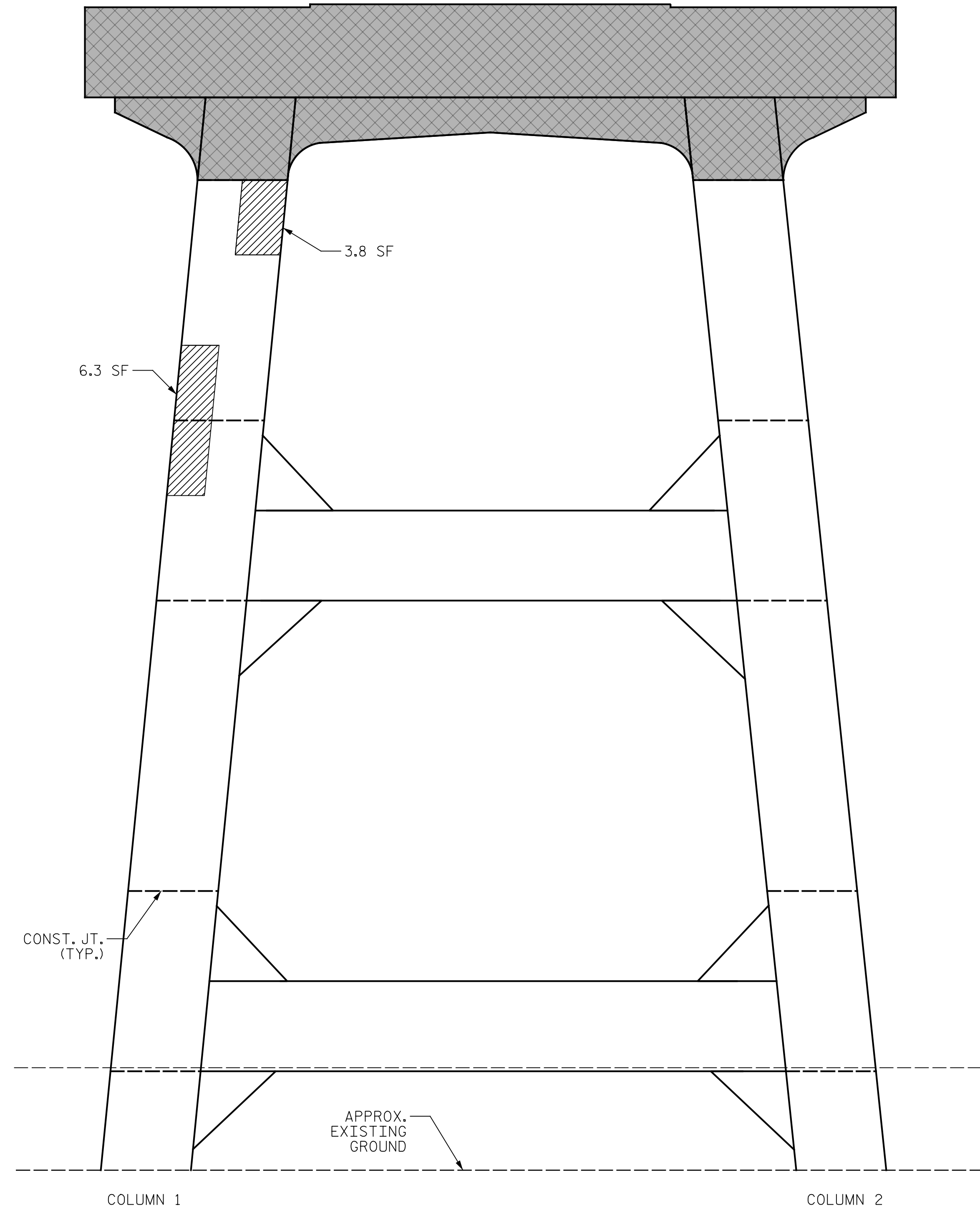
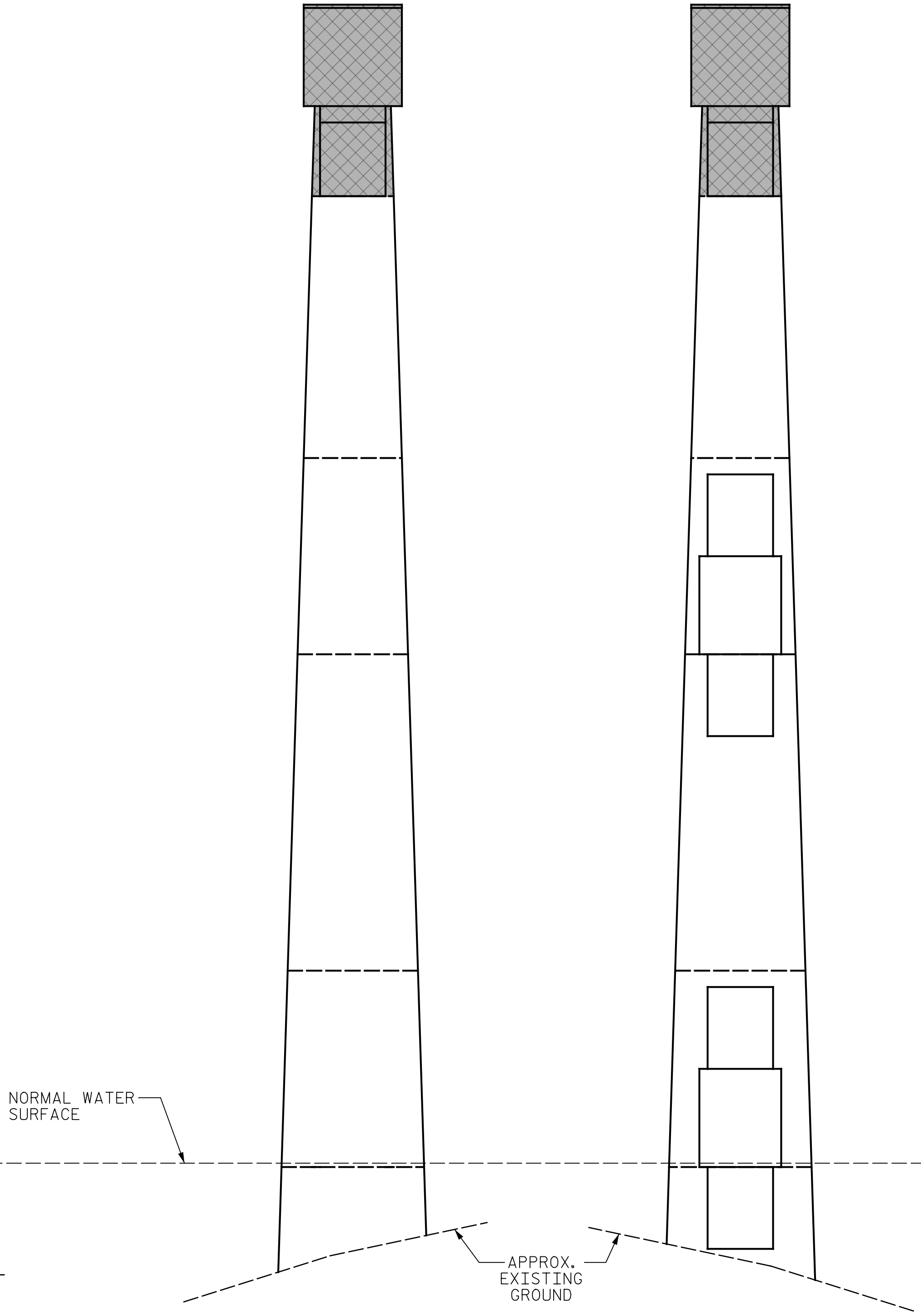


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ELEVATION
(SPAN "J" FACE)



END VIEW
(RIGHT FACE COL. 2)

INTERIOR VIEW
(LEFT FACE COL. 2)

AS-BUILT REPAIR QUANTITY TABLE					
BENT 10 REPAIRS	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH IN.	VOLUME CF
COLUMN & STRUT	26.6	10.7			
EPOXY RESIN INJECTION	LENGTH LF		LENGTH LF		
COLUMN & STRUT	0.0				

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

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE 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.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 WHEN COLUMN REPAIRS ARE INDICATED TO GROUND LINE, EXTEND REPAIR MINIMUM OF 1' BELOW GROUND LINE.
 FOR PROPOSED BENT CAP REPLACEMENT DETAILS, SEE SUBSTRUCTURE BENT SHEETS.

- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION
- DEMOLITION (SEE "CAP DEMOLITION DETAILS" SHEET)

PROJECT NO. B-4626
STANLY, ROWAN
AND DAVIDSON COUNTY
 STATION: 45+22.65 -EBL-

SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE REPAIR
 BENT 10
 SPAN "J" FACE



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 Eric B. Nelson
 9/2/2021
 AC88821192742D

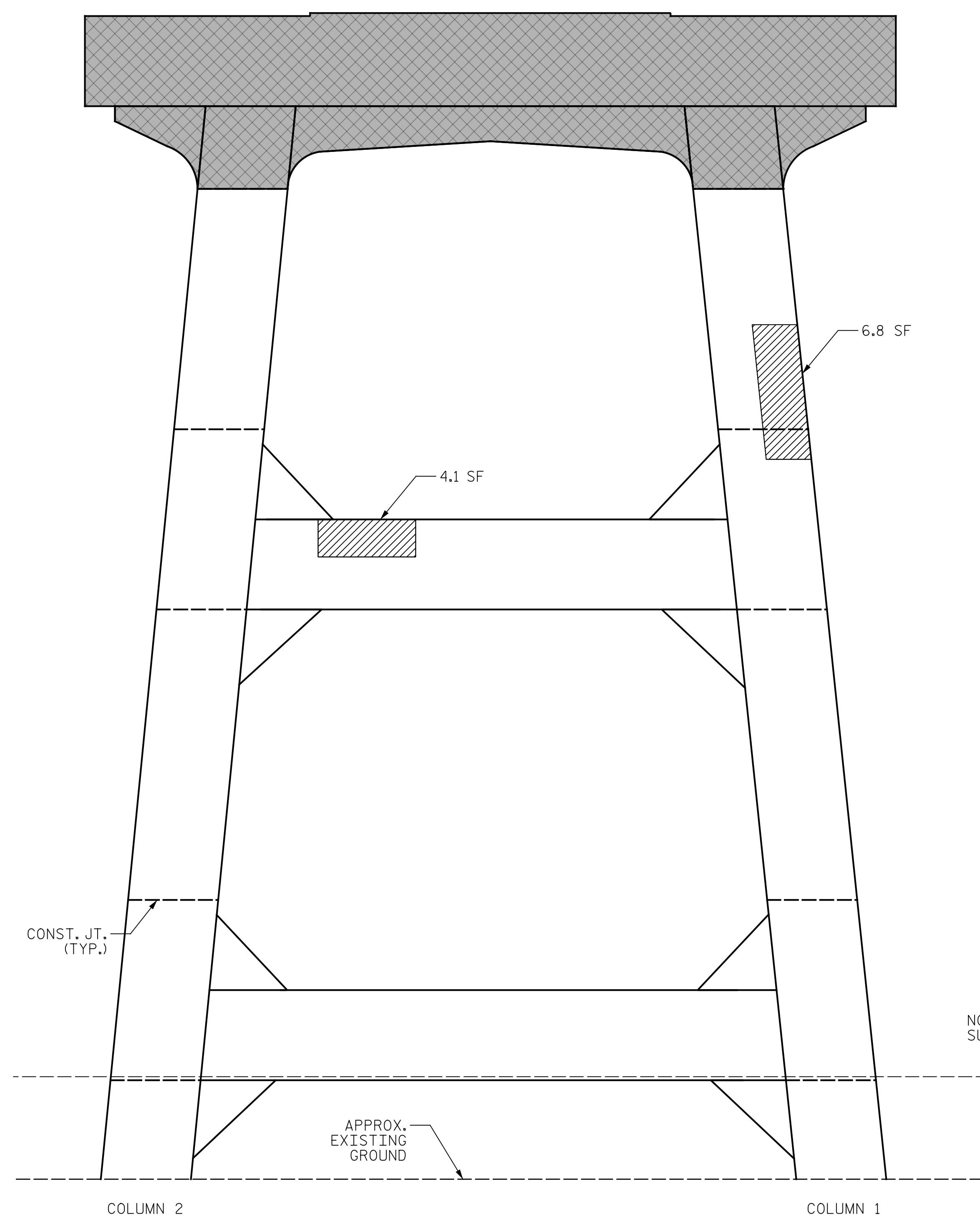
DRAWN BY : T. HARTLEY/J. MYA DATE : 03/2021
 CHECKED BY : J. YANACCONI DATE : 05/2021
 DESIGN ENGINEER OF RECORD: R. NELSON DATE : 05/2021

PLANS PREPARED BY:
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 Excellence Delivered As Promised
 One Glenwood Avenue
 Suite 900
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 NC Lic. No. F-0270

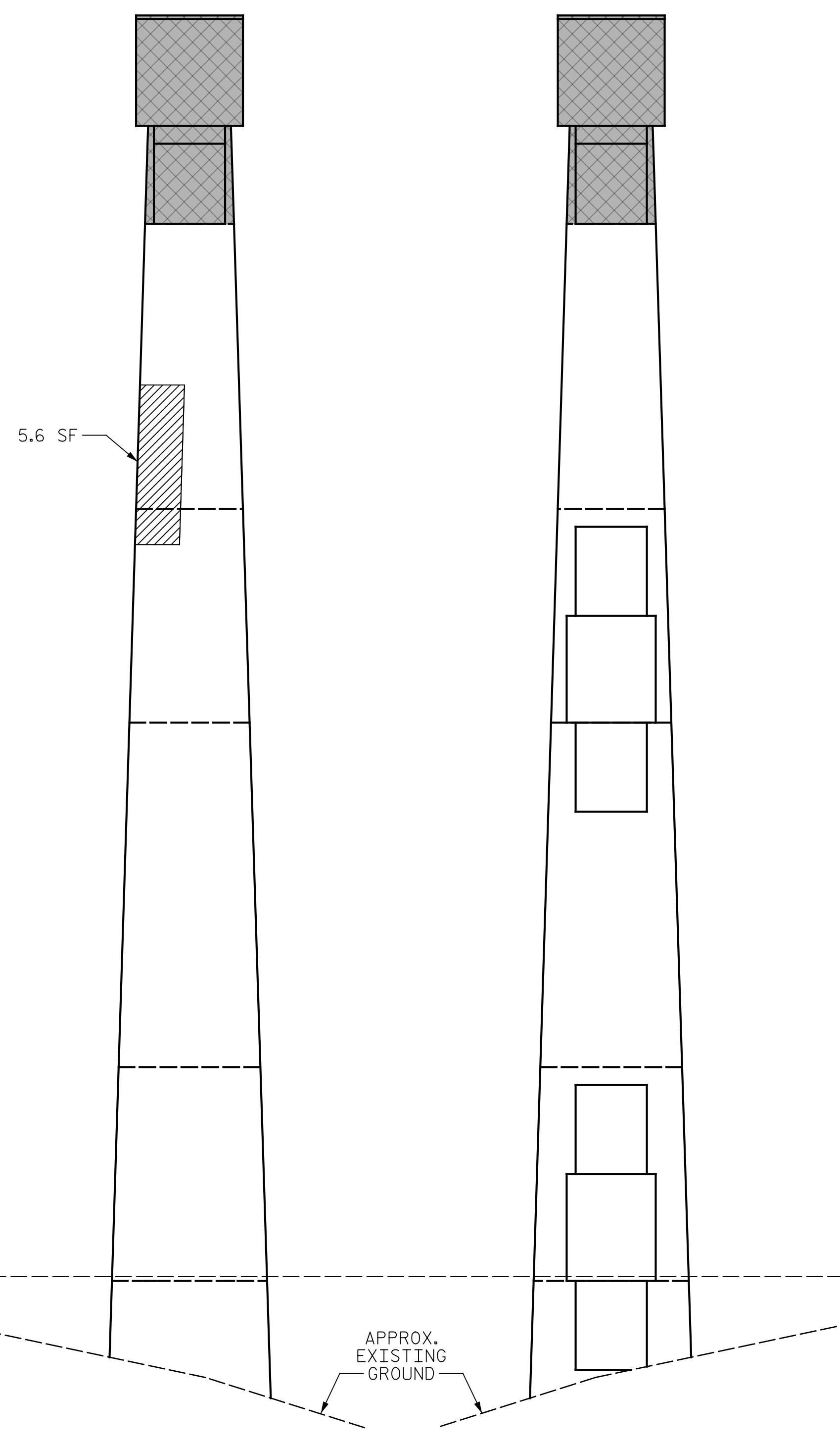
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ELEVATION
(SPAN "K" FACE)



END VIEW
(LEFT FACE COL. 1)

INTERIOR VIEW
(RIGHT FACE COL. 1)

NOTES:
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FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.
 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 WHEN COLUMN REPAIRS ARE INDICATED TO GROUND LINE, EXTEND REPAIR A MINIMUM OF 1' BELOW GROUND LINE.
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- SHOTCRETE REPAIR
- EPOXY RESIN INJECTION
- DEMOLITION (SEE "CAP DEMOLITION DETAILS" SHEET)

PROJECT NO. B-4626
STANLY, ROWAN
AND DAVIDSON COUNTY
 STATION: 45+22.65 -EBL-

SHEET 2 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE REPAIR
 BENT 10
 SPAN "K" FACE



DRAWN BY : T. HARTLEY/J. MYA DATE : 03/2021
 CHECKED BY : J. YANACCONI DATE : 05/2021
 DESIGN ENGINEER OF RECORD: R. NELSON DATE : 05/2021

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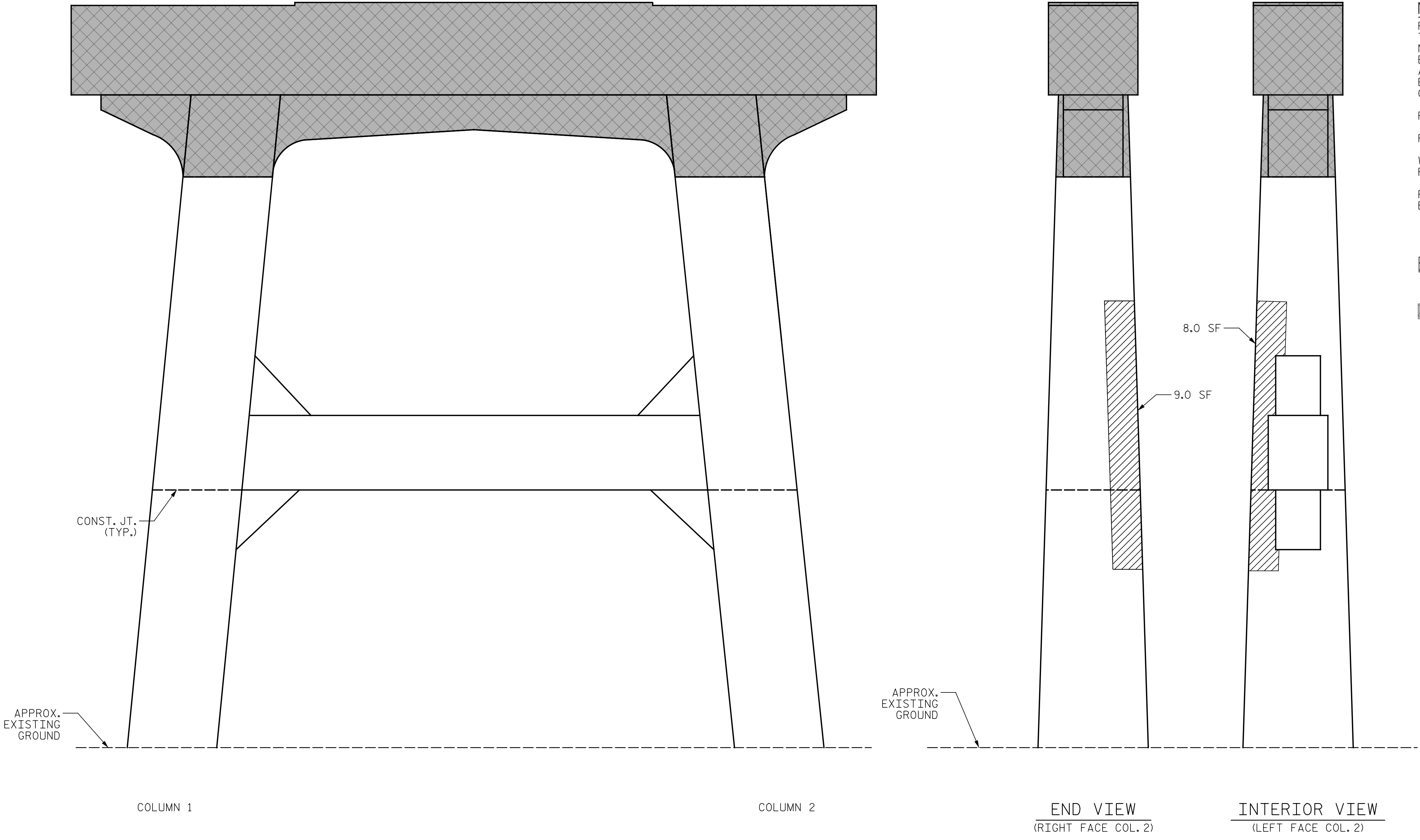
AS-BUILT REPAIR QUANTITY TABLE					
BENT 11 REPAIRS	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH IN.	VOLUME CF
COLUMN & STRUT	49.0	19.7			
EPOXY RESIN INJECTION	LENGTH LF		LENGTH LF		
COLUMN & STRUT	0.0				

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

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 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
 WHEN COLUMN REPAIRS ARE INDICATED TO GROUND LINE, EXTEND REPAIR MINIMUM OF 1' BELOW GROUND LINE.
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- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION
- DEMOLITION (SEE "CAP DEMOLITION DETAILS" SHEET)



ELEVATION
(SPAN "K" FACE)

END VIEW
(RIGHT FACE COL. 2)

INTERIOR VIEW
(LEFT FACE COL. 2)

PROJECT NO. B-4626
STANLY, ROWAN
AND DAVIDSON COUNTY
 STATION: 45+22.65 -EBL-
 SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE REPAIR
 BENT 11
 SPAN "K" FACE



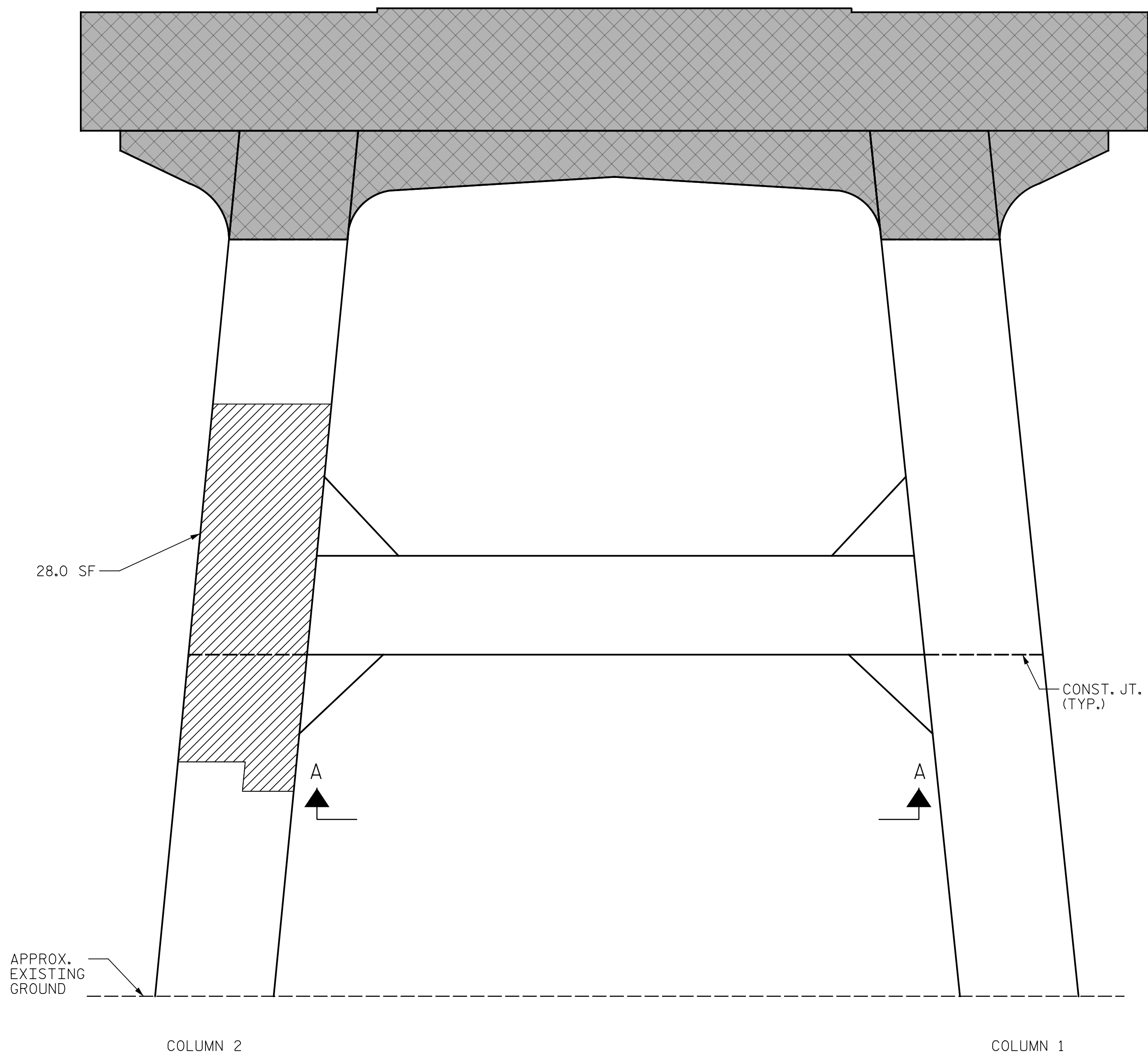
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DRAWN BY : T. HARTLEY/J. MYA DATE : 03/2021
 CHECKED BY : J. YANNAACONE DATE : 05/2021
 DESIGN ENGINEER OF RECORD: R. NELSON DATE : 05/2021

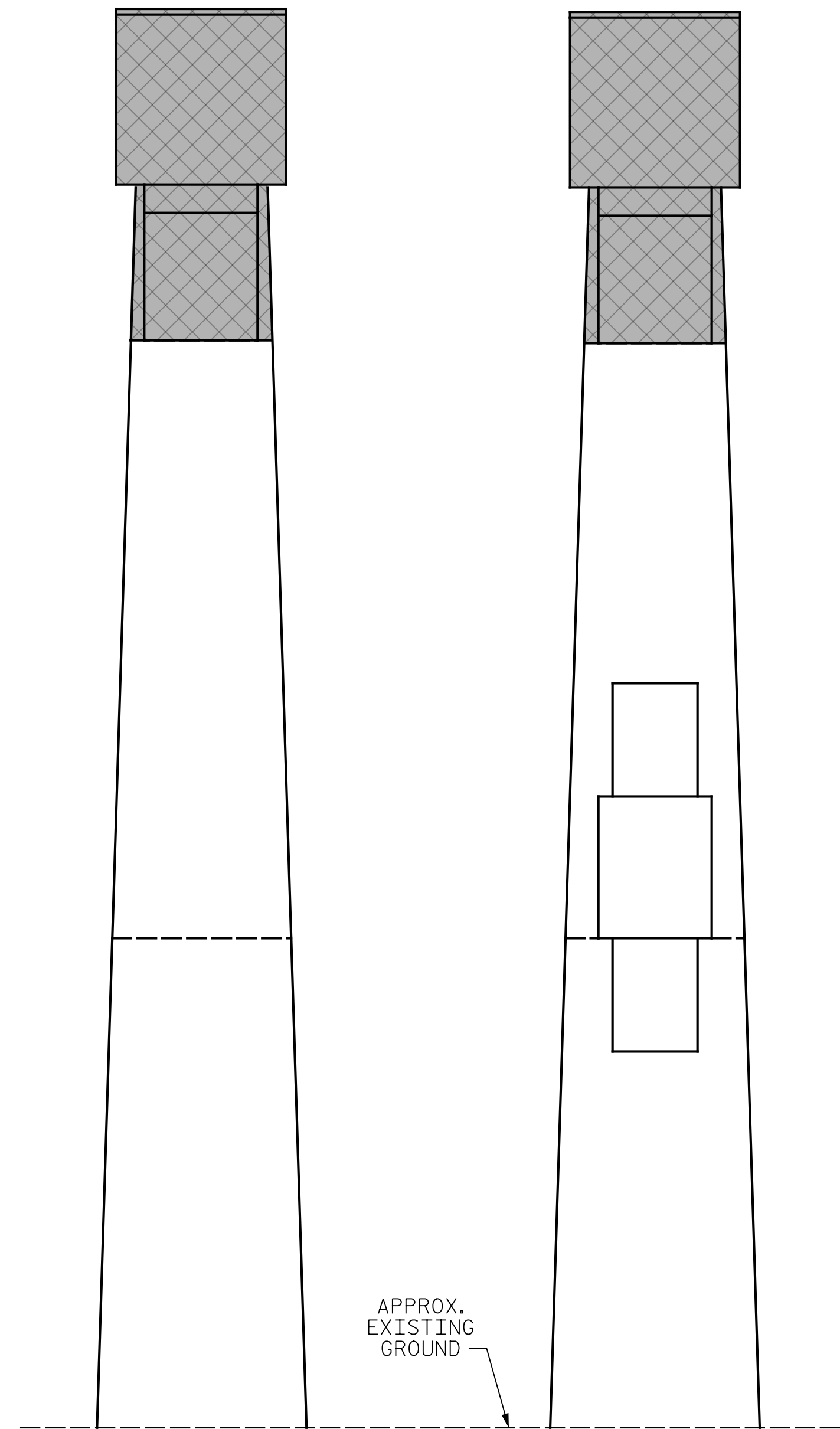
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ELEVATION
(SPAN "L" FACE)

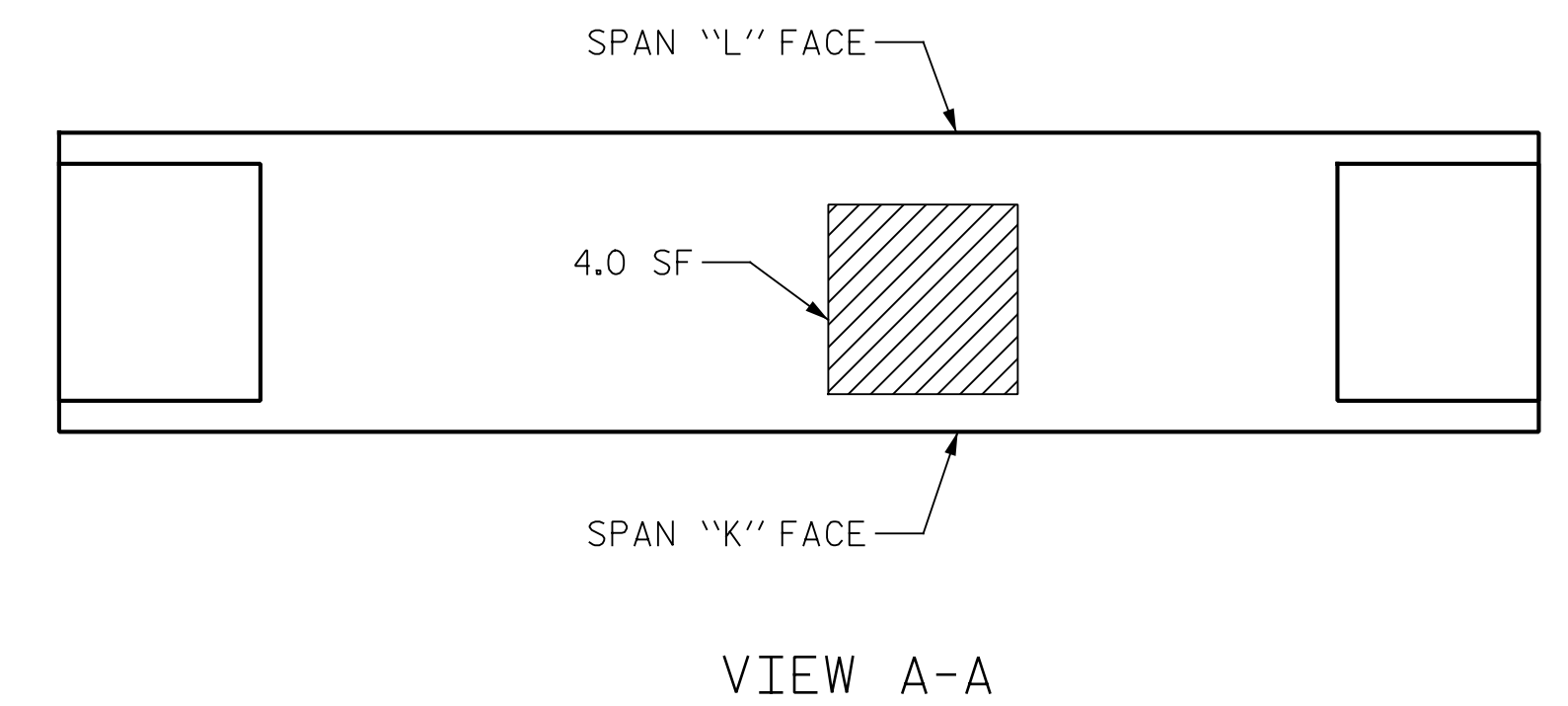


END VIEW
(LEFT FACE COL. 1)

INTERIOR VIEW
(RIGHT FACE COL. 1)

NOTES:
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 FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.
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- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION
- DEMOLITION (SEE "CAP DEMOLITION DETAILS" SHEET)



PROJECT NO. B-4626
STANLY, ROWAN
AND DAVIDSON COUNTY
 STATION: 45+22.65 -EBL-

SHEET 2 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE REPAIR
 BENT 11
 SPAN "L" FACE



DocuSigned by:
 Eric B. Nelson 9/2/2021
 NC3008218074CD

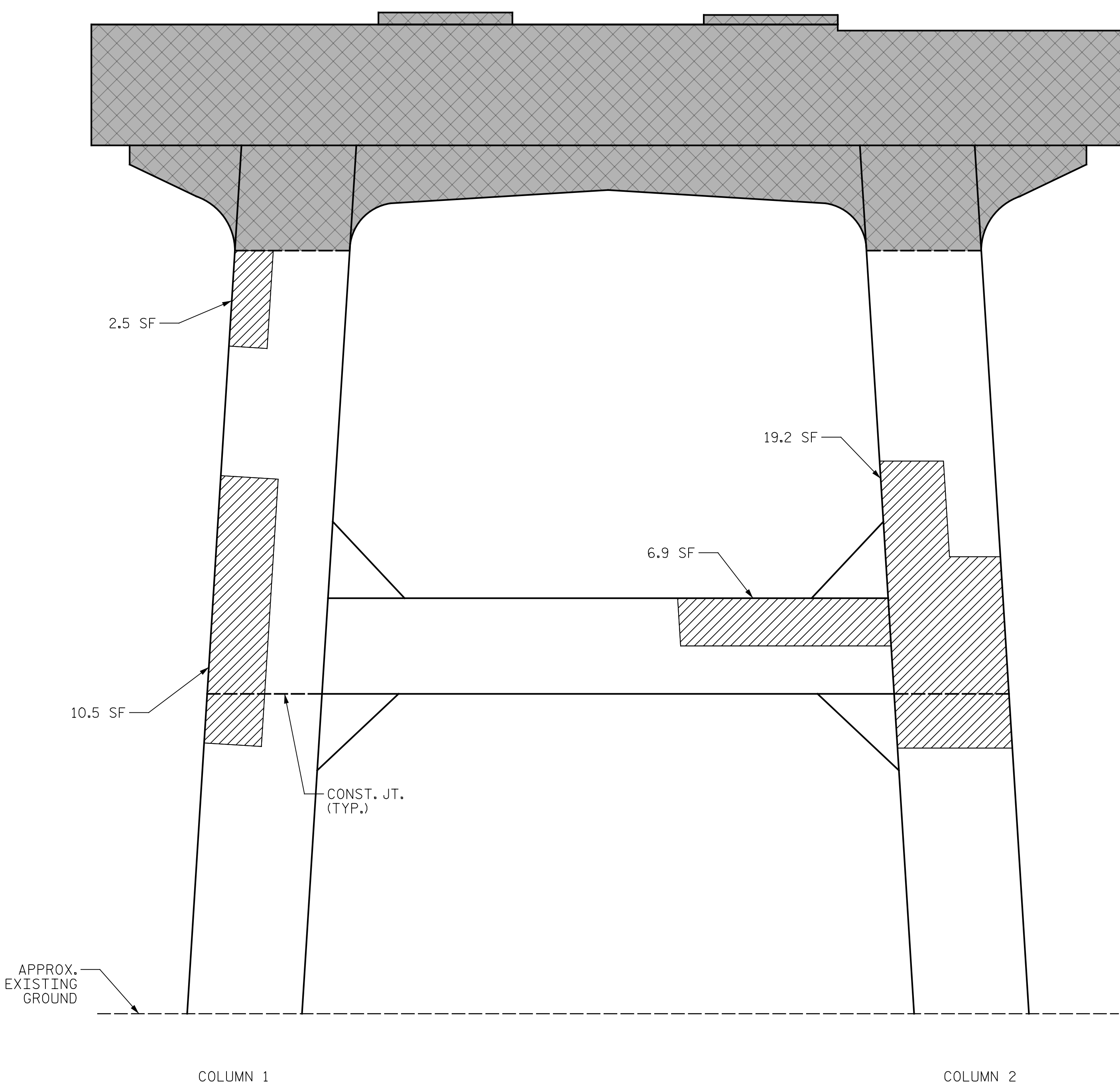
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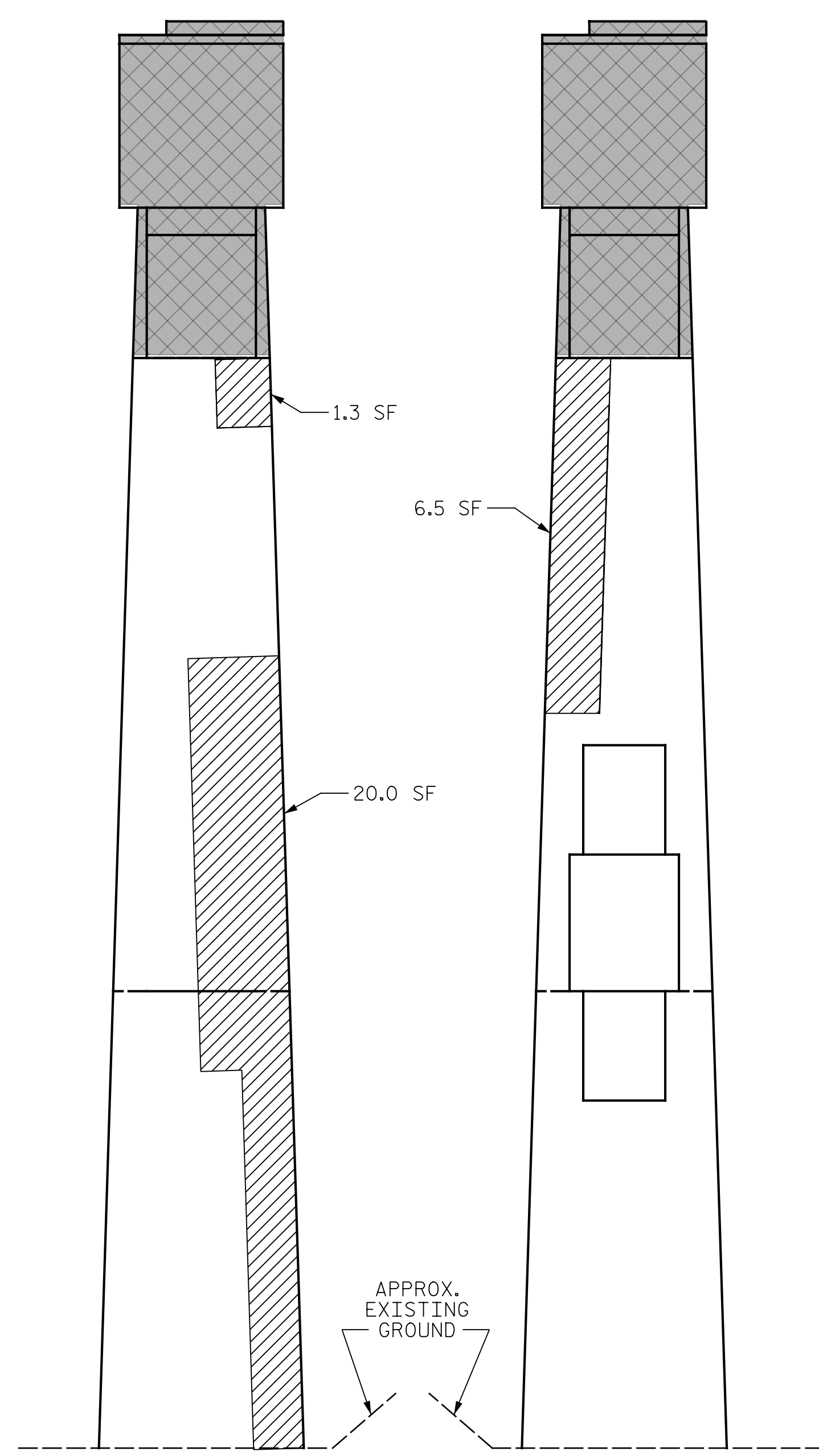
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DRAWN BY : T. HARTLEY/J. MYA DATE : 03/2021
 CHECKED BY : J. YANACCONO DATE : 05/2021
 DESIGN ENGINEER OF RECORD: R. NELSON DATE : 05/2021

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ELEVATION
(SPAN "L" FACE)



END VIEW
(RIGHT FACE COL. 2)

INTERIOR VIEW
(LEFT FACE COL. 2)

AS-BUILT REPAIR QUANTITY TABLE					
BENT 12 REPAIRS	QUANTITIES				
	ESTIMATE		ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	DEPTH IN.	VOLUME CF
COLUMN & STRUT	109.9	44.1			
EPOXY RESIN INJECTION	LENGTH LF		LENGTH LF		
COLUMN & STRUT	0.0				

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

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FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

WHEN COLUMN REPAIRS ARE INDICATED TO GROUND LINE, EXTEND REPAIR MINIMUM OF 1' BELOW GROUND LINE.

FOR PROPOSED BENT CAP REPLACEMENT DETAILS, SEE SUBSTRUCTURE BENT SHEETS.

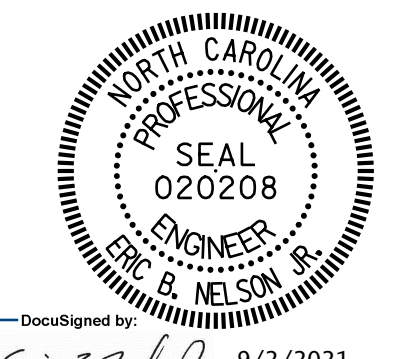
- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION
- DEMOLITION (SEE "CAP DEMOLITION DETAILS" SHEET)

PROJECT NO. B-4626
STANLY, ROWAN
AND DAVIDSON COUNTY
 STATION: 45+22.65 -EBL-

SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE REPAIR
 BENT 12
 SPAN "L" FACE



REVISIONS						SHEET NO.
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1			3			TOTAL SHEETS
2			4			125

DRAWN BY : T. HARTLEY/J. MYA DATE : 03/2021
 CHECKED BY : J. YANNACCONE DATE : 05/2021
 DESIGN ENGINEER OF RECORD: R. NELSON DATE : 05/2021

PLANS PREPARED BY:
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 Suite 900
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 (919) 420-7660
 NC Lic. No. F-0270

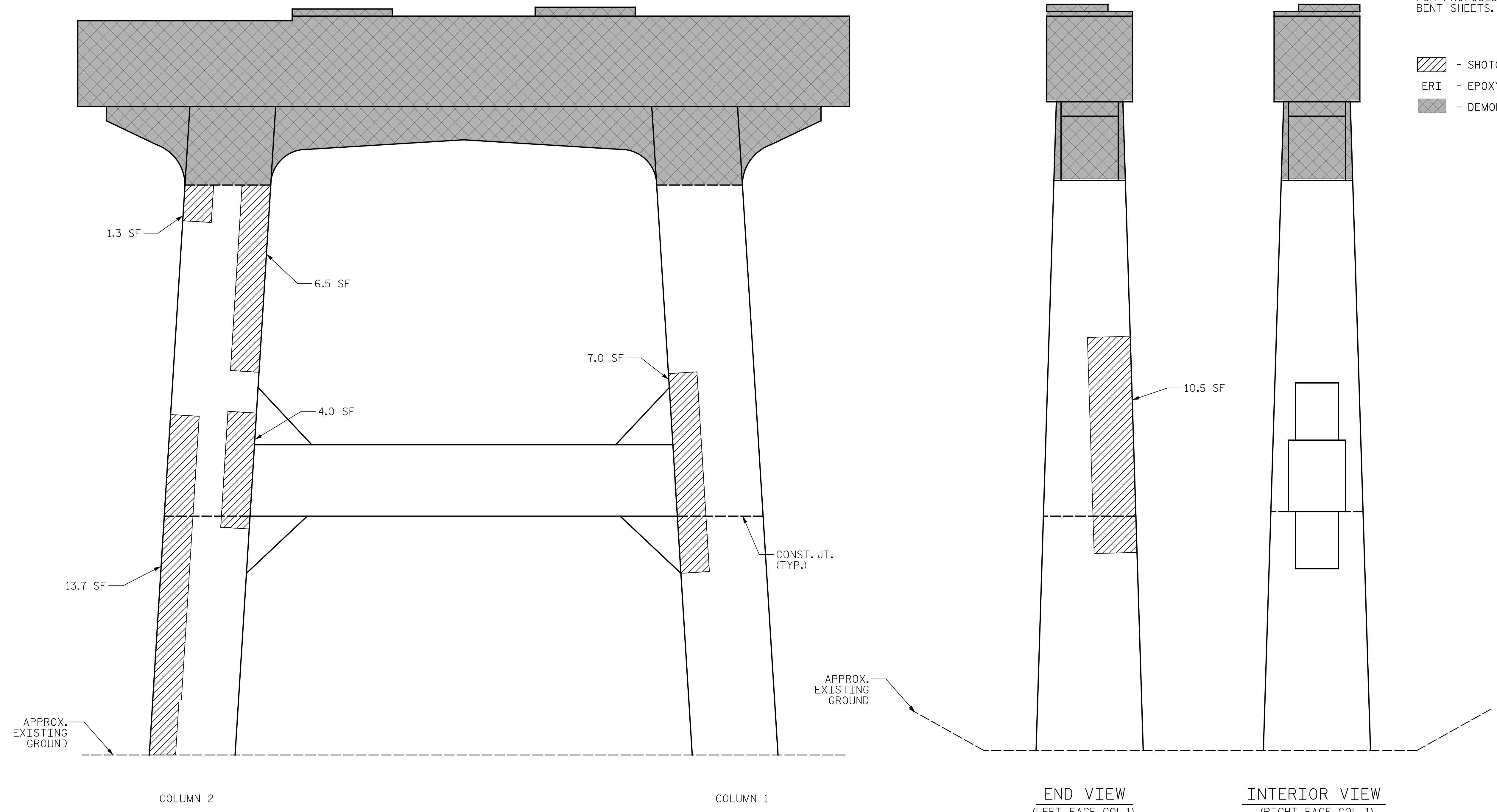
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- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION
- DEMOLITION (SEE "CAP DEMOLITION DETAILS" SHEET)



ELEVATION
 (SPAN "M" FACE)

END VIEW
 (LEFT FACE COL.1)

INTERIOR VIEW
 (RIGHT FACE COL. 1)

PROJECT NO. B-4626
STANLY, ROWAN
AND DAVIDSON COUNTY
 STATION: 45+22.65 -EBL-

SHEET 2 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE REPAIR
 BENT 12
 SPAN "M" FACE**



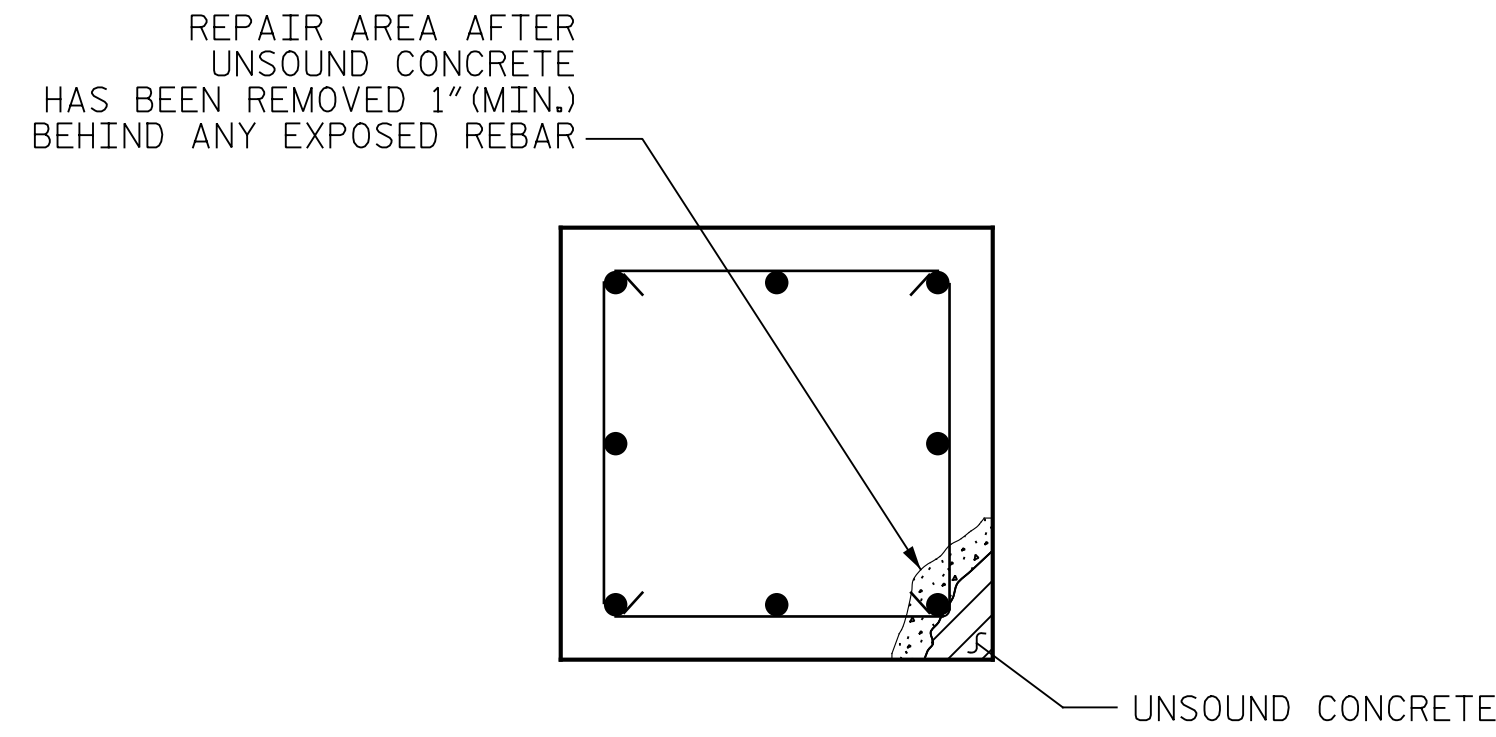
DRAWN BY : T. HARTLEY/J. MYA DATE : 03/2021
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 DESIGN ENGINEER OF RECORD: R. NELSON DATE : 05/2021

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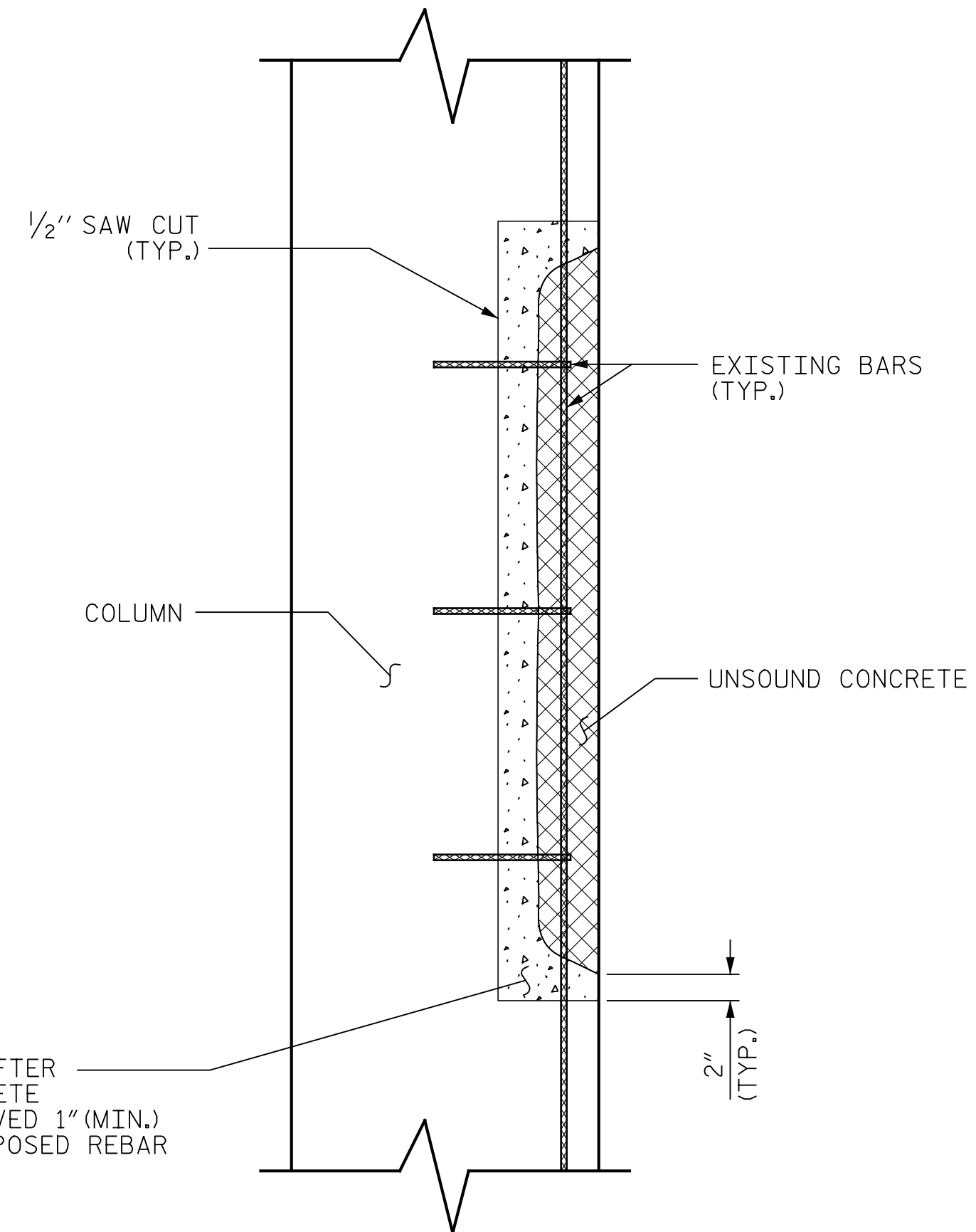
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SECTION
 (COLUMN AT BENT 1 THRU 4 AND 9 THRU 12 SHOWN.
 REPAIR AT BENT 5 THRU 8 SIMILAR.)



* REPAIR AREA AFTER UNSOUND CONCRETE HAS BEEN REMOVED 1" (MIN.) BEHIND ANY EXPOSED REBAR

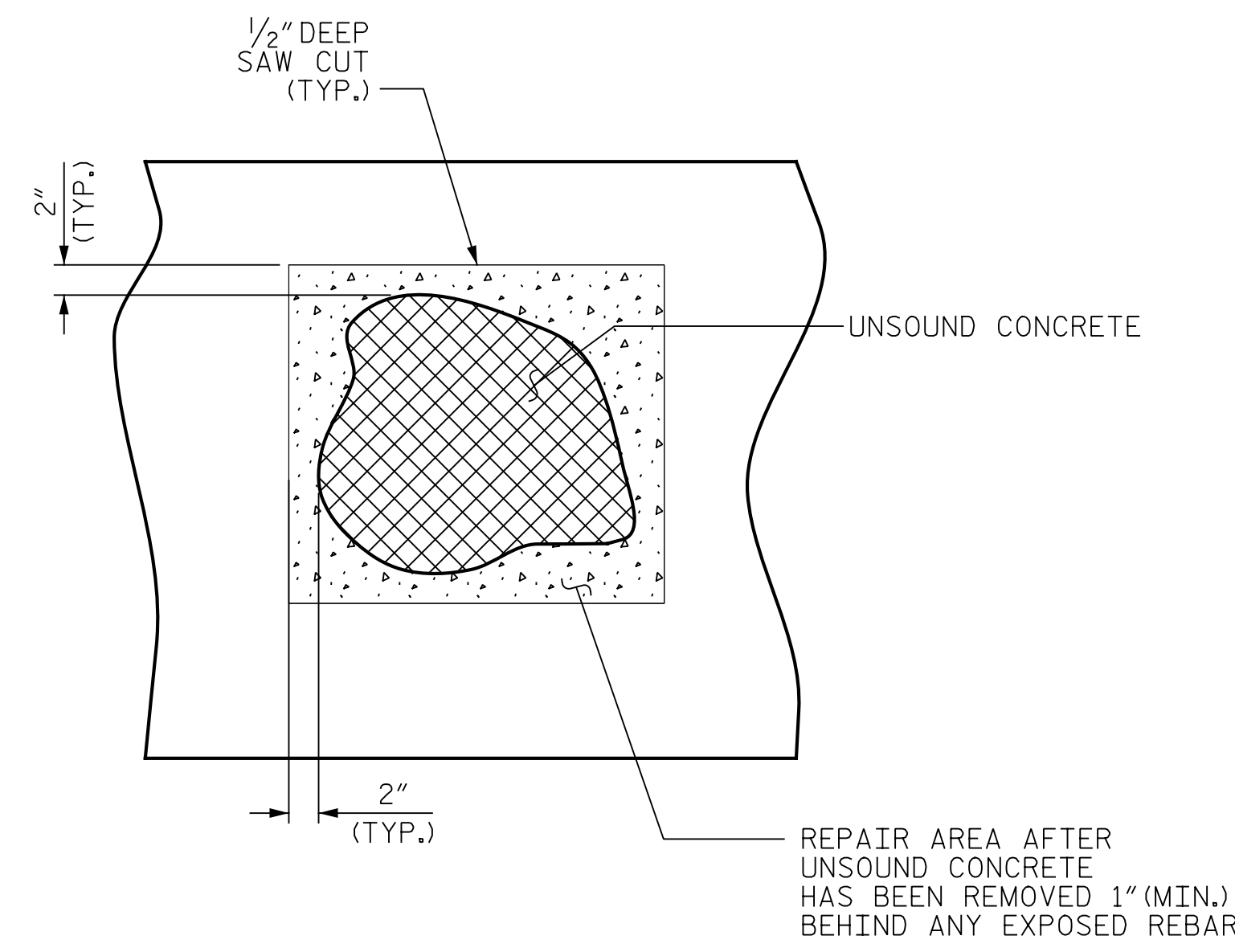
* REPAIR LENGTH SHALL NOT EXCEED 10 FEET.

ELEVATION

COLUMN REPAIR

REPAIR SEQUENCE:

- SOUND CONCRETE TO DETERMINE EXTENT OF REPAIR LOCATION.
- REMOVE SURFACE CONCRETE TO VERIFY SAWCUT DEPTH WILL NOT DAMAGE EXISTING REINFORCING STEEL. SAW CUT AROUND REPAIR AREA TO A NOMINAL DEPTH OF 1/2".
- REMOVE CONCRETE WITHIN SAW CUT AREA TO MINIMUM 1" BEHIND REBAR.
- USE A WIRE BRUSH TO CLEAN ALL EXPOSED REINFORCING STEEL. FOR BARS WITH MORE THAN 10% SECTION LOSS, SPLICE AND SECURELY TIE SUPPLEMENTAL REINFORCING BARS AS NEEDED.
- REMOVE ALL LOOSE OR WEAKENED MATERIAL THEN CLEAN THE REPAIR AREA OF DIRT, GREASE, OIL, AND FOREIGN MATTER.
- PREPARE SURFACE AND APPLY STRUCTURAL SHOTCRETE.



FACE REPAIR

PROJECT NO. B-4626
STANLY, ROWAN
AND DAVIDSON COUNTY
 STATION: 45+22.65 -EBL-



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

TYPICAL COLUMN REPAIR DETAILS

DRAWN BY :	J. MYA	DATE :	04/2021
CHECKED BY :	J. YANACCONI	DATE :	05/2021
DESIGN ENGINEER OF RECORD:	R. NELSON	DATE :	05/2021

PLANS PREPARED BY:
Gannett Fleming
 Excellence Delivered As Promised

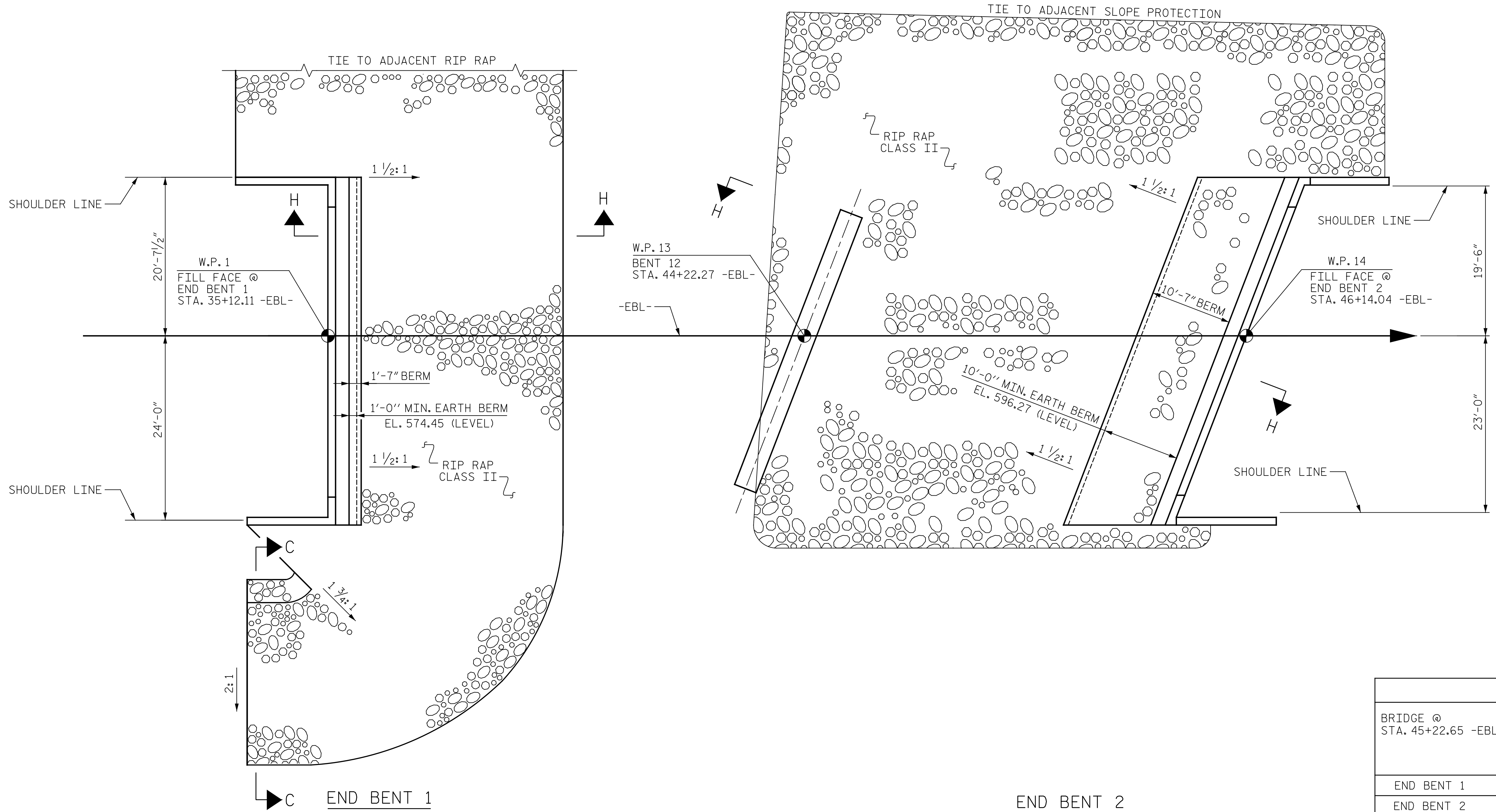
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 NC Lic. No. F-0270

DocuSigned by:
 Eric B. Nelson
 9/2/2021
 1528802119274C0

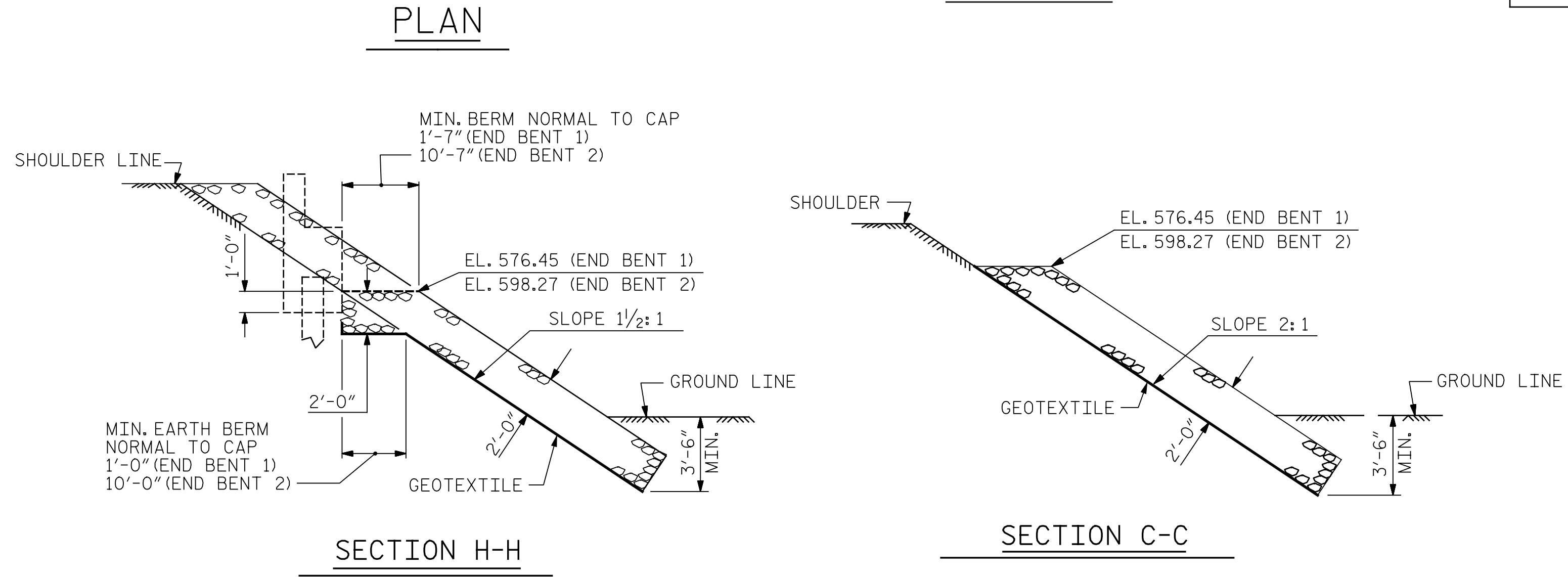
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ESTIMATED QUANTITIES		
BRIDGE @ STA. 45+22.65 -EBL-	RIP RAP CLASS II (2'-0" THICK)	GEOTEXTILE FOR DRAINAGE
	TONS	SQUARE YARDS
END BENT 1	290	325
END BENT 2	450	500



PROJECT NO. B-4626
STANLY, ROWAN
AND DAVIDSON COUNTY
 STATION: 45+22.65 -EBL-



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

RIP RAP DETAILS

DRAWN BY : J. MYA DATE : 04/2021
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 DESIGN ENGINEER OF RECORD: R. NELSON DATE : 05/2021

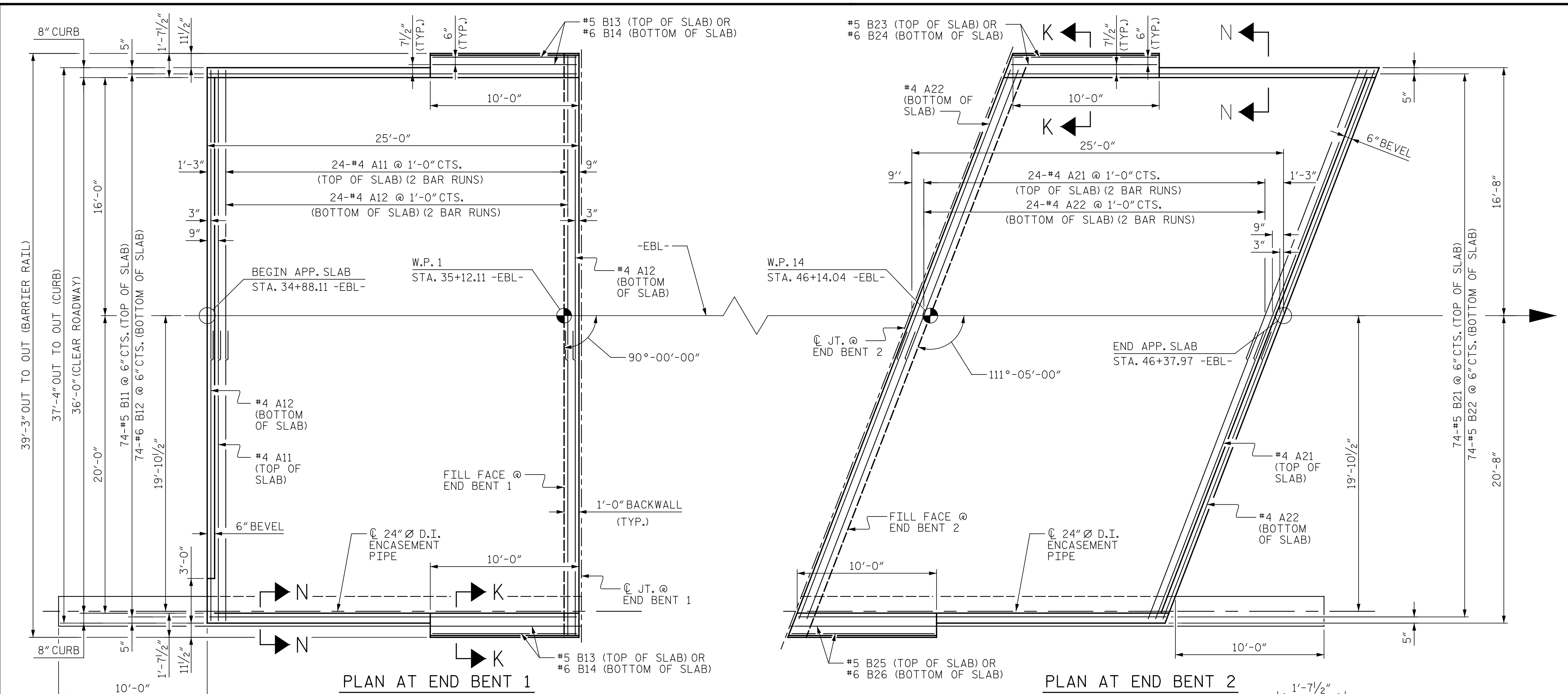
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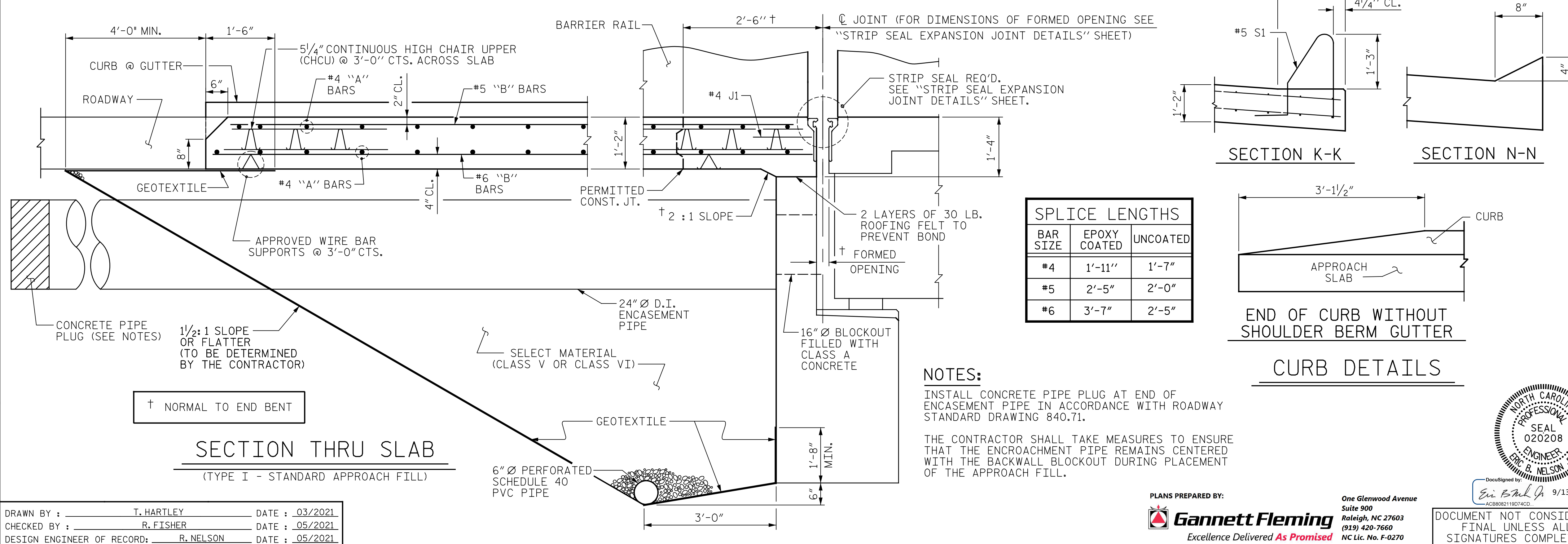
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BILL OF MATERIAL

APPROACH SLAB AT END BENT 1					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
* A11	50	#4	STR.	20'-5"	682
A12	52	#4	STR.	20'-3"	703
* B11	74	#5	STR.	24'-0"	1,852
B12	74	#6	STR.	24'-7"	2,732
* B13	4	#5	STR.	9'-7"	40
B14	4	#6	STR.	9'-7"	58
REINFORCING STEEL **				LBS.	2,608
* EPOXY COATED REINFORCING STEEL **				LBS.	3,459
CLASS AA CONCRETE **				C. Y.	41.3
APPROACH SLAB AT END BENT 2					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
* A21	50	#4	STR.	21'-10"	729
A22	52	#4	STR.	21'-8"	753
* B21	74	#5	STR.	23'-11"	1,846
B22	74	#6	STR.	24'-7"	2,732
* B23	2	#5	STR.	9'-8"	20
B24	2	#6	STR.	9'-8"	29
* B25	2	#5	STR.	9'-11"	21
B26	2	#6	STR.	9'-11"	30
REINFORCING STEEL **				LBS.	3,554
* EPOXY COATED REINFORCING STEEL **				LBS.	2,616
CLASS AA CONCRETE **				C. Y.	41.2

** QUANTITIES FOR BARRIER RAIL ARE NOT INCLUDED. SEE SHEET 2 OF 2.



SPLICE LENGTHS

BAR SIZE	EPOXY COATED	UNCOATED
#4	1'-11"	1'-7"
#5	2'-5"	2'-0"
#6	3'-7"	2'-5"

NOTES:

INSTALL CONCRETE PIPE PLUG AT END OF ENCASUREMENT PIPE IN ACCORDANCE WITH ROADWAY STANDARD DRAWING 840.71.

THE CONTRACTOR SHALL TAKE MEASURES TO ENSURE THAT THE ENCROACHMENT PIPE REMAINS CENTERED WITH THE BACKWALL BLOCKOUT DURING PLACEMENT OF THE APPROACH FILL.

PROJECT NO. B-4626
STANLY, ROWAN
AND DAVIDSON COUNTY
 STATION: 45+22.65 -EBL-

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BRIDGE APPROACH SLAB FOR FLEXIBLE PAVEMENT

SHEET 1 OF 2

SHEET NO. S1-102

TOTAL SHEETS 125

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

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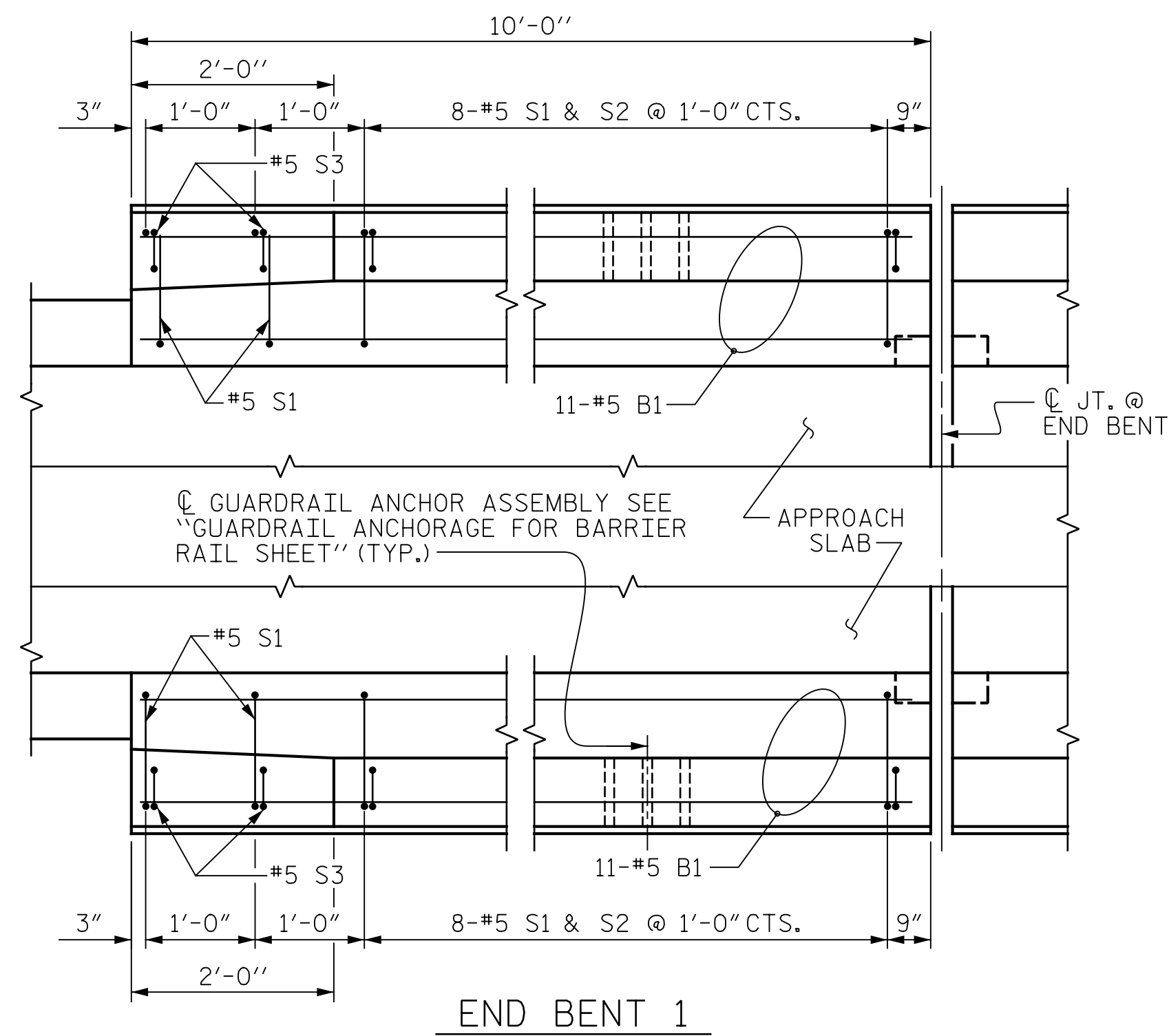
9/13/2021
 Eric B. Nelson
 PROFESSIONAL ENGINEER
 No. 020208
 State of North Carolina

PLANS PREPARED BY:

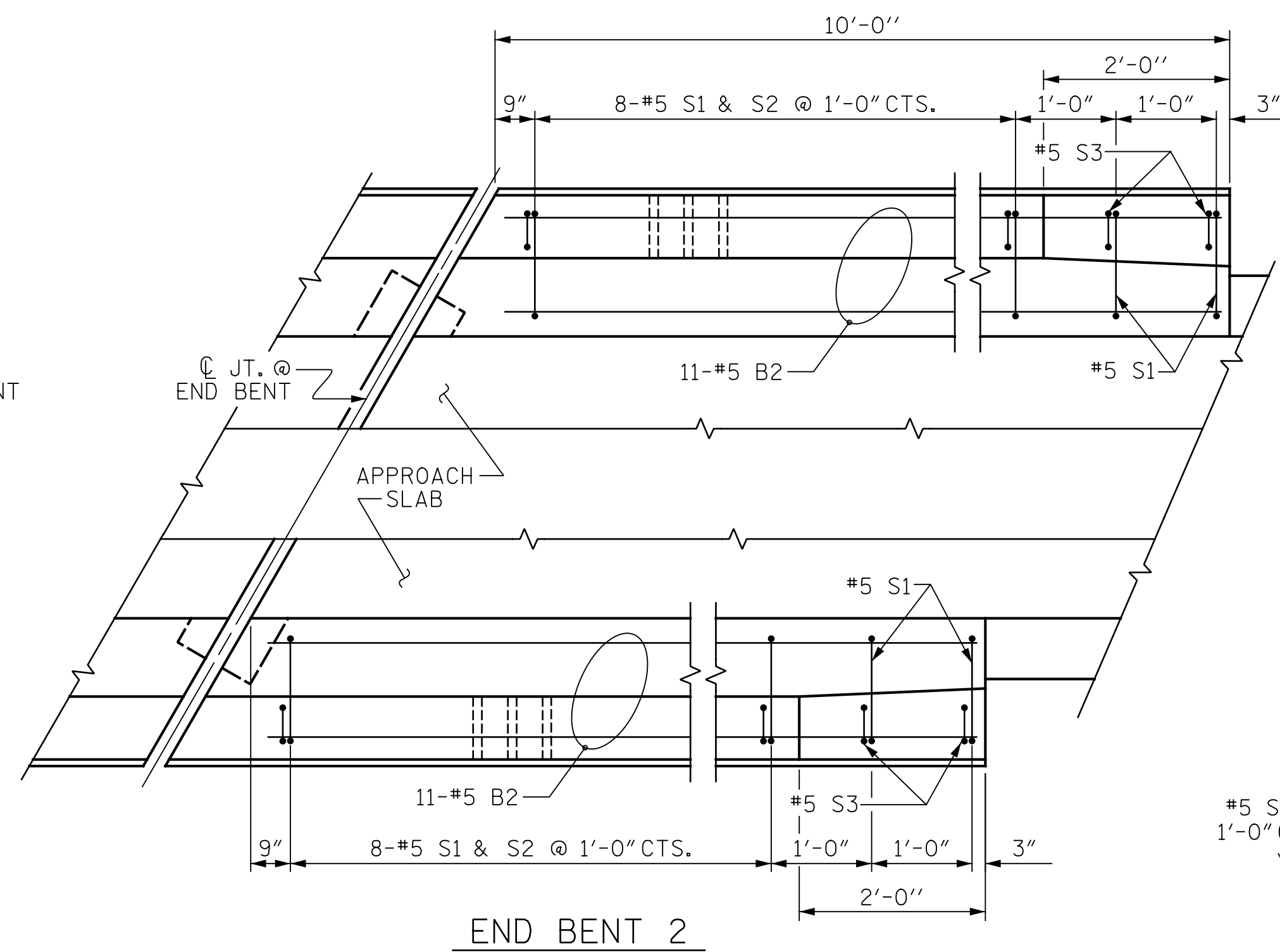
 One Glenwood Avenue
 Suite 900
 Raleigh, NC 27603
 (919) 420-7660
 Excellence Delivered As Promised
 NC Lic. No. F-0270

DRAWN BY: T. HARTLEY DATE: 03/2021
 CHECKED BY: R. FISHER DATE: 05/2021
 DESIGN ENGINEER OF RECORD: R. NELSON DATE: 05/2021

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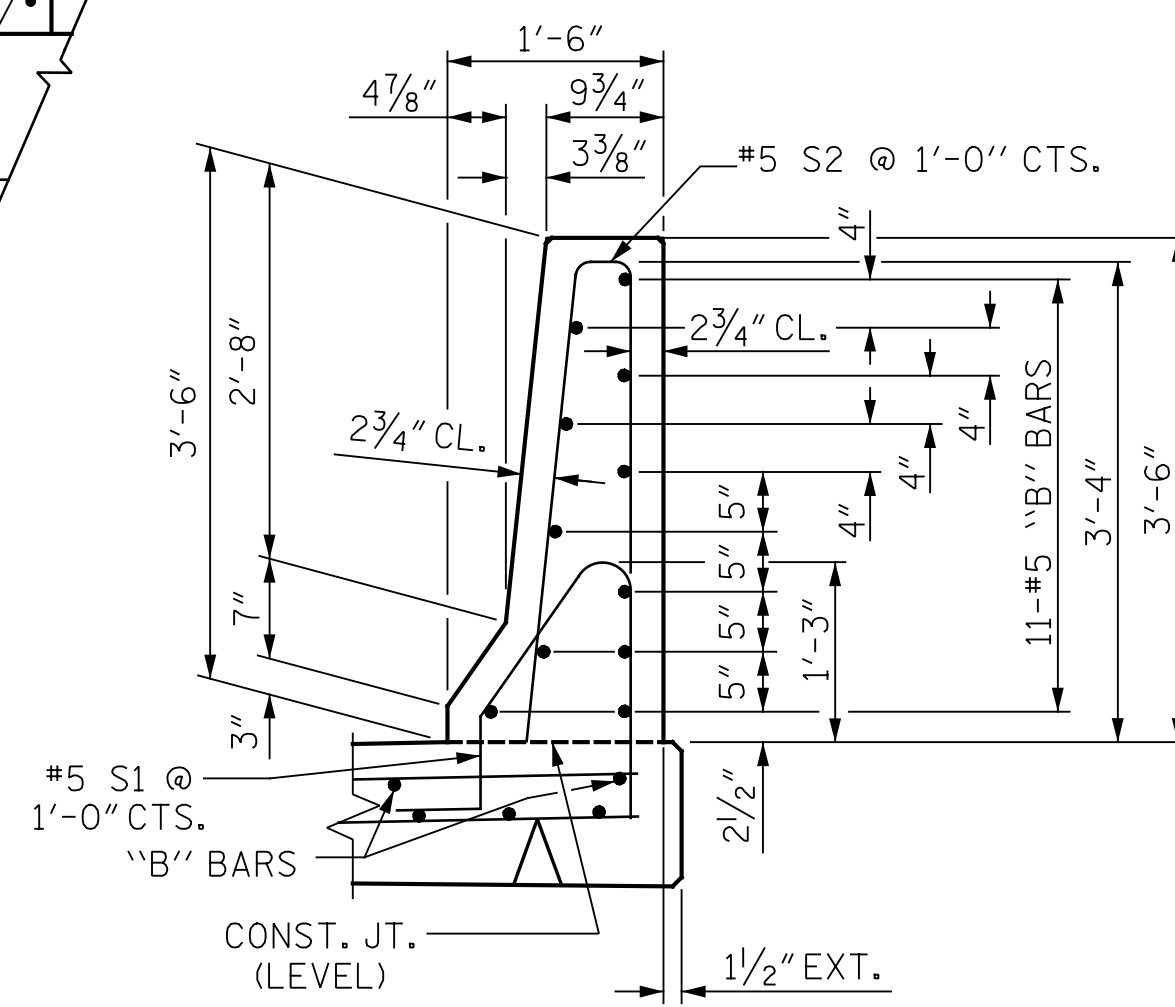


END BENT 1

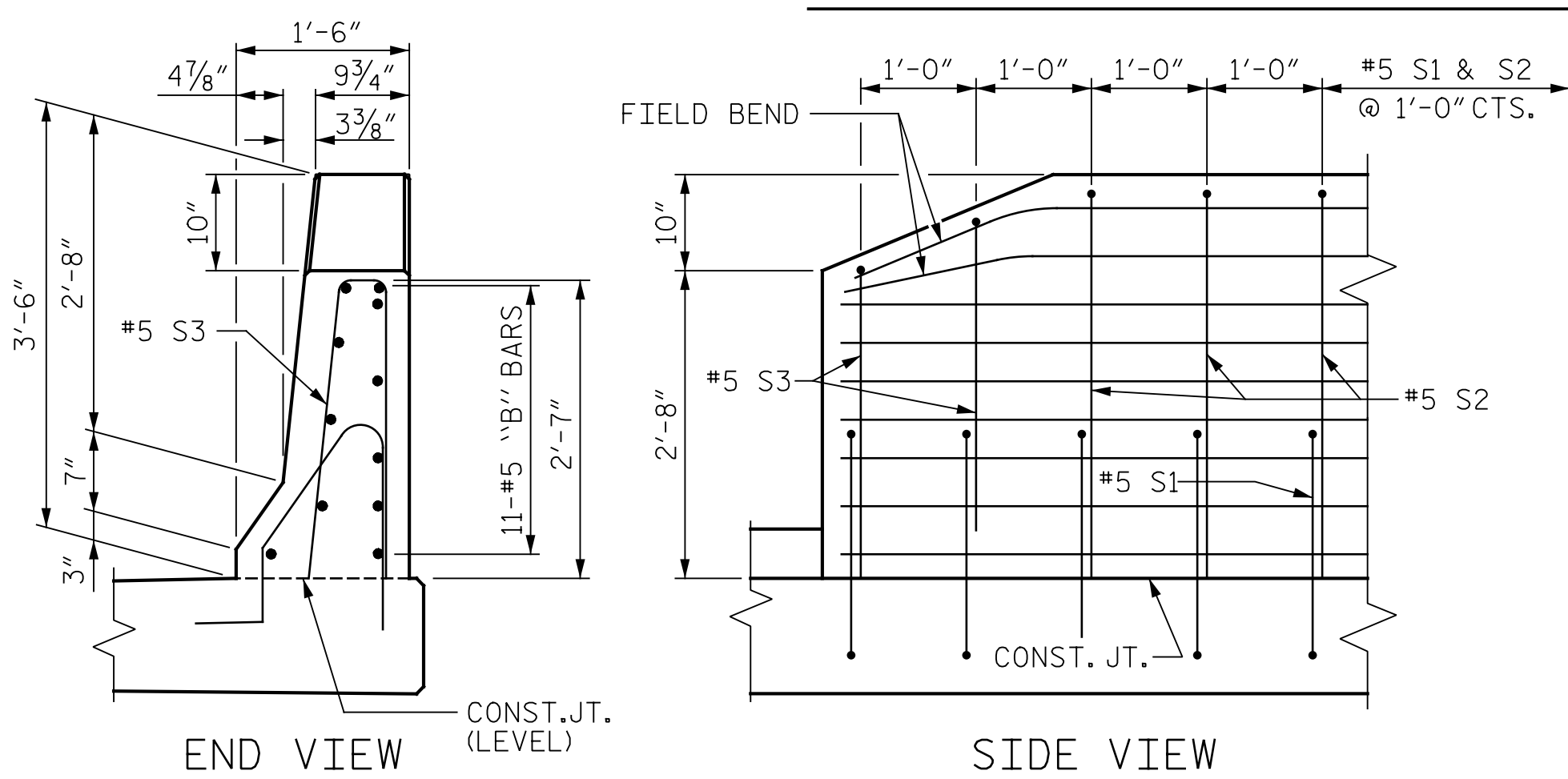


END BENT 2

PLAN OF BARRIER RAIL



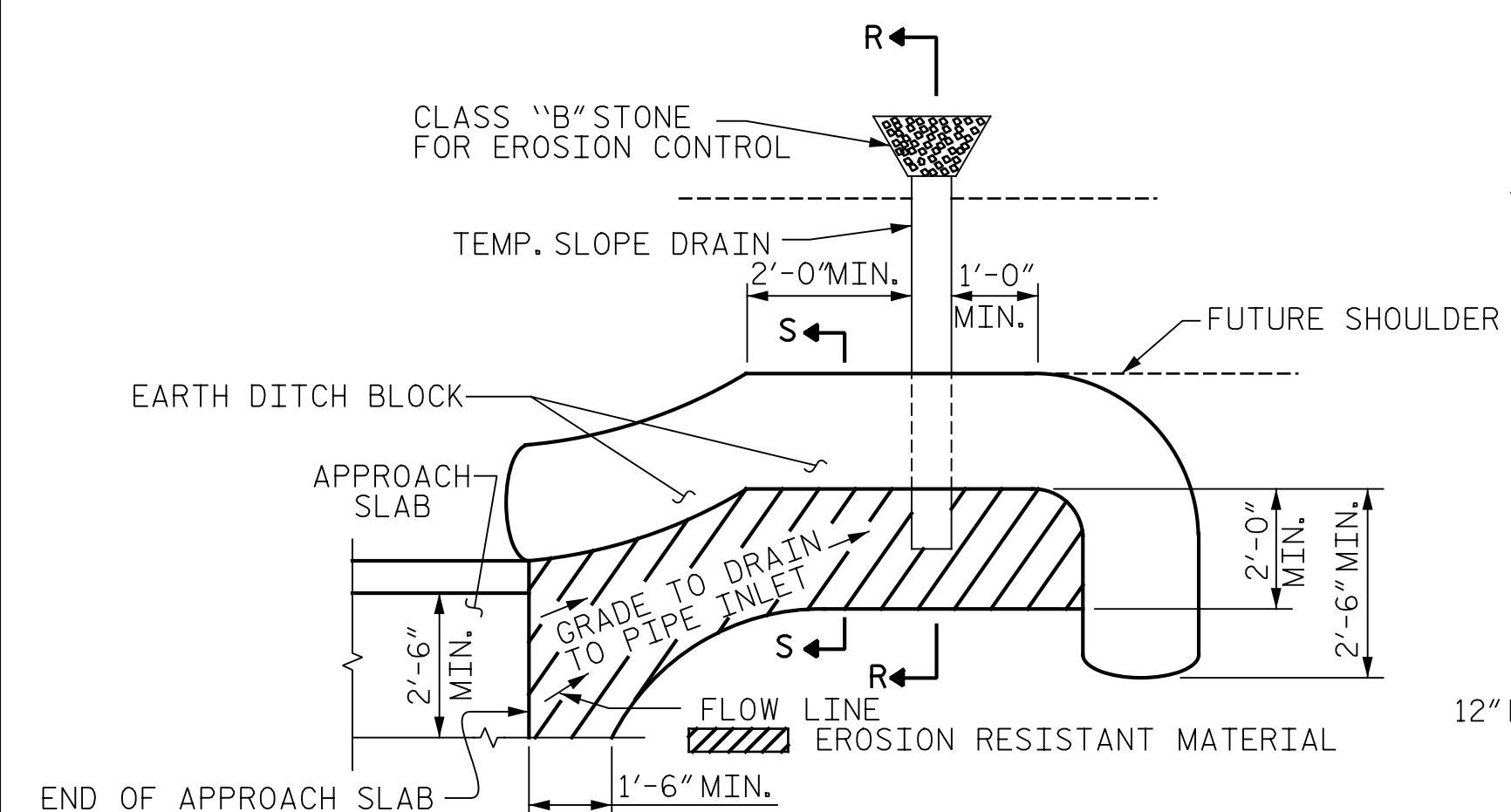
SECTION THRU RAIL



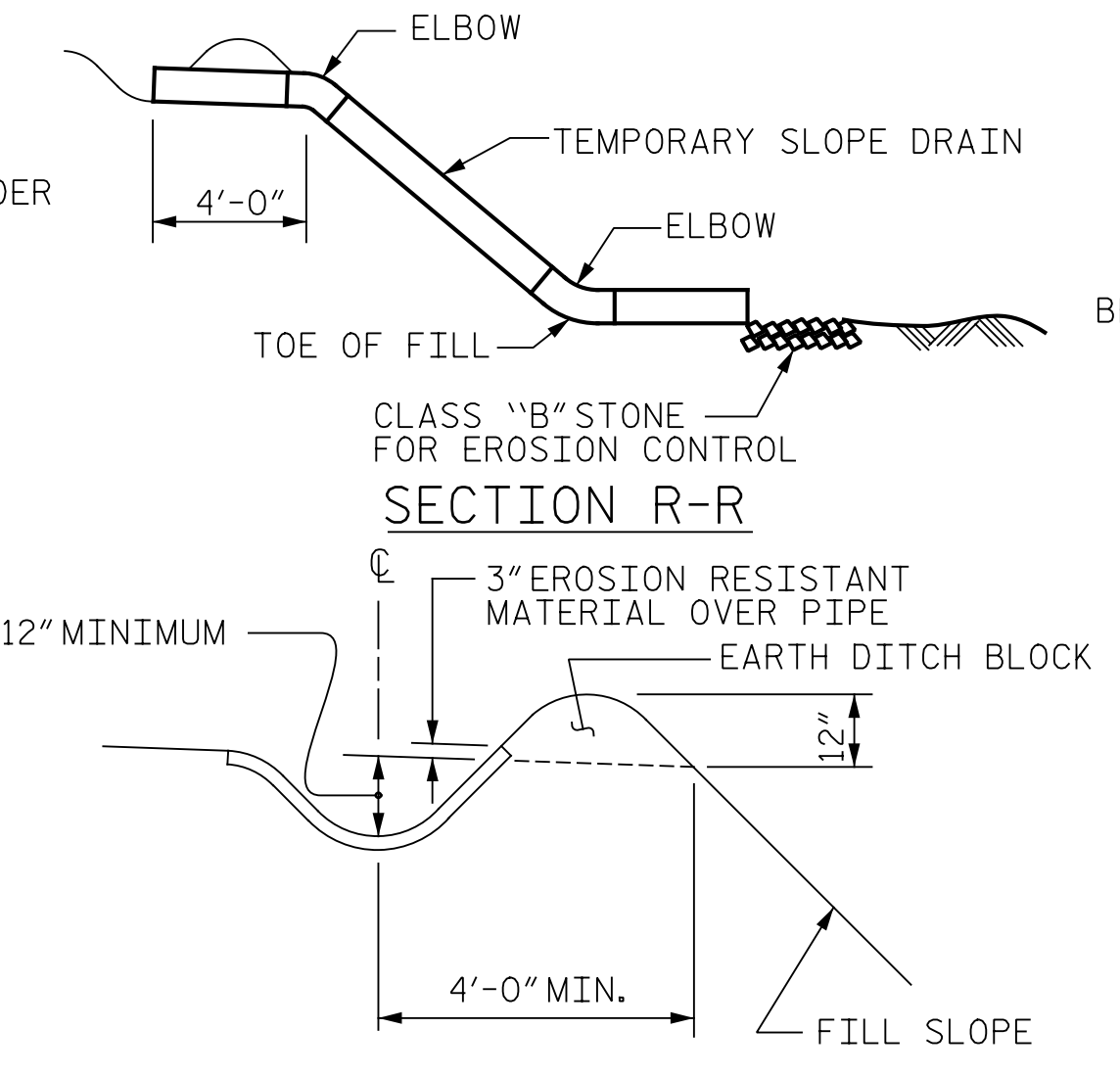
END VIEW

SIDE VIEW

END OF RAIL DETAILS



PLAN VIEW



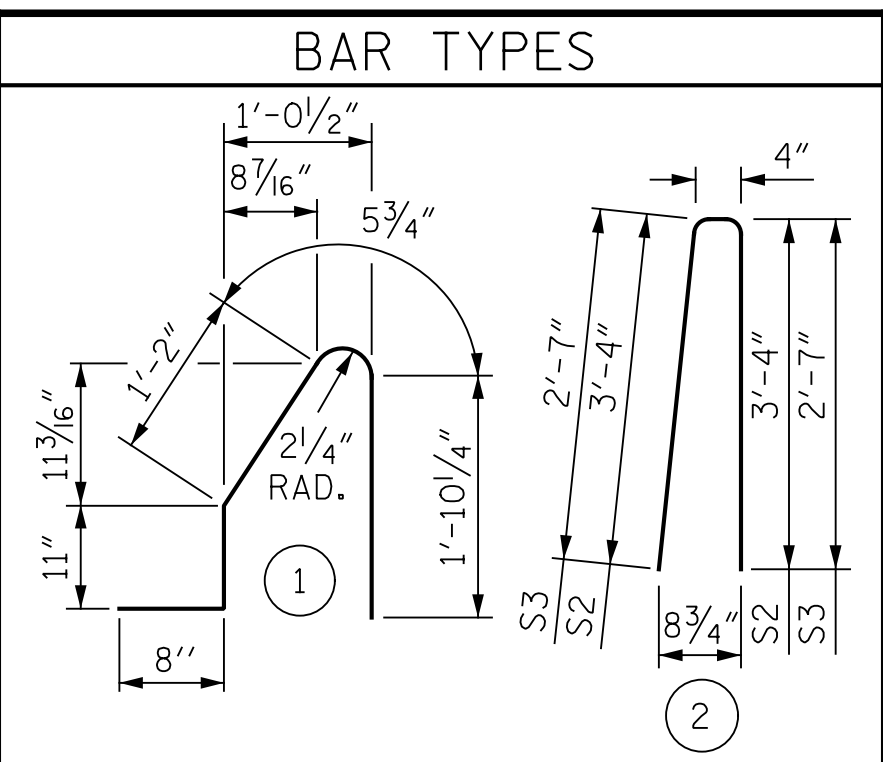
SECTION S-S

TEMPORARY BERM AND SLOPE DRAIN DETAILS

(TO BE USED WHEN SHOULDER BERM GUTTER IS REQUIRED)

DRAWN BY : T. HARTLEY DATE : 03/2021
 CHECKED BY : R. FISHER DATE : 05/2021
 DESIGN ENGINEER OF RECORD : R. NELSON DATE : 05/2021

NOTES
 THE COST OF THE BARRIER RAIL ON THE APPROACH SLAB SHALL BE INCLUDED IN THE LINEAR FOOT CONTRACT PRICE BID FOR "CONCRETE BARRIER RAIL".
 THE BARRIER RAIL ON EACH APPROACH SLAB SHALL NOT BE CAST UNTIL ALL APPROACH SLAB CONCRETE HAS BEEN CAST AND HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.
 ALL REINFORCING STEEL IN BARRIER RAILS SHALL BE EPOXY COATED.

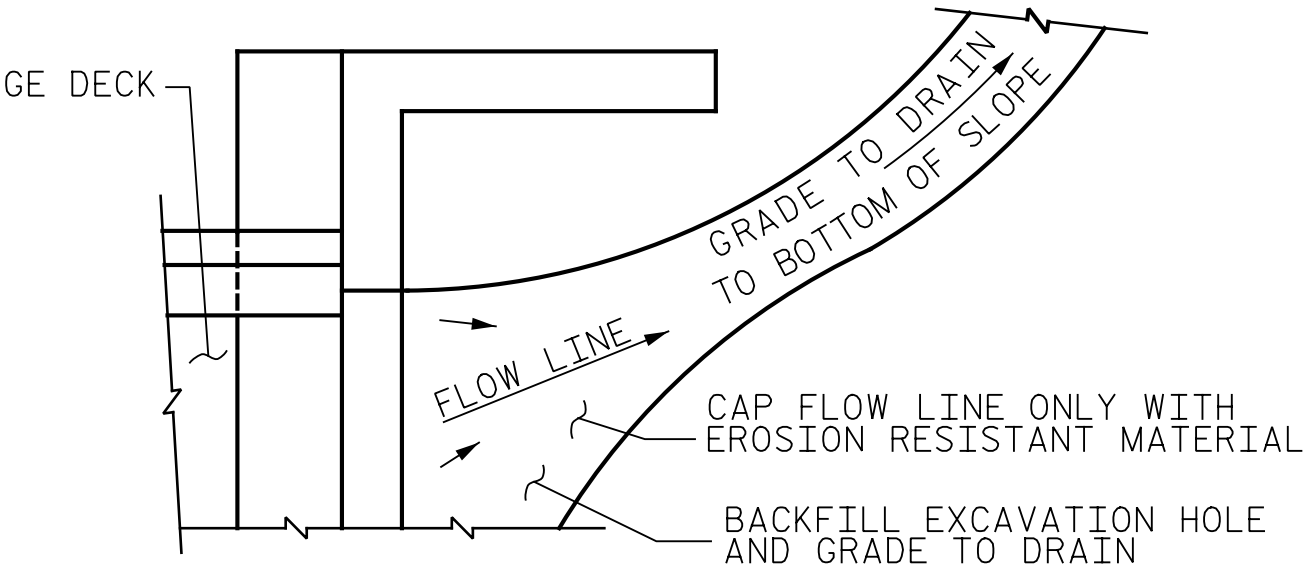


ALL BAR DIMENSIONS ARE OUT TO OUT

BILL OF MATERIAL

FOR CONCRETE BARRIER RAIL ONLY					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
* B1	22	#5	STR.	9'-7"	220
* B2	22	#5	STR.	9'-9"	224
* S1	40	#5	1	5'-1"	212
* S2	32	#5	2	7'-0"	234
* S3	8	#5	2	5'-6"	46

* EPOXY COATED REINFORCING STEEL 936 LBS.
 CLASS AA CONCRETE 5.4 CU. YDS.
 CONCRETE BARRIER RAIL 40.58 LIN. FT.



TEMPORARY DRAINAGE DETAIL

NOTE: IF THE APPROACH SLAB IS NOT CONSTRUCTED IMMEDIATELY AFTER THE BACKFILLING OF THE END BENT EXCAVATION, GRADE TO DRAIN TO THE BOTTOM OF THE SLOPE AND PROVIDE EROSION RESISTANT MATERIAL, SUCH AS FIBERGLASS ROVING OR AS DIRECTED BY THE ENGINEER TO PREVENT SOIL EROSION AND TO PROTECT THE AREA ADJACENT TO THE STRUCTURE. THE CONTRACTOR WILL BE REQUIRED TO REMOVE THESE MATERIALS PRIOR TO CONSTRUCTION OF THE APPROACH SLAB.

PROJECT NO. B-4626
 STANLY, ROWAN
 AND DAVIDSON COUNTY
 STATION: 45+22.65 -EBL-

SHEET 2 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 STANDARD
 BRIDGE APPROACH
 SLAB DETAILS



PLANS PREPARED BY:
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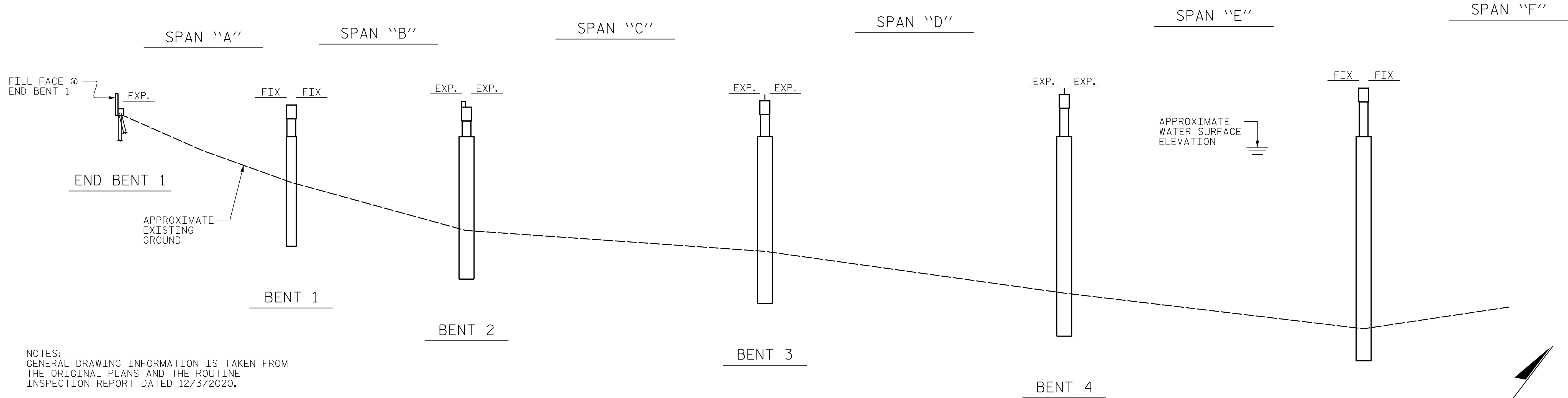
DocuSigned by:
 Eric B. Nelson
 9/2/2021
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SHEET NO.
 S1-103
 TOTAL SHEETS
 125

STD. NO. BAS4 (SHT 3)

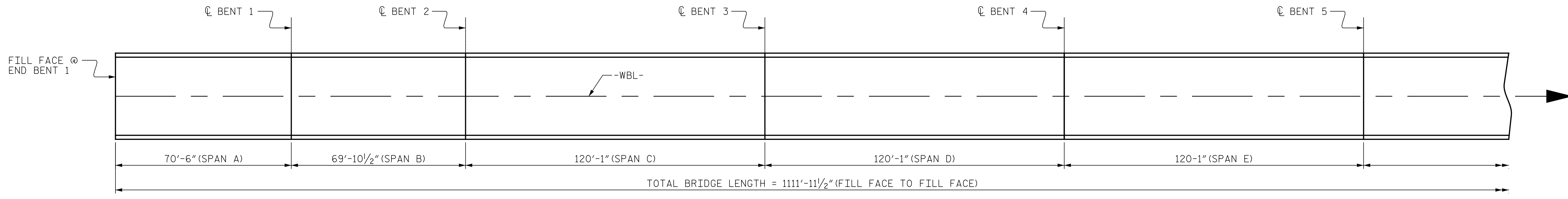
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SECTION ALONG CL BRIDGE

(SECTION AT BENTS AND END BENTS ARE AT RIGHT ANGLES)

NOTES:
GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 12/3/2020.
BRIDGE ORIENTATION CONFORMS TO THE EXISTING BRIDGE PLANS.



PARTIAL PLAN

(PILES NOT SHOWN FOR CLARITY)

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

RESIDENT ENGINEER _____ DATE _____

PROJECT NO. B-4626
STANLY, ROWAN
AND DAVIDSON COUNTY
BRIDGE NO. 790008
SHEET 1 OF 3 MILE POST #44.79

SCOPE OF WORK

- REPLACE EXISTING BEARINGS AT BENT #2 SPAN C & BENT#8 SPAN H
- CLEAN AND EPOXY COAT END BENT AND BENTS CAPS
- EPOXY COAT GIRDER ENDS
- BRIDGE DECK OVERLAY WITH POLYMER CONCRETE (PC)
- BRIDGE JOINT REPLACEMENTS
- CLEAN EXISTING BRIDGE DECK DRAINAGE SYSTEM

CONSTRUCTION SEQUENCE

- 1) REPLACE EXISTING BEARINGS AT BENTS 2 & 8
- 2) BRIDGE DECK SURFACE PREPARATION
- 3) BRIDGE DECK OVERLAY WITH POLYMER CONCRETE
- 4) BRIDGE JOINT REPLACEMENTS
- 5) GROOVING BRIDGE FLOORS
- 6) EPOXY COAT GIRDER ENDS AT END BENTS AND AT BENTS 2 & 8
- 7) CLEAN AND EPOXY COAT END BENT CAPS AND BENT 2 & 8 CAPS
- 8) CLEAN EXISTING BRIDGE DECK DRAINAGE SYSTEM



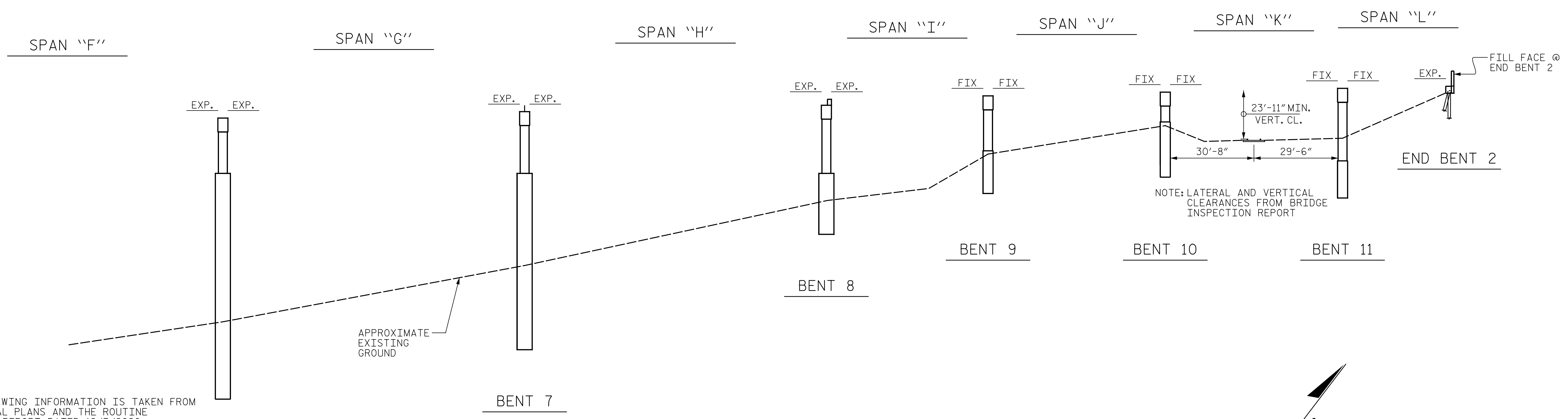
DocuSigned by:
Eric B. Nelson 9/2/2021
ACB892119274CD

PLANS PREPARED BY:
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Suite 900
Raleigh, NC 27603
(919) 420-7660
NC Lic. No. F-0270

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
GENERAL DRAWING FOR -WBL- BRIDGE OVER YADKIN RIVER AND WINSTON-SALEM SOUTHBOUND RR ON NC 8/49 BETWEEN SR 1578 AND SR 2543					
NO.		BY:		DATE:	
1		3			
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REVISIONS					SHEET NO. S2-1
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED					TOTAL SHEETS 125

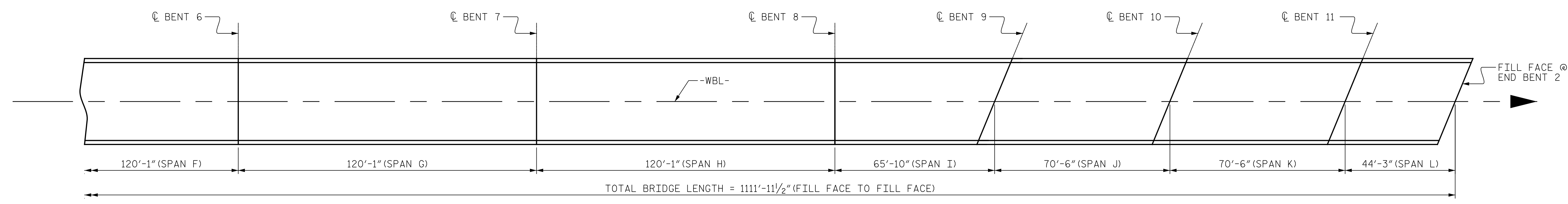
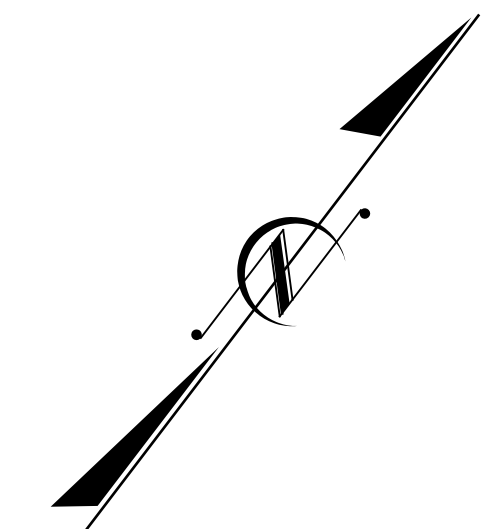
DRAWN BY : M. LEE DATE : 3/2021
CHECKED BY : R. NELSON DATE : 4/2021

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NOTES:
 GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 12/3/2020.
 BRIDGE ORIENTATION CONFORMS TO THE EXISTING BRIDGE PLANS.

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



PARTIAL PLAN
 (PILES NOT SHOWN FOR CLARITY)

PROJECT NO. B-4626
STANLY, ROWAN
AND DAVIDSON COUNTY
 BRIDGE NO. 790008

SHEET 2 OF 3
 STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING
 FOR -WBL- BRIDGE OVER YADKIN
 RIVER AND WINSTON-SALEM
 SOUTHBOUND RR ON NC 8/49
 BETWEEN SR 1578 AND SR 2543



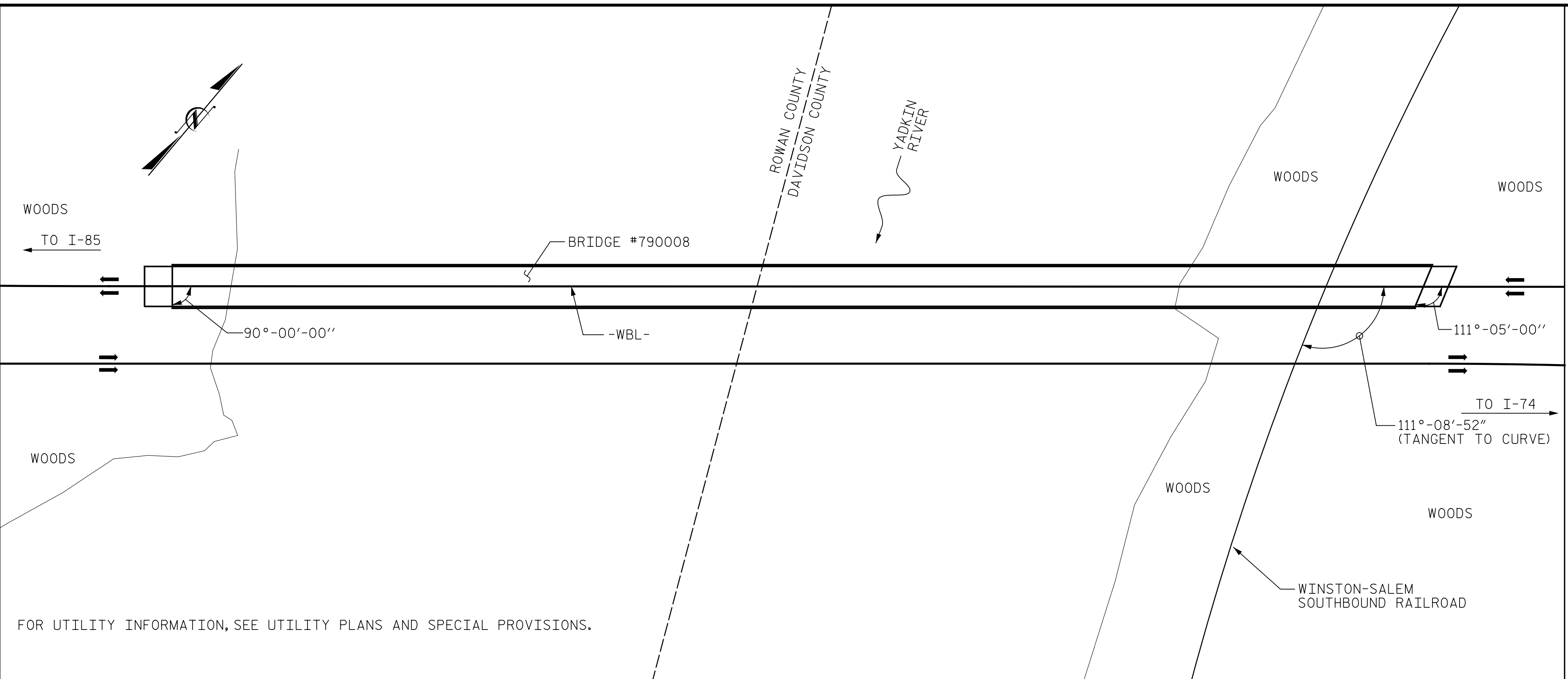
DRAWN BY : M. LEE DATE : 3/2021
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PLANS PREPARED BY:
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 NC Lic. No. F-0270

DocuSigned by:
 Eric B. Nelson
 9/2/2021
 NC020208119214C0
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-2
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GENERAL 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.

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

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

FOR ROADWAY MILLING AND RESURFACING AT BOTH ENDS OF THE BRIDGE, SEE ROADWAY PLANS.

LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG LANE LINES OR EDGE LINES UNLESS OTHERWISE NOTED ON THE PLANS.

AFTER SCARIFICATION THE EXISTING BRIDGE CONCRETE DECK SHALL BE REPAIRED PRIOR TO THE SURFACE PREPARATION AND APPLICATION OF THE POLYMER CONCRETE (PC) OVERLAY AT LOCATIONS SHOWN ON THE PLANS OR AS DETERMINED BY THE ENGINEER. SUCH LOCATIONS MAY BE REPAIRED WITH PC.

EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO AND DURING REPAIR OF BRIDGE DECKS. WHEN RAIN IS PREDICTED BETWEEN WORK PERIODS THE CONTRACTOR SHALL REMOVE DECK DRAIN SEAL DEVICES. DURING SUCH OCCURRENCES, DEMOLITION, CONSTRUCTION AND OTHER DEBRIS SHALL BE PREVENTED FROM ESCAPING THE BRIDGE DECK. REINSTALL DECK DRAIN DEVICES PRIOR TO RESUMING DECK REPAIR ACTIVITIES.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FIELD MEASURING, SEE SPECIAL PROVISION.

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

FOR CONCRETE DECK REPAIR FOR PC OVERLAY, PC MATERIALS, AND PLACING AND FINISHING PC OVERLAY, SEE POLYMER CONCRETE BRIDGE DECK OVERLAY 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 BEARING KEEPER PLATE, SEE SPECIAL PROVISIONS.

FOR TYPE I BRIDGE JACKING, SEE SPECIAL PROVISIONS

FOR CLEANING EXISTING DRAINAGE SYSTEM, SEE SPECIAL PROVISIONS.

FOR EPOXY PROTECTIVE COATING BENT CAPS AND CONCRETE GIRDER ENDS, SEE SPECIAL PROVISIONS.

LOCATION SKETCH

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

TOTAL BILL OF MATERIAL

BRIDGE NO.	FIELD MEASURING	GROOVING BRIDGE FLOORS	CLASS II. SURFACE PREPARATION	FOAM JOINT SEALS FOR PRESERVATION	POLYESTER POLYMER CONCRETE MATERIALS	EPOXY POLYMER CONCRETE MATERIALS (ALTERNATE)	CLEAN BRIDGE DECK DRAINAGE SYSTEM	TOP OF CAP EPOXY COATINGS	PLACING & FINISHING PC OVERLAY	CONCRETE DECK REPAIR FOR PC OVERLAY	SCARIFYING BRIDGE DECK	SHOTBLASTING BRIDGE DECK	TYPE I BRIDGE JACKING BRIDGE NO. 790008	ELASTOMERIC BEARINGS	BEARING KEEPER PLATE	BEAM END EPOXY COATINGS
	LUMP SUM	SQ. FT.	SQ. YDS.	LN. FT.	CU. YDS.	CU. YDS.	LN. FT.	SQ. FT.	SQ. YDS.	SQ. YDS.	SQ. YDS.	SQ. YDS.	EA.	LUMP SUM	EA.	EA.
790008	LUMP SUM	32380	65.8	69.5	119	119	900	494	3959	7.3	3959	3959	10	LUMP SUM	10	30

PROJECT NO. B-4626
STANLY, ROWAN
AND DAVIDSON COUNTY
 BRIDGE NO. 790008

SHEET 3 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

FOR -WBL- BRIDGE OVER YADKIN RIVER AND WINSTON-SALEM SOUTHBOUND RR ON NC 8/49 BETWEEN SR 1578 AND SR 2543

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-3
1			3			TOTAL SHEETS
2			4			125



PLANS PREPARED BY:
Gannett Fleming
 Excellence Delivered As Promised

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

DocuSigned by:

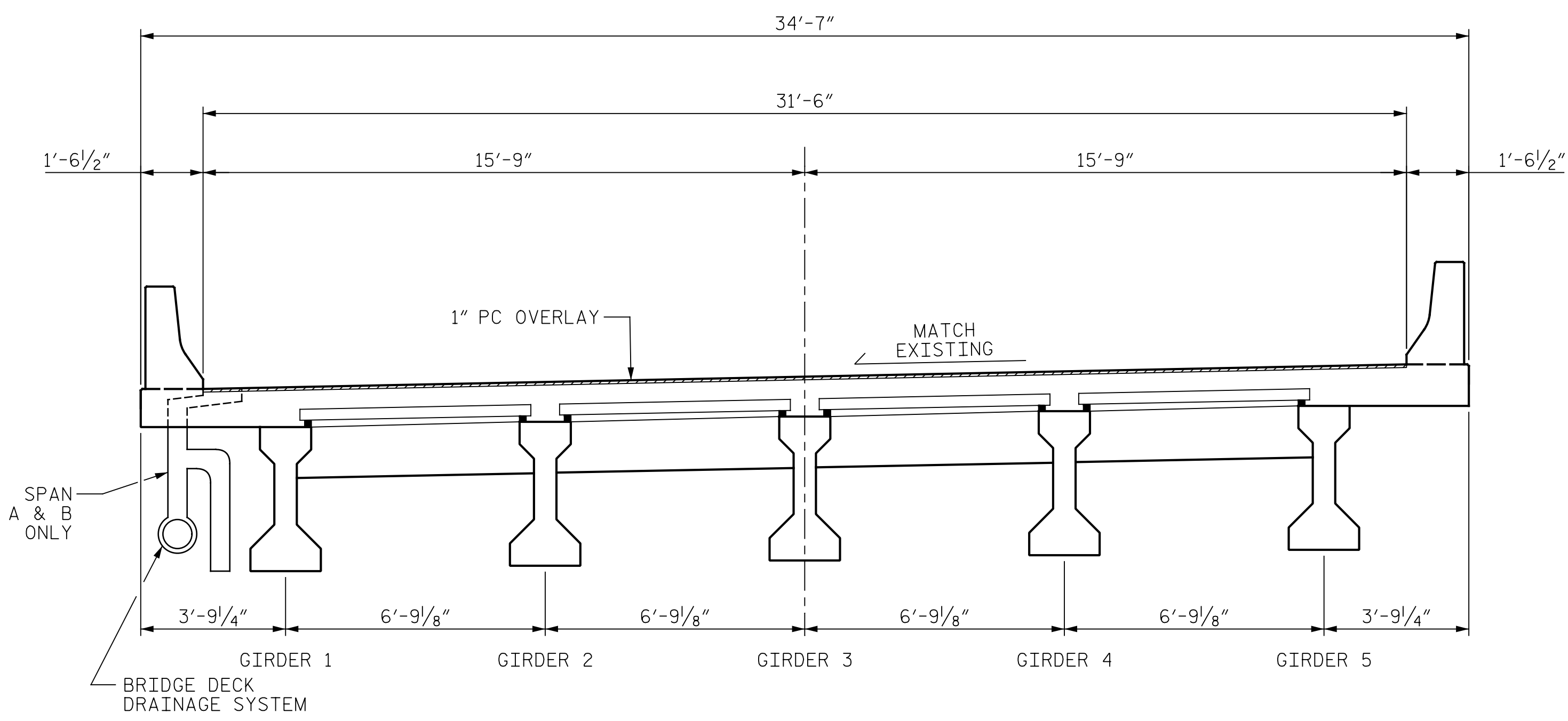
 9/13/2021
 NC09032110274C0

DRAWN BY : M. LEE DATE : 3/2021
 CHECKED BY : R. NELSON DATE : 4/2021

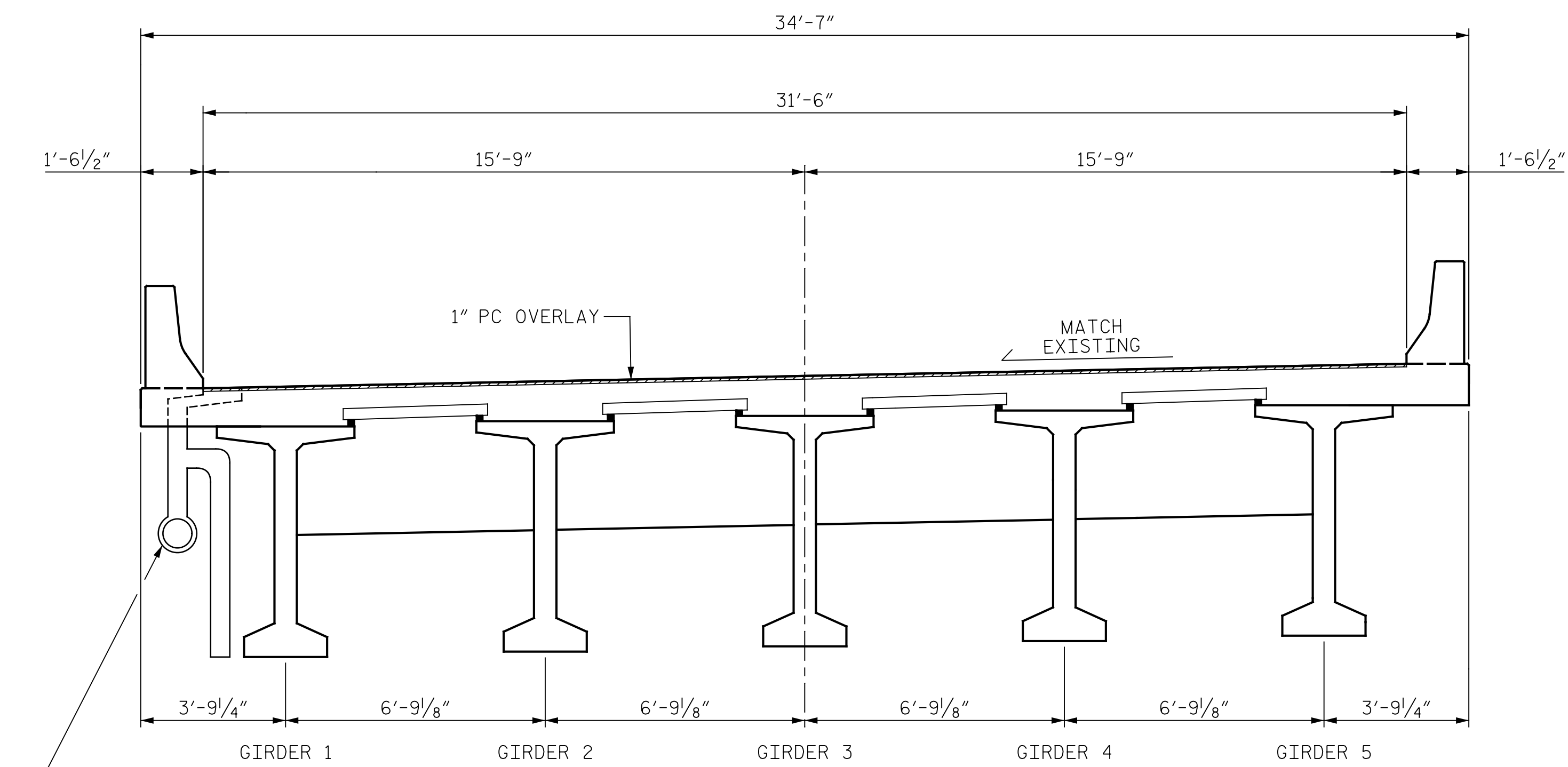
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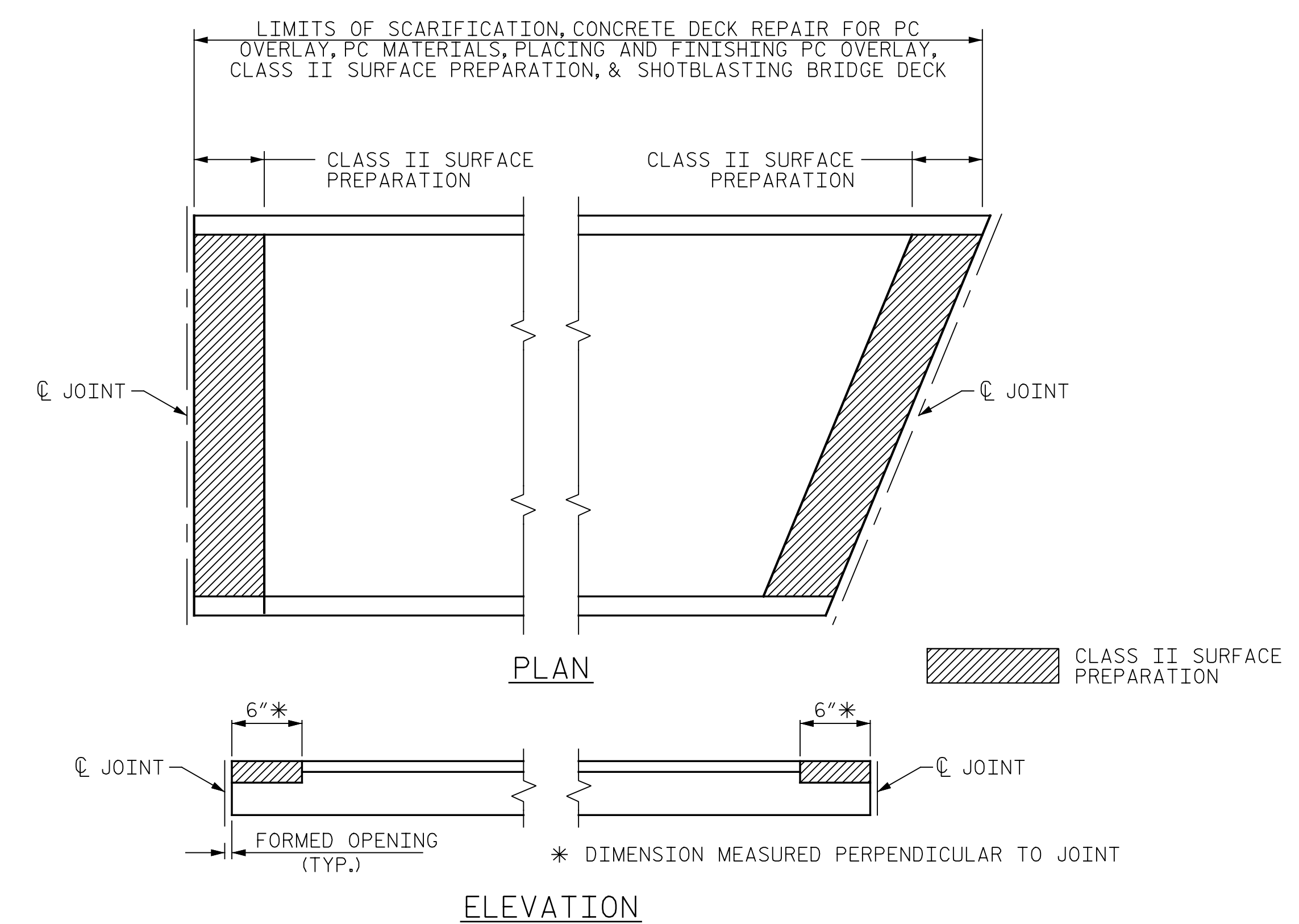
NOTE:
SEE TRANSPORTATION MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION AND POLYMER CONCRETE PLACEMENT.



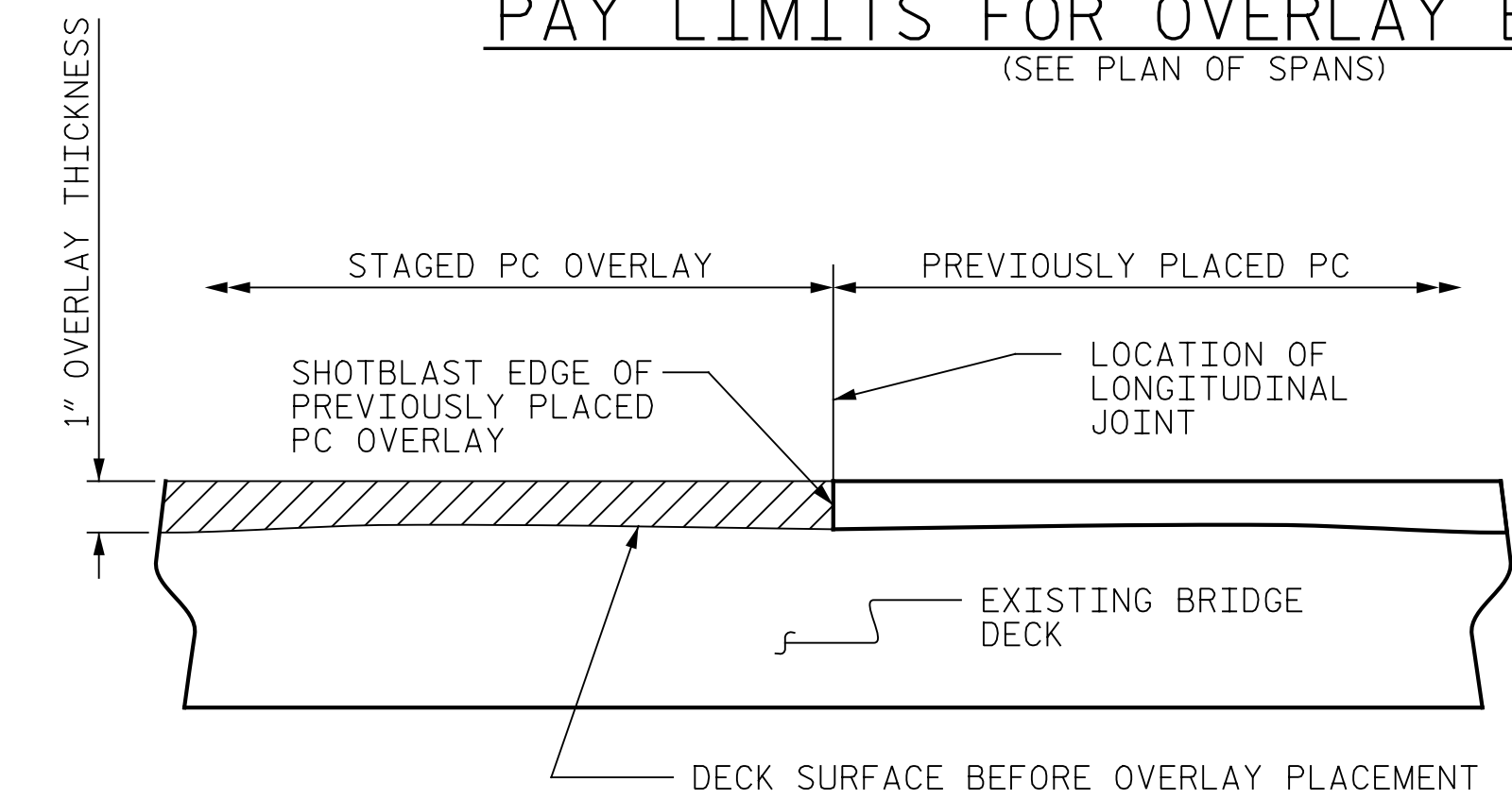
TYPICAL SECTION FOR SPANS A, B, I-L
(PROPOSED)



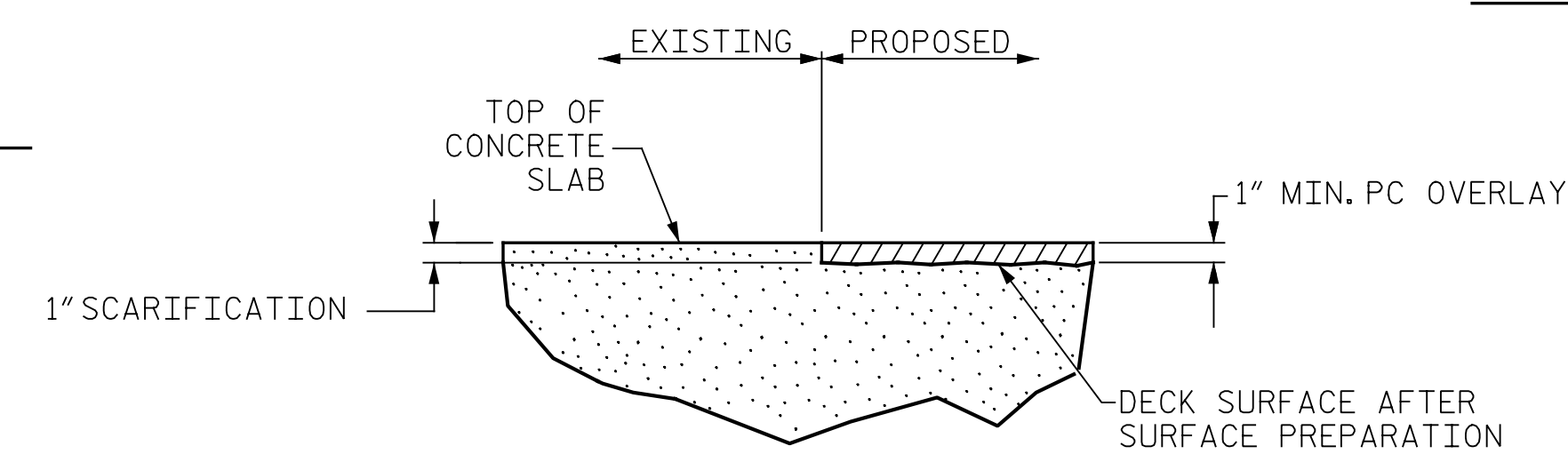
TYPICAL SECTION FOR SPANS C-H
(PROPOSED)



PAY LIMITS FOR OVERLAY BID ITEMS
(SEE PLAN OF SPANS)



STAGED PC OVERLAY CONSTRUCTION JOINT



DETAIL FOR POLYMER CONCRETE OVERLAY

PROJECT NO. B-4626
STANLY, ROWAN
AND DAVIDSON COUNTY
BRIDGE NO. 790008

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION & OVERLAY DETAILS



DocuSigned by:
Eric B. Nelson
9/2/2021
ACB8052119074CD

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(919) 420-7660
NC Lic. No. F-0270

DRAWN BY: M. LEE DATE: 3/2021
CHECKED BY: R. NELSON DATE: 4/2021

REVISIONS						SHEET NO. S2-4
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2			4			

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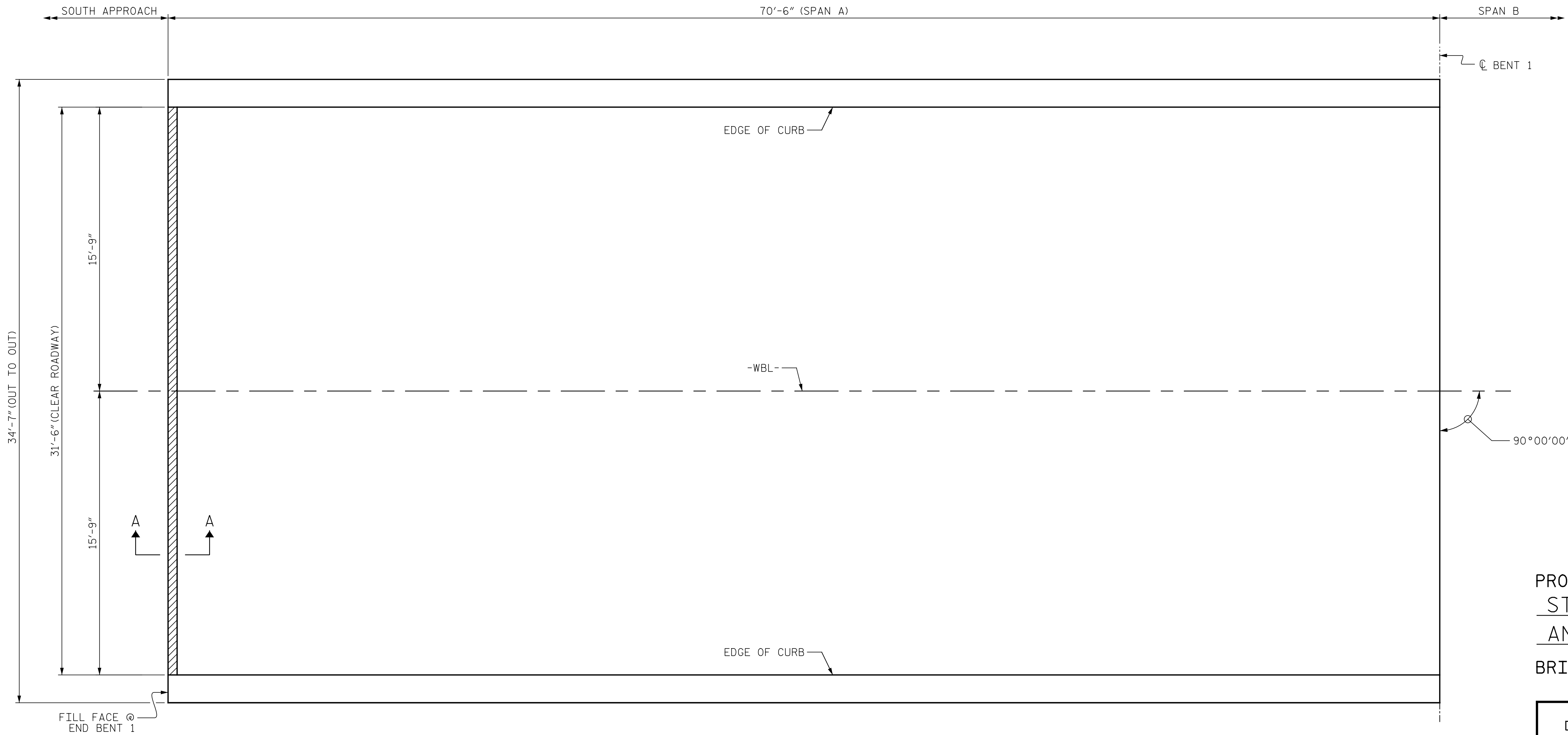
NOTES:

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

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

FOR EPOXY PROTECTIVE COATING, SEE SPECIAL PROVISIONS.

SUMMARY OF QUANTITIES FOR SPAN "A"		
TOP OF DECK REPAIRS		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	246.9 SY	
CLASS II SURFACE PREPARATION	1.8 SY	
CONCRETE DECK REPAIR FOR PC OVERLAY	1.8 SY	
SHOTBLASTING BRIDGE DECK	246.9 SY	
PC MATERIALS	7.7 CY	
PLACING AND FINISHING PC OVERLAY	246.9 SY	
GROOVING BRIDGE FLOORS	2011 SF	
TOP OF CAP EPOXY COATINGS		
END BENT 1	91 SF	



PROJECT NO. B-4626
STANLY, ROWAN
AND DAVIDSON COUNTY
 BRIDGE NO. 790008

PLAN OF SPAN "A"
 (SEE SHEET NO. S2-18 FOR SECTION A-A)

- SCARIFYING OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SURFACE PREPARATION
 SPAN "A"**

DRAWN BY : M. LEE DATE : 3/2021
 CHECKED BY : R. NELSON DATE : 4/2021

PLANS PREPARED BY:
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 Excellence Delivered As Promised

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 NC Lic. No. F-0270

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1			3			TOTAL SHEETS
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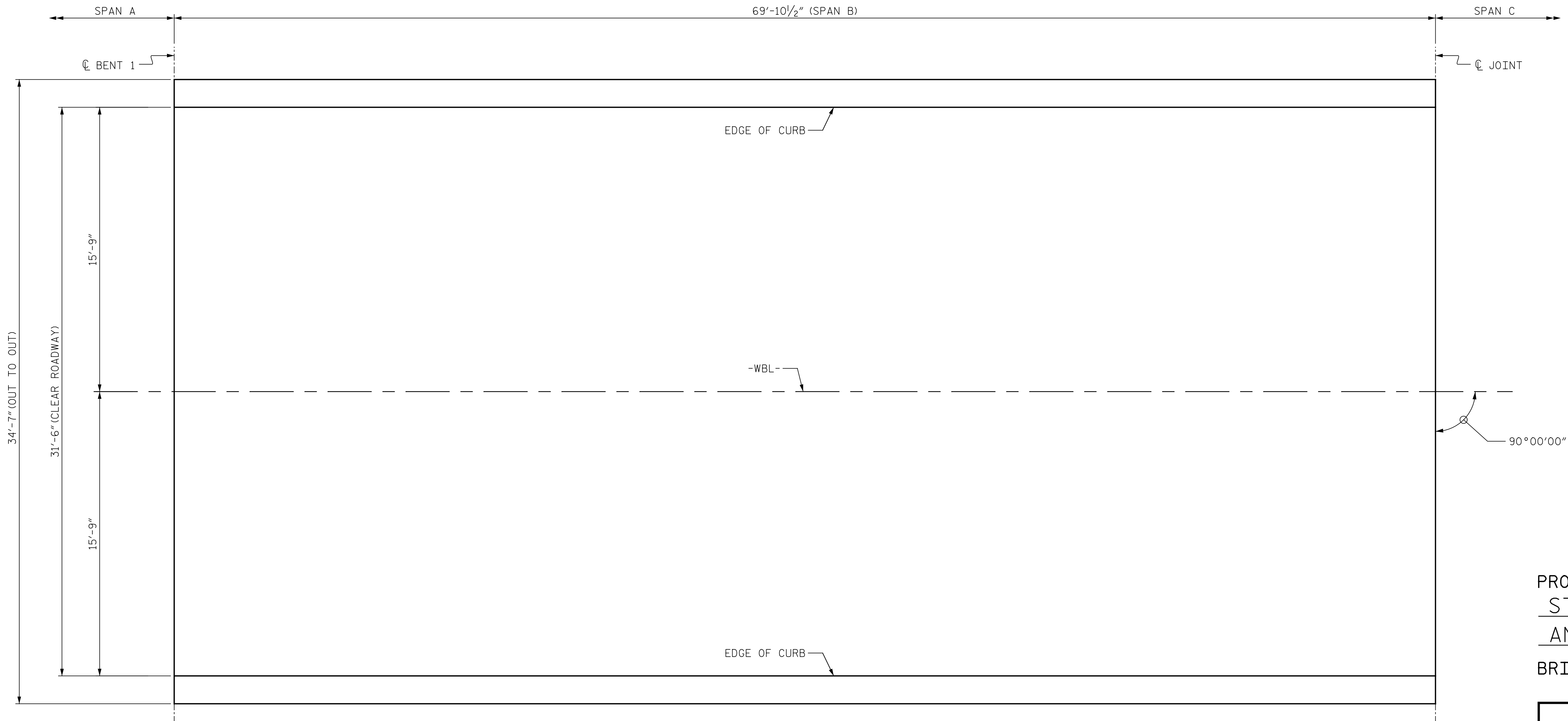
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NOTES:

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

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

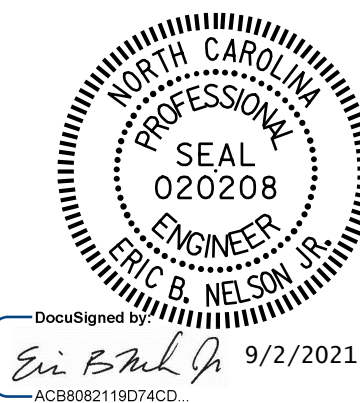
SUMMARY OF QUANTITIES FOR SPAN "B"		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	244.6 SY	
CLASS II SURFACE PREPARATION	- SY	
CONCRETE DECK REPAIR FOR PC OVERLAY	- SY	
SHOTBLASTING BRIDGE DECK	244.6 SY	
PC MATERIALS	7.4 CY	
PLACING AND FINISHING PC OVERLAY	244.6 SY	
GROOVING BRIDGE FLOORS	1992 SF	



PLAN OF SPAN "B"

- SCARIFYING OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION

PROJECT NO. B-4626
STANLY, ROWAN
AND DAVIDSON COUNTY
BRIDGE NO. 790008



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION
SPAN "B"

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-6
1			3			TOTAL SHEETS
2			4			125

DRAWN BY : M. LEE DATE : 3/2021
CHECKED BY : R. NELSON DATE : 4/2021

PLANS PREPARED BY:
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Suite 900
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(919) 420-7660
NC Lic. No. F-0270

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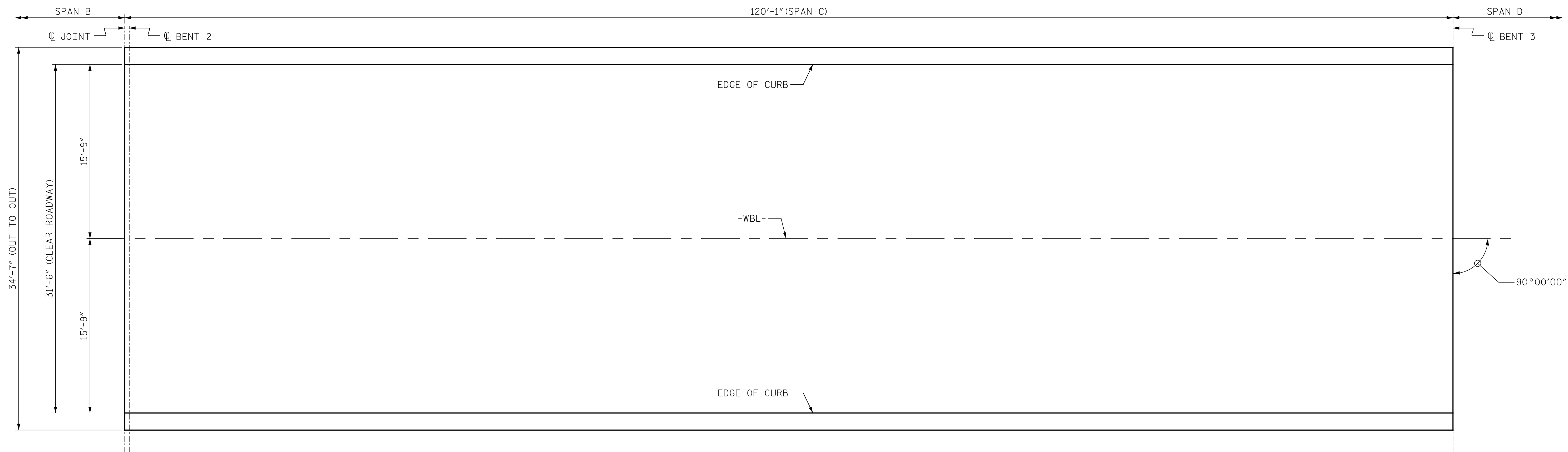
NOTES:

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

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

FOR EPOXY PROTECTIVE COATING, SEE SPECIAL PROVISIONS.

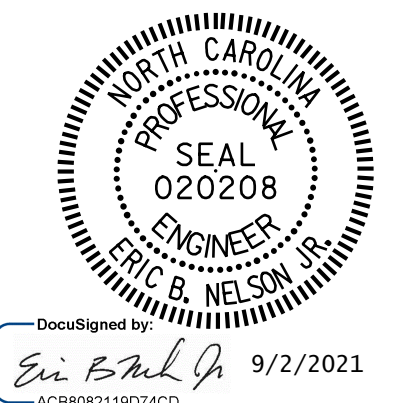
SUMMARY OF QUANTITIES FOR SPAN "C"		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	420.3 SY	
CLASS II SURFACE PREPARATION	- SY	
CONCRETE DECK REPAIR FOR PC OVERLAY	- SY	
SHOTBLASTING BRIDGE DECK	420.3 SY	
PC MATERIALS	14.6 CY	
PLACING AND FINISHING PC OVERLAY	420.3 SY	
GROOVING BRIDGE FLOORS	3422 SF	
TOP OF CAP EPOXY COATINGS		
BENT 2	155 SF	



PLAN OF SPAN "C"

PROJECT NO. B-4626
STANLY, ROWAN
AND DAVIDSON COUNTY
 BRIDGE NO. 790008

- SCARIFYING OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION
SPAN "C"

DRAWN BY : M. LEE DATE : 3/2021
 CHECKED BY : R. NELSON DATE : 4/2021

PLANS PREPARED BY:
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REVISIONS						SHEET NO.
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1			3			TOTAL SHEETS
2			4			125

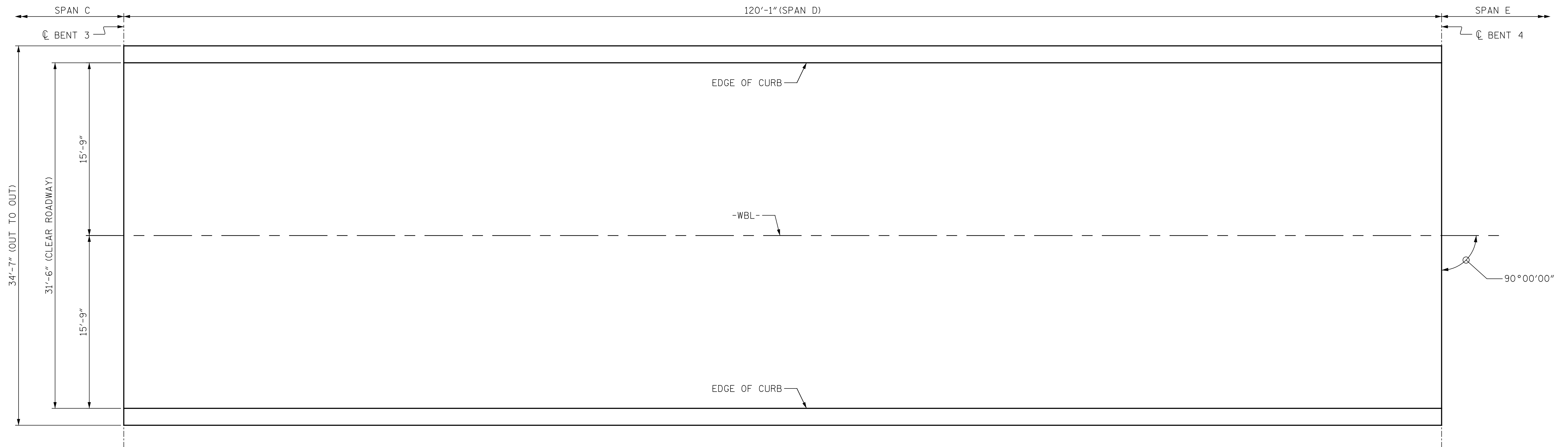
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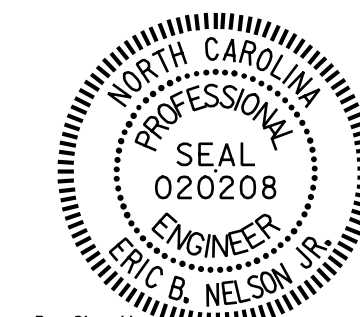
SUMMARY OF QUANTITIES FOR SPAN "D"		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	420.3 SY	
CLASS II SURFACE PREPARATION	- SY	
CONCRETE DECK REPAIR FOR PC OVERLAY	- SY	
SHOTBLASTING BRIDGE DECK	420.3 SY	
PC MATERIALS	14.6 CY	
PLACING AND FINISHING PC OVERLAY	420.3 SY	
GROOVING BRIDGE FLOORS	3422 SF	



PLAN OF SPAN "D"

PROJECT NO. B-4626
STANLY, ROWAN
AND DAVIDSON COUNTY
 BRIDGE NO. 790008

- SCARIFYING OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION



DocuSigned by:
Eric B. Nelson
9/2/2021

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION
SPAN "D"

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-8
1			3			TOTAL SHEETS
2			4			125

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 CHECKED BY : R. NELSON DATE : 4/2021

PLANS PREPARED BY:
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 (919) 420-7660
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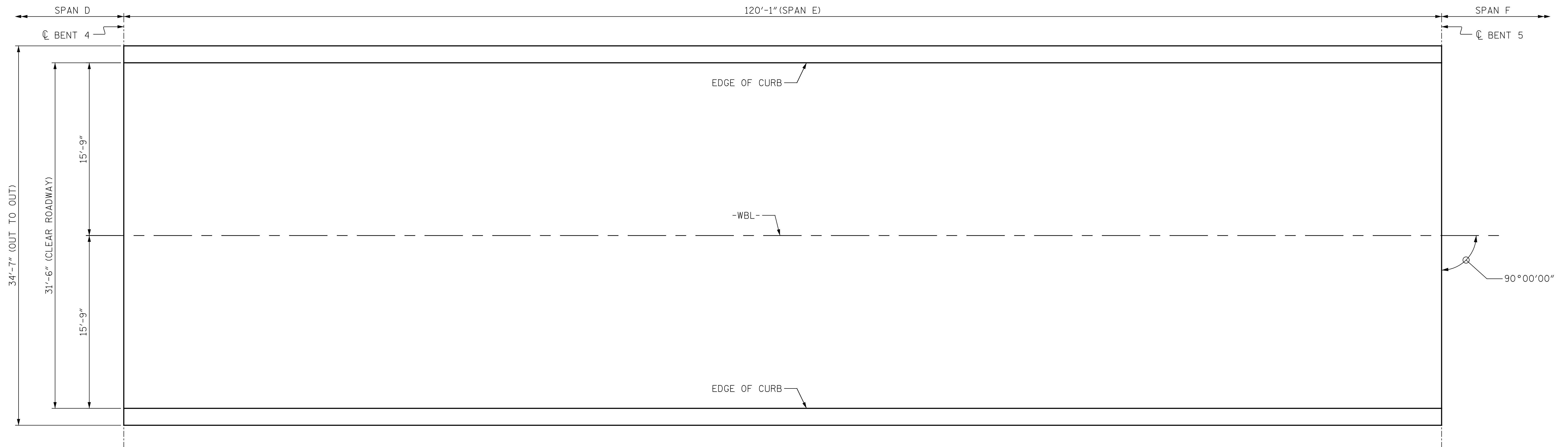
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SUMMARY OF QUANTITIES FOR SPAN "E"		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	420.3 SY	
CLASS II SURFACE PREPARATION	- SY	
CONCRETE DECK REPAIR FOR PC OVERLAY	- SY	
SHOTBLASTING BRIDGE DECK	420.3 SY	
PC MATERIALS	14.6 CY	
PLACING AND FINISHING PC OVERLAY	420.3 SY	
GROOVING BRIDGE FLOORS	3422 SF	



PLAN OF SPAN "E"

PROJECT NO. B-4626
STANLY, ROWAN
AND DAVIDSON COUNTY
 BRIDGE NO. 790008

- SCARIFYING OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION



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Eric B. Nelson 9/2/2021

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DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION
SPAN "E"

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

SHEET NO. S2-9	TOTAL SHEETS 125
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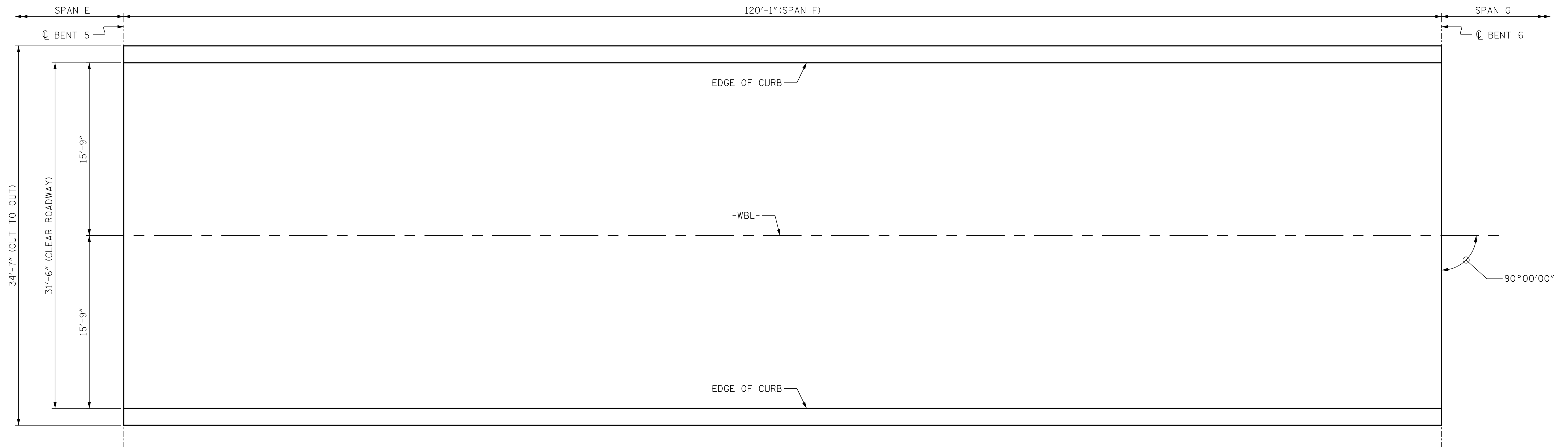
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SUMMARY OF QUANTITIES FOR SPAN "F"		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	420.3 SY	
CLASS II SURFACE PREPARATION	- SY	
CONCRETE DECK REPAIR FOR PC OVERLAY	- SY	
SHOTBLASTING BRIDGE DECK	420.3 SY	
PC MATERIALS	14.6 CY	
PLACING AND FINISHING PC OVERLAY	420.3 SY	
GROOVING BRIDGE FLOORS	3422 SF	



PLAN OF SPAN "F"

PROJECT NO. B-4626
STANLY, ROWAN
AND DAVIDSON COUNTY
 BRIDGE NO. 790008

- SCARIFYING OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

 SURFACE PREPARATION
 SPAN "F"

DRAWN BY : M. LEE DATE : 3/2021
 CHECKED BY : R. NELSON DATE : 4/2021

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1			3			TOTAL SHEETS
2			4			125

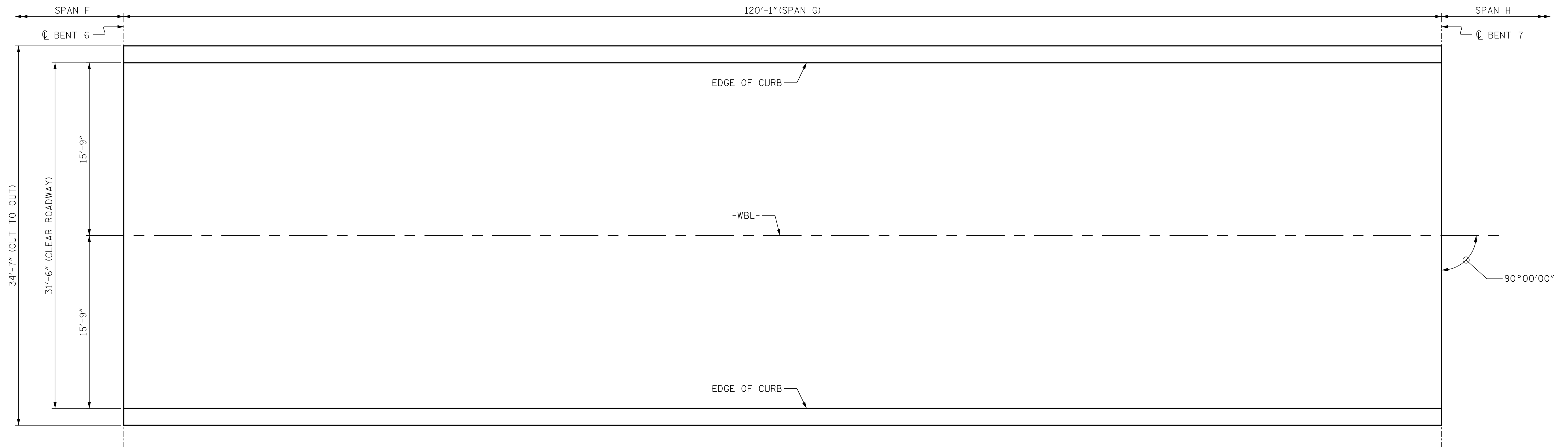
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SUMMARY OF QUANTITIES FOR SPAN "G"		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	420.3 SY	
CLASS II SURFACE PREPARATION	- SY	
CONCRETE DECK REPAIR FOR PC OVERLAY	- SY	
SHOTBLASTING BRIDGE DECK	420.3 SY	
PC MATERIALS	14.6 CY	
PLACING AND FINISHING PC OVERLAY	420.3 SY	
GROOVING BRIDGE FLOORS	3422 SF	



PLAN OF SPAN "G"

PROJECT NO. B-4626
STANLY, ROWAN
AND DAVIDSON COUNTY
 BRIDGE NO. 790008

- SCARIFYING OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION



DocuSigned by: *Eric B. Nelson* 9/2/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SURFACE PREPARATION
SPAN "G"

DRAWN BY : M. LEE DATE : 3/2021
 CHECKED BY : R. NELSON DATE : 4/2021

PLANS PREPARED BY:
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-11
1			3			TOTAL SHEETS
2			4			125

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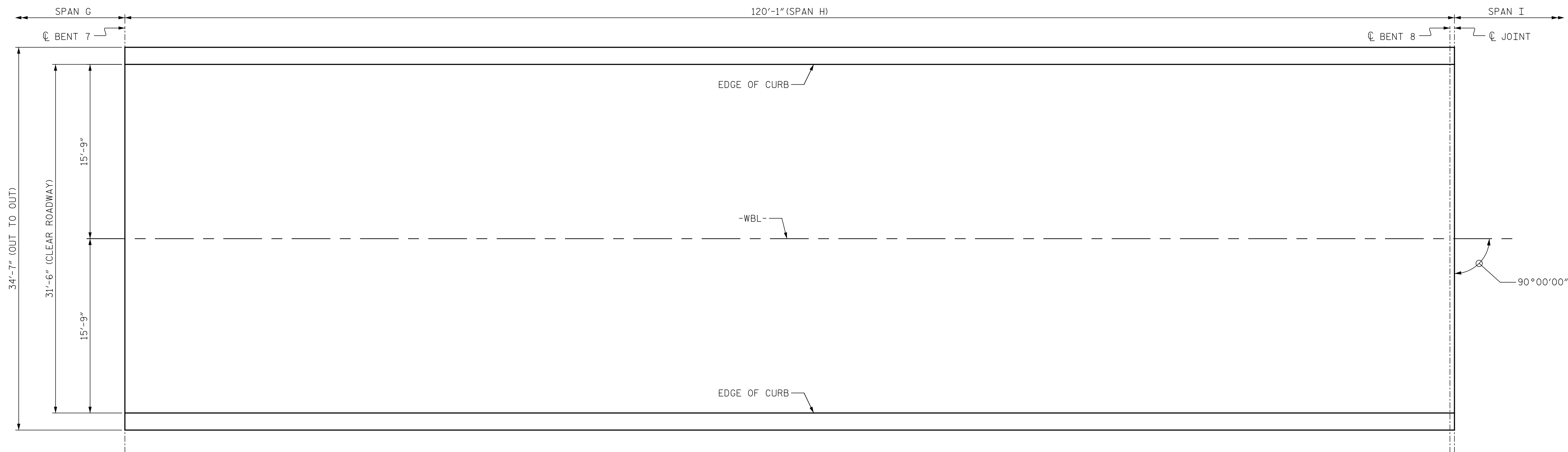
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FOR EPOXY PROTECTIVE COATING, SEE SPECIAL PROVISIONS.

SUMMARY OF QUANTITIES FOR SPAN "H"		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	420.3 SY	
CLASS II SURFACE PREPARATION	- SY	
CONCRETE DECK REPAIR FOR PC OVERLAY	- SY	
SHOTBLASTING BRIDGE DECK	420.3 SY	
PC MATERIALS	14.6 CY	
PLACING AND FINISHING PC OVERLAY	420.3 SY	
GROOVING BRIDGE FLOORS	3422 SF	
TOP OF CAP EPOXY COATINGS		
BENT 8	155 SF	



PLAN OF SPAN "H"

PROJECT NO. B-4626
STANLY, ROWAN
AND DAVIDSON COUNTY
 BRIDGE NO. 790008

- SCARIFYING OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION
SPAN "H"

REVISIONS						SHEET NO. S2-12
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 125
2			4			

DRAWN BY : M. LEE DATE : 3/2021
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Gannett Fleming
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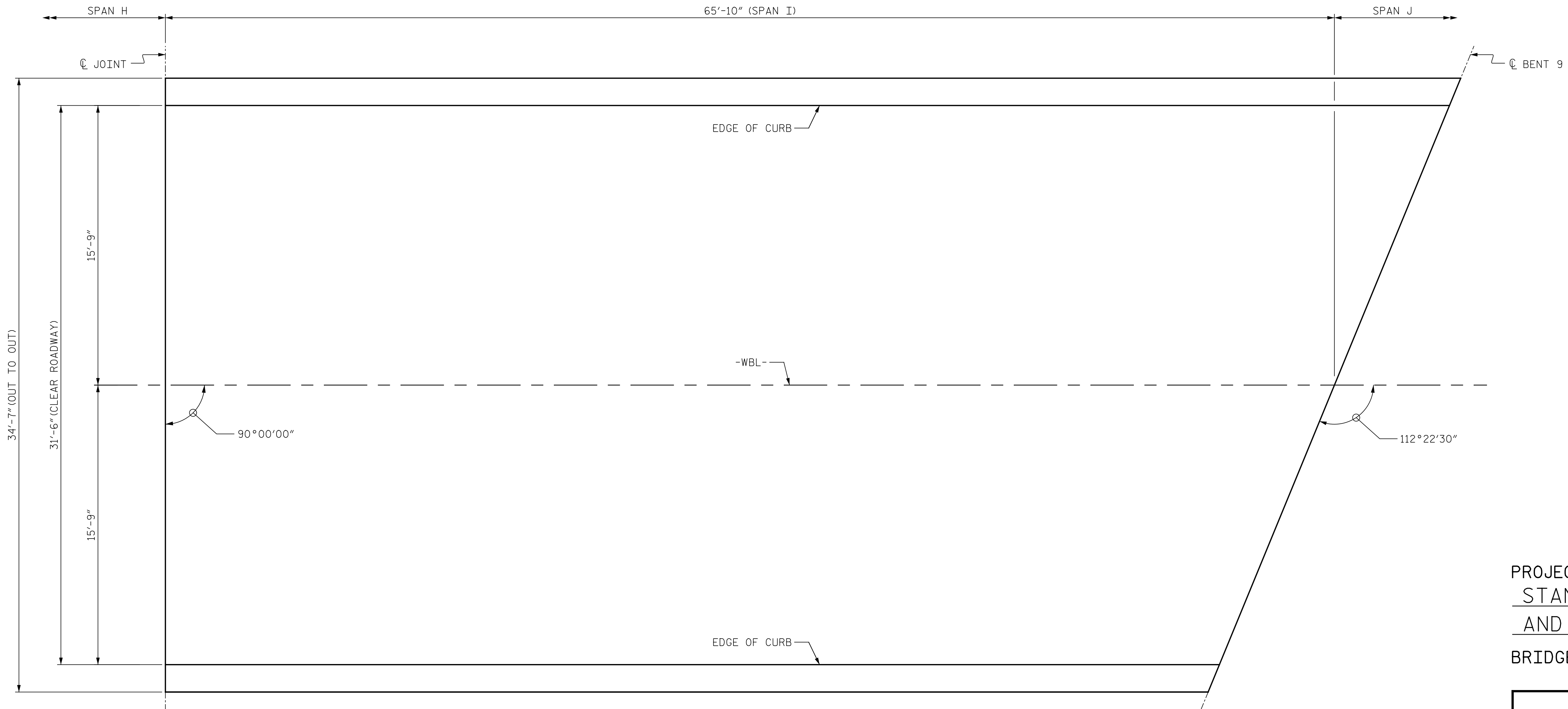
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SUMMARY OF QUANTITIES FOR SPAN "I"		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	230.6 SY	
CLASS II SURFACE PREPARATION	- SY	
CONCRETE DECK REPAIR FOR PC OVERLAY	- SY	
SHOTBLASTING BRIDGE DECK	230.6 SY	
PC MATERIALS	7.2 CY	
PLACING AND FINISHING PC OVERLAY	230.6 SY	
GROOVING BRIDGE FLOORS	1878 SF	



PLAN OF SPAN "I"

- SCARIFYING OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION

PROJECT NO. B-4626
STANLY, ROWAN
AND DAVIDSON COUNTY
 BRIDGE NO. 790008

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION
 SPAN "I"



DocuSigned by:
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 9/2/2021

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2			4		

SHEET NO.
S2-13
TOTAL SHEETS
125

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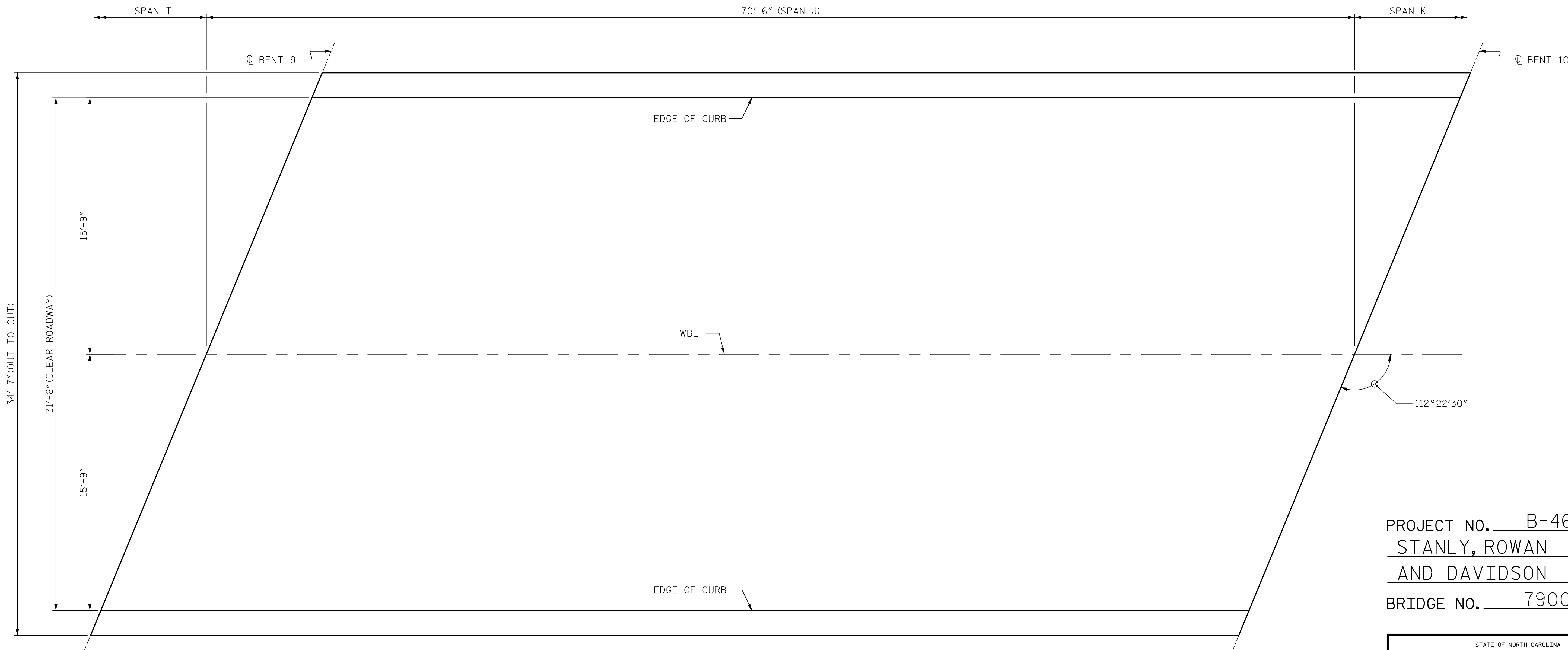
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SUMMARY OF QUANTITIES FOR SPAN "J"		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	246.9 SY	
CLASS II SURFACE PREPARATION	- SY	
CONCRETE DECK REPAIR FOR PC OVERLAY	- SY	
SHOTBLASTING BRIDGE DECK	246.9 SY	
PC MATERIALS	7.7 CY	
PLACING AND FINISHING PC OVERLAY	246.9 SY	
GROOVING BRIDGE FLOORS	2011 SF	



PLAN OF SPAN "J"

- SCARIFYING OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION

PROJECT NO. B-4626
STANLY, ROWAN
AND DAVIDSON COUNTY
 BRIDGE NO. 790008



Drawn by: Eric B. Nelson 9/2/2021
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STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
SURFACE PREPARATION SPAN "J"					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO. S2-14	TOTAL SHEETS 125
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DRAWN BY : M. LEE DATE : 3/2021
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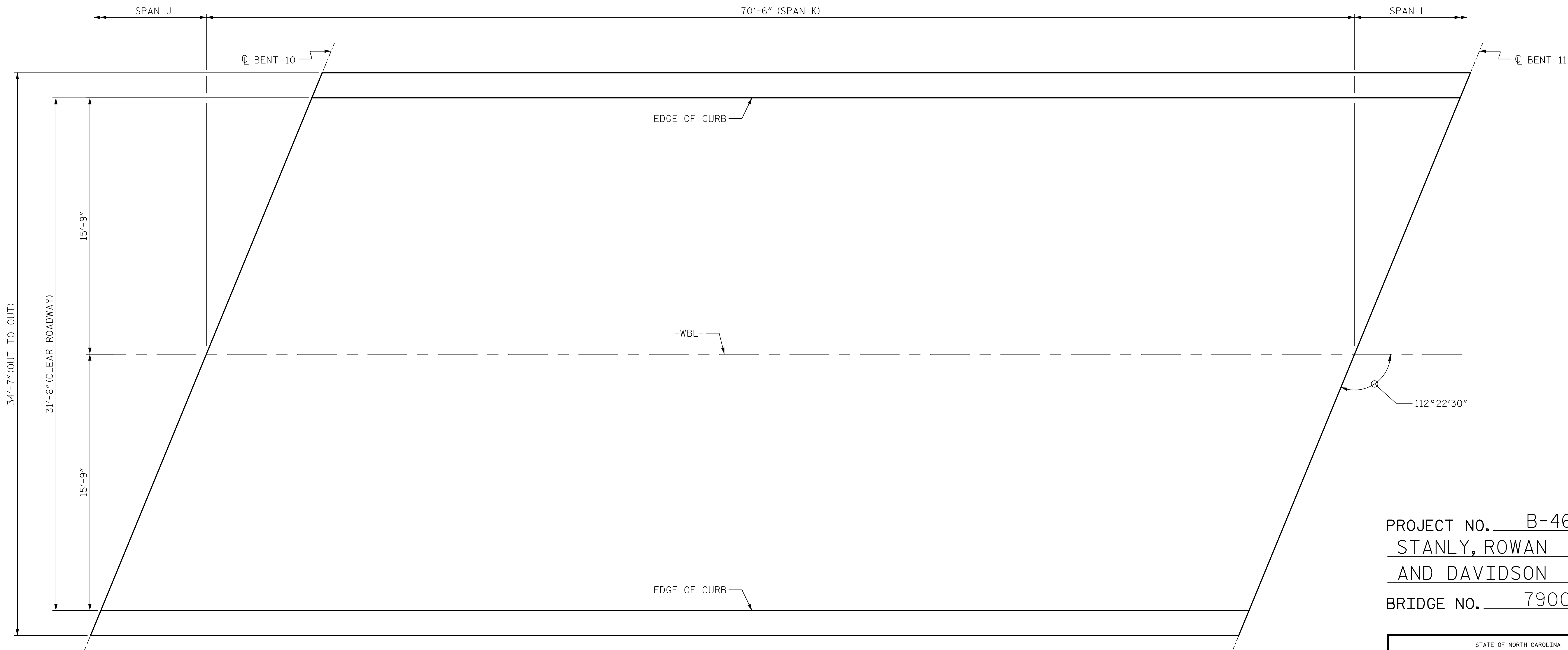
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SUMMARY OF QUANTITIES FOR SPAN "K"

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	246.9 SY	
CLASS II SURFACE PREPARATION	- SY	
CONCRETE DECK REPAIR FOR PC OVERLAY	- SY	
SHOTBLASTING BRIDGE DECK	246.9 SY	
PC MATERIALS	7.4 CY	
PLACING AND FINISHING PC OVERLAY	246.9 SY	
GROOVING BRIDGE FLOORS	2011 SF	



PLAN OF SPAN "K"

- SCARIFYING OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION

PROJECT NO. B-4626
STANLY, ROWAN
AND DAVIDSON COUNTY
 BRIDGE NO. 790008



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Eric B. Nelson 9/2/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION
 SPAN "K"

DRAWN BY : M. LEE DATE : 3/2021
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2			4			125

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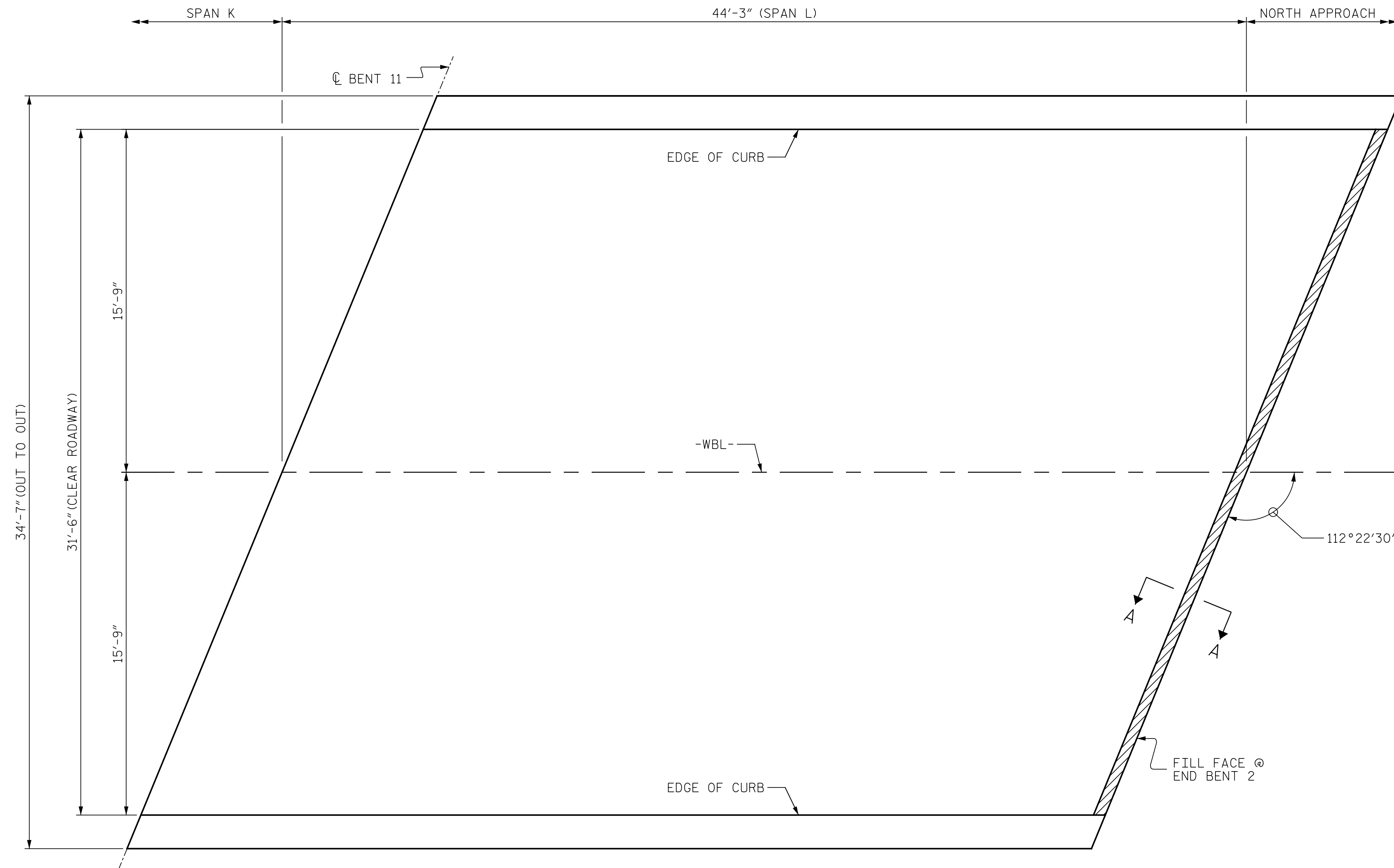
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FOR EPOXY PROTECTIVE COATING, SEE SPECIAL PROVISIONS.

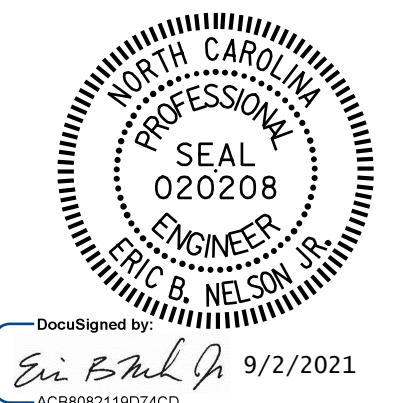
SUMMARY OF QUANTITIES FOR SPAN "L"		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	155.0 SY	
CLASS II SURFACE PREPARATION	1.9 SY	
CONCRETE DECK REPAIR FOR PC OVERLAY	1.9 SY	
SHOTBLASTING BRIDGE DECK	155.0 SY	
PC MATERIALS	4.8 CY	
PLACING AND FINISHING PC OVERLAY	155.0 SY	
GROOVING BRIDGE FLOORS	1261 SF	
TOP OF CAP EPOXY COATINGS		
END BENT 2	93 SF	



PLAN OF SPAN "L"
 (SEE SHEET NO. S2-18 FOR SECTION A-A)

- SCARIFYING OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION

PROJECT NO. B-4626
STANLY, ROWAN
AND DAVIDSON COUNTY
 BRIDGE NO. 790008



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SURFACE PREPARATION
SPAN "L"**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-16
1			3			TOTAL SHEETS
2			4			125

DRAWN BY : M. LEE DATE : 3/2021
 CHECKED BY : R. NELSON DATE : 4/2021

PLANS PREPARED BY:
Gannett Fleming
 Excellence Delivered As Promised

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

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NOTES:

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

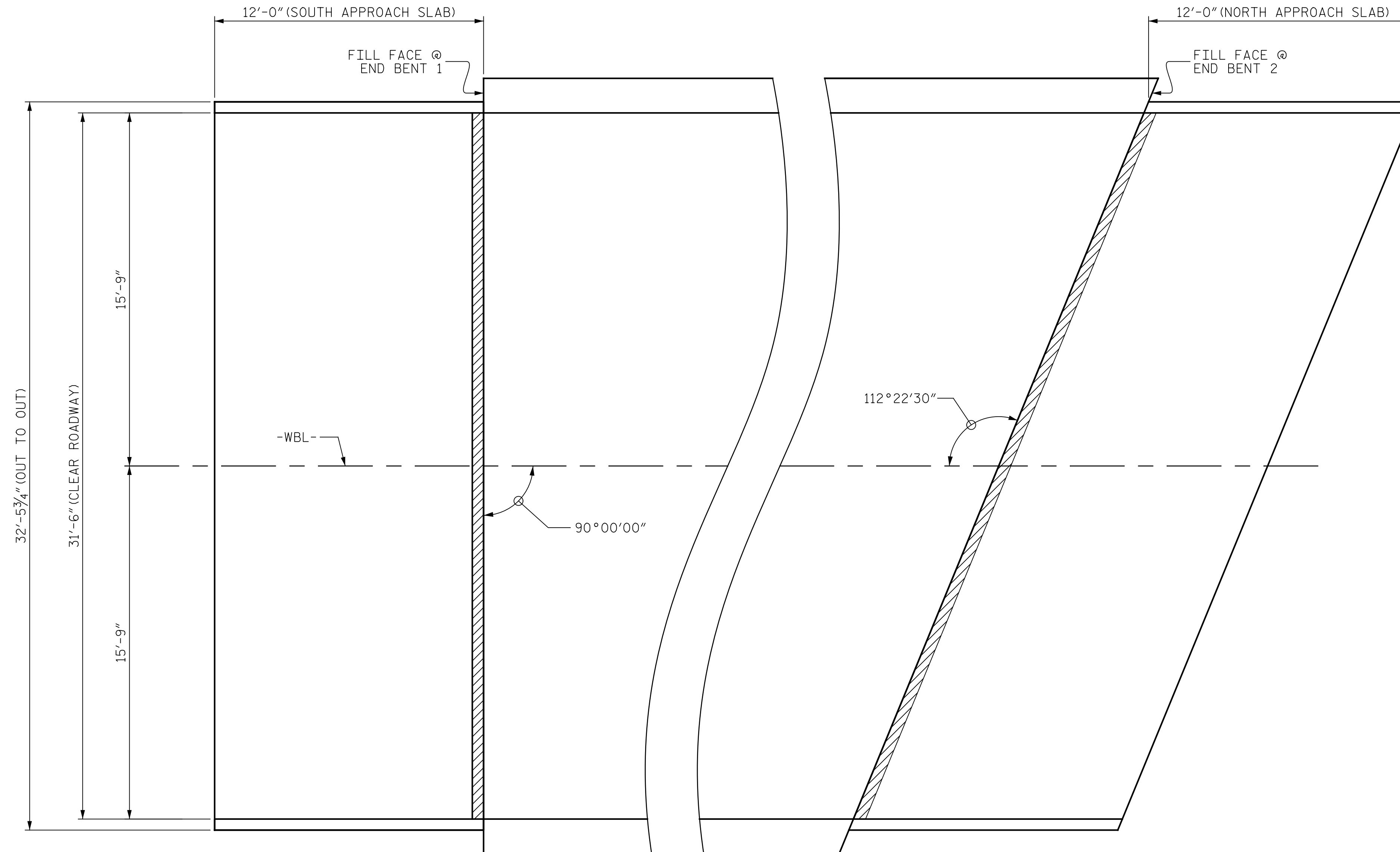
PAYMENT FOR CLASS II SURFACE PREPARATION IS BASED UPON SQUARE YARDS OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING SCARIFICATION OF BRIDGE DECK. SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

SUMMARY OF QUANTITIES FOR NORTH APPROACH

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	42.0 SY	
CLASS II SURFACE PREPARATION	1.8 SY	
CONCRETE DECK REPAIR FOR PC OVERLAY	1.8 SY	
SHOTBLASTING BRIDGE DECK	42.0 SY	
PC MATERIALS	1.3 CY	
PLACING AND FINISHING PC OVERLAY	42.0 SY	
GROOVING BRIDGE FLOORS	342.0 SF	

SUMMARY OF QUANTITIES FOR SOUTH APPROACH

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	42.0 SY	
CLASS II SURFACE PREPARATION	1.9 SY	
CONCRETE DECK REPAIR FOR PC OVERLAY	1.9 SY	
SHOTBLASTING BRIDGE DECK	42.0 SY	
PC MATERIALS	1.3 CY	
PLACING AND FINISHING PC OVERLAY	42.0 SY	
GROOVING BRIDGE FLOORS	342.0 SF	



PLAN OF SOUTH APPROACH SLAB

PLAN OF NORTH APPROACH SLAB

- SCARIFYING OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION

PROJECT NO. B-4626
STANLY, ROWAN
AND DAVIDSON COUNTY
 BRIDGE NO. 790008

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SURFACE PREPARATION
 APPROACH SLABS**



DocuSigned by:
 Eric B. Nelson 9/2/2021

REVISIONS

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2			4		

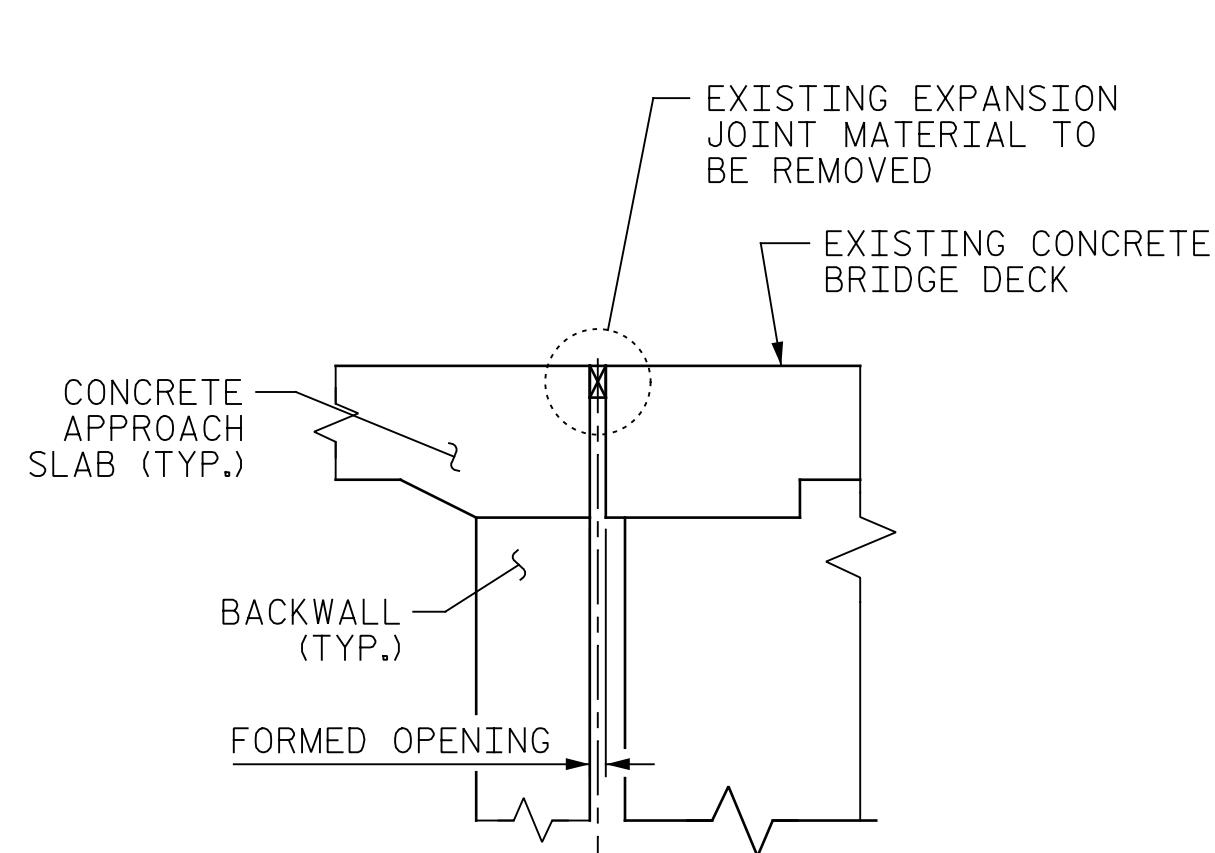
SHEET NO.
 S2-17
 TOTAL SHEETS
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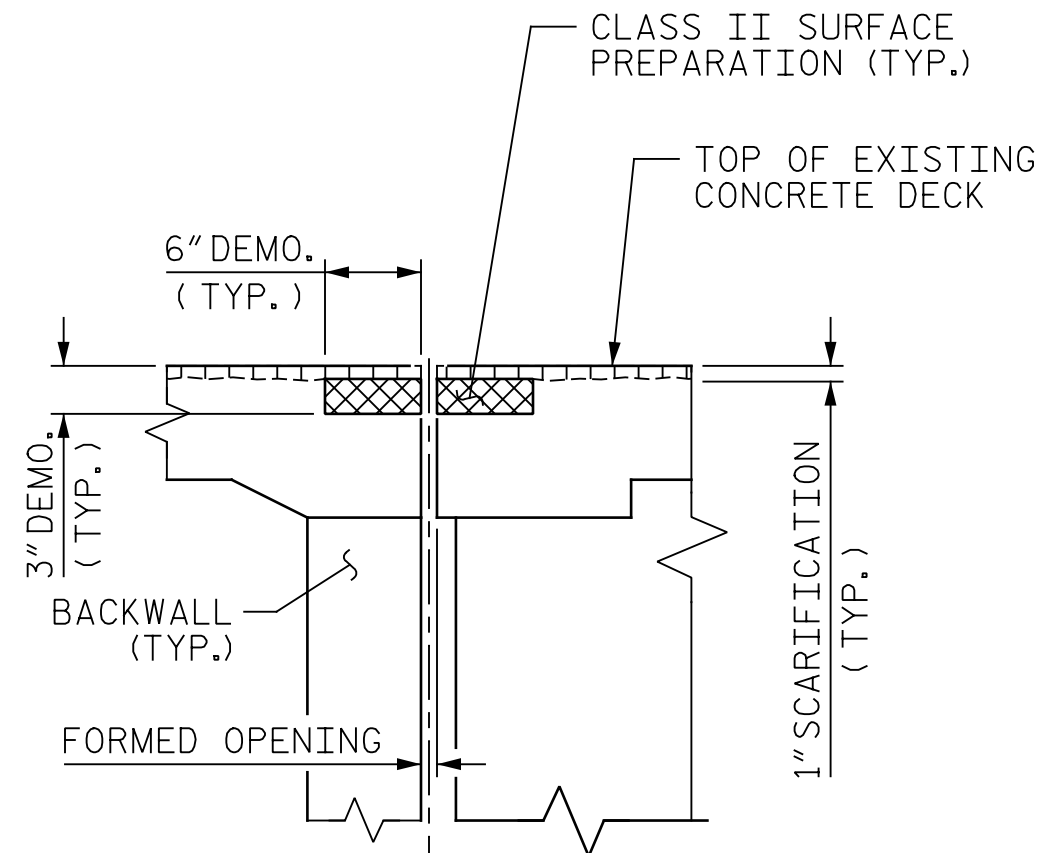
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DRAWN BY : M. LEE DATE : 3/2021
 CHECKED BY : R. NELSON DATE : 4/2021

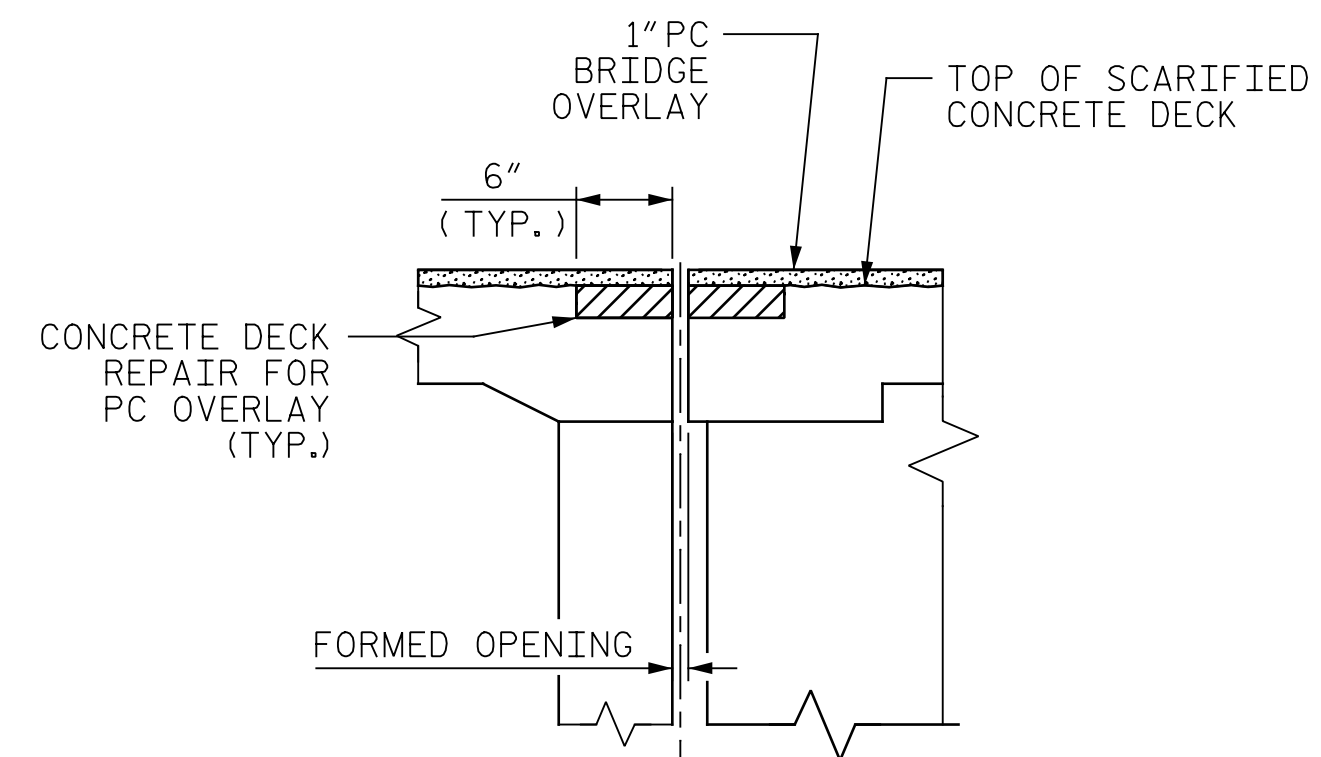
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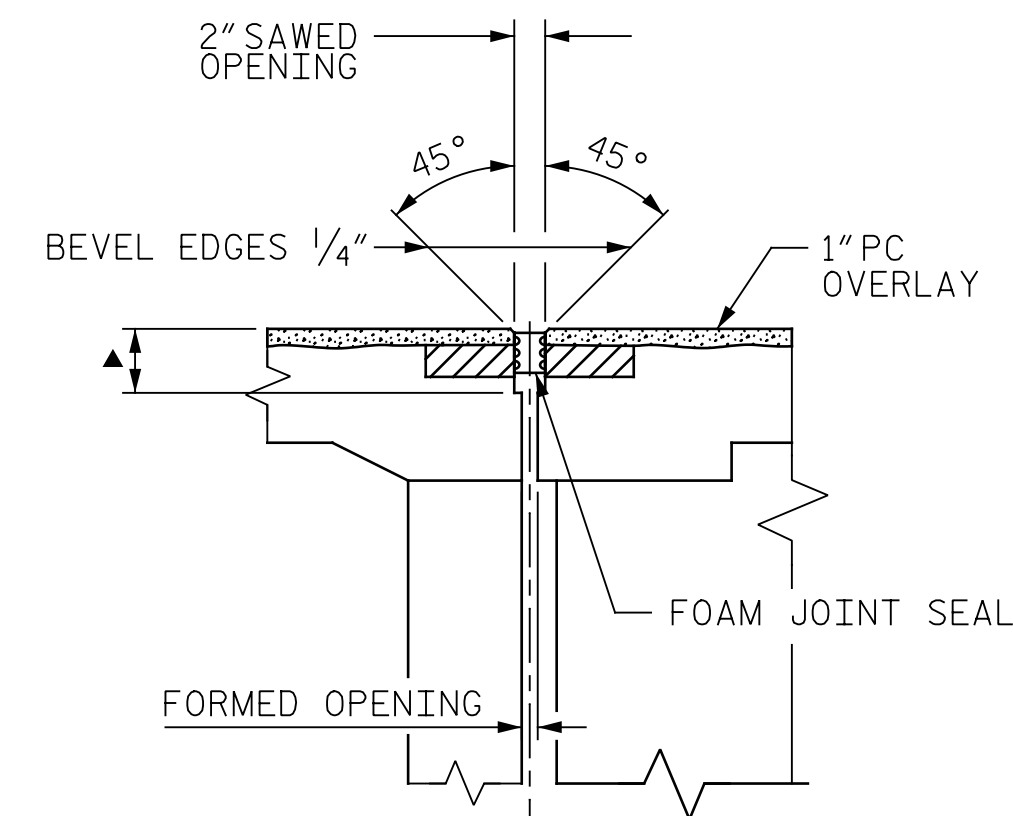
EXISTING



MINIMUM CLASS II SURFACE PREPARATION & SCARIFICATION



PROPOSED JOINT PRE-SAWED & PC OVERLAY



PROPOSED JOINT WITH SAWED DIMENSIONS

SECTION A-A

DEMOLISH BRIDGE JOINT AREA TO THE NECESSARY DEPTH, SUCH THAT CONCRETE REPAIR SHALL BE FOUNDED ON SOUND CONCRETE SUBSTRATE.

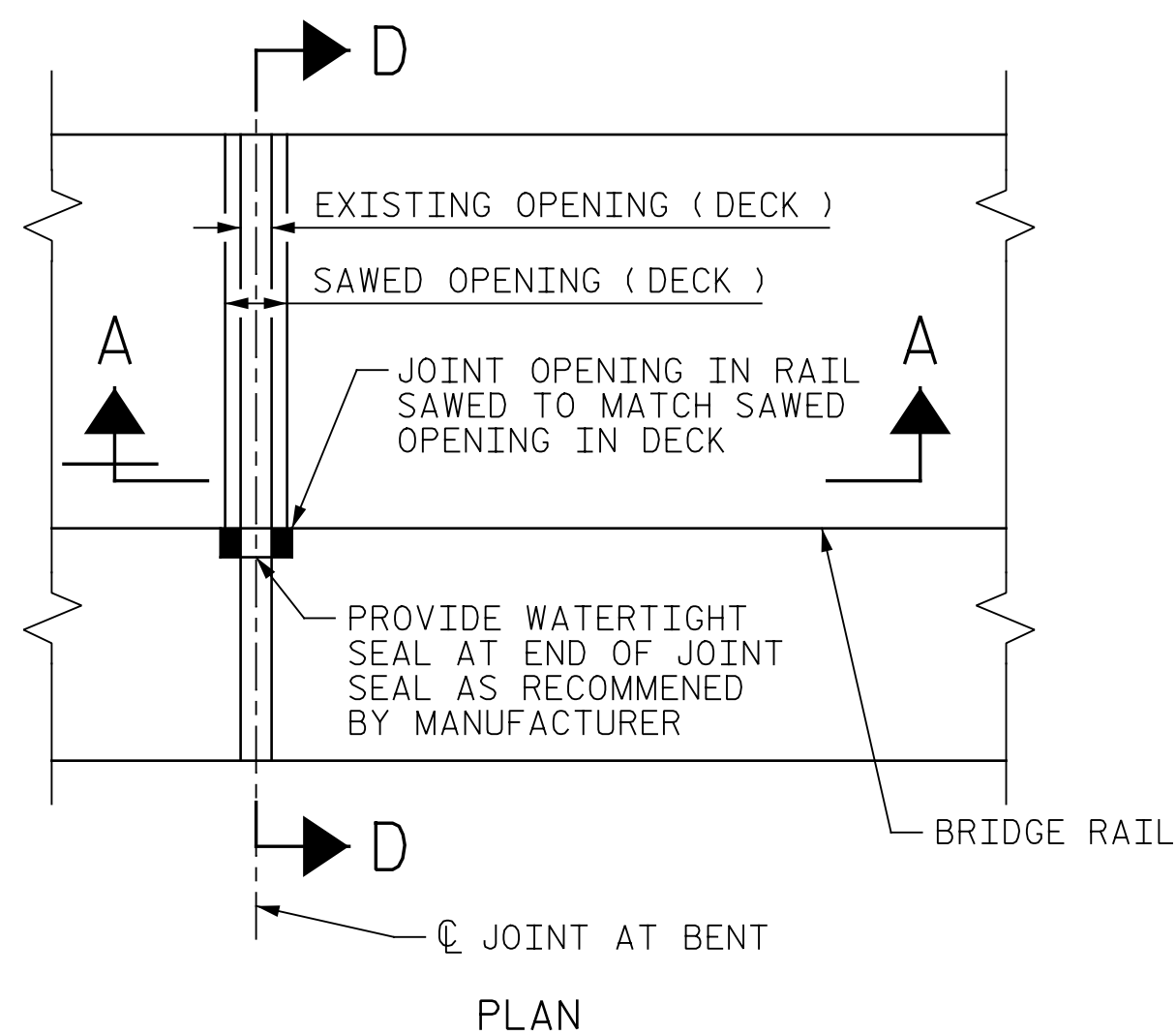
NOTES:

FOR CONCRETE DECK REPAIR FOR PC OVERLAY SEE SPECIAL PROVISIONS.

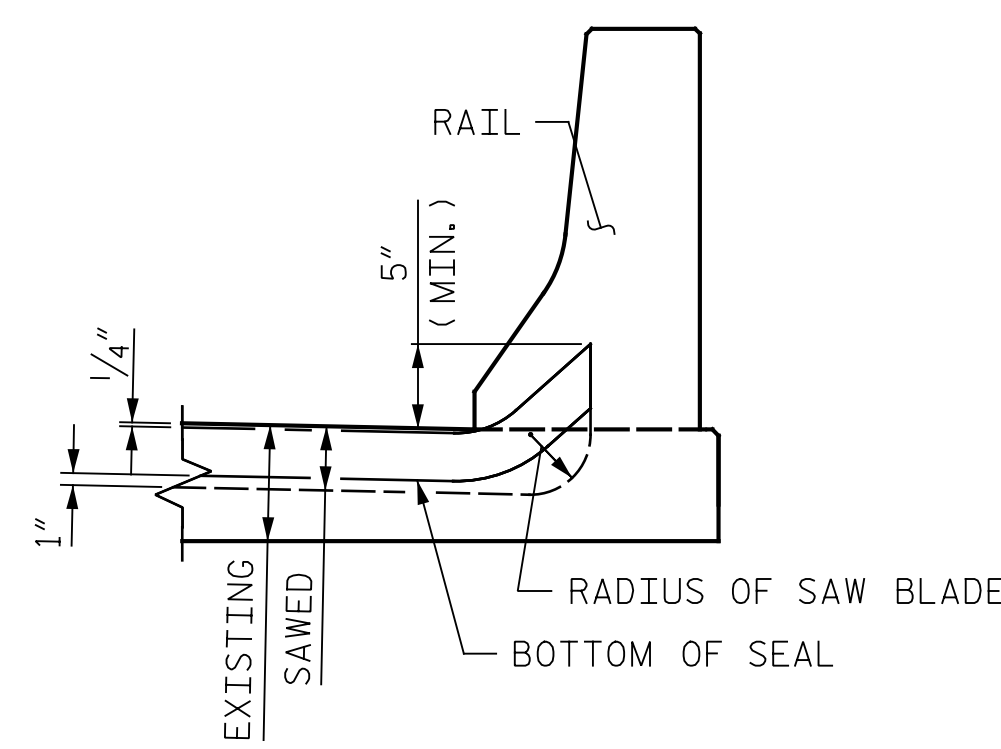
FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT OPENING FOR THE JOINT SEAL IN LIEU OF SAWING.

THE NOMINAL UNCOMPRESSED SEAL WIDTH OF FOAM JOINT SEAL SHALL BE 2" AT END BENT 1 AND END BENT 2.



PLAN



SECTION D-D

JOINT SEAL DETAILS AT BENT

PROJECT NO. B-4626
STANLY, ROWAN
AND DAVIDSON COUNTY
 BRIDGE NO. 790008

	FOAM JOINT SEAL (LF)
END BENT 1	33.5
END BENT 2	36

STATE OF NORTH CAROLINA
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 RALEIGH

JOINT DETAILS



DocuSigned by: *Eric B. Nelson* 9/13/2021

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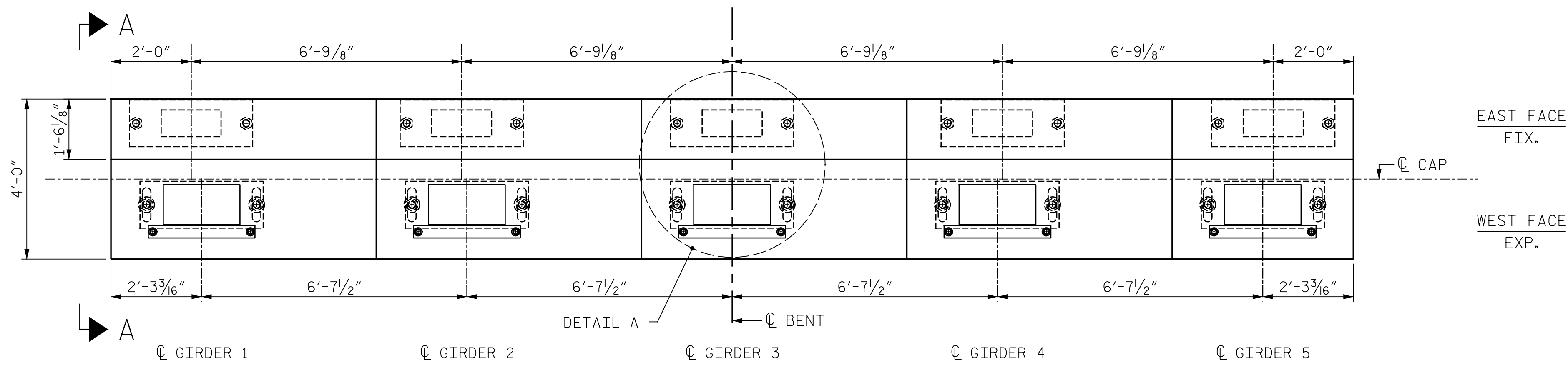
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2			4			125

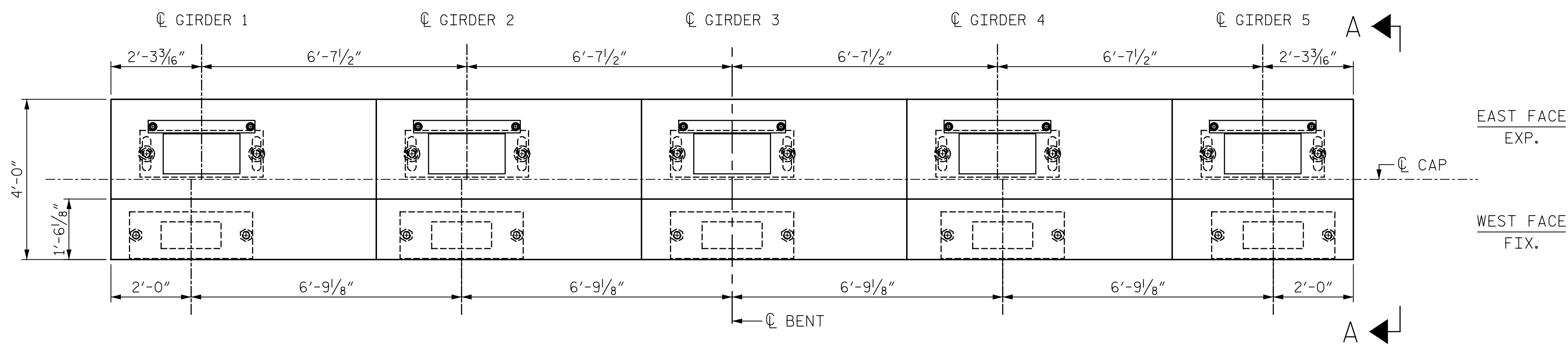
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 CHECKED BY: R. NELSON DATE: 4/2021

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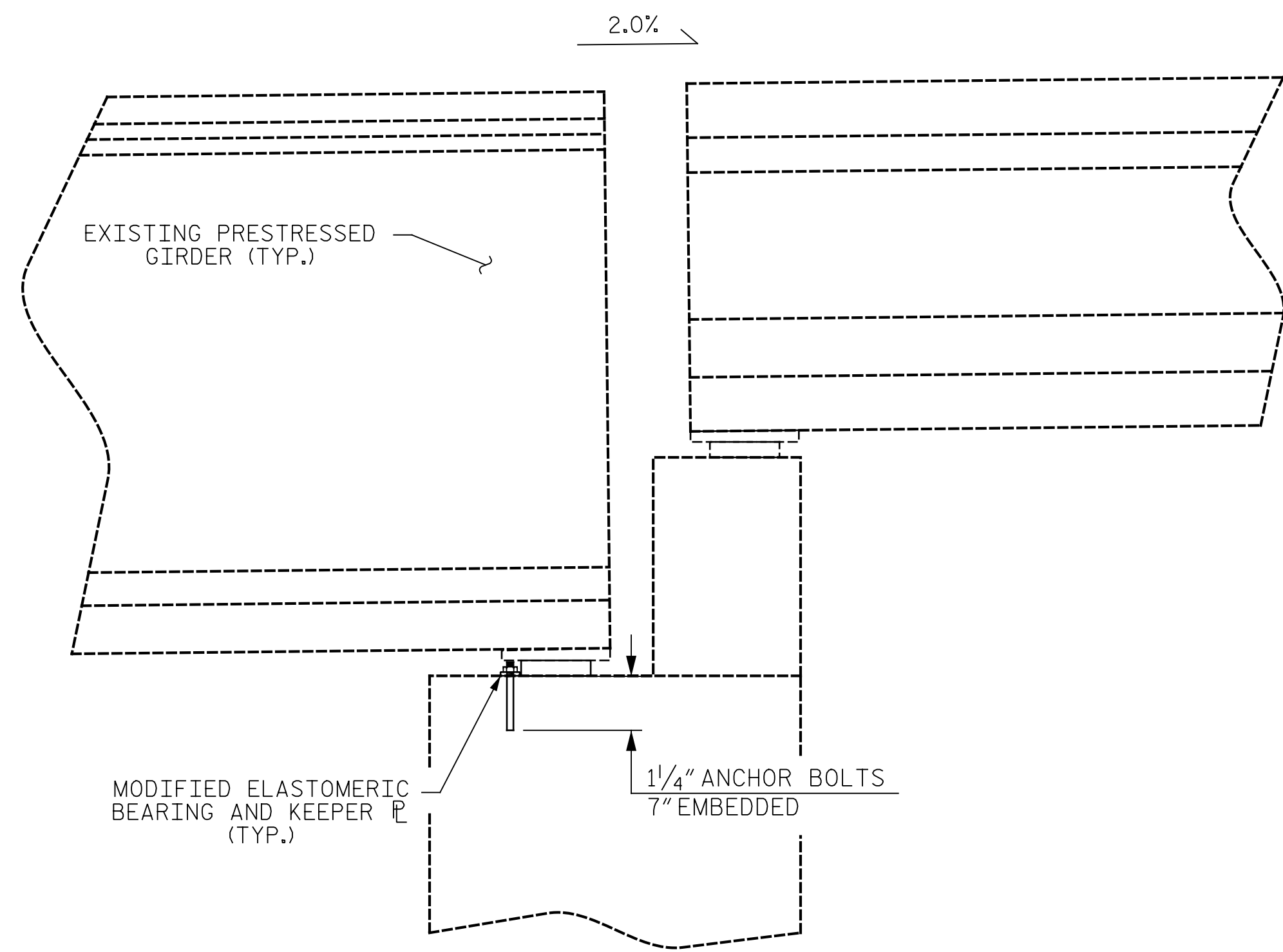


PLAN OF CAP FOR BENT 8

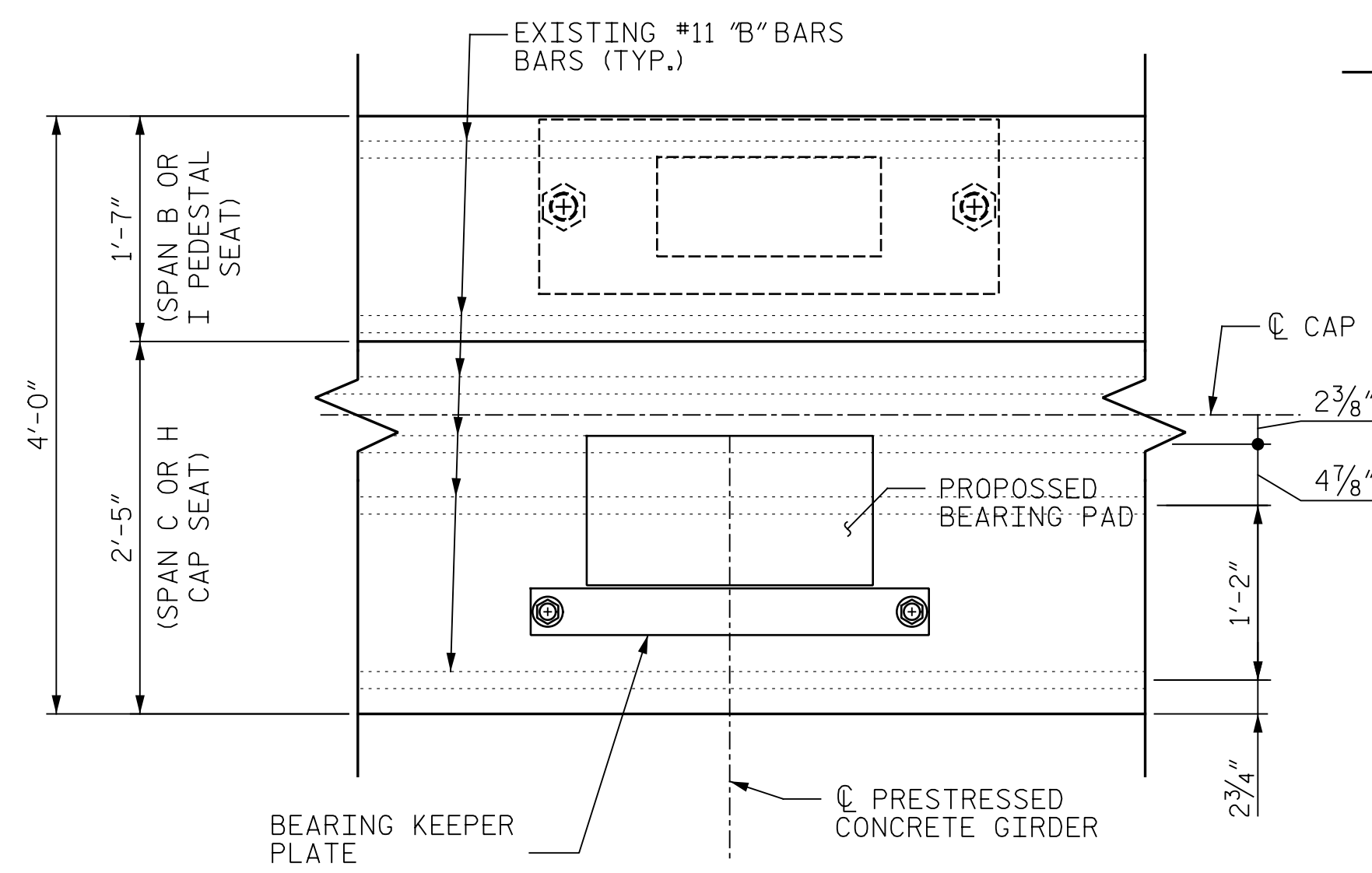


PLAN OF CAP FOR BENT 2

PROPOSED BEARING LAYOUT



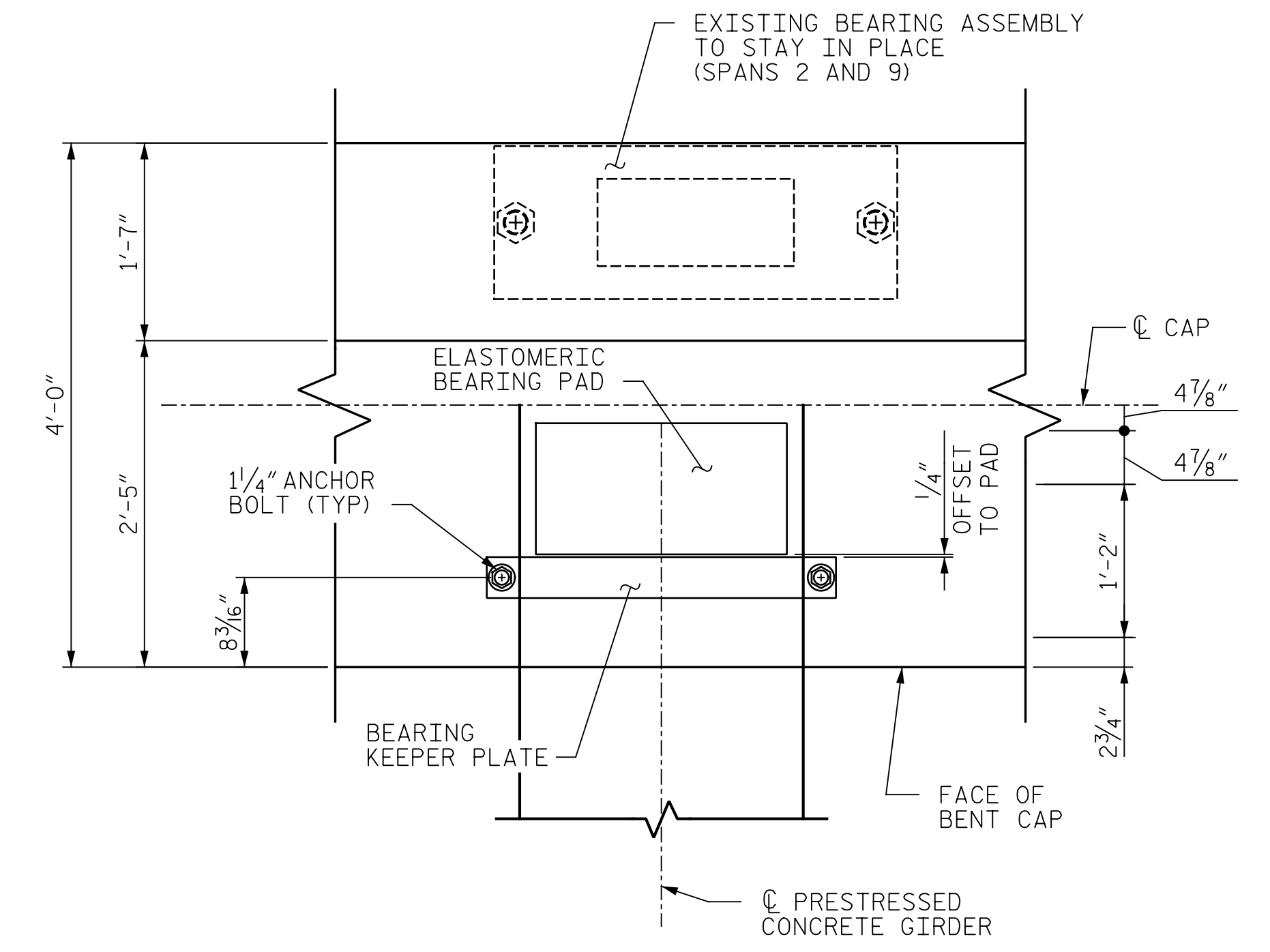
SECTION A-A



DETAIL A

(SOLE PLATE AND ANCHOR BOLTS NOT SHOWN FOR CLARITY)

NOTES
 PROPOSED KEEPER ANCHOR BOLTS ARE DETAILED TO CLEAR MAIN CAP BARS.
 EXISTING "S" BARS MAY BE CUT AS REQUIRED TO INSTALL ANCHOR BOLTS.
 FOR KEEPER PLATE DETAILS, SEE BEARING REPAIR DETAILS SHEET S2-20

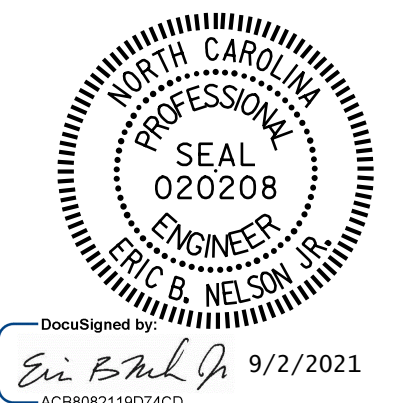


DETAIL OF KEEPER PLATE ORIENTATION FOR BEAMS

PROJECT NO. B-4626
STANLY, ROWAN
AND DAVIDSON COUNTY
 BRIDGE NO. 790008

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BEARING AND KEEPER LAYOUT DETAILS



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 CHECKED BY: R. NELSON DATE: 4/2021

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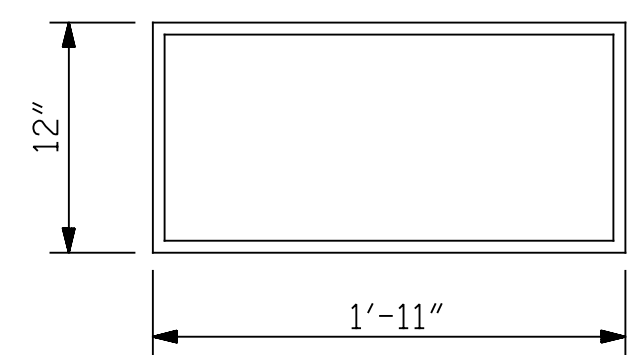
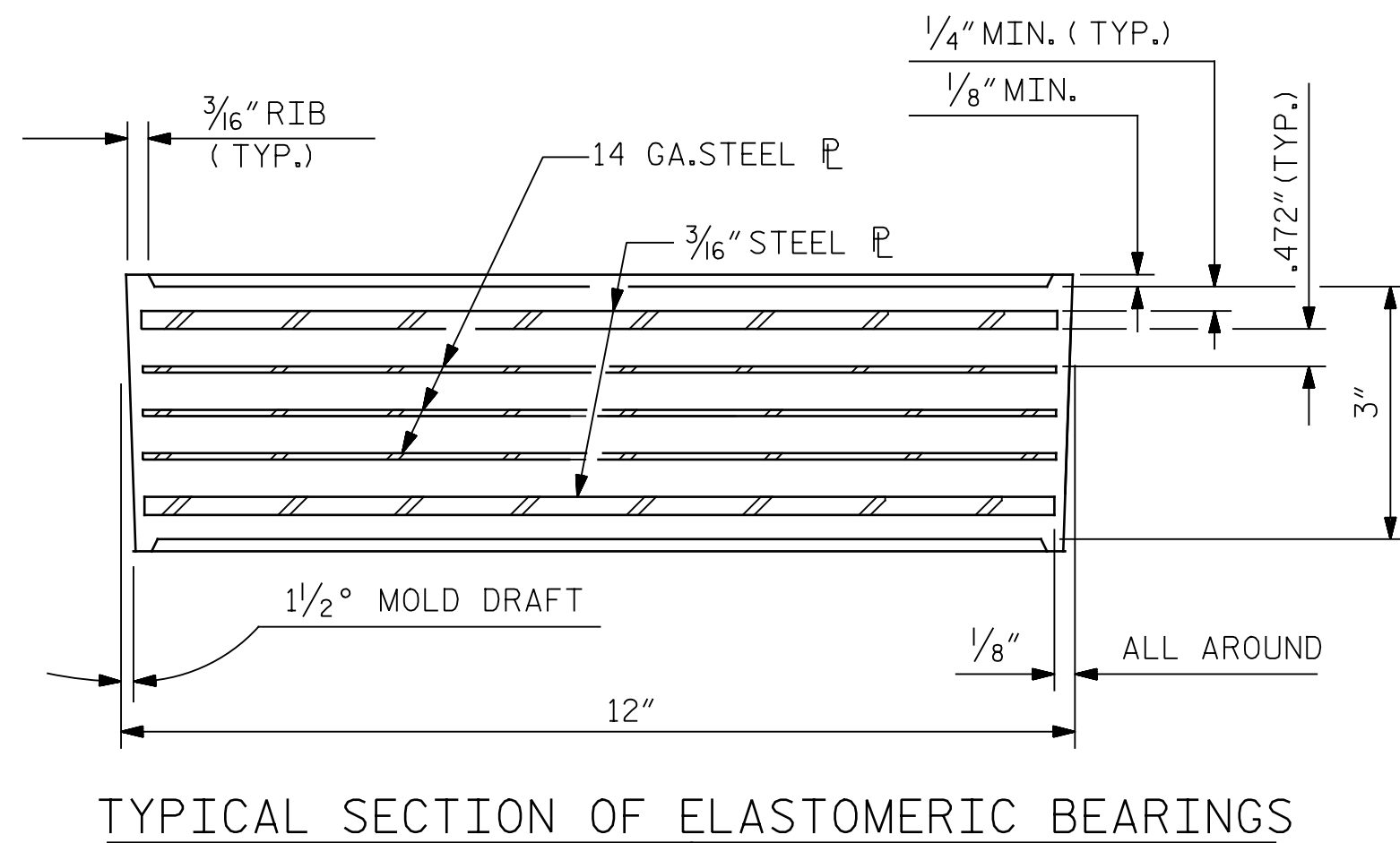
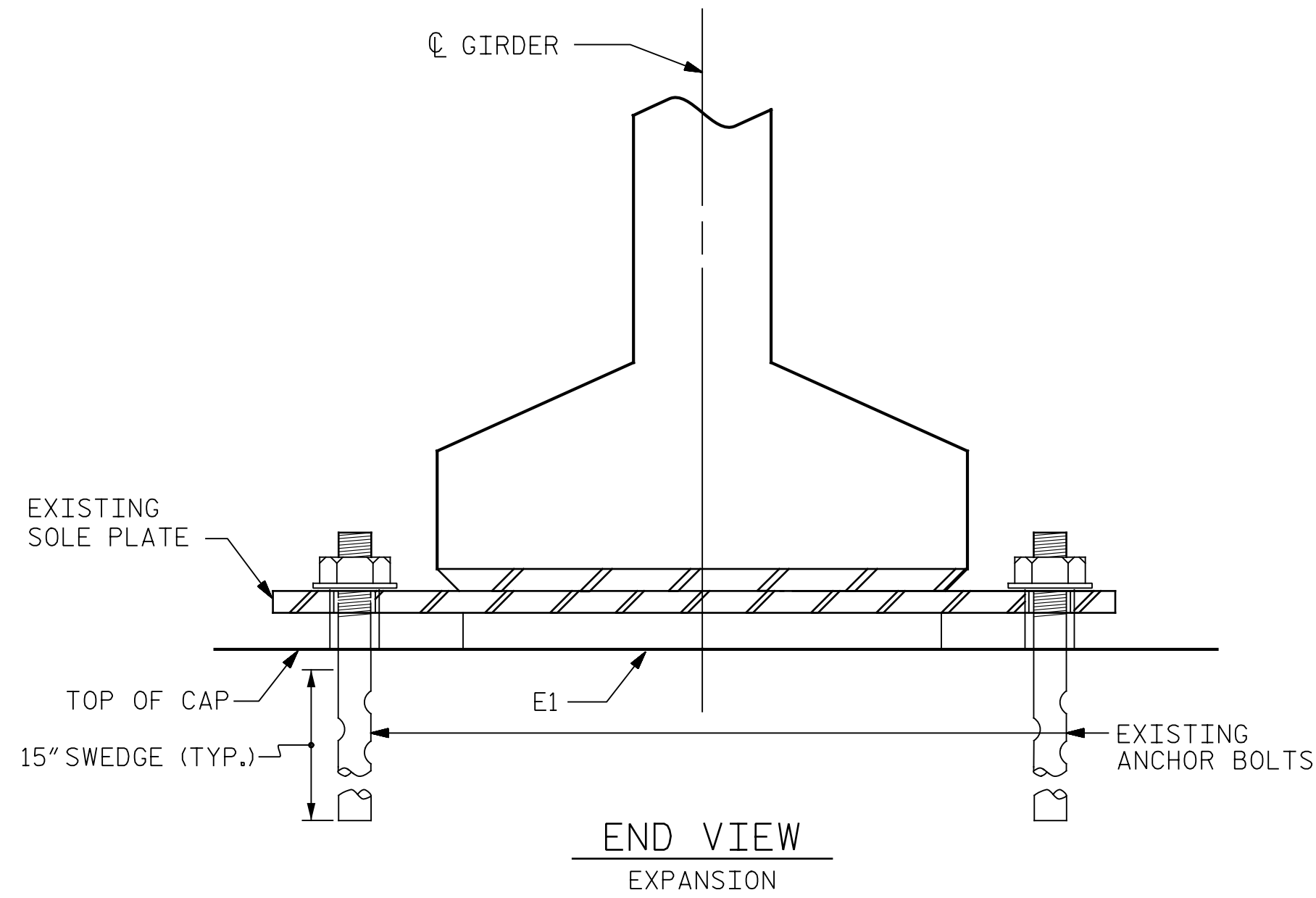
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2			4			125

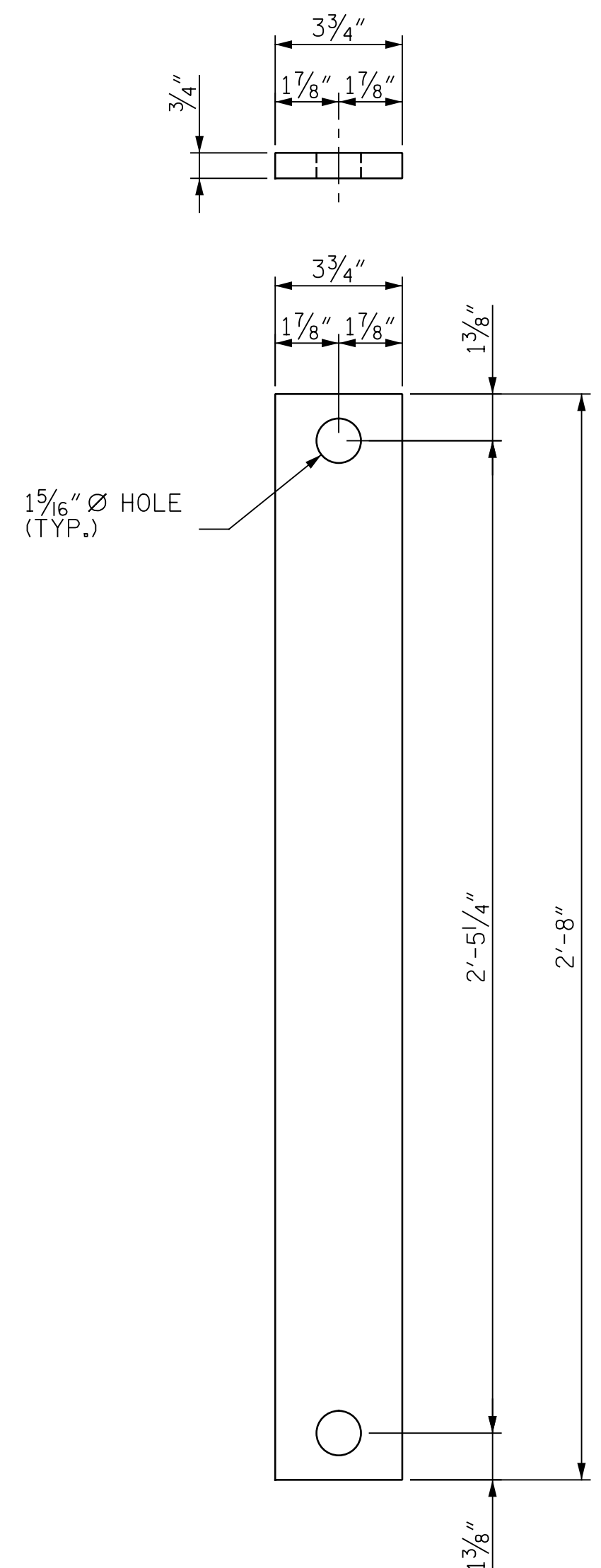
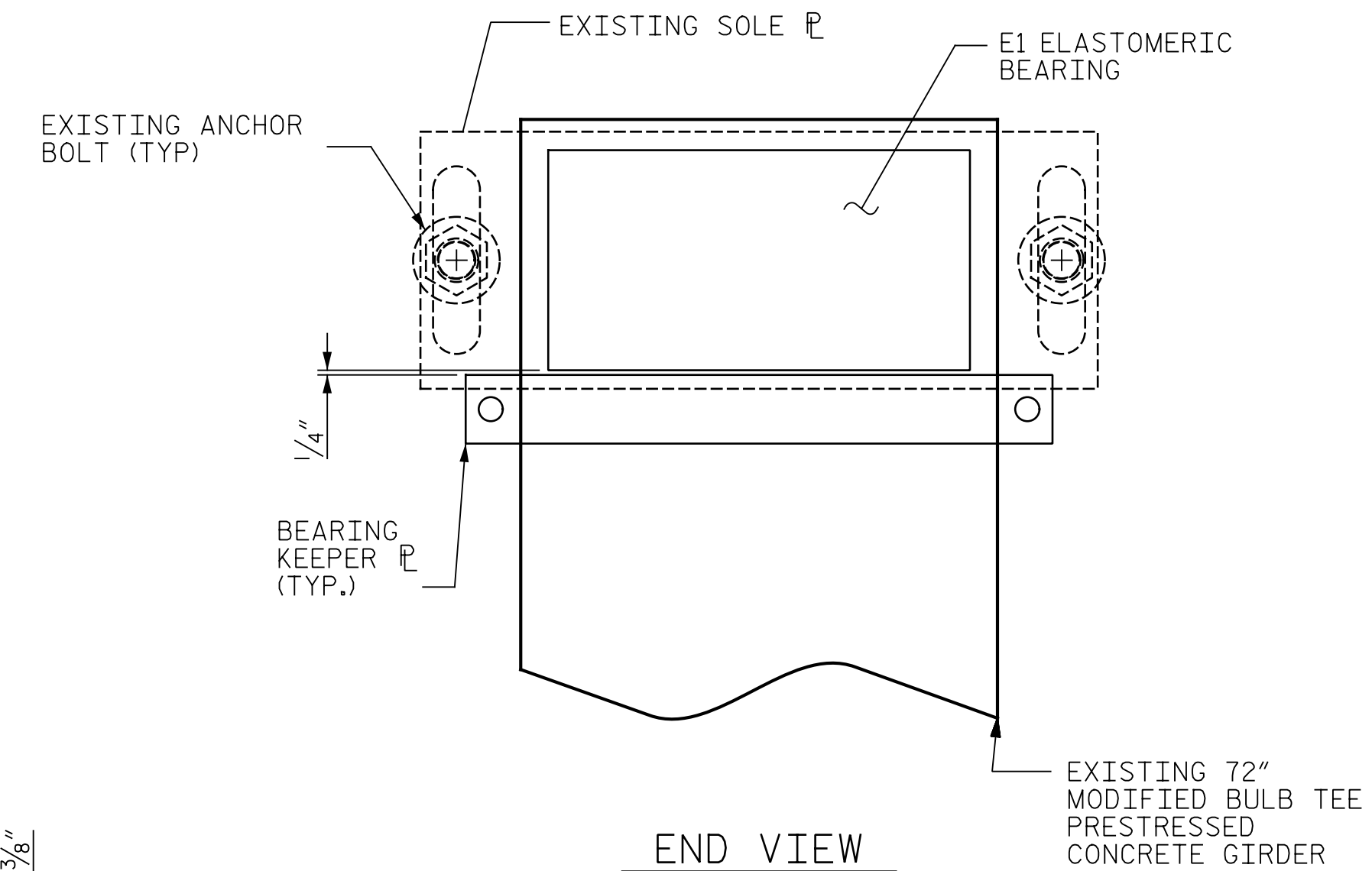
NOTES

BEARING SHEET NOTES:
 THE EXISTING ELASTOMERIC BEARINGS SHALL BE REMOVED AND REPLACED WITH BEARINGS AND KEEPER ASSEMBLIES AS SHOWN.
 LOOSEN OR REMOVE EXISTING ANCHOR BOLT NUTS AS REQUIRED TO ALLOW JACKING OF GIRDERS.
 WITH GIRDERS IN A JACKED AND SUPPORTED CONDITION, REMOVE EXISTING ELASTOMERIC BEARING PADS. FOR JACKING DETAILS, SEE "JACKING DETAILS" SHEET.
 INSTALL REPLACEMENT ELASTOMERIC BEARINGS CENTERED UNDER THE EXISTING SOLE PLATE.
 LOWER GIRDER ONTO NEW BEARING PADS. TIGHTEN ANCHOR BOLT NUTS TO FINGER TIGHT AND THEN BACK THEM OFF 1/2" TURN.
 INSTALL BEARING KEEPER ASSEMBLY AS SHOWN.
 KEEPER BARS, BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH SECTION 1076 OF THE STANDARD SPECIFICATIONS.

MATERIALS:
 ANCHOR BOLTS SHALL BE 1 1/4" ALL THREAD MEETING THE REQUIREMENTS OF ASTM F1554 GRADE 55.
 NUTS SHALL MEET THE REQUIREMENTS OF ASTM A563-15 GRADE A.
 WASHERS SHALL MEET THE REQUIREMENTS OF ASTM F436 TYPE 1 CIRCULAR.
 THE CONTRACTOR SHALL DRILL OR CORE INTO THE EXISTING BENT CAP TO INSTALL KEEPER BAR ANCHORS. THE ANCHORS SHALL BE ADHESIVELY ANCHORED. ADHESIVE FOR ANCHORING SHALL BE ON THE NCDOT APPROVED PRODUCTS LIST.
 EXISTING "S" BAR STIRRUPS MAY BE CUT TO INSTALL ANCHOR BOLTS.
 THE EMBEDMENT DEPTH OF THE ANCHOR BOLT SHALL BE 7" OR THE DEPTH RECOMMENDED BY THE ADHESIVE MANUFACTURER TO ATTAIN THE PULL-OUT STRENGTH OF THE DESIGN LOAD BELOW, WHICHEVER IS GREATER. FIELD TESTING OF THE ADHESIVE BONDING SYSTEM IS NOT REQUIRED.
 ANCHOR DESIGN YIELD LOAD: 15 KIPS.
 THE ELASTOMER IN THE STEEL REINFORCED BEARINGS SHALL HAVE A SHEAR MODULUS OF 0.160 KSI IN ACCORDANCE WITH AASHTO M251.
 FOR STEEL REINFORCED ELASTOMERIC BEARINGS, SEE SPECIAL PROVISIONS.



E1 (10 REQ'D)
 PLAN VIEW OF ELASTOMERIC BEARING



BEARING KEEPER DETAIL
 (10 REQ'D)

PROJECT NO. B-4626
STANLY, ROWAN
AND DAVIDSON COUNTY
 BRIDGE NO. 790008

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
BEARING REPAIR DETAILS					
SHEET NO. S2-20					
TOTAL SHEETS 125					
REVISIONS					
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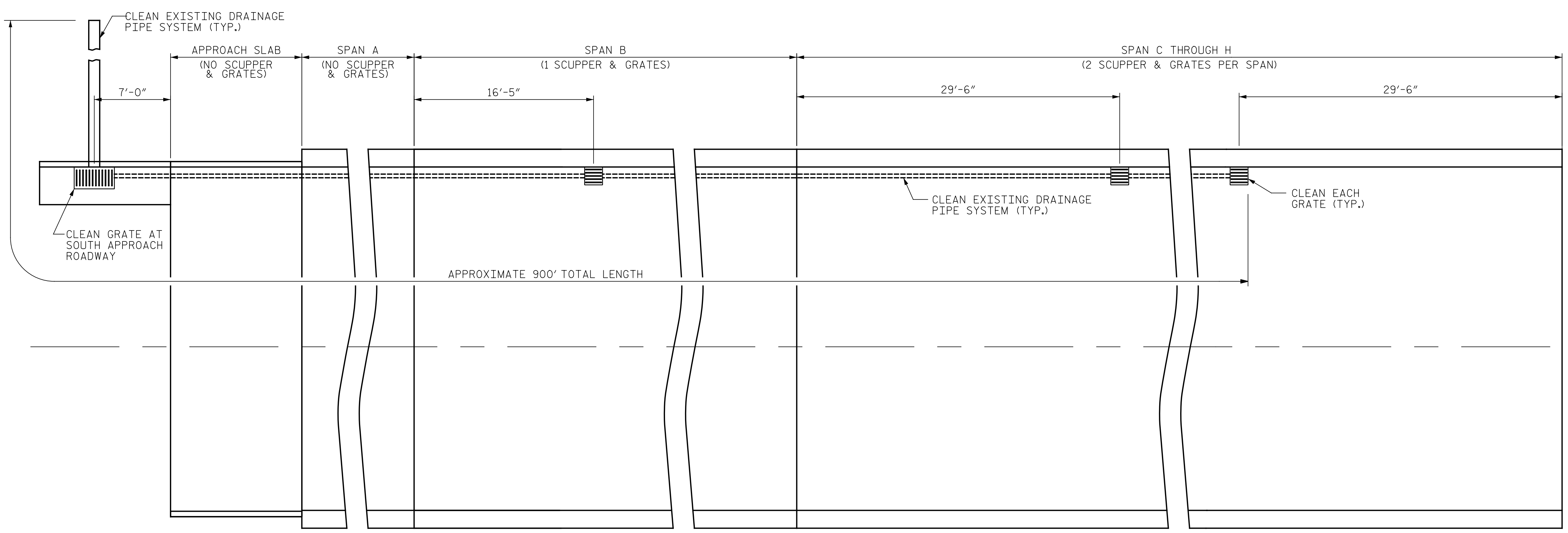
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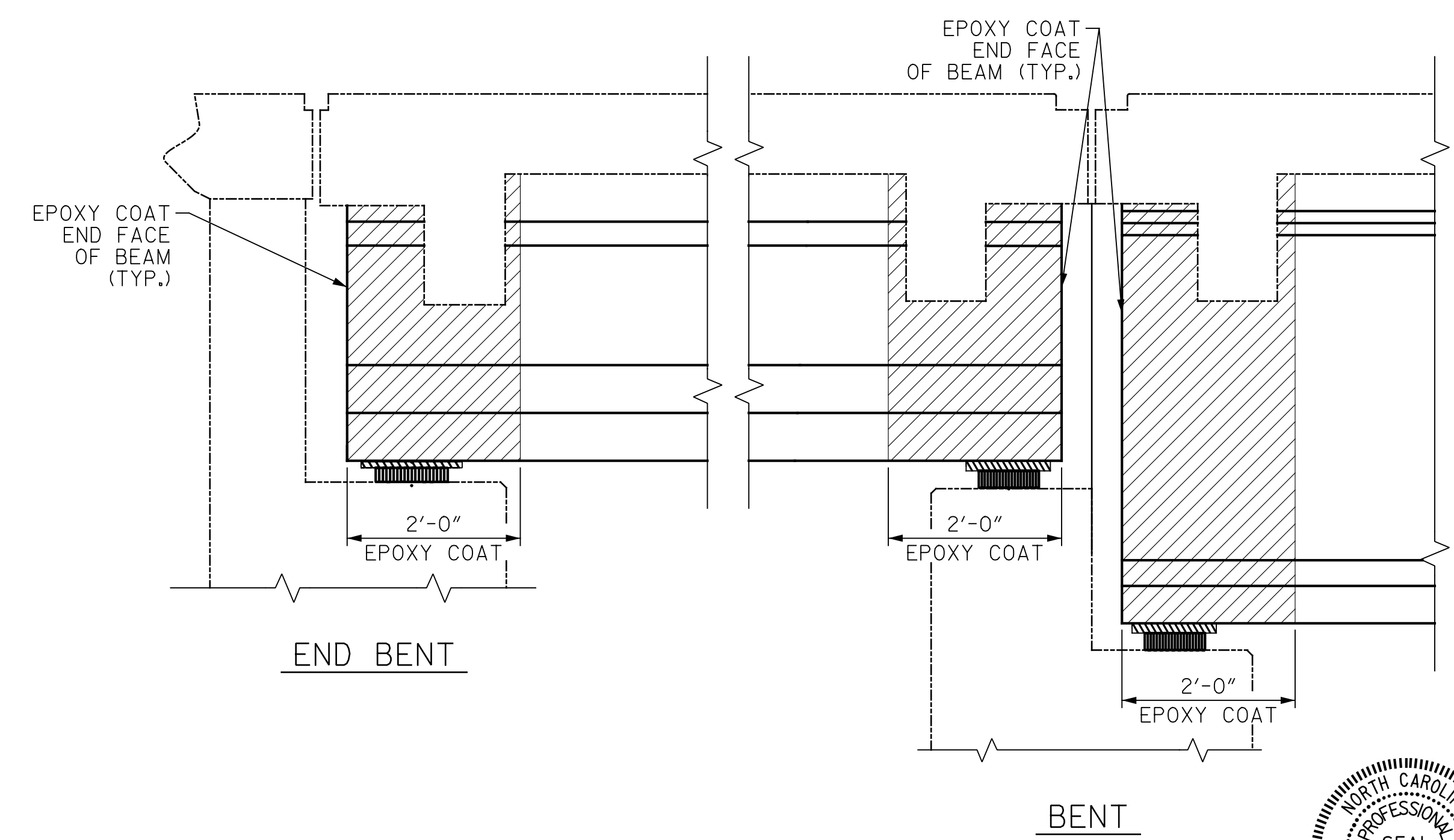
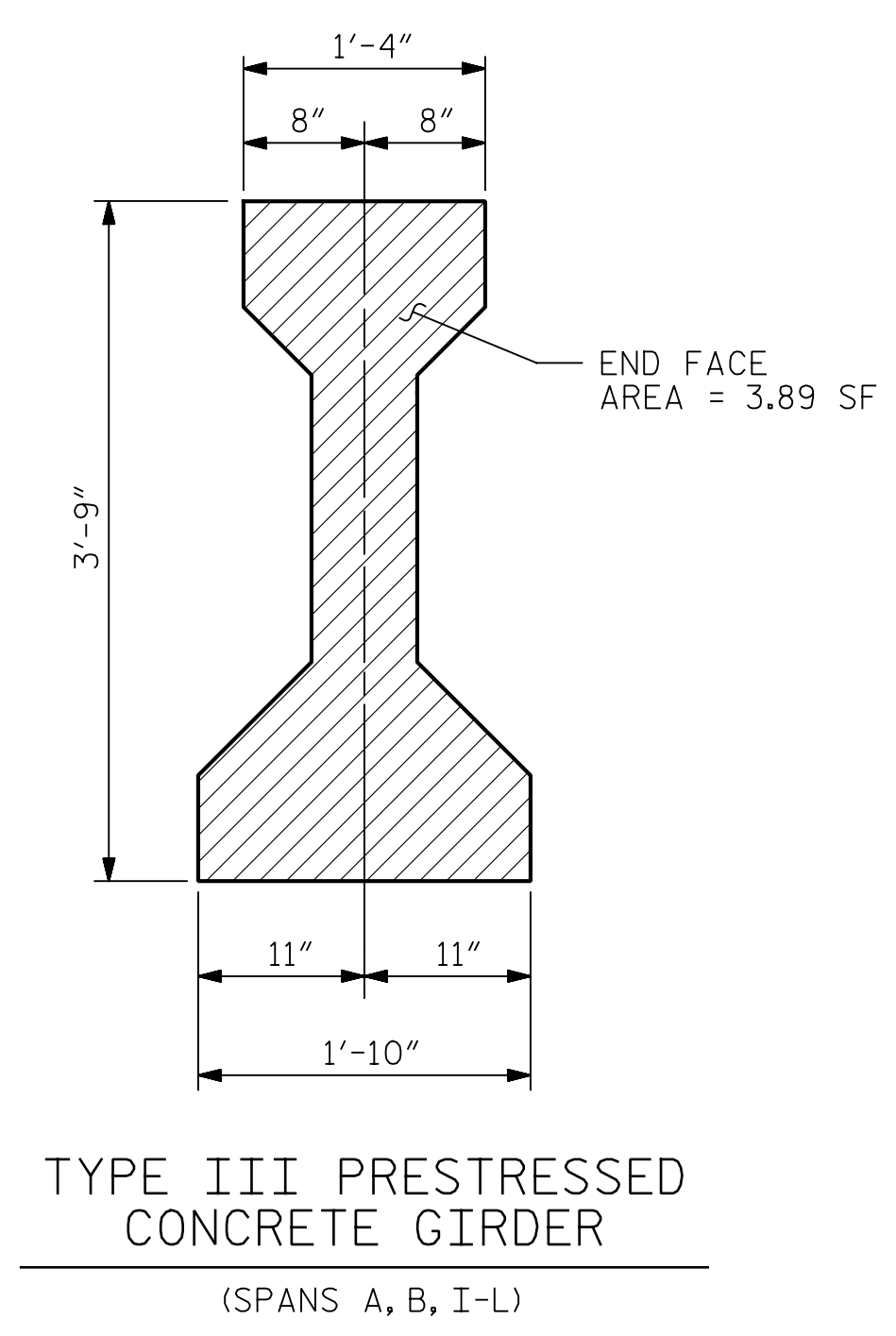
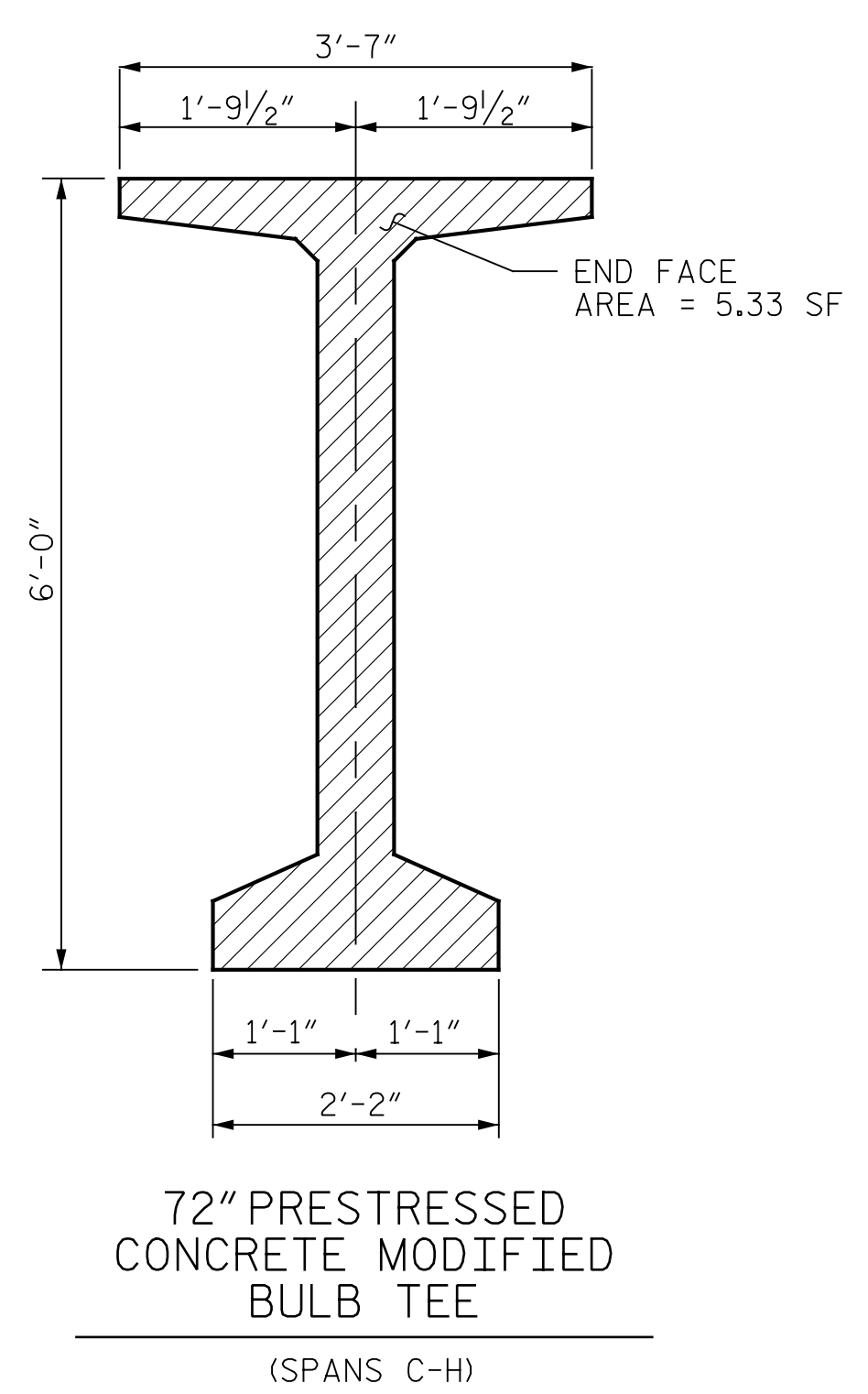
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NOTES:
 FOR EPOXY COATING CONCRETE GIRDER ENDS, SEE SPECIAL PROVISIONS.
 FOR CLEANING EXISTING DRAINAGE SYSTEM, SEE SPECIAL PROVISIONS.

DRAINAGE SYSTEM	
900 LF	

CLEAN EXISTING DRAINAGE SYSTEM LAYOUT



LIMITS OF EPOXY COATING

BEAM END EPOXY COATINGS	
END BENT 1	5 EA.
BENT 2	10 EA.
BENT 8	10 EA.
END BENT 2	5 EA.

PROJECT NO. B-4626
STANLY, ROWAN
AND DAVIDSON COUNTY
 BRIDGE NO. 790008



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

CLEANING EXISTING DRAINAGE SYSTEM AND EPOXY COATING GIRDER ENDS DETAILS

DRAWN BY : M. LEE DATE : 3/2021
 CHECKED BY : R. NELSON DATE : 4/2021

PLANS PREPARED BY:
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Eric B. Nelson 9/2/2021
 SEAL 020208
 ENGINEER
 ERIC B. NELSON JR.

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2			4			125

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BRIDGE JACKING NOTES:

THIS DETAIL IS A GENERIC EXAMPLE OF A JACKING SCHEME AND DOES NOT NECESSARILY REPRESENT SPECIFIC CONDITIONS AT A PARTICULAR BRIDGE. ACTUAL BRIDGE GEOMETRIES, DIMENSIONS, AND CONDITIONS MAY DIFFER FROM THIS DETAIL. PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL INVESTIGATE THE BRIDGES ON THE PROJECT AND DEVELOP A JACKING PLAN TO BE SUBMITTED FOR REVIEW AND APPROVAL. SEE BRIDGE JACKING SPECIAL PROVISIONS.

PRIOR TO BRIDGE JACKING OPERATIONS, THE ENGINEER AND CONTRACTOR SHALL INSPECT THE STRUCTURE FOR ANY NOTABLE DEFECTS TO THE PRIMARY AND SECONDARY STRUCTURAL MEMBERS. ALL NOTABLE DEFECTS SHALL BE DOCUMENTED AND REPORTED TO THE AREA BRIDGE MAINTENANCE ENGINEER PRIOR TO COMMENCEMENT OF ANY BRIDGE JACKING. THE CONTRACTOR SHALL PROVIDE SAFE AND SUFFICIENT ACCESS TO ALL STRUCTURAL MEMBERS FOR THE ENGINEER TO ESTABLISH PROPER DOCUMENTATION.

PRIOR TO JACKING THE CONTRACTOR SHALL ENSURE THERE ARE NO OBSTACLES PREVENTING THE BEAM FROM BEING LIFTED.

THE BEAM SHALL BE LIFTED ENOUGH THAT THE BEAM CLEARS THE BEARINGS AND ALL LOAD IS SUPPORTED BY THE JACKS. AFTER JACKING IS COMPLETE, THE CONTRACTOR SHALL PROVIDE FOR A METHOD TO REMOVE THE JACKS AND SUPPORT THE BEAM FOR DEAD AND LIVE LOAD DURING THE REPAIR OPERATIONS. IF THE JACKS REMAIN IN PLACE DURING THE ENTIRE JACKING AND REPAIR OPERATION, THEY SHALL HAVE MECHANICAL LOCK OFF CAPABILITIES.

IF, DURING THE JACKING PROCESS, OR WHILE THE BEAM IS BEING SUPPORTED, THE BEAM SHIFTS FROM ITS ORIGINAL POSITION, ALL WORK SHALL CEASE AND THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.

BEARINGS ADJACENT TO THE BEAM BEING JACKED MAY BE LOOSENED TO DECREASE THE RESISTANCE OF THE DECK SLAB DURING JACKING. ALL BEARINGS LOOSENED SHALL BE TIGHTENED BACK AFTER REPAIR OPERATIONS ARE COMPLETED AND THE JACKS AND BLOCKING HAVE BEEN REMOVED.

THE MAXIMUM DIFFERENTIAL BETWEEN ADJACENT BEAMS THAT ARE BEING JACKED IS 1/8".

LOADS PROVIDED IN THE "BRIDGE JACKING TABLE" ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR'S ENGINEER SHALL DETERMINE THE EXPECTED LOADS TO BE LIFTED DURING THE BRIDGE JACKING OPERATIONS.

THE CONTRACTOR SHALL SUBMIT WORKING DRAWINGS AND CALCULATIONS OF THE JACKING PROCEDURE(S) SEALED BY A PROFESSIONAL ENGINEER IN THE STATE OF NORTH CAROLINA TO THE ENGINEER FOR APPROVAL PRIOR TO BRIDGE JACKING OPERATIONS.

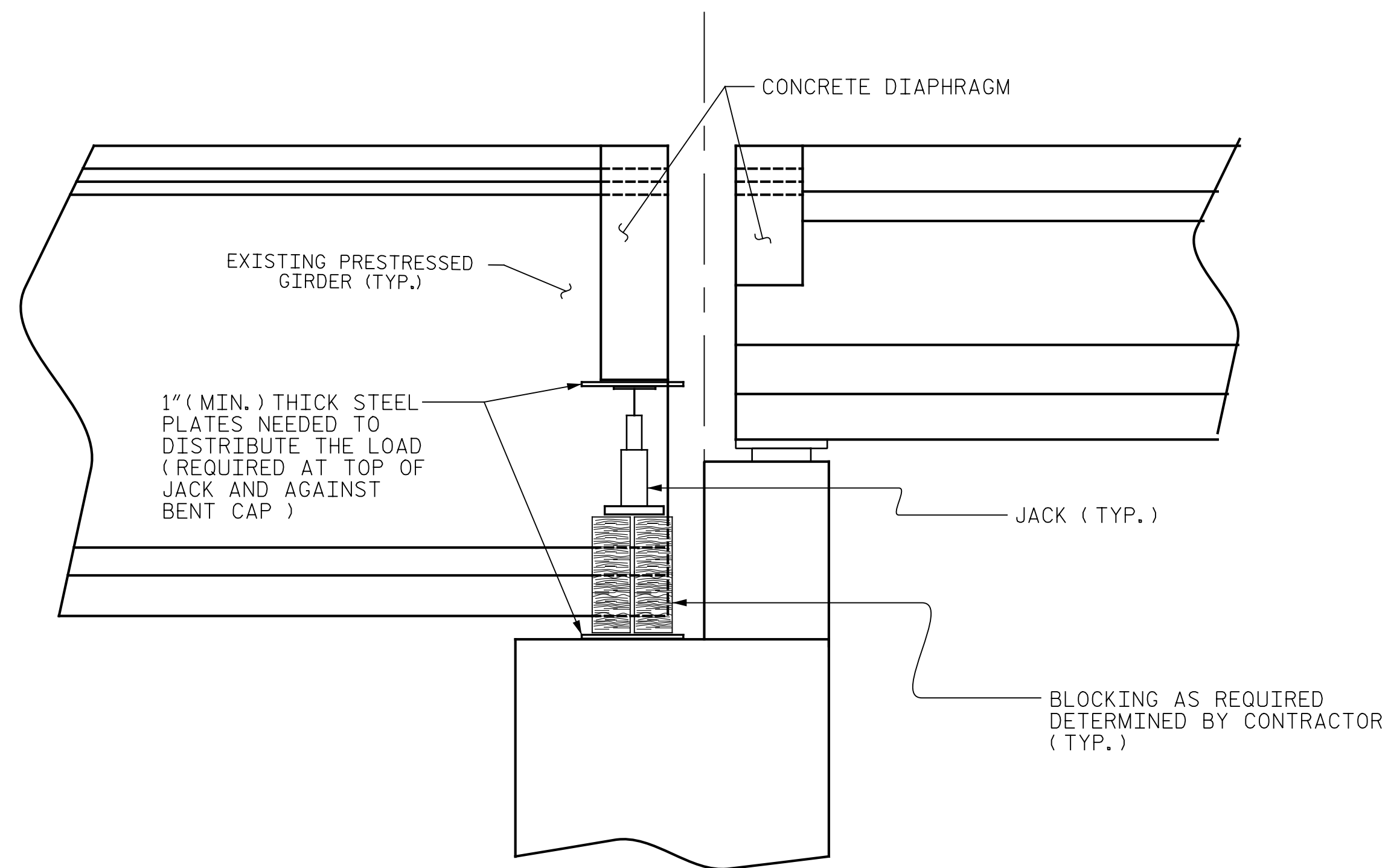
FOR TYPE I OR TYPE II BRIDGE JACKING, SEE SPECIAL PROVISIONS.

FOR WORKING DRAWING SUBMITTALS, SEE SPECIAL PROVISIONS.

ANY STEEL THAT HAS BEEN WELDED TO THE EXISTING STRUCTURE SHALL REMAIN IN PLACE.

TYPE II BRIDGE JACKING SHALL BE DONE WITH A HYDRAULIC JACKING SYSTEM THAT LIFTS EACH BEAM ALONG THE ENTIRE SPAN END WITH EQUAL FORCE AND AT AN EQUAL RATE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE CAUSED TO EXISTING STRUCTURE BY BRIDGE JACKING OPERATIONS AT NO ADDITIONAL COST TO THE DEPARTMENT.



SECTION THRU DIAPHRAGM

BRIDGE JACKING TABLE				
PRELIMINARY GIRDER REACTIONS (MAXIMUM)				
LOCATION	GIRDER	BRIDGE JACKING TYPE	DEAD LOAD (DC+DW) (KIPS)	LIVE LOAD (W/IMPACT) (KIPS)
BENTS 2 & 8	1-5	I	150	74

NOTE: LOADS ARE UNFACTORED

PROJECT NO. B-4626
STANLY, ROWAN
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BRIDGE NO. 790008

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BRIDGE JACKING DETAILS



DocuSigned by: *Eric B. Nelson Jr.* 9/13/2021
AC38002119274C0

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1			3			TOTAL SHEETS
2			4			125

DRAWN BY : M. LEE DATE : 3/2021
CHECKED BY : R. NELSON DATE : 4/2021

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 2018 "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 $\frac{3}{4}$ " WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO $1\frac{1}{2}$ " RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A $\frac{1}{4}$ " 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 $\frac{1}{4}$ " RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

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.

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 DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. 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.

STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE $\frac{7}{8}$ " \emptyset SHEAR STUDS FOR THE $\frac{3}{4}$ " \emptyset STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - $\frac{7}{8}$ " \emptyset STUDS FOR 4 - $\frac{3}{4}$ " \emptyset STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF $\frac{7}{8}$ " \emptyset STUDS ALONG THE BEAM AS SHOWN FOR $\frac{3}{4}$ " \emptyset STUDS BASED ON THE RATIO OF 3 - $\frac{7}{8}$ " \emptyset STUDS FOR 4 - $\frac{3}{4}$ " \emptyset 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 PLATES ARE AT LEAST $\frac{5}{16}$ " 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 SUITABLE MEANS TO A RADIUS OF APPROXIMATELY $\frac{1}{16}$ " 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. FINIS 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

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