

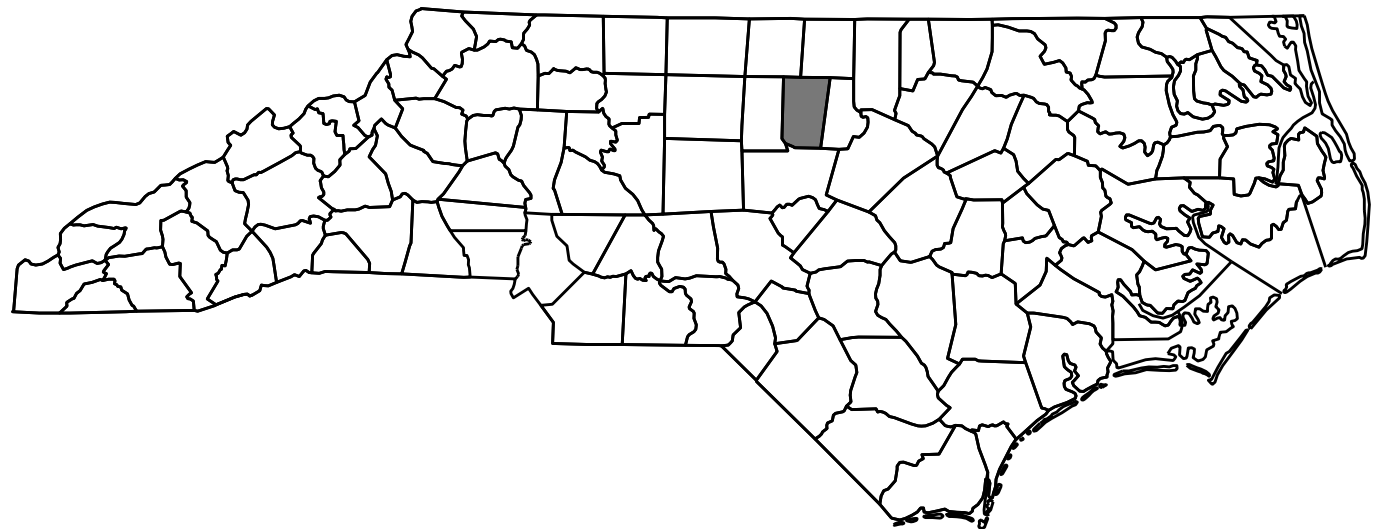
TIP PROJECT: I-5958

CONTRACT NO: C205227

STATE OF NORTH CAROLINA

DIVISION OF HIGHWAYS

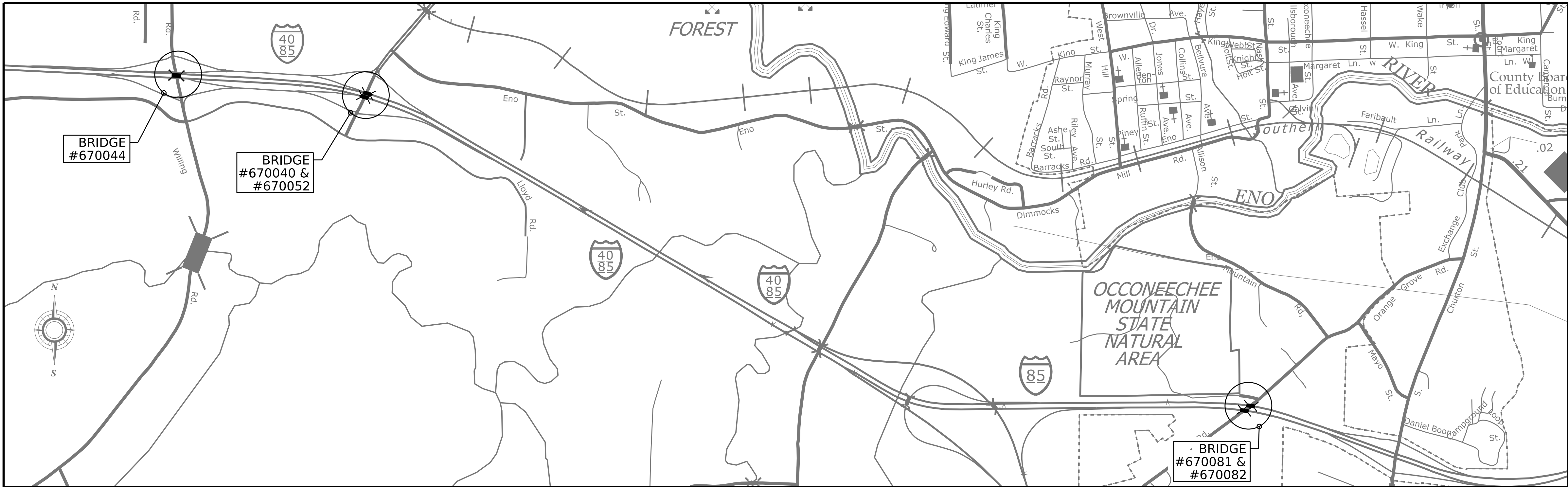
ORANGE COUNTY



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5958	1	56
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45910.1.2	-	P.E.	
45910.3.1	4591031	CONST.	
45910.3.2	4591031	CONST.	

LOCATION: BRIDGE #670040 ON I-40 & I-85 EBL OVER US-70 CONNECTOR
BRIDGE #670044 ON I-40 & I-85 OVER SR 1120 (MT WILLING RD)
BRIDGE #670052 ON I-40 & I-85 WBL OVER US-70 CONNECTOR
BRIDGE #670081 ON I-85 & NC86 NBL OVER SR 1006 (ORANGE GROVE RD)
BRIDGE #670082 ON I-85 & NC86 SBL OVER SR 1006 (ORANGE GROVE RD)

TYPE OF WORK: BRIDGE PRESERVATION - SHOTBLASTING, SCARIFICATION, POLYMER CONCRETE (PC) BRIDGE DECK OVERLAY, BRIDGE DECK SURFACE PREPARATION FOR CRACK SEALING, BRIDGE DECK CRACK SEALING (HMWM), RECONSTRUCTION OF DECK JOINTS AND FOAM JOINT SEALS FOR PRESERVATION, CLEANING AND PAINTING EXISTING WEATHERING STEEL, SUBSTRUCTURE CONCRETE REPAIRS WITH SHOTCRETE & EPOXY RESIN INJECTION, EPOXY COATING OF SUBSTRUCTURE CAPS, MILLING ASPHALT APPROACH ROADWAY



VICINITY MAP



DESIGN DATA

BRIDGE No. 670040 ADT (2024) = 62,000
BRIDGE No. 670044 ADT (2024) = 124,000
BRIDGE No. 670052 ADT (2024) = 62,000
BRIDGE No. 670081 ADT (2024) = 27,500
BRIDGE No. 670082 ADT (2024) = 27,500

PROJECT LENGTH

BRIDGE No. 670040 = 0.022 MILES
BRIDGE No. 670044 = 0.022 MILES
BRIDGE No. 670052 = 0.022 MILES
BRIDGE No. 670081 = 0.039 MILES
BRIDGE No. 670082 = 0.039 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 :
NOVEMBER 17, 2026

KRISTY ALFORD, PE
PROJECT ENGINEER

FRANCESCA LEA, PE
PROJECT DESIGN ENGINEER

TIP PROJECT: I-5958

CONTRACT NO: C205227

STATE OF NORTH CAROLINA

DIVISION OF HIGHWAYS

ORANGE COUNTY

LOCATION: BRIDGE #670040 ON I-40 & I-85 EBL OVER US-70 CONNECTOR
BRIDGE #670044 ON I-40 & I-85 OVER SR 1120 (MT WILLING RD)
BRIDGE #670052 ON I-40 & I-85 WBL OVER US-70 CONNECTOR
BRIDGE #670081 ON I-85 & NC86 NBL OVER SR 1006 (ORANGE GROVE RD)
BRIDGE #670082 ON I-85 & NC86 SBL OVER SR 1006 (ORANGE GROVE RD)

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5958	1A	56
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45910.1.2	-	P.E.	
45910.3.1	4591031	CONST.	
45910.3.2	4591031	CONST.	

INDEX OF STRUCTURES SHEETS

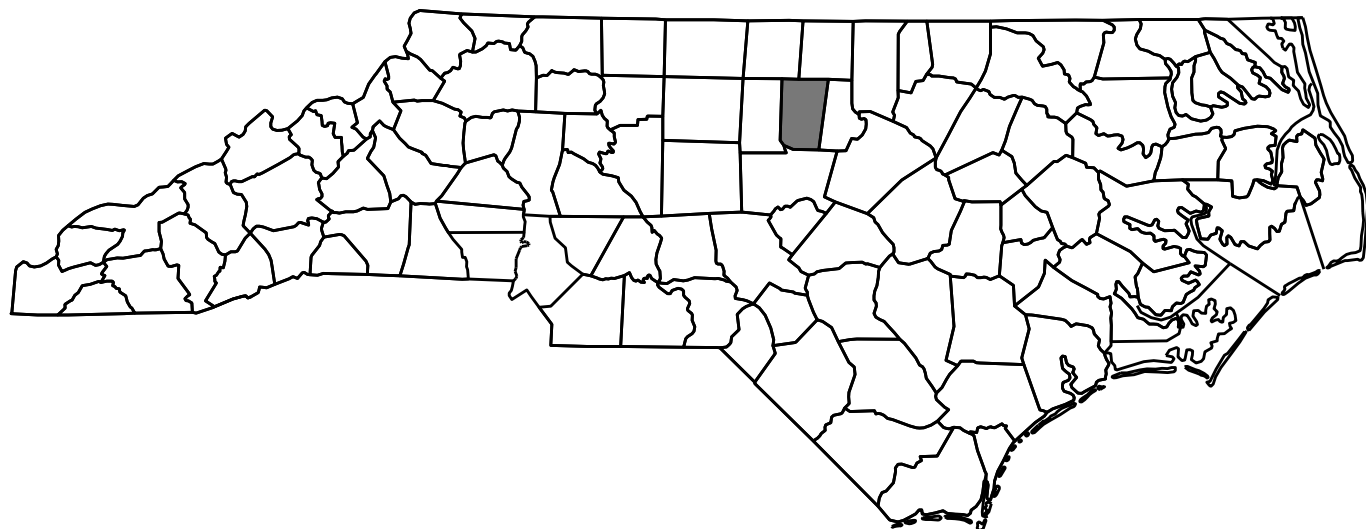
SHEET No. DESCRIPTION
1 TITLE SHEET
1A INDEX OF SHEETS
S-01 LOCATION SKETCHES
S-02 TOTAL BILL OF MATERIALS

STRUCTURE No. 670040
S1-01 GENERAL DRAWING
S1-02 TYPICAL SECTION
S1-03 DECK SURFACE REPAIR
S1-04 DECK UNDERSIDE REPAIR
S1-05 JOINT DETAILS
S1-06 END BENT 1 & 2
S1-07 INCIDENTAL MILLING
STRUCTURE No. 670044
S2-01 GENERAL DRAWING
S2-02 TYPICAL SECTION
S2-03 DECK SURFACE REPAIR
S2-04 DECK UNDERSIDE REPAIR
S2-05 JOINT DETAILS
S2-06 END BENT 1 & 2
S2-07 INCIDENTAL MILLING

SHEET No. DESCRIPTION
STRUCTURE No. 670052
S3-01 GENERAL DRAWING
S3-02 TYPICAL SECTION
S3-03 DECK SURFACE REPAIR
S3-04 DECK UNDERSIDE REPAIR
S3-05 JOINT DETAILS
S3-06 END BENT 1 & 2
S3-07 INCIDENTAL MILLING
STRUCTURE No. 670081
S4-01 GENERAL DRAWING
S4-02 TYPICAL SECTION
S4-03 DECK SURFACE REPAIR SPAN A
S4-04 DECK SURFACE REPAIR SPAN B
S4-05 DECK SURFACE REPAIR SPAN C
S4-06 DECK UNDERSIDE REPAIR SPAN A
S4-07 DECK UNDERSIDE REPAIR SPAN B
S4-08 DECK UNDERSIDE REPAIR SPAN C
S4-09 JOINT DETAILS
S4-10 END BENT 1
S4-11 BENT 1 SPAN A FACE
S4-12 BENT 1 SPAN B FACE
S4-13 BENT 2 SPAN B FACE
S4-14 BENT 2 SPAN C FACE
S4-15 END BENT 2

SHEET No. DESCRIPTION
STRUCTURE No. 670082
S5-01 GENERAL DRAWING
S5-02 TYPICAL SECTION
S5-03 DECK SURFACE REPAIR SPAN A
S5-04 DECK SURFACE REPAIR SPAN B
S5-05 DECK SURFACE REPAIR SPAN C
S5-06 DECK UNDERSIDE REPAIR SPAN A
S5-07 DECK UNDERSIDE REPAIR SPAN B
S5-08 DECK UNDERSIDE REPAIR SPAN C
S5-09 JOINT DETAILS
S5-10 END BENT 1
S5-11 BENT 1 SPAN A FACE
S5-12 BENT 1 SPAN B FACE
S5-13 BENT 2 SPAN B FACE
S5-14 BENT 2 SPAN C FACE
S5-15 END BENT 2

STANDARD SHEETS
SD-54 DECK REPAIR DETAILS
SD-55 OVERHANG & DIAPHRAGM REPAIR DETAILS
SD-56 TYPICAL CAP AND COLUMN REPAIR DETAILS
SN NOTES



TYPE OF WORK:
BRIDGE PRESERVATION - SHOTBLASTING, SCARIFICATION,
POLYMER CONCRETE (PC) BRIDGE DECK OVERLAY, BRIDGE
DECK SURFACE PREPARATION FOR CRACK SEALING,
BRIDGE DECK CRACK SEALING (HMWM), RECONSTRUCTION
OF DECK JOINTS AND FOAM JOINT SEALS FOR
PRESERVATION, CLEANING AND PAINTING EXISTING
WEATHERING STEEL, SUBSTRUCTURE CONCRETE REPAIRS
WITH SHOTCRETE & EPOXY RESIN INJECTION, EPOXY
COATING OF SUBSTRUCTURE CAPS, MILLING ASPHALT
APPROACH ROADWAY

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

NOTES

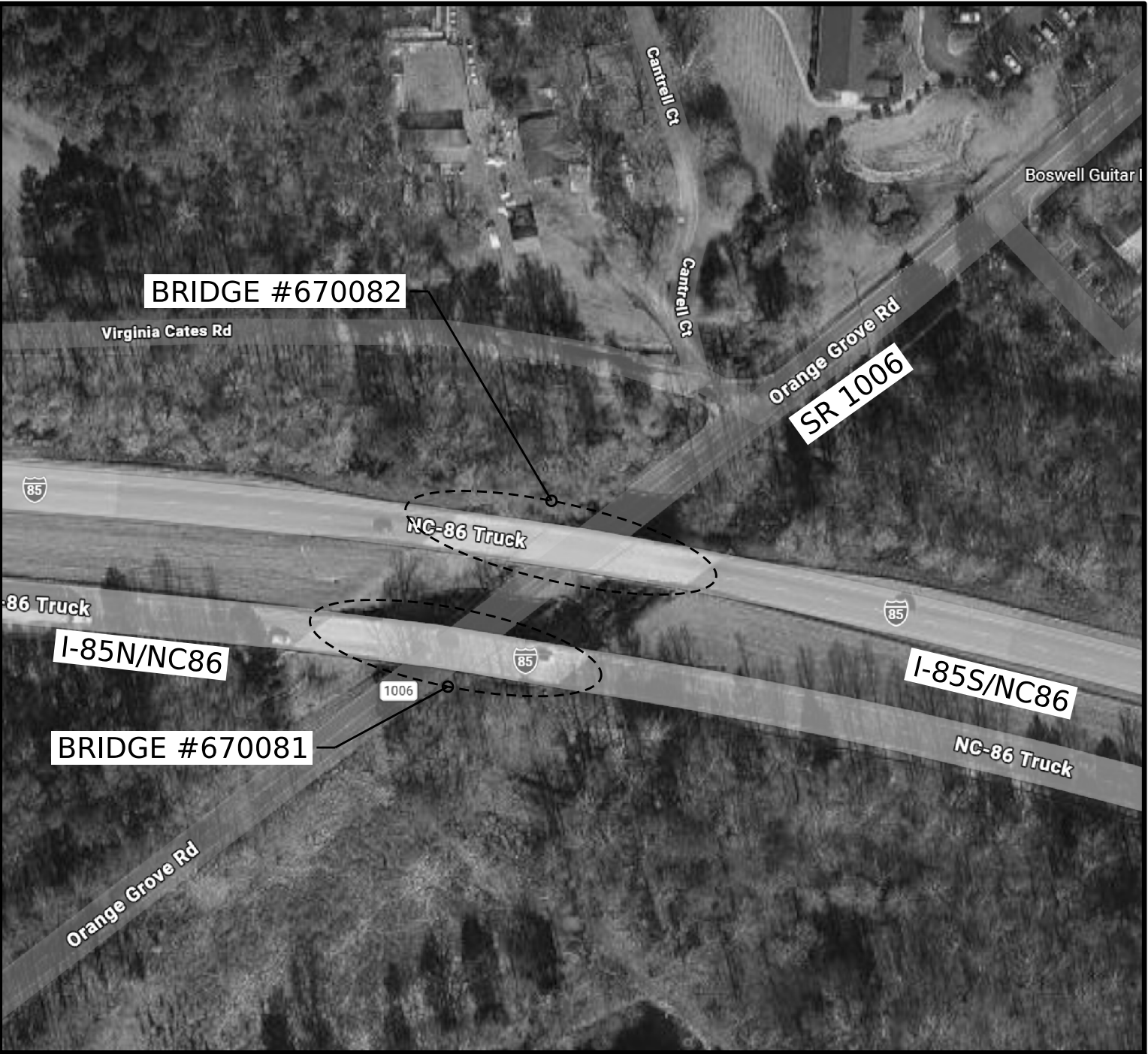
INFORMATION INDICATED ON THE LOCATION SKETCHES SHALL BE CONSIDERED GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE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



BRIDGE No. 670044 LOCATION SKETCH



BRIDGE No. 670040 & No. 670052 LOCATION SKETCH



BRIDGE No. 670081 & No. 670082 LOCATION SKETCH

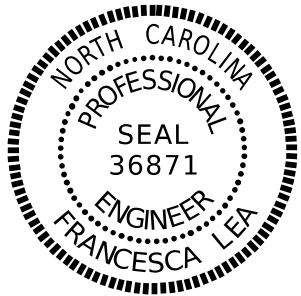
BRIDGE COORDINATES

BRIDGE No.	LATITUDE	LONGITUDE
670040	36°-04'-21.5"	79°-09'-35.0"
670044	36°-04'-24.5"	79°-10'-11.3"
670052	36°-04'-22.2"	79°-09'-34.7"
670081	36°-03'-32.4"	79°-06'-44.6"
670082	36°-03'-33.2"	79°-06'-43.4"

PROJECT NO. **I-5958**

ORANGE COUNTY

BRIDGE NO. **670040, 670044, 670052, 670081, 670082**



DocuSigned by:
Francesca Lea
878DAD865D84EF
08/19/2026

GENERAL DRAWING

LOCATION SKETCHES

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SHEET NO. **S-01**

TOTAL SHEETS **56**

REVISIONS

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

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

DRAWN BY: **S.A. HERNANDEZ** DATE: **07/2026**
CHECKED BY: **S. LOTFI** DATE: **07/2026**
DESIGN ENGINEER OF RECORD: DATE:

TOTAL BILL OF MATERIAL											
BRIDGE No.	INCIDENTAL MILLING	ASPHALT CONCRETE SURFACE COURSE TYPE S9.5D	POLYMER MODIFIED ASPHALT BINDER FOR PLANT MIX	GROOVING BRIDGE FLOOR	POLLUTION CONTROL	CLASS II SURFACE PREPARATION	SHOTCRETE REPAIRS	EPOXY RESIN INJECTION	CLEANING AND PAINTING EXISTING WEATHERING STEEL FOR BRIDGE # ____	PAINTING CONTAINMENT FOR BRIDGE # ____	FOAM JOINT SEAL FOR PRESERVATION
	SQ. YDS.	TONS	TONS	SQ. FT.	LUMP SUM	SQ. YDS.	CU. FT.	LIN. FT.	LUMP SUM	LUMP SUM	LIN. FT.
670040	850.4	80.0	5.0	10,175	LUMP SUM	8.6	16.8	10.8	LUMP SUM	LUMP SUM	160.4
670044	1,595.5	140.0	10.0	19,355	LUMP SUM	16.6	7.9	8.0	LUMP SUM	LUMP SUM	304.2
670052	761.6	70.0	5.0	9,056	LUMP SUM	7.7	2.2	6.3	LUMP SUM	LUMP SUM	144.1
670081	-	-	-	-	-	-	101.0	6.3	-	-	85.2
670082	-	-	-	-	-	-	114.9	-	-	-	85.2
TOTALS	3,207.5	290.0	20.0	38,586	LUMP SUM	32.9	242.8	31.4	LUMP SUM	LUMP SUM	779.1

TOTAL BILL OF MATERIAL CONTINUED											
BRIDGE No.	ELASTOMERIC CONCRETE FOR PRESERVATION	EPOXY POLYMER CONCRETE MATERIALS (ALTERNATE)	POLYESTER POLYMER CONCRETE MATERIALS	CONCRETE DECK REPAIR FOR DECK CRACK SEALING TREATMENT	EPOXY COATING	CONCRETE BRIDGE DECK CRACK SEALING	CONCRETE DECK REPAIR FOR POLYMER CONCRETE OVERLAY	PLACING AND FINISHING POLYMER CONCRETE OVERLAY	SCARIFYING BRIDGE DECK	SHOTBLASTING BRIDGE DECK	
	CU. FT.	CU. YDS.	CU. YDS.	SQ. FT.	SQ. FT.	SQ. YDS.	SQ. YDS.	SQ. YDS.	SQ. YDS.	SQ. YDS.	SQ. YDS.
670040	-	41.9	41.9	-	282.1	-	8.6	1,205.9	1,205.9	1,205.9	
670044	-	78.6	78.6	-	605.9	-	16.6	2,263.6	2,263.6	2,263.6	
670052	-	37.4	37.4	-	246.5	-	7.7	1,078.6	1,078.6	1,078.6	
670081	16.4	-	-	3.0	320.8	636.1	-	-	-	636.1	
670082	16.4	-	-	-	320.8	636.1	-	-	-	636.1	
TOTALS	32.8	157.9	157.9	3.0	1,776.1	1,272.2	32.9	4,548.1	4,548.1	5,820.3	

NOTES

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 OF 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.

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.

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.

WORK ON THE BRIDGES SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL BELOW, EXCEPT WHERE THE CONTRACTOR'S PLAN USE 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.

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

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

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

FOR SHOTBLASTING BRIDGE DECK, CLASS II SURFACE PREPARATION, CONCRETE DECK REPAIR, AND CONCRETE BRIDGE DECK CRACK SEALING, SEE CONCRETE BRIDGE DECK CRACK SEALING SPECIAL PROVISIONS.

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

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

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

FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

FOR CONCRETE DECK REPAIR FOR DECK CRACK SEALING TREATMENT, SEE SPECIAL PROVISIONS.

FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR POLLUTION CONTROL, SEE SPECIAL PROVISIONS.

FOR CLEANING AND PAINTING WEATHERING STEEL, SEE PAINTING EXISTING WEATHERING STEEL STRUCTURE SPECIAL PROVISIONS.

FOR PAINTING CONTAINMENT AND POLLUTION CONTROL, SEE PAINTING EXISTING WEATHERING STEEL STRUCTURE SPECIAL PROVISIONS.

FOR SCARIFYING BRIDGE DECK, SHOTBLASTING BRIDGE DECK, AND CLASS II AND CLASS III SURFACE PREPARATION, SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISIONS.

FOR CONCRETE DECK REPAIR FOR POLYMER CONCRETE OVERLAY, PLACING AND FINISHING POLYMER CONCRETE OVERLAY, GROOVING BRIDGE FLOORS, POLYESTER POLYMER CONCRETE MATERIALS, AND EPOXY POLYMER CONCRETE MATERIALS, SEE POLYMER CONCRETE BRIDGE DECK OVERLAY SPECIAL PROVISIONS.

AT THE TIME OF PREPARATION OF THESE PLANS, IT WAS NOT ANTICIPATED THAT ITEM(S) LISTED BELOW WOULD BE REQUIRED. HOWEVER, IT MAY BE DETERMINED IN THE FIELD THAT THE FOLLOWING ITEM(S) LISTED, OR OTHER WORK WILL BE NECESSARY TO PROPERLY COMPLETE THE INTENDED BRIDGE PRESERVATION/REHABILITATION WORK. THE CONTRACTOR SHALL BE PREPARED TO PERFORM SUCH WORK IN A TIMELY MANNER, AS DETERMINED IN THE FIELD. SUCH WORK SHALL BE CONSIDERED EXTRA WORK AND SHALL BE ADDRESSED 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 COST WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

UNANTICIPATED ITEMS:

ITEM	DESCRIPTION	UNIT
1	CLASS III SURFACE PREPARATION	SQ. YDS.
2	VOLUMETRIC MIXER	LUMP SUM
3	CONCRETE REPAIRS	CU. FT.



PROJECT NO. **I-5958**

ORANGE COUNTY

BRIDGE NO. **670040, 670044, 670052, 670081, 670082**

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

NOTES & TOTAL BILL OF MATERIALS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-02
1			3			TOTAL SHEETS
2			4			56

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY: S.A. HERNANDEZ

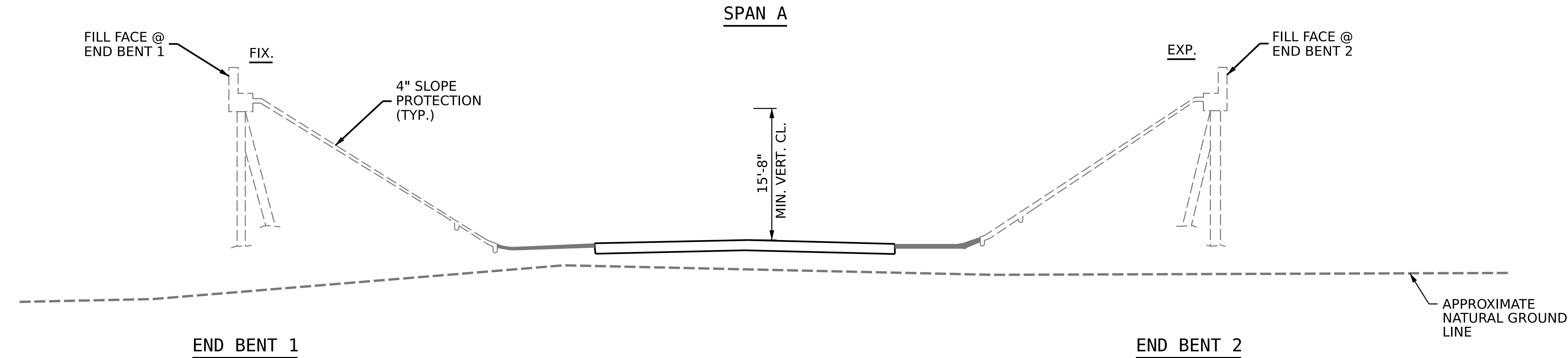
CHECKED BY: S. LOTFI

DESIGN ENGINEER OF RECORD:

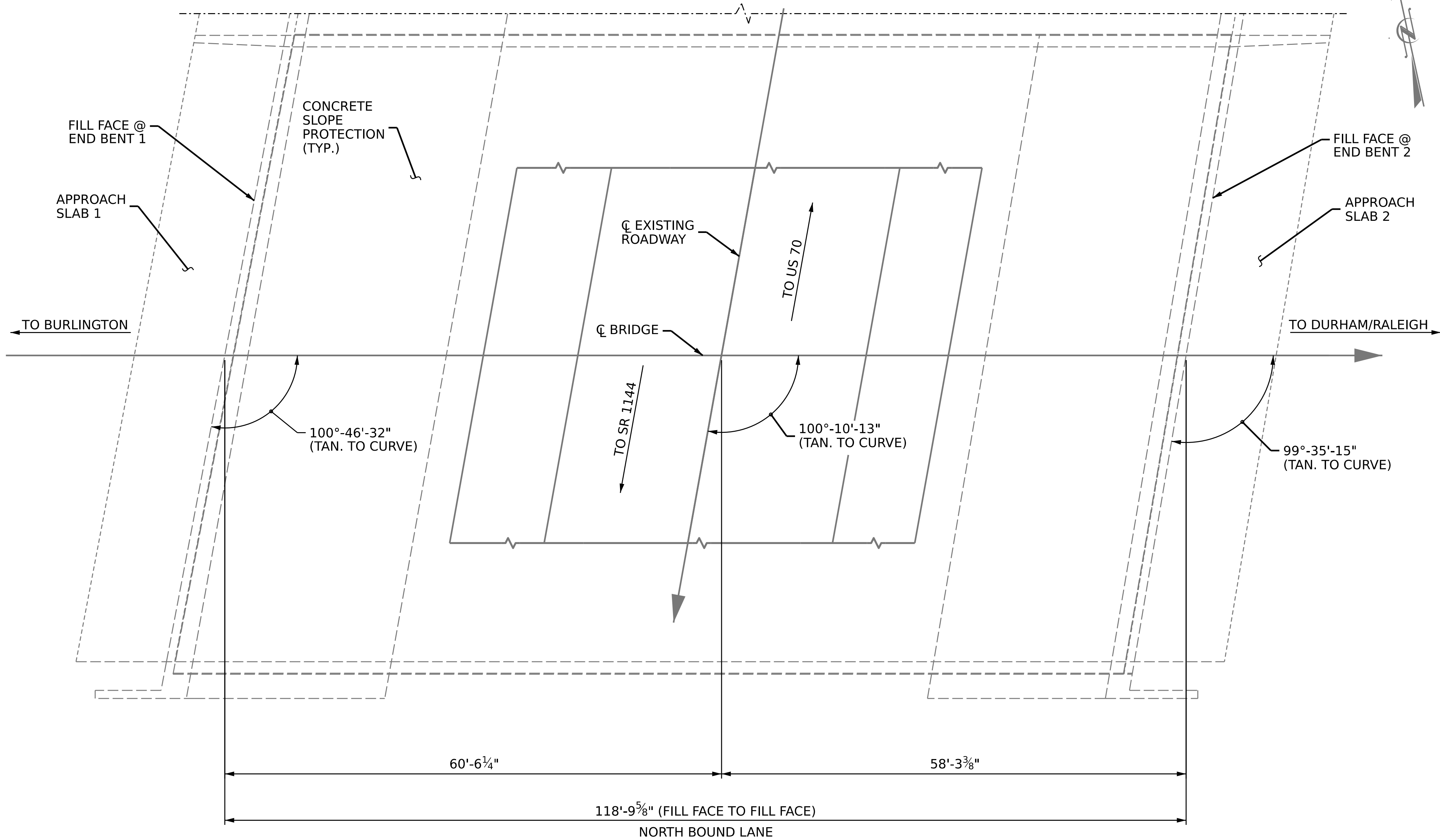
DATE: 07/2026

DATE: 07/2026

DATE:



SECTION ALONG ϕ BRIDGE



PLAN

NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 12/03/2024.

BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS AND/OR ROUTINE INSPECTION REPORT.

SCOPE OF WORK

PARTIALLY REMOVE TOP OF BRIDGE DECK CONCRETE BY SCARIFICATION AND SHOTBLASTING METHODS.

MILL AND PAVE ASPHALT APPROACH ROADWAYS.

OVERLAY PREPARED TOP OF BRIDGE DECK WITH POLYMER CONCRETE (PC).

REMOVE EXISTING JOINT MATERIAL AND INSTALL FOAM JOINTS.

GROOVE POLYMER CONCRETE BRIDGE DECK.

CLEAN AND PAINT EXISTING WEATHERING STEEL.

REMOVE UNSOUND CONCRETE AND PROPERLY PREPARE EXISTING END BENT AREAS, AND PERFORM EPOXY RESIN INJECTION OF CONCRETE CRACKS, AND SHOTCRETE AND CONCRETE REPAIRS.

REMOVE DEBRIS FROM TOP OF EXISTING END BENT CAPS AND APPLY EPOXY COATING.

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

RESIDENT ENGINEER

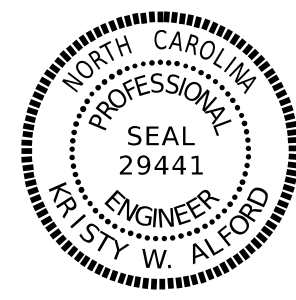
DATE

PROJECT NO. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670040**

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

FOR BRIDGE OVER US 70 &
I 85 CONNECTOR ON I 85
NBL/I 40 EBL BETWEEN MT
WILLING RD AND SR 1009



DocuSigned by:
Kristy W. Alford
F245838592BF4DE...

08/19/2026



DocuSigned by:
Francesca Lea
8770AD8850584EF...

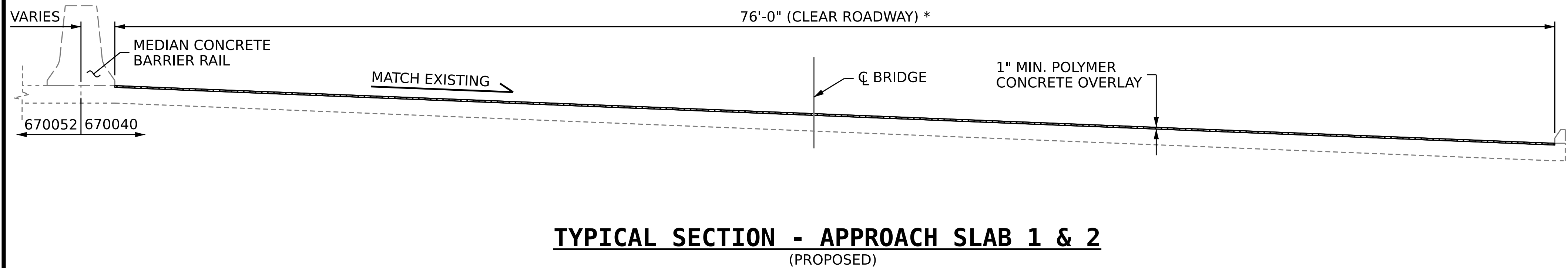
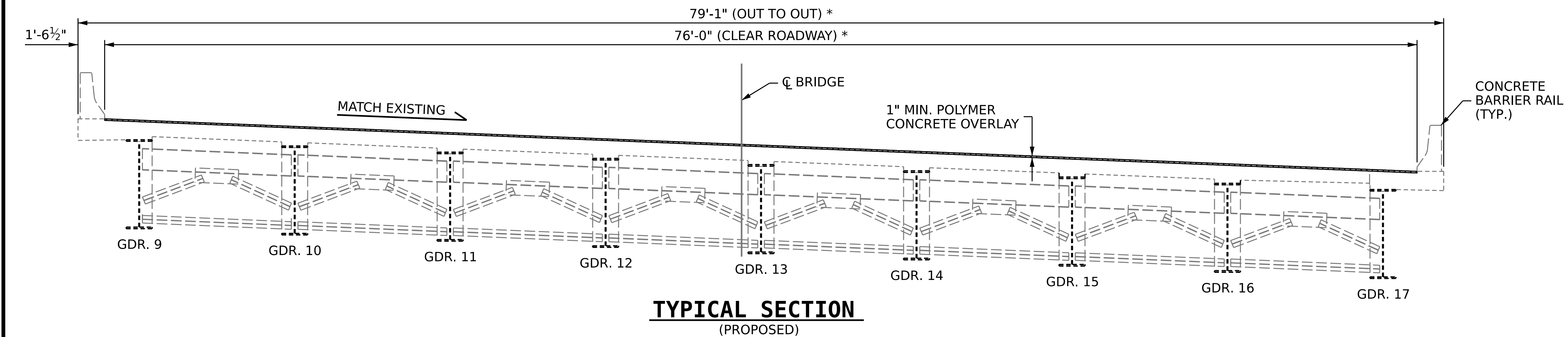
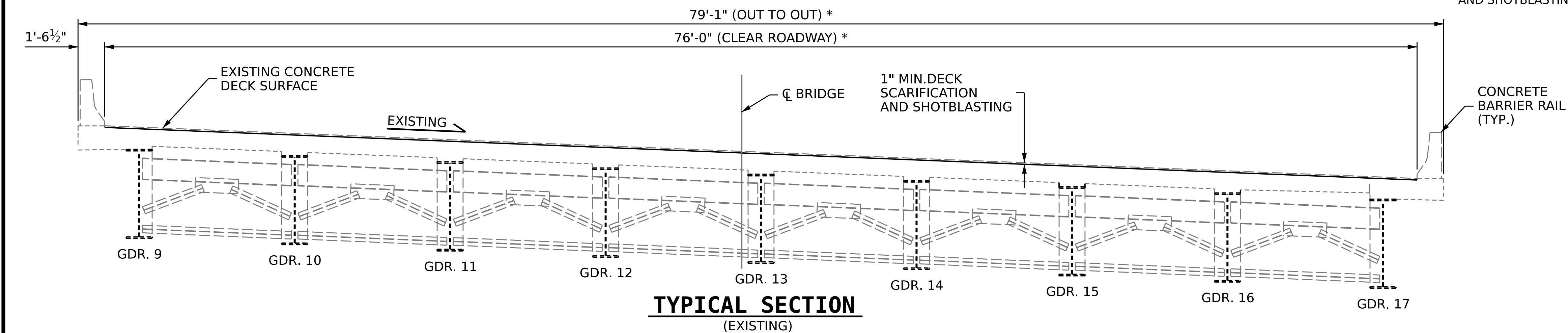
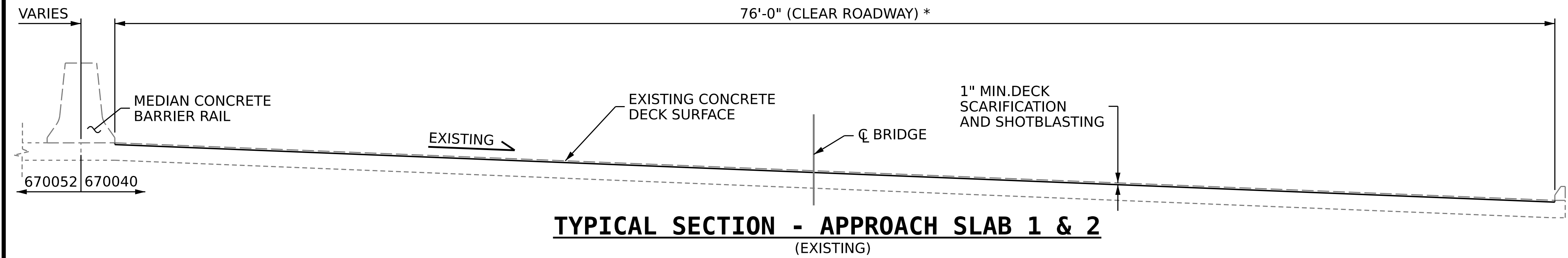
08/19/2026

DRAWN BY: **R.KARKI / S. LOTFI** DATE: **02/2026**
CHECKED BY: **J. SCOTT** DATE: **04/2026**
DESIGN ENGINEER OF RECORD: DATE:

8/13/2026
S:\DPG1\Division7\I-5958\Bridge #670040\Plans\401_001_I-5958_SMU_GD_S1-01_670040.dgn
sbaguiilar-herandez

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

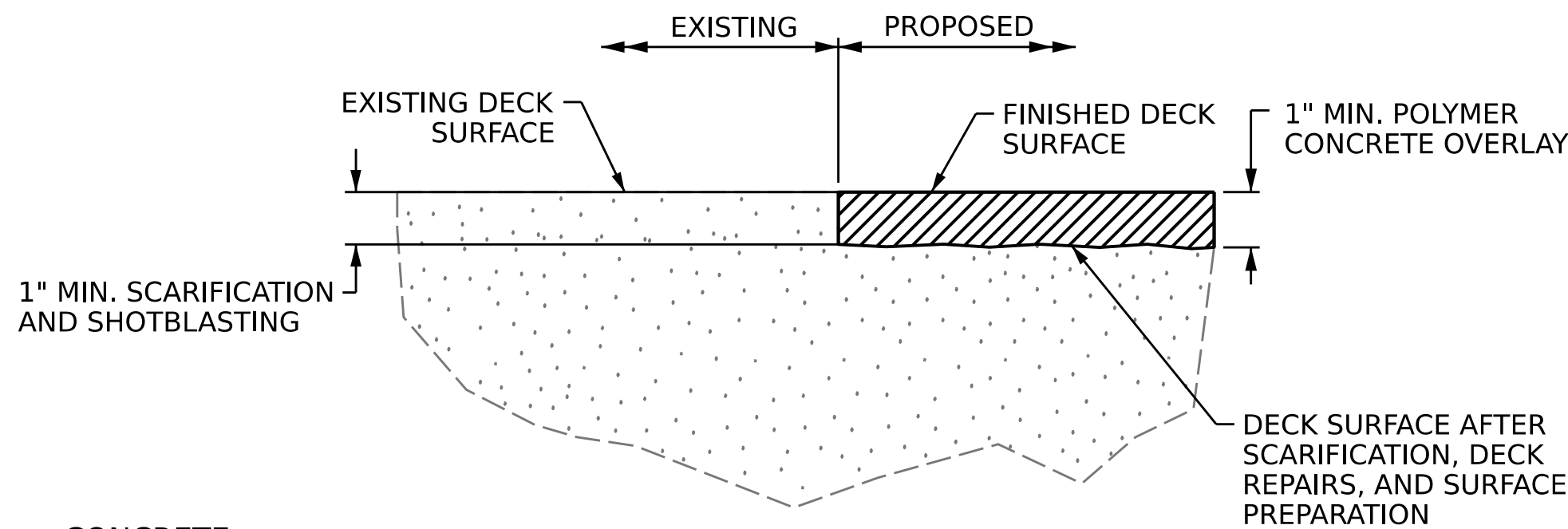
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S1-01 TOTAL SHEETS 56
2			4			



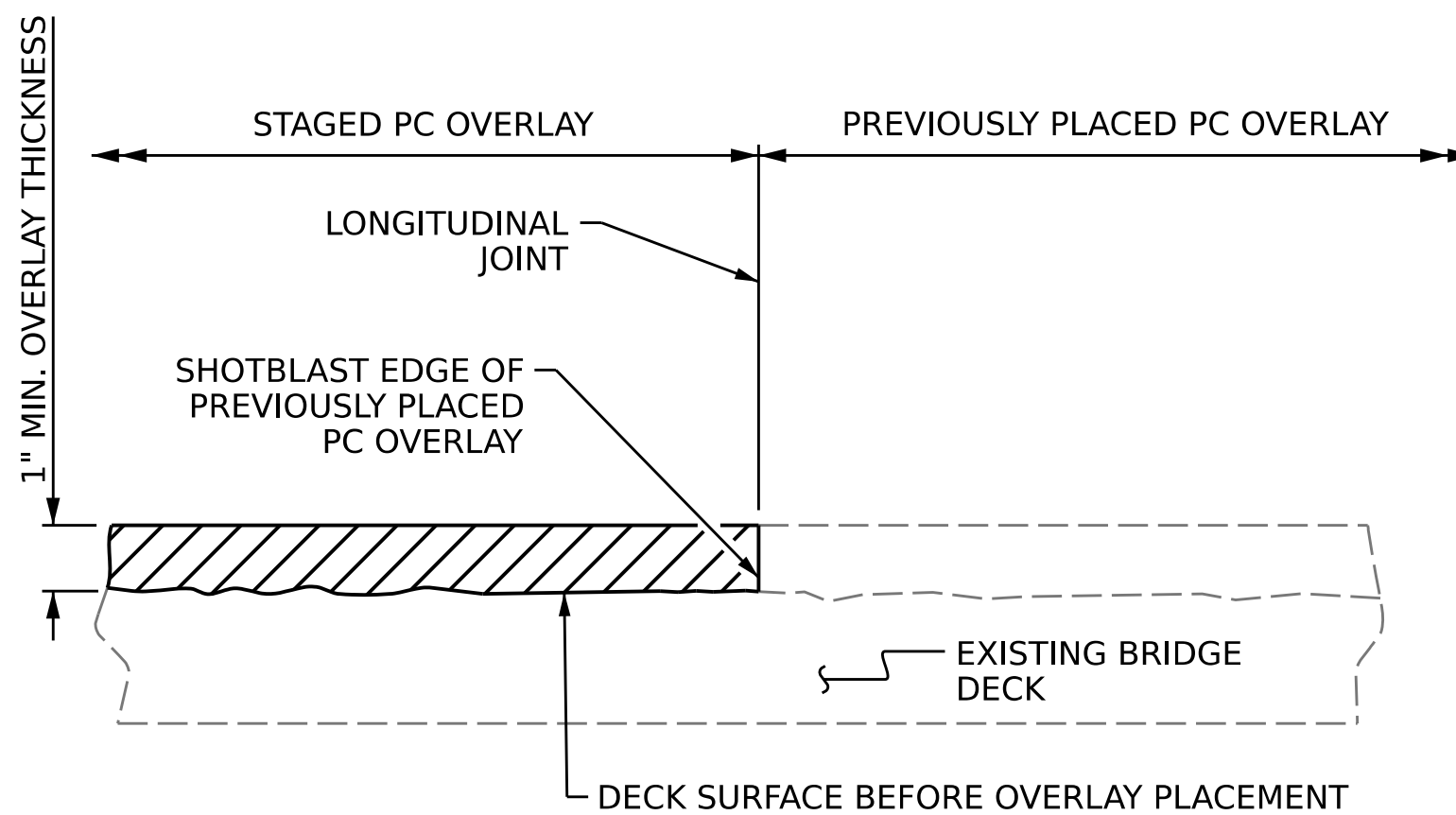
NOTES

FOR LANE WIDTHS, SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF POLYMER CONCRETE AND SURFACE PREPARATION SEE ELSEWHERE IN THE CONTRACT DOCUMENTS.

* THESE DIMENSIONS ARE RADIAL DIMENSIONS.



DETAIL FOR POLYMER CONCRETE (PC) OVERLAY



STAGED PC OVERLAY JOINT

PROJECT NO. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670040**



DocuSigned by:
Francesca Lea
8780A0B850584EF...
08/19/2026

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION AND POLYMER CONCRETE OVERLAY DETAILS

DRAWN BY: **J. I. SCOTT** DATE: **04/2026**
CHECKED BY: **S. LOTFI** DATE: **06/2026**
DESIGN ENGINEER OF RECORD: DATE:

8/17/2026
S:\DPG1\Division7\I-5958\Bridge #670040\Plans\401_003_I-5958_SMU_TS_S1-02_670040.dgn
filea

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S1-02 TOTAL SHEETS 56
2			4			

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 LOCATION AND DESCRIPTION OF THE REPAIRS AND UPDATE THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

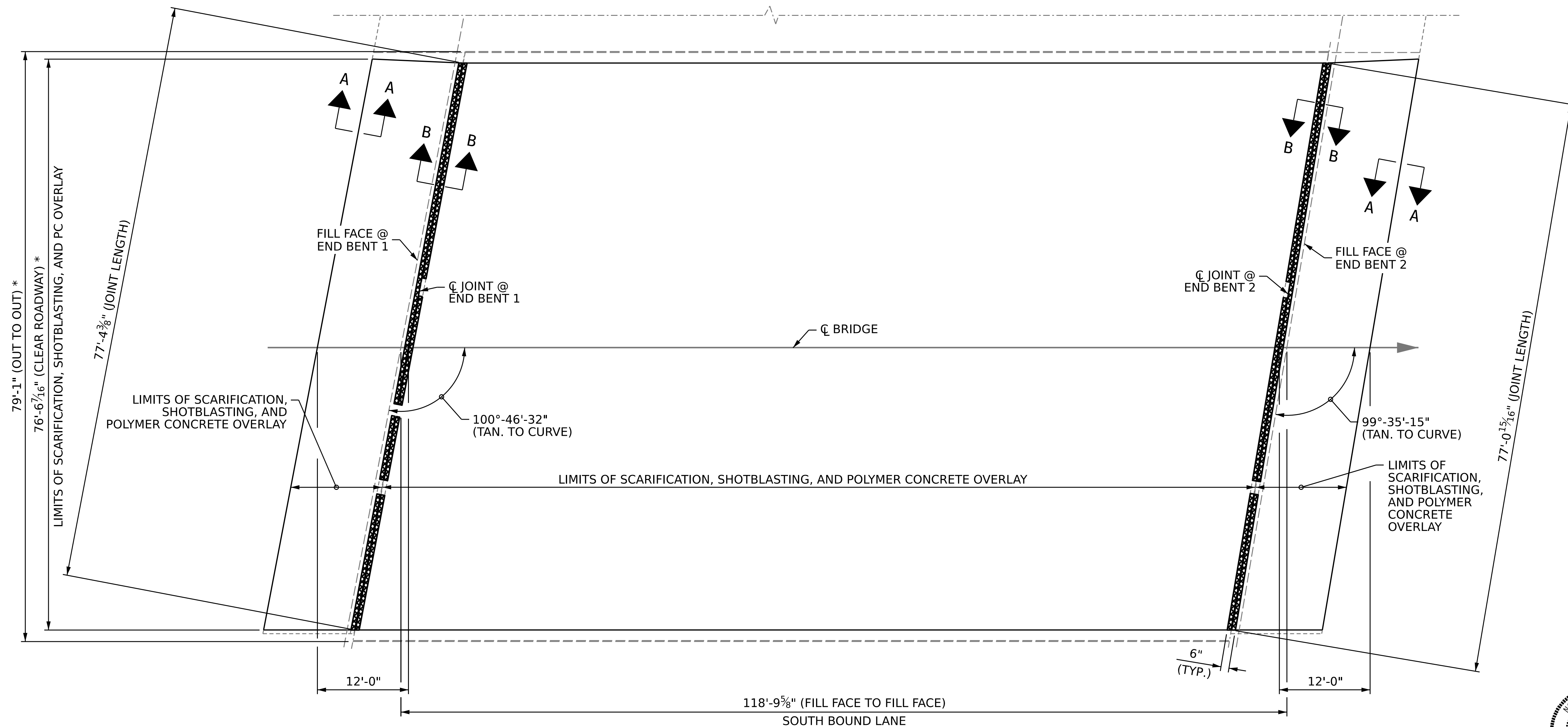
FOR SCARIFYING BRIDGE DECK, SHOTBLASTING BRIDGE DECK, AND CLASS II SURFACE PREPARATION, SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISIONS.

WHEN PC OVERLAY ARE TO BE USED ON THE EXISTING APPROACH SLABS, ALL EDGES OF THE PC OVERLAY ON THE APPROACH SLAB SHOULD PROVIDE A NEAT, UNIFORM STRAIGHT LINE.

FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

DECK SURFACE REPAIRS - SPAN A & APPROACH SLAB 1 & 2

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	1,205.9 SQ. YDS.	
CLASS II SURFACE PREPARATION	8.6 SQ. YDS.	
CONCRETE DECK REPAIR FOR PC OVERLAY	8.6 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	1,205.9 SQ. YDS.	
POLYESTER POLYMER CONCRETE MATERIALS	41.9 CU. YDS.	
EPOXY POLYMER CONCRETE MATERIALS (ALTERNATE)	41.9 CU. YDS.	
PLACING AND FINISHING POLYMER CONCRETE OVERLAY	1,205.9 SQ. YDS.	
GROOVING BRIDGE FLOORS	10,175.0 SQ. FT.	



APPROACH SLAB 2

PROJECT NO. I-5958
ORANGE COUNTY
 BRIDGE NO. 670040

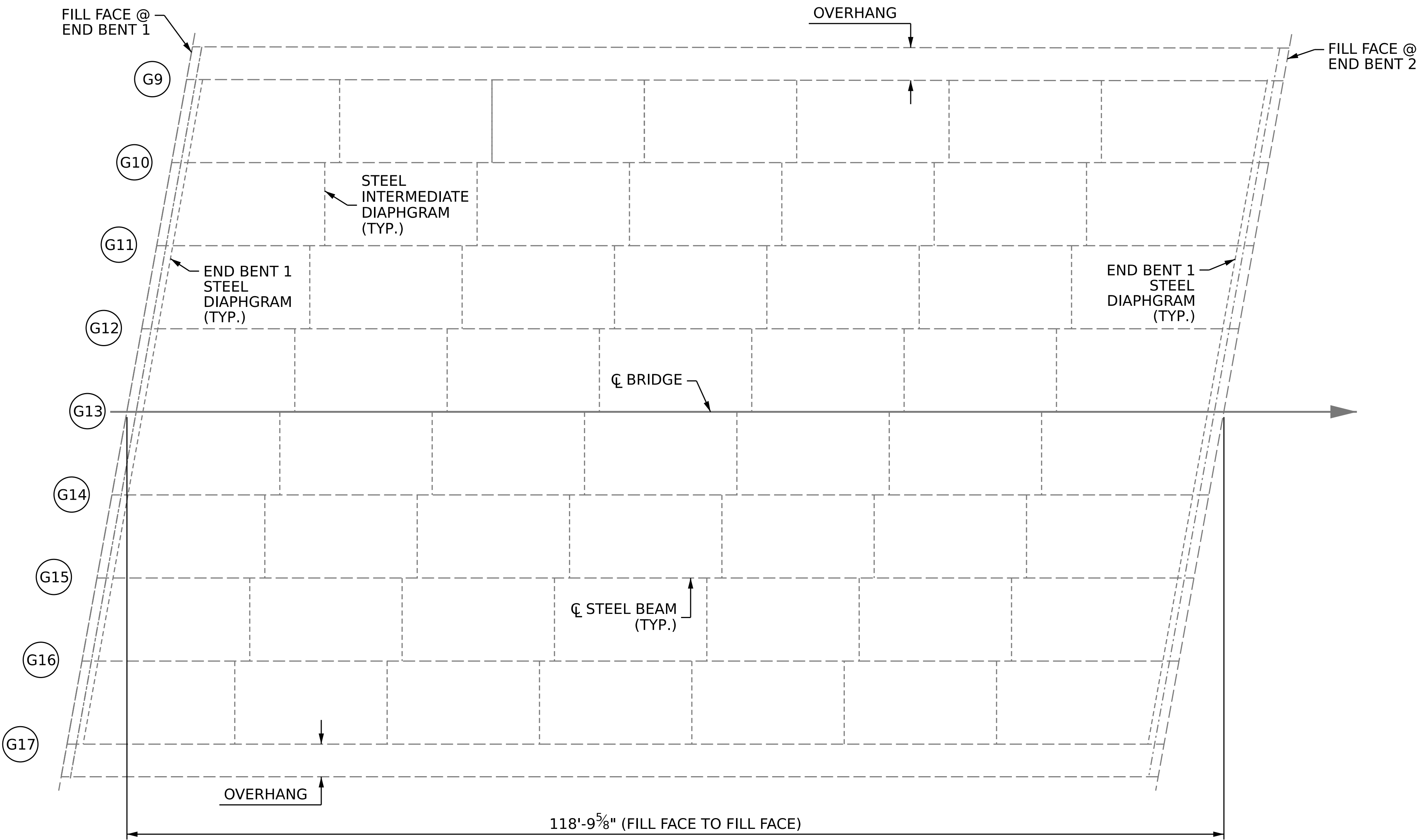


DECK SURFACE REPAIRS

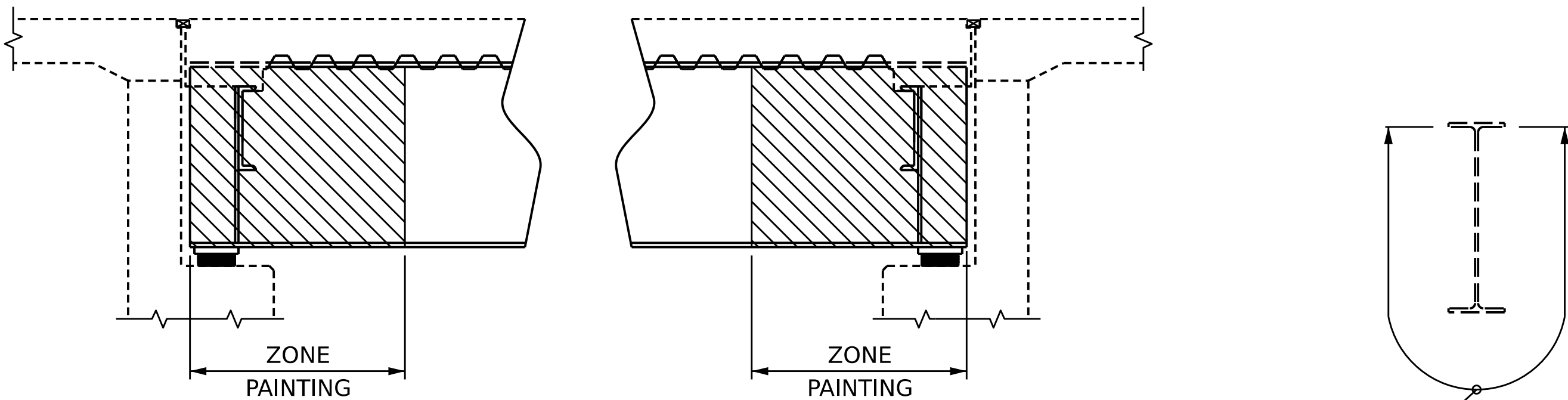
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-03
1			3			TOTAL SHEETS
2			4			56

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

8/17/2026
S:\DPG1\Division7\I-5958\Bridge #670040\Plans\401_005_I-5958_SMU_DSR A_S1-03_670040.dgn
file



SPAN A



LIMITS OF ZONE PAINTING

AS-BUILT REPAIR QUANTITY TABLE				
DECK UNDERSIDE REPAIRS SPAN A	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	0	0		
OVERHANG	0	0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	0	0		
OVERHANG	0	0		
ZONE PAINTING		AREA SF		AREA SF
BEAM ENDS		3,406		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 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 LOCATION AND DESCRIPTION OF THE REPAIRS AND UPDATE THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR ZONE PAINTING, SEE SPECIAL PROVISIONS.

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

FOR OVERHANG AND DIAPHRAGM REPAIRS, SEE "OVERHANG AND DIAPHRAGM REPAIR DETAILS" SHEET.

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

PROJECT NO. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670040**



DocuSigned by:
Francesca Lea
08/19/2026

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

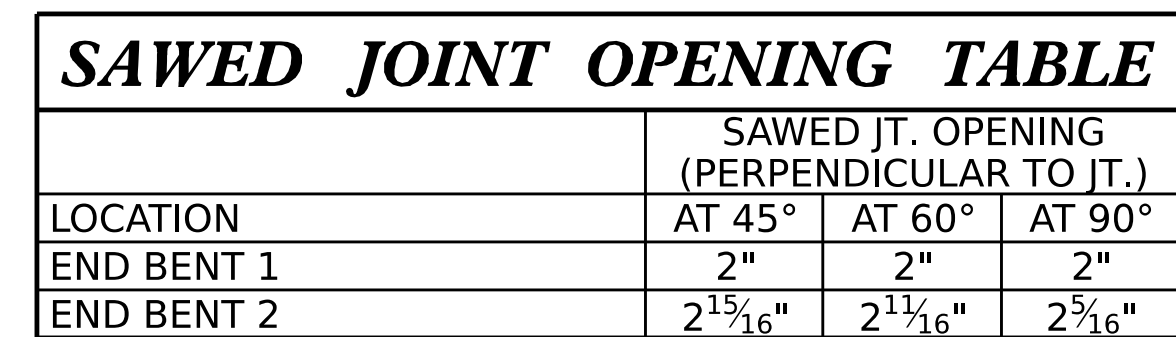
DECK UNDERSIDE REPAIRS

SPAN A

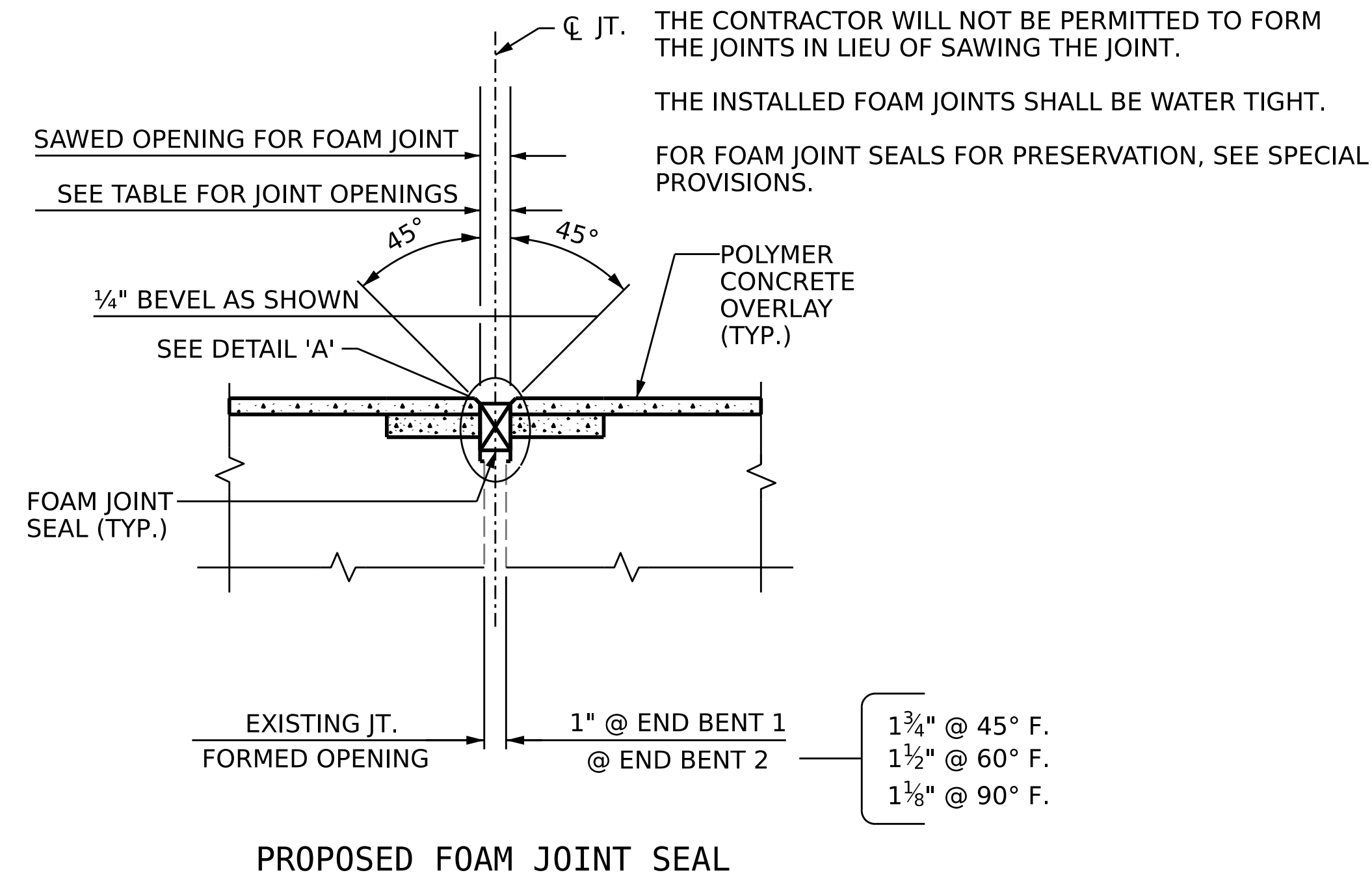
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-04
1			3			TOTAL SHEETS 56
2			4			

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

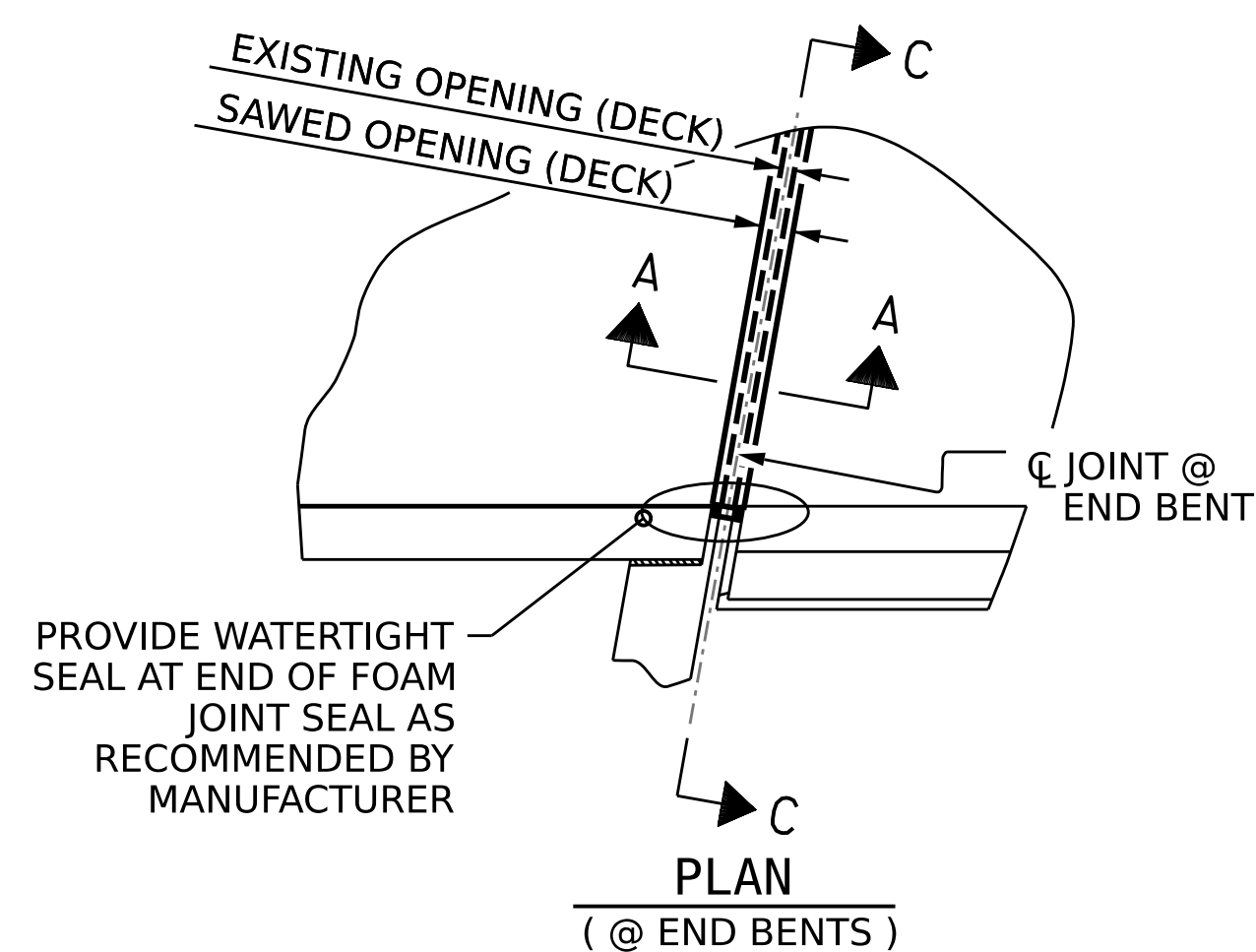
DRAWN BY: **J. SCOTT** DATE: **04/2026**
CHECKED BY: **S. LOTFI** DATE: **06/2026**
DESIGN ENGINEER OF RECORD: _____ DATE: _____



(APPROACH ROADWAY AND APPROACH SLABS)



(TYP. AT END BENTS)



(@ END BENTS)

<i>JOINT REPAIR QUANTITY TABLE</i>		
	ESTIMATED	ACTUAL
FOAM JOINT SEALS FOR PRESERVATION	160.4	

PROJECT NO. **I-5958**
ORANGE COUNTY
 BRIDGE NO. **670040**

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

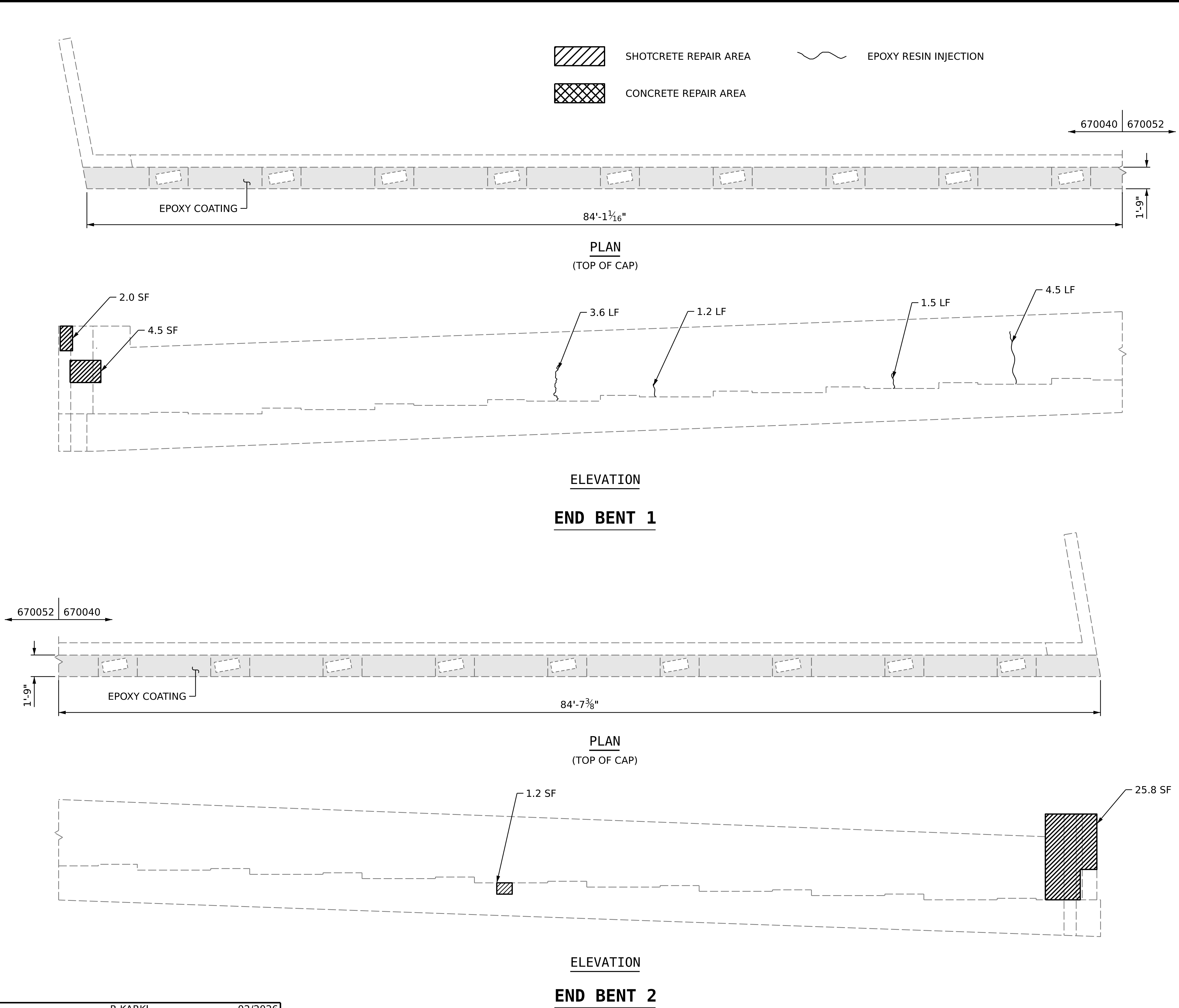
FOAM JOINT SEALS FOR PRESERVATION DETAILS

REVISIONS						SHEET NO. S1-05 TOTAL SHEETS 56
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			
2			4			

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

DRAWN BY: J. SCOTT / S. LOTFI DATE: 05/2026
 CHECKED BY: F. LEA DATE: 06/2026
 DESIGN ENGINEER OF RECORD: _____ DATE: _____

8/17/2026
S:\DPG1\Division7\I-5958\Bridge #670040\Plans\401_009_I-5958_SMU_JT_S1-05_670040.dgn
flea



AS-BUILT REPAIR QUANTITY TABLE				
END BENT 1 & 2				
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ.FT.	VOLUME CU.FT.	AREA SQ.FT.	VOLUME CU.FT.
CAP	1.2	0.6		
BACKWALL	0.0	0.0		
WINGWALL	32.3	16.2		
CONCRETE REPAIRS	AREA SQ.FT.	VOLUME CU.FT.	AREA SQ.FT.	VOLUME CU.FT.
CAP	0.0	0.0		
BACKWALL	0.0	0.0		
WINGWALL	0.0	0.0		
EPOXY RESIN INJECTION	LN. FT.		LN. FT.	
CAP	0.0			
BACKWALL	10.8			
WINGWALL	0.0			
EPOXY COATING	AREA SQ.FT.		AREA SQ.FT.	
CAP	282.1			

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

NOTES

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

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

FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

SHOTCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

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

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

PROJECT NO. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670040**



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

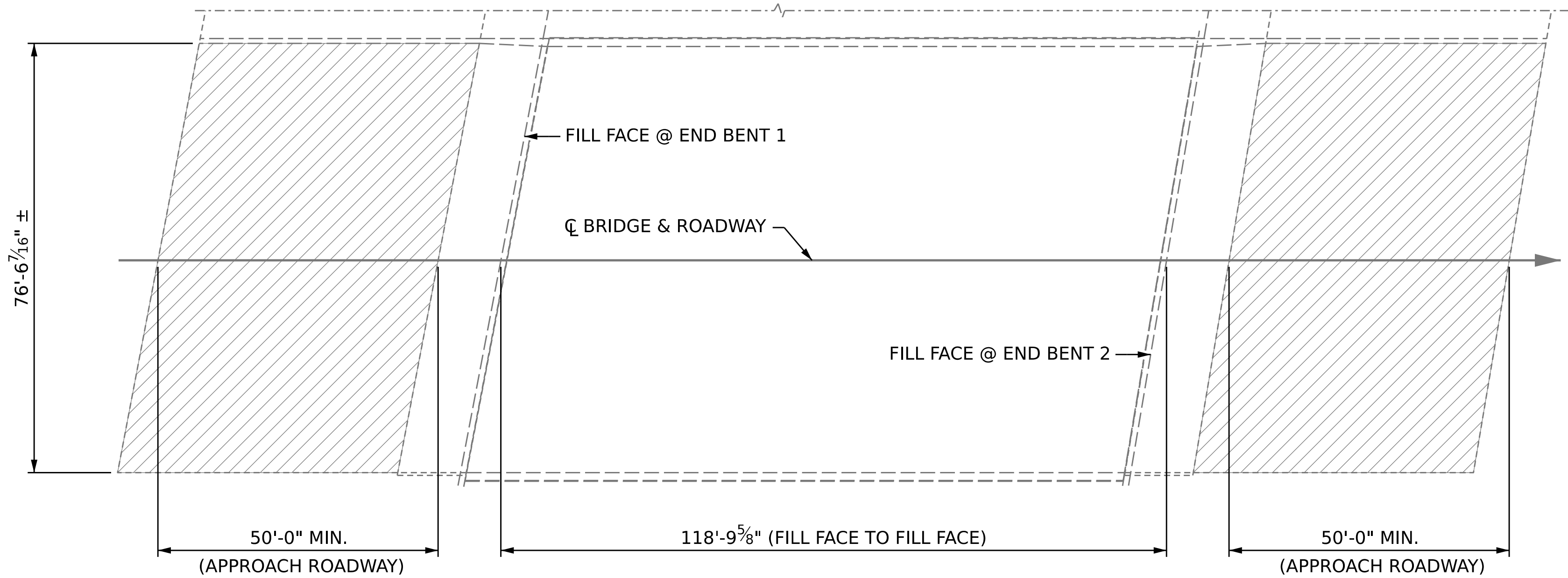
SUBSTRUCTURE REPAIRS
END BENT 1 & END BENT 2

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			56
2			4			

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY: **R.KARKI** DATE: **02/2026**
CHECKED BY: **J.SCOTT / S. LOTFI** DATE: **06/2026**
DESIGN ENGINEER OF RECORD: _____ DATE: _____

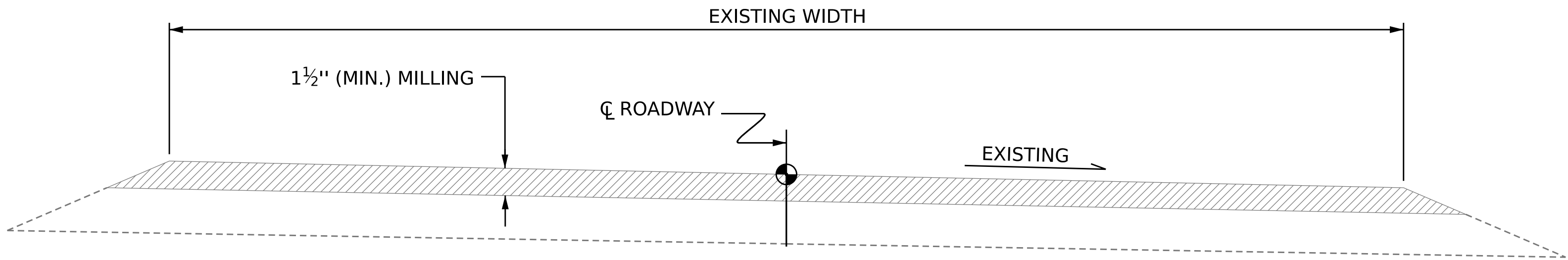
NOTES
INCIDENTAL MILLING - EXISTING APPROACH ASPHALT PAVING TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM 1½" DEPTH OF NEW ASPHALT PAVING. NEW ASPHALT PAVEMENT SHALL BE OF THICKNESS NECESSARY TO PROVIDE A SMOOTH TRANSITION BETWEEN THE ROADWAY AND THE APPROACH SLAB. THE NEW ASPHALT PAVEMNET THICKNESS MAY EXCEED 1½" DUE TO SETTLEMENT OF THE EXISTING APPROACH.



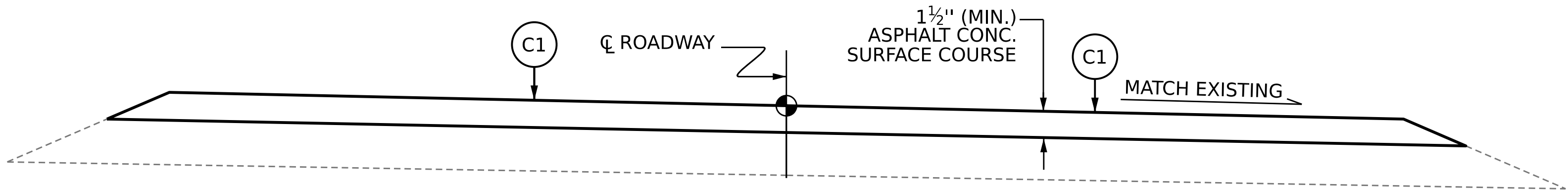
PLAN

C1 PROPOSED VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 1½" IN DEPTH OR GREATER THAN 2" DEPTH.

INCIDENTAL MILLING



TYPICAL ROADWAY MILLING SECTION

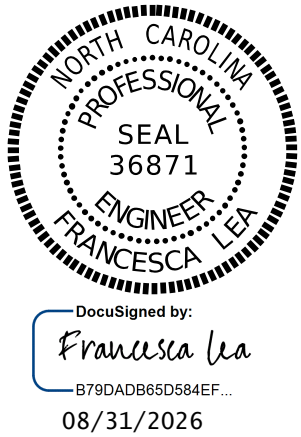


TYPICAL PROPOSED ROADWAY SECTION

SUMMARY OF QUANTITIES

	ESTIMATE	ACTUAL
INCIDENTAL MILLING	850.4 SY.	
ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D	80.0 TONS	
POLYMER MODIFIED ASPHALT BINDER FOR PLANT MIX	5.0 TONS	

PROJECT NO. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670040**



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**INCIDENTAL MILLING
& TYPICAL ROADWAY
SECTIONS**

DRAWN BY: **S.A. HERNANDEZ** DATE: **07/2026**
CHECKED BY: **F. LEA** DATE: **08/2026**
DESIGN ENGINEER OF RECORD: DATE:

8/31/2026
S:\DPG1\Division7\I-5958\Bridge #670040\Plans\401_013_I-5958_SMU_IM_S1-07_670040.dgn
flea

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S1-07
2			4			TOTAL SHEETS 56

NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 12/03/2024.

BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS AND/OR ROUTINE INSPECTION REPORT.

SCOPE OF WORK

PARTIALLY REMOVE TOP OF BRIDGE DECK CONCRETE BY SCARIFICATION AND SHOTBLASTING METHODS.

MILL AND PAVE ASPHALT APPROACH ROADWAYS.

OVERLAY PREPARED TOP OF BRIDGE DECK WITH POLYMER CONCRETE (PC).

REMOVE EXISTING JOINT MATERIAL AND INSTALL FOAM JOINTS.

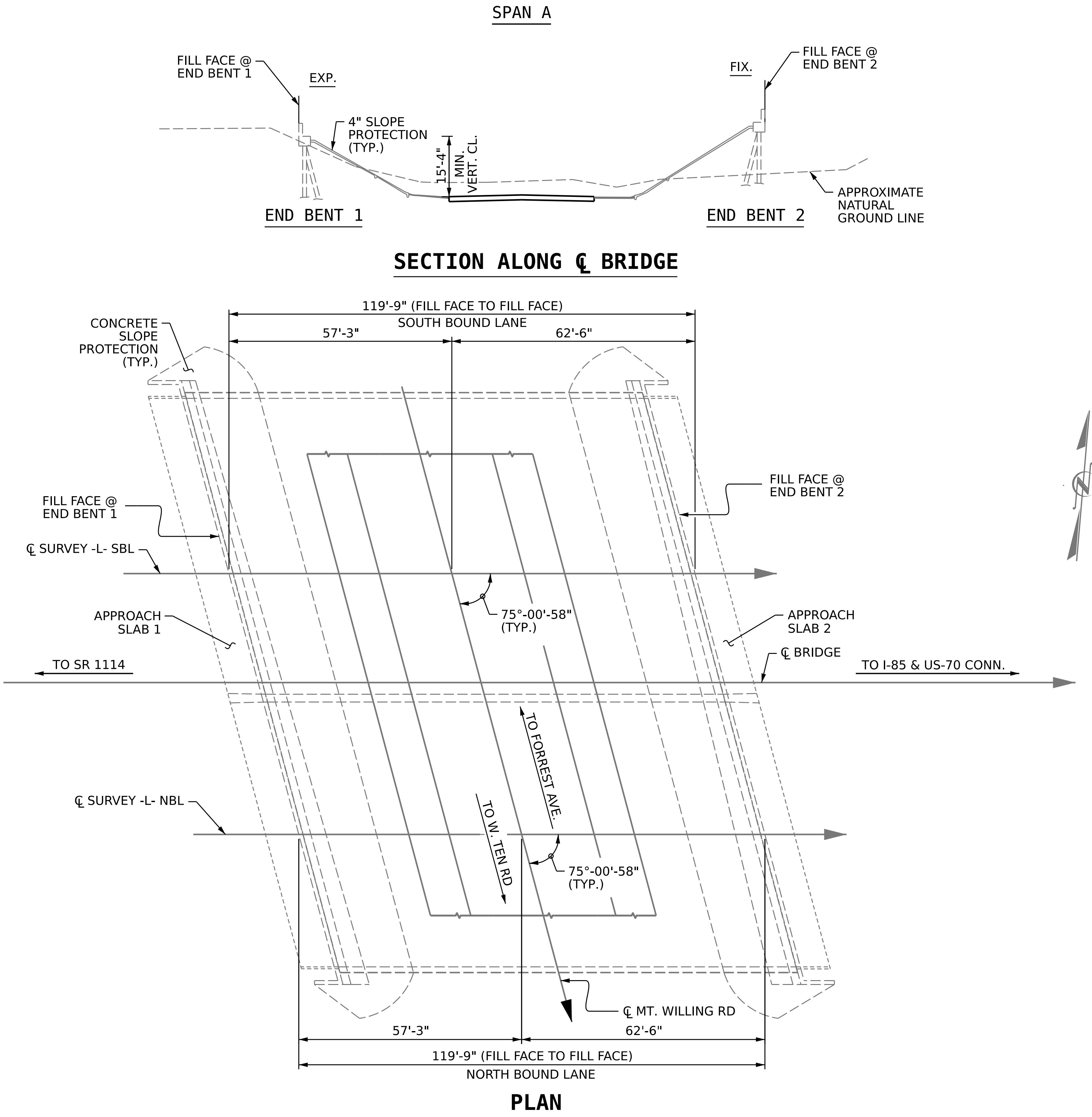
GROOVE POLYMER CONCRETE BRIDGE DECK.

CLEAN AND PAINT EXISTING WEATHERING STEEL

REMOVE UNSOUND CONCRETE AND PROPERLY PREPARE EXISTING END BENT AREAS, AND PERFORM EPOXY RESIN INJECTION OF CONCRETE CRACKS, AND SHOTCRETE AND CONCRETE REPAIRS.

REMOVE DEBRIS FROM TOP OF EXISTING END BENT CAPS AND APPLY EPOXY COATING.

SECTION ALONG CL BRIDGE



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

RESIDENT ENGINEER _____ DATE _____

PROJECT NO. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670044**

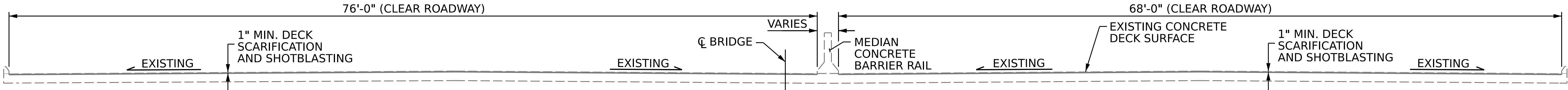
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			56
2			4			

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY: **S. LOTFI** DATE: **03/2026**
CHECKED BY: **S.A.HERNANDEZ** DATE: **04/2026**
DESIGN ENGINEER OF RECORD: _____ DATE: _____

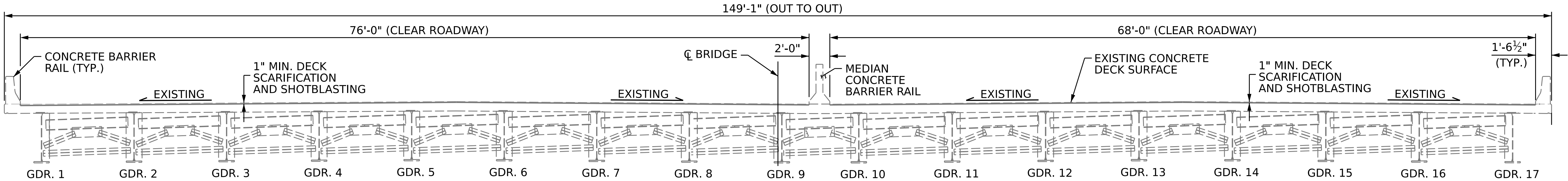
NOTES

FOR LANE WIDTHS, SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF POLYMER CONCRETE AND SURFACE PREPARATION SEE ELSEWHERE IN THE CONTRACT DOCUMENTS.



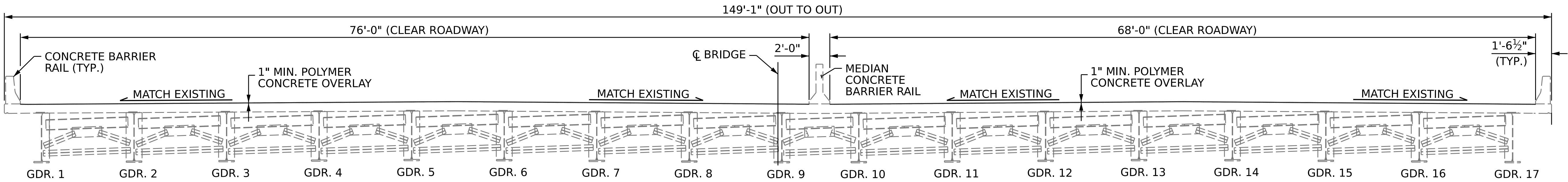
TYPICAL SECTION - APPROACH SLAB 1 & 2

(EXISTING)



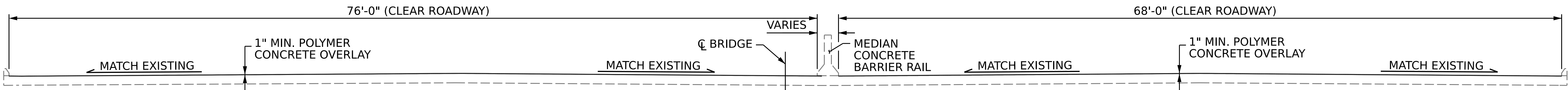
TYPICAL SECTION

(EXISTING)



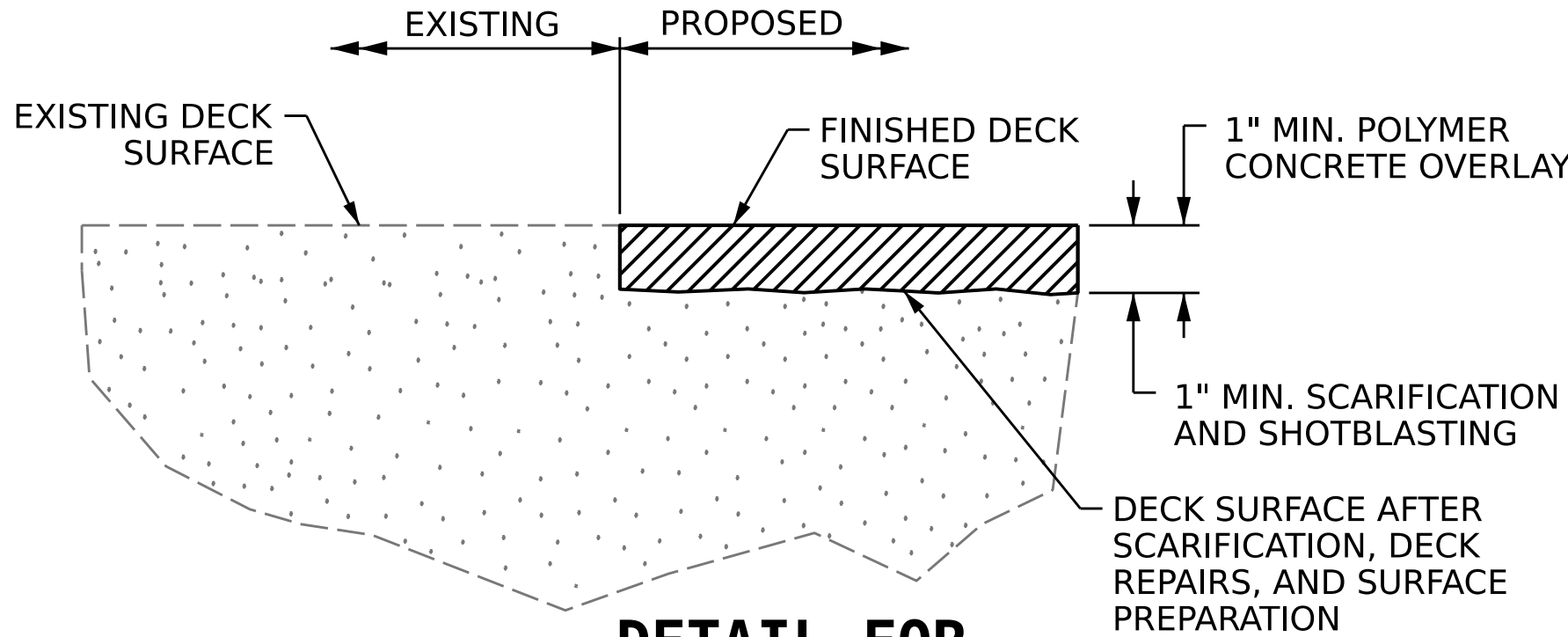
TYPICAL SECTION

(PROPOSED)

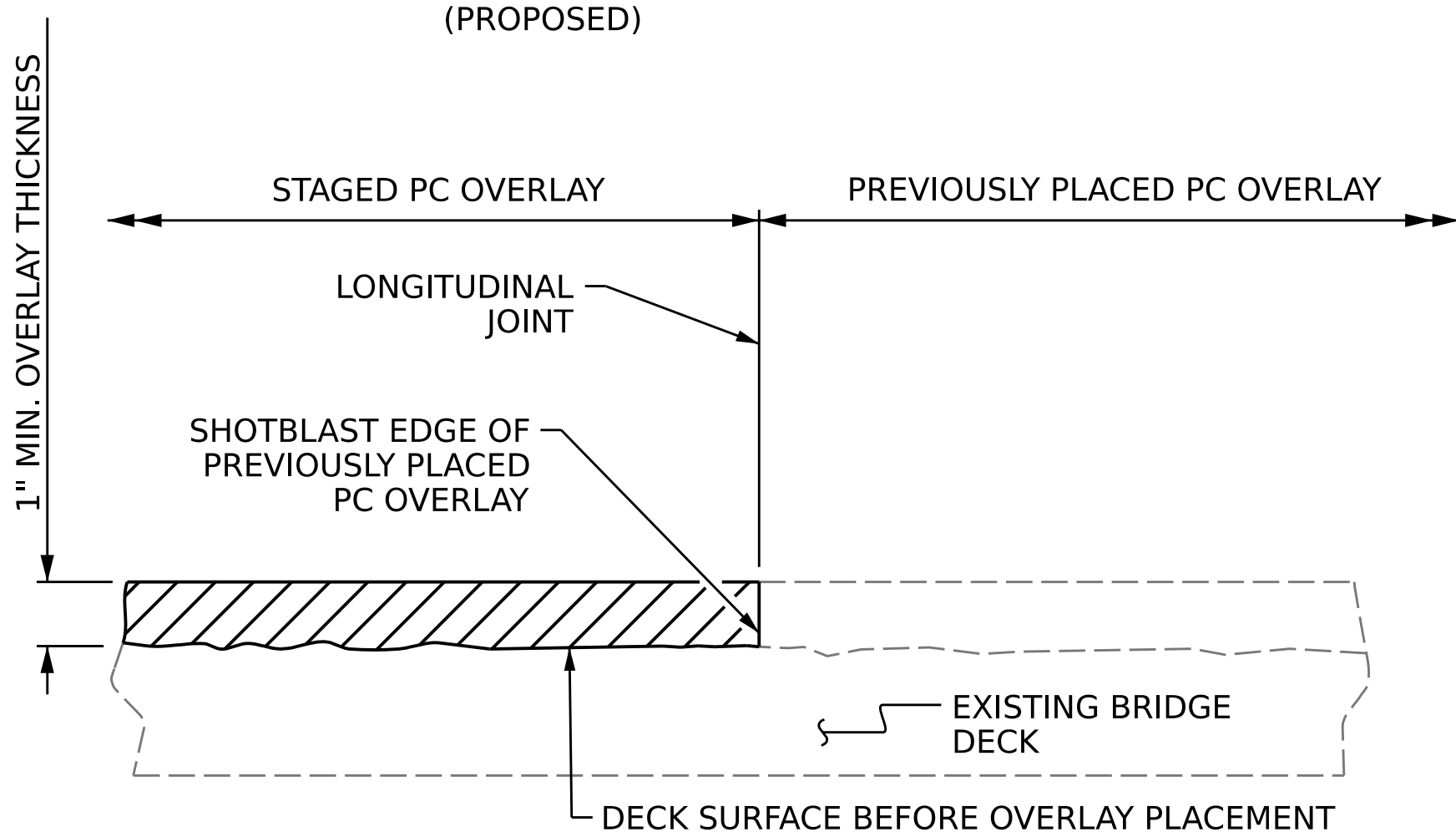


TYPICAL SECTION - APPROACH SLAB 1 & 2

(PROPOSED)



DETAIL FOR POLYMER CONCRETE (PC) OVERLAY



STAGED PC OVERLAY JOINT

DRAWN BY: S. LOTFI
CHECKED BY: S.A.HERNANDEZ
DESIGN ENGINEER OF RECORD: S.A.HERNANDEZ
DATE: 03/2026
DATE: 04/2026
DATE: 04/2026

8/13/2026
S:\DPG1\Division7\I-5958\Bridge #670044\Plans\402_003_I-5958_SMU_TS_S2-02_670044.dgn
sbaguiar-herandez



DecaSigned by:
Francesca Lea
679DA0B6D5D84EF
08/19/2026

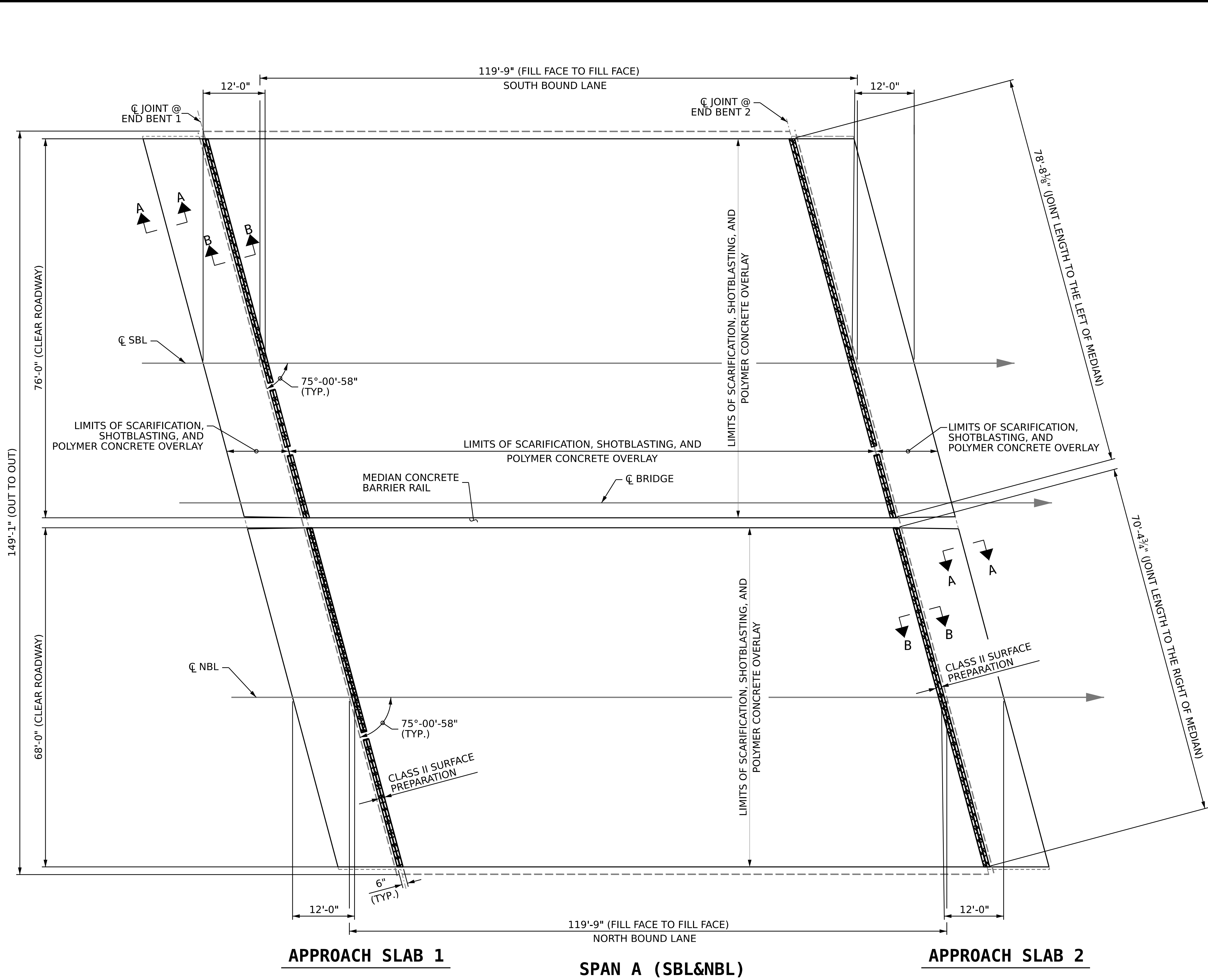
PROJECT NO. I-5958
ORANGE COUNTY
BRIDGE NO. 670044

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION
AND POLYMER CONCRETE
OVERLAY DETAILS

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS
2			4			56



AS-BUILT REPAIR QUANTITY TABLE		
DECK SURFACE REPAIRS-SPAN A & APPROACH SLAB 1&2		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	2,263.6 SQ. YDS.	
CLASS II SURFACE PREPARATION	16.6 SQ. YDS.	
CONCRETE DECK REPAIR FOR POLYMER CONCRETE OVERLAY	16.6 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	2,263.6 SQ. YDS.	
POLYESTER POLYMER CONCRETE MATERIALS	78.6 CU. YDS.	
EPOXY POLYMER CONCRETE MATERIALS (ALTERNATE)	78.6 CU. YDS.	
PLACING AND FINISHING POLYMER CONCRETE OVERLAY	2,263.6 SQ. YDS.	
GROOVING BRIDGE FLOORS	19,355 SQ.FT.	

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 LOCATION AND DESCRIPTION OF THE REPAIRS AND UPDATE THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIRS QUANTITY TABLE.

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

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

FOR SCARIFYING BRIDGE DECK, SHOTBLASTING BRIDGE DECK, AND CLASS II SURFACE PREPARATION, SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISIONS.

FOR POLYMER CONCRETE BRIDGE DECK OVERLAY, SEE SPECIAL PROVISIONS.

WHEN PC OVERLAYS ARE TO BE USED ON THE EXISTING APPROACH SLABS, ALL EDGES OF THE PC OVERLAY ON THE APPROACH SLAB SHOULD PROVIDE A NEAT, UNIFORMSTRAIGHT LINE.

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

FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

- CLASS II SURFACE PREPARATION
- SCARIFYING AND SHOTBLASTING OF BRIDGE DECK FOR POLYMER CONCRETE OVERLAY

PROJECT NO. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670044**

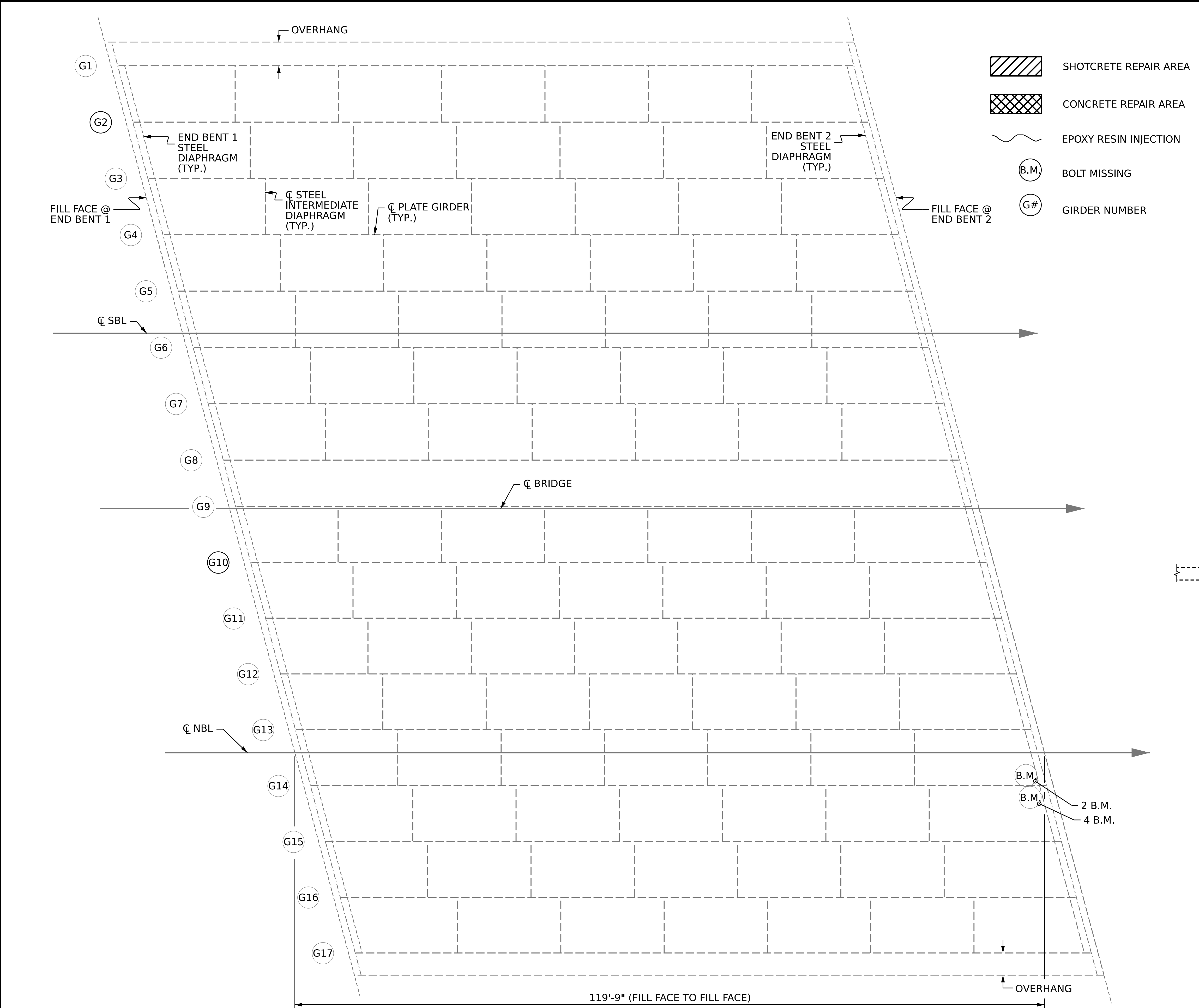


DocuSigned by:
Francesca Lei
5710AD8B5C584EF...
08/19/2026

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH	
DECK SURFACE REPAIRS SPAN A AND APPROACH SLABS	
REVISIONS	
NO.	BY: DATE: NO. BY: DATE:
1	3
2	4
SHEET NO. S2-03 TOTAL SHEETS 56	

DRAWN BY: **S. LOTFI** DATE: **02/2026**
CHECKED BY: **S.A. HERNANDEZ** DATE: **05/2026**
DESIGN ENGINEER OF RECORD: DATE:

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED



DRAWN BY: S. LOTFI

CHECKED BY: S.A.HERNANDEZ

DESIGN ENGINEER OF RECORD:

DATE: 02/2026

DATE: 06/2026

DATE:

8/13/2026
S:\DPG1\Division7\I-5958\Bridge #670044\Plans\402_007_I-5958_SMU_DUR A_S2-04_670044.dgn
sbaguiar-herandez

- SHOTCRETE REPAIR AREA
- CONCRETE REPAIR AREA
- EPOXY RESIN INJECTION
- BOLT MISSING
- GIRDER NUMBER

AS-BUILT REPAIR QUANTITY TABLE				
DECK UNDERSIDE REPAIRS SPAN A	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	0	0		
OVERHANG	0	0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	0	0		
OVERHANG	0	0		
ZONE PAINTING		AREA SF		AREA SF
BEAM ENDS		6,475		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 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 LOCATION AND DESCRIPTION OF THE REPAIRS AND UPDATE THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

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

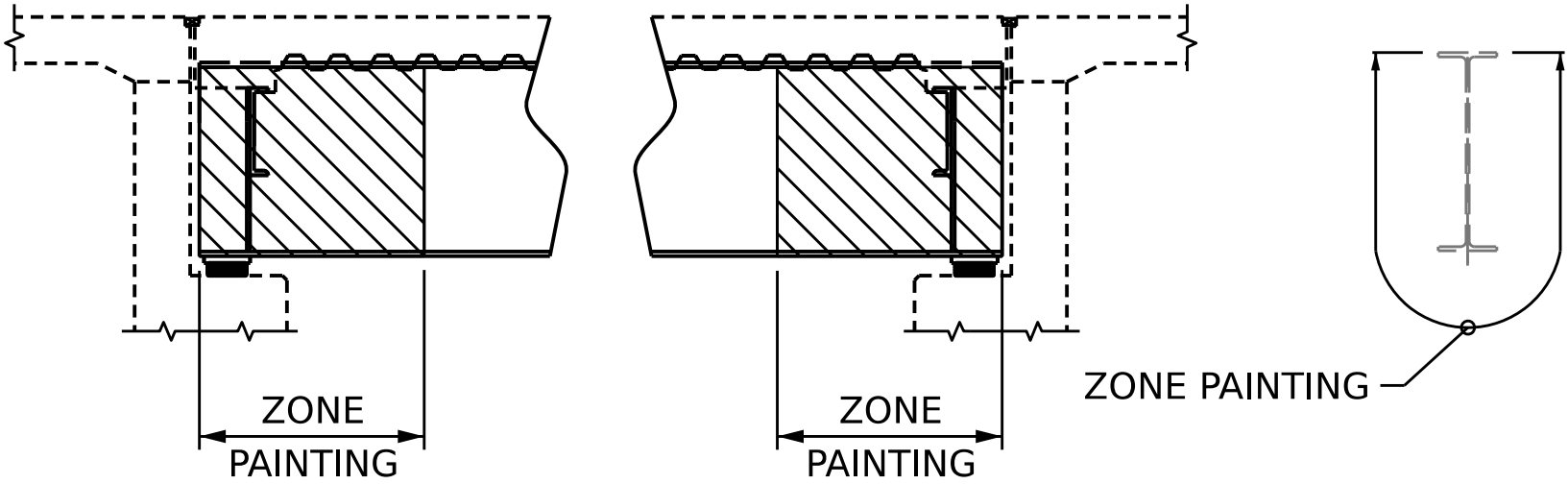
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR ZONE PAINTING, SEE SPECIAL PROVISIONS.

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

FOR OVERHANG AND DIAPHRAGM REPAIRS, SEE "OVERHANG AND DIAPHRAGM REPAIR DETAILS" SHEET.

ALL FIELD CONNECTIONS TO BE 7/8" DIA. HIGH STRENGTH BOLTS.



LIMITS OF ZONE PAINTING

PROJECT NO. I-5958

ORANGE COUNTY

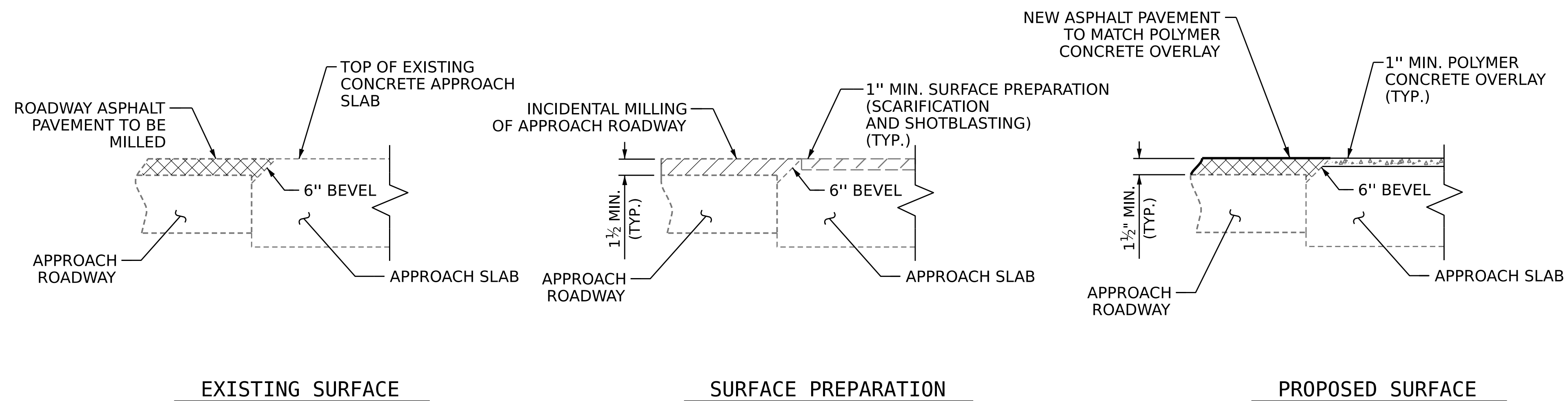
BRIDGE NO. 670044

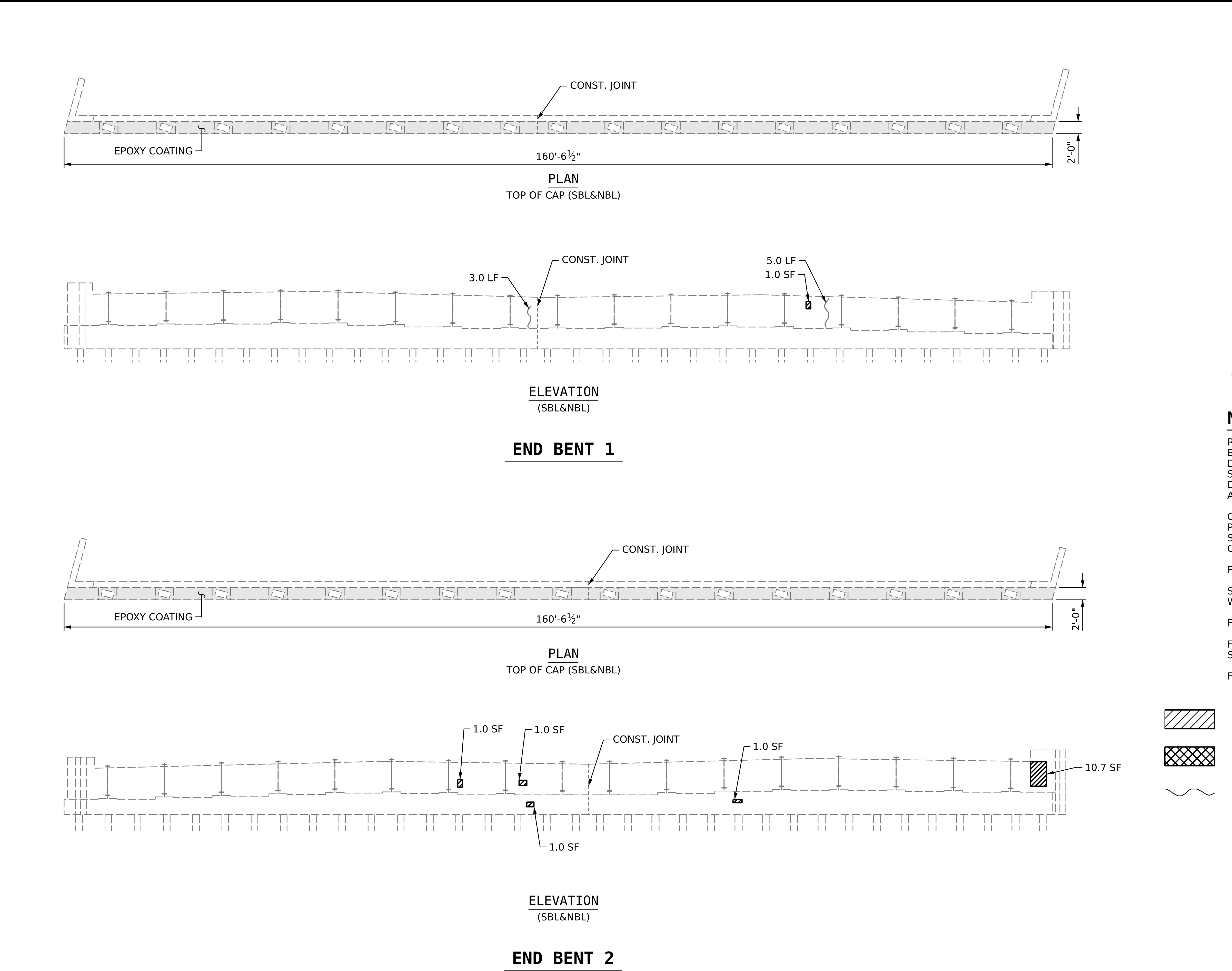


DocuSigned by:
Francesca Lea
870AD8B65C84EF...
08/19/2026

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.	
DECK UNDERSIDE REPAIRS SPAN A						S2-04	
REVISIONS						TOTAL SHEETS	
NO.	BY:	DATE:	NO.	BY:	DATE:	56	
1			3				
2			4				





AS-BUILT REPAIR QUANTITY TABLE				
END BENT 1 & 2				
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ.FT.	VOLUME CU.FT.	AREA SQ.FT.	VOLUME CU.FT.
CAP	2.0	1.0		
BACKWALL	3.0	1.5		
WINGWALL	10.7	5.4		
CONCRETE REPAIRS	AREA SQ.FT.	VOLUME CU.FT.	AREA SQ.FT.	VOLUME CU.FT.
CAP	0.0	0.0		
BACKWALL	0.0	0.0		
WINGWALL	0.0	0.0		
EPOXY RESIN INJECTION	LN. FT.		LN. FT.	
CAP	0.0			
BACKWALL	8.0			
WINGWALL	0.0			
EPOXY COATING	AREA SQ.FT.		AREA SQ.FT.	
CAP	605.9			

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

NOTES

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

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

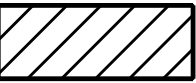
FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

SHOTCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

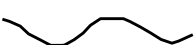
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.



SHOTCRETE REPAIR AREA



CONCRETE REPAIR AREA



EPOXY RESIN INJECTION

PROJECT NO. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670044**



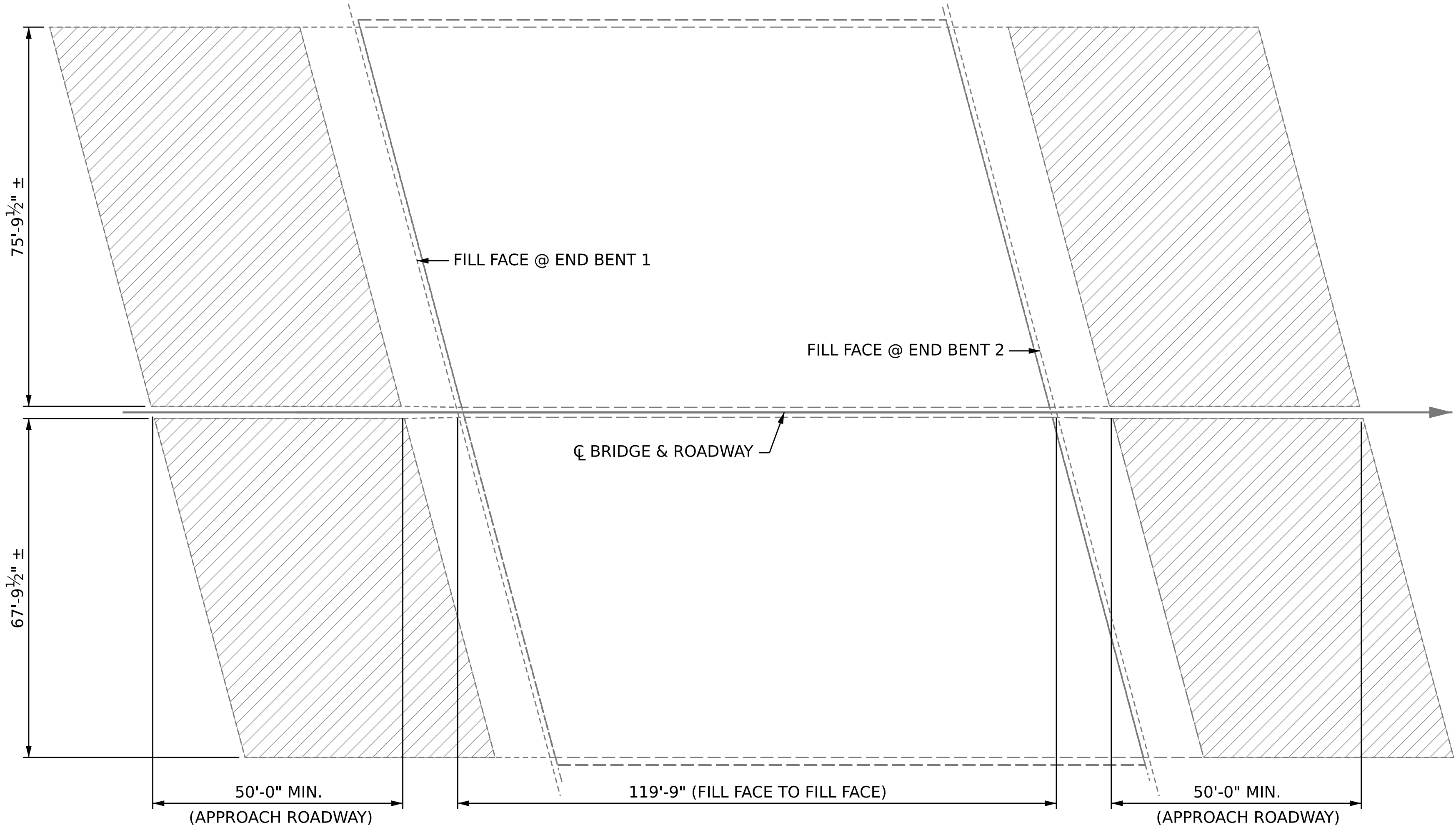
SUBSTRUCTURE REPAIRS
END BENT 1 & END BENT 2

DRAWN BY: **S. LOTFI** DATE: **02/2026**
CHECKED BY: **S.A.HERNANDEZ** DATE: **06/2026**
DESIGN ENGINEER OF RECORD: DATE:

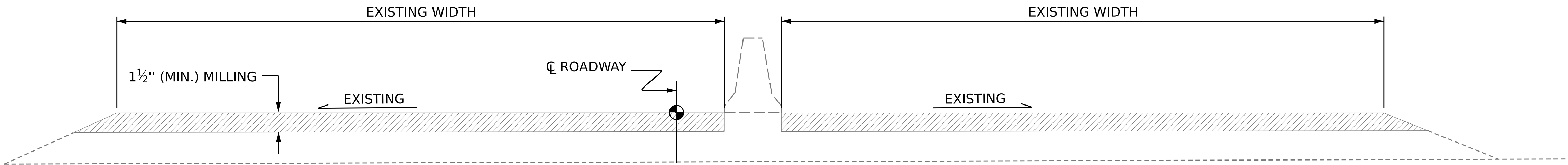
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			56
2			4			

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

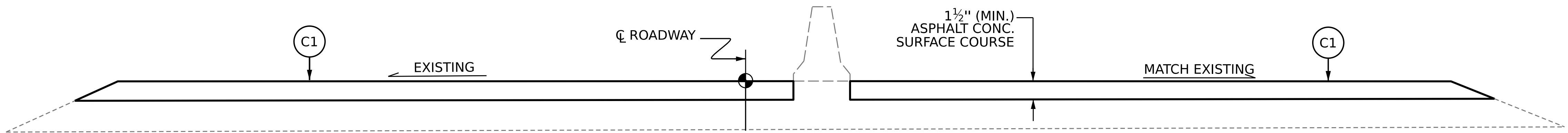
NOTES
INCIDENTAL MILLING - EXISTING APPROACH ASPHALT PAVING TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM 1½" DEPTH OF NEW ASPHALT PAVING. NEW ASPHALT PAVEMENT SHALL BE OF THICKNESS NECESSARY TO PROVIDE A SMOOTH TRANSITION BETWEEN THE ROADWAY AND THE APPROACH SLAB. THE NEW ASPHALT PAVEMNET THICKNESS MAY EXCEED 1½" DUE TO SETTLEMENT OF THE EXISTING APPROACH.



PLAN



TYPICAL ROADWAY MILLING SECTION



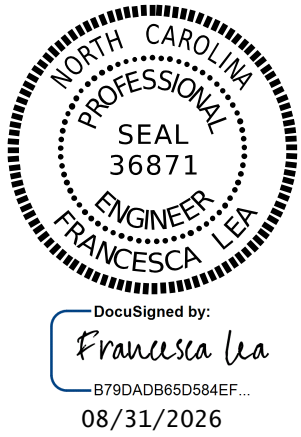
TYPICAL PROPOSED ROADWAY SECTION

INCIDENTAL MILLING

SUMMARY OF QUANTITIES

	ESTIMATE	ACTUAL
INCIDENTAL MILLING	1595.5 SY.	
ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D	140.0 TONS	
POLYMER MODIFIED ASPHALT BINDER FOR PLANT MIX	10.0 TONS	

PROJECT NO. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670044**



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

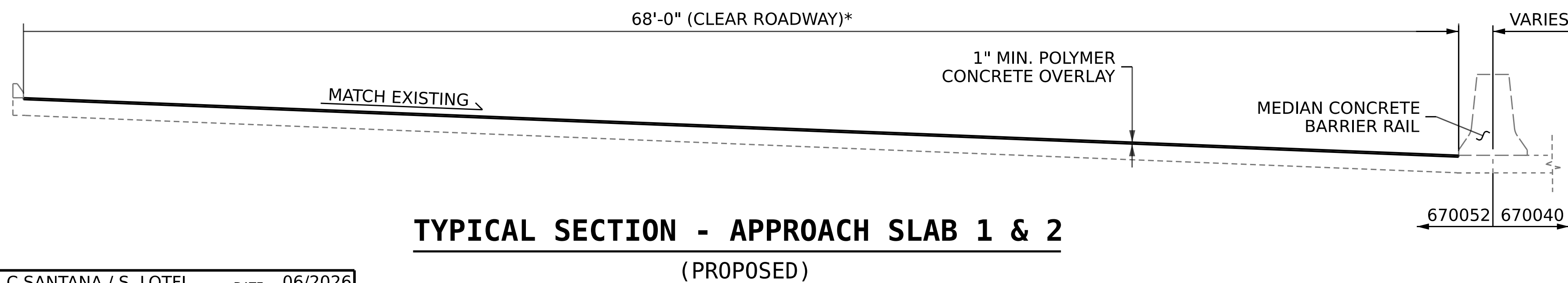
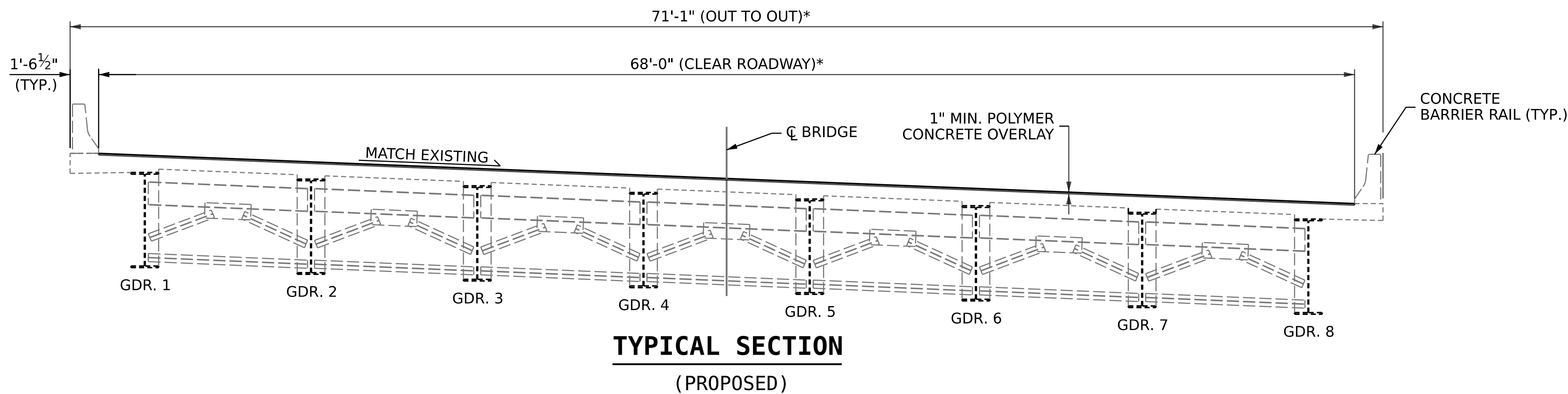
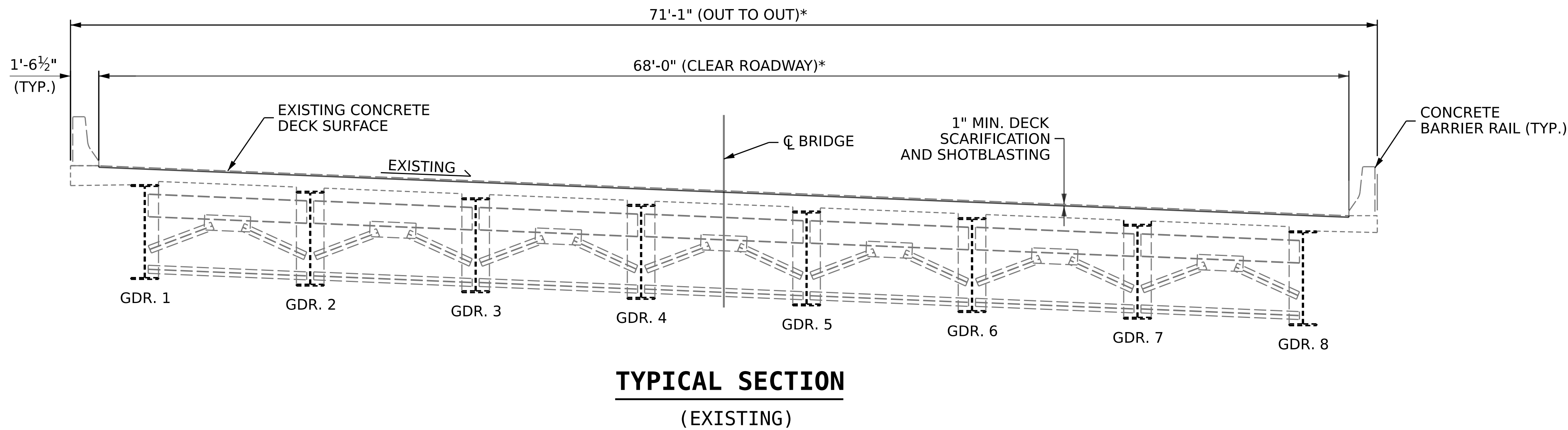
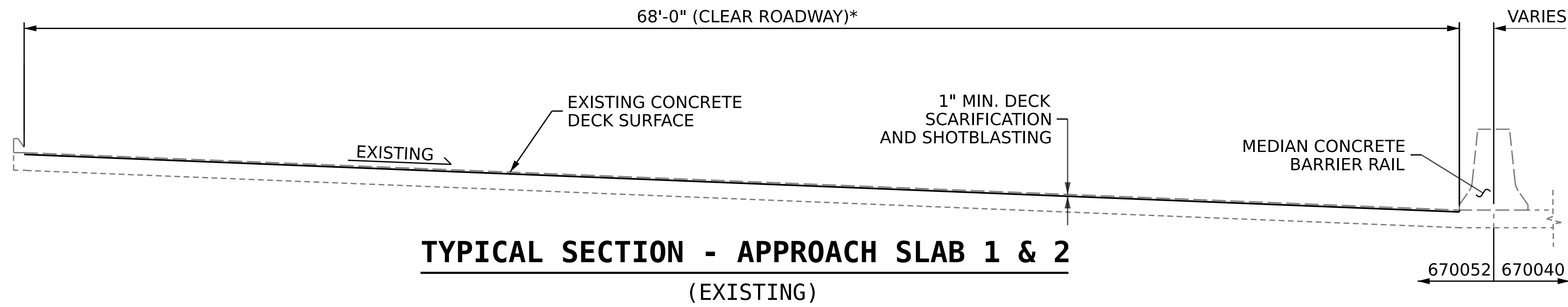
**INCIDENTAL MILLING
& TYPICAL ROADWAY
SECTIONS**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			56
2			4			

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

DRAWN BY: **S.A. HERNANDEZ** DATE: **07/2026**
CHECKED BY: **F. LEA** DATE: **08-2026**
DESIGN ENGINEER OF RECORD: DATE:

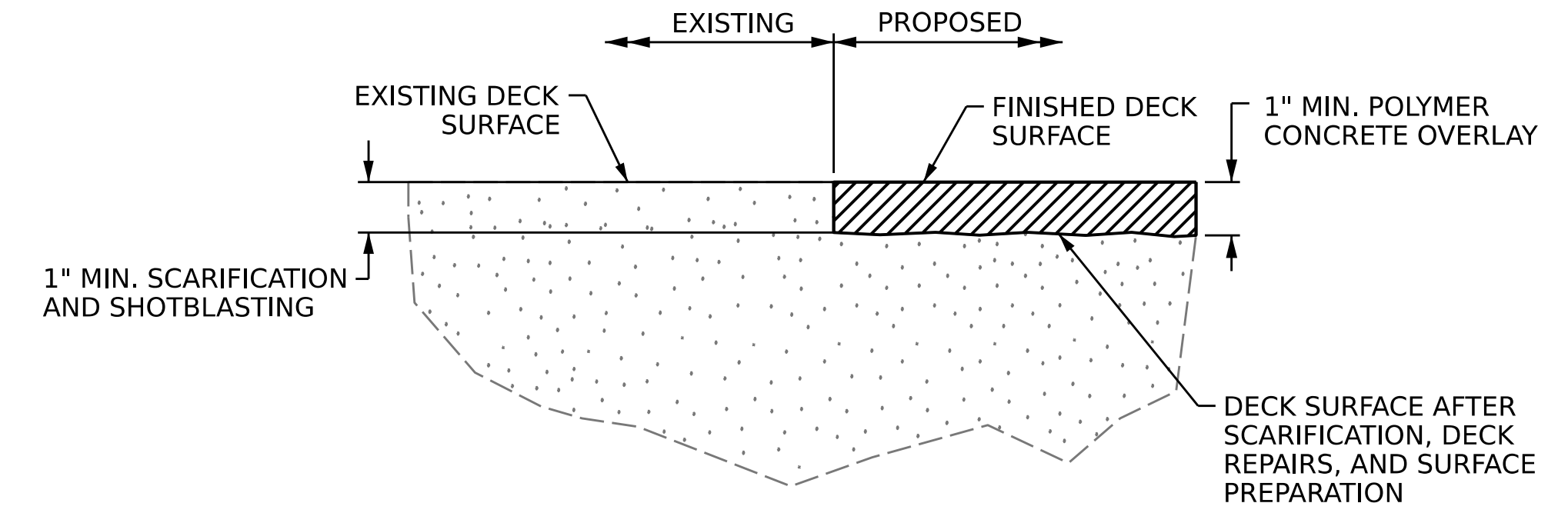




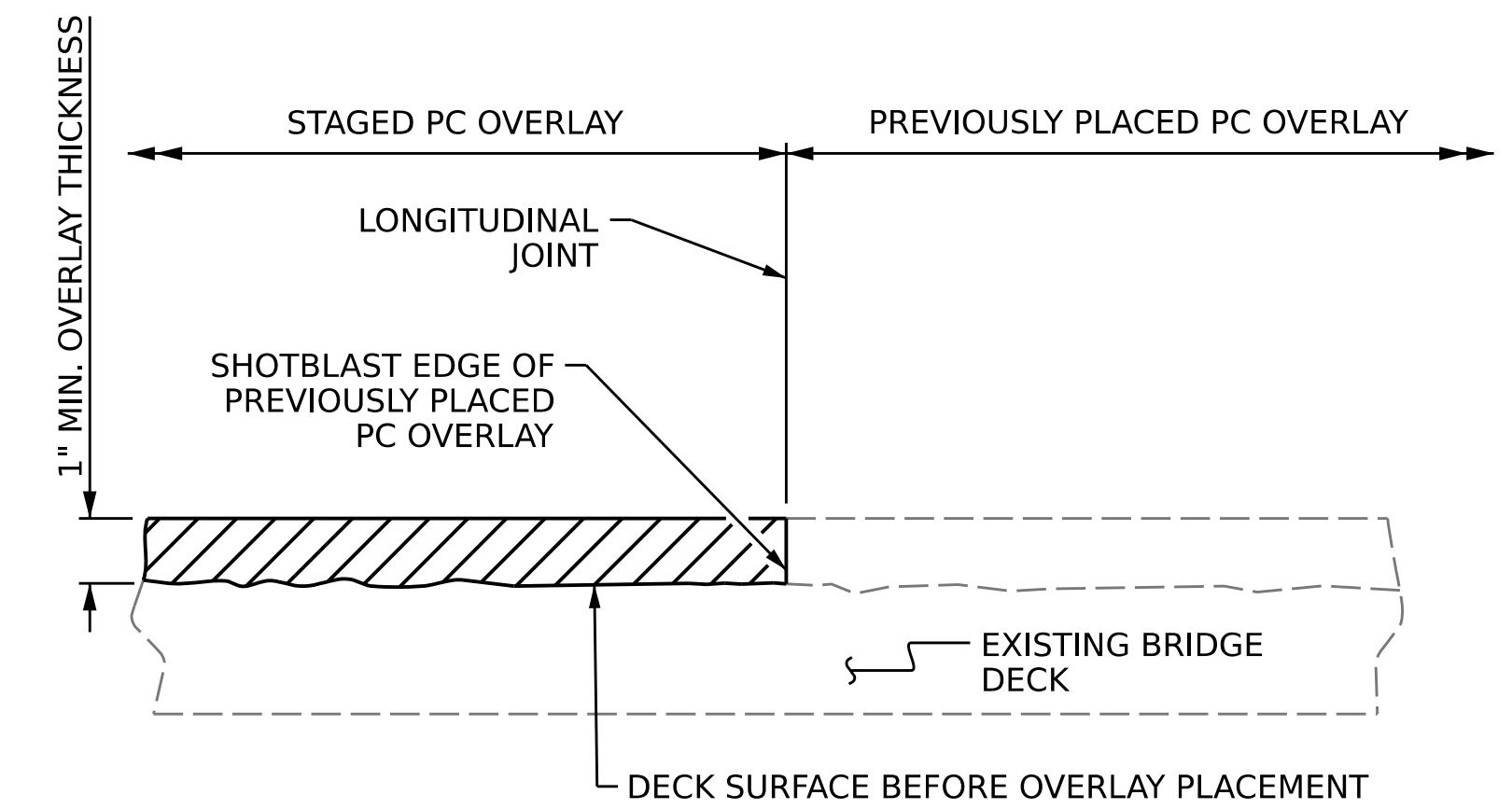
NOTES

FOR LANE WIDTHS, SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF POLYMER CONCRETE AND SURFACE PREPARATION SEE ELSEWHERE IN THE CONTRACT DOCUMENTS.

* THESE DIMENSIONS ARE RADIAL DIMENSIONS.



DETAIL FOR POLYMER CONCRETE (PC) OVERLAY



STAGED PC OVERLAY JOINT

PROJECT NO. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670052**



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION AND POLYMER CONCRETE OVERLAY DETAILS

DRAWN BY: C.SANTANA / S. LOTFI DATE: 06/2026
CHECKED BY: F.LEA DATE: 06/2026
DESIGN ENGINEER OF RECORD: DATE:

8/19/2026
403_003_I-5958_SMU_TS_S3-02_670052
flea

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			56
2			4			

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 LOCATION AND DESCRIPTION OF THE REPAIRS AND UPDATE THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

FOR SCARIFYING BRIDGE DECK, SHOTBLASTING BRIDGE DECK, AND CLASS II SURFACE PREPARATION, SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISIONS.

WHEN PC OVERLAY ARE TO BE USED ON THE EXISTING APPROACH SLABS, ALL EDGES OF THE PC OVERLAY ON THE APPROACH SLAB SHOULD PROVIDE A NEAT, UNIFORM STRAIGHT LINE.

FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

	CLASS II SURFACE PREPARATION
	SCARIFYING AND SHOTBLASTING OF BRIDGE DECK FOR POLYMER CONCRETE OVERLAY

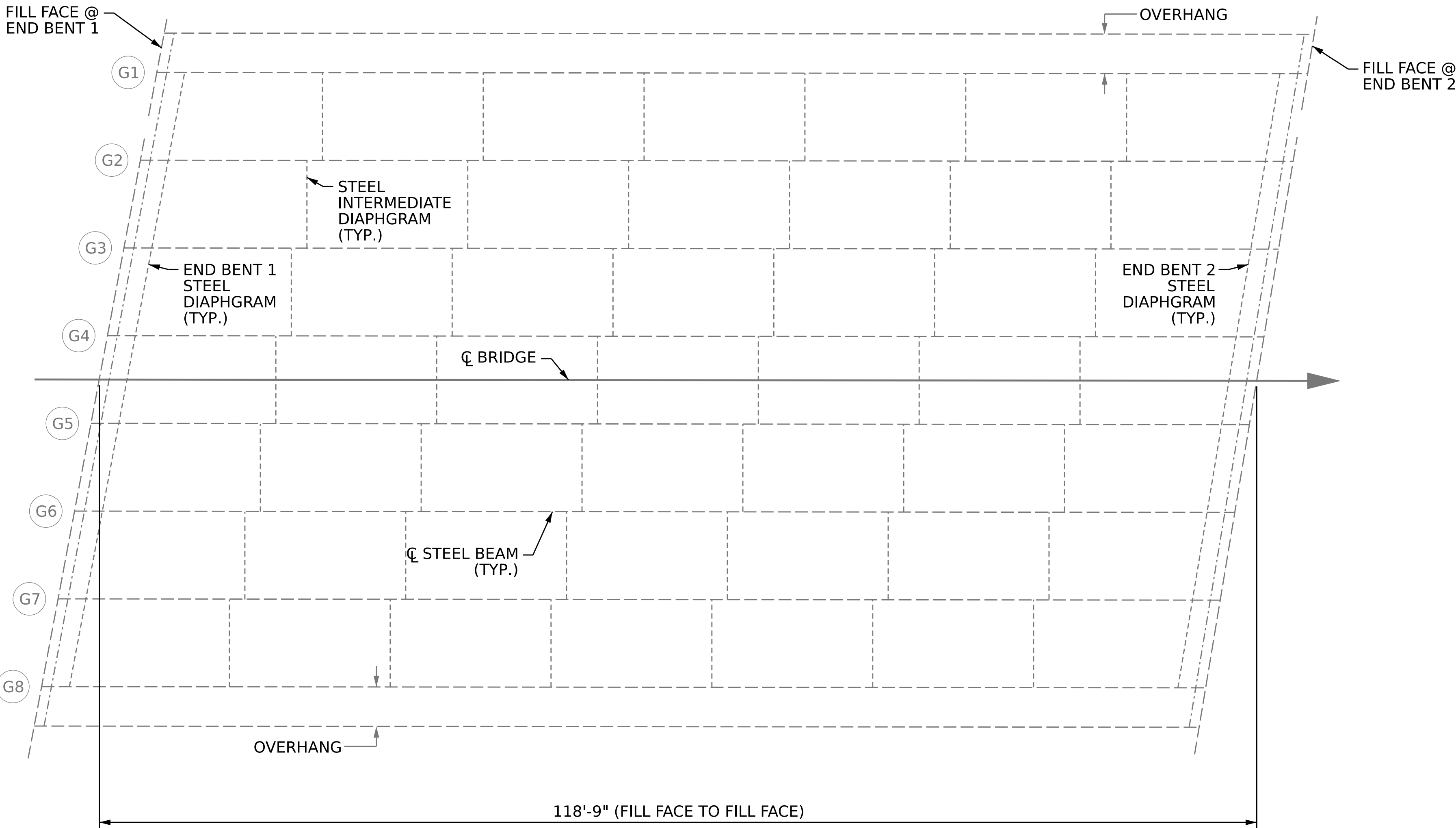


PROJECT NO. **I-5958**
ORANGE COUNTY
 BRIDGE NO. **670052**

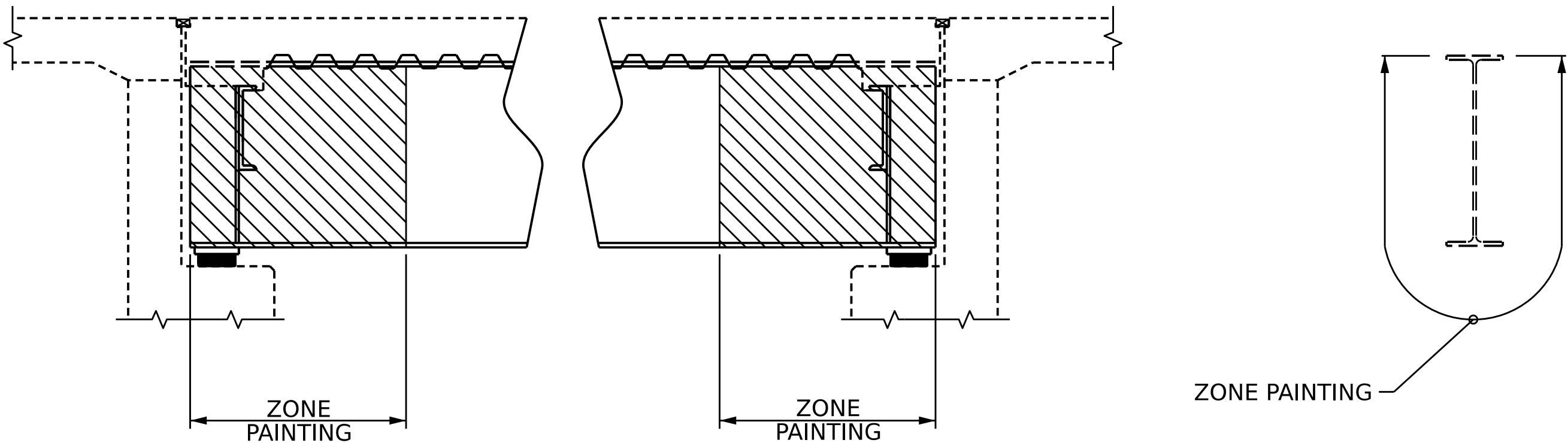
DECK SURFACE REPAIRS

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

8/18/2026
S:\DPG1\Division7\I-5958\Bridge #670052\Plans\403_005_I-5958_SMU_DSR A_S3-03_670052.dgn
fla



SPAN A



LIMITS OF ZONE PAINTING

AS-BUILT REPAIR QUANTITY TABLE				
DECK UNDERSIDE REPAIRS SPAN A	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	0	0		
OVERHANG	0	0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	0	0		
OVERHANG	0	0		
ZONE PAINTING		AREA SF		AREA SF
BEAM ENDS		2,476		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 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 LOCATION AND DESCRIPTION OF THE REPAIRS AND UPDATE THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

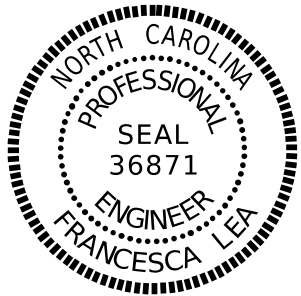
FOR ZONE PAINTING, SEE SPECIAL PROVISIONS.

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

FOR OVERHANG AND DIAPHRAGM REPAIRS, SEE "OVERHANG AND DIAPHRAGM REPAIR DETAILS" SHEET.

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

PROJECT NO. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670052**



DocuSigned by:
Francesca Lea
87f0a0d860584ef...
08/19/2026

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

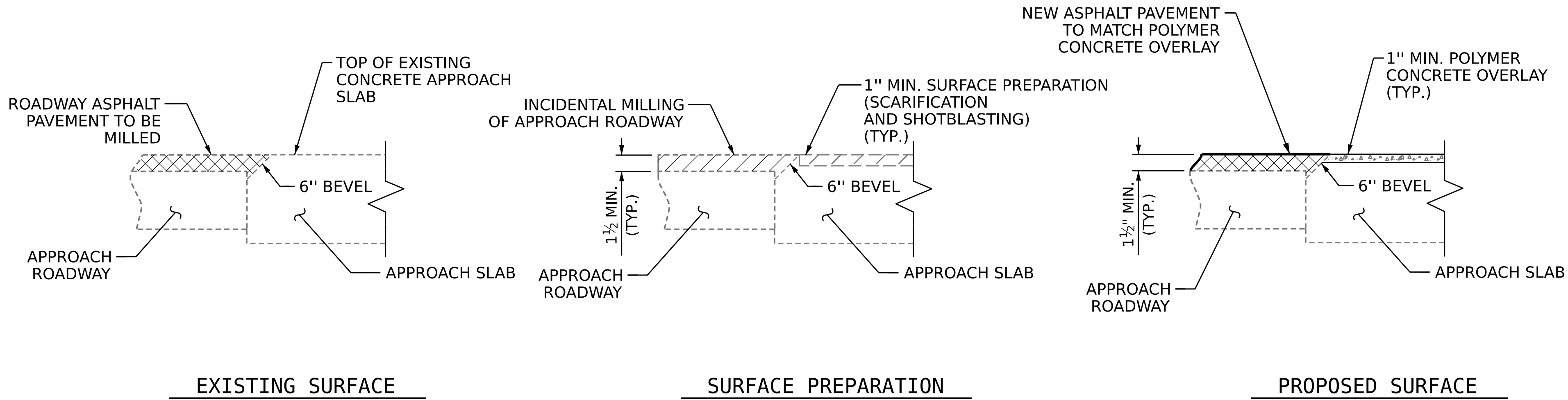
DECK UNDERSIDE REPAIRS

SPAN A

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S3-04
1			3			TOTAL SHEETS
2			4			56

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

DRAWN BY: **C.SANTANA** DATE: **05/2026**
CHECKED BY: **F.LEA** DATE: **05/2026**
DESIGN ENGINEER OF RECORD: _____ DATE: _____



SAWED JOINT OPENING TABLE			
	SAWED JT. OPENING (PERPENDICULAR TO JT.)		
LOCATION	AT 45°	AT 60°	AT 90°
END BENT 1	2"	2"	2"
END BENT 2	2 15/16"	2 11/16"	2 5/16"

NOTES

FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY OR SEALANT WORK IS COMPLETE.

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

THE MANUFACTURER IS TO PROVIDE THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE FOAM JOINT SEAL FOR THE SIZE OF THE OPENING ON THE PLANS AND ACCOMODATE THE MINIMUM EXPANSION SHOWN ON THE PLANS.

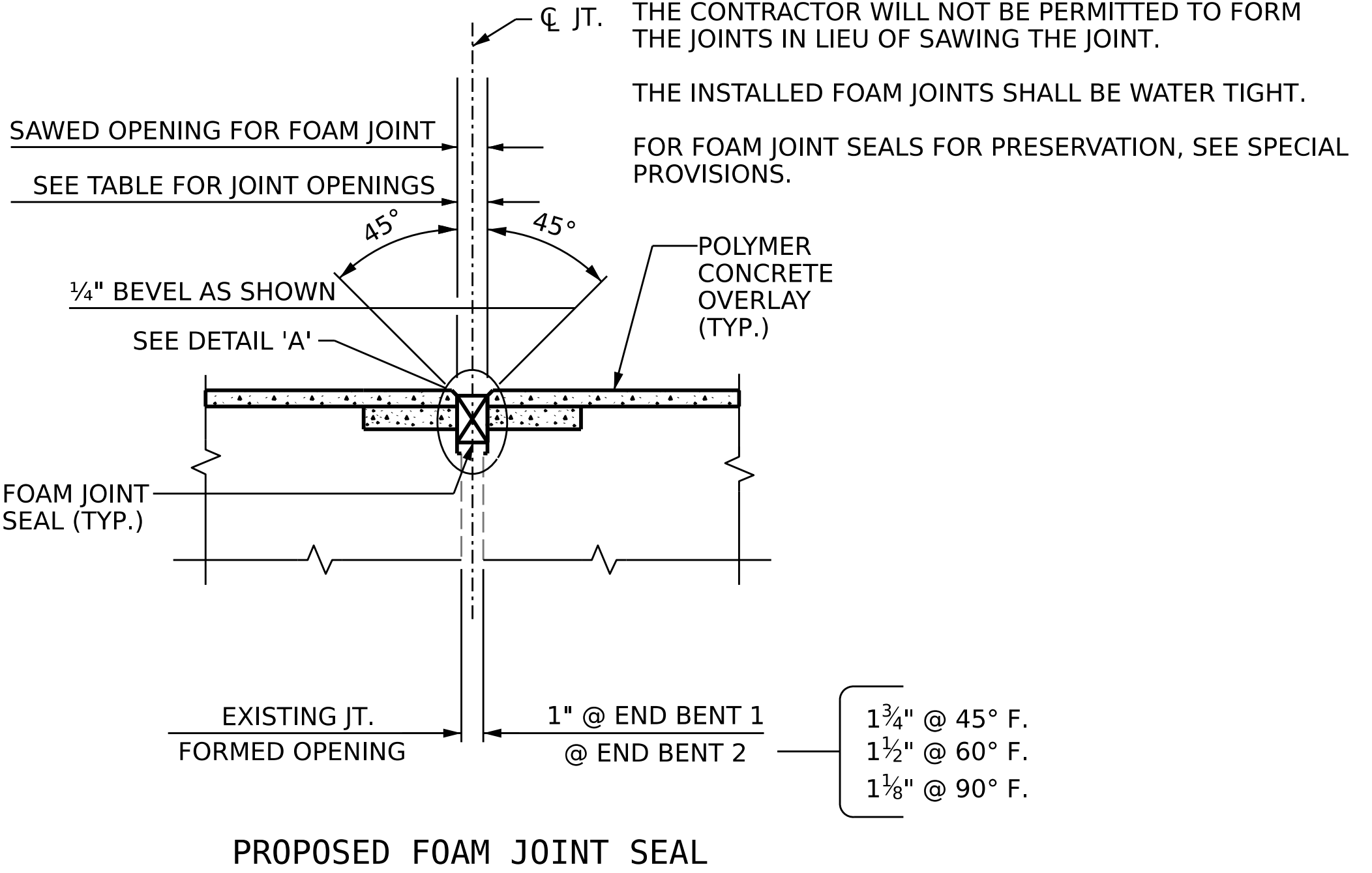
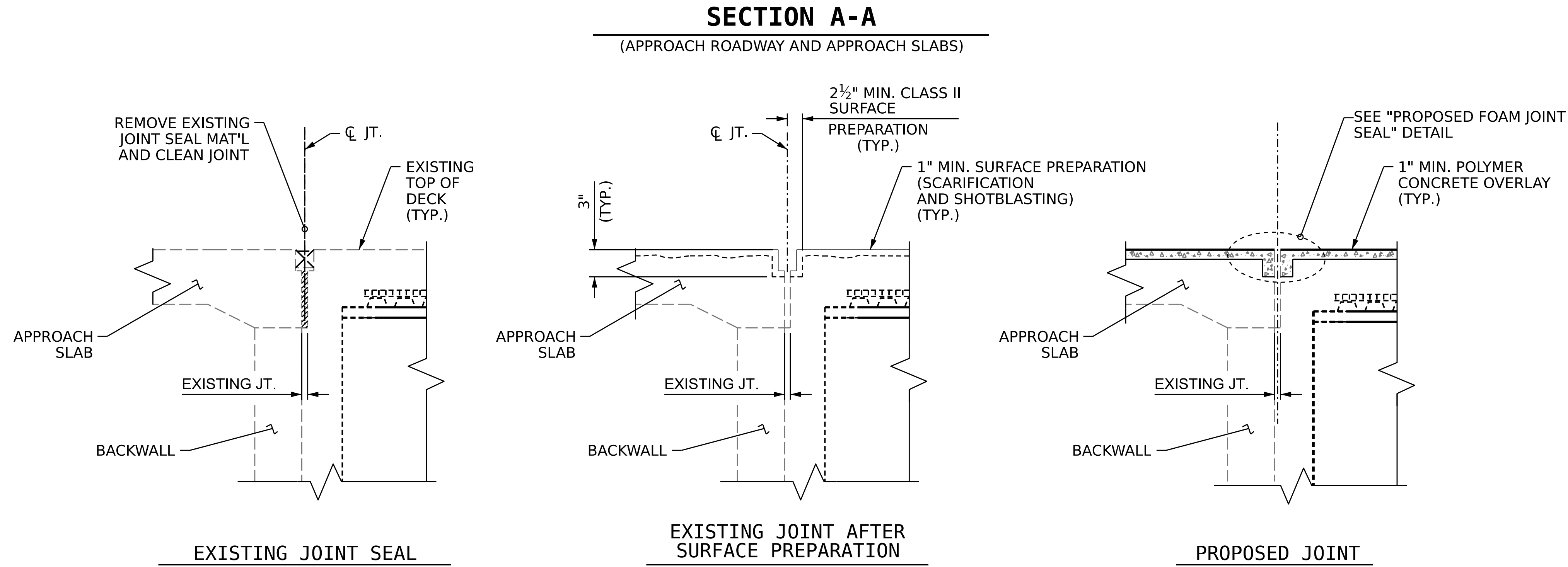
FOAM JOINT SEALS FOR PRESERVATION SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS.

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

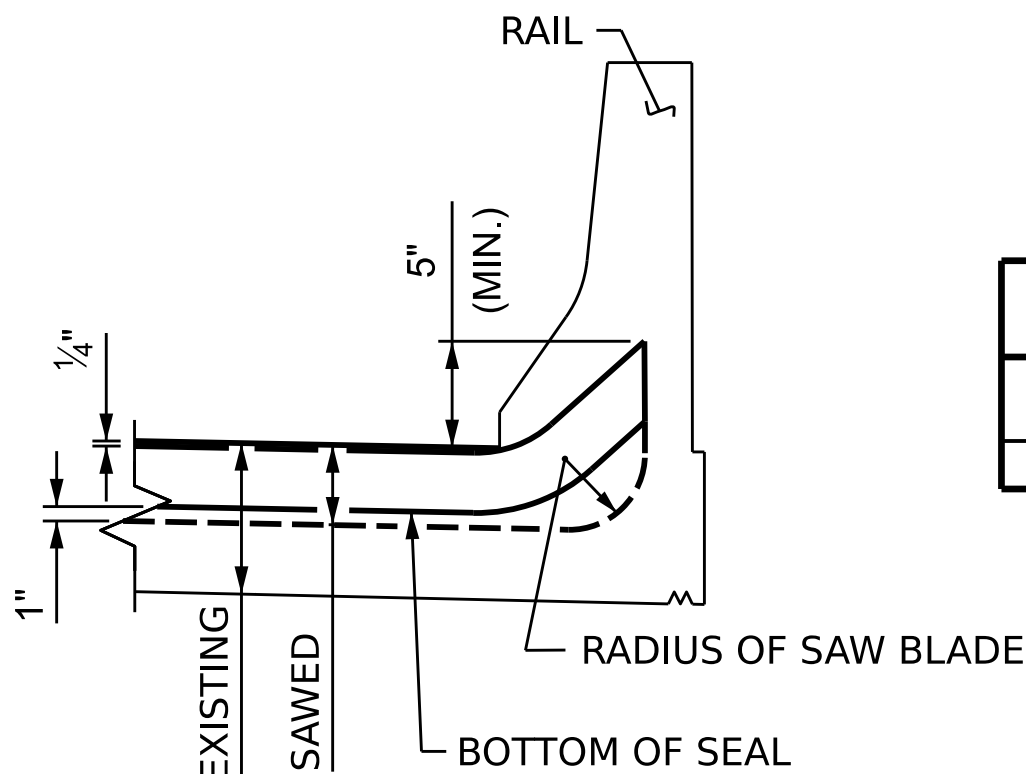
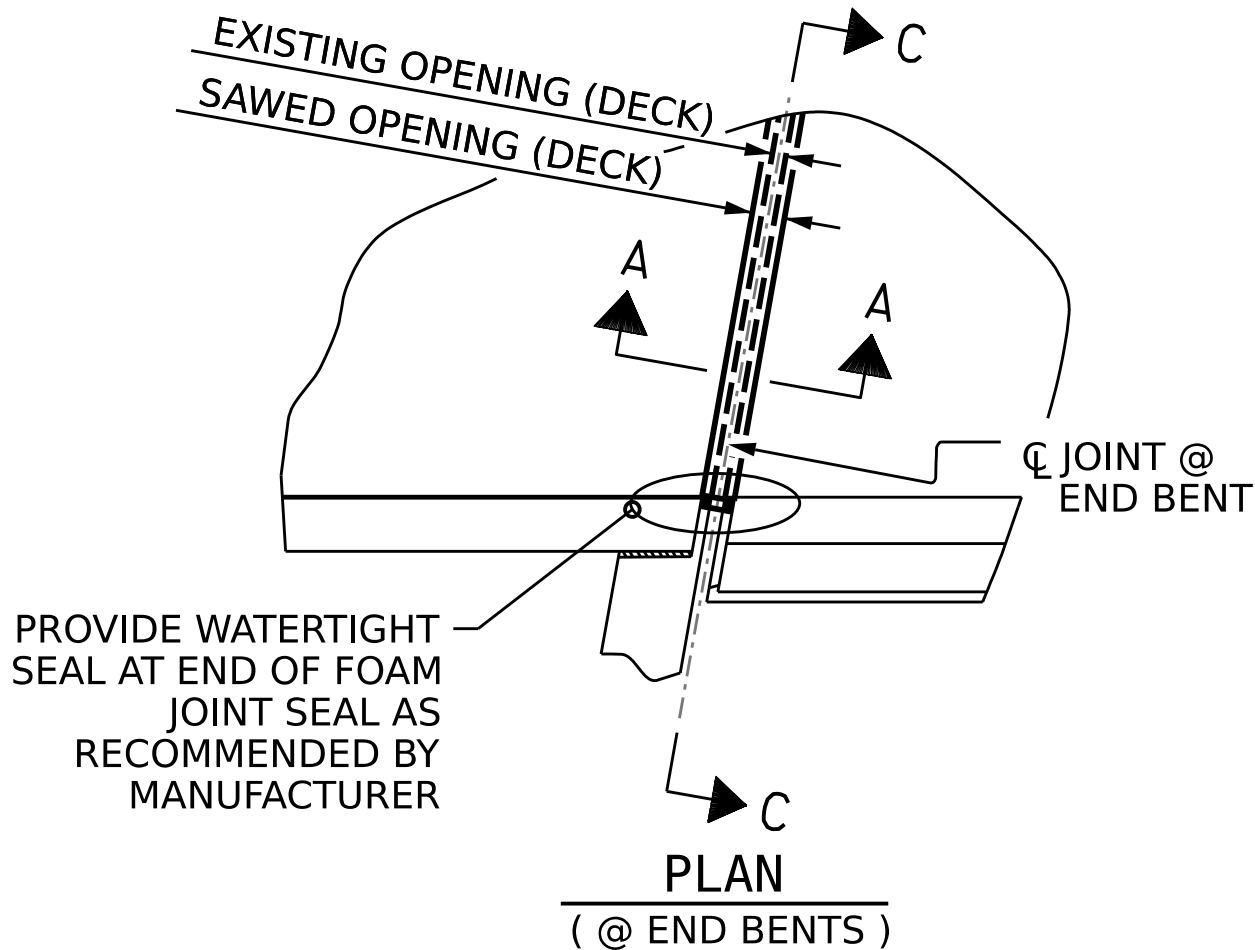
THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINTS IN LIEU OF SAWING THE JOINT.

THE INSTALLED FOAM JOINTS SHALL BE WATER TIGHT.

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.



SECTION B-B (TYP. AT END BENTS)



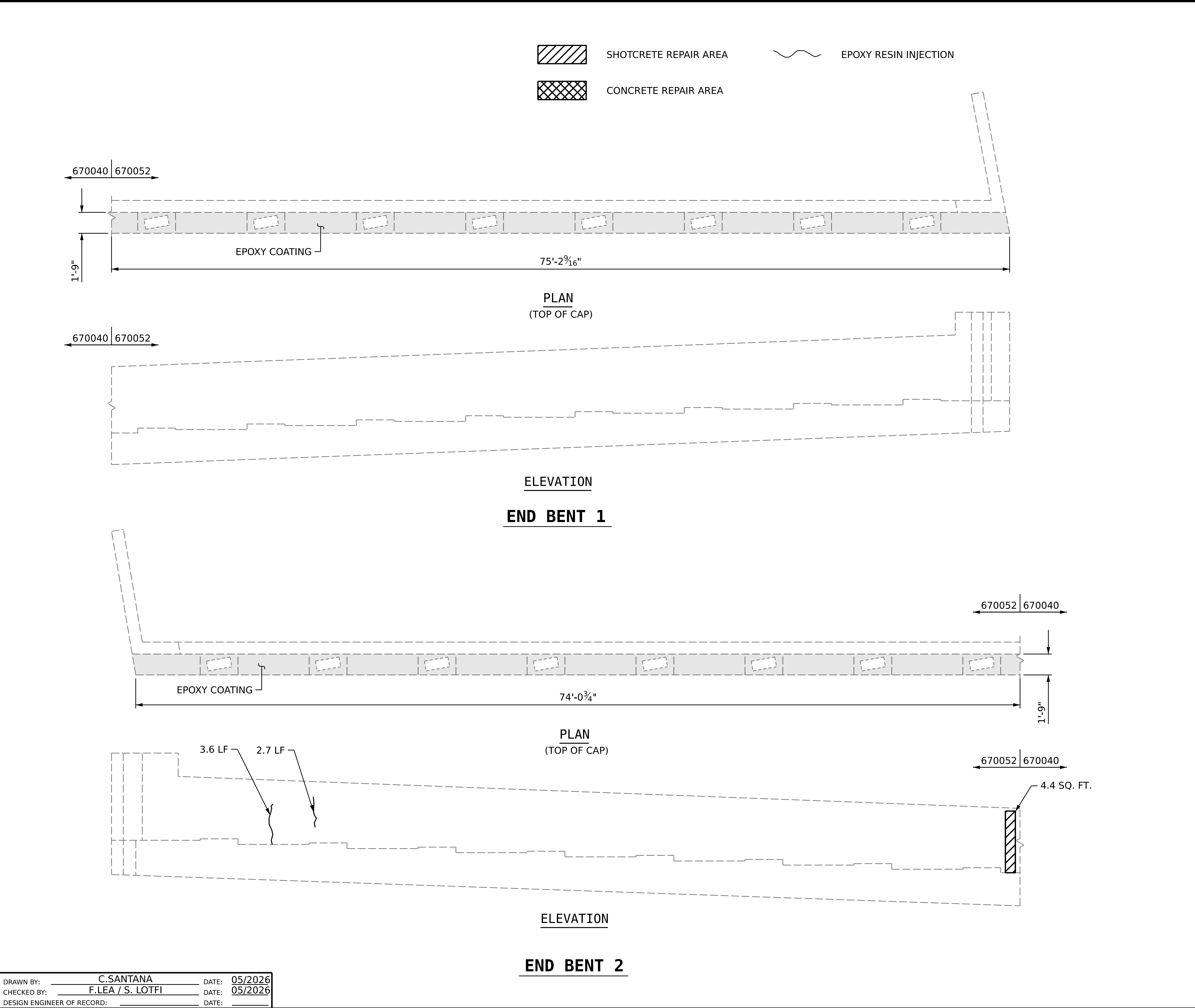
SECTION C-C

JOINT REPAIR QUANTITY TABLE		
	ESTIMATED	ACTUAL
FOAM JOINT SEALS FOR PRESERVATION	144.1 LF	

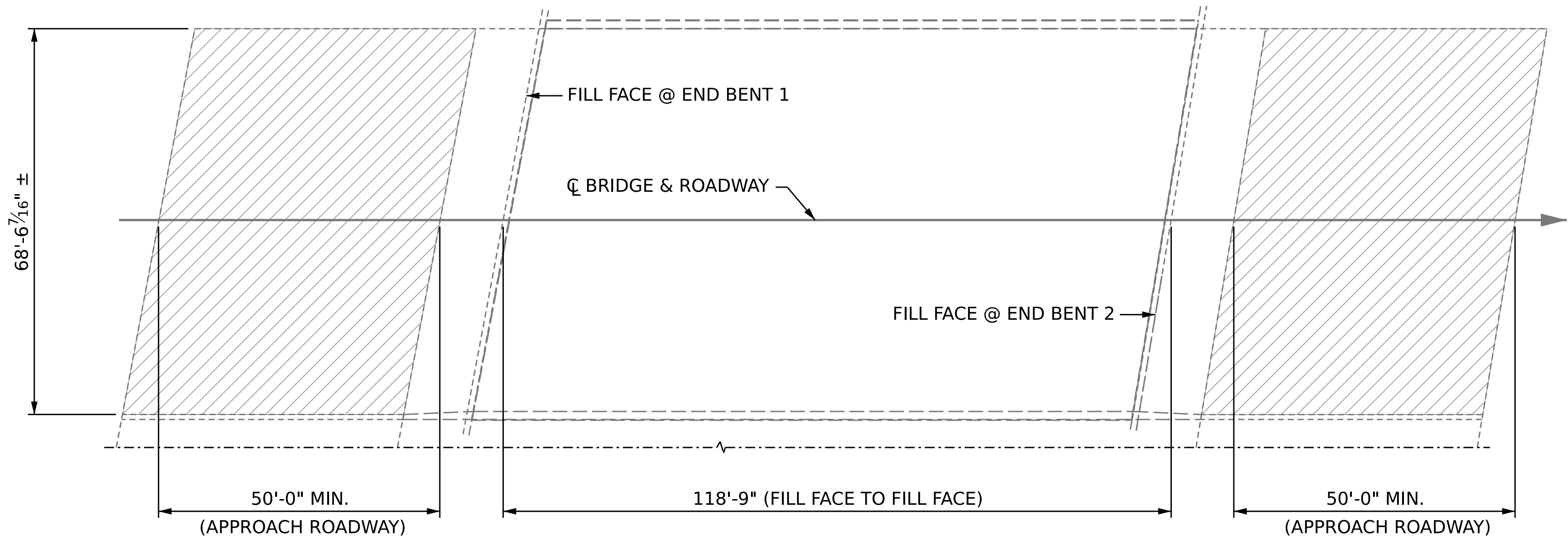
PROJECT NO. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670052**

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
FOAM JOINT SEALS FOR PRESERVATION DETAILS					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED					TOTAL SHEETS 56

DRAWN BY: C.SANTANA DATE: 05/2026
CHECKED BY: S. LOTFI DATE: 05/2026
DESIGN ENGINEER OF RECORD: DATE:

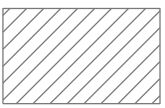


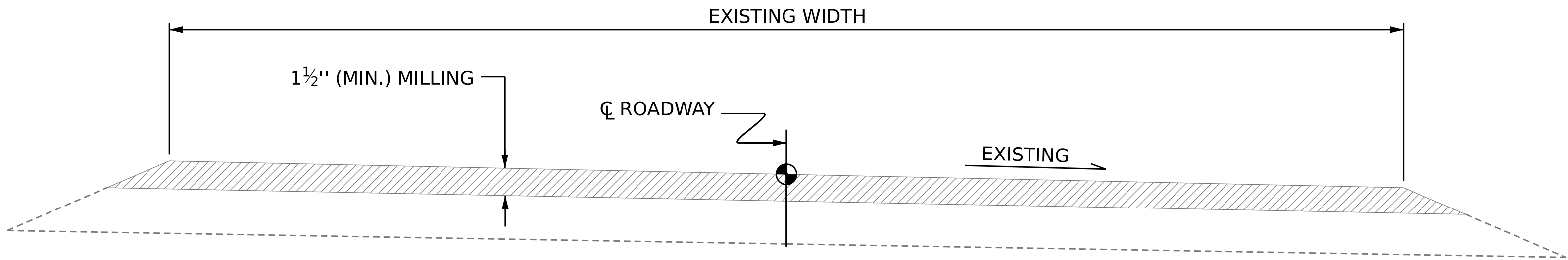
NOTES
INCIDENTAL MILLING - EXISTING APPROACH ASPHALT PAVING TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM 1½" DEPTH OF NEW ASPHALT PAVING. NEW ASPHALT PAVEMENT SHALL BE OF THICKNESS NECESSARY TO PROVIDE A SMOOTH TRANSITION BETWEEN THE ROADWAY AND THE APPROACH SLAB. THE NEW ASPHALT PAVEMNET THICKNESS MAY EXCEED 1½" DUE TO SETTLEMENT OF THE EXISTING APPROACH.



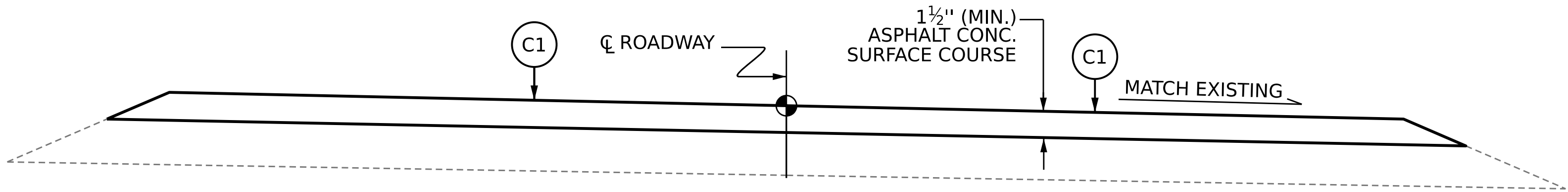
PLAN

C1	PROPOSED VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 1½" IN DEPTH OF GREATER THAN 2" DEPTH.
----	--

 INCIDENTAL MILLING



TYPICAL ROADWAY MILLING SECTION

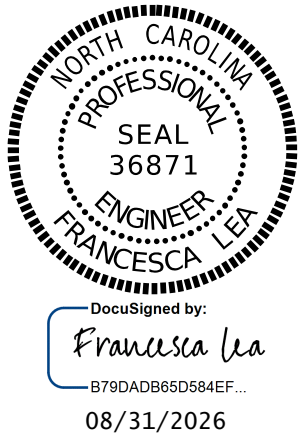


TYPICAL PROPOSED ROADWAY SECTION

SUMMARY OF QUANTITIES

	ESTIMATE	ACTUAL
INCIDENTAL MILLING	761.6 SY.	
ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D	70.0 TONS	
POLYMER MODIFIED ASPHALT BINDER FOR PLANT MIX	5.0 TONS	

PROJECT NO. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670052**



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**INCIDENTAL MILLING
& TYPICAL ROADWAY
SECTIONS**

DRAWN BY: **S.A. HERNANDEZ** DATE: **07/2026**
CHECKED BY: **F.LEA** DATE: **07/2026**
DESIGN ENGINEER OF RECORD: DATE:

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			56
2			4			

NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 05/09/2025.

BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS AND/OR ROUTINE INSPECTION REPORT.

SCOPE OF WORK

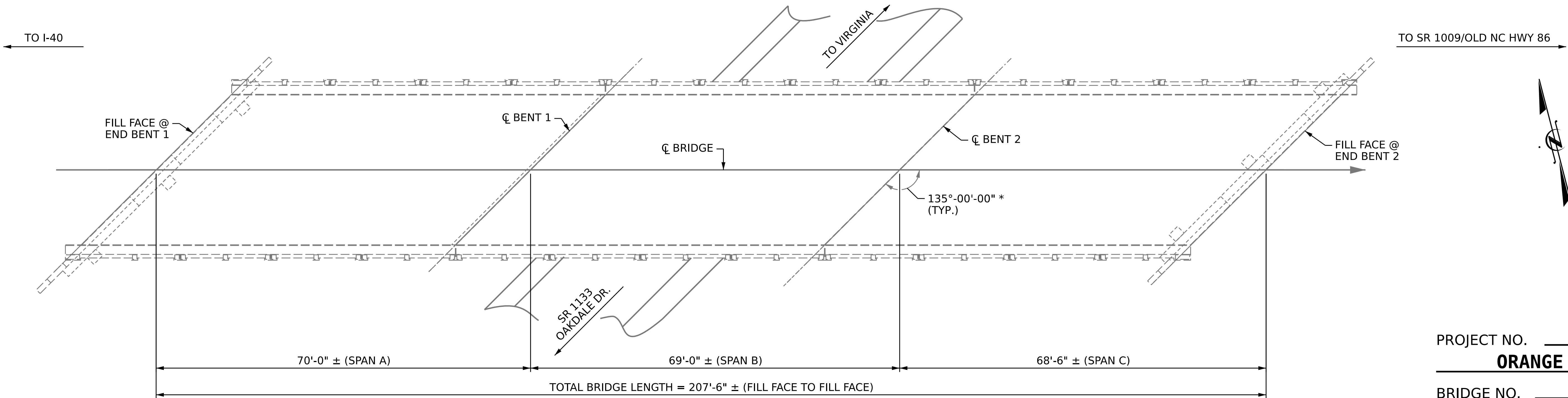
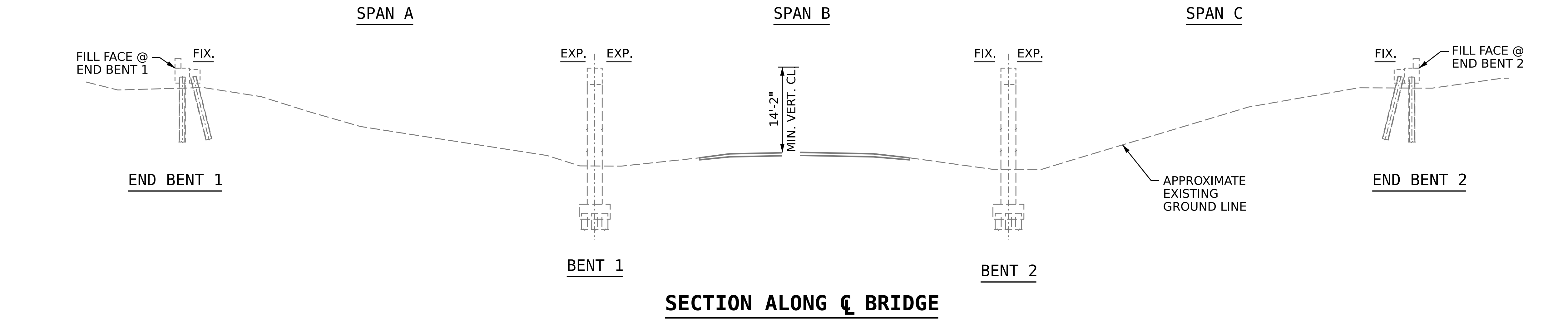
PARTIALLY REMOVE TOP OF BRIDGE DECK CONCRETE BY SHOTBLASTING METHODS.

APPLY CONCRETE DECK CRACK SEALER TO PREPARED TOP OF BRIDGE DECK.

REMOVE EXISTING JOINT MATERIAL AND INSTALL FOAM JOINTS.

REMOVE UNSOUND CONCRETE AND PROPERLY PREPARE EXISTING END BENT AND BENT AREAS TO PERFORM EPOXY RESIN INJECTIONS OF CONCRETE CRACKS, AND SHOTCRETE AND CONCRETE REPAIRS.

REMOVE DEBRIS FROM TOP OF EXISTING END BENT AND BENT CAPS AND APPLY EPOXY COATING.



PROJECT NO. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670081**

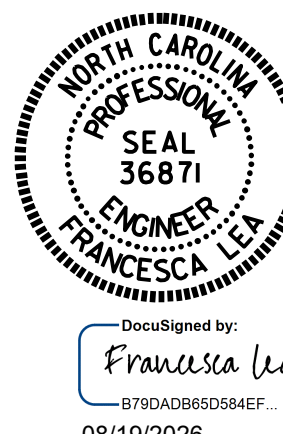
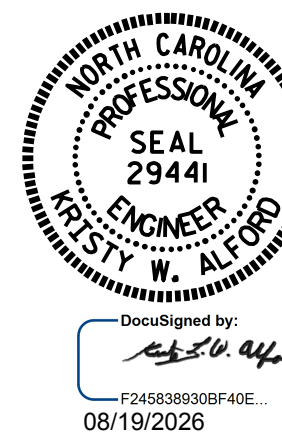
PLAN

* APPROXIMATE CHORD TO BENT ANGLE, ACTUAL ANGLES VARY DUE TO CURVATURE OF ROADWAY.

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

RESIDENT ENGINEER

DATE



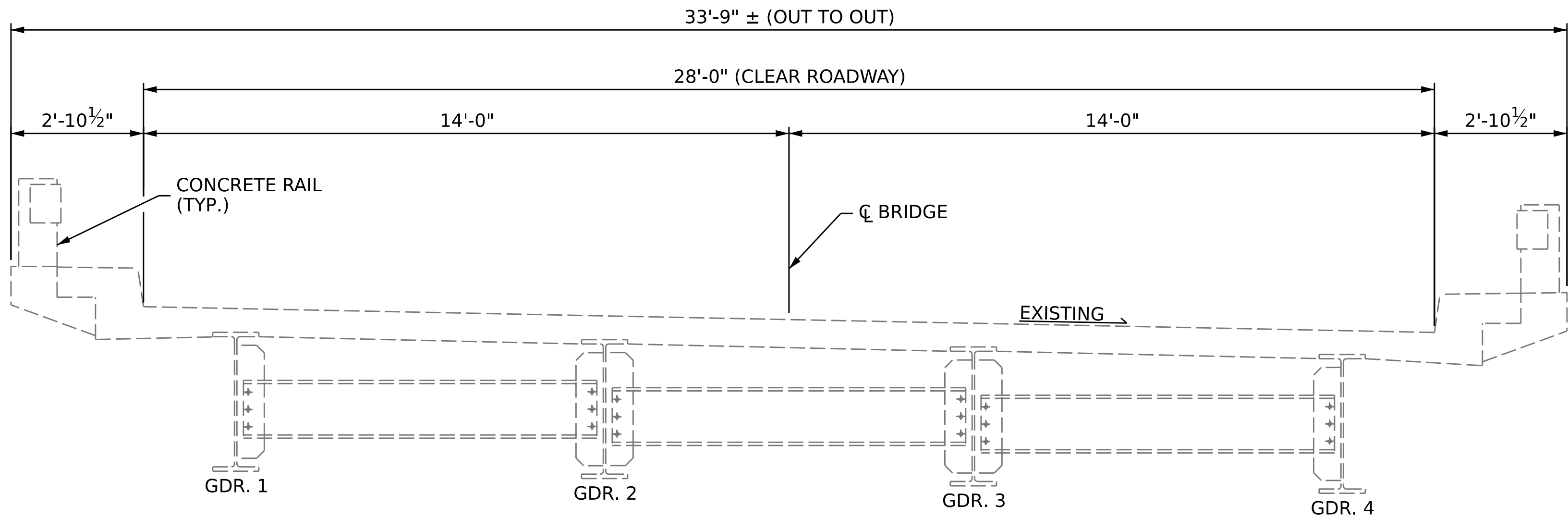
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR BRIDGE OVER SR 1006
ON I 85 NBL BETWEEN
I 40 AND SR 1009
(OLD NC HWY 86)

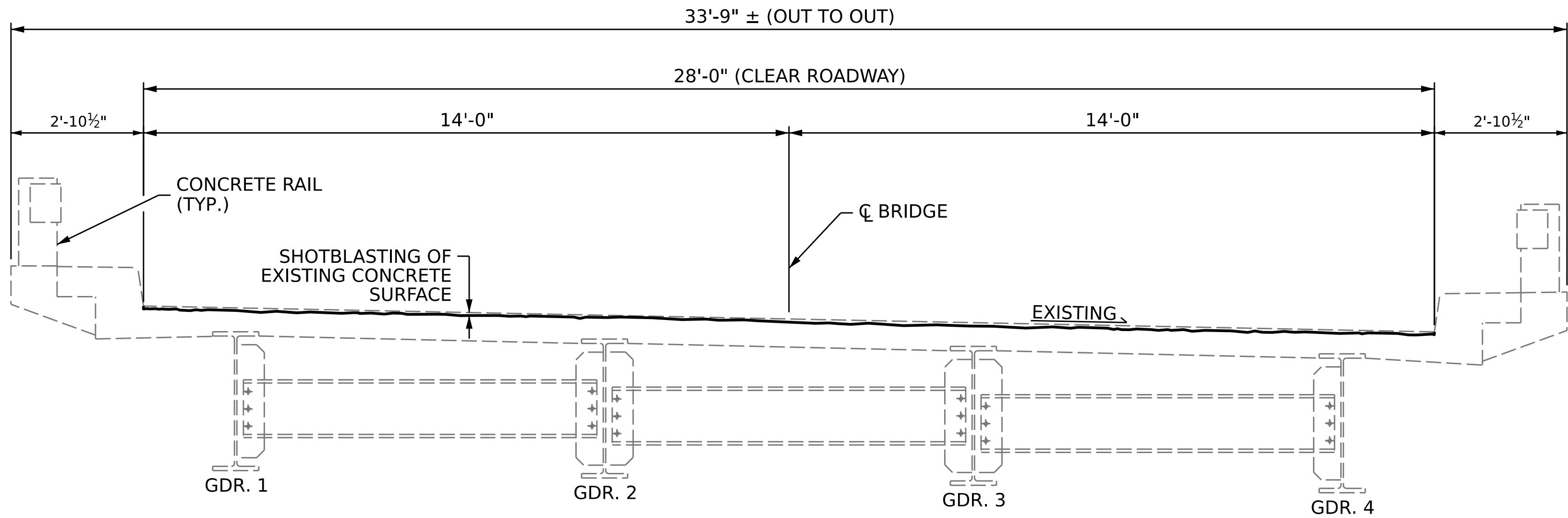
REVISIONS						SHEET NO. S4-01 TOTAL SHEETS 56
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			
2			4			

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

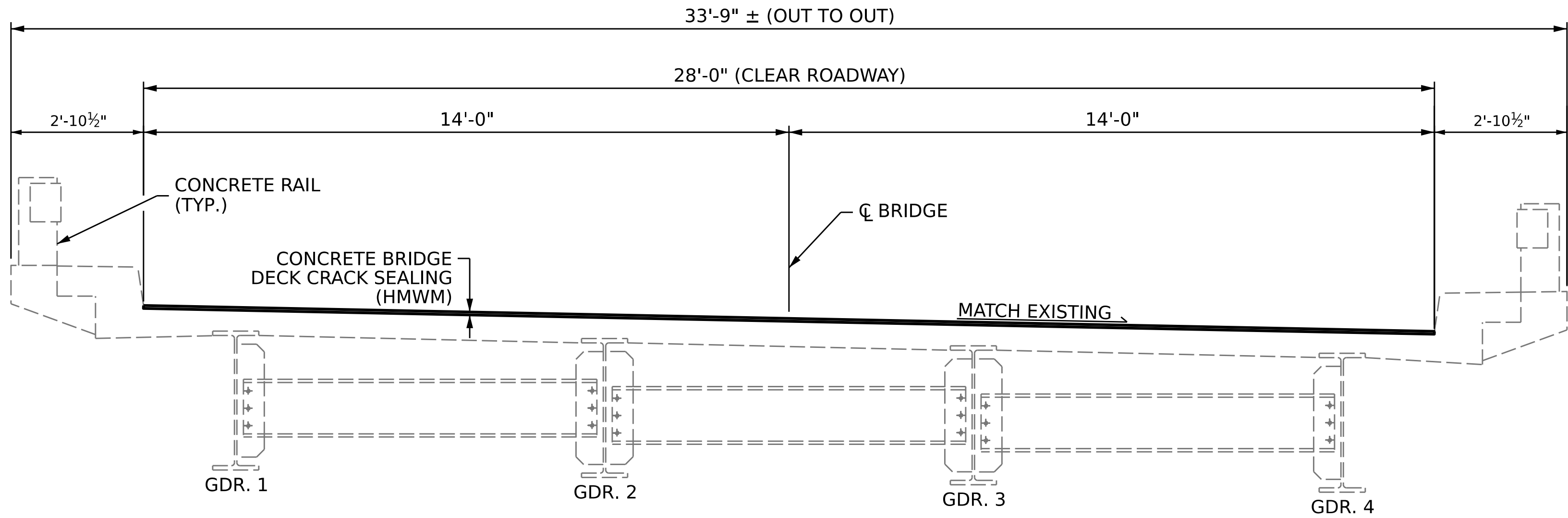
DRAWN BY: **S.A.HERNANDEZ** DATE: **10/2025**
CHECKED BY: **F. LEA** DATE: **6/2026**
DESIGN ENGINEER OF RECORD: DATE:



TYPICAL SECTION
(EXISTING)

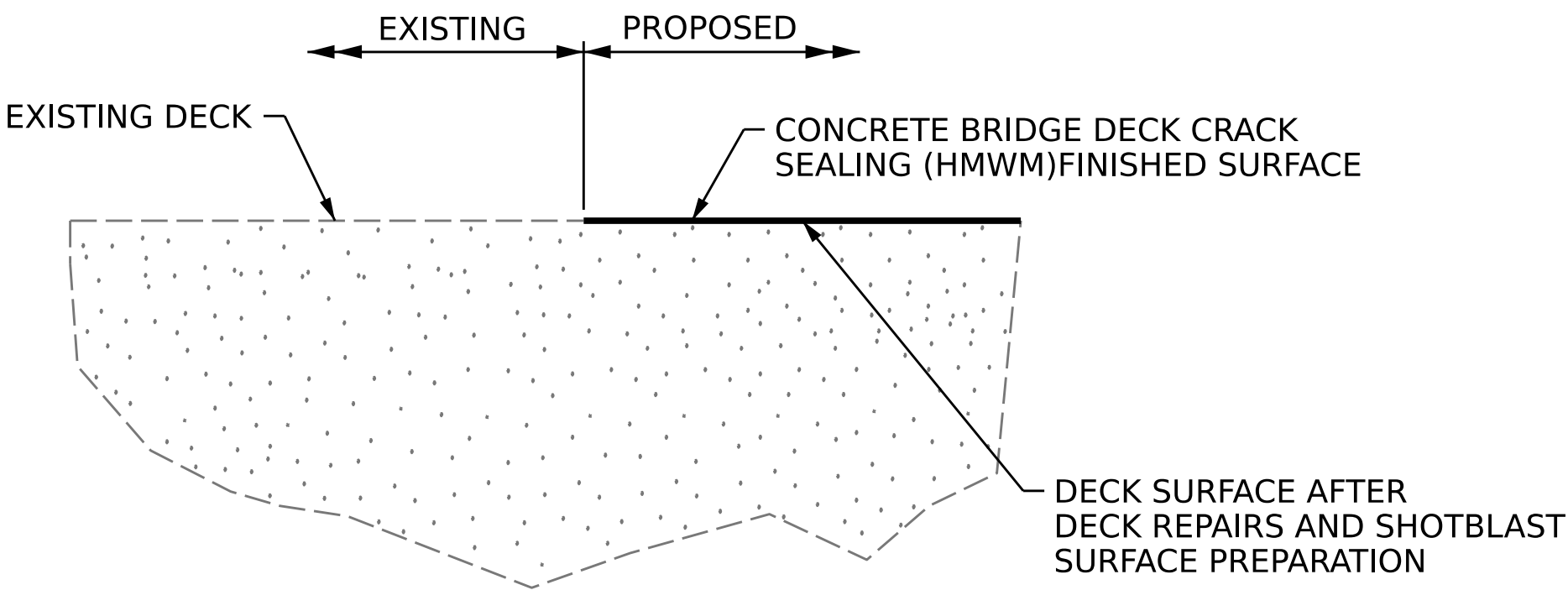


TYPICAL SECTION
(SHOTBLASTING AND DECK PREPARATION)



TYPICAL SECTION
(PROPOSED)

NOTES
FOR CONCRETE BRIDGE DECK CRACK SEALING,
SEE SPECIAL PROVISIONS.



**DETAIL FOR CONCRETE BRIDGE
DECK CRACK SEALING (HMWM)**

PROJECT NO. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670081**



DocuSigned by:
Francesca Lea
8710AD8B65C84EF...
08/19/2026

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**TYPICAL SECTION
AND CONCRETE BRIDGE DECK
CRACK SEALING (HMWM) DETAIL**

REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	
1			3		S4-02
2			4		TOTAL SHEETS 56

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

DRAWN BY: **S.A.HERNANDEZ** DATE: **10/2025**
CHECKED BY: **F. LEA** DATE: **06/2026**
DESIGN ENGINEER OF RECORD: DATE:

NOTES

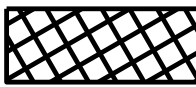
REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND UPDATE THE ACTUAL QUANTITIES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

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

FOR SHOTBLASTING BRIDGE DECK AND CONCRETE BRIDGE DECK CRACK SEALING (HMWM), SEE CONCRETE BRIDGE DECK CRACK SEALING SPECIAL PROVISIONS.

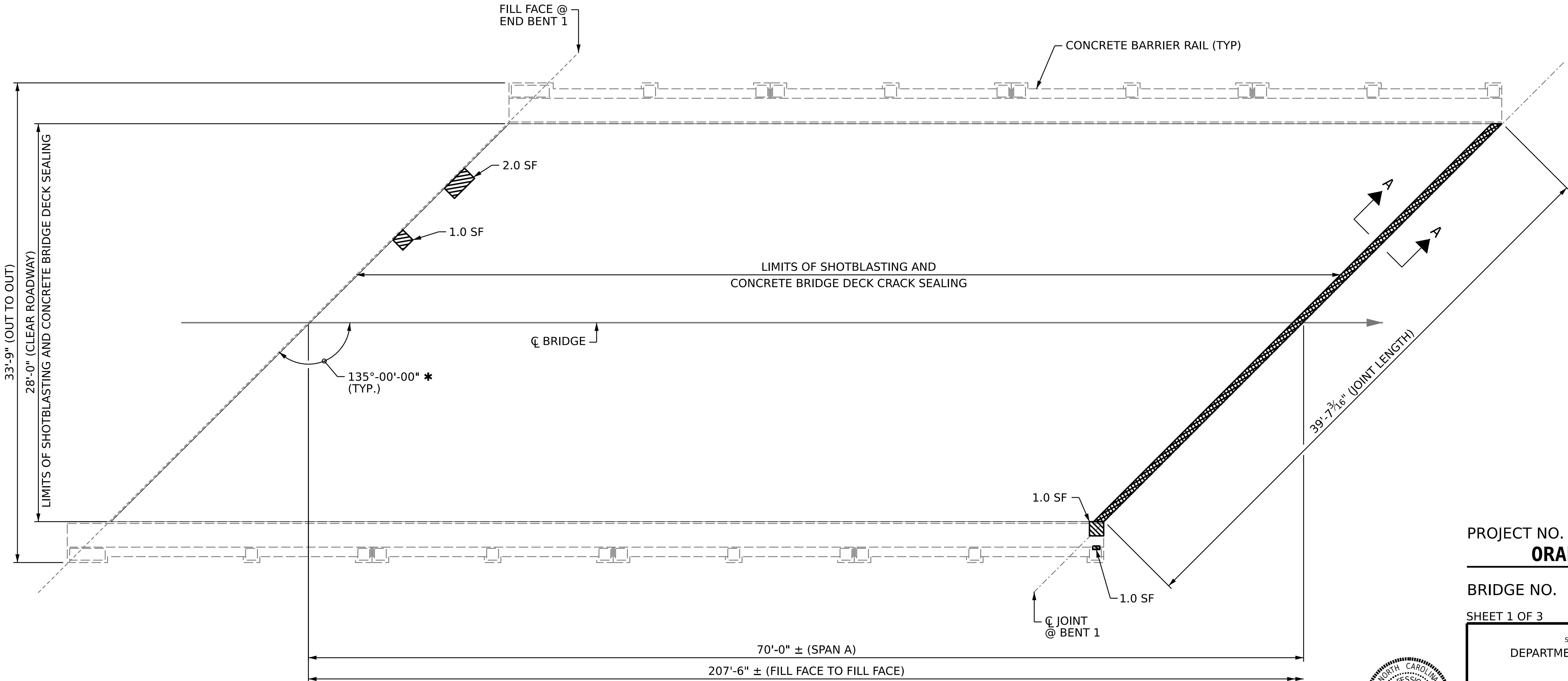
FOR SECTION A-A, SEE "JOINT DETAILS" SHEET.

FOR CONCRETE DECK REPAIR FOR DECK CRACK SEALING TREATMENT, SEE SPECIAL PROVISION.

-  CONCRETE DECK REPAIR FOR DECK CRACK SEALING TREATMENT
-  SHOTCRETE REPAIR AREA
-  SHOTBLASTING AND CONCRETE BRIDGE DECK SEALING
-  EPOXY RESIN INJECTION (ERI)
-  ELASTOMERIC CONCRETE

AS-BUILT REPAIR QUANTITY TABLE

DECK SURFACE REPAIRS - SPAN A				
	ESTIMATE		ACTUAL	
SHOTBLASTING BRIDGE DECK	215.4 SQ. YDS.			
CONCRETE DECK REPAIR FOR DECK CRACK SEALING	3.0 SQ. FT.			
CONCRETE BRIDGE DECK CRACK SEALING (HMWM)	215.4 SQ. YDS.			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA (SQ.FT.)	VOLUME (CU.FT.)	AREA (SQ.FT.)	VOLUME (CU.FT.)
CONCRETE BARRIER RAIL	2.0	1.0		
CONCRETE REPAIRS	AREA (SQ.FT.)	VOLUME (CU.FT.)	AREA (SQ.FT.)	VOLUME (CU.FT.)
CONCRETE BARRIER RAIL	0.0	0.0		



SPAN A

ALL DIMENSIONS SHOWN ARE FROM BEST AVAILABLE SOURCES, CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD.
* APPROXIMATE CHORD TO BENT ANGLE, ACTUAL ANGLES WILL VARY DUE TO CURVATURE OF ROADWAY.

PROJECT NO. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670081**

SHEET 1 OF 3



DocuSigned by:
Francesca Lea
5710A0B805084EF...
08/19/2026

DECK SURFACE REPAIRS

SPAN A

DRAWN BY: **S.A.HERNANDEZ** DATE: **10/2025**
CHECKED BY: **F. LEA** DATE: **06/2026**
DESIGN ENGINEER OF RECORD: DATE:

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S4-03 TOTAL SHEETS 56
2			4			

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 LOCATION AND DESCRIPTION OF THE REPAIRS AND UPDATE THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

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

FOR SHOTBLASTING BRIDGE DECK AND CONCRETE BRIDGE DECK CRACK SEALING (HMWM), SEE CONCRETE BRIDGE DECK CRACK SEALING SPECIAL PROVISIONS.

FOR SECTION A-A, SEE "JOINT DETAILS" SHEET.

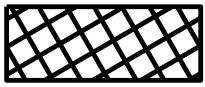
FOR CONCRETE DECK REPAIR FOR DECK CRACK SEALING TREATMENT, SEE SPECIAL PROVISIONS.

- 

CONCRETE DECK REPAIR FOR
DECK CRACK SEALING TREATMENT
- 

SHOTCRETE REPAIR AREA
- 

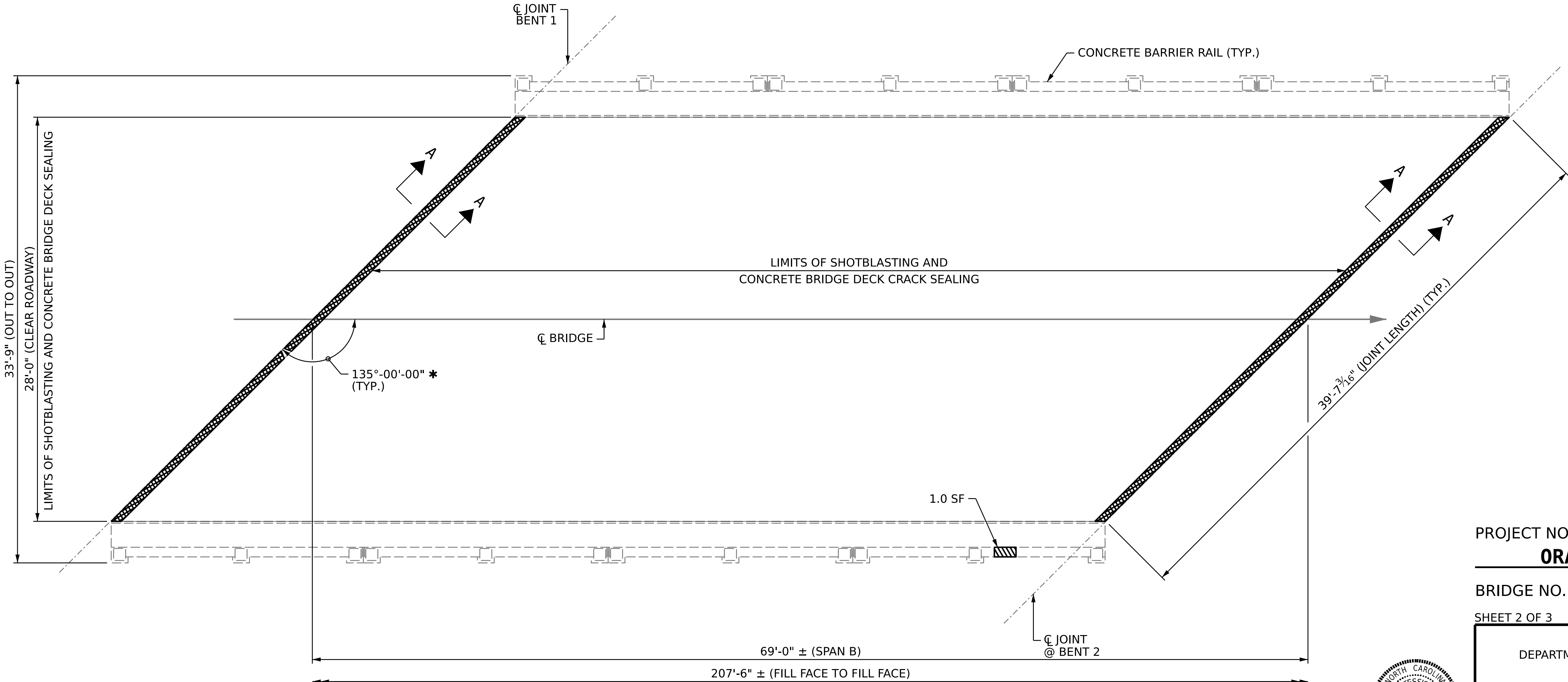
SHOTBLASTING AND CONCRETE
BRIDGE DECK SEALING
- 

EPOXY RESIN INJECTION (ERI)
- 

ELASTOMERIC CONCRETE

AS-BUILT REPAIR QUANTITY TABLE

DECK SURFACE REPAIR - SPAN B				
		ESTIMATE		ACTUAL
SHOTBLASTING BRIDGE DECK		210.0 SQ. YDS.		
CONCRETE DECK REPAIR FOR DECK CRACK SEALING		0.0 SQ. FT.		
CONCRETE BRIDGE DECK CRACK SEALING (HMWM)		210.0 SQ. YDS.		
		ESTIMATE		ACTUAL
SHOTCRETE REPAIRS		AREA (SQ.FT.)	VOLUME (CU.FT.)	AREA (SQ.FT.)
CONCRETE BARRIER RAIL		1.0	0.5	
CONCRETE REPAIRS		AREA (SQ.FT.)	VOLUME (CU.FT.)	AREA (SQ.FT.)
CONCRETE BARRIER RAIL		0.0	0.0	



SPAN B

ALL DIMENSIONS SHOWN ARE FROM BEST AVAILABLE SOURCES, CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD.
* APPROXIMATE CHORD TO BENT ANGLE, ACTUAL ANGLES WILL VARY DUE TO CURVATURE OF ROADWAY.

PROJECT NO. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670081**

SHEET 2 OF 3



DocuSigned by:
Francesca Lea
5710A0B85C584EF...
08/19/2026

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH				
DECK SURFACE REPAIRS SPAN B				
REVISIONS				
NO.	BY:	DATE:	NO.	BY:
1			3	
2			4	
				SHEET NO. S4-04 TOTAL SHEETS 56

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

DRAWN BY: **S.A.HERNANDEZ** DATE: **10/2025**
CHECKED BY: **F. LEA** DATE: **06/2026**
DESIGN ENGINEER OF RECORD: _____ DATE: _____

NOTES

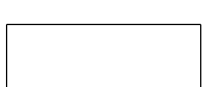
REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND UPDATE THE ACTUAL QUANTITIES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

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

FOR SHOTBLASTING BRIDGE DECK AND CONCRETE BRIDGE DECK CRACK SEALING (HMWM), SEE CONCRETE BRIDGE DECK CRACK SEALING SPECIAL PROVISIONS.

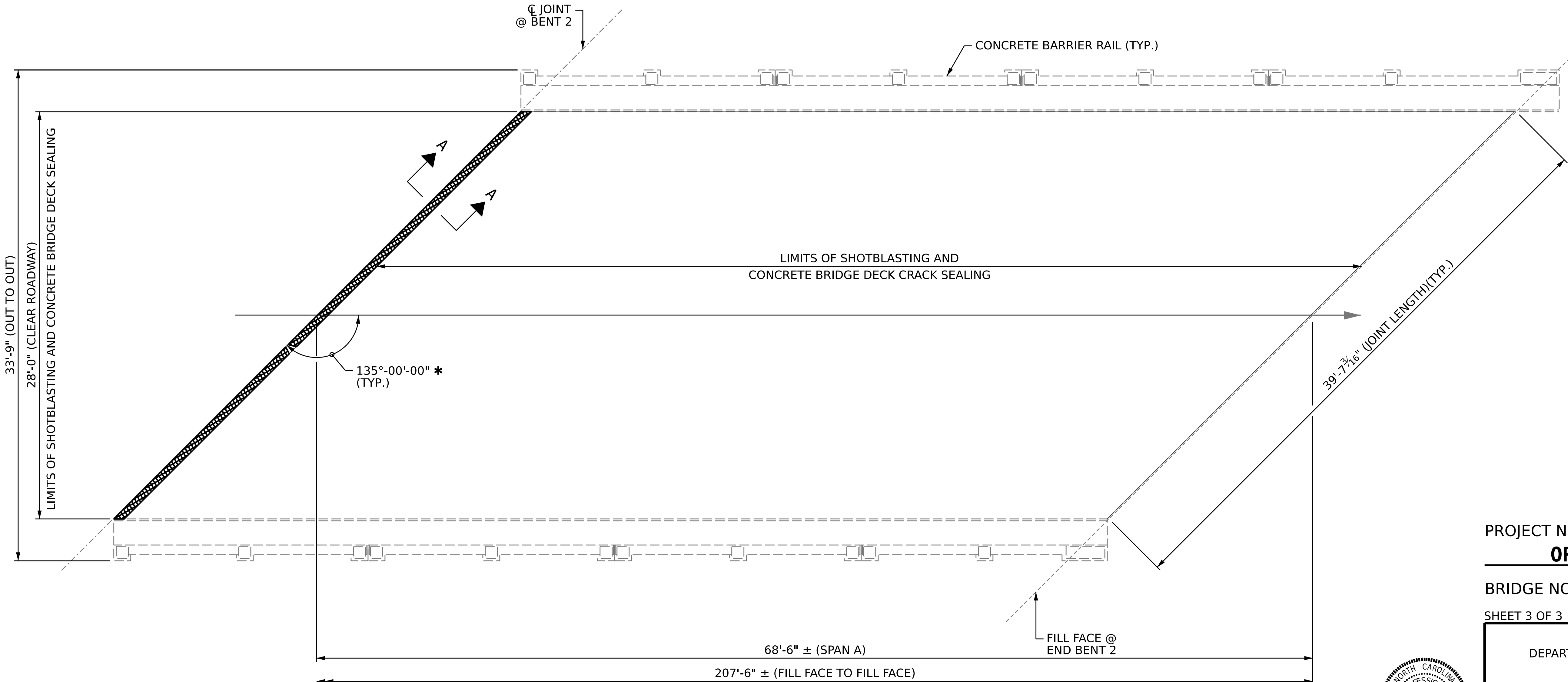
FOR SECTION A-A, SEE "JOINT DETAILS" SHEET.

FOR CONCRETE DECK REPAIR FOR DECK CRACK SEALING TREATMENT, SEE SPECIAL PROVISIONS.

-  CONCRETE DECK REPAIR FOR DECK CRACK SEALING TREATMENT
-  SHOTCRETE REPAIR AREA
-  SHOTBLASTING AND CONCRETE BRIDGE DECK SEALING
-  EPOXY RESIN INJECTION (ERI)
-  ELASTOMERIC CONCRETE

AS-BUILT REPAIR QUANTITY TABLE

DECK SURFACE REPAIR - SPAN C				
		ESTIMATE		ACTUAL
SHOTBLASTING BRIDGE DECK		210.7 SQ. YDS.		
CONCRETE DECK REPAIR FOR DECK CRACK SEALING		0.0 SQ. FT.		
CONCRETE BRIDGE DECK CRACK SEALING (HMWM)		210.7 SQ. YDS.		
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA (SQ.FT.)	VOLUME (CU.FT.)	AREA (SQ.FT.)	VOLUME (CU.FT.)
CONCRETE BARRIER RAIL	0.0	0.0		
CONCRETE REPAIRS	AREA (SQ.FT.)	VOLUME (CU.FT.)	AREA (SQ.FT.)	VOLUME (CU.FT.)
CONCRETE BARRIER RAIL	0.0	0.0		



SPAN C

ALL DIMENSIONS SHOWN ARE FROM BEST AVAILABLE SOURCES, CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD.
* APPROXIMATE CHORD TO BENT ANGLE, ACTUAL ANGLES WILL VARY DUE TO CURVATURE OF ROADWAY.

PROJECT NO. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670081**

SHEET 3 OF 3



DocuSigned by:
Francesca Lea
5710A0B850584EF...
08/19/2026

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
DECK SURFACE REPAIRS					
SPAN C					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED					S4-05 TOTAL SHEETS 56

DRAWN BY: **S.A.HERNANDEZ** DATE: **10/2025**
CHECKED BY: **F. LEA** DATE: **06/2026**
DESIGN ENGINEER OF RECORD: _____ DATE: _____

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN 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 LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

FOR OVERHANG AND DIAPHRAGM REPAIRS, SEE "OVERHANG AND DIAPHRAGM REPAIR DETAILS" SHEET.

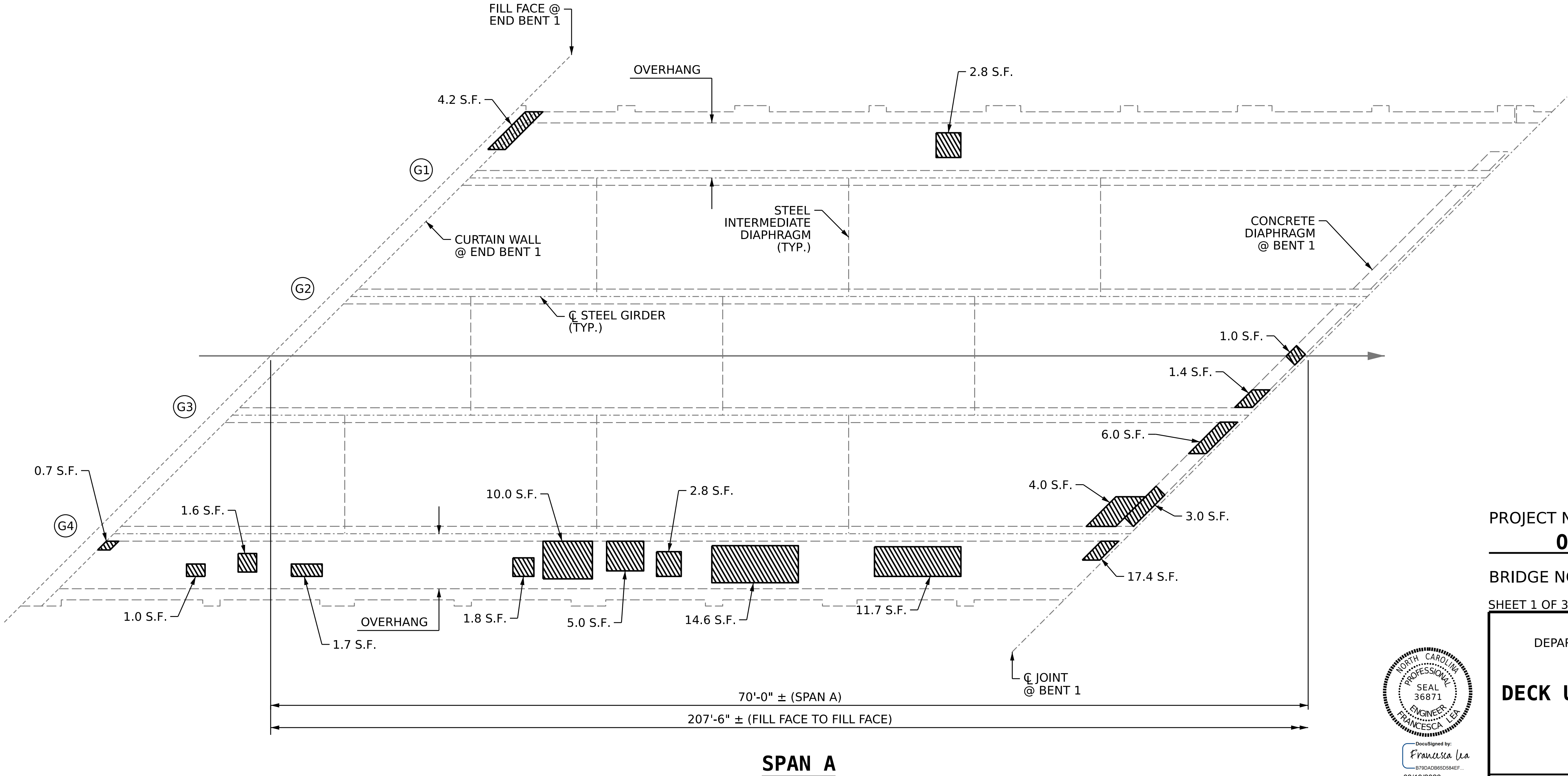
- SHOTCRETE REPAIR AREA
- CONCRETE REPAIR AREA
- EPOXY RESIN INJECTION (ERI)
- G#

GIRDER NUMBER

AS-BUILT REPAIR QUANTITY TABLE

DECK UNDERSIDE REPAIRS SPAN A	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	4.0	1.3		
CONCRETE DIAPHRAGM	28.8	9.6		
OVERHANG	57.9	19.3		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	0	0		
CONCRETE DIAPHRAGM	0	0		
OVERHANG	0	0		

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



PROJECT NO. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670081**

SHEET 1 OF 3



DocuSigned by:
Francesca Lea
5710A0B860584EF...
08/19/2026

DECK UNDERSIDE REPAIRS
SPAN A

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S4-06 TOTAL SHEETS 56
2			4			

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

DRAWN BY: **S.A.HERNANDEZ** DATE: **10/2025**
CHECKED BY: **S. LOTFI** DATE: **07/2026**
DESIGN ENGINEER OF RECORD: DATE:

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN 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 LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

FOR OVERHANG AND DIAPHRAGM REPAIRS, SEE "OVERHANG AND DIAPHRAGM REPAIR DETAILS" SHEET.

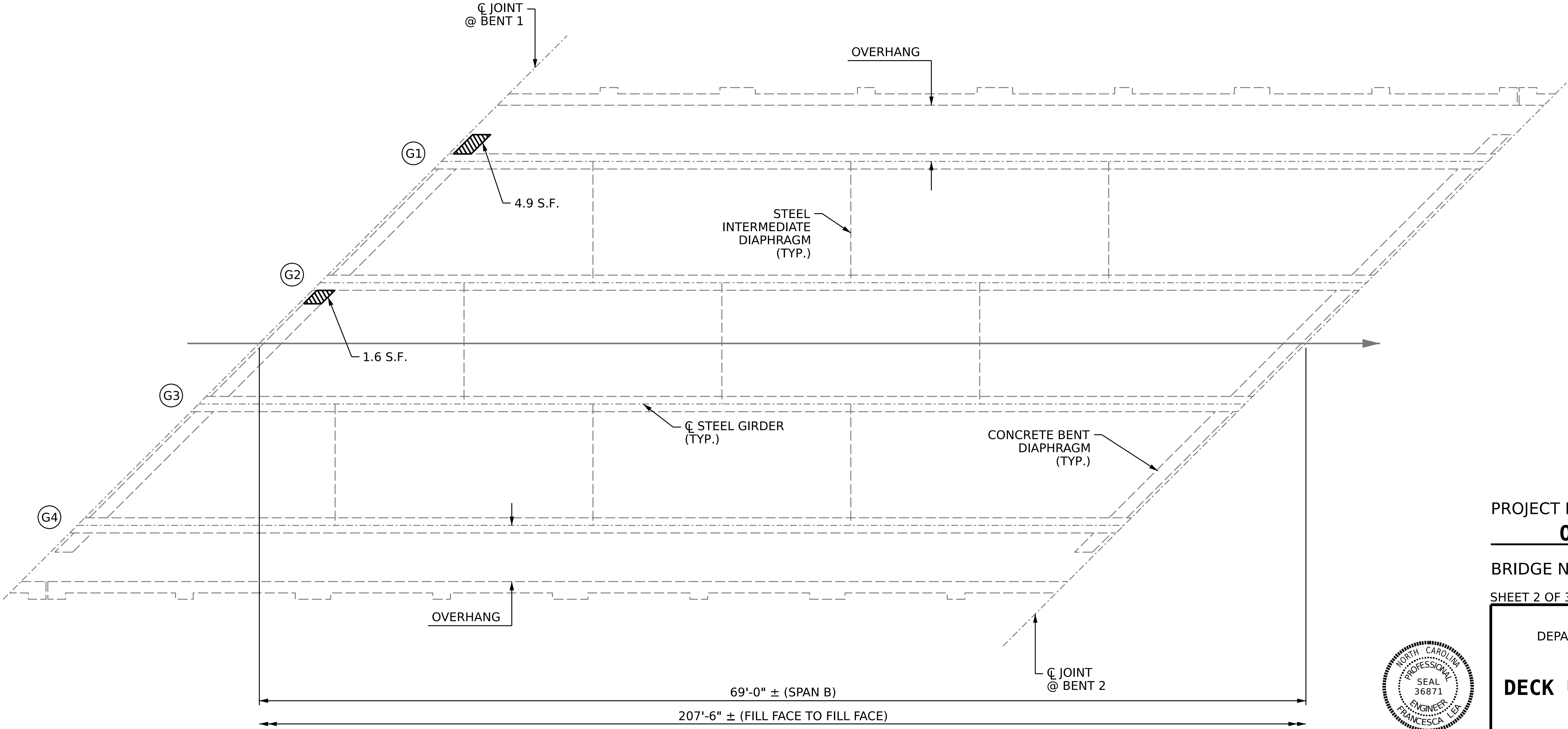
- SHOTCRETE REPAIR AREA
- CONCRETE REPAIR AREA
- EPOXY RESIN INJECTION (ERI)
- G#

GIRDER NUMBER

AS-BUILT REPAIR QUANTITY TABLE

DECK UNDERSIDE REPAIRS SPAN B	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	0	0		
CONCRETE DIAPHRAGM	6.5	2.2		
OVERHANG	0	0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	0	0		
CONCRETE DIAPHRAGM	0	0		
OVERHANG	0	0		

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



PROJECT NO. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670081**

SHEET 2 OF 3



DocuSigned by:
Francesca Lea
5710AD8B65C584EF...
08/19/2026

DECK UNDERSIDE REPAIRS
SPAN B

DRAWN BY: **S.A.HERNANDEZ** DATE: **10/2025**
CHECKED BY: **S. LOTFI** DATE: **07/2026**
DESIGN ENGINEER OF RECORD: _____ DATE: _____

8/18/2026
S:\DPG1\Division7\I-5958\Bridge #670081\Plans\404_013_I-5958_SMU_DUR_B_S4-07_670081.dgn
flea

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO. TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			54-07 56
2			4			

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN 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 LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

FOR OVERHANG AND DIAPHRAGM REPAIRS, SEE "OVERHANG AND DIAPHRAGM REPAIR DETAILS" SHEET.

- SHOTCRETE REPAIR AREA
- CONCRETE REPAIR AREA
- EPOXY RESIN INJECTION (ERI)
- G#

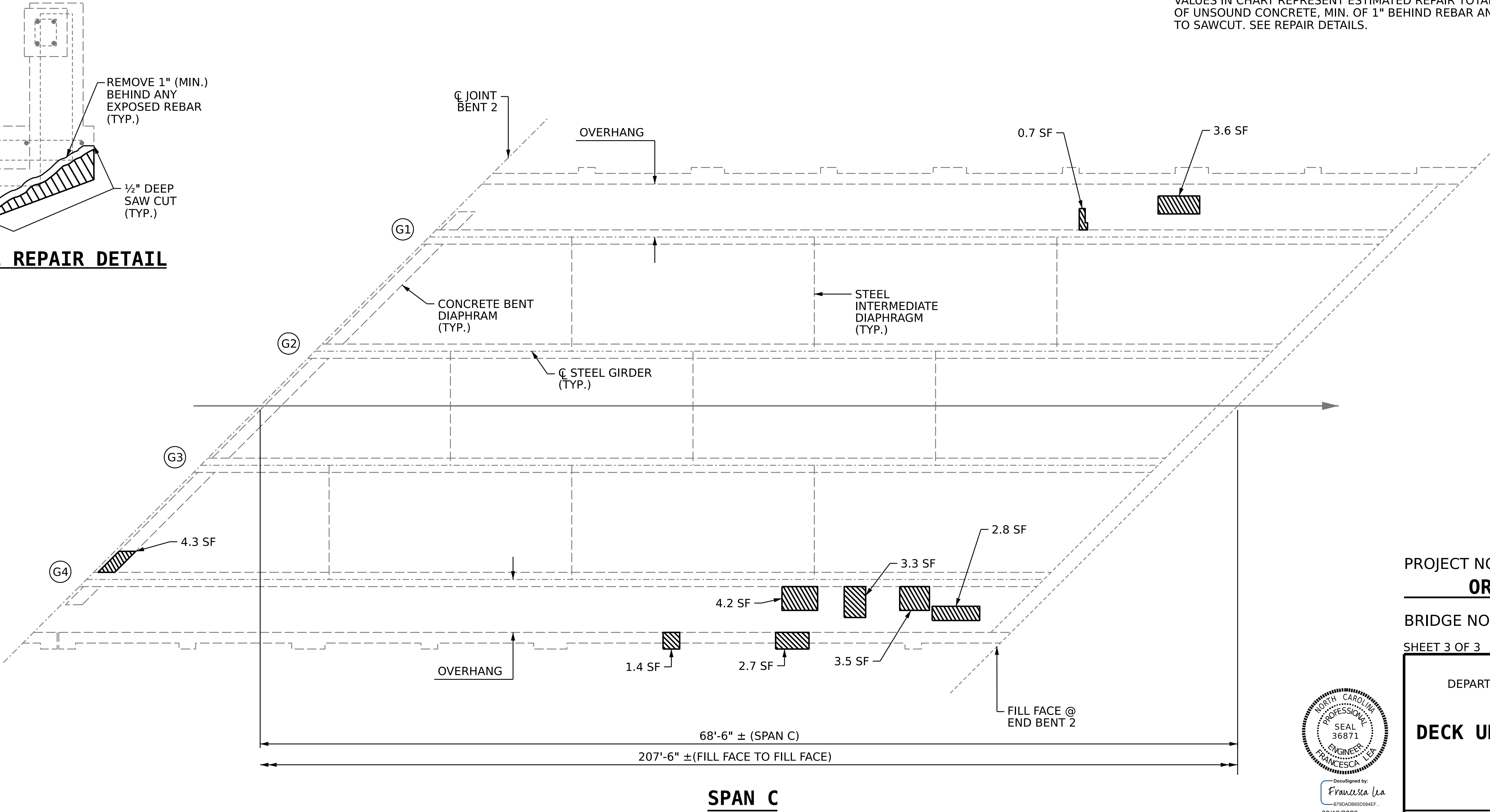
GIRDER NUMBER

AS-BUILT REPAIR QUANTITY TABLE

DECK UNDERSIDE REPAIRS SPAN C	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	0	0		
CONCRETE DIAPHRAGM	4.3	1.4		
OVERHANG	18.1	6.0		
CONCRETE BARRIER RAIL	4.1	1.4		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	0	0		
CONCRETE DIAPHRAGM	0	0		
OVERHANG	0	0		

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

BARRIER RAIL REPAIR DETAIL



PROJECT NO. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670081**

SHEET 3 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK UNDERSIDE REPAIRS
SPAN C

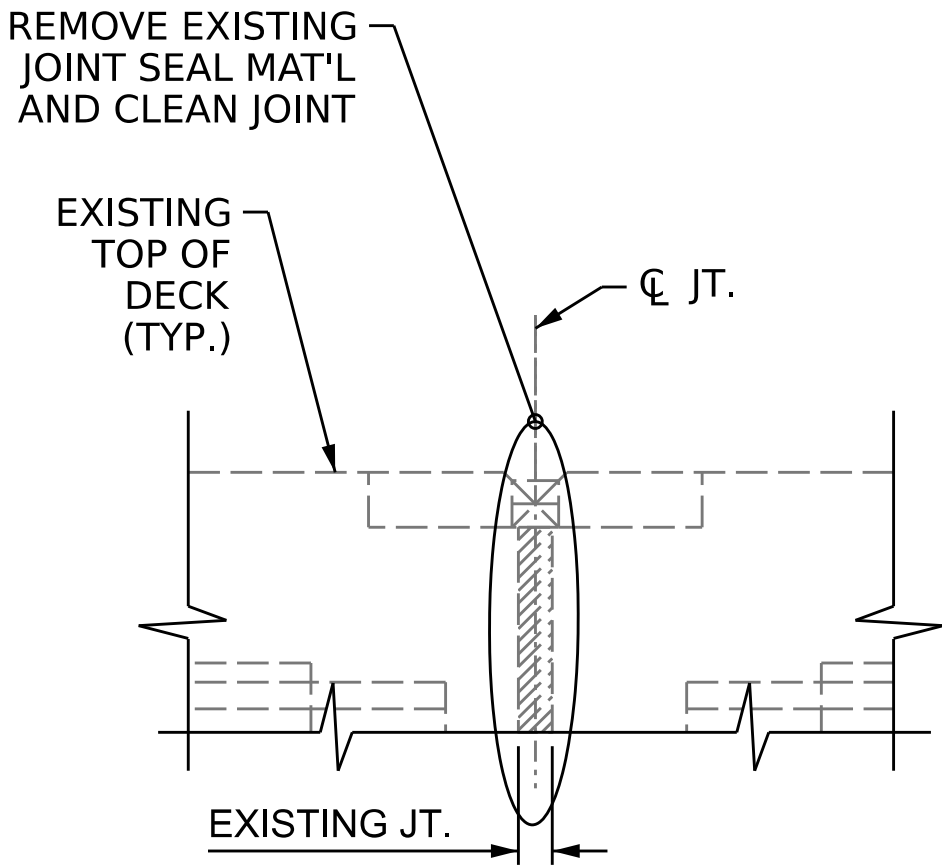
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			56
2			4			



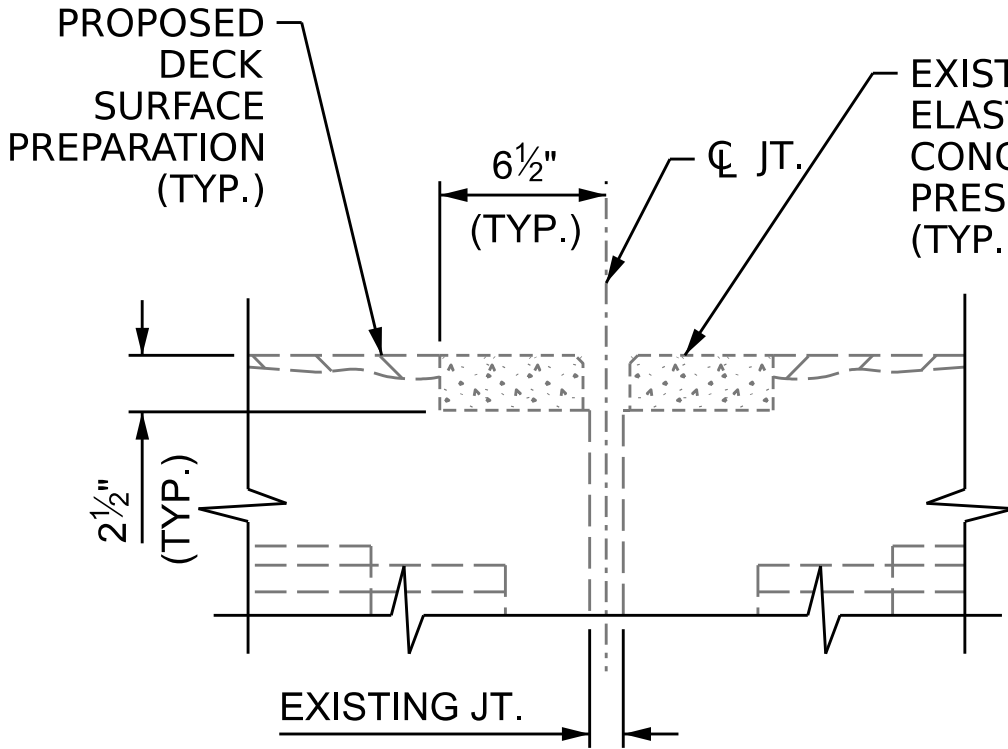
DocuSigned by:
Francesca Lea
5793ADB860584EF...
08/19/2026

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

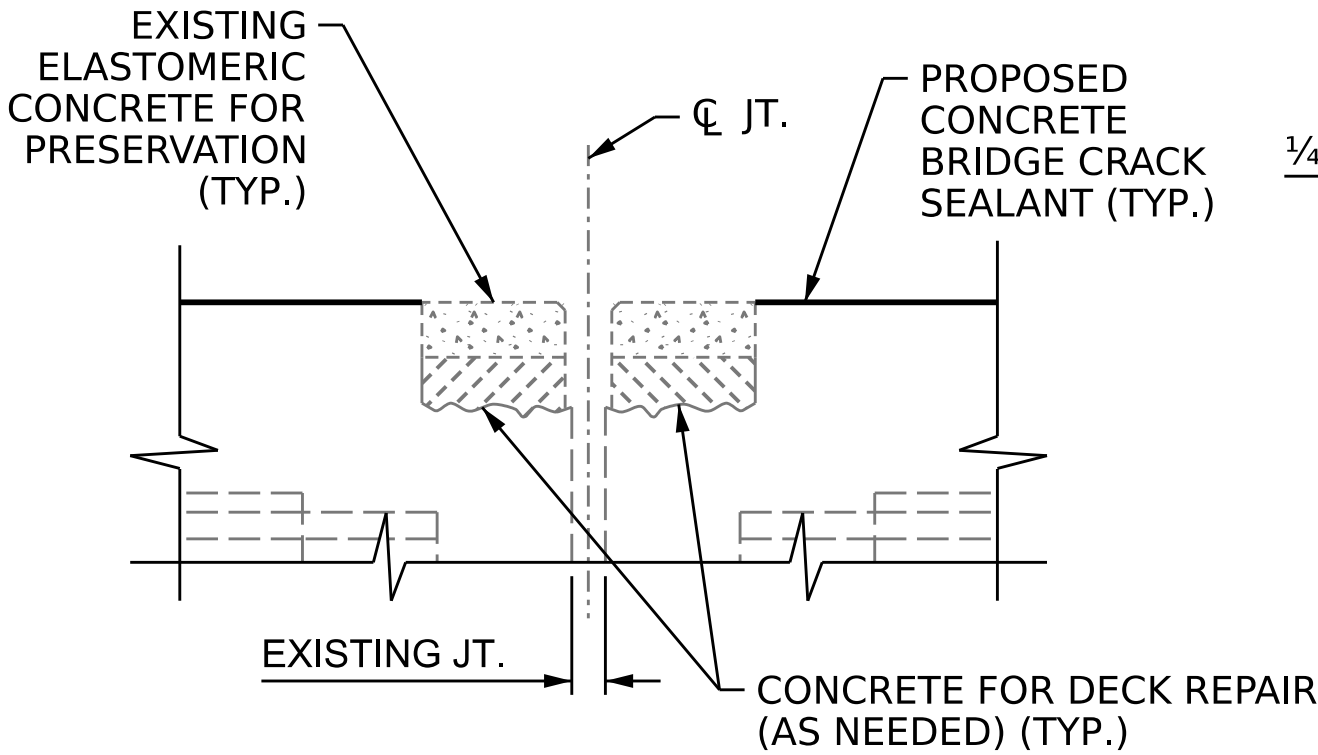
DRAWN BY: **S.A.HERNANDEZ** DATE: **10/2025**
CHECKED BY: **F. LEA / S. LOTFI** DATE: **06/2026**
DESIGN ENGINEER OF RECORD: DATE:



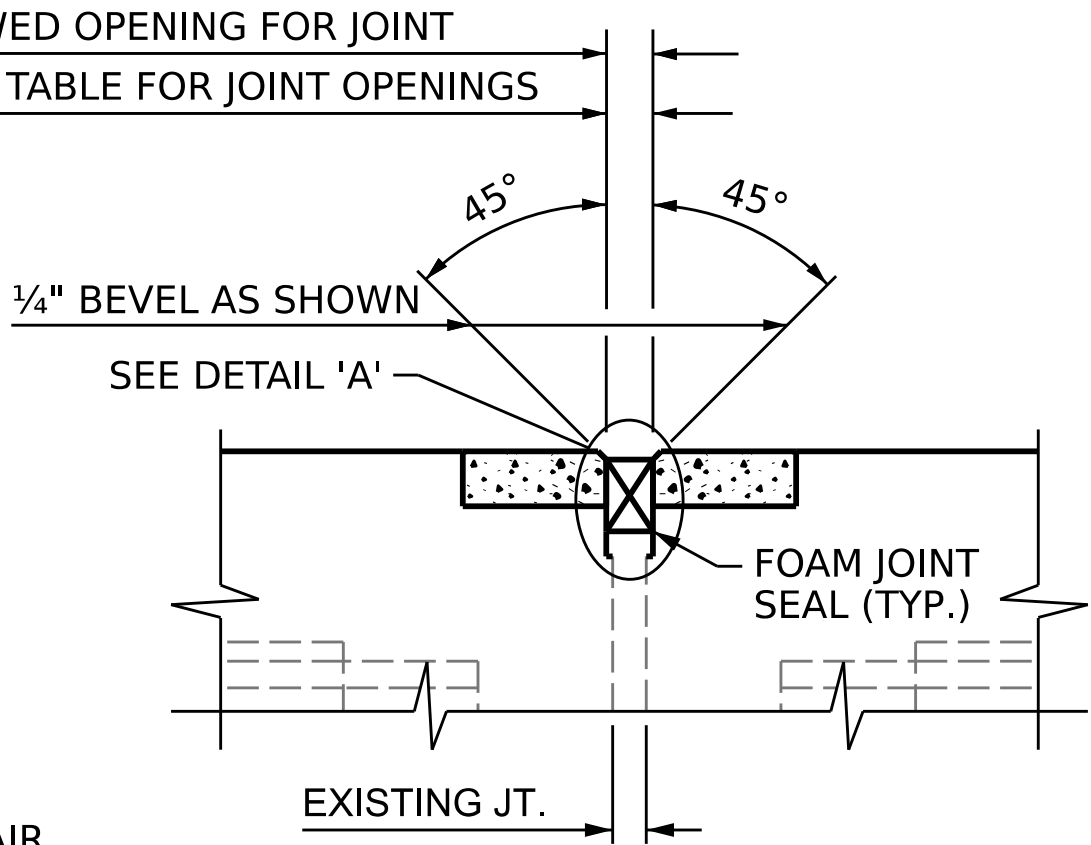
EXISTING JOINT SEAL



EXISTING JOINT AFTER JOINT DEMOLITION



PROPOSED JOINT PRIOR TO SAWING



PROPOSED FOAM JOINT SEAL

SECTION A-A
(TYP. AT BENTS)

SAWED JOINT OPENING TABLE			
LOCATION	SAWED JT. OPENING (PERPENDICULAR TO JT.)		
	AT 45°	AT 60°	AT 90°
BENT 1	2 1/8"	2"	1 3/4"
BENT 2	2"	1 1/8"	1 3/4"

JOINT REPAIR QUANTITY TABLE		
	ESTIMATED	ACTUAL
FOAM JOINT SEALS FOR PRESERVATION	85.2 LF	

ELASTOMERIC CONCRETE FOR PRESERVATION		
LOCATION	ESTIMATED (CU.FT.)	ACTUAL (CU.FT.)
BENT 1	8.2	
BENT 2	8.2	
TOTAL	16.4	

NOTES

FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY OR SEALANT WORK IS COMPLETE.

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

THE MANUFACTURER IS TO PROVIDE THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE FOAM JOINT SEAL FOR THE SIZE OF THE OPENING ON THE PLANS AND ACCOMMODATE THE MINIMUM EXPANSION SHOWN ON THE PLANS.

FOAM JOINTS SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS.

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

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

THE INSTALLED FOAM JOINTS SHALL BE WATER TIGHT.

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

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

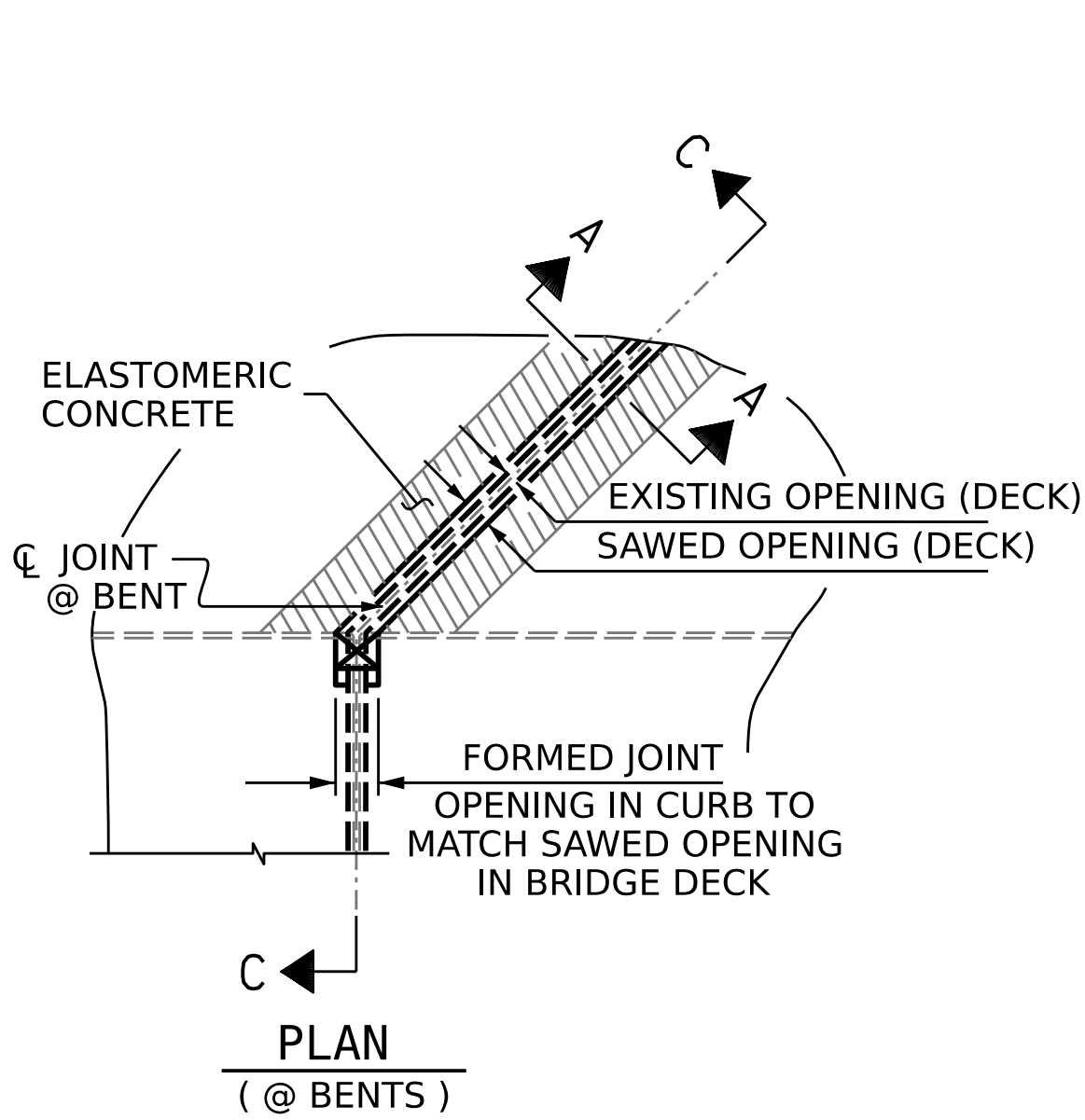
QUANTITIES SHOWN IN THE ELASTOMERIC CONCRETE FOR PRESERVATION TABLE ARE BASED ON THE MINIMUM JOINT DEMOLITION SHOWN.

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

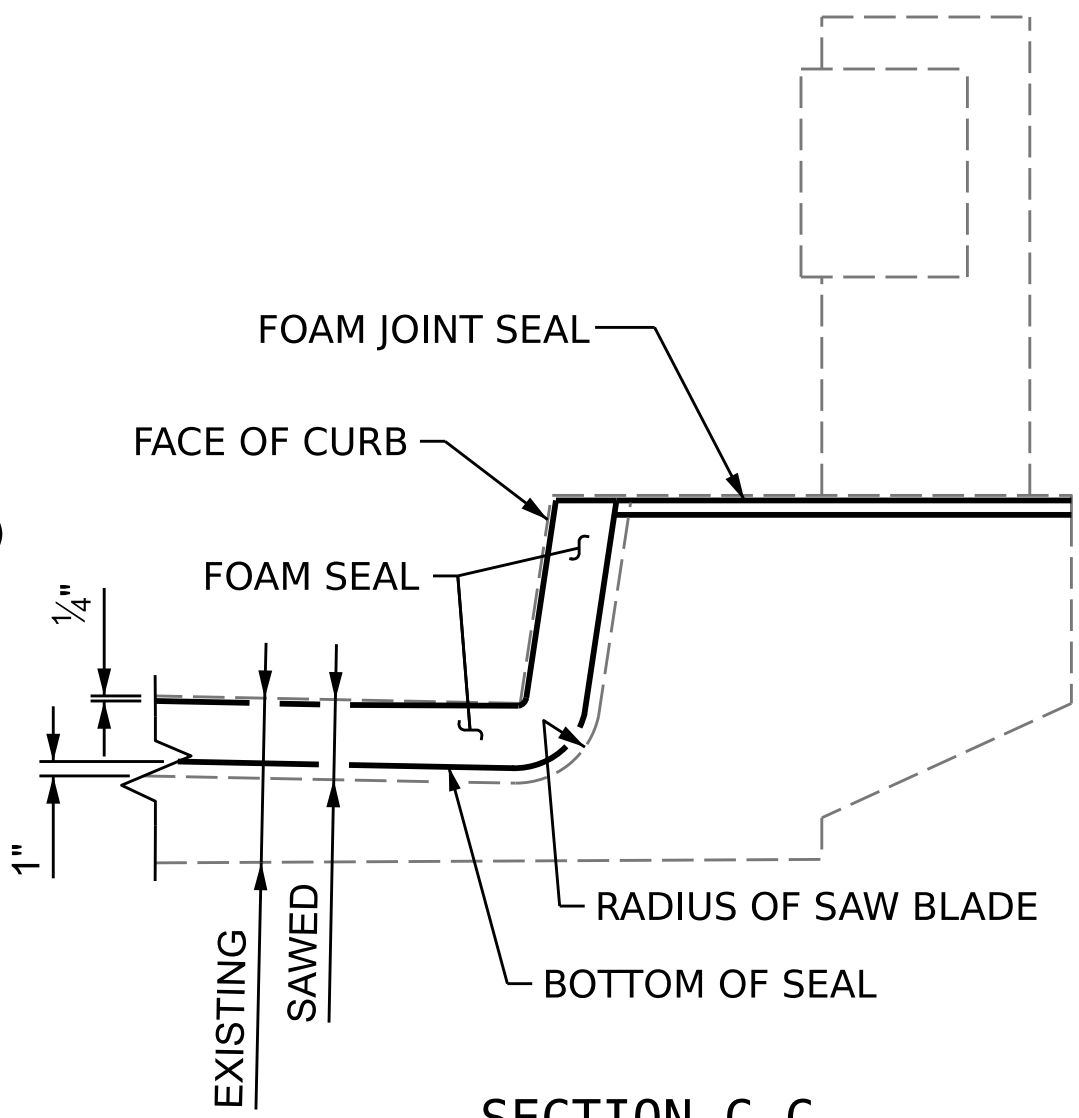
FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

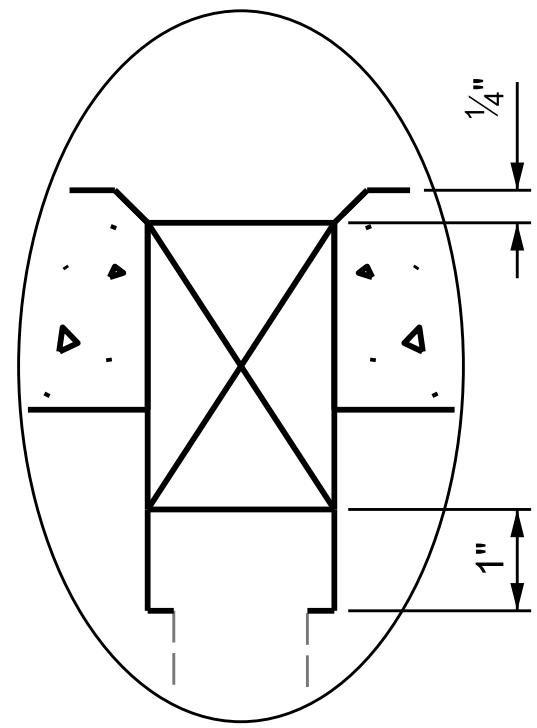
FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.



JOINT SEAL DETAILS



SECTION C-C



DETAIL 'A'

PROJECT NO. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670081**



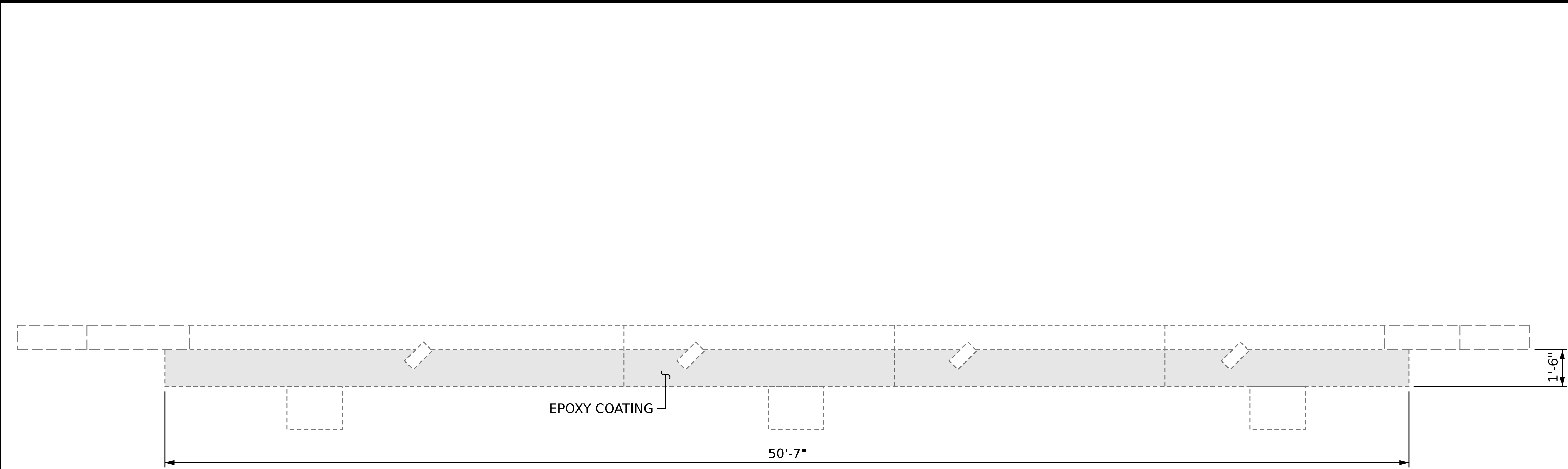
DocuSigned by:
Francesca Lea
5710AD8B5C584EF...
08/19/2026

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
**FOAM JOINT SEALS
FOR PRESERVATION
DETAILS**

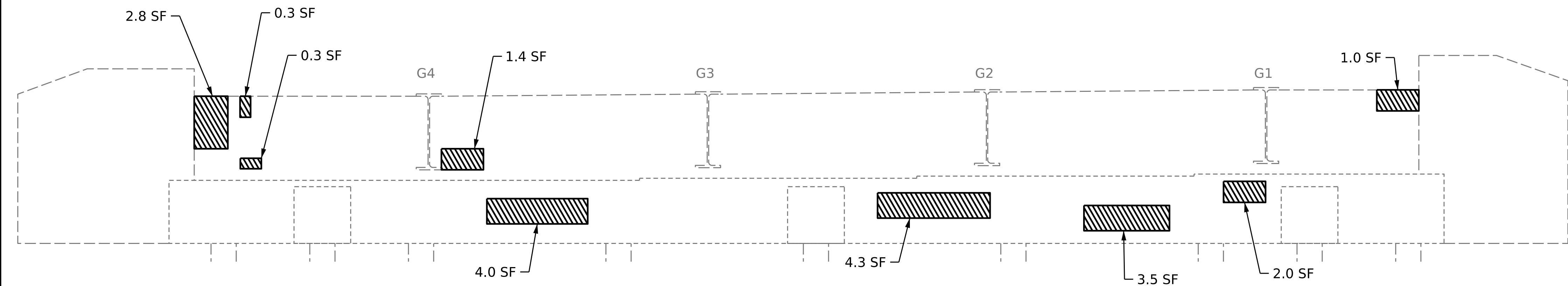
DRAWN BY: **S.A.HERNANDEZ** DATE: **10/2025**
CHECKED BY: **F. LEA** DATE: **06/2026**
DESIGN ENGINEER OF RECORD: DATE:

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS					SHEET NO. S4-09 TOTAL SHEETS 56
NO.	BY:	DATE:	NO.	BY:	
1			3		
2			4		



PLAN
TOP OF CAP (NBL)



ELEVATION

AS-BUILT REPAIR QUANTITY TABLE

END BENT 1				
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ.FT.	VOLUME CU.FT.	AREA SQ.FT.	VOLUME CU.FT.
CAP	13.8	6.9		
CURTAINWALL	5.8	2.9		
WINGWALL	0.0	0.0		
CONCRETE REPAIRS	AREA SQ.FT.	VOLUME CU.FT.	AREA SQ.FT.	VOLUME CU.FT.
CAP	0.0	0.0		
CURTAINWALL	0.0	0.0		
WINGWALL	0.0	0.0		
EPOXY RESIN INJECTION	LN. FT.		LN. FT.	
CAP	0.0			
CURTAINWALL	0.0			
WINGWALL	0.0			
EPOXY COATING	AREA SQ.FT.		AREA SQ.FT.	
CAP	73.7			

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 SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

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

FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

 SHOTCRETE REPAIR AREA

 CONCRETE REPAIR AREA

 EPOXY REISN INJECTION

PROJECT NO. **I-5958**

ORANGE COUNTY

BRIDGE NO. **670081**

SHEET 1 OF 6



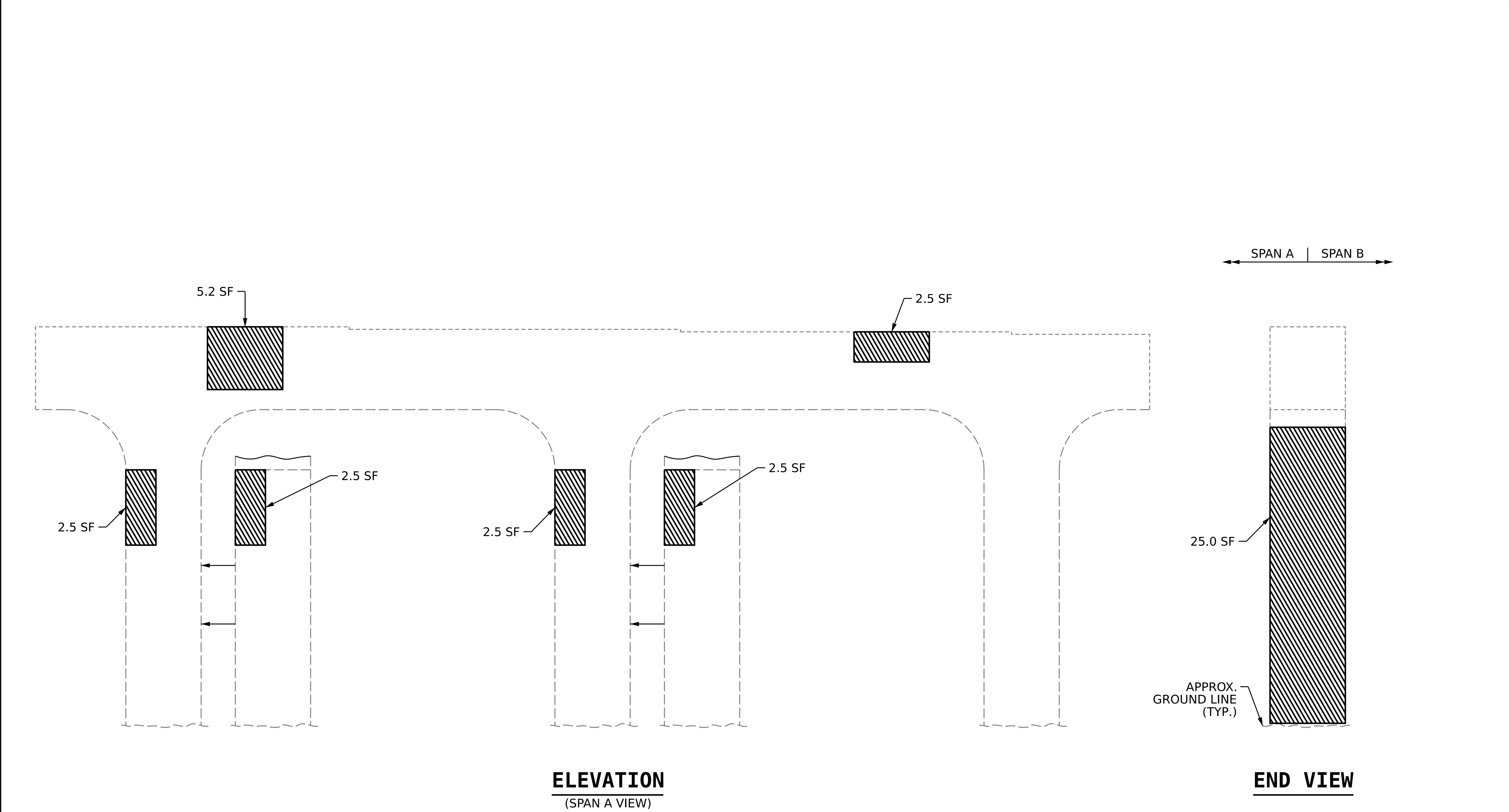
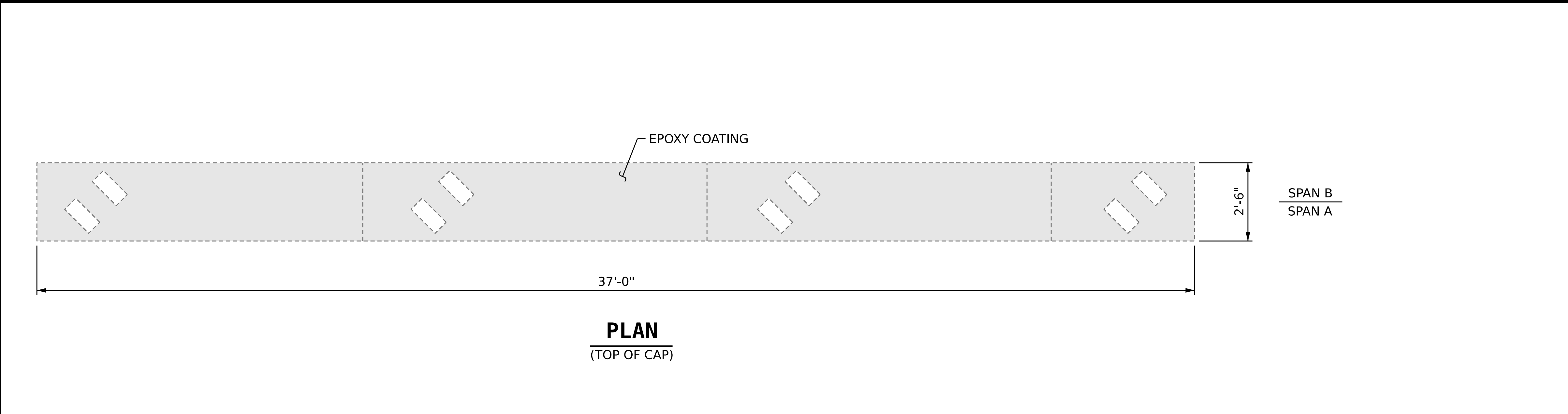
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE REPAIRS
END BENT 1**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			54-10
2			4			TOTAL SHEETS 56

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

DRAWN BY: **S.A.HERNANDEZ** DATE: **10/2025**
CHECKED BY: **S. LOTFI** DATE: **06/2026**
DESIGN ENGINEER OF RECORD: _____ DATE: _____



AS-BUILT REPAIR QUANTITY TABLE

BENT 1				
SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SQ.FT.	VOLUME CU.FT.	AREA SQ.FT.	VOLUME CU.FT.
CAP	7.7	3.9		
COLUMN	35.0	17.5		
CONCRETE REPAIRS	AREA SQ.FT.	VOLUME CU.FT.	AREA SQ.FT.	VOLUME CU.FT.
	0.0	0.0		
CAP	0.0	0.0		
COLUMN	0.0	0.0		
EPOXY RESIN INJECTION	LN. FT.		LN. FT.	
	0.0			
CAP	0.0			
COLUMN	0.0			
EPOXY COATING	AREA SQ.FT.		AREA SQ.FT.	
	88.2			
CAP	88.2			

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 SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

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

FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

 SHOTCRETE REPAIR AREA

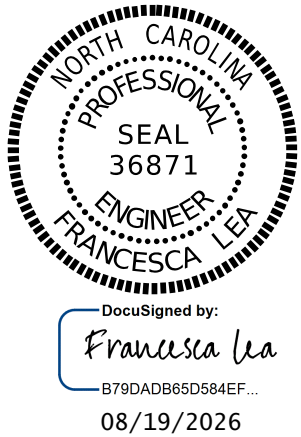
 CONCRETE REPAIR AREA

PROJECT NO. **I-5958**

ORANGE COUNTY

BRIDGE NO. **670081**

SHEET 2 OF 6



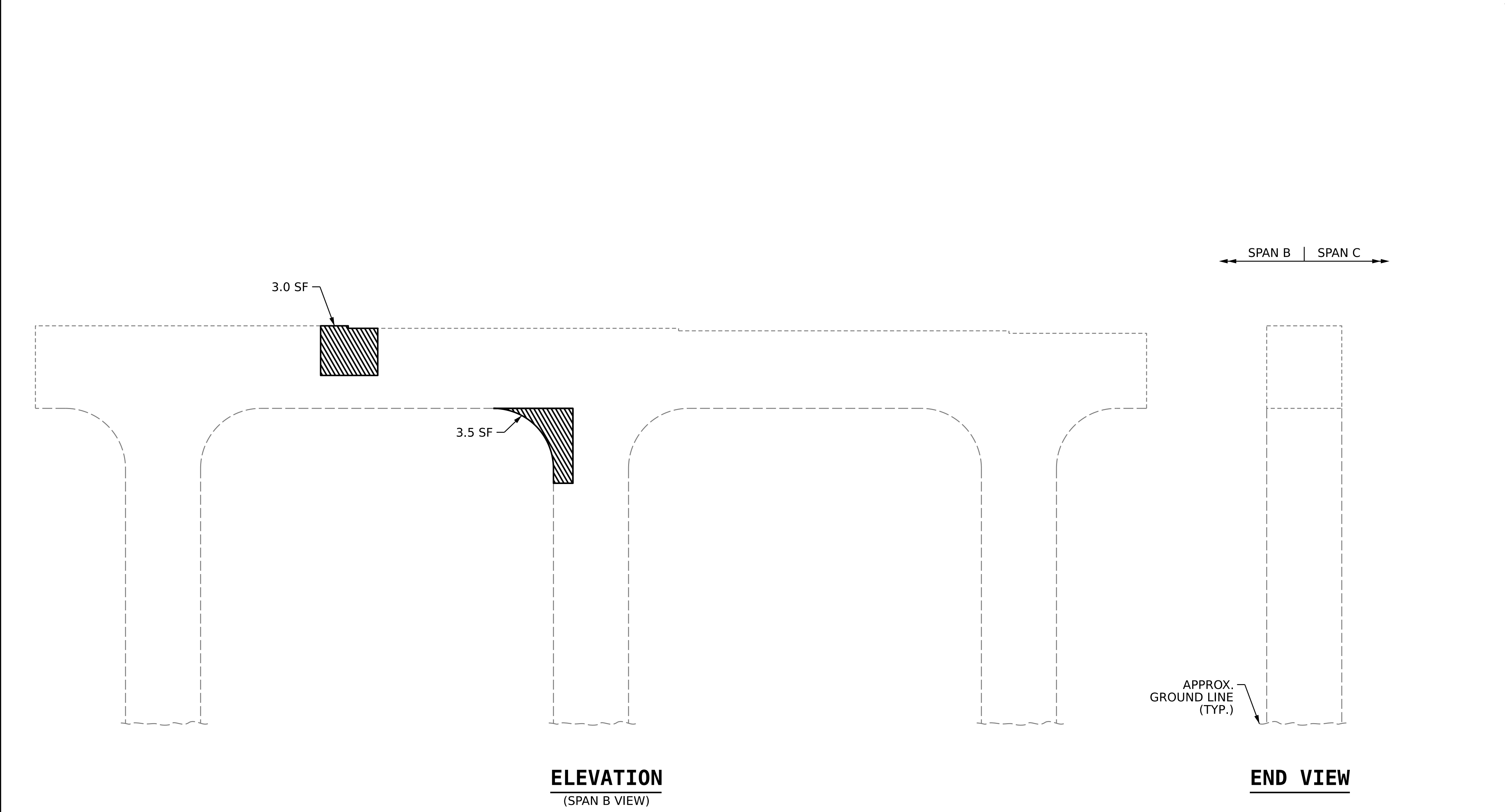
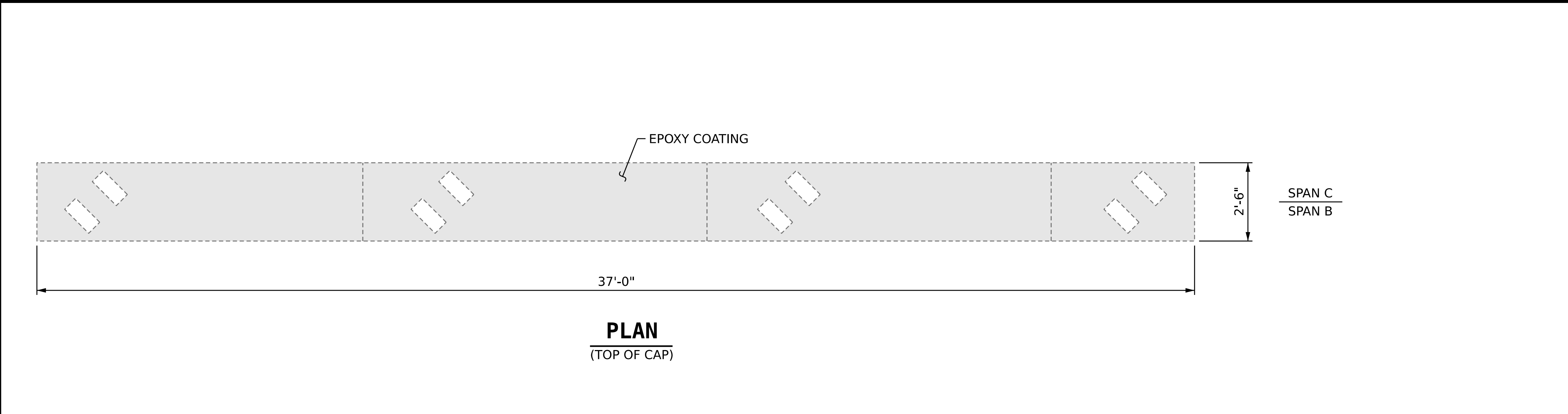
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE REPAIRS BENT 1 SPAN A FACE

REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	
1			3		S4-11 TOTAL SHEETS 56
2			4		

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

DRAWN BY: **S.A.HERNANDEZ** DATE: **10/2025**
CHECKED BY: **S. LOTFI** DATE: **06/2026**
DESIGN ENGINEER OF RECORD: _____ DATE: _____



AS-BUILT REPAIR QUANTITY TABLE				
BENT 2				
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ.FT.	VOLUME CU.FT.	AREA SQ.FT.	VOLUME CU.FT.
CAP	3.0	1.5		
COLUMN	3.5	1.8		
CONCRETE REPAIRS	AREA SQ.FT.	VOLUME CU.FT.	AREA SQ.FT.	VOLUME CU.FT.
CAP	0.0	0.0		
COLUMN	0.0	0.0		
EPOXY RESIN INJECTION	LN. FT.		LN. FT.	
CAP	0.0			
COLUMN	0.0			
EPOXY COATING	AREA SQ.FT.		AREA SQ.FT.	
CAP	88.2			

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 SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

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

FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

- SHOTCRETE REPAIR AREA
- CONCRETE REPAIR AREA

DRAWN BY:	S.A.HERNANDEZ	DATE:	10/2025
CHECKED BY:	S. LOTFI	DATE:	06/2026
DESIGN ENGINEER OF RECORD:		DATE:	

8/19/2026
S:\DPG1\Division7\I-5958\Bridge #670081\Plans\404_025_I-5958_SMU_B2B_S4-13_670081.dgn
filea

PROJECT NO. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670081**

SHEET 4 OF 6

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

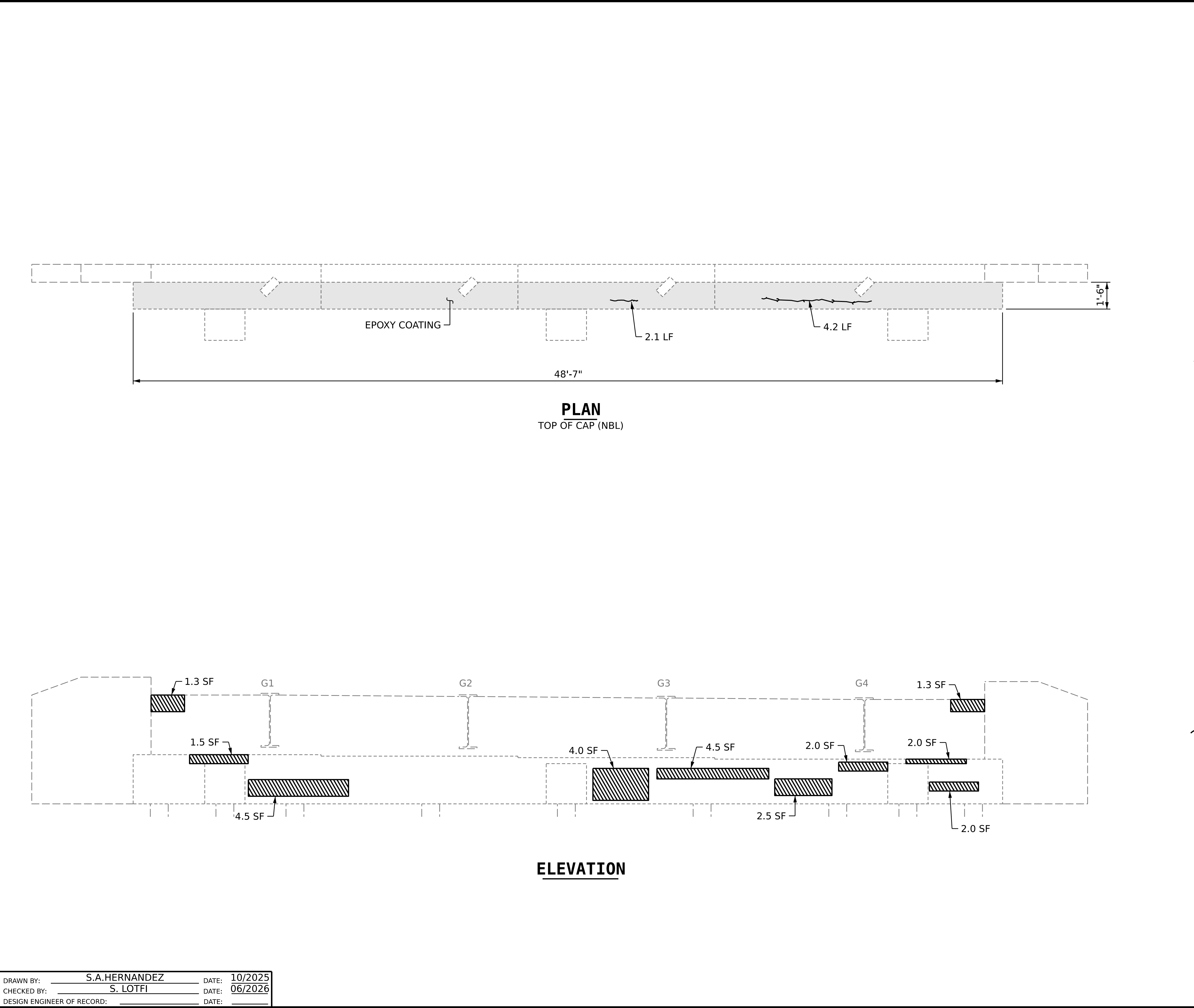
SUBSTRUCTURE REPAIRS
BENT 2
SPAN B FACE

REVISIONS					SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			54-13
2			4			56

FRANCISCA LEA
ENGINEER
36871
SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER

DocuSigned by:
Francisca Lea
879C4D855C5948F
08/19/2026

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED



AS-BUILT REPAIR QUANTITY TABLE																						
END BENT 2																						
	ESTIMATE		ACTUAL																			
SHOTCRETE REPAIRS	AREA SQ.FT.	VOLUME CU.FT.	AREA SQ.FT.	VOLUME CU.FT.																		
CAP	23.0	11.5																				
CURTAINWALL	2.6	1.3																				
WINGWALL	0.0	0.0																				
CONCRETE REPAIRS	AREA SQ.FT.	VOLUME CU.FT.	AREA SQ.FT.	VOLUME CU.FT.																		
CAP	0.0	0.0																				
CURTAINWALL	0.0	0.0																				
WINGWALL	0.0	0.0																				
EPOXY RESIN INJECTION	LN. FT.		LN. FT.																			
CAP	6.3																					
CURTAINWALL	0.0																					
WINGWALL	0.0																					
EPOXY COATING	AREA SQ.FT.		AREA SQ.FT.																			
CAP	70.7																					
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 SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.																						
SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.																						
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.																						
FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.																						
FOR REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.																						
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES.																						
FOR EPOXY COATING, SEE SPECIAL PROVISIONS.																						
	SHOTCRETE REPAIR AREA																					
	CONCRETE REPAIR AREA																					
	EPOXY REISN INJECTION																					
PROJECT NO.			I-5958																			
			ORANGE COUNTY																			
BRIDGE NO.			670081																			
SHEET 6 OF 6																						
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH SUBSTRUCTURE REPAIRS END BENT 2 DocuSigned by: Francesca Lea b780AD865D584EF... 08/19/2026 REVISIONS <table><tr><th>NO.</th><th>BY:</th><th>DATE:</th><th>NO.</th><th>BY:</th><th>DATE:</th></tr><tr><td>1</td><td></td><td></td><td>3</td><td></td><td></td></tr><tr><td>2</td><td></td><td></td><td>4</td><td></td><td></td></tr></table> DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED SHEET NO. S4-15 TOTAL SHEETS 56					NO.	BY:	DATE:	NO.	BY:	DATE:	1			3			2			4		
NO.	BY:	DATE:	NO.	BY:	DATE:																	
1			3																			
2			4																			

DRAWN BY: S.A.HERNANDEZ

CHECKED BY: S. LOTFI

DESIGN ENGINEER OF RECORD:

DATE: 10/2025

DATE: 06/2026

DATE:

NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 05/09/2025.

BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS AND/OR ROUTINE INSPECTION REPORT.

SCOPE OF WORK

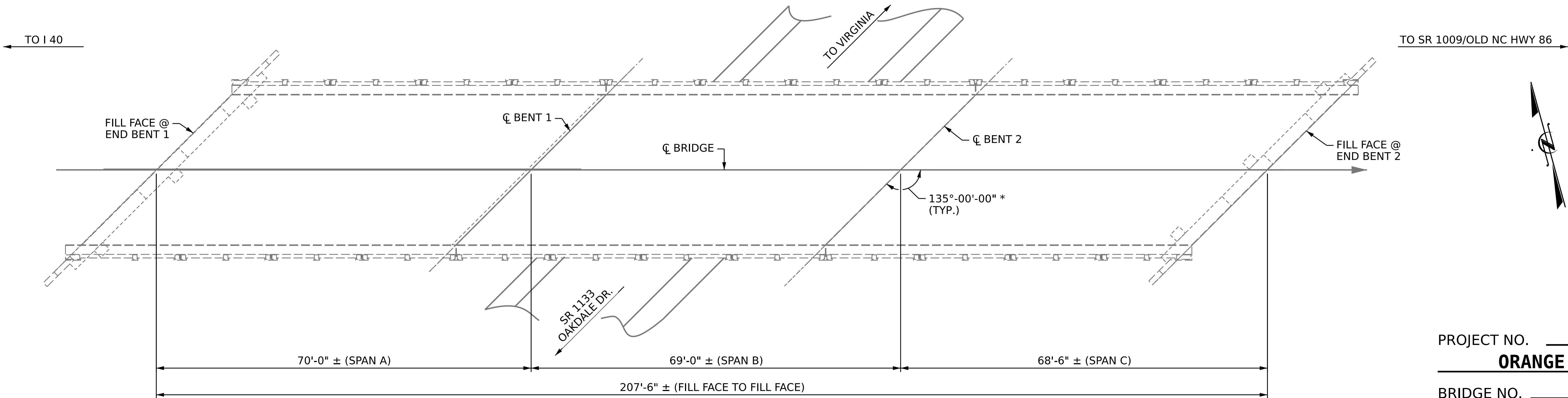
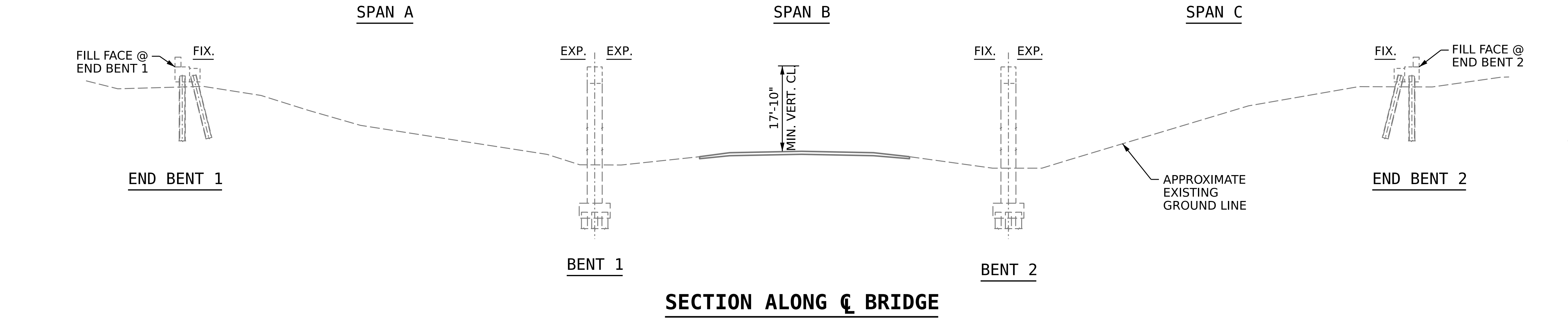
PARTIALLY REMOVE TOP OF BRIDGE DECK CONCRETE BY SHOTBLASTING METHODS.

APPLY CONCRETE DECK CRACK SEALER TO PREPARED TOP OF BRIDGE DECK.

REMOVE EXISTING JOINT MATERIAL AND INSTALL FOAM JOINTS.

REMOVE UNSOUND CONCRETE AND PROPERLY PREPARE EXISTING END BENT AND BENT AREAS TO PERFORM EPOXY RESIN INJECTIONS OF CONCRETE CRACKS, AND SHOTCRETE AND CONCRETE REPAIRS.

REMOVE DEBRIS FROM TOP OF EXISTING END BENT AND BENT CAPS AND APPLY EPOXY COATING.



PROJECT NO. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670082**

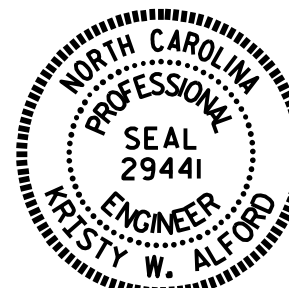
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS
2			4			56

DRAWN BY: J.J.ANDERSON/SBAH DATE: 05/2026
CHECKED BY: S.A.HERNANDEZ DATE: 05/2026
DESIGN ENGINEER OF RECORD: _____ DATE: _____

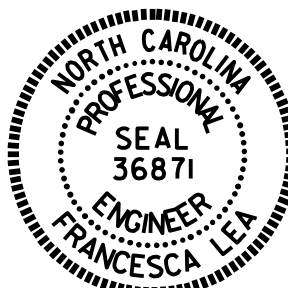
8/18/2026
S:\DPG1\Division7\I-5958\Bridge #670082\Plans\405_001_I-5958_SMU_GD_S5-01_670082.dgn
sbaguiilar-herandez

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

RESIDENT ENGINEER _____ DATE _____

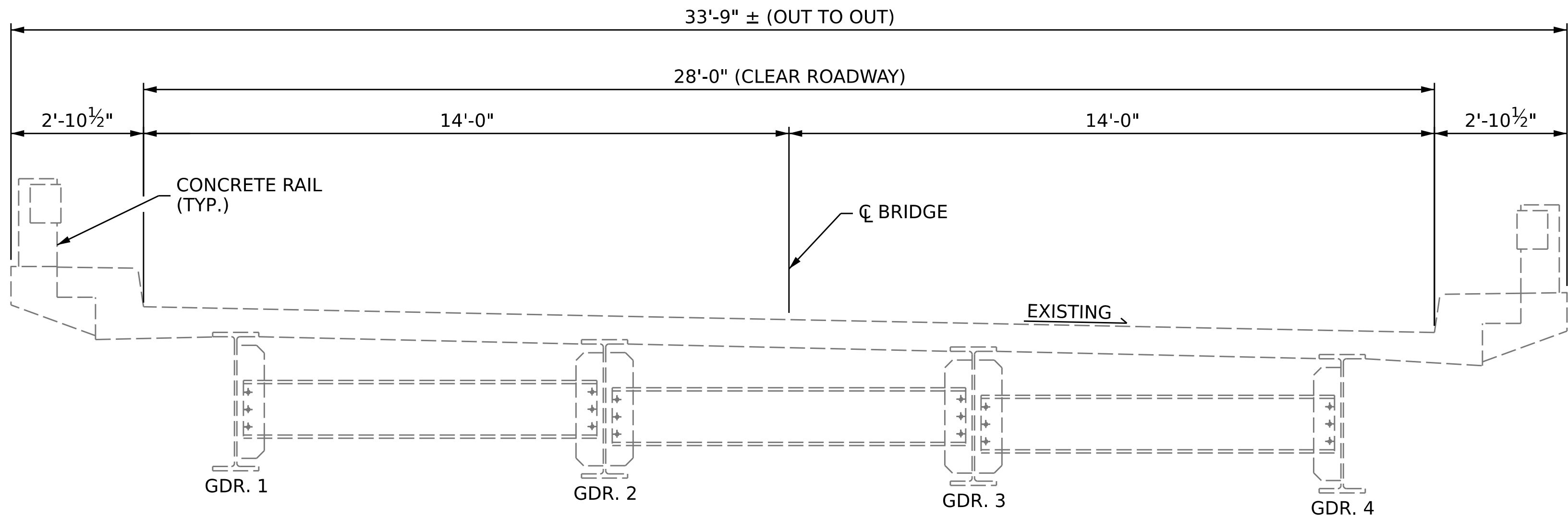


DocuSigned by:
F245B38830BF40E...
08/19/2026

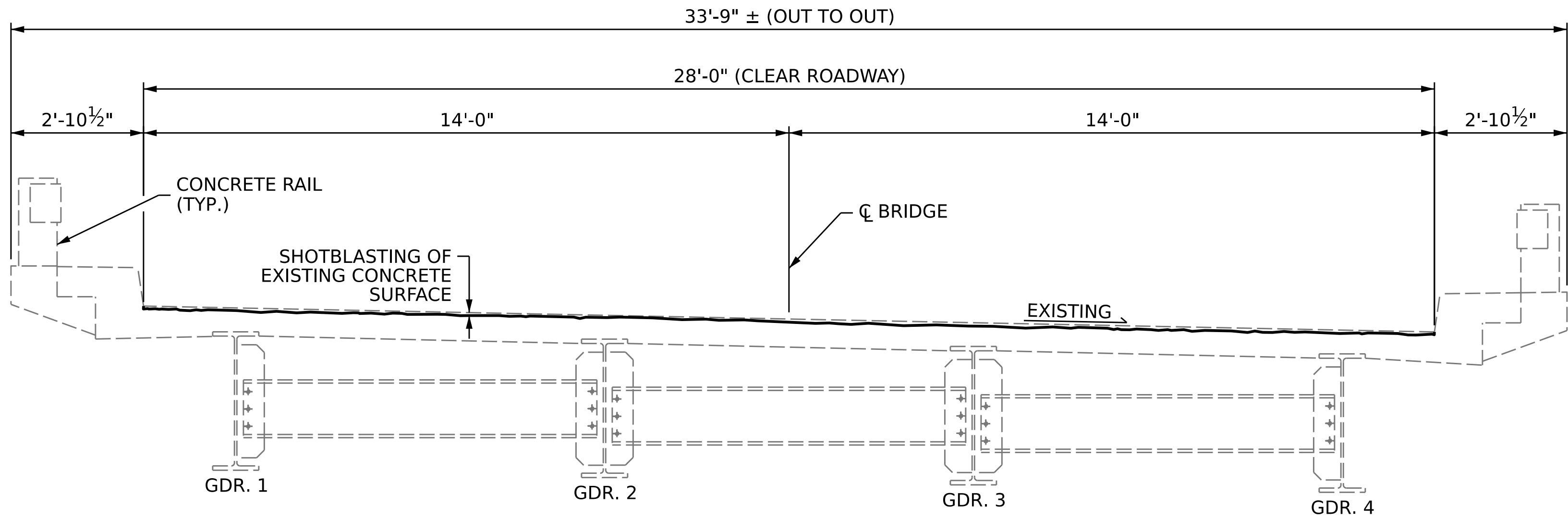


DocuSigned by:
570DA0B86D584EF...
08/19/2026

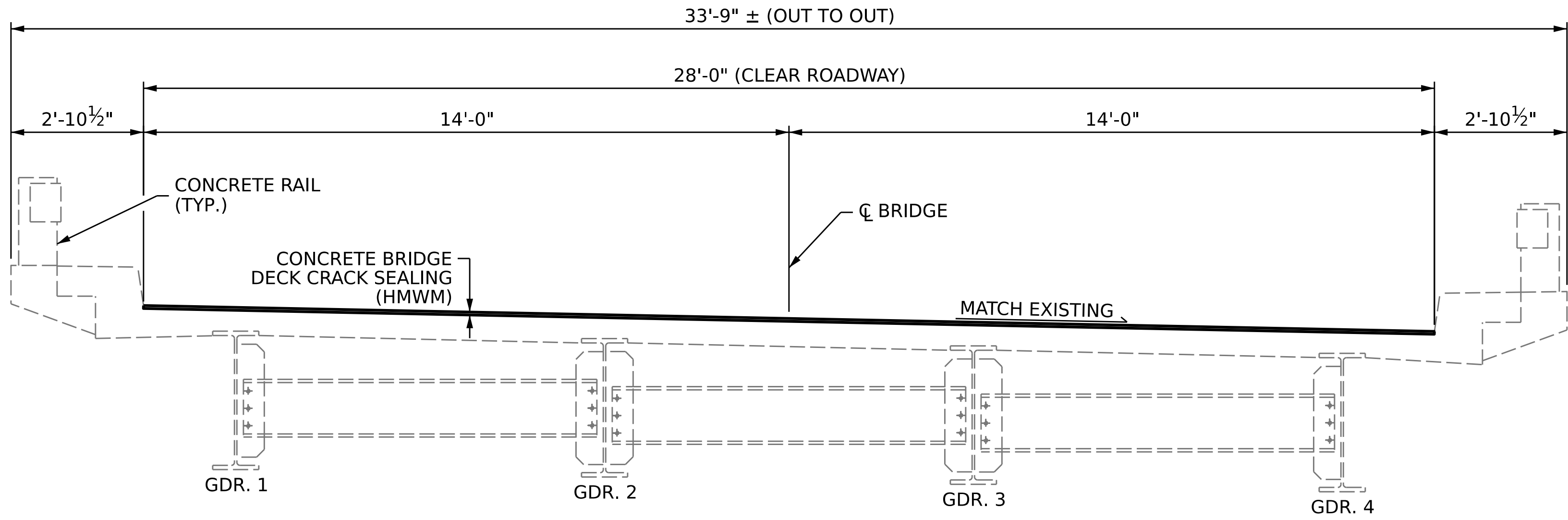
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



TYPICAL SECTION
(EXISTING)

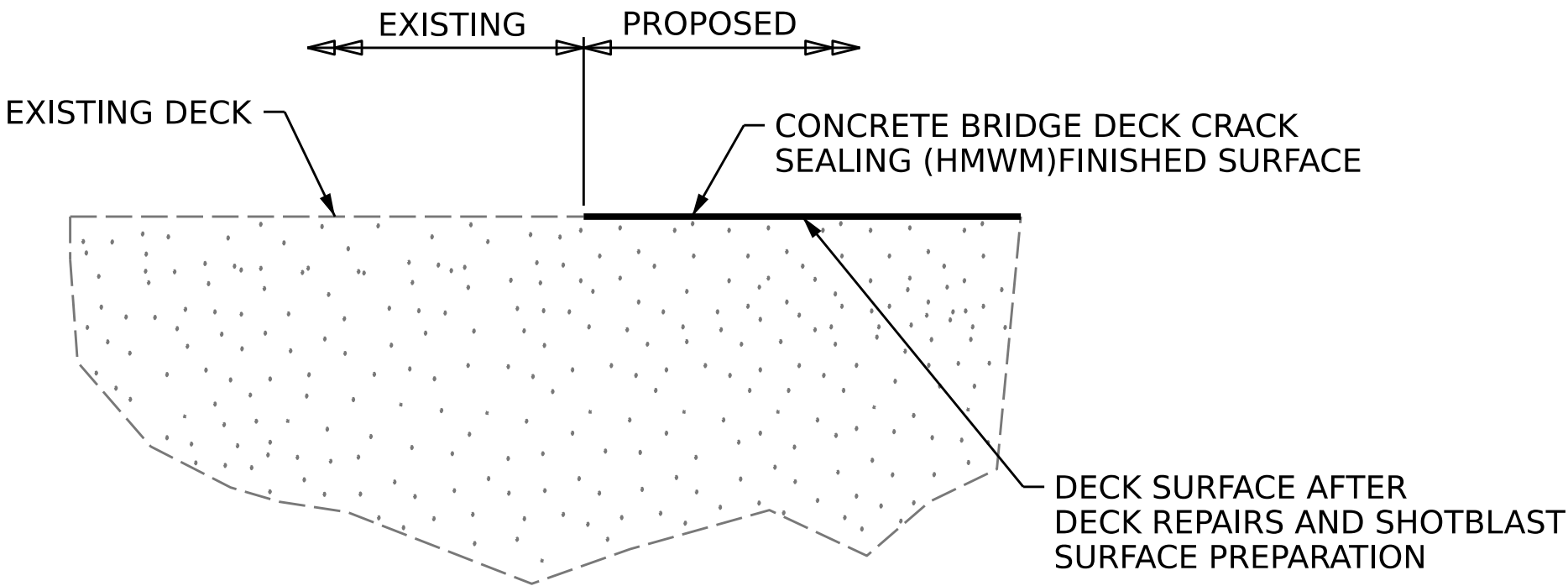


TYPICAL SECTION
(SHOTBLASTING AND DECK PREPARATION)



TYPICAL SECTION
(PROPOSED)

NOTES
FOR CONCRETE BRIDGE DECK CRACK SEALING,
SEE SPECIAL PROVISIONS.



**DETAIL FOR CONCRETE BRIDGE
DECK CRACK SEALING (HMWM)**

PROJECT NO. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670082**



DocuSigned by:
Francesca Lea
8703A0B865C84EF...
08/19/2026

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**TYPICAL SECTION
AND CONCRETE BRIDGE DECK
CRACK SEALING (HMWM) DETAIL**

DRAWN BY: J.J.ANDERSON/SBAH DATE: 05/2026
CHECKED BY: S.A.HERNANDEZ / S. LOTFI DATE: 05/2026
DESIGN ENGINEER OF RECORD: _____ DATE: _____

8/19/2026
S:\DPG1\Division7\I-5958\Bridge #670082\Plans\405_003_I-5958_SMU_TS_55-02_670082.dgn
flea

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S5-02
1			3			TOTAL SHEETS
2			4			56

NOTES

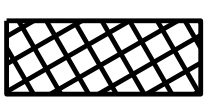
REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND UPDATE THE ACTUAL QUANTITIES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

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

FOR SHOTBLASTING BRIDGE DECK AND CONCRETE BRIDGE DECK CRACK SEALING (HMWM), SEE CONCRETE BRIDGE DECK CRACK SEALING SPECIAL PROVISIONS.

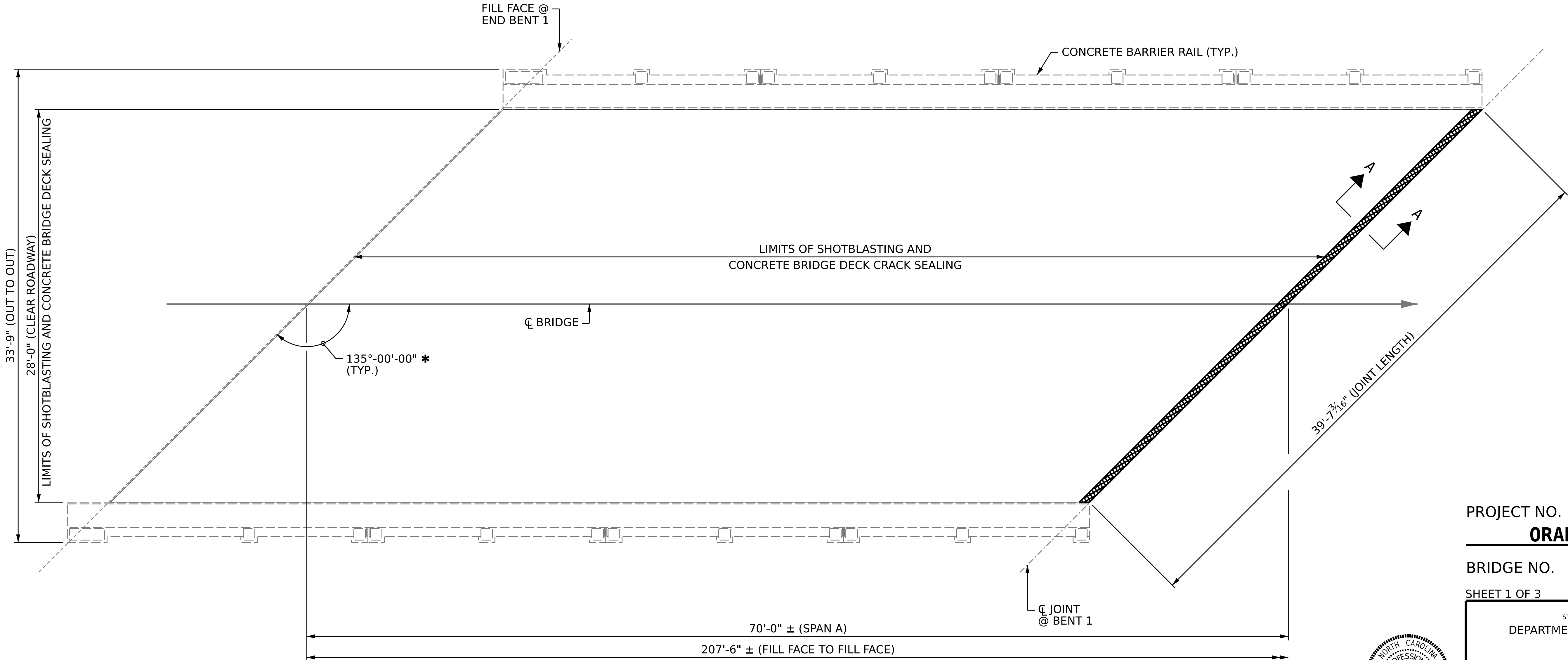
FOR SECTION A-A, SEE "JOINT DETAILS" SHEET.

FOR CONCRETE DECK REPAIR FOR DECK CRACK SEALING TREATMENT, SEE SPECIAL PROVISION.

-  CONCRETE DECK REPAIR FOR DECK CRACK SEALING TREATMENT
-  SHOTCRETE REPAIR AREA
-  SHOTBLASTING AND CONCRETE BRIDGE DECK SEALING
-  EPOXY RESIN INJECTION (ERI)
-  ELASTOMERIC CONCRETE

AS-BUILT REPAIR QUANTITY TABLE

DECK SURFACE REPAIRS - SPAN A		
	ESTIMATE	ACTUAL
SHOTBLASTING BRIDGE DECK	215.4 SQ. YDS.	
CONCRETE DECK REPAIR FOR DECK CRACK SEALING	0.0 SQ. FT.	
CONCRETE BRIDGE DECK CRACK SEALING (HMWM)	215.4 SQ. YDS.	



SPAN A

ALL DIMENSIONS SHOWN ARE FROM BEST AVAILABLE SOURCES, CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD.
* APPROXIMATE CHORD TO BENT ANGLE, ACTUAL ANGLES WILL VARY DUE TO CURVATURE OF ROADWAY.

PROJECT NO. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670082**

SHEET 1 OF 3



DocuSigned by:
Francesca Lea
879DA0B65D584EF...
08/19/2026

DECK SURFACE REPAIRS

SPAN A

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S5-03 TOTAL SHEETS 56
2			4			

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

DRAWN BY: **J.J.ANDERSON/SBAH** DATE: **03/2026**
CHECKED BY: **S. LOTFI** DATE: **07/2026**
DESIGN ENGINEER OF RECORD: _____ DATE: _____

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 LOCATION AND DESCRIPTION OF THE REPAIRS AND UPDATE THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

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

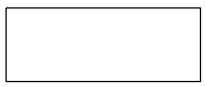
FOR SHOTBLASTING BRIDGE DECK AND CONCRETE BRIDGE DECK CRACK SEALING (HMWM), SEE CONCRETE BRIDGE DECK CRACK SEALING SPECIAL PROVISION.

FOR SECTIONS A-A, SEE "JOINT DETAILS" SHEET.

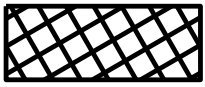
FOR CONCRETE DECK REPAIR FOR DECK CRACK SEALING TREATMENT, SEE SPECIAL PROVISION.

- 

CONCRETE DECK REPAIR FOR
DECK CRACK SEALING TREATMENT
- 

SHOTCRETE REPAIR AREA
- 

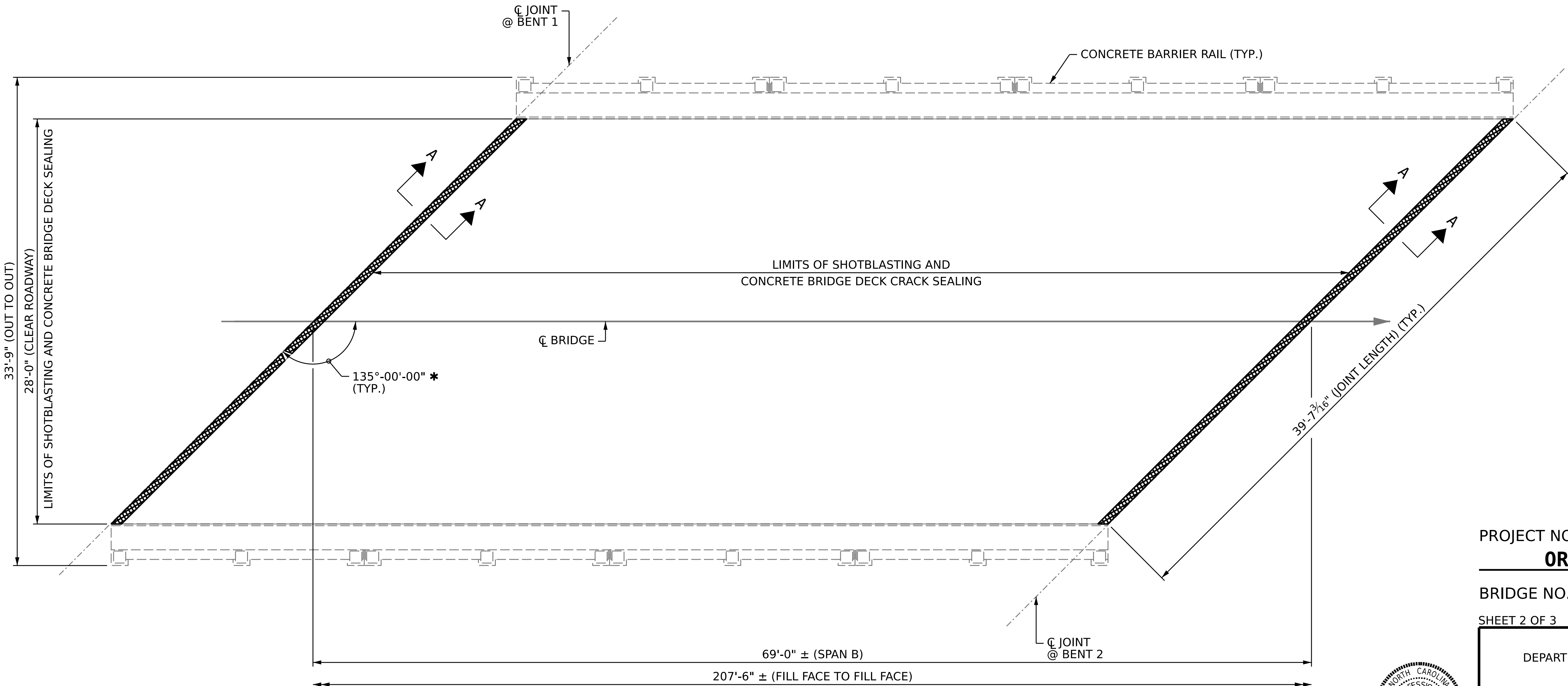
SHOTBLASTING AND CONCRETE
BRIDGE DECK SEALING
- 

EPOXY RESIN INJECTION (ERI)
- 

ELASTOMERIC CONCRETE

AS-BUILT REPAIR QUANTITY TABLE

DECK SURFACE REPAIRS - SPAN B		
	ESTIMATE	ACTUAL
SHOTBLASTING BRIDGE DECK	210.0 SQ. YDS.	
CONCRETE DECK REPAIR FOR DECK CRACK SEALING (HMWM)	0.0 SQ. FT.	
CONCRETE BRIDGE DECK CRACK SEALING (HMWM)	210.0 SQ. YDS.	

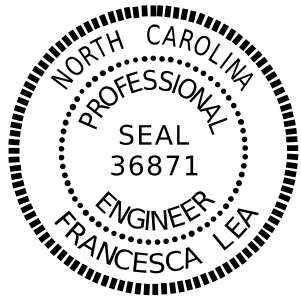


SPAN B

ALL DIMENSIONS SHOWN ARE FROM BEST AVAILABLE SOURCES, CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD.
* APPROXIMATE CHORD TO BENT ANGLE, ACTUAL ANGLES WILL VARY DUE TO CURVATURE OF ROADWAY.

PROJECT NO. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670082**

SHEET 2 OF 3



DocuSigned by:
Francesca Lea
57f0a0b860584ef...
08/19/2026

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
DECK SURFACE REPAIRS					
SPAN B					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED					S5-04 TOTAL SHEETS 56

DRAWN BY: **J.J.ANDERSON/SBAH** DATE: **03/2026**
CHECKED BY: **S. LOTFI** DATE: **07/2026**
DESIGN ENGINEER OF RECORD: DATE:

NOTES

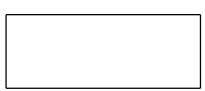
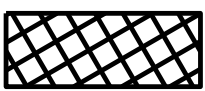
REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND UPDATE THE ACTUAL QUANTITIES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

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

FOR SHOTBLASTING BRIDGE DECK AND CONCRETE BRIDGE DECK CRACK SEALING (HMWM), SEE CONCRETE BRIDGE DECK CRACK SEALING SPECIAL PROVISION.

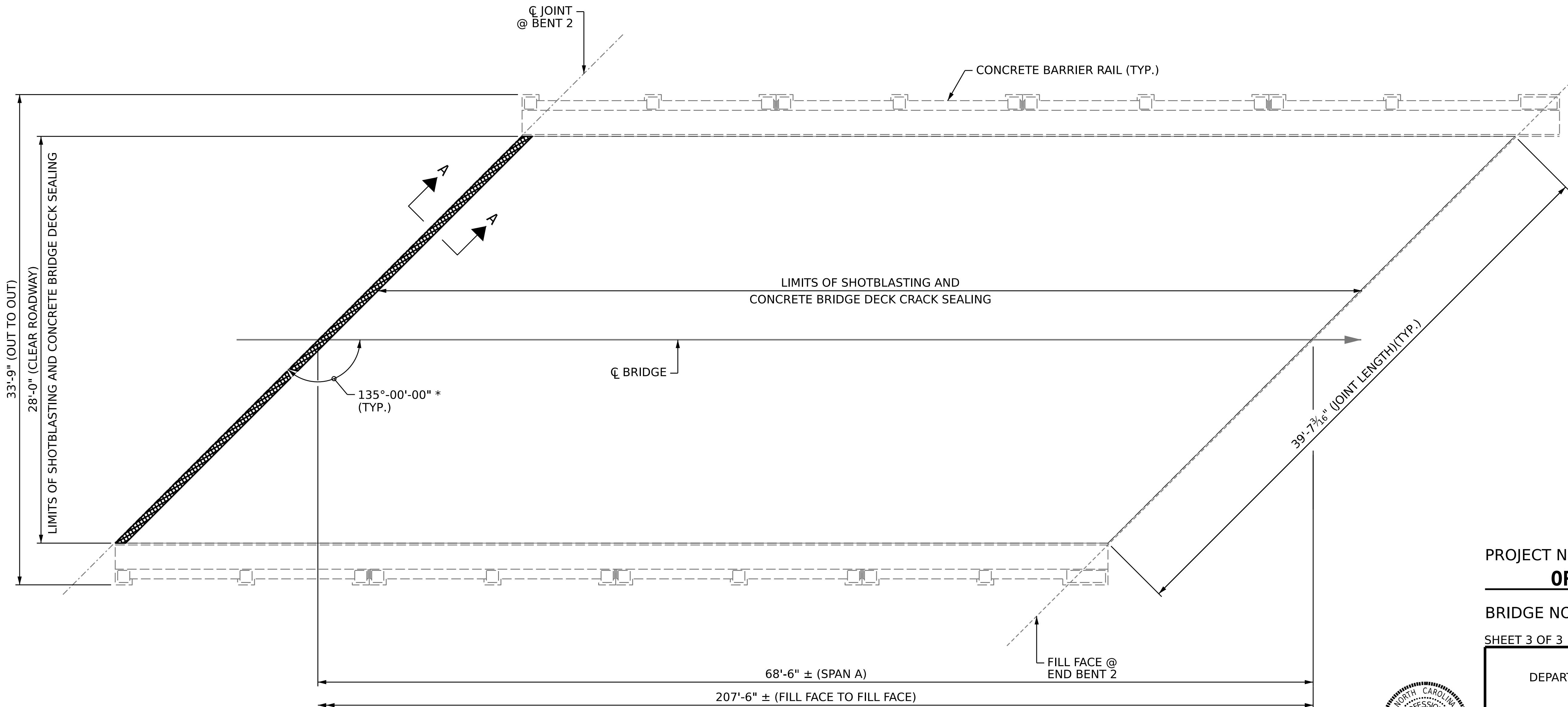
FOR SECTIONS A-A, SEE "JOINT DETAILS" SHEET.

FOR CONCRETE DECK REPAIR FOR DECK CRACK SEALING TREATMENT, SEE SPECIAL PROVISION.

-  CONCRETE DECK REPAIR FOR DECK CRACK SEALING TREATMENT
-  SHOTCRETE REPAIR AREA
-  SHOTBLASTING AND CONCRETE BRIDGE DECK SEALING
-  EPOXY RESIN INJECTION (ERI)
-  ELASTOMERIC CONCRETE

AS-BUILT REPAIR QUANTITY TABLE

DECK SURFACE REPAIRS- SPAN C		
	ESTIMATE	ACTUAL
SHOTBLASTING BRIDGE DECK	210.7 SQ. YDS.	
CONCRETE DECK REPAIR FOR DECK CRACK SEALING	0.0 SQ. FT.	
CONCRETE BRIDGE DECK CRACK SEALING (HMWM)	210.7 SQ. YDS.	



SPAN C

ALL DIMENSIONS SHOWN ARE FROM BEST AVAILABLE SOURCES, CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD.
* APPROXIMATE CHORD TO BENT ANGLE, ACTUAL ANGLES WILL VARY DUE TO CURVATURE OF ROADWAY.

PROJECT NO. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670082**

SHEET 3 OF 3



DocuSigned by:
Francesca Lea
5710A0B850584EF...
08/19/2026

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
DECK SURFACE REPAIRS SPAN C					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED					TOTAL SHEETS 56

DRAWN BY: **J.J.ANDERSON/SBAH** DATE: **03/2026**
CHECKED BY: **S. LOTFI** DATE: **07/2026**
DESIGN ENGINEER OF RECORD: _____ DATE: _____

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN 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 LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

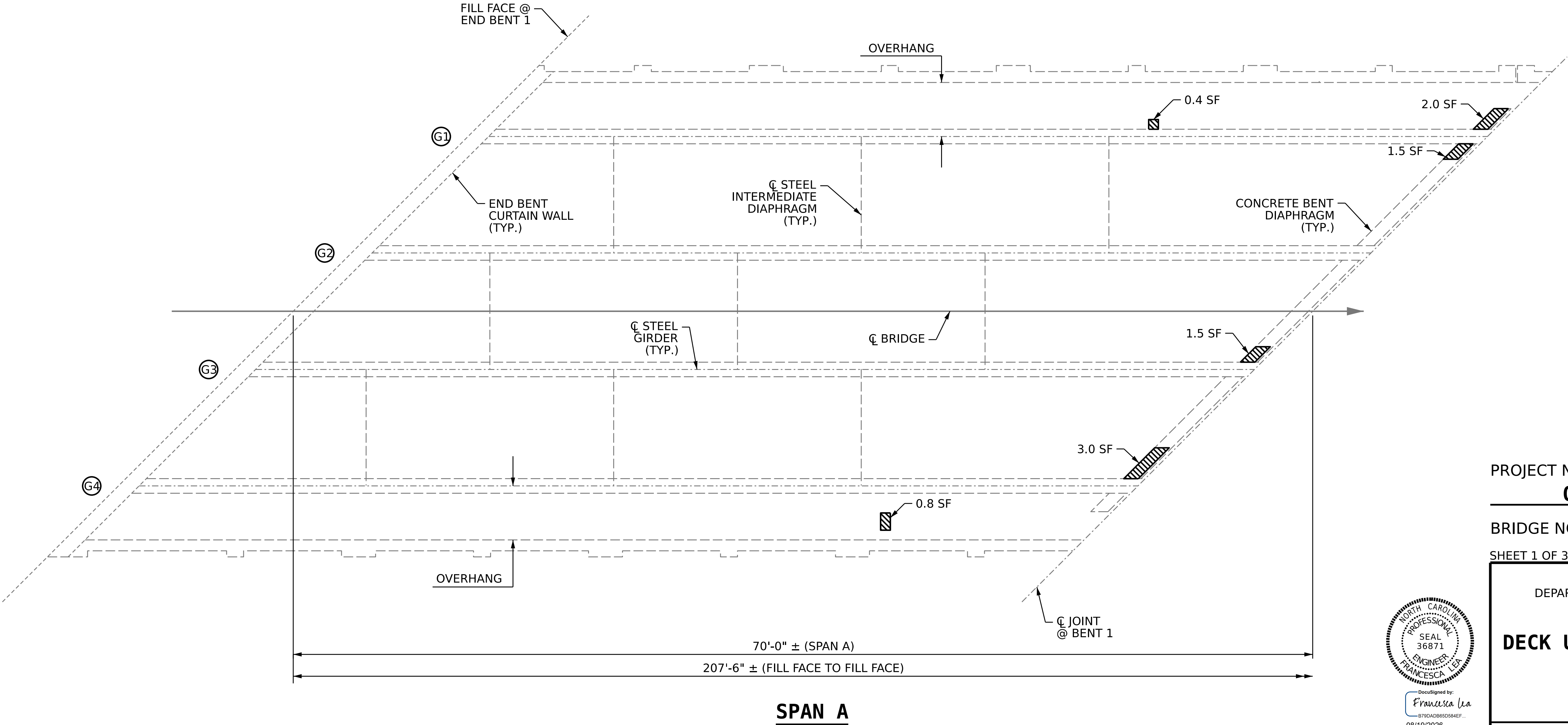
FOR OVERHANG AND DIAPHRAGM REPAIRS, SEE "OVERHANG AND DIAPHRAGM REPAIR DETAILS" SHEET.

-  SHOTCRETE REPAIR AREA
-  CONCRETE REPAIR AREA
-  EPOXY RESIN INJECTION (ERI)
-  GIRDER NUMBER

AS-BUILT REPAIR QUANTITY TABLE

DECK UNDERSIDE REPAIRS SPAN A	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	0	0		
CONCRETE DIAPHRAGM	8.0	2.7		
OVERHANG	1.2	0.4		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	0	0		
CONCRETE DIAPHRAGM	0	0		
OVERHANG	0	0		

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



PROJECT NO. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670082**

SHEET 1 OF 3



DocuSigned by:
Francesca Lea
5793ADB85C584EF...
08/19/2026

DECK UNDERSIDE REPAIRS
SPAN A

REVISIONS						SHEET NO. S5-06
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 56
2			4			

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

DRAWN BY: J.J.ANDERSON/SBAH DATE: 05/2026
CHECKED BY: S. LOTFI DATE: 07/2026
DESIGN ENGINEER OF RECORD: DATE:

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN 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 LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

FOR OVERHANG AND DIAPHRAGM REPAIRS, SEE "OVERHANG AND DIAPHRAGM REPAIR DETAILS" SHEET.

- SHOTCRETE REPAIR AREA
- CONCRETE REPAIR AREA
- EPOXY RESIN INJECTION (ERI)
- G#

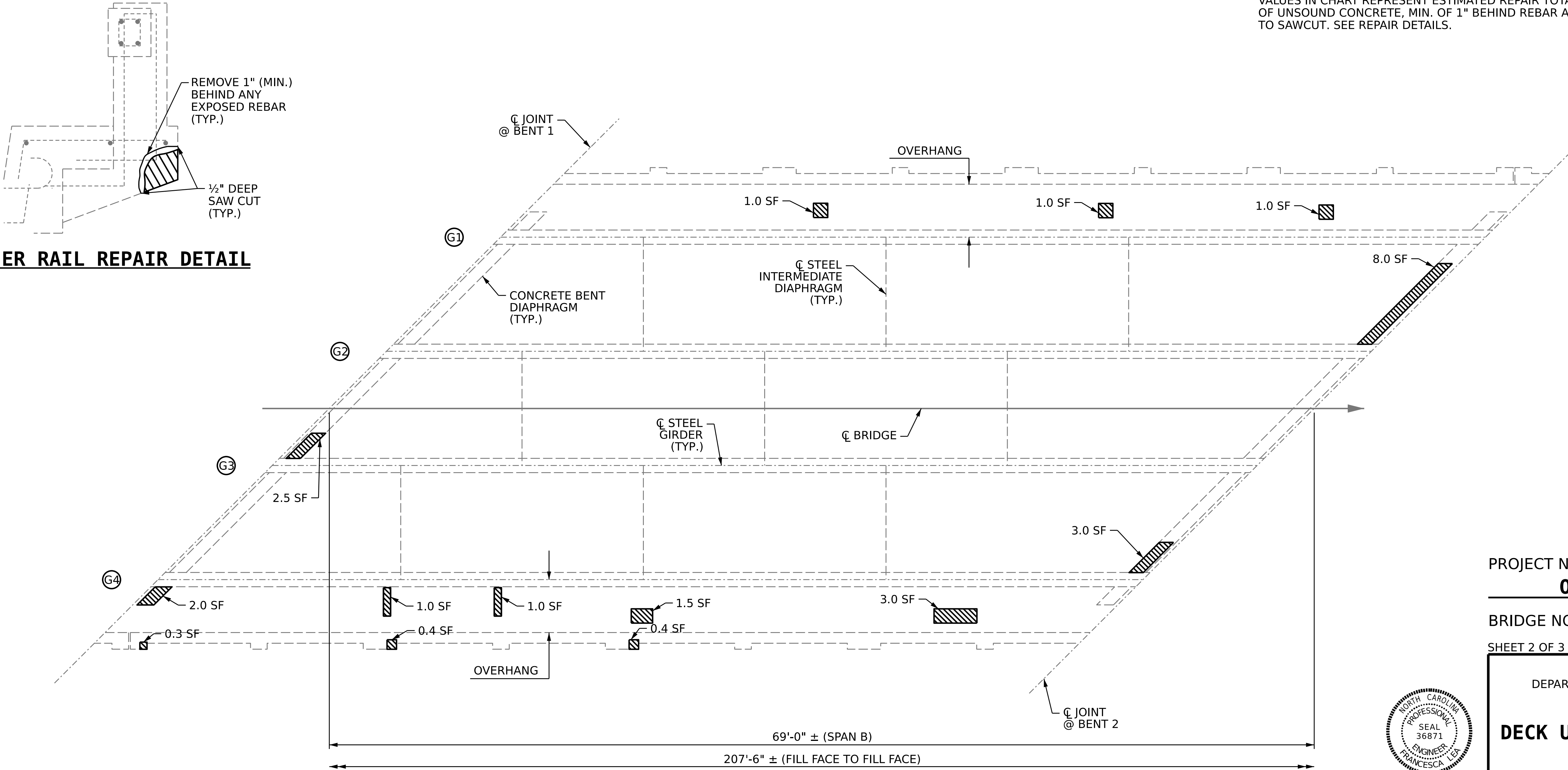
GIRDER NUMBER

AS-BUILT REPAIR QUANTITY TABLE

DECK UNDERSIDE REPAIRS SPAN B	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	0	0		
CONCRETE DIAPHRAGM	15.5	5.2		
OVERHANG	9.5	3.2		
CONCRETE BARRIER RAIL	1.1	0.4		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	0	0		
CONCRETE DIAPHRAGM	0	0		
OVERHANG	0	0		

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

BARRIER RAIL REPAIR DETAIL



PROJECT NO. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670082**

SHEET 2 OF 3



DocuSigned by:
Francesca Lea
5793AD8850584EF...
08/19/2026

DECK UNDERSIDE REPAIRS
SPAN B

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S5-07
1			3			TOTAL SHEETS
2			4			56

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

DRAWN BY: J.J.ANDERSON/SBAH DATE: 05/2026
CHECKED BY: S. LOTFI DATE: 07/2026
DESIGN ENGINEER OF RECORD: DATE:

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN 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 LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

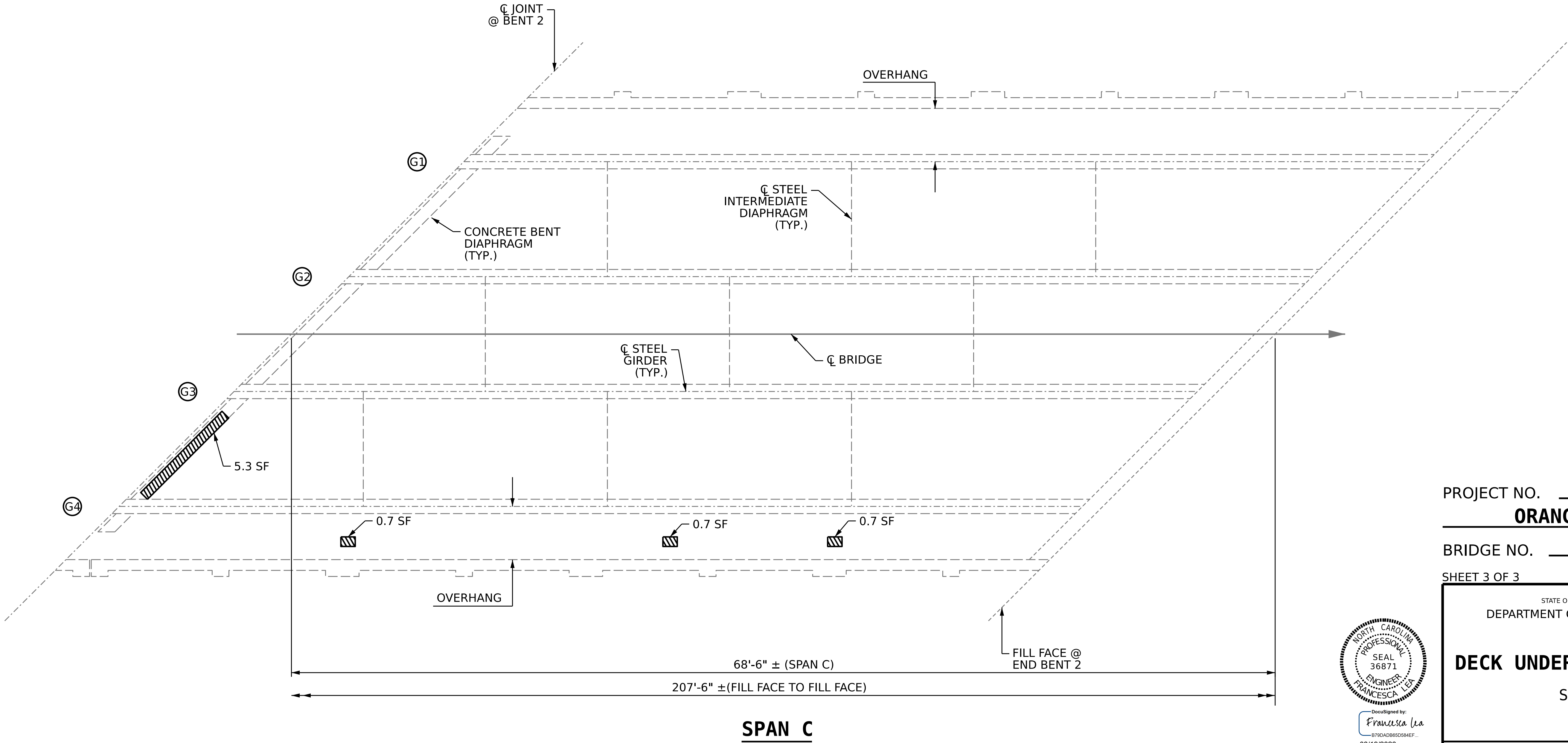
FOR OVERHANG AND DIAPHRAGM REPAIRS, SEE "OVERHANG AND DIAPHRAGM REPAIR DETAILS" SHEET.

- SHOTCRETE REPAIR AREA
- CONCRETE REPAIR AREA
- EPOXY RESIN INJECTION (ERI)
- GIRDER NUMBER

AS-BUILT REPAIR QUANTITY TABLE

DECK UNDERSIDE REPAIRS SPAN C	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	0	0		
CONCRETE DIAPHRAGM	5.3	1.8		
OVERHANG	2.1	0.7		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	0	0		
CONCRETE DIAPHRAGM	0	0		
OVERHANG	0	0		

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



PROJECT NO. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670082**

SHEET 3 OF 3



DocuSigned by:
Francesca Lea
5703AD880584EF...
08/19/2026

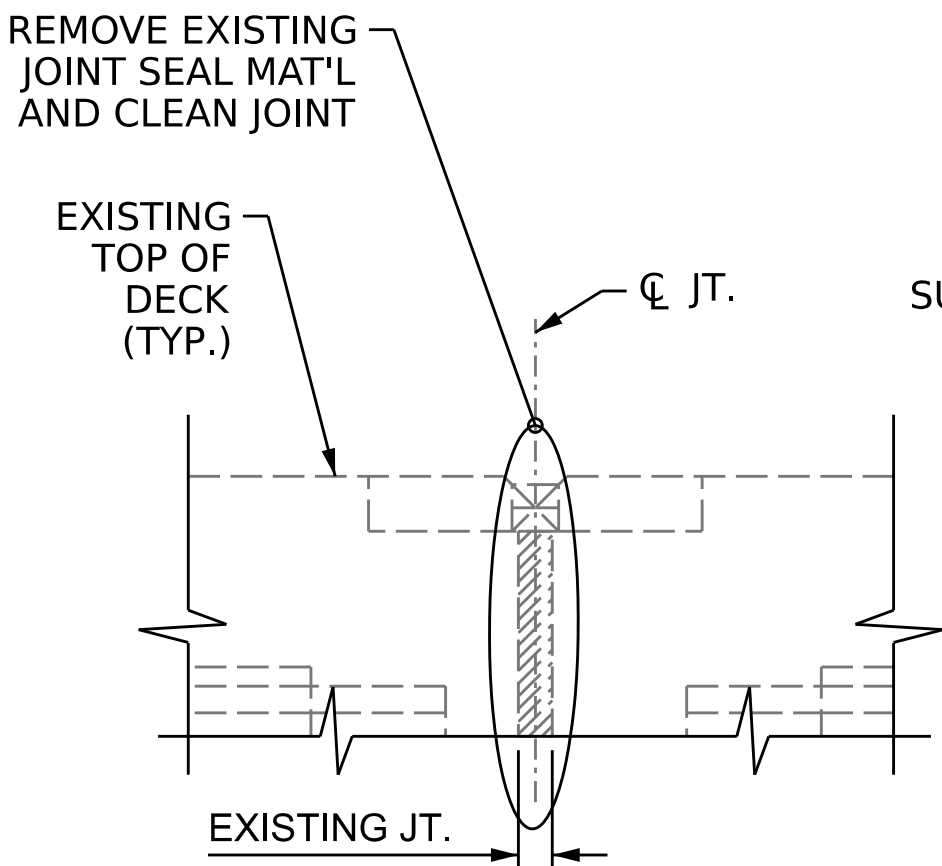
DECK UNDERSIDE REPAIRS
SPAN C

REVISIONS

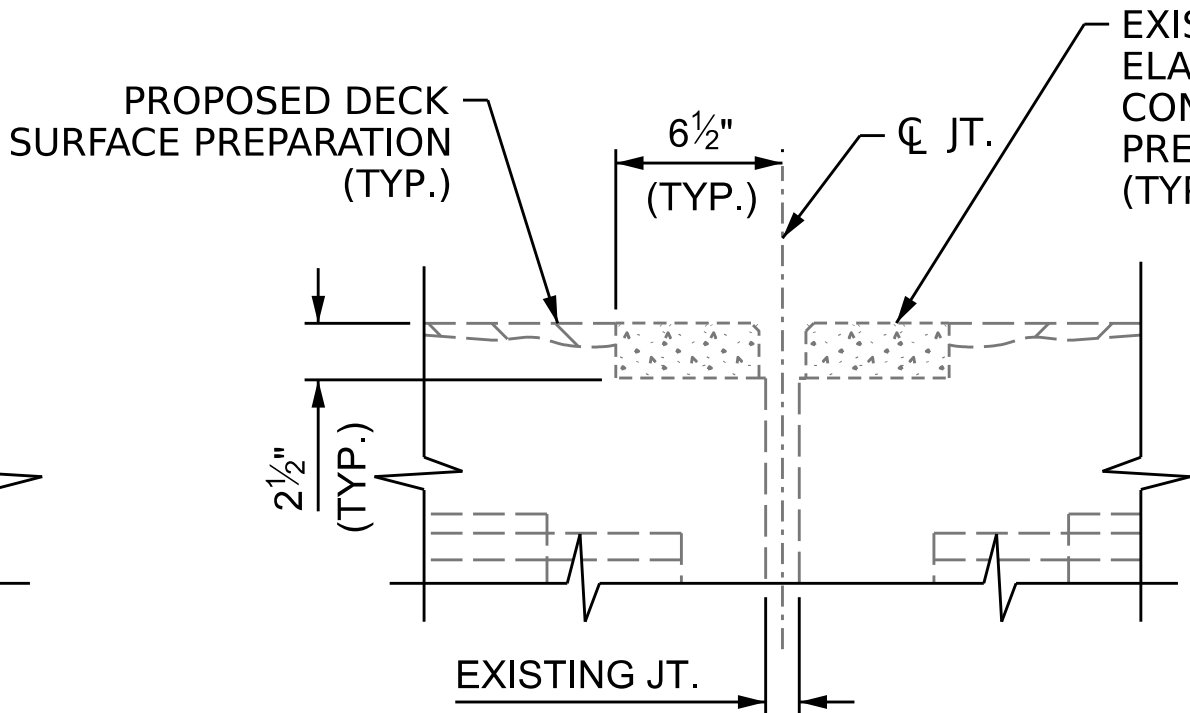
NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.
1			3			S5-08
2			4			TOTAL SHEETS 56

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

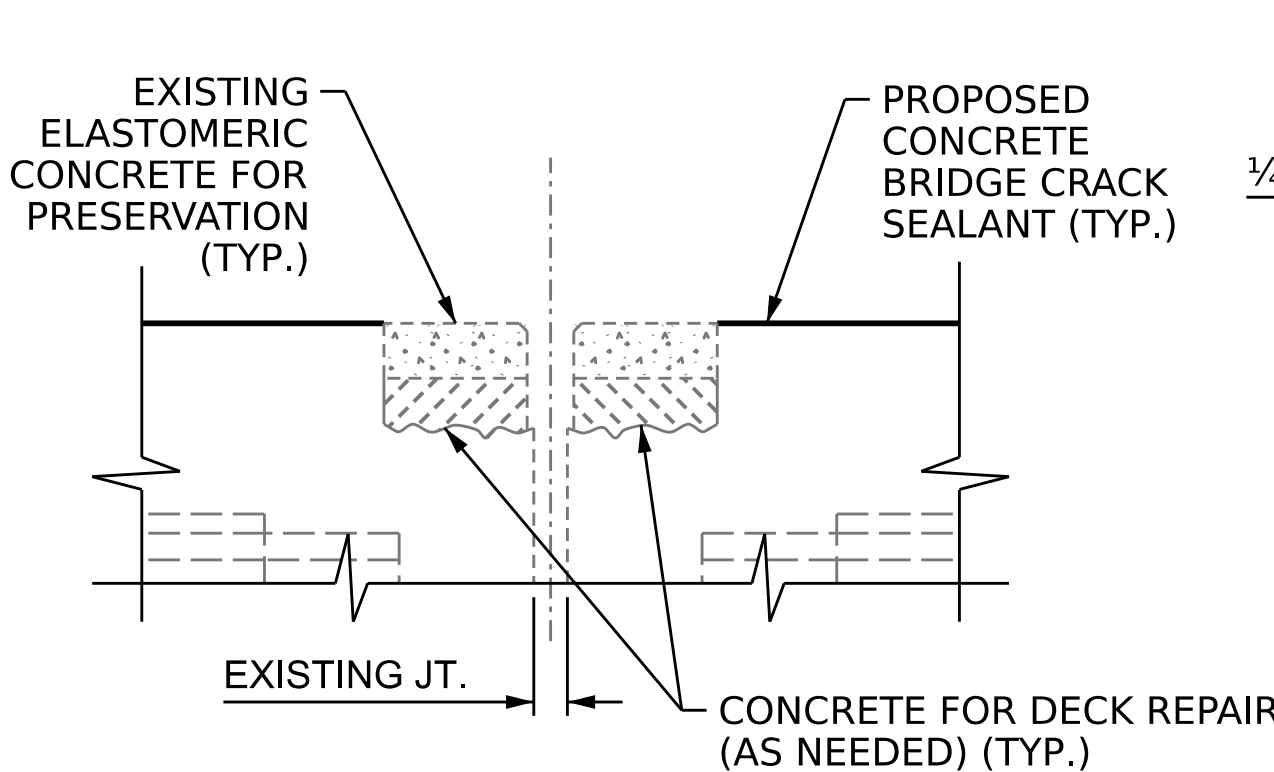
DRAWN BY: **J.J.ANDERSON/SBAH** DATE: **04/2026**
CHECKED BY: **S. LOTFI** DATE: **07/2026**
DESIGN ENGINEER OF RECORD: DATE:



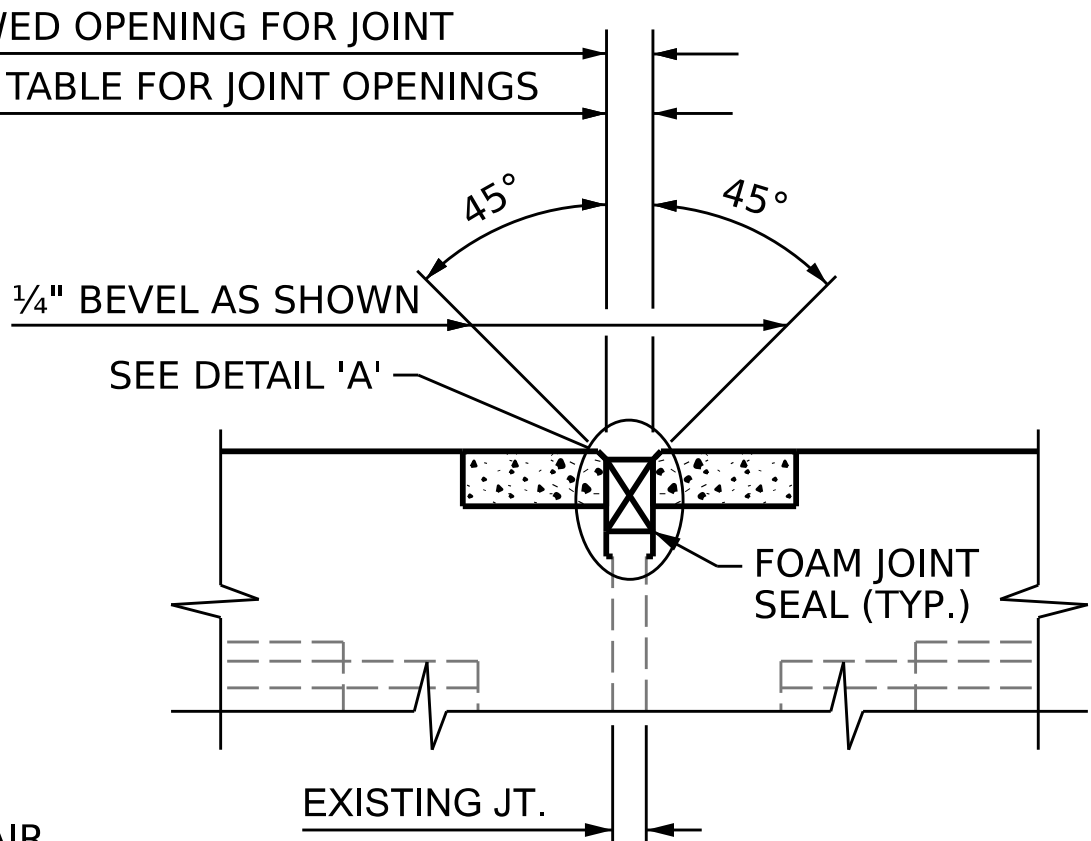
EXISTING JOINT SEAL



EXISTING JOINT AFTER JOINT DEMOLITION



PROPOSED JOINT PRIOR TO SAWING



PROPOSED FOAM JOINT SEAL

SECTION A-A
(TYP. AT BENTS)

SAWED JOINT OPENING TABLE			
LOCATION	SAWED JT. OPENING (PERPENDICULAR TO JT.)		
	AT 45°	AT 60°	AT 90°
BENT 1	2 1/8"	2"	1 3/4"
BENT 2	2"	1 1/8"	1 3/4"

JOINT REPAIR QUANTITY TABLE		
	ESTIMATED	ACTUAL
FOAM JOINT SEALS FOR PRESERVATION	85.2 LF	

ELASTOMERIC CONCRETE FOR PRESERVATION		
LOCATION	ESTIMATED (CU.FT.)	ACTUAL (CU.FT.)
BENT 1	8.2	
BENT 2	8.2	
TOTAL	16.4	

NOTES

FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY OR SEALANT WORK IS COMPLETE.

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

THE MANUFACTURER IS TO PROVIDE THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE FOAM JOINT SEAL FOR THE SIZE OF THE OPENING ON THE PLANS AND ACCOMMODATE THE MINIMUM EXPANSION SHOWN ON THE PLANS.

FOAM JOINTS SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS.

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

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

THE INSTALLED FOAM JOINTS SHALL BE WATER TIGHT.

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

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

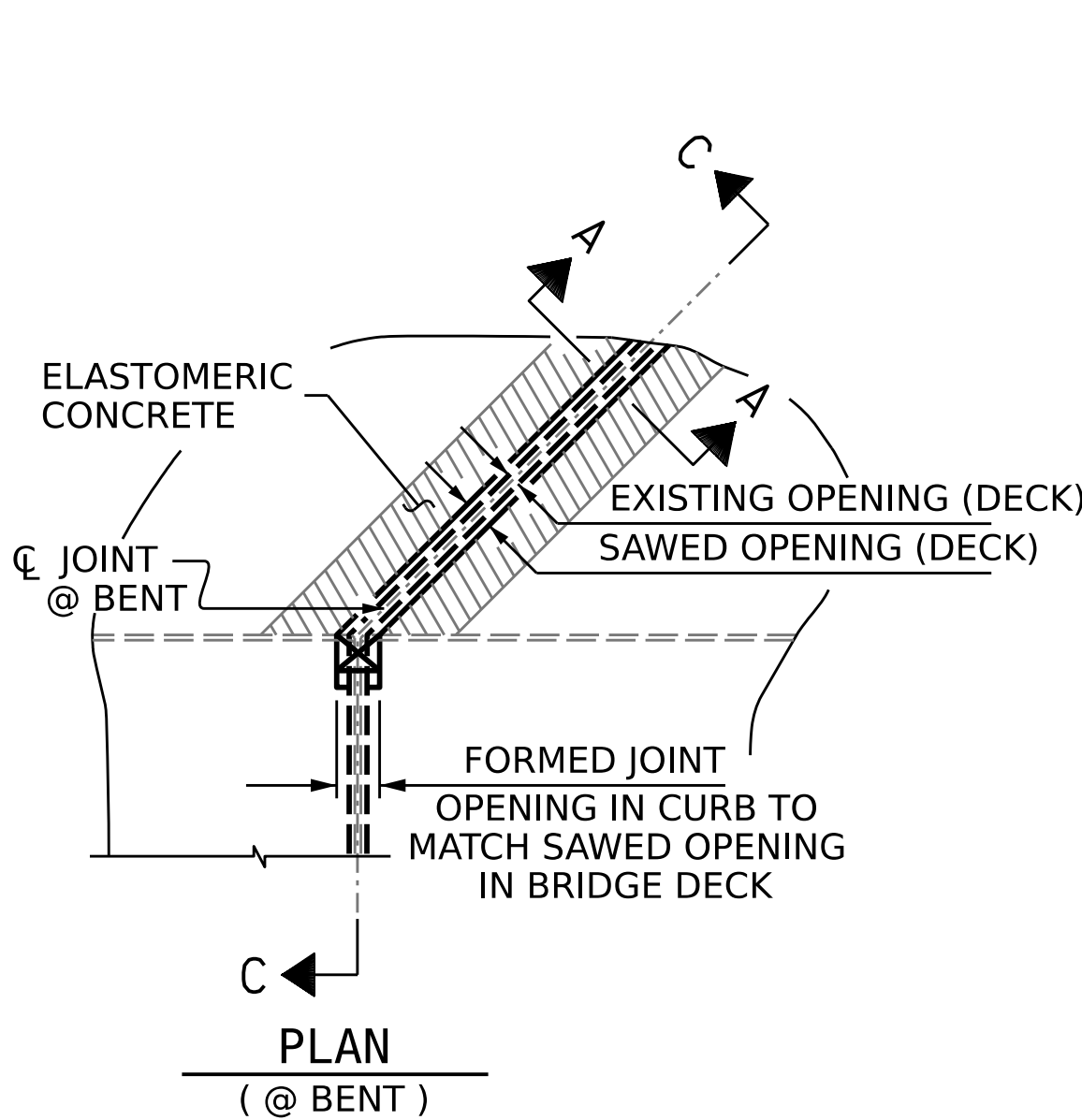
QUANTITIES SHOWN IN THE ELASTOMERIC CONCRETE FOR PRESERVATION TABLE ARE BASED ON THE MINIMUM JOINT DEMOLITION SHOWN.

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

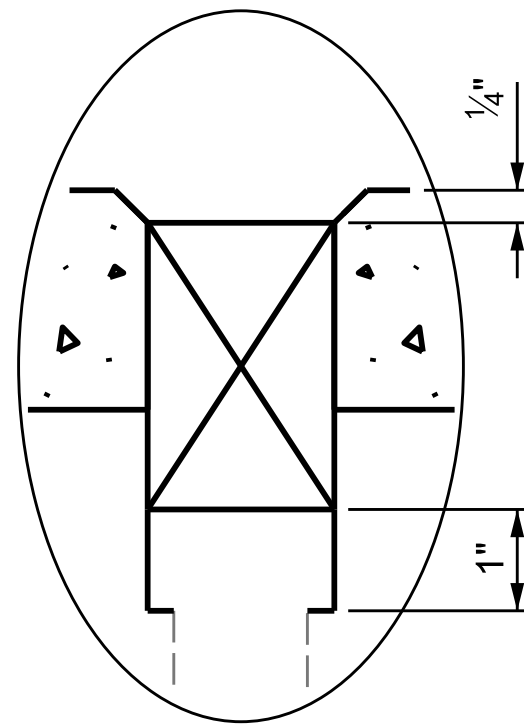
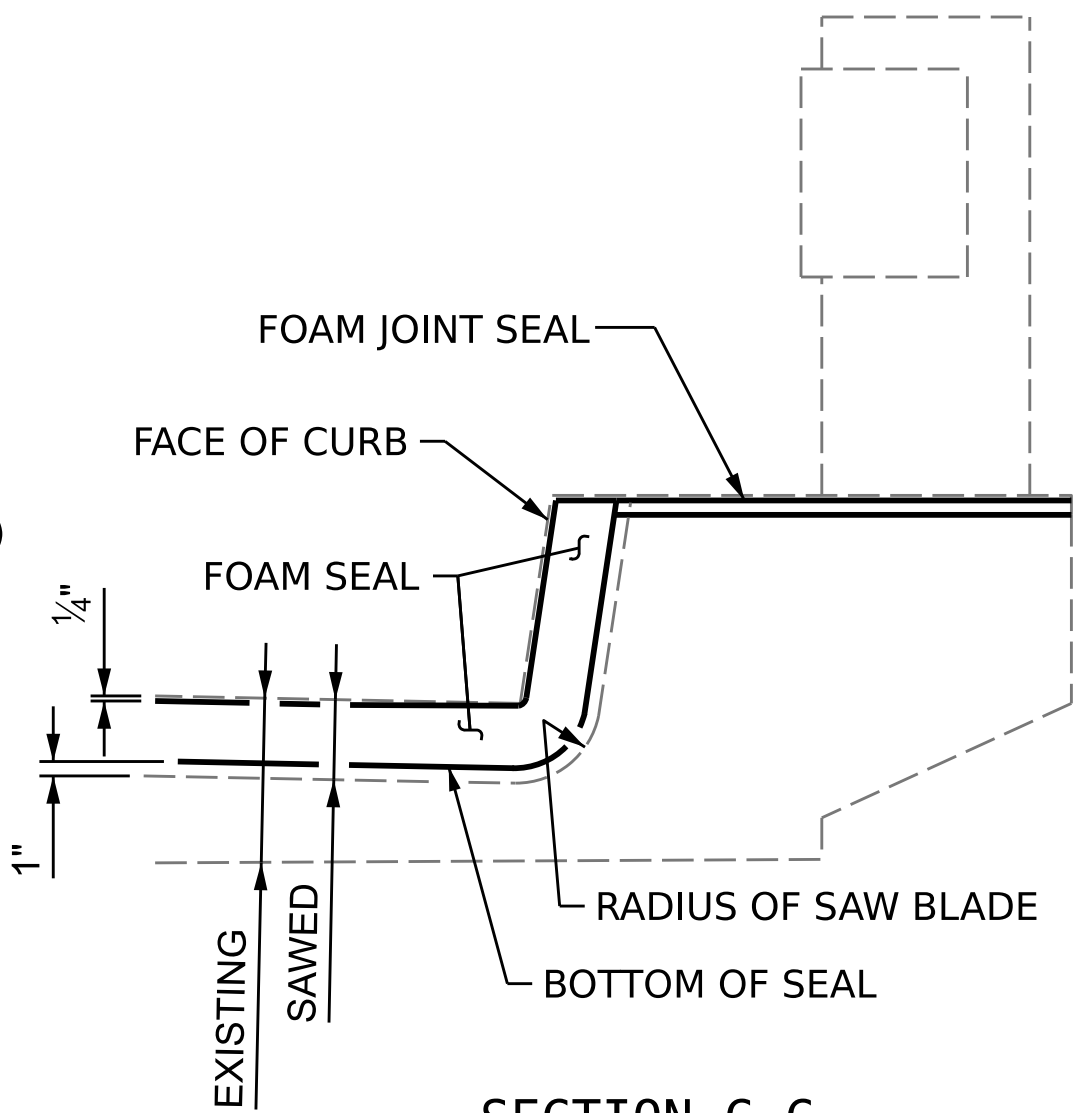
FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.



JOINT SEAL DETAILS



DETAIL 'A'

PROJECT NO. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670082**



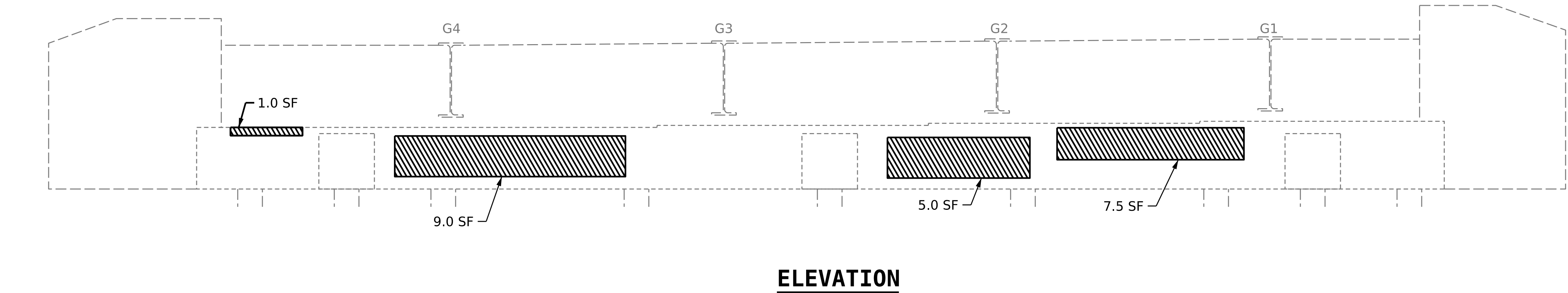
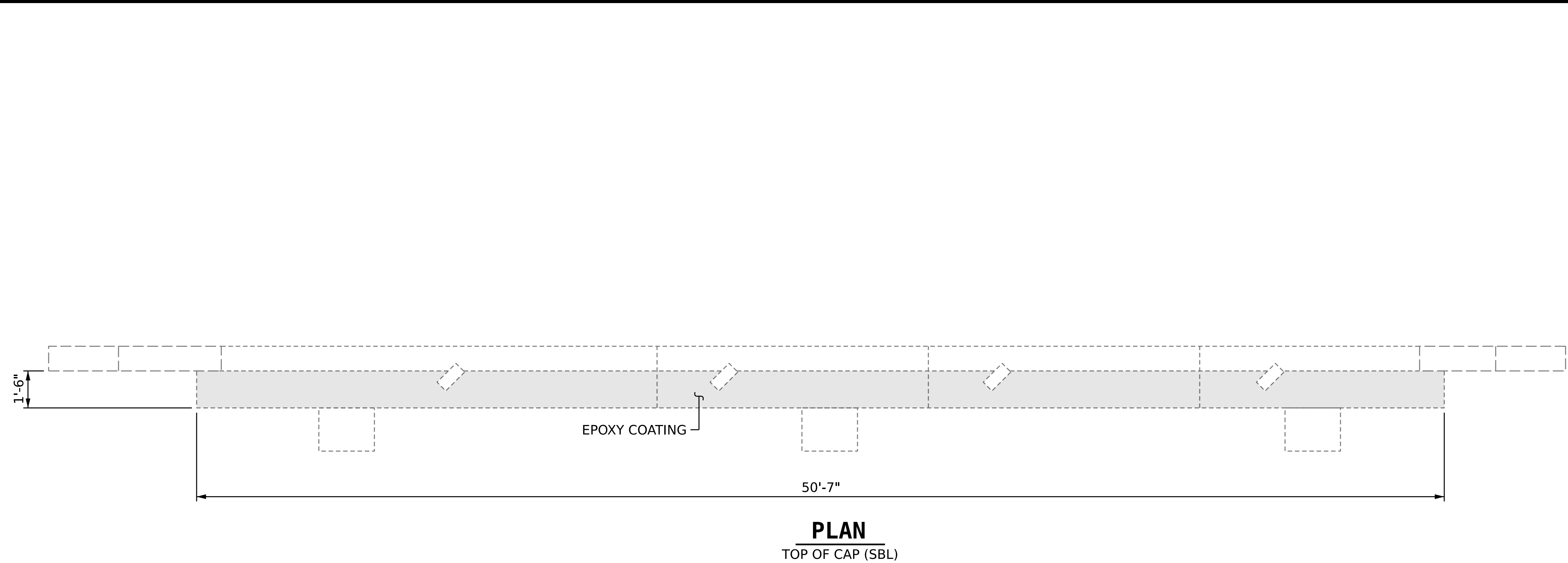
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

FOAM JOINT SEALS
FOR PRESERVATION
DETAILS

REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	
1			3		S5-09
2			4		TOTAL SHEETS 56

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

DRAWN BY: J.J.ANDERSON/SBAH DATE: 05/2026
CHECKED BY: S. LOTFI DATE: 07/2026
DESIGN ENGINEER OF RECORD: DATE:



AS-BUILT REPAIR QUANTITY TABLE

END BENT 1				
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ.FT.	VOLUME CU.FT.	AREA SQ.FT.	VOLUME CU.FT.
CAP	22.5	10.8		
CURTAINWALL	0.0	0.0		
WINGWALL	0.0	0.0		
CONCRETE REPAIRS	AREA SQ.FT.	VOLUME CU.FT.	AREA SQ.FT.	VOLUME CU.FT.
CAP	0.0	0.0		
CURTAINWALL	0.0	0.0		
WINGWALL	0.0	0.0		
EPOXY RESIN INJECTION	LN. FT.		LN. FT.	
CAP	0.0			
CURTAINWALL	0.0			
WINGWALL	0.0			
EPOXY COATING	AREA SQ.FT.		AREA SQ.FT.	
CAP	73.7			

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 SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

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

FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

SHOTCRETE REPAIR AREA

CONCRETE REPAIR AREA

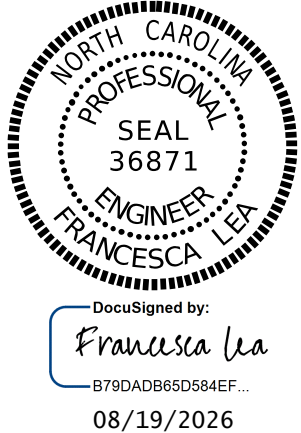
EPOXY REISN INJECTION

PROJECT NO. **I-5958**

ORANGE COUNTY

BRIDGE NO. **670082**

SHEET 1 OF 6

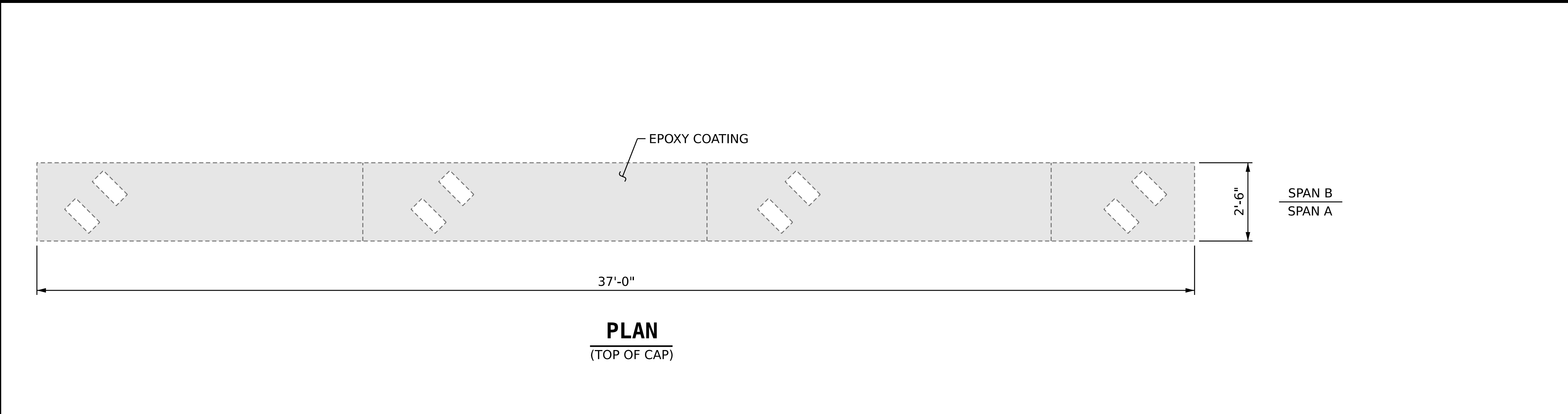


SUBSTRUCTURE REPAIRS END BENT 1

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

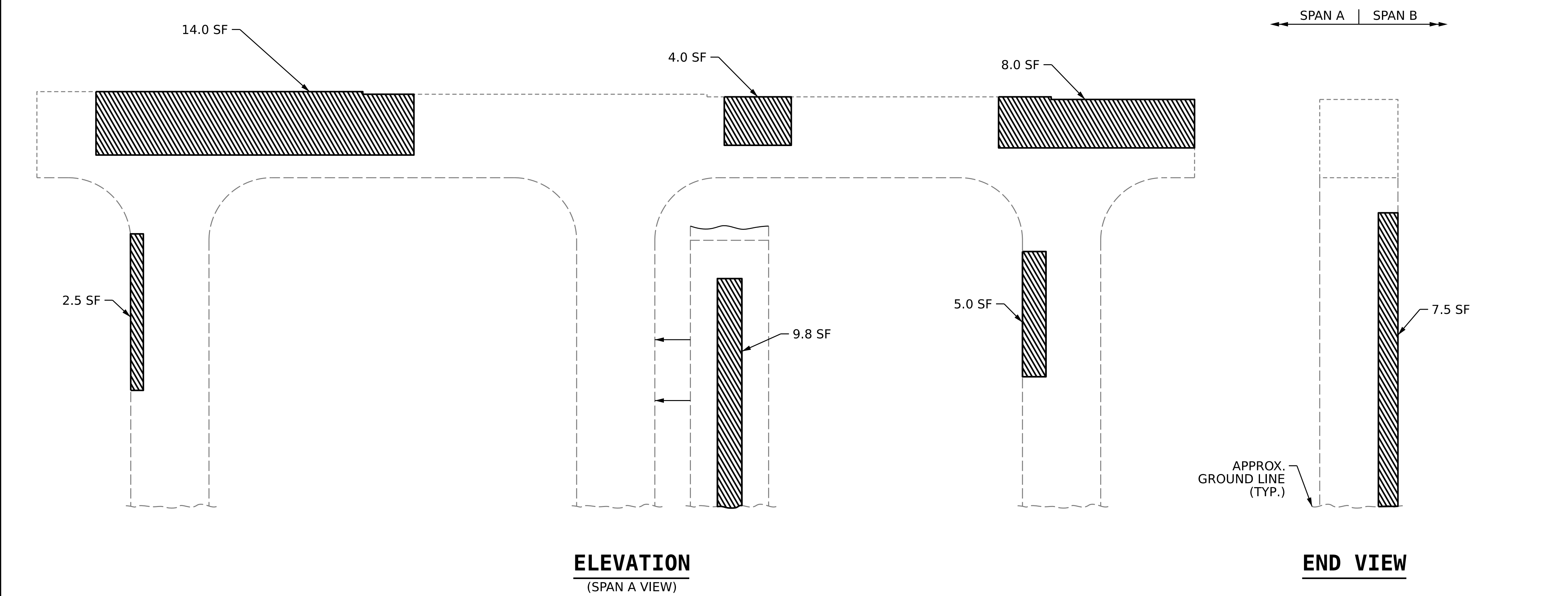
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S5-10 TOTAL SHEETS 56
2			4			

DRAWN BY: **J.J.ANDERSON/SBAH** DATE: **04/2026**
CHECKED BY: **S. LOTFI** DATE: **06/2026**
DESIGN ENGINEER OF RECORD: _____ DATE: _____



PLAN

(TOP OF CAP)



ELEVATION

(SPAN A VIEW)

END VIEW

AS-BUILT REPAIR QUANTITY TABLE

BENT 1				
SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SQ.FT.	VOLUME CU.FT.	AREA SQ.FT.	VOLUME CU.FT.
CAP	26.0	13.0		
COLUMN	24.8	12.4		
CONCRETE REPAIRS	AREA SQ.FT.	VOLUME CU.FT.	AREA SQ.FT.	VOLUME CU.FT.
	0.0	0.0		
CAP	0.0	0.0		
COLUMN	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.	LN. FT.	
CAP		0.0		
COLUMN		0.0		
EPOXY COATING		AREA SQ.FT.	AREA SQ.FT.	
CAP		88.2		

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 SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

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

FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

 SHOTCRETE REPAIR AREA

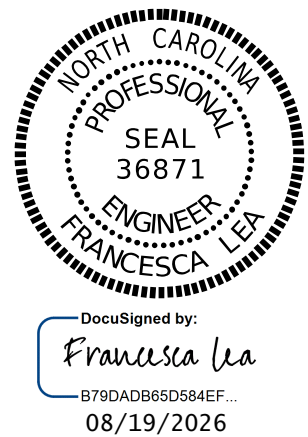
 CONCRETE REPAIR AREA

PROJECT NO. **I-5958**

ORANGE COUNTY

BRIDGE NO. **670082**

SHEET 2 OF 6

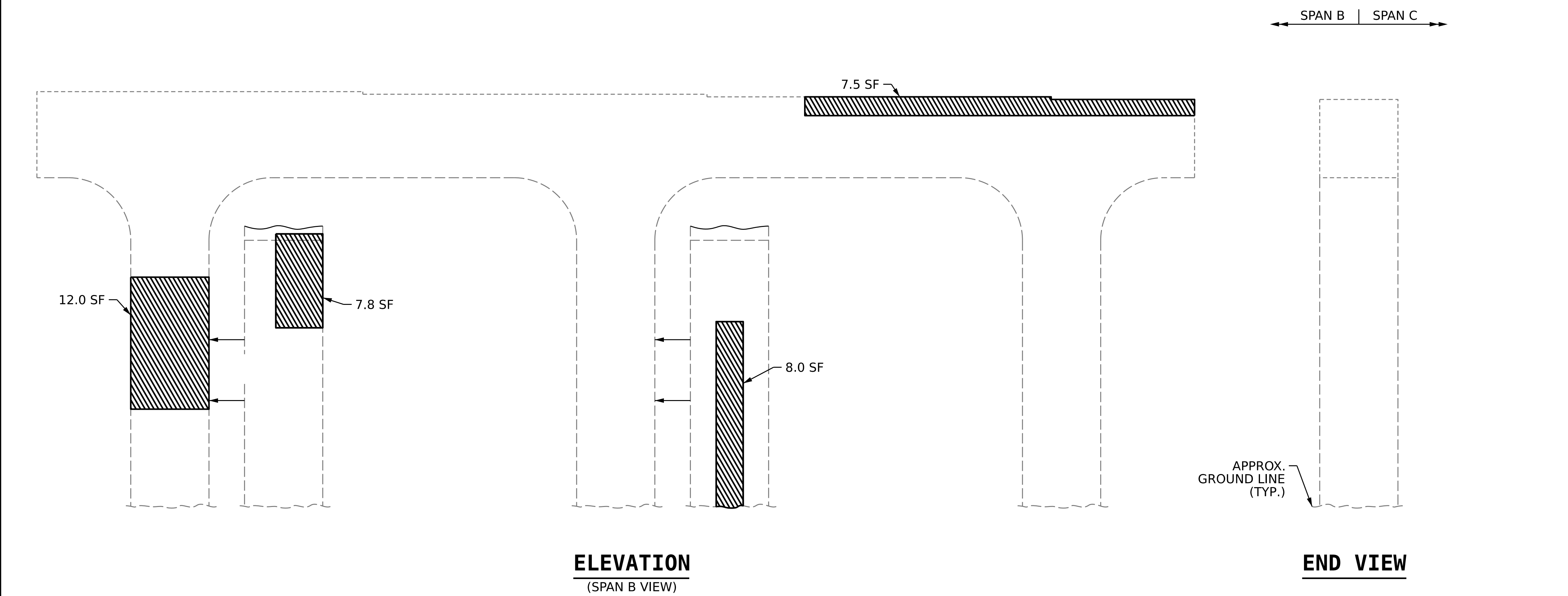
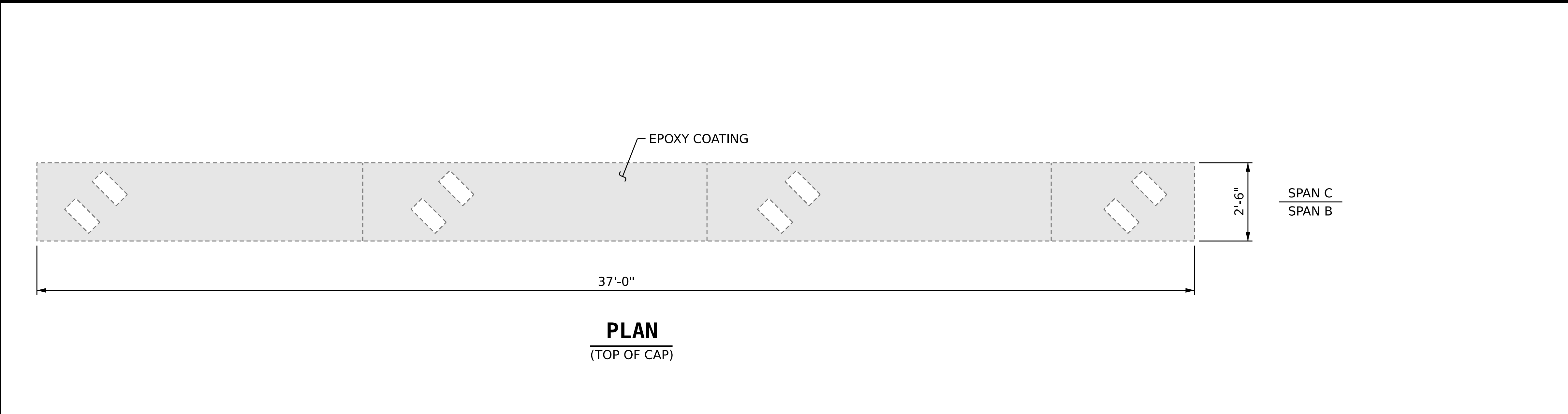


SUBSTRUCTURE REPAIRS
BENT 1
SPAN A FACE

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S5-11 TOTAL SHEETS 56
2			4			

DRAWN BY: **J.J.ANDERSON/SBAH** DATE: **05/2026**
CHECKED BY: **S. LOTFI** DATE: **06/2026**
DESIGN ENGINEER OF RECORD: _____ DATE: _____



AS-BUILT REPAIR QUANTITY TABLE				
BENT 2				
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ.FT.	VOLUME CU.FT.	AREA SQ.FT.	VOLUME CU.FT.
CAP	7.5	3.8		
COLUMN	27.8	13.9		
CONCRETE REPAIRS	AREA SQ.FT.	VOLUME CU.FT.	AREA SQ.FT.	VOLUME CU.FT.
CAP	0.0	0.0		
COLUMN	0.0	0.0		
EPOXY RESIN INJECTION	LN. FT.		LN. FT.	
CAP	0.0			
COLUMN	0.0			
EPOXY COATING	AREA SQ.FT.		AREA SQ.FT.	
CAP	88.2			

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 SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

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

FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

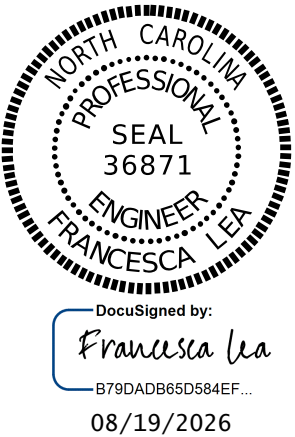
-  SHOTCRETE REPAIR AREA
-  CONCRETE REPAIR AREA

DRAWN BY: J.J.ANDERSON/SBAH DATE: 05/2026
CHECKED BY: S. LOTFI DATE: 06/2026
DESIGN ENGINEER OF RECORD: DATE:

8/19/2026
S:\DPG1\Division7\I-5958\Bridge #670082\Plans\405_025_I-5958_SMU_B2B_S5-13_670082.dgn
filea

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			55-13
2			4			56

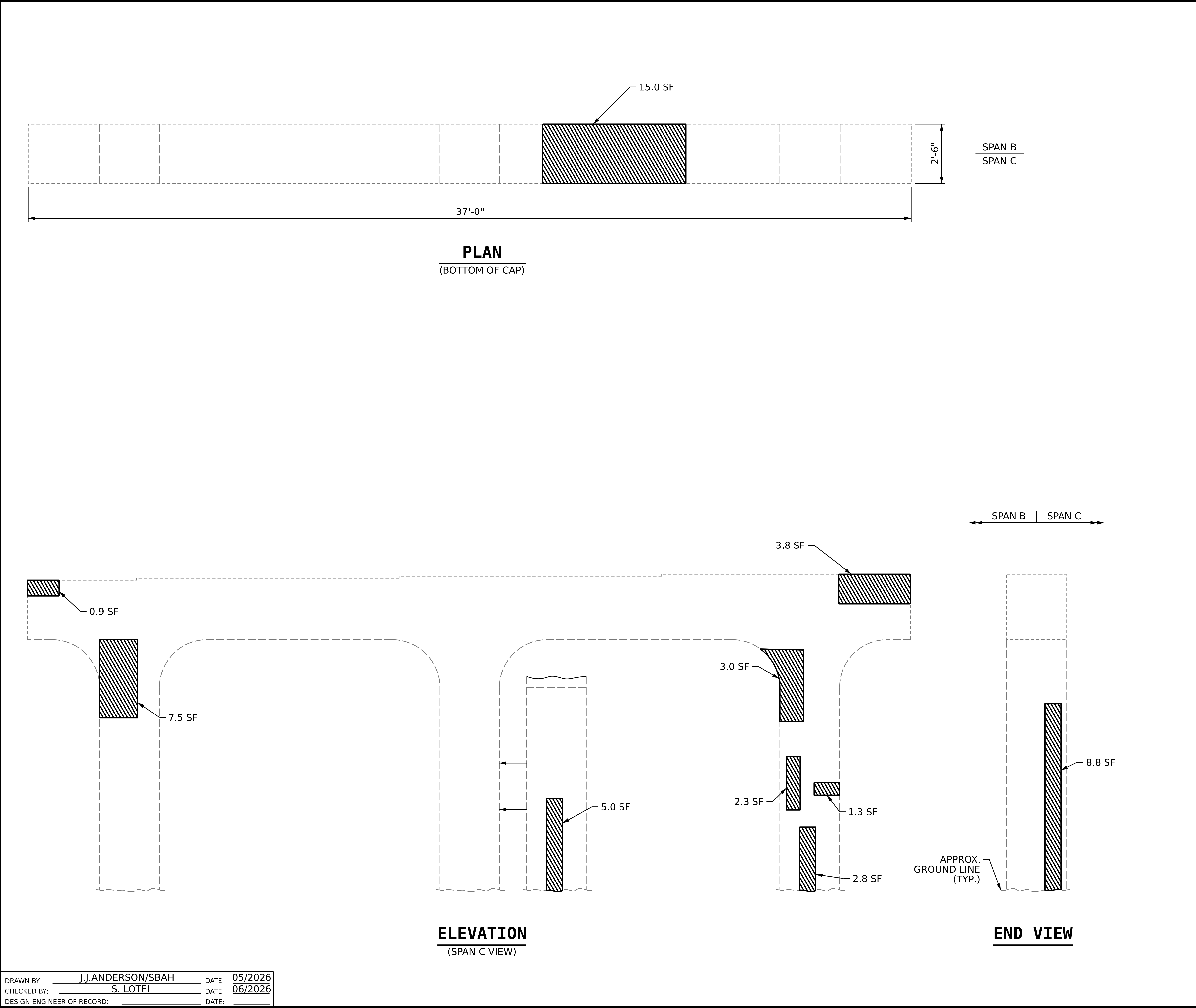
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



PROJECT NO. I-5958
ORANGE COUNTY
BRIDGE NO. 670082

SHEET 4 OF 6

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
**SUBSTRUCTURE REPAIRS
BENT 2
SPAN B FACE**



AS-BUILT REPAIR QUANTITY TABLE

BENT 2				
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ.FT.	VOLUME CU.FT.	AREA SQ.FT.	VOLUME CU.FT.
CAP	19.7	9.9		
COLUMN	30.7	15.4		
CONCRETE REPAIRS	AREA SQ.FT.	VOLUME CU.FT.	AREA SQ.FT.	VOLUME CU.FT.
CAP	0.0	0.0		
COLUMN	0.0	0.0		
EPOXY RESIN INJECTION	LN. FT.		LN. FT.	
CAP	0.0			
COLUMN	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 SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

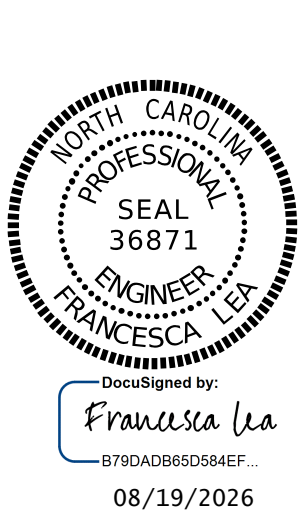
FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

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

PROJECT NO. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670082**

SHEET 5 OF 6



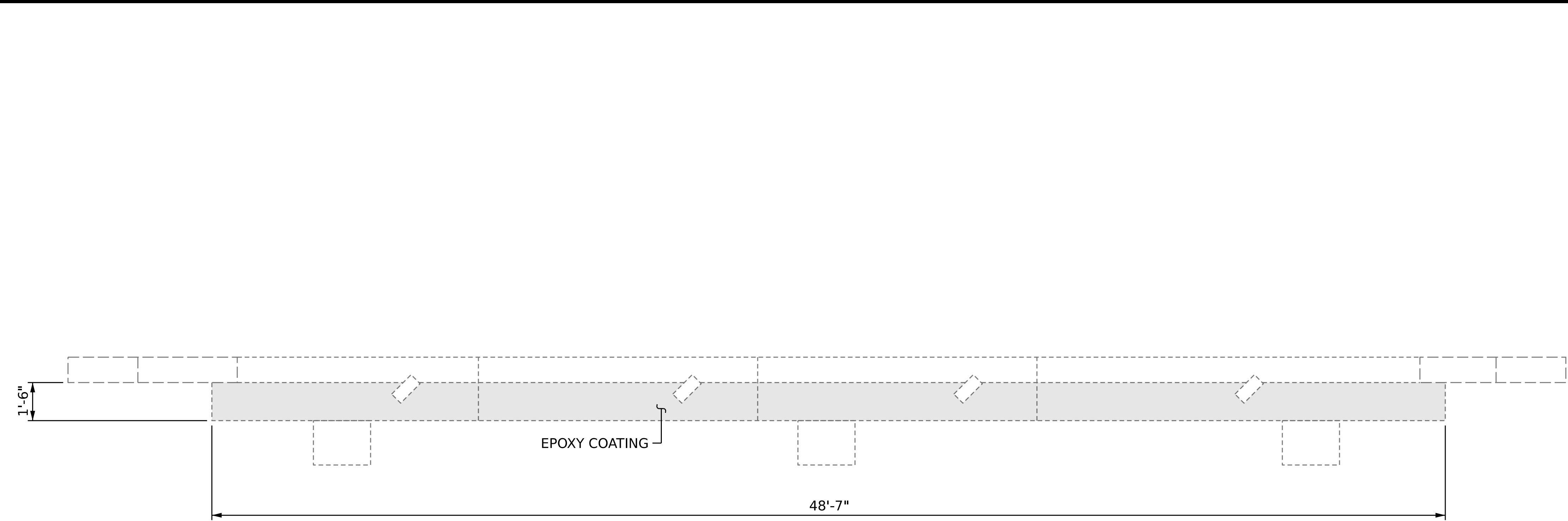
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE REPAIRS
BENT 2
SPAN C FACE

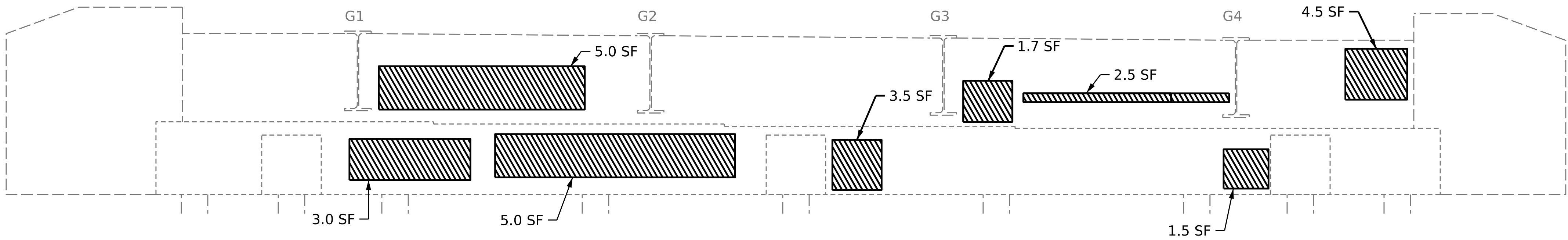
REVISIONS						SHEET NO. S5-14 TOTAL SHEETS 56
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			
2			4			

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY: J.J.ANDERSON/SBAH DATE: 05/2026
CHECKED BY: S. LOTFI DATE: 06/2026
DESIGN ENGINEER OF RECORD: DATE:



PLAN
TOP OF CAP (SBL)



ELEVATION

AS-BUILT REPAIR QUANTITY TABLE

END BENT 2				
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ.FT.	VOLUME CU.FT.	AREA SQ.FT.	VOLUME CU.FT.
CAP	13.0	6.5		
CURTAINWALL	13.7	6.9		
WINGWALL	0.0	0.0		
CONCRETE REPAIRS	AREA SQ.FT.	VOLUME CU.FT.	AREA SQ.FT.	VOLUME CU.FT.
CAP	0.0	0.0		
CURTAINWALL	0.0	0.0		
WINGWALL	0.0	0.0		
EPOXY RESIN INJECTION	LN. FT.		LN. FT.	
CAP	0.0			
CURTAINWALL	0.0			
WINGWALL	0.0			
EPOXY COATING	AREA SQ.FT.		AREA SQ.FT.	
CAP	70.7			

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 SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

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

FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

 SHOTCRETE REPAIR AREA

 CONCRETE REPAIR AREA

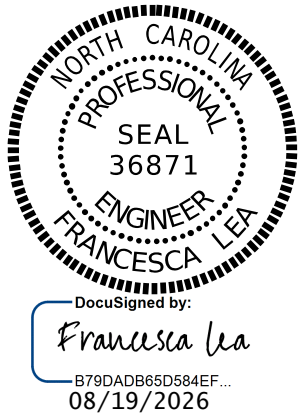
 EPOXY REISN INJECTION

PROJECT NO. **I-5958**

ORANGE COUNTY

BRIDGE NO. **670082**

SHEET 6 OF 6



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE REPAIRS
END BENT 2**

REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	
1			3		S5-15 TOTAL SHEETS 56
2			4		

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

DRAWN BY: J.J.ANDERSON/SBAH DATE: 04/2026
CHECKED BY: S. LOTFI DATE: 06/2026
DESIGN ENGINEER OF RECORD: _____ DATE: _____

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.

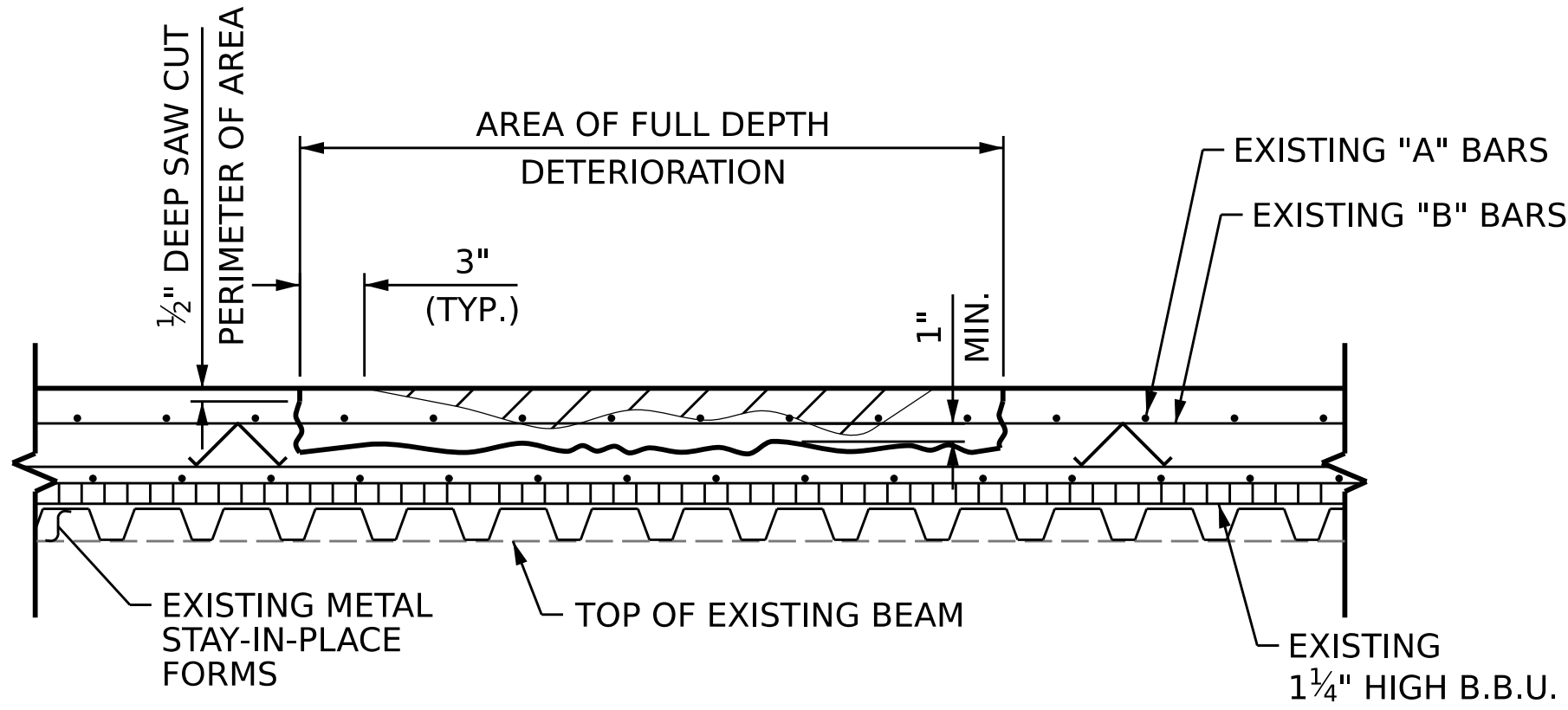
FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIR, SEE SPECIAL PROVISIONS.

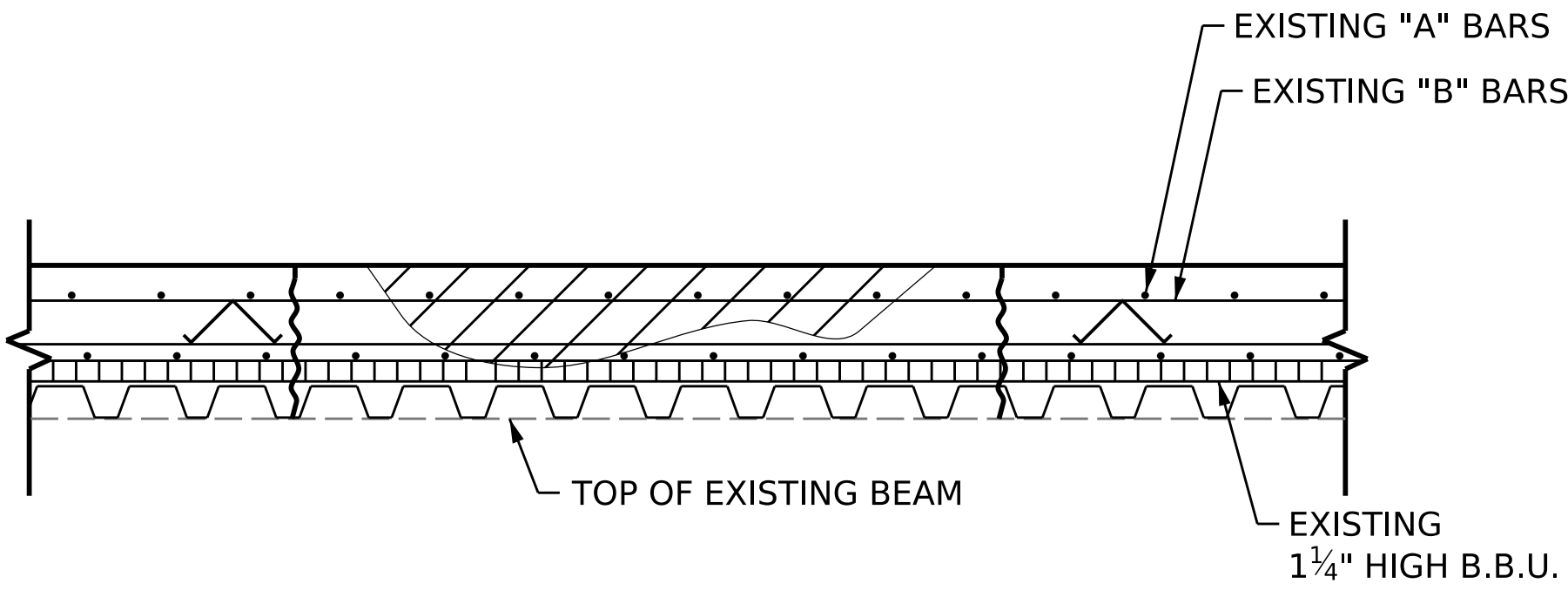
THE CONTRACTOR SHALL SUBMIT WORKING DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO STARTING WORK FOR TEMPORARY FORMWORK , FOR SUBMITTALS OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

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.

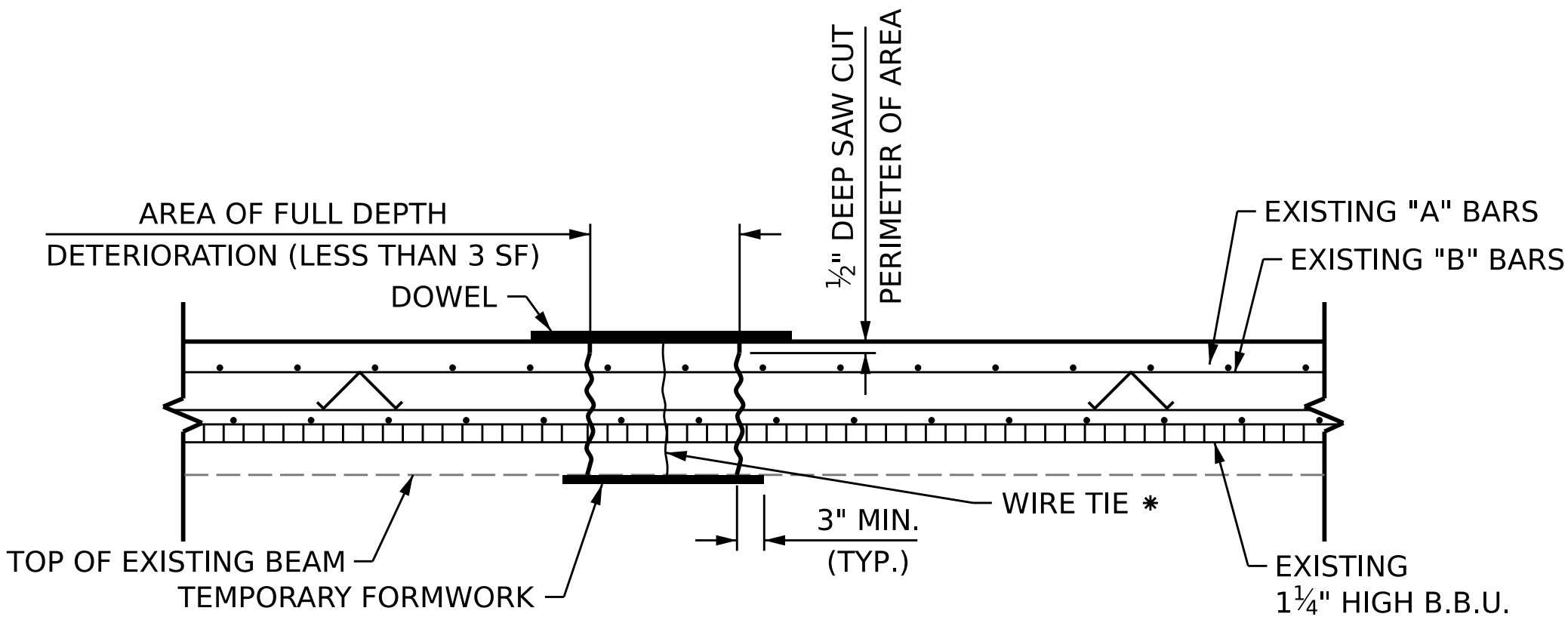
NO FORMWORK SHALL BE LEFT IN PLACE.



CLASS II (PARTIAL DEPTH) REPAIR



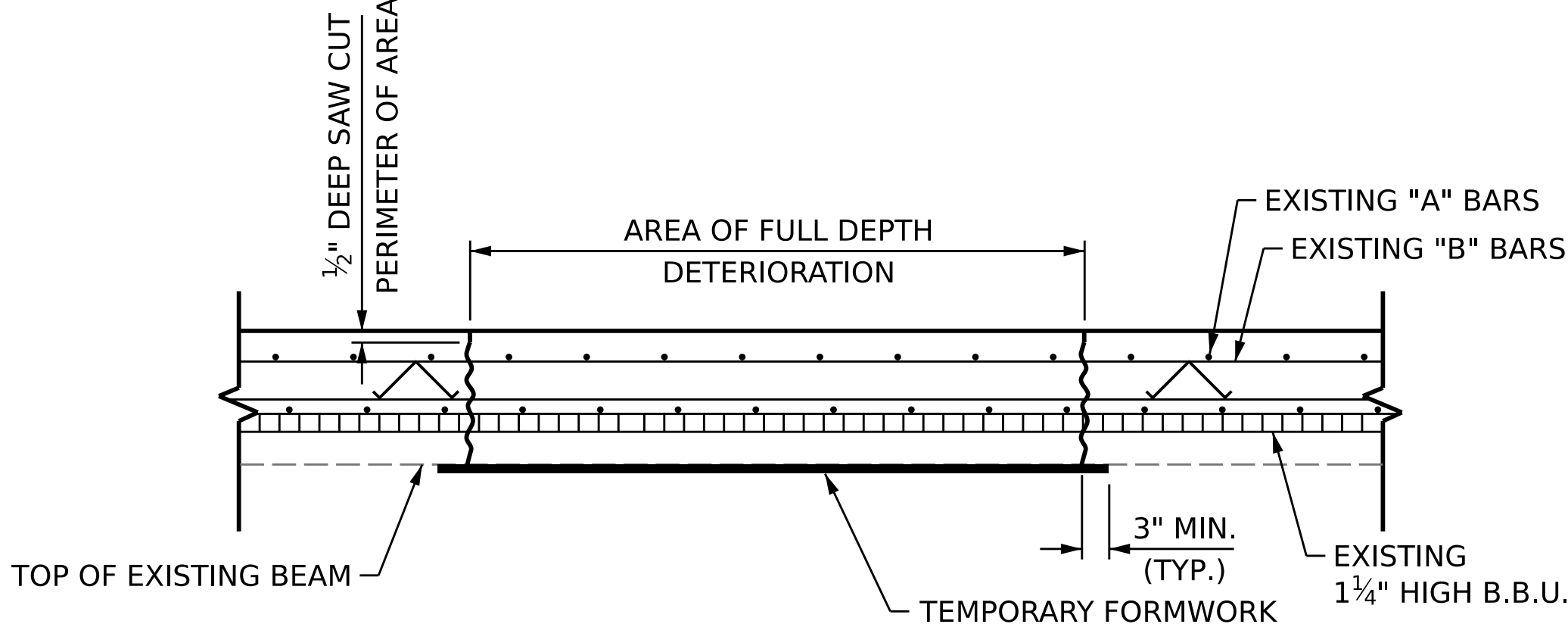
CLASS III (FULL DEPTH) REPAIR



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.



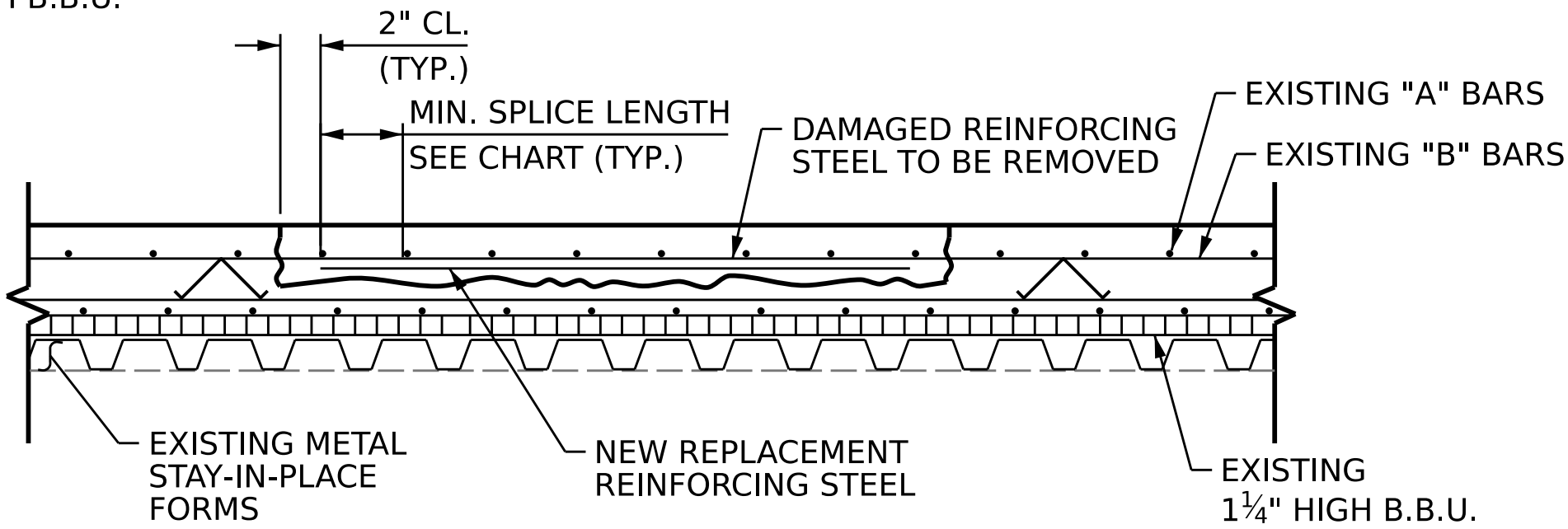
FULL DEPTH REPAIR WITH TEMPORARY FORMWORK

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

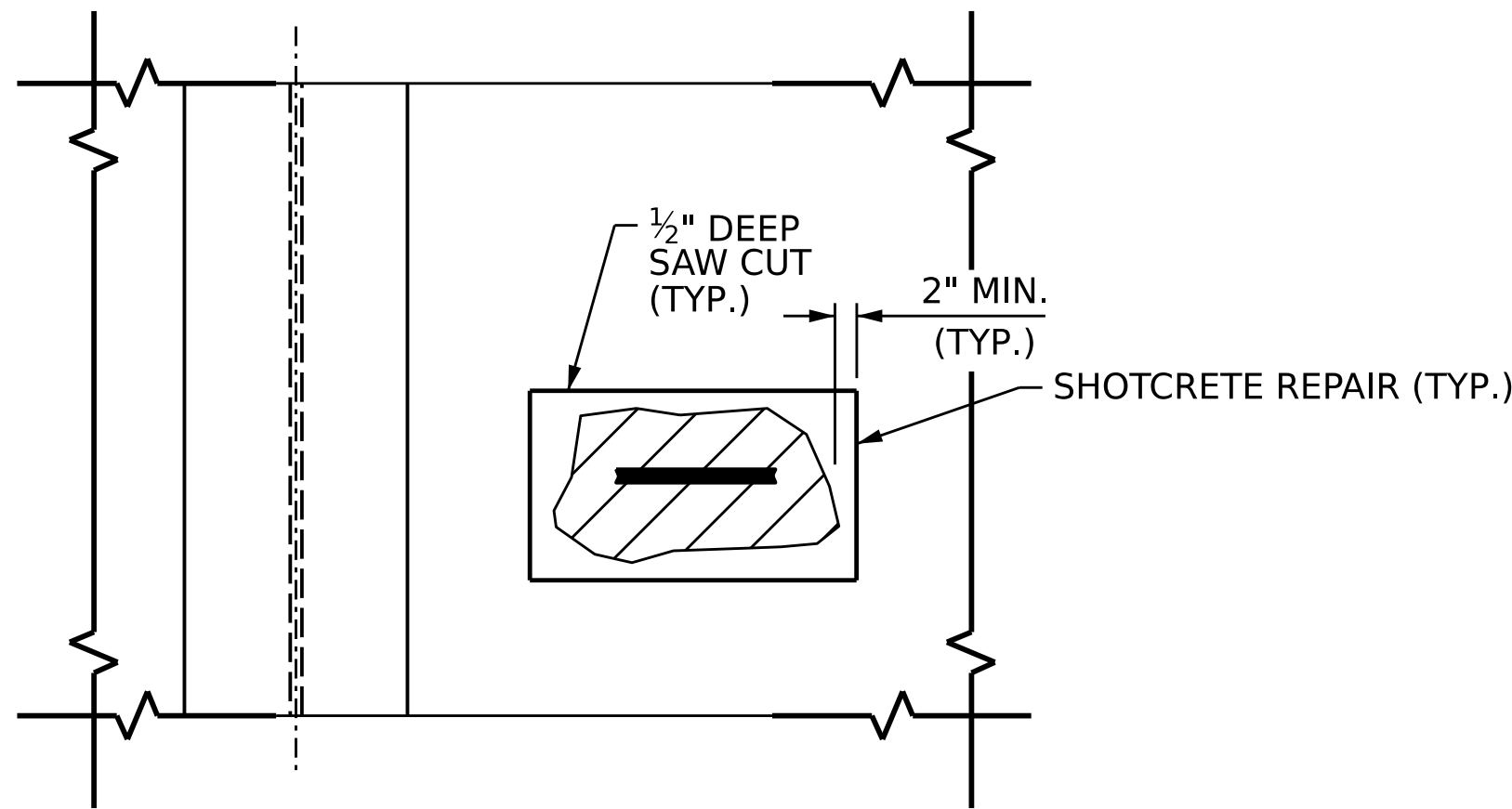


AREA OF DETERIORATION

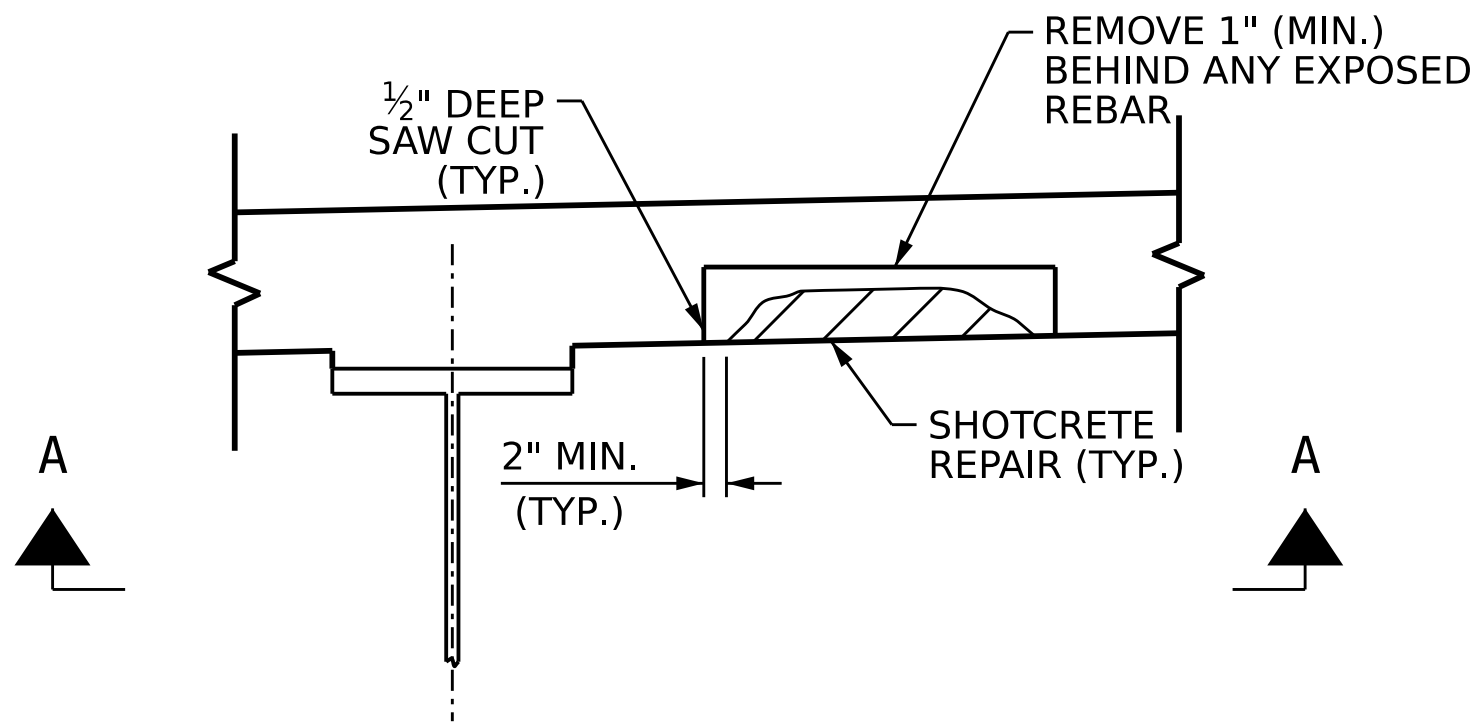
SUPERSTRUCTRE REINFORCING STEEL LENGTHS ARE BASED ON THE FOLLOWING MINIMUM SPLICE LENGTHS					
BAR SIZE	SUPERSTRUCTURE EXCEPT APPROACH SLABS, PARAPET, AND BARRIER RAIL		APPROACH SLABS		PARAPET AND BARRIER RAIL
	EPOXY COATED	UNCOATED	EPOXY COATED	UNCOATED	
#4	2'-0"	1'-9"	2'-0"	1'-9"	2'-9"
#5	2'-6"	2'-2"	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. **I-5958**

ORANGE COUNTY

BRIDGE NO. **670081 & 670082**



DocuSigned by:
Francesca Lea
8710AD8B5C584EF...
08/19/2026

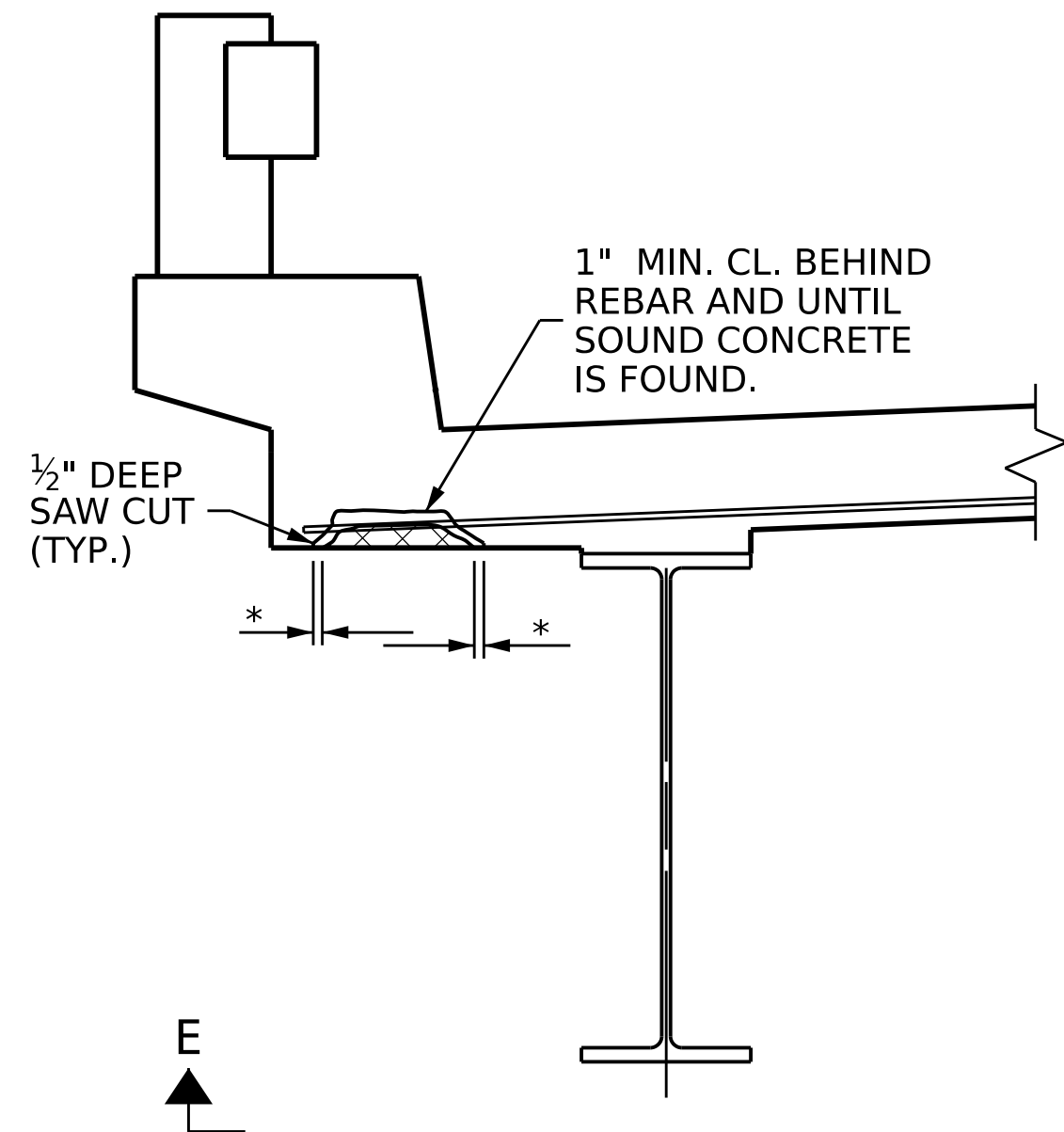
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STANDARD
DECK REPAIR DETAILS

ASSEMBLED BY: J.J.ANDERSON
CHECKED BY: S. LOTFI
DATE: 05/2026
DATE: 06/2026

DRAWN BY: NAP 09/2018
CHECKED BY: DAC 09/2018

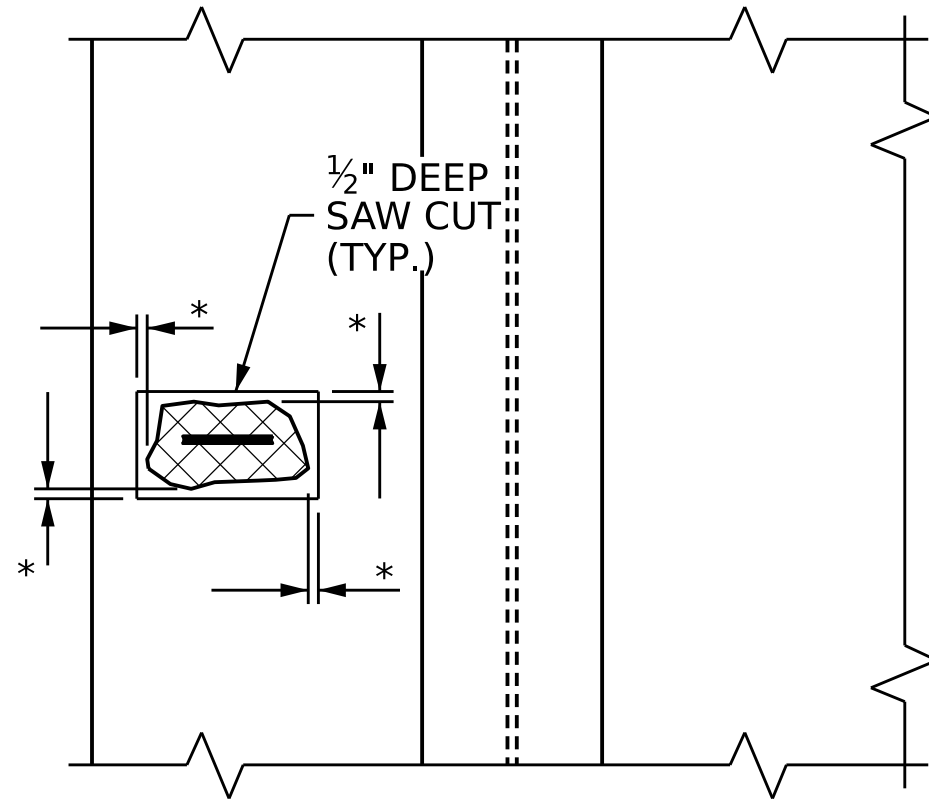
DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	
1			3		TOTAL SHEETS
2			4		56



TYPICAL SECTION

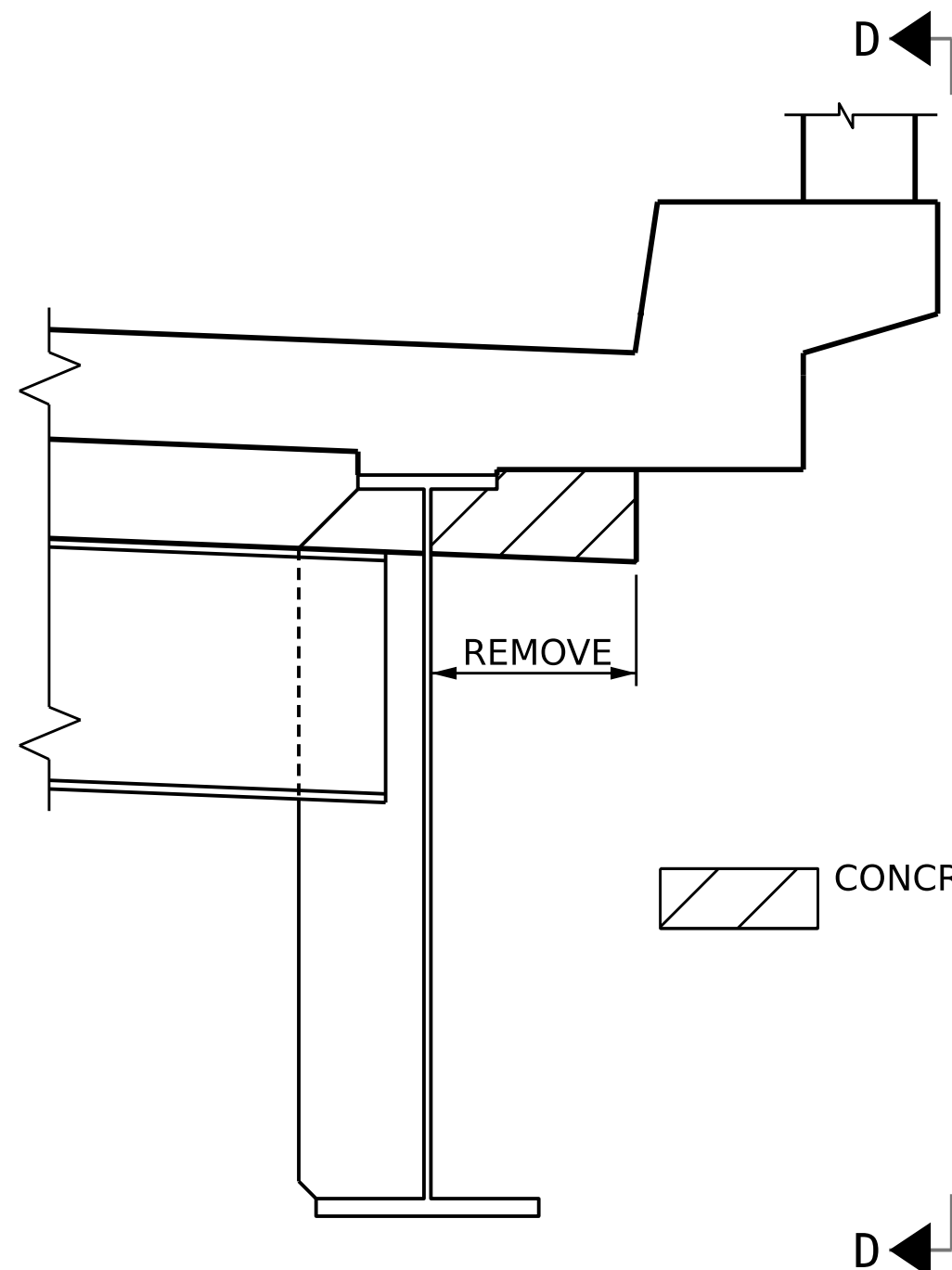
* REMOVE CONCRETE UNTIL SOUND CONCRETE IS FOUND (2" MIN. CL.)



SECTION E-E

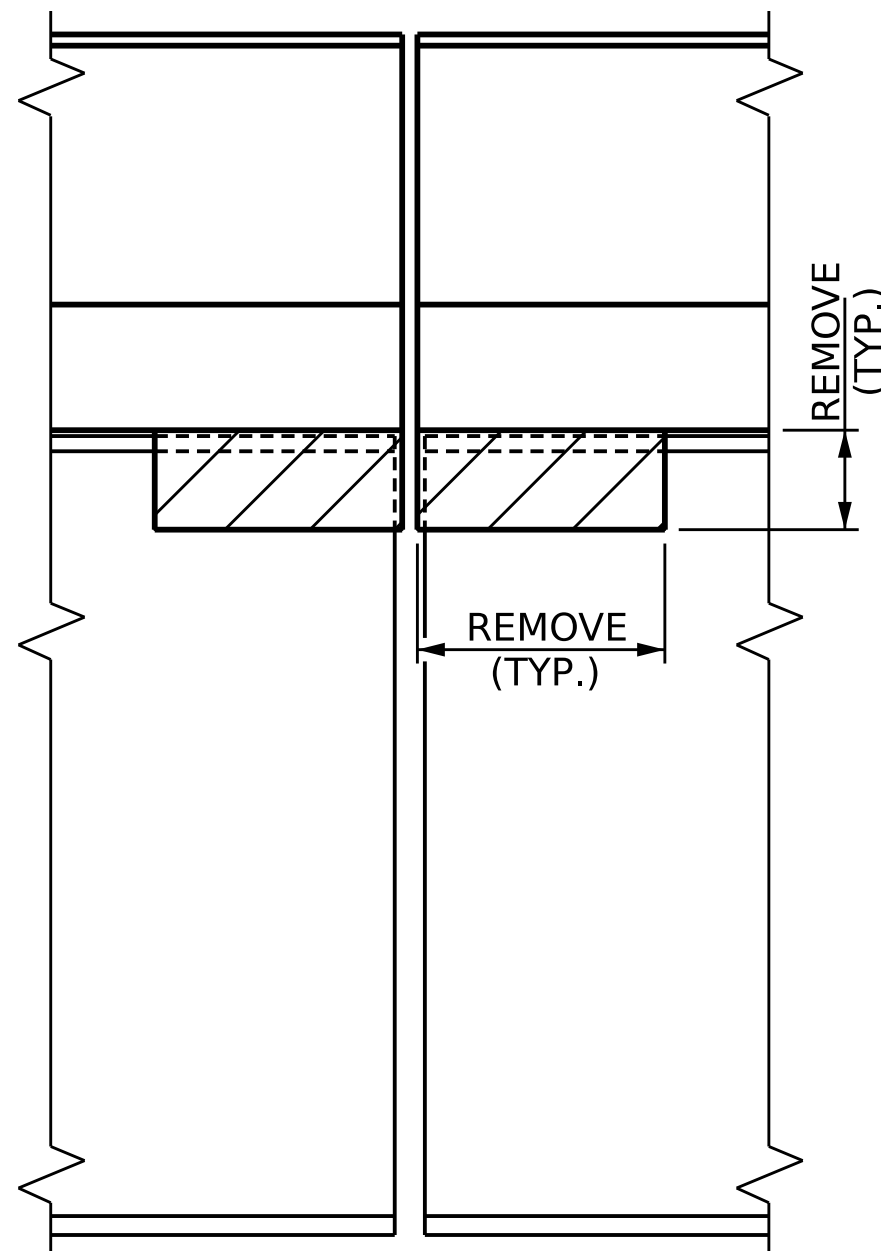
OVERHANG DETAILS

NOTE: OVERHANG DIAPHRAGMS TO BE REMOVED ARE SHOWN ON ``DECK UNDERSIDE REPAIR'' SHEETS.



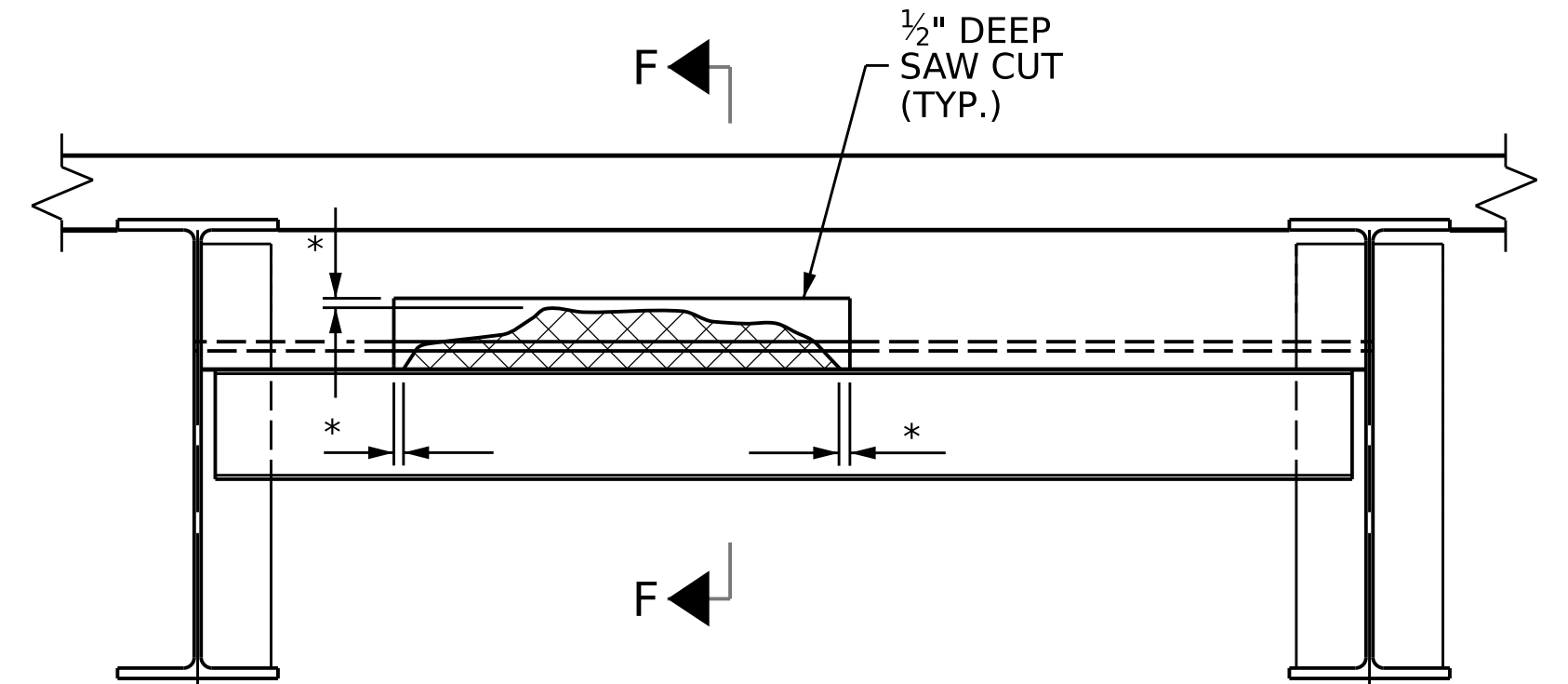
TYPICAL SECTION

CONCRETE IN THIS AREA SHALL BE REMOVED



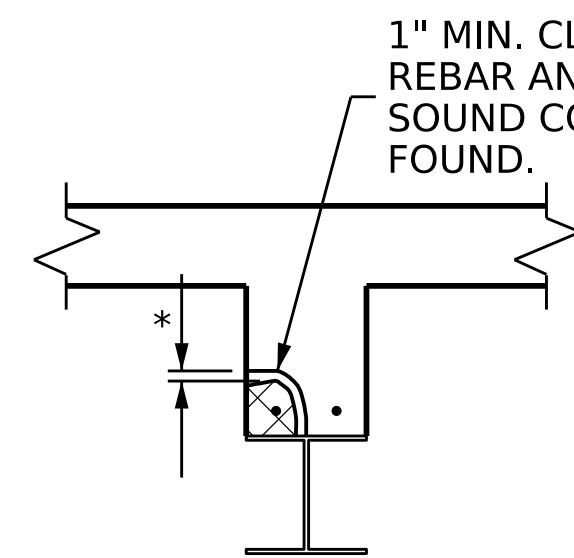
SECTION D-D

OVERHANG DIAPHRAGM REMOVAL DETAILS



TYPICAL SECTION

* REMOVE CONCRETE UNTIL SOUND CONCRETE IS FOUND (2" MIN. CL.)



SECTION F-F

DAMAGED AREA

NOTE:
EXISTING REBAR TO REMAIN
IN PLACE. CLEAN AND
REPAIR AS NECESSARY.

INTERIOR DIAPHRAGM REPAIR DETAILS

PROJECT NO. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670081 & 670082**



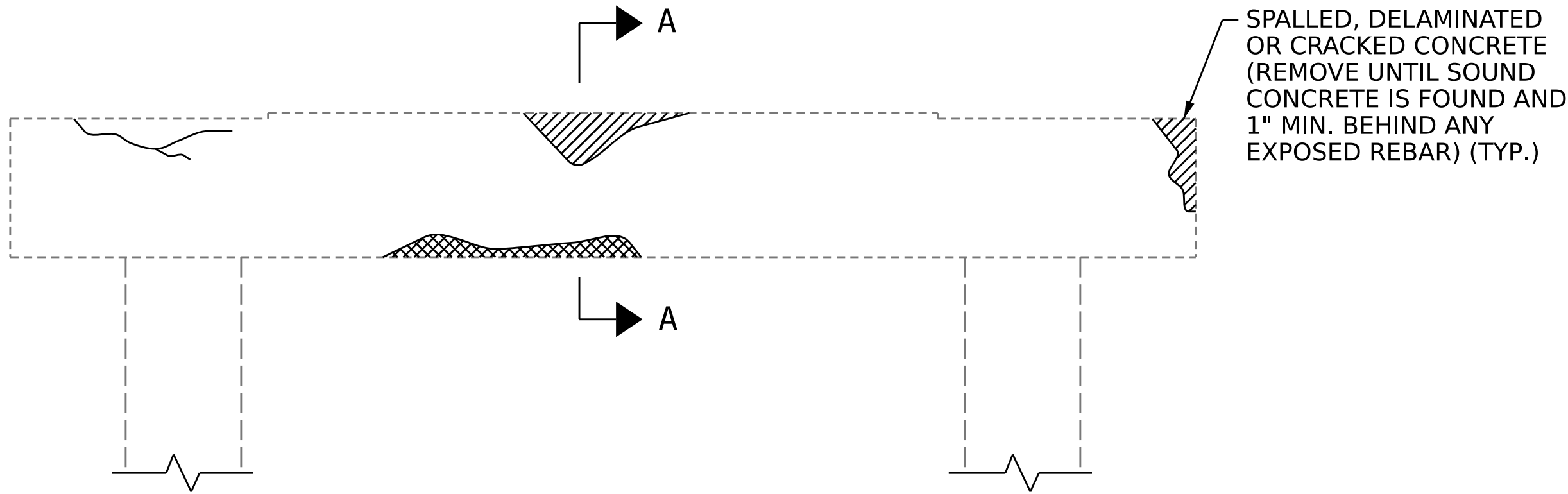
OVERHANG AND DIAPHRAGM REPAIR DETAILS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			SD-55
2			4			TOTAL SHEETS 56

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

DRAWN BY: **J.J.ANDERSON** DATE: **05/2026**
CHECKED BY: **F. LEA** DATE: **07/2026**
DESIGN ENGINEER OF RECORD: DATE:

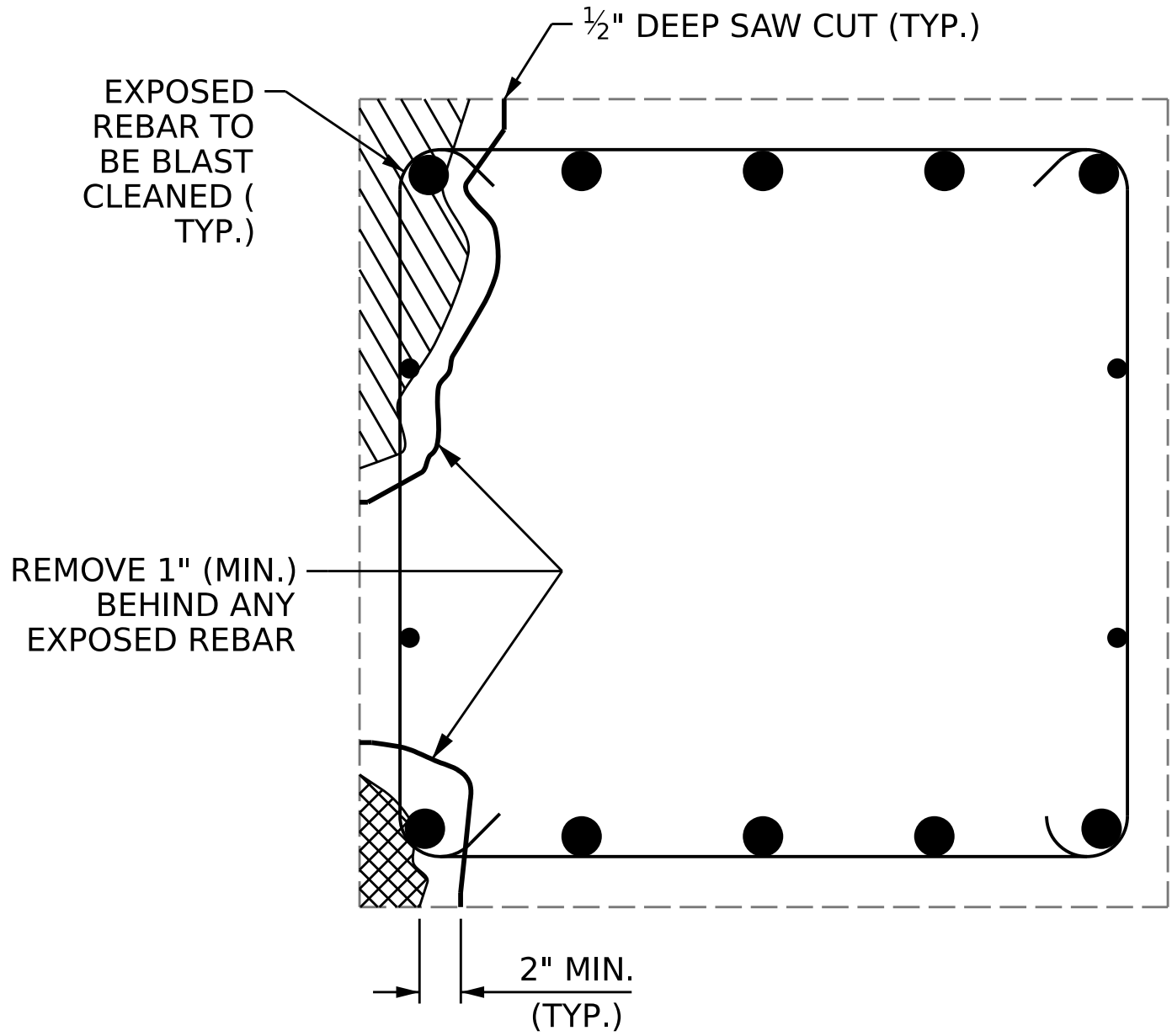
8/19/2026
S:\DPG1\Division7\I-5958\STD sheets\406_003_I-5958_SMU_OVERHANG & DIAPHRAGM REPAIR.dgn
flea



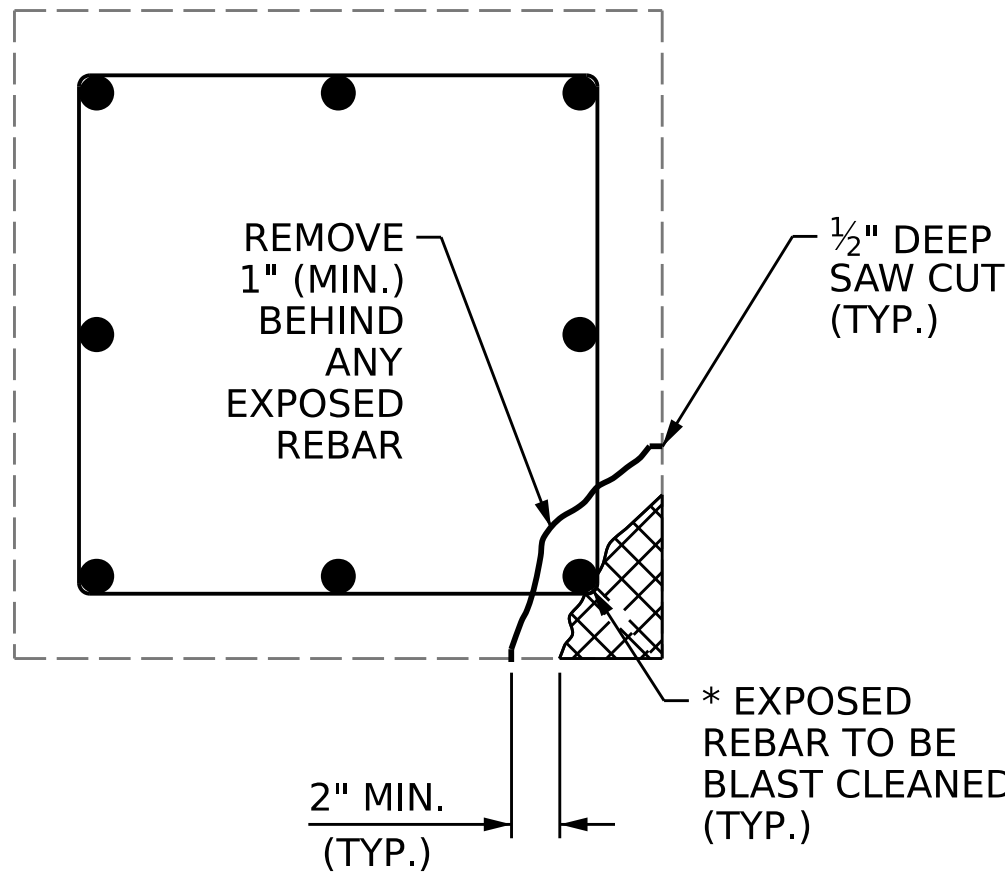
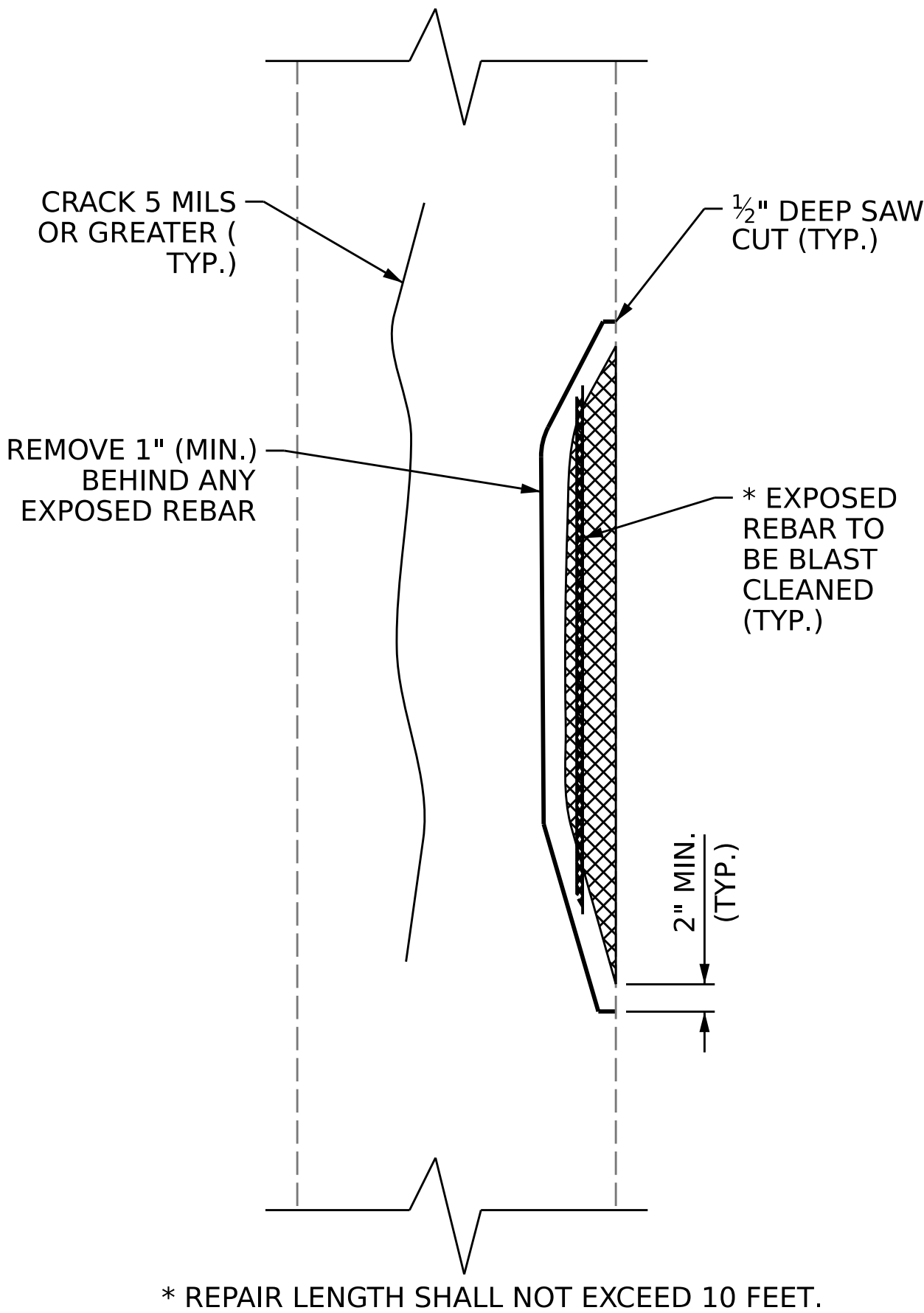
BENT CAP REPAIRS

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"

CAP REPAIR



SECTION A-A

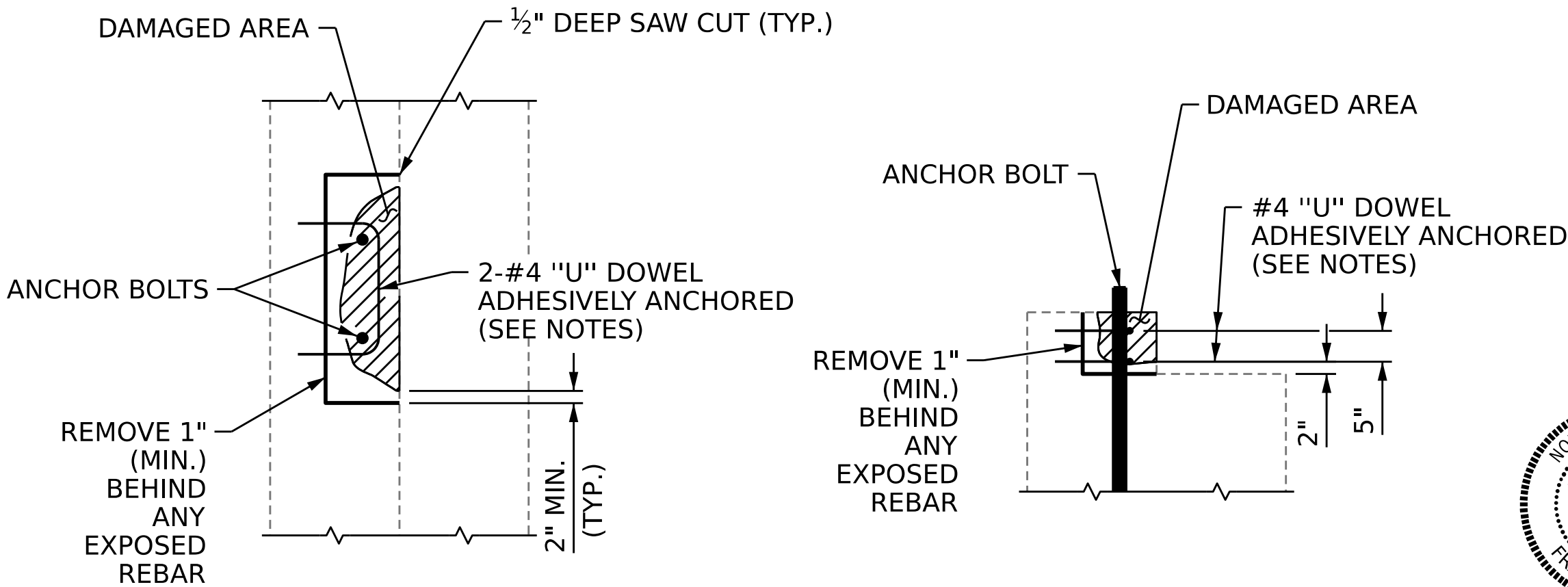


PLAN OF COLUMN

COLUMN REPAIR

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 1 1/2" 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. **I-5958**
ORANGE COUNTY
BRIDGE NO. **670040, 670044**
670052, 670081 & 670082



DocuSigned by:
Francesca Lea
5710AD8B5C584EF
08/19/2026

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

REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	
1			3		TOTAL SHEETS
2			4		56

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

DRAWN BY: **J.J.ANDERSON** DATE: **05/2026**
CHECKED BY: **S. LOTFI** DATE: **06/2026**
DESIGN ENGINEER OF RECORD: DATE:

STANDARD NOTES

DESIGN DATA:

SPECIFICATIONS	- - - - -	A.A.S.H.T.O. (CURRENT)
LIVE LOAD	- - - - -	SEE PLANS
IMPACT ALLOWANCE	- - - - -	SEE A.A.S.H.T.O.
STRESS IN EXTREME FIBER OF STRUCTURAL STEEL		
- AASHTO M270 GRADE 36	- -	20,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50W	- -	27,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50	- -	27,000 LBS. PER SQ. IN.
REINFORCING STEEL IN TENSION - GRADE 60	- - -	24,000 LBS. PER SQ. IN.
CONCRETE IN COMPRESSION	- - - - -	1,200 LBS. PER SQ. IN.
CONCRETE IN SHEAR	- - - - -	SEE A.A.S.H.T.O.
STRUCTURAL TIMBER - TREATED OR UNTREATED EXTREME FIBER STRESS	- - -	1,800 LBS. PER SQ. IN.
COMPRESSION PERPENDICULAR TO GRAIN OF TIMBER	- - - - -	375 LBS. PER SQ. IN.
EQUIVALENT FLUID PRESSURE OF EARTH	- - - - -	30 LBS. PER CU. FT. (MINIMUM)

MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N.C. DEPARTMENT OF TRANSPORTATION.

STEEL SHEET PILING FOR PERMANENT OR TEMPORARY APPLICATIONS SHALL BE HOT ROLLED.

CONCRETE:

UNLESS OTHERWISE REQUIRED ON PLANS, CLASS A CONCRETE SHALL BE USED FOR ALL PORTIONS OF ALL STRUCTURES WITH THE EXCEPTION THAT: CLASS AA CONCRETE SHALL BE USED IN BRIDGE SUPERSTRUCTURES, ABUTMENT BACKWALLS, AND APPROACH SLABS; AND CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP.

CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED ¾" WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO 1½" RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH ¼" FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A ¼" RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

CONCRETE COVER:

UNLESS OTHERWISE NOTED ON THE PLANS OR SPECIAL PROVISIONS, CONCRETE COVER SHALL MATCH THE TABLE BELOW.

MINIMUM CONCRETE COVER TABLE		
	COVER	
	ALL OTHER SITES	CORROSIVE SITES
BRIDGE DECK		
TO TOP OF SLAB	2½" (65MM)	2½" (65MM)
TO BOTTOM OF SLAB	1¼" (32MM)	1¼" (32MM)*
FOOTING AND PILE CAPS		
TO TOP FACE	2" (50MM)	4" (100 MM)
TO ALL OTHER FACES	3" (75MM)	4" (100 MM)
BENT CAPS		
TO TOP OF CAP	3" (75MM)	4" (100MM)
TO ALL OTHER FACES	2" (50MM)	3" (75MM) *
COLUMNS	2" (50MM)	3" (75MM)
DRILLED PIERS	5" (125MM)	6" (150MM)
CULVERTS		
TO BOTTOM SLAB AND FOOTINGS	3" (75MM)	4" (100MM)
TO ALL OTHER FACES	2" (50MM)	3" (75MM)
APPROACH SLABS	2½" (65MM)	2½" (65MM)

* WHEN USING REMOVABLE FORMS, COVER SHALL BE INCREASED TO 2½"

ALLOWANCE FOR DEAD LOAD DEFLECTION, SETTLEMENT, ETC. IN CASTING SUPERSTRUCTURES:

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS, SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE.

ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSINOS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATED, AND ACTUAL BEAM CAMBERS. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.

IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.

WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

DOWELS:

DOWELS WHEN INDICATED ON PLANS AS FOR CULVERT EXTENSIONS, SHALL BE EMBEDDED AT LEAST 12" INTO THE OLD CONCRETE AND GROUTED INTO PLACE WITH 1:2 CEMENT MORTAR.

STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE ⅞" ∅ SHEAR STUDS FOR THE ¾" ∅ STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 -⅞" ∅ STUDS FOR 4 -¾" ∅ STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF ⅞" ∅ STUDS ALONG THE BEAM AS SHOWN FOR ¾" ∅ STUDS BASED ON THE RATIO OF 3 - ⅞" ∅ STUDS FOR 4 - ¾" ∅ STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0".

EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATESS ARE AT LEAST ⅓₁₆" IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.

WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITBALE MEANS TO A RADIUS OF APPROXIMATELY ⅓₁₆ INCH OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.

METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINs AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

SPECIAL NOTES:

GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE SPECIFICATIONS ARTICLE 105-4.

ENGLISH

JUNE, 2020

STD. NO. PRR SN