

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 1-4	120	899.90	70			200							
END BENT 1, PILES 5-8	120	899.90	55			200							
END BENT 2, PILES 1-8	120	903.36	50			200							
BENT 1, PILES 1-9	130	880.30	35			220							
BENT 1, PILES 10-18	130	880.30	30			220							

* PREDRILLING FOR PILES IS REQUIRED FOR END BENTS/ BENT WITH A PREDRILLING LENGTH AND AT THE CONTRACTOR'S OPTION FOR END BENTS/ BENTS WITH PREDRILLING INFORMATION BUT NO PREDRILLING LENGTH.

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

SUMMARY OF PDA/ PILE ORDER LENGTHS

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PILE DRIVING ANALYZER (PDA)			PILE ORDER LENGTHS		
END BENT/ BENT NO	PDA TESTING REQUIRED? YES OR MAYBE	PDA TEST PILE LENGTH FT	TOTAL PDA TESTING QUANTITY EACH	END BENT/ BENT NO(S)	PILE ORDER LENGTH BASIS* EST OR PDA
END BENT 1, PILES 1-4	MAYBE	75	1		
END BENT 1, PILES 5-8	MAYBE	60			
END BENT 2, PILES 1-8	MAYBE	55			
BENT 1, PILES 1-9	MAYBE	40			
BENT 1, PILES 10-18	MAYBE	35			

* 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.

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END BENT/ BENT NO. PILE (S) *-# (e.g., BENT 1, PILES 1-5')	FACTORED AXIAL LOAD PER PILE TONS	FACTORED DOWNDRAW LOAD PER PILE TONS	FACTORED DEAD LOAD* PER PILE TONS	DYNAMIC RESISTANCE FACTOR	NOMINAL DOWNDRAW RESISTANCE PER PILE TONS	NOMINAL SCOUR RESISTANCE PER PILE TONS	SCOUR RESISTANCE FACTOR (DEFAULT=1.00)
END BENT 1, PILES 1-8	120			0.60			
END BENT 1, PILES 1-8	120			0.60			
BENT 1, PILES 1-18	130			0.60			

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

FOUNDATION NOTES:

FOR PILES, SEE PILES PROVISION AND SECTION 450 OF THE STANDARD SPECIFICATIONS.

IT HAS BEEN ESTIMATED THAT A HAMMER WITH AN EQUIVALENT RATED ENERGY IN THE RANGE OF 50-80 FT-KIPS PER BLOW WILL BE REQUIRED TO DRIVE PILES AT END BENTS NO. 1 AND 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.

NOTES:

1. THE PILE FOUNDATION TABLES ARE BASED ON THE BRIDGE SUBSTRUCTURE DESIGN AND FOUNDATION RECOMMENDATIONS SEALED BY A NORTH CAROLINA PROFESSIONAL ENGINEER (STEPHEN C. CROCKETT, 048207) ON 10/27/22.
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 PDA TESTING WHEN PDAs MAY BE REQUIRED.

PROJECT NO. R-2707D
CLEVELAND COUNTY
 STATION: 20+16.72 -Y2-

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE
 PILE FOUNDATION TABLES



DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-03
1			3			TOTAL SHEETS
2			4			35



DRAWN BY : J. E. HAGENBUSH DATE : 05/17/22 DESIGN ENGINEER OF RECORD : J.T. KELVINGTON DATE : 04/27/22
 CHECKED BY : J. T. KELVINGTON DATE : 11/09/22

jhagenbush

4/27/2023

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