3/22/2022
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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 Lenth per Pile FT	Scour Critical Elevation FT	Driven Piles: Min Pile Tip (Tip No Higher Than) Elev FT	Driven Piles: Required Driving Resistance (RDR)** per Pile TONS	Driven Piles: Total Pile Redrives Quantity EACH	Predrilling for Piles*: Predrilling Length per Pile Lin FT	Predrilling for Piles*: Predrilling Elevation (Elev Not To Predrill Below) FT	Predrilling for Piles*: Maximum Predrilling Dia INCHES	Drilled-In Piles: Pile Excavation (Bottom of Hole) Elev FT	Drilled-In Piles: Pile Exc Not In Soil per Pile Lin FT	Drilled-In Piles: Pile Exc In Soil per Pile Lin FT
END BENT 1, Piles 1-6	120	166.22	100			160	3						
BENT 1, Piles 1-18	150	144.98	65			200	9						
END BENT 2, Piles 1-6	120	163.73	85			160	3						

*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.

$$^{**}RDR = \frac{Factored\ Resistance + \ Factored\ Downdrag\ Load + Factored\ Dead\ Load}{Dynamic\ Resistance\ Factor} + Nominal\ Downdrag\ Resistance + \frac{Nominal\ Scour\ Resistance}{Scour\ Resistance\ Factor}$$

SUMMARY OF PDA/ PILE ORDER LENGTHS
(Blank entries indicate item is not applicable to structure)

Pile Driving Analyzer (PDA): End Bent/ Bent No	Pile Driving Analyzer (PDA): PDA Testing Required? YES or MAYBE	Pile Driving Analyzer (PDA): PDA Test Pile Length FT	Pile Driving Analyzer (PDA): Total PDA Testing Quantity EACH	Pile Order Lengths: End Bent/ Bent No(s)	Pile Order Lengths: Pile Order Length Basis* EST or PDA
END BENT 1, Piles 1-6	YES	105	2		
BENT 1, Piles 1-18	YES	70			
END BENT 2, Piles 1-6	MAYBE	90			

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

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 1-6	120			0.75			1.00
BENT 1, Piles 1-18	150			0.75			1.00
END BENT 2, Piles 1-6	120			0.75			1.00

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

NOTES:

1. THE PILE FOUNDATION TABLES ARE BASED ON THE BRIDGE SUBSTRUCTURE DESIGN AND FOUNDATION RECOMMENDATIONS SEALED BY A NORTH CAROLINA PROFESSIONAL ENGINEER (ABNER F. RIGGS 014155) ON 11-04-2021.
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. FOR PILES, SEE PILES PROVISION AND SECTION 450 OF THE STANDARD SPECIFICATIONS.
4. SEE ROADWAY PLANS AND SECTION 235 OF THE STANDARD SPECIFICATIONS FOR THE SETTLEMENT GAUGES REQUIRED AT END BENT 1 AND END BENT 2.
5. INSTALL PILE SLEEVES BEFORE CONSTRUCTING THE MECHANICALLY STABILIZED EARTH (MSE) ABUTMENT WALL AT END BENT 1 AND END BENT 2. OBSERVE A 4 MONTH WAITING PERIOD AFTER CONSTRUCTING THE MSE ABUTMENT WALL AND THE REINFORCED BRIDGE APPROACH FILL TO WITHIN 1 FT OF THE FINAL GRADE ELEVATION. THEN, INSTALL PILES THROUGH THE CORRUGATED STEEL PIPES AND FILL PIPES WITH LOOSE UNCOMPACTED SAND BEFORE CONSTRUCTING END BENT CAPS. FOR PILE SLEEVES, SEE MSE RETAINING WALL PLANS AND PROVISION. FOR BRIDGE WAITING PERIODS, SEE ROADWAY PLANS AND SECTION 235 OF THE STANDARD SPECIFICATIONS.
6. FOR REINFORCED BRIDGE APPROACH FILL, SEE APPROACH FILL FOR INTEGRAL ABUTMENT AT MSE WALLS (SPECIAL) PROVISION.

PROJECT NO. I-5987A
ROBESON COUNTY
STATION: 29+75.79 -Y2-

DocuSigned by:
64AE7A477DFE46D...
SEAL 027799
ALLYSON K. ORR
3/22/2022

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

MI ENGINEERING
1011 SCHAUB DRIVE, SUITE 100
RALEIGH, NC 27606
(919) 851-6606
FIRM PE NUMBER : P-0671

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PILE
FOUNDATION
TABLES

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

SHEET NO.
S1-4
TOTAL SHEETS
36

DRAWN BY : B.E. LANNING DATE : 11/2021
CHECKED BY : A.K. ORR DATE : 11/2021
DESIGN ENGINEER OF RECORD : A.K. ORR DATE : 03/2022