

AS-BUILT REPAIR QUANTITY TABLE TOP OF DECK REPAIRS SPAN D ESTIMATE ACTUAL SCARIFYING BRIDGE DECK 202**.**2 SY HYDRO-DEMOLITION OF BRIDGE DECK 202**.**2 SY 1.6 SY CLASS II SURFACE PREPARATION CLASS III SURFACE PREPARATION 0.0 SY LMC OVERLAY-VES 8.4 CY PLACING AND FINISHING LMC OVERLAY-VES 202.2 SY 1616.7 SF GROOVING BRIDGE FLOORS SF BRIDGE JOINT DEMOLITION 14.0

NOTES

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

THE BOUNDARIES OF AREAS IDENTIFIED FOR CLASS II (PARTIAL DEPTH) SURFACE PREPARATION ARE APPROXIMATE AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED AT THE PROJECT SITE.

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

FOR OVERLAY OF BRIDGE WITH LATEX MODIFIED CONCRETE- VERY EARLY STRENGTH, SEE SPECIAL PROVISIONS.

PREVIOUSLY PLACED LMC OVERLAY AT STAGED EDGES SHALL BE DEMOLISHED BACK A MINIMUM OF 4 INCHES AND RECAST WITH LMC.

FOR LMC OVERLAY - VES SURFACE PREPARATION, SEE SPECIAL PROVISIONS.

FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY IS COMPLETE

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

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



BRIDGE JOINT DEMOLITION



CLASS II SURFACE PREPARATION

PROJECT NO. 15BPR.130

MOORE COUNTY

BRIDGE NO. 620049

SHEET 7 OF 12

SEAL 025516

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DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE
PLAN OF SPAN D
(SURFACE PREPARATION)

STATE OF NORTH CAROLINA

5430 Wade Park Blvd., Suite 410
Raleigh, NC 27607
Tel. 919-854-0344 Fax. 919-854-0355
NC License No. F-0765

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REVISIONS

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3 TOTAL SHEETS

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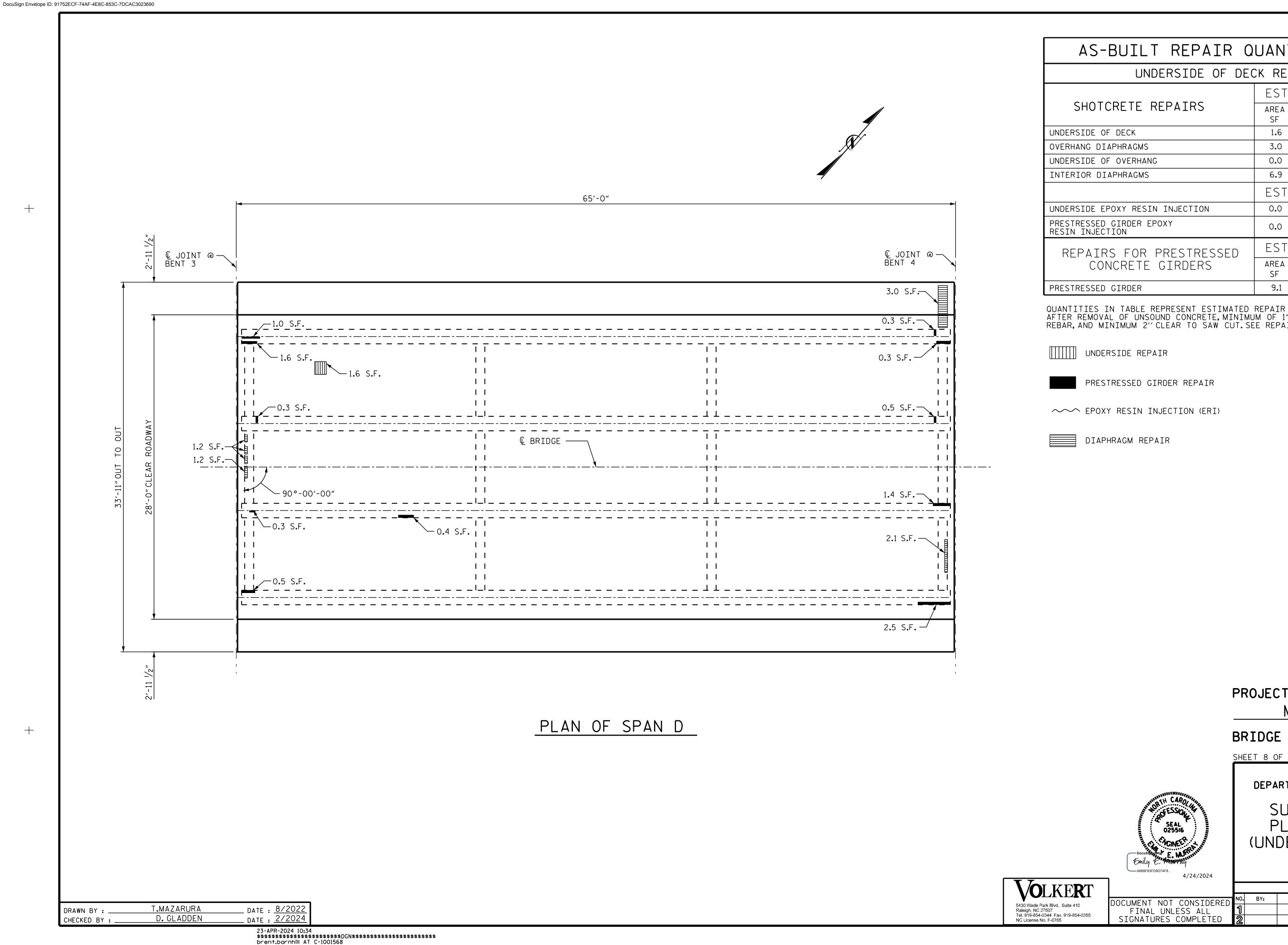
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T.MAZARURA

D. GLADDEN

DRAWN BY :

CHECKED BY : _



AS-BUILT REPAIR QUANTITY TABLE UNDERSIDE OF DECK REPAIRS ACTUAL ESTIMATE AREA VOLUME VOLUME AREA CF 0.6 1.6 3.0 1.0 0.0 2.3 6.9 ACTUAL 0.0 LF 0.0 ESTIMATE ACTUAL AREA VOLUME VOLUME

QUANTITIES IN TABLE REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1"BEHIND REBAR, AND MINIMUM 2" CLEAR TO SAW CUT. SEE REPAIR DETAILS.

PROJECT NO. 15BPR.130

2.7

MOORE __ COUNTY

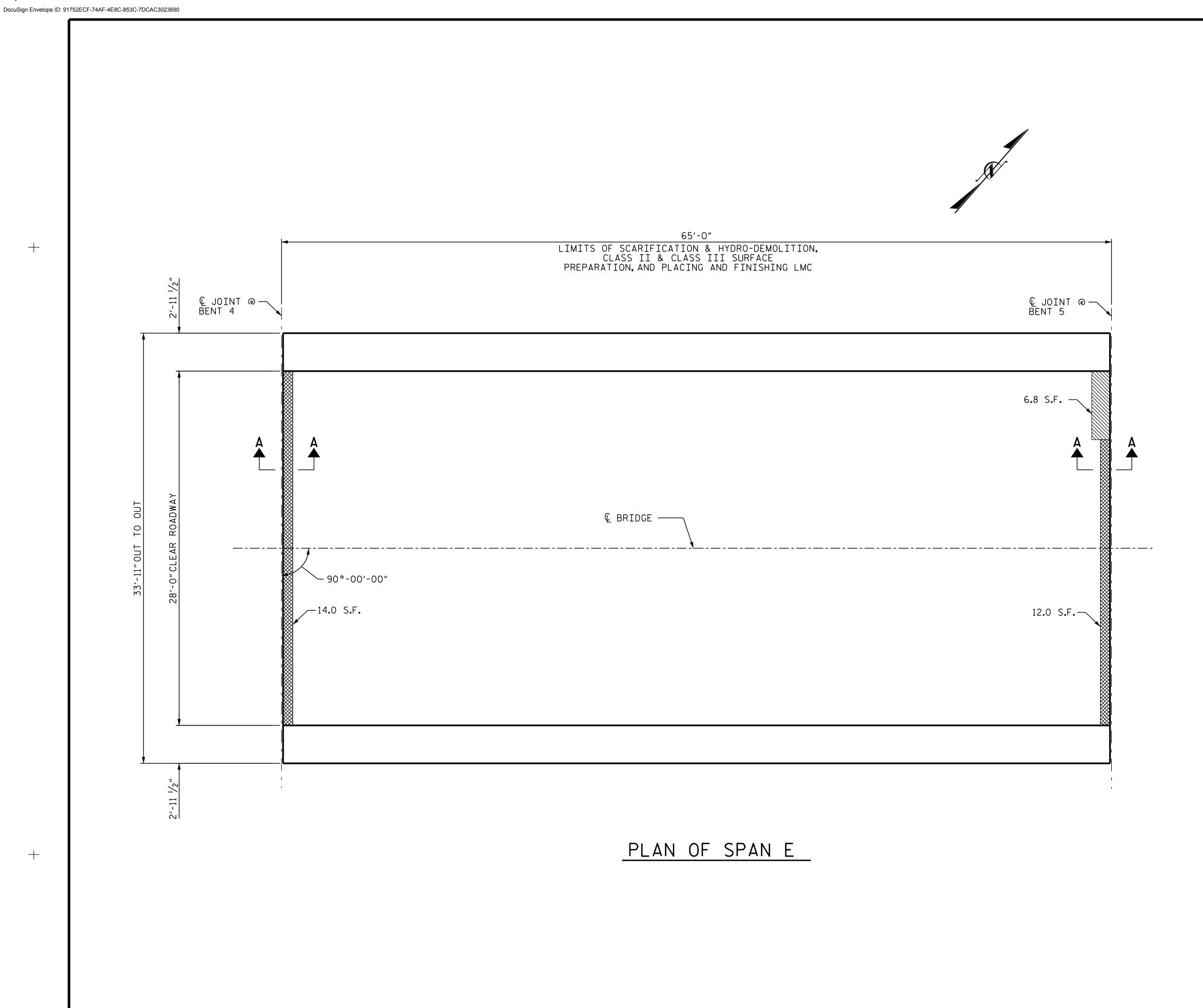
BRIDGE NO. 620049

SHEET 8 OF 12

DEPARTMENT OF TRANSPORTATION
RALEIGH SUPERSTRUCTURE PLAN OF SPAN D (UNDERSIDE REPAIRS)

STATE OF NORTH CAROLINA

SHEET NO **REVISIONS** S-95



AS-BUILT REPAIR QUANTITY TABLE TOP OF DECK REPAIRS SPAN E ESTIMATE ACTUAL SCARIFYING BRIDGE DECK 202**.**2 SY HYDRO-DEMOLITION OF BRIDGE DECK 202**.**2 SY 0.8 SY CLASS II SURFACE PREPARATION CLASS III SURFACE PREPARATION 0.0 SY LMC OVERLAY-VES 8.4 CY PLACING AND FINISHING LMC OVERLAY-VES 202.2 SY 1616.7 SF GROOVING BRIDGE FLOORS 26.0 SF BRIDGE JOINT DEMOLITION

NOTES

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

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

FOR OVERLAY OF BRIDGE WITH LATEX MODIFIED CONCRETE- VERY EARLY STRENGTH, SEE SPECIAL PROVISIONS.

PREVIOUSLY PLACED LMC OVERLAY AT STAGED EDGES SHALL BE DEMOLISHED BACK A MINIMUM OF 4 INCHES AND RECAST WITH LMC.

FOR LMC OVERLAY - VES SURFACE PREPARATION, SEE SPECIAL PROVISIONS.

FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY IS COMPLETE

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

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

BRIDGE JOINT DEMOLITION



CLASS II SURFACE PREPARATION

PROJECT NO. 15BPR.130

MOORE COUNTY
BRIDGE NO. 620049

SHEET 9 OF 12

SEAL 025516

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DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE
PLAN OF SPAN E
(SURFACE PREPARATION)

STATE OF NORTH CAROLINA

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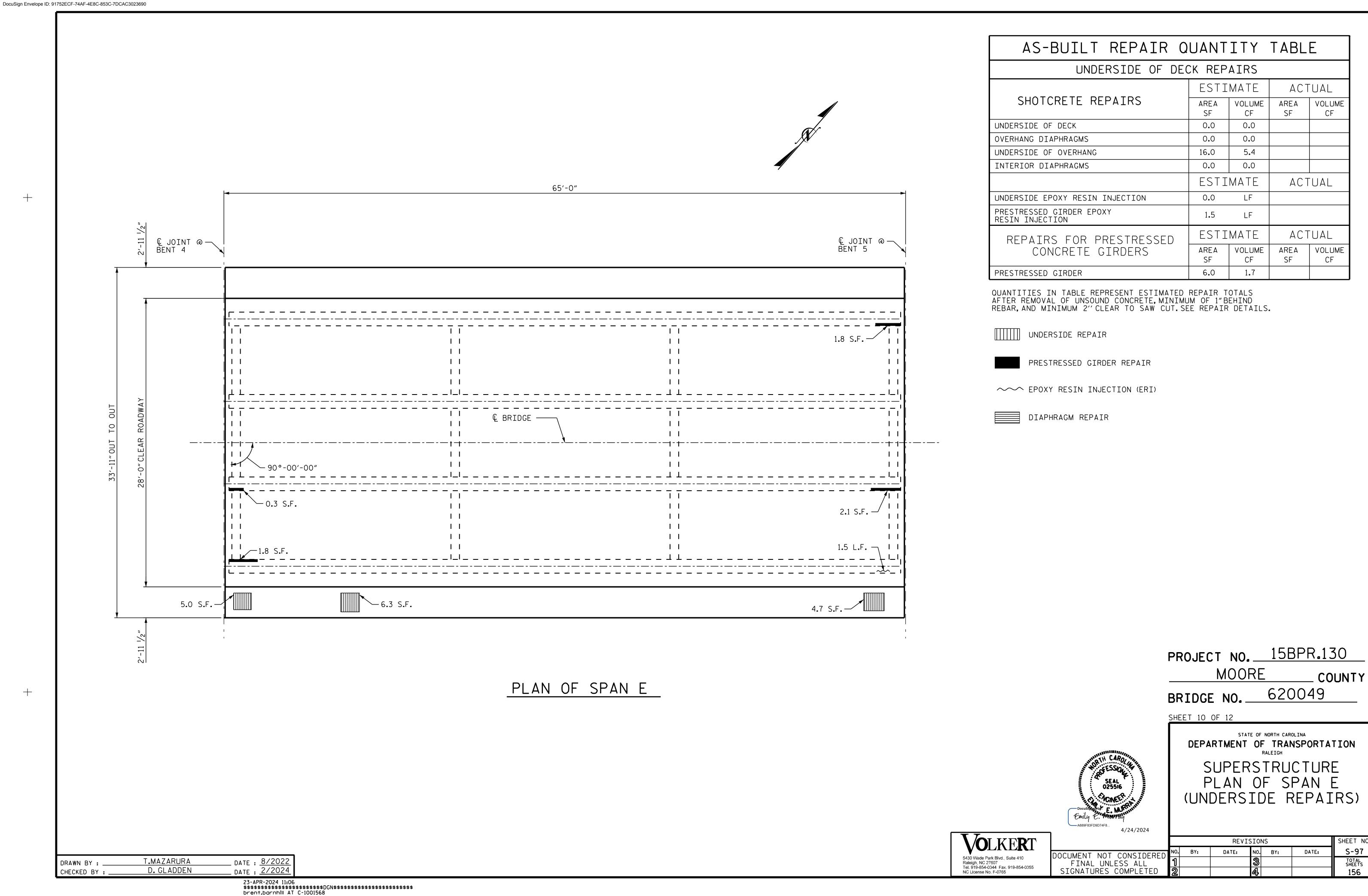
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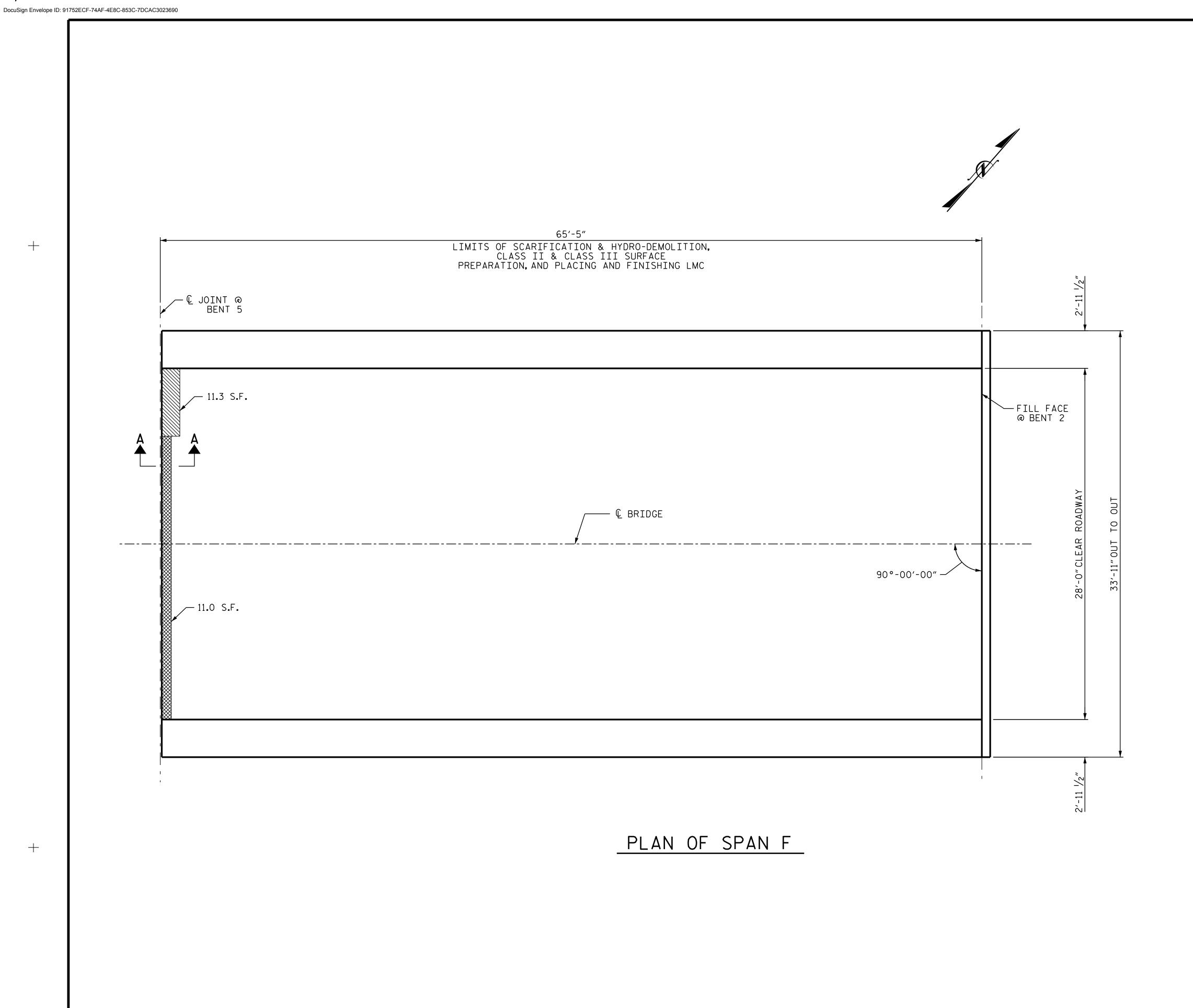
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AS-BUILT REPAIR QUANTITY TABLE TOP OF DECK REPAIRS SPAN F ESTIMATE ACTUAL SCARIFYING BRIDGE DECK 203**.**5 SY HYDRO-DEMOLITION OF BRIDGE DECK 203**.**5 SY 1.3 SY CLASS II SURFACE PREPARATION CLASS III SURFACE PREPARATION 0.0 SY LMC OVERLAY-VES 8.5 CY PLACING AND FINISHING LMC OVERLAY-VES 203**.**5 SY

1631.3

11.0

SF

NOTES

GROOVING BRIDGE FLOORS

BRIDGE JOINT DEMOLITION

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

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

FOR OVERLAY OF BRIDGE WITH LATEX MODIFIED CONCRETE- VERY EARLY STRENGTH, SEE SPECIAL PROVISIONS.

PREVIOUSLY PLACED LMC OVERLAY AT STAGED EDGES SHALL BE DEMOLISHED BACK A MINIMUM OF 4 INCHES AND RECAST WITH LMC.

FOR LMC OVERLAY - VES SURFACE PREPARATION, SEE SPECIAL PROVISIONS.

FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY IS COMPLETE

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

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

BRIDGE JOINT DEMOLITION



CLASS II SURFACE PREPARATION

PROJECT NO. 15BPR.130

MOORE COUNTY
BRIDGE NO. 620049

SHEET 11 OF 12

DEPARTMENT OF TRANSPORTATION
RALEIGH

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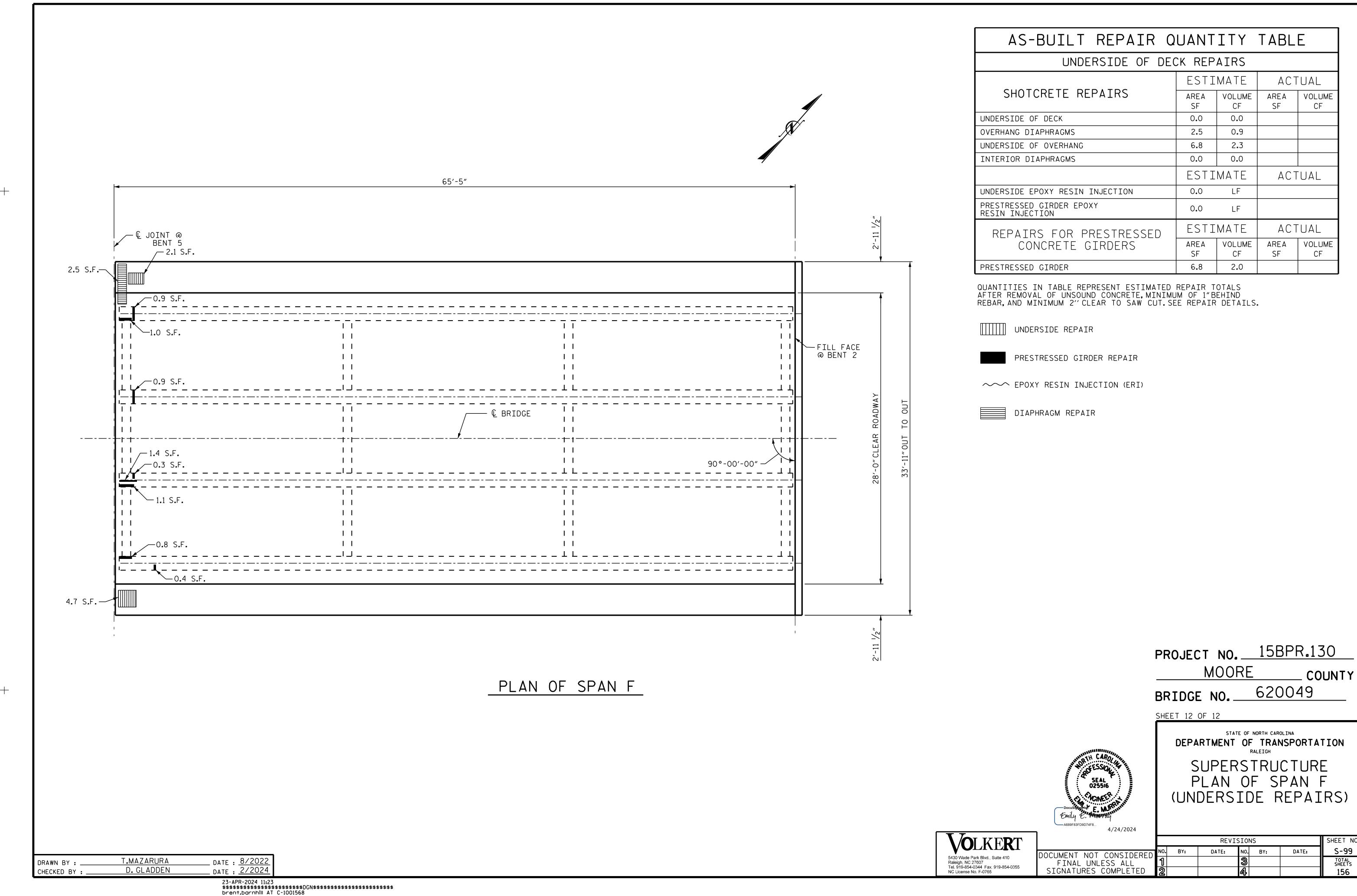
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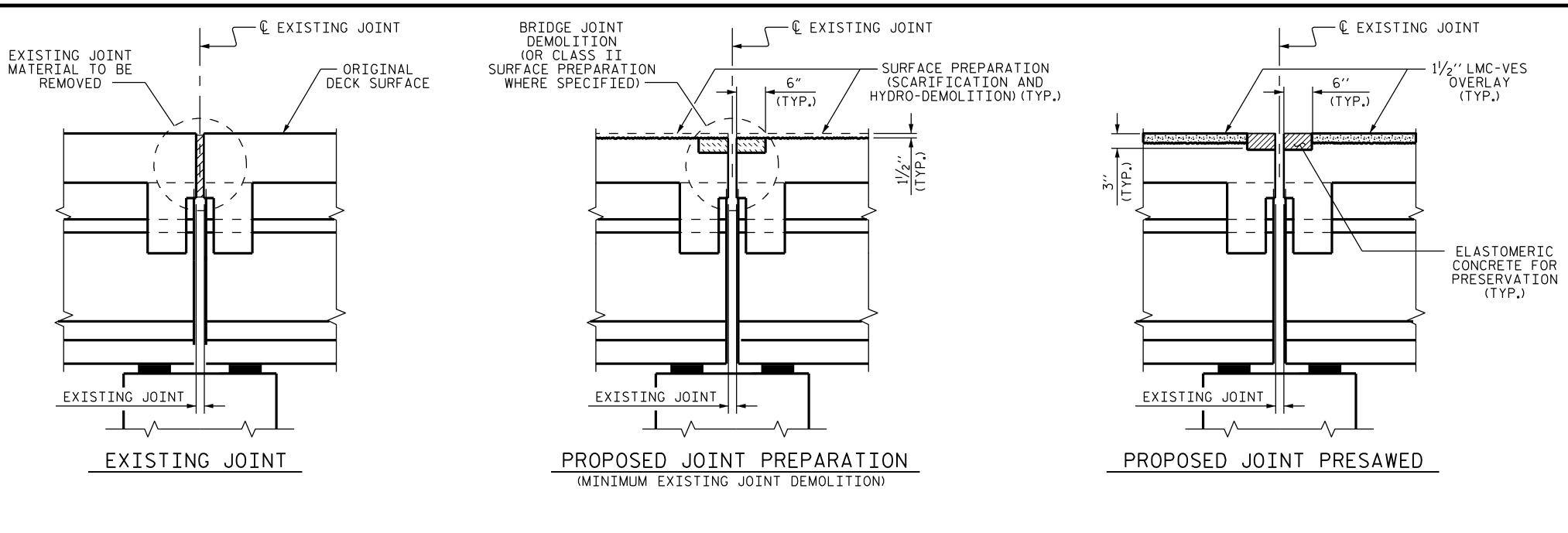
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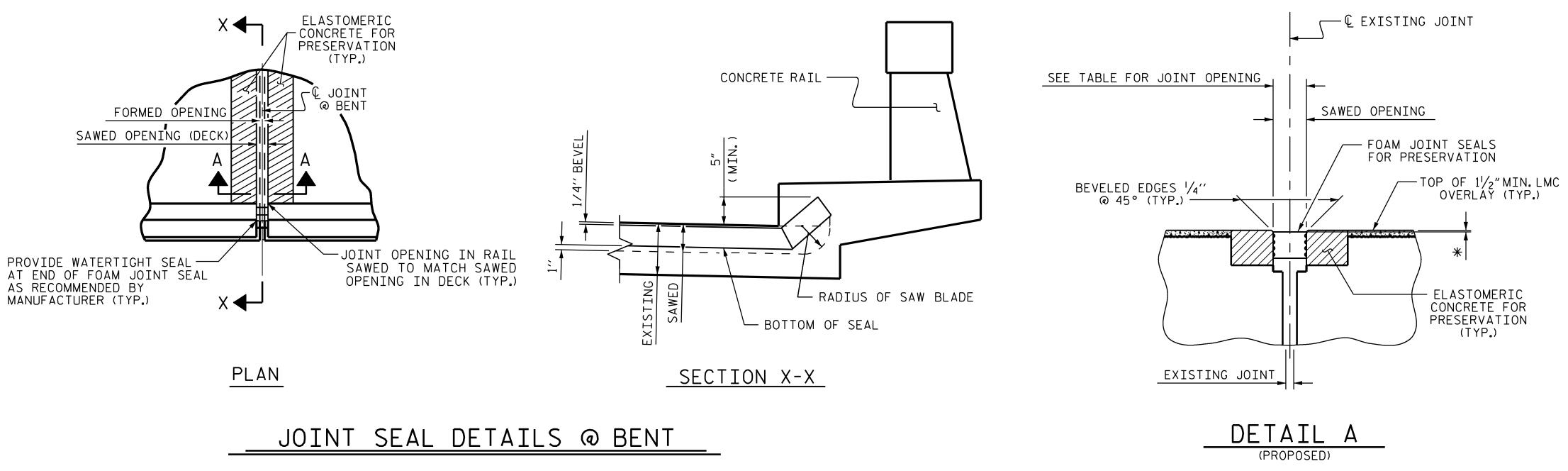
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JOINT INSTALLATION SEQUENCE AT BENTS (SECTION A-A)



* FOAM JOINT SEALS FOR PRESERVATION SHALL BE RECESSED AS PER MANUFACTURER'S RECOMMENDATIONS.

JOINT REPAIR QUANTITY						
	FOAM JOI FOR PRES	NT SEALS ERVATION		C CONCRETE ERVATION		
	ESTIMATED ACTUAL (LIN. FT.)		ESTIMATED (CU.FT.)	ACTUAL (CU.FT.)		
BENT 1	29.0		7.0			
BENT 2	29.0		7.0			
BENT 3	29.0		7.0			
BENT 4	29.0		7.0			
BENT 5	29.0		7.0			

SAWED JOINT OPENING TABLE						
LOCATION	SKEW ANGLE	PERPENDICULAR JOINT OPENING AT 45°	PERPENDICULAR JOINT OPENING AT 60°	PERPENDICULAR JOINT OPENING AT 90°		
BENT 1	90°00′00″	1 ⁵ / ₈ ′′	1%′′	1 ½6″		
BENT 2	90°00′00″	1"/16"	1%6′′	15⁄ ₁₆ ″		
BENT 3	90°00′00″	1 ⁵ / ₈ ''	1%6′′	17⁄ ₁₆ "		
BENT 4	90°00′00″	1 ⁵ ⁄8′′	1%6′′	17⁄ ₁₆ "		
BENT 5	90°00′00"	1 ⁵ ⁄8′′	19/16′′	1½6″		

NOTES

EXISTING JOINT

PROPOSED FOAM JOINT

SEE DETAIL A

THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING JOINT OPENING PRIOR TO ORDER JOINT SEAL MATERIAL. IF THE ACTUAL JOINT OPENING VARIES FROM THE OPENING ALLOWED BY THE JOINT SEAL MATERIAL, NOTIFY THE ENGINEER. REVISION TO THE JOINT SEAL SIZE AND TYPE MIGHT BE NECESSARY.

—— € EXISTING JOINT

(TYP.)

1/2"LMC-VES OVERLAY (TYP.)

ELASTOMERIC CONCRETE FOR

PRESERVATION (TYP.)

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

THE MANUFACTURER IS TO PROVIDE THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE FOAM JOINT SEAL BASED ON JOINT OPENINGS.

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

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

THE INSTALLED FOAM JOINT SEALS FOR PRESERVATION SHALL BE WATER

FOR LOCATION OF SECTION A-A, SEE PLAN OF SPAN SHEETS.

FINAL SURFACE OF THE JOINT DEMOLITION AREA PRIOR TO PLACEMENT OF CONCRETE REPAIR MATERIAL SHOULD BE REASONABLY FLAT AND LEVEL. ENGINEER SHALL DETERMINE THE ACCEPTABILITY OF THE SURFACE PRIOR TO PLACEMENT OF REPAIR CONCRETE.

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

PROJECT NO. 15BPR.130 MOORE COUNTY BRIDGE NO: 620049



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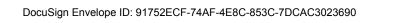
> JOINT REPAIR DETAILS AT BENTS

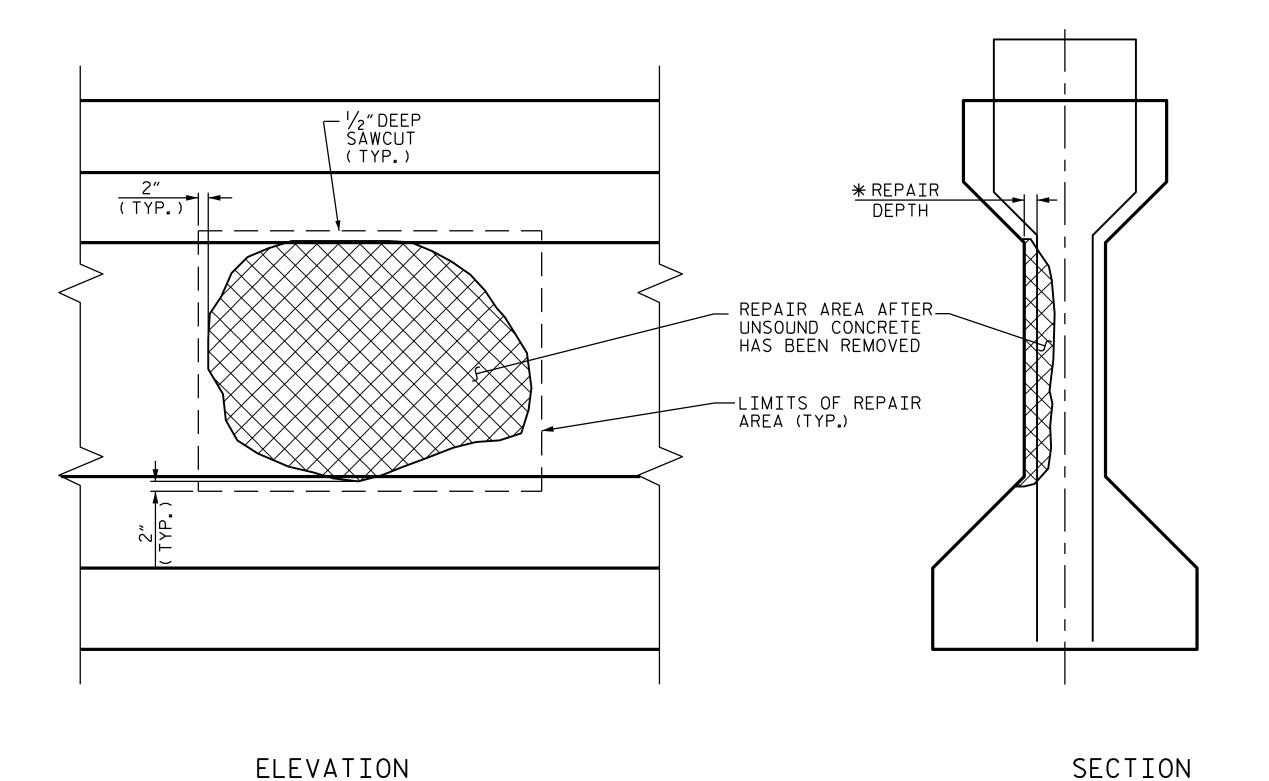
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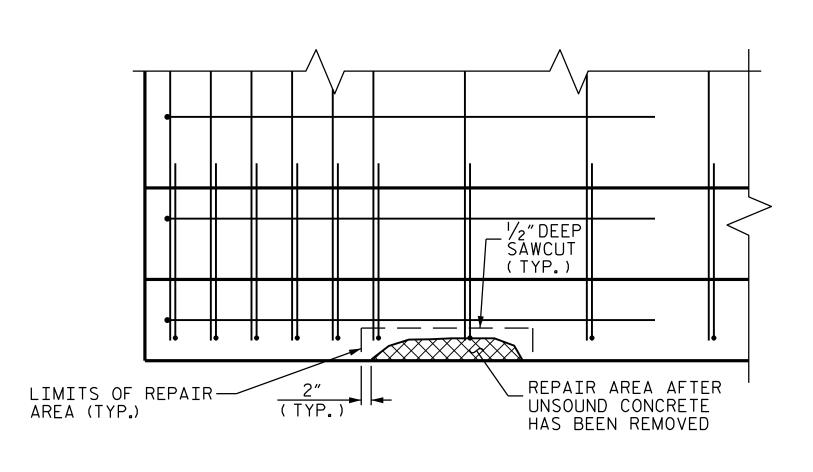
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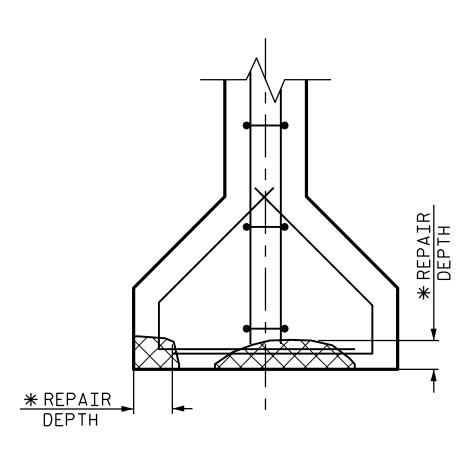
__ DATE : 5/23 __ DATE : 3/24 D. A. GLADDEN DRAWN BY : _ E.E.MURRAY CHECKED BY : _





GIRDER WEB REPAIR





ELEVATION

SECTION

* REPAIR DEPTH:

IF REMOVAL OF UNSOUND CONCRETE RESULTS IN EXPOSING MORE THAN HALF THE DEPTH OF A REINFORCING BAR OR PRESTRESSING STRAND, REMOVE ADDITIONAL CONCRETE TO 1"BEHIND THE BAR OR STRAND WITHOUT DAMAGE TO REINFORCING BAR OR PRESTRESSING STRAND. ALTERNATIVELY, AS DIRECTED BY THE ENGINEER, INSTALL 1/4" DIAMETER X 3"LONG (MAX.) ADHESIVE ANCHORS OR STUDS IN REPAIR AREAS WITH MINIMUM DEPTH OF 11/2" WITHOUT DAMAGE TO REINFORCING BAR OR PRESTRESSING STRAND.

DRAWN BY: ______ D.A. GLADDEN DATE: 3/21
CHECKED BY: _____ E.E. MURRAY DATE: 3/24
DESIGN ENGINEER OF RECORD: _____ DATE: ____

NOTES:

EXISTING REINFORCING STEEL LOCATIONS ARE FROM BEST INFORMATION AVAILABLE.

AROUND THE PERIMETER OF THE REPAIR AREA, AS INDICATED, THE CONTRACTOR SHALL SAW CUT TO A MINIMUM DEPTH OF $\frac{1}{2}$ " BUT REINFORCING STEEL AND/OR PRESTRESSING STRANDS SHALL NOT BE DAMAGED.

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

AFTER REMOVAL OF SOUND AND UNSOUND CONCRETE WITHIN THE SAWCUT AREA, TO A MINIMUM DEPTH OF $\frac{1}{2}$, clean and remove rust from all reinforcing steel and prestressing strands.

SHOTCRETE OR CONCRETE MAY BE USED FOR REPAIRS WITH THE APPROVAL OF THE ENGINEER.

MAXIMUM AGGREGATE SIZE FOR REPAIR MATERIAL SHALL NOT EXCEED 2/3 THE MINIMUM REPAIR DEPTH.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

PROJECT NO. 15BPR.130

MOORE COUNTY

STATION: 620049

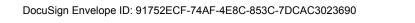


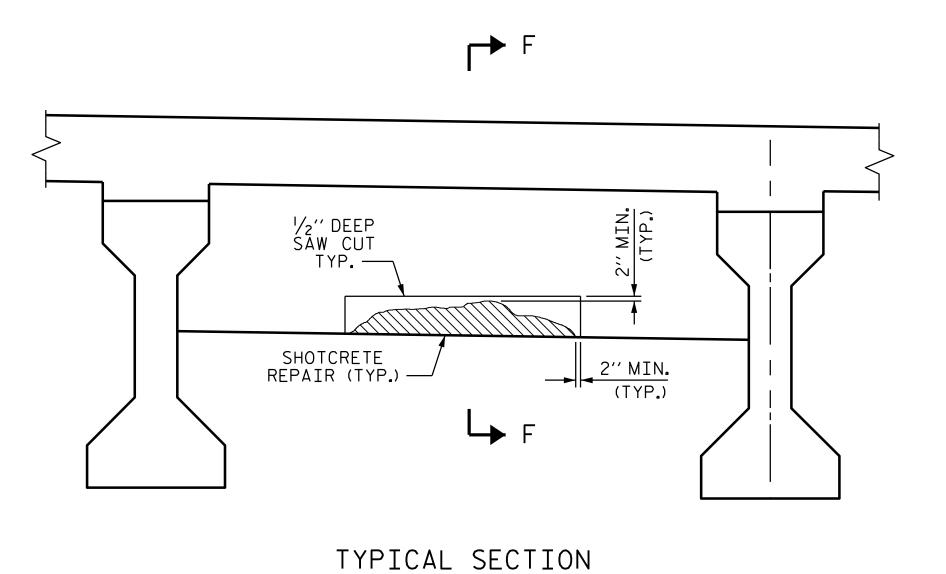
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RALEIGH

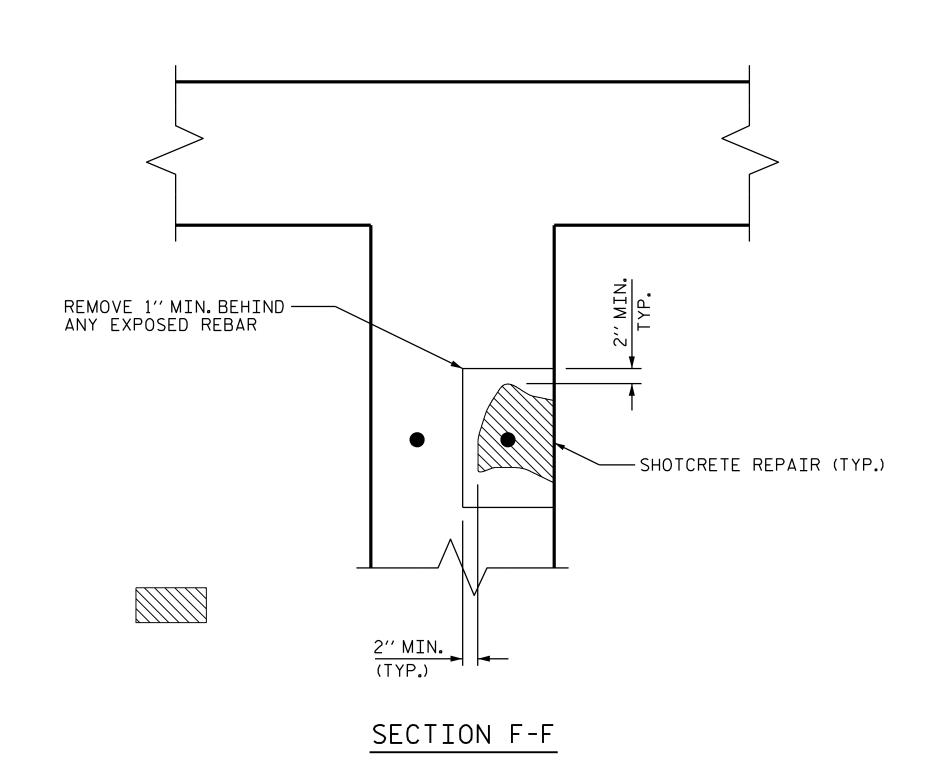
PRESTRESSED GIRDER REPAIR DETAILS

4/24/2024

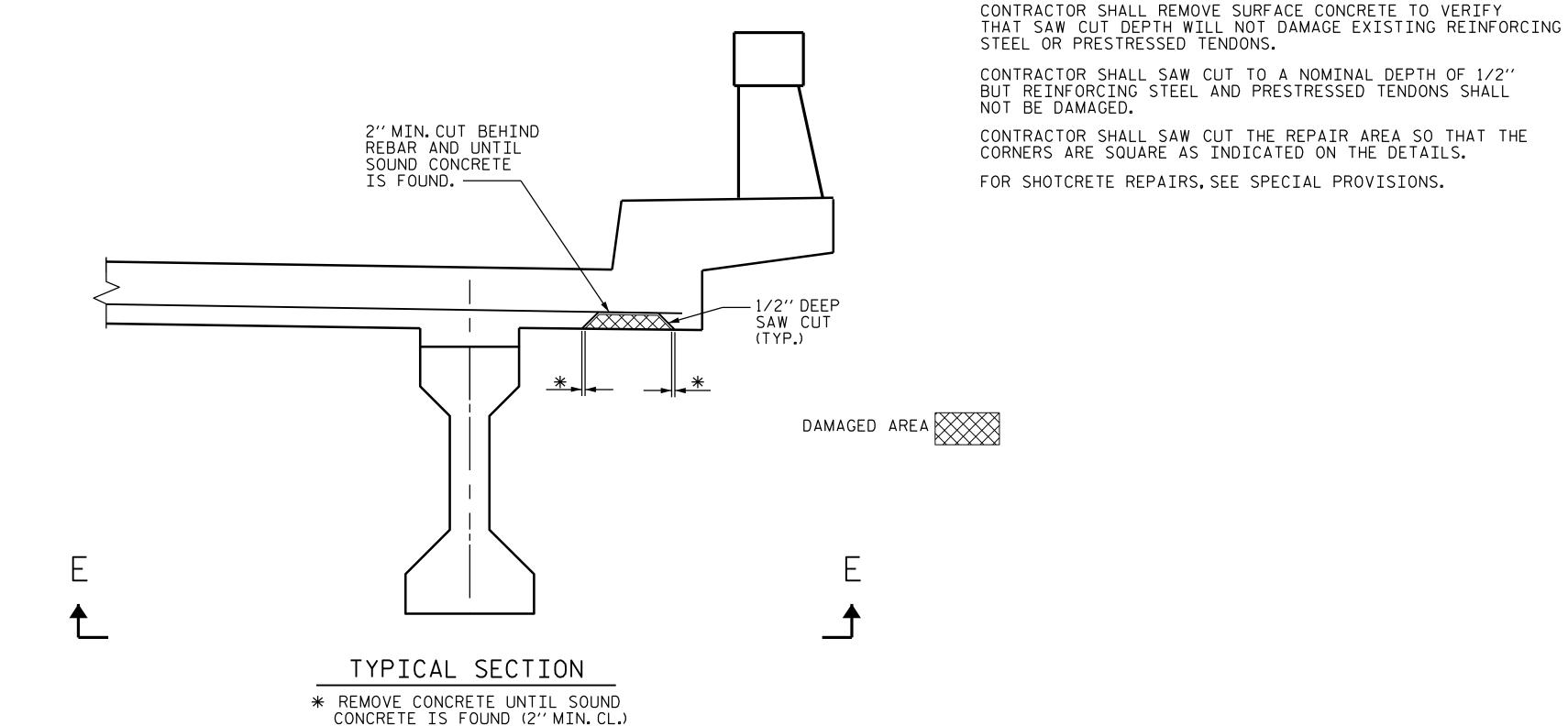
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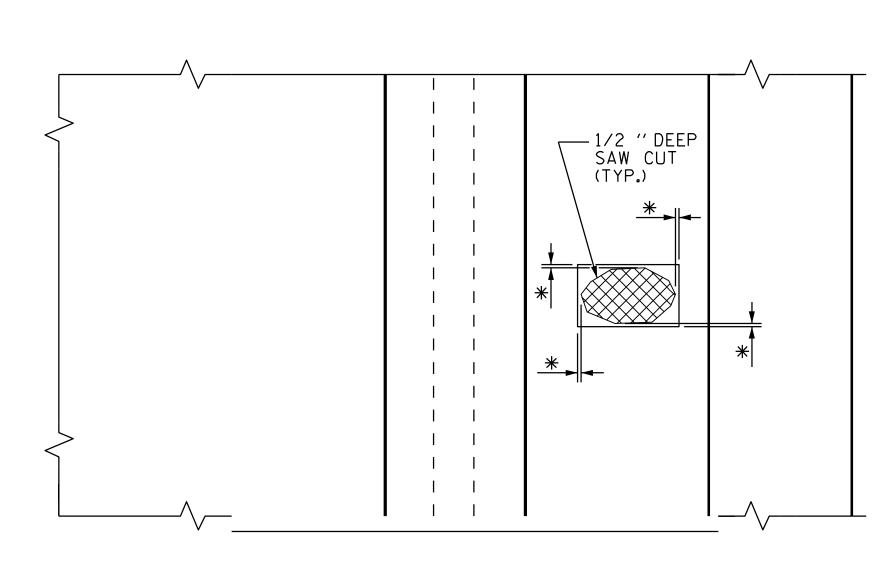






INTERIOR DIAPHRAGM REPAIR DETAILS





SECTION E-E

OVERHANG DETAILS



NOTES

PROJECT NO. 15BPR.130 MOORE COUNTY

620049 STATION:_

> STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

OVERHANG AND DIAPHRAGM REPAIR DETAILS

5430 Wade Park Blvd., Suite 410 Raleigh, NC 27607 Tel. 919-854-0344 Fax. 919-854-0355 NC License No. F-0765

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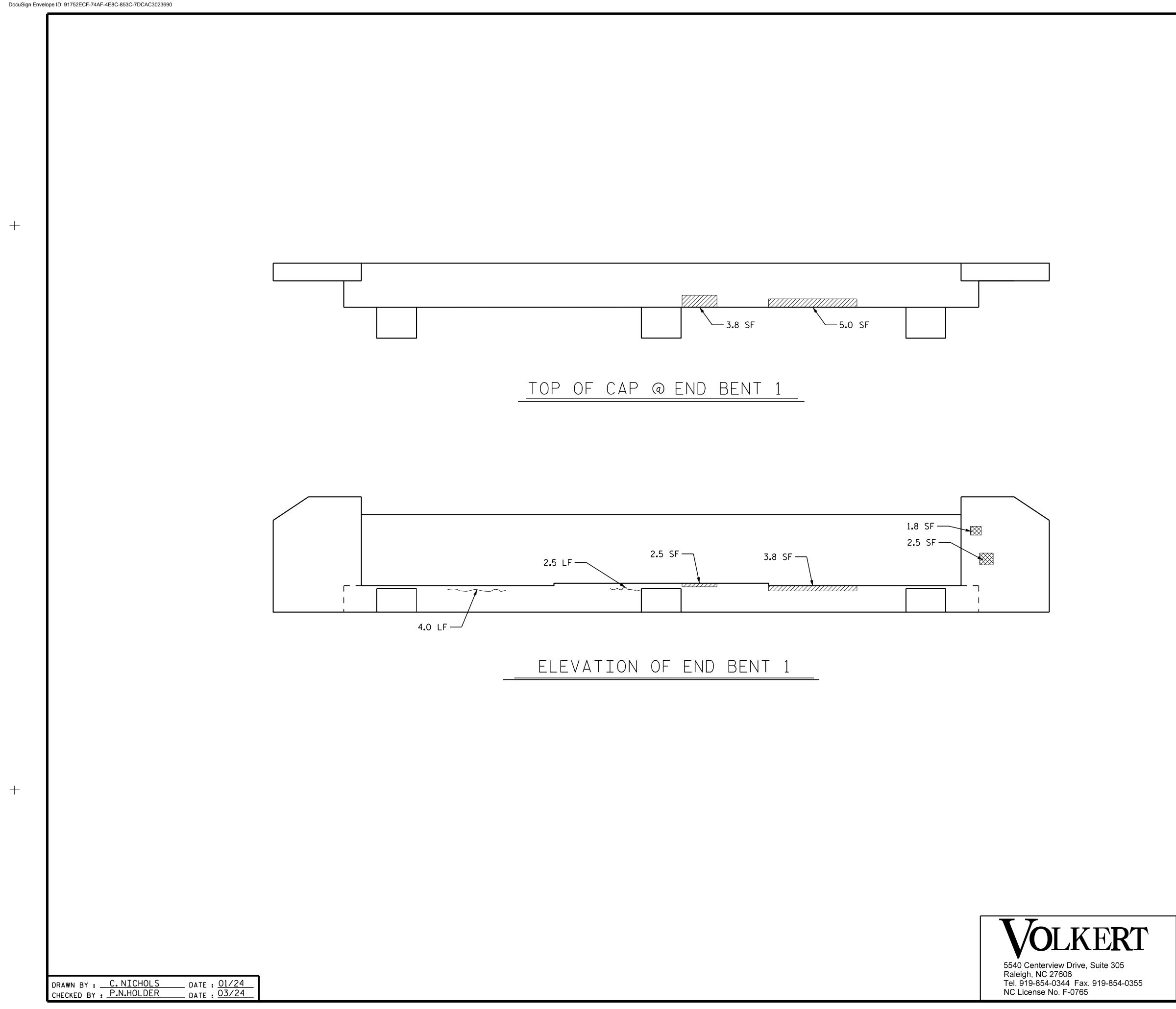
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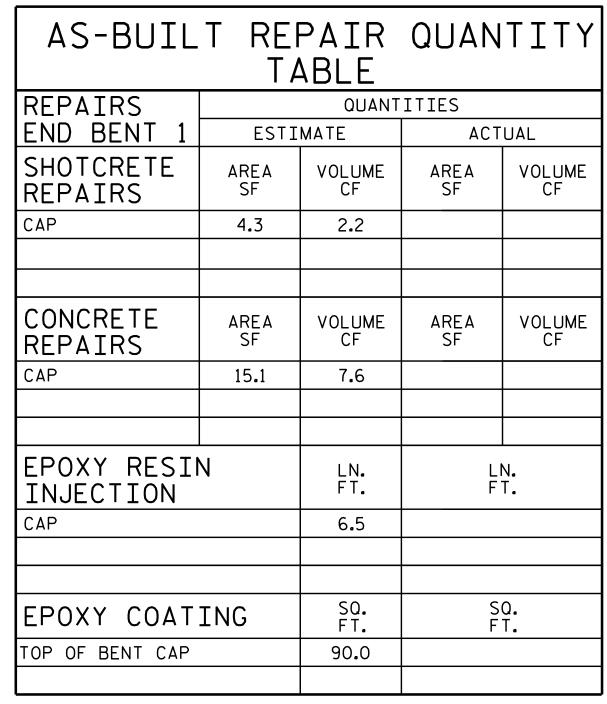
E.E.MURRAY

DRAWN BY :

CHECKED BY :

DESIGN ENGINEER OF RECORD: _





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

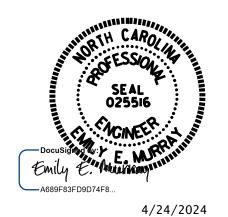




CONCRETE REPAIR

EPOXY RESIN INJECTION (ERI)

PROJECT NO. 15BPR.130 MOORE COUNTY BRIDGE NO. 620049

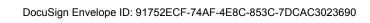


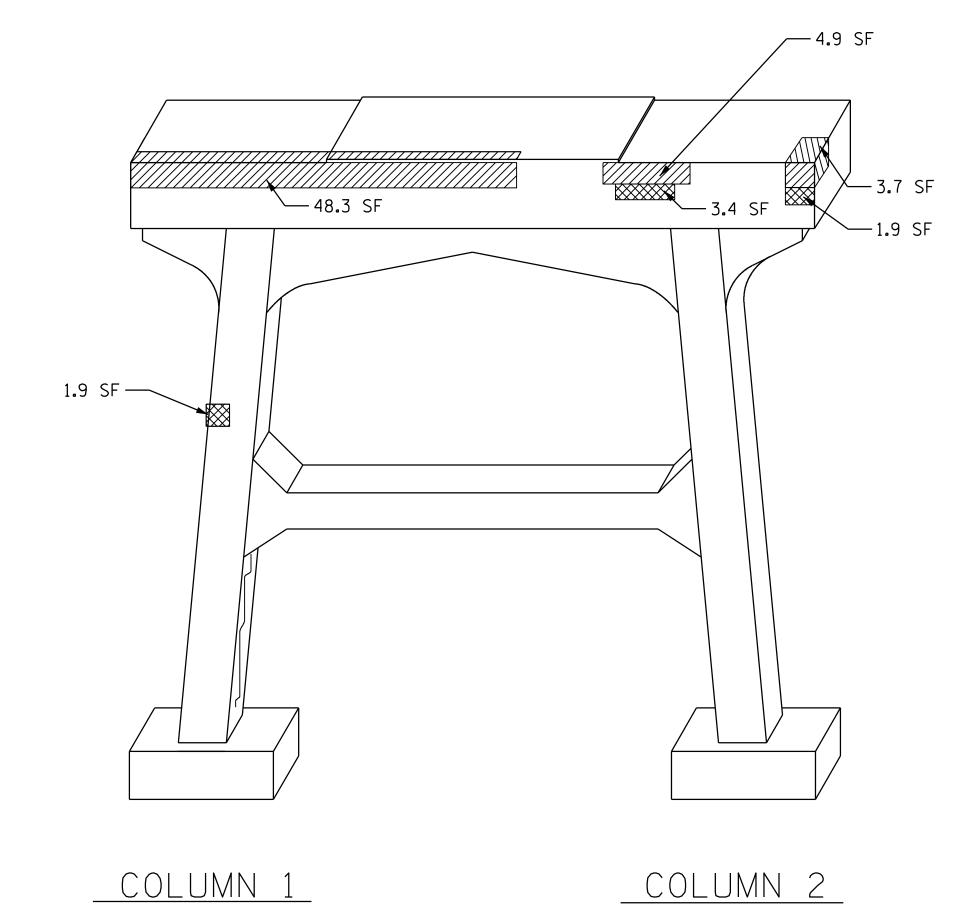
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RALEIGH

END BENT 1

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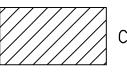
ELEVATION @ BENT 1 (SPAN A)

AS-BUILT REPAIR QUANTITY TABLE REPAIRS QUANTITIES BENT 1 ESTIMATE ACTUAL SHOTCRETE AREA SF VOLUME AREA SF VOLUME CF REPAIRS 5.3 2.7 12.3 6.2 COLUMN

CONCRETE AREA SF VOLUME CF AREA SF VOLUME CF REPAIRS 92.8 46.4 0.0 COLUMN 0.0 EPOXY RESIN LN. FT. INJECTION CAP 0.0 COLUMN 20.0 SQ. FT. SQ. FT. EPOXY COATING TOP OF BENT CAP 85.5

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





EPOXY RESIN INJECTION (ERI)

SHEET 1 OF 2

PROJECT NO. 15BPR.130

MOORE _ COUNTY

BRIDGE NO. 620049



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RALEIGH

BENT 1

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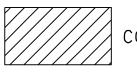


9.0 SF — ____0.6 SF 8.5 SF —

ELEVATION @ BENT 1 (SPAN B)

COLUMN 1

COLUMN 2



EPOXY RESIN INJECTION (ERI)

PROJECT NO.15BPR.130

MOORE _ COUNTY

620049 BRIDGE NO.____

SHEET 2 OF 2

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 1

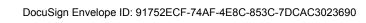
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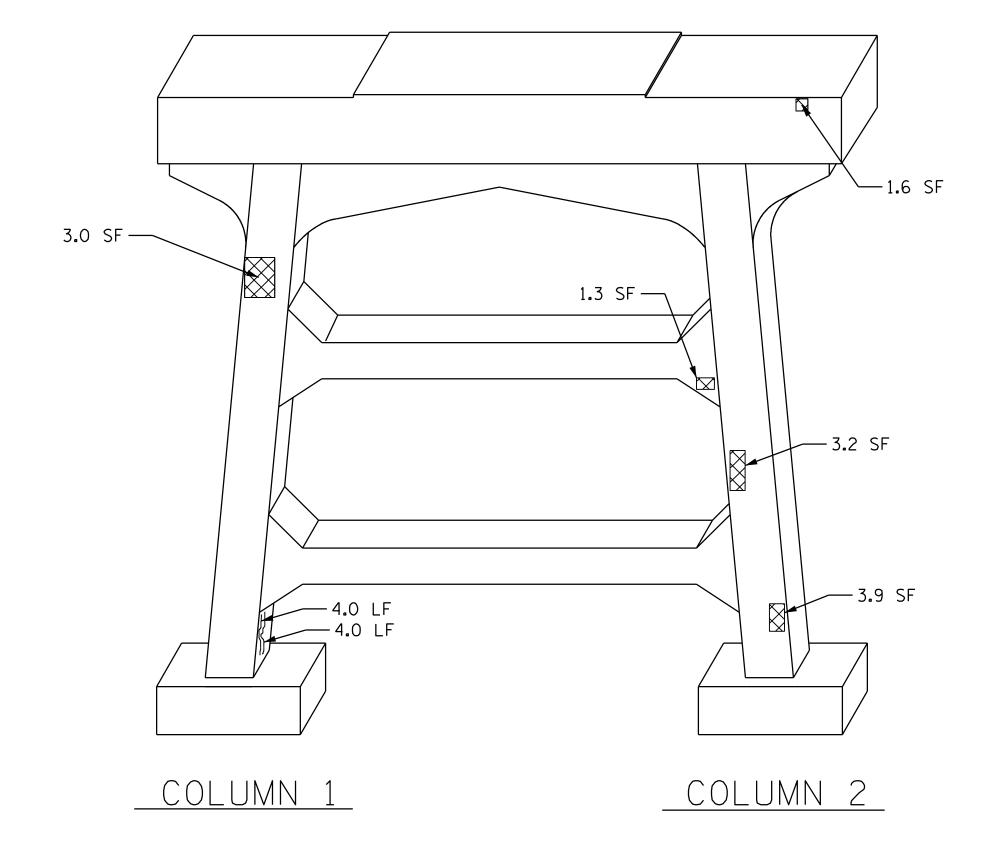
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ELEVATION @ BENT 2 (SPAN B)

AS-BUILT REPAIR QUANTITY TABLE

IADLE						
REPAIRS		QUANT	ITIES			
BENT 2	ESTI	MATE	ACT	UAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF		
CAP	1.6	0.8				
COLUMN	19.6	9.8				
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF		
CAP	0.0	0.0				
COLUMN	0.0	0.0				
EPOXY RESII	LN. FT.		N. T.			
CAP	0.0					
COLUMN	33					
EPOXY COAT	SQ. FT.		Q. T.			
TOP OF BENT CAP	85.5					

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





EPOXY RESIN INJECTION (ERI)

PROJECT NO. 15BPR.130

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BENT 2

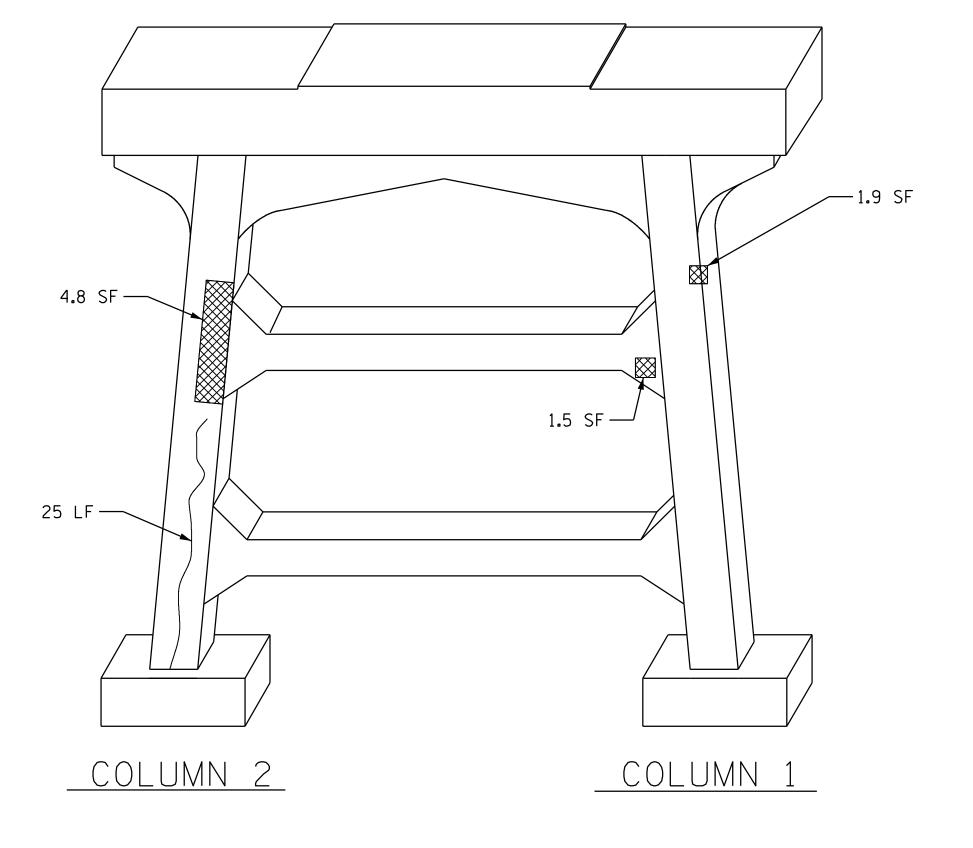
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EPOXY RESIN INJECTION (ERI)

ELEVATION @ BENT 2 (SPAN C)

PROJECT NO. 15BPR.130 ____ COUNTY

MOORE

BRIDGE NO. 620049

SHEET 2 OF 2

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 2

BY:

SHEET NO.

S-107

TOTAL SHEETS 156

DATE:

OLKERT

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4/24/2024

REVISIONS DATE: BY:

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13.3 SF —

COLUMN 1

ELEVATION @ BENT 3 (SPAN C)

COLUMN 2

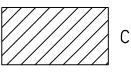
AS-BUILT REPAIR QUANTITY TABLE QUANTITIES REPAIRS BENT 3 ACTUAL ESTIMATE SHOTCRETE AREA SF VOLUME AREA SF VOLUME CF REPAIRS 4.3 2.2 COLUMN 0.7 1.3 CONCRETE AREA SF VOLUME CF VOLUME CF REPAIRS 13.3 6.7 COLUMN 0.0 0.0 EPOXY RESIN LN. FT. INJECTION CAP COLUMN 0.0 SQ. FT. SQ. FT. EPOXY COATING

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

85.5



TOP OF BENT CAP



EPOXY RESIN INJECTION (ERI)

SHEET 1 OF 2

PROJECT NO. 15BPR.130 MOORE _ COUNTY

BRIDGE NO. 620049



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RALEIGH

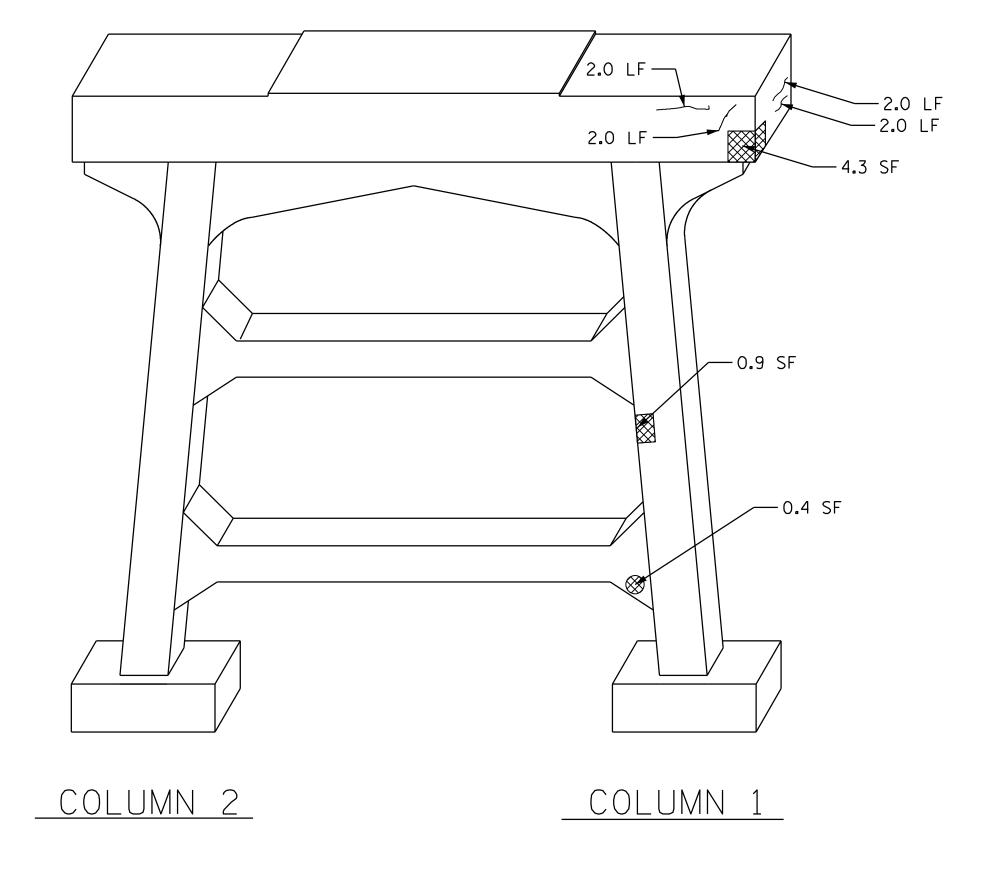
BENT 3

OLKERT 5540 Centerview Drive, Suite 305 Raleigh, NC 27606 Tel. 919-854-0344 Fax. 919-854-0355 NC License No. F-0765

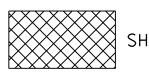
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S COMPLETED	2			4			156

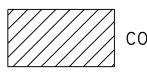




ELEVATION @ BENT 3 (SPAN D)



SHOTCRETE REPAIR



CONCRETE REPAIR

EPOXY RESIN INJECTION (ERI)

PROJECT NO. 15BPR.130

<u>MOORE</u>

_____ **COUNTY** 620049

SHEET NO.

S-109

BRIDGE NO. 620049

SHEET 2 OF 2

STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 3

TOLKERT

Docusign

Emily

A689F83F

5540 Centerview Drive, Suite 305 Raleigh, NC 27606 Tel. 919-854-0344 Fax. 919-854-0355 NC License No. F-0765

Emily	E. Were	areter.
—A689F83	FD9D74F8	·
		4/24/2024

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SIGNATURES COMPLETED

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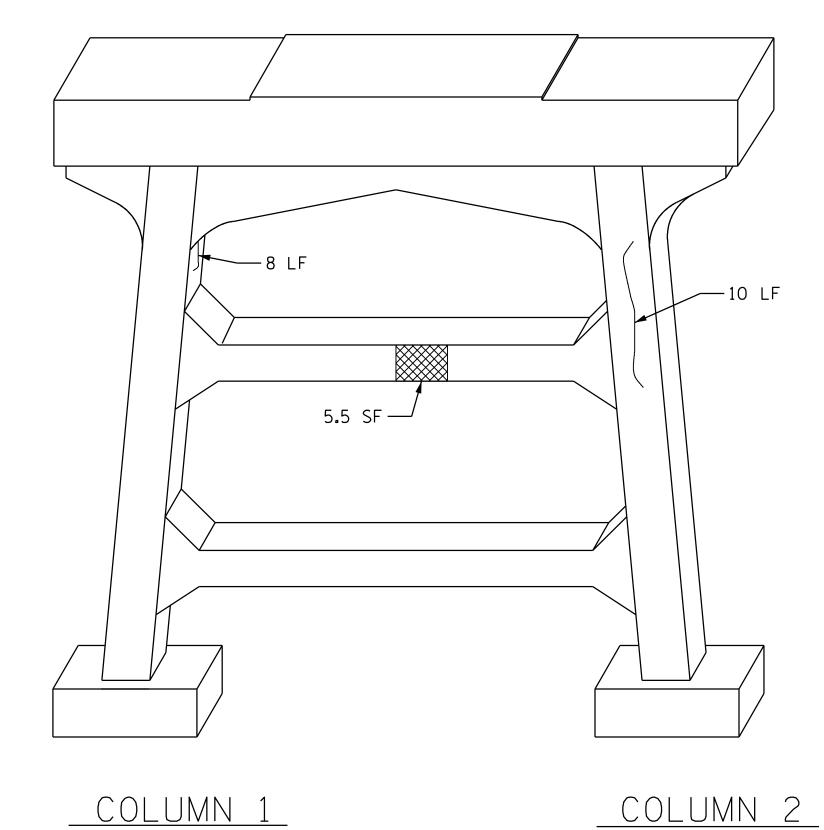
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DRAWN BY :	C. NICHOLS	DATE: 01/24
	. P.N.HOLDER	DATE: 03/24
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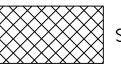


ELEVATION @ BENT 4 (SPAN D)

AS-BUILT REPAIR QUANTITY
TABLE
REPAIRS QUANTITIES

1 4 5 5						
REPAIRS		QUANTITIES				
BENT 4	ESTI	MATE	ACTUAL			
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF		
CAP	0.0	0.0				
COLUMN	11.5	5.8				
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF		
CAP	0.0	0.0				
COLUMN	0.0	0.0				
EPOXY RESIN INJECTION		LN. FT.		N. T.		
CAP		0.0				
COLUMN		18.0				
EPOXY COATING		SQ. FT.	S F	Q. T.		
TOP OF BENT CAP		85.5				

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



SHOTCRETE REPAIR



CONCRETE REPAIR

EPOXY RESIN INJECTION (ERI)

PROJECT NO. 15BPR.130

MOORE COUNTY

BRIDGE NO. 620049



STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION

RALEIGH

BENT 4

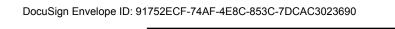
SHEET 1 OF 2

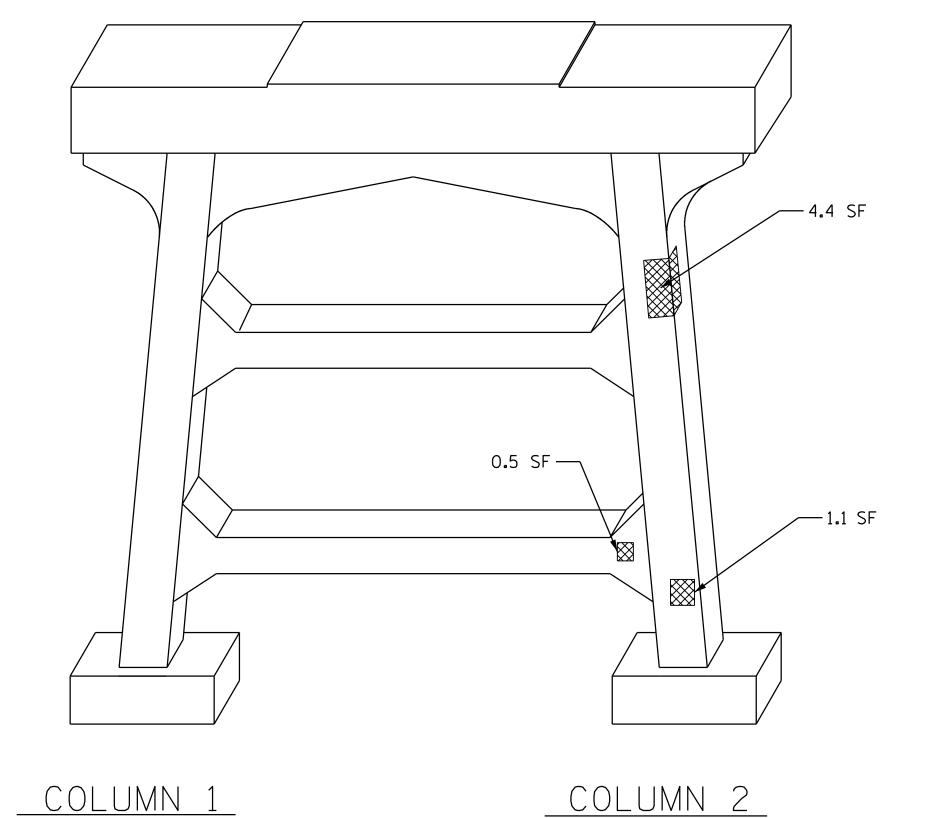
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BY: DATE: NO. BY: DATE: S-110

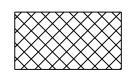
TOTAL SHEETS
156

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Raleigh, NC 27606
Tel. 919-854-0344 Fax. 919-854-0355
NC License No. F-0765





ELEVATION @ BENT 4 (SPAN E)





EPOXY RESIN INJECTION (ERI)

PROJECT NO. 15BPR.130

MOORE

BRIDGE NO. 620049

SHEET 2 OF 2

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 4

_ COUNTY

S-111

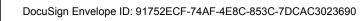
TOTAL SHEETS 156

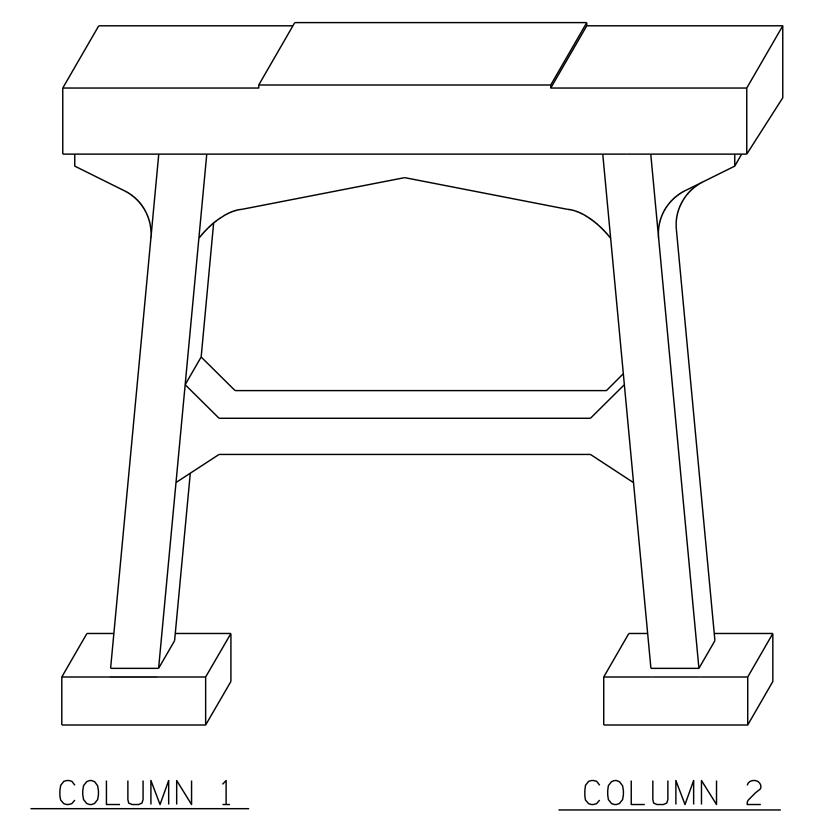
4/24/2024

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SHEET NO. REVISIONS DATE: DATE: BY: BY:

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CHECKED BY: P.N.HOLDER DATE: 03/24

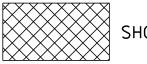




ELEVATION @ BENT 5 (SPAN E)

AS-BUILT REPAIR QUANTITY TABLE QUANTITIES REPAIRS BENT 5 ESTIMATE ACTUAL SHOTCRETE AREA SF VOLUME CF AREA SF VOLUME CF REPAIRS 0.0 0.0 COLUMN 0.4 0.2 CONCRETE AREA SF VOLUME CF AREA SF VOLUME CF REPAIRS 4.5 2.3 0.0 COLUMN 0.0 EPOXY RESIN LN. FT. INJECTION 0.0 2.0 COLUMN SQ. FT. SQ. FT. EPOXY COATING TOP OF BENT CAP 85.5

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



SHOTCRETE REPAIR



CONCRETE REPAIR

EPOXY RESIN INJECTION (ERI)

SHEET 1 OF 2

PROJECT NO. 15BPR.130 MOORE _ COUNTY

BRIDGE NO. 620049

4/24/2024

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

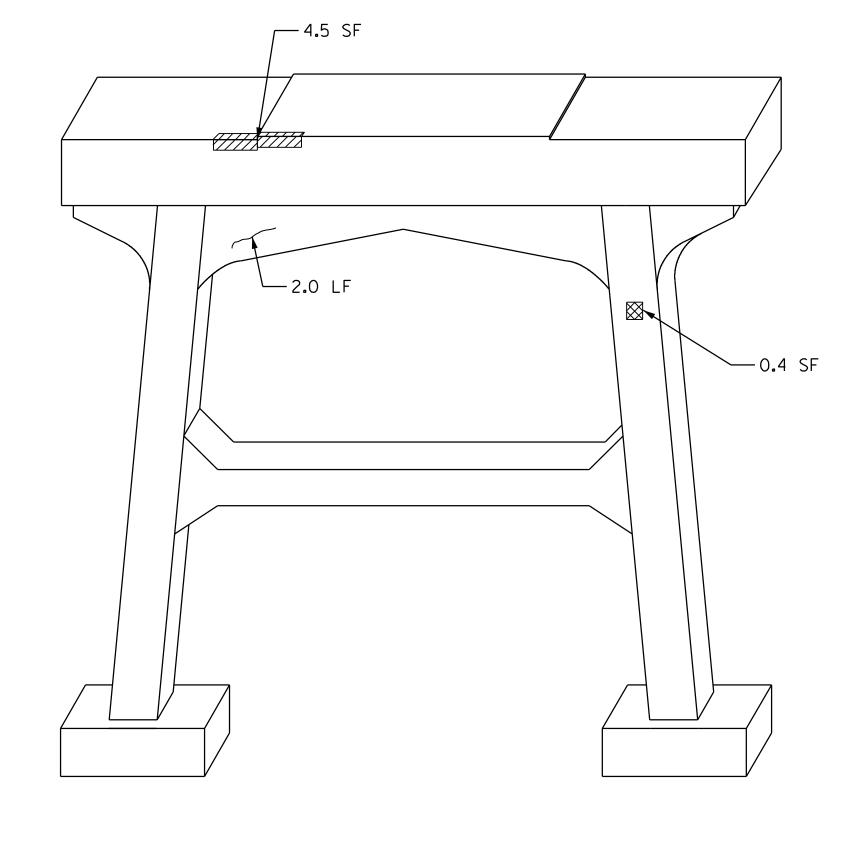
BENT 5

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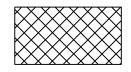




<u>COLUMN 2</u>

COLUMN 1

<u>ELEVATION @ BENT 5 (SPAN F)</u>





EPOXY RESIN INJECTION (ERI)

PROJECT NO. 15BPR.130

MOORE ___ COUNTY

BRIDGE NO. 620049

SHEET 2 OF 2

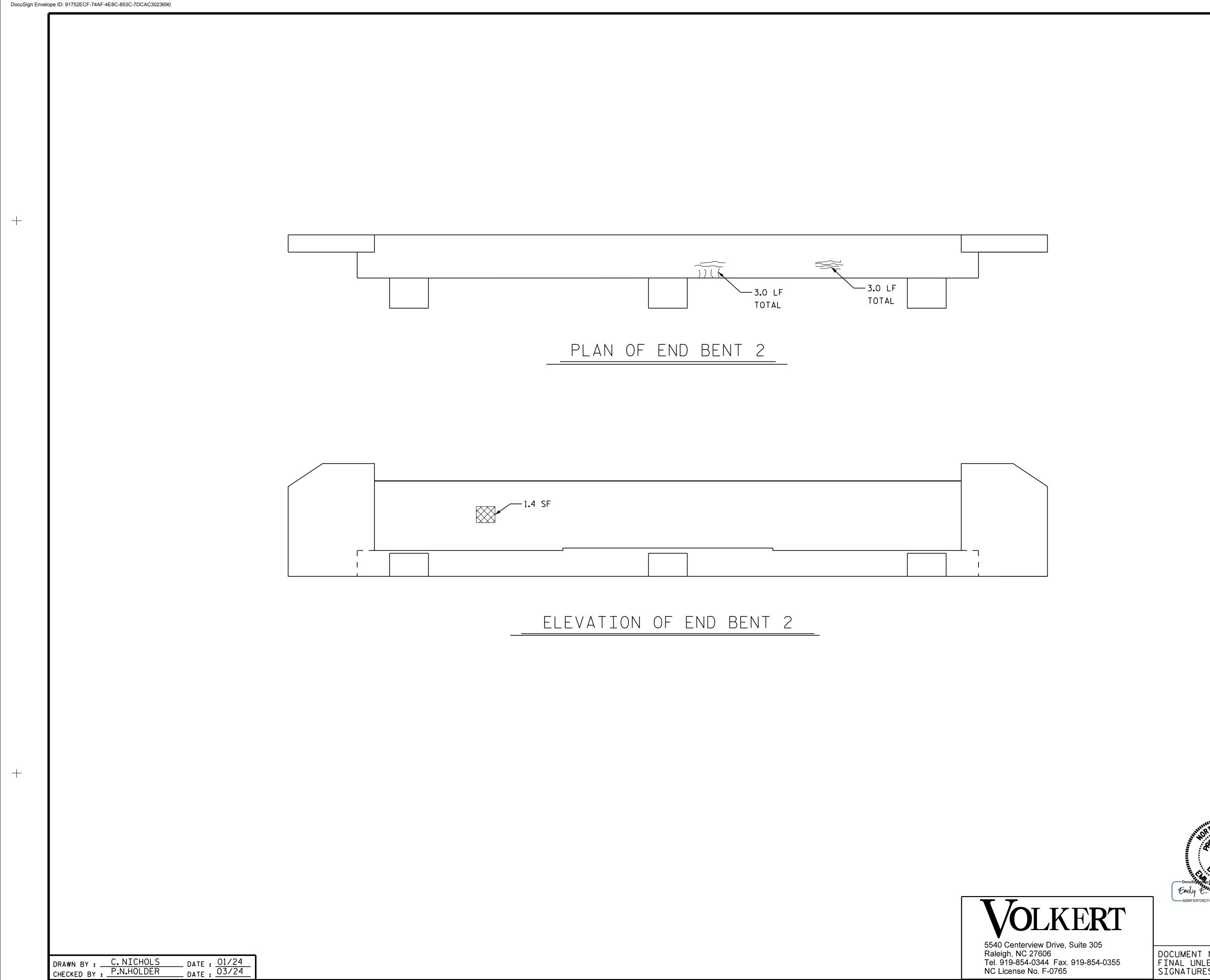
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RALEIGH

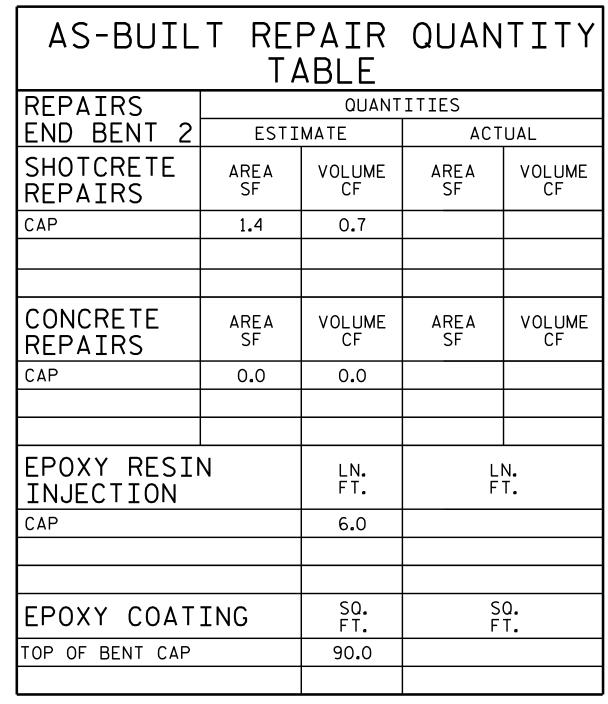
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VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND 2" MIN. CLEAR TO SAWCUT.





CONCRETE REPAIR

EPOXY RESIN INJECTION (ERI)

PROJECT NO. 15BPR.130 MOORE _ COUNTY

BRIDGE NO. 620049

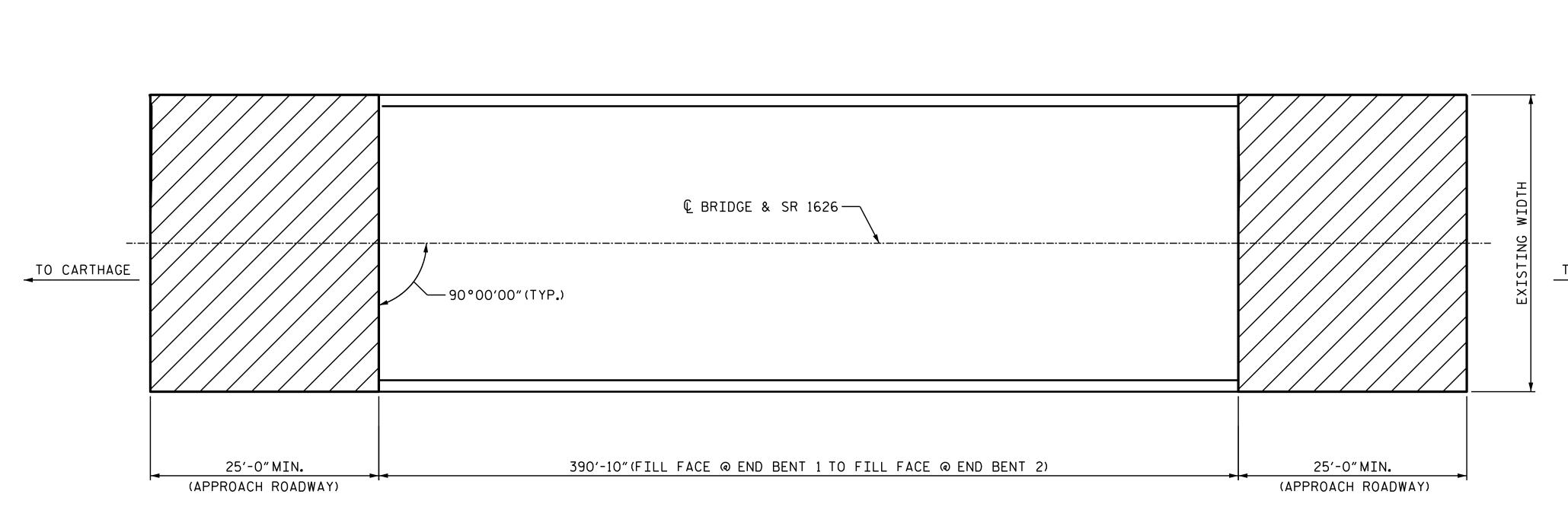


STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

END BENT 2

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	1			3			TOTAL SHEETS
	2			4			156



PLAN

NOTES

INCIDENTAL MILLING - EXISTING APPROACH ASPHALT PAVING TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM $1\frac{1}{2}$ " DEPTH OF NEW ASPHALT PAVING.

PROVIDE NEW ASPHALT PAVING THICKNESS TO CREATE A SMOOTH TRANSITION BETWEEN THE ROADWAY AND THE BRIDGE DECK.

NEW ASPHALT PAVING THICKNESS MAY EXCEED $1\frac{1}{2}$ "DUE TO SETTLEMENT OF THE EXISTING APPROACH ASPHALT PAVING.

TO CARBONTON

SUMMARY OF	QUANTIT	IES		
MOORE 49				
	ESTIMATE	ACTUAL		
INCIDENTAL MILLING	156 SQ. YD.			
ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C	13.2 TONS			
ASPHALT BINDER FOR PLANT MIX	0.8 TONS			

EXISTING WIDTH ┌─ (L ROADWAY) GRADE POINT — EXISTING EXISTING

TYPICAL ROADWAY MILLING SECTION

PROPOSED VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1"DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN $1\frac{1}{2}$ " IN DEPTH OR GREATER THAN 2" IN DEPTH.

EXISTING WIDTH ┌─ (L ROADWAY) GRADE POINT -MATCH EXISTING MATCH EXISTING

TYPICAL PROPOSED ROADWAY SECTION

PROJECT NO. 15BPR.130 MOORE COUNTY BRIDGE NO. 620049



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

APPROACH MILLING AND TYPICAL ROADWAY SECTIONS

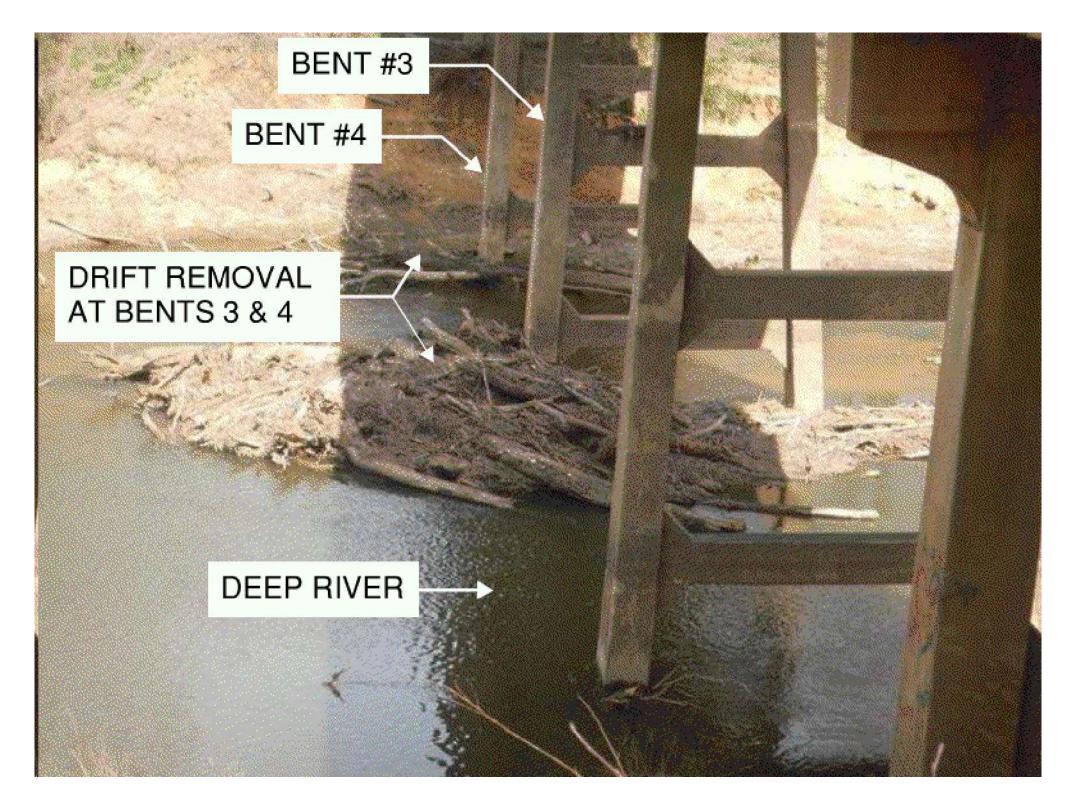
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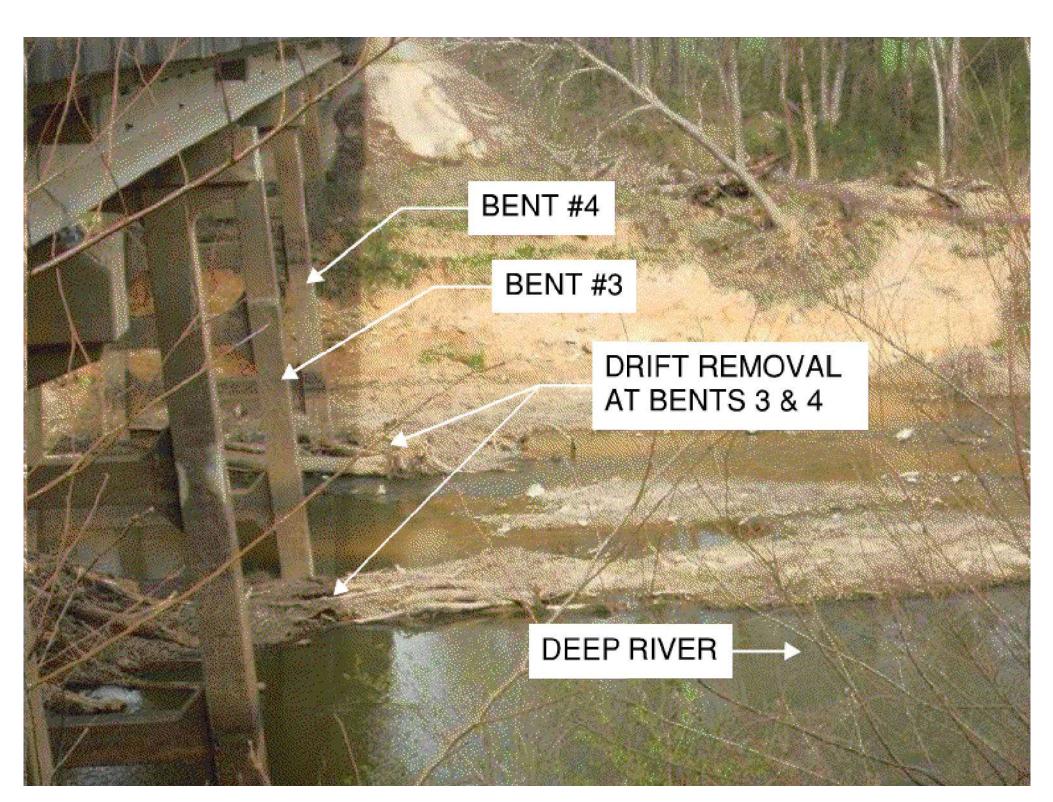
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UNLESS ALL	1			3			TOTAL SHEETS
ES COMPLETED	2			4			156

__ DATE : 03/2024 __ DATE : 03/2024 D. A. GLADDEN DRAWN BY : __ P. H. HOLDER CHECKED BY :

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WEST PROFILE, LOOKING NORTH



EAST PROFILE, LOOKING NORTH

DRIFT REMOVAL LOCATIONS

DRAWN BY: B.H.BARNHILL DATE: 04/2024 CHECKED BY: E.E.MURRAY DATE: 04/2024

Raleigh, NC 27607 Tel. 919-854-0344 Fax. 919-854-0355 NC License No. F-0765

DRIFT REMOVAL

THE INFORMATION PROVIDED IS BASED ON DRIFT ACCUMULATION AS OF 3/8/2022. THE EXACT AMOUNT OF DRIFT VARIES DAILY.

REMOVAL OF DRIFT SHALL BE ACCESSED FROM THE TOP OF THE BRIDGE DECK.
ASSISTANCE FROM BOATS IN THE RIVER MAYBE ALLOWED, BUT NO ACCESS TO THE DRIFT SHALL BE ALLOWED FROM THE RIVER BANK.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF ALL DRIFT MATERIALS PRIOR TO THE PROJECT'S END.

THE CONTRACTOR SHALL NOT ALLOW, AT ANY TIME, THE DRIFT MATERIALS TO FLOW DOWNSTREAM OF THE PROJECT SITE.

THE CONTRACTOR SHALL CONTAIN AND DISPOSE OF COLLECTED DRIFT MATERIALS OFF SITE.

FOR DRIFT REMOVAL, SEE SPECIAL PROVISIONS.

FOR SECURING OF VESSELS, SEE SPECIAL PROVISIONS.

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

RESIDENT ENGINEER

DATE

PROJECT NO. 15BPR.130

MOORE

____ COUNTY

BRIDGE NO. 620049

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DRIFT REMOVAL

4/24/2024

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BY:

SHEET NO REVISIONS S-116 DATE: DATE: BY: TOTAL SHEETS



BRIDGE 620072 - LATITUDE: 35°28′41.54″; LONGITUDE: 79°31′11.52″

LOCATION SKETCH

INFORMATION INDICATED ON THE LOCATION SKETCH 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.

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.

DURING CONSTRUCTION, BERMS OR APPROPRIATE MEASURES SHALL BE USED TO ENSURE HYDRO-DEMOLITION WATER DOES NOT MIGRATE INTO ACTIVE TRAVEL LANES.

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

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.

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

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

FOR SCARIFYING BRIDGE DECK, HYDRO-DEMOLITION OF BRIDGE DECK, AND CLASS II AND III SURFACE PREPARATION, SEE LMC OVERLAY SURFACE PREPARATION SPECIAL PROVISION.

THE CONTRACTOR MUST COLLECT, TREAT AND DISPOSE OF RUN-OFF WATER FROM THE HYDRO-DEMOLITION PROCESS, SEE LMC OVERLAY SURFACE PREPARATION SPECIAL PROVISIONS.

THE LMC CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THROUGH OF THE DECK DURING HYDRO-DEMOLITION.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR OVERLAY OF BRIDGE WITH LATEX MODIFIED CONCRETE - VERY EARLY STRENGTH, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIR. SEE SPECIAL PROVISIONS.

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

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

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

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR DRIFT REMOVAL, SEE SPECIAL PROVISIONS.

- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- FOR BRIDGE JACKING, SEE SPECIAL PROVISIONS.

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

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.

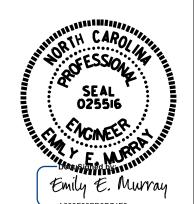
THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN WHAT IS SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

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

UNANTICIPATED ITEMS:

UNIT ITEM NO. DESCRIPTION CLASS III SURFACE PREPARATION SQ. YDS. **VOLUMETRIC MIXER** LUMP SUM TYPE II BRIDGE JACKING BRIDGE EACH NO.: 620072

> PROJECT NO. 15BPR.130 MOORE _ COUNTY BRIDGE NO. <u>62007</u>2



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

GENERAL DRAWING

FOR BRIDGE OVER DEEP RIVER BETWEEN SR 1470 AND SR 1606 ON NC 22

BY:

SHEET NO

S-117

TOTAL SHEETS

DATE:

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

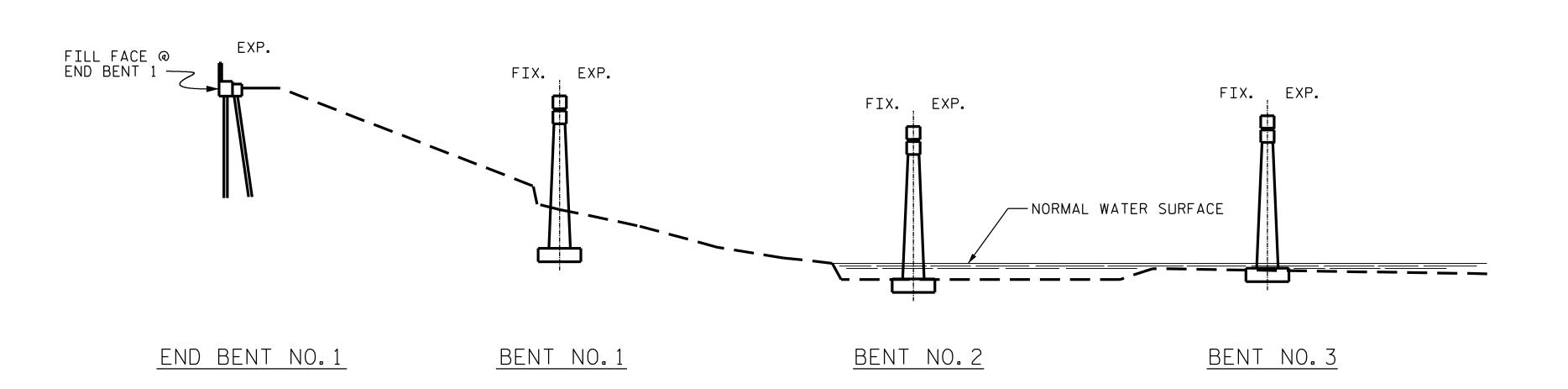
REVISIONS BY: DATE:

5430 Wade Park Blvd, Suite 410 Raleigh, NC 27607 Tel. 919-854-0344 Fax. 919-854-0355

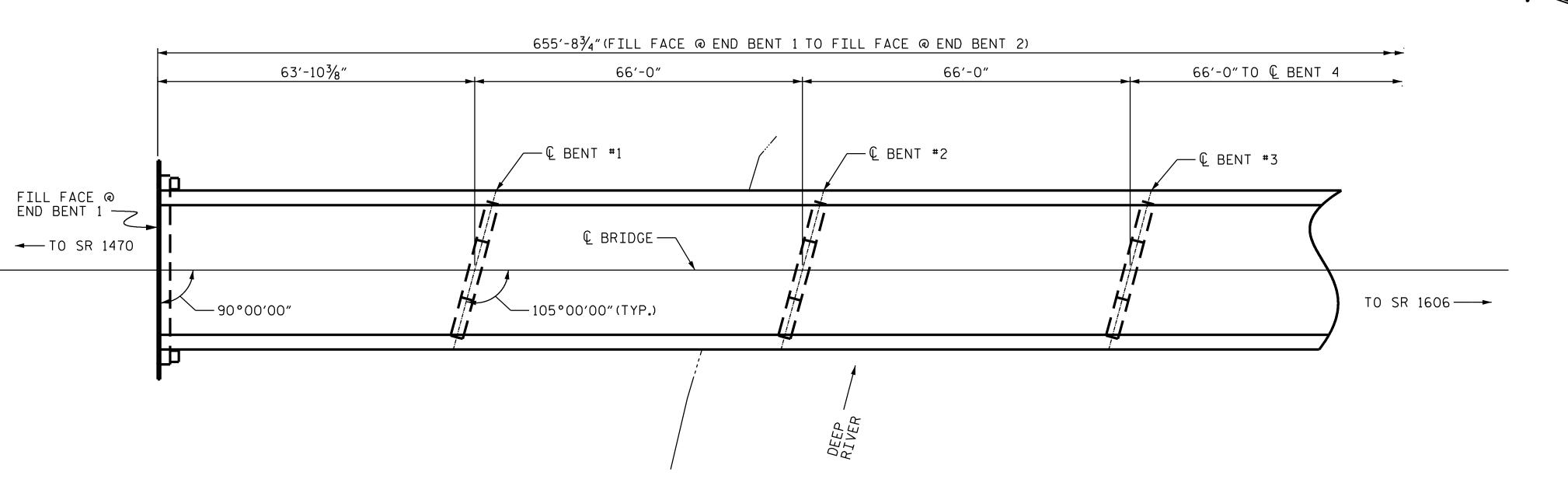
NC License No. F-0765

_ DATE : 7/21/22 J. BRYANT DRAWN BY : _ $_$ DATE : $\frac{3}{1}/24$ E. MURRAY CHECKED BY : _

SPAN A SPAN B SPAN C SPAN D



SECTION ALONG & BRIDGE



<u>PLAN</u>

NOTES:

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 4/14/2022.

BRIDGE ORIENTATION CONFORMS TO THE ORIGINAL BRIDGE PLANS/ROUTINE INSPECTION

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

RESIDENT ENGINEER DATE

_ DATE : 07/2022 J.BRYANT DRAWN BY : DATE: 03/2024 E.E.MURRAY CHECKED BY:

SCOPE OF WORK:

REMOVE DRIFT ACCUMULATION.

REPAIR SUBSTRUCTURE USING EPOXY RESIN INJECTION, SHOTCRETE, AND CONCRETE.

PARTIALLY REMOVE BRIDGE DECK CONCRETE BY SCARIFICATION AND HYDRO-DEMOLITION METHODS.

PERFORM DECK REPAIRS IN PREPARED AREAS.

OVERLAY PREPARED BRIDGE DECK WITH LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH.

RECONSTRUCT BRIDGE JOINTS AND INSTALL JOINT SEALS.

GROOVE LATEX MODIFIED CONCRETE-VERY EARLY STRENGTH.

PROJECT NO. 15BPR.130

COUNTY

MOORE

BRIDGE NO. 620072

SHEET 1 OF 2

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

GENERAL DRAWING FOR BRIDGE OVER DEEP RIVER BETWEEN SR1470 AND SR1606 ON NC 22

4/24/2024

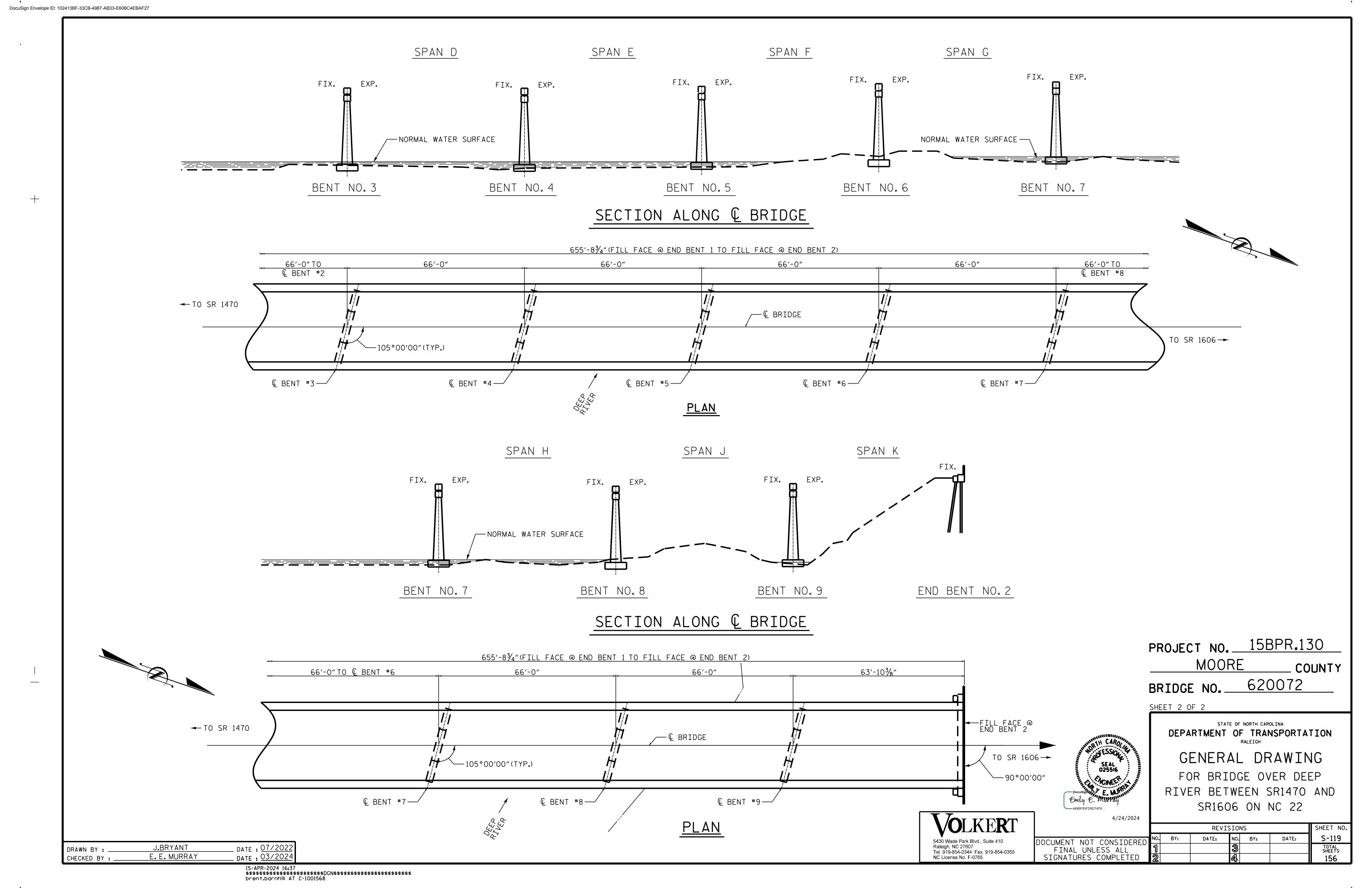
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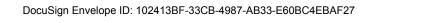
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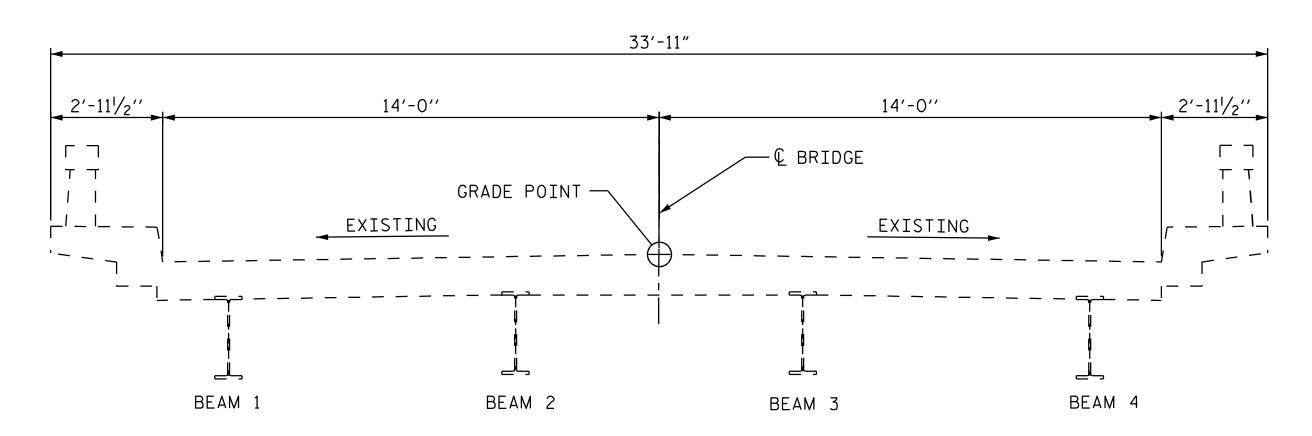
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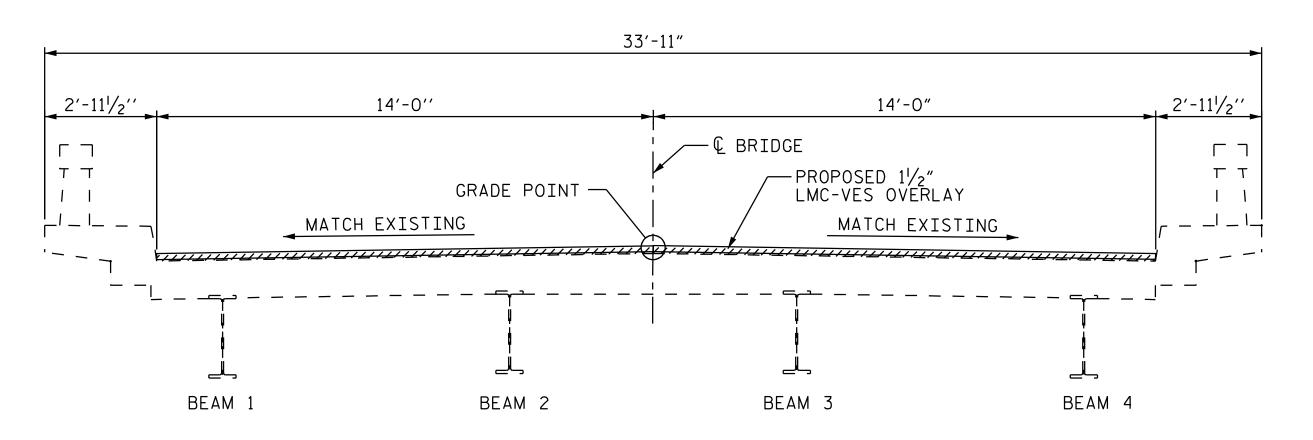
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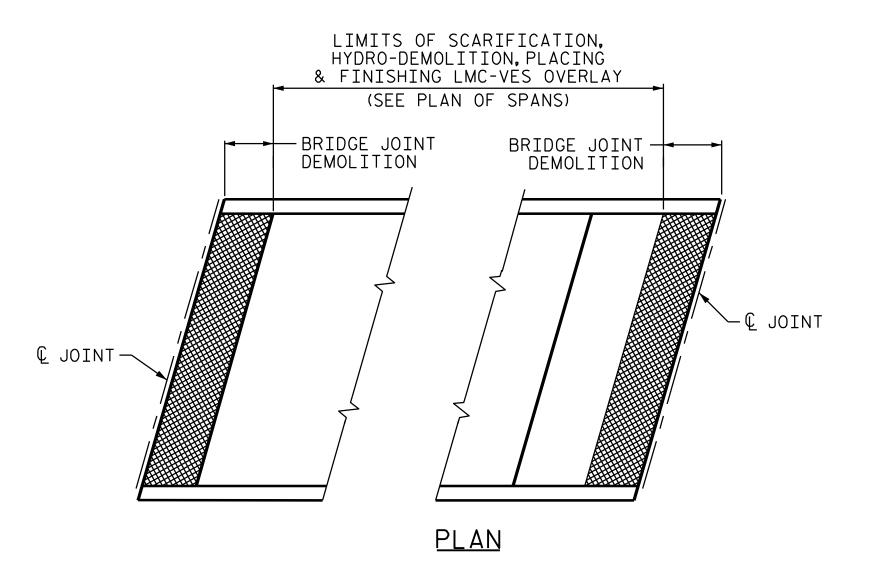
EXISTING TYPICAL SECTION

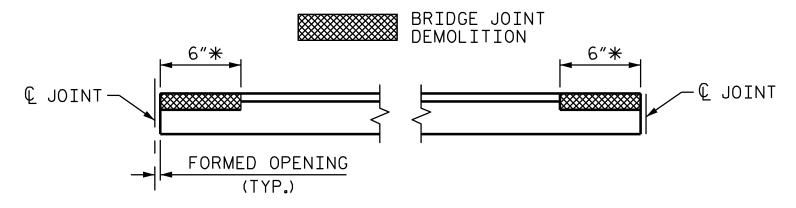


PROPOSED TYPICAL SECTION

NOTES

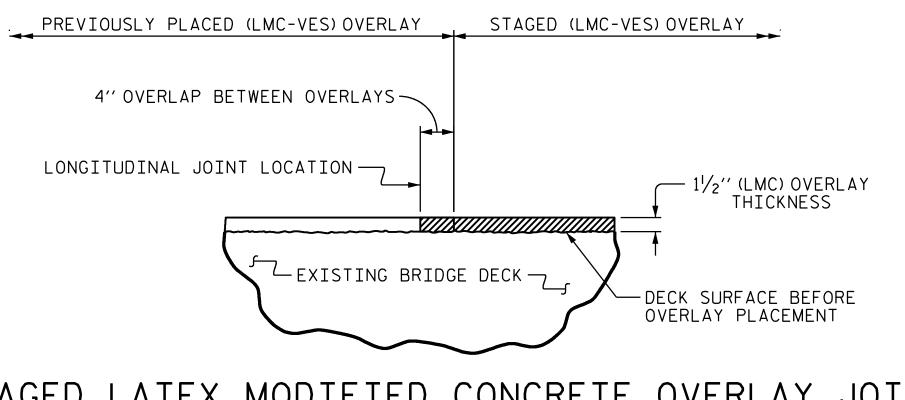
SEE TRANSPORTATION MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING, AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION AND LATEX MODIFIED CONCRETE (LMC) BRIDGE DECK OVERLAY.





* DIMENSION MEASURED PERPENDICULAR TO JOINT <u>ELEVATION</u>

PAY LIMITS FOR OVERLAY BID ITEMS



STAGED LATEX MODIFIED CONCRETE OVERLAY JOINT

(AS NEEDED)

EXISTING DECK SURFACE

EXISTING DECK SURFACE

DECK SURFACE BEFORE
OVERLAY PLACEMENT

DETAIL OF LATEX MODIFIED CONCRETE OVERLAY

PROJECT NO. 15BPR.130

MOORE COUNTY
BRIDGE NO. 620072

DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION

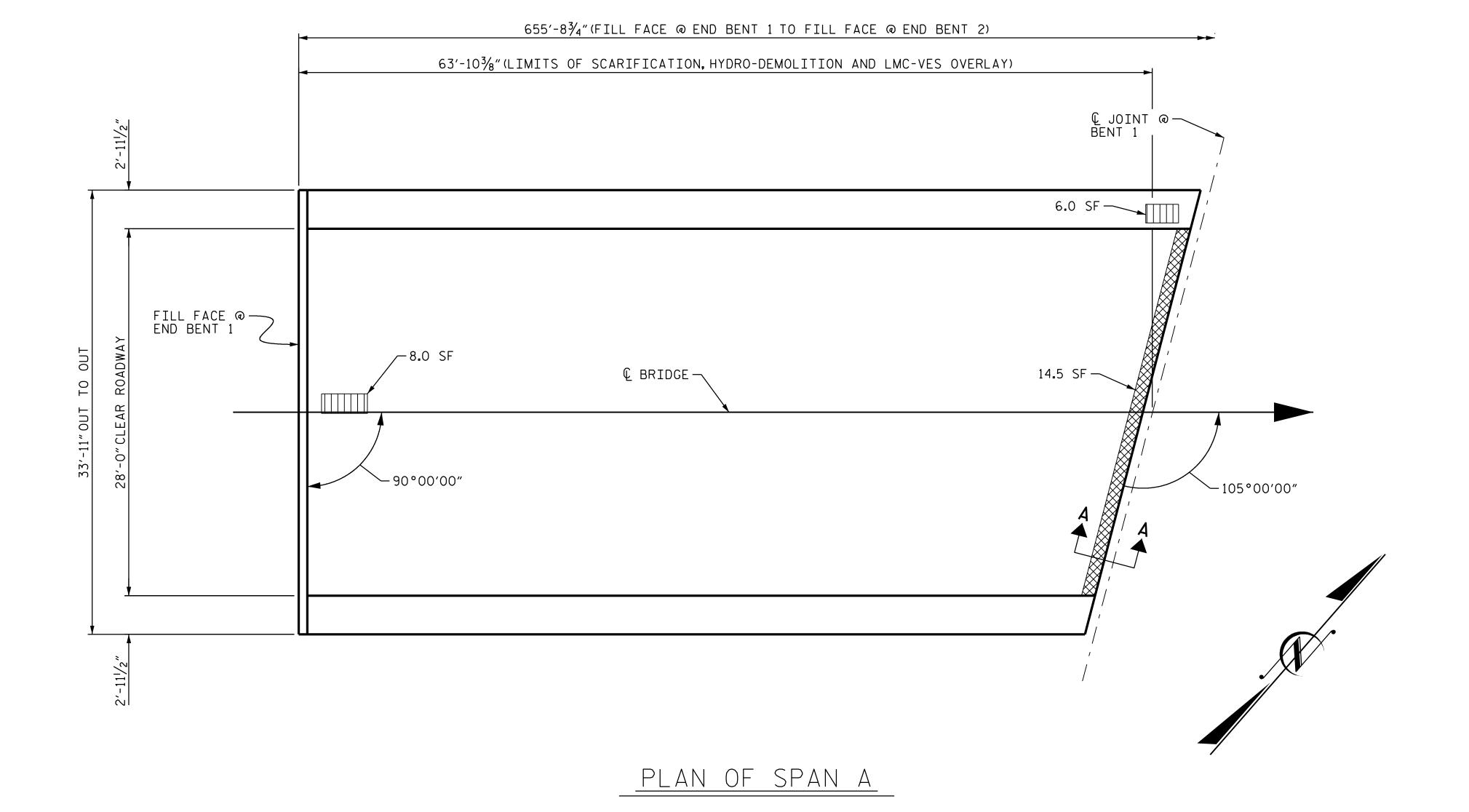
5430 Wade Park Blvd., Suite 410
Raleigh, NC 27607
Tel. 919-854-0344 Fax. 919-854-0355
NC License No. F-0765

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4/24/2024							
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FINAL UNLESS ALL	1			3			TOTAL SHEETS
GNATURES COMPLETED	2			4			156

DRAWN BY: T.MAZARURA DATE: 8/22
CHECKED BY: D. A. GLADDEN DATE: 4/24



NOTES

DRAWN BY : __

CHECKED BY : _

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

B. H. BARNHILL

E.E.MURRAY

DESIGN ENGINEER OF RECORD: ______ E.E.MURRAY ____ DATE : 03/2024

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

THE BOUNDARIES OF AREAS IDENTIFIED FOR CLASS II (PARTIAL DEPTH) SURFACE PREPARATION ARE APPROXIMATE AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED AT THE PROJECT SITE.

__ DATE : <u>03/2024</u>

_ DATE : <u>03/2024</u>

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

FOR OVERLAY OF BRIDGE WITH LATEX MODIFIED CONCRETE- VERY EARLY STRENGTH, SEE SPECIAL PROVISIONS.

PREVIOUSLY PLACED LMC OVERLAY AT STAGED EDGES SHALL BE DEMOLISHED BACK A MINIMUM OF 4 INCHES AND RECAST WITH LMC.

FOR LMC OVERLAY - VES SURFACE PREPARATION, SEE SPECIAL PROVISIONS.

FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY IS COMPLETE

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

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

AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS

SPAN A

	ESTIMATE		ACTUAL
SCARIFYING BRIDGE DECK	198.7	SY	
HYDRO-DEMOLITION OF BRIDGE DECK	198.7	SY	
CLASS II SURFACE PREPARATION	0.0	SY	
CLASS III SURFACE PREPARATION	0.0	SY	
LMC OVERLAY-VES	8.3	CY	
PLACING AND FINISHING LMC OVERLAY-VES	198.7	SY	
GROOVING BRIDGE FLOORS	1592.4	SF	
BRIDGE JOINT DEMOLITION	14.5	SF	

UNDERSIDE OF DECK REPAIRS

	ESTI	MATE	ACTUAL
SHOTCRETE REPAIRS		VOLUME CF	AREA SF
UNDERSIDE OF DECK	8.0	2.8	
OVERHANG DIAPHRAGMS	0.0	0.0	
UNDERSIDE OF OVERHANG	6.0	2.0	
INTERIOR DIAPHRAGMS	0.0	0.0	
	ESTIMATE		ACTUAL
UNDERSIDE EPOXY RESIN INJECTION	0.0	LF	

QUANTITIES IN TABLE REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1"BEHIND REBAR, AND MINIMUM 2" CLEAR TO SAW CUT. SEE REPAIR DETAILS.

CLASS II SURFACE PREPARATION

BRIDGE JOINT DEMOLITION

UNDERSIDE REPAIR

TEST LOCATION

<u>SHEET 1 OF 10</u>

DEPARTMENT OF TRANSPORTATION
RALEIGH

PLAN OF SPAN A

A/24/2024

REVISIONS

SHEET NO

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

2

REVISIONS

SHEET NO. BY: DATE: S-121

TOTAL SHEETS
156

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CONCESSION E MIRRITARIA

EMILY E. MUNTALY

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4/24/2024

66'-0"(LIMITS OF SCARIFICATION, HYDRO-DEMOLITION AND LMC-VES OVERLAY) - © JOINT @ BENT 1 · (L JOINT @ BENT 2 -6.0 SF 7.0 SF ─14**.**5 SF 3.3 SF — 7.2 SF — -105°00′00"

655'-8¾"(FILL FACE @ END BENT 1 TO FILL FACE @ END BENT 2)

<u>Plan of Span B</u>

NOTES

DRAWN BY : _

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

B. H. BARNHILL

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

THE BOUNDARIES OF AREAS IDENTIFIED FOR CLASS II (PARTIAL DEPTH) SURFACE PREPARATION ARE APPROXIMATE AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED AT THE PROJECT SITE.

__ DATE : <u>03/2024</u>

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

FOR OVERLAY OF BRIDGE WITH LATEX MODIFIED CONCRETE- VERY EARLY STRENGTH,

10.0 SF

PREVIOUSLY PLACED LMC OVERLAY AT STAGED EDGES SHALL BE DEMOLISHED BACK A

FOR LMC OVERLAY - VES SURFACE PREPARATION, SEE SPECIAL PROVISIONS.

FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY IS COMPLETE

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

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

AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS

SPAN B

	ESTIM	ATE	ACTUAL
SCARIFYING BRIDGE DECK	205.3	SY	
HYDRO-DEMOLITION OF BRIDGE DECK	205.3	SY	
CLASS II SURFACE PREPARATION	2.3	SY	
CLASS III SURFACE PREPARATION	0.0	SY	
LMC OVERLAY-VES	8.6	CY	
PLACING AND FINISHING LMC OVERLAY-VES	205.3	SY	
GROOVING BRIDGE FLOORS	1641.7	SF	
BRIDGE JOINT DEMOLITION	21.7	SF	

UNDERSIDE OF DECK REPAIRS

	ESTI	MATE	ACTUAL
SHOTCRETE REPAIRS		VOLUME CF	AREA SF
UNDERSIDE OF DECK	SF 0.0	0.0	
- BINDERSIDE OF BECK	0.0	0.0	
OVERHANG DIAPHRAGMS	0.0	0.0	
UNDERSIDE OF OVERHANG	16.0	3.4	
INTERIOR DIAPHRAGMS	10.3	3.7	
	ESTIMATE		ACTUAL
UNDERSIDE EPOXY RESIN INJECTION	0.0	LF	

QUANTITIES IN TABLE REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1"BEHIND REBAR, AND MINIMUM 2" CLEAR TO SAW CUT. SEE REPAIR DETAILS.

CLASS II SURFACE PREPARATION

BRIDGE JOINT DEMOLITION

UNDERSIDE REPAIR

TEST LOCATION

PROJECT NO. 15BPR.130 MOORE COUNTY

620072 STATION:__

SHEET 2 OF 10

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

TOTAL SHEETS

PLAN OF SPAN B

4/24/2024

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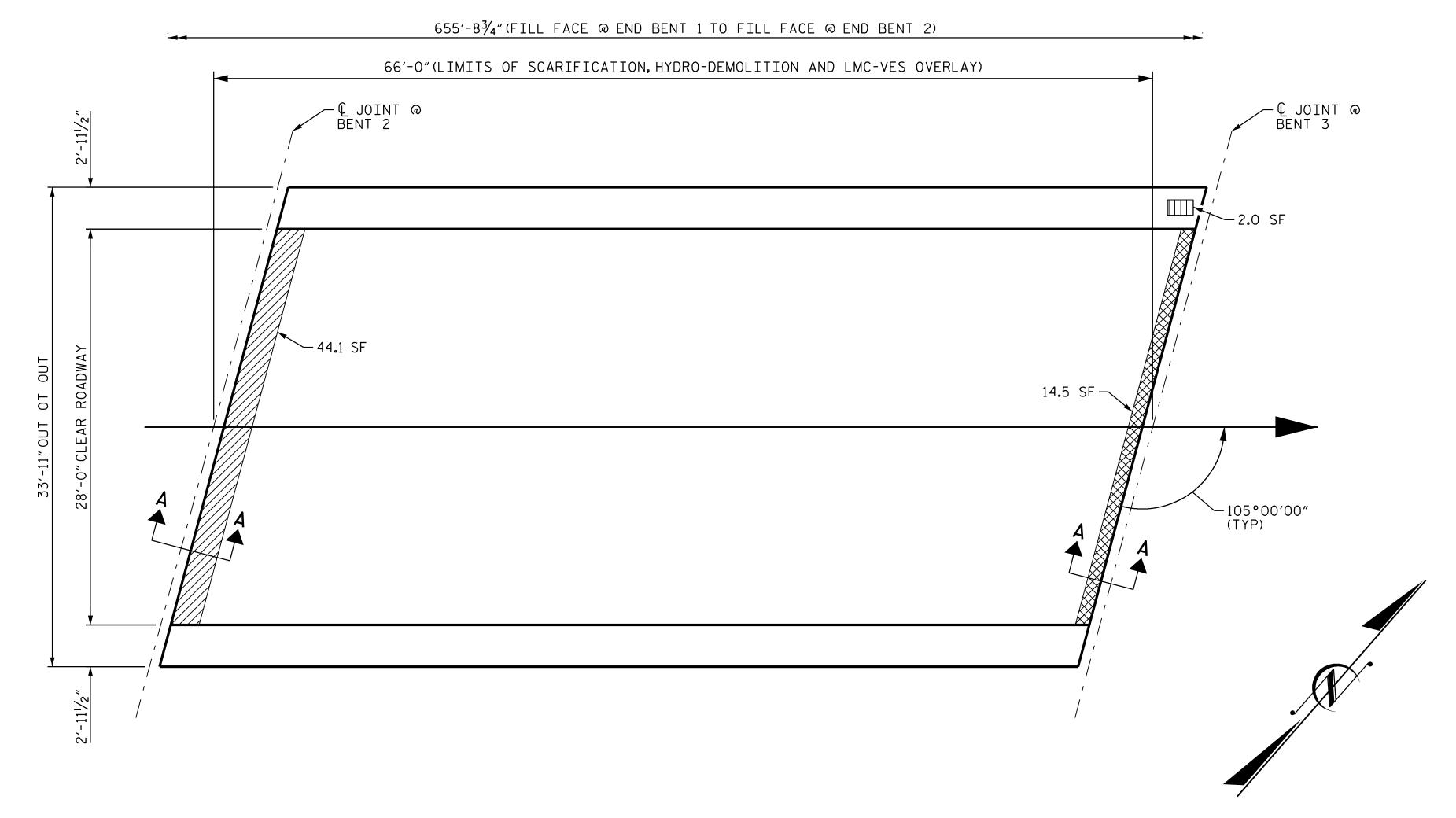
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DATE: BY: DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEE SPECIAL PROVISIONS.

MINIMUM OF 4 INCHES AND RECAST WITH LMC.

CHECKED BY : _ _ DATE : <u>03/2024</u> E.E.MURRAY DESIGN ENGINEER OF RECORD: ______ E.E.MURRAY ____ DATE : 03/2024



AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS

SPAN C

	ESTIM	ATE	ACTUAL
SCARIFYING BRIDGE DECK	205.3	SY	
HYDRO-DEMOLITION OF BRIDGE DECK	205.3	SY	
CLASS II SURFACE PREPARATION	4.9	SY	
CLASS III SURFACE PREPARATION	0.0	SY	
LMC OVERLAY-VES	8.6	CY	
PLACING AND FINISHING LMC OVERLAY-VES	205.3	SY	
GROOVING BRIDGE FLOORS	1641.7	SF	
BRIDGE JOINT DEMOLITION	14.5	SF	

UNDERSIDE OF DECK REPAIRS

	ESTIMATE		ACTUAL
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF
UNDERSIDE OF DECK	0.0	0.0	
OVERHANG DIAPHRAGMS	0.0	0.0	
UNDERSIDE OF OVERHANG	2.0	0.7	
INTERIOR DIAPHRAGMS	0.0	0.0	
	ESTIMATE		ACTUAL
UNDERSIDE EPOXY RESIN INJECTION	0.0	LF	

QUANTITIES IN TABLE REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1"BEHIND REBAR, AND MINIMUM 2" CLEAR TO SAW CUT. SEE REPAIR DETAILS.

CLASS II SURFACE PREPARATION



BRIDGE JOINT DEMOLITION

UNDERSIDE REPAIR

TEST LOCATION

PLAN OF SPAN C

NOTES

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

THE BOUNDARIES OF AREAS IDENTIFIED FOR CLASS II (PARTIAL DEPTH) SURFACE PREPARATION ARE APPROXIMATE AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED AT THE PROJECT SITE.

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

FOR OVERLAY OF BRIDGE WITH LATEX MODIFIED CONCRETE- VERY EARLY STRENGTH,

PREVIOUSLY PLACED LMC OVERLAY AT STAGED EDGES SHALL BE DEMOLISHED BACK A MINIMUM OF 4 INCHES AND RECAST WITH LMC.

FOR LMC OVERLAY - VES SURFACE PREPARATION, SEE SPECIAL PROVISIONS.

FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY IS COMPLETE

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

PROJECT NO. 15BPR.130 MOORE COUNTY 620072 STATION:___

DEPARTMENT OF TRANSPORTATION SEAL 025516 CHCINEER

SHEET 3 OF 10

PLAN OF SPAN C

STATE OF NORTH CAROLINA

4/24/2024

	REVISIONS					SHEET NO	
DOCUMENT NOT CONSIDERED	NO.	BY:	DATE:	NO.	BY:	DATE:	S-123
FINAL UNLESS ALL	1			3			TOTAL SHEETS
SIGNATURES COMPLETED	2			4			156

SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

B. H. BARNHILL _ DATE : <u>03/2024</u> DRAWN BY : _ DATE : <u>03/2024</u> E.E.MURRAY CHECKED BY : _ DESIGN ENGINEER OF RECORD: <u>E.E. MURRAY</u> DATE: <u>03/2024</u>

655'-8¾"(FILL FACE @ END BENT 1 TO FILL FACE @ END BENT 2) 66'-0"(LIMITS OF SCARIFICATION, HYDRO-DEMOLITION AND LMC-VES OVERLAY) © JOINT @ BENT 3 © JOINT @ BENT 4 6.0 SF 4.5 SF — ─12.5 SF 12**.**9 SF -105°00′00″ (TYP) 1.4 SF

PLAN OF SPAN D

NOTES

DRAWN BY : __

CHECKED BY : _

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

B. H. BARNHILL

E.E.MURRAY

DESIGN ENGINEER OF RECORD: ______ E.E.MURRAY ____ DATE : 03/2024

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

THE BOUNDARIES OF AREAS IDENTIFIED FOR CLASS II (PARTIAL DEPTH) SURFACE PREPARATION ARE APPROXIMATE AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED AT THE PROJECT SITE.

__ DATE : <u>03/2024</u>

DATE : 03/2024

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

FOR OVERLAY OF BRIDGE WITH LATEX MODIFIED CONCRETE- VERY EARLY STRENGTH,

PREVIOUSLY PLACED LMC OVERLAY AT STAGED EDGES SHALL BE DEMOLISHED BACK A MINIMUM OF 4 INCHES AND RECAST WITH LMC.

FOR LMC OVERLAY - VES SURFACE PREPARATION, SEE SPECIAL PROVISIONS.

FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY IS COMPLETE

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS

SPAN D

	ESTIM#	4TE	ACTUAL
SCARIFYING BRIDGE DECK	205.3	SY	
HYDRO-DEMOLITION OF BRIDGE DECK	205.3	SY	
CLASS II SURFACE PREPARATION	1.2	SY	
CLASS III SURFACE PREPARATION	0.0	SY	
LMC OVERLAY-VES	8.6	CY	
PLACING AND FINISHING LMC OVERLAY-VES	205.3	SY	
GROOVING BRIDGE FLOORS	1641.7	SF	
BRIDGE JOINT DEMOLITION	25.4	SF	

UNDERSIDE OF DECK REPAIRS

CHATCHETE DEDATES	ESTIMATE		ACTUAL
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF
		-	
UNDERSIDE OF DECK	0.0	0.0	
OVERHANG DIAPHRAGMS	0.0	0.0	
UNDERSIDE OF OVERHANG	7.4	2.5	
INTERIOR DIAPHRAGMS	0.0 0.0		
	ESTIMATE		ACTUAL
UNDERSIDE EPOXY RESIN INJECTION	0.0 LF		

QUANTITIES IN TABLE REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1"BEHIND REBAR, AND MINIMUM 2" CLEAR TO SAW CUT. SEE REPAIR DETAILS.

CLASS II SURFACE PREPARATION

BRIDGE JOINT DEMOLITION

UNDERSIDE REPAIR

TEST LOCATION

PROJECT NO. 15BPR.130 MOORE COUNTY 620072 STATION:__

SHEET 4 OF 10

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

PLAN OF SPAN D

4/24/2024

* CINEE!

SHEET NO REVISIONS DATE: S-124 DATE: BY: DOCUMENT NOT CONSIDERED TOTAL SHEETS FINAL UNLESS ALL SIGNATURES COMPLETED

SEE SPECIAL PROVISIONS.

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

66'-0"(LIMITS OF SCARIFICATION, HYDRO-DEMOLITION AND LMC-VES OVERLAY) · € JOINT @ BENT 5 € JOINT @ BENT 4 5.0 SF 8.1 SF — 11.9 SF — -105°00′00″ (TYP) ~14.5 SF

655'-8¾"(FILL FACE @ END BENT 1 TO FILL FACE @ END BENT 2)

PLAN OF SPAN E

NOTES

DRAWN BY : _

CHECKED BY : _

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

B. H. BARNHILL

E.E.MURRAY

DESIGN ENGINEER OF RECORD: ______ E.E.MURRAY ____ DATE : 03/2024

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

THE BOUNDARIES OF AREAS IDENTIFIED FOR CLASS II (PARTIAL DEPTH) SURFACE PREPARATION ARE APPROXIMATE AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED AT THE PROJECT SITE.

__ DATE : <u>03/2024</u>

DATE : 03/2024

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

FOR OVERLAY OF BRIDGE WITH LATEX MODIFIED CONCRETE- VERY EARLY STRENGTH, SEE SPECIAL PROVISIONS.

PREVIOUSLY PLACED LMC OVERLAY AT STAGED EDGES SHALL BE DEMOLISHED BACK A

FOR LMC OVERLAY - VES SURFACE PREPARATION, SEE SPECIAL PROVISIONS.

FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY IS COMPLETE

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

PROJECT NO. 15BPR.130 MOORE COUNTY 620072 STATION:__

SHEET 5 OF 10

AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS

SPAN E

UNDERSIDE OF DECK REPAIRS

SCARIFYING BRIDGE DECK

GROOVING BRIDGE FLOORS

BRIDGE JOINT DEMOLITION

LMC OVERLAY-VES

UNDERSIDE OF DECK

OVERHANG DIAPHRAGMS

INTERIOR DIAPHRAGMS

UNDERSIDE OF OVERHANG

HYDRO-DEMOLITION OF BRIDGE DECK

CLASS II SURFACE PREPARATION

CLASS III SURFACE PREPARATION

PLACING AND FINISHING LMC OVERLAY-VES

SHOTCRETE REPAIRS

UNDERSIDE EPOXY RESIN INJECTION

CLASS II SURFACE PREPARATION

BRIDGE JOINT DEMOLITION

UNDERSIDE REPAIR

TEST LOCATION

QUANTITIES IN TABLE REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1"BEHIND REBAR, AND MINIMUM 2" CLEAR TO SAW CUT. SEE REPAIR DETAILS.

ESTIMATE

205.3 SY

205.3 SY

205.3 SY

1641.7 SF

26.4 SF

ESTIMATE

ESTIMATE

AREA

0.0

1.8

5.0

0.0

0.0

SY

SY

CY

VOLUME

CF

0.0

0.6

1.7

0.0

LF

0.9

0.0

8.6

ACTUAL

ACTUAL

ACTUAL

AREA

SF

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

PLAN OF SPAN E

SHEET NO

S-125

TOTAL SHEETS

REVISIONS DATE: DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

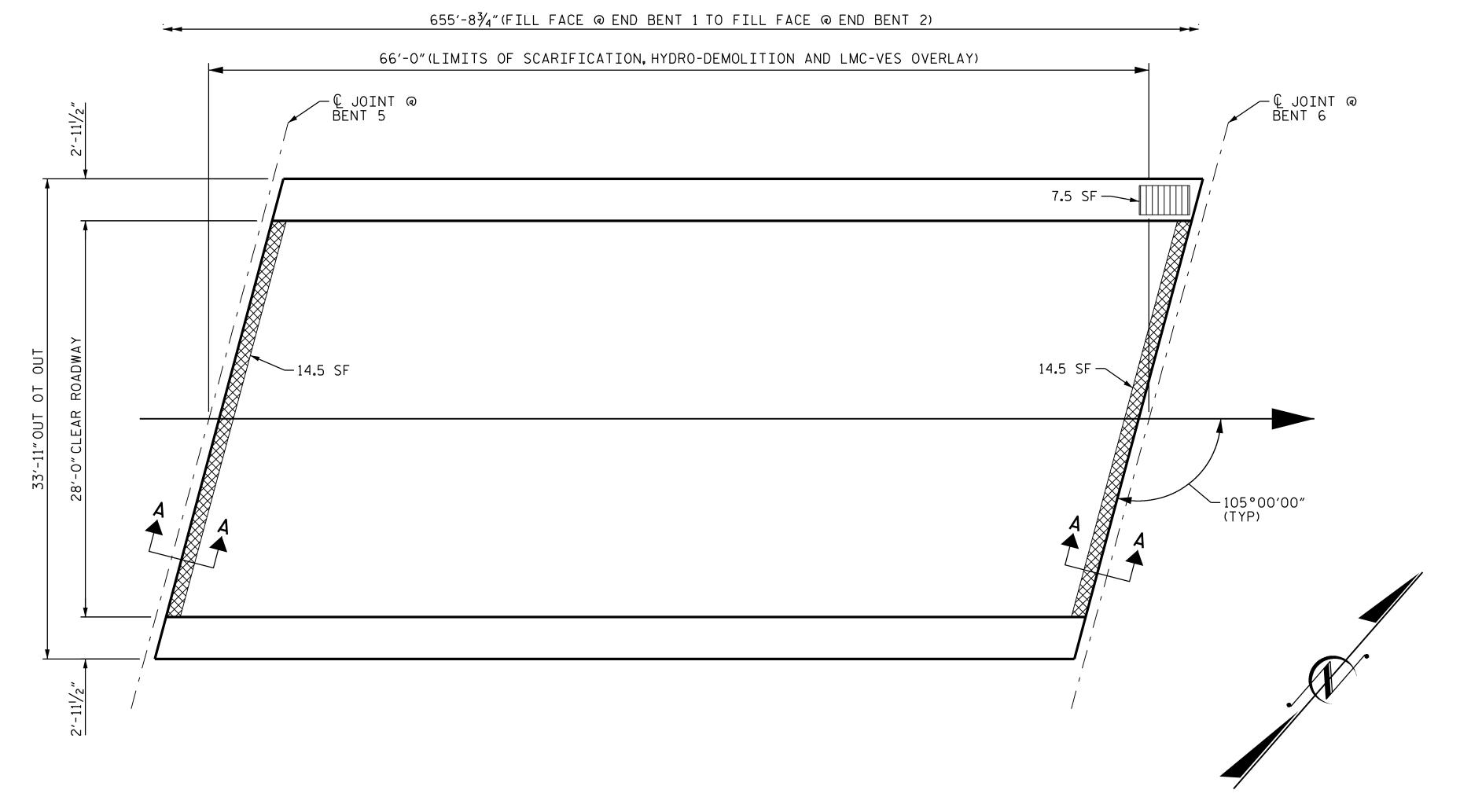
4/24/2024

! CINEE!

DATE: BY:

MINIMUM OF 4 INCHES AND RECAST WITH LMC.

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



PLAN OF SPAN F

NOTES

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

THE BOUNDARIES OF AREAS IDENTIFIED FOR CLASS II (PARTIAL DEPTH) SURFACE PREPARATION ARE APPROXIMATE AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED AT THE PROJECT SITE.

FOR OVERLAY OF BRIDGE WITH LATEX MODIFIED CONCRETE- VERY EARLY STRENGTH, SEE SPECIAL PROVISIONS.

PREVIOUSLY PLACED LMC OVERLAY AT STAGED EDGES SHALL BE DEMOLISHED BACK A MINIMUM OF 4 INCHES AND RECAST WITH LMC.

FOR LMC OVERLAY - VES SURFACE PREPARATION, SEE SPECIAL PROVISIONS.

FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY IS COMPLETE

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

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

AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS

SPAN F

	ESTIMATE		ACTUAL
SCARIFYING BRIDGE DECK	205.3	SY	
HYDRO-DEMOLITION OF BRIDGE DECK	205.3	SY	
CLASS II SURFACE PREPARATION	0.0	SY	
CLASS III SURFACE PREPARATION	0.0	SY	
LMC OVERLAY-VES	8.6	CY	
PLACING AND FINISHING LMC OVERLAY-VES	205.3	SY	
GROOVING BRIDGE FLOORS	1641.7	SF	
BRIDGE JOINT DEMOLITION	29.0	SF	

UNDERSIDE OF DECK REPAIRS

	ESTI	MATE	ACTUAL
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF
UNDERSIDE OF DECK	0.0	0.0	
OVERHANG DIAPHRAGMS	0.0	0.0	
UNDERSIDE OF OVERHANG	7 . 5	2.5	
INTERIOR DIAPHRAGMS	0.0 0.0		
	ESTI	MATE	ACTUAL
UNDERSIDE EPOXY RESIN INJECTION	0.0 LF		
	•	•	·

QUANTITIES IN TABLE REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1"BEHIND REBAR, AND MINIMUM 2" CLEAR TO SAW CUT. SEE REPAIR DETAILS.

CLASS II SURFACE PREPARATION

BRIDGE JOINT DEMOLITION

UNDERSIDE REPAIR

TEST LOCATION

PROJECT NO. 15BPR.130 MOORE _ COUNTY <u>6200</u>72 STATION:__

SHEET 6 OF 10

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

PLAN OF SPAN F

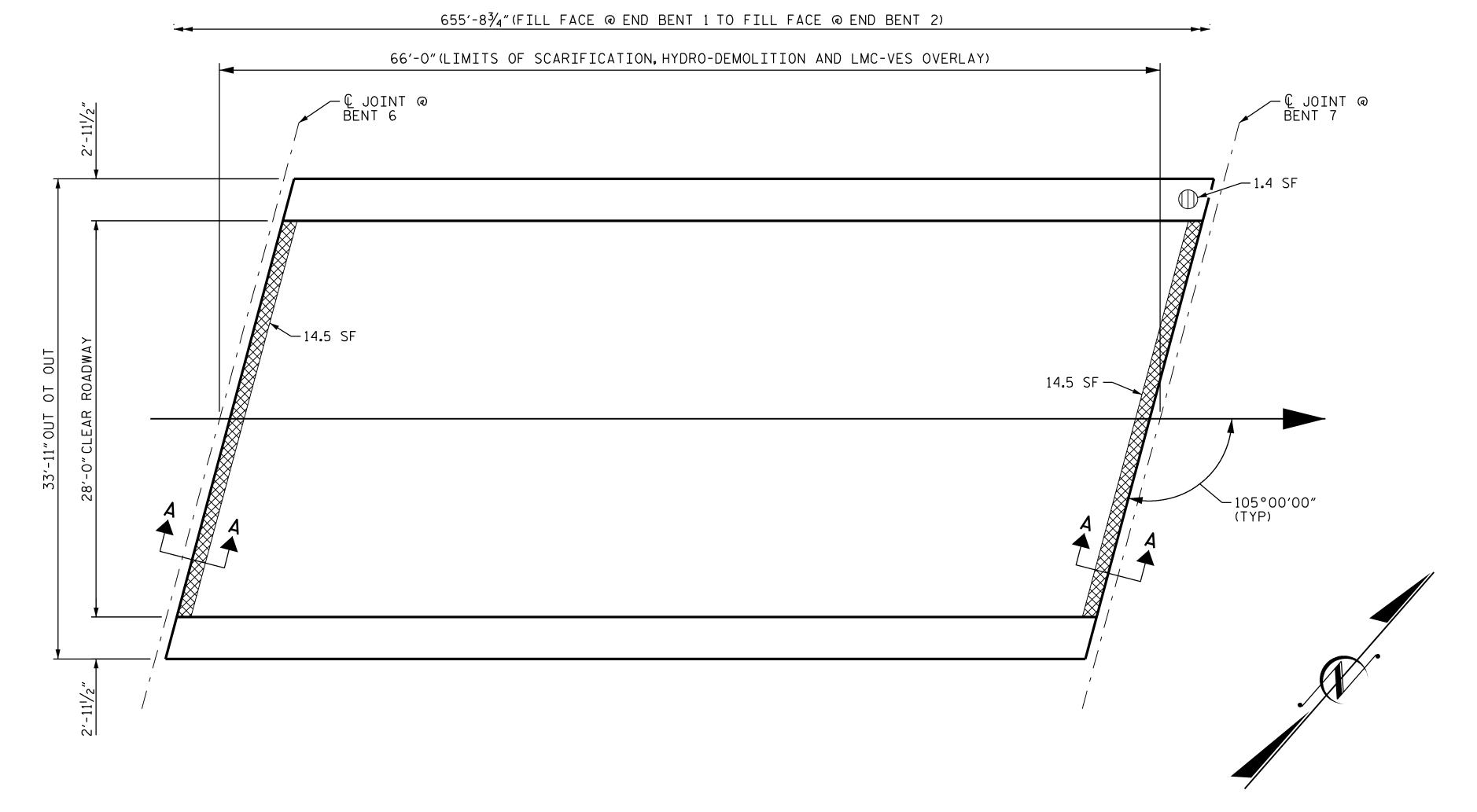
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7/27/2027							
	REVISIONS						SHEET N
CUMENT NOT CONSIDERED	NO.	BY:	DATE:	NO.	BY:	DATE:	S-126
FINAL UNLESS ALL	1			3			TOTAL SHEETS
SIGNATURES COMPLETED	2			4			156

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

B.H.BARNHILL __ DATE : <u>03/2024</u> DRAWN BY : __ CHECKED BY : _ _ DATE : <u>03/2024</u> E.E.MURRAY DESIGN ENGINEER OF RECORD: ______ E.E.MURRAY ____ DATE : 03/2024



PLAN OF SPAN G

NOTES

DRAWN BY : __

CHECKED BY : _

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

B. H. BARNHILL

E.E.MURRAY

DESIGN ENGINEER OF RECORD: ______ E.E.MURRAY ____ DATE : 03/2024

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

THE BOUNDARIES OF AREAS IDENTIFIED FOR CLASS II (PARTIAL DEPTH) SURFACE PREPARATION ARE APPROXIMATE AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED AT THE PROJECT SITE.

__ DATE : <u>03/2024</u>

DATE : 03/2024

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

FOR OVERLAY OF BRIDGE WITH LATEX MODIFIED CONCRETE- VERY EARLY STRENGTH,

PREVIOUSLY PLACED LMC OVERLAY AT STAGED EDGES SHALL BE DEMOLISHED BACK A

FOR LMC OVERLAY - VES SURFACE PREPARATION, SEE SPECIAL PROVISIONS.

FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY IS COMPLETE

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

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

AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS

SPAN G

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	205.3 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	205.3 SY	
CLASS II SURFACE PREPARATION	0.0 SY	
CLASS III SURFACE PREPARATION	0.0 SY	
LMC OVERLAY-VES	8.6 CY	
PLACING AND FINISHING LMC OVERLAY-VES	205.3 SY	
GROOVING BRIDGE FLOORS	1641.7 SF	
BRIDGE JOINT DEMOLITION	29 . 0 SF	

UNDERSIDE OF DECK REPAIRS

CHOTODETE DEDATOS	ESTIMATE		ACTUAL
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF
			31
UNDERSIDE OF DECK	0.0	0.0	
OVERHANG DIAPHRAGMS	0.0	0.0	
UNDERSIDE OF OVERHANG	1.4	0.5	
INTERIOR DIAPHRAGMS	0.0 0.0		
	ESTIMATE		ACTUAL
UNDERSIDE EPOXY RESIN INJECTION	0.0 LF		
<u> </u>	<u>"</u>	·	·

QUANTITIES IN TABLE REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1"BEHIND REBAR, AND MINIMUM 2" CLEAR TO SAW CUT. SEE REPAIR DETAILS.

CLASS II SURFACE PREPARATION

BRIDGE JOINT DEMOLITION

UNDERSIDE REPAIR

TEST LOCATION

PROJECT NO. 15BPR.130 MOORE COUNTY

<u>6200</u>72 STATION:__

SHEET 7 OF 10

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

PLAN OF SPAN G

4/24/2024

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SHEET NO REVISIONS DATE: S-127 DATE: BY: DOCUMENT NOT CONSIDERED TOTAL SHEETS FINAL UNLESS ALL SIGNATURES COMPLETED

SEE SPECIAL PROVISIONS.

MINIMUM OF 4 INCHES AND RECAST WITH LMC.

655'-83/4" (FILL FACE @ END BENT 1 TO FILL FACE @ END BENT 2) 66'-0"(LIMITS OF SCARIFICATION, HYDRO-DEMOLITION AND LMC-VES OVERLAY) Ĺ JOINT @ BENT 7 · (L JOINT @ BENT 8 3.4 SF -14.5 SF 10.5 SF — 28'-0" CLEAR 15.3 SF -105°00′00″ (TYP)

PLAN OF SPAN H

NOTES

DRAWN BY : __

CHECKED BY : _

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

B. H. BARNHILL

E.E.MURRAY

DESIGN ENGINEER OF RECORD: ______ E.E.MURRAY ____ DATE : 03/2024

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

THE BOUNDARIES OF AREAS IDENTIFIED FOR CLASS II (PARTIAL DEPTH) SURFACE PREPARATION ARE APPROXIMATE AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED AT THE PROJECT SITE.

__ DATE : <u>03/2024</u>

DATE : 03/2024

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

FOR OVERLAY OF BRIDGE WITH LATEX MODIFIED CONCRETE- VERY EARLY STRENGTH,

PREVIOUSLY PLACED LMC OVERLAY AT STAGED EDGES SHALL BE DEMOLISHED BACK A

FOR LMC OVERLAY - VES SURFACE PREPARATION, SEE SPECIAL PROVISIONS.

FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY IS COMPLETE

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS

SPAN H

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	205.3 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	205.3 SY	
CLASS II SURFACE PREPARATION	1.7 SY	
CLASS III SURFACE PREPARATION	0.0 SY	
LMC OVERLAY-VES	8.6 CY	
PLACING AND FINISHING LMC OVERLAY-VES	205.3 SY	
GROOVING BRIDGE FLOORS	1641.7 SF	
BRIDGE JOINT DEMOLITION	25 . 0 SF	

UNDERSIDE OF DECK REPAIRS

	ESTIMATE		ACTUAL
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF
UNDERSIDE OF DECK	0.0	0.0	
OVERHANG DIAPHRAGMS	0.0	0.0	
UNDERSIDE OF OVERHANG	7.1	2.4	
INTERIOR DIAPHRAGMS	0.0 0.0		
	ESTIMATE		ACTUAL
UNDERSIDE EPOXY RESIN INJECTION	0.0 LF		
			·

QUANTITIES IN TABLE REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1"BEHIND REBAR, AND MINIMUM 2" CLEAR TO SAW CUT. SEE REPAIR DETAILS.

CLASS II SURFACE PREPARATION

BRIDGE JOINT DEMOLITION

UNDERSIDE REPAIR

TEST LOCATION

PROJECT NO. 15BPR.130 MOORE

COUNTY 620072 STATION:__

SHEET 8 OF 10

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

PLAN OF SPAN H

4/24/2024

* CINEE!

SHEET NO REVISIONS DATE: S-128 DATE: BY: DOCUMENT NOT CONSIDERED TOTAL SHEETS FINAL UNLESS ALL SIGNATURES COMPLETED

SEE SPECIAL PROVISIONS.

MINIMUM OF 4 INCHES AND RECAST WITH LMC.

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

655'-8¾"(FILL FACE @ END BENT 1 TO FILL FACE @ END BENT 2) 66'-0"(LIMITS OF SCARIFICATION, HYDRO-DEMOLITION & LMC-VES OVERLAY) © JOINT @ BENT 8 -© JOINT @ BENT 9 14.5 SF — -105°00′00″ (TYP)

PLAN OF SPAN J

NOTES

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

THE BOUNDARIES OF AREAS IDENTIFIED FOR CLASS II (PARTIAL DEPTH) SURFACE PREPARATION ARE APPROXIMATE AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED AT THE PROJECT SITE.

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

FOR OVERLAY OF BRIDGE WITH LATEX MODIFIED CONCRETE- VERY EARLY STRENGTH, SEE SPECIAL PROVISIONS.

PREVIOUSLY PLACED LMC OVERLAY AT STAGED EDGES SHALL BE DEMOLISHED BACK A MINIMUM OF 4 INCHES AND RECAST WITH LMC.

FOR LMC OVERLAY - VES SURFACE PREPARATION, SEE SPECIAL PROVISIONS.

FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY IS COMPLETE

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

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

AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS

SPAN J

	ESTIMATE		ACTUAL
SCARIFYING BRIDGE DECK	205.3	SY	
HYDRO-DEMOLITION OF BRIDGE DECK	205.3	SY	
CLASS II SURFACE PREPARATION	0.0	SY	
CLASS III SURFACE PREPARATION	0.0	SY	
LMC OVERLAY-VES	8.6	CY	
PLACING AND FINISHING LMC OVERLAY-VES	205.3	SY	
GROOVING BRIDGE FLOORS	1641.7	SF	
BRIDGE JOINT DEMOLITION	29.0	SF	

UNDERSIDE OF DECK REPAIRS

SHOTCRETE REPAIRS	ESTIMATE		ACTUAL
	AREA SF	VOLUME CF	AREA SF
UNDERSIDE OF DECK	0.0	0.0	
OVERHANG DIAPHRAGMS	0.0	0.0	
UNDERSIDE OF OVERHANG	2.7	0.9	
INTERIOR DIAPHRAGMS	0.0	0.0	
	ESTIMATE		ACTUAL
UNDERSIDE EPOXY RESIN INJECTION	0.0	LF	

QUANTITIES IN TABLE REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1"BEHIND REBAR, AND MINIMUM 2" CLEAR TO SAW CUT. SEE REPAIR DETAILS.

CLASS II SURFACE PREPARATION

BRIDGE JOINT DEMOLITION

UNDERSIDE REPAIR

TEST LOCATION

PROJECT NO. 15BPR.130 MOORE COUNTY 620072 STATION:__

SHEET 9 OF 10

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

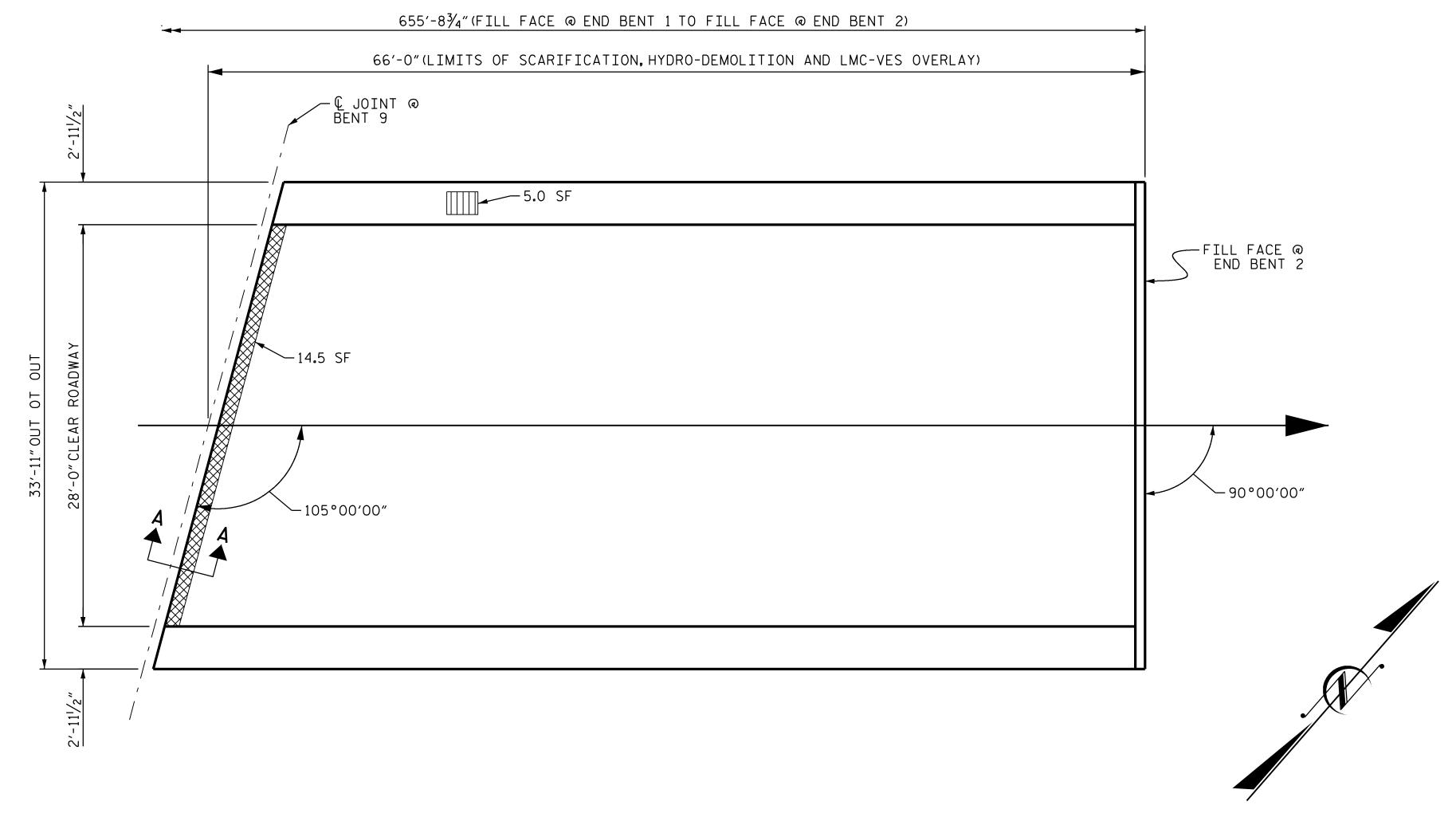
PLAN OF SPAN J

4/24/2024

* CINEE!

SHEET NO REVISIONS DATE: S-129 DATE: BY: DOCUMENT NOT CONSIDERED TOTAL SHEETS FINAL UNLESS ALL SIGNATURES COMPLETED

B.H.BARNHILL __ DATE : <u>03/2024</u> DRAWN BY : __ CHECKED BY : _ E.E.MURRAY DATE : 03/2024 DESIGN ENGINEER OF RECORD: ______ E.E.MURRAY ____ DATE : 03/2024



PLAN OF SPAN K

NOTES

DRAWN BY : __

CHECKED BY : _

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

B. H. BARNHILL

E.E.MURRAY

DESIGN ENGINEER OF RECORD: ______ E.E.MURRAY ____ DATE : 03/2024

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

THE BOUNDARIES OF AREAS IDENTIFIED FOR CLASS II (PARTIAL DEPTH) SURFACE PREPARATION ARE APPROXIMATE AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED AT THE PROJECT SITE.

__ DATE : <u>03/2024</u>

DATE : 03/2024

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

FOR OVERLAY OF BRIDGE WITH LATEX MODIFIED CONCRETE- VERY EARLY STRENGTH,

PREVIOUSLY PLACED LMC OVERLAY AT STAGED EDGES SHALL BE DEMOLISHED BACK A MINIMUM OF 4 INCHES AND RECAST WITH LMC.

FOR LMC OVERLAY - VES SURFACE PREPARATION, SEE SPECIAL PROVISIONS.

FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY IS COMPLETE

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS

SPAN K

	ESTIM	ATE	ACTUAL
SCARIFYING BRIDGE DECK	198.7	SY	
HYDRO-DEMOLITION OF BRIDGE DECK	198.7	SY	
CLASS II SURFACE PREPARATION	0.0	SY	
CLASS III SURFACE PREPARATION	0.0	SY	
LMC OVERLAY-VES	8.3	CY	
PLACING AND FINISHING LMC OVERLAY-VES	198.7	SY	
GROOVING BRIDGE FLOORS	1592.4	SF	
BRIDGE JOINT DEMOLITION	14.5	SF	

UNDERSIDE OF DECK REPAIRS

SHOTODETE DEDATOS	ESTI	MATE	ACTUAL
SHOTCRETE REPAIRS		VOLUME CF	AREA SF
UNDERSIDE OF DECK	0.0	0.0	
OVERHANG DIAPHRAGMS	0.0	0.0	
UNDERSIDE OF OVERHANG	5.0	0.3	
INTERIOR DIAPHRAGMS	0.0	0.0	
	ESTI	MATE	ACTUAL
UNDERSIDE EPOXY RESIN INJECTION	0.0	LF	
	·	•	

QUANTITIES IN TABLE REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1"BEHIND REBAR, AND MINIMUM 2" CLEAR TO SAW CUT. SEE REPAIR DETAILS.

CLASS II SURFACE PREPARATION

BRIDGE JOINT DEMOLITION

UNDERSIDE REPAIR

TEST LOCATION

PROJECT NO. 15BPR.130

MOORE COUNTY

620072 STATION:__

SHEET 10 OF 10

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

PLAN OF SPAN K

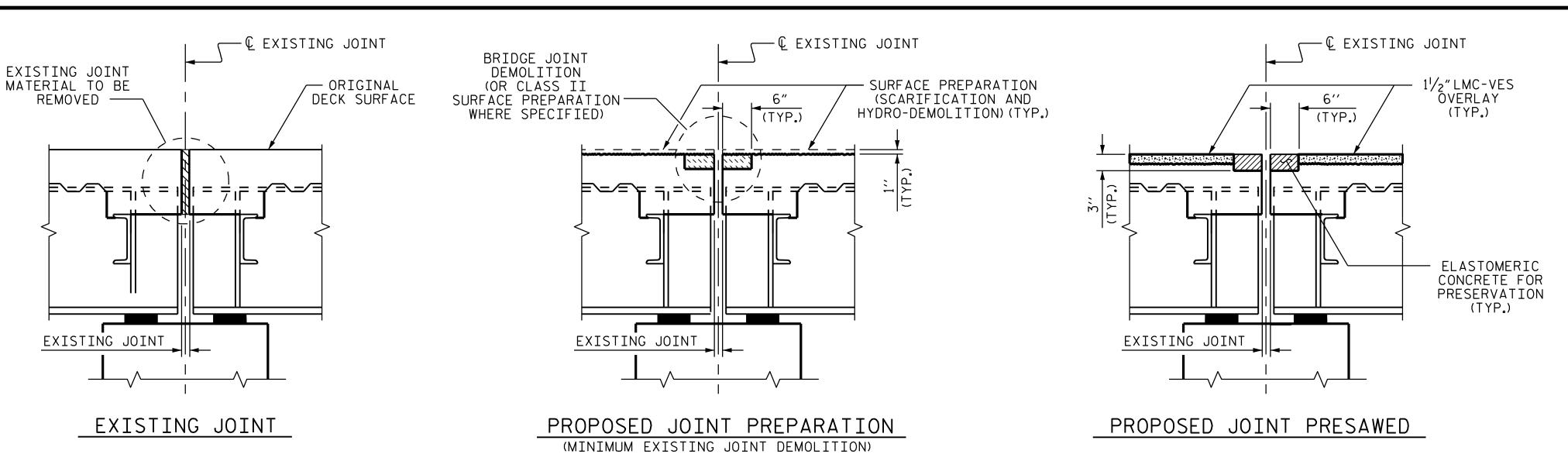
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SHEET NO REVISIONS DATE: S-130 DATE: BY: DOCUMENT NOT CONSIDERED FINAL UNLESS ALL TOTAL SHEETS SIGNATURES COMPLETED

SEE SPECIAL PROVISIONS.

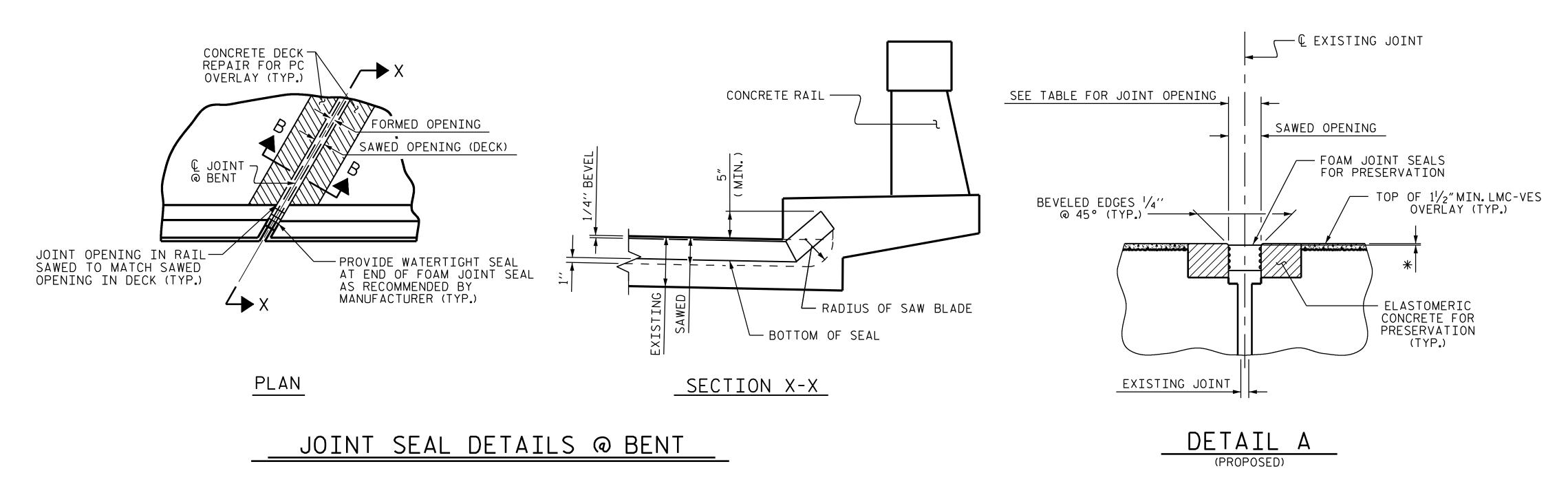
FOR SECTION A-A, SEE "JOINT REPAIR DETAILS" SHEET.



- ← EXISTING JOINT 11/2"LMC-VES OVERLAY (TYP.) SEE DETAIL A (TYP.) ELASTOMERIC CONCRETE FOR PRESERVATION (TYP.) EXISTING JOINT

PROPOSED FOAM JOINT

JOINT INSTALLATION SEQUENCE AT BENTS (SECTION A-A)



* FOAM JOINT SEALS FOR PRESERVATION SHALL BE RECESSED AS PER MANUFACTURER'S RECOMMENDATIONS.

5430 Wade Park BLVD, Suite 410

Tel. 919-854-0344 Fax. 919-854-0355

Raleigh, NC 27607

NC License No. F-0765

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THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING JOINT OPENING PRIOR TO ORDER JOINT SEAL MATERIAL. IF THE ACTUAL JOINT OPENING VARIES FROM THE OPENING ALLOWED BY THE JOINT SEAL MATERIAL, NOTIFY THE ENGINEER. REVISION TO THE JOINT SEAL SIZE AND TYPE MIGHT BE NECESSARY.

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

THE MANUFACTURER IS TO PROVIDE THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE FOAM JOINT SEAL BASED ON JOINT OPENINGS.

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

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

THE INSTALLED FOAM JOINT SEALS FOR PRESERVATION SHALL BE WATER

FOR LOCATION OF SECTION A-A, SEE PLAN OF SPAN SHEETS.

FINAL SURFACE OF THE JOINT DEMOLITION AREA PRIOR TO PLACEMENT OF CONCRETE REPAIR MATERIAL SHOULD BE REASONABLY FLAT AND LEVEL. ENGINEER SHALL DETERMINE THE ACCEPTABILITY OF THE SURFACE PRIOR TO PLACEMENT OF REPAIR CONCRETE.

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

JOINT REPAIR QUANTITY					
	FOAM JOI FOR PRES		ELASTOMERIC CONCRETE FOR PRESERVATION		
	ESTIMATED (LIN. FT.)	ACTUAL (LIN.FT.)	ESTIMATED (CU.FT.)	ACTUAL (CU.FT.)	
BENT 1	30.0		7.3		
BENT 2	30.0		7.3		
BENT 3	30.0		7.3		
BENT 4	30.0		7.3		
BENT 5	30.0		7.3		
BENT 6	30.0		7.3		
BENT 7	30.0		7.3		
BENT 8	30.0		7.3		
BENT 9	30.0		7.3		

	SAWED .	JOINT OPEN	ING TABLE	
LOCATION	SKEW ANGLE	PERPENDICULAR JOINT OPENING AT 45°	PERPENDICULAR JOINT OPENING AT 60°	PERPENDICULAR JOINT OPENING AT 90°
BENT 1	105°00′00″	1 ⁵ / ₁₆ ′′	1%6′′	1"/16"
BENT 2	105°00′00″	1 ⁷ / ₁₆ ''	1%6′′	1 ⁵ ⁄8′′
BENT 3	105°00′00″	17⁄ ₁₆ ′′	1%6′′	15⁄8′′
BENT 4	105°00′00″	17⁄ ₁₆ ′′	1%6′′	1 ⁵ ⁄8′′
BENT 5	105°00′00″	1 ⁷ / ₁₆ ''	1%6′′	1 ⁵ ⁄8′′
BENT 6	105°00′00″	1 ⁷ / ₁₆ ''	1%6′′	1 ⁵ ⁄8′′
BENT 7	105°00′00″	1 ⁷ / ₁₆ ''	1%6′′	1 ⁵ / ₈ ′′
BENT 8	105°00′00″	17/16′′	1%′′	1 ⁵ / ₈ ′′
BENT 9	105°00′00″	17/ ₁₆ ''	1%6′′	15/8′′

PROJECT NO. 15BPR.130 MOORE _ COUNTY BRIDGE NO: 620072

> STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

> > JOINT REPAIR DETAILS AT BENTS

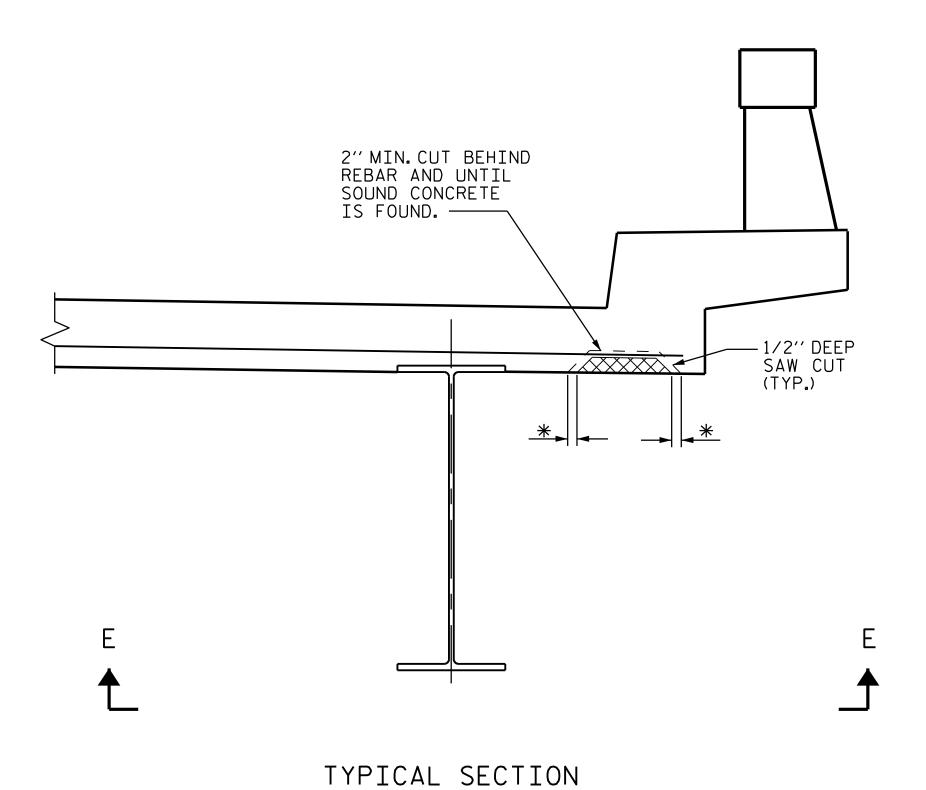
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4/24/2024

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T NOT CONSIDERED	NO.	BY:	DATE:	NO.	BY:	DATE:	S-13
L UNLESS ALL	1			3			TOTAL SHEETS
URES COMPLETED	2			4			156

_ DATE : 5/23 _ DATE : 3/24 D. A. GLADDEN DRAWN BY : _ B.H.BARNHILL CHECKED BY : _





— 1/2" DEEP \ SAW CUT

(TYP.)

SECTION E-E

OVERHANG DETAILS

NOTES

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

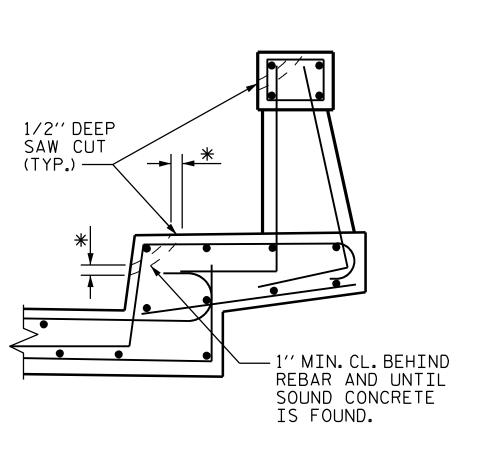
CONTRACTOR SHALL SAW CUT TO A NOMINAL DEPTH OF 1/2" BUT REINFORCING STEEL SHALL NOT BE DAMAGED.

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.



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



BRIDGE RAIL AND CURB REPAIR DETAILS

PROJECT NO. 15BPR.130 MOORE _ COUNTY

620072 STATION:___

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RALEIGH

OVERHANG REPAIR DETAILS

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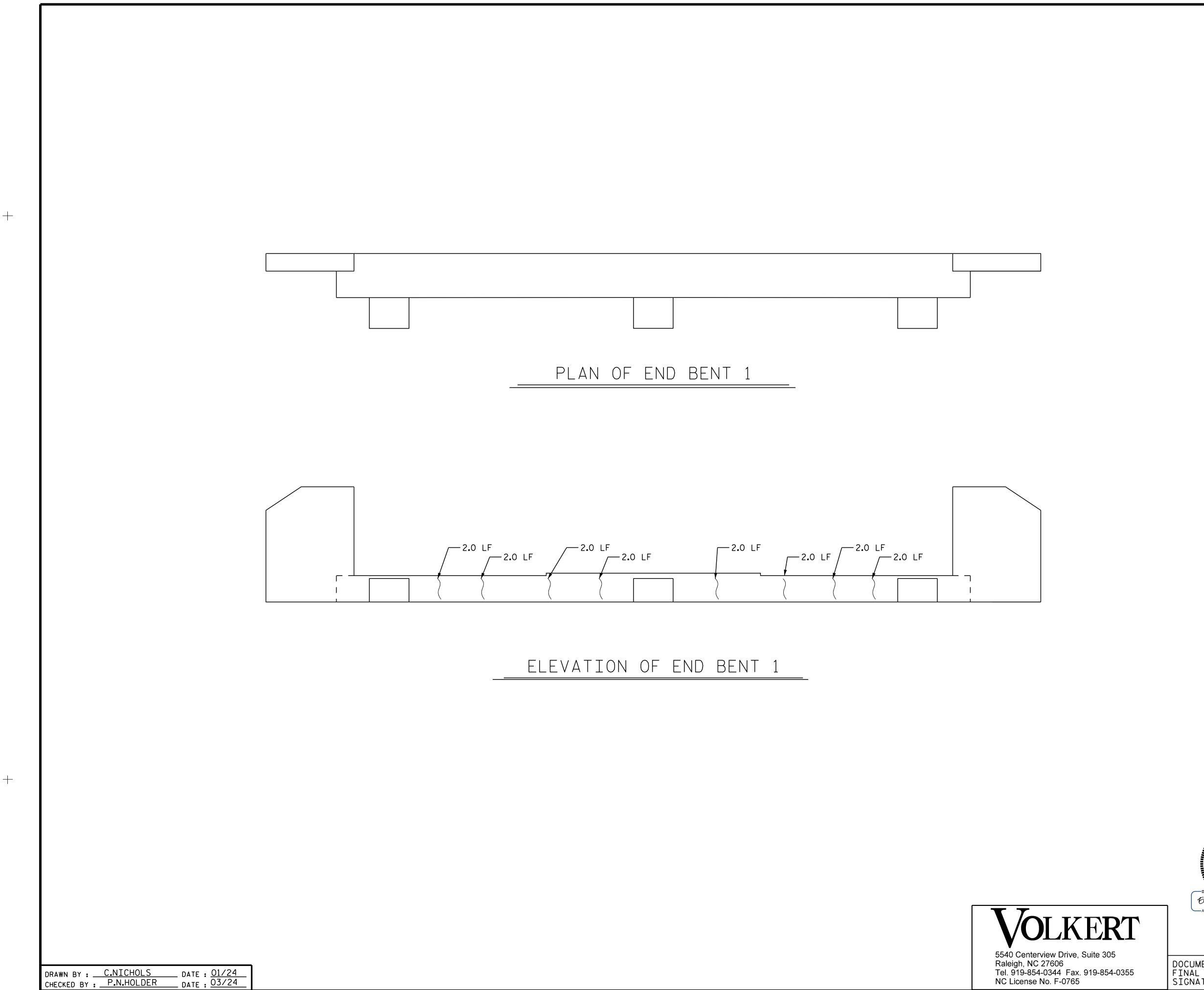
Raleigh, NC 27607 Tel. 919-854-0344 Fax. 919-854-0355 NC License No. F-0765

4/24/2024 DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

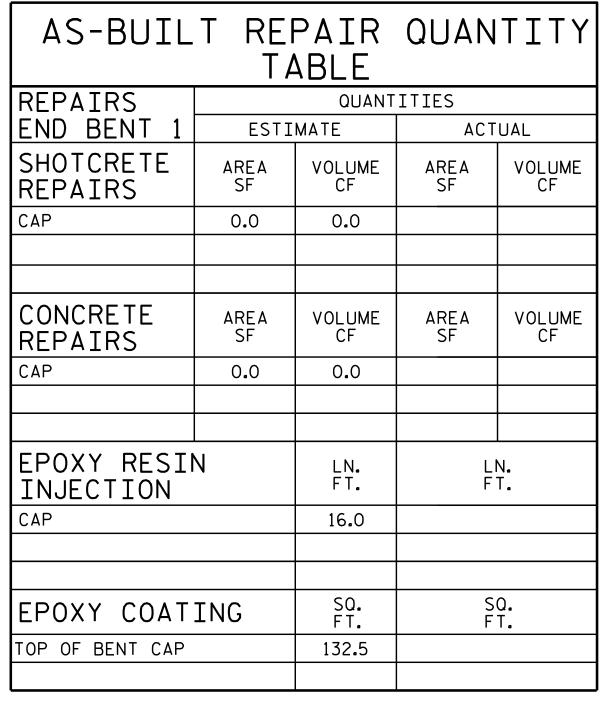
REVISIONS SHEET NO S-132 DATE: DATE: BY: TOTAL SHEETS 156

D. A. GLADDEN E. E. MURRAY __ DATE : <u>04/2024</u> __ DATE : <u>04/2024</u> CHECKED BY : DESIGN ENGINEER OF RECORD: ______ _ DATE : _____

DRAWN BY :



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

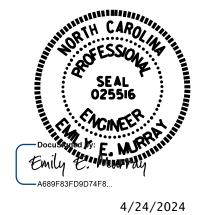




CONCRETE REPAIR

EPOXY RESIN INJECTION (ERI)

PROJECT NO. 15BPR.130 MOORE _ COUNTY BRIDGE NO. 620072

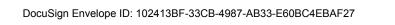


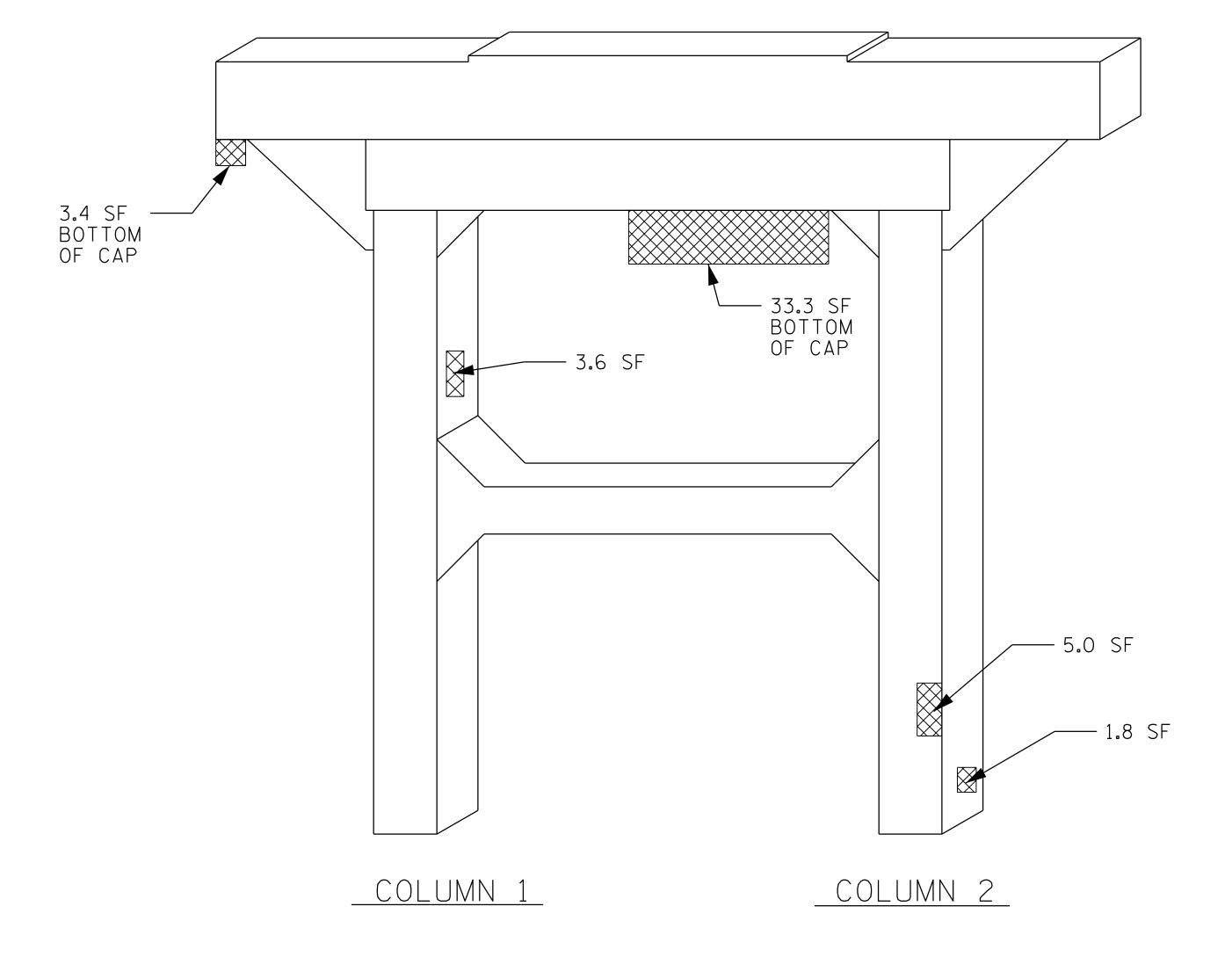
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RALEIGH

END BENT 1

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	REVISIONS					SHEET NO.	
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	1			3			TOTAL SHEETS
	2			4			156



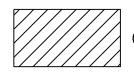


AS-BUILT REPAIR QUANTITY

TABLE					
REPAIRS	QUANTITIES				
BENT 1	ESTI	MATE	ACTUAL		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF	
CAP	40.1	20.1			
COLUMN	27.7	13.9			
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF	
CAP	0.0	0.0			
COLUMN	0.0	0.0			
EPOXY RESIN INJECTION		LN. FT.	L F	N. T.	
CAP		0.0			
COLUMN		0.0			
EPOXY COATING		SQ. FT.		Q. T.	
TOP OF BENT CAP		70.0			

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





EPOXY RESIN INJECTION (ERI)

PROJECT NO. 15BPR.130

MOORE _ COUNTY

BRIDGE NO. 620072

SHEET 1 OF 2



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RALEIGH

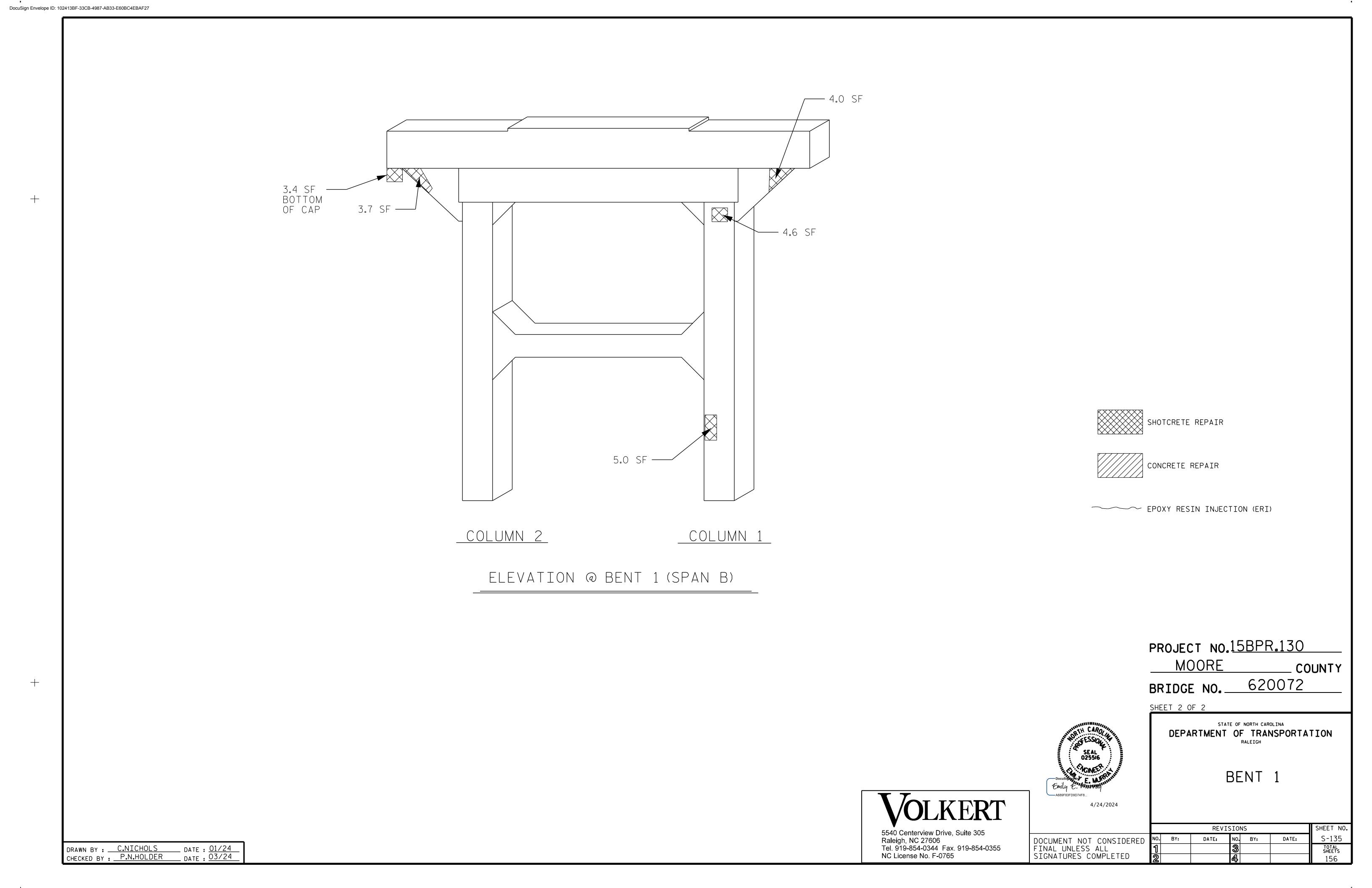
BENT 1

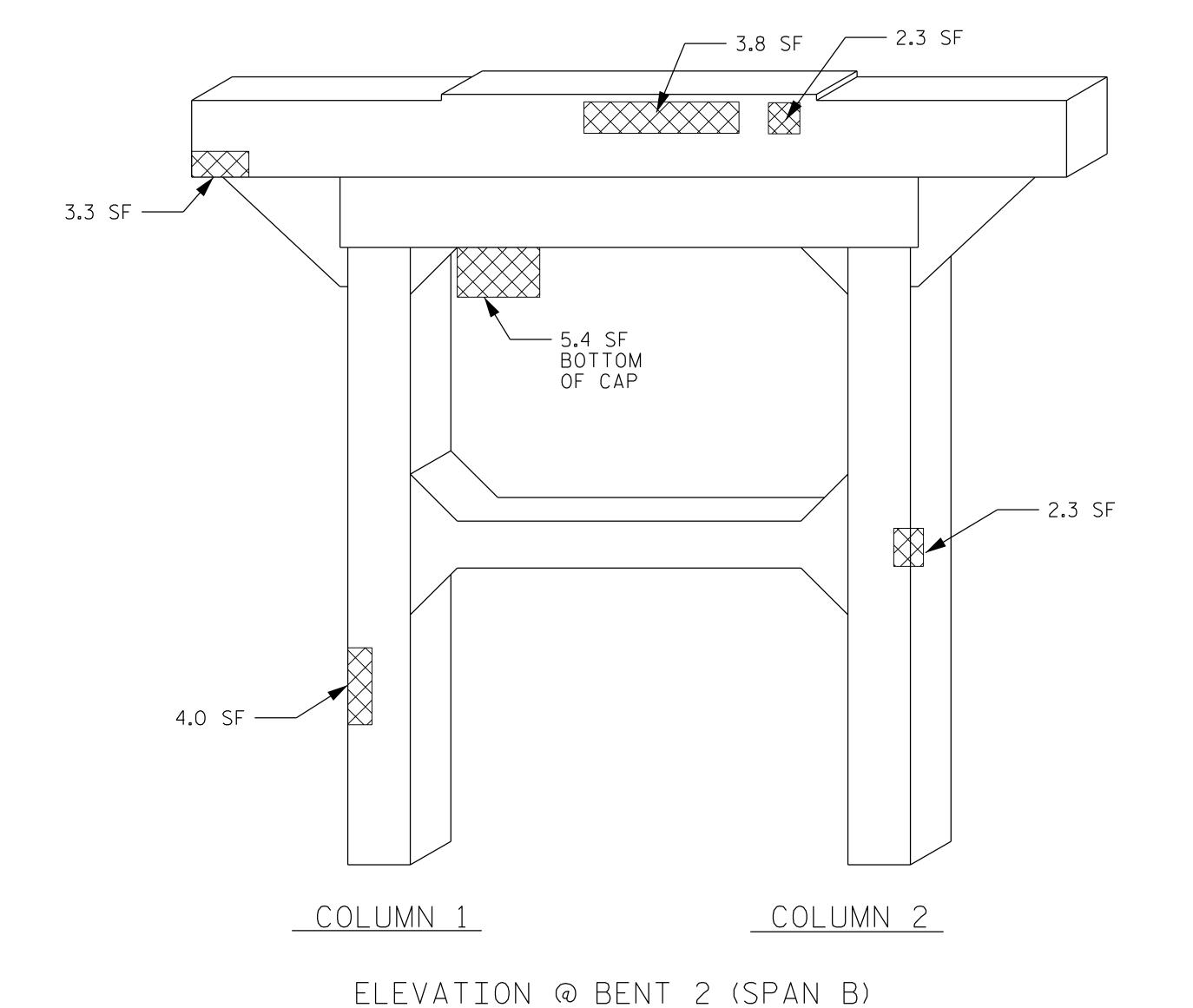
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS				SHEET N		
10.	BY:	DATE:	NO.	BY:	DATE:	S-134
1			3			TOTAL SHEETS
2			4			156
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OLKERT 5540 Centerview Drive, Suite 305 Raleigh, NC 27606 Tel. 919-854-0344 Fax. 919-854-0355 NC License No. F-0765 DRAWN BY: C.NICHOLS DATE: 01/24
CHECKED BY: P.N.HOLDER DATE: 03/24

ELEVATION @ BENT 1 (SPAN A)

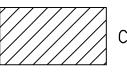




AS-BUILT REPAIR QUANTITY TABLE QUANTITIES REPAIRS BENT 2 ACTUAL ESTIMATE SHOTCRETE AREA SF VOLUME CF AREA SF VOLUME CF REPAIRS 20.5 10.3 COLUMN 11.6 5.8 CONCRETE AREA SF VOLUME CF VOLUME CF REPAIRS 0.0 0.0 COLUMN 0.0 0.0 EPOXY RESIN LN. FT. INJECTION CAP 6.0 COLUMN 3.0 SQ. FT. SQ. FT. EPOXY COATING TOP OF BENT CAP 70

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



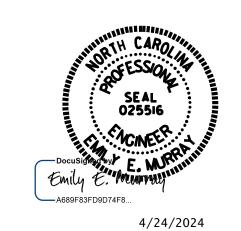


EPOXY RESIN INJECTION (ERI)

PROJECT NO. 15BPR.130 MOORE COUNTY

BRIDGE NO. 620072

SHEET 1 OF 2

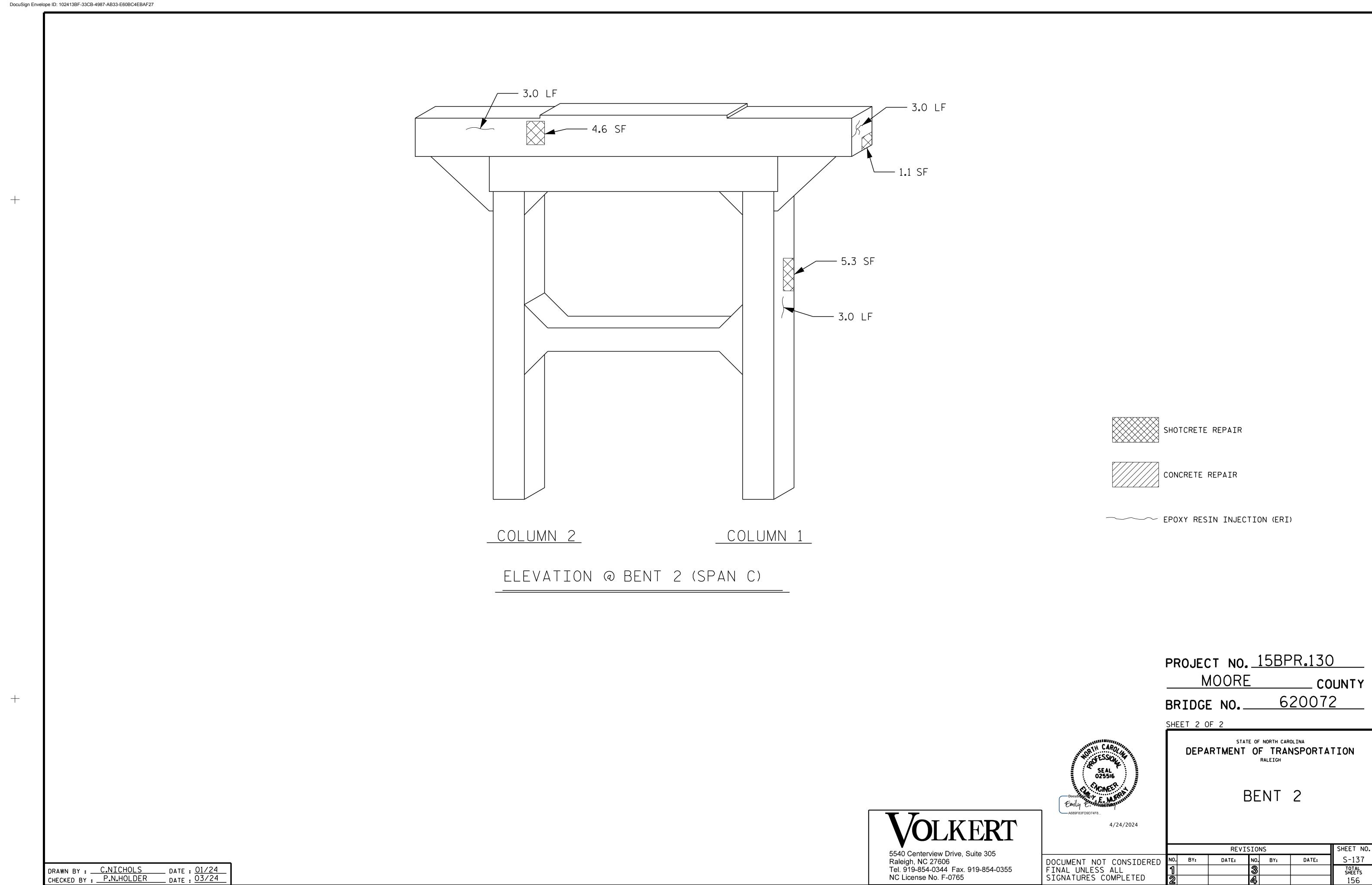


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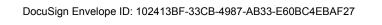
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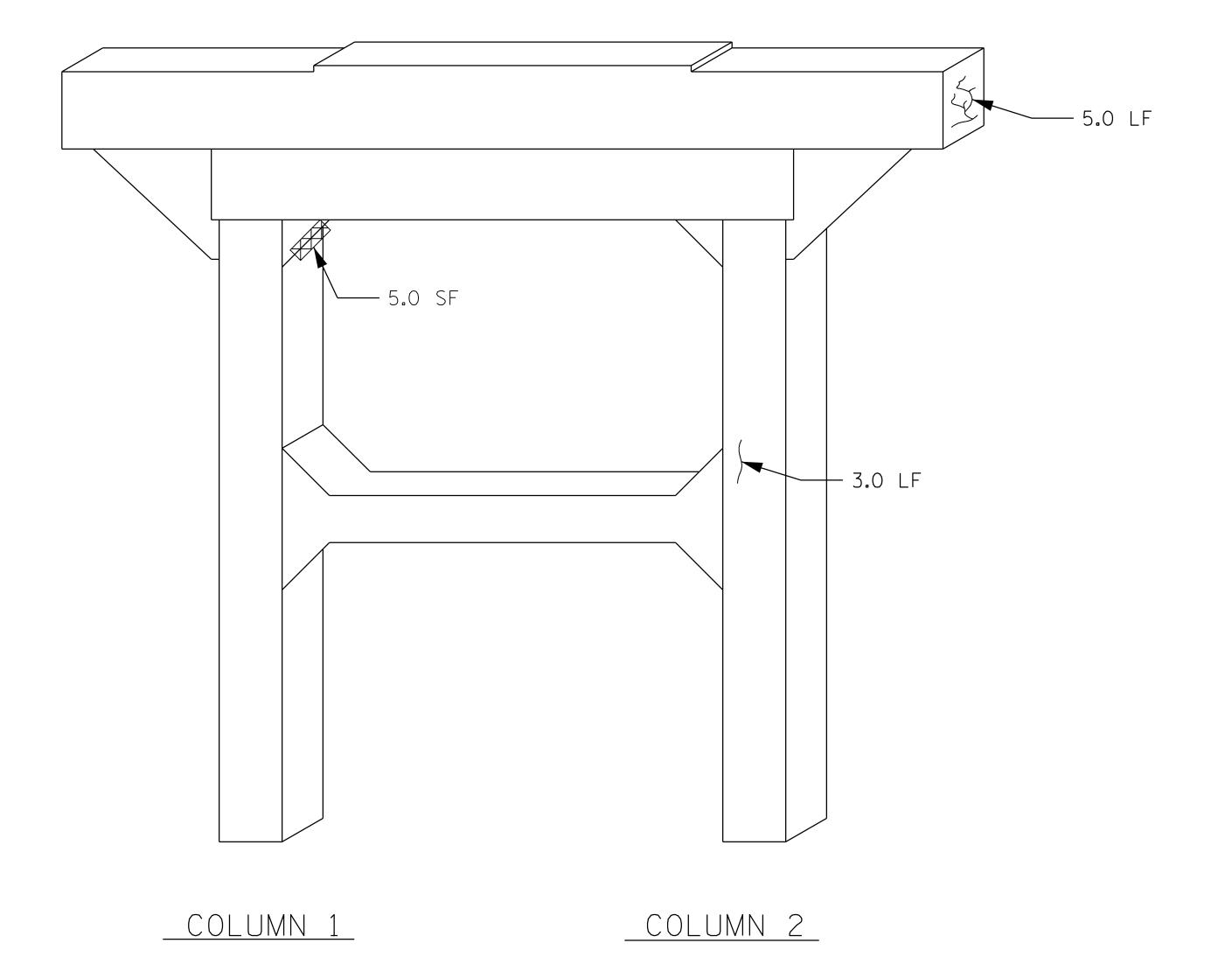
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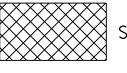


ELEVATION @ BENT 3 (SPAN C)

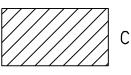
AS-BUILT REPAIR QUANTITY
TABLE

REPAIRS	QUANTITIES			
BENT 3	ESTI	MATE	ACT	UAL
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
AP	10.6	5.3		
OLUMN	13.1	6.6		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
ΔР	0.0	0.0		
OLUMN	0.0	0.0		
POXY RESIN		LN. FT.	LI F	N. T.
ΔР		8.0		
OLUMN		3.0		
POXY COATING		SQ. FT.		Q. T.
OP OF BENT CAP		70.0		

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



SHOTCRETE REPAIR



CONCRETE REPAIR

EPOXY RESIN INJECTION (ERI)

PROJECT NO. 15BPR.130

MOORE county

BRIDGE NO. 620072

SHEET 1 OF 2



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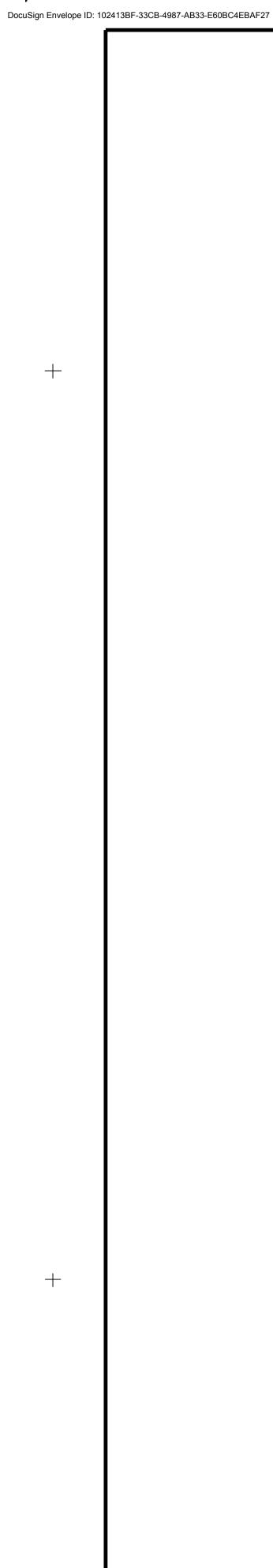
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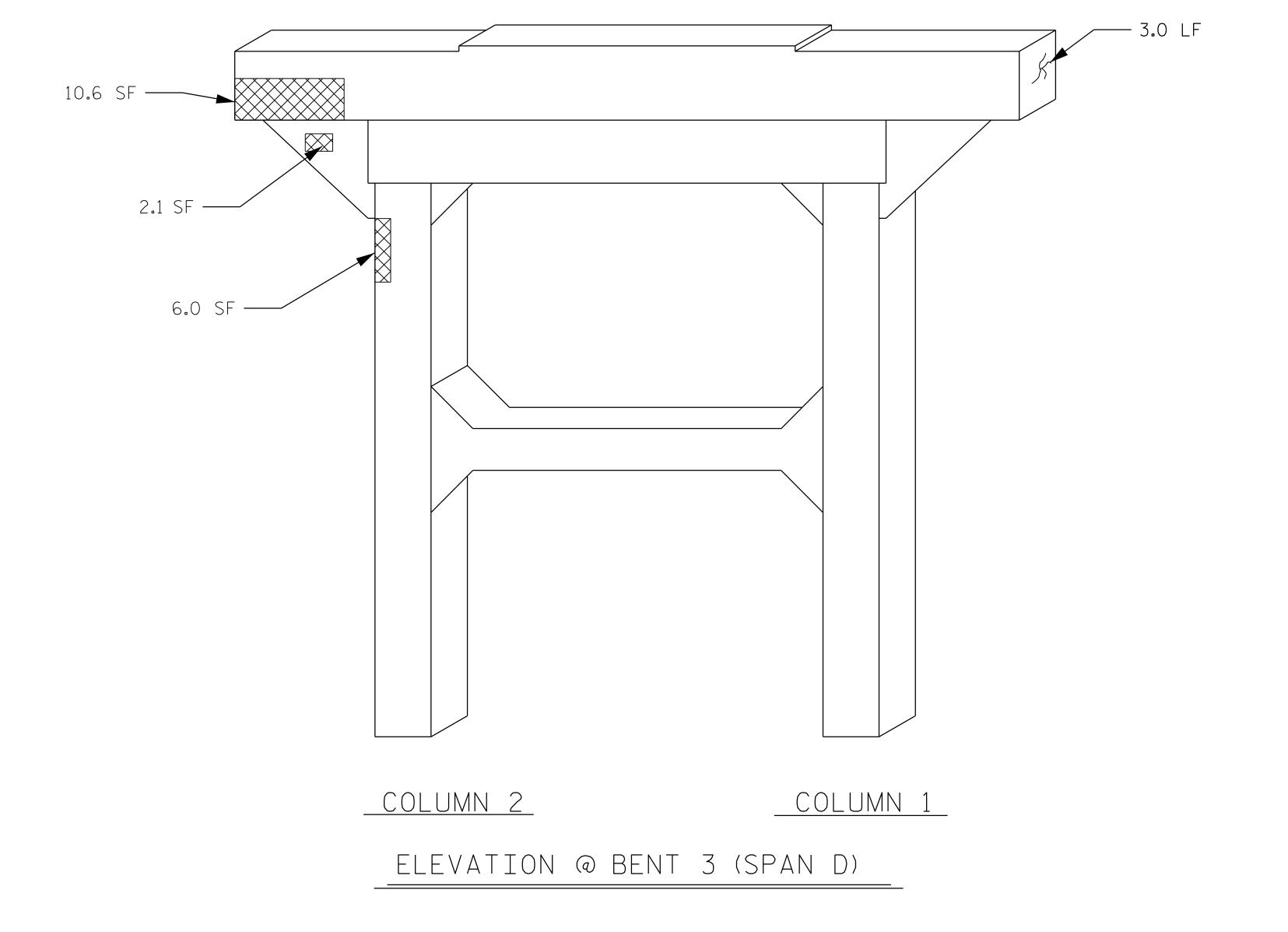
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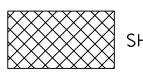
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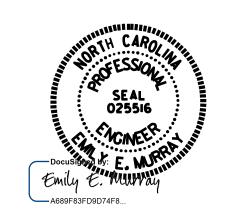
EPOXY RESIN INJECTION (ERI)

PROJECT NO. 15BPR.130

MOORE _ COUNTY

BRIDGE NO. 620072

SHEET 2 OF 2



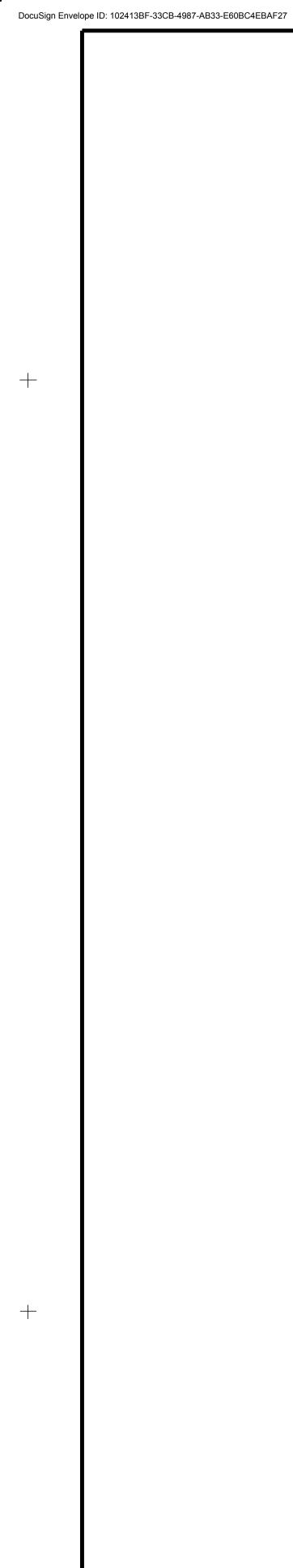
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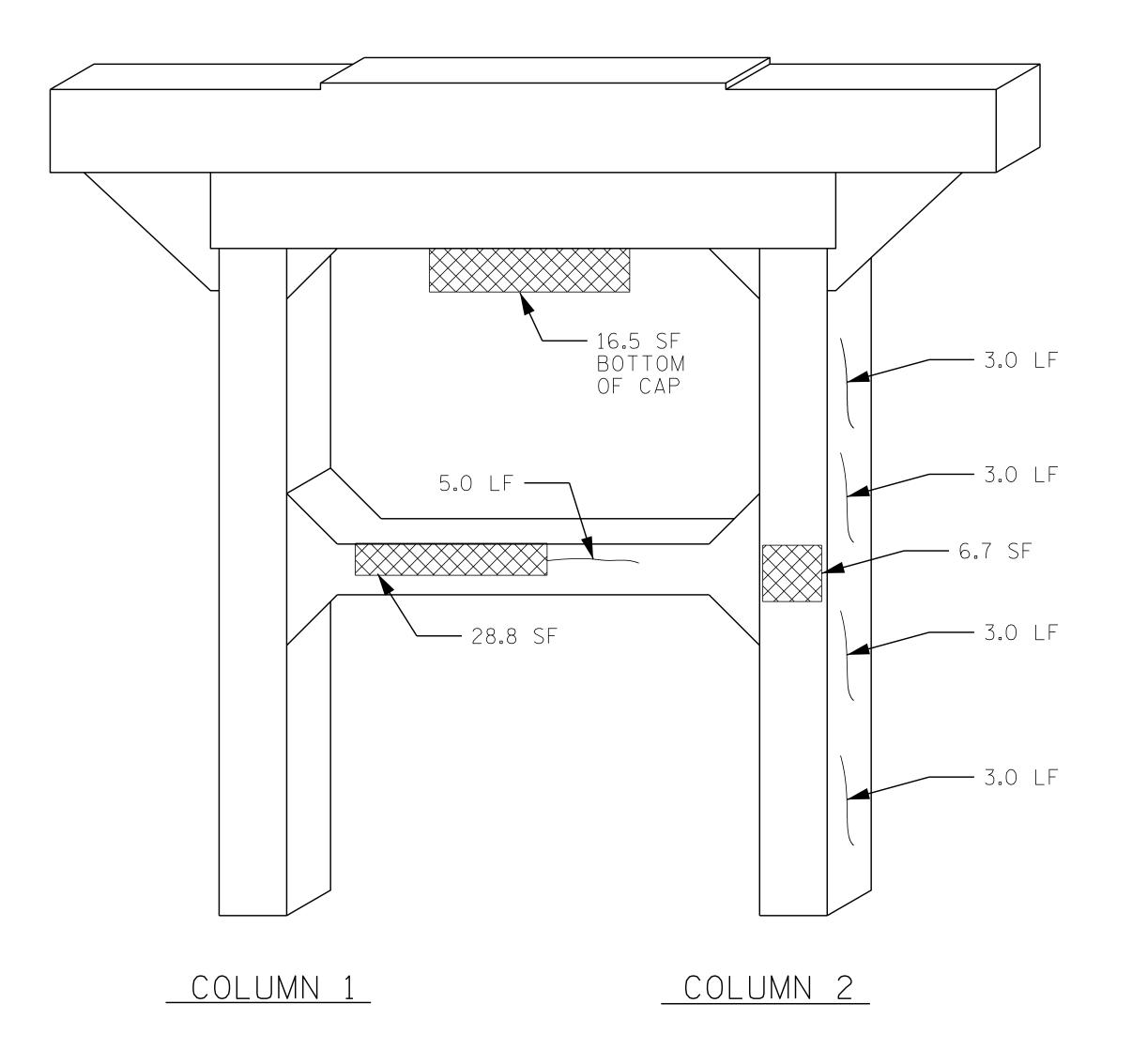
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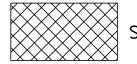




ELEVATION @ BENT 4 (SPAN D)

AS-BUILT REPAIR QUANTITY TABLE QUANTITIES REPAIRS BENT 4 ESTIMATE ACTUAL SHOTCRETE AREA SF VOLUME CF AREA SF VOLUME CF REPAIRS 18.9 9.5 38.0 COLUMN 75.9 CONCRETE VOLUME CF AREA SF VOLUME CF REPAIRS 0.0 0.0 0.0 COLUMN 0.0 EPOXY RESIN LN. FT. INJECTION 4.0 COLUMN 63.0 SQ. FT. SQ. FT. EPOXY COATING TOP OF BENT CAP 70.0

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



SHOTCRETE REPAIR



CONCRETE REPAIR

EPOXY RESIN INJECTION (ERI)

SHEET 1 OF 2

PROJECT NO. 15BPR.130

MOORE COUNTY

BRIDGE NO. 620072

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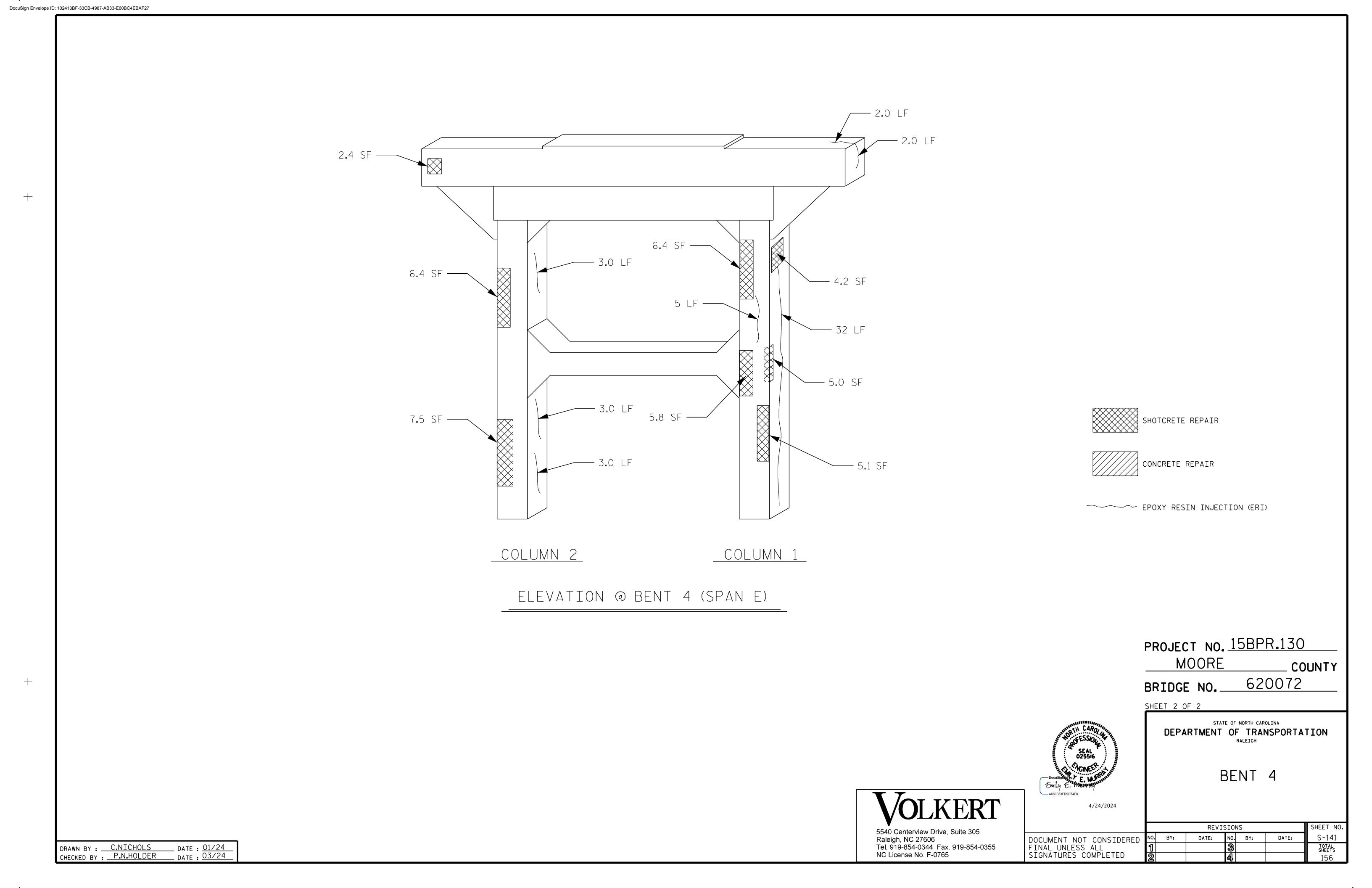
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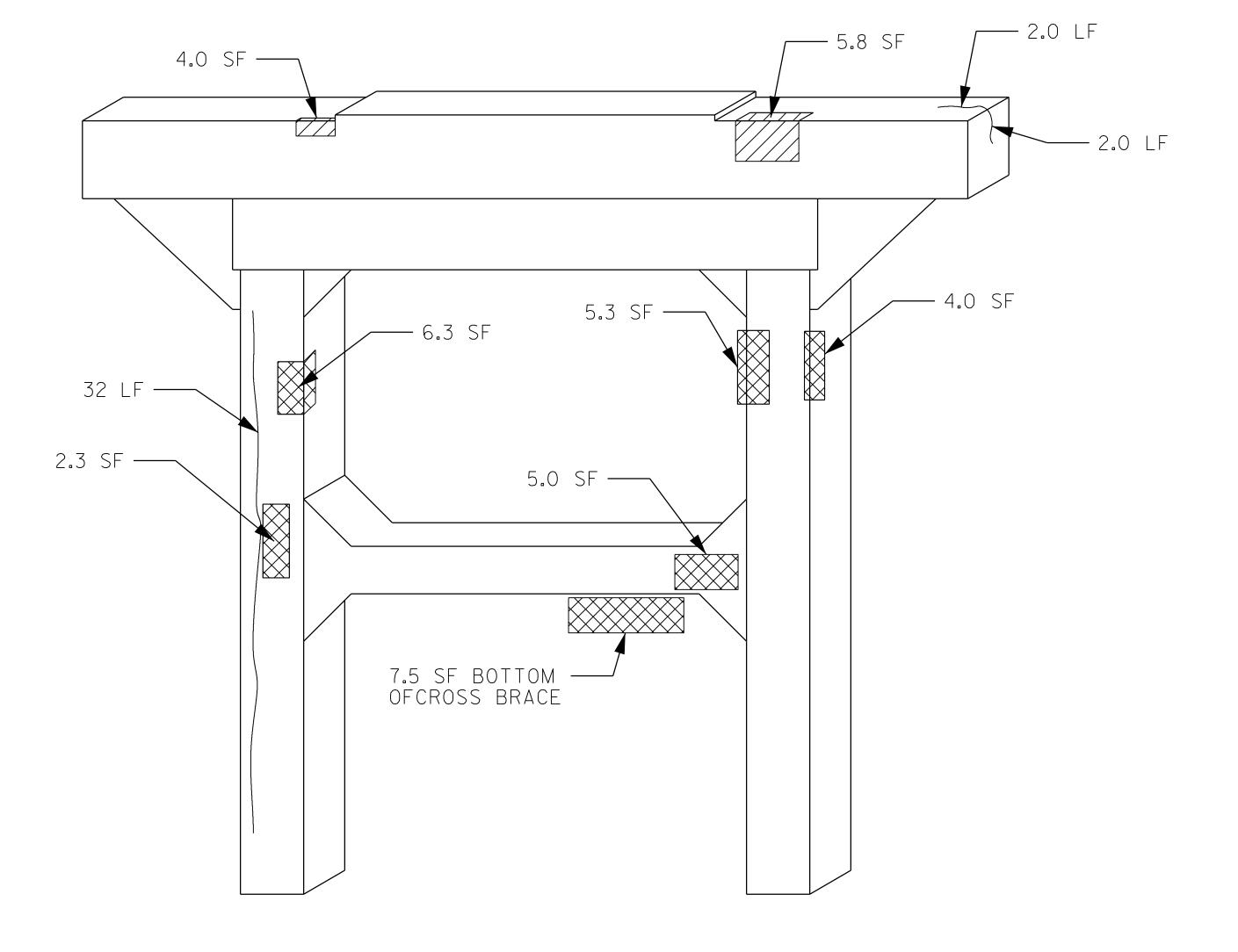
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COLUMN 1

COLUMN 2

ELEVATION @ BENT 5 (SPAN E)

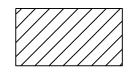
AS-BUILT REPAIR QUANTITY TABLE QUANTITIES REPAIRS BENT 5 ESTIMATE ACTUAL SHOTCRETE AREA SF VOLUME CF AREA SF VOLUME CF REPAIRS 0.0 0.0 COLUMN 37.4 18.7 CONCRETE AREA SF VOLUME CF VOLUME CF REPAIRS 9.8 4.9 COLUMN 0.0 0.0 EPOXY RESIN LN. FT. INJECTION CAP 4.0 COLUMN 32.0 SQ. FT. SQ. FT. EPOXY COATING

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

70.0



TOP OF BENT CAP



EPOXY RESIN INJECTION (ERI)

PROJECT NO. 15BPR.130

MOORE ____ COUNTY

BRIDGE NO. 620072

SHEET 1 OF 2



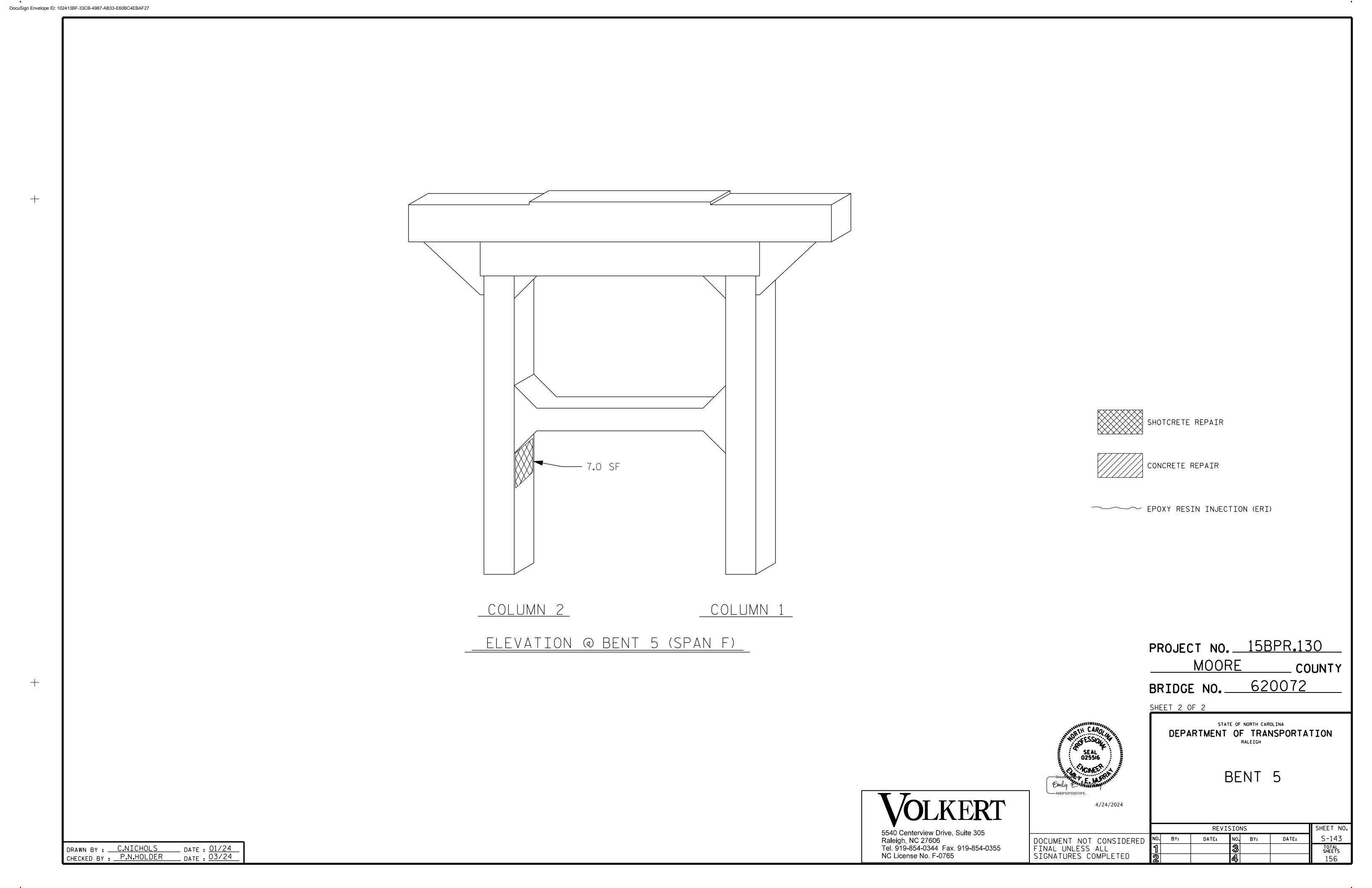
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BENT 5

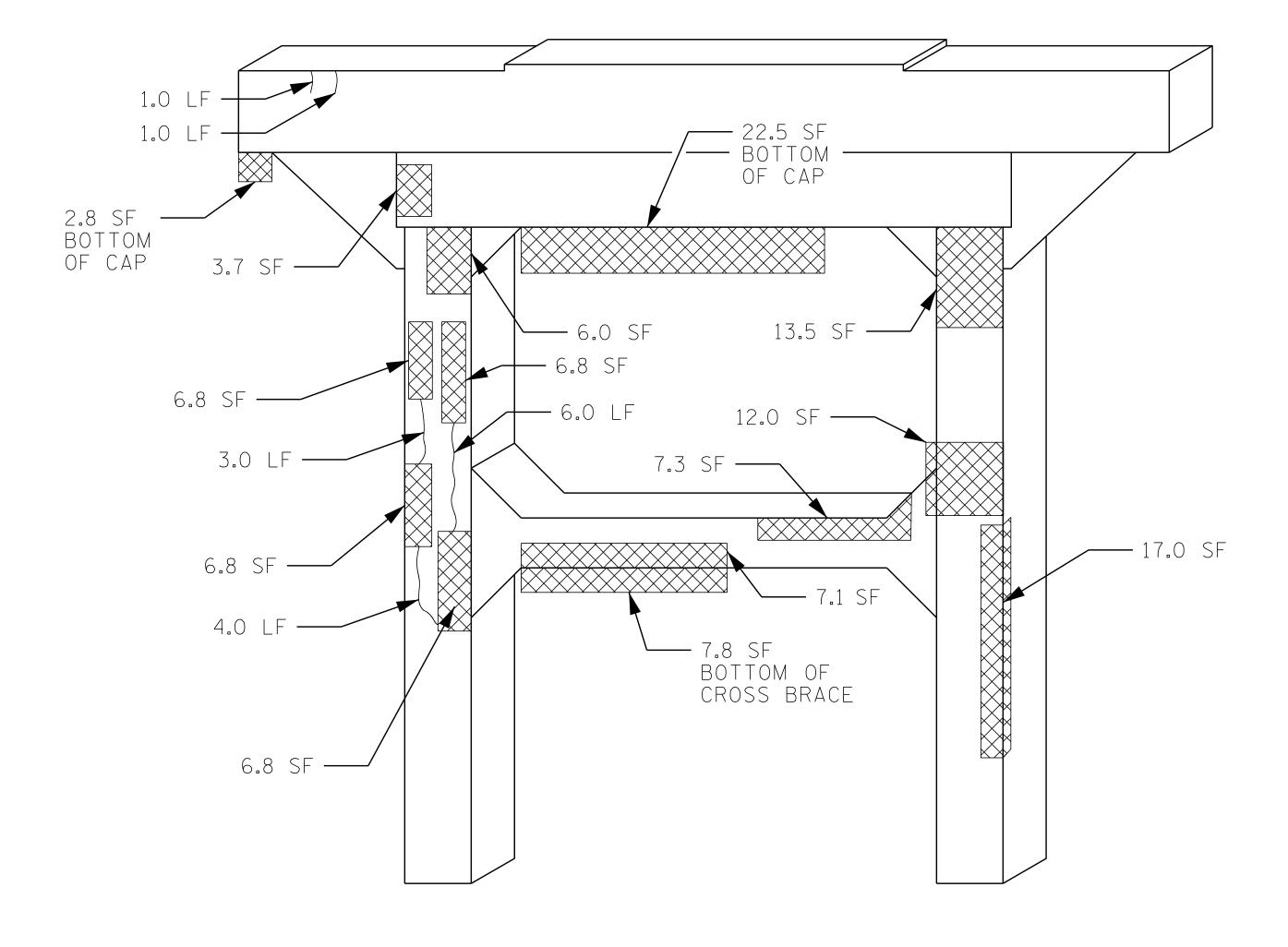
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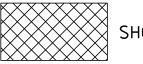
ELEVATION @ BENT 6 (SPAN F)

COLUMN 2

COLUMN 1

AS-BUILT REPAIR QUANTITY TABLE QUANTITIES REPAIRS BENT 6 ESTIMATE ACTUAL SHOTCRETE AREA SF VOLUME CF AREA SF VOLUME CF REPAIRS 29.0 14.5 COLUMN 120.2 60.1 CONCRETE AREA SF VOLUME CF AREA SF VOLUME CF REPAIRS 0.0 0.0 0.0 COLUMN 0.0 EPOXY RESIN LN. FT. INJECTION 2.0 COLUMN 16.0 SQ. FT. SQ. FT. EPOXY COATING TOP OF BENT CAP 70.0

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



SHOTCRETE REPAIR



CONCRETE REPAIR

EPOXY RESIN INJECTION (ERI)

PROJECT NO. 15BPR.130 MOORE COUNTY

BRIDGE NO. 620072

SHEET 1 OF 2

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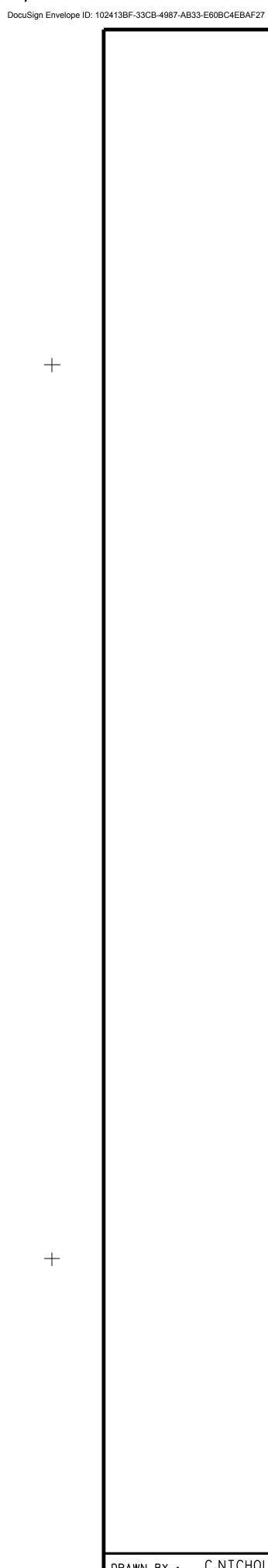
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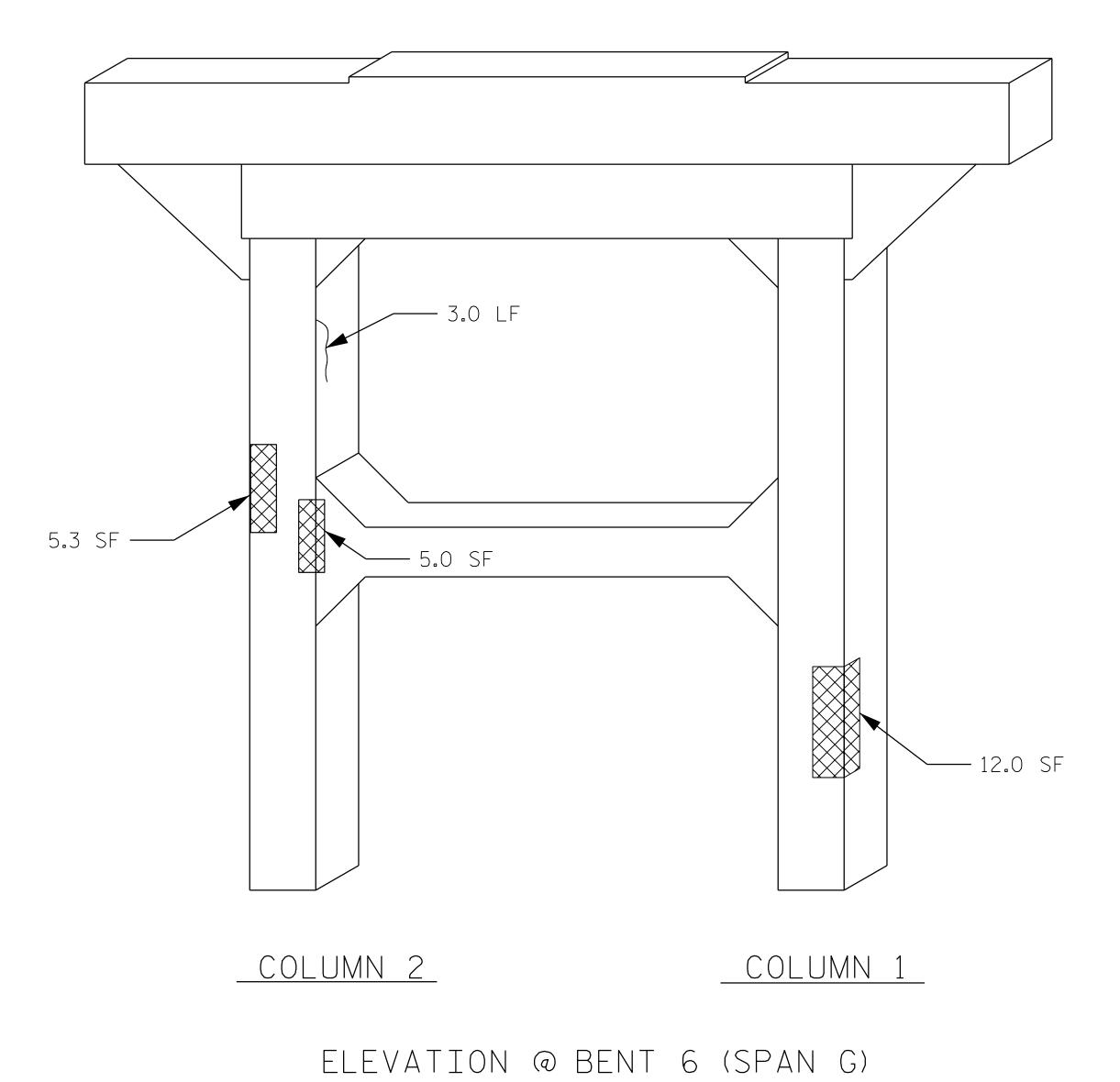
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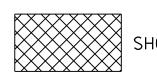
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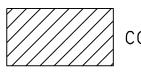
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EPOXY RESIN INJECTION (ERI)

PROJECT NO. 15BPR.130

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STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
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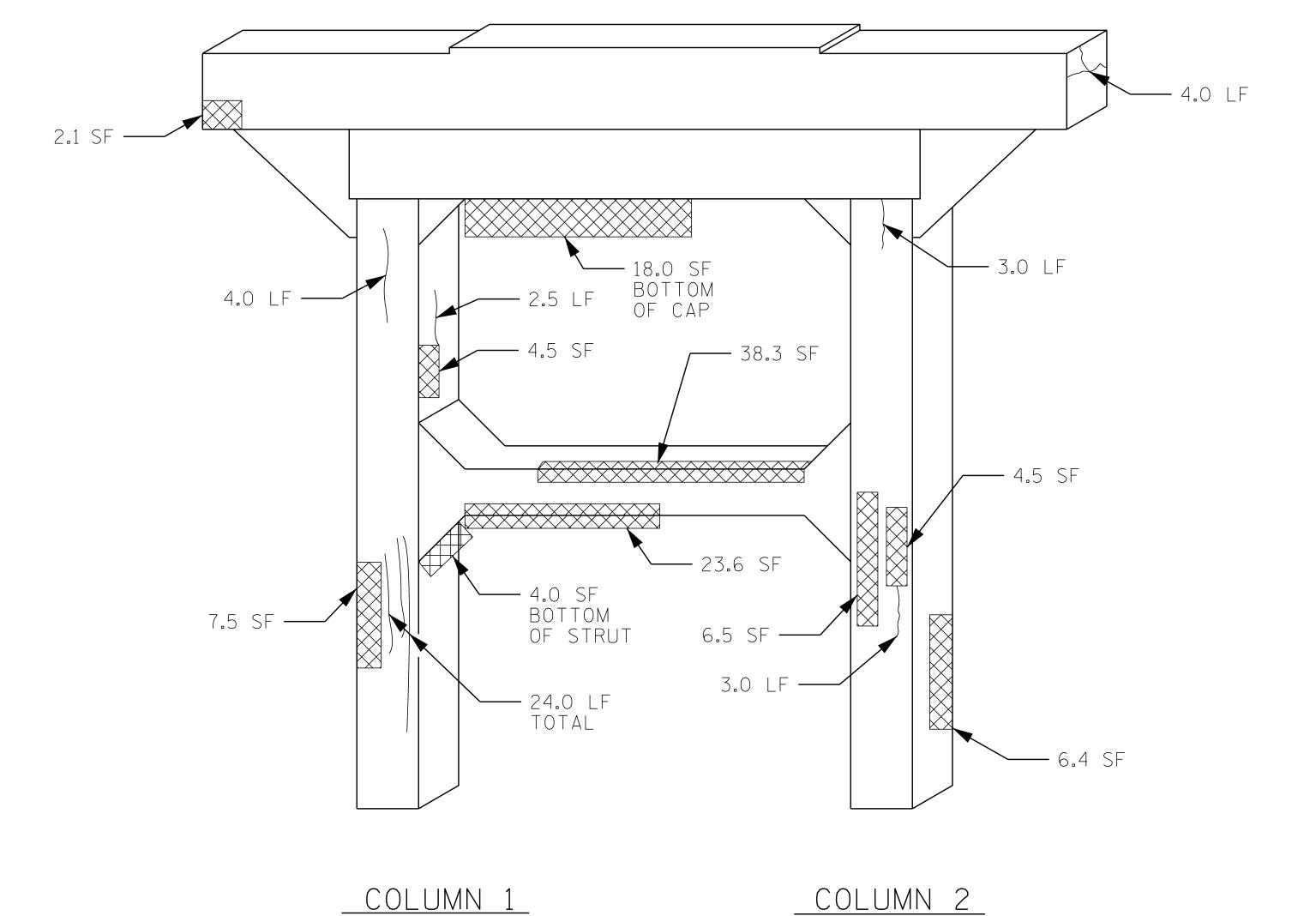
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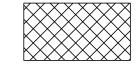




ELEVATION @ BENT 7 (SPAN G)

AS-BUILT REPAIR QUANTITY TABLE QUANTITIES REPAIRS BENT 7 ESTIMATE ACTUAL SHOTCRETE AREA SF VOLUME CF AREA SF VOLUME CF REPAIRS 20.1 10.1 68.0 COLUMN 136.0 CONCRETE AREA SF VOLUME CF AREA SF VOLUME CF REPAIRS 0.0 0.0 0.0 COLUMN 0.0 EPOXY RESIN LN. FT. INJECTION 14.0 42.5 COLUMN SQ. FT. SQ. FT. EPOXY COATING TOP OF BENT CAP 70.0

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



SHOTCRETE REPAIR



CONCRETE REPAIR

EPOXY RESIN INJECTION (ERI)

PROJECT NO. 15BPR.130

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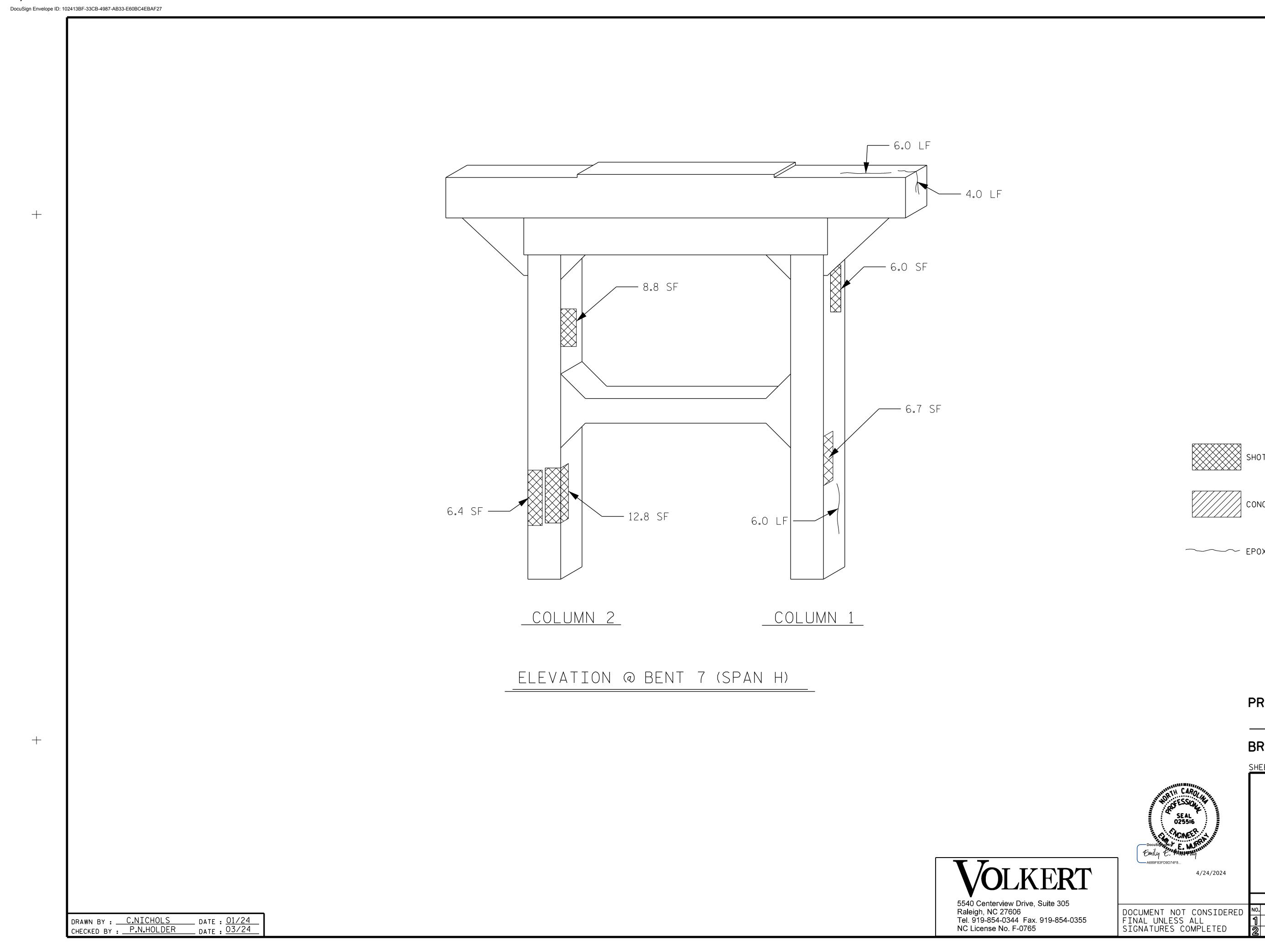
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EPOXY RESIN INJECTION (ERI)

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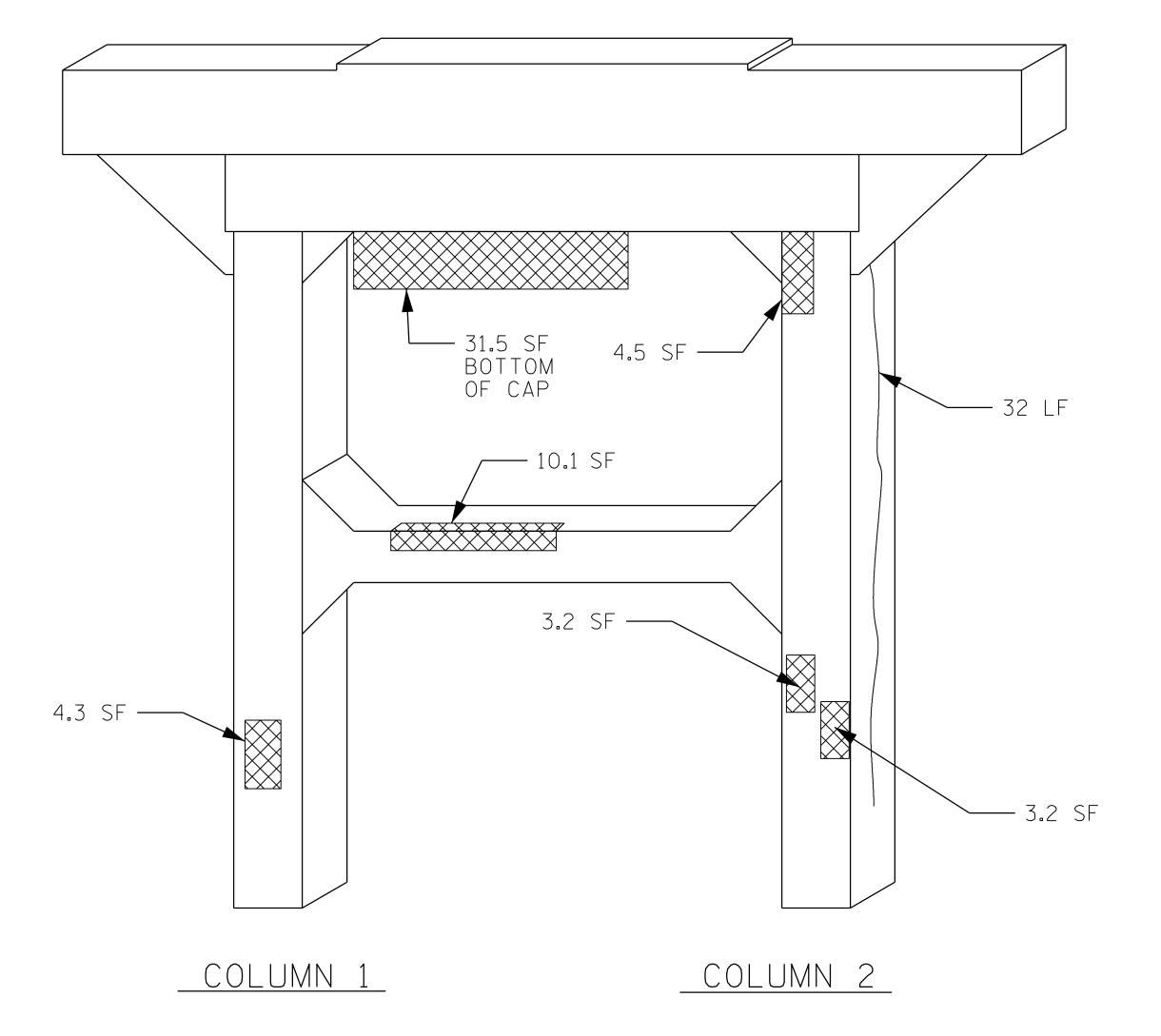
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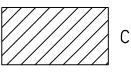
ELEVATION @ BENT 8 (SPAN H)

AS-BUILT REPAIR QUANTITY TABLE

REPAIRS	QUANTITIES						
BENT 8	ESTI	MATE	ACTUAL				
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF			
CAP	31.5	15.8					
COLUMN	33.3	16.7					
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF			
CAP	0.0	0.0					
COLUMN	0.0	0.0					
EPOXY RESII	N	LN. FT.	LN. FT.				
CAP		0.0					
COLUMN		32.0					
EPOXY COATING		SQ. FT.	SQ. FT.				
TOP OF BENT CAP		70.0					

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





EPOXY RESIN INJECTION (ERI)

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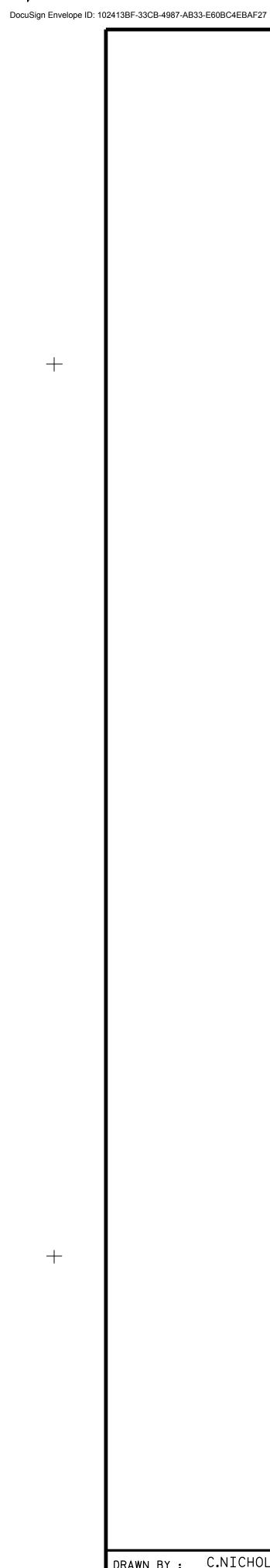
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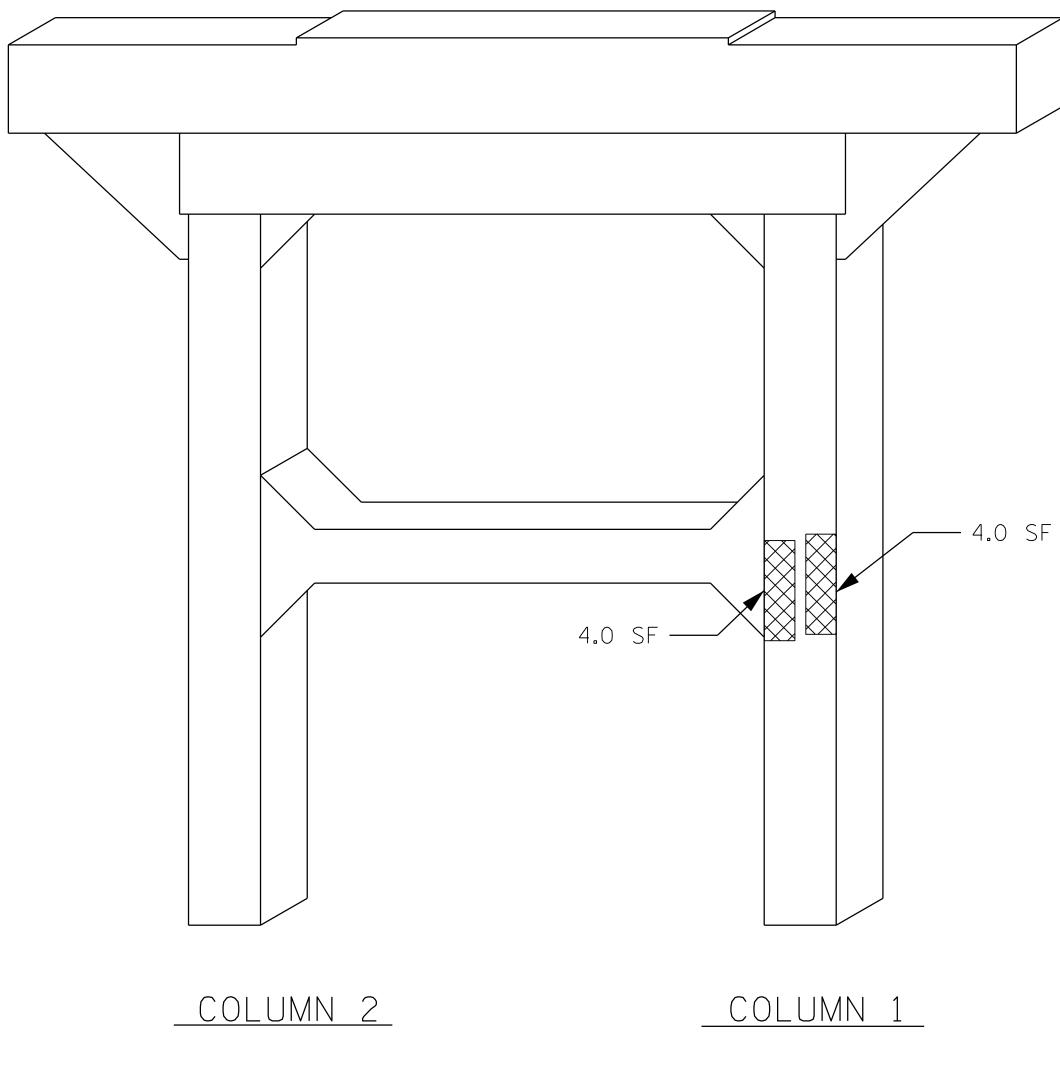
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SHOTCRETE REPAIR



CONCRETE REPAIR

EPOXY RESIN INJECTION (ERI)

ELEVATION @ BENT 8 (SPAN J)

PROJECT NO. 15BPR.130

MOORE COUNTY

BRIDGE NO. 620072

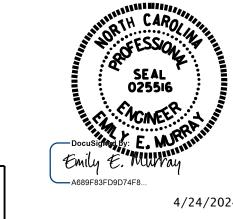
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BENT 8

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2			4			156		

— 5.3 SF — 17.0 SF 7.5 SF — BOTTOM — 2.0 LF OF CAP 5.3 SF —— 5.8 SF —

— 3.6 SF

_COLUMN 2

ELEVATION @ BENT 9 (SPAN J)

COLUMN 1

AS-BUILT REPAIR QUANTITY TABLE QUANTITIES REPAIRS BENT 9 ESTIMATE ACTUAL SHOTCRETE AREA SF VOLUME CF AREA SF VOLUME CF REPAIRS 25.4 12.7 38.2 COLUMN 19.1 CONCRETE AREA SF VOLUME CF VOLUME CF REPAIRS 0.0 0.0 COLUMN 0.0 0.0 EPOXY RESIN LN. FT. INJECTION CAP 0.0 COLUMN 2.0 SQ. FT. SQ. FT. EPOXY COATING TOP OF BENT CAP 70.0

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





EPOXY RESIN INJECTION (ERI)

PROJECT NO. 15BPR.130 MOORE ____ COUNTY

BRIDGE NO. 620072

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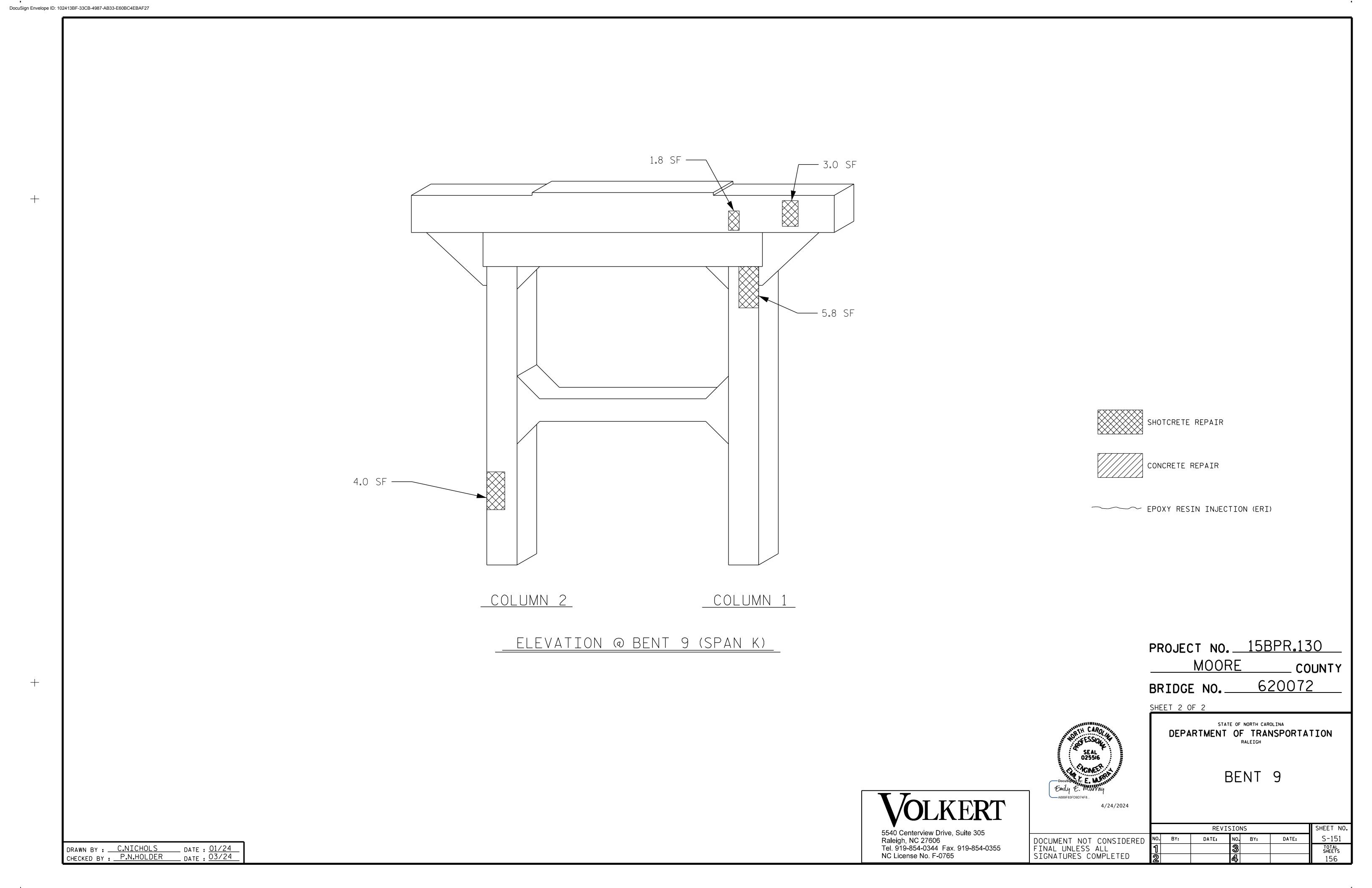
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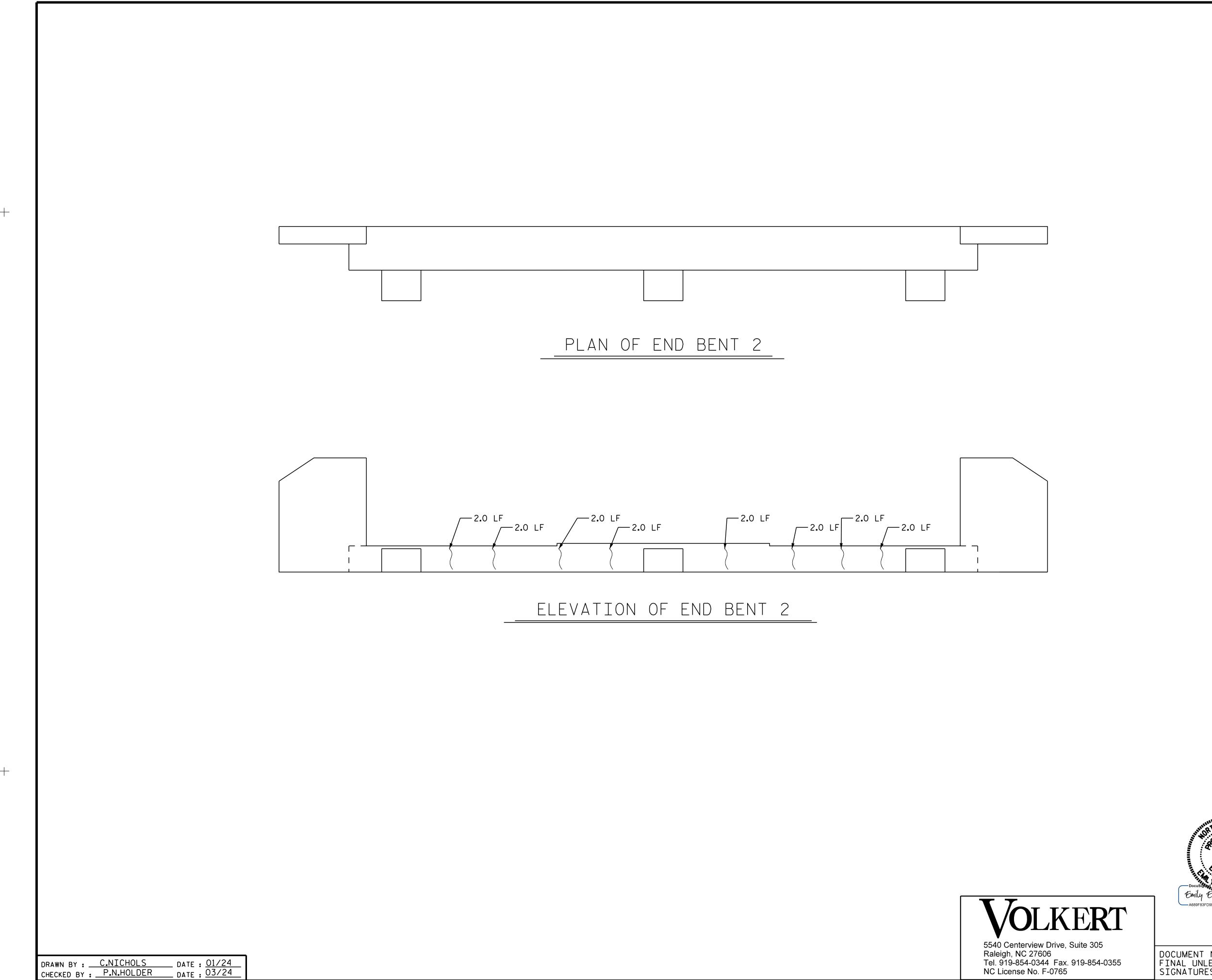
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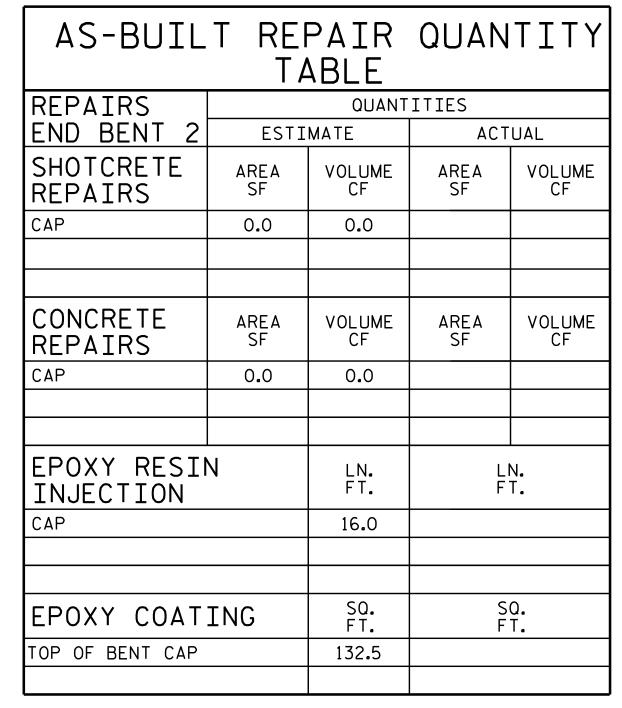
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VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND 2" MIN. CLEAR TO SAWCUT.

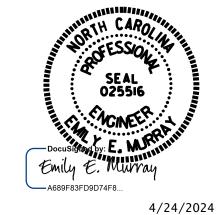




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EPOXY RESIN INJECTION (ERI)

PROJECT NO. 15BPR.130 MOORE _ COUNTY BRIDGE NO. 620072



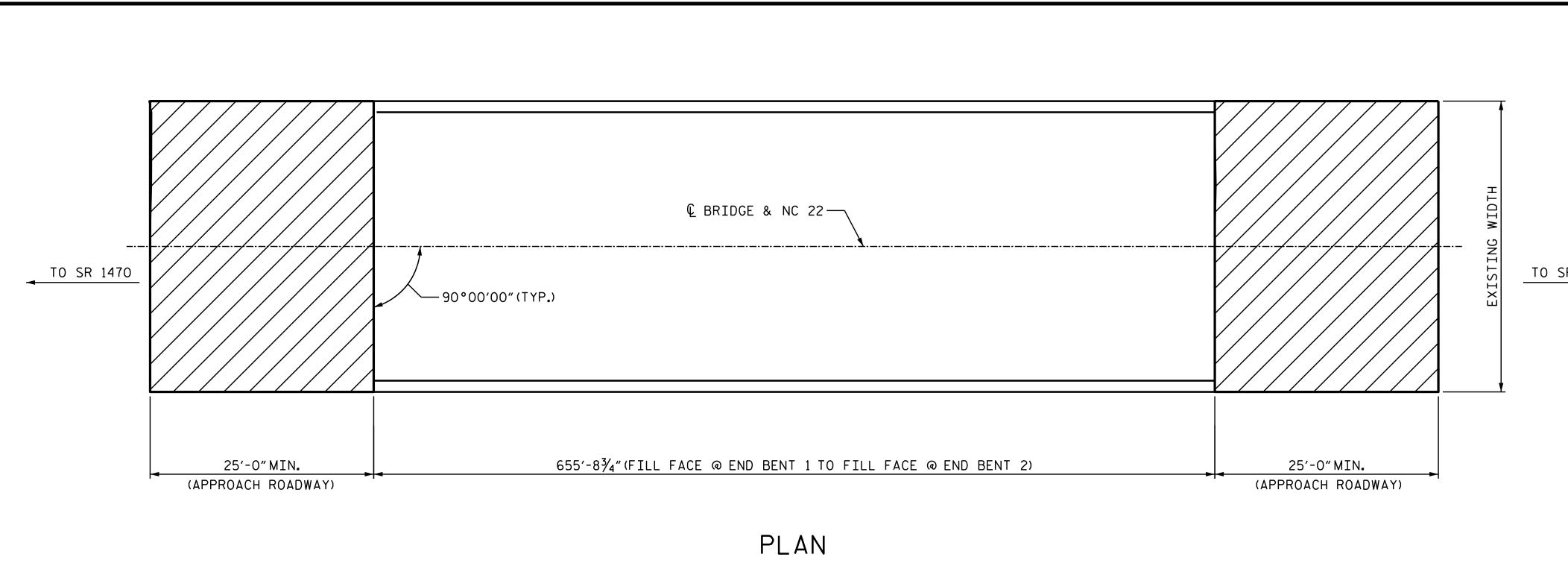
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INCIDENTAL MILLING - EXISTING APPROACH ASPHALT PAVING TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM $1\frac{1}{2}$ " DEPTH OF NEW ASPHALT PAVING.

PROVIDE NEW ASPHALT PAVING THICKNESS TO CREATE A SMOOTH TRANSITION BETWEEN THE ROADWAY AND THE BRIDGE DECK.

NEW ASPHALT PAVING THICKNESS MAY EXCEED $1^{1}\!\!/_{2}$ "DUE TO SETTLEMENT OF THE EXISTING APPROACH ASPHALT PAVING.

TO SR 1606

SUMMARY OF QUANTITIES							
MOORE 72							
	ESTIMATE	ACTUAL					
INCIDENTAL MILLING	156 SQ. YD.						
ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C	13.2 TONS						
ASPHALT BINDER FOR PLANT MIX	O.8 TONS						

EXISTING WIDTH ┌─ (L ROADWAY) GRADE POINT — EXISTING EXISTING

TYPICAL ROADWAY MILLING SECTION

EXISTING WIDTH ┌─ (L ROADWAY) GRADE POINT -MATCH EXISTING MATCH EXISTING

TYPICAL PROPOSED ROADWAY SECTION

PROPOSED VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1"DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN $1\frac{1}{2}$ " IN DEPTH OR GREATER THAN 2" IN DEPTH.

PROJECT NO. 15BPR.130 MOORE COUNTY BRIDGE NO. 620072

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

APPROACH MILLING AND TYPICAL ROADWAY SECTIONS

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BENT 4 LOOKING SOUTH

DRIFT REMOVAL LOCATIONS

DRAWN BY: B.H.BARNHILL DATE: 04/2024 CHECKED BY: E.E.MURRAY DATE: 04/2024

DRIFT REMOVAL

THE INFORMATION PROVIDED IS BASED ON DRIFT ACCUMULATION AS OF 3/8/2022. THE EXACT AMOUNT OF DRIFT VARIES DAILY.

REMOVAL OF DRIFT SHALL BE ACCESSED FROM THE TOP OF THE BRIDGE DECK. ASSISTANCE FROM BOATS IN THE RIVER MAYBE ALLOWED, BUT NO ACCESS TO THE DRIFT SHALL BE ALLOWED FROM THE RIVER BANK.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF ALL DRIFT MATERIALS PRIOR TO THE PROJECT'S END.

THE CONTRACTOR SHALL NOT ALLOW, AT ANY TIME, THE DRIFT MATERIALS TO FLOW DOWNSTREAM OF THE PROJECT SITE.

THE CONTRACTOR SHALL CONTAIN AND DISPOSE OF COLLECTED DRIFT MATERIALS OFF SITE.

FOR DRIFT REMOVAL, SEE SPECIAL PROVISIONS.

FOR SECURING OF VESSELS, SEE SPECIAL PROVISIONS.

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

RESIDENT ENGINEER

DATE

PROJECT NO. 15BPR.130

MOORE COUNTY

BRIDGE NO. 620072



DEPARTMENT OF TRANSPORTATION
RALEIGH

DRIFT REMOVAL

4/24/2024

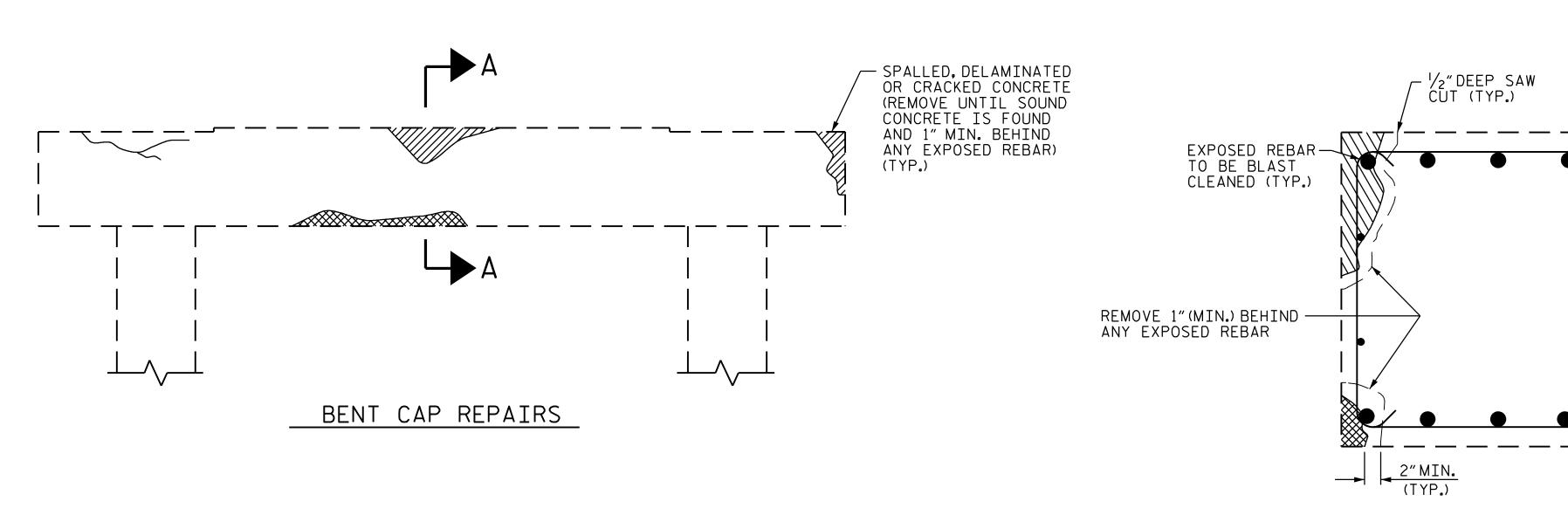
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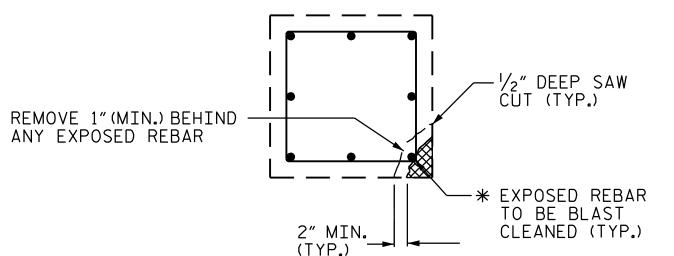
5430 Wade Park Blvd, Suite 410

Raleigh, NC 27607 Tel. 919-854-0344 Fax. 919-854-0355 NC License No. F-0765 REVISIONS

SHEET NO.
S-154

STOTAL SHEETS
156





PLAN OF COLUMN

ELEVATION OF COLUMN

COLUMN REPAIR

CRACK 5 MILS — OR GREATER

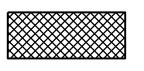
REMOVE 1"(MIN.) BEHIND -ANY EXPOSED REBAR

REPAIR KEY

SECTION A-A

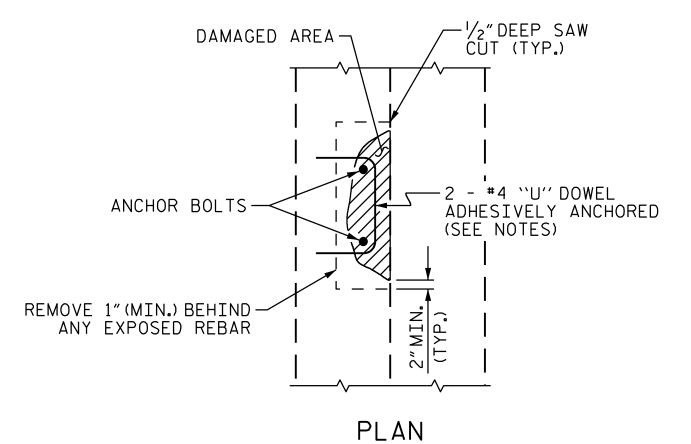
CONCRETE REPAIR AREA (FORM AND POUR)

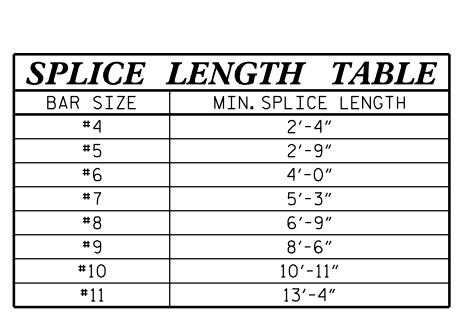
CAP REPAIR

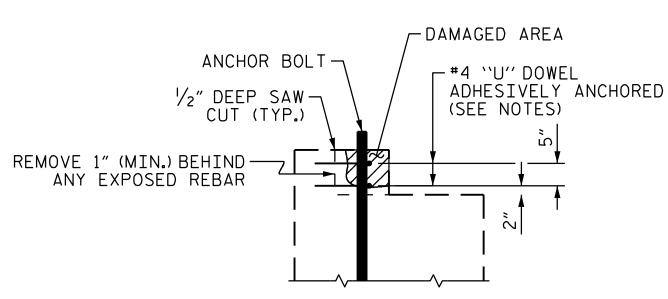


SHOTCRETE REPAIR AREA

EPOXY RESIN INJECTION (ERI)

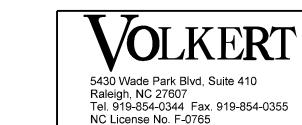






ELEVATION

PEDESTAL WALL REPAIR



OCUMENT NOT CONSIDERED FINAL UNLESS ALL

SIGNATURES COMPLETED

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

CHATHAM, MOORE COUNTY

15BPR.130

SHEET NO **REVISIONS** DATE: S-155 DATE: BY: TOTAL SHEETS

156

ASSEMBLED BY : D. A. GLADDEN DATE: 04/2024 CHECKED BY : E. E. MURRAY DATE: 04/2024 DRAWN BY: NAP 8/18

CHECKED BY :

1/2" DEEP SAW CUT (TYP.)

-* EXPOSED REBAR

—2"MIN. (TYP.)

* REPAIR LENGTH SHALL NOT EXCEED 10 FEET.

TO BE BLAST CLEANED (TYP.)

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 11/2" BEHIND THE MAIN REINFORCING BARS, NOTIFY THE ENGINEER PRIOR TO PROCEEDING.

REINFORCING STEEL WHICH IS DETERMINED BY THE ENGINEER TO BE REPLACED, SHALL BE REMOVED TO A POINT WHERE IT IS SOUND. THE PATCH 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 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.

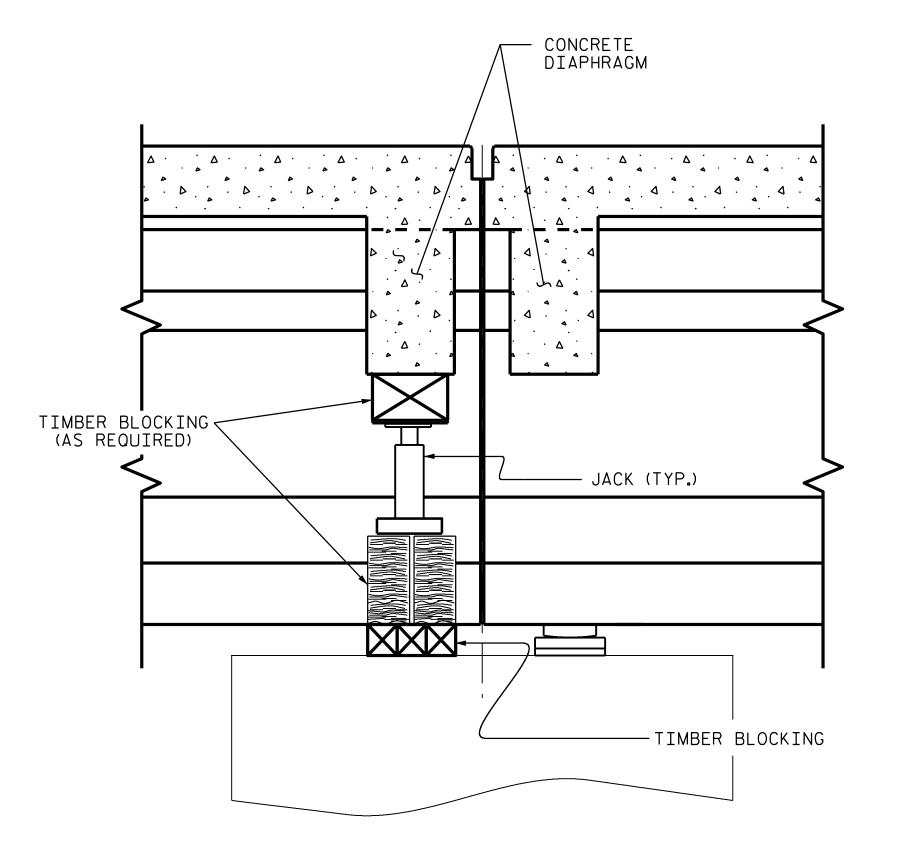
FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

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

BRIDGE No. 180007, 180477, 620049, 620072

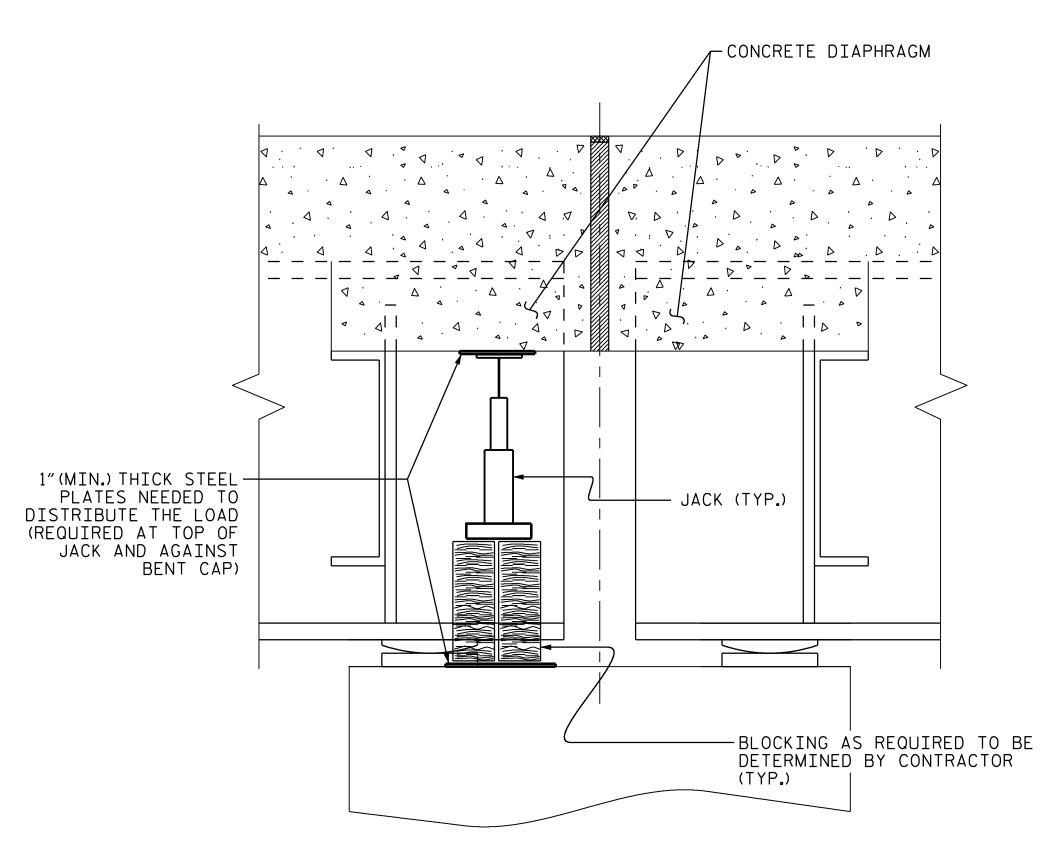
PROJ. NO. ___

4/24/2024



SECTION THRU DIAPHRAGM
(BRIDGE #620049)

BRIDGE #620049 JACKING TABLE					
LOCATION	SPAN	BEAM(S)	BRIDGE JACKING TYPE	DEAD LOAD (DC+DW) (KIPS)	
BENT 1	Α	1	TYPE I	59.0	
BENT 1	Α	2	TYPE I	49.3	
BENT 1	В	1	TYPE I	58.6	
BENT 1	В	2	TYPE I	49.0	
BENT 1	В	3	TYPE I	49.0	
BENT 1	В	4	TYPE I	58.6	



SECTION THRU DIAPHRAGM
(BRIDGE #620072)

BRIDGE #620072 JACKING TABLE						
LOCATION	SPAN	BEAM(S)	BRIDGE JACKING TYPE	DEAD LOAD (DC+DW) (KIPS)		
BENT 5	E	4	TYPE I	43.9		

5430 Wade Park Blvd., Suite 410
Raleigh, NC 27607
Tel. 919-854-0344 Fax. 919-854-0355
NC License No. F-0765

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 PROVISION.

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.

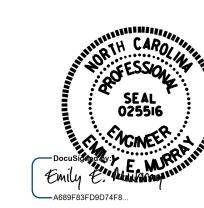
ANY STEEL THAT HAS BEEN WELDED TO THE EXISTING STRUCTURE SHALL REMAIN IN PLACE.

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

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

PROJ. NO. 15BPR.130

MOORE county
BRIDGE NO.620049, 620072



DOCUMENT NOT CONSIDERED

FINAL UNLESS ALL

SIGNATURES COMPLETED

DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD

BRIDGE JACKING DETAILS

4/24/2024

REVISIONS

NO. BY: DATE: NO. BY: DATE: S-156

1 3 TOTAL SHEETS
156

ASSEMBLED BY : B. N. BARNHILL
CHECKED BY : P. N. HOLDER

DRAWN BY : NAP 08/18
CHECKED BY :

STANDARD NOTES

DESIGN DATA:

SPECIFICATIONS	AASHTO (CURRENT)	
LIVE LOAD	SEE PLANS	
IMPACT ALLOWANCE	SEE AASHTO	
STRESS IN EXTREMI STRUCTURAL STEE	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 STEE	24,000 LBS. PER SQ. IN.	
CONCRETE IN COMP	1,200 LBS. PER SQ. IN.	
CONCRETE IN SHEA	R	SEE AASHTO
STRUCTURAL TIMBE	R - TREATED OR UNTREATED EXTREME FIBER STRESS	1,800 LBS. PER SQ. IN.
COMPRESSION PER	375 LBS. PER SQ. IN.	
EQUIVALENT FLUID I	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 2024 "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 CHAMFERED¾" WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO 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 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 $\frac{1}{6}$ " Ø SHEAR STUDS FOR THE 3/4" Ø STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - $\frac{7}{8}$ " Ø STUDS FOR 4 - $\frac{3}{4}$ " Ø STUDS. AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF # Ø STUDS ALONG THE BEAM AS SHOWN FOR $\frac{3}{4}$ " Ø STUDS BASED ON THE RATIO OF 3 - $\frac{7}{8}$ "Ø STUDS FOR 4 - $\frac{3}{4}$ " Ø 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 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 APPROXIMATEL \$\frac{1}{2} f_6\text{"} 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.