



**FOUNDATION LAYOUT PLAN**

(DIMENSIONS LOCATING PILES ARE SHOWN TO THE PILE CENTERLINE)

**NOTES:**

FOR DRILLED PIERS, SEE GEOTECHNICAL SPECIAL PROVISIONS AND SECTION 411 OF THE STANDARD SPECIFICATIONS.

DRILLED PIERS AT BENT 1 ARE DESIGNED FOR A FACTORED RESISTANCE OF 515 TONS PER PIER. CHECK FIELD CONDITIONS FOR THE REQUIRED TIP RESISTANCE OF 25 TSF.

DRILLED PIERS AT BENT 2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 605 TONS PER PIER. CHECK FIELD CONDITIONS FOR THE REQUIRED TIP RESISTANCE OF 40 TSF.

PERMANENT STEEL CASINGS MAY BE REQUIRED FOR DRILLED PIERS AT BENTS 1 AND 2. IF REQUIRED, DO NOT EXTEND PERMANENT CASINGS BELOW ELEVATION 570 FT WITHOUT PRIOR APPROVAL FROM THE ENGINEER. THE ENGINEER WILL DETERMINE THE NEED FOR PERMANENT STEEL CASINGS.

INSTALL DRILLED PIERS AND BENT 1 TO A TIP ELEVATION NO HIGHER THAN 544 FT (LEFT), 550 FT (CENTER) AND 549 FT (RIGHT) AND WITH THE REQUIRED TIP RESISTANCE.

INSTALL DRILLED PIERS AND BENT 2 TO A TIP ELEVATION NO HIGHER THAN 552 FT (LEFT), 546 FT (CENTER) AND 549 FT (RIGHT) AND WITH THE REQUIRED TIP RESISTANCE.

THE SCOUR CRITICAL ELEVATION FOR BENT 1 IS 573 FT. SCOUR CRITICAL ELEVATIONS ARE USED TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

THE SCOUR CRITICAL ELEVATION FOR BENT 2 IS 575 FT. SCOUR CRITICAL ELEVATIONS ARE USED TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

SID INSPECTIONS MAY BE REQUIRED FOR DRILLED PIERS. THE ENGINEER WILL DETERMINE THE NEED FOR SID INSPECTIONS. FOR SID INSPECTIONS, SEE SECTION 411 OF THE STANDARD SPECIFICATIONS.

CSL TUBES ARE REQUIRED AND CSL TESTING MAY BE REQUIRED FOR DRILLED PIERS. THE ENGINEER WILL DETERMINE THE NEED FOR CSL TESTING. FOR CSL TESTING, SEE SECTION 411 OF THE STANDARD SPECIFICATIONS.

FOR PILES, SEE GEOTECHNICAL SPECIAL PROVISIONS AND SECTION 450 OF THE STANDARD SPECIFICATIONS.

PILES AT END BENT 1 ARE DESIGNED FOR A FACTORED RESISTANCE OF 90 TONS PER PILE.

PILES AT END BENT 2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 150 TONS PER PILE.

DRIVE PILES AT END BENT 1 TO A REQUIRED DRIVING RESISTANCE OF 115 TONS PER PILE.

DRIVE PILES AT END BENT 2 TO A REQUIRED DRIVING RESISTANCE OF 195 TONS PER PILE.

TESTING THE PRODUCTION PILES WITH THE PDA DURING DRIVING, RESTRIKING OR REDRIVING MAY BE REQUIRED AT END BENT 2. THE ENGINEER WILL DETERMINE THE NEED FOR PDA TESTING. FOR PDA TESTING, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

OBSERVE A TWO (2) MONTH WAITING PERIOD AFTER CONSTRUCTING THE EMBANKMENT TO WITHIN 2 FT OF FINISHED GRADE BEFORE BEGINNING END BENT CONSTRUCTION AT END BENTS 1 AND 2. FOR BRIDGE WAITING PERIODS, SEE ROADWAY PLANS AND SPECIAL PROVISIONS.

SPT MAY BE REQUIRED FOR DRILLED PIERS AT BENT 1. IF REQUIRED, THE REQUIRED SPT N60 VALUE WILL BE 100 BLOWS OR MORE IN THE FIRST FOUR (4) INCHES OF THE DRIVE. THE ENGINEER WILL DETERMINE THE NEED FOR SPT. FOR SPT TESTING, SEE SECTION 411 OF THE STANDARD SPECIFICATIONS.

SPT MAY BE REQUIRED FOR DRILLED PIERS AT BENT 2. IF REQUIRED, THE REQUIRED SPT N60 VALUE WILL BE 60 BLOWS OR MORE IN THE FIRST ONE (1) INCH OF THE DRIVE. THE ENGINEER WILL DETERMINE THE NEED FOR SPT. FOR SPT TESTING, SEE SECTION 411 OF THE STANDARD SPECIFICATIONS.

PROJECT NO. U-4910A  
CABARRUS COUNTY  
 STATION: 147+80.00 -L-

SHEET 2 OF 4

**AECOM**  
 AECOM TECHNICAL SERVICES, INC.  
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11/30/2016

SEAL  
 030474  
 JOHN C. MORRISON  
 ENGINEER

STATE OF NORTH CAROLINA  
**DEPARTMENT OF TRANSPORTATION**  
 RALEIGH

**GENERAL DRAWING**

**BRIDGE OVER ROCKY RIVER  
 ON DERITA RD. (SR 1445)  
 BETWEEN SR 1447 & SR 1394**

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

SHEET NO. **S-02**  
 TOTAL SHEETS **55**

DRAWN BY : K.H. COMPTON DATE : 7/2016  
 CHECKED BY : J.C. MORRISON DATE : 7/2016  
 DESIGNED BY : K.H. COMPTON DATE : 7/2016

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DATE: 11/30/2016 TIME: 10:54:45 AM  
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