ROSETTA BELVEDERE RETAINING WALL SYSTEM

ST. LOUIS COUNTY MASTERPLAN

INDEX OF DRAWNGS:

MIDCOAST & ASSOCIATES, LLC
636-978-7770
O'FALLON, MO
MO COA #E-2013015539

BELVEDERE
RETAINING WALL SYSTEM

MIDWEST BLOCK & BRICK
12901 ST. CHARLES ROCK RD
BRIDGETON, MO 63044
314-291-3200
314-291-0265 FAX

COVER SHEET

SHEET 1 OF 10

DATE: SEPTEMBER 2015

APPLICATION:

THE BELVEDERE RETAINING WALL SYSTEM IS A STRUCTURE COMBINING AN ARCHITECTURALLY ATTRACTIVE CONCRETE FACING BLOCK WITH OR WITHOUTH GEOGRID REINFORCEMENT. THE GEOGRID REINFORCEMENT INTERLOCKS WITH THE BELVEDERE BLOCK UNITS AND FILL SOIL TO CREATE A STABLE RETAINING WALL. DESIGN OF THESE REINFORCED SOIL STRUCTURES USES WELL ESTABLISHED GUIDELINES THAT ARE READILY AVAILABLE. THE FOLLOWING SPECIFICATIONS AND DETAILS PROVIDE A DESIGN TO INCORPORATE GEOGRID REINFORCEMENT INTO THE SOIL FOR THE PURPOSES OF CONSTRUCTING RETAINING WALLS. CONSULT MIDWEST BLOCK AND BRICK FOR ADDITIONAL DETAILS REGARDING DESIGN, APPEARANCE AND AESTHETIC CONSIDERATIONS.

STANDARD DESIGN PROCEDURE:

THE FOLLOWING DESIGN TABLES ESTABLISHED FOR THE CONSTRUCTION OF SOIL REINFORCED WALLS ARE BASED UPON GENERALLY ACCEPTED SOIL PARAMETERS IN THE ST LOUIS COUNTY, MISSOURI AREA. ALL SOIL PARAMETERS ASSUMED IN THE DESIGN ARE WELL DRAINED, LONG TERM STRENGTH CONDITIONS. HIGH PLASTIC SILTS AND CLAYS SHOULD BE AVOIDED WITHOUT SPECIFIC DESIGN RECOMMENDATIONS FROM LOCAL GEOTECHNICAL ENGINEERS. FROST HEAVE AND SETTLEMENT NEED TO BE ADDRESSED IF WARRANTED BY CONDITIONS. ALSO, SPECIFIC PRECAUTIONS ARE NECESSARY FOR WALLS CONSTANTLY IN CONTACT WITH WATER, I.E. NEAR OR AT RIVERS, LAKES AND PONDS.

FOUR TYPICAL GEOMETRIC CASES WERE SELECTED FOR THESE TABLES. THE FIRST CASE IS A TYPICAL RETAINING WALL WITH HORIZONTAL BACKFILL AND NO SURCHARGE, THE SECOND CASE IS A TYPICAL RETAINING WALL WITH HORIZONTAL BACKFILL AND 100 PSF SURCHARGE, THE THIRD CASE IS A 3:1 SLOPING BACKFILL AND THE FOURTH CASE IS A TIERED WALL WITH FLAT BACKSLOPE AND NO SURCHARGE. THE FOLLOWING IS A SUMMARY OF THE DESIGN PARAMETERS USED AND THE MINIMUM FACTORS OF SAFETY WHICH THE DESIGNS ARE BASED ON.

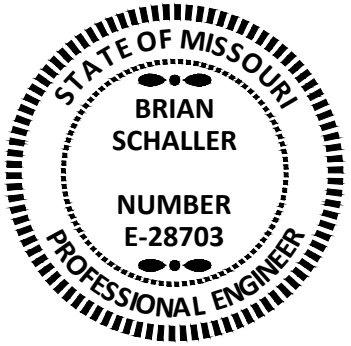
SOIL PROPERTIES:

	FRICTION ANGLE (DEGREES)	UNIT WEIGHT (LBS/CF)	COHESION (LBS/SF)
WALL FILL	28	120	0
RETAINED BACKFILL	28	120	0
FOUNDATION SOIL	28	120	0

FRICTION ANGLE - DEGREES
UNIT WEIGHT - LBS PER CUBIC FOOT
COHESION - LBS PER SQUARE FOOT

MINIMUM FACTORS OF SAFETY CALCULATED:

REINFORCEMENT PULLOUT = 1.5
REINFORCEMENT RUPTURE = 1.5
EXTERNAL SLIDING = 1.5
INTERNAL SLIDING = 1.5
OVERTURNING = 2.0
BEARING CAPACITY = 1,500 PSF



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APPLICATIONS

DATE: SEPTEMBER 2015

SPECIFICATIONS - St. Louis County, Missouri Masterplan

MATERIALS

RETAINING WALL UNITS SHALL BE ROSETTA BELVEDERE BLOCK UNITS AS MANUFACTURED BY MIDWEST BLOCK AND BRICK. THE BELVEDERE WALL SYSTEM CONSISTS OF (6) WALL UNITS OF VARIOUS SIZES, EACH BEING 9" DEEP. CONCRETE WALL UNITS SHALL MEET THE REQUIREMENTS OF ASTM C1372 AND BE MADE FROM WET CAST, READY-MIXED CONCRETE IN ACCORDANCE WITH ASTM C-94. UNITS SHALL HAVE A MINIMUM SPECIFIED 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI.

THE REINFORCED WALL BACKFILL MATERIAL SHALL BE COMPACTED SOIL FROM ON-SITE. THE SOIL SHALL BE FREE OF DEBRIS, CLUMPS, ROCKS LARGER THAN 4", AND ANY ORGANIC OR FROZEN MATERIALS. DO NOT USE HIGH PLASTIC SOILS THAT HAVE A PI>20 OR LL>40.

GEOGRID SHALL BE MIRAGRID 2XT OR 3XT AS MANUFACTURED BY TENCATE GEOSYNTHETICS; STRATA SG150 OR SG200 AS MANUFACTURED BY STRATA SYSTEMS, INC; OR SYNTEEN SF20 OR SF35 AS MANUFACTURED BY SYNTEEN TECHNICAL FABRICS, INC.

THE GEOTEXTILE FILTER FABRIC SHALL BE A NONWOVEN FABRIC WITH A MINIMUM WEIGHT OF 3.5 OZ/SY.

THE LEVELING PAD SHALL BE WELL-GRADED, CRUSHED LIMESTONE SIMILAR TO 1" MINUS.

THE DRAINAGE ROCK SHALL BE FREE-DRAINING ROCK SUCH AS 3/4" CRUSHED LIMESTONE.

THE PERFORATED PIPE SHALL BE 4" DIAMETER HDPE COIL PIPE.

WALL FOUNDATION

FOUNDATION SOIL SHALL BE EXCAVATED AS REQUIRED FOR THE LEVELING PAD AND THE REINFORCED FILL ZONE TO THE DEPTHS AND LOCATIONS SHOWN ON THE PLAN SHEET. WALLS SHALL HAVE THE BOTTOM COURSE(S) BURIED TO A MINIMUM DEPTH OF 6".

THE EXPOSED FOUNDATION SOIL SHALL BE OBSERVED PRIOR TO CONSTRUCTION TO VERIFY THAT THE EXPOSED MATERIAL IS SUITABLE FOR A NET DESIGN BEARING PRESSURE OF 2000 PSF AND THAT THE BASE OF THE EXCAVATION IS FREE OF LOOSE SOIL, UNCOMPACTED FILL, WATER, OR FROZEN MATERIAL. CONSULT A SOILS ENGINEER IF IN DOUBT. UNDERCUT ANY UNSUITABLE SOIL. UNDERCUT AREAS SHALL BE FILLED WITH CRUSHED LIMESTONE AND COMPACTED TO AT LEAST 95% OF THE MATERIAL'S STANDARD PROCTOR MAXIMUM DRY DENSITY.

EXISTING FOUNDATION SOIL (SOIL BELOW WALL) SHOULD BE COMPACTED TO A MINIMUM OF 95% OF STANDARD PROCTOR BEFORE LEVELING PAD MATERIAL IS INTRODUCED. CONSTRUCT THE CRUSHED ROCK LEVELING PAD TO LINES AND GRADES SHOWN ON THE PLANS. COMPACT USING A VIBRATOR PLATE COMPACTOR.

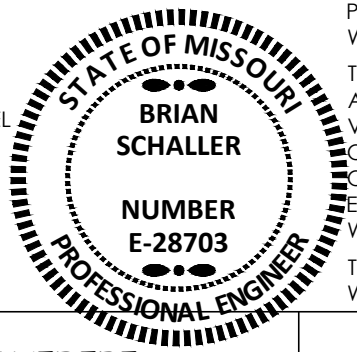
INSTALL A 4" (100 MM) DIAMETER PERFORATED DRAIN PIPE BEHIND THE BASE UNIT AND IN THE DRAINAGE LAYER. DAYLIGHT THE DRAIN PIPE AT THE ENDS AND/OR THROUGH THE FACE OF THE WALL TO ALLOW FOR DRAINAGE.

WALL CONSTRUCTION

PLACE THE BOTTOM COURSE OF WALL BLOCKS. TAKE CARE TO LEVEL THE BLOCKS BOTH PARALLEL AND PERPENDICULAR TO THE WALL.

PLACE SUCCESSIVE UNITS, DRAINSTONE, AND COMPACTED BACKFILL TO THE DESIRED GRADE/ WALL HEIGHT. MAKE SURE THE WALL BLOCKS ARE SETBACK A MINIMUM OF 1/2" FOR EVERY 6" OF WALL HEIGHT.

COPING LAYER SHOULD BE ADHERED WITH A CONCRETE ADHESIVE.



GEOGRID REINFORCING

GEOGRID SHALL BE CUT TO DESIGN LENGTHS AND PLACED BETWEEN THE BLOCKS AT THE ELEVATIONS SHOWN ON THE PLANS. THE GEOGRID'S PRIMARY STRENGTH DIRECTION WILL BE DIRECTED PERPENDICULAR TO THE WALL FACE (INTO THE FILL.) GEOGRID PLACED OUTSIDE A PLUS OR MINUS 4" ZONE OF THE GEOGRID DESIGN ELEVATION WILL NOT BE ACCEPTED. THE GEOGRID SHALL BE PLACED HORIZONTALLY AND LAY FLAT ON THE REINFORCED FILL SOIL.

GEOGRID SHALL BE PLACED STARTING AT THE FACE OF THE RETAINING BLOCK AND EXTENDING INTO THE REINFORCED SOIL. MAKE SURE THE GEOGRID IS AS CLOSE AS POSSIBLE TO THE FRONT FACE OF THE WALL WITHOUT BEING VISIBLE. USE THE NEXT LAYER OF BLOCKS TO SECURE THE FRONT END OF THE GEOGRID. PULL THE GEOGRID TAUT TO ELIMINATE ANY FOLDS AND PRETENSION THE GEOGRID. PIN OR SECURE THE BACK EDGE OF THE GEOGRID BEFORE PLACING THE REINFORCED FILL.
FOLLOW GEOGRID MANUFACTURER'S REQUIREMENTS, INCLUDING REQUIREMENTS FOR VERTICAL SEPARATION AND OVERLAP OF GEOGRID.

WALL BACKFILL

WALL BACKFILL MATERIAL SHALL BE PLACED IN MAXIMUM 6" LOOSE LIFTS AND COMPACTED TO AT LEAST 95% OF THE MATERIAL'S MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR METHOD. BACKFILL SHALL BE PLACED, SPREAD, AND COMPACTED IN SUCH A MANNER THAT MINIMIZES WRINKLES AND MOVEMENT OF THE GEOGRID. FIELD DENSITY TESTING SHALL BE CONDUCTED BY A QUALIFIED SOILS TECHNICIAN TO VERIFY THAT AT LEAST THE MINIMUM DEGREE OF COMPACTION IS BEING OBTAINED.

PLACE 12" OF DRAINAGE ROCK BEHIND UNITS. BACKFILL THE FIRST 12" (300 MM) BEHIND THE BLOCKS AND TRIANGLE SHAPED AREAS BETWEEN THE BLOCKS WITH ASTM NO. 57 DRAINSTONE. PLACE A LAYER OF NON-WOVEN GEOTEXTILE FABRIC IMMEDIATELY BEHIND THE DRAINSTONE AND THEN PLACE THE RETAINED OR REINFORCED SOIL.

DURING BACKFILL PLACEMENT THE 3 FOOT ZONE DIRECTLY BEHIND THE WALL SHALL BE LIMITED TO THE USE OF HAND OPERATED COMPACTION EQUIPMENT ONLY. MONITOR THE WALL BLOCKS FOR MOVEMENT DURING COMPACTION AND RECTIFY IF REQUIRED PRIOR TO PROCEEDING.
CONSTRUCTION EQUIPMENT SHALL NOT BE OPERATED DIRECTLY ON THE GEOGRID.

PROTECTION OF WORK

THE SURFACE OF THE WALL BACKFILL SHALL BE GRADED AT THE END OF EACH DAY OF WORK TO PROVIDE POSITIVE SURFACE DRAINAGE AWAY FROM THE WALL. GRADING SHALL INCLUDE PROPER CONTOURING OF FILLS IN ADJACENT AREAS TO PREVENT THE FLOW OF SURFACE WATER INTO THE REINFORCED EARTH ZONE.

THE DESIGN OF THE WALLS ARE BASED ON CONDITIONS AND LOADS IMPOSED ON THE WALL AT COMPLETION OF THE PROJECT. PRIOR TO PROJECT COMPLETION, THE WALL IS VULNERABLE TO DAMAGES CAUSED BY CONSTRUCTION ACTIVITY ADJACENT TO THE WALL. OF PARTICULAR CONCERN IS THE OF GRADING AND PAVEMENT CONSTRUCTION EQUIPMENT ON THE RETAINED BACKFILL AT THE TOP OF THE WALL. ONLY EQUIPMENT WITH A WEIGHT NOT EXCEEDING ONE TON CAN BE USED IN THE 3 FOOT ZONE DIRECTLY BEHIND THE BACK OF THE WALL FACE.

THE SOIL IN FRONT OF THE WALLS SHALL BE PROTECTED FROM FUTURE EROSION. THE TOP OF WALL MUST BE GRADED TO DIRECT SURFACE WATER AWAY FROM THE WALL.

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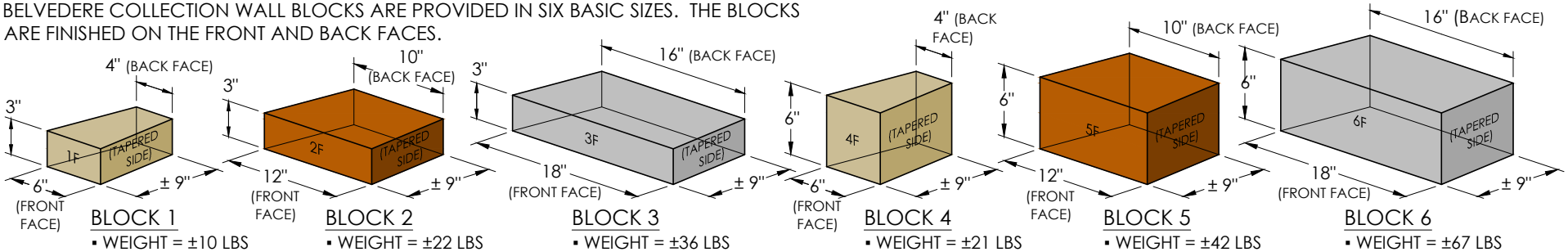
SPECIFICATIONS

DATE: SEPTEMBER 2015

WALL BLOCKS

NOTE: AVERAGE BLOCK WEIGHTS ARE SHOWN. WEIGHTS OF INDIVIDUAL BLOCKS MAY VARY.

BELVEDERE COLLECTION WALL BLOCKS ARE PROVIDED IN SIX BASIC SIZES. THE BLOCKS ARE FINISHED ON THE FRONT AND BACK FACES.



BLOCK 1
- WEIGHT = ±10 LBS
- 12 PER PALLET

BLOCK 2
- WEIGHT = ±22 LBS
- 12 PER PALLET

BLOCK 3
- WEIGHT = ±36 LBS
- 12 PER PALLET

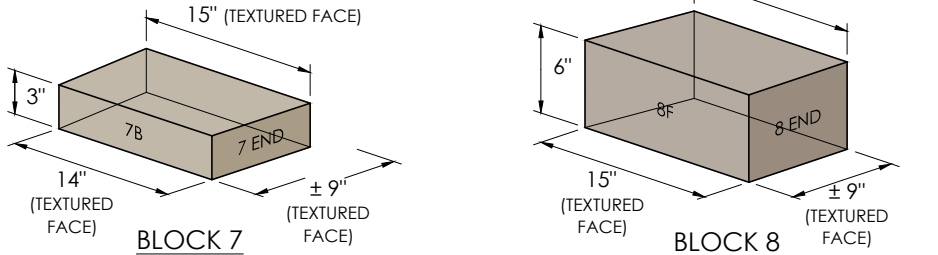
BLOCK 4
- WEIGHT = ±21 LBS
- 12 PER PALLET

BLOCK 5
- WEIGHT = ±42 LBS
- 12 PER PALLET

BLOCK 6
- WEIGHT = ±67 LBS
- 12 PER PALLET

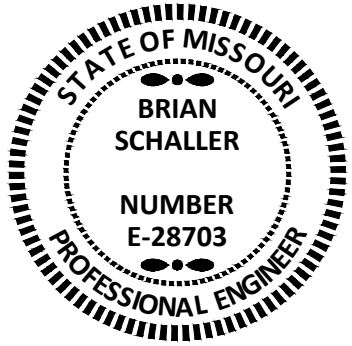
CORNER BLOCKS

THE BELVEDERE COLLECTION CONTAINS 2 CORNER BLOCKS SIZES. THE BLOCKS ARE FINISHED ON 3 SIDES. THE 4TH SIDE IS TAPERED TO FIT WITH RETAINING WALL BLOCKS. THE CORNER BLOCKS CAN BE USED TO CONSTRUCT COLUMNS, PROVIDE A FINISHED END ON A FREESTANDING WALL, AND TO MAKE 90° CORNERS.



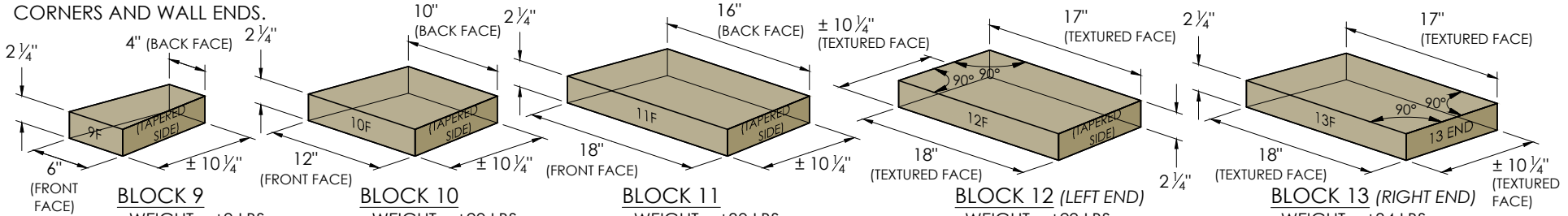
BLOCK 7
- WEIGHT = ± 30 LBS
- 16 PER PALLET

BLOCK 8
- WEIGHT = ± 58 LBS
- 16 PER PALLET



COPING BLOCKS (CAPS)

BELVEDERE COLLECTION COPING BLOCKS ARE PROVIDED IN FIVE BASIC SIZES. THERE ARE THREE STANDARD COPING BLOCKS WHICH ARE FINISHED ON THE FRONT, BACK, AND TOP FACES. THERE ARE ALSO TWO END UNITS WHICH ARE FINISHED ON FRONT, BACK, TOP, AND ONE OF THE SIDES. THE END UNITS ARE USEFUL FOR CONSTRUCTING CORNERS AND WALL ENDS.



BLOCK 9
- WEIGHT = ±9 LBS
- 24 PER PALLET

BLOCK 10
- WEIGHT = ±20 LBS
- 24 PER PALLET

BLOCK 11
- WEIGHT = ±30 LBS
- 12 PER PALLET

BLOCK 12 *(LEFT END)*
- WEIGHT = ±29 LBS
- 6 PER PALLET

BLOCK 13 *(RIGHT END)*
- WEIGHT = ±34 LBS
- 6 PER PALLET

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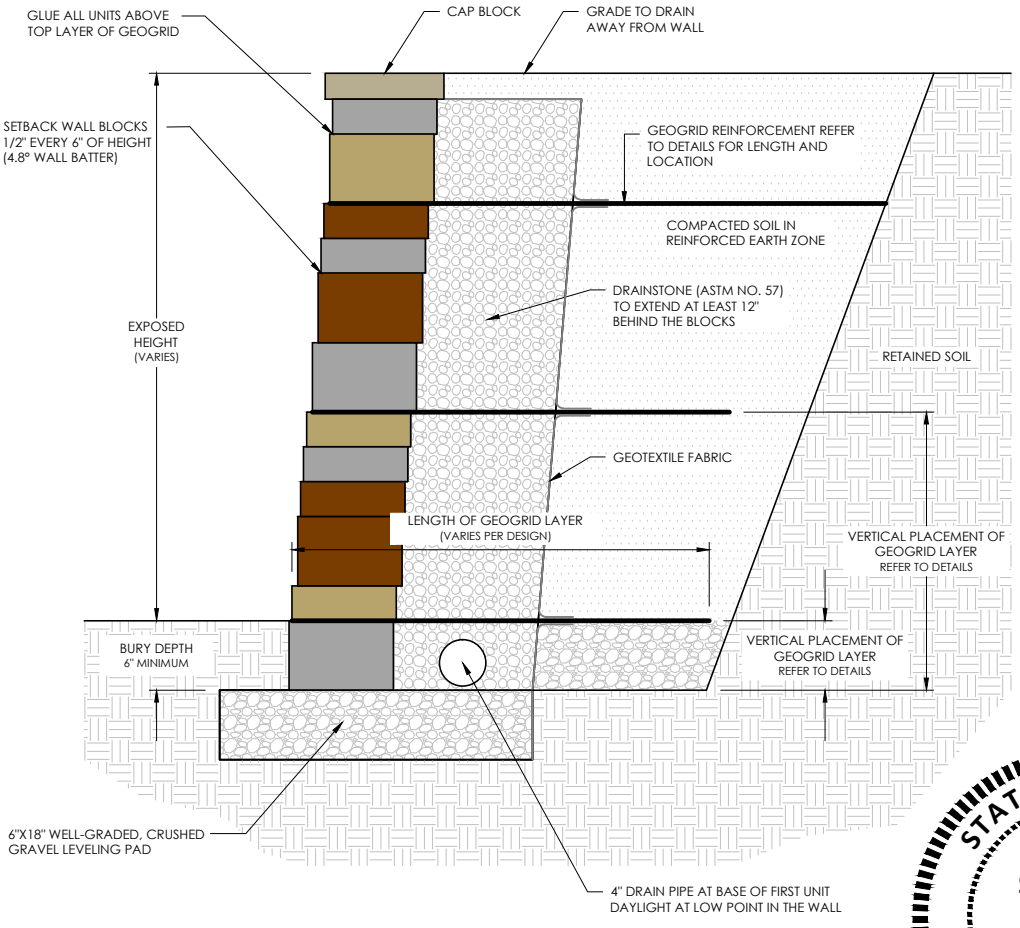
DETAILS

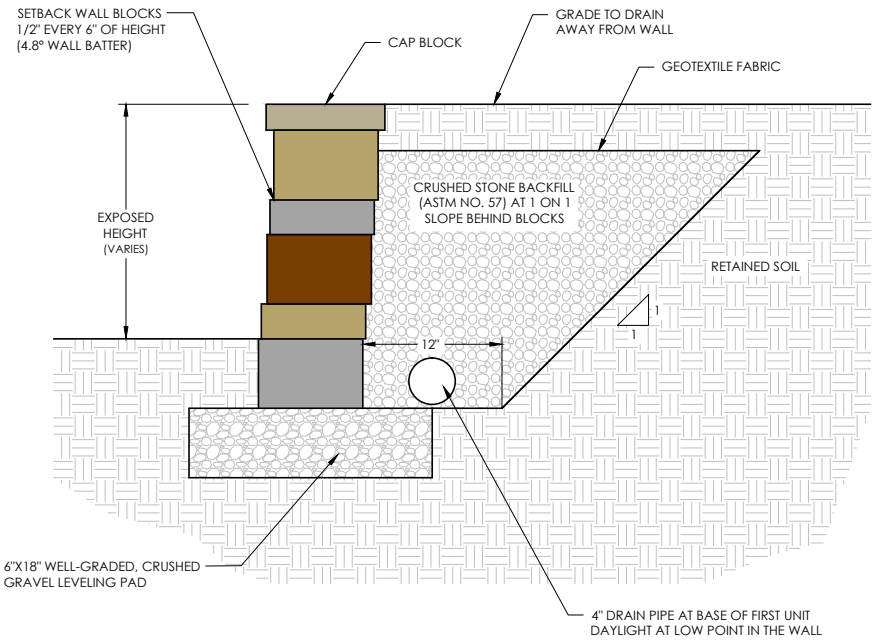
DATE: SEPTEMBER 2015

TYPICAL RETAINING WALL CONSTRUCTION DETAILS

THIS PAGE SHOWS TYPICAL CONSTRUCTION DETAILS FOR BELVEDERE RETAINING WALLS. THESE DRAWINGS ARE REPRESENTATIVE OF MAJOR COMPONENTS REQUIRED IN WALL CONSTRUCTION. SPECIFIC DETAILS INCLUDING GEOTEXTILE REINFORCEMENT LAYERS, DRAINAGE DETAILS, SOIL REQUIREMENTS, ETC. SHALL BE PER THE ENGINEERED DESIGN FOR THE WALL.

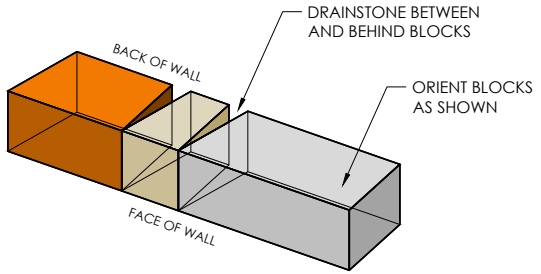


TYPICAL SECTION - WITH REINFORCEMENT



TYPICAL SECTION - WITHOUT REINFORCEMENT

STATE OF MISSOURI
BRIAN SCHALLER
NUMBER E-28703
PROFESSIONAL ENGINEER



TYPICAL BLOCK DETAIL

· BLOCK SIZES AND PLACEMENT SHOWN ARE FOR REFERENCE ONLY. INDIVIDUAL BELVEDERE BLOCKS WILL VARY WITH INSTALLATION PATTERN.

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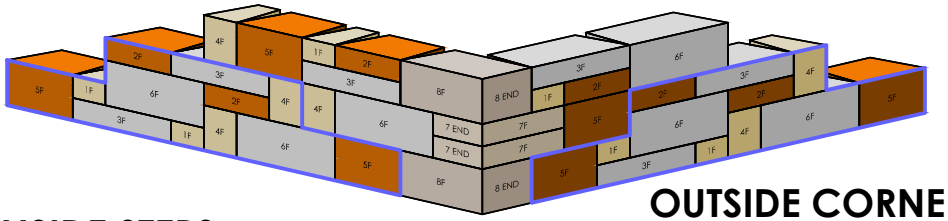
TYPICAL SECTIONS

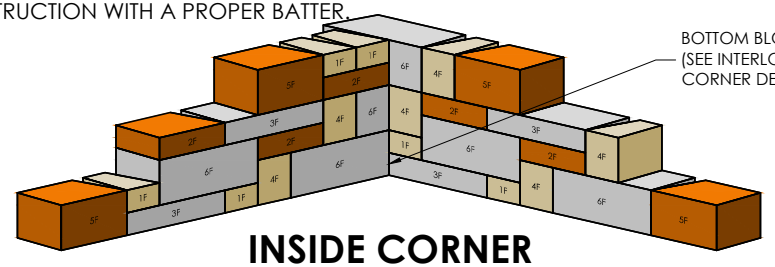
DATE: SEPTEMBER 2015

CORNER DETAILS

THIS PAGE SHOWS TYPICAL CONSTRUCTION DETAILS FOR MAKING 90° CORNERS WITH BELVEDERE BLOCKS. SOME BASIC CONCEPTS ARE SHOWN HERE. PLAN TO TAKE SOME TIME TO PROPERLY WORK CORNERS INTO THE LARGER RETAINING AND FREESTANDING WALL PATTERNS. WALLS ARE SHOWN WITHOUT BATTER FOR CLARITY. BLOCKS IN A RETAINING WALL SHOULD BE ADJUSTED SLIGHTLY IN PLACE AND TRIMMED AS NEEDED TO ALLOW WALL CONSTRUCTION WITH A PROPER BATTER.



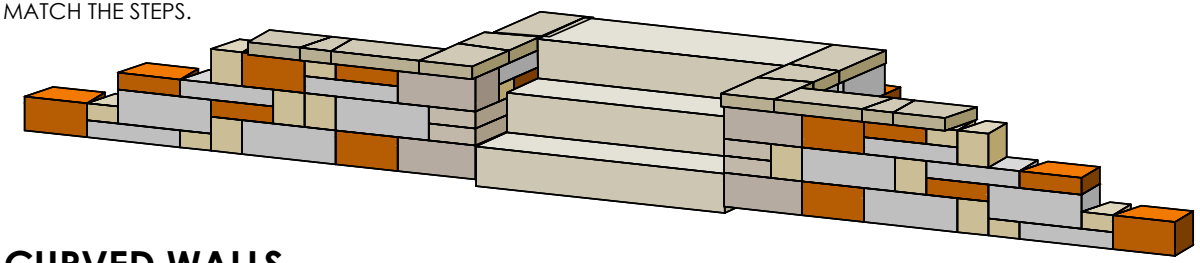
OUTSIDE CORNER

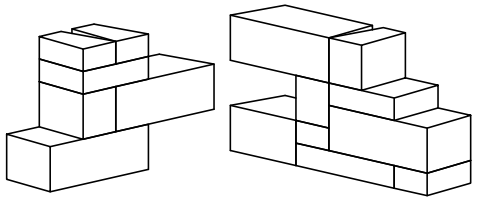


INSIDE CORNER

INSIDE STEPS

THIS PAGE SHOWS TYPICAL CONSTRUCTION DETAILS FOR MAKING STAIR OPENINGS INTO A WALL USING BELVEDERE BLOCKS AND ROSETTA DIMENSIONAL STEPS. WALLS ARE SHOWN WITHOUT BATTER FOR CLARITY. BLOCKS IN A RETAINING WALL SHOULD BE ADJUSTED SLIGHTLY IN PLACE AND TRIMMED AS NEEDED TO ALLOW WALL CONSTRUCTION WITH A PROPER BATTER. THE INSIDE WINGWALLS ARE TYPICALLY CONSTRUCTED WITHOUT BATTER TO MATCH THE STEPS.



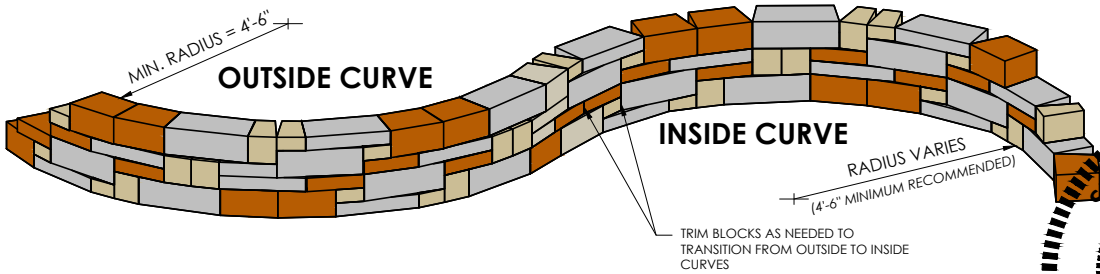


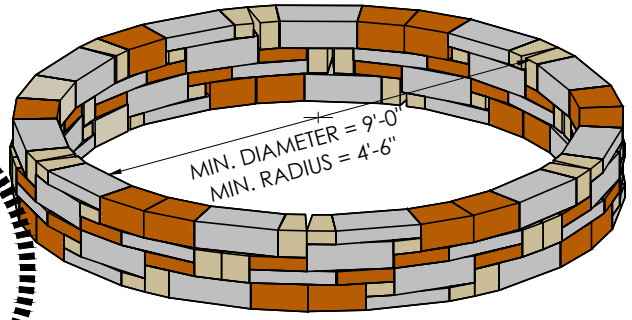
PLACE BLOCKS IN AN OVERLAPPING, INTERLOCKING PATTERN AT CORNER FOR ADDED WALL STABILITY.

INTERLOCKING CORNER

CURVED WALLS

THIS PAGE SHOWS TYPICAL CONSTRUCTION DETAILS FOR MAKING CURVED RETAINING WALLS WITH BELVEDERE BLOCKS. THE TAPER ON THE SIDES OF THE BLOCKS ALLOW FOR CONSTRUCTION OF A WIDE RANGE OF CURVES IN BOTH RETAINING AND FREESTANDING WALLS. WALLS ARE SHOWN WITHOUT BATTER FOR CLARITY. BLOCKS IN A RETAINING WALL SHOULD BE ADJUSTED SLIGHTLY IN PLACE AND TRIMMED AS NEEDED TO ALLOW WALL CONSTRUCTION WITH A PROPER BATTER.





PLANTER / TREE RING

STATE OF MISSOURI
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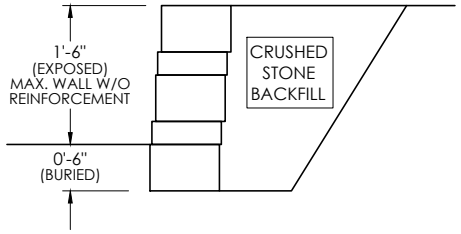
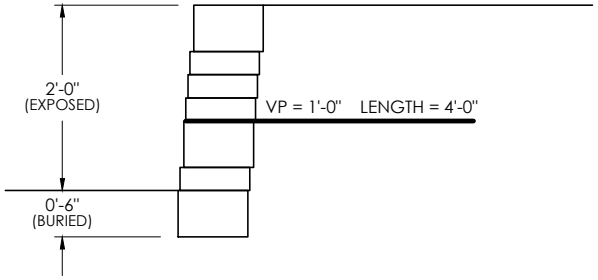
PRELIMINARY WALL HEIGHT GUIDES

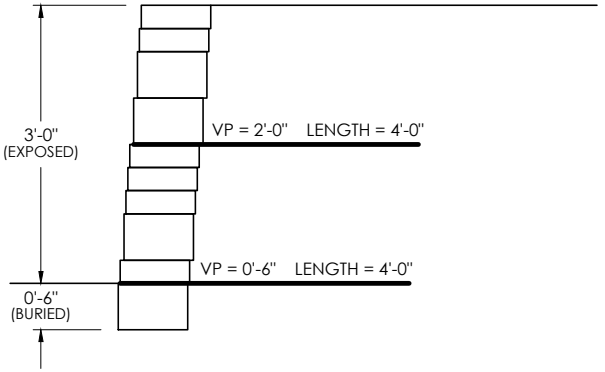
NO BACKSLOPE NO SURCHARGE

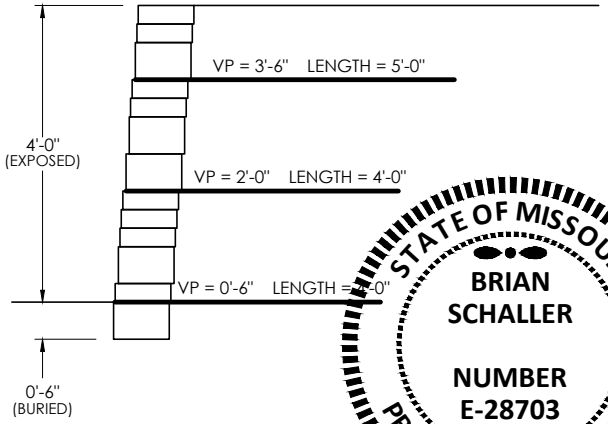
THIS PAGE SHOWS GUIDES FOR THE SOIL REINFORCEMENT REQUIRED TO CONSTRUCT A WALL WITH BELVEDERE COLLECTION BLOCKS SHOWN IN THE CONDITIONS NOTED. THE GEOGRID LAYERS SHOWN SHALL BE PLACED WITH 100% COVERAGE ALONG THE LENGTH OF THE WALL (NO GAPS BETWEEN SECTIONS OF GRID). SEE TYPICAL SECTIONS AND SPECIFICATIONS FOR TYPICAL CONSTRUCTION NOTES. BLOCK SIZES AND PLACEMENT SHOWN ARE FOR REFERENCE ONLY. INDIVIDUAL BELVEDERE COLLECTION BLOCKS WILL VARY WITH INSTALLATION PATTERN.

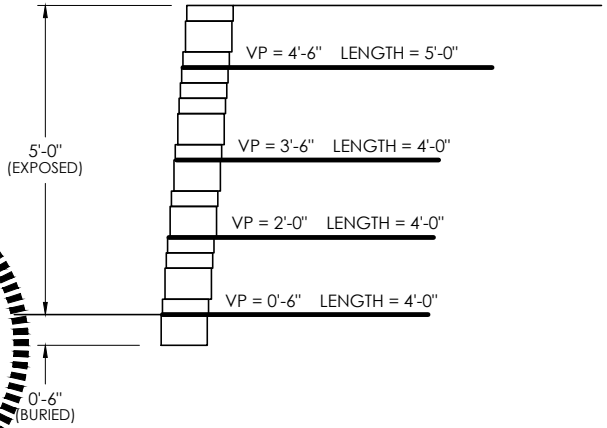
- GEOGRID REINFORCEMENT IS MIRAGRID 2XT OR 3XT; STRATA SG150 OR SG200; OR SYNTEEN SF20 OR SF35.
- LENGTH OF GEOGRID IS MEASURED FROM THE FRONT OF THE BELVEDERE BLOCKS.
- VERTICAL PLACEMENT (VP) OF GEOGRID IS MEASURED UP FROM THE BOTTOM OF THE BLOCKS/TOP OF THE STONE LEVELING PAD.

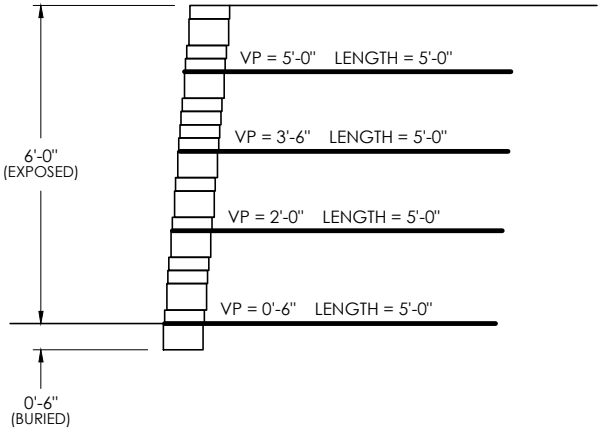


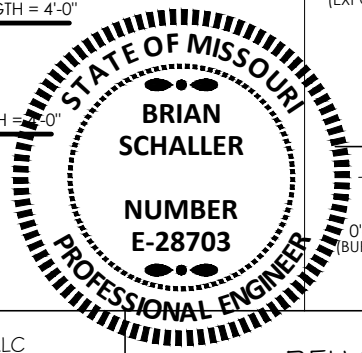












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FLAT BACKFILL

DATE: SEPTEMBER 2015

PRELIMINARY WALL HEIGHT GUIDES

NO BACKSLOPE LIGHT TRAFFIC SURCHARGE (NO TRUCKS) (100 PSF)

THIS PAGE SHOWS GUIDES FOR THE SOIL REINFORCEMENT REQUIRED TO CONSTRUCT A WALL WITH BELVEDERE COLLECTION BLOCKS SHOWN IN THE CONDITIONS NOTED. THE GEOGRID LAYERS SHOWN SHALL BE PLACED WITH 100% COVERAGE ALONG THE LENGTH OF THE WALL (NO GAPS BETWEEN SECTIONS OF GRID). SEE TYPICAL SECTIONS AND SPECIFICATIONS FOR TYPICAL CONSTRUCTION NOTES. BLOCK SIZES AND PLACEMENT SHOWN ARE FOR REFERENCE ONLY. INDIVIDUAL BELVEDERE COLLECTION BLOCKS WILL VARY WITH INSTALLATION PATTERN.

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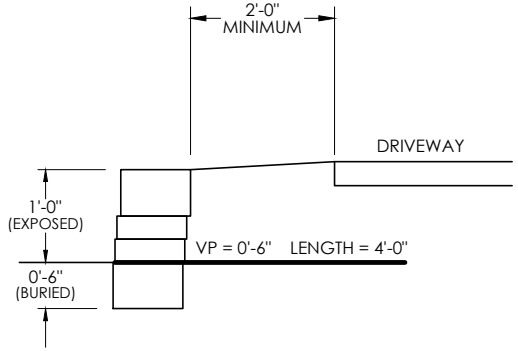

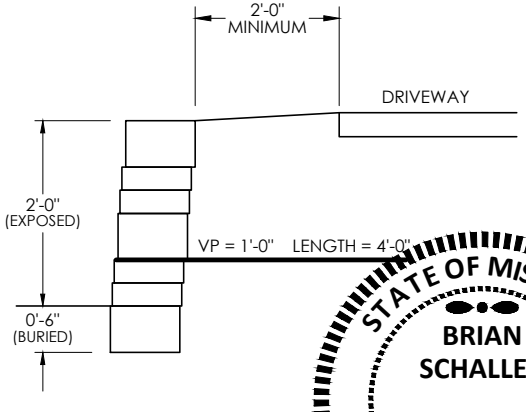

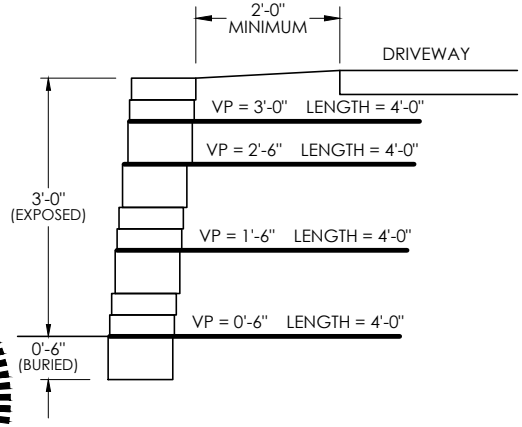

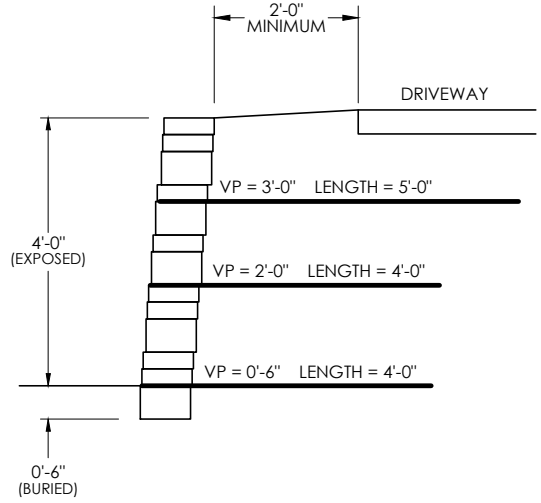

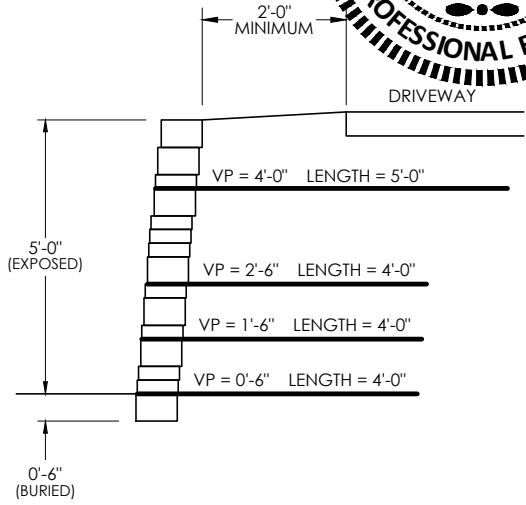

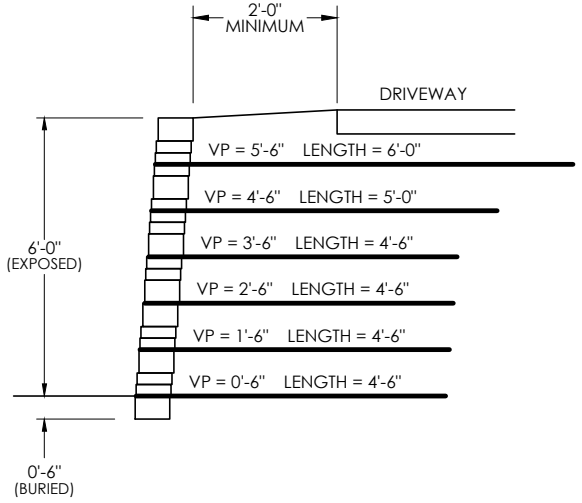

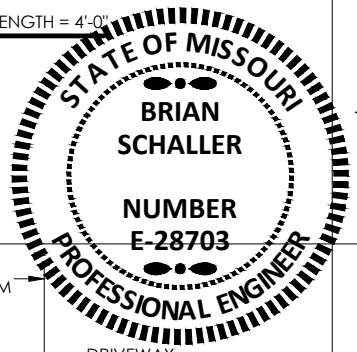

MIDCOAST & ASSOCIATES, LLC
636-978-7770
O'FALLON, MO
MO COA #E-2013015539

BELVEDERE
RETAINING WALL SYSTEM

MIDWEST BLOCK & BRICK
12901 ST. CHARLES ROCK RD
BRIDGETON, MO 63044
314-291-3200
314-291-0265 FAX

TRAFFIC SURCHARGE

DATE: SEPTEMBER 2015

PRELIMINARY WALL HEIGHT GUIDES

1 ON 3 (18.5°) BACKSLOPE NO SURCHARGE

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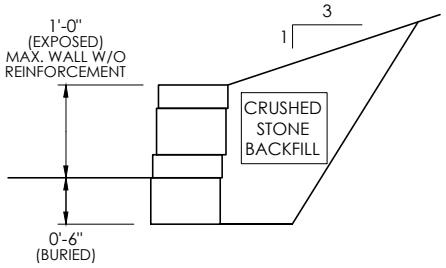

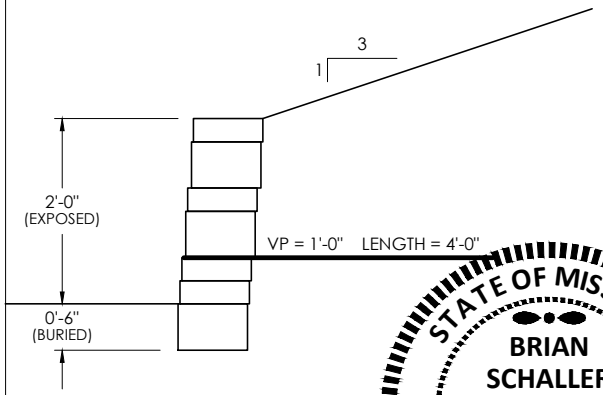

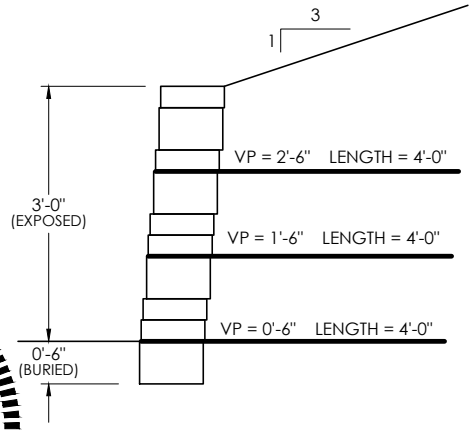

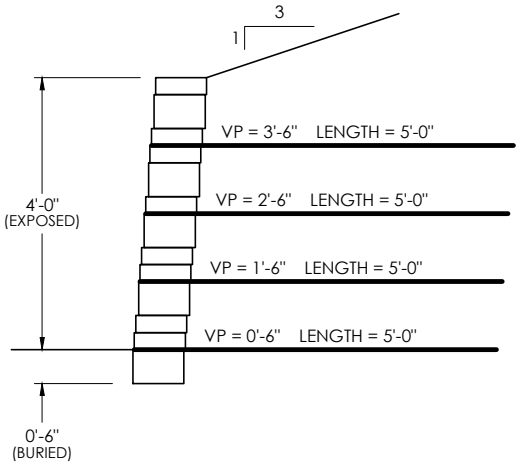

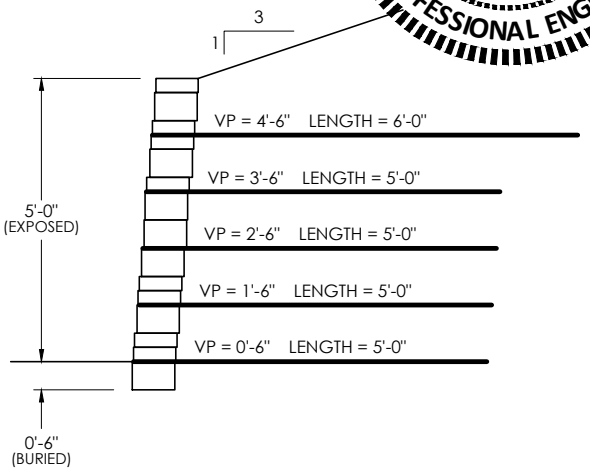

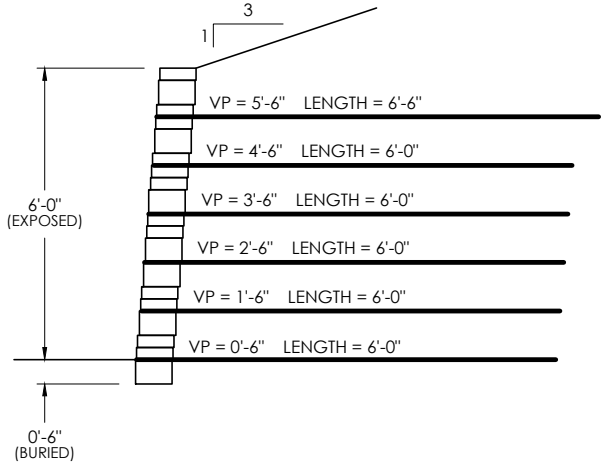

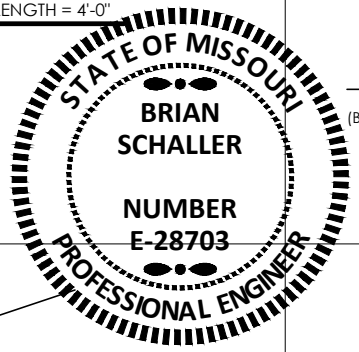

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636-978-7770
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BELVEDERE
RETAINING WALL SYSTEM

MIDWEST BLOCK & BRICK
12901 ST. CHARLES ROCK RD
BRIDGETON, MO 63044
314-291-3200
314-291-0265 FAX

SLOPING BACKFILL

DATE: SEPTEMBER 2015

PRELIMINARY WALL HEIGHT GUIDES

TIERED NO BACKSLOPE NO SURCHARGE

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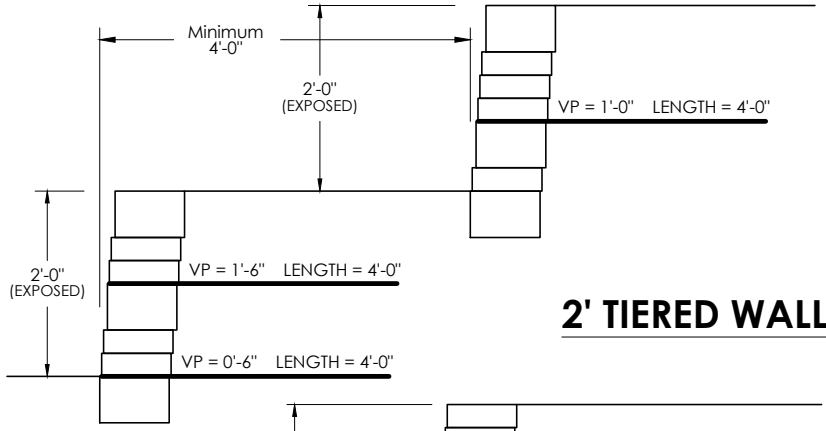
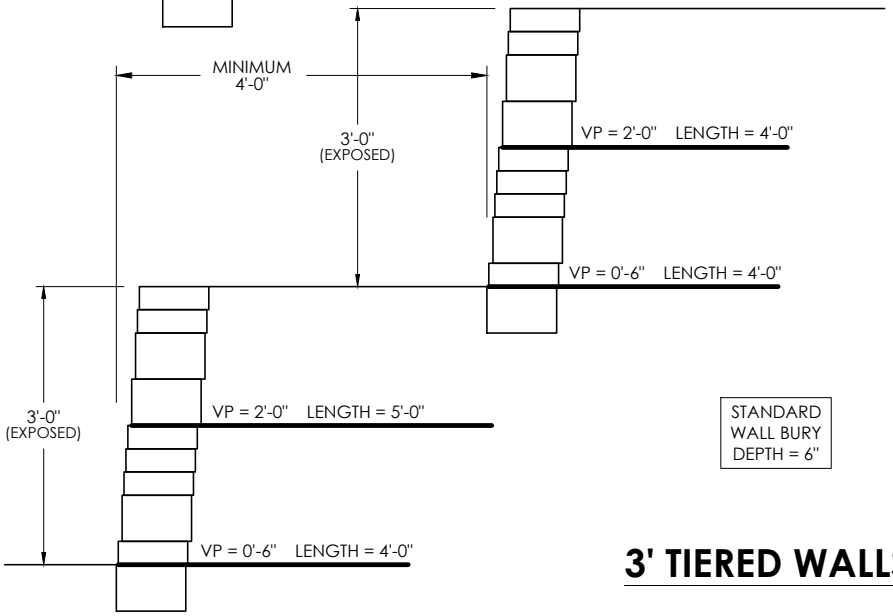
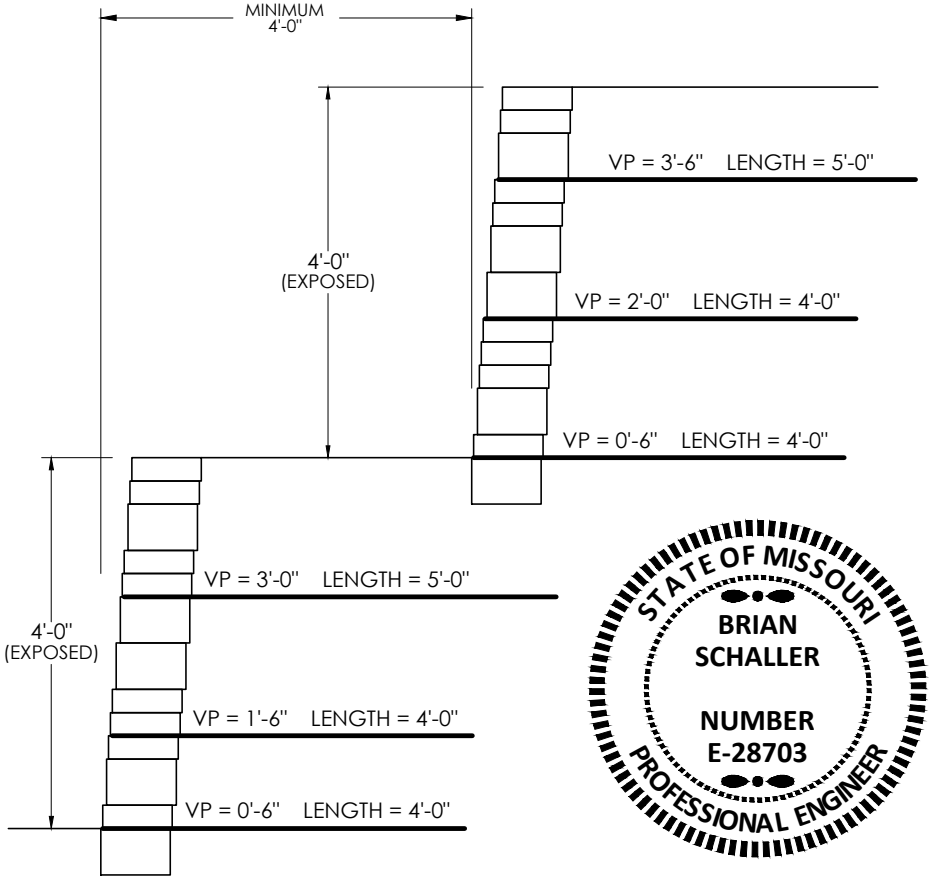


2' TIERED WALLS



3' TIERED WALLS



4' TIERED WALLS

STANDARD
WALL BURY
DEPTH = 6"

STATE OF MISSOURI
BRIAN
SCHALLER
NUMBER
E-28703
PROFESSIONAL ENGINEER

MIDCOAST & ASSOCIATES, LLC
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TIERED WALLS

DATE: SEPTEMBER 2015

Steven V. Stenger
County Executive

Saint Louis
COUNTY
TRANSPORTATION
PUBLIC WORKS

Nichalos D. Gardner, Ph.D., P.E.
Director

Stephanie Leon Streeter, P.E.
Deputy Director

October 13, 2015

David Mudd
c/o Midwest Block & Brick
12901 St. Charles Rock Rd.
Bridgeton, MO 63044

Re: Master Plan Retaining Wall Designs for Rosetta Belvedere Block
Building Permit Application 15BLD-03507

Dear Mr. Mudd:

I am pleased to inform you that the designs that you submitted for the Rosetta Belvedere product are approved for use within this jurisdiction as master plans. The master plan numbers assigned to identify the wall designs are:

Single tier wall up to 6' high with level soil backfill	725-15-4
Single tier wall up to 6' high with level soil backfill and surcharge	725-15-5
Single tier wall up to 6' high with sloping soil backfill (max. 1 vert : 3 horiz)	725-15-6
Two tier wall with each tier up to 4' high level with a level soil backfill	725-15-7

Anyone applying for a building permit for a retaining wall in our jurisdiction based on these plans must provide:

1. a completed permit application form that includes the appropriate master plan number listed above.
2. municipal zoning approval (if the wall is located within the city limits of a contracting municipality).
3. four (4) copies of the site plan showing the location and length of the wall, drawn to scale. Top and bottom of wall elevations, the direction of drainage, the retained side of the wall, and distances to any structures, parking lots, and property lines must be indicated on the site plan.
4. four (4) copies of the front elevation view of the wall with dimensions.
5. four (4) copies of construction details of the specific wall design to be built. These details (e.g. geogrid type, length, locations, leveling pad size, backfill material, etc.) must match those in the approved master plan (i.e. the 10 pages of plans and specifications that you submitted and I approved).

If you have any questions, you may contact me at (314) 615-3726.

Sincerely,

C J Falk

Chris Falk, P.E.
Building Code Review Section