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# SUMMARY OF PILE INFORMATION/ INSTALLATION

(BLANK ENTRIES INDICATE ITEM IS NOT APPLICABLE TO STRUCTURE)

| END BENT/ BENT NO. PILE (s) #-# (e.g., "BENT 1, PILES 1-5") | FACTORED RESISTANCE PER PILE TONS | PILE CUT-OFF (TOP OF PILE) ELEVATION FT | ESTIMATED PILE LENGTH PER PILE FT | SCOUR CRITICAL ELEVATION FT | DRIVEN PILES | | | PREDRILLING FOR PILES * | | | DRILLED-IN PILES | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | MIN. PILE TIP (TIP NO HIGHER THAN) ELEV FT | REQUIRED DRIVING RESISTANCE (RDR)** PER PILE TONS | TOTAL PILE REDRIVES QUANTITY EACH | PREDRILLING LENGTH PER PILE LIN FT | PREDRILLING ELEVATION (ELEV NOT TO PREDRILL BELOW) FT | MAXIMUM PREDRILLING DIA INCHES | PILE EXCAVATION (BOTTOM OF HOLE) ELEV FT | PILE EXC NOT IN SOIL PER PILE LIN FT | PILE EXC IN SOIL PER PILE LIN FT |
| END BENT 1, PILES 1-5 | 97 | 1.43 | 85 | | | 162 | | | | | | | |
| | | | | | | | | | | | | | |
| END BENT 2, PILES 1-5 | 97 | 1.64 | 85 | | | 162 | 5 | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

* 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.

** $RDR = \frac{\text{FACTORED RESISTANCE + FACTORED DOWNDRAG LOAD + FACTORED DEAD LOAD}}{\text{DYNAMIC RESISTANCE FACTOR}} + \text{NORMAL DOWNDRAG RESISTANCE} + \frac{\text{NORMINAL SCOUR RESISTANCE}}{\text{SCOUR RESISTANCE FACTOR}}$

# SUMMARY OF DPT/ PILE ORDER LENGTHS

(BLANK ENTRIES INDICATE ITEM IS NOT APPLICABLE TO STRUCTURE)

| DYNAMIC PILE TESTING (DPT) | | | | PILE ORDER LENGTHS | |
|---|---|---|---|---|---|
| END BENT/ BENT NO. | DPT REQUIRED? YES OR MAYBE | DPT PILE LENGTH FT | TOTAL DPT QUANTITY EACH | END BENT/ BENT NO(s) | PILE ORDER LENGTH BASIS* EST OR DPT |
| END BENT 1 | MAYBE | 90 | | | |
| | | | | | |
| END BENT 2 | MAYBE | 90 | 1 | | |
| | | | | | |
| | | | | | |

* EST=PILE ORDER LENGTHS FROM ESTIMATED PILE LENGTHS; DPT=PILE ORDER LENGTHS BASED ON DPT. FOR GROUPS OF END BENTS/BENTS WITH PILE ORDER LENGHTS BASED ON DPT, THE FIRST END BENT/ BENT NO. LISTED FOR EACH GROUP IS THE REPRESENTATIVE END BENT/ BENT WITH THE DPT.

# PILE DESIGN INFORMATION

(BLANK ENTRIES INDICATE ITEM IS NOT APPLICABLE TO STRUCTURE)

| END BENT/ BENT NO. PILE (s) #-# (e.g., "BENT 1, PILES 1-5") | FACTORED AXIAL LOAD PER PILE TONS | FACTORED DOWNDRAG LOAD PER PILE TONS | FACTORED DEAD LOAD* PER PILE TONS | DYNAMIC RESISTANCE FACTOR | NOMINAL DOWNDRAG RESISTANCE PER PILE TONS | NOMINAL SCOUR RESISTANCE PER PILE TONS | SCOUR RESISTANCE FACTOR (DEFAULT=1.00) |
|---|---|---|---|---|---|---|---|
| END BENT 1, PILES 1-5 | 97 | | | 0.60 | | | |
| | | | | | | | |
| END BENT 2, PILES 1-5 | 97 | | | 0.60 | | | |
| | | | | | | | |
| | | | | | | | |

* FACTORED DEAD LOAD IS FACTORED WEIGHT OF PILE ABOVE THE GROUND LINE.

## FOUNDATION NOTES:

FOR PILES, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

PILES WITH THE DPT DURING DRIVING, RESTRIKING OR REDRIVING MAY BE REQUIRED. THE ENGINEER WILL DETERMINE THE NEED FOR DPT WHEN DPT MAY BE REQUIRED. FOR DPT, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

IT HAS BEEN ESTIMATED THAT A HAMMER WITH AN EQUIVALENT RATED ENERGY IN THE RANGE OF 25,000 TO 45,000 FT-LBS PER BLOW WILL BE REQUIRED TO DRIVE PILES AT END BENT NO. 1 AND 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.

APPLY AN 8 MIL THICK 1350 ALUMINUM (W-AL-1350) THERMAL SPRAY COATING WITH A 0.5 MIL THICK SEAL COAT TO THE PILES, IN ACCORDANCE WITH THE THERMAL SPRAYED COATINGS SPECIAL PROVISION AND SECTION 442 OF THE STANDARD SPECIFICATIONS. FOR THERMAL SPRAYED COATINGS, SEE SPECIAL PROVISIONS.

AFTER DRIVING THE PILES, APPLY 1 COAT EACH OF 1080-12 BROWN AND 1080-12 GRAY PAINT TO THE EMBEDDED SECTION OF THE METALLIZED PILE PRIOR TO CONCRETE EMBEDMENT IN ACCORDANCE WITH SECTION 442 OF THE STANDARD SPECIFICATIONS.

## NOTES:

1. THE PILE FOUNDATION TABLES ARE BASED ON THE BRIDGE SUBSTRUCTURE DESIGN AND FOUNDATION RECOMMENDATIONS SEALED BY A NORTH CAROLINA PROFESSIONAL ENGINEER (YINHUI LIU, PE #034020) ON 07-16-2024.
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 WILL DETERMINE THE NEED FOR DPT AND WHEN DPT MAY BE REQUIRED.

DRAWN BY : J.E.HAGENBUSH DATE : 01/28/26
CHECKED BY : J.T. KELVINGTON DATE : 01/28/26
DESIGN ENGINEER OF RECORD: J.T. KELVINGTON DATE : 03/26/26

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NORTH CAROLINA PROFESSIONAL SEAL 13406 ENGINEER JOSEPH T. KELVINGTON
4/29/2026

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT NO. BP1.R014.1
TYRRELL COUNTY
STATION: 14+33.00 -L-

SHEET 3 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PILE FOUNDATION TABLES

| REVISIONS | | | | | | SHEET NO. |
|---|---|---|---|---|---|---|
| NO. | BY: | DATE: | NO. | BY: | DATE: | S-03 |
| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | 16 |

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