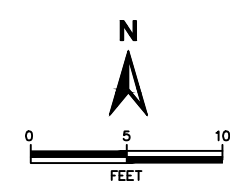


WALL LAYOUT AND GRADING PLAN

REFERENCE: HARMSSEN ASSOCIATES INC, RON BERESKY, TOPOGRAPHIC SURVEY, SHEET S2, 5/17/18



- DESIGN NOTES:**
 DESIGN OF THE SEGMENTAL RETAINING WALL IS BASED ON THE FOLLOWING VALUES:
 INTERNAL ANGLE OF FRICTION FOR REINFORCED SOIL = 32 DEGREES
 UNIT WEIGHT OF SOIL = 125 LB/CU FT
 MAXIMUM WALL HEIGHT = 5.0' MAX EXPOSED HEIGHT
 BATTER OF WALL = 6"
 BACKFILL SLOPE = LEVEL
 EMBEDMENT - UPPER TIERS = 6" MIN / LOWER TIER = 12" MIN
- GEOGRID SHALL BE MIRAGRID 8XT.
 - SRW UNITS SHALL BE ALLAN BLOCK AB CLASSIC 6 DEGREE BATTER.
 - CONTRACTOR TO VERIFY ALL LOCATIONS, ELEVATIONS, AND DIMENSIONS.
 - GRIDS SHALL NOT BE CUT AFTER INSTALLATION.

GENERAL NOTES:
 WORK SHALL CONSIST OF CONSTRUCTION OF AN ALLAN BLOCK AB STONES RETAINING WALL SYSTEM IN ACCORDANCE WITH THESE SPECIFICATIONS AND IN REASONABLY CLOSE CONFORMITY WITH THE LINES, GRADES, DESIGN, AND DIMENSIONS SHOWN ON THESE PLANS.
 NO ALTERNATE WALL SYSTEMS WILL BE CONSIDERED.

SEGMENTAL RETAINING WALL (SRW) UNITS
 1. SRW UNITS SHALL BE MACHINE-FORMED CONCRETE BLOCKS SPECIFICALLY DESIGNED FOR RETAINING WALL APPLICATIONS.

- AB STONES UNITS SHALL CONFORM TO THE FOLLOWING ARCHITECTURAL REQUIREMENTS:
 - FACE COLOR - AS SPECIFIED BY THE OWNER.
 - FACE FINISH - FORM LINER FACE FINISH IN A NATURAL STONE APPEARANCE AND TEXTURE. OTHER FACE FINISHES WILL NOT BE ALLOWED WITHOUT WRITTEN APPROVAL OF OWNER.
 - BOND CONFIGURATION - RUNNING WITH BONDS NOMINALLY LOCATED AT MIDPOINT VERTICALLY ADJACENT UNITS.
 - EXPOSED SURFACES OF UNITS SHALL BE FREE OF CHIPS, CRACKS OR OTHER IMPERFECTIONS WHEN VIEWED FROM A DISTANCE OF 10 FEET (3 M) UNDER DIFFUSED LIGHTING.

3. ALLAN BLOCK CONCRETE MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C1372, STANDARD SPECIFICATIONS FOR SEGMENTAL RETAINING WALL UNITS.

- ALLAN BLOCK UNITS SHALL CONFORM TO THE FOLLOWING STRUCTURAL AND GEOMETRIC REQUIREMENTS MEASURED IN ACCORDANCE WITH APPROPRIATE REFERENCES:
 - COMPRESSIVE STRENGTH: 3000 PSI (21 MPA) PER ASTM C137.
 - ABSORPTION: 7.5 LBS/FT³ FOR STANDARD WEIGHT AGGREGATES
 - UNIT SIZE: 8" H X 12" D X 18" L
 - UNIT WEIGHT: 75 LBS

LEVELING PAD AND UNIT FILL MATERIAL
 1. MATERIAL FOR LEVELING PAD SHALL CONSIST OF COMPACTED CRUSHED ROCK OR UNREINFORCED CONCRETE AND SHALL BE A MINIMUM OF 6 INCHES IN DEPTH.

- FILL FOR UNITS SHALL BE 1-1/4" WASHED CRUSHED ROCK WITH NO MORE THAN 5% PASSING THE #200 SIEVE (ASTM D422).
- COMPACT UNIT FILL BY RUNNING HAND-OPERATED PLATE COMPACTION EQUIPMENT.

- DRAINAGE AGGREGATE**
 1. DRAINAGE AGGREGATE SHALL BE USED FOR WALL DRAIN.
- DRAINAGE MATERIALS SHALL BE 1 1/4-INCH WASHED CRUSHED ROCK MATERIAL AND FREE OF ORGANICS, WITH LESS THAN 5% FINES (SILT AND CLAY PARTICLES PASSING THE #200 SIEVE MEASURED ON THE MINUS #4 SIEVE FRACTION).

INFILL SOIL - (REINFORCED SOIL ZONE)
 1. THE INFILL SOIL MATERIAL SHALL BE FREE OF DEBRIS AND CONSIST OF SELECT NON-ORGANIC IMPORTED SOIL WITH LESS THAN 5% FINES PASSING THE #200 SIEVE BASED ON THE -40 SIEVE FRACTION, MAX PARTICLE SIZE 4" IN ANY DIMENSION, PLACED AND COMPACTED TO A FIRM AND UNYIELDING CONDITION IN ACCORDANCE WITH THE STRUCTURAL FILL REQUIREMENTS.

LEVELING PAD CONSTRUCTION
 1. LEVELING PAD SHALL BE PLACED AS SHOWN ON THE CONSTRUCTION DETAILS WITH A MINIMUM THICKNESS OF 6 INCHES.

2. FOUNDATION SOIL SHALL BE COMPACTED TO 95% OF MODIFIED PROCTOR. OVEREXCAVATION (OR OTHER METHODS) AT THE DIRECTION OF THE GEOTECHNICAL ENGINEER MAY BE REQUIRED TO PROVIDE A SUITABLE BASE FOR LEVELING PAD CONSTRUCTION. OVEREXCAVATED AREAS SHALL BE BACKFILLED WITH AN APPROVED STRUCTURAL FILL COMPACTED TO 95% OF THE MODIFIED PROCTOR.

3. LEVELING PAD MATERIAL SHALL BE COMPACTED TO PROVIDE A LEVEL HARD SURFACE ON WHICH TO PLACE THE FIRST COURSE OF UNITS. COMPACTION WILL BE BY MECHANICAL PLATE COMPACTORS TO 95% OF MODIFIED PROCTOR DENSITY.

4. LEVELING PAD SHALL BE PREPARED TO PROVIDE INTIMATE CONTACT OF RETAINING WALL UNIT WITH PAD.

SEGMENTAL UNIT INSTALLATION
 1. FIRST COURSE OF SRW UNITS SHALL BE PLACED ON THE LEVELING PAD. THE UNITS SHALL BE CHECKED FOR LEVEL AND ALIGNMENT. THE FIRST COURSE IS THE MOST IMPORTANT TO ENSURE ACCURATE AND ACCEPTABLE RESULTS.

2. ENSURE THAT UNITS ARE IN FULL CONTACT WITH BASE.

3. UNITS ARE PLACED SIDE BY SIDE FOR FULL LENGTH OF STRAIGHT WALL ALIGNMENT. ALIGNMENT MAY BE DONE BY MEANS OF A STRING LINE OR OFFSET FROM BASE LINE TO A MOLDED FINISHED FACE OF THE SRW UNIT.

4. PLACE UNIT FILL. TAMP OR ROD UNIT FILLS AND USE A HAND-OPERATED PLATE COMPACTOR TO ENSURE ALL VOIDS ARE COMPLETELY FILLED.

5. PLACE AND COMPACT FILL BEHIND AND WITHIN UNITS.

6. CLEAN ALL EXCESS DEBRIS FROM TOP OF UNITS AND INSTALL GEOGRID AND NEXT BLOCK COURSE. ENSURE EACH COURSE IS COMPLETELY FILLED PRIOR TO PROCEEDING TO NEXT COURSE.

7. LAY EACH SUCCESSIVE LAYER OF GEOGRID AS SHOWN. GEOGRID MAY BE FIELD ADJUSTED TO PROVIDE ADEQUATE COVERAGE OF SOIL AT THE DIRECTION OF THE GEOTECHNICAL ENGINEER.

8. MAXIMUM STACKED VERTICAL HEIGHT OF WALL UNITS, PRIOR TO UNIT FILL AND BACKFILL PLACEMENT AND COMPACTION, SHALL NOT EXCEED TWO COURSES.

9. REPEAT PROCEDURES TO THE EXTENT OF THE WALL HEIGHT.

10. UPPERMOST ROW OF SRW OR CAPS SHALL BE GLUED TO UNDERLYING UNITS WITH AN ADHESIVE, AS RECOMMENDED BY THE MANUFACTURER.

GEOSYNTHETIC REINFORCEMENT INSTALLATION
 1. THE GEOSYNTHETIC REINFORCEMENT SHALL BE INSTALLED AT THE WALL HEIGHT, HORIZONTAL LOCATION, AND TO THE EXTENT AS SHOWN ON THE CONSTRUCTION DETAILS.

2. THE GEOSYNTHETIC REINFORCEMENT SHALL BE LAID HORIZONTALLY ON COMPACTED INFILL AND CONNECTED TO THE CONCRETE SRW UNITS PER MANUFACTURER'S RECOMMENDATIONS.

3. CORRECT ORIENTATION (ROLL DIRECTION) OF THE GEOSYNTHETIC REINFORCEMENT SHALL BE VERIFIED BY THE CONTRACTOR.

4. THE GEOSYNTHETIC REINFORCEMENT SHALL BE PULLED TAUT AND FREE OF WRINKLES PRIOR TO PLACEMENT OF SOIL FILL. STAKE OR SECURE BACK EDGE OF GEOGRID PRIOR TO AND DURING BACKFILL AND COMPACTION.

5. THE PROCEDURE FOR TENSIONING GEOSYNTHETIC REINFORCEMENT SHALL BE UNIFORM THROUGHOUT WALL LENGTH AND HEIGHT.

6. OVERLAPS SHALL BE 12 INCHES MINIMUM IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. GEOSYNTHETIC REINFORCEMENT WILL BE CONTINUOUS THROUGHOUT WALL LENGTH, EXCEPT FOR CURVES.

FILL PLACEMENT OVER GEOSYNTHETIC REINFORCEMENT
 1. REINFORCED WALL FILL MATERIAL SHALL BE PLACED IN MAXIMUM 8-INCH LOOSE LIFTS ON THE GEOSYNTHETIC REINFORCEMENT.

2. THE GEOSYNTHETIC REINFORCEMENT SHALL BE PRETENSIONED BY HAND TO REMOVE WRINKLES. TENSIONING IS USUALLY FACILITATED BY THE USE OF STEEL STAKES. APPLY CONSTANT TENSION TO EACH SECTION OF GEOSYNTHETIC REINFORCEMENT UNTIL SOIL FILL HAS BEEN PLACED. SOIL FILL SHALL BE PLACED, SPREAD, AND COMPACTED IN SUCH A MANNER THAT PREVENTS THE DEVELOPMENT OF WRINKLES AND/OR MOVEMENT OF THE GEOSYNTHETIC REINFORCEMENT.

3. ONLY HAND-OPERATED COMPACTION EQUIPMENT SHALL BE ALLOWED WITHIN 3 FEET FROM THE TAIL OF THE MODULAR CONCRETE UNITS.

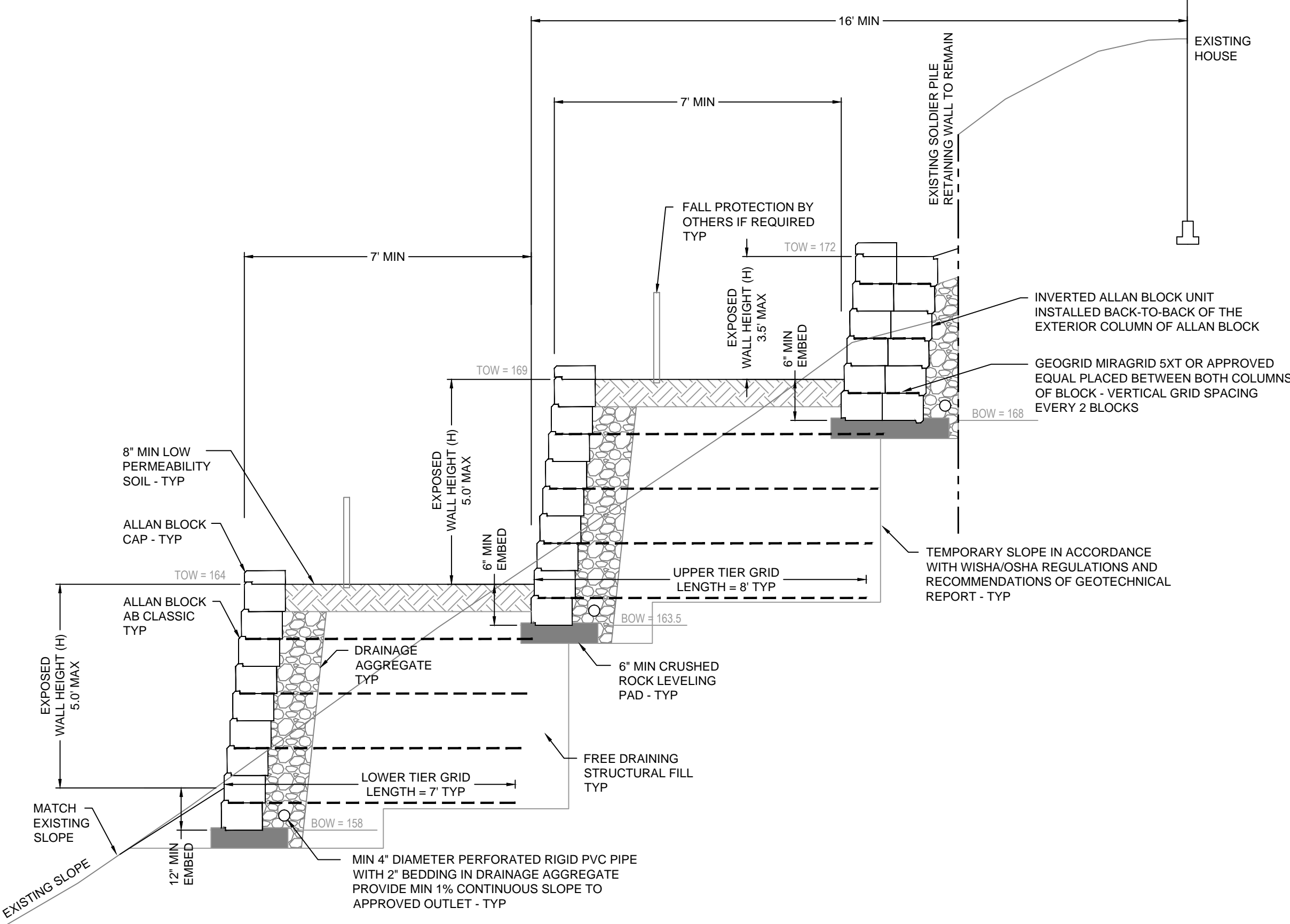
4. IF POSSIBLE, GRAVEL FILL SHALL BE PLACED FROM THE WALL FACE OUTWARD TO ENSURE THAT THE GEOSYNTHETIC REINFORCEMENT REMAINS TAUT. SOIL SHALL BE PLACED IN UNIFORM LIFTS.

5. TRACKED CONSTRUCTION EQUIPMENT SHALL NOT BE OPERATED DIRECTLY ON THE GEOSYNTHETIC REINFORCEMENT. A MINIMUM FILL THICKNESS OF 8 INCHES IS REQUIRED PRIOR TO OPERATION OF TRACKED VEHICLES OVER THE GEOSYNTHETIC REINFORCEMENT. TURNING OF TRACKED VEHICLES SHOULD BE KEPT TO A MINIMUM TO PREVENT TRACKS FROM DISPLACING THE FILL AND DAMAGING THE GEOSYNTHETIC REINFORCEMENT.

6. IF IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, RUBBER-TIRED EQUIPMENT MAY PASS OVER THE GEOSYNTHETIC REINFORCEMENT AT SLOW SPEEDS, LESS THAN 10 MPH. SUDDEN BRAKING AND SHARP TURNING SHALL BE AVOIDED.

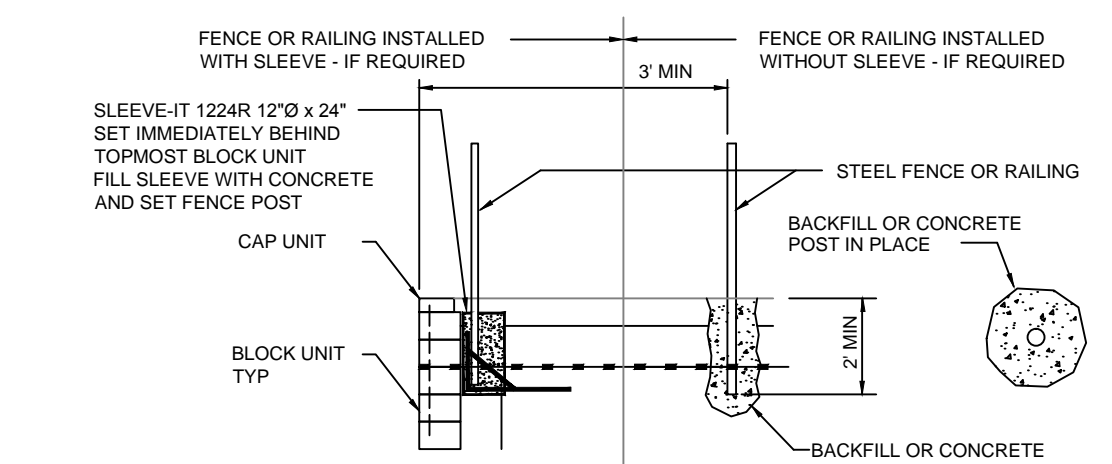
7. SURFACE DRAINAGE DURING AND AFTER CONSTRUCTION OF THE WALL SHALL BE PROVIDED TO MINIMIZE WATER INFILTRATION IN THE REINFORCED SOIL ZONE.

INSPECTIONS
 1. FULL-TIME INSPECTION OF THE WALL CONSTRUCTION, INCLUDING FOUNDATION SOIL, LEVELING PAD CONSTRUCTION, DRAINAGE, GRID PLACEMENT, AND BACKFILL, SHALL BE COMPLETED BY THE GEOTECHNICAL ENGINEER.

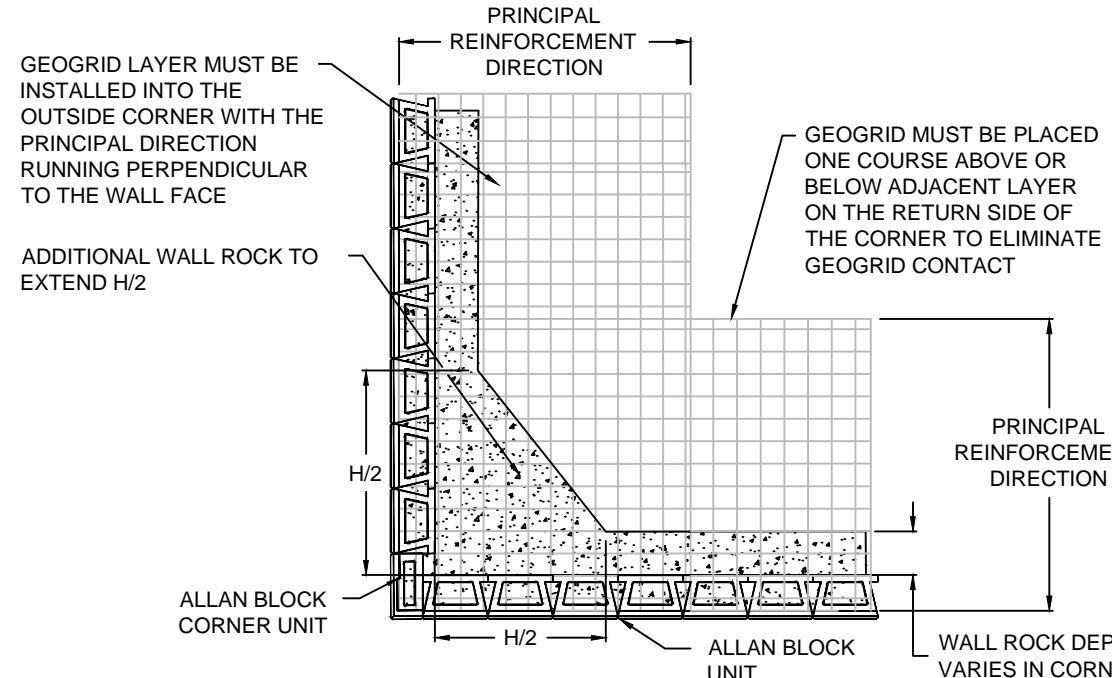


CROSS-SECTION A - A'

NO SCALE

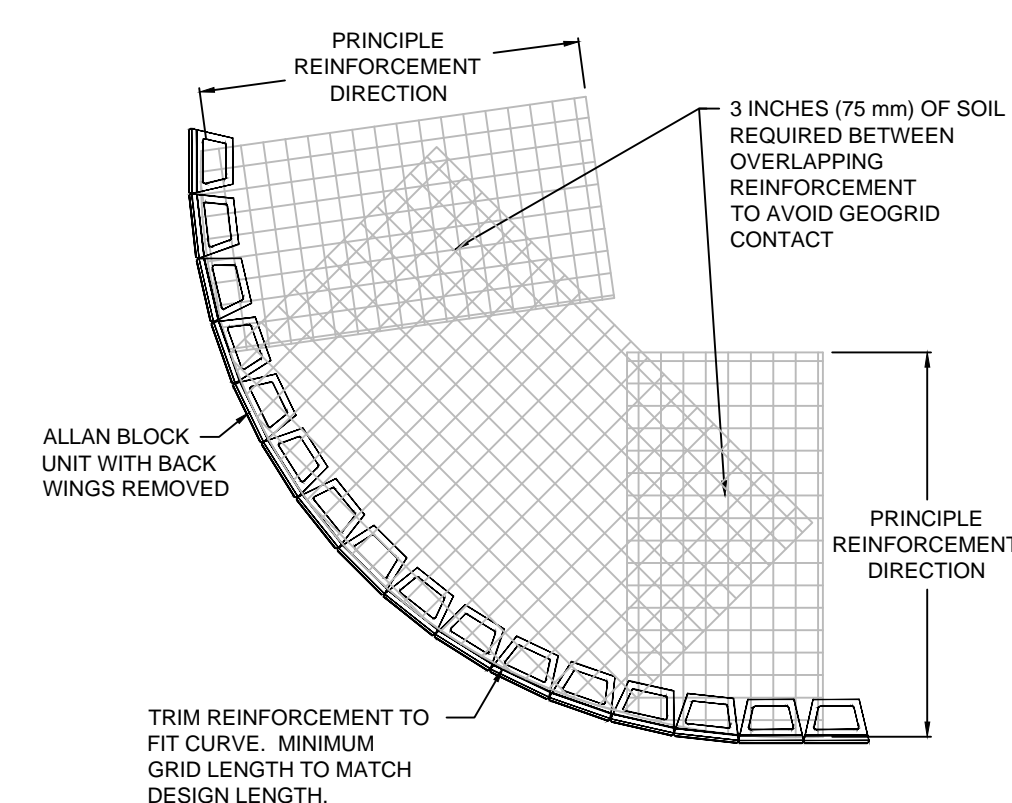


FENCE SECTION & PLAN DETAIL IF REQUIRED
NO SCALE



GEOGRID INSTALLATION AT INSIDE CORNERS
NO SCALE

AB® Collection					
Classic Cut Stone	Name	Setback	Coverage	Weight	Approximate Dimensions
	AB Stone Red Stone Block Choice	12"	1 sq ft. approx. 11 blk per m ²	75 lbs 34 kg	8 in. H x 12 in. D x 18 in. L 200mm H x 300mm D x 460mm L
	AB Jumbo Jr	6"	0.5 sq ft. approx. 22 blk per m ²	35 lbs 16 kg	8 in. H x 9.5 in. D x 9 in. L 200mm H x 240mm D x 230mm L
	AB Lite Stone	6"	0.5 sq ft. approx. 22 blk per m ²	35 lbs 16 kg	4 in. H x 12 in. D x 18 in. L 100mm H x 300mm D x 460mm L
	AB Junior Lite	6"	0.25 sq ft. approx. 45 blk per m ²	18 lbs 8 kg	4 in. H x 12 in. D x 9 in. L 100mm H x 300mm D x 230mm L
	AB Classic	6"	1 sq ft. approx. 11 blk per m ²	75 lbs 34 kg	8 in. H x 12 in. D x 18 in. L 200mm H x 300mm D x 460mm L



GEOGRID INSTALLATION ON INSIDE CURVES
NO SCALE

associated earth sciences incorporated
 1552 Commerce Street, Suite 102
 Tacoma, WA 98402
 (253) 722-2392
 aesgeo.com
 911 Fifth Avenue
 Kirkland, WA 98033
 (425) 827-7701
 aesgeo.com

ALLAN BLOCK WALL
BERESKY RESIDENCE - 8100 SE 48TH STREET
MERCER ISLAND, WASHINGTON

DRAWN BY:	EIN / BP
CHECKED BY:	SGB / SAS
DATE:	1/19
PROJECT NO:	180127E001
FIGURE	1

180127 Beresky_180127 Wall Allan Blok 1-19.dwg LAYOUT: E001 F1 Walls