



# Building Permit Application

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

RECEIVED  
Date Received: NOV 01 2012  
LICENSES & PERMITS  
DIVISION  
Permit No.: B12003608

Building Address: 870 Driver Road  
City: Marriottsville State: md Zip Code: 21044  
Suite/Apt. #: \_\_\_\_\_ SDP/WP/BA #: 6P# 13-23  
Census Tract: \_\_\_\_\_ Subdivision: Aston's Property  
Section: \_\_\_\_\_ Area: \_\_\_\_\_ Lot: 4  
Tax Map: 10 Parcel: 271 Grid: \_\_\_\_\_  
Zoning: \_\_\_\_\_ Map Coordinates: 4694 Lot Size: 3Ac  
65

Property Owner's Name: Carrigan Homes  
Address: 9812 Carling Ct  
City: Ellicott City State: md Zip Code: 21042  
Phone: 410-977-8927 Fax: 410-465-5808  
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: \_\_\_\_\_

Existing Use: Empty lot  
Proposed Use: New home  
Estimated Construction Cost: \$ 280,000  
Description of Work: To build new single family home on empty lot  
Occupant or Tenant: \_\_\_\_\_  
Was tenant space previously occupied?  Yes  No  
Contact Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Email: \_\_\_\_\_

Contractor Company: Carrigan Homes  
Contact Person: Owen Kelly  
Address: 9812 Carling Ct  
City: Ellicott City State: md Zip Code: 21042  
License No.: 358  
Phone: 410-977-8927 Fax: 410-465-5808  
Email: Carriganhomes@comcast.net

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: <u>56</u>	<u>56</u>
	2 <sup>nd</sup> floor:	
Area of construction (sq. ft.):	Basement:	
Use group:	<input type="checkbox"/> Finished Basement	
	<input checked="" 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:	
<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 checked="" type="checkbox"/> No	Roof:	
<input type="checkbox"/> 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:	
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 Print Name: Owen Kelly  
Email Address: Carriganhomes@comcast.net Date: 10-31-12  
Title/Company: Pres Carrigan Homes

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	<u>11/16/12</u>	<u>[Signature]</u>

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 #	<u>3079</u>

## Scott, Heidi

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**From:** Carrigan Homes [carriganhomes@comcast.net]  
**Sent:** Friday, November 16, 2012 12:31 PM  
**To:** Scott, Heidi  
**Subject:** RE: 870 Driver Road - Building Permit B12003608

Heidi,

The house is 4 bedroom, 3 bath. 3250 sq. ft.

Owen Kelly  
*Pres. Carrigan Homes, Inc.*  
9812 Caitlins Court  
Ellicott City, MD 21042  
410-465-7755 office  
410-465-5608 fax

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**From:** Scott, Heidi [mailto:hscott@howardcountymd.gov]  
**Sent:** Friday, November 16, 2012 12:11 PM  
**To:** Carrigan Homes  
**Subject:** 870 Driver Road - Building Permit B12003608

Hi Owen –

I am reviewing this building permit for a new dwelling. I need to find out the number of bedrooms and the square footage of the proposed house? It is not indicated on the building permit application.

Thanks for your help.

Heidi Scott  
Environmental Sanitarian  
Howard County Health Dept.  
Well & Septic Program  
410-313-6287

### CONFIDENTIALITY NOTICE

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**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 EROSION AND SEDIMENT CONTROL STRUCTURES OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
  - 7) 14 DAYS AFTER THE START OF CONSTRUCTION.
  - 14 DAYS AFTER THE START OF CONSTRUCTION ON GRADED AREAS ON THE PROJECT SITE.
  - ALL SEDIMENT TRAPPING DEVICES MUST BE FEEDS AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. FOR PERMANENT SEEDING (SEC. 51), SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50), AND MULCHING (SEC. 53), TEMPORARY STABILIZATION WITH MULCH ALONE CAN 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 PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:
 

TOTAL AREA OF SITE	3,046.8 ACRES
AREA TO BE ROOFED OR PAVED	0.137 ACRES
AREA TO BE VEGETATIVELY STABILIZED	260 CU.YDS.
TOTAL CUT	250 CU.YDS.
TOTAL FILL	250 CU.YDS.

- NO STOCKING PERMITTED ON SITE.
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- TEMPORARY SEDIMENT CONTROL STRUCTURES 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 DISTURBANCE AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERMANENT EROSION AND SEDIMENT CONTROL STRUCTURES, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- REMOVES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITH ONE WORKING DAY, WHICHEVER IS SHORTER.

- TEMPORARY SEEDING NOTES**
- APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE RESTORED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.
- SEEDING 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./1,000 SQ. FT.).
- SEEDING:**  
FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 1 1/2 BUSHEL PER ANNUAL RYE (3.2 LBS./1,000 SQ. FT.) FOR THE PERIOD MAY 1 THROUGH AUGUST 14, SEED WITH 3 LBS./ACRE OF WEEPING LOVEGRASS (0.7 LBS./1,000 SQ. FT.). FOR THE PERIOD NOVEMBER 16 THROUGH 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./1,000 SQ. FT.) OF UNWOTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL./1,000 SQ. FT.) OF EMULSIFIED ASPHALT ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL./1,000 SQ. FT.) FOR ANCHORING. REFER TO THE 1998 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, FOR DATES AND METHODS NOT COVERED.

- PERMANENT SEEDING NOTES**
- ALL DISTURBED AREAS SHALL BE STABILIZED AS FOLLOWS:
- SEEDING PREPARATION:**  
LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.
- SOIL AMENDMENTS:**  
APPLY TWO TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./1,000 SQ. FT.) AND 600 LBS. PER ACRE 0-20-20 FERTILIZER (14 LBS./1,000 SQ. FT.) BEFORE SEEDING HARROW OR DISC. INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS./1,000 SQ. FT.) AND 500 LBS. PER ACRE (115 LBS./1,000 SQ. FT.) OF 10-20-20 FERTILIZER.
- SEEDING:**  
FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 15 THROUGH OCTOBER 15, SEED WITH 100 LBS. PER ACRE (2.3 LBS./1,000 SQ. FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THROUGH JULY 31, SEED WITH 60 LBS./ACRE (1.4 LBS./1,000 SQ. FT.) KENTUCKY 31 TALL FESCUE AND 2 LBS. PER ACRE (0.05 LBS./1,000 SQ. FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY: OPTION (1) - TWO 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 100 LBS./ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH TWO TONS/ACRE WELL ANCHORED STRAW. ALL SLOPES SHOULD BE HYDROSEEDED.
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- MAINTENANCE:**  
INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDING.  
\* FOR PUBLIC PONDS SUBSTITUTE CHEMUNG CROWNWEED AT 15 LBS./ACRE AND KENTUCKY 31 TALL FESCUE AT 40 LBS./ACRE AS THE SEEDING REQUIREMENT. OPTIMUM SEEDING DATE FOR THIS MIXTURE IS MARCH 1 TO APRIL 30.
- 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. RECORDED. TOPSOIL SHALL NOT BE A MIXTURE OF CONCRETE, STONES, SLAG, COARSE TEXTURE SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CONCRETE, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS 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 TOPSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.

- SEQUENCE OF CONSTRUCTION**
- |   |          |
|---|----------|
| 1. OBTAIN GRADING PERMIT.   | 1 DAY    |
| 2. INSTALL SEDIMENT AND EROSION CONTROL DEVICES AS SHOWN ON PLAN.   | 1 DAY    |
| 3. CLEAR AND GRUB TO LIMITS OF DISTURBANCE AND MASS GRADE TO SUB-BASE.  | 1 DAY    |
| 4. INSTALL TEMPORARY SEEDING.   | 1 DAY    |
| 5. CONSTRUCT BUILDINGS.   | 2 MONTHS |
| 6. CONSTRUCT STORMWATER MANAGEMENT FACILITIES.  | 2 DAYS   |
| 7. FINE GRADE SITE AND INSTALL PERMANENT SEEDING AND LANDSCAPE.   | 1 DAY    |
| 8. REMOVE SEDIMENT CONTROL DEVICES AS UPLAND AREAS ARE STABILIZED AND PERMISSION IS GRANTED BY E/S CONTROL INSPECTOR. | 2 DAYS   |

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PARK  
ELICOTT CITY, MARYLAND 21042  
(410) 461-2800

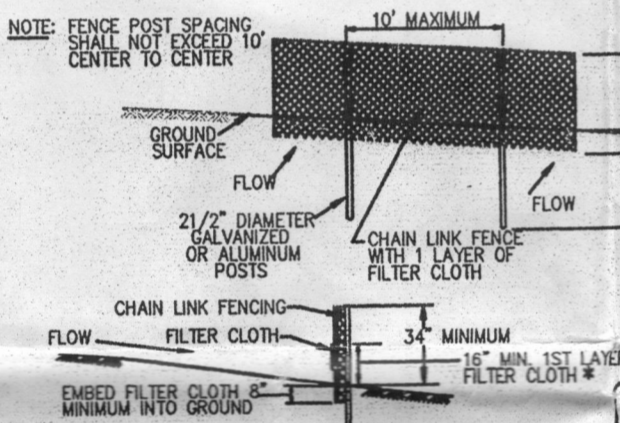
THIS DEVELOPMENT IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY CONSERVATION DISTRICT.  
APPROVED: *John R. Whitten*  
HOWARD COUNTY CONSERVATION DISTRICT  
DATE: 10/31/12

**TEMPORARY SEEDING NOTES**

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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./1,000 SQ. FT.).
- SEEDING:**  
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- MULCHING:**  
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- MAINTENANCE:**  
INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDING.  
\* FOR PUBLIC PONDS SUBSTITUTE CHEMUNG CROWNWEED AT 15 LBS./ACRE AND KENTUCKY 31 TALL FESCUE AT 40 LBS./ACRE AS THE SEEDING REQUIREMENT. OPTIMUM SEEDING DATE FOR THIS MIXTURE IS MARCH 1 TO APRIL 30.



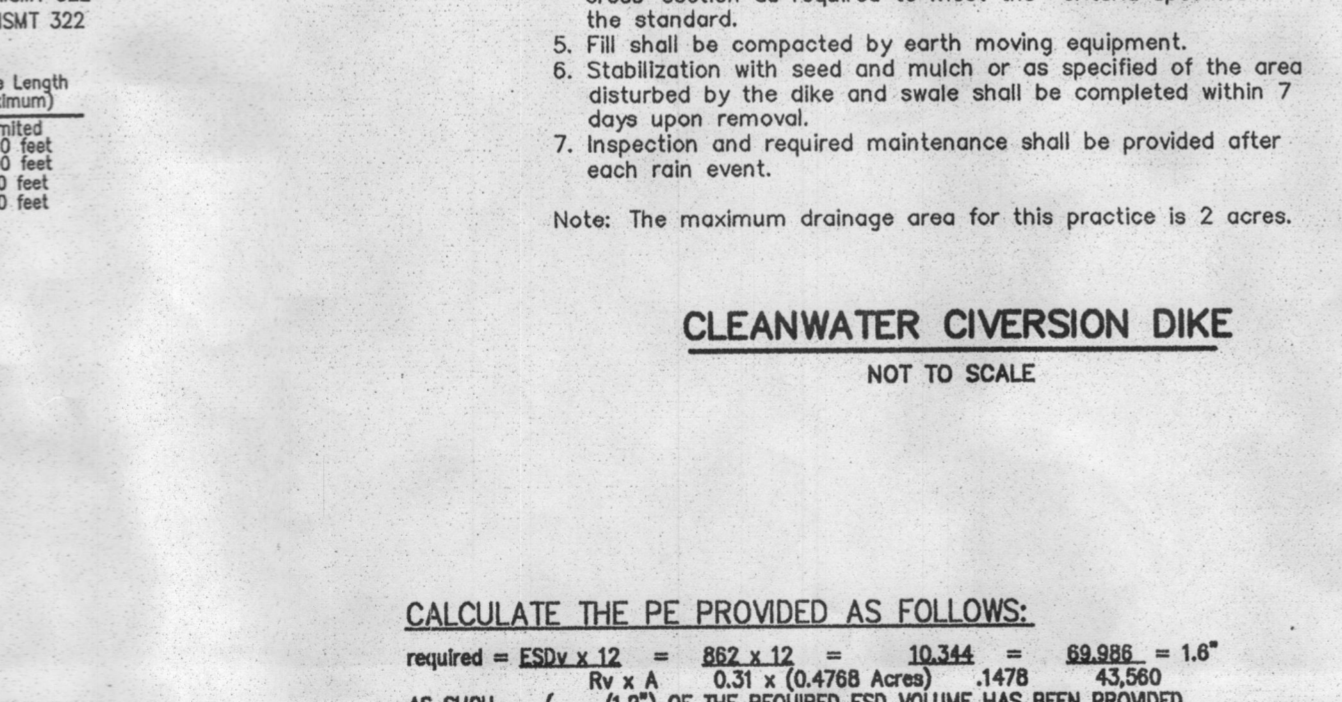
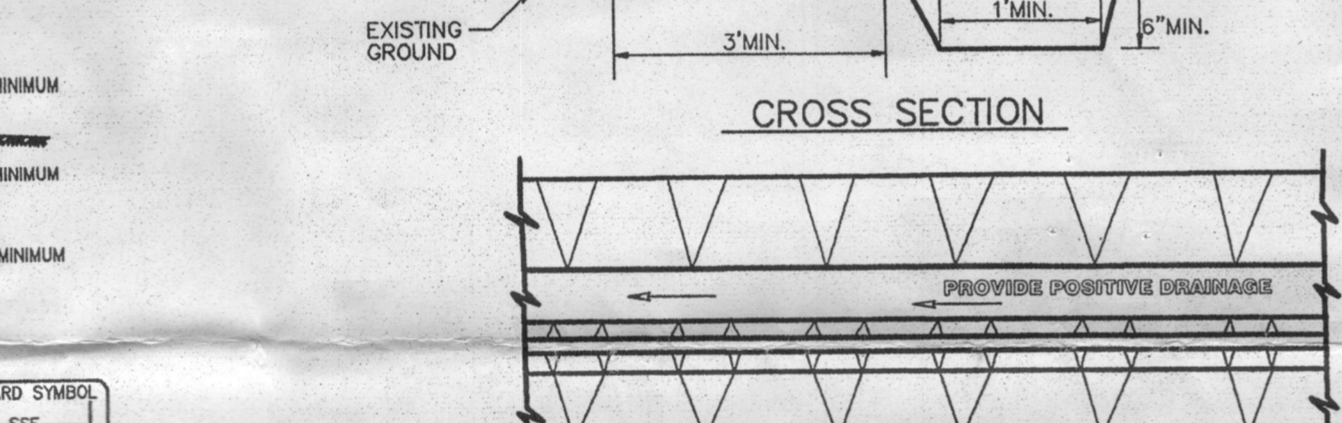
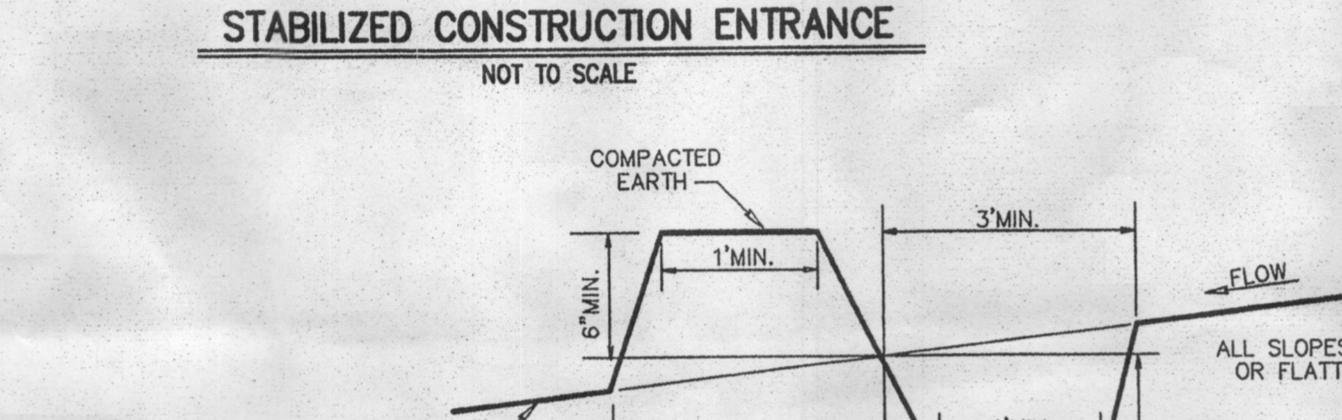
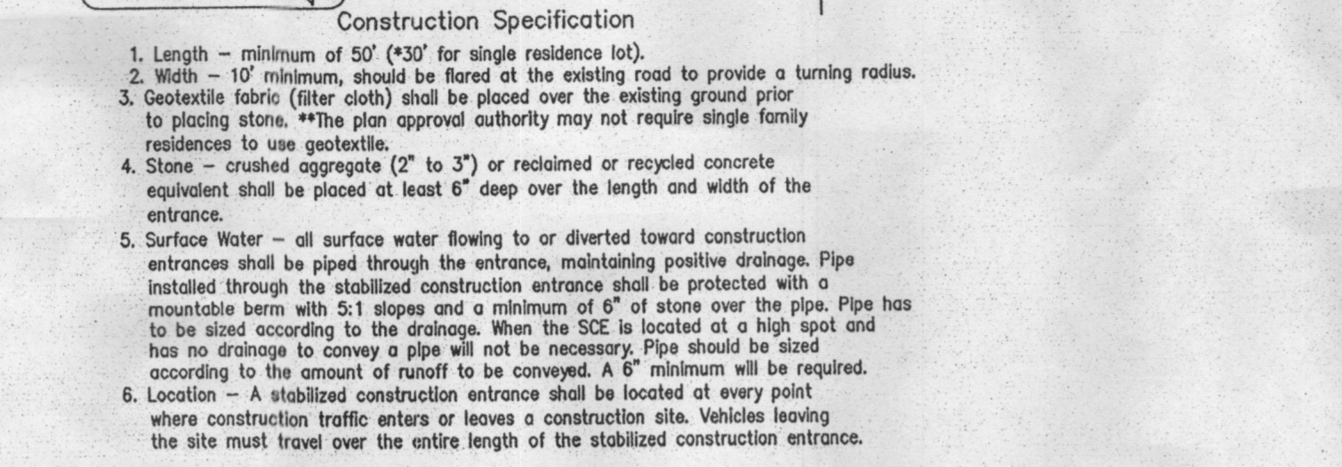
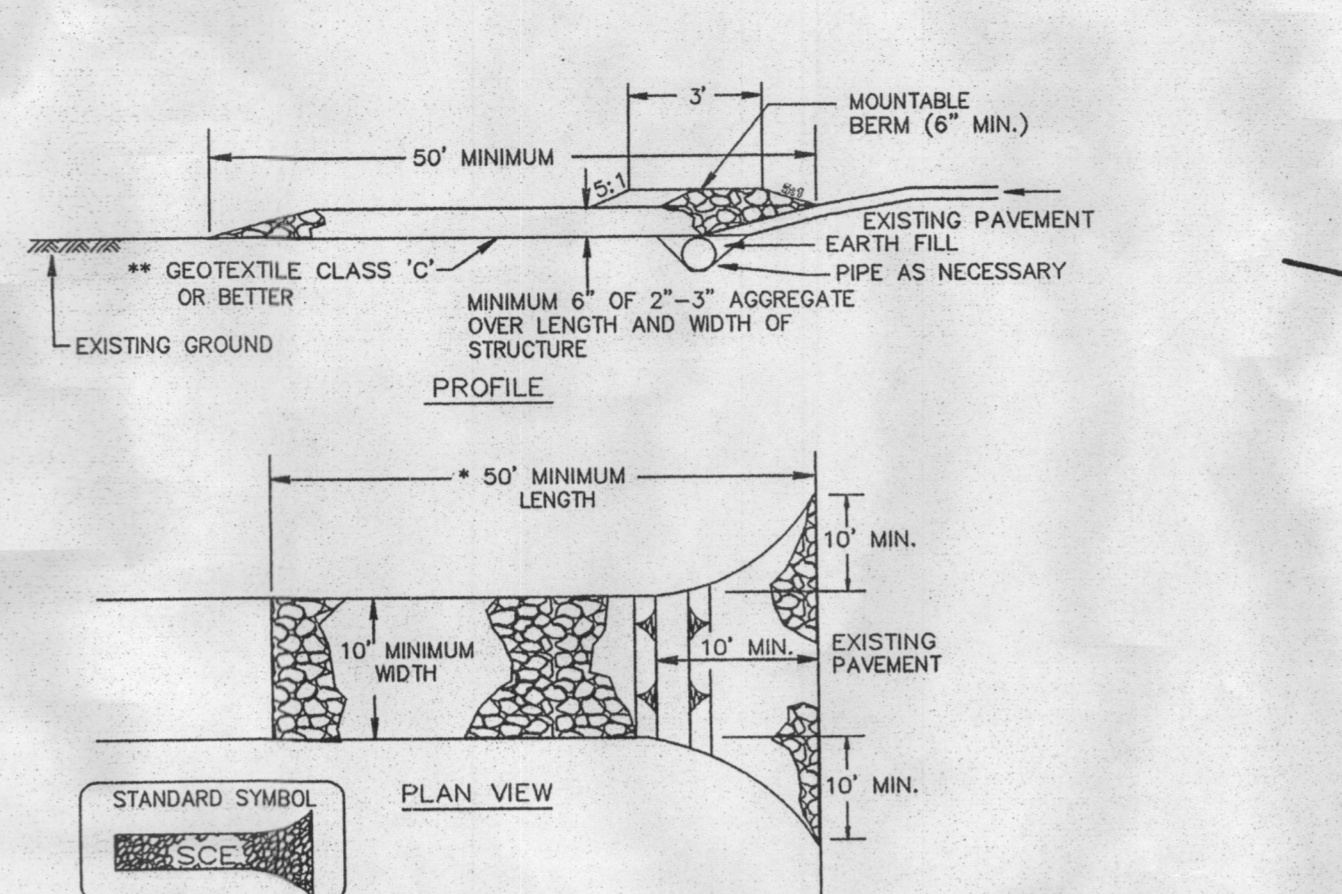
**CONSTRUCTION SPECIFICATIONS**

- Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6" fence shall be used, substituting 42" fabric and 6" length posts.
- Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
- Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
- Filter cloth shall be embedded a minimum of 6" into the ground.
- When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
- Maintenance shall be performed as needed and silt bulging removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.
- Filter cloth 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.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal/ft <sup>2</sup> /minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

**DESIGN CRITERIA**

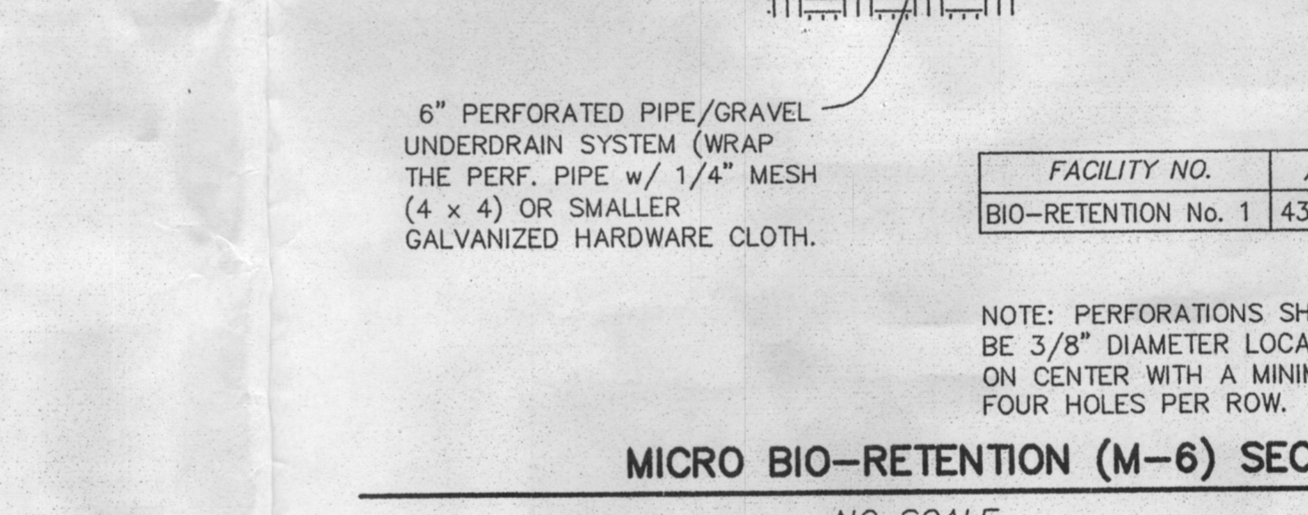
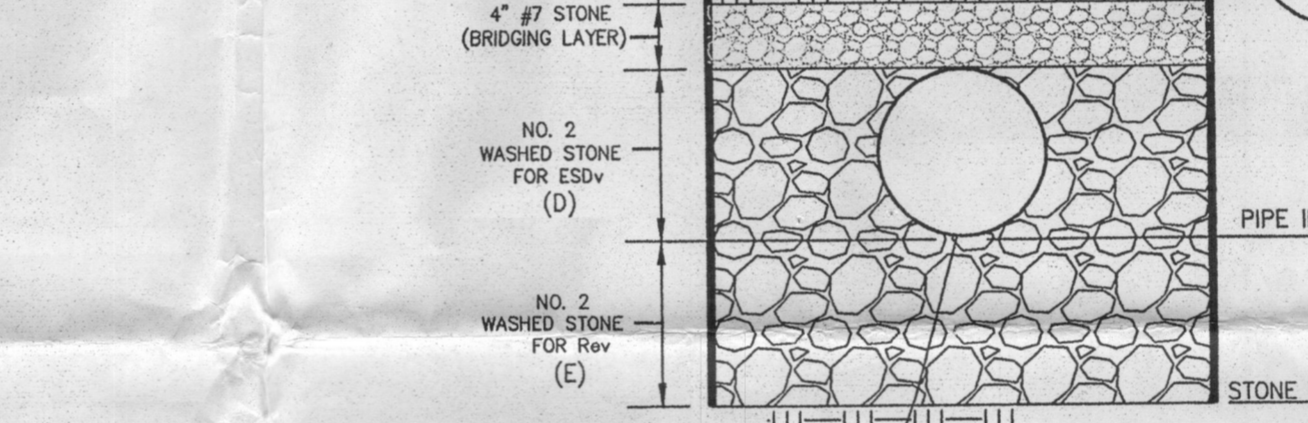
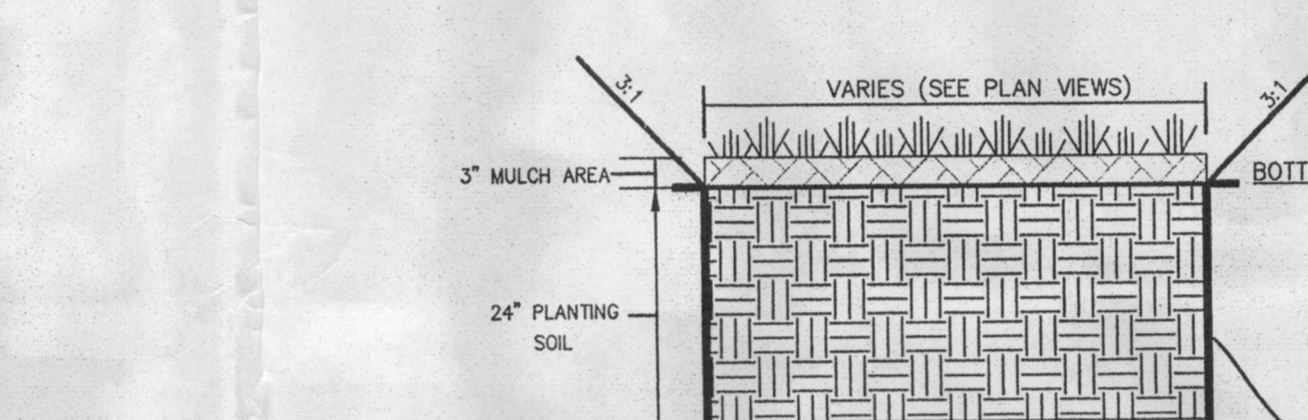
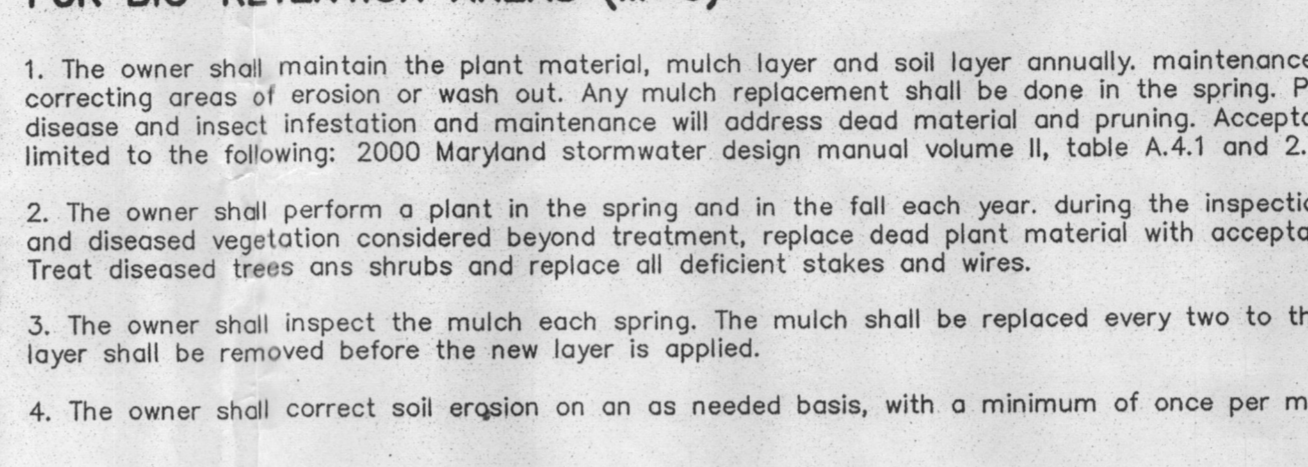
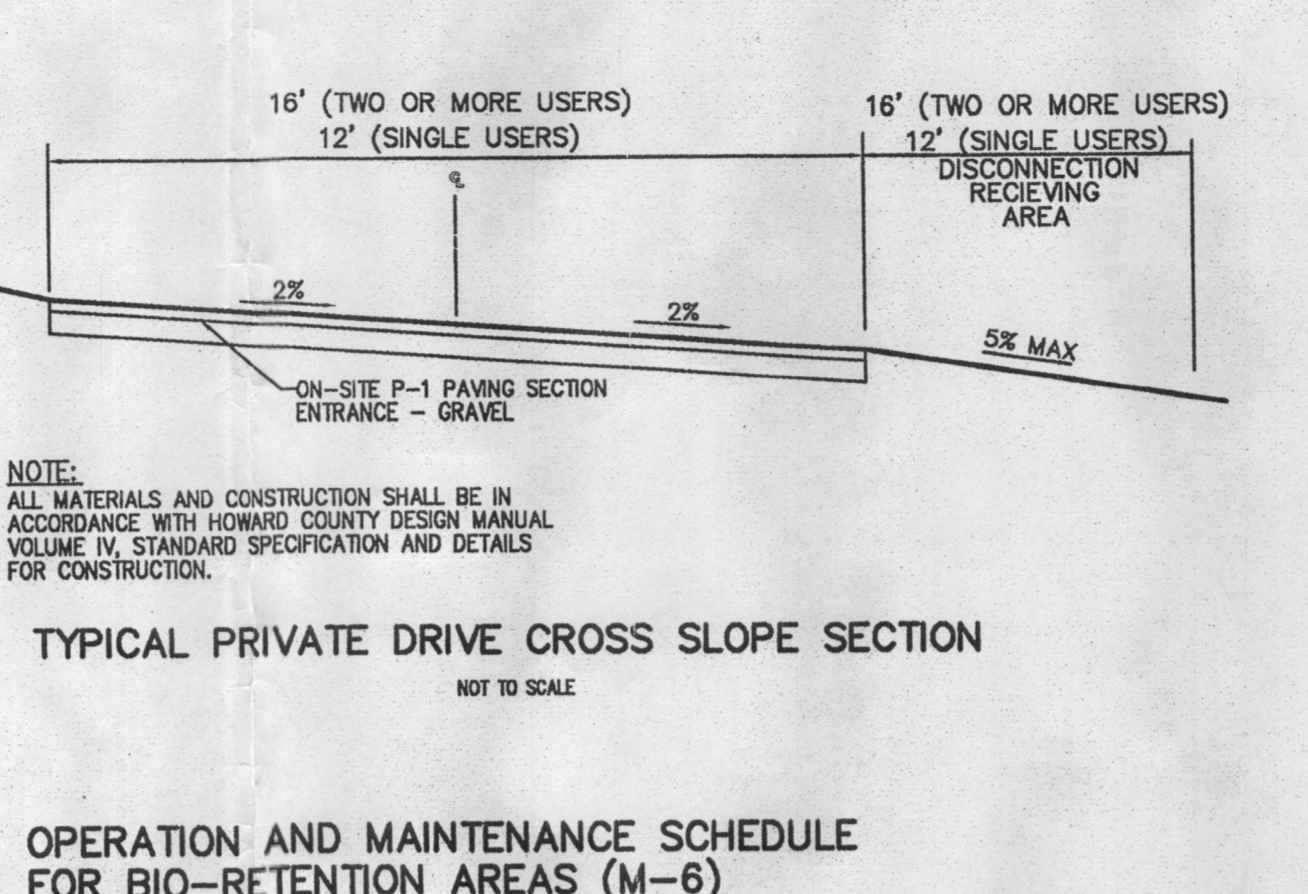
Slope	Slope Steepness	Slope Length (maximum)	24" Fence Length (maximum)
0 - 10%	0 - 10:1	Unlimited	200 feet
10 - 15%	10:1 - 7:1	200 feet	1,000 feet
15 - 20%	7:1 - 5:1	100 feet	500 feet
20 - 30%	5:1 - 3:1	50 feet	250 feet



**DEVELOPER'S CERTIFICATE**

I, WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD COUNTY CONSERVATION DISTRICT.

OWEN KELLY  
DATE: 10-31-12

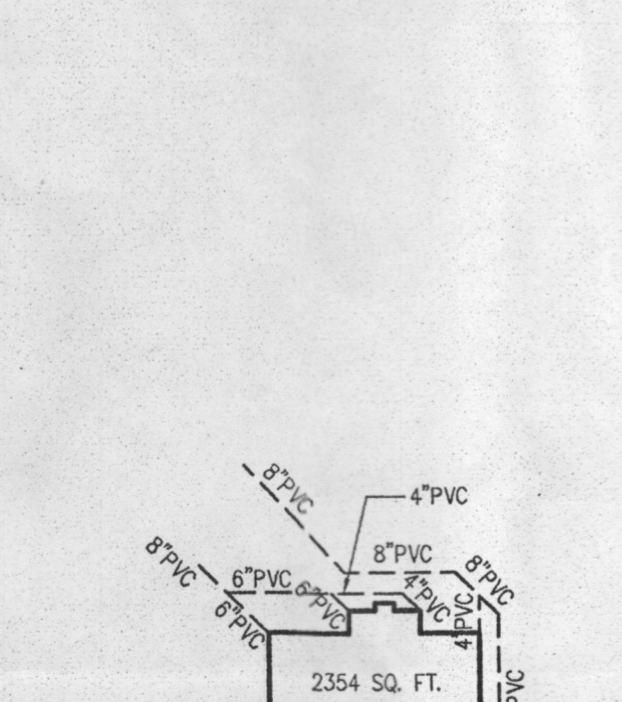
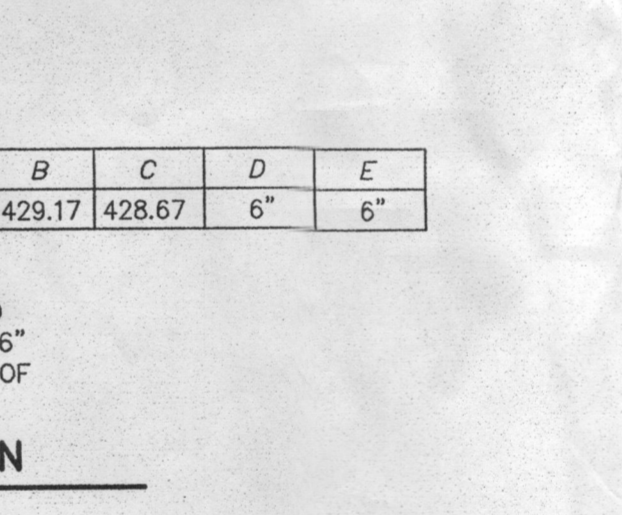
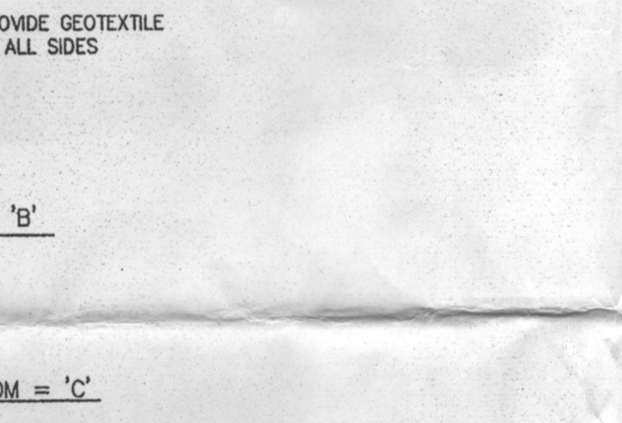
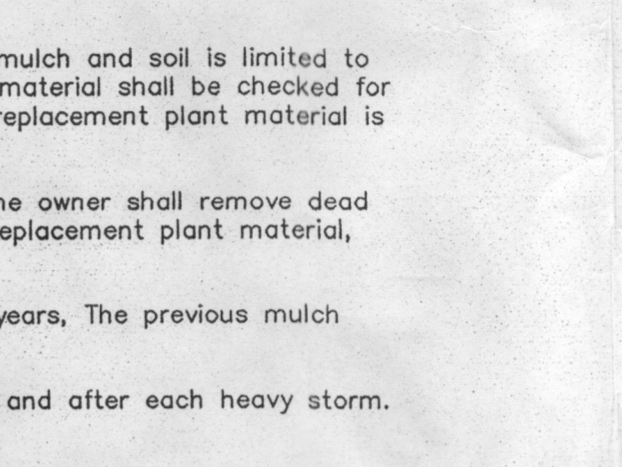
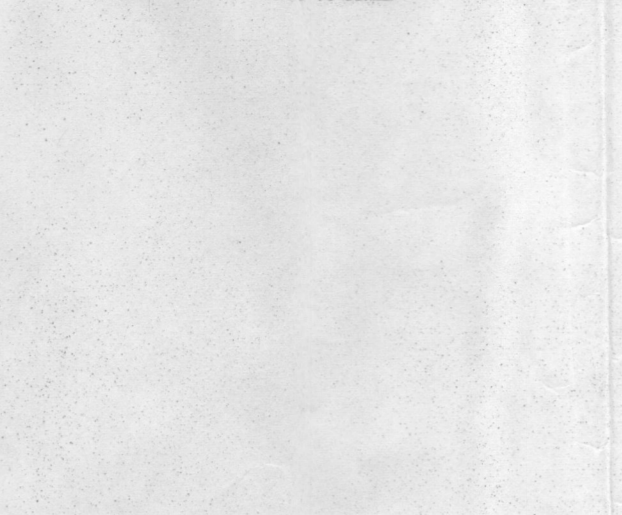
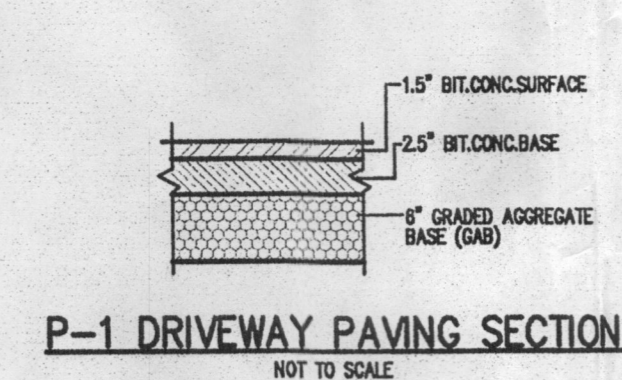


**STORMWATER MANAGEMENT PRACTICES**

LOT NO.	ADDRESS	BIO-RETENTION FACILITY (M-6)
LOT 4	870 DRIVER ROAD	YES
DRIVEWAY	870 DRIVER ROAD	YES

**SWM SUMMARY CHART**

AREA ID	ESDy REQ. cu.ft.	ESDy Pvd. cu.ft.	BIOTENTION FACILITY (M-6)
LOT 4	215	288	BIOTENTION FACILITY (M-6)
DRIVEWAYS	1142	1142	BIOTENTION FACILITY (M-6)
TOTALS	2160	2250	



**MULCH LAYER**

The mulch layer plays an important role in the performance of the bioretention system. The mulch layer helps maintain soil moisture and avoids surface sealing, which reduces permeability. Mulch helps prevent erosion, and provides a microenvironment suitable for soil biota at the mulch/soil interface. It also serves as a pretreatment layer, trapping the finer sediments, which remain suspended after the primary pretreatment.

The mulch layer should be standard landscape style, single or double shredded hardwood mulch or chips. The mulch layer should be well aged (stockpiled or stored for at least 12 months), uniform in color, and free of other materials, such as weed seeds, soil, roots, etc. The mulch should be applied to a maximum depth of three inches. Grass clippings should not be used as a mulch material.

**Planting Guidance**

Plant material selection should be based on the goal of simulating a terrestrial forested community of native species. Bioretention simulates an upland-species ecosystem. The community should be dominated by trees, but have a distinct community of understory trees, shrubs and herbaceous materials. By creating a diverse, dense plant cover, a bioretention facility will be able to treat stormwater runoff and withstand urban stresses from insects, disease, drought, temperature, wind, and exposure. The proper selection and installation of plant materials is key to a successful system. There are essentially three zones within a bioretention facility (Figure A.5). The lowest elevation supports plant species adapted to standing and fluctuating water levels. The middle elevation supports plants that like drier soil conditions, but can still tolerate occasional inundation by water. The outer edge is the highest elevation and generally supports plants adapted to drier conditions. A sample of appropriate plant materials for bioretention facilities are included in Table A.4. The layout of plant material should be flexible, but should follow the general principles described in Table A.5. The objective is to have a system, which resembles a random, and natural plant layout, while maintaining optimal conditions for plant establishment and growth. For a more extensive bioretention plan, consult ETAB, 1993 or Claytor and Schueler, 1997.

**Infiltration and Filter System Construction Specifications**

Infiltration and filter systems either take advantage of existing permeable soils or create a permeable medium such as sand for infiltration, and Re v. In some instances where permeability is great, these facilities may be used for G<sub>o</sub> as well. The most common systems include infiltration trenches, infiltration basins, sand filters, and organic filters.

When properly planted, vegetation will thrive and enhance the functioning of these systems. For example, pre-treatment buffers will trap sediments that often are bound with phosphorus and metals. Vegetation planted in the facility will aid in nutrient uptake and water storage. Additionally, plant roots will provide arteries for stormwater to permeate soil for groundwater recharge. Finally, successful plantings provide aesthetic value and wildlife habitat making these facilities more desirable to the public.

- Design Constraints:**
- > Planting buffer strips of at least 20 feet will cause sediments to settle out before reaching the facility, thereby reducing the possibility of clogging.
  - > Determine areas that will be saturated with water and water table depth so that appropriate plants may be selected (hydrology will be similar to bioretention facilities, see figure A.5 and Table A.4 for planting material guidance).
  - > Plants known to send down deep taproots should be avoided in systems where filter fabric is used as part of facility design.
  - > Test soil conditions to determine if soil amendments are necessary.
  - > Plants shall be located so that access is possible for structure maintenance.
  - > Stabilize heavy flow areas with erosion control mats or sod.
  - > Temporally divert flows from seeded areas until vegetation is established.
  - > See Table A.5 for additional design considerations.

**Bio-retention**

**Soil Bed Characteristics**

The characteristics of the soil for the bioretention facility are perhaps as important as the facility layout, size, and treatment volume. The soil must be permeable enough to allow runoff to filter through, and the media, while having characteristics suitable to promote and sustain a robust vegetative cover crop, in addition, much of the nutrient pollutant uptake (nitrogen and phosphorus) is accomplished through absorption and microbial activity within the soil profile. Therefore, soils must balance their chemical and physical properties to support biotic communities above and below ground.

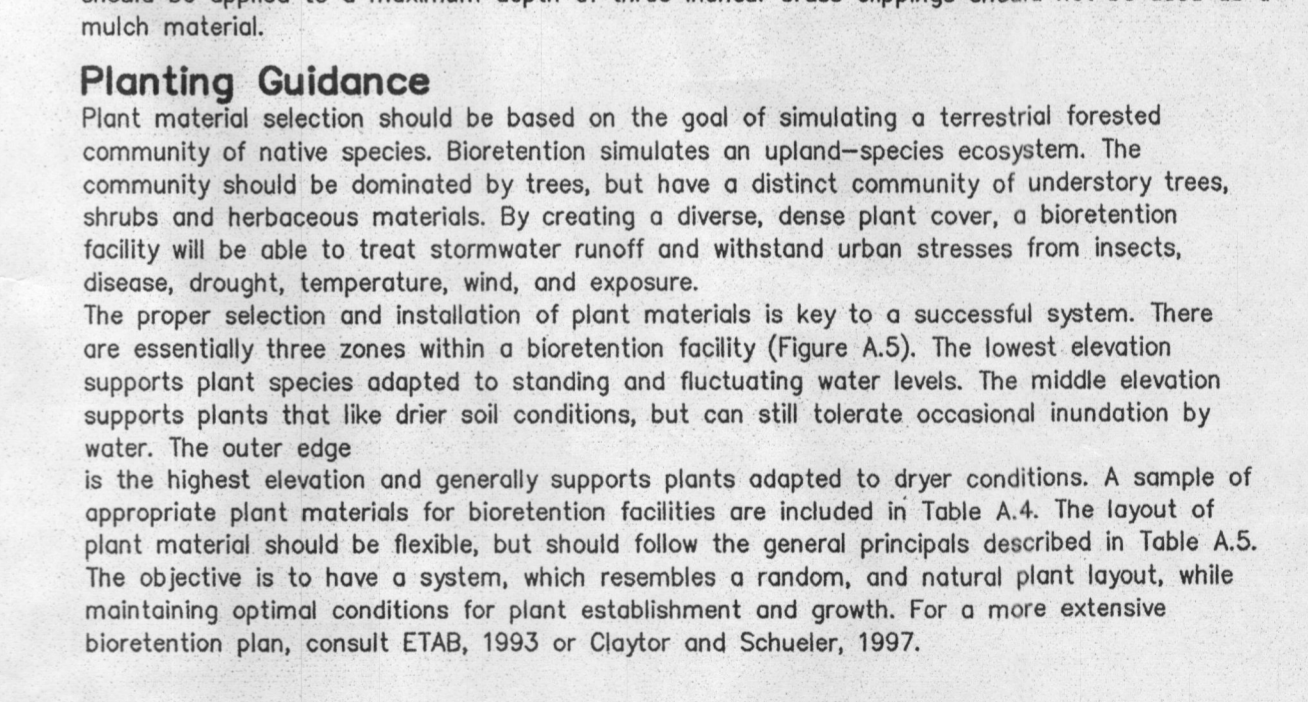
The planting soil should be a sandy loam, loamy sand, loam (USDA), or a loam/sand mix (should contain a minimum 35 to 60% sand, by volume). The clay content for these soils should be less than 25% by volume [Environmental Quality Resources (EQR), 1996; Engineering Technology Inc. and Biohabitats, Inc. (ETAB), 1993]. Soils should fall within the SM, ML, SC classifications of the Unified Soil Classification System (USCS). A permeability of at least 1.0 feet per day (0.5"/hr) is required (a conservative value of 0.5 feet per day is used for design). The soil should be free of stones, stumps, roots, or other woody material over 1" in diameter. Brush or seeds from noxious weeds (e.g., Johnson Grass, Mugwort, Nutsedge, and Canada Thistle or other noxious weeds as specified under COMAR 15.08.01.05.) should not be present in the soils. Placement of the planting soil should be in 12 to 18 lifts that are loosely compacted (tamped lightly with a backhoe bucket or traversed by dozer tracks). The specific characteristics are presented in Table A.3.

**Table A.3 Planting Soil Characteristics**

Parameter	Value
pH range	5.2 to 7.00
Organic matter	1.5 to 4.0% (by weight)
Magnesium	35 lbs. per acre, minimum
Phosphorus (phosphate - P2O5)	75 lbs. per acre, minimum
Potassium (potash -K2O)	85 lbs. per acre, minimum
Soluble salts	500 ppm
Clay	10 to 25 %
Silt	30 to 55 %
Sand	35 to 60%

**Facility Performance Data**

FACILITY NO.	A	B	C	D	E
BIOTENTION No. 1	432.00	429.17	428.67	6"	6"



**STORMWATER MANAGEMENT, SEDIMENT & EROSION NOTES & DETAILS**

**ANTONIS PROPERTY**  
LOT 4  
870 DRIVER ROAD

ZONING: RC-DED PLAT NO: 17998  
TAX MAP NO. 10 BLOCK NO. 04 PARCEL NO. 271  
3RD ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: OCTOBER, 2012  
SHEET 2 OF 2

**OWNER:** JAMES H. SELFRIDGE BUILDERS, INC. 4810 TEN OAKS ROAD DATON, MARLAND 21036

**BUILDER:** CARRIGAN HOMES INC. 9812 CAULINUS COURT ELLICOTT CITY, MD, 21042 410-465-7755

GP-13-23



FOREST CONSERVATION EASEMENT NO. 1  
PER PLAT 17998

FOREST CONSERVATION EASEMENT NO. 2  
PER PLAT 17998

NON-BUILDABLE  
PRESERVATION PARCEL A  
ANTONIS PROPERTY  
ZONED: RC-DEO  
PLAT NO. 17998

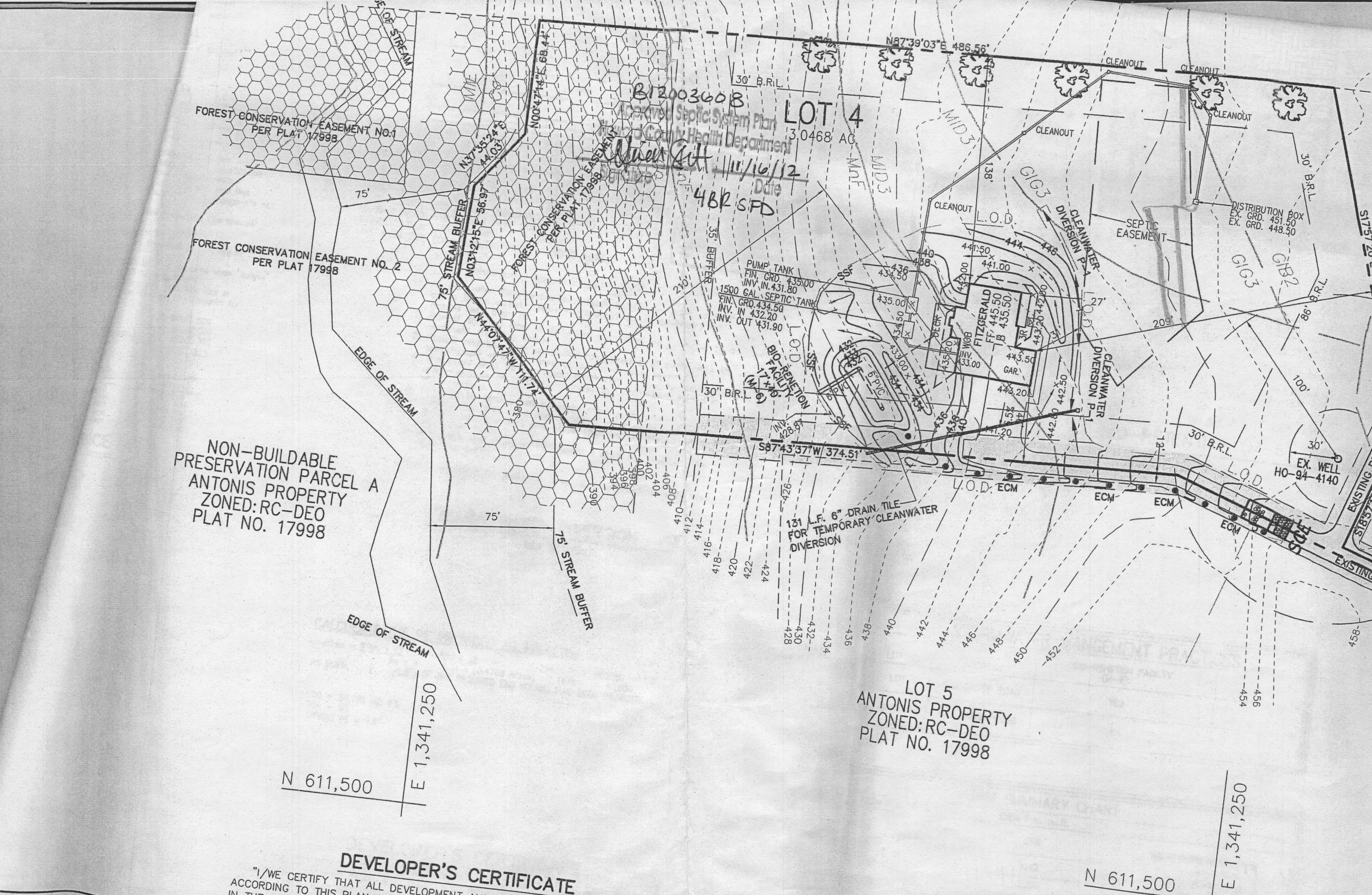
DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION  
ACCORDING TO THIS PLAN AND SPECIFICATIONS  
IN THE CONSTRUCTION OF THIS PROJECT SHALL BE IN ACCORDANCE WITH THE  
REQUIREMENTS OF THE ZONING ORDINANCES AND THE HEALTH DEPARTMENT  
REQUIREMENTS FOR SEPTIC SYSTEMS AND WASTEWATER TREATMENT PLANTS.

812003608  
Approved Septic System Plan  
Health Department  
Date 11/16/12  
482 SFD

LOT 4  
3.0468 AC

LOT 5  
ANTONIS PROPERTY  
ZONED: RC-DEO  
PLAT NO. 17998



N 611,500

E 1,341,250

N 611,500

E 1,341,250