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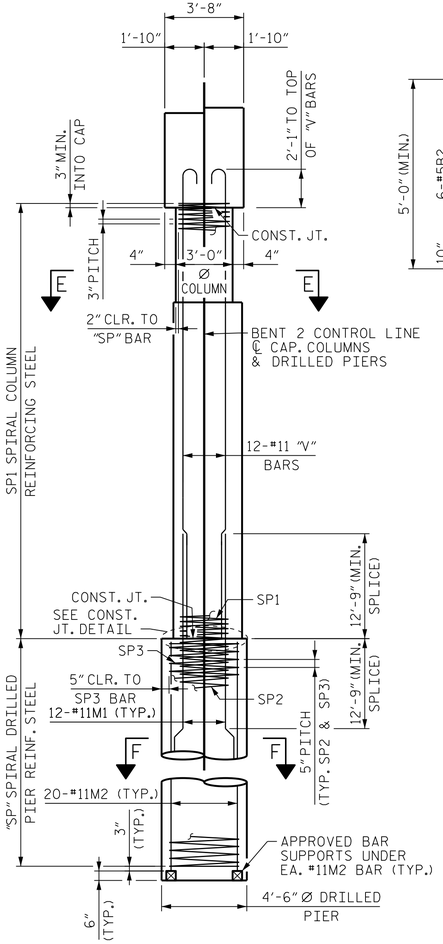
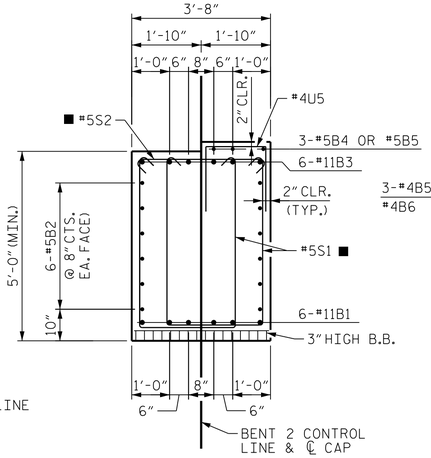
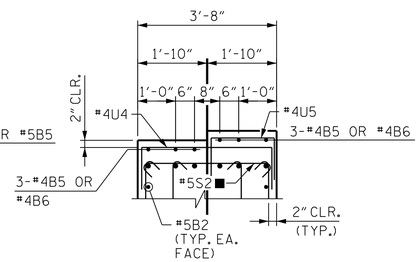
SPAN C SPAN B




END ELEVATION

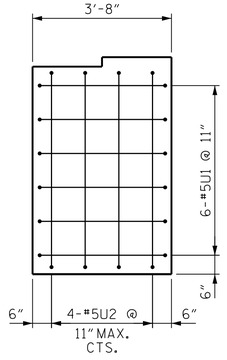



SECTION A-A

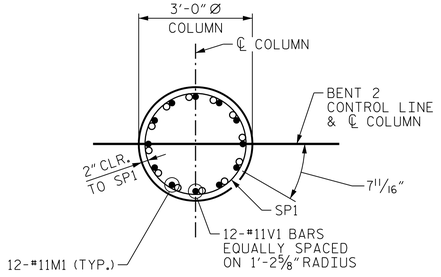



SECTION B-B

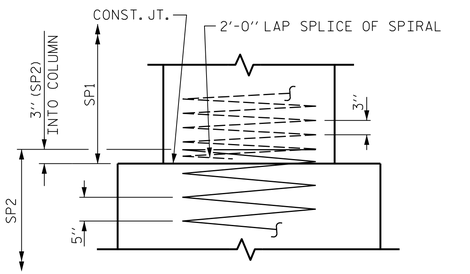
■ = INVERT ALTERNATE STIRRUPS




VIEW C-C

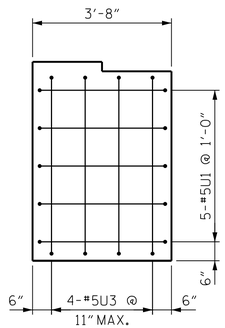



SECTION E-E

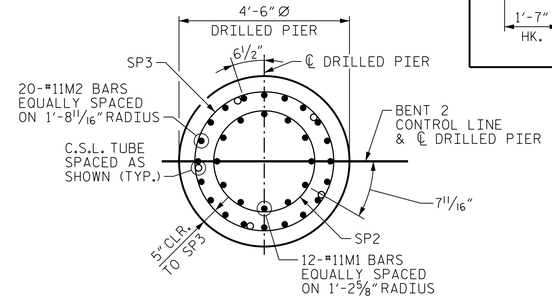



CONSTRUCTION JOINT DETAIL

(SP3 & LONGITUDINAL REINFORCING NOT SHOWN FOR CLARITY)

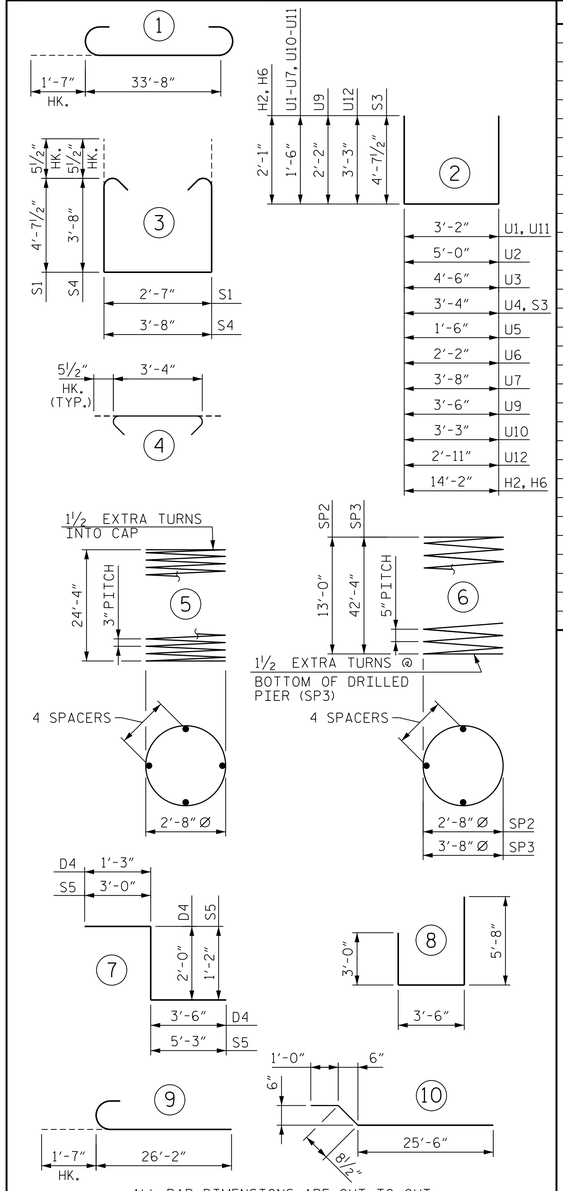



VIEW D-D




SECTION F-F

## BAR TYPES




ALL BAR DIMENSIONS ARE OUT TO OUT

## BILL OF MATERIAL

BENT 2

| BAR | NO. | SIZE | TYPE | LENGTH | WEIGHT |
|---|---|---|---|---|---|
| B1 | 6 | #11 | STR | 33'-8" | 1074 |
| B2 | 12 | #5 | STR | 33'-8" | 422 |
| B3 | 6 | #11 | 1 | 36'-10" | 1175 |
| B4 | 3 | #4 | STR | 11'-5" | 23 |
| B5 | 9 | #4 | STR | 12'-1" | 73 |
| B6 | 6 | #4 | STR | 5'-0" | 21 |
| | | | | | |
| D1 | 84 | #5 | STR | 4'-3" | 373 |
| D2 | 24 | #5 | STR | 3'-4" | 84 |
| D3 | 8 | #5 | STR | 6'-6" | 55 |
| D4 | 8 | #5 | 7 | 6'-9" | 57 |
| | | | | | |
| H1 | 7 | #5 | STR | 40'-8" | 297 |
| H2 | 14 | #5 | 2 | 18'-4" | 268 |
| H3 | 3 | #6 | STR | 2'-2" | 10 |
| H4 | 1 | #6 | STR | 40'-8" | 62 |
| H5 | 2 | #6 | STR | 14'-2" | 43 |
| H6 | 2 | #6 | 2 | 18'-4" | 56 |
| H7 | 76 | #5 | STR | 21'-2" | 1678 |
| H8 | 1 | #5 | STR | 5'-3" | 6 |
| H9 | 3 | #6 | STR | 39'-2" | 177 |
| | | | | | |
| M1 | 24 | #11 | 10 | 27'-3" | 3475 |
| M2 | 40 | #11 | STR | 45'-3" | 9617 |
| | | | | | |
| S1 | 70 | #5 | 3 | 12'-9" | 931 |
| S2 | 35 | #5 | 4 | 4'-4" | 159 |
| S3 | 6 | #5 | 2 | 12'-7" | 79 |
| S4 | 24 | #5 | 3 | 11'-11" | 299 |
| S5 | 20 | #5 | 7 | 9'-5" | 197 |
| | | | | | |

| BAR | NO. | SIZE | TYPE | LENGTH | WEIGHT |
|---|---|---|---|---|---|
| U1 | 11 | #5 | 2 | 6'-2" | 71 |
| U2 | 4 | #5 | 2 | 8'-0" | 34 |
| U3 | 4 | #5 | 2 | 7'-6" | 32 |
| U4 | 47 | #4 | 2 | 6'-4" | 199 |
| U5 | 69 | #4 | 2 | 4'-6" | 208 |
| U6 | 74 | #5 | 2 | 5'-2" | 399 |
| U7 | 4 | #5 | 2 | 6'-8" | 28 |
| U8 | 8 | #5 | 8 | 12'-2" | 102 |
| U9 | 12 | #5 | 2 | 7'-10" | 99 |
| U10 | 4 | #5 | 2 | 6'-3" | 27 |
| U11 | 20 | #5 | 2 | 6'-2" | 129 |
| U12 | 20 | #5 | 2 | 9'-5" | 197 |
| | | | | | |
| V1 | 24 | #11 | 9 | 27'-9" | 3539 |
| V2 | 94 | #5 | STR | 6'-7" | 646 |
| V3 | 15 | #5 | STR | 17'-7" | 276 |
| V4 | 92 | #5 | STR | 18'-8" | 1792 |

| | |
|---|---|
| REINFORCING STEEL | LBS. 28489 |

| BAR | NO. | SIZE | TYPE | LENGTH | WEIGHT |
|---|---|---|---|---|---|
| SP1 | 2 | * | 5 | 816'-10" | 1092 |
| SP2 | 2 | ** | 6 | 263'-3" | 550 |
| SP3 | 2 | ** | 6 | 1181'-10" | 2466 |

| | |
|---|---|
| SPIRAL REINF. STEEL | LBS. 4108 |
| CLASS A CONCRETE | |
| POUR 2 (COLUMNS & CRASHWALL) | CU. YDS. 79.4 |
| POUR 3 (CAP) | CU. YDS. 24.6 |
| CRASHWALL AT EXISTING BENT | CU. YDS. 30.8 |
| TOTAL CLASS A CONCRETE | CU. YDS. 134.8 |
| DRILLED PIER CONCRETE | |
| POUR 1 (DRILLED PIERS) | CU. YDS. 50.6 |
| CSL TUBES | LIN. FT. 450.0 |
| 4'-6" DIA. DRILLED PIERS IN SOIL | LIN. FT. 76.9 |
| 4'-6" DIA. DRILLED PIERS NOT IN SOIL | LIN. FT. 9.0 |

* THE SP1 SPIRAL REINFORCING STEEL SHALL BE W20 OR D-20 COLD DRAWN WIRE OR #4 PLAIN OR DEFORMED BAR.

** THE SP2 AND SP3 SPIRAL REINFORCING STEEL SHALL BE W31 OR D-31 COLD DRAWN WIRE OR #5 PLAIN OR DEFORMED BAR.

PROJECT NO. B-3186/B-5898

HAYWOOD COUNTY

STATION: 68+65.75± -L_RT-

SHEET 4 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

# SUBSTRUCTURE BENT 2 SECTIONS AND DETAILS

NORTH CAROLINA PROFESSIONAL SEAL 043854 ENGINEER ERIC M. NOLTING

Eric Nolting 1/25/2022

HDR Engineering, Inc. of the Carolinas
555 Fayetteville St., Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

| REVISIONS | | | | | | SHEET NO. |
|---|---|---|---|---|---|---|
| NO. | BY: | DATE: | NO. | BY: | DATE: | S03R-42 |
| 1 | -- | -- | 3 | -- | -- | TOTAL SHEETS |
| 2 | -- | -- | 4 | -- | -- | 61 |

| | | | |
|---|---|---|---|
| DES BY: | D. MAST | DATE : | 07/21 |
| DES CHK: | M. NEIHEISEL | DATE : | 07/21 |
| DWG BY: | D. CARTER | DATE : | 07/21 |
| CHK BY: | E. NOLTING | DATE : | 08/21 |

PLOT DRIVER: NCDOT STRUCTURES DEFAULT PLOTTER.plt PENTABLE: NCDOT STRUCTURES DEFAULT PEN.tbl
USER: PPETERSO DATE: 1/24/2022 TIME: 2:44:44 PM
FILE: ...\404_205_B5898B3186_SMU_B2_042_430107.dgn