



Building Permit Application

Howard County Maryland
Department of Inspections, Licenses and Permits
3430 Court House Drive
Permits: 410-313-2455
www.howardcountymd.gov

Date Received: 4/7/14

Permit No.: B14001012

Building Address: 6275 Heather Glen Way
 City: Clarksville State: MD Zip Code: 21029
 Suite/Apt. #: _____ SDP/WP/BA #: F-06-77
 Census Tract: _____ Subdivision: The Preserve @ Clarksville
 Section: _____ Area: _____ Lot: 18
 Tax Map: 34 Parcel: 77 Grid: 11
 Zoning: RR-DEO Map Coordinates: _____ Lot Size: 47,647

Property Owner's Name: Williamsburg Group LLC
 Address: 5485 Harpers Farm Rd #700
 City: Columbia State: MD Zip Code: 21044
 Phone: 410-997-8800 Fax: _____
 Email: marinamorris@williamsburgllc.com

Existing Use: Vacant Lot
 Proposed Use: SF Home
 Estimated Construction Cost: \$ 150,000
 Description of Work: Canterbury - 2 story Full
blmt, 12 R, 4 BR, 1 HB, 2 FP +
3 car gar (4 BR)
 Occupant or Tenant: _____
 Was tenant space previously occupied? Yes No
 Contact Name: _____
 Address: _____
 City: _____ State: _____ Zip Code: _____
 Phone: _____ Fax: _____
 Email: _____

Applicant's Name & Mailing Address, (if other than stated herein)
 Applicant's Name: _____
 Address: _____
 City: _____ State: _____ Zip Code: _____
 Phone: _____ Fax: _____
 Email: _____

Contractor Company: _____
 Contact Person: _____
 Address: _____
 City: _____ State: _____ Zip Code: _____
 License No.: 155
 Phone: _____ Fax: _____
 Email: _____

Engineer/Architect Company: _____
 Responsible Design Prof.: _____
 Address: _____
 City: _____ State: _____ Zip Code: _____
 Phone: _____ Fax: _____
 Email: _____

Commercial Building Characteristics	Residential Building Characteristics	
Height: _____	<input checked="" type="checkbox"/> SF Dwelling <input type="checkbox"/> SF Townhouse	
No. of stories: _____	Depth	Width
Gross area, sq. ft./floor: _____	1 st floor: _____	
	2 nd floor: _____	
Area of construction (sq. ft.): _____	Basement:	
	<input type="checkbox"/> Finished Basement	
Use group: _____	<input type="checkbox"/> Unfinished Basement	
	<input type="checkbox"/> Crawl Space	
	<input type="checkbox"/> Slab on Grade	
Construction type:	No. of Bedrooms: <u>5</u>	
<input type="checkbox"/> Reinforced Concrete	Multi-family Dwelling	
<input type="checkbox"/> Structural Steel	No. of efficiency units: _____	
<input type="checkbox"/> Masonry	No. of 1 BR units: _____	
<input type="checkbox"/> Wood Frame	No. of 2 BR units: _____	
<input type="checkbox"/> State Certified Modular	No. of 3 BR units: _____	
	Other Structure: _____	
	Dimensions: _____	
<input checked="" type="checkbox"/> Roadside Tree Project Permit	Footings: _____	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Roof: _____	
Roadside Tree Project Permit # _____	<input type="checkbox"/> State Certified Modular	
	<input type="checkbox"/> Manufactured Home	

Utilities	
Water Supply	
<input type="checkbox"/> Public	
<input checked="" type="checkbox"/> Private	
Sewage Disposal	
<input type="checkbox"/> Public	
<input checked="" type="checkbox"/> Private	
Electric: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Gas: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Heating System	
<input checked="" type="checkbox"/> Electric <input type="checkbox"/> Oil	
<input checked="" type="checkbox"/> Natural Gas <input type="checkbox"/> Propane Gas	
<input type="checkbox"/> Other: _____	
Sprinkler System:	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Grading Permit Number: <u>614000103</u>	
Building Shell Permit Number: _____	

THE UNDERSIGNED HEREBY CERTIFIES AND AGREES AS FOLLOWS: (1) THAT HE/SHE IS AUTHORIZED TO MAKE THIS APPLICATION; (2) THAT THE INFORMATION IS CORRECT; (3) THAT HE/SHE WILL COMPLY WITH ALL REGULATIONS OF HOWARD COUNTY WHICH ARE APPLICABLE THERETO; (4) THAT HE/SHE WILL PERFORM NO WORK ON THE ABOVE REFERENCED PROPERTY NOT SPECIFICALLY DESCRIBED IN THIS APPLICATION; (5) THAT HE/SHE GRANTS COUNTY OFFICIALS THE RIGHT TO ENTER ONTO THIS PROPERTY FOR THE PURPOSE OF INSPECTING THE WORK DESCRIBED IN THIS APPLICATION.

Applicant's Signature: Marina Morris
 Email Address: marinamorris@williamsburgllc.com
 Title/Company: agent

Print Name: Marina Morris
 Date: 4/7/14

RECEIVED
 APR 7 2014

LICENSES & PERMITS
 DIVISION

Checks Payable to: DIRECTOR OF FINANCE OF HOWARD COUNTY
 PLEASE WRITE NEATLY & LEGIBLY
 FOR OFFICE USE ONLY

AGENCY	DATE	SIGNATURE OF APPROVAL
<input checked="" type="checkbox"/> State Highways		
<input checked="" type="checkbox"/> Building Officials		
<input checked="" type="checkbox"/> PSZA (Zoning)		
<input checked="" type="checkbox"/> PSZA (Engineering)		
<input checked="" type="checkbox"/> Health		

Is Sediment Control approval required for issuance? Yes No
 CONTINGENCY CONSTRUCTION START

DPZ SETBACK INFORMATION	
Front:	
Rear:	
Side:	
Side St.:	
All minimum setbacks met?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Is Entrance Permit Required?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Historic District?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Lot Coverage for New Town Zone:	
SDP/Red-line approval date:	

Filing Fee	\$ 100.00
Permit Fee	\$
Tech Fee	\$
Excise Tax	\$
PSFS	\$
Guaranty Fund	\$ 50.00
Add'l per Fee	\$
Total Fees	\$
Sub-Total Paid	\$
Balance Due	\$
Check	# 239322

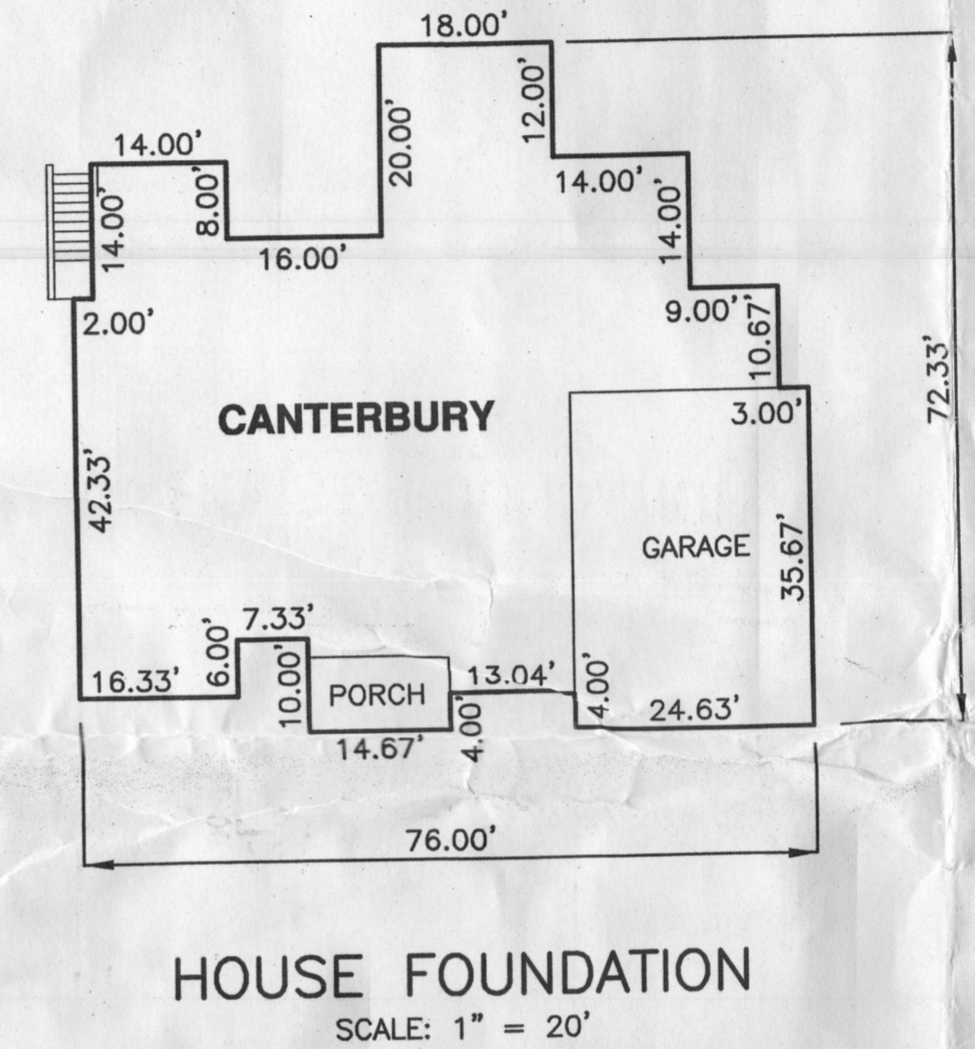
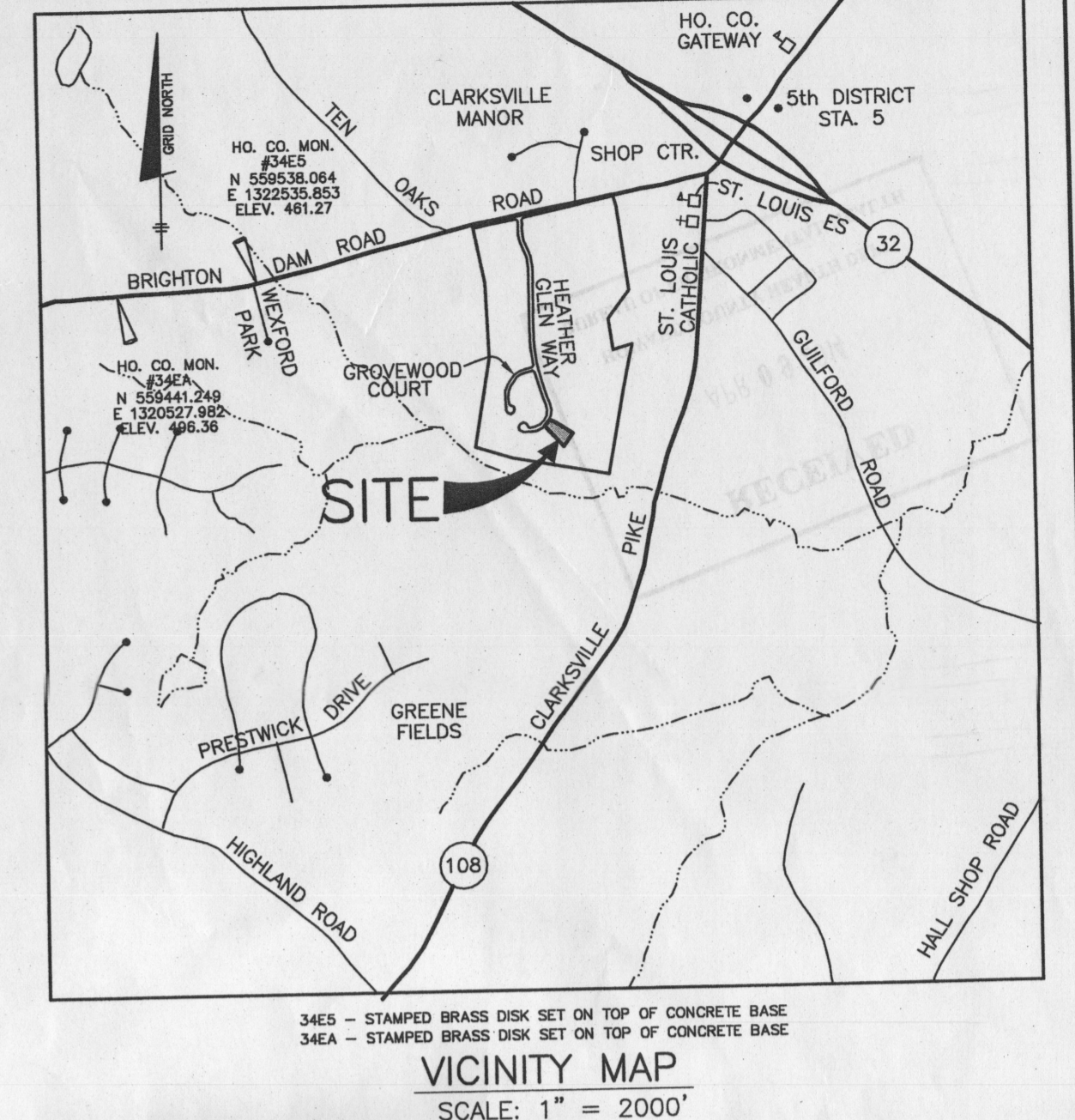
Distribution of Copies: White: Building Officials Green: PSZA,Zoning Yellow: PSZA,Engineering Pink: Health Gold: SHA



SEPTIC INVERT CHART	
INV @ HOUSE	416.92
GROUND @ HOUSE	421.50
INV IN BAT TANK	416.08
INV OUT BAT TANK	415.75
TOP OF BAT TANK	417.08
GROUND OVER TANK	418.88
INV IN DIST BOX	415.25
INV OUT DIST BOX	415.00
GROUND AT DIST BOX	418.00

LEGEND	
---	BOUNDARY
- - - -	EXISTING TOPO
---	10' BRL
---	BUILDING RESTRICTION LINE
▨	SEWAGE DISPOSAL AREA
▩	WELL BOX
⊙	WELL LOCATION
---	LIMIT OF DISTURBANCE
▩	S.C.E.
---	STABILIZED CONSTRUCTION ENTRANCE
SSS	SSS
---	SUPER SILT FENCE

- NOTES:**
- THE TOPOGRAPHY OF THIS PLAN IS TAKEN FROM FIELD SURVEY BY BENCHMARK ENGINEERING, INC. AND SIGNED F-06-072 PLANS AND IS VERIFIED TO ACCURATELY REPRESENT THE RELATIVE CHANGES ON THE SUBJECT PROPERTY.
 - THIS AREA DESIGNATES A PRIVATE SEWAGE DISPOSAL AREA OF AT LEAST 10,000 SQUARE FEET AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED. THIS SEWAGE DISPOSAL AREA SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWAGE EASEMENT. RECORDATION OF A REVISED SEWAGE EASEMENT SHALL NOT BE NECESSARY.
 - THE LOT SHOWN HEREON COMPLIES WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.
 - ANY CHANGES TO THE PRIVATE SEWERAGE EASEMENT SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
 - ALL WELLS AND SEPTIC SYSTEMS LOCATED WITHIN 100' OF THE LOT BOUNDARIES AND 200' DOWN GRADIENT OF ANY WELLS AND/OR SEPTIC SYSTEMS HAVE BEEN SHOWN.
 - THE EXISTING WELL ON THIS LOT (TAG NO. HO-95-0261) HAS BEEN FIELD LOCATED BY BENCHMARK ENGINEERING, INC. AND IS ACCURATELY SHOWN.
 - EXACT LENGTH OF SEPTIC TRENCHES ARE TO BE DETERMINED BY THE HEALTH DEPARTMENT AT THE TIME OF PRECONSTRUCTION INSPECTION.
 - SPOIL FROM THE TRENCHING OF THE SEPTIC AREA IS TO BE PLACED ON THE UPHILL SIDE OF THE EXCAVATION FOR EACH INDIVIDUAL LOT.
 - SEDIMENT AND EROSION CONTROLS SHALL BE PER THIS PLAN AND COMPLY WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
 - DRIVEWAY CULVERT COMPUTATIONS WERE APPROVED UNDER F-06-072. THE CULVERT SHALL BE A 15" CIRCULAR PIPE OR ELLIPTICAL EQUIVALENT.
 - STORMWATER MANAGEMENT FOR THIS LOT WAS PROVIDED UNDER F-06-072.



- SEQUENCE OF CONSTRUCTION**
- NOTIFY SEDIMENT CONTROL DIVISION 48 HOURS PRIOR TO START OF WORK
- Obtain grading permit. (day 1)
 - On-site Pre-Construction meeting. (day 2)
 - Clear and grub as necessary to install stabilized construction entrance and perimeter controls (super silt fences) (day 3)
 - Install the driveway culvert and provide adequate fill cover. (day 4)
 - Upon approval from the Howard County sediment control inspector, proceed to clear and grub within the perimeter. (day 5)
 - Excavate for foundation, pour and backfill. (day 5-12)
 - Install septic lines and tank. (day 13)
 - Finish house construction. (day 14-90)
 - Pave driveway. (day 91)
 - Final grade the lot and stabilize in accordance with the permanent seedbed notes including erosion control matting within 48 hours as shown on the plan. (day 93)
 - Upon approval from the Howard County sediment control inspector, remove sediment control devices and stabilize any remaining disturbed areas. (day 93)

ENGINEER'S CERTIFICATE

I, THE ENGINEER, 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 SOIL CONSERVATION DISTRICT.

BRIAN F. CLEARY 3/14/2014
DATE

DEVELOPER'S CERTIFICATE

I, THE DEVELOPER, CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN 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 THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

WILLIAMSBURG HOMES, INC. 3-13-14
DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John P. Winton 3/27/14
HOWARD SOIL CONSERVATION DISTRICT DATE

NRCS SOILS CHART				
SYMBOL	HYDRIC	HYDROLOGIC GROUP	ALTERNATE GROUP	NAME
GgA		B		GLENELG LOAM, 0 TO 3 PERCENT SLOPES
GgB		B		GLENELG LOAM, 3 TO 8 PERCENT SLOPES

NOTE: TEMPORARY OR PERMANENT STABILIZATION IS TO BE PERFORMED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR OR AT THE INTERVALS REQUIRED BY THE 2011 STANDARD & SPECIFICATIONS WHICHEVER IS MORE STRINGENT.

NOTE: SHOULD THE STOCKPILE EXCEED 15 FEET IN HEIGHT, IT MUST BE BENCHED. SEE SPECIFICATIONS B-4-8 ON SHEET 2.

THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF ANY WORK.

THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.

BENCHMARK ENGINEERING, INC.
ENGINEERS • LAND SURVEYORS • PLANNERS
8480 BALTIMORE NATIONAL PIKE • SUITE 315 • BELLOTT CITY, MARYLAND 21043
(P) 410-465-6100 (F) 410-465-6844
WWW.BE-CVLEADINGENGINEERING.COM

THE PRESERVE AT CLARKSVILLE
LOT 18
6275 HEATHER GLEN WAY

BUILDER: WILLIAMSBURG HOMES, INC.
5485 HARPERS FARM ROAD
SUITE 200
COLUMBIA, MARYLAND 21044
410-997-8800

TAX MAP: 34 GRID: 11 PARCEL: 77
ZONED: RR-DEO
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

CUSTOM GRADING PLAN & BUILDING PERMIT PLAN

DATE: MARCH 13, 2014 BEI PROJECT NO: 1407-W
SCALE: AS SHOWN SHEET 1 OF 2

DESIGN: DBT DRAWN: DBT

**HOWARD SOIL CONSERVATION DISTRICT
STANDARD 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 (313-1855).
- 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: A) 3 CALENDAR DAYS FOR ALL PERMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERMETER SLOPES AND ALL SLOPES OTHER THAN 3:1; B) 7 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. B-4-5), TEMPORARY SEEDING (SEC. B-4-4) AND MULCHING (SEC. B-4-3). TEMPORARY STABILIZATION WITH MULCHING 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:	1.09 ACRES
AREA DISTURBED:	0.51 ACRES
AREA TO BE ROOFED OR PAVED:	0.15 ACRES
AREA TO BE VEGETATIVELY STABILIZED:	0.36 ACRES
TOTAL CUT:	1,000* CY
TOTAL FILL:	1,000* CY
OFFSITE WASTE/BORROW LOCATION:	N/A
- ANY SEDIMENT CONTROL PRACTICE THAT IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROL 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 PERMETER 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.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER.
- ANY CHANGES OR REVISIONS TO THE SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE PLAN APPROVAL AUTHORITY PRIOR TO PROCEEDING WITH CONSTRUCTION.
- A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MINIMUM INCREASE OF 20 ACRES PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PREVIOUS GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE PLAN APPROVAL AUTHORITY, UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE PLAN APPROVAL AUTHORITY. NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.

* CUT/FILL NUMBERS ARE FOR SEDIMENT CONTROL PURPOSES ONLY. CONTRACTOR TO VERIFY.

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

Definition: To stabilize disturbed soils with vegetation for up to 6 months.
Purpose: To use fast growing vegetation that provides cover on disturbed soils.
Conditions Where Practice Applies: Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.

Criteria:

- Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardiness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths. If this Summary is not put on the plan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan.
- For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding.
- When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch as prescribed in Section B-4.3-A, 1b and maintain until the next seeding season.

B-4-4 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA

Definition: A mound or pile of soil protected by appropriately designed erosion and sediment control measures.
Purpose: To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage patterns.
Conditions Where Practice Applies: Stockpile areas are utilized when it is necessary to salvage and store soil for later use.
Criteria:

- The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.
- The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Section B-3 Land Grading.
- Runoff from the stockpile area must drain to a suitable sediment control practice.
- Access the stockpile area from the upgrade side.
- Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary waste or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner.
- Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.
- Stockpiles must be stabilized in accordance with the 3:1 day stabilization requirement as well as Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization.
- If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable sheeting.

Maintenance

The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section B-3 Land Grading.

H-5 STANDARDS AND SPECIFICATIONS FOR DUST CONTROL

Definition: Controlling the suspension of dust particles from construction activities.
Purpose: To prevent blowing and movement of dust from exposed soil surfaces to reduce on and off-site damage including health and traffic hazards.
Conditions Where Practice Applies: Areas subject to dust blowing and movement where on and off-site damage is likely without treatment.

Specifications:

- Mulches: See Section B-4-2 Soil Preparation, Topsoiling, and Soil Amendments. Section B-4-3 Seeding and Mulching, and Section B-4-4 Temporary Stabilization. Mulch must be anchored to prevent blowing.
- Vegetative Cover: See Section B-4-4 Temporary Stabilization.
- Tillage: Till to roughen surface and bring clods to the surface. Begin plowing on windward side of site. Chisel-type plows spaced at 12 inches apart, spring-tipped harrows, and similar plows are examples of equipment that may produce the desired effect.
- Grading: Sprinkle site with water until the surface is moist. Repeat as needed. The site must not be irrigated to the point that runoff occurs.
- Barriers: Solid board fences, silt fences, snow fences, burp fences, straw bales, and similar material can be used to control air currents and soil blowing.
- Chemical Treatment: Use of chemical treatment requires approval by the appropriate plan review authority.

General Specifications

- Class of turfgrass must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.
- Sod must be machine cut at a uniform soil thickness of 1/2 inch, plus or minus 1/8 inch, at the time of cutting. Measurement for thickness must exclude top growth and thatch. Broken pads and turf or uneven ends will not be acceptable.
- Standard size sections of sod must be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.
- Sod must not be harvested or transported when moisture content (excessively dry or wet) may adversely affect its survival.
- Sod must be harvested, delivered, and installed within a period of 36 hours. Sod not transported within this period must be approved by an agronomist or soil scientist prior to its installation.

2. Sod Installation

During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.

- Lay the first row of sod straight and with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.
- Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, peg or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact between sod roots and the underlying soil surface.
- Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operations of laying, tamping and irrigating for any piece of sod within eight hours.

3. Sod Maintenance

In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting.

- After the first week, sod watering is required as necessary to maintain adequate moisture content. Do not mow until the sod is firmly rooted. No more than 1/3 of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified.

4. Sod Installation

During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.

- Lay the first row of sod straight and with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.
- Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, peg or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact between sod roots and the underlying soil surface.
- Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operations of laying, tamping and irrigating for any piece of sod within eight hours.

5. Sod Maintenance

In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting.

- After the first week, sod watering is required as necessary to maintain adequate moisture content. Do not mow until the sod is firmly rooted. No more than 1/3 of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified.

6. Sod Installation

During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.

- Lay the first row of sod straight and with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.
- Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, peg or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact between sod roots and the underlying soil surface.
- Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operations of laying, tamping and irrigating for any piece of sod within eight hours.

7. Sod Maintenance

In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting.

- After the first week, sod watering is required as necessary to maintain adequate moisture content. Do not mow until the sod is firmly rooted. No more than 1/3 of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified.

8. Sod Installation

During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.

- Lay the first row of sod straight and with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.
- Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, peg or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact between sod roots and the underlying soil surface.
- Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operations of laying, tamping and irrigating for any piece of sod within eight hours.

9. Sod Maintenance

In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting.

- After the first week, sod watering is required as necessary to maintain adequate moisture content. Do not mow until the sod is firmly rooted. No more than 1/3 of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified.

10. Sod Installation

During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.

- Lay the first row of sod straight and with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.
- Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, peg or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact between sod roots and the underlying soil surface.
- Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operations of laying, tamping and irrigating for any piece of sod within eight hours.

11. Sod Maintenance

In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting.

- After the first week, sod watering is required as necessary to maintain adequate moisture content. Do not mow until the sod is firmly rooted. No more than 1/3 of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified.

12. Sod Installation

During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.

- Lay the first row of sod straight and with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.
- Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, peg or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact between sod roots and the underlying soil surface.
- Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operations of laying, tamping and irrigating for any piece of sod within eight hours.

13. Sod Maintenance

In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting.

- After the first week, sod watering is required as necessary to maintain adequate moisture content. Do not mow until the sod is firmly rooted. No more than 1/3 of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified.

14. Sod Installation

During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.

- Lay the first row of sod straight and with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.
- Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, peg or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact between sod roots and the underlying soil surface.
- Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operations of laying, tamping and irrigating for any piece of sod within eight hours.

15. Sod Maintenance

In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting.

- After the first week, sod watering is required as necessary to maintain adequate moisture content. Do not mow until the sod is firmly rooted. No more than 1/3 of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified.

16. Sod Installation

During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.

- Lay the first row of sod straight and with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.
- Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, peg or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact between sod roots and the underlying soil surface.
- Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operations of laying, tamping and irrigating for any piece of sod within eight hours.

17. Sod Maintenance

In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting.

- After the first week, sod watering is required as necessary to maintain adequate moisture content. Do not mow until the sod is firmly rooted. No more than 1/3 of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified.

18. Sod Installation

During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.

- Lay the first row of sod straight and with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.
- Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, peg or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact between sod roots and the underlying soil surface.
- Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operations of laying, tamping and irrigating for any piece of sod within eight hours.

19. Sod Maintenance

In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting.

- After the first week, sod watering is required as necessary to maintain adequate moisture content. Do not mow until the sod is firmly rooted. No more than 1/3 of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified.

20. Sod Installation

During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.

- Lay the first row of sod straight and with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.
- Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, peg or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact between sod roots and the underlying soil surface.
- Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operations of laying, tamping and irrigating for any piece of sod within eight hours.

21. Sod Maintenance

In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting.

- After the first week, sod watering is required as necessary to maintain adequate moisture content. Do not mow until the sod is firmly rooted. No more than 1/3 of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified.

22. Sod Installation

During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.

- Lay the first row of sod straight and with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.
- Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, peg or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact between sod roots and the underlying soil surface.
- Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operations of laying, tamping and irrigating for any piece of sod within eight hours.

23. Sod Maintenance

In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting.

- After the first week, sod watering is required as necessary to maintain adequate moisture content. Do not mow until the sod is firmly rooted. No more than 1/3 of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified.

24. Sod Installation

During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.

- Lay the first row of sod straight and with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.
- Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, peg or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact between sod roots and the underlying soil surface.
- Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operations of laying, tamping and irrigating for any piece of sod within eight hours.

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

Definition: The application of seed and mulch to establish vegetative cover.
Purpose: To protect disturbed soils from erosion during and at the end of construction.
Conditions Where Practice Applies: To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.

Criteria:

A. Seeding

- 1. Specifications**
 - All seed must meet the requirements of the Maryland State Seed Law. All seed must be subjected to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the Inspector to verify type of seed and seeding rate.
 - Mulch alone may be applied between the fall and spring seeding dates only if the ground is frozen. The appropriate seeding mixture must be applied when the ground thaws.
 - Inoculants: The inoculant for treating legumes seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants to seed directed on the package. Use four times the recommended rate when hydrosowing. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
 - Sod or seed must not 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.
- 2. Application**
 - Dry Seeding: This includes use of conventional drop or broadcast spreaders.
 - Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries.
 - Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with a weighted roller to provide good seed to soil contact.
 - Dill 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 inch of soil covering. Seedbed must be firm after planting.
 - Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
 - Hydrosowing: Apply seed uniformly with hydrosower (slurry includes seed and fertilizer).
 - If fertilizer is being applied at the time of seeding, the application rates should not exceed the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P2O5 (phosphorus), 200 pounds per acre; K2O (potassium), 200 pounds per acre.
 - Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydrosowing). Normally, not more than 2 tons are applied by hydrosowing at any one time. Soil pH, not more than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, siltics, rocks, trash, or other materials larger than 1 1/2 inches in diameter.

B. Mulching

- 1. Mulch Materials (in order of preference)**
 - Straw consisting of thoroughly cleaned, dry, oat, or barley and reasonably bright in color. Straw is to be free of noxious weed seeds as specified in the Maryland Seed Law and not moldy, decayed, or excessively dry.
 - Use only sterile straw mulch in areas where one species of grass is desired.
 - Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into a uniform fibrous physical state.
 - WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
 - WCFM, including dye, must contain no germination or growth inhibiting factors.
 - WCFM materials are to 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 must form a biotrick-like ground cover, on application, having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
 - WCFM material must not contain elements or compounds at concentration levels that will be phytotoxic.
 - WCFM must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately 1 millimeter, pH range of 4.0 to 8.5, ash content of 1.6 percent maximum and water holding capacity of 90 percent minimum.

2. Application

- Apply mulch to all seeded areas immediately after seeding.
- When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. When using a mulch anchoring tool, increase the application rate to 2.5 tons per acre.
- Wood cellulose fiber used as mulch must be applied at a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to attain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.

3. Anchoring

- Perform mulch anchoring immediately following application of mulch to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon the size of the 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 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 land, this practice should follow the contour.
 - Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water at a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
 - Synthetic binders such as Acrylic CLR (Aqua-Tack), DCA-70, Polyester, Terra Tax II, Terra Tack AR or other approved equal may be used. Follow application rates as specified by the manufacturer. Application of liquid binders needs to be heavier at the edges where wind catches mulch, such as in valleys and on crests of banks. Use of asphalt binders is strictly prohibited.
 - Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4 to 15 feet wide and 300 to 3,000 feet long.

B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

Definition: To stabilize disturbed soils with permanent vegetation.
Purpose: To use long-lived perennial grasses and legumes to establish permanent ground cover on disturbed soils.
Conditions Where Practice Applies: Exposed soils where ground cover is needed for 6 months or more.

Criteria:

A. Seed Mixtures

- 1. General Use**
 - Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.
 - Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS Technical Field Office Guide, Section 342 - Critical Area Planning.
 - For sites having disturbed areas over 5 acres, use and show the rates recommended by the soil testing agency.
 - For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 1/2 pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary.
- 2. Turfgrass Mixtures**
 - Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.
 - Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The summary is to be placed on the plan.
 - Kentucky Bluegrass: Full sun mixtures: For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky Bluegrass Cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
 - Kentucky Bluegrass/Perennial Ryegrass: Full sun mixtures: For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentucky Bluegrass Cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
 - Tall Fescue/Kentucky Bluegrass: Full sun mixtures: For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes: Certified Tall Fescue Cultivars 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.
 - Kentucky Bluegrass/Fine Fescue: Shade mixtures: For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf areas. Mixture includes Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1 1/2 to 3 pounds per 1000 square feet.
 - Notes: Select turfgrass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland." Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line.
 - Ideal Times of Seeding for Turf Grass Mixtures

Western MD:	March 15 to June 1, August 1 to October 1 (Hardiness Zone: 5b)
Central MD:	March 1 to May 15, August 15 to October 15 (Hardiness Zone: 6)
Southern MD:	March 1 to May 15, August 15 to October 15

B. Turfgrass Installation

- 1. Turfgrass Installation**
 - Till areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 1/2 inches in diameter. The resulting seedbed must be in such condition that future mowing of grasses will pose no difficulty.
 - If soil moisture is deficient, supply new seedlings with adequate water for plant growth (1/2 to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is not especially true when seedlings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

B. Sod Installation

- 1. Sod Installation**
 - Class of turfgrass must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.
 - Sod must be machine cut at a uniform soil thickness of 1/2 inch, plus or minus 1/8 inch, at the time of cutting. Measurement for thickness must exclude top growth and thatch. Broken pads and turf or uneven ends will not be acceptable.
 - Standard size sections of sod must be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.
 - Sod must not be harvested or transported when moisture content (excessively dry or wet) may adversely affect its survival.
 - Sod must be harvested, delivered, and installed within a period of 36 hours. Sod not transported within this period must be approved by an agronomist or soil scientist prior to its installation.

2. Sod Installation

- 2. Sod Installation**
 - During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.
 - Lay the first row of sod straight and with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.
 - Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, peg or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact between sod roots and the underlying soil surface.
 - Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operations of laying, tamping and irrigating for any piece of sod within eight hours.

3. Sod Installation

- 3. Sod Installation**
 - In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting.
 - After the first week, sod watering is required as necessary to maintain adequate moisture content. Do not mow until the sod is firmly rooted. No more than 1/3 of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain