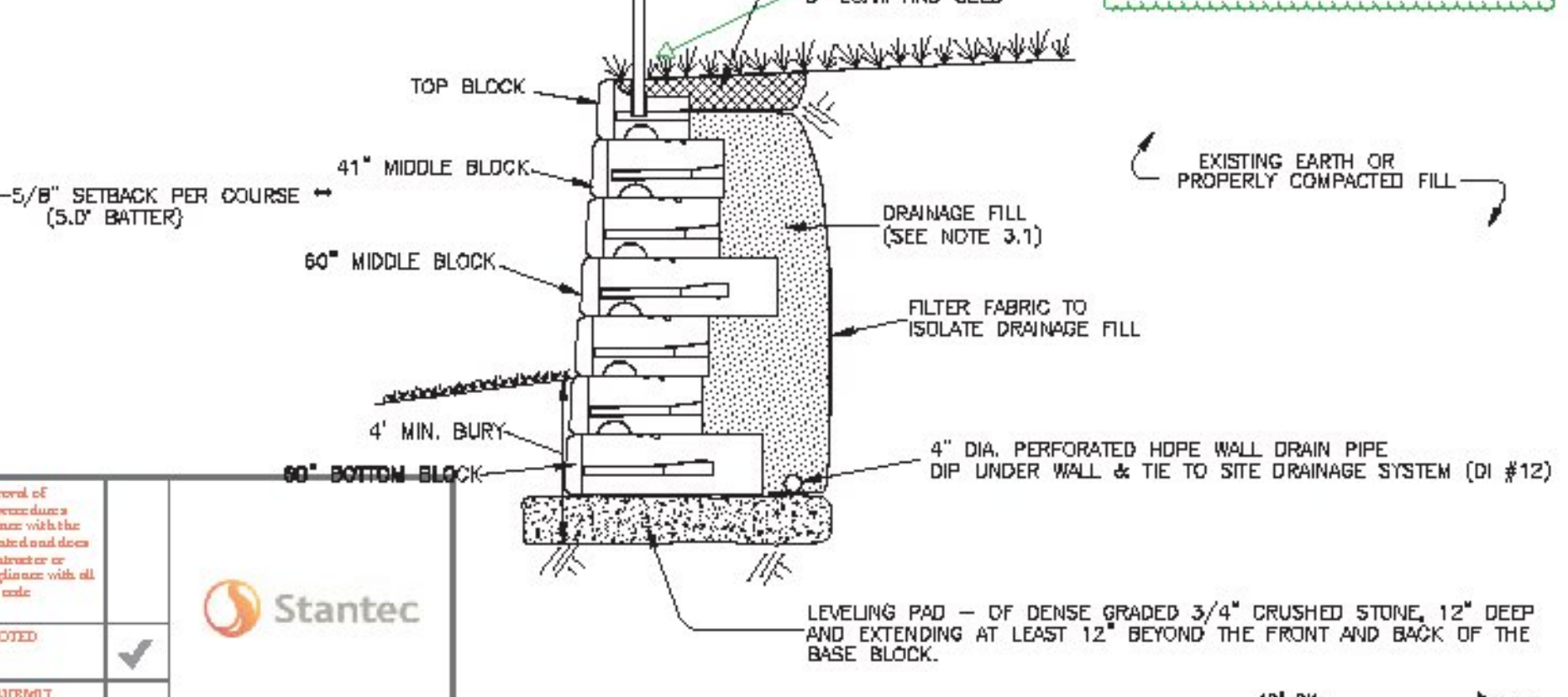


TOP BLOCK TO BE FIELD-CORED TO ACCEPT FENCE POST. ANNULUS SHALL BE FILLED WITH NON-SHRINK GROUT (TYPE BY FENCE SUPPLIER). KEEP CORE HOLE EDGE AT LEAST 6" FROM OUTSIDE EDGE OF BLOCK. EXTEND POST 6" INTO BLOCK.



APPROVED: Approval of drawings and/or presentation information presented and does not constitute a representation of Stantec or its employees. Stantec shall not be held responsible for any errors or omissions. The contractor is responsible for all construction and safety requirements.

APPROVED AS NOTED: [Signature]

DATE: 9/9/16

Signature: TEK

TYPICAL SECTION - GRAVITY WALL
(TYPICAL DETAIL ONLY - SEE WALL FACE DRAWING FOR SPECIFIC BLOCK CONFIGURATIONS)

"REDI-ROCK" SEGMENTAL RETAINING WALL

COMPACTION NOTE: WHERE THE RETAINING WALL PASSES OVER ANY UTILITY LINES, COMPACTION OF THE SOIL WITHIN THE UTILITY TRENCH IS CRITICAL IN ORDER TO PREVENT SETTLEMENT OF THE WALL. COMPACTION OF ALL FILL MATERIAL IN UTILITY TRENCHES WHICH PASS UNDER THIS RETAINING WALL MUST BE AT LEAST 50% OF THE MAXIMUM DENSITY OF THE FILL MATERIAL.

COMPACTED FILL/BACKFILL GENERAL REQUIREMENTS	
SIEVE SIZE	% PASSING
3"	100%
#4	43-75%
#100	0-12%
#200	0-6%

VT ADT 704-02B
GRANULAR BACKFILL FOR STRUCTURES

DENSE GRADED 3/4" CRUSHED STONE GRADATION REQUIREMENTS	
SIEVE SIZE	% PASSING
1"	100%
3/4"	90-100%
3/8"	60-85%
#8	25-60%
#200	8-20%

NOTE: ALTERNATE MATERIALS SHALL ONLY BE USED WITH THE APPROVAL OF THE WALL DESIGN ENGINEER.

DESIGN ASSUMPTIONS	
SOIL	SOIL UNIT WEIGHT (γ)
COMPACTED FILL/BACKFILL	130
RETAINED EARTH	105
FOUNDATION SOIL	105
APPLIED SURCHARGE LOADING:	NONE
SEISMIC ACCELERATION	= 0.08
MAX. SLOPE ABOVE WALL	= 10H:1V

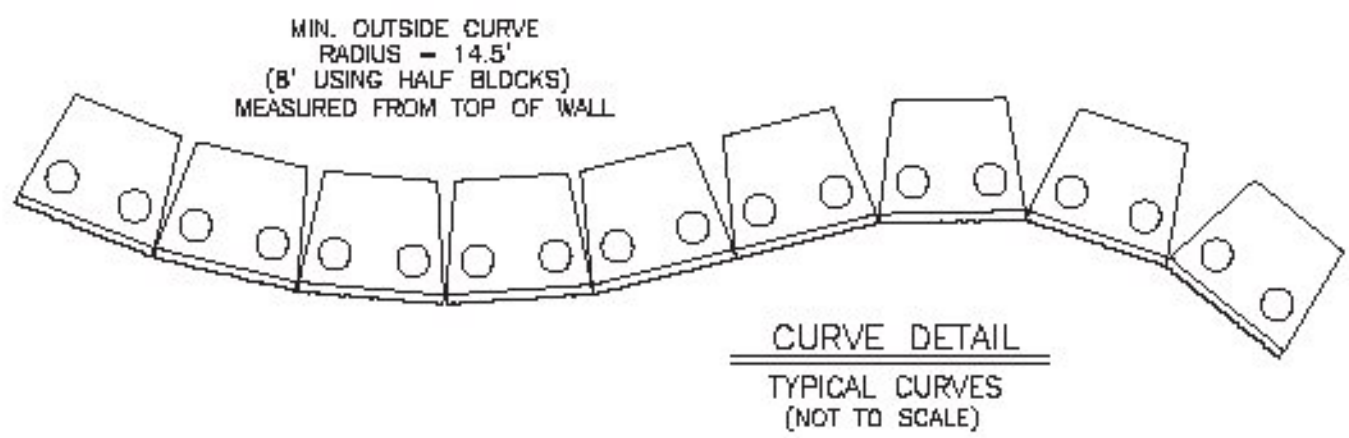
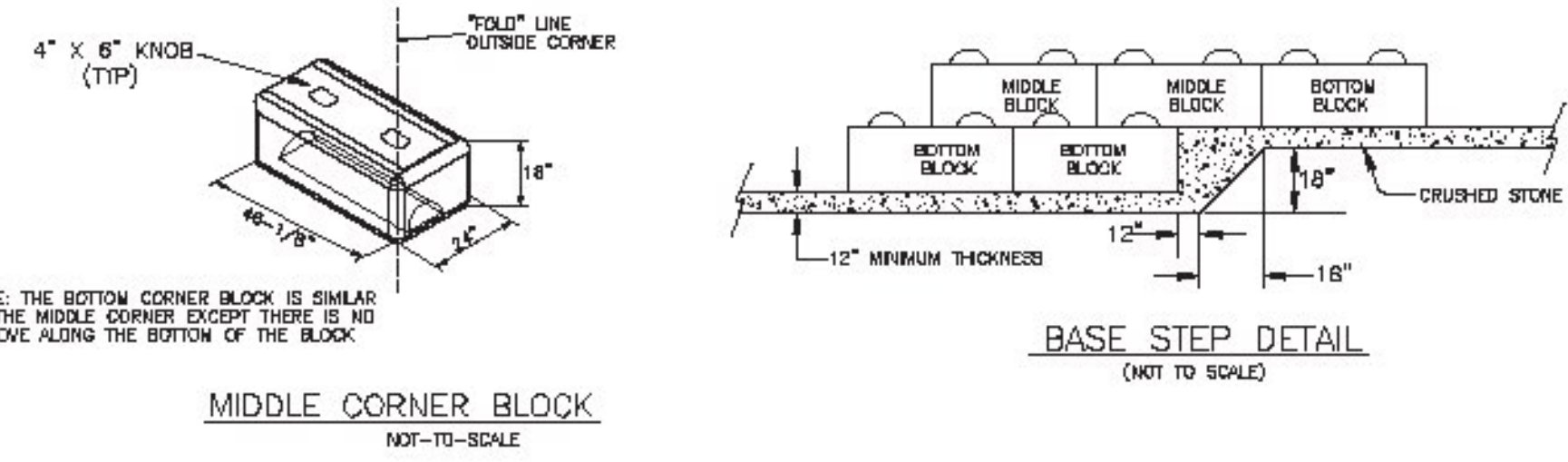
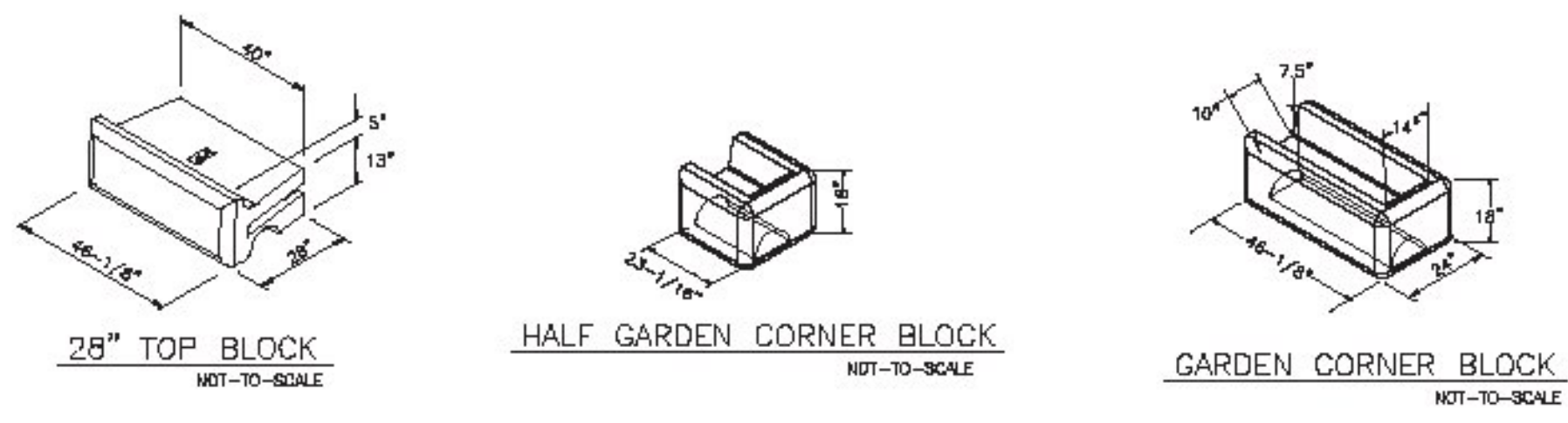
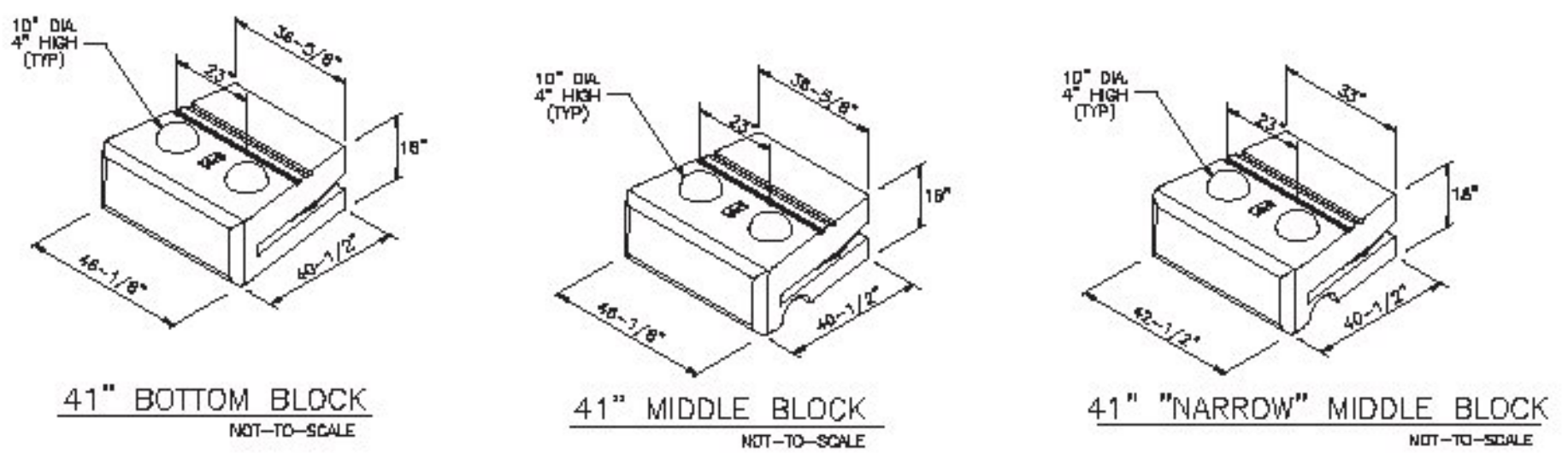
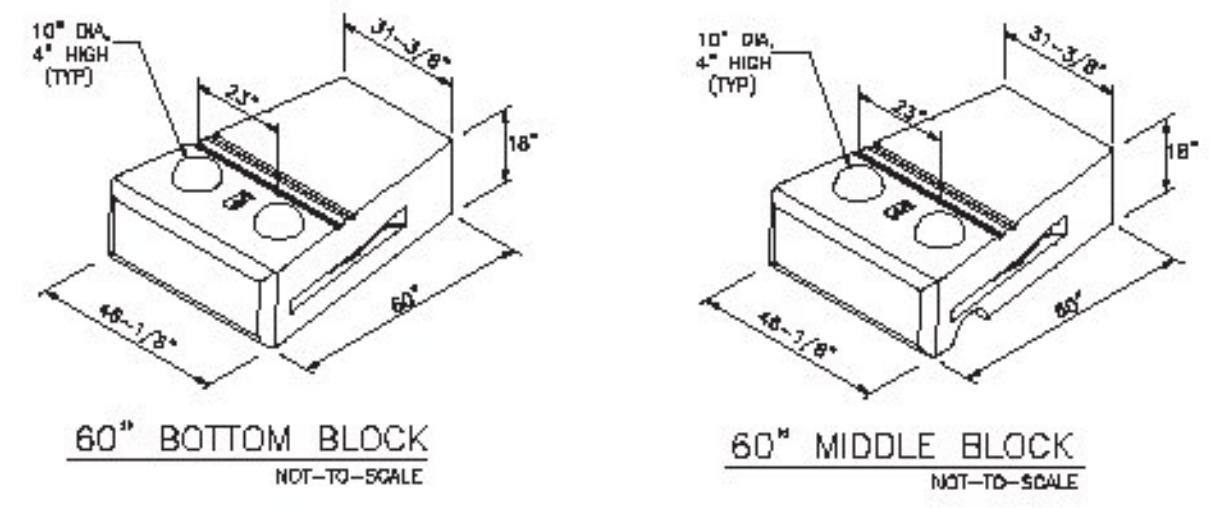
DRAINAGE FILL - VT ADT 704-02B GRADATION REQUIREMENTS	
SIEVE SIZE	% PASSING
1"	100
3/4"	80 - 100
3/8"	20 - 55
#4	0 - 10
#8	0 - 5

AASHTO LRFD LOAD/RESISTANCE FACTORS	
INTERNAL STABILITY:	
VERTICAL EARTH PRESSURE - EV	1.35
EARTHQUAKE LOADS - EQ	1.00
LIVE LOAD SURCHARGE - LS	1.75
DEAD LOAD SURCHARGE - ES	1.50
GEGRID STRENGTH/CONNECTION/PULLOUT	0.90 (STATIC)
	1.20 (COMBINED STATIC/SEISMIC)
EXTERNAL STABILITY:	
VERTICAL EARTH PRESSURE - EV	1.00 (STATIC)
SLIDING & ECCENTRICITY:	1.00 (COMBINED STATIC/SEISMIC)
BEARING CAPACITY:	1.35 (STATIC)
	1.35 (COMBINED STATIC/SEISMIC)
ACTIVE EARTH PRESSURE - EH	1.50
ACTIVE EARTH PRESSURE (EARTHQUAKE)	1.50
EARTHQUAKE LOADS - EQ	1.00
BEARING CAPACITY	0.45 (STATIC)
	0.45 (COMBINED STATIC/SEISMIC)

BLOCK SPECIFICATION NOTES:

- ALL BLOCKS SHALL BE MANUFACTURED BY A LICENSED REDI-ROCK (TM) MANUFACTURER.
- BLOCKS SHALL MEET THE MINIMUM REDI-ROCK SPECIFICATIONS OF 4000 PSF WITH AN AIR CONTENT OF 4%-8%.
- THE REDI-ROCK UNITS MAY UTILIZE EITHER THE SPLIT LIMESTONE OR COBBLESTONE FACE CONFIGURATION AS CHOSEN BY THE OWNER OR OWNER'S REPRESENTATIVE.

NOTE: HALF-BLOCKS HAVE THE SAME FEATURES AS SHOWN HERE FOR FULL BLOCKS BUT THEY ARE 23-1/16" WIDE, NOT THE FULL 46-1/8" WIDE.



GENERAL NOTES:

- SITE PREPARATION:**
 - STRIP ALL VEGETATION, ORGANIC SOILS AND UNSUITABLE FILL SOILS FROM THE WALL ALIGNMENT AREA.
 - BENCH CUT ALL EXCAVATED SLOPES.
 - DO NOT OVER EXCAVATE UNLESS DIRECTED TO DO SO BY THE OWNER'S SITE REPRESENTATIVE IN ORDER TO REMOVE UNSUITABLE SOIL.
 - THE OWNER'S SITE REPRESENTATIVE SHALL VERIFY THE COMPETENCY OF THE FOUNDATION SOILS.
- LEVELING PAD & BOTTOM BLOCK:**
 - LEVELING PAD SHALL CONSIST OF DENSE GRADED 3/4" CRUSHED STONE, 12" THICK AND EXTENDING AT LEAST 12" TO EITHER SIDE OF THE BASE BLOCK.
 - MINIMUM EMBEDMENT OF WALL BELOW FINISH GRADE SHALL BE AS INDICATED ON THE WALL FACE DRAWING.
 - FOLLOW APPLICABLE PROVISIONS OF THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS, ESPECIALLY WITH REGARDS TO LEVELING OF BLOCKS AND BASE.
- WALL DRAIN:**
 - DRAINAGE FILL SHALL CONSIST OF VT ADT 704-02B 3/4" CRUSHED STONE PLACED FOR A DEPTH OF AT LEAST 12" BEHIND THE WALL. A FILTER FABRIC SHALL BE PLACED OVER THE CUT OR FILL FACE BEHIND THE WALL TO PREVENT THE MIGRATION OF SOIL INTO THE DRAINAGE MATERIAL.
 - THE 4" DIA. PERFORATED HDPE WALL DRAIN SHALL DIP UNDER THE WALL AND TIE TO THE SITE DRAINAGE SYSTEM AT DI #12.
 - IF THE PERFORATED WALL DRAIN IS TO BE CARRIED UNDER THE WALL TO OUTLET, IT SHALL BE CARRIED DOWN SLOPE ENOUGH DISTANCE TO ALLOW FOR A PROPER DRAINING SLOPE (MIN. 1/4" PER FOOT FROM WALL TO DAYLIGHT) OR TIED TO A CLOSED DRAINAGE SYSTEM.
 - DRAIN LINES (4" HDPE) WHICH PASS UNDER THE WALL BASE SHOULD BE CENTERED UNDER THE BASE BLOCK. THE PIPE TRENCH SHALL BE MINIMIZED SO THAT THE BASE BLOCK ACTS AS A LINTEL OVER THE PIPE AND TRENCH.
 - PLACE A FILTER FABRIC (MIRAF 140N, OR EQUAL) OVER THE DRAINAGE MATERIAL TO MINIMIZE SOIL MIGRATION FROM THE SURFACE MATERIAL (TOPSOIL OR IMPERVIOUS) INTO THE DRAINAGE MATERIAL.
- BACKFILLING & COMPACTION:**
 - BACKFILL AND COMPACT THE FILL MATERIAL BEHIND THE WALL AS THE WALL IS INSTALLED.
 - COMPACTION TESTS SHALL BE TAKEN AS THE WALL IS INSTALLED. THE MINIMUM NUMBER OF TESTS SHALL BE DETERMINED BY THE OWNER'S SITE REPRESENTATIVE.
 - COMPACTION SHALL BE TO A MINIMUM OF 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY.
 - RECOMMENDED COMPACTION EQUIPMENT WITHIN 15 FEET OF THE BACK OF THE WALL IS AS FOLLOWS:
0 - 4 FEET HAND TAMP OR VIBRATORY PLATE COMPACTOR
4 - 15 FEET NOTHING LARGER THAN TWO-DRUM, WALK-BEHIND VIBRATORY ROLLER (LARGER ROLLERS CAN BE USED STATICALLY, PROVIDED LIFT SIZE DOES NOT COMPROMISE ACHIEVEMENT OF NECESSARY COMPACTION RATES.)
- GENERAL WALL LAYOUT & CONSTRUCTION:**
 - FINAL WALL ALIGNMENT SHALL BE LOCATED IN THE FIELD BY THE OWNER'S SITE REPRESENTATIVE.
 - PROVIDE LATERAL DRAINAGE SWALES TO DIRECT FLOWS AROUND THE ENDS OF THE WALL AND AWAY FROM THE WALL DURING CONSTRUCTION. PERMANENT SWALES SHALL BE FITTED TO DRAIN SURFACE WATER RUNOFF TO THE ENDS OF THE WALL. DO NOT ALLOW WATER TO POND AT THE TOP OF THE WALL.
 - TURF, OR SOME ACCEPTABLE FORM OF SOIL EROSION PROTECTION, SHOULD BE ESTABLISHED AT THE TOP OF THE WALL (WHERE REQUIRED) BY THE LANDSCAPE CONTRACTOR AS SOON AS THE WALL IS COMPLETED.
 - ENDS OF THE RETAINING WALLS SHALL BE BLENDED INTO THE PROPOSED/EXISTING GRADE IN A MANNER SATISFACTORY TO THE OWNER'S SITE REPRESENTATIVE. AT THE ENDS OF A WALL WHERE BLENDING TAKES PLACE, THE ISSUE IS NOT A STRUCTURAL FACTOR BUT AN AESTHETIC FACTOR AND THE OWNER'S SITE REPRESENTATIVE IS QUALIFIED TO MAKE THIS JUDGEMENT.
 - IF CONDITIONS ARE DIFFERENT THAN THOSE STATED IN THESE DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR MUST CONTACT THE DESIGN ENGINEER PRIOR TO PROCEEDING WITH THE CONSTRUCTION OF THE WALL.
 - THESE WALLS HAVE BEEN DESIGNED WITH CONSIDERATION OF SEISMIC LOADINGS.
 - WALL CERTIFICATIONS: OCCASIONALLY A "SIGN OFF" BY THE DESIGN ENGINEER IS NEEDED AFTER COMPLETION OF WALL CONSTRUCTION. IF THIS SERVICE IS NEEDED ARRANGEMENTS MUST BE MADE WITH THE DESIGN ENGINEER PRIOR TO WALL CONSTRUCTION FOR A SERIES OF SITE VISITS TO OBSERVE WALL CONSTRUCTION. ACCEPTANCE LETTERS, SIGN OFFS, CERTIFICATIONS, WARRANTIES, ETC. WILL NOT BE PROVIDED WITHOUT PERIODIC SITE VISITS.

IT IS THE RESPONSIBILITY OF THE INSTALLER TO REVIEW THE NOTES AND DETAILS ON ALL SHEETS OF THIS PLAN SET



PEDESTRIAN RAILING CALCS:

POST SPACING: 4' (±)
POST LOAD: 200 LB @ 48" HEIGHT
RESISTING MOMENT: 1225 LB BLOCK X 13" C.D.G. = 1325 FT-LB
OVERTURNING MOMENT: 200 LB X (3.5+1.5) = 1000 FT-LB
** CORE INTO TOP BLOCK ONLY **

Please provide additional information on wall texture, integral color and stained color for approval before casting.

NOTE: THIS DRAWING WAS PREPARED FOR USE WITH REDI-ROCK (TM) RETAINING WALL SYSTEMS. CONTACT REDI-ROCK WALLS OF NEW ENGLAND AT (802) 863-1000.

ERIC MERLUZZI, P.E.

184 ROWENTOWN ROAD, WENTWORTH, NH 03282
PHONE: (802) 798-8751 E-MAIL: em35@earthlink.net

CLIENT: REDI-ROCK WALLS OF NEW ENGLAND
8 REEDS MILL ROAD, NEWPORT, NH 03773

PROJECT: EAST MONTPELIER BRF 037-1(7)
US ROUTE 2, EAST MONTPELIER, VT

SHEET TITLE: RETAINING WALL DESIGN SHEET 1

DATE: AUGUST 30, 2016 SCALE: AS SHOWN PROJECT No.: 2016-050

SHEET 1 OF 2