

(1) Rolling coulter. (2) Double mouldboard plow or middle buster. Not essential in the absence of heavy ground cover. (3) Planting shoe, which opens the trench. (4) Packing wheels, which close trench and firm the soil.

Síze	Number Required per Acre	Approximate Spacing feet on center	Survivability Requirement At the end of the second growing season		
Bare Root Seedlings or Whips	700	8 x 8	75%	525	
Container Grown Seedling Tubes (Minimum Cavity Width 1.5")	500	10 x 10	75%	375	
Container Grown , 2, 3 Gallon 400		12 x 12	75%	300	
Container Grown 5, 7 Gallon or 1" Caliper B & B	Gallon or 300		85%	255	
Container Grown 15, 25 Gallon or 1,5 - 2" Caliper B & B	5 Gallon or 150		100%	150	

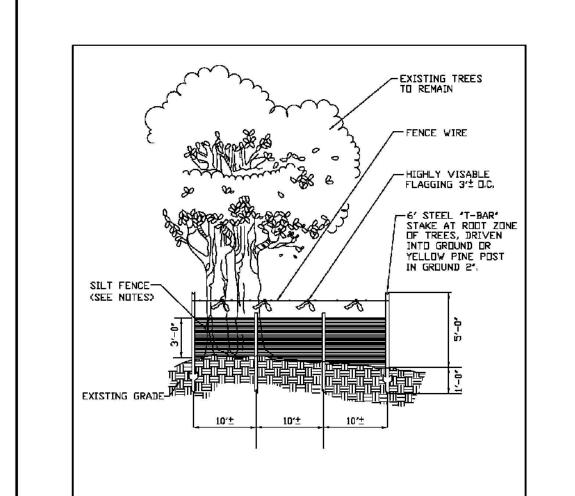
These stocking and survival requirements are the minimum numbers estimated to meet the

definition of forest from bare land. In certain circumstances, any combination of the above mentioned stocking options, dry seeding, tree shelters, transplants, and/or natural regeneration may be appropriate strategies to fulfill the requirements of an approved TCP. They will be evaluated on a case-by-case

basis by the approving authority Spacing does not imply that trees or shrubs must be planted in a grid pattern.

## Site Stocking

AFFORESTATION AREA #1						Acreage	2.42	Upland Pla	ntings
Species		Large Caliper Planting Stock			Reforestationercent of				
<b>Botanical Name</b>	Common Name	Caliper	Height (	redits/Un	it Type	Quantity	Credits	Stocking	
Pinus taeda	Loblolly Pine	Seedling		1	Seedling	750	750	44.1%	
Liquidambar styraciflua	Sweetgum	Seedling		1	Seedling	425	425	25.0%	
Platanus occidentalis	Sycamore	Seedling		1	Seedling	425	425	25.0%	
Cercis canadensis	Redbud	Seedling		1	Seedling	100	100	5.9%	100.0%
Reforestation Units Provided							1,700	_	
Total Reforestation Units Required							1,694		
						Excess	6		



1. SILT FENCE TO BE HEELED INTO SOIL. 2. WIRE, SNOW FENCE, ETC. FOR TREE PROTECTION ONLY. 3. BOUNDARIES OF RETENTION AREA WILL BE ESTABLISHED AS PART OF

8. LOCATE FENCE OUTSIDE THE CRITICAL ROOT ZONE

THE TREE CONSERVATION PLAN REVIEW PROCESS. 4. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE

5. AVOID ROOT DAMAGE WHEN PLACING ANCHOR POSTS. 6. DEVICE SHOULD BE PROPERLY MAINTAINED THROUGHOUT CONSTRUCTION. 7. PROTECTION SIGNS ARE ALSO REQUIRED.

TYPE 4 (TEMPORARY) TREE PROTECTION FENCE COMBINATION SILT FENCE & TREE PROTECTION

# Planting With Dibble Bar 2. REMOVE DIBBLE AND PLACE SEEDLING AT CORRECT DEPTH 3. INGERT DIBBLE 2 INCHES TOWARD PLANTER FROM SEEDLING ANGLE SHOWN ABOVE AND PUSH FORWARD TO UPRIGHT POSITION 4. PULL HANDLE OF DIBBLE 5. PUSH HANDLE OF DIBBLE 6. INSERT DIBBLE 2 INCHES FROM SEEDLING FORWARD FROM PLANTER FIRMING SOIL AT TOP OF SOIL AT BOTTOM OF 7. PULL FORWARD THEN PULL BACKWARD FILLING Source: Adapted from Duryea & Dougherty, Forest Regeneration Manual, Kluwer Academic Publishers, Boston, 1991 and Forest Conservation Manual, 1991

**Seedling Planting Techniques** 

#### **Standard Type 2 Tree Conservation Plan Notes**

- 1. This plan is submitted to fulfill the woodland conservation requirements for Permit # If Permit # expires, then this TCP2 also expires and is no longer valid.
- 2. Cutting or clearing woodlands not in conformance with this plan or without the expressed written consent of the Planning Director or designee shall be subject to a \$9.00 per square foot mitigation
- 3. A pre-construction meeting is required prior to the issuance of grading permits. The Department of Public Works and Transportation or the Department of Environmental Resources, as appropriate, shall be contacted prior to the start of any work on the site to conduct a preconstruction meeting where implementation of woodland conservation measures shown on this
- plan will be discussed in detail. 4. The developer or builder of the lots or parcels shown on this plan shall notify future buyers of any woodland conservation areas through the provision of a copy of this plan at time of contract
- signing. Future property owners are also subject to this requirement. 5. The owners of the property subject to this tree conservation plan are solely responsible for
- conformance to the requirements contained herein.
- 6. The property is within Environmental Strategy Area ESA-3 and is zoned O-S.
- The site is not adjacent to a roadway designated as scenic, historic, a parkway or a scenic byway. 8. The site is not adjacent to a roadway classified as arterial or greater. 9. This plan is not grandfathered by CB27-2010, Section 25-119(g).
- **Tree Preservation and Retention Notes** 10. All woodlands designated on this plan for preservation are the responsibility of the property
- owner. The woodland areas shall remain in a natural state. This includes the canopy trees and understory vegetation. A revised tree conservation plan is required prior to clearing woodland areas that are not specifically identified to be cleared on the approved TCP2. 11. Tree and woodland conservation methods such as root pruning shall be conducted as noted on
- 12. The location of all temporary tree protection fencing (TPFs) shown on this plan shall be flagged or staked in the field prior to the pre-construction meeting. Upon approval of the locations by the
- county inspector, installation of the TPFs may begin. 13. All temporary tree protection fencing required by this plan shall be installed prior to commencement of clearing and grading of the site and shall remain in place until the bond is released for the project. Failure to install and maintain temporary or permanent tree protective
- devices is a violation of this TCP2. 14. Woodland preservation areas shall be posted with signage as shown on the plans at the same time as the temporary TCF installation. These signs must remain in perpetuity. Removal of Hazardous Trees or Limbs by Developers or Builders
- 15. The developer and/or builder is responsible for the complete preservation of all forested areas shown on the approved plan to remain undisturbed. Only trees or parts thereof designated by the county as dead, dying or hazardous may be removed.
- 16. A tree is considered hazardous if a condition is present which leads a Certified Arborist or Licensed Tree Expert to believe that the tree or a portion of the trees has a potential to fall and strike a structure, parking area, or other high use area and result in personal injury or property
- 17. During the initial stages of clearing and grading, if hazardous trees are present, or trees are present that are not hazardous but are leaning into the disturbed area, the permitee shall remove said trees using a chain saw. Corrective measures requiring the removal of the hazardous tree or portions thereof shall require authorization by the county inspector. Only after approval by the inspector may the tree be cut by chainsaw to near the existing ground level. The stump shall not be removed or covered with soil, mulch or other materials that would inhibit sprouting.
- 18. If a tree or trees become hazardous prior to bond release for the project, due to storm events or other situations not resulting from an action by the permitee, prior to removal, a Certified Arborist or a Licensed Tree Expert must certify that the tree or the portion of the tree in question has a potential to fall and strike a structure, parking area, or other high use area and may result in personal injury or property damage. If a tree or portions thereof are in imminent danger of striking a structure, parking area, or other high use area and may result in personal injury or property damage then the certification is not required and the permitee shall take corrective action immediately. The condition of the area shall be fully documented through photographs prior to corrective action being taken. The photos shall be submitted to the inspector for documentation of the damage.
  - a. If corrective pruning may alleviate a hazardous condition, the Certified Arborist or a Licensed Tree Expert may proceed without further authorization. The pruning must be done in accordance with the latest edition of the appropriate ANSI A-300 Pruning Standards. The condition of the area shall be fully documented through photographs prior to corrective action being taken. The photographs shall be submitted to the inspector for documentation of the damage.
- b. Debris from the tree removal or pruning that occurs within 35 feet of the woodland edge may be removed and properly disposed of by recycling, chipping or other acceptable methods. All debris that is more than 35 feet from the woodland edge shall be cut up to allow contact with the ground, thus encouraging decomposition. The smaller materials shall be placed into brush piles that will serve as wildlife habitat.
- c. Tree work to be completed within a road right-of-way requires a permit from the Maryland Department of Natural Resources unless the tree removal is shown within the approved limits of disturbance on a TCP2. The work is required to be conducted by a Licensed Tree Expert.

## Afforestation and Reforestation Notes

- 19. All afforestation and reforestation bonds, based on square footage, shall be posted with the county prior to the issuance of any permits. These bonds will be retained as surety until all required activities have been satisfied or the required timeframe for maintenance has passed, whichever is
- 20. The planting of afforestation or reforestation areas shall be completed prior to the issuance of the Use and Occupancy permit or the first planting season after the issuance of that permit. Seedling planting is to occur from November through May only. No planting shall be done while the ground is frozen. Planting with larger caliper stock or containerized stock may be done at any time provided a detailed maintenance schedule is provided.
- 21. If planting cannot occur due to planting conditions, the developer or property owner shall install the fencing and signage in accordance with the approved Type 2 Tree Conservation Plan. Planting shall then be accomplished during the next planting season. If planting is delayed beyond the transfer of the property title to the homeowner, the developer or builder shall obtain a signed statement from the purchaser indicating that they understand that the reforestation area is located on their property and that reforestation will occur during the next planting season. A copy of that document shall be presented to the county inspector.
- 22. Reforestation areas shall not be mowed. The management of competing vegetation around individual trees and the removal of noxious, invasive and non-native vegetation within the reforestation areas is acceptable.
- 23. All required temporary tree protection fencing shall be installed prior to the clearing and grading of the site and shall remain in place until the permanent tree protection fencing is installed with the required planting. The temporary fencing is not required to be installed if the permanent fencing is installed prior to the clearing and grading of the site. Failure to install and maintain temporary or permanent tree protective fencing is a violation of this TCP2.
- 24. Afforestation / reforestation areas shall be posted with notification signage, as shown on the plans, at the same time as the permanent protection fencing installation. These signs shall remain
- 25. The county inspector shall be notified prior to soil preparation or initiation of any tree planting on
- 26. At time of issuance of the first permit, the following information shall be submitted to the M-NCPPC Planning Department regarding the contractor responsible for implementation of this plan: Contractor name, business name (if different), address, and phone number.
- 27. Result of annual survival check for each of the required four years after tree planting shall be
- reported to the M-NCPPC, Planning Department. 28. Failure to establish the afforestation or reforestation within the prescribed time frame will result in the forfeiture of the reforestation bond and/or a violation of this plan including the associated \$9.00 per square foot penalty unless the county inspector approves a written extension.
- **Planting Specification Notes** 29. Quantity: (See Plant Schedule)
- 30. Type: (See Plant Schedule)
- 31. Plant Quality Standards: The plants selected shall be healthy and sturdy representative 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 roots shall be present.
- a. Plants that do not have an abundance of well developed terminal buds on the leaders and branches shall be rejected.
- b. Plants shall be shipped by the nursery immediately after lifting from the field or removal from the green house, and planted immediately upon receipt by the landscape contractor.
- c. 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.
- 32. 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
- 33. 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 soils is moist, but may be planted from March through November. No planting shall be done while the ground is frozen. Planting shall occur within one growing season of the issuance of grading/building permits and/or reaching the final grades and stabilization of planting areas.
- 34. Seedling Planting: Tree seedlings shall 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 shall 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 lie just below the ground surface. Air pockets should not be left after closing the hold which would allow the roots to dry out. See planting details for further explanation. If the contractor wishes to plant by another method, the preparer of this tree conservation plan must be contracted and give his approval before planting may begin.
- 35. 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 theory.
- 36. Soil: Upon the completion of all grading operations, 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 on soil sample for each area that appears to have a different soil type (if the entire area appears uniform, then only on sample is necessary), and submitted for testing to a private company. The company of choice shall make recommendations for improving the existing soil. The soil will be tested and recommended for corrections of soil texture, pH, magnesium, phosphorus, potassium, calcium and organic matter.

37. Soil Improvement Measures: the soil shall then be improved according to the recommendations

- made by the testing company. 38. Fencing and Signage: Final protective fencing shall be placed on the visible and/or development side of planting areas. The final protective fence shall be installed upon completion of planting
- operations unless it was installed during the initial stages of development. Signs shall be posted per the signage detail on this sheet. 39. Planting method: Consult the Planting Detail(s) shown on this plan.
- 40. Mulching: Apply two-inch thick layer of woodchip or shredded hardwood mulch (as noted) to each planting site (see detail shown on this plan).
- 41. Groundcover Establishment: the remaining disturbed area between seedling planting sites shall be seeded and stabilized with white clover seed at the rate of 5 lbs/acre.
- 42. Mowing: No mowing shall be allowed in any planting area.
- 43. Survival Check for Bond Release: The seedling planting is to be checked at the end of each year for four years to assure that no less than 75% of the original planted quantity survives. If the minimum number has not been provided the area must be supplemented with additional seedlings to reach the required number at time of planting.
- 44. Source of Seedlings: state name, address, and phone number of nursery or supplier. **Natural Regeneration Notes**

#### All areas designated for reforestation shall be reforested by natural regeneration.

- The following requirements and conditions apply: 45. All existing turf, ground covers, and invasive species shall be exterminated using a general broadcast herbicide such as "Round-Up" or equivalent. Secondary application shall be applied as
- 46. Care shall be taken to avoid spraying any hardwood seedlings or saplings.
- 47. Roto-tilling of turf areas and manual removal of invasive vines shall be completed two weeks after chemical treatments are completed.
- 48. Reforestation signs shall be installed every fifty feet or as appropriate and two strand wire fencing shall be installed along the road frontages adjacent to any reforestation areas.
- 49. Reforestation internal to the site shall be posted as required in the direction of any trails used to reach those areas.
- 50. 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. 51. After one and two years all desirable seedlings and saplings shall be counted and flagged with surveyors tape in the late fall.
- 52. If in 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. Four-Year Management Plan for Re/Afforestation Areas Field check the re-afforestation area according to the following schedule:

- Site preparation and tree planting
- Survival check once annually (September-November) see Note 1
- Watering is needed (2 x month) Control of undesirable vegetation as needed (1 x in June and 1 x in September minimum)
- Reinforcement planting is needed (See Note 2) Survival check once annually (September-November)
- Control of undesirable vegetation if needed (1 x in May and 1 x in August minimum)
- Reinforcement planting if needed (See Note 2) Survival check (September – November)
- 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. 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 alternative plant type. Miscellaneous: Fertilization or watering during years 1 through 3 will be done on an as needed basis. Special return operations or recommendations will be conducted on an as
- needed basis. When Virginia Pines are present within 40 feet of the limits of disturbance in a preservation area:
- 53. The subject property contains Virginia Pine (Pinus virginiana) that are subject to wind throw. All Virginia Pine greater than 6 inches in diameter within 40 feet of the final proposed limit of disturbance or the property boundary of the property shall be cut down by hand during the
- 54. After the Virginia Pine have been removed, the contractor responsible for implementation of this TCP2 shall submit an evaluation of the stocking levels for the residual stand, management techniques to be applied to the residual stand, and supplemental planting requirements to the M-NCPPC Planning Department. This evaluation shall be submitted prior the issuance of the first building permit to ensure that all high risk trees have been removed. A planting schedule and/or details for the management of natural regeneration to fully restock the site must be shown on the
- When woodlands and/or specimen, historic or champion trees are to remain:
- 55. If the developer or builder no longer has an interest in the property and the new owner desires to remove a hazardous tree or portion thereof, the new owner shall obtain a written statement from a Certified Arborist or Licensed Tree Expert identifying the hazardous condition and the proposed corrective measures prior to having the work conducted. After proper documentation has been completed per the handout "Guidance for Prince George's County Property Owners, Preservation of Woodland Conservation Areas", the arborist or tree expert may then remove the tree. The stump shall be cut as close to the ground as possible and left in place. The removal or grinding of
- the stumps in the woodland conservation area is not permitted. 56. If a tree or portion thereof are in imminent danger of striking a structure, parking area, or other high use areas and may result in personal injury or property damage then the certification is not required and the permitee shall take corrective action immediately. The condition of the area shall be fully documented through photographs prior to corrective action being taken. The photos shall be submitted to the inspector for documentation of the damage.

I/We Cherryl R. Jackson hereby acknowledge that we

are aware of this Type 2 Tree Conservation Plan (TCP2) and that we understand the requirements as set forth in this TCP2.

12-11-2019

57. Tree work to be completed within a road right-of-way requires a permit from the Maryland Department of Natural Resources unless the tree removal is shown within the approved limits of disturbance on a TCP2. The work is required to be conducted by a Licensed Tree Expert.

- 58. The removal of noxious, invasive, and non-native plant species from any woodland preservation area shall be done with the use of hand-held equipment only (pruners or a chain saw). These plant may be cut near the ground and material less than two inches diameter may be removed from the area and disposed of appropriately. All material from these noxious, invasive, and nonnative plants greater than two (2) inches diameter shall be cut to allow contact with the ground,
- thus encouraging decomposition. 59. The use of broadcast spraying of herbicides is not permitted. However, the use of herbicides to
- application of the chemical directly to the cut stump immediately following cutting of plant tops. The use of any herbicide shall be done in accordance with the label instructions. 60. The use of chainsaws is extremely dangerous and should not be conducted with poorly

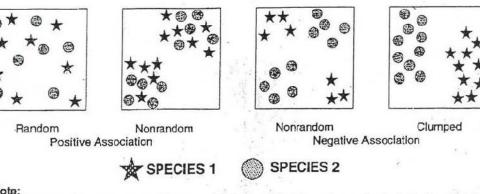
discourage re-sprouting of invasive, noxious, or non-native plants is permitted if done as an

- maintained equipment, without safety equipment, or by individuals not trained in the use of this equipment for the pruning and/or cutting of trees. **Protection of Reforestation and Afforestation Areas by Individual Homeowners**
- 61. Reforestation fencing and signage shall remain in place in accordance with the approved Type 2 Tree Conservation Plan.

62. Reforestation areas shall not be mowed; however, the management of competing vegetation and

removal of noxious, invasive, and non-native vegetation around individual trees is acceptable.

# Typical Forest Tree Distribution Patterns



QUALIFIED PROFESSIONAL CERTIFICATION

Prince George's County Planning Department, M-NCPPC

**Environmental Planning Section** 

TCP2- 001 -2020

TREE CONSERVATION PLAN APPROVAL

6/17/2020 NA

the Environmental Technical Manual.

John P. Markovich

Waldorf, MD 20601

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02 Revision

03 Revision

04 Revision

05 Revision

JM Forestry Services, LLC

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11552 Timberbrook Drive

This complies with the current requirements of Subtitle 25 and

Naturally occurring populations of trees tend to be found in informal groupings. A cluster of trees is really a mosaic of different species groups. The objective of an afforestation/reforestation plan is to select the appropriate species and distribution pattern for a chose site that mimic natural

Source: Prince Georges County Woodland Conservation Manual.

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REVISIONS

Reason for Revision

JPM

19-050

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