

A. Plant Materials

The landscape contractor shall furnish and install and/or dig, ball, burlap and transport all of the plant materials called for on drawings and/or listed in the Plant Schedule.

- Plant Names**
Plant names used in the Plant Schedule shall conform with "Standardized Plant Names," latest edition.
- Plant Standards**
All plant material shall be equal to or better than the requirements of the "USA Standard for Nursery Stock" latest edition, as published by the American Association of Nurserymen (hereafter referred to as AAN Standards). All plants shall be typical of their species and variety, shall have a normal habit of growth and shall be first quality, sound, vigorous, well-branched and with healthy, well-furnished root systems. They shall be free of disease, insect pests and mechanical injuries.

- Plant Measurements**
All plants shall conform to the measurements specified in the Plant Schedule as approved by the ARC.
- Caliper Measurements**
Caliper measurements shall be taken six inches (6") above grade for trees under four (4") in caliper and twelve (12") above grade for trees four inches (4") in caliper and over.
- Minimum Branching Height**
Minimum branching height for all trees shall be six feet (6'), maximum eight feet (8').
- Minimum Size for Planting Shade Trees**
Minimum size for planting shade trees shall be 3-3/4" caliper, 14'-16" in height.
- Minimum Size for Planting Minor or Intermediate Trees**
Minimum size for planting minor or intermediate trees (specimen trees, crabapples, etc.) shall be 3-3/4" caliper, 10'-12" in height.
- Minimum Size for Planting Shrubs**
Minimum size for planting shrubs shall be 18" spread unless noted otherwise.
- Caliper, Height, Spread and Size of Ball**
Caliper, height, spread and size of ball shall be generally as follows:

PLANT SIZE	ROOT BALL	DIAMETER	DEPTH
3" - 3 3/4" cal.	32"	64"	28"
3 3/4" - 4" cal.	36"	72"	32"
4" - 4 1/2" cal.	40"	80"	36"
4 1/2" - 5" cal.	44"	88"	40"
5" - 5 1/2" cal.	48"	96"	44"
5 1/2" - 6" cal.	52"	104"	48"

- 20% Compaction**
A 20% compaction figure of the soil to be removed is assumed and will be allowed in calculation of extra topsoil. The tabulated pit sizes are for purposes of uniform calculation and shall not override the specified depths below the bottoms of the root balls.
- Staking, Guying and Wrapping**
All plant material shall be staked or guyed, and wrapped in accordance with the following specifications:

- Stakes**
Stakes shall be sound wood 2" x 2" rough sawn oak or similar durable woods, or lengths minimum 7'-0" for major trees and 5'-0" minimum for minor trees.
- Wire and Cable**
Wire shall be #10 galvanized or galvanized steel wire. For trees over 3" caliper, provide 5/16" turn buckles, eye and eye with a take-up. For trees over 5" caliper, provide 3/16", 7 strand cable cadmium plated steel, with galvanized "eye" thimbles of wire and hose on trees up to 3" in caliper.
- Hose**
Hose shall be new, 2 ply reinforced rubber hose, minimum 1/2" I.D. "Plastic Lock Tie" or "Paul's Trees" may be used in place of wire and hose on trees up to 3" in caliper.

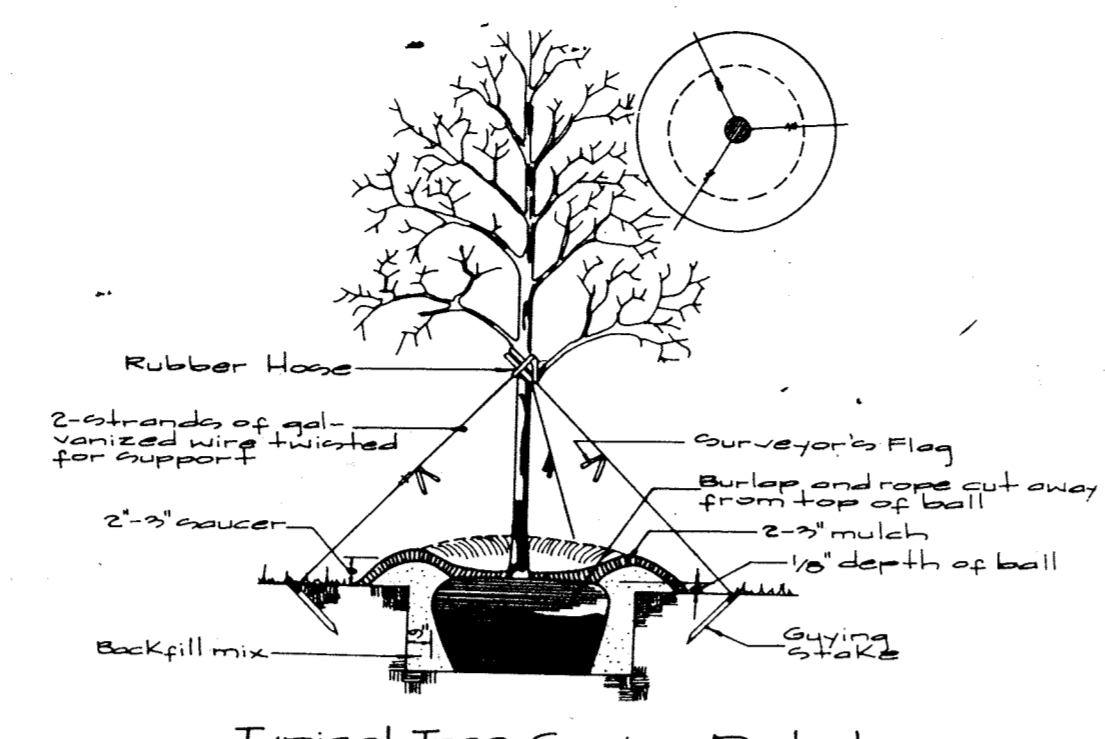
- Plant Pruning, Edging and Mulching**
Each tree, shrub or vine shall be pruned in an appropriate manner to its particular requirements in accordance with accepted standard practices. Broken or bruised branches shall be removed with clean cuts flush with the adjacent trunk or branches. All cuts over 1/2" in diameter shall be painted with an approved antiseptic tree wound dressing.
- Trenches and Shrub Beds**
All trenches and shrub beds shall be edged and cultivated to the lines shown on the drawing. The edges of all plant material shall be edged and cultivated to the full diameter of the pit. Sod which has been removed and stacked shall be used to trim the edges of all excavated areas to the near lines of the plant pit saucers, the edges of shrub areas, hedge trenches and vine pockets.

- Plant Inspection and Acceptance**
The ARC shall be responsible for inspecting all planting projects on a periodic basis to assure that all work is proceeding in accordance with the approved plans and specifications.
- Plant Guarantee**
All plant material shall be guaranteed for the duration of one full growing season, after final inspection and acceptance of the work in the planting project. Plants shall be alive and in satisfactory growing condition at the end of the guarantee period.

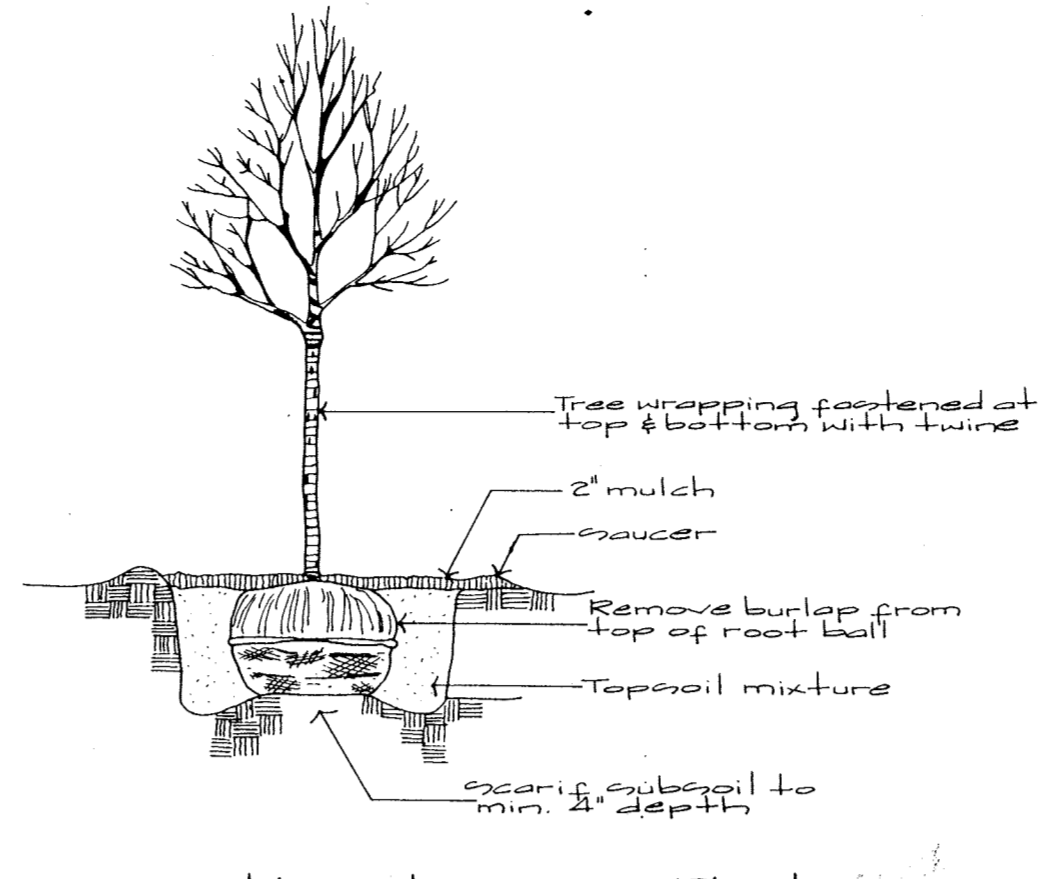
- For this purpose**, the "growing season" shall be that period between the end of the "Spring" planting season, and the commencement of the "Fall" planting season.
- Guarantee for planting performed after the specified end of the "Spring" planting season**, shall be extended through the end of the next following "Spring" planting season.

Sodding
All sodding shall be in accordance with the "Landscape Specification Guidelines for Baltimore-Washington Metropolitan Area" latest edition, approved by the Landscape Contractors Association of Metropolitan Washington and the American Society of Landscape Architects.

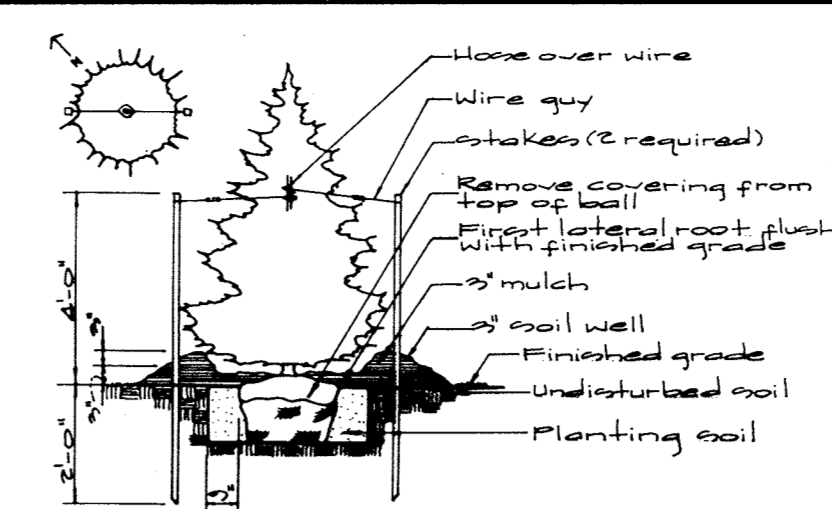
All sod shall be strongly rooted sod, not less than two years old and free of weeds and undesirable native grasses. Provide only sod capable of growth development when planted and in strips not more than 18" wide x 4" long. Provide sod composed primarily of improved strain Kentucky bluegrass, such as, Columbia, Victoria, or Secor.



Typical Tree Guying Detail



Typical Deciduous Tree Planting



Topsoiling Detail

Materials:
Top soil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand or other soil as approved by an Agronomist or soil scientist. It shall not have a mixture of contrasting textures, stones, slag, coarse fragments, gravel, sticks, roots, trash or other extraneous materials larger than 1/2" in dia. Top soil must be free of plants or plant parts larger than 1/2" in dia. Top soil must be tested by a recognized laboratory to determine organic content, pH and soluble salts. A pH of 6.0 to 7.5 and an organic matter of not less than 1% percent by weight is required. If pH value is less than 6.5 lime shall be applied and incorporated with the top soil to adjust the pH to 6.5 or higher. Top soil containing soluble salts greater than 500 per million shall not be used.

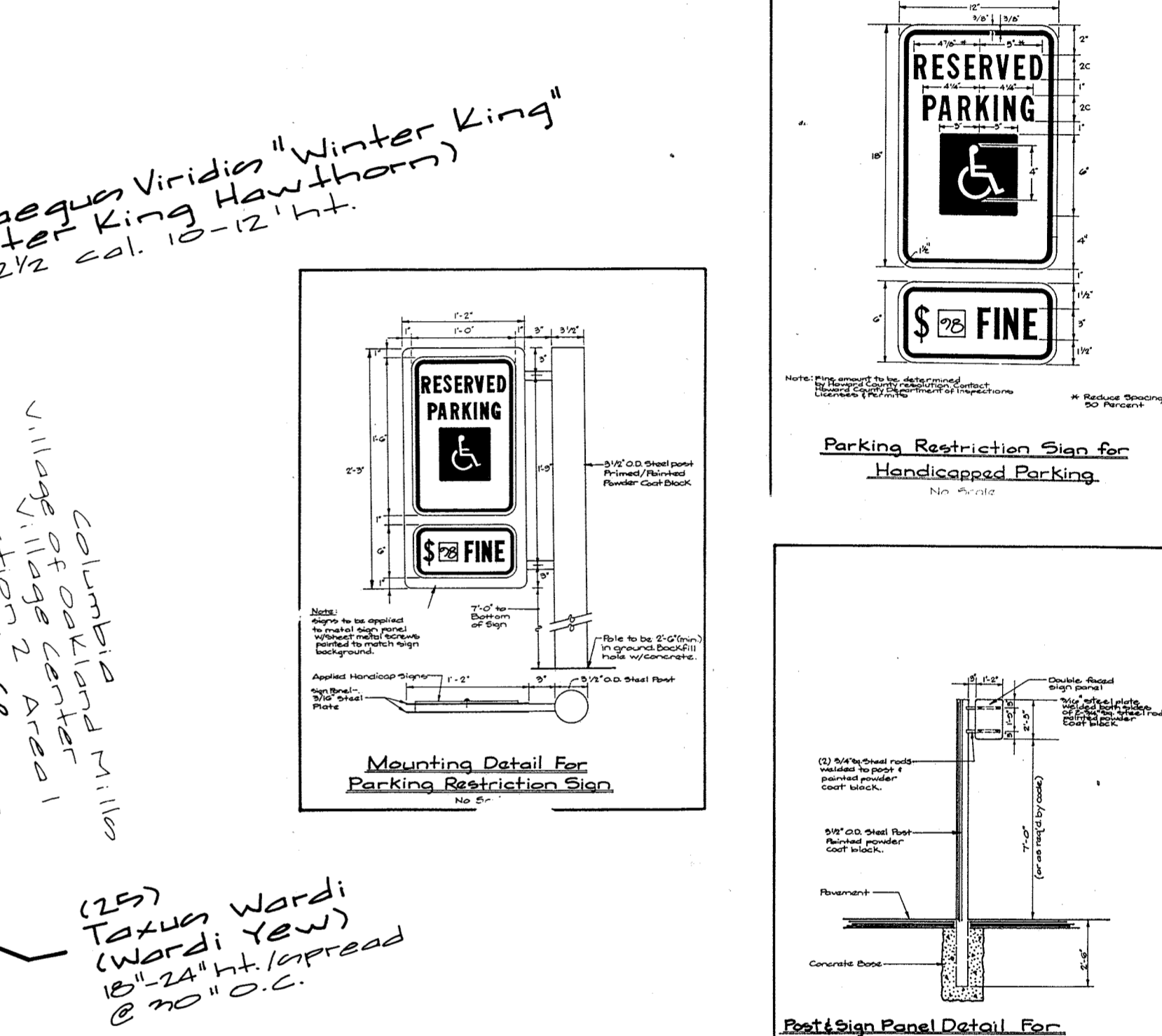
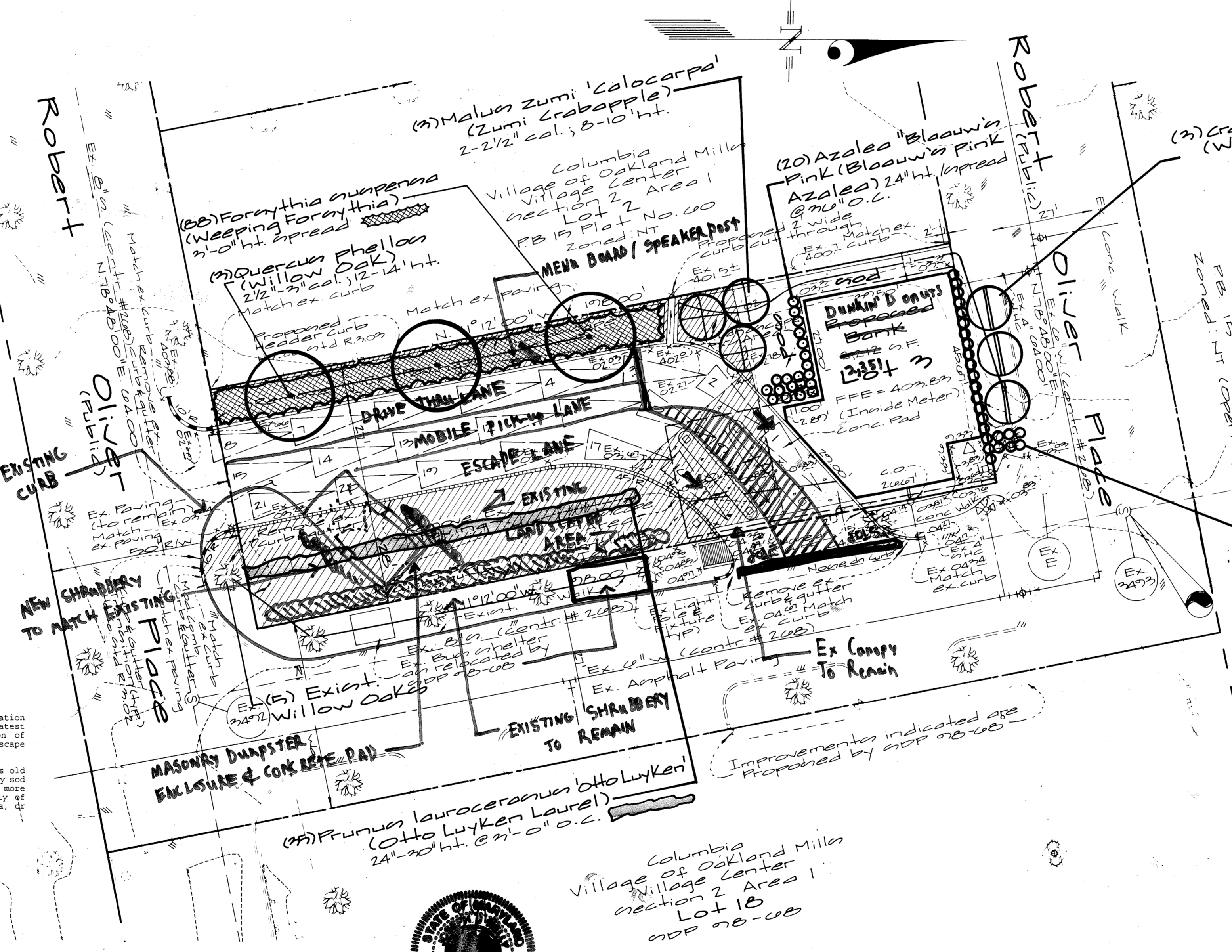
CALIPER	HEIGHT	SPREAD	SIZE OF BALL
3" - 3 3/4"	14'-16'	6'-8"	32" diameter
3 3/4" - 4"	14'-16'	8'-10"	36" diameter
4" - 4 1/2"	16'-18'	8'-10"	40" diameter
4 1/2" - 5"	16'-18'	10'-12"	44" diameter
5" - 5 1/2"	16'-20'	10'-12"	48" diameter
5 1/2" - 6"	18'-20'	12'-14"	52" diameter

- Plant Identification**
Legible labels shall be attached to all shade trees, minor trees, specimen shrubs and bundles or boxes of other plant material giving the botanical and common names, size and quantity of each. Each shipment of plants shall bear certificates of inspection as required by Federal, State and County authorities.
- Plant Inspection**
The ARC may, upon request by the builder or developer, at least ten (10) days prior to the installation of any proposed plant material, inspect all proposed plant material at the source of origin.

- Planting Methods**
All proposed plant materials that meet the specifications in Section A are to be planted in accordance with the following methods during the proper planting seasons as described in the following:
- Planting Seasons**
The planting of deciduous trees, shrubs and vines shall be from March 1st to June 15th and from September 15th to December 15th. Planting of evergreen material may be continued during the winter months providing there is no frost in the ground and frost-free topsoil planting mixtures are used.

- Planting of evergreen material** shall be from March 15th to June 15th and from August 15th to December 15th. No planting shall be done when ground is frozen or excessively moist. No frozen or wet topsoil shall be used at any time.
- Digging**
All plant material shall be dug, balled and burlapped (B+B), in accordance with the "AAN Standards".
- Excavation of Planting Pits**
The landscaping contractor shall excavate all plant pits, vine pits, hedge trenches and shrub beds in accordance with the following schedule:

- Locations of all proposed plant material** shall be staked and approved in the field by the landscape architect before any of the proposed plant material is installed by the landscape contractor.
- All pits** shall be generally circular in outline, vertical sides; depth shall not be less than 6" deeper than the root ball diameter shall not be less than two times the diameter of the root ball as set forth in the following schedule.



SCHEDULE A PERIMETER LANDSCAPE EDGE

Category	Adjacent to Roadways	Adjacent to Perimeter Properties
Landscape Type	B	
Linear Feet of Roadway Frontage/Perimeter	260 LF	
Credit for Existing Vegetation (Yes, No, Linear Feet) (Describe below if needed)	No	
Credit for Wall, Fence or Berm (Yes, No, Linear Feet) (Describe below if needed)	No	N/A
Number of Plants Required		
Shade Trees	0/100 = 5	
Evergreen Trees	1/100 = 7	
Shrubs	none	
Number of Plants Provided		
Shade Trees	per alt. compliance	
Evergreen Trees	14/100 = 14	
Other Trees (2:1 substitution)	14/100 = 14	
Shrubs (10:1 substitution)	per alt. compliance	
(Describe plant substitution credits below if needed)		

Landscape Surety for schedule A required plantings: 12 x 100 = \$1,200.00

APPROVED PLANNING BOARD OF HOWARD COUNTY
DATE: May 7, 1998

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
[Signatures and dates: 6/1/98, 5/29/98, 5/19/98]

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONTVILLE OFFICE PARK
BURTONTVILLE, MARYLAND 20884
TEL: 301-421-4024 FAX: 301-421-4198

DES.	DRN.	CHK.	MJT	DATE

NO.	REVISION	DATE	BY	APP'R.

PREPARED FOR:
THE HOWARD RESEARCH & DEVELOPMENT CORPORATION
THE ROUSE BUILDING
10275 LITTLE PATENT PARKWAY
COLUMBIA, MD. 21044
(410) 992-6370

Landscape Plan, Notes & Details
COLUMBIA
VILLAGE OF OAKLAND MILLS
SECTION 2 AREA 1
LOT 3
HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
1" = 20'	NEW TOWN	97071
DATE	TAX MAP NO.	SHEET
May 11, 1998	36	2 OF 3

50P-98-109

SEDIMENT CONTROL NOTES

1. A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (410) 313-1855.
2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
3. 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 and perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
4. 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.
5. 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, sod, temporary seeding and mulching (Sec. C).
6. Temporary stabilization, with mulch alone, can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
7. 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.
8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
9. Additional sediment control must be provided, if deemed necessary by the Howard County DPM Sediment Control Inspector.
10. On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
11. Trenches for the construction of utilities is limited to 3 pipe lengths or that which shall be backfilled and stabilized within one working day, whichever is shorter.

PERMANENT SEEDING NOTES

Apply to graded or cleared area 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 (unless previously loosened).

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:

- 1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 square feet) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 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/1000 sq ft).
- 2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 square feet) 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 (1.4 lbs/1000 sq ft) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (.05 lbs/1000 sq ft) of weeping lovegrass. During the period of October 16 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/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrattled 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 reseedings.

1983 STANDARD AND SPECIFICATIONS

- TOPSOIL**
- Construction and Material Specifications
1. Topsoil salvaged from the existing site may be used provided that it meets the standards set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profiles in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experiment Station.
 2. Topsoil Specifications - Soil to be used as topsoil must meet the following:
 - i. Topsoil shall be a loam, sandy loam, clay loam, silty 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 containing: natural subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, weeds, or other materials larger than 1 1/2" diameter.
 - ii. Topsoil must be free of plants or plant parts such as bennet grass, quackgrass, Johnsrass, nutgrass, poison ivy, thistle, or others as specified.
 - iii. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Limes shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.
 3. For sites having disturbed areas under 5 acres:
 - i. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetation Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
 4. Topsoil Application
 - i. When topsoiling, maintain reduced erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Step Erosion and Sediment Traps and Basins.
 - ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.
 - iii. Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that existing or existing new ground with a minimum of additional soil preparation and tillage. Any irregularities in the formation of depressions or water pockets.
 - iv. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.
 5. Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and manure may be applied as specified below:
 - i. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe manure and for sites having disturbed areas under 5 acres shall conform to the following requirements:
 - a. Composted sludge shall be supplied by, or originate from, a person or persons that are permitted as the date of acquisition of the compost by the Maryland Department of the Environment under COMAR 26.04.06.
 - b. Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a Ph of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.
 - c. Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
 - d. Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lbs/1,000 square feet, and 1/3 the normal lime application rate.
- References: Guidelines Specifications, Soil Preparation and Seeding, MD-VA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institute, Revised 1973.

TEMPORARY SEEDING NOTES

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

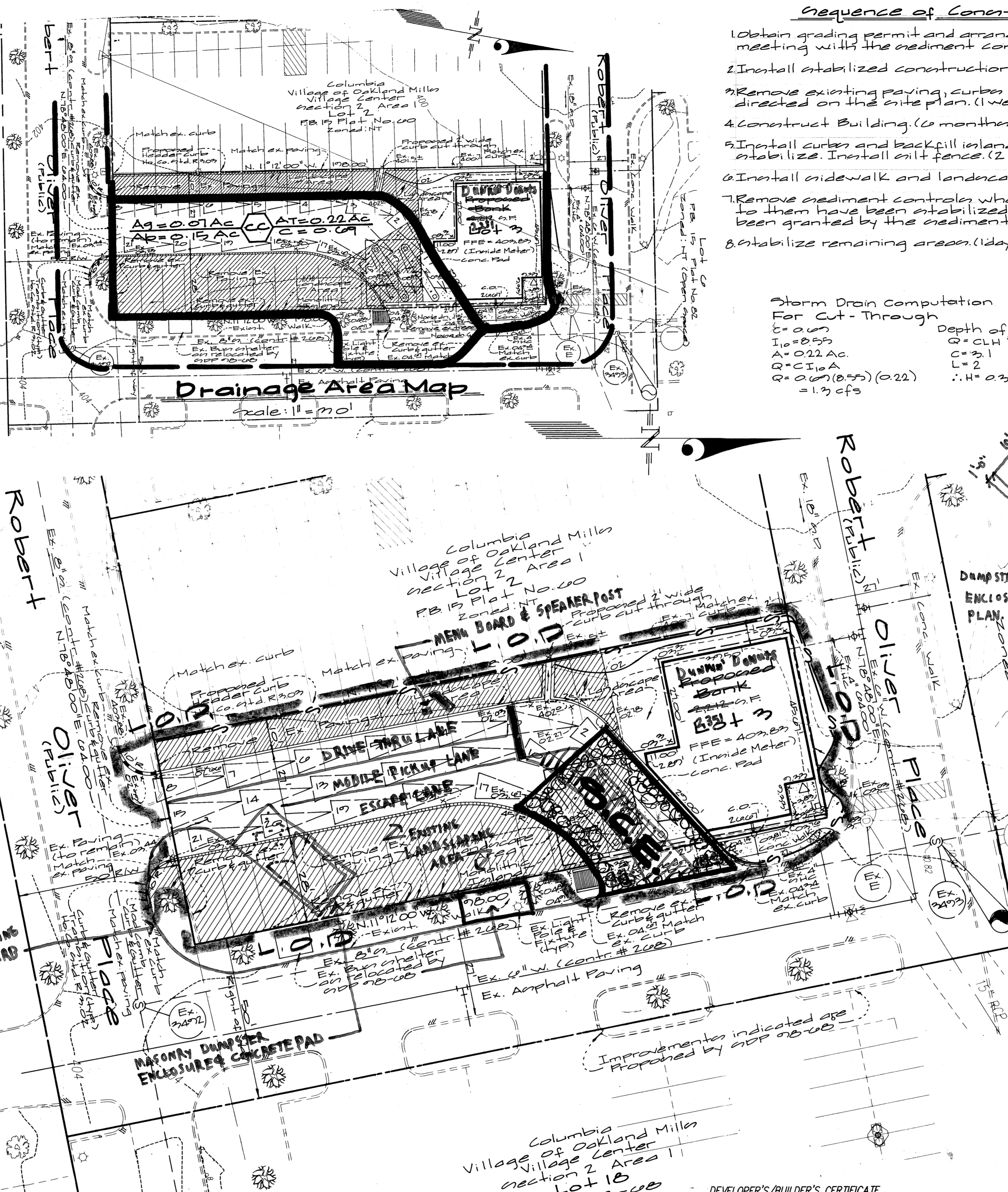
Seeded Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding (unless previously loosened).

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 October 15, seed with 2-1/2 bushel per acre of annual rye (32 lbs/1000 sq ft). For the period May 1 thru August 14, seed with 3 lbs per acre of weeping lovegrass (07 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 unrattled, weed-free, small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes, 8 ft or higher, use 348 gal per acre (8 gal/1000 sq ft) for anchoring.

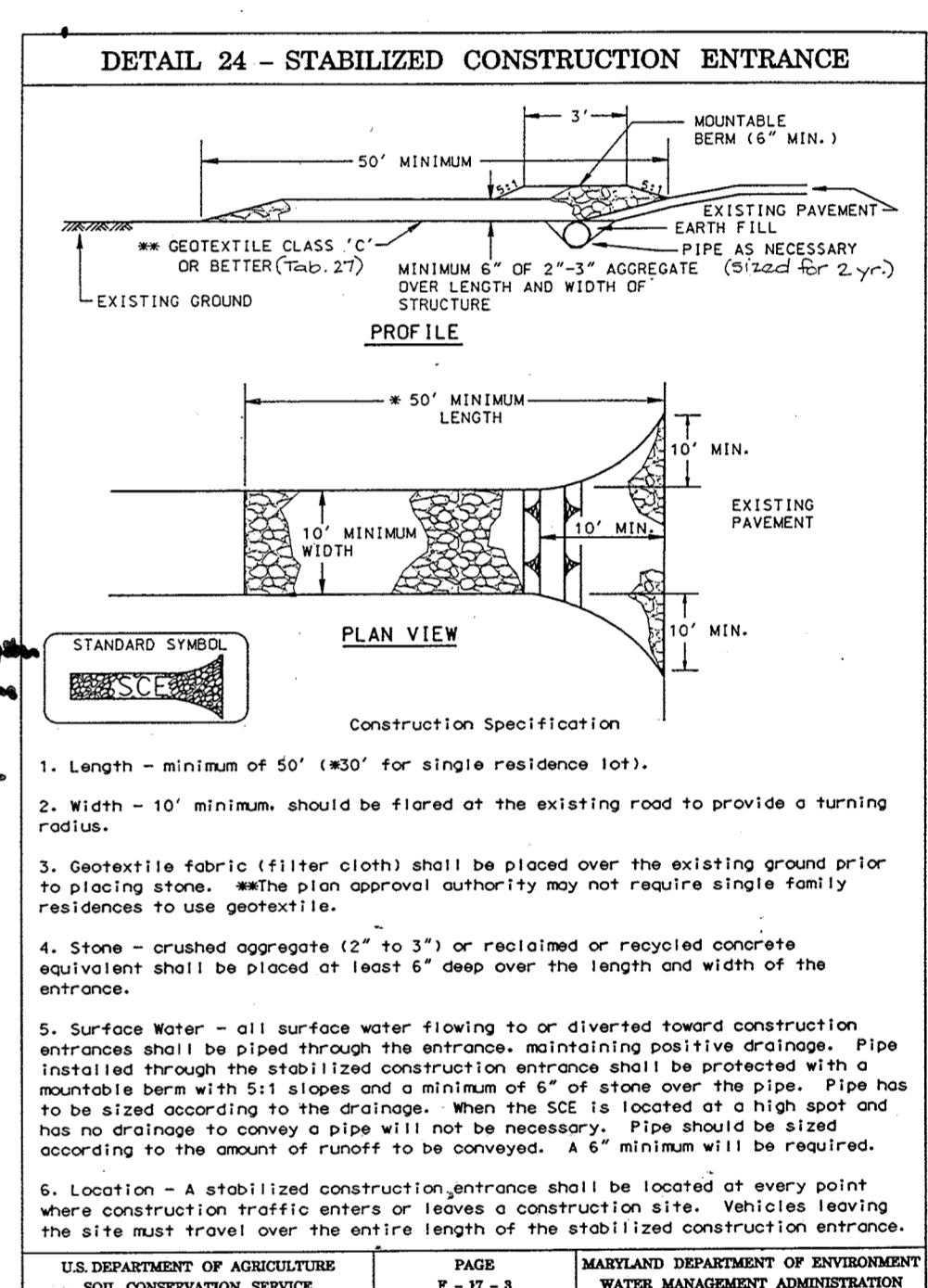
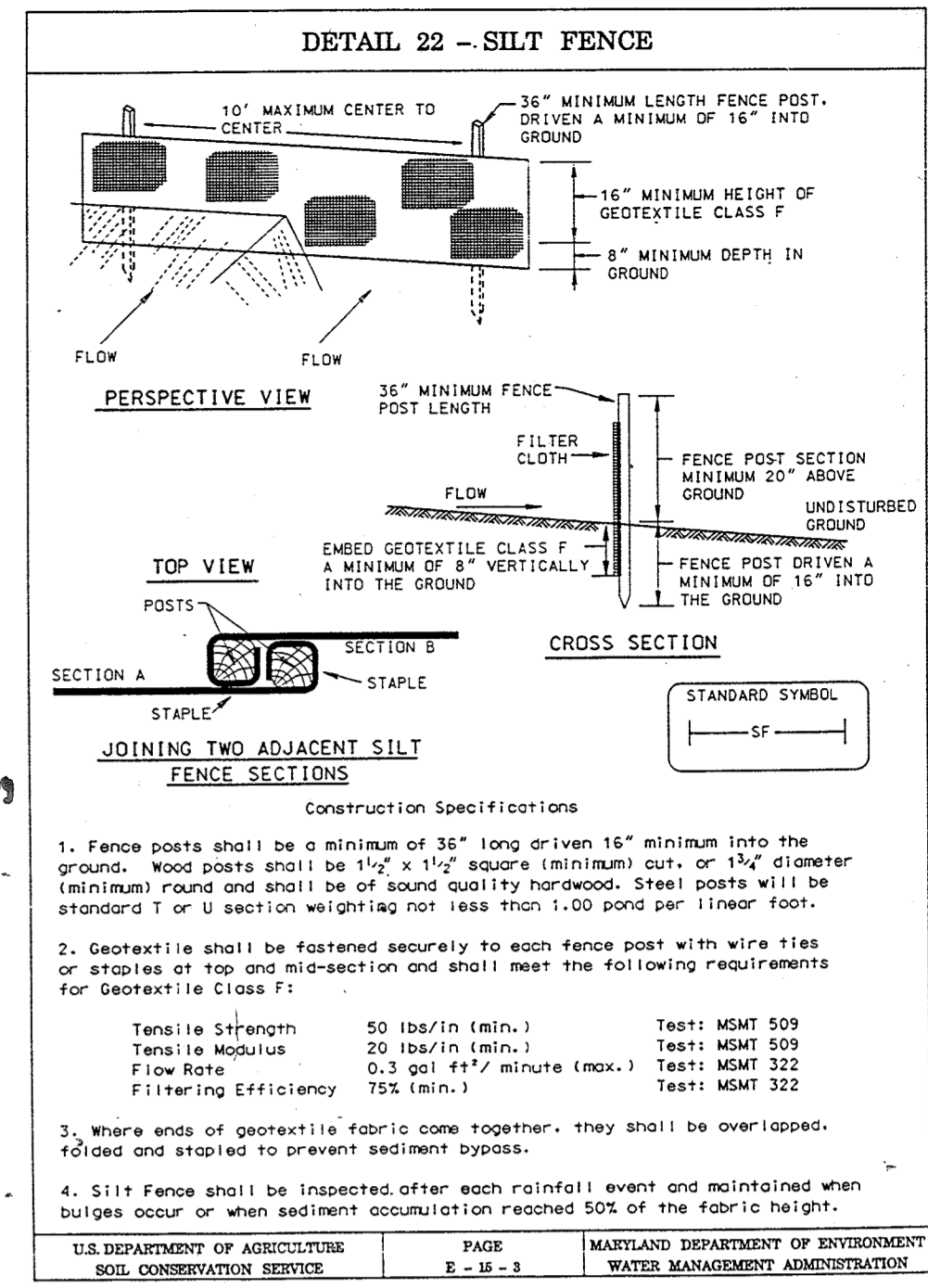
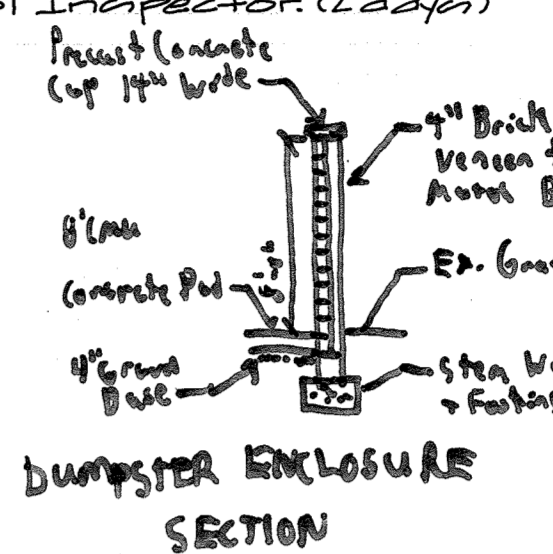
Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.



Storm Drain Computation For Cut-Through

C = 0.05
 I₀ = 0.55
 A = 0.22 Ac
 Q = C I₀ A
 Q = 0.05(0.55)(0.22) = 0.006 cfs

Depth of Flow:
 Q = CLH^{3/2}
 C = 3.1
 L = 2
 H = 0.35' < 0.5'



These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements.

Cheryl Simmons 5/18/98
 Natural Resources Conservation Service Date

ENGINEER'S 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."

John P. Plutner 5/18/98
 Howard S.C.D. Date

DEVELOPER'S/BUILDER'S CERTIFICATE

"I/we certify that all development and/or 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 Maryland 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 HSCD."

Ma 3-17-98
 Signature of Developer/Builder Date

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

John P. Plutner 5/18/98
 Howard S.C.D. Date

For Sediment Control Purposes Only!!

APPROVED PLANNING BOARD OF HOWARD COUNTY

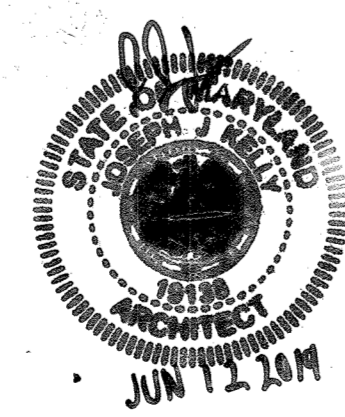
DATE May 7, 1998

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Paul Butts 5/19/98
 Director Date

Condy Handley 5/18/98
 Chief, Division of Land Development Date

Mike Danvers 5/19/98
 Chief, Development Engineering Division Date



Legend

L.O.D. Limit of Disturbance

Silt Fence

Stabilized Construction Entrance

GLW GUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS

3909 NATIONAL DRIVE - SUITE 250 - BURTONTOWN OFFICE PARK
 BURTONTOWN, MARYLAND 20886

TEL: 301-421-4024 FAX: 301-421-4188

DES.	DRN.	CHK.	MT	DATE	REVISION	BY	APPR.

PREPARED FOR:

THE HOWARD RESEARCH & DEVELOPMENT CORPORATION

THE ROUSE BUILDING
 10275 LITTLE PATUXENT PARKWAY
 COLUMBIA, MD. 21044
 (410) 982-6370

Sediment Control Plan Details & Notes

COLUMBIA VILLAGE OF OAKLAND MILLS SECTION 2 AREA 1 LOT 3

HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1" = 20'	NEW TOWN	97071
DATE	TAX MAP No.	SHEET
May 11, 1998	36	77 OF 3

SOP-98-109