

GEOTECHNICAL ENGINEER

ENGINEER

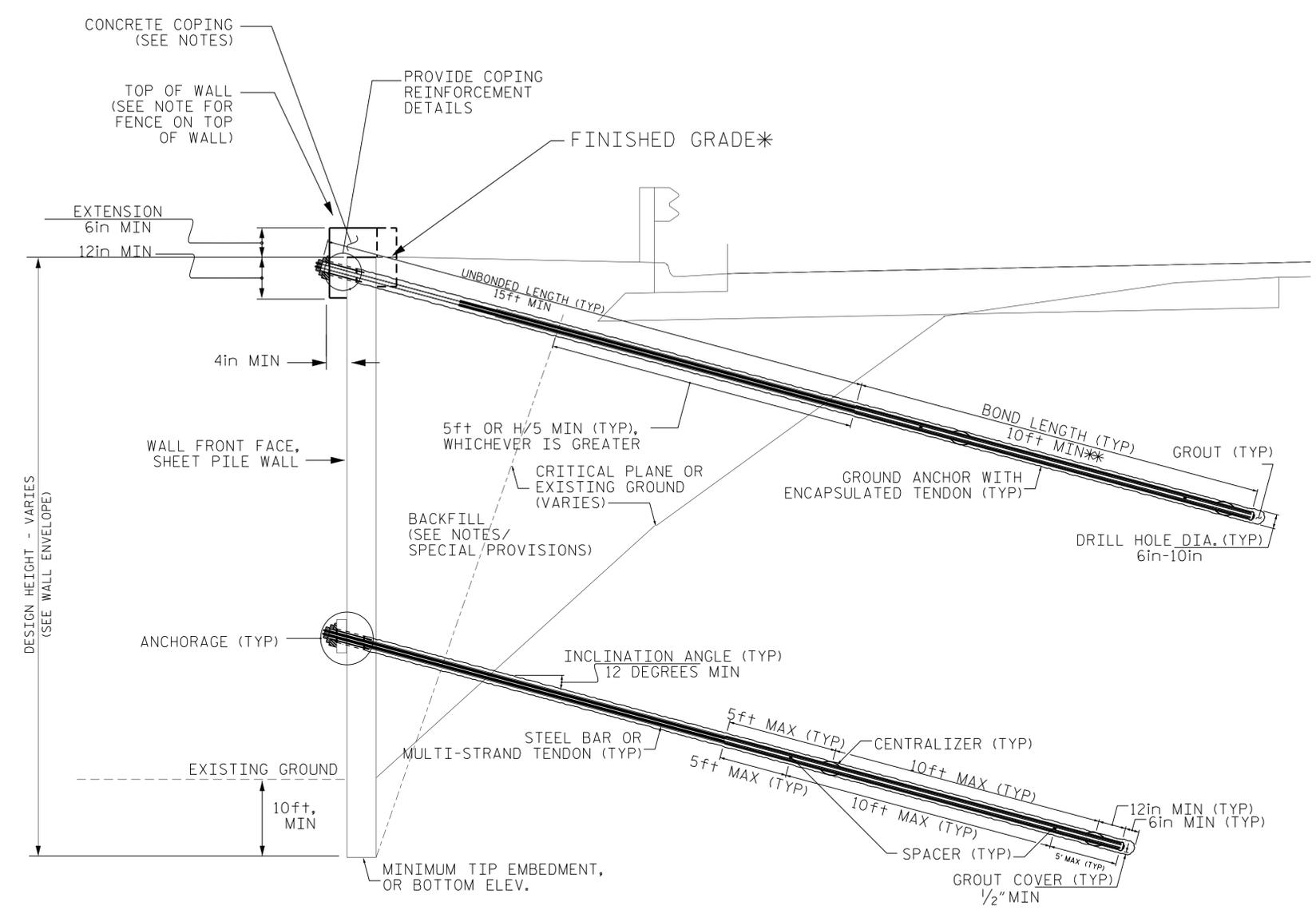
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10/4/2016

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**



NOTES:

FOR ANCHORED SHEET PILE RETAINING WALLS, SEE ANCHORED SHEET PILE RETAINING WALLS PROVISION.

A FENCE IS REQUIRED ON TOP OF SHEET PILE RETAINING WALLS. SEE ROADWAY PLANS FOR FENCE ATTACHMENT DETAILS.

BEFORE BEGINNING ANCHORED SHEET PILE WALL DESIGN, SURVEY WALL LOCATIONS AND SUBMIT A REVISED WALL PROFILE VIEWS (WALL ENVELOPE) FOR REVIEW. DO NOT START WALL DESIGNS OR CONSTRUCTION UNTIL THE REVISED WALL ENVELOPES ARE ACCEPTED.

DESIGN ANCHORED SHEET PILE RETAINING WALLS FOR WALL HEIGHTS EQUAL TO THE DESIGN HEIGHT (DIFFERENCE BETWEEN GRADE ELEVATION AND BOTTOM OF WALL) PLUS ADDITIONAL EMBEDMENT.

DESIGN ANCHORED SHEET PILE RETAINING WALLS FOR THE FOLLOWING:

- 1) MINIMUM DESIGN LIFE = 100 YEARS
- 2) MINIMUM EMBEDMENT DEPTH = 10 FEET BELOW EXISTING GRADE
- 3) IN-SITU ASSUMED MATERIAL PARAMETERS:
 UNIT WEIGHT, $\gamma = 125$ PCF
 FRICTION ANGLE, $\phi = 32$ DEGREES
 COHESION, $c = 0$ PSF
- 4) BACKFILL MINIMUM MATERIAL PARAMETERS:
 UNIT WEIGHT, $\gamma = 115$ PCF
 FRICTION ANGLE, $\phi = 34$ DEGREES
 COHESION, $c = 0$ PSF

DESIGN ANCHORED SHEET PILE RETAINING WALLS FOR A LIVE LOAD (TRAFFIC) SURCHARGE.

EXISTING OR FUTURE OBSTRUCTIONS SUCH AS FOUNDATIONS, GUARDRAIL, FENCE OR HANDRAIL POSTS, PAVEMENTS, PIPES, INLETS OR UTILITIES MAY INTERFERE WITH GROUND ANCHORS FOR ANCHORED SHEET PILE RETAINING WALLS.

ANCHORS ARE SHOWN IN GENERAL LOCATIONS AND MAY BE RELOCATED BASED ON THE SUBMITTED DESIGN. DESIGN AND LOCATIONS OF WALERS SHOULD BE SUBMITTED WITH THE DESIGN SUBMITTAL.

GROUTED ANCHORS ARE SHOWN, HOWEVER, ALTERNATIVE ANCHOR SYSTEMS INCLUDING DEADMEN OR AN APPROVED ALTERNATE MAY BE CONSIDERED. ALL COMPONENTS ARE REQUIRED TO PROVIDE THE STATED DESIGN LIFE.

ANCHORED SHEET PILE WALL - TYPICAL SECTION

*SEE ROADWAY PLANS FOR FINISHED GRADE DETAILS.
 **SEE SHEETPILE RETAINING WALLS PROVISION.

PROJECT NO.: 34522.2.FR4 (R-3100B)
 CATAWBA COUNTY
 STATION: RWALL1: 44+50 -L- TO 47+50 -L-
 SHEET 1 OF 2

PREPARED BY: SY DATE: 9/27/2016
 REVIEWED BY: SCC DATE: 9/28/2016

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

**GEOTECHNICAL
ENGINEERING UNIT**

REVISIONS						SHEET NO. W2
NO.	BY	DATE	NO.	BY	DATE	
1			3			
2			4			