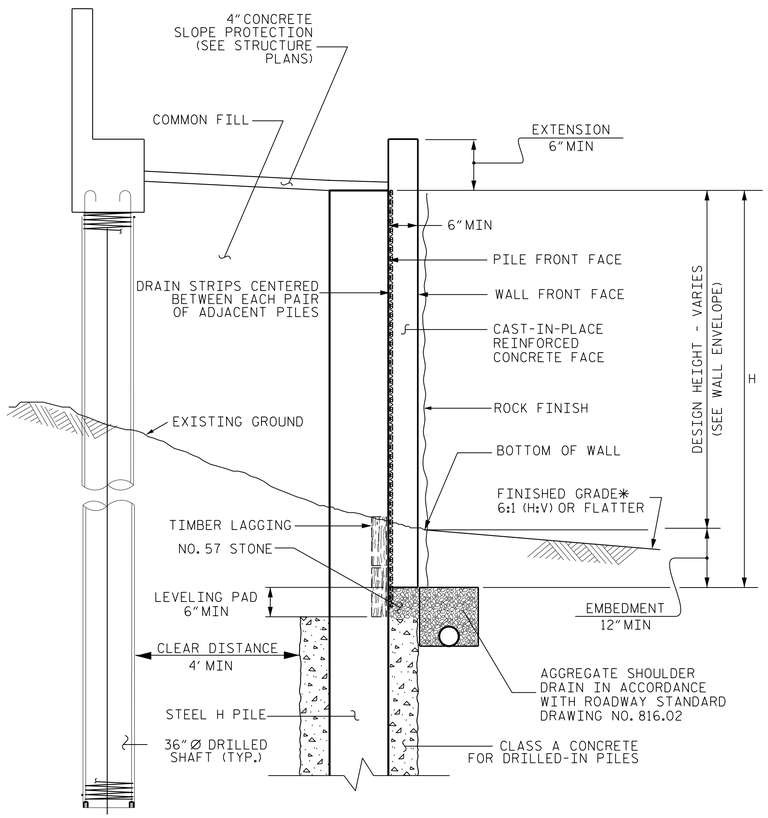
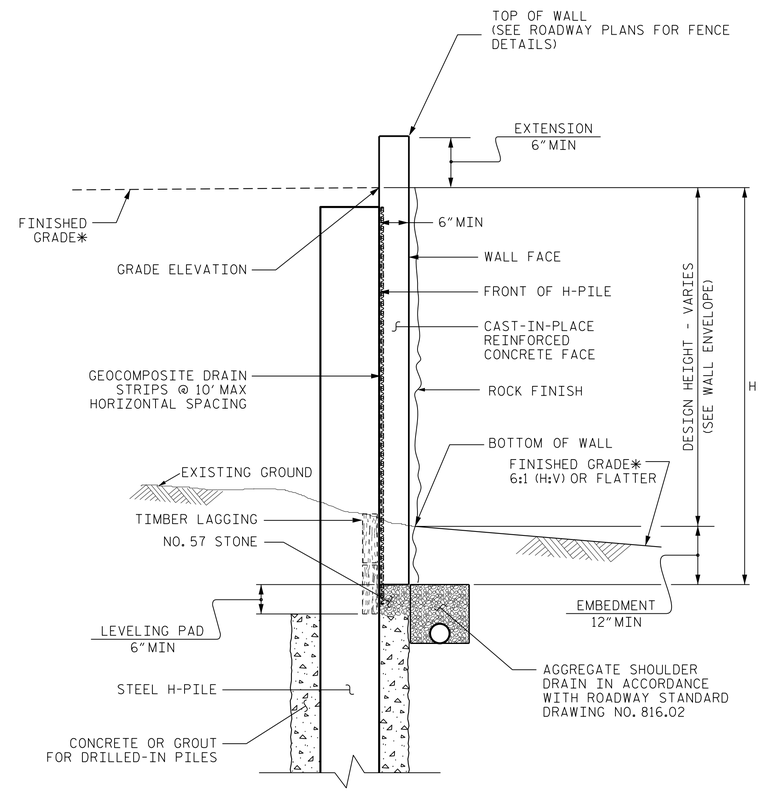
| GEOTECHNICAL ENGINEER | ENGINEER |
|---|---|
| NORTH CAROLINA PROFESSIONAL SEAL 038545 ENGINEER NADIA A. AL-DHALIMY<br>DocuSigned by: Nadia A. Al-Dhalimy 33A79A851514439...<br>10/16/2014 | |
| SIGNATURE DATE | SIGNATURE DATE |



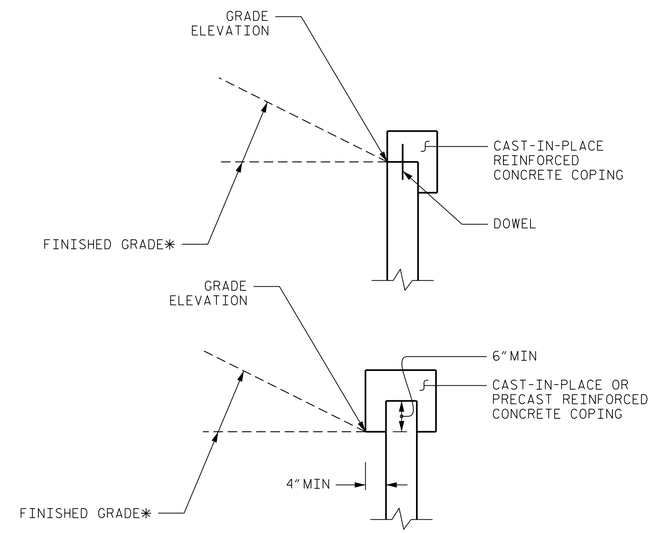

## SECTION A-A SOLDIER PILE WALL WITH CAST-IN-PLACE FACE

N.T.S. * SEE ROADWAY PLANS FOR END BENT SLOPE DETAILS.




## SECTION B-B SOLDIER PILE WALL WITH CAST-IN-PLACE FACE

N.T.S. * SEE ROADWAY PLANS FOR FINISHED GRADE DETAILS.




## COPING DETAILS

AT THE CONTRACTOR'S OPTION, CONNECT COPING TO PANELS WITH DOWELS OR EXTEND COPING DOWN BACK OF PANELS.
* SEE ROADWAY PLANS FOR FINISHED GRADE DETAILS.

## NOTES:

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

A FENCE IS REQUIRED ON TOP OF RETAINING WALL NO. 1. SEE ROADWAY PLANS FOR FENCE DETAILS.

DRILLED-IN PILES ARE REQUIRED FOR RETAINING WALL NO. 1.

USE A SOLDIER PILE RETAINING WALL WITH CAST-IN-PLACE REINFORCED CONCRETE FACE FOR RETAINING WALL NO. 1.

BEFORE BEGINNING SOLDIER PILE 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) H = DESIGN HEIGHT + EMBEDMENT
2) DESIGN LIFE = 100 YEARS
3) IN-SITU ASSUMED MATERIAL PARAMETERS
   UNIT WEIGHT, $\gamma$ = 120 LB/CF
   FRICTION ANGLE, $\phi$ = 30 DEGREES
   COHESION, c = 0 LB/SF

DESIGN RETAINING WALL NO. 1 FOR A LIVE LOAD (TRAFFIC) SURCHARGE.

A STONE FORM LINER ARCHITECTURAL FINISH IS REQUIRED FOR THE CAST-IN-PLACE REINFORCED CONCRETE FACE FOR RETAINING WALL NO. 1.

## SPECIAL NOTES:

THE CLEAR DISTANCE BETWEEN THE EDGE OF THE BRIDGE DRILLED SHAFT AND THE EDGE OF THE EXCAVATING HOLE FOR DRILLED-IN PILE MUST BE AT LEAST 4 FEET.

FOR STONE FORM LINERS, SEE SIMULATED STONE FORM LINER FINISH SPECIAL PROVISION.

EXISTING FOUNDATIONS MAY INTERFERE WITH SOLDIER PILES FOR RETAINING WALL NO. 1.

PLACE COMMON FILL IN ACCORDANCE WITH SECTION 235 OF STANDARD SPECIFICATIONS.

DESIGN THE SOLDIER PILE RETAINING WALL AND THE CONCRETE FACING TO ACCOUNT FOR COMPACTION-INDUCED LATERAL EARTH PRESSURE.

| | | | |
|---|---|---|---|
| PREPARED BY: | N. AL-DHALIMY DS | DATE: | 10/14 |
| REVIEWED BY: | K. KREIDER | DATE: | 10/14 |

**PROJECT NO.:** B-5103 (42238.1.1)
NEW HANOVER **COUNTY**
**STATION:** 15+57.46 -L-

SHEET 2 OF 2

**GEOTECHNICAL ENGINEERING UNIT**

☒ EASTERN REGIONAL OFFICE
☐ WESTERN REGIONAL OFFICE
☐ CONTRACT OFFICE

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SOLDIER PILE RETAINING WALL
TYPICAL SECTION AND NOTES

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