

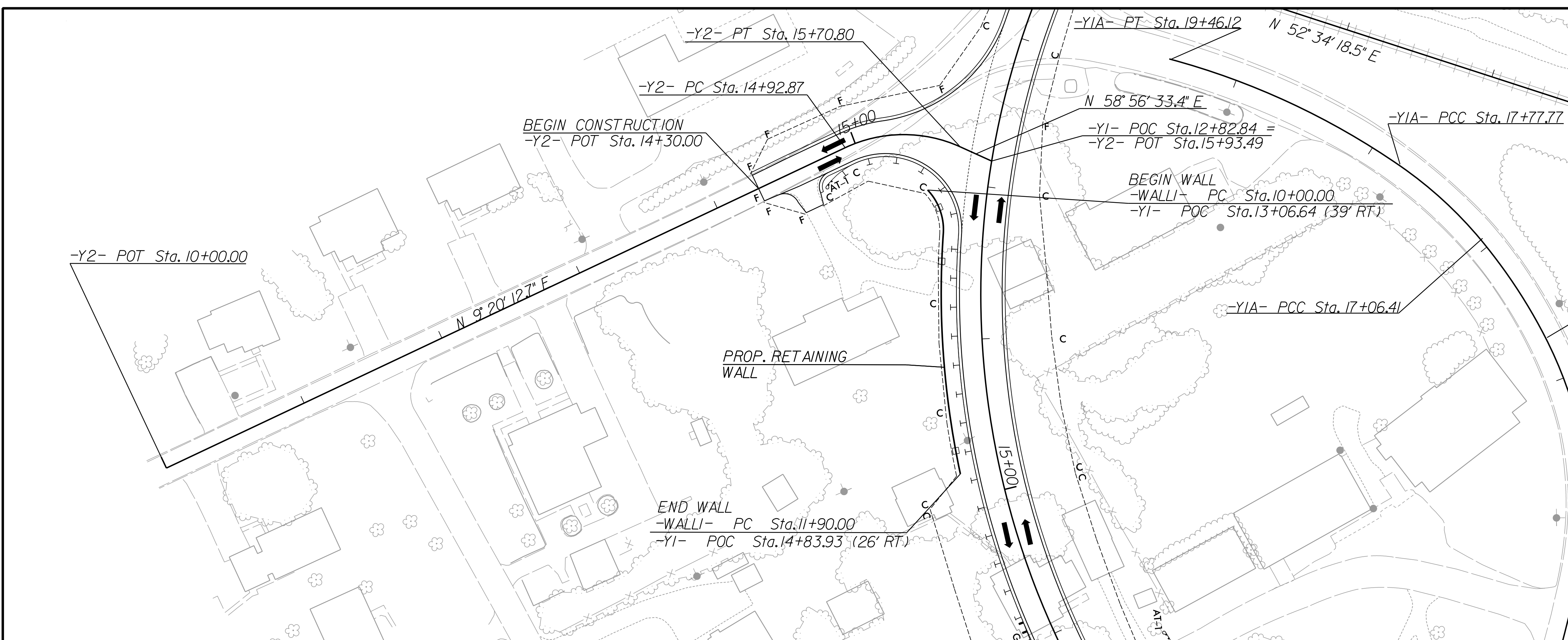
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8/17/99

I:\16\2022\InvestigationDesign\CADD_GEO\TECH\Site&Sub\Retaining Wall_Inventory\NR-5768_GEO-plan and wallenvelope.dgn



GEOTECHNICAL ENGINEER

ENGINEER

SEAL 041709

DocuSigned by: Gregory K. Gains 11/16/2022

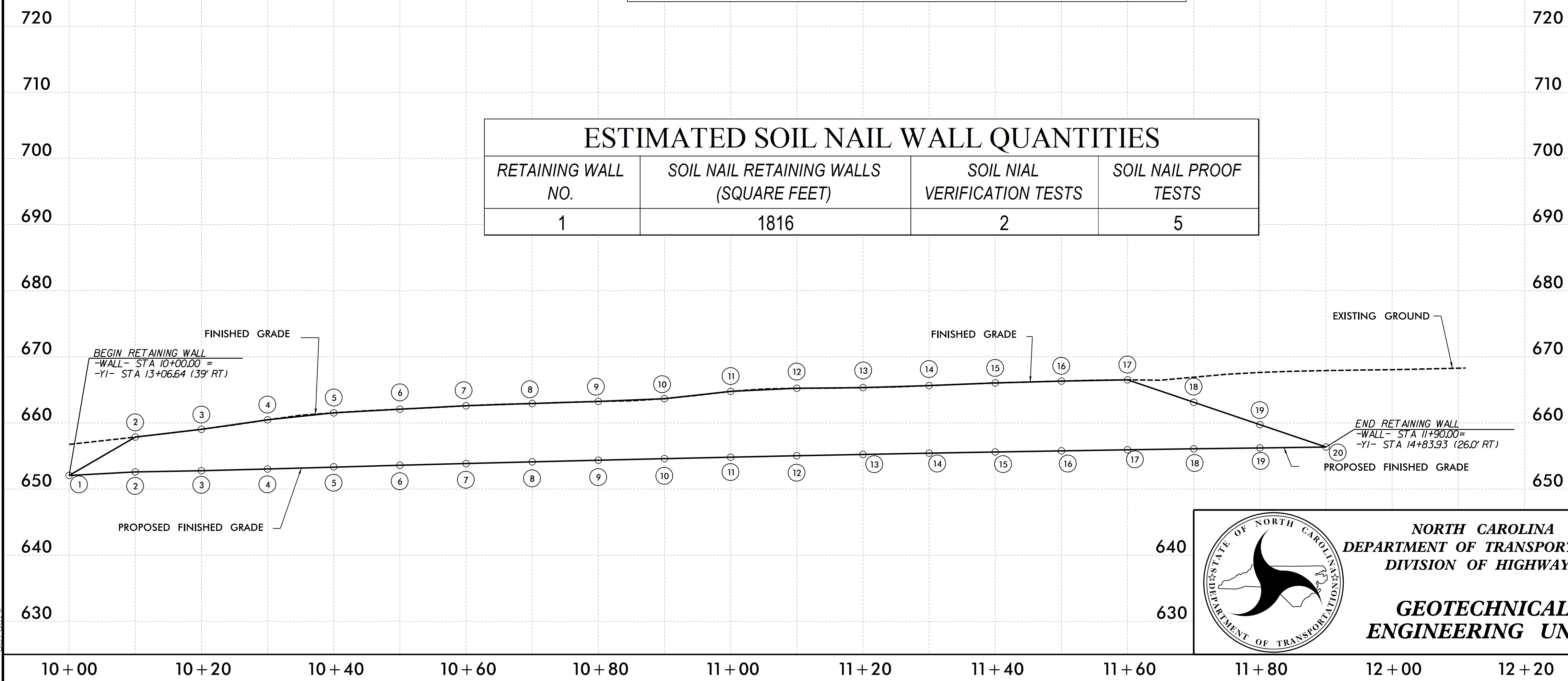
DATE 11/16/2022

SIGNATURE DATE

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0 50 100 FEET

RETAINING WALL NO. 1 ENVELOPE



ESTIMATED SOIL NAIL WALL QUANTITIES

RETAINING WALL NO.	SOIL NAIL RETAINING WALLS (SQ. FEET)	SOIL NAIL VERIFICATION TESTS	SOIL NAIL PROOF TESTS
1	1816	2	5

POINT NO.	-WALL- STATION	PROPOSED FINISHED GRADE (TOP)	PROPOSED FINISHED GRADE (BENCH)
1	10+00.00	652.06	652.06
2	10+10.00	657.86	652.59
3	10+20.00	659.03	652.78
4	10+30.00	660.48	653.03
5	10+40.00	661.53	653.34
6	10+50.00	662.08	653.60
7	10+60.00	662.60	653.86
8	10+70.00	662.94	654.12
9	10+80.00	663.26	654.36
10	10+90.00	663.67	654.60
11	11+00.00	664.77	654.82
12	11+10.00	665.25	655.04
13	11+20.00	665.34	655.24
14	11+30.00	665.65	655.43
15	11+40.00	666.04	655.61
16	11+50.00	666.33	655.78
17	11+60.00	666.52	655.94
18	11+70.00	663.13	656.09
19	11+80.00	659.74	656.22
20	11+90.00	656.35	656.35

PROJECT NO.: R-5768

STOKES COUNTY

STATION: -Y1- 13+07 TO -Y1- 14+84

SHEET 1 OF 2

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS

GEOTECHNICAL ENGINEERING UNIT

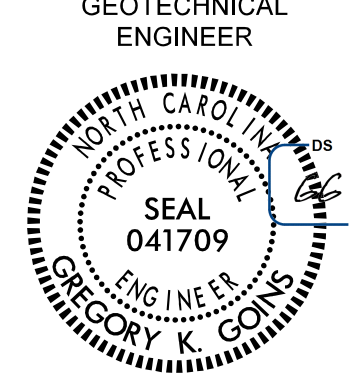
RETAINING WALL NO. 1 PLAN AND PROFILE

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

SHEET NO. W-1

GEOTECHNICAL ENGINEER

ENGINEER



DocuSigned by:
Gregory Goins
ADDITIONAL SIGNATURE

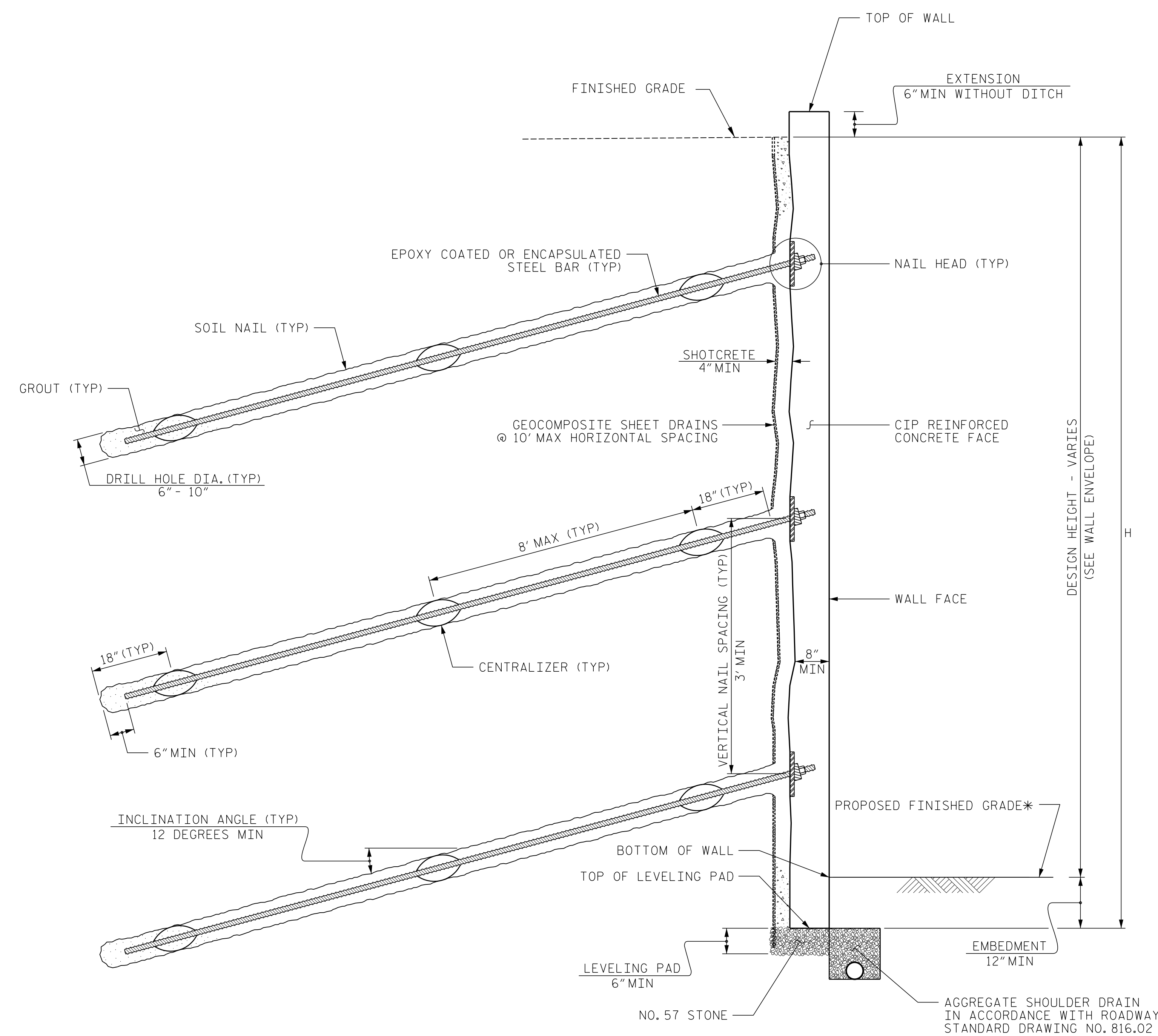
11/16/2022

DATE

SIGNATURE

DATE

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SOIL NAIL WALL - TYPICAL SECTION

*SEE PLANS FOR FINISHED GRADE.

NOTES:

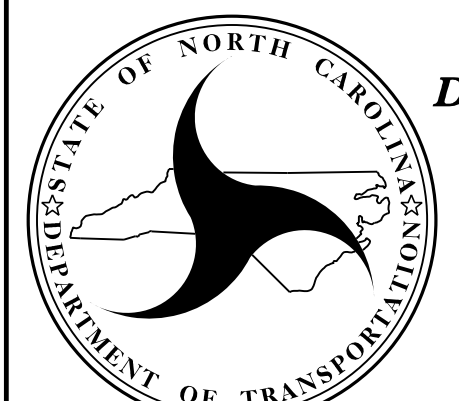
- FOR SOIL NAIL RETAINING WALLS, SEE SOIL NAIL RETAINING WALLS PROVISION.
- A FENCE OR HANDRAIL IS REQUIRED ON TOP OF RETAINING WALL NO. 1. SEE ROADWAY PLANS FOR FENCE OR HANDRAIL ATTACHMENT DETAILS.
- BEFORE BEGINNING SOIL NAIL WALL DESIGN FOR RETAINING WALL NO. 1, SURVEY WALL LOCATION AND SUBMIT A REVISED WALL PROFILE VIEW (WALL ENVELOPE) FOR REVIEW. DO NOT START WALL DESIGN OR CONSTRUCTION UNTIL THE REVISED WALL ENVELOPE IS ACCEPTED.
- DESIGN RETAINING WALL NO. 1 FOR THE FOLLOWING:
 - 1) H = DESIGN HEIGHT + EMBEDMENT
 - 2) DESIGN LIFE = 75 YEARS
 - 3) MINIMUM EMBEDMENT = 1 FT
 - 4) IN-SITU ASSUMED MATERIAL PARAMETERS:
 - UNIT WEIGHT, $\gamma = 115$ PCF
 - FRICTION ANGLE, $\phi = 30$ DEGREES
 - COHESION, $c = 0$ PSF
- PERFORM GRADING BEHIND THE TOP OF WALL BEFORE BEGINNING WALL CONSTRUCTION.
- FOUNDATIONS FOR SIGNS, LIGHTING OR SIGNALS MAY BE LOCATED BEHIND RETAINING WALL AND MAY INTERFERE WITH SOIL NAILS. SUBMIT PROPOSED CONSTRUCTION METHODS FOR THESE FOUNDATIONS WITH THE SOIL NAIL WALL CONSTRUCTION PLAN.
- EXISTING OR FUTURE OBSTRUCTIONS SUCH AS FOUNDATIONS, GUARDRAIL, FENCE OR HANDRAIL POSTS, PAVEMENTS, PIPES, INLETS OR UTILITIES MAY INTERFERE WITH SOIL NAILS FOR RETAINING WALL.
- AN ASHLAR STONE ARCHITECTURAL FINISH IS REQUIRED FOR THE CAST-IN-PLACE REINFORCED CONCRETE FACING FOR RETAINING WALL NO. 1. THE CONTRACTOR SHALL SUBMIT A SAMPLE OF THE ASHLAR FINISH TO THE ENGINEER FOR APPROVAL. THE FORM LINERS SHALL CREATE NO VISIBLE VERTICAL OR HORIZONTAL SEAMS OR CONSPICUOUS FORM LINER BUTT MARKS.

PROJECT NO.: R-5768

STOKES COUNTY

STATION: -Y1- 13+07 TO -Y1- 14+84

SHEET 2 OF 2



**NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS**

**GEOTECHNICAL
ENGINEERING UNIT**

**RETAINING WALL NO. 1
PLAN AND PROFILE**

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1	-	-	3	-	-	W-2
2	-	-	4	-	-	

PREPARED BY: A. Bozorgi	DATE: 10/10/18
REVIEWED BY: M. Snyder	DATE: 10/10/18