



# 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: 7-25-13

Permit No.: B13002445

Building Address: 1120 Dorsch Farms Rd  
 City: Ellicott City State: Md Zip Code: 21043  
 Suite/Apt. #: 7 SDP/WP/BA #: 6P-13-090  
 Census Tract: \_\_\_\_\_ Subdivision: Carroll Ziegler  
 Section: \_\_\_\_\_ Area: \_\_\_\_\_ Lot: 7  
 Tax Map: \_\_\_\_\_ Parcel: \_\_\_\_\_ Grid: \_\_\_\_\_  
 Zoning: \_\_\_\_\_ Map Coordinates: 26 B-3 Lot Size: 60,661 sq ft

Existing Use: Empty lot  
 Proposed Use: To build new home on lot  
 Estimated Construction Cost: \$ 300,000  
 Description of Work: Custom to build new three single family home with integral garage on empty lot. Finished Basement  
 Occupant or Tenant: \_\_\_\_\_  
 Was tenant space previously occupied?  Yes  No  
 Contact Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
 Email: \_\_\_\_\_

Property Owner's Name: Carrigan Homes  
 Address: 9812 Caitlins Ct  
 City: Ellicott State: Md Zip Code: 21042  
 Phone: 410-977-8927 Fax: 410-465-5608  
 Email: CarriganHomes@Comcast.net

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

Contractor Company: Carrigan Homes  
 Contact Person: Owen Kelly  
 Address: 9812 Caitlins Ct  
 City: Ellicott State: Md Zip Code: 21042  
 License No.: 358  
 Phone: 410-977-8927 Fax: \_\_\_\_\_  
 Email: CarriganHomes Inc

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

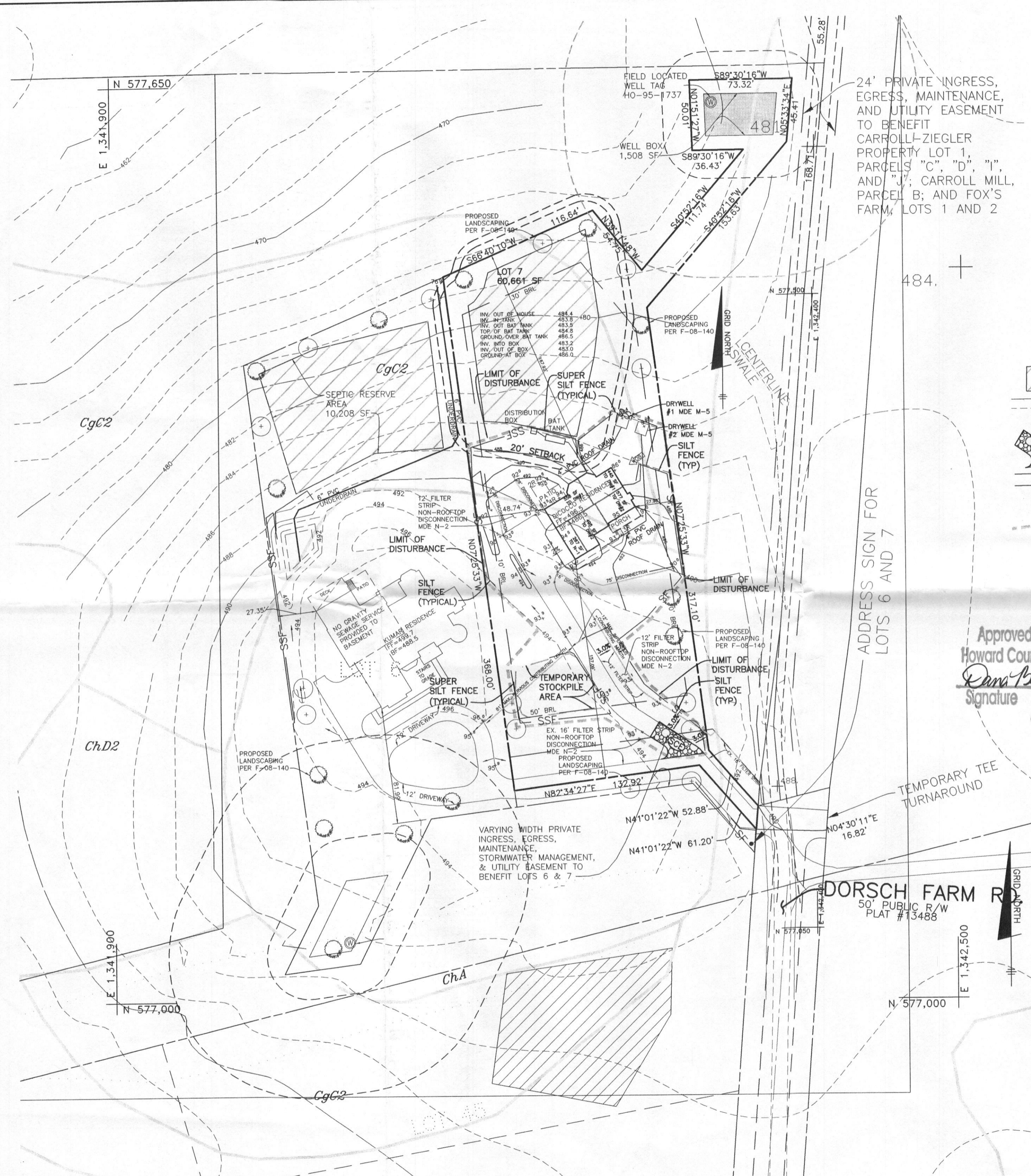
Commercial Building Characteristics	Residential Building Characteristics	
Height:	<input checked="" type="checkbox"/> SF Dwelling <input type="checkbox"/> SF Townhouse	
No. of stories:	Depth	Width
Gross area, sq. ft./floor:	1 <sup>st</sup> floor:	
	2 <sup>nd</sup> floor:	
Area of construction (sq. ft.):	Basement:	
	<input checked="" type="checkbox"/> Finished Basement	
Use group:	<input type="checkbox"/> Unfinished Basement	
	<input type="checkbox"/> Crawl Space	
<b>Construction type:</b>	<input type="checkbox"/> Slab on Grade	
<input type="checkbox"/> Reinforced Concrete	No. of Bedrooms: <u>4</u>	
<input type="checkbox"/> Structural Steel	<b>Multi-family Dwelling</b>	
<input type="checkbox"/> Masonry	No. of efficiency units:	
<input type="checkbox"/> Wood Frame	No. of 1 BR units:	
<input type="checkbox"/> State Certified Modular	No. of 2 BR units:	
	No. of 3 BR units:	
	Other Structure:	
	Dimensions:	
<input checked="" type="checkbox"/> Roadside Tree Project Permit	Footings:	
<input type="checkbox"/> Yes <input type="checkbox"/> No	Roof:	
Roadside Tree Project Permit #	<input type="checkbox"/> State Certified Modular	
	<input type="checkbox"/> Manufactured Home	

Utilities	
<b>Water Supply</b>	
<input type="checkbox"/> Public	
<input checked="" type="checkbox"/> Private	
<b>Sewage Disposal</b>	
<input type="checkbox"/> Public	
<input checked="" type="checkbox"/> Private	
Electric: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Gas: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<b>Heating System</b>	
<input checked="" type="checkbox"/> Electric <input type="checkbox"/> Oil	
<input type="checkbox"/> Natural Gas <input type="checkbox"/> Propane Gas	
<input type="checkbox"/> Other:	
<b>Sprinkler System:</b>	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Grading Permit Number: <u>G13000249</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 PERMITTED AND POSTING NOTICES.

Applicant's Signature: Owen Kelly  
 Email Address: Carriganhomes@Comcast.net

Print Name: Owen Kelly  
 Date: 7-25-13



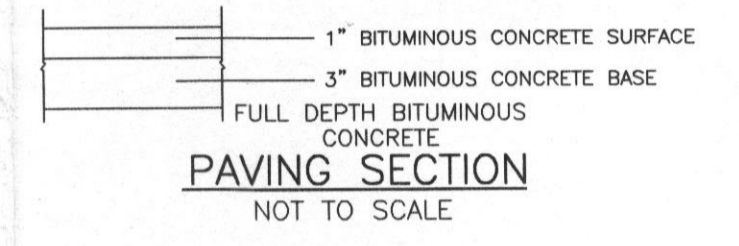
24' PRIVATE INGRESS, EGRESS, MAINTENANCE, AND UTILITY EASEMENT TO BENEFIT CARROLL-ZIEGLER PROPERTY LOT 1, PARCELS "C", "D", "I", AND "J"; CARROLL MILL, PARCEL B; AND FOX'S FARM, LOTS 1 AND 2

**NOTES:**

1. THE LOT SHOWN HEREON WAS RECORDED ON THE PLAT FOR CARROLL-ZIEGLER PROPERTY, PLAT No. 21057. REFER TO THE PLAT FOR LOT DIMENSIONS, LOT AREAS AND ALL EASEMENTS.
2. THIS AREA DESIGNATES A PRIVATE SEWERAGE EASEMENT OF 10,000 SQUARE FEET AS REQUIRED BY THE STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWERAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA IS RESTRICTED UNTIL PUBLIC SEWER IS AVAILABLE. THIS EASEMENT SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWERAGE EASEMENT. ANY CHANGES TO A PRIVATE SEWERAGE EASEMENT SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN. RECORDATION OF A MODIFIED SEWERAGE EASEMENT PLAT SHALL NOT BE NECESSARY.
3. SEDIMENT AND EROSION CONTROLS WERE APPROVED BY HOWARD SOIL CONSERVATION DISTRICT UNDER A GRADING PLAN AND MODIFIED FOR THIS SPECIFIC HOUSE.
4. TOPOGRAPHY SHOWN HEREON IS TAKEN FROM THE APPROVED ROAD CONSTRUCTION PLANS AND HAS BEEN FIELD VERIFIED BY BENCHMARK ENGINEERING, INC., ON OR ABOUT APRIL, 2006
5. EXACT LENGTH OF SEPTIC TRENCHES ARE BE DETERMINED BY THE HEALTH DEPARTMENT AT THE TIME OF TRENCH LAYOUT AND INSPECTION.
6. SPOIL FROM THE TRENCHING OF THE SEPTIC AREA IS TO BE PLACED ON THE UPHILL SIDE OF THE EXCAVATION FOR EACH INDIVIDUAL LOT.
7. ALL SEDIMENT AND EROSION CONTROL FEATURES USED ON THIS SITE SHALL COMPLY WITH 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
8. ALL DRAINAGE AND STORMWATER MANAGEMENT FEATURES USED ON THIS SITE MUST COMPLY WITH THE APPROVED ROAD CONSTRUCTION PLANS OR ENVIRONMENTAL CONCEPT PLAN.
9. SEPTIC TANK FOR THIS LOT TO BE 2,000 GALLONS.
10. THE EXISTING WELL SHOWN ON THIS PLAN, HO-95-1737, HAS BEEN FIELD LOCATED BY BENCHMARK ENGINEERING, INC. AND IS ACCURATELY SHOWN.
11. THERE ARE NO EXISTING WELLS OR SEPTIC SYSTEMS WITHIN 100' OF THIS PROJECT'S BOUNDARY EXCEPT AS NOTED.
12. ANY CHANGES TO A PRIVATE SEWERAGE EASEMENT SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
13. STORMWATER MANAGEMENT FOR THE HOUSE AND THE TURNAROUND AREA OF THE DRIVEWAY IS PROVIDED BY MICRO-BICRETENTION FACILITIES. SOME OF THE DRIVEWAY IS TREATED BY FILTER STRIPS.

**LEGEND**

- EXISTING SEPTIC EASEMENT
- EXISTING CONTOURS
- FIELD LOCATED WELL
- STABILIZED CONSTRUCTION ENTRANCE
- SILT FENCE
- SUPER SILT FENCE
- EXISTING TREELINE
- SOILS
- LIMIT OF DISTURBANCE



Approved Septic System Plan  
 Howard County Health Department  
*Dana Perout* 8-21-13  
 Signature *P-13002915*

ADDRESS SIGN FOR LOTS 6 AND 7

**DORSCH FARM ROAD**  
 50' PUBLIC R/W  
 PLAT #13488

<b>BENCHMARK</b> ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS <b>ENGINEERING, INC.</b> 8480 BALTIMORE NATIONAL PIKE ▲ SUITE 418 ELLICOTT CITY, MARYLAND 21043 PHONE: 410-465-6105 ▲ FAX: 410-465-6644 BEI@BEI-CIVILENGINEERING.COM	
OWNER/BUILDER:	CARRIGAN HOMES 9812 CAITLINS COURT ELLICOTT CITY, MARYLAND 21042 410-465-7755
PROJECT:	<b>CARROLL-ZIEGLER PROPERTY LOT 7</b>
LOCATION:	MANOR LANE TAX MAP: 23, GRID: 10 P/O PARCEL: 148 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TITLE:	<b>BUILDING PERMIT PLAN</b>
HOUSE TYPE:	<b>DICICCO RESIDENCE</b>
DATE:	JUNE, 2013
PROJECT NO.:	2571
DESIGN:	JMC
DRAFT:	JMC
SCALE:	1" = 50'
DRAWING	<u>1</u> OF <u>2</u>

Drywell Construction						
drywell	Existing Grade	Proposed Ground	Top of Dry Well	Depth (ft)	Length (ft)	Width (ft)
1	484.4	464.4	483.4	5	8.10	8.10
2	484.4	464.4	483.4	5	8.10	8.10

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORMWATER INFILTRATION TRENCHES (1-1) AND DRY WELLS (M-5)

a. The Owner shall inspect the monitoring wells and structures on a quarterly basis and after every heavy storm event.

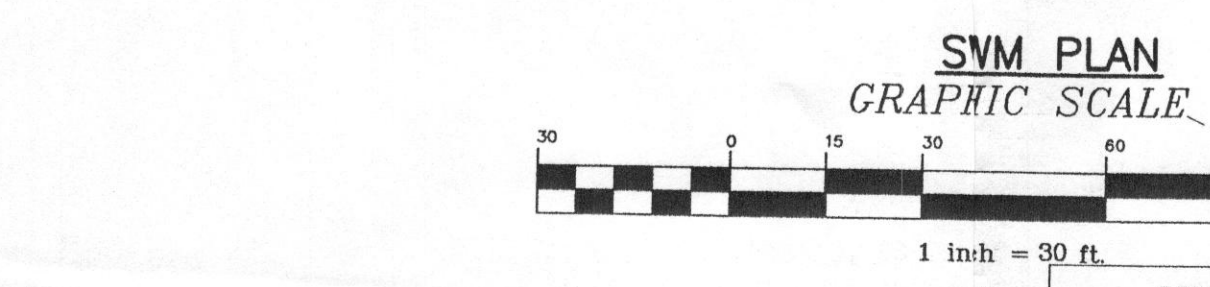
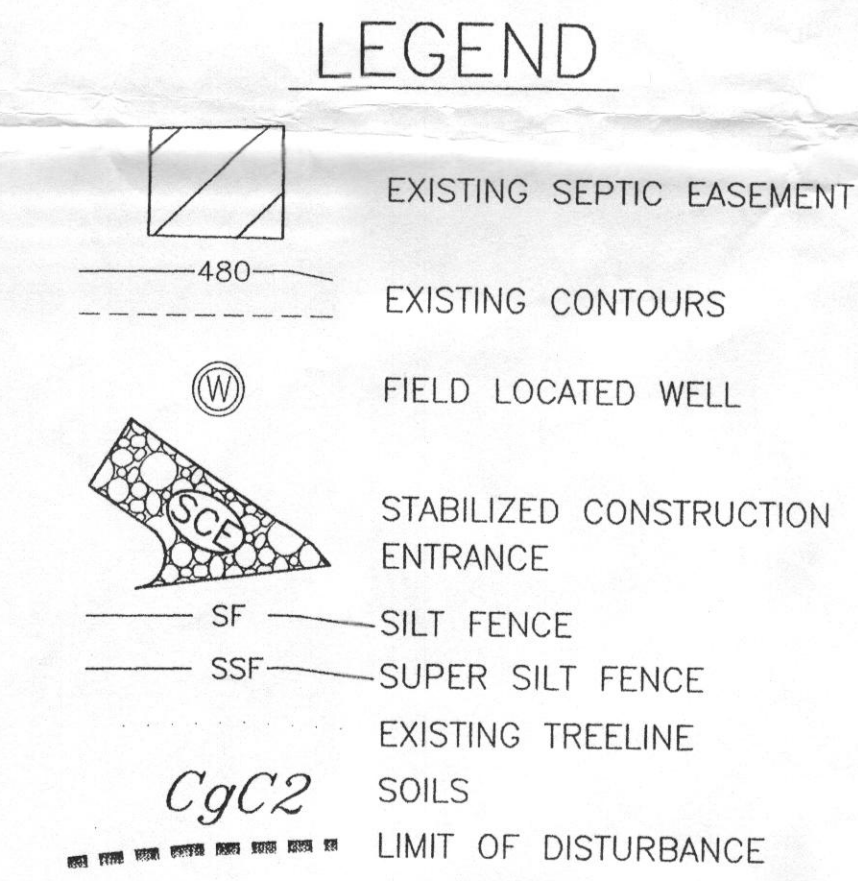
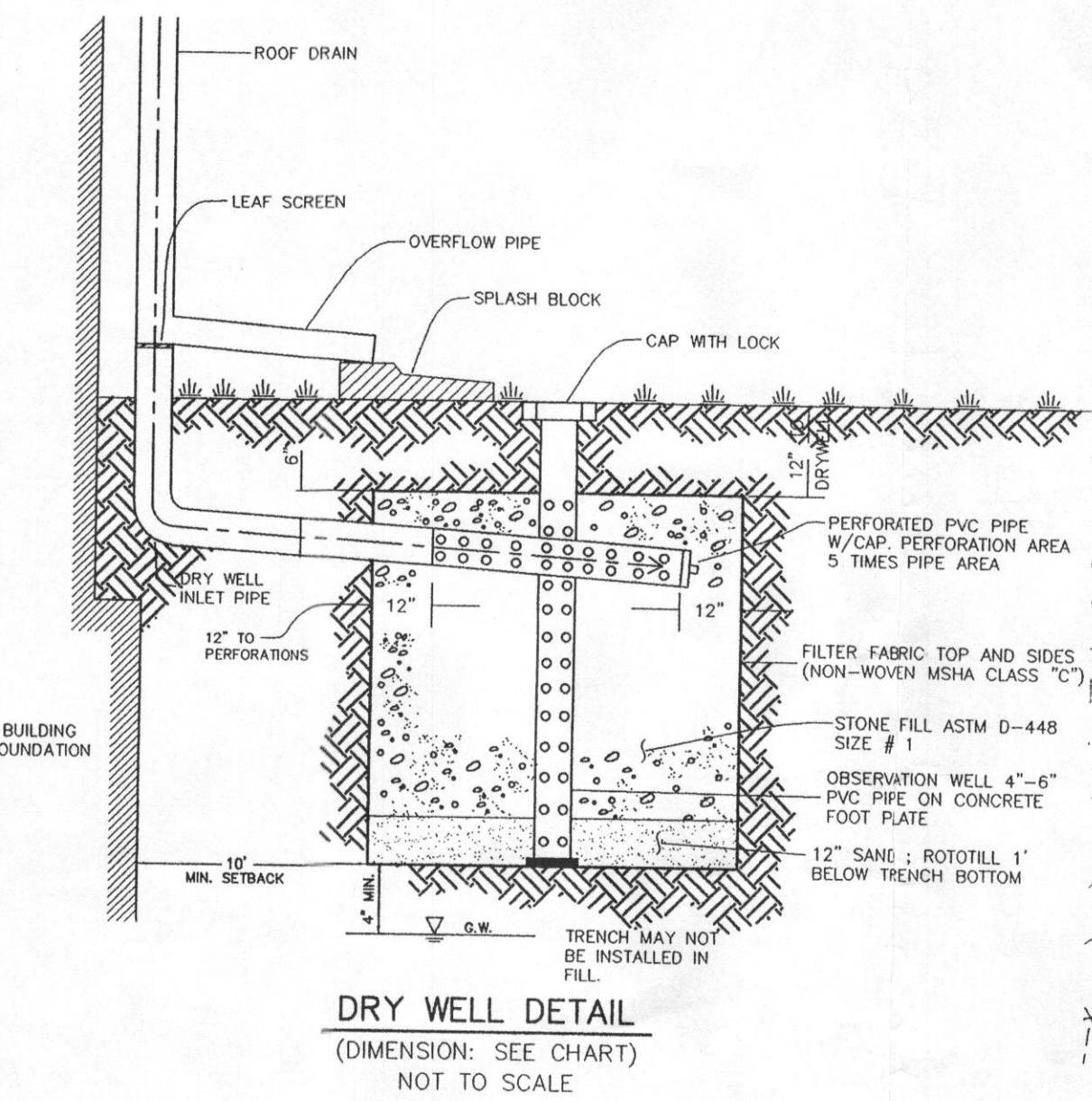
b. The Owner shall record the water levels and sediment build up in the monitoring wells over a period of several days to insure trench drainage.

c. The Owner shall maintain a log book to determine the rate at which the facility drains.

d. When the facility becomes clogged so that it does not drain within a seventytwo (72) hour time period, corrective action shall be taken.

e. The maintenance log book shall be available to Howard County for inspection to insure compliance with operation and maintenance criteria.

f. Once the performance characteristics of the infiltration facility have been verified, the monitoring schedule can be reduced to an annual basis unless the performance data indicates that a more frequent schedule is required.



**SOILS LEGEND**

SYMBOL	TYPE	NAME
CgC2	B	CHESTER GRAVELLY SILT LOAM - 8 TO 15 PERCENT SLOPES - MODERATELY ERODED
ChC	B	CHESTER SILT LOAM, 0 TO 3 PERCENT SLOPES

INDICATES HYDRIC SOILS

TAKEN FROM SOIL SURVEY, HOWARD COUNTY, MARYLAND (ISSUED JULY 1968) MAP NO. 31

**ENGINEER'S CERTIFICATE**

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

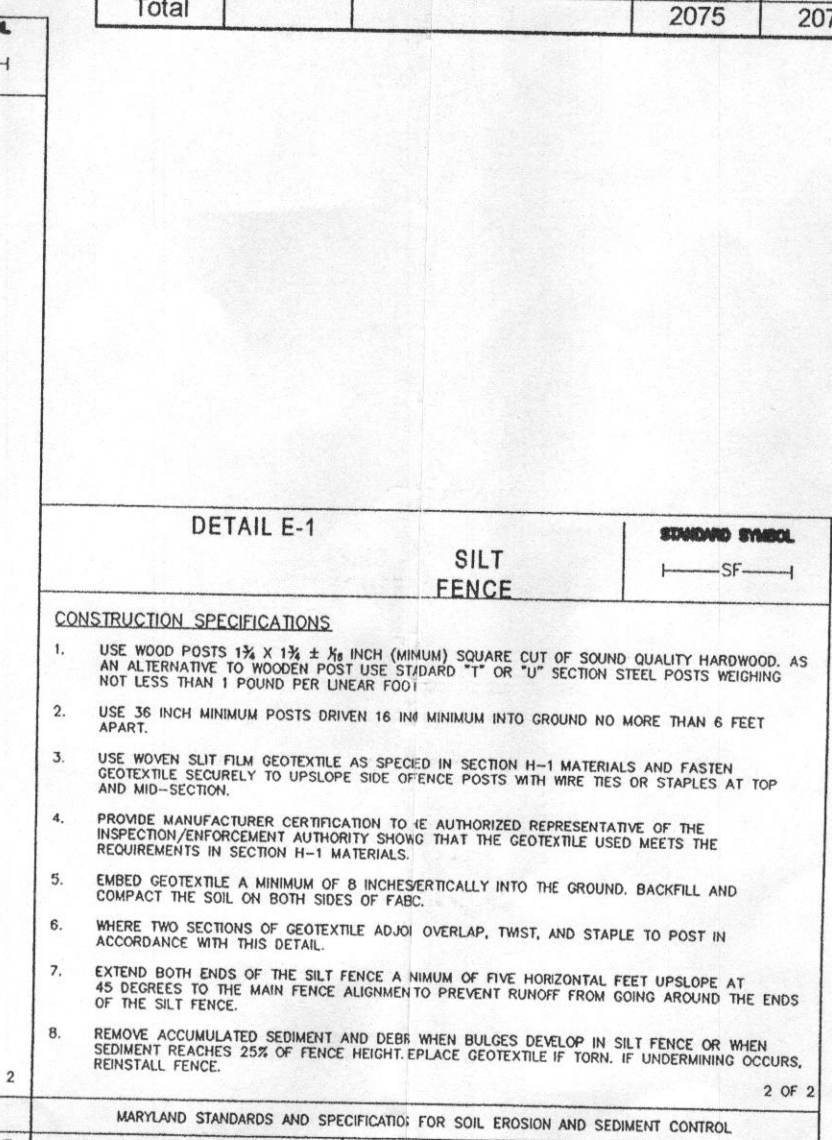
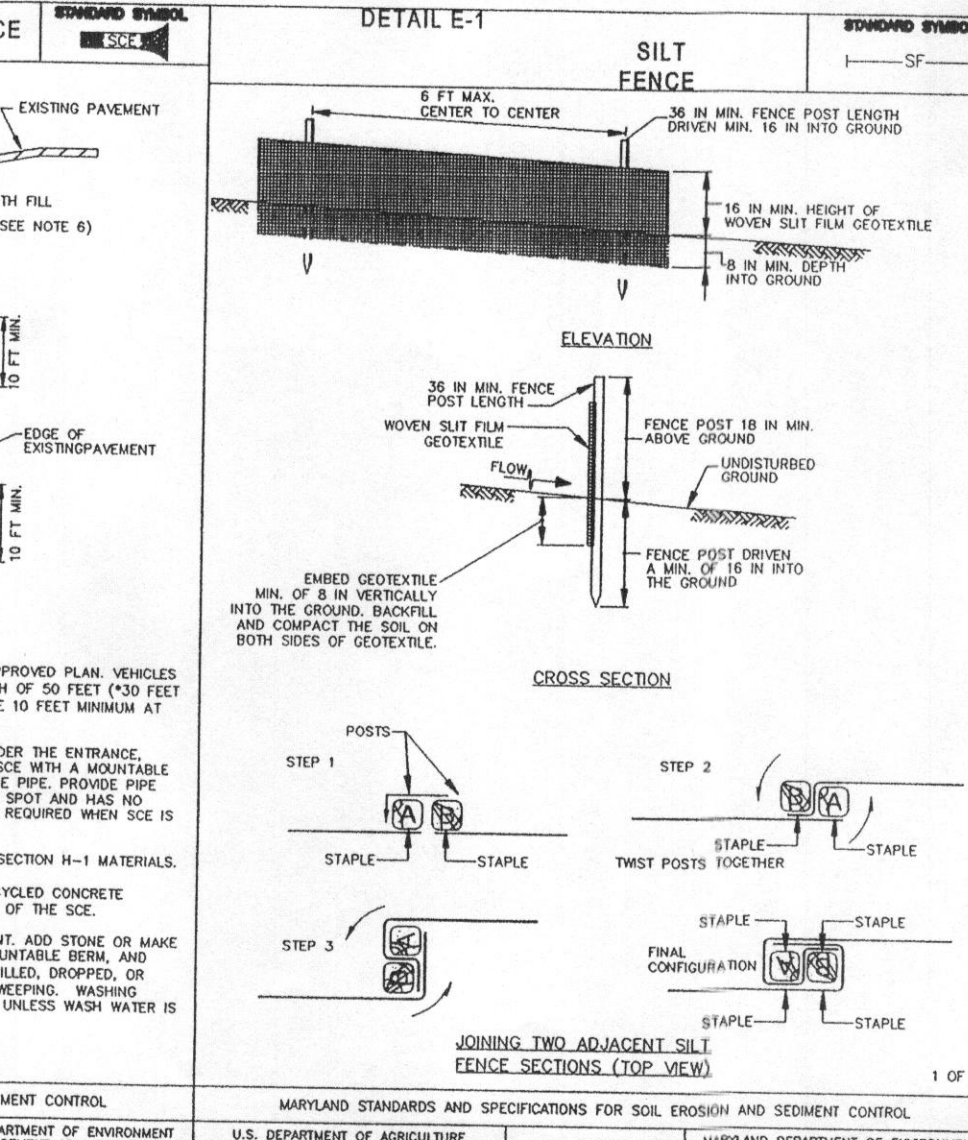
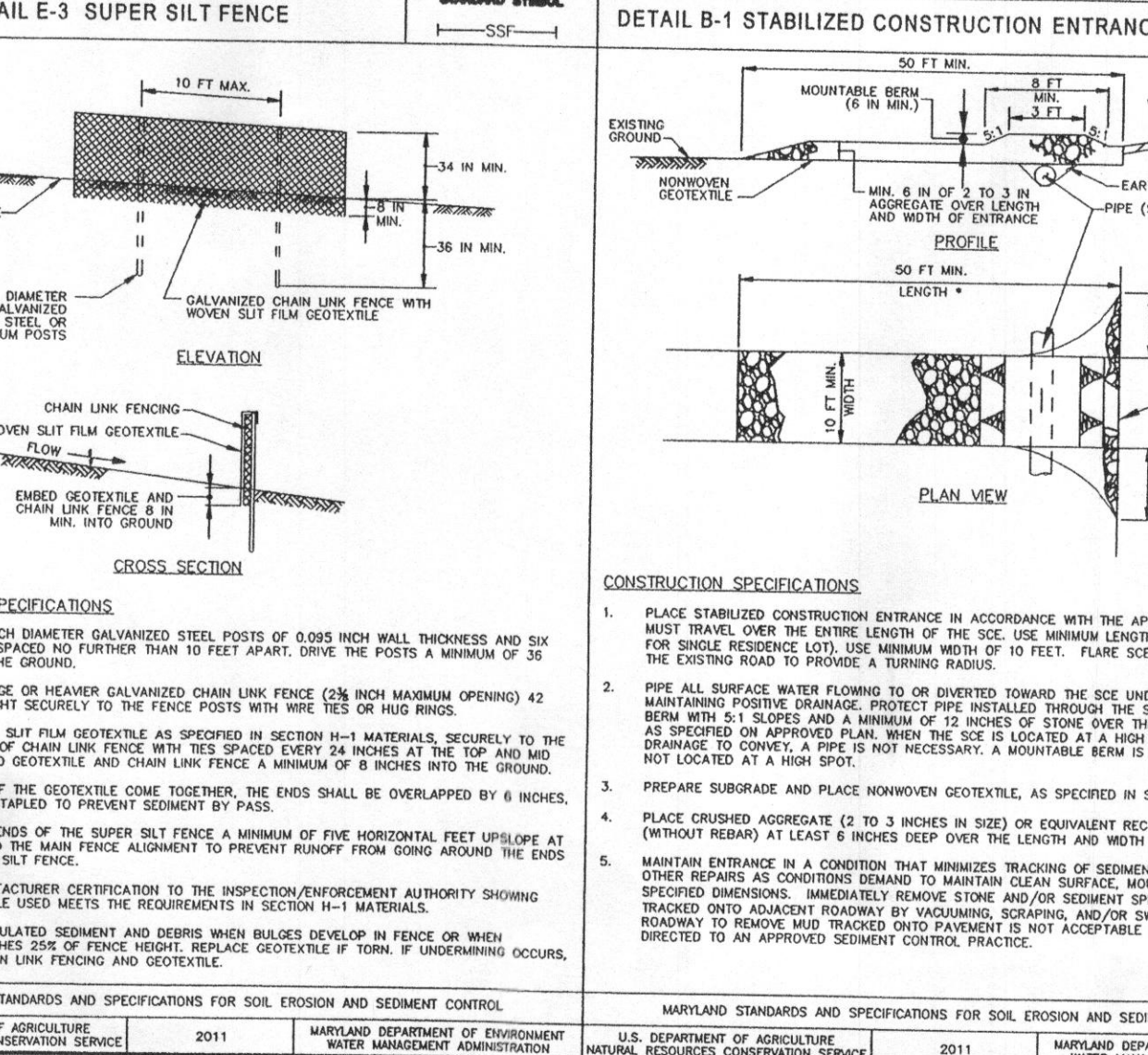
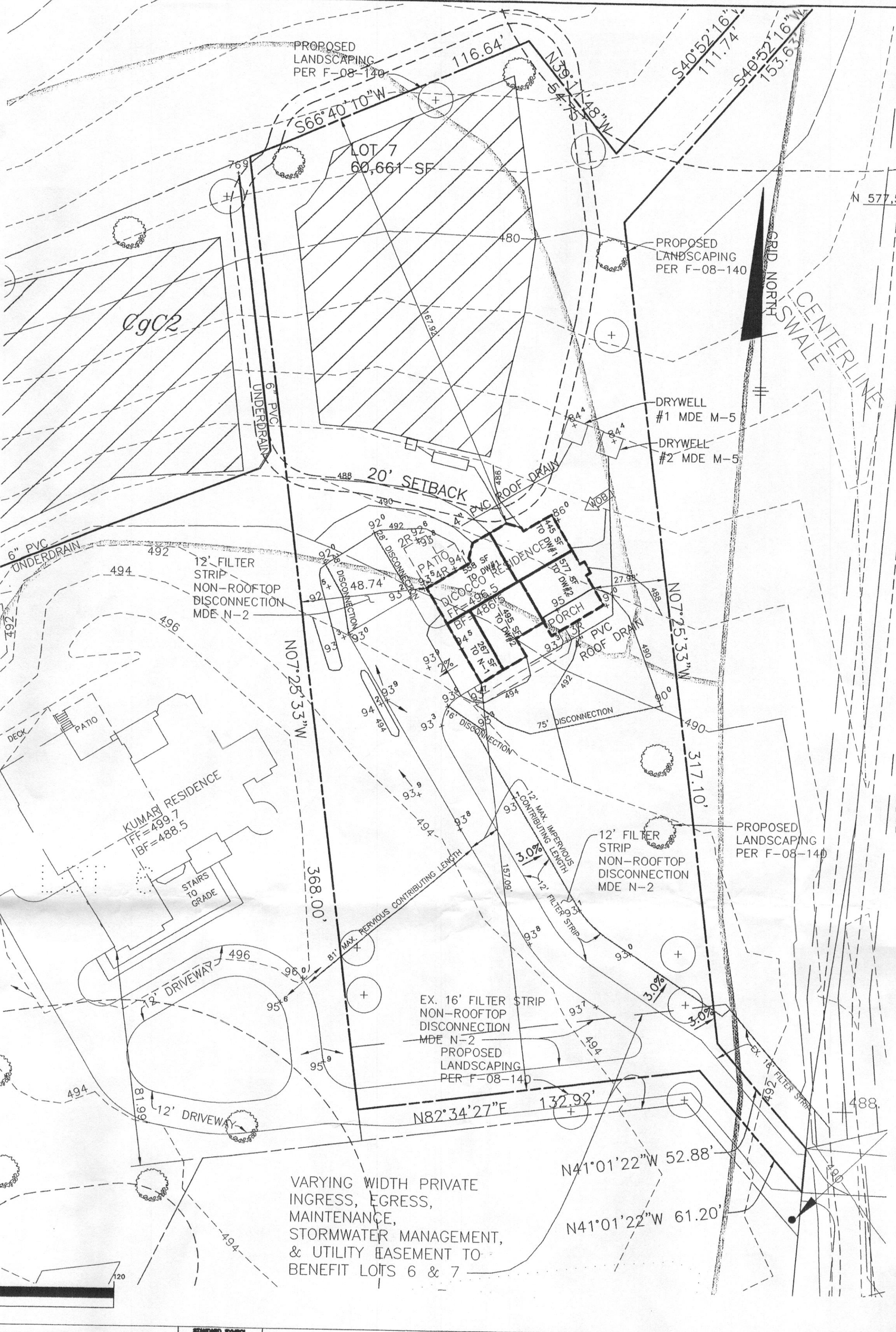
ENGINEER: OWEN KELLY, P.E. # 28559 DATE: 7/18/2013

**DEVELOPER'S CERTIFICATE**

I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND THAT I AM RESPONSIBLE FOR THE PROTECTION OF THE SITE CONDITIONS AND THAT I AM RESPONSIBLE FOR THE PROTECTION OF THE SITE CONDITIONS AND THAT I AM RESPONSIBLE FOR THE PROTECTION OF THE SITE CONDITIONS.

BUILDER: OWEN KELLY, CARRIAGE HOMES DATE: 7-19-13

HOWARD SCD DATE: 7/23/13



**B-4 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION**

Definition: Using vegetation as cover to protect exposed soil from erosion.

Purpose: To promote the establishment of vegetation on exposed soil.

Conditions Where Practice Applies

All on disturbed areas not stabilized by other methods. This specification is divided into sections on incremental stabilization; soil preparation, soil amendments and topsoiling; seeding and mulching; temporary stabilization; and permanent stabilization.

Effects on Water Quality and Quantity

Stabilization practices 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.

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. Over time, the increased organic matter content and improved 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 practices must remain in place during seeding, seedbed preparation, seeding, mulching, and vegetative establishment.

Adequate Vegetative Establishment

Inspect seedbed areas for vegetative establishment and make necessary repairs, replacements, and reseedings within the planting season.

1. Adequate vegetative stabilization requires 85 percent groundcover.
2. If an area has less than 40 percent groundcover, restabilize following the original recommendations for lime, fertilizer, seedbed preparation, and seeding.
3. If an area between 40 and 94 percent groundcover, over-seed and fertilize using half of the rates originally specified.
4. Maintenance fertilizer rates for permanent seeding are shown in Table B.6.

**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

1. 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.
2. For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding.
3. When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch alone as prescribed in Section B-4-3-A.1.b and maintain until the next seeding season.

**B-4-3 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

1. The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.
2. 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.
3. Runoff from the stockpile area must drain to a suitable sediment control practice.
4. Access the stockpile area from the upgrade side.
5. Clear water runoff from the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary silt or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner.
6. Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.
7. Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization.
8. 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.

**Dry Well Design**

Practice	Type	DA	AF	ESDv Req	75% ESDv Req	ESDv Pro.	Pe Test
1	M-6	1001	98	79	60	98	Pass
2	M-6	1071	98	85	64	98	Pass
Total		2071	197		123		

**Drywell Chart**

drywell	Vol. Req. (cf)	Depth (ft)	Length (ft)	Width (ft)	Area (sf)	Vol. Prov. (cf)	Obligation
1	79.40	5	8.10	8.10	65.8	98.42	fulfilled
2	84.87	5	8.10	8.10	65.8	98.42	fulfilled

**ESDV COMPUTATIONS**

Imp Area	Type	lot - ESD #	DA (sf)	Imp. (sf)	Qe (cfs)	ESDv Inflow (cf)	ESDv Outflow (cf)	Vol. of DW (cf)
1	M-5	dry Well #1	1003	1003	0.95	84.87	98.4	98.4
2	M-5	dry Well #2	1072	1072	0.95	84.87	98.4	98.4
Total			2075	2075		169.74	196.8	196.8

**B-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS**

Definition: The process of preparing the soils to sustain adequate vegetative stabilization.

Purpose: To provide a suitable soil medium for vegetative growth.

Conditions Where Practice Applies

Where vegetative stabilization is to be established.

Criteria

1. Soil Preparation
  - a. Temporary Stabilization
    - i. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrow or chisel plow or ripper mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.
    - ii. Apply fertilizer and lime as prescribed on the plans.
    - iii. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disk or other suitable means.
  2. Permanent Stabilization
    - i. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
      - i. Soil pH between 6.0 and 7.0.
      - ii. Soluble salts less than 500 parts per million (ppm).
      - iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: If forgrasses will be planted, then a sandy soil (less than 30 percent silt plus clay) will be acceptable.
      - iv. Soil contains 1.5 percent minimum organic matter by weight.
      - v. Soil contains sufficient pore space to permit adequate root penetration.
    - ii. Application of amendments or topsoil is required if on-site soils do not meet the above conditions.
    - iii. Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise prepared to meet the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.
    - iv. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.
2. Topsoiling
  - i. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is 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.
  - ii. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.
  - iii. Topsoiling is limited to areas having 2:1 or flatter slopes where:
    - a. The texture of the exposed subsoil/parent material is not adequate to produce vegetatively growth.
    - b. 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.
    - c. The original soil to be vegetated contains material toxic to plant growth.
    - d. The soil is so acidic that treatment with limestone is not feasible.
  - iv. Areas having slopes steeper than 2:1 require special consideration and design.
  - v. Soil Specifications: Soil to be used as topsoil must meet the following criteria:
    - a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 8 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2 inches in diameter.
    - b. Topsoil must be free of noxious plants or plant parts such as thistles, grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified by the appropriate approval authority.
    - c. Topsoil substitutes 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.
  - vi. Topsoil Application
    - a. Erosion and sediment control practices must be maintained when applying topsoil.
    - b. Uniformly distributed topsoil in a 4 to 8 inch layer and lightly compacted to a minimum thickness of 4 inches. Spreading is to be performed in a manner that minimizes soil erosion and seedling competition. Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
    - c. Topsoil must not be placed if the topsoil or subsoil is in a frozen or ruddy condition, to proper grading and seedling and in a condition that may otherwise be detrimental when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedling.
3. Soil Amendments (Fertilizer and Lime Specifications)
  - i. Soil tests shall be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples shall be prepared by the appropriate approval authority, free flowing and suitable to accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
  - ii. Lime materials must be ground limestone (hydrated or burnt lime) may be substituted except when hydroseeding which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
  - iii. Where the subsoil is either highly acidic or composed of heavy clay, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

**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 a perimeter control, slope, and any disturbed area not under active grading.

Criteria

1. Specifications
  - a. All seed must meet the requirements of the Maryland State Seed Law. All seed must be subject to testing by a recognized seed laboratory. All seed used must have been tested within 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.
  - b. Mulch alone may be applied between the fall and spring seeding dates only if the ground is frozen. The appropriate seeding mixtures must be applied when the ground thaws. Note: It is very important to keep inoculant as cool as possible until use. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
  - c. Inoculant: The inoculant for treating legumes should 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 freeze inoculants as directed on the package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until use. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
  - d. Seed 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
  - i. Incorporated seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1. Permanent Seeding Table B.3 or site-specific seeding summaries.
  - ii. 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.
  - iii. Drill or Outdragger Seeding: Mechanized seeders that apply and cover seed with soil. Outdragger 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.
  - iv. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
  - v. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).
  - vi. 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 total of soluble P2O5; K2O (potassium), 200 pounds per acre.
  - vii. Lime: Use only ground agricultural limestone (up 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.
  - viii. Mix seed and fertilizer on site and seed immediately and without interruption. When hydroseeding do not incorporate seed into the soil.
3. Mulching
  - i. Mulch Materials (in order of preference)
    - a. Straw consisting of thoroughly threshed wheat, rye, 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 musty, moldy, decayed, or excessively dusty. Note: Use only straw mulch that is free of noxious weed seeds as specified in the Maryland Seed Law and not musty, moldy, decayed, or excessively dusty.
    - b. Wood Cellulose Fiber Mulch (WCFFM) consisting of specially prepared wood cellulose processed into a uniform fibrous physical state.
    - c. WCFFM is to be dried green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformity spread slurry.
    - d. WCFFM, including dye, must contain no germination or growth inhibiting factors.
    - e. WCFFM materials are to be manufactured and processed in such a manner that the water under agitation 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 blotter-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.
    - f. WCFFM material must not contain elements or compounds at concentration levels that will be phytotoxic.
    - g. WCFFM 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.
  - ii. Apply mulch to all seeded areas immediately after seeding.
  - iii. 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 to 3 tons per acre.
  - iv. 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.
  - v. Apply mulch anchoring immediately following application of mulch to minimize loss by wind or water. This to be done by one of the following methods (listed by preference), depending upon the size of the area and erosion hazard:
    - a. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor the 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.
    - b. If used on sloping land, this practice should follow the contour.
    - c. Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds of wood cellulose fiber per 100 gallons of water.
    - d. 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.
    - e. Use of asphalt binders is strictly prohibited.
  - vi. 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 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.

Criteria

1. 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 the surface.
2. Vegetative Cover: See Section B-4-4 Temporary Stabilization.
3. Tillage: Till to roughen surface and bring clods to the surface. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, spring-tipped harrows, and similar plows and assemblies of equipment that may produce the desired effect.
4. Irrigation: Sprinkle site with water until the surface is moist. Repeat as needed. The site must not be irrigated to the point that runoff occurs.
5. Barriers: Solid board fences, 8 ft fences, snow fences, burlap fences, straw bales, and similar material can be used to control air currents and soil blowing.
6. Chemical Treatment: Use of chemical treatment requires approval by the appropriate plan review authority.

**SEDIMENT CONTROL NOTES**

1. 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 (D13-1855).
2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereto.
3. Following initial soil disturbance or re-disturbance, permanent or temporary stabilization shall be completed within: a) 3 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and any other structures; b) 7 days to all other disturbed or graded areas on the project site.
4. 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 stabilization (Sec. B-4-4) and mulching (Sec. B-4-3). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
5. All sediment control structures are to remain in place and are to be maintained in accordance with the requirements of the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division.
6. All sediment control structures are to be maintained in accordance with the requirements of the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division.
7. Any sediment control practice that is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
8. Additional sediment control measures approved, if deemed necessary by the Howard County Sediment Control Inspector.
9. On all sites with disturbed areas in excess of 2 acres, approval of the Inspector 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 the site is approved by the Inspector.
10. 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.
11. Any changes or revisions to the sediment control plan must be approved by the Inspector.
12. 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. If approved by the plan approval authority prior to proceeding with construction, a preceding grading unit has been stabilized and approved by the enforcement authority. Unless otherwise specified and approved by the enforcement authority, no more than 30 acres cumulatively may be disturbed at a given time.

**B-4-2 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 a perimeter control, slope, and any disturbed area not under active grading.

Criteria

1. Specifications
  - a. All seed must meet the requirements of the Maryland State Seed Law. All seed must be subject to testing by a recognized seed laboratory. All seed used must have been tested within 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.
  - b. Mulch alone may be applied between the fall and spring seeding dates only if the ground is frozen. The appropriate seeding mixtures must be applied when the ground thaws. Note: It is very important to keep inoculant as cool as possible until use. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
  - c. Inoculant: The inoculant for treating legumes should 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 freeze inoculants as directed on the package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until use. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
  - d. Seed 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
  - i. Incorporated seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1. Permanent Seeding Table B.3 or site-specific seeding summaries.
  - ii. 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.
  - iii. Drill or Outdragger Seeding: Mechanized seeders that apply and cover seed with soil. Outdragger 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.
  - iv. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
  - v. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).
  - vi. 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 total of soluble P2O5; K2O (potassium), 200 pounds per acre.
  - vii. Lime: Use only ground agricultural limestone (up 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.
  - viii. Mix seed and fertilizer on site and seed immediately and without interruption. When hydroseeding do not incorporate seed into the soil.
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  - i. Mulch Materials (in order of preference)
    - a. Straw consisting of thoroughly threshed wheat, rye, 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 musty, moldy, decayed, or excessively dusty. Note: Use only straw mulch that is free of noxious weed seeds as specified in the Maryland Seed Law and not musty, moldy, decayed, or excessively dusty.
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1. 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 the surface.
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3. Tillage: Till to roughen surface and bring clods to the surface. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, spring-tipped harrows, and similar plows and assemblies of equipment that may produce the desired effect.
4. Irrigation: Sprinkle site with water until the surface is moist. Repeat as needed. The site must not be irrigated to the point that runoff occurs.
5. Barriers: Solid board fences, 8 ft fences, snow fences, burlap fences, straw bales, and similar material can be used to control air currents and soil blowing.
6. Chemical Treatment: Use of chemical treatment requires approval by the appropriate plan review authority.

**SEDIMENT CONTROL NOTES**

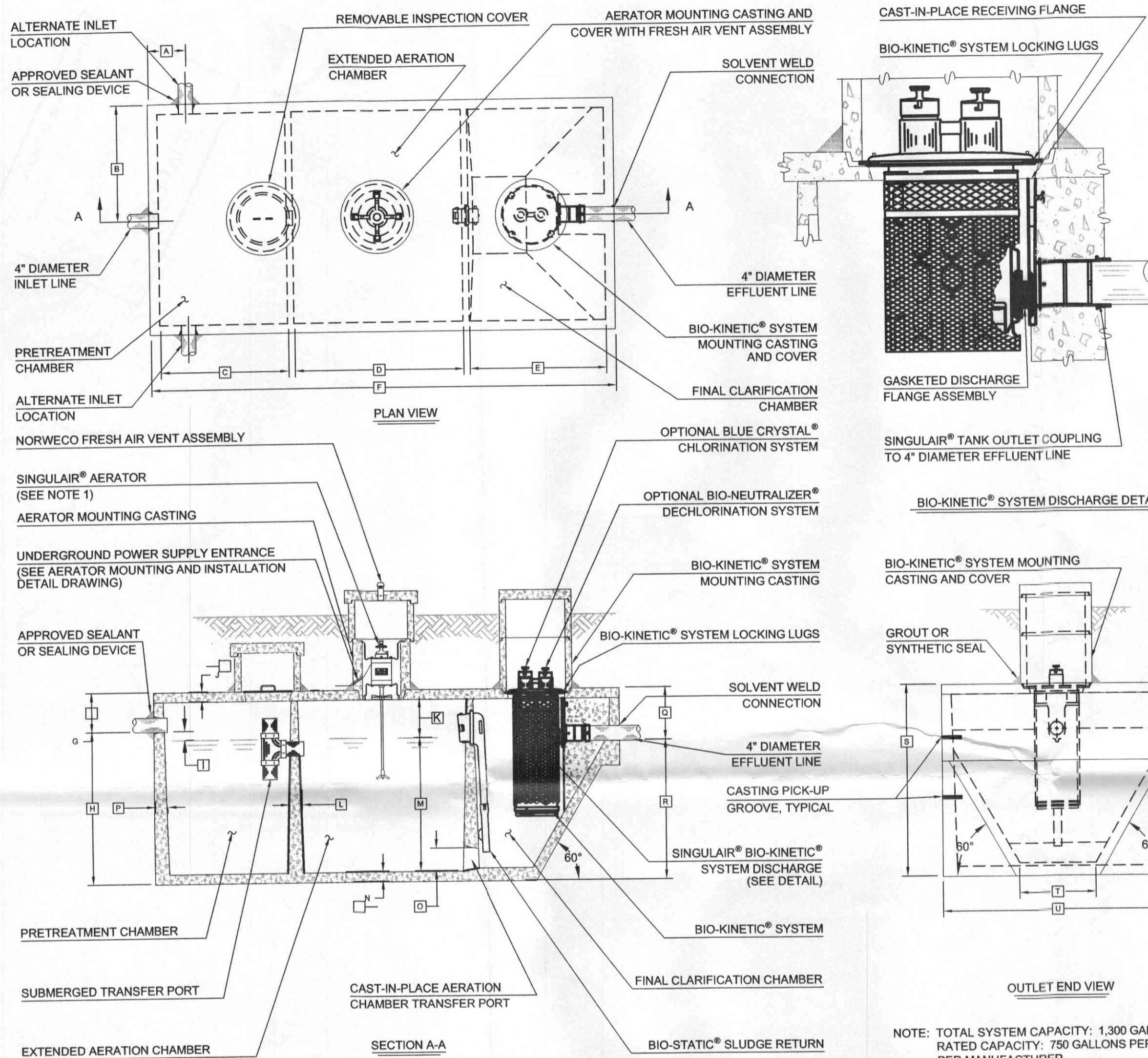
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**DETAIL E-1 SILT FENCE**

CONSTRUCTION SPECIFICATIONS

1. USE WOOD POSTS 18 IN. DIA. (ROUND) SQUARE CUT OF SOUND QUALITY HARDWOOD, AS AN ALTERNATIVE TO WOODEN POSTS USE STEEL POSTS W/ROUND END CAPS 18 IN. DIA. (ROUND) FOR USE IN SOILS WITH HIGH WATER TABLE.
2. USE 3/4 IN. MINIMUM POSTS DRIVEN 18 IN. MINIMUM INTO SOIL NO MORE THAN 6 FEET ABOVE GROUND.
3. USE WOVEN SILT FABM GEOTEXTILE AS SPECIFIED IN SECTION III-B MATERIALS AND FASTEN TO GEOTEXTILE USING 1/2 IN. DIA. OFFICE POSTS WITH WIRE TIE OR STAPLES AT 10 FT INTERVALS.
4. PROVIDE MANUFACTURER CERTIFICATION TO BE AUTHORIZED REPRESENTATIVE OF THE MANUFACTURER THAT THE GEOTEXTILE MEETS THE REQUIREMENTS IN SECTION III-B MATERIALS.
5. EMBED GEOTEXTILE A MINIMUM OF 6 INCHES BELOW THE GROUND, BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABM.
6. WEDGE TWO SECTIONS OF GEOTEXTILE AND OVERLAP, TWIST, AND STAPLE TO POST IN MIDDLE OF EACH SECTION.
7. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPWARD AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM COMING AROUND THE ENDS OF THE SUPER SILT FENCE.
8. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BRIDGES DEVELO





- GENERAL NOTES:**
- 1 SINGULAIR® AERATOR, AS TESTED AND ACCEPTED BY NSF, OPERATING 60 MINUTES ON / 60 MINUTES OFF.
  - 2 FALL THROUGH SINGULAIR® PLANT FROM INLET INVERT TO OUTLET INVERT IS FOUR INCHES. INLET INVERT IS TWELVE INCHES BELOW TANK TOP.
  - 3 ON DEEPER INSTALLATIONS, PRECAST RISERS MUST BE USED TO EXTEND AERATOR MOUNTING CASTING AND BIO-KINETIC® SYSTEM MOUNTING CASTING TO GRADE.
  - 4 TANK REINFORCED PER ACI STD. 318-05.
  - 5 REMOVABLE COVERS ON RISERS WEIGH IN EXCESS OF SEVENTY-FIVE POUNDS EACH TO PREVENT UNAUTHORIZED ACCESS.
  - 6 CONTACT THE LOCAL, LICENSED SINGULAIR® DISTRIBUTOR FOR ELECTRICAL REQUIREMENTS.

SEE MANUFACTURER'S SPECIFICATIONS FOR DETAILS. [WWW.NORWECO.COM](http://WWW.NORWECO.COM)

CRITICAL DIMENSIONS			
A	1'-0"	N	0'-3"
B	3'-0"	O	0'-6"
C	3'-4"	P	0'-3"
D	4'-5"	Q	1'-4"
E	3'-7"	R	3'-8"
F	12'-2"	S	5'-0"
G	1'-0"	T	2'-0"
H	4'-0"	U	6'-0"
I	0'-3"	V	
J	0'-3"	W	
K	1'-0"	X	
L	0'-2"	Y	
M	3'-6"	Z	

U.S. AND FOREIGN PATENTS PENDING	<b>norweco</b>	3-26-07	B
	LOW-PROFILE SINGULAIR® BIO-KINETIC® WASTEWATER TREATMENT SYSTEM MODEL TINTLP-600 GPD		BDS
			JMM
			10-16-06
			NTS
			PC-5-7091

NOTE: TOTAL SYSTEM CAPACITY: 1,300 GALLONS  
 RATED CAPACITY: 750 GALLONS PER DAY  
 PER MANUFACTURER.

**BENCHMARK**  
 ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS  
**ENGINEERING, INC.**  
 8480 BALTIMORE NATIONAL PIKE ▲ SUITE 315  
 ELLICOTT CITY, MARYLAND 21043  
 PHONE: 410-465-6105 ▲ FAX: 410-465-6644  
 BEI@BEI-CIVILENGINEERING.COM

OWNER/BUILDER: CARRIGAN HOMES 9812 CAITLINS COURT ELLICOTT CITY, MARYLAND 21042 410-465-7755		PROJECT: <b>CARROLL-ZIEGLER PROPERTY LOT 7</b>	
LOCATION: MANOR LANE TAX MAP: 23, GRID: 10 P/O PARCEL: 148 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND		TITLE: BUILDING PERMIT PLAN	
HOUSE TYPE: DICICCO RESIDENCE		DATE: AUGUST, 2013	
DESIGN: JMC	DRAFT: JMC	PROJECT NO. 2571	DRAWING 2 OF 2