

NOTES:

FOR MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALLS, SEE MECHANICALLY STABILIZED EARTH RETAINING WALLS PROVISION.
 FOR STEEL BEAM GUARDRAIL, SEE ROADWAY PLANS AND SECTION 862 OF THE STANDARD SPECIFICATIONS.
 FOR FENCES OR HANDRAILS ON THE TOP OF THE RETAINING WALL, SEE ROADWAY PLANS FOR FENCE OR HANDRAIL ATTACHMENT DETAILS.
 AT THE CONTRACTOR'S OPTION, USE FINE AGGREGATE IN THE REINFORCED ZONE OF RETAINING WALL #10.
 A SEPARATION GEOTEXTILE IS REQUIRED AT THE BACK OF THE REINFORCED ZONE FOR RETAINING WALL #10.
 A DRAIN IS REQUIRED FOR RETAINING WALL #10.
 A SMOOTH ARCHITECTURAL FINISH IS REQUIRED FOR PRECAST CONCRETE PANELS FOR RETAINING WALL #10.
 BEFORE BEGINNING MSE WALL DESIGN FOR RETAINING WALL #10, 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 #10 FOR THE FOLLOWING:
 1) H = DESIGN HEIGHT + EMBEDMENT
 2) DESIGN LIFE = 75 YEARS
 3) MAXIMUM FACTORED VERTICAL PRESSURE ON FOUNDATION MATERIAL:
 RETAINING WALL #10: 3,100 PSF
 4) MINIMUM REINFORCEMENT
 RETAINING WALL #10: LENGTH (L) = 0.8xH OR 6 FT, WHICHEVER IS LONGER
 5) MINIMUM EMBEDMENT DEPTH = 2 FEET, SEE TABLE ON SHEET W10-1 AND MSE WALL PROVISION
 6) 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.


8) IN-SITU ASSUMED MATERIAL PARAMETERS:

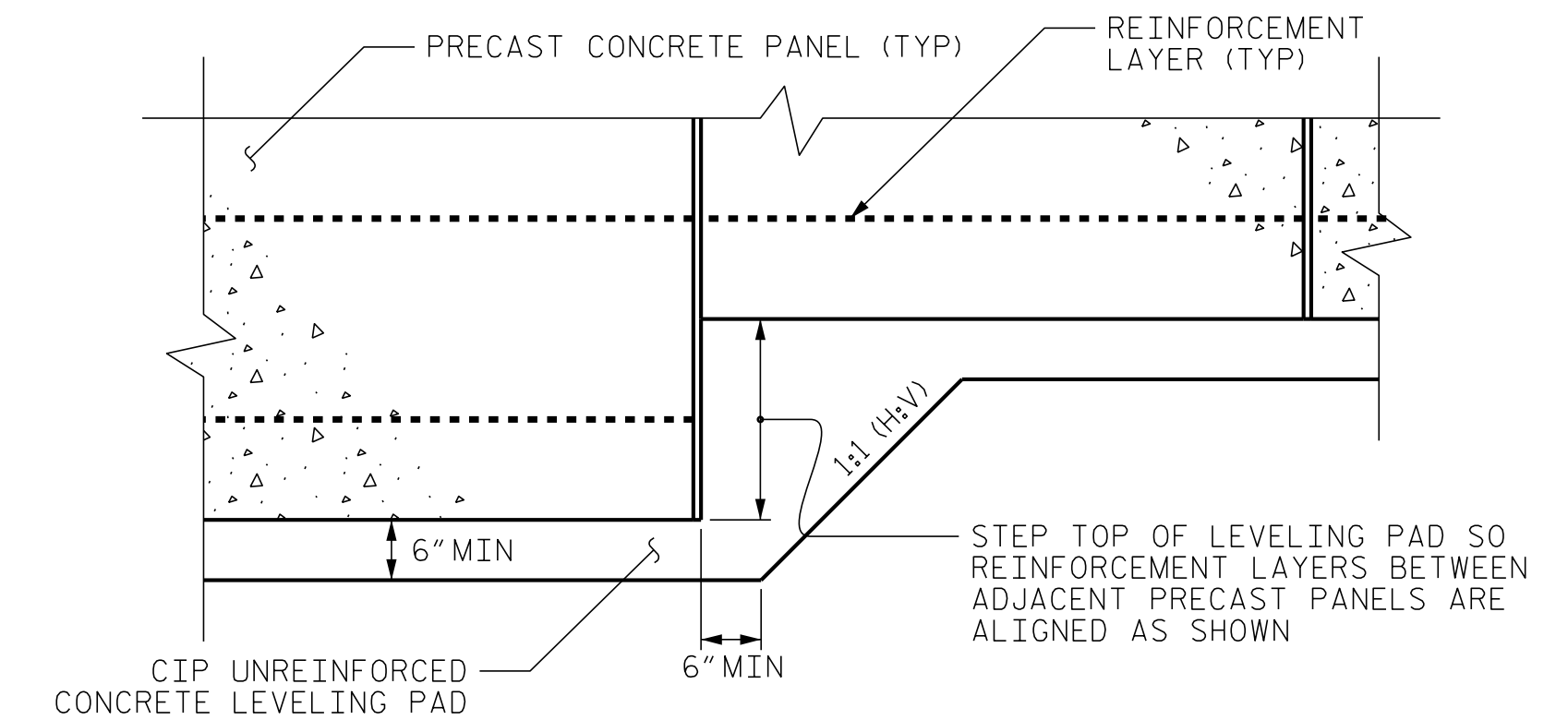
MATERIAL TYPE	UNIT WEIGHT (γ) PCF	FRICTION ANGLE (φ) DEGREES	COHESION (c) PSF
BACKFILL	120	30	0
FOUNDATION	120	30	0

DESIGN RETAINING WALL #10 FOR A LIVE LOAD (TRAFFIC) SURCHARGE.
 FOUNDATIONS FOR SIGNS, LIGHTING OR SIGNALS MAY BE LOCATED BEHIND RETAINING WALL #10 AND MAY INTERFERE WITH REINFORCEMENT. BEFORE BEGINNING MSE WALL CONSTRUCTION, SUBMIT PROPOSED CONSTRUCTION METHODS FOR THESE FOUNDATIONS FOR APPROVAL.
 EXISTING OR FUTURE OBSTRUCTIONS SUCH AS GUARDRAIL, FENCE OR HANDRAIL POSTS, PAVEMENTS, PIPES, INLETS OR UTILITIES MAY INTERFERE WITH REINFORCEMENT FOR RETAINING WALL #10.
 DO NOT PLACE LEVELING PAD CONCRETE, AGGREGATE OR REINFORCEMENT FOR RETAINING WALL #10 UNTIL EXCAVATION DIMENSIONS AND FOUNDATION MATERIAL ARE APPROVED.
 AT THE CONTRACTOR'S OPTION, "TEMPORARY SHORING FOR WALL CONSTRUCTION" MAY BE USED TO CONSTRUCT RETAINING WALL #10. SEE MSE RETAINING WALLS PROVISION FOR TEMPORARY SHORING FOR WALL CONSTRUCTION.

SPECIAL NOTES:

UNDERCUTTING SOFT AND/OR WET SOILS IN THE VICINITY OF THE REINFORCED ZONE AND LEVELING PAD MAY BE REQUIRED TO IMPROVE BEARING RESISTANCE. IF REQUIRED BY THE ENGINEER, USE UNDERCUT EXCAVATION TO REMOVE SOFT SOILS AS DIRECTED BY THE ENGINEER. UNDERCUT TO SUITABLE FOUNDATION SOILS OR TO A DEPTH NO GREATER THAN 3 FEET BELOW THE TOP OF LEVELING PAD ELEVATION, WHICHEVER OCCURS FIRST. PLACE GEOTEXTILE FOR SOIL STABILIZATION IN THE BOTTOM OF THE EXCAVATION AND BACKFILL WITH SELECT GRANULAR MATERIAL. FOR UNDERCUT EXCAVATION AND SELECT GRANULAR MATERIAL SEE STANDARD SPECIFICATIONS. UNDERCUT EXCAVATION, SELECT GRANULAR MATERIAL, AND GEOTEXTILE FOR SOIL STABILIZATION WILL BE PAID AS SEPARATE ADDITIONAL QUANTITIES.
 GROUNDWATER WAS ENCOUNTERED NEAR THE PROPOSED TOP OF LEVELING PAD. THE CONTRACTOR SHOULD BE PREPARED TO DEWATER TO CONSTRUCT THE LEVELING PAD, REINFORCED ZONE, AND UNDERCUT AREAS, IF NECESSARY.

GEOTECHNICAL ENGINEER  Documented by: <i>D. Matthew Brown</i> 38812800A04C1462 SIGNATURE	ENGINEER 6/7/2022 DATE SIGNATURE DATE
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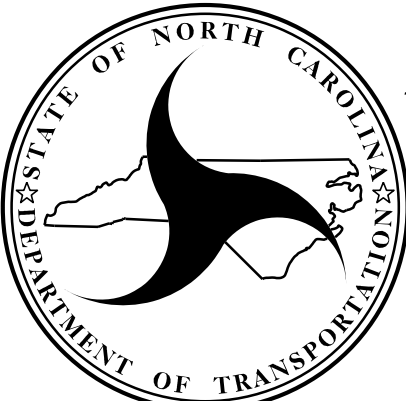
**PRECAST PANELS
LEVELING PAD STEP DETAIL**

PROJECT NO.: A-0009CB
 GRAHAM COUNTY
 RETAINING WALL #10 STATION: -L- 316+45, 42' RT TO 317+67, 39' RT
 SHEET 3 OF 3

PREPARED BY: DMB	DATE: 5/6/2022
REVIEWED BY: REK	DATE: 5/6/2022

Prepared in the Office of:

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

**GEOTECHNICAL
ENGINEERING UNIT**

REVISIONS						SHEET NO. W10-3
NO.	BY	DATE	NO.	BY	DATE	
1			3			
2			4			