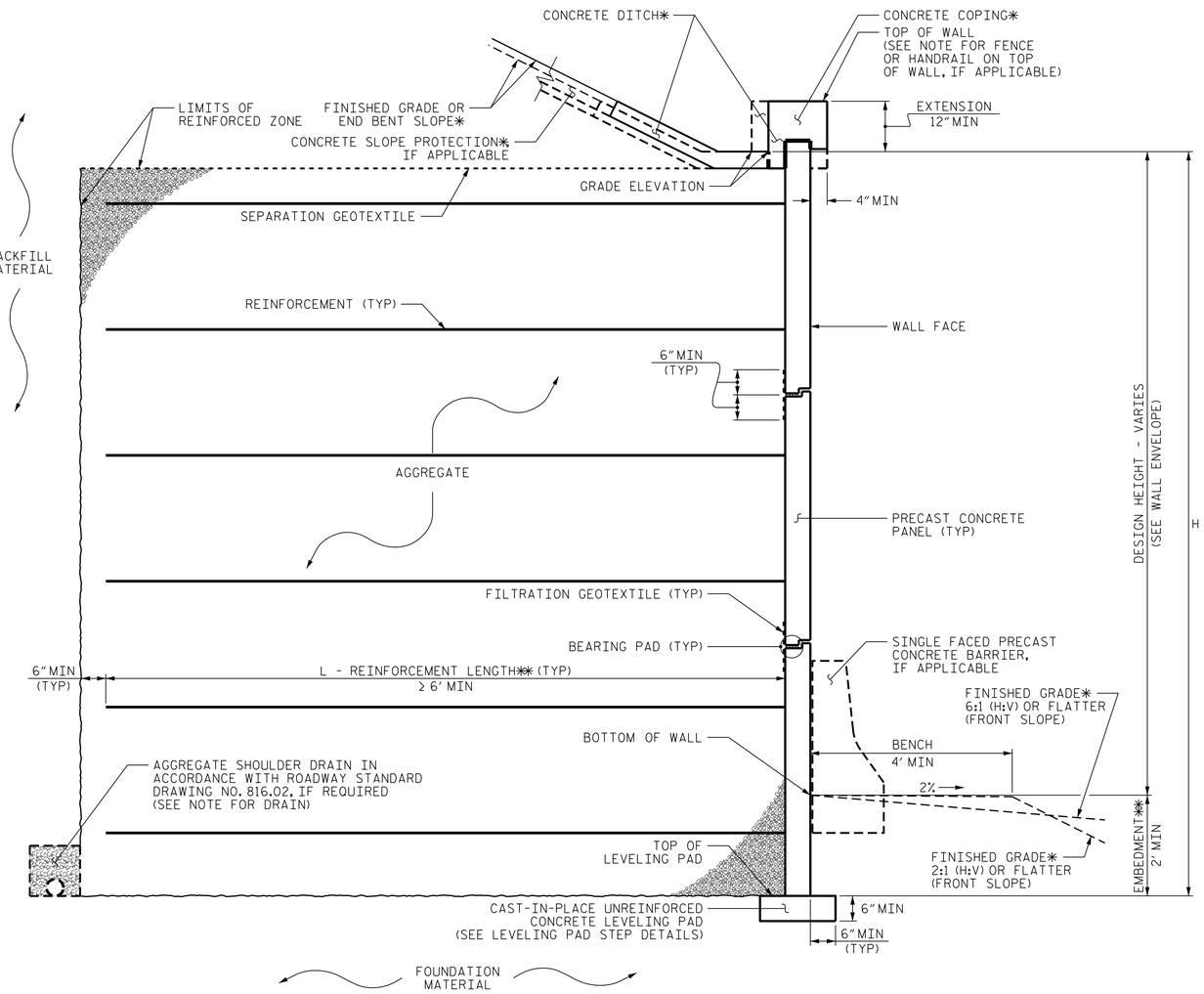
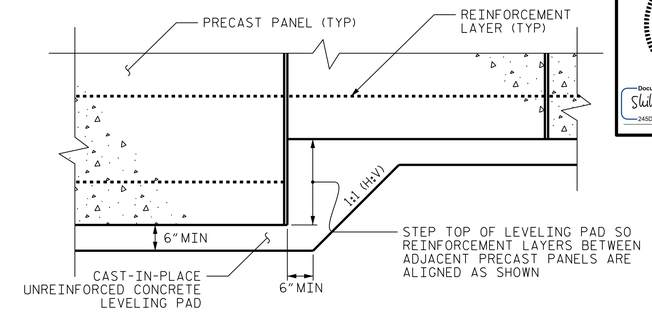
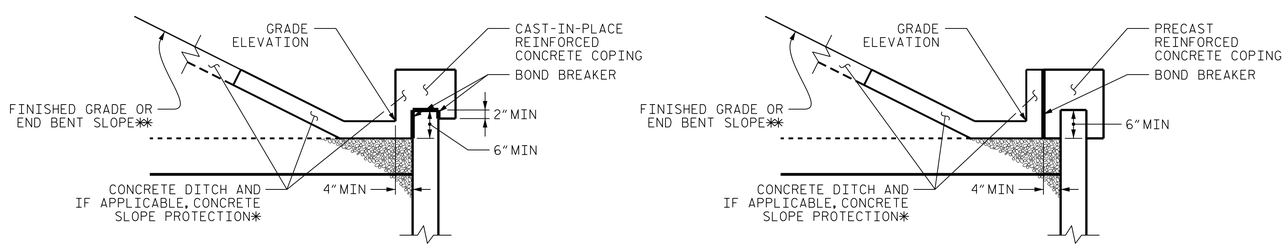


MSE WALL WITH PRECAST PANELS - TYPICAL SECTION

*SEE COPING DETAILS AND PLANS FOR FINISHED GRADE OR END BENT SLOPE DETAILS.
**SEE MSE RETAINING WALLS PROVISION FOR EMBEDMENT AND REINFORCEMENT LENGTH REQUIREMENTS.



LEVELING PAD STEP DETAILS



COPING DETAILS

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

NOTES:

FOR MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALLS, SEE MECHANICALLY STABILIZED EARTH RETAINING WALLS PROVISION.

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

USE AN MSE WALL SYSTEM WITH PRECAST CONCRETE PANELS THAT MEET SECTION 1077 OF THE STANDARD SPECIFICATIONS FOR RETAINING WALL NO. 1.

A DRAIN IS REQUIRED FOR RETAINING WALL NO. 1.

BEFORE BEGINNING MSE 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) MAXIMUM FACTORED VERTICAL STRESS ON FOUNDATION MATERIAL = 4,500 LB/SF
4) MINIMUM REINFORCEMENT LENGTH (L) TO WALL HEIGHT (H) RATIO = 1.3
5) AGGREGATE PARAMETERS:

AGGREGATE TYPE*	UNIT WEIGHT (γ) LB/CF	FRICTION ANGLE (ϕ) DEGREES	COHESION (c) LB/SF
COARSE	110	38	0
FINE	115	34	0
*SEE MSE RETAINING WALLS PROVISION FOR COARSE AND FINE AGGREGATE MATERIAL REQUIREMENTS.			

6) IN-SITU ASSUMED MATERIAL PARAMETERS:

MATERIAL TYPE	UNIT WEIGHT (γ) LB/CF	FRICTION ANGLE (ϕ) DEGREES	COHESION (c) LB/SF
BACKFILL	120	30	0
FOUNDATION	120	30	0

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

DO NOT PLACE LEVELING PAD CONCRETE, AGGREGATE OR REINFORCEMENT FOR RETAINING WALL NO. 1 UNTIL EXCAVATION DIMENSIONS AND FOUNDATION MATERIAL ARE APPROVED.

GEOTECHNICAL ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 038176 ENGINEER SHIHAI ZHANG
DocuSigned by: Shihai Zhang 10/27/2014
245D67F41811435...
SIGNATURE DATE

ENGINEER
SIGNATURE DATE

PROJECT NO.: I-0914BA
VANCE *COUNTY*
STATION: 20+00.00 -Y2SBL-
SHEET 2 OF 3

PREPARED BY: S. ZHANG	DATE: 10/2014
REVIEWED BY: J. BATTS	DATE: 10/2014

GEOTECHNICAL ENGINEERING UNIT
☒ *EASTERN REGIONAL OFFICE*
☐ *WESTERN REGIONAL OFFICE*
☐ *CONTRACT OFFICE*
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

MSE RETAINING WALL NO. 1
NOTES & DETAILS

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