

Kenneth R. Bussey, Jr. 3/31/2022
SIGNATURE DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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N.C.B.E.L.S. License Number: F-0116

FRONT SLOPE WALL EMBEDMENT

SLOPE IN FRONT OF STRUCTURES	MINIMUM EMBEDMENT DEPTH	
	FOR WALLS	FOR ABUTMENTS
HORIZONTAL		
3.0H:1.0V	WALLS	H/10
2.5H:1.0V	WALLS	H/8.5
2.0H:1.0V	WALLS	H/7
1.5H:1.0V	WALLS	H/5
1.25H:1.0V	WALLS	H/4
1.0H:1.0V	WALLS	H/3

NOTE:
 1) MAINTAIN A MINIMUM BENCH WIDTH OF 4.0 FT IN FRONT OF THE WALL FOR ITS ENTIRE LENGTH.
 2) MINIMUM EMBEDMENT DEPTH OF 2 FT, UNLESS LARGER DEPTHS DICTATED BY THE ABOVE TABLE.
 3) MAXIMUM SLOPE OF 1H:1V WILL BE MAINTAINED ON FRONT SLOPES FOR THE ENTIRE LENGTH OF THE WALL.
 4) SUBMIT WITH THE WALL DESIGN INTERNAL, EXTERNAL, AND GLOBAL STABILITY ANALYSES.

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.

A CONCRETE BARRIER RAIL WITH MOMENT SLAB IS REQUIRED ABOVE RETAINING WALL NO. 6. SEE PLANS FOR CONCRETE BARRIER RAIL WITH MOMENT SLAB DETAILS.

AT THE CONTRACTOR'S OPTION, USE FINE AGGREGATE IN THE REINFORCED ZONE OF RETAINING WALL NO. 6.

A SEPARATION GEOTEXTILE IS REQUIRED AT THE BACK OF THE REINFORCED ZONE FOR RETAINING WALL NO. 6.

A DRAIN IS REQUIRED FOR RETAINING WALL NO. 6.

BEFORE BEGINNING MSE WALL DESIGN FOR RETAINING WALL NO. 6, 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. 6 FOR THE FOLLOWING:
 1) H = DESIGN HEIGHT + EMBEDMENT
 2) DESIGN LIFE = 100 YEARS
 3) MAXIMUM FACTORED VERTICAL PRESSURE ON FOUNDATION MATERIAL = 6,400 PSF
 4) MINIMUM REINFORCEMENT LENGTH (L) = 1.30H OR 6 FT, WHICHEVER IS LONGER
 5) REINFORCED ZONE AGGREGATE PARAMETERS:

AGGREGATE TYPE*	UNIT WEIGHT (γ) PCF	FRICTION ANGLE (φ) DEGREES	COHESION (c) PSF
COARSE	110	38	0
FINE	115	34	0

*SEE MSE RETAINING WALLS PROVISION FOR COARSE AND FINE AGGREGATE MATERIAL REQUIREMENTS.

7) IN-SITU ASSUMED MATERIAL PARAMETERS:

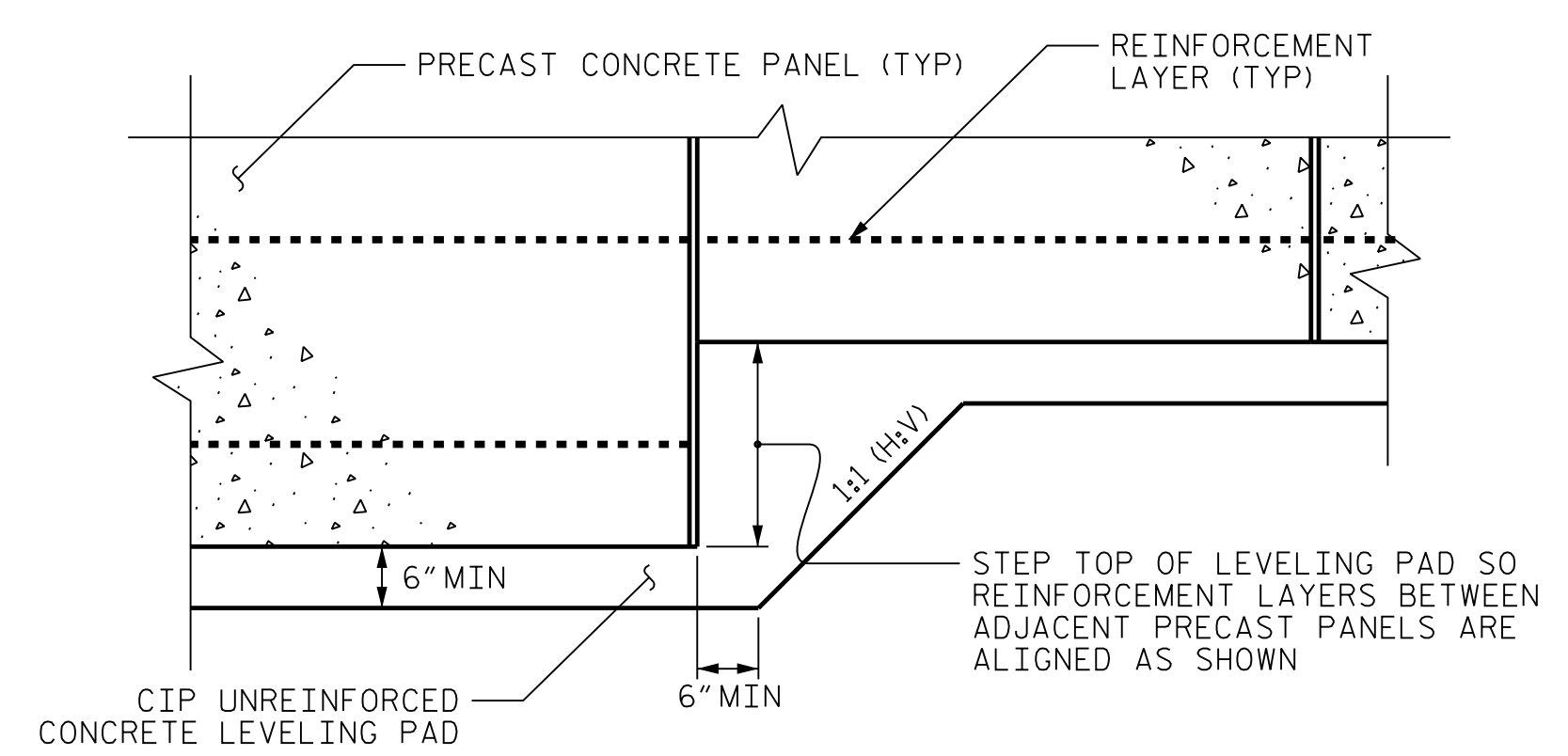
MATERIAL TYPE	UNIT WEIGHT (γ) PCF	FRICTION ANGLE (φ) DEGREES	COHESION (c) PSF
BACKFILL	120	30	0
FOUNDATION	110	30	0

DESIGN RETAINING WALL NO. 6 FOR A LIVE LOAD (TRAFFIC) SURCHARGE.

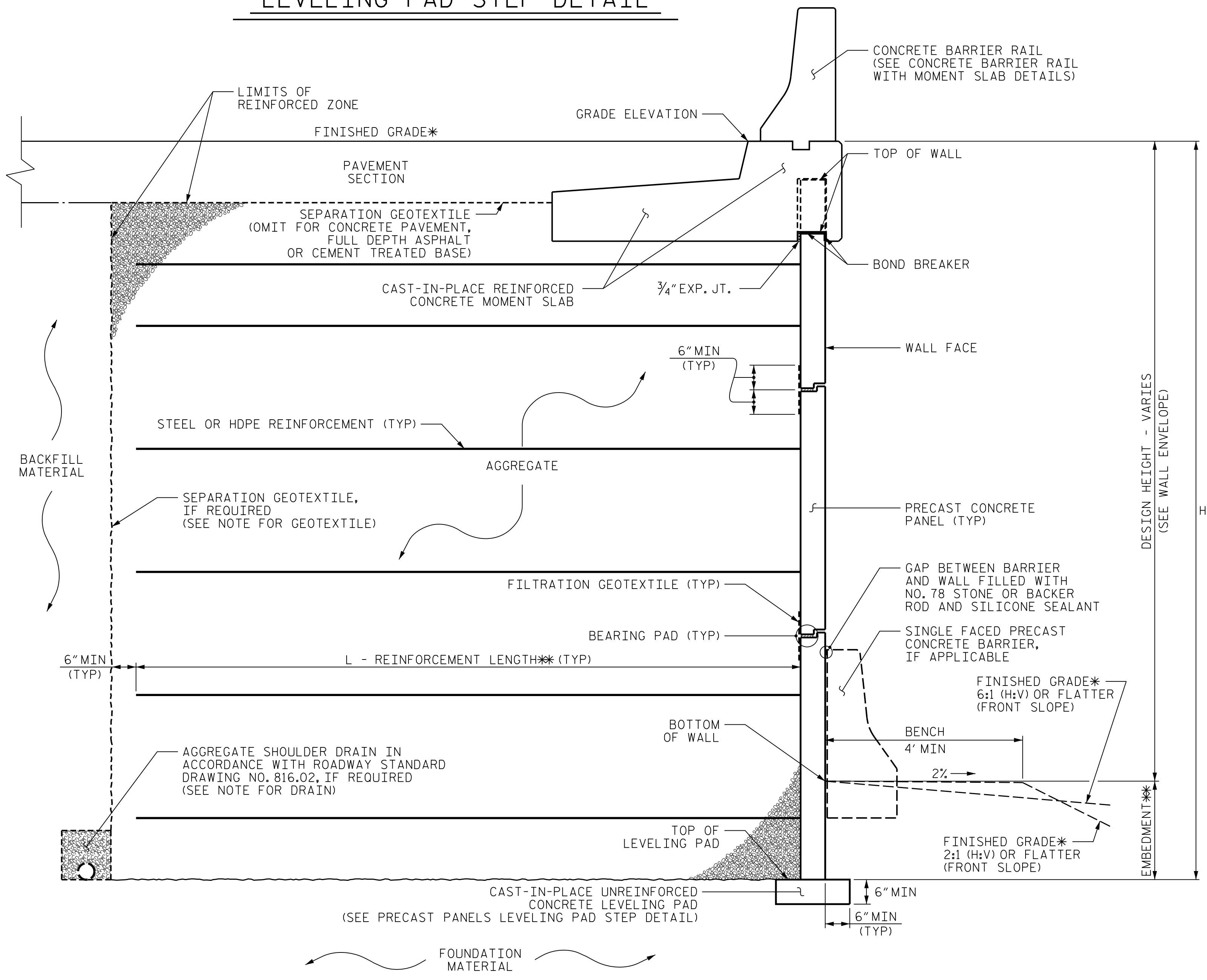
EXISTING OR FUTURE OBSTRUCTIONS SUCH AS FOUNDATIONS, GUARDRAIL, FENCE OR HANDRAIL POSTS, PAVEMENTS, PIPES, INLETS OR UTILITIES MAY INTERFERE WITH REINFORCEMENT FOR RETAINING WALL NO. 6.

DO NOT PLACE LEVELING PAD CONCRETE, AGGREGATE OR REINFORCEMENT FOR RETAINING WALL NO. 6 UNTIL EXCAVATION DIMENSIONS AND FOUNDATION MATERIAL ARE APPROVED.

TEMPORARY SHORING MAY BE REQUIRED FOR RETAINING WALL NO. 6 IN ACCORDANCE WITH THE TEMPORARY SHORING PROVISION. SEE TRAFFIC CONTROL PLANS.



PRECAST PANELS LEVELING PAD STEP DETAIL



MSE WALL (RETAINING WALL NO. 6) WITH PRECAST PANELS - TYPICAL SECTION

*SEE ROADWAY PLANS FOR FINISHED GRADE DETAILS.
 **SEE MSE RETAINING WALLS PROVISION AND IF APPLICABLE, MSE WALL NOTES FOR EMBEDMENT AND REINFORCEMENT LENGTH REQUIREMENTS.

REVISIONS

PLOT DRIVER: NCDOT_color_eng_50.plt
 USER: PPETERSO
 DATE: 3/31/2022
 TIME: 12:16:13 PM
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