

GEOTECHNICAL ENGINEER

ENGINEER

SEAL 028893

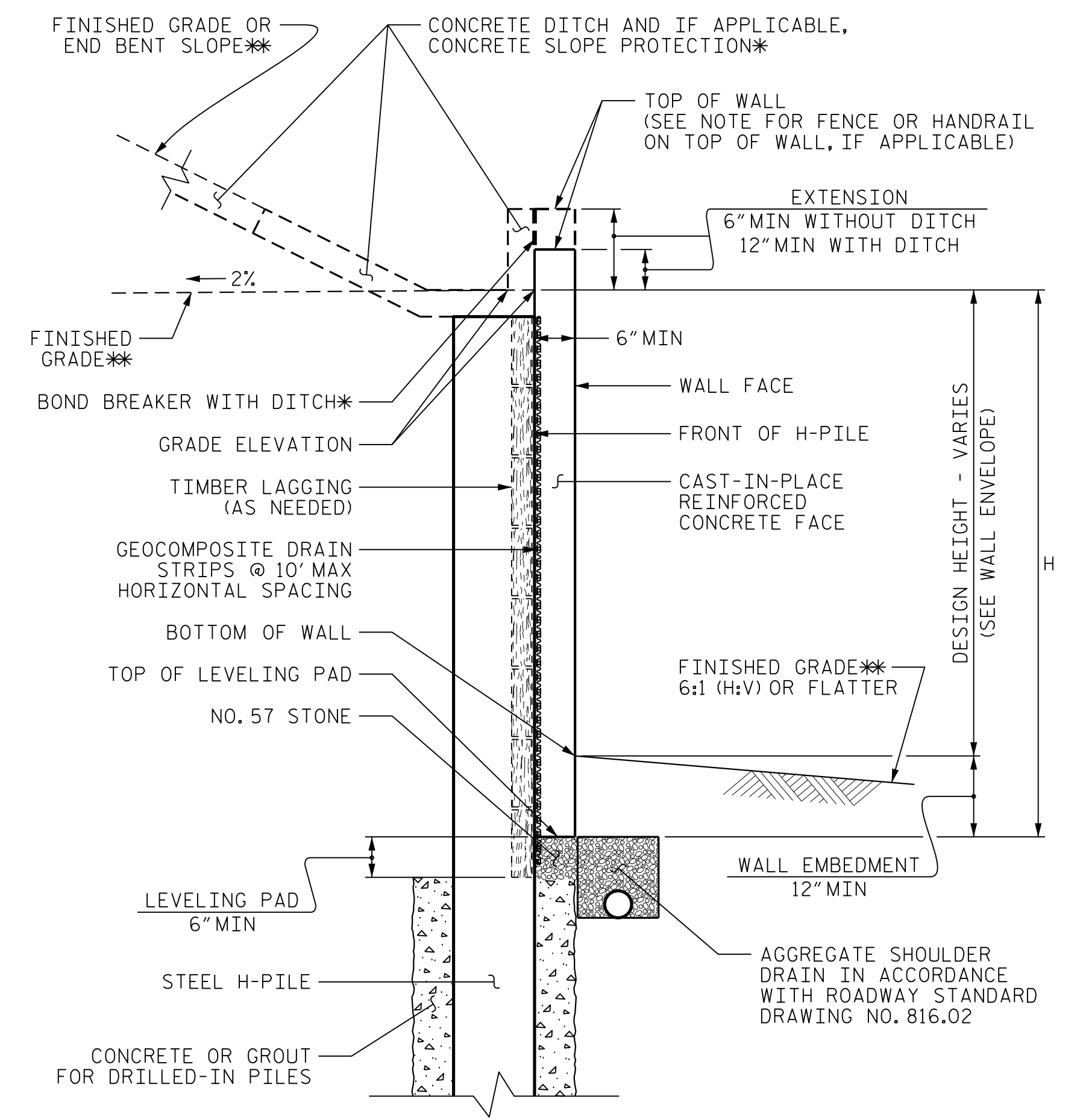
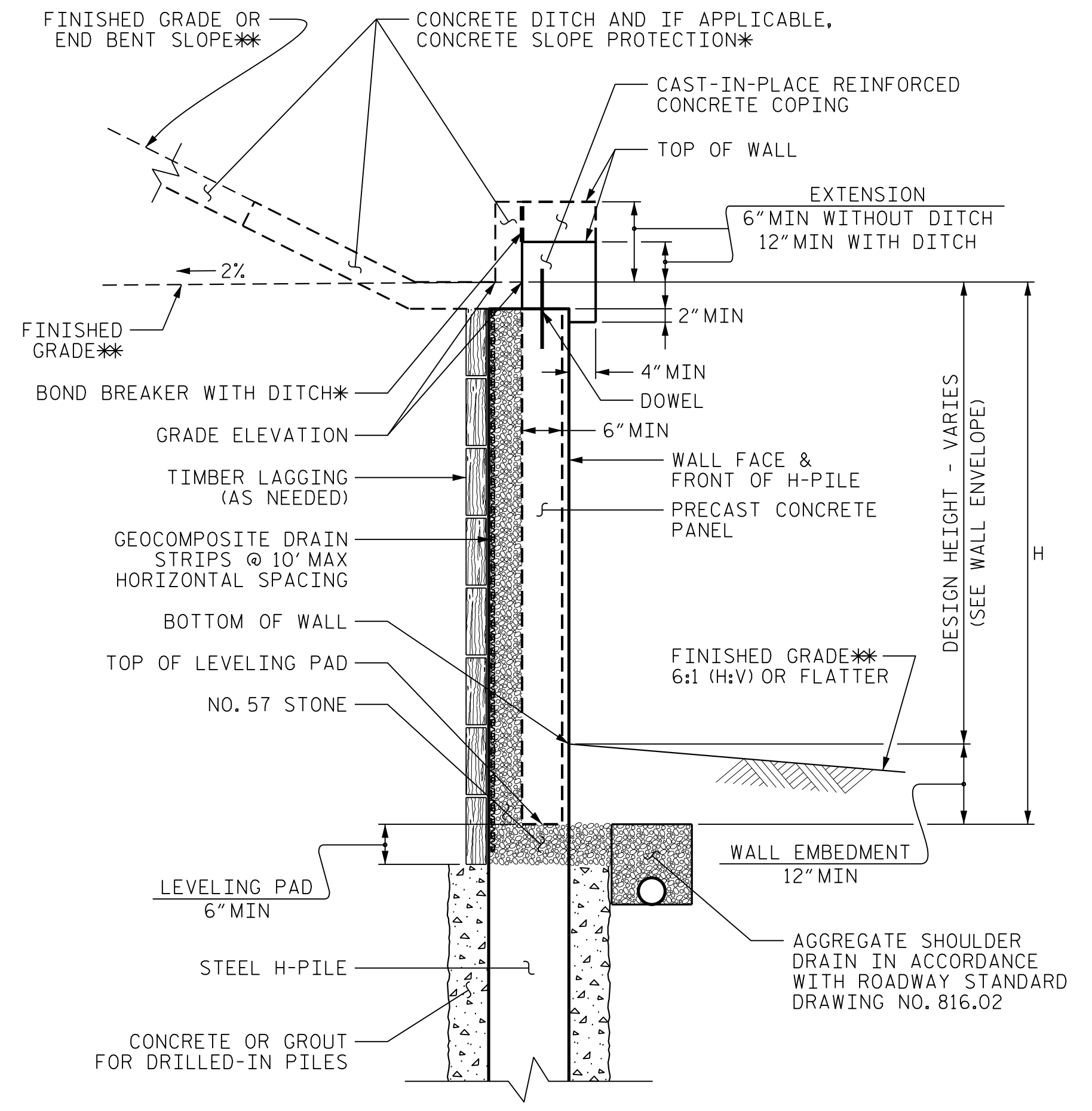
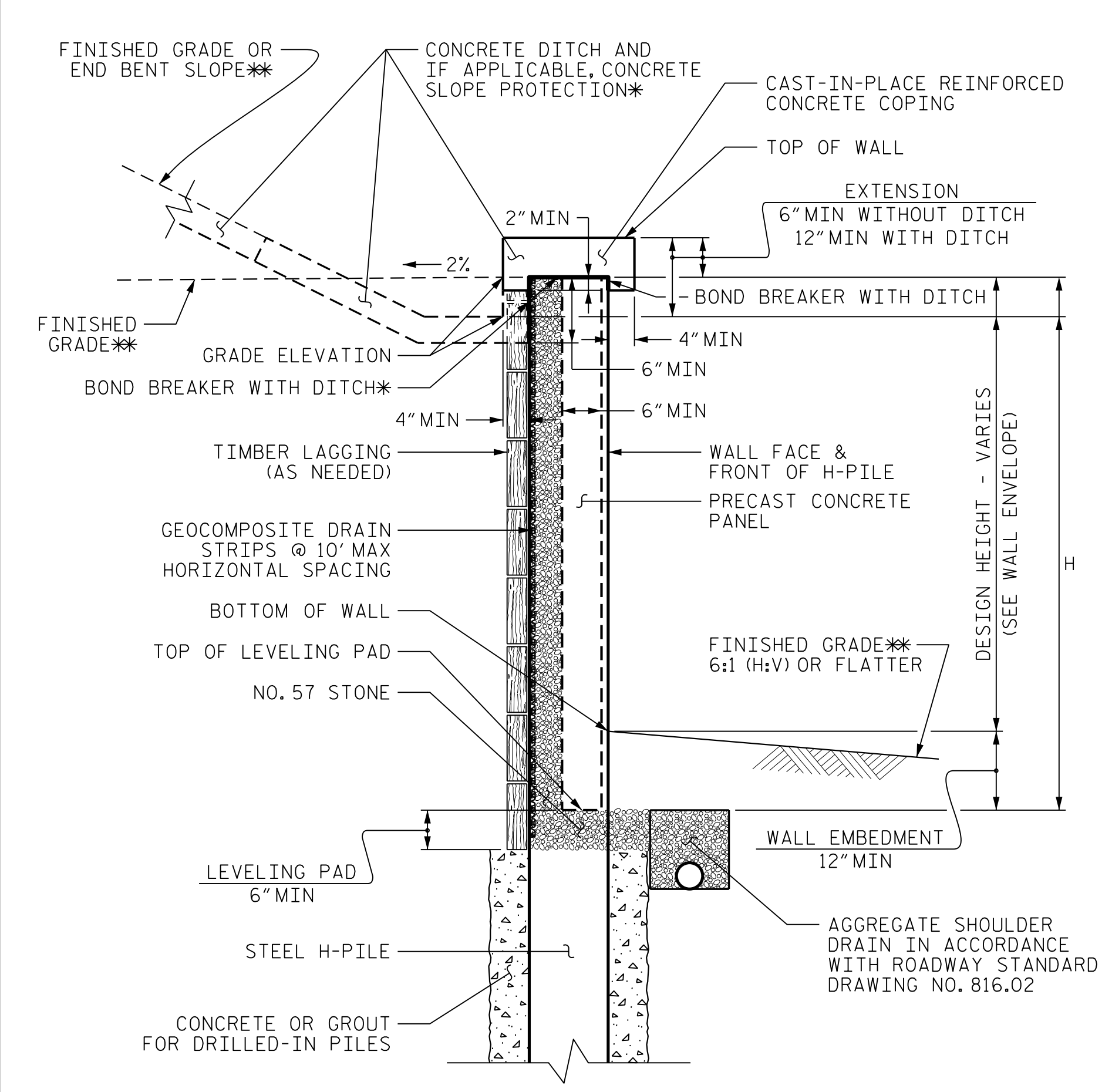
Michael Stephens

9/14/2016

DATE

SIGNATURE

DATE



SOLDIER PILE WALL WITH PRECAST PANEL - TYPICAL SECTIONS

AT THE CONTRACTOR'S OPTION, CONNECT COPING TO PANELS WITH DOWELS OR EXTEND COPING DOWN BACK OF PANELS AND PILES.
 *SEE CONCRETE DITCH BEHIND WALL DETAILS.
 **SEE PLANS FOR FINISHED GRADE OR END BENT SLOPE DETAILS.

NOTES:

- FOR SOLDIER PILE RETAINING WALLS, SEE SOLDIER PILE RETAINING WALLS PROVISION.
- DRILLED-IN H-PILES ARE REQUIRED FOR RETAINING WALL NO. 2.
- AT THE CONTRACTORS OPTION USE A SOLDIER PILE RETAINING WALL WITH PRECAST CONCRETE PANELS THAT MEET SECTION 1077 OF THE STANDARD SPECIFICATIONS FOR RETAINING WALL NO. 2.
- PAINT GALVANIZED H-PILES GRAY IN ACCORDANCE WITH ARTICLE 442-12 OF THE STANDARD SPECIFICATIONS FOR RETAINING WALL NO. 2.
- AT THE CONTRACTOR OPTION USE A SOLDIER PILE RETAINING WALL WITH A CAST-IN-PLACE REINFORCED CONCRETE FACE FOR RETAINING WALL NO. 2.
- BEFORE BEGINNING SOLDIER PILE 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:

- H = DESIGN HEIGHT + WALL EMBEDMENT
- DESIGN LIFE = 100 YEARS
- MINIMUM WALL EMBEDMENT ELEVATION = 3,042 FT
- MINIMUM PILE PENETRATION INTO ROCK = 10 FT
- 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
- 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
- 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
- IN-SITU ASSUMED MATERIAL PARAMETERS ROCK:
 UNIT WEIGHT, $\gamma = 150$ LB/CF
 FRICTION ANGLE, $f = 45$ DEGREES
 COHESION, $c = 0$ LB/SF

SOLDIER PILE WALL WITH CAST-IN-PLACE FACE - 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 2 OF 3

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

GEOTECHNICAL
ENGINEERING UNIT

SOLDIER PILE OPTION FOR RETAINING WALL #2

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1	MHS	7-12-16	3	-	-	W-2
2	-	-	4	-	-	

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