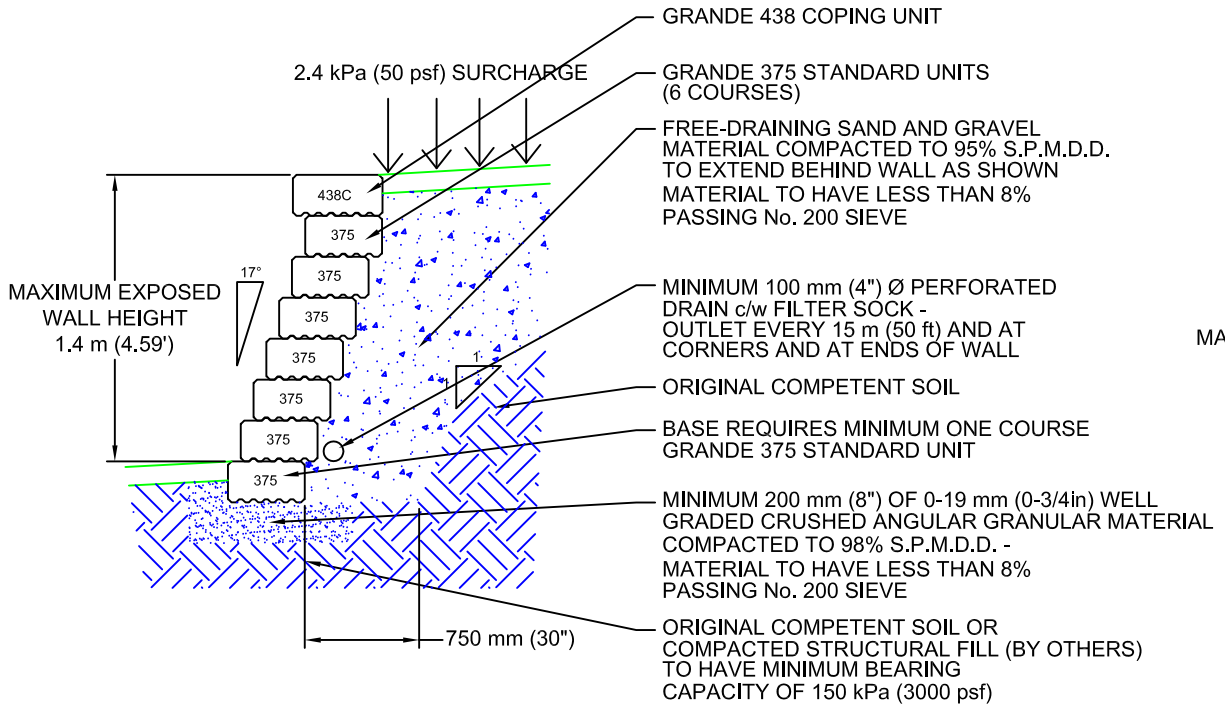

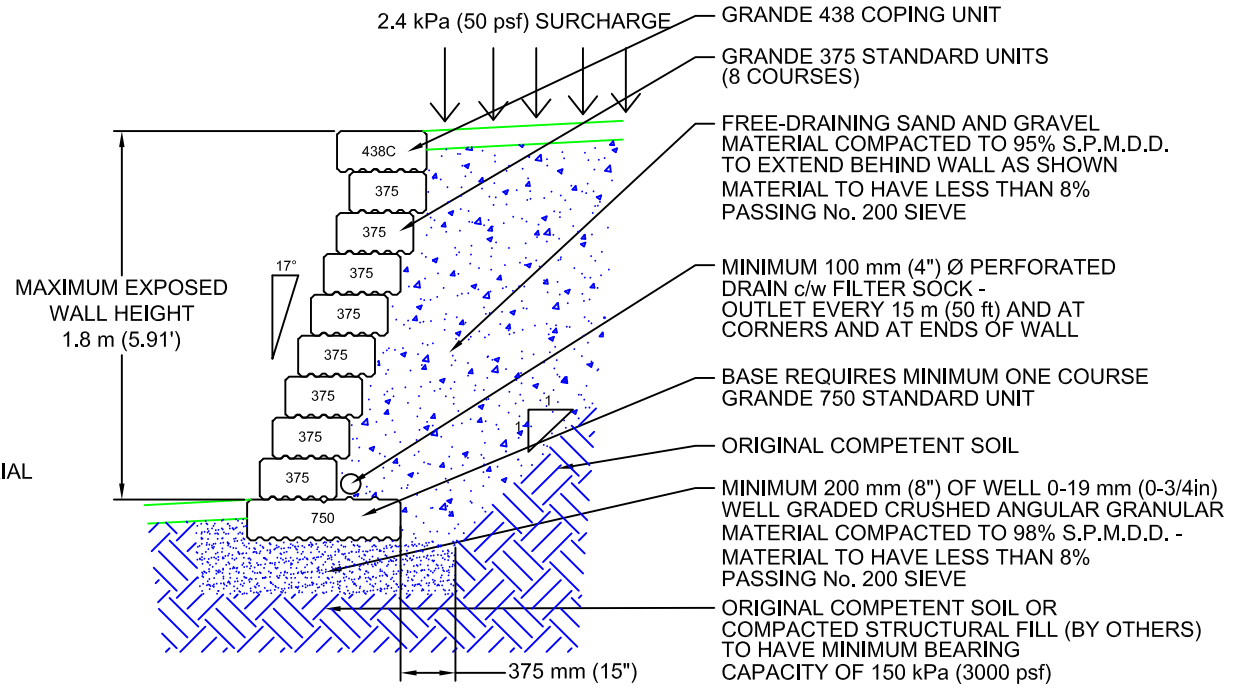

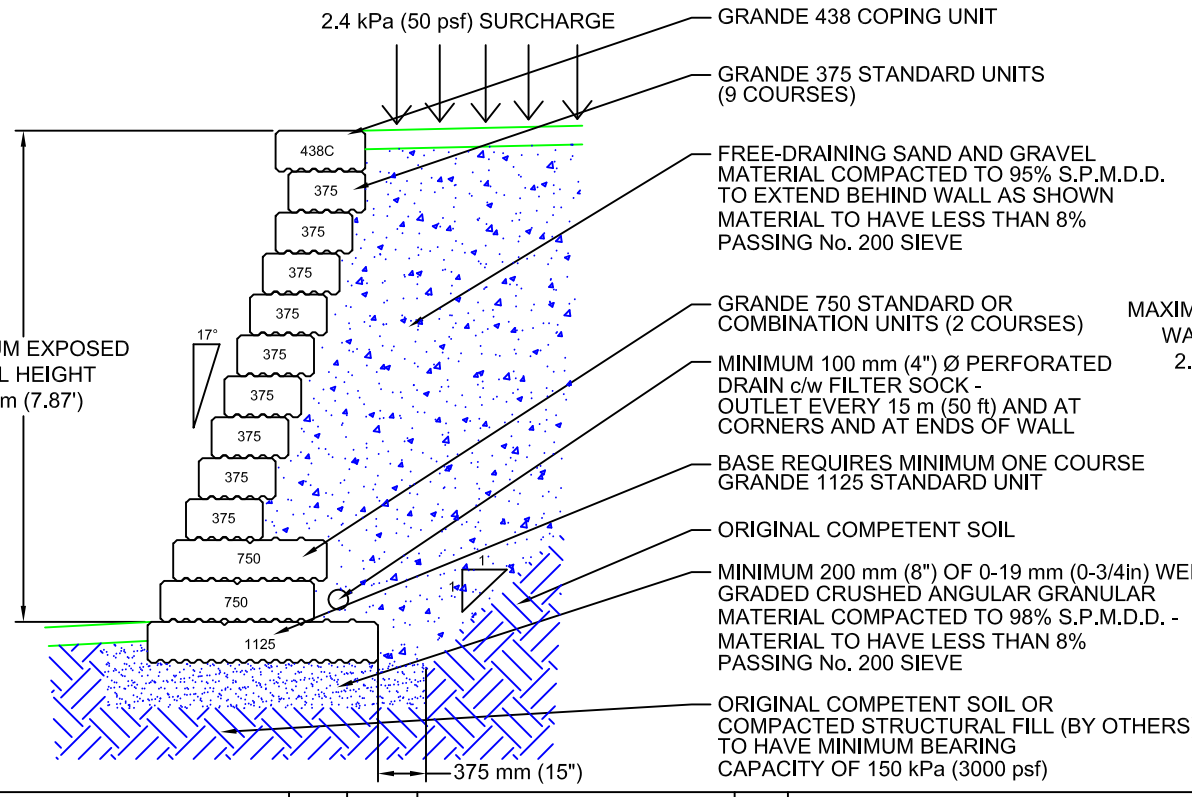

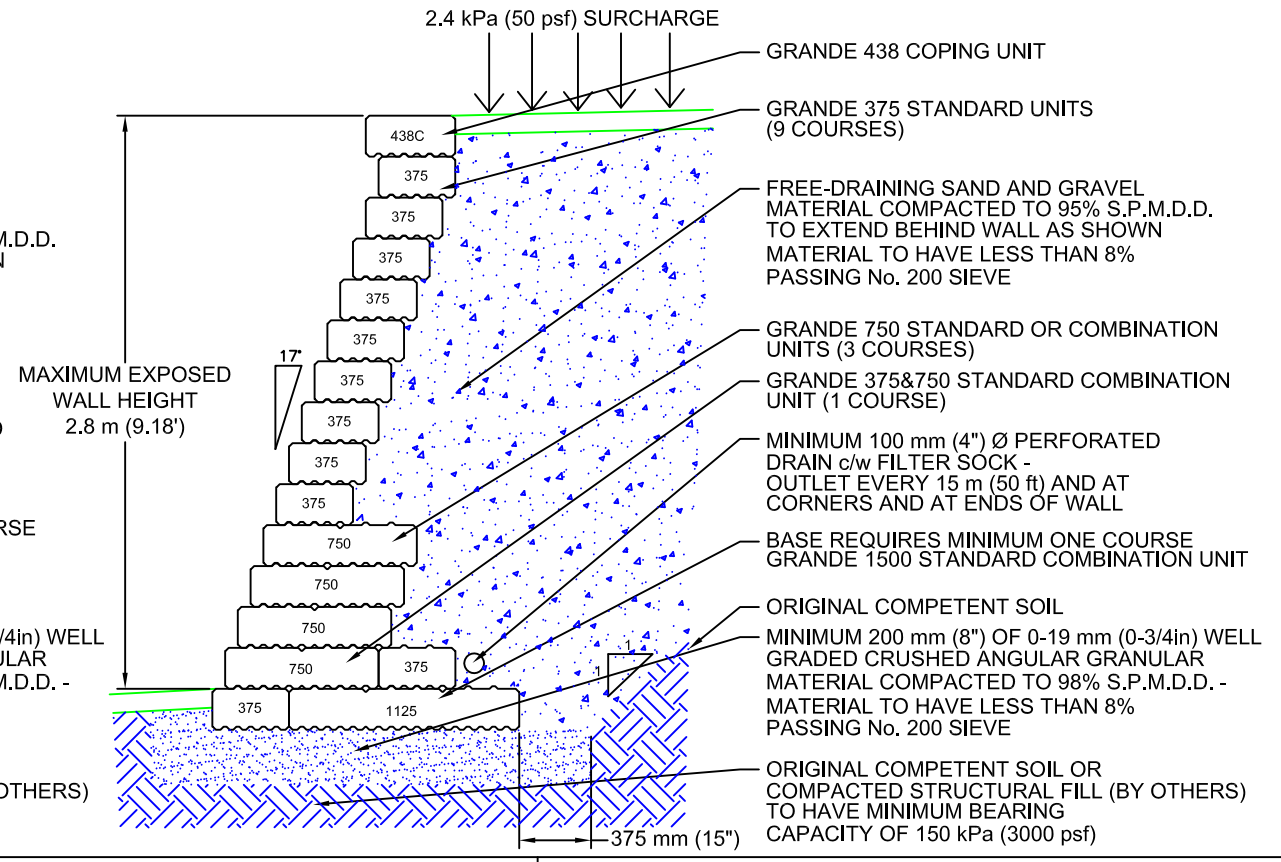

GENERAL NOTES:

1) EXCAVATE FOR FOOTING TO MINIMUM DEPTH OF 400mm (16 in), OR UNTIL COMPETENT SOIL IS REACHED OR FILL WITH COMPACTED STRUCTURAL FILL (BY OTHERS). THE FOUNDING SOIL MUST BE INSPECTED BY THE GEOTECHNICAL ENGINEER TO CONFIRM ADEQUATE BEARING CAPACITY AND SLOPE STABILITY. WHERE REQUIRED BY GEOTECHNICAL ENGINEER, PLACE ENGINEERED FILL COMPRISING OF APPROVED GRANULAR MATERIAL PLACED IN 250 mm (10") LIFTS AND COMPACTED TO 98% S.P.M.D.D. BACKFILLING AND COMPACTION TO BE CARRIED OUT UNDER GEOTECHNICAL SUPERVISION. PERMACON IS NOT RESPONSIBLE FOR RETAINING A GEOTECHNICAL ENGINEER TO OVERSEE CONSTRUCTION OF RETAINING WALL.

2. EXCAVATION TO ALLOW FOR THE THICKNESS OF THE WALL PLUS A SUFFICIENT DISTANCE TO ALLOW FOR COMPACTED GRANULAR BACKFILL BEHIND THE WALL. EXCAVATE ON A SUITABLE BACK ANGLE DEEP ENOUGH TO REACH ORIGINAL COMPETENT SOIL.

3. PLACE 200 mm (8") OF 0-19 mm (0-3/4") WELL GRADED CRUSHED ANGULAR GRANULAR MATERIAL WITHIN FOOTING EXCAVATION AND COMPACT TO 98% STANDARD PROCTOR MAXIMUM DRY DENSITY. BASE MATERIAL TO HAVE LESS THAN 8% PASSING THE No. 200 SIEVE.

4. LEVEL THE FIRST COURSE AND PLACE TOP FLUSH WITH THE DESIRED FINISHED GRADE IN FRONT OF THE WALL. SLOPES AT TOE OF WALL MAY REQUIRE MORE UNITS TO BE BURIED (CONSULT QUALIFIED PROFESSIONAL ENGINEER FOR GUIDANCE).

5. WALL APPEARANCE TO BE SPLIT FACE AND COLOR TO BE DETERMINED BY OWNER.

6. BACKFILL THE WALL WITH FREE-DRAINING SAND AND GRAVEL MATERIAL AS THE HEIGHT INCREASES, IDEALLY EVERY ONE OR TWO COURSES. AT NO TIME SHOULD THE HEIGHT EXCEED 2 COURSES WITHOUT BACKFILLING UNLESS OTHERWISE DIRECTED BY THE ENGINEER. BACKFILL MUST BE COMPACTED TO 95% S.P.M.D.D. BACKFILL MATERIAL TO HAVE LESS THAN 8% PASSING No. 200 SIEVE.

7. ALL CONSTRUCTION OPERATIONS INCLUDING BLOCK PLACEMENT, BACKFILLING AND COMPACTION TO BE COMPLETED UNDER GEOTECHNICAL SUPERVISION.

8. POOR SOIL CONDITIONS AND EXCESSIVE MOISTURE MAY REQUIRE ALTERNATE DRAINAGE REQUIREMENTS AND DESIGN MODIFICATIONS.

9. TO ACHIEVE A 17° BATTER, STEP BACK EVERY COURSE.

10. THE TOP MUST BE LANDSCAPED TO PROMOTE SURFACE RUNOFF OVER THE TOP OF THE WALL. NO UNUSUAL SURCHARGE LOADING SHOULD BE ADJACENT TO THE TOP OF THE WALL.

11. APPROPRIATE RESTRAINT MUST BE PROVIDED TO ENSURE PEDESTRIANS CANNOT ACCESS THE TOP OF THE WALL, OTHERWISE AN ENGINEERED HANDRAIL SYSTEM WILL BE REQUIRED ON THE TOP OF THE WALL. PROVISION OF A HANDRAIL ON TOP OF THE WALL MAY REQUIRE DESIGN MODIFICATIONS.

12. ALL PRODUCT NAMES AND STYLIZED REPRESENTATIONS ARE TRADEMARKS OF PERMACON, OR APPROVED FOR USE BY PERMACON COMPANIES.

13. ALL PRODUCTS ILLUSTRATED ARE SUBJECT TO PATENTS AS FOLLOWS:
GRANDE - CANADA 1,307,675
- USA 4,860,505

14. THE APPLICABILITY OF THESE RETAINING WALL SECTIONS MUST BE REVIEWED ON A SITE SPECIFIC BASIS BY A QUALIFIED PROFESSIONAL ENGINEER.

15. FOR OTHER WALL HEIGHTS, SOIL PARAMETERS, AND SURCHARGE LOADING NOT REPRESENTED ON THIS DRAWING, PLEASE REFER TO DESIGN TABLES.

SOIL PARAMETERS USED IN DESIGNS:
ϕ = 35 DEGREES
γ = 22 kN/M3 (140 pcf)

REV.	DATE	DESCRIPTION	BY
0	JAN 1/08	ISSUED FOR USE	PAS

DRAWING: GRAVITY DESIGN 17 DEGREE BATTER TO 2.8 m (9.18 ft)

PROJECT: Navascape Products GRANDE WALL STANDARD ENGINEERING

PROJECT ENGINEER:

GRANDE® Wall

NAVASCAPE BY PERMACON

DESIGN ENGINEER:

DRAWN BY: PAS	CH'D BY:
DATE: OCTOBER 31, 2007	
SCALE: NOT TO SCALE	
FILE NAME: GRANDE-SE-GR-17 Degree.dwg	

DRAWING No. GRANDE-SE-GR-17 DEGREE