



NOTES:

- FOR SOIL NAIL RETAINING WALLS, SEE SOIL NAIL RETAINING WALLS PROVISION.
- BEFORE BEGINNING SOIL NAIL WALL DESIGN FOR RETAINING WALL NO.2, 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.2 FOR THE FOLLOWING:
- 1) H = DESIGN HEIGHT + EMBEDMENT
 - 2) DESIGN LIFE = 100 YEARS
 - 3) MINIMUM EMBEDMENT DEPTH = 2 FT
 - 4) IN-SITU ASSUMED MATERIAL PARAMETERS FOR COLLUVIUM, ALLUVIUM AND FILL IN-SITU ASSUMED MATERIAL PARAMETERS ABOVE ELEVATION 3062 FT
 UNIT WEIGHT, $\gamma = 120$ LB/CF
 FRICTION ANGLE, $f = 32$ DEGREES
 COHESION, $c = 0$ LB/SF
 - 5) IN-SITU ASSUMED MATERIAL PARAMETERS FOR RESIDUAL ABOVE ELEVATION 3,055 FT:
 UNIT WEIGHT, $\gamma = 125$ LB/CF
 FRICTION ANGLE, $f = 34$ DEGREES
 COHESION, $c = 0$ LB/SF
 - 6) IN-SITU ASSUMED MATERIAL PARAMETERS FOR PARTIALLY WEATHER ROCK ABOVE ELEVATION 3050 FT:
 UNIT WEIGHT, $\gamma = 135$ LB/CF
 FRICTION ANGLE, $f = 38$ DEGREES
 COHESION, $c = 0$ LB/SF
 - 7) IN-SITU ASSUMED MATERIAL PARAMETERS ROCK:
 UNIT WEIGHT, $\gamma = 150$ LB/CF
 FRICTION ANGLE, $f = 45$ DEGREES
 COHESION, $c = 0$ LB/SF
- DRILLING OPERATIONS WILL LIKELY ENCOUNTER COLLUVIAL/ALLUVIAL BOULDERS, CONTRACTOR SHALL USE DRILLING TECHNIQUES THAT WILL MAINTAIN HOLE STABILITY AND ALLOW ALL NAILS TO BE INSTALLED TO THEIR REQUIRED DESIGN DEPTHS.
- (1) VERIFICATION TEST AND (2) PROOF TESTS WILL BE REQUIRED UNLESS OTHERWISE DIRECTED BY THE GEOTECHNICAL OPERATIONS ENGINEER.

SOIL NAIL WALL - TYPICAL SECTION

*SEE CONCRETE DITCH BEHIND WALL DETAILS.
 **SEE PLANS FOR FINISHED GRADE OR END BENT SLOPE DETAILS.

PROJECT NO.: **B-5380**
AVERY COUNTY
 STATION: **12+65.00 -L- to 13+50.00 -L-**
 SHEET 3 OF 3

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

GEOTECHNICAL
ENGINEERING UNIT

SOIL NAIL OPTION FOR
RETAINING WALL #2

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

SHEET NO. W-3

| | |
|------------------|---------------|
| PREPARED BY: MHS | DATE: 9/14/16 |
| REVIEWED BY: SCC | DATE: 9/14/16 |