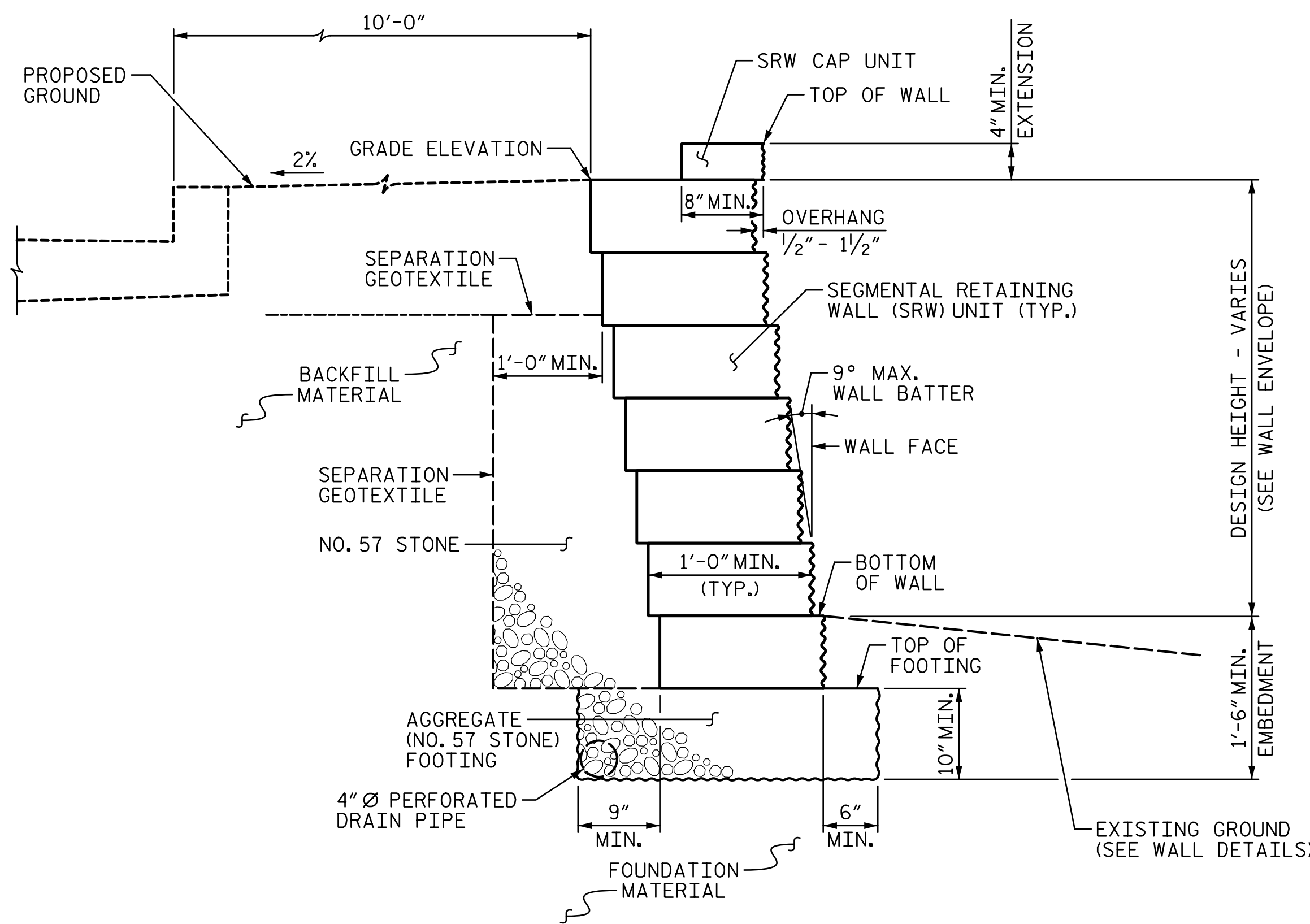
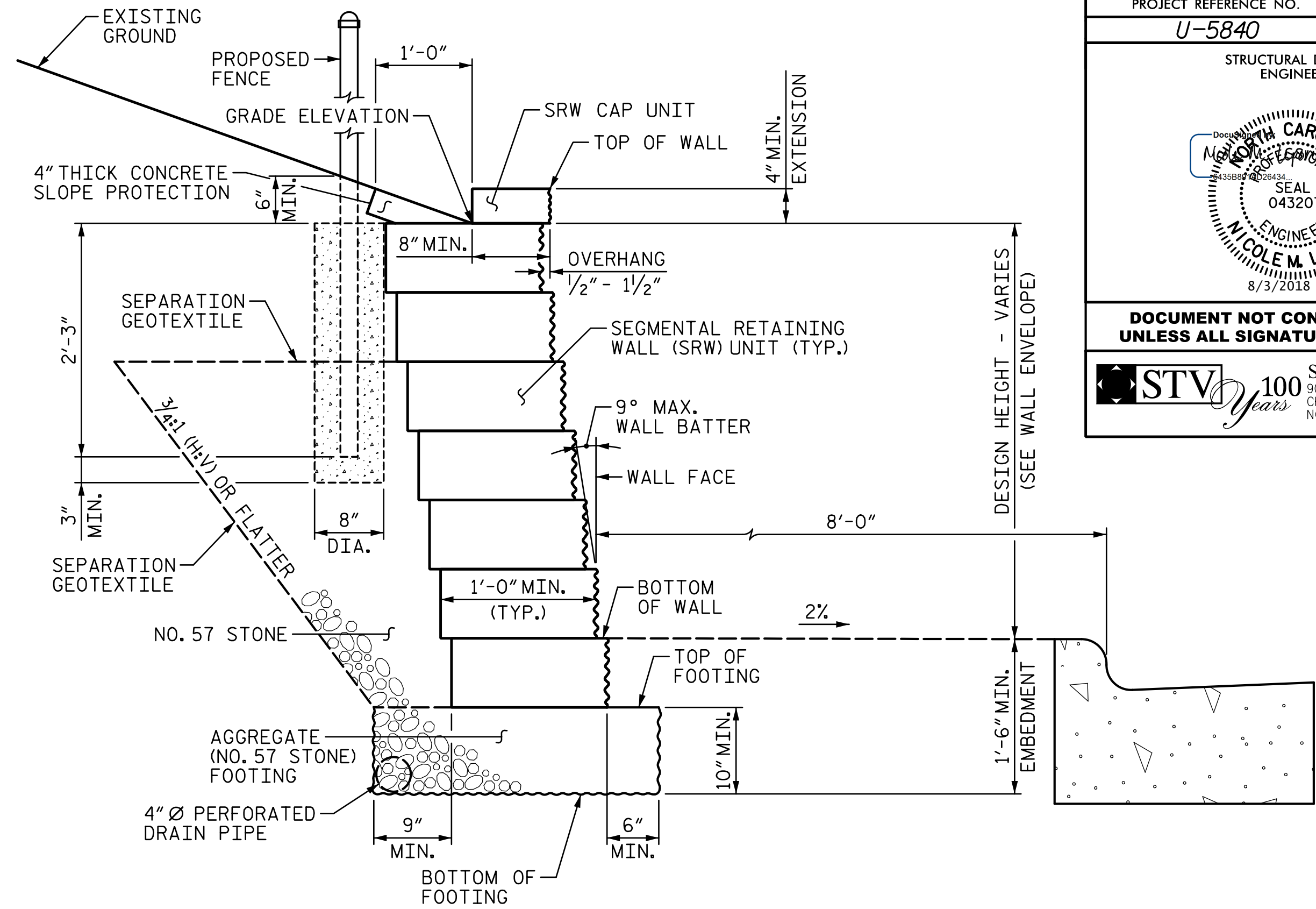


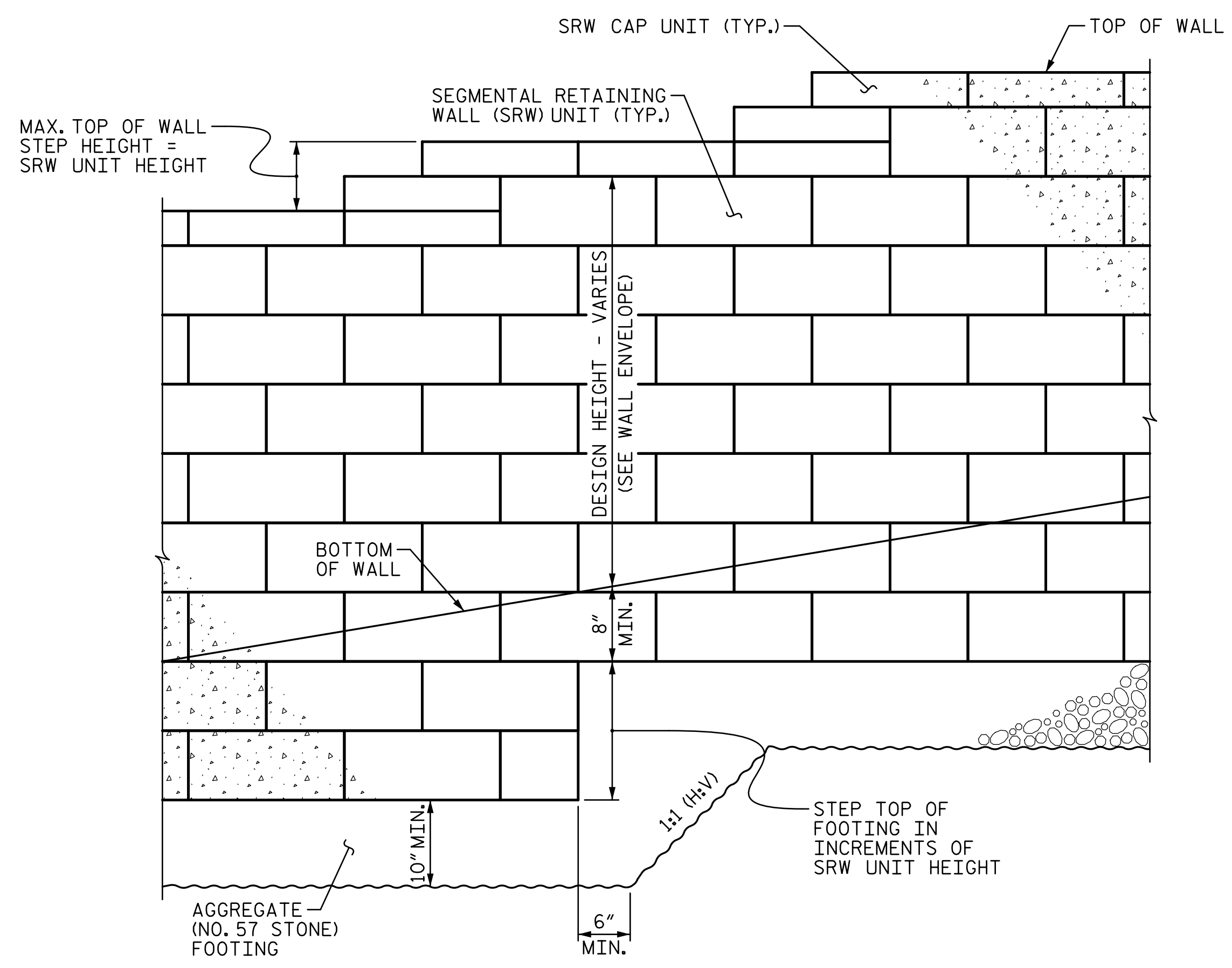
PROJECT REFERENCE NO. U-5840	SHEET NO. W-5
STRUCTURAL DESIGN ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
STV Engineers, Inc. 900 West Trade St., Suite 715 Charlotte, NC 28202 NC License Number F-0991	



SEGMENTAL GRAVITY WALL -W1- TYPICAL SECTION



SEGMENTAL GRAVITY WALL -W2- TYPICAL SECTION



SEGMENTAL GRAVITY WALL TYPICAL ELEVATION

(FENCE FOR WALL -W2- NOT SHOWN FOR CLARITY)

NOTES:

- FOR SEGMENTAL GRAVITY RETAINING WALLS, SEE SECTION 454 OF THE STANDARD SPECIFICATIONS.
- FREEZE-THAW DURABLE SRW UNITS THAT MEET ARTICLE 1040-4 OF THE STANDARD SPECIFICATIONS ARE REQUIRED.
- 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.
- A DRAIN PIPE IS REQUIRED FOR RETAINING WALLS. VERIFY PIPE LOCATION AND ELEVATION BEFORE BEGINNING SEGMENTAL GRAVITY WALL DESIGN OR CONSTRUCTION.
- BEFORE BEGINNING SEGMENTAL GRAVITY WALL DESIGN FOR RETAINING WALLS, 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 WALLS FOR WALL HEIGHTS EQUAL TO THE DESIGN HEIGHT PLUS DEPTH TO TOP OF FOOTING (DIFFERENCE BETWEEN GRADE ELEVATION AND TOP OF FOOTING ELEVATION).

- DESIGN RETAINING WALL -W1- FOR THE FOLLOWING:
- 1) 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.
 - 2) MAXIMUM COEFFICIENT OF FRICTION = 0.35
 - 3) GROUNDWATER WAS NOT ENCOUNTERED IN THE BORING TERMINATION DEPTHS.
 - 4) 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

- DESIGN RETAINING WALL -W2- FOR THE FOLLOWING:
- 1) MAXIMUM FACTORED VERTICAL STRESS ON FOUNDATION MATERIAL = 2,500 LB/SF. THIS ASSUMES ANY FILL OR SOFT SOILS, IF ENCOUNTERED, WILL BE UNDERCUT AND REPLACED.
 - 2) MAXIMUM COEFFICIENT OF FRICTION = 0.35
 - 3) GROUNDWATER WAS NOT ENCOUNTERED IN THE BORING TERMINATION DEPTHS.
 - 4) 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

- IGNORE PASSIVE EARTH PRESSURES IN THE UPPER 18 INCHES OF RETAINING WALLS -W1- AND -W2-.
- DESIGN RETAINING WALL -W1- FOR A LIVE LOAD SURCHARGE OF 250 PSF.
- DO NOT PLACE NO. 57 STONE FOR FOOTINGS FOR RETAINING WALLS UNTIL EXCAVATION DIMENSIONS AND FOUNDATION MATERIAL ARE APPROVED.
- FOR PROPOSED FENCE DETAILS, SEE SPECIAL PROVISION.

3/12/2018 R:\Structures\Station\Finals\Walls\U-5840_W-5_Segmental Wall Details.dgn