

SYMBOL	NAME / DESCRIPTION	SOIL GROUP
GgB	Glenelg loam, 3 to 8 percent slopes	B
GnB	Glenville-Balle silt loams, 0 to 8 percent slopes	B
MaC	Manor loam, 3 to 15 percent slopes	C
MaD	Manor loam, 15 to 25 percent slopes	B

KEY	QUAN.	BOTANICAL/Common NAME	SIZE	NOTE
○	4	Gleditsia triacanthos 'Imperial'	2 1/2"-3" Cal.	B # B
○	4	Acer rubrum 'October Glory'	2 1/2"-3" Cal.	B # B
○	5	Liriodendron tulipifera	2 1/2"-3" Cal.	B # B

Number	Common name	Species	DBH	Condition	Status
ST-1	Tulip Poplar	Liriodendron tulipifera	37"	Fair	Remove
ST-2	Black Oak	Quercus velutina	34"	Poor	Retain

CATEGORY	ADJACENT TO PERIMETER PROPERTIES	
	1	2
Perimeter/Frontage Designation	A	A
Linear Feet of Roadway	932	635
Frontage/Perimeter	Yes*	Yes*
Credit for Existing Vegetation (Yes, No, Linear Feet)	(246)	(535)
Remaining Perimeter Length	686	102
Credit for Wall, Fence or Berm (Yes, No, Linear Feet)	No	No
Remaining Perimeter Length		
Number of Plants Required	1:60	1:60
Shade Trees	11	2
Evergreen Trees	-	-
Shrubs	-	-
Number of Plants Provided	11	2
Shade Trees	-	-
Evergreen Trees	-	-
Other Trees (2:1 Substitution)	-	-
Shrubs (10:1 Substitution)	-	-
(Describe Plant Substitution Credits Below if needed)		

### LEGEND

Existing Contour  
Existing Spot Elevation

Existing Trees to Remain

15% - 25% slopes

Existing Septic Easement

Existing Well

Proposed Well Field

Soil Boundary

Forest Conservation Easement Retention Area

FCE Signage

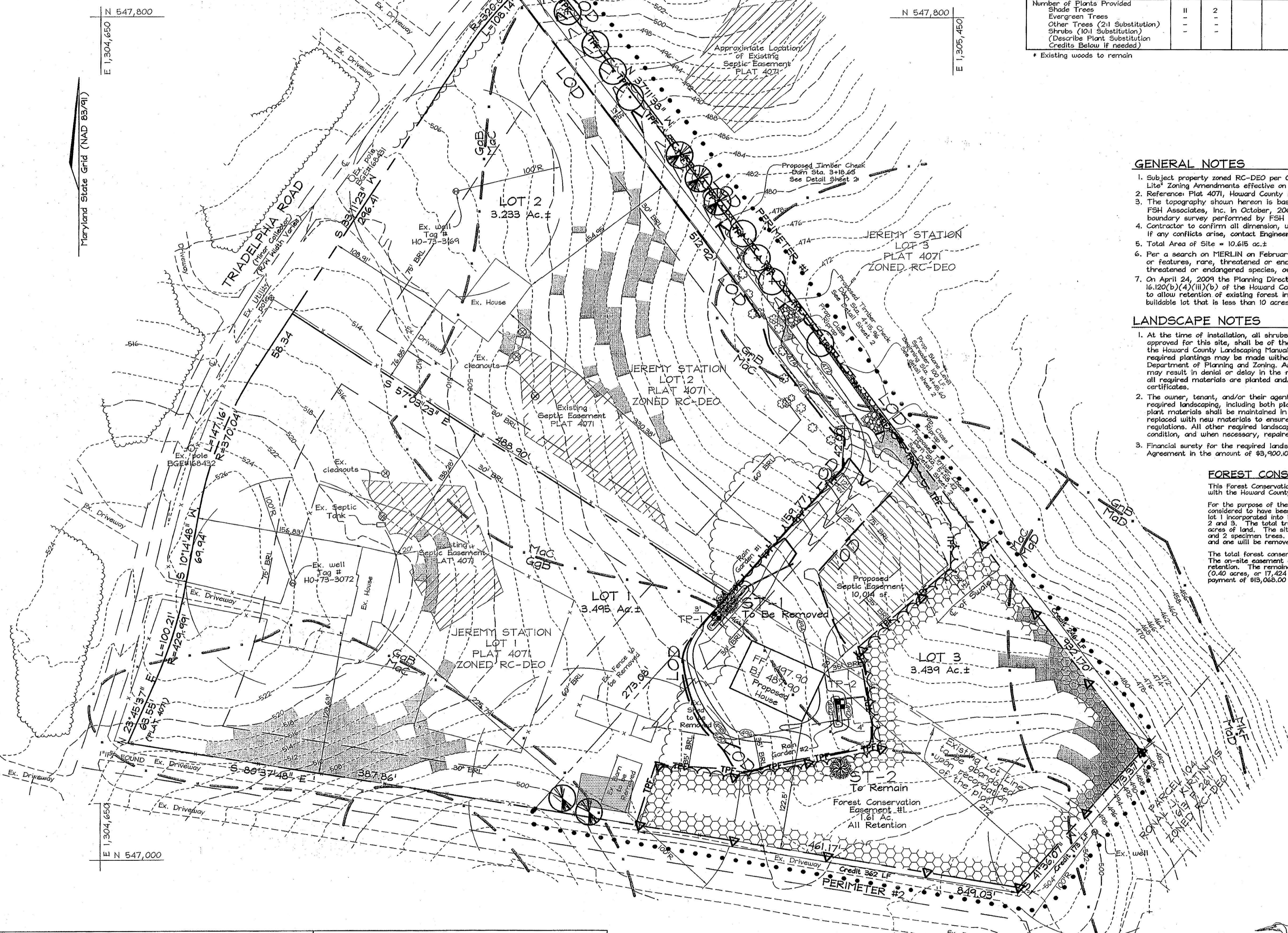
Tree Protection Fence

Limit of Disturbance

Specimen Tree Label

Boring Test Pit Label

**VICINITY MAP**  
SCALE: 1"=2000'  
HOWARD COUNTY ADC MAP 13 BI



### GENERAL NOTES

- Subject property zoned RC-DEO per 02/02/04 Comprehensive Zoning Plan and the "Comp. Lite" Zoning Amendments effective on 07/28/06.
- Reference: Plat 4071, Howard County File F-70-106, WP-09-137.
- The topography shown hereon is based on a field run topographic survey performed by FSH Associates, Inc. in October, 2008. The project boundary is based on a field run boundary survey performed by FSH Associates, Inc. in October, 2009.
- Contractor to confirm all dimension, utilities and topography in the field. If any conflicts arise, contact Engineer before beginning any work.
- Total Area of Site = 10.615 ac.±
- Per a search on MERLIN on February 23, 2009, there are no floodplains, historic sites or features, rare, threatened or endangered species, critical habitat for rare, threatened or endangered species, or cemeteries on the subject site.
- On April 24, 2009 the Planning Director approved a waiver from Section 16.100(b)(4)(iii)(b) of the Howard County Subdivision and Land Development Regulations to allow retention of existing forest in a forest conservation easement on a residential buildable lot that is less than 10 acres in size (Waiver Petition WP-09-137).

### LANDSCAPE NOTES

- At the time of installation, all shrubs and other plantings herewith listed and approved for this site, shall be of the proper height requirements in accordance with the Howard County Landscaping Manual. In addition, no substitutions or relocation of required plantings may be made without prior review and approval from the Department of Planning and Zoning. Any deviation from this approved Landscape Plan may result in denial or delay in the release of landscape surety until such time as all required materials are planted and/or revisions are made to applicable plans and certificates.
- The owner, tenant, and/or their agents shall be responsible for maintenance of the required landscaping, including both plant materials and berms, fences and walls. All plant materials shall be maintained in good growing condition, and when necessary, replaced with new materials to ensure continued compliance with applicable regulations. All other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced.
- Financial surety for the required landscaping will be posted as part of the Developer's Agreement in the amount of \$3,900.00 (13 shade trees @ \$300.00 each)

### FOREST CONSERVATION NARRATIVE

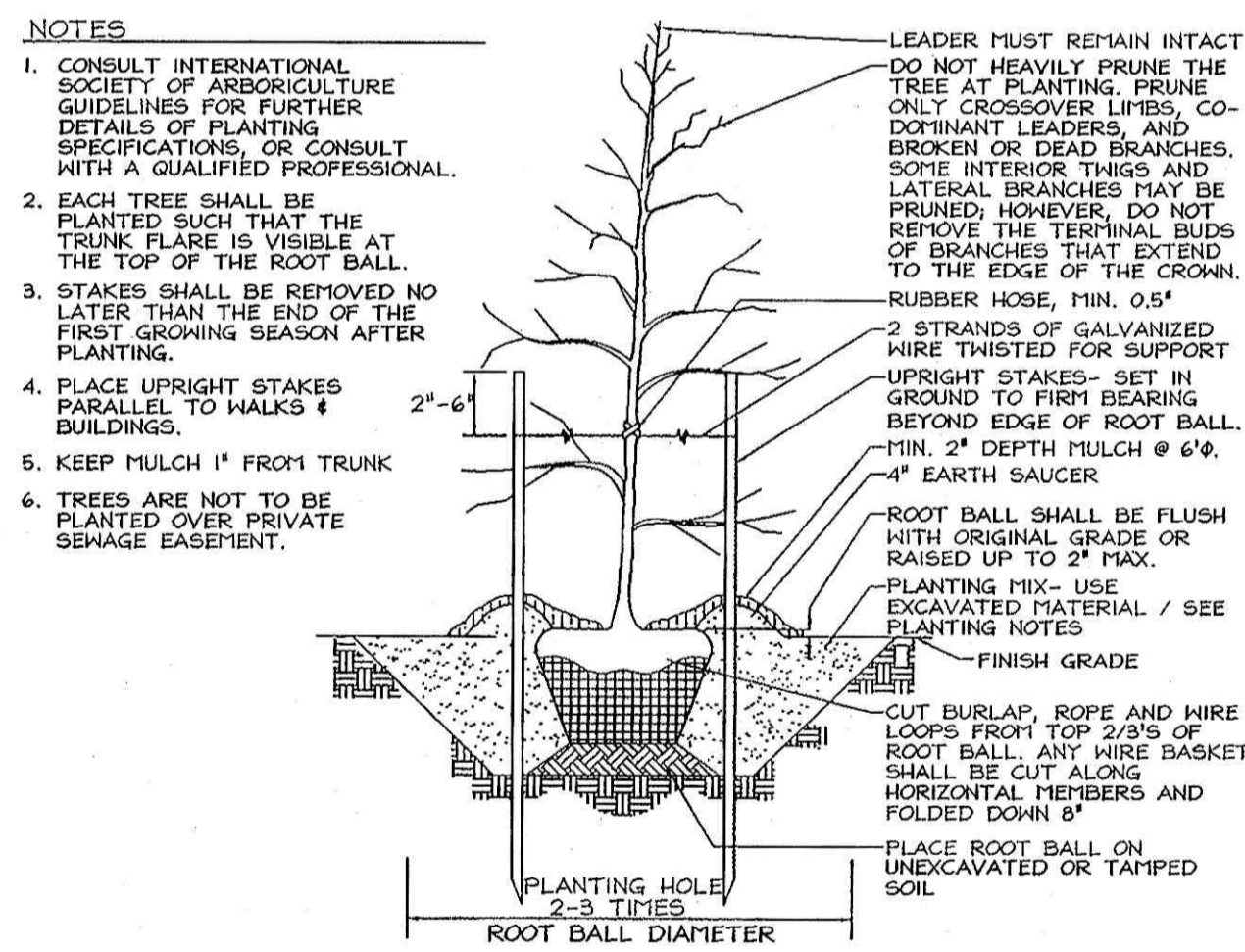
This Forest Conservation Plan has been developed in accordance with the Howard County Forest Conservation Act of 1991.

For the purpose of the forest calculations, the site has been considered to have been subdivided with the southeast portion of lot 1 incorporated into lot 2. Lot 2 uses then subdivided into lots 2 and 3. The total tract area for lot 2 and 3 consists of 6.67 acres of land. The site contains 2.77 acres of forest resources and 2 specimen trees. One of the specimen trees will be retained and one will be removed for site grading.

The total forest conservation obligation for the site is 2.01 acres. The on-site easement contains 1.61 (70,132 sf) acres of forest retention. The remainder of the forest conservation obligations (0.40 acres, or 17,424 sf) shall be fulfilled with a fee-in-lieu payment of \$15,068.00 (\$0.75/sf for 17,424 sf).

### FOREST CONSERVATION WORKSHEET

Item	Acres
<b>Net Tract Area</b>	
A. Total Tract Area	6.67
B. Area Within 100 Year Floodplain	---
C. Other deductions	---
D. Net Tract Area	6.67
Zoning Use Category: RESIDENTIAL-RURAL MEDIUM	
<b>Land Use Category</b>	
E. Afforestation Minimum (20 % x D)	1.33
F. Conservation Threshold (25 % x D)	1.67
<b>Existing Forest Cover</b>	
G. Existing Forest on Net Tract Area	2.77
H. Forest Area Above Conservation Threshold	1.10
<b>Break-even Point</b>	
I. Forest Retention Above Threshold with no Mitigation	1.84
J. Clearing Permitted without Mitigation	0.88
<b>Proposed Forest Clearing</b>	
K. Forest Areas to be Cleared	1.16
L. Forest Areas to be Retained	1.61
<b>Planting Requirements</b>	
M. Reforestation for Clearing Above Threshold	0.28
N. Reforestation for Clearing Below the Threshold	0.12
P. Credit for Retention Above Conservation Threshold	0
Q. Total Reforestation Required	0.40
R. Total Afforestation Required	0.40
S. Total Reforestation and Afforestation Requirement	0.40



**TYPICAL TREE PLANTING AND STAKING**  
ALL TREES UP TO 3" CALIPER NOT TO SCALE

**OWNER/ DEVELOPER**  
MR. ROBERT HECHT  
14895 Triadelphia Road  
Glenelg, Maryland 21737-9407  
(410) 442-1598

**FOREST CONSERVATION, LANDSCAPE AND RAINGARDEN/DRY SWALE/LEVEL SPREADER PLAN**  
**HECHT PROPERTY**  
LOT 1-3  
A RESUBDIVISION OF LOTS 1 AND 2 OF "JEREMY STATION"  
PLAT #4071

TAX MAP 27 GRID 4  
5TH ELECTION DISTRICT

PARCEL 125  
HOWARD COUNTY, MARYLAND

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Paul Edwards*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 7/15/09

*Candy Ham*  
CHIEF, DIVISION OF LAND DEVELOPMENT  
DATE: 7/16/09

**DEVELOPER'S BUILDER'S CERTIFICATE**

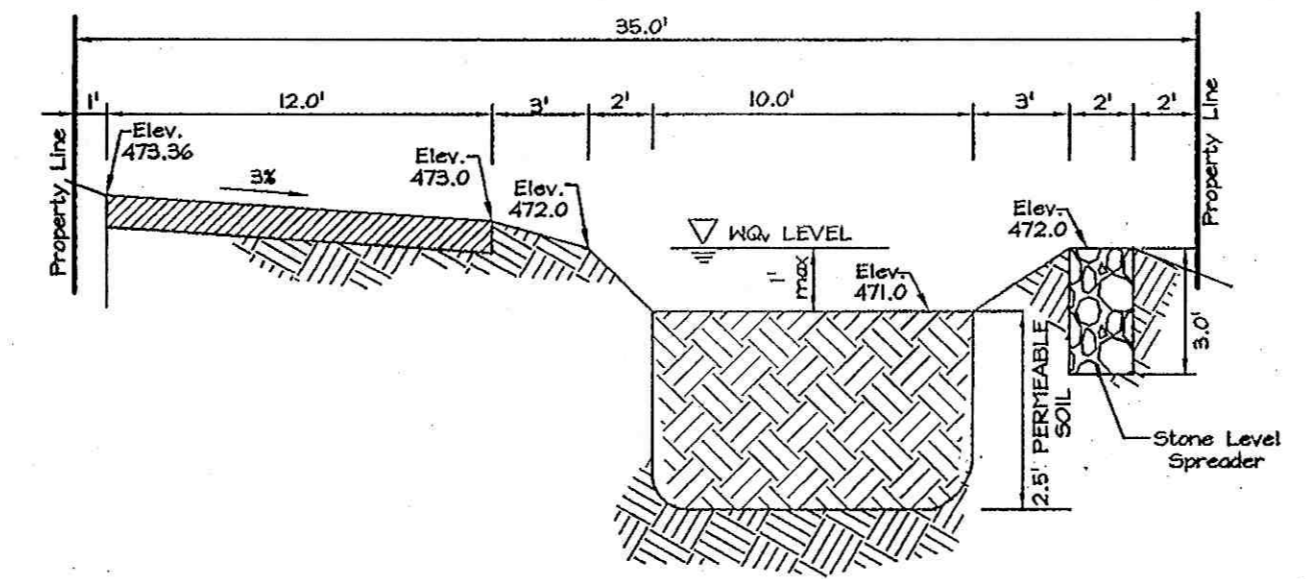
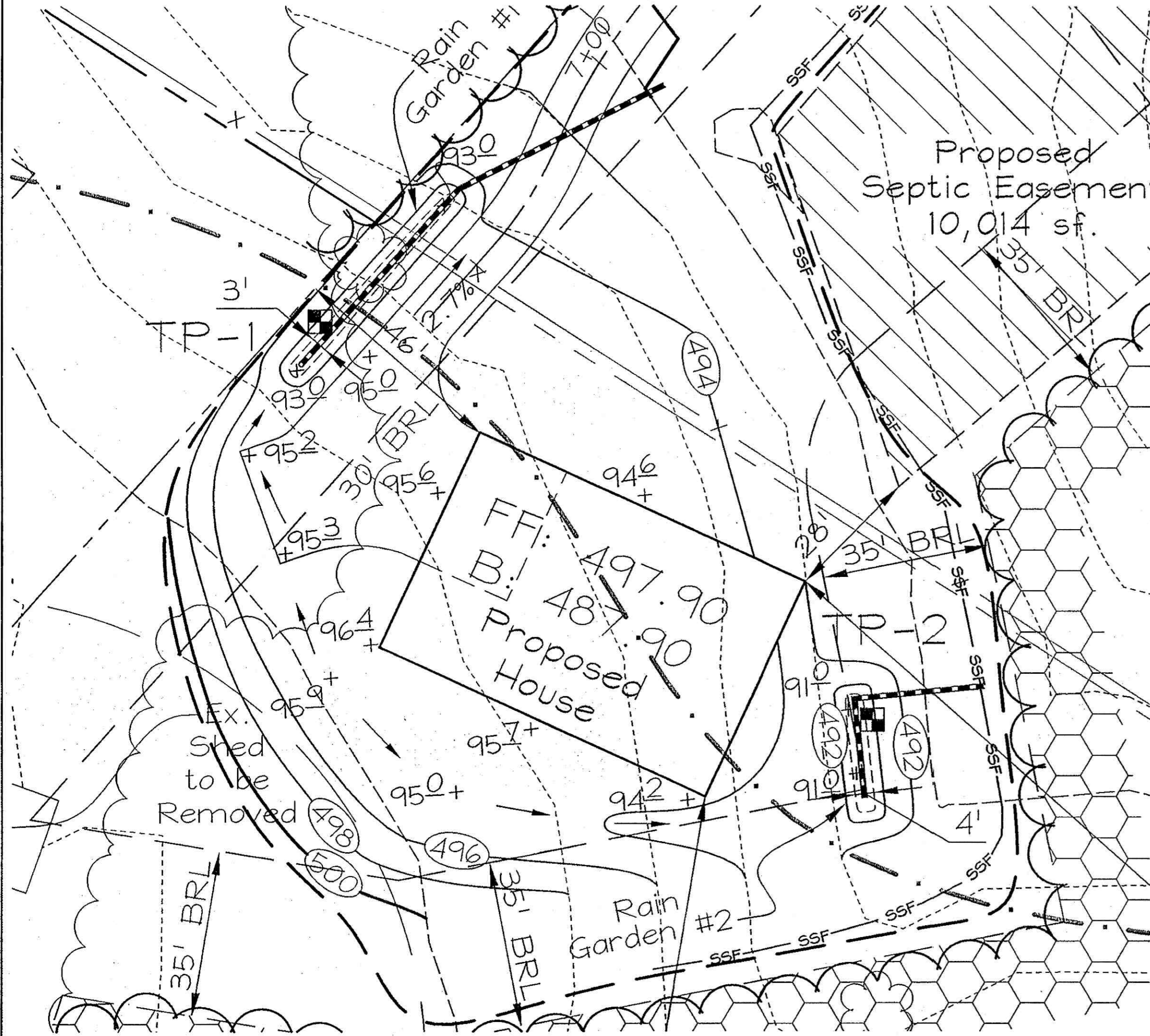
I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE(1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

*Bob Hecht*  
SIGNATURE OF DEVELOPER  
DATE: 6/17/09

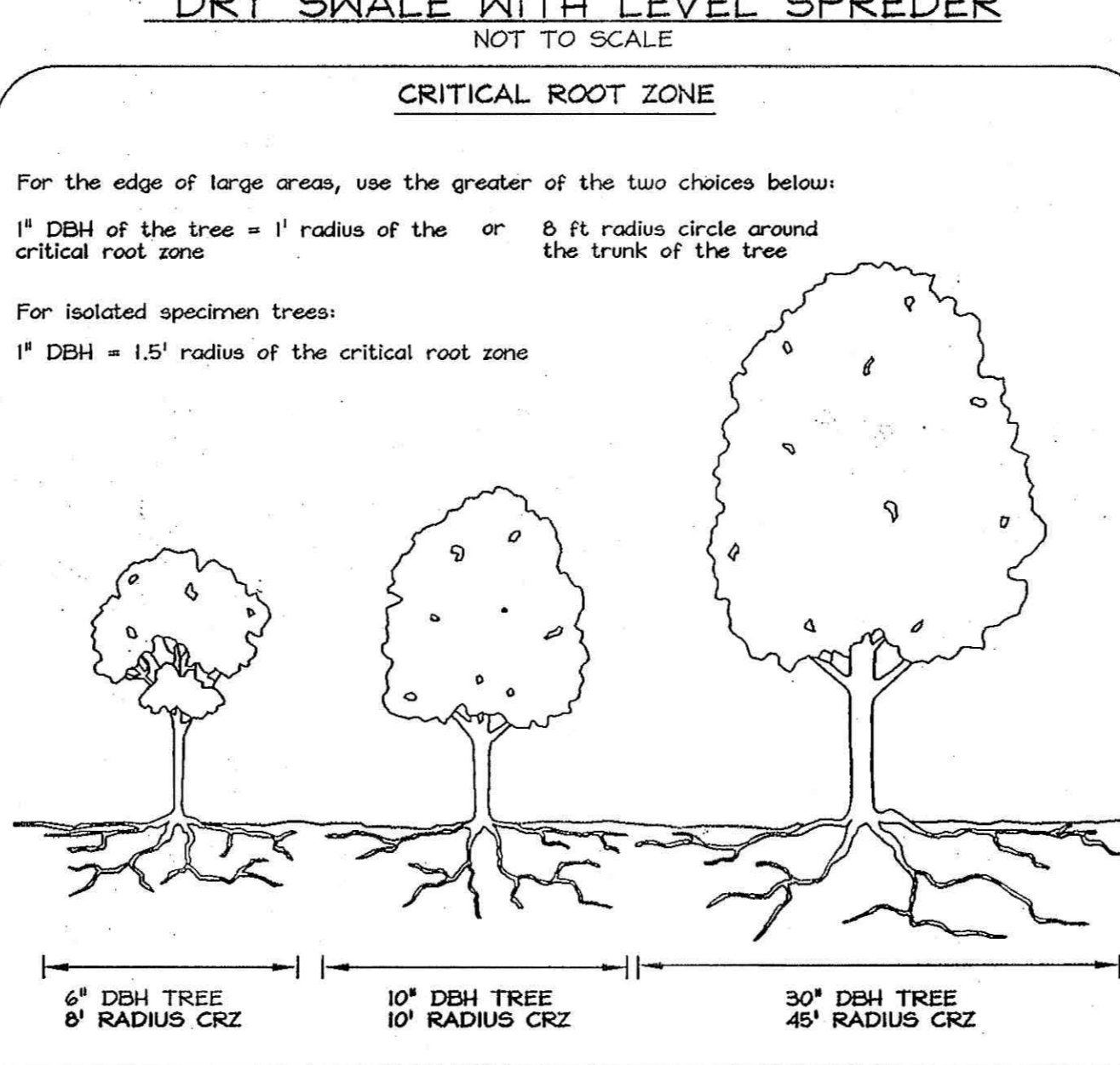
**EXPLORATION RESEARCH, INC.**  
ENVIRONMENTAL CONSULTANTS  
LANDSCAPE ARCHITECTS  
6339 HOWARD LANE  
ELLSWICK, MARYLAND 21076  
TEL: (410) 587-5210 FAX: (410) 798-1082

**FSH Associates**  
Engineers Planners Surveyors  
6339 HOWARD LANE  
ELLSWICK, MD 21075  
Tel: 410-587-5200 Fax: 410-798-1582  
E-mail: info@fsheri.com

DESIGN BY: AB/SMH  
DRAWN BY: AY/SMH  
CHECKED BY: AB/SH  
SCALE: 1"=50'  
DATE: Jun 9, 2009  
P.O. No.: 3874  
SHEET No.: 1 OF 2



NOTE:  
Dry Swales are used at low density residential projects or for very small impervious areas.  
See plan for level spreader lengths.



**Forest Retention Management Notes**

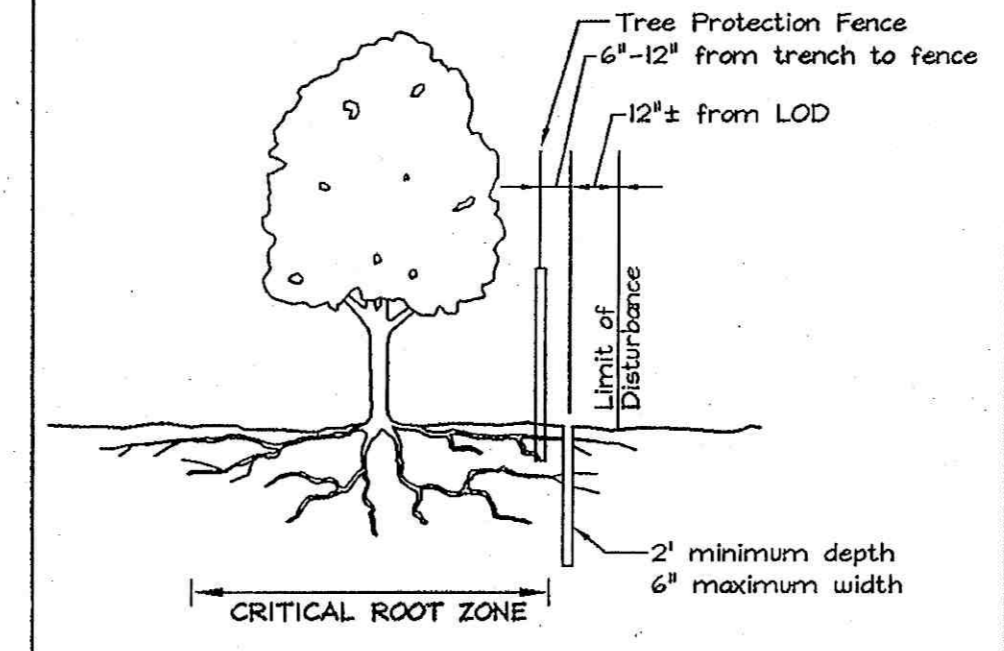
- All proposed activities shall adhere to the conditions, schedules and terms of an approved sediment control and erosion plan.
- After the boundaries of the retention area have been staked and flagged and before any disturbance has taken place, a preconstruction meeting at the construction site shall take place. The developer, contractor or project manager and approved inspectors shall attend.
- Tree protection for all retained areas:
  - All retention areas within 50 feet of proposed construction activities shall be protected by highly visible, well anchored temporary protection devices (silt fence or blaze orange plastic mesh).
  - All protection devices shall be in place prior to any grading or land clearing.
  - All protection devices shall be properly maintained and shall remain in place until construction has ceased.
  - Attachment of signs, fencing or other objects to trees is prohibited.
  - No equipment, machinery, vehicles, materials or excessive pedestrian traffic shall be allowed within protected areas.
- If the critical root zone (see detail) is affected by construction activities such as grade change, digging for foundations and roads or utility installation:
  - Prune roots with a clean cut using proper pruning equipment (see root pruning detail).
  - Water and fertilize as needed.
  - During construction phase, monitor and correct condition of retained trees for soil compaction, root injury, flood conditions, drought conditions and other stress signs.
- Post-Construction Phase:
  - Inspect existing trees around the perimeter of disturbed limits for evidence of soil compaction, root injury, limb injury, or other stress signs and correct with proper management techniques such as root or limb pruning, soil aeration, fertilization, crown reduction or watering. Inspection and evaluation shall be performed by a licensed arborist.
  - Inspect for dead or dying trees or limbs which may pose safety hazard and remove.
  - No burial of discarded materials will occur onsite within the conservation areas.
  - No burning within 100 feet of wooded area.
  - All temporary forest protection structures will be removed after construction.
  - Following completion of construction, prior to use, the County Inspector shall inspect the entire area.

**Soil Protection Zone Notes**

- The Soil Protection Zone shall include all areas contained outside the Limit of Disturbance.
- Where possible, the Soil Protection Zone shall extend to the drip line of specimen trees. For other groups of trees, the zone shall be the drip line or 40% of the height of the trees, whichever is greater.
- No construction activity is permitted within the Soil Protection Zone.
- If soil has been compacted or grading has taken place in the vicinity of the Soil Protection Zone, root pruning shall be implemented per Root Pruning detail, shown on this plan.
- Root pruning shall occur prior to the beginning of construction.
- Where the Limit of Disturbance must encroach inside the Critical Root Zone of a tree, soil disturbance shall be mitigated with vertical mulching, radial trenching, or another method approved by the ERI Forest Conservation Professional.
- Prior to construction, the Limits of Disturbance shall be marked and the ERI Professional shall determine which trees will need preventative treatment or removal.
- Tree maintenance and removal shall be undertaken by a qualified Maryland Tree Expert to ensure damage to surrounding trees is minimized.
- Brush and limbs removed for construction shall be chipped and spread at the edge of the Soil Protection Zone to a depth of 6 inches. This shall occur outside the Soil Protection Zone where compaction could impact otherwise unprotected Critical Root Zone.

**ROOT PRUNING**

- Retention areas shall be set prior to construction.
- Boundaries of retention areas shall be flagged, and location of trench shall be specified by ERI Qualified Professional.
- Roots shall be cut cleanly with root pruning equipment. Where roots 1" are found, trenching shall be done by air spade or hand tools. Roots 1/2" shall be cut with a hand saw.
- Trench shall be immediately backfilled with soil removed or high organic content soil.
- Any other techniques shall be approved by the ERI Qualified Professional before implementation.



**TEST PITS SOIL PROFILES**

Investigated By: Stephen L. Huber  
Test pits excavated by back-hoe to 10 ft+/-

TP-1	Soil	Notes
0-8"	Brown	Silt Loam
8-36"	Yellowish Brown	Silty Clay Loam
36-72"	Yellowish Brown	Sandy Loam
72-120+/-"	Yellowish Brown	Sand - Saprolite

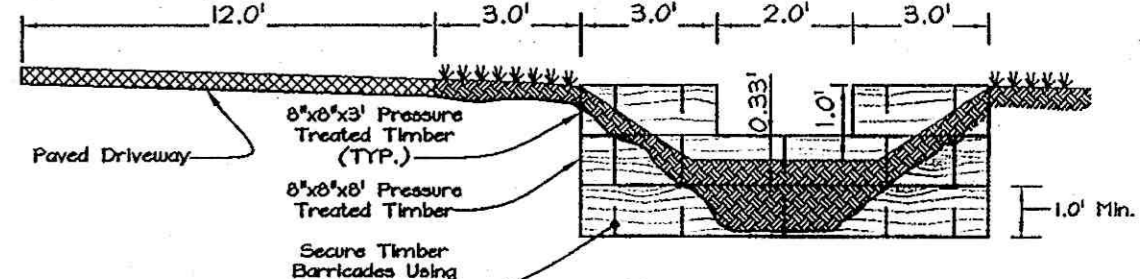
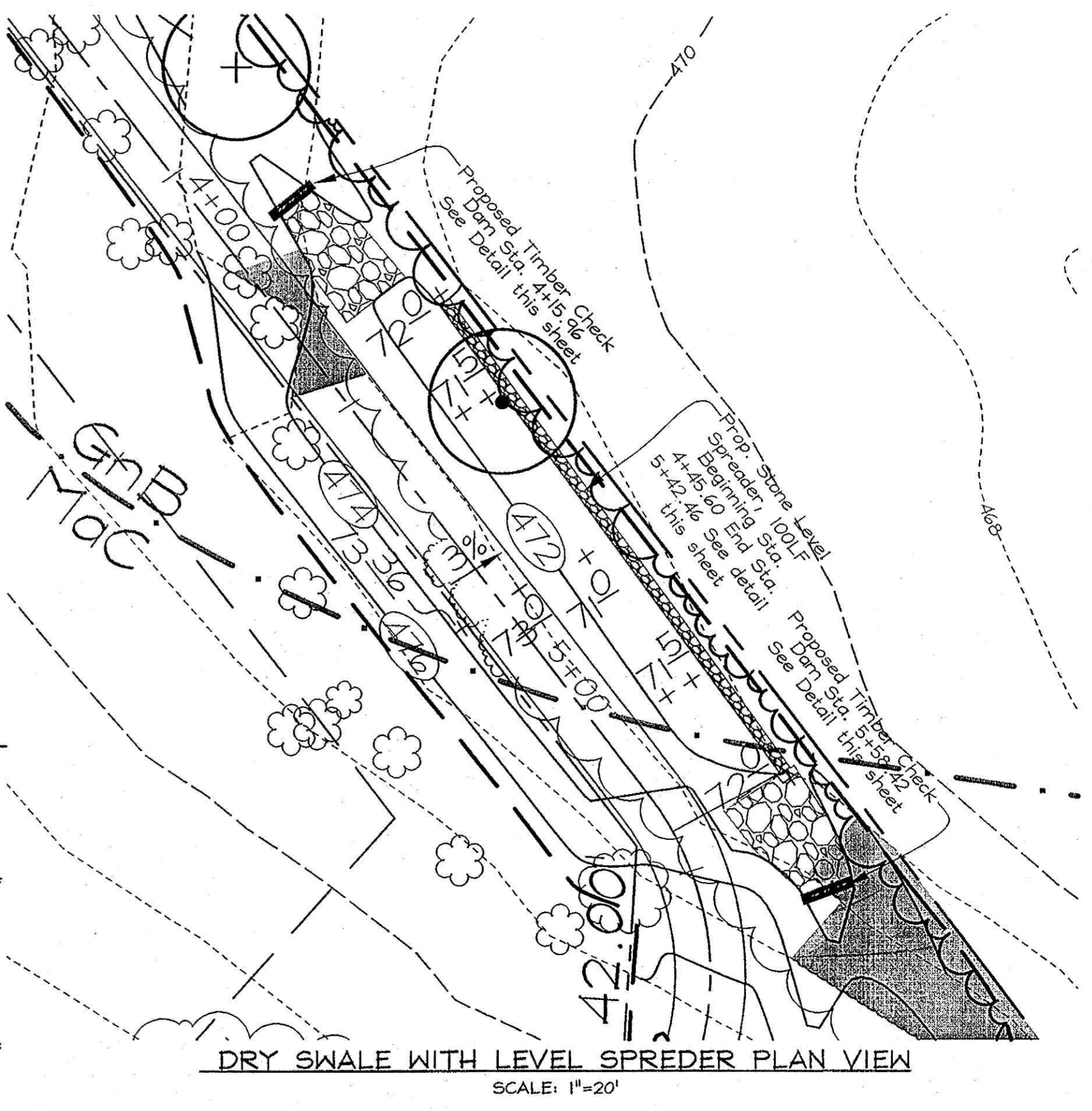
Hole dry and intact at completion.

TP-2	Soil	Notes
0-9"	Brown	Silt Loam
9-48"	Yellowish Brown	Silty Clay Loam
48-96"	Yellowish Brown	Sandy Loam
96+/-"	Yellowish Brown	Sand - Saprolite

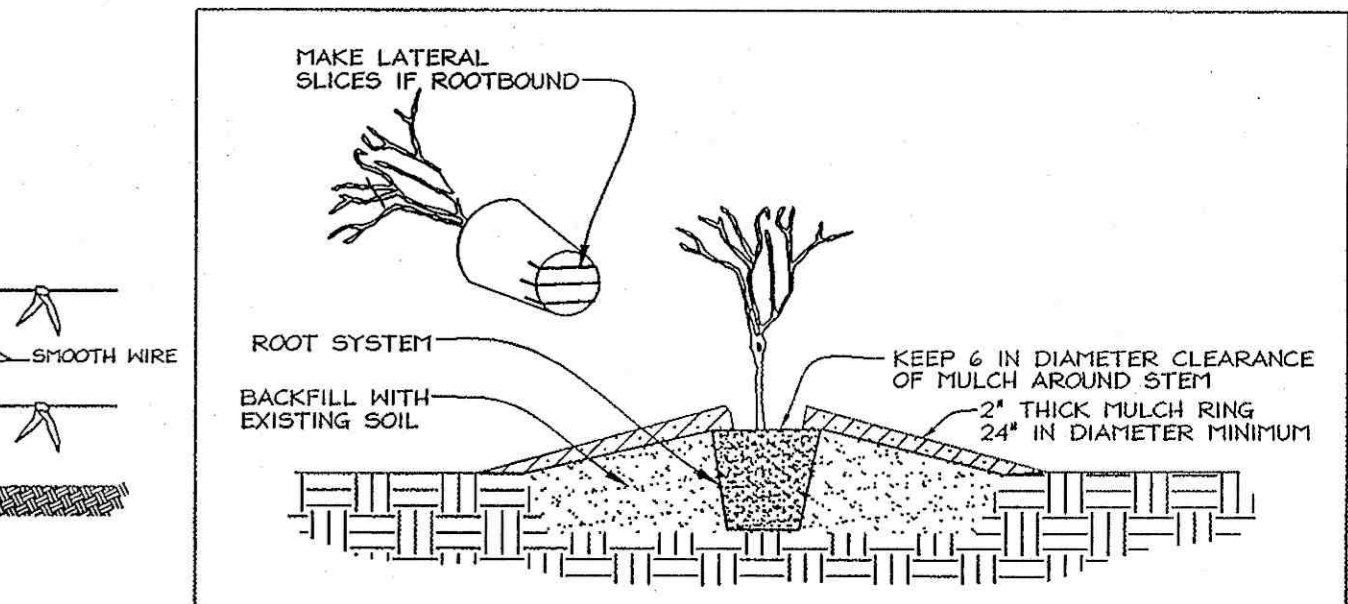
Hole dry and intact at completion.

**OPERATION AND MAINTENANCE SCHEDULE FOR RAIN GARDENS**

- Annual maintenance of plant material, mulch layer and soil is required. Maintenance of mulch and soil is limited to correcting areas of erosion or wash out. 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 diseased trees and shrubs and replacement of dead shrubs and vines.
- Mulch shall be inspected each spring. Remove mulch layer before applying new layer once every 2 to 3 years.
- Soil erosion to be addressed on an as needed basis, with a minimum of once per month and other heavy storm events.

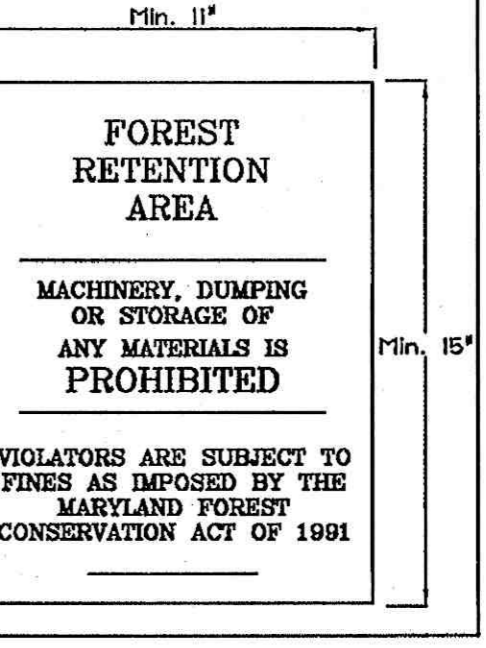


**CONTAINER PLANTING DETAIL**



- PLANTING PROCEDURE FOR CONTAINER GROWN PLANTS**
- REMOVE THE PLANT EITHER BY CUTTING OR INVERTING THE CONTAINER
  - USE A KNIFE TO CUT THROUGH BOTTOM HALF OF THE ROOT BALL
  - PLANT SHRUBS ON FORTIFIED POUNDS 4" ABOVE THE EXISTING GRADE WITH HIGH WATER TABLE CONDITIONS EXIST, OTHERWISE PLANT FLUSH WITH EXISTING GRADE
  - PLANTING HOLE TO BE 2-3 TIMES THE DIAMETER OF THE CONTAINER.
  - INSERT FERTILIZER TABLET, BACKFILL 2/3 OF THE ROOT BALL AND WATER.
  - AFTER WATER PERCOLATES, BACKFILL HOLE TO TOP OF ROOT BALL AND GENTLY TAMP SOIL TO FIRM CONTACT WITH PLANT.
  - APPLY MULCH RING AROUND PLANT KEEPING A 6" IN CLEARANCE FROM STEM.

**Forest Retention Area Protection Signage**



SIGNAGE NOTE: All tree protection signs shall be placed on metal "T" posts or pressure treated wood poles. NO attachment of signs to trees is permitted.

**OWNER / DEVELOPER**  
Robert E. Hecht Jr.  
14895 Triadelphia Road  
Glenede, Maryland 21737-9407  
(410) 442-1598

**FOREST CONSERVATION, LANDSCAPE AND RAINGARDEN/DRY SWALE/LEVEL SPREADER PLAN AND DETAILS**  
**HECHT PROPERTY**  
LOT 1-3  
A RESUBDIVISION OF LOTS 1 AND 2 OF "JEREMY STATION"  
PLAT# 4071  
TAX MAP 27 GRID 4  
5TH ELECTION DISTRICT  
PARCEL 125  
HOWARD COUNTY, MARYLAND



**FSH Associates**  
Engineers Planners Surveyors  
3339 Howard Lane, Ellicott City, MD 21075  
Tel: 410-567-5200 Fax: 410-798-1882  
E-mail: info@fsh.com

DESIGN BY: MT  
DRAWN BY: AY  
CHECKED BY: ZTF  
SCALE: N.T.S.  
DATE: Jun 9, 2009  
P.O. No.: 3574  
SHEET No.: 2 OF 2

**RAIN GARDEN #2 PLANT LIST**

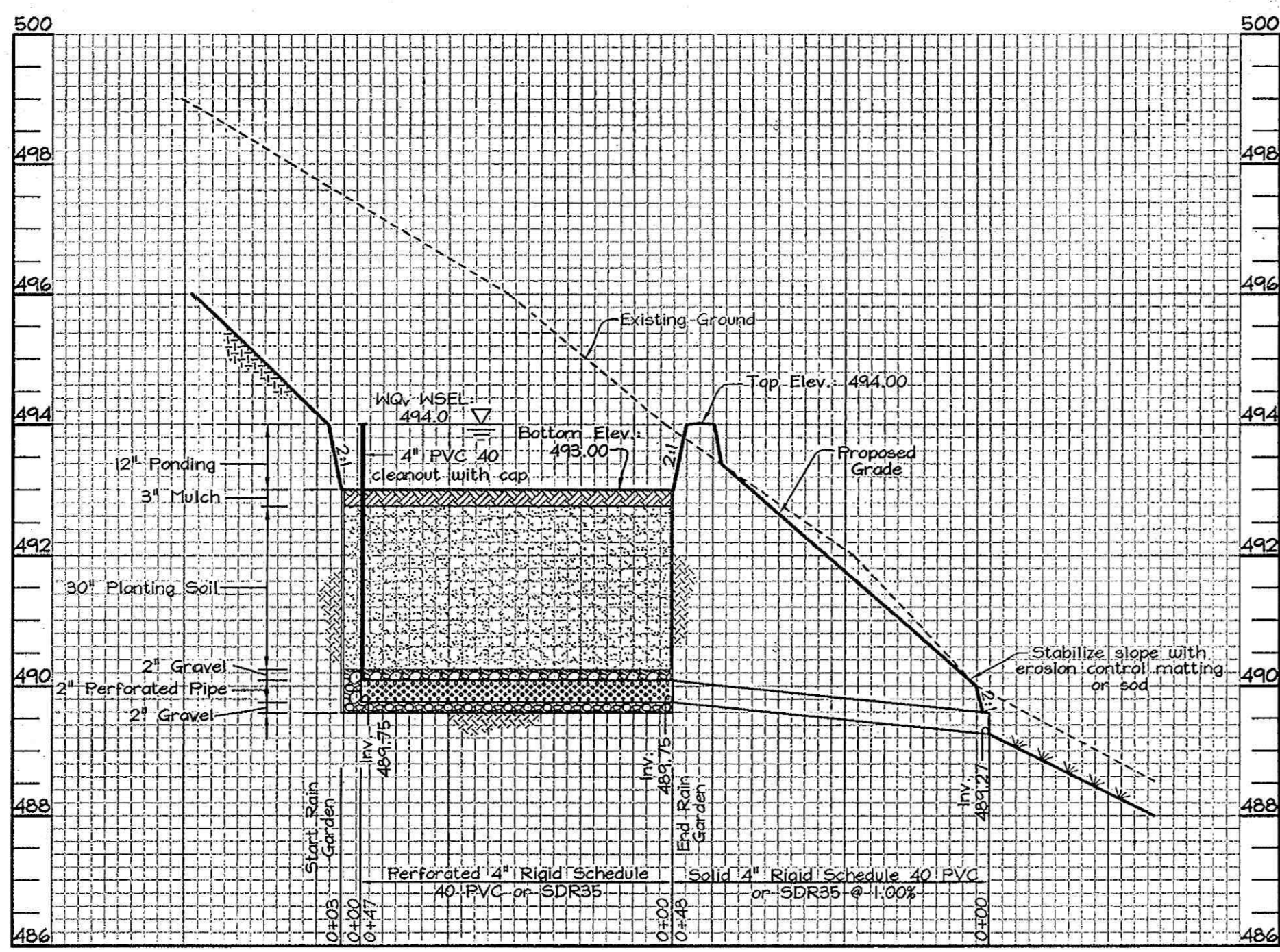
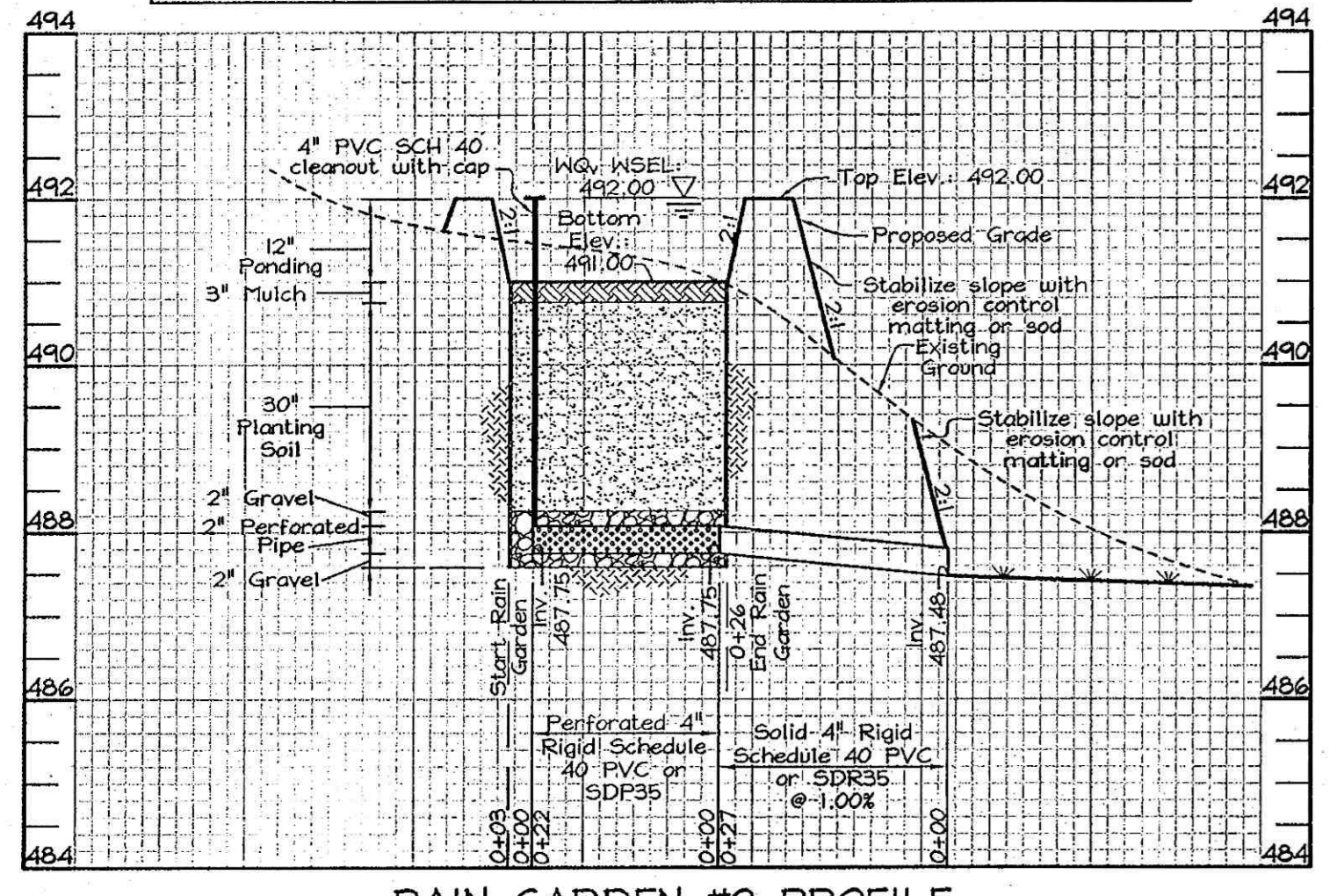
QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE
10	ILEX GLABRA	INKBERRY	2' 3" HT.
50	LOBELIA CARDINALIS	CARDINAL FLOWER	1 GAL. CONTAINER 10" O.C.
50	DRYOPTERIS SP.	WOOD FERN	1 GAL. CONTAINER 10" O.C.
50	ASTER NOVAE-ANGLIAE	NEW ENGLAND ASTER	1 GAL. CONTAINER 10" O.C.

**RAIN GARDEN #1 PLANT LIST**

QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE
10	ILEX GLABRA	INKBERRY	2' 3" HT.
50	LOBELIA CARDINALIS	CARDINAL FLOWER	1 GAL. CONTAINER 10" O.C.
50	DRYOPTERIS SP.	WOOD FERN	1 GAL. CONTAINER 10" O.C.
50	ASTER NOVAE-ANGLIAE	NEW ENGLAND ASTER	1 GAL. CONTAINER 10" O.C.

**RAIN GARDEN MATERIALS & SPECIFICATIONS**

MATERIALS	SPECIFICATIONS	SIZE	NOTES
Plantings	See Rain Garden Plant Lists	N/A	Plantings are site specific
Planting Soil (2' deep)	Sand: 50% to 60% Silt: 30% to 55% Clay: 0% to 25%	N/A	USDA soil types loamy sand, sandy loam or loam
Mulch	Shredded hardwood	N/A	Aged six months minimum
Underdrain	AASHTO M-43 #57 or #67	3/8" to 3/4"	
Piping	F 750, Type PS 20 or AASHTO M-270	Perforated 4" Rigid Schedule 40 PVC or SDR35	3/8" perforations @ 6" on center, 4 holes per row minimum 5' gravel over pipes; gravel not necessary beneath pipes
Piping	F 750, Type PS 20 or AASHTO M-270	Solid 4" Rigid Schedule 40 PVC or SDR35	Minimum 3' gravel over pipes; gravel not necessary beneath pipes



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 Chief, Development Engineering Division  
 Chief, Division of Land Development  
 DATE: 7-15-09  
 DATE: 7/16/09