

SEDIMENT AND EROSION CONTROL NOTES

- Prior to any excavating or placement of embankment materials, all sediment control measures shall be installed and in place. The sediment control measures shown on this plan may be adjusted to meet field conditions at the time of construction. ANY ADJUSTMENTS TO THE PLAN MUST BE APPROVED BY THE INSPECTION AGENCY.
- All construction and placement of sediment control measures shall be in accordance with the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control.
- Sediment basins and/or traps shall be the first sediment control measure installed and the last removed so that sediment is controlled during all other construction during all other construction operations. When final site grading is complete and all upstream areas are stabilized, the sediment basins and/or traps shall be cleaned out, leveled, and a permanent stabilization applied as specified on the plan. The sediment basins and/or traps shall not be removed under dry conditions and any and all sediment control devices shall not be removed without the permission of the Inspection Agency.
- Periodic inspection and maintenance of all sediment control devices shall be provided by the contractor to insure that the intended purpose of the device is accomplished. The contractor is to repair any and all sediment control devices damaged or destroyed during construction, and all sediment basins and/or traps are to be cleaned out following each major storm to insure continued operation of the basins and/or traps.
- Following initial soil disturbance or disturbance, permanent or temporary stabilization shall be completed within:
 - Three (3) calendar days as to the surface of all perimeter controls, ditches, perimeter slopes, and all slopes greater than three (3) horizontal to one (1) vertical (3:1), and;
 - Seven (7) calendar days as to all other disturbed or graded areas on the project site.
- No constructed or altered slope shall be greater than 3:1 unless otherwise approved.
- Upon completion of all excavation, the area shall be sloped and graded as shown. All disturbed areas, perimeter slopes, and all slopes shall be topsoiled (Minimum 2") limed, fertilized, seeded and mulched in accordance with the 2011 Standards and Specifications for Soil Erosion and Sediment Control Section B.
 - Lime: Two (2) tons Dolomitic Limestone per acre.
 - Fertilizer: 600 pounds, 0-20-20 per acre.
400 pounds, 38-0-0 per acre.
300 pounds, 10-20-20 per acre.
 - Lime and fertilizer is to be disc'd uniformly into soil.
 - Seed: 60 pounds Kentucky 31 Tall Fescue per acre.
 - Mulch: One and one-half (1-1/2) to two (2) tons of straw per acre.
 - Binder: 348 gallons of RS-1 per acre.
- Prior to the start of work, the contractor is to obtain St. Mary's Soil Conservation District approval of any proposed plan changes and sequence of construction, specifically relating to installation, inspection, maintenance and removal of erosion and sediment control measures.
- Sediment control measures are not to be removed until the areas served have established vegetative cover, and with the permission of the MDE Enforcement Inspector.
- When pumping sediment laden water, the discharge must be directed to an approved sediment trapping measure prior to release from the site.
- All temporary stockpiles are to be loaded within areas protected by sediment control measures, and are to be topped with straw or hay.
- All sediment control dikes, swales, basins and flow lines to basins will be temporarily sealed immediately upon installation to reduce the contribution to sediment loading.
- Disposal of excess earth materials on State or Federal property requires MDE approval, otherwise, materials are to be disposed of at a location approved by local authority.
- Temporary soil erosion and sediment control measures are to be provided as per the approved plan prior to grading operations. Location adjustments are to be made in the field as necessary. The minimum area practical shall be disturbed for the minimum possible time.
- If grading is completed out of seeding season, graded areas are to be temporarily stabilized by mulch and mulch anchoring. Mulch material shall be unweathered, unchopped small grain straw spread at a rate of 1-1/2 to 2 tons per acre. Mulch anchoring to be accomplished by an approved method. Use of a mulch anchoring tool is recommended where possible.
- Implementation of the sediment control plan shall be in accordance with the "2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control".
- The contractor is responsible for implementation and maintenance of the approved plan, and all other measures necessary to control, filter or prevent sediment from leaving the site.
- In cases where stormwater management structures are a part of site development, removal of sediment control structures may not be accomplished before the contributing draining area to the stormwater management structure is stabilized. Also, proper dewatering of the sediment basin must be accomplished to prevent loss of sediment from the site.
- On sites where infiltration techniques are utilized for the control of stormwater, extreme care must be taken to prevent all runoff from entering the structure during construction.
- Sediment control for utility construction outside of the proposed sediment control measures shall be as follows:
 - Excavated trench material shall be placed on the high side of the trench.
 - Immediately following pipe installation, the trench shall be backfilled, compacted and stabilized at the end of each working day.
 - Temporary silt fence shall be placed immediately downstream of any disturbed area intended to remain disturbed longer than (1) working day.
- On all sites, approval of the inspection agency shall be requested upon completion of the installation of the perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
- Approval shall be requested upon final stabilization before removal of sediment controls.
- Signed/stamped SCD approval plans must be on-site and available at all times.
- The Owner/Agent is responsible for contacting any/all regulatory agencies as required and having the applicable approvals in hand before commencing project. Below is a list of agency contacts:
Maryland Department of the Environment 410-537-3510 Maryland Department of the Environment - Wetland Issues 410-537-3819
St. Mary's County Department of Land Use & Growth Management 301-475-4200 x1580
St. Mary's County Department of Public Works and Transportation 301-863-8400
St. Mary's County Metropolitan Commission 301-863-8400
Southern Maryland Electric Coop 888-440-3311

PERMANENT SEEDING SUMMARY

SEED MIXTURE HARDNESS ZONE 7A2 FROM TABLE 22				FERTILIZER RATE		LIME RATE
SPECIES	PER ACRE	SEEDING DATES	SEEDING DEPTH	N	P205 K20	
TALL FESCUE (75%) CANADA BLUEGRASS (10%) KENTUCKY BLUEGRASS (10%) RYEGRASS (5%)	150 lbs	3/1 - 5/15 8/15 - 11/15	1/4 - 1/2 in	90 LB/AC (2.0 LB/1000 S.F.)	175 LB/AC (4.0 LB/1000 S.F.)	2 TONS/AC (100 LB/1000 S.F.)
TALL FESCUE (85%) PERENNIAL BLUEGRASS (10%) KENTUCKY BLUEGRASS (5%)	125 lbs	3/1 - 5/15 8/15 - 11/15	1/4 - 1/2 in	90 LB/AC (2.0 LB/1000 S.F.)	175 LB/AC (4.0 LB/1000 S.F.)	2 TONS/AC (100 LB/1000 S.F.)
TALL FESCUE (85%) CROWN VETCH	110 lbs	3/1 - 5/15 8/15 - 11/15	1/4 - 1/2 in	90 LB/AC (2.0 LB/1000 S.F.)	175 LB/AC (4.0 LB/1000 S.F.)	2 TONS/AC (100 LB/1000 S.F.)

TEMPORARY SEEDING SUMMARY

SPECIES	MINIMUM SEEDING RATES		PLANTING DEPTH	HARDNESS ZONES 7A AND SEEDING DATES		BY
	PER ACRE	LB/1000 S.Q.F.T.	INCHES	2-1 - 5/1 4/30	5/1 - 8/15 6/14	11/30
CHOOSE ONE: BARLEY OATS RYE	2.5 BU. (122 lbs) 3 BU. (146 lbs) 2.5 BU. (140 lbs)	2.80 2.81 3.22	1/4-1/2 1/4-1/2 1/4-1/2	X X X	- - X	10/15 10/15 10/15
BARLEY OR RYE PLUS FOXTAIL MILLET	150 lbs	3.45	1/4-1/2	X	X	X
WEEDING LOVEGRASS	4 lbs	0.09	1/4-1/2	-	X	-
ANNUAL RYEGRASS	50 lbs	1.15	1/4-1/2	X	-	11/1
MILLET	50 lbs	1.15	1/2	-	X	-

36. Applicable on 3:1 slopes or flatter.
37. Refer to Figure A - Adopted From USDA ARS Miscellaneous Publication #1475, January 1990.
38. Between fall and spring seeding dates, use mulch only if ground is frozen and reseed when thawed.
39. May be used as a nurse crop for late fall/early winter permanent seedings. Add 50 lbs/ac to the permanent seedings.
40. Maryland State Highway Administration Temporary Seed Mix.
41. May be used as a nurse crop for mid-summer permanent seedings. Add 2 lbs/ac to permanent seed mix.
42. May be used as a nurse crop for mid-summer seedings. Add 10 lbs/ac to the permanent seedings mix.

UTILITY NOTE:

IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO ANY EXCAVATION. CONTACT PEGS UTILITY AT 1-800-287-7777 AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF ANY WORK.

SEDIMENT CONTROL CONSTRUCTION SEQUENCE

- A pre-construction meeting is required with the St. Mary's Soil Conservation District, 301-475-8402 x3. To schedule a pre-construction meeting, the owner/developer or a contractor representative must go to the District Office at least five (5) days in advance of the date you want to hold the meeting. Fees must be paid when you schedule the meeting. Failure to schedule and hold a pre-construction meeting may result in a stop work order, penalties or both.
- Clearing and grubbing for those areas necessary for installation of perimeter and sediment controls. 2 days
- Installation and construction of perimeter controls. 1 day
- On all sites, approval by MDE inspection agency at 410-537-3510 shall be requested upon completion of the installation of the perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
- Remaining clearing and grubbing along with removal of existing house, shed + conc. pads. 2-4 days
- Construct new house, driveway and utilities. 4 months
- Install cistern C-1 and associated piping system. 2-4 days
- Fine grading and permanent stabilization of disturbed areas with a minimum of 4 inches of topsoil, seed and mulch. 2 days
- Construct all other SWM BMP's as required once all contributory drainage areas have been permanently stabilized. 4 days
- Removal of sediment controls upon the MDE inspectors approval. 2 days

UTILITY INSTALLATION NOTE

All trenches or holes created for utility installation shall be backfilled, compacted and stabilized at the end of each workday. Excavated trench material shall be placed on the high side of the trench hole. No more trench/hole shall be opened than can be stabilized the same day. If an area must be left un-stabilized overnight, silt fence will be placed immediately downstream of all disturbed areas and stockpiles, and appropriate safety measures will be installed as required.

ENGINEER'S CERTIFICATE

I hereby certify that the plans have been designed in accordance with approved erosion and sediment ordinances, regulations, standards and criteria.

I hereby certify that the plans shown hereon are correct and conform to the St. Mary's County standards and specifications for road, grading, sediment control, stormwater and sewer design. All clearing, grading, construction and development will be performed in accordance with these plans as approved.

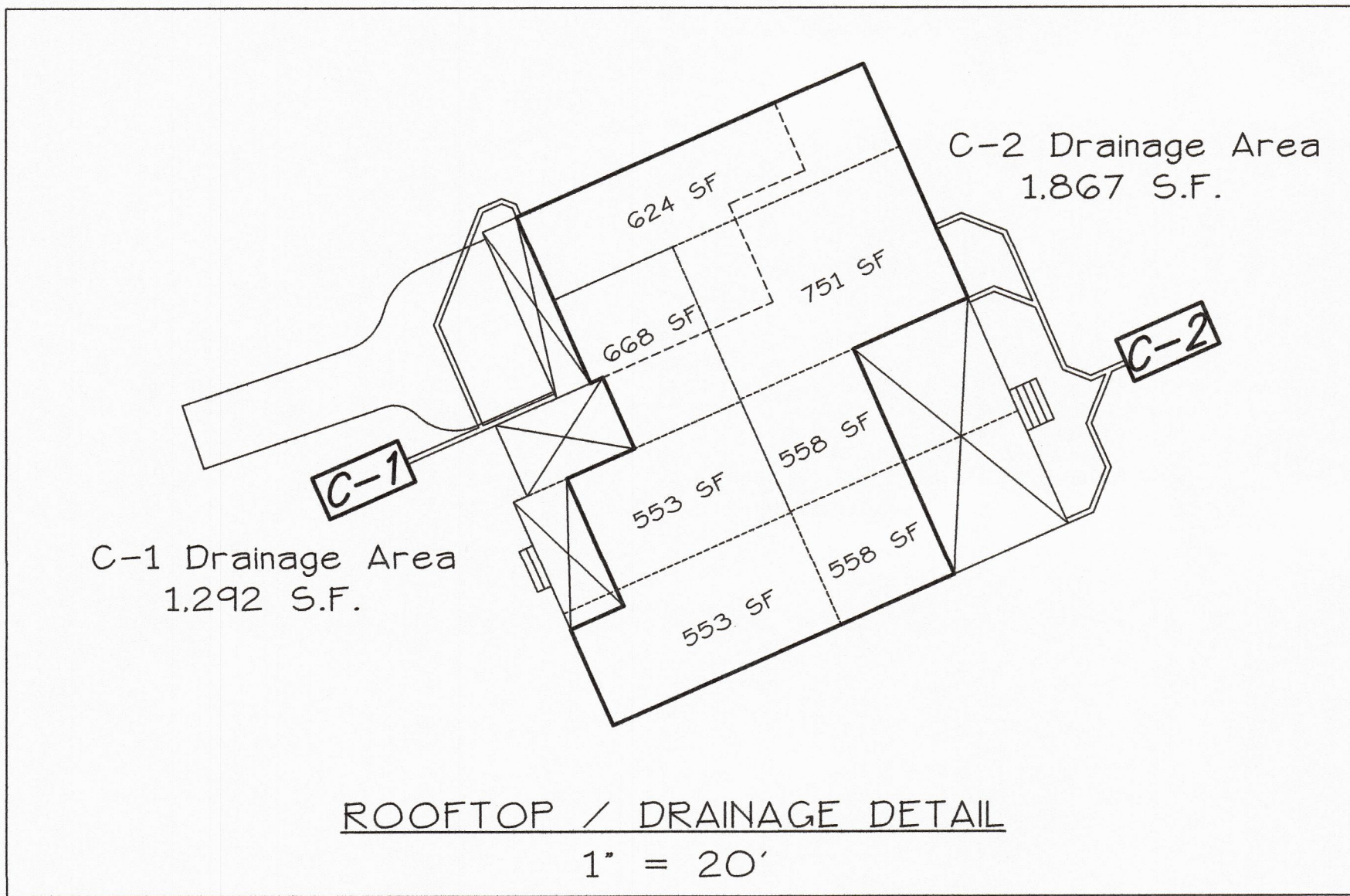
I further hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Land Surveyor under the laws of the State of Maryland, License No. 21258, expiration date June 15, 2023.

R. Victor Buckler

Date

Owner/Developer

Date



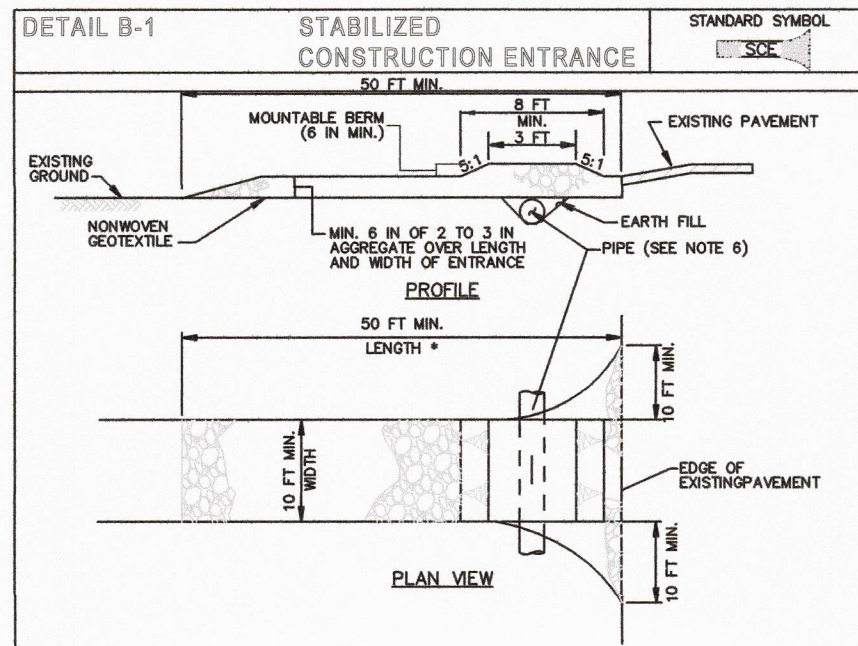
OWNER/DEVELOPERS CERTIFICATE

I hereby certify that all clearing, grading, construction and development will be performed in accordance with these plans as approved and that responsible personnel involved in the construction of this project will have a Certificate of Training from an approved Maryland Department of the Environment, Sediment and Stormwater Administration training program for the control of sediment and erosion before beginning this project.

MAINTENANCE PLAN:

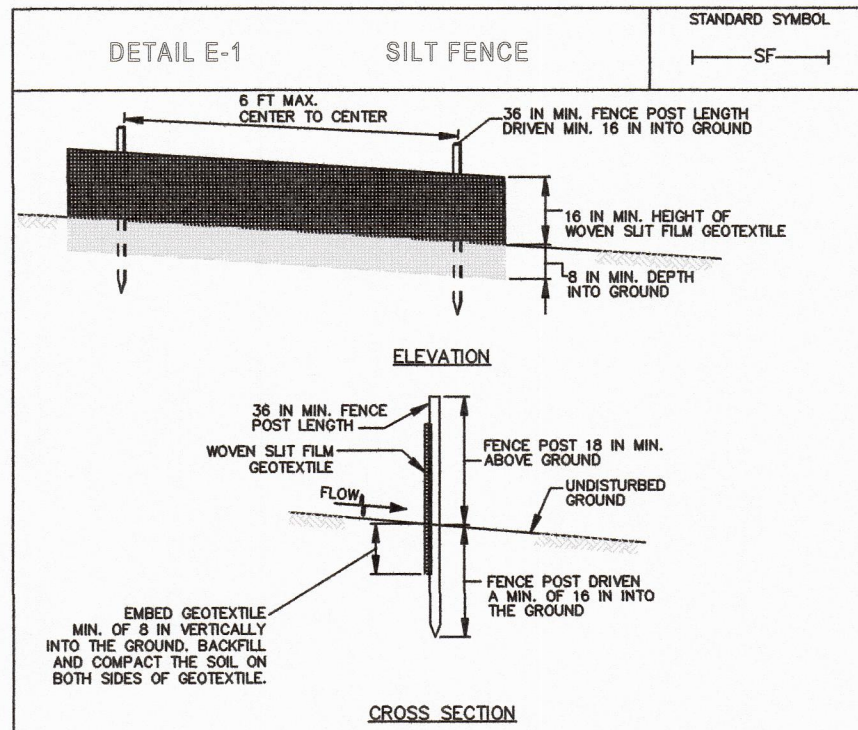
- NATURAL REGENERATION
 - Must be within 50 feet of a mature forest with seed bank of native species.
 - All lawn care practices must be ceased to allow for regeneration.
 - Once native species have established, routine inspections should be performed to check for non-native invasive species, pests, and nutrient + water deficiency.
 - Removal of non-native invasive species should be done by hand or controlled chemically.
 - These areas should only be fertilized once annually, from late March to early June. Soils should be tested to determine the correct fertilizer mixture.
 - Watering should only be done if the desirable plants look stressed.
 - Some additional plantings may be required to meet the required density.
- BARE-ROOT SEEDLINGS
 - Bare-root seedlings should only be planted in the fall session.
 - Tree shelter tubes with mesh tops should be used and properly staked to reduce animal damage.
 - Noxious and invasive weeds should be removed from the areas to reduce competition for nutrients, water, sunlight, etc. This can be done by hand or by temporarily moving until the trees reach 6 feet in height.
 - Only water if rainfall is not sufficient or leaves on the plantings are starting to wilt.
 - These areas should only be fertilized once annually, from late March to early June. Soils should be tested to determine the correct fertilizer mixture.
 - Once the seedlings have reached 6 feet in height, remove the tree shelter tubes, mulch around the trees with 6" of organic mulch around the base of the plant.
- LANDSCAPING STOCK
 - It is best if these plants are planted in the fall. These plantings should be mulched with 6" of organic mulch around the base of the plant.
 - Routine inspections should be performed to check for non-native invasive species, pests and nutrient + water deficiency.
 - Trees may need to be staked to safeguard from strong winds until the roots have been established well in their new environment.
 - Removal of non-native invasive species should be done by hand or controlled chemically.
 - These areas should only be fertilized once annually, from late March to early June, using a slow release fertilizer. Soils should be tested to determine the correct fertilizer mixture.
 - Watering should only be necessary in the summer if the plantings are mulched properly.
- At the end of the 2-year monitoring period for the landscape stock and the 5-year monitoring period for the bare-root seedlings and natural regeneration areas the survival of the plantings shall be assessed to determine the need for replacement plantings.

PLANTINGS PROVIDED			
SYMBOL	NAME	CREDIT	QTY.
	BARE-ROOT SEEDLINGS	62.22 s.f.	0
	CANOPY TREE 2' CALLIPER 5' TALL	200 s.f.	21
	CANOPY TREE 1' CALLIPER 5' TALL	100 s.f.	0
	UNDERSTORY TREE 1' CALLIPER 6' TALL	75 s.f.	0
	LARGE SHRUB 1 GAL 4' TALL	50 s.f.	0
	SMALL SHRUB 1 GAL 18" TALL	25 s.f.	0
	HERB PERENNIAL 1 QUART	2 s.f.	0
	CLUSTER 1 1 CANOPY TREE 1 LARGE OR 6 SMALL SHRUBS	300 s.f.	0
	CLUSTER 2 2 UNDERSTORY TREES 3 LARGE OR 6 SMALL SHRUBS	350 s.f.	11
PLANTINGS REQUIRED = 7,935 s.f.		PLANTINGS PROVIDED = 8,050 s.f.	
	2 UNDERSTORY TREES	CLUSTER 2 DETAIL	
	8 SMALL SHRUBS (TYP)		



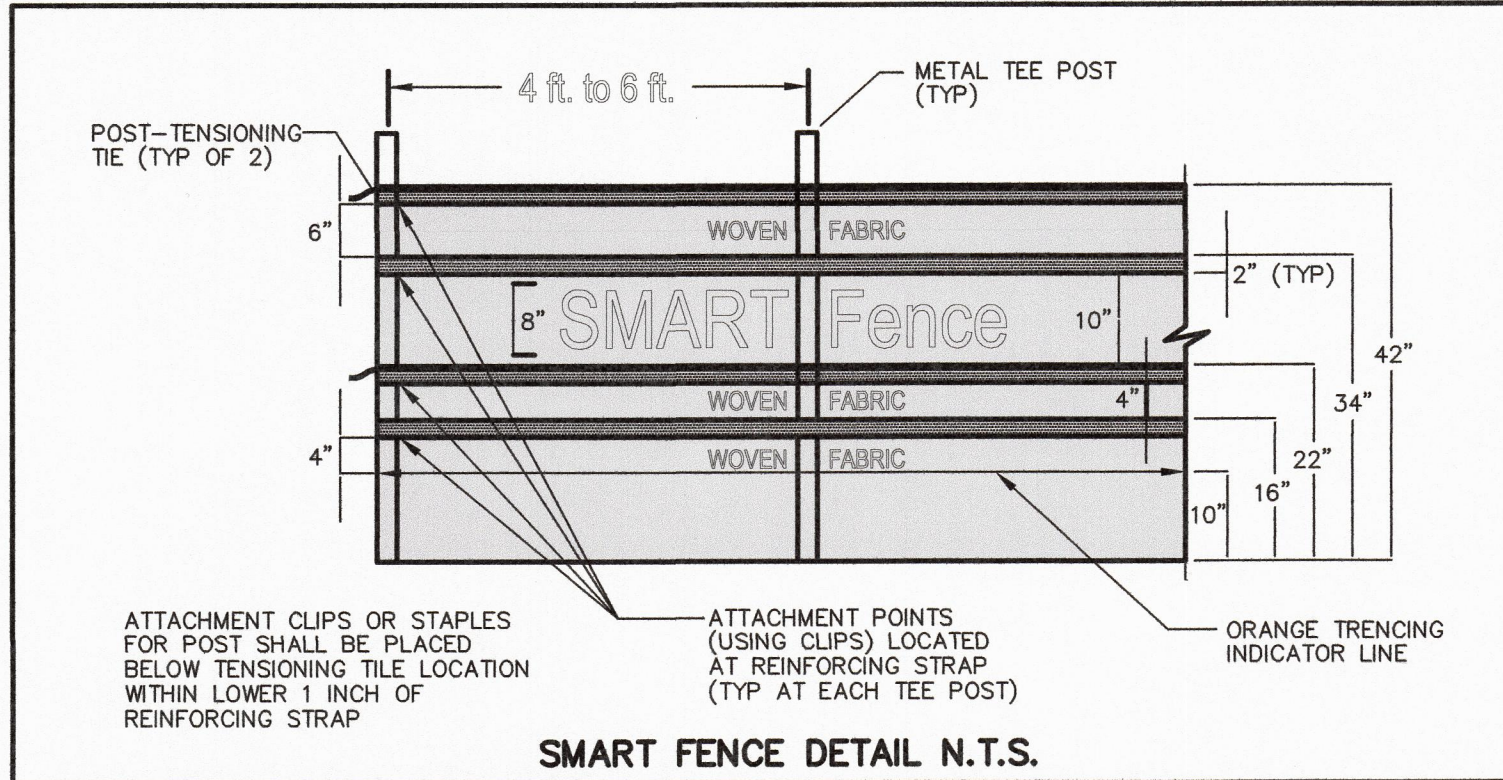
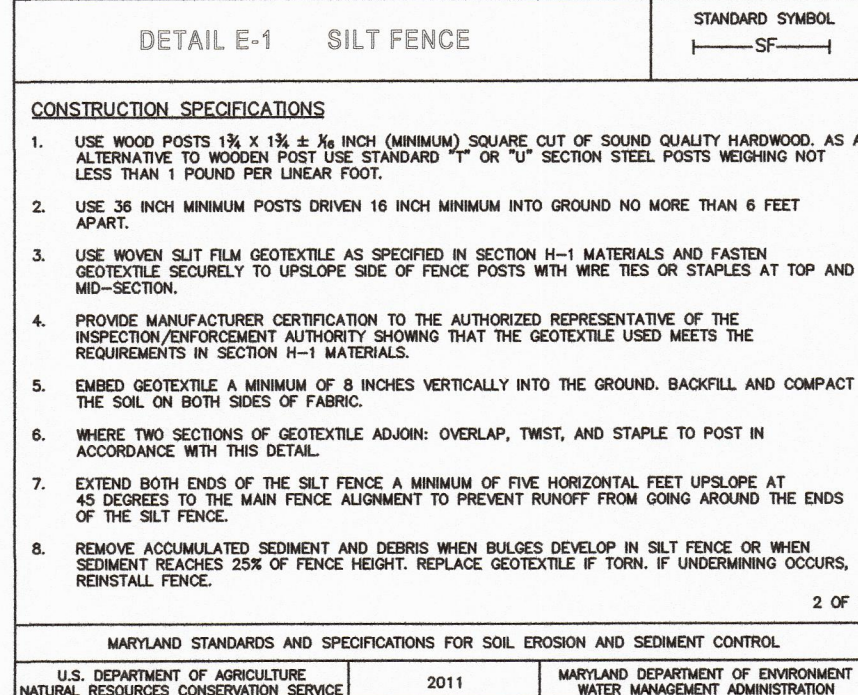
- PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SIZE. USE MINIMUM LENGTH OF 50 FEET FOR SINGLE RESIDENCE LOT. USE MINIMUM WIDTH OF 10 FEET. FLARE SIZE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
- PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SIZE UNDER THE ENTRANCE. MAINTAIN POSITIVE DRAINAGE PROTECT FROM REMOVED TRUCKS OF REMOVED STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAR SURFACE, MOUNTAIN BERN, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE AND DISMANTLE COLLAPSED, DROPPED, OR TRUCKED ONTO ADJACENT ROADWAY BY WADING, SPRAYING, AND/OR SHEEPING. WADING ROADWAY TO REMOVE MUD TRACKS ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.
- PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
- PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SIZE.
- MAINTAIN ENTRANCE IN A CONDITION THAT PREVENTS TRACKING OF SEDIMENT AND STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAR SURFACE, MOUNTAIN BERN, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE AND DISMANTLE COLLAPSED, DROPPED, OR TRUCKED ONTO ADJACENT ROADWAY BY WADING, SPRAYING, AND/OR SHEEPING. WADING ROADWAY TO REMOVE MUD TRACKS ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL		
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



- USE WOOD POSTS 1 1/2 IN. x 8 IN. (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATE TO WOODEN POSTS USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 10 LBS. EACH POST.
- USE 3/8 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
- USE WOVEN SILT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTENED TO GEOTEXTILE SECURES TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
- PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USE MEETS THE REQUIREMENTS OF THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND, BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
- WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
- EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
- REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN RIDGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN, IF UNDERMINING OCCURS, REINSTALL FENCE.

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POST-DEVELOPMENT DRAINAGE AREA TABLE									
DRAINAGE AREA	EXISTING IMPERVIOUS	PROPOSED IMPERVIOUS	Imperv	Rv	Qe	TARGET Pe	ESDv	Rq	Z AREA
13,795 s.f.	0 s.f.	4,916 s.f.	35.6%	0.370	0.37	1.0'	428 c.f.	56 c.f.	4,916 s.f.

MICRO-SCALE PRACTICES						
MICRO-SCALE PRACTICES	PRACTICE No.	DRAINAGE AREA No.	AREA RECEIVED	IMPERVIOUS RECEIVED	Pe CREDIT	ESDv PROVIDED
CISTERN	C-1	DA1	1,292 s.f.	1,292 s.f.	1.96 in.	200.5 c.f.
CISTERN	C-2	DA2	1,867 s.f.	1,867 s.f.	1.81 in.	267.4 c.f.

* ALL OTHER AREAS IN THE POST DEVELOPMENT DRAINAGE AREA HAVE BEEN DIVERTED FROM THE ESD PRACTICES.
* ESD PRACTICES WERE SIZED TO MEET THE ESDv REQUIRED FOR THE ENTIRE SITE

Qe COMPUTATIONS

$Q_e = P_e \times R_v$; where
 $P_e = 1.0$ inches
 $R_v = 0.05 + (0.009 \times D_i)$
where $I = 35.6$
 $R_v = 0.370$
 $Q_e = 0.37$ inches

Rey COMPUTATIONS

$R_{ey} = (C_s) (C_v) (C_a)$
12
 $R_{ey} = (0.13) (0.370) (0.32ac)$
12
 $R_{ey} = 55.4 CF$ use 56

BMP TABLE

PRACTICE	LOCATION	AREA TREATED	VOLUME (ESDv)
C-1	Part of House	1292 sf	200.5 cf
C-2	Part of House	1867 sf	267.4 cf
	Total		467.9 cf
	ESDv Required		428.0 cf

ESDv COMPUTATIONS

$ESDv = (1.0') (R_v) (C_a)$
12
 $ESDv = (1.0') (0.370) (0.32ac)$
12
 $ESDv = 425.8 CF$ use 428.0 CF

LIMITS OF DISTURBANCE

TOTAL = 13,795 S.F.

Date	Revisions	Seal	Scale: 1" = 20'	Fax: 301-880-0653	Date: 8-21-22
10-05-22	Per SCS + C.A. email comments		R. VICTOR BUCKLER Professional Land Surveyor 40562 Old Horse Landing Road Mechanicville, Maryland 20659		
1-09-23	Revised Septic Trenches per Health Dept. site visit; revised house + cistern locations per above change				
2-15-23	Revised to Smartfence per SCS				
3-31-23	Added Buffer Management Info				
			DRAWN BY DEJ Phone: 240-925-7465 CHECKED BY RVB		
			Job No: SM02-81A00-05 Email: Vcb@md.metrocast.net Sheet No: 2 of 2		
		EXPIRES 06-15-23			