

**FOUNDATION LAYOUT**

(NOTE: ALL PILES ARE VERTICAL)

**FOUNDATION NOTES**

FOR PILES, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

PILES AT END BENT 1 AND END BENT 2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 105 TONS PER PILE.

PILES AT BENT 1 AND BENT 2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 250 TONS PER PILE.

DRIVE PILES AT END BENT 1 AND END BENT 2 TO A REQUIRED DRIVING RESISTANCE OF 175 TONS PER PILE.

DRIVE PILES AT BENT 1 AND BENT 2 TO A REQUIRED DRIVING RESISTANCE OF 425 TONS PER PILE. THIS REQUIRED DRIVING RESISTANCE INCLUDES ADDITIONAL RESISTANCE FOR SCOUR.

INSTALL PILES AT BENT 1 TO A TIP ELEVATION NO HIGHER THAN 56.0 FT (LT) AND 53.0 FT (RT).

INSTALL PILES AT BENT 2 TO A TIP ELEVATION NO HIGHER THAN 54.0 FT (LT) AND 51.0 FT (RT).

THE SCOUR CRITICAL ELEVATION FOR BENT 1 AND BENT 2 IS ELEVATION 77.0 FT. SCOUR CRITICAL ELEVATION IS USED TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

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

IT HAS BEEN ESTIMATED THAT A HAMMER WITH AN EQUIVALENT RATED ENERGY IN THE RANGE OF 80-170 FT-KIPS PER BLOW WILL BE REQUIRED TO DRIVE PILES AT BENT 1 AND BENT 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.

**FOUNDATION RECOMMENDATION COMMENTS**

1.5:1 (H:V) SLOPE AT THE END BENTS ARE OK WITH SLOPE PROTECTION.

INTEGRAL END BENT WILL BE USED AT END BENT 1 AND END BENT 2.

USE ONLY TYPE A BRIDGE APPROACH FILL DETAILS AT END BENT 1 TO AID SLOPE STABILITY.

USE TYPE I OR TYPE A BRIDGE APPROACH FILL DETAILS AT END BENT 2.

THE DESIGN SCOUR ELEVATIONS FOR BENT 1 AND BENT 2 ARE 79.3 FT. AND 79.9 FT.

NO WAITING PERIOD IS REQUIRED BEFORE BEGINNING OF END BENT CONSTRUCTION.

USE A SINGLE ROW OF PLUMB PILES AT EACH END BENT.

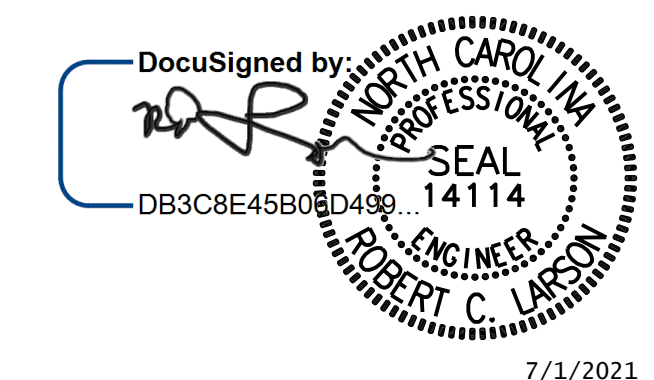
PROJECT NO. B-5703  
CUMBERLAND/HARNETT COUNTY  
 STATION: 16+92.70 -L-

SHEET 2 OF 3

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**GENERAL DRAWING**

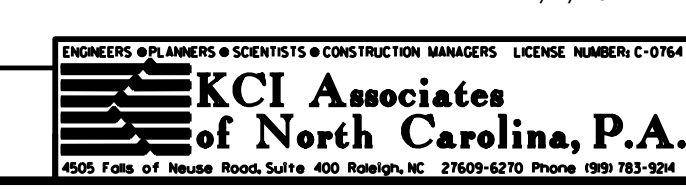
FOR BRIDGE ON US 40 (RAMSEY ST)  
 OVER LOWER LITTLE RIVER  
 BETWEEN NC 217 AND SR 2027



KCI JOB NO: 251801945.13

DESIGN ENGINEER OF RECORD:	DATE:
A. SAMBOY	7/1/2021
DRAWN BY:	DATE:
R.C. LARSON	03/11/19
CHECKED BY:	DATE:
R.C. LARSON	09/10/20

**DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED**



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

TOTAL SHEETS: 29