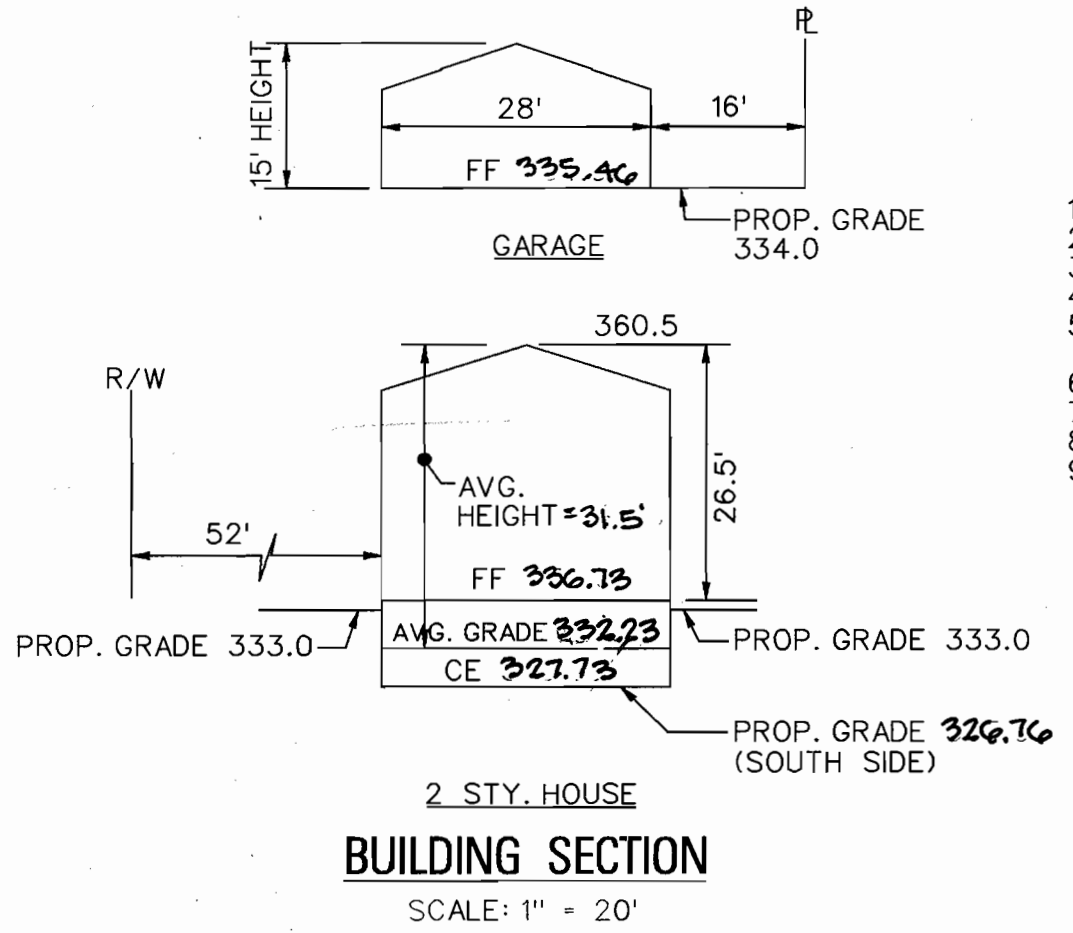


SITE ANALYSIS

- GROSS AREA OF SITE: 31,420 s.f OR 0.7213 Ac.
- NUMBER OF PARKING SPACES: 2
- PRESENT ZONING: R-20
- PROPOSED USE: RESIDENTIAL HOUSE
- FLOOR AREA: 3,932 SF
- 2 STORY SINGLE FAMILY: 1
- TOTAL NO. OF UNITS ALLOWED: 1
- TOTAL NO. OF UNITS PROPOSED: 1
- TOTAL DISTURBED AREA: 16,698 s.f, OR 0.3833 Ac.
- DPZ FILES: SDP-03-027

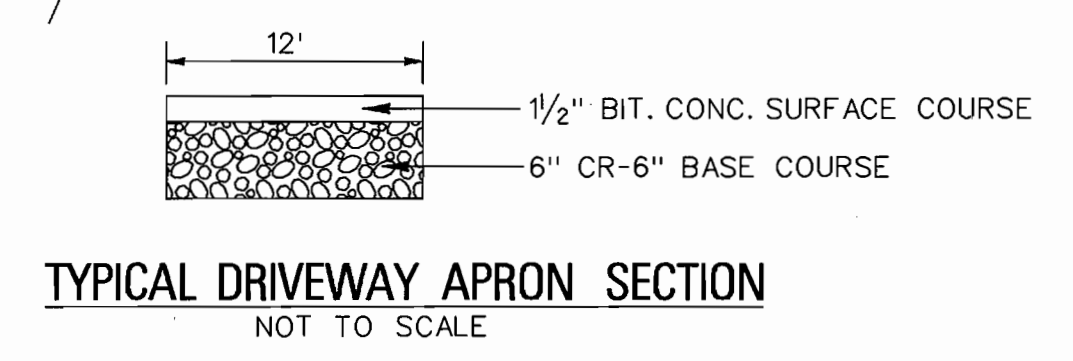


GENERAL NOTES

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL VOLUME IV (I.E. STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION).
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FROM BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS TO VERIFY THEIR LOCATION AND ELEVATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF LOCATION OF UTILITIES IS OTHER THAN SHOWN.
- CONTRACTOR TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.

MISS UTILITY	1-800-257-7777
VERIZON TELEPHONE COMPANY	752-9876
HOWARD COUNTY BUREAU OF UTILITIES	992-2366
AT&T CABLE LOCATION DIVISION	383-3535
BALTIMORE GAS & ELECTRIC COMPANY	685-0123
STATE HIGHWAY ADMINISTRATION	531-5533
HOWARD COUNTY CONSTRUCTION/ INSPECTION/ SURVEY DIVISION	792-7272
(24 HOURS NOTICE PRIOR TO COMMENCEMENT OF WORK)	313-1880
- TOPO TAKEN FROM FIELD SURVEY DATED JULY 19, 2002 BY KCI.
- THE DEVELOPER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS AND/OR RIGHTS-OF-WAY THAT MAY BE REQUIRED FOR THE SEDIMENT AND EROSION CONTROL PRACTICES, STORM WATER MANAGEMENT PRACTICES AND THE DISCHARGE OF STORM WATER ONTO OR ACROSS ADJACENT OR DOWNSTREAM PROPERTIES INCLUDED IN THIS PLAN. HE IS ALSO RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS AND/OR RIGHTS-OF-WAY THAT MAY BE REQUIRED FOR GRADINGS AND/OR WORK ON ADJACENT PROPERTIES INCLUDED IN THIS PLAN.
- ALL COORDINATES ARE BASED ON HOWARD COUNTY GEODETIC CONTROL TRAVERSE WHICH IS BASED ON THE MARYLAND STATE PLANE COORDINATE SYSTEM. REFERENCE HOWARD COUNTY CONTROL POINT- HOPKINS. NAD 83/91 N 39° 04' 55.988" W 78° 53' 58.262" E
- INSTALLATION OF TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- ALL ON-SITE PARKING AND DRAINAGE STRUCTURES SHALL BE PRIVATELY OWNED & MAINTAINED.
- ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- GRAVITY SEWER LINE WILL BE 6" PVC.
- THIS PLAN IS SUBJECT TO THE FIFTH EDITION OF THE SUBDIVISION REGULATIONS AND THE NEW ZONING REGULATIONS AS AMENDED BY COUNCIL BILL 15-0101.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
- STORMWATER MANAGEMENT WILL BE PROVIDED THROUGH NON-STRUCTURAL SWM PRACTICES (i.e. GRASS BUFFER, GRASS SWALES, ROOF DISCONNECT).
- AN AFPO STUDY IS EXEMPT PER DMV SECTION 4.7.4.G.
- THE APPROVED NOISE STUDY WAS PREPARED BY KCI TECHNOLOGIES, INC. AND APPROVED OCTOBER 17, 2002. THE 65 dBA NOISE LINE AS SHOWN WAS ESTABLISHED BY USE OF FEDERAL HIGHWAY ADMINISTRATION AND HOWARD COUNTY TRAFFIC NOISE ASSESSMENT METHODOLOGY.
- THIS SITE IS IN THE PATUXENT RIVER WATERSHED #02-13-11 AND IS CLASSIFIED AS A USE IV.
- THIS PROJECT IS CONDITIONALLY EXEMPT FROM THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION WITH THE FILING OF A DECLARATION OF INTENT FOR SINGLE LOT CLEARING LESS THAN 40,000 SQUARE FEET OF FOREST.
- THE SUBJECT PROPERTY IS ZONED R-20 PER THE 10/18/93 COMPREHENSIVE ZONING PLAN.
- THERE ARE NO STEEP SLOPES, WETLANDS, STREAMS OR FLOOD PLANS ON THIS SITE.
- SINGLE USE DRIVEWAY TO A WIDTH OF 12' SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
 - WIDTH - 12'
 - SURFACE - 6" OF COMPACTED CRUSHER RUN BASE W/TAR AND CHIP COATING (1-1/2" MIN.)
 - GEOMETRY - MAX. 15% GRADE, MAX. 10% GRADE CHANGE AND MIN. 45' TURNING RADIUS
 - MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE Builder's Grading Permit Application, THE AMOUNT OF \$1,200 FOR 4 SHADE TREES.

SHEET INDEX	
SHEET NO.	TITLE
1	SITE DEVELOPMENT & SEDIMENT CONTROL PLAN
2	BIORETENTION GARDENS - PLAN & PROFILES
3	SEDIMENT CONTROL DETAILS
4	SEDIMENT CONTROL NOTES
5	LANDSCAPE PLAN & DETAILS



REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS <i>Jim Meyer</i> 10/15/02 USA - NATURAL RESOURCES CONSERVATION SERVICE DEVELOPMENT PLANNING SECTION DATE	BY THE DEVELOPER: I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I/ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT. <i>Thomas Ferguson</i> DATE 10/15/02	BY THE ENGINEER: I 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 COUNTY SOIL CONSERVATION DISTRICT. <i>Marianne Klein</i> 10-21-02 ENGINEER DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING. <i>Chris Dammann</i> 10/15/02 CHIEF, DEVELOPMENT ENGINEERING DIVISION <i>Candy Hammett</i> 11/1/02 CHIEF, DIVISION OF LAND DEVELOPMENT <i>James S. Smith</i> 11/1/02 DIRECTOR DATE		

PERMIT INFORMATION CHART					
Subdivision Name: FERGUSON PROPERTY	Section/Area: NA	Lot/Parcel No.: 149			
Plat # or L/F: 6176/202	Grid #: 19	Zoning: R-20	Tax Map No.: 47	Elect Distr: 6	Census Tract: 6082.02
Water Code: D04	Sewer Code: 2153000				
ADDRESS CHART					
LOT/PARCEL #	STREET ADDRESS				
149	9051 DUMHART ROAD				

Drafting ANL	DATE 6.15.03	REVISIONS Rev. Plan to reflect as-built conditions
Check CGW		
Design CGW		
Check THM		

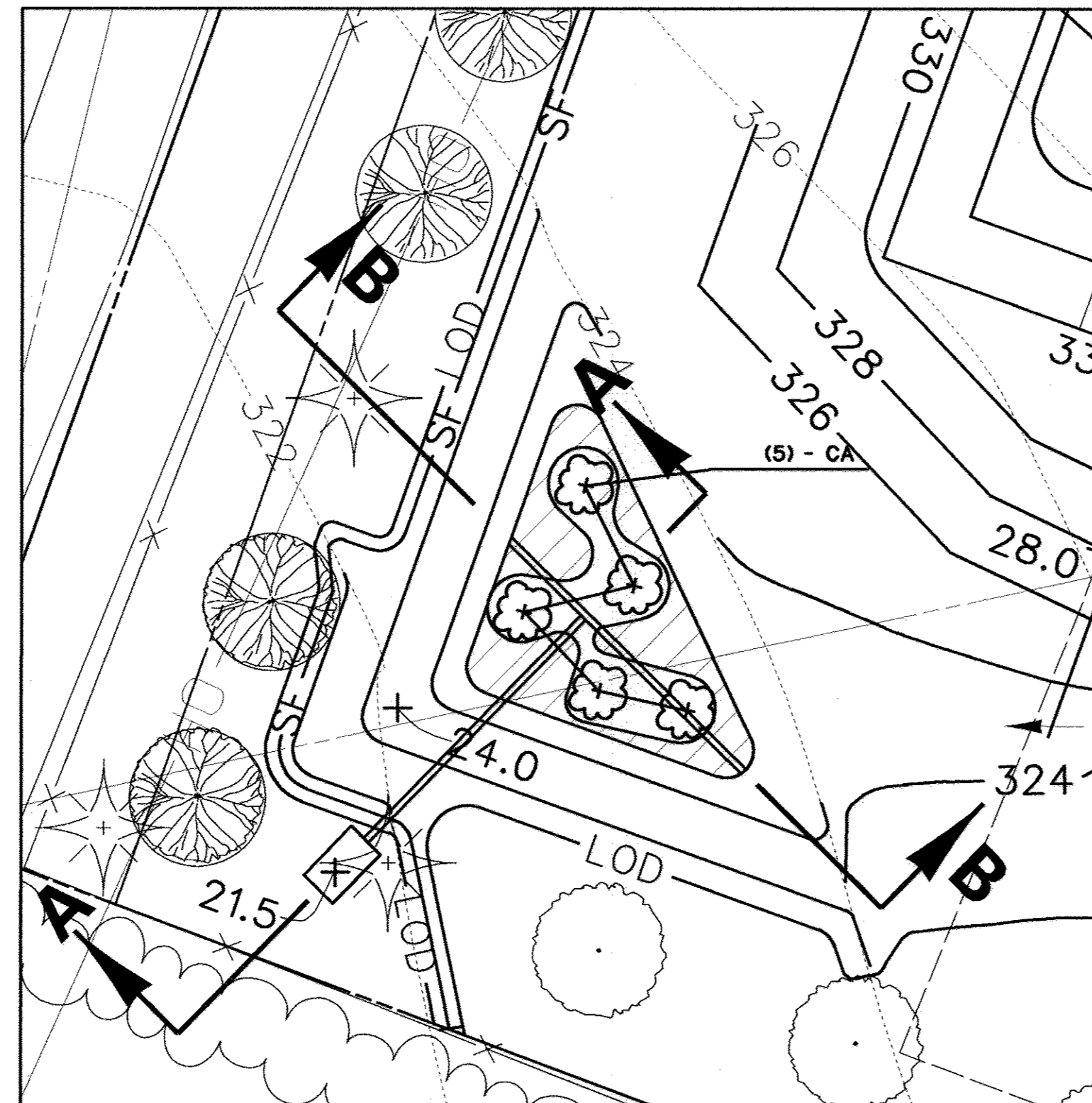
14502 Greenview Drive, Suite 424
 Laurel, Maryland 20708
 (301) 953-1821 (410) 792-8086
 Fax: (410) 792-7419
 www.kci.com

KCI TECHNOLOGIES
 ENGINEERS PLANNERS SCIENTISTS
 CONSTRUCTION MANAGERS

OWNER/DEVELOPER
THOMAS EUGENE FERGUSON
 9051 DUMHART ROAD
 LAUREL, MD 20723
 PARCEL 149, LOT 2

SITE PLAN GRADING & SEDIMENT CONTROL PLAN

THOMAS E. & DIANNE C. FERGUSON PROPERTY
 SINGLE FAMILY DETACHED
 TAX MAP 47, GRID 19, PARCEL 149
 L. 6176 / F. 202, ZONE R-20
 6th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 WATER CODE: D04 SEWER CODE: 215 3000
SDP-03-027
BAR SCALE
 1" = 30'
 DATE: OCTOBER 21, 2002
 SHEET 1 OF 5
 FILE:1602036/DRAWINGS/ 01_SDP.DGN

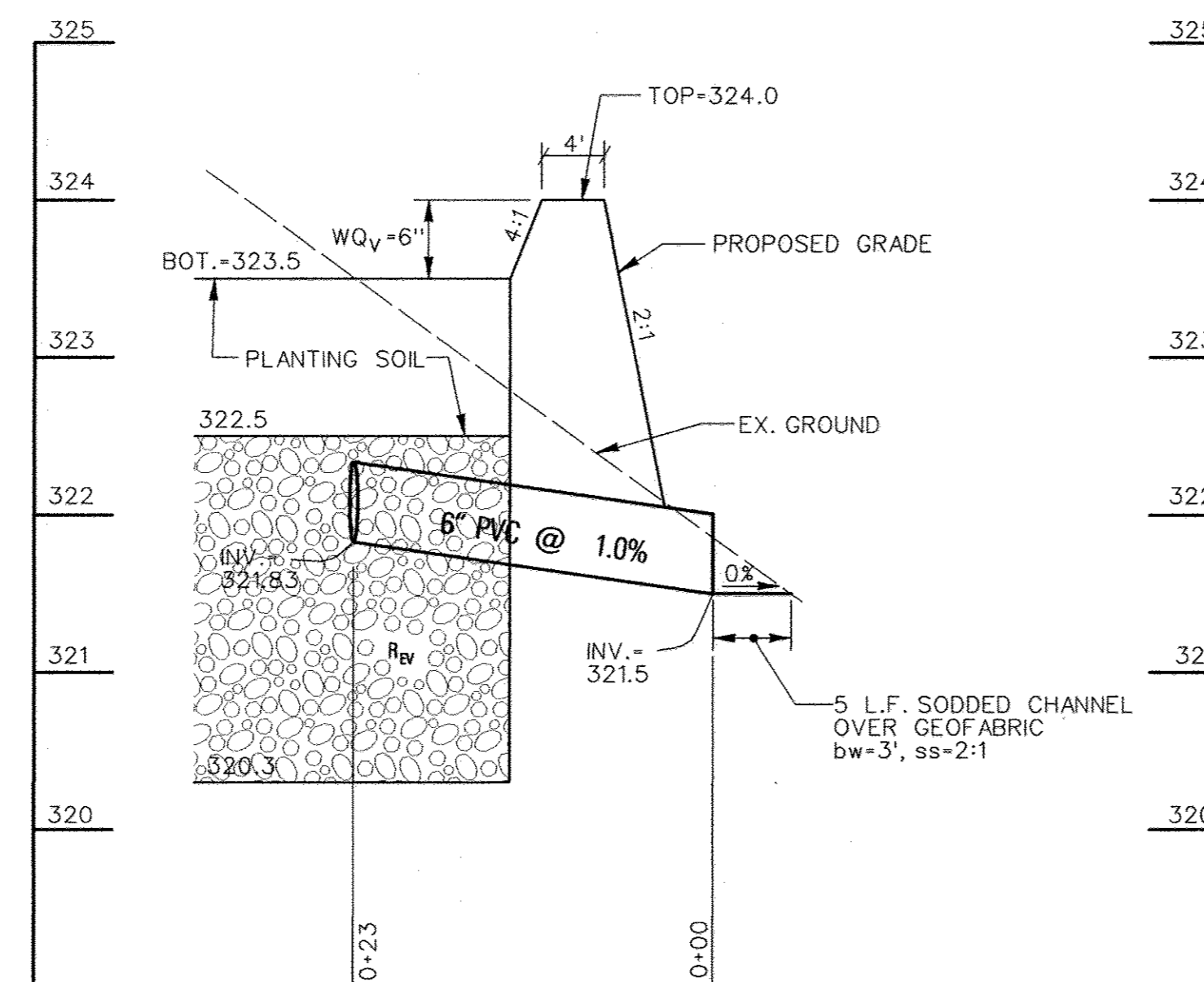


BIORETENTION GARDEN #1
PLAN VIEW
 SCALE: 1" = 10'

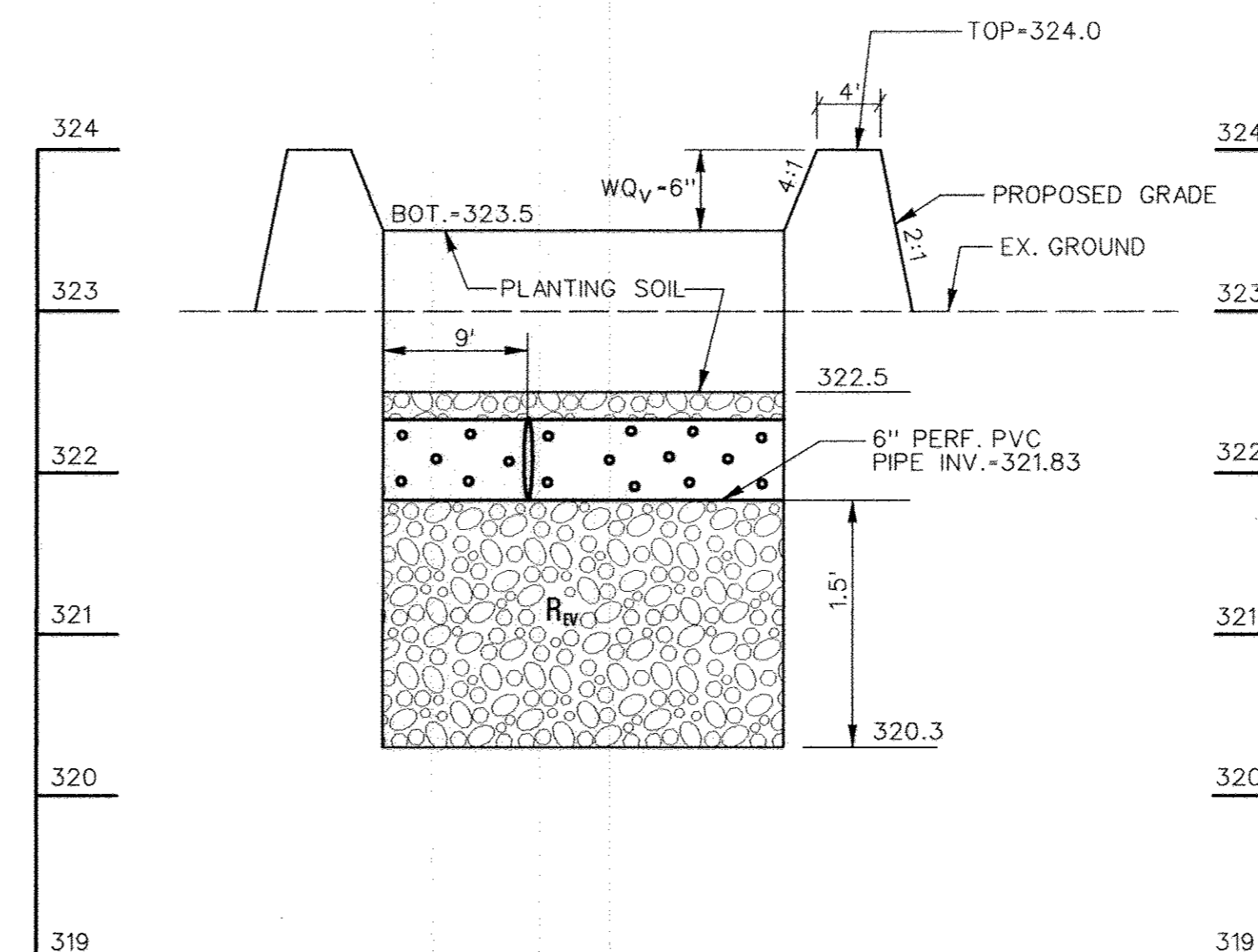
BIORETENTION GARDEN 1 PLANT SCHEDULE		
Qty.	Key	Botanical/Common Name
SHRUBS		
4	CA	Clethra Alnifolia-Sweet Pepperbush (18"-24" container)
159	JP	Pachysandra terminalis - Japanese Pachysandra
		Hatching for Herbaceous Cover

OPERATION AND MAINTENANCE SCHEDULE FOR BIO-RETENTION AREA (F-6)

- 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 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 all deficient stakes and wires.
- Mulch shall be inspected each spring. Remove previous mulch layer before applying new layer 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.



BIORETENTION GARDEN #1
SECTION A-A
 SCALE: HOR.: 1" = 10'
 VERT.: 1" = 1'



BIORETENTION GARDEN #1
SECTION B-B
 SCALE: HOR.: 1" = 10'
 VERT.: 1" = 1'

Approved: Howard County Department of Planning and Zoning
 Chief, Development Engineering Division
 Chief, Division of Land Development
 Director

10/21/02
 11/1/02
 11/1/02
 Date

Drafting	AMW	DATE	REVISIONS
Check	CGW		
Design	CGW		
Check	THM		

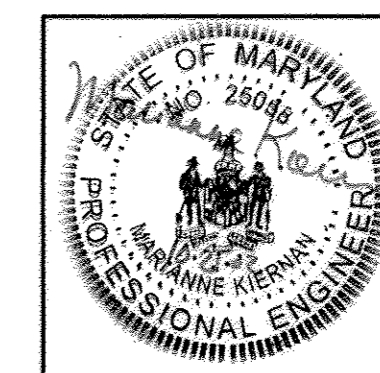


ENGINEERS
 PLANNERS
 SCIENTISTS
 CONSTRUCTION MANAGERS

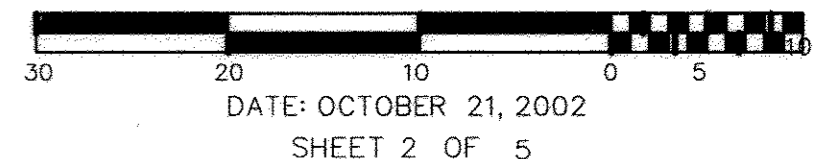
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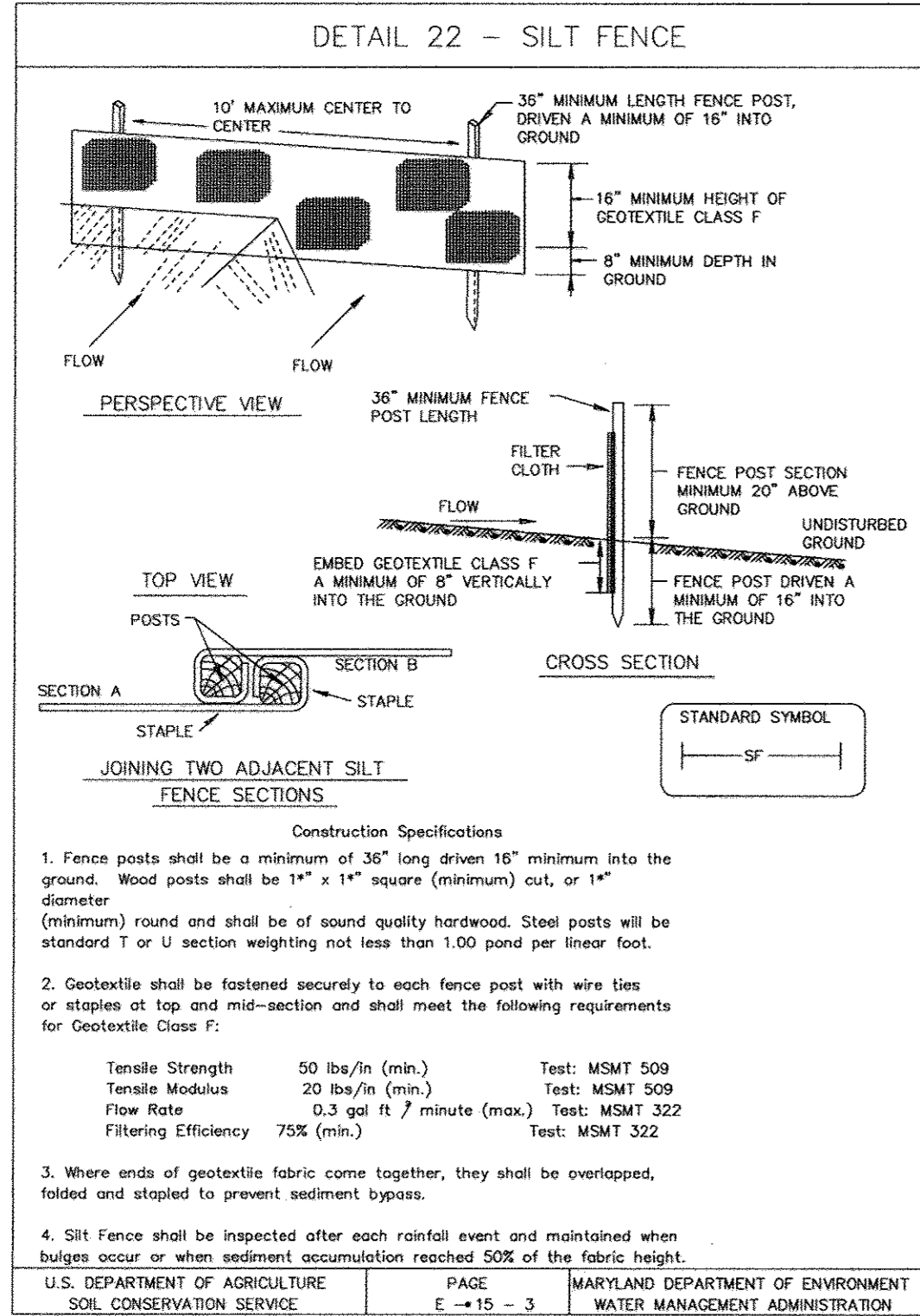
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 LAUREL, MD 20723
 PARCEL 149, LOT 2

BIORETENTION GARDENS
PLAN AND PROFILES



THOMAS E. & DIANNE C. FERGUSON PROPERTY
 SINGLE FAMILY DETACHED
 TAX MAP 47, GRID 19, PARCEL 149
 L. 6176 / F. 202, ZONE R-20
 6th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 WATER CODE: D04 SEWER CODE: 215 3000
SDP-03-027
 BAR SCALE
 1" = 10'





SILT FENCE

Silt Fence Design Criteria

Slope Steepness	(Maximum) Slope Length	(Maximum) Silt Fence Length
Flatter than 50:1	unlimited	unlimited
50:1 to 10:1	125 feet	1,000 feet
10:1 to 5:1	100 feet	750 feet
5:1 to 3:1	60 feet	500 feet
3:1 to 2:1	40 feet	250 feet
2:1 and steeper	20 feet	125 feet

Note: In areas of less than 2% slope and sandy soils (USDA general classification system, soil class A) maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control required.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE E-15-3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

GENERAL NOTES

- A minimum of 24 hours notice must be given to the Howard County Sediment Control Division prior to the start of any construction (880-3450).
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- 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 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 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51) sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- Site Analysis:

Total Area of Site	0.7213 Acres
Area Disturbed	0.3853 Acres
Area to be Roofed or Paved	0.1599 Acres
Area to be Vegetatively Stabilized	0.2003 Acres
Total Cut	200 Cubic Yards
Total Fill	200 Cubic Yards
Offsite Waste/Borrow Area Location	NONE
- Any sediment control practices which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment controls must be provided, if deemed necessary by the Howard County Department of Public Works Sediment Control Inspector.
- On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of the 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 this initial approval by the inspection agency is made.

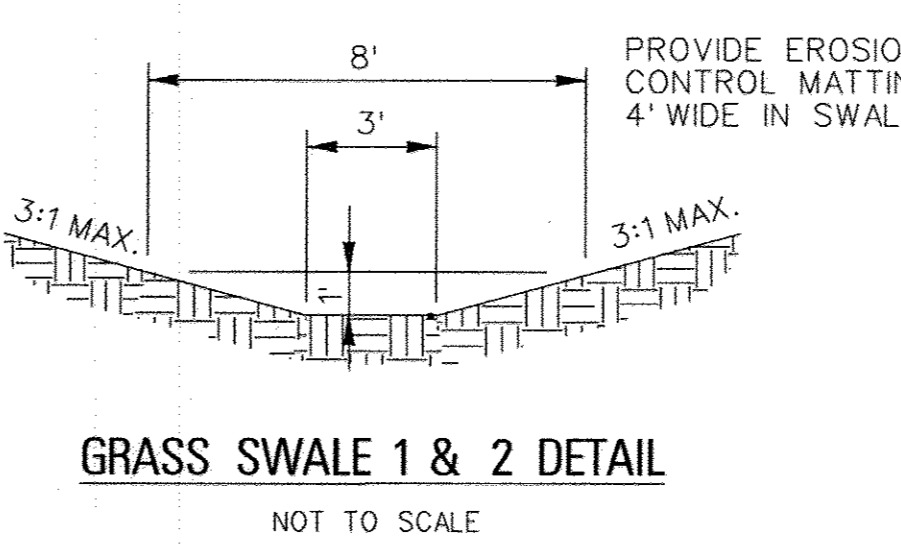
SEQUENCE OF CONSTRUCTION

- Obtain grading and MDE permit.
- Notify Howard County Sediment Control Inspector for pre-construction meetings as required by note number one (No. 1) of the Standard Erosion and Control Notes shown on this sheet. Notify Miss Utility.
- Install sediment control measures (i.e. see silt fence).
- With inspectors approval, grade site within the limits of disturbance. Remove existing foundation and existing gravel drive.
- Construct house and garage.
- Install sewer and water house connections.
- Install driveway.
- Stabilize all disturbed areas. Install Bioretention Gardens.
- With inspector's approval, remove all sediment control measures.

1 DAY
1 DAY
1 DAY
3 DAYS
3 MONTHS
1 WEEK
3 DAYS
1 DAY
1 DAY

PLANTING NOTES

- Plants shall conform to current "American Standards for Nursery Stock" by American Association of Nurserymen (AAN), particularly with regards to size, growth, size of ball, and density of branch structure.
- All plants (B&B or container) shall be property identified by weather-proof labels securely attached thereto before delivery to project site. Labels shall identify plants by name, species, and size. Labels shall not be removed until the final inspection by the Landscape Architect.
- Any material and/or work may be rejected by the Landscape Architect if it does not meet the requirements of the specifications. All rejected materials shall be removed from the site by the Landscape Contractor.
- The Landscape Contractor shall furnish all plants in quantities and sizes to complete the work as specified on the landscape plan. The Landscape Contractor shall be responsible to verify on the plan all plant quantities prior to commencement of work. Quantities in the schedule are the Landscape Contractor's convenience.
- Substitutions in plant species or size shall not be permitted except with the written approval of the Landscape Architect.
- Plants shall be located as shown on the drawings and by scaling or as designated in the field by the Landscape Architect.
- Landscape Contractor shall contact Miss Utility prior to any excavation.
- If utility lines are encountered in excavation of tree pits, other locations for trees shall be selected by the Landscape Architect. Such changes shall be made by the contractor without additional compensation. No changes of location shall be made without the approval of the Landscape Architect.
- Landscape Contractor shall first locate and mark the underground utilities, prior to locating and digging the pits for the trees.
- All equipment and tools shall be placed so as not to interfere or hinder the pedestrian and vehicular traffic flow.
- During planting operations, excess and waste materials shall be promptly and frequently removed from the site.
- All disturbed areas of the site not planted with shrubs or ground cover shall be sodded. Till soil to a depth of 6". Apply fertilizer of analysis 5-10-5 at the rate of 20 lbs. per 1000 square feet. Water sod daily until established.
- All plant beds to receive perennials, bulbs or ground cover are to be filled to a depth of 6" prior to installation of plants. Apply fertilizer of analysis 5-10-5 at the rate specified by manufacturer. Water plants until established.
- All beds containing shrubs, ground covers, perennials, bulbs or trees are to be filled with 2"-3" of shredded hardwood mulch after planting and clean up operations have been completed.



I. 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 hindrance to planting or maintenance operations.

The planting soil shall be free of plants or plant parts of Bermuda grass, Quack grass, Johnson grass, Mugwort, Nutsedge, Poison Ivy, Canadian Thistle or others as specified. It shall not contain toxic substances harmful to plant growth.

The planting soil shall be tested and meet the following criteria:

pH range 5.5 - 6.5
Organic matter 1.5 - 3.0%
Magnesium - Mg 35 lbs./acre
Phosphorus - P2O5 100 lbs./acre
Potassium - K2O 85 lbs./acre
Soluble salts not to exceed 500ppm

The following testing frequencies shall apply to the above soil constituents:

pH, Organic Matter: 1 test per 90 cubic yards, but no more than 1 test per Bioretention Area

Magnesium, Phosphorus, Potassium, Soluble Salts:

1 test per 500 cubic yards, but no less than 1 test per borrow source

One grain size analysis shall be performed per 90 cubic yards of planting soil, but no less than 1 test per Bioretention Area.

B. Mulch Layer Specifications

A mulch layer shall be provided on top of the planting soil. An acceptable mulch layer shall include shredded hardwood or shredded wood chips or other similar product approved by the Maryland Department of Environment (MDE).

Of the approved mulch products all 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

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.

II. BIORETENTION AREA PLANT SPECIFICATIONS

General Planting Specifications

Root stock of the plant material shall be kept moist during transport from the source to the job site and until planted.

Walls of planting pit shall be dug so that they are vertical.

The diameter of the planting pit must be a minimum of six inches (6") larger than the diameter of the ball of the tree.

The planting pit shall be deep enough to allow 1/4" of the ball to be above the existing grade. Loose soil at the bottom of the pit shall be tamped by hand.

The appropriate amount of fertilizer is to be placed at the bottom of the pit (see below for fertilization rates).

The plant shall be removed from the container and placed in the planting pit by lifting and carrying the plant by its ball (never lift by branches or trunk).

Set the plant straight and in the center of the pit so that the top of the ball is approximately 1/4" above the final grade.

Backfill planting pit with existing soil.

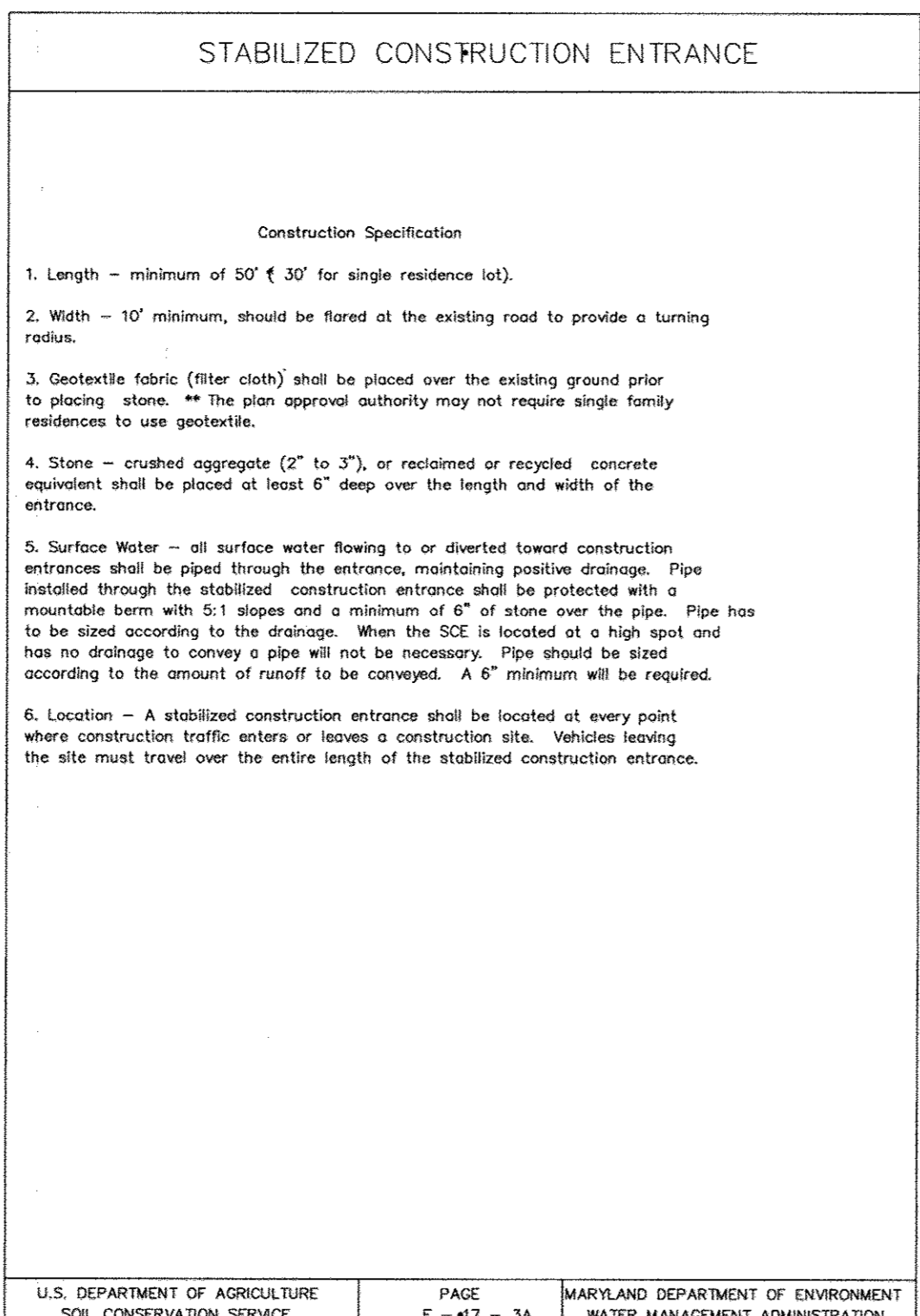
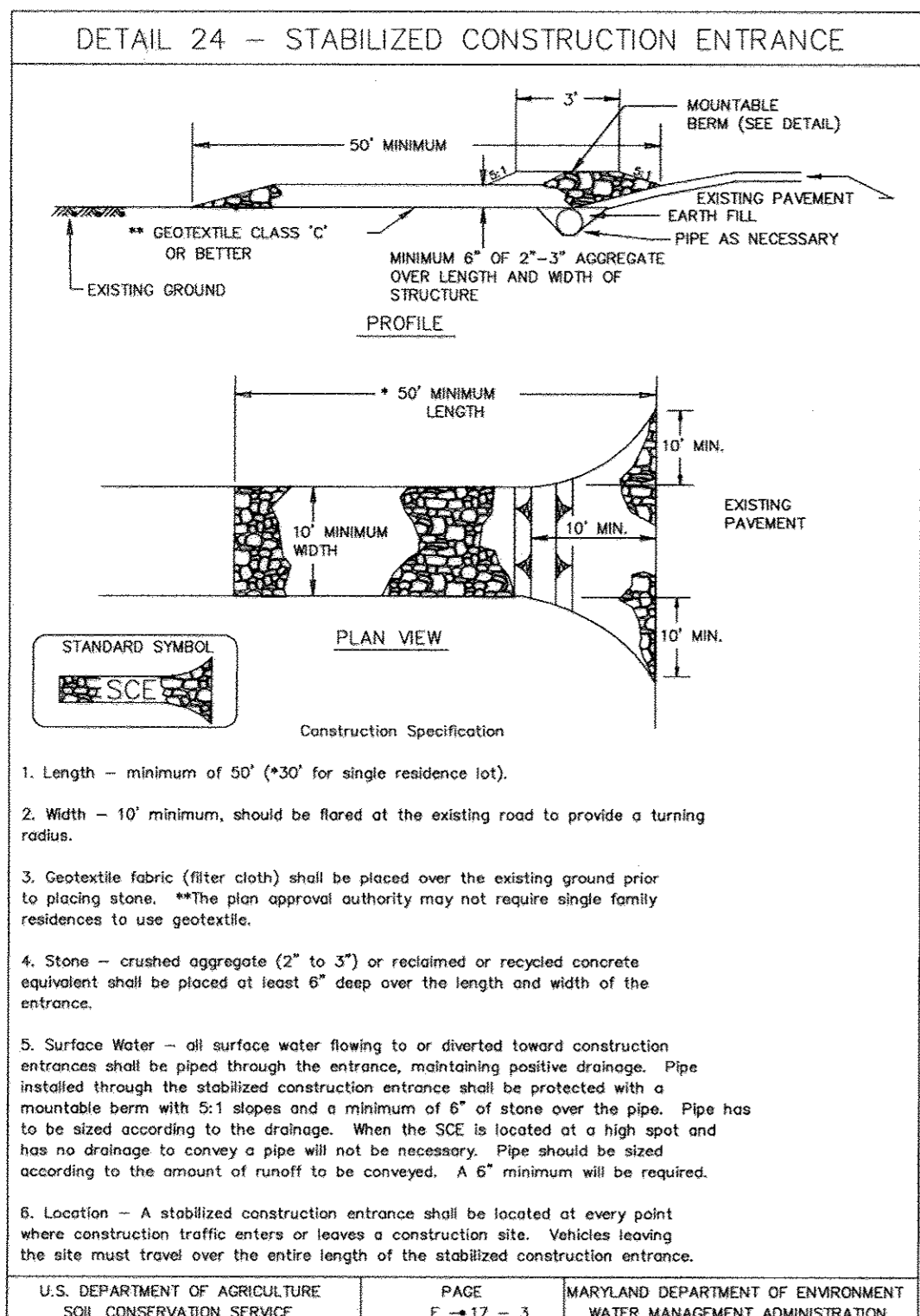
Make sure plant remains straight during backfilling procedure.

Never cover the top of the ball with soil. Mound soil around the exposed ball (1/4").

Trees shall be braced by using 2" by 2" white oak stakes. Stakes shall be placed parallel to walkways and buildings. Stakes are to be equally spaced on the outside of the tree ball. Utilizing hose and wire the tree is braced to the stakes.

BIORETENTION AREA SEQUENCE OF CONSTRUCTION

- Install Phase I Silt Fence as shown on the plan. -Construction time: 1/2 Day
 - Stabilize grading within Limit of Disturbance except for Bioretention Area. -Construction time: 1/2 Day
 - Excavate Bioretention Area to proposed depth. -Construction time: 1/2 Day
 - Fill Bioretention Area with planting soil and sand, as shown in the plans and detailed in the specifications. Construction time: 1 Day
 - Plant vegetation specified in the planting plan Bioretention Area. -Construction time: 1/2 Day
 - Upon authorization from DER inspector, remove all sediment controls and stabilize all disturbed areas. Unblock curb openings, and provide drainage to the Bioretention Areas. -Construction time: 1/2 Day
- Total Estimated Construction Time - 3.5 Days



REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

Jim Meyer 10/25/02
USDA NATURAL RESOURCES CONSERVATION SERVICE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division 11/1/02
Chief, Division of Land Development 11/1/02
Director 11/1/02

BY THE DEVELOPER:

I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, FOR SEDIMENT AND EROSION CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THIS CONSTRUCTION PROJECT WILL HAVE A CURRENT 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 INSPECTIONS BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

DEVELOPER [Signature] DATE 10/21/02

BY THE ENGINEER:

I 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 [Signature] DATE 10/21/02

Drafting	ANL	DATE	REVISIONS
Check	CGW		
Design	CGW		
Check	THM		

KCI ENGINEERS PLANNERS SCIENTISTS CONSTRUCTION MANAGERS

14502 Greenview Drive, Suite 424
Laurel, Maryland 20708
(301) 953-1821 (410) 792-8086
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www.kci.com

OWNER/DEVELOPER
THOMAS EUGENE FERGUSON
9051 DUMMART ROAD
LAUREL, MD 20723
PARCEL 149, LOT 2

GRADING, SEDIMENT CONTROL, AND BIORETENTION DETAILS

BIORETENTION SHRUB PLANTING DETAIL
B&B AND CONTAINER GROWN
NOT TO SCALE

THOMAS E. & DIANNE C. FERGUSON PROPERTY

SINGLE FAMILY DETACHED
TAX MAP 47, GRID 19, PARCEL 149
L. 6176 / F. 202, ZONE R-20
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
WATER CODE: DD4 SEWER CODE: 215 3000

SDP-03-027

DATE: OCTOBER 21, 2002
SHEET 3 OF 5

SCHEDULE A - PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES		
		A-1	A-2	A-3
LANDSCAPE TYPE	NONE	A-1	A-2	A-3
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	153'	199'	160'	200'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	N/A	YES 199' L.F.	YES 160' L.F.	NO
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	N/A	NO	NO	NO
NUMBER OF PLANTS REQUIRED	N/A	4	3	4
SHADE TREES	0	0	0	0
EVERGREEN TREES	0	0	0	0
SHRUBS	0	0	0	0
NUMBER OF PLANTS PROVIDED	1	0	0	4 PROP
SHADE TREES	2	2 EX.	20 EX.	0
EVERGREEN TREES	4	8 EX.	8 EX.	0
OTHER TREES (2:1 SUBSTITUTION)	0	0	0	0
SHRUBS (10:1 SUBSTITUTION)	0	0	0	0
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	EXISTING TREES ALONG FRONT			
COMMENTS:				

EXISTING PLANT SCHEDULE

SYMBOL	KEY	COMMON NAME	QUANTITY	SIZE/CONDITION	SPACING
AA	-	American Arborvitae	20	5' HT.	5'
SM	-	Silver Maple	1	2" Cal.	--
FT	-	Various fruit trees	9	2" Cal.	20'
JM	-	Japanese Maple	2	2" Cal.	--
P	-	Pine	3	2" Cal.	--
WJ	-	Weeping Japanese Maple	2	2" Cal.	--
PER	-	Persimmon	1	6" Cal.	--

PROPOSED PLANT SCHEDULE

SYMBOL	KEY	COMMON NAME	QUANTITY	SIZE/CONDITION	SPACING
JZ	-	Japanese Zelkova	4	2 1/2" - 3" Cal.	40'

PLANTING SPECIFICATIONS

- I. DESCRIPTION

The Contractor shall furnish and install all plant materials, labor and other materials necessary to complete the work as shown on the plans and details.
- MATERIALS AND METHODS

A. The materials and methods shall comply with all the requirements of the current edition of the "American Standard for Nursery Stock" as prepared by the American Association of Nurserymen and as modified herein.

B. Substitutions

 1. If a plant is found not to be suitable or available, the Landscape Contractor shall notify the Owner's Representative before bidding.
 2. The Owner or Owner's Representative will select a reasonable alternate, or to inform all Landscape Contractors of the source of availability of the original.

C. Utilities

The Landscape Contractor shall verify the correct location of any existing underground utilities prior to any excavation or plant installation. The Landscape Contractor shall call Miss Utility (1-800-257-7777) a minimum of 48 hours prior to construction.

D. Plant Material Sources

The Landscape Contractor shall, at least ten (10) days before beginning planting operations submit a list of planting material sources giving the nursery address and phone number for each plant material required on the job.

E. The total number of plants shall be as shown on the landscape plan. If this total differs from the plant schedule, the Landscape Contractor shall notify the Owner's Representative before the plant schedule, the Landscape Contractor shall notify the Owner's Representative before the plant schedule.

F. Time of Planting

Planting season schedule shall be in accordance with the "American Standard for Nursery Stock" as prepared by the American Association of Nurserymen. Plant pines and oaks shall be during spring planting season only.

G. Mulch

Mulch shall be shredded hardwood bark. The Landscape Contractor shall provide a one (1) lb. sample to the Owner's Representative for his approval. Mulch shall be applied to a depth of three (3) inches within 24 hours of installation of plant materials.

H. Tree wrap shall not be utilized.

I. The Landscape Contractor shall prune plant material within two (2) days of installation in accordance with the details and as directed by the Owner's Representative.

J. Topsoil

ASTM D 5268, pH range 5.5 to 7.4 percent organic material minimum, free of stones 1 inch (25 mm) or larger in any dimension, and other extraneous materials harmful to plant growth.

 1. Topsoil Source: Reuse surface soil stockpiled on the site. Verify suitability of surface soil to produce topsoil meeting requirements and amend when necessary. Supplement with imported topsoil when quantities are insufficient. Clean topsoil of roots, plants, sods, stones, clay lumps and other extraneous materials harmful to plant growth.
 2. Spread topsoil 4" min. depth over all landscape areas.

K. Soil Preparation

 1. Spread agricultural lime on sod and seed areas at a rate of 92 lbs/1000 s.f.
 2. Fertilize sod and seed areas with (10-2-25) at 25 lbs/1000 s.f.

L. All disturbed areas within the limit of contract which are not paved, sodded or otherwise planted shall be seeded. The following seed mixture and rate of application will be used: 50% Kentucky Bluegrass, 40% Chewings or Red Fescue, 10% Red Top. This mixture shall be applied at the rate of two and a half to five (2.5-5) lbs/s.f. sown in two (2) directions at right angles.

M. Clean-Up and Restoration

 1. During the course of planting, excess and waste materials shall be continuously and promptly removed, lawn areas kept clear, and all reasonable precautions taken to avoid damage of existing lawns, paving, etc.
 2. The Landscape Contractor shall restore to their original condition all pavements, sodded and planted areas, structures and substructures not specifically provided for in the Contract, which are disturbed by the Landscape Contractor during planting operations. Such restoration shall be in a manner satisfactory to the Owner's Representative and at no additional cost to the Owner.

N. Water

Water for planting and maintenance purposes, will be supplied by the Owner. The Landscape contractor shall provide equipment necessary to transport the water from source to required locations. The Landscape Contractor shall water plants promptly, adequately and as often as necessary to insure proper plant growth and to keep the soil moist and in a condition satisfactory to the Owner's Representative. The Landscape Contractor is responsible for watering all plants from the time of planting until the final inspection.

O. Final Inspection

The Owner's Representative shall make a final inspection and notify the Landscape Contractor in writing, when all work is satisfactorily completed. If the work is not satisfactorily completed, the Owner's Representative will notify the Landscape Contractor in writing, as to the deficiencies in the work and the necessary corrective measures. A reasonable amount of time will be given and another final inspection will be scheduled by the Owner's Representative.

P. Owner Maintenance

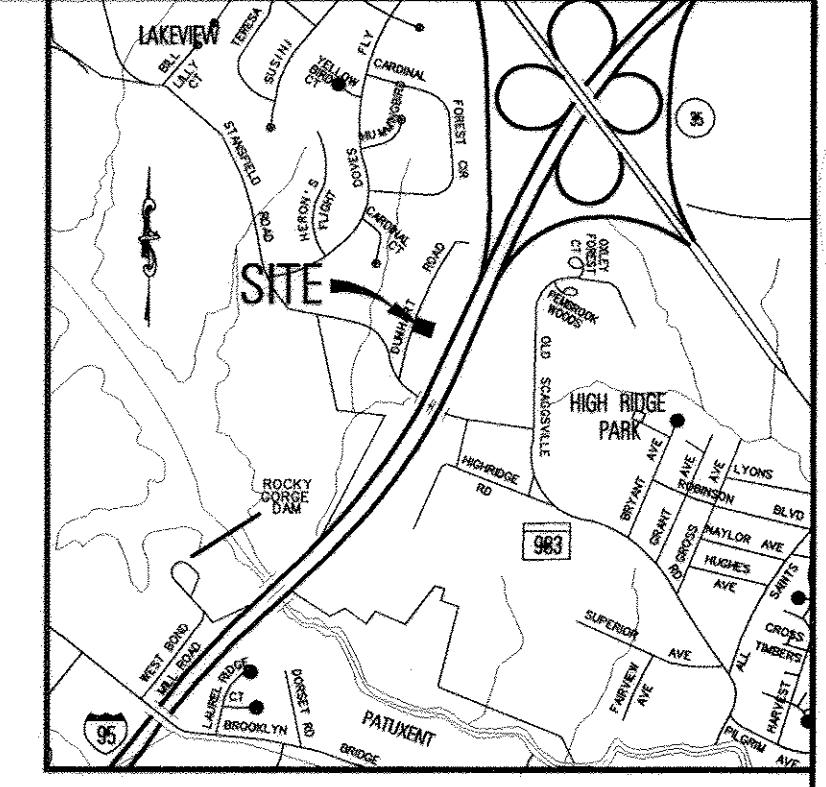
After the planting has been approved by the Owner's Representative and the Owner, the maintenance of watering and weeding of such plants and planted area shall be provided by the Owner. Since the plants are to be guaranteed by the Landscape Contractor for one year from final inspection, he should check the maintenance conducted by the Owner. The Landscape Contractor shall also make monthly site inspections after installation of trees during the guarantee period and shall report any trees that are not vertically true. If the Landscape Contractor is not satisfied with the maintenance of the plants, a written report, in triplicate, stating appropriate changes shall be given immediately to the Owner's Representative two copies will be forwarded to the Owner.

Q. Guarantee

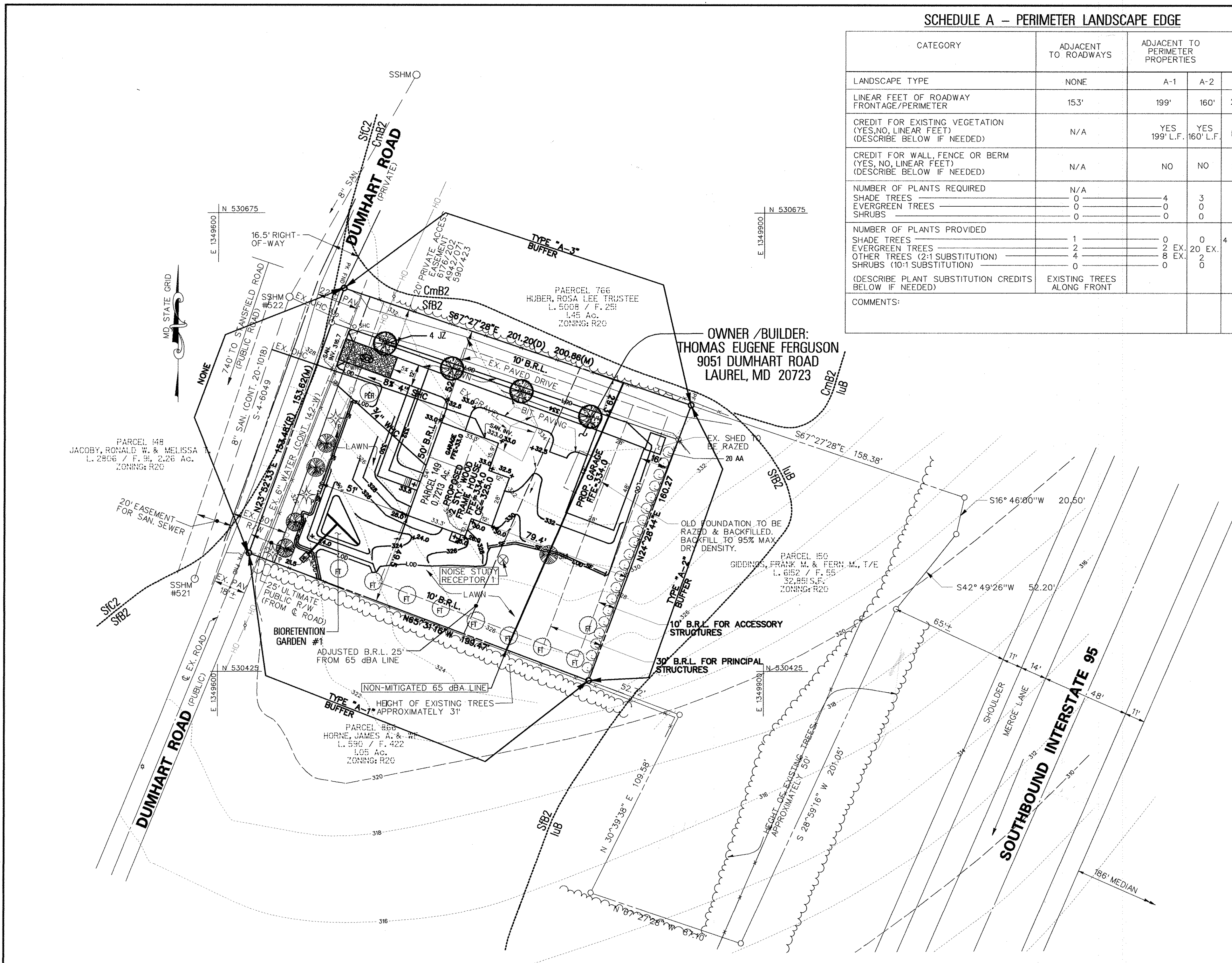
All plant material shall be guaranteed to be in a vigorous growing condition one year from the date of final inspection. Any plants infected with disease or insects, as well as dead or unacceptable plants will be replaced by the same plants at the same price and graded as specified herein and without extra compensation to the contractor. At the completion of such work and with the approval of the Owner's Representative, the Contract will be considered complete.

R. Payment

Terms of payment shall be as specified in the bid package.

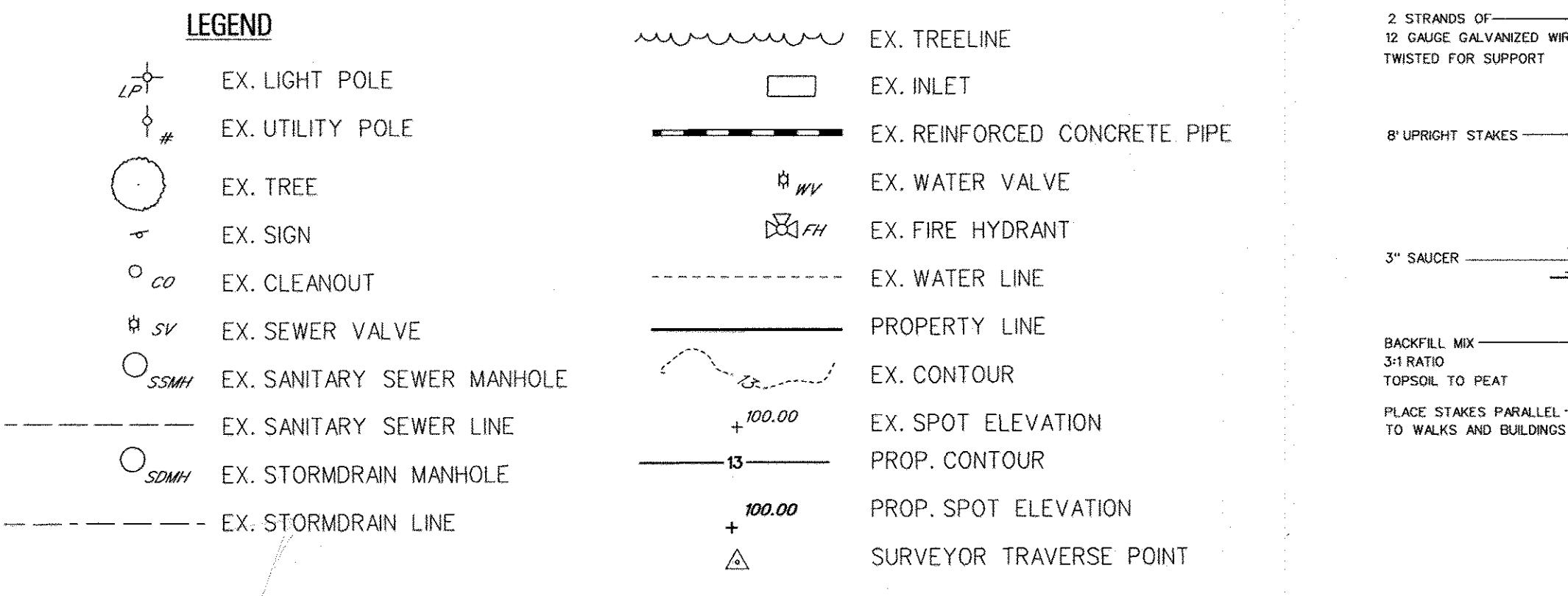


VICINITY MAP
SCALE: 1" = 2000'



NOTE:
1. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
2. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF \$1,200 FOR 4 SHADE TREES.

DEVELOPER'S / BUILDERS 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 Certification of Landscape Installation, accompanied by an executed one year guarantee of plant materials, will be submitted to the Department of Planning and Zoning.
Date: Oct 11, 02

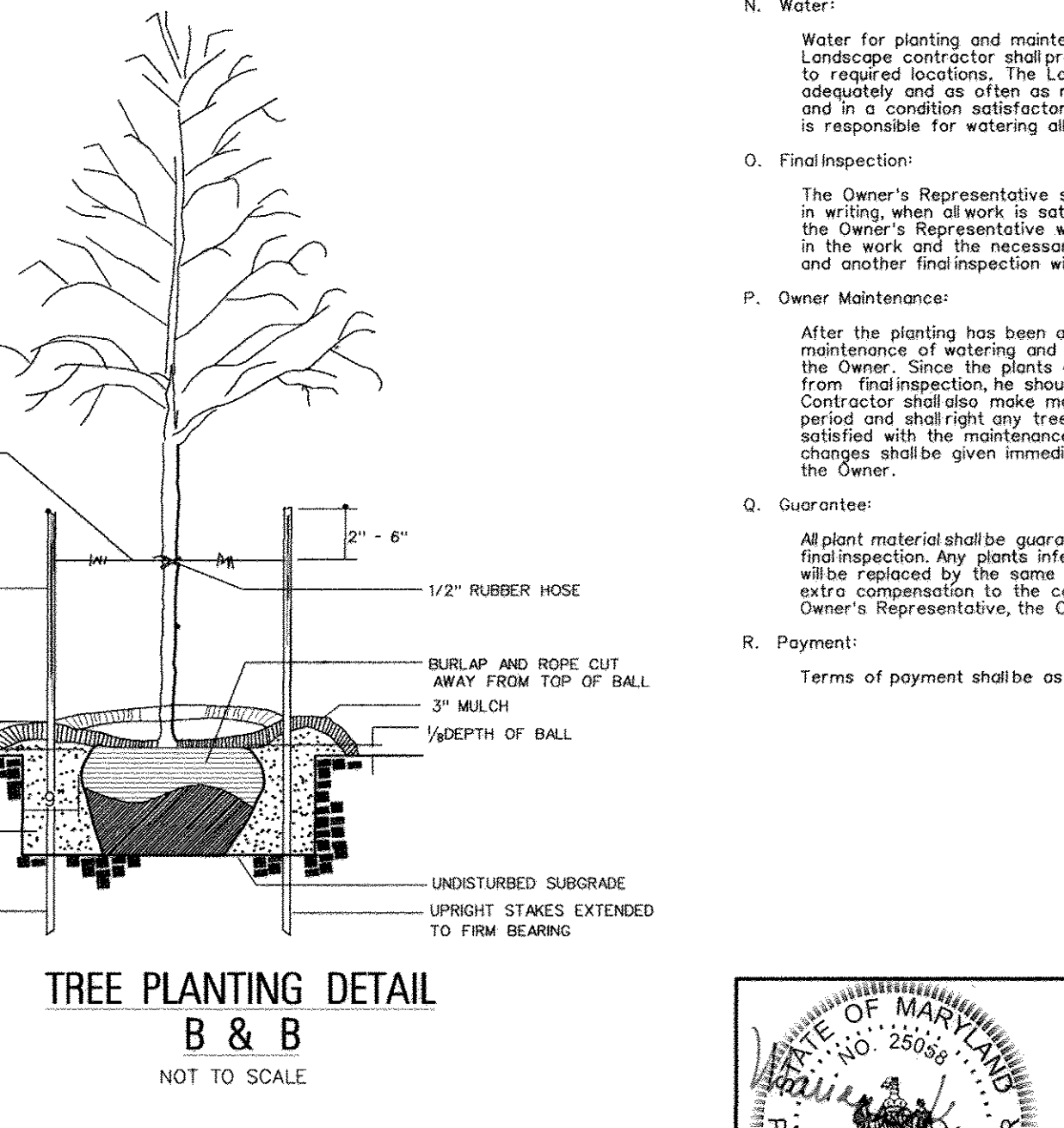


Drafting	ANL	DATE	REVISIONS
Check	CGW		
Design	CGW		
Check	THM		

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OWNER / DEVELOPER
THOMAS EUGENE FERGUSON
9051 DUMHART ROAD
LAUREL, MD 20723
PARCEL 149, LOT 2

LANDSCAPE PLAN



THOMAS E. & DIANNE C. FERGUSON PROPERTY
SINGLE FAMILY DETACHED
TAX MAP 47, GRID 19, PARCEL 149
L. 6176 / F. 202, ZONE R-20
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
WATER CODE: D04 SEWER CODE: 215 3000
SDP-03-027
BAR SCALE
1" = 30'
DATE: OCTOBER 21, 2002
SHEET 5 OF 5