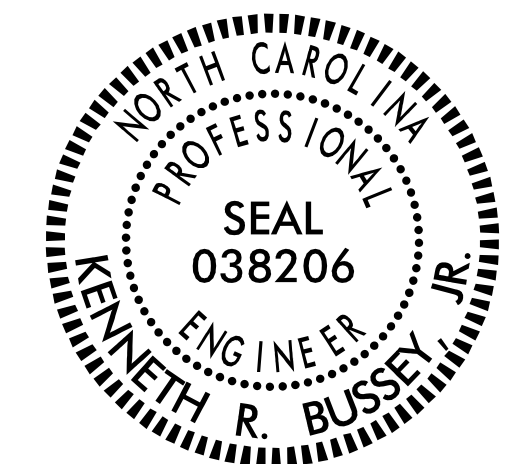


GEOTECHNICAL ENGINEER

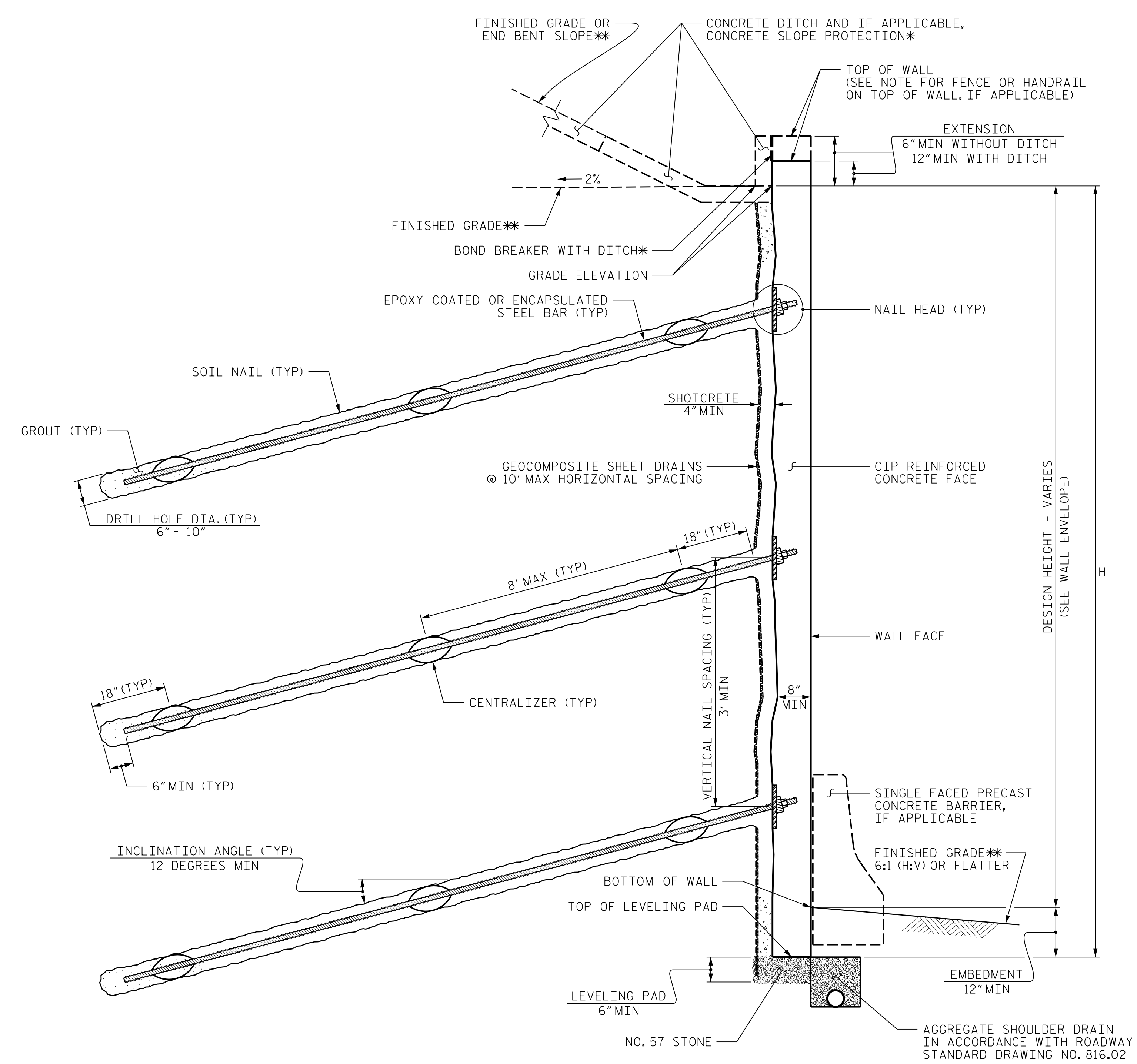


SEAL
038206
ENGINEER
KENNETH R. BUSSEY, JR.

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

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

HDR HDR Engineering, Inc. of the Carolinas
555 Fayetteville St. Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116



NOTES:

- FOR SOIL NAIL RETAINING WALLS, SEE SOIL NAIL RETAINING WALLS PROVISION.
- FOR SINGLE FACED PRECAST CONCRETE BARRIER, SEE ROADWAY PLANS AND SECTION 857 OF THE STANDARD SPECIFICATIONS.
- A FENCE OR HANDRAIL IS REQUIRED ON TOP OF RETAINING WALL NO. 8. SEE ROADWAY PLANS FOR FENCE OR HANDRAIL ATTACHMENT DETAILS.
- BEFORE BEGINNING SOIL NAIL WALL DESIGN FOR RETAINING WALL NO. 8, 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. 8 FOR THE FOLLOWING:
 - 1) H = DESIGN HEIGHT + EMBEDMENT
 - 2) DESIGN LIFE = 100 YEARS
 - 3) IN-SITU ASSUMED MATERIAL PARAMETERS:
 - UNIT WEIGHT, $\gamma = 120$ PCF
 - FRICTION ANGLE, $\phi = 30$ DEGREES
 - COHESION, $c = 0$ PSF
- DESIGN RETAINING WALL NO. 8 FOR A PIPE EXTENDING THROUGH THE WALL AS SHOWN. VERIFY PIPE LOCATION AND ELEVATION BEFORE BEGINNING SOIL NAIL WALL DESIGN OR CONSTRUCTION.
- EXISTING OR FUTURE OBSTRUCTIONS SUCH AS FOUNDATIONS, GUARDRAIL, FENCE OR HANDRAIL POSTS, PAVEMENTS, PIPES, INLETS OR UTILITIES MAY INTERFERE WITH SOIL NAILS FOR RETAINING WALL NO. 8.

SOIL NAIL WALL (RETAINING WALL NO. 8) - TYPICAL SECTION

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

PLOT DRIVER: NCDOT_color_eng_50.plt PENTABLE: NCDOT_pshp.plt.tdi
 USER: PPETERSO DATE: 3/31/2022 TIME: 12:16:24 PM
 FILE: \

REVISIONS