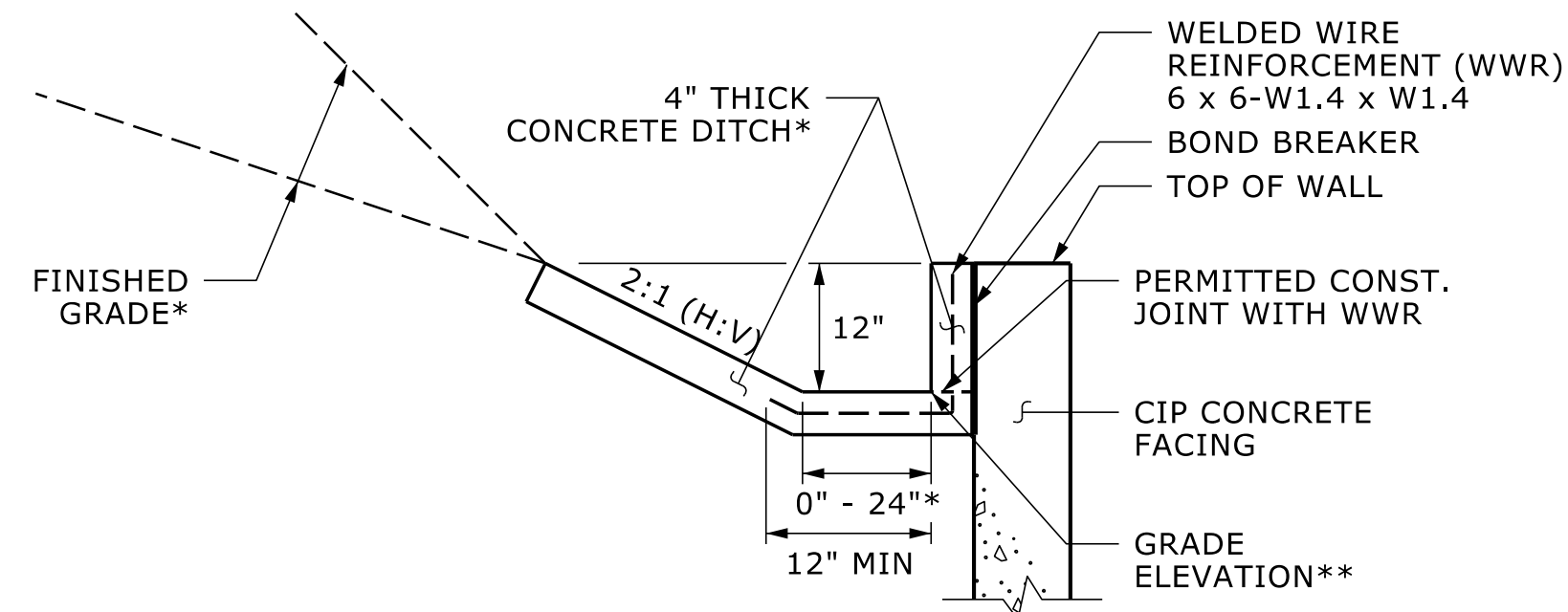


SOIL NAIL WALL - TYPICAL SECTION

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



CONCRETE DITCH BEHIND
WALL WITH CONCRETE FACING

*SEE ROADWAY PLANS FOR CONCRETE
DITCH AND FINISHED GRADE DETAILS.
**SEE WALL ENVELOPE FOR GRADE ELEVATIONS.

NOTES:

FOR SOIL NAIL RETAINING WALLS, SEE SOIL NAIL RETAINING WALLS PROVISION.

FOR SINGLE FACED PRECAST CONCRETE BARRIER, SEE ROADWAY PLANS AND SECTION 857 OF THE STANDARD SPECIFICATIONS.

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.

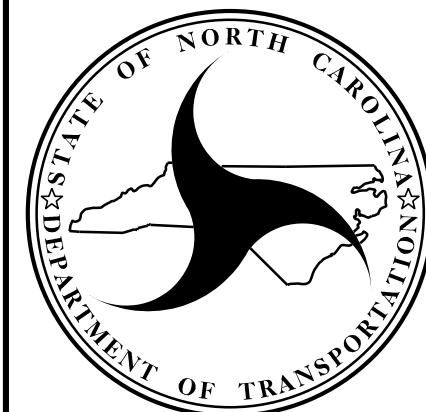
- DESIGN RETAINING WALL NO. 1 FOR THE FOLLOWING:
- 1) DESIGN HEIGHT (H) = WALL HEIGHT + WALL EMBEDMENT
 - 2) DESIGN LIFE = 75 YEARS
 - 3) MINIMUM WALL EMBEDMENT DEPTH = 1 FT
 - 4) MINIMUM NAIL LENGTH = 1.2H OR 10 FEET, WHICHEVER IS LONGER
 - 5) IN-SITU ASSUMED MATERIAL PARAMETERS:
 - IN COLLUVIAL:
 - UNIT WEIGHT, γ = 110 PCF
 - FRICTION ANGLE, ϕ = 26 DEGREES
 - COHESION, c = 0 PSF
 - IN RESIDUAL:
 - UNIT WEIGHT, γ = 120 PCF
 - FRICTION ANGLE, ϕ = 32 DEGREES
 - COHESION, c = 0 PSF
 - IN WEATHERED ROCK:
 - UNIT WEIGHT, γ = 135 PCF
 - FRICTION ANGLE, ϕ = 32 DEGREES
 - COHESION, c = 500 PSF
 - IN CRYSTALLINE ROCK:
 - UNIT WEIGHT, γ = 170 PCF
 - FRICTION ANGLE, ϕ = 34 DEGREES
 - COHESION, c = 1,000 PSF

SOIL NAIL WALL CONSTRUCTION WILL REQUIRE GROUND TO BE CREATED TO REACH TOP OF WALL AT SOME LOCATIONS WITHIN THE WALL ENVELOPE. CONSTRUCTION OF THE CREATED GROUND SHOULD BE ACCOUNTED FOR IN THE SOIL NAIL WALL DESIGN.

ESTIMATED SOIL NAIL WALL QUANTITIES			
RETAINING WALL NO.	SOIL NAIL RETAINING WALLS (SQUARE FEET)	SOIL NAIL VERIFICATION TESTS	SOIL NAIL PROOF TESTS
1	3,450	2 EA	7 EA

PREPARED BY: KND	DATE: 11/25
REVIEWED BY: REK	DATE: 11/25

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NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

GEOTECHNICAL
ENGINEERING UNIT

PROJECT NO.: BP14.R038
POLK COUNTY
STATION: -RW1- STA. 10+00.00 TO 12+05.37
SHEET 2 OF 2

SOIL NAIL RETAINING WALL NO. 1
NOTES AND DETAILS

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