

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 SINGLE FACED PRECAST CONCRETE BARRIER, SEE ROADWAY PLANS AND SECTION 857 OF THE STANDARD SPECIFICATIONS.

AT THE CONTRACTOR'S OPTION, USE FINE AGGREGATE IN THE REINFORCED ZONE OF RETAINING WALLS -W1- & -W2-.

A SEPARATION GEOTEXTILE IS NOT REQUIRED AT THE BACK OF THE REINFORCED ZONE FOR RETAINING WALLS -W1- & -W2-

A DRAIN IS NOT REQUIRED FOR RETAINING WALLS -W1- & -W2-.

BEFORE BEGINNING MSE WALL DESIGN FOR RETAINING WALLS -W1- & -W2-, 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 -W1- FOR THE FOLLOWING:

- 1) H = DESIGN HEIGHT + EMBEDMENT
- 2) DESIGN LIFE = 100 YEARS
- 3) MAXIMUM FACTORED VERTICAL PRESSURE ON FOUNDATION MATERIAL = 5700 PSF
- 4) MINIMUM REINFORCEMENT LENGTH (L) = 0.8H
- 5) MINIMUM EMBEDMENT DEPTH = 4 FT
- 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.

7) IN-SITU ASSUMED MATERIAL PARAMETERS:

MATERIAL TYPE	UNIT WEIGHT (γ) PCF	FRICTION ANGLE (ϕ) DEGREES	COHESION (c) PSF
BACKFILL	120	30	0
FOUNDATION	115	28	0

DESIGN RETAINING WALL -W2- FOR THE FOLLOWING:

- 1) H = DESIGN HEIGHT + EMBEDMENT
- 2) DESIGN LIFE = 100 YEARS
- 3) MAXIMUM FACTORED VERTICAL PRESSURE ON FOUNDATION MATERIAL = 7100 PSF
- 4) MINIMUM REINFORCEMENT LENGTH (L) = 0.7H
- 5) MINIMUM EMBEDMENT DEPTH = 2 FT
- 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.

7) IN-SITU ASSUMED MATERIAL PARAMETERS:


MATERIAL TYPE	UNIT WEIGHT (γ) PCF	FRICTION ANGLE (ϕ) DEGREES	COHESION (c) PSF
BACKFILL	120	30	0
FOUNDATION	125	34	0

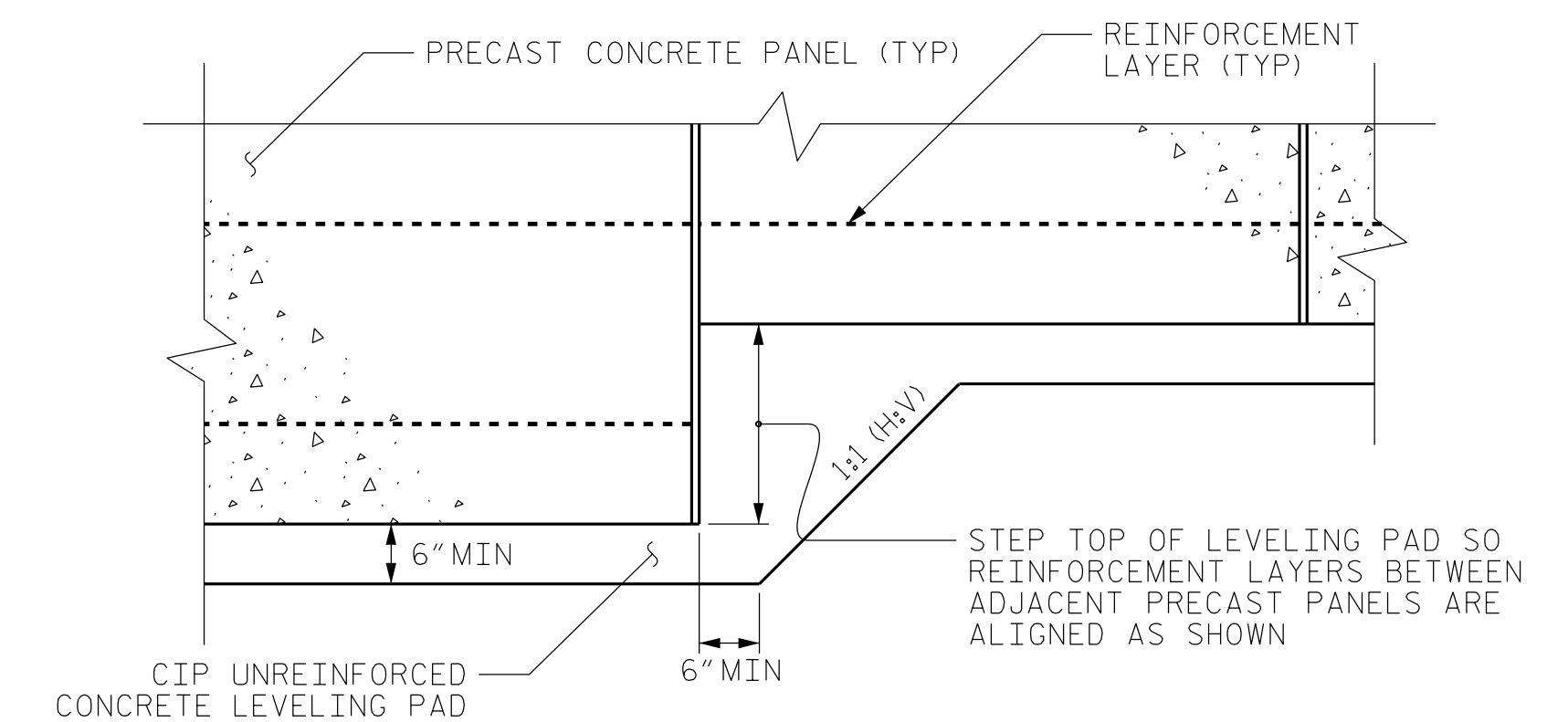
DESIGN RETAINING WALLS -W1- & -W2- FOR A LIVE LOAD (TRAFFIC) SURCHARGE.

EXISTING OR FUTURE OBSTRUCTIONS SUCH AS FOUNDATIONS, GUARDRAIL, FENCE OR HANDRAIL POSTS, PAVEMENTS, PIPES, INLETS OR UTILITIES MAY INTERFERE WITH REINFORCEMENT FOR RETAINING WALLS -W1- & -W2-.

DO NOT PLACE LEVELING PAD CONCRETE, AGGREGATE OR REINFORCEMENT FOR RETAINING WALLS -W1- & -W2- UNTIL EXCAVATION DIMENSIONS AND FOUNDATION MATERIAL ARE APPROVED. IF UNSTABLE MATERIAL EXISTS AT THE REQUIRED EMBEDMENT DEPTH, REMOVE AND REPLACE WITH ADDITIONAL COARSE AGGREGATE AS DIRECTED BY THE ENGINEER.

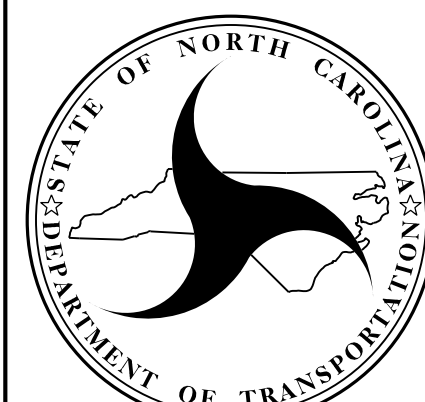
AT THE CONTRACTOR'S OPTION, "TEMPORARY SHORING FOR WALL CONSTRUCTION" MAY BE USED TO CONSTRUCT RETAINING WALLS -W1- & -W2-. SEE MSE RETAINING WALLS PROVISION FOR TEMPORARY SHORING FOR WALL CONSTRUCTION.

GEOTECHNICAL ENGINEER  DocuSigned by: Jeremy R Hamm 9/13/2021 SIGNATURE DATE	ENGINEER SIGNATURE DATE
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



PRECAST PANELS
LEVELING PAD STEP DETAIL

PROJECT NO.: P-5720
 WAKE COUNTY
 STATION: -W1- & -W2-
 SHEET 4 OF 8

	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS GEOTECHNICAL ENGINEERING UNIT
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RETAINING WALLS NO. 1 AND NO. 2
 -W1- & -W2-
 NOTES AND PRECAST PANELS
 LEVELING PAD STEP DETAIL

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

PREPARED BY: S. C. CROCKETT	DATE: 11/28/18
REVIEWED BY: J. R. HAMM	DATE: 11/30/18