

## GENERAL NOTES FOR TREE CONSERVATION

- Any tree cutting or clearing on this site not in conformance with this plan or without the expressed written consent of the Planning Director or designee, shall be subject to the mitigation fee of \$1.50 per square foot of woodland damaged or destroyed.
- 2. The Department of Environmental Resources (DER) Inspectors Office, must be contacted prior to the start of any work on the site to address implementation of Tree Conservation Measures shown on this
- 3. Property owners shall be notified by the Developer or Contractor, of any Woodland Conservation Areas (Tree Save Areas, Reforestation Areas, Afforestation Areas or Selective Clearing Areas) located on their lot or parcel of land and the associated fines for unauthorized disturbances in these areas.
- 4. All appropriate bonds will be posted with the Building Official prior to the issuance of any permits. These bonds will be retained as surety by the Building Official until all required activities have been satisfied. Three copies of the bonds are submitted with the grading permit ap-
- 5. The location of all Tree Protection Devices (TPD's) shown on this Plan, shall be flagged or staked in the field prior to the pre-construction meeting with the DER Inspectors. Upon approval of the flagged or staked TPD locations by the inspector, installation of the TPD's may begin. TPD installation shall be completed prior to installation of initial sediment controls. No cutting or clearing of trees may begin before final approval of the TPD installation.
- 6. All field personnel, including equipment operators and supervisors who might work or direct work in the vicinity of protected trees are to be instructed in techniques for avoiding damage to these trees.
- 7. The layout of the construction site shall provide for special, marked areas for fueling, oil changing and equipment maintenance, employee parking and for materials storage and stockpilling. These areas shall be located as to prevent the deposit of silt or the washing or leaching of petroleum products or other harmful substances, into the tree save
- 8. The following are not allowed within a tree save area:
- Depositing of refuse, construction debris, spoil, petroleum products and vehicle or equipment waste water. - Dumping of limbs, stumps, and other clearing debris.
- Driving of any vehicle or equipment. - Storage or stockpiling of materials and supplies.

- Lighting of any fire, including cooking or warming fires.

9. Woodland Conservation - Tree Save Areas and/or Reforestation shall be posted as shown at the same time as the Tree Protective Device installation and/or start of reforestation activities. These signs shall remain in place until sediment control devices are authorized to be removed.

### PRE-CONSTRUCTION ACTIVITIES

- Prior to any disturbance of the site, the tree save lines shall be field located by surveying techniques and the appropriate tree protective device (see detail) shall be erected along these designated lines. Only after the tree protective devices have been installed shall any tree cutting or other clearing, grubbing or grading operations begin. All protection devices shall remain in place until all construction has ceased in the immediate vicinity. Devices shall be maintained throughout construction. Attachment of signs, or any other objects, to trees is prohibited. No equipment, machinery, vehicles, materials or excessive pedestrian traffic shall be allowed within protected areas.
- 2. After the boundaries of the retention area have been staked and flagged and before any disturbance has taken place on site, a pre-construction meeting at the construction site shall take place. The developer, contractor or project manager, and appropriate local inspectors shall attend.

## NATURAL REGENERATION NOTES

The following requirements and conditions apply to natural regeneration areas:

- 1) All existing turf, ground covers, and invasive species shall be exterminated using a general broadcast herbicide such as "Round-Up" or equivalent. Secondary applications shall be applied as necessary. 2) Care shall be taken to avoid spraying any hardwood seedlings or
- 3) Roto-tilling of turf areas and manual removal of invasive vines shall be completed two weeks after chemical treatments are completed. 4) Reforestation signs shall be installed every fifty feet and two
- strand wire fencing on any road frontage adjacent to any reforestation areas.
- 5) Reforestation internal to the site shall be posted as required in the direction of any trails used to reach those areas. 6) Natural regeneration shall be encouraged by semi-annual maintenance of the designated areas. The maintenance shall, at a minimum, require
- removal of competitive and invasive species from the desired indigenous hardwoods. This maintenance shall occur for a period of two years. 7) After one and two years all desirable seedlings and saplings shall be counted and flagged with surveyors tape in the late fall.
- 8) If after two years there is less than one seedling per 60 square feet and there are indications that natural regeneration is not occurring adequately then the owners shall plant those areas with container grown seedlings at a rate of one per 60 square feet. Only naturally occurring species already present within the site shall be used.

### PLANTING SPECIFICATIONS FOR RE/AFFORESTATION AREAS

- 1. Quantity: (see Plant Schedule)
- 2. Type: (see Plant Schedule)
- 3. Plant Quality Standards: The plants selected shall be healthy and sturdy representatives of their species. Seedlings shall have a minimum top growth of 18". The diameter of the root collar (the part of the root just below ground level) shall be at least 3/8". The roots shall be well developed and at least 8" long. No more than twenty-five percent (25%) of the root system (both primary and auxiliary/fibrous) shall show evidence of being cut (pruned) or striped from the plant during the digging process. Substantial auxiliary/fibrous roots shall be present.
- Plants that do not have an abundance of well developed terminal buds on the leaders and branches shall be rejected.
- Plants shall be shipped by the nursery immediately after lifting from the field or removal from the greenhouse, and planted immediately upon receipt by the landscape contractor.
- If the plants cannot be planted immediately after delivery to the reforestation site, they shall be stored in the shade with their root masses protected from direct exposure to sun and wind by the use of straw, peat moss, compost, or other suitable material and shall be maintained through periodic watering, until the time of planting.
- 4. Plant Handling: The quantity of seedlings taken to the field shall not exceed the quantity that can be planted in a day. Seedlings, once removed from the nursery or temporary storage area shall be planted immediately.
- 5. Timing of Planting: The best time to plant seedlings is while they are dormant, prior to spring budding. The most suitable months for planting are March and April, when the soil is moist. Planting can extend into the summer months if the seedlings are kept in cold storage (and therefore dormant) until planting. November and early December are also acceptable planting times for this region as cool and cloudy weather is considered ideal.
- 6. Seedling Planting: Tree seedlings can be hand planted using a dibble bar or sharp-shooter shovel. It is important that the seedling be placed in the hole so that the roots can spread out naturally; they should not be twisted, balled up, or bent. Moist soil should then be packed firmly around the roots. Seedlings should be planted at a depth where their roots collars lie just below the ground surface. Air pockets should not be left after closing the hole which would allow the roots to dry out. See planting details for further explanation. If the contractor wishes to plant by another method, the Landscape Architect must be contacted and give his approval before planting may begin.
- 7. Spacing: See Plant Schedule and/or Planting Plan for spacing requirements. Also refer to the Planting Layout detail for a description of the general planting
- 8. Soil: Upon the completion of grading operations in reforestation areas, a soil test shall be conducted to determine what soil preparation and soil amendments, if any, are necessary to create good tree growing conditions. Soil samples shall be taken at a rate that provides one soil sample for each area that appears to have a different soil type (if the entire area appears uniform, then only one sample is necessary), and submitted for testing to, and according to the instructions provided by:
- The Soil Testing Laboratory Agronomy Department, H.J. Patterson Hall University of Maryland College Park, Maryland 20742.

These field tests will be processed for \$5 each, which includes the soil laboratory sending the test results to the Cooperative Extension Service of Prince George's County at the University of Maryland, who will then make recommendations for improving the existing soil. The soil will be tested and recommended for corrections of soil texture, pH, magnesium, phosphorous, potassium, calcium and

- 9. Soil Improvement Measures: The soil shall then be improved according to the recommendations made by the Cooperative Extension Service.
- 10. Fencing & Signage: (see Reforestation Area Fence Detail)
- 11. Planting Method: Consult the Planting Detail(s) shown on this plan.
- 12. Mulching: Apply 2" thick layer of woodchip or shredded hardwood mulch (as noted) to each planting site (see detail shown on this plan).
- 13. Groundcover Establishment: The remaining disturbed area between seedling planting sites shall be seeded and stabilized with white clover seed at the rate of 5lbs./acre.
- 14. Mowing: No mowing is allowed within seedling planting areas.
- 15. Survival Check for Bond Release: The seedling planting is to be checked at the end of each year for two years to assure that no less than 75% of the original planted quantity survives.
- 16. Source of Seedlings: Md. Forest, Park and Wildlife Service in Bowle, Md.; Phone (301) 464-3065.

Ruppert Environmental, Ashton, Md; Phone: (301)774-0400.

### 5 YEAR MANAGEMENT PLAN FOR RE/AFFORESTATION

Field check the re-afforestation area according to the following schedule:

Site Preparation and Tree Planting Survival check 3 times (March-April, July-August, October-November, see Note 1) <u>Matering if needed</u> (2 x month) Control of undesirable vegetation as needed ( $1 \times 10^{-5}$  June \$  $1 \times in September min.)$ 

Year 2-3: Reinforcement planting if needed (see Note 2) Survival check twice annually (April-May), (Sept.-Oct.) Control of undesirable vegetation if needed (1 x in May &  $1 \times 1$ n August min).

Year 4-5: Reinforcement planting if needed (See Note 2) Survival check once annually (May-September)

1) Survival Check: Check planted stock against plant list (or as-built) by walking the site and taking inventory. Plants must show vitality. Submit field data forms (Condition Check Sheets) to owner after each inspection. Remove all dead plants.

- 2) Reinforcement Planting: Replace dead or missing plants in sufficient quantity to bring the total number of live plants to at least 75% of the number originally planted. If a particular species suffers unusually high mortality, replace with an alternate plant
- 3) Miscellaneous: Fertilization or watering during years I through 3 will be done on an as needed basis. Special return operations or recommendations will be conducted on an as needed basis. Remove perimeter fencing and signage after year 5 based on the date planted.

#### REFORESTATION NOTES

- 1. Site stabilization and reforestation planting will occur when disturbed areas of sufficient size have reached final grades and meet with the approval of the Sediment Control Inspector.
- 2. Reforestation planting shall be completed the first planting season after the final grade is reached for reforestation areas.
- 3. An herbicide treatment of 12 18" diameter shall be performed at each seedling planting location prior to planting.
- 4. Tree Protection signs for preservation areas (PA) adjacent to reforestation areas may be removed upon completion of reforestation plantings and installation of protective signs for reforestation areas.

# TOTAL RE/AFFORESTATION REQUIRED: 10.98 ACRES TOTAL RE/AFFORESTATION PROVIDED: 10.98 ACRES

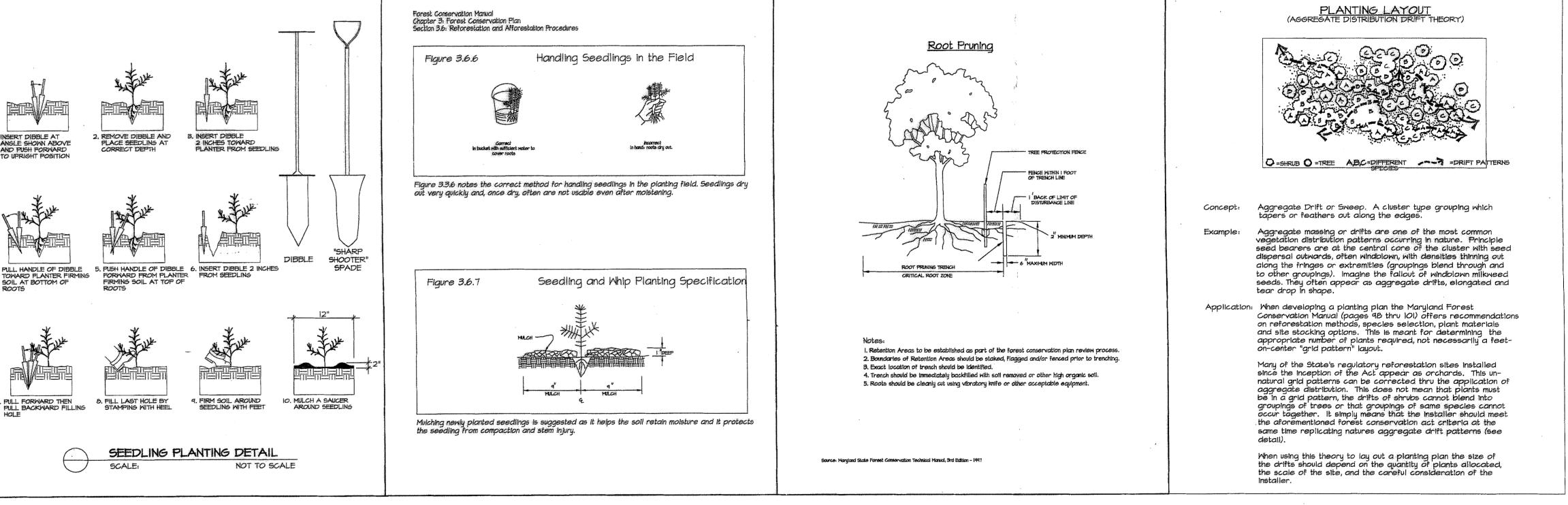
## PLANT SCHEDULE FOR RE/AFFORESTATION OF UPLAND AREAS STOCK SPECIFICATION: 1000 SEEDLINGS PER ACRE

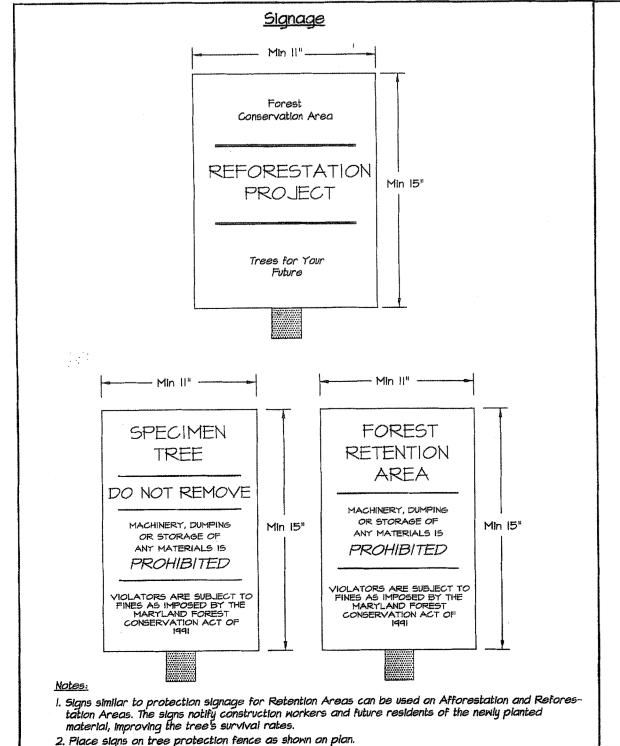
Reforestation Area (RA)	Acreage		See				
		Tulip Poplar	American Beech	Red Maple	Red Oak	Virginia Pine	Total No. of Seedlings
1	29.85	5,970	5,970	5,970	5,970	5,970	29,850
2	1.10	220	220	220	220	220	1,100
3	8.58	1,716	1,716	1,716	1,716	1,716	8,580
4	2.03	406	406	406	406	406	2,030
6	2.01	402	402	402	402	402	2,010
7	1.46	292	292	292	292	292	1,460
8	0.26	52	52	52	52	52	260
9	1,53	306	306	306	306	306	1,530
10	0.72	144	144	144	144	144	720
TOTAL	47.54	9,508	9,508	9,508	9,508	9,508	47,540

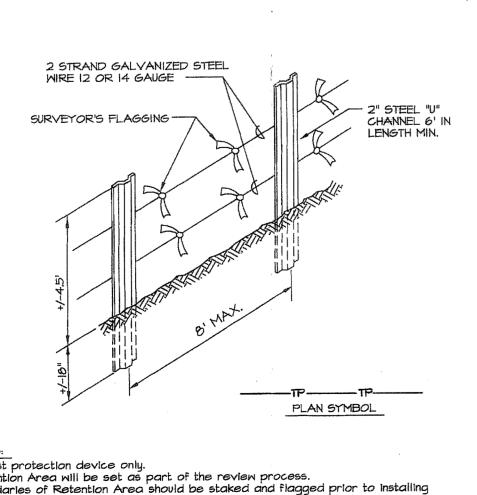
I - All tree/shrub species planted within the re/afforestation areas, should be randomly distributed throughout the proposed relafforestation area, so as to promote a natural woodland structure. 2 - In the event of species unavailability, a substitution may be made. Any substitution made requires written notification to MNCPPC, Environmental Planning Section.

#### PLANT SCHEDULE FOR RE/AFFORESTATION OF LOWLAND AREAS STOCK SPECIFICATION: 1000 SEEDLINGS PER ACRE

Reforestation Area (RA)	Acreage		50				
		American Holly	Sweet Gum	Red Maple	River Birch	Loblolly Pine	Total No. of Seedlings
5	1.54	308	308	308	308	308	1,540
TOTAL	1.54	308	308	308	308	308	1,540
05-1	2.34	468	468	468	468	468	2,340

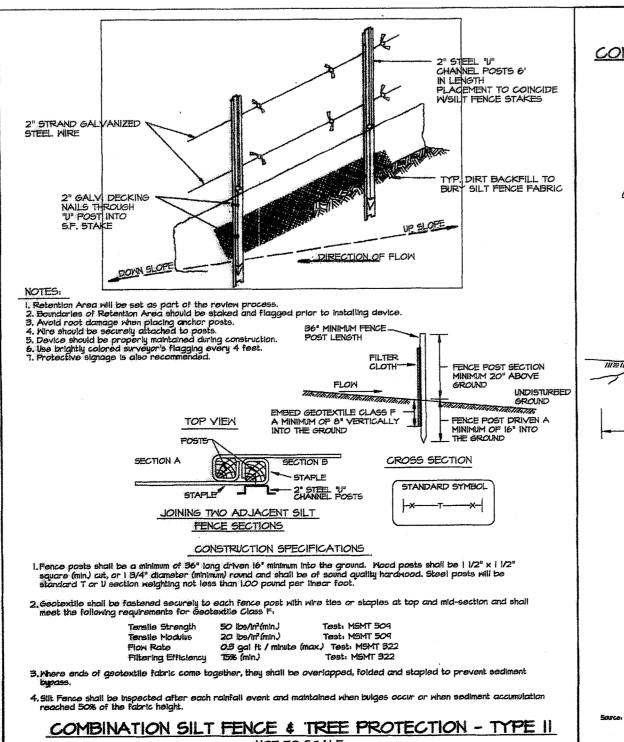


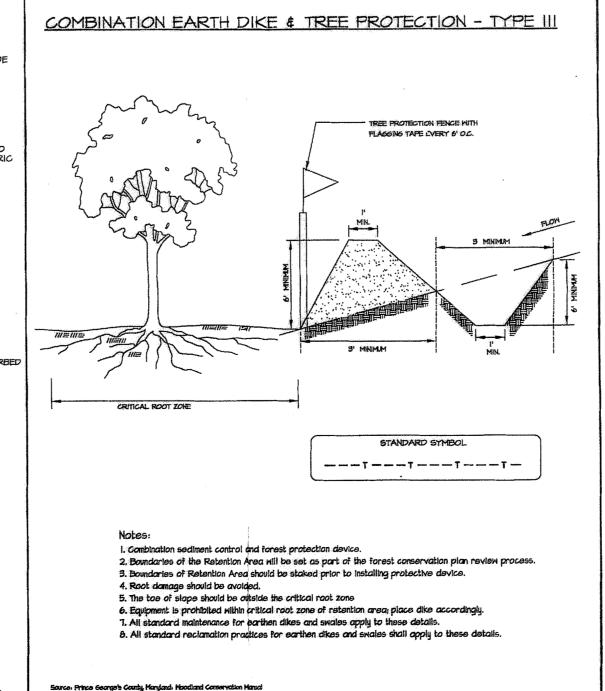


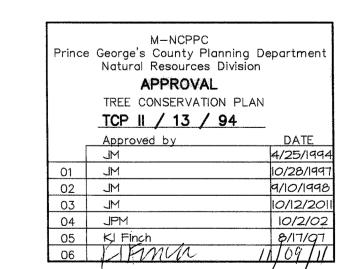


.Forest protection device only. 2. Retention Area will be set as part of the review process. 3. Boundaries of Retention Area should be staked and flagged prior to installing 4. Avoid root damage when placing anchor posts 5. Wire should be secure attached to posts. 6. Device should be properly maintained during construction. 1. Use brightly colored surveyor's flagging every 4'. 8. Protective signage is also recommended. 9. Contractor may use blaze orange tree protection fence or equal according to MD State Forest Conservation Technical Manual Figure D-5.

TREE PROTECTION FENCING - TYPE I







DETAILS & SPECIFICATIONS TREE CONSERVATION PLAN - TYPE II

PANORAMA PISCATAWAY DISTRICT No.5 PRINCE GEORGE'S COUNTY, MARYLAND

(For SHEET I SEE BDAI DWG. NO. 54.00#-Z) WSSC 200' SHEET SERIES 211 SE-2 ADC MAP BK LOCATION 23-J-II 11721 WOODMORE ROAD, SUITE 200 11-2-1 ITCHELLVILLE, MARYLAND 20721 BEN DYER ASSOCIATES, INC Revised to update signature and approval blocks. OPYRIGHT (C) 2001 BEN DYER ASSOCIATES. CHECKED BY RECORD NO Revised plan per EPS Comments Mike Petrakis 6/1/02 Revised plan to add prop. 4 account for slope failure AS SHOWN Qualified Professional COMAR 08.19.06.01 . REVISIONS DESCRIPTION MAY 2002

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