



GEOTECHNICAL ENGINEER



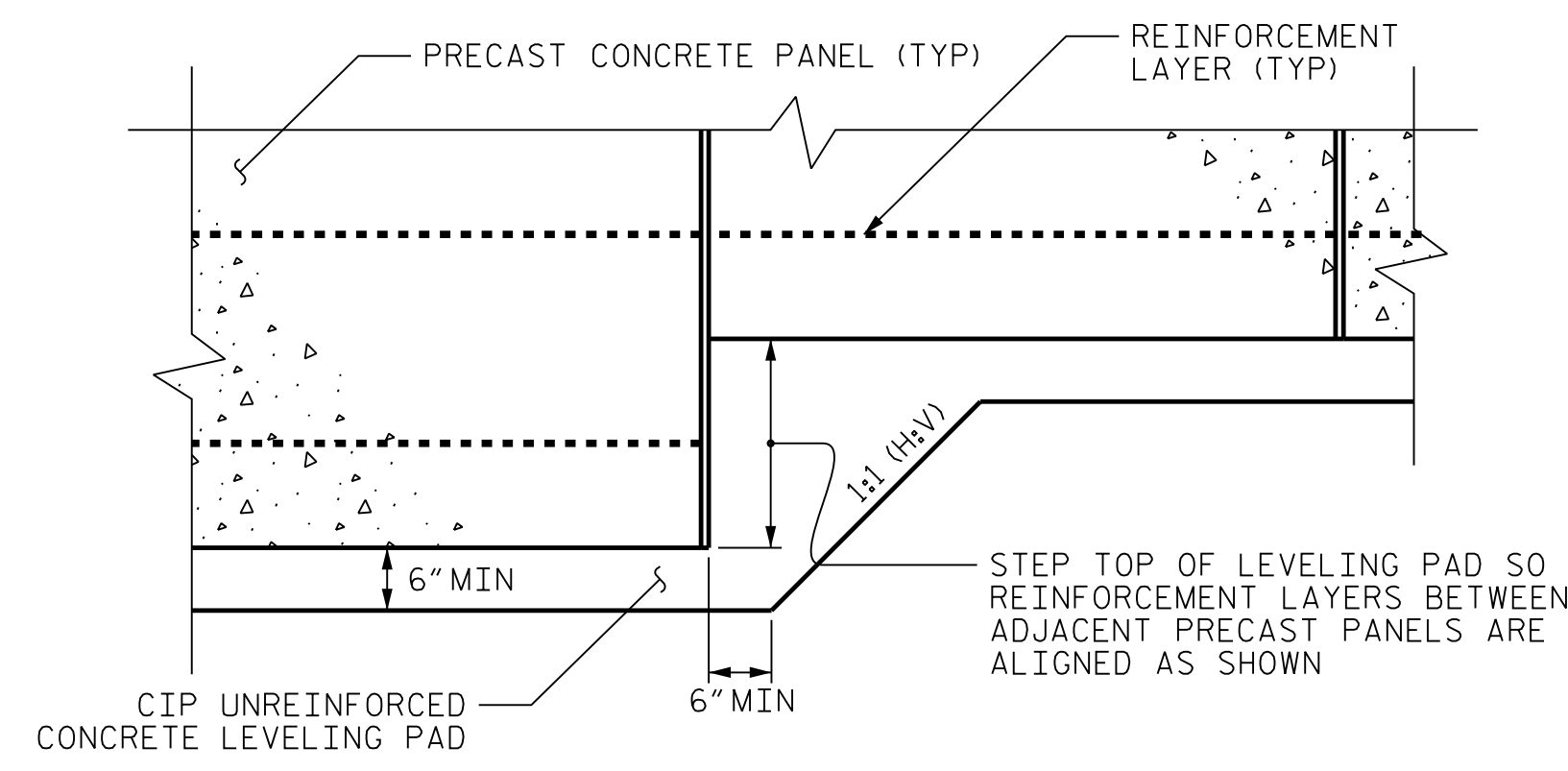
SEAL
038206
ENGINEER
KENNETH R. BUSSEY, JR.

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



PRECAST PANELS LEVELING PAD STEP DETAIL

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. 5. 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. 5.
- AN ARCHITECTURAL FINISH IS REQUIRED FOR PRECAST CONCRETE PANELS FOR RETAINING WALL NO. 5. SEE SIMULATED STONE FORM LINER FINISH SPECIAL PROVISION.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING A COLOR APPLICATION ARTIST AS NEEDED FOR THE PROJECT. SEE SIMULATED STONE FORM LINER FINISH SPECIAL PROVISION.
- A SEPARATION GEOTEXTILE IS REQUIRED AT THE BACK OF THE REINFORCED ZONE FOR RETAINING WALL NO. 5.
- A DRAIN IS REQUIRED FOR RETAINING WALL NO. 5.
- BEFORE BEGINNING MSE WALL DESIGN FOR RETAINING WALL NO. 5, 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. 5 FOR THE FOLLOWING:

- 1) H = DESIGN HEIGHT + EMBEDMENT
- 2) DESIGN LIFE = 100 YEARS
- 3) MAXIMUM FACTORED VERTICAL PRESSURE ON FOUNDATION MATERIAL = 8,100 PSF
- 4) MINIMUM REINFORCEMENT LENGTH (L) = 0.80H 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:

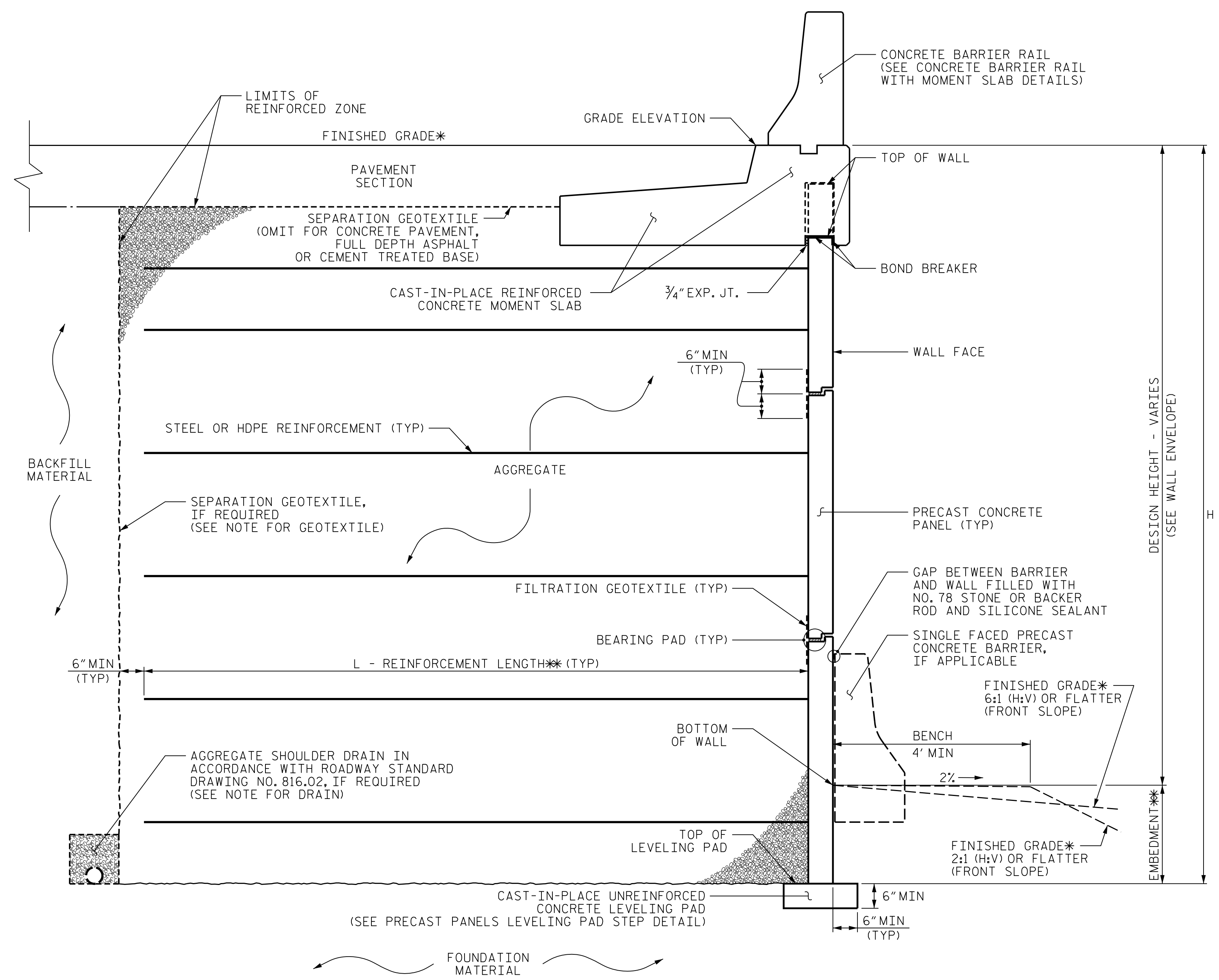
MATERIAL TYPE	UNIT WEIGHT (γ) PCF	FRICTION ANGLE (φ) DEGREES	COHESION (c) PSF
BACKFILL	120	30	0
FOUNDATION	110	27	0

DESIGN RETAINING WALL NO. 5 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. 5.

DO NOT PLACE LEVELING PAD CONCRETE, AGGREGATE OR REINFORCEMENT FOR RETAINING WALL NO. 5 UNTIL EXCAVATION DIMENSIONS AND FOUNDATION MATERIAL ARE APPROVED.

TEMPORARY SHORING MAY BE REQUIRED FOR RETAINING WALL NO. 5 IN ACCORDANCE WITH THE TEMPORARY SHORING PROVISION. SEE TRAFFIC CONTROL PLANS.



MSE WALL (RETAINING WALL NO. 5) 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.

PLOT DRIVER: NCDOT_color_eng_50.plt
 USER: PPETERSON
 DATE: 3/31/2022
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REVISIONS