



**LEGEND**

- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING TREE LINE
- SOILS CLASSIFICATION
- SOILS DELINEATION
- EXISTING STRUCTURE
- PROPOSED STRUCTURE
- EXISTING WETLAND
- EXISTING UTILITY POLE
- EXISTING OVERHEAD WIRE
- EXISTING FENCE LINE
- USE-IN-COMMON ACCESS AND UTILITY EASEMENT
- EXISTING FOREST CONSERVATION EASEMENT-RETENTION
- EXISTING FOREST MITIGATION BANK
- STEEP SLOPES 15% TO 24.9%
- STEEP SLOPES 25% OR GREATER
- FCE PERMANENT SIGNAGE
- PROPOSED STORM WATER MANAGEMENT
- ROOFTOP DISCONNECTION
- NON-ROOFTOP DISCONNECTION

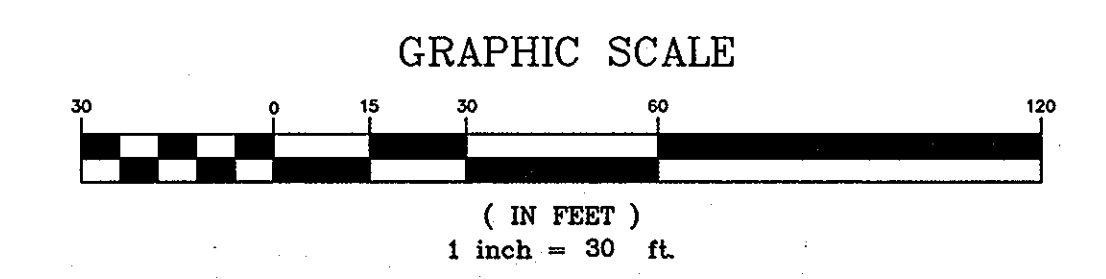
**Design Drainage Area No. 1 - Application of Non-Structural Methods/Credits**

Credit Designation	Natural Area Conservation (ac.)	Disconnection of Rooftop Runoff (ac.)	Disconnection of Non-Rooftop Runoff (ac.)	Sheet Flow to Buffer (ac.)	Open Channel use (ac.)	Environmentally Sensitive Development (ac.)
1		0.011				
6				0.011		
7				0.011		
8		0.011				
9			0.025			
<b>Totals</b>	<b>0.00</b>	<b>0.022</b>	<b>0.025</b>	<b>0.022</b>	<b>0.00</b>	<b>0.00</b>

**Design Drainage Area No. 2 - Application of Non-Structural Methods/Credits**

Credit Designation	Natural Area Conservation (ac.)	Disconnection of Rooftop Runoff (ac.)	Disconnection of Non-Rooftop Runoff (ac.)	Sheet Flow to Buffer (ac.)	Open Channel use (ac.)	Environmentally Sensitive Development (ac.)
2		0.011				
3		0.011				
4		0.011				
5		0.011				
<b>Totals</b>	<b>0.00</b>	<b>0.044</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

- Responses to Disconnection Credit Criteria:**
- Criteria for Disconnection of Rooftop Runoff Credit:**
- Runoff cannot come from a designated hotspot. Runoff does not come from a designated hotspot.
  - Disconnection shall cause no basement seepage. Disconnection does not cause basement seepage.
  - The contributing area of rooftop to each disconnected discharge shall be 500 square feet or less. All contributing area of rooftops to each disconnected discharge is less than 500 square feet.
  - The length of the "disconnection" shall be 75' or greater or compensated using Table 5.2. All disconnection lengths are equal or greater than 75 feet length.
  - Dry wells, French drains, rain gardens, or other similar storage devices may be utilized to compensate for areas with disconnection lengths less than 75 feet. (See Table 5.2 and Figure 5.1. dry wells are prohibited in "D" soils).
  - All disconnection lengths are equal or greater than 75 feet length.
  - In residential development applications, disconnections will only be credited for lot sizes greater than 6000 sq. ft. All lot sizes are greater than 6000 sq. ft.
  - The entire vegetative "disconnection" shall be on an average slope of 5% or less. Entire lengths of all disconnections are on an average slope less than 5%.
  - The disconnection must drain continuously through a vegetated channel, swale, or through a filter strip to the property line or BMP.
  - All disconnections are drain through a vegetated channel and swale.
  - Downspouts must be at least 10 feet away from the nearest impervious surface to discourage "re-connectors", and All downspouts are 10 feet from the nearest impervious surface.
  - For those rooftops draining directly to a buffer, only the rooftop disconnection credit or the buffer credit may be used, not both. Buffer credit has been taken.



**SOILS LEGEND**

MAP SYMBOL	SOIL TYPE	MAPPING UNIT
ChB	B	GLENDLE-URBAN LAND COMPLEX, 0 TO 8% SLOPES
ChC	C	GLENDLE-URBAN LAND-COORRENTS COMPLEX, 0 TO 8% SLOPES
MD	B	MAJOR LOAM, 15 TO 25% SLOPES

INFORMATION FROM NCRS WEB SOIL SURVEY 2.0, HOWARD COUNTY, MD (MD027)

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Vest S. Leach* 7/10  
 CHIEF, DIVISION OF LAND DEVELOPMENT

*John J. Quinn* 7/10  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

*Morgan E. Suttler* 3/24/10  
 DIRECTOR

PLAN VIEW  
 SCALE: 1" = 30'

<p>1 7-22-2010 REVISE RE AND B/E ELEVATION, REVISE GRADES / SPOT ELEV. PER AS-BUILT CONDITIONS</p>	
NO.	DATE
<p>REVISION</p>	
<p><b>BENCHMARK</b>        ENGINEERS &amp; LAND SURVEYORS &amp; PLANNERS  <b>ENGINEERING, INC.</b>        8480 BALTIMORE NATIONAL PIKE &amp; SUITE 418 &amp; ELLIOTT CITY, MARYLAND 21043        (P) 410-465-8100 (F) 410-465-8984        60 THOMAS JOHNSON DRIVE &amp; FREDERICK, MARYLAND 21702        (P) 301-371-3505 (F) 301-371-3508        WWW.BEI-CIVILENGINEERING.COM</p>	
<p>STATE OF MARYLAND        BONNIE F. CLEARY        REGISTERED PROFESSIONAL ENGINEER        2/9/2010        Professional Certification: I hereby certify that these documents were prepared/approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 28559, Expiration Date: 7-22-2011.</p>	
OWNER/DEVELOPER:	PROJECT:
<p>RAINMAKER ASSOCIATES, LTD        8015 DORSEY RUN ROAD        SUITE C        JESSUP, MD 20794-9380        PHONE: 410-799-9415</p>	<p><b>VALLEY MEDE</b>        SECTION 14        LOTS 71 AND 72</p>
LOCATION:	TITLE:
<p>TAX MAP 17 - GRID 21        PARCEL 139        2nd ELECTION DISTRICT        HOWARD COUNTY, MARYLAND</p>	<p><b>SITE DEVELOPMENT PLAN,        GRADING PLAN AND        ON-LOT STORMWATER MANAGEMENT PLAN</b></p>
DATE:	PROJECT NO.:
NOVEMBER, 2009	2144
Design: MCR/DAM	Draft: HP
Check: BFC	SCALE: AS SHOWN
	DRAWING 2 OF 3





**LEGEND**

EXISTING CONTOURS	999
PROPOSED CONTOURS	999
EXISTING TREE LINE	ABC1
SOILS CLASSIFICATION	
SOILS DELINEATION	
EXISTING STRUCTURE	
PROPOSED STRUCTURE	
EXISTING WETLAND	
EXISTING UTILITY POLE	
EXISTING OVERHEAD WIRE	
EXISTING FENCE LINE	
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STEEP SLOPES 15% TO 24.9%	
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PROPOSED STORM WATER MANAGEMENT	
ROOFTOP DISCONNECTION	
NON-ROOFTOP DISCONNECTION	

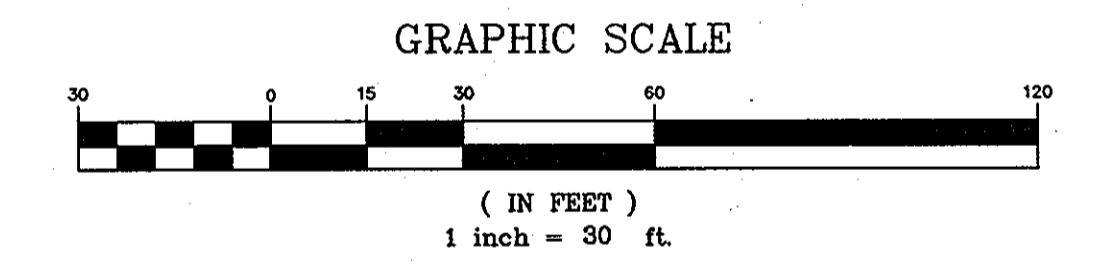
**Design Drainage Area No. 1 - Application of Non-Structural Methods/Credits**

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6				0.011		
7				0.011		
8		0.011	0.025			
9						
Totals	0.00	0.022	0.025	0.022	0.00	0.00

**Design Drainage Area No. 2 - Application of Non-Structural Methods/Credits**

Credit Designation	Natural Area Conservation (ac.)	Disconnection of Rooftop Runoff (ac.)	Disconnection of Non-Rooftop Runoff (ac.)	Sheet Flow to Buffer (ac.)	Open Channel use (ac.)	Environmentally Sensitive Development (ac.)
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Totals	0.00	0.044	0.00	0.00	0.00	0.00

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**SOILS LEGEND**

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GhB	B	GLENELG-URBAN LAND COMPLEX, 0 TO 8% SLOPES
GhC	C	GLENELG-URBAN LAND-UDORTMENTS COMPLEX, 0 TO 8% SLOPES
MaD	B	MANOR LOAM, 15 TO 25% SLOPES

INFORMATION FROM NCRS WEB SOIL SURVEY 2.0, HOWARD COUNTY, MD (MD027)

NO.	DATE	REVISION
4	5-13-11	REVISE GRADES FOR LOT 72 TO MATCH AS-BUILT CONDITIONS
3	10-29-10	REVISE HSB, ROOFTOP DISCONNECTIONS, GRADES AND SPOT ELEVATIONS ON LOT 72 PER AS-BUILT CONDITIONS
2	9-14-2010	REVISE ROOFTOP DISCONNECTION FLOW PATH & REVISE GRADES ON LOT 71 PER AS-BUILT CONDITIONS
1	7-22-2010	REVISE FF AND BF ELEVATION, REVISE GRADES & SPOT ELEV PER AS-BUILT CONDITIONS

**BENCHMARK ENGINEERING, INC.**  
 ENGINEERS & LAND SURVEYORS & PLANNERS  
 8480 BALTIMORE NATIONAL PIKE SUITE 418 & ELLICOTT CITY, MARYLAND 21043  
 (P) 410-465-6105 (F) 410-465-6644  
 60 THOMAS JOHNSON DRIVE A FREDERICK, MARYLAND 21702  
 (P) 301-371-3205 (F) 301-371-3208  
 WWW.BEI-CIVILENGINEERING.COM

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 28559, Expiration Date: 7-22-2011.

OWNER/DEVELOPER: <b>RAINMAKER ASSOCIATES, LTD</b> 8015 DORSEY RUN ROAD SUITE C JESSUP, MD 20794-9380 PHONE: 410-799-9415	PROJECT: <b>VALLEY MEDE</b> SECTION 14 LOTS 71 AND 72
LOCATION: TAX MAP 17 - GRID 21 PARCEL 139 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND	TITLE: <b>SITE DEVELOPMENT PLAN, GRADING PLAN AND ON-LOT STORMWATER MANAGEMENT PLAN</b>
DATE: NOVEMBER, 2009	PROJECT NO. 2144
Design: MCR/DAM	Draft: HP
Check: BFC	SCALE: AS SHOWN
	DRAWING 2 OF 3

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

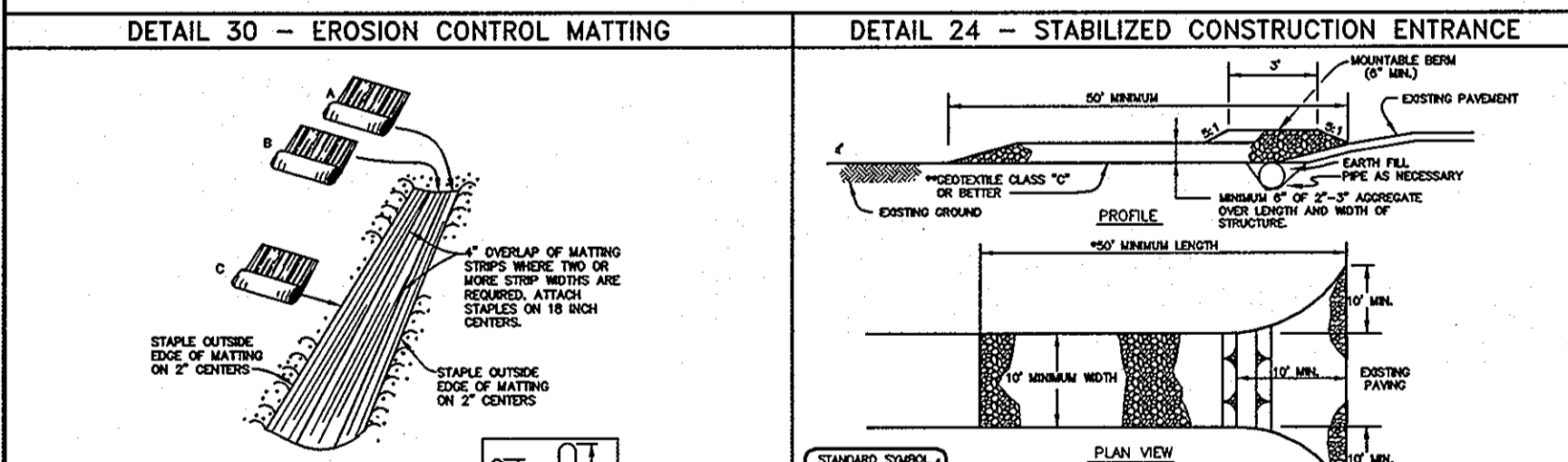
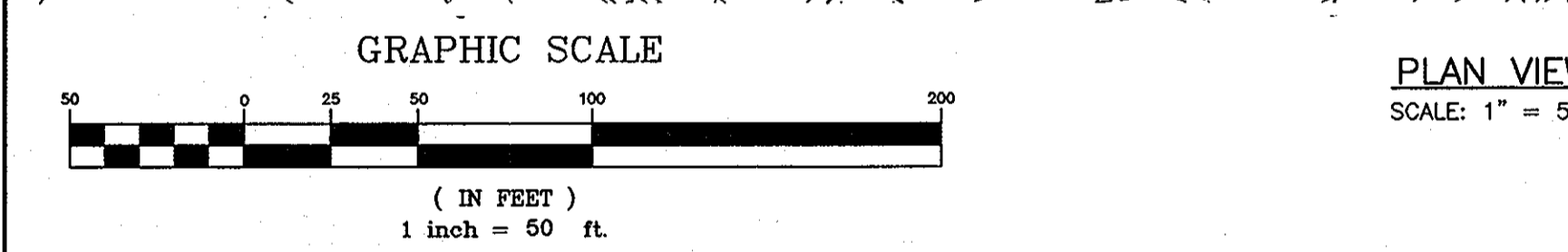
*Vest S. Lander* 3/11/10  
CHIEF, DIVISION OF LAND DEVELOPMENT

*William J. ...* 3/11/10  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

*Morgan E. ...* 3/12/10  
DIRECTOR

**PLAN VIEW**  
SCALE: 1" = 30'





**CONSTRUCTION SPECIFICATIONS**

1. LAY-OUT THE MATTING BY PLACING THE TOP EDGES OF THE MATTING IN A NARROW STRIP OF 6" WIDTH. SHOULD THE TOP EDGES BE PLACED IN CONTACT WITH THE CHANNEL, CROSS-SECTIONAL SECTIONS WITH A ROW OF STAPLES ABOUT 4" DOWN SLOPE FROM THE THICK SPACES OF STAPLES AT 12" SPACING.
2. STAPLE THE 4" OVERLAP IN THE CHANNEL CENTER USING AN 18" SPACING.
3. BEFORE STAPLING THE OUTER EDGES OF THE MATTING, MAKE SURE THE MATTING IS SMOOTH AND IS FIRM CONTACT WITH THE SOIL.
4. STAPLES SHALL BE PLACED AT 12" SPACING FOR EACH STEP. 2 OUTER ROWS AND 2 ALTERNATING ROWS DOWN THE CENTER.
5. MAKE ONE ROW OF MATTING OVER AND ANOTHER ROWS, THE END OF THE TOP STRIP SHALL OVERLAP THE UPPER END OF THE LOWER STRIP BY 2" STAPLES PARALLEL TO THE CHANNEL CENTER. THE END OF THE LOWER STRIP SHALL BE STAPLED TO THE CHANNEL CENTER.
6. THE END OF THE MATTING LAYER SHOULD BE SIMILARLY SECURED WITH TWO DOUBLE ROWS OF STAPLES.

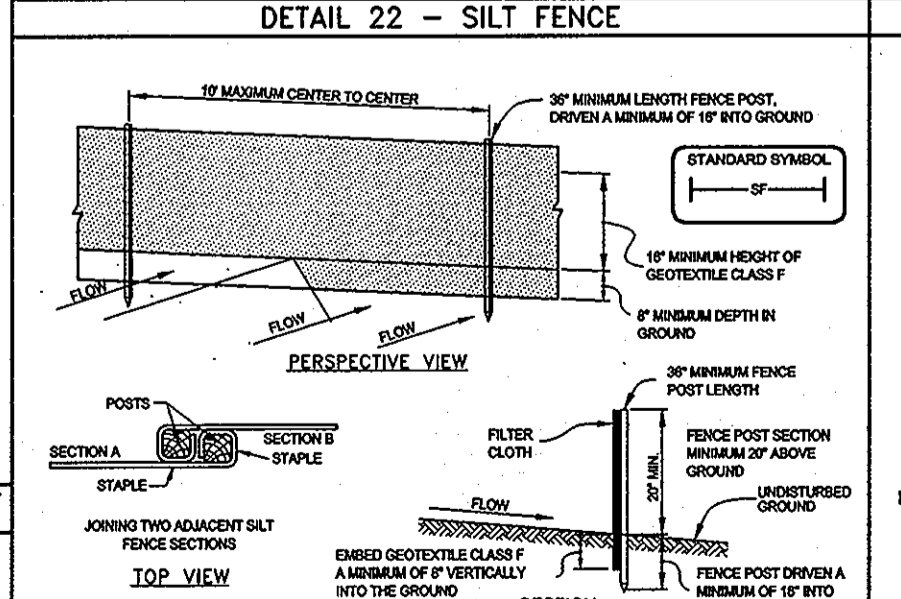
**NOTE:** IF FLOW WILL ENTER FROM THE EDGE OF THE MATTING THEN THE AREA IMPACTED BY THE FLOW MUST BE REVEALED.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Karl Stalder* 3/1/10  
 CHIEF, DIVISION OF LAND DEVELOPMENT

*John J. Cleary* 3/1/10  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

*Thomas G. Butler* 3/1/10  
 DIRECTOR



**CONSTRUCTION NOTES FOR FABRICATED SILT FENCE**

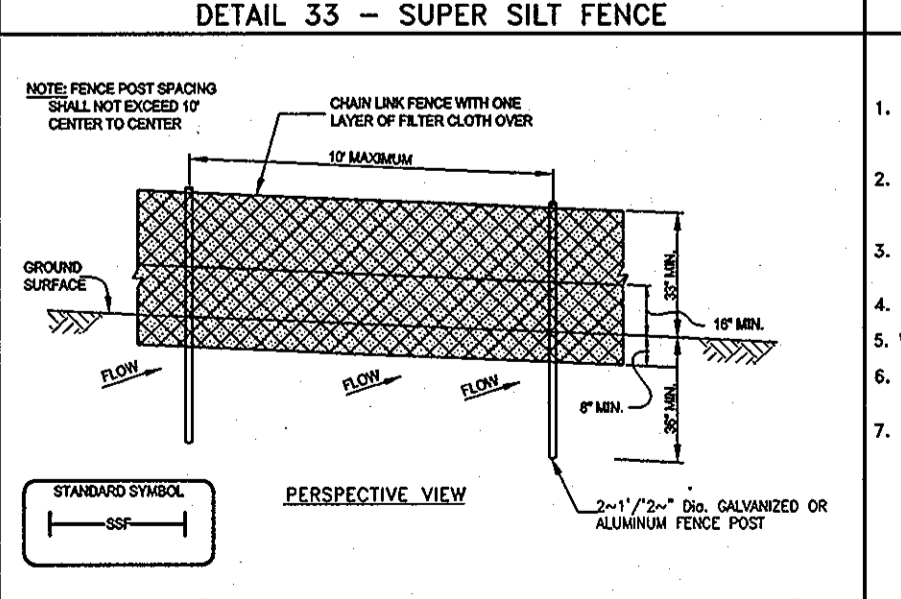
1. Fence posts shall be a minimum of 3/4" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) cut, or 1 3/4" diameter (minimum) round and shall be spaced at 10' intervals. Steel posts will be standard I or U section weighing not less than 1.00 pound per linear foot.
2. Geotextile fabric shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:  
 Tensile Strength 50 lbs/in (min.) Test: MSMT 509  
 Tensile Modulus 20 lbs/in (min.) Test: MSMT 509  
 Flow Rate 0.5 gpm/ft (min.) Test: MSMT 522  
 Filling Efficiency 75% (min.) Test: MSMT 322
3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
4. Silt fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reaches 50% of the fabric height.

**SILT FENCE DESIGN CRITERIA**

Slope Steepness	(Maximum) Slope Length	(Maximum) Silt Fence Length
Flatter than 50:1	unlimited	unlimited
50:1 to 10:1	125 feet	1,000 feet
10:1 to 5:1	100 feet	750 feet
5:1 to 3:1	60 feet	500 feet
3:1 to 2:1	40 feet	250 feet
2:1 and steeper	20 feet	125 feet

**NOTE:** In areas of less than 2% slope and sandy soils (USDA general classification system, soil class A) maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control required.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE E-15-3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



**CONSTRUCTION SPECIFICATIONS**

1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Design for Chain Link Fences. The specification for a 6" fence shall be used, substituting 42" fabric and 6" length posts.
2. Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brack and bottom rail shall be secured to the fence posts with wire ties or staples. The top rail shall be secured to the fence posts with wire ties or staples.
3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
4. Filter cloth shall be embedded a minimum of 6" into the ground.
5. When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
6. Maintenance shall be performed as needed and bulges removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.
7. Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:  
 Tensile Strength 50 lbs/in (min.) Test: MSMT 509  
 Tensile Modulus 20 lbs/in (min.) Test: MSMT 509  
 Flow Rate 0.5 gpm/ft (min.) Test: MSMT 522  
 Filling Efficiency 75% (min.) Test: MSMT 322

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE H-26-3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

**SEQUENCE OF CONSTRUCTION**

- NOTIFY SEDIMENT CONTROL DIVISION 48 HOURS PRIOR TO START OF CONSTRUCTION
- DAY 1-1) OBTAIN GRADING PERMIT.
  - DAY 2-6 2) INSTALL SEDIMENT CONTROLS THAT ARE NOTED TO BE INSTALLED UNDER THIS SDP.
  - DAY 7-10\* 3) EXCAVATE FOR FOUNDATIONS, ROUGH GRADE AND STABILIZE IN ACCORDANCE WITH TEMPORARY SEEDBED NOTES.
  - DAY 11-80 4) CONSTRUCT HOUSES, BACKFILL AND CONSTRUCT DRIVEWAYS.
  - DAY 81-85 5) FINAL GRADE AND STABILIZE IN ACCORDANCE WITH PERMANENT SEEDBED NOTES AND FLUSH STORM DRAIN SYSTEM.
  - DAY 86-89 6) WITH THE APPROVAL OF THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES AND STABILIZE ANY REMAINING DISTURBED AREAS.
- \* - INDICATES SINGLE HOUSE CONSTRUCTION.
- NOTE:** EROSION CONTROL MATTING SHALL BE PLACED IN SWALES WHERE DEEMED NECESSARY UNTIL VEGETATION IS ESTABLISHED OR SOLID SOIL SHOULD BE USED.

**TOPSOIL SPECIFICATIONS**

- I. Topsoil salvaged from the existing site may be used provided that it meets the standards set forth in these specifications. Typical depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.
  - II. Topsoil Specifications - Soil to be used as topsoil must meet the following:
    - I. Topsoil shall be a loam, sandy loam, clay loam, silt loam, silty loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting texture subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1-1/2" in diameter.
    - II. Topsoil must be free of plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nutgrass, poison ivy, thistle, or others as specified.
    - III. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.
  - III. For sites having disturbed areas under 5 acres:
    - I. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
  - IV. For sites having disturbed areas over 5 acres:
    - I. On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
      - a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
      - b. Organic content or topsoil shall be not less than 1.5 percent by weight.
      - c. Topsoil having soluble salt content greater than 500 parts per million shall not be used.
      - d. No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic materials.
    - II. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
  - V. Topsoil Application
    - I. When topsoiling, maintain needed erosion and sediment control practices such as diversions, grade stabilization structures, earth dikes, slope silt fence and sediment traps and basins.
    - II. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.
    - III. Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
    - IV. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.
  - VI. Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:
    - I. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:
      - a. Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
      - b. Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a pH of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.
      - c. Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
    - II. Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.
- References:** Guidelines Specifications, Soil Preparation and Sowing, MD-VA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institute, Revised 1973.

**LEGEND**

SOILS CLASSIFICATION	ABC1
SOILS DELINEATION	-----
EXISTING CONTOURS	999
PROPOSED CONTOURS	999
EXISTING TREE LINE	-----
PROPOSED TREE LINE	-----
EXISTING STRUCTURE	[Symbol]
PROPOSED STRUCTURE	[Symbol]
EXISTING WETLAND	[Symbol]
EXISTING UTILITY POLE	[Symbol]
EXISTING OVERHEAD WIRE	[Symbol]
EXISTING FENCE LINE	[Symbol]
FOREST CONSERVATION EASEMENT	[Symbol]
FOREST MITIGATION BANK	[Symbol]
FCE PERMANENT SIGNAGE	[Symbol]
LIMIT OF DISTURBANCE	-----
SILT FENCE	-----
SUPER SILT FENCE	-----
EROSION CONTROL MATTING ENTRANCE	[Symbol]

**SOILS LEGEND**

MAP SYMBOL	SOIL TYPE	MAPPING UNIT
G&B	C	GLENELG-URBAN LAND COMPLEX, 0 TO 8% SLOPES
G&B	B	GLENELG-URBAN LAND-UDORMENTS COMPLEX, 0 TO 8% SLOPES
M&D	B	MANOR LOAM, 15 TO 28% SLOPES

INFORMATION FROM NCRS WEB SOIL SURVEY 2.0, HOWARD COUNTY, MD (M0027)

**SEDIMENT CONTROL NOTES**

1. A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION, (313-1850).
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL REVISIONS THERE TO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR RESTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1; B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDBEDS (SEC. 61) SD (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION MEANS ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
7. SITE ANALYSIS:
 

TOTAL AREA OF SITE (THIS SUBMISSION)	4.16	ACRES
AREA TO BE ROOFED OR PAVED	1.03	ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.20	ACRES
TOTAL CUT	739	CY
TOTAL FILL	844	CY
OFFSITE WASTE/BORROW AREA LOCATION	*	

\*IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY THE SPILL/BORROW AREA AND NOTIFY AND OBTAIN PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR OF THE SITE AND ITS GRADING PERMIT NUMBER AT THE TIME OF CONSTRUCTION.
8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROL, 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.
11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

**TEMPORARY SEEDBED PREPARATIONS**

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING. IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT).

SEEDING: FOR PERIOD MARCH 1 THROUGH APRIL 30 AND FROM AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 2-1/2 BUSHELS PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ FT). FOR THE PERIOD MAY 1 THROUGH AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (07 LBS/1000 SQ FT). FOR THE PERIOD NOVEMBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOIL.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SEDIMENT CONTROL DIVISION.

*John K. Blanton* 3/1/10  
 HOWARD SCD DATE

**ENGINEER'S CERTIFICATE**

I HEREBY CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SEDIMENT CONTROL DISTRICT.

*John J. Cleary* 2/19/2010  
 ENGINEER - JOHN J. CLEARY, P.E. # 28559 DATE

**DEVELOPER'S CERTIFICATE**

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING CONSTRUCTION. I/WE ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD COUNTY SEDIMENT CONTROL DISTRICT.

*Thomas G. Butler* 2/23/10  
 DEVELOPER DATE

NO.	DATE	REVISION

**BENCHMARK ENGINEERING, INC.**  
 ENGINEERS • LAND SURVEYORS • PLANNERS

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Professional Certification: I/We certify that these documents were prepared by me or under my direct supervision and that I am a duly licensed and qualified engineer under the laws of the State of Maryland, License No. 28559, Expiration Date: 7-22-2011.

OWNER/DEVELOPER: RAINMAKER ASSOCIATES, LTD  
 8015 DORSEY RUN ROAD SUITE C JESSUP, MD 20794-9380 PHONE: 410-799-9415

PROJECT: VALLEY MEDE SECTION 14 LOTS 71 AND 72

LOCATION: TAX MAP 17 - GRID 21 PARCEL 139 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE: SEDIMENT AND EROSION CONTROL PLAN, NOTES AND DETAILS

DATE: NOVEMBER 2009 FEBRUARY, 2010 PROJECT NO. 2144

SCALE: AS SHOWN DRAWING 3 OF 3

Design: MCR/DAM Draft: HP Check: BFC