


GEOTECHNICAL ENGINEER

ENGINEER



DocuSigned by: *J. Young Park* 11/8/2021

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

**NOTES:**

FOR MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALLS, SEE MECHANICALLY STABILIZED EARTH RETAINING WALLS PROVISION.

AT THE CONTRACTOR'S OPTION, USE AN MSE WALL SYSTEM WITH SEGMENTAL RETAINING WALL (SRW) UNITS THAT MEET ARTICLE 1040-4 OF THE STANDARD SPECIFICATIONS FOR RETAINING WALL NO.1.

AT THE CONTRACTOR'S OPTION, USE FINE AGGREGATE IN THE REINFORCED ZONE OF RETAINING WALL NO.1.

A SEPARATION GEOTEXTILE IS REQUIRED AT THE BACK OF THE REINFORCED ZONE FOR RETAINING WALL NO.1.

A DRAIN IS REQUIRED FOR RETAINING WALL NO.1.

BEFORE BEGINNING MSE WALL DESIGN FOR RETAINING WALL NO.1, SURVEY WALL LOCATION AND SUBMIT 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) H = DESIGN HEIGHT + EMBEDMENT
- 2) DESIGN LIFE = 75 YEARS
- 3) MAXIMUM FACTORED VERTICAL PRESSURE ON FOUNDATION MATERIAL = 1,840 LB/SF
- 4) MINIMUM REINFORCEMENT LENGTH (L) = 1.0H OR 6 FT, WHICHEVER IS GREATER
- 5) EMBEDMENT DEPTH = 1 FT.
- 6) REINFORCED ZONE AGGREGATE PARAMETERS:

AGGREGATE TYPE*	UNIT WEIGHT ( $\gamma$ ) LB/CF	FRICTION ANGLE ( $\phi$ ) DEGREES	COHESION (c) LB/SF
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:

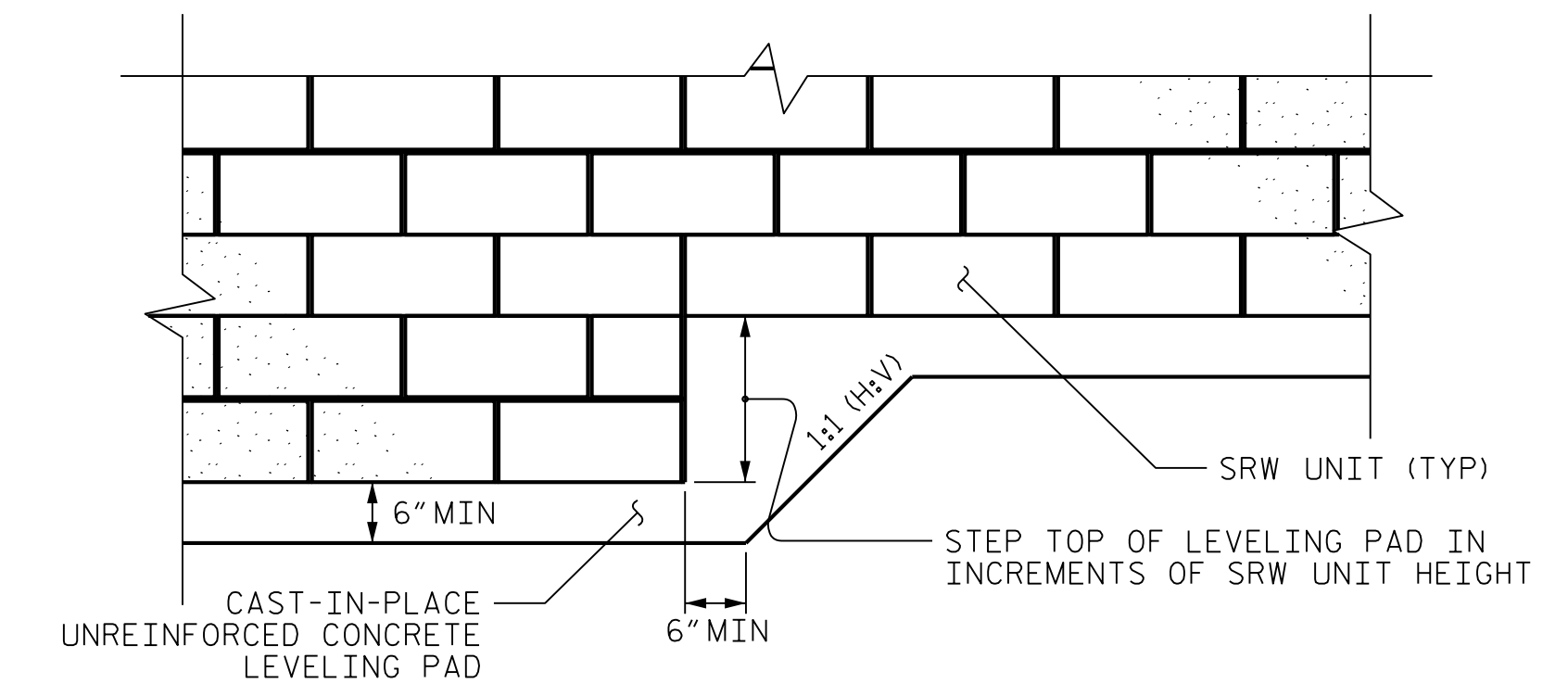
MATERIAL TYPE	UNIT WEIGHT ( $\gamma$ ) LB/CF	FRICTION ANGLE ( $\phi$ ) DEGREES	COHESION (c) LB/SF
BACKFILL	120	30	0
FOUNDATION	115	29	0

DESIGN RETAINING WALL NO.1 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 WALL NO.1.

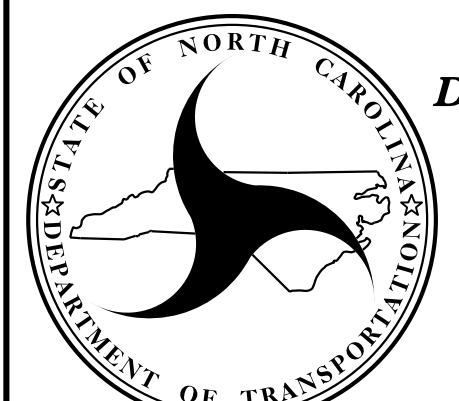
DO NOT PLACE LEVELING PAD CONCRETE, AGGREGATE OR REINFORCEMENT FOR RETAINING WALL NO.1 UNTIL EXCAVATION DIMENSIONS AND FOUNDATION MATERIAL ARE APPROVED.

AT THE CONTRACTOR'S OPTION, "TEMPORARY SHORING FOR WALL CONSTRUCTION" MAY BE USED TO CONSTRUCT RETAINING WALL NO.1. SEE MSE RETAINING WALLS PROVISION FOR TEMPORARY SHORING FOR WALL CONSTRUCTION.



**SRW UNITS LEVELING PAD STEP DETAIL**

PROJECT NO.: 49502 (U-6223)  
 JOHNSTON COUNTY  
 STATION: -L- 61+25.00  
 SHEET 3 OF 3



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

**GEOTECHNICAL  
ENGINEERING UNIT**

**MSE RETAINING WALL NO. 1  
NOTES AND LEVELING PAD  
STEP DETAILS**

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

PREPARED BY: J. PARK	DATE: 11 / 2021
REVIEWED BY: J. BATTS	DATE: 11 / 2021