



Signed by: Robert E. Kral 02/16/2026
DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NOTES:

FOR SOLDIER PILE RETAINING WALLS, SEE SOLDIER PILE RETAINING WALLS SPECIAL PROVISION.

FOR STEEL BEAM GUARDRAIL, SEE ROADWAY PLANS AND SECTION 862 OF THE STANDARD SPECIFICATIONS.

DRILLED-IN H-PILES ARE REQUIRED FOR RETAINING WALL #1.

USE A SOLDIER PILE RETAINING WALL WITH PRECAST CONCRETE PANELS THAT MEET SECTION 1077 OF THE STANDARD SPECIFICATIONS FOR RETAINING WALL #1.

BEFORE BEGINNING SOLDIER PILE WALL DESIGN FOR RETAINING WALL #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 #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) ASSUMED BORROW MATERIAL PARAMETERS, SEE SECTION 1018 OF THE STANDARD SPECIFICATIONS
 UNIT WEIGHT, $\gamma = 120$ PCF
 FRICTION ANGLE, $\phi = 30$ DEGREES
 COHESION, $c = 0$ PSF
- 5) IN-SITU ASSUMED MATERIAL PARAMETERS COLLUVIAL SOIL:
 UNIT WEIGHT, $\gamma = 110$ PCF
 FRICTION ANGLE, $\phi = 26$ DEGREES
 COHESION, $c = 0$ PSF
- 6) IN-SITU ASSUMED MATERIAL PARAMETERS RESIDUAL SOIL:
 UNIT WEIGHT, $\gamma = 120$ PCF
 FRICTION ANGLE, $\phi = 30$ DEGREES
 COHESION, $c = 0$ PSF
- 7) IN-SITU ASSUMED MATERIAL PARAMETERS WEATHERED ROCK:
 UNIT WEIGHT, $\gamma = 130$ PCF
 FRICTION ANGLE, $\phi = 34$ DEGREES
 COHESION, $c = 500$ PSF
- 8) IN-SITU ASSUMED MATERIAL PARAMETERS CRYSTALLINE ROCK:
 UNIT WEIGHT, $\gamma = 170$ PCF
 FRICTION ANGLE, $\phi = 36$ DEGREES
 COHESION, $c = 1,000$ PSF

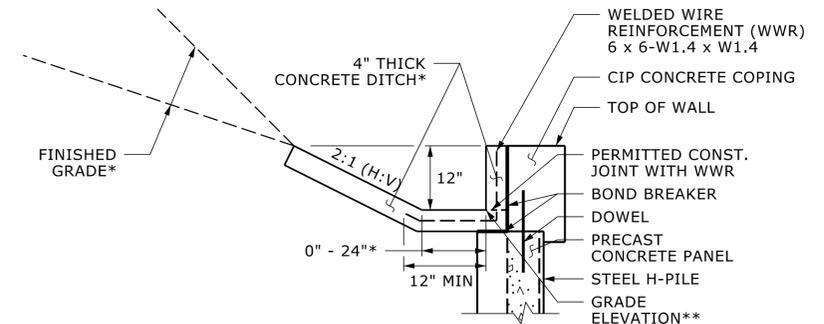
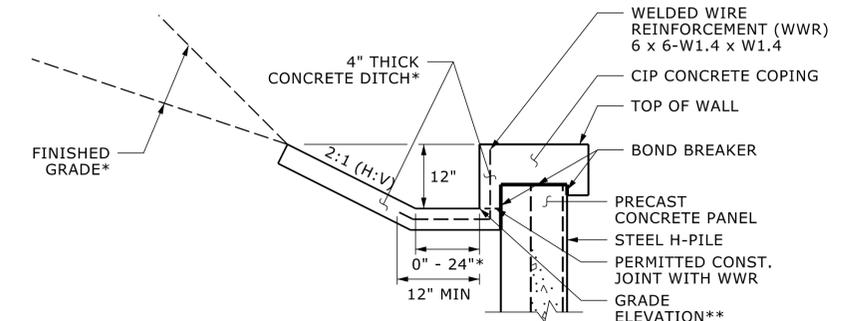
DESIGN RETAINING WALL #1 FOR A LIVE LOAD (TRAFFIC) SURCHARGE.

DESIGN RETAINING WALL #1 FOR 300 LB/FT HORIZONTAL TRAFFIC IMPACT LOAD.

AN ISOLATED POCKET OF COLLUVIAL MATERIAL WAS ENCOUNTERED ALONG THE WALL ALIGNMENT BETWEEN -L2- STA. 13+25 AND 15+25. WHERE PRESENT AT THE PROPOSED BOTTOM OF WALL ELEVATION, UNDERCUT THE COLLUVIAL MATERIAL AND EXTEND BOTTOM OF WALL INTO UNDERLYING RESIDUAL MATERIALS BY AT LEAST 2 FEET. WE ESTIMATE 1,400 CY OF UNDERCUT EXCAVATION.

RETAINING WALL #1 CONSTRUCTION WILL REQUIRE GROUND TO BE CREATED TO REACH GRADE ELEVATION AT SOME LOCATIONS ALONG THE WALL ALIGNMENT. CONSTRUCTION OF THE CREATED GROUND SHOULD BE ACCOUNTED FOR IN THE SOLDIER PILE WALL DESIGN.

IF GROUNDWATER IS ENCOUNTERED BEHIND THE FACE OF RETAINING WALL #1, HORIZONTAL DRAINS MAY BE REQUIRED AS DIRECTED BY THE ENGINEER. FOR HORIZONTAL DRAINS, SEE SHEET W-4 AND THE HORIZONTAL DRAINS SPECIAL PROVISION.



CONCRETE DITCH BEHIND WALL WITH CONCRETE COPING

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

PROJECT NO.: W03294

HENDERSON COUNTY

RETAINING WALL #1: -L2- STA. 12+92.90 TO 15+72.45, LT

SHEET 3 OF 4

Prepared in the Office of:

CARLINAS GEOTECHNICAL GROUP
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SOLDIER PILE RETAINING WALL #1

REVISIONS

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

SHEET NO. W-3

PREPARED BY: KND	DATE: 12/25
REVIEWED BY: REK	DATE: 12/25