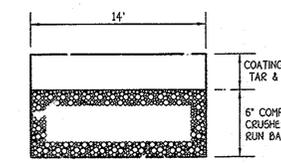


LOT NUMBER	STREET ADDRESS
1	4101 HOGG COURT
2	4105 HOGG COURT
3	4109 HOGG COURT
4	4113 HOGG COURT
5	4117 HOGG COURT
6	4121 HOGG COURT
7	4125 HOGG COURT
8	4134 HOGG COURT
9	4110 HOGG COURT
11	8225 MAPLE CLIFFE WAY
12	8229 MAPLE CLIFFE WAY
13	8233 MAPLE CLIFFE WAY
14	8237 MAPLE CLIFFE WAY
15	8241 MAPLE CLIFFE WAY
16	8228 MAPLE CLIFFE WAY
17	8224 MAPLE CLIFFE WAY
18	8220 MAPLE CLIFFE WAY
19	8216 MAPLE CLIFFE WAY
20	8212 MAPLE CLIFFE WAY
21	8208 MAPLE CLIFFE WAY
22	8204 MAPLE CLIFFE WAY

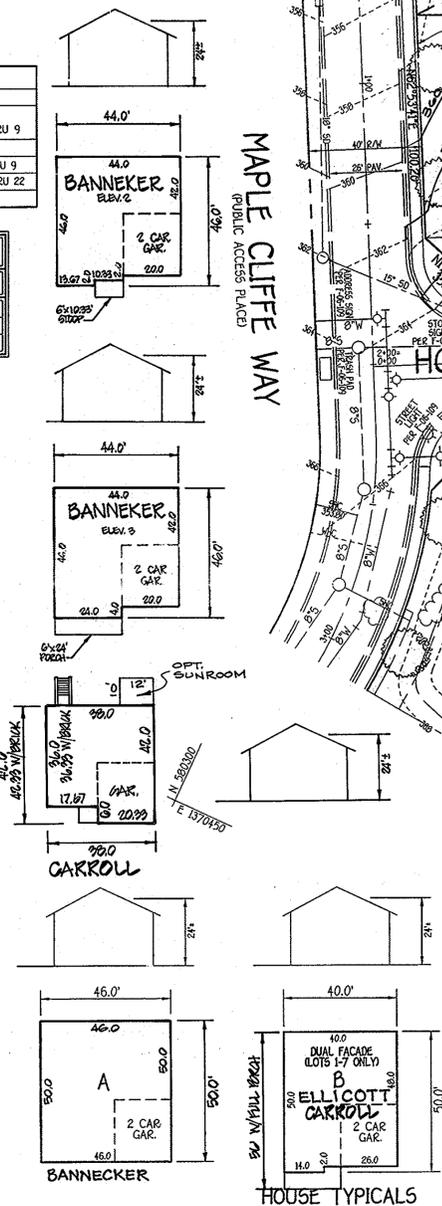
SHEET	DESCRIPTION
SHEET 1	TITLE SHEET, GENERAL NOTES, TEMPLATES & SITE DEVELOPMENT & LANDSCAPE PLAN LOTS 1 THRU 9
SHEET 2	SITE DEVELOPMENT & LANDSCAPE PLAN LOTS 11 THRU 22
SHEET 3	SEDIMENT/EROSION CONTROL & LANDSCAPE PLAN LOTS 1 THRU 9
SHEET 4	SEDIMENT/EROSION CONTROL & LANDSCAPE PLAN LOTS 11 THRU 22
SHEET 5	SEDIMENT/EROSION CONTROL NOTES & DETAILS

LOT NO.	GROSS AREA	PIPESTEM AREA	MINIMUM LOT SIZE
19	7,134 SQ. FT.	779 SQ. FT.	6,355 SQ. FT.
20	7,903 SQ. FT.	1,093 SQ. FT.	6,810 SQ. FT.
21	10,076 SQ. FT.	1,533 SQ. FT.	8,543 SQ. FT.



SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
- - -	PROPOSED CONTOUR 2' INTERVAL
+	SPOT ELEVATION
---	WALKOUT BASEMENT
-S-	SILT FENCE
-SF-SF-	SUPER SILT FENCE
---	EROSION CONTROL MATTING
---	LIMIT OF DISTURBANCE
---	TREES REMOVED PER F-06-109
---	PERIMETER LANDSCAPING PLANTINGS PER F-06-109
---	STREET TREE PLANTINGS TAKEN FROM F-06-109
---	LANDSCAPING PROPOSED PER THIS PLAN

APPROVED  
PLANNING BOARD  
OF HOWARD COUNTY  
DATE 10-04-07



NO.	REVISION	DATE
7	ADD OPT. SUNROOM TO GARROLL MOD.	11/11/11
6	REV. GRD LOT 1 TO REFLECT AS-BUILT COND	10/11/10
5	REV. GRADING LOT 9 TO REFLECT AS-BUILT	7/7/10
4	REV. & ADD GENERAL NOTES TO ACCOMMODATE WORKS	7/1/10
3	ADD GARROLL MODEL INCL. TO GEN. BOX B	6/2/10
2	APPROV FULL PUNCH TO ELICOTT HOUSE FINAL	4/15/10
1	REV. HOGG & GRD LOT 1, PER APPROVED A-A 09-028	4/15/09

**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* 10-15-07 Date  
Earl D. Collins, Professional Engineer, License No. 9753

**DEVELOPER'S CERTIFICATE**  
I 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: *Robert Dorsey, Jr.* 10-26-07 Date  
Robert Dorsey, Jr., Subject Dorsey, Jr.

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: 2/28/08.

Signature of Engineer: *Earl D. Collins* 10-28-07 Date  
Earl D. Collins

**OWNER/BUILDER/DEVELOPER**  
DORSEY FAMILY HOMES  
10717-B BIRMINGHAM WAY  
WOODSTOCK, MARYLAND 21163  
410-465-7200

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Planning Division: *Caroly Howard* 12/2/07 Date  
Chief, Development & Zoning Division: *Robert Collins* 12/2/07 Date  
Director, Department of Planning and Zoning: *Robert Collins* 12/2/07 Date

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
19655	14	R-ED	25	SECOND	602304

PROJECT: HOGG PROPERTY SECTION: N/A LOTS: 1 THRU 9 & 11 THRU 22

**SITE DEVELOPMENT AND LANDSCAPE PLAN**  
**SINGLE FAMILY DETACHED**  
**HOGG PROPERTY**  
**LOTS 1 THRU 9 & 11 THRU 22**

TAX MAP NO.: 25 PARCEL NO.: 64 GRID NO.: 14  
SECOND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
SCALE: 1" = 30' DATE: MAY, 2007  
SHEET 1 OF 5

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SDP 07-128

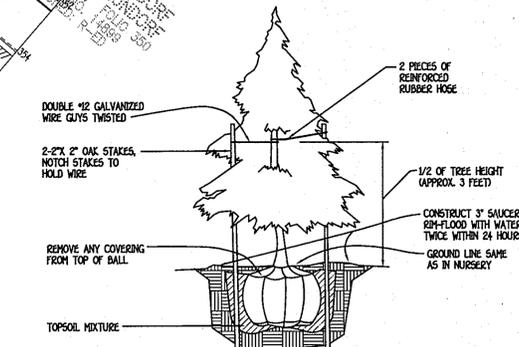
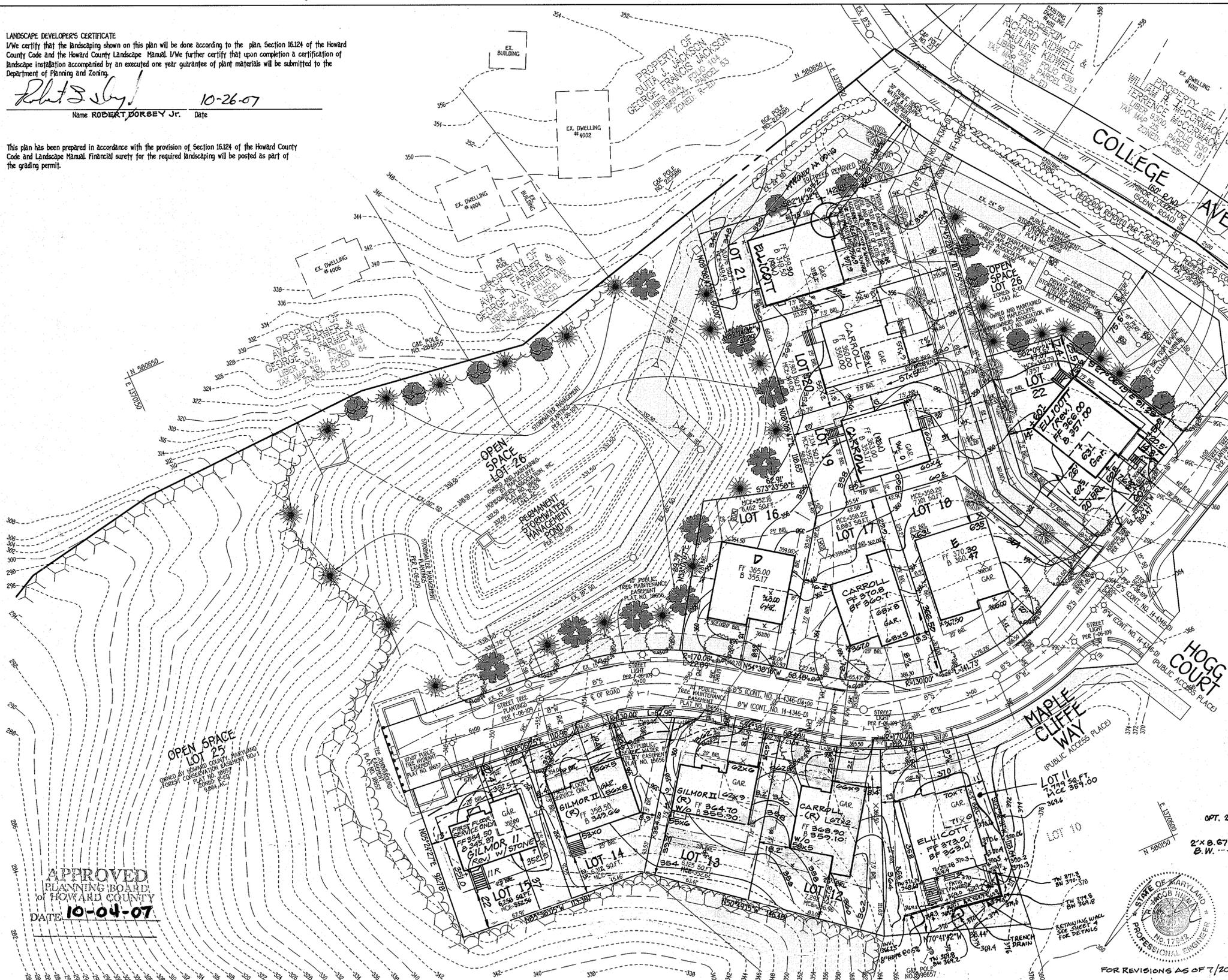
LANDSCAPE DEVELOPER'S CERTIFICATE  
 I/We certify that the landscaping shown on this plan will be done according to the plan, Section 15.124 of the Howard County Code and the Howard County Landscape Manual. I/We further certify that upon completion a certification of landscape installation accompanied by an executed one year guarantee of plant materials will be submitted to the Department of Planning and Zoning.

*Robert Dorsey Jr.*  
 Name: ROBERT DORSEY JR. Date: 10-26-07

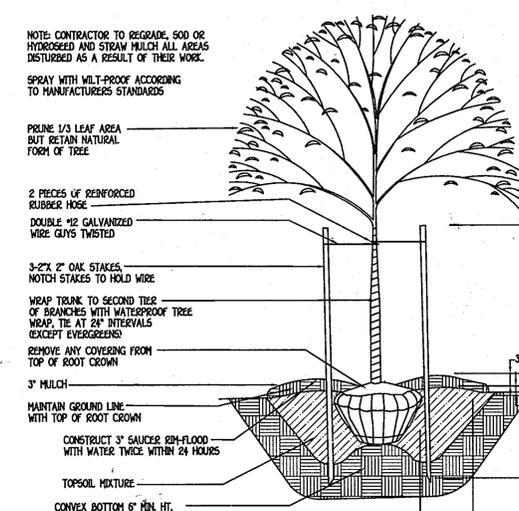
This plan has been prepared in accordance with the provision of Section 15.124 of the Howard County Code and Landscape Manual. Financial surety for the required landscaping will be posted as part of the grading permit.

SCHEDULE A - PERIMETER LANDSCAPING									
PERIMETER	CATEGORY (PROPERTIES/ROADWAYS)	LANDSCAPE TYPE	LINEAR FEET OF ROADWAY FRONTAGE PERIMETER	CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NUMBER OF PLANTS REQUIRED			
P-1	ADJ. TO ROADWAY	B	397'	NO	NO	SHADE TREES	EVERGREEN TREES	SHRUBS	
						8	10	-	

LANDSCAPING PLANT LIST (PROPOSED LANDSCAPING PER THIS PLAN)			
QTY.	KEY	NAME	SIZE
8		ACER rubrum 'October Glory' / October Glory Red Maple	2 1/2" - 3" CALIPER FULL CROWN B/B
10		Pinus strobus Eastern White Pine	6' - 8' HGT.
11		Acer rubrum 'Red Sunset' / Red Sunset Red Maple	4" - 6" CALIPER FULL CROWN B/B



EVERGREEN PLANTING DETAIL  
NO SCALE



TREE PLANTING DETAIL  
NO SCALE

APPROVED  
 PLANNING BOARD  
 of HOWARD COUNTY  
 DATE: 10-04-07



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*  
 Signature of Engineer EARL D. COLLINS Date: 10-25-07

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."

*Robert Dorsey Jr.*  
 Signature of Developer ROBERT DORSEY, JR. Date: 10-26-07

"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: 2/28/08."

*Earl D. Collins*  
 Signature of Engineer EARL D. COLLINS Date: 10-25-07

OWNER/BUILDER/DEVELOPER

DORSEY FAMILY HOMES  
 10717-B BIRMINGHAM WAY  
 WOODSTOCK, MARYLAND 21163  
 410-465-7200

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Chris Kenna*  
 Chief, Division of Land Development Date: 12/21/07

*Steph...*  
 Chief Development Engineer/Division Director - Department of Planning and Zoning Date: 10/26/07

SITE DEVELOPMENT AND LANDSCAPE PLAN

SINGLE FAMILY DETACHED  
 HOGG PROPERTY

LOTS 1 THRU 9 & 11 THRU 22

TAX MAP NO.: 25 PARCEL NO.: 64 GRID NO.: 14  
 SECOND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: 1" = 30' DATE: MAY, 2007

SHEET 2 OF 5

FISHER, COLLINS & CARTER, INC.  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 10722 BALTIMORE NATIONAL FREE  
 ELICOTT CITY, MARYLAND 21042  
 410-465-2999

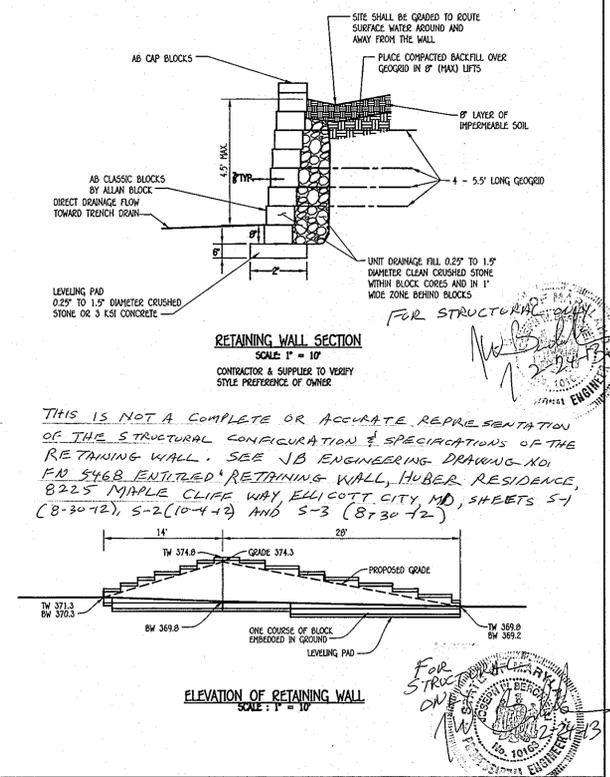


SOP 07-128





APPROVED  
PLANNING BOARD  
OF HOWARD COUNTY  
DATE 10-04-07



THIS IS NOT A COMPLETE OR ACCURATE REPRESENTATION  
OF THE STRUCTURAL CONFIGURATION & SPECIFICATIONS OF THE  
RETAINING WALL. SEE JB ENGINEERING DRAWING NO.  
FD 546B ENTITLED 'RETAINING WALL, HUBER RESIDENCE,  
8225 MAPLE CLIFF WAY, ELLICOTT CITY, MD, SHEETS S-1  
(8-30-12), S-2 (10-4-12) AND S-3 (8-13-12)

NO.	REVISION	DATE
17	ADD SUPER SILT FENCE AND REVISE LOD (LOT 1) AND ADD RETAINING WALL DETAILS - 53T	1/22/13



**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* Date: 10-25-07  
Earl D. COLLINS

**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: *Robert J. Dorsey, Jr.* Date: 10-26-07  
ROBERT J. DORSEY, JR.

Reviewed for HOWARD SCD and waste Technical Requirements  
U.S.D.A. - Natural Resources Conservation Service Date: 11/1/07  
Signature: *John K. Rauten*

**OWNER/BUILDER/DEVELOPER**  
DORSEY FAMILY HOMES  
10717-B BIRMINGHAM WAY  
WOODSTOCK, MARYLAND 21163  
410-465-7200

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
Chief, Division of Land Development Date: 12/21/07  
Signature: *Andy Hume*  
Chief, Development Engineering Division Date: 11/17/07  
Signature: *Donna C. Hume* Date: 12/26/07  
Director - Department of Planning and Zoning

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: 2/28/08.  
Signature: *Earl D. Collins* Date: 10-25-07

**SEDIMENT/EROSION CONTROL PLAN**  
SINGLE FAMILY DETACHED  
HOGG PROPERTY  
LOTS 1 THRU 9 & 11 THRU 22  
TAX MAP NO.: 25 PARCEL NO.: 64 GRID NO.: 14  
SECOND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
SCALE: 1" = 30' DATE: MAY, 2007  
SHEET 4 OF 5

FISHER, COLLINS & CARTER, INC.  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
ELLICOTT CITY, MARYLAND 21114  
410-461-2855

SDP 07-128

## 20.0 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION DEFINITION

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

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 rainfall, thereby reducing sediment loads and runoff 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 divided into 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 Stockpiles, clear between construction phases, earth dikes, etc. and for Permanent Seeding are lawns, dunes, cut and fill slopes and other areas at final grade, former stockpile 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, percolation, 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 assimilating 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, wharves, 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 required soil tests to determine soil amendment composition and application rates for 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 analyses.
- 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 analyses.
  - Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Nitrate may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall be delivered to the site fully loaded according to 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 disk or other suitable means.

### C. Seeded Preparation

- Temporary Seeding**
  - Seeded preparation shall consist of loosening soil to a depth of 3" to 5" by means of suitable agricultural or construction equipment, such as disc harrows or chain dozers or rollers mounted on construction equipment. After the soil is loosened it should not be rutted 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 disk or other suitable means.
- Permanent Seeding**
  - Minimum soil conditions required for permanent vegetative establishment:
    - Soil 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 40% clay, but enough fine grained material (30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if horsetail or serecia lepedeza is to be planted, then a sandy soil (30% silt plus clay) would be acceptable.
    - Soil shall contain 1.5% 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, adding topsoil is required in accordance with Section 20.0 Standards and Specifications for Topsoil.
  - 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 bonding of the topsoil to the surface area and to create horizontal erosion check slots to prevent 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 indicated on the plans.
  - Use soil amendments into the top 3-5" of topsoil by disk or other suitable means. Lawn areas should be raked to smooth the surface, remove large objects like stones and branches, and ready the area for seed and application. Where site conditions will not permit normal seeded preparation, loose surface soil by hand or other equipment should be used to roughen the surface. Step 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.

### D. 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 the 6 months immediately preceding the date of seeding each material on the job.
- Note:** Seed tags 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 mixtures shall be a pure culture of nitrogen fixing bacteria specifically for the 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 until used. Temperatures above 75°-80° F. can weaken bacteria and make the inoculant less effective.
- Methods of Seeding**
  - Hydroseeding:** Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or drop seeded, or a cultipacker 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 P205 (phosphorous) 200 lbs/acre; K2O (potassium) 200 lbs/acre.
  - Lime - use only ground agricultural limestone, 40 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.
  - Seed and fertilizer shall be mixed on site and seeding shall be done immediately and without interruption.
- Dry Seeding:** This includes use of conventional drop or broadcast spreaders.
  - Seed spread dry shall be incorporated into the subsoil at the rates prescribed on the Temporary or Permanent Seeding Summary or Tables 265 or 266. 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 Cultipacker Seeding:** Mechanized seeders that apply and cover seed with soil.
  - Cultipacker seeders are required to bury the seed in such a fashion as to provide at least 1/4" of soil covering. Seeded must 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 wheat, rye or oat straw, reasonable bright in color, and shall not be overly moldy, stalk decayed, or excessively dusty and shall be free of noxious weed seeds as specified in the Maryland Seed Law.
  - Wood Cellulose Fiber Mulch (WCFM)**
    - WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state.
    - WCFM shall be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniform spread slurry.
    - WCFM, including dye, shall contain no germination or growth inhibiting factors.
    - WCFM 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 batter-like ground cover, on application, having moisture absorption and permeation properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
    - WCFM material shall contain no elements or compounds of concentration levels that will be phytotoxic.
    - WCFM must conform to the following physical requirements: fiber length to approximately 10 mm, diameter approximately 1 mm, pH range of 4.0 to 8.5, ash content of 10% maximum and water holding capacity of 50% minimum.

Note: Only sterile straw mulch should be used in areas where one species of grass is desired.

- Mulching Seeded Areas** - Mulch shall be applied to all seeded areas immediately after seeding.
  - If grading is completed outside of the seeding season, mulch along shall be applied as prescribed in this section and maintained until the seeding season returns and seeding can be performed in accordance with these specifications.
  - When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons/acre. Mulch shall be applied to a uniform depth of between 1" and 2". Mulch applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. If a mulch anchoring tool is to be used, the rate should be increased to 2.5 tons/acre.
  - Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1,500 lbs. per acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons of water.
- Securing Straw Mulch (Mulch Anchoring)** - Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods listed by preference, depending upon size of area and erosion hazard:
  - A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of two (2) inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping sites, this practice should be used on the contour if possible.
  - Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 1,500 lbs. per acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
  - Application of liquid binders should be heavier at the edges where wind catches much, such as in valleys and crest of banks. The remainder of area should be applied uniform after the binder application. Synthetic binders - such as Acrylic DLR (Maga-Teck), DCA-70 Petroset, Terra Tex DLR, Terra Tack, or other approved equal may be used at rates recommended by the manufacturer to anchor mulch.
  - Lightweight plastic netting may be stapled over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4' to 15' feet wide and 300 to 3,000 feet long.
- Incremental Stabilization - Cut Slopes**
  - All cut slopes shall be dressed, prepared, seeded and mulched as the work progresses. Slopes shall be excavated and stabilized in equal increments not to exceed 15'.
  - Construction sequence (Refer to Figure 3 below):
    - 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. Overseed Phase 1 areas as necessary.
    - Perform final phase excavation, dress and stabilize. Overseed previously seeded areas as necessary.

Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation of completing the operation out of the seeding season will necessitate the application of temporary stabilization.

- 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 as prescribed in the plans.
  - At the end of each day, temporary berms and side 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 side fill fence on low side of fill as shown in Figure 5, unless other methods shown on the plans address this issue.
  - 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.

Note: Once the placement of fill has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

## SEDIMENT CONTROL NOTES

- A MINIMUM 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 DISTURBANCE.
- 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 14 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DICES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1, BY 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRANSPORTING BARRIERS MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1 CHAPTER 62 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 (ISC. SEC. 50, 51, 52, 53, 54), TEMPORARY SEEDING (ISC. SEC. 50), AND MULCHING (ISC. SEC. 20), 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 IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:**

TOTAL AREA OF SITE	324 ACRES
AREA DISTURBED	324 ACRES
AREA TO BE ROOFED OR PAVED	183 ACRES
AREA TO BE VEGETATIVELY STABILIZED	2,057 ACRES
TOTAL CUT	5,868 CUBIC YDS.
TOTAL FILL	3,995 CUBIC YDS.
- OFFSITE WASTE/BORROW AREA LOCATION NOT TO BE LEFT ON SITE.
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, 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 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.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

## PERMANENT SEEDING NOTES

- Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.
- Seeded Preparation:** Loosen upper three inches of soil by raking, discing 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 (14 lbs. per 1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs. per acre 30-0-0 urea-form fertilizer (8 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. Harrow 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 60 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.) urea-form fertilizer (8 lbs. per 1000 sq.ft.).
- For the period October 16 thru February 28, protect site by one of the following options:
- 2 tons per acre of well-anchored mulch and seed as soon as possible in the spring.
  - Use seed.
  - Seed with 60 lbs. per acre Kentucky 31 Tall Fescue and mulch with 2 tons per acre well anchored straw.
- Mulching:** Apply 1 1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq.ft.) of unrutted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal. per acre) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 1000 sq.ft.) for anchoring.
- Maintenence: Inspect all seeded areas and make needed repairs, replacements and reseedings.

## 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  |

## STANDARDS AND SPECIFICATIONS FOR TOPSOIL

### Definition

Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

### Purpose

To provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

### Conditions Where Practice Applies

- This practice is limited to areas having 2:1 or flatter slopes where:
  - The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
  - The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
  - The original soil to be treated contains material toxic to plant growth.
  - The soil is so acidic that vegetation with ironstone is not feasible.
- For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for appropriate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

### Construction and Material Specifications

- Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Topsoil shall 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 Experiment Station.
- Topsoil Specifications - Soil to be used as topsoil must meet the following:
  - Topsoil shall be a loam, sandy loam, clay loam, silty loam, sandy clay loam, loamy sand. Other soils may be used if approved by a topsoil soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, or other material larger than 1 1/2" in diameter.
  - Topsoil must be free of plants or plant stubs such as bermuda grass, quailgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.
  - 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.
    - For sites having disturbed areas over 5 acres:
      - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
      - For sites having disturbed areas over 5 acres:
        - On soil meeting Topsoil specifications, obtain test results depicting fertilizer and lime amendments required to bring the soil into compliance with the following:
          - 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.
          - Organic content of topsoil shall be not less than 1.5 percent by weight.
          - Topsoil having soluble salt content greater than 500 parts per million shall not be used.
          - No seed 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.
        - Topsoil substitute or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
      - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.

Note: Topsoil substitute or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

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