



**FOUNDATION LAYOUT**  
(DIMENSIONS LOCATING PILES ARE SHOWN TO THE PILE CENTERLINE)

**FOUNDATION NOTES (CONTINUED):**

- DRIVE PILES AT END BENT NO.1 AND END BENT NO.2 PRIOR TO BEGINNING MSE WALL CONSTRUCTION.
- INSTALLATION OF 24-INCH DIAMETER CORRUGATED METAL CANS AROUND THE PILES AFTER THEY ARE DRIVEN FROM THE BOTTOM OF THE PILE CAP TO THE LEVELING PAD ELEVATION IS REQUIRED FOR PILES AT END BENT NO.1 AND END BENT NO.2.
- THE CORRUGATED METAL CANS SHALL BE DESIGNED TO WITHSTAND THE PRESSURES FROM COMPACTION OPERATIONS ON ADJACENT FILL WITHOUT DISTORTION. AT A MINIMUM, CORRUGATED METAL CANS SHALL BE 16-GAUGE WITH A WALL THICKNESS OF 0.064 INCHES.
- LOOSELY BACKFILL CORRUGATED METAL CANS USING THE SAME MATERIAL AS MSE REINFORCED ZONE PRIOR TO CONSTRUCTION OF THE END BENT PILE CAP. DO NOT COMPACT MATERIAL WITHIN THE CAN.

**FOUNDATION NOTES:**

- FOR PILES, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.
- PILES AT END BENT NO.1 ARE DESIGNED FOR A FACTORED RESISTANCE OF 105 TONS PER PILE.
- PILES AT END BENT NO.2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 105 TONS PER PILE.
- PILES AT BENT NO.1 ARE DESIGNED FOR A FACTORED RESISTANCE OF 100 TONS PER PILE.
- DRIVE PILES AT END BENT NO.1 TO A REQUIRED DRIVING RESISTANCE OF 260 TONS PER PILE. THIS REQUIRED DRIVING RESISTANCE INCLUDES ADDITIONAL RESISTANCE FOR DOWNDRAW.
- DRIVE PILES AT END BENT NO.2 TO A REQUIRED DRIVING RESISTANCE OF 320 TONS PER PILE. THIS REQUIRED DRIVING RESISTANCE INCLUDES ADDITIONAL RESISTANCE FOR DOWNDRAW.
- DRIVE PILES AT BENT NO.1 TO A REQUIRED DRIVING RESISTANCE OF 170 TONS PER PILE.
- INSTALL PILES AT END BENT NO.1 TO A TIP ELEVATION NO HIGHER THAN 702 FEET.
- INSTALL PILES AT END BENT NO.2 TO A TIP ELEVATION NO HIGHER THAN 702 FEET.
- INSTALL PILES AT BENT NO.1 TO A TIP ELEVATION NO HIGHER THAN 699 FEET.
- STEEL H-PILE POINTS ARE REQUIRED FOR STEEL H-PILES AT END BENT NO.1, BENT NO.1 AND END BENT NO.2. FOR STEEL PILE POINTS SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.
- IT HAS BEEN ESTIMATED THAT A HAMMER WITH AN EQUIVALENT RATED ENERGY IN THE RANGE OF 45,000 TO 65,000 FT-LBS PER BLOW WILL BE REQUIRED TO DRIVE PILES AT END BENT NO.1. 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.
- IT HAS BEEN ESTIMATED THAT A HAMMER WITH AN EQUIVALENT RATED ENERGY IN THE RANGE OF 35,000 TO 55,000 FT-LBS PER BLOW WILL BE REQUIRED TO DRIVE PILES AT BENT NO.1. 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.
- IT HAS BEEN ESTIMATED THAT A HAMMER WITH AN EQUIVALENT RATED ENERGY IN THE RANGE OF 65,000 TO 75,000 FT-LBS PER BLOW WILL BE REQUIRED TO DRIVE PILES AT END BENT NO.2. 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.
- TESTING THE FIRST PRODUCTION PILE WITH THE PDA DURING DRIVING, RESTRIKING OR REDRIVING IS REQUIRED AT END BENT NO.1, BENT NO.1 AND END BENT NO.2. FOR PDA TESTING, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.
- OBSERVE A 1 MONTH WAITING PERIOD AFTER CONSTRUCTING THE MECHANICALLY STABILIZED EARTH (MSE) ABUTMENT WALL TO WITHIN 1 FT OF THE BOTTOM OF CAP ELEVATION BEFORE BEGINNING END BENT CONSTRUCTION AT END BENT NO.1 AND NO.2. FOR BRIDGE WAITING PERIODS, SEE ROADWAY PLANS AND SECTION 235 OF THE STANDARD SPECIFICATIONS.

DRAWN BY : A.J. FORFA DATE : 02/01/19  
 CHECKED BY : J.S. HOBSON DATE : 02/21/19  
 DESIGN ENGINEER OF RECORD : J.S. HOBSON DATE : 02/07/20

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**Professional Seal:**  
 NORTH CAROLINA PROFESSIONAL SEAL 043177  
 J.S. HOBSON ENGINEER  
 4/16/2020

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT NO. R-4707  
GUILFORD COUNTY  
 STATION: 41+39.51 -Y-  
61+03.00 -L-  
 SHEET 2 OF 3

|   |     |       |     |     |                 |
|---|-----|-------|-----|-----|-----------------|
| STATE OF NORTH CAROLINA<br>DEPARTMENT OF TRANSPORTATION<br>RALEIGH            |     |       |     |     |                 |
| GENERAL DRAWING   |     |       |     |     |                 |
| BRIDGE ON SR 4771 (REEDY FORK PARKWAY) OVER US 29 BETWEEN SR 2526 AND SR 2790 |     |       |     |     |                 |
| REVISIONS   |     |       |     |     |                 |
| NO.   | BY: | DATE: | NO. | BY: | DATE:           |
| 1   |     |       | 3   |     |                 |
| 2   |     |       | 4   |     |                 |
| SHEET NO. S-02  |     |       |     |     | TOTAL SHEETS 39 |