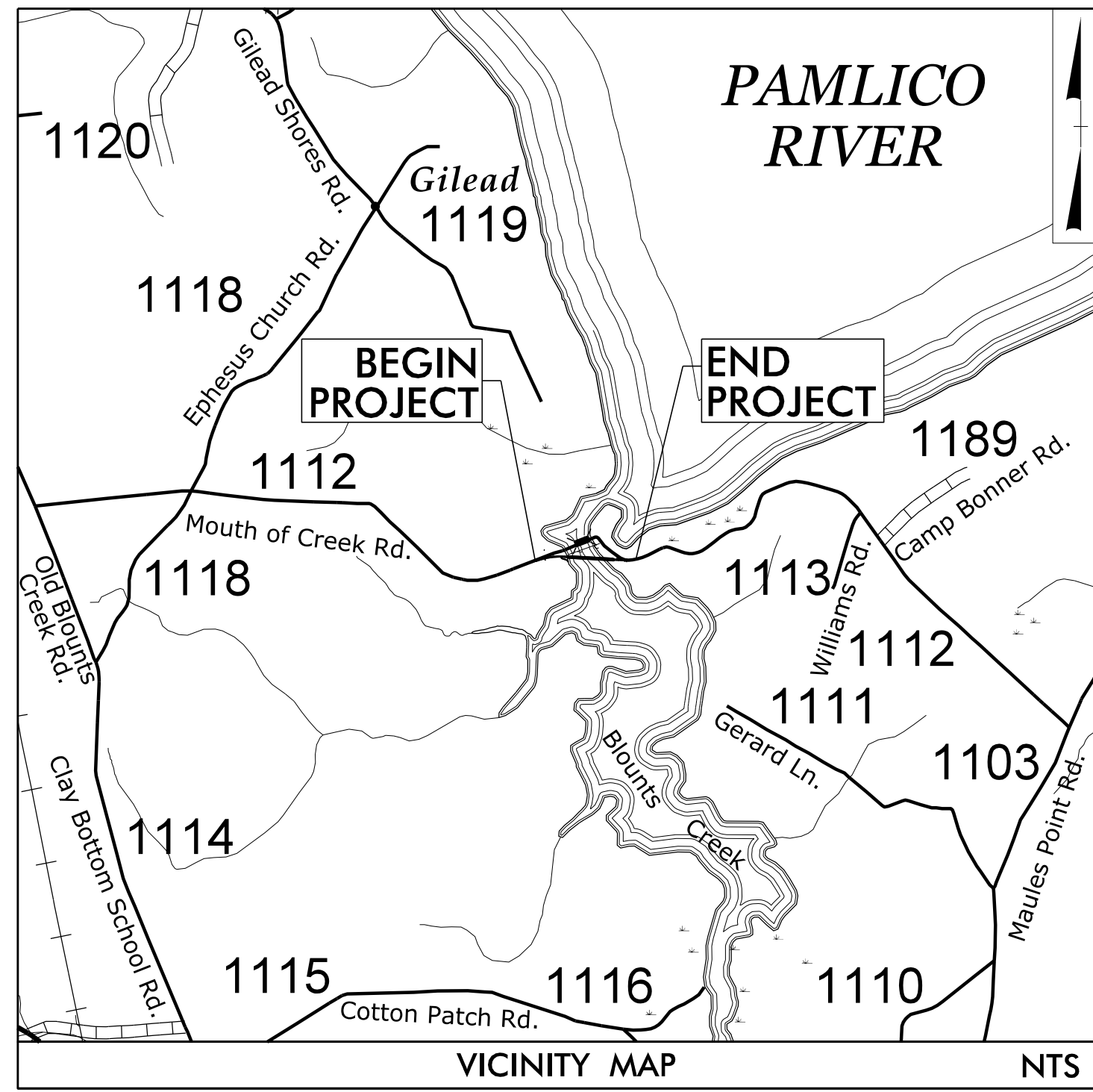


09/08/25  
\$\$\$\$\$SYTIME\$\$\$\$\$DON\$\$\$\$\$USERNAME\$\$\$\$\$

TIP PROJECT: B-5614

CONTRACT: C204711

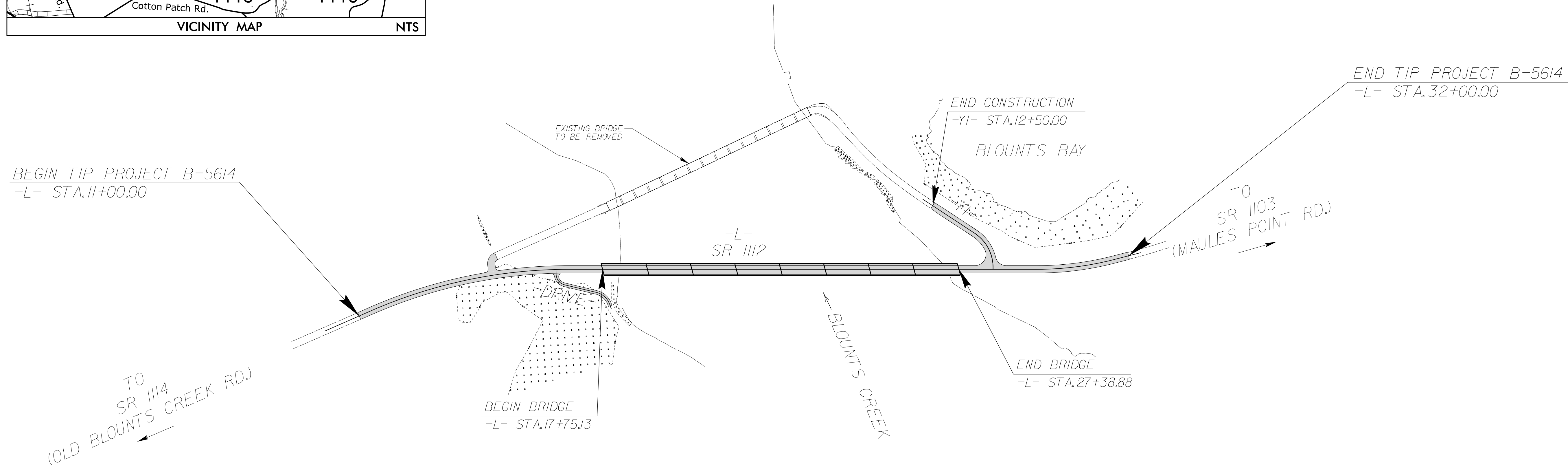


STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS  
**BEAUFORT COUNTY**

LOCATION: **BRIDGE #060009 OVER BLOUNTS CREEK  
ON SR 1112 (MOUTH OF THE CREEK ROAD)**

TYPE OF WORK: **DRAINAGE, GRADING, PAVING, AND STRUCTURE**

| STATE           | STATE PROJECT REFERENCE NO. | SHEET NO.    | TOTAL SHEETS |
|-----------------|-----------------------------|--------------|--------------|
| N.C.            | B-5614                      | 1            |              |
| STATE PROJ. NO. | F.A. PROJ. NO.              | DESCRIPTION  |              |
| 45569.1.2       | N/A                         | PE           |              |
| 45569.2.1       | 1112019                     | RIGHT-OF-WAY |              |
| 45569.2.2       | 1112019                     | UTILITIES    |              |
| 45569.3.1       | 1112019                     | CONSTRUCTION |              |



**STRUCTURES**

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

**DESIGN DATA**

2024 ADT = <1000  
2044 ADT = <1000  
V = 60 MPH

FUNC. CLASS. = LOCAL  
SUBREGIONAL TIER

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT B-5614 = 0.215 mi.  
LENGTH STRUCTURES TIP PROJECT B-5614 = 0.183 mi.  
TOTAL LENGTH TIP PROJECT B-5614 = 0.398 mi.

Prepared in the Offices of:



**STEWART**  
223 S. WEST ST., STE. 1100  
RALEIGH, NC 27603  
T 919.380.8750



VHB Engineering NC, P.C. (C-3705)  
940 Main Campus Drive, Suite 500  
Raleigh, NC 27606

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:  
NOVEMBER 15, 2021

LETTING DATE:  
OCTOBER 21, 2025

DAVID RUGGLES, PE  
PROJECT ENGINEER

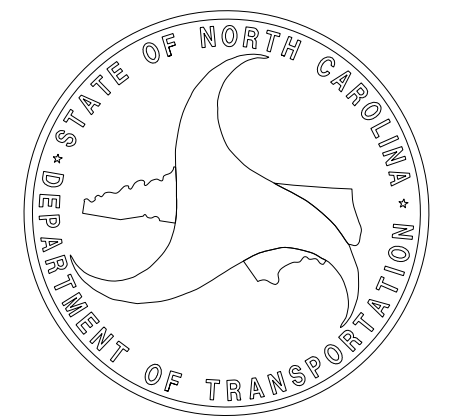
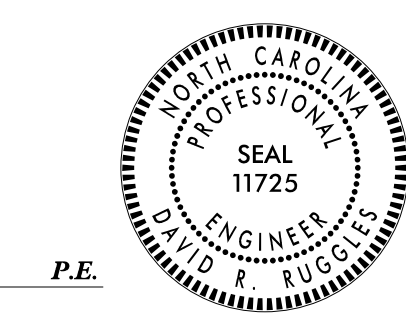
JEFFREY C. WILSON, PE  
PROJECT DESIGN ENGINEER

DAVID STUTTS, PE  
NCDOT CONTACT

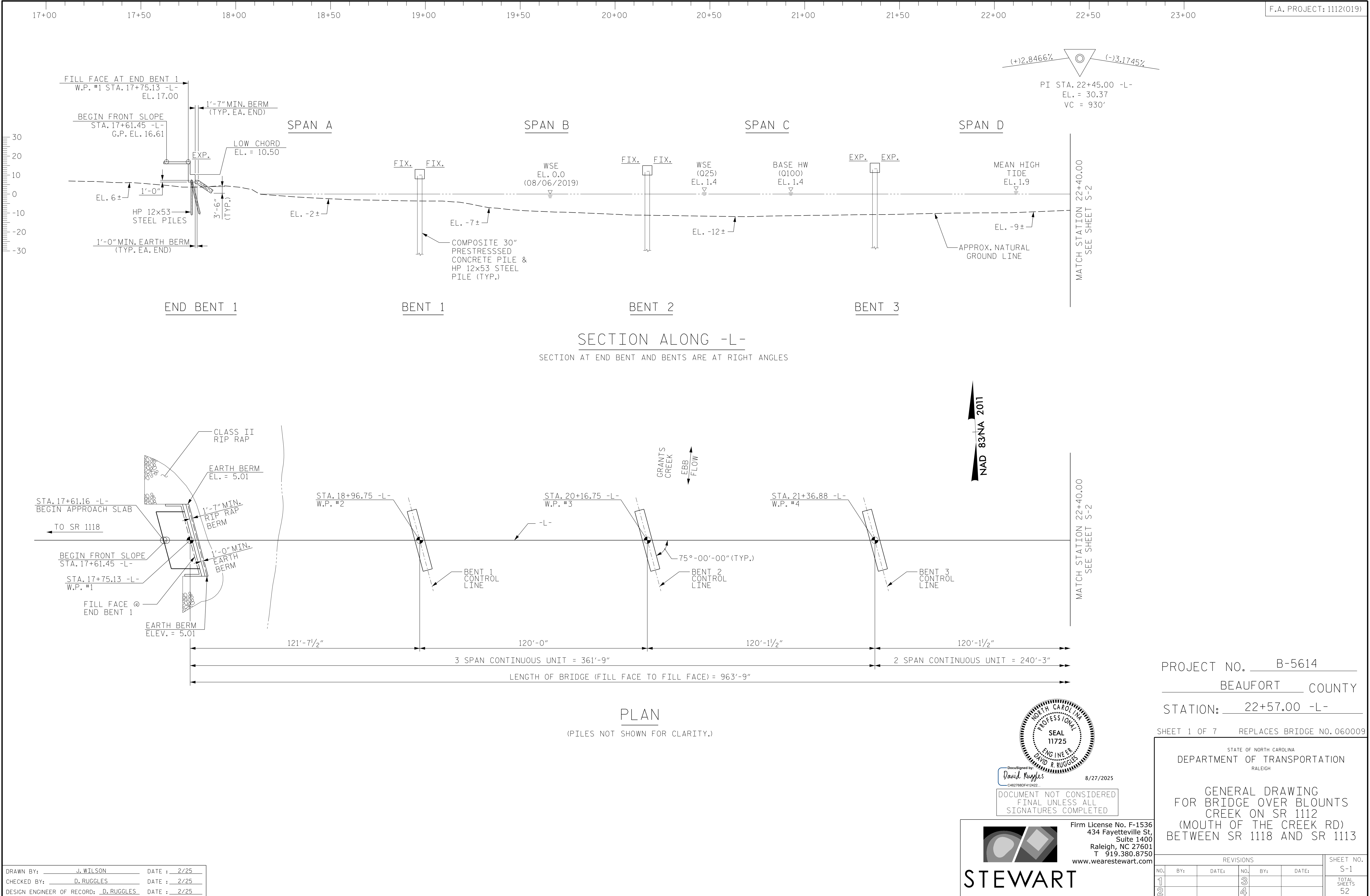
STRUCTURES ENGINEER

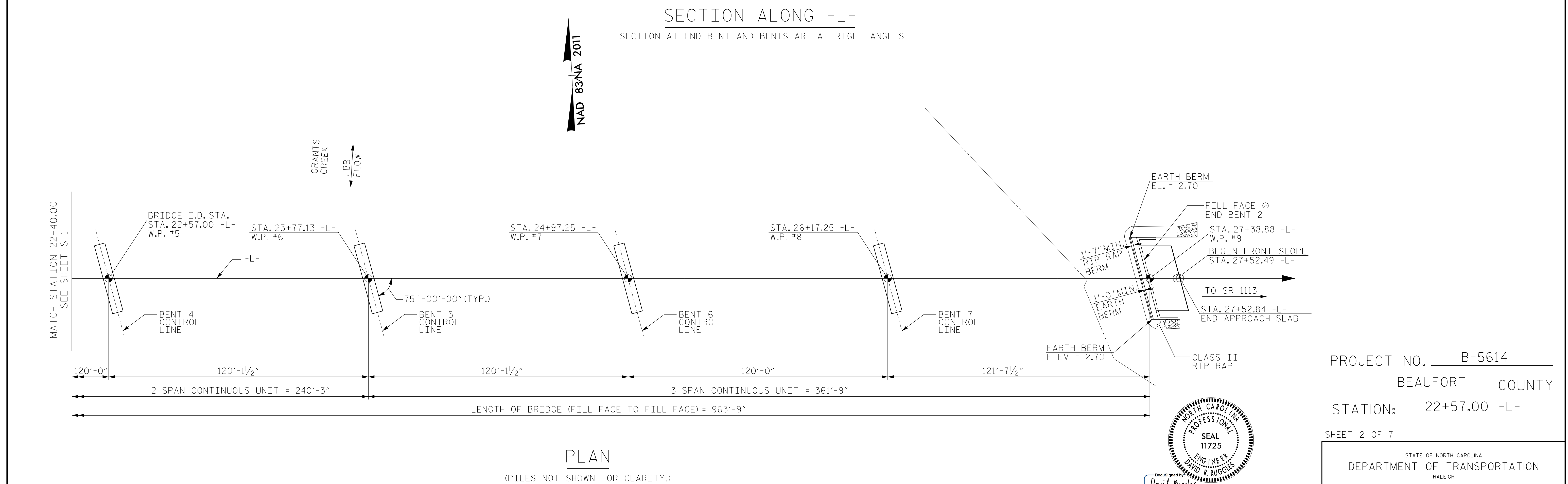
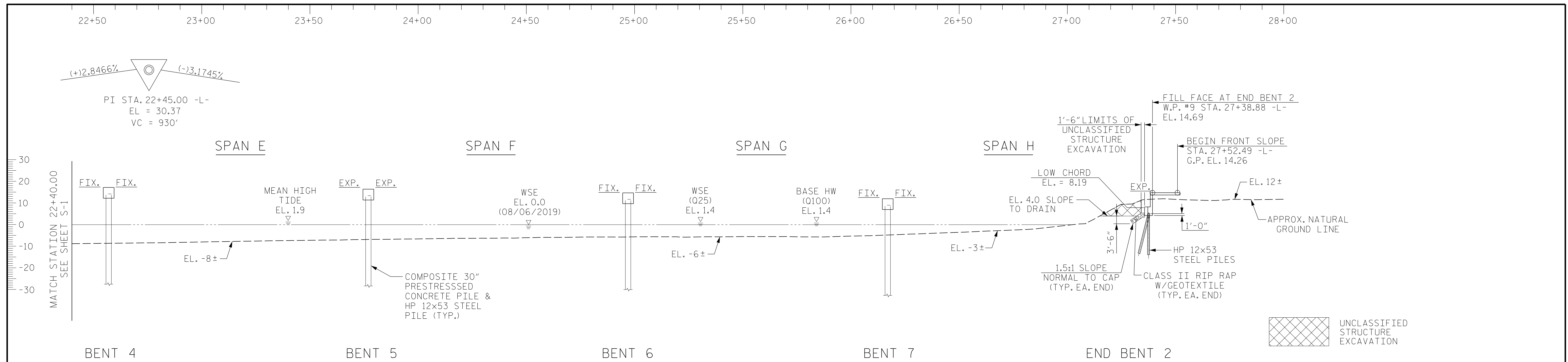
DocuSigned by:  
David Ruggles  
C48278BDE412422

SIGNATURE:  
9/22/2025



8/27/2025  
B-5614\_SMU.GD1\_060009.dgn  
USER:dfault





PROJECT NO. B-5614  
BEAUFORT COUNTY  
 STATION: 22+57.00 -L-

SHEET 2 OF 7

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

GENERAL DRAWING  
FOR BRIDGE OVER BLOUNTS  
CREEK ON SR 1112  
(MOUTH OF THE CREEK RD)  
BETWEEN SR 1118 AND SR 1113

|           |     |       |     |     |       |                       |
|-----------|-----|-------|-----|-----|-------|-----------------------|
| REVISIONS |     |       |     |     |       | SHEET NO.<br>S-2      |
| NO.       | BY: | DATE: | NO. | BY: | DATE: |                       |
| 1         |     |       | 3   |     |       | TOTAL<br>SHEETS<br>52 |
| 2         |     |       | 4   |     |       |                       |



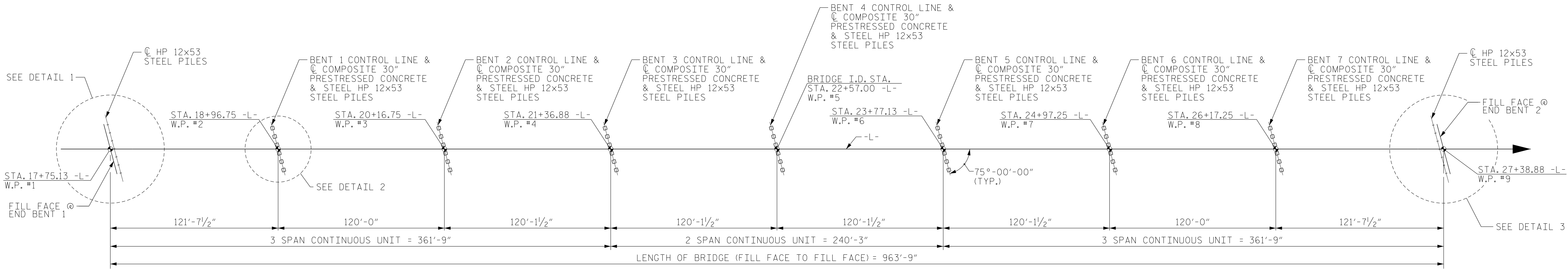
Firm License No. F-1536  
434 Fayetteville St.  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
[www.wearstewart.com](http://www.wearstewart.com)

STEWART

8/26/2025  
...\\B-5614-SMU\_GD2\_060009.dgn  
USER:default

DRAWN BY: J. WILSON DATE: 2/25  
CHECKED BY: D. RUGGLES DATE: 2/25  
DESIGN ENGINEER OF RECORD: D. RUGGLES DATE: 2/25

8/26/2025  
B-5614\_SMU.FL1\_060009.dgn  
USER:default



END BENT 1

BENT 1

BENT 2

BENT 3

BENT 4

BENT 5

BENT 6

BENT 7

END BENT 2

## FOUNDATION LAYOUT

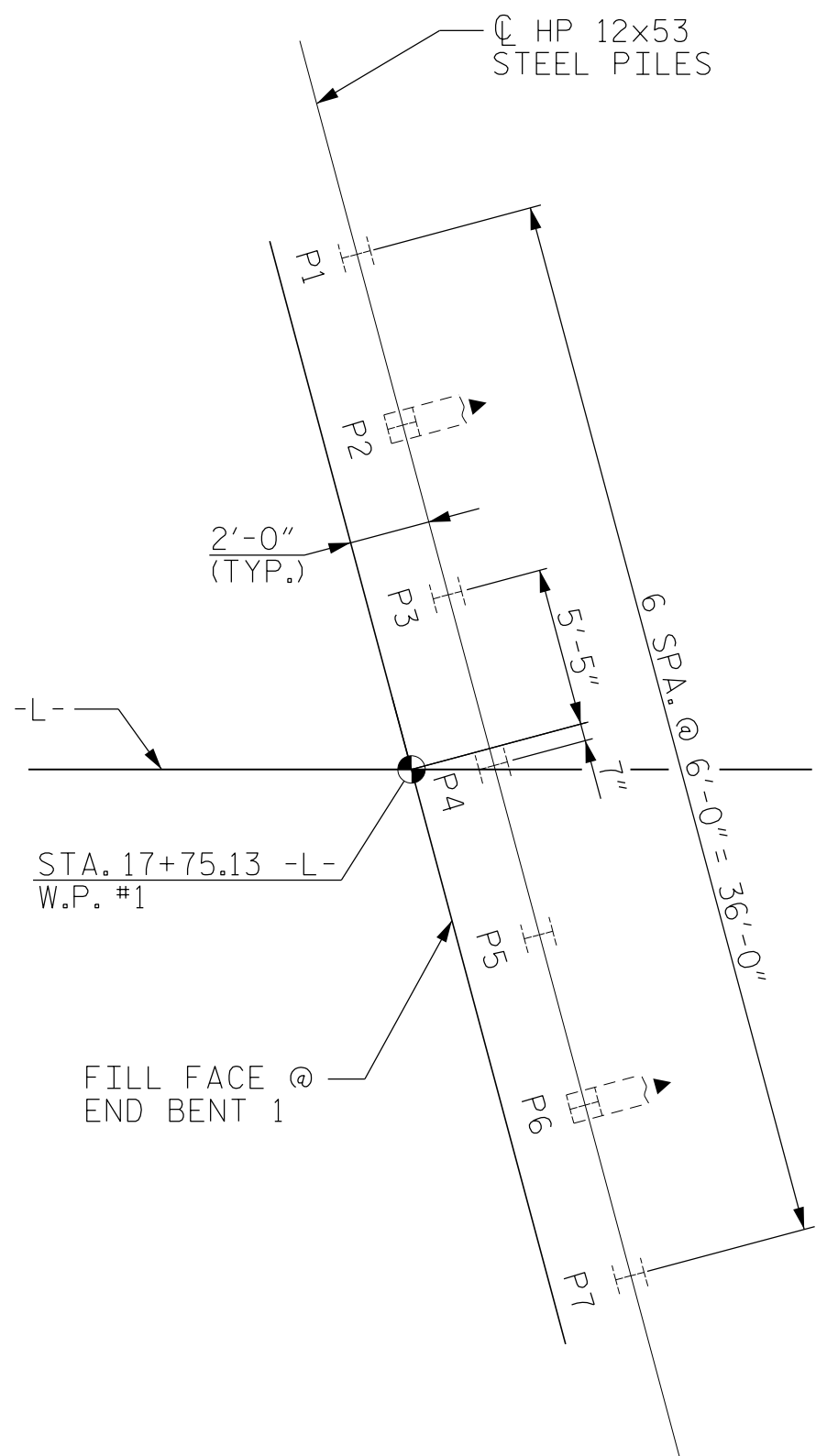
DIMENSIONS LOCATING PILES ARE SHOWN TO THE CENTERLINE OF PILES.

## FOUNDATION NOTES

OBSERVE A THREE (3) MONTH WAITING PERIOD AFTER CONSTRUCTING THE EMBANKMENT, END BENT AND REINFORCED BRIDGE APPROACH FILL, IF APPLICABLE, BEFORE BEGINNING APPROACH SLAB CONSTRUCTION AT END BENT 1. FOR BRIDGE WAITING PERIODS, SEE ROADWAY PLAN AND SECTION 235 OF THE STANDARD SPECIFICATIONS.

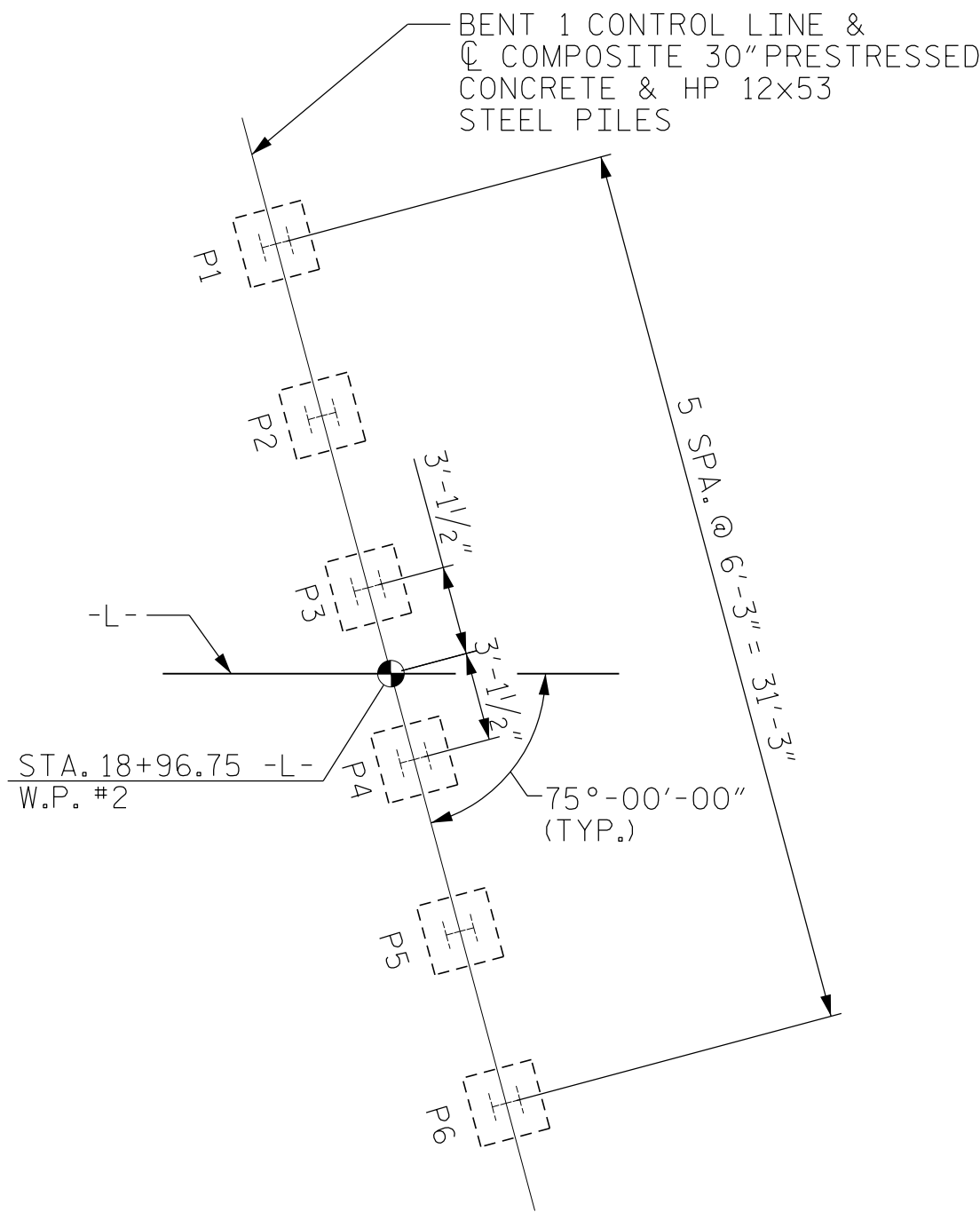
FOR PILES, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

IT HAS BEEN ESTIMATED THAT A HAMMER WITH AN EQUIVALENT RATED ENERGY IN THE RANGE OF 80,000 FT-LBS PER BLOW TO 165,000 FT-LBS PER BLOW WILL BE REQUIRED TO DRIVE PILES AT BENT 1 THROUGH BENT 7. THIS ESTIMATED ENERGY RANGE DOES NOT RELEASE THE CONTRACTOR FROM PROVIDING DRIVING EQUIPMENT IN ACCORDANCE WITH SUBARTICLE 450-3(D)(2) OF THE STANDARD SPECIFICATIONS.



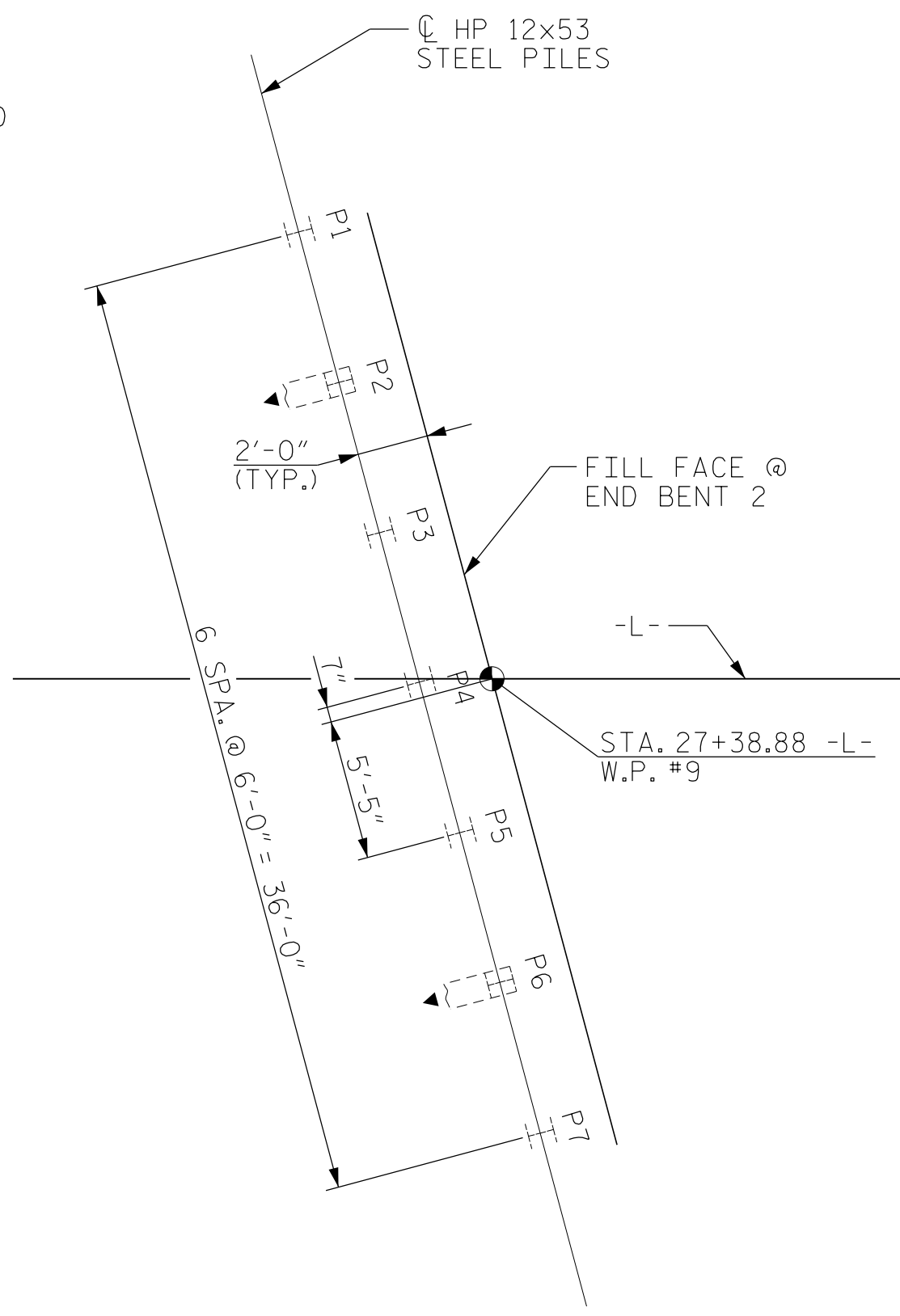
DETAIL 1

▲ DENOTES 3:12 PILE BATTER



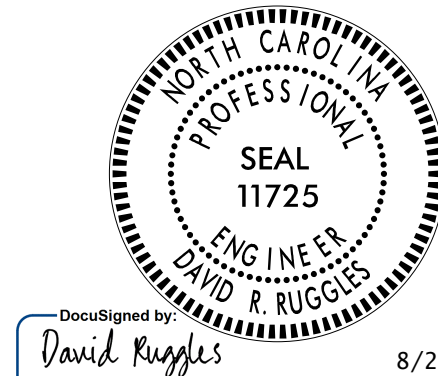
DETAIL 2

BENT 1 SHOWN, OTHER BENTS SIMILAR



DETAIL 3

▲ DENOTES 3:12 PILE BATTER



8/26/2025

DocuSigned by  
David Ruggles

DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED



STEWART

Firm License No. F-1536  
434 Fayetteville St,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com

PROJECT NO. B-5614

BEAUFORT COUNTY

STATION: 22+57.00 -L-

SHEET 3 OF 7

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

GENERAL DRAWING  
FOR BRIDGE OVER BLOUNTS  
CREEK ON SR 1112  
(MOUTH OF THE CREEK RD)  
BETWEEN SR 1118 AND SR 1113

| REVISIONS |     |       |     |     |       | SHEET NO.<br>S-3      |
|-----------|-----|-------|-----|-----|-------|-----------------------|
| NO.       | BY: | DATE: | NO. | BY: | DATE: |                       |
| 1         |     |       | 3   |     |       | TOTAL<br>SHEETS<br>52 |
| 2         |     |       | 4   |     |       |                       |

(Blank entries indicate item is not applicable to structure)

\*Predrilling for Piles is required for end bents/bents with a predrilling length and at the Contractor's option for end bents/bents with predrilling information but no predrilling length.

(Blank entries indicate item is not applicable to structure)

\*Factored Dead Load is factored weight of pile above the ground line.

(Blank entries indicate item is not applicable to structure)

\*EST = Pile order lengths from estimated pile lengths; DPT = Pile order lengths based on DPT testing. For groups of end bents/bents with pile order lengths based on DPT testing, the first end bent/bent no. listed for each group is the representative end bent/bent with the DPT.

(Blank entries indicate item is not applicable to structure)

---

1. The Pile Foundation Tables are based on the bridge substructure design and foundation recommendations sealed by a North Carolina Professional Engineer (Jacob Wessell, P.E., NC PE 030395) on 11-22-2022.
2. Total Pile Driving Equipment Setup quantity (not shown in Pile Foundation Tables) equals the number of driven piles, i.e., the number of piles with a Required Driving Resistance.
3. Observe a three (3) month waiting period after constructing the embankment, end bent and reinforced bridge approach fill, if applicable, before beginning approach slab construction at End Bent No. 1. For bridge waiting periods, see roadway plans and Section 235 of the Standard Specifications.
4. For piles, see piles provision and Section 450 of the Standard Specifications.

BEAUFORT COUNTY

STATION: 22+57.00 -L-

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

# PILE FOUNDATION TABLES (END BENTS)

(Blank entries indicate item is not applicable to structure)

$$* RDR = \frac{\text{Factored Resistance} + \text{Factored Drag Load} + \text{Factored Dead Load}}{\text{Dynamic Resistance Factor}} + \text{Nominal Drag Load Resistance} + \text{Nominal Resistance from Scourable Material}$$

(Blank entries indicate item is not applicable to structure)

\* Factored Dead Load is factored weight of pile above the ground line.

(Blank entries indicate item is not applicable to structure)

(Blank entries indicate item is not applicable to structure)

EST = Pile order lengths from estimated pile lengths; DPT = Pile order lengths based on Dynamic Pile Testing. For groups of end bents/bents with pile order lengths based on DPT testing, the first end bent/bent no. listed for each group is the representative end bent/bent with the DPT.

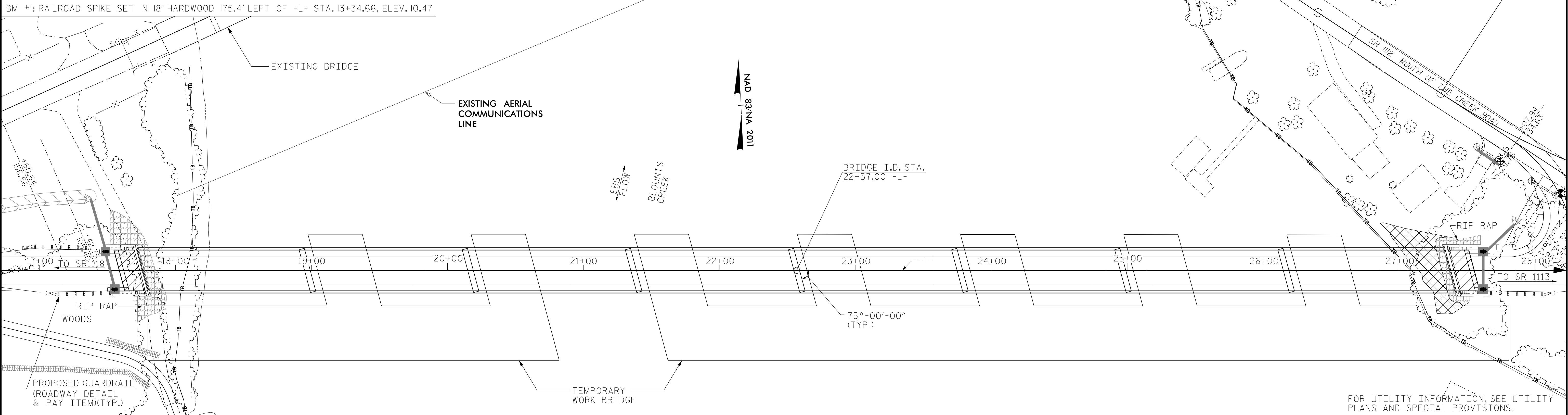
EST = Pile order lengths from estimated pile lengths; DPT = Pile order lengths based on Dynamic Pile Testing. For groups of end bents/bents with pile order lengths based on DPT testing, the first end bent/bent no. listed for each group is the representative end bent/bent with the DPT.

**SHEET 5 OF 7**

1. The Pile Foundation Tables are based on the bridge substructure design and foundation recommendations sealed by a North Carolina Professional Engineer (Thein Tun Zan, #030943) on 012-5-2024.
2. Total Pile Driving Equipment Setup quantity (not shown in Pile Foundation Tables) equals the number of driven piles, i.e., the number of piles with a Required Driving Resistance.
3. The Engineer may adjust the quantity for DPT Testing and Pipe Pile Plates when necessary.

|                                                                                                                      |                                                                                                                                                                                                                         |                  |     |     |       |              |
|----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-----|-----|-------|--------------|
|                                 | <p>STATE OF NORTH CAROLINA<br/> <b>DEPARTMENT OF TRANSPORTATION</b><br/>         RALEIGH</p> <p style="font-size: 2em; font-weight: bold; margin: 20px 0;">PILE<br/>         FOUNDATION<br/>         TABLES (BENTS)</p> |                  |     |     |       |              |
| DocuSigned by:<br><br>SIGNATURE | 7/14/2025<br>DATE                                                                                                                                                                                                       |                  |     |     |       |              |
| REVISIONS                                                                                                            |                                                                                                                                                                                                                         | SHEET NO.<br>S-5 |     |     |       |              |
| NO.                                                                                                                  | BY:                                                                                                                                                                                                                     | DATE:            | NO. | BY: | DATE: | TOTAL SHEETS |
| 1                                                                                                                    |                                                                                                                                                                                                                         |                  | 3   |     |       | 52           |
| 2                                                                                                                    |                                                                                                                                                                                                                         |                  | 4   |     |       |              |
| DOCUMENT NOT CONSIDERED<br>FINAL UNLESS ALL<br>SIGNATURES COMPLETED                                                  |                                                                                                                                                                                                                         |                  |     |     |       |              |

BM #1: RAILROAD SPIKE SET IN 18" HARDWOOD 175.4' LEFT OF -L- STA. 13+34.66, ELEV. 10.47



LOCATION SKETCH

TOTAL BILL OF MATERIAL

| TOTAL BILL OF MATERIAL |                                                             |                                                             |                        |                                         |                                     |                             |                      |                             |                                      |                                               |                                                                  |                                                                            |                                         |                            |                         |                  |                            |                                         |                                      |                               |                         |                        |                                       |          |          |     |
|------------------------|-------------------------------------------------------------|-------------------------------------------------------------|------------------------|-----------------------------------------|-------------------------------------|-----------------------------|----------------------|-----------------------------|--------------------------------------|-----------------------------------------------|------------------------------------------------------------------|----------------------------------------------------------------------------|-----------------------------------------|----------------------------|-------------------------|------------------|----------------------------|-----------------------------------------|--------------------------------------|-------------------------------|-------------------------|------------------------|---------------------------------------|----------|----------|-----|
|                        | CONSTRUCTION<br>MAINTENANCE &<br>REMOVAL OF<br>TEMP. ACCESS | REMOVAL OF<br>EXISTING<br>STRUCTURE AT<br>STA. 22+57.00 -L- | ASBESTOS<br>ASSESSMENT | UNCLASSIFIED<br>STRUCTURE<br>EXCAVATION | REINFORCED<br>CONCRETE<br>DECK SLAB | GROOVING<br>BRIDGE<br>FLOOR | CLASS AA<br>CONCRETE | BRIDGE<br>APPROACH<br>SLABS | EPOXY COATED<br>REINFORCING<br>STEEL | 63" FIB<br>PRESTRESSED<br>CONCRETE<br>GIRDERS | PILE DRIVING<br>EQUIPMENT<br>SETUP FOR<br>HP12x53 STEEL<br>PILES | PILE DRIVING<br>EQUIPMENT<br>SETUP FOR 30"<br>PRESTESSED<br>CONCRETE PILES | 30"<br>PRESTRESSED<br>CONCRETE<br>PILES | HP 12x53<br>STEEL<br>PILES | STEEL<br>PILE<br>POINTS | PILE<br>REDRIVES | DYNAMIC<br>PILE<br>TESTING | VERTICAL<br>CONCRETE<br>BARRIER<br>RAIL | RIP RAP<br>CLASS II<br>(2'-0" THICK) | GEOTEXTILE<br>FOR<br>DRAINAGE | ELASTOMERIC<br>BEARINGS | FOAM<br>JOINT<br>SEALS | BRIDGE<br>DECK<br>ASPHALT<br>PATCHING |          |          |     |
|                        | LUMP SUM                                                    | LUMP SUM                                                    | LUMP SUM               | LUMP SUM                                | SQ. FT.                             | SQ. FT.                     | CY. YDS.             | LUMP SUM                    | LBS                                  | NO.                                           | LIN. FT.                                                         | EACH                                                                       | EACH                                    | No.                        | LIN. FT.                | No.              | LIN. FT.                   | EACH                                    | EACH                                 | EACH                          | LIN. FT.                | TON                    | SQ. YD.                               | LUMP SUM | LUMP SUM | TON |
| SUPERSTRUCTURE         | LUMP SUM                                                    | LUMP SUM                                                    | LUMP SUM               |                                         | 30,985                              | 26,662                      |                      | LUMP SUM                    |                                      | 32                                            | 3,829.33                                                         |                                                                            |                                         |                            |                         |                  |                            |                                         | 1,921.56                             |                               |                         | LUMP SUM               | LUMP SUM                              | 30       |          |     |
| END BENT 1             |                                                             |                                                             |                        |                                         |                                     |                             | 45.8                 |                             | 6,885                                |                                               |                                                                  | 7                                                                          |                                         |                            | 7                       | 490              | 7                          |                                         | 1                                    |                               | 130                     | 145                    |                                       |          |          |     |
| BENT 1                 |                                                             |                                                             |                        |                                         |                                     |                             | 31.2                 |                             | 3,597                                |                                               |                                                                  | 6                                                                          | 6                                       | 330                        | 6                       | 60               | 3                          | 1                                       |                                      |                               |                         |                        |                                       |          |          |     |
| BENT 2                 |                                                             |                                                             |                        |                                         |                                     |                             | 31.1                 |                             | 3,597                                |                                               |                                                                  | 6                                                                          | 6                                       | 360                        | 6                       | 60               | 3                          |                                         |                                      |                               |                         |                        |                                       |          |          |     |
| BENT 3                 |                                                             |                                                             |                        |                                         |                                     |                             | 31.0                 |                             | 3,597                                |                                               |                                                                  | 6                                                                          | 6                                       | 330                        | 6                       | 60               | 3                          |                                         |                                      |                               |                         |                        |                                       |          |          |     |
| BENT 4                 |                                                             |                                                             |                        |                                         |                                     |                             | 30.9                 |                             | 3,597                                |                                               |                                                                  | 6                                                                          | 6                                       | 330                        | 6                       | 60               | 3                          | 1                                       |                                      |                               |                         |                        |                                       |          |          |     |
| BENT 5                 |                                                             |                                                             |                        |                                         |                                     |                             | 31.1                 |                             | 3,597                                |                                               |                                                                  | 6                                                                          | 6                                       | 330                        | 6                       | 60               | 3                          |                                         |                                      |                               |                         |                        |                                       |          |          |     |
| BENT 6                 |                                                             |                                                             |                        |                                         |                                     |                             | 31.2                 |                             | 3,597                                |                                               |                                                                  | 6                                                                          | 6                                       | 330                        | 6                       | 60               | 3                          | 1                                       |                                      |                               |                         |                        |                                       |          |          |     |
| BENT 7                 |                                                             |                                                             |                        |                                         |                                     |                             | 31.4                 |                             | 3,597                                |                                               |                                                                  | 6                                                                          | 6                                       | 330                        | 6                       | 60               | 3                          | 1                                       |                                      |                               |                         |                        |                                       |          |          |     |
| END BENT 2             |                                                             |                                                             |                        | LUMP SUM                                |                                     |                             | 45.8                 |                             | 6,883                                |                                               |                                                                  | 7                                                                          |                                         |                            | 7                       | 455              | 7                          |                                         | 1                                    |                               | 55                      | 60                     |                                       |          |          |     |
| TOTAL                  | LUMP SUM                                                    | LUMP SUM                                                    | LUMP SUM               | LUMP SUM                                | 30,985                              | 26,662                      | 309.5                | LUMP SUM                    | 38,947                               | 32                                            | 3,829.33                                                         | 14                                                                         | 42                                      | 42                         | 2,340                   | 56               | 1,365                      | 14                                      | * 28                                 | 6                             | 1,921.56                | 185                    | 205                                   | LUMP SUM | LUMP SUM | 30  |

NOTES

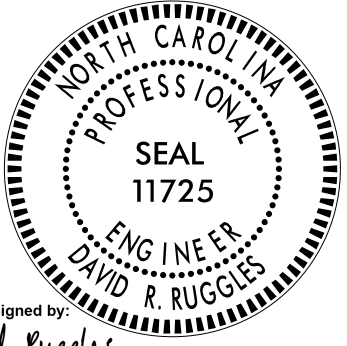
\* TOTAL FOR PILE REDRIVES INCLUDES 7 TOTAL FOR BOTH  
END BENTS, SEE PILE FOUNDATION TABLES.

PROJECT NO. B-5614

BEAUFORT COUNTY

STATION: 22+57.00 -L-

SHEET 6 OF 7



DocuSigned by  
David Ruggles

9/5/2025

DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED



STEWART

Firm License No. F-1536  
434 Fayetteville St,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

GENERAL DRAWING  
BRIDGE OVER BLOUNTS  
CREEK ON SR 1112  
(MOUTH OF THE CREEK RD)  
BETWEEN SR 1118 AND SR 1113

| REVISIONS |     |       |     |     |       | SHEET NO.<br>S-6      |
|-----------|-----|-------|-----|-----|-------|-----------------------|
| NO.       | BY: | DATE: | NO. | BY: | DATE: |                       |
| 1         |     |       | 3   |     |       | TOTAL<br>SHEETS<br>52 |
| 2         |     |       | 4   |     |       |                       |

NOTES

ASSUMED LIVE LOAD = HL-93 OR ALTERNATE LOADING

THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

THIS BRIDGE IS LOCATED IN SEISMIC ZONE 1.

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

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.

THE CLASS AA CONCRETE IN THE BRIDGE DECK SHALL CONTAIN FLY ASH OR GROUND GRANULATED BLAST FURNACE SLAG AT THE SUBSTITUTION RATE SPECIFIED IN ARTICLE 1024-1 AND IN ACCORDANCE WITH ARTICLES 1024-5 AND 1024-6 OF THE STANDARD SPECIFICATIONS. NO PAYMENT WILL BE MADE FOR THIS SUBSTITUTION AS IT IS CONSIDERED INCIDENTAL TO THE COST OF THE REINFORCED CONCRETE DECK SLAB.

FOR FOUNDATION NOTES, SEE SHEETS S-3 THRU S-5.

THE CONTRACTOR SHALL PROVIDE INDEPENDENT ASSURANCE SAMPLES OF REINFORCING STEEL AS FOLLOWS: FOR PROJECTS REQUIRING UP TO 400 TONS OF REINFORCING STEEL, ONE 30 INCH SAMPLE OF EACH SIZE BAR USED, AND FOR PROJECTS REQUIRING OVER 400 TONS OF REINFORCING STEEL, TWO 30 INCH SAMPLES OF EACH SIZE BAR USED. THE SAMPLE BARS SHOULD COME FROM STEEL ACTUALLY USED IN THE PROJECT AND THE SAMPLE BARS SHOULD BE REPLACED BY SPLICED BARS AS SPECIFIED IN THE SAMPLE BAR REPLACEMENT CHART. PAYMENT FOR THE SAMPLE BARS AND REPLACEMENT REINFORCING STEEL SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.

THIS STRUCTURE CONTAINS THE NECESSARY CORROSION PROTECTION REQUIRED FOR A CORROSIVE SITE.

FOR SECURING OF VESSELS, SEE SPECIAL PROVISIONS.

NEEDLE BEAMS WILL NOT BE ALLOWED UNLESS OTHERWISE CALLED FOR ON THE PLANS OR APPROVED BY THE ENGINEER.

ALL METALIZED SURFACES SHALL RECEIVE A SEAL COATING AS SPECIFIED IN THE SPECIAL PROVISION FOR THERMAL SPRAYED COATINGS (METALIZATION).

CLASS AA CONCRETE SHALL BE USED IN ALL CAST-IN-PLACE BENT CAPS AND SHALL CONTAIN CALCIUM NITRITE CORROSION INHIBITOR. FOR CALCIUM NITRITE CORROSION INHIBITOR, SEE STANDARD SPECIFICATIONS.

ALL BAR SUPPORTS USED IN THE BARRIER RAIL, DECK, BENT CAPS, AND ALL INCIDENTAL REINFORCING STEEL SHALL BE EPOXY COATED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

THE CONCRETE IN THE BENT CAPS AND PILES SHALL CONTAIN SILICA FUME. SILICA FUME SHALL BE SUBSTITUTED FOR 5% OF THE PORTLAND CEMENT BY WEIGHT. IF THE OPTION OF ARTICLE 1024-1 OF THE STANDARD SPECIFICATIONS TO PARTIALLY SUBSTITUTE CLASS F FLY ASH FOR PORTLAND CEMENT IS EXERCISED, THEN THE RATE OF FLY ASH SUBSTITUTION SHALL BE REDUCED TO 1.0 LB OF FLY ASH PER 1.0 LB OF CEMENT. NO PAYMENT WILL BE MADE FOR THIS SUBSTITUTION AS IT IS CONSIDERED INCIDENTAL TO THE VARIOUS PAY ITEMS.

THE MATERIAL SHOWN IN THE CROSS-HATCHED AREA, ON SHEETS S-2 AND S-6, SHALL BE EXCAVATED FOR THE DISTANCE OF 25 FT EACH SIDE OF CENTERLINE ROADWAY AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR UNCLASSIFIED STRUCTURE EXCAVATION. SEE SECTION 412 OF THE STANDARD SPECIFICATIONS.

AFTER SERVING AS A TEMPORARY STRUCTURE, THE EXISTING STRUCTURE CONSISTING OF FOURTEEN STEEL I-GIRDER SPANS; 22'-6" CLEAR ROADWAY WIDTH ON A TIMBER DECK ON STEEL CAP AND H-PILE END BENTS AND ON TIMBER PILES AND TIMBER CAP INTERIOR BENTS AND LOCATED APPROXIMATELY 300 FT NORTH OF THE PROPOSED STRUCTURE SHALL BE REMOVED. THE EXISTING BRIDGE IS PRESENTLY POSTED FOR LOAD LIMIT. SHOULD THE STRUCTURAL INTEGRITY OF THE BRIDGE DETERIORATE DURING CONSTRUCTION OF THE PROPOSED BRIDGE, A LOAD LIMIT MAY BE POSTED AND MAY BE REDUCED AS FOUND NECESSARY DURING THE LIFE OF THE PROJECT. THERE IS A CHANCE THAT UNDERGROUND BORE USED FOR INSTALLATION OF WATERLINE POSSIBLY DRILLED THROUGH EXISTING BRIDGE PILES. CARE SHALL BE USED WHEN REMOVING EXISTING PILES.

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

REMOVAL OF THE EXISTING BRIDGE SHALL BE PERFORMED IN A MANNER THAT PREVENTS DEBRIS FROM FALLING INTO THE WATER. THE CONTRACTOR SHALL SUBMIT DEMOLITION PLANS FOR REVIEW AND REMOVE THE BRIDGE IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.

THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH "HEC 18-EVALUATING SCOUR AT BRIDGES."

FOR ASBESTOS ASSESSMENT FOR BRIDGE DEMOLITION AND RENOVATION ACTIVITIES, SEE SPECIAL PROVISIONS.

ALL FALSEWORK AND FORMS FOR THE CAST-IN-PLACE DECK SLAB CONTINUOUS UNIT SHALL REMAIN IN PLACE UNTIL THE ENTIRE UNIT IS CAST AND CURED.

INASMUCH AS THE PAINT SYSTEM ON THE EXISTING STRUCTURAL STEEL CONTAINS LEAD, THE CONTRACTOR'S ATTENTION IS DIRECTED TO ARTICLE 107-1 OF THE STANDARD SPECIFICATIONS. ANY COSTS RESULTING FROM COMPLIANCE WITH APPLICABLE STATE OR FEDERAL REGULATIONS PERTAINING TO HANDLING OF MATERIALS CONTAINING LEAD BASED PAINT SHALL BE INCLUDED IN THE BID PRICE FOR REMOVAL OF EXISTING STRUCTURE AT STATION 22+57.00 -L-.

THE CONTRACTOR HAS THE OPTION TO CONSTRUCT, MAINTAIN AND AFTERWARDS REMOVE A TEMPORARY STRUCTURE AT STATION 22+57.00 -L- FOR USE DURING CONSTRUCTION OF THE PROPOSED STRUCTURE. FOR CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY STRUCTURE, SEE SPECIAL PROVISIONS.

FOR SECURING OF VESSELS, SEE SPECIAL PROVISIONS.

ALL RIP RAP SHALL BE GRANITE RIPRAP.

| HYDRAULIC DATA            |              |
|---------------------------|--------------|
| DESIGN DISCHARGE          | 2700 CFS     |
| FREQUENCY OF DESIGN FLOOD | 25 YR.       |
| DESIGN HIGHWATER ELEV.    | 1.4 FT.      |
| DRAINAGE AREA             | 52.5 SQ. MI. |
| BASE DISCHARGE (Q100)     | 4000 C.F.S   |
| BASE HIGHWATER ELEV.      | 1.4 FT       |

| OVERTOPPING FLOOD DATA          |            |
|---------------------------------|------------|
| OVERTOPPING DISCHARGE           | 118700 CFS |
| FREQUENCY OF OVERTOPPING FLOOD  | 500+ YR.   |
| OVERTOPPING FLOOD ELEV.         | * 8.3 FT.  |
| * OVERTOPS AT STA. 12+14.00 -L- |            |

| SAMPLE BAR REPLACEMENT |         |
|------------------------|---------|
| SIZE                   | LENGTH  |
| #3                     | 6'-2"   |
| #4                     | 7'-4"   |
| #5                     | 8'-6"   |
| #6                     | 9'-8"   |
| #7                     | 10'-10" |
| #8                     | 12'-0"  |
| #9                     | 13'-2"  |
| #10                    | 14'-6"  |
| #11                    | 15'-10" |

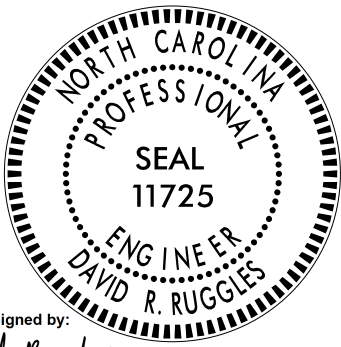
NOTE:  
SAMPLE BAR REPLACEMENT  
LENGTHS BASED ON  
30" (SAMPLE LENGTH)  
PLUS TWO SPLICE LENGTHS  
AND f<sub>y</sub> = 60ksi.

PROJECT NO. B-5614

BEAUFORT COUNTY

STATION: 22+57.00 -L-

SHEET 7 OF 7



DocuSigned by:  
David Ruggles

8/27/2025

DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED



STEWART

Firm License No. F-1536  
434 Fayetteville St.,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

GENERAL NOTES  
BRIDGE OVER BLOUNTS  
CREEK ON SR 1112  
(MOUTH OF THE CREEK RD)  
BETWEEN SR 1118 AND SR 1113

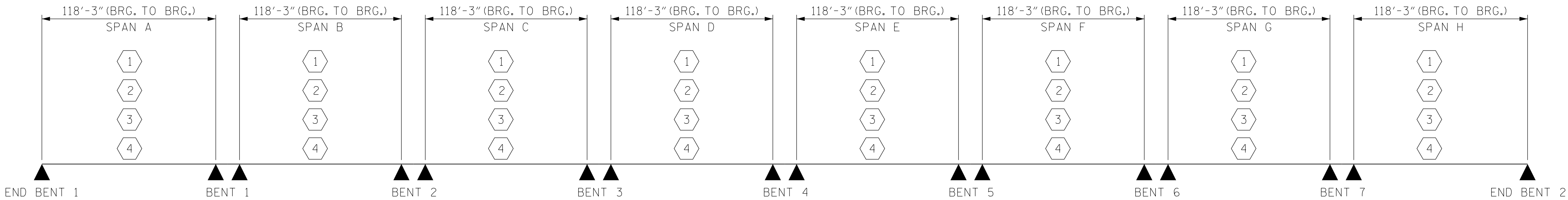
| REVISIONS |     |       |     |     | SHEET NO.<br>S-7      |
|-----------|-----|-------|-----|-----|-----------------------|
| NO.       | BY: | DATE: | NO. | BY: |                       |
| 1         |     |       | 3   |     | TOTAL<br>SHEETS<br>52 |
| 2         |     |       | 4   |     |                       |

|                                       |             |
|---------------------------------------|-------------|
| DRAWN BY: J. WILSON                   | DATE : 2/25 |
| CHECKED BY: D. RUGGLES                | DATE : 2/25 |
| DESIGN ENGINEER OF RECORD: D. RUGGLES | DATE : 2/25 |

7/11/2025  
B-5614\_SMU.GD5\_060009.dgn  
USER:dcfaul

|                         |  |                        |
|-------------------------|--|------------------------|
| ASSEMBLED BY : JCW      |  | DATE : 2/25            |
| CHECKED BY : DRR        |  | DATE : 2/25            |
| DRAWN BY : MMA 1/08     |  | REV. 11/12/08RR MMA/GM |
| CHECKED BY : GM/DI 2/08 |  | REV. 10/1/11 MMA/GM    |
|                         |  | REV. 04/23 BNB/AAI     |

| LOAD AND RESISTANCE FACTOR RATING (LRFD) SUMMARY FOR PRESTRESSED CONCRETE GIRDERS |                                      |                      |                            |                                   |               |                        |                              |               |      |                 |                                           |                              |               |       |                 |                                           |                         |                              |               |      |                 |                                           |                   |   |
|-----------------------------------------------------------------------------------|--------------------------------------|----------------------|----------------------------|-----------------------------------|---------------|------------------------|------------------------------|---------------|------|-----------------|-------------------------------------------|------------------------------|---------------|-------|-----------------|-------------------------------------------|-------------------------|------------------------------|---------------|------|-----------------|-------------------------------------------|-------------------|---|
| LEVEL                                                                             | VEHICLE                              | WEIGHT (W)<br>(TONS) | CONTROLLING<br>LOAD RATING | MINIMUM<br>RATING FACTORS<br>(RF) | TONS = W X RF | STRENGTH I LIMIT STATE |                              |               |      |                 |                                           |                              |               |       |                 |                                           | SERVICE III LIMIT STATE |                              |               |      |                 |                                           | COMMENT<br>NUMBER |   |
|                                                                                   |                                      |                      |                            |                                   |               | LIVELOAD<br>FACTORS    | MOMENT                       |               |      |                 |                                           | SHEAR                        |               |       |                 |                                           | LIVELOAD<br>FACTORS     | MOMENT                       |               |      |                 |                                           |                   |   |
|                                                                                   |                                      |                      |                            |                                   |               |                        | DISTRIBUTION<br>FACTORS (DF) | RATING FACTOR | SPAN | GIRDER LOCATION | DISTANCE FROM<br>LEFT END OF<br>SPAN (ft) | DISTRIBUTION<br>FACTORS (DF) | RATING FACTOR | SPAN  | GIRDER LOCATION | DISTANCE FROM<br>LEFT END OF<br>SPAN (ft) |                         | DISTRIBUTION<br>FACTORS (DF) | RATING FACTOR | SPAN | GIRDER LOCATION | DISTANCE FROM<br>LEFT END OF<br>SPAN (ft) |                   |   |
| DESIGN<br>LOAD<br>RATING                                                          | HL-93 (INVENTORY)                    | N/A                  | 1                          | 1.51                              | --            | 1.75                   | 0.830                        | 1.61          | A-H  | EL              | 59.1                                      | 0.730                        | 2.18          | A-H   | I               | 11.3                                      | 0.80                    | 0.830                        | 1.51          | A-H  | EL              | 59.1                                      | 1                 |   |
|                                                                                   | HL-93 (OPERATING)                    | N/A                  | --                         | 2.09                              | --            | 1.35                   | 0.830                        | 2.09          | A-H  | EL              | 59.1                                      | 0.730                        | 2.86          | A-H   | I               | 11.3                                      | N/A                     | --                           | --            | --   | --              | --                                        | 1                 |   |
|                                                                                   | HS-20 (INVENTORY)                    | 36.000               | 2                          | 2.21                              | 79.56         | 1.75                   | 0.830                        | 2.35          | A-H  | EL              | 59.1                                      | 0.730                        | 3.14          | A-H   | I               | 11.3                                      | 0.80                    | 0.830                        | 2.21          | A-H  | EL              | 59.1                                      | 1                 |   |
|                                                                                   | HS-20 (OPERATING)                    | 36.000               | --                         | 3.05                              | 109.80        | 1.35                   | 0.830                        | 3.05          | A-H  | EL              | 59.1                                      | 0.730                        | 4.11          | A-H   | I               | 11.3                                      | N/A                     | --                           | --            | --   | --              | --                                        | 1                 |   |
| LEGAL<br>LOAD<br>RATING                                                           | SINGLE VEHICLE<br>(SV)               | SNSH                 | 13.500                     | --                                | 4.29          | 57.92                  | 1.4                          | 0.830         | 6.89 | A-H             | EL                                        | 59.1                         | 0.730         | 10.18 | A-H             | I                                         | 107.0                   | 0.80                         | 0.830         | 4.29 | A-H             | EL                                        | 59.1              | 1 |
|                                                                                   |                                      | SNGARBS2             | 20.000                     | --                                | 3.07          | 61.40                  | 1.4                          | 0.830         | 4.92 | A-H             | EL                                        | 59.1                         | 0.730         | 7.07  | A-H             | I                                         | 11.3                    | 0.80                         | 0.830         | 3.07 | A-H             | EL                                        | 59.1              | 1 |
|                                                                                   |                                      | SNAGRIS2             | 22.000                     | --                                | 2.85          | 62.70                  | 1.4                          | 0.830         | 4.58 | A-H             | EL                                        | 59.1                         | 0.730         | 6.50  | A-H             | I                                         | 11.3                    | 0.80                         | 0.830         | 2.85 | A-H             | EL                                        | 59.1              | 1 |
|                                                                                   |                                      | SNCOTTS3             | 27.250                     | --                                | 2.13          | 58.04                  | 1.4                          | 0.830         | 3.42 | A-H             | EL                                        | 59.1                         | 0.730         | 4.90  | A-H             | I                                         | 11.3                    | 0.80                         | 0.830         | 2.13 | A-H             | EL                                        | 59.1              | 1 |
|                                                                                   |                                      | SNAGGRS4             | 34.925                     | --                                | 1.73          | 60.42                  | 1.4                          | 0.830         | 2.78 | A-H             | EL                                        | 59.1                         | 0.730         | 3.78  | A-H             | I                                         | 11.3                    | 0.80                         | 0.830         | 1.73 | A-H             | EL                                        | 59.1              | 1 |
|                                                                                   |                                      | SNS5A                | 35.550                     | --                                | 1.70          | 60.44                  | 1.4                          | 0.830         | 2.72 | A-H             | EL                                        | 59.1                         | 0.730         | 3.74  | A-H             | I                                         | 11.3                    | 0.80                         | 0.830         | 1.70 | A-H             | EL                                        | 59.1              | 1 |
|                                                                                   |                                      | SNS6A                | 39.950                     | --                                | 1.53          | 61.12                  | 1.4                          | 0.830         | 2.46 | A-H             | EL                                        | 59.1                         | 0.730         | 3.40  | A-H             | I                                         | 11.3                    | 0.80                         | 0.830         | 1.53 | A-H             | EL                                        | 59.1              | 1 |
|                                                                                   |                                      | SNS7B                | 42.000                     | --                                | 1.46          | 61.32                  | 1.4                          | 0.830         | 2.35 | A-H             | EL                                        | 59.1                         | 0.730         | 3.29  | A-H             | I                                         | 11.3                    | 0.80                         | 0.830         | 1.46 | A-H             | EL                                        | 59.1              | 1 |
|                                                                                   | TRUCK TRACTOR SEMI-TRAILER<br>(TTST) | TNAGRIT3             | 33.000                     | --                                | 1.87          | 61.71                  | 1.4                          | 0.830         | 3.00 | A-H             | EL                                        | 59.1                         | 0.730         | 4.06  | A-H             | I                                         | 11.3                    | 0.80                         | 0.830         | 1.87 | A-H             | EL                                        | 59.1              | 1 |
|                                                                                   |                                      | TNT4A                | 33.075                     | --                                | 1.87          | 61.85                  | 1.4                          | 0.830         | 3.00 | A-H             | EL                                        | 59.1                         | 0.730         | 3.95  | A-H             | I                                         | 11.3                    | 0.80                         | 0.830         | 1.87 | A-H             | EL                                        | 59.1              | 1 |
|                                                                                   |                                      | TNT6A                | 41.600                     | --                                | 1.51          | 62.82                  | 1.4                          | 0.830         | 2.42 | A-H             | EL                                        | 59.1                         | 0.730         | 3.39  | A-H             | I                                         | 11.3                    | 0.80                         | 0.830         | 1.51 | A-H             | EL                                        | 59.1              | 1 |
|                                                                                   |                                      | TNT7A                | 42.000                     | --                                | 1.51          | 63.42                  | 1.4                          | 0.830         | 2.42 | A-H             | EL                                        | 59.1                         | 0.730         | 3.30  | A-H             | I                                         | 11.3                    | 0.80                         | 0.830         | 1.51 | A-H             | EL                                        | 59.1              | 1 |
|                                                                                   |                                      | TNT7B                | 42.000                     | --                                | 1.53          | 64.26                  | 1.4                          | 0.830         | 2.46 | A-H             | EL                                        | 59.1                         | 0.730         | 3.17  | A-H             | I                                         | 11.3                    | 0.80                         | 0.830         | 1.53 | A-H             | EL                                        | 59.1              | 1 |
|                                                                                   |                                      | TNAGRIT4             | 43.000                     | --                                | 1.48          | 63.64                  | 1.4                          | 0.830         | 2.37 | A-H             | EL                                        | 59.1                         | 0.730         | 3.08  | A-H             | I                                         | 11.3                    | 0.80                         | 0.830         | 1.48 | A-H             | EL                                        | 59.1              | 1 |
| EMERGENCY<br>VEHICLE (EV)                                                         | EV2                                  | 28.750               | --                         | 1.91                              | 54.91         | 1.3                    | 0.830                        | 3.97          | A-H  | EL              | 59.1                                      | 0.730                        | 3.42          | A-H   | I               | 11.3                                      | 0.80                    | 0.830                        | 1.91          | A-H  | EL              | 59.1                                      | 1                 |   |
|                                                                                   | EV3                                  | 43.000               | 4                          | 1.26                              | 54.18         | 1.3                    | 0.830                        | 2.62          | A-H  | EL              | 59.1                                      | 0.730                        | 2.26          | A-H   | I               | 11.3                                      | 0.80                    | 0.830                        | 1.26          | A-H  | EL              | 59.1                                      | 1                 |   |



LRFR SUMMARY

LOAD FACTORS:

| DESIGN<br>LOAD<br>RATING<br>FACTORS | LIMIT STATE | $\gamma_{DC}$ | $\gamma_{DW}$ |
|-------------------------------------|-------------|---------------|---------------|
|                                     | STRENGTH I  | 1.25          | 1.50          |
|                                     | SERVICE III | 1.00          | 1.00          |

NOTES:

MINIMUM RATING FACTORS ARE BASED ON THE STRENGTH I AND SERVICE III LIMIT STATES.

ALLOWABLE TENSILE STRESSES FOR SERVICE III LIMIT STATE SHALL BE 0 PSI IN THE PRECOMPRESSED TENSILE ZONE.

COMMENTS:

1. RATING FACTORS ARE THE SAME FOR ALL SPANS.

# CONTROLLING LOAD RATING

1 DESIGN LOAD RATING (HL-93)

2 DESIGN LOAD RATING (HS-20)

3 LEGAL LOAD RATING \*\*

4 EMERGENCY VEHICLE LOAD RATING \*\*

\*\* SEE CHART FOR VEHICLE TYPE

GIRDER LOCATION

I - INTERIOR GIRDER  
EL - EXTERIOR LEFT GIRDER  
ER - EXTERIOR RIGHT GIRDER

PROJECT NO. B-5614  
BEAUFORT COUNTY  
STATION: 22+57.00 -L-

DocuSign  
David Ruggies  
C402780DF412422

SEAL  
11725  
ENGINEER  
DAVID R. RUGGIES  
14/2025

DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED

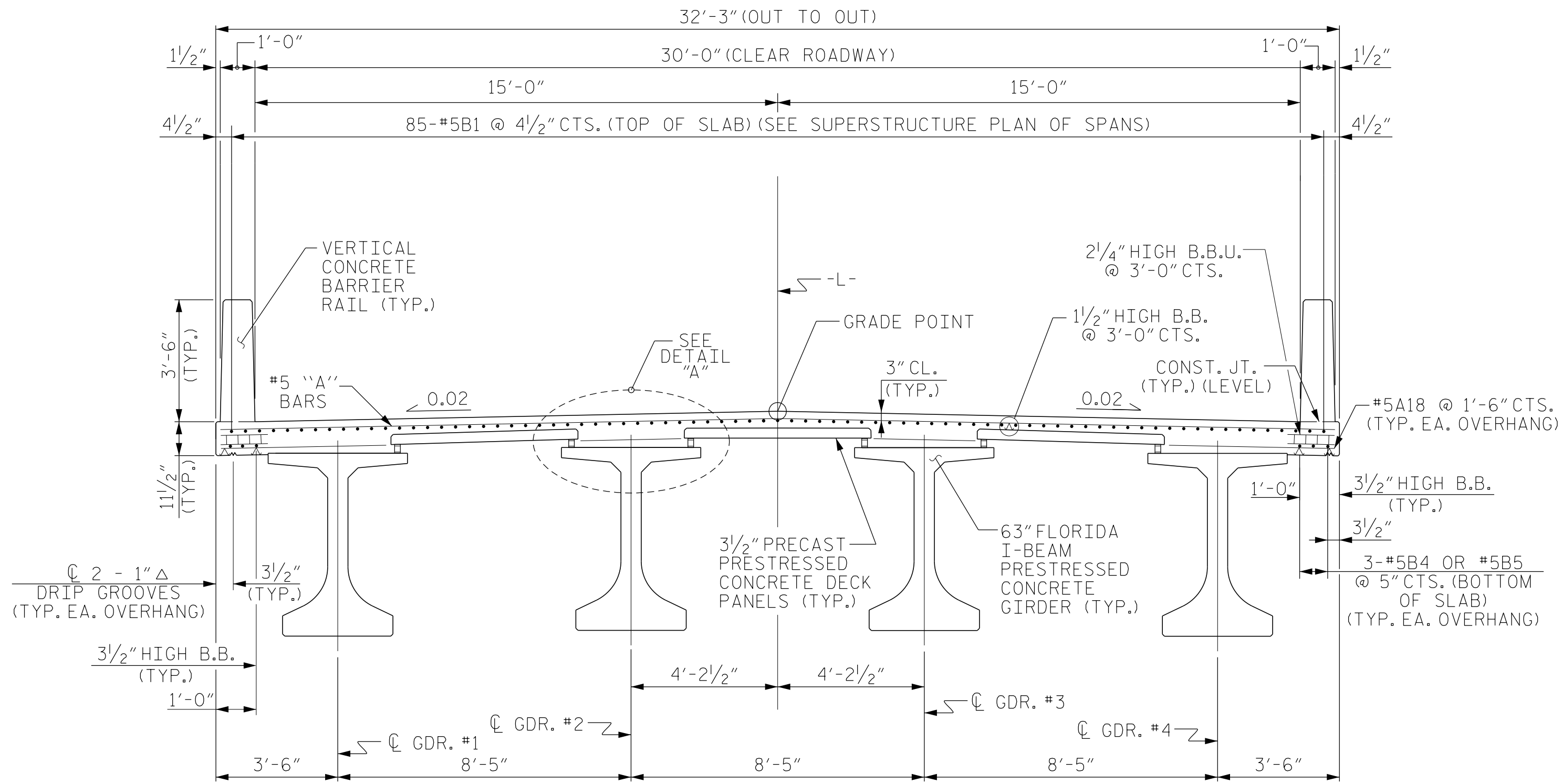
STEWART

Firm License No. F-1536  
434 Fayetteville St,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com

| STATE OF NORTH CAROLINA<br>DEPARTMENT OF TRANSPORTATION<br>RALEIGH |  |  |     |  |  | REVISIONS |  |  | SHEET NO.    |
|--------------------------------------------------------------------|--|--|-----|--|--|-----------|--|--|--------------|
| NO.                                                                |  |  | BY: |  |  | DATE:     |  |  | S-8          |
| 1                                                                  |  |  |     |  |  |           |  |  | TOTAL SHEETS |
| 2                                                                  |  |  |     |  |  |           |  |  | 52           |

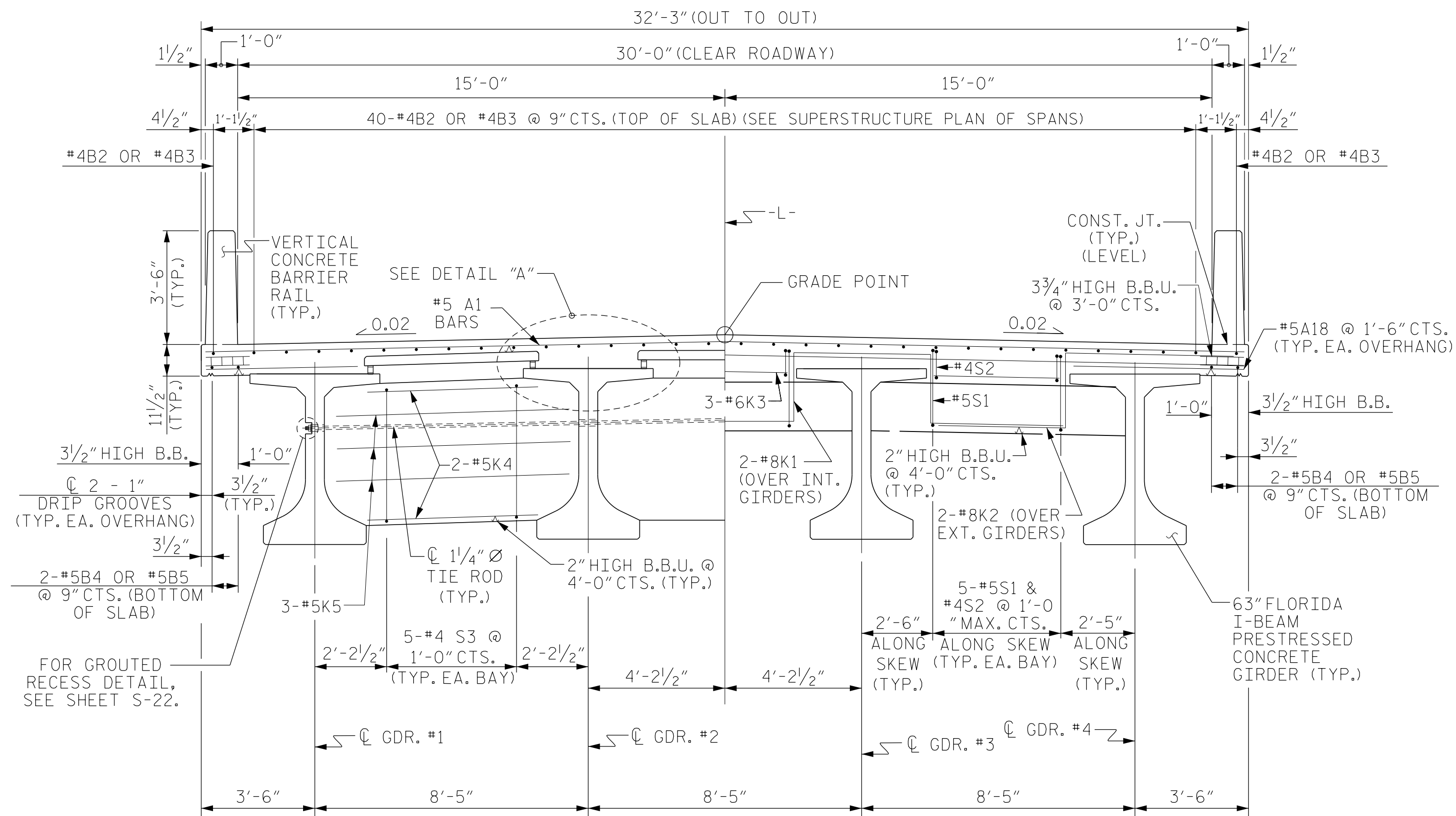
8/26/2025  
B-5614\_SMU.TS1\_060009.dgn  
USERdefault

|                            |            |        |      |
|----------------------------|------------|--------|------|
| DRAWN BY:                  | J. WILSON  | DATE : | 2/25 |
| CHECKED BY:                | D. RUGGLES | DATE : | 2/25 |
| DESIGN ENGINEER OF RECORD: | D. RUGGLES | DATE : | 2/25 |



### TYPICAL SECTION

SECTION AT BENTS 1, 2, 4, 6, & 7



### TYPICAL HALF SECTION

SECTION AT INTERMEDIATE DIAPHRAGMS  
FOR SECTION THRU DIAPHRAGMS, SEE SHEET S-21.

### TYPICAL HALF SECTION

SECTION AT END BENT AND EXPANSION  
BENT DIAPHRAGMS

## NOTES

LONGITUDINAL STEEL MAY BE SHIFTED SLIGHTLY, AS NECESSARY, TO AVOID INTERFERENCE WITH STIRRUPS IN PRESTRESSED CONCRETE GIRDERS.

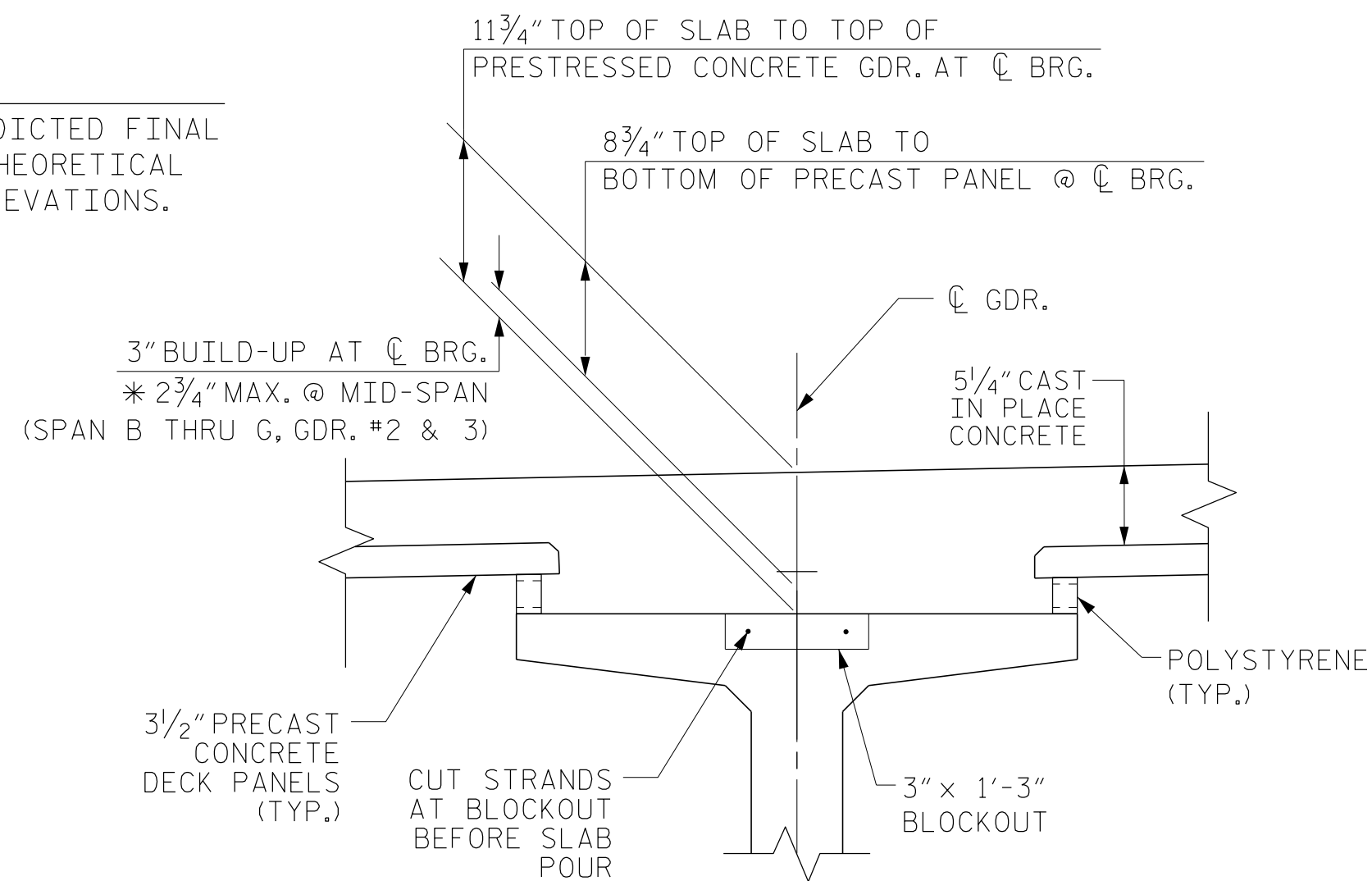
PREVIOUSLY CAST CONCRETE IN A CONTINUOUS UNIT SHALL HAVE ATTAINED A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI BEFORE ADDITIONAL CONCRETE IS CAST IN THE UNIT.

CONCRETE BARRIER IN A CONTINUOUS UNIT SHALL NOT BE CAST UNTIL ALL SLAB CONCRETE IN THAT UNIT HAS BEEN CAST AND HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.

CONCRETE IN INTERMEDIATE DIAPHRAGMS MAY BE CLASS A IN LIEU OF CLASS AA. PAYMENT SHALL BE MADE UNDER THE UNIT CONTRACT PRICE FOR REINFORCED CONCRETE DECK SLAB.

TEMPORARY STRUTS SHALL BE PLACED BETWEEN PRESTRESSED GIRDERS ADJACENT TO THE DIAPHRAGMS AND THE NUTS ON THE 1/4"Ø TIE RODS SHALL BE FULLY TIGHTENED BEFORE DIAPHRAGMS ARE CAST. STRUTS SHALL REMAIN IN PLACE 3 DAYS AFTER CONCRETE IS PLACED. THE TIE RODS SHALL BE RE-TIGHTENED AFTER THE STRUTS HAVE BEEN REMOVED.

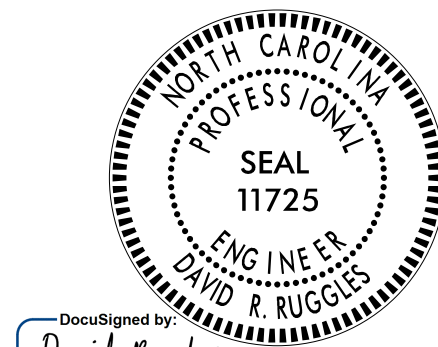
NOTE:  
\* BASED ON PREDICTED FINAL CAMBER AND THEORETICAL GRADE LINE ELEVATIONS.



### DETAIL "A"

PROJECT NO. B-5614  
BEAUFORT COUNTY  
STATION: 22+57.00 -L-

SHEET 1 OF 2



8/26/2025

DocuSigned by  
David Ruggles  
C4827B8DF-112422...  
DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED

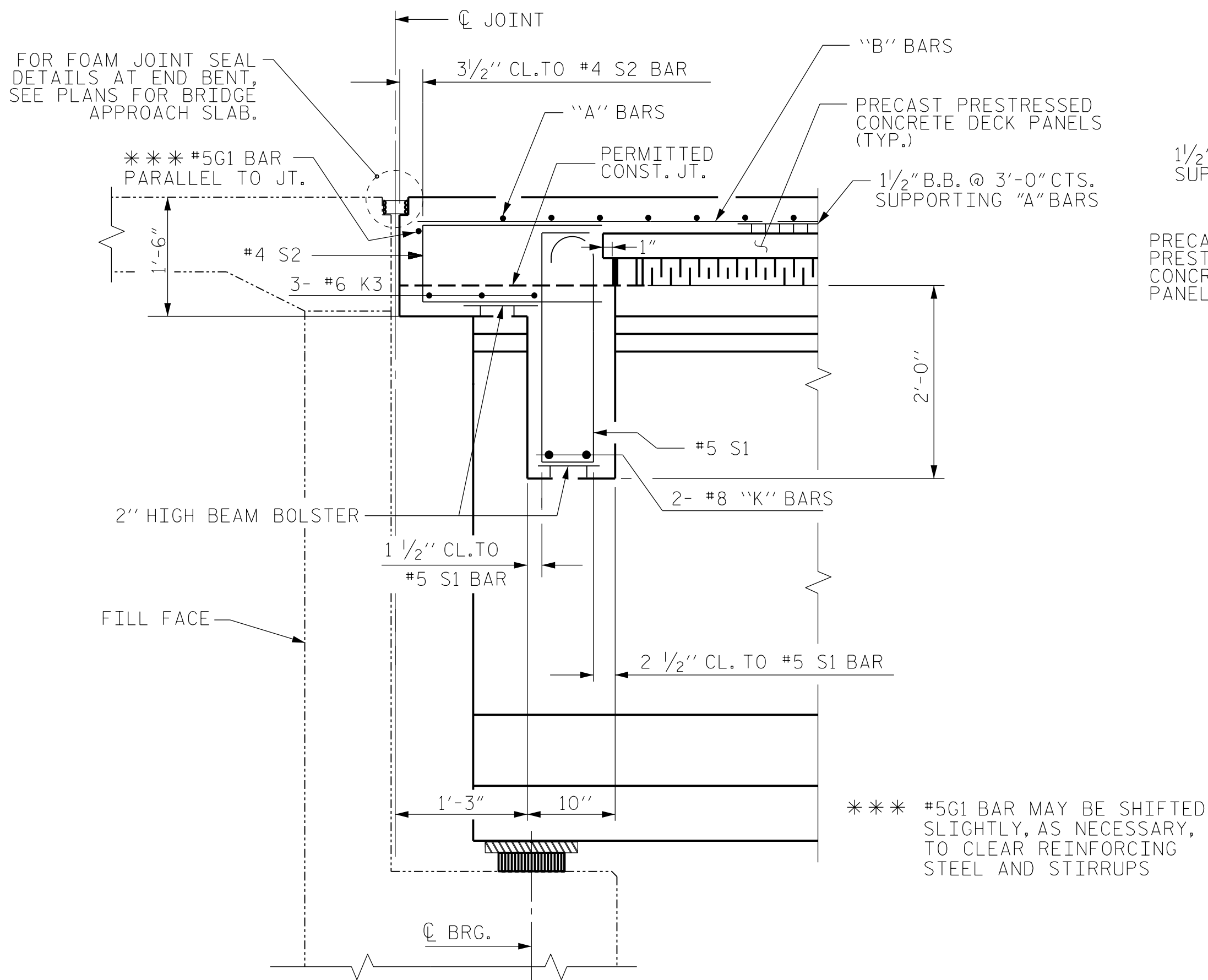


STEWART

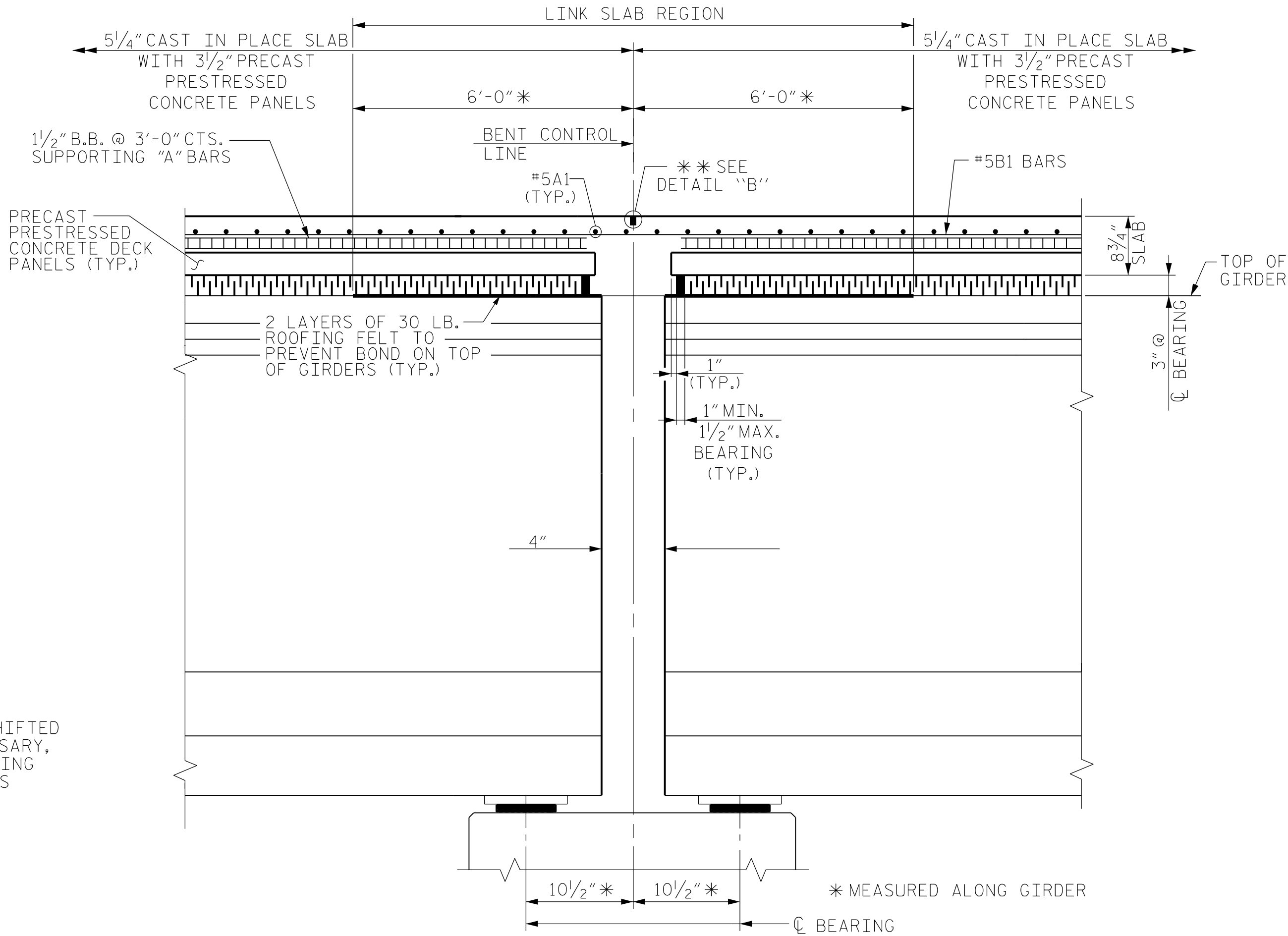
Firm License No. F-1536  
434 Fayetteville St,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
SUPERSTRUCTURE  
TYPICAL SECTION

| REVISIONS    |     |       |     |     |       | SHEET NO. |
|--------------|-----|-------|-----|-----|-------|-----------|
| NO.          | BY: | DATE: | NO. | BY: | DATE: |           |
| 1            |     |       | 3   |     |       | S-9       |
| 2            |     |       | 4   |     |       |           |
| TOTAL SHEETS |     |       |     |     |       | 52        |

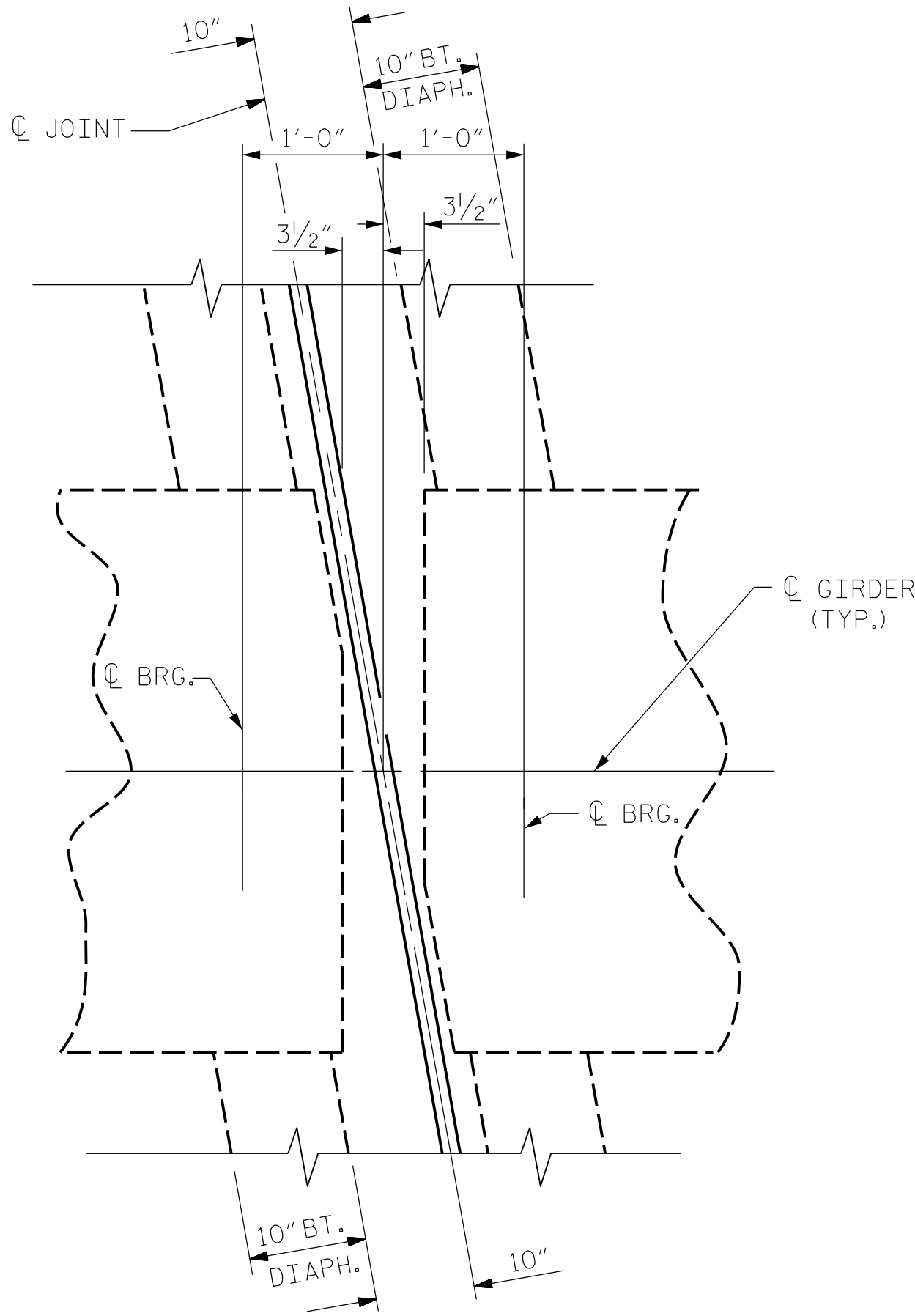


SECTION @ END BENT DIAPHRAGM



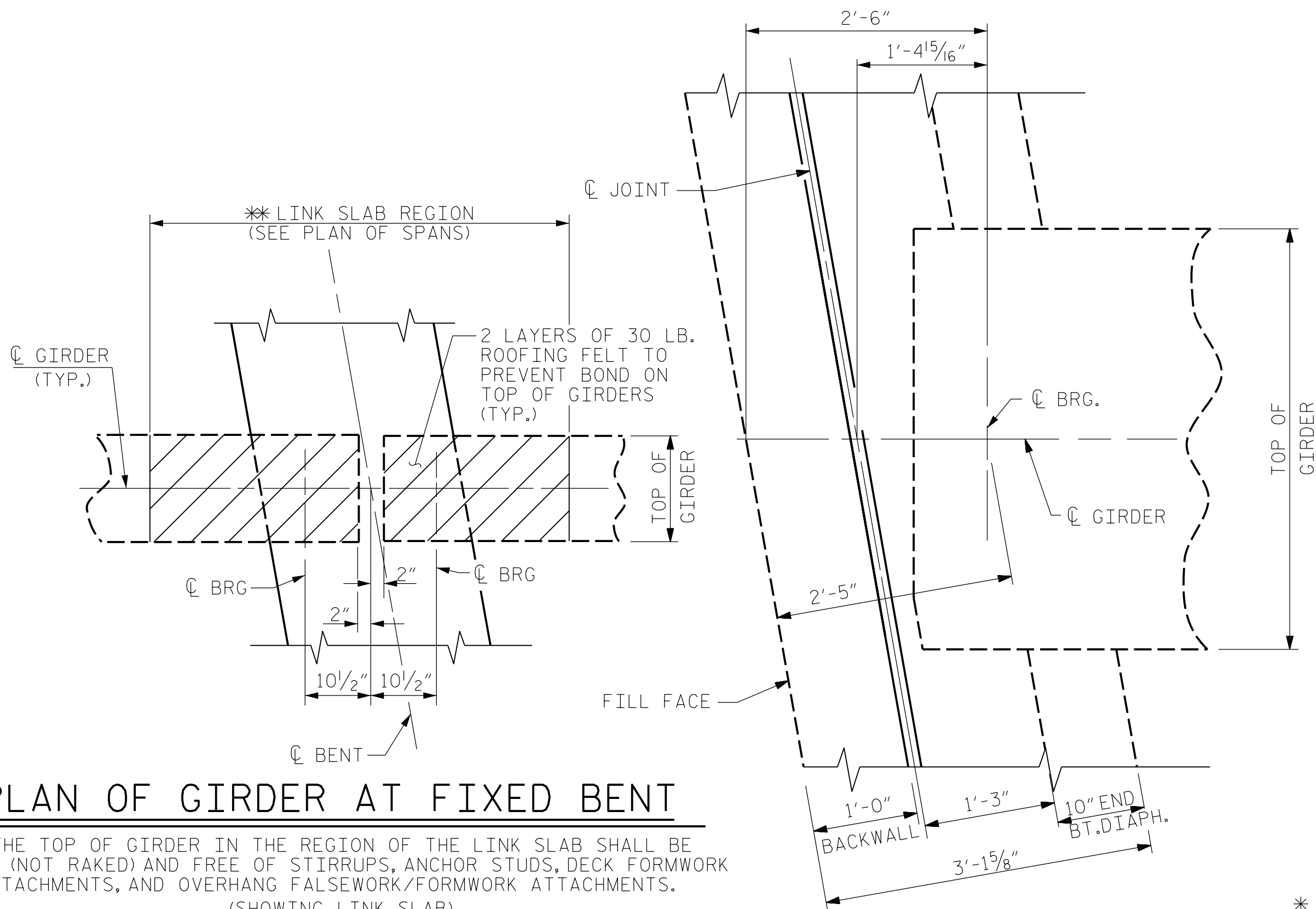
SECTION @ LINK SLAB

(BENTS 1, 2, 4, 6, AND 7)



PLAN OF GIRDER AT EXPANSION BENT

(BENTS 3 & 5)

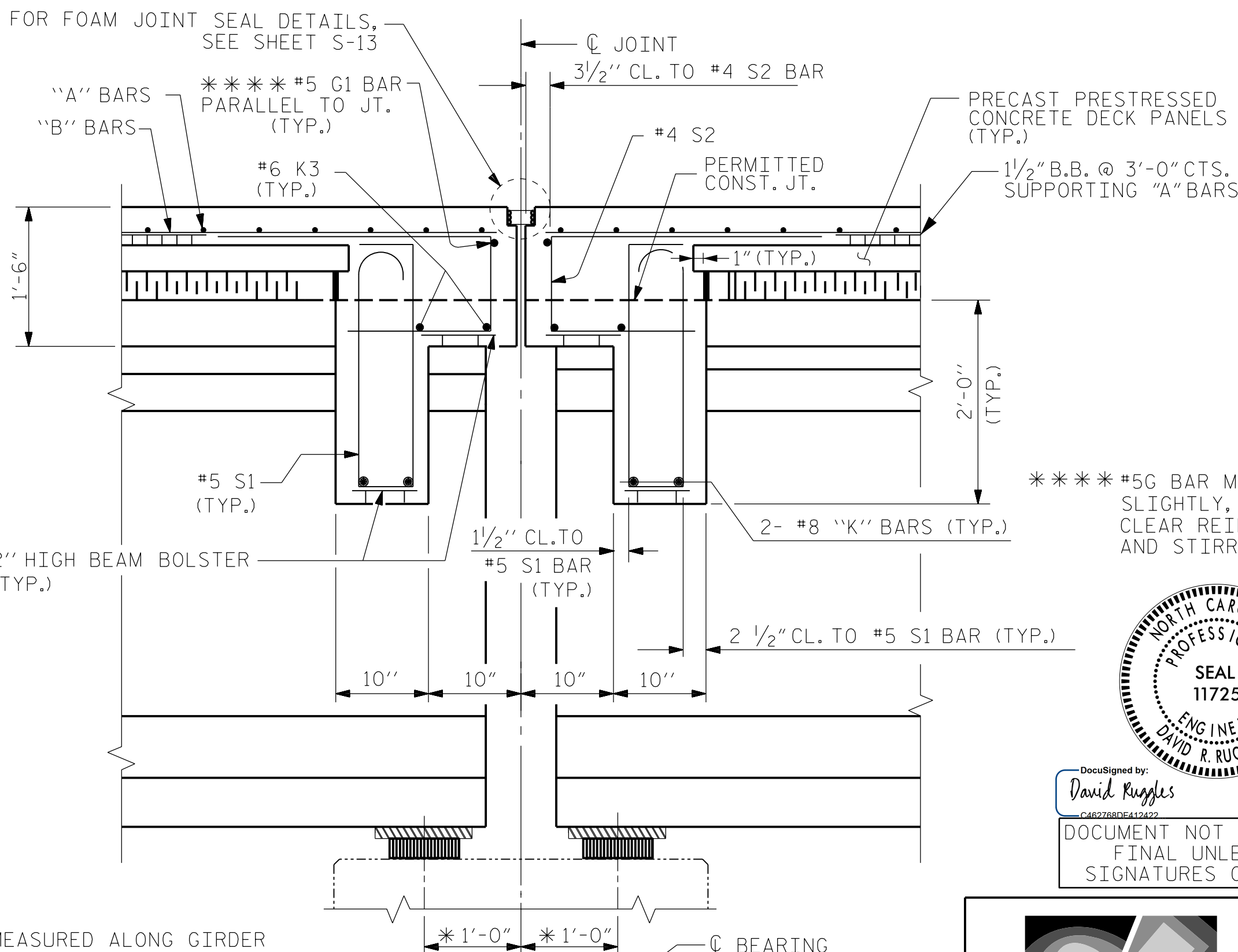


PLAN OF GIRDER AT FIXED BENT

\*\*\* THE TOP OF GIRDER IN THE REGION OF THE LINK SLAB SHALL BE SMOOTH (NOT RAKED) AND FREE OF STIRRUPS, ANCHOR STUDS, DECK FORMWORK ATTACHMENTS, AND OVERHANG FALSEWORK/FORMWORK ATTACHMENTS. (SHOWING LINK SLAB) (BENTS 1, 2, 4, 6, & 7)

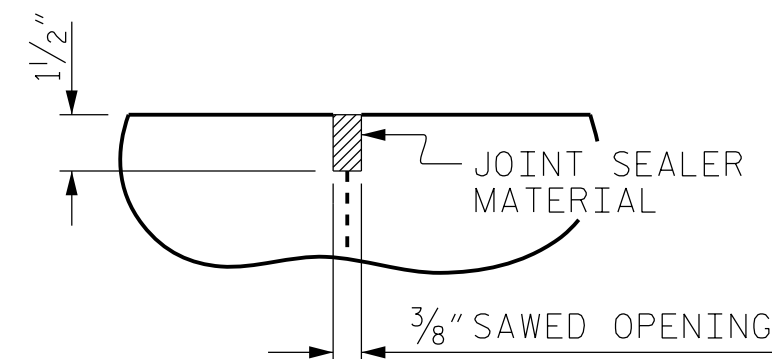
PLAN OF GIRDER AT END BENT

(END BENT 1 SHOWN, END BENT 2 SIMILAR)



SECTION @ EXP. BENT DIAPHRAGM

(BENTS 3 AND 5)



DETAIL "B"

A 1/2" DEEP, 3/8" WIDE CONTRACTION JOINT AT BENT CONTROL LINE SHALL BE SAWN WITHIN 24 HOURS OF POURING THE DECK. THE JOINT SHALL BE FILLED WITH JOINT SEALER MATERIAL. THE JOINT SEALER MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF SECTION 1028-3 OF THE STANDARD SPECIFICATIONS.

\*\*\* #5G BAR MAY BE SHIFTED SLIGHTLY, AS NECESSARY, TO CLEAR REINFORCING STEEL AND STIRRUPS.



8/26/2025

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



Firm License No. F-1536  
434 Fayetteville St.,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com

STEWART

PROJECT NO. B-5614

BEAUFORT COUNTY

STATION: 22+57.00 -L-

SHEET 2 OF 2

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
SUPERSTRUCTURE  
TYPICAL SECTION  
DETAILS

| REVISIONS |     |       |     |     |       | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|-----------|
| NO.       | BY: | DATE: | NO. | BY: | DATE: |           |
| 1         |     |       | 3   |     |       | S-10      |
| 2         |     |       | 4   |     |       |           |

TOTAL SHEETS 52

\$\$\$\$SYTIME\$\$\$\$  
\$\$\$\$DGN\$\$\$\$  
\$\$\$\$USERNAME\$\$\$\$

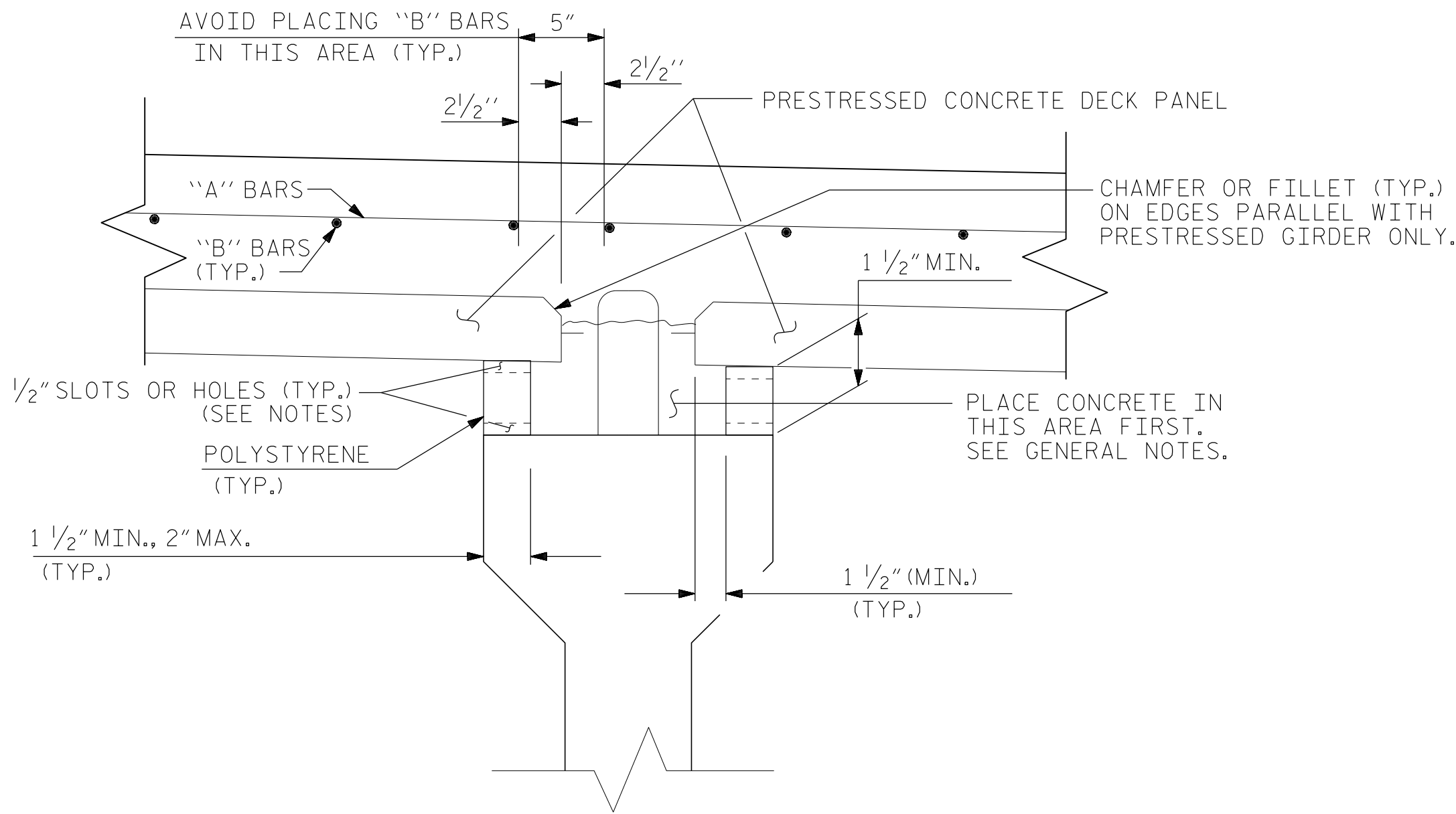
DRAWN BY: J. WILSON DATE: 2/25  
CHECKED BY: D. RUGGLES DATE: 2/25  
DESIGN ENGINEER OF RECORD: D. RUGGLES DATE: 2/25

DECK PANEL SUPPORTS

THE CONTRACTOR SHALL PROVIDE THE DECK PANEL SUPPORT SYSTEM SHOWN OR HE MAY SUBMIT A DECK PANEL SUPPORT SYSTEM OF HIS OWN DESIGN TO THE ENGINEER FOR APPROVAL.

POLYSTYRENE SUPPORT SYSTEM

- ALL POLYSTYRENE SHALL BE DOW STYROFOAM 60 HIGH-LOAD,UC INDUSTRIES FOAMULAR 600 OR APPROVED EQUAL.
- THE POLYSTYRENE SUPPORT SYSTEM SHALL CONSIST OF ONE LAYER WITH A MINIMUM WIDTH OF 1 1/2" AND A MAXIMUM WIDTH OF 2".THE POLYSTYRENE SHALL HAVE 1/2"X 1/2"WIDE SLOTS OR 1/2" DIAMETER HOLES AT 4'-0"CENTERS STAGGERED ALONG THE TOP AND BOTTOM.
- THE POLYSTYRENE MAY BE CUT AND PLACED ON EDGE AS NECESSARY TO MATCH THE REQUIRED BUILDUP PROFILE ALONG THE GIRDER.
- ADHESIVE,AS APPROVED BY THE ENGINEER,SHALL BE APPLIED TO THE TOP OF THE GIRDER IN A CONTINUOUS BEAD AND IN SUFFICIENT AMOUNT TO PREVENT THE POLYSTYRENE FROM BLOWING OUT AND TO PREVENT GAPS FROM FORMING BETWEEN THE POLYSTYRENE AND THE GIRDER.PRIOR TO PLACEMENT OF THE DECK PANELS,THE ADHESIVE SHALL ALSO BE APPLIED TO THE TOP OF THE POLYSTYRENE.
- CONCRETE-FILLED BUCKETS,STACKS OF DECK PANELS,BUNDLED REINFORCING BARS OR OTHER HEAVY CONCENTRATED LOADS WILL NOT BE PERMITTED ON THE DECK PANEL ONCE THE PANEL HAS BEEN PLACED ON THE POLYSTYRENE SUPPORT SYSTEM.

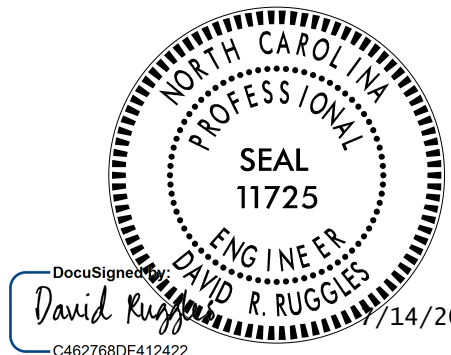


POLYSTYRENE SUPPORT

GENERAL NOTES

- THE DESIGN COMPRESSIVE STRENGTH (F'c) FOR THE CONCRETE IN PRESTRESSED PANELS SHALL BE 5000 PSI MINIMUM AT 28 DAYS.COMPRESSIVE STRENGTH OF CONCRETE AT TIME OF RELEASE OF STRANDS SHALL BE 4000 PSI MINIMUM.
- THE PRECAST PRESTRESSED PANEL SHALL HAVE A THICKNESS OF 3 1/2" WITH THE PRESTRESSED STRANDS LOCATED AT HALF THE DEPTH OF THE PANEL.
- FOR SKEWED SPANS,TRAPEZOIDAL CLOSURE PANELS SHALL HAVE A MINIMUM WIDTH OF 2 FEET ON THE SHORT SIDE.
- ALL PRESTRESSING STRANDS SHALL EXTEND 2" BEYOND THE PANEL EDGES.
- SHEAR REINFORCING OF 0.60 SQ.INCHES OF REINFORCING STEEL PER 10 SQ.FEET OF PANEL SURFACE SHALL BE PROVIDED IN THE PANEL TO ENSURE COMPOSITE ACTION BETWEEN PANEL AND THE CAST-IN-PLACE CONCRETE. SHEAR REINFORCEMENT SHALL BE MADE OF WELDED WIRE HAVING A MINIMUM YIELD STRENGTH OF 60 KSI.
- SHEAR REINFORCEMENT AND LIFTING DEVICES SHALL BE CONSTRUCTED AND PLACED SO AS TO AVOID ANY INTERFERENCE WITH REINFORCING STEEL IN THE CAST-IN-PLACE DECK SLAB AND TO ALLOW FOR PROPER CONCRETE CONSOLIDATION IN THE DECK PANEL.
- SHIFT LONGITUDINAL "B" BARS AS NECESSARY TO OBTAIN A MINIMUM CLEAR DISTANCE OF 2 1/2" TO THE RIGHT OR LEFT OF THE EDGE OF THE DECK PANEL. IF, IN SHIFTING TO OBTAIN THIS CLEARANCE,THE "B" BAR INTERFERES WITH THE STIRRUP IN THE TOP OF THE GIRDER THE "B" BAR MAY BE ELIMINATED.
- WHEN CASTING THE DECK,PLACE CONCRETE FIRST OVER THE GIRDERS IN CONTINUOUS STRIPS A MINIMUM OF THREE PANEL LENGTHS AHEAD OF THE REST OF THE CONCRETE.CAREFULLY VIBRATE THE CONCRETE OVER THE GIRDERS SO THAT CONCRETE COMPLETELY FILLS THE AREA UNDER THE DECK PANEL OVERHANGS.THEN PLACE AND VIBRATE THE REMAINING DECK CONCRETE.
- PRECAST PANELS SHALL BE DESIGNED FOR AN ALLOWABLE TENSILE STRESS OF 0 PSI IN THE PRECOMPRESSED TENSILE ZONE UNDER ALL LOADING CONDITIONS.
- PRESTRESSED CONCRETE GIRDERS AND PRECAST DECK PANELS SHALL CONTAIN CALCIUM NITRITE CORROSION INHIBITOR.SEE STANDARD SPECIFICATIONS FOR CALCIUM NITRITE CORROSION INHIBITOR.

PROJECT NO. B-5614  
BEAUFORT COUNTY  
STATION: 22+57.00 -L-



DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED



STEWART

Firm License No. F-1536  
434 Fayetteville St,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com

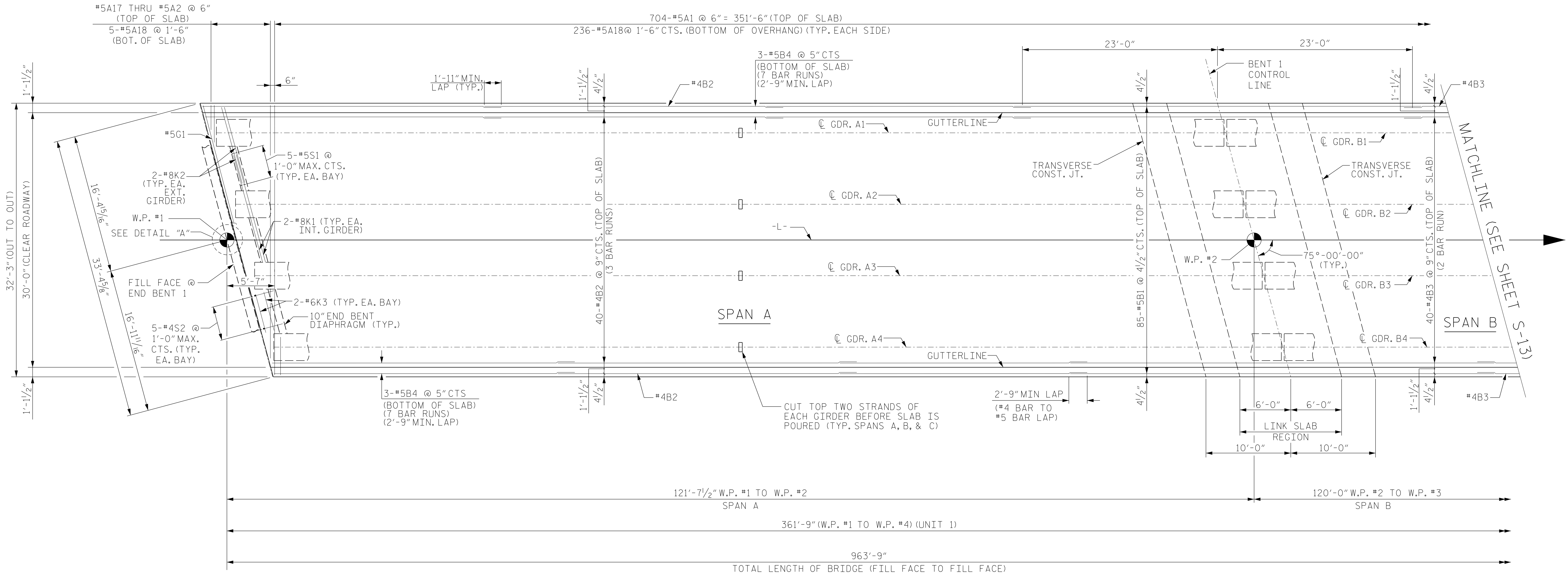
STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
STANDARD  
PRECAST PRESTRESSED  
CONCRETE DECK PANELS

| REVISIONS    |     |       |     |     |       | SHEET NO. |
|--------------|-----|-------|-----|-----|-------|-----------|
| NO.          | BY: | DATE: | NO. | BY: | DATE: |           |
| 1            |     |       | 3   |     |       | S-11      |
| 2            |     |       | 4   |     |       |           |
| TOTAL SHEETS |     |       |     |     |       | 52        |

|                |          |              |         |
|----------------|----------|--------------|---------|
| ASSEMBLED BY : | JCW      | DATE :       | 2/25    |
| CHECKED BY :   | DRR      | DATE :       | 2/25    |
| DRAWN BY :     | ELR 1/92 | REV. 5/1/06R | TLA/GM  |
| CHECKED BY :   | GRP 4/92 | REV. 10/1/11 | MMA/GM  |
|                |          | REV. 12/17   | MMA/THC |

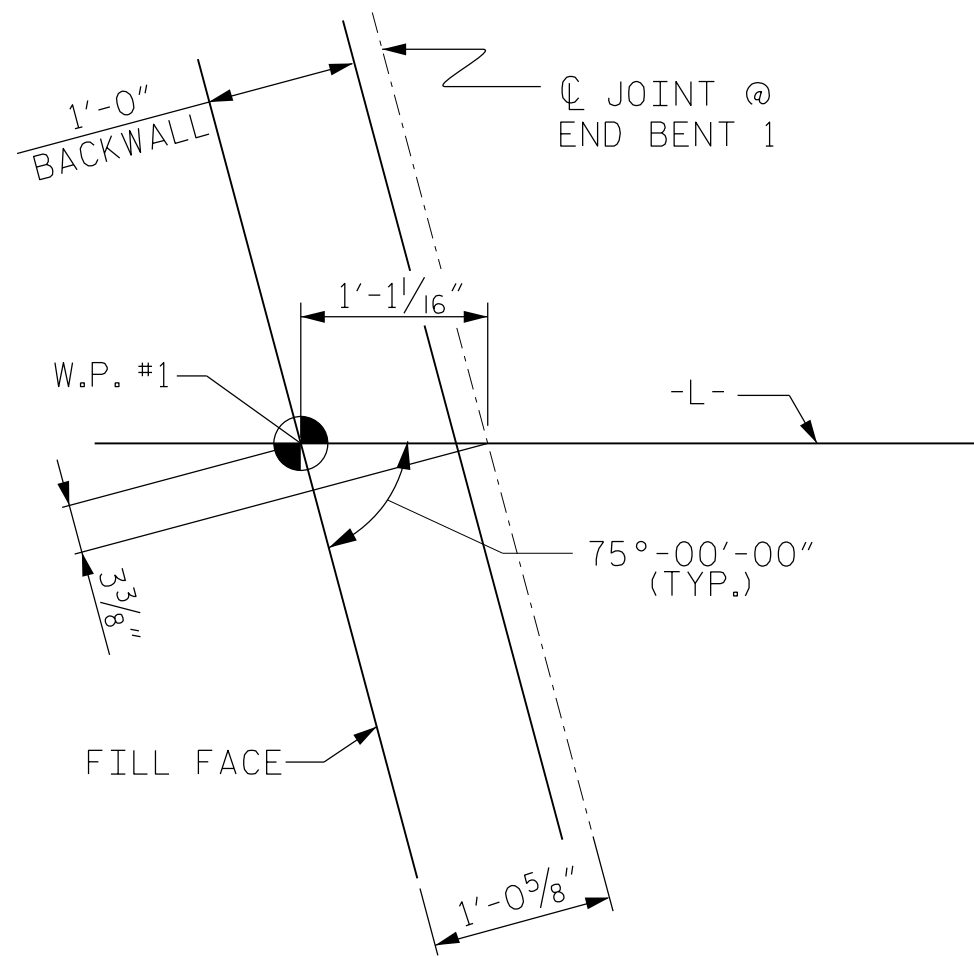
7/11/2025  
B-5614\_SMU.S1\_060009.dgn  
USERdefault

DRAWN BY: J. WILSON DATE: 2/25  
CHECKED BY: D. RUGGLES DATE: 2/25  
DESIGN ENGINEER OF RECORD: D. RUGGLES DATE: 2/25

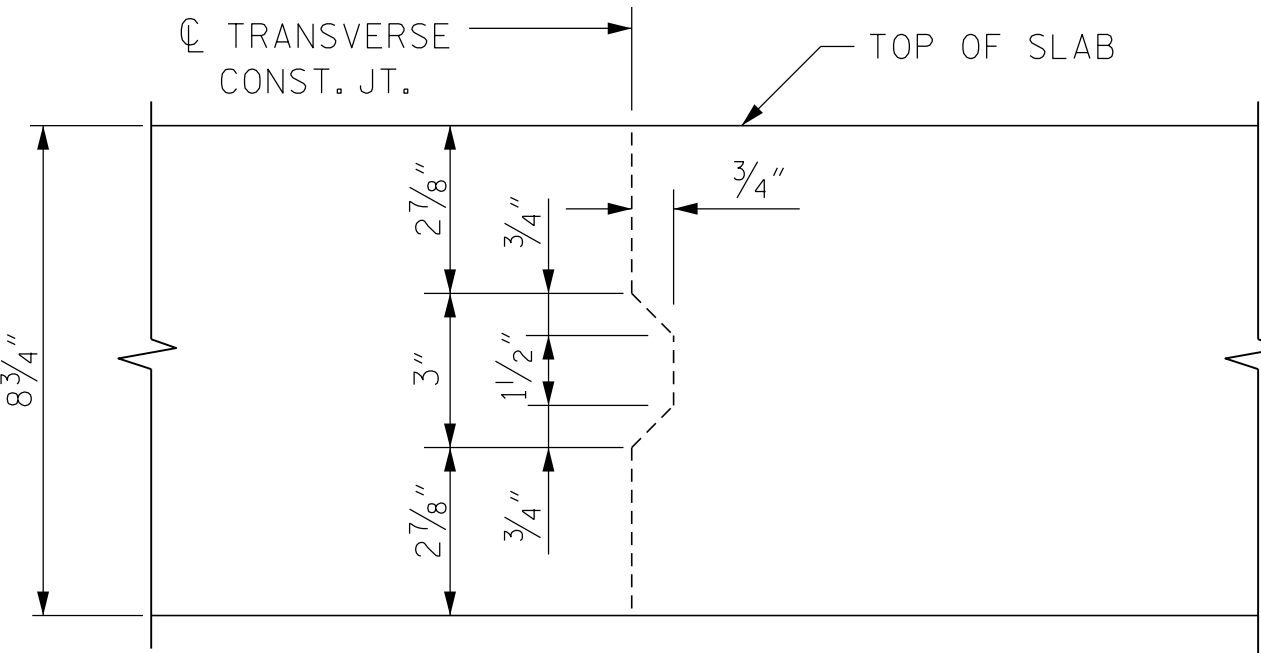


## PLAN OF SPANS A, B, & C

AFTER STRANDS ARE CUT, FILL RECESS WITH NON-SHRINK GROUT.

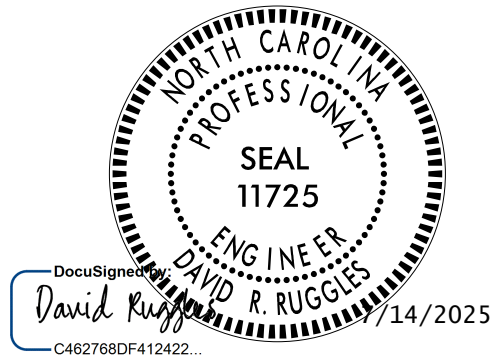


DETAIL A



TRANSVERSE CONSTRUCTION JOINT DETAIL

NOTE: REINFORCING STEEL IN SLAB NOT SHOWN  
LONGITUDINAL STEEL SHALL BE CONTINUOUS THROUGH JOINT.



DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED

**STEWART**

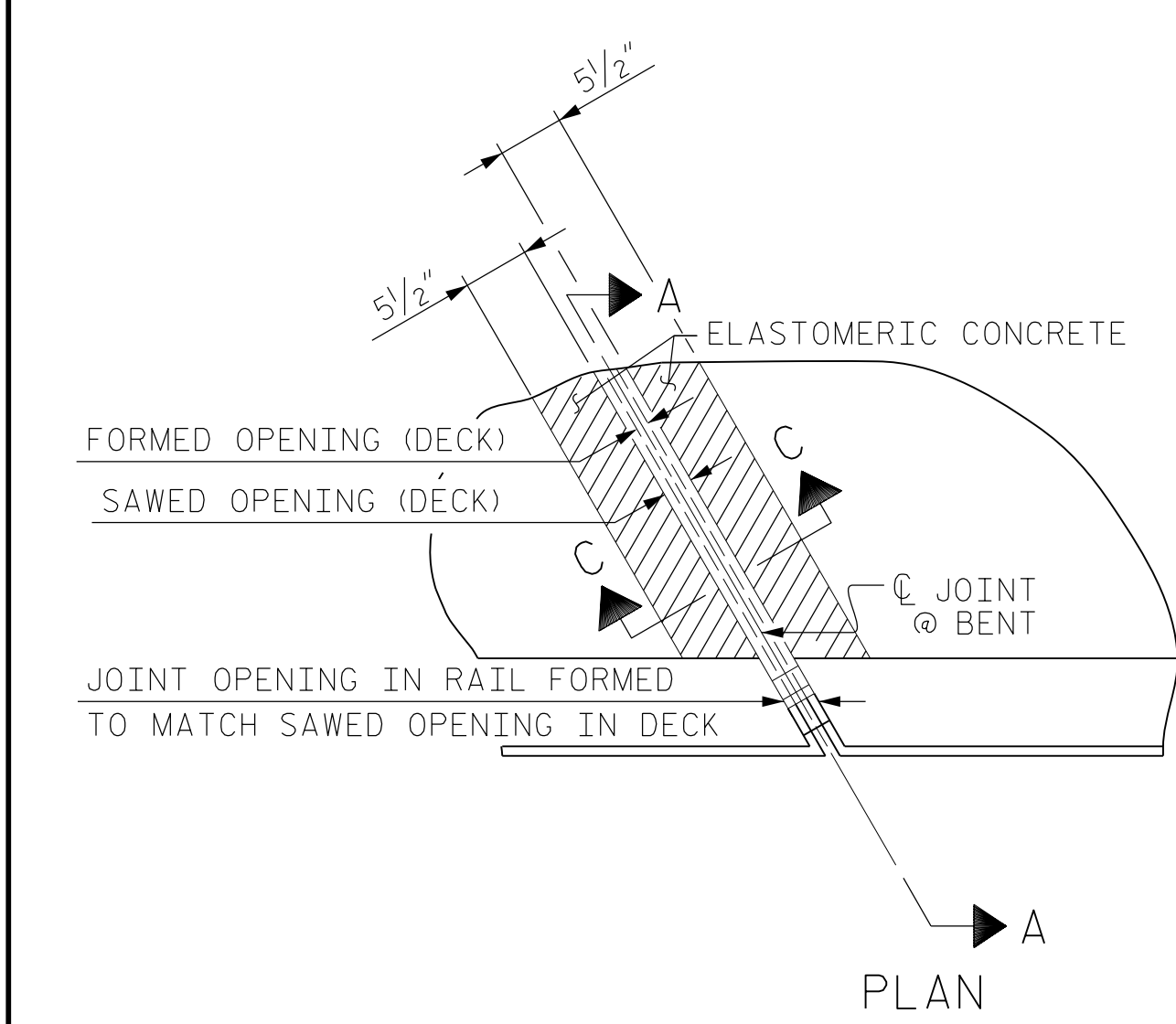
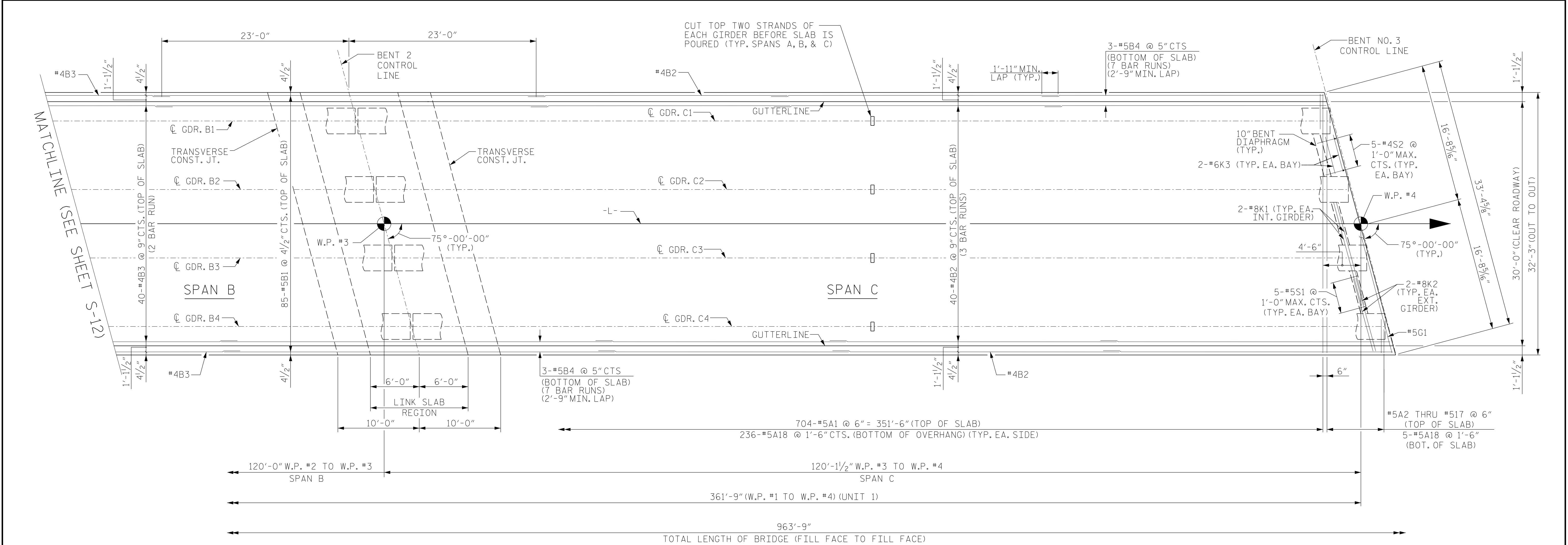
Firm License No. F-1536  
434 Fayetteville St.,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com

PROJECT NO. B-5614  
BEAUFORT COUNTY  
STATION: 22+57.00 -L-

SHEET 1 OF 2

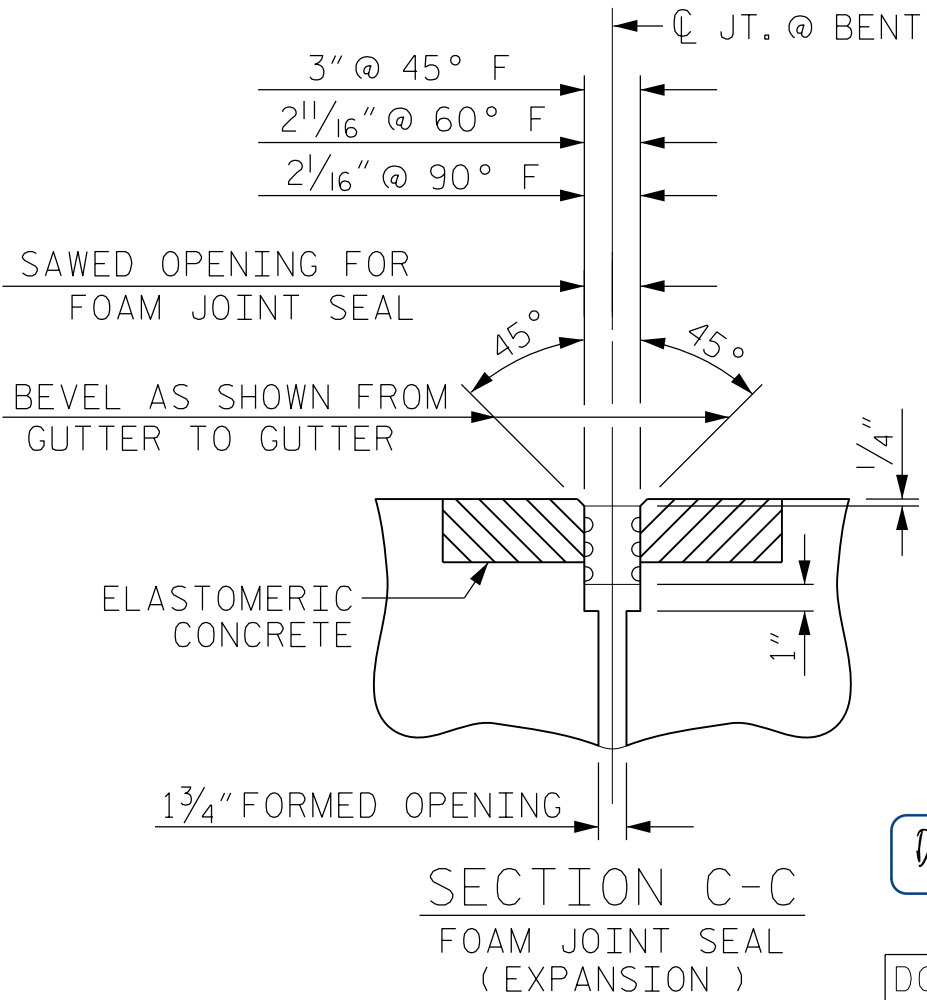
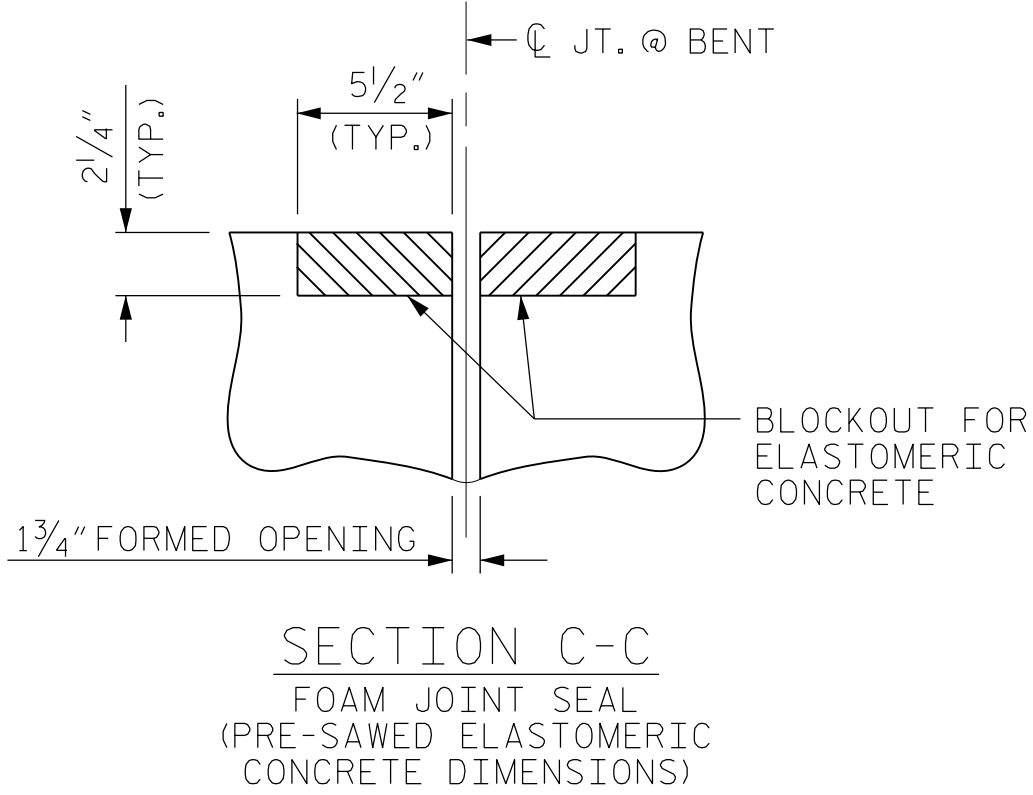
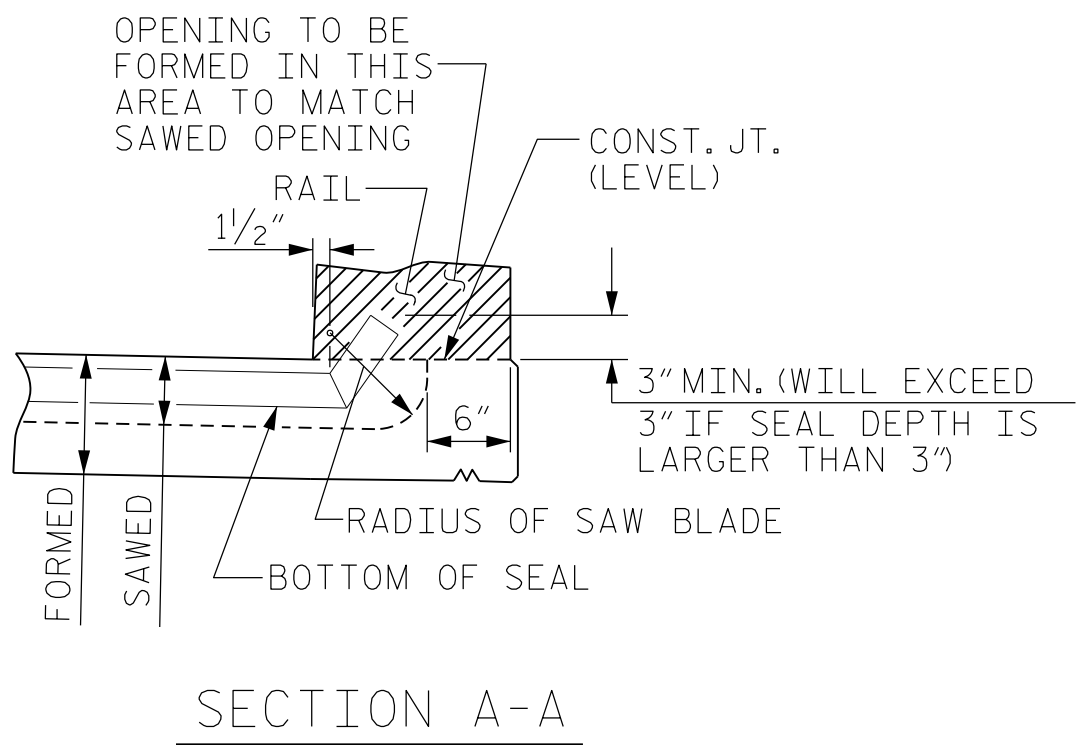
| REVISIONS |     |       |     |     |       | SHEET NO.<br>S-12     |
|-----------|-----|-------|-----|-----|-------|-----------------------|
| NO.       | BY: | DATE: | NO. | BY: | DATE: |                       |
| 1         |     |       | 3   |     |       | TOTAL<br>SHEETS<br>52 |
| 2         |     |       | 4   |     |       |                       |

7/11/2025  
B-5614\_SMU.S2.060009.dgn  
USER:dfault



| ELASTOMERIC CONCRETE |                                  |
|----------------------|----------------------------------|
| BENT NO.             | ELASTOMERIC CONCRETE * (CU. FT.) |
| 3                    | 5.5                              |
| 5                    | 5.5                              |
| TOTAL                | 11.0                             |

\* BASED ON THE MINIMUM BLOCKOUT SHOWN.



### JOINT SEAL DETAILS @ BENT 3 & BENT 5

FOAM JOINT SEAL TO BE CUT, HEAT WELDED AND TURNED UP PARALLEL TO SLOPED FACE OF THE BARRIER RAIL.  
THE JOINT SHALL BE SAWED PRIOR TO THE CASTING OF THE BARRIER RAIL.

|                            |            |        |      |
|----------------------------|------------|--------|------|
| DRAWN BY:                  | J. WILSON  | DATE : | 2/25 |
| CHECKED BY:                | D. RUGGLES | DATE : | 2/25 |
| DESIGN ENGINEER OF RECORD: | D. RUGGLES | DATE : | 2/25 |

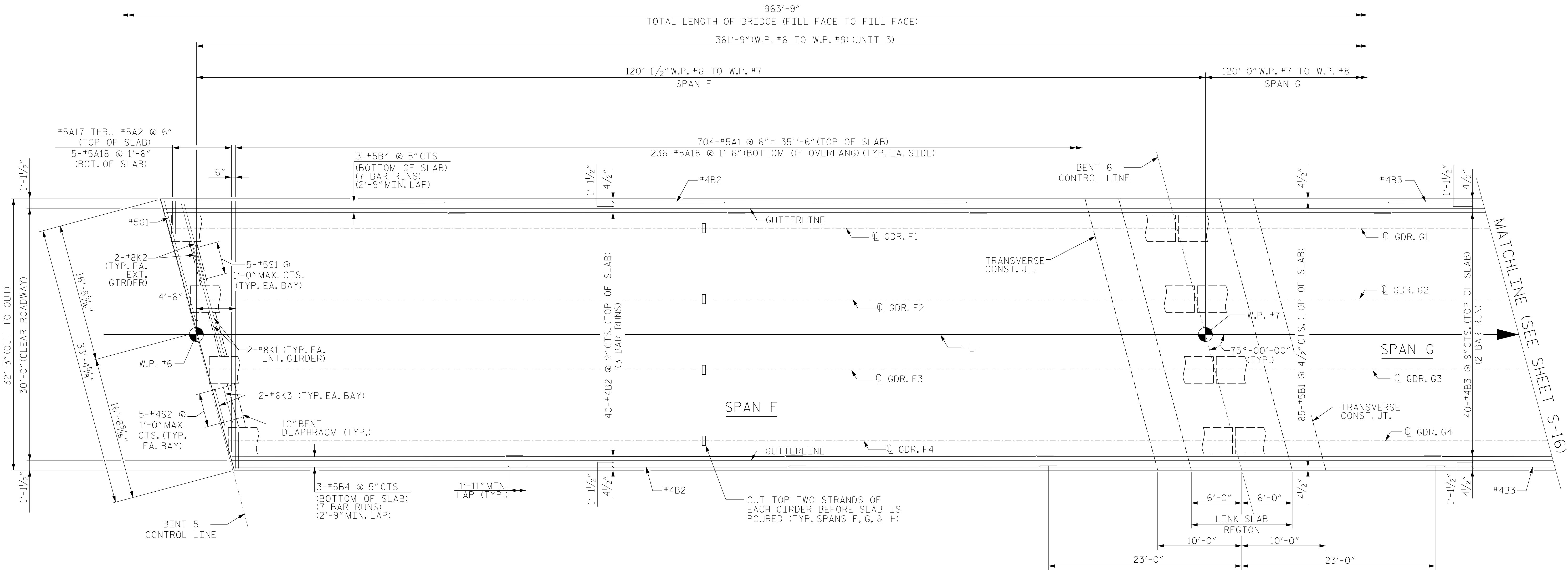
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Firm License No. F-1536  
434 Fayetteville St., Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com

PROJECT NO. B-5614  
BEAUFORT COUNTY  
STATION: 22+57.00 -L-

| SHEET 2 OF 2                                                                                                      |     |       |     |     |                 |
|-------------------------------------------------------------------------------------------------------------------|-----|-------|-----|-----|-----------------|
| STATE OF NORTH CAROLINA<br>DEPARTMENT OF TRANSPORTATION<br>RALEIGH<br>SUPERSTRUCTURE<br>PLAN OF SPANS A, B, AND C |     |       |     |     |                 |
| REVISIONS                                                                                                         |     |       |     |     |                 |
| NO.                                                                                                               | BY: | DATE: | NO. | BY: | DATE:           |
| 1                                                                                                                 |     |       | 3   |     |                 |
| 2                                                                                                                 |     |       | 4   |     |                 |
| SHEET NO. S-13                                                                                                    |     |       |     |     | TOTAL SHEETS 52 |





PLAN OF SPANS F, G, & H

AFTER STRANDS ARE CUT, FILL RECESS WITH NON-SHRINK GROUT.

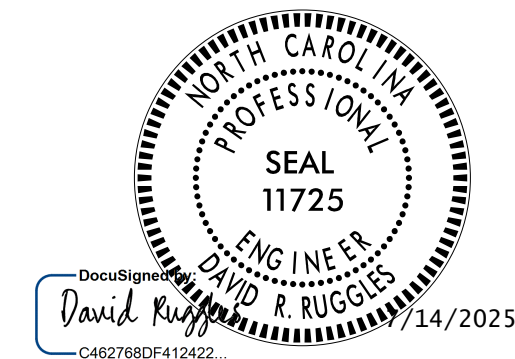
FOR BENT 5 JOINT DETAILS, SEE SHEET S-13.

PROJECT NO. B-5614

BEAUFORT COUNTY

STATION: 22+57.00 -L-

SHEET 1 OF 2



DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED



Firm License No. F-1536  
434 Fayetteville St,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com

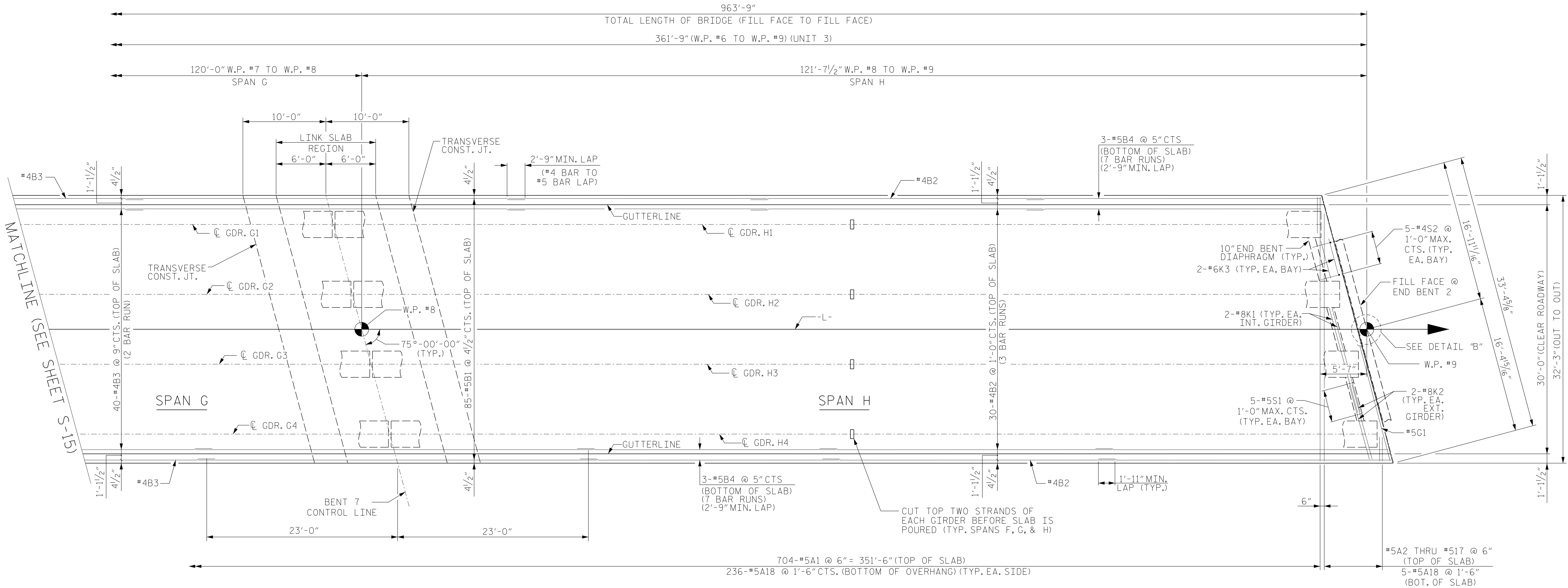
STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
SUPERSTRUCTURE  
PLAN OF SPANS  
F, G, AND H

| REVISIONS |     |       |     |     |       | SHEET NO.<br>S-15     |
|-----------|-----|-------|-----|-----|-------|-----------------------|
| NO.       | BY: | DATE: | NO. | BY: | DATE: |                       |
| 1         |     |       | 3   |     |       | TOTAL<br>SHEETS<br>52 |
| 2         |     |       | 4   |     |       |                       |

DRAWN BY: J. WILSON DATE: 2/25

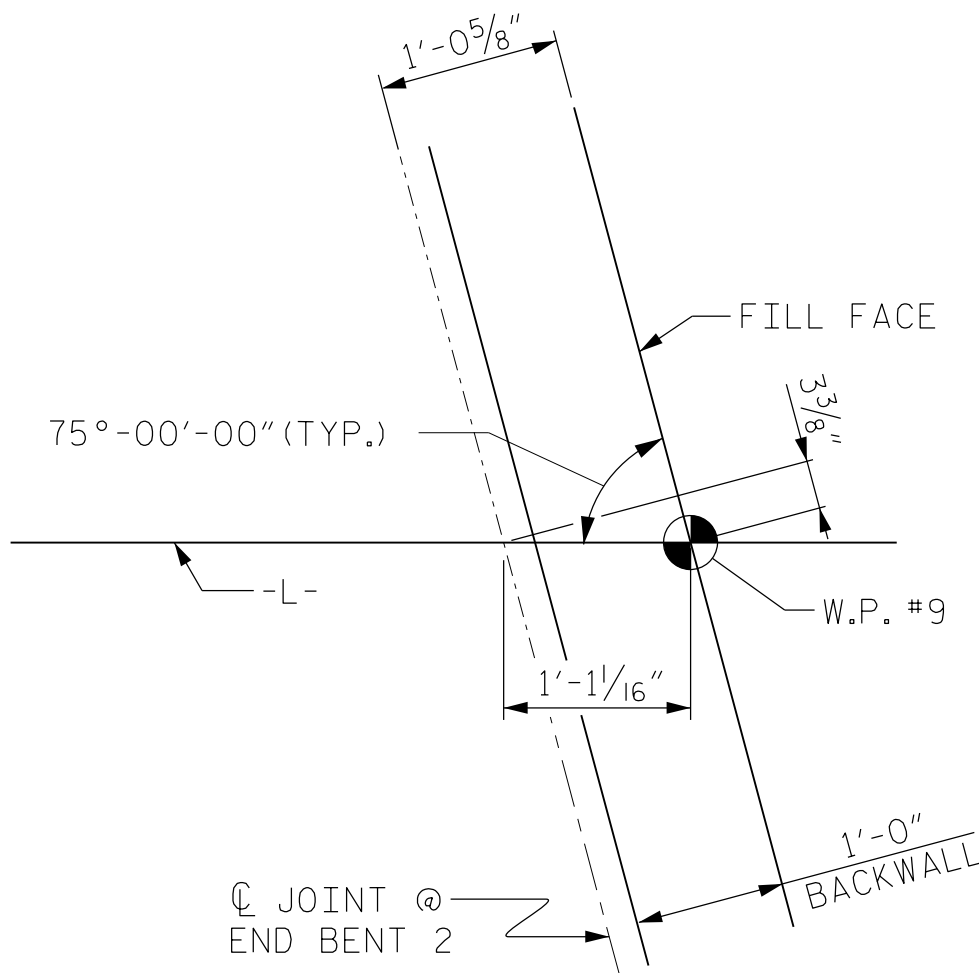
CHECKED BY: D. RUGGLES DATE: 2/25

DESIGN ENGINEER OF RECORD: D. RUGGLES DATE: 2/25



PLAN OF SPANS F, G, & H

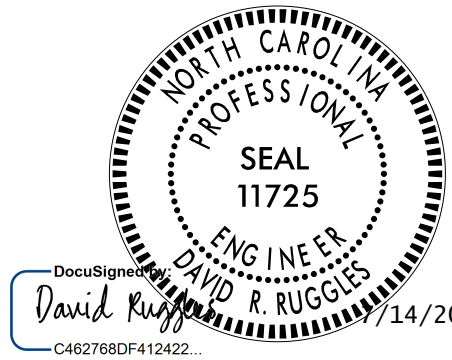
AFTER STRANDS ARE CUT, FILL RECESS WITH NON-SHRINK GROUT.



DETAIL B

PROJECT NO. B-5614  
BEAUFORT COUNTY  
STATION: 22+57.00 -L-

SHEET 2 OF 2



DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED



STEWART

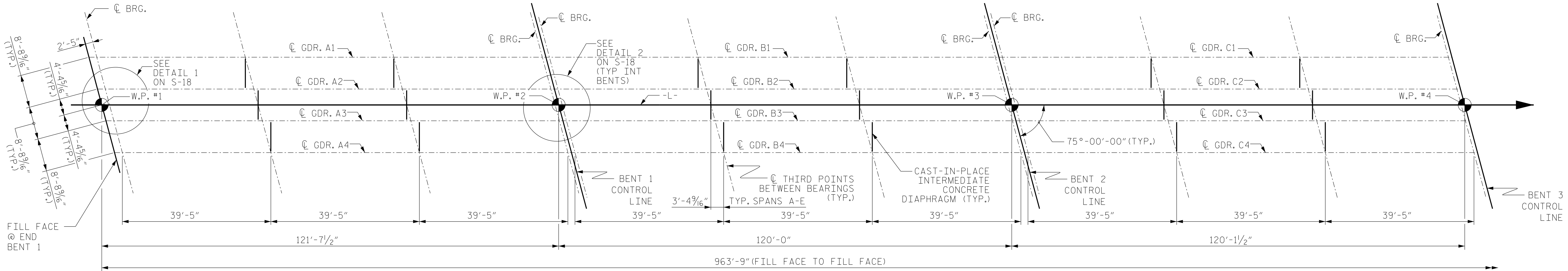
Firm License No. F-1536  
434 Fayetteville St,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
SUPERSTRUCTURE  
PLAN OF SPANS  
F, G, AND H

| REVISIONS |     |       |     |     |       | SHEET NO.<br>S-16     |
|-----------|-----|-------|-----|-----|-------|-----------------------|
| NO.       | BY: | DATE: | NO. | BY: | DATE: |                       |
| 1         |     |       | 3   |     |       | TOTAL<br>SHEETS<br>52 |
| 2         |     |       | 4   |     |       |                       |

7/11/2025  
B-5614\_SMU.S5\_060009.dgn  
USER:dfault

DRAWN BY: J. WILSON DATE: 2/25  
CHECKED BY: D. RUGGLES DATE: 2/25  
DESIGN ENGINEER OF RECORD: D. RUGGLES DATE: 2/25



EXP.

E5, PE1

SPAN A

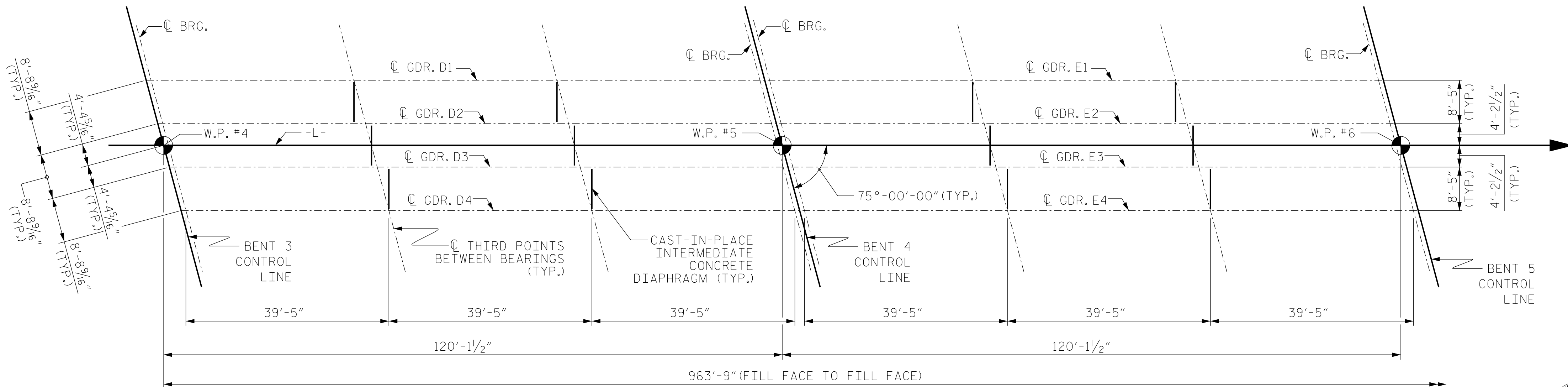
FIX  
E5, PF3 (A1, A2, A4)  
E5, PF4 (A3)

SPAN B

FIX  
E5, PF7 (B1, B2, B4)  
E5, PF8 (B3)

SPAN C

EXP  
E5, PE11



EXP  
E5, PE12

SPAN D

FIX  
E5, PF7

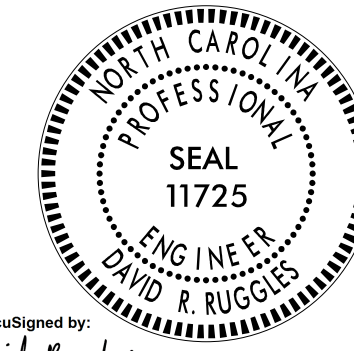
FIX  
E5, PF7

SPAN E

EXP  
E5, PE13 (E1, E3, E4)  
E5, PE14 (E2)

## FRAMING PLAN

NOTE: AFTER GIRDERS HAVE BEEN SET IN FINAL POSITION,  
EXPOSED TOP TWO STRANDS SHALL BE CUT AT CENTER OF  
SPAN. STRANDS SHALL BE CUT BEFORE SLAB IS POURED.



Documented by  
David Ruggles  
C462788DF412422  
DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED

Firm License No. F-1536  
434 Fayetteville St,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com



STEWART

PROJECT NO. B-5614  
BEAUFORT COUNTY  
STATION: 22+57.00 -L-

SHEET 1 OF 2

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
SUPERSTRUCTURE  
FRAMING PLAN

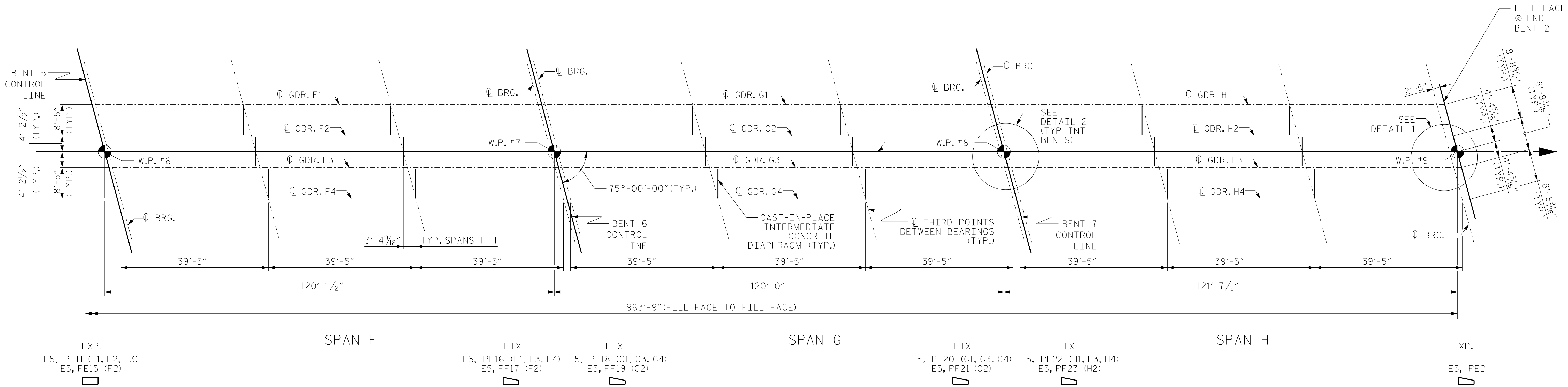
| REVISIONS    |     |       |     |     |       | SHEET NO. |
|--------------|-----|-------|-----|-----|-------|-----------|
| NO.          | BY: | DATE: | NO. | BY: | DATE: |           |
| 1            |     |       | 3   |     |       | S-17      |
| 2            |     |       | 4   |     |       |           |
| TOTAL SHEETS |     |       |     |     |       | 52        |

\$\$\$\$SYTIME\$\$\$\$  
\$\$\$\$DGN\$\$\$\$  
\$\$\$\$USERNAME\$\$\$\$

DRAWN BY: J. WILSON DATE: 2/25  
CHECKED BY: D. RUGGLES DATE: 2/25  
DESIGN ENGINEER OF RECORD: D. RUGGLES DATE: 2/25

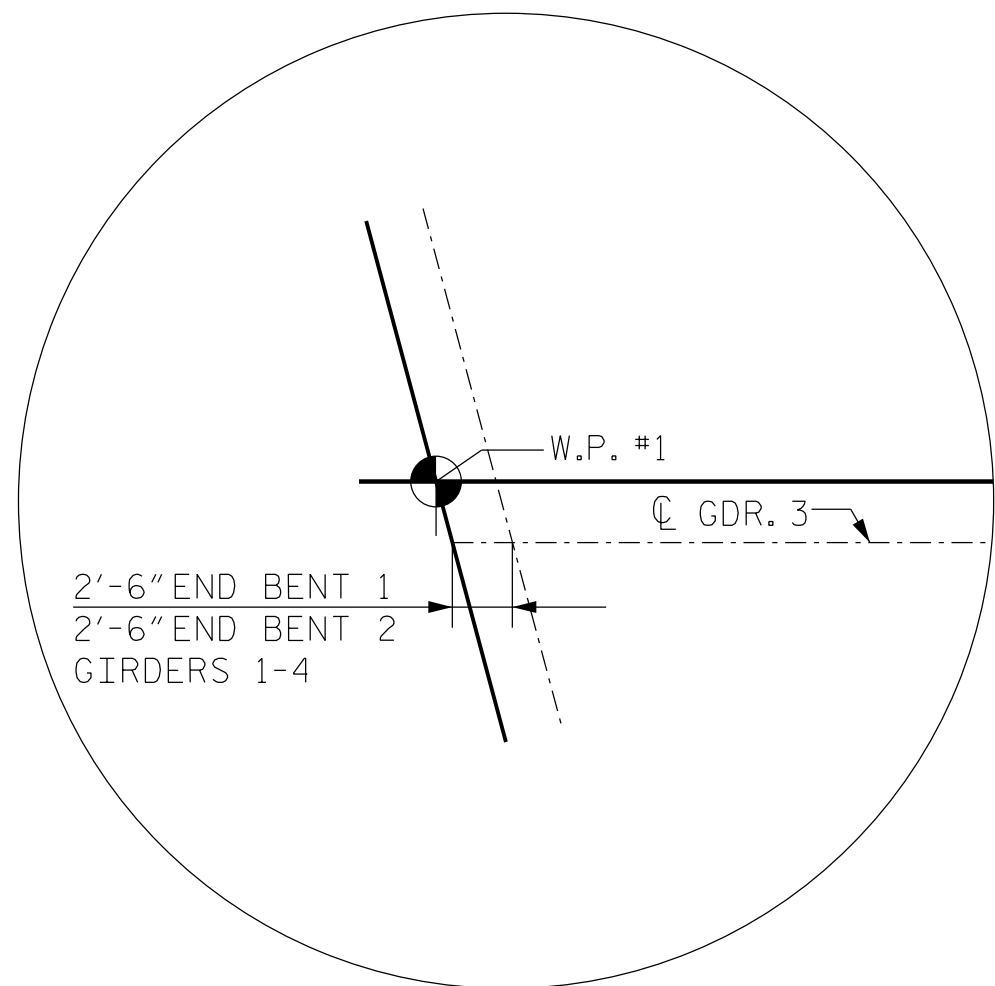
\$\$\$SYTIME\$\$\$  
\$\$\$DGN\$\$\$  
\$\$\$USERNAME\$\$\$

DRAWN BY: J. WILSON DATE: 2/25  
CHECKED BY: D. RUGGLES DATE: 2/25  
DESIGN ENGINEER OF RECORD: D. RUGGLES DATE: 2/25



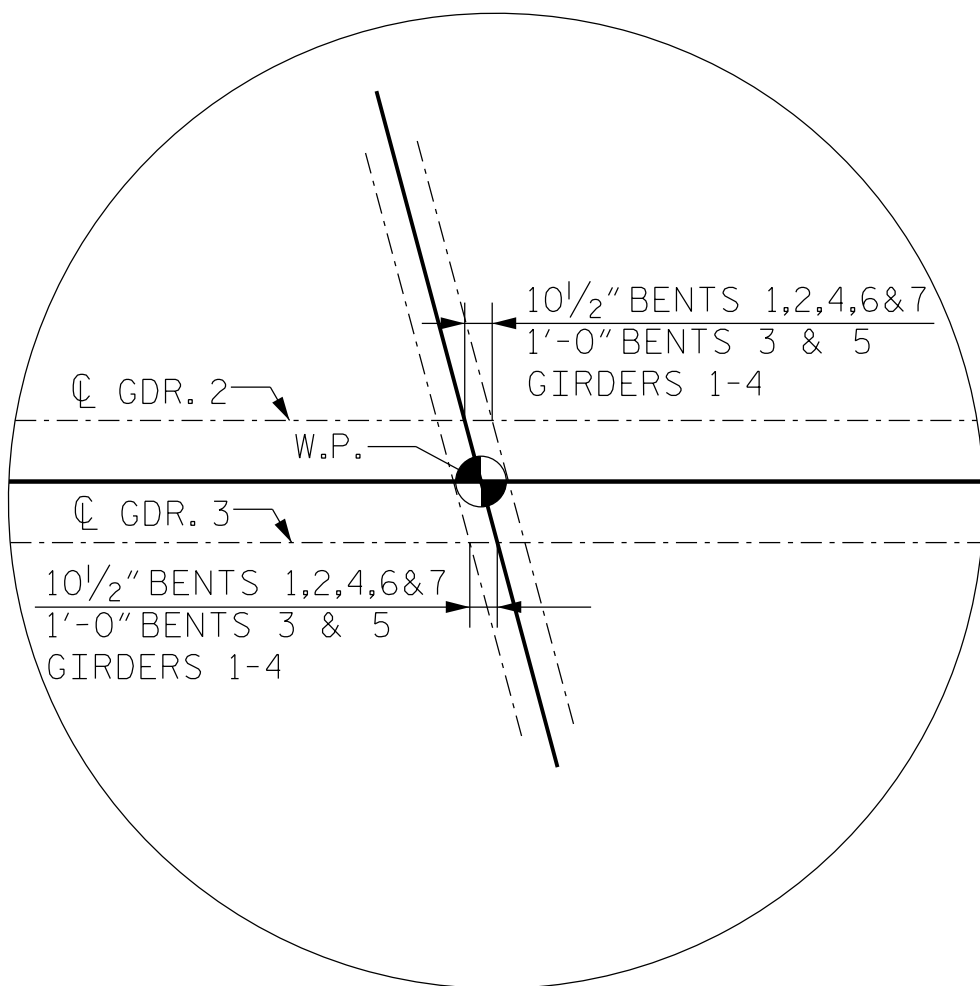
## FRAMING PLAN

NOTE: AFTER GIRDERS HAVE BEEN SET IN FINAL POSITION, EXPOSED TOP TWO STRANDS SHALL BE CUT AT CENTER OF SPAN. STRANDS SHALL BE CUT BEFORE SLAB IS POURED.



## DETAIL 1

FILL FACE TO C BRG  
END BENT 1 SHOWN; END BENT 2 SIMILAR



## DETAIL 2

C BENT TO C BRG  
INTERIOR BENTS



DocuSigned by:  
David Ruggles  
8/26/2025  
DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED



STEWART

Firm License No. F-1536  
434 Fayetteville St,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com

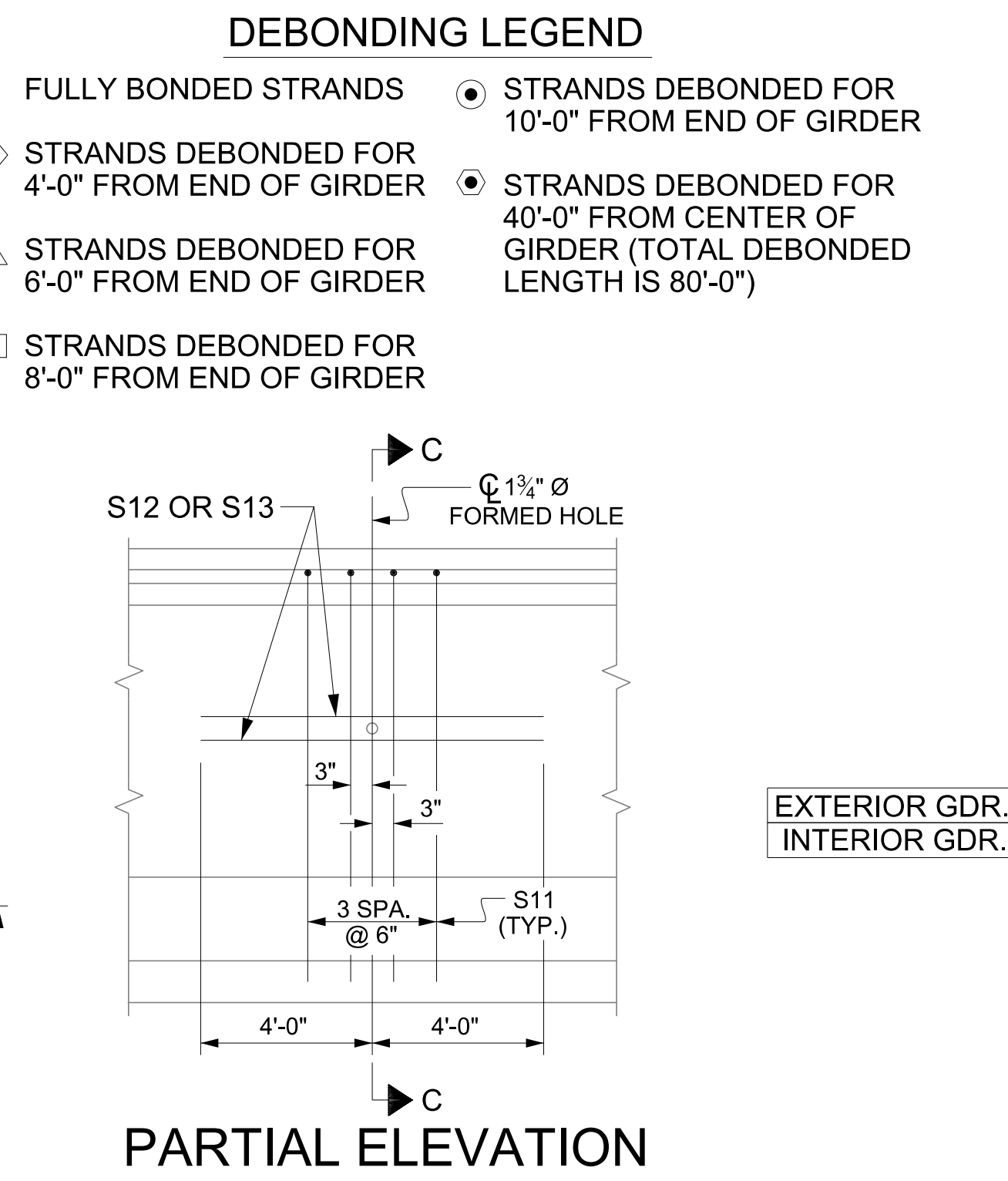
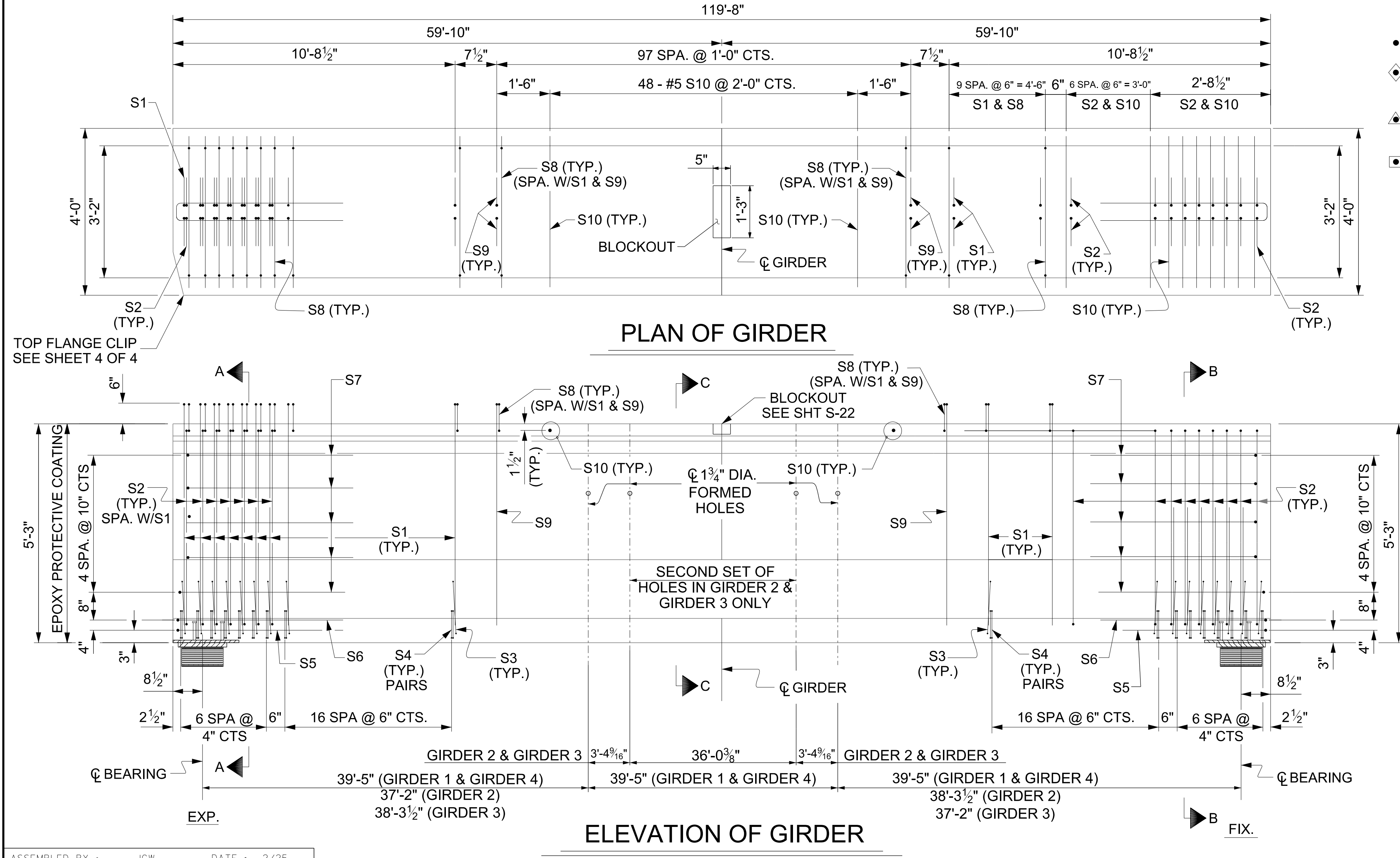
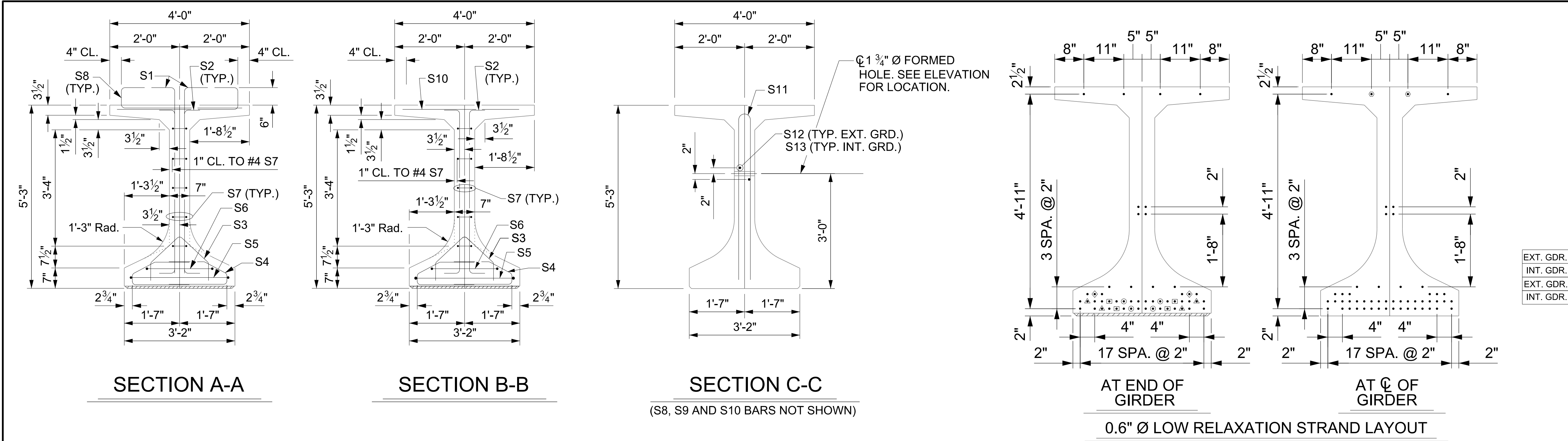
PROJECT NO. B-5614  
BEAUFORT COUNTY  
STATION: 22+57.00 -L-

SHEET 2 OF 2

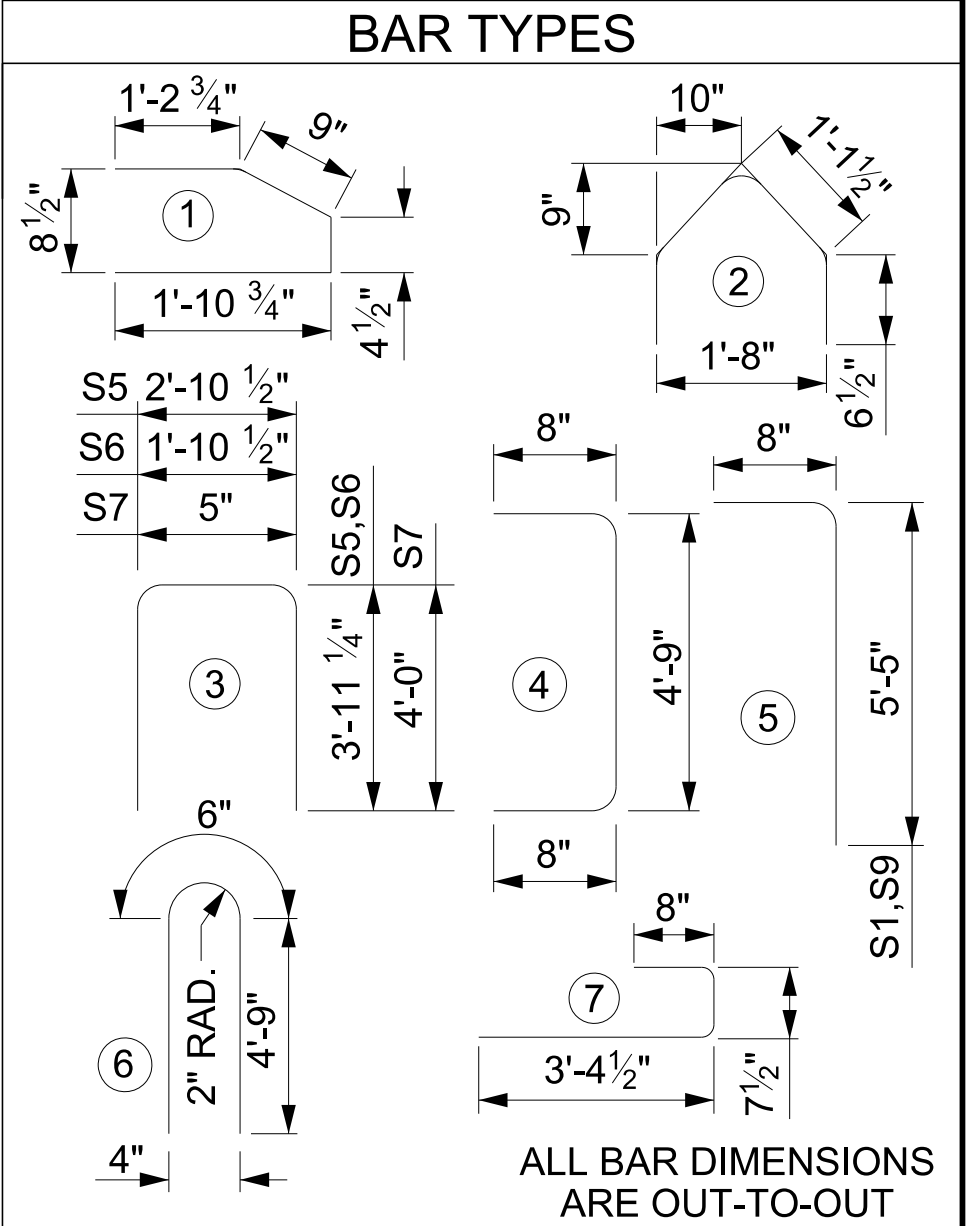
STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
SUPERSTRUCTURE  
FRAMING PLAN

| REVISIONS    |     |       |     |     |       | SHEET NO. |
|--------------|-----|-------|-----|-----|-------|-----------|
| NO.          | BY: | DATE: | NO. | BY: | DATE: |           |
| 1            |     |       | 3   |     |       | S-18      |
| 2            |     |       | 4   |     |       |           |
| TOTAL SHEETS |     |       |     |     |       | 52        |

8/26/2025  
B-5614\_SMU\_G1\_060009.dgn  
USER:dfault



| 0.6"Ø L. R. GRADE 270 STRANDS |        |                                     |      |                                     |        |
|-------------------------------|--------|-------------------------------------|------|-------------------------------------|--------|
| AREA (SQUARE INCHES)          |        | ULTIMATE STRENGTH (LBS. PER STRAND) |      | APPLIED PRESTRESS (LBS. PER STRAND) |        |
| 0.217                         |        | 58,600                              |      | 43,950                              |        |
| REINFORCING STEEL FOR ONE GDR |        |                                     |      |                                     |        |
| BAR                           | NUMBER | SIZE                                | TYPE | LENGTH                              | WEIGHT |
| S1                            | 68     | #5                                  | 5    | 6'-1"                               | 431    |
| S2                            | 42     | #5                                  | 4    | 6'-1"                               | 266    |
| S3                            | 48     | #3                                  | 2    | 3'-4"                               | 60     |
| S4                            | 96     | #3                                  | 1    | 4'-3"                               | 153    |
| S5                            | 2      | #5                                  | 3    | 10'-9"                              | 22     |
| S6                            | 2      | #5                                  | 3    | 9'-9"                               | 20     |
| S7                            | 10     | #4                                  | 3    | 8'-5"                               | 56     |
| S8                            | 264    | #5                                  | 7    | 4'-8"                               | 1,285  |
| S9                            | 196    | #4                                  | 5    | 6'-0"                               | 786    |
| S10                           | 62     | #5                                  | STR  | 3'-8"                               | 237    |
| S11                           | 8      | #5                                  | 6    | 10'-0"                              | 83     |
| S11                           | 16     | #5                                  | 6    | 10'-0"                              | 167    |
| S12                           | 4      | #4                                  | 5    | 8'-0"                               | 21     |
| S13                           | 4      | #4                                  | 5    | 11'-5"                              | 31     |
|                               |        |                                     |      |                                     |        |
|                               |        |                                     |      |                                     |        |



| QUANTITIES FOR ONE GIRDER |                   |                     |
|---------------------------|-------------------|---------------------|
| REINFORCING STEEL         | 8000 PSI CONCRETE | 0.6" Ø L.R. STRANDS |
| LB.                       | C.Y.              | No.                 |
| 3,420                     | 30.6              | 52                  |
| 3,514                     | 30.6              | 52                  |
| GIRDERS REQUIRED          |                   |                     |
| NUMBER                    | LENGTH            | TOTAL LENGTH        |
| 4                         | 119'-8"           | 478'-8"             |

PROJECT NO. B-5614  
BEAUFORT COUNTY  
STATION: 22+57.00 -L-

SHEET 1 OF 4

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

STANDARD  
63" FIB PRESTRESSED  
CONCRETE GIRDER  
(SPAN A, D, & F)

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

SHEET NO. S-19  
TOTAL SHEETS 52

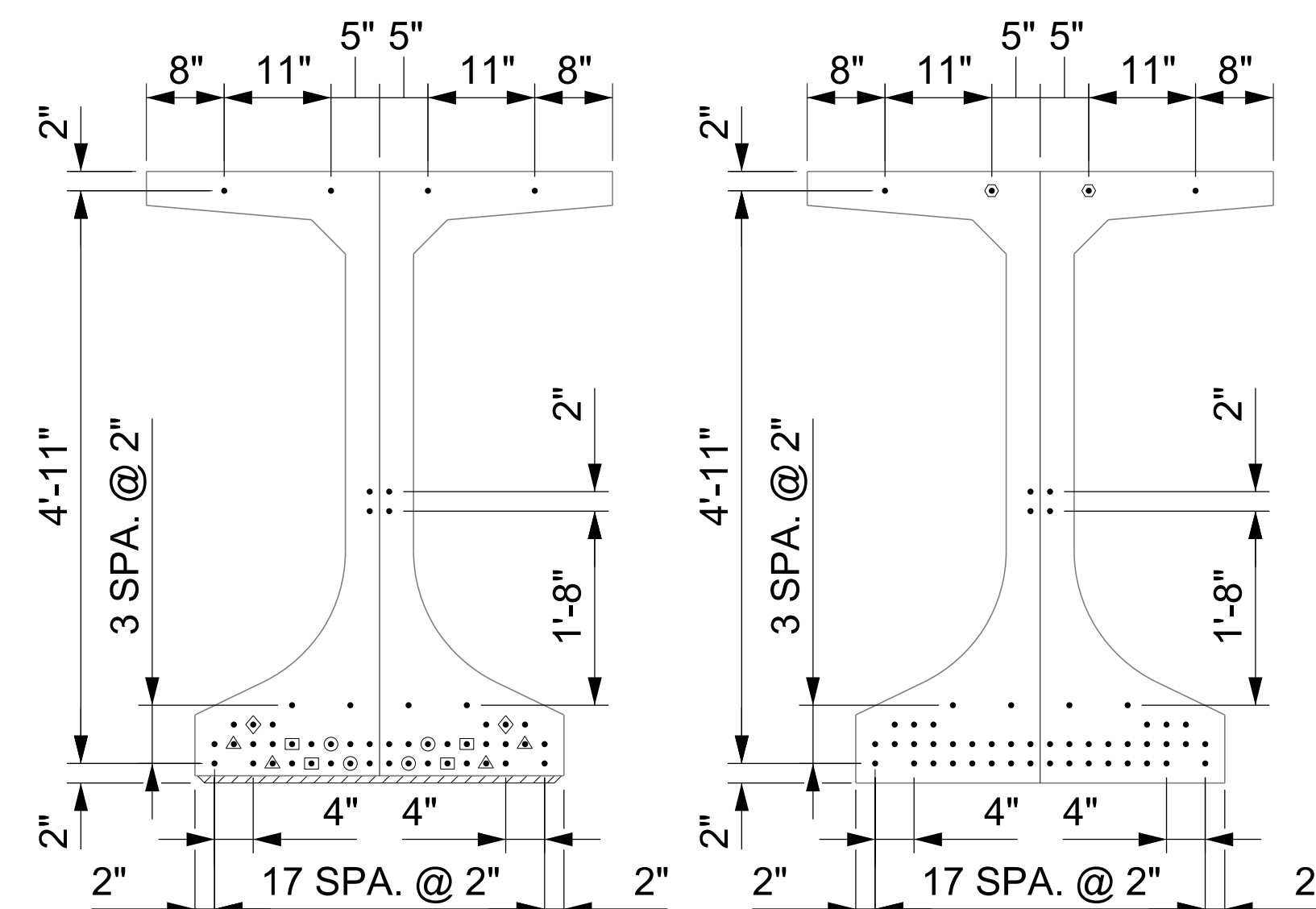
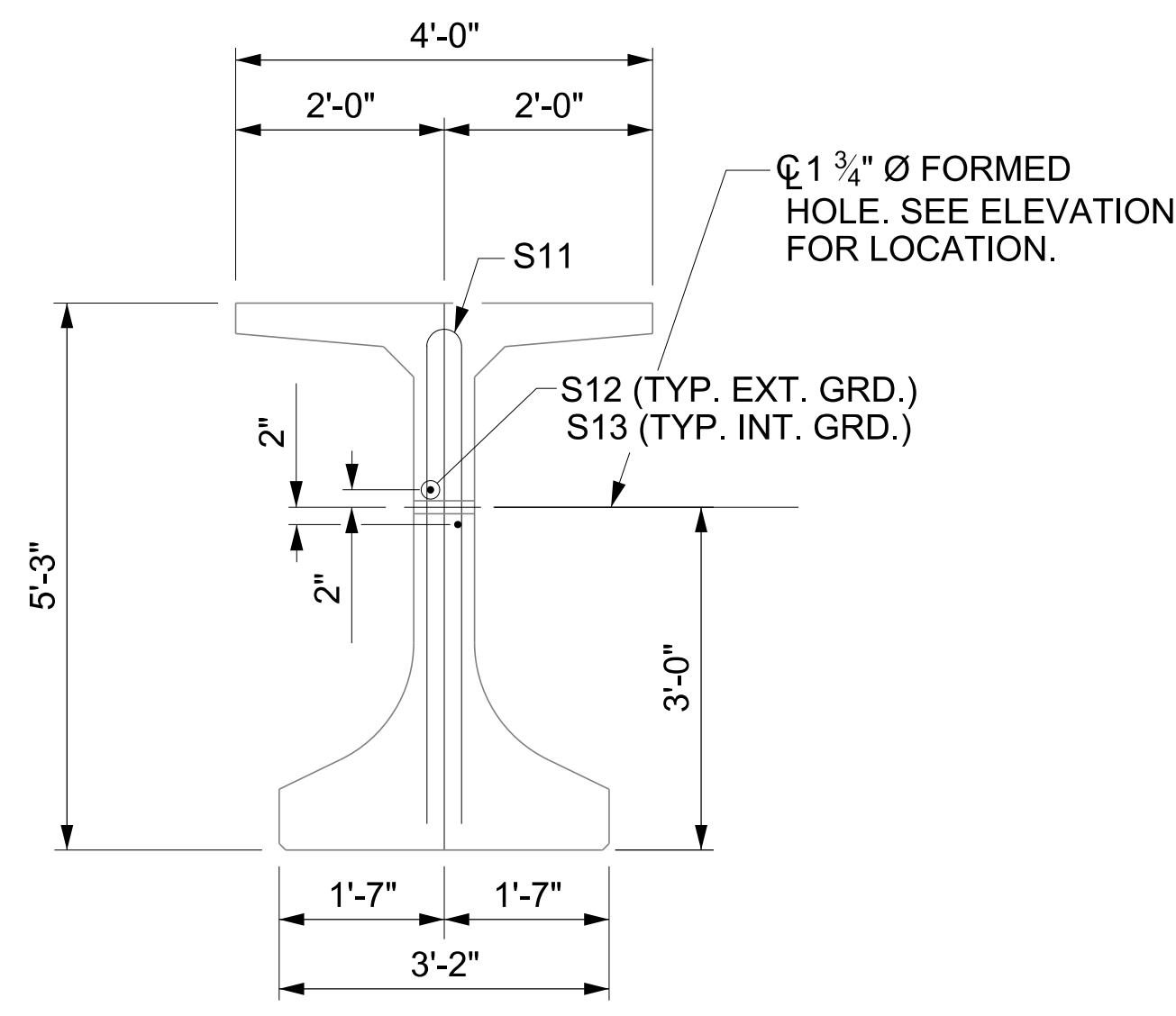
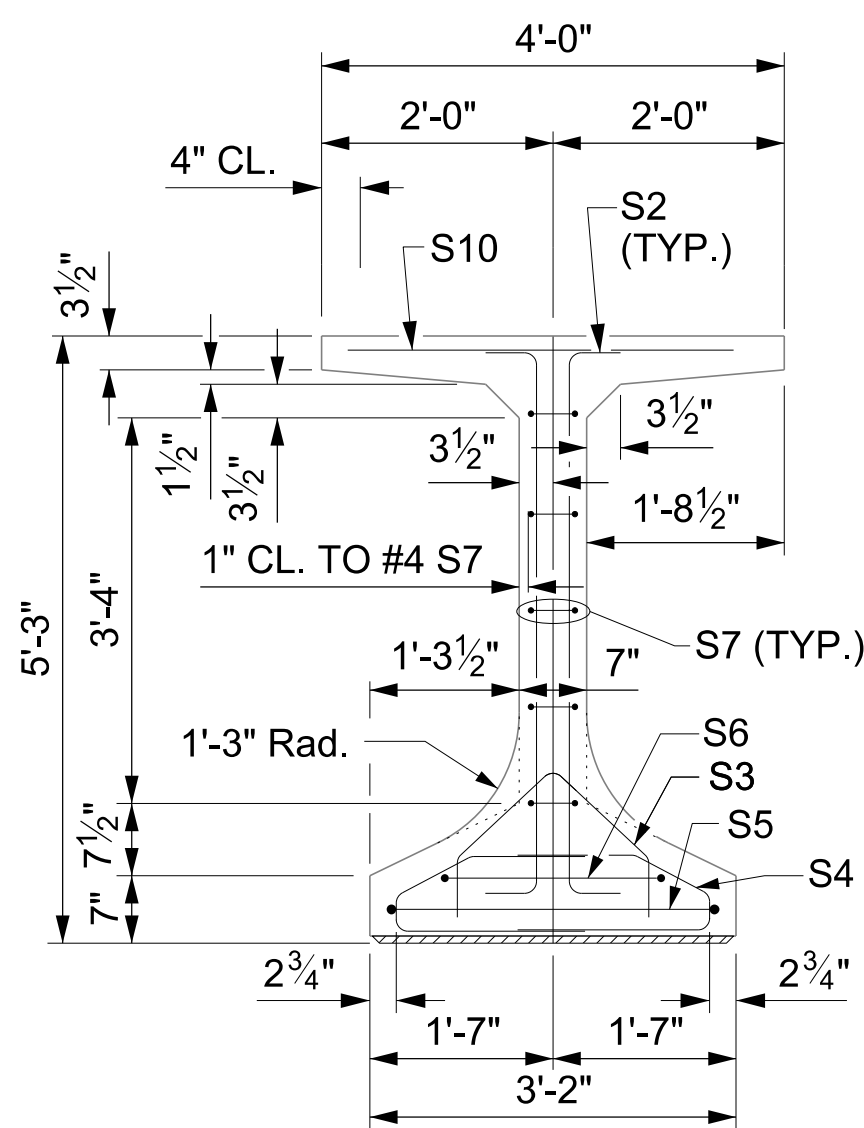
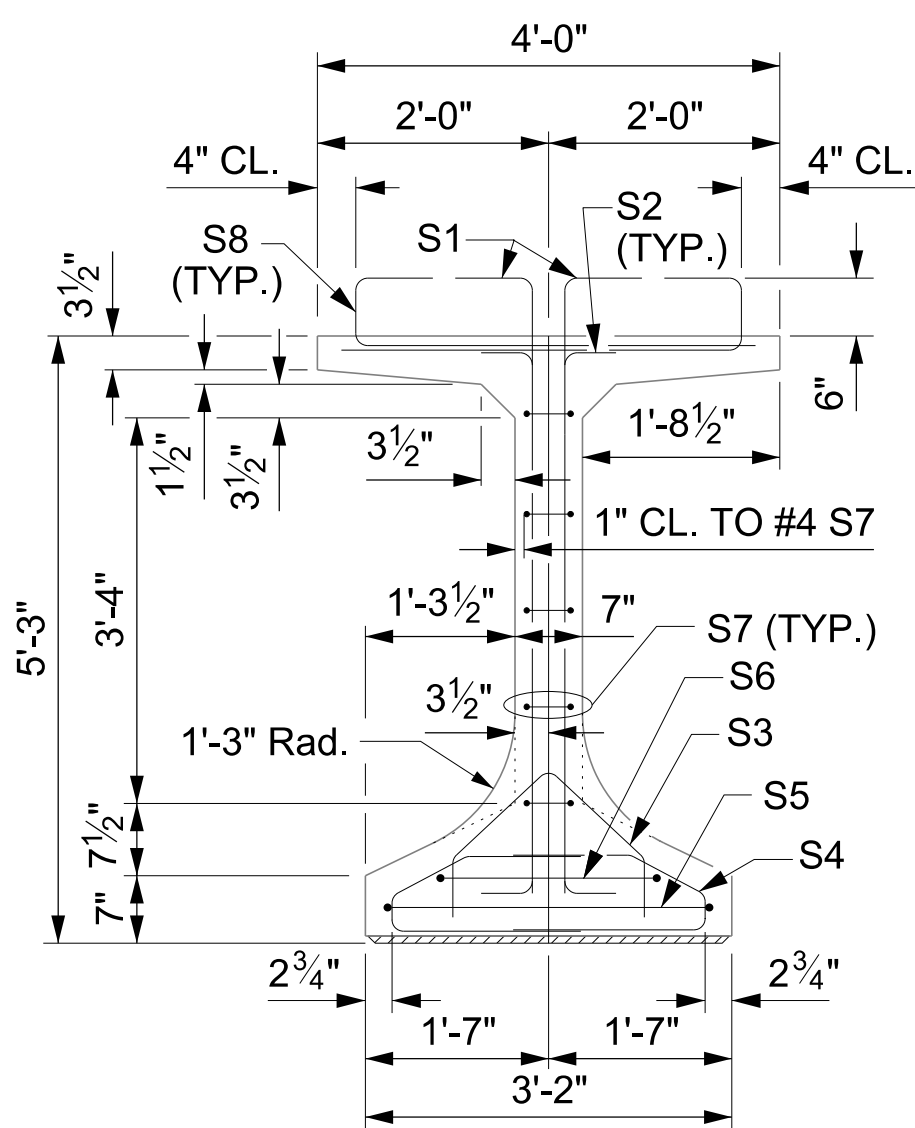
8/26/2025

David Ruggles  
Professional Engineer  
SEAL 11725  
C462788DF412422

DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED

Firm License No. F-1536  
434 Fayetteville St.,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com

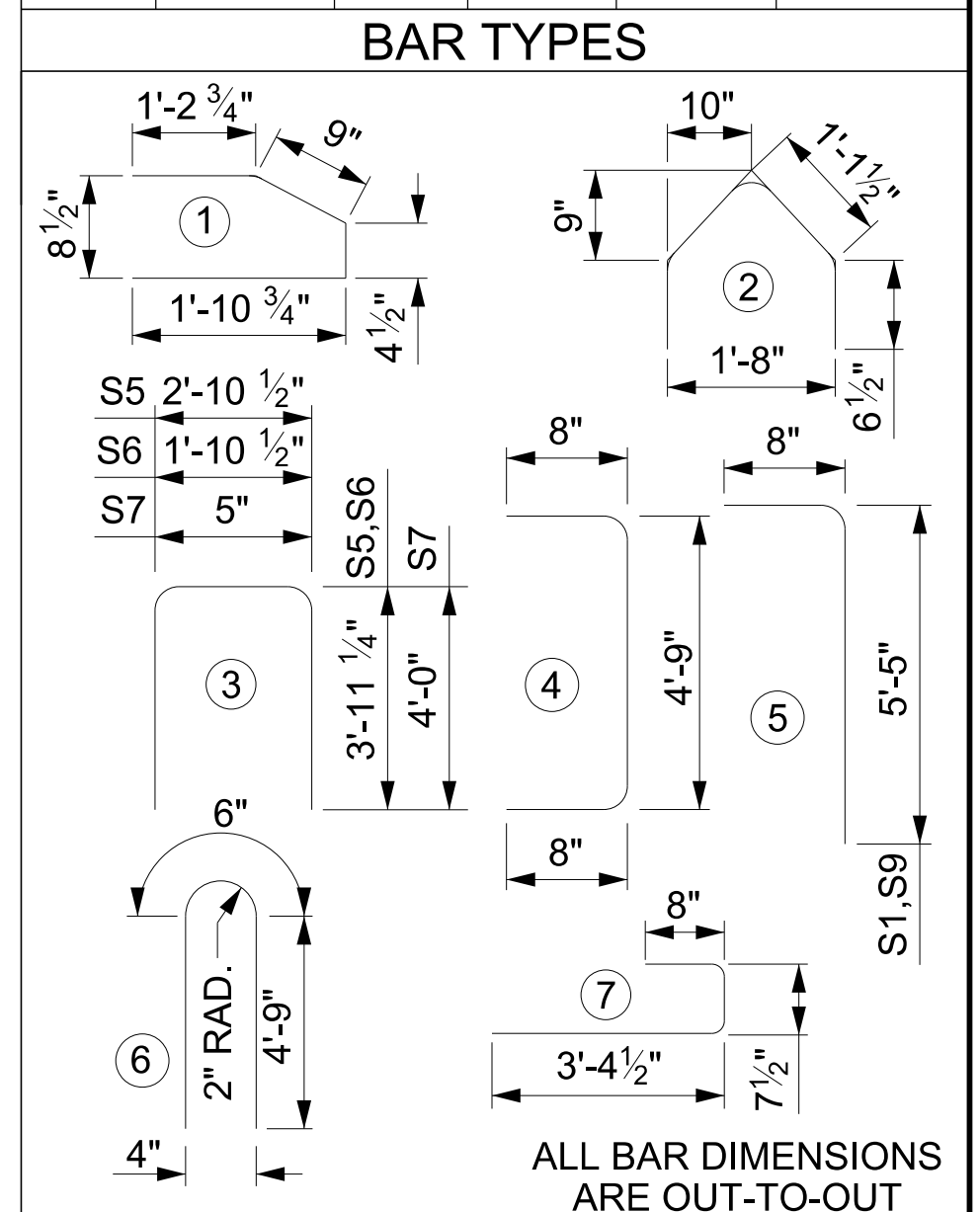
STEWART



| 0.6"Ø L. R. GRADE 270 STRANDS |                                           |                                           |
|-------------------------------|-------------------------------------------|-------------------------------------------|
| AREA<br>(SQUARE<br>INCHES)    | ULTIMATE<br>STRENGTH<br>(LBS. PER STRAND) | APPLIED<br>PRESTRESS<br>(LBS. PER STRAND) |
| 0.217                         | 58,600                                    | 43,950                                    |

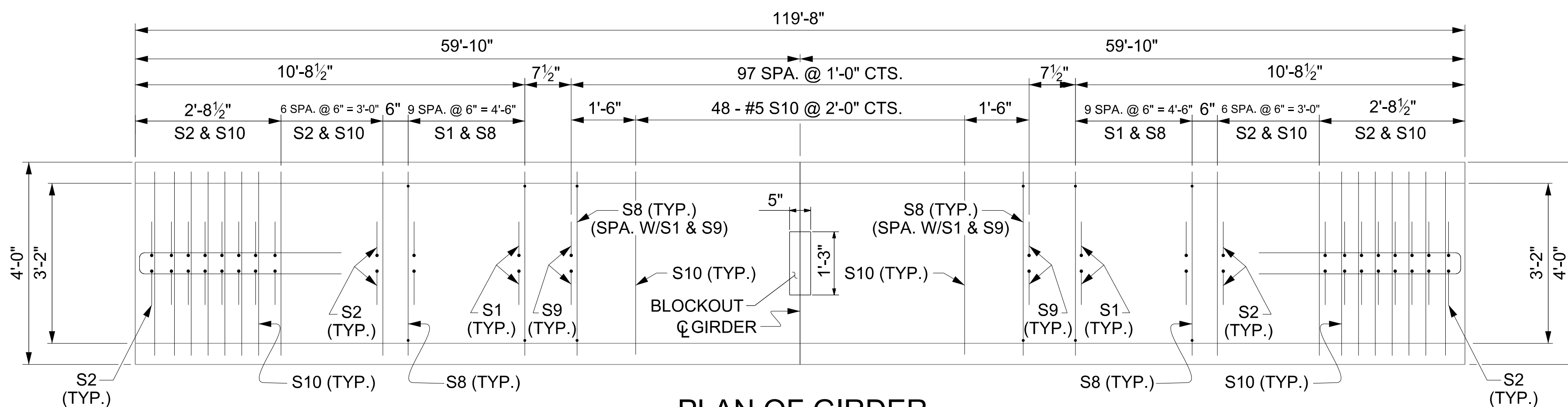
| REINFORCING STEEL FOR ONE GDR |     |        |      |      |        |        |
|-------------------------------|-----|--------|------|------|--------|--------|
|                               | BAR | NUMBER | SIZE | TYPE | LENGTH | WEIGHT |
|                               | S1  | 40     | #5   | 5    | 6'-1"  | 254    |
|                               | S2  | 56     | #5   | 4    | 6'-1"  | 355    |
|                               | S3  | 48     | #3   | 2    | 3'-4"  | 60     |
|                               | S4  | 96     | #3   | 1    | 4'-3"  | 153    |
|                               | S5  | 2      | #5   | 3    | 10'-9" | 22     |
|                               | S6  | 2      | #5   | 3    | 9'-9"  | 20     |
|                               | S7  | 10     | #4   | 3    | 8'-5"  | 56     |
|                               | S8  | 236    | #5   | 7    | 4'-8"  | 1,149  |
|                               | S9  | 196    | #4   | 5    | 6'-0"  | 786    |
|                               | S10 | 76     | #5   | STR  | 3'-8"  | 291    |
| R.                            | S11 | 8      | #5   | 6    | 10'-0" | 83     |
| R.                            | S11 | 16     | #5   | 6    | 10'-0" | 167    |
| R.                            | S12 | 4      | #4   | 5    | 8'-0"  | 21     |
|                               | S13 | 4      | #4   | 5    | 11'-5" | 31     |

|          |
|----------|
| EXT. GDR |
| INT. GDR |
| EXT. GDR |
| INT. GDR |

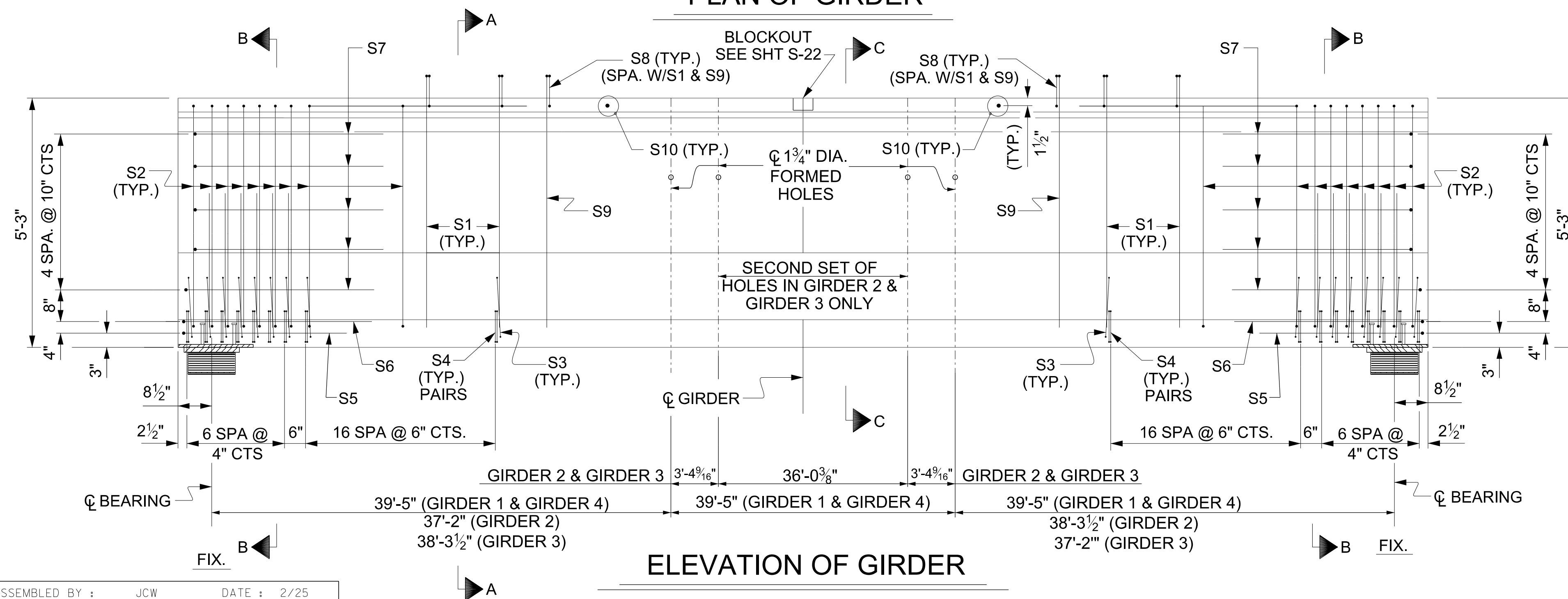
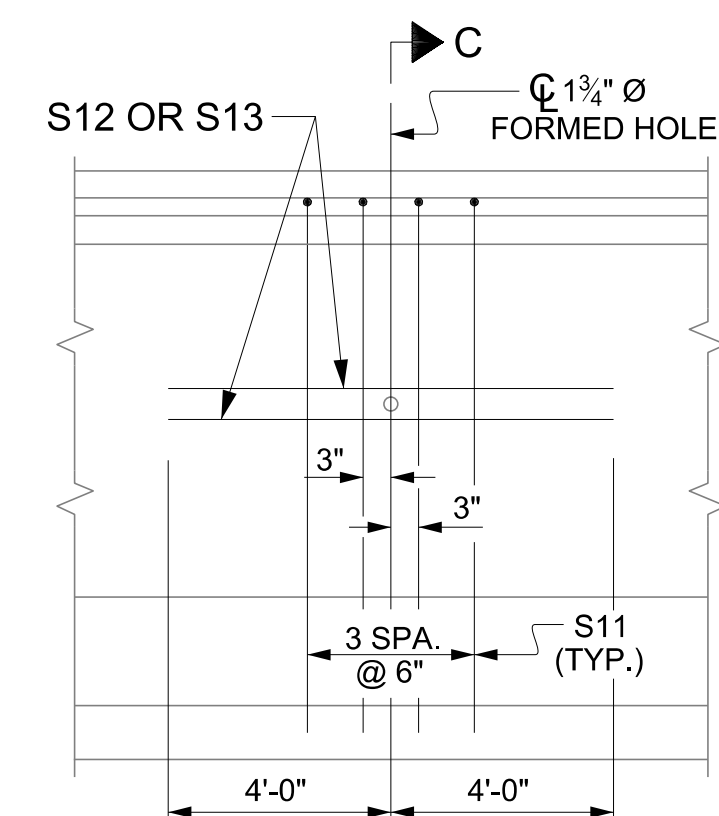


| QUANTITIES FOR ONE GIRDER |                      |                        |
|---------------------------|----------------------|------------------------|
| REINFORCING<br>STEEL      | 8000 PSI<br>CONCRETE | 0.6" Ø<br>L.R. STRANDS |
| LB.                       | C.Y.                 | No.                    |
| 3,250                     | 30.6                 | 52                     |
| 3,344                     | 30.6                 | 52                     |

| GIRDERS REQUIRED |         |              |
|------------------|---------|--------------|
| NUMBER           | LENGTH  | TOTAL LENGTH |
| 4                | 119'-8" | 478'-8"      |



- ### DEBONDING LEGEND
- |                                                 |                                                                                       |
|-------------------------------------------------|---------------------------------------------------------------------------------------|
| ● FULLY BONDED STRANDS                          | ● STRANDS DEBONDED FOR 10'-0" FROM END OF GIRDER                                      |
| ◆ STRANDS DEBONDED FOR 4'-0" FROM END OF GIRDER | ● STRANDS DEBONDED FOR 40'-0" FROM CENTER OF GIRDER (TOTAL DEBONDED LENGTH IS 80'-0") |
| ▲ STRANDS DEBONDED FOR 6'-0" FROM END OF GIRDER |                                                                                       |
| ■ STRANDS DEBONDED FOR 8'-0" FROM END OF GIRDER |                                                                                       |



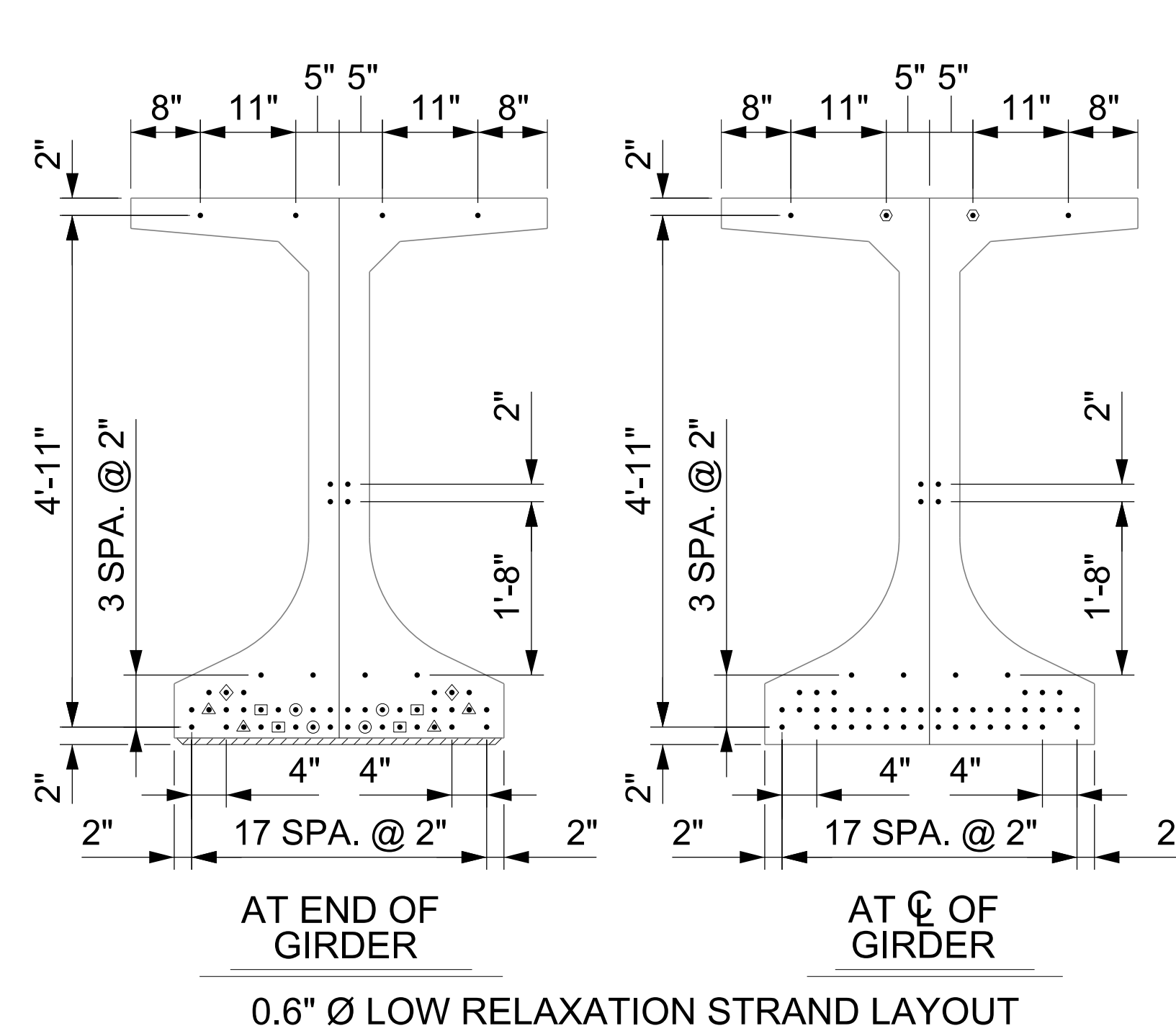
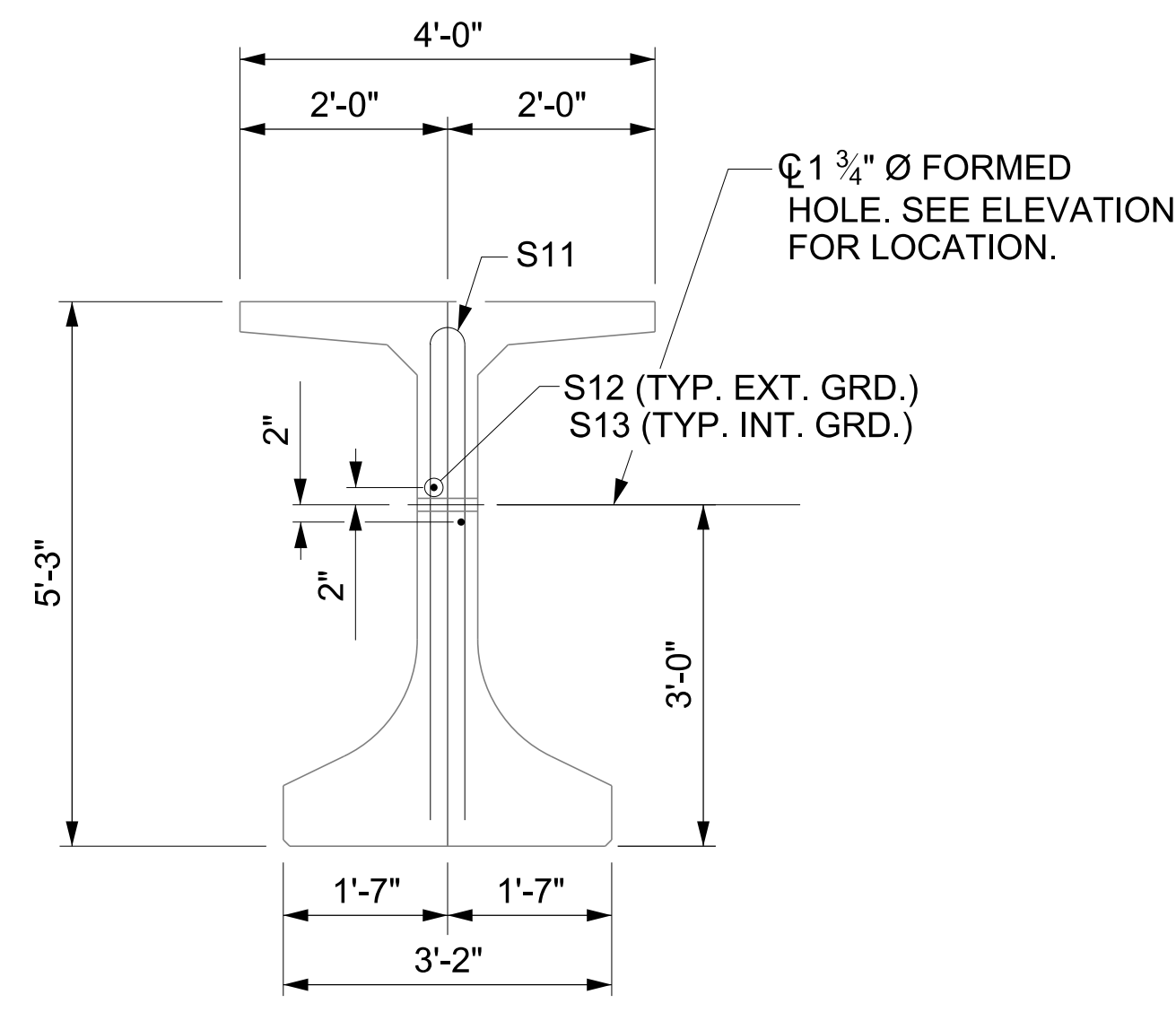
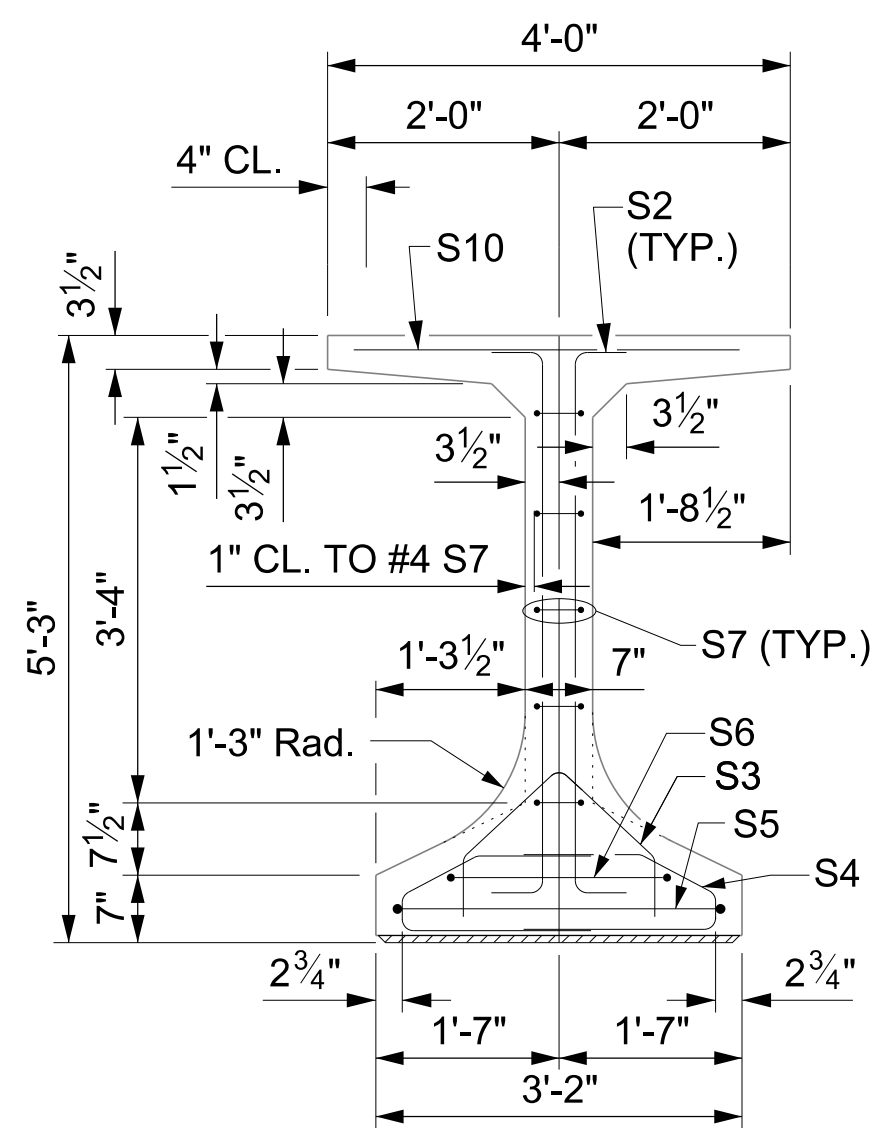
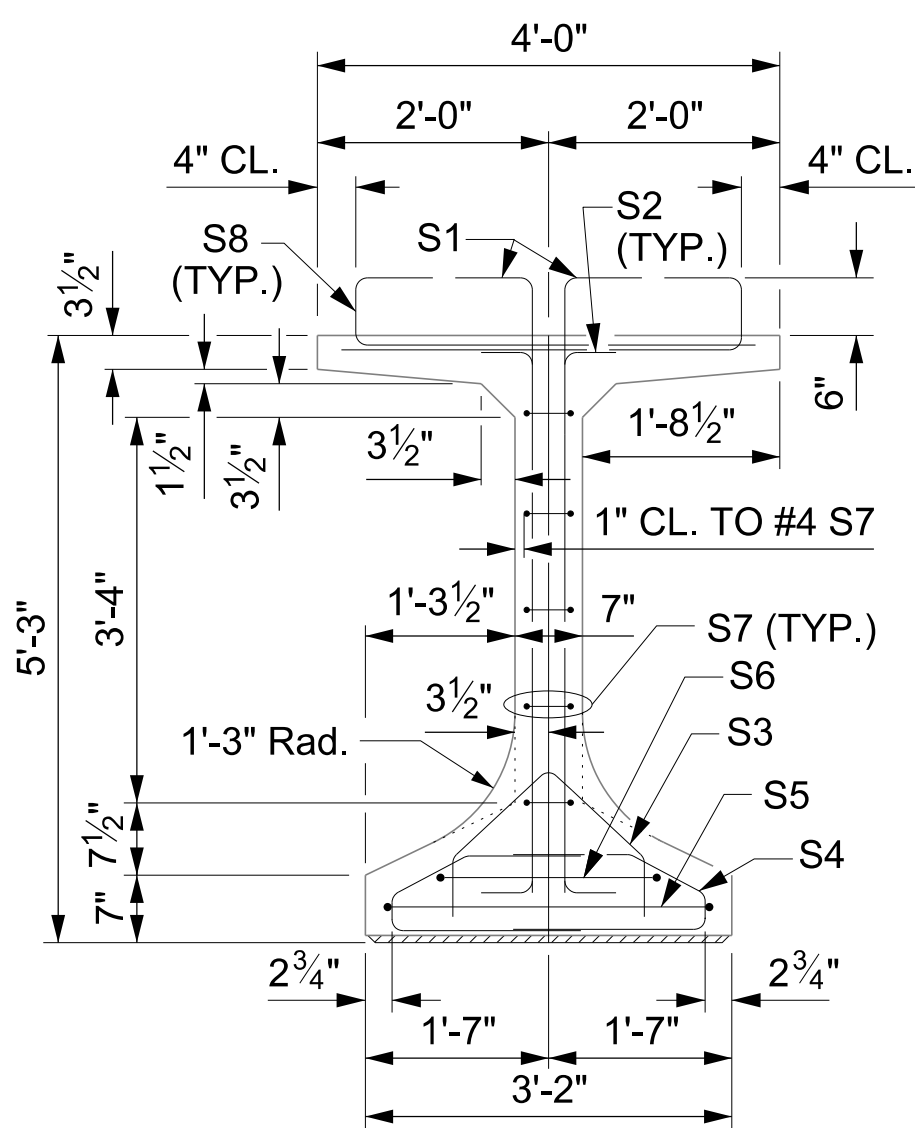
|                |           |          |         |
|----------------|-----------|----------|---------|
| ASSEMBLED BY : | JCW       | DATE :   | 2/25    |
| CHECKED BY :   | DRR       | DATE :   | 2/25    |
| DRAWN BY :     | BNB 01/21 | REV. --- | ---/--- |
| CHECKED BY :   | AAI 07/21 | REV. --- | ---/--- |
|                |           | REV. --- | ---/--- |

STEWART

Firm License No. F-1536  
434 Fayetteville St,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
[www.wearestewart.com](http://www.wearestewart.com)

|           |     |       |     |     |       |                       |
|-----------|-----|-------|-----|-----|-------|-----------------------|
| REVISIONS |     |       |     |     |       | SHEET NO.<br>S-20     |
| NO.       | BY: | DATE: | NO. | BY: | DATE: |                       |
| 1         |     |       | 3   |     |       | TOTAL<br>SHEETS<br>52 |
| 2         |     |       | 4   |     |       |                       |

STD. NO. FIB63



|           |
|-----------|
| EXT. GDR. |
| INT. GDR. |
| EXT. GDR. |
| INT. GDR. |

| 0.6"Ø L. R. GRADE 270 STRANDS |                                           |      |                                           |        |        |
|-------------------------------|-------------------------------------------|------|-------------------------------------------|--------|--------|
| AREA<br>(SQUARE<br>INCHES)    | ULTIMATE<br>STRENGTH<br>(LBS. PER STRAND) |      | APPLIED<br>PRESTRESS<br>(LBS. PER STRAND) |        |        |
| 0.217                         | 58,600                                    |      | 43,950                                    |        |        |
| REINFORCING STEEL FOR ONE GDR |                                           |      |                                           |        |        |
| BAR                           | NUMBER                                    | SIZE | TYPE                                      | LENGTH | WEIGHT |
| S1                            | 68                                        | #5   | 5                                         | 6'-1"  | 431    |
| S2                            | 42                                        | #5   | 4                                         | 6'-1"  | 266    |
| S3                            | 48                                        | #3   | 2                                         | 3'-4"  | 60     |
| S4                            | 96                                        | #3   | 1                                         | 4'-3"  | 153    |
| S5                            | 2                                         | #5   | 3                                         | 10'-9" | 22     |
| S6                            | 2                                         | #5   | 3                                         | 9'-9"  | 20     |
| S7                            | 10                                        | #4   | 3                                         | 8'-5"  | 56     |
| S8                            | 264                                       | #5   | 7                                         | 4'-8"  | 1,285  |
| S9                            | 196                                       | #4   | 5                                         | 6'-0"  | 786    |
| S10                           | 62                                        | #5   | STR                                       | 3'-8"  | 237    |
| S11                           | 8                                         | #5   | 6                                         | 10'-0" | 83     |
| S11                           | 16                                        | #5   | 6                                         | 10'-0" | 167    |
| S12                           | 4                                         | #4   | 5                                         | 8'-0"  | 21     |
| S13                           | 4                                         | #4   | 5                                         | 11'-5" | 31     |

### BAR TYPES

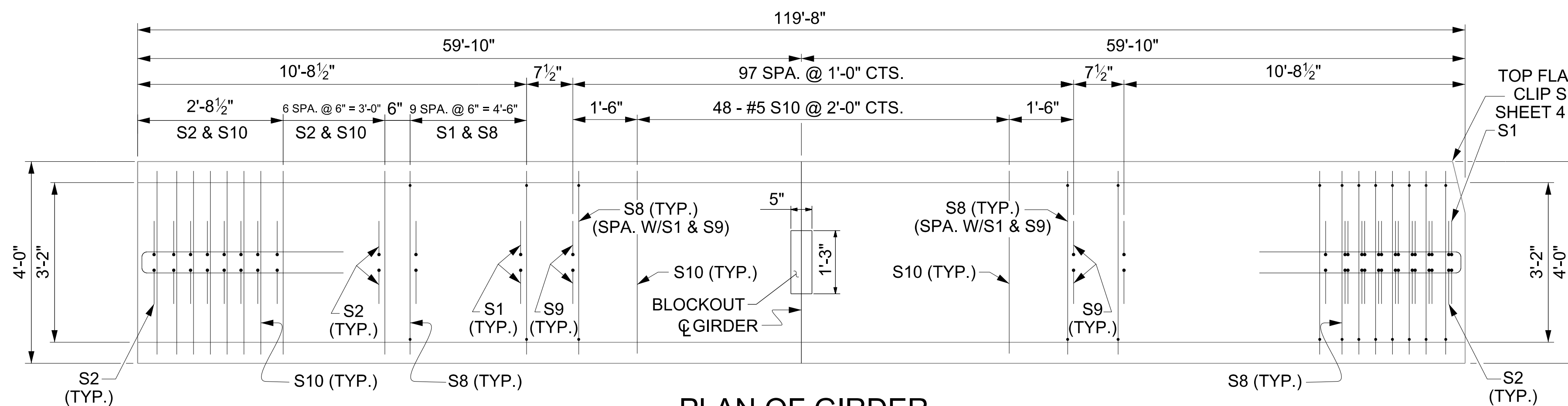
Diagram illustrating seven different bar types (1-7) with their dimensions:

- Bar 1:** Dimensions include 1'-2 3/4", 9", 8 1/2", 1'-10 3/4", 4 1/2", and 4".
- Bar 2:** Dimensions include 10", 7'-1 1/2", 6", 1'-8", 6 1/2", and 8".
- Bar 3:** Dimensions include 6", 3'-11 1/4", 4'-0", and 4".
- Bar 4:** Dimensions include 8", 4'-9", 8", and 5'-5".
- Bar 5:** Dimensions include 8", 8", 4'-9", 5'-5", and S1, S9.
- Bar 6:** Dimensions include 6", 2" RAD., 4'-9", 4", and 4".
- Bar 7:** Dimensions include 8", 3'-4 1/2", 7 1/2", and 4".

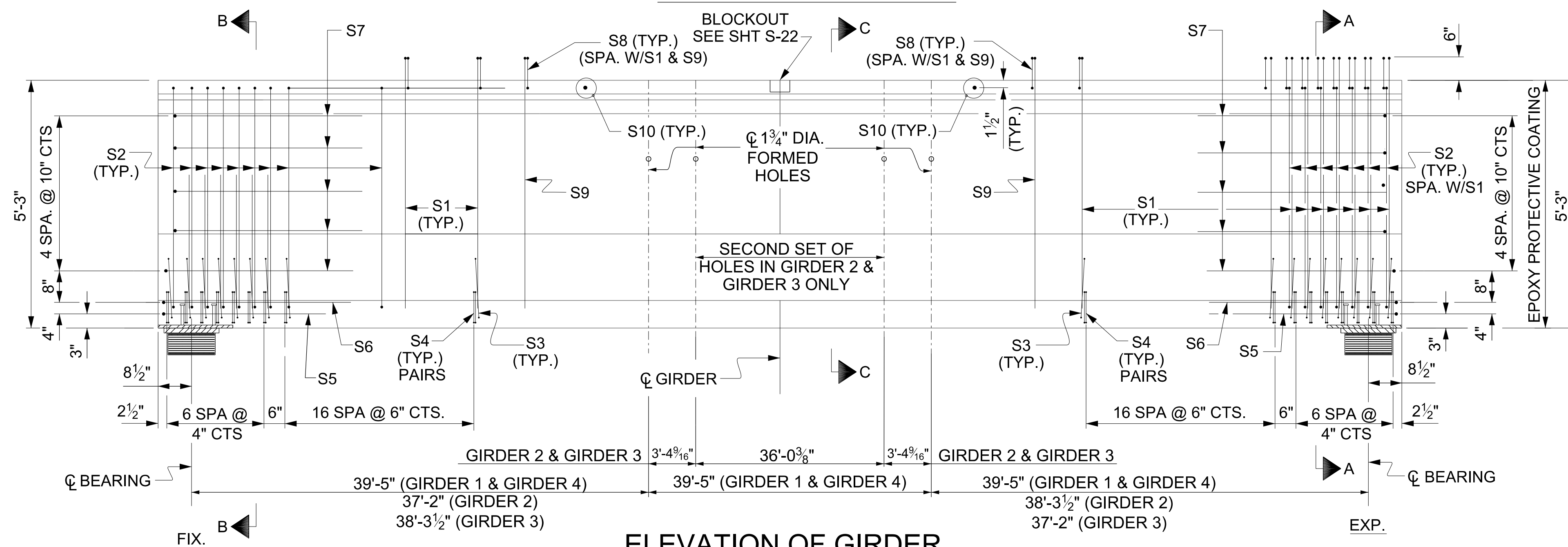
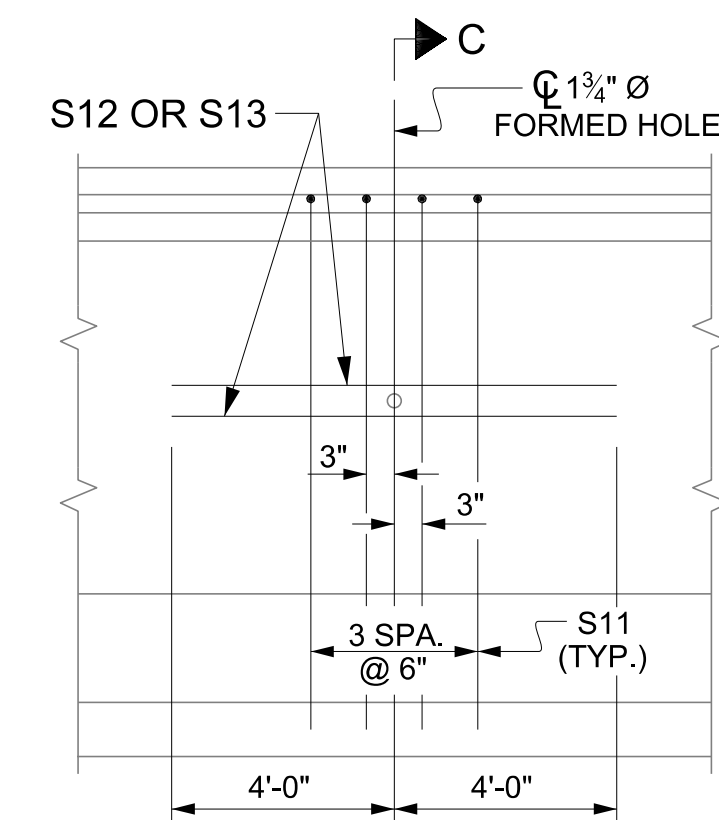
ALL BAR DIMENSIONS ARE OUT-TO-OUT

| QUANTITIES FOR ONE GIRDER |                      |                        |
|---------------------------|----------------------|------------------------|
| REINFORCING<br>STEEL      | 8000 PSI<br>CONCRETE | 0.6" Ø<br>L.R. STRANDS |
| LB.                       | C.Y.                 | No.                    |
| 3,420                     | 30.6                 | 52                     |
| 3,514                     | 30.6                 | 52                     |
| GIRDERS REQUIRED          |                      |                        |
| NUMBER                    | LENGTH               | TOTAL LENGTH           |
| 4                         | 119'-8"              | 478'-8"                |

| GIRDERS REQUIRED |         |              |
|------------------|---------|--------------|
| NUMBER           | LENGTH  | TOTAL LENGTH |
| 4                | 119'-8" | 478'-8"      |



- ### DEBONDING LEGEND
- |                                                 |                                                                                       |
|-------------------------------------------------|---------------------------------------------------------------------------------------|
| ● FULLY BONDED STRANDS                          | ● STRANDS DEBONDED FOR 10'-0" FROM END OF GIRDER                                      |
| ◊ STRANDS DEBONDED FOR 4'-0" FROM END OF GIRDER | ● STRANDS DEBONDED FOR 40'-0" FROM CENTER OF GIRDER (TOTAL DEBONDED LENGTH IS 80'-0") |
| ▲ STRANDS DEBONDED FOR 6'-0" FROM END OF GIRDER |                                                                                       |
| ◼ STRANDS DEBONDED FOR 8'-0" FROM END OF GIRDER |                                                                                       |



|                        |  |             |         |
|------------------------|--|-------------|---------|
| ASSEMBLED BY : JCW     |  | DATE : 2/25 |         |
| CHECKED BY : DRR       |  | DATE : 2/25 |         |
| DRAWN BY : BNB 01/21   |  | REV. ---    | ---/--- |
| CHECKED BY : AAI 07/21 |  | REV. ---    | ---/--- |
|                        |  | REV. ---    | ---/--- |

|              |           |         |         |
|--------------|-----------|---------|---------|
| DRAWN BY :   | BNB 01/21 | REV.--- | ---/--- |
| CHECKED BY : | AAI 07/21 | REV.--- | ---/--- |
|              |           | REV.--- | ---/--- |

|          |         |
|----------|---------|
| DATE :   | 2/25    |
| DATE :   | 2/25    |
| REV. --- | ---/--- |
| REV. --- | ---/--- |
| REV. --- | ---/--- |

|          |         |
|----------|---------|
| REV. --- | ---/--- |
| REV. --- | ---/--- |
| REV. --- | ---/--- |

3/26/2025  
...\\B-5614-SMU\_G3\_060009.dgn  
USER:default

STEWART

Firm License No. F-1536  
434 Fayetteville St,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
[www.wearestewart.com](http://www.wearestewart.com)

| REVISIONS |     |       |     |     |       | SHEET NO.<br>S-21  |
|-----------|-----|-------|-----|-----|-------|--------------------|
| NO.       | BY: | DATE: | NO. | BY: | DATE: |                    |
| 1         |     |       | 3   |     |       | TOTAL SHEETS<br>52 |
| 2         |     |       | 4   |     |       |                    |

STD. NO. FIB63

NOTES

ALL PRESTRESSING STRANDS SHALL BE 7-WIRE LOW-RELAXATION GRADE 270 STRANDS AND SHALL CONFORM TO AASHTO M203 EXCEPT FOR SAMPLING REQUIREMENTS WHICH SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

ALL REINFORCING STEEL SHALL BE GRADE 60.

APPLY EPOXY PROTECTIVE COATING TO END OF GIRDER SURFACES INDICATED IN ELEVATION VIEW.

EMBEDDED PLATE "B-1" SHALL BE GALVANIZED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

ANCHOR STUDS SHALL CONFORM TO AASHTO M169 GRADES 1010 THROUGH 1020 OR APPROVED EQUAL, AND SHALL MEET THE TYPE "B" REQUIREMENTS OF SUBSECTION 7.3 OF THE ANSI/AASHTO/AWS D1.5 BRIDGE WELDING CODE.

PRESTRESSING STRANDS SHALL BE CUT FLUSH WITH THE GIRDER ENDS.

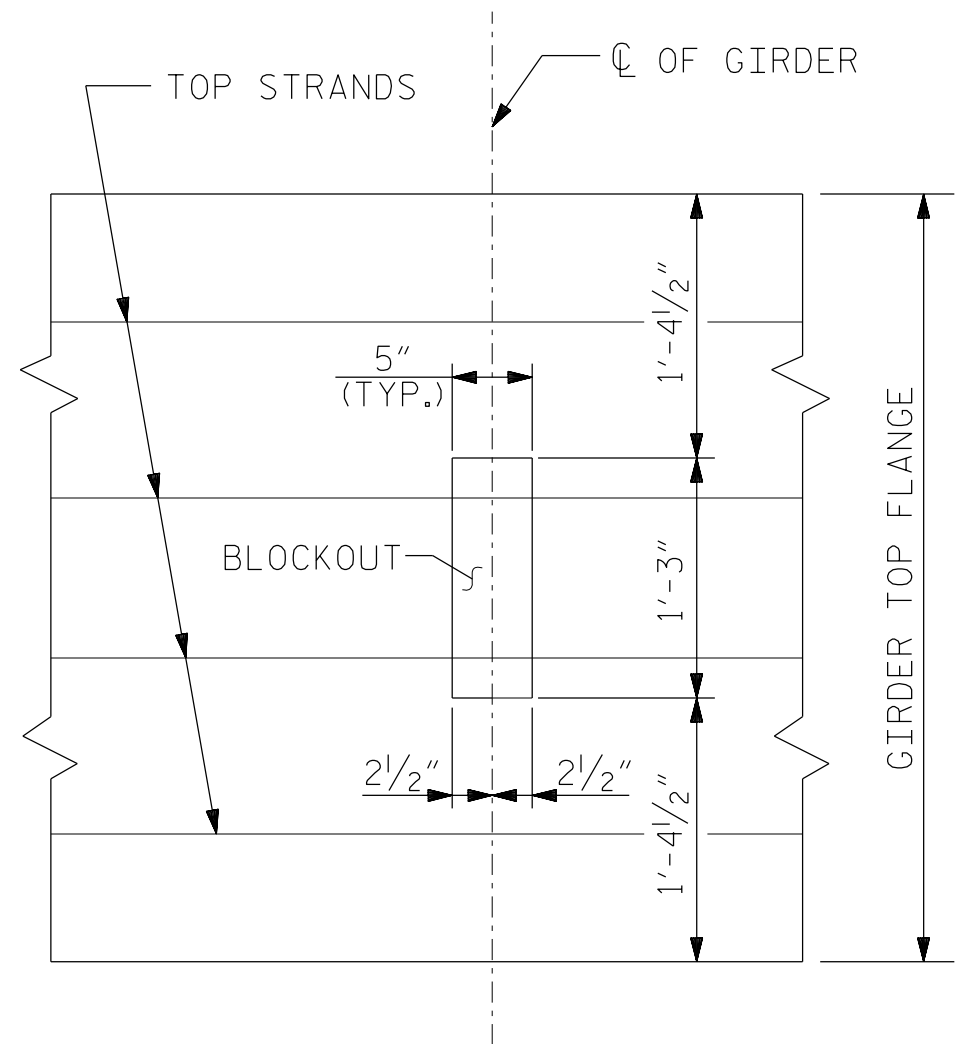
THE TRANSFER OF LOAD FROM THE ANCHORAGES TO THE GIRDER SHALL BE DONE WHEN CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF NOT LESS THAN 6,500 PSI.

THE TOP SURFACE OF THE GIRDER, EXCLUDING THE OUTSIDE 4", SHALL BE RAKED TO A DEPTH OF 1/4". (EXCLUDING LINK SLAB AREA)

THE CONTRACTOR HAS THE OPTION TO PROVIDE, AT NO ADDITIONAL COST TO THE DEPARTMENT, 2 ADDITIONAL STRANDS AT THE TOP OF THE GIRDER TO FACILITATE TYING OF THE REINFORCING STEEL. THESE STRANDS SHALL BE PULLED TO A LOAD OF 4500 lbs.

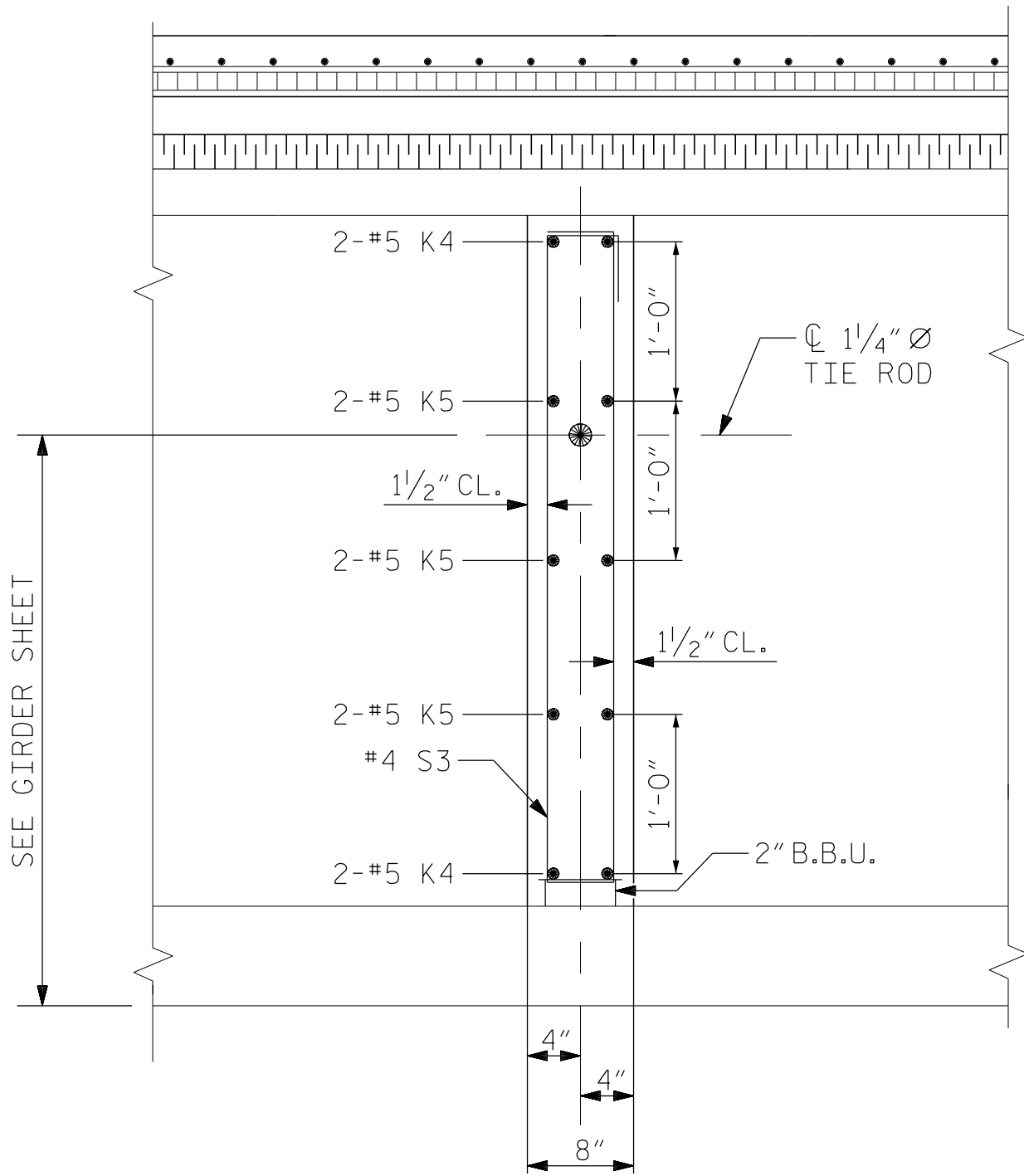
PRESTRESSED CONCRETE GIRDERS ARE DESIGNED FOR 0 PSI (0 MPA) TENSION IN THE PRECOMPRESSED TENSILE ZONE UNDER ALL LOADING CONDITIONS.

PRESTRESSED CONCRETE GIRDERS AND PRECAST DECK PANELS SHALL CONTAIN CALCIUM NITRATE CORROSION INHIBITOR. SEE STANDARD SPECIFICATIONS FOR CALCIUM NITRATE CORROSION INHIBITOR.

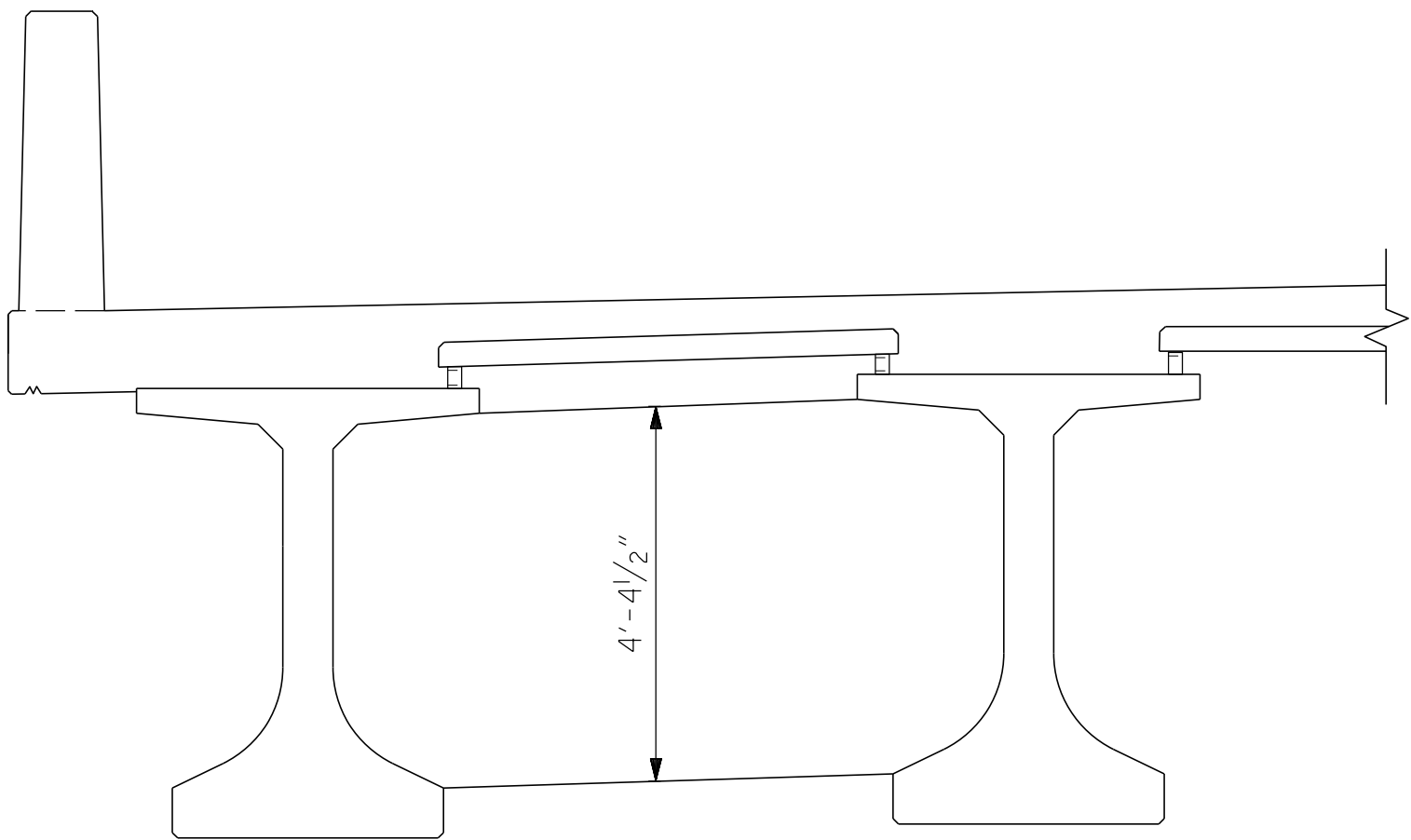


PLAN VIEW OF BLOCKOUT

NOTE: AFTER GIRDER HAS BEEN SET IN FINAL POSITION, TOP STRANDS SHALL BE CUT AT RECESS LOCATION. STRANDS SHALL BE CUT BEFORE SLAB IS POURED.

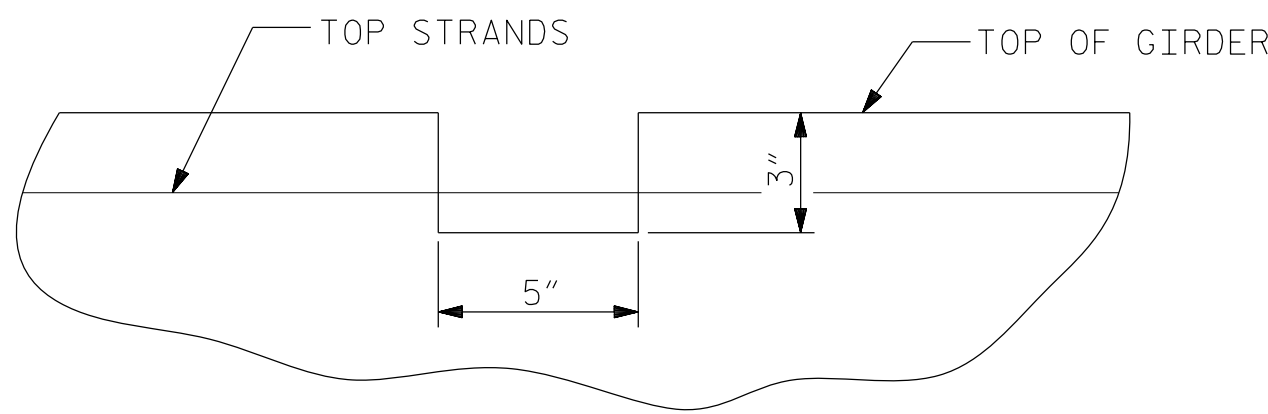


SECTION AT INTERMEDIATE DIAPHRAGM

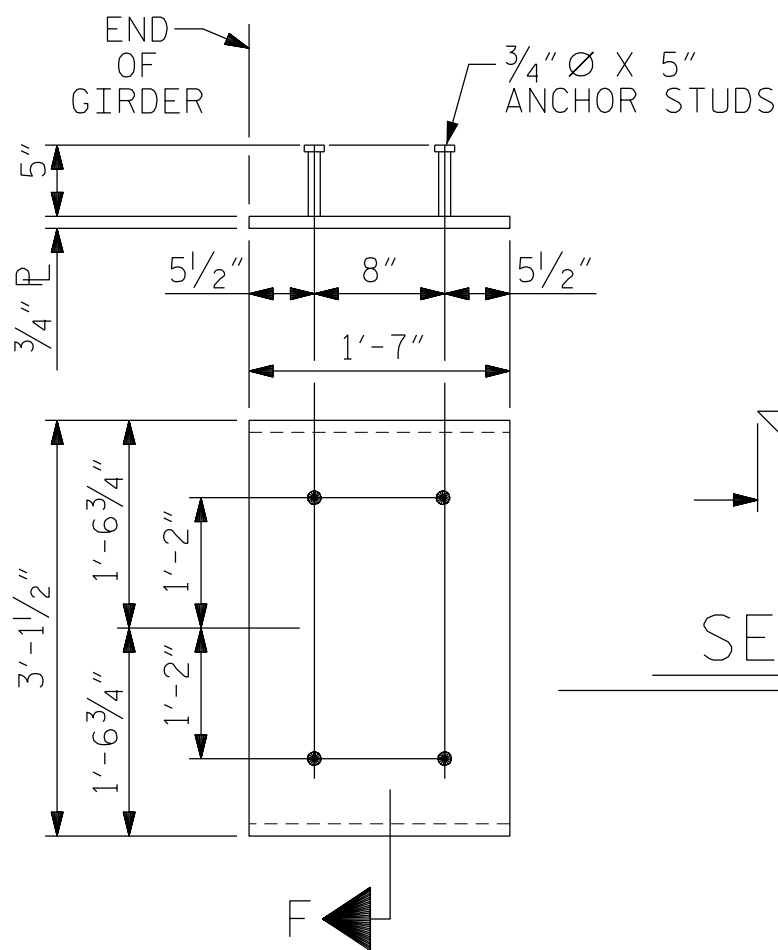


DIAPHRAGM ELEVATION

\* FOR REINFORCEMENT, SEE SHEET S-9



ELEVATION VIEW OF BLOCKOUT

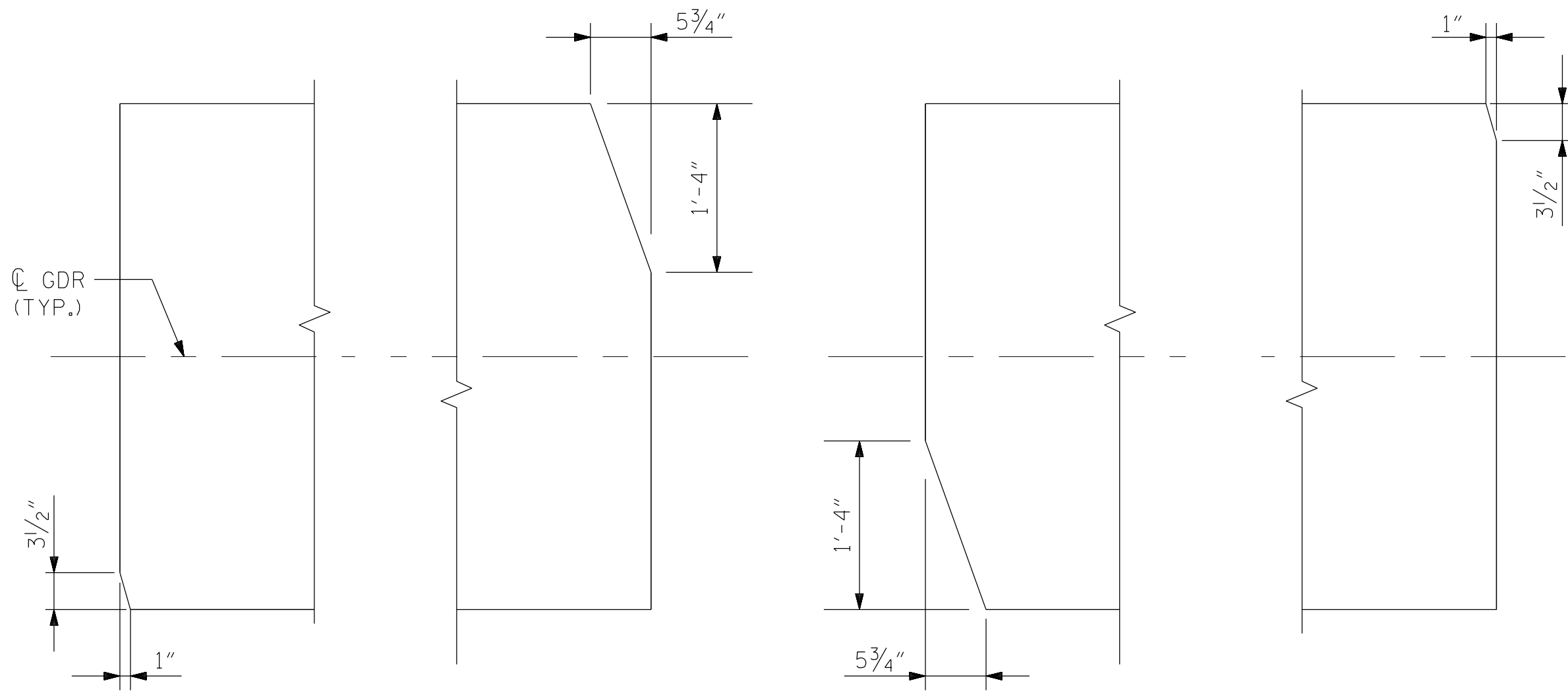


SECTION "F"

(SEE NOTES)

EMBEDDED PLATE "B-1" DETAILS FOR 63" F.I.B. PRESTRESSED GIRDER

(2 REQ'D PER GIRDER)



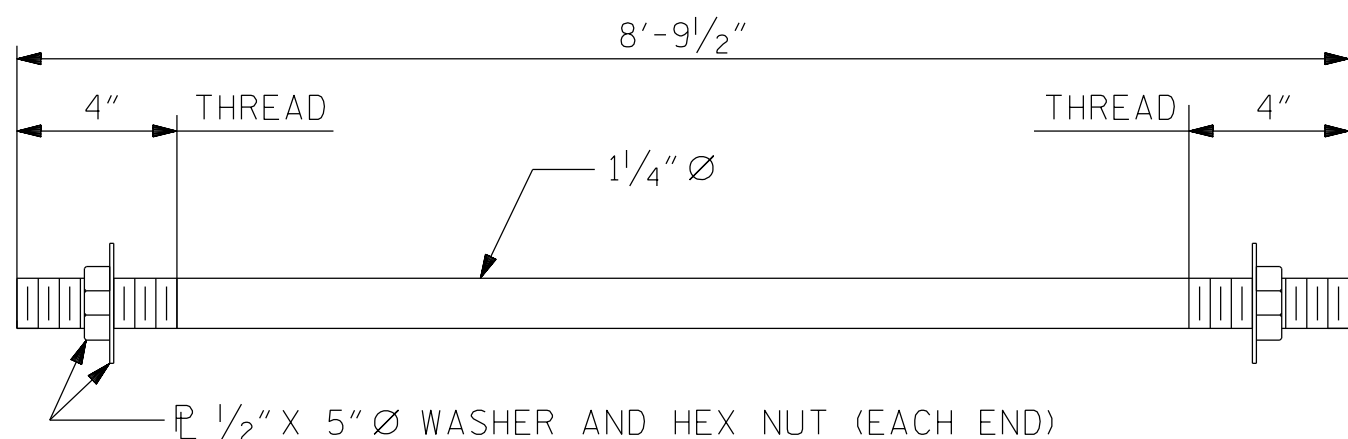
SPAN A

SPANS C & E

SPANS D & F

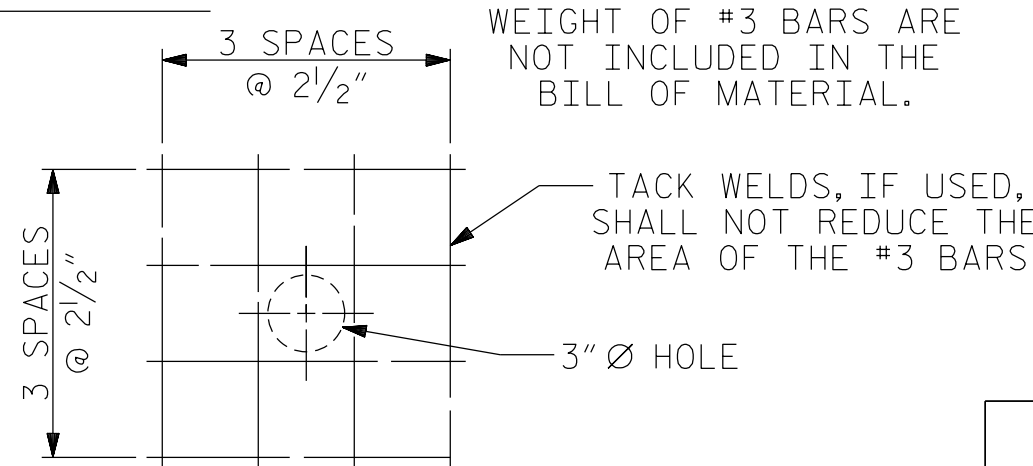
SPAN H

TOP FLANGE CLIP DETAILS

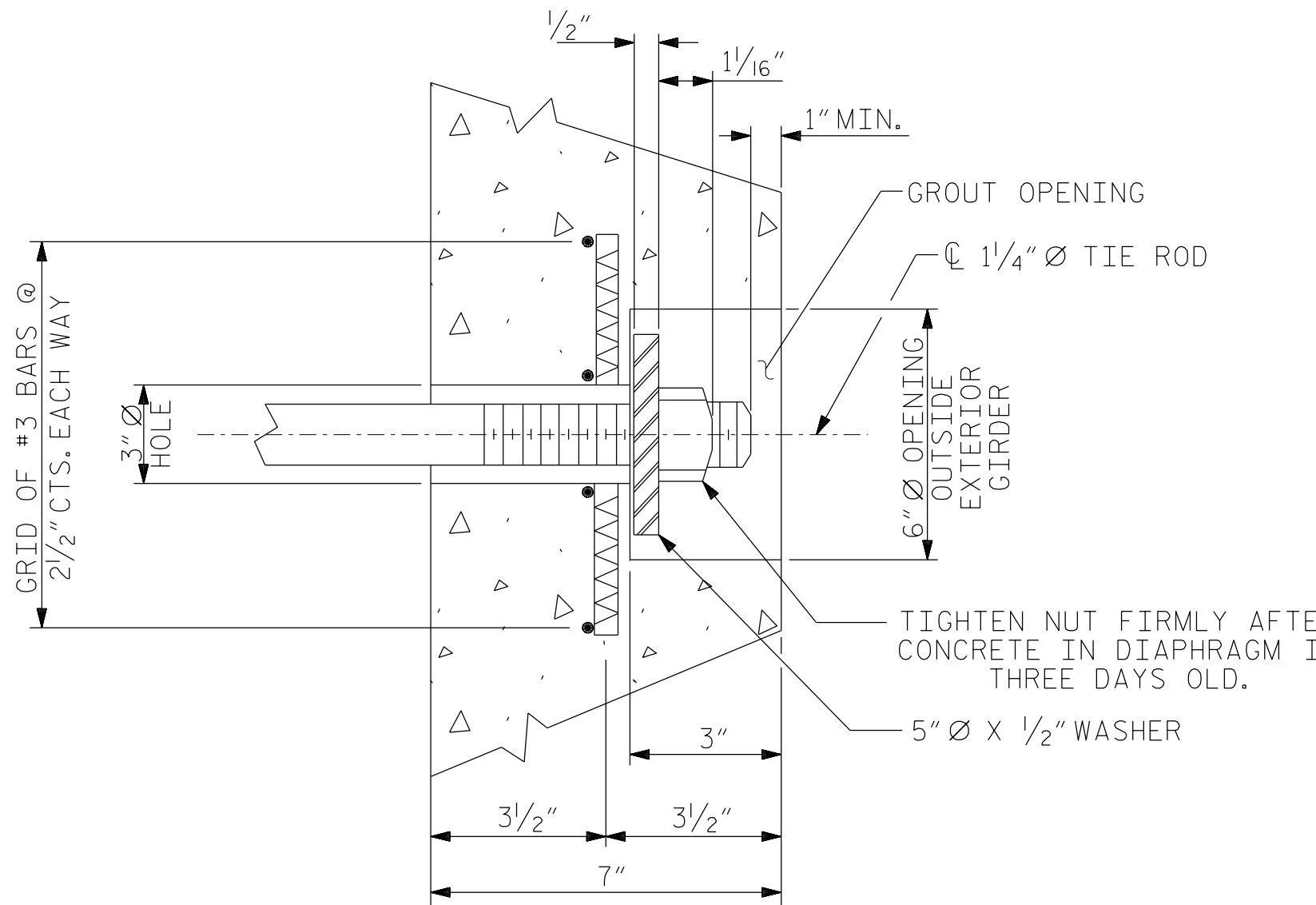


1/4" Ø TIE ROD ASSEMBLY

(48 COMPLETE ASSEMBLIES REQUIRED)



#3 BAR GRID



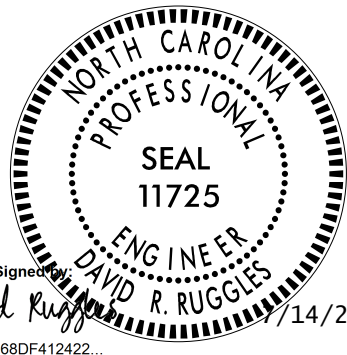
GROUTED RECESS DETAIL

PROJECT NO. B-5614

BEAUFORT COUNTY

STATION: 22+57.00 -L-

SHEET 4 OF 4



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

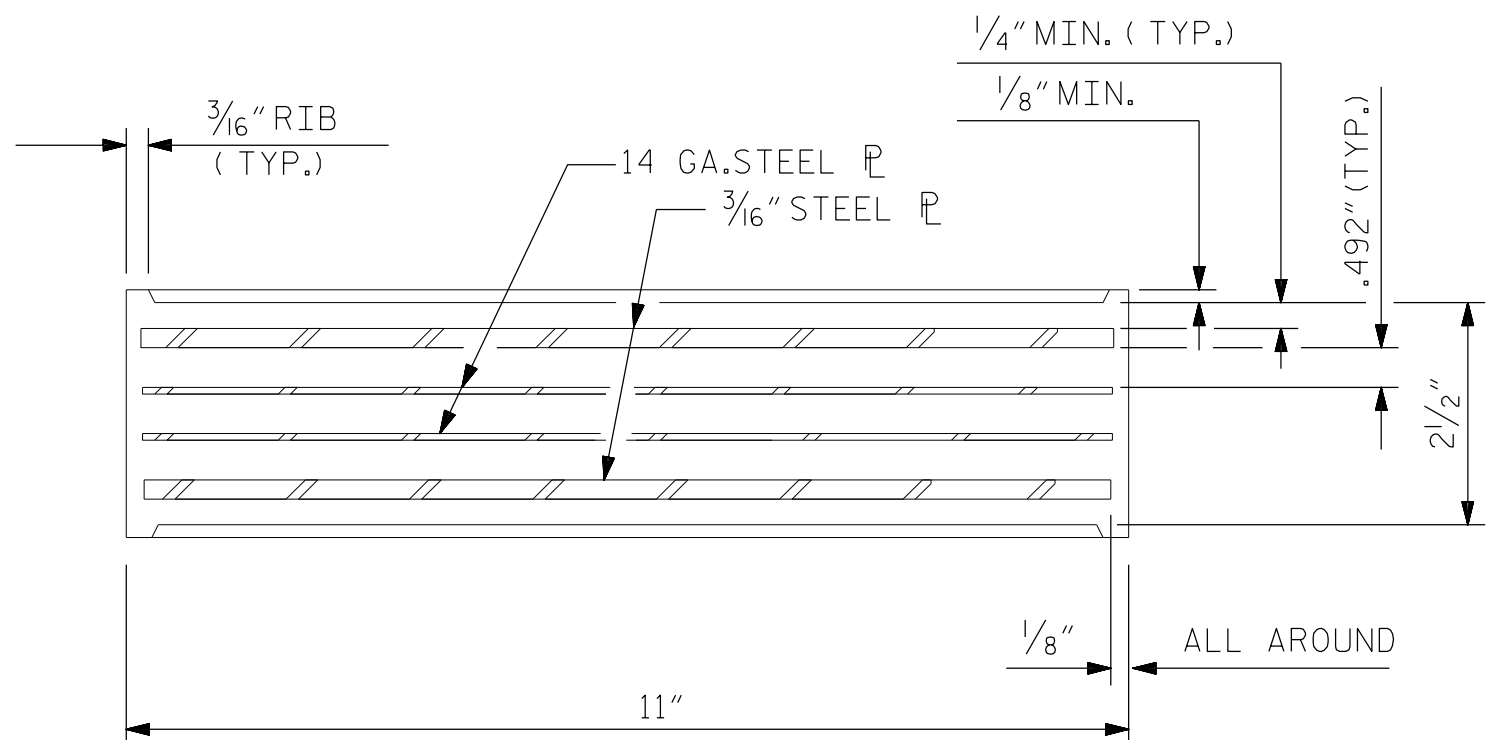
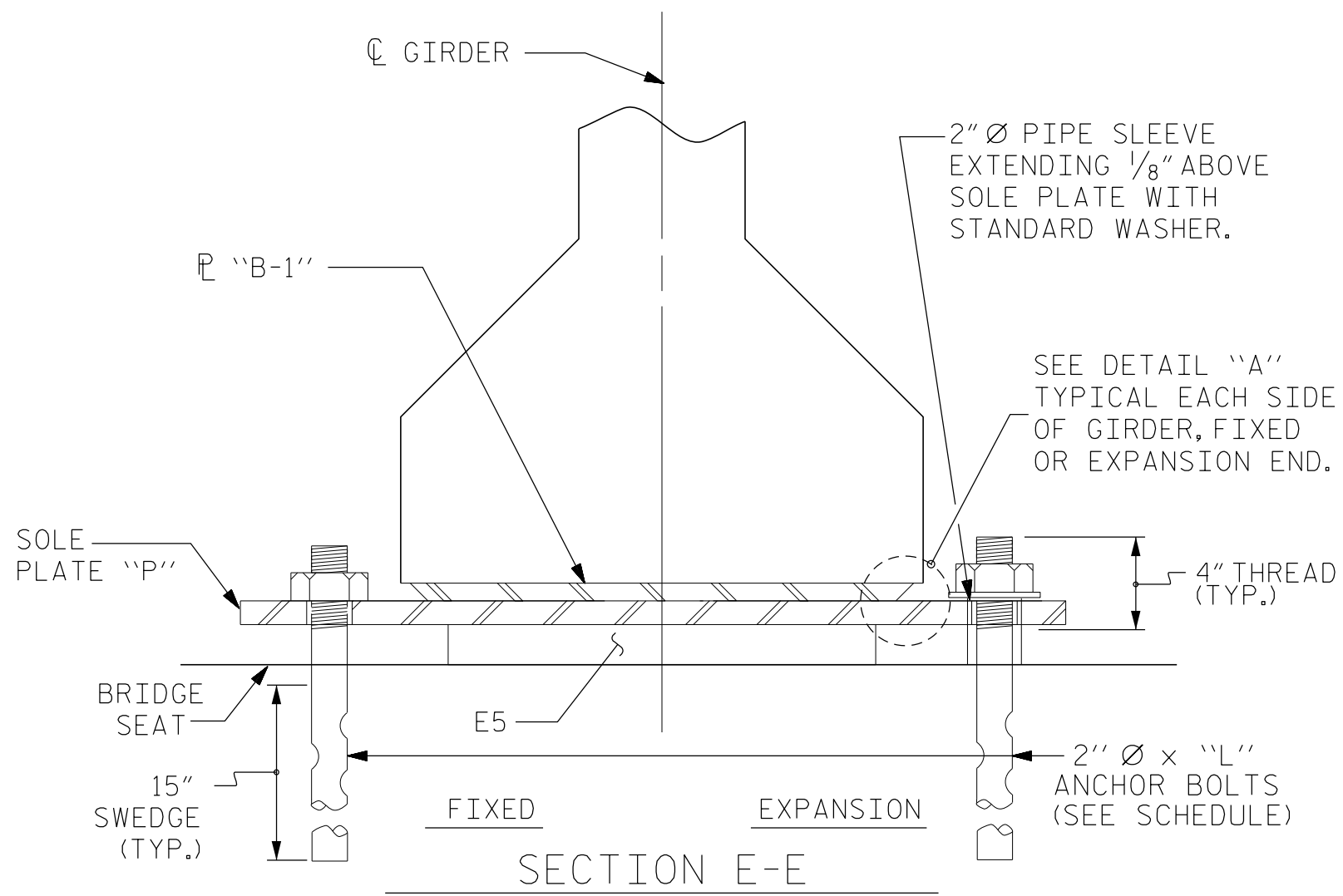


Firm License No. F-1536  
434 Fayetteville St., Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com

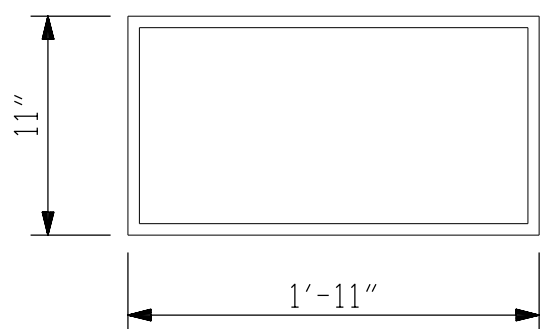
STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
STANDARD  
PRESTRESSED CONCRETE GIRDER DETAILS

| REVISIONS |     |       |     |     |       | SHEET NO.<br>S-22  |
|-----------|-----|-------|-----|-----|-------|--------------------|
| NO.       | BY: | DATE: | NO. | BY: | DATE: |                    |
| 1         |     |       | 3   |     |       | TOTAL SHEETS<br>52 |
| 2         |     |       | 4   |     |       |                    |

7/11/2025  
\\B-5614-SMU.BG1\_060009.dgn  
USERdefault

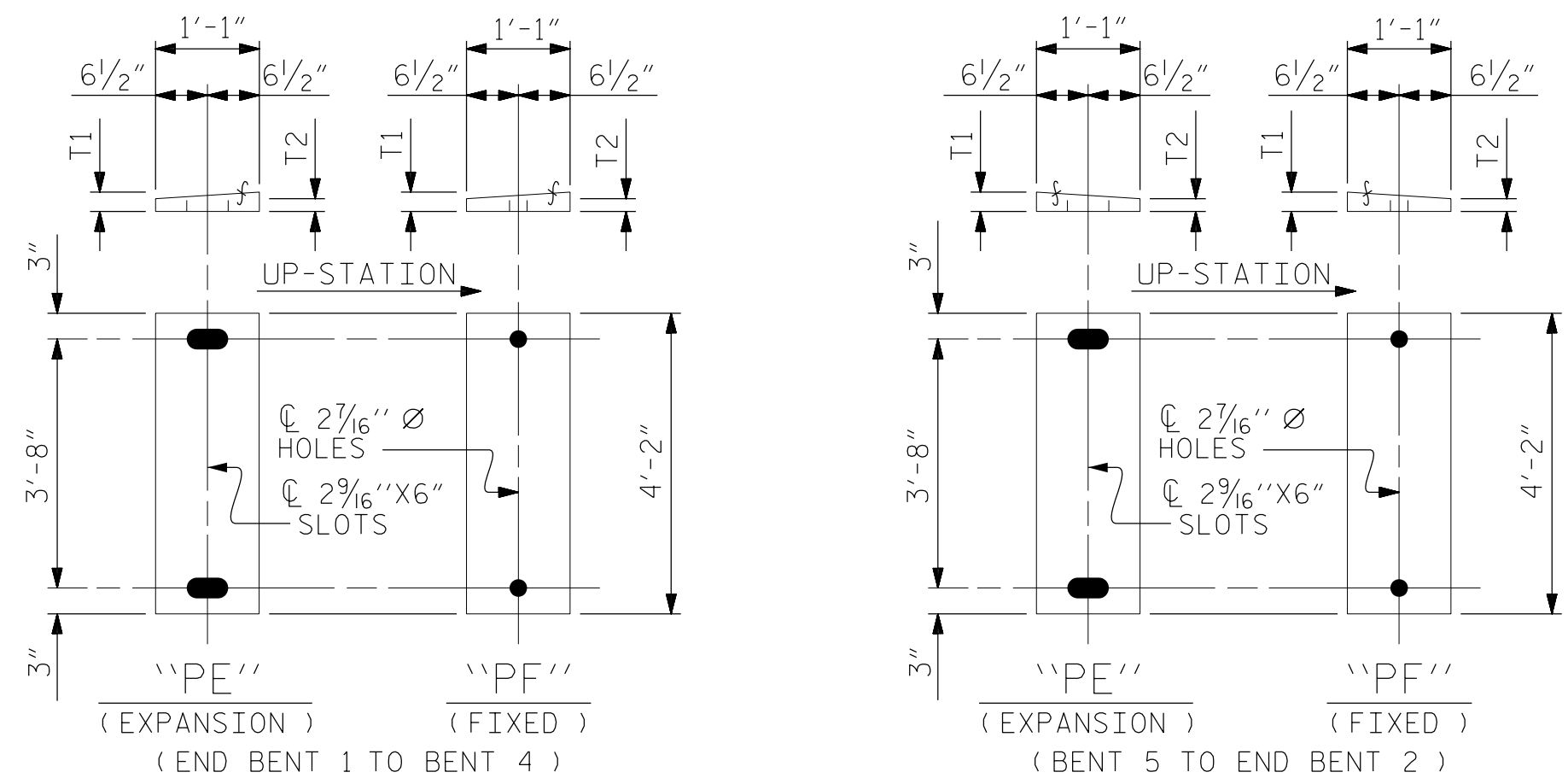


TYPICAL SECTION OF ELASTOMERIC BEARINGS

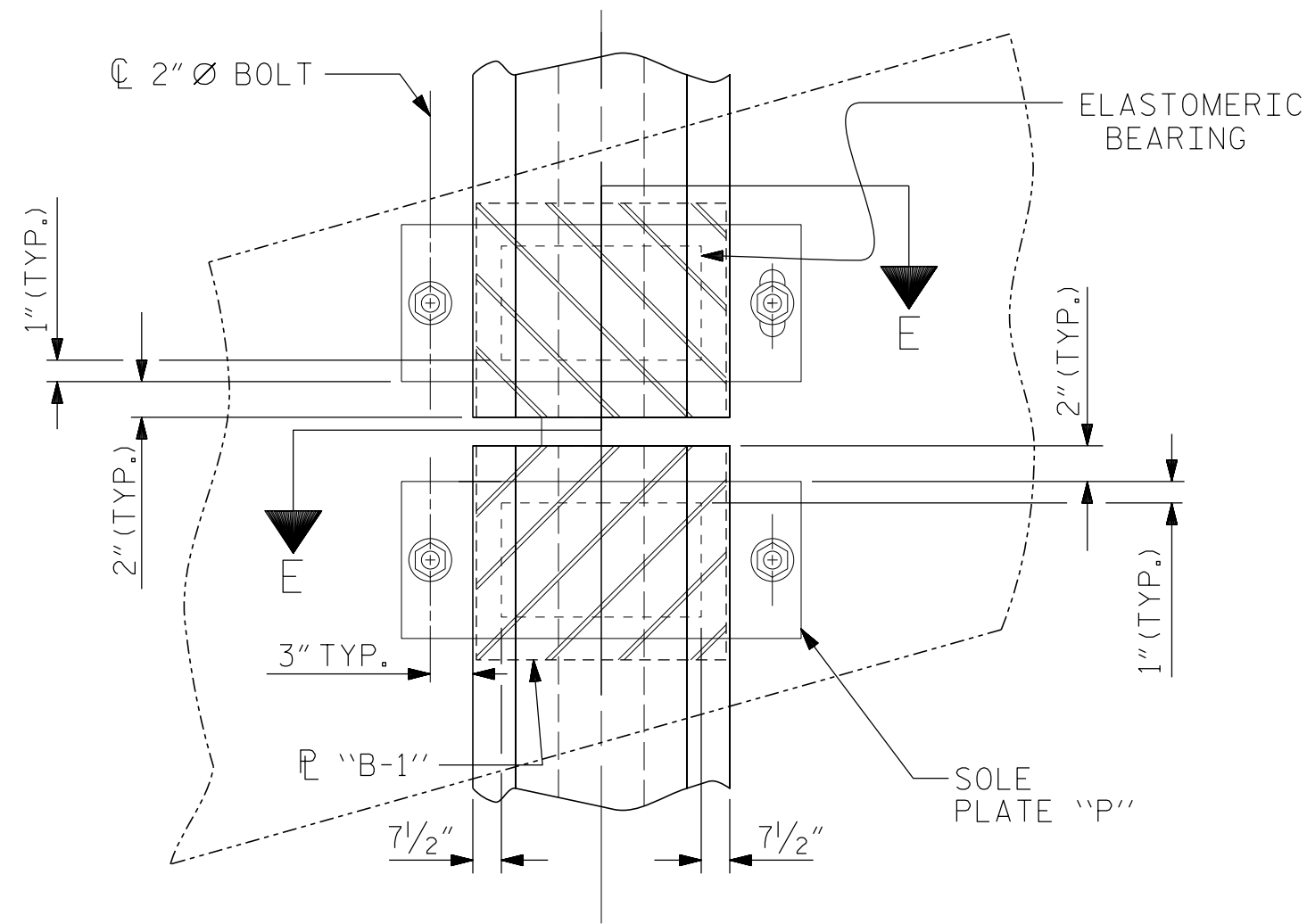


E5 ( 64 REQ'D )  
PLAN VIEW OF ELASTOMERIC BEARING

TYPE VI



SOLE PLATE DETAILS ( "P" )

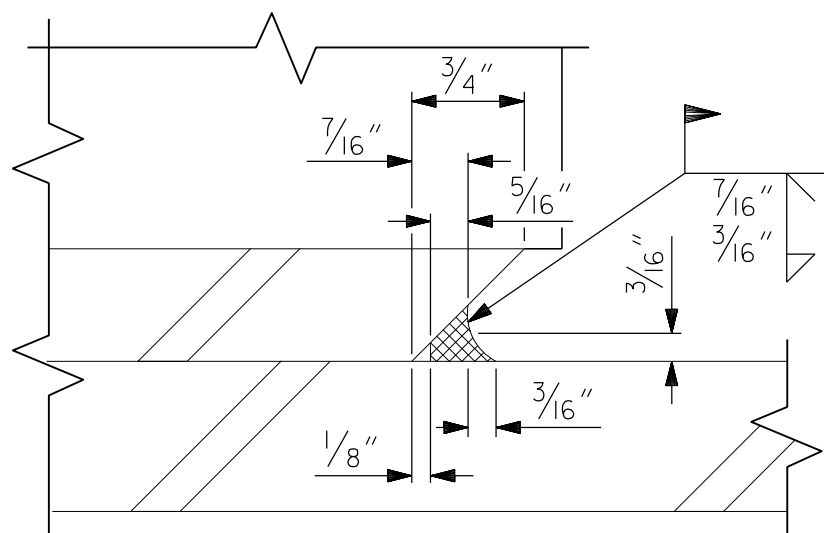


TYPICAL HALF-PLAN

(SHOWING FIXED BEARING  
@ BENTS 1, 2, 4, 6 & 7)

TYPICAL HALF-PLAN

(SHOWING EXPANSION BEARING  
@ BENTS 3 & 5)  
END BENTS 1 & 2 SIMILAR



DETAIL "A"

| SOLE PLATE SCHEDULE (FIXED) |      |      |         |          |          |         |
|-----------------------------|------|------|---------|----------|----------|---------|
| PLATE                       | BENT | SPAN | GIRDER  | T1       | T2       | # REQ'D |
| PF3                         | 1    | A    | 1, 2, 4 | 1 1/2"   | 1 11/16" | 3       |
| PF4                         | 1    | A    | 3       | 2 1/8"   | 2 5/16"  | 1       |
| PF5                         | 1    | B    | 1, 2, 4 | 2"       | 2 3/8"   | 3       |
| PF6                         | 1    | B    | 3       | 2 5/8"   | 3"       | 1       |
| PF7                         | 2    | B    | 1, 2, 4 | 1 1/2"   | 1 1/2"   | 3       |
| PF7                         | 4    | D    | 1,2,3,4 | 1 1/2"   | 1 1/2"   | 4       |
| PF8                         | 2    | B    | 3       | 1 7/8"   | 1 7/8"   | 1       |
| PF9                         | 2    | C    | 1, 2, 4 | 1 1/2"   | 1 3/4"   | 3       |
| PF10                        | 2    | C    | 3       | 1 7/8"   | 2 1/8"   | 1       |
| PF16                        | 6    | F    | 1, 3, 4 | 2 3/16"  | 1 7/8"   | 3       |
| PF17                        | 6    | F    | 2       | 2 11/16" | 2 3/8"   | 1       |
| PF18                        | 6    | G    | 1, 3, 4 | 1 5/8"   | 1 1/2"   | 3       |
| PF19                        | 6    | G    | 2       | 2 1/8"   | 2"       | 1       |
| PF20                        | 7    | G    | 1, 3, 4 | 2 7/16"  | 2"       | 3       |
| PF21                        | 7    | G    | 2       | 3 3/16"  | 2 3/4"   | 1       |
| PF22                        | 7    | H    | 1, 3, 4 | 1 3/4"   | 1 1/2"   | 3       |
| PF23                        | 7    | H    | 2       | 2 1/2"   | 2 1/4"   | 1       |
| TOTAL SOLE PLATE (FIX.)     |      |      |         |          |          | 40      |

| SOLE PLATE SCHEDULE (EXPANSION) |      |      |         |        |         |         |
|---------------------------------|------|------|---------|--------|---------|---------|
| PLATE                           | BENT | SPAN | GIRDER  | T1     | T2      | # REQ'D |
| PE1                             | EB1  | A    | 1,2,3,4 | 1 1/2" | 1 5/16" | 4       |
| PE2                             | EB2  | H    | 1,2,3,4 | 2"     | 1 1/2"  | 4       |
| PE11                            | 3    | C    | 1,2,3,4 | 1 1/2" | 1 1/2"  | 4       |
| PE11                            | 5    | F    | 1, 3, 4 | 1 1/2" | 1 1/2"  | 3       |
| PE12                            | 3    | D    | 1,2,3,4 | 1 1/2" | 1 5/8"  | 4       |
| PE13                            | 5    | E    | 1, 3, 4 | 1 3/4" | 1 1/2"  | 3       |
| PE14                            | 5    | E    | 2       | 2"     | 1 3/4"  | 1       |
| PE15                            | 5    | F    | 2       | 1 3/4" | 1 3/4"  | 1       |
| TOTAL SOLE PLATE (EXP.)         |      |      |         |        |         | 24      |

| ANCHOR BOLT SCHEDULE |      |         |           |         |
|----------------------|------|---------|-----------|---------|
| BENT                 | SPAN | GIRDER  | L         | # REQ'D |
| EB1                  | A    | 1,2,3,4 | 2'-1"     | 8       |
| 1                    | A,B  | 1,2,3,4 | 2'-2"     | 16      |
| 2                    | B,C  | 1,2,3,4 | 2'-1"     | 16      |
| 3                    | C,D  | 1,2,3,4 | 2'-1"     | 16      |
| 4                    | D,E  | 1,2,3,4 | 2'-1"     | 16      |
| 5                    | E,F  | 1,2,3,4 | 2'-1"     | 16      |
| 6                    | F,G  | 1,2,3,4 | 2'-1 1/2" | 16      |
| 7                    | G,H  | 1,2,3,4 | 2'-2"     | 16      |
| EB2                  | H    | 1,2,3,4 | 2'-1"     | 8       |
| TOTAL ANCHOR BOLTS   |      |         |           | 128     |

## NOTES

AT ALL FIXED POINTS OF SUPPORT,NUTS FOR ANCHOR BOLTS ARE TO BE TIGHTENED FINGER TIGHT AND THEN BACKED OFF 1/2 TURN. THE THREAD OF THE NUT AND BOLT SHALL THEN BE BURR WITH A SHARP POINTED TOOL.

THE 2"Ø PIPE SLEEVE SHALL BE CUT FROM SCHEDULE 40 PVC PLASTIC PIPE. THE PVC PLASTIC PIPE SHALL MEET THE REQUIREMENTS OF ASTM D1785.

STEEL SOLE PLATES, ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

PRIOR TO WELDING, GRIND THE GALVANIZED SURFACE OF THE PORTION OF THE EMBEDDED PLATE AND SOLE PLATE THAT ARE TO BE WELDED. AFTER WELDING, DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

WHEN WELDING THE SOLE PLATE TO THE EMBEDDED PLATE IN THE GIRDER, USE TEMPERATURE INDICATING WAX PENS, OR OTHER SUITABLE MEANS, TO ENSURE THAT THE TEMPERATURE OF THE SOLE PLATE DOES NOT EXCEED 300°F. TEMPERATURES ABOVE THIS MAY DAMAGE THE ELASTOMER.

SOLE PLATE "P", BOLTS, NUTS, WASHERS, AND PIPE SLEEVE SHALL BE INCLUDED IN THE PAY ITEM FOR PRESTRESSED CONCRETE GIRDERS.

ANCHOR BOLTS SHALL MEET THE REQUIREMENTS OF ASTM A449. NUTS SHALL MEET THE REQUIREMENTS OF AASHTO M291-DH OR AASHTO M292-2H. WASHERS SHALL MEET THE REQUIREMENTS OF AASHTO M293. NO SHOP DRAWINGS ARE REQUIRED FOR ANCHOR BOLTS, NUTS AND WASHERS. SHOP INSPECTION IS REQUIRED.

ALL SURFACES OF BEARING PLATES SHALL BE SMOOTH AND STRAIGHT.

THE ELASTOMER IN THE STEEL REINFORCED BEARINGS SHALL HAVE A SHEAR MODULUS OF 0.160 KSI, IN ACCORDANCE WITH AASHTO M251.

FOR STEEL REINFORCED ELASTOMERIC BEARINGS, SEE STANDARD SPECIFICATIONS.

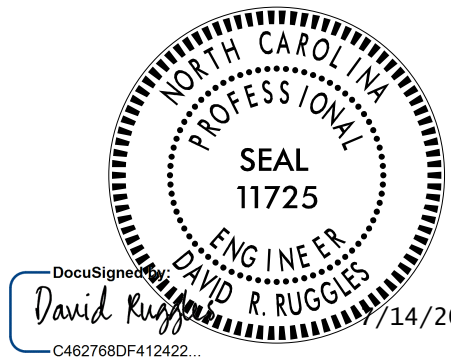
ALL SOLE PLATES SHALL BE AASHTO M270 GRADE 36.

MAXIMUM ALLOWABLE  
SERVICE LOADS

D.L.+L.L. (NO IMPACT)

TYPE VI || 420 k

PROJECT NO. B-5614  
BEAUFORT COUNTY  
STATION: 22+57.00 -L-



DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED



STEWART

Firm License No. F-1536  
434 Fayetteville St,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

STANDARD  
ELASTOMERIC BEARING  
DETAILS

PRESTRESSED CONCRETE GIRDER  
SUPERSTRUCTURE

| REVISIONS |     |       |     |     | SHEET NO.<br>S-23     |
|-----------|-----|-------|-----|-----|-----------------------|
| NO.       | BY: | DATE: | NO. | BY: |                       |
| 1         |     |       | 3   |     | TOTAL<br>SHEETS<br>52 |
| 2         |     |       | 4   |     |                       |

STD. NO. EB4

7/11/2025  
B-5614\_SMU.DL1\_060009.dgn  
USERdefault

|                            |            |        |      |
|----------------------------|------------|--------|------|
| DRAWN BY:                  | J. WILSON  | DATE : | 2/25 |
| CHECKED BY:                | D. RUGGLES | DATE : | 2/25 |
| DESIGN ENGINEER OF RECORD: | D. RUGGLES | DATE : | 2/25 |

|        | DEAD LOAD DEFLECTION TABLE - ALL SPANS |   |   |        |       |       |       |       |        |        |       |        |       |        |        |       |        |        |        |        |        |        |        |      |
|--------|----------------------------------------|---|---|--------|-------|-------|-------|-------|--------|--------|-------|--------|-------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|------|
|        | 0.6 Ø LOW RELAXATION                   |   |   |        |       |       |       |       |        |        |       |        |       |        |        |       |        |        |        |        |        |        |        |      |
|        | FORTIETH POINTS                        |   |   | ℄ BRG. | 0.025 | 0.05  | 0.075 | 0.10  | 0.125  | 0.150  | 0.175 | 0.20   | 0.225 | 0.250  | 0.275  | 0.30  | 0.325  | 0.350  | 0.375  | 0.40   | 0.425  | 0.450  | 0.475  | 0.50 |
| GIRDER |                                        |   |   |        |       |       |       |       |        |        |       |        |       |        |        |       |        |        |        |        |        |        |        |      |
| 1      | CAMBER (GIRDER ALONE IN PLACE)         | ▲ | 0 | 0.030  | 0.060 | 0.090 | 0.119 | 0.140 | 0.161  | 0.182  | 0.203 | 0.217  | 0.231 | 0.245  | 0.259  | 0.267 | 0.275  | 0.283  | 0.291  | 0.293  | 0.296  | 0.298  | 0.301  |      |
|        | * DEFLECTION DUE TO SUPERIMPOSED D.L.  | ▼ | 0 | 0.013  | 0.025 | 0.038 | 0.050 | 0.062 | 0.074  | 0.086  | 0.098 | 0.107  | 0.116 | 0.126  | 0.135  | 0.141 | 0.147  | 0.153  | 0.159  | 0.161  | 0.163  | 0.165  | 0.167  |      |
|        | FINAL CAMBER                           | ▲ | 0 | 3⁄16   | 7⁄16  | 5⁄8   | 13⁄16 | 15⁄16 | 1 1⁄16 | 1 3⁄16 | 1 1⁄4 | 1 5⁄16 | 1 3⁄8 | 1 7⁄16 | 1 1⁄2  | 1 1⁄2 | 1 9⁄16 | 1 9⁄16 | 1 9⁄16 | 1 9⁄16 | 1 5⁄8  | 1 5⁄8  | 1 5⁄8  |      |
| 2      | CAMBER (GIRDER ALONE IN PLACE)         | ▲ | 0 | 0.030  | 0.060 | 0.090 | 0.119 | 0.140 | 0.161  | 0.182  | 0.203 | 0.217  | 0.231 | 0.245  | 0.259  | 0.267 | 0.275  | 0.283  | 0.291  | 0.293  | 0.296  | 0.298  | 0.301  |      |
|        | * DEFLECTION DUE TO SUPERIMPOSED D.L.  | ▼ | 0 | 0.013  | 0.026 | 0.039 | 0.052 | 0.064 | 0.076  | 0.088  | 0.100 | 0.110  | 0.119 | 0.129  | 0.138  | 0.144 | 0.151  | 0.157  | 0.163  | 0.165  | 0.167  | 0.169  | 0.171  |      |
|        | FINAL CAMBER                           | ▲ | 0 | 3⁄16   | 3⁄8   | 5⁄8   | 13⁄16 | 15⁄16 | 1      | 1 1⁄8  | 1 1⁄4 | 1 5⁄16 | 1 3⁄8 | 1 3⁄8  | 1 7⁄16 | 1 1⁄2 | 1 1⁄2  | 1 1⁄2  | 1 9⁄16 | 1 9⁄16 | 1 9⁄16 | 1 9⁄16 | 1 9⁄16 |      |
| 3      | CAMBER (GIRDER ALONE IN PLACE)         | ▲ | 0 | 0.030  | 0.060 | 0.090 | 0.119 | 0.140 | 0.161  | 0.182  | 0.203 | 0.217  | 0.231 | 0.245  | 0.259  | 0.267 | 0.275  | 0.283  | 0.291  | 0.293  | 0.296  | 0.298  | 0.301  |      |
|        | * DEFLECTION DUE TO SUPERIMPOSED D.L.  | ▼ | 0 | 0.013  | 0.026 | 0.039 | 0.052 | 0.064 | 0.076  | 0.088  | 0.100 | 0.110  | 0.119 | 0.129  | 0.138  | 0.144 | 0.151  | 0.157  | 0.163  | 0.165  | 0.167  | 0.169  | 0.171  |      |
|        | FINAL CAMBER                           | ▲ | 0 | 3⁄16   | 3⁄8   | 5⁄8   | 13⁄16 | 15⁄16 | 1      | 1 1⁄8  | 1 1⁄4 | 1 5⁄16 | 1 3⁄8 | 1 3⁄8  | 1 7⁄16 | 1 1⁄2 | 1 1⁄2  | 1 1⁄2  | 1 9⁄16 | 1 9⁄16 | 1 9⁄16 | 1 9⁄16 | 1 9⁄16 |      |
| 4      | CAMBER (GIRDER ALONE IN PLACE)         | ▲ | 0 | 0.030  | 0.060 | 0.090 | 0.119 | 0.140 | 0.161  | 0.182  | 0.203 | 0.217  | 0.231 | 0.245  | 0.259  | 0.267 | 0.275  | 0.283  | 0.291  | 0.293  | 0.296  | 0.298  | 0.301  |      |
|        | * DEFLECTION DUE TO SUPERIMPOSED D.L.  | ▼ | 0 | 0.013  | 0.025 | 0.038 | 0.050 | 0.062 | 0.074  | 0.086  | 0.098 | 0.107  | 0.116 | 0.126  | 0.135  | 0.141 | 0.147  | 0.153  | 0.159  | 0.161  | 0.163  | 0.165  | 0.167  |      |
|        | FINAL CAMBER                           | ▲ | 0 | 3⁄16   | 7⁄16  | 5⁄8   | 13⁄16 | 15⁄16 | 1 1⁄16 | 1 3⁄16 | 1 1⁄4 | 1 5⁄16 | 1 3⁄8 | 1 7⁄16 | 1 1⁄2  | 1 1⁄2 | 1 9⁄16 | 1 9⁄16 | 1 9⁄16 | 1 9⁄16 | 1 5⁄8  | 1 5⁄8  | 1 5⁄8  |      |

\* INCLUDES FUTURE WEARING SURFACE

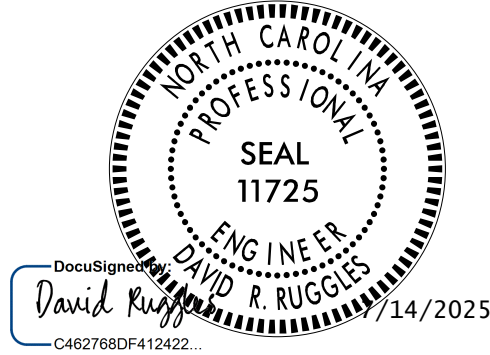
ALL VALUES ARE GIVEN IN FEET (DECIMAL FORMAT), EXCEPT "FINAL CAMBER" WHICH IS GIVEN IN INCHES

|        | DEAD LOAD DEFLECTION TABLE - ALL SPANS (CONT'D) |        |        |        |        |        |       |        |        |       |        |       |        |        |       |       |        |       |       |        |
|--------|-------------------------------------------------|--------|--------|--------|--------|--------|-------|--------|--------|-------|--------|-------|--------|--------|-------|-------|--------|-------|-------|--------|
|        |                                                 |        |        |        |        |        |       |        |        |       |        |       |        |        |       |       |        |       |       |        |
|        | 0.525                                           | 0.550  | 0.575  | 0.60   | 0.625  | 0.650  | 0.675 | 0.70   | 0.725  | 0.750 | 0.775  | 0.80  | 0.825  | 0.850  | 0.875 | 0.90  | 0.925  | 0.950 | 0.975 | ℄ BRG. |
| GIRDER |                                                 |        |        |        |        |        |       |        |        |       |        |       |        |        |       |       |        |       |       |        |
| 1      | 0.298                                           | 0.296  | 0.293  | 0.291  | 0.283  | 0.275  | 0.267 | 0.259  | 0.245  | 0.231 | 0.217  | 0.203 | 0.182  | 0.161  | 0.140 | 0.119 | 0.090  | 0.060 | 0.030 | 0      |
|        | 0.165                                           | 0.163  | 0.161  | 0.159  | 0.153  | 0.147  | 0.141 | 0.135  | 0.126  | 0.116 | 0.107  | 0.098 | 0.085  | 0.072  | 0.059 | 0.046 | 0.035  | 0.023 | 0.012 | 0      |
|        | 1 5⁄8                                           | 1 5⁄8  | 1 9⁄16 | 1 9⁄16 | 1 9⁄16 | 1 9⁄16 | 1 1⁄2 | 1 1⁄2  | 1 7⁄16 | 1 3⁄8 | 1 5⁄16 | 1 1⁄4 | 1 3⁄16 | 1 1⁄16 | 1     | 7⁄8   | 1 1⁄16 | 7⁄16  | 1⁄4   | 0      |
| 2      | 0.298                                           | 0.296  | 0.293  | 0.291  | 0.283  | 0.275  | 0.267 | 0.259  | 0.245  | 0.231 | 0.217  | 0.203 | 0.182  | 0.161  | 0.140 | 0.119 | 0.090  | 0.060 | 0.030 | 0      |
|        | 0.169                                           | 0.167  | 0.165  | 0.163  | 0.157  | 0.151  | 0.144 | 0.138  | 0.129  | 0.119 | 0.110  | 0.100 | 0.088  | 0.076  | 0.064 | 0.052 | 0.039  | 0.026 | 0.013 | 0      |
|        | 1 9⁄16                                          | 1 9⁄16 | 1 9⁄16 | 1 9⁄16 | 1 1⁄2  | 1 1⁄2  | 1 1⁄2 | 1 7⁄16 | 1 3⁄8  | 1 3⁄8 | 1 5⁄16 | 1 1⁄4 | 1 1⁄8  | 1      | 15⁄16 | 13⁄16 | 5⁄8    | 3⁄8   | 3⁄16  | 0      |
| 3      | 0.298                                           | 0.296  | 0.293  | 0.291  | 0.283  | 0.275  | 0.267 | 0.259  | 0.245  | 0.231 | 0.217  | 0.203 | 0.182  | 0.161  | 0.140 | 0.119 | 0.090  | 0.060 | 0.030 | 0      |
|        | 0.169                                           | 0.167  | 0.165  | 0.163  | 0.157  | 0.151  | 0.144 | 0.138  | 0.129  | 0.119 | 0.110  | 0.100 | 0.088  | 0.076  | 0.064 | 0.052 | 0.039  | 0.026 | 0.013 | 0      |
|        | 1 9⁄16                                          | 1 9⁄16 | 1 9⁄16 | 1 9⁄16 | 1 1⁄2  | 1 1⁄2  | 1 1⁄2 | 1 7⁄16 | 1 3⁄8  | 1 3⁄8 | 1 5⁄16 | 1 1⁄4 | 1 1⁄8  | 1      | 15⁄16 | 13⁄16 | 5⁄8    | 3⁄8   | 3⁄16  | 0      |
| 4      | 0.298                                           | 0.296  | 0.293  | 0.291  | 0.283  | 0.275  | 0.267 | 0.259  | 0.245  | 0.231 | 0.217  | 0.203 | 0.182  | 0.161  | 0.140 | 0.119 | 0.090  | 0.060 | 0.030 | 0      |
|        | 0.165                                           | 0.163  | 0.161  | 0.159  | 0.153  | 0.147  | 0.141 | 0.135  | 0.126  | 0.116 | 0.107  | 0.098 | 0.086  | 0.072  | 0.062 | 0.046 | 0.038  | 0.023 | 0.013 | 0      |
|        | 1 5⁄8                                           | 1 5⁄8  | 1 9⁄16 | 1 9⁄16 | 1 9⁄16 | 1 9⁄16 | 1 1⁄2 | 1 1⁄2  | 1 7⁄16 | 1 3⁄8 | 1 5⁄16 | 1 1⁄4 | 1 3⁄16 | 1 1⁄16 | 15⁄16 | 7⁄8   | 5⁄8    | 7⁄16  | 3⁄16  | 0      |

\* INCLUDES FUTURE WEARING SURFACE

ALL VALUES ARE GIVEN IN FEET (DECIMAL FORMAT), EXCEPT "FINAL CAMBER" WHICH IS GIVEN IN INCHES

PROJECT NO. B-5614  
BEAUFORT COUNTY  
STATION: 22+57.00 -L-



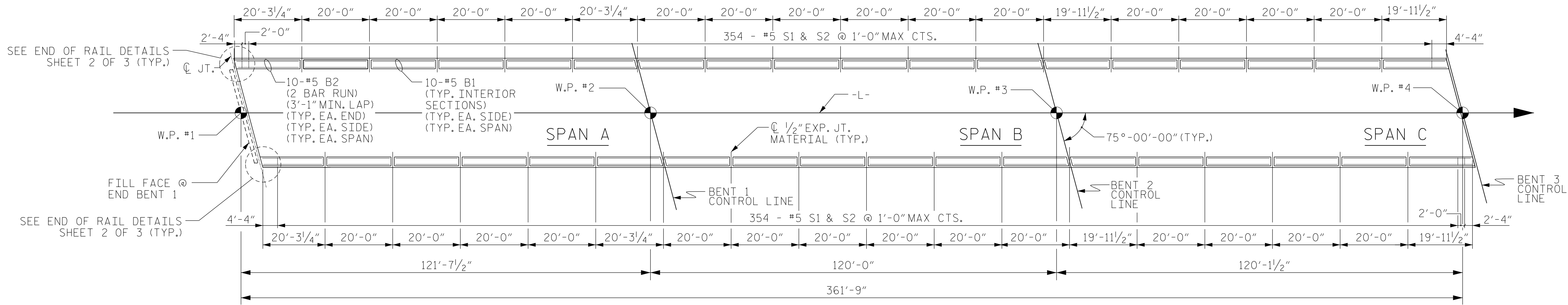
DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED



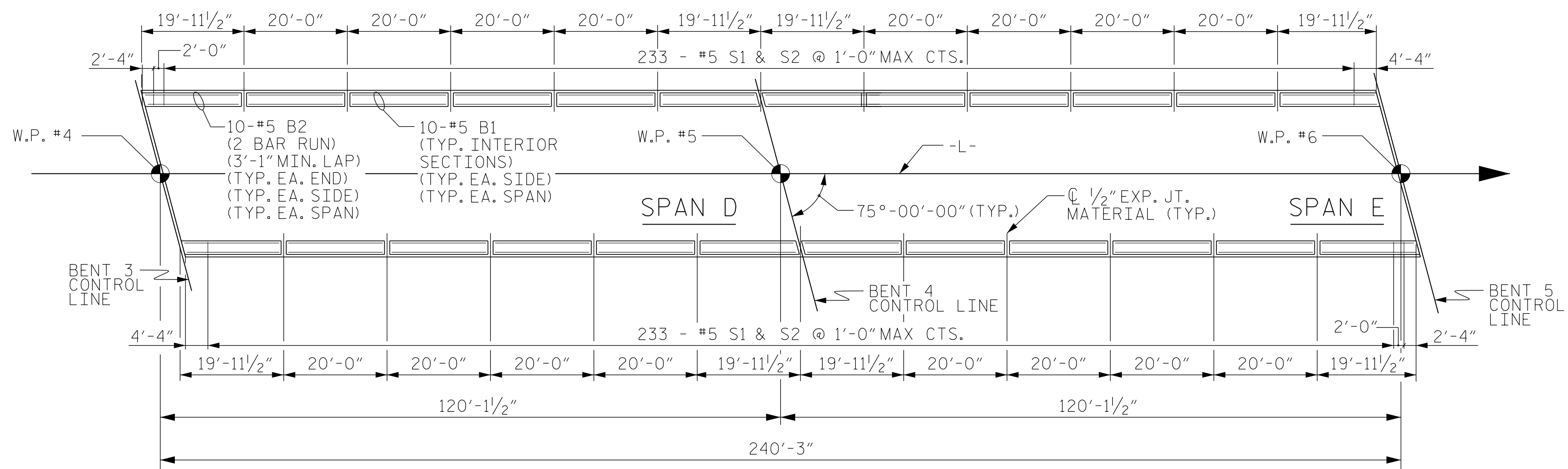
**STEWART**

Firm License No. F-1536  
434 Fayetteville St,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com

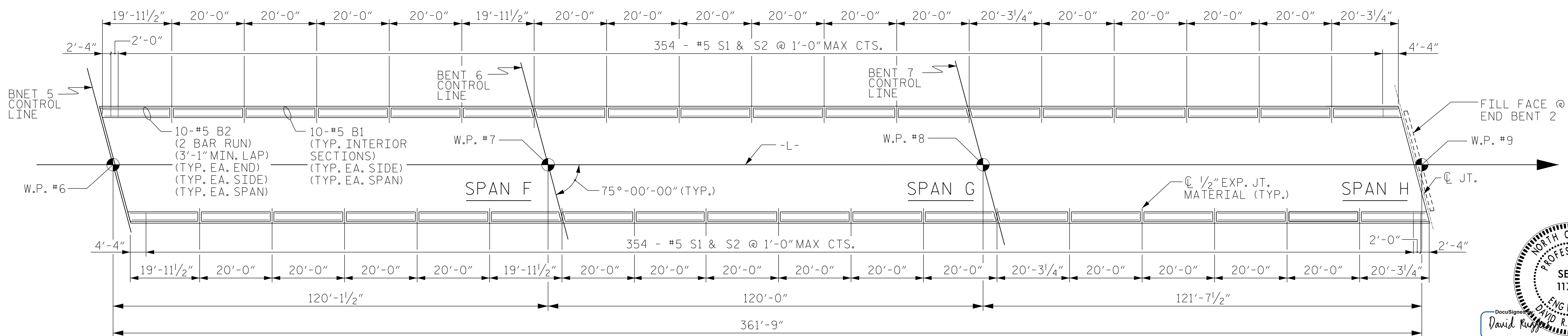
| STATE OF NORTH CAROLINA<br>DEPARTMENT OF TRANSPORTATION<br>RALEIGH |     |       |     |     |                    |
|--------------------------------------------------------------------|-----|-------|-----|-----|--------------------|
| SUPERSTRUCTURE                                                     |     |       |     |     |                    |
| GIRDER CAMBER AND DEFLECTION TABLES                                |     |       |     |     |                    |
| REVISIONS                                                          |     |       |     |     | SHEET NO.          |
| NO.                                                                | BY: | DATE: | NO. | BY: | DATE:              |
| 1                                                                  |     |       | 3   |     |                    |
| 2                                                                  |     |       | 4   |     |                    |
|                                                                    |     |       |     |     | TOTAL SHEETS<br>52 |



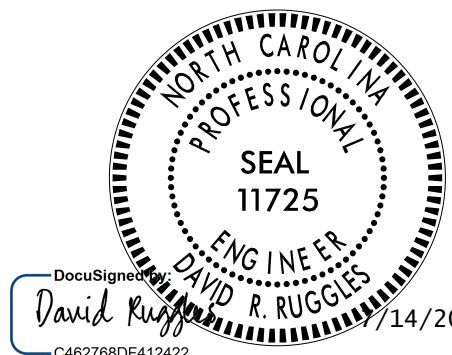
PLAN - SPANS A, B, & C



PLAN - SPANS D & E



PLAN - SPANS F, G, & H



DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED



Firm License No. F-1536  
434 Fayetteville St.  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com

PROJECT NO. B-5614  
BEAUFORT COUNTY  
STATION: 22+57.00 -L-

SHEET 1 OF 2

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
SUPERSTRUCTURE  
VERTICAL CONCRETE  
BARRIER RAIL

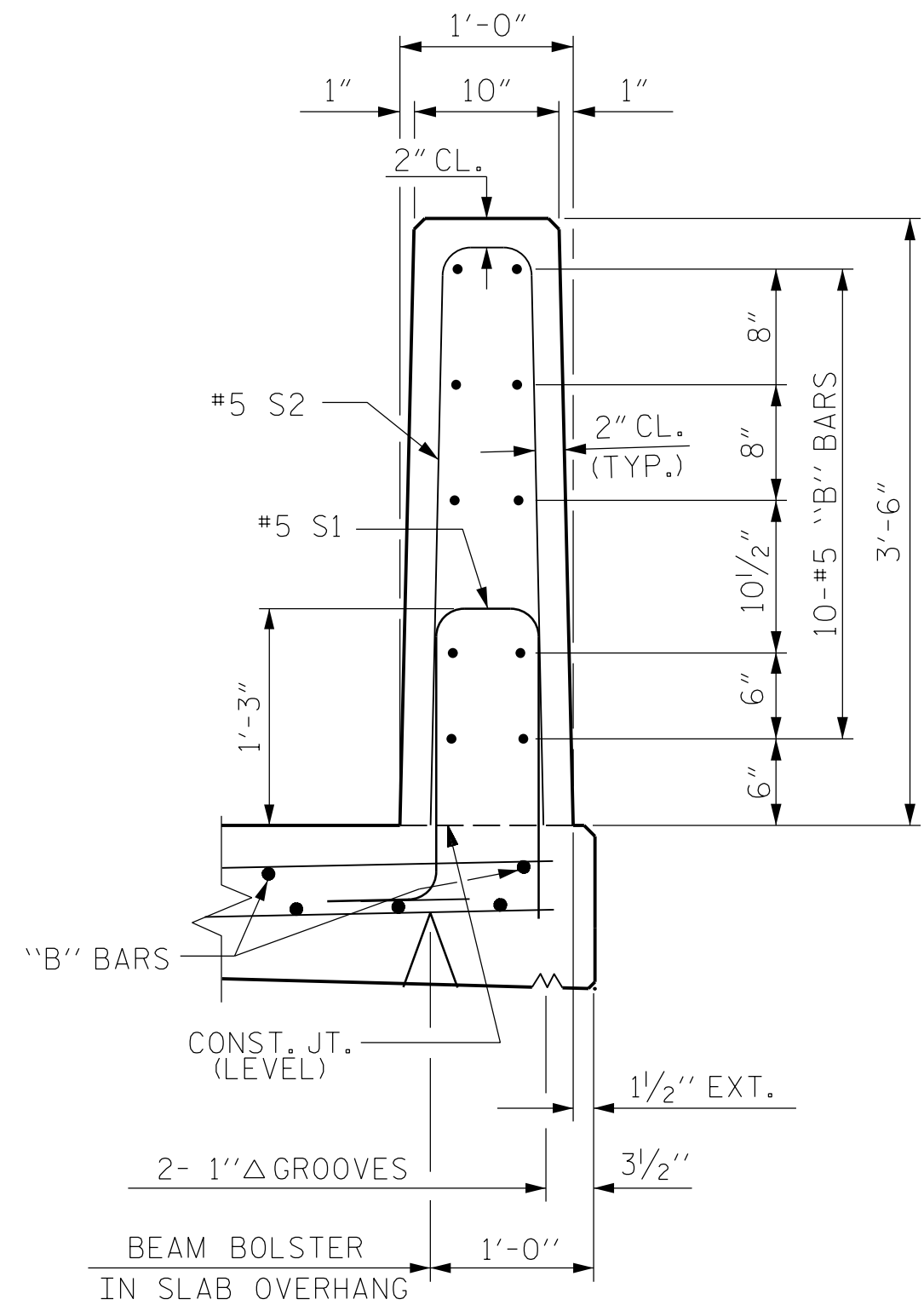
| REVISIONS |     |       |     |     |       | SHEET NO.<br>S-25     |
|-----------|-----|-------|-----|-----|-------|-----------------------|
| NO.       | BY: | DATE: | NO. | BY: | DATE: |                       |
| 1         |     |       | 3   |     |       | TOTAL<br>SHEETS<br>52 |
| 2         |     |       | 4   |     |       |                       |

7/14/2025  
B-5614\_SMU.BR1\_060009.dgn  
USER:dcfauit

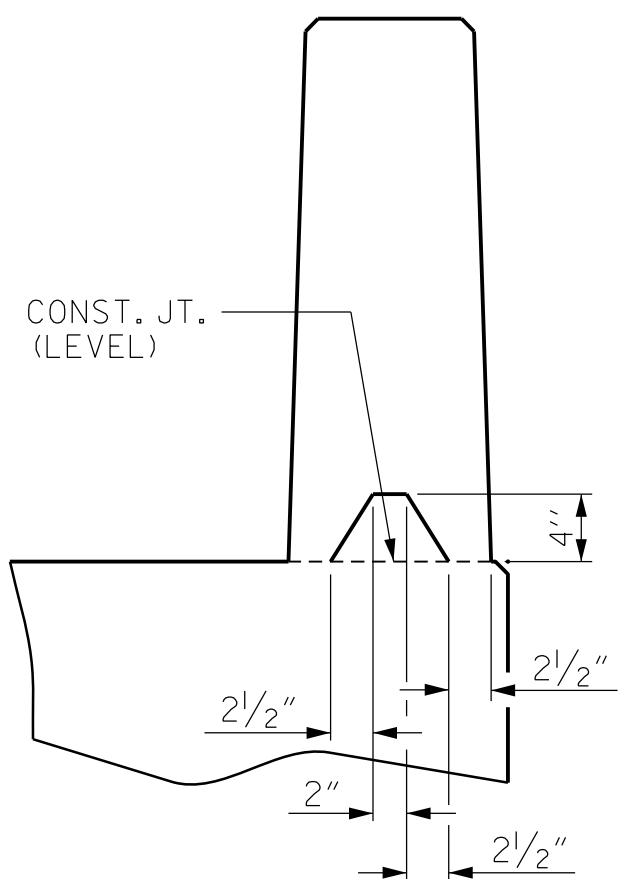
DRAWN BY: J. WILSON DATE: 2/25  
CHECKED BY: D. RUGGLES DATE: 2/25  
DESIGN ENGINEER OF RECORD: D. RUGGLES DATE: 2/25

\$\$\$\$SYTIME\$\$\$\$  
\$\$\$\$DGN\$\$\$\$  
\$\$\$\$USERNAME\$\$\$\$

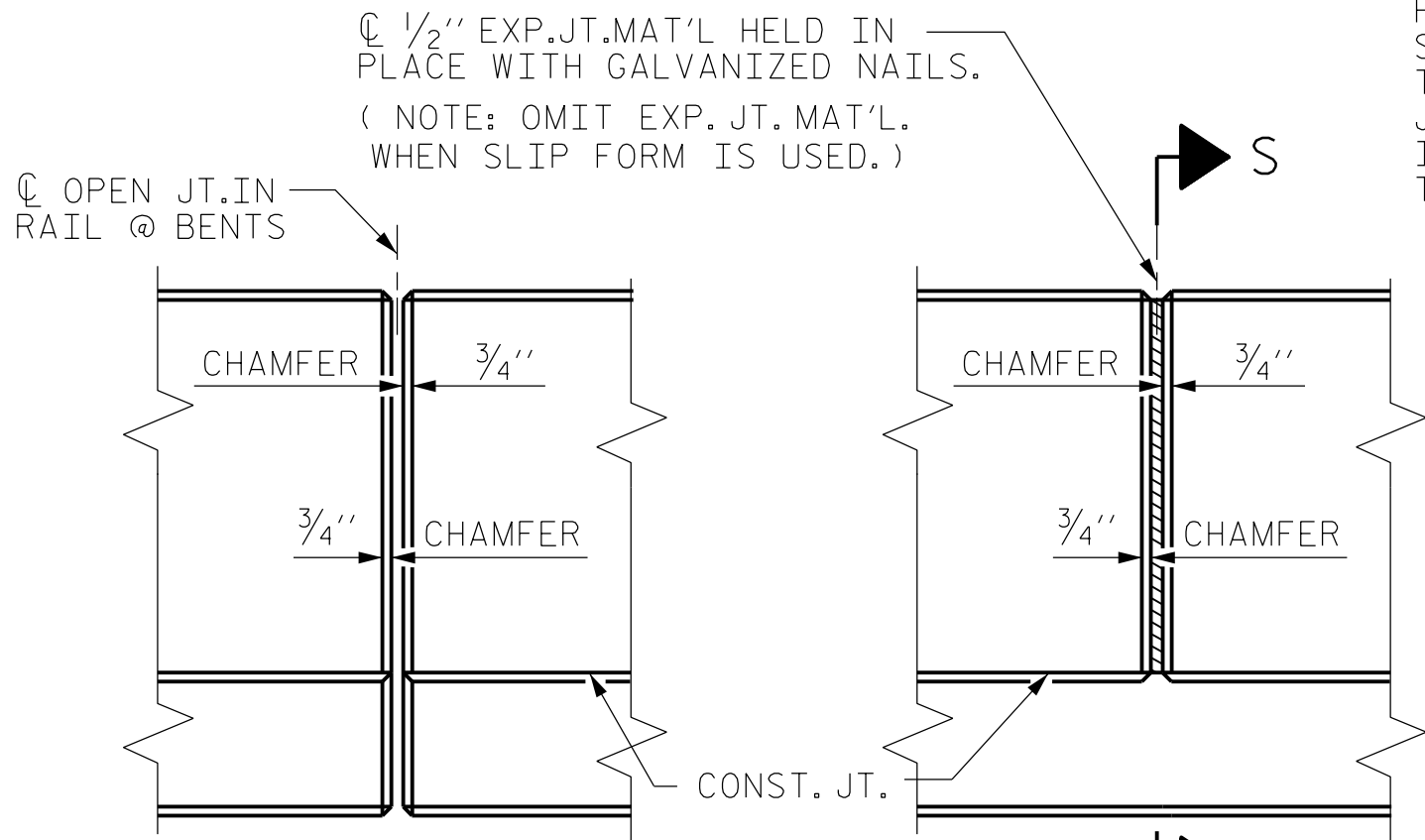
|                |          |            |         |
|----------------|----------|------------|---------|
| ASSEMBLED BY : | JCW      | DATE :     | 2/25    |
| CHECKED BY :   | DRR      | DATE :     | 2/25    |
| DRAWN BY :     | MAA 5/10 | REV. 6/13  | MAA/GM  |
| CHECKED BY :   | GM 5/10  | REV. 12/17 | MAA/THC |
|                |          | REV. 5/18  | MAA/THC |



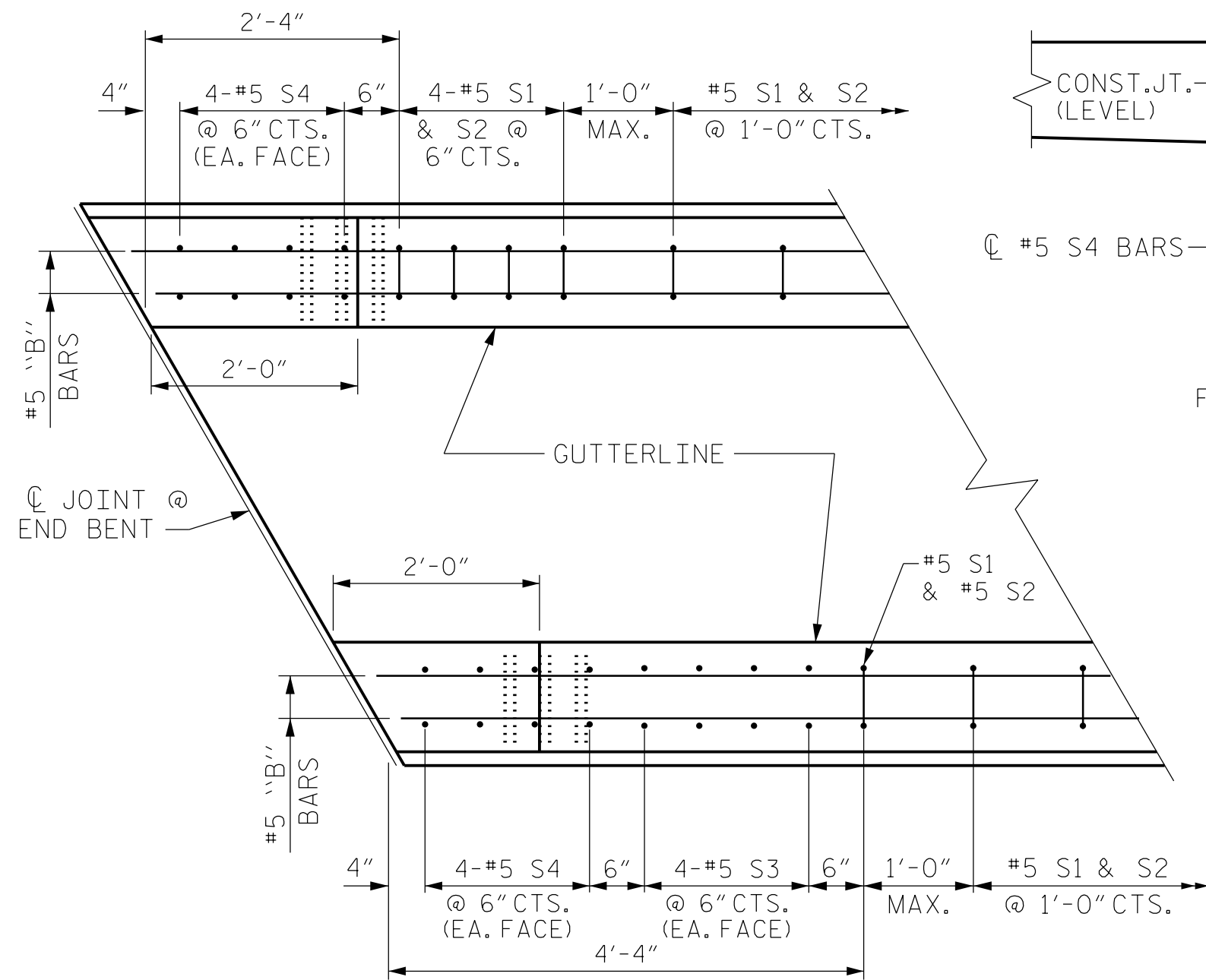
SECTION THRU RAIL



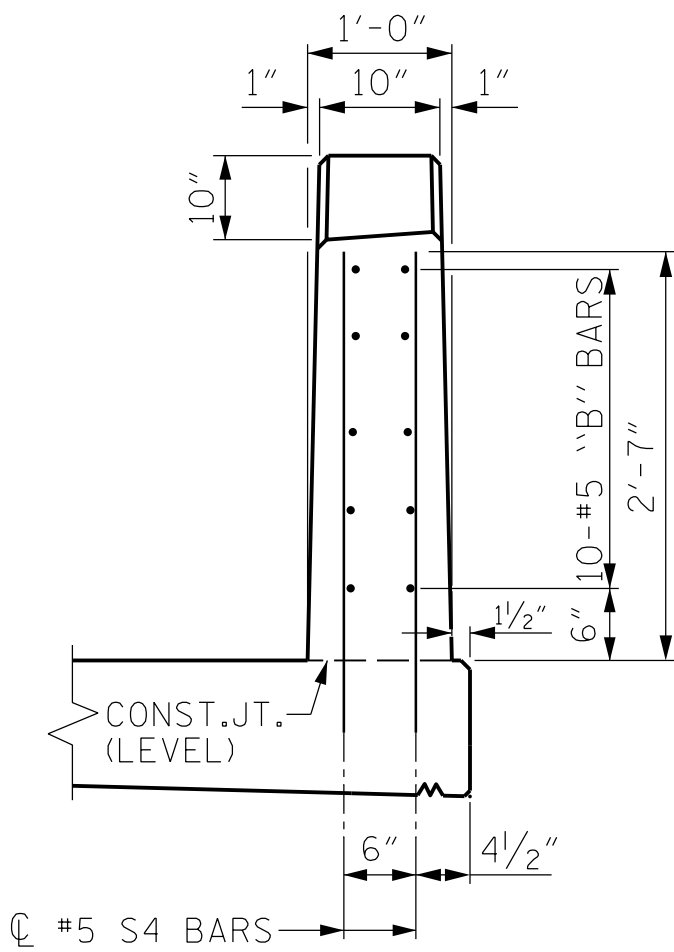
SECTION S-S  
AT DAM IN OPEN JOINT  
(THIS IS TO BE USED ONLY  
WHEN SLIP FORM IS USED)



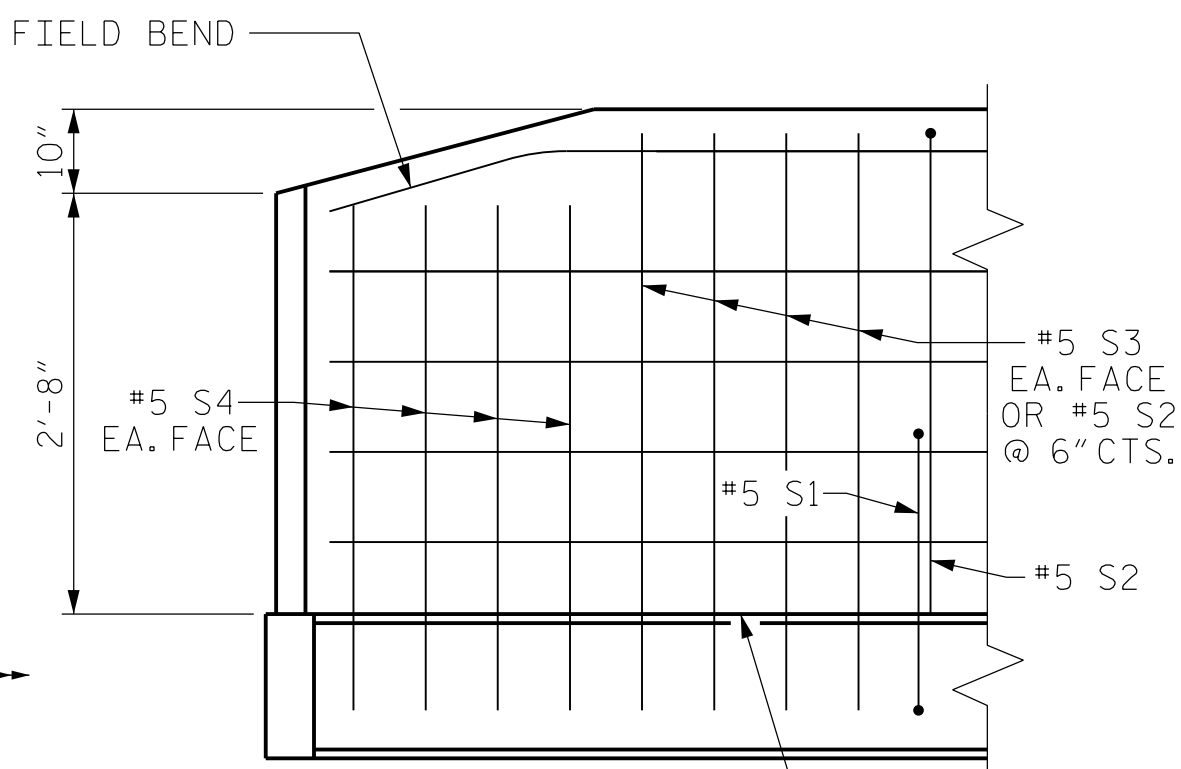
ELEVATION AT EXPANSION JOINTS  
BARRIER RAIL DETAILS



PLAN



END VIEW



SIDE VIEW

END OF RAIL DETAILS - END BENTS

FOR ADHESIVE ANCHORING AT SAWED JOINTS  
END BENT 1 SHOWN; END BENT 2 SIMILAR

## NOTES

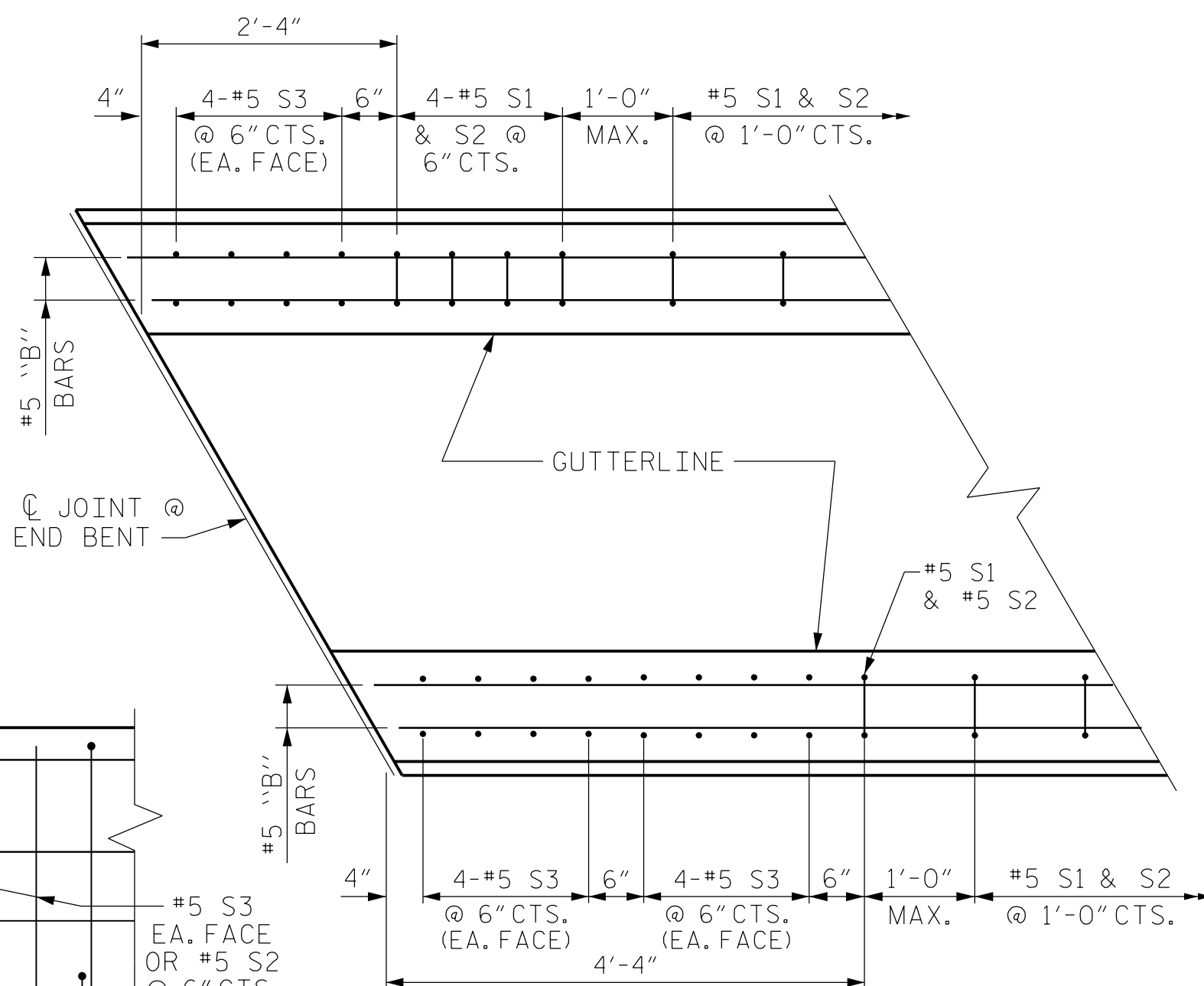
THE BARRIER RAIL IN A CONTINUOUS UNIT SHALL NOT BE CAST UNTIL ALL SLAB CONCRETE IN THAT SPAN HAS BEEN CAST AND HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.

WHEN FOAM JOINT SEAL IS REQUIRED, THE JOINT IN THE DECK SHALL BE SAWED PRIOR TO THE CASTING OF VERTICAL CONCRETE BARRIER RAIL.

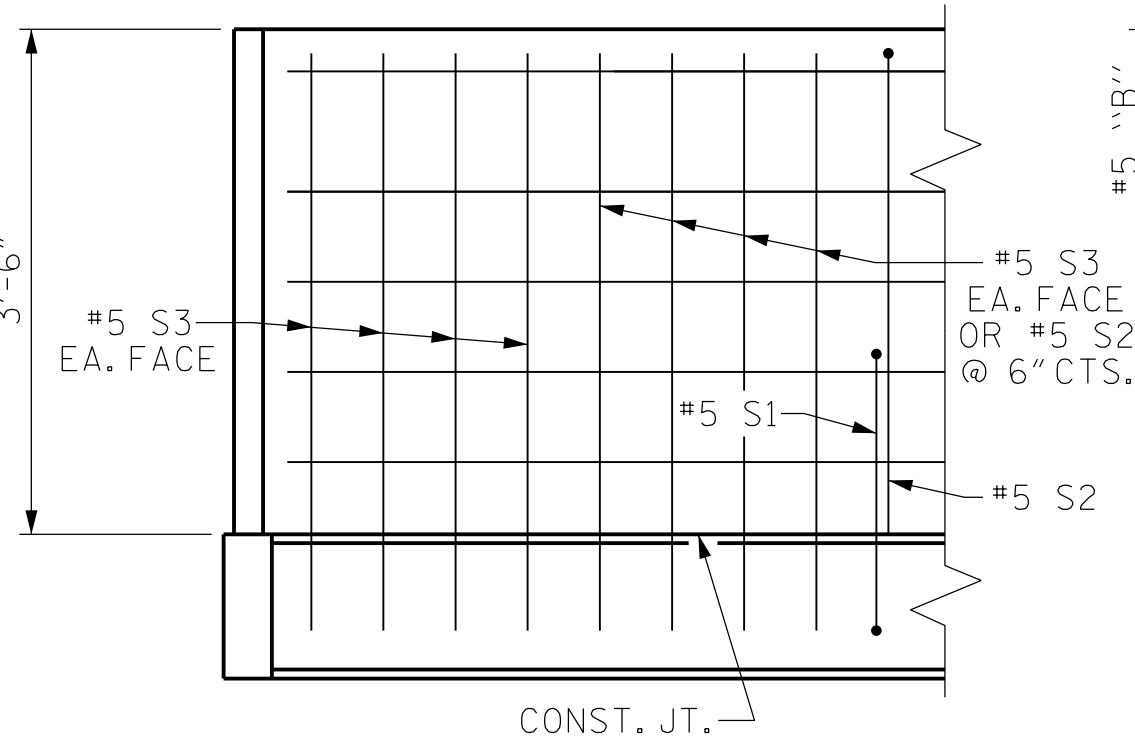
ALL REINFORCING STEEL IN BARRIER RAILS SHALL BE EPOXY COATED.

THE #5 S3 & S4 BARS SHALL BE INSTALLED, USING AN ADHESIVE ANCHORING SYSTEM, AFTER SAWING THE JOINT. THE YIELD LOAD FOR THE #5 S3 & S4 BARS IS 18.6 KIPS. FIELD TESTING FOR THE ADHESIVE BONDING SYSTEM IS NOT REQUIRED.

GROOVED CONTRACTION JOINTS, 1/2" IN DEPTH, SHALL BE TOOLED IN ALL EXPOSED FACES OF THE BARRIER RAIL AND IN ACCORDANCE WITH ARTICLE 825-10(B) OF THE STANDARD SPECIFICATIONS. THE CONTRACTION JOINT SHALL BE LOCATED AT EACH THIRD POINT BETWEEN BARRIER RAIL EXPANSION JOINTS. ONLY ONE CONTRACTION JOINT IS REQUIRED AT MIDPOINT OF BARRIER RAIL SEGMENTS LESS THAN 20 FEET IN LENGTH AND NO CONTRACTION JOINTS ARE REQUIRED FOR THOSE SEGMENTS LESS THAN 10 FEET IN LENGTH.



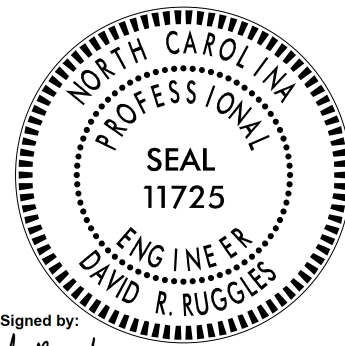
PLAN



SIDE VIEW

END OF RAIL DETAILS - BENTS 3 & 5

FOR ADHESIVE ANCHORING AT SAWED JOINTS



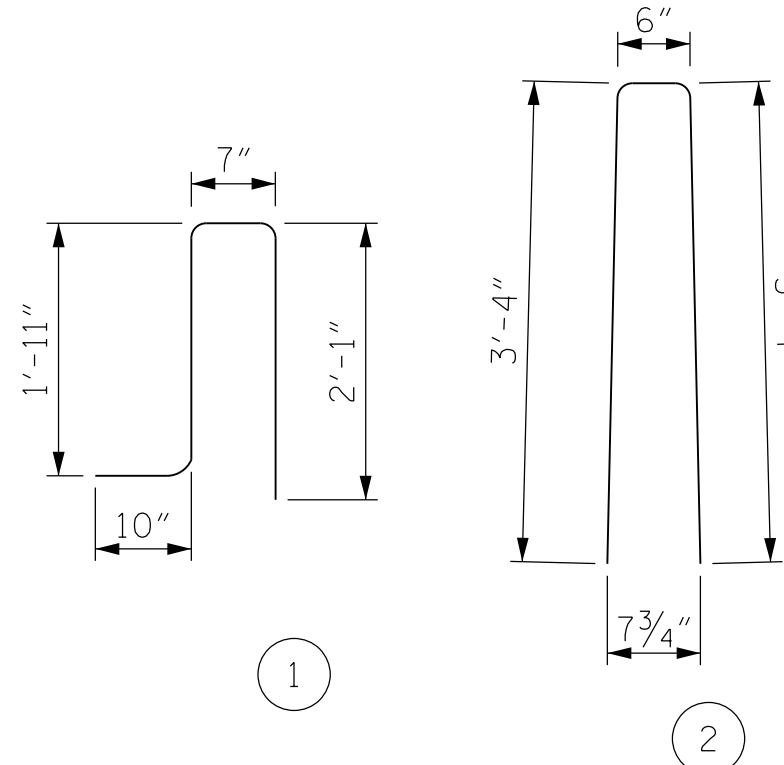
Documented by:  
David Ruggles  
8/26/2025  
DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED



STEWART

Firm License No. F-1536  
434 Fayetteville St,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com

## BAR TYPES



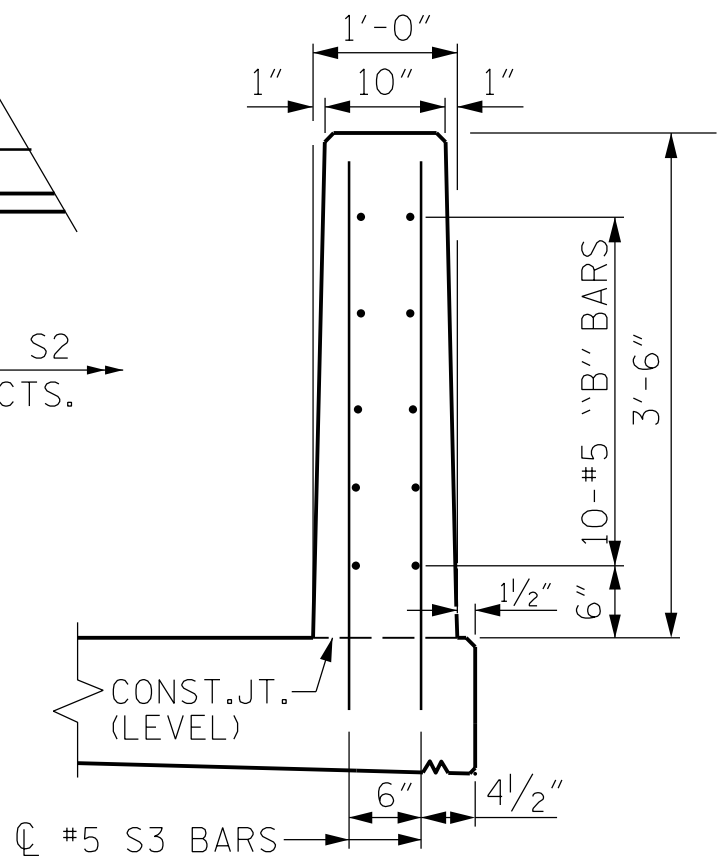
ALL BAR DIMENSIONS ARE OUT TO OUT

## BILL OF MATERIAL

FOR VERTICAL CONCRETE BARRIER RAIL ONLY

| BAR  | NO.  | SIZE | TYPE | LENGTH | WEIGHT |
|------|------|------|------|--------|--------|
| * B1 | 640  | #5   | STR  | 19'-7" | 13,072 |
| * B2 | 640  | #5   | STR  | 11'-8" | 7,788  |
| * S1 | 1900 | #5   | 1    | 5'-5"  | 10,734 |
| * S2 | 1900 | #5   | 2    | 7'-2"  | 14,202 |
| * S3 | 112  | #5   | STR  | 4'-1"  | 477    |
| * S4 | 32   | #5   | STR  | 3'-3"  | 108    |

\* EPOXY COATED  
REINFORCING STEEL 46,381 LBS.  
CLASS AA CONCRETE 228.8 CU. YDS.  
VERTICAL CONCRETE  
BARRIER RAIL 1922.56 LIN. FT.



END VIEW

PROJECT NO. B-5614

BEAUFORT COUNTY

STATION: 22+57.00 -L-

SHEET 2 OF 2

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

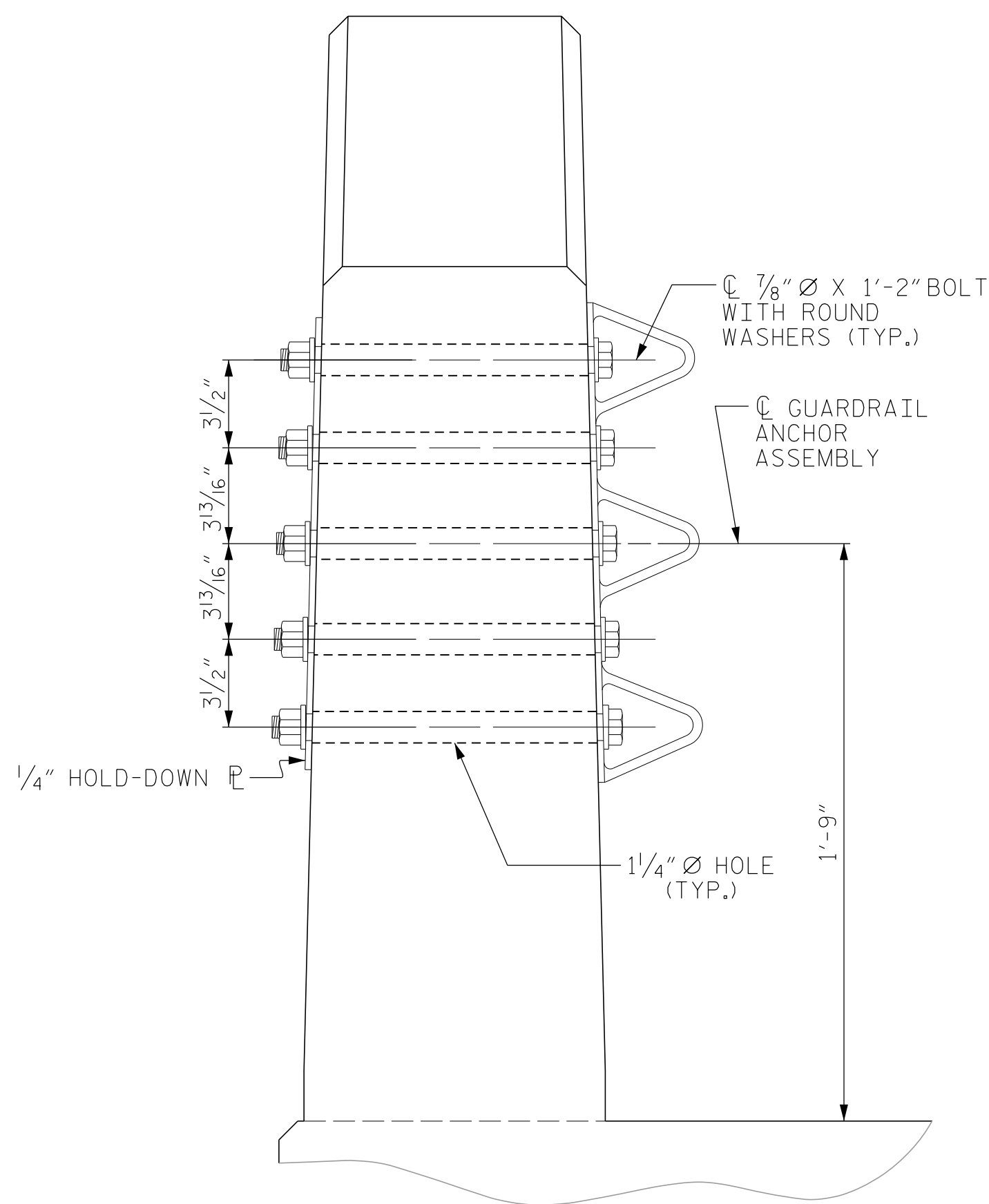
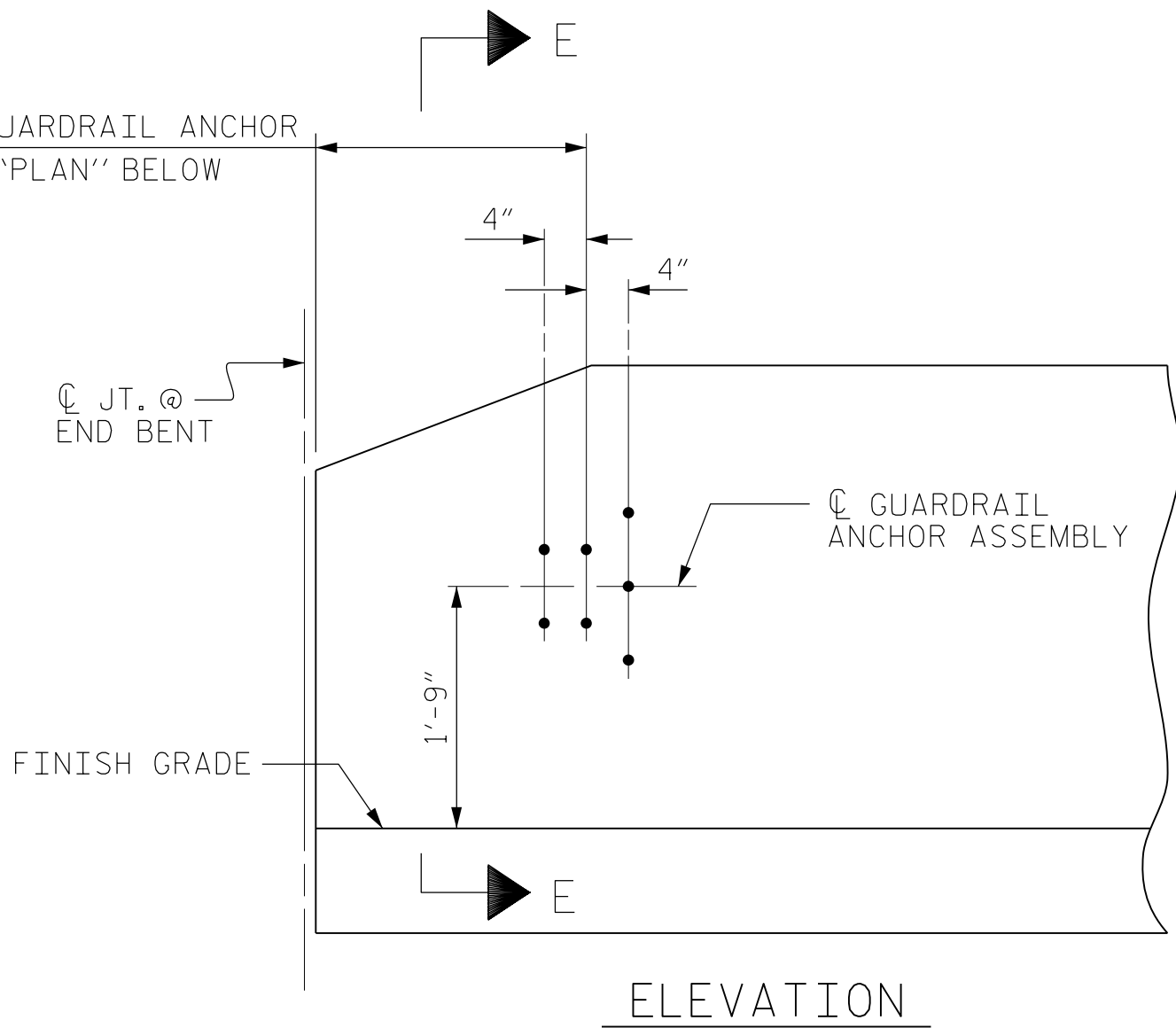
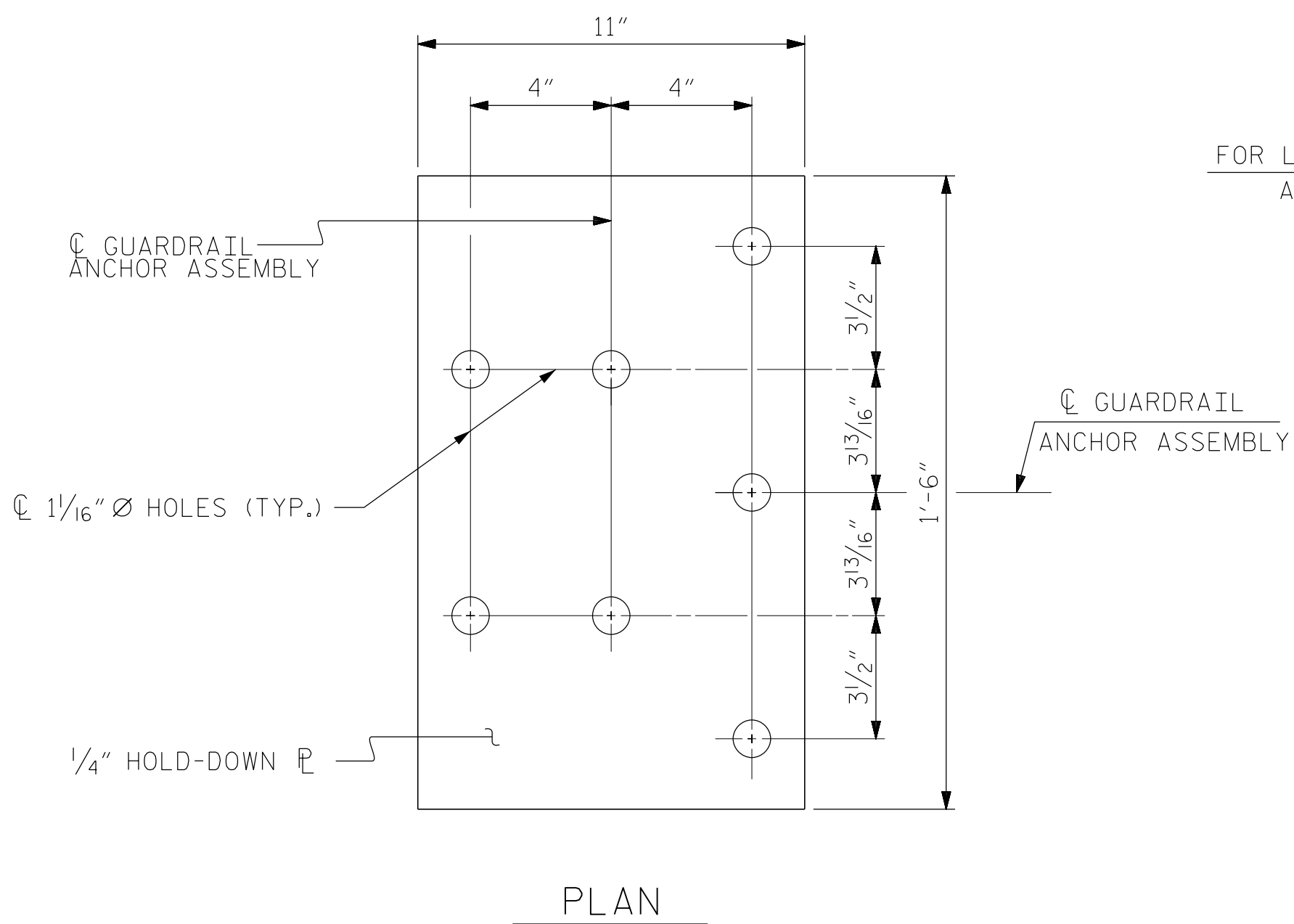
STANDARD  
VERTICAL  
CONCRETE  
BARRIER RAIL

| REVISIONS |     |       |     |     |       | SHEET NO.<br>S-26     |
|-----------|-----|-------|-----|-----|-------|-----------------------|
| NO.       | BY: | DATE: | NO. | BY: | DATE: |                       |
| 1         |     |       | 3   |     |       | TOTAL<br>SHEETS<br>52 |
| 2         |     |       | 4   |     |       |                       |

STD. NO. CBR2

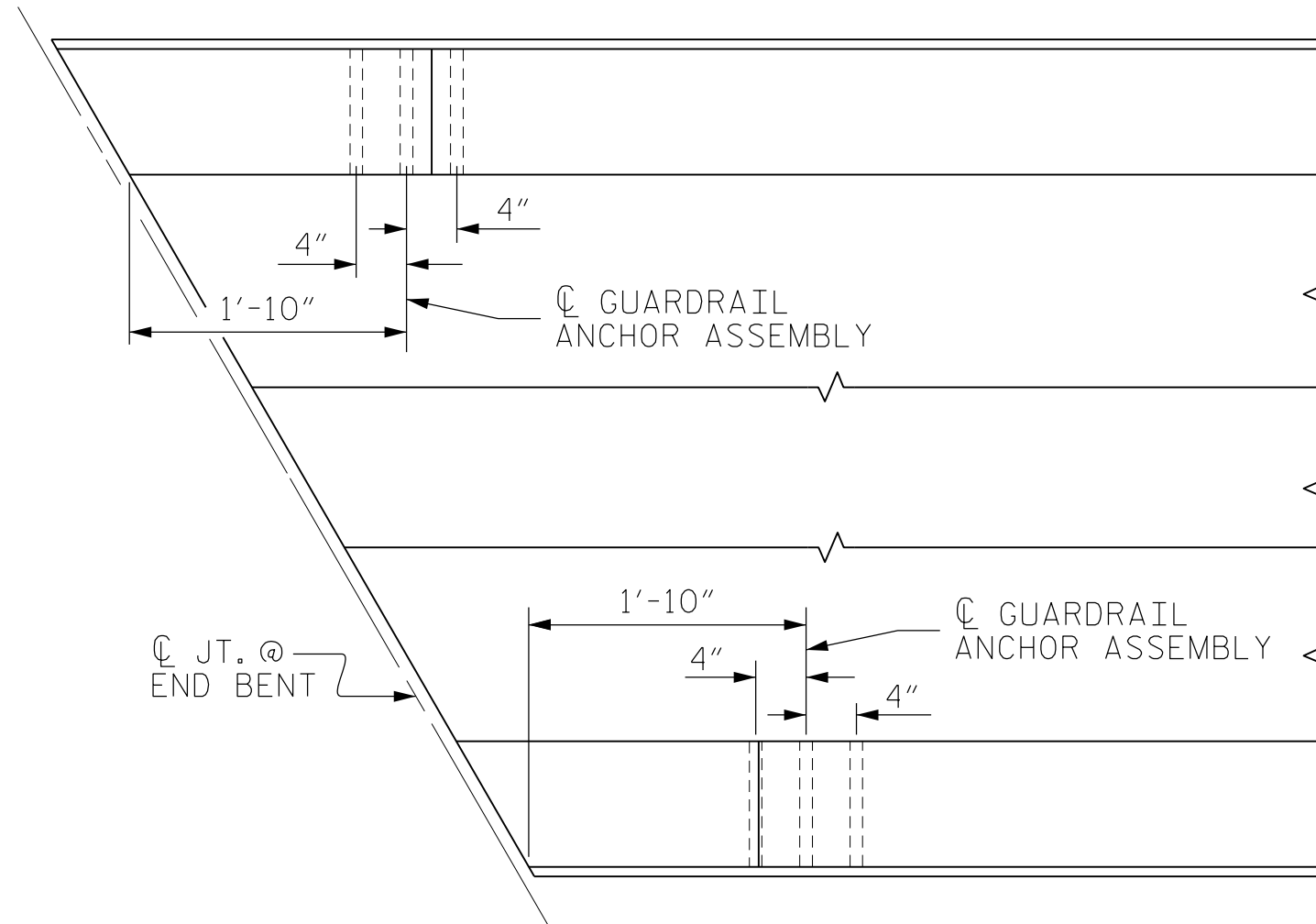
7/11/2025  
B-5614\_SMU.GR1\_060009.dgn  
USER: default

|                    |      |             |         |
|--------------------|------|-------------|---------|
| ASSEMBLED BY : JCW |      | DATE : 2/25 |         |
| CHECKED BY : DRR   |      | DATE : 2/25 |         |
| DRAWN BY : MAA     | 5/10 | REV. 1/15   | MAA/TMG |
| CHECKED BY : GM    | 5/10 | REV. 12/17  | MAA/THC |
|                    |      | REV. 5/18   | MAA/THC |



### GUARDRAIL ANCHOR ASSEMBLY DETAILS

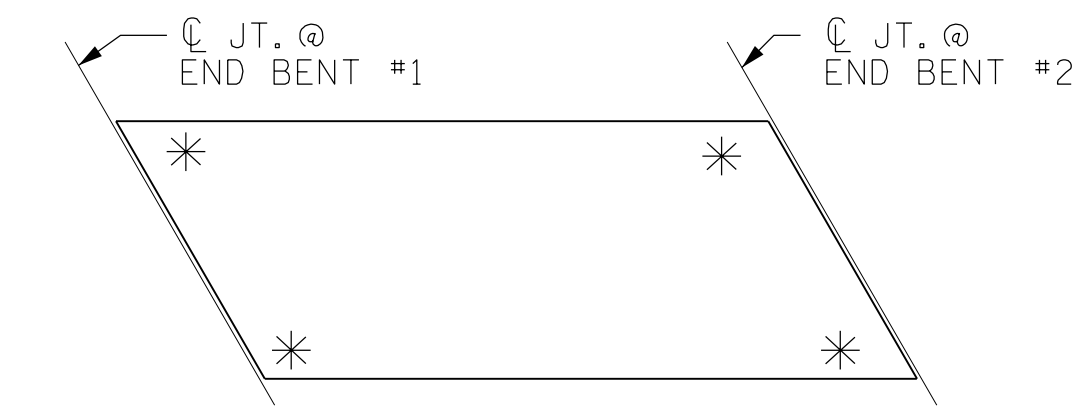
FOR LOCATION OF GUARDRAIL ANCHOR ASSEMBLY, SEE "PLAN" BELOW



### LOCATION OF ANCHORS FOR GUARDRAIL

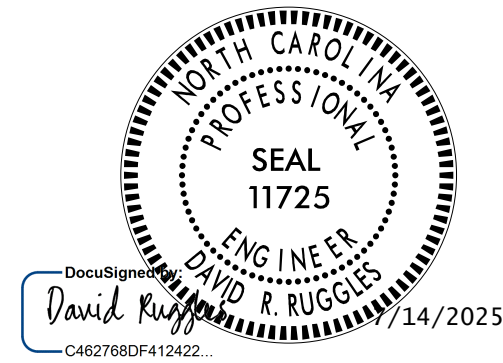
END BENT #1 SHOWN, END BENT #2 SIMILAR.

- #### NOTES
- THE GUARDRAIL ANCHOR ASSEMBLY SHALL CONSIST OF A 1/4" HOLD DOWN PLATE AND 7 - 7/8" Ø BOLTS WITH NUTS AND WASHERS.
- THE HOLD-DOWN PLATE SHALL CONFORM TO AASHTO M270 GRADE 36, AFTER FABRICATION, THE HOLD-DOWN PLATE SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M111.
- BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307 AND NUTS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M291. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED. (AT THE CONTRACTOR'S OPTION, STAINLESS STEEL BOLTS, NUTS AND WASHERS MAY BE USED AS AN ALTERNATE FOR THE 7/8" Ø GALVANIZED BOLTS, NUTS AND WASHERS. THEY SHALL CONFORM TO OR EXCEED THE MECHANICAL REQUIREMENTS OF ASTM A307, THE USE OF THIS ALTERNATE SHALL BE APPROVED BY THE ENGINEER.)
- THE GUARDRAIL ANCHOR ASSEMBLY IS REQUIRED AT ALL POINTS WHERE APPROACH GUARDRAIL IS TO BE ATTACHED TO THE END OF BARRIER RAIL. FOR POINTS OF ATTACHMENT, SEE SKETCH.
- AFTER INSTALLATION, THE EXPOSED THREAD OF THE BOLT SHALL BE BURRED WITH A SHARP POINTED TOOL.
- THE COST OF THE GUARDRAIL ANCHOR ASSEMBLY SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR VERTICAL CONCRETE BARRIER RAIL.
- THE VERTICAL REINFORCING BARS MAY BE SHIFTED SLIGHTLY IN THE VERTICAL CONCRETE BARRIER RAIL TO CLEAR ASSEMBLY BOLTS.
- THE 1 1/4" Ø HOLES SHALL BE FORMED OR DRILLED WITH A CORE BIT. IMPACT TOOLS WILL NOT BE PERMITTED. ANY CONCRETE DAMAGED BY THIS WORK SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER.



\* DENOTES GUARDRAIL ANCHOR ASSEMBLY

PROJECT NO. B-5614  
BEAUFORT COUNTY  
STATION: 22+57.00 -L-



DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED



STEWART

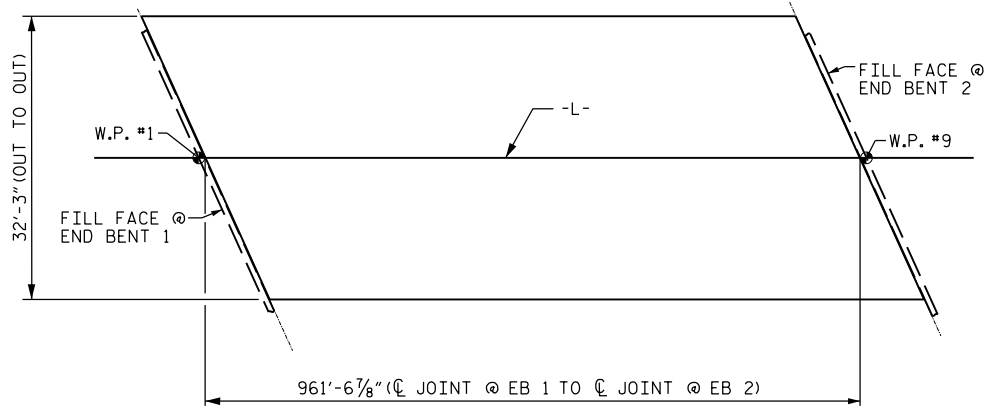
Firm License No. F-1536  
434 Fayetteville St.,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
STANDARD  
GUARDRAIL ANCHORAGE  
DETAILS  
FOR VERTICAL CONCRETE  
BARRIER RAIL

| REVISIONS |     |       |     |     |       | SHEET NO.<br>S-27     |
|-----------|-----|-------|-----|-----|-------|-----------------------|
| NO.       | BY: | DATE: | NO. | BY: | DATE: |                       |
| 1         |     |       | 3   |     |       | TOTAL<br>SHEETS<br>52 |
| 2         |     |       | 4   |     |       |                       |

STD. NO. GRA3

10/7/2025  
\\B-5614\_SMU\_BMI\_060009.dgn  
USERdefault



LAYOUT FOR COMPUTING AREA  
REINFORCED CONCRETE DECK SLAB  
( SQ. FT. = 31,011 )

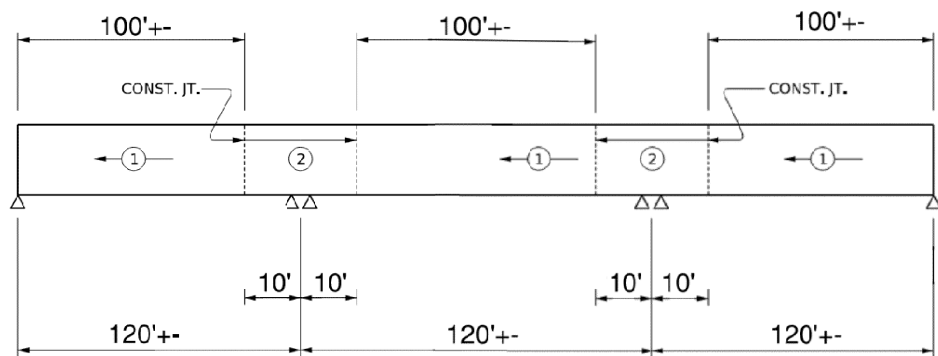
| CLASS AA CONCRETE   |        |                                       |
|---------------------|--------|---------------------------------------|
| SPANS               | POUR # | CLASS AA***<br>CONCRETE<br>(CU. YDS.) |
| A, B, & C           | 1      | 273.3                                 |
| A, B, & C           | 2      | 47.9                                  |
| TOTAL (A, B, & C)   |        | 321.2                                 |
| D & E               | 1      | 176.2                                 |
| D & E               | 2      | 38.9                                  |
| TOTAL (D & E)       |        | 215.1                                 |
| F, G, & H           | 1      | 273.3                                 |
| F, G, & H           | 2      | 47.9                                  |
| TOTAL (F, G, & H)   |        | 321.2                                 |
| TOTAL (SPANS A - H) |        | 857.5                                 |

\*\*\* CONCRETE QUANTITIES SHOWN DO NOT INCLUDE  
INTERMEDIATE DIAPHRAGMS

| GROOVING BRIDGE FLOORS |        |        |
|------------------------|--------|--------|
| APPROACH SLABS         | 765    | SQ.FT. |
| BRIDGE DECK            | 25,923 | SQ.FT. |
| TOTAL                  | 26,688 | SQ.FT. |

| ———— SUPERSTRUCTURE BILL OF MATERIAL ———— |                                        |
|-------------------------------------------|----------------------------------------|
|                                           | * EPOXY COATED<br>REINFORCING<br>STEEL |
|                                           | ( LBS. )                               |
| SPANS A, B, & C                           | 47,685                                 |
| SPANS D & E                               | 31,566                                 |
| SPANS F, G, & H                           | 47,685                                 |
|                                           |                                        |
| ** TOTALS                                 | 126,936                                |

\*\*QUANTITIES FOR BARRIER RAIL ARE NOT INCLUDED



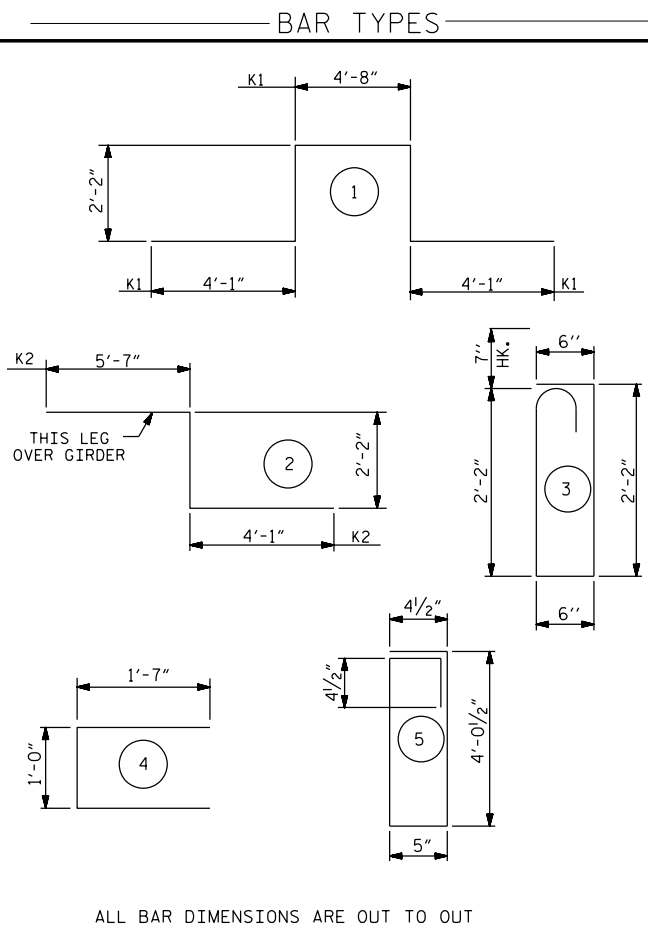
\* POUR (2) CAN NOT BE STARTED UNTIL BOTH ADJACENT (1) POURS REACH A MINIMUM OF 3000 PSI.

② — INDICATES POUR NUMBER AND DIRECTION OF POUR

OPTIONAL POURING SEQUENCE - SPANS A, B, & C

SPANS F, G, & H SIMILAR. SPANS D&E SIMILAR.

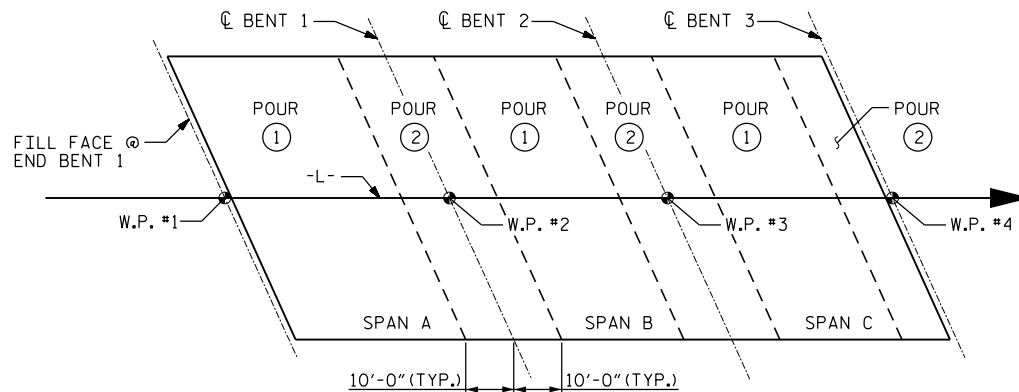
DRAWN BY: J. WILSON DATE: 2/25  
CHECKED BY: D. RUGGLES DATE: 2/25  
DESIGN ENGINEER OF RECORD: D. RUGGLES DATE: 2/25



ALL BAR DIMENSIONS ARE OUT TO OUT

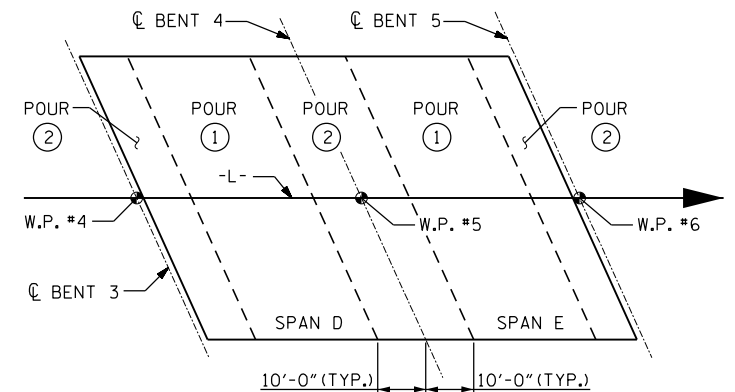
## BILL OF MATERIAL

| SPANS A, B, & C |     |      |      |         |        | SPANS D & E |     |      |      |         |        | SPANS F, G, & H |     |      |      |         |        |
|-----------------|-----|------|------|---------|--------|-------------|-----|------|------|---------|--------|-----------------|-----|------|------|---------|--------|
| BAR             | NO. | SIZE | TYPE | LENGTH  | WEIGHT | BAR         | NO. | SIZE | TYPE | LENGTH  | WEIGHT | BAR             | NO. | SIZE | TYPE | LENGTH  | WEIGHT |
| *A1             | 704 | #5   | STR  | 31'-11" | 23436  | *A1         | 463 | #5   | STR  | 31'-11" | 15413  | *A1             | 704 | #5   | STR  | 31'-11" | 23436  |
| *A2             | 2   | #5   | STR  | 30'-4"  | 63     | *A2         | 2   | #5   | STR  | 30'-7"  | 64     | *A2             | 2   | #5   | STR  | 30'-4"  | 63     |
| *A3             | 2   | #5   | STR  | 28'-5"  | 59     | *A3         | 2   | #5   | STR  | 28'-9"  | 60     | *A3             | 2   | #5   | STR  | 28'-5"  | 59     |
| *A4             | 2   | #5   | STR  | 26'-7"  | 55     | *A4         | 2   | #5   | STR  | 26'-11" | 56     | *A4             | 2   | #5   | STR  | 26'-7"  | 55     |
| *A5             | 2   | #5   | STR  | 24'-8"  | 51     | *A5         | 2   | #5   | STR  | 25'-0"  | 52     | *A5             | 2   | #5   | STR  | 24'-8"  | 51     |
| *A6             | 2   | #5   | STR  | 22'-10" | 48     | *A6         | 2   | #5   | STR  | 23'-1"  | 48     | *A6             | 2   | #5   | STR  | 22'-10" | 48     |
| *A7             | 2   | #5   | STR  | 20'-11" | 44     | *A7         | 2   | #5   | STR  | 21'-3"  | 44     | *A7             | 2   | #5   | STR  | 20'-11" | 44     |
| *A8             | 2   | #5   | STR  | 19'-1"  | 40     | *A8         | 2   | #5   | STR  | 19'-5"  | 41     | *A8             | 2   | #5   | STR  | 19'-1"  | 40     |
| *A9             | 2   | #5   | STR  | 17'-2"  | 36     | *A9         | 2   | #5   | STR  | 17'-6"  | 37     | *A9             | 2   | #5   | STR  | 17'-2"  | 36     |
| *A10            | 2   | #5   | STR  | 15'-4"  | 32     | *A10        | 2   | #5   | STR  | 15'-8"  | 33     | *A10            | 2   | #5   | STR  | 15'-4"  | 32     |
| *A11            | 2   | #5   | STR  | 13'-6"  | 28     | *A11        | 2   | #5   | STR  | 13'-9"  | 29     | *A11            | 2   | #5   | STR  | 13'-6"  | 28     |
| *A12            | 2   | #5   | STR  | 11'-7"  | 24     | *A12        | 2   | #5   | STR  | 11'-11" | 25     | *A12            | 2   | #5   | STR  | 11'-7"  | 24     |
| *A13            | 2   | #5   | STR  | 9'-9"   | 20     | *A13        | 2   | #5   | STR  | 10'-1"  | 21     | *A13            | 2   | #5   | STR  | 9'-9"   | 20     |
| *A14            | 2   | #5   | STR  | 7'-10"  | 16     | *A14        | 2   | #5   | STR  | 8'-2"   | 17     | *A14            | 2   | #5   | STR  | 7'-10"  | 16     |
| *A15            | 2   | #5   | STR  | 6'-0"   | 13     | *A15        | 2   | #5   | STR  | 6'-4"   | 13     | *A15            | 2   | #5   | STR  | 6'-0"   | 13     |
| *A16            | 2   | #5   | STR  | 4'-2"   | 9      | *A16        | 2   | #5   | STR  | 4'-5"   | 9      | *A16            | 2   | #5   | STR  | 4'-2"   | 9      |
| *A17            | 2   | #5   | STR  | 2'-3"   | 5      | *A17        | 2   | #5   | STR  | 2'-7"   | 5      | *A17            | 2   | #5   | STR  | 2'-3"   | 5      |
| *A18            | 482 | #5   | STR  | 4'-7"   | 2304   | *A18        | 320 | #5   | STR  | 4'-7"   | 1530   | *A18            | 482 | #5   | STR  | 4'-7"   | 2304   |
| *B1             | 170 | #5   | STR  | 46'-0"  | 8156   | *B1         | 85  | #5   | STR  | 46'-0"  | 4078   | *B1             | 170 | #5   | STR  | 46'-0"  | 8156   |
| *B2             | 252 | #4   | STR  | 34'-8"  | 5836   | *B2         | 240 | #4   | STR  | 34'-8"  | 5558   | *B2             | 252 | #4   | STR  | 34'-8"  | 5836   |
| *B3             | 84  | #4   | STR  | 38'-10" | 2179   | *B5         | 42  | #5   | STR  | 50'-2"  | 2198   | *B3             | 84  | #4   | STR  | 38'-10" | 2179   |
| *B4             | 42  | #5   | STR  | 53'-10" | 2358   |             |     |      |      |         |        | *B4             | 42  | #5   | STR  | 53'-10" | 2358   |
| *G1             | 2   | #5   | STR  | 32'-10" | 68     | *G1         | 2   | #5   | STR  | 32'-10" | 68     | *G1             | 2   | #5   | STR  | 32'-10" | 68     |
| *K1             | 8   | #8   | 1    | 17'-2"  | 367    | *K1         | 8   | #8   | 1    | 17'-2"  | 367    | *K1             | 8   | #8   | 1    | 17'-2"  | 367    |
| *K2             | 8   | #8   | 2    | 11'-10" | 253    | *K2         | 8   | #8   | 2    | 11'-10" | 253    | *K2             | 8   | #8   | 2    | 11'-10" | 253    |
| *K3             | 18  | #6   | STR  | 4'-3"   | 115    | *K3         | 12  | #6   | STR  | 4'-3"   | 77     | *K3             | 18  | #6   | STR  | 4'-3"   | 115    |
| *K4             | 72  | #5   | STR  | 5'-3"   | 394    | *K4         | 48  | #5   | STR  | 5'-3"   | 263    | *K4             | 72  | #5   | STR  | 5'-3"   | 394    |
| *K5             | 108 | #5   | STR  | 7'-4"   | 826    | *K5         | 72  | #5   | STR  | 7'-4"   | 551    | *K5             | 108 | #5   | STR  | 7'-4"   | 826    |
| *S1             | 30  | #5   | 3    | 5'-11"  | 185    | *S1         | 30  | #5   | 3    | 5'-11"  | 185    | *S1             | 30  | #5   | 3    | 5'-11"  | 185    |
| *S2             | 30  | #4   | 4    | 4'-2"   | 84     | *S2         | 30  | #4   | 4    | 4'-2"   | 84     | *S2             | 30  | #4   | 4    | 4'-2"   | 84     |
| *S3             | 90  | #4   | 5    | 9'-8"   | 581    | *S3         | 60  | #4   | 5    | 9'-8"   | 387    | *S3             | 90  | #4   | 5    | 9'-8"   | 581    |



POURING SEQUENCE - SPANS A, B, & C

SPANS F, G, & H SIMILAR EXCEPT OPPOSITE HAND



POURING SEQUENCE - SPANS D & E

PROJECT NO. B-5614

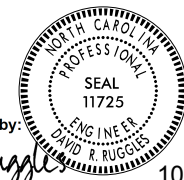
BEAUFORT COUNTY

STATION: 22+57.00 -L-

SUPERSTRUCTURE REINFORCING STEEL  
LENGTHS ARE BASED ON THE  
FOLLOWING MINIMUM SPLICE LENGTHS

| BAR<br>SIZE | SUPERSTRUCTURE<br>EXCEPT APPROACH<br>SLABS, PARAPET,<br>AND BARRIER RAIL |          | APPROACH SLABS  |          | PARAPET<br>AND<br>BARRIER<br>RAIL |
|-------------|--------------------------------------------------------------------------|----------|-----------------|----------|-----------------------------------|
|             | EPOXY<br>COATED                                                          | UNCOATED | EPOXY<br>COATED | UNCOATED |                                   |
| #4          | 1'-11"                                                                   | 1'-7"    | 1'-11"          | 1'-7"    | 2'-6"                             |
| #5          | 2'-5"                                                                    | 2'-0"    | 2'-5"           | 2'-0"    | 3'-1"                             |
| #6          | 2'-10"                                                                   | 2'-5"    | 3'-7"           | 2'-5"    | 3'-8"                             |
| #7          | 4'-2"                                                                    | 2'-9"    |                 |          |                                   |
| #8          | 4'-9"                                                                    | 3'-2"    |                 |          |                                   |

DocuSigned by:  
David Ruggles  
C462768DF412422...



10/7/2025

DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED



Firm License No. F-1536  
434 Fayetteville St.,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
SUPERSTRUCTURE  
BILL OF MATERIAL

| REVISIONS |     |       |     |     |       | SHEET NO.<br>S-28     |
|-----------|-----|-------|-----|-----|-------|-----------------------|
| NO.       | BY: | DATE: | NO. | BY: | DATE: |                       |
| 1         |     |       | 3   |     |       | TOTAL<br>SHEETS<br>52 |
| 2         |     |       | 4   |     |       |                       |

NOTES

STIRRUPS IN CAP MAY BE SHIFTED AS NECESSARY TO CLEAR ANCHOR BOLTS.

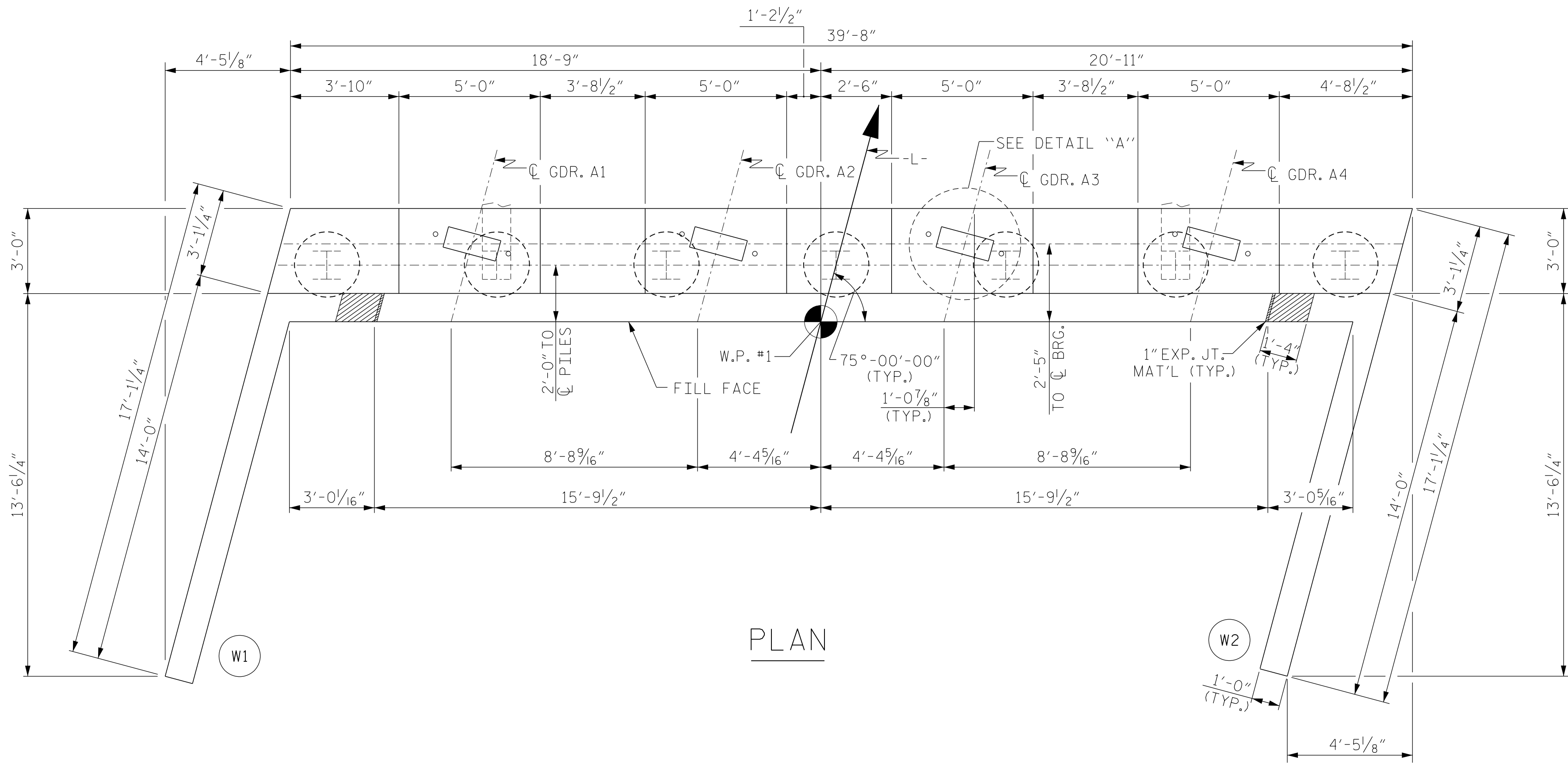
THE CONCRETE IN THE SHADED AREA OF THE WING SHALL BE POURED AFTER THE JOINT BETWEEN THE DECK AND APPROACH SLAB HAS BEEN SAWED AND THE BARRIER RAIL IS CAST IF SLIP FORMING IS USED.

FOR BEARING DETAILS, SEE ELASTOMERIC BEARING DETAILS.

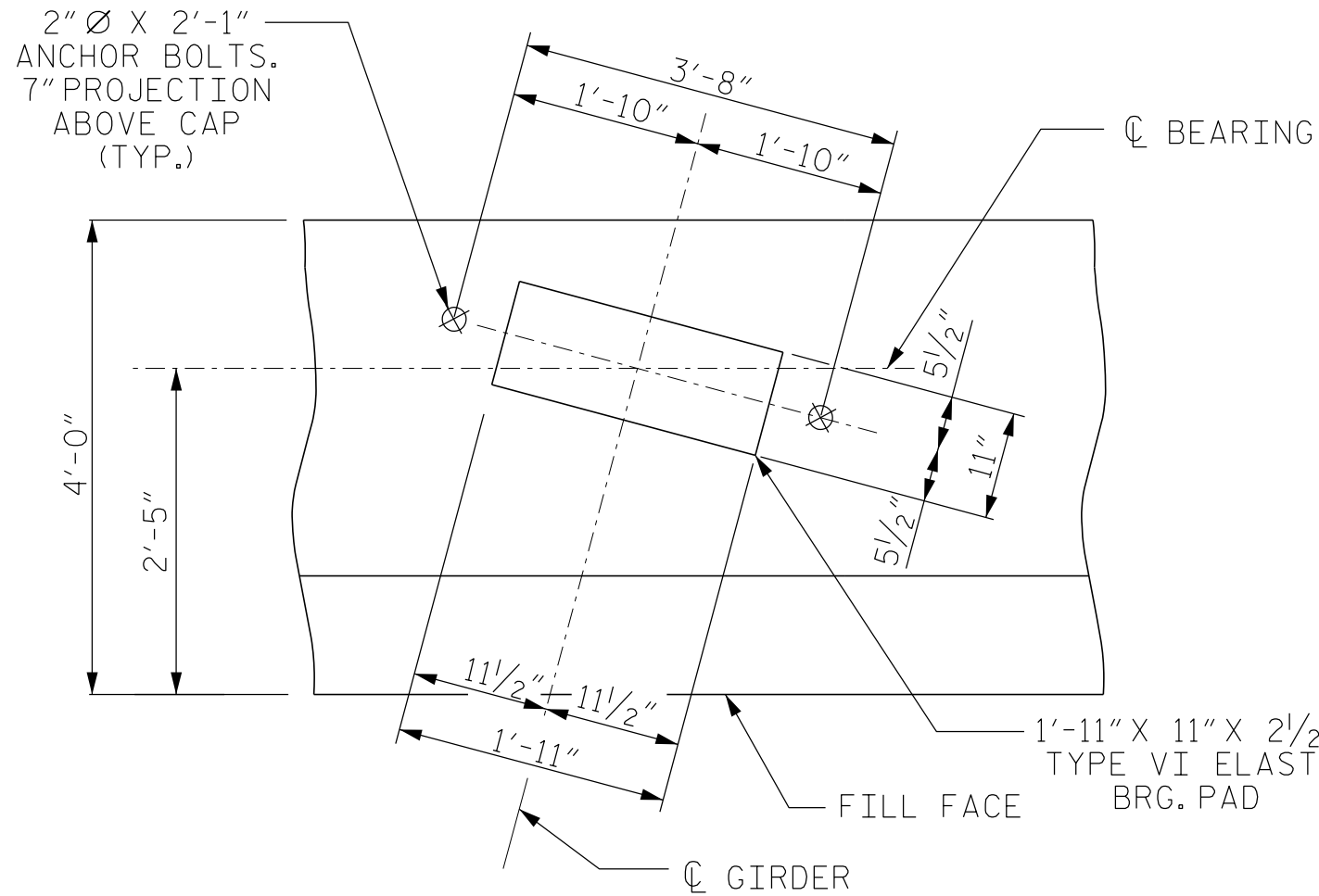
FOR PILE SPlice DETAILS, SEE SHEET 3 OF 3.

BACKWALL SHALL BE PLACED BEFORE APPLYING THE EPOXY PROTECTIVE COATING.

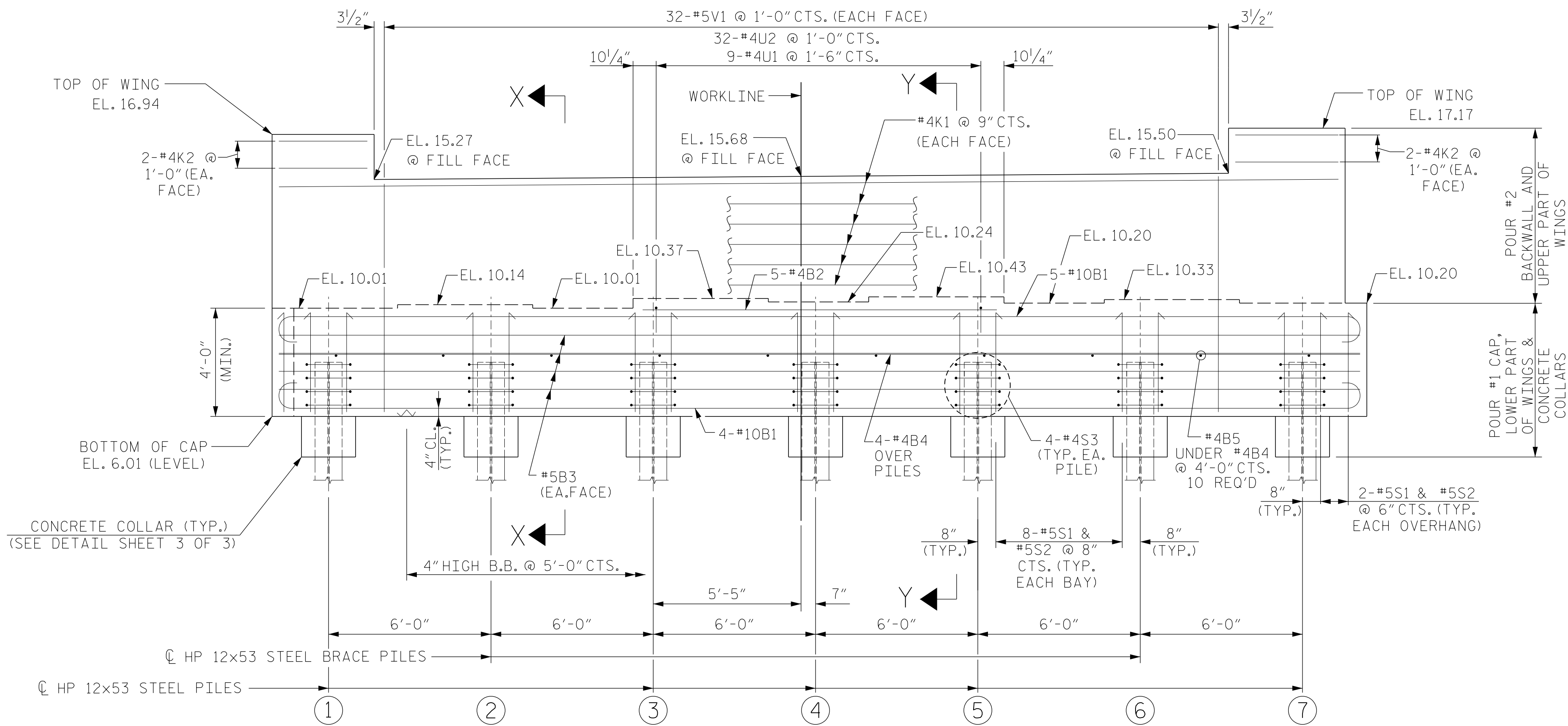
THE TOP SURFACE AREAS OF THE END BENT CAPS SHALL BE CURED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS EXCEPT THE MEMBRANE CURING COMPOUND METHOD SHALL NOT BE USED.



PLAN



DETAIL "A"

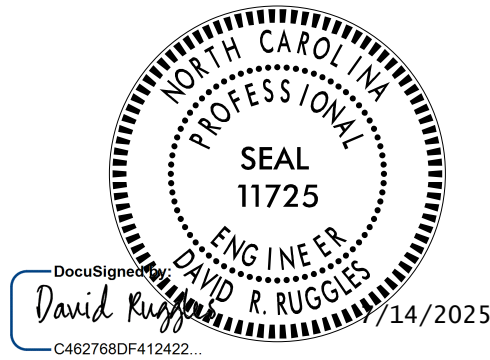


ELEVATION

WINGS NOT SHOWN FOR CLARITY.  
FOR SECTIONS X-X & Y-Y, SEE SHEET S-31.  
CONCRETE COLLARS FOR STEEL PILES NOT SHOWN IN PLAN VIEW FOR CLARITY.  
SEE "CORROSION PROTECTION FOR STEEL PILES DETAIL", END BENT 1 SHEET 3 OF 3.

PROJECT NO. B-5614  
BEAUFORT COUNTY  
STATION: 22+57.00 -L-

SHEET 1 OF 3



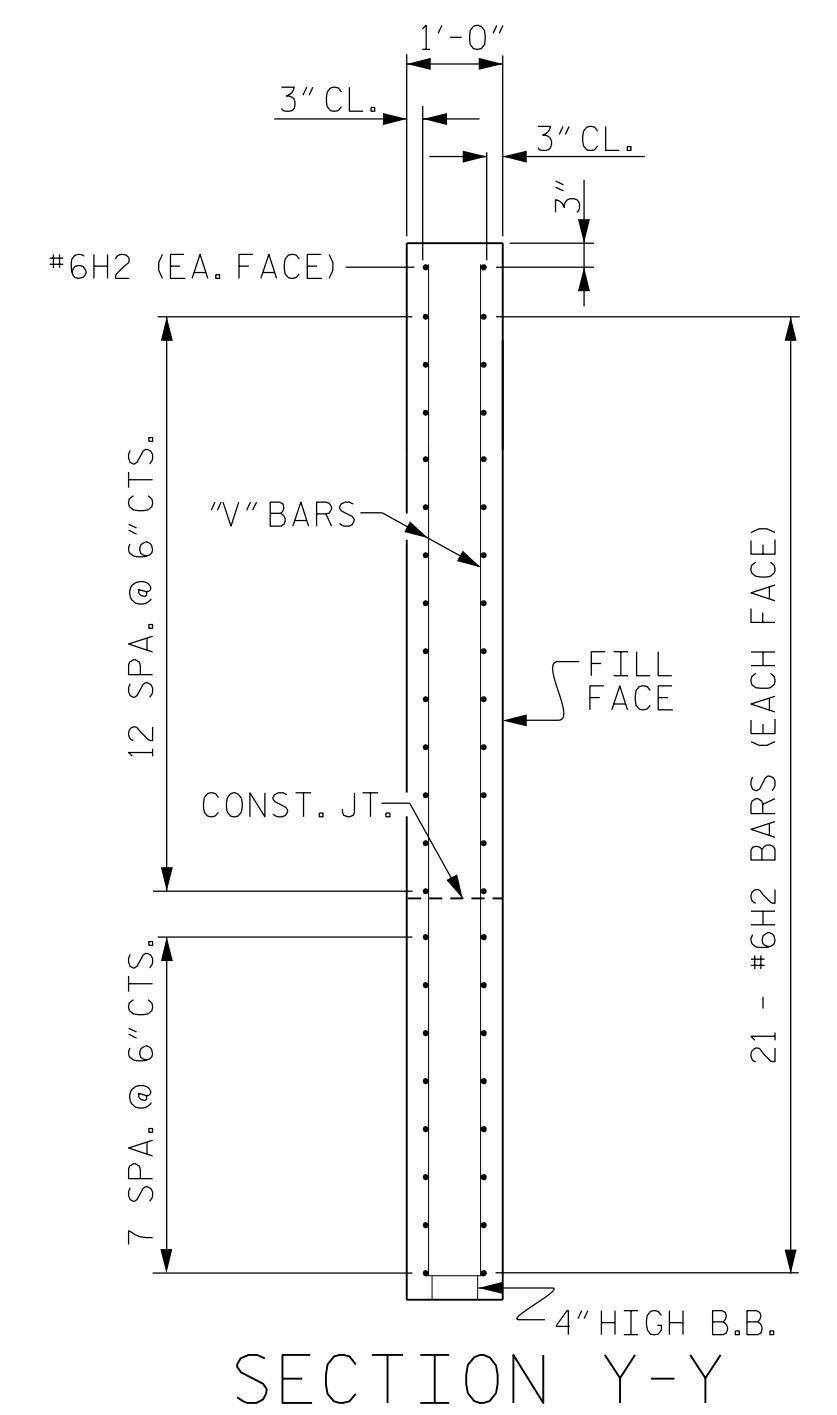
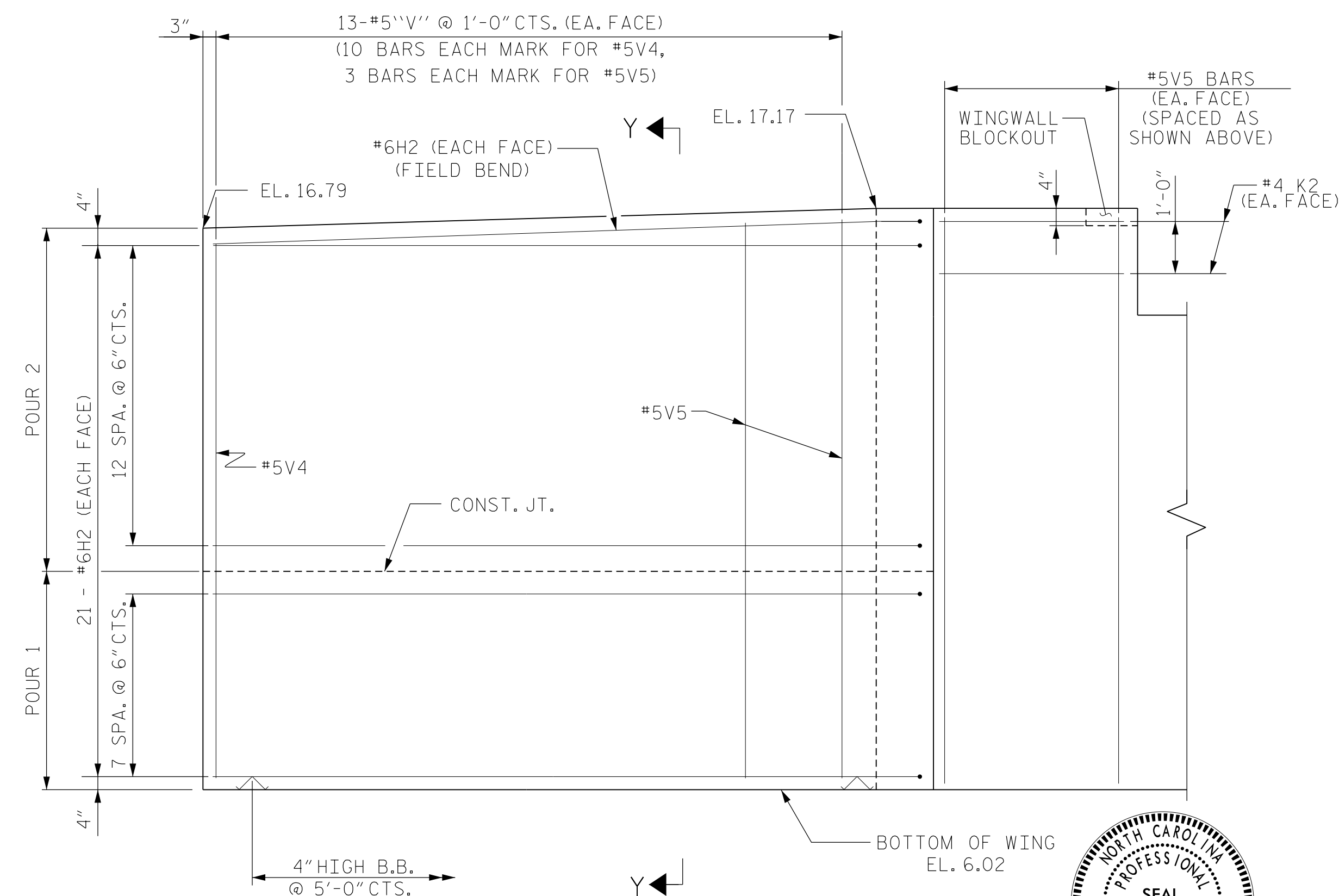
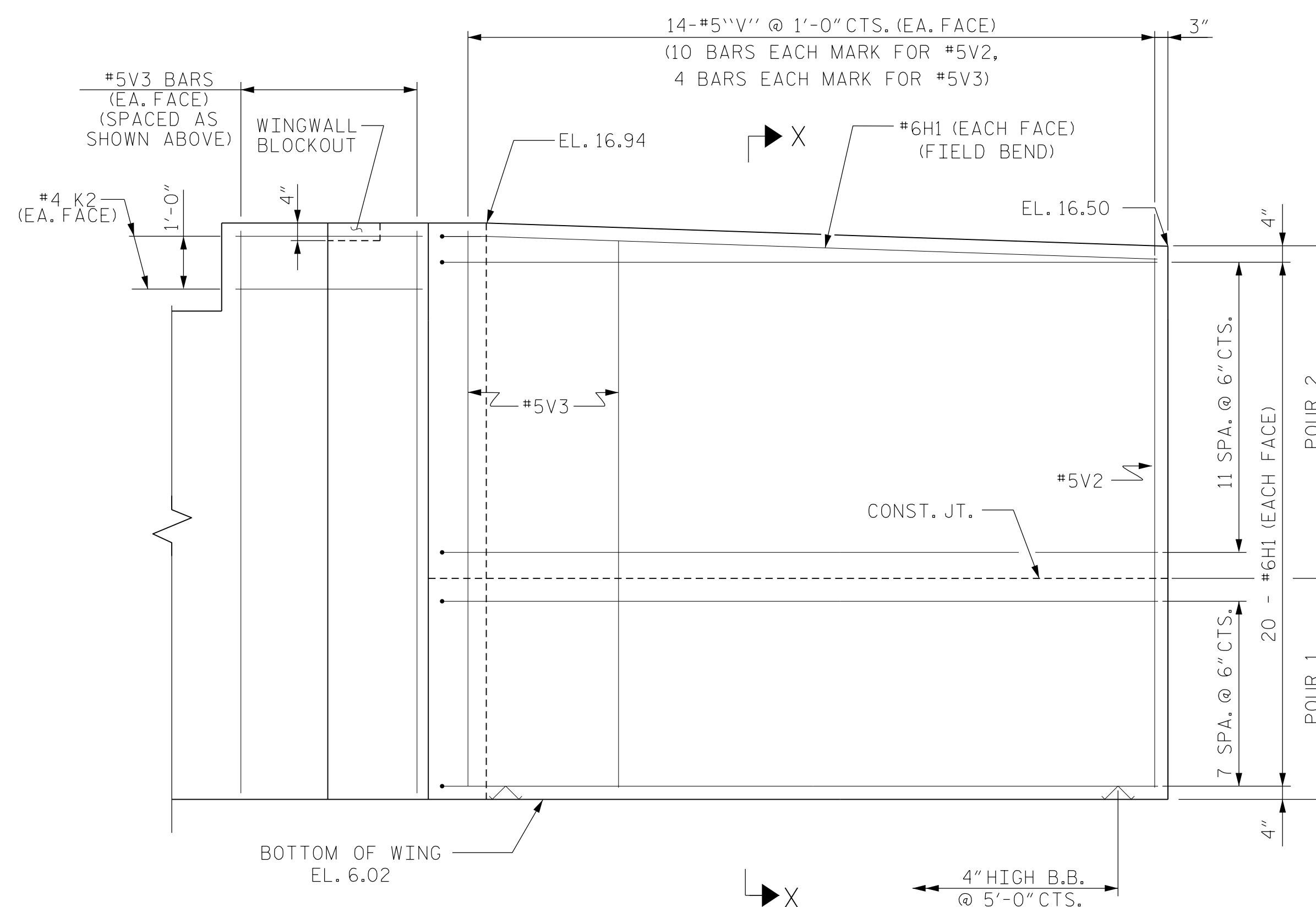
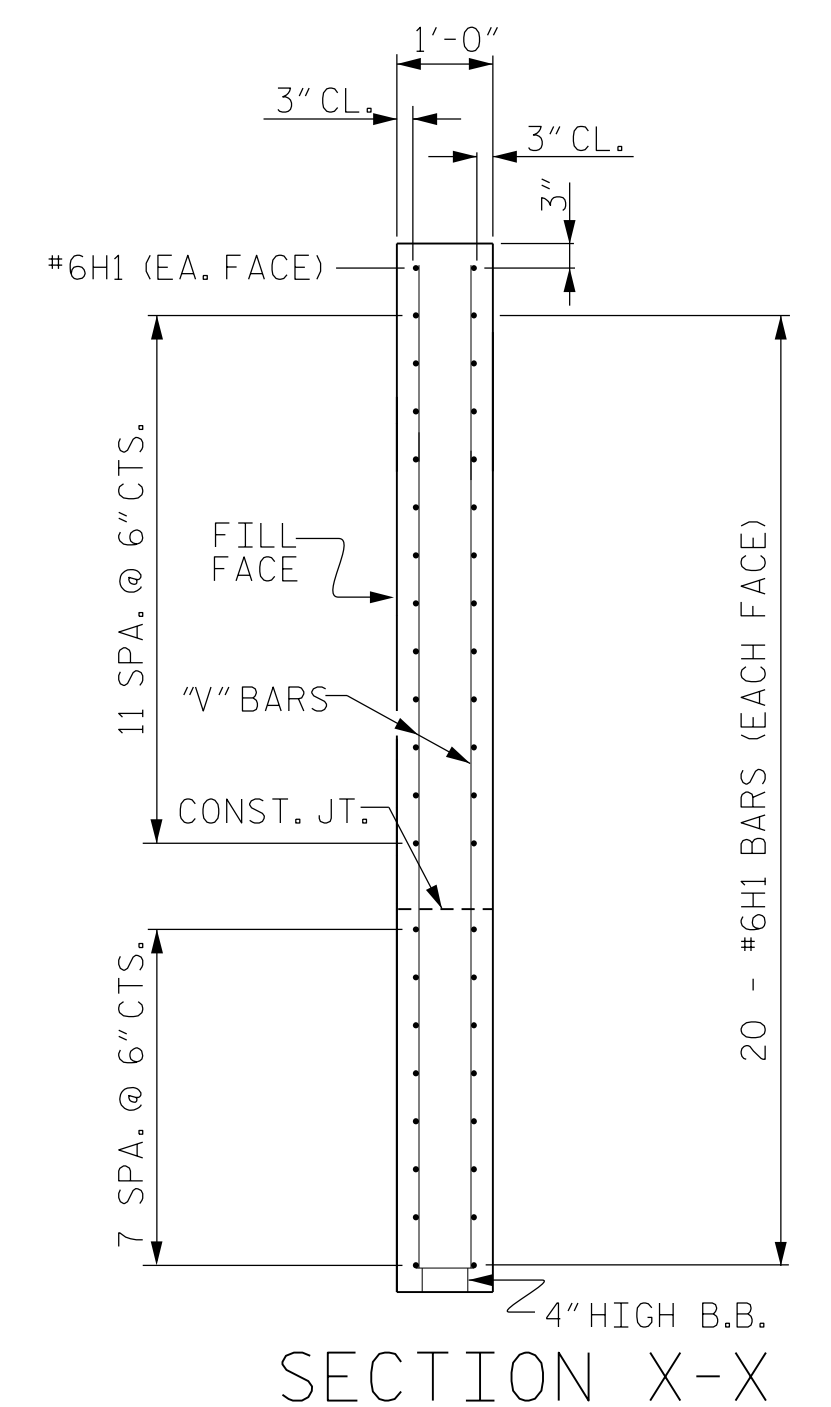
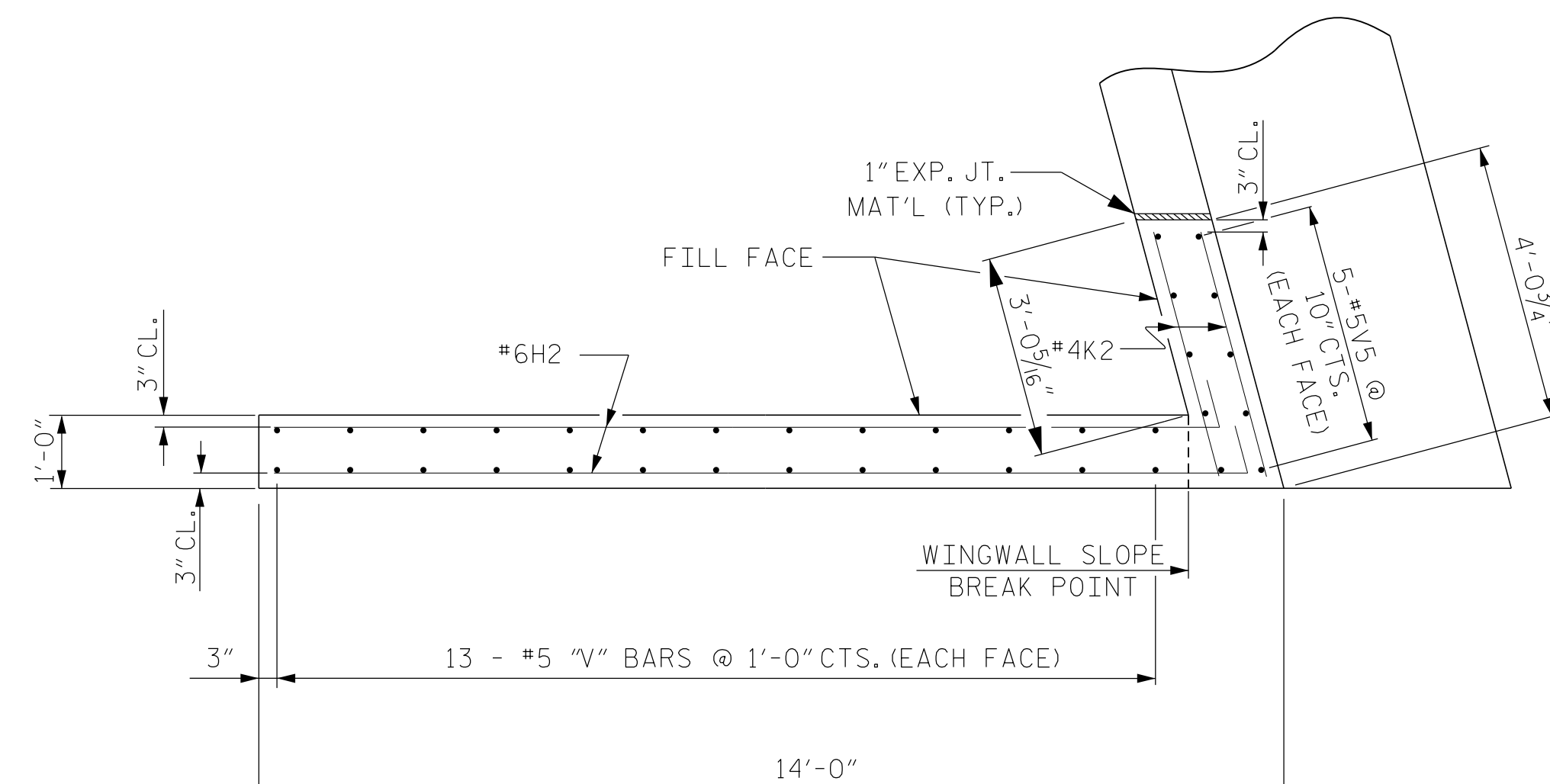
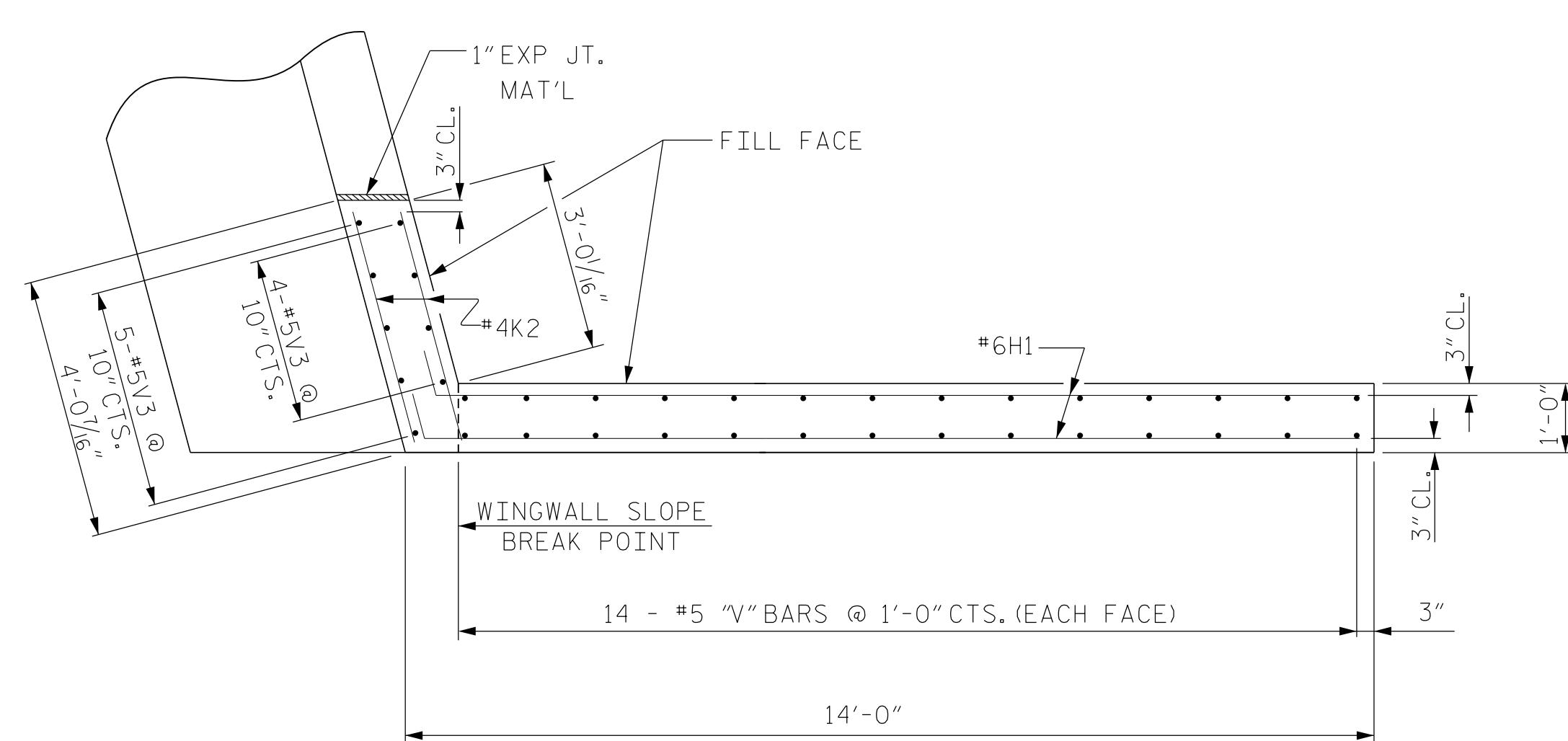
DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED



Firm License No. F-1536  
434 Fayetteville St.,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
SUBSTRUCTURE  
END BENT 1  
PLAN AND ELEVATION

| REVISIONS    |     |       |     |     |       | SHEET NO. |
|--------------|-----|-------|-----|-----|-------|-----------|
| NO.          | BY: | DATE: | NO. | BY: | DATE: |           |
| 1            |     |       | 3   |     |       | S-29      |
| 2            |     |       | 4   |     |       |           |
| TOTAL SHEETS |     |       |     |     |       | 52        |



PROJECT NO. B-5614  
BEAUFORT COUNTY  
 STATION: 22+57.00 -L-

SHEET 2 OF 3

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

SUBSTRUCTURE

END BENT 1  
WING DETAILS

|          |           |     |       |     |     |       |                 |
|----------|-----------|-----|-------|-----|-----|-------|-----------------|
| 50<br>mm | REVISIONS |     |       |     |     |       | SHEET NO.       |
|          | NO.       | BY: | DATE: | NO. | BY: | DATE: | S-30            |
|          | 1         |     |       | 3   |     |       | TOTAL<br>SHEETS |
|          | 2         |     |       | 4   |     |       | 52              |

DRAWN BY: J. WILSON DATE: 2/25  
CHECKED BY: D. RUGGLES DATE: 2/25  
DESIGN ENGINEER OF RECORD: D. RUGGLES DATE: 2/25

WING  
02

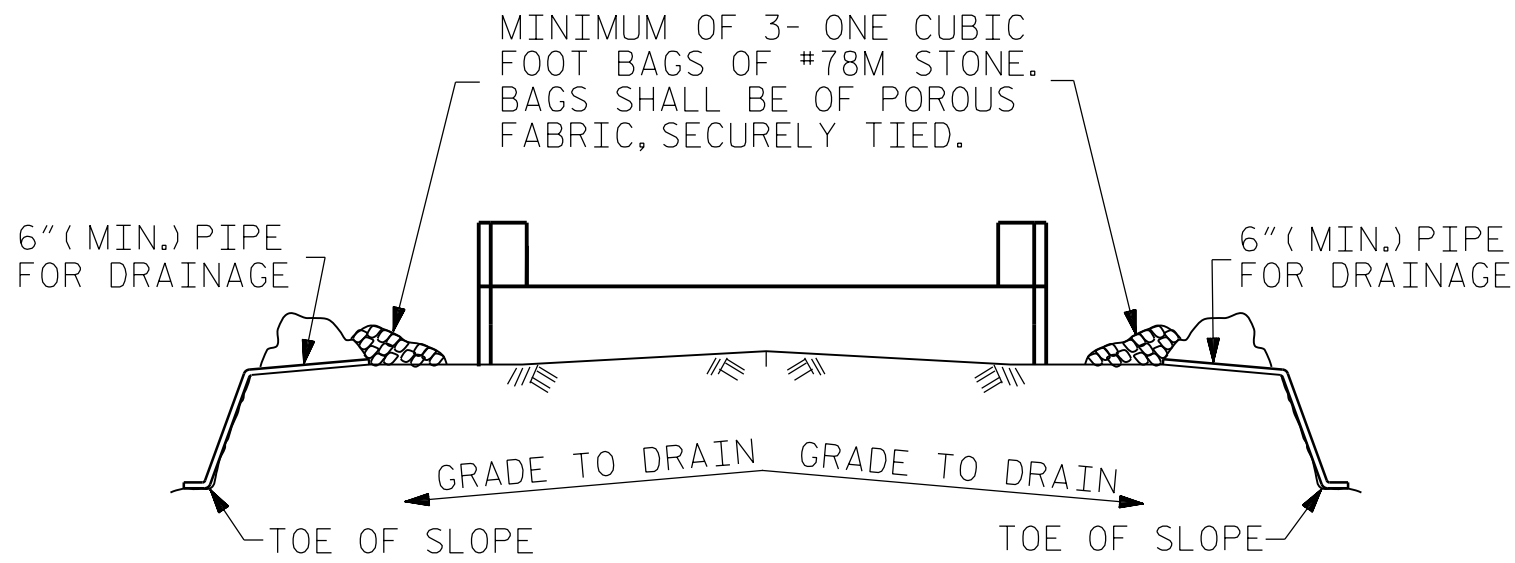
NORTH CAROLINA  
PROFESSIONAL  
SEAL  
11725  
ENGINEER  
DAVID R. RUGGLES

DocuSign  
David Ruggles  
01/06/2015 11:14 AM

DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED

Firm License No. F-1536  
434 Fayetteville St,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com

STEWART

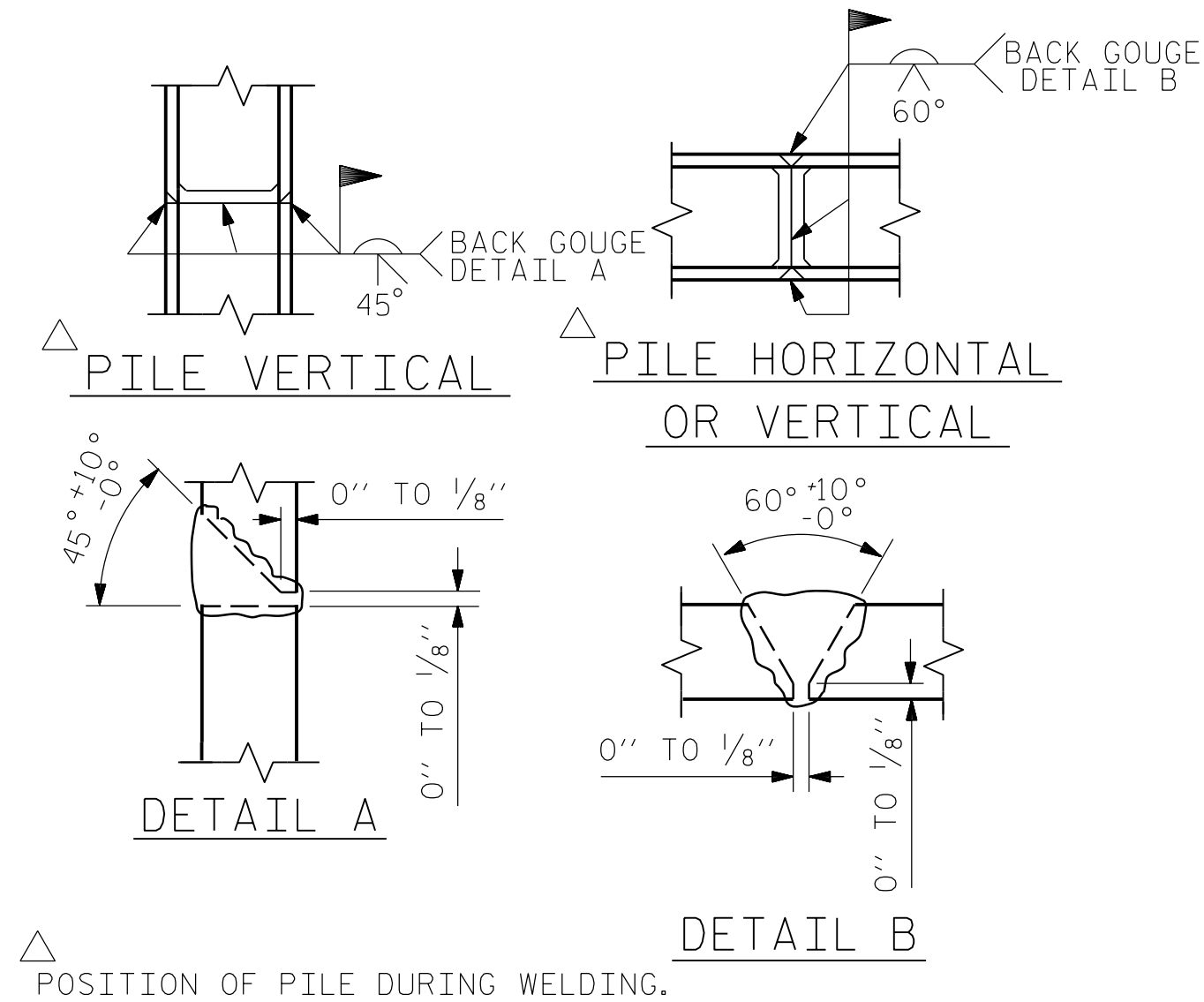


BAGGED STONE AND PIPE SHALL BE PLACED IMMEDIATELY AFTER COMPLETION OF END BENT EXCAVATION. PIPE MAY BE EITHER CONCRETE, CORRUGATED STEEL, CORRUGATED ALUMINUM ALLOY, OR CORRUGATED PLASTIC. PERFORATED PIPE WILL NOT BE ALLOWED.

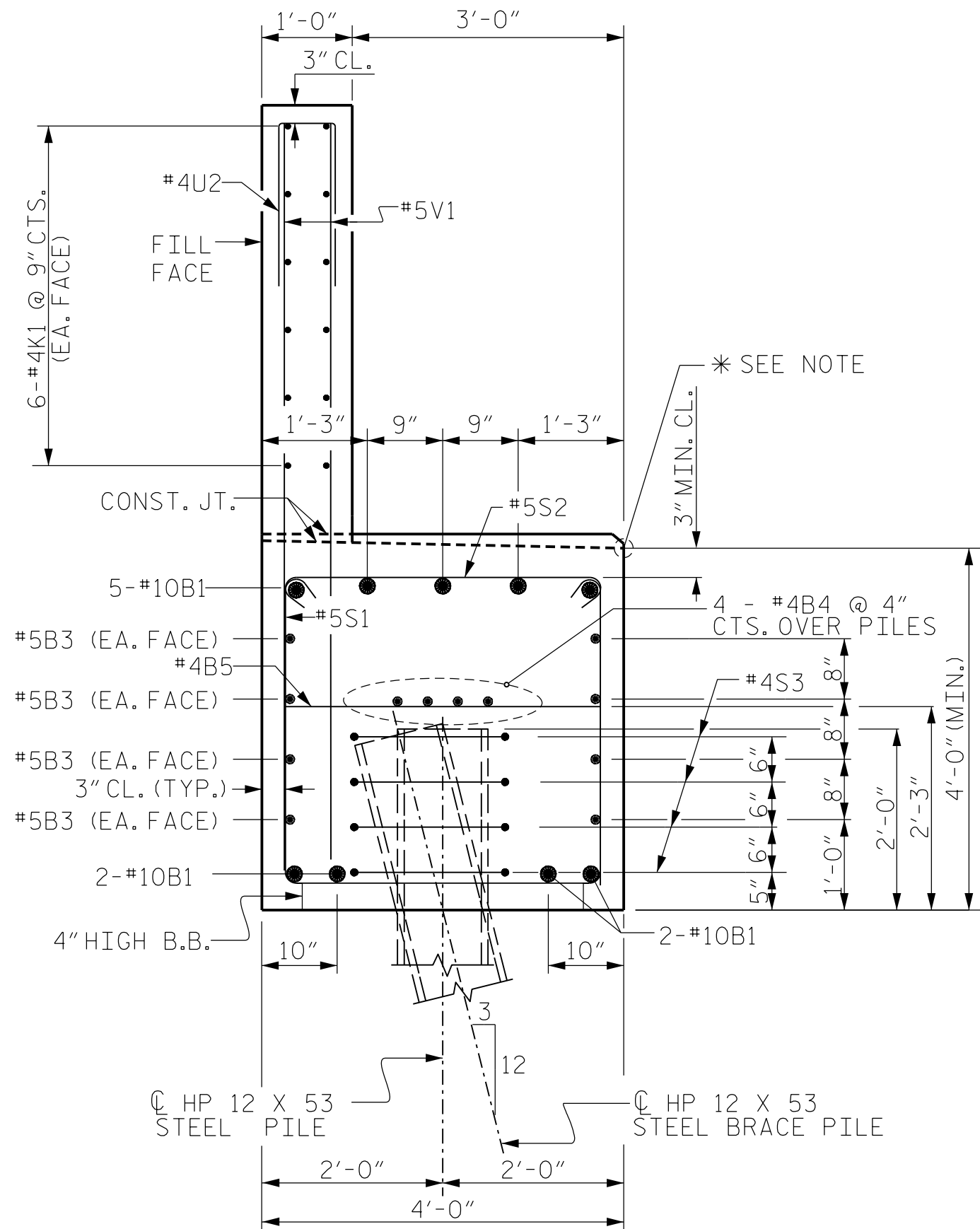
BAGGED STONE SHALL REMAIN IN PLACE UNTIL THE ENGINEER DIRECTS THAT IT BE REMOVED. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF SILT ACCUMULATIONS AT BAGGED STONE WHEN SO DIRECTED BY THE ENGINEER. BAGS SHALL BE REMOVED AND REPLACED WHENEVER THE ENGINEER DETERMINES THAT THEY HAVE DETERIORATED AND LOST THEIR EFFECTIVENESS.

NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK AND THE ENTIRE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR THE SEVERAL PAY ITEMS.

### TEMPORARY DRAINAGE AT END BENT

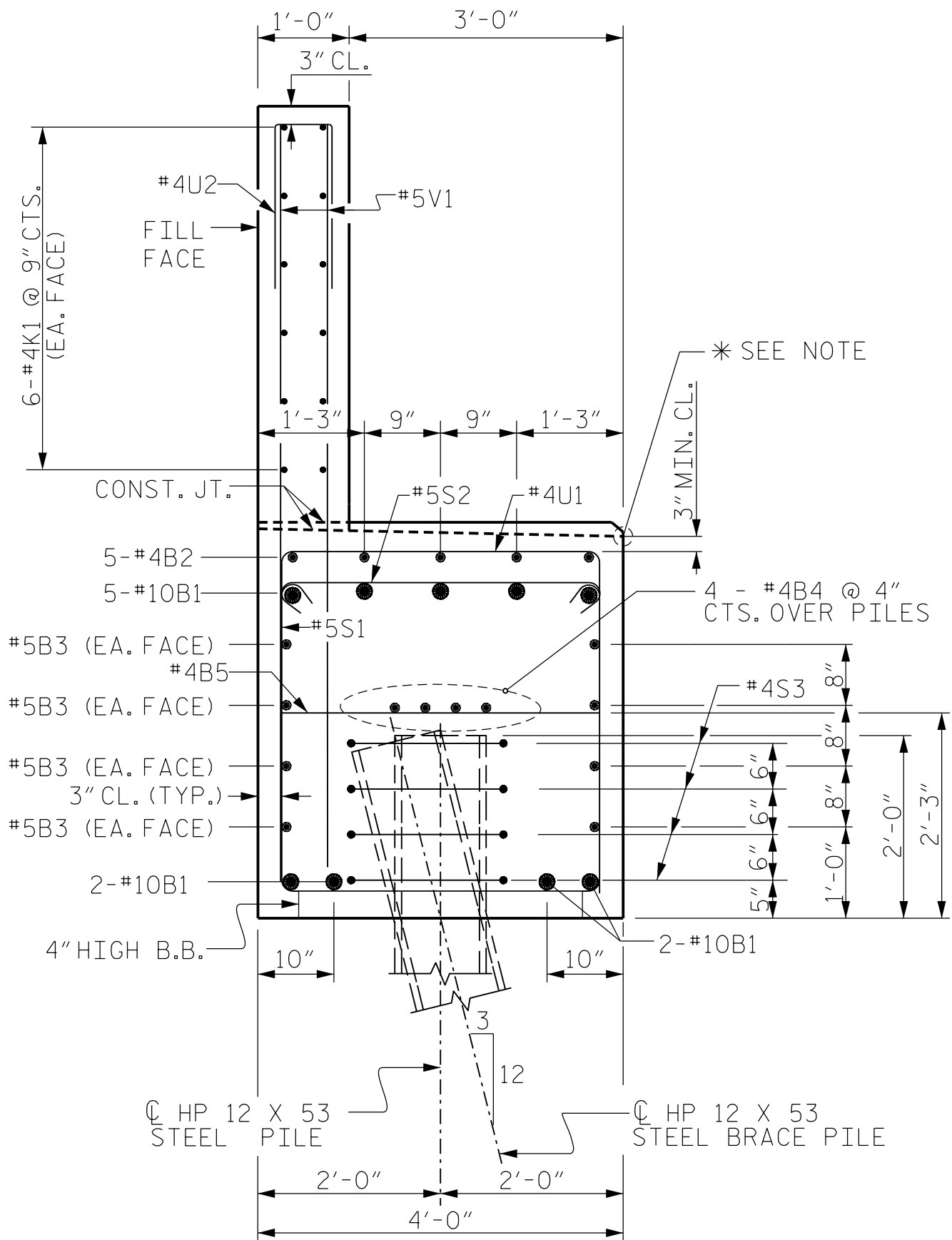


### PILE SPLICE DETAILS



SECTION X-X

(CONCRETE COLLAR NOT SHOWN FOR CLARITY)  
(SEE "CORROSION PROTECTION FOR STEEL PILES DETAIL")



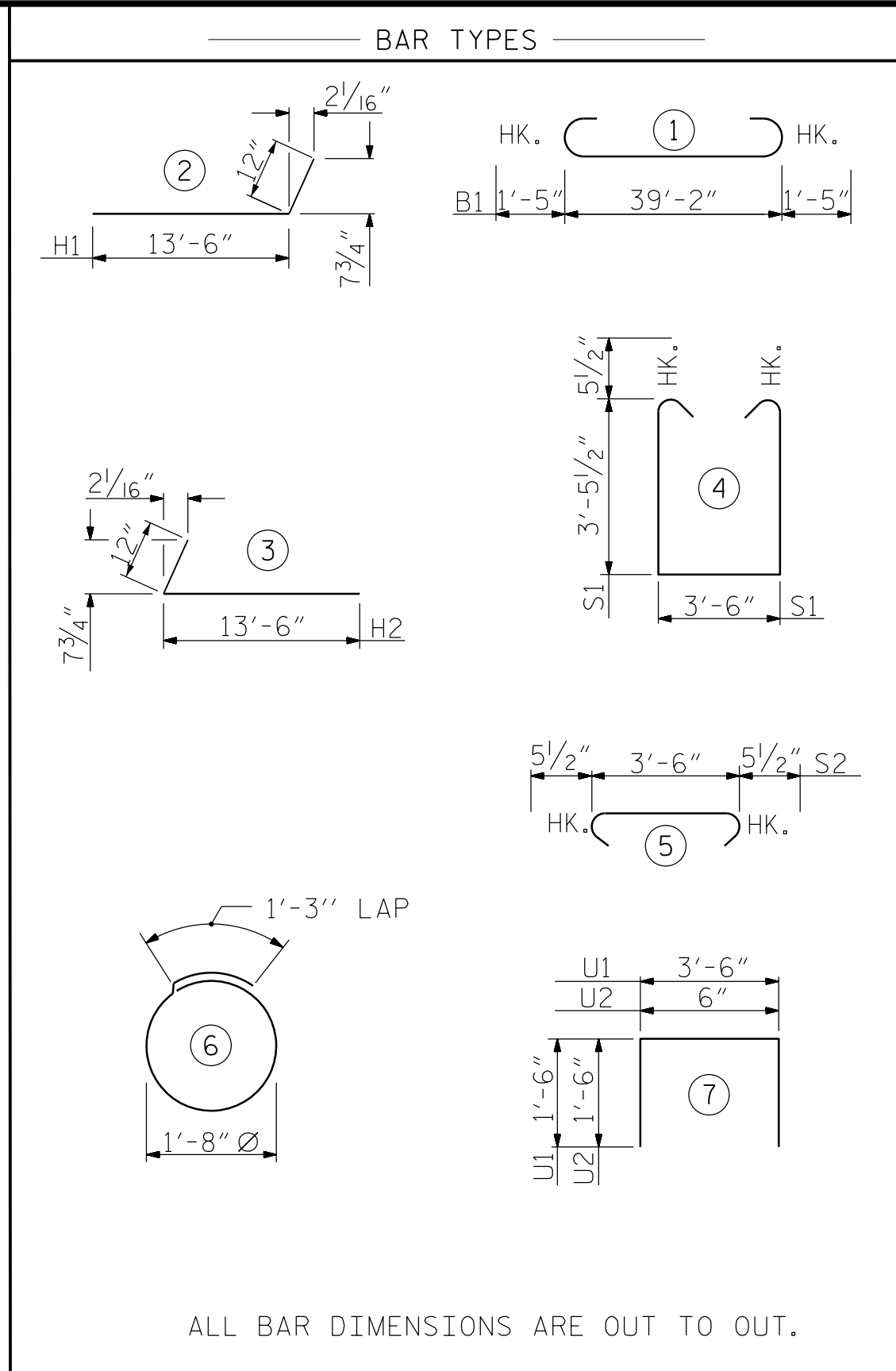
SECTION Y-Y

(CONCRETE COLLAR NOT SHOWN FOR CLARITY)  
(SEE "CORROSION PROTECTION FOR STEEL PILES DETAIL")

#### NOTES:

THE TOP SURFACE OF THE CAP EXCEPT THE BRIDGE SEAT BUILDUPS SHALL BE SLOPED TRANSVERSLY FROM THE FILL FACE TO THE BACK FACE AT THE RATE OF 2%.

\* ELEVATIONS BETWEEN BRIDGE SEAT BUILDUPS ARE SHOWN AT THIS POINT.



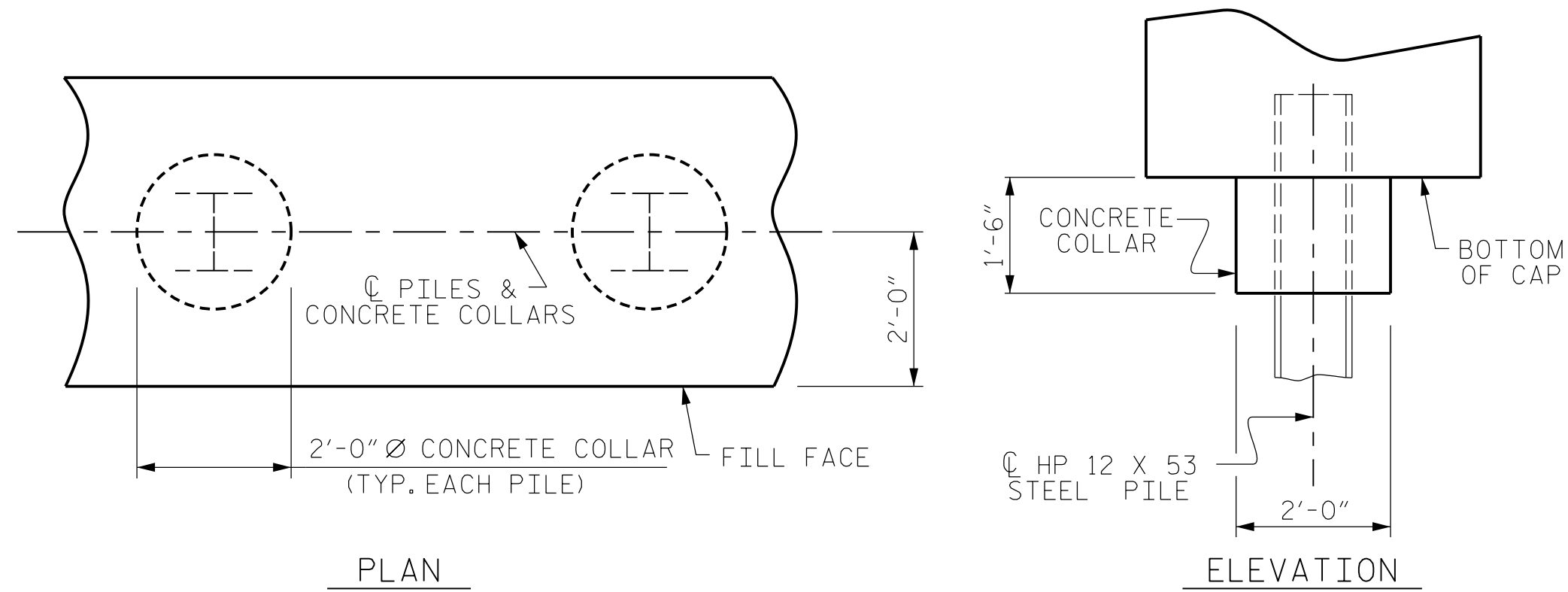
#### BILL OF MATERIAL

##### FOR END BENT 1

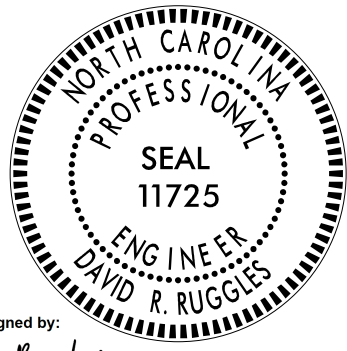
| BAR | NO. | SIZE | TYPE | LENGTH | WEIGHT |
|-----|-----|------|------|--------|--------|
| *B1 | 9   | #10  | 1    | 42'-0" | 1627   |
| *B2 | 5   | #4   | STR  | 13'-2" | 44     |
| *B3 | 8   | #5   | STR  | 39'-2" | 327    |
| *B4 | 8   | #4   | STR  | 39'-2" | 209    |
| *B5 | 10  | #4   | STR  | 3'-6"  | 23     |
| *H1 | 42  | #6   | 2    | 14'-6" | 915    |
| *H2 | 44  | #6   | 3    | 14'-6" | 958    |
| *K1 | 12  | #4   | STR  | 39'-2" | 314    |
| *K2 | 8   | #4   | STR  | 3'-6"  | 19     |
| *S1 | 52  | #5   | 4    | 11'-4" | 615    |
| *S2 | 52  | #5   | 5    | 4'-5"  | 240    |
| *S3 | 28  | #4   | 6    | 6'-6"  | 122    |
| *U1 | 9   | #4   | 7    | 6'-6"  | 39     |
| *U2 | 32  | #4   | 7    | 3'-6"  | 75     |
| *V1 | 64  | #5   | STR  | 8'-8"  | 579    |
| *V2 | 20  | #5   | STR  | 9'-11" | 207    |
| *V3 | 17  | #5   | STR  | 10'-4" | 183    |
| *V4 | 20  | #5   | STR  | 10'-2" | 212    |
| *V5 | 16  | #5   | STR  | 10'-7" | 177    |

\*EPOXY COATED REINFORCING STEEL (FOR END BENT 1) 6,885 LBS.

CLASS AA CONCRETE BREAKDOWN  
POUR #1 CAP & LOWER PART OF WINGS 30.3 C.Y.  
POUR #2 BACKWALL & UPPER PART OF WINGS 15.5 C.Y.  
TOTAL CLASS AA CONCRETE 45.8 C.Y.



### CORROSION PROTECTION FOR STEEL PILES DETAIL



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



STEWART

Firm License No. F-1536  
434 Fayetteville St,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com

PROJECT NO. B-5614  
BEAUFORT COUNTY  
STATION: 22+57.00 -L-

SHEET 3 OF 3

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
SUBSTRUCTURE

END BENT 1  
SECTION AND DETAILS

| REVISIONS    |     |       |     |     |       | SHEET NO. |
|--------------|-----|-------|-----|-----|-------|-----------|
| NO.          | BY: | DATE: | NO. | BY: | DATE: |           |
| 1            |     |       | 3   |     |       | S-31      |
| 2            |     |       | 4   |     |       |           |
| TOTAL SHEETS |     |       |     |     |       | 52        |

\$\$\$\$SYTIME\$\$\$\$  
\$\$\$\$DGN\$\$\$\$  
\$\$\$\$USERNAME\$\$\$\$

DRAWN BY: J. WILSON DATE: 2/25  
CHECKED BY: D. RUGGLES DATE: 2/25  
DESIGN ENGINEER OF RECORD: D. RUGGLES DATE: 2/25

NOTES

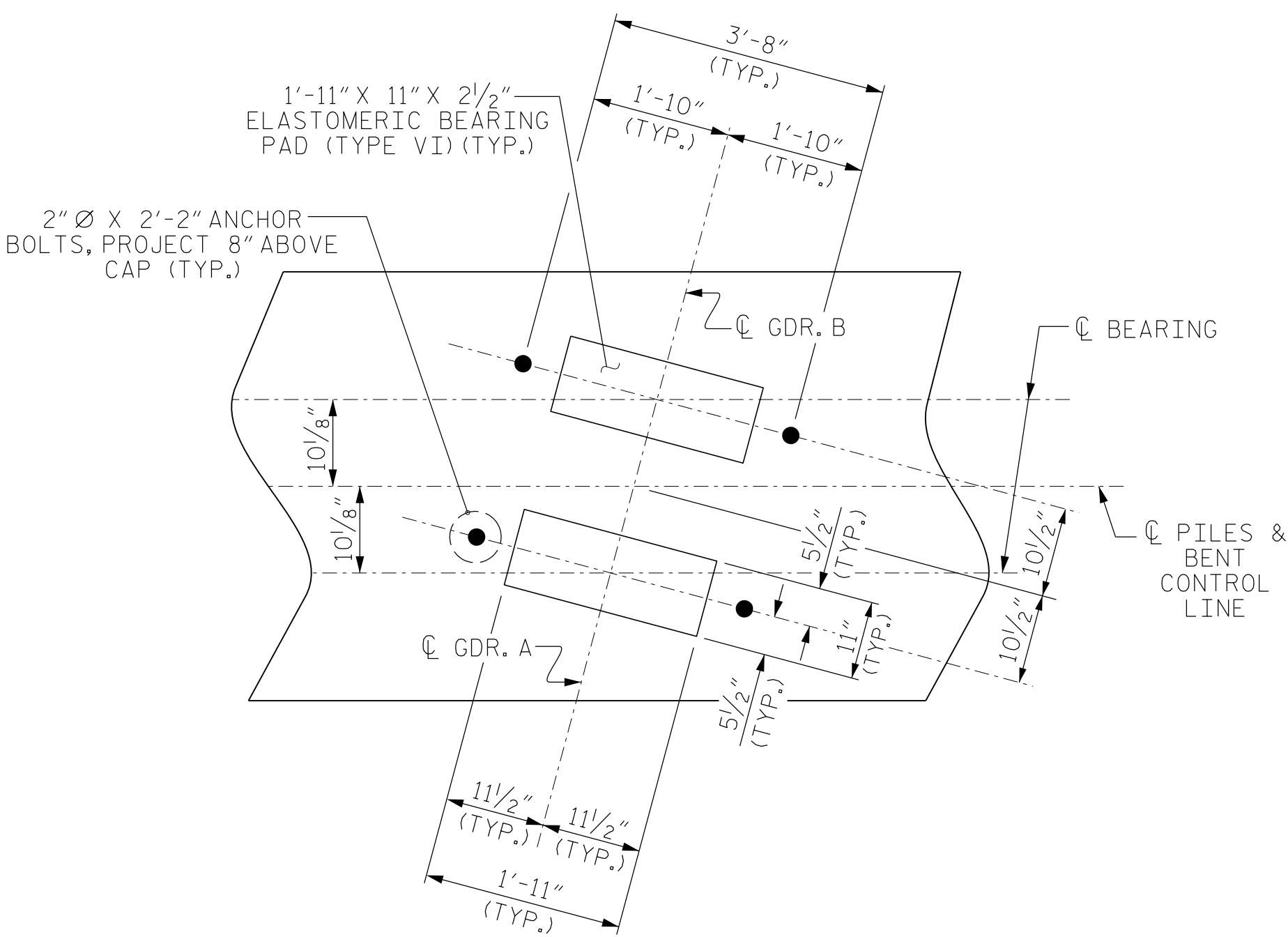
STIRRUPS IN CAP MAY BE SHIFTED AS NECESSARY TO CLEAR ANCHOR BOLTS.

★INVERT ALTERNATE STIRRUPS.

SEE SHEET 2 OF 2 FOR SECTION X-X AND Y-Y.

|     |     |     |     |
|-----|-----|-----|-----|
| B1  | B2  | B3  | B4  |
| PF5 | PF5 | PF6 | PF5 |
| A1  | A2  | A3  | A4  |
| PF3 | PF3 | PF4 | PF3 |

SOLE PLATE CHART



DETAIL "A"

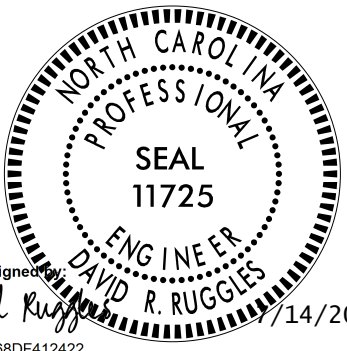
(DIMENSIONS ARE TYPICAL EACH BEARING)

PROJECT NO. B-5614

BEAUFORT COUNTY

STATION: 22+57.00 -L-

SHEET 1 OF 2



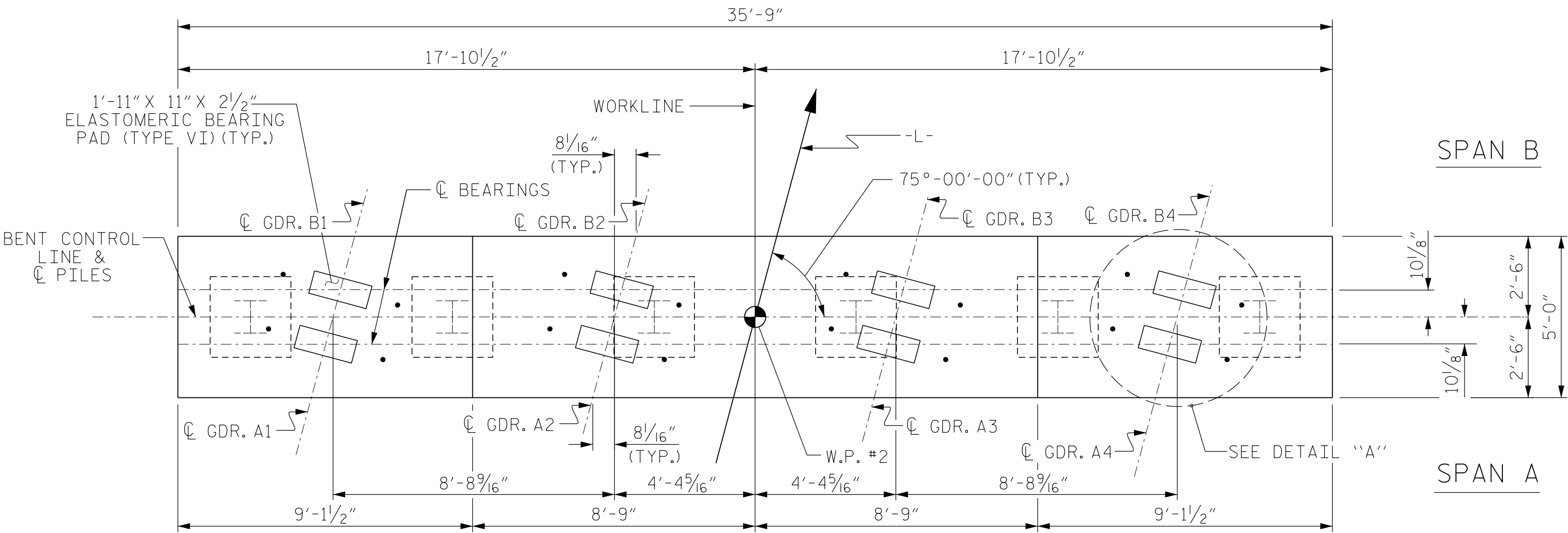
DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED



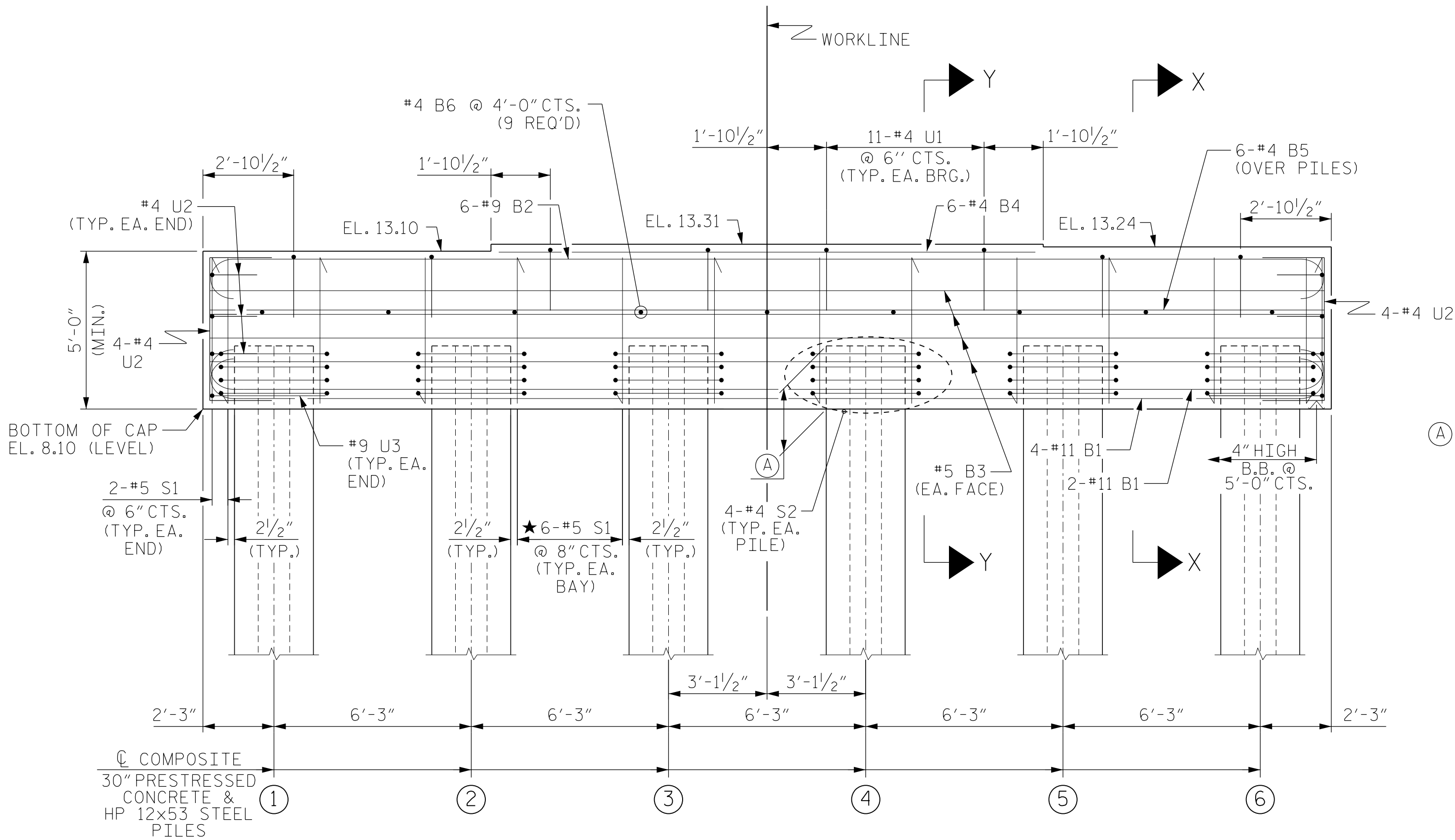
Firm License No. F-1536  
434 Fayetteville St.,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
SUBSTRUCTURE  
BENT 1  
PLAN AND ELEVATION

| REVISIONS    |     |       |     |     |       | SHEET NO. |
|--------------|-----|-------|-----|-----|-------|-----------|
| NO.          | BY: | DATE: | NO. | BY: | DATE: |           |
| 1            |     |       | 3   |     |       | S-32      |
| 2            |     |       | 4   |     |       |           |
| TOTAL SHEETS |     |       |     |     |       | 52        |



PLAN



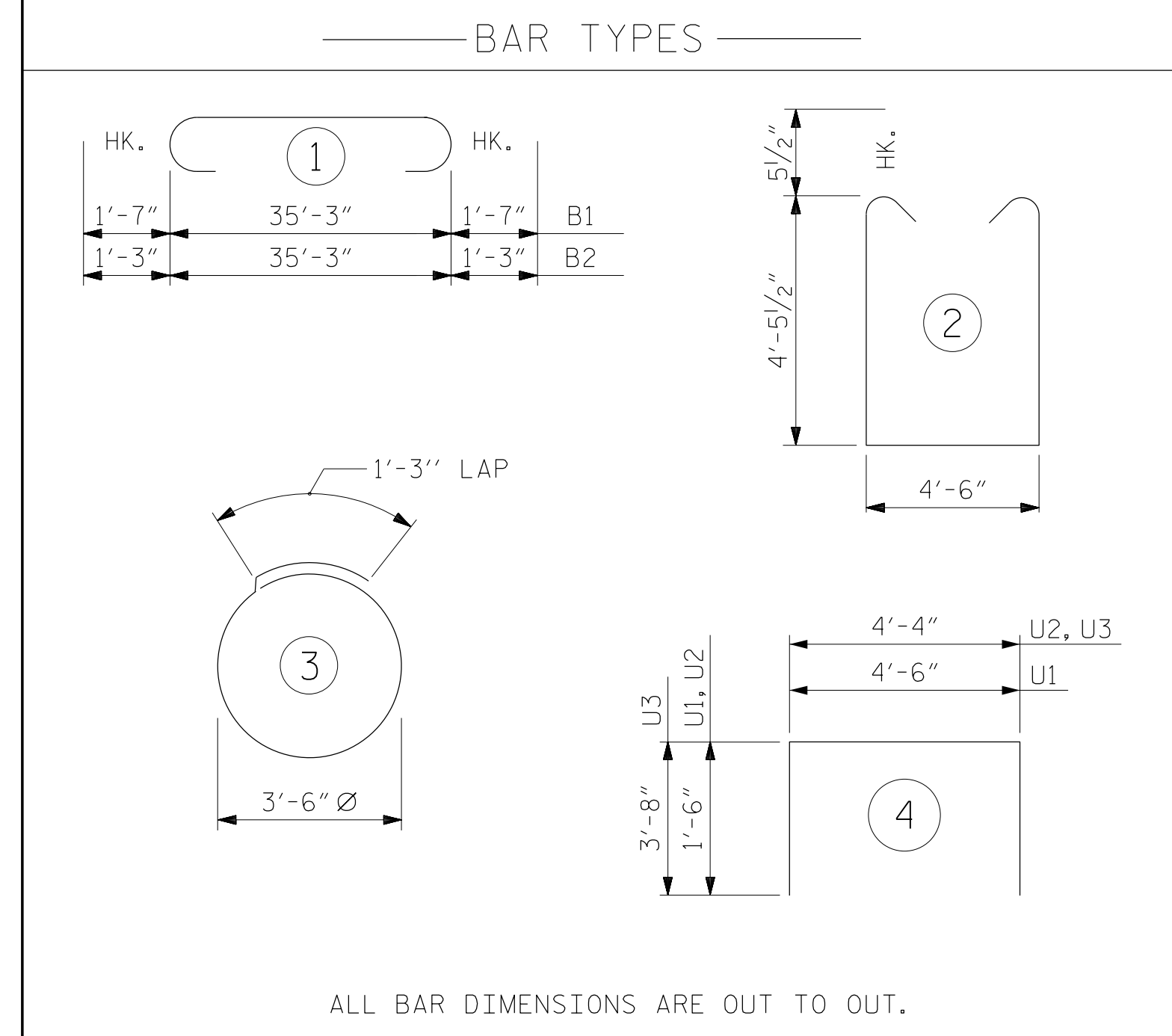
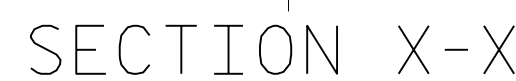
ELEVATION

DRAWN BY: J. WILSON DATE: 2/25

CHECKED BY: D. RUGGLES DATE: 2/25

DESIGN ENGINEER OF RECORD: D. RUGGLES DATE: 2/25

7/11/2025  
B-5614\_SMU.B01\_060009.dgn  
USER:default



|                                    |             |
|------------------------------------|-------------|
| *EPOXY COATED<br>REINFORCING STEEL | 3,597 LBS.  |
| TOTAL CLASS AA CONCRETE            | ▲ 31.2 C.Y. |

▲ CONCRETE DISPLACED BY THE 30" PRESTRESSED CONCRETE PILES HAS BEEN DEDUCTED FROM THE CONCRETE QUANTITY.

SHEET 2 OF 2

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
SUBSTRUCTURE  
BENT 1  
SECTION AND DETAILS

|           |     |       |     |     |       |                       |
|-----------|-----|-------|-----|-----|-------|-----------------------|
| REVISIONS |     |       |     |     |       | SHEET NO.<br>S-33     |
| NO.       | BY: | DATE: | NO. | BY: | DATE: |                       |
| 1         |     |       | 3   |     |       | TOTAL<br>SHEETS<br>52 |
| 2         |     |       | 4   |     |       |                       |

A circular professional engineer seal for the State of North Carolina. The outer ring contains the text "NORTH CAROLINA" at the top and "PROFESSIONAL" at the bottom. In the center, it reads "SEAL" and "11725". Along the bottom inner edge, it says "ENGINEER" and "DAVID R. RUGGLES". To the right of the seal, the expiration date "12/31/14" is printed.

DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED

Firm License No. F-1536  
434 Fayetteville St,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
[www.wearestewart.com](http://www.wearestewart.com)



STEWART

NOTES

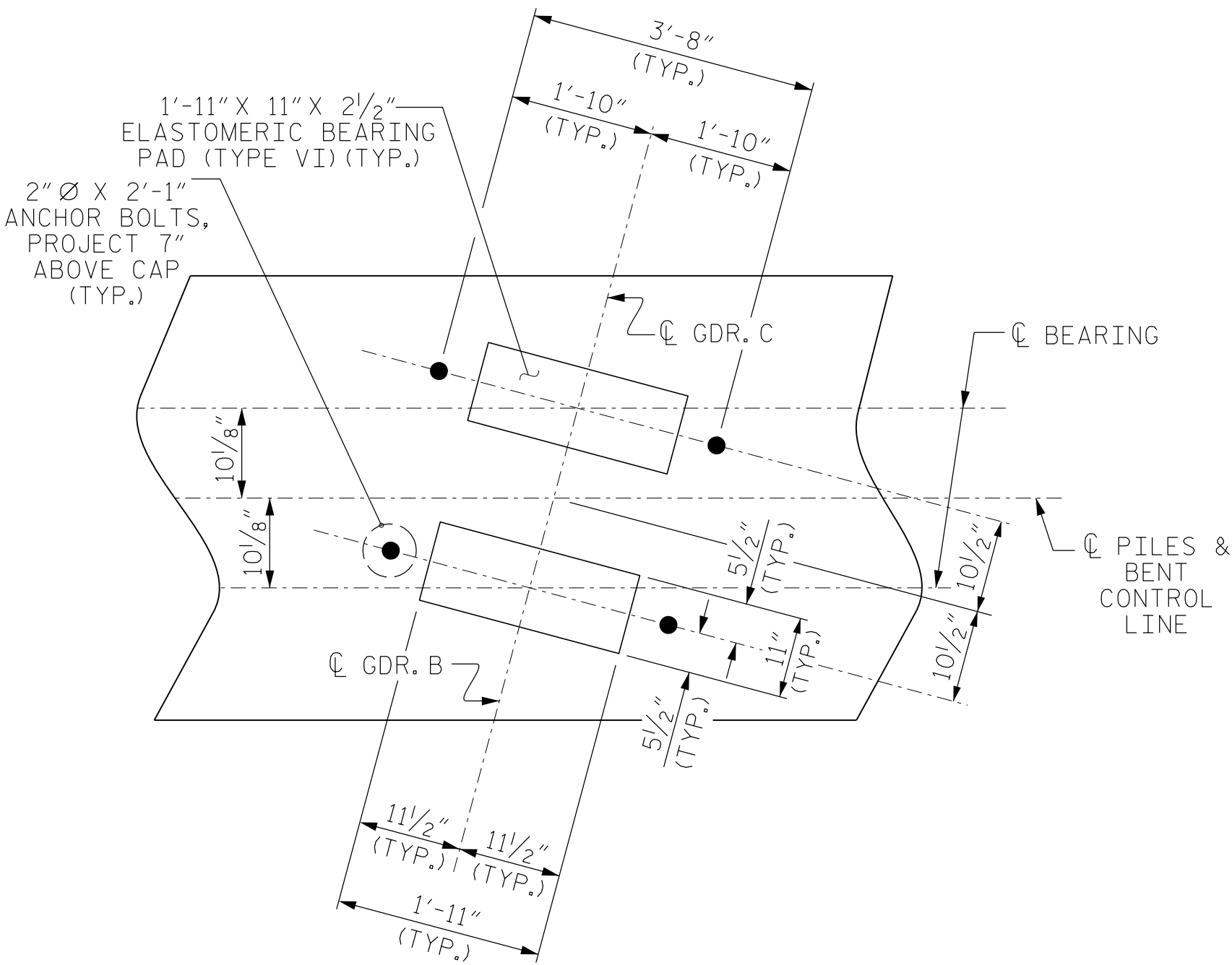
STIRRUPS IN CAP MAY BE SHIFTED AS NECESSARY TO CLEAR ANCHOR BOLTS.

★INVERT ALTERNATE STIRRUPS.

SEE SHEET 2 OF 2 FOR SECTION X-X AND Y-Y.

|     |     |      |     |
|-----|-----|------|-----|
| C1  | C2  | C3   | C4  |
| PF9 | PF9 | PF10 | PF9 |
| B1  | B2  | B3   | B4  |
| PF7 | PF7 | PF8  | PF7 |

SOLE PLATE CHART



DETAIL "A"

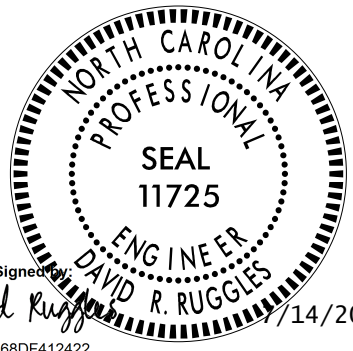
(DIMENSIONS ARE TYPICAL EACH BEARING)

PROJECT NO. B-5614

BEAUFORT COUNTY

STATION: 22+57.00 -L-

SHEET 1 OF 2



DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED

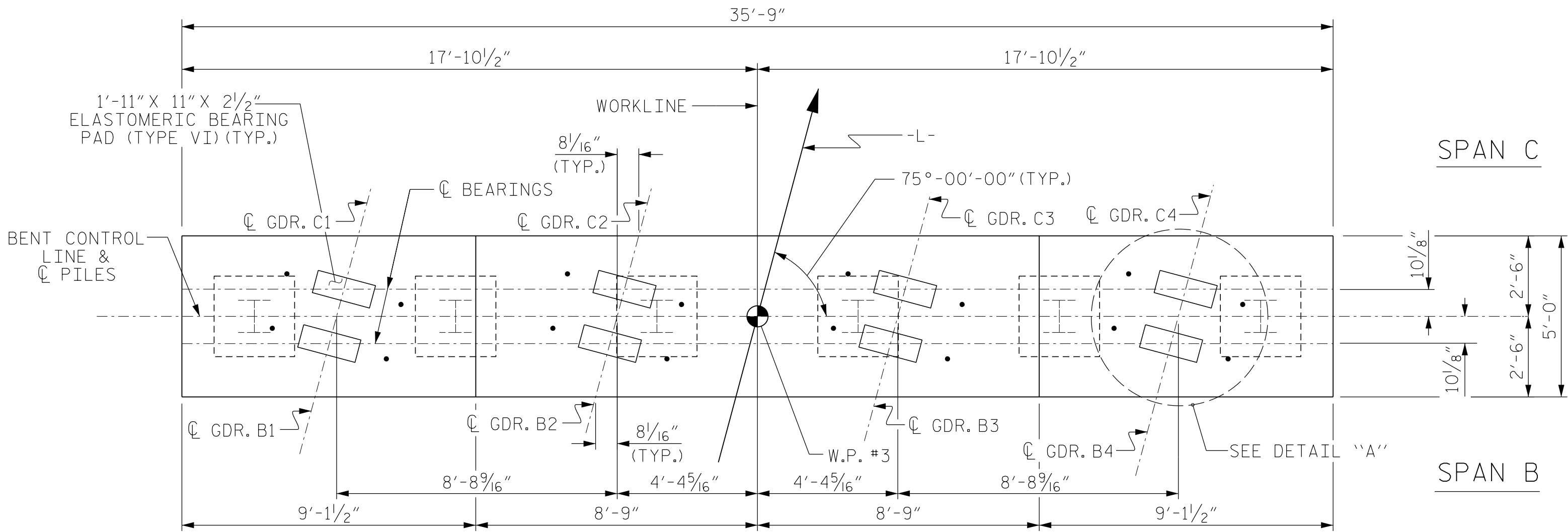


STEWART

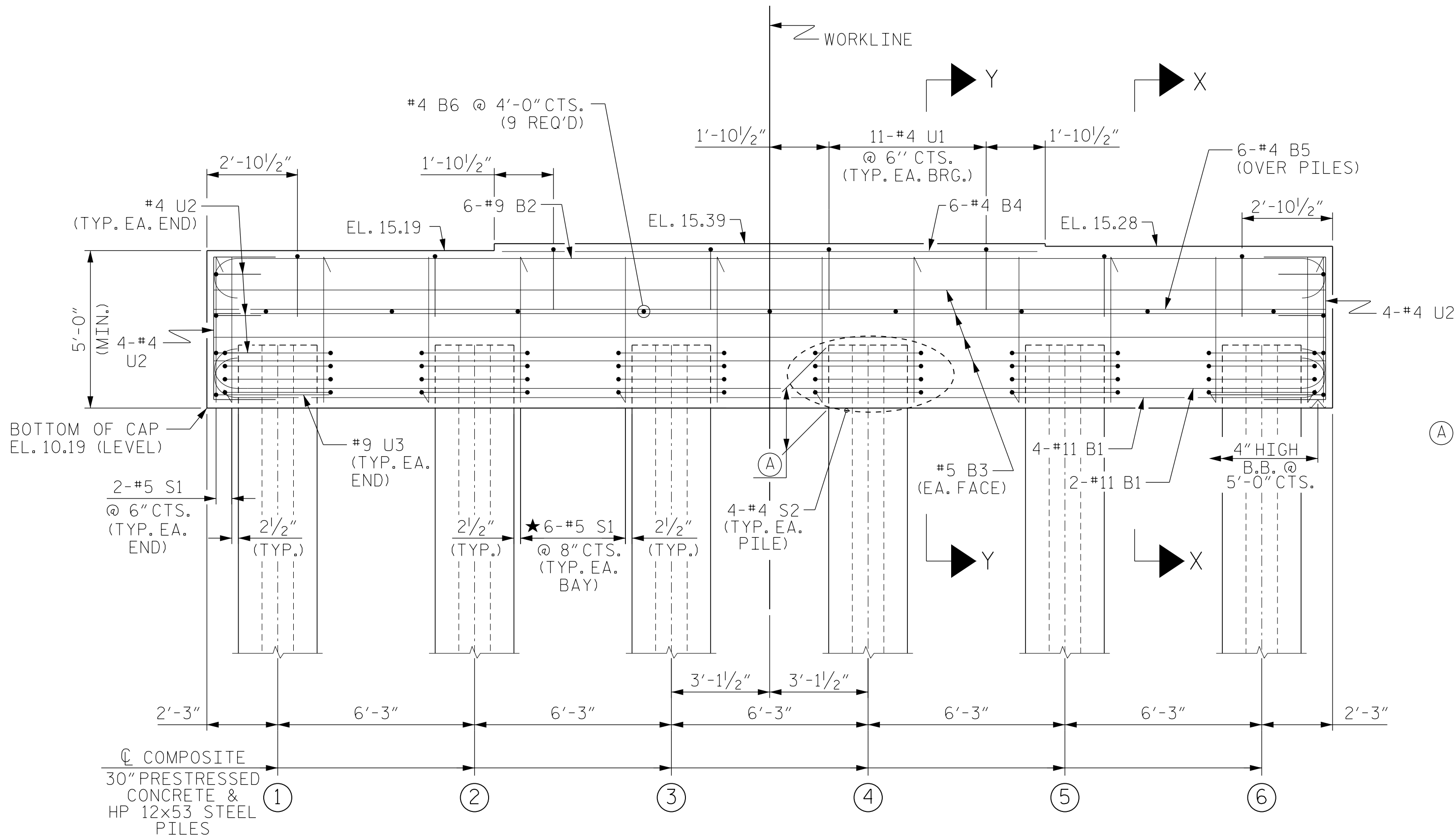
Firm License No. F-1536  
434 Fayetteville St.,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
SUBSTRUCTURE  
BENT 2  
PLAN AND ELEVATION

| REVISIONS |     |       |     |     |       | SHEET NO.<br>S-34     |
|-----------|-----|-------|-----|-----|-------|-----------------------|
| NO.       | BY: | DATE: | NO. | BY: | DATE: |                       |
| 1         |     |       | 3   |     |       | TOTAL<br>SHEETS<br>52 |
| 2         |     |       | 4   |     |       |                       |



PLAN



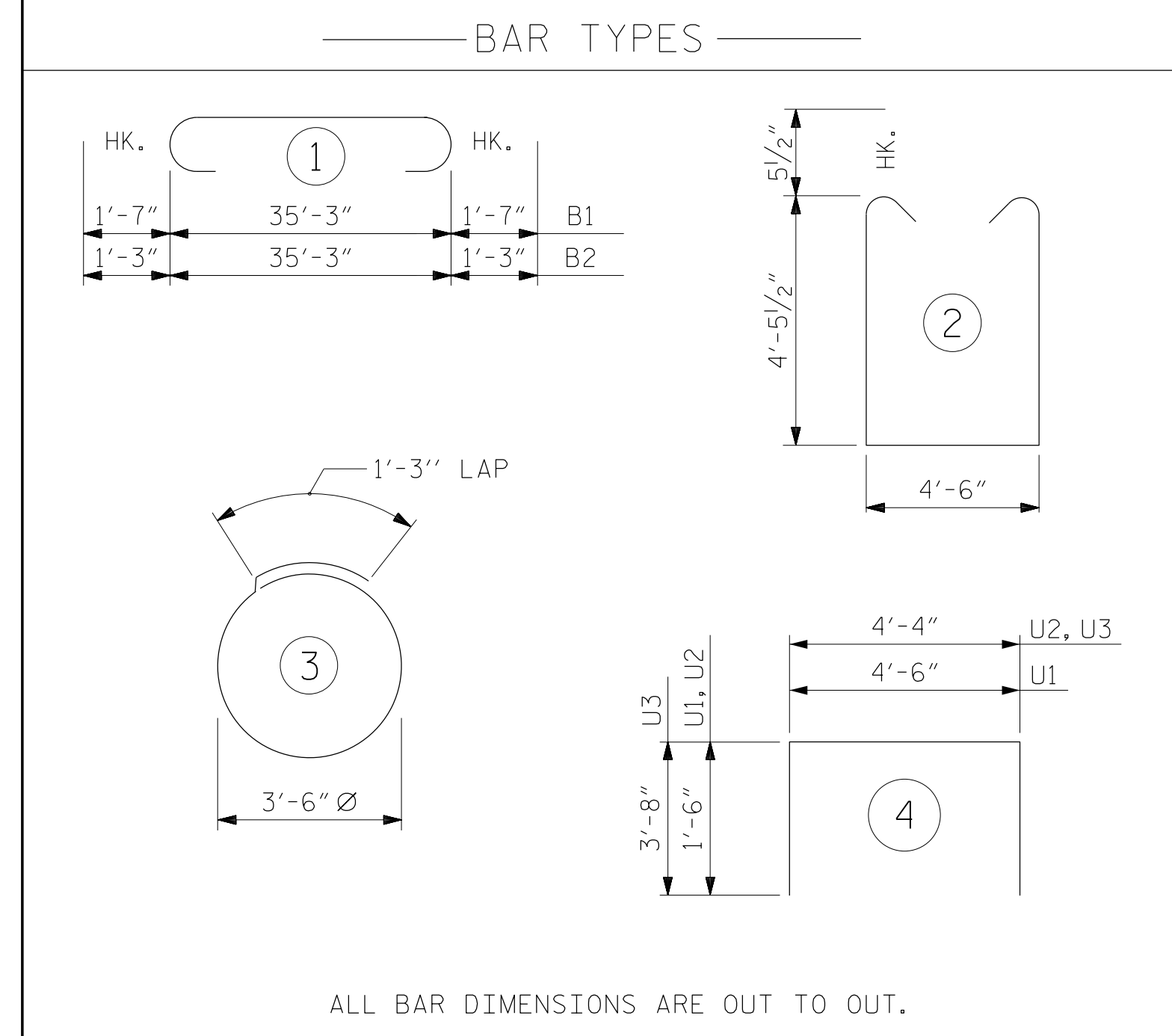
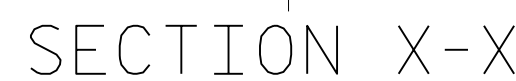
ELEVATION

DRAWN BY: J. WILSON DATE: 2/25

CHECKED BY: D. RUGGLES DATE: 2/25

DESIGN ENGINEER OF RECORD: D. RUGGLES DATE: 2/25

7/11/2025  
B-5614\_SMU.B03\_060009.dgn  
USER:default

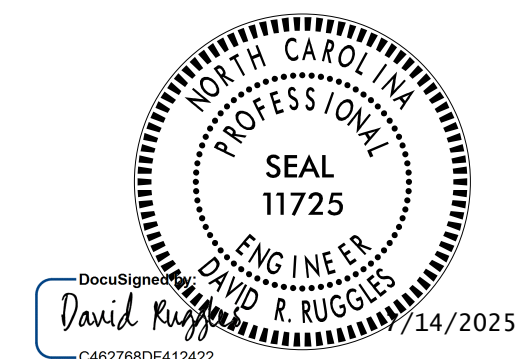


|                                    |             |
|------------------------------------|-------------|
| *EPOXY COATED<br>REINFORCING STEEL | 3,597 LBS.  |
| TOTAL CLASS AA CONCRETE            | ▲ 31.1 C.Y. |

▲ CONCRETE DISPLACED BY THE 30" PRESTRESSED CONCRETE PILES HAS BEEN DEDUCTED FROM THE CONCRETE QUANTITY.

PROJECT NO. B-5614  
BEAUFORT COUNTY  
 STATION: 22+57.00 -L-

SHEET 2 OF 2



DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED

Firm License No. F-1536  
434 Fayetteville St,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
[www.wearestewart.com](http://www.wearestewart.com)

STEWART

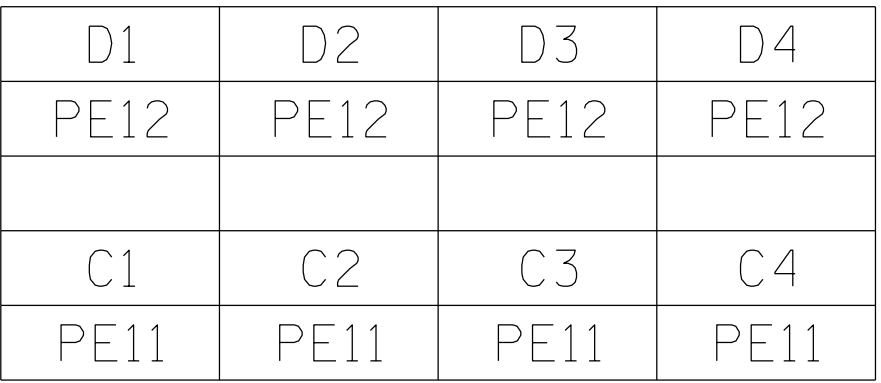
|           |     |       |     |     |       |                       |
|-----------|-----|-------|-----|-----|-------|-----------------------|
| REVISIONS |     |       |     |     |       | SHEET NO.<br>S-35     |
| NO.       | BY: | DATE: | NO. | BY: | DATE: |                       |
| 1         |     |       | 3   |     |       | TOTAL<br>SHEETS<br>52 |
| 2         |     |       | 4   |     |       |                       |

STIRRUPS IN CAP MAY BE SHIFTED AS NECESSARY TO  
CLEAR ANCHOR BOLTS.

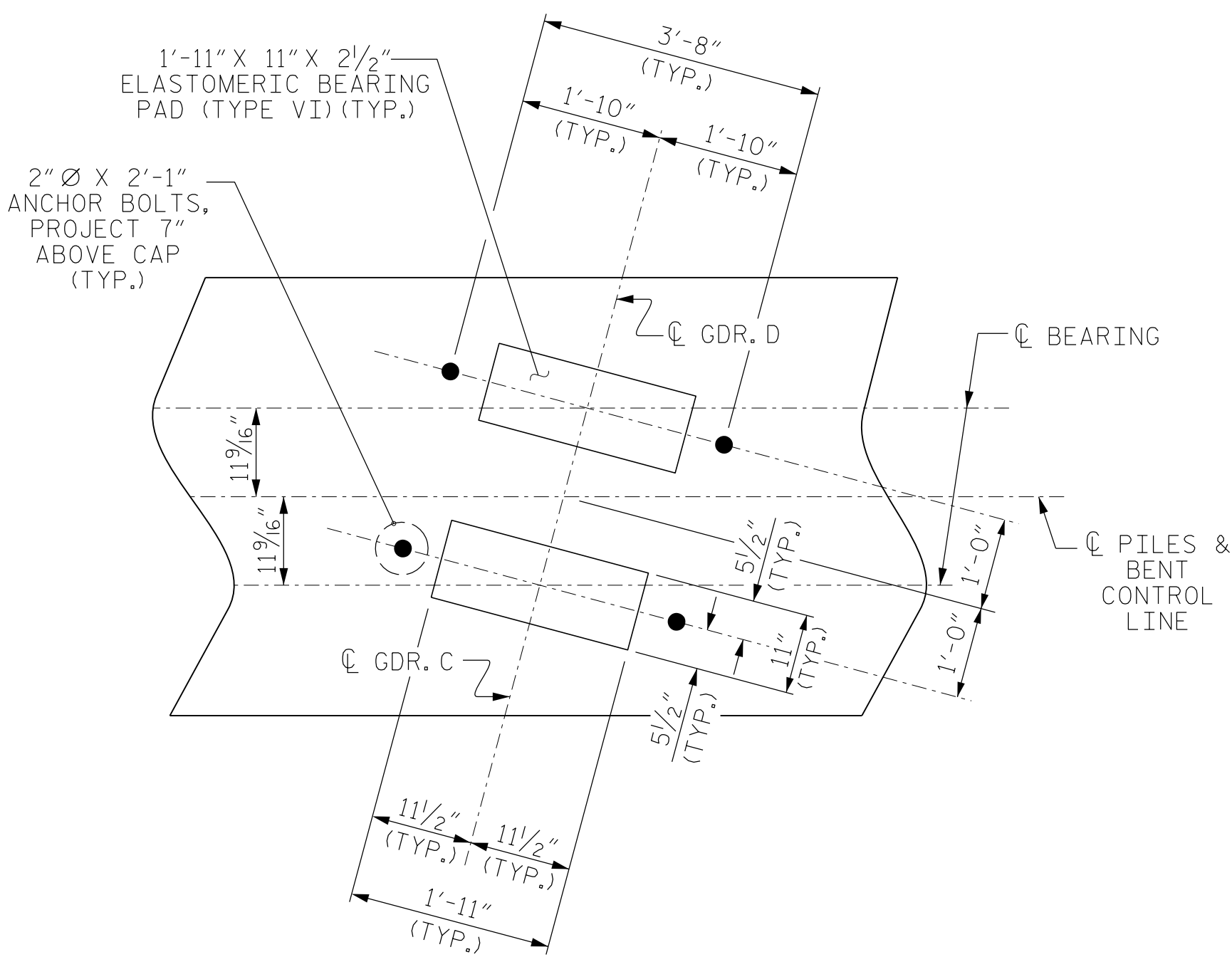
INVERT ALTERNATE STIRRUPS.

THE TOP SURFACE AREAS OF THE BENT 3 CAP SHALL BE CURED  
IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS EXCEPT  
THE MEMBRANE CURING COMPOUND METHOD SHALL NOT BE USED.

SEE SHEET 2 OF 2 FOR SECTION X-X AND Y-Y.



## PLAN



(DIMENSIONS ARE TYPICAL EACH BEARING)

SHEET 1 OF 2



Firm License No. F-1536  
434 Fayetteville St,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
[www.wearestewart.com](http://www.wearestewart.com)

BENT 3  
PLAN AND ELEVATION

| REVISIONS |     |       |     |     |       | SHEET NO.<br>S-36  |
|-----------|-----|-------|-----|-----|-------|--------------------|
| NO.       | BY: | DATE: | NO. | BY: | DATE: |                    |
| 1         |     |       | 3   |     |       | TOTAL SHEETS<br>52 |
| 2         |     |       | 4   |     |       |                    |

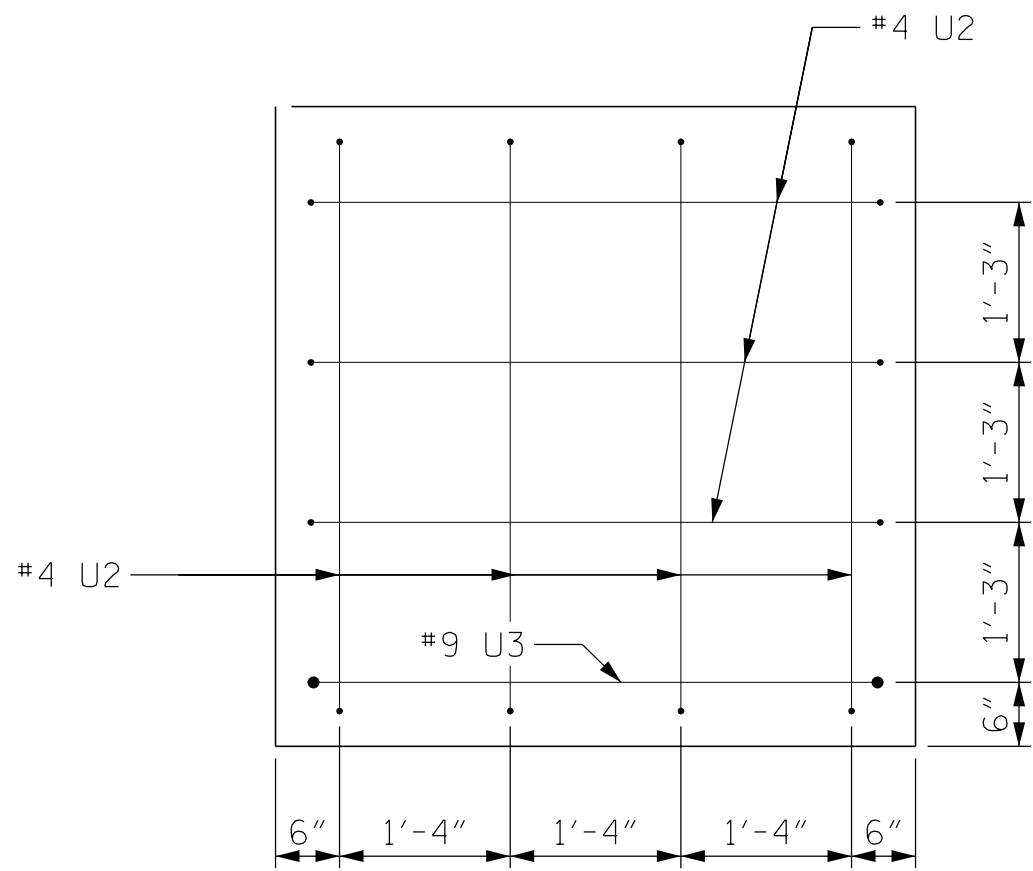
# STEWART

DRAWN BY: J. WILSON DATE : 2/25  
 CHECKED BY: D. RUGGLES DATE : 2/25  
 DESIGN ENGINEER OF RECORD: D. RUGGLES DATE : 2/25

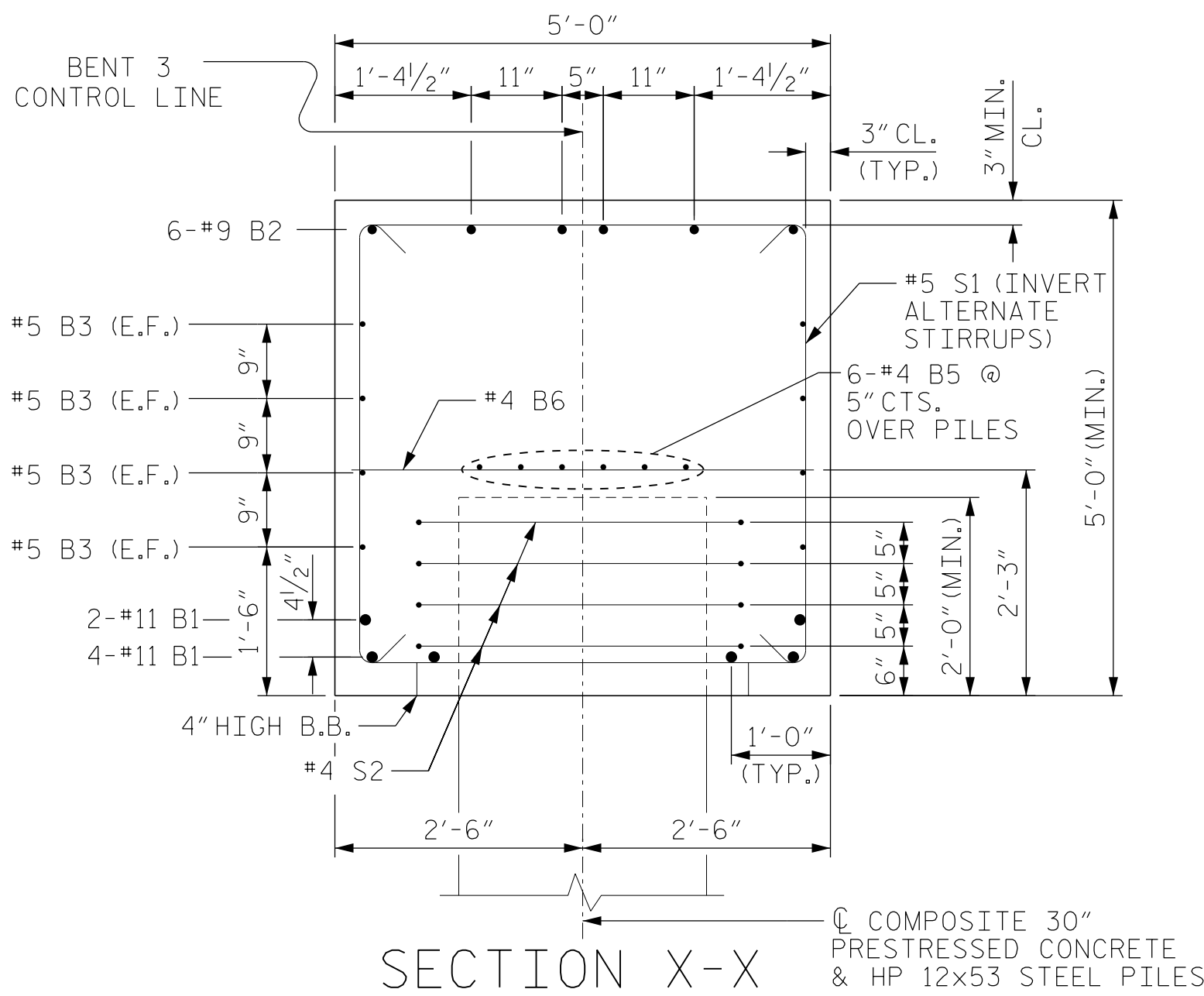
7/11/2025  
...\\B-5614\_SMU\_B05\_060009.dgn  
USER:default

7/11/2025  
B-5614\_SMU.B06\_060009.dgn  
USERdefault

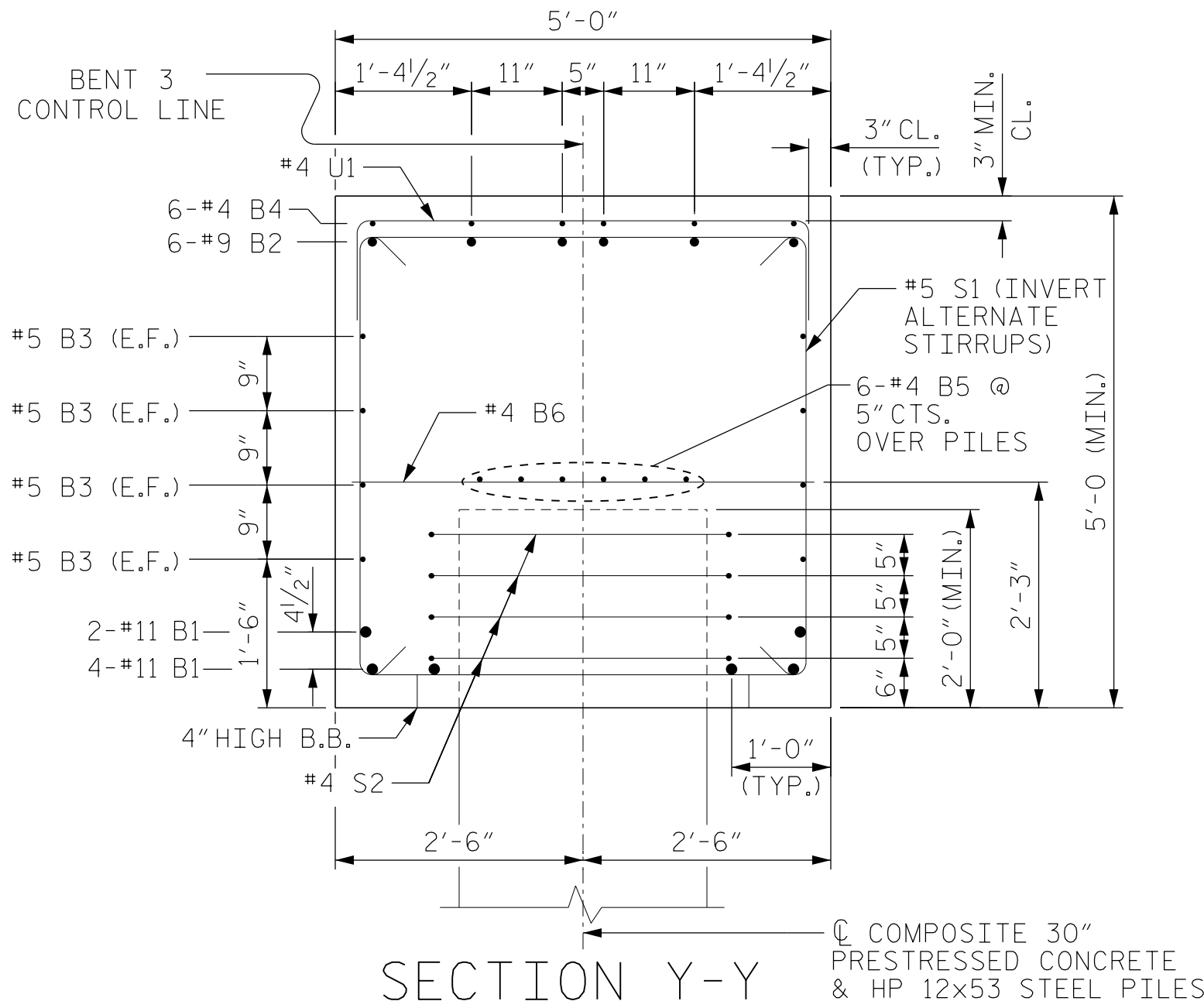
DRAWN BY: J. WILSON DATE : 2/25  
CHECKED BY: D. RUGGLES DATE : 2/25  
DESIGN ENGINEER OF RECORD: D. RUGGLES DATE : 2/25



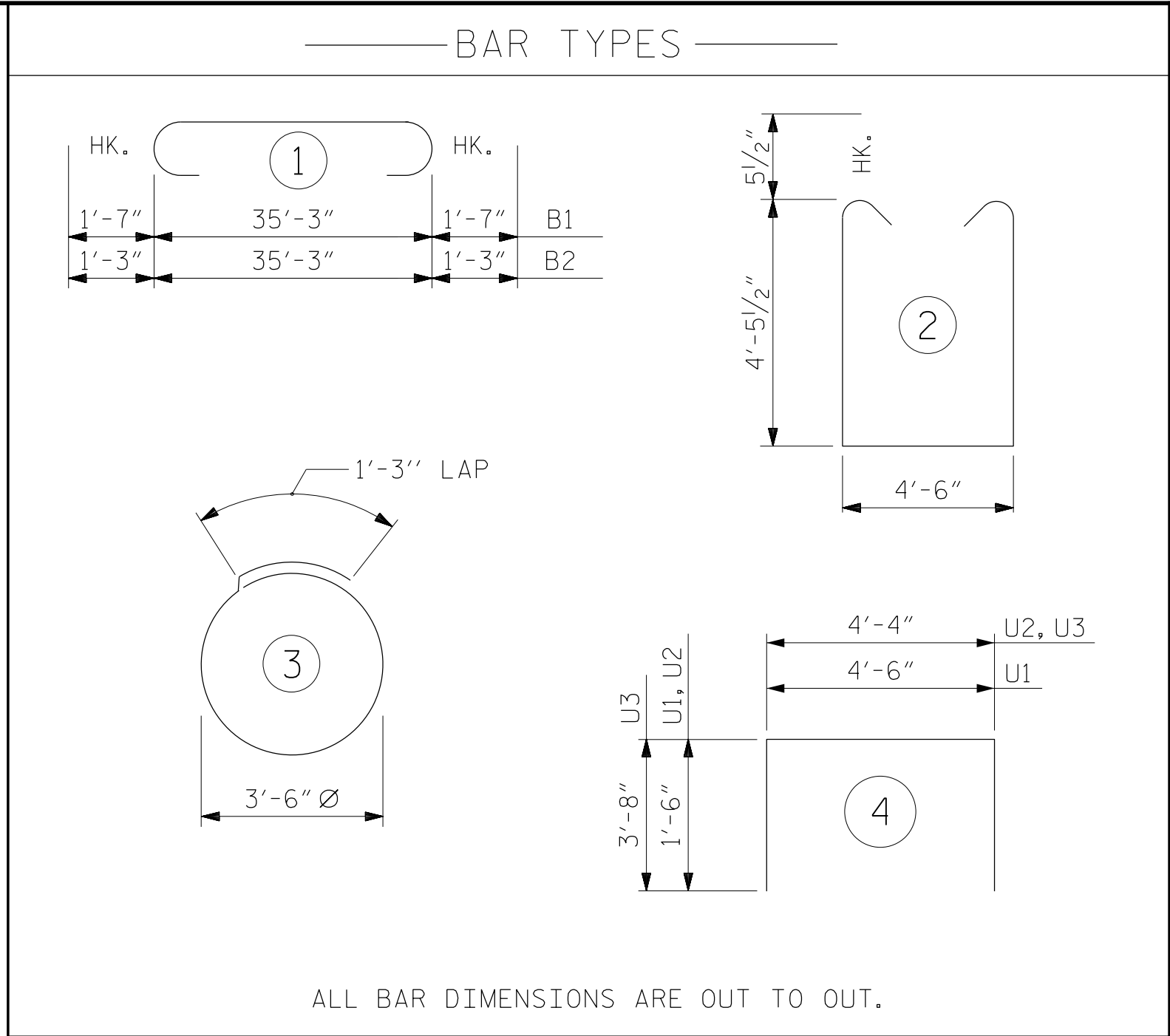
END OF CAP VIEW  
(TYPICAL BOTH ENDS)



SECTION X-X



SECTION Y-Y



ALL BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIAL  
FOR BENT 3

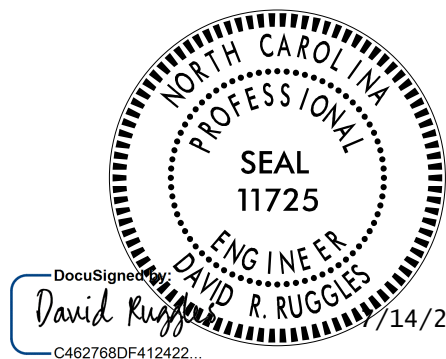
| BAR  | NO. | SIZE | TYPE | LENGTH | WEIGHT |
|------|-----|------|------|--------|--------|
| * B1 | 6   | #11  | 1    | 38'-5" | 1.225  |
| * B2 | 6   | #9   | 1    | 37'-9" | 770    |
| * B3 | 8   | #5   | STR  | 35'-3" | 294    |
| * B4 | 6   | #4   | STR  | 17'-0" | 68     |
| * B5 | 6   | #4   | STR  | 35'-3" | 141    |
| * B6 | 9   | #4   | STR  | 4'-6"  | 27     |
| * S1 | 34  | #5   | 2    | 14'-4" | 508    |
| * S2 | 24  | #4   | 3    | 12'-3" | 196    |
| * U1 | 44  | #4   | 4    | 7'-6"  | 220    |
| * U2 | 14  | #4   | 4    | 7'-4"  | 69     |
| * U3 | 2   | #9   | 4    | 11'-8" | 79     |

\*EPOXY COATED REINFORCING STEEL 3,597 LBS.  
TOTAL CLASS AA CONCRETE ▲ 31.0 C.Y.

▲ CONCRETE DISPLACED BY THE 30"PRESTRESSED CONCRETE PILES HAS BEEN DEDUCTED FROM THE CONCRETE QUANTITY.

PROJECT NO. B-5614  
BEAUFORT COUNTY  
STATION: 22+57.00 -L-

SHEET 2 OF 2



DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED



STEWART

Firm License No. F-1536  
434 Fayetteville St,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
SUBSTRUCTURE  
BENT 3  
SECTION AND DETAILS

| REVISIONS |     |       |     |     |       | SHEET NO.<br>S-37  |
|-----------|-----|-------|-----|-----|-------|--------------------|
| NO.       | BY: | DATE: | NO. | BY: | DATE: |                    |
| 1         |     |       | 3   |     |       | TOTAL SHEETS<br>52 |
| 2         |     |       | 4   |     |       |                    |

NOTES

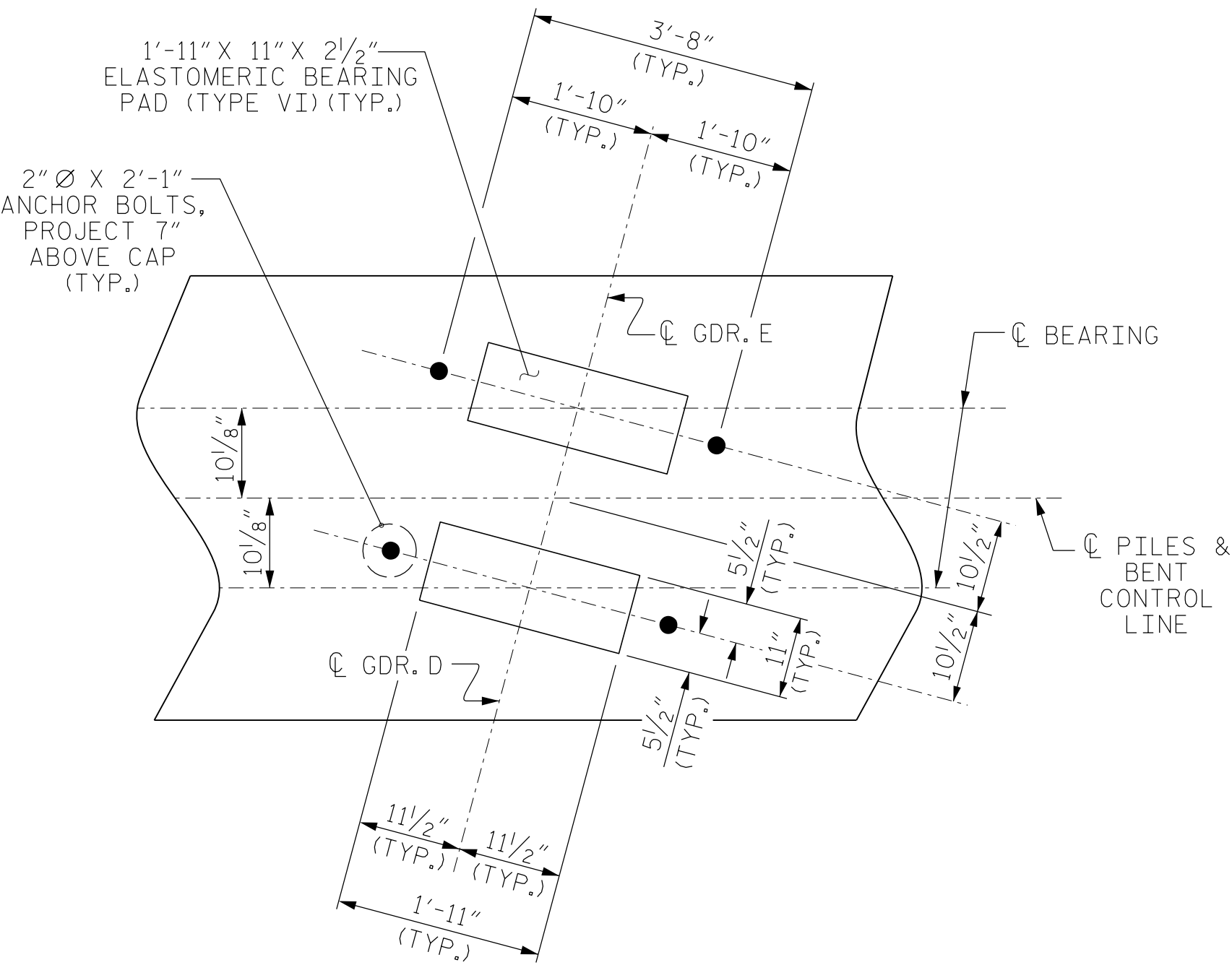
STIRRUPS IN CAP MAY BE SHIFTED AS NECESSARY TO CLEAR ANCHOR BOLTS.

★INVERT ALTERNATE STIRRUPS.

SEE SHEET 2 OF 2 FOR SECTION X-X AND Y-Y.

|     |     |     |     |
|-----|-----|-----|-----|
| E1  | E2  | E3  | E4  |
| PF7 | PF7 | PF7 | PF7 |
| D1  | D2  | D3  | D4  |
| PF7 | PF7 | PF7 | PF7 |

SOLE PLATE CHART



DETAIL "A"

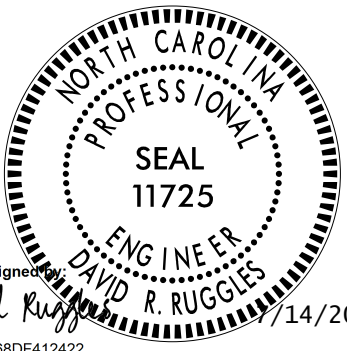
(DIMENSIONS ARE TYPICAL EACH BEARING)

PROJECT NO. B-5614

BEAUFORT COUNTY

STATION: 22+57.00 -L-

SHEET 1 OF 2



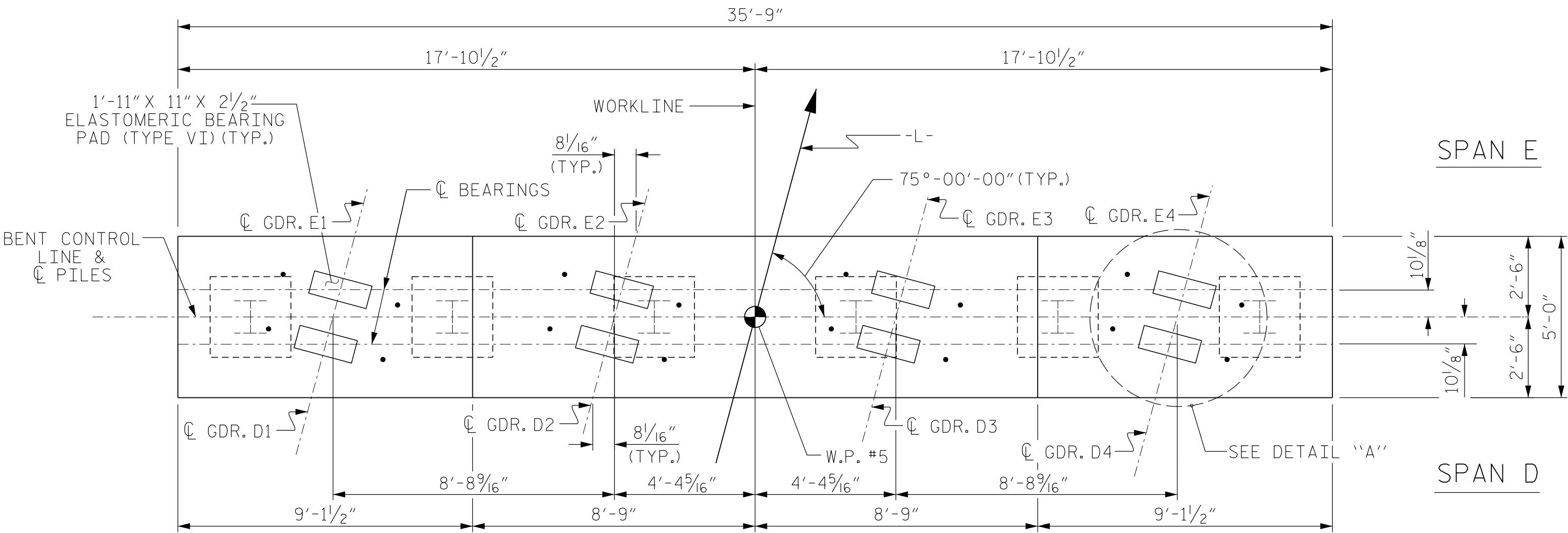
DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED



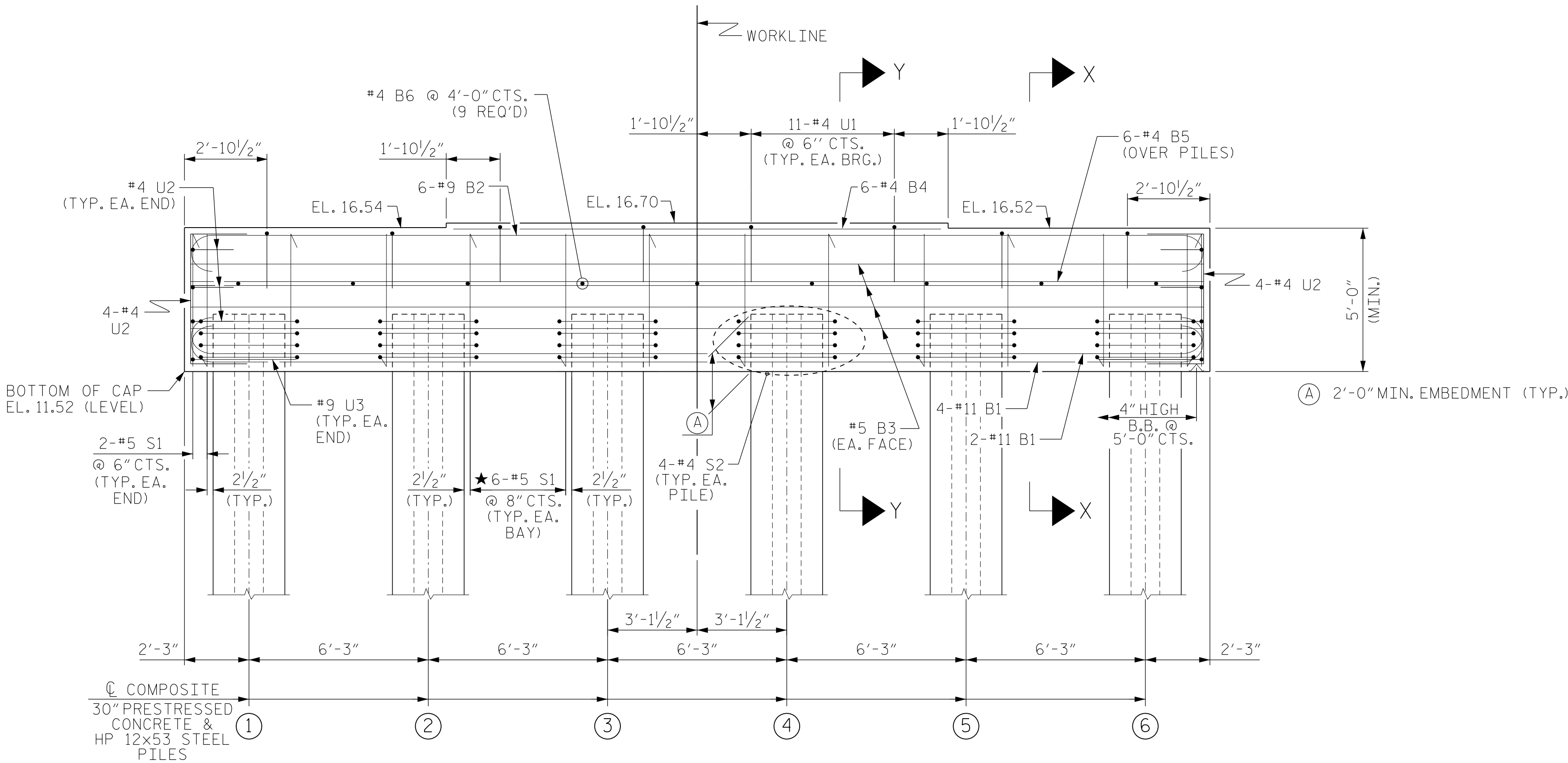
Firm License No. F-1536  
434 Fayetteville St,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
SUBSTRUCTURE  
BENT 4  
PLAN AND ELEVATION

| REVISIONS    |     |       |     |     |       | SHEET NO. |
|--------------|-----|-------|-----|-----|-------|-----------|
| NO.          | BY: | DATE: | NO. | BY: | DATE: |           |
| 1            |     |       | 3   |     |       | S-38      |
| 2            |     |       | 4   |     |       |           |
| TOTAL SHEETS |     |       |     |     |       | 52        |



PLAN



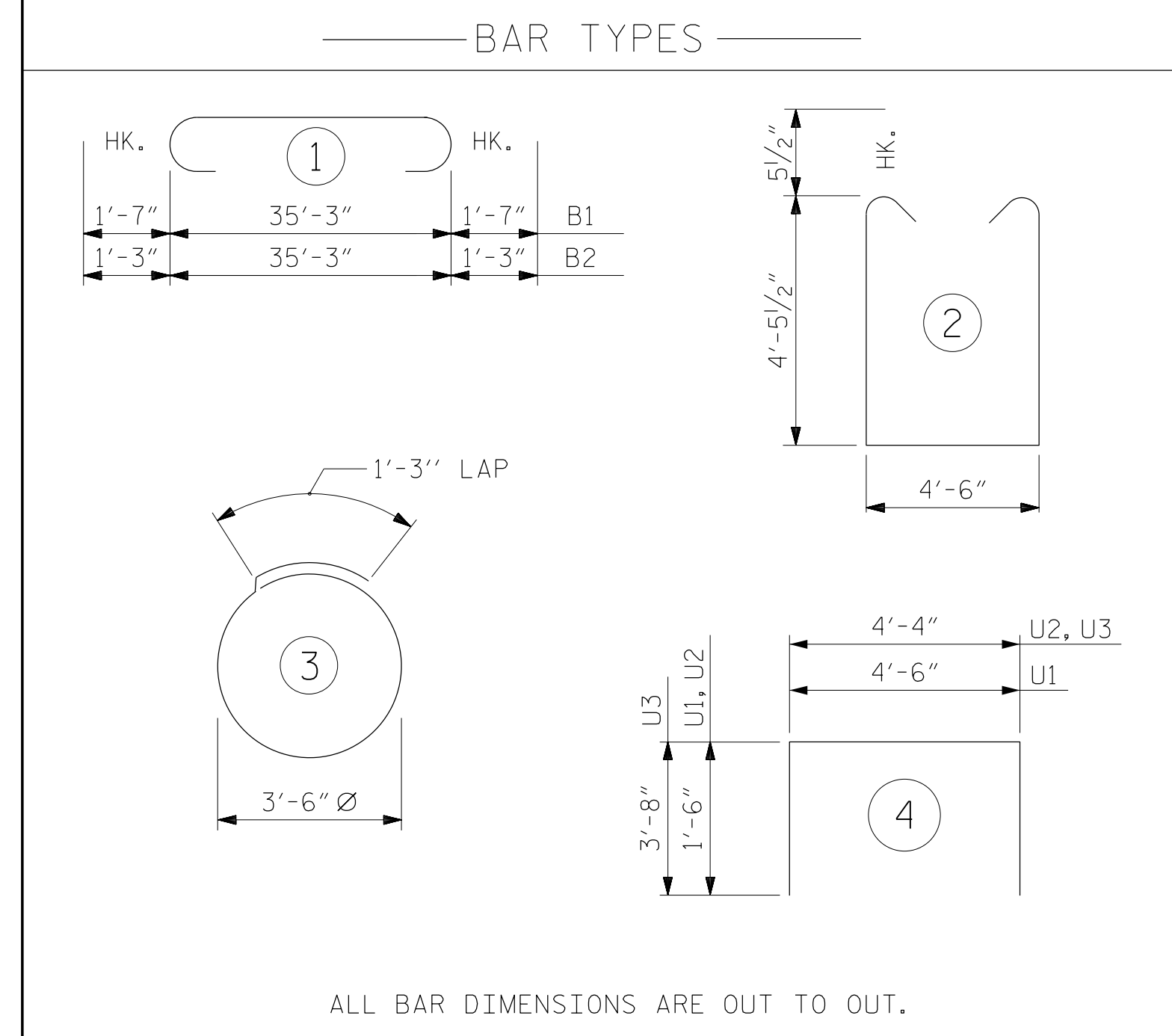
ELEVATION

DRAWN BY: J. WILSON DATE: 2/25

CHECKED BY: D. RUGGLES DATE: 2/25

DESIGN ENGINEER OF RECORD: D. RUGGLES DATE: 2/25

7/11/2025  
B-5614\_SMU.B07\_060009.dgn  
USER:dfault

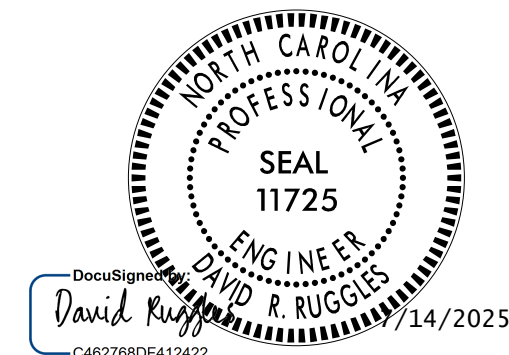


|                                    |             |
|------------------------------------|-------------|
| *EPOXY COATED<br>REINFORCING STEEL | 3,597 LBS.  |
| TOTAL CLASS AA CONCRETE            | ▲ 30.9 C.Y. |

▲ CONCRETE DISPLACED BY THE 30" PRESTRESSED CONCRETE PILES HAS BEEN DEDUCTED FROM THE CONCRETE QUANTITY.

PROJECT NO. B-5614  
BEAUFORT COUNTY  
 STATION: 22+57.00 -L-

SHEET 2 OF 2



DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED



Firm License No. F-1536  
434 Fayetteville St,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
[www.wearstewart.com](http://www.wearstewart.com)

# STEWART

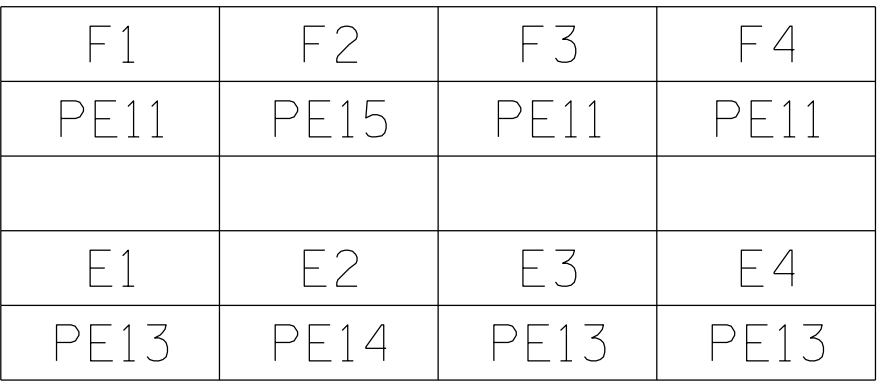
|           |     |       |     |     |       |                       |
|-----------|-----|-------|-----|-----|-------|-----------------------|
| REVISIONS |     |       |     |     |       | SHEET NO.<br>S-39     |
| NO.       | BY: | DATE: | NO. | BY: | DATE: |                       |
| 1         |     |       | 3   |     |       | TOTAL<br>SHEETS<br>52 |
| 2         |     |       | 4   |     |       |                       |

STIRRUPS IN CAP MAY BE SHIFTED AS NECESSARY TO  
CLEAR ANCHOR BOLTS.

INVERT ALTERNATE STIRRUPS.

THE TOP SURFACE AREAS OF THE BENT 5 CAP SHALL BE CURED  
IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS EXCEPT  
THE MEMBRANE CURING COMPOUND METHOD SHALL NOT BE USED.

SEE SHEET 2 OF 2 FOR SECTION X-X AND Y-Y.



1'-11" X 11" X 2 1/2" ELASTOMERIC BEARING PAD (TYPE VI) (TYP.)

2" Ø X 2'-1" ANCHOR BOLTS, PROJECT 7" ABOVE CAP (TYP.)

3'-8" (TYP.)

1'-10" (TYP.)

1'-10" (TYP.)

CL GDR. F

CL BEARING

CL PILES & BENT CONTROL LINE

11 5/8"

11 9/16"

CL GDR. E

5 1/2" (TYP.)

11" (TYP.)

5 1/2" (TYP.)

1'-0"

1'-0"

11 1/2" (TYP.)

11 1/2" (TYP.)

1'-11" (TYP.)

(DIMENSIONS ARE TYPICAL EACH BEARING)



DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED

Firm License No. F-1536  
434 Fayetteville St,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
[www.wearestewart.com](http://www.wearestewart.com)

SHEET 1 OF 2

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

## SUBSTRUCTURE

BENT 5  
PLAN AND ELEVATION

| REVISIONS |     |       |     |     |       | SHEET NO.<br>S-40     |
|-----------|-----|-------|-----|-----|-------|-----------------------|
| NO.       | BY: | DATE: | NO. | BY: | DATE: |                       |
| 1         |     |       | 3   |     |       | TOTAL<br>SHEETS<br>52 |
| 2         |     |       | 4   |     |       |                       |

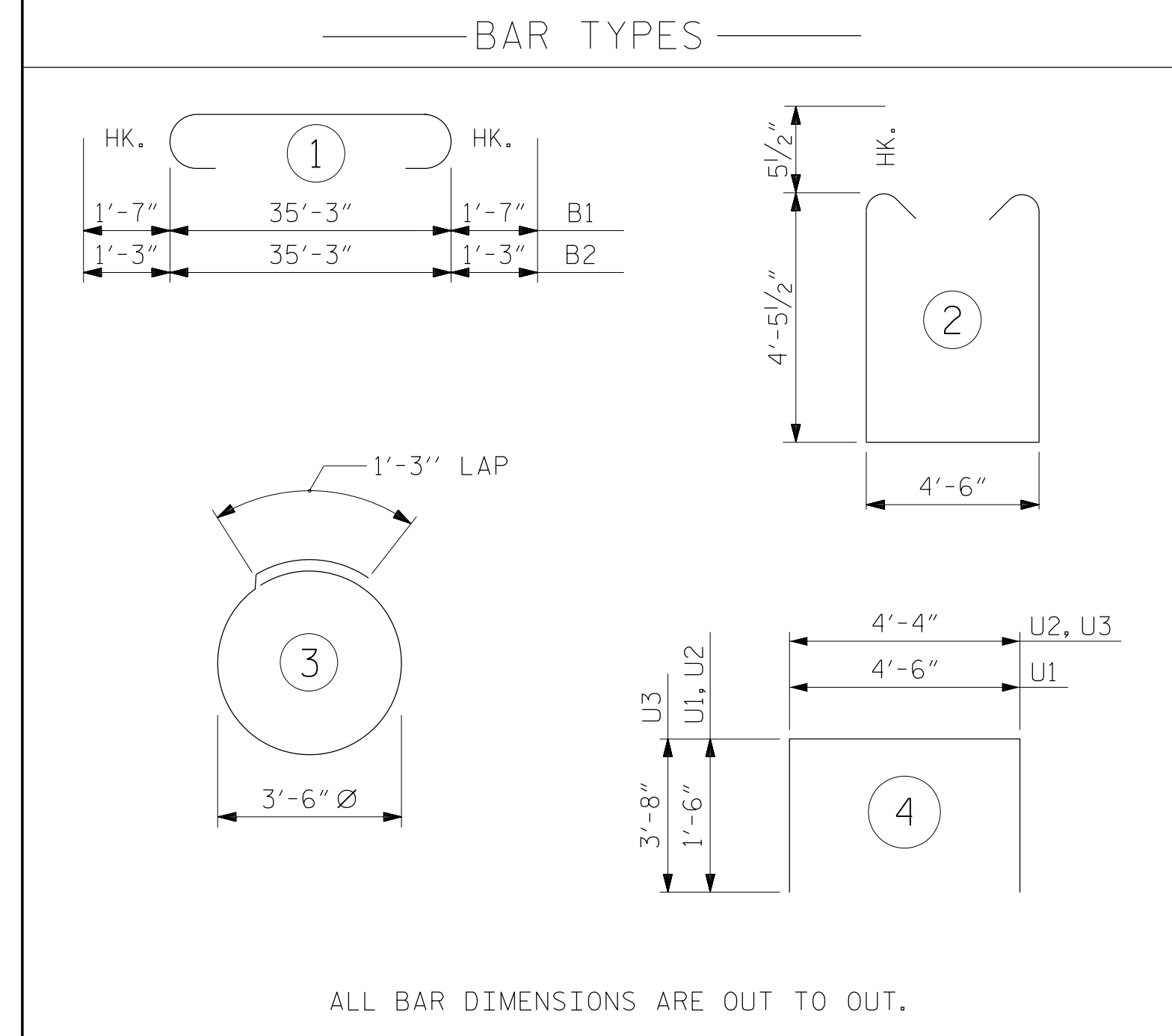
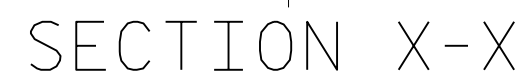


STEWART

7/11/2025

...\\B-5614\_SMU\_B09\_060009.dgn  
USER:default

DRAWN BY: J. WILSON DATE : 2/25  
 CHECKED BY: D. RUGGLES DATE : 2/25  
 DESIGN ENGINEER OF RECORD: D. RUGGLES DATE : 2/25



|                                    |             |
|------------------------------------|-------------|
| *EPOXY COATED<br>REINFORCING STEEL | 3,597 LBS.  |
| TOTAL CLASS AA CONCRETE            | ▲ 31.1 C.Y. |

▲ CONCRETE DISPLACED BY THE 30" PRESTRESSED  
CONCRETE PILES HAS BEEN DEDUCTED FROM  
THE CONCRETE QUANTITY.

SHEET 2 OF 2

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
SUBSTRUCTURE  
BENT 5  
SECTION AND DETAILS

|           |     |       |     |     |       |                       |
|-----------|-----|-------|-----|-----|-------|-----------------------|
| REVISIONS |     |       |     |     |       | SHEET NO.<br>S-41     |
| NO.       | BY: | DATE: | NO. | BY: | DATE: |                       |
| 1         |     |       | 3   |     |       | TOTAL<br>SHEETS<br>52 |
| 2         |     |       | 4   |     |       |                       |

DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED

Firm License No. F-1536  
434 Fayetteville St,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com



STEWART

NOTES

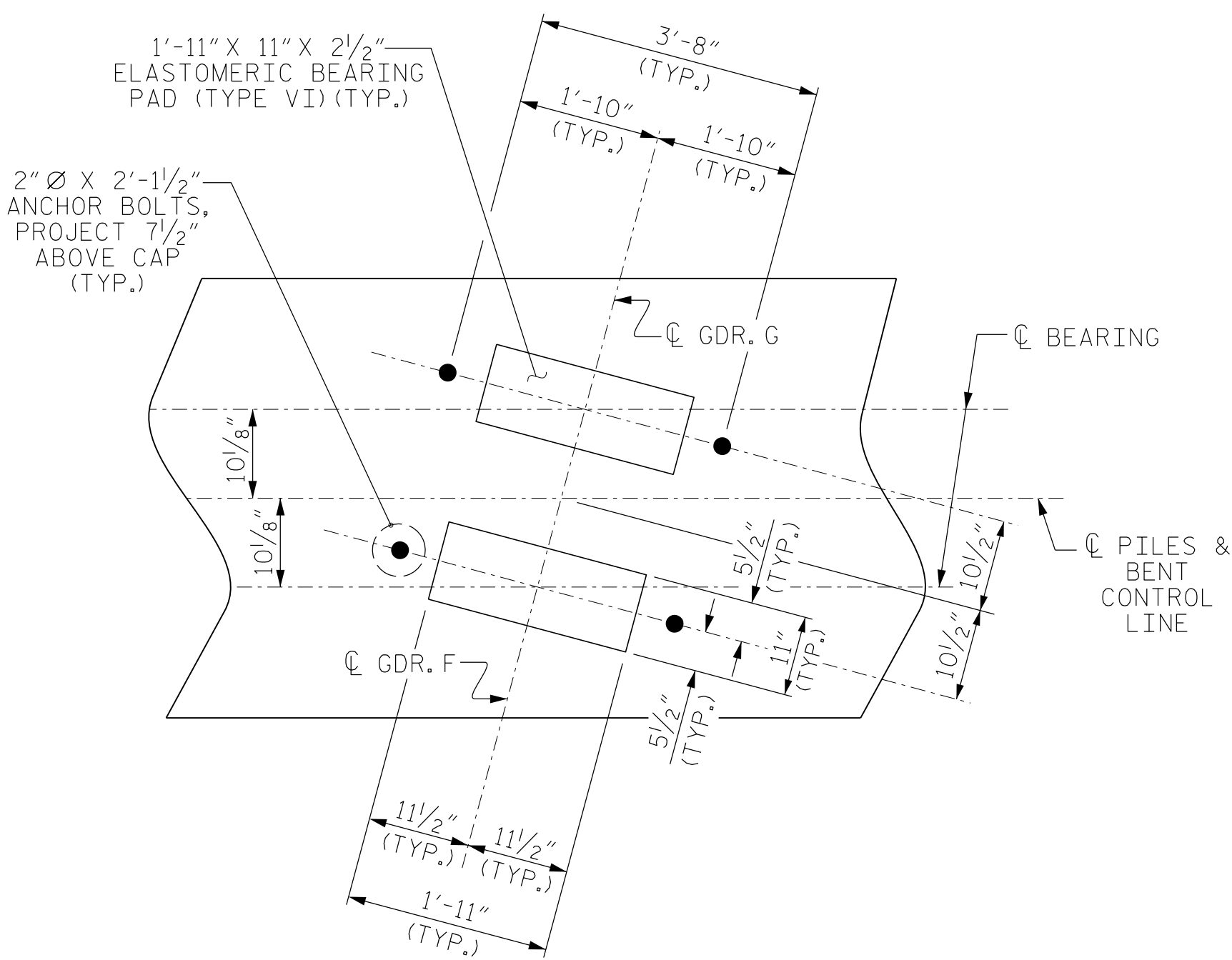
STIRRUPS IN CAP MAY BE SHIFTED AS NECESSARY TO CLEAR ANCHOR BOLTS.

★INVERT ALTERNATE STIRRUPS.

SEE SHEET 2 OF 2 FOR SECTION X-X AND Y-Y.

|      |      |      |      |
|------|------|------|------|
| G1   | G2   | G3   | G4   |
| PF18 | PF19 | PF18 | PF18 |
| F1   | F2   | F3   | F4   |
| PF16 | PF17 | PF16 | PF16 |

SOLE PLATE CHART



DETAIL "A"

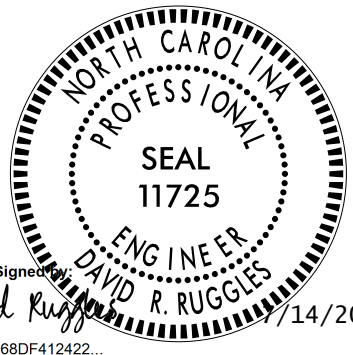
(DIMENSIONS ARE TYPICAL EACH BEARING)

PROJECT NO. B-5614

BEAUFORT COUNTY

STATION: 22+57.00 -L-

SHEET 1 OF 2



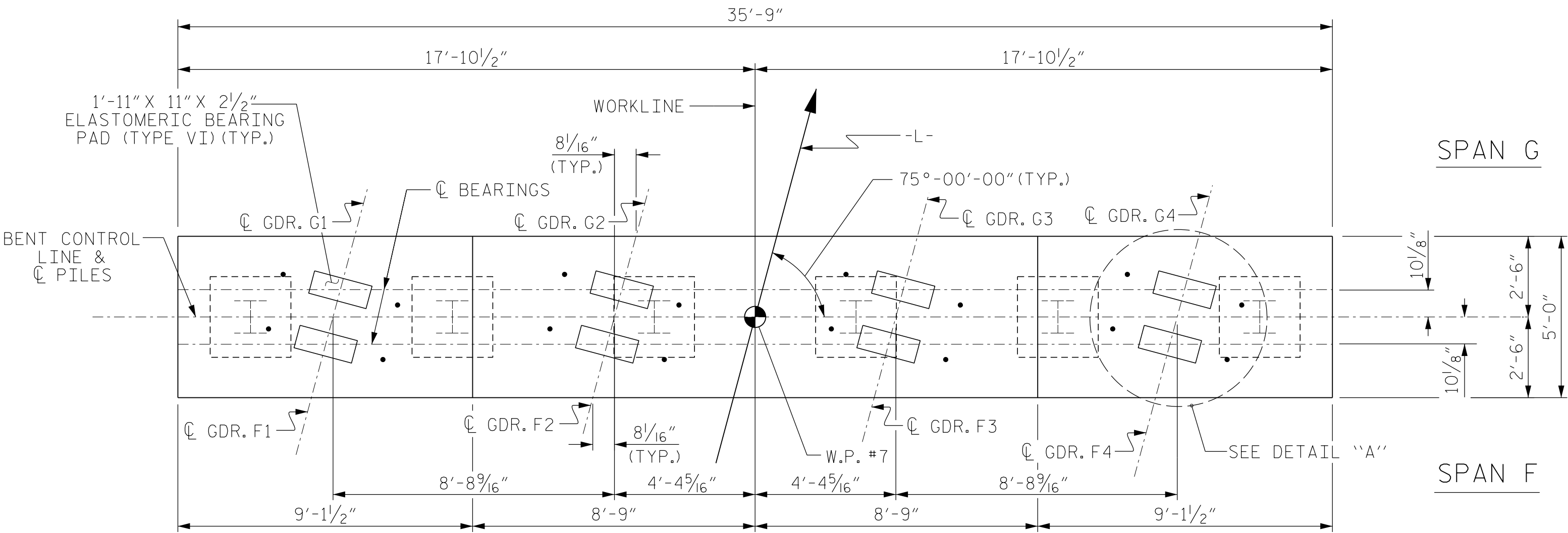
DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED



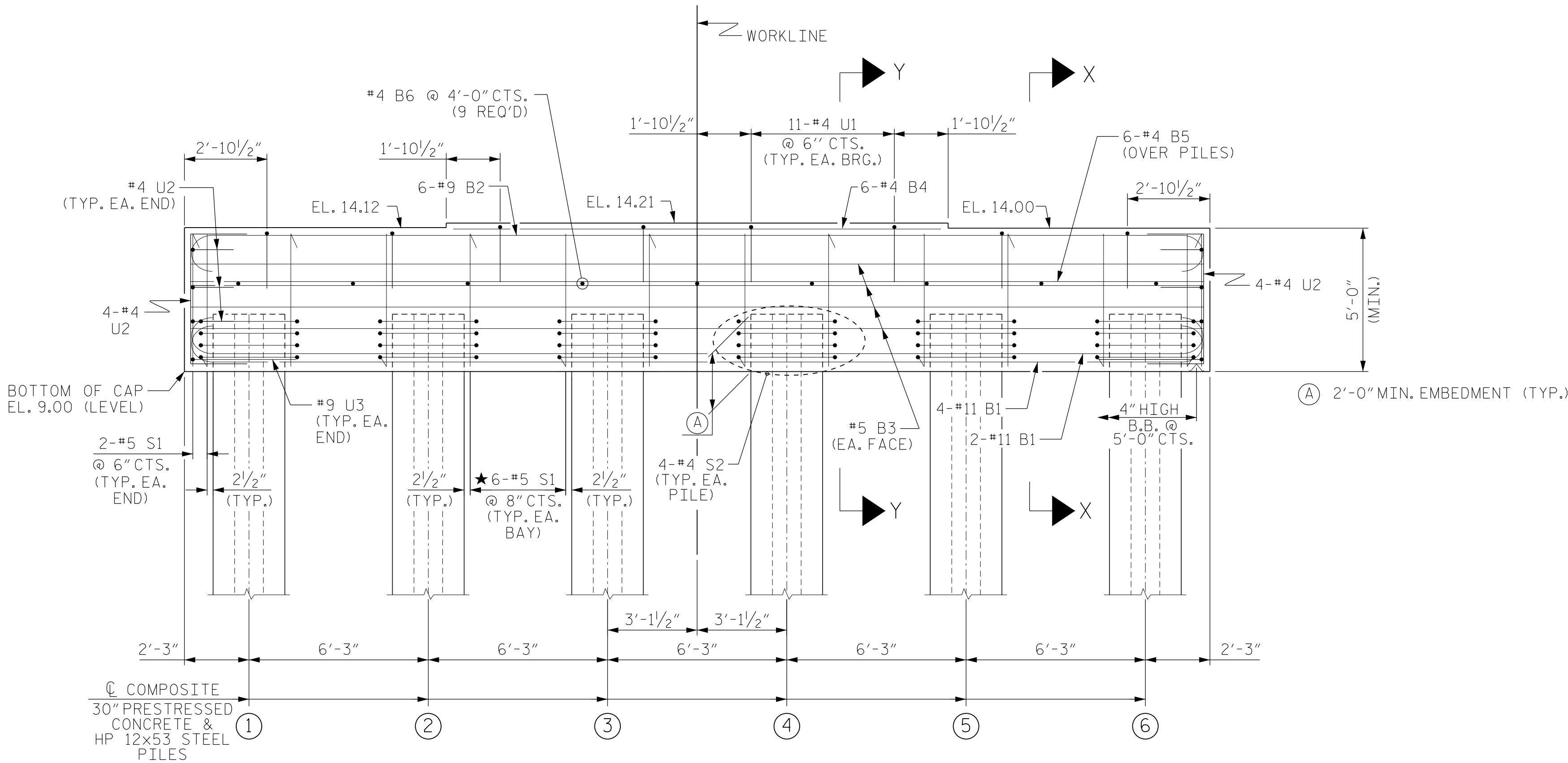
Firm License No. F-1536  
434 Fayetteville St.,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
SUBSTRUCTURE  
BENT 6  
PLAN AND ELEVATION

| REVISIONS    |     |       |     |     |       | SHEET NO. |
|--------------|-----|-------|-----|-----|-------|-----------|
| NO.          | BY: | DATE: | NO. | BY: | DATE: |           |
| 1            |     |       | 3   |     |       | S-42      |
| 2            |     |       | 4   |     |       |           |
| TOTAL SHEETS |     |       |     |     |       | 52        |



PLAN



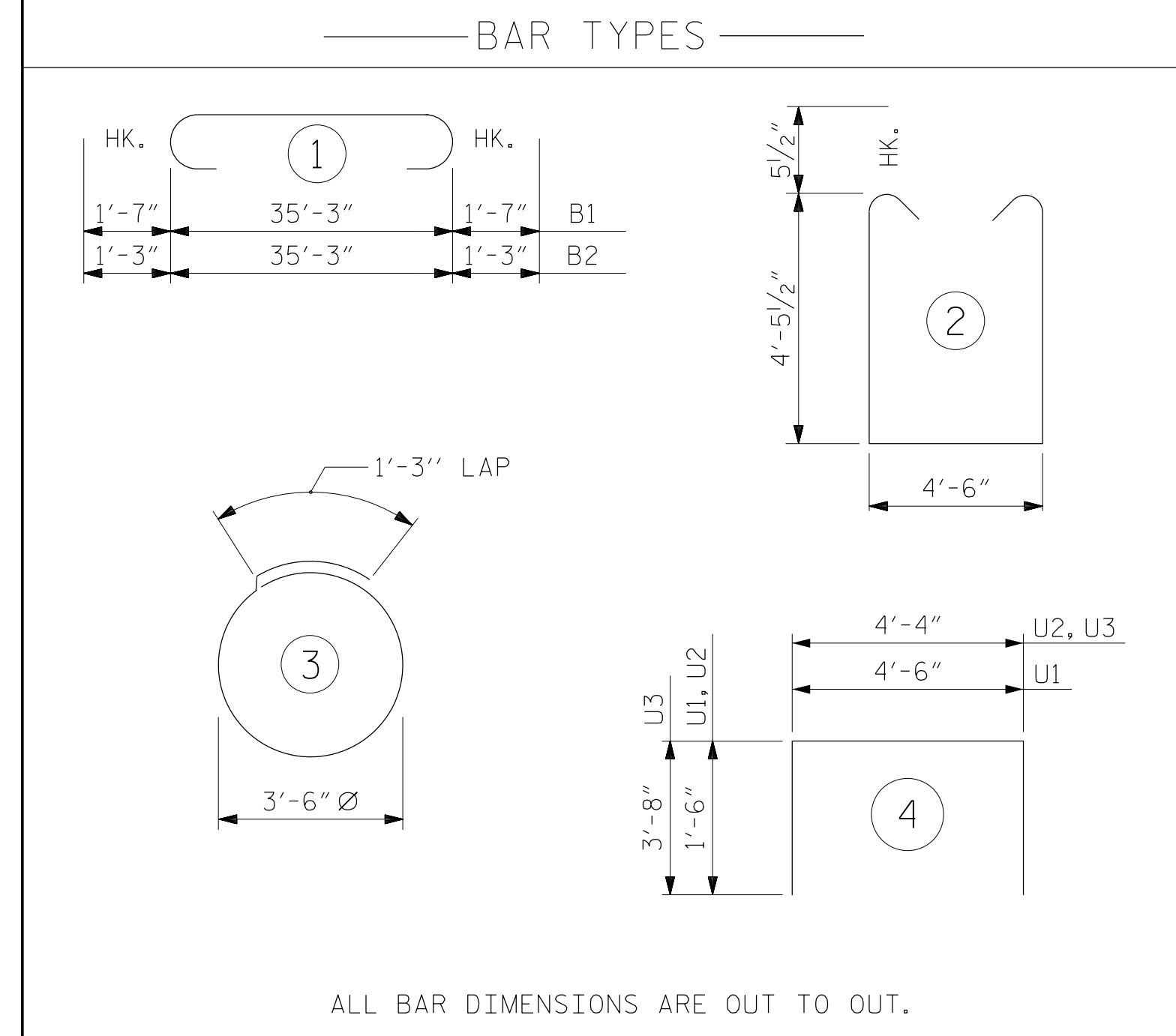
ELEVATION

DRAWN BY: J. WILSON DATE: 2/25

CHECKED BY: D. RUGGLES DATE: 2/25

DESIGN ENGINEER OF RECORD: D. RUGGLES DATE: 2/25

7/14/2025  
B-5614\_SMU.B11\_060009.dgn  
USER:dcfauit

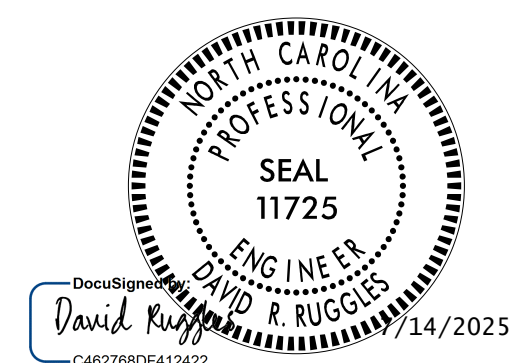


|                                    |             |
|------------------------------------|-------------|
| *EPOXY COATED<br>REINFORCING STEEL | 3,597 LBS.  |
| TOTAL CLASS AA CONCRETE            | ▲ 31.2 C.Y. |

▲ CONCRETE DISPLACED BY THE 30" PRESTRESSED CONCRETE PILES HAS BEEN DEDUCTED FROM THE CONCRETE QUANTITY.

PROJECT NO. B-5614  
BEAUFORT COUNTY  
 STATION: 22+57.00 -L-

SHEET 2 OF 2



DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED



Firm License No. F-1536  
434 Fayetteville St,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
[www.wearesteward.com](http://www.wearesteward.com)

STEWART

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

# SUBSTRUCTURE

## BENT 6

### SECTION AND DETAILS

NOTES

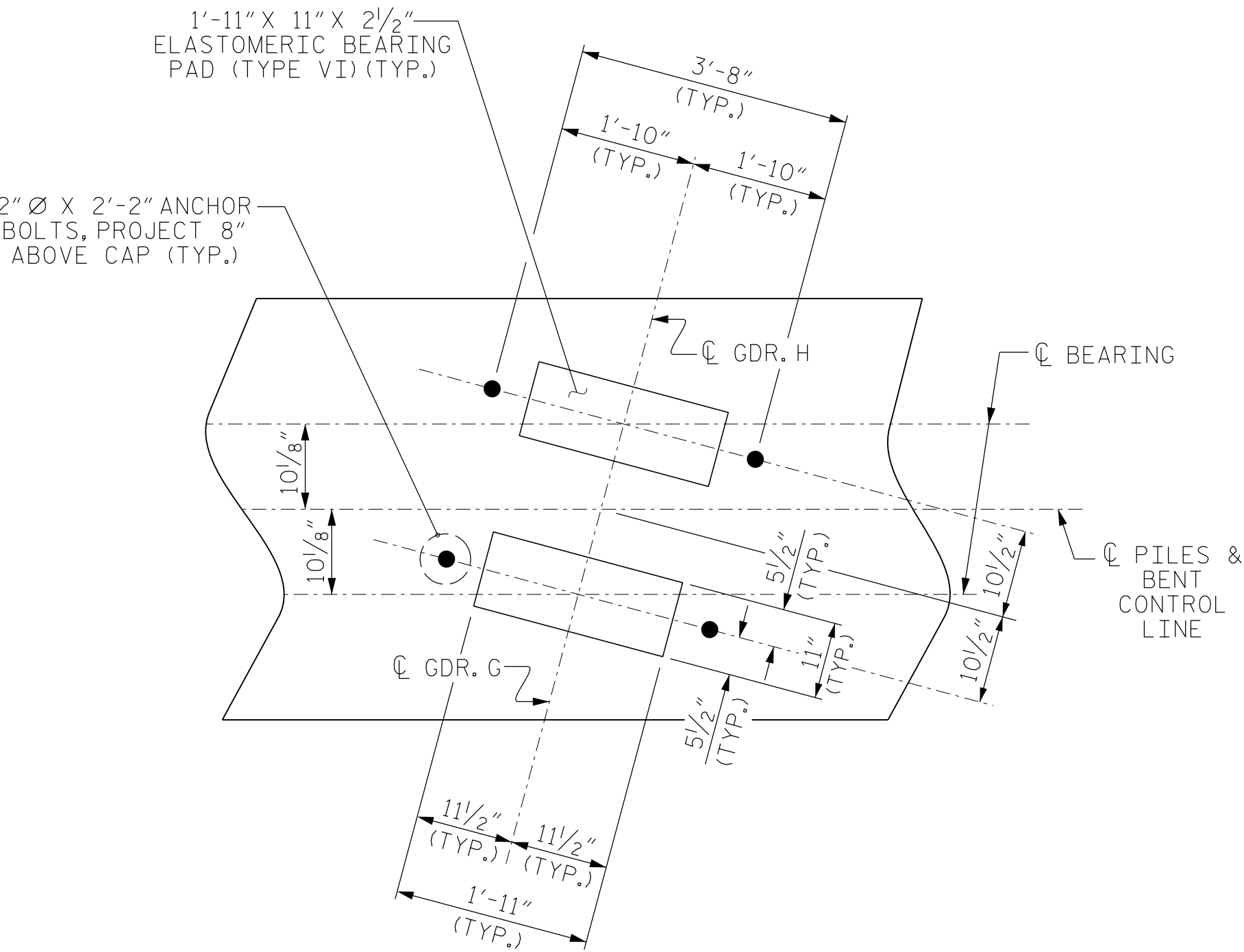
STIRRUPS IN CAP MAY BE SHIFTED AS NECESSARY TO CLEAR ANCHOR BOLTS.

★INVERT ALTERNATE STIRRUPS.

SEE SHEET 2 OF 2 FOR SECTION X-X AND Y-Y.

|      |      |      |      |
|------|------|------|------|
| H1   | H2   | H3   | H4   |
| PF22 | PF23 | PF22 | PF22 |
| G1   | G2   | G3   | G4   |
| PF20 | PF21 | PF20 | PF20 |

SOLE PLATE CHART



DETAIL "A"

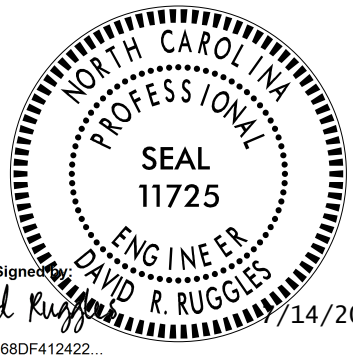
(DIMENSIONS ARE TYPICAL EACH BEARING)

PROJECT NO. B-5614

BEAUFORT COUNTY

STATION: 22+57.00 -L-

SHEET 1 OF 2



DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED

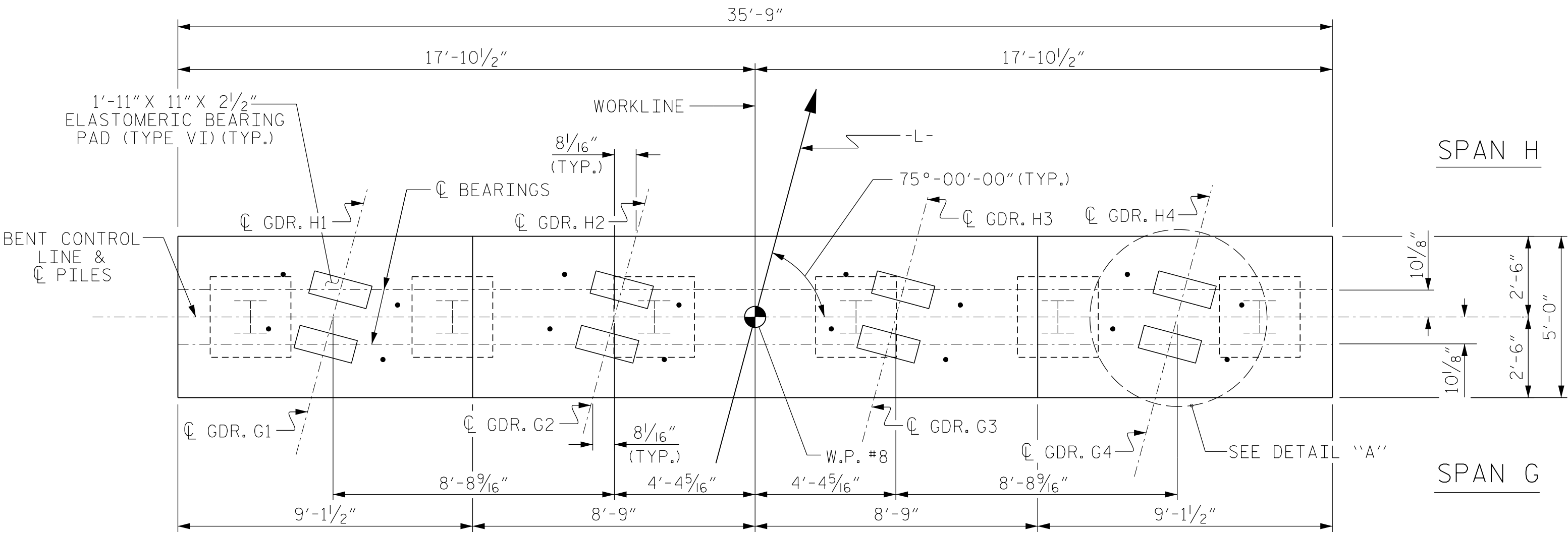


STEWART

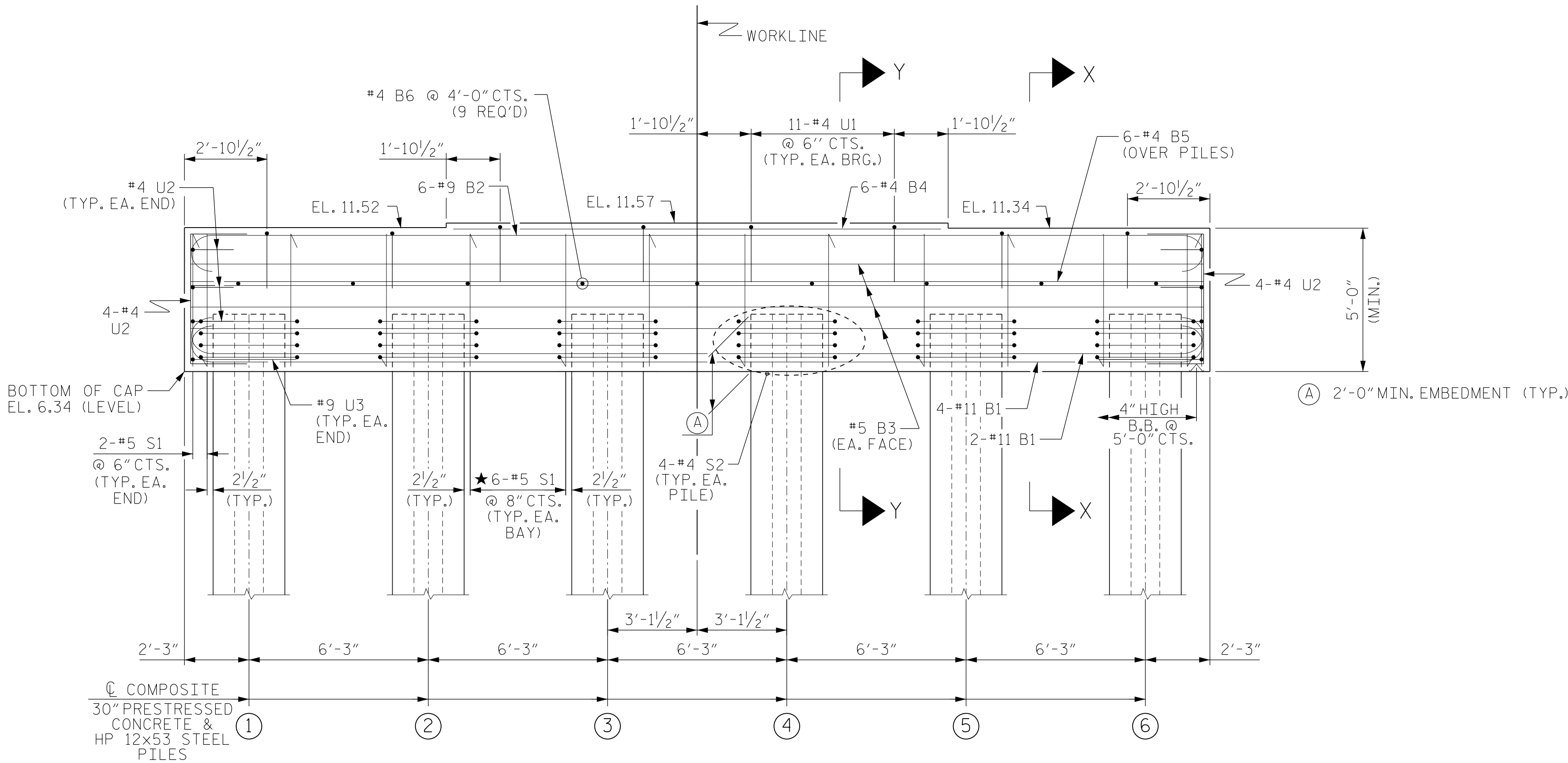
Firm License No. F-1536  
434 Fayetteville St.,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
SUBSTRUCTURE  
BENT 7  
PLAN AND ELEVATION

| REVISIONS |     |       |     |     |       | SHEET NO.<br>S-44     |
|-----------|-----|-------|-----|-----|-------|-----------------------|
| NO.       | BY: | DATE: | NO. | BY: | DATE: |                       |
| 1         |     |       | 3   |     |       | TOTAL<br>SHEETS<br>52 |
| 2         |     |       | 4   |     |       |                       |



PLAN



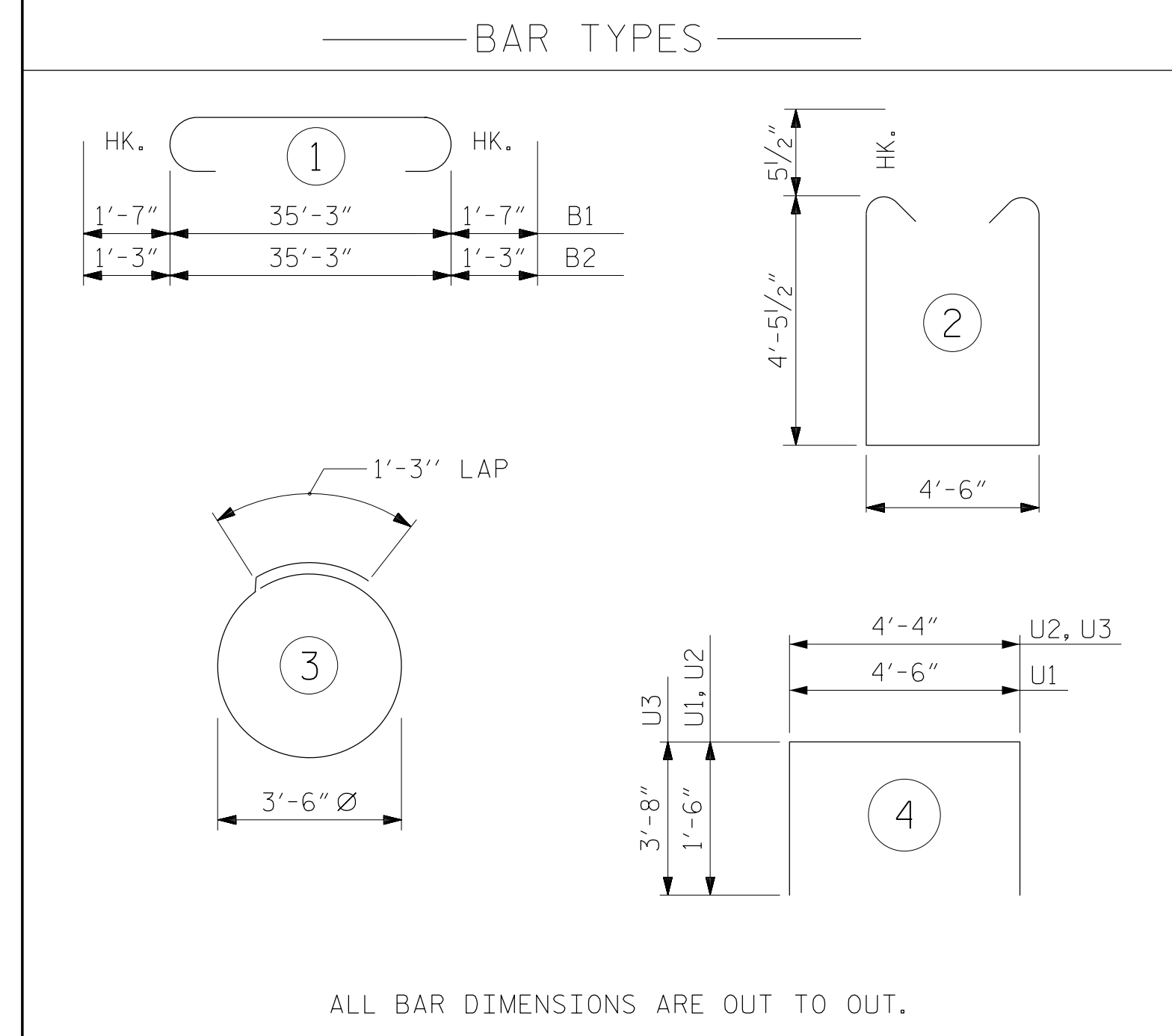
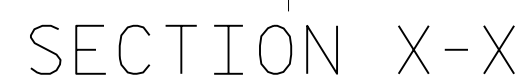
ELEVATION

DRAWN BY: J. WILSON DATE: 2/25

CHECKED BY: D. RUGGLES DATE: 2/25

DESIGN ENGINEER OF RECORD: D. RUGGLES DATE: 2/25

7/11/2025  
B-5614\_SMU.B13\_060009.dgn  
USER:druggles

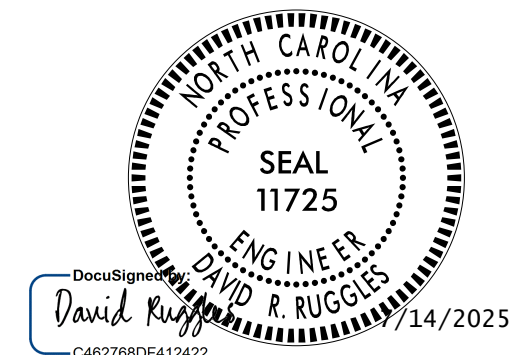


|                                    |             |
|------------------------------------|-------------|
| *EPOXY COATED<br>REINFORCING STEEL | 3,597 LBS.  |
| TOTAL CLASS AA CONCRETE            | ▲ 31.4 C.Y. |

▲ CONCRETE DISPLACED BY THE 30" PRESTRESSED CONCRETE PILES HAS BEEN DEDUCTED FROM THE CONCRETE QUANTITY.

PROJECT NO. B-5614  
BEAUFORT COUNTY  
 STATION: 22+57.00 -L-

SHEET 2 OF 2



DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED

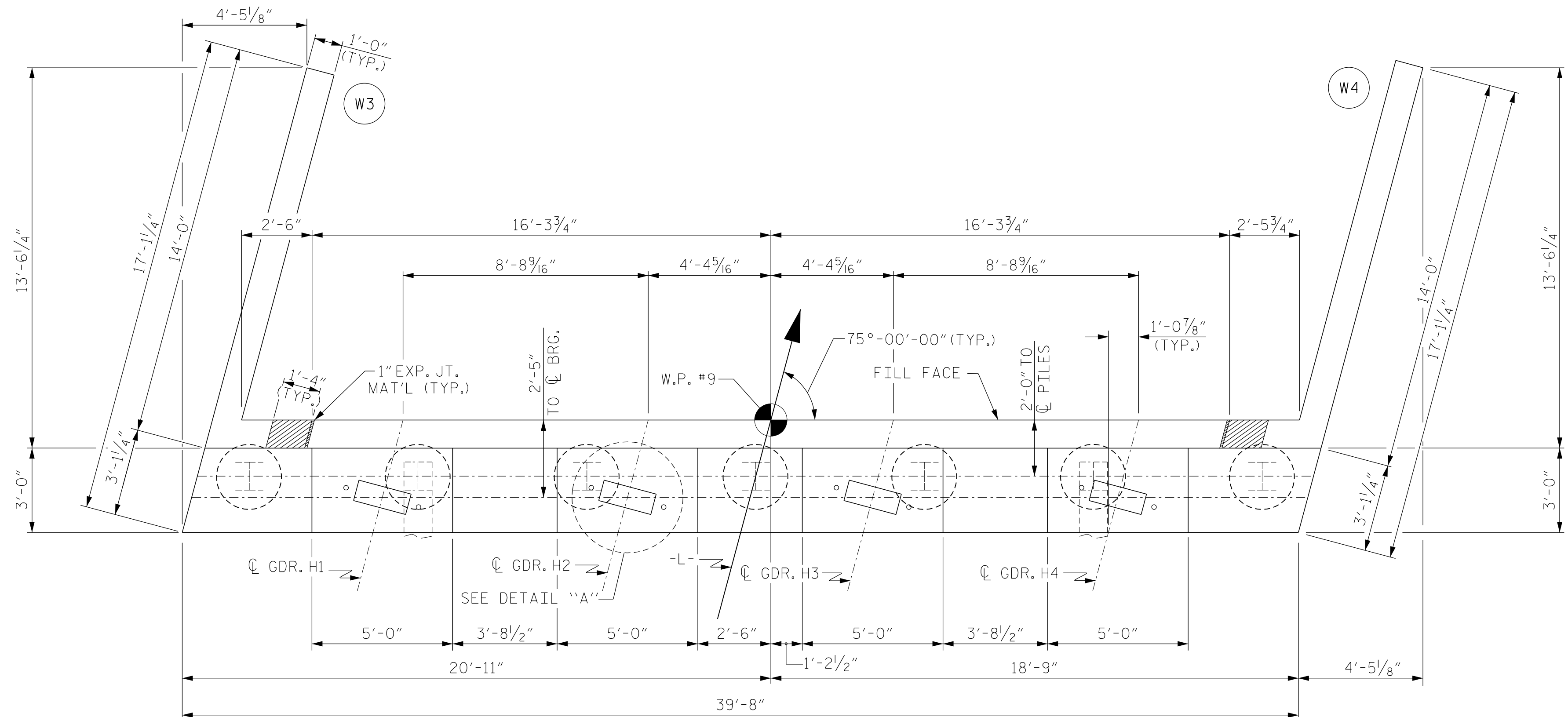
Firm License No. F-1536  
434 Fayetteville St,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
[www.wearestewart.com](http://www.wearestewart.com)

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
SUBSTRUCTURE  
BENT 7  
SECTION AND DETAILS

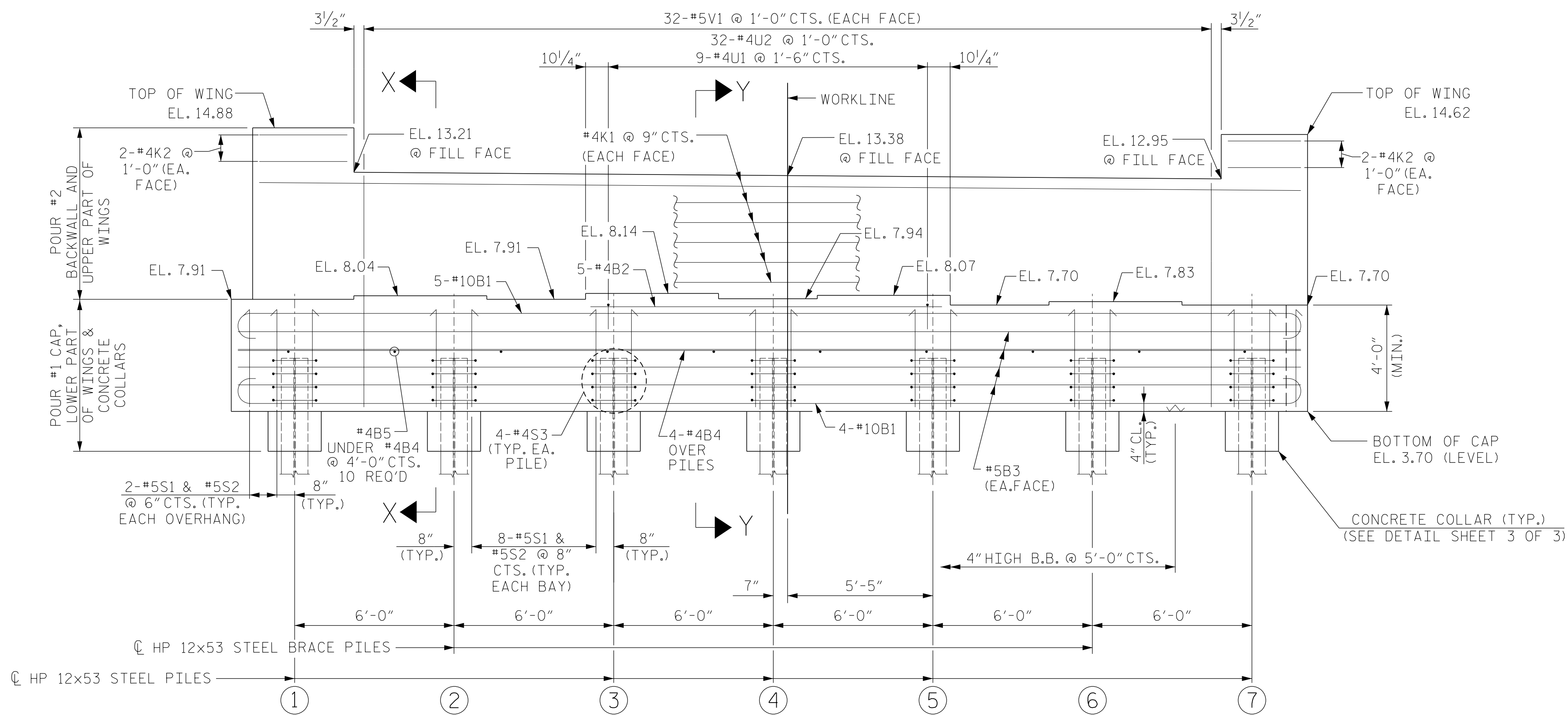
|   |           |     |       |     |     |       |              |
|---|-----------|-----|-------|-----|-----|-------|--------------|
| 0 | REVISIONS |     |       |     |     |       | SHEET NO.    |
|   | NO.       | BY: | DATE: | NO. | BY: | DATE: | S-45         |
|   | 1         |     |       | 3   |     |       | TOTAL SHEETS |
|   | 2         |     |       | 4   |     |       | 52           |



7/11/2025  
B-5614\_SMU.E4\_060009.dgn  
USER:default



PLAN



ELEVATION

WINGS NOT SHOWN FOR CLARITY.  
FOR SECTIONS X-X & Y-Y, SEE SHEET S-49.  
CONCRETE COLLARS FOR STEEL PILES NOT SHOWN IN PLAN VIEW FOR CLARITY.  
SEE "CORROSION PROTECTION FOR STEEL PILES DETAIL", END BENT 1 SHEET 3 OF 3.

NOTES

STIRRUPS IN CAP MAY BE SHIFTED AS NECESSARY TO CLEAR ANCHOR BOLTS.

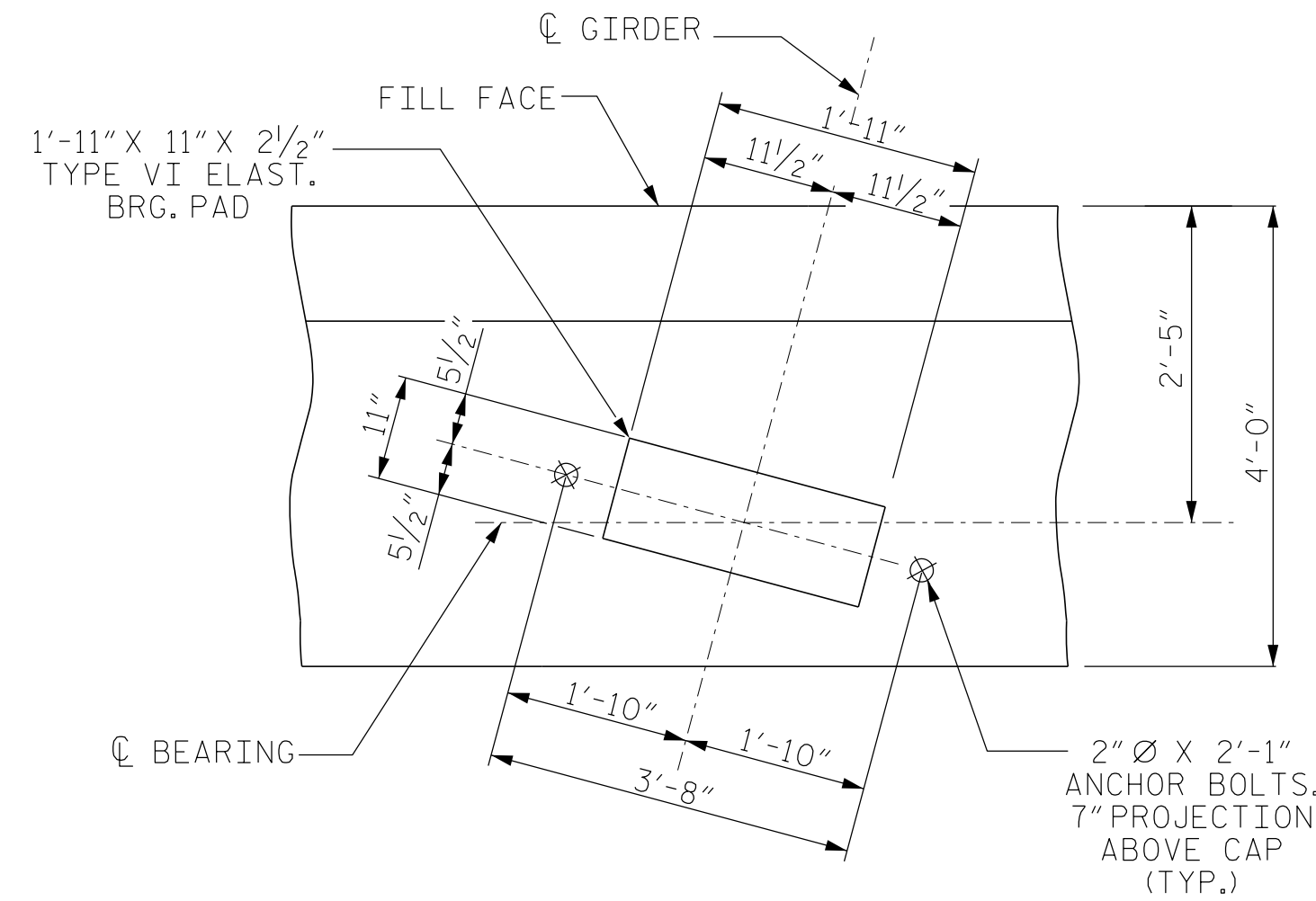
THE CONCRETE IN THE SHADED AREA OF THE WING SHALL BE POURED AFTER THE JOINT BETWEEN THE DECK AND APPROACH SLAB HAS BEEN SAWED AND THE BARRIER RAIL IS CAST IF SLIP FORMING IS USED.

FOR BEARING DETAILS, SEE ELASTOMERIC BEARING DETAILS.

FOR PILE SPLICE DETAILS, SEE SHEET 3 OF 3.

BACKWALL SHALL BE PLACED BEFORE APPLYING THE EPOXY PROTECTIVE COATING.

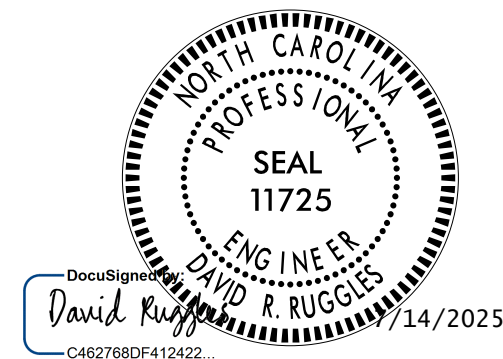
THE TOP SURFACE AREAS OF THE END BENT CAPS SHALL BE CURED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS EXCEPT THE MEMBRANE CURING COMPOUND METHOD SHALL NOT BE USED.



DETAIL "A"

PROJECT NO. B-5614  
BEAUFORT COUNTY  
STATION: 22+57.00 -L-

SHEET 1 OF 3



DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED

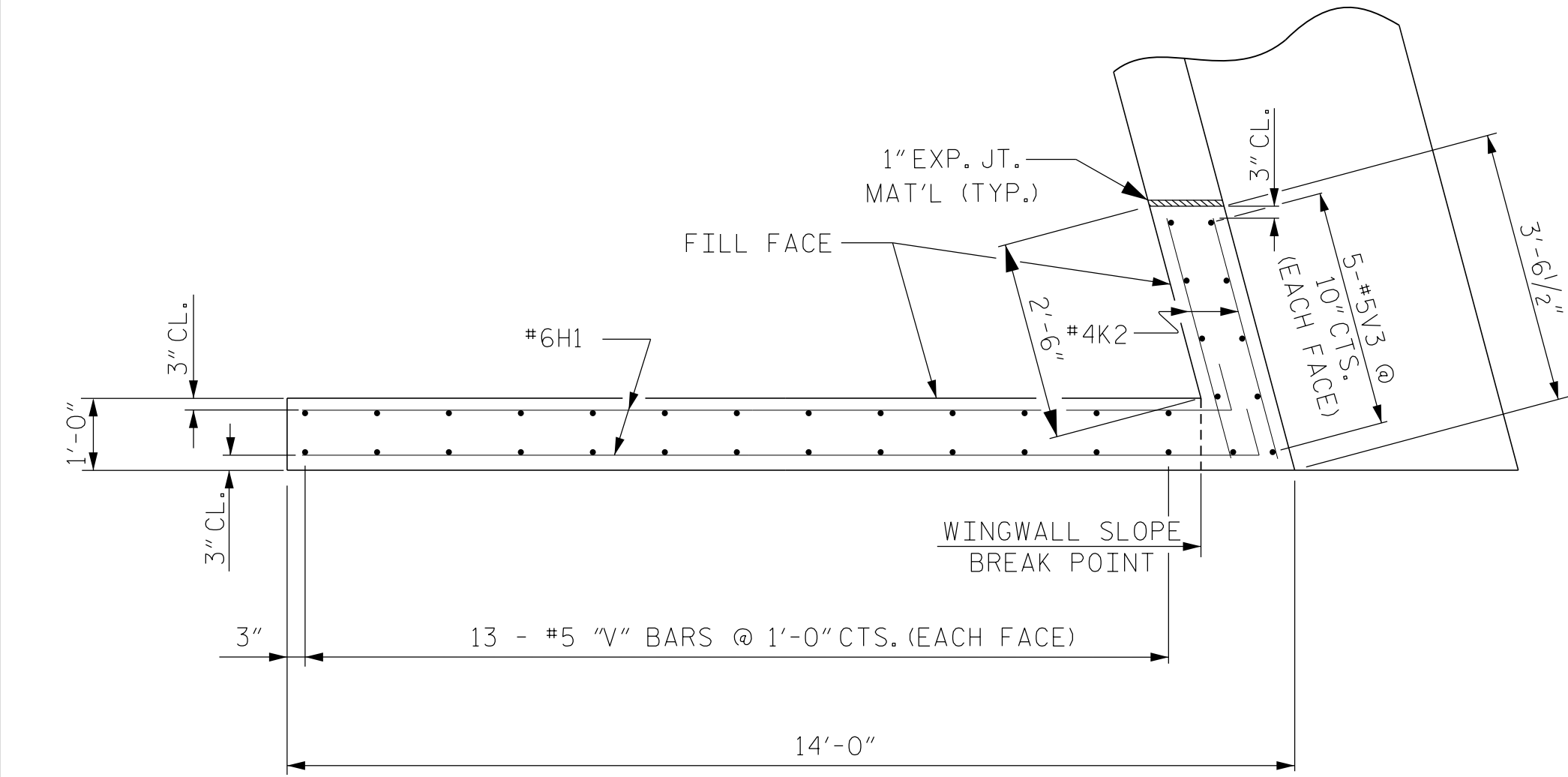


Firm License No. F-1536  
434 Fayetteville St,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com

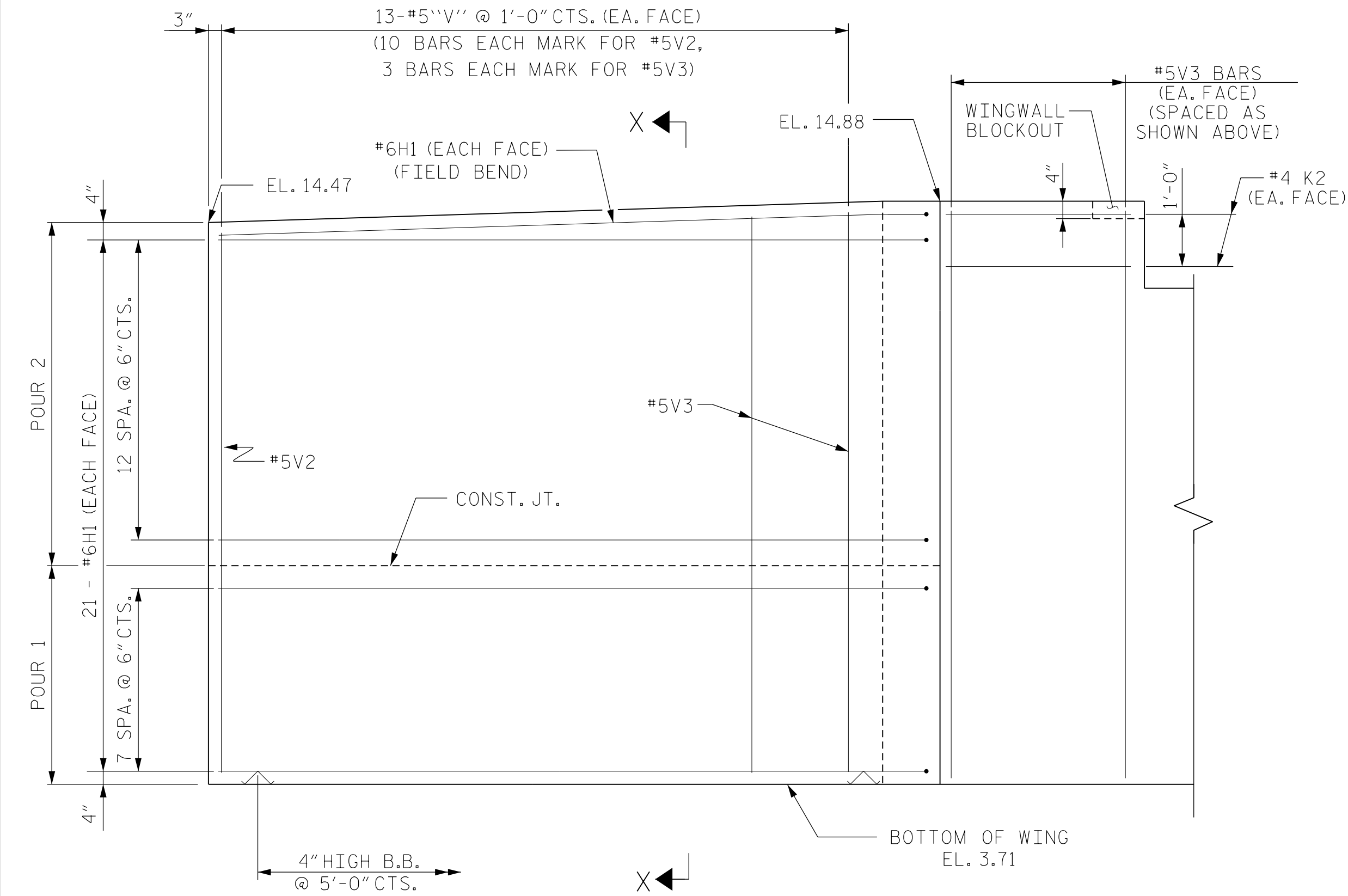
STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
SUBSTRUCTURE  
END BENT 2  
PLAN AND ELEVATION

| REVISIONS    |     |       |     |     |       | SHEET NO. |
|--------------|-----|-------|-----|-----|-------|-----------|
| NO.          | BY: | DATE: | NO. | BY: | DATE: |           |
| 1            |     |       | 3   |     |       | S-47      |
| 2            |     |       | 4   |     |       |           |
| TOTAL SHEETS |     |       |     |     |       | 52        |

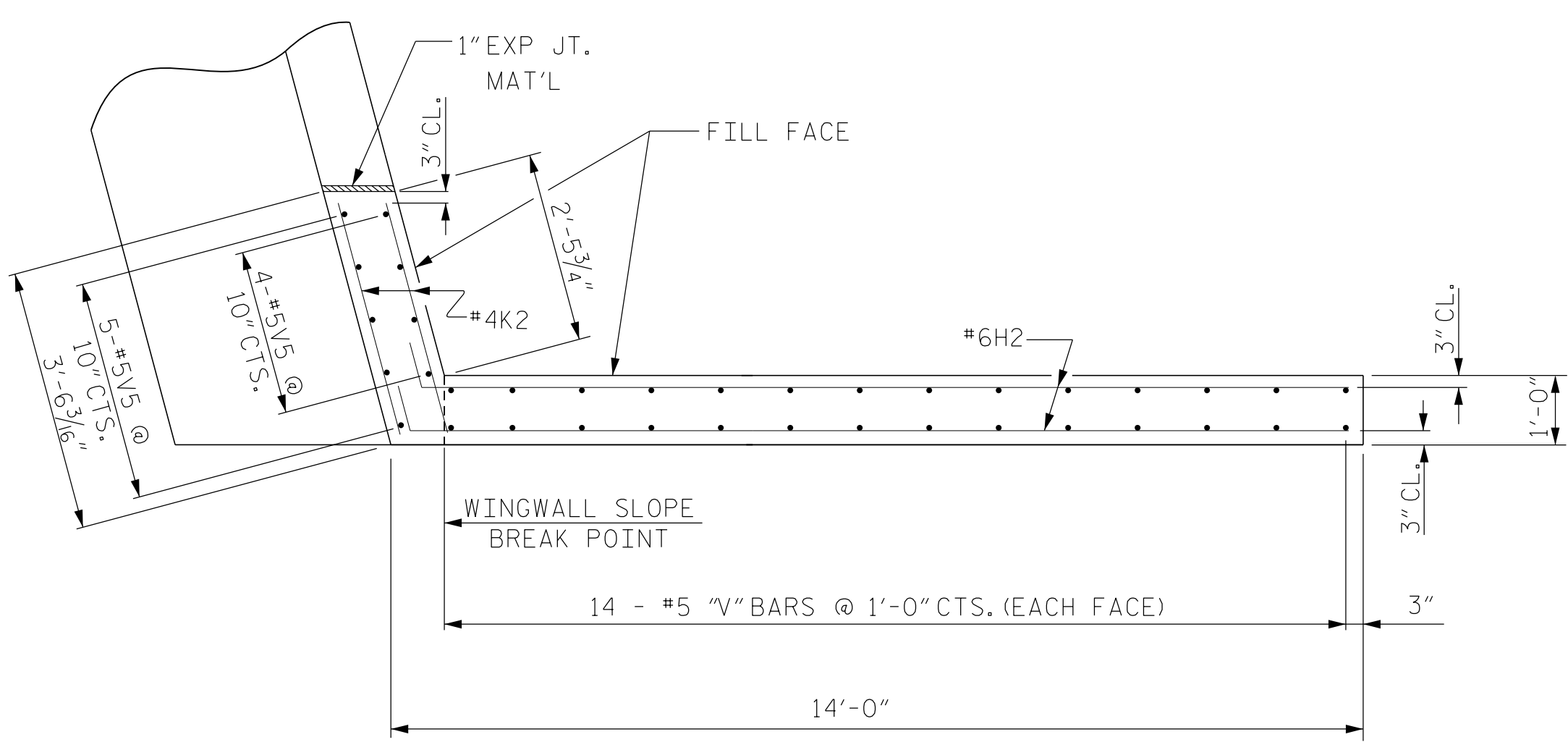
7/11/2025  
B-5614\_SMU.E5.060009.dgn  
USER:default



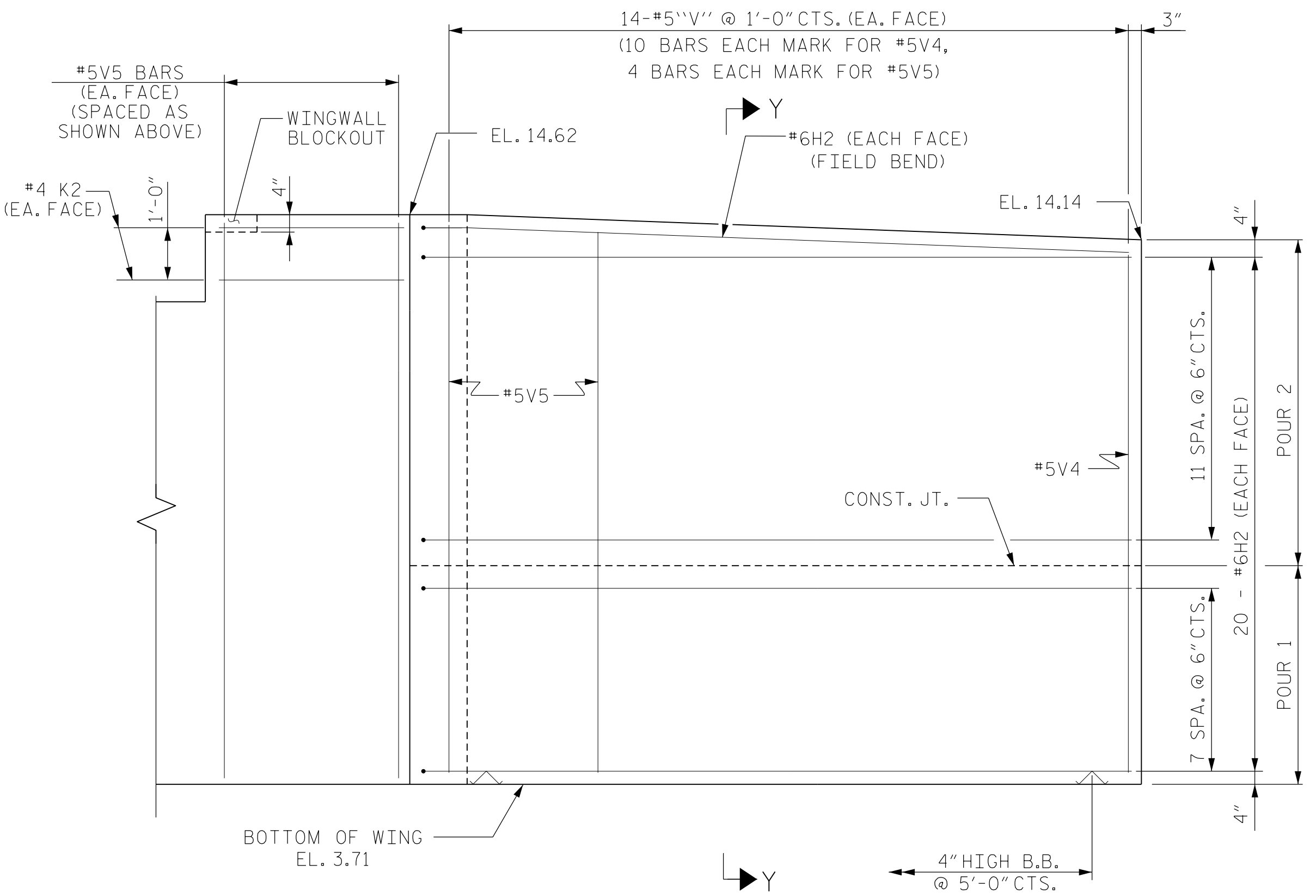
PLAN OF WING (W3)



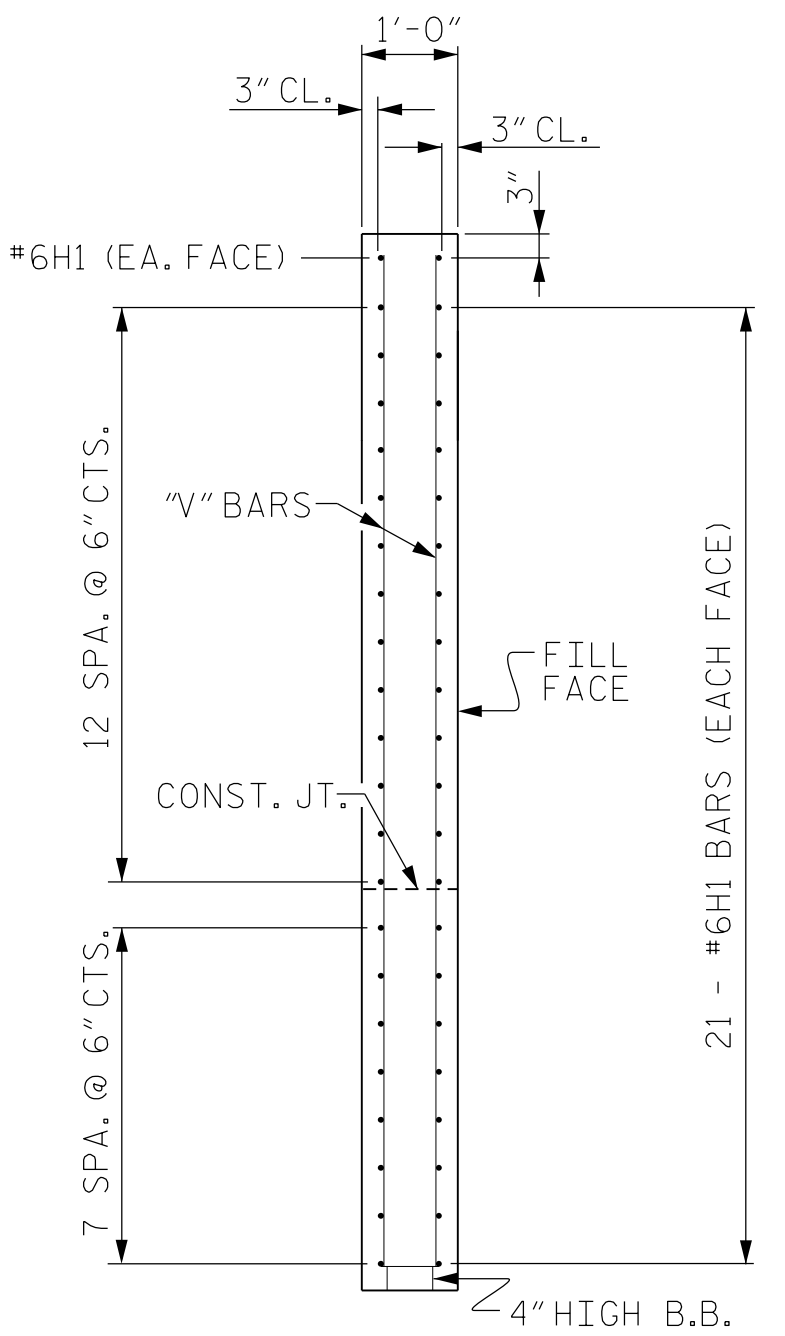
ELEVATION OF WING (W3)



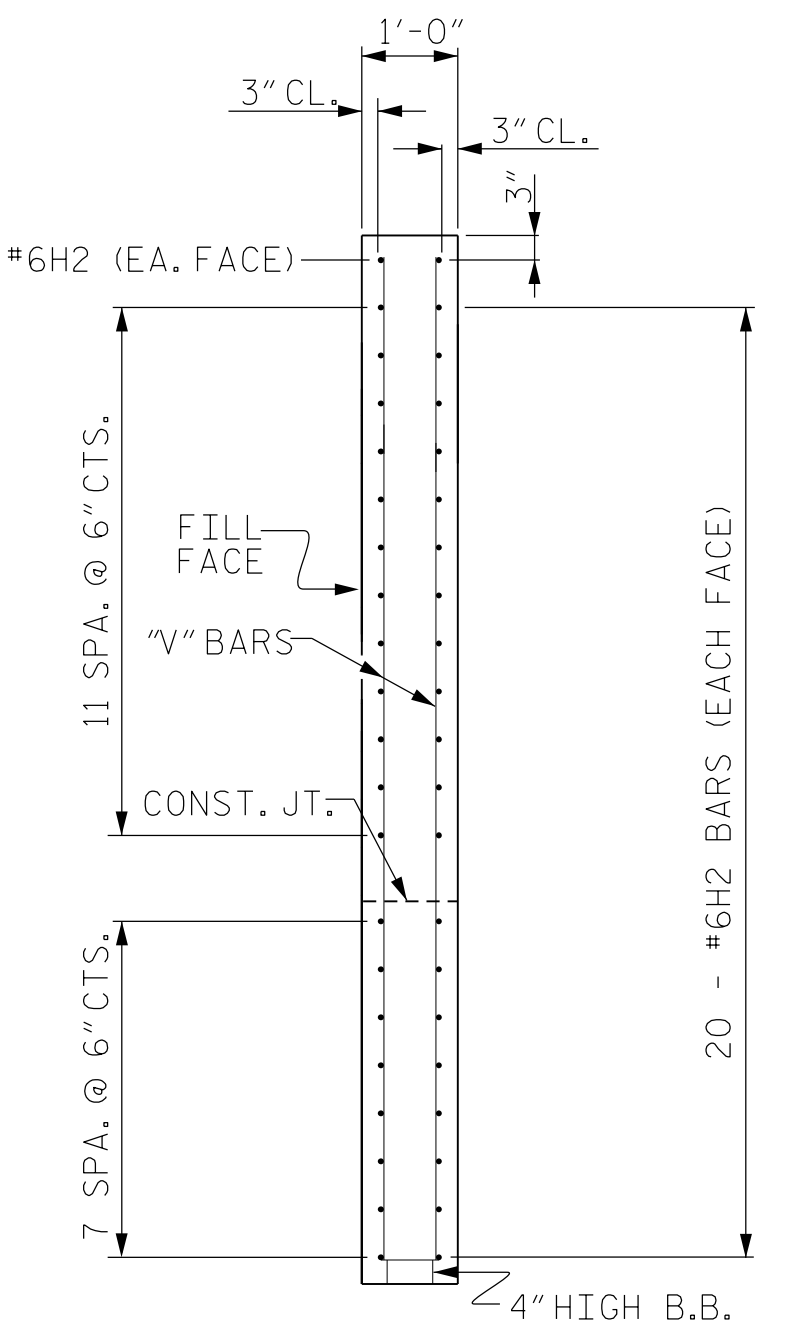
PLAN OF WING (W4)



ELEVATION OF WING (W4)



SECTION X-X



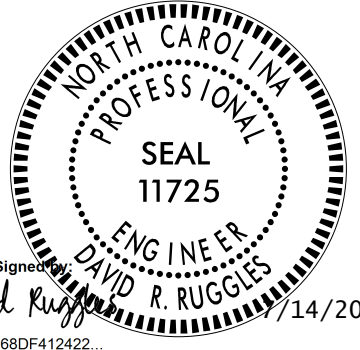
SECTION Y-Y

PROJECT NO. B-5614  
BEAUFORT COUNTY  
STATION: 22+57.00 -L-

SHEET 2 OF 3

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
SUBSTRUCTURE  
END BENT 2  
WING DETAILS

| REVISIONS |     |       |     |     |       | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|-----------|
| NO.       | BY: | DATE: | NO. | BY: | DATE: |           |
| 1         |     |       | 3   |     |       | S-48      |
| 2         |     |       | 4   |     |       |           |



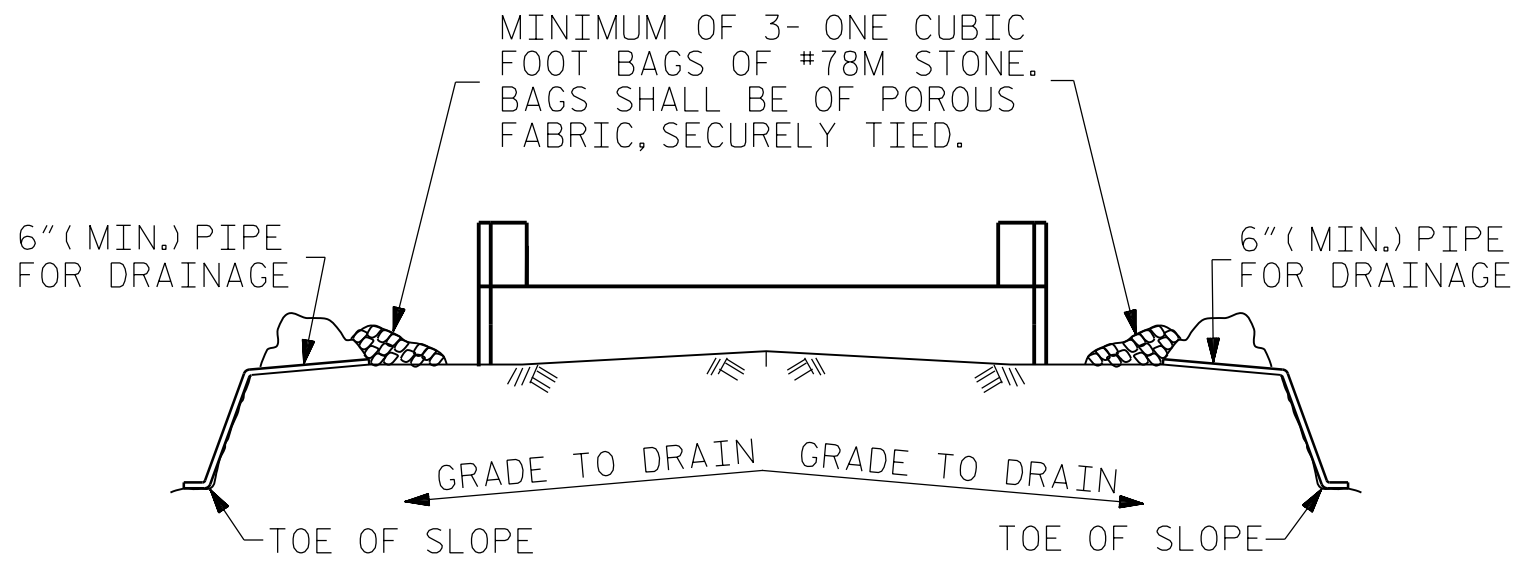
DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED



STEWART

Firm License No. F-1536  
434 Fayetteville St.,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com

DRAWN BY: J. WILSON DATE: 2/25  
CHECKED BY: D. RUGGLES DATE: 2/25  
DESIGN ENGINEER OF RECORD: D. RUGGLES DATE: 2/25

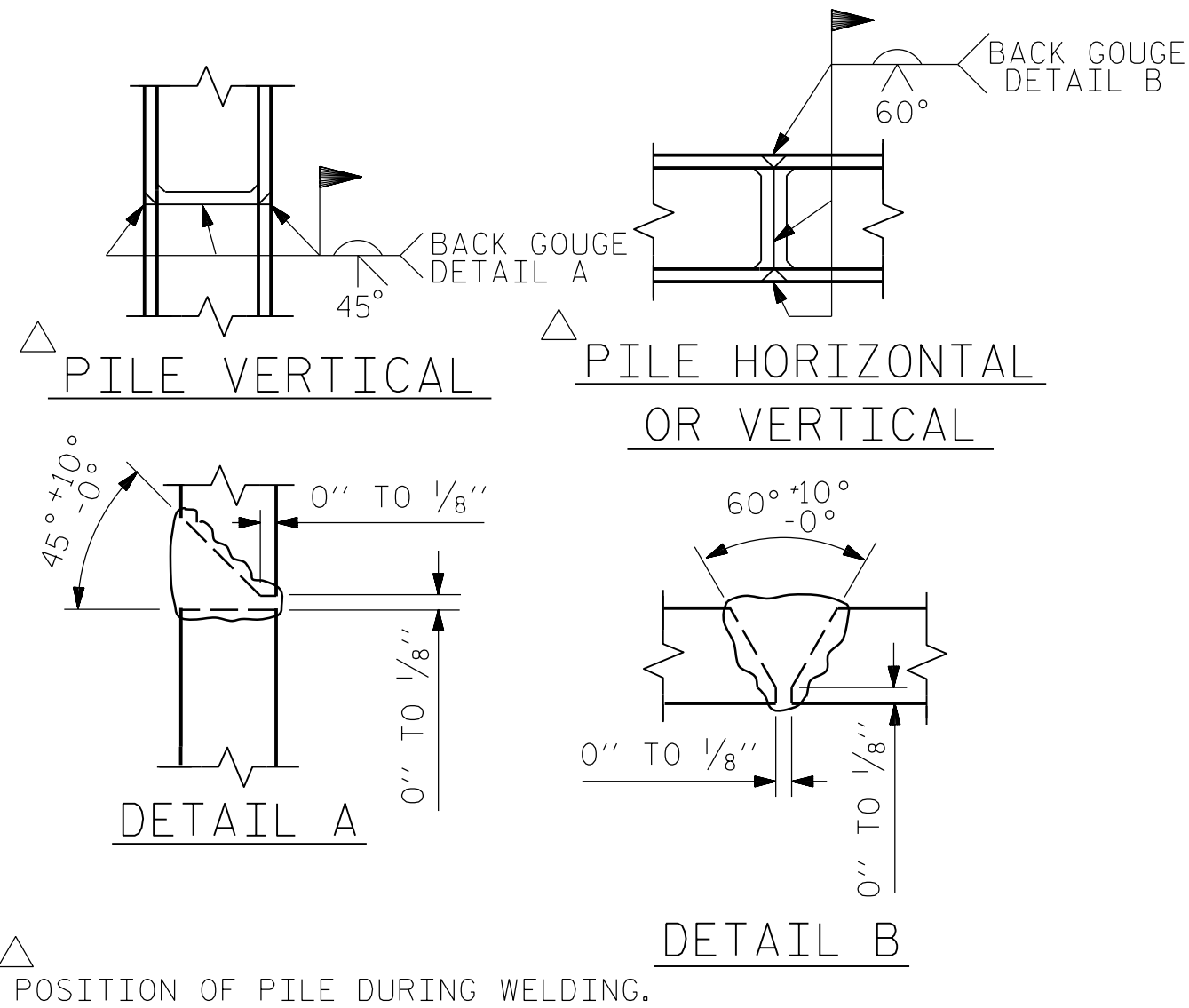


BAGGED STONE AND PIPE SHALL BE PLACED IMMEDIATELY AFTER COMPLETION OF END BENT EXCAVATION. PIPE MAY BE EITHER CONCRETE, CORRUGATED STEEL, CORRUGATED ALUMINUM ALLOY, OR CORRUGATED PLASTIC. PERFORATED PIPE WILL NOT BE ALLOWED.

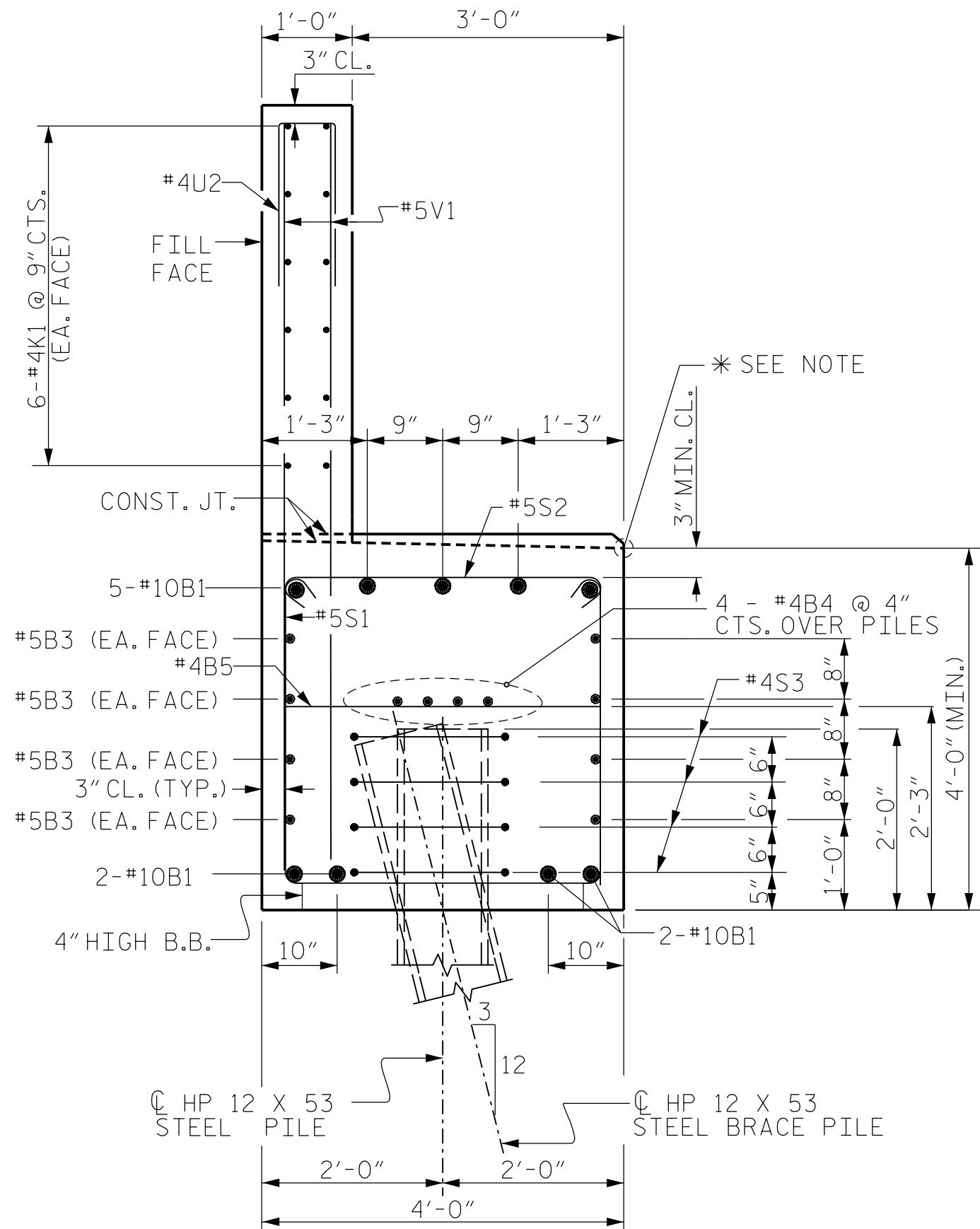
BAGGED STONE SHALL REMAIN IN PLACE UNTIL THE ENGINEER DIRECTS THAT IT BE REMOVED. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF SILT ACCUMULATIONS AT BAGGED STONE WHEN SO DIRECTED BY THE ENGINEER. BAGS SHALL BE REMOVED AND REPLACED WHENEVER THE ENGINEER DETERMINES THAT THEY HAVE DETERIORATED AND LOST THEIR EFFECTIVENESS.

NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK AND THE ENTIRE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR THE SEVERAL PAY ITEMS.

## TEMPORARY DRAINAGE AT END BENT

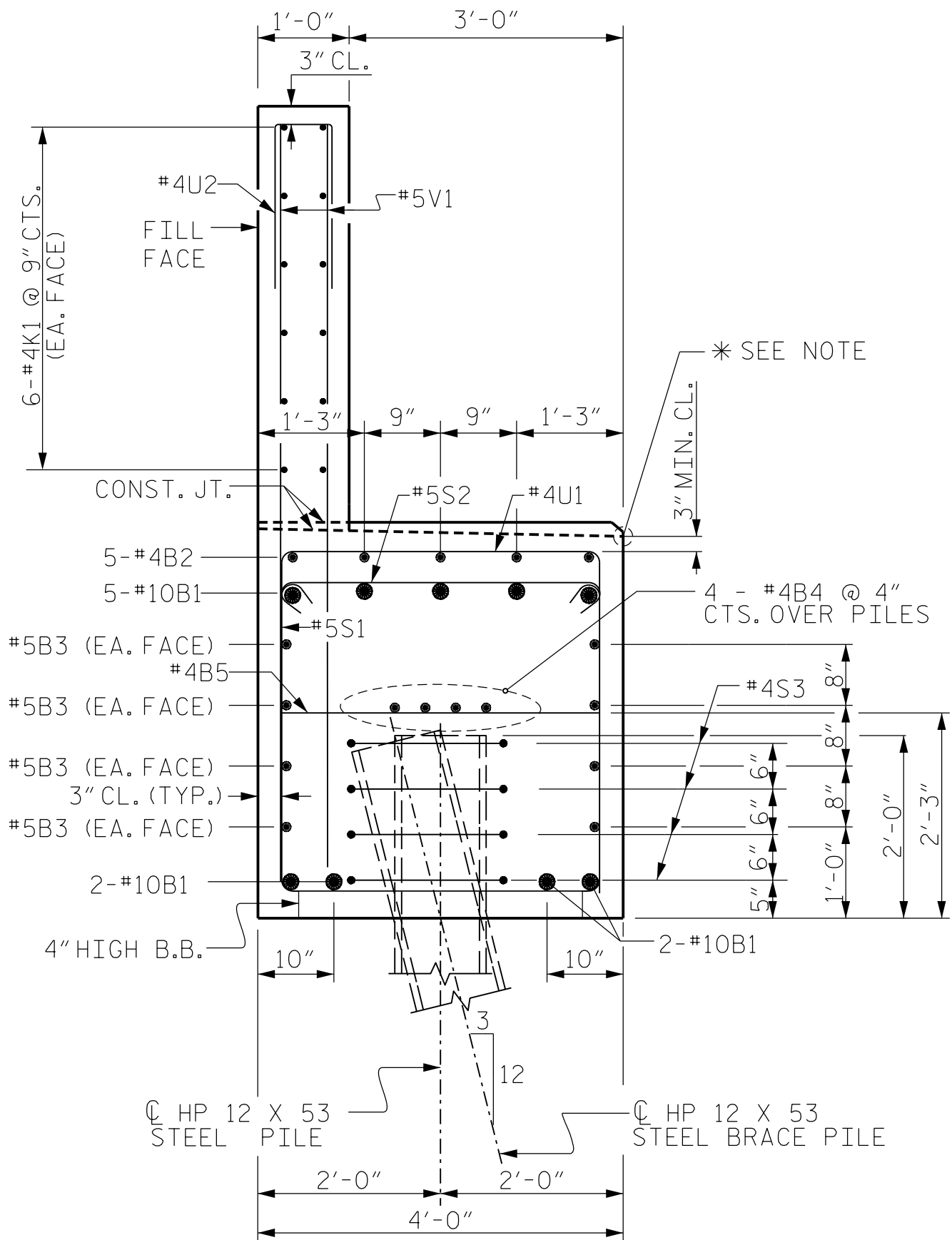


## PILE SPLICE DETAILS



SECTION X-X

(CONCRETE COLLAR NOT SHOWN FOR CLARITY)  
(SEE "CORROSION PROTECTION FOR STEEL PILES DETAIL")



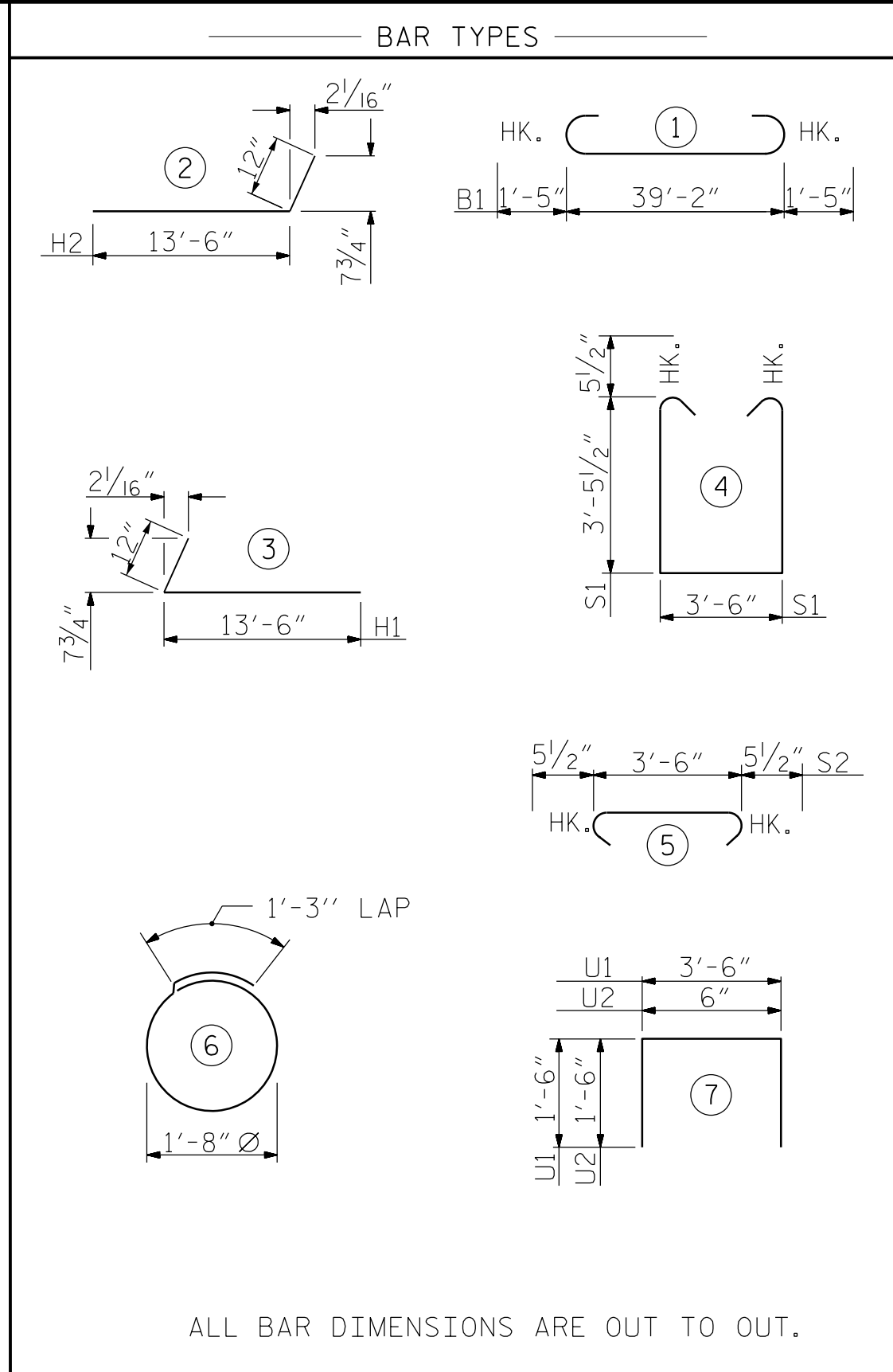
SECTION Y-Y

(CONCRETE COLLAR NOT SHOWN FOR CLARITY)  
(SEE "CORROSION PROTECTION FOR STEEL PILES DETAIL")

### NOTES:

THE TOP SURFACE OF THE CAP EXCEPT THE BRIDGE SEAT BUILDUPS SHALL BE SLOPED TRANSVERSLY FROM THE FILL FACE TO THE BACK FACE AT THE RATE OF 2%.

\* ELEVATIONS BETWEEN BRIDGE SEAT BUILDUPS ARE SHOWN AT THIS POINT.



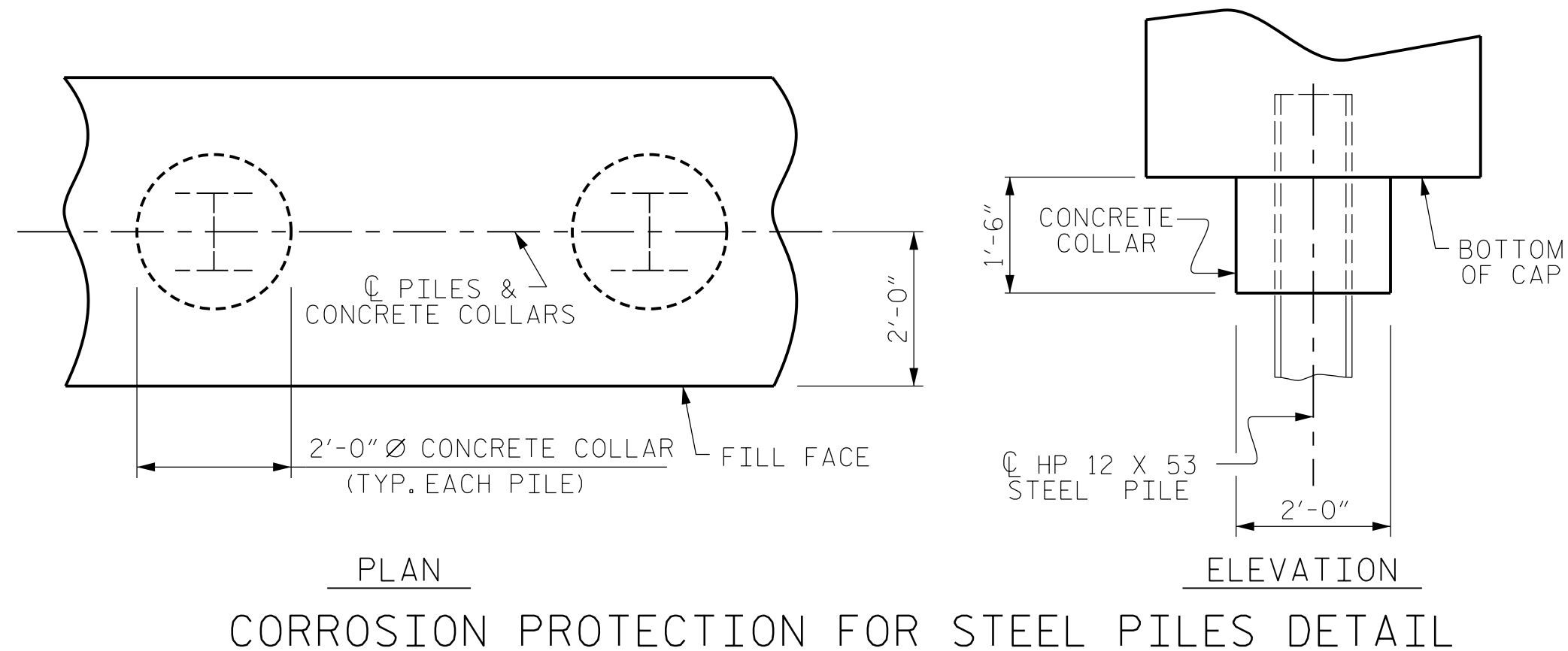
### BILL OF MATERIAL

#### FOR END BENT 2

| BAR | NO. | SIZE | TYPE | LENGTH | WEIGHT |
|-----|-----|------|------|--------|--------|
| *B1 | 9   | #10  | 1    | 42'-0" | 1627   |
| *B2 | 5   | #4   | STR  | 13'-2" | 44     |
| *B3 | 8   | #5   | STR  | 39'-2" | 327    |
| *B4 | 8   | #4   | STR  | 39'-2" | 209    |
| *B5 | 10  | #4   | STR  | 3'-6"  | 23     |
| *H1 | 44  | #6   | 3    | 14'-6" | 958    |
| *H2 | 42  | #6   | 2    | 14'-6" | 915    |
| *K1 | 12  | #4   | STR  | 39'-2" | 314    |
| *K2 | 8   | #4   | STR  | 3'-6"  | 19     |
| *S1 | 52  | #5   | 4    | 11'-4" | 615    |
| *S2 | 52  | #5   | 5    | 4'-5"  | 240    |
| *S3 | 28  | #4   | 6    | 6'-6"  | 122    |
| *U1 | 9   | #4   | 7    | 6'-6"  | 39     |
| *U2 | 32  | #4   | 7    | 3'-6"  | 75     |
| *V1 | 64  | #5   | STR  | 8'-8"  | 579    |
| *V2 | 20  | #5   | STR  | 10'-2" | 212    |
| *V3 | 16  | #5   | STR  | 10'-7" | 177    |
| *V4 | 20  | #5   | STR  | 9'-10" | 205    |
| *V5 | 17  | #5   | STR  | 10'-4" | 183    |

\*EPOXY COATED REINFORCING STEEL (FOR END BENT 2) 6,883 LBS.

CLASS AA CONCRETE BREAKDOWN  
POUR #1 CAP & LOWER PART OF WINGS 30.4 C.Y.  
POUR #2 BACKWALL & UPPER PART OF WINGS 15.4 C.Y.  
TOTAL CLASS AA CONCRETE 45.8 C.Y.



PROJECT NO. B-5614  
BEAUFORT COUNTY  
STATION: 22+57.00 -L-

SHEET 3 OF 3



Decoupled by  
David Ruggles  
C-4827680F412022  
DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED

8/26/2025

Firm License No. F-1536  
434 Fayetteville St,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com



STEWART

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
SUBSTRUCTURE  
END BENT 2  
SECTION AND DETAILS

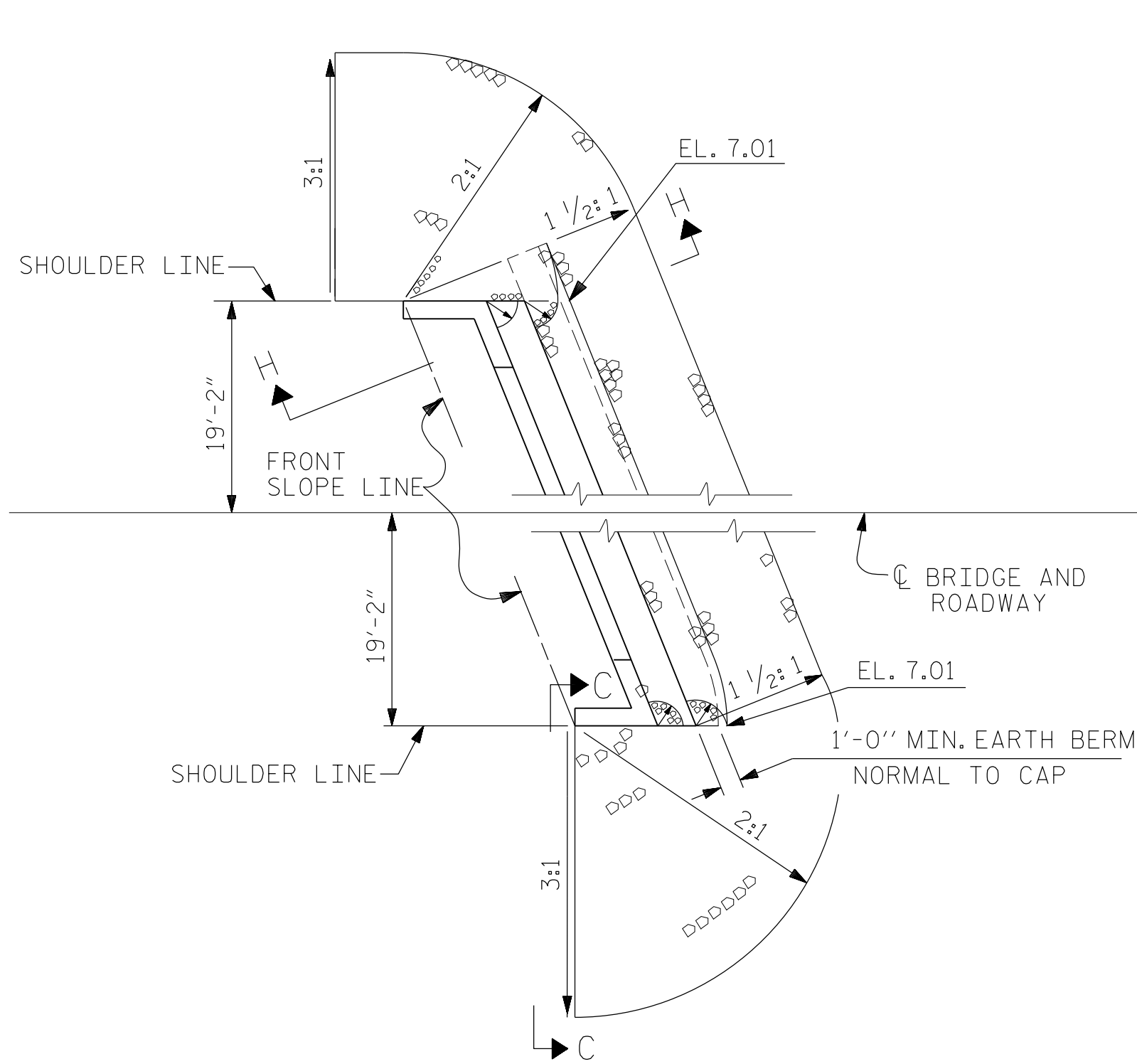
| REVISIONS |     |       |     |     |       | SHEET NO.<br>S-49  |
|-----------|-----|-------|-----|-----|-------|--------------------|
| NO.       | BY: | DATE: | NO. | BY: | DATE: |                    |
| 1         |     |       | 3   |     |       | TOTAL SHEETS<br>52 |
| 2         |     |       | 4   |     |       |                    |

\$\$\$\$SYTIME\$\$\$\$  
\$\$\$\$DGN\$\$\$\$  
\$\$\$\$USERNAME\$\$\$\$

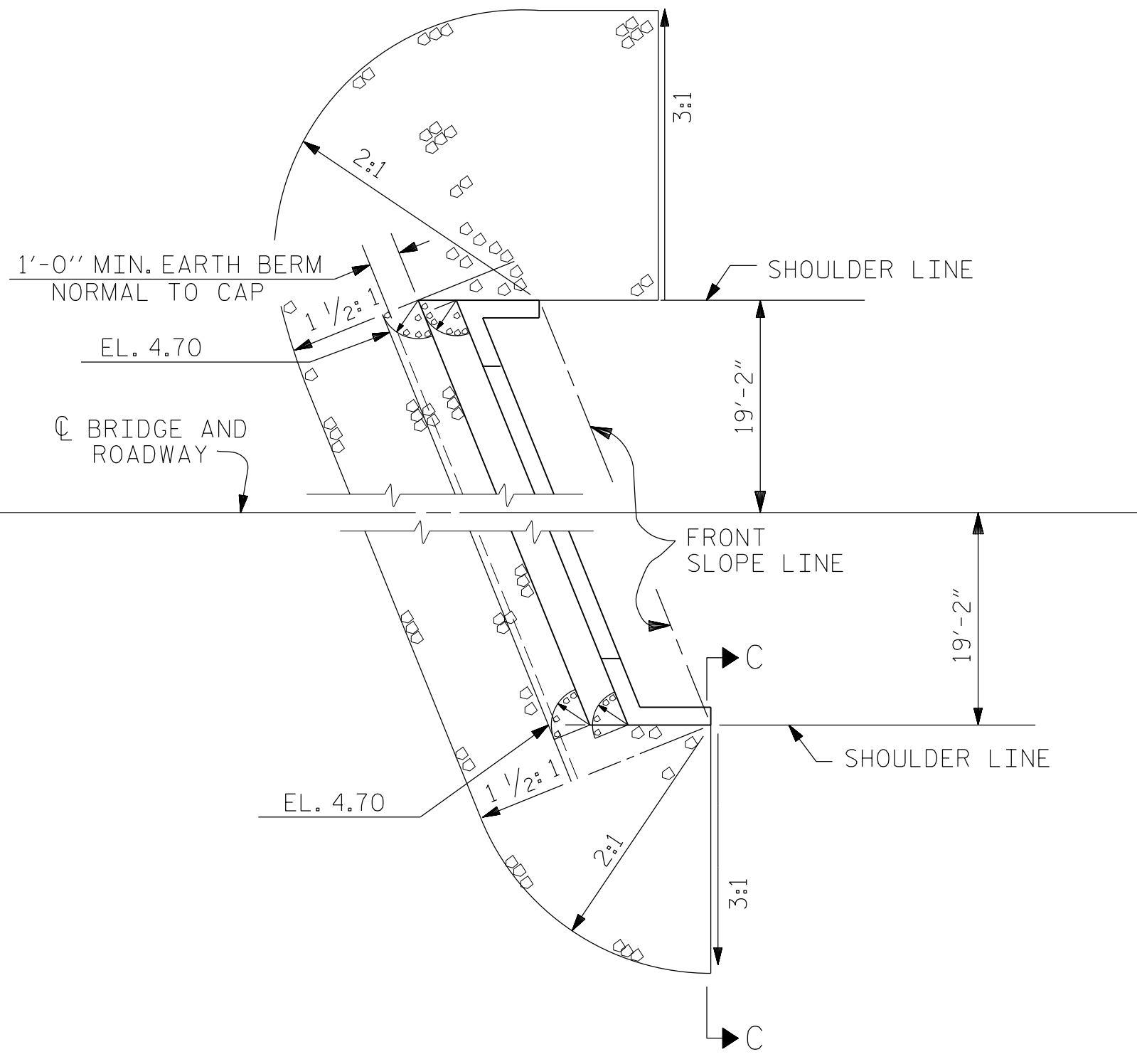
DRAWN BY: J. WILSON DATE: 2/25  
CHECKED BY: D. RUGGLES DATE: 2/25  
DESIGN ENGINEER OF RECORD: D. RUGGLES DATE: 2/25

7/11/2025  
B-5614\_SMU.RR1\_060009.dgn  
USERdefault

|                |          |               |         |
|----------------|----------|---------------|---------|
| ASSEMBLED BY : | JCW      | DATE :        | 2/25    |
| CHECKED BY :   | DRR      | DATE :        | 2/25    |
| DRAWN BY :     | REK 1/84 | REV. 10/1/II  | MAA/GM  |
| CHECKED BY :   | RDU 1/84 | REV. 12/21/II | MAA/GM  |
|                |          | REV. 12/17    | MAA/THC |



END BENT 1



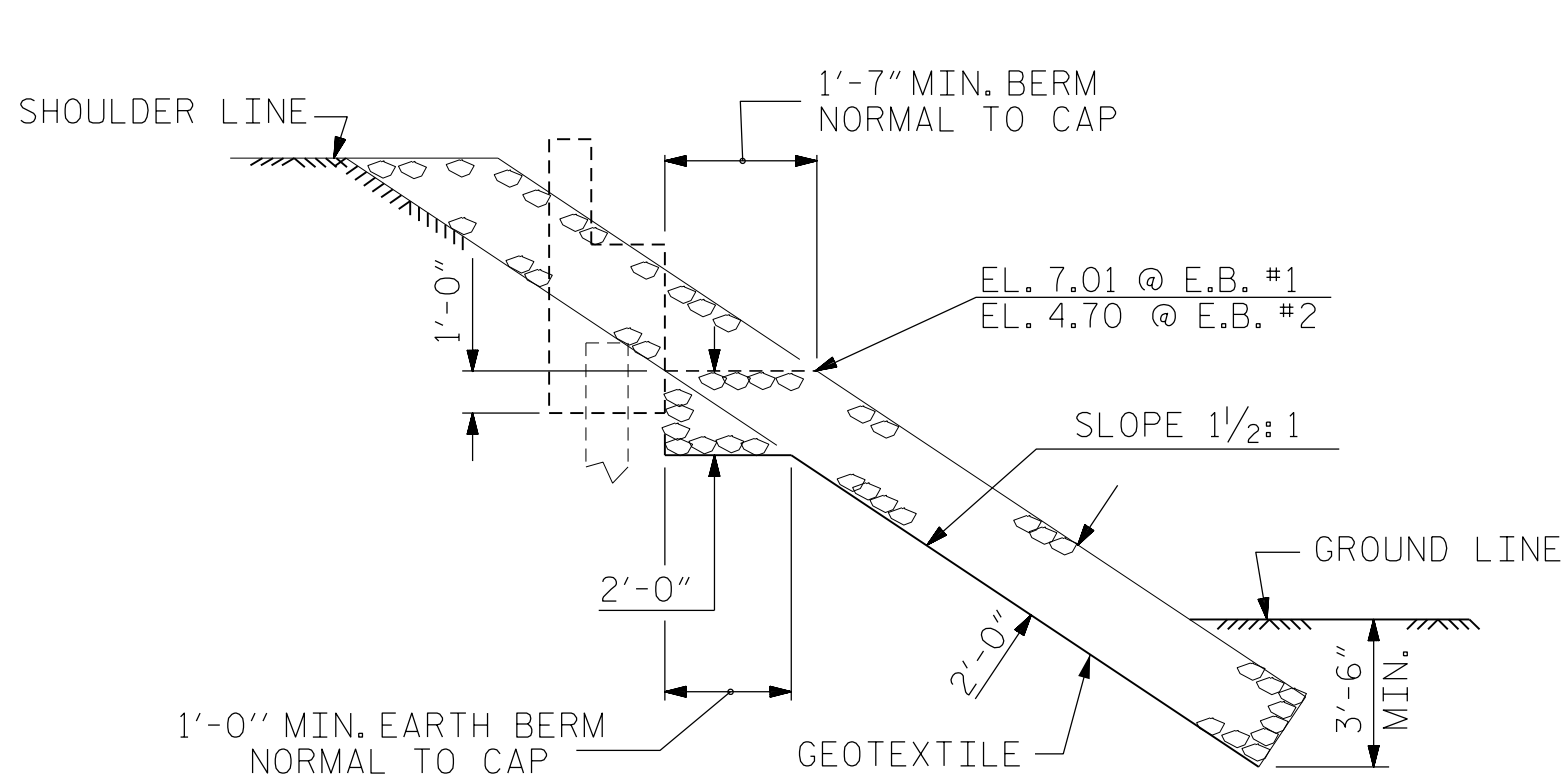
END BENT 2

PLAN OF RIP RAP

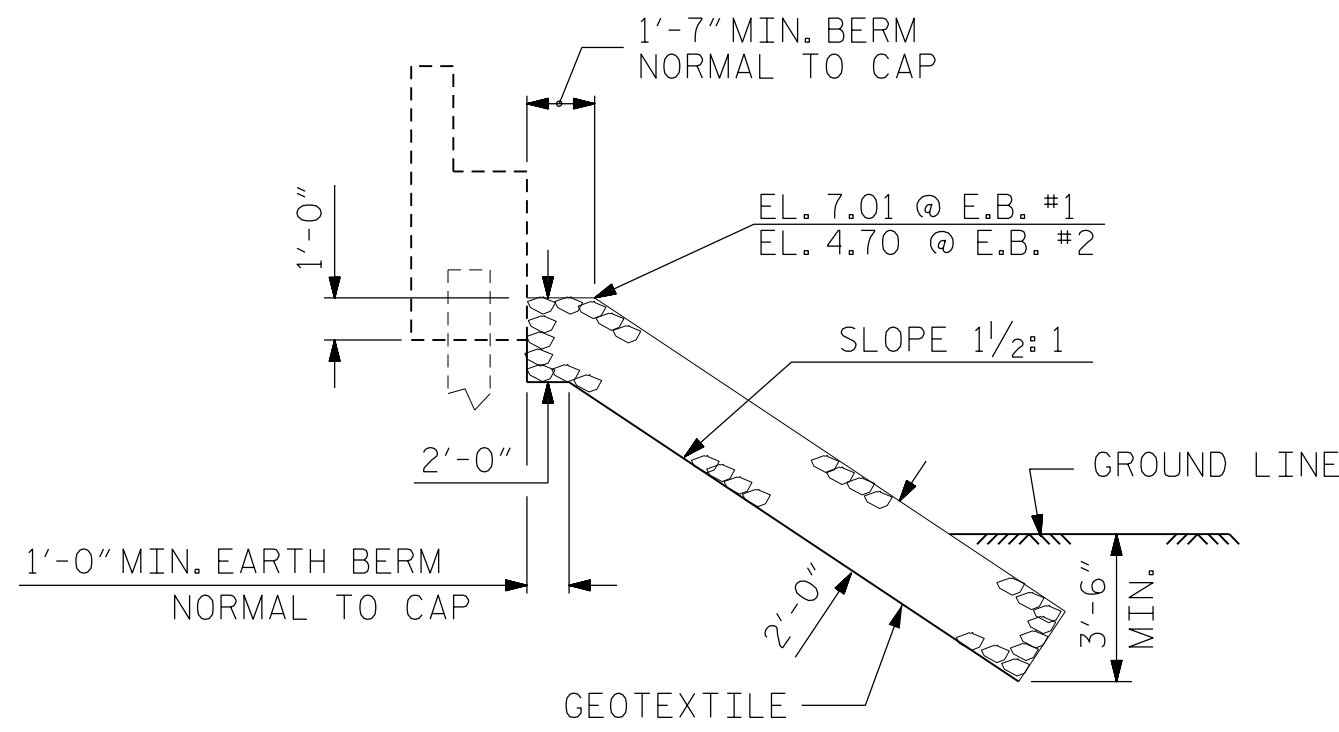
NOTES :

- FOR BERM WIDTH DIMENSIONS, SEE GENERAL DRAWING.  
FOR GRANITE RIP RAP CLASS II (2'-0" THICK), SEE SPECIAL PROVISIONS.

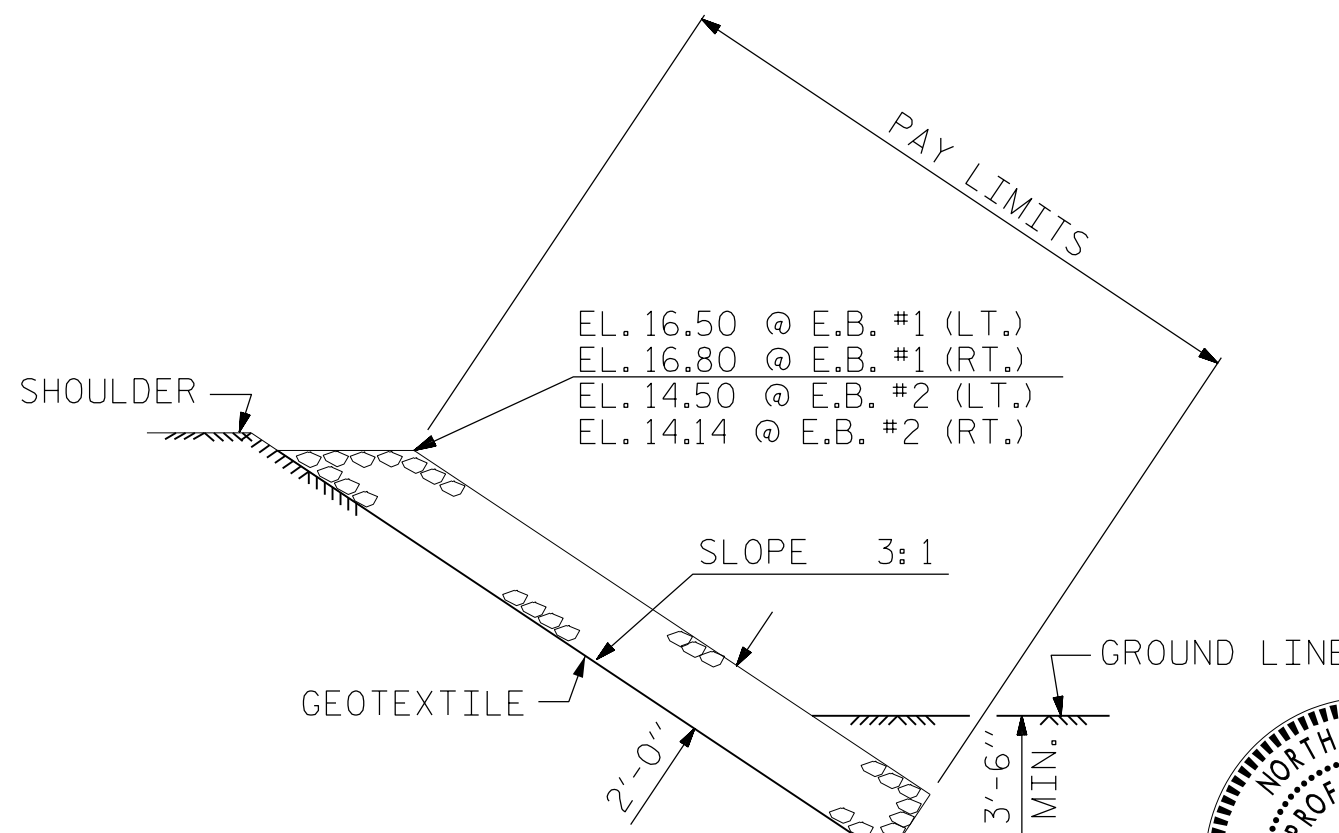
| ESTIMATED QUANTITIES          |                                                 |                            |
|-------------------------------|-------------------------------------------------|----------------------------|
| BRIDGE @<br>STA. 22+57.00 -L- | GRANITE<br>RIP RAP<br>CLASS II<br>(2'-0" THICK) | GEOTEXTILE<br>FOR DRAINAGE |
|                               | TONS                                            | SQUARE YARDS               |
| END BENT 1                    | 130                                             | 145                        |
| END BENT 2                    | 55                                              | 60                         |



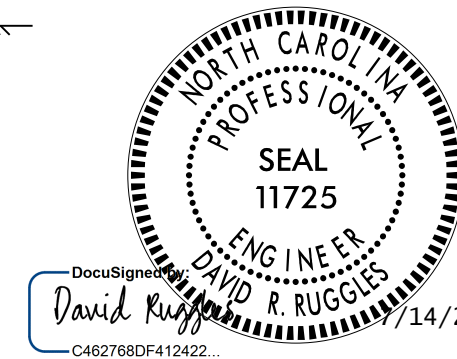
SECTION H-H



SECTION  
BERM RIP RAPPED



SECTION C-C



DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED

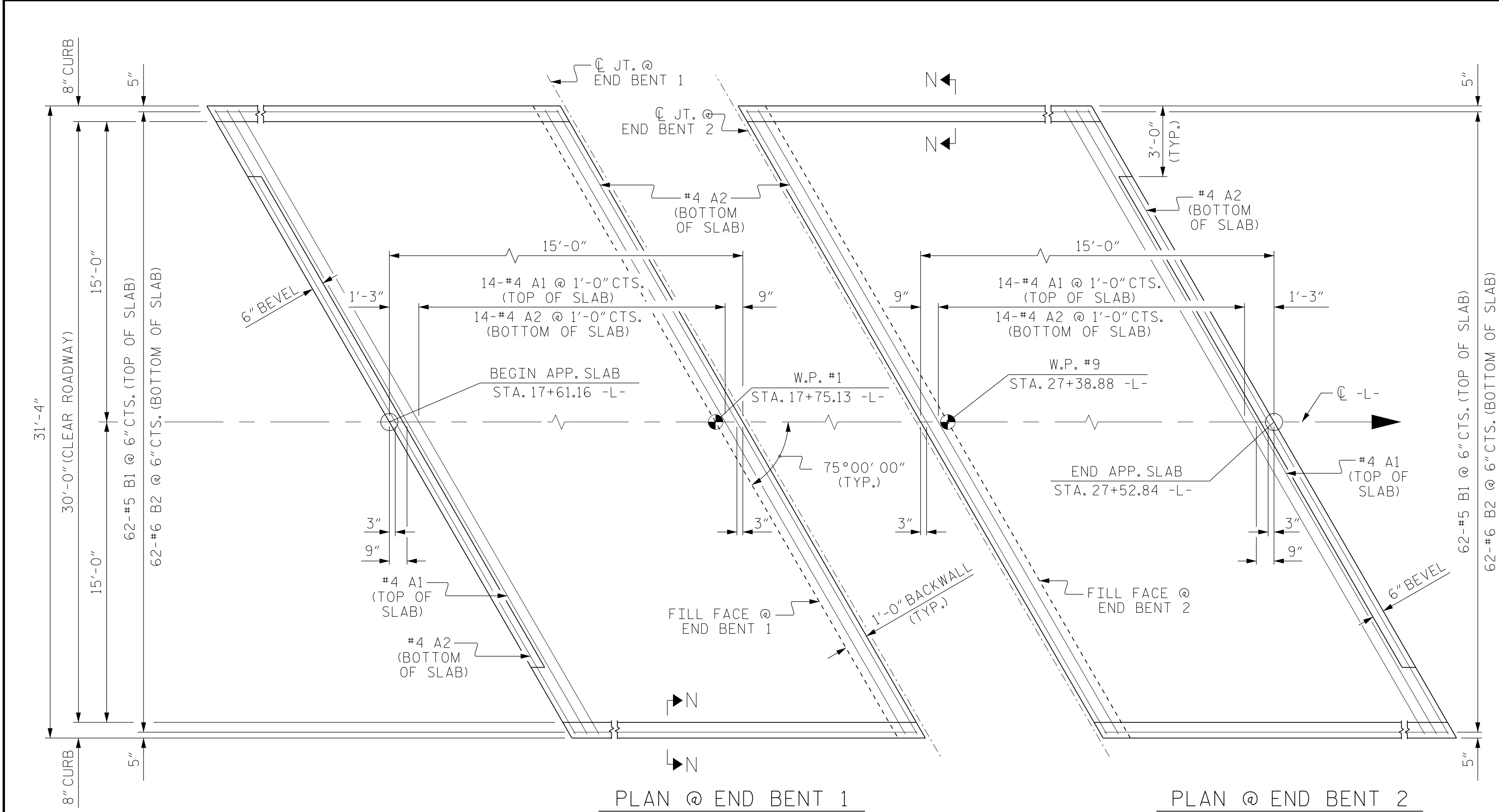
**STEWART**

Firm License No. F-1536  
434 Fayetteville St.,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com

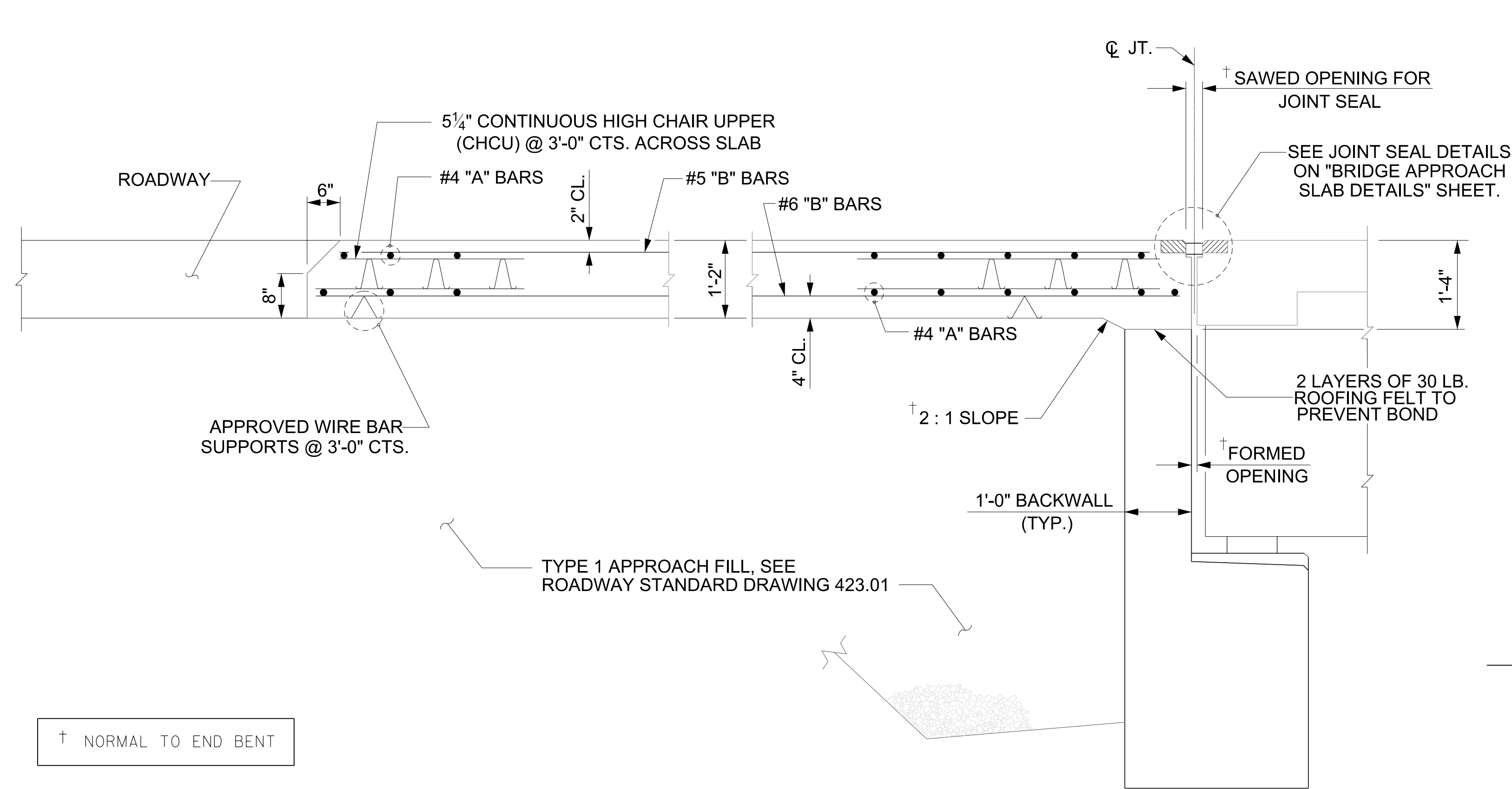
PROJECT NO. B-5614  
BEAUFORT COUNTY  
STATION: 22+57.00 -L-

| REVISIONS |     |       |     |     |       | SHEET NO.<br>S-50     |
|-----------|-----|-------|-----|-----|-------|-----------------------|
| NO.       | BY: | DATE: | NO. | BY: | DATE: |                       |
| 1         |     |       | 3   |     |       | TOTAL<br>SHEETS<br>52 |
| 2         |     |       | 4   |     |       |                       |

7/11/2025  
B-5614\_SMU.AS1\_060009.dgn  
USER:default



PLAN @ END BENT 1  
PLAN @ END BENT 2  
DIMENSIONS SHOWN ARE TYPICAL FOR BOTH APPROACH SLABS



SECTION THRU SLAB

## NOTES

FOR BRIDGE APPROACH FILL, SEE ROADWAY PLANS.

APPROACH SLAB SHALL NOT BE CONSTRUCTED PRIOR TO COMPLETION OF THE BRIDGE DECK.

THE JOINT SHALL BE SAWS PRIOR TO THE CASTING OF THE BARRIER RAIL OR PARAPET AND END POST.

AREA BETWEEN THE WINGWALL AND APPROACH SLAB SHALL BE GRADED TO DRAIN THE WATER AWAY FROM THE FILL FACE OF THE BRIDGE AND SHALL BE PAVED. SEE ROADWAY PLANS.

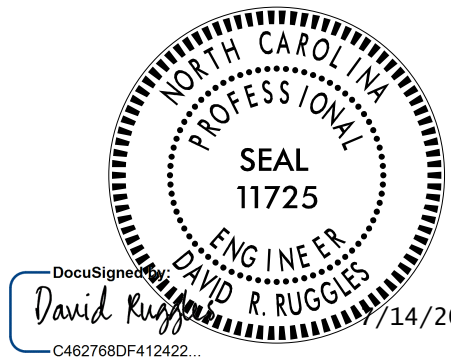
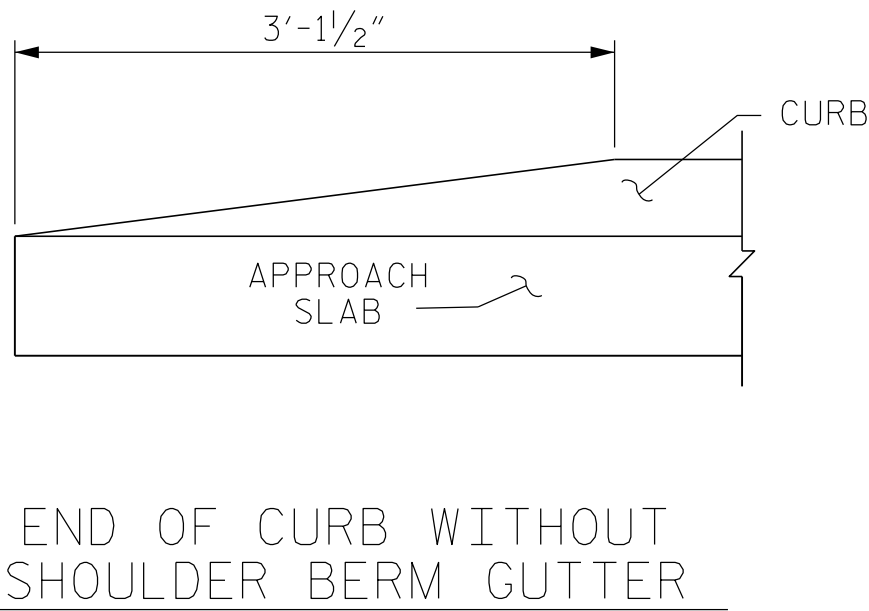
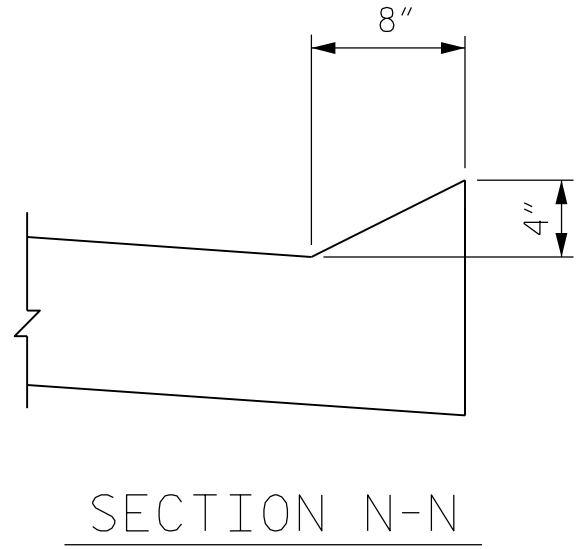
FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE FOAM JOINT SEAL SHALL BE 2 1/2".

FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

| BILL OF MATERIAL                           |     |      |      |        |        |
|--------------------------------------------|-----|------|------|--------|--------|
| FOR ONE APPROACH SLAB (2 REQ'D)            |     |      |      |        |        |
| BAR                                        | NO. | SIZE | TYPE | LENGTH | WEIGHT |
| * A1                                       | 15  | #4   | STR  | 32'-1" | 321    |
| * A2                                       | 16  | #4   | STR  | 32'-1" | 343    |
| * B1                                       | 62  | #5   | STR  | 14'-2" | 916    |
| * B2                                       | 62  | #6   | STR  | 14'-8" | 1366   |
| * EPOXY COATED REINFORCING STEEL 2946 LBS. |     |      |      |        |        |
| CLASS AA CONCRETE 20.8 C.Y.                |     |      |      |        |        |

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



DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED



Firm License No. F-1536  
434 Fayetteville St,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com

PROJECT NO. B-5614  
BEAUFORT COUNTY  
STATION: 22+57.00 -L-

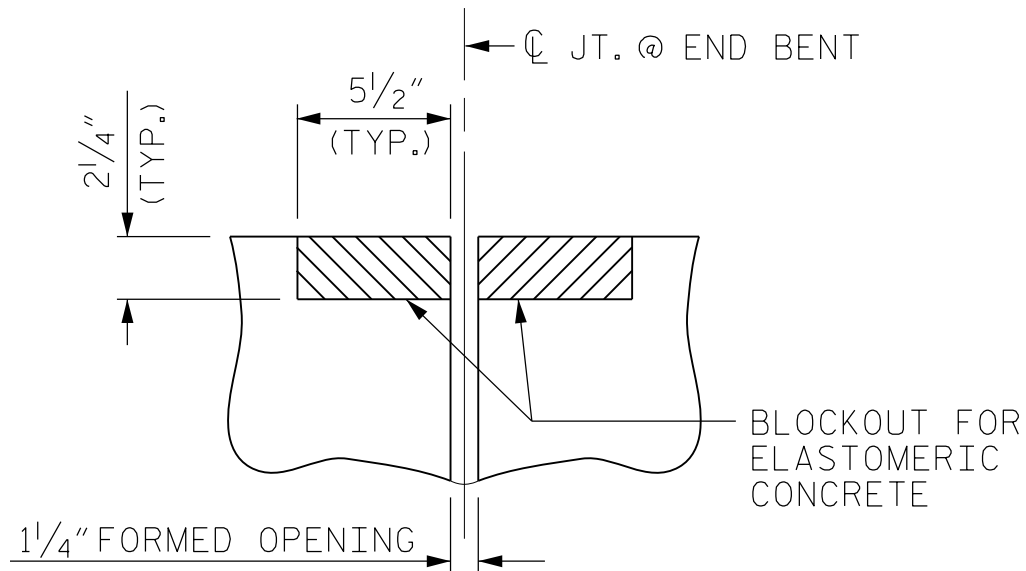
SHEET 1 OF 2

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
STANDARD

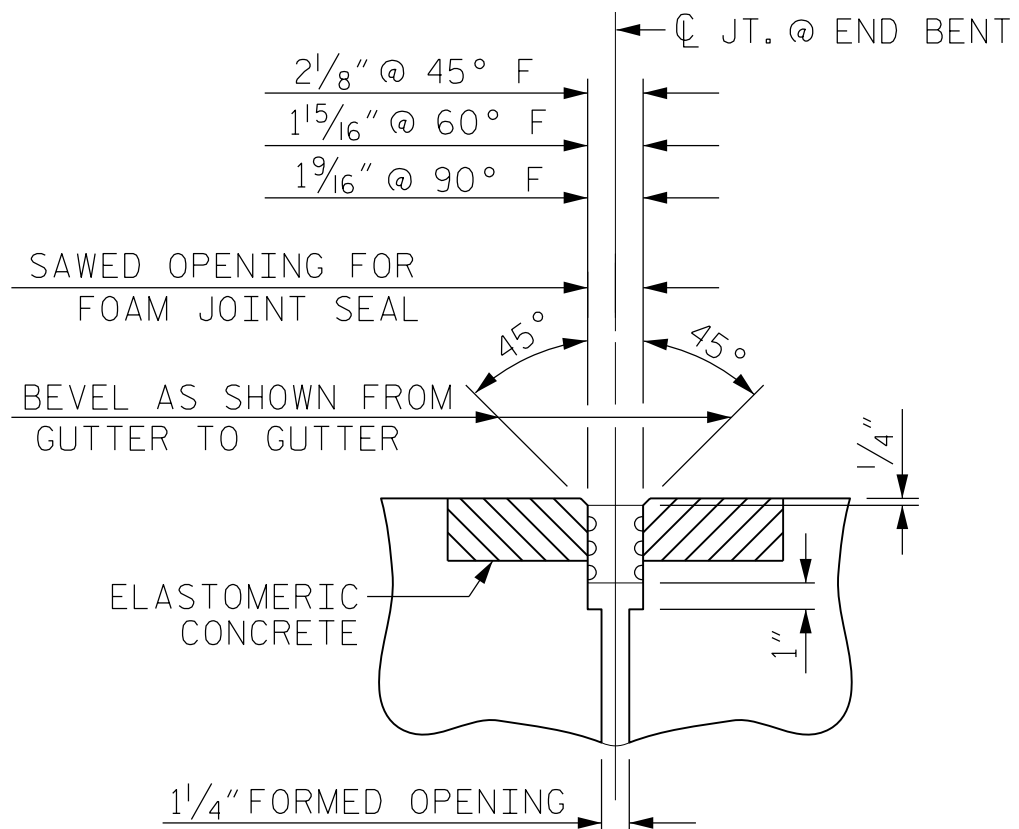
BRIDGE APPROACH SLAB  
FOR FLEXIBLE PAVEMENT

| REVISIONS |     |       |     |     |       | SHEET NO.<br>S-51     |
|-----------|-----|-------|-----|-----|-------|-----------------------|
| NO.       | BY: | DATE: | NO. | BY: | DATE: |                       |
| 1         |     |       | 3   |     |       | TOTAL<br>SHEETS<br>52 |
| 2         |     |       | 4   |     |       |                       |

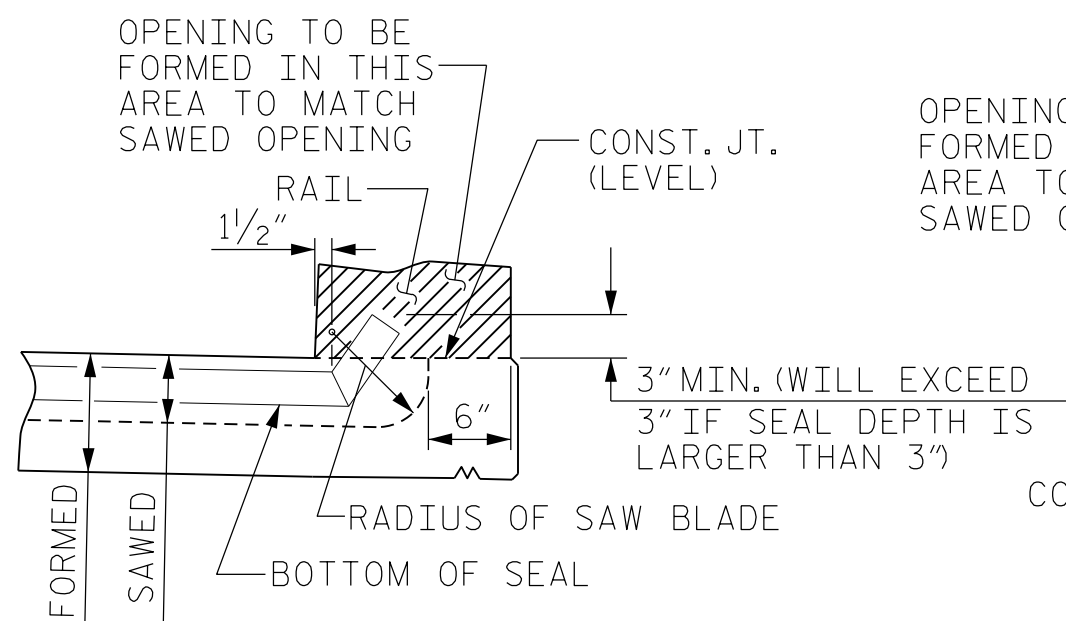
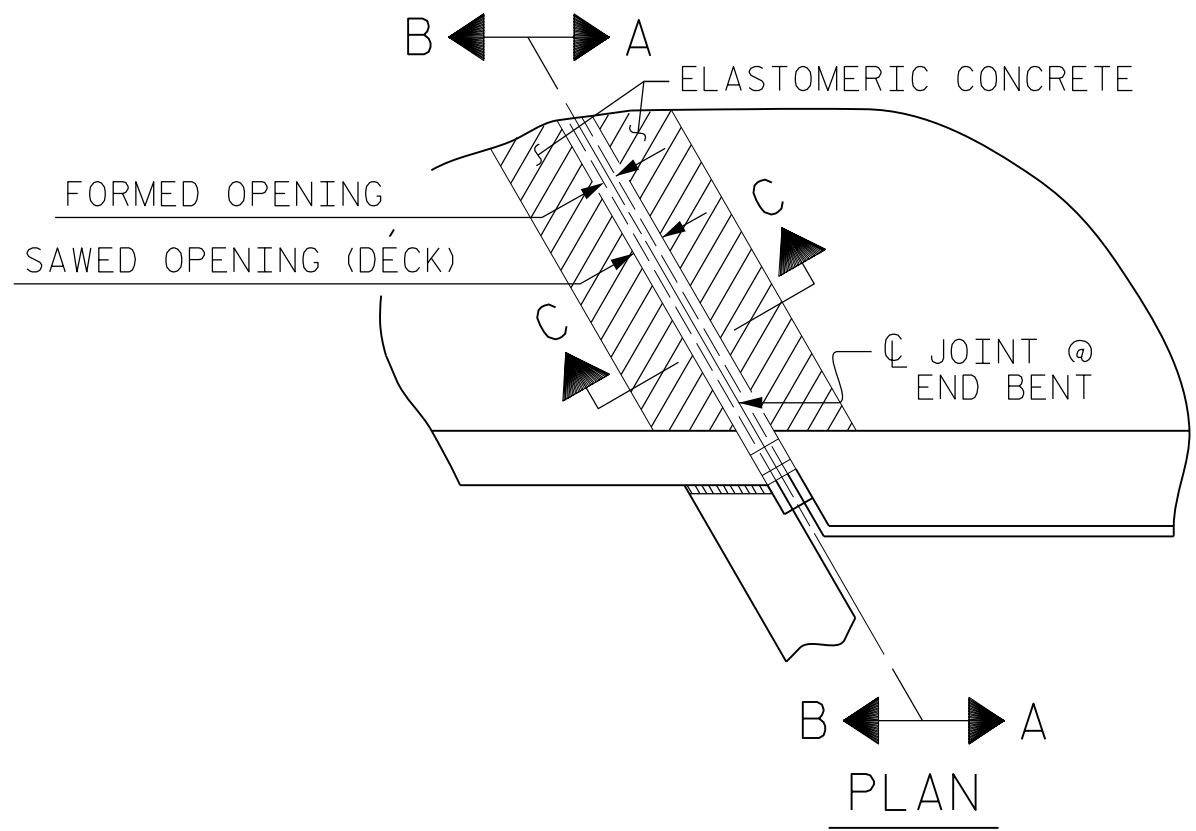
STD. NO. BAS2



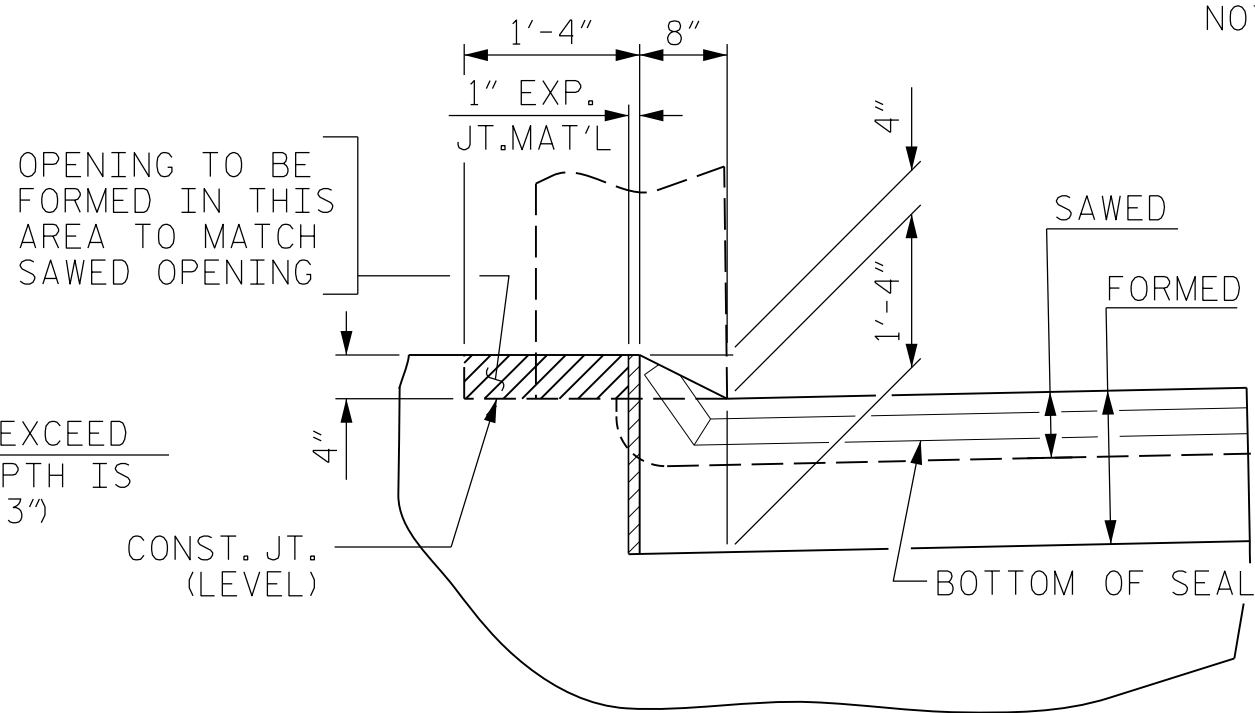
SECTION C-C  
FOAM JOINT SEAL  
(PRE-SAWED ELASTOMERIC  
CONCRETE DIMENSIONS)



SECTION C-C  
FOAM JOINT SEAL  
(EXPANSION)



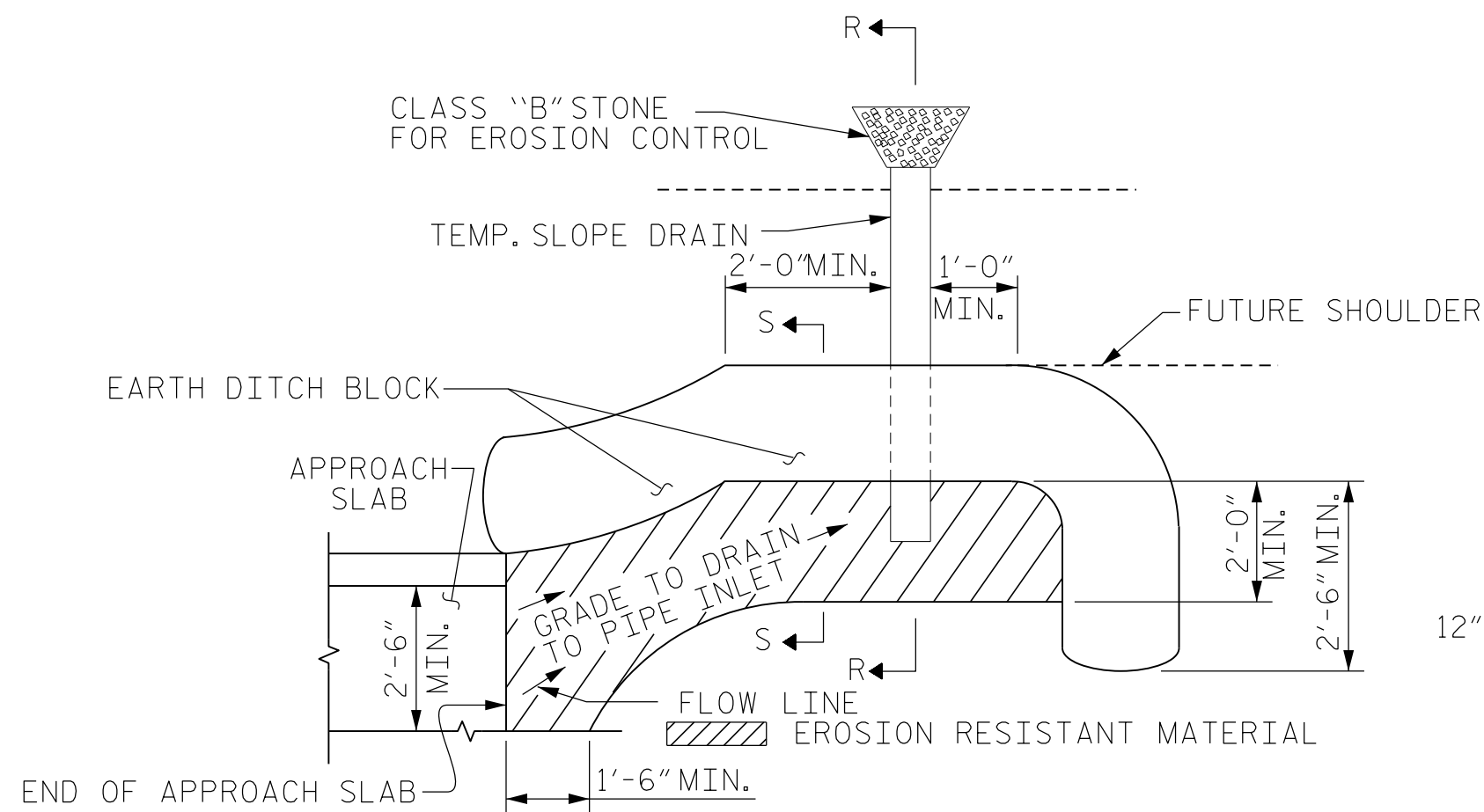
SECTION A-A



SECTION B-B

### JOINT SEAL DETAILS @ END BENT

FOAM JOINT SEAL TO BE CUT, HEAT WELDED AND TURNED UP PARALLEL TO SLOPED FACE OF THE BARRIER RAIL.  
THE JOINT SHALL BE SAWED PRIOR TO THE CASTING OF THE BARRIER RAIL.

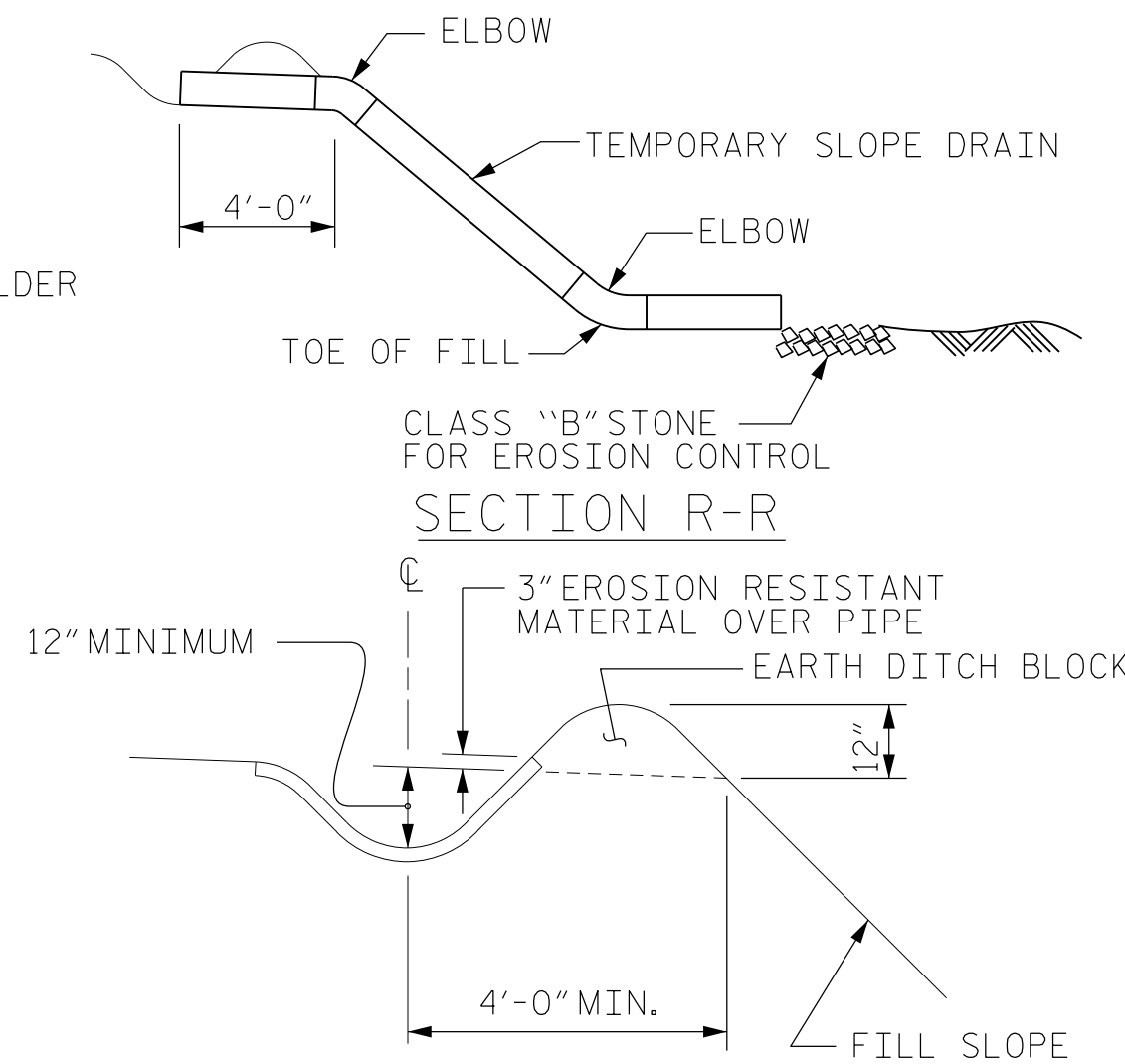


NOTE: IMMEDIATELY AFTER THE CONSTRUCTION OF THE APPROACH SLAB, THE CONTRACTOR SHALL PROVIDE TEMPORARY BERM AND SLOPE DRAIN. CONTRACTOR SHALL GRADE TO PIPE INLET AND PROVIDE EROSION RESISTANT MATERIAL AS SHOWN. THE EROSION RESISTANT MATERIAL SHALL BE EITHER 1) ASPHALT PLANT MIX, TYPE 1 OR TYPE 2, MIN. 2" DEPTH, 2) EROSION CONTROL MAT, OR 3) CONCRETE, AS DIRECTED BY THE ENGINEER. THE SLOPE DRAIN SHALL CONSIST OF A NON-PERFORATED TEMPORARY DRAINAGE PIPE, 12 INCHES IN DIAMETER.

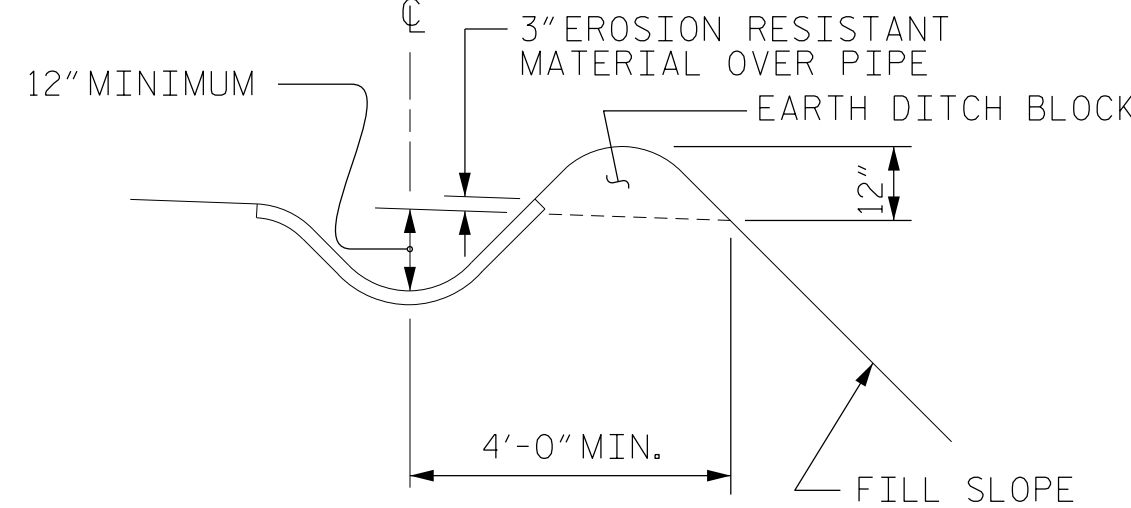
PLAN VIEW

### TEMPORARY BERM AND SLOPE DRAIN DETAILS

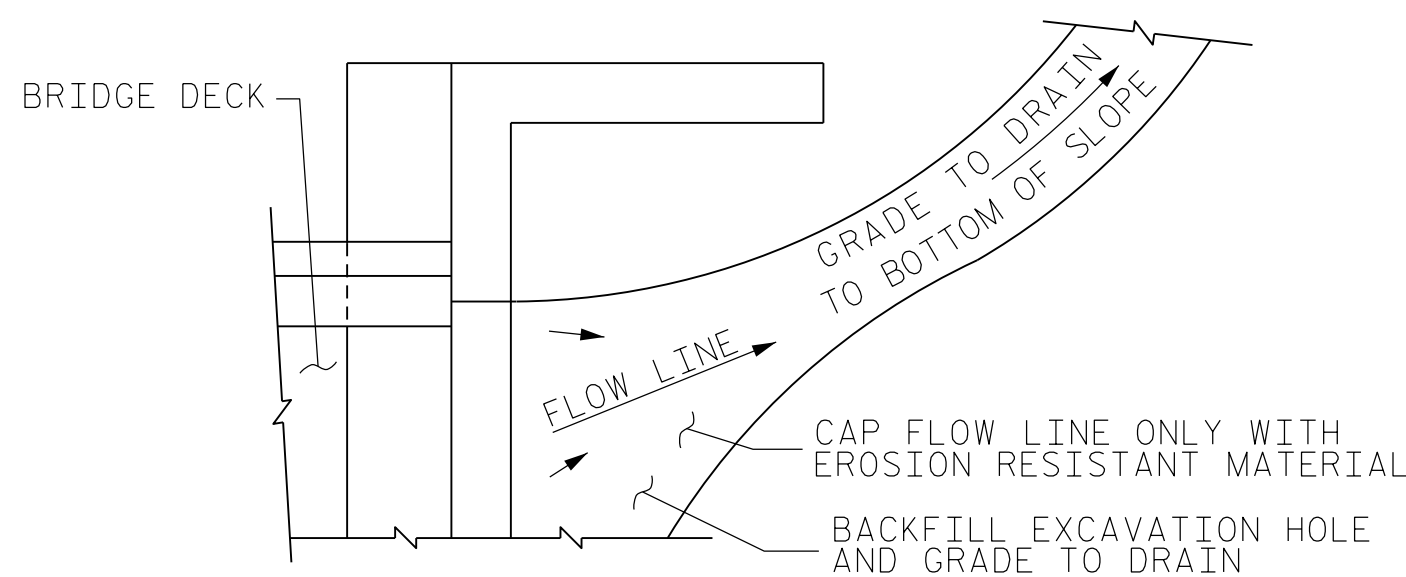
(TO BE USED WHEN SHOULDER BERM GUTTER IS REQUIRED)



SECTION R-R



SECTION S-S



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

### TEMPORARY DRAINAGE DETAIL

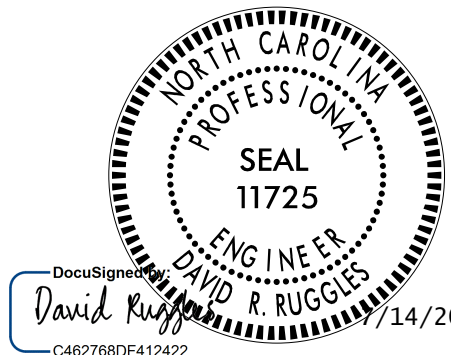
PROJECT NO. B-5614  
BEAUFORT COUNTY  
STATION: 22+57.00 -L-

SHEET 2 OF 2

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

STANDARD  
BRIDGE APPROACH  
SLAB DETAILS

| REVISIONS |     |       |     |     |       | SHEET NO. |
|-----------|-----|-------|-----|-----|-------|-----------|
| NO.       | BY: | DATE: | NO. | BY: | DATE: |           |
| 1         |     |       | 3   |     |       | S-52      |
| 2         |     |       | 4   |     |       |           |



DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED



STEWART

Firm License No. F-1536  
434 Fayetteville St,  
Suite 1400  
Raleigh, NC 27601  
T 919.380.8750  
www.wearestewart.com

STD. NO. BAS4

|                |           |            |         |
|----------------|-----------|------------|---------|
| ASSEMBLED BY : | JCW       | DATE :     | 2/25    |
| CHECKED BY :   | DRR       | DATE :     | 2/25    |
| DRAWN BY :     | FCJ 11/88 | REV. 6/13  | MMA/GM  |
| CHECKED BY :   | ARB 11/88 | REV. 12/17 | MMA/THC |
|                |           | REV. 5/18  | MMA/THC |

STANDARD NOTES

DESIGN DATA:

|                                                                       |                                  |
|-----------------------------------------------------------------------|----------------------------------|
| SPECIFICATIONS.....                                                   | AASHTO (CURRENT)                 |
| LIVE LOAD .....                                                       | SEE PLANS                        |
| IMPACT ALLOWANCE.....                                                 | SEE AASHTO                       |
| STRESS IN EXTREME FIBER OF<br>STRUCTURAL STEEL - AASHTO M270 GRADE 36 | ---- 20,000 LBS. PER SQ. IN.     |
| - AASHTO M270 GRADE 50W                                               | --- 27,000 LBS. PER SQ. IN.      |
| - AASHTO M270 GRADE 50                                                | ---- 27,000 LBS. PER SQ. IN.     |
| REINFORCING STEEL IN TENSION - GRADE 60                               | ----- 24,000 LBS. PER SQ. IN.    |
| CONCRETE IN COMPRESSION .....                                         | 1,200 LBS. PER SQ. IN.           |
| CONCRETE IN SHEAR .....                                               | SEE AASHTO                       |
| STRUCTURAL TIMBER - TREATED OR UNTREATED<br>EXTREME FIBER STRESS      | ---- 1,800 LBS. PER SQ. IN.      |
| COMPRESSION PERPENDICULAR TO GRAIN<br>OF TIMBER .....                 | 375 LBS. PER SQ. IN.             |
| EQUIVALENT FLUID PRESSURE OF EARTH .....                              | 30 LBS. PER CU. FT.<br>(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 CHAMFERED 3⁄4" WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO 1½" RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A ¼" FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A ¼" RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

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 7⁄8" Ø SHEAR STUDS FOR THE ¾" Ø STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - 7⁄8" Ø STUDS FOR 4 - ¾" Ø STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF 7⁄8" Ø STUDS ALONG THE BEAM AS SHOWN FOR ¾" Ø STUDS BASED ON THE RATIO OF 3 - 7⁄8"Ø STUDS FOR 4 - ¾" 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 5⁄16" IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.

WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY 1⁄16" OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

HANDRAILS AND POSTS:

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

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

SPECIAL NOTES:

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