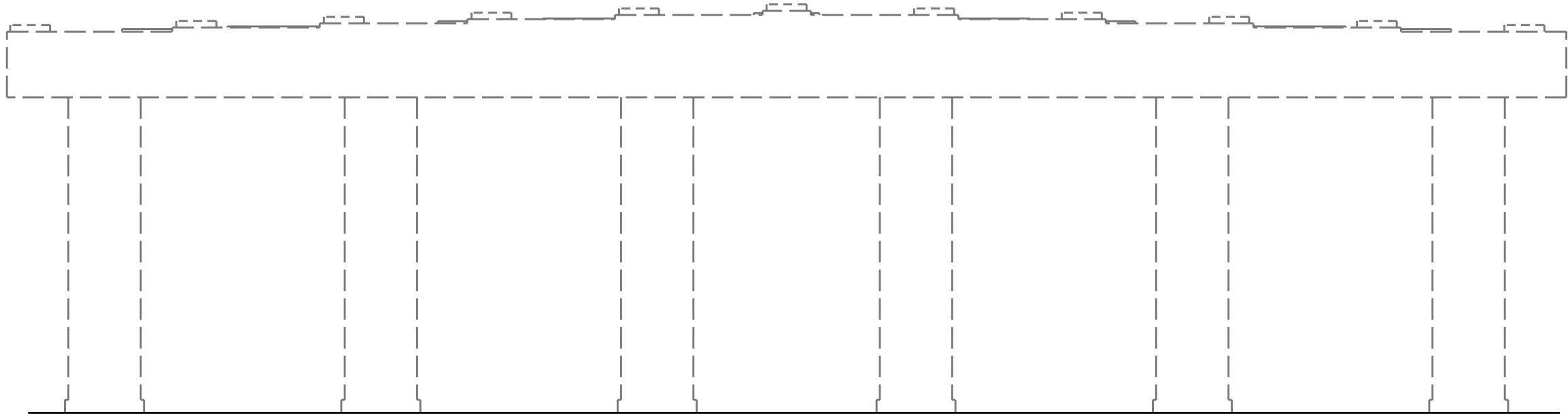
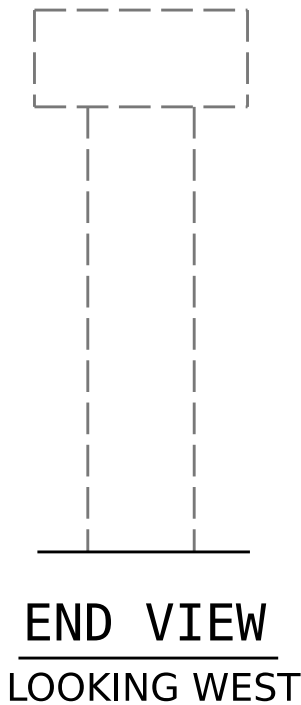
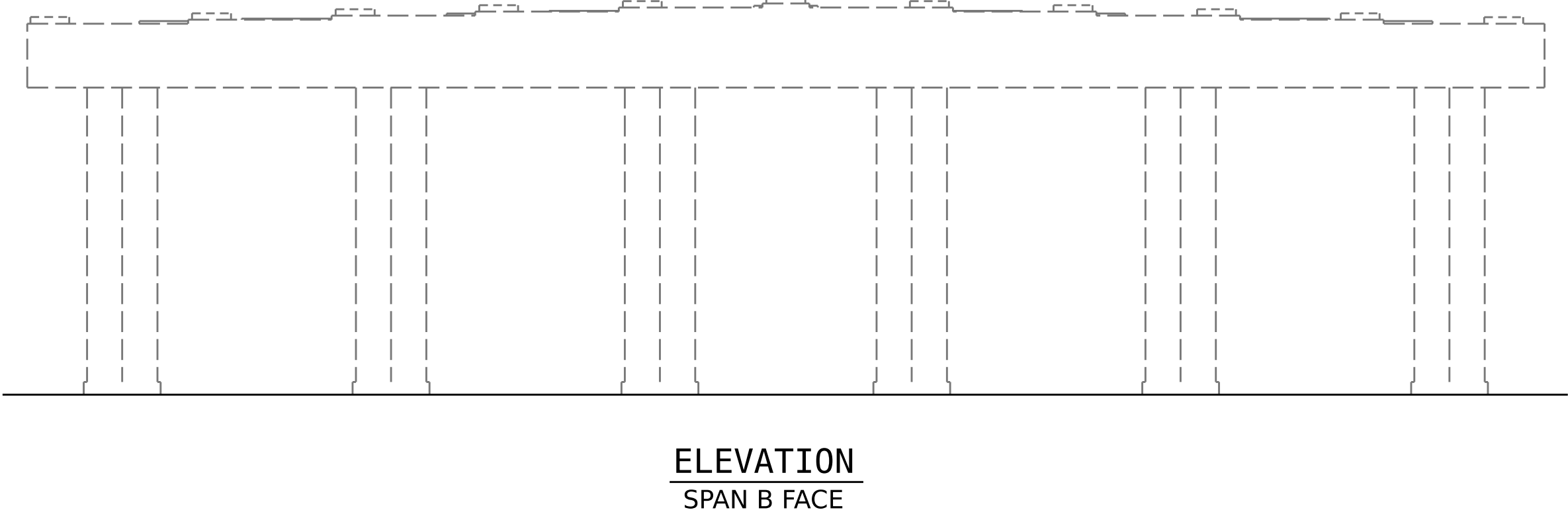
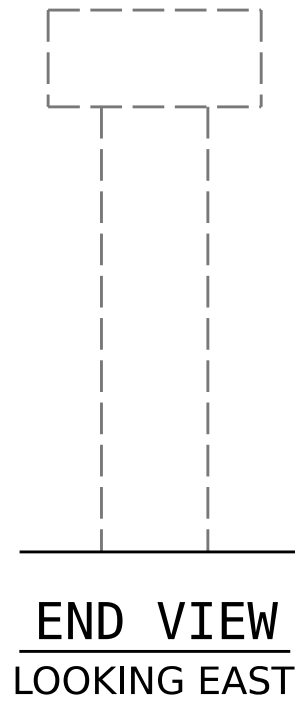
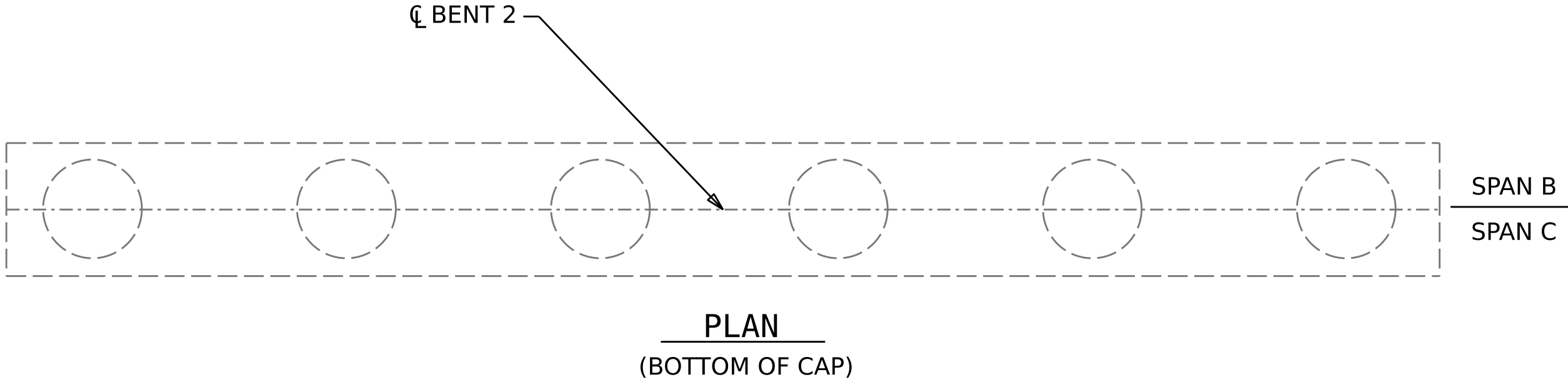
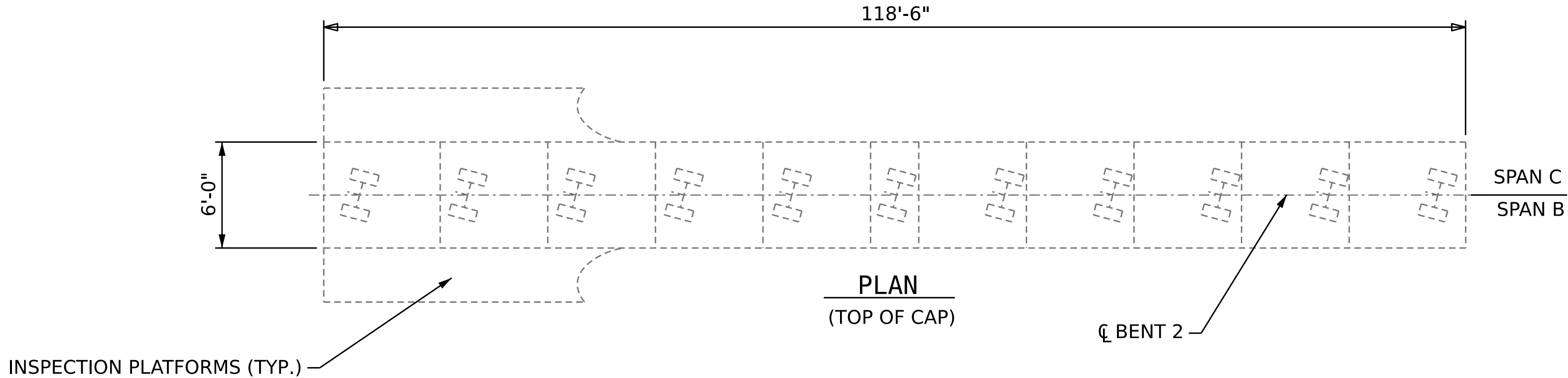


STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					SHEET NO.	
BENT 1 SPAN A/B FACE					51-28	
REVISIONS					TOTAL SHEETS	
NO.	BY:	DATE:	NO.	BY:	DATE:	45
1			3			
2			4			

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

DRAWN BY : J.J.ANDERSON DATE : 04/2026
CHECKED BY : W.C.SMITH DATE : 05/2026
DESIGN ENGINEER OF RECORD: _____ DATE : _____

8/26/21



DRAWN BY : J.J.ANDERSON DATE : 04/2026
CHECKED BY : W.C.SMITH DATE : 05/2026
DESIGN ENGINEER OF RECORD: DATE :

S:\13\2026
S:\DPG1\Division3\15BPR.107 Onslow\Bridge #660253\PLANS\660253. Bent 2 B.C Face.dgn
jjanderson2

SUBSTRUCTURE REPAIR QUANTITY TABLE				
REPAIRS-BENT 2 QUANTITIES				
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
COLUMN	0.0	0.0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0			
COLUMN	0.0			
EPOXY RESIN INJECTION	LINEAR FT		LINEAR FT	
CAP				
COLUMN				
EPOXY COATING	AREA SF		AREA SF	
TOP OF CAP	663.3			

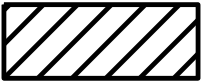
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

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

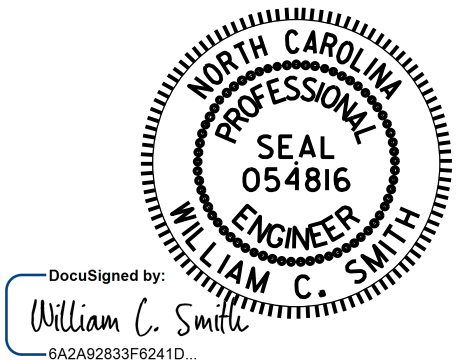
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES.

INSPECTION PLATFORMS NOT SHOWN FOR CLARITY.

-  SHOTCRETE REPAIR AREA
-  CONCRETE REPAIR AREA
-  EPOXY RESIN INJECTION

PROJECT NO. 15BPR.107
ONSNOW COUNTY
BRIDGE NO. 660253

SHEET 2 OF 14



05/22/2026

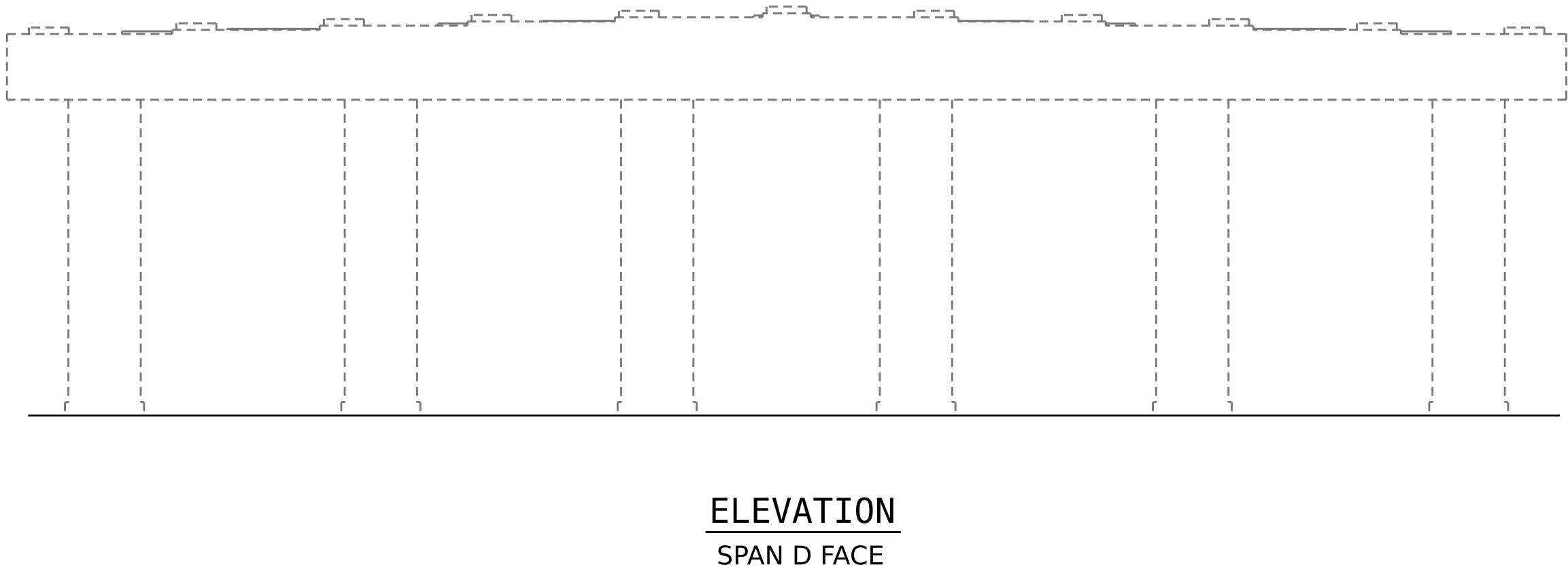
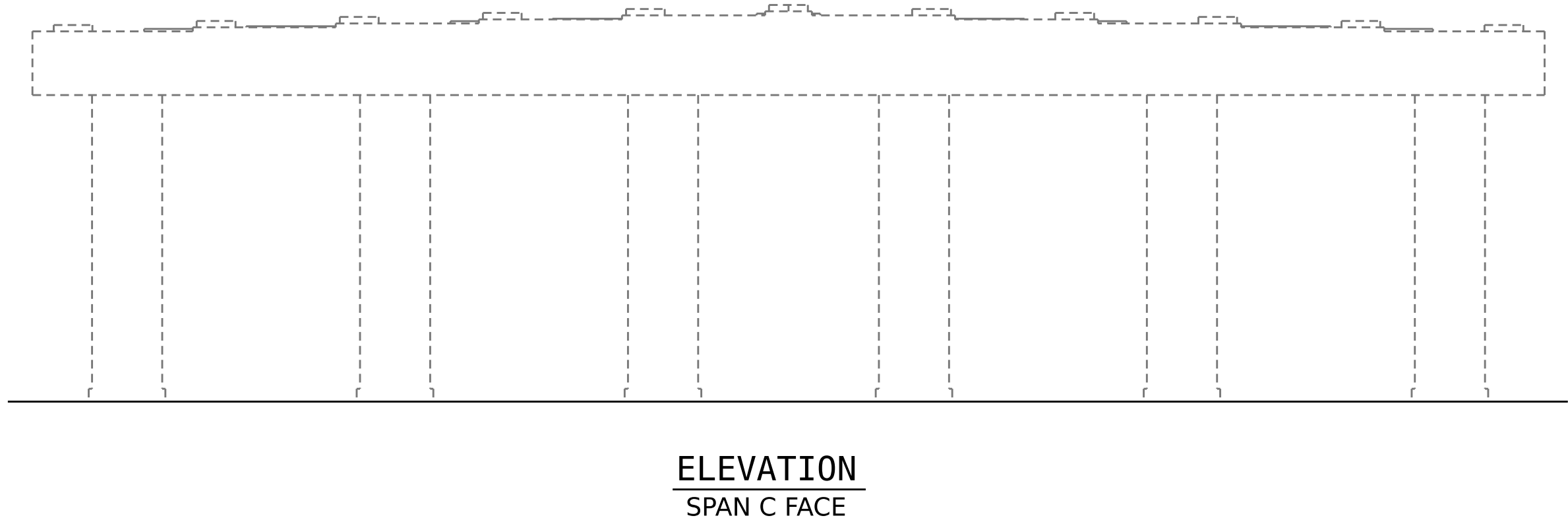
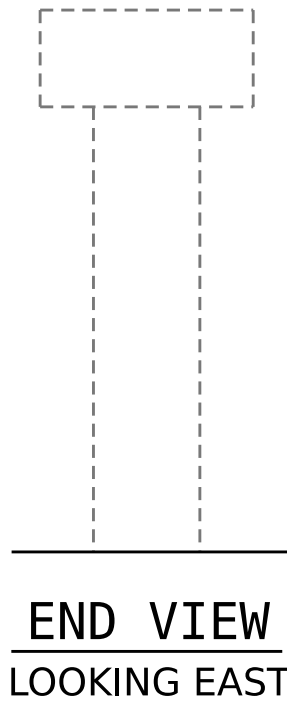
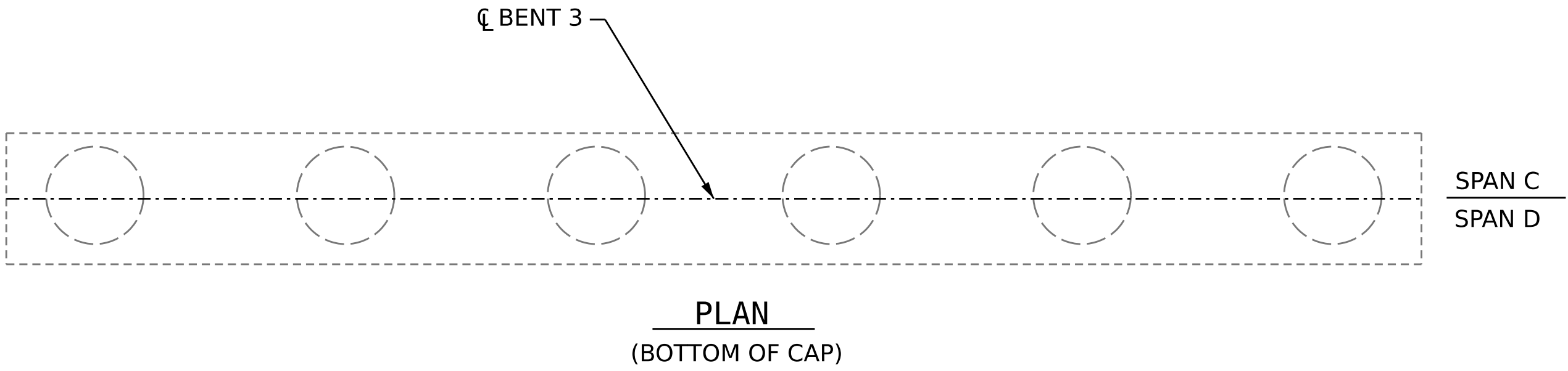
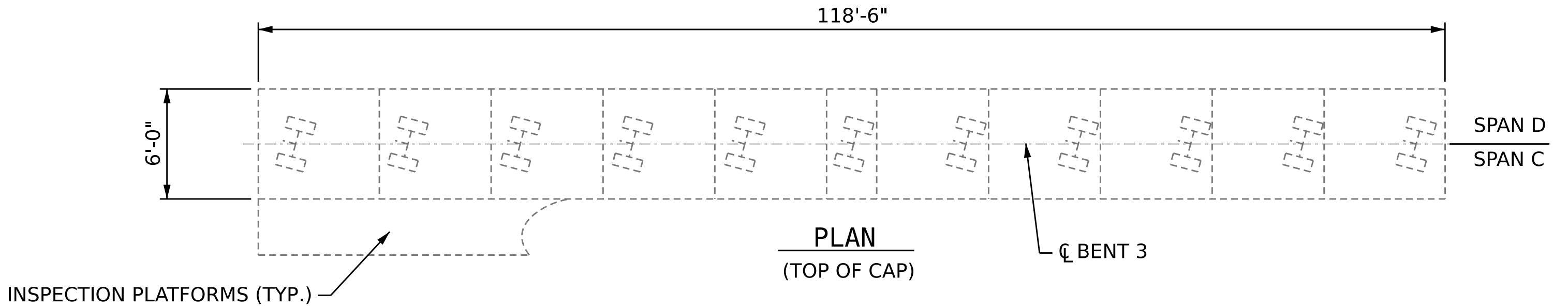
DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO. S1-29		
BENT 2 SPAN B/C FACE						TOTAL SHEETS 45		
REVISIONS								
NO.	BY:	DATE:	NO.	BY:	DATE:			
1			3					
2			4					

8/26/21

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+



SUBSTRUCTURE REPAIR QUANTITY TABLE				
REPAIRS-BENT 3 QUANTITIES				
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
COLUMN	0.0	0.0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0			
COLUMN	0.0			
EPOXY RESIN INJECTION	LINEAR FT		LINEAR FT	
CAP				
COLUMN				
EPOXY COATING	AREA SF		AREA SF	
TOP OF CAP	663.3			

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

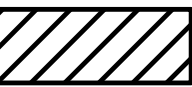
NOTES

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

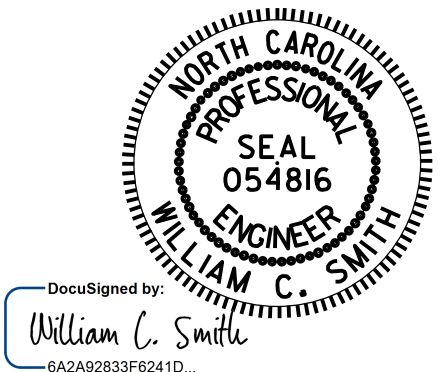
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INSPECTION PLATFORMS NOT SHOWN FOR CLARITY.

-  SHOTCRETE REPAIR AREA
-  CONCRETE REPAIR AREA
-  EPOXY RESIN INJECTION

PROJECT NO. **15BPR.107**
ONSLOW COUNTY
BRIDGE NO. **660253**

SHEET 3 OF 14



05/22/2026

STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION

RALEIGH

BENT 3

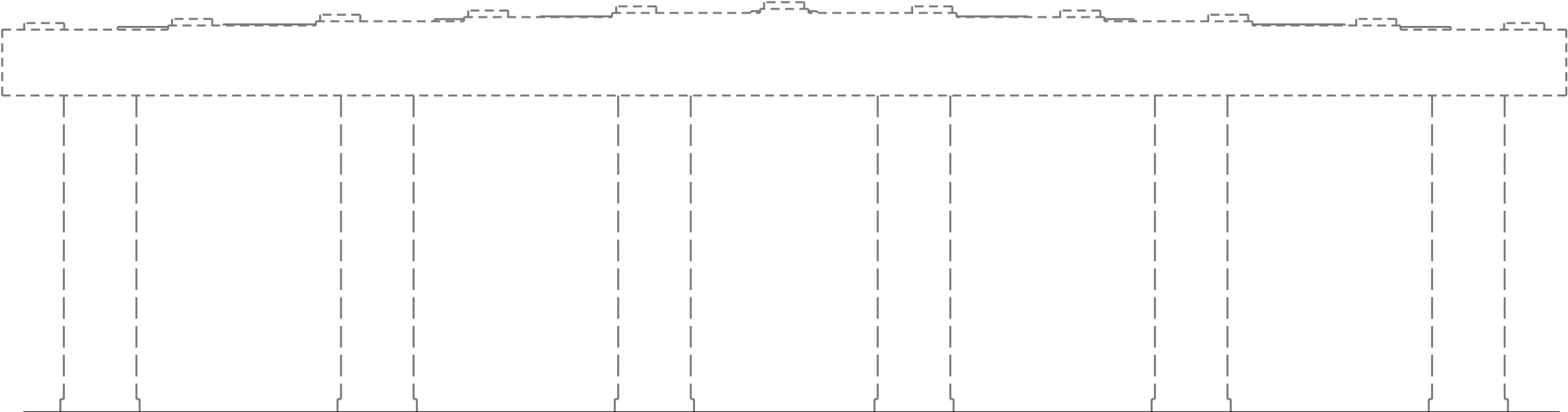
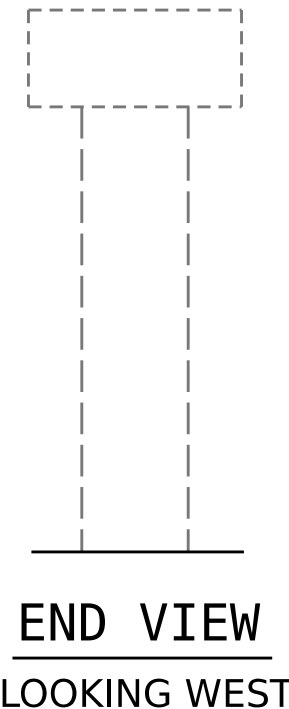
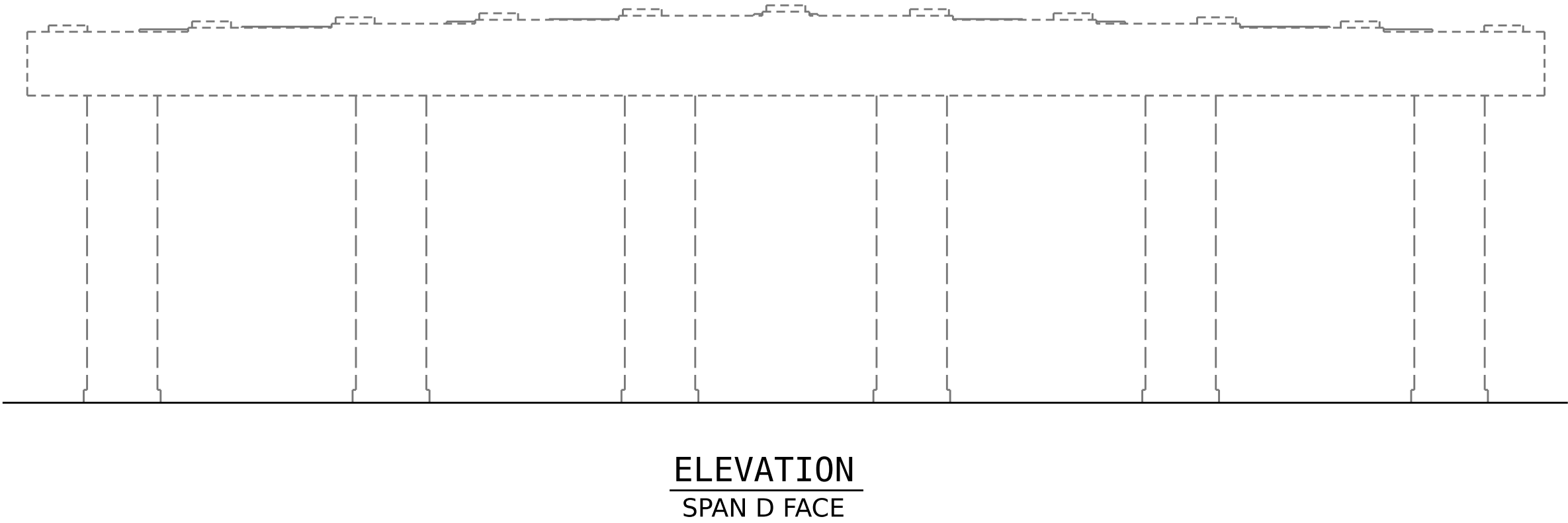
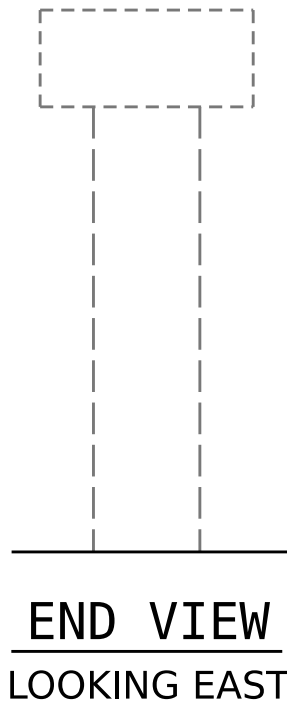
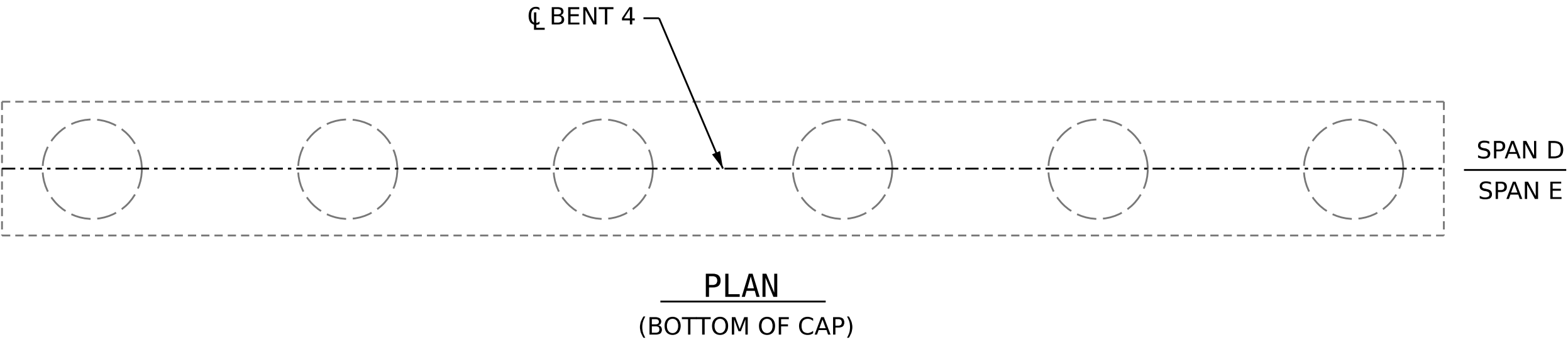
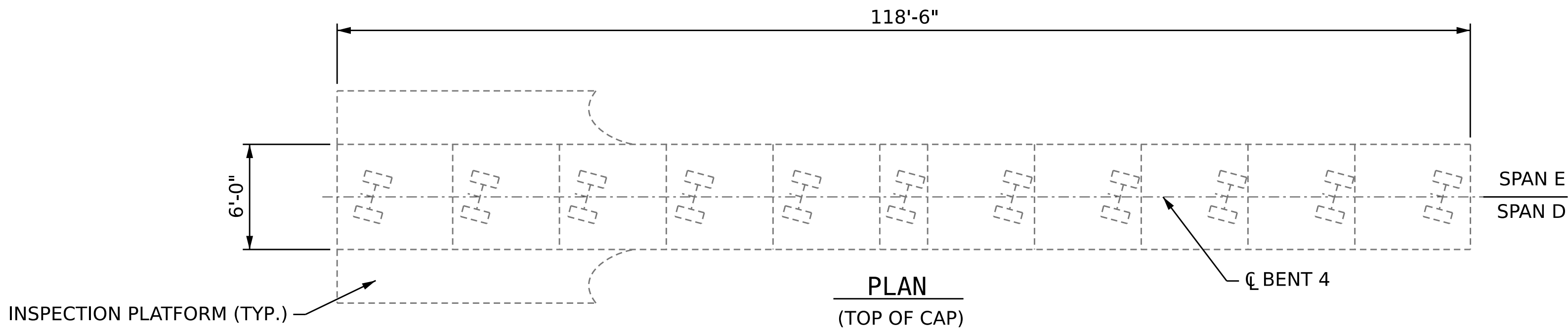
SPAN C/D FACE

REVISIONS							SHEET NO. S1-30
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS	
1			3			45	
2			4				

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

DRAWN BY : J.J.ANDERSON DATE : 04/2026
CHECKED BY : W.C.SMITH DATE : 05/2026
DESIGN ENGINEER OF RECORD: _____ DATE : _____

8/26/21



DRAWN BY : J.J.ANDERSON DATE : 03/2026
CHECKED BY : W.C.SMITH DATE : 05/2026
DESIGN ENGINEER OF RECORD: DATE :

5/13/2026
S:\DPG1\Division3\15BPR.107 Onslow\Bridge #660253\PLANS\660253. Bent 4 D.E Face.dgn
jjanderson2

SUBSTRUCTURE REPAIR QUANTITY TABLE				
REPAIRS-BENT 4 QUANTITIES				
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
COLUMN	0.0	0.0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0			
COLUMN	0.0			
EPOXY RESIN INJECTION	LINEAR FT		LINEAR FT	
CAP				
COLUMN				
EPOXY COATING	AREA SF		AREA SF	
TOP OF CAP	663.3			

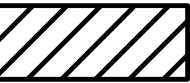
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SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

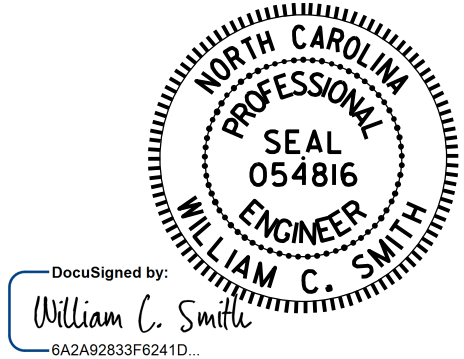
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES.

INSPECTION PLATFORMS NOT SHOWN FOR CLARITY.

-  SHOTCRETE REPAIR AREA
-  CONCRETE REPAIR AREA
-  EPOXY RESIN INJECTION

PROJECT NO. 15BPR.107
ONSLOW COUNTY
BRIDGE NO. 660253

SHEET 4 OF 14



05/22/2026

DOCUMENT NOT CONSIDERED
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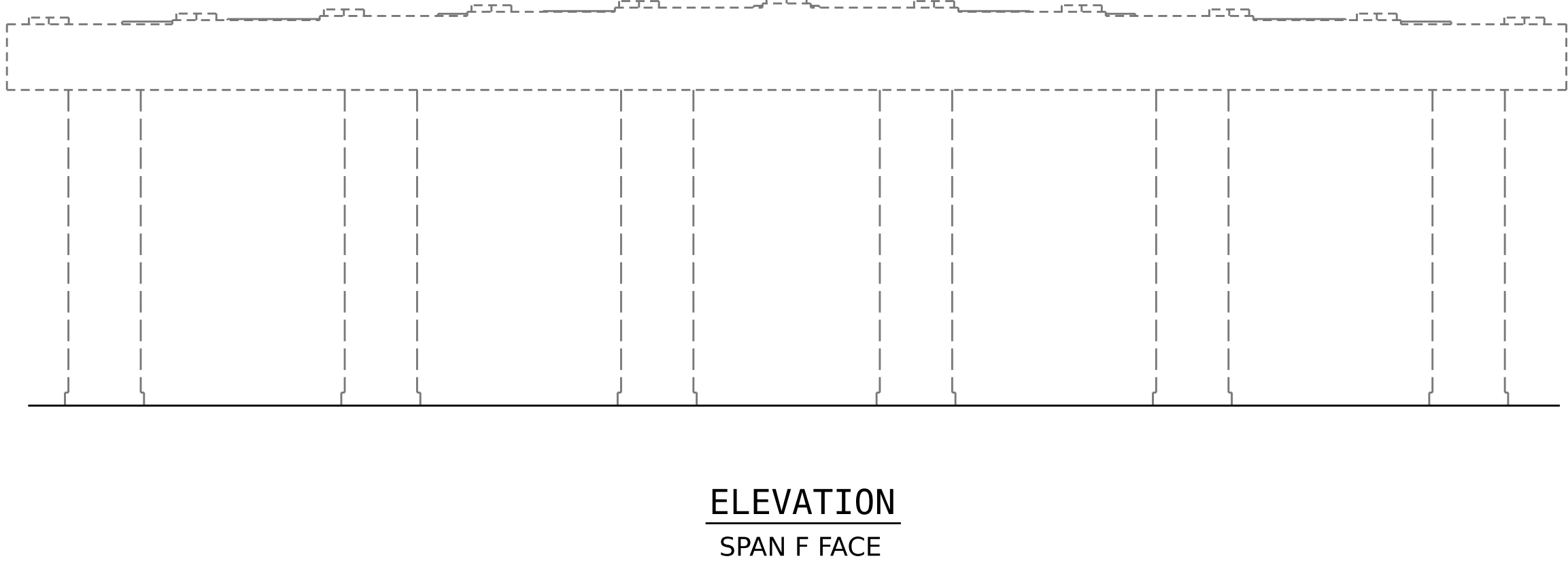
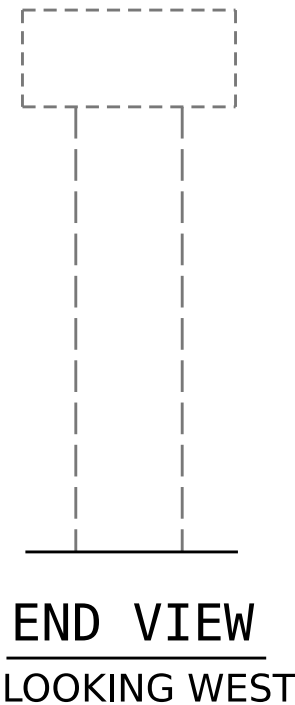
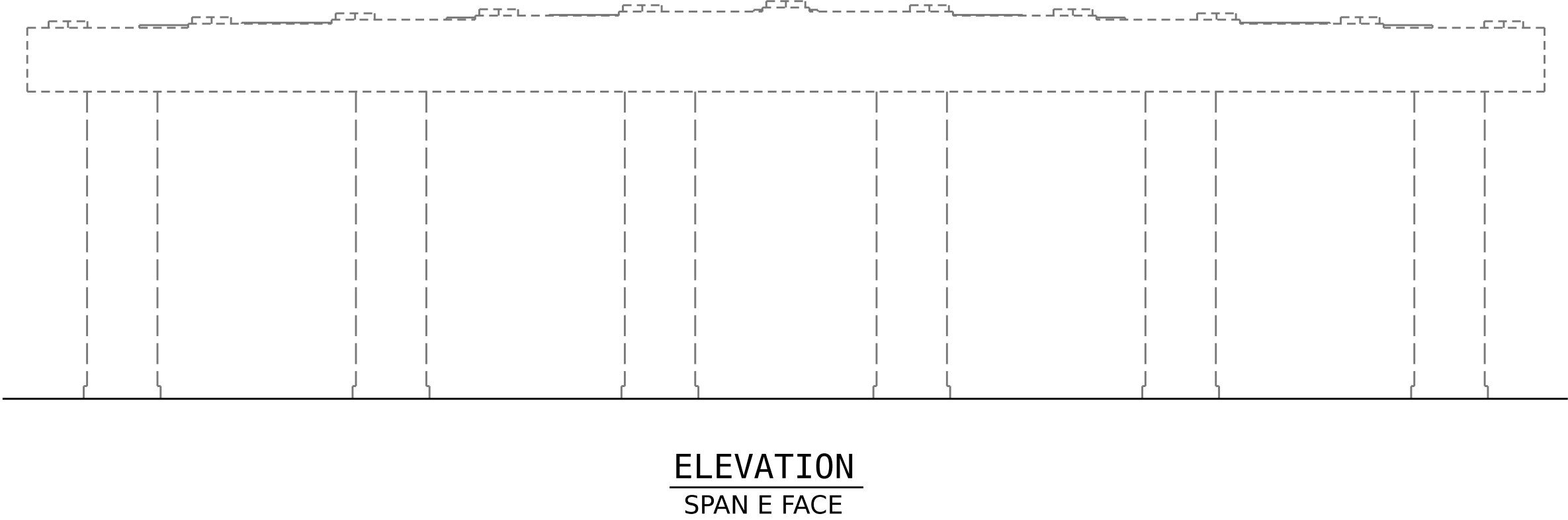
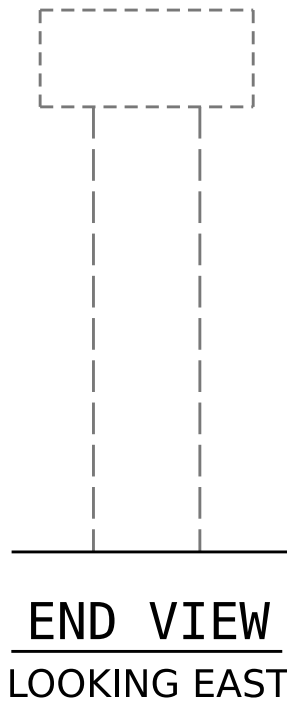
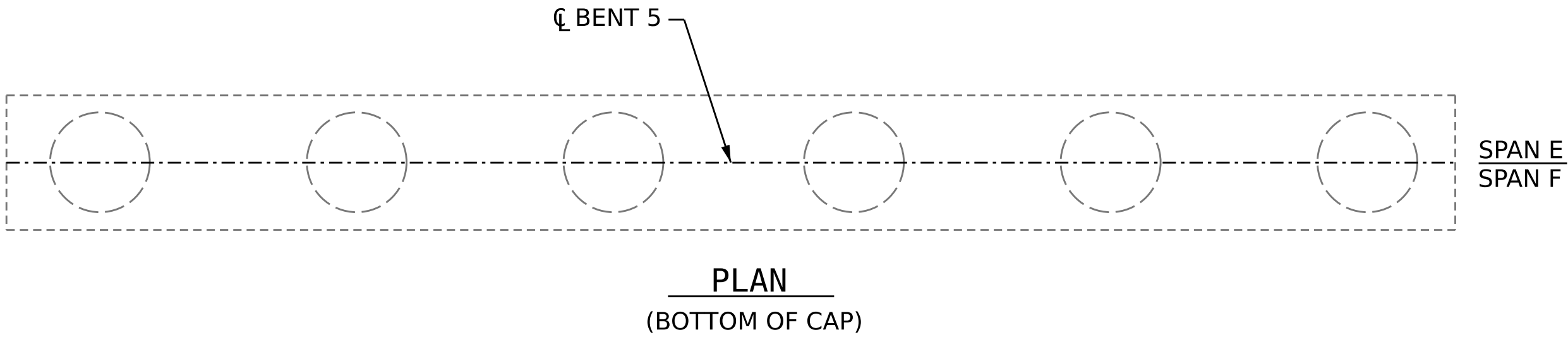
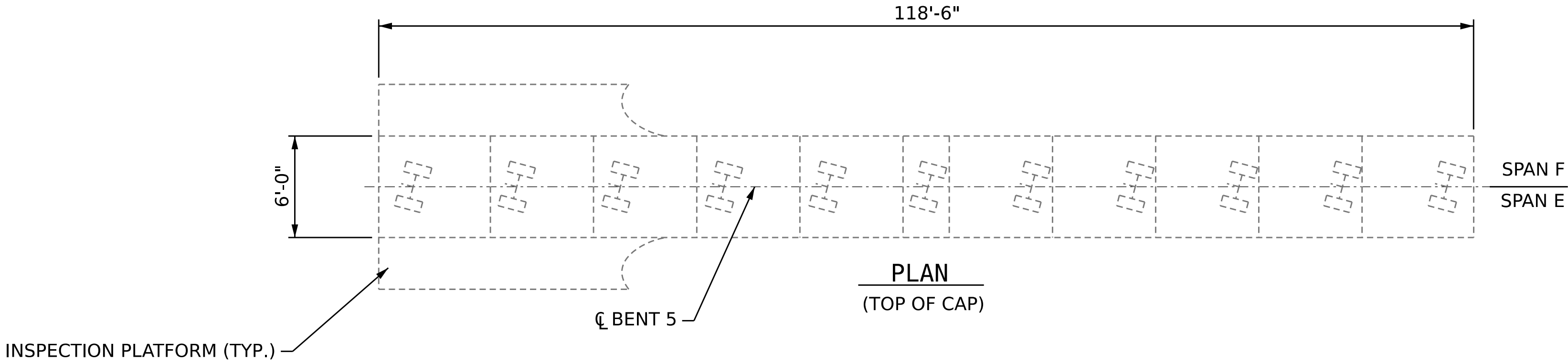
REVISIONS						SHEET NO. S1-31
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 45
2			4			

8/26/21

8/26/21

8/26/21

8/26/21



SUBSTRUCTURE REPAIR QUANTITY TABLE				
REPAIRS-BENT 5 QUANTITIES				
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
COLUMN	0.0	0.0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0			
COLUMN	0.0			
EPOXY RESIN INJECTION	LINEAR FT		LINEAR FT	
CAP				
COLUMN				
EPOXY COATING	AREA SF		AREA SF	
TOP OF CAP	663.3			

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

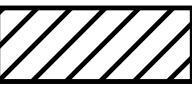
NOTES

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

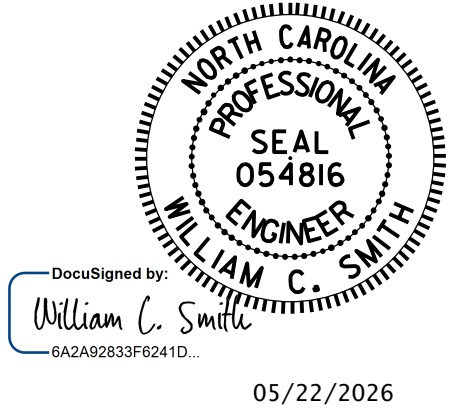
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES.

INSPECTION PLATFORMS NOT SHOWN FOR CLARITY.

-  SHOTCRETE REPAIR AREA
-  CONCRETE REPAIR AREA
-  EPOXY RESIN INJECTION

PROJECT NO. **15BPR.107**
ONSLOW COUNTY
BRIDGE NO. **660253**

SHEET 5 OF 14

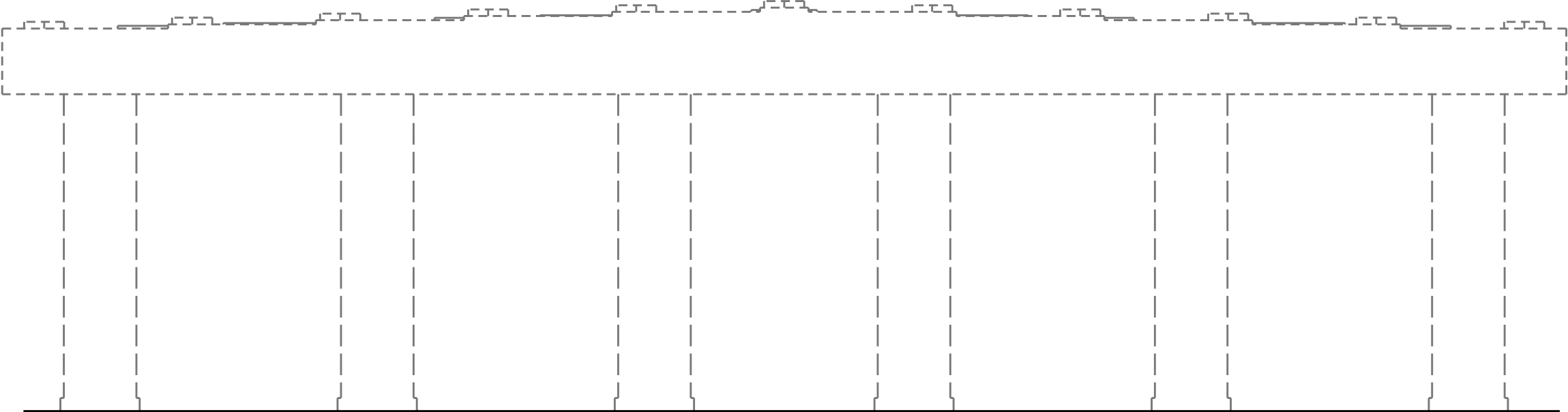
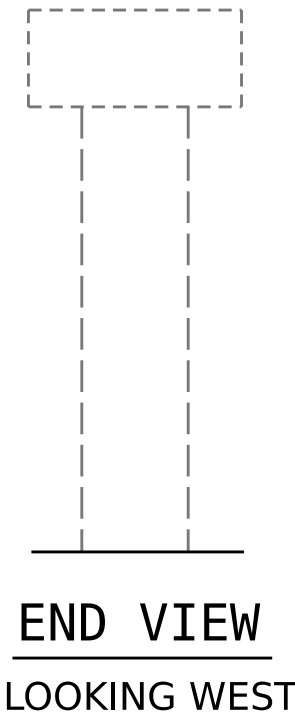
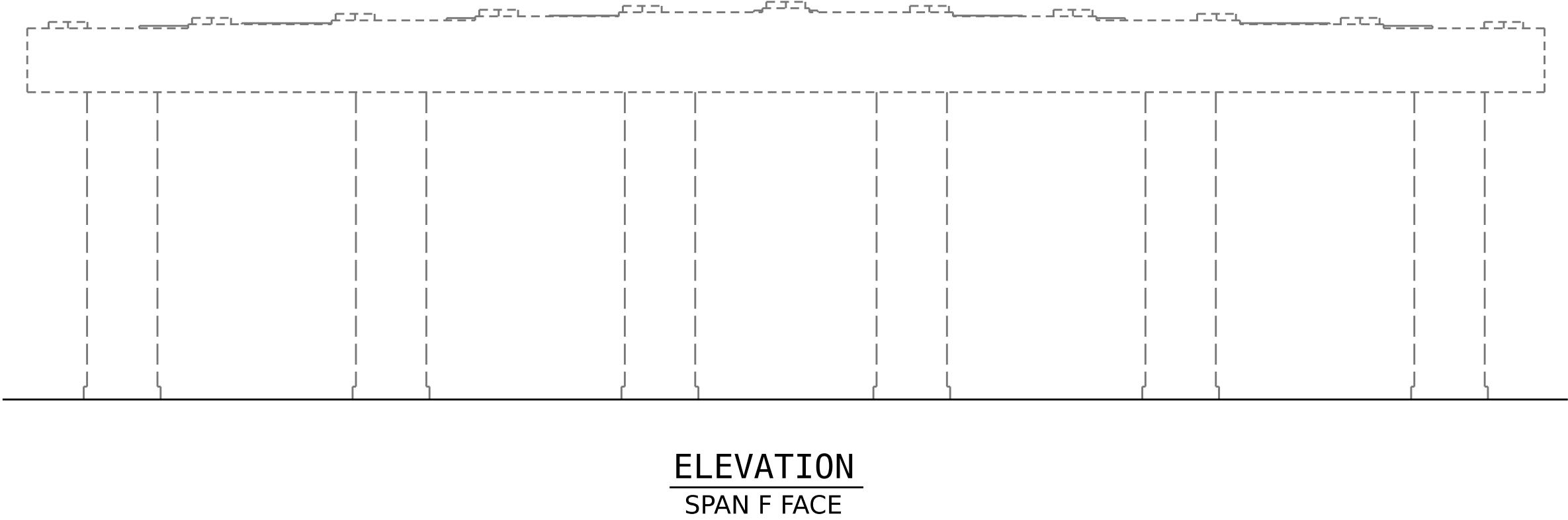
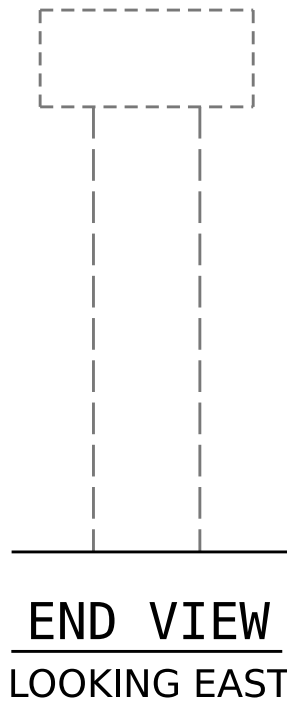
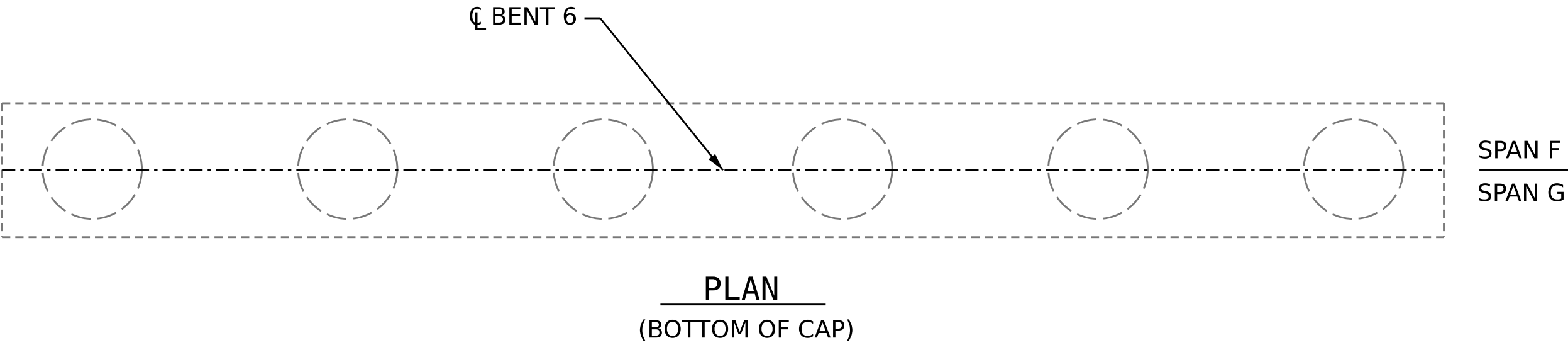
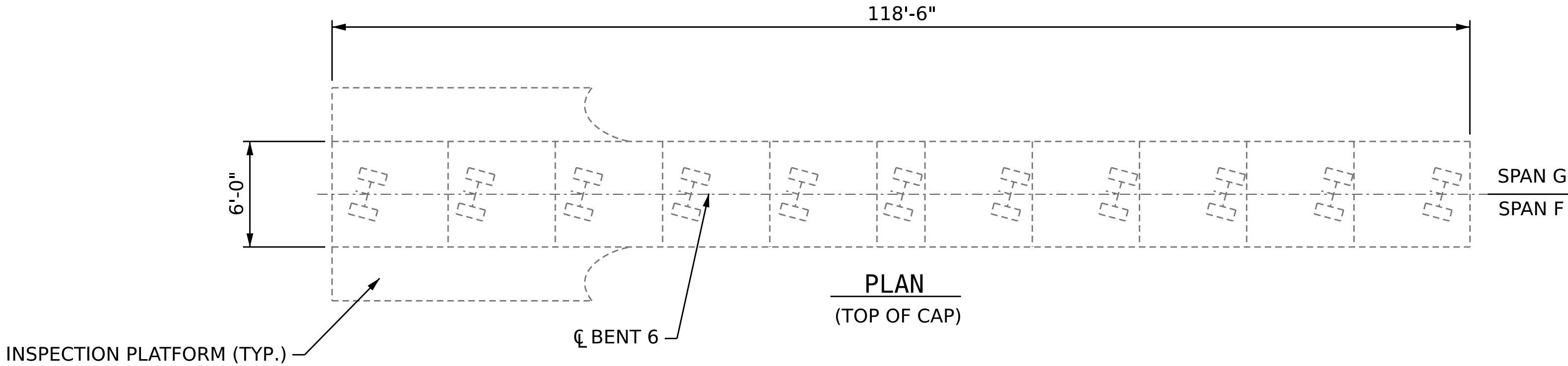


STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO. S1-32	
BENT 5 SPAN E/F FACE						TOTAL SHEETS 45	
REVISIONS							
NO.	BY:	DATE:	NO.	BY:	DATE:		
1			3				
2			4				

DRAWN BY : J.J.ANDERSON DATE : 04/2026
CHECKED BY : W.C.SMITH DATE : 05/2026
DESIGN ENGINEER OF RECORD: _____ DATE : _____

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

8/26/21



SUBSTRUCTURE REPAIR QUANTITY TABLE				
REPAIRS-BENT 6 QUANTITIES				
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
COLUMN	0.0	0.0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0			
COLUMN	0.0			
EPOXY RESIN INJECTION	LINEAR FT		LINEAR FT	
CAP				
COLUMN				
EPOXY COATING	AREA SF		AREA SF	
TOP OF CAP	663.3			

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

NOTES

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

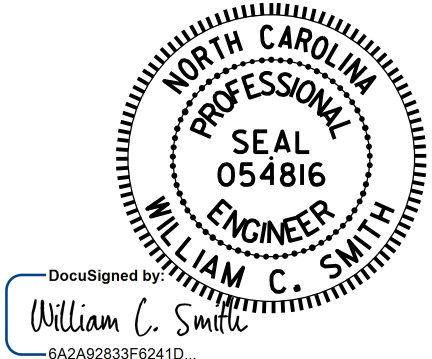
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INSPECTION PLATFORMS NOT SHOWN FOR CLARITY.

-  SHOTCRETE REPAIR AREA
-  CONCRETE REPAIR AREA
-  EPOXY RESIN INJECTION

PROJECT NO. 15BPR.107
ONslow COUNTY
BRIDGE NO. 660253

SHEET 6 OF 14



STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION

RALEIGH

BENT 6

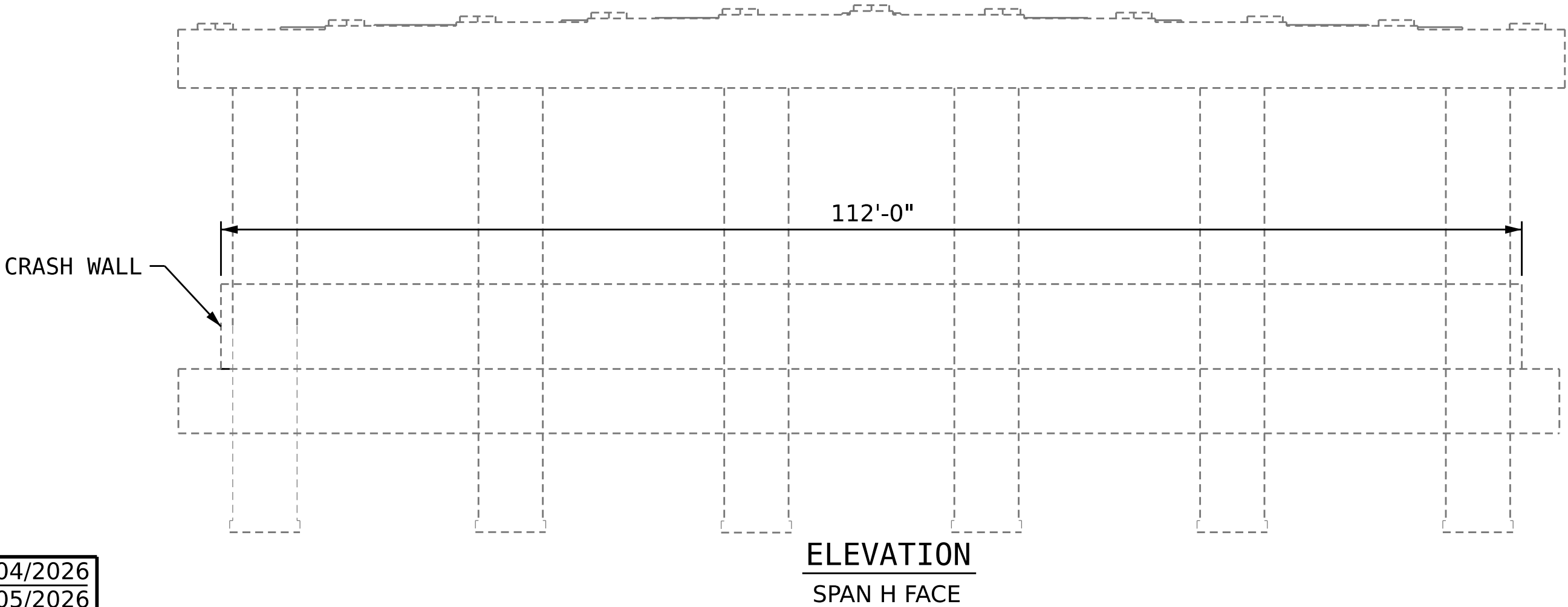
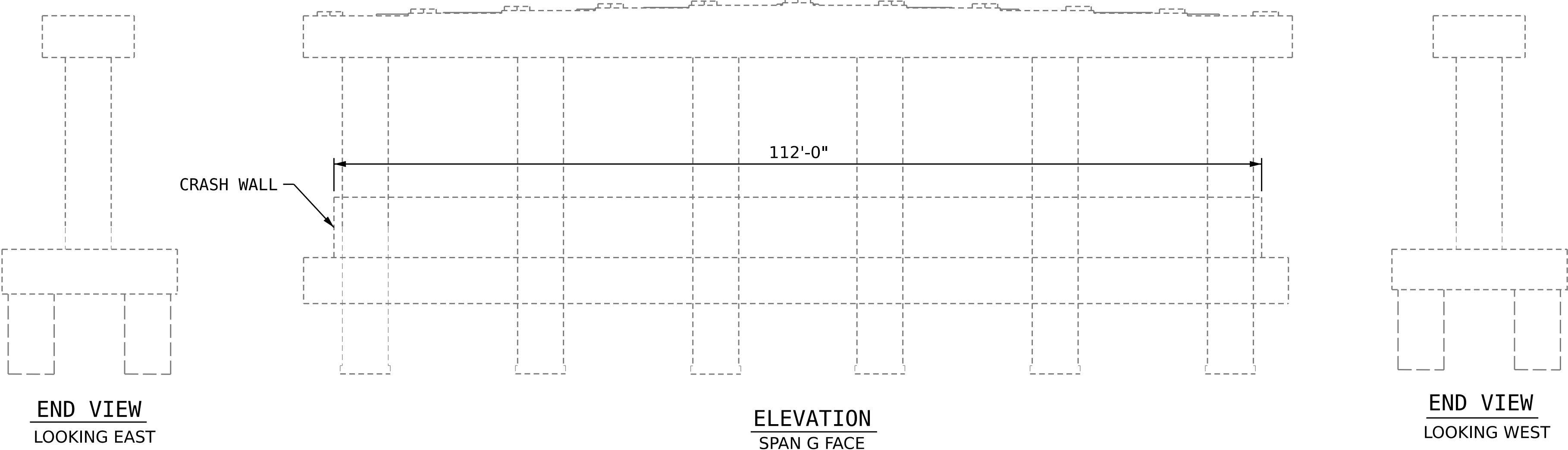
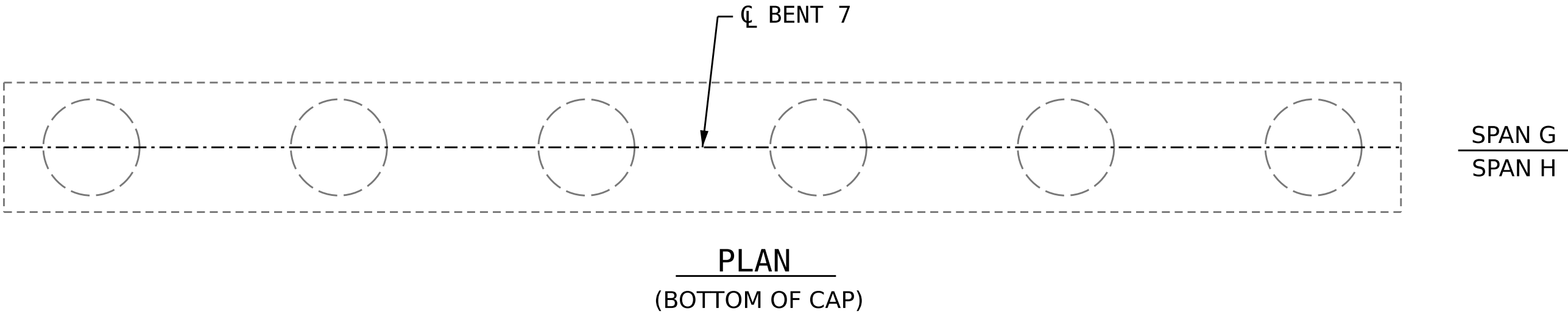
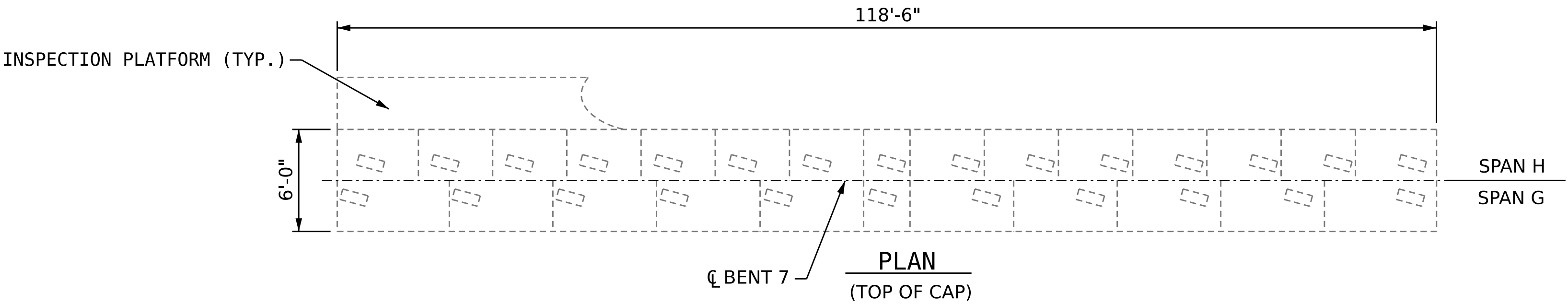
SPAN F/G FACE

REVISIONS							SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:		S-33
1			3				TOTAL SHEETS 45
2			4				

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

DRAWN BY : J.J.ANDERSON DATE : 04/2026
CHECKED BY : W.C.SMITH DATE : 05/2026
DESIGN ENGINEER OF RECORD: _____ DATE : _____

8/26/21



DRAWN BY : J.J.ANDERSON DATE : 04/2026
CHECKED BY : W.C.SMITH DATE : 05/2026
DESIGN ENGINEER OF RECORD: DATE :

S:\713\2026
S:\DPG\Division3\15BPR.107 Onslow\Bridge #660253\PLANS\660253. Bent 7 G.H Face.dgn
jjanderson2

SUBSTRUCTURE REPAIR QUANTITY TABLE				
REPAIRS-BENT 7 QUANTITIES				
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
COLUMN	0.0	0.0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	
CAP	0.0			
COLUMN	0.0			
EPOXY RESIN INJECTION	LINEAR FT		LINEAR FT	
CAP				
COLUMN				
EPOXY COATING	AREA SF		AREA SF	
TOP OF CAP	654.7			

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

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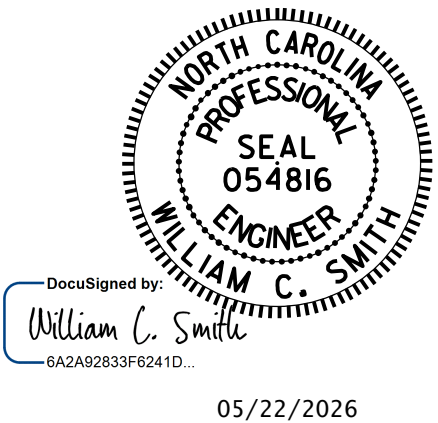
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INSPECTION PLATFORMS NOT SHOWN FOR CLARITY.

-  SHOTCRETE REPAIR AREA
-  CONCRETE REPAIR AREA
-  EPOXY RESIN INJECTION

PROJECT NO. **15BPR.107**
ONSLOW COUNTY
BRIDGE NO. **660253**

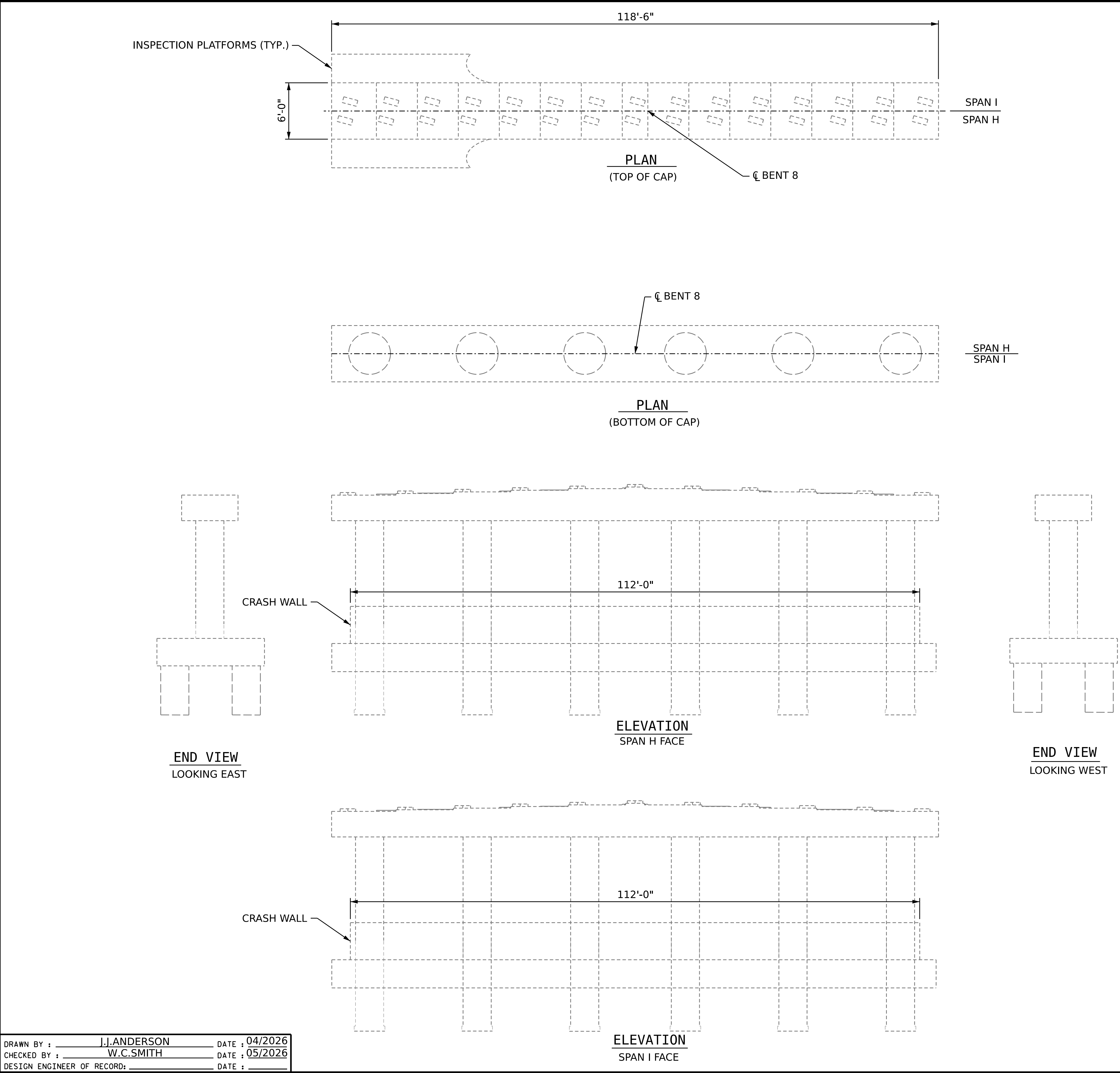
SHEET 7 OF 14



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO. S1-34	
BENT 7 SPAN G/H FACE						TOTAL SHEETS 45	
REVISIONS							
NO.	BY:	DATE:	NO.	BY:	DATE:		
1			3				
2			4				

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

8/26/21



SUBSTRUCTURE REPAIR QUANTITY TABLE				
REPAIRS-BENT 8 QUANTITIES				
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
COLUMN	0.0	0.0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0			
COLUMN	0.0			
EPOXY RESIN INJECTION	LINEAR FT		LINEAR FT	
CAP				
COLUMN				
EPOXY COATING	AREA SF		AREA SF	
TOP OF CAP	646.0			

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

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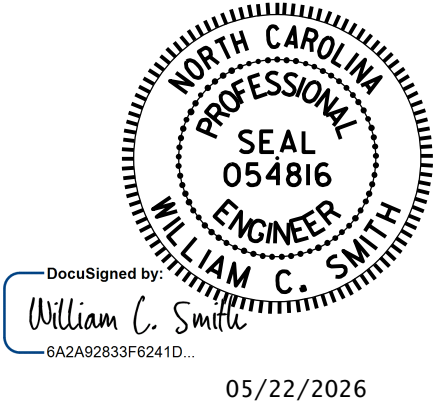
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INSPECTION PLATFORMS NOT SHOWN FOR CLARITY.

-  SHOTCRETE REPAIR AREA
-  CONCRETE REPAIR AREA
-  EPOXY RESIN INJECTION

PROJECT NO. 15BPR.107
ONslow COUNTY
BRIDGE NO. 660253

SHEET 8 OF 14

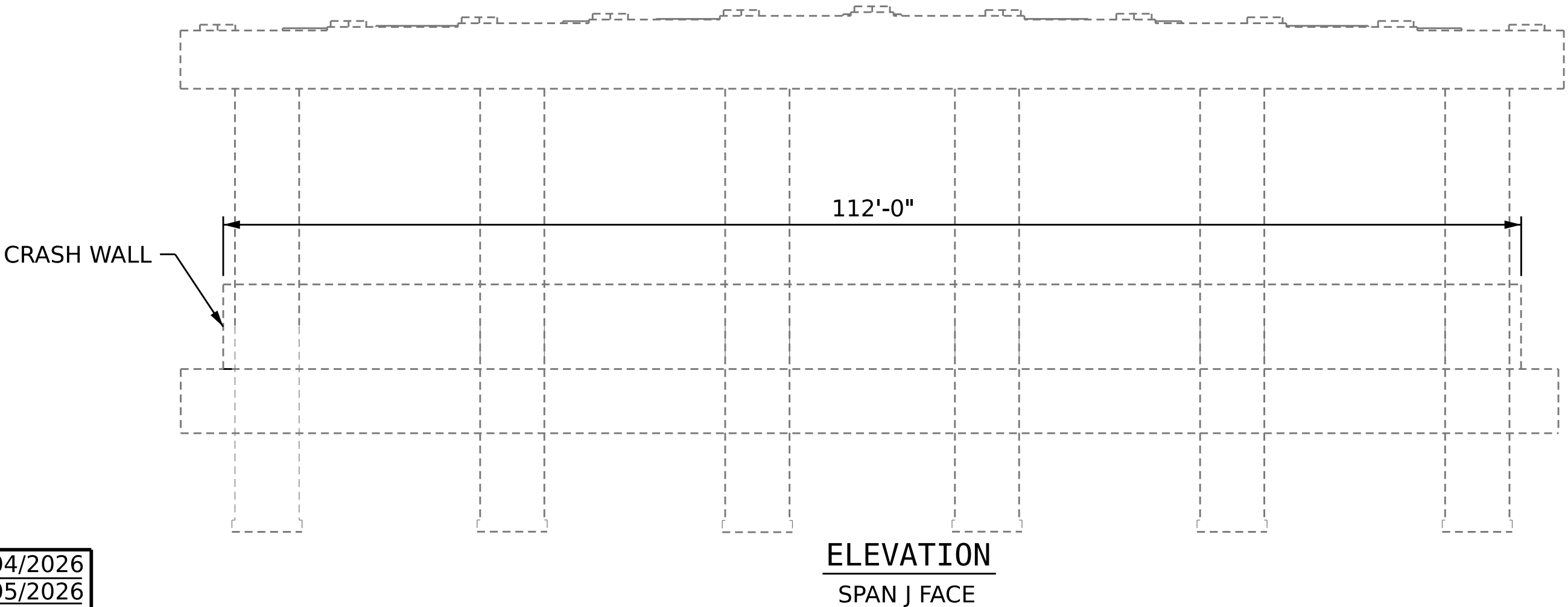
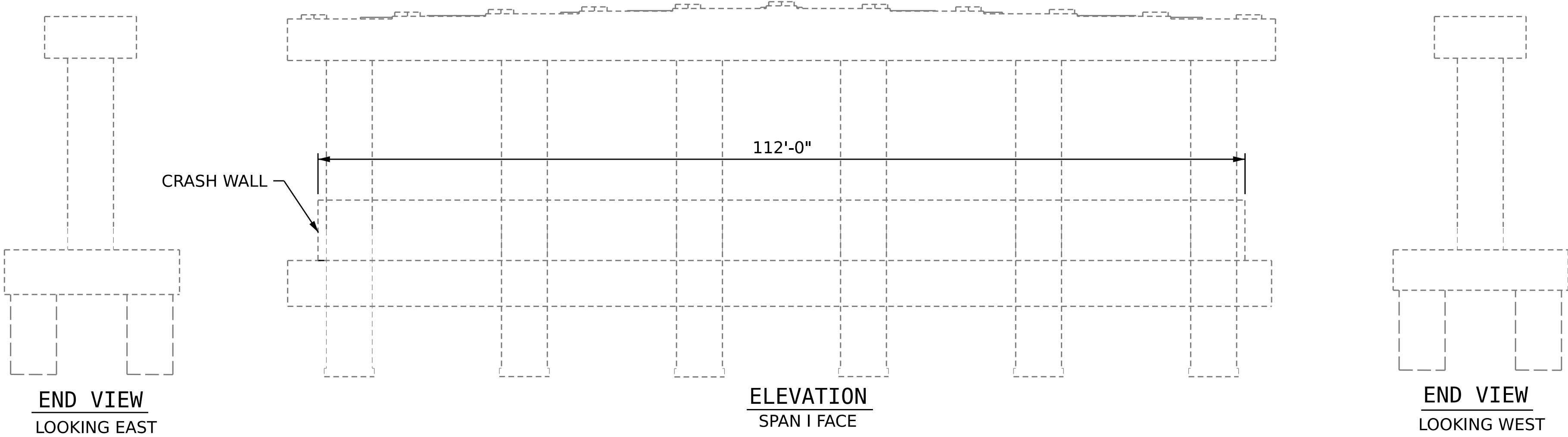
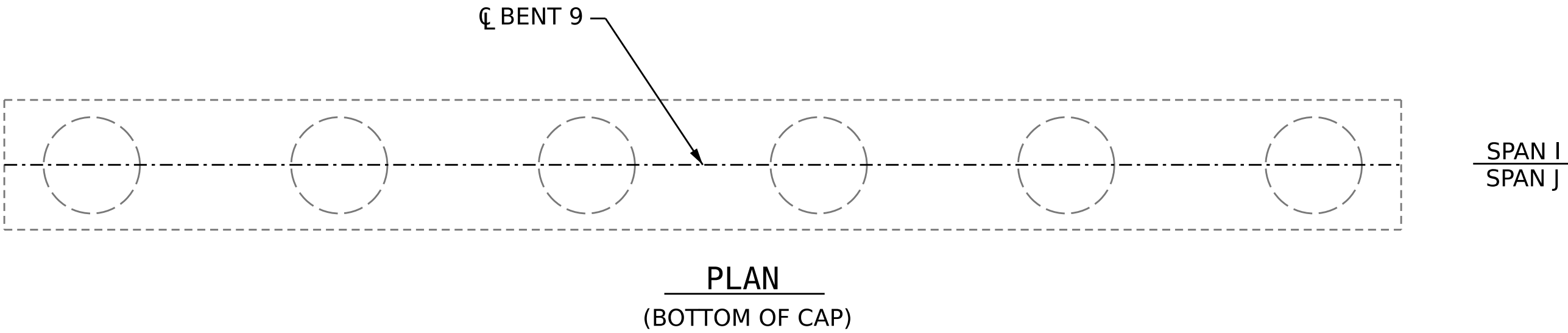
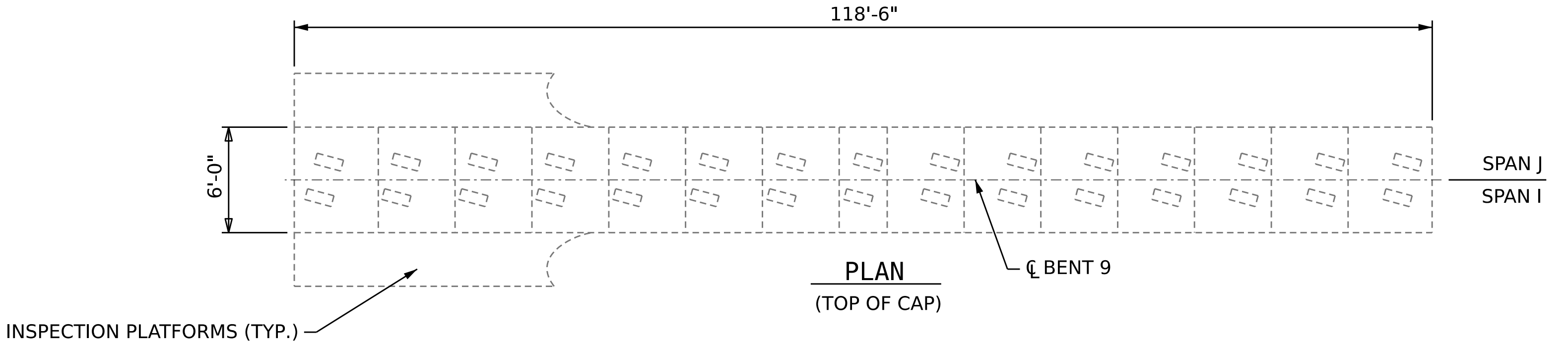


STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					SHEET NO. S1-35		
BENT 8 SPAN H/I FACE					TOTAL SHEETS 45		
REVISIONS							
NO.	BY:	DATE:	NO.	BY:	DATE:		
1			3				
2			4				

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

DRAWN BY : J.J.ANDERSON DATE : 04/2026
CHECKED BY : W.C.SMITH DATE : 05/2026
DESIGN ENGINEER OF RECORD: _____ DATE : _____

8/26/21



DRAWN BY : J.J.ANDERSON DATE : 04/2026
CHECKED BY : W.C.SMITH DATE : 05/2026
DESIGN ENGINEER OF RECORD: DATE :

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S:\DPG\Division3\15BPR.107 Onslow\Bridge #660253\PLANS\660253. Bent 9 I.J Face.dgn
jjanderson2

SUBSTRUCTURE REPAIR QUANTITY TABLE				
REPAIRS-BENT 9 QUANTITIES				
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
COLUMN	0.0	0.0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	
CAP	0.0			
COLUMN	0.0			
EPOXY RESIN INJECTION	LINEAR FT		LINEAR FT	
CAP				
COLUMN				
EPOXY COATING	AREA SF		AREA SF	
TOP OF CAP	646.0			

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

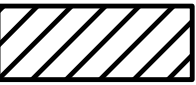
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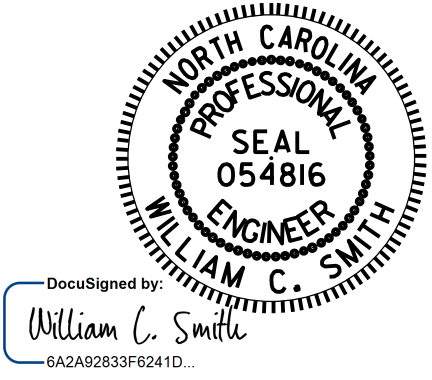
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INSPECTION PLATFORMS NOT SHOWN FOR CLARITY.

-  SHOTCRETE REPAIR AREA
-  CONCRETE REPAIR AREA
-  EPOXY RESIN INJECTION

PROJECT NO. **15BPR.107**
ONSLOW COUNTY
BRIDGE NO. **660253**

SHEET 9 OF 14



05/22/2026

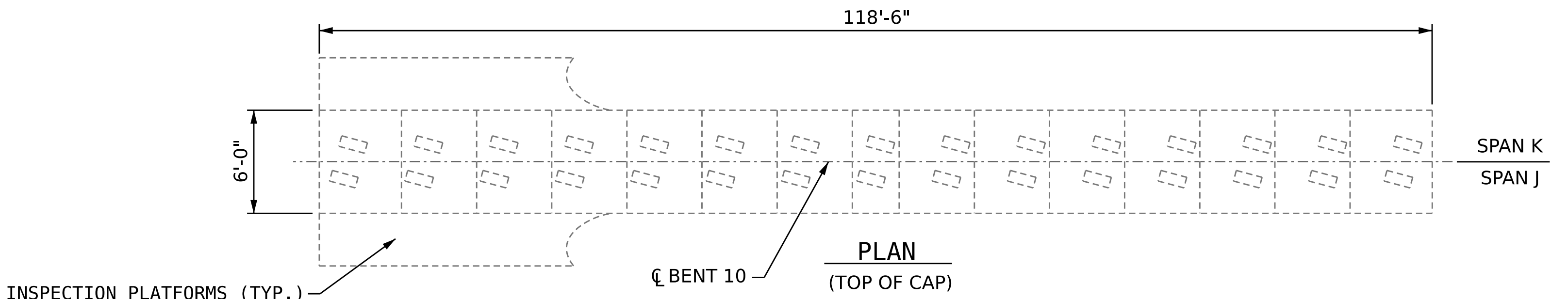
DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			45
2			4			

8/26/21

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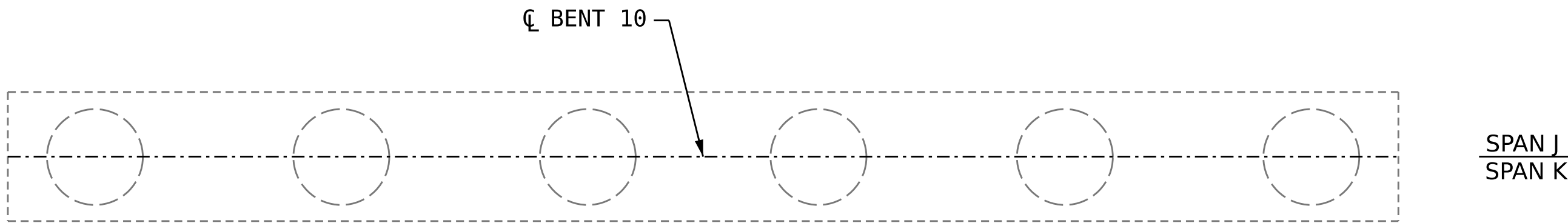
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INSPECTION PLATFORMS (TYP.)

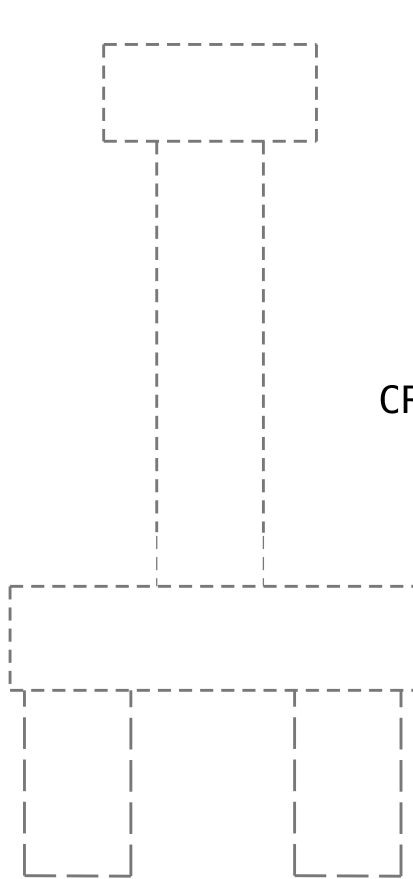
CL BENT 10

PLAN
(TOP OF CAP)

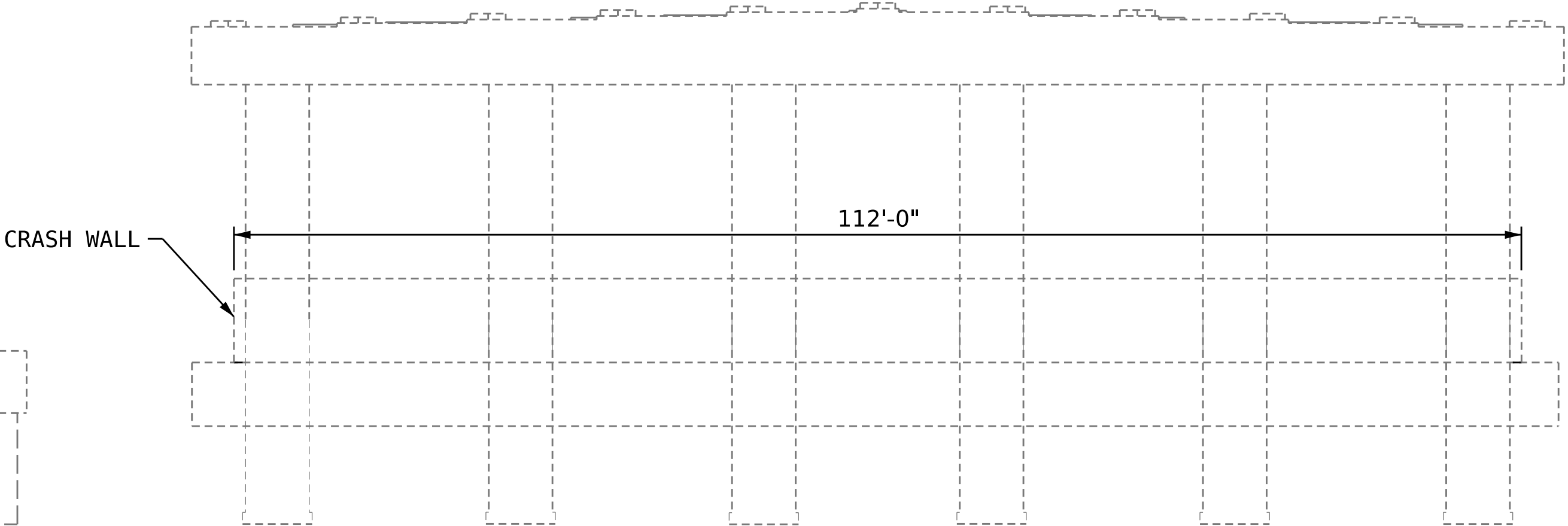


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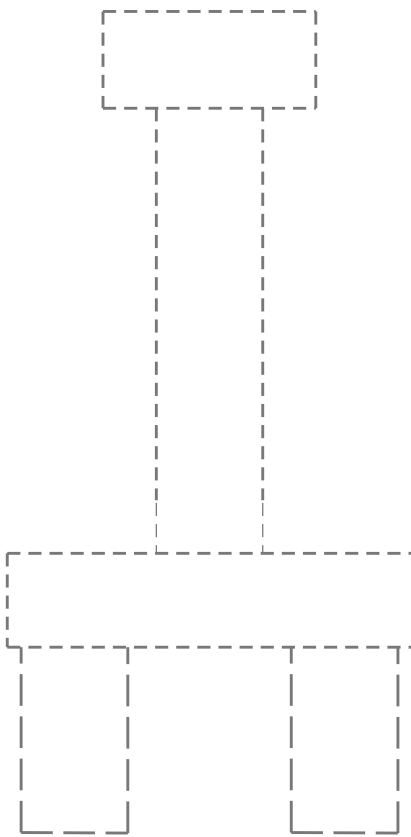
PLAN
(BOTTOM OF CAP)



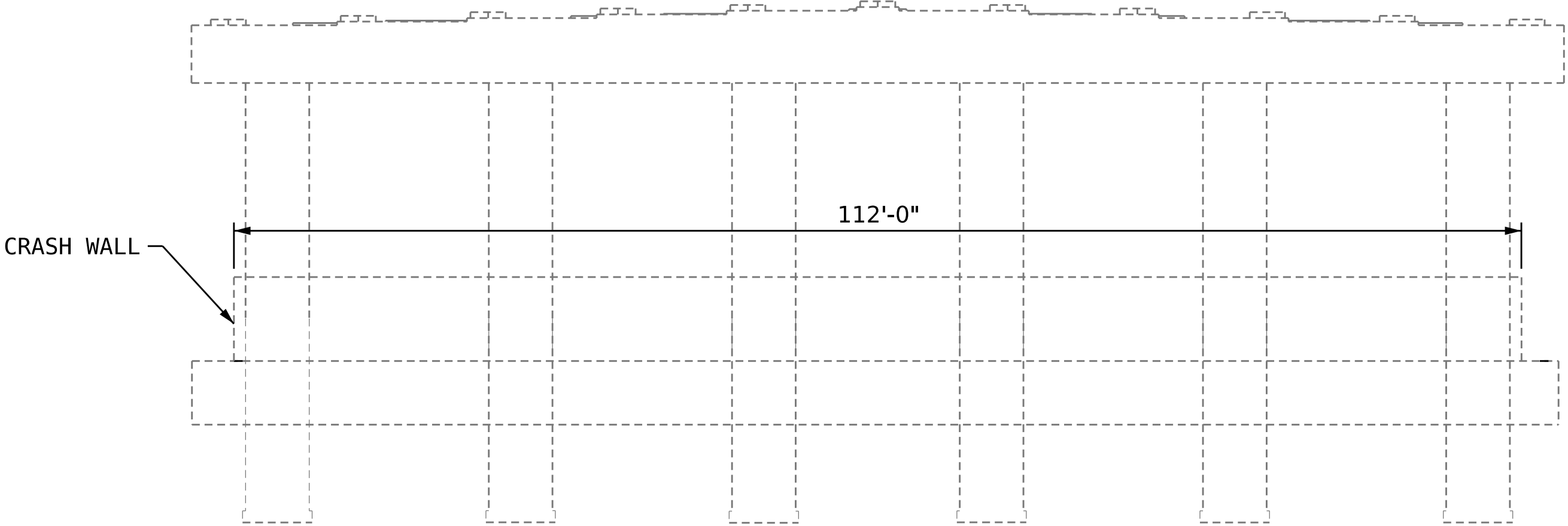
END VIEW
LOOKING EAST



ELEVATION
SPAN J FACE



END VIEW
LOOKING WEST



CRASH WALL

ELEVATION
SPAN K FACE

DRAWN BY : J.J.ANDERSON DATE : 04/2026
CHECKED BY : W.C.SMITH DATE : 05/2026
DESIGN ENGINEER OF RECORD: DATE :

5/13/2026
S:\DPG1\Division3\15BPR.107 Onslow\Bridge #660253\PLANS\660253. Bent 10 J,K Face.dgn
jjanderson2

SUBSTRUCTURE REPAIR QUANTITY TABLE

REPAIRS-BENT 10 QUANTITIES

	ESTIMATE		ACTUAL	
	AREA SF	VOLUME CF	AREA SF	VOLUME CF
SHOTCRETE REPAIRS				
CAP	0.0	0.0		
COLUMN	0.0	0.0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	
CAP	0.0			
COLUMN	0.0			
EPOXY RESIN INJECTION	LINEAR FT		LINEAR FT	
CAP				
COLUMN				
EPOXY COATING	AREA SF		AREA SF	
TOP OF CAP	646.0			

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

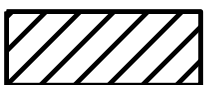
NOTES

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

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES.

INSPECTION PLATFORMS NOT SHOWN FOR CLARITY.



SHOTCRETE REPAIR AREA



CONCRETE REPAIR AREA



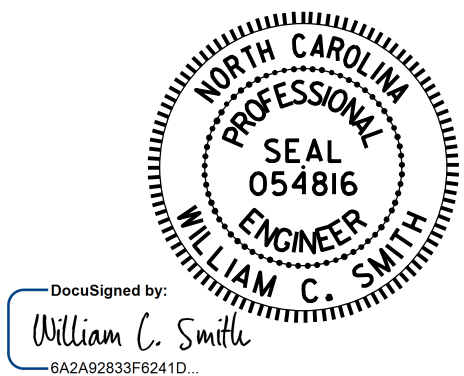
EPOXY RESIN INJECTION

PROJECT NO. **15BPR.107**

ONSLOW COUNTY

BRIDGE NO. **660253**

SHEET 10 OF 14



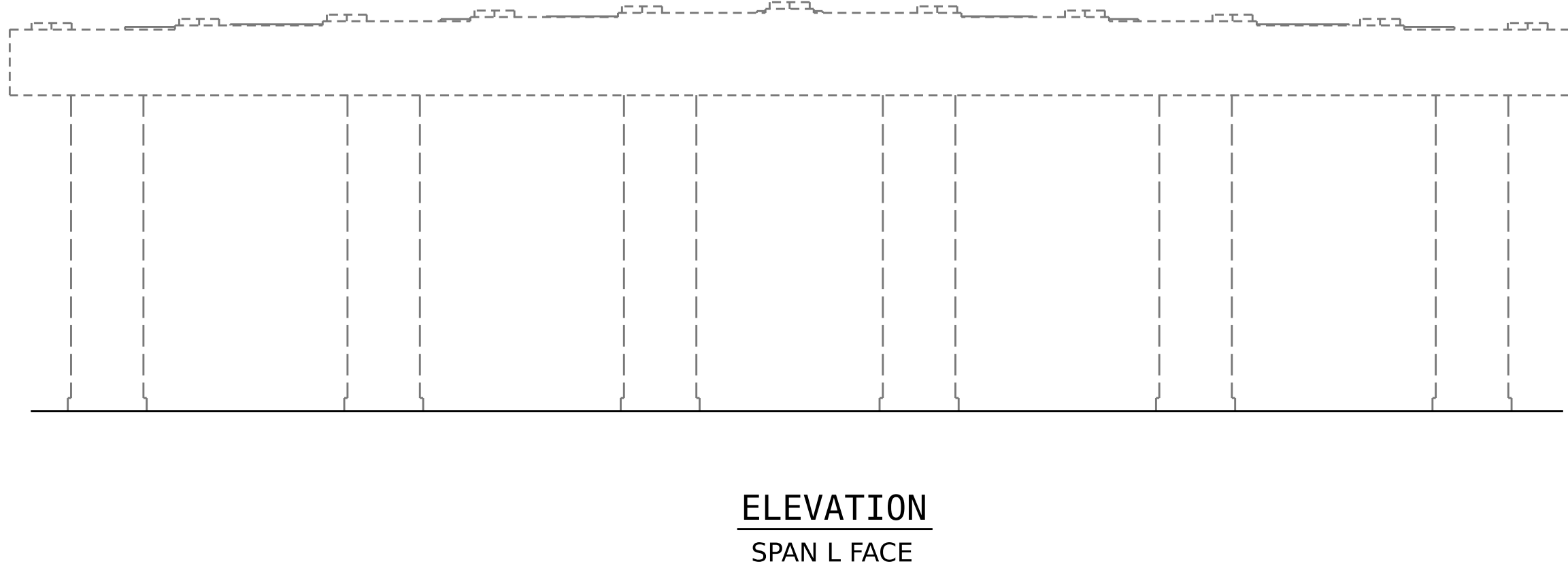
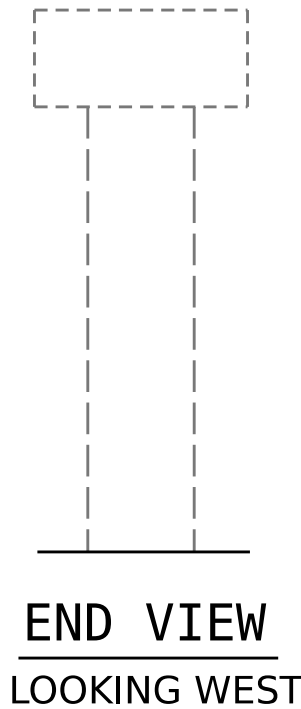
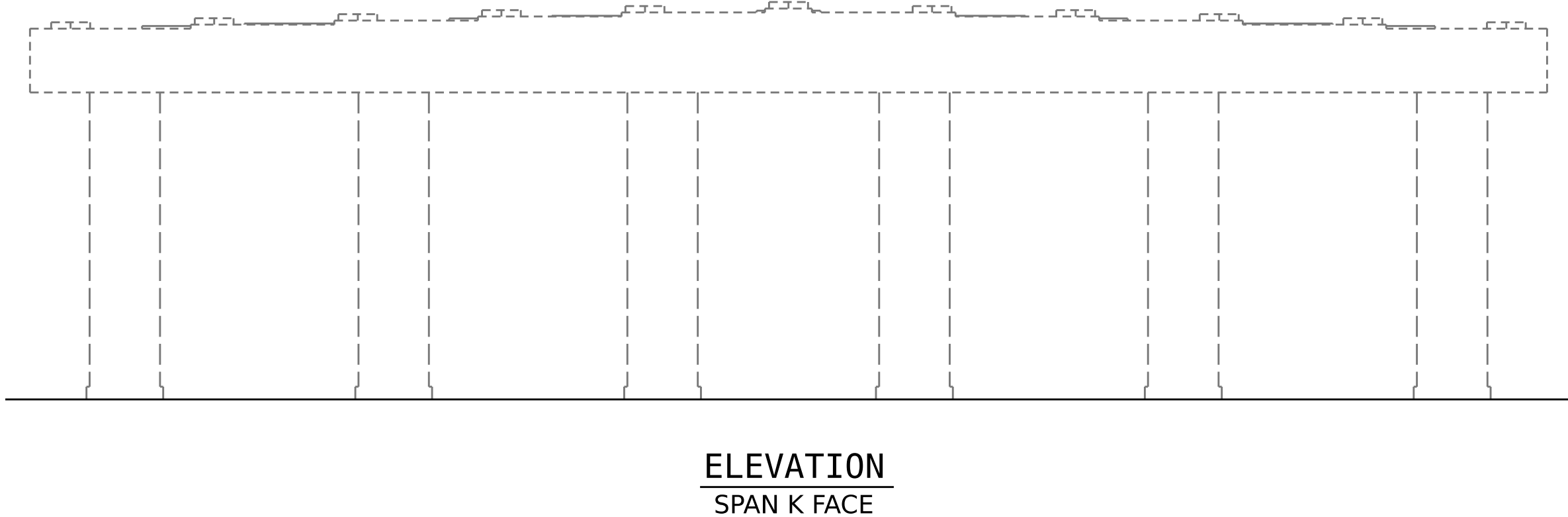
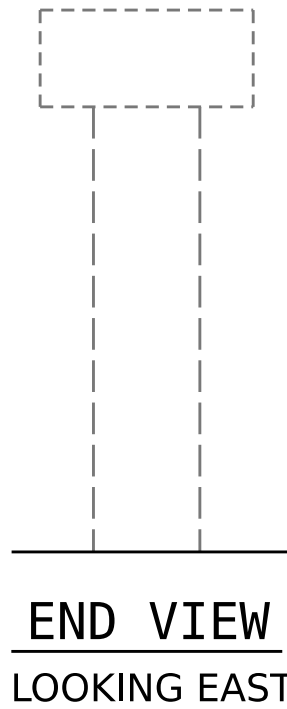
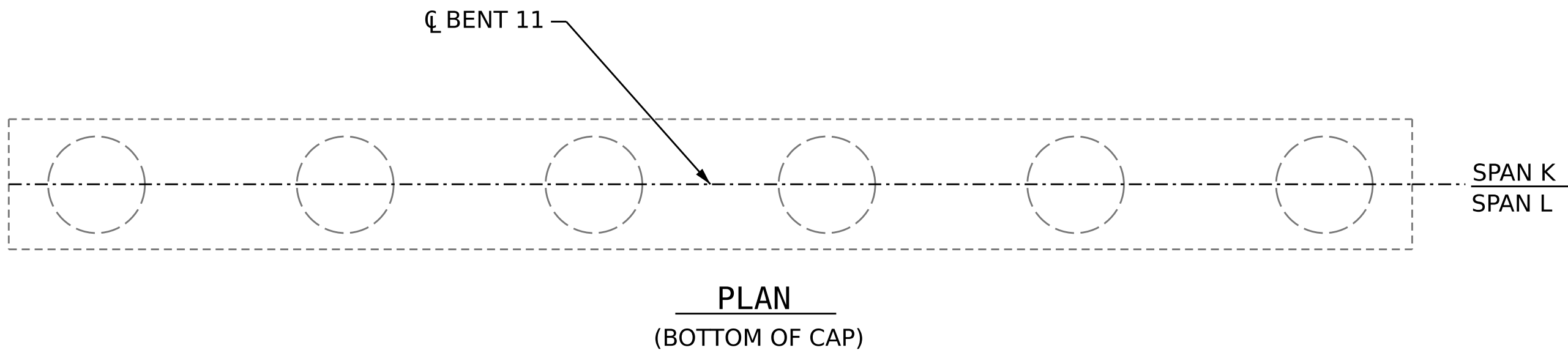
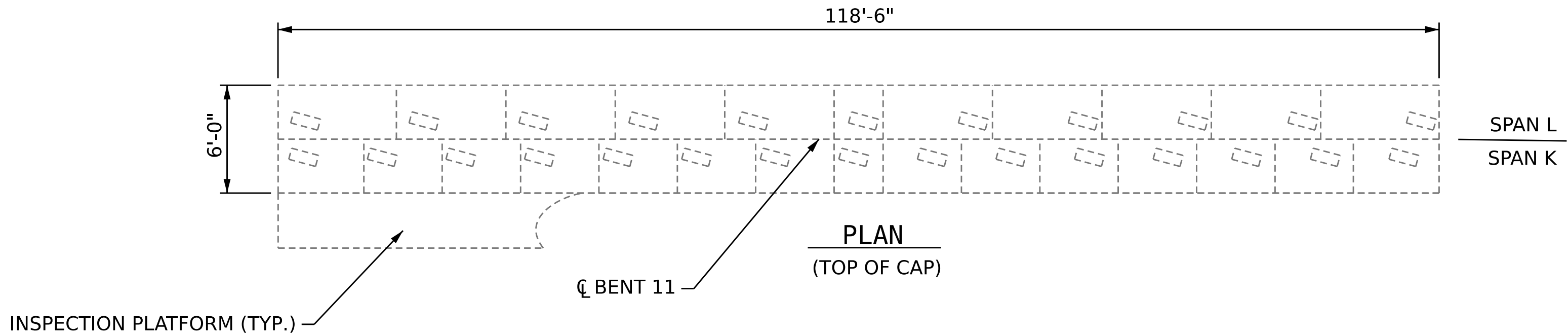
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 10
SPAN J/K FACE

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS					SHEET NO. S1-37
NO.	BY:	DATE:	NO.	BY:	
1			3		TOTAL SHEETS 45
2			4		

8/26/21



SUBSTRUCTURE REPAIR QUANTITY TABLE				
REPAIRS-BENT 11 QUANTITIES				
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
COLUMN	0.0	0.0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0			
COLUMN	0.0			
EPOXY RESIN INJECTION	LINEAR FT		LINEAR FT	
CAP				
COLUMN				
EPOXY COATING	AREA SF		AREA SF	
TOP OF CAP	654.7			

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

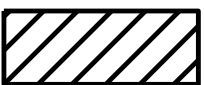
NOTES

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

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

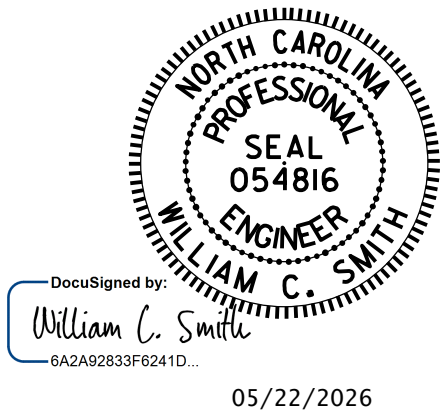
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES.

INSPECTION PLATFORMS NOT SHOWN FOR CLARITY.

-  SHOTCRETE REPAIR AREA
-  CONCRETE REPAIR AREA
-  EPOXY RESIN INJECTION

PROJECT NO. 15BPR.107
ONSLOW COUNTY
BRIDGE NO. 660253

SHEET 11 OF 14

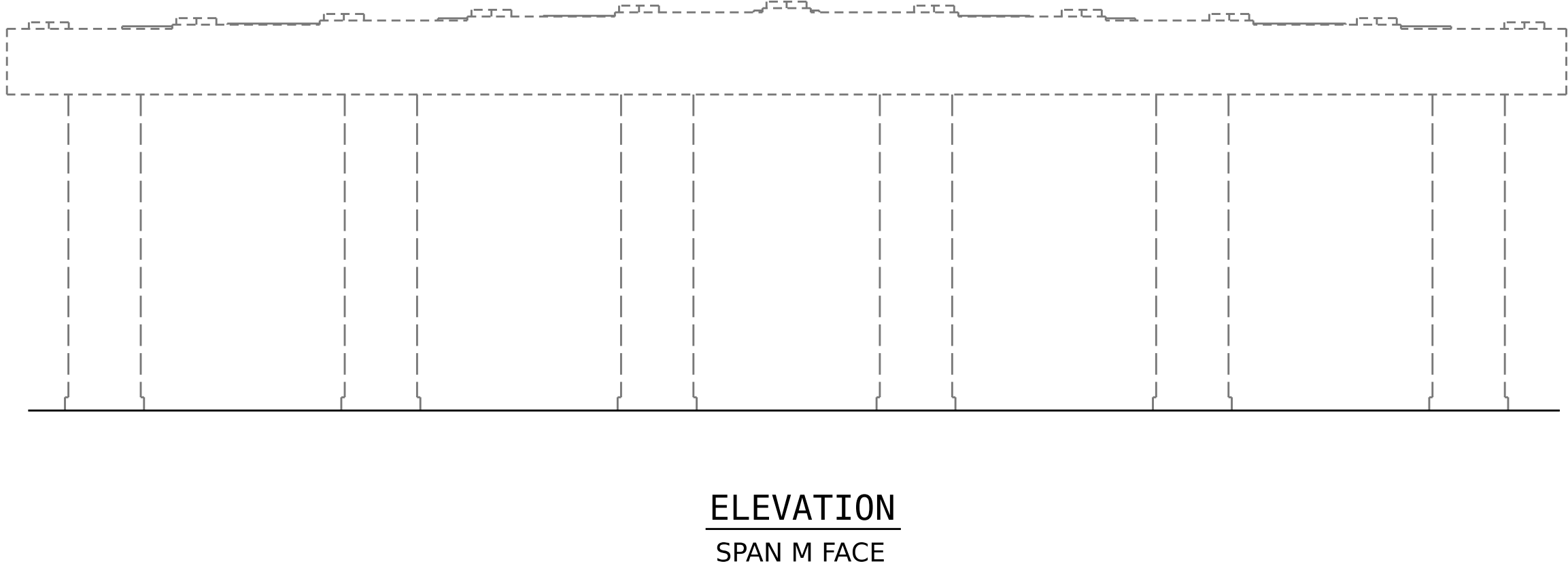
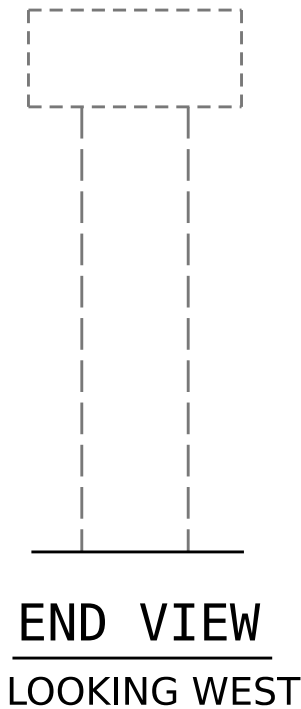
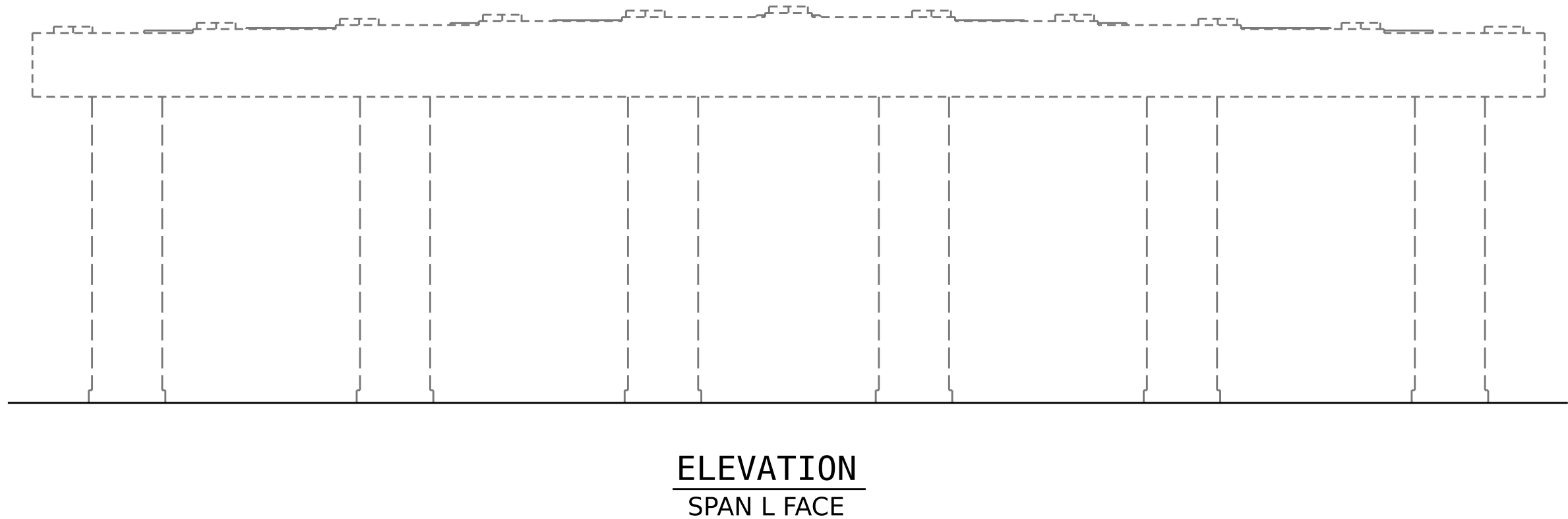
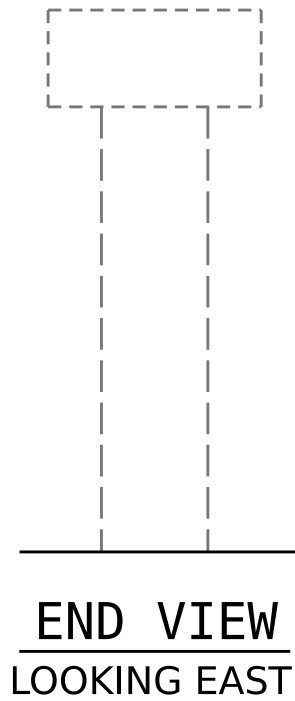
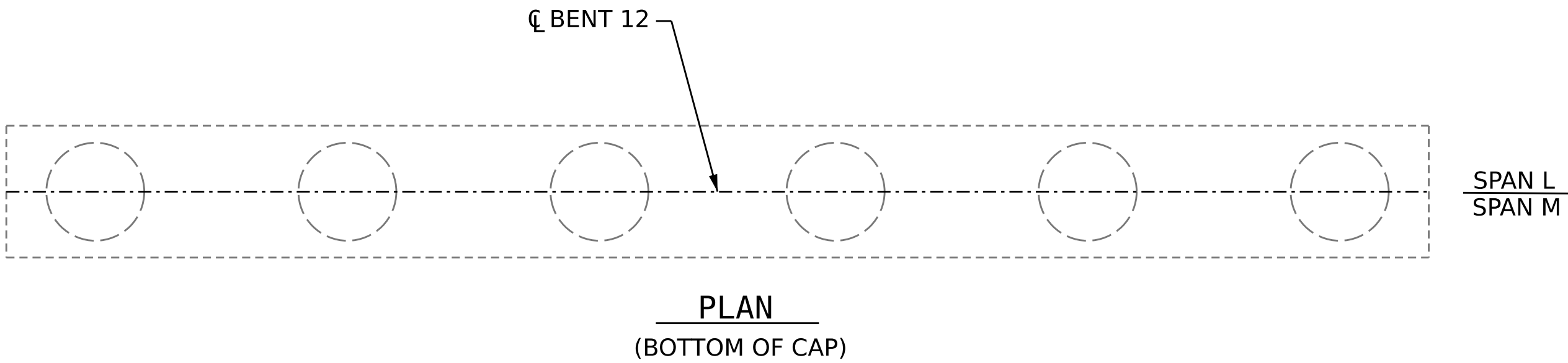
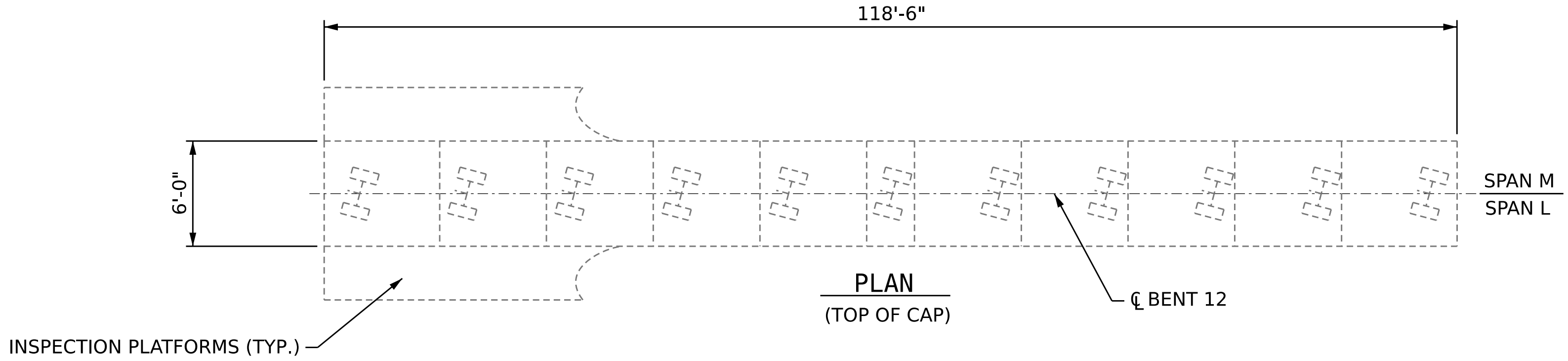


STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.	
BENT 11 SPAN K/L FACE						S1-38	
REVISIONS						TOTAL SHEETS	
NO.	BY:	DATE:	NO.	BY:	DATE:	45	
1			3				
2			4				

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SIGNATURES COMPLETED

DRAWN BY : J.J.ANDERSON DATE : 04/2026
CHECKED BY : W.C.SMITH DATE : 05/2026
DESIGN ENGINEER OF RECORD: _____ DATE : _____

8/26/21



SUBSTRUCTURE REPAIR QUANTITY TABLE				
REPAIRS-BENT 12 QUANTITIES				
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
COLUMN	0.0	0.0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0			
COLUMN	0.0			
EPOXY RESIN INJECTION	LINEAR FT		LINEAR FT	
CAP				
COLUMN				
EPOXY COATING	AREA SF		AREA SF	
TOP OF CAP	663.3			

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

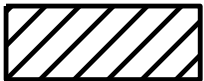
NOTES

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

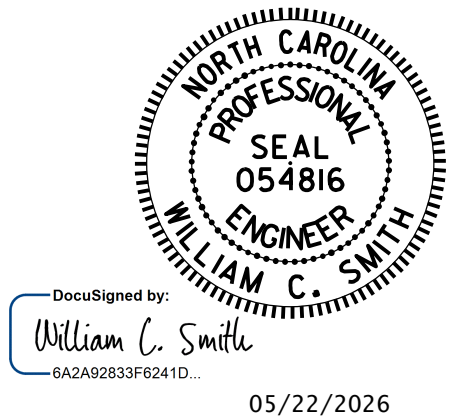
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES.

INSPECTION PLATFORMS NOT SHOWN FOR CLARITY.

-  SHOTCRETE REPAIR AREA
-  CONCRETE REPAIR AREA
-  EPOXY RESIN INJECTION

PROJECT NO. 15BPR.107
ONslow COUNTY
BRIDGE NO. 660253

SHEET 12 OF 14

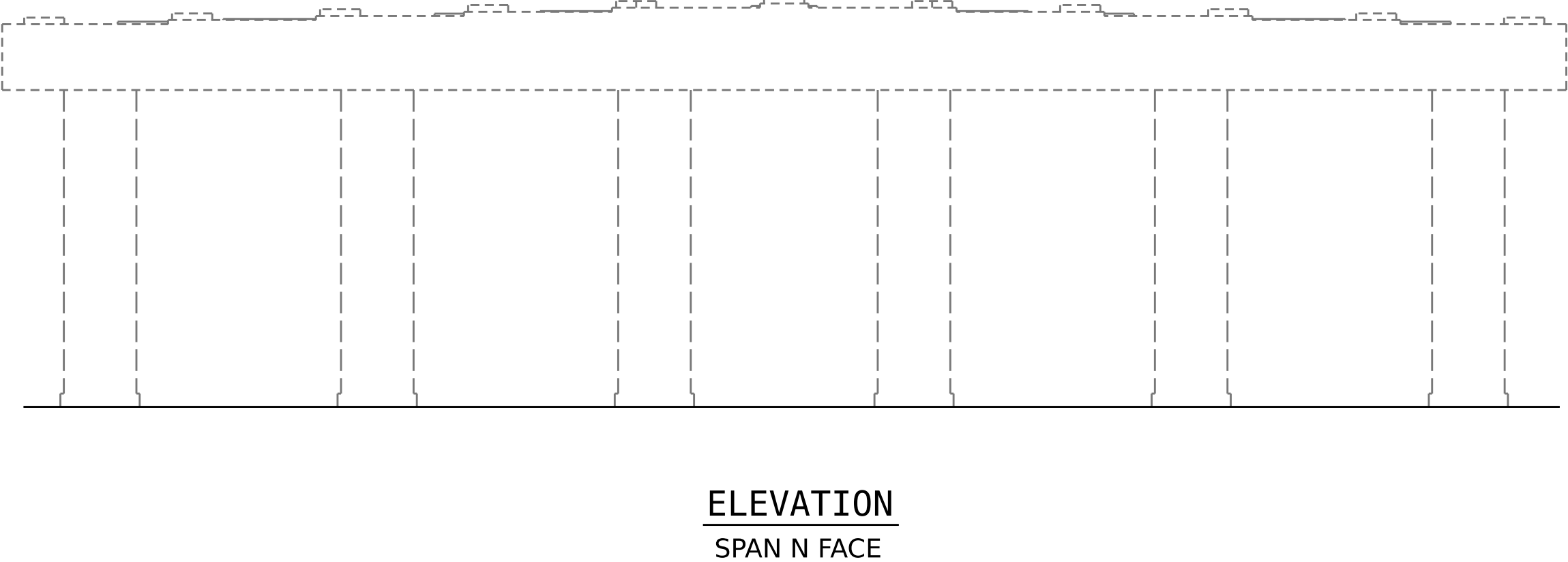
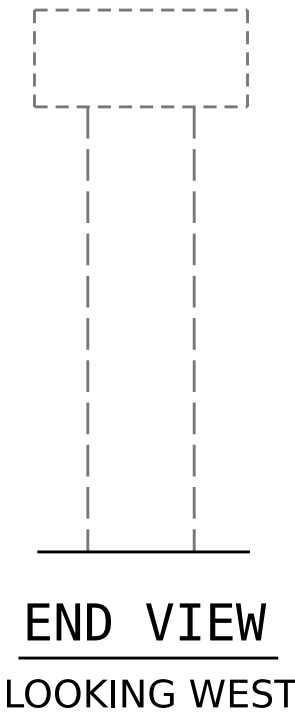
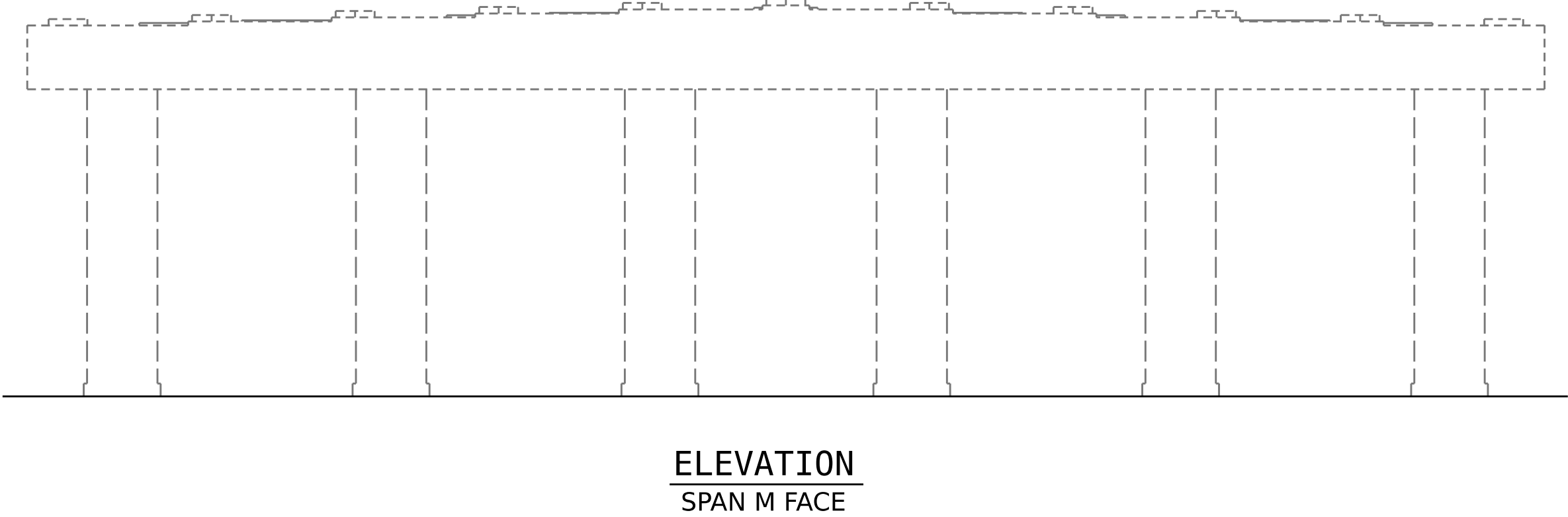
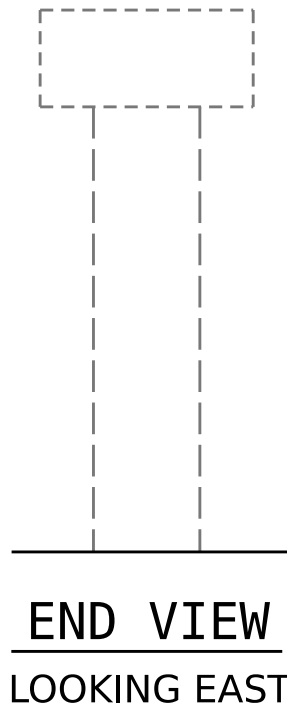
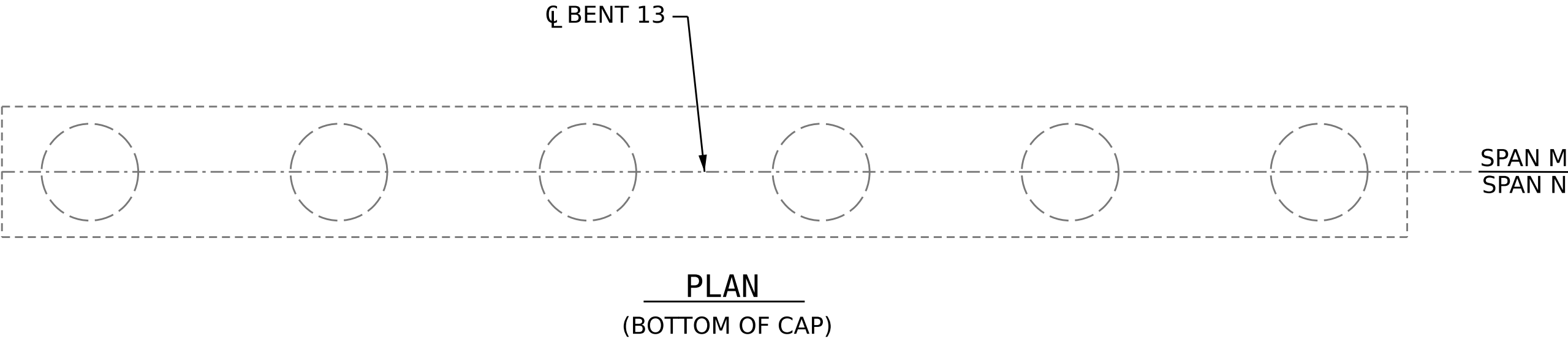
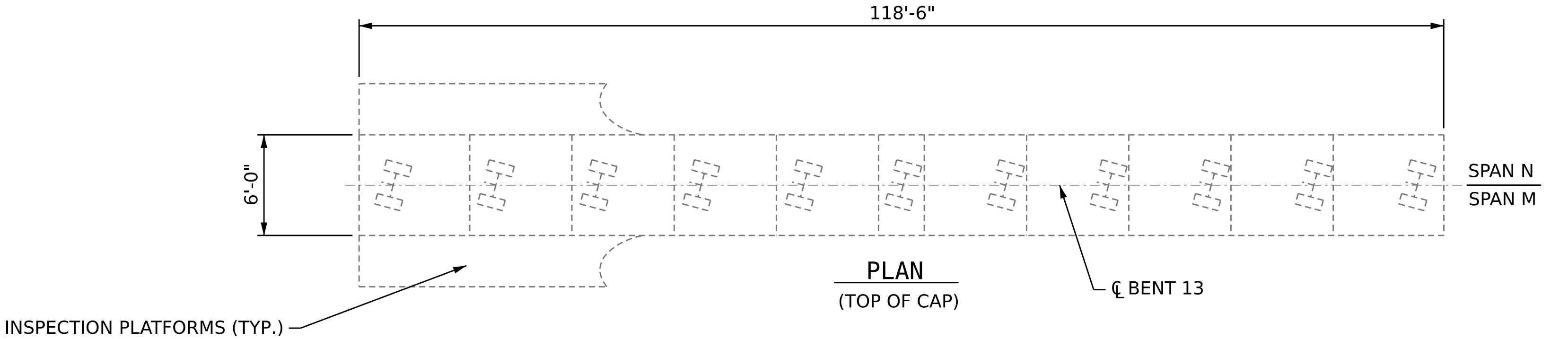


STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					SHEET NO. S1-39		
BENT 12 SPAN L/M FACE					TOTAL SHEETS 45		
REVISIONS							
NO.	BY:	DATE:	NO.	BY:	DATE:		
1			3				
2			4				

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

DRAWN BY : J.J.ANDERSON DATE : 04/2026
CHECKED BY : W.C.SMITH DATE : 05/2026
DESIGN ENGINEER OF RECORD: _____ DATE : _____

8/26/22



SUBSTRUCTURE REPAIR QUANTITY TABLE				
REPAIRS-BENT 13 QUANTITIES				
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
COLUMN	0.0	0.0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0			
COLUMN	0.0			
EPOXY RESIN INJECTION	LINEAR FT		LINEAR FT	
CAP				
COLUMN				
EPOXY COATING	AREA SF		AREA SF	
TOP OF CAP	663.3			

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

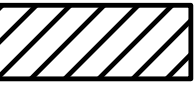
NOTES

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

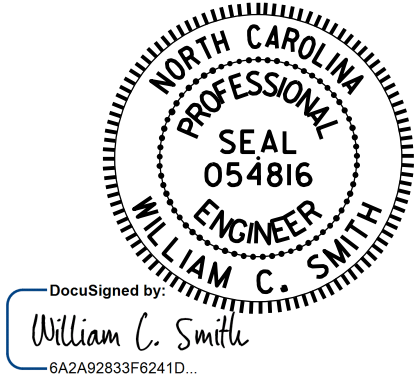
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES.

INSPECTION PLATFORMS NOT SHOWN FOR CLARITY.

-  SHOTCRETE REPAIR AREA
-  CONCRETE REPAIR AREA
-  EPOXY RESIN INJECTION

PROJECT NO. 15BPR.107
ONSLOW COUNTY
BRIDGE NO. 660253

SHEET 13 OF 14



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 13
SPAN M/N FACE

REVISIONS					SHEET NO. S1-40
NO.	BY:	DATE:	NO.	BY:	
1			3		TOTAL SHEETS
2			4		45

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

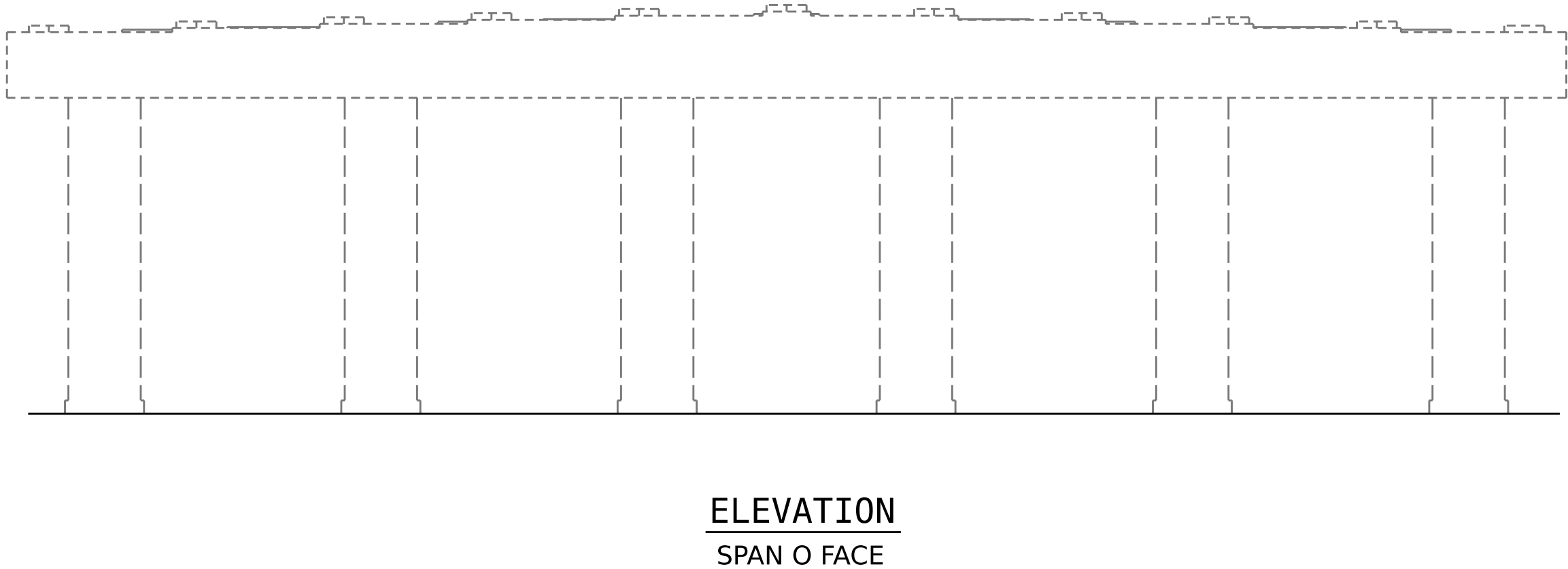
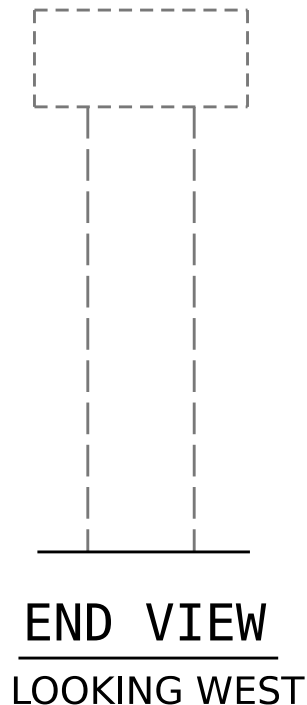
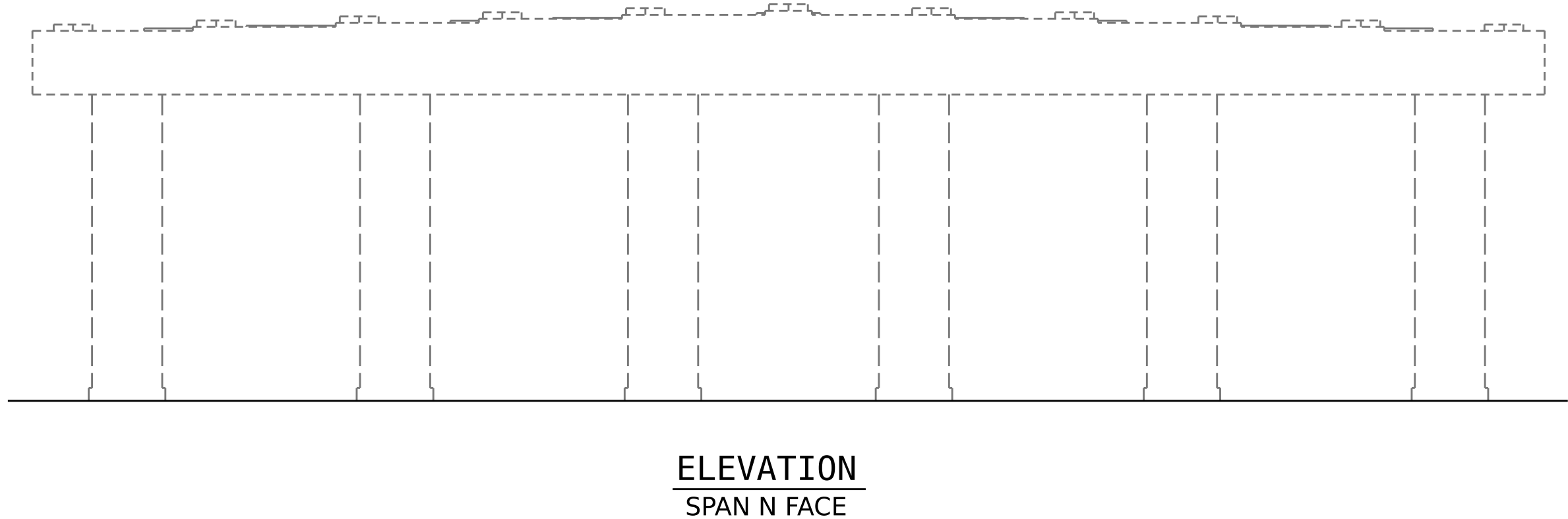
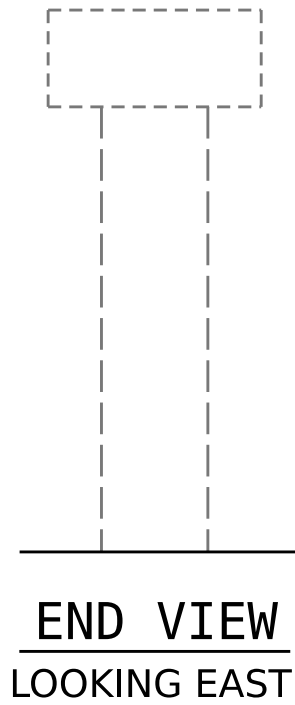
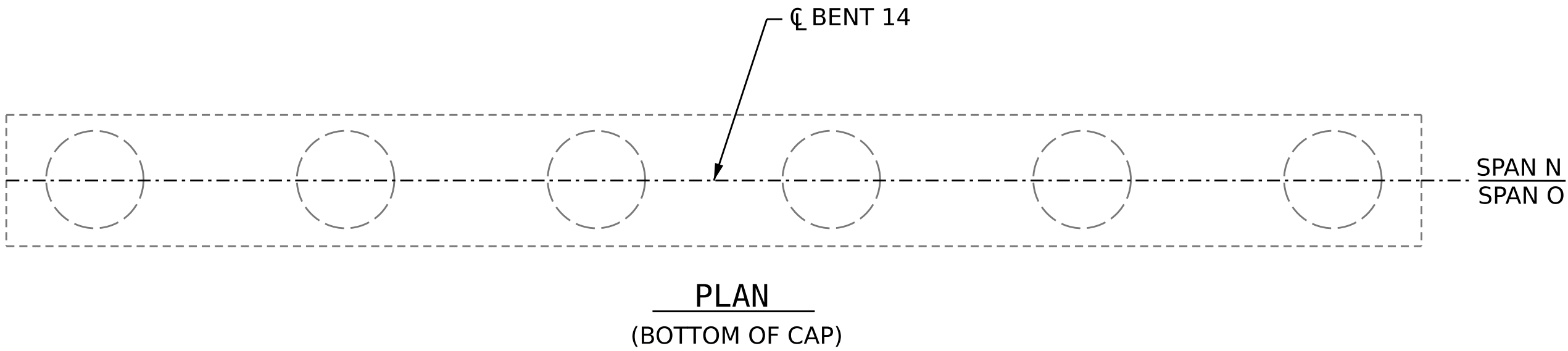
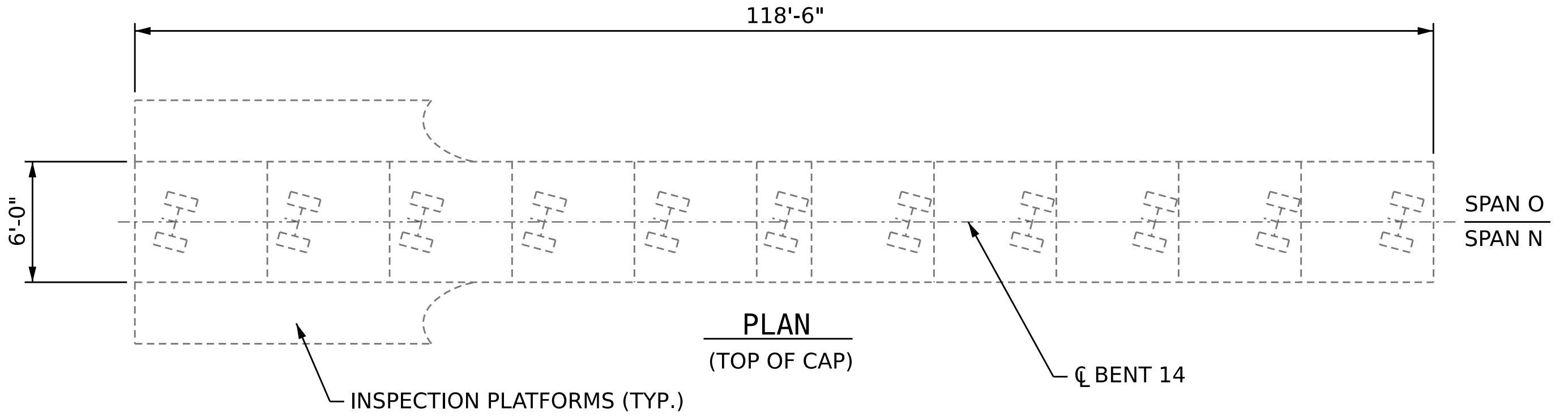
DRAWN BY : J.J.ANDERSON DATE : 04/2026
CHECKED BY : W.C.SMITH DATE : 05/2026
DESIGN ENGINEER OF RECORD: DATE :

8/26/21

8/26/21

8/26/21

8/26/21



SUBSTRUCTURE REPAIR QUANTITY TABLE

REPAIRS-BENT 14 QUANTITIES

	ESTIMATE		ACTUAL	
	AREA SF	VOLUME CF	AREA SF	VOLUME CF
SHOTCRETE REPAIRS				
CAP	0.0	0.0		
COLUMN	0.0	0.0		

CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0			
COLUMN	0.0			

EPOXY RESIN INJECTION	LINEAR FT		LINEAR FT	
CAP				
COLUMN				

EPOXY COATING	AREA SF		AREA SF	
TOP OF CAP	663.3			

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

NOTES

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

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES.

INSPECTION PLATFORMS NOT SHOWN FOR CLARITY.

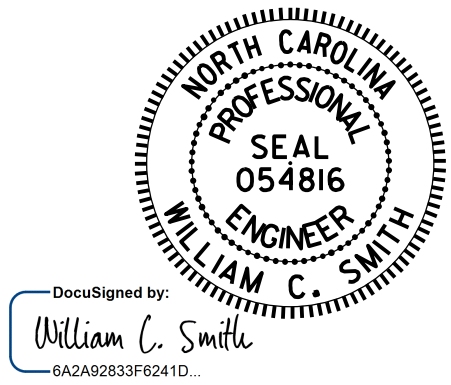
- SHOTCRETE REPAIR AREA
- CONCRETE REPAIR AREA
- EPOXY RESIN INJECTION

PROJECT NO. **15BPR.107**

ONSLOW COUNTY

BRIDGE NO. **660253**

SHEET 14 OF 14



STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION

RALEIGH

BENT 14

SPAN N/O FACE

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-41
1			3			TOTAL SHEETS 45
2			4			

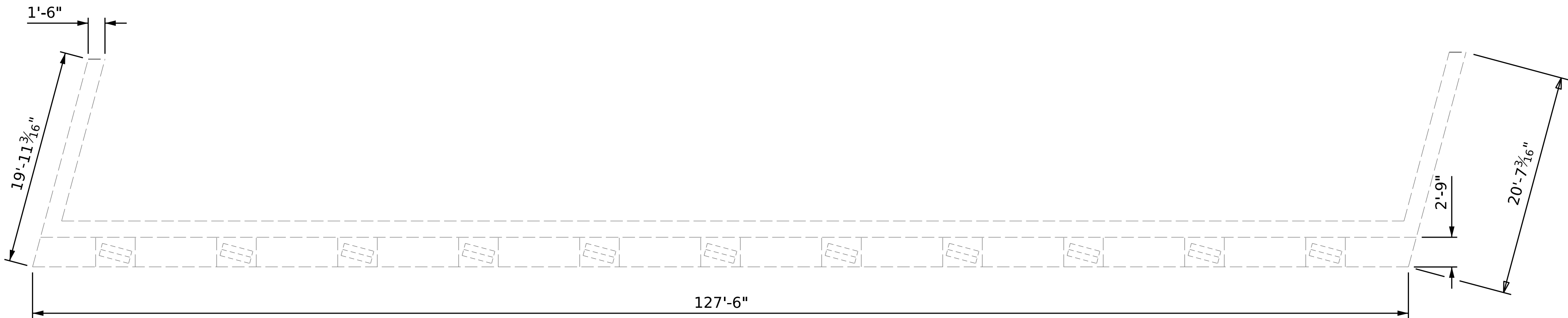
DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

DRAWN BY : **J.J.ANDERSON** DATE : **04/2026**
CHECKED BY : **W.C.SMITH** DATE : **05/2026**
DESIGN ENGINEER OF RECORD: DATE :

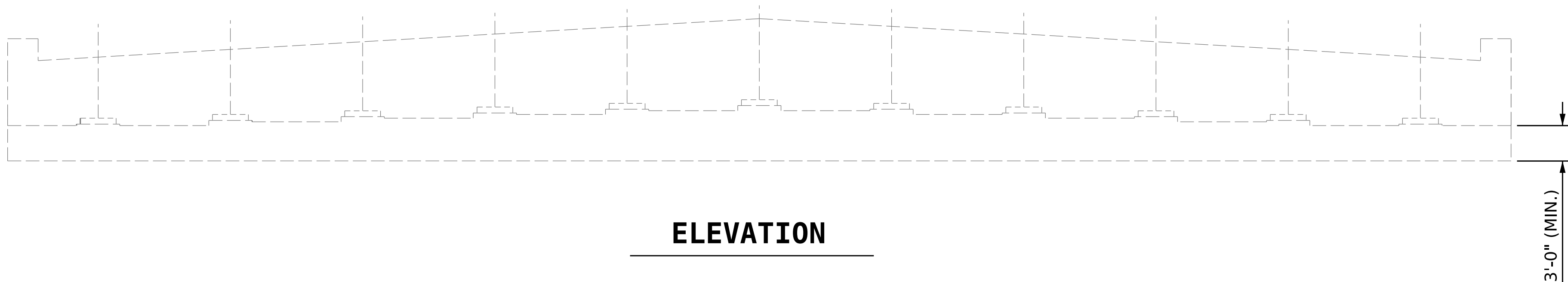
8/26/21

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PLAN



SUBSTRUCTURE REPAIR QUANTITY TABLE

REPAIRS- END BENT 2 QUANTITIES

	ESTIMATE		ACTUAL	
	AREA SF	VOLUME CF	AREA SF	VOLUME CF
SHOTCRETE REPAIRS				
CAP	0.0	0.0		
BACKWALL	0.0	0.0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0			
BACKWALL	0.0			
EPOXY COATING	AREA SF		AREA SF	
TOP OF CAP	326.8			
EPOXY RESIN INJECTION	LINEAR FT		LINEAR FT	
CAP				
BACKWALL	0.0			

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

NOTES

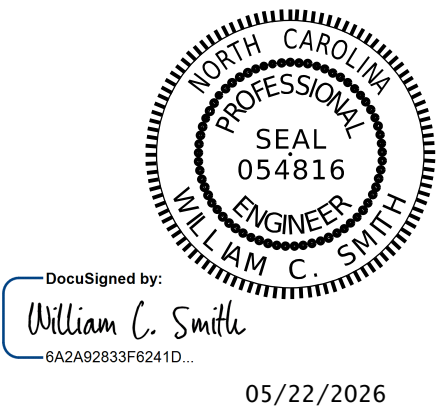
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SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES.

- SHOTCRETE REPAIR AREA
- CONCRETE REPAIR AREA
- EPOXY RESIN INJECTION

PROJECT NO. 15BPR.107
ONSLOW COUNTY
BRIDGE NO. 660253



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE REPAIRS
END BENT 2

DRAWN BY : J.J.ANDERSON DATE : 04/2026
CHECKED BY : W.C.SMITH DATE : 05/2026
DESIGN ENGINEER OF RECORD: _____ DATE : _____

5/20/2026
S:\DPG1\Division3\15BPR.107 Onslow\Bridge #660253\PLANS\660253. End Bent 2.dgn
wcsmith

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO. S1-42
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 45
2			4			

8/26/21

NOTES

FOR AREAS TO BE REPAIRED, SEE "PLAN OF SPAN" SHEETS.

ALL DECK REPAIRS SHALL BE COMPLETED PRIOR TO PLACEMENT OF OVERLAY.

FOR CLASS II AND CLASSIII SURFACE PRPARATION, SEE "OVERLAY SURFACE PREPARATIONS" SPECIAL PROVISION.

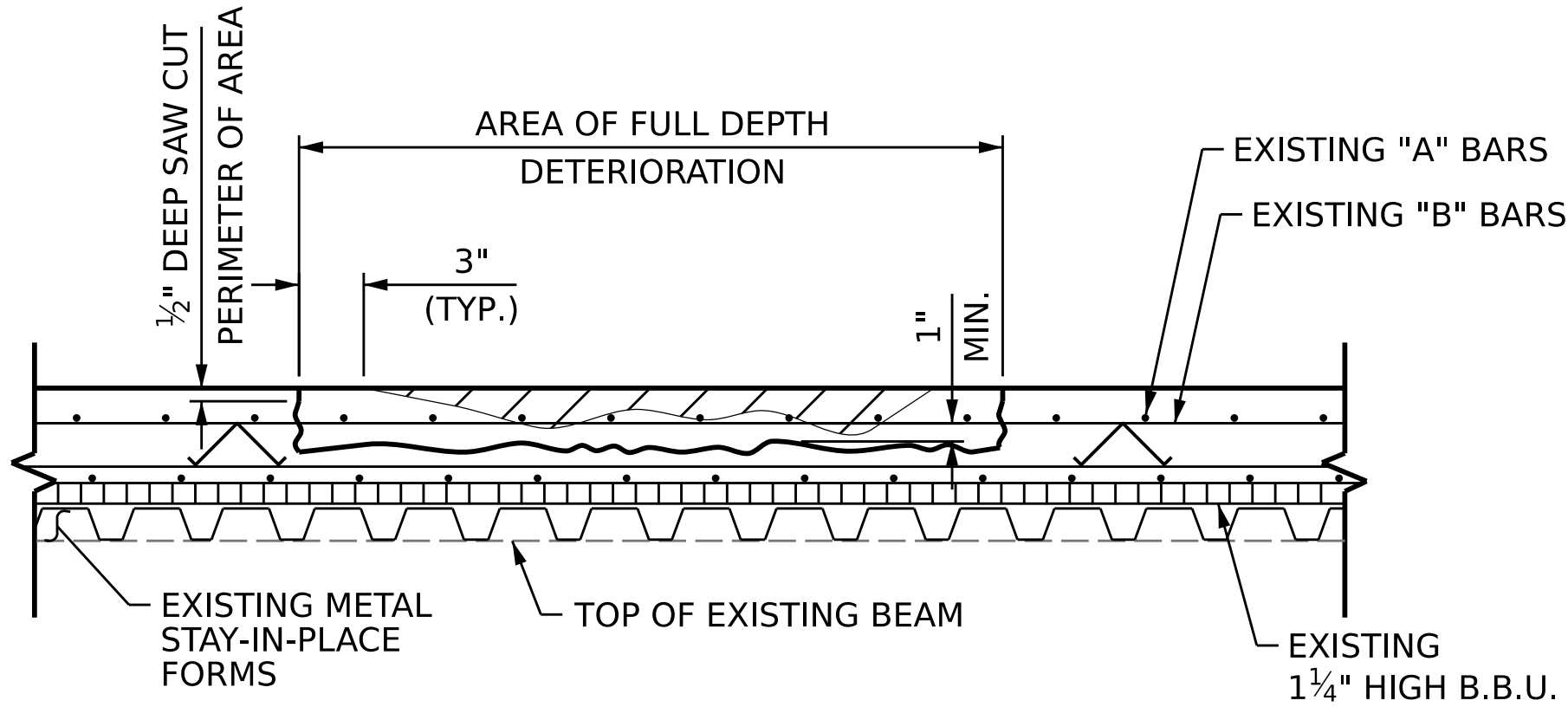
FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIR, SEE SPECIAL PROVISIONS.

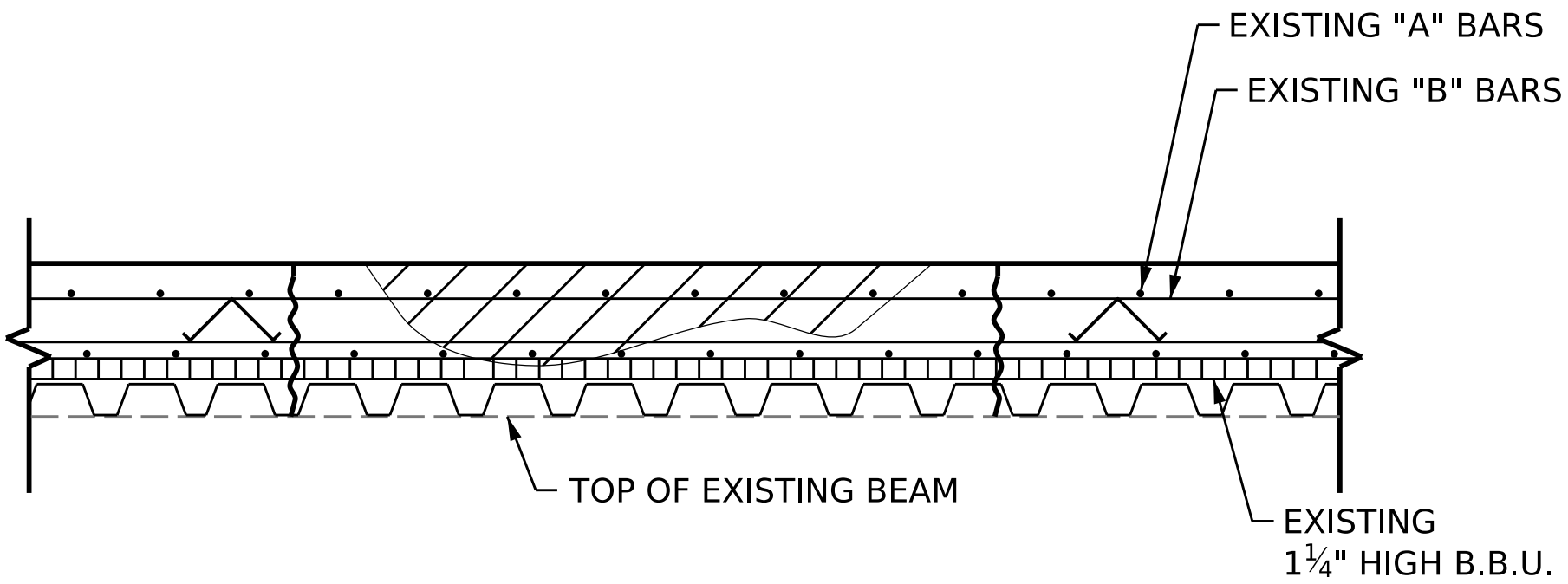
THE CONTRACTOR SHALL SUBMIT WORKING DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO STARTING WORK FOR TEMPORARY FORMWORK , FOR SUBMITTALS OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

UPON REMOVAL OF TEMPORARY FORMWORK, ALL VOIDS AND HONEYCOMBS ON THE UNDERSIDE OF DECK SURFACE SHALL BE FILLED WITH THE SAME MATERIAL AS USED FOR THE PATCH, AND FINISHED TO CONFORM TO THE SURROUNDING CONCRETE SURFACE.

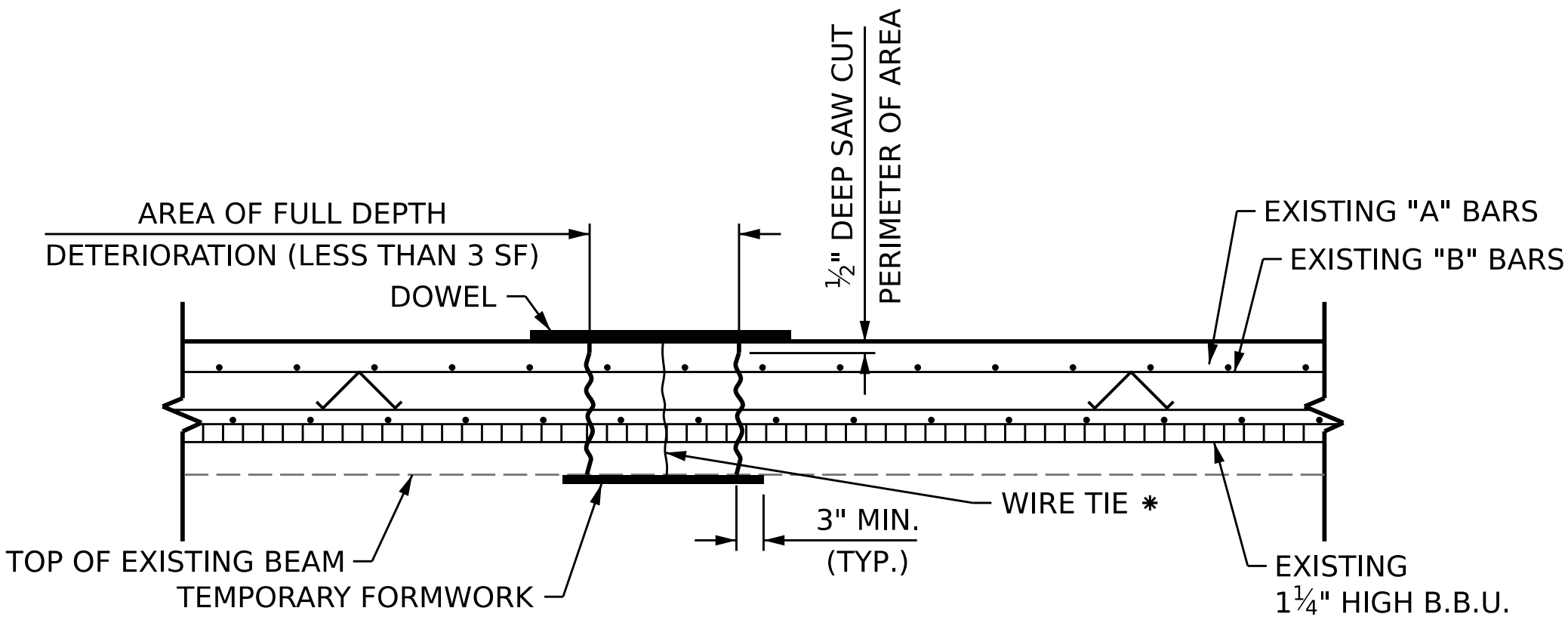
NO FORMWORK SHALL BE LEFT IN PLACE.



CLASS II (PARTIAL DEPTH) REPAIR



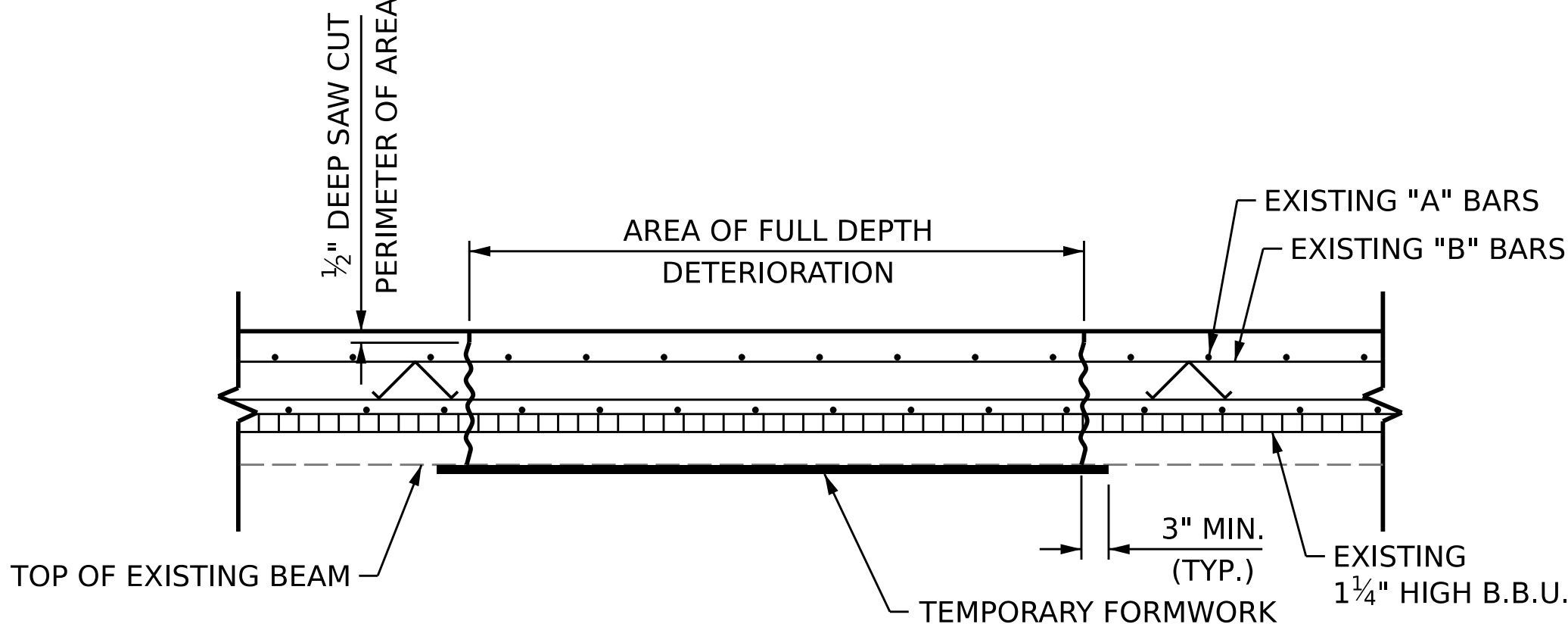
CLASS III (FULL DEPTH) REPAIR



FULL DEPTH REPAIR WITH TEMPORARY FORMWORK

(FOR AREAS OF DETERIORATION LESS THAN OR EQUAL TO 3 SF)

* WIRE TIE TO BE KNOTTED BELOW TEMPORARY FORMWORK AND ATTACHED TO DOWEL THAT IS WIDER THAN FORMED FULL DEPTH HOLE. ROTATE DOWEL TO TIGHTEN FORMWORK AGAINST BOTTOM OF DECK.



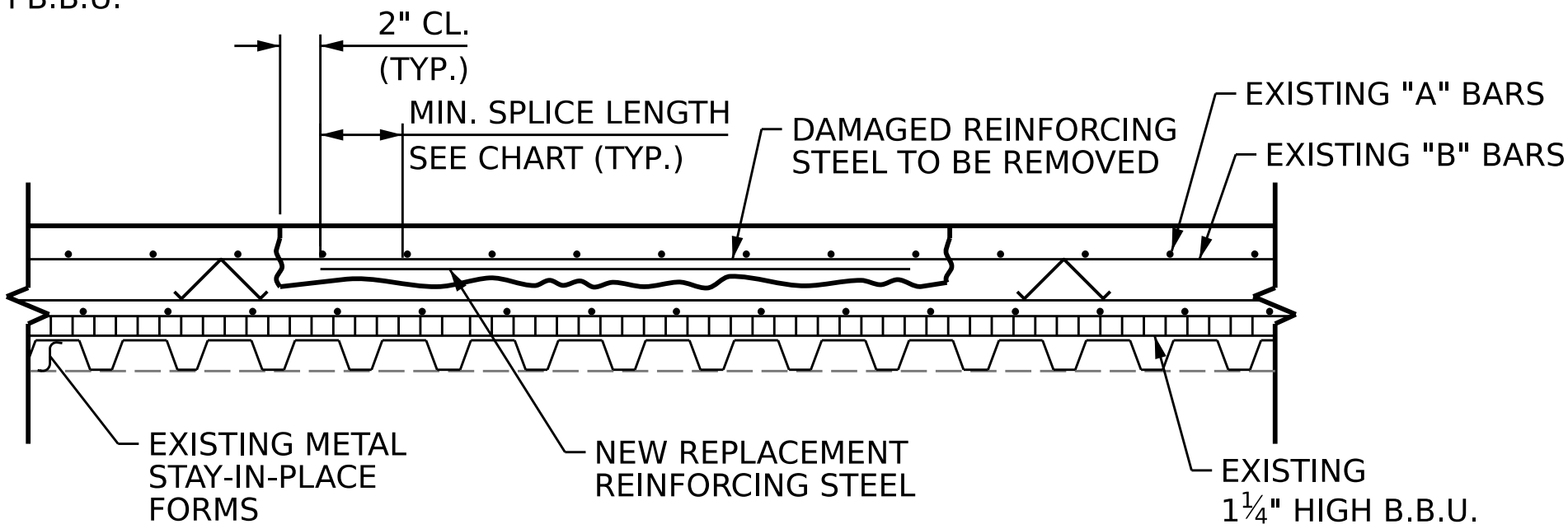
FULL DEPTH REPAIR WITH TEMPORARY FORMWORK

(FOR AREAS OF DETERIORATION LESS THAN OR EQUAL TO 3 SF)

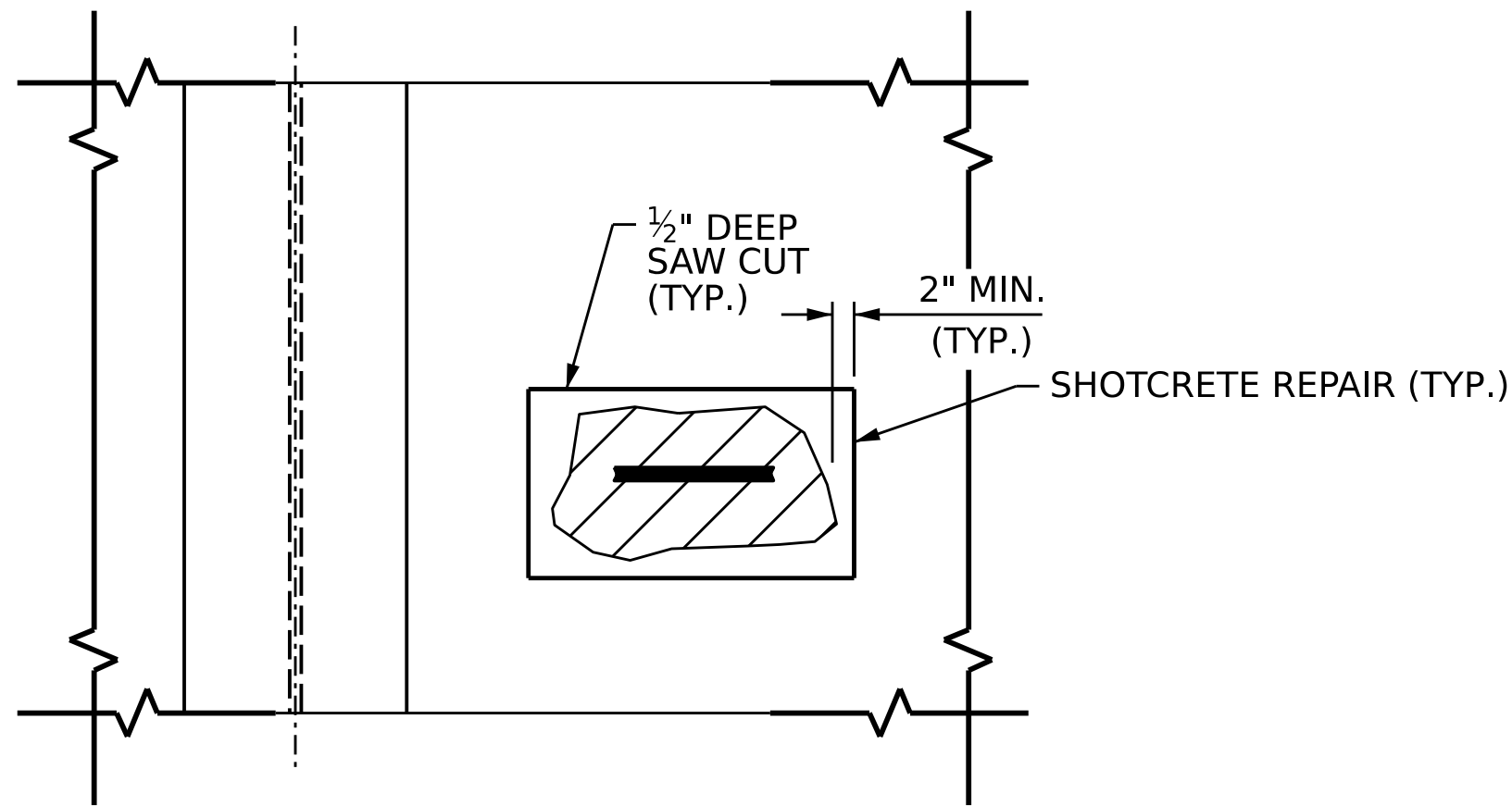


AREA OF DETERIORATION

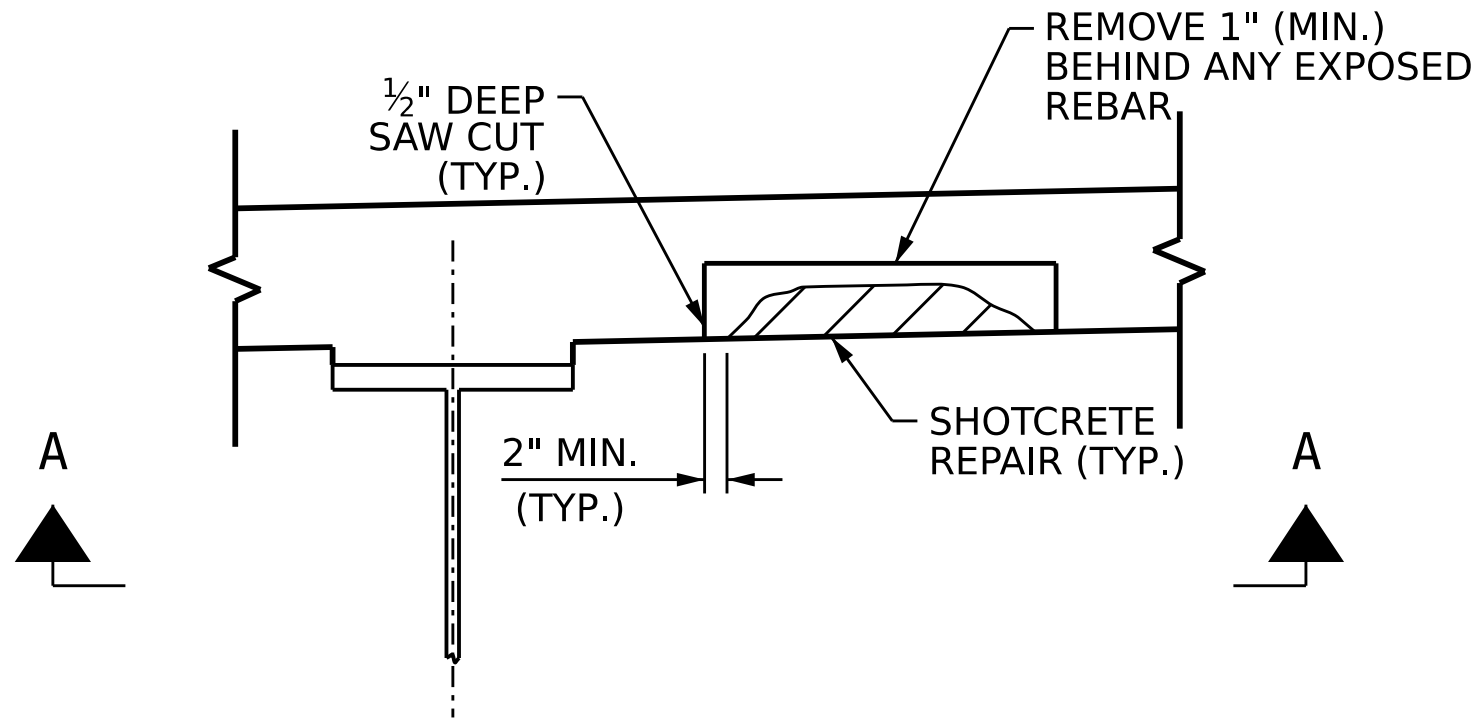
SUPERSTRUCTRE REINFORCING STEEL LENGTHS ARE BASED ON THE FOLLOWING MINIMUM SPLICE LENGTHS					
BAR SIZE	SUPERSTRUCTURE EXCEPT APPROACH SLABS, PARAPET, AND BARRIER RAIL		APPROACH SLABS		PARAPET AND BARRIER RAIL
	EPOXY COATED	UNCOATED	EPOXY COATED	UNCOATED	
#4	2'-0"	1'-9"	2'-0"	1'-9"	2'-9"
#5	2'-6"	2'-2"	2'-6"	2'-2"	3'-5"
#6	3'-0"	2'-7"	3'-10"	2'-7"	4'-4"
#7	5'-3"	3'-6"			
#8	6'-10"	4'-7"			



REINFORCING STEEL REPAIR



SECTION A-A



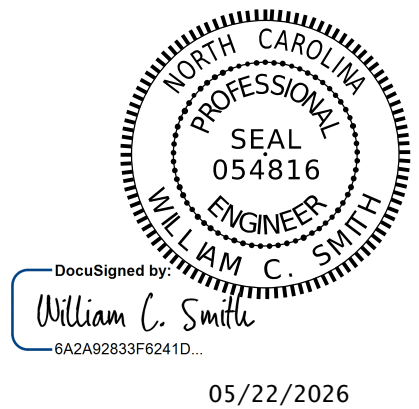
TYPICAL SECTION

UNDERSIDE OF DECK REPAIR

PROJECT NO. **15BPR.107**

ONslow COUNTY

BRIDGE NO. **660253**

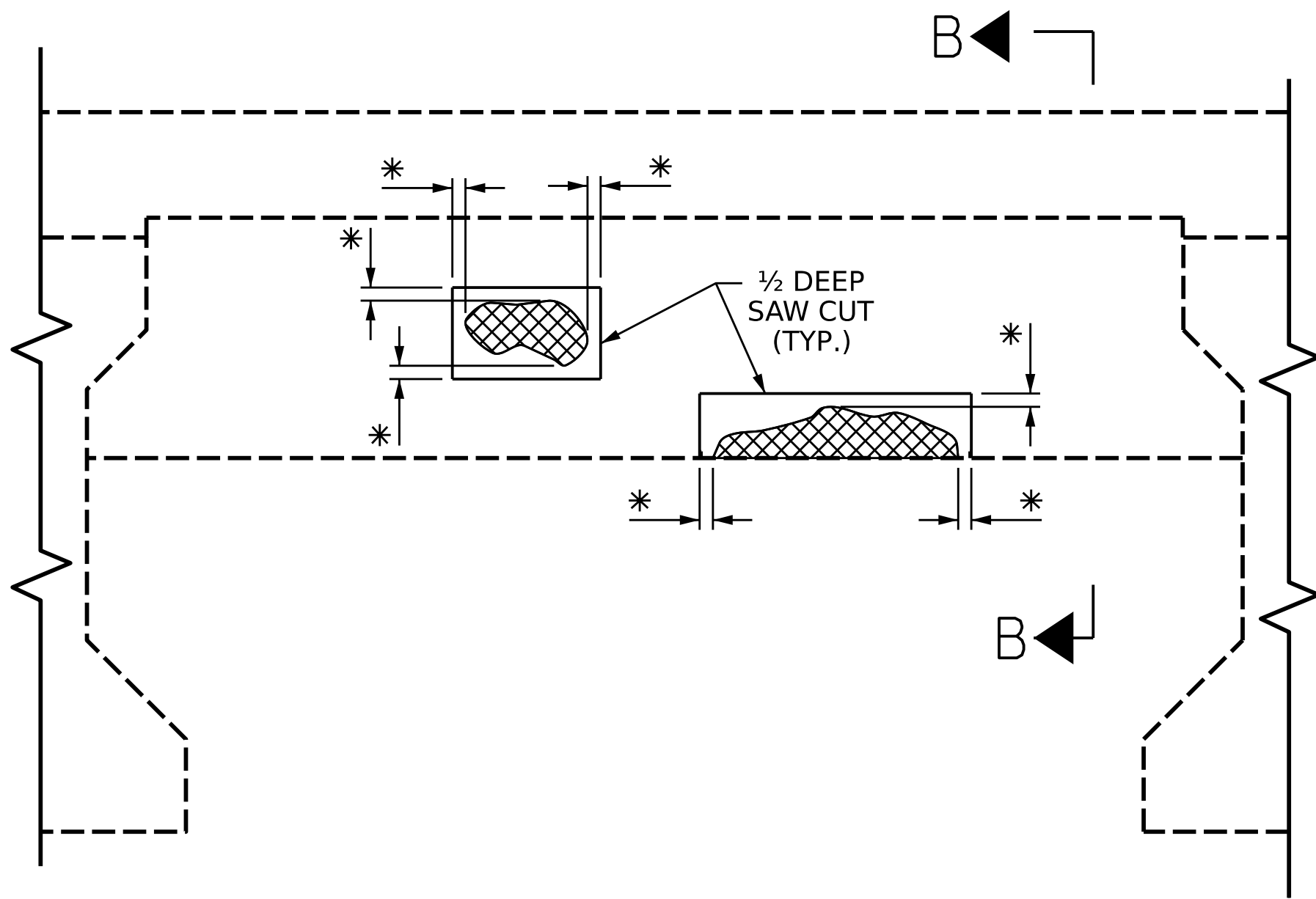


STATE OF NORTH CAROLINA					
DEPARTMENT OF TRANSPORTATION					
RALEIGH					
STANDARD					
DECK REPAIR DETAILS					

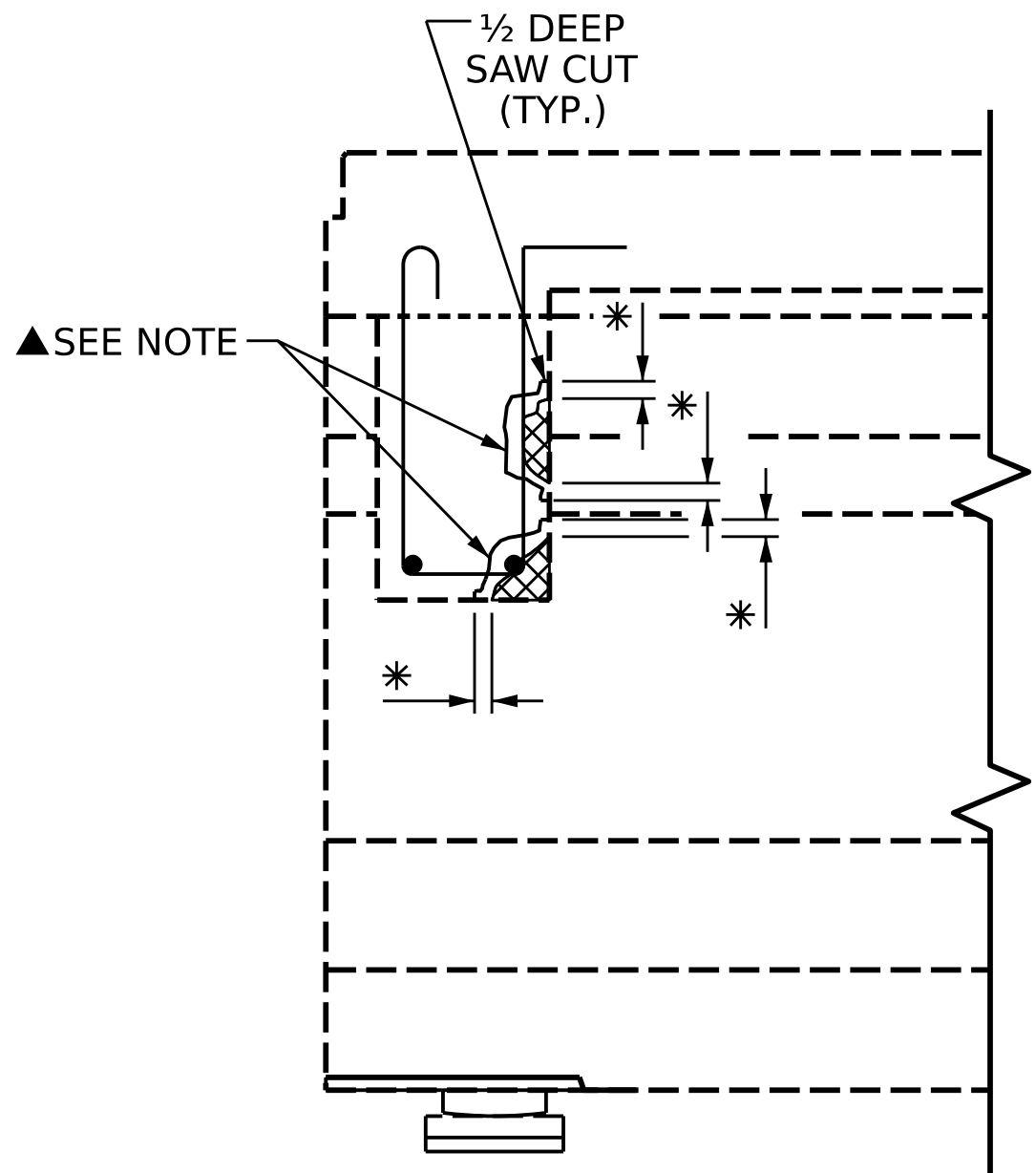
ASSEMBLED BY: J. SCOTT	DATE : 05/2026
CHECKED BY : W. SMITH	DATE : 05/2026
DRAWN BY : NAP 09/2018	
CHECKED BY : DAC 09/2018	

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED					
1			3		
2			4		

REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
TOTAL SHEETS					45



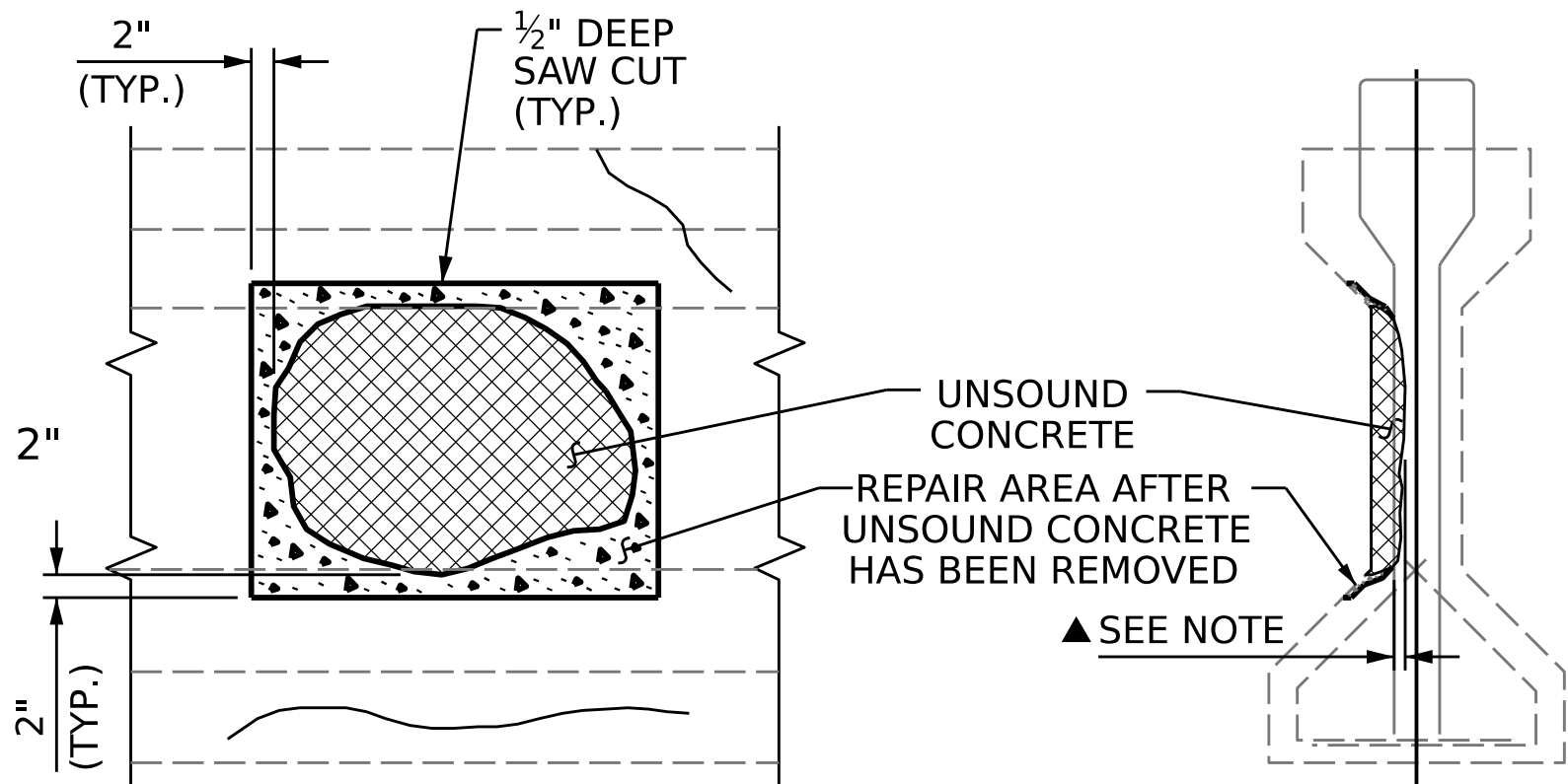
TYPICAL SECTION



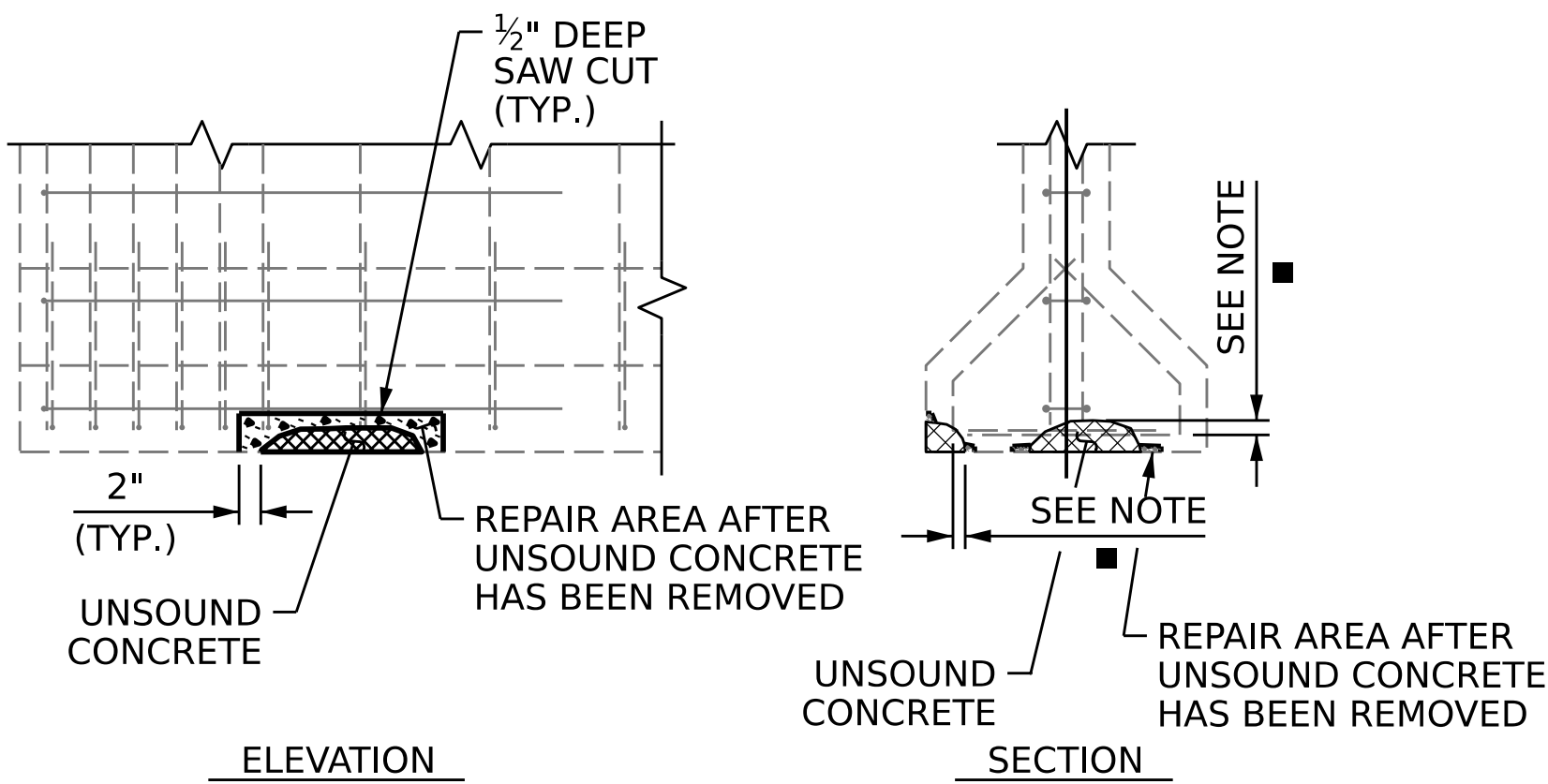
SECTION B-B

BENT DIAPHRAGM REPAIR DETAIL

* 1/2" DEEP SAW CUT SHALL BE PLACED 2" INTO SOUND CONCRETE.

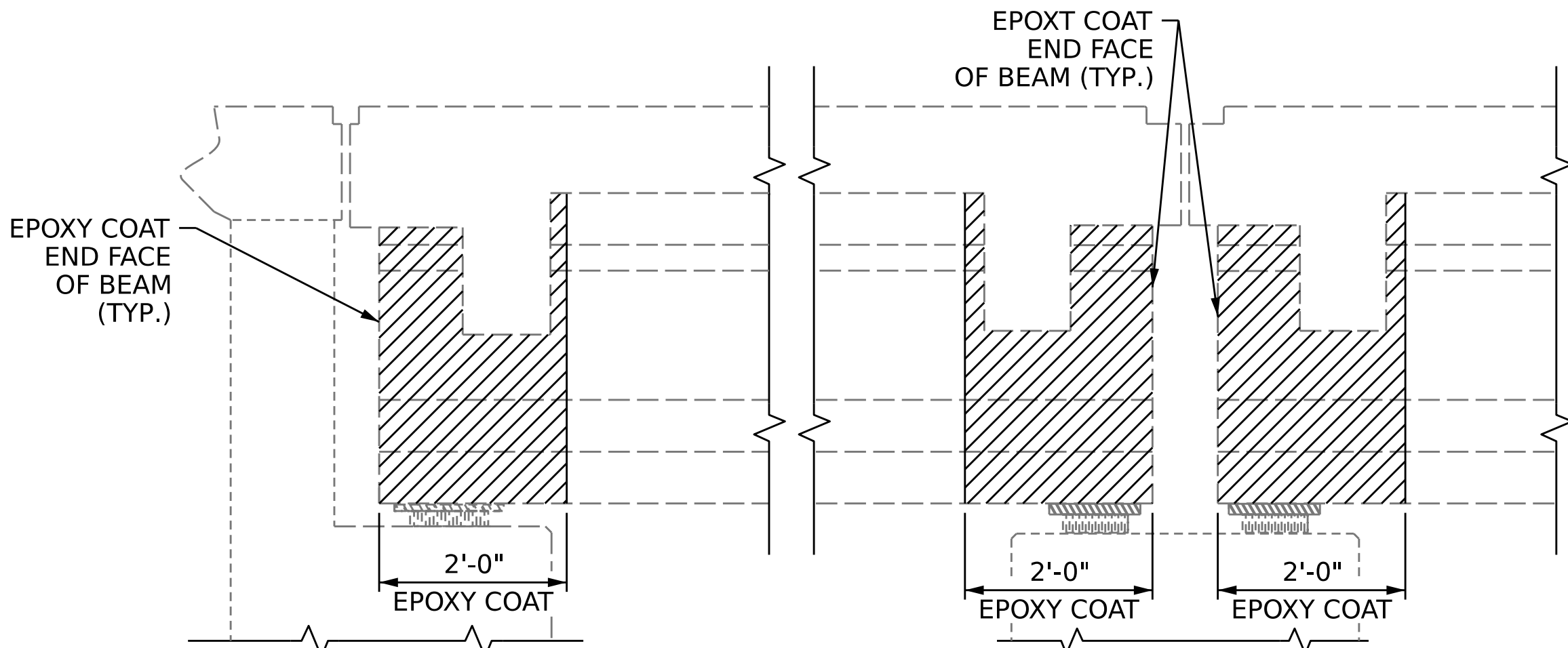
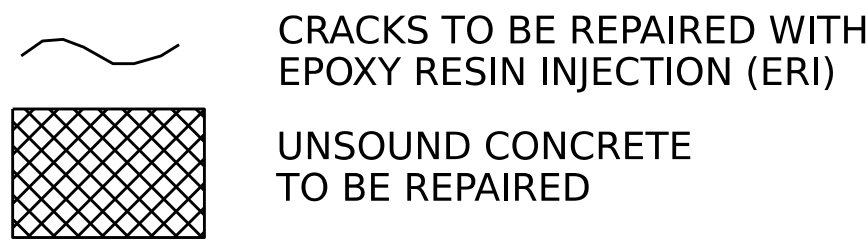


GIRDER WEB REPAIR



GIRDER FLANGE REPAIR

PRESTRESSED GIRDER REPAIR



END BENT

BENT

LIMITS OF EPOXY COATING

NOTES:

PREPACKAGED MATERIAL IS REQUIRED.

CONSULT WITH THE ENGINEER TO DETERMINE PRELOADING REQUIREMENTS WHEN REPAIR IS WITHIN THE CENTER REGION OF THE BEAM (0.25L TO 0.75L).

FOR REPAIRS OVER TRAFFIC AND SHALLOW REPAIRS THAT DO NOT ENGAGE REINFORCEMENT, ANCHOR PATCH MATERIAL USING 1/4" GALVANIZED BOLTS EPOXY ANCHORED WITH 2" EMBEDMENT. PLACE BOLTS IN A 6" GRID. USE A LATEX OR EPOXY PATCH MATERIAL FOR IMPROVED BOND. USE EXTREME CARE TO NOT DAMAGE STRANDS.

FOR REPAIRS TO PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.

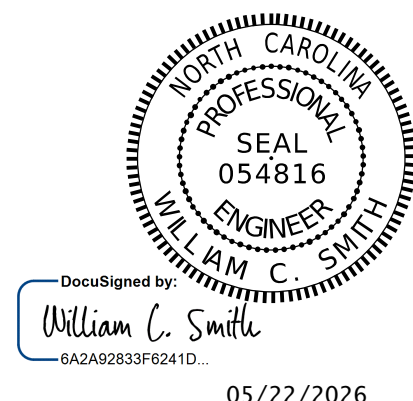
FOR EPOXY RESIN INJECTION (ERI), SEE SPECIAL PROVISIONS.

FOR EPOXY COATING CONCRETE GIRDER ENDS, SEE SPECIAL PROVISIONS.

PRESTRESSED GIRDER REPAIR SEQUENCE:

1. SOUND CONCRETE TO DETERMINE EXTENTS OF REPAIR LOCATION. (PICTURE REQUIRED)
2. REMOVE SURFACE CONCRETE TO VERIFY THAT SAWCUT DEPTH WILL NOT DAMAGE EXISTING REINFORCING STEEL. SAW CUT AROUND REPAIR AREA TO A NOMINAL DEPTH OF 1/2".
3. REMOVE CONCRETE WITHIN SAW CUT AREA TO MINIMUM 1/2" DEPTH. IF CONCRETE IS DAMAGED BEYOND THE ORIGINAL SAW CUT, A NEW SAW CUT IS REQUIRED. (PICTURE REQUIRED)
- ▲ 4. IF MORE THAN HALF THE CIRCUMFERENCE OF A REINFORCING BAR IS EXPOSED DURING THIS PROCESS, REMOVE ADDITIONAL CONCRETE TO 1" BEHIND THE BAR. THIS DOES NOT APPLY TO PRESTRESSED STRANDS.
- 5. ALL UNSOUND CONCRETE MUST BE REMOVED, HOWEVER, PRESTRESSED STRANDS SHOULD NOT BE DISTURBED UNLESS ABSOLUTELY NECESSARY. USE EXTREME CARE TO NOT DAMAGE STRANDS.
6. USE A WIRE BRUSH TO CLEAN ALL EXPOSED REINFORCING BARS AND PRESTRESSED STRANDS. FOR BARS WITH MORE THAN 10% SECTION LOSS, SPLICE AND SECURELY TIE SUPPLEMENTAL REINFORCING BARS AS NEEDED. NOTE AND PROVIDE DETAILED DOCUMENTATION, INCLUDING LOCATION AND SEVERITY, OF ALL DAMAGE TO PRESTRESSED STRANDS THAT EXCEEDS 10% SECTION LOSS. IF FIVE (5) OR MORE STRANDS ARE DAMAGED, NOTIFY THE ENGINEER PRIOR TO PLACEMENT OF REPAIR MATERIAL.
7. REMOVE ALL LOOSE OR WEAKENED MATERIAL THEN CLEAN THE REPAIR AREA OF DIRT, GREASE, OIL, AND FOREIGN MATTER. (PICTURE REQUIRED)
8. PREPARE SURFACE AND PLACE APPROVED REPAIR MATERIAL ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. MAXIMUM AGGREGATE SIZE FOR REPAIR MATERIAL SHALL NOT EXCEED 2/3 THE MINIMUM REPAIR DEPTH. (PICTURE REQUIRED)

PROJECT NO. **15BPR.107**
ONslow COUNTY
BRIDGE NO. **660253**

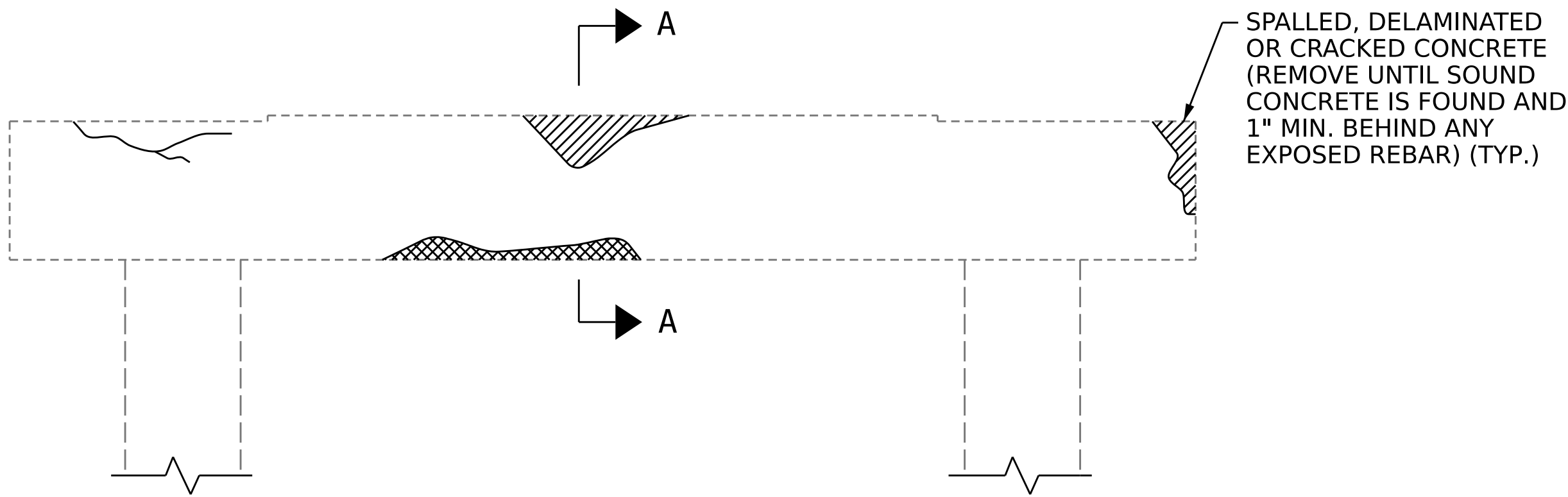


STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
**PRESTRESSED CONCRETE
GIRDER REPAIR
DETAILS**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS
2			4			45

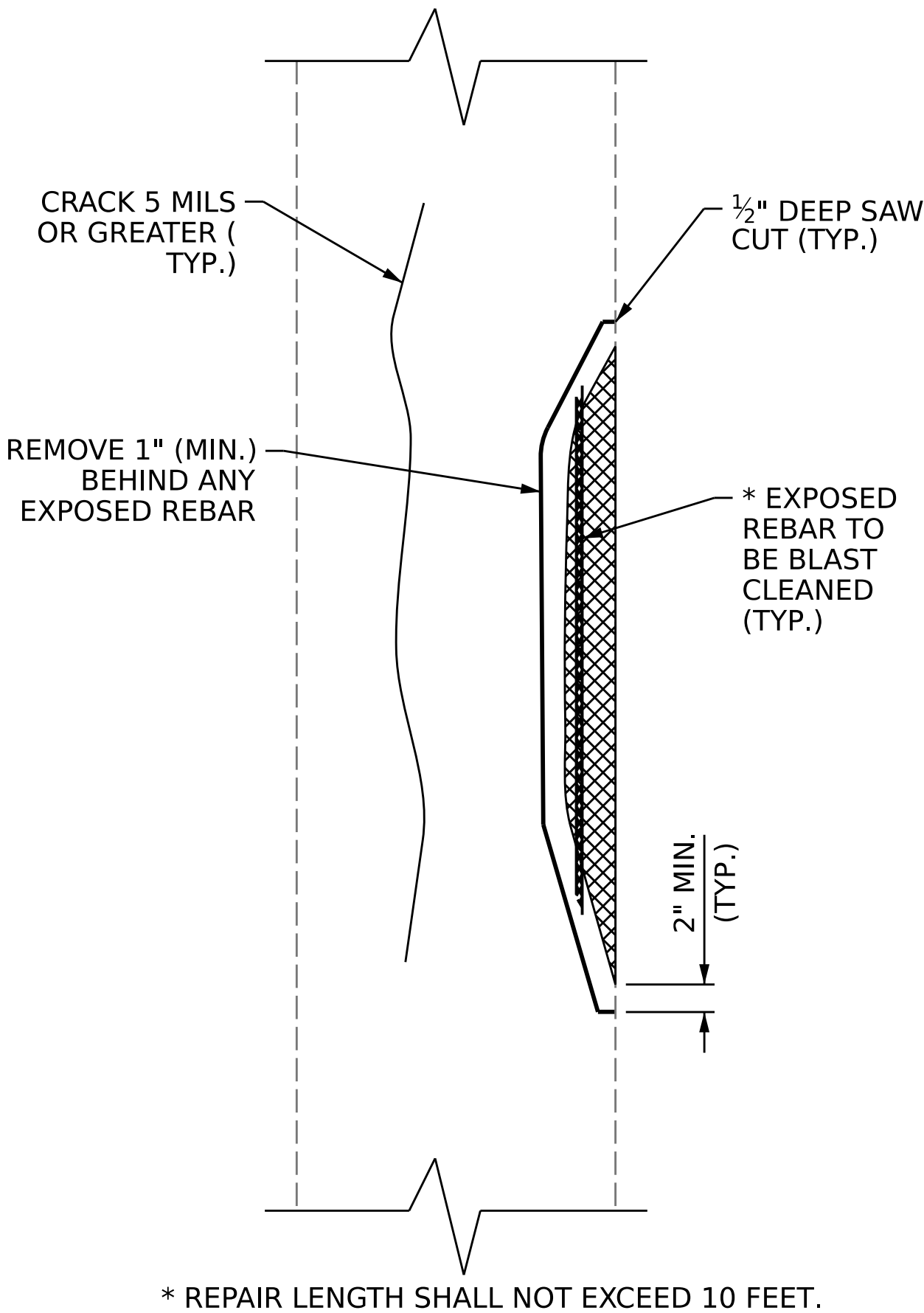
DRAWN BY: J.SCOTT DATE: 5/2026
CHECKED BY: W.C.SMITH DATE: 5/2026
DESIGN ENGINEER OF RECORD: DATE:

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wcsmith

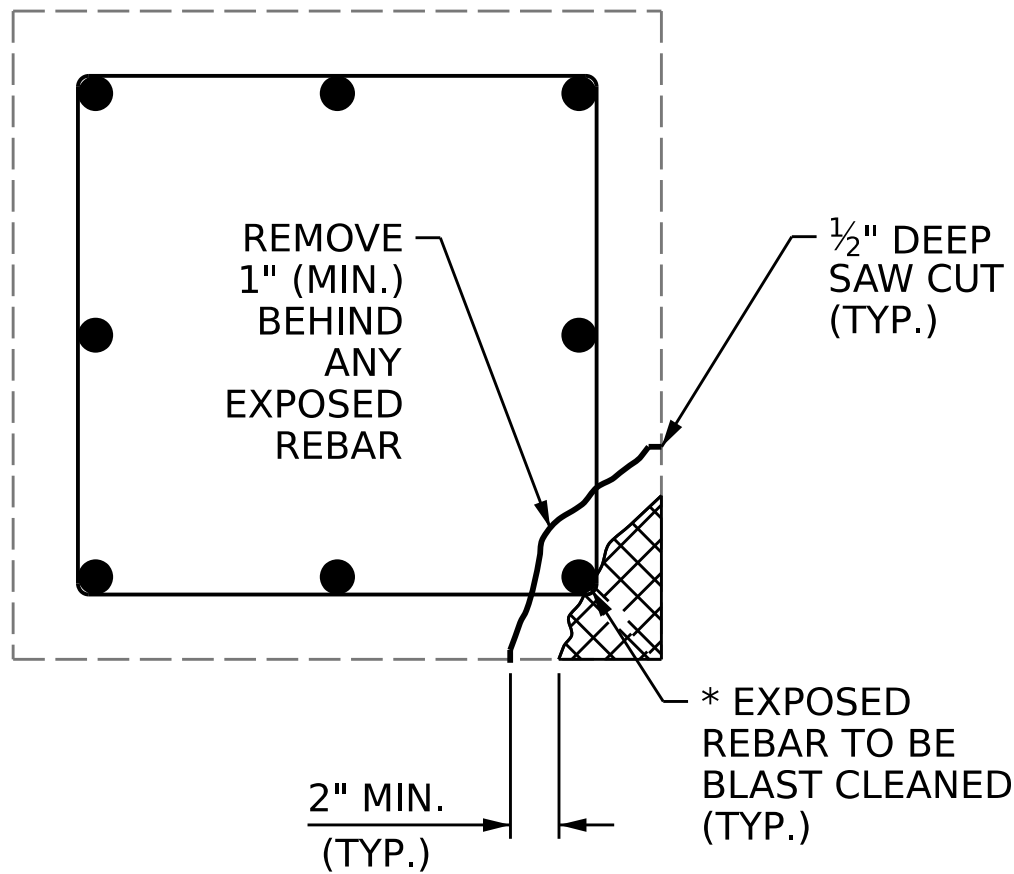


BENT CAP REPAIRS

SPlice LENGTH TABLE	
BAR SIZE	MIN. SPLICE LENGTH
#4	2'-5"
#5	3'-0"
#6	3'-7"
#7	4'-2"
#8	4'-9"
#9	5'-4"
#10	6'-0"
#11	6'-8"



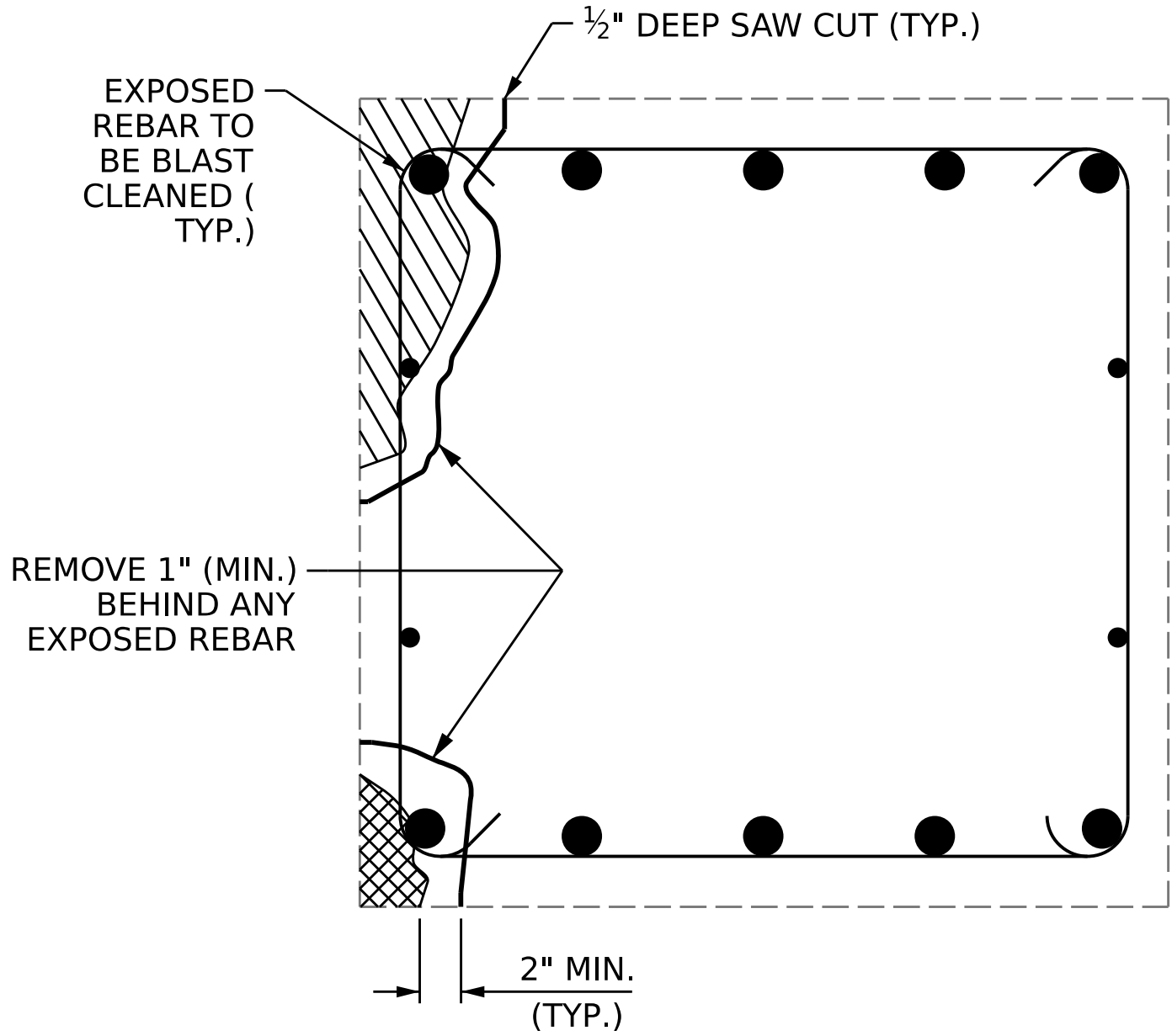
ELEVATION OF COLUMN



PLAN OF COLUMN

COLUMN REPAIR

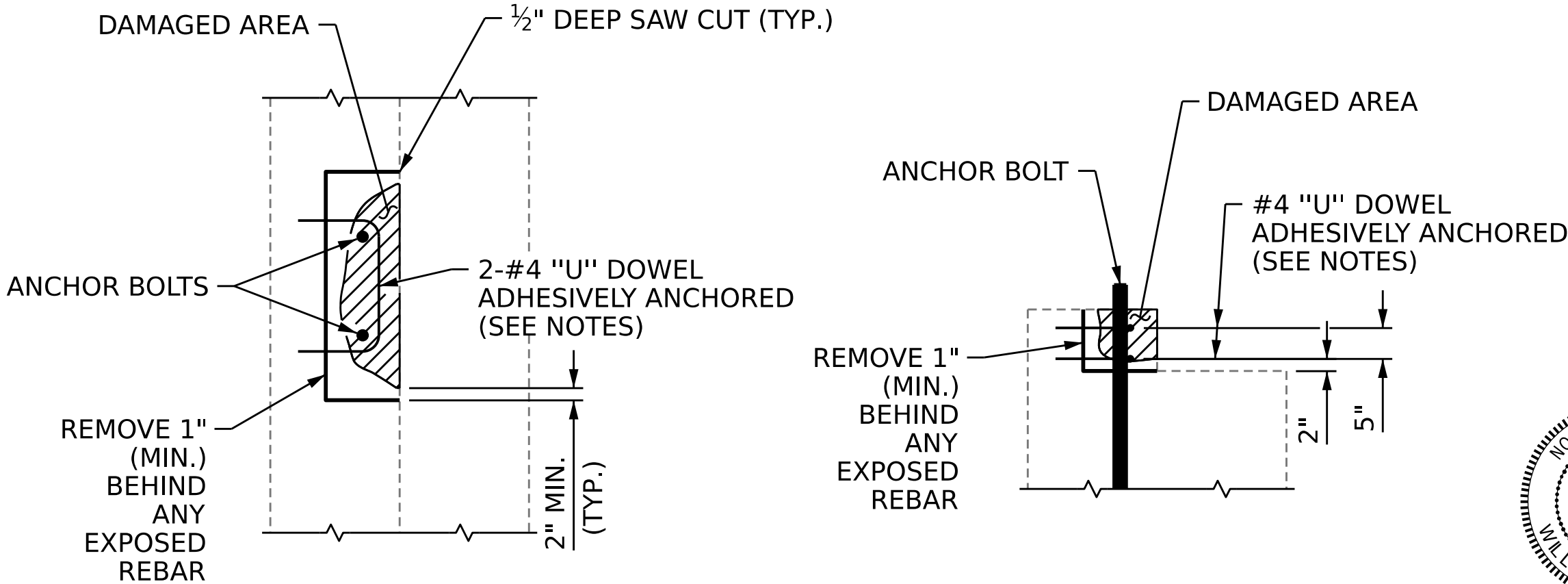
CAP REPAIR



SECTION A-A

REPAIR KEY

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



PLAN

ELEVATION

PEDESTAL WALL REPAIR

NOTES

TYPICAL BENT CAP REPAIRS ARE SHOWN. REPAIR DETAILS SIMILAR FOR END BENT CAPS AND STRUTS.

THE METHOD USED TO DELINEATE THE AREAS OF UNSOUND CONCRETE TO BE REPAIRED SHALL NOT PERMANENTLY MARK THE CONCRETE, LEAVE ANY RESIDUE AFTER REMOVAL OR REQUIRE HARSH CHEMICALS TO REMOVE.

THE CONTRACTOR SHALL REMOVE THE DETERIORATED CONCRETE IN ACCORDANCE WITH THE GUIDELINES SET IN THESE NOTES, IN THE SPECIAL PROVISIONS AND THE STANDARD SPECIFICATIONS.

REMOVE UNSOUND CONCRETE TO THE EXTENT NECESSARY, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEARANCE TO SAWCUT.

NO MORE THAN ONE-THIRD OF THE CAP OR COLUMN CROSS SECTIONAL AREA SHALL BE REMOVED AT ONE TIME. SHOULD IT BECOME NECESSARY TO REMOVE MORE THAN 30% OF A CAP OR COLUMN CROSS SECTIONAL AREA, NOTIFY THE ENGINEER PRIOR TO PROCEEDING.

SIMULTANEOUS REMOVAL OF UNSOUND CONCRETE MAY BE PERMITTED ON MORE THAN ONE FACE OF A CAP AND/OR COLUMN, IF THE AREAS OF REMOVAL ARE NOT ADJACENT TO OR DIRECTLY OPPOSITE ONE ANOTHER. IF REMOVAL EXTENDS MORE THAN 1½" BEHIND THE MAIN REINFORCING BARS, NOTIFY THE ENGINEER PRIOR TO PROCEEDING.

NO MORE THAN 10 VERTICAL FEET OF A COLUMN MAY BE REMOVED AT ONE TIME, PRIOR TO REPAIR, UNLESS OTHERWISE APPROVED BY THE ENGINEER.

REINFORCING STEEL WHICH IS DETERMINED BY THE ENGINEER TO BE REPLACED, SHALL BE REMOVED TO A POINT WHERE IT IS SOUND. THE REPAIR AREA SHALL EXTEND A SUFFICIENT DISTANCE BEYOND THIS POINT TO DEVELOP A SPLICE LENGTH SPECIFIED IN THE TABLE ON THIS SHEET.

THE #4 "U" DOWELS ARE REQUIRED ONLY AROUND THE ANCHOR BOLTS. THE EXISTING REINFORCING STEEL IN THE PEDESTAL WALL SHALL BE CLEANED, STRAIGHTENED AND REMAIN IN PLACE.

FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE STANDARD SPECIFICATIONS.

COAT ALL REPAIR SURFACE AREAS ON THE TOP OF CAPS, INCLUDING CHAMFERS, WITH EPOXY PROTECTIVE COATING, OVERLAPPING THE REPAIR AREA BY A MINIMUM OF 3" ON ALL POSSIBLE SIDES.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

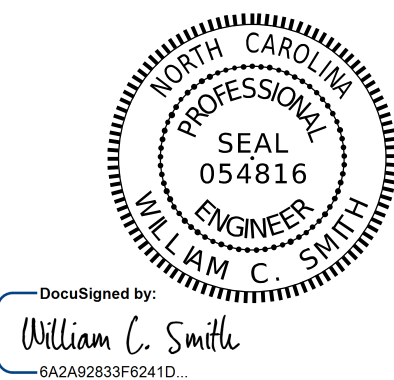
FOR EPOXY PROTECTIVE COATING, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION (ERI), SEE SPECIAL PROVISIONS.

PROJECT NO. **15BPR.107**
ONSLOW COUNTY
BRIDGE NO. **660253**

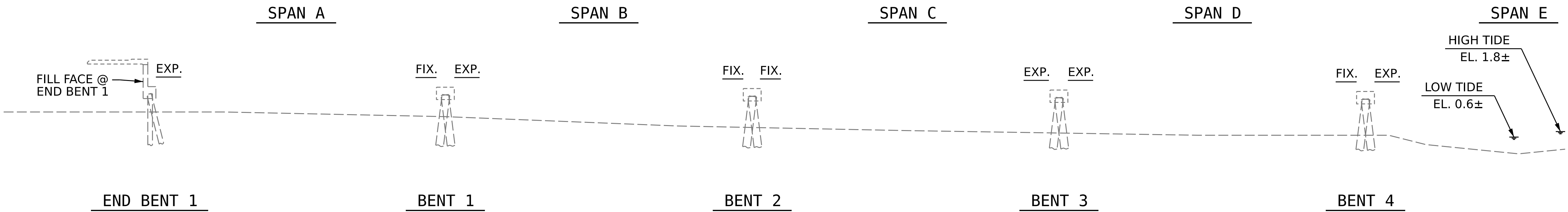
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STANDARD
**TYPICAL CAP
AND COLUMN
REPAIR DETAILS**

REVISIONS						SHEET NO. S1-45
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 45
2			4			

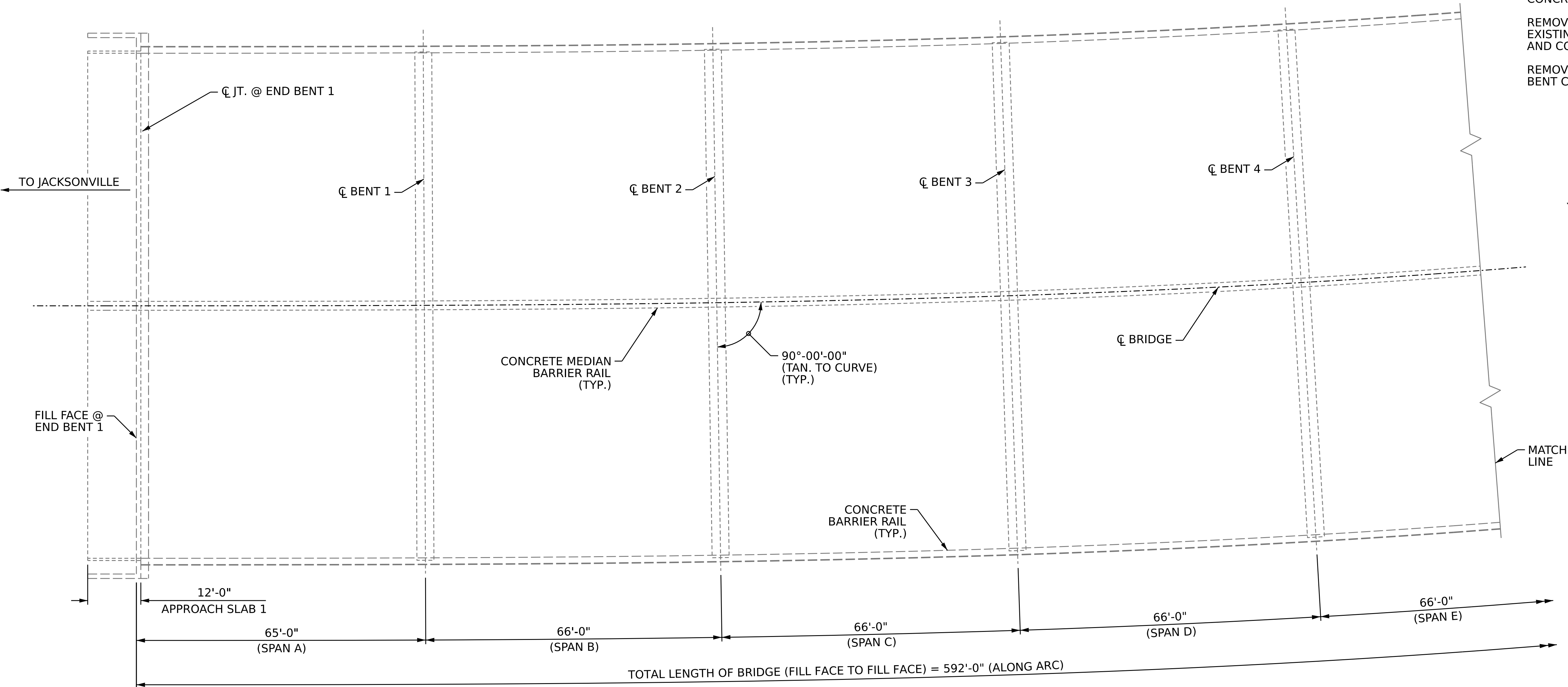


05/22/2026

ASSEMBLED BY:	J.SCOTT	DATE:	5/2026
CHECKED BY:	W.C.SMITH	DATE:	5/2026
DRAWN BY:	DAC 10/2021		
CHECKED BY:	NAP 10/2021		



PART SECTION ALONG CL BRIDGE



PART PLAN

NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 1/23/2026.

BRIDGE ORIENTATION CONFORMS TO THE EXISTING BRIDGE PLANS/ROUTINE INSPECTION.

SCOPE OF WORK

- BRIDGE DECK PREPARATION WITH SHOTBLASTING METHODS.
- CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT.
- APPLY SILANE DECK TREATMENT.
- REMOVE AND REPLACE EXISTING FOAM JOINT MATERIAL.
- CLEAN AND EPOXY COAT EXISTING PRESTRESSED CONCRETE GIRDER ENDS.
- REMOVE UNSOUND CONCRETE AND PROPERLY PREPARE EXISTING END BENT AND BENT AREAS FOR SHOTCRETE AND CONCRETE REPAIRS.
- REMOVE DEBRIS FROM TOP OF EXISTING END BENT AND BENT CAPS AND APPLY EPOXY COATING.

PROJECT NO. **15BPR.107**

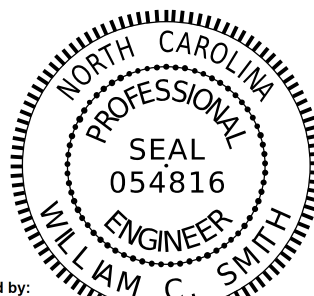
ONSLOW COUNTY

BRIDGE NO. **660268**

SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
BRIDGE ON US 17 OVER
EDWARDS CREEK



05/22/2026

DRAWN BY : DSHACKELFORD DATE : 4/2026
CHECKED BY : WSMITH DATE : 5/2026
DESIGN ENGINEER OF RECORD: DATE :

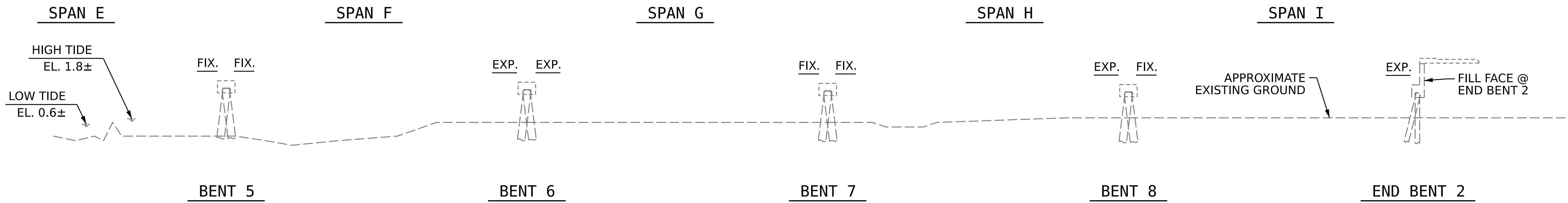
I HEREBY CERTIFY THAT THIS STRUCTURE WAS REHABILITATED
ACCORDING TO THESE PLANS OR AS NOTED HEREIN.

RESIDENT ENGINEER

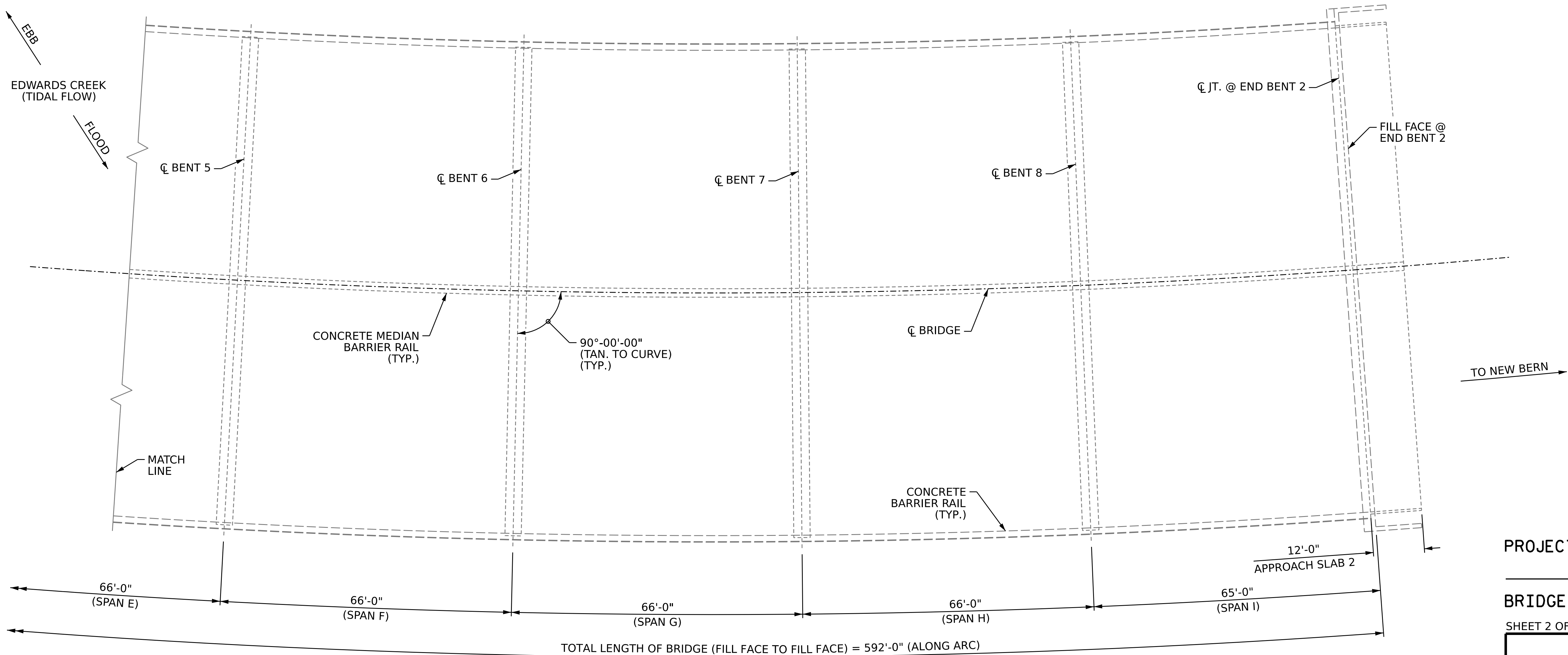
DATE

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-01
1			3			TOTAL SHEETS 31
2			4			



PART SECTION ALONG CL BRIDGE



PART PLAN

PROJECT NO. **15BPR.107**

ONSLOW COUNTY

BRIDGE NO. **660268**

SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

BRIDGE ON US 17 OVER
EDWARDS CREEK

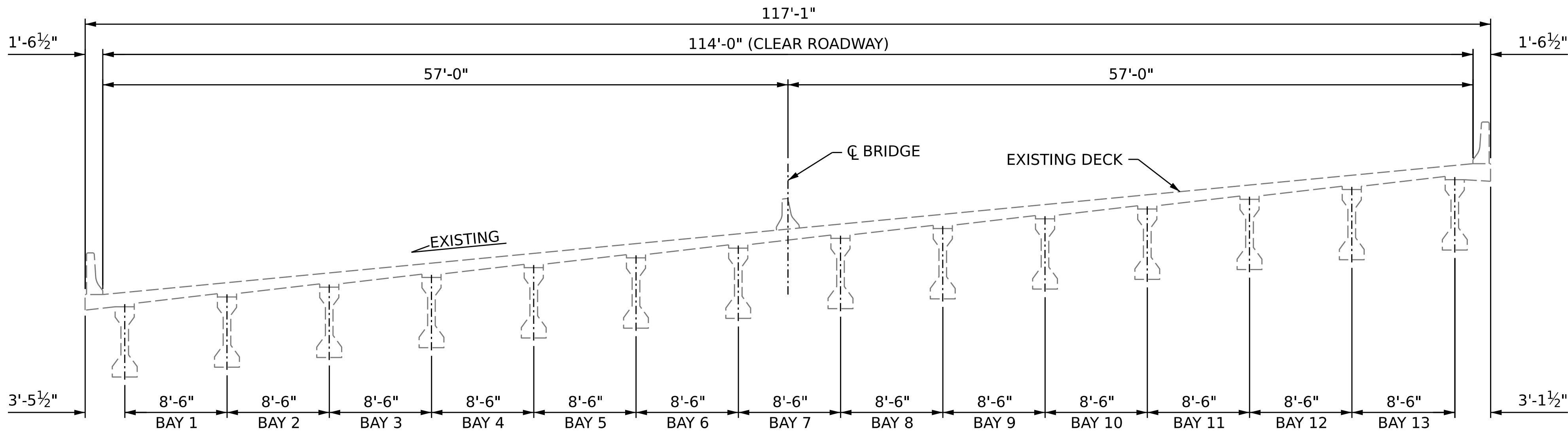


05/22/2026

DRAWN BY : DSHACKELFORD DATE : 4/2026
CHECKED BY : WSMITH DATE : 5/2026
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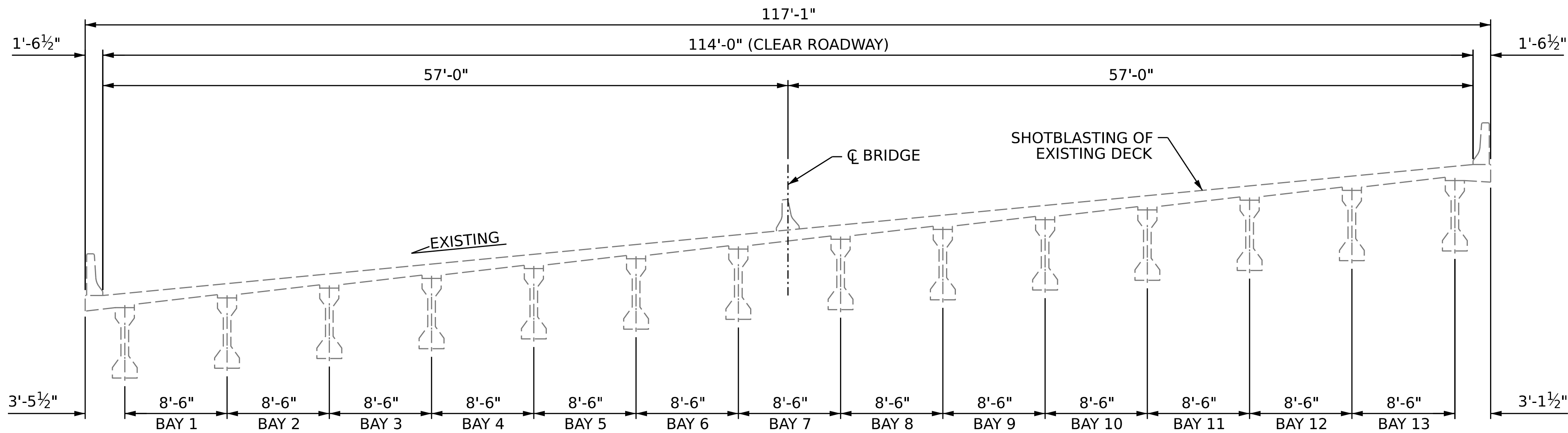
DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			
2			4			31



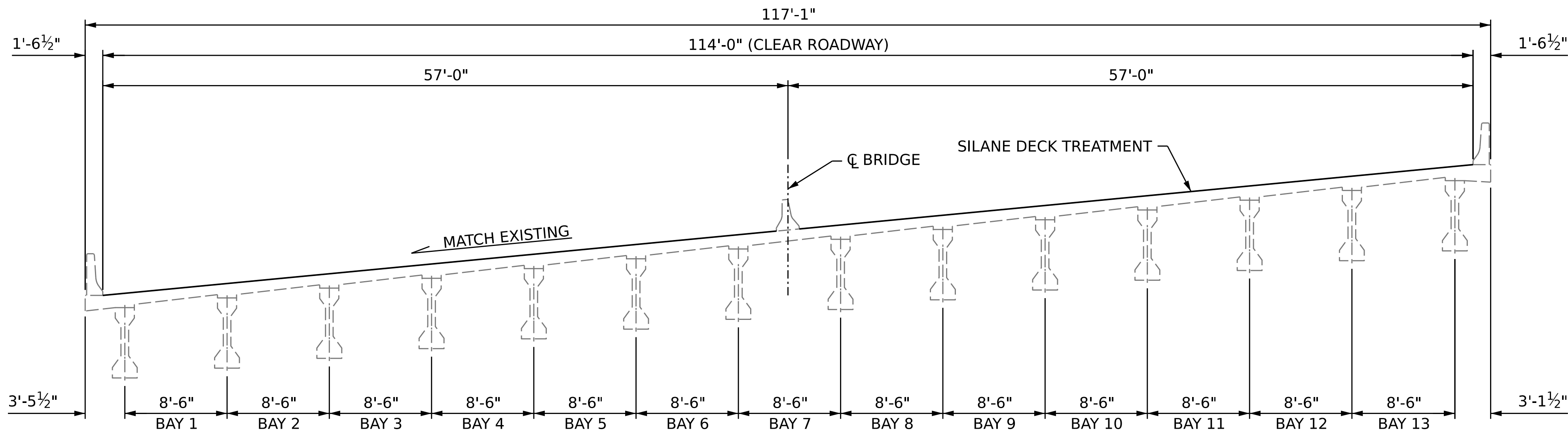
TYPICAL SECTION

(EXISTING)



TYPICAL SECTION

(SHOTBLASTING)



TYPICAL SECTION

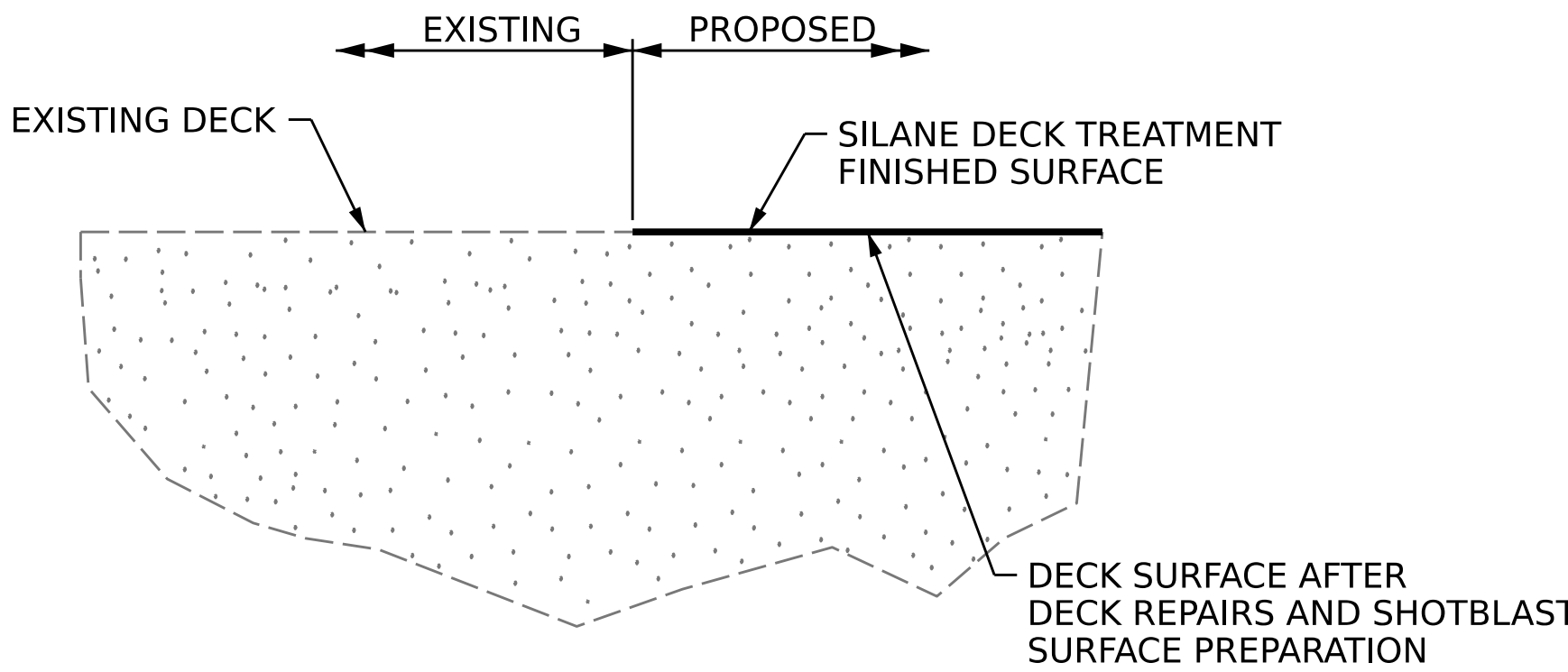
(PROPOSED)

NOTES

PROTECT TRAFFIC FROM REBOUND, DUST, DEBRIS, OVERSPRAY, AND CONSTRUCTION ACTIVITIES. PROVIDE APPROPRIATE SHIELDING, AS REQUIRED AND/OR DIRECTED BY ENGINEER.

ALL GIRDERS ARE 54" PRESTRESSED CONCRETE GIRDERS

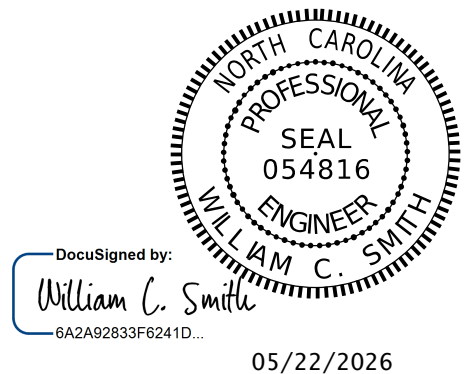
SEE CONTRACT DOCUMENTS FOR LANE WIDTH, SEQUENCING, AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF SURFACE PREPARATION AND SILANE DECK TREATMENT.



DETAIL FOR SILANE DECK TREATMENT

PROJECT NO. **15BPR.107**
ONslow COUNTY
BRIDGE NO. **660268**

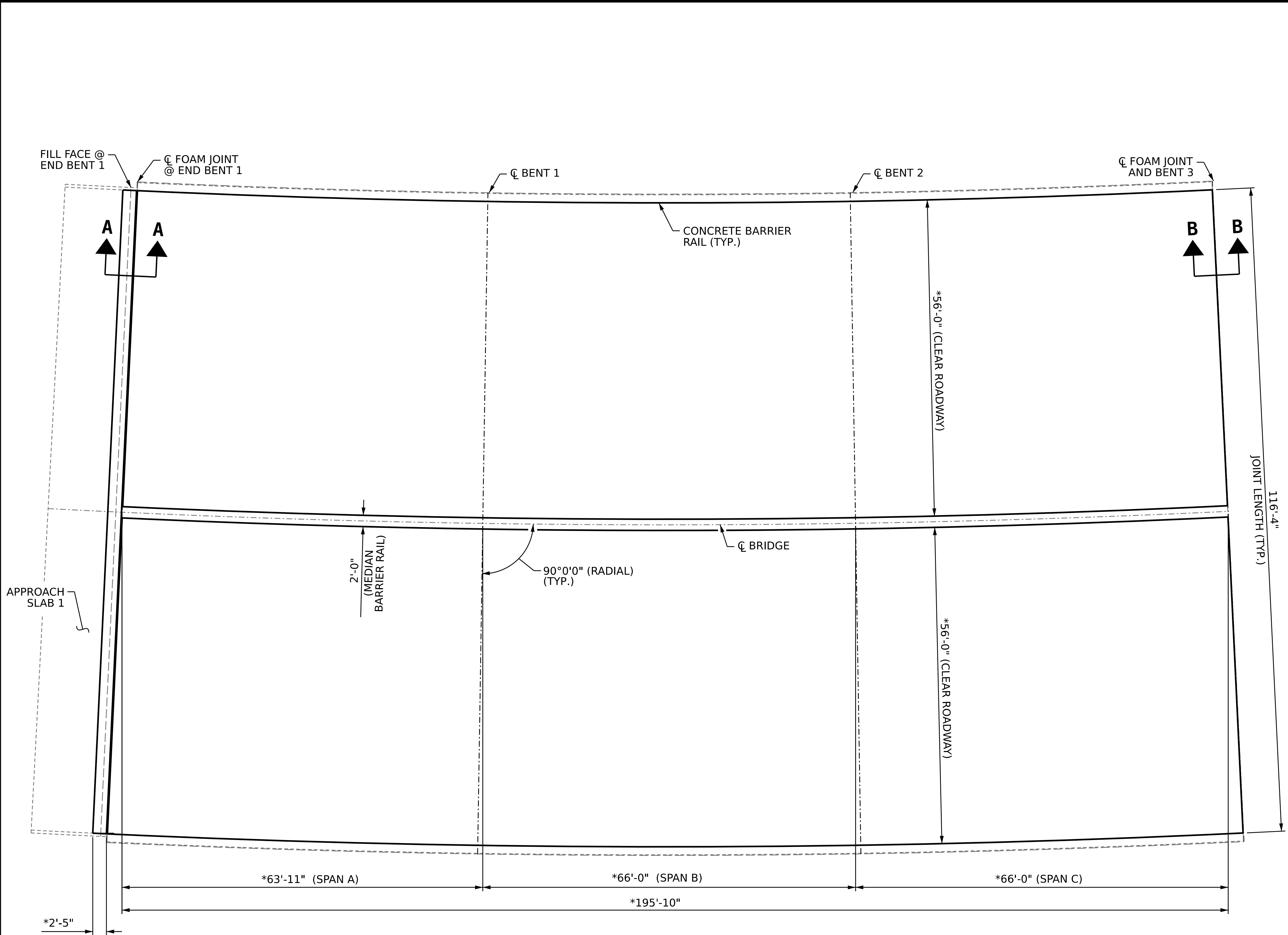
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
TYPICAL SECTION
AND
SILANE DECK TREATMENT
DETAILS



DRAWN BY : **DSHACKELFORD** DATE : **04/2026**
CHECKED BY : **WSMITH** DATE : **05/2026**
DESIGN ENGINEER OF RECORD: DATE :

DOCUMENT NOT CONSIDERED
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SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S2-03
2			4			TOTAL SHEETS 31



PLAN OF SPANS
*(LIMITS OF SHOTBLASTING AND SILANE DECK TREATMENT)

DECK SURFACE REPAIR QUANTITY TABLE		
DECK SURFACE REPAIR - SPANS A THRU C		
	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR SILANE TREATMENT	0.0 SQ. FT.	
SHOTBLASTING BRIDGE DECK	2,437.0 SQ. YDS.	
SILANE DECK TREATMENT	2,437.0 SQ. YDS.	
SURFACE REPAIR - APPROACH SLAB 1		
CONCRETE DECK REPAIR FOR SILANE TREATMENT	0.0 CU. FT	
SHOTBLASTING BRIDGE DECK	31.2 SQ. YDS.	
SILANE DECK TREATMENT	31.2 SQ. YDS.	

NOTES

DECK SURFACE REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR AFTER REMOVAL OF UNSOUND CONCRETE (MIN. 2" CLEAR TO SAWCUT), SEE DECK REPAIR DETAIL SHEET.

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

FOR CONCRETE FOR DECK REPAIR FOR SILANE TREATMENT, SEE SPECIAL PROVISION.

FINAL JOINT SEALS SHALL NOT BE INSTALL UNTIL THE SILANE DECK TREATMENT IS COMPLETE.

FOR SECTION A-A AND SECTION B-B, SEE FOAM JOINT DETAILS SHEET S2-07.

- SHOTBLASTING BRIDGE DECK AND
SILANE DECK TREATMENT AREA
- CONCRETE DECK REPAIR FOR SILANE TREATMENT

DRAWN BY : DSHACKELFORD DATE : 03/2026
CHECKED BY : WSMITH DATE : 05/2026
DESIGN ENGINEER OF RECORD: DATE :

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wsmith

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION

SPANS A THRU C

DocuSigned by:
William C. Smith
6A2A6283F0241D...

05/22/2026

REVISIONS						SHEET NO. S2-04
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 31
2			4			

DOCUMENT NOT CONSIDERED
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SIGNATURES COMPLETED

PROJECT NO. 15BPR.107
ONslow COUNTY
BRIDGE NO. 660268
SHEET 1 OF 3

8/26/21

DECK SURFACE REPAIR QUANTITY TABLE		
DECK SURFACE REPAIR - SPANS D THRU F		
	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR SILANE TREATMENT	0.0 SQ. FT.	
SHOTBLASTING BRIDGE DECK	2,462.2 SQ. YDS.	
SILANE DECK TREATMENT	2,462.2 SQ. YDS.	

NOTES

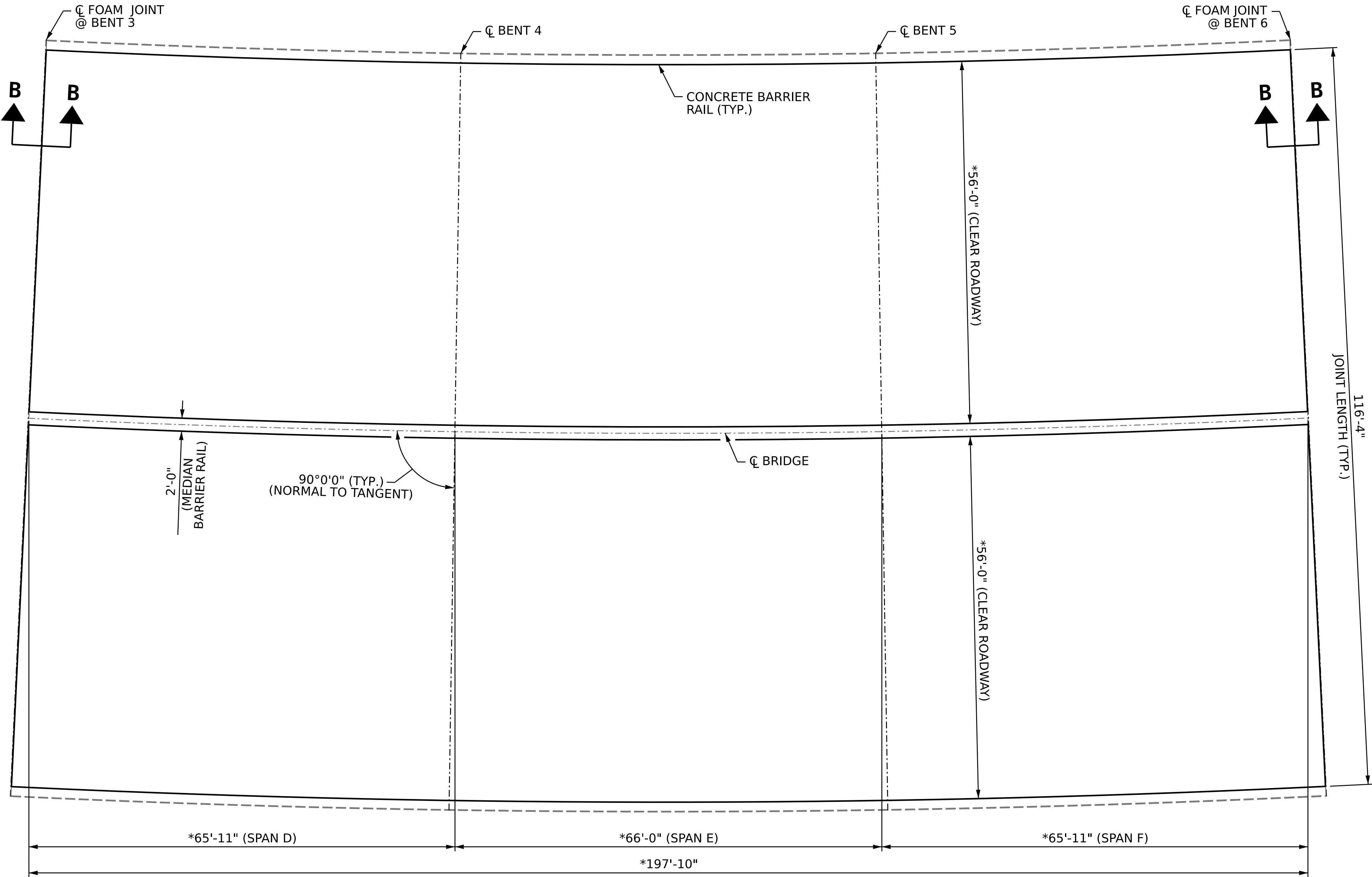
DECK SURFACE REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR AFTER REMOVAL OF UNSOUND CONCRETE (MIN. 2" CLEAR TO SAWCUT), SEE DECK REPAIR DETAIL SHEET.

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FOR CONCRETE FOR DECK REPAIR FOR SILANE TREATMENT, SEE SPECIAL PROVISION.

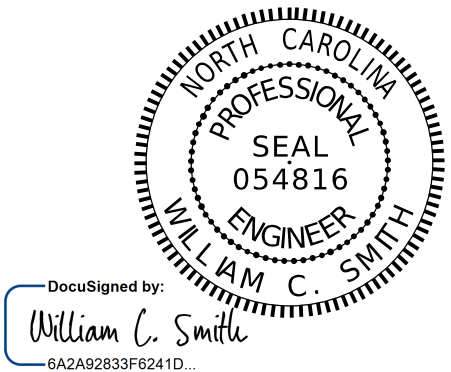
FINAL JOINT SEALS SHALL NOT BE INSTALL UNTIL THE SILANE DECK TREATMENT IS COMPLETE.

FOR SECTION B-B, SEE FOAM JOINT DETAILS SHEET S2-07.



- SHOTBLASTING BRIDGE DECK AND SILANE DECK TREATMENT AREA
- CONCRETE DECK REPAIR FOR SILANE TREATMENT

PROJECT NO. **15BPR.107**
ONslow COUNTY
BRIDGE NO. **660268**



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH SURFACE PREPARATION SPANS D THRU F					
REVISIONS					SHEET NO. S2-05
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
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DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED					TOTAL SHEETS 31

DRAWN BY : **DSHACKELFORD** DATE : **04/2026**
CHECKED BY : **WSMITH** DATE : **05/2026**
DESIGN ENGINEER OF RECORD: _____ DATE : _____