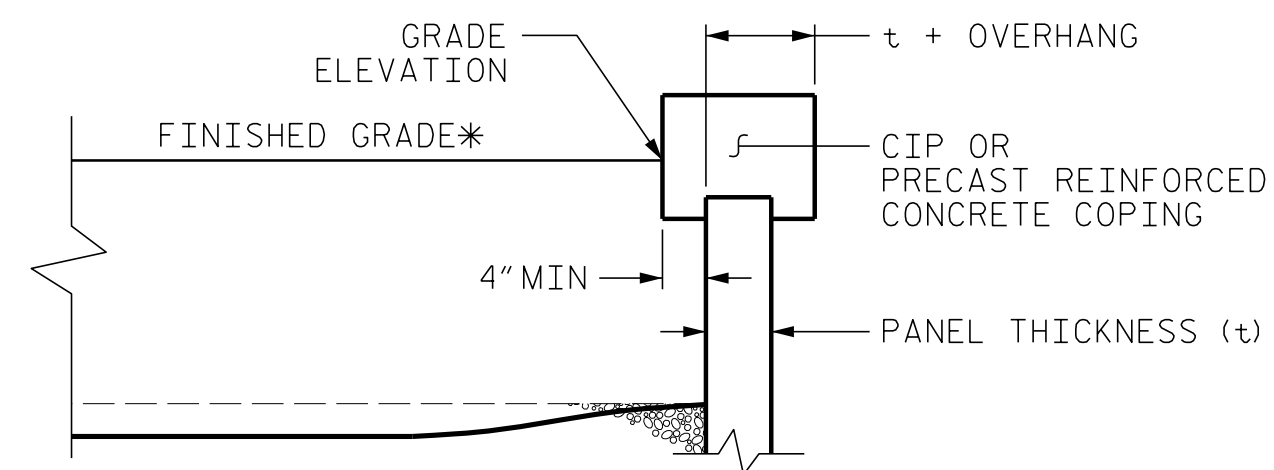
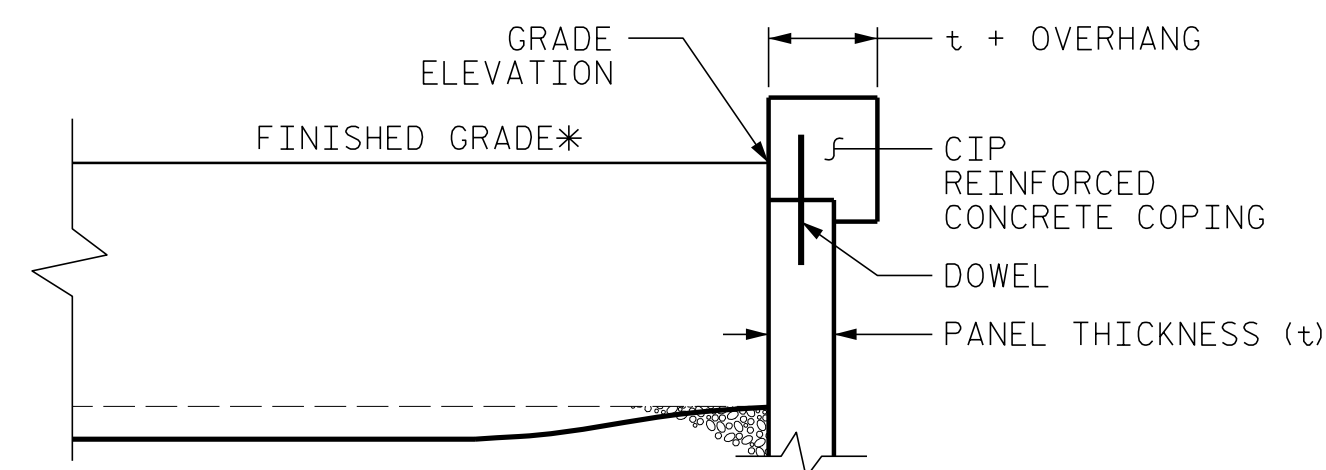
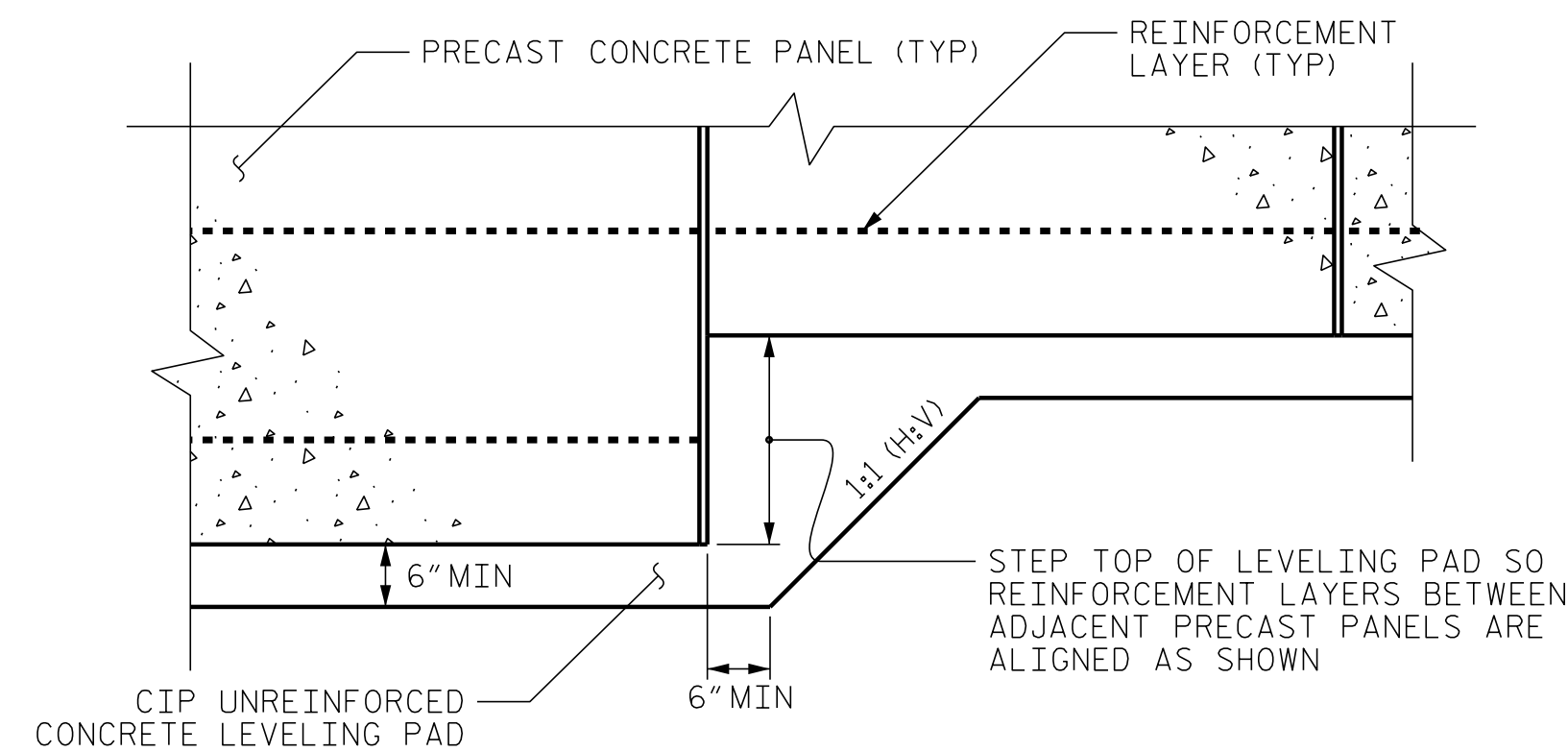




PRECAST PANEL COPING DETAILS

AT THE CONTRACTOR'S OPTION, CONNECT COPING TO PANELS
WITH DOWELS OR EXTEND COPING DOWN BACK OF PANELS.
*SEE ROADWAY PLANS FOR FINISHED GRADE DETAILS.



PRECAST PANELS LEVELING PAD STEP DETAIL

NOTES:

FOR SHORED MECHANICALLY STABILIZED EARTH (SMSE) RETAINING WALLS, SEE SHORED MECHANICALLY STABILIZED EARTH RETAINING WALLS SPECIAL PROVISION.

FOR STEEL BEAM GUARDRAIL, SEE ROADWAY PLANS AND SECTION 862 OF THE STANDARD SPECIFICATIONS.

A WEATHER CUT ASHLAR FORM LINER ARCHITECTURAL FINISH IS REQUIRED FOR THE CIP REINFORCED CONCRETE FACE FOR RETAINING WALL NO.5.SEE WEATHER CUT ASHLAR FORM LINER ARCHITECTURAL FINISH SPECIAL PROVISION.

AT THE CONTRACTOR'S OPTION, USE FINE AGGREGATE IN THE REINFORCED ZONE OF RETAINING WALL NO. 5.

A SEPARATION GEOTEXTILE IS NOT REQUIRED AT THE BACK OF THE REINFORCED ZONE FOR RETAINING WALL NO. 5.

A DRAIN IS REQUIRED FOR RETAINING WALL NO. 5.

BEFORE BEGINNING SMSE 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) DESIGN HEIGHT (H) = WALL HEIGHT + WALL EMBEDMENT
- 2) DESIGN LIFE = 100 YEARS
- 3) MAXIMUM FACTORED VERTICAL PRESSURE ON FOUNDATION MATERIAL = 4,500 PSF
- 4) MINIMUM REINFORCEMENT LENGTH (L) = 0.4H OR 6 FT, WHICHEVER IS LONGER
- 5) MINIMUM EMBEDMENT ELEVATION = SEE SMSE WALL SCHEDULE AND EMBEDMENT TABLE
- 6) REINFORCED ZONE AGGREGATE PARAMETERS:

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

*SEE SMSE 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
RETAINED	30	120	0
FOUNDATION	30	120	0

DESIGN RETAINING WALL NO.5 FOR A LIVE LOAD (TRAFFIC) SURCHARGE.

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

FOR FENCES OR HANDRAILS ON TOP OF WALLS, SEE ROADWAY PLANS FOR FENCE OR HANDRAIL ATTACHMENT DETAILS.

THE PERMANENT SHORING HEIGHT IS AN ESTIMATE ONLY, HEIGHT IS BASED THE DIFFERENCE BETWEEN THE SLOPE HINGE POINT AND TOP OF SMSE WALL LEVELING PAD.

THE SOIL NAIL WALL DESIGNER IS RESPONSIBLE FOR DETERMINING GLOBAL STABILITY BASED ON THE FULLY EXCAVATED CUT AND THE SMSE WALL. SUBMIT THESE RESULTS WITH THE WALL DESIGN PACKAGE.

SUBMIT SMSE WALL AND SOIL NAIL WALL DESIGNS AT THE SAME TIME.



DocuSigned by:
Thomas J. Daily
F29CA6BB83F449F...

6/16/2026

SIGNATURE

DATE _____

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

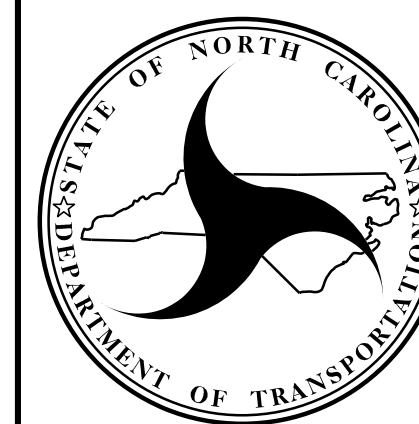
PROJECT NO.: U-5810

WATAUGA COUNTY

STATION: -WALL05- STA. 10+00 TO 19+89.56



8848 RED OAK BLVD., SUITE A
CHARLOTTE, NC 28217
(704) 523-4726



**NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS**

**GEOTECHNICAL
ENGINEERING UNIT**

RETAINING WALL NO. 5

REVISIONS

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

SHEET
NO.
W-14

PREPARED BY: J. DAILY	DATE: 1/17/25
REVIEWED BY: K. HILL	DATE: 1/17/25