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PROJECT REFERENCE NO.	SHEET NO.
BP14.R014	1

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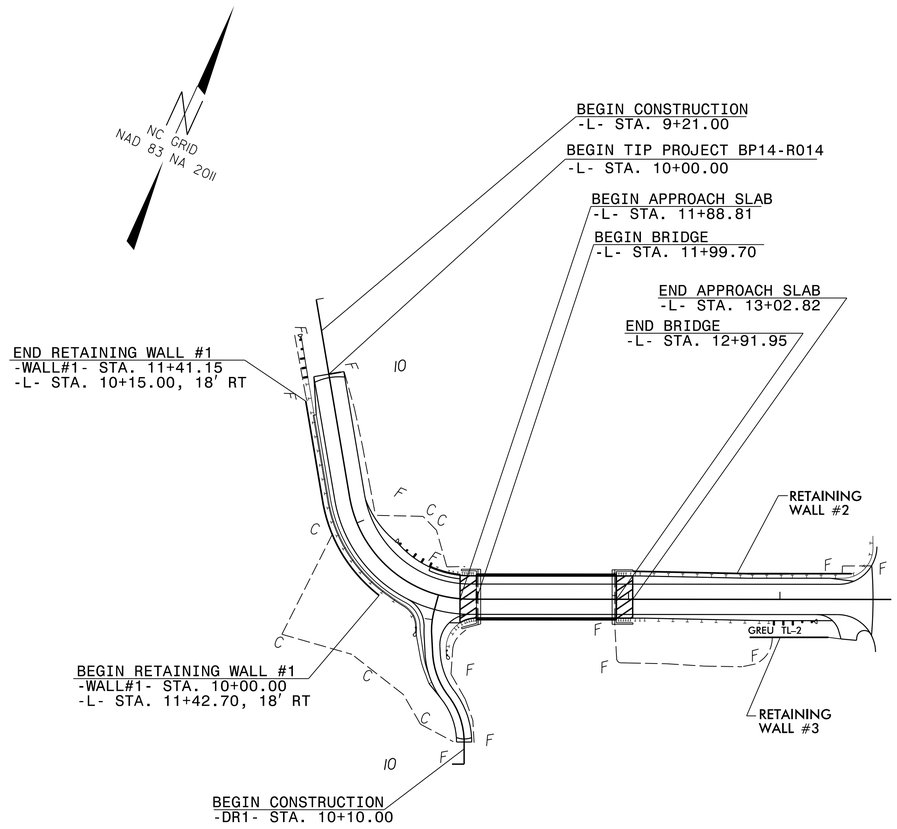
NORTH CAROLINA PROFESSIONAL SEAL 048207 ENGINEER STEPHEN C. CROCKETT

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ENGINEER

SIGNATURE DATE

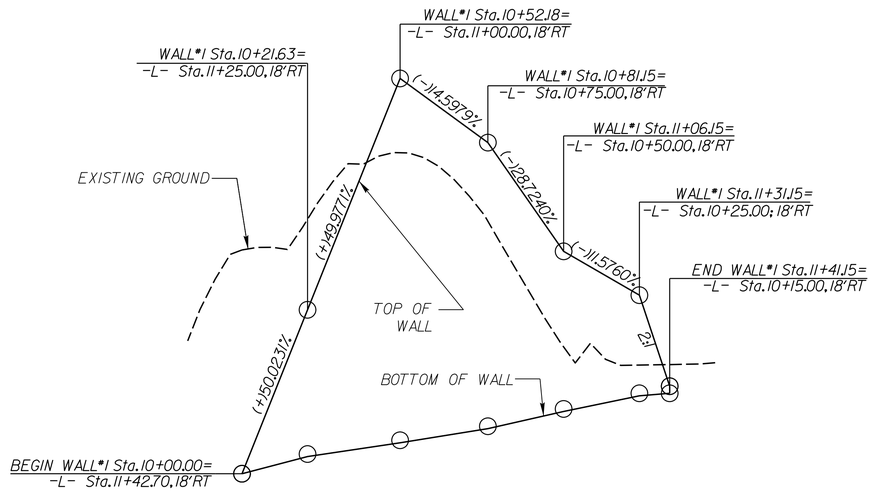
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PLAN VIEW FOR SOIL NAIL RETAINING WALL NO.1

NOT TO SCALE

WALL STATION	TOP OF WALL ELEVATION (FT)	BOTTOM OF WALL ELEVATION (FT)	WALL HEIGHT (FT)
10+15.00	1,956.53	1,956.53	0.00
10+21.63	1,966.92	1,957.23	9.69
10+52.18	1,982.19	1,958.14	24.05
10+81.15	1,977.96	1,959.08	18.88
11+06.15	1,970.78	1,960.21	10.57
11+31.15	1,967.88	1,961.24	6.64
11+41.15	1,961.88	1,961.41	0.47



SOIL NAIL RETAINING WALL - EXPOSED WALL FACE ENVELOPE

NOT TO SCALE

PREPARED BY: S. C. CROCKETT	DATE: 7/7/26
REVIEWED BY: J. R. HAMM	DATE: 7/8/26

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

GEOTECHNICAL ENGINEERING UNIT

BRIDGE NO. 152 SOIL NAIL RETAINING WALL NO. 1
PLAN VIEW & WALL ENVELOPE

REVISIONS

NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		

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PROJECT REFERENCE NO.	SHEET NO.
BP14.R014	2

GEOTECHNICAL ENGINEER

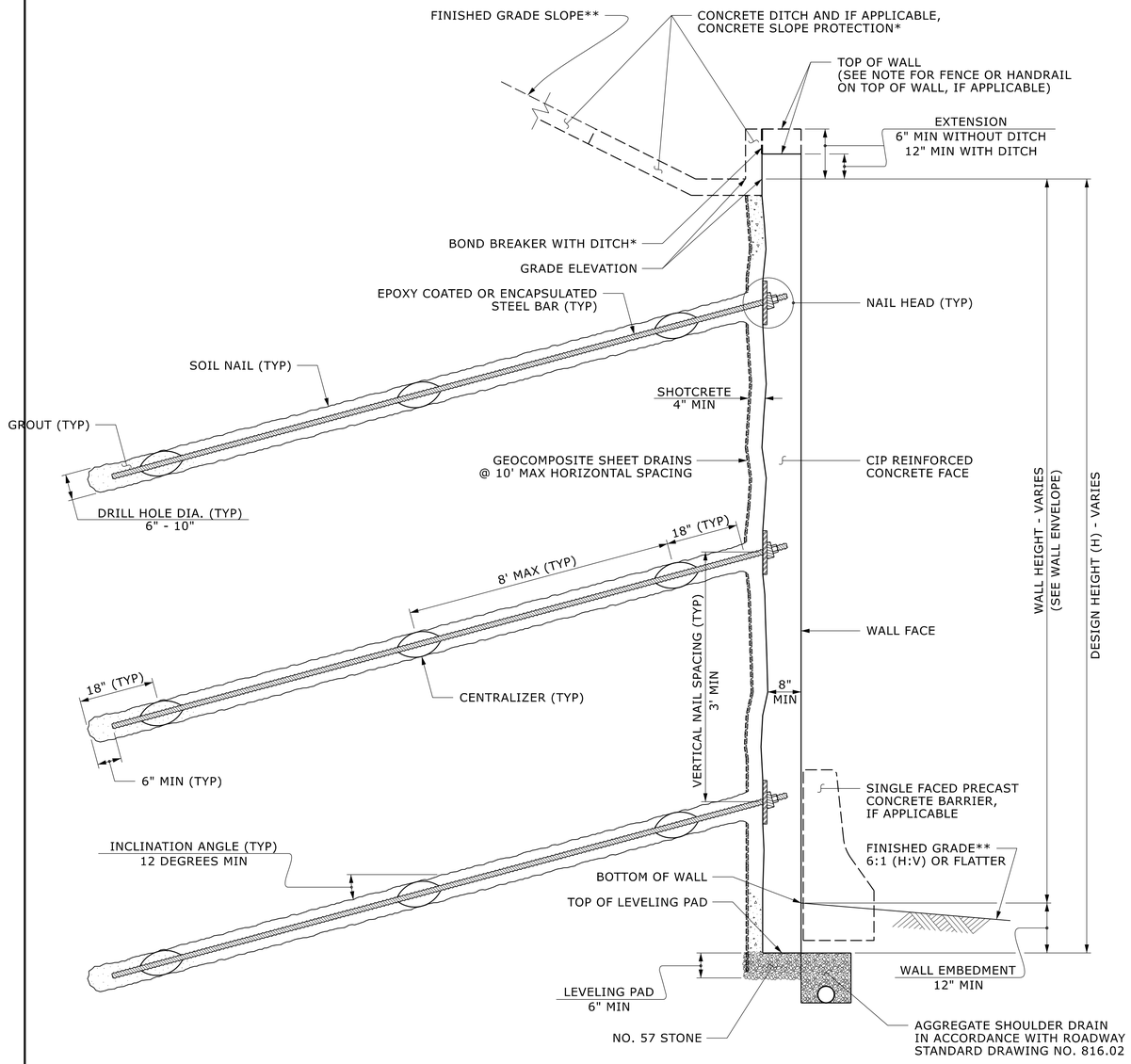
NORTH CAROLINA PROFESSIONAL SEAL 048207 ENGINEER STEPHEN C. CROCKETT

DocuSigned by: Stephen Crockett 10/5/2026
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SIGNATURE DATE

ENGINEER

SIGNATURE DATE

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SOIL NAIL WALL - TYPICAL SECTION

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

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. 1. SEE ROADWAY PLANS FOR FENCE OR HANDRAIL ATTACHMENT DETAILS.

BEFORE BEGINNING SOIL NAIL 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) DESIGN HEIGHT (H) = WALL HEIGHT + WALL EMBEDMENT
2) DESIGN LIFE = 75 YEARS
3) MINIMUM WALL EMBEDMENT ELEVATION = 1 FT
4) IN-SITU ASSUMED MATERIAL PARAMETERSABOVE ELEVATION 1,969 FT:
   UNIT WEIGHT, γ = 100 PCF
   FRICTION ANGLE, φ = 30 DEGREES
   COHESION, c = 0 PSF
5) IN-SITU ASSUMED MATERIAL PARAMETERS BELOW ELEVATION 1,969 FT:
   UNIT WEIGHT, γ= 140 PCF
   FRICTION ANGLE, φ= 0 DEGREES
   COHESION, c = 8,000 PSF

ESTIMATED SOIL NAIL WALL QUANTITIES

RETAINING WALL NO.	SOIL NAIL RETAINING WALLS (SQUARE FEET)	SOIL NAIL VERIFICATION TESTS	SOIL NAIL PROOF TESTS
1	2,005	2	6

PREPARED BY: S. C. CROCKETT	DATE: 7/7/26
REVIEWED BY: J. R. HAMM	DATE: 7/8/26

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS

GEOTECHNICAL ENGINEERING UNIT

BRIDGE NO. 152 SOIL NAIL RETAINING WALL NO. 1 TYPICAL SECTION AND NOTES

REVISIONS

NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		