

### FOUNDATION LAYOUT

DIMENSIONS LOCATING PILES ARE SHOWN TO THE CENTERLINE OF PILES  
 BRACE PILES AT END BENTS ARE BATTERED 3:12  
 HP 12 X 53 STEEL BRACE PILES IN END BENT WING WALLS ARE ORIENTED PARALLEL TO SHORT CHORD.  
 FOR SUBSTRUCTURE ANGLES, SEE SHEET 3 OF 4.

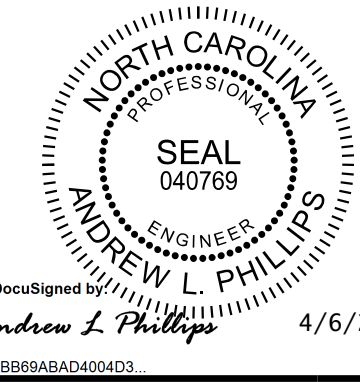
### FOUNDATION NOTES:

- FOR PILES, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.
- PILES AT END 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 170 TONS PER PILE.
- IT HAS BEEN ESTIMATED THAT A HAMMER WITH AN EQUIVALENT RATED ENERGY IN THE RANGE OF 55 TO 85 FT-KIPS 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.
- PILES AT BENT NO.1 ARE DESIGNED FOR A FACTORED RESISTANCE OF 215 TONS PER PILE.
- DRIVE PILES AT BENT NO.1 TO REQUIRED DRIVING RESISTANCE OF 290 TONS PER PILE.
- INSTALL PILES AT BENT NO.1 TO A TIP ELEVATION NO HIGHER THAN 8 FT.
- IT HAS BEEN ESTIMATED THAT A HAMMER WITH AN EQUIVALENT RATED ENERGY IN THE RANGE OF 55 TO 125 FT-KIPS 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.
- PILES AT BENT NO.2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 225 TONS PER PILE.
- DRIVE PILES AT BENT NO.2 TO REQUIRED DRIVING RESISTANCE OF 300 TONS PER PILE.

- INSTALL PILES AT BENT NO.2 TO A TIP ELEVATION NO HIGHER THAN 4 FT.
- IT HAS BEEN ESTIMATED THAT A HAMMER WITH AN EQUIVALENT RATED ENERGY IN THE RANGE OF 55 TO 125 FT-KIPS PER BLOW WILL BE REQUIRED TO DRIVE PILES AT 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.
- PILES AT END BENT NO.2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 90 TONS PER PILE.
- DRIVE PILES AT END BENT NO.2 TO A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE.
- IT HAS BEEN ESTIMATED THAT A HAMMER WITH AN EQUIVALENT RATED ENERGY IN THE RANGE OF 55 TO 85 FT-KIPS 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 PIPE PILE WITH THE PDA DURING DRIVING, RESTRIKING, OR REDRIVING IS REQUIRED AT BENT NO.2. FOR PDA TESTING, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.
- OBSERVE A 1 MONTH WAITING PERIOD AFTER CONSTRUCTING THE EMBANKMENT TO FINISHED GRADE BEFORE BEGINNING END BENT CONSTRUCTION AT END BENTS NO.1 AND 2. FOR BRIDGE WAITING PERIODS, SEE ROADWAY PLANS AND SECTION 435 OF THE STANDARD SPECIFICATIONS.
- DO NOT BEGIN WORK AT BENTS NO.1 AND 2 UNTIL FILL HAS BEEN PLACED AND WAITING PERIOD HAS BEEN RELEASED.

PROJECT NO. B-5301  
PITT COUNTY  
 STATION: 25+98.05 -L-

SHEET 2 OF 4



**Kimley»Horn**  
 421 Fayetteville Street, Suite 600  
 Raleigh, NC 27601-1772  
 Phone (919) 677-2000  
 NC LICENSE # F-0102

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**GENERAL DRAWING**  
 FOR BRIDGE OVER  
 NORFOLK SOUTHERN  
 RAILROAD ON NC 33  
 BETWEEN SR 1762 & SR 1760

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-2
1			3			TOTAL SHEETS
2			4			55

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

This document, together with the concepts and designs presented herein, is an integral part of the project. It is intended only for the specific project and site and without written authorization and approval by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.  
 Copyright Kimley-Horn and Associates, Inc., 2020

G:\Users\andrew.phillips\My Documents\Bridges - Documents\B-5301\Code\Drawings\401\_003\_B5301\_SML\_F1.01\_002\_730087.dgn  
 4/7/2020

DRAWN BY: D. D. LOWERY DATE: 2/20  
 CHECKED BY: C. I. POOLE DATE: 2/20  
 DESIGN ENGINEER OF RECORD: A. L. PHILLIPS DATE: 2/20