

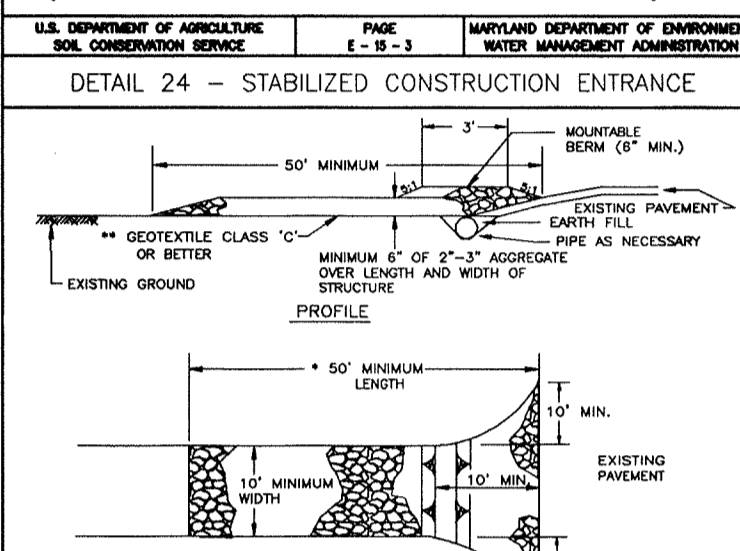
**Construction Specifications**

- Fence posts shall be a minimum of 16" diameter and 12" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) oak, or 1 3/4" diameter (minimum) steel pipe shall be of sound quality hardwood. Steel posts will standard 1" U section weighing not less than 1.00 pound per linear foot.
- Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Tear	HEMT 509
Tensile Modulus	20 lbs/in (min.)	Weight	HEMT 509
Flow Rate	0.2 gal/in <sup>2</sup> minute (max.)	Permeability	HEMT 322
Filtering Efficiency	75% (min.)		

- Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
- Silt fence shall be inspected after each rainfall event and maintained when higher occur or when sediment accumulation reaches 50% of the fabric height.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE E-10-3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



**Construction Specifications**

- Length - minimum of 50" (5'0") for single residence lot.
- Width - 10" minimum, should be placed at the existing road to provide a turning radius.
- Geotextile fabric (other cloth) shall be placed over the existing ground prior to placing stone. The stone applied directly may not ensure adequate family resistance to use geotextile.
- Stone - crushed aggregate (2" to 3") or recycled concrete. Resident shall be placed at least 6" over the length and width of the entrance.
- Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe shall be 4" minimum diameter and a minimum of 6" of stone over the pipe. Pipe has to be at least 12" above the ground surface. If pipe is installed with a manhole, it has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff. A 6" minimum will be required.
- Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE F-17-3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

**BIORETENTION AREA SOIL SPECIFICATIONS**

**A. PLANTING SOIL**

THE BIORETENTION AREAS SHALL CONSIST OF A PLANTING SOIL HAVING A COMPOSITION OF AT LEAST 10 TO 25 PERCENT CLAY AND SHALL BE OF A SANDY LOAM OR LOAMY SAND TEXTURE. LOAMY SOILS MAY BE UTILIZED FOR THE PLANTING SOIL BUT MUST CONSIST OF 35% SAND. IN ADDITION, THE FURNISHED PLANTING SOIL SHALL BE OF UNIFORM COMPOSITION, FREE OF STONES, STUMPS, ROOTS OR SIMILAR OBJECTS LARGER THAN ONE INCH BRUSH, OR ANY OTHER MATERIAL OR SUBSTANCE WHICH MAY BE HARMFUL TO PLANT GROWTH, OR A HINDERANCE TO PLANTING OR MAINTENANCE OPERATIONS.

THE PLANTING SOIL SHALL BE FREE OF PLANTS OR PLANT PARTS OF BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, MUDWORT, NUTSEDGE, POISON IVY, CANADIAN THISTLE OR OTHERS AS SPECIFIED.

IT SHALL NOT CONTAIN TOXIC SUBSTANCES HARMFUL TO PLANT GROWTH.

THE PLANTING SOIL SHALL MEET THE FOLLOWING CRITERIA:

PH RANGE	5.5 - 6.5
ORGANIC MATTER	1.5 - 3.0%
MAGNESIUM - Mg	35 lbs / ACRE
PHOSPHORUS - P <sub>2</sub> O <sub>5</sub>	100 lbs / ACRE
POTASSIUM - K <sub>2</sub> O	85 lbs / ACRE
SOLUBLE SALTS	NOT TO EXCEED 500 ppm

**B. MULCH LAYER SPECIFICATIONS (3" THICK)**

A MULCH LAYER SHALL BE PROVIDED ON TOP OF THE PLANTING SOIL. AN ACCEPTABLE MULCH LAYER SHALL INCLUDE SHREDED HARDWOOD OR SHREDED WOOD CHIPS OR OTHER SIMILAR PRODUCT.

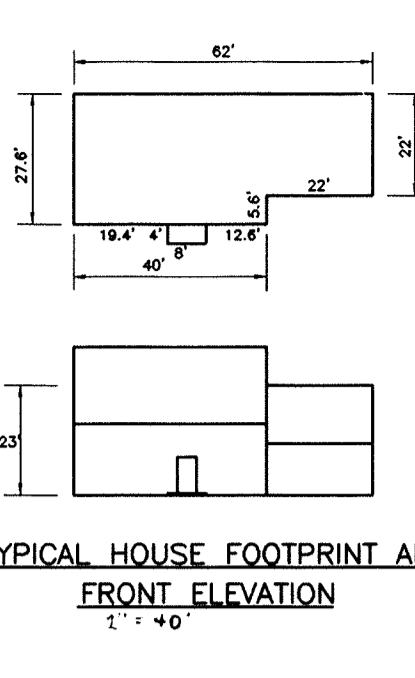
ALL MULCH PRODUCTS MUST BE WELL AGED, UNIFORM IN COLOR, AND FREE OF FOREIGN MATERIAL INCLUDING PLANT MATERIAL, WELL AGED MULCH IS DEFINED AS MULCH THAT HAS BEEN STOCKPILED OR STORED FOR AT LEAST TWELVE (12) MONTHS.

**C. SAND SPECIFICATIONS (1" MIN.)**

THE SAND SHALL BE FREE OF DELETERIOUS MATERIAL AND ROCKS GREATER THAN 1 INCH IN DIAMETER.

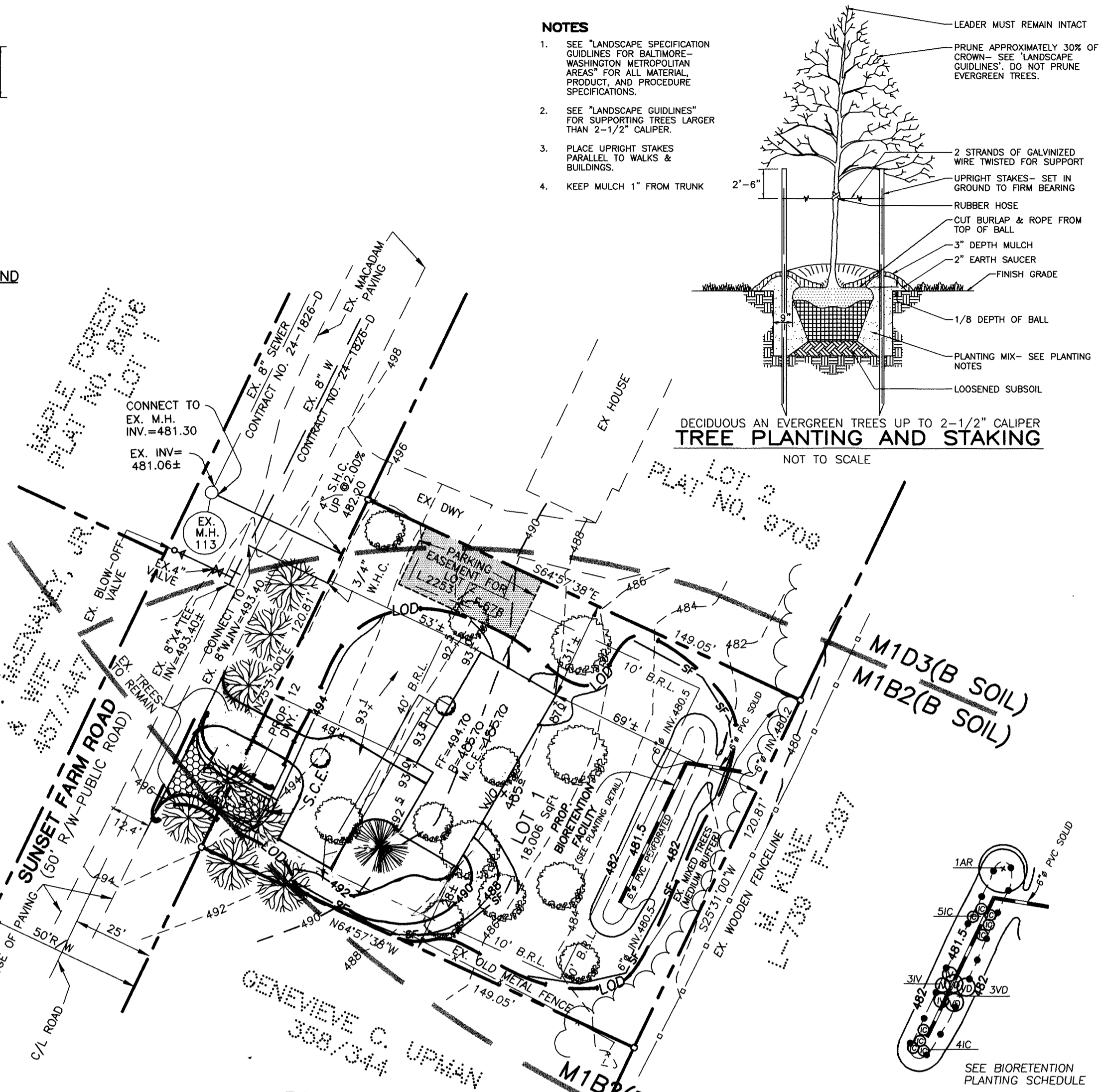
**D. COMPACTION**

SOIL SHALL BE PLACED IN LIFTS LESS THAN 18 INCHES AND LIGHTLY COMPACTED (MINIMAL COMPACTIVE EFFORT) BY TAMPING WITH A BUCKET FROM A DOZER OR A BACKHOE.



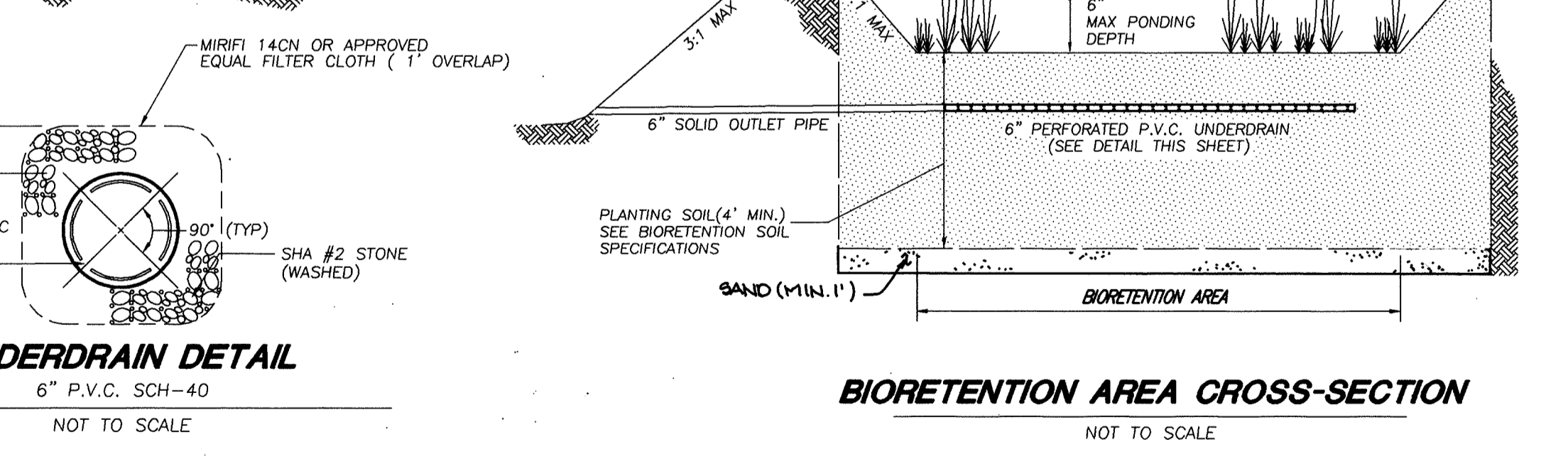
**NOTES**

- SEE "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREA" FOR ALL MATERIAL, PRODUCT, AND PROCEDURE SPECIFICATIONS.
- SEE "LANDSCAPE GUIDELINES FOR SUPPORTING TREES LARGER THAN 2-1/2" CALIBER.
- PLACE UPRIGHT STAKES PARALLEL TO WALKS & BUILDINGS.
- KEEP MULCH 1" FROM TRUNK.

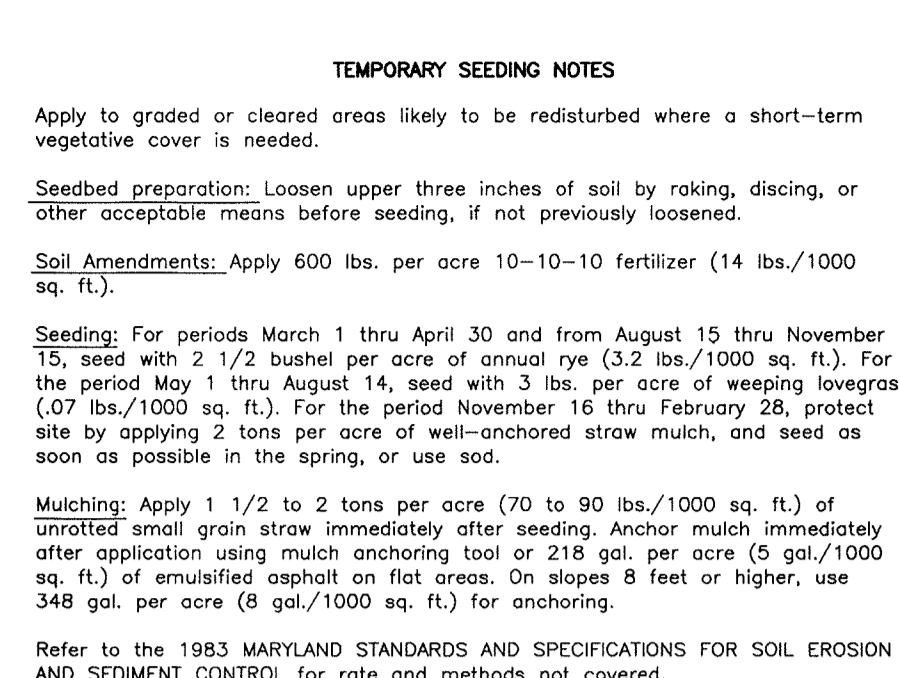
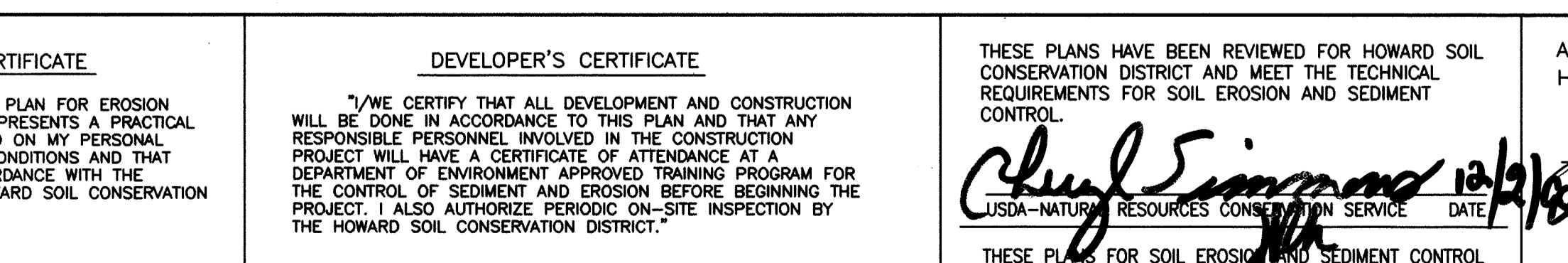


**OPERATION AND MAINTENANCE SCHEDULE FOR BIO-RETENTION AREAS**

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



**UNDERDRAIN DETAIL**



**TEMPORARY SEEDING NOTES**

Apply to graded or cleared areas likely to be redistributed where a short-term vegetative cover is needed.

Seeded preparation: Loosen upper three inches of soil by raking, discing, or other acceptable means before seeding, if not previously loosened.

Soil Amendments: Apply 600 lbs. per acre 10-10-10 fertilizer (14 lbs./1000 sq. ft.).

Seeding: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 1/2 bushel per acre of annual ryegrass (3.2 lbs./1000 sq. ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (0.7 lbs./1000 sq. ft.). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well-anchored straw mulch, and seed as soon as possible in the spring, or use sod.

Mulching: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs./1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gals. per acre (5 gal./1000 sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gals. per acre (8 gal./1000 sq. ft.) for anchoring.

Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

**PERMANENT SEEDING NOTES**

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent, long-lived vegetative cover is needed.

Seeded Preparation: Loosen upper three inches of soil by raking, discing, or other acceptable means before seeding, if not previously loosened.

Soil Amendments: Use one of the following schedules:

- Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq. ft.) and 600 lbs. per acre (14 lbs./1000 sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs. of Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (.05 lbs./1000 sq. ft.) of weeping lovegrass. During the period of October 15 thru February 28, protect site by Option 1 - 2 tons per acre of well-anchored straw mulch, and seed as soon as possible in the spring. Option 2 - Use sod. Option 3 - Seed with 60 lbs. per acre Kentucky 31 Tall Fescue, and mulch with 2 tons per acre well anchored straw.
- Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq. ft.) and 1000 lbs. per acre 10-10-10 fertilizer (23 lbs./1000 sq. ft.) before seeding. Harrow or disc into upper three inches of soil.

Seeding: For the periods March 1 thru April 30 and August 1 thru October 15, seed with 60 lbs. per acre (14 lbs./1000 sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs. of Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (.05 lbs./1000 sq. ft.) of weeping lovegrass. During the period of October 15 thru February 28, protect site by Option 1 - 2 tons per acre of well-anchored straw mulch, and seed as soon as possible in the spring. Option 2 - Use sod. Option 3 - Seed with 60 lbs. per acre Kentucky 31 Tall Fescue, and mulch with 2 tons per acre well anchored straw.

Mulching: Apply 1 1/2 to 2 tons per acre (70-90 lbs./1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal./1000 sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal./1000 sq. ft.) for anchoring.

Maintenance: Inspect all seeded areas, and make needed repairs, replacements, and reseeding.

**SEDIMENT CONTROL NOTES**

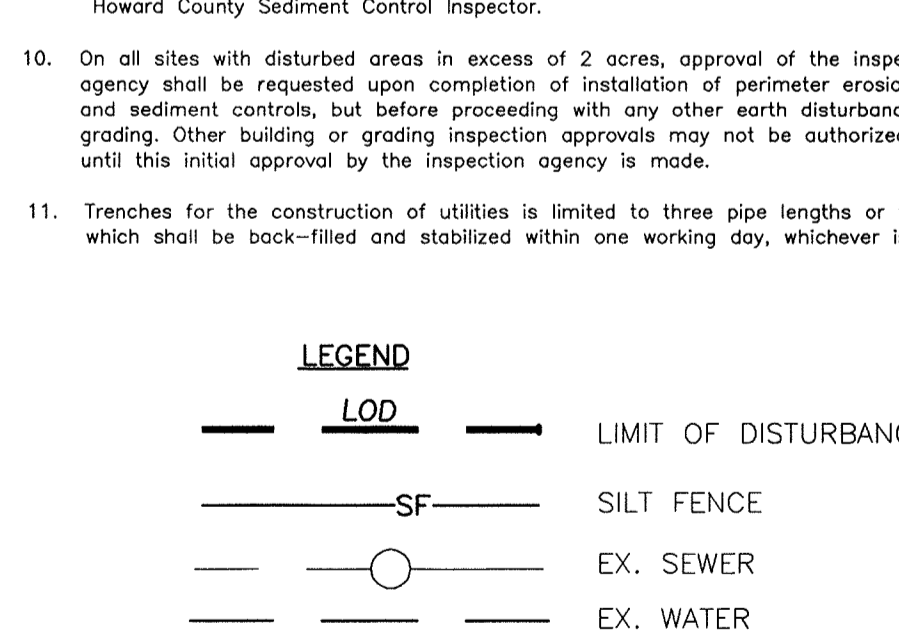
- A minimum of 48 hours notice must be given to the Howard County Department of Inspection, License and Permits Sediment Control Division prior to the start of any construction (313-1825).
- All vegetation and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and revisions thereto.
- Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within: (a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes, and all slopes greater than 3:1, (b) 14 days as to all other disturbed or graded areas on the project site.
- All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 7, HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding, sod, temporary seeding, and mulching (Sec. O). Temporary stabilization with mulch alone shall 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	0.41 acres
Area Disturbed	0.28 acres
Area to be roofed or paved	0.05 acres
Area to be vegetatively stabilized	0.24 acres
Total Cut	127 cu. yds.
Total Fill	39 cu. yds.

 Offsite waste/borrow area location to be determined by the contractor, with pre-approval of the Sediment Control Inspector.

**SEQUENCE OF CONSTRUCTION**

- Obtain grading permits.
- Notify Howard County Bureau of Inspections and Permits (313-1880) at least 24 hours before starting any work.
- Construct Stabilized Construction Entrance.....1 DAY
- Install sediment control devices (silt fence).....1 DAY
- Excavate for foundation and rough grade. Contract bioretention facility.....7 DAYS
- Install driveway, sidewalk and begin house construction.
- The first floor elevation cannot be more than 1' higher or 0.2' lower than the elevations shown on this plan.....3 MONTHS
- Fine grade and install permanent seeding. Final lot grade to be in substantial conformance with the site development plan.....3 DAYS
- During grading and after each rainfall, the contractor shall inspect and provide the necessary maintenance on the sediment and erosion control measures shown hereon.
- Final initial soil disturbance or redistribution permanent or temporary stabilization shall be completed within:
  - 7 calendar days for all perimeter sediment control structures, dikes, swales, ditch perimeter slopes and all slopes greater than 3:1.
  - 14 calendar days for all other disturbed areas.
- Upon stabilization of all disturbed areas and with the approval of the sediment control inspector, remove all sediment control devices.



**ADDRESS CHART**

LOT #	STREET ADDRESS
1	2471 SUNSET FARM ROAD

**21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL**

**DEFINITION**

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

**PURPOSE**

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

**CONDITION WHERE PRACTICE APPLIES**

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

**CONSTRUCTION AND MATERIAL SPECIFICATIONS**

- Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil shall be determined by the representative soil profile section in the Soil Survey published by USDA in cooperation with Maryland Agricultural Experiment Station.
- Topsoil Specifications - Soil to be used as topsoil must meet the following:
  - Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, slag, coarse fragments, gravel, sticks, trash, or other materials larger than 1 1/2" in diameter.
  - Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, johnsongrass, nutsedge, poison ivy, thistle, or others as specified.
  - Where the subsoil is either highly acidic or composed of heavy clays, the topsoil shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) of October 15 thru February 28, protect site by Option 1 - 2 tons per acre of well-anchored straw mulch, and seed as soon as possible in the spring. Option 2 - Use sod. Option 3 - Seed with 60 lbs. per acre Kentucky 31 Tall Fescue, and mulch with 2 tons per acre well anchored straw.
- For sites having disturbed areas over 5 acres:
  - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
  - For sites having disturbed areas over 5 acres:
    - On soil meeting topsoil specifications, obtain test results indicating fertilizer and lime amendments required to bring the soil into compliance with the following:
      - pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, a sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
      - Organic content of topsoil shall not be less than 1.5 percent by weight.
      - Topsoil having soluble salt content greater than 500 parts per million shall not be used.
      - No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for pest control until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic materials.
    - Place a topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.

**GENERAL NOTES**

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK ON THESE DRAWINGS:
 

MISS UTILITY	1-800-257-7777
BELL ATLANTIC TELEPHONE COMPANY	725-9976
HOWARD COUNTY BUREAU OF UTILITIES	313-3568
AT&T CABLE LOCATION DIVISION	393-3553
B.G.&C. CO. CONTRACTOR SERVICES	850-4620
B.G.&C. CO. UNDERGROUND DAMAGE CONTROL	787-4620
STATE HIGHWAY ADMINISTRATION	531-5533
- SITE ANALYSIS:
 

AREA OF SITE	0.41 AC
LIMIT OF DISTURBANCE	0.29 AC
PROPOSED USE OF SITE	SINGLE FAMILY DWELLINGS
TOTAL NUMBER OF UNITS	1
- PROJECT BACKGROUND:
 

LOCATION	TAX MAP: 17 PARCEL 21
ZONING	R-20
SUBDIVISION	SWARTZ SUBDIVISION
DPZ REFERENCES	F-91-26
- 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 START OF WORK.
- ANY DAMAGE TO PUBLIC RIGHT-OF-WAYS, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- EXISTING UTILITIES LOCATED FROM ROAD CONSTRUCTION PLANS AND AVAILABLE RECORD DRAWINGS, APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTOR'S INFORMATION. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- ALL DRIVEWAY APRONS SHALL BE PER HOWARD COUNTY STANDARD DET. R-6.06.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- ESTIMATES OF EARTHWORK QUANTITIES ARE PROVIDED SOLELY FOR THE PURPOSE OF CALCULATING FEES.
- SOIL COMPACTION SPECIFICATIONS, REQUIREMENTS, METHODS AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER OR A REGISTERED PROFESSIONAL ENGINEER TO CONFIRM ACCEPTABILITY OF PROPOSED PAVING SECTION, BASED ON SOILS TEST.
- THERE ARE NO WETLANDS ON THIS SITE.
- COORDINATES AND ELEVATIONS ARE BASED ON HOWARD COUNTY MONUMENTS 170A AND 170B (NAD 83)
- EXISTING TOPOGRAPHY IS BASED ON PLANS PREPARED BY VOGEL & ASSOCIATES DATED 5-19-98
- SEWER AND WATER CONTRACT NO. 24-1828-D. SHC TO BE L.O.M. BEYOND R/W.
- STORMWATER MANAGEMENT FOR THIS SITE IS PROVIDED BY A PRIVATE BIORETENTION FACILITY.

**BIORETENTION PLANTING SCHEDULE**

KEY	QTY	BOTANICAL NAME/COMMON NAME	SIZE	ROOT
AR	1	ACER RUBRUM/RED MAPLE	1 1/2"-2" CAL	B & B
IC	9	LEX GLABRA "COMPACTA" DWARF HYDRANGEA	18"-24" HEIGHT	CONT
IV	3	LEX VERTICILLATA 1 MALE WINTERBERRY 2 FEMALE	3'-4" HEIGHT	B & B
VD	3	VIBURNUM DENTATUM ARROW WOOD	3'-4" HEIGHT	B & B OR CONT
●●●	125	LIRIOPE SPICATA CREEPING LILY TURF	2" POT	18" O/C

**OWNER**

NANCY SWARTZ  
2463 SUNSET FARM RD.  
ELLCOTT CITY, MARYLAND 21042  
410-465-8570

**DEVELOPER**

DICK JAMISON  
RJJ CARDINAL  
8948 BLADE GREEN  
COLUMBIA, MARYLAND 21045  
301-952-1203

NO.	REVISION	DATE
2	REVISE DRIVEWAY LOCATION	9/16/99
1	REVISE GRADING FOR A WALKOUT	4/14/99

**SWARTZ SUBDIVISION**  
**LOT NO. 1**

**SITE DEVELOPMENT PLAN**

REFERENCE: F-91-26  
TAX MAP #17  
2ND ELECTION DISTRICT

BLOCK #8  
PARCEL 21  
HOWARD COUNTY, MARYLAND

**VOGEL & ASSOCIATES, INC.**  
ENGINEERS - SURVEYORS - PLANNERS

3691 PARK AVENUE, SUITE 101  
ELLCOTT CITY, MARYLAND 21048

TELEPHONE: (410) 461-5828  
FAX: (410) 465-3968

DESIGN BY: P.K.P.  
DRAWN BY: P.K.P.  
CHECKED BY: R.H.V.  
DATE: JUNE, 1998  
SCALE: 1"=30'  
W.O. NO.: 98-48

1 SHEET OF 1

**ENGINEERS CERTIFICATE**

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

ROBERT H. VOGEL  
11/6/98  
SIGNATURE OF ENGINEER DATE

**DEVELOPER'S CERTIFICATE**

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE IN ACCORDANCE TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF 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.

DAMISON  
4/4/98  
SIGNATURE OF DEVELOPER DATE

THESE PLANS HAVE BEEN REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

APPROVED: JUDSA-NATURAL RESOURCES CONSERVATION SERVICE DATE 12/2/98

THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

JOHN R. BLANTON  
12/2/98  
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

2/8/99  
DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS  
HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER DATE

SUBDIVISION NAME	SECTION/AREA	PARCEL NUMBER
SWARTZ SUBDIVISION		21

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELECT. DIST.	CENSUS TR.
9709	8	R-20	17	21D	6021

WATER CODE H03 SEWER CODE 5758200

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

2/8/99  
DATE

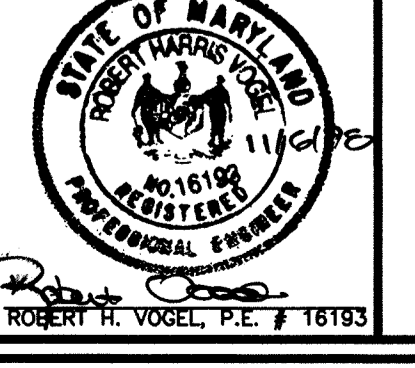
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HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER DATE

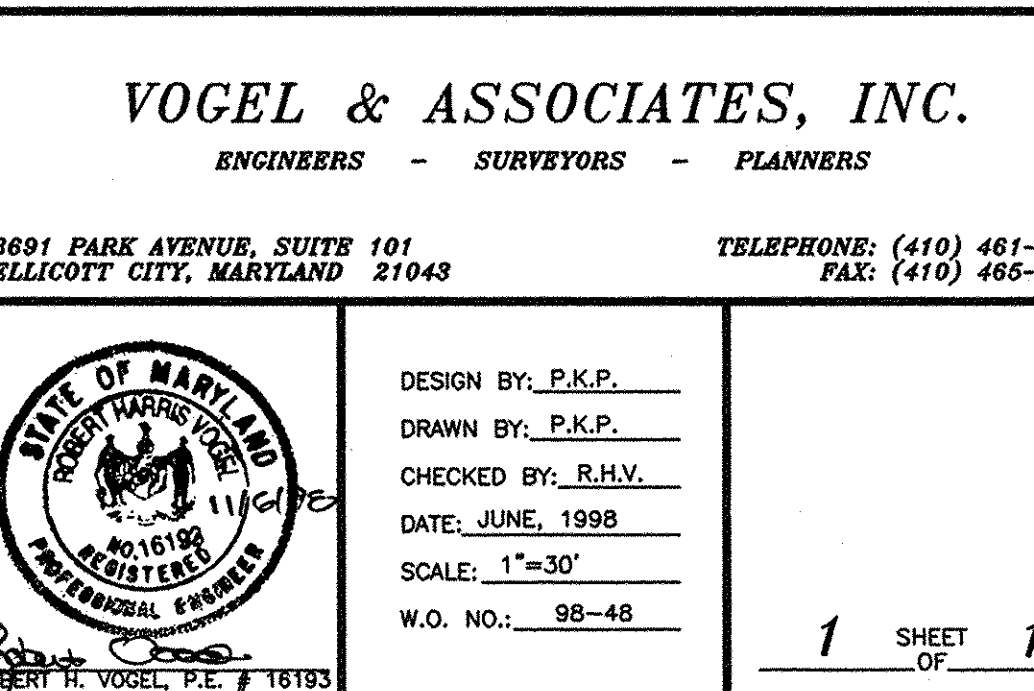
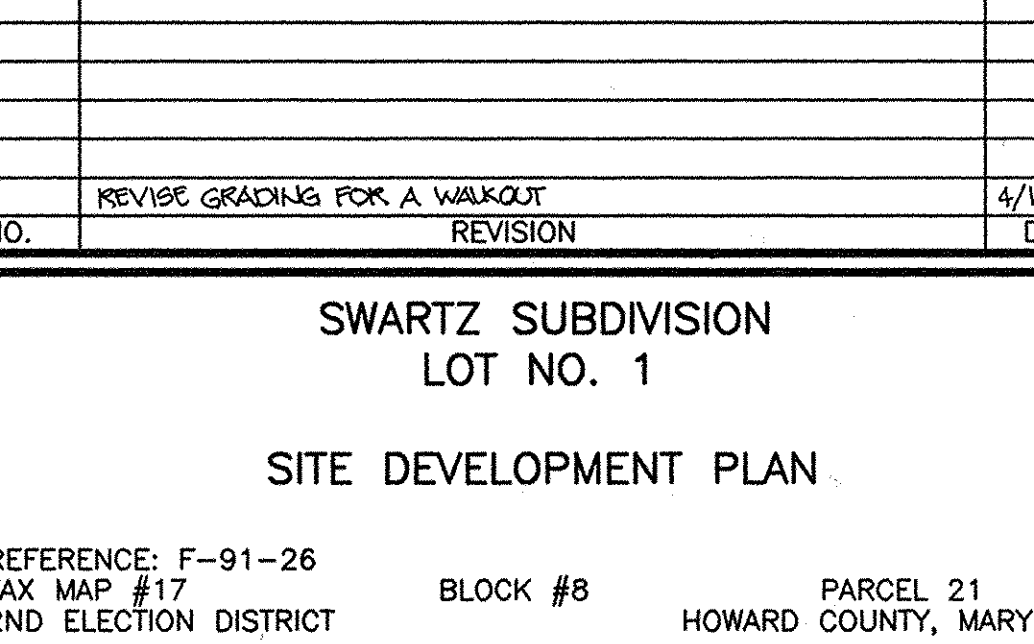
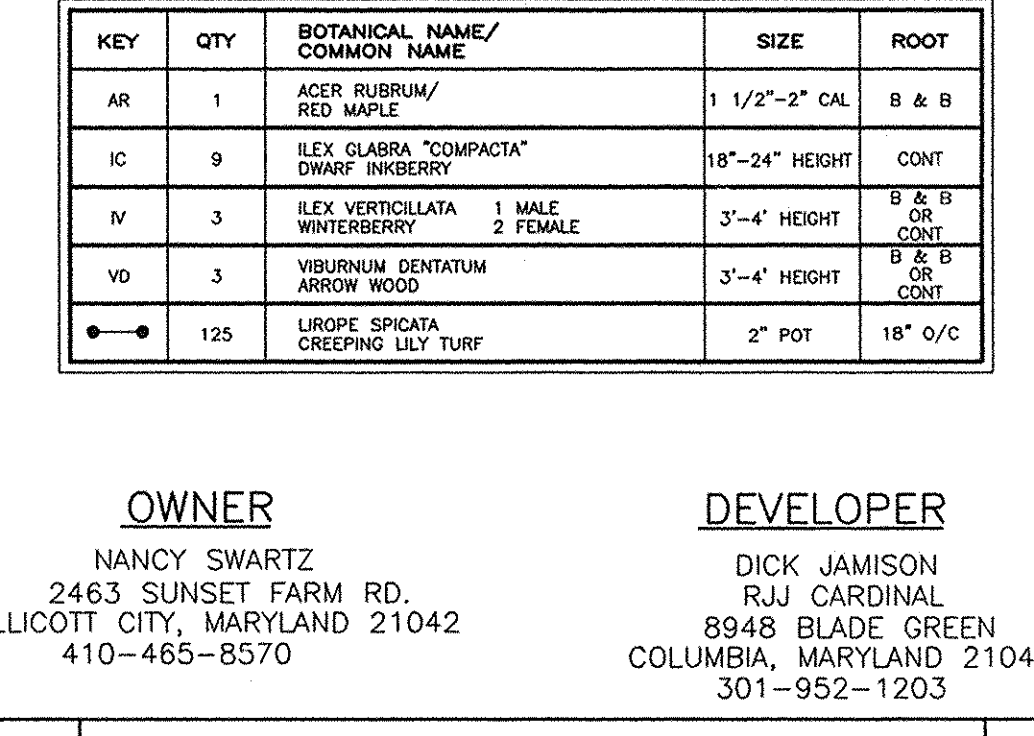
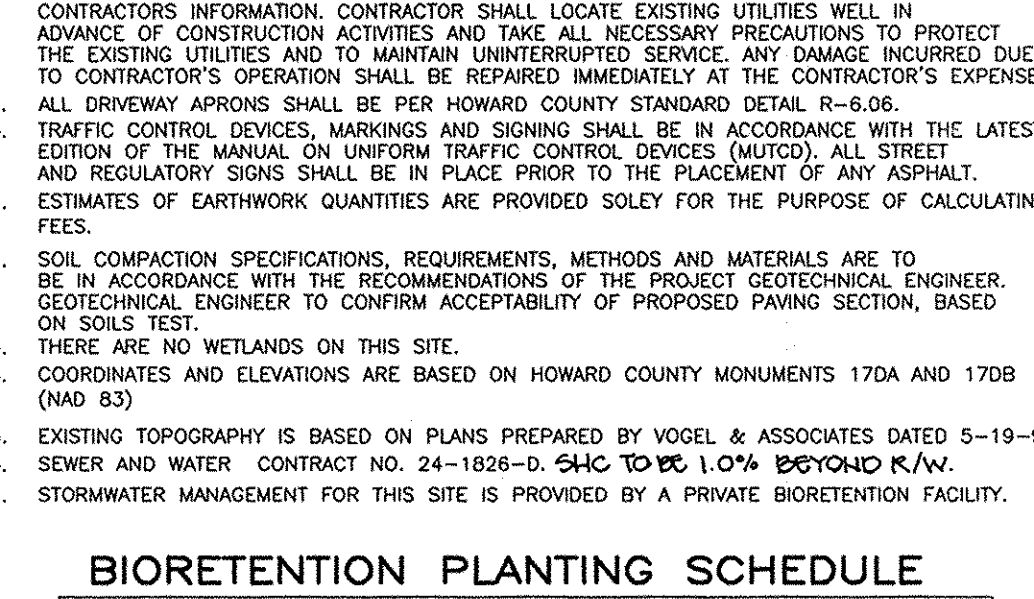
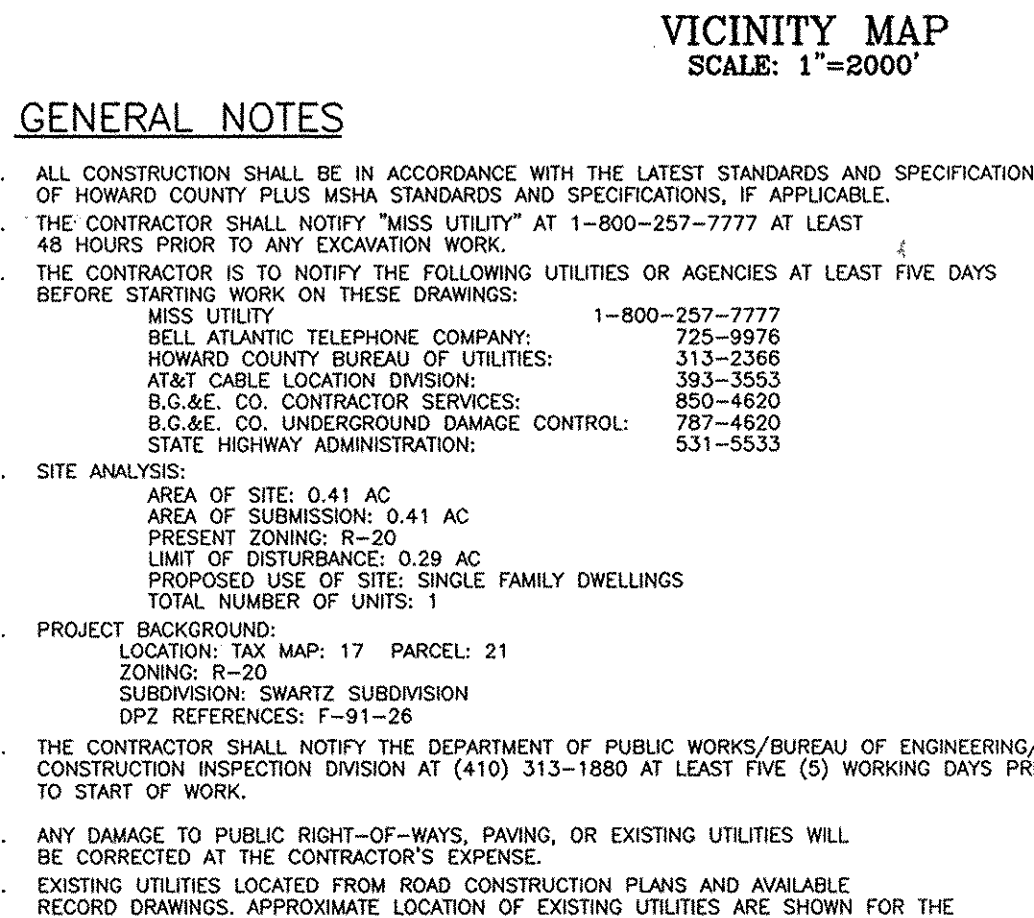
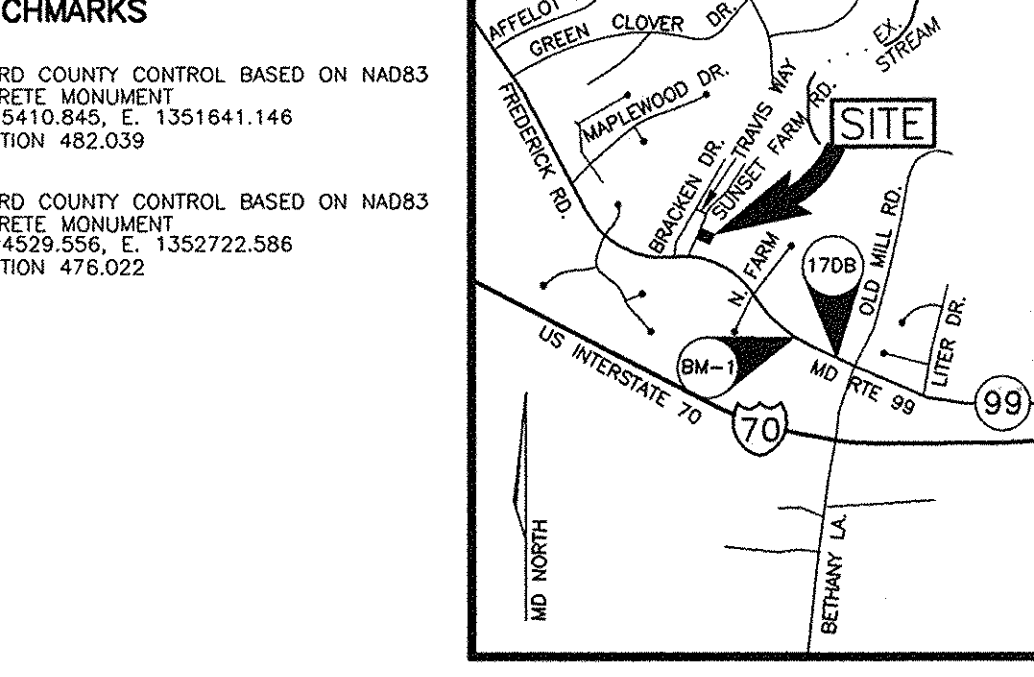
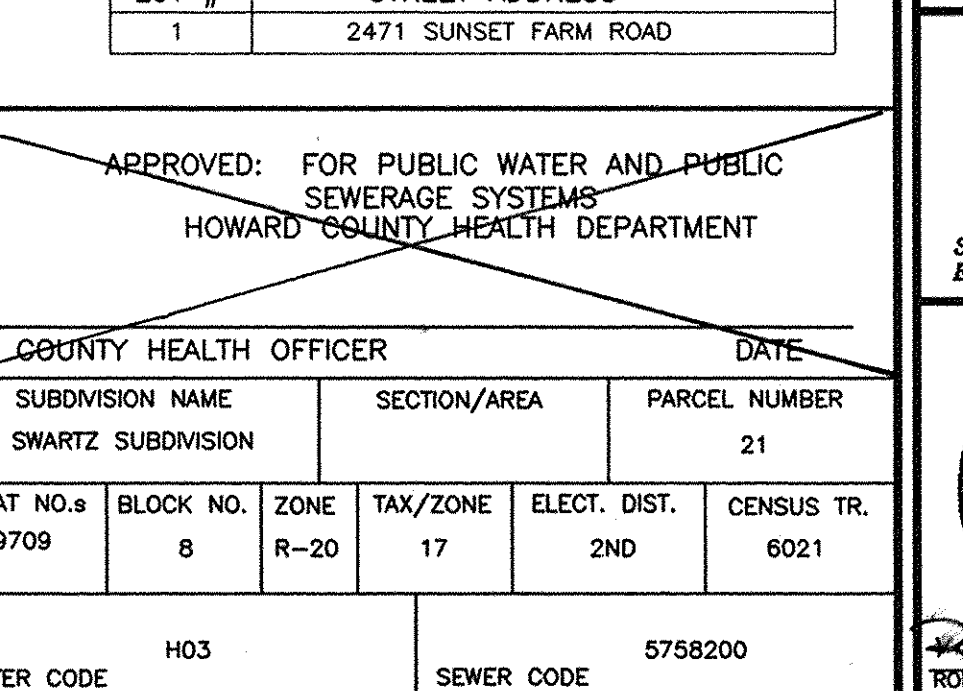
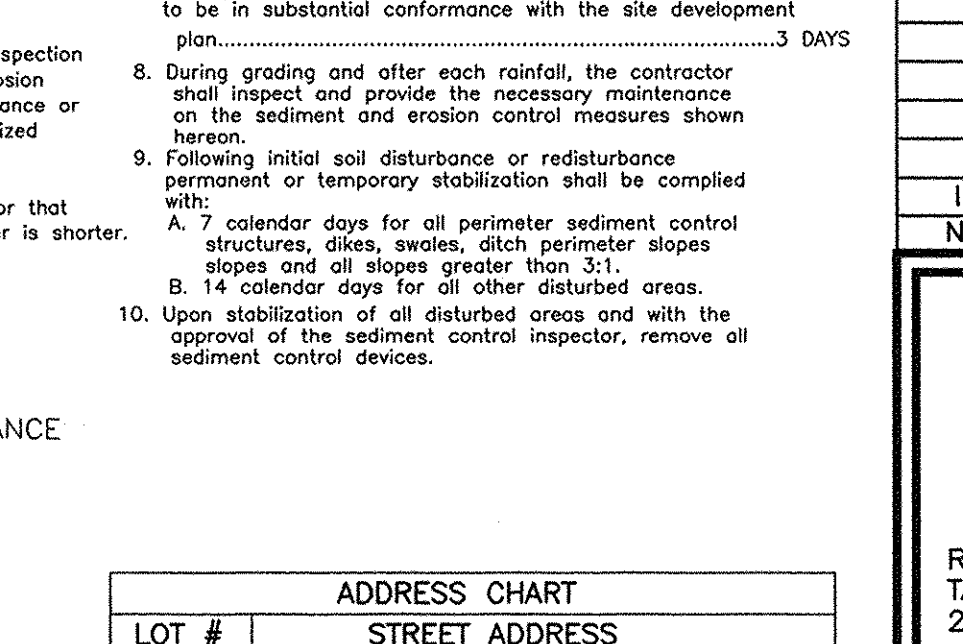
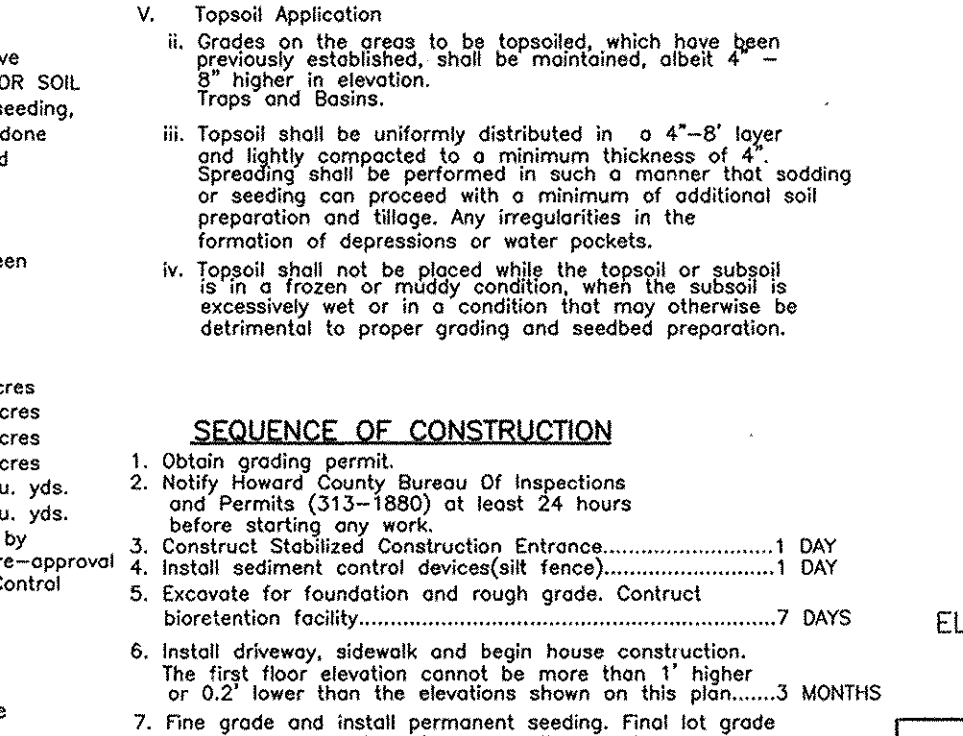
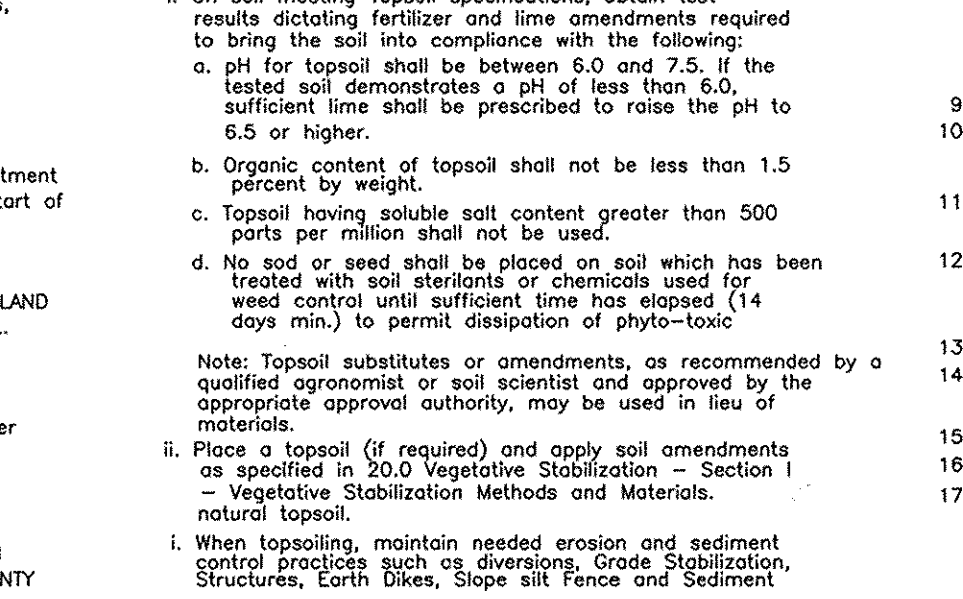
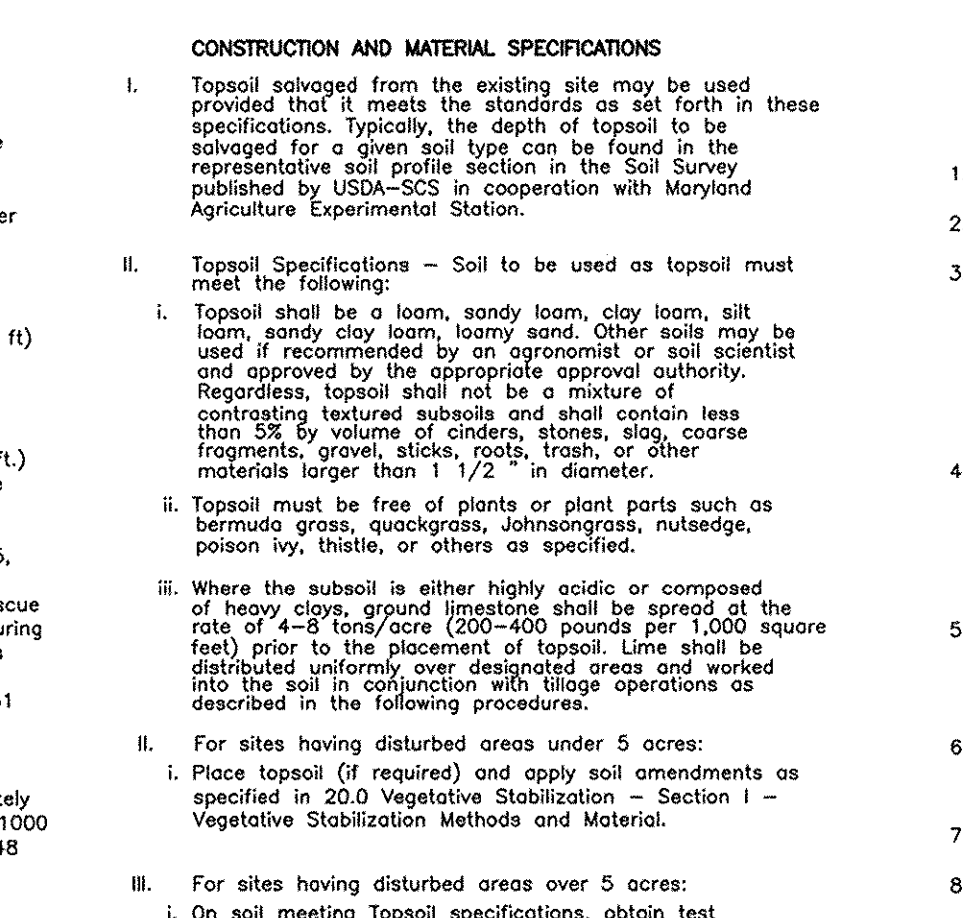
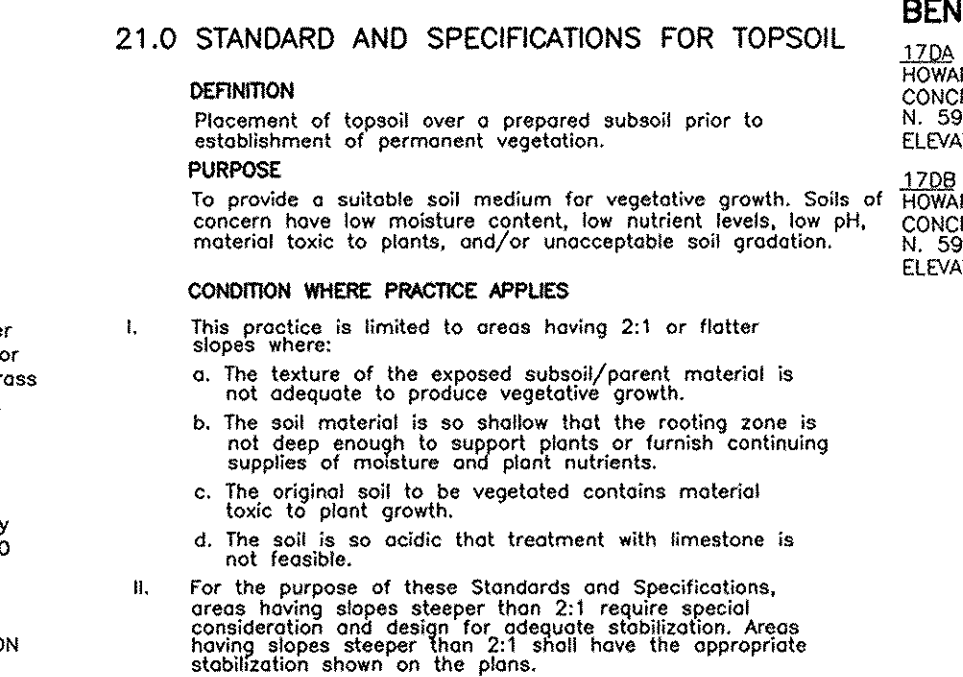
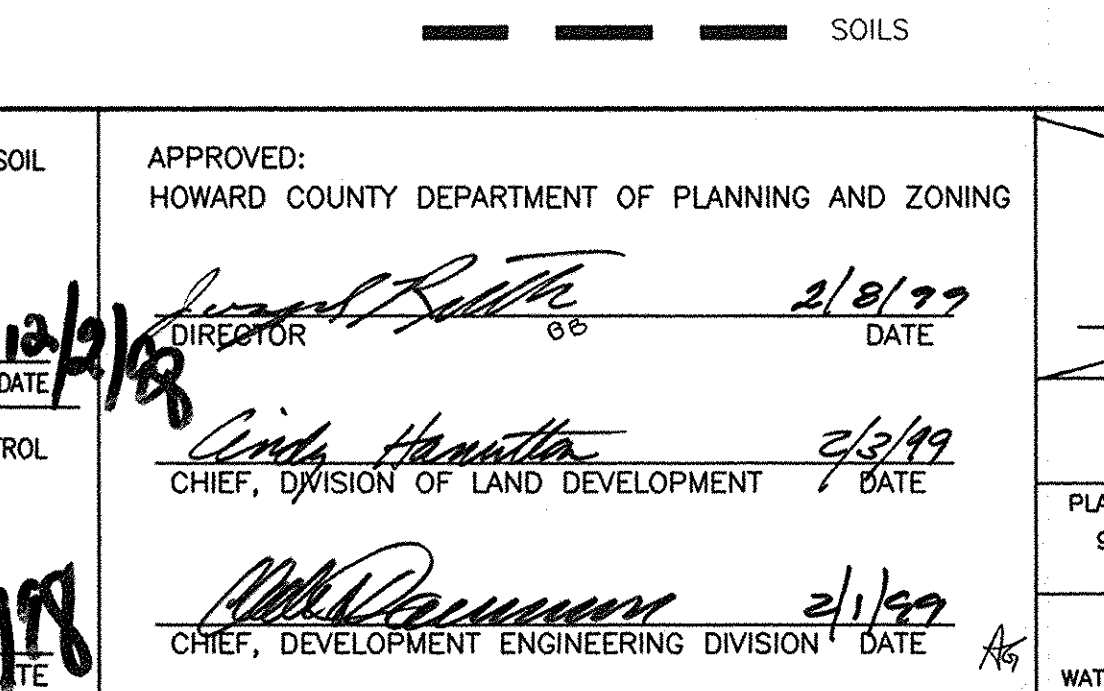
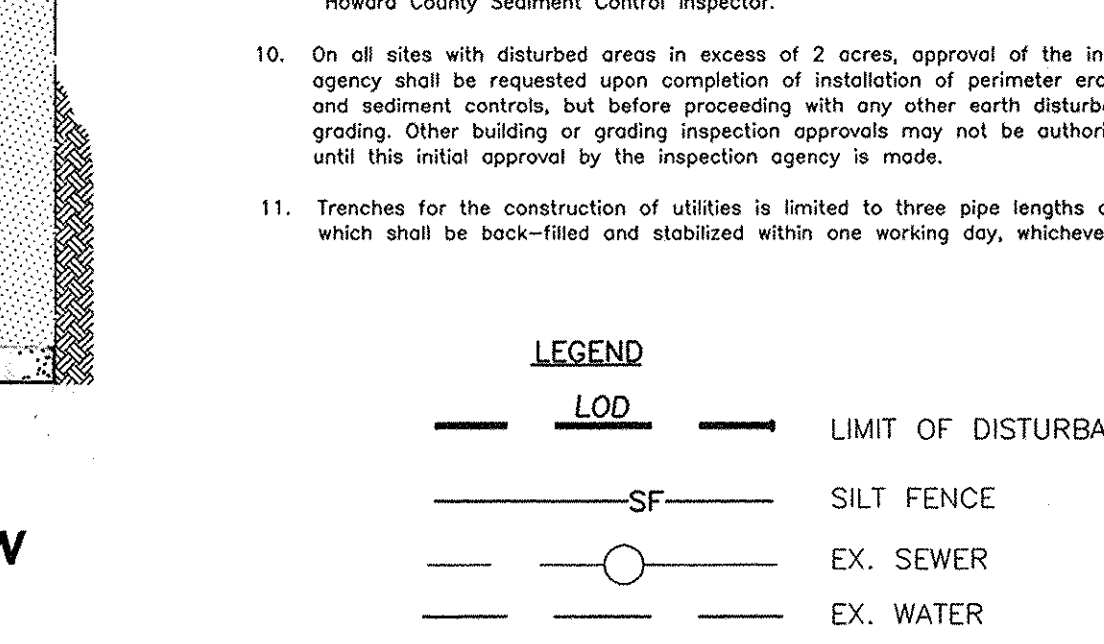
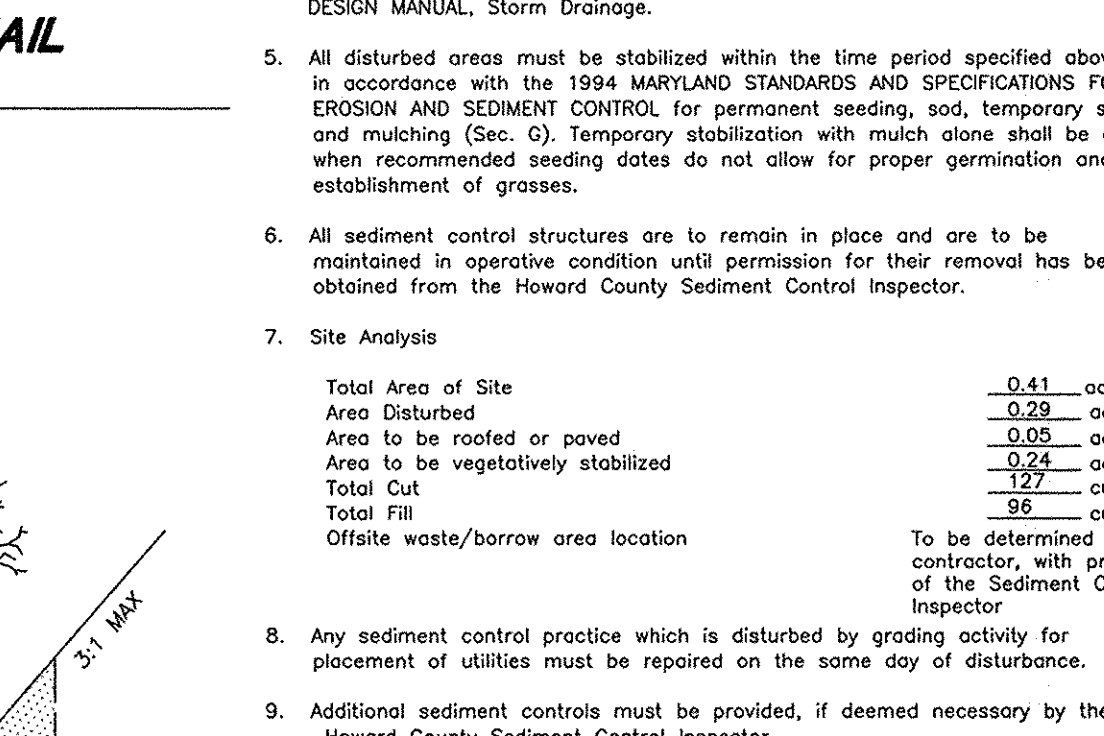
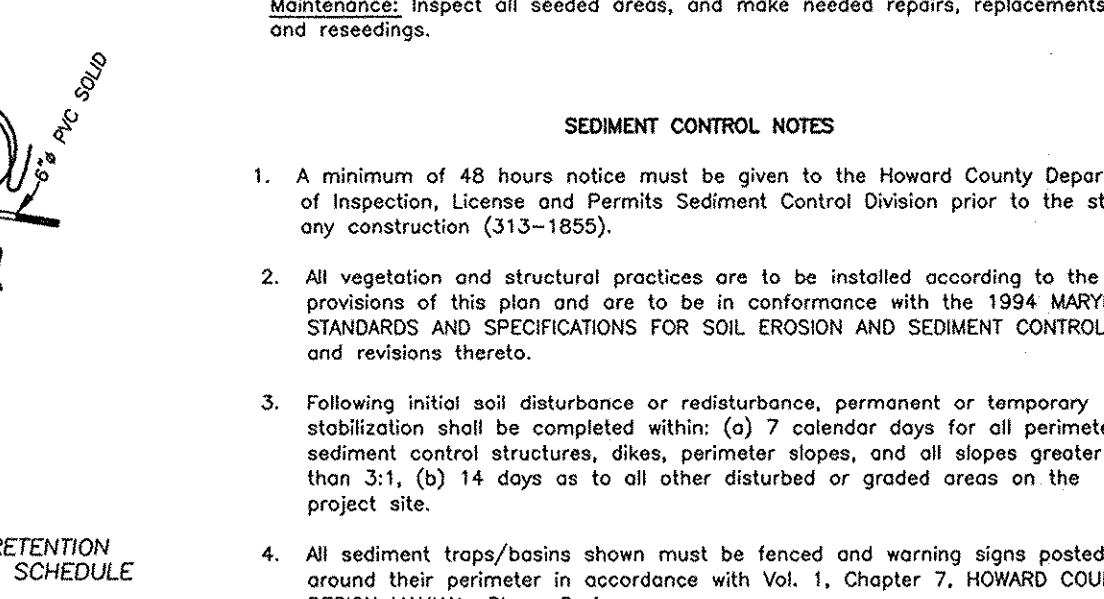
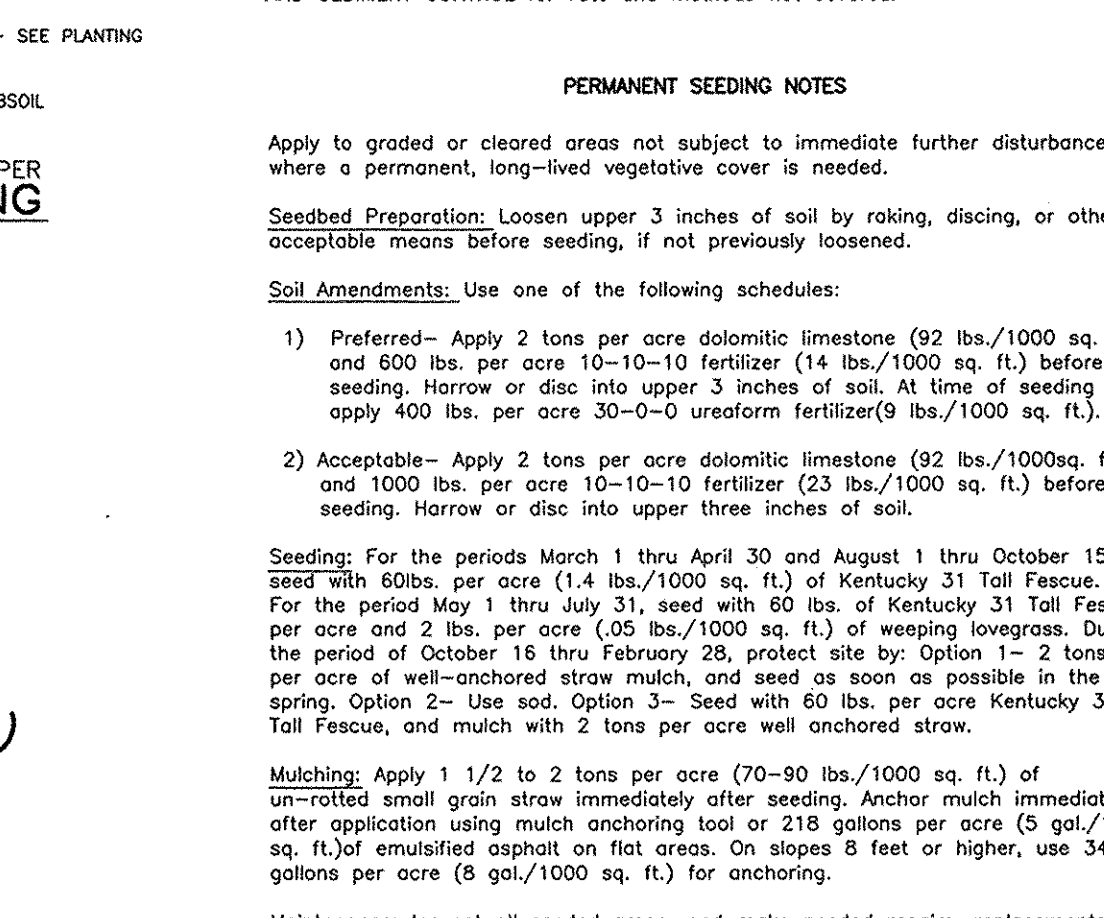
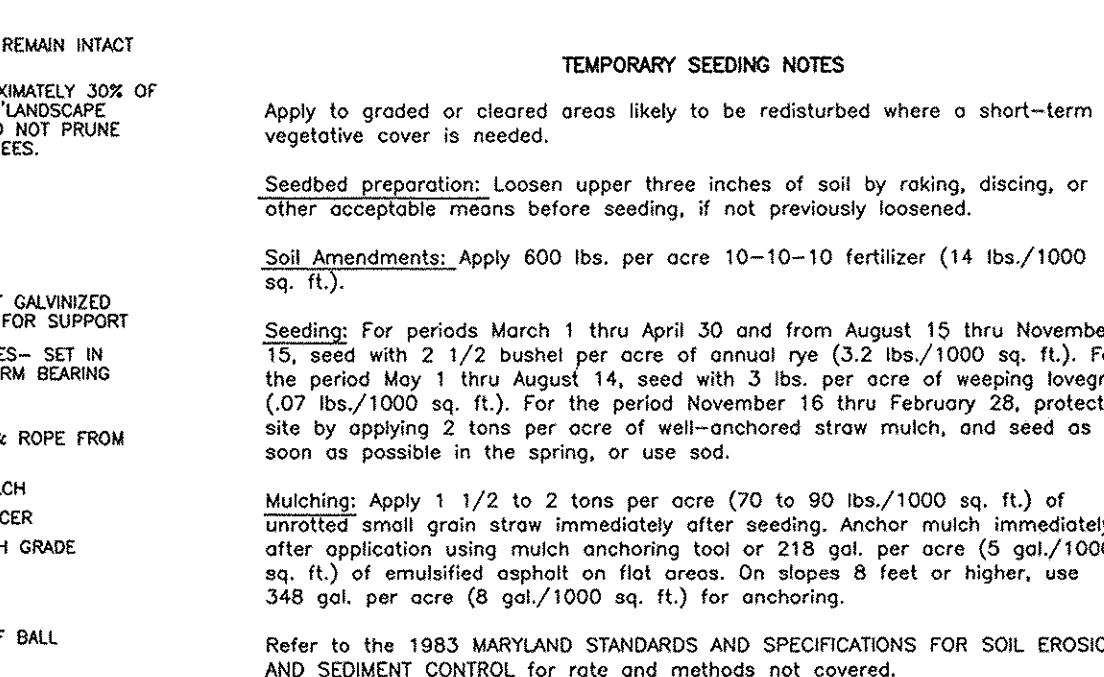
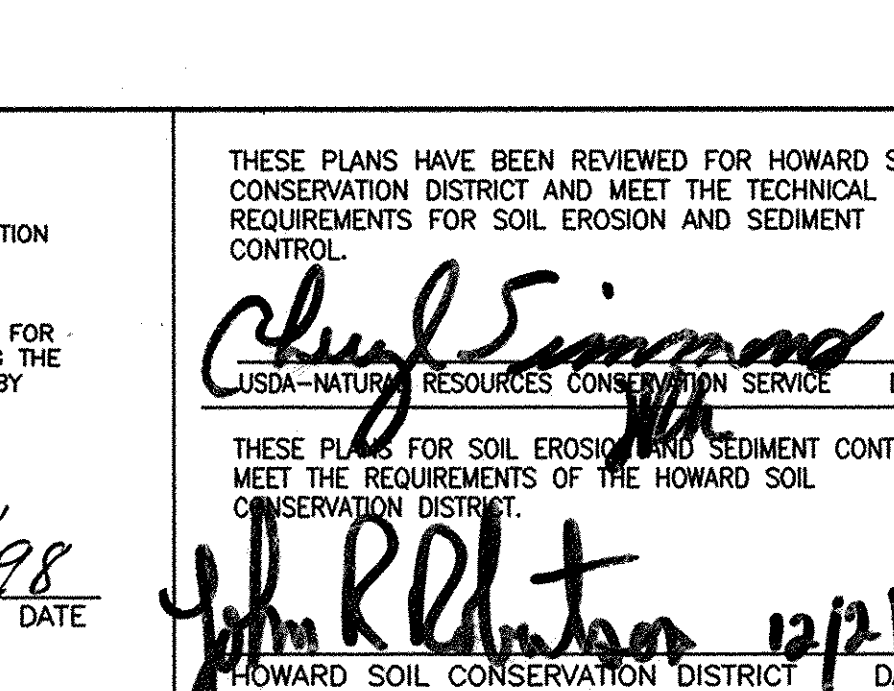
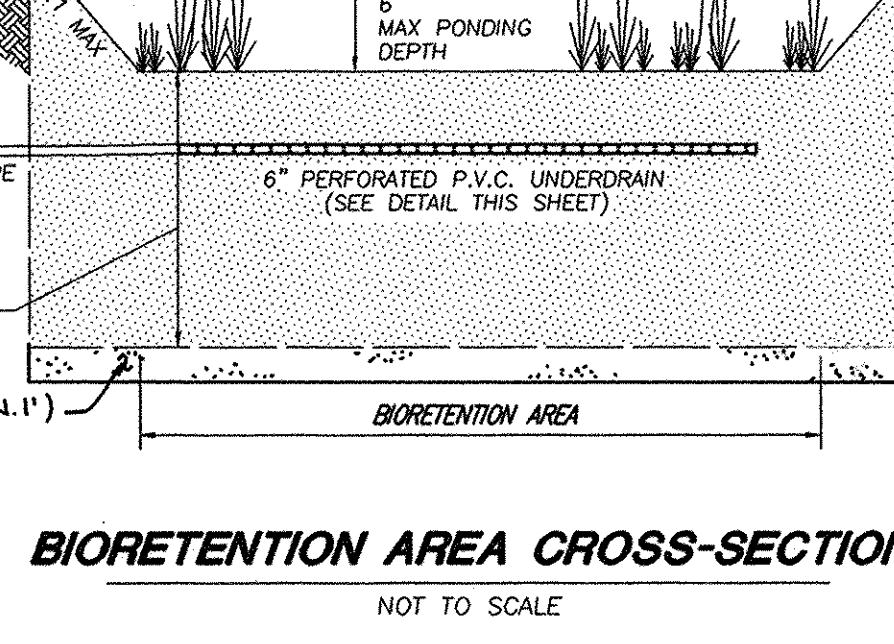
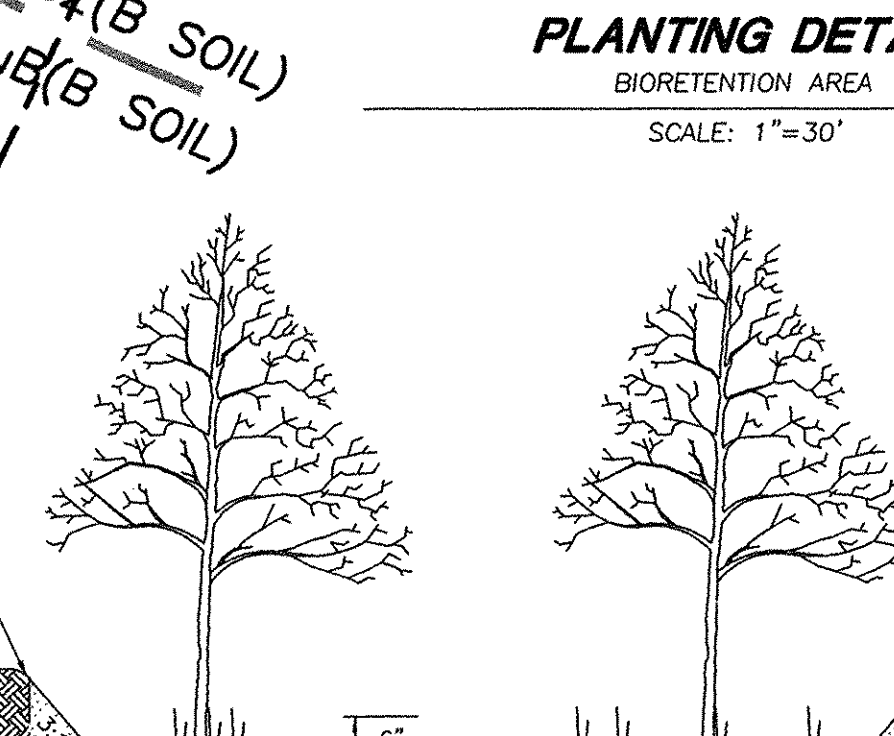
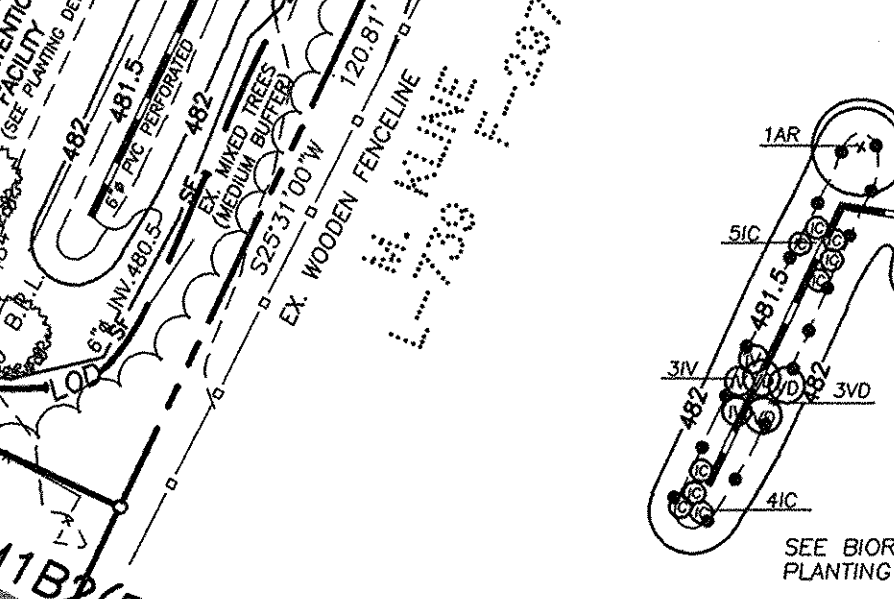
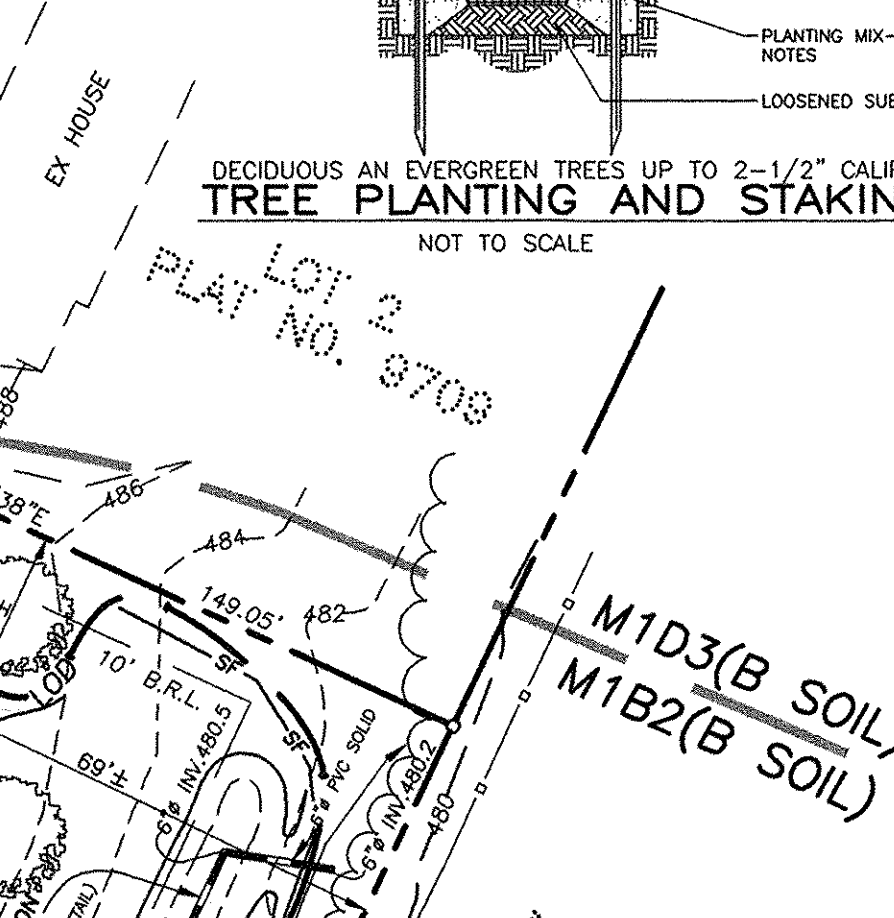
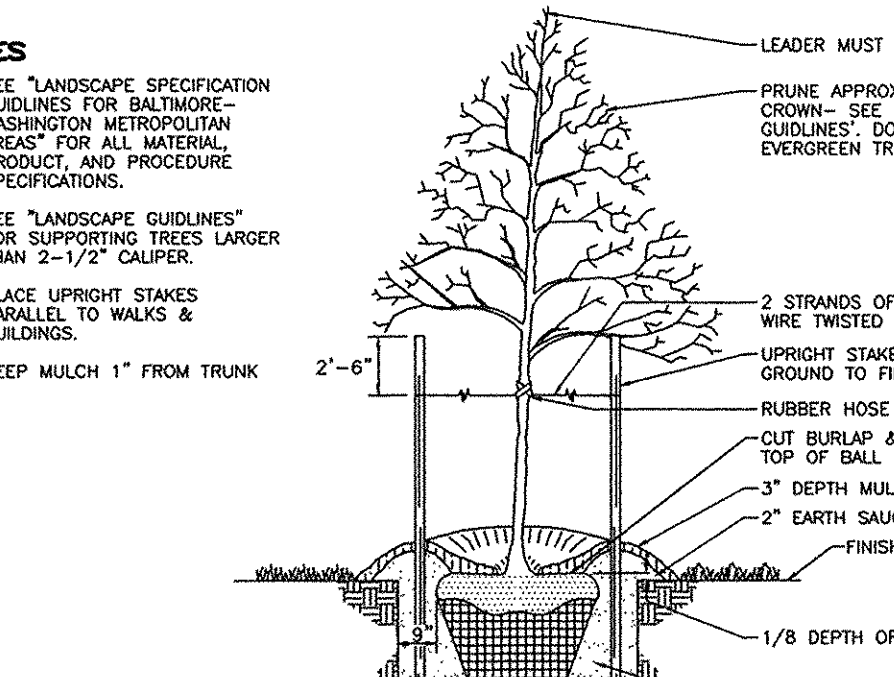
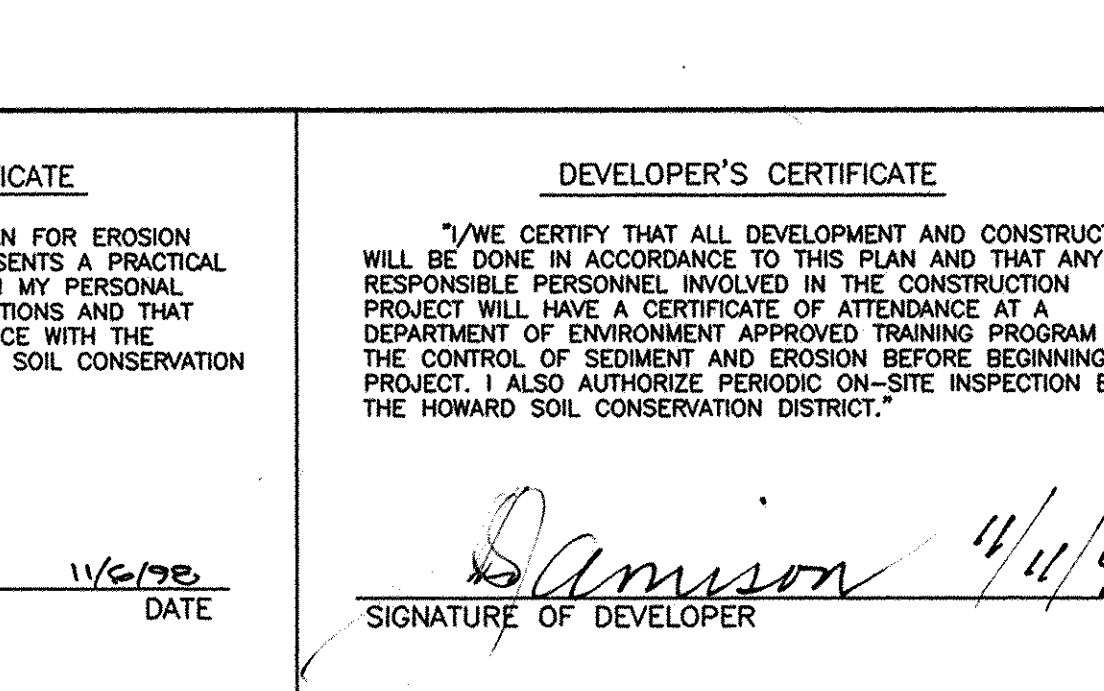
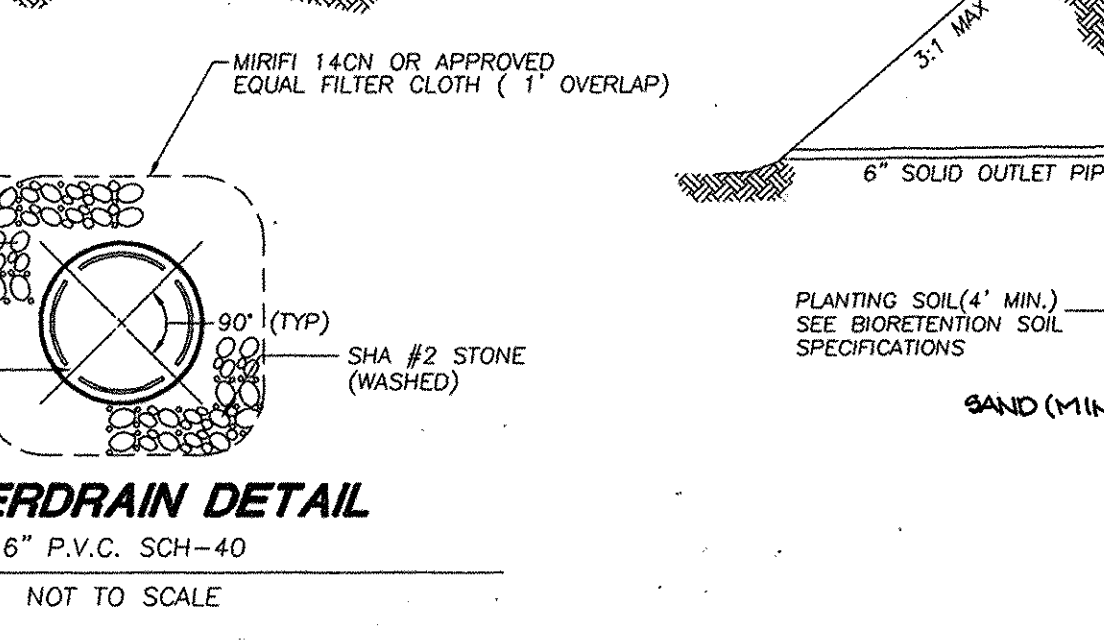
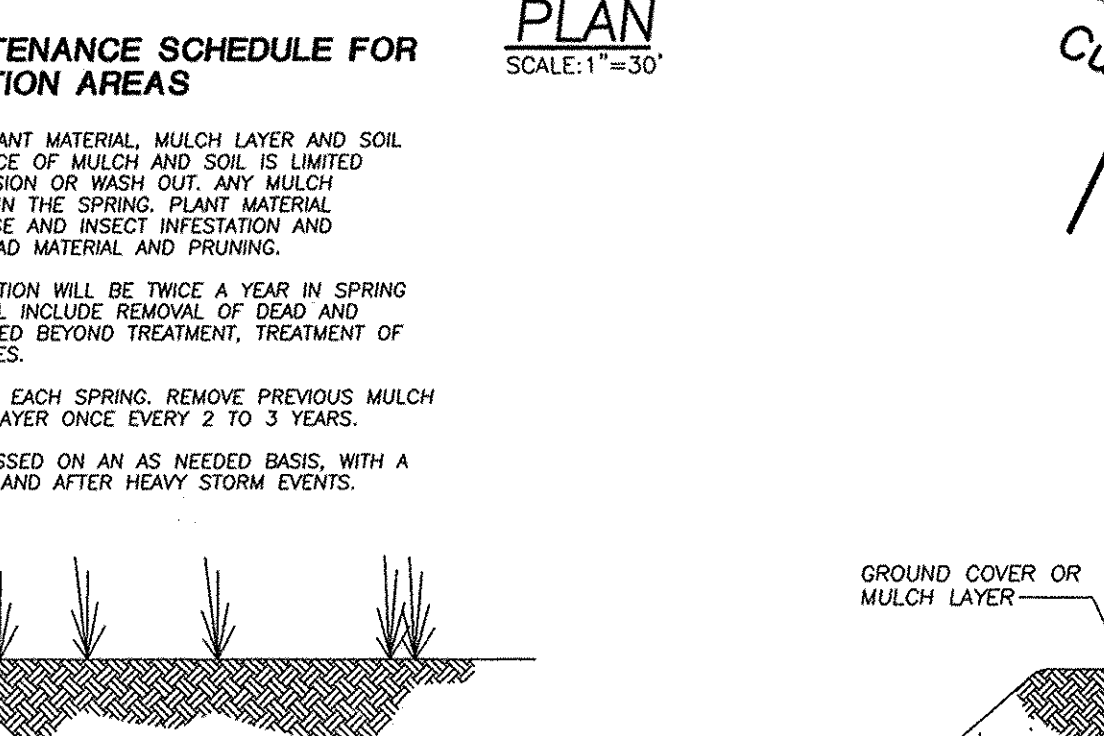
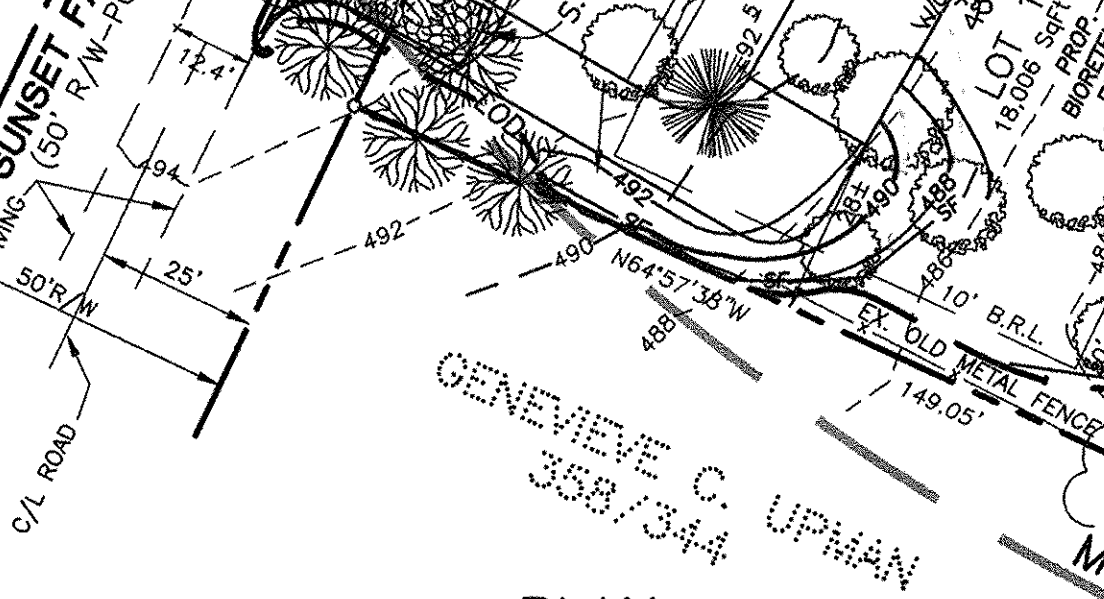
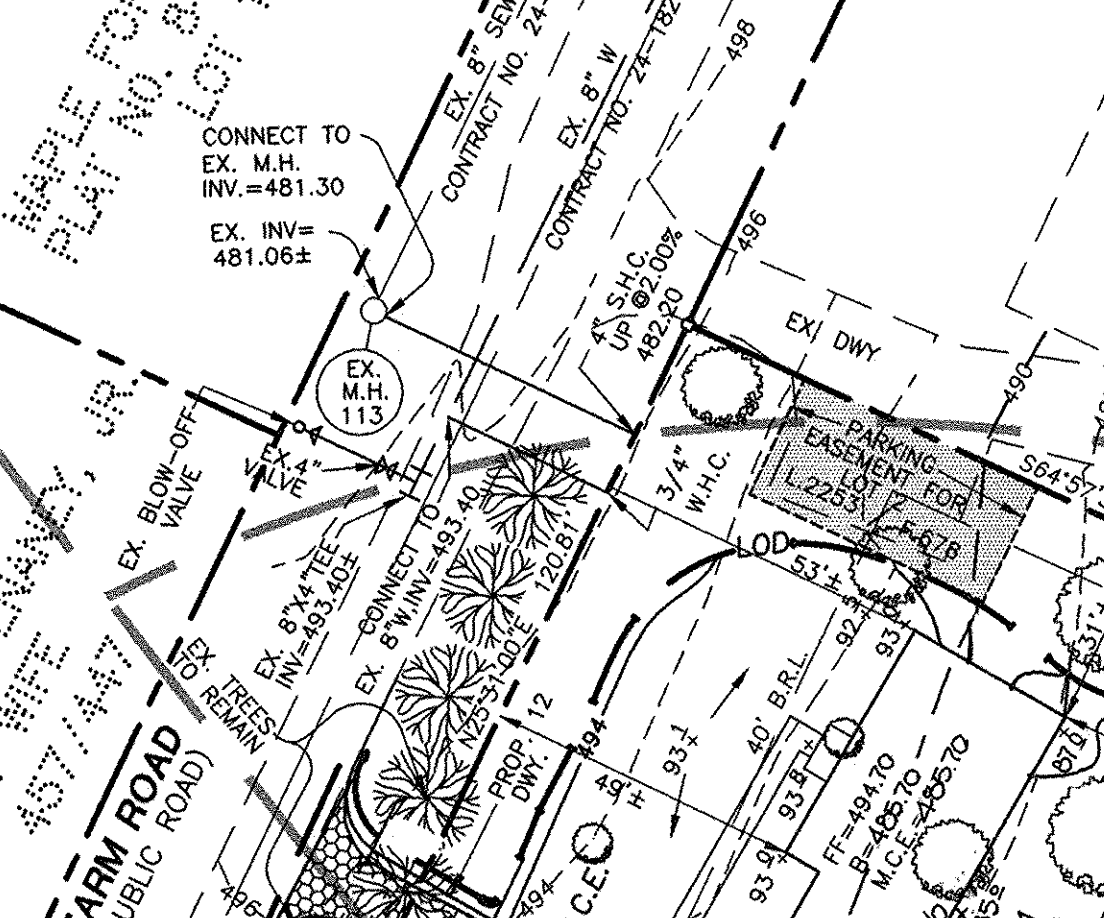
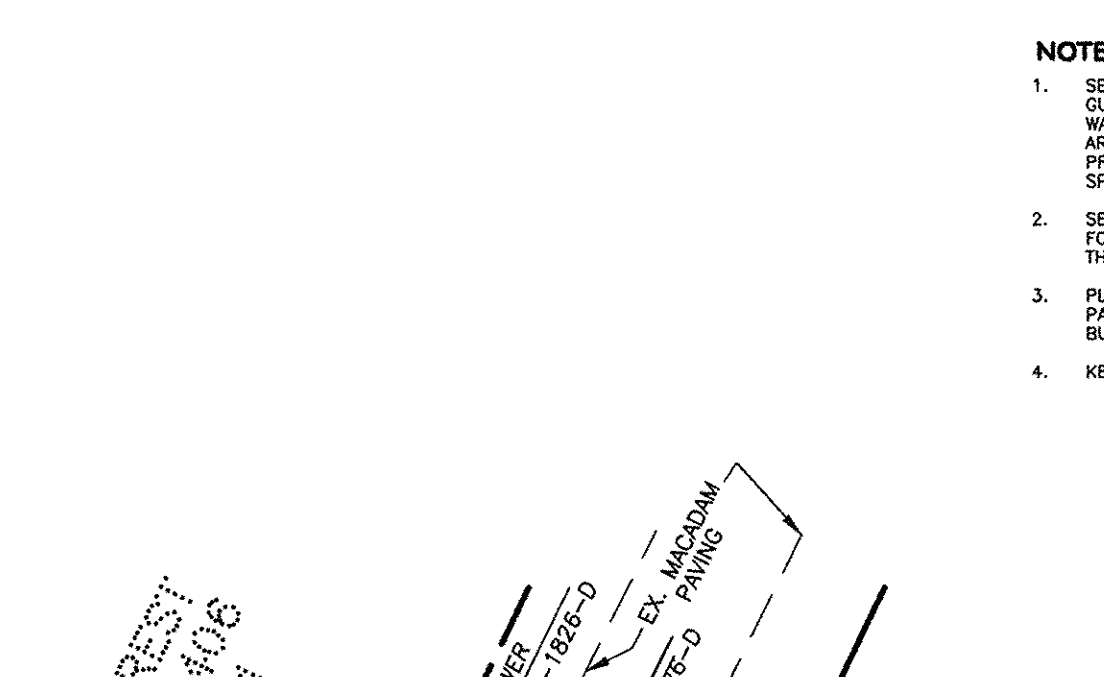
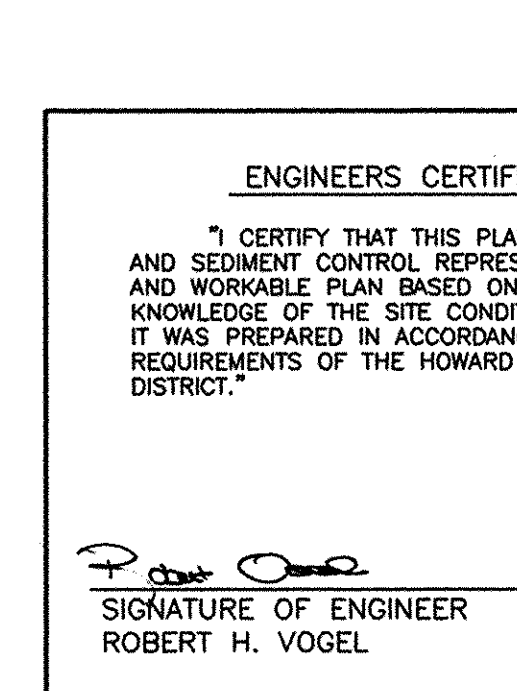
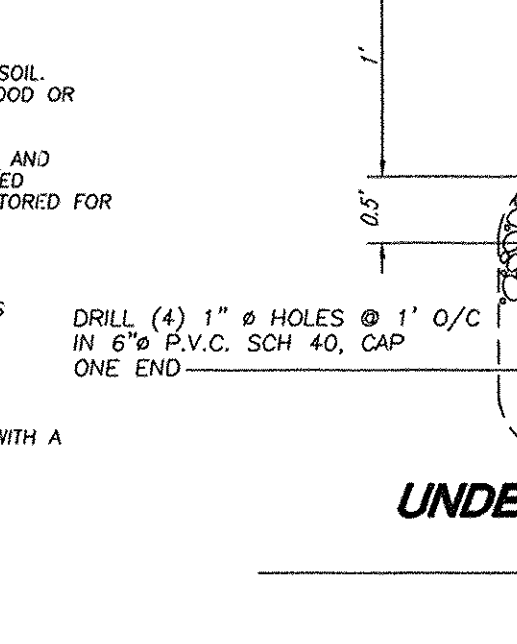
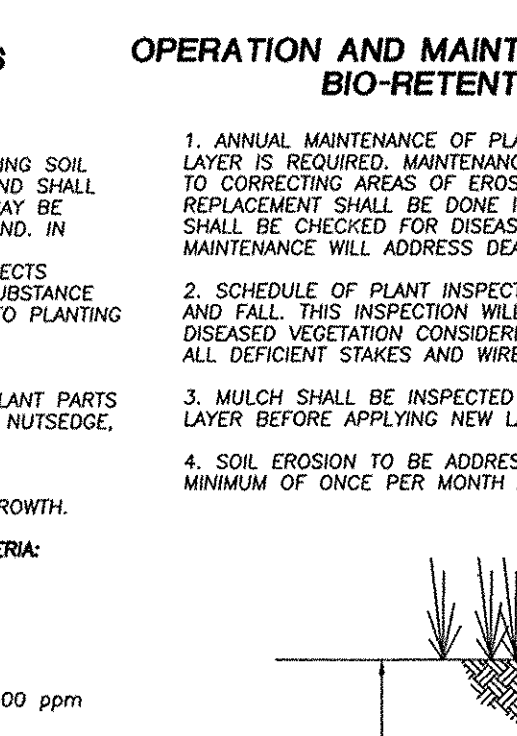
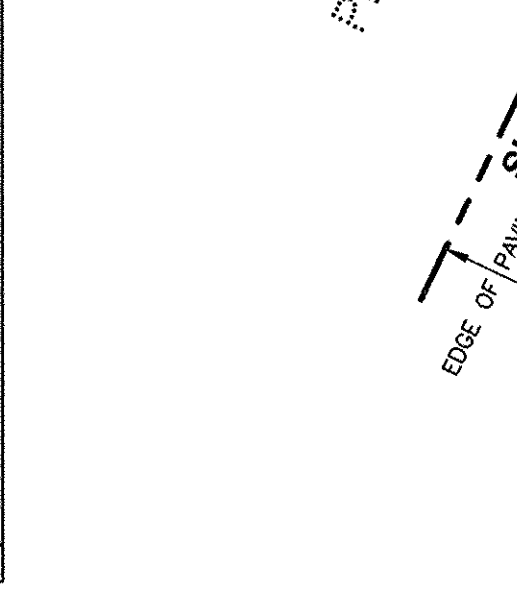
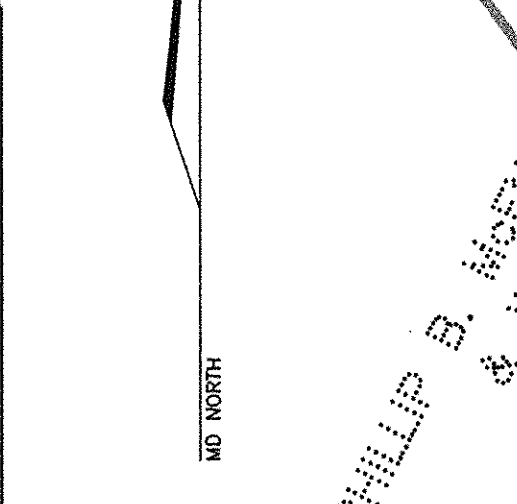
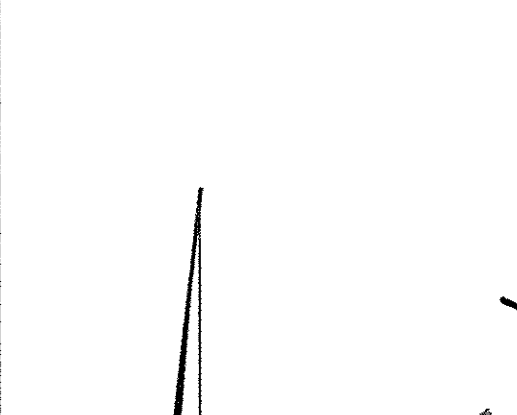
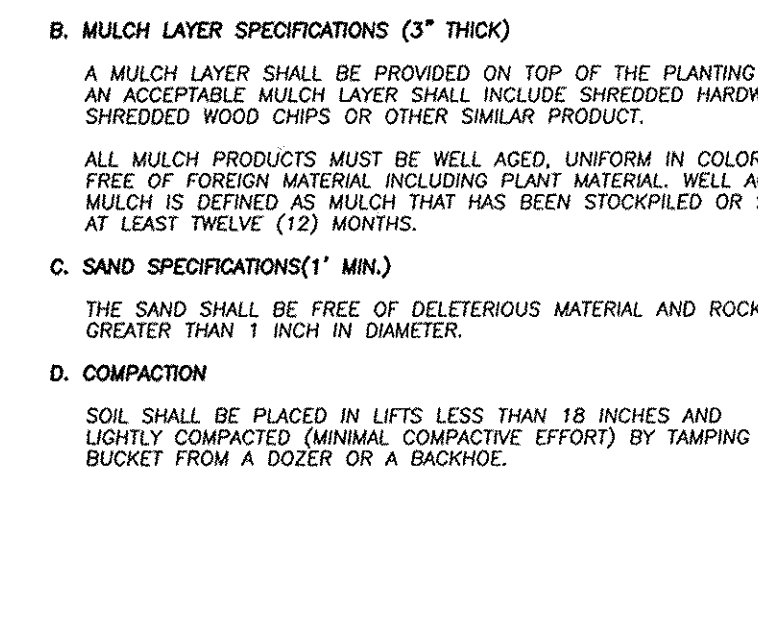
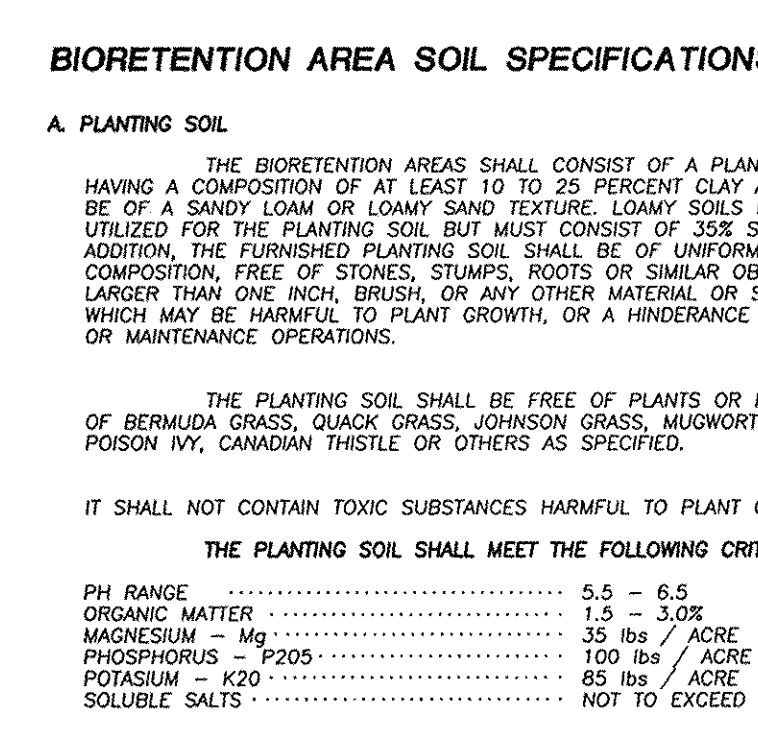
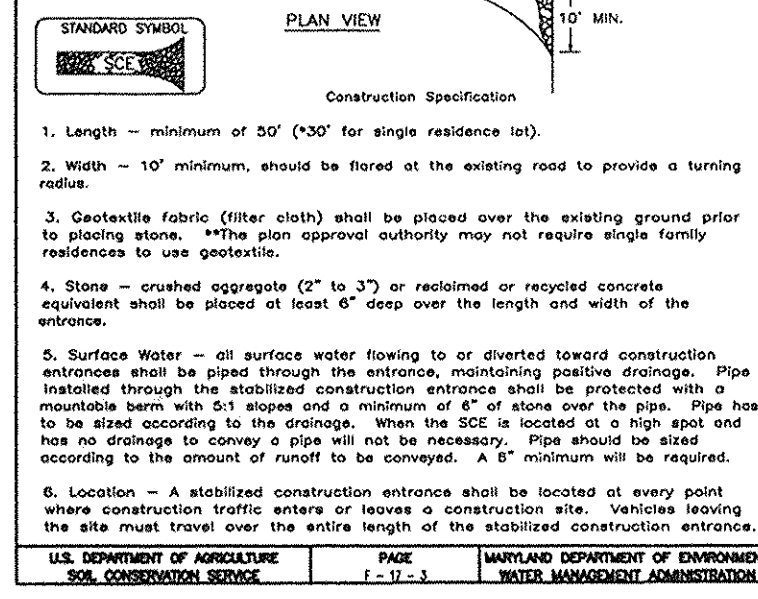
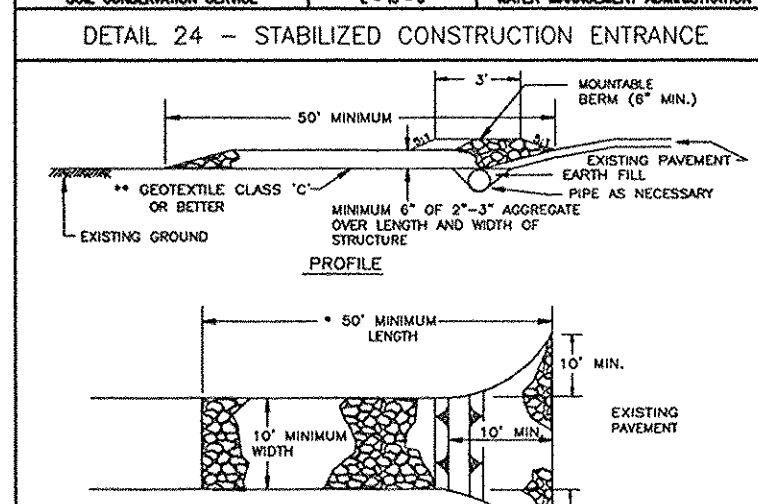
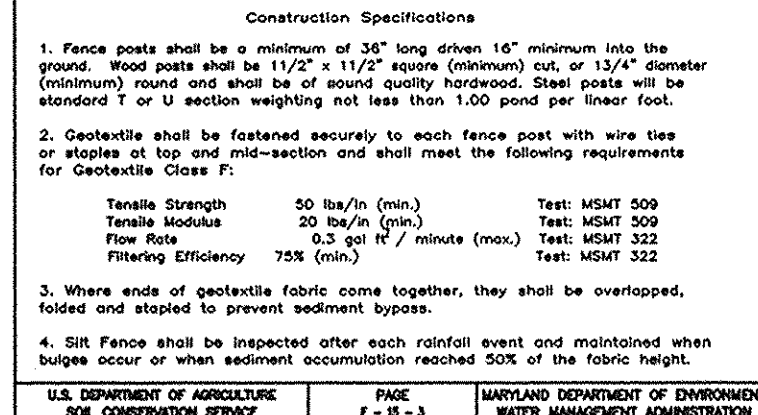
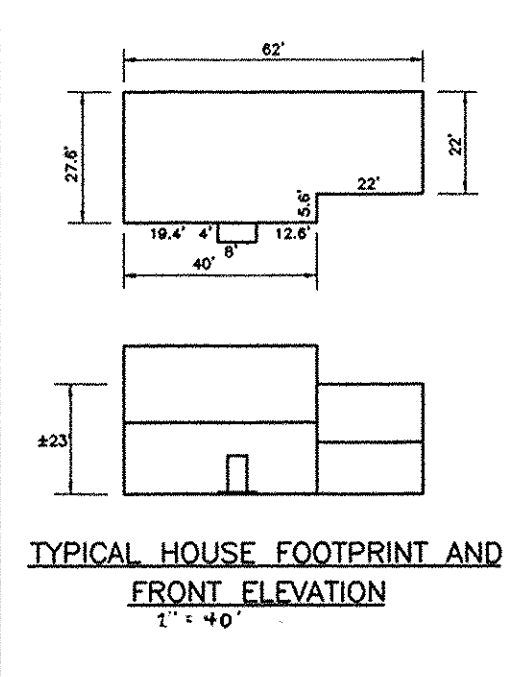
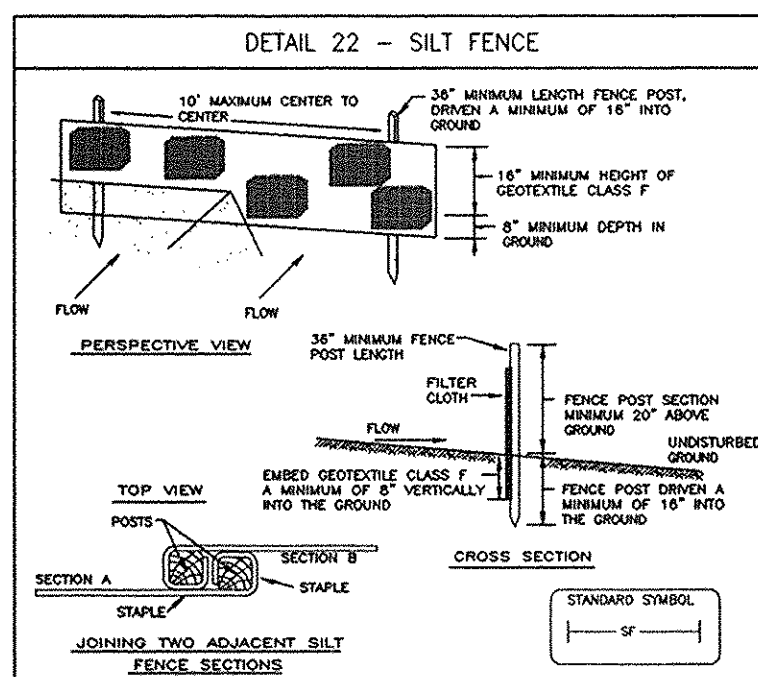
SUBDIVISION NAME	SECTION/AREA	PARCEL NUMBER
SWARTZ SUBDIVISION		21

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELECT. DIST.	CENSUS TR.
9709	8	R-20	17	21D	6021

WATER CODE H03 SEWER CODE 5758200







**SWARTZ SUBDIVISION LOT NO. 1 SITE DEVELOPMENT PLAN**

REFERENCE: F-91-26 TAX MAP #17 2ND ELECTION DISTRICT BLOCK #8 PARCEL 21 HOWARD COUNTY, MARYLAND

**VOGEL & ASSOCIATES, INC.**  
ENGINEERS - SURVEYORS - PLANNERS  
3691 PARK AVENUE, SUITE 101 ELLICOTT CITY, MARYLAND 21048  
TELEPHONE: (410) 461-5828 FAX: (410) 465-3966

DESIGN BY: P.K.P.  
DRAWN BY: P.K.P.  
CHECKED BY: R.H.V.  
DATE: JUNE, 1998  
SCALE: 1"=30'  
W.O. NO.: 98-48

1 SHEET OF 1