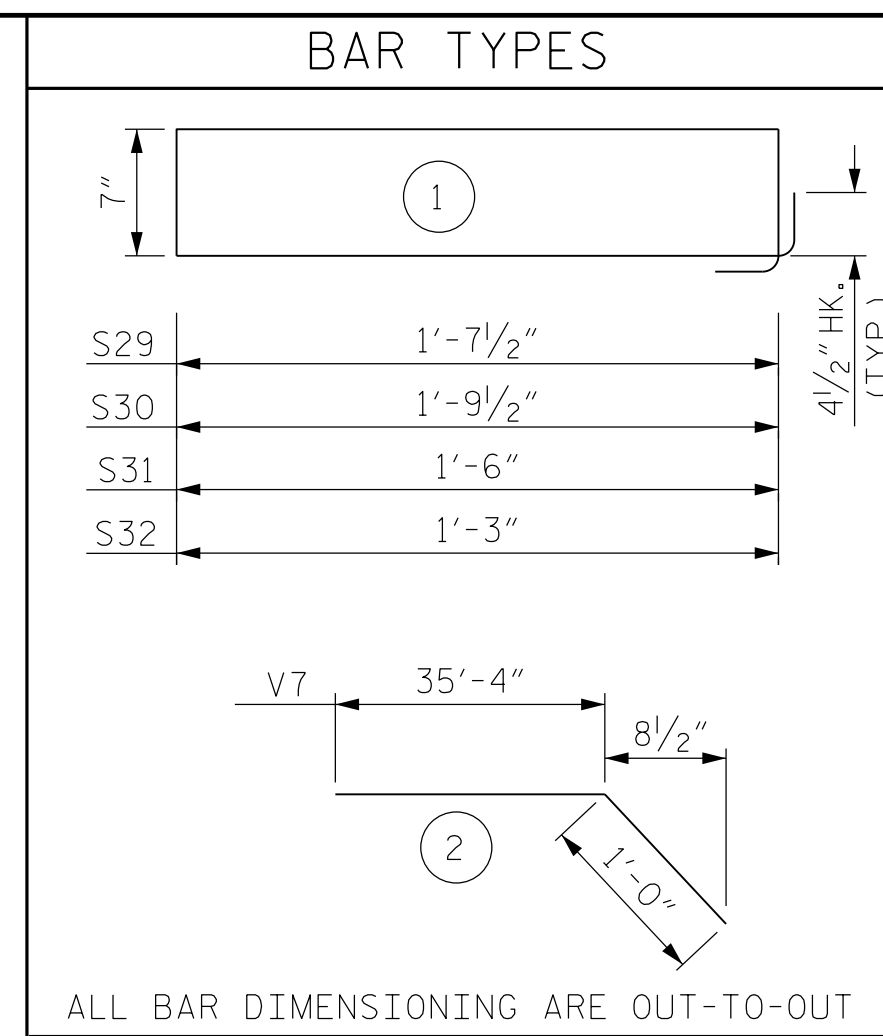


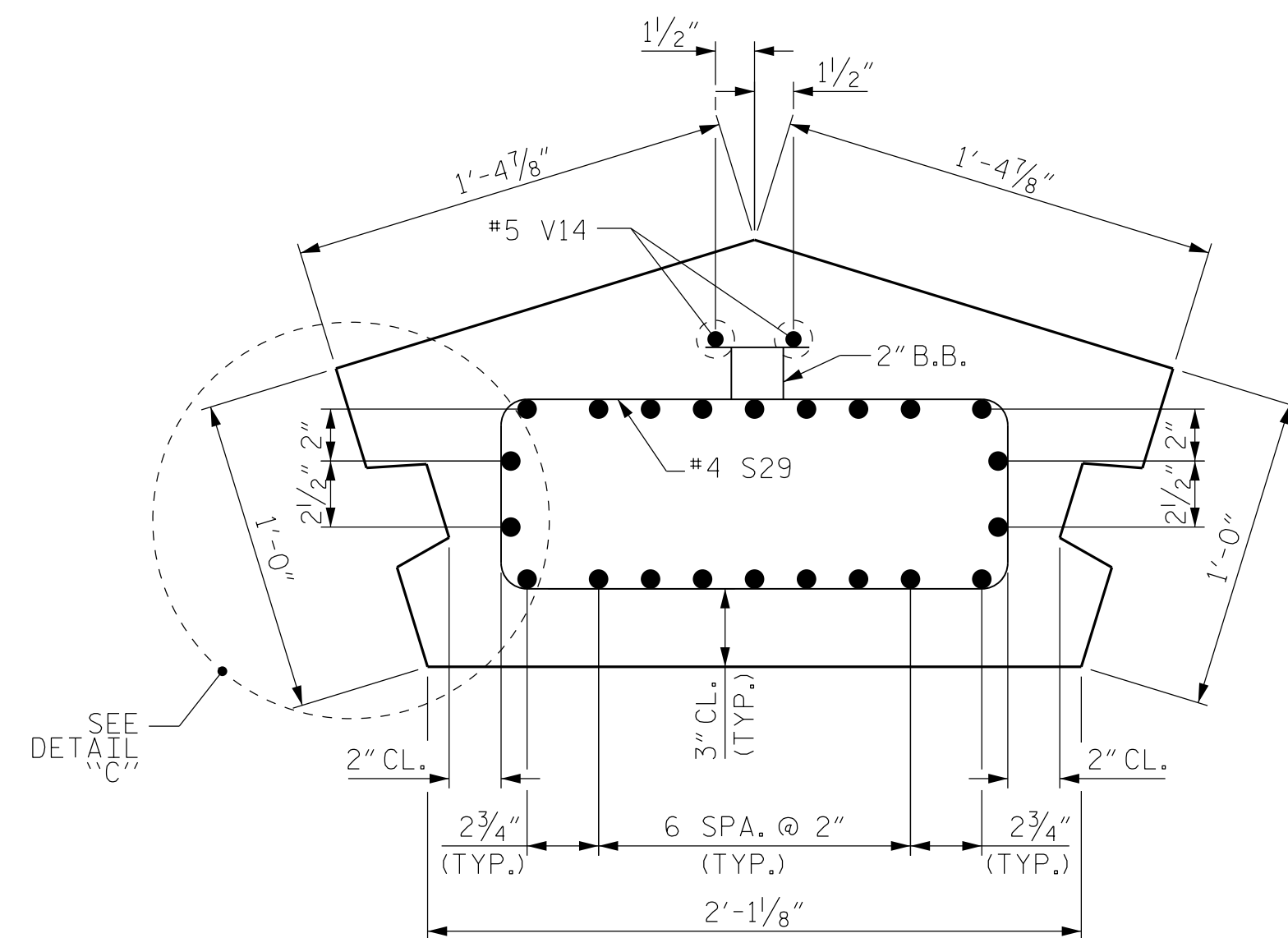
PILE TYPE A19 (SPECIAL PILE)

DRAWN BY : B. L. GREEN, P.E. DATE : 3/19
 CHECKED BY : D. A. CANTRELL, P.E. DATE : 6/19
 DESIGN ENGINEER OF RECORD : B. L. GREEN, P.E. DATE : 7/19

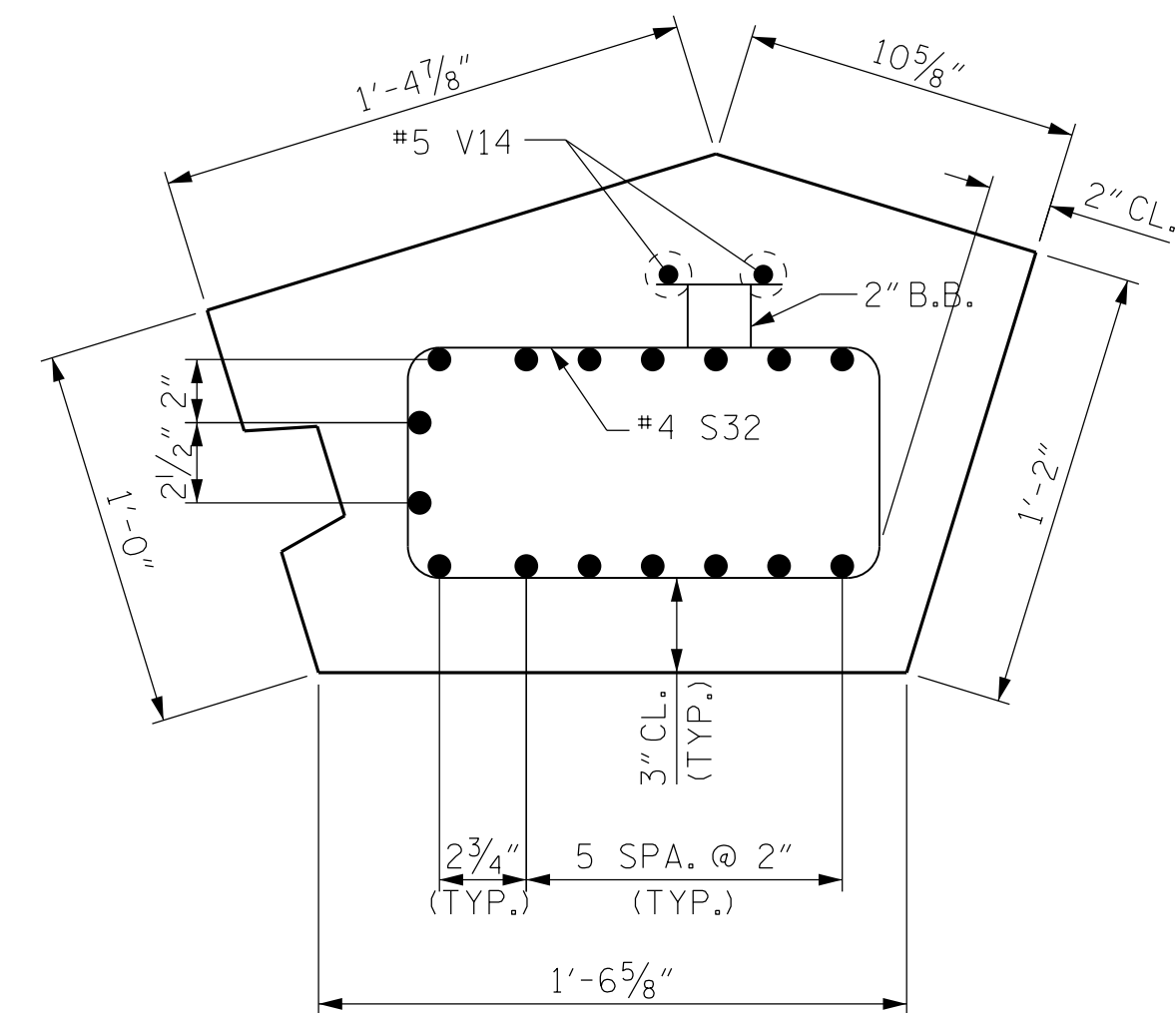
0.6" Ø L. R. GRADE 270 STRANDS		
AREA (SQUARE INCHES)	ULTIMATE STRENGTH (LBS. PER STRAND)	APPLIED PRESTRESS (LBS. PER STRAND)
0.217	58,600	43,950



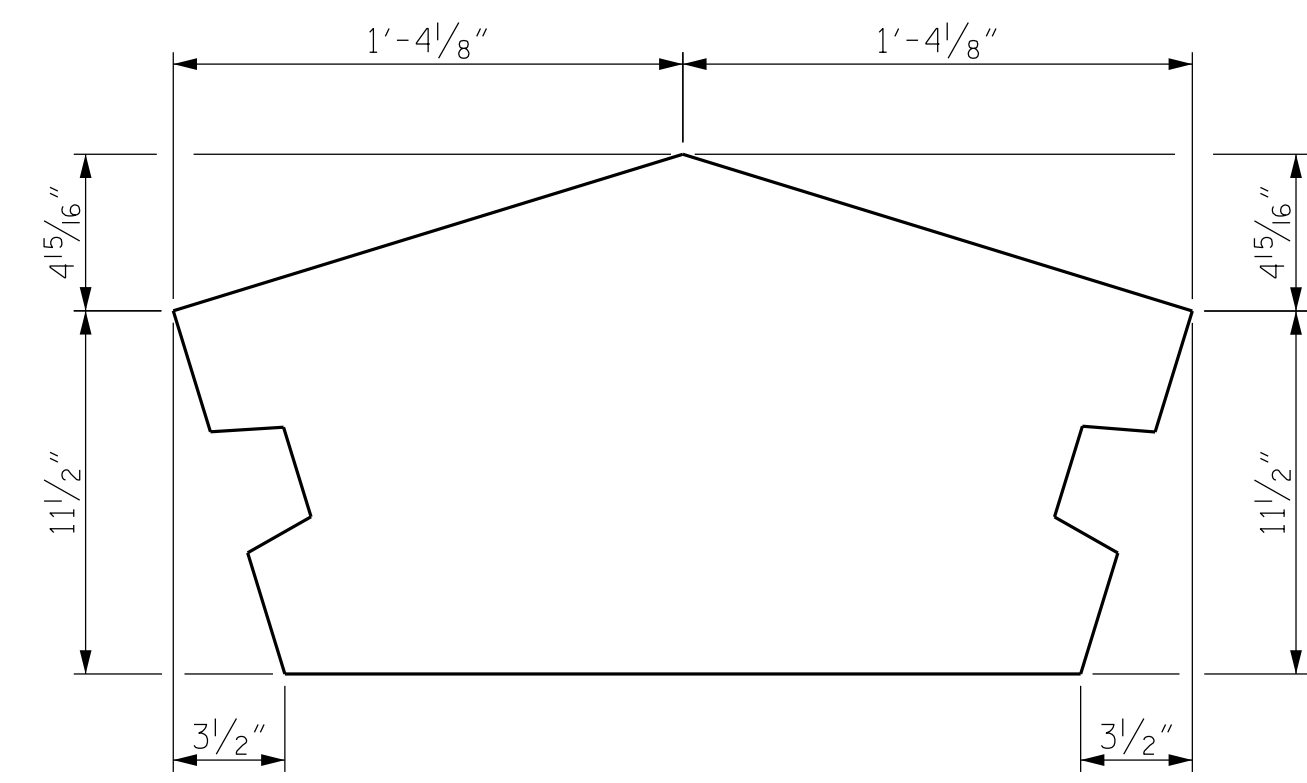
BILL OF MATERIAL A19 (SPECIAL PILE)						
BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT	
S29	10	#4	1	5'-2"	35	
S30	39	#4	1	5'-6"	143	
S31	1	#4	1	4'-11"	3	
S32	1	#4	1	4'-5"	3	
V7	2	#5	2	36'-4"	76	
V14	2	#5	STR.	41'-6"	87	



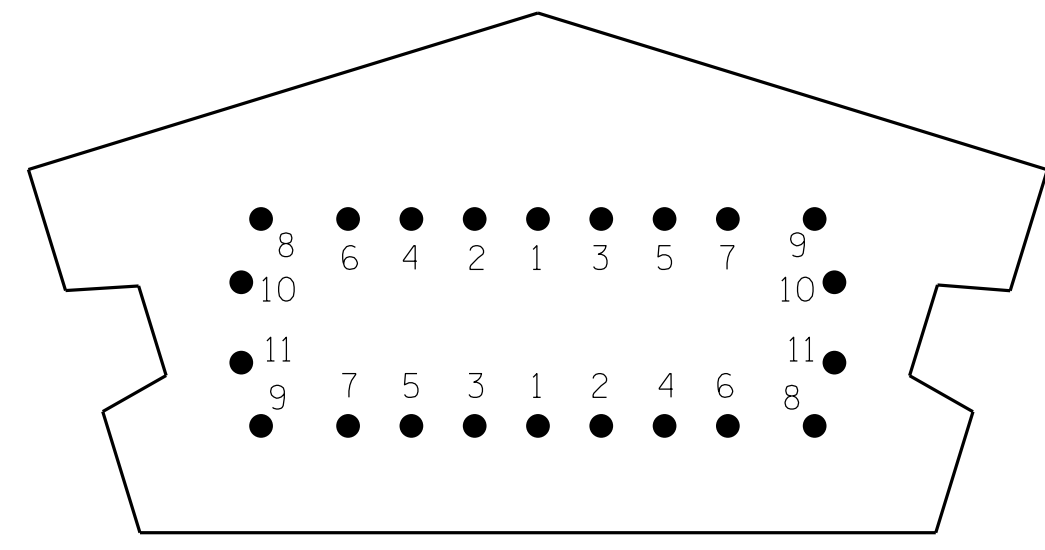
SECTION A-A (22 TOTAL STRANDS)



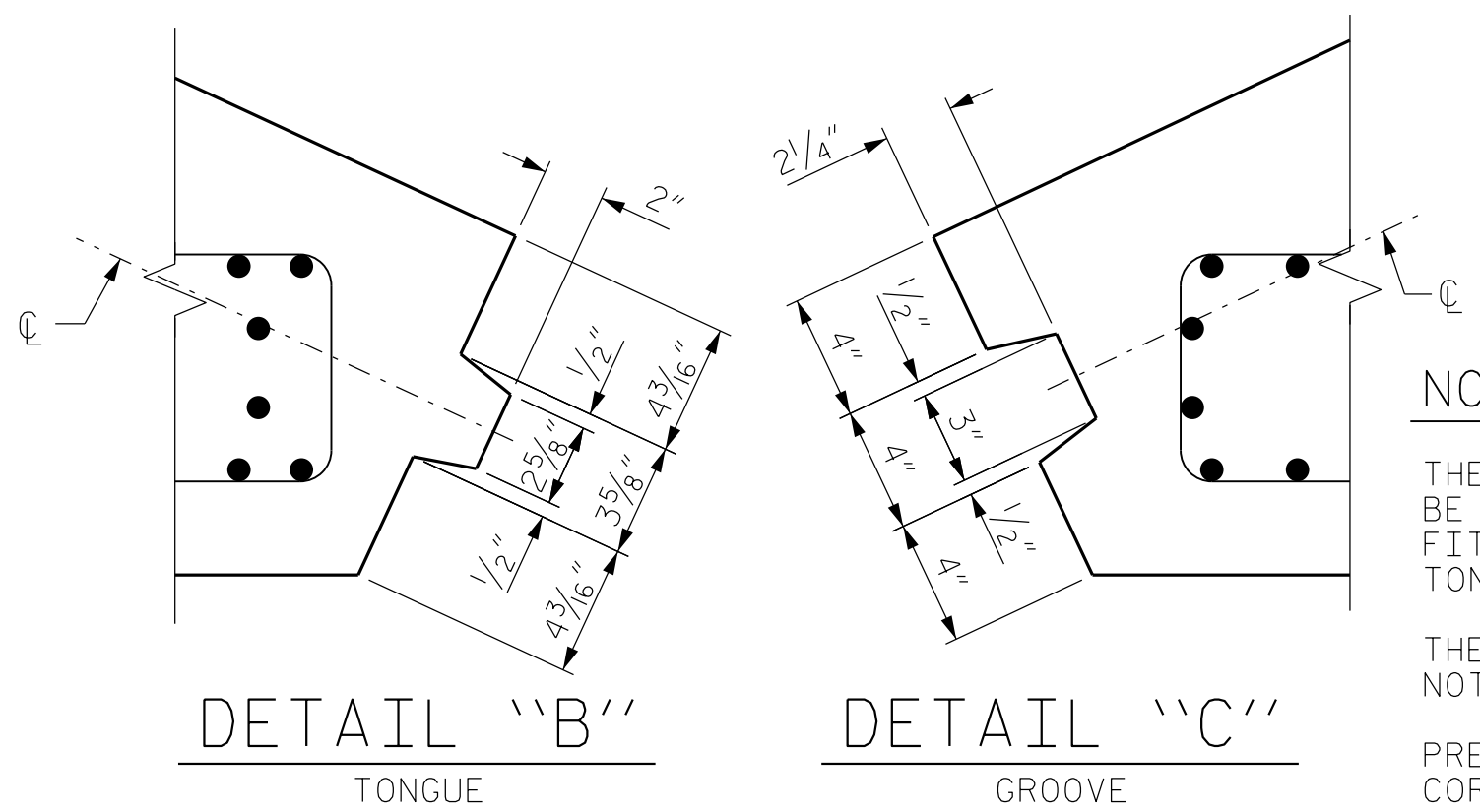
SECTION B-B



SECTION THRU PILE REINFORCING NOT SHOWN



PATTERN FOR BURNING



DETAIL "B" TONGUE

DETAIL "C" GROOVE

NOTES

THE SHEET PILE WIDTH DIMENSIONS ARE NOMINAL. THESE DIMENSIONS MAY BE SHORTENED BY THE MANUFACTURER UP TO 1/2" TO ALLOW FOR SHEET PILE FIT-UP IN ITS FINAL POSITION. NO CHANGES SHALL BE MADE TO THE TONGUES OR GROOVES.

THE WATER/CEMENT RATIO FOR PRESTRESSED CONCRETE SHEET PILES SHALL NOT EXCEED 0.40.

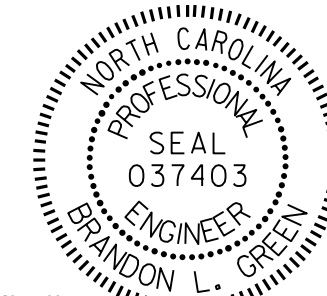
PRESTRESSED CONCRETE SHEET PILES SHALL CONTAIN CALCIUM NITRITE CORROSION INHIBITOR IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, EXCEPT THAT THE INHIBITOR SHALL BE APPLIED AT A RATE OF 4.0 GALLONS PER CUBIC YARD. NO SEPARATE PAYMENT WILL BE MADE FOR THE ADDITION OF CALCIUM NITRITE, AS IT IS CONSIDERED INCIDENTAL TO THE VARIOUS PAY ITEMS.

PRESTRESSED CONCRETE SHEET PILES SHALL CONTAIN A MINIMUM OF 25% FLY ASH CLASS F OR A MINIMUM OF 40% GROUND GRANULATED BLAST FURNACE SLAG (GGBFS). ADDITIONALLY, SILICA FUME SHALL BE SUBSTITUTED FOR A MINIMUM 5% OF THE PORTLAND CEMENT BY WEIGHT IN THE PRESTRESSED CONCRETE SHEET PILES. MINERAL ADMIXTURES SHALL REPLACE THE CEMENT CONTENT AT A 1:1 RATIO BY WEIGHT. NO PAYMENT WILL BE MADE FOR THIS SUBSTITUTION, AS IT IS CONSIDERED INCIDENTAL TO THE VARIOUS PAY ITEMS.

PILE	QUANTITIES FOR ONE PILE		
	REINFORCING STEEL LB.	8,000 PSI CONCRETE C.Y.	0.6" Ø L. R. STRANDS No.
A19 (SPECIAL PILE)	347	4.4	22

PROJECT NO. B-4863
 CARTERET COUNTY
 STATION: 34+75.00 -L-

SHEET 14 OF 16



DocuSigned by: Brandon Green 3/9/2020

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

CONCRETE SHEET PILE
 RETAINING WALL
 SHEET PILE DETAILS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	W-14
1			3			TOTAL SHEETS
2			4			24