

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.

A CONCRETE BARRIER RAIL WITH MOMENT SLAB IS REQUIRED ABOVE RETAINING WALL NO. . SEE PLANS FOR CONCRETE BARRIER RAIL WITH MOMENT SLAB DETAILS.

A FENCE OR HANDRAIL IS REQUIRED ON TOP OF RETAINING WALL NO. . SEE ROADWAY PLANS FOR FENCE OR HANDRAIL ATTACHMENT DETAILS.

USE COARSE AGGREGATE IN THE REINFORCED ZONE FOR RETAINING WALL NO. .

USE AN MSE WALL SYSTEM WITH PRECAST CONCRETE PANELS FOR RETAINING WALL NO. .

USE AN MSE WALL SYSTEM WITH SEGMENTAL RETAINING WALL UNITS FOR RETAINING WALL NO. .

WHEN USING AN MSE WALL SYSTEM WITH SEGMENTAL RETAINING WALL UNITS FOR RETAINING WALL NO. . FREEZE-THAW DURABLE SRW UNITS ARE REQUIRED IN ACCORDANCE WITH THE MSE RETAINING WALLS PROVISION.

CAST-IN-PLACE REINFORCED CONCRETE COPING IS REQUIRED FOR RETAINING WALL NO. .

AN _____ ARCHITECTURAL FINISH IS REQUIRED FOR FRONT FACES OF PRECAST CONCRETE PANELS FOR RETAINING WALL NO. .

USE SEGMENTAL RETAINING WALL UNITS WITH A _____ FACE FOR RETAINING WALL NO. .

USE SEGMENTAL RETAINING WALL UNITS WITH A _____ COLOR FOR RETAINING WALL NO. .

A DRAIN IS OR IS NOT REQUIRED FOR RETAINING WALL NO. .

BEFORE BEGINNING MSE WALL DESIGN FOR RETAINING WALL NO. . 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. . FOR WALL HEIGHTS EQUAL TO THE DESIGN HEIGHT (DIFFERENCE BETWEEN GRADE ELEVATION AND BOTTOM OF WALL ELEVATION) PLUS EMBEDMENT (DIFFERENCE BETWEEN BOTTOM OF WALL ELEVATION AND TOP OF LEVELING PAD ELEVATION).

DESIGN RETAINING WALL NO. . FOR THE FOLLOWING:

- 1) MINIMUM DESIGN LIFE = 75 OR 100 YEARS
- 2) MAXIMUM FACTORED RESISTANCE = _____ PSF
- 3) MINIMUM REINFORCEMENT LENGTH = _____ FT
- 4) MINIMUM EMBEDMENT ELEVATION = _____ FT
- 5) AGGREGATE PARAMETERS:

STANDARD SIZE NO. (IN ACCORDANCE WITH SECTION 1005 OF THE STANDARD SPECIFICATIONS)	UNIT WEIGHT (γ) PCF	FRICTION ANGLE (φ) DEGREES	COHESION (c) PSF
1S, 2S, 2MS AND 4S (FINE AGGREGATE)	125	34	0
5, 57, 57M, 6M, 67 AND 78M (COARSE AGGREGATE)	110	38	0

6) IN-SITU ASSUMED MATERIAL PARAMETERS:

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

THE MINIMUM EMBEDMENT ELEVATION FOR RETAINING WALL NO. . INCLUDES EMBEDMENT FOR SCOUR.

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

DESIGN RETAINING WALL NO. . FOR THE POINT LINE OR STRIP SURCHARGE LOAD SHOWN.

DESIGN RETAINING WALL NO. . FOR A PIPE EXTENDING THROUGH THE WALL AS SHOWN. VERIFY PIPE LOCATION AND ELEVATION BEFORE BEGINNING MSE WALL DESIGN OR CONSTRUCTION.

DESIGN REINFORCEMENT CONNECTED TO END BENT CAPS FOR THE LOADING SHOWN AND CAST THE REINFORCEMENT CONNECTION HARDWARE INTO THE CAP BACKWALL FOR END BENT NO. . LOCATED AT STATION _____ MAINTAIN A CLEARANCE OF AT LEAST 3" BETWEEN THE HARDWARE AND REINFORCING STEEL IN THE CAP.

FOUNDATIONS FOR OVERHEAD SIGNS, HIGH MOUNT LUMINARIES OR SIGNAL POLES WILL BE LOCATED BEHIND RETAINING WALL NO. . AND WILL OR MAY INTERFERE WITH REINFORCEMENT. BEFORE BEGINNING MSE WALL CONSTRUCTION, SUBMIT PROPOSED CONSTRUCTION METHODS FOR THESE FOUNDATIONS FOR APPROVAL.

EXISTING OR FUTURE OBSTRUCTIONS SUCH AS FOUNDATIONS, GUARDRAIL, FENCE OR HANDRAIL POSTS, PAVEMENTS, PIPES, INLETS OR UTILITIES WILL OR MAY INTERFERE WITH REINFORCEMENT FOR RETAINING WALL NO. .

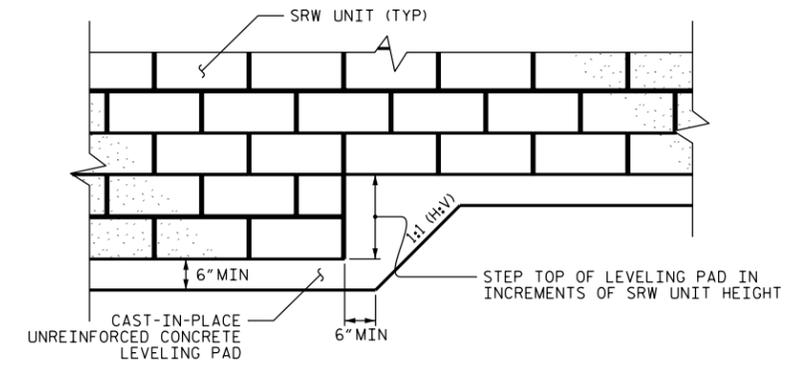
FOUNDATIONS FOR END BENT NO. . LOCATED AT STATION _____ WILL OR MAY INTERFERE WITH REINFORCEMENT FOR RETAINING WALL NO. . SEE "FOUNDATION LAYOUT" SHEET FOR FOUNDATION LOCATIONS.

CONSTRUCT RETAINING WALL NO. . BEFORE INSTALLING FOUNDATIONS FOR END BENT NO. . LOCATED AT STATION _____

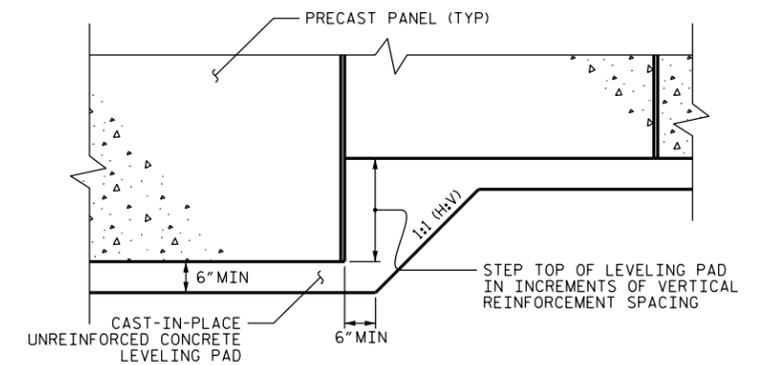
DO NOT PLACE LEVELING PAD CONCRETE, AGGREGATE OR REINFORCEMENT FOR RETAINING WALL NO. . UNTIL EXCAVATION DIMENSIONS AND FOUNDATION MATERIAL ARE APPROVED.

"TEMPORARY SHORING" IS OR MAY BE REQUIRED FOR RETAINING WALL NO. . IN ACCORDANCE WITH THE TEMPORARY SHORING PROVISION. SEE ROADWAY, STRUCTURE OR BASEEIC CONIBOL PLANS.

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



SEGMENTAL RETAINING WALL (SRW) UNITS



PRECAST CONCRETE PANELS

LEVELING PAD STEP DETAILS

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



**GEOTECHNICAL
ENGINEERING UNIT**
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STD CELL Wall MSE Notes LevelingPad

**MSE WALL NOTES &
LEVELING PAD STEP DETAILS**

DATE: 6-21-11