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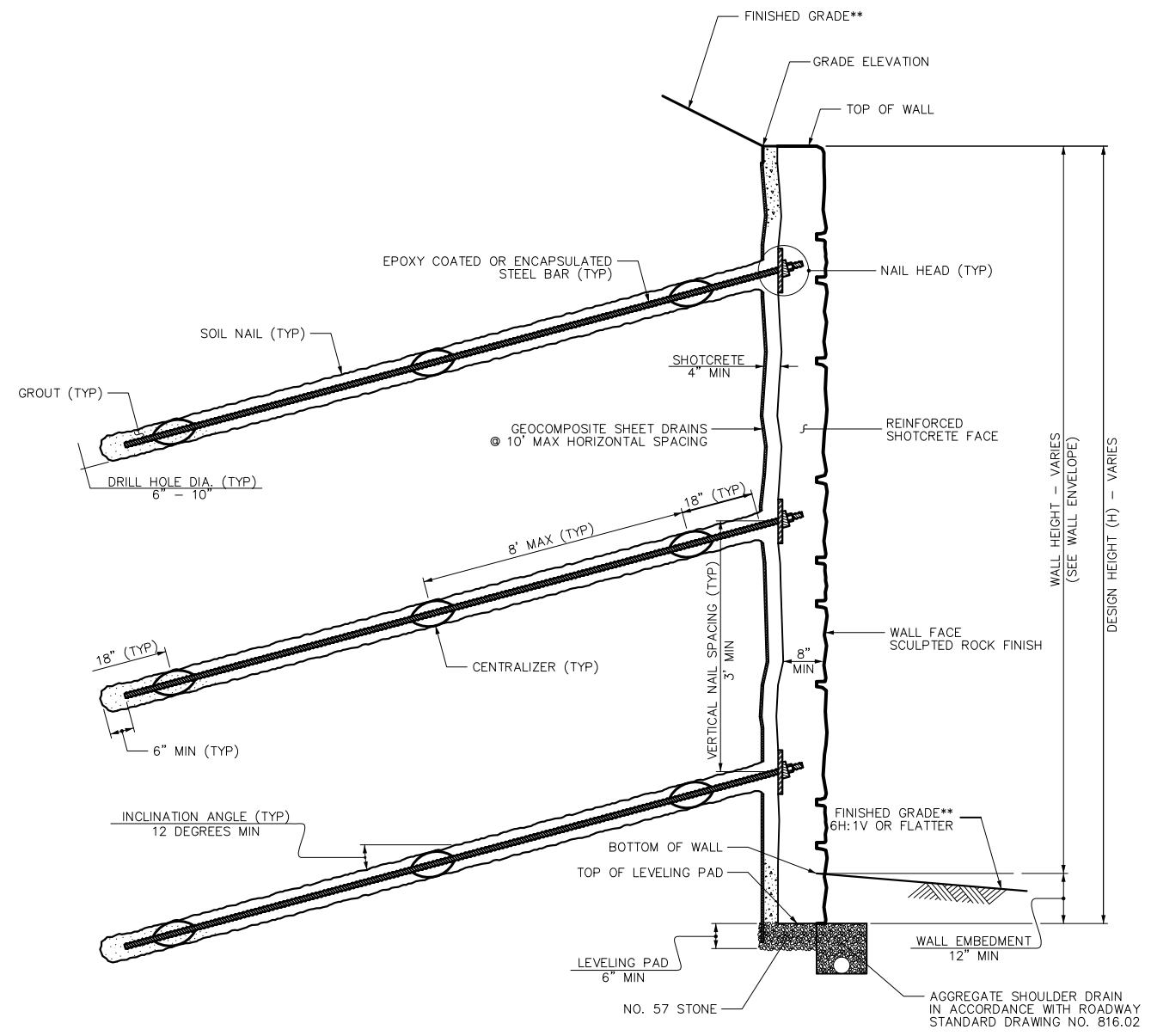
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GEOTECHNICAL ENGINEER



DocuSigned by:  
*Mohammed A. Mulla*

DATE: \_\_\_\_\_ SIGNATURE: \_\_\_\_\_



**NOTES:**

- 1.) FOR SOIL NAIL RETAINING WALLS, SEE SOIL NAIL RETAINING WALL PROVISIONS.
- 2.) A SCULPTED ROCK ARCHITECTURAL FINISH IS REQUIRED FOR THE REINFORCED SHOTCRETE FACE FOR RETAINING WALL NO. 1. AND NO. 2.
- 3.) BEFORE BEGINNING SOIL NAIL WALL DESIGN FOR RETAINING WALL NO. 1 AND NO. 2, SURVEY WALL LOCATION AND SUBMIT A REVISED WALL PROFILE VIEW (WALL ENVELOPES) FOR REVIEW. DO NOT START WALL DESIGN OR CONSTRUCTION UNTIL THE REVISED WALL ENVELOPE IS ACCEPTED.
- 4.) DESIGN RETAINING WALL NO. 1 AND NO. 2 FOR THE FOLLOWING:
  - I. DESIGN HEIGHT (H) = WALL HEIGHT + WALL EMBEDMENT
  - II. DESIGN LIFE = 100 YEARS
  - III. MINIMUM WALL EMBEDMENT = 12 INCHES
  - IV. IN-SITU ASSUMED MATERIAL PARAMETERS ABOVE ELEVATION 2635 FT:  
 UNIT WEIGHT  $\gamma = 110$  PCF  
 FRICTION ANGLE  $\phi = 28^\circ$   
 COHESION  $c = 0$  PSF
  - V. IN-SITU ASSUMED MATERIAL PARAMETERS BELOW ELEVATION 2635 FT:  
 UNIT WEIGHT  $\gamma = 120$  PCF  
 FRICTION ANGLE  $\phi = 30^\circ$   
 COHESION  $c = 0$  PSF
- 5.) DESIGN RETAINING WALL NO. 1 AND NO. 2 FOR SURCHARGE LOAD RESULTING FROM 1.75H:1V BACKSLOPE.
- 6.) AGGREGATE SUBDRAIN SHOULD DRAIN AT THE END OF THE WALL. RIP-RAP OUTLET PROTECTION SHOULD BE PLACED, SEE ROADWAY PLANS FOR OUTLET DETAIL.

**SOIL NAIL WALL – TYPICAL SECTION FOR WALLS NO. 1 AND NO. 2**

\*\*SEE PLANS FOR FINISHED GRADE


PROJECT NO.: 14C.044182  
 HAYWOOD COUNTY  
 STATION: 16+81.50 TO 18+96.46  
 SHEET 1 OF 1 WALL ID RW-001-002

PREPARED BY: D. CHAPPELL DATE: 1/13/23  
 REVIEWED BY: M. MULLA DATE: 1/13/23

Prepared in the Office of:



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NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

GEOTECHNICAL ENGINEERING UNIT

SOIL NAIL WALLS #1 AND #2

DATE: 01-13-23

SHEET NO. 1.