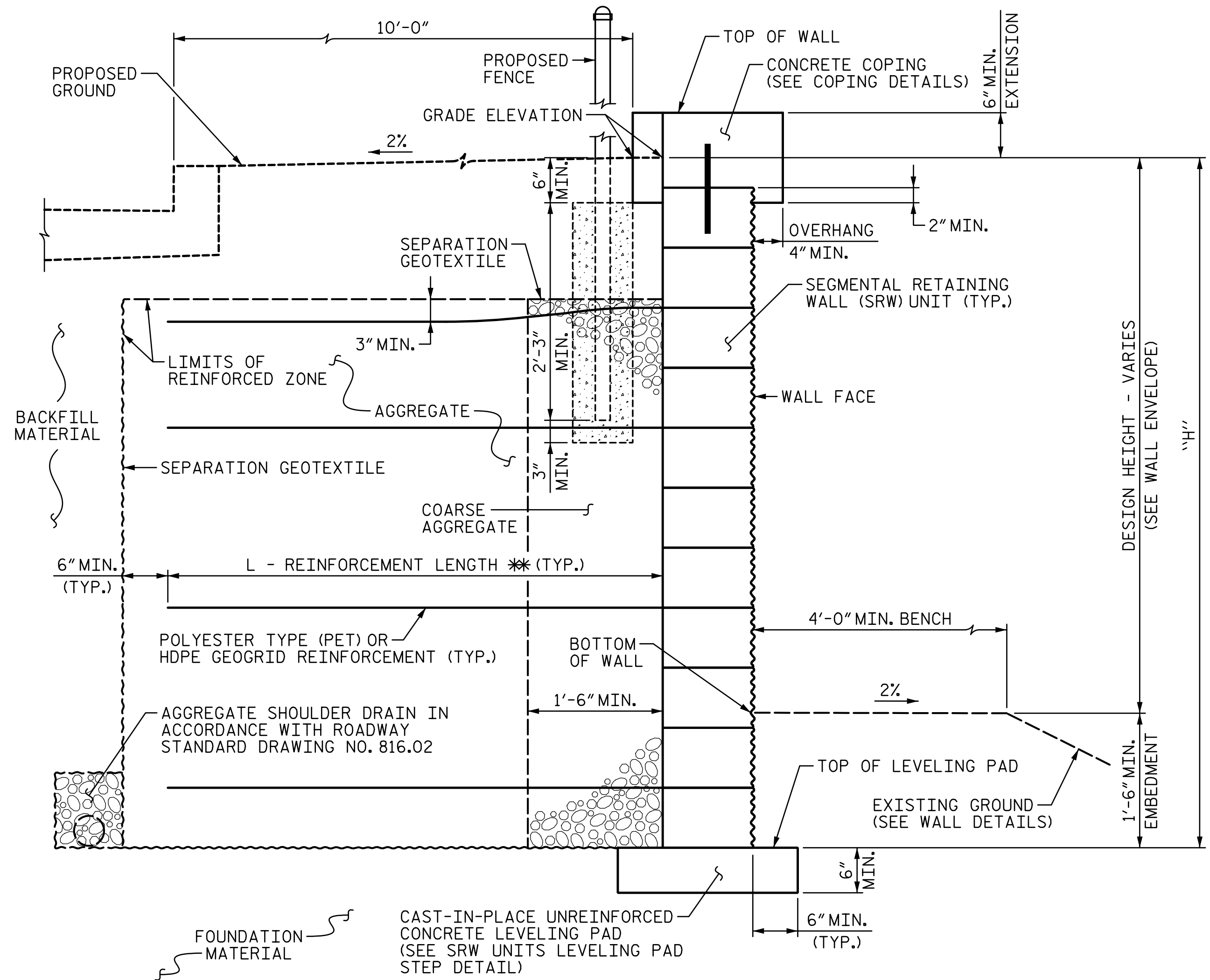
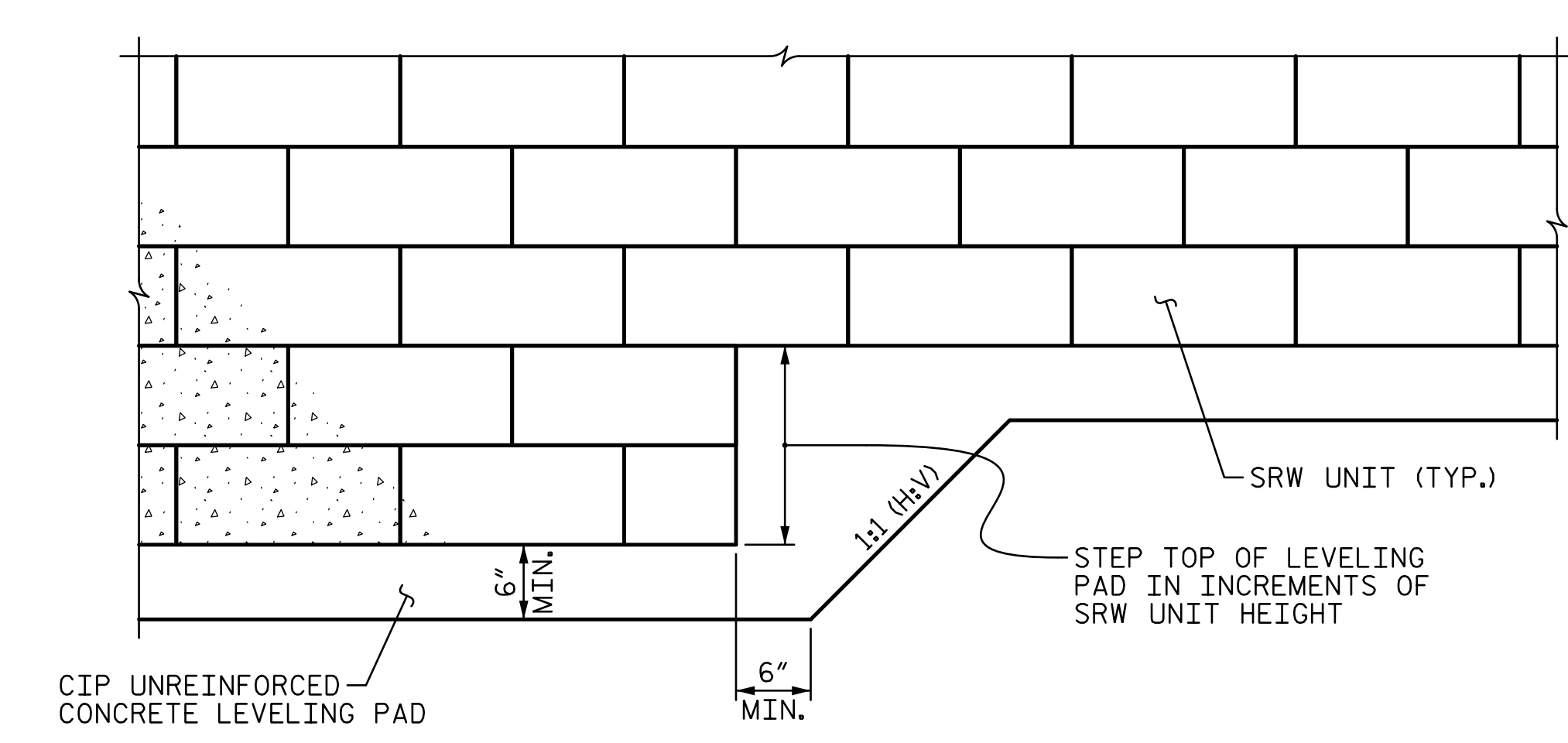


PROJECT REFERENCE NO. U-5840	SHEET NO. W-6
STRUCTURAL DESIGN ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
STV Engineers, Inc. 900 West Trade St., Suite 715 Charlotte, NC 28202 NC License Number F-0991	



SEGMENTAL GRAVITY WALL -W3- AND -W4- TYPICAL SECTION

** SEE MSE RETAINING WALLS PROVISION AND IF APPLICABLE, MSE WALL NOTES FOR REINFORCEMENT LENGTH REQUIREMENTS



SRW UNITS LEVELING PAD STEP DETAIL

NOTES:

- FOR MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALLS, SEE MECHANICALLY STABILIZED EARTH RETAINING WALLS PROVISION.
- USE AN MSE WALL SYSTEM WITH SEGMENTAL RETAINING WALL (SRW) UNITS THAT MEET ARTICLE 1040-4 OF THE STANDARD SPECIFICATIONS FOR RETAINING WALLS -W3- AND -W4-.
- WHEN USING AN MSE WALL SYSTEM WITH SRW UNITS FOR RETAINING WALLS -W3- AND -W4-, FREEZE-THAW DURABLE SRW UNITS THAT MEET ARTICLE 1040-4 OF THE STANDARD SPECIFICATIONS ARE REQUIRED.
- AT THE CONTRACTOR'S OPTION, USE FINE AGGREGATE IN THE REINFORCED ZONE OF RETAINING WALLS -W3- AND -W4-.
- SUBMIT A SAMPLE OF THE SRW UNIT FOR THE RETAINING WALLS TO THE DIVISION ENGINEER FOR APPROVAL.
- USE SRW UNITS WITH A WHITE NEUTRAL CONCRETE COLOR FOR RETAINING WALLS -W3- AND -W4-.
- A SEPARATION GEOTEXTILE IS REQUIRED AT THE BACK OF THE REINFORCED ZONE FOR RETAINING WALLS -W3- AND -W4-.
- A DRAIN IS REQUIRED FOR RETAINING WALLS -W3- AND -W4-.

BEFORE BEGINNING MSE WALL DESIGN FOR RETAINING WALLS -W3- AND -W4-, 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 -W3- FOR THE FOLLOWING:

- H = DESIGN HEIGHT + EMBEDMENT
- DESIGN LIFE = 75 YEARS
- MAXIMUM FACTORED VERTICAL STRESS ON FOUNDATION MATERIAL = 2,000 LB/SF. THIS ASSUMES ANY FILL OR SOFT SOILS, IF ENCOUNTERED, WILL BE UNDERCUT AND REPLACED.
- MINIMUM REINFORCEMENT LENGTH (L) = 0.8H OR 6 FT, WHICHEVER IS LONGER
- REINFORCED ZONE AGGREGATE PARAMETERS:

AGGREGATE TYPE	UNIT WEIGHT (γ) LB/CF	FRICTION ANGLE (φ) DEGREES	COHESION (c) LB/SF
COARSE	110	38	0
FINE	115	34	0

DESIGN RETAINING WALL -W4- FOR THE FOLLOWING:

- H = DESIGN HEIGHT + EMBEDMENT
- DESIGN LIFE = 75 YEARS
- MAXIMUM FACTORED VERTICAL STRESS ON FOUNDATION MATERIAL = 2,000 LB/SF. THIS ASSUMES ANY FILL OR SOFT SOILS, IF ENCOUNTERED, WILL BE UNDERCUT AND REPLACED.
- MINIMUM REINFORCEMENT LENGTH (L) = 0.9H OR 6 FT, WHICHEVER IS LONGER
- REINFORCED ZONE AGGREGATE PARAMETERS:

AGGREGATE TYPE	UNIT WEIGHT (γ) LB/CF	FRICTION ANGLE (φ) 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.

6) IN-SITU ASSUMED MATERIAL PARAMETERS:

MATERIAL TYPE	UNIT WEIGHT (γ) LB/CF	FRICTION ANGLE (φ) DEGREES	COHESION (c) LB/SF
BACKFILL	120	30	0
FOUNDATION	120	28	0

6) IN-SITU ASSUMED MATERIAL PARAMETERS:

MATERIAL TYPE	UNIT WEIGHT (γ) LB/CF	FRICTION ANGLE (φ) DEGREES	COHESION (c) LB/SF
BACKFILL	120	30	0
FOUNDATION	110	26	0

DESIGN RETAINING WALLS -W3- AND -W4- FOR A LIVE LOAD (TRAFFIC) SURCHARGE.

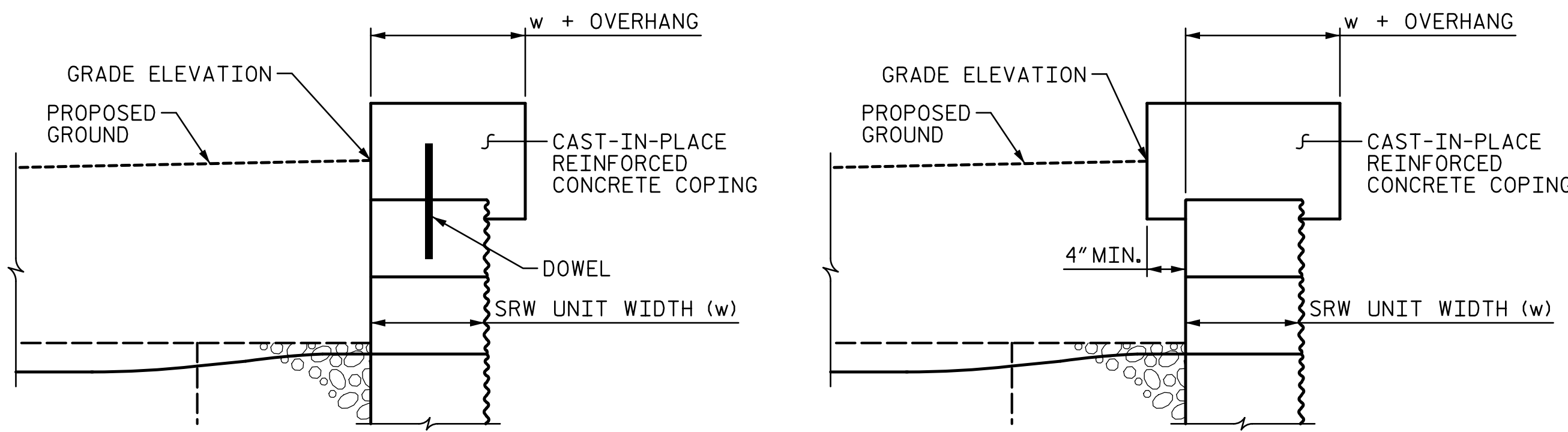
IGNORE PASSIVE EARTH PRESSURE IN THE UPPER 18 INCHES OF RETAINING WALLS -W3- AND -W4-.

DO NOT PLACE LEVELING PAD CONCRETE, AGGREGATE OR REINFORCEMENT FOR RETAINING WALLS -W3- AND -W4- UNTIL EXCAVATION DIMENSIONS AND FOUNDATION MATERIAL ARE APPROVED.

AT THE CONTRACTOR'S OPTION, "TEMPORARY SHORING FOR WALL CONSTRUCTION" MAY BE USED TO CONSTRUCT RETAINING WALLS -W3- AND -W4-. SEE MSE RETAINING WALLS PROVISION FOR TEMPORARY SHORING FOR WALL CONSTRUCTION.

FOR PROPOSED FENCE DETAILS, SEE SPECIAL PROVISION.

FOUNDATIONS FOR FENCE POSTS WILL BE LOCATED BEHIND RETAINING WALLS -W3- AND -W4- AND WILL INTERFERE WITH REINFORCEMENT. BEFORE BEGINNING MSE WALL CONSTRUCTION, SUBMIT PROPOSED CONSTRUCTION METHODS FOR THESE FOUNDATIONS FOR APPROVAL.



COPING DETAILS

AT THE CONTRACTOR'S OPTION, CONNECT COPING TO SRW UNITS WITH DOWELS OR EXTEND COPING DOWN BACK OF SRW UNITS.

3/12/2018
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 REVISED