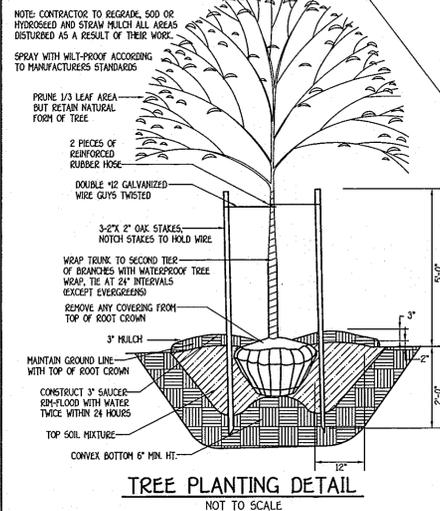


SCHEDULE A - PERIMETER LANDSCAPE EDGE						
PERIMETER	P-1	P-2	P-3	P-4	P-5	TOTAL
CATEGORY	ADJACENT TO ROADWAY	ADJACENT TO PERIMETER PROPERTIES				
LANDSCAPE TYPE	N/A	A	A	A	D	
LINEAR FEET OF PERIMETER	24.27 L.F.	602.68' L.F.	99.34 L.F.	183 L.F.	423 L.F.	
NUMBER OF PLANTS REQUIRED						
SHADE TREES	N/A	602.68/60' = 10.04 OR 10	99.34/60' = 1.65 OR 2	(183/60' = 3.05 OR 3)	(423/60' = 7.05 OR 7)	
SMALL/MEDIUM DECIDUOUS TREES						
CREDIT FOR EXISTING VEGETATION						
SHADE TREES	N/A	YES 100X	YES 100X	YES 100X	0	0
SMALL/MEDIUM DECIDUOUS TREES (2:1 SUBSTITUTION)		0	0	0	0	0
NUMBER OF PLANTS PROVIDED						
SHADE TREES	N/A	*0	*0	*0	7	7
SMALL/MEDIUM DECIDUOUS TREES		0	0	0	0	0

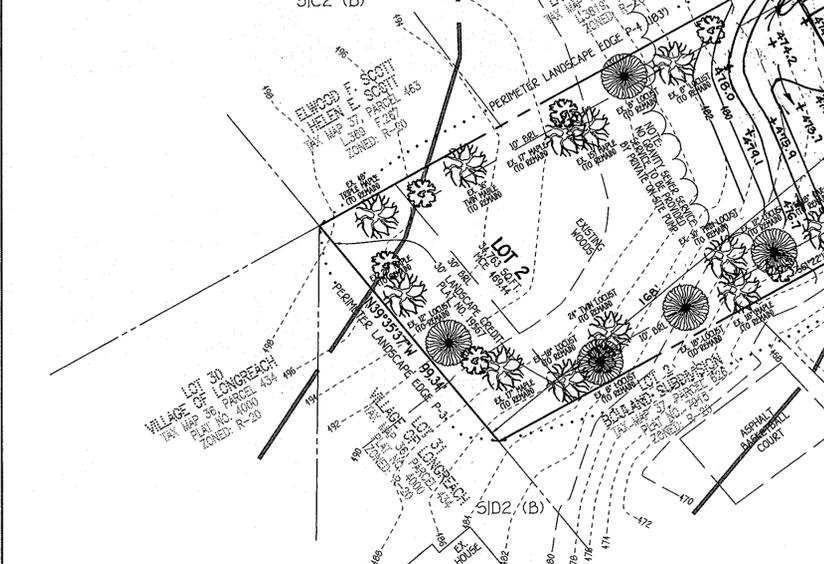
1. A LANDSCAPE SURETY FOR 7 SHADE TREES IN THE AMOUNT OF \$2,100.00
2. 7 SHADE TREES * \$300 EACH SHALL BE PROVIDED WITH THE GRADING PERMIT.
3. * 100% CREDIT IS TAKEN FOR THE EXISTING TREES LOCATED ALONG P-2, P-3 & P-4 PERIMETER LANDSCAPE EDGE.

LANDSCAPING PLANT LIST			
QTY.	KEY	NAME	SIZE
7		ACER RUBRUM OCTOBER GLOBE OCTOBER RED MAPLE MAPLE	2 1/2" - 3" CALIPER FULL CROWN, BAB



TREE PLANTING DETAIL NOT TO SCALE

SIC2 (B)



NO.	REVISION	DATE
3	Move hse, Lot 1, to allow a side entry garage	6-28-12
2	Rev. hse & grd., Lot 1, and add Seneca Model	4-9-12
1	Rev. hse & lot grd., Lot 2, to show as built cond.	9-11-09

NO.	REVISION	DATE



ENGINEER'S CERTIFICATE
I certify that this plan for erosion and sediment 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 Soil Conservation District.

Signature of Engineer: *Earl D. Collins* 4-8-08
Earl D. Collins Date

BUILDER/DEVELOPER'S CERTIFICATE
I/we certify that all development and construction will be done according to this plan, for sediment and erosion control and that any 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 the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District.

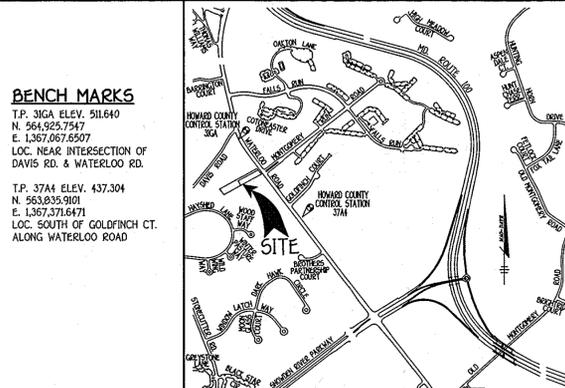
Signature of Developer: *Stephen Forney* 4-8-08
Stephen Forney Date

OWNER/BUILDER/DEVELOPER
MR. & MRS. STEPHEN FORNEY
3368 BRANTLY COURT
GLENWOOD, MARYLAND 21044
410-480-9146

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
19567	1	R-20	37	SIXTH	6069.02

WATER CODE: C-02
SEWER CODE: 7390000

SITE DEVELOPMENT/LANDSCAPING PLAN
SINGLE FAMILY DETACHED
FORNEY PROPERTY
LOTS 1 & 2
ZONED: R-20
TAX MAP NO.: 37 PARCEL NO.: 219 GRID NO.: 1
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 30' DATE: JUNE, 2007
SHEET 1 OF 3



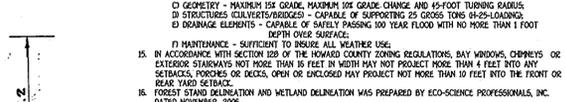
GENERAL NOTES

1. SUBJECT PROPERTY ZONED R-20 PER 2/02/04 COMPREHENSIVE ZONING PLAN.
2. TOTAL AREA OF SITE 1.369 ACRES.
3. TOTAL NUMBER OF LOTS SUBMITTED 2 SFD.
4. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT 405-25-1800 AT LEAST FIVE WORKING DAYS PRIOR TO START OF WORK.
5. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT 405-25-1800 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
6. THIS PROJECT IS SUBJECT TO HOWARD COUNTY FILES 4-07-172, W (CONT. NO. 2618), S (CONT. NO. 547-5-B).
7. THIS PLAN IS BASED ON A FIELD TOPOGRAPHIC SURVEY PERFORMED ON JANUARY 28, 2006 BY FISHER, COLLINS & CARTER, INC. WITH 2 FOOT INTERVALS.
8. SURVEY SUBJECT WAS PREPARED BY FISHER, COLLINS & CARTER, INC. ON OR ABOUT JANUARY 25, 2006.
9. HORIZONTAL AND VERTICAL CONTROL DATUM IS BASED ON NAD 83, MARYLAND COORDINATE SYSTEM AS APPROVED BY HOWARD COUNTY ELECTRONIC SURVEYING DIVISION.
10. ANY DAMAGE TO THE COUNTY'S SURVEY SHALL BE PROTECTED AT THE DEVELOPER'S EXPENSE.
11. THIS PLAN IS FOR HOUSE SITING AND GRADING ONLY. IMPROVEMENTS SHOWN WITHIN THE RIGHTS-OF-WAY OF THIS S.D.P. ARE NOT USED FOR CONSTRUCTION AND/OR APPROVED WATER AND SEWER PLANS CONTRACT NO. 14-305614.
12. CONTRACTOR WILL CHECK SEWER HOUSE CONNECTION ELEVATION AT EASEMENT LINE PRIOR TO CONSTRUCTION FOR FLAG OR PIPE STON LOTS. BEFORE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE USE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPESTON AND ROAD RIGHT OF WAY LINE AND NOT ON TO THE FLAG OR PIPE STON LOT DRIVEWAY.
13. HOMEOWNERS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING ORDINANCE RESOLUTIONS:
a) WIDTH - 12 FEET 05 INCHES SEEVING MORE THAN ONE RESIDENCE.
b) SURFACE - 50X 407 INCHES OF COMPACTED COURSE RUN BASE WITH TAR AND CHIP COATING.
14. MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.
a) GEOMETRY - MAXIMUM 1% GRADE, MAXIMUM 10% GRADE CHANGE AND 45-FOOT TURNING RADIUS.
b) STRUCTURES EXCEPTED - CANALS, OR SUBSTITUTING 25 CUBIC YARDS 20%+ LOADING.
c) DRAINAGE ELEMENTS - DRAINAGE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER SURFACE.
15. IN ACCORDANCE WITH SECTION 128 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, PORCHES OR EXTERIOR STAIRWAYS NOT MORE THAN 10 FEET IN WIDTH MAY NOT PROJECT MORE THAN 4 FEET INTO ANY SIDE YARD, REAR YARD, FRONT OR REAR YARD SETBACK.
16. THESE STAND DELIBERATION AND METLAND DELIBERATION WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED NOVEMBER, 2006.
17. LANDSCAPING FOR LOT 2 ON FILE WITH THIS PLAN IS PROVIDED IN ACCORDANCE WITH A CERTIFIED LANDSCAPE PLAN IN ACCORDANCE WITH SECTION 5.3 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. A LANDSCAPE SURETY FOR 7 SHADE TREES IN THE AMOUNT OF \$2,100.00 IS PROVIDED WITH THE DEVELOPER'S AGREEMENT FOR LOT 2. EXISTING TREES TO REMAIN ON THESE LOTS SHALL BE PROTECTED BY THE DEVELOPER'S AGREEMENT FOR LOT 2. THE DEVELOPER SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING TREES IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION APPLICATION OR BUILDING/GRADING PERMIT AND PER THE COMPLETE ZONING REGULATIONS DATED JULY 28, 2006.
18. THE 65' MIN HOSE CATCHER LINE SHOWN ON THIS PLAN IS AS REQUIRED BY THE HOWARD COUNTY DESIGN MANUAL, CHAPTER 5, REVISED FEBRUARY, 1992 AND CANNOT BE CONSIDERED TO EXACTLY LOCATE THE 65' MIN HOSE LINE AS ESTABLISHED BY HOWARD COUNTY TO ALLEVIATE DEVELOPERS, BUSINESS AND FUTURE RESIDENTS THAT AREAS BEYOND THIS THRESHOLD MAY EXCEED GENERALLY ACCEPTED HOSE LEVELS ESTABLISHED BY THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.
19. NO 30 YEAR FLOOD PLAIN EXISTS ON SITE.
20. FOR DRIVEWAY ENTRANCE DETAIL REFER TO THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD DETAIL 25-05.
21. WATER AND SEWER SERVICE TO THESE LOTS WILL BE GRANTED UNDER THE PROVISIONS OF SECTION 18-2228 OF THE HOWARD COUNTY CODE.
22. PUBLIC WATER AND SEWER ALLOCATIONS WILL BE GRANTED AT TIME OF ISSUANCE OF THE BUILDING PERMIT IF CAPACITY IS AVAILABLE AT THAT TIME.
23. A FEE IN LIEU OF PROVIDING OPEN SPACE HAS BEEN PAID IN THE AMOUNT OF \$10,000 PER F-07-172. THERE IS AN EXISTING DWELLING STRUCTURE AND ACCESSORY STRUCTURES LOCATED ON LOTS 1 AND 2 TO BE REMOVED PRIOR TO PLAT RECORDECTION.
24. A PRIVATE USE-IN-DRIVEWAY ACCESS AND MAINTENANCE AGREEMENT FOR SHARED DRIVEWAY IS RECORDED SIMULTANEOUSLY WITH THE RECORD PLAT.
25. LOTS 1 AND 2 DO NOT INCLUDE METLAND, STREAM, ASSOCIATED WETLAND BUFFERS AND STREAM BUFFERS, FOREST CONSERVATION EASEMENTS AND ASSOCIATED BUFFERS AND STEEP SLOPES GREATER THAN 20%.
26. HOSE STUDY PREPARED BY HANS GROUP DATED JUNE, 2007.
27. FOREST CONSERVATION REQUIREMENTS FOR THE SUBDIVISION IS EXEMPT DUE TO THIS HOSE SUBDIVISION CREATED ONE ADDITIONAL LOT # 47-172 AND HAS NO FURTHER RESUBDIVISION POTENTIAL PER SECTION 18-2228 OF THE HOWARD COUNTY CODE.
28. WATER QUALITY VOLUME (WQV) AND COORDINATE RECHARGE VOLUME (CRV) STORMWATER MANAGEMENT (SWM) REQUIREMENTS ARE PROVIDED TO MEET IN ACCORDANCE WITH THE 2000 STORMWATER MANAGEMENT DESIGN MANUAL BY APPLYING THE CRITERIA FOUND IN CHAPTER 3, SECTION 3.4 STORMWATER FLOWERS SYSTEMS AND CHAPTER 5, SECTION 5.2 RECONNECTION OF ROOFTOP RUNOFF CREEK AND SECTION 5.3 DISCONNECTION OF NON ROOFTOP RUNOFF CREEK. ALTHOUGH THE COMPUTED BELOW RECHARGE FOR THE CHANNEL PROTECTION VOLUME (CPV) STORM EXCESS 2.0 CFS, CPV IS NOT PROVIDED BECAUSE THE INCREASED FLOW RATES ARE BEING CAUSED BY OFF-SITE DRAINAGE AND EXISTING SHEET FLOW CONDITIONS ARE BEING MAINTAINED. THE BIO-RETENTION MAINTENANCE WILL BE THE RESPONSIBILITY OF THE HOMEOWNER.
29. SE ELEVATIONS SHOWN ARE LOCATED AT THE PROPERTY LINE PER F-07-172.
30. ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTINGS UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS.
31. A WAIVER TO THE HOWARD COUNTY DESIGN MANUAL, VOLUME II - WATER & SEWER, CHAPTER 4 SEWER MAIN DESIGN PARAGRAPH 4.3.3.3, ALLOWING GRAVITY SEWER SERVICE FIRST FLOOR ONLY, FOR LOTS 1 AND 2 FORNEY PROPERTY HAS BEEN GRANTED. BASEMENT SEWER SERVICE TO BE PROVIDED BY PRIVATE ON-SITE PUMP.
32. THE OWNER, TENANT AND/OR THESE AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, PLANT MATERIALS, BARRIERS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD CONDITION AND WHEN NECESSARY, REPAIRED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION AND WHEN NECESSARY, REPAIRED OR REPLACED. MAINTENANCE SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION AND WHEN NECESSARY, REPAIRED OR REPLACED.
33. NO CLEARING OF EXISTING VEGETATION IS PERMITTED WITHIN THE LANDSCAPE EDGE FOR WHICH CREDIT IS BEING TAKEN HOWEVER, LANDSCAPE MAINTENANCE IS AUTHORIZED.
34. AT THE TIME OF INSTALLATION, ALL TREES AND SHRUBS RECENTLY LISTED AND APPROVED FOR THIS SITE SHALL BE THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION NO SUBSTITUTIONS OR REDUCTIONS OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THE APPROVED LANDSCAPE PLAN WILL RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REDUCTIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATES.

ADDRESS CHART	
LOT NUMBER	STREET ADDRESS
1	5636 WATERLOO ROAD
2	5632 WATERLOO ROAD

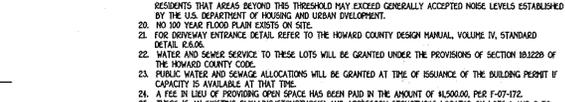
MINIMUM LOT SIZE CHART			
LOT NO.	GROSS AREA	PIPESTEM AREA	MINIMUM LOT SIZE
2	34,763 SQ.FT.	7762 SQ.FT.	27,001 SQ.FT.

INDEX CHART	
SHEET	DESCRIPTION
SHEET 1	TITLE SHEET, HOUSE TYPE, SITE DEVELOPMENT PLAN, LOTS 1 & 2
SHEET 2	SEDIMENT/EROSION CONTROL SWM PLAN LOTS 1 & 2
SHEET 3	SEDIMENT/EROSION CONTROL/LANDSCAPING NOTES & DETAILS



COMMON DRIVEWAY DETAIL NOT TO SCALE

LEGEND	
SYMBOL	DESCRIPTION
	EXISTING CONTOUR 2' INTERVAL
	EXISTING CONTOUR 10' INTERVAL
	PROPOSED CONTOUR 2' INTERVAL
+362.2	SPOT ELEVATION
-SF - SF	SILT FENCE
-SSF - SSF	SUPER SILT FENCE
-TFP - TFP	TREE PROTECTION FENCE
	EARTH DIKE
	LIMIT OF DISTURBANCE
	LANDSCAPE TREES PER F-07-172



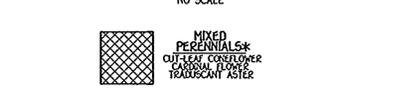
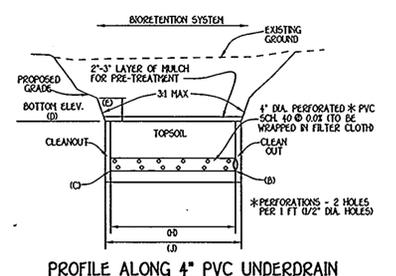
SITE ANALYSIS DATA CHART

- A. TOTAL PROJECT AREA: 1.369 ACRES OR 59,634 SQUARE FEET.
- B. AREA OF SUBMISSION: 1.369 ACRES OR 59,634 SQUARE FEET.
- C. LIMITS OF DISTURBANCE: 1.096 ACRES OR 47,733 SQUARE FEET.
- D. PRESENT ZONING DESIGNATION: R-20.
- E. PROPOSED USES FOR SITE: RESIDENTIAL.
- F. DPZ FILE REFERENCES: F-07-172, W (CONT. 248-W) & S (CONT. 547-5-B)

1:2005050131231313 5p; Lot 1 & 2.dwg; 4/7/2008 9:22:52 AM

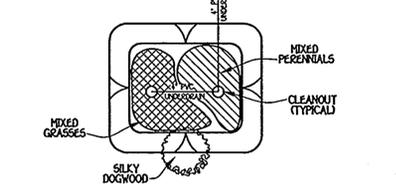
FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELICOTT CITY, MARYLAND 21042
(410) 461-2022

SDP 08-052



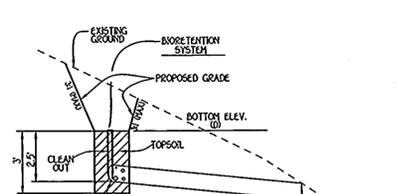
PRIVATE BIORETENTION FILTER OPERATION & MAINTENANCE SCHEDULE

- ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER AND SOIL LAYER IS REQUIRED. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND SPOILING.
- SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION. SPRING AND REPLACEMENT OF ALL DEFICIENT STAGES AND WEEDS.
- MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.
- SOIL EROSION TO BE ADDRESSED ON AN ASSESSED BASIS, WITH A HISTORY OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.



BIORETENTION FILTER PLANT MATERIAL

QUANTITY	NAME	MAXIMUM SPACING (FT)
45	MIXED PERENNIALS	1 FT.
45	MIXED GRASSES	1 FT.
1	SILKY DOGWOOD	PLANT AWAY FROM INFLOW LOCATION



BIORETENTION FILTER DATA

BIORETENTION FILTER	A	B	C	D	E	F	G	H	I	J
1	350.00	352.50	355.00	357.50	360.00	15'	9'	15'	10'	22'
2	362.50	365.00	367.50	370.00	372.50	15'	9'	15'	10'	22'

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. 9753, EXPIRATION DATE: 2/28/10.

Earl D. Collins 4-3-08
EARL D. COLLINS DATE

ENGINEER'S CERTIFICATE

"I certify that this plan for erosion and sediment 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 Soil Conservation District."

Earl D. Collins 4-3-08
Signature of Engineer EARL D. COLLINS Date

BUILDER/DEVELOPER'S CERTIFICATE

"I/we certify that all development and construction will be done according to this plan for sediment and erosion control and that any 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 the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Stephen Forney 4-8-08
Signature of Developer STEVEN FORNEY Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Karl Decker 6-18-08
Chief, Division of Land Development Date

John Edwards 6-16-08
Chief, Development Engineering Division Date

Michael A. Goff 6/14/08
Director - Department of Planning and Zoning Date

PROJECT: FORNEY PROPERTY SECTION: N/A LOT NO'S: 1 & 2

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
19567	1	R-20	37	SIXTH	6069.02

WATER CODE: C-02 SEWER CODE: 7390000

OWNER/BUILDER/DEVELOPER

MR. & MRS. STEPHEN FORNEY
3368 BRANTLEY COURT
GLENWOOD, MARYLAND 21044
410-480-9146

SEDIMENT/EROSION CONTROL STORMWATER MANAGEMENT PLAN, NOTES & DETAILS

SINGLE FAMILY DETACHED FORNEY PROPERTY

LOTS 1 & 2
ZONED: R-20
TAX MAP NO.: 37 PARCEL NO.: 219 GRID NO.: 1
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 30' DATE: JUNE, 2007

SHEET 2 OF 3

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 30772 BALTHAZAR NATIONAL PIKE
ELLSWORTH CITY, MARYLAND 22042
(410) 484 - 2899



NO.	REVISION	DATE

SDP 08-052

20.0 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION DEFINITION

Using vegetation as cover for barren soil to protect it from forces that cause erosion.

PURPOSE

Vegetative stabilization specifications are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainwater, thereby reducing sediment loads and run-off to downstream areas, and improving wildlife habitat and visual resources.

CONDITIONS WHERE PRACTICE APPLIES

This practice shall be used on denuded areas as specified on the plans and may be used on highly erodible or critically eroding areas. This specification is derived from Temporary Seeding, to quickly establish vegetative cover for short duration Oup to one year, and Permanent Seeding for long term vegetative cover. Examples of applicable areas for Temporary Seeding are Temporary Soil Stabilization, cleared areas being left in place during construction phases, earth dikes, etc. and for Permanent Seeding are dikes, ditches, cut and fill slopes and other areas of final grade, former stockpiles and staging areas, etc.

EFFECTS ON WATER QUALITY AND QUANTITY

Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff. Infiltration, evaporation, transpiration, and groundwater recharge. Vegetation over time, will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth. Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by absorbing those substances present within the root zone. Sediment control devices must remain in place during grading, seeded preparation, seeding, mulching and vegetative establishment to prevent large quantities of sediment and associated chemicals and nutrients from washing into surface waters.

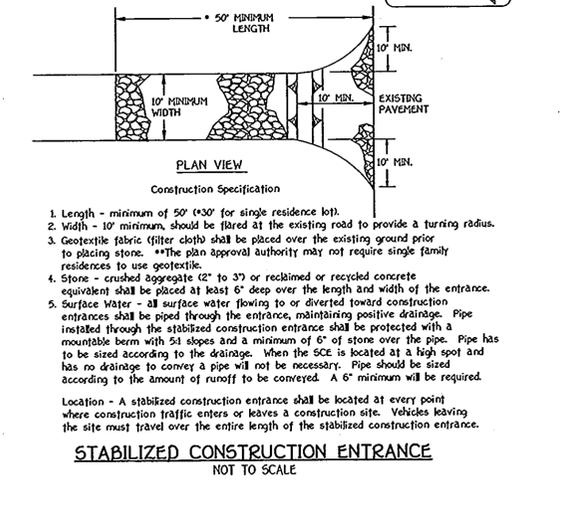
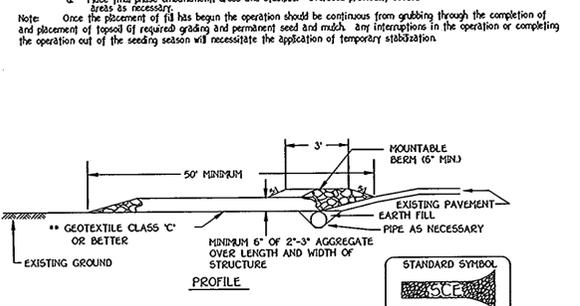
SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS

- Site Preparation**
 - Install erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms, waterways or sediment control basins.
 - Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.
 - Schedule soil tests to determine soil amendment composition and application rates for sites having disturbed areas over 5 acres.
- Soil Amendments (Fertilizer and Lime Specifications)**
 - Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analysis.
 - Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Name may be substituted for fertilizer with prior approval from the appropriate authority. Fertilizers shall be applied to the applicable sites in accordance with the applicable state fertilizer laws and shall bear the name, trade name or trademark and warranty of the producer.
 - Lime materials shall be ground limestone hydrated or burnt lime may be substituted which contains at least 50% total oxides (calcium oxide plus magnesium oxide). Limestone shall be ground to such fineness that at least 50% will pass through a #100 mesh sieve and 90-100% will pass through a #20 mesh sieve.
 - Incorporate lime and fertilizer into the top 3-5" of soil by diking or other suitable means.
- Seeded Preparation**
 - Temporary Seeding**
 - Seeded preparation shall consist of loosening soil to a depth of 3" to 5" by means of suitable mechanical or construction equipment, such as disc harrows or other types of plows or rollers mounted on construction equipment. After the soil is loosened it should not be rolled or dragged smooth, but left in the roughened condition. Sloped areas greater than 3:1 should be tracked leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.
 - Apply fertilizer and lime as prescribed on the plans.
 - Incorporate lime and fertilizer into the top 3-5" of soil by diking or other suitable means.
 - Permanent Seeding**
 - Minimum soil conditions required for permanent vegetative establishment:
 - Minimum pH shall be between 6.0 and 7.0.
 - Soluble salts shall be less than 500 parts per million (ppm).
 - The soil shall contain less than 60% clay, but enough fine grained material (200 mesh plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if loess or special loesslike is to be planted, then a silt soil (200 mesh plus clay) would be acceptable.
 - Soil shall contain 1% minimum organic matter by weight.
 - Soil must contain sufficient pore space to permit adequate root penetration.
 - If these conditions cannot be met by soils on site, seeding is required in accordance with Section 20.0 Standards and Specifications for Temporary Seeding.
 - Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3-5" to permit banking of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.
 - Apply soil amendments as per soil test or as included on the plans.
 - For soil amendments into the top 3-5" of topsoil by diking or other suitable means. Lawn areas shall be rolled to smooth the surface, remove large objects like stones and branches, and roll the area for seed and application. Where site conditions will not permit normal seeded preparation, loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface. Slope slopes (steeper than 3:1) should be tracked by a dozer leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top 1-3" of soil should be loose and friable. Seeded loosening may not be necessary on newly disturbed areas.

- Seed Specifications**
 - All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to re-testing by a recognized seed laboratory. All seed used shall have been tested within 6 months immediately preceding the date of sowing such material on this job.
 - Note: Seed lots shall be made available to the inspector to verify type and rate of seed used.
 - Inoculant** - The inoculant for treating legume seed in the seed mixture shall be a pure culture of nitrogen fixing bacteria prepared specifically for this species. Inoculants shall not be used later than the date indicated on the container. Add fresh inoculant as directed on package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible. Temperatures above 75-80° F. can weaken bacteria and make the inoculant less effective until used.
- Methods of Seeding**
 - Hydroseeding** - Apply seed uniformly with hydroseeder. Slurry includes seed and fertilizer, broadcast or drop seeded, or a catparker seeder.
 - If fertilizer is being applied at the time of seeding, the application rates amounts will not exceed the following: Nitrogen maximum of 100 lbs. per acre total of soluble nitrogen (50% phosphorous, 200 lbs./acre, K2O potassium 200 lbs./acre).
 - Lime - use only ground agricultural limestone, 100 to 3 tons per acre may be applied by hydroseeding. Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding as it will be done immediately and without interruption.
 - Dry Seeding** - This includes use of conventional drop or broadcast seeders.
 - Seed spread dry shall be incorporated into the subsoil at the rates prescribed on the Temporary or Permanent Seeding summaries or Tables 501 or 501a. The seeded area shall then be rolled with a weighted roller to provide good seed to soil contact.
 - Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.
 - Drill or Catparker Seeding** - Mechanized seeders that apply and cover seed with soil. Catparker seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seeded may be firm after planting.
 - Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.
 - Mulch Specifications** (in order of preference)
 - Straw shall consist of thoroughly threshed, ripe, or old straw, reasonable bright in color, and shall not be rusty, moldy, or contain excessive dirt and shall be free of noxious weed seeds as specified in the Maryland Seed Law.
 - Wood Cellulose Fiber Mulch (WCF) shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state.
 - WCF shall be dried green or contain a green dye that will provide an appropriate color to facilitate visual inspection of the uniform spread straw.
 - WCF includes dye, shall contain no germination or growth inhibiting factors.
 - WCF materials shall be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material shall form a blotter-like ground cover, on application, having moisture absorption and retention properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
 - WCF material shall contain no elements or compounds of concentration levels that will be phytotoxic.
 - WCF must conform to the following physical requirements (fiber length to approximately 1/8" diameter approximately 1/4" mm, pH range of 4.0 to 8.5, ash content of 10% maximum and water holding capacity of 90% minimum.

- Seeded Preparation**
 - Excavate and stabilize all temporary swales, side ditches, or berms that will be used to convey runoff from the excavation.
 - Perform Phase 1 excavation, dress and stabilize.
 - Perform Phase 2 excavation, dress and stabilize.
 - Perform final phase excavation, dress and stabilize. Overseed previously seeded areas as necessary.
- Incremental Stabilization of Embankments - Fill Slopes**
 - Embankments shall be constructed in lifts as prescribed on the plans.
 - Slopes shall be stabilized immediately when the vertical height of the multiple lifts reaches 15' or when the grading operation ceases its prescribed on the plans.
 - At the end of each day, temporary berms and pipe slope drains shall be constructed along the top edge of the embankment to intercept surface runoff and convey it down the slope in a non-erosive manner to a sediment trapping device.
 - Construction sequence: Refer to Figure 4 below.
 - Excavate and stabilize all temporary swales, side ditches, or berms that will be used to divert runoff around the fill. Construct slope sill fence on low side of fill as shown in Figure 5, unless other methods shown on the plans address this area.
 - Place Phase 1 embankment, dress and stabilize.
 - Place Phase 2 embankment, dress and stabilize.
 - Place final phase embankment, dress and stabilize. Overseed previously seeded areas as necessary.

- SEDIMENT CONTROL NOTES**
- A PERIOD OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (03-18-99).
 - 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 SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THEREOF.
 - FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DICES, PERPETUE SLOPES AND ALL SLOPES STEEPER THAN 3:1 BY 11 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
 - ALL SEDIMENT TRAPPING DEVICES 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.
 - 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 SEEDING (SEC. 20.0 500 GGC. 50), TEMPORARY SEEDING (SEC. 50.0 AND 100.0 GGC. 50). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
 - ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED OPERATIVE CONSTANT UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
 - SILT FENCE**
 - CONSTRUCTION SEQUENCE: Refer to Figure 4 below.
 - Excavate and stabilize all temporary swales, side ditches, or berms that will be used to divert runoff around the fill. Construct slope sill fence on low side of fill as shown in Figure 5, unless other methods shown on the plans address this area.
 - Place Phase 1 embankment, dress and stabilize.
 - Place Phase 2 embankment, dress and stabilize.
 - Place final phase embankment, dress and stabilize. Overseed previously seeded areas as necessary.

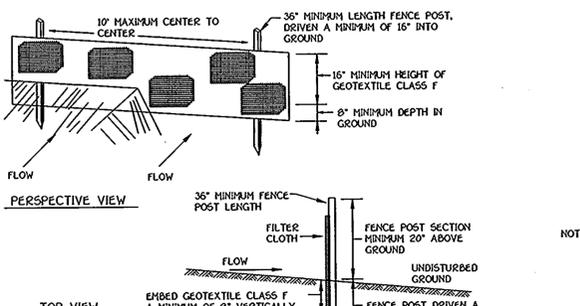


STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE

Slope Steepness	Slope Length (Maximum)	Silt Fence Length (Maximum)
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 2:1 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.

- PERMANENT SEEDING NOTES**
- Apply to graded or cleared areas likely to be redistributed where a short-term vegetative cover is needed.
 - Seeded Preparation: Loosen upper three inches of soil by rolling, dicing or other acceptable means before seeding, if not previously loosened.
 - Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:
 - Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq ft) and 600 lbs. per acre 10-10-10 fertilizer (4 lbs. per 1000 sq ft) before seeding. Narrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs. per acre 30-0-0 ureaform fertilizer (9 lbs. per 1000 sq ft).
 - Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq ft) and 1000 lbs. per acre 10-10-10 fertilizer (23 lbs. per 1000 sq ft) before seeding. Narrow or disc into upper three inches of soil.
 - Seeding: For the period March 1 thru April 30 and from August 1 thru October 15, seed with 50 lbs. per acre (14 lbs. per 1000 sq ft) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (0.05 lbs. per 1000 sq ft) of creeping brome. During the period October 16 thru February 28, protect site by one of the following options:
 - 2 tons per acre of well-anchored mulch straw and seed as soon as possible in the spring.
 - Use sod.
 - Seed with 60 lbs. per acre Kentucky 31 Tall Fescue and mulch with 2 tons per acre well anchored straw.
 - Mulching: Apply 1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 2/8 gal per acre (6 gal per 1000 sq ft) of emulsified asphalt on flat areas. On slopes, 0 ft. or higher, use 3/7 gal per acre (9 gal per 1000 sq ft) for anchoring.
 - Maintenance: Inspect all seeded areas and make needed repairs, replacements and reseeds.



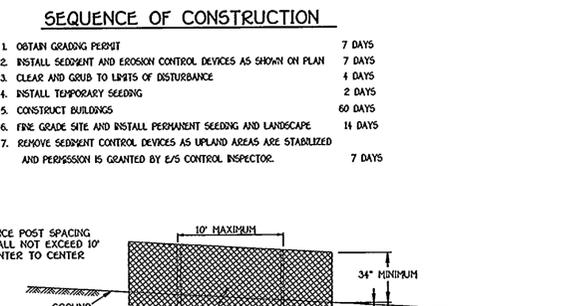
SILT FENCE
NOT TO SCALE

Slope Steepness	Slope Length (Maximum)	Silt Fence Length (Maximum)
0 - 10%	0 - 101	Unlimited
10 - 20%	101 - 51	200 feet
20 - 33%	51 - 31	100 feet
33 - 50%	31 - 21	100 feet
50% +	21 +	50 feet

DESIGN CRITERIA

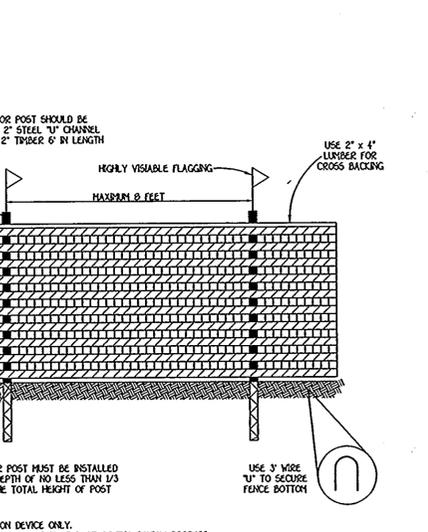
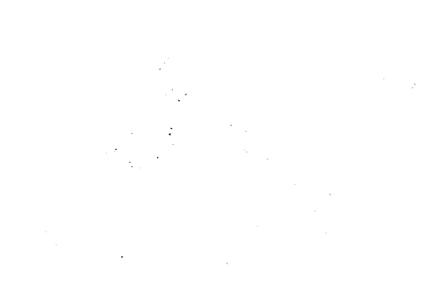
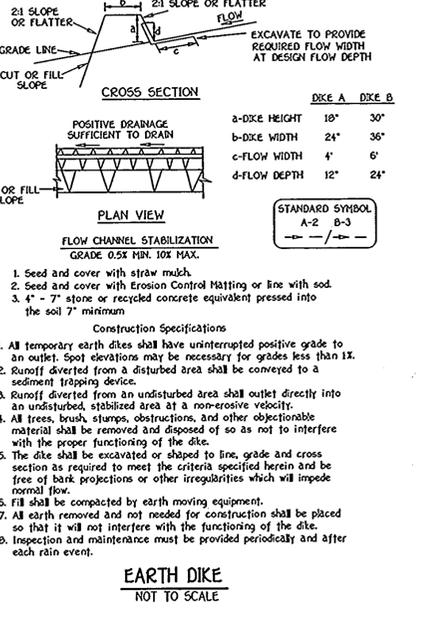
Slope	Slope Steepness	Slope Length (Maximum)	Silt Fence Length (Maximum)
0 - 10%	0 - 10%	Unlimited	Unlimited
10 - 20%	10% - 20%	200 feet	1,500 feet
20 - 33%	20% - 33%	100 feet	1,000 feet
33 - 50%	33% - 50%	100 feet	500 feet
50% +	50% +	50 feet	250 feet

- TEMPORARY SEEDING NOTES**
- Apply to graded or cleared areas likely to be redistributed where a short-term vegetative cover is needed.
 - Seeded Preparation: Loosen upper three inches of soil by rolling, dicing or other acceptable means before seeding, if not previously loosened.
 - Soil Amendments: Apply 600 lbs. per acre 10-10-10 fertilizer (4 lbs. per 1000 sq ft).
 - Seeding: For the period March 1 thru April 30 and from August 1 thru November 15, seed with 2-1/2 bushels per acre of annual ryegrass (32 lbs. per 1000 sq ft). For the period May 1 thru August 14, seed with 3 lbs. per acre of creeping brome (0.07 lbs. per 1000 sq ft). For the period November 16 thru 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 sod.
 - Mulching: Apply 1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 2/8 gal per acre (6 gal per 1000 sq ft) of emulsified asphalt on flat areas. On slopes, 0 ft. or higher, use 3/7 gal per acre (9 gal per 1000 sq ft) for anchoring.
 - Maintenance: Inspect all seeded areas and make needed repairs, replacements and reseeds.



SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT	7 DAYS
2. INSTALL SEDIMENT AND EROSION CONTROL DEVICES AS SHOWN ON PLAN	7 DAYS
3. CLEAR AND GRUB TO LIMITS OF DISTURBANCE	4 DAYS
4. INSTALL TEMPORARY SEEDING	2 DAYS
5. CONSTRUCT BUILDINGS	60 DAYS
6. FINE GRADE SITE AND INSTALL PERMANENT SEEDING AND LANDSCAPE	14 DAYS
7. REMOVE SEDIMENT CONTROL DEVICES AS UPLAND AREAS ARE STABILIZED AND PERMISSION IS GRANTED BY E/S CONTROL INSPECTOR.	7 DAYS



EARTH DIKE
NOT TO SCALE

Dike A	Dike B
a-DIKE HEIGHT	18" 30"
b-DIKE WIDTH	24" 36"
c-FLOW WIDTH	4" 6"
d-FLOW DEPTH	12" 24"

SEDIMENT/EROSION CONTROL NOTES & DETAILS
NOT TO SCALE

BLAZE ORANGE PLASTIC MESH TREE PROTECTION DETAIL
NOT TO SCALE

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A QUALY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 9753, EXPIRATION DATE: 2/28/10.

Earl D. Collins 4.3.08 DATE
EARL D. COLLINS

ENGINEER'S CERTIFICATE

"I certify that this plan for erosion and sediment 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 Soil Conservation District."

Earl D. Collins 4.3.08 DATE
Earl D. Collins

BUILDER/DEVELOPER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan, for sediment and erosion control and that any 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 the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Stephen Forney 4.8.08 DATE
Signature of Developer STEVEN FORNEY

SILT FENCE
NOT TO SCALE

This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

John R. Roberts 6/12/08 DATE
John R. Roberts

OWNER/BUILDER/DEVELOPER

MR. & MRS. STEPHEN FORNEY
3368 BRANTLY COURT
CLEWODD, MARYLAND 21044
410-480-9146

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development	<i>Ket She Duda</i>	DATE	6-18-08
Chief, Development Engineering Division	<i>David Church</i>	DATE	6-16-08
Director - Department of Planning and Zoning	<i>Marissa M. Gault</i>	DATE	6/18/08

PROJECT: FORNEY PROPERTY SECTION: N/A LOT NO'S: 1 & 2

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
19567	1	R-20	37	SIXTH	6069.02

WATER CODE: C-02 SEWER CODE: 7390000

SINGLE FAMILY DETACHED
FORNEY PROPERTY
LOTS 1 & 2
ZONED: R-20
TAX MAP NO.: 37 PARCEL NO.: 219 GRID NO.: 1
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 30' DATE: JUNE, 2007
SHEET 3 OF 3

SDP 08-052

