

Appendices

Index of Appendices

APPENDIX: Introduction

Intro-1. Standard Sheet Layout	Appendix Intro-2
Intro-2. Standard Symbols	Appendix Intro-3
Intro-3. General Information Table	Appendix Intro-4
Intro-4. Index of Data Resources	Appendix Intro-5

APPENDIX A: Woodland and Wildlife Habitat Conservation—Tree Conservation Plans (TCP)

TCP-1. Type 1 Tree Conservation Plan Preparation and Review Checklist	Appendix A-2
TCP-2. Standard Type 1 Tree Conservation Plan Notes	Appendix A-5
TCP-3. Construction Tolerance Chart	Appendix A-7
TCP-4. Basic Standard Woodland Conservation Worksheet (Blank)	Appendix A-10
TCP-5. Basic Standard Woodland Conservation Worksheet (Example Property)	Appendix A-11
TCP-6. Guidelines for the Completion of the Prince George's County Woodland Conservation Worksheet	Appendix A-12
TCP-7. Woodland Conservation Worksheet for Prince George's County Government Projects (Blank)	Appendix A-16
TCP-8. Woodland Conservation Worksheet for Prince George's County Government Projects (Example Property)	Appendix A-17
TCP-9. Woodland Conservation Worksheet for Phased Projects (Blank)	Appendix A-18
TCP-10. Woodland Conservation Worksheet for Phased Projects (Example Property)	Appendix A-19
TCP-11. Woodland Conservation Worksheet for Single Lot TCP2 with Previously Approved TCPI (Blank)	Appendix A-20
TCP-12. Woodland Conservation Worksheet for Single Lot TCP2 with Previously Approved TCPI (Example Property)	Appendix A-21
TCP-13. Type 2 Tree Conservation Plan Preparation and Review Checklist	Appendix A-22
TCP-14. Standard Type 2 Tree Conservation Plan Notes	Appendix A-27
TCP-15. Type 2 Tree Conservation Plan Preparation and Review Checklist for Woodland Conservation Banking	Appendix A-37
TCP-16. Off-Site Woodland Conservation Bank Summary Table	Appendix A-41
TCP-17. Woodland Preservation Area Sign	Appendix A-42
TCP-18. Reforestation Area Sign	Appendix A-43
TCP-19. Specimen Tree Sign	Appendix A-44
TCP-20. Type 1 (Temporary) Tree Protection Fence Detail for Woodland Preservation Areas	Appendix A-45
TCP-21. Temporary Fence Protection Detail for Woodland Preservation	Appendix A-46
TCP-22. Type 2 (Temporary) Tree Protection Fence for Reforestation Areas	Appendix A-47
TCP-23. Type 3 (Temporary) Tree Protection Fence Combination Earth Dike and Tree Protection	Appendix A-48
TCP-24. Type 4 (Temporary) Tree Protection Fence Combination Silt Fence and Tree	Appendix A-49
TCP-25. Permanent (Split Rail) Tree Protection Fence for Reforestation Areas	Appendix A-50
TCP-26. Root Pruning Detail	Appendix A-51
TCP-27. Tree Pruning Detail	Appendix A-52
TCP-28. Planting Distribution Patterns	Appendix A-53
TCP-29. Tree Planting and Maintenance Calendar	Appendix A-54
TCP-30. Container Grown and B&B Planting Techniques	Appendix A-55
TCP-31. Handling Bare Root Stock	Appendix A-56
TCP-32. Seedling and Whip Planting Techniques	Appendix A-57
TCP-33. Seedling Planting Techniques	Appendix A-58
TCP-34. Tree Staking and Guying Specifications	Appendix A-59
TCP-35. Site Stocking	Appendix A-60
TCP-36. Property Owners Awareness Certificate	Appendix A-61
TCP-37. Reforestation Certification Form and Instructions	Appendix A-62
TCP-38. Environmental Planning Section Approval Blocks	Appendix A-64
TCP-39. Type 2 Tree Conservation Plan Application	Appendix A-65
TCP-40. Woodland Conservation Exemption Application	Appendix A-66

APPENDIX B: Natural Resources Inventory (NRI)

NRI-1. NRI Equivalency Letter Application	Appendix B-2
NRI-2. NRI Plan (Full, Intermediate, Limited, CBCA) Application	Appendix B-3
NRI-3. Combined NRI Equivalency & Numbered Exemption Letters Application (CWP & County Projects Only)	Appendix B-4
NRI-4. NRI Checklist	Appendix B-5
NRI-5. Site Statistics Table	Appendix B-10
NRI-6. NRI Approval Block	Appendix B-11
NRI-7. NRI 1-Year Revalidation Stamp	Appendix B-12
NRI-8. NRI General Notes	Appendix B-13
NRI-9. Wetland Delineation Study Template	Appendix B-16
NRI-10. How to Prepare a Custom Soils Report	Appendix B-22
NRI-11. CBCA Existing Lot Coverage Table	Appendix B-23
NRI-12. Zoning Lot Coverage Table	Appendix B-24
NRI-13. Standard FSD Notes	Appendix B-25
NRI-14. Simplified FSD Checklist	Appendix B-28
NRI-15. Intermediate FSD Checklist	Appendix B-29
NRI-16. Detailed FSD Checklist	Appendix B-31
NRI-17. Forest Sample Plot Field Data Sheet (Blank)	Appendix B-33
NRI-18. Forest Sample Plot Field Data Sheet (Example Property)	Appendix B-34
NRI-19. Forest Sample Plot Field Data Sheet Preparation Guidelines	Appendix B-35
NRI-20. Crown Density Scale	Appendix B-37
NRI-21. Forest Stand Summary Sheet	Appendix B-38
NRI-22. Forest Stand Summary Sheet Preparation Guidelines	Appendix B-39
NRI-23. Forest Analysis Worksheet	Appendix B-41
NRI-24. Suggested Format for Forest Stand Delineation Report	Appendix B-43
NRI-25. Additional Information Needed for FSD Report	Appendix B-47

APPENDIX C: Preservation, Restoration and Enhancement of Regulated Environmental Features (REF)

REF-1. TBD	Appendix C-3
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APPENDIX D: Tree Canopy Coverage (TCC)

TCC-1. Calculating Tree Canopy Coverage Requirements	Appendix D-2
TCC-2. Tree Canopy Coverage Worksheet	Appendix D-4

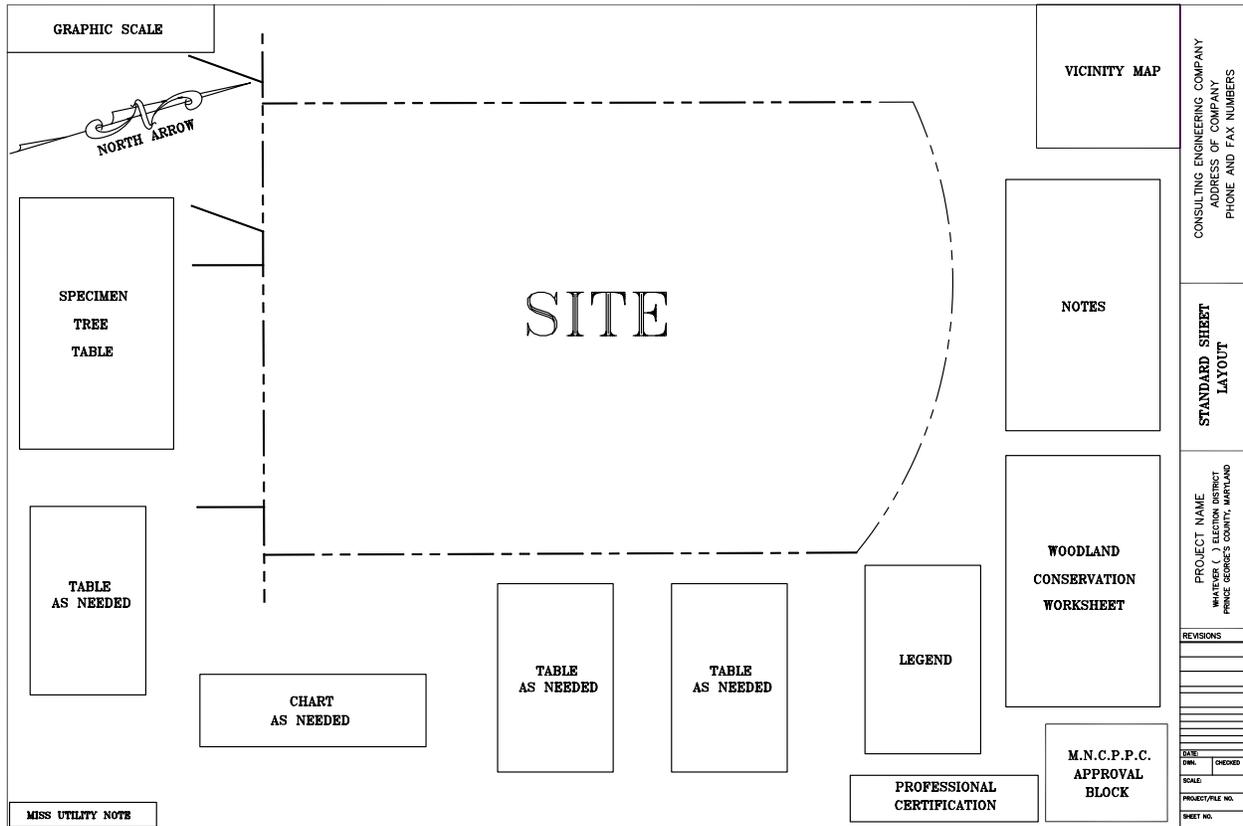
APPENDIX E: Chesapeake Bay Critical Area (CBCA)

CBCA-1. TBD	Appendix E-3
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Appendix

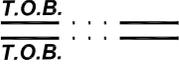
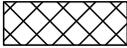
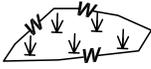
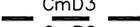
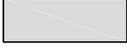
Introduction

Intro-1. Standard Sheet Layout



Intro-2.Standard Symbols

STANDARD SYMBOLS¹

	PROPERTY BOUNDARY		LIMIT OF DISTURBANCE
	SPLIT ZONING LINE		CLEARED FLOODPLAIN AREA (C-FP) (AutoCAD Hatch Pattern DOTS or equivalent)
	CHESAPEAKE BAY CRITICAL AREA BOUNDARY ¹		CLEARED OFF-SITE AREA (C-OS) (AutoCAD Hatch Pattern Solid Color 254 or equivalent)
	REGULATED STREAM ² (TOP OF BANK) (PERENNIAL, INTERMITTANT)		WOODLAND PRESERVATION AREA (WPA) (AutoCAD Hatch Pattern ANSI31 or equivalent)
	REGULATED STREAM ² (CENTERLINE)		WOODLAND REFORESTATION/ AFFORESTATION AREA (WRA) (AutoCAD Hatch Pattern ANSI37 or equivalent)
	REGULATED STREAM BUFFER		WOODLAND PRESERVED-NOT CREDITED (AutoCAD Hatch Pattern Honey (WP-NC) or equivalent)
	NONREGULATED STREAM (EPHEMERAL)		WOODLAND RETAINED-ASSUMED CLEARED (AutoCAD Hatch Pattern ANSI33,(WP-AC) Angle 60 or equivalent)
	100-YEAR FLOODPLAIN		NATURAL REGENERATION AREA (NRA) (AutoCAD Hatch Pattern HEX, or equivalent)
	100-YEAR FLOODPLAIN BUILDING RESTRICTION LINE		SPECIMEN,CHAMPION, HISTORIC TREE PROPOSED FOR REMOVAL (X OVER TREE)
	WETLAND		SPECIMEN,CHAMPION, HISTORIC TREE TO BE SAVED (AutoCAD Hatch Pattern-Solid)
	25' WETLAND BUFFER		TREE PROTECTION FENCE (TEMPORARY)
	EXPANDED WETLAND BUFFER		TREE PROTECTION FENCE (PERMANENT)
	PRIMARY MANAGEMENT AREA (PMA)		WOODLAND PRESERVATION SIGN
	FOREST INTERIOR DWELLING SPECIES 300' HABITAT BUFFER		REFORESTATION/AFFORESTATION SIGN
	RARE,THREATENED OR ENDANGERED SPECIES HABITAT		SPECIMEN TREE SIGN
	EXISTING TREE LINE		
	EXISTING HEDGEROW OR OTHER NON-WOODLAND AREAS		
	FOREST STAND BOUNDARY		
	SOILS BOUNDARY		
	SLOPE STABILITY 1.5 SAFETY FACTOR LINE		
	MARLBORO CLAY OUTCROP (TOP AND BOTTOM)		
	FSD DATA SAMPLE POINT		
	WETLAND DATA SAMPLE POINT		
	SPECIMEN,CHAMPION,HISTORIC TREE WITH CRITICAL ROOT ZONE (1"DBH=1.5'CRZ)		
	STEEP SLOPES ³ (15% OR GREATER) (AutoCAD Hatch-color index 254 or equivalent)		

1. The standard symbols for CBCA

2. When stream banks are 10 feet or less apart, show only the centerline of the stream.

3. Do not show on tree conservation plans unless required.

Intro-3.General Information Table

General Information Table

The following information is required to be placed on a separate 8x11 sheet or :

- a. the proposed site plan for NRI-EL application; or
- b. the NRI plan for any NRI plan application; OR
- c. the Type 1 Tree Conservation Plan (TCP1)
- d. the Type 2 Tree Conservation Plan (TCP2)

The information can be found on the PGAtlas.com website. The table below provides the PGAtlas.com category layer, where each specific layer containing the required information can be found.

Table B-1. General Information Table

Layer Category	Layer Name	Value
Zone	Zoning (Zone)	
Zone	Aviation Policy Area (APA) ¹	
Administrative	Tax Grid (TMG)	
Administrative	WSSC Grid (Sheet 20)	
Administrative	Planning Area (Plan Area)	
Administrative	Election District (ED)	
Administrative	Councilmanic District (CD)	
Administrative	General Plan 2002 Tier (Tier)	

¹ If the site is within an APA, enter the name of the airport. If the site is not within an APA, enter "N/A"

Intro-4.Index of Data Resources

INDEX OF DATA RESOURCES

INFORMATION	SOURCE
Zoning	www.PGAtlas.com
Plat	http://plats.net/pages/index.aspx
Approved floodplain delineation	http://www.princegeorgescountymd.gov/sites/DPIE/Resources/Forms/SiteRoad%20Plan%20Review%20Forms/DPIE.FloodplainInformationRequest.7.1.15.pdf
Soil Map/Reports	http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm#
How to prepare a Soils Report	See Appendix B-1
Sample Wetland Report	See Appendix B-1
Tier II Waters	www.PGAtlas.com OR https://mde.maryland.gov/programs/water/tmdl/waterqualitystandards/pages/highqualitywatersmap.aspx
TMDL/Impaired Waters	https://mdewin64.mde.state.md.us/WSA/IR-TMDL/index.html
National Wetlands Inventory (NWI) map,	https://www.fws.gov/wetlands/ OR http://www.mdmerlin.net/
the MDDNR Wetland Guidance Map	http://www.mdmerlin.net/ OR www.PGAtlas.com
Wetlands of Special State Concern	www.PGAtlas.com OR http://www.mdmerlin.net/
Stronghold Watershed	www.PGAtlas.com OR http://www.mdmerlin.net/
Sensitive Species Protection Review Area	www.PGAtlas.com OR http://www.mdmerlin.net/ OR http://dnr2.maryland.gov/wildlife/Pages/plants_wildlife/espaa.aspx
Forest Interior Dwelling Species Habitat	www.PGAtlas.com OR http://www.mdmerlin.net/
Previously approved TCP(s)	www.PGAtlas.com
Scenic and/or Historic Roads	www.PGAtlas.com
Maryland Inventory of Historic Properties	https://mht.maryland.gov/secure/medusa/
National Register Properties:	https://mht.maryland.gov/secure/medusa/ ; www.PGAtlas.com
Registered Historic District	www.PGAtlas.com
Historic Sites and Districts	www.PGAtlas.com
Archeological Sites	M-NCPPC Historic Preservation Section
Marlboro clay	www.PGAtlas.com
Christiana Clay	http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm#
Master Planned Road	www.PGAtlas.com
Chesapeake Bay Critical Area Overlay Zone	www.PGAtlas.com OR http://www.mdmerlin.net/ OR http://webmaps.esrgc.org/cbca/desktop/Map
Aviation Policy Area	www.PGAtlas.com
JB Andrews Noise Contours	www.PGAtlas.com
Subtitle 5B (CBCA) allowable lot coverage	5B-113(e)(4) for I-D-O 5B-114(e)(8) for L-D-O 5B-115(e)(10) for R-C-O
Subtitle 27 (Zoning) allowable lot coverage	27-442(c)

Appendix A

Woodland and Wildlife

Habitat Conservation—

Tree Conservation Plans (TCP)

	condition and comments on the reason for the determination of the condition, proposed disposition and any comments regarding special preservation treatments or recommendations. A note should also be added to indicate that the trees were field located. (All trees within 100 feet of the proposed LOD shall be field located.)		
	Regulated streams and their required buffers (buffers measured from top of bank and as shown on an approved NRI)		
	Wetlands and their required buffers as shown on an approved NRI		
	100-year floodplain delineation as shown on an approved NRI		
	Critical habitat areas as obtained from the Maryland Department of Natural Resources, Wildlife and Heritage Division		
	Forest Interior Dwelling Species (FIDS) habitat and designated buffers		
	Location of PMA as shown on an approved NRI		
	Slopes 15% and greater		
	Adjacent historic sites or districts labeled as listed in the latest edition of "Illustrated Inventory of Historic Sites and District Plan for Prince George's County, Maryland."		
	Unmitigated 65 dBA Ldn noise contour shown and labeled if site is adjacent to or in the vicinity of a roadway of arterial classification or greater		
	Utilities and their associated easements if applicable		
	All other easements		
	A note regarding the location and current possession of "previously dedicated land" is provided		

C. Proposed Site Features

Feature	Included Y/N	Comment
Lot lines with dimensions, setbacks, lot and block numbers, and lot area		
Internal roads with limits of paving and street grades		
Proposed building locations (to be represented by actual proposed building footprints or the maximum limits of proposed construction)		
Conceptual grading and proposed limits of disturbance (see Sec. 25-122(b) for requirements regarding limits of disturbance)		
Conceptual stormwater management methods and facilities		
Water and sewer lines and easements or well and septic		
Public utility easements (PUE) where required		
Proposed noise mitigation measures shown (as necessary)		
Mitigated 65 dBA Ldn noise contour shown and labeled (as necessary)		
Building restriction lines from all property lines and the required 25-foot building restriction line from the 100-year floodplain		

D. Woodland Conservation Information

Information Type	Included Y/N	Comment
Woodland Conservation Worksheet (showing zoning and proper calculations of all acreages to the nearest one-hundredth of an acre; do not deduct land from the gross tract area that has not, to date, been dedicated)		
Standard TCPI Notes and other TCPI notes that may be appropriate		
Woodland Conservation Areas (WCAs) (must address Sec. 25-122(b) and Sections 6.5.4 and 6.6 of the Woodland and Wildlife Habitat Conservation Technical Manual)		
Woodlands clearly identified by the treatment proposed (Woodland Preservation Area, Woodland Reforestation/Afforestation Area, etc.)		

	Acreage shown to the nearest 1/100th acre for each of the woodland treatment areas shown		
	All woodland conservation areas are a minimum size of 10,000 square feet and a width of 50 feet except where these areas abut other protected woodlands previously protected by a TCP or other prior approved mechanism, such as a conservation easement, and where the combined total of these areas is 10,000 square feet in size and 50 feet in width. Landscaped areas may be 35 feet in width.		
	There are no woodland conservation areas located on lots one (1) acre or less in size; within 40 feet of the front and rear of all building footprints; within 20 feet of the sides of all building footprints; within 30 feet of a commercial or industrial building; within 10 feet of the rear lot line of a town house; or within 5 feet of a parking lot. These dimensions are shown on the plan.		
	Woodland preservation is not located within the 100-year floodplain, utility easements, or other areas where control of the land and its preservation is not possible		
	Land to be dedicated or conveyed containing WCAs of any kind, has received approval from the future property owner/s. The approval documents shall be provided with the TCP1.		
	For TCP1s with more than one sheet, a Woodland Conservation Summary Table as shown in Part A, Section 6.2 of the Environmental Technical Manual has been provided on the cover sheet		
	For projects where woodland conservation is located on lots/parcels, a "Lot-by-Lot table" has been provided as shown in Part A, Section 6.2 of the Environmental Technical Manual		

TCP-2. Standard Type 1 Tree Conservation Plan Notes

Standard Type 1 Tree Conservation Plan Notes

TCP1 General Notes to include with all Type 1 TCPs:

1. This plan is conceptual in nature and is submitted to fulfill the woodland conservation requirements for (Insert Plan #) . If (Insert Plan #) expires, then this TCP1 also expires and is no longer valid.
2. The TCP1 will be modified by a Type 2 Tree Conservation Plan in conjunction with the approval of a detailed site plan, a specific design plan, and/or a grading permit application, whichever comes first.
3. The Type 2 Tree Conservation Plan will provide specific details on the type and location of protection devices, signs, reforestation, afforestation, and other details necessary for the implementation of the requirements on this site. The details and limits of disturbance shown on the TCP2 shall be consistent with all other plans for the site, including the stormwater management plan and the erosion and sediment control plan.
4. Changes to the type, location, or extent of the woodland conservation reflected on this plan are subject to the conformance provisions of Section 25-119(c) of the Woodland Conservation Ordinance.
5. Cutting, clearing, or damaging woodlands contrary to this plan, as modified by a Type 2 Tree Conservation Plan, or in the absence of an approved Type 2 Tree Conservation Plan, without the expressed written consent of the Prince George's County Planning Board or designee shall be subject to appropriate mitigation which may include restoration of the disturbed area and a fine not to exceed \$9.00 per square foot of woodland disturbed.
6. 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 the approved TCP2 at time of contract signing. Future owners of the property are also subject to this requirement.
7. The property is within the _____ (*Developed, Developing, Rural*) Tier and is zoned _____.
8. The property is adjacent to _____ (*state street/road name*) which is a designated _____ (*scenic, historic, scenic and historic, parkway, or scenic byway*) roadway.

If no adjacent roadway is designated as scenic, historic, a parkway or a scenic byway then use the following note for #7:

The site is not adjacent to a roadway designated as scenic, historic, a parkway or a scenic byway.
9. The property is adjacent to _____ (*provide roadway name*) which is classified as a _____ (*provide roadway classification if arterial or greater*) roadway.

If no adjacent roadway is classified as arterial or greater, then use the following note for #8:

- The site is not adjacent to a roadway classified as arterial or greater.
10. This plan is/is not grandfathered by CB-27-2010, Section 25-119(g).

The following additional Notes shall be provided on the Type 1 TCPs when appropriate:

9. Plans for stormwater management are contained in Conceptual Stormwater Management Plan #_____. The proposed stormwater management facilities shown on this TCP1 are in conformance with the concept plan approval. The TCP2 shall show the final design for storm water management in conformance with the approved Final Stormwater Management Plan.
10. Lands to be dedicated to a public agency will only be used to fulfill the woodland conservation requirements if the agency provides written authorization for the use of those lands prior to signature approval of this plan. Land proposed for dedication that contains woodland conservation includes _____ (*describe the portion of the property to be dedicated*) to be dedicated to _____ (*agency to receive dedication*).

If Virginia pines are present:

The Type 2 TCP shall address the treatment of all Virginia pines (*Pinus virginiana*) that are located within 40 feet of the final proposed limit of disturbance or the boundary of the property. The TCP2 shall also include a planting schedule and/or details for the management of natural regeneration to fully restock the site.

TCP-3.Construction Tolerance Chart

Construction Tolerance Chart

General Tolerance: G=Good;M=Medium; P=Poor

Limiting Factors: I=physical injury;R=root zone impacts;P=pest complications;C=climactic tolerance

Common Name	Botanical Name	General Tolerance	Limiting Factors	Comments
ash, green	<i>Fraxinus pennsylvanica</i>	G	P	borers
ash, white	<i>Fraxinus americana</i>	M	I, R, C	
Atlantic white cedar	<i>Chamaecyparis thyoides</i>	G	C	
baldcypress	<i>Taxodium distichum</i>	G	R, C	
basswood	<i>Tilia americana</i>	M	I, R	
beech, American	<i>Fagus grandifolia</i>	P	I, R, P, C	
birch, black/sweet	<i>Betula lenta</i>	M	I, C	
birch, river/red	<i>Betula nigra</i>	G		
blackgum	<i>Nyssa sylvatica</i>	G		
black locust	<i>Robinia pseudoacacia</i>	G	P, C	weak wood
black walnut	<i>Juglans nigra</i>	P	I, R, C	allelopathic
bigtooth aspen	<i>Populus grandidentata</i>	P	I, R, C	weak wood
butternut/white walnut	<i>Juglans cinerea</i>	P	I, R, C	weak wood, allelopathic
catalpa, southern	<i>Catalpa bignonioides</i>	G	R	
cherry, black	<i>Prunus serotina</i>	M	I, P	eastern tent caterpillar
crabapple species	<i>Malus spp.</i>	M	I, P, C	fire-blight, scab
cryptomeria, Japanese	<i>Cryptomeria japonica</i>	G		
cucumber tree	<i>Magnolia acuminata</i>	M	I	
dogwood, flowering	<i>Cornus florida</i>	M	I, P, C	Discula anthracnose
downy serviceberry	<i>Amelanchier arborea</i>	M	I, R, C	
eastern hophornbeam	<i>Ostrya virginiana</i>	M	R, C	
eastern redcedar	<i>Juniperus virginiana</i>	G		
elm, American	<i>Ulmus americana</i>	M	P	Dutch elm disease
elm, Chinese	<i>Ulmus parvifolia</i>	M	R, P	
elm, Siberian	<i>Ulmus pumila</i>	M	C, P	weak wood
elm, slippery	<i>Ulmus rubra</i>	M	R, P, C	
fringetree	<i>Chionanthus virginicus</i>	M	I, R, C	
ginko/maiden-hair tree	<i>Ginko biloba</i>	G		
hemlock, eastern	<i>Tsuga canadensis</i>	P	I, R, P, C	woolly adelgid
hickory, butternut	<i>Carya cordiformis</i>	M	R, C	
hickory, mockernut	<i>Carya tomentosa</i>	M, P	R, C	
hickory, pignut	<i>Carya glabra</i>	M	R, C	
hickory, shagbark	<i>Carya ovata</i>	M, P	R, C	

Construction Tolerance Chart

General Tolerance: G=Good;M=Medium; P=Poor

Limiting Factors: I=physical injury;R=root zone impacts;P=pest complications;C=climactic tolerance

Common Name	Botanical Name	General Tolerance	Limiting Factors	Comments
holly, American	<i>Ilex opaca</i>	G		
honeylocust	<i>Gleditsia triacanthos</i>	G	I, P	
hornbeam, American	<i>Carpinus caroliniana</i>	M	R, C	
magnolia, southern	<i>Magnolia grandiflora</i>	M	I, C	
magnolia, sweetbay	<i>Magnolia virginiana</i>	G	C	
maple, Norway	<i>Acer platanoides</i>	M, G	I, R	invasive exotic, allelopathic
maple, red	<i>Acer rubrum</i>	G		weak wood
maple, silver	<i>Acer saccharinum</i>	P	I, R, P, C	weak wood
maple, sugar	<i>Acer saccharum</i>	P	C	
oak, black	<i>Quercus velutina</i>	G	R	
oak, chestnut	<i>Quercus prinus</i>	G, M	R, C	
oak, pin	<i>Quercus palustris</i>	G		iron chlorosis in alkaline soil
oak, laurel	<i>Quercus laurifolia</i>	G	R	
oak, northern red	<i>Quercus rubra</i>	G, M	R, C	
oak, post	<i>Quercus stellata</i>	G	R	
oak, sawtooth	<i>Quercus acutissima</i>	G	R	
oak, scarlet	<i>Quercus coccinea</i>	G	R	
oak, southern red	<i>Quercus falcata</i>	G	R, C	
oak, swamp chestnut	<i>Quercus michauxii</i>	G	R, C	
oak, swamp white	<i>Quercus bicolor</i>	G	R, C	
oak, water	<i>Quercus nigra</i>	G	R, C	
oak, white	<i>Quercus alba</i>	G, M	R, C	
oak, willow	<i>Quercus phellos</i>	G, M	R, C	
persimmon, common	<i>Diospyros virginiana</i>	G	P	
pine, Austrian	<i>Pinus nigra</i>	G, M	P	
pine, eastern white	<i>Pinus strobus</i>	M	I, R, P, C	weak wood
pine, loblolly	<i>Pinus taeda</i>	G	C	
pine, pitch	<i>Pinus rigida</i>	G		
pine, scotch	<i>Pinus sylvestris</i>	G	C	
pine, shortleaf	<i>Pinus echinata</i>	M	P	
pine, Virginia	<i>Pinus virginiana</i>	M	C	weak wood, wind-throw hazard
plum, American	<i>Prunus americana</i>	M	I, R, P	
redbud, eastern	<i>Cercis canadensis</i>	M	R, C	

Construction Tolerance Chart

General Tolerance: G=Good;M=Medium; P=Poor

Limiting Factors: I=physical injury;R=root zone impacts;P=pest complications;C=climactic tolerance

Common Name	Botanical Name	General Tolerance	Limiting Factors	Comments
sassafrass	<i>Sassafrass albidum</i>	G		weak wood
silverbell, Carolina	<i>Halesia carolina</i>	M	I, R, C	
snowbell, American	<i>Styrax americana</i>	M	I, R	
sourwood	<i>Oxydendrum arboreum</i>	P	I, R, P, C	
spruce, Colorado blue	<i>Picea pungens</i>	M	R, C	
stewartia, Virginia	<i>Stewartia malacodendron</i>	G		
sweetgum	<i>Liquidambar styraciflua</i>	G	R	
sycamore, American	<i>Patanus occidentalis</i>	M	P, C	anthracnose
tulip poplar/tulip tree	<i>Liriodendron tulipifera</i>	P	I, R, C	weak wood
yellowwood	<i>Cladrastis kentukea</i>	P	I, R, P, C	

Adapted from: Fairfax County, Virginia Public Facilities Manual

TCP-4. Basic Standard Woodland Conservation Worksheet (Blank)

Basic Standard Woodland Conservation Worksheet for Prince George's County

SECTION I-Establishing Site Information- (Enter acres for each zone)			
1 Zone:			
2 Gross Tract:			
3 Floodplain:			
4 Previously Dedicated Land:			
5 Net Tract (NTA):	0.00	0.00	0.00
6 Property Description or Subdivision Name:	Basic Standard Worksheet		
7 Is this site subject to the 1989 Ordinance?(y/n)			
8 Is this one (1) single family lot? (y,n)			
9 Are there prior TCP approvals which include a combination of this lot/s? (y,n)			
10 Is this a Woodland Conservation Bank?			
11 Break-even Point (preservation) =	#DIV/0!	acres	
12 Clearing permitted w/o reforestation=	#DIV/0!	acres	

SECTION II-Determining Requirements (Enter acres for each corresponding column)				
	Column A WCT/AFT %	Column B Net Tract	Column C Floodplain (1:1)	Column D Off-Site Impacts (1:1)
13 Existing Woodland				
14 Woodland Conservation Threshold (WCT) =	#DIV/0!	#DIV/0!		
15 Smaller of 13 or 14		#DIV/0!		
16 Woodland above WCT		#DIV/0!		
17 Woodland cleared				
18 Woodland cleared above WCT (smaller of 16 or 17)		#DIV/0!		
19 Clearing above WCT (0.25 : 1) replacement requirement		#DIV/0!		
20 Woodland cleared below WCT		#DIV/0!		
21 Clearing below WCT (2:1 replacement requirement)		#DIV/0!		
22 Afforestation Threshold (AFT) =	#DIV/0!	#DIV/0!		
23 Off-site Conservation being provided on this property			0.00	
24 Woodland Conservation Required		#DIV/0!		

SECTION III-Meeting the Requirements			
25 Woodland Preservation			
26 Afforestation / Reforestation			
27 Area approved for fee-in-lieu			\$0.00
28 Credits for Off-site Conservation on another property			
29 Off-site Conservation (preservation) being provided on this property			
30 Off-site Conservation (afforestation) being provided on this property			
31 Total Woodland Conservation Provided		#DIV/0!	#DIV/0!

32 Area of woodland not cleared 0.00 acres
 33 Woodland retained not part of requirements: 0.00 acres

TCP-5.Basic Standard Woodland Conservation Worksheet (Example Property)

Basic Standard Woodland Conservation Worksheet for Prince George's County

SECTION I-Establishing Site Information- (Enter acres for each zone)			
1 Zone:	R-R	R-T	
2 Gross Tract:	8.50	5.50	
3 Floodplain:	0.50	0.50	
4 Previously Dedicated Land:	0.00	0.00	
5 Net Tract (NTA):	8.00	5.00	0.00
6 Property Description or Subdivision Name:	Example Basic Standard Worksheet		
7 Is this site subject to the 1989 Ordinance?(y/n)	N		
8 Is this one (1) single family lot? (y,n)	N		
9 Are there prior TCP approvals which include a combination of this lot/s? (y,n)	N		
10 Is this a Woodland Conservation Bank?	N		
11 Break-even Point (preservation) =	4.48	acres	
12 Clearing permitted w/o reforestation=	7.52	acres	

SECTION II-Determining Requirements (Enter acres for each corresponding column)				
	Column A WCT/AFT %	Column B Net Tract	Column C Floodplain (1:1)	Column D Off-Site Impacts (1:1)
13 Existing Woodland		12.00	1.00	
14 Woodland Conservation Threshold (WCT) =	20.00%	2.60		
15 Smaller of 13 or 14		2.60		
16 Woodland above WCT		9.40		
17 Woodland cleared		10.50		0.38
18 Woodland cleared above WCT (smaller of 16 or 17)		9.40		
19 Clearing above WCT (0.25 : 1) replacement requirement		2.35		
20 Woodland cleared below WCT		1.10		
21 Clearing below WCT (2:1 replacement requirement)		2.20		
22 Afforestation Threshold (AFT) =	15.00%	0.00		
23 Off-site Conservation being provided on this property		0.00		
24 Woodland Conservation Required		6.43		

SECTION III-Meeting the Requirements			
25 Woodland Preservation		1.10	
26 Afforestation / Reforestation		4.50	
27 Area approved for fee-in-lieu		0.83	\$10,846.44
28 Credits for Off-site Conservation on another property		0.00	
29 Off-site Conservation (preservation) being provided on this property		0.00	
30 Off-site Conservation (afforestation) being provided on this property		0.00	
31 Total Woodland Conservation Provided		6.43	

32 Area of woodland not cleared 1.50 acres

33 Woodland retained not part of requirements: 0.40 acres

1:1 Impacts: 0.13 ac. for the off-site connection of sewer line

0.25 ac. required by condition of approval

0.38 ac. Total 1:1 impacts (Does not include 1:1 floodplain impacts)

TCP-6.Guidelines for the Completion of the Prince George’s County Woodland Conservation Worksheet

**Guidelines for the Completion of the Prince George’s County Woodland Conservation Worksheet
(Basic Standard Worksheet)**

All areas shown on this worksheet should be rounded to the nearest 1/100th of an acre. Remember all of the areas that are shaded on the spreadsheet **MUST** be filled in for the Excel spreadsheet to make the necessary calculations. The areas that are not shaded are protected cells that **MUST NOT** be altered or the worksheet will not calculate properly.

I	Establishing Site Information	
1	Zone	Identify all zoning categories for the site. Three shaded boxes allow for multiple zones on one property.
2	Gross Tract	The total area of all lots and parcels to be included on the Tree Conservation Plan FOR EACH ZONE. (Example: The property has 8.5 acres in the R-R zone and 5.5 acres in the R-T zone. The total site area is 14.0 acres but should be listed separately for each zoning category.)
3	Floodplain	The area of one-hundred year floodplain. Fill in the amount for each zone. (Example: The property has 0.50 acres of floodplain in the R-R zone and 0.50 acres in the R-T zone. The total floodplain for the site is 1.0 acre but should be listed separately for each zoning category. Refer to Section 27-124.01, of the Zoning Ordinance for information regarding the one hundred (100) year floodplain)
4	Previously Dedicated Land	The area of any land which was dedicated to public use prior to the approval of any Tree Conservation Plans for the property. Do not include any area which HAS NOT YET been dedicated.
5	Net Tract Area (NTA)	This area is the Gross Tract (2) minus the Floodplain (3) minus Previously Dedicated Land (4) (Example: The property has 8.5 acres in the R-R zone, 0.50 acre in the floodplain, and no previously dedicated land. The Net Tract area in the R-R zone is 8.00 acres. AND the property also has 5.5 acres in the R-T zone, 0.50 acres in the floodplain, and no previously dedicated land. The Net Tract area in the R-T zone is 5.00 acres.)
6	Property Description or Subdivision Name	This should include the name of the project and assigned TCP number.
7	Is this site subject to the 1989 Ordinance?	Was the plan previously approved under the requirements of the 1989 Woodland Conservation and Tree Preservation Ordinance? Answer yes or no by using a capital “Y” or “N”.
	Reforestation Requirement Reduction Questions	The answers to questions 8, 9, 10 and 11 are important for establishing requirements.
8	Is this one (1) single family lot? (y/n)	Answer yes or no by using a capital “Y” or “N”.
9	Are there prior TCP approvals which include a combination of this lot/s?(y/n)	Answer yes or no by using a capital “Y” or “N”.

10	Is this a Woodland Conservation Bank? (y/n)	Answer yes or no by using a capital “Y” or “N”. (A woodland conservation bank with no clearing has no WCT or AFT. A woodland conservation bank with previous or proposed clearing must meet its own woodland conservation requirement prior to providing marketable credits.)
11	Break-even Point	If the woodland above the woodland conservation threshold (16) is greater than “0”, then the Break-even-Point= (0.2) x woodland above the WCT + the WCT. This is the amount of forest that must be retained so that no mitigation is needed. If the area of woodland above the woodland conservation threshold is equal to “0”, then the Break-even-Point = Existing Woodland (13).
12	Clearing permitted without reforestation	Existing woodland on the net tract (13) minus the break-even point (11)
II Determining Requirements		
	Woodland Conservation Calculations	The answers to questions 13 through 23 establish the total woodland conservation requirements for the site.
13	Existing Woodland	Column B – Area of existing woodland on the net tract (sum of all zones) Column C – Area of existing woodland in the floodplain (sum of all zones) This information shall be established on a Forest Stand Delineation (FSD) as either a stand alone FSD or as part of an approved NRI, if required.
14	Woodland Conservation Threshold WCT	Column A – The percentage of Woodland Conservation required based on the zoning category(s) of the site (Refer to WCO Subtitle 25, Section 25-121, for threshold requirements by zone). Column B – The percentage (14A) multiplied by the Net Tract Area (5)
15	Smaller of (13) or (14)	Which number is less? The amount of existing woodland on the net tract area (sum of all zones) or the woodland conservation threshold? The smaller of 13B or 14B.
16	Woodland above WCT	Area of woodland on the net tract (sum of all zones) that is greater than the Woodland Conservation Threshold. (13B)-(14B)
17	Woodland cleared	Column B – Woodland on the net tract proposed to be cleared Column C – Woodland in the floodplain proposed to be cleared Column D – Woodland located off-site proposed to be cleared (Unavoidable clearing for the proposed development.) Note: Column D shall also be used for any other “condition of approval” circumstance where 1:1 replacement is required. If off-site clearing AND other 1:1 clearing is required, the sum of the areas shall be entered and individual areas shall be listed at the bottom of the worksheet.
18	Woodland cleared above WCT(smaller of 16 or 17)	This determines the area of woodland above the WCT that has been cleared. Enter the smaller of 16B or 17B
19	Clearing above WCT (0.25:1 replacement requirement)	If the woodland cleared on the net tract for all zones (17B) is less than the WCT (14B) then the clearing is above the WCT (14B) and the replacement is calculated by multiplying the woodland cleared on the net tract for all zones by 0.25. If the woodland cleared on the net tract for all zones (17B) is greater

		than the WCT (14B) then part of the clearing is above the WCT (14B) and part is below the WCT. The replacement is calculated by multiplying the woodland above the WCT (16) by 0.25. The remainder of the clearing is calculated at 2:1 for clearing below the threshold. (This will be done on line #20).
20	Woodland cleared below WCT	This is the total woodland cleared on the net tract for all zones (17B) minus the woodland above the WCT (16B).
21	Clearing below WCT (2:1 replacement requirement)	If the woodland cleared on the net tract for all zones (17B) is greater than the WCT (14B), then part of the clearing is below the WCT (14B). The woodland cleared on the net tract for all zones (17B) that is above the WCT has already been calculated in #19. To calculate the replacement for clearing below the WCT (14B), the woodland above the threshold (16) is subtracted from the total cleared (17B). The result is multiplied by 2 for the required replacement.
22	Afforestation Threshold (AFT)	Column A - The percentage of afforestation required based on the zoning category(s) of the site. (Refer to WCO Subtitle 25, Section 25-121, for threshold requirements by zone). Column B - (22A) multiplied by the net tract area for all zones (5). Is the existing woodland on the net tract for all zones (13B) less than the result? If so, the result is (22A) multiplied by (5) for all zones, minus the existing net tract woodland (13B) Otherwise the result is "0"- no afforestation is required. (Note: Lots that were platted prior to November 21, 1992, are exempt from the afforestation requirement)
23	Off-site Conservation being provided on this property	This number is the sum of Off-site Conservation (preservation) (28) and Off-site Conservation (afforestation) (29) being provided on this property. This number represents the acreage available on the property to establish a woodland conservation bank.
24	Woodland Conservation Required	The total woodland conservation requirement for the property is the sum of the following: <ul style="list-style-type: none"> • Smaller of existing woodland on the net tract (13B) or the WCT (14B) • 0.25:1 replacement requirement for clearing above the WCT (19) • 2:1 replacement requirement for clearing below the WCT (21) • Afforestation threshold (AFT) requirement (22B) • Off-site conservation provided on this property (22) • 1:1 replacement for clearing in the floodplain (17C) • 1:1 replacement for off-site clearing (17D) • <i>Minus</i> woodland cleared below WCT (20)
III	Meeting the Requirements	
	Woodland Conservation Provided	
25	Woodland Preservation	Acreage of woodland to remain on-site in perpetuity. This area must meet the definition of a woodland conservation area (refer to Woodland and Wildlife Habitat Ordinance (WCO), Section 25-206 (b) Design Criteria)
26	Afforestation/ Reforestation	Acreage of woodland to be planted on-site that shall remain in perpetuity. This area must meet the criteria for on-site afforestation/reforestation (refer to the WCO, Section 25-206 (b) Design Criteria)

27	Area approved for fee-in-lieu	This fee counts toward meeting the woodland conservation requirement. Fee-in-lieu is not accepted for requirements of one acre or more and is available only after all other options have been exhausted. Documentation must be provided to justify the use of this option and must be approved prior to calculating the area into the worksheet. This fee is calculated on a square footage basis and is subject to change.
28	Credits for Off-site Conservation on another property	Acreage of requirement to be met at an off-site woodland conservation bank. The woodlands must be located on an approved woodland conservation bank. A list of approved woodland conservation banks is available through the Environmental Planning Section
29	Off-site Conservation (preservation) being provided on this property	Acreage of woodland to remain on-site in perpetuity. This area must meet the definition of woodland as defined in the WCO, Section 25-202. Definitions. This area is to be established in the land records as a woodland conservation bank and may be used to meet the woodland conservation requirements of another property unable to meet all or part of their requirements on-site.
30	Off-site Conservation (afforestation) being provided on this property	Acreage of woodland to be planted on-site that shall remain in perpetuity. This area must meet the minimum planting requirements as defined in the WCO, Section 25-202. Definitions. This area is to be established in the land records as a woodland conservation bank and may used to meet the woodland conservation requirements of another property unable to meet all or part of their requirements on-site.
31	Total Woodland Conservation Provided	The total woodland conservation provided must equal or exceed the woodland conservation required (23) for the property and is the sum of the following: <ul style="list-style-type: none"> • Woodland Preservation (24) • Afforestation/ Reforestation (25) • Area approved for fee-in-lieu (26) • Credits for off-site conservation on another property (27) • Off-site conservation (preservation) being provided on this property (28) • Off-site conservation (afforestation) being provided on this property (29)
32	Area of woodland not cleared	This is the acreage of on-site woodland that is not cleared. It is the difference of existing woodland on the net tract (13a) minus the woodland cleared on the net tract (17a)
33	Woodland retained not part of requirements	This is the net tract woodland that is not cleared and also not counted as preservation; it is the difference of the area of woodland not cleared (31) minus Woodland Preservation (24)
34	Prepared by	All plans must be prepared by a Qualified Professional. (See Definitions in the WCO) The original plans must be signed and dated in blue ink . (In the lower right corner of the plan).

TCP-7. Woodland Conservation Worksheet for Prince George's County Government Projects (Blank)

Woodland Conservation Worksheet
for
Prince George's County Government Projects

Property Description or Subdivision Name: Government Worksheet

1	Zone:		
2	Gross Tract:		
3	Existing Woodland = WCT		or #DIV/0!
4	Woodland Cleared		
5	Total area of woodland cleared (subject to 1:1 replacement)	0.00	
6	Off-Site Mitigation Provided (afforestation)	0.00	
7	Off-Site Mitigation Provided (preservation)	0.00	
8	Woodland Conservation Requirement:		
9	Woodland Conservation Provided:		
10	Woodland preserved		
11	Afforestation		
12	Reforestation		
13	Prior Credit for Off-site Mitigation		Location:
14	Current Credit for Off-site Mitigation		Location: Name & TCP#
15	Off-site Mitigation provided (afforestation)		
16	Off-site Mitigation provided (preservation)		
17	Area Mitigated by Woodland Conservation Fund		or \$0.00
18	Total Woodland Conservation Provided		

Last Rev. August 2010

TCP-8.Woodland Conservation Worksheet for Prince George's County Government Projects (Example Property)

Woodland Conservation Worksheet
for
Prince George's County Government Projects

Property Description or Subdivision Name: Example Government Worksheet

1	Zone:	R-R	
2	Gross Tract:	40.00	
3	Existing Woodland = WCT	15.00	or 37.50%
4	Woodland Cleared	8.00	
5	Total area of woodland cleared (subject to 1:1 replacement)	8.00	
6	Off-Site Mitigation Provided (afforestation)	0.00	
7	Off-Site Mitigation Provided (preservation)	0.00	
8	Woodland Conservation Requirement:	15.00	
9	Woodland Conservation Provided:		
10	Woodland preserved	7.00	
11	Afforestation	3.00	
12	Reforestation		
13	Prior Credit for Off-site Mitigation		Location:
14	Current Credit for Off-site Mitigation	5.00	Location: Wood Acres
15	Off-site Mitigation provided (afforestation)		TCP2/895/10
16	Off-site Mitigation provided (preservation)		
17	Area Mitigated by Woodland Conservation Fund		or \$0.00
18	Total Woodland Conservation Provided	15.00	

TCP-11. Woodland Conservation Worksheet for Single Lot TCP2 with Previously Approved TCP1 (Blank)

Woodland Conservation Worksheet
for
Prince George's County Government Projects

Property Description or Subdivision Name: Government Worksheet

1	Zone:		
2	Gross Tract:		
3	Existing Woodland = WCT		or #DIV/0!
4	Woodland Cleared		
5	Total area of woodland cleared (subject to 1:1 replacement)	0.00	
6	Off-Site Mitigation Provided (afforestation)	0.00	
7	Off-Site Mitigation Provided (preservation)	0.00	
8	Woodland Conservation Requirement:		
9	Woodland Conservation Provided:		
10	Woodland preserved		
11	Afforestation		
12	Reforestation		
13	Prior Credit for Off-site Mitigation		Location:
14	Current Credit for Off-site Mitigation		Location: Name & TCP#
15	Off-site Mitigation provided (afforestation)		
16	Off-site Mitigation provided (preservation)		
17	Area Mitigated by Woodland Conservation Fund		or \$0.00
18	Total Woodland Conservation Provided		

Last Rev. August 2010

**TCP-12. Woodland Conservation Worksheet for Single Lot TCP2 with Previously Approved TCP1
(Example Property)**

Single Lot TCP2 with Previously Approved TCP1
Woodland Conservation Worksheet
for
Prince George's County

1	Zone:	R-R		
2	Gross Tract:	2.50		
3	Floodplain:	0.00		
4	Previously Dedicated Land:	0.00		
5	Net Tract (NTA):	2.50	0.00	0.00
6	Property Description or Subdivision Name:	Example Single Lot TCP2 with previously approved TCP1		
7	Owner:	Shell M.E. Beans		
8	Address:	4972 Stalk Pass		
9	Phone:	301-555-1212		
10	Previous TCP1 Number:	TCP1/825/2010		
Woodland Conservation Calculations:			Net Tract (acres)	Floodplain (acres)
11	Acreeage of Existing Woodland		2.50	
12	Woodland Conservation Required for Lot per TCP1	27.60%	0.69	
13	Area of Woodland Cleared per TCP1		0.75	0.00
14	Area of Woodland Cleared per TCP2		1.35	0.00
15	Area of Woodland above WCT not cleared by TCP1		1.25	
16	Additional Woodland Cleared by TCP2	0.60		0.00
17	Does the TCPI show 2:1 replacement	N		
18	Clearing above WCT	0.60	Additional 1/4:1 Replacement required =	0.15
19	Clearing below WCT	0.00	Additional 2:1 Replacement required =	0.00
20	Total Woodland Conseravtion Required for this Lot:		0.84	
Woodland Conservation Provided:			(acres)	
22	Woodland Preservation		0.84	
23	Reforestation / Replacement		0.00	
24	Afforestation		0.00	
25	Area approved for fee-in-lieu		0.00	= \$0.00
26	Credits Received for Off-site Mitigation on another property		0.00	
27	Off-site Mitigation provided on this property		0.00	
28	Total Woodland Conservation Provided		0.84	
29	Area of net tract woodland not cleared		1.15	acres
30	Woodland retained not part of requirements:		0.31	acres

	Physical site features shown such as buildings, roads, driveways, etc.		
	Woodlands and trees (must extend 100' off the property line on all sides)		
	All specimen, champion and historic trees shown with their critical root zones		
	Specimen, Champion and Historic Tree Table showing tree number, species, size, condition and reason for the determination of the condition, proposed disposition and any comments regarding special preservation treatments or recommendations. A note should also be added to indicate that the trees were survey located. (All trees within 100 feet of the proposed LOD shall be survey located.)		
	Regulated streams and their required buffers (buffers measured from top of bank and as shown on an approved NRI)		
	Wetlands and their required buffers as shown on an approved NRI		
	100-year floodplain delineation as shown on an approved NRI		
	Critical habitat areas as obtained from the Maryland Department of Natural Resources, Wildlife and Heritage Division		
	Forest Interior Dwelling Species (FIDS) habitat and designated buffers		
	Location of PMA as shown on an approved NRI		
	Slopes 15% and greater		
	Adjacent historic sites or districts labeled as listed in the latest edition of "Illustrated Inventory of Historic Sites and District Plan for Prince George's County, Maryland."		
	Unmitigated 65 dBA Ldn noise contour shown and labeled if site is adjacent to or in the vicinity of a roadway of arterial classification or greater		
	Utilities and their associated easements if applicable		
	All other easements		
	A note regarding the location and current possession of "previously dedicated land" is provided		

C. Proposed Site Features

Feature	Included Y/N	Comment
Lot lines with dimensions, setbacks, lot and block numbers, and lot area		
Internal roads with limits of paving and street grades		
Proposed building locations (to be represented by actual proposed building footprints or the maximum limits of proposed construction)		
Proposed grading and proposed limits of disturbance to include all sediment and erosion control devices, stockpiles and other areas that need to be cleared during construction (see Sec. 25-122(b) for requirements regarding limits of disturbance)		
Conceptual stormwater management methods and facilities		
Water and sewer lines and easements or well and septic		
Public utility easements (PUE) where required		
Proposed noise mitigation measures shown (as necessary)		
Mitigated 65 dBA Ldn noise contour shown and labeled (as necessary)		
Building restriction lines from all property lines and the required 25-foot building restriction line from the 100-year floodplain		

D. Woodland Conservation Information

Information Type	Included Y/N	Comment
Woodland Conservation Worksheet (appropriate worksheet must show zoning and proper calculations of all acreages to the nearest one-hundredth of an acre; do not deduct land from the gross tract area that has not, to date, been dedicated)		
Standard TCP2 notes and other TCP2 notes that may be appropriate		

	Woodland Conservation Areas (WCAs) (must address Sec. 25-122(b) and Sections 6.5.4 and 6.6 of the Woodland and Wildlife Habitat Conservation Technical Manual)		
	Woodlands clearly identified by the treatment proposed (Woodland Preservation Area, Woodland Reforestation/Afforestation Area, etc.)		
	Acreage shown to the nearest 1/100th acre for each of the woodland treatment areas shown		
	All woodland conservation areas are a minimum size of 10,000 square feet and a width of 50 feet except where these areas abut other protected woodlands previously protected by a TCP or other prior approved mechanism, such as a conservation easement, and where the combined total of these areas is 10,000 square feet in size and 50 feet in width. Landscaped areas may be 35 feet in width.		
	There are no woodland conservation areas located on lots less than one (1) acre in size; within 40 feet of the front and rear of all building footprints; within 20 feet of the sides of all building footprints; within 30 feet of a commercial or industrial building; within 10 feet of the rear lot line of a town house; or within 5 feet of a parking lot. These dimensions are shown on the plan.		
	Woodland preservation is not located within the 100-year floodplain, utility easements, or other areas where control of the land and its preservation is not possible		
	Land to be dedicated or conveyed containing WCAs of any kind, has received approval from the future property owner/s. The approval documents will be provided with the TCP2 if they were not provided with the TCP1.		
	For TCP2s with more than one sheet, a Woodland Conservation Summary Table as shown in Part A, Section 6.2 of the Environmental Technical Manual has been provided on the cover sheet		
	For projects where woodland conservation is located on lots/parcels, a "Lot-by-Lot table" has been provided as shown in Part A, Section 6.2 of the Environmental Technical Manual		
Fee-in-lieu:			
	If the project is phased, the TCP2 must provide the breakdown of the fee-in-lieu amount required for each phase. If the fee-in-lieu option has been approved for use on the subject property, the fee must be posted prior to the issuance of any permits unless the project is phased.		

E. Specimen, Champion, and Historic Trees

Information Type	Included Y/N	Comment
A table that includes information regarding the species, diameter at breast height, numerical and descriptive condition rating, and whether the tree is to be preserved or removed		
Individual trees are shown on the plans with their critical root zones shown and an indication as to whether the tree is to be preserved or removed		
Grading, structures, and any other activities that are proposed within the critical root zone have been shown		
Proposed limits of disturbance (LOD) have been shown on the plan		
Details for time of occurrence, equipment to be used, and any special practices for root pruning that may be necessary have been provided		
Details for any pruning that may be necessary have been provided		
Details of any fertilization or irrigation practices that are to be used have been provided		
Graphic and written details have been provided for all temporary or permanent tree protective devices to be used		
Details about berms or swales that are to be constructed to prevent silt or contaminated runoff from wash pads, materials stock piles, vehicle parking areas, or		

	equipment maintenance and storage areas from washing into the tree's root zone have been provided. Locations are shown on the plan		
	All other necessary information is provided.		

F. Site Protection and Signage

Information Type	Included Y/N	Comment
Type and location of all tree protection devices are shown		
Details for all protection devices are shown		
All sign locations are shown		
All sign details are shown		
Statement on the plan regarding the timing of the installation of all tree protection devices		
Statement on plan stating that the signs for planted areas are to remain in perpetuity and that the signs for preservation areas may be removed after use and occupancy permit has been issued		
Sign locations and details are shown for all woodland conservation preservation areas along the limits of disturbance and along roadways		

G. Afforestation/Reforestation Areas

Information Type (The following items must be addressed in text form and/or graphically shown on the plan)	Included Y/N	Comment
Soil Conditions		
Existing soil pH		
Soil compaction corrections to be conducted		
Topsoil minimum depth		
Soil amendments proposed and method of application		
Soils stabilization proposed and method of application (Structural, Vegetative, Mulch)		
Removal method for soil contaminants (oil products, concentrated soluble salts, ferrous iron, soluble aluminum, soluble manganese, and herbicides)		
Hydrology		
Hydrology of planting sites is suited to species selected		
Site Preparation		
Ground cover will not adversely impact tree growth		
Control of competing vegetation around trees		
Planting Stock		
Afforestation and reforestation is being provided on lots one (1) acre in size or greater		
Planting stock seed source is from within the geographic region suited for growth in this area		
Planting stock size is specified (seedling, whip, 1" caliper, 2" caliper, etc.)		
Planting stock meets the standards set by the American Nursery and Landscape Association		
Seedling stock meets the following criteria: Hardwoods - 1/4" to 1/2" caliper with roots no less than 8" long Conifers - 1/8" to 1/4" caliper with roots not less than 8" long and top height of 6" or more Shrubs - 1/8" or larger caliper with 8" root system		

	Containerized stock used has been noted		
	Species and quantities used are specified		
	Planting pattern is identified		
Planting Methods			
	Detail of planting by hand		
	Detail of planting by machine		
	Schedule of tree planting activities (start and completion of each phase of work)		
	Detail of planting method used for larger caliper stock. (A larger planting bed must be utilized. This should not be a drilled or dug hole 6 to 12 inches larger than the root ball or container.)		
Planting Management Plan			
	Information on site and tree maintenance is listed		
	Company or individual responsible for tree care is listed on the plan or detail sheet		
	Term of the Plan is no less than five years		
	Final expected survival is indicated		
	Follow-up care and maintenance (watering, fertilization, weeding, support plantings, etc. must be addressed)		
Afforestation/Reforestation Notes			
	All applicable notes from the afforestation/reforestation section of the standard TCP 2 notes		

TCP-14. Standard Type 2 Tree Conservation Plan Notes

Standard Type 2 Tree Conservation Plan Notes

The following notes shall be used as appropriate on tree conservation plans and shall be modified as necessary to address the specific conditions of the site.

GENERAL NOTES

To include with all Type 2 TCPs:

1. This plan is submitted to fulfill the woodland conservation requirements for (Insert Plan # or state it is for a grading permit) . If (Insert Plan # or state "this grading permit") expires, then this TCP2 also expires and is no longer valid.
2. Cutting or clearing of woodland 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 fee.
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 pre-construction 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 the _____ (*Developed, Developing, Rural*) Tier and is zoned _____.
7. The property is adjacent to _____ (*state street/road name*) which is a designated _____ (*scenic, historic, scenic and historic, parkway, or scenic byway*) roadway.

If no adjacent roadway is designated as scenic, historic, a parkway or a scenic byway then use the following note for #7:

The site is not adjacent to a roadway designated as scenic, historic, a parkway or a scenic byway.

8. The property is adjacent to _____ (*provide roadway name*) which is classified as a _____ (*provide roadway classification if arterial or greater*) roadway.

If no adjacent roadway is classified as arterial or greater, then use the following note for #8:

The site is not adjacent to a roadway classified as arterial or greater.

9. This plan is/is not grandfathered under CB-27-2010, Section 25-117 (g).

ADDITIONAL NOTES

To be provided when appropriate. Must be numbered in sequence starting with number 10.

When preservation or retention of existing woodlands is proposed:

Tree Preservation and Retention Notes

- a. 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.
- b. Tree and woodland conservation methods such as root pruning shall be conducted as noted on this plan.
- c. 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.
- d. 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.
- e. Woodland preservation areas shall be posted with signage as shown on the plans at the same time as the temporary TPF installation. These signs must remain in perpetuity.

Removal of Hazardous Trees or Limbs by Developers or Builders

- f. 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.
- g. 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 tree has a potential to fall and strike a structure, parking area, or other high use area and result in personal injury or property damage.
- h. 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 permittee 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.

- i. 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 permittee, 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 permittee 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.

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 photos shall be submitted to the inspector for documentation of the damage.

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.

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.

If development is proposed to be completed in phases:

- j. Work on this project will be initiated in several phases. All temporary TPFs required for a given phase shall be installed prior to any disturbance within that phase of work.

If existing trees are proposed for use as protection for preservation areas:

- k. Tree protection fencing (TPFs) is not required for all or portions of this plan because an undisturbed 100-foot buffer of open land /or a 50-foot forested buffer is being maintained between the limit of disturbance (LOD) and the woodland preservation areas. If the LOD changes and the change impacts these buffers, the county inspector shall be contacted to evaluate the change to determine if a revision to the tree conservation plan is necessary or if installation of TPFs will be required.

If debris piles are noted on the FSD and located in preservation areas:

- l. Debris piles shown in woodland preservation areas shall be removed by hand without the use of mechanical equipment within the preservation area. Chains may be used to pull debris out

of the preservation areas. Caution must be used not to damage remaining vegetation.

When afforestation/reforestation is proposed:

Afforestation and Reforestation Notes

- a. 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 longer.
- b. The planting of afforestation or reforestation areas shall be completed prior to the issuance of the first building permit. *(This standard note may be modified as necessary to address which building permits are adjacent to the proposed planting area.)* Seedling planting is to occur from November through May only. No planting shall be done while ground is frozen. Planting with larger caliper stock or containerized stock may be done at any time provided a detailed maintenance schedule is provided.
- c. 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 Grading Inspector and the county.
- d. 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.
- e. 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 clearing and grading of the site. Failure to install and maintain temporary or permanent tree protective fencing is a violation of this TCP2.
- f. 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 in perpetuity.
- g. The county inspector shall be notified prior to soil preparation or initiation of any tree planting on this site.
- h. 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.

Results of annual survival checks for each of the required four years after tree planting shall be reported to the M-NCPPC, Planning Department.

- i. 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

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 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 green house, 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, but may be planted from March through November. No planting shall be done while 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.
6. 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 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 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 preparer of this tree conservation plan 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 theory.
8. 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 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 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.
9. Soil Improvement Measures: the soil shall then be improved according to the recommendations made by the testing company.
10. 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.
11. Planting method: Consult the Planting Detail(s) shown on this plan.
12. Mulching: Apply two-inch thick layer of woodchip or shredded hardwood mulch (as noted) to each plating 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 5 lbs/acre.
14. Mowing: No mowing shall be allowed in any planting area.
15. 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.
16. Source of Seedlings: state name, address, and phone number of nursery or supplier.

When areas designated for reforestation will be reforested by natural regeneration the following notes shall be added to the plan:

Natural Regeneration Notes

All areas designated for reforestation shall be reforested by natural regeneration. The following requirements and conditions apply:

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 saplings.
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 or as appropriate and two strand wire fencing shall be installed along road frontages 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.

A Four-Year Management Plan for Re/Afforestation shall be added to the plan as follows:

Four-Year Management Plan for Re/Afforestation Areas

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

- | | |
|-----------|--|
| Year 1: | 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 min.) |
| Year 2-3: | 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 min.) |
| Year 4: | <u>Reinforcement planting if needed.</u> (See Note 2)
<u>Survival check</u> (September –November) |
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 alternative plant type.

3. 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 off-site woodland conservation is proposed:

Prior to the issuance of the first permit for the development shown on this TCP2, all off site woodland conservation required by this plan shall be identified on an approved TCP2 plan and recorded as an off-site easement in the land records of Prince George's County. Proof of recordation of the off-site conservation shall be provided to the M-NCPPC, Planning Department prior to issuance of any permit for the associated plan.

Add the applicable invasive plan removal notes if afforestation is used on an off-site woodland conservation bank.

When the use of fee-in-lieu is proposed:

All required fee-in-lieu payments shall be made to the Woodland Conservation Fund. Proof of deposit shall be provided prior to issuance of any permits related to this TCP2 unless the project is phased. Phased projects shall pay the fee-in-lieu amount for each phase prior to the issuance of any permit for that phase and shown in the fee-in-lieu breakdown on this TCP2.

**When invasive plant species are to be removed by the permittee:
(use the applicable notes based on the invasive plant removal plan)**

- a. Invasive plant removal shall be completed prior to _____ (*insert timing mechanism*) and conform to the recommendations of the invasive plant removal plan shown on the plan prepared by _____ (*insert the qualified professional's name who prepared the invasive plant removal recommendations*) dated _____.
- b. The removal of noxious, invasive, and non-natives plant species shall be done with the use of hand-held equipment only such as pruners or a chain saw. These plants may be cut near the ground and the material less than two inches diameter may be removed from the area and disposed of appropriately. All material from these noxious, invasive, and non-native plants greater than two (2) inches diameter shall be cut to allow contact with the ground, thus encouraging decomposition.
- c. The use of broadcast spraying of herbicides is not permitted. However, the use of herbicides to discourage re-sprouting of invasive, noxious, or non-native plants is permitted if done as an 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 and be applied by a certified pesticide applicator.

When Virginia pines are present within 40 feet of the limits of disturbance in a preservation area:

- a. The subject property contains Virginia pines (*Pinus virginiana*) that are subject to wind throw.

All Virginia pines greater than 6 inches in diameter within 40 feet of the final proposed limit of disturbance or the boundary of the property shall be cut down by hand during the clearing of the site.

- b. After the Virginia pines 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 to 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 plan.

POST DEVELOPMENT NOTES

When woodlands and/or specimen, historic or champion trees are to remain:

- a. 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.

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 permittee 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.

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.

- b. 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 plants 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 non-native plants greater than two (2) inches diameter shall be cut to allow contact with the ground, thus encouraging decomposition.
- c. The use of broadcast spraying of herbicides is not permitted. However, the use of herbicides to discourage re-sprouting of invasive, noxious, or non-native plants is permitted if done as

an 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.

- d. The use of chainsaws is extremely dangerous and should not be conducted with poorly 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

- a. Reforestation fencing and signage shall remain in place in accordance with the approved Type 2 Tree Conservation Plan.
- b. 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.

TCP-15.Type 2 Tree Conservation Plan Preparation and Review Checklist for Woodland Conservation Banking

**PRINCE GEORGE’S COUNTY: TYPE 2 TREE CONSERVATION PLAN
PREPARATION AND REVIEW CHECKLIST FOR
WOODLAND CONSERVATION BANKING
(Based on CB-027-2010 and Environmental Technical Manual: Effective September 1, 2010)**

Project Name: _____

TCP 1 Number (if applicable): _____ Associated Plan: _____

Prepared By: _____ Date _____

The TCP 2 must include the entire area of the site and use the standard line types and symbols as provided by EPS. An approved NRI is required for all proposed woodland conservation banks. The NRI must be prepared in accordance with all applicable requirements of the Technical Manual. (Refer to Part B, Natural Resource Inventories).

A. GENERAL INFORMATION

- ___ Includes the entire legal boundaries of the site
- ___ Vicinity map, north arrow, scale (at the same scale as the associated plan, but no greater than 1" = 50')
- ___ Legend or Key to all symbols, shading, and patterns used on the plan. (The legend shall be shown on each sheet of the plan containing views of the site. The standard symbols established by EPS shall be used)
- ___ Revision box (All revisions made to a TCP shall be shown in the revision box along with a brief description of the revision, the date, and the initials of the person making the revision.)
- ___ Qualified Professional name, address, phone number, e-mail, stamp (if applicable), signature, and date of plan certification
- ___ EPS approval block

B. EXISTING SITE FEATURES AS SHOWN ON AN APPROVED NRI

- ___ Property boundaries with bearings and distances
- ___ Parcel/lot numbers and area/s per legal description
- ___ Topography (2' maximum contour intervals)
- ___ Physical site features shown such as buildings, roads, driveways, etc.
- ___ Woodlands and trees (must extend 100' off the property line on all sides)
- ___ All specimen trees and their critical root zones
- ___ Specimen Tree Table showing tree number, species, size, condition and comments on the reason for the determination of the condition, proposed disposition and any comments regarding special preservation treatments or recommendations. A note should also be added to indicate that the trees were survey located. (All trees within 100 feet of the proposed LOD shall be survey located.)
- ___ Regulated streams and their required buffers (buffers measured from top of bank)
- ___ Wetlands and their required buffers (If wetlands exist on-site and an NRI was not previously required, the FSD submission must also include a wetland study)
- ___ 100-year floodplain and required twenty-five (25) foot building setback for residential applications (package must also include the source of the FP delineation and verification of its location by DPW&T).
- ___ Critical habitat areas as obtained from the Maryland Department of Natural Resources, Wildlife and Heritage Division.
- ___ Forest Interior Dwelling Species (FIDS) habitat and designated buffers
- ___ Location of PMA (from the approved NRI, approved TCP 1 or delineated per Part B, Section 4.6 of the Environmental Technical Manual)
- ___ Steep slopes (slopes 15% in grade and greater shown for the establishment of the PMA only. If the PMA was established on the NRI or TCP 1, then steep slopes should not be shown)
- ___ Historic sites labeled as listed in the latest edition of "Illustrated Inventory of Historic Sites and District Plan for Prince George's County, Maryland."
- ___ Note presence or absence of scenic or historic roads as listed in the "Designated Scenic and Historic Road List for Prince George's County"

- ___ Note included to indicate if the site is adjacent to or in the vicinity of any roadways designated or master planned as arterial or higher per Part B, Section 4.11 of the Environmental Technical Manual.
- ___ Unmitigated 65 dBA Ldn noise contour shown and labeled
- ___ Utilities and their associated easements if applicable
- ___ All other easements

C. WOODLAND CONSERVATION INFORMATION

- ___ Woodland Conservation Worksheet (appropriate worksheet must show zoning and proper calculations of all acreages to the nearest one-hundredth of an acre; do not deduct land from the gross tract area that has not, to date, been dedicated)
- ___ Standard TCP2 notes and other TCP2 notes that may be appropriate
- ___ Woodlands clearly identified by the treatment proposed (Cleared Floodplain Area, Cleared Off-Site Area, Woodland Preservation Area, Woodland Reforestation/Afforestation Area, Woodland Preserved-Not Credited, Woodland Retained-Assumed Cleared, Natural Regeneration Area, etc.) using standard symbols and labels as established in the Environmental Technical Manual
- ___ Acreage shown to the nearest 1/100th acre for each of the woodland treatment areas shown
- ___ All woodland conservation areas are a minimum width of fifty- (50) feet except where these areas abut other protected woodlands previously protected by a TCP or other prior approved mechanism, such as a conservation easement, and where the combined total of these areas total 50 feet in width. Landscaped areas may be thirty-five (35) feet in width.
- ___ There are no woodland conservation areas located on lots less than one (1) acre in size; within 40 feet of the front and rear of all building footprints; within 20 feet of the sides of all building footprints; within 30 feet of a commercial or industrial building; within 10 feet of the rear lot line of a town house; or within 5 feet of a parking lot. These dimensions are shown on the plan.
- ___ Woodland preservation is not located within the 100-year floodplain, utility easements, or other areas where control of the land and its preservation is not possible
- ___ If land to be dedicated or conveyed contains woodland conservation of any kind, approval of the future property owner shall be obtained and provided with the TCP 2 if not provided on a previous TCP 1
- ___ For TCP 2s with more than one sheet, a Woodland Conservation Summary Table as shown in Part A, Section 6.2 of the Environmental Technical Manual has been provided on the cover sheet
- ___ For projects where woodland conservation is located on lots/parcels, a "Lot-by-Lot table" has been provided with areas listed for Woodland Preservation, Woodland Reforestation/Afforestation, Woodland Preserved-Not Credited, Woodland Retained-Assumed Cleared, and Natural Regeneration for each applicable lot
- ___ Proposed building locations (to be represented by actual proposed building footprints or the maximum limits of proposed construction)
- ___ Proposed grading and proposed limits of disturbance to include all sediment and erosion control devices, stockpiles and other areas that need to be cleared during construction
- ___ All information is clear. Graphic patterns, line types, and symbols are from "Standard List of Symbols" with all required text and labeling shown.
- ___ A note regarding the location and current possession of "previously dedicated land"

D. SPECIMEN TREES

(Use this section when grading or disturbing the critical root zone of any specimen tree shown on the plan)

- ___ Information has been provided on the species, diameter at breast height, crown height, average crown spread, general vigor and potential for retention.
- ___ Grading, structures, and any other activities that are proposed within the root zone have been shown.
- ___ Proposed limits of disturbance (LOD) have been shown on the plan.
- ___ Details for time of occurrence, equipment to be used, and any special practices for root pruning that may be necessary have been provided.

- ___ Details for any top pruning that may be necessary have been provided.
- ___ Details of any fertilization or irrigation practices that are to be used have been provided.
- ___ Graphic and written details have been provided for all temporary or permanent tree protective devices to be used.
- ___ Details about berms or swales that are to be constructed to prevent silt or contaminated runoff from wash pads, materials stock piles, vehicle parking areas, or equipment maintenance and storage areas from washing into the tree's root zone have been provided. Locations are shown on the plan.

E. SITE PROTECTION AND SIGNAGE

- ___ Type and location of all tree protection devices are shown.
- ___ Details for all protection devices are shown.
- ___ All sign locations are shown.
- ___ All sign details are shown.
- ___ Statement on plan stating that the signs for planted areas are to remain in perpetuity; (signs for preservation areas may be removed after use and occupancy)
- ___ Sign locations and details are shown for all woodland conservation preservation areas along the limits of disturbance and along roadways.

F. AFFORESTATION/REFORESTATION AREAS

(The following items must be addressed in text form and/or graphically shown on the plan)

Soil Conditions

- ___ Amended soil ph.
- ___ Soil compaction corrected
- ___ Topsoil minimum depth
- ___ Soil amendments? Organic other
- ___ Soils stabilized?
 - ___ Structural
 - ___ Vegetative
 - ___ Mulch
- ___ Soils free of contaminants (oil products, concentrated soluble salts, ferrous iron, soluble aluminum, soluble manganese, and herbicides).

Hydrology

- ___ Hydrology of planting sites is suited to species selected.

Presence of Invasive Species

- ___ Invasive species present on site
- ___ Management plan for invasive species

Site Preparation

- ___ Ground cover will not adversely impact tree growth.
- ___ Control of competing vegetation around trees.

Planting Stock

- ___ Afforestation and reforestation is being provided on lots greater than one (1) acre in size.
- ___ Planting stock seed source is from within the geographic region suited for growth in this area.
- ___ Planting stock size is specified (seedling, whip, 1" caliper, 2" caliper, etc.)
- ___ Planting stock meets the standards set by the American Nursery and Landscape Association.
- ___ Seedling stock meets the following criteria:
 - Hardwoods - 1/4" to 1/2" caliper with roots no less than 8" long
 - Conifers - 1/8" to 1/4" caliper with roots not less than 8" long and top height of 6" or more

TCP2 Checklist for Off-site Banking

Revised August, 2010

Page 4

Shrubs - 1/8" or larger caliper with 8" root system

- ___ Containerized stock used has been noted.
- ___ Species and quantities used are specified.
- ___ Planting pattern is identified.

Planting Methods

- ___ Detail of planting by hand.
- ___ Detail of planting by machine.
- ___ Schedule of tree planting activities (start and completion of each phase of work).
- ___ Detail of planting method used for larger caliper stock. (A larger planting bed must be utilized. This should not be a drilled or dug hole 6 to 12 inches larger than the root ball or container)

Planting Management Plan

- ___ Information on site and tree maintenance is listed.
- ___ Company or individual responsible for tree care is listed on the plan or detail sheet.
- ___ Term of the Plan is no less than five years.
- ___ Final expected survival is indicated.
- ___ Follow-up care and maintenance (watering, fertilization, weeding, support plantings, etc. must be addressed).

Afforestation/Reforestation Notes

- ___ All applicable notes from the afforestation/reforestation section of the standard TCP 2 notes.

Natural Regeneration

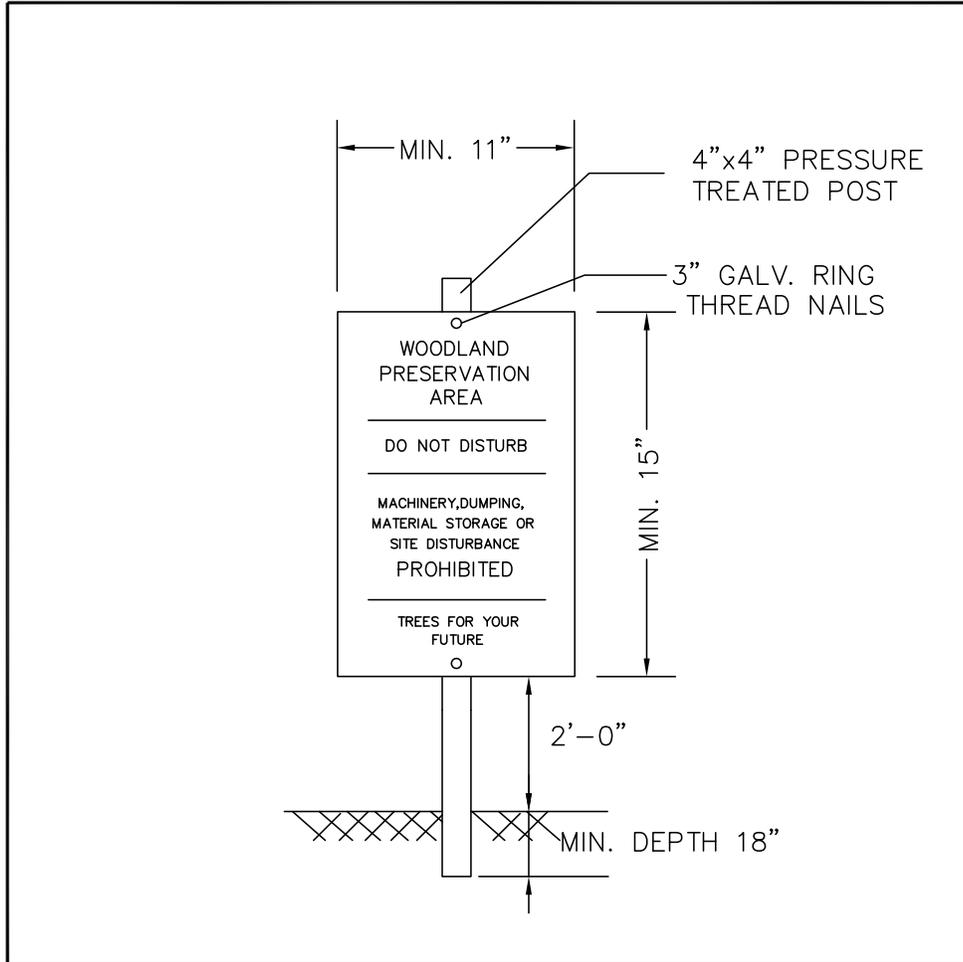
- ___ Sufficient seed source
- ___ Sampling points taken in areas under regeneration that has not yet achieved status of woodlands

TCP-16.Off-Site Woodland Conservation Bank Summary Table

OFF-SITE WOODLAND CONSERVATION BANK SUMMARY TABLE

Woodland Conservation Bank Identifier	Woodland Conservation Credits Total (acres)	Off-Site Preservation (acres) 2:1	Off-Site Afforestation (acres) 1:1	Preservation Area Available (acres)	Afforestation Area Available (acres)	Recordation Information (Liber/Folio)	Benefiting TCP2	Benefiting Property	Reviewer	Approval Date

TCP-17.Woodland Preservation Area Sign

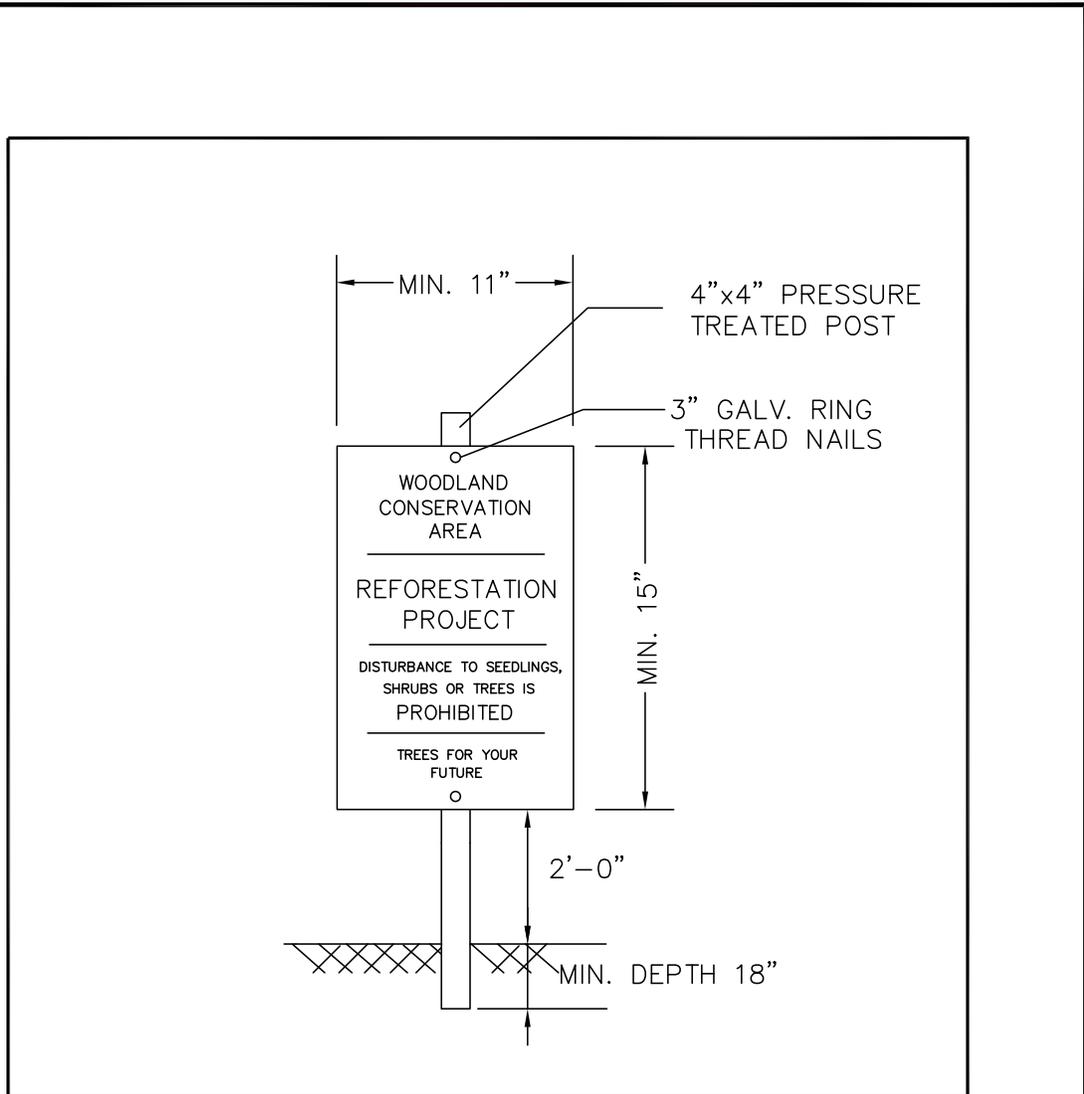


NOTES:

1. ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.
2. SIGNS SHOULD BE PROPERLY MAINTAINED.
3. AVOID INJURY TO ROOTS WHEN PLACING POSTS FOR THE SIGNS.
4. SIGNS SHOULD BE POSTED TO BE VISIBLE TO ALL CONSTRUCTION PERSONNEL FROM ALL DIRECTIONS.
5. SIGNS SHOULD BE INSTALLED AT SAME TIME AS TREE PROTECTION DEVICE.
6. LOCATE SIGNS APPROXIMATELY EVERY 50 FEET ALONG FENCING.
7. SIGNS SHOULD BE IN PLACE IMMEDIATELY FOLLOWING STAKE OUT OF L.O.D., AND REMAIN IN PLACE IN PERPETUITY.

WOODLAND PRESERVATION AREA SIGN

TCP-18.Reforestation Area Sign

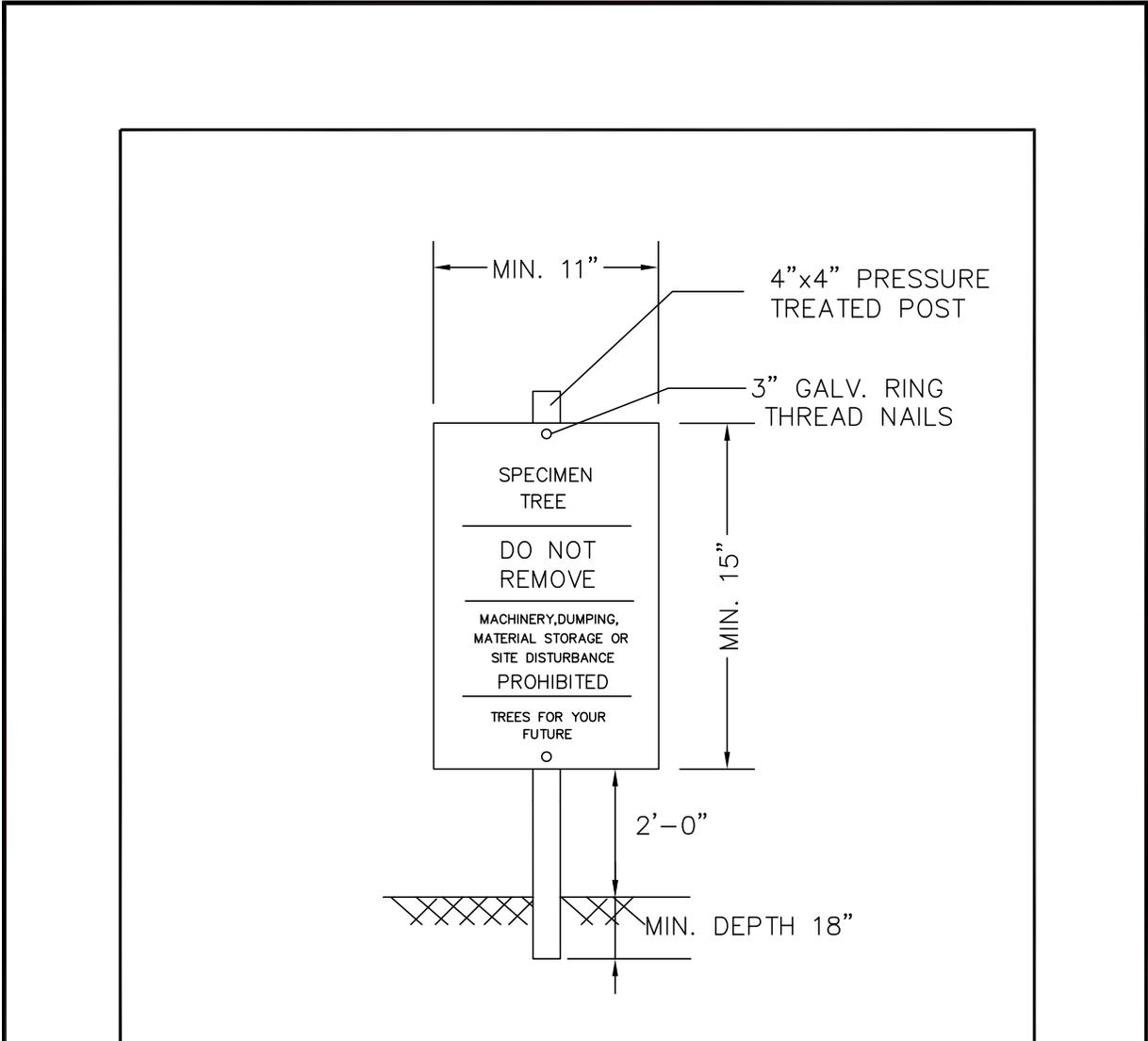


NOTES:

1. ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.
2. SIGNS SHOULD BE PROPERLY MAINTAINED.
3. AVOID INJURY TO ROOTS WHEN PLACING POSTS FOR THE SIGNS.
4. SIGNS SHOULD BE POSTED TO BE VISIBLE TO ALL CONSTRUCTION PERSONNEL FROM ALL DIRECTIONS.
5. SIGNS SHOULD BE INSTALLED AT SAME TIME AS TREE PROTECTION DEVICE.
6. LOCATE SIGNS APPROXIMATELY EVERY 50 FEET ALONG FENCING.
7. SIGNS SHOULD BE IN PLACE IMMEDIATELY FOLLOWING STAKE OUT OF L.O.D., AND REMAIN IN PLACE IN PERPETUITY.

REFORESTATION AREA SIGN

TCP-19. Specimen Tree Sign

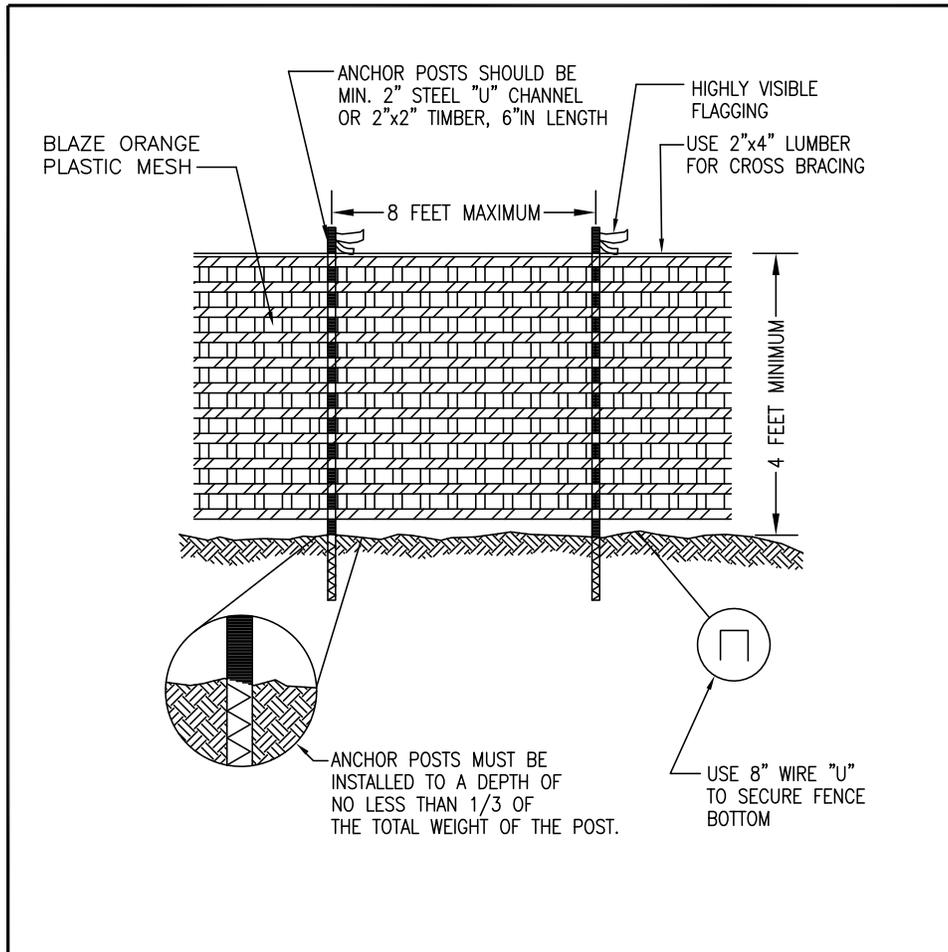


NOTES:

1. ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.
2. SIGNS SHOULD BE PROPERLY MAINTAINED.
3. AVOID INJURY TO ROOTS WHEN PLACING POSTS FOR THE SIGNS.
4. SIGNS SHOULD BE POSTED TO BE VISIBLE TO ALL CONSTRUCTION PERSONNEL FROM ALL DIRECTIONS.
5. SIGNS SHOULD BE INSTALLED AT SAME TIME AS TREE PROTECTION DEVICE.
6. LOCATE SIGNS APPROXIMATELY EVERY 50 FEET ALONG FENCING.
7. SIGNS SHOULD BE IN PLACE IMMEDIATELY FOLLOWING STAKE OUT OF L.O.D., AND REMAIN IN PLACE IN PERPETUITY.

SPECIMEN TREE SIGN

TCP-20.Type 1 (Temporary) Tree Protection Fence Detail for Woodland Preservation Areas

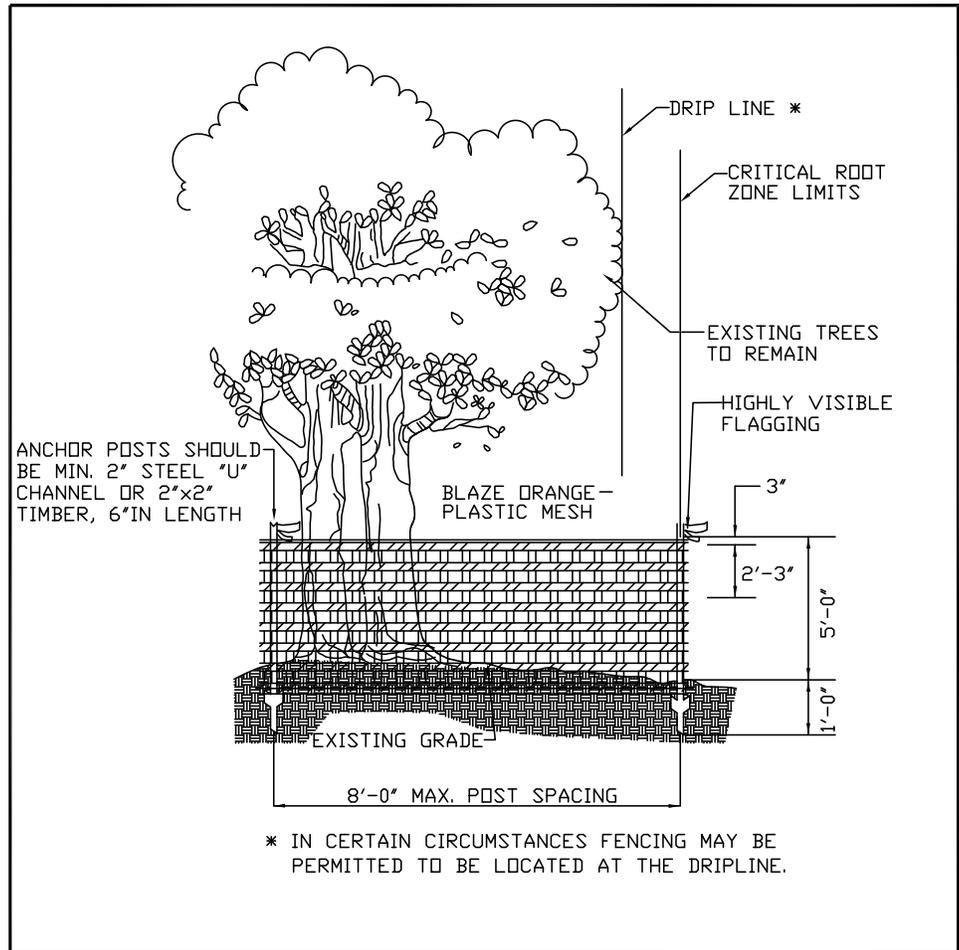


NOTES: (MUST BE INCLUDED WITH DETAIL)

1. 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 DEVICES.
4. AVOID ROOT DAMAGE WHEN PLACING ANCHOR POSTS.
5. DEVICE SHOULD BE PROPERLY MAINTAINED DURING CONSTRUCTION
6. PROTECTIVE SIGNAGE IS ALSO REQUIRED.

TYPE 1 (TEMPORARY) TREE PROTECTION FENCE DETAIL
FOR WOODLAND PRESERVATION AREAS

TCP-21. Temporary Fence Protection Detail for Woodland Preservation

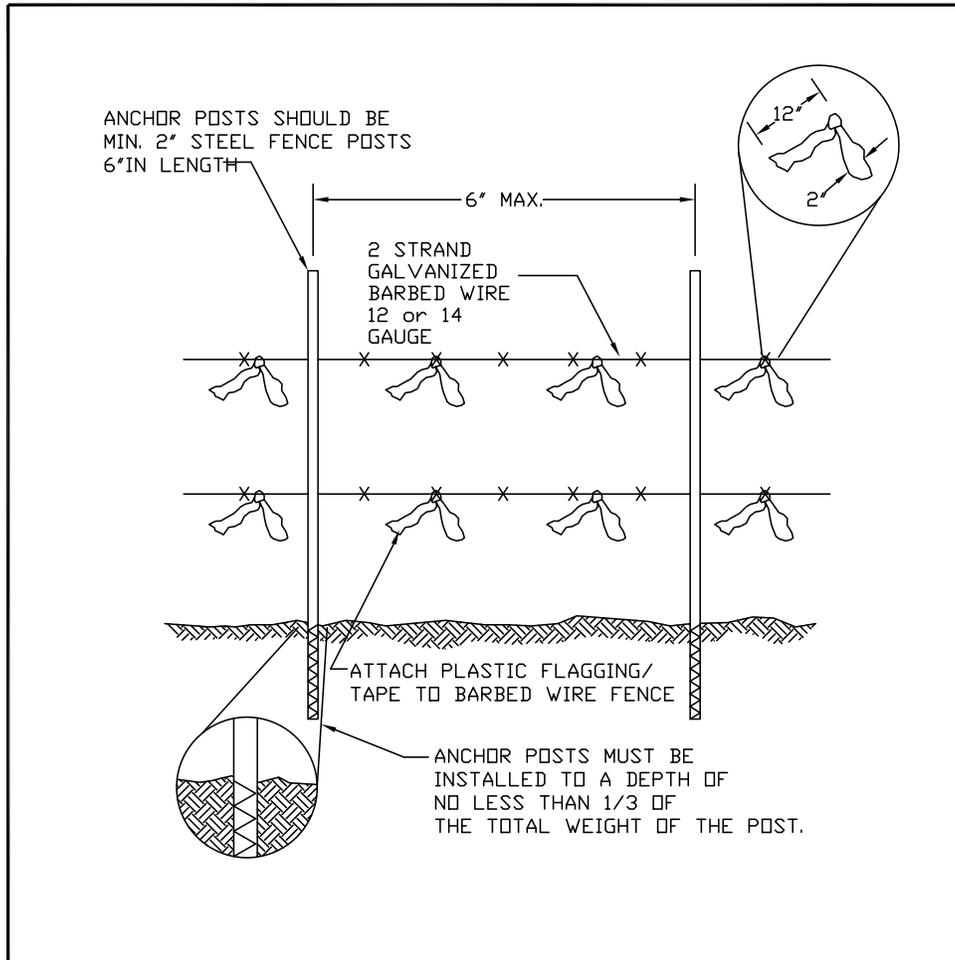


NOTES: (MUST BE INCLUDED WITH DETAIL)

1. 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 DEVICES.
4. AVOID ROOT DAMAGE WHEN PLACING ANCHOR POSTS.
5. DEVICE SHOULD BE PROPERLY MAINTAINED DURING CONSTRUCTION
6. PROTECTIVE SIGNAGE IS ALSO REQUIRED.

TEMPORARY FENCE PROTECTION DETAIL
FOR WOODLAND PRESERVATION AREAS

TCP-22.Type 2 (Temporary) Tree Protection Fence for Reforestation Areas

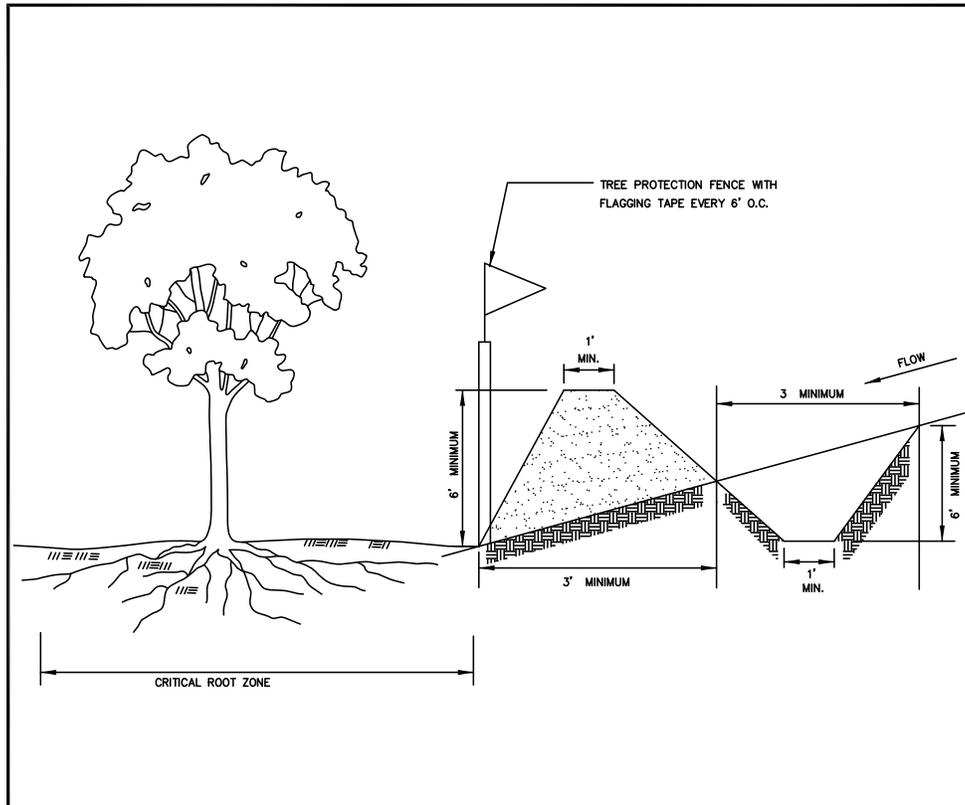


NOTES: (MUST BE INCLUDED WITH DETAIL)

1. 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 DEVICE.
4. AVOID ROOT DAMAGE WHEN PLACING ANCHOR POSTS.
5. BARBED WIRE SHOULD BE SECURELY ATTACHED TO POSTS.
6. DEVICE SHOULD BE PROPERLY MAINTAINED DURING CONSTRUCTION.
7. PROTECTIVE SIGNAGE IS ALSO REQUIRED.

TYPE 2 (TEMPORARY) TREE PROTECTION FENCE
FOR REFORESTATION AREAS

TCP-23.Type 3 (Temporary) Tree Protection Fence Combination Earth Dike and Tree Protection

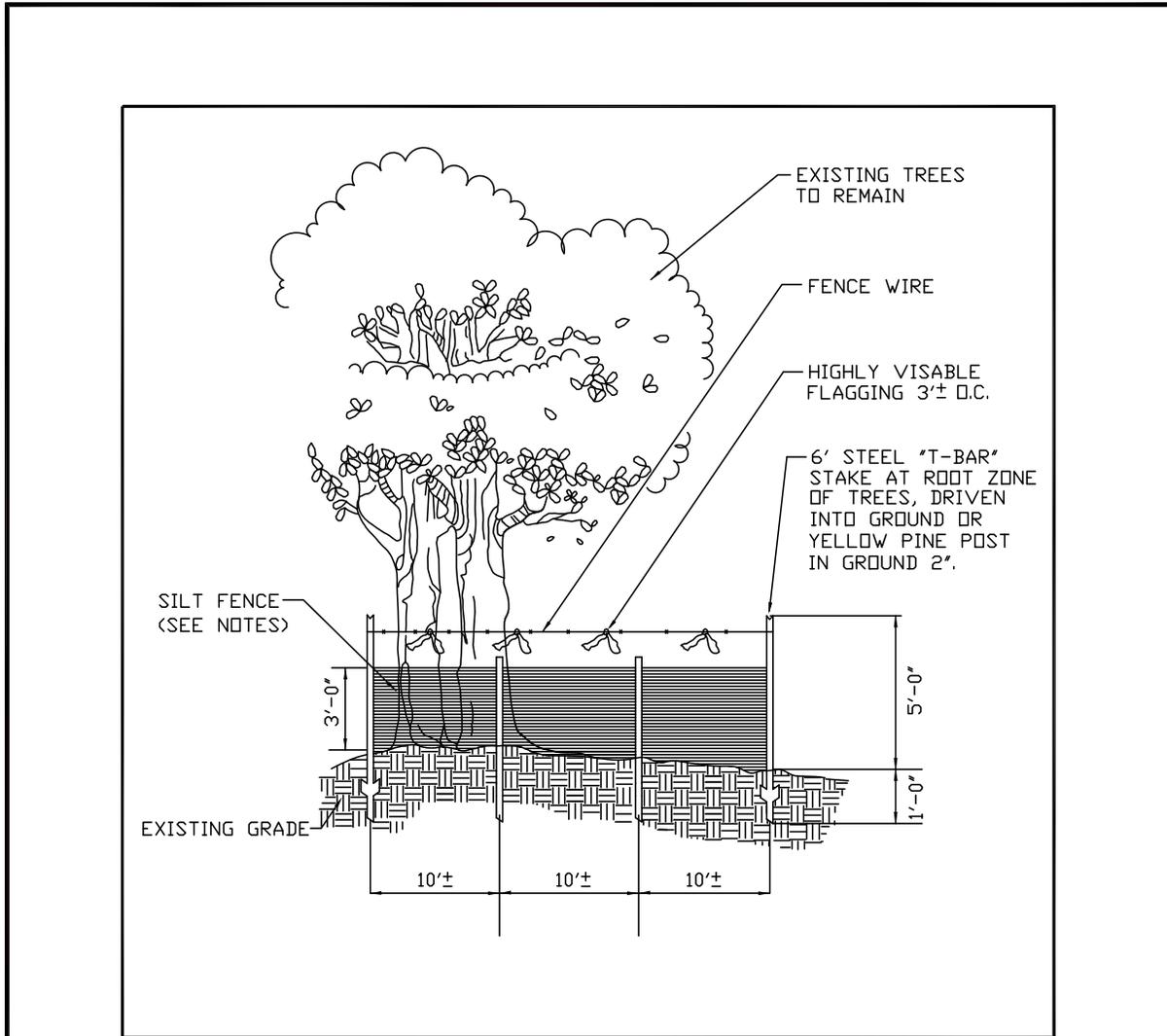


NOTES:

1. COMBINATION SEDIMENT CONTROL AND FOREST PROTECTION DEVICE.
2. BOUNDARIES OF THE RETENTION AREA WILL BE SET AS PART OF THE FOREST CONSERVATION PLAN REVIEW PROCESS.
3. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED PRIOR TO INSTALLING PROTECTIVE DEVICE.
4. ROOT DAMAGE SHOULD BE AVOIDED.
5. THE TOE OF SLOPE SHOULD BE OUTSIDE THE CRITICAL ROOT ZONE.
6. EQUIPMENT IS PROHIBITED WITHIN CRITICAL ROOT ZONE OF RETENTION AREA; PLACE DIKE ACCORDINGLY.
7. ALL STANDARD MAINTENANCE FOR EARTHEN DIKES AND SWALES APPLY TO THESE DETAILS.
8. ALL STANDARD RECLAMATION PRACTICES FOR EARTHEN DIKES AND SWALES SHALL APPLY TO THESE DETAILS.

TYPE 3 (TEMPORARY) TREE PROTECTION FENCE
COMBINATION SILT FENCE & TREE PROTECTION

TCP-24.Type 4 (Temporary) Tree Protection Fence Combination Silt Fence and Tree

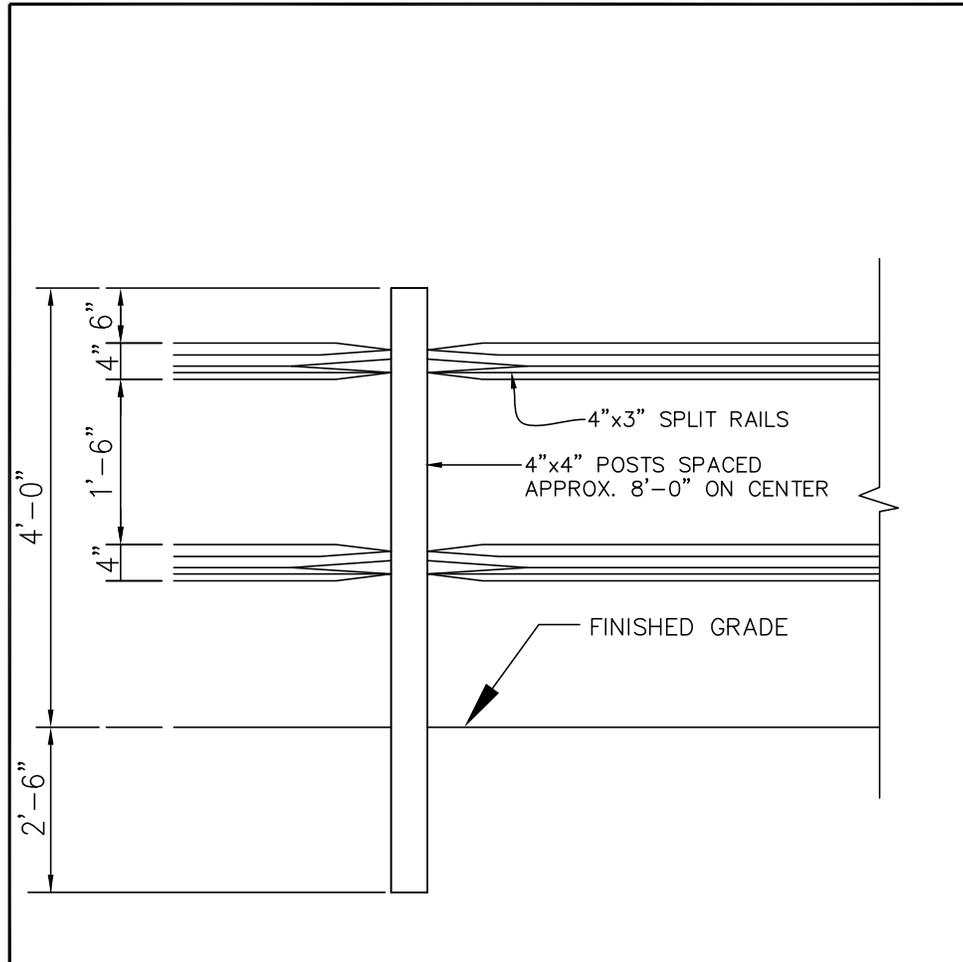


NOTES:

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 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.
8. LOCATE FENCE OUTSIDE THE CRITICAL ROOT ZONE.

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

TCP-25. Permanent (Split Rail) Tree Protection Fence for Reforestation Areas

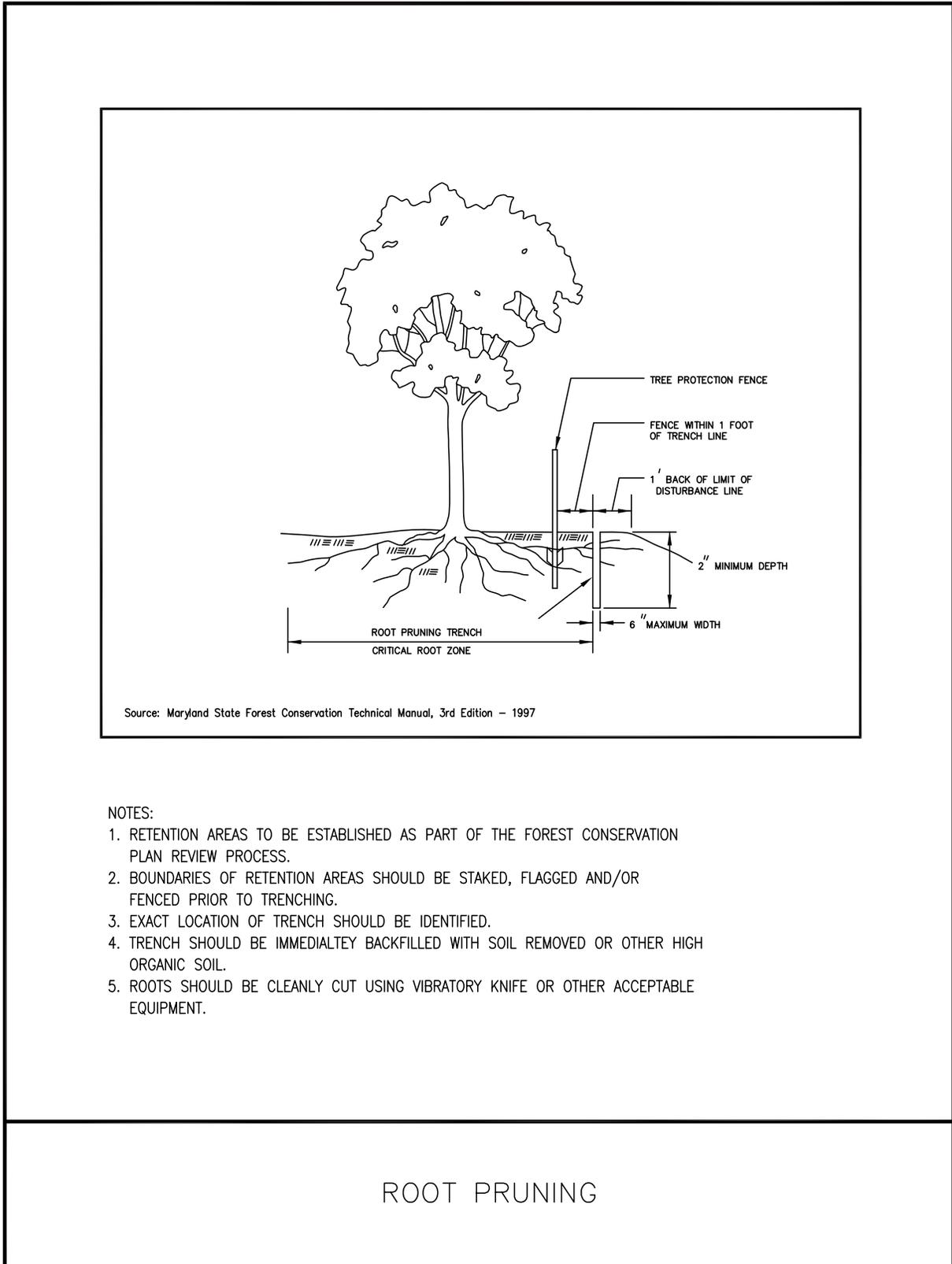


NOTES:

1. POSTS SHALL STAND PLUMB.
2. RAILS SHALL BE HUNG WITH UNIFORM HEIGHT AND SPACING.
3. REFORESTATION SIGNS TO BE ATTACHED TO WOOD POSTS EVERY 50 FEET..
4. TOP OF SIGN TO BE FLUSH WITH TOP OF WOOD POST.
5. SIGNS TO BE ATTACHED USING 2 GALVANIZED WOOD SCREWS EACH WITH A GALVANIZED WASHER.

PERMANENT (SPLIT RAIL) TREE PROTECTION FENCE
FOR REFORESTATION AREAS

TCP-26.Root Pruning Detail



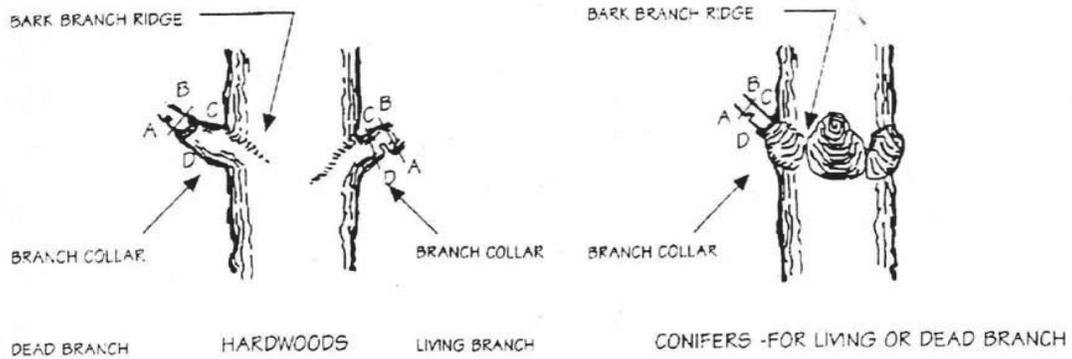
NOTES:

1. RETENTION AREAS TO BE ESTABLISHED AS PART OF THE FOREST CONSERVATION PLAN REVIEW PROCESS.
2. BOUNDARIES OF RETENTION AREAS SHOULD BE STAKED, FLAGGED AND/OR FENCED PRIOR TO TRENCHING.
3. EXACT LOCATION OF TRENCH SHOULD BE IDENTIFIED.
4. TRENCH SHOULD BE IMMEDIATELY BACKFILLED WITH SOIL REMOVED OR OTHER HIGH ORGANIC SOIL.
5. ROOTS SHOULD BE CLEANLY CUT USING VIBRATORY KNIFE OR OTHER ACCEPTABLE EQUIPMENT.

ROOT PRUNING

TCP-27.Tree Pruning Detail

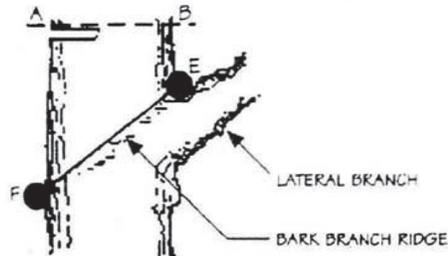
Pruning a Branch



Notes:

1. Remove branch weight by undercutting at A and remove limb by cutting through at AB.
2. Remove stub at CD (line between branch bark ridge and outer edge of branch collar).
3. If D is difficult to find on hardwoods, angle of CD to trunk should be the reflective angle of the bark branch ridge to the trunk.
4. Only prune at specified times.
5. Remove no more than 30% of crown at one time.

Pruning a Leader to Reduce Size



Notes:

1. Remove top weight by undercutting at A and remove limb by cutting through AB.
2. Remove stub at EF parallel to the bark branch ridge.
3. Only prune at specified times.
4. No more than 30% of crown to be removed at one time.
5. Diameter of lateral branch should be no less than 30% of the diameter of the leader.

Source: Fairfax County, Virginia:Vegetation Preservation & Planting, January 1986

Tree Pruning

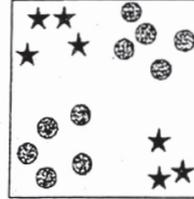
Typical Forest Tree Distribution Patterns



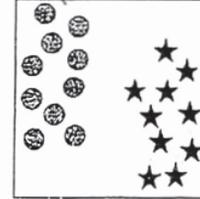
Random



Nonrandom
Positive Association



Nonrandom
Negative Association



Clumped



SPECIES 1



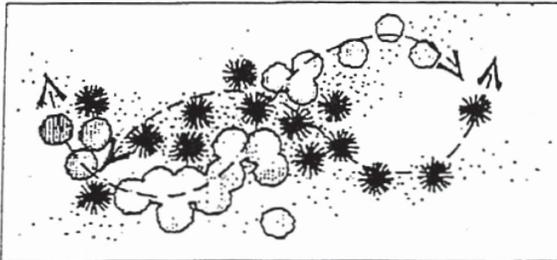
SPECIES 2

Note:

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 chosen site that mimic natural patterns.

Source: Prince Georges County Woodland Conservation Manual.

Aggregate Distribution Drift

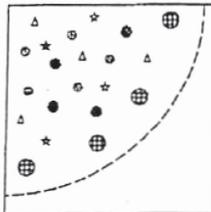


Note:

When used, plant cluster type groupings that taper or feather out along the edges. Clusters often appear as elongated or tear drop shapes.

Source: EQR, Inc.

Mixing Transplant Stock



⊕ Locate larger trees (B&B or container grown) or transplant stock at the perimeter of reforestation/afforestation plantings of whips, seedling grown stock.

--- Protective Fencing

★ Smaller Stock

Source: Adapted from Forest Conservation Manual, 1991

Planting Distribution Patterns

TCP-29.Tree Planting and Maintenance Calendar

Tasks	Months											
	Jan ⁺	Feb ⁺	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov ⁺	Dec ⁺
Transplant of 2" DBH or Greater	[Recommended with Additional Care]				[Recommended, Optimal time]							
Planting Seedlings, Whips	[Recommended with Additional Care]				[Recommended, Optimal time]							
Minimum Monitoring			*				*				*	
Fertilizer (if Needed) ⁺					[Recommended]					[Recommended]		
Water ⁺⁺					[Recommended, Optimal time]							
Pruning	[Recommended]				[Recommended]					[Recommended]		

+

++

Recommended, Optimal time

Recommended with Additional Care

Recommended

Dependent Upon Site Conditions

Dependent Upon Site Conditions: Weekly Watering is Strongly Recommended From May Through October Unless Weekly Rainfall Equals 1"

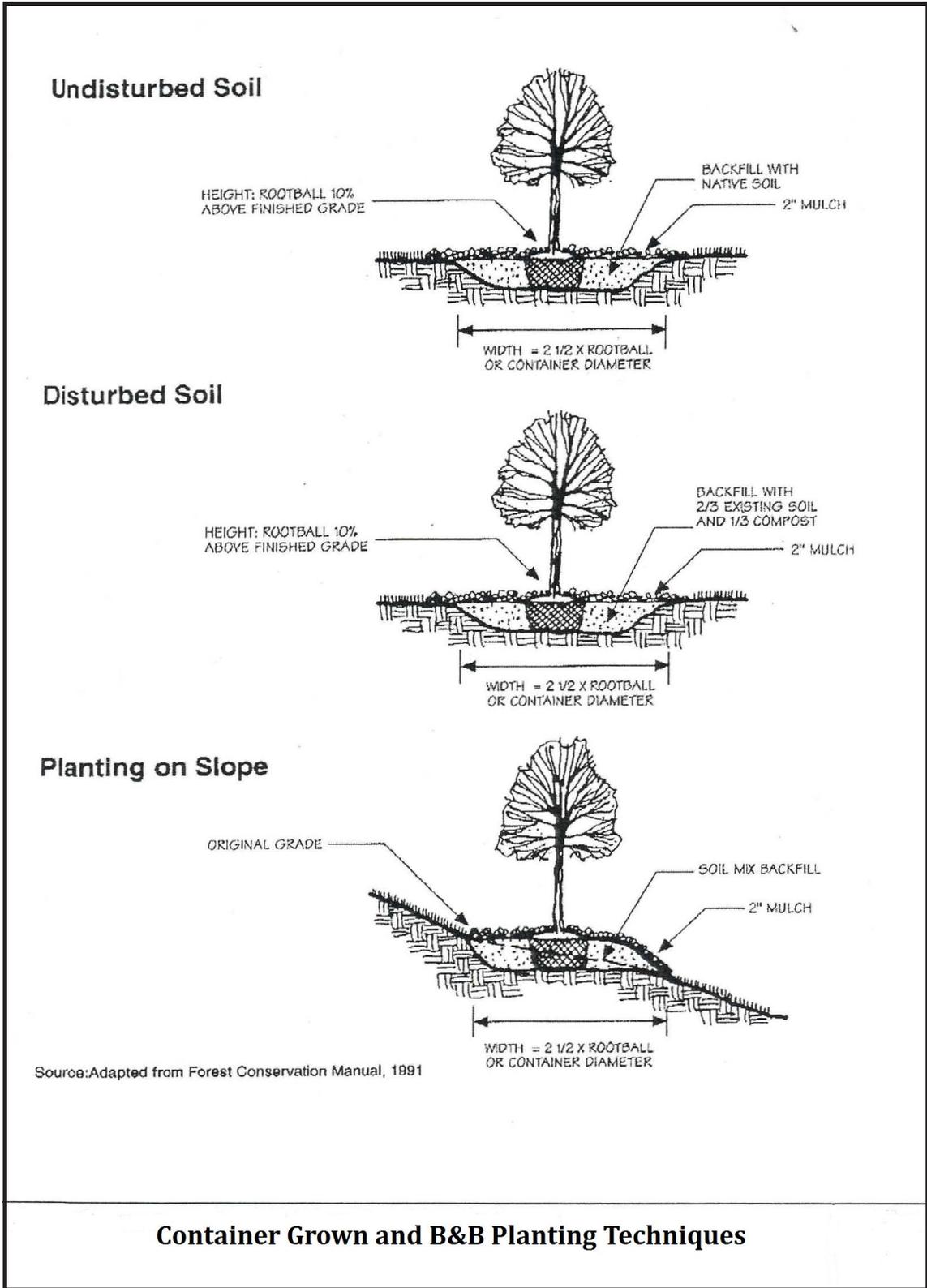
Notes:

1. Activities during November through February depend on ground conditions.
2. No fall planting of oaks and pines.
3. The planting and care of trees is most successful when coordinated with the local conditions. This calendar summarizes some of the recommended time frames for basic reforestation and stress reduction activities.

Source: Adapted from Forest Conservation Manual, 1991

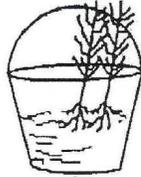
Tree Planting and Maintenance Calendar

TCP-30.Container Grown and B&B Planting Techniques

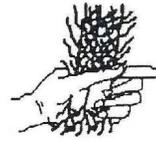


TCP-31.Handling Bare Root Stock

Handling Seedlings in the Field



Correct
IN BUCKET WITH SUFFICIENT
WATER TO COVER ROOTS

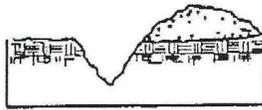


Incorrect
IN HAND:
ROOTS DRY OUT

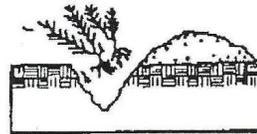
Note:

1. Bare root seedlings and whip stock should be heeled-in when left unplanted for more than 24 hours.

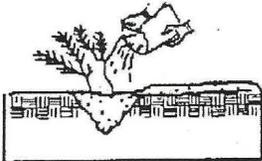
Seedlings and Whips



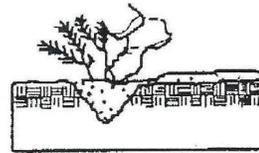
1. DIG Y-SHAPED TRENCH
IN MOIST SHADY PLACE



2. BREAK BUNDLES AND
SPREAD OUT EVENLY



3. FILL IN LOOSE SOIL AND
WATER WELL

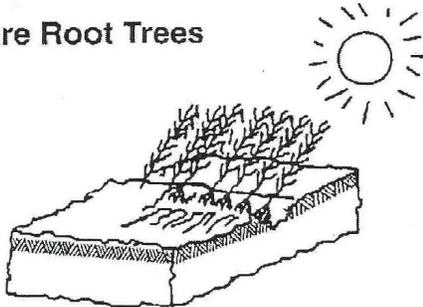


4. COMPLETE FILLING IN SOIL
AND FIRM WITH FEET

Note:

1. Bare root seedlings and whip stock should be heeled-in when left unplanted for more than 24 hours.

Bare Root Trees



Place trees in an east-west trench with the tops of the trees pointing toward the afternoon sun. Moist soil should be worked around the roots to cover them and minimize air pockets. Pointing the tree tops toward the afternoon sun exposes the least surface to the sun so the buds will be less likely to begin growth.

Note:

1. Bare root trees should be banked-in when they must be left unplanted for longer than a few days

Source: Adapted from Forest Conservation Manual, 1991

Handling Bare Root Stock

TCP-32. Seedling and Whip Planting Techniques

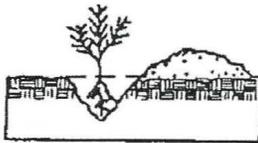
Seedling and Whip Planting



Note:

1. Mulching newly planted seedlings helps the soil retain moisture and protects the seedling from compaction and stem injuries.

Correct and Incorrect Planting Depth

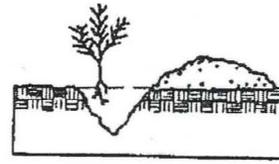


Correct
AT SAME DEPTH

SEEDLING WAS GROWN
IN NURSERY

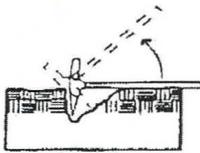


Incorrect
TOO DEEP AND ROOT
BENT



Incorrect
TOO SHALLOW AND ROOTS
EXPOSED

Mattock Planting



1. Insert mattock; lift handle
and pull



2. Place seedling along straight side
at correct depth.



3. Fill in and pack soil to
bottom of roots.



5. Firm around seedling with feet.



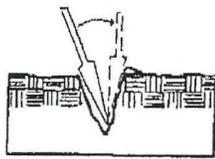
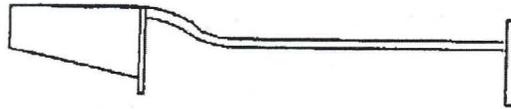
4. Finish filling in soil and firm with heel.

Source: Adapted from Forest Conservation Manual, 1991

Seedling and Whip Planting Techniques

TCP-33. Seedling Planting Techniques

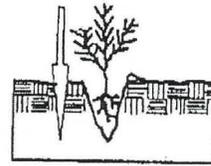
Planting With Dibble Bar



1. INSERT DIBBLE AT ANGLE SHOWN ABOVE AND PUSH FORWARD TO UPRIGHT POSITION



2. REMOVE DIBBLE AND PLACE SEEDLING AT CORRECT DEPTH



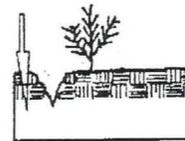
3. INSERT DIBBLE 2 INCHES TOWARD PLANTER FROM SEEDLING



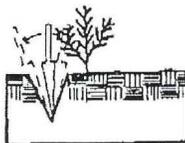
4. PULL HANDLE OF DIBBLE TOWARD PLANTER FIRING SOIL AT BOTTOM OF ROOTS



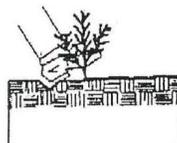
5. PUSH HANDLE OF DIBBLE FORWARD FROM PLANTER FIRING SOIL AT TOP OF ROOTS



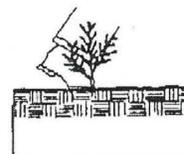
6. INSERT DIBBLE 2 INCHES FROM SEEDLING



7. PULL FORWARD THEN PULL BACKWARD FILLING HOLE



8. FILL LAST HOLE BY STAMPING WITH HEEL



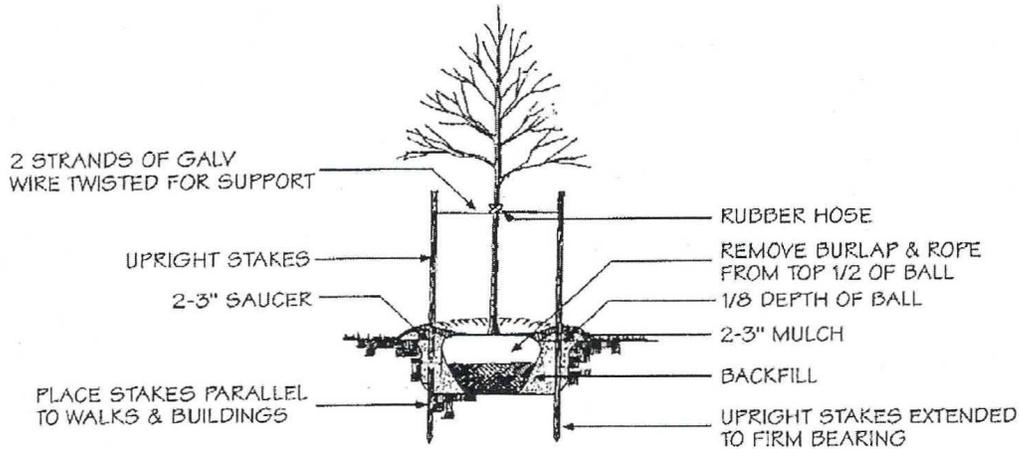
9. FIRM SOIL AROUND SEEDLING WITH FEET

Source: Adapted from Duryea & Dougherty, Forest Regeneration Manual, Kluwer Academic Publishers, Boston, 1991 and Forest Conservation Manual, 1991

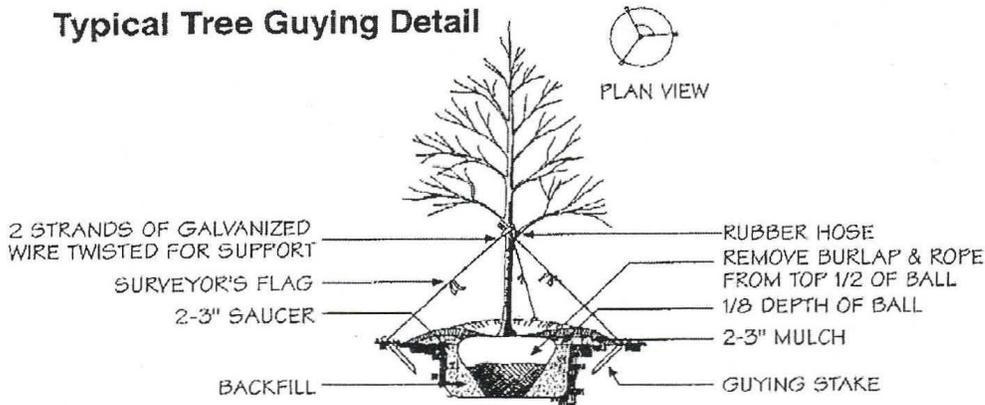
Seedling Planting Techniques

TCP-34. Tree Staking and Guying Specifications

Typical Upright Staking Detail



Typical Tree Guying Detail



Tree Size Height	Tree Size Caliper	Stake	#	Wire or Cable	Hose
6-10'	1" to 1-1/2"	5-6' upright	2	14 guage wire	1/2"
10-12'	2" to 2-1/2"	7-8' upright	2	14 guage wire	1/2"
12-14'	2-1/2" to 3"	2" guy	3	12 guage wire	1/2"
14-16'	3-4"	2" guy	3	12 guage wire	3/4"

Source: Adapted from Forest Conservation Manual, 1991

Tree Staking and Guying Specifications

TCP-35.Site Stocking

Size	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 1, 2, 3 Gallon	400	12 x 12	75%	300
Container Grown 5, 7 Gallon or 1" Caliper B & B	300	15 x 15	85%	255
Container Grown 15, 25 Gallon or 1.5 - 2" Caliper B & B	150	20 x 20	100%	150
<p>Notes:</p> <ol style="list-style-type: none"> 1. These stocking and survival requirements are the minimum numbers estimated to meet the definition of forest from bare land. 2. 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. 3. Spacing does not imply that trees or shrubs must be planted in a grid pattern. 				
<p>Site Stocking</p>				

TCP-36.Property Owners Awareness Certificate

Property Owners Awareness Certificate

I/ We _____ 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.	
_____	_____
Owner or Owners Representative	Date
I/ We _____ 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.	
_____	_____
Contract Purchaser	Date

TCP-37.Reforestation Certification Form and Instructions

**Figure C:6 MARYLAND DNR – FOREST SERVICE
Planting Quality Check**

PROJECT: _____ FCA FILE: _____
 ADDRESS: _____ INSPECTOR: _____
 _____ REVIEW DATE: _____
 JURISDICTION: _____ PLANTING DATE: _____

SAMPLE PLOT LOCATION: _____
 PLOT SIZE SELECTED: [] 1/10th (=37.2 Radius circle); [] 1/20th (=26.4' Radius circle) or [] Other: _____

SITE SUMMARY	
Size of Planting	_____
Species Planted:	_____
_____	_____
Spaces (betweenx along Rows)	_____
Site Prep:	_____
Planting Method:	_____

SAMPLING REQUIREMENTS:	
Site Size (Acres)	Min # of Plots Taken
1-10	2 Total
10-75	10 Total
75+	1 per 7 acres

Key: - Correct A Angled D Planted Deeply L Loose M Multiple S Shallow	Key: - Correct A Angled D Planted Deeply J J-Rooted L Loose M Multiple R Roots Pruned (by installer) S Shallow T Twisted or Balled Up	Key: I Compact Soil II Wet Area III Heavy Slash IV Thick Duff V Brush VI Rocky VII Sandy VIII Thick Grass IX Steep Slope (mach. Pltd?)
--	---	--

Plot Number	VISUAL INSPECTION:			DUG SEEDLINGS:			SITE CONDITIONS
	Planted Property	Planted Improperly	Plot Total (Std. #=)	1	2	3	
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
TOTAL:				Total # Dug			
%			Per Acre Average:	Total Satisfactory			
Per Acre Standard: (20% +/- range= _____ - _____ min. max.)				% Satisfactory Target = 85% Minimum = 70% (<70% = replant)			

COMMENTS: _____

PLANTING QUALITY FORM INSTRUCTIONS

- I. Before beginning field checks and sampling determine the following information and add it to the "Planting Quality" form:
 - a) All site description information (ie: acres, spacing, site prep, planting method, etc.)
 - b) Determine the plot size you will use when sampling, and thus calculate the radius of plot circle (add this info. To form as requested)
 - c) Based on the seedling spacing chart, determine the "Per Acre Standard" and the acceptable range (+/-20%), and add info. To the form where requested.
 - d) Based on the "Per Acre Standard", and your plot size, determine the "Plot Total Standard #: as requested on the form. (For 1/10th acre plot, divide "Per Acre Standard" by 10. Example: for 700 seedling/acre, "Plot Total Standard " = 70.0 seedlings/plot, the goal)
- II. Based on the sampling area's size and the sampling requirements (as shown on the form), layout out the number of sampling plots and their locations or a copy of the planting plan. Sampling areas should be determined based on planting layout, such as species and spacing similarities.
- III. Supplies/tools needed to perform the sampling include;
 - a) A small planting shovel or space
 - b) A loggers tape, measuring tape or a remeasured chain/rope (to make plot radius)
(note: a planting spade with a hole in its handle for attaching the measuring tape is the best approach. A typical wood stake with a whole drilled into top can be used to hold end of tape/rope also.)
 - c) Planting gloves (as preferred)
 - d) a clip board for forms/plans, and calculator (if preferred)
- IV. Perform "Visual Inspection" and "Dug Seedlings" sampling. Use the Key descriptions to note observations. Visually inspect all seedlings counted within the plot area (thus, quantities of "planted property" and planted improperly" should add up to "plot total"). At least 3 seedlings should be dug and inspected per plot.

Key descriptions are as follows:

<p>A – Angled Seedlings (more than 30 degrees from vertical) D – Planted Deeply (more than 1 inch of live needles buried) J – J-Rooted (Over 1" of tap root turned 90degrees or more) L – Loose (can be removed from hole with easy upward pull down)</p>	<p>M – Multiple (more than one seedling in planting hole) R – Roots Pruned (roots pruned by contractor without approval) S – Shallow (the root collar is above packed soil) T – Twisted or Balled (roots aren't straight and extending straight down)</p>
--	--
- V. List Site Conditions – Note any site conditions, planting problems or seedling conditions when severe enough to adversely affect survival.
- VI. Once all plots are completed, compute the Visual Inspection percentages, and the Total Satisfactory # of dug seedlings to see if they have reached the target and minimums. Request replant if needed. (If all 10 plots will be taken, after completing approximately 5 plots, do informal calculations/totals to see if corrections are needed.)

<p>Visual Inspection results-To determine...</p> <p>-% planted properly: divide the properly planted total by the total seedlings counted and multiply by 10</p> <p>-% planted improperly: divide total improperly planted</p> <p>-per acre average: divide total # of seedlings inspected by # of plots taken, then multiply by 10</p>	<p>Dug Seedlings results – To determine...</p> <p>-% satisfactory (per dug seedlings): divide the total satisfactory dug by the total number of dug seedlings (total dug = number of plots multiplied by three), then multiply result by 10.</p>
---	--
- VI. Unusual and unacceptable results should be discussed with the contractor immediately, and corrections must be made.

TCP-38.Environmental Planning Section Approval Blocks

STANDARD SIGNATURE BLOCKS FOR ENVIRONMENTAL PLANS

For TCP1 Plans:

<p>M-NCPPC Prince George's County Planning Department Environmental Planning Section APPROVAL TREE CONSERVATION PLAN TCP1- -</p>		
	Approved by	Date
01		
02		
03		
04		
05		

For TCP2 Plans:

<p>M-NCPPC Prince George's County Planning Department Environmental Planning Section APPROVAL TREE CONSERVATION PLAN TCP2- -</p>		
	Approved by	Date
01		
02		
03		
04		
05		

For Natural Resource Inventories ONLY:

<p>M-NCPPC Prince George's County Planning Department Environmental Planning Section APPROVAL NATURAL RESOURCES INVENTORY NRI- -</p>		
	Approved by	Date
01		
02		
03		
04		

TCP-39.Type 2 Tree Conservation Application



M-NCPPC – Countywide Planning Division, Environmental Planning Section
 Prince George's County Planning Department ♦ 14741 Governor Oden Bowie Drive, Upper Marlboro, Maryland 20772 ♦ 301-952-3650

Last Updated: June 2016

TYPE 2 TREE CONSERVATION APPLICATION FORM

APPLICANTS DO NOT WRITE IN THIS SPACE

Plan Type: TCP2 (SF) TCP2 (MF or C) Case No.(s): _____
 Acceptance Date: _____ Plan Reviewer: _____ Receipt Number _____
 Filing Fee: _____ Calculation Method: (for TCPs only) _____

APPLICANT TO FILL OUT ALL REMAINING SECTIONS

Payment by check, money order, or cashier's check ONLY – made payable to M-NCPPC

APPLICATION TYPE: Type 2 TCP for single-family residential use or Woodland Conservation Bank (\$50 plus \$10 per lot or parcel)
 Type 2 TCP for multi-family or non-residential use (\$100 plus \$25 per acre)

Name on Check: _____ Check No. _____ Revision to Approved Plan # _____

PROJECT NAME:

Geographic Location (related to or near major intersection):

Street Address (if available):

Companion Case(s):

(TCP1, TCP2, Preliminary Plan, Site Plan, or Special Exception) (If SDP or DSP, the TCP2 is submitted to DRD with the companion case)

Total Area (acres): Area of Revision:	Tax Map/Grid:	Council District:
Total Number of Lots or Parcels: No. of Lots or Parcels Revised:	WSSC Grid:	Election District:
Lot Numbers/Blocks/Parcels:	Plat Book/Page:	Planning Area:
Subdivision Name:	Municipality(ies):	Policy Analysis Zone:
Current Zone(s):	Overlay Zone(s):	Tax Account Number:
Environmental Strategy Area (ESA) (Plan 2035): <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4	Subwatershed:	Basin: <input type="checkbox"/> Anacostia <input type="checkbox"/> Potomac <input type="checkbox"/> Patuxent
Is this site in a Priority Funding Area (PFA)? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Is there a historic site or resource on the subject property? <input type="checkbox"/> Yes <input type="checkbox"/> No Historic Site ID _____		
Has a Historic Area Work Permit (HAWP) application been filed with the Historic Preservation Commission? <input type="checkbox"/> Yes <input type="checkbox"/> No		

Proposed Use, Activity, Revision, and/or Request:

List and provide copies of resolutions of previously approved applications affecting the subject property or state not applicable (N/A):

Property Owner Name(s), Address and Phone:

Contact Person, Name, Address, Phone Number & Fax:

Contact E-mail address:

SIGNATURE (Signature required is either the property owner OR the property owner's authorized representative)

Signature

Date

Relationship to Property Owner

Printed Name

Last Updated: June 2016

TCP-40.Woodland Conservation Exemption Application

M-NCPPC – Countywide Planning Division, Environmental Planning Section // Send to: PPD-EnvPlanning@ppd.mncppc.org
 Prince George's County Planning Department ♦ 14741 Governor Oden Bowie Drive, Upper Marlboro, Maryland 20772 ♦ 301-952-3650

APPLICATION FOR WOODLAND CONSERVATION LETTER OF EXEMPTION (WCO-Ex)

APPLICANT TO FILL OUT THIS SECTION - Refer to www.PGAtlas.com for Information
 HOVER OVER BLANK FIELDS FOR ADDITIONAL INFORMATION

Property Owner Name, Address, and Contact Info:		Agent/Contact Name, Company, Address, Phone & E-mail:	
Payment by check, money order, or cashier's check ONLY – made payable to M-NCPPC Please indicate name of project, address, or other identifying information on payment. <i>Do not staple payment.</i>		Agent/Contact	
Name on Check: _____ Check No. _____		APPLICATION FEE - \$50.00 Gov't Projects - Fee Waived	
		Signature: _____ Date: _____	
PROJECT/PROPERTY NAME:			
Street Address (if available), <i>otherwise</i> Geographic Location in relation to nearest major road intersection:			
Companion Case(s) and/or Resolution(s) - Preliminary Plan, Site Plan, Special Exception, etc.:			
Total Area (acres): _____		Tax Account #(s): _____	
Total Number of Lots _____ and/or Parcels: _____		Current Zone(s): _____	WSSC Grid: _____
Lot/Block/Parcel(s): _____		Proposed Woodland Clearing (ft ²): _____	Environmental Strategy Area (ESA): <small>Located under the Environmental heading in PGAtlas</small>
Proposed Activity: _____			
SITE PLAN:		Preparer Qualifications: _____	
Date: _____ Prepared by: _____		Firm: _____ ID #: _____	
RESPONSE (TO BE COMPLETED BY EPS STAFF)			
APPLICATION TYPE: <input type="checkbox"/> Numbered Exemption <input type="checkbox"/> Standard Exemption			Exemption Number:
Staff Reviewer: _____ Receipt Number: _____ Filing Fee: _____			
Your request for a Standard Letter of Exemption from the Prince George's County Woodland and Wildlife Habitat Conservation Ordinance (WCO) is hereby approved . This Standard Letter of Exemption is issued because the property has no previous TCP approvals and:			
<input type="checkbox"/> Is less than 40,000 square feet in size; and/or <input type="checkbox"/> Contains less than 10,000 square feet of woodland; or <input type="checkbox"/> The project is subject to the Maryland Forest Conservation Act and will be reviewed by Department of Natural Resources			
Your request for a Numbered Letter of Exemption from the Prince George's County Woodland and Wildlife Habitat Conservation Ordinance (WCO) is hereby approved . This Letter of Exemption is issued because the site is over 40,000 square feet in size and contains over 10,000 square feet of woodland; however the project has no previous TCP approvals and:			
<input type="checkbox"/> Results in the clearing of less than 5,000 square feet of woodland (area of proposed clearing is _____ ft ²); or <input type="checkbox"/> The project is a government or linear project that results in the clearing of less than 20,000 square feet of woodland (area of proposed clearing is _____ ft ²); or <input type="checkbox"/> The proposed activity is for a timber harvest.			
This letter is valid for two years from approval or until such time as the cumulative woodland disturbance exceeds the minimum specified above during the validity period. If a development review application (preliminary plan, detailed site plan, etc. is required, the Numbered Exemption may be considered invalid in accordance with Section 25-119(b)(5)(A). A copy of this letter must be submitted at time of development activity or permit application.			
Staff Signature Approval: _____		Approval Date: _____	
		Expiration Date: _____	

Last Updated: March 2019

Appendix B

Natural Resources
Inventory (NRI)

NRI-1.NRI Equivalency Letter Application

M-NCPPC – Countywide Planning Division, Environmental Planning Section // Send to: PPD-EnvPlanning@ppd.mncppc.org
 Prince George's County Planning Department ♦ 14741 Governor Oden Bowie Drive, Upper Marlboro, Maryland 20772 ♦ 301-952-3650

APPLICATION FOR NATURAL RESOURCES INVENTORY EQUIVALENCY LETTER (NRI-EL)

APPLICANT TO FILL OUT THIS SECTION - Refer to www.PGAtlas.com for Information

HOVER OVER BLANK FIELDS FOR ADDITIONAL INFORMATION

Property Owner Name(s), Address & Phone:		Agent/Contact Name, Company, Address, Phone & E-mail:	
PROJECT/PROPERTY NAME:			Agent/Contact
Street Address:			Signature: _____
Geographic Location:			Date: _____
Total Area (acres):	Proposed Limits of Disturbance [LOD] ft ² :	Current Zone(s):	WSSC Grid:
Lot/Block/Parcel(s):	Tax Account #(s):	Environmental Strategy Area (ESA): <i>Located under the Environmental Category in PGAtlas</i> 1 2 3 4	
Proposed Activity:			
Will the proposed project require a Subdivision or Zoning application?:			Please List:
Concurrent and Previous NRI, TCP1, TCP2, & Other Applicable Applications:			
Environmental Technical Manual Link	NRI-EL CHECKLIST (TO BE COMPLETED BY APPLICANT)		Procedural Guidelines for NRI-EL Application Submission (ext. PDF)
REQUIRED For All NRI-EL Applications:	For Project Type 1 only:	Project Type 2 only:	
<input type="checkbox"/> Proposed Site Plan, Containing ALL of the Following: <input type="checkbox"/> Signature from a Qualified Professional as defined under COMAR 08.19.06.01 <input type="checkbox"/> Legible Limits of Disturbance (LOD) <input type="checkbox"/> General Information Table (see Procedural Guidelines)	If Exempt from Woodland Conservation, submit one of the following: <input type="checkbox"/> Application for Letter of Exemption, and: <input type="checkbox"/> Application Fee Included in Submission <input type="checkbox"/> Copy of a previously Issued Letter of Exemption (Standard or Numbered)	Select one or more previously approved and implemented plans for project site: <input type="checkbox"/> Type II or Type 2 Tree Conservation Plan (TCP2) <input type="checkbox"/> CBCA Conservation Plan <input type="checkbox"/> Other Environmental Information Deemed Sufficient by Staff - [Provide Explanation]	
RESPONSE (TO BE COMPLETED BY EPS STAFF)			
Date Received: _____ Date Accepted: _____ Reviewer Assigned: _____			NRI Number:
This APPROVAL for the above referenced project and location is based upon information using the submitted proposed site plan, the most current aerial imagery, and data sourced from PGAtlas.com at the time of review. At any point following an approval, if the scope of the proposed activity or limits of disturbance changes significantly, a full NRI may be required. This letter is valid for five years from the date of issuance, or until such time as a different development activity is proposed; whichever comes first. The submitted request was found to meet the following checked criteria:			
<input type="checkbox"/>	The site qualifies for a Standard or Numbered Letter of Exemption _____ from the Prince George's County Woodland and Wildlife Habitat Conservation Ordinance.		
<input type="checkbox"/>	The site has a previously approved and implemented Type 2 Tree Conservation Plan _____.		
<input type="checkbox"/>	The submitted proposed site plan, dated _____ and prepared by _____ demonstrates that no regulated environmental features are located on the subject site or no on-site regulated environmental features will be impacted.		
<input type="checkbox"/>	The submitted proposed site plan, dated _____ and prepared by _____ shows that the proposed work will not result in any significant changes to the limits of disturbance of the previously approved TCP2, or create additional impacts to any regulated environmental features.		
<input type="checkbox"/>	The site is within the Chesapeake Bay Critical Area Overlay Zone and the submitted site plan demonstrates that the proposed activity will result in less than 500 square feet of disturbance, or that no variance is required.		
<input type="checkbox"/>	Other Approval Criteria:		
A FLOODPLAIN STUDY MAY STILL BE REQUIRED AT THE TIME OF STORMWATER CONCEPT REVIEW			
Staff Signature Approval: _____			Approval Date: _____
			Expiration Date: _____

Last Updated: March 2019

NRI-2.NRI Plan (Full, Intermediate, Limited, CBCA) Application

APPLICATION FORM FOR NRI PLAN ONLY

APPLICANTS DO NOT WRITE IN THIS SPACE

Date Received: _____ Reviewed for Acceptance by: _____ NRI No.: _____
 Application Package Complete: YES NO (incomplete applications must be returned) Date Returned: _____
 Reason for return of the package: _____
 Agent/Contact Notified: _____ (date) VIA _____ (method)
 Dated Accepted: _____ Reviewer Assigned: _____ Due Date: _____ (30 days from acceptance date)

APPLICANT TO FILL OUT ALL REMAINING SECTIONS

APPLICATION TYPE: Full Plan Intermediate Plan (Limited Government or Linear) Plan CBCA Plan

PROPERTY OR PROJECT NAME: _____

Geographic Location (related to or near major intersection): _____

Street Address: _____

Companion Case(s) and/or Previous Approvals:
 (TCP1, TCP2, Preliminary Plan, Site Plan, or Special Exception) _____

Total Area (acres):	Tax Account #:	WSSC Grid:
Lot Numbers/ Blocks/Parcels:	Current Zone:	Planning Area:
Environmental Strategy Area (ESA) (Plan 2035): <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4	Watershed:	Overlay Zone:

Proposed Use of Property and/or Future Request: _____

NRI PACKAGE CONTENTS CHECKLIST

The following applicable documents are **required** in the formats indicated below:

One paper copy of the following documents: <input type="checkbox"/> Transmittal letter <input type="checkbox"/> NRI Plan (signed)	One compact disc or thumb drive containing one file each of the following documents: <input type="checkbox"/> NRI Preparation Checklist (signed) <input type="checkbox"/> NRI Plan (signed) <input type="checkbox"/> FSD Text (signed) <input type="checkbox"/> Wetlands Study Text (signed) <input type="checkbox"/> Approved floodplain request form (approved by DPIE) <input type="checkbox"/> USDA NRCS Web Soil Survey (WSS) Custom Soil Resource Report <input type="checkbox"/> RTE Letter from DNR or Letter of Request to DNR <input type="checkbox"/> Other information provided by the applicant
--	---

Applicant Name and Address: Owner Name and Address:	Agent/Contact Person, Company Name, Address, Phone Number, Fax and E-mail (all required):
--	--

SIGNATURE (Signature required is either the property owner OR the property owner's authorized representative)

Signature: _____ Date: _____ Relationship to Property Owner: _____

Printed Name: _____

**NRI-3. Combined NRI Equivalency & Numbered Exemption Letters Application
(CWP & County Certain Projects only)**

M-NCPPC – Countywide Planning Division, Environmental Planning Section Send to: PPD-EnvPlanning@ppd.mncppc.org
 Prince George's County Planning Department ♦ 14741 Governor Oden Bowie Drive, Upper Marlboro, Maryland 20772 ♦ 301-952-3650

APPLICATIONS: WOODLAND CONSERVATION NUMBERED EXEMPTION & NRI EQUIVALENCY

APPLICANT TO FILL OUT THIS SECTION

Owner Name and Address:	Agent/Contact, Company, Address, Phone and E-mail (all required):
	Signature: _____ Date: _____

PROPERTY OR PROJECT NAME:

Street Address: _____

Previous Applications (NRI, TCP1, or TCP2): _____

Gross Acres:	Proposed Woodland Clearing:	Tax Account #:	WSSC Grid:
--------------	-----------------------------	----------------	------------

Lot/Block/Parcel: _____ Current Zone: _____ Environmental Strategy Area (ESA) (Plan 2035): 1 2 3 4

Proposed Activity: _____

Type of Plan: _____ Preparer/Firm: _____ Date: _____

APPLICATION CHECKLIST: each box must either be checked or listed as "N/A" for not applicable

<i>For Project Type 1 and 2</i>	<i>For Project Type 1 only</i>	<i>Project Type 2 only</i>
<input type="checkbox"/> (1) copy of a proposed Site Plan showing existing conditions (signed)	Exemption Status: <input type="checkbox"/> Request for WCO Numbered Exemption	Previously Approved Plan: <input type="checkbox"/> (1) copy of approved TCP2 or
<input type="checkbox"/> (1) Coversheet	<input type="checkbox"/> Copy of a previously Issued Letter of Exemption	<input type="checkbox"/> CBCA #: _____
	<input type="checkbox"/> N/A	<input type="checkbox"/> N/A

RESPONSE (TO BE COMPLETED BY EPS STAFF)

Date Received: _____ Reviewed for Acceptance by: _____ Plan Reviewer: _____ Acceptance Date: _____ Due Date: _____

NRI No. _____ Approval Date: _____ Expiration Date: _____	WCO-Ex No. _____ Approval Date: _____ Expiration Date: _____
This APPROVAL is for the existing conditions on the above referenced location as it relates to the proposed activity. The review is based upon information using the submitted proposed site plan, the most current color imagery aerial photography and the PGAtlas.com environmental layers. If the scope of the proposed activity or limits of disturbance change significantly, a full NRI may be required. This letter is valid for five years from the date of issuance, or until such time as a different development activity is proposed, whichever comes first. The submitted request was found to meet the following checked criteria.	This Approval exempts the proposed project from the requirements of the Woodland Conservation Ordinance . It is valid for two years from approval or until such time as the cumulative woodland disturbance exceeds the minimum specified below during the validity period. If a development review application (preliminary plan, detailed site plan, etc., is required, the Numbered Exemption may be considered invalid in accordance with Section 25-119(b)(5)(A). A copy of this letter must be submitted at time of permit application.

<input type="checkbox"/>	The site qualifies for a Numbered Letter of Exemption () from the Prince George's County Woodland and Wildlife Habitat Conservation Ordinance because although the site is over 40,000 and contains over 10,000 square feet of woodland, the proposed acreage of woodland disturbance as referenced above is less than 20,000 square feet and the site has no previous TCP approvals.
<input type="checkbox"/>	The submitted proposed site plan demonstrates that no regulated environmental features are located on the subject site or no on-site regulated environmental features will be impacted.
<input type="checkbox"/>	The site has a previously approved Type 2 or Type II Tree Conservation Plan as referenced above , and the proposed site plan shows that the proposed work will not result in any significant changes to the limits of disturbance of the previously approved TCP or create any additional impacts to any regulated environmental features.
<input type="checkbox"/>	The site is within the Chesapeake Bay Critical Area Overlay Zone and the submitted site plan demonstrates that the proposed activity will result in less than 500 square feet of disturbance, or no variance is required.
<input type="checkbox"/>	(Other)

A FLOODPLAIN STUDY MAY BE REQUIRED AT THE TIME OF STORMWATER CONCEPT REVIEW.

Preparer Initials: _____ Planner Initials: _____

Last Updated: September 2018

	A vicinity map showing the location of the site in relation to major and adjacent roadways at a minimum scale of 1"=2000'. The vicinity map should include a north arrow and a scale.		
	A plan view showing the entire legal boundaries of all lot(s) and/or parcel(s) included in the application at a minimum scale of 1" = 100'.		
	Deeds verifying recorded property boundaries only if the property boundaries do not match the state property layer or the County GIS property layer.		
	Existing Statistics Table that includes the total of: gross tract acreage; floodplain acreage; net tract acreage; woodland acreage in floodplain; woodland acreage on net tract; woodland acreage total; Primary Management Area (PMA) acreage; regulated streams in linear feet; and riparian (wooded) stream buffer up to 300 feet wide measured from the stream centerline or top of each bank). All values should be to the nearest hundredth. For CBCA, include Primary Buffer, Secondary Buffer and woodland total shall include developed woodland		
	General Information Table		
	Topographic contours (interval = 2 feet).		
	All existing structures and site features including easements and any visible foundations or ruins.		
	historic resources, cemeteries, archeological sites, existing buildings and foundations, as well as paving and man-made landforms such as terracing		
	When present on the property, identification and location of agricultural lands, surface mining sites, natural parks, dredging activity and dredge material disposal		
**	Subtitle 27 Lot coverage in square feet (CBCA only)		
**	Subtitle 5B Lot Coverage in square feet (CBCA only)		
	All existing utilities, utility easements and Master Planned rights-of-way.		
	Legend containing all features shown on the plan. (Using EPS standard symbols)		
	A north arrow and scale.		
	Labels and shading (Per EPS Standards)		
	Qualified professional certification with name, address, phone number, email, stamp (if applicable), signature, and date of plan certification on each sheet. The qualified Professional's valid seal may be used instead of the certification block.		
	General notes section that follows the standard note language with information		
	M-NCPPC NRI signature approval block on each sheet of the NRI plan		
	* Required for all land outside of CBCA		
	** Required for all land within CBCA		

historic resources, cemeteries, archeological sites, existing buildings and foundations, as well as paving and man-made landforms such as terracing

I. Natural Resource Inventory Plan (continued)

Information Type	Included Y/N/NA	Comment
B Environmental Features		
Banks of all regulated streams or a centerline if the banks are too close together.		

September 2018

*	Location of stream buffers		
*	Location of the Primary Management Area		
	Location of all wetlands and wetland buffers		
	Location of expanded wetland buffers		
	Delineation of the approved 100-year floodplain		
	Location of rare, threatened or endangered species habitat		
**	Location of mean high water line of all tidal waters (CBCA only)		
**	Field delineated location of the landward edge and description of the extent of tidal wetlands, including the delineation of State and private tidal wetland boundaries (CBCA Only)		
**	Critical Area Primary Buffer (CBCA Only)		
**	Critical Area Secondary Buffer (CBCA Only)		
C	Soil and Slope Information		
	Locations of mapping units within each soil series shown on the plan to scale, using standard soils boundary symbol per EPS standards.		
	Table stating the mapping unit name and the soil series, erodibility (K-factor), and hydric characteristics.		
	Location of steep slopes (15% and greater) clearly shown on the plan and in the legend.		
D	Forest Stand Delineation Information (to be shown on the plan)		
	Existing woodland and individual trees outside of woodland areas on the property and extending off the property 100 feet in all directions.		
	Forest stand boundaries and stand acreages to the nearest one-hundredth of an acre.		
	Field sample point locations in adequate numbers and locations to delineate separate stands.		
	Locations of specimen, champion and historic trees and their critical root zones.		
	Table of specimen, champion and historic trees stating field flag number, common name, scientific name, size (in dbh), condition, and condition comments.		
	Location of Forest Interior Dwelling Species (FIDS) habitat and associated 300 foot-wide buffer.		
	Forest stand summary table including all required information.		
	* Required for all land outside of CBCA		
	** Required for all land within CBCA		

II. Wetland Study Information

Feature	Included	Comment
A Wetland Delineation Features		
All wetland sample points and flagged delineations.		
Note stating whether the flagging points are based on field or survey locations. (include in note general 6)		
Plan signed, and dated by a professional who has completed an USACE approved training course in wetland delineation. This is a separate signature if different from the qualified professional who prepared the information listed in Section's I and III		
B Wetland Study		
Study text and data sheets for each sample point, signed and dated (See sample report)		

September 2018

	Color Photocopies of the NWI map, the MDDNR Wetland Guidance Map, and the soil survey (<i>Note: if a wetland study is not required, these photocopies should be included in the Forest Stand Delineation Report</i>).		
	Prepared, signed, and dated by a professional who has completed an USACE approved training course in wetland delineation.		

III. Forest Stand Delineation Text (Report must include ALL of the following) *

Feature	Included Y/N	Comment
A Narrative that briefly describes the forest conditions, including:		
A statement indicating the sampling methodology used for data collection.		
A statement of the existing condition of each stand.		
Stand structure, forest structure, retention potential and comments on history of the stand.		
Description of other environmental features which may impact decisions on forest retention.		
Prepared by a licensed landscape architect, licensed forester or a current MDDNR qualified professional, and signed and dated by that person. If this person differs from the qualified professional submitting the NRI plan, the Forest Stand Delineation text must also be signed and dated by the qualified professional submitting the NRI plan.		
<i>If a wetland study is not required</i> , color photocopies of the NWI map, the MDDNR Wetland Guidance Map, and the soil survey (otherwise, these materials should be included with the wetland study).		
B Field data sheets, including:		
Diameter and species of trees sampled.		
Number of living trees and dead trees per acre.		
Percent canopy closure and number of species in canopy.		
Percent of understory coverage (3'-20'), dominant understory species, number of species.		
Percent of herbaceous coverage (0'-3'), dominant herbaceous species, number of species.		
Percent of invasive species in canopy, understory, and herbaceous including species present.		
C Forest analysis worksheets for each stand including:		
Structure analysis		
Condition analysis		
Location analysis		
Stand function		
Forest retention summary analysis (Summary table of ALL stands must be shown on the plan)		

D	Stand summary sheets including:		
	Dominant/Codominant species.		
	Successional stage		
	Basal area in s.f. per acre		
	Size class of dominant species		
	Percent canopy coverage		
	Number of tree species per acre		
	Common understory species per acre		
	Percent of understory cover 3' to 20' tall		
	Number of woody plant species 3' to 20' tall		
	Common herbaceous species 0' to 3' tall		
	Percent of herbaceous and woody plant cover 0' to 3' tall		
	List of major invasive plant species and percent of cover		
	Number of standing dead trees 6" dBH or greater		
	Forest Structure Rating Score		

NRI-5.Site Statistics Table

Site Statistics Table

Site statistics are required to be shown on the plan for several of the environmental features outlined in in Section 3. These statistics need to be shown on the plan in table form.

Table 5. Natural Resources Inventory Statistics Table

Existing Site Statistics	Total ¹
Gross tract area	
100-year floodplain	
Net tract area	
woodland ² in the floodplain	
woodland ² net tract	
woodland ² total	
PMA	
Primary Buffer ³	
Secondary Buffer ³	
Regulated streams (linear feet of centerline)	
Riparian (wooded) buffer up to 300 feet wide ⁴	

¹Figures are to be provided in acres rounded to the nearest 1/100th of an acre unless otherwise indicated.

² For woodland within the CBCA, this also applies to developed woodland

³Applies to CBCA NRIs only

⁴Acreage of onsite woodland up to 300 feet measured from the stream centerline or from the top of bank on both sides of all regulated streams

NRI-6.NRI Approval Block

NRI Plan Approval Block

Prince George's County Planning Department, M-NCPPC Environmental Planning Section NATURAL RESOURCES INVENTORY PLAN APPROVAL NRI-xxx-xxxx			
	Approved by	Date	Reason for Revision
00			N/A
01			
02			
03			
04			
05			
06			

September 2018

NRI-7.NRI 1-Year Revalidation Stamp

NRI PLAN 1 YEAR REVALIDATION STAMP

***comments to be completed by staff before adding stamp to plan)**

***stamp must be added in color (green) as shown below**

<p>Prince George's County Planning Department, M-NCPPC Environmental Planning Section NATURAL RESOURCES INVENTORY PLAN VALIDATION</p> <p>NRI- ____ - ____</p> <p>This NRI expired _____.</p> <p>A review of this NRI plan, associated reports/studies and other supplemental information provided as needed, was found to be sufficient for a 1-YEAR VALIDATION for the purpose indicated below. After expiration a revised or new NRI shall be provided for any future development plans.</p>			
Approved by	Approval Date	Expiration Date	Purpose of Temporary Validation
Additional staff comments: 			

NRI-8.NRI General Notes

NATURAL RESOURCE INVENTORY – GENERAL NOTES

The following notes must be provided on all Natural Resource Inventories with all blanks filled in.

1. This site is zoned (insert zone) and is located in Environmental Strategy Area (insert area) in accordance with Plan 2035.
2. The source of the property boundaries on this plan is from (state source as state property layer, deeds, or boundary survey.) (If deeds- list Liber and Folio and provide copies).
3. The topography shown on this plan is from (state source, date, and manner in which the information was obtained).
4. The source of the soils information on this plan is from the 1) USDA NRCS Web Soil Survey (WSS) in a Custom Soil Resource Report for an Area of Interest (AOI) established for the subject site only and generated on (include date report was generated); and 2) current Prince George's Soil Conservation District Soil Erosion and Sediment Control – Pond Safety Reference Manual
5. The regulated 1-percent annual chance (100-year) floodplain information on this plan, approved by the Prince George's Department of Permitting, Inspections and Enforcement, is from (state source).

OR, if no floodplain is located on-site, use the following note:

- In a letter dated (enter date), the Prince George's County Department of Permitting, Inspections and Enforcement stated that no county regulated 100-year floodplain is located on-site.
6. The wetland and stream information on this plan is from a study prepared by (state name of professional qualified to prepare the study) and dated (state date of preparation of the study).
OR, if no wetlands or streams are located on-site, use the following note:
No wetlands or streams are located on-site as field verified by (state name of professional qualified to make such a determination in the field).
 7. This site (does/ does not) contain Wetlands of Special State Concern as defined in COMAR 26.23.06.01.
 8. This site (is/ is not) located within a Tier II catchment area and (does/ does not) contain a Tier II waterbody as defined in COMAR 26.08.02.04. This site (is/is not) located within an impaired water body with a Total Maximum Daily Load (TMDL) allocated for sediment, which are afforded special protection under Maryland's Anti-degradation policy. *if the subject property is within a Tier II catchment or contains impaired waters, add the following note: PGSCD reserves the right to restrict disturbance to any onsite or offsite Tier II buffer or buffers for impaired waters.*
 9. This site (is/ is not) located within a Stronghold Watershed as established by the MD DNR.
 10. This site (is/is not) within a Sensitive Species Protection Review Area based on a review of the SSPRA GIS layer prepared by the Heritage and Wildlife Service, Maryland Department of Natural Resources.
OR, if a letter has been obtained from the Maryland Department of Natural Resource Natural Heritage Program, use the following note:
In a letter dated (insert date) the Maryland Department of Natural Resource Natural Heritage Program has determined (insert information from the letter).
 11. The site (does/does not) include Forest Interior Dwelling Species habitat.
 12. The site is not subject to a previously approved TCP.
OR, if the subject property is subject to a previously approved TCP/TCP's use the following note:
The site is subject to previously approved TCP's. Previously approved TCP's include: (state TCP

- identification number/s).
13. There are (state the number of trees) specimen, champion and/or historic trees located on the property. These trees were located using (state method of location - field observations or surveyed locations).
OR, if there are no specimen, champion or historic trees on the property use the following note:
There are no specimen, champion or historic trees located on the property.
 14. The subject site is/is not with a Scenic Resources Policy Area (insert name of area).

if site is within a Scenic Resources Policy Area, add the following: Development within this area is subject to applicable Scenic Resource Policy Area standards.
 15. There are no scenic or historic roads located on or adjacent to this property.
OR, if scenic or historic roads are located in the vicinity of the subject site use the following note:
The site is (describe location – abutting, adjacent to, etc. – insert name of road), a designated (list designation as scenic, historic, or both) road in the vicinity of the property.
 16. The subject property is not located within a Registered Historic District.
OR, if the subject property is located within a Registered Historic District use the following note:
(The subject property/ a portion of the subject property) is located within the (state the name and inventory number of the Registered Historic District).
 17. There are no known archeological sites located on the subject property; however, the subject property has not been surveyed for archeological resources and a Phase I archeology report may be required during subsequent development review processes.
If the subject property has a known archeological site use the following note:
Archeological site (insert registration number), registered with the state is located on-site. Further archeological investigations (Phase II or Phase III) may be required during subsequent development review processes.
 18. Marlboro clay and Christiana clay are not found to occur on or within the vicinity of this property.
OR, if Marlboro clay or Christiana clay are mapped on or in the vicinity of the subject property use the following note:
Marlboro clay (and/or Christiana clay) is/are found to occur on or within the vicinity of this property.. A geotechnical report in accordance with the DPIE’s *Geotechnical Guidelines for Soil Investigations and Reports for Site/Road Grading Permits in or near Over-consolidated Clays* may be required during subsequent development processes.
 19. The site is not located in the vicinity of any master planned roadway designated as arterial or higher.
OR, if the site is located in the vicinity of a master planned roadway designated as arterial or higher use the following note.
The site is located in the vicinity of (abutting/ adjacent to - name of road), a master planned (state designation - arterial or higher) roadway that is regulated for noise. A noise study may be required during subsequent development review processes.
 20. The subject property is not located within the 2009 Joint Base Andrews Noise Contours.
OR, if the property is located within the noise contours, use the following note:
(The subject property/ a portion of the subject property) is located within the (dba level) dba noise contour as found in the 2009 Joint Base Andrews Noise Contours.
 21. The site is not located within an Aviation Policy Area (APA).
OR, if the property is located within an APA area use the following note:
The site lies within the Aviation Policy Area (APA) of (insert airport name) Airport and is

- subject to compliance with APA regulations under CB-51-2002.
22. The site is not located within the Chesapeake Bay Critical Area (CBCA).
OR if the property is located within the CBCA use the following note:
The site lies within the (insert CBCA designation as L-D-O, R-C-O, or I-D-O) overlay zone of Chesapeake Bay Critical Area (CBCA).
 23. An approved NRI is valid for five years from the date of signature by staff, or until information used to prepare the NRI changes. NRIs will be required to be revised and re-approved if the base information changes significantly. Approval of this NRI in no way imparts any other development application approvals.

ADDITIONAL NOTES (if applicable)

Sites with current or previous mining activity

24. Because of previous mining activity on this site, a soils report may required as part of any development application for the subject property. The study shall clearly define the limits of past excavation and indicate all areas where fill has been placed. All fill areas shall include borings, test pits, and logs of the materials found. Borings and test pits in fill areas shall be deep enough to reach undisturbed ground.

Intermediate and Limited NRI's only

25. The entirety of this property was not analyzed as part of this NRI. Future applications showing disturbance outside the limits of this NRI may be required to submit more information and/or a Full NRI.

NRI-9.Wetland Delineation Study Template

Suggested Format for Wetland Delineation Study

Wetland Study

for

Name of Project

Prepared for:

Name of Developer or Owner

Address

Phone Number

Prepared by:

Name of Consultant or Preparer

Address

Phone Number

Fax Number

Email address

Certification

Certification statement by qualified professional

Signature _____ Date _____

September 2018

I. SITE LOCATION AND CONDITIONS

Description of the property including the area, location and relationship to the nearest major road, current use, and adjoining uses. Description of any structural remains or existing constructed features on-site. (Include ADC Map or other location map at the end of report)

Latitude and Longitude coordinates provided as required by the United States Army Corps of Engineers, for the purpose of providing a jurisdictional determination.

II. EQUIPMENT USED

Description of the equipment used in the on-site assessment of the property, to determine the findings reported on the data sheets.

III. METHODOLOGY

Description of the prescribed methodology cited in the current U.S. Army Corps of Engineers, Wetland Delineation Manual. Include a brief description of the analysis performed using this methodology. In addition to confirming or denying the presence of wetlands on the property, other regulated waters such as ponds, lakes, streams, and rivers should also be evaluated. Describe the number of data sheets completed during the field delineation to document both wetland and non-wetland characteristics encountered. Data points must be shown on the Wetland Delineation Plan.
(Include all data sheets and photos in Appendix A)

IV. RESEARCH OF AVAILABLE DOCUMENTS

A. National Wetland Inventory Map

The National Wetland Inventory (NWI) is a United States Fish and Wildlife Service document that correlates the use of aerial photographs with limited on-site analysis. Cite the NWI map for the property and indicate any presence of wetland classifications per the map and their descriptions. (Include the NWI map at the end of the report).

B. Prince George's County Soil Survey

Description of soil types and source, (Prince George's County Soils Survey) Reference the soils table and soils map for the subject property. (Included at the end of the report).

C. United States Geological Survey Topographic Maps

Description of the United States Geological Survey's (USGS) topographic map for the property and any significant features. (Include the USGS topographic map for the subject property at the end of the report).

D. Maryland Non-tidal Wetland Guidance Maps

Describe any locations of "Wetlands of Special State Concern" shown on the Wetland Guidance Map provided by the Maryland Department of Natural Resources (DNR) for Prince George's County. Report any of these special wetlands located on and within one (1) mile of the subject property. If none are present, a statement should be made to this fact. (Include Wetlands of Special State Concern Map at the end of the report).

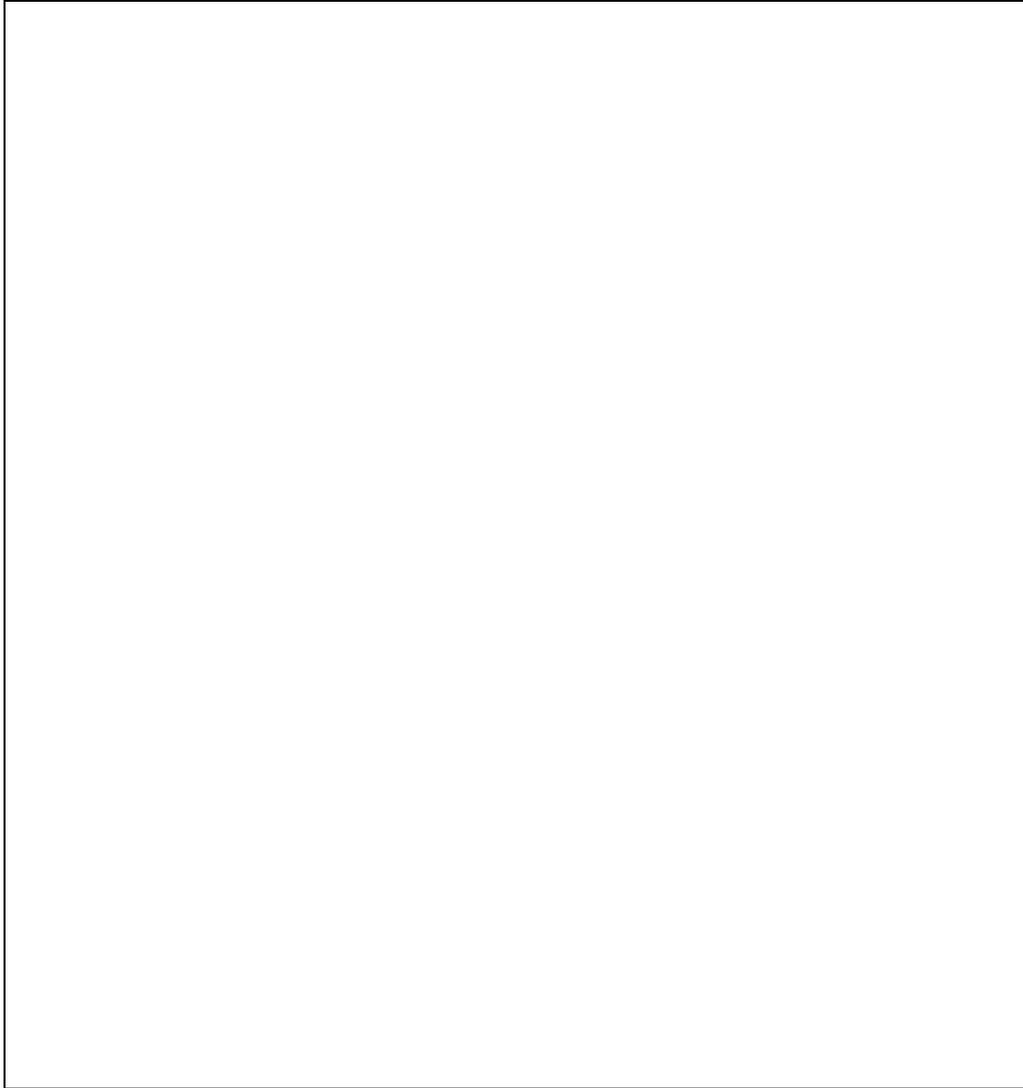
E. Photographs

Describe the color photographs taken at various locations to document the existing site conditions. (Include all photos in the Appendix). The location of each photo and the direction the photo was taken should be illustrated on the Wetland Delineation Plan or on a separate photo exhibit.

IV. ON-SITE ASSESSMENT

A. Hydrology

List the named watershed and the associated tributary. Describe all confirmed hydrology on the site. Include descriptions of all isolated wetland areas and where they are located. If a representative from the Maryland Department of the Environment (MDE) has been to the site and confirmed that any of the areas described are not jurisdictional, this should be noted along with the name of the MDE representative and the date of their site visit. Descriptions of any man-made ditches should also be included.



September 2018

B. Soils

Describe all soil samples taken throughout the site. Describe indicators of the presence or absence of anaerobic soil conditions. Verify whether the soils found on-site match the mapped soils shown on the current Prince George's County soils survey. The soils found on the property should be described on the data sheets included in Appendix A.

C. Vegetation

Describe all of the vegetation found on the site. Describe the indicator status of the species identified on the site as compared to the National List of Plant Species that occur in Wetlands: Northeast (Region1). Provide specific information on the plant communities on the data sheets included in Appendix A.

V. CONCLUSION

Summarize the on-site evaluation. Describe the determination based on the information gathered. If the findings in the report have been verbally confirmed in the field by a representative of the Maryland Department of the Environment (MDE), include the name of the representative and the date the confirmation was received. Written confirmation may also be required. It should be noted that sensitive environmental features may be regulated by the county that are not regulated by Federal or State agencies based on local/county regulations.

Additional Information Needed for Wetland Study

Site Map- provide 8 ½” x 11” vicinity map (in color) taken from Prince George’s County ADC Map with outline of property shown and labeled.

Soils Map- provide 8 ½” x 11” soils map (in color) taken from Prince George’s County Soil Survey with outline of property shown and labeled.

National Wetland Inventory Map- provide 8 ½” x 11” NWI map (Quad) (in color) with outline of property shown and labeled.

USGS Topographic Map- provide 8 ½” x 11” United States Geological Survey Topographic Map (in color) with outline of property shown and labeled

Wetlands of Special State Concern Map- provide 8 ½” x 11” Maryland Department of Natural Resources Nontidal Wetland Guidance Map (in color)

Photographs and Wetland Delineation Data sheets - provide for **ALL** data points. Preferred method is to include two color photographs per 8 ½” x 11” sheet, with each photograph numbered and dated with a brief description of the photo. Following each set of photographs, include all corresponding data sheets for each data point.

Reference Section IV. B for required soil descriptions:

Sample Soils Table				
Symbol	Soil Description	K- factor	Hydric	Soil Group
BIB2	Beltsville silt loam, 5-10% slopes, moderately eroded	0.49	No*	B
BIB3	Beltsville silt loam, 5-10% slopes, moderately eroded	0.49	No*	B
Bo	Bibb silt loam	0.43	Yes	B
CaB2	Chillum silt loam,0-6% slopes, moderately eroded	0.49	No	B

*May potentially contain hydric inclusions. Taken from USDA, SCS-Soil Survey, Prince George’s County, Maryland (1967) and USDA, NRCS RUSLE2 attributes table and hydric soils list

NRI-10.How to Prepare a Custom Soils Report

How-to produce Custom Soil Survey Reports

Here are the steps*:

1. Define AOI.
2. Choose the “Soil Data Explorer” tab at top left. Several sub-tabs will come up in a row under the “Soil Data Explorer” tab.
3. Choose the “Suitabilities and Limitations for Use” tab. A menu will come up on the left hand side.
 - a. Click on “Building Site Development” drop-down. Click on “Dwellings with Basements.”
 - b. Under View Options unclick Map and Description of Rating. Ensure that the Detailed Description box remains unchecked. Click view rating. At the top right corner of the screen click on “Add to Shopping Cart.” Click “OK” in pop-up window (no sub-title necessary).
 - c. Click on “Dwellings without Basements.” Repeat step b for this category.
 - d. Click on “Local Roads and Streets.” Repeat step b for this category.
 - e. Click on “Small Commercial Buildings.” Repeat step b for this category.
 - f. Click on “Sanitary Facilities” drop-down. Click on “Septic Tank Absorption Fields.” Repeat step b for this category.
 - g. Click on “Land Classifications” drop-down. Click on “Hydric Rating by Map Unit.” Repeat step b for this category.
4. Choose the “Soil Properties and Qualities” tab.
 - a. Click on “Soil Erosion Factors” drop-down. Click on “K-Factor, Whole Soil.”
 - b. Under View Options unclick Map and Description of Rating. Ensure that the Detailed Description box remains unchecked. Click view rating. At the top right corner of the screen click on “Add to Shopping Cart.”
 - c. Click on “Soil Qualities and Features” drop-down. Click on “Drainage Class.” Repeat step b for this category.
 - d. Continuing under the “Soil Qualities and Features” drop-down. Click on “Hydrologic Soil Group.” Repeat step b for this category.
5. Choose the “Shopping Cart (Free)” tab.
 - a. Under the “Report Properties” drop-down, check “Custom Subtitle” and type-in the name of the project.
 - b. Under the “Table of Contents” drop-down un-check the following: “How Soil Surveys Are Made”, “Map Unit Description”, “References”, “Glossary.”
6. Click the “Check Out” button at the top right. Click the “Get now” button and “OK”. Website should generate a PDF that you can then save to your server.

NRI-11.CBCA Existing Lot Coverage Table

Existing Lot Coverage Chesapeake Bay Critical Area (CBCA)			
Area Calculations			
CBCA Overlay Zone		LDO	
Enter gross lot size in square feet (SF):		25,042	
Enter % CBCA lot coverage allowed:		15%	
Total SF CBCA lot coverage allowed:		3,756	
CBCA Lot Coverage by Category	Surface Material¹	Percent Impervious²	Existing Lot Coverage Area³ (SF)
Dwelling	asphalt shingles	100%	3,000
Accessory Structures	Pool	100%	0
Sidewalk	Concrete	100%	70
Porches	asphalt shingles	100%	50
Driveway	Concrete/ gravel	100%	1,325
Patio or Pavers	Stone steps to water	0%	181
Deck	Wood with gaps	0%	1150
Other Surfaces	Rip rap	0%	56
Total Existing CBCA Lot Coverage =			4,445
CBCA Percent Impervious Surface =			17.8%

¹All existing or proposed surfaces that contribute to lot coverage

²All surfaces are 100% impervious to water (except decks that are constructed with gaps between the wood to allow water to permeate are considered 0% impermeable).

³Enter lot coverage in square feet for each category (enter all numbers as positive numbers)

NRI-12.Zoning Lot Coverage Table

Zoning Ordinance (Z.O.) Net Lot Coverage Calculations	
Area Calculations	
Enter Zone	R-R
Enter net lot area in square feet (SF)	25,042
Enter % of Z.O. lot coverage allowed	15%
Total SF Z.O. lot coverage allowed	3,756
Lot Coverage by Category	Existing Lot Coverage (SF)
Roofed Structures ¹	3000
Driveway ²	1,325
Total Existing Z.O. Lot Coverage =	4,325
Total Percentage Z.O. Lot Coverage =	17.3%

¹Includes dwellings, accessory structures, covered porches, covered decks covered stoops and covered patios

²Includes any area used for vehicle parking and vehicle access to the dwelling regardless of surface

NRI-13. Standard FSD Notes

STANDARD FSD NOTES

General Notes to include on all FSDs (when NRI not required) with all blanks filled in:

1. This site is zoned (insert zone) and is located in the (Rural/ Developing/ Developed) Tier as defined in the Approved General Plan.
2. The source of the property boundaries on this plan is from (state source as state property layer, deeds, or boundary survey.) (If deeds- list Liber and Folio and provide copies).
3. The topography shown on this plan is from (state source, date, and manner in which the information was obtained).
4. The source of the soils information on this plan is from the USDA NRCS Web Soil Survey (WSS) in a Custom Soil Resource Report for an Area of Interest (AOI) established for the subject site only and generated on (include date report was generated).
5. The county regulated 100-year floodplain information on this plan is from (state source from choices below):
 - a) If the source is a floodplain easement less than 10 years old, then provide a copy of the easement and provide the easement recordation information. Such as "... an easement recorded in the land records at (list Liber and Folio)."
 - b) If the source is a county watershed study, then provide the name of the study and relevant plate number. Such as "... (Insert watershed study name) watershed study, plate number (insert plate number)."
 - c) If the source is a floodplain study prepared by DPW&T, then provide the number and date of approval. Such as "...DPW&T Floodplain Study Number (insert number), approved (insert date)."
 - d) If the source is a floodplain study prepared by an engineer and approved by DPW&T, then provide the number, the name of the engineering firm responsible for preparing the study, and the date of approval. Such as "Floodplain Study Number (insert number), prepared by (insert name of engineering firm), approved by DPW&T (insert date)."
 - e) If the source is a delineation prepared by an engineer that has not yet been approved by DPW&T, then provide the name of the engineer, and the engineering company responsible for the delineation, and a statement regarding their qualifications to do so, such as: "... a delineation prepared by (insert name of engineer and qualifications – for example Tom Jones, P.E., water resources engineer), (insert company name). An approved floodplain study may be required during subsequent development review processes." This statement must be accompanied by the engineer's seal and signature adjacent to this note on the plan.

OR, if no floodplain is located on-site, use the following note:
No county regulated 100-year floodplain is located on-site per (state source from choices below):

 - a) If verified in writing by DPW&T, then provide the date of verification and a copy of the letter. Such as "...DPW&T letter of verification dated (insert date)."
 - b) If no county regulated 100-year floodplain is located on-site because the drainage area to the site is less than 50-acres, then provide the name of the engineer, and the engineering company responsible for determining the drainage area, and a statement regarding their qualifications to do so, such as: "... a drainage area of less than 50-acres as verified by (insert name of engineer and qualifications – for example Tom Jones, P.E., water resources engineer), (insert company name). Written verification from DER may be required during subsequent development review processes." This statement must be accompanied by the engineer's seal and signature adjacent to this note on the plan.
6. The wetland and stream information on this plan is from a study prepared by (state name of professional qualified to prepare the study) in a study dated (state date of preparation of the study).

OR, if no wetlands or streams are located on-site, use the following note:
No wetlands or streams are located on-site as field verified by (state name of professional qualified to make such a determination in the field).

7. This site (is/is not) within a Sensitive Species Protection Review Area based on a review of the SSPRA GIS layer prepared by the Heritage and Wildlife Service, Maryland Department of Natural Resources.
OR, if a letter has been obtained from the Maryland Department of Natural Resource Natural Heritage Program, use the following note:
In a letter dated (insert date) the Maryland Department of Natural Resource Natural Heritage Program has determined (insert information from the letter).
8. The site (does/does not) include Forest Interior Dwelling Species habitat.
9. The site is not subject to a previously approved TCP.
OR, if the subject property is subject to a previously approved TCP/TCP's use the following note:
The site is subject to previously approved TCP's. Previously approved TCP's include: (state TCP identification number/s).
10. There are (state the number of trees) specimen, champion and/or historic trees located on the property. These trees were located using (state method of location - field observations or surveyed locations).
OR, if there are no specimen, champion or historic trees on the property use the following note:
There are no specimen, champion or historic trees located on the property.
11. Marlboro clay and Christiana complex are not found to occur on or within the vicinity of this property.
OR, if Marlboro clay or Christiana complex are mapped on or in the vicinity of the subject property use the following note:
Marlboro clay (and/or Christiana complex) is/are found to occur on or within the vicinity of this property. As such, the property may be subject to regulation by Section 24-131 of the Subdivision Regulations
12. If any of the base information used to prepare this FSD changes significantly, the FSD will be revised and re-submitted for review to the Environmental Planning Section.

Additional Notes required to be included on FSDs when appropriate. Additional notes should be numbered sequentially following the standard notes)

- (1) This site (does/ does not) contain Wetlands of Special State Concern as defined in COMAR 26.23.06.01.
- (2) This site (does/ does not) contain a Tier II waterbody as defined in COMAR 26.08.02.04.
- (3) This site (is/ is not) located within a Stronghold Watershed as established by the MD DNR.
- (4) There are no scenic or historic roads located on or adjacent to this property.
OR, if scenic or historic roads are located in the vicinity of the subject site use the following note:
The site is (describe location – abutting, adjacent to, etc. – insert name of road), a designated (list designation as scenic, historic, or both) road in the vicinity of the property.
- (5) The subject property is not located within a Registered Historic District.
OR, if the subject property is located within a Registered Historic District use the following note:
(The subject property/ a portion of the subject property) is located within the (state the name and inventory number of the Registered Historic District).
- (6) There are no known archeological sites located on the subject property; however, the subject property has not been surveyed for archeological resources and a Phase I archeology report may be required during subsequent development review processes.
If the subject property has a known archeological site use the following note:
Archeological site (insert registration number), registered with the state is located on-site. Further archeological investigations (Phase II or Phase III) may be required during subsequent development review processes.
- (7)
- (8) The site is not located in the vicinity of any master planned roadway designated as arterial or higher.
OR, if the site is located in the vicinity of a master planned roadway designated as arterial or higher use the following note.
The site is located in the vicinity of (abutting/ adjacent to - name of road), a master planned (state designation - arterial or higher) roadway that is regulated for noise. A noise study may be required during

subsequent development review processes.

- (9) The subject property is not located within the 2008 Air Installation Compatible Use Zone (AICUZ) Study for Andrews Air Force Base.

OR, if the property is located within the AICUZ use the following note:

(The subject property/ a portion of the subject property) is located within the (dba level) dba noise contour as found in the 2008 Air Installation Compatible Use Zone (AICUZ) Study for Andrews Air Force Base.

- (10) The site is not located within an Aviation Policy Area (APA).

OR, if the property is located within an APA area use the following note:

The site lies within the Aviation Policy Area (APA) of (insert airport name) Airport and is subject to compliance with APA regulations under CB-51-2002.

- (11) The site is not located within the Chesapeake Bay Critical Area (CBCA).

OR if the property is located within the CBCA use the following note:

The site lies within the (insert CBCA designation as L-D-O, R-C-O, or I-D-O) overlay zone of Chesapeake Bay Critical Area (CBCA).

NRI-14.Simplified FSD Checklist

Project Name: _____

Prepared By: _____

Date: _____

Simplified FSD Checklist

Use when applying for a Standard or Numbered Letter of Exemption or for applications not eligible for exemption that are not showing any proposed clearing. This option may also be used for Natural Resource Inventories (NRIs) that have no regulated environmental features and limited areas of woodland on-site. Sampling data collection is not required; however, a brief narrative description of the woodlands and a calculation of the amount of woodlands on the site must be provided on the plan. **Additional information may be required by the Planning Director or designee.**

Submittal Requirements

1. Site Vicinity Map

- Location of the project site and surrounding area within one square mile
- Major roads and intersections
- North arrow
- Boundaries of property
- Minimum scale of 1"=2,000'

2. Environmental Features Map

- Property boundaries (tax maps, plats or surveyed boundaries of all lot(s) and/or parcel(s) included in the application
- Locations of all existing structures and easements
- Topographic contours (maximum interval = 2 feet)
- North arrow
- Existing regulated woodlands and trees on the property and extending off the property 100 feet
- Regulated streams and their required buffers
- Limit of 100-year floodplain and source stated
- Nontidal or tidal wetlands and their required buffers
- Location of existing Critical Habitat Areas for rare, threatened, and endangered species
- Locations of cultural features and historic sites
- Location of soils mapping units within each soil series shown on the plan to scale, using standard soils boundary symbol per EPS standards
- Table stating the soils mapping unit name and description, k-factor, hydric rating, hydrologic soil group, and drainage class
- Location of steep slopes (15% and greater)
- Standard FSD Notes
- Title, date, revisions and scale
- Legend containing all features shown on the plan (Standard symbols used)
- Qualified professional certification with name, address, phone number, email, stamp (if applicable), signature, and date of plan certification on each sheet
- A brief narrative description of the woodlands including general class, dominant species, and general health
- Total woodland on the site to the nearest one-hundredth of an acre

3. Documents

- 2 copies of completed checklist

NRI-15. Intermediate FSD Checklist

Project Name: _____

Associated Plan: _____

Prepared By: _____

Date: _____

Intermediate FSD Checklist

Use when the subject application is for properties where the proposed activity will occur on a small portion of a larger property. Requires a plan of the entire site and text and sampling data for areas proposed for development. Intermediate FSDs shall not be submitted as part of a Natural Resource Inventory. **Additional information may be required by the Planning Director or designee.**

Submittal Requirements

1. Site Vicinity Map (Place on plan and include copy with Forest Stand Analysis report)

- Location of the project site and surrounding area within one square mile
- Major roads and intersections
- North arrow
- Boundaries of property
- Minimum scale of 1"=2,000'

2. Environmental Features Map (Needed for Entire Site)

- Property boundaries (tax maps, plats or surveyed boundaries of all lot(s) and/or parcel(s) included for the entire property
- Locations of all existing structures and easements
- Topographic contours (maximum interval = 2 feet)
- North arrow
- Existing regulated woodlands and trees on the property and extending off the property 100 feet
- Regulated streams and required buffers
- Limit of 100-year floodplain and source stated
- Nontidal or tidal wetlands and required buffers (If present must also include a wetland report)
- Location of existing Critical Habitat Areas for rare, threatened, and endangered species
- Locations of cultural features and historic sites
- Location of soils mapping units within each soil series shown on the plan to scale, using standard soils boundary symbol per EPS standards
- Table stating the soils mapping unit name and description, k-factor, hydric rating, hydrologic soil group, and drainage class
- Location of steep slopes (15% and greater)
- Standard FSD Notes
- Title, date, revisions and scale
- Legend containing all features shown on the plan (Standard symbols used)
- Qualified professional certification with name, address, phone number, email, stamp (if applicable), signature, and date of plan certification on each sheet
- Locations of Forest Interior Dwelling Species (FIDS) habitat
- Limit of Disturbance (LOD) for the proposed development with area noted
- A brief narrative description of the woodlands located outside of the proposed LOD including general class, dominant species, and general health

In addition to the above, you MUST include the following for the area of proposed Development (within the LOD and 200-feet beyond).

- Field sample point locations in adequate numbers and locations to delineate separate stands
- Forest stand boundaries and stand acreages to the nearest one-hundredth of an acre
- Forest stand summary table including all required information
- Locations of specimen, champion and historic trees and their critical root zones.
- Table of specimen, champion and historic trees stating field flag number, common name, scientific name, size (in dbh), condition, and condition comments (with note regarding whether the trees were field located or surveyed)

3. Forest Stand Analysis Report

- Cover sheet (Must include Title, Date and Certification by Qualified Professional)

Narrative to include the following:

- Brief introduction describing location of the site, total acreage (to the nearest one-hundredth of an acre), zoning, current condition of the property (Partially developed? Undeveloped?)
- A statement indicating the sampling methodology and equipment used for data collection
- A statement of the total woodland to the nearest one-hundredth of an acre
- A statement of the existing condition of each stand including a description of composition, structure, and condition, as well as retention potential and comments on stand history
- Description of other environmental or cultural features which may impact decisions on forest retention
- A statement regarding the presence or absence of rare, threatened, or endangered species including the source of this information (SSPRA layer or Letter from Maryland Natural Heritage Program)
- A statement regarding the presence or absence of specimen, champion and historic trees including condition comments that may affect retention potential
- A statement regarding the soils (including the mapping unit name and description, k-factor, hydric rating, hydrologic soil group, and drainage class)
- Field sampling data sheets
- Forest analysis worksheets
- Forest stand summary sheets

Supporting information to be provided:

- Site Vicinity Map
- A dated custom soil resource report for an area of interest (AOI) established for the subject site and generated from the USDA NRCS WSS
- Information obtained regarding the presence or absence of rare, threatened, or endangered species including the source of this information (SSPRA layer or Letter from Maryland Natural Heritage Program)
- If a wetland study is not required*, color photocopies of the NWI map, the MDDNR Wetland Guidance Map, and the soil survey (otherwise, these materials should be included with the wetland study)
- Letter from Maryland Natural Heritage Program

4. Additional Documents to be included with the application

- 2 copies of completed checklist

NRI-16.Detailed FSD Checklist

Project Name: _____
Associated Plan: _____
Prepared By: _____
Date: _____

Detailed FSD Checklist

Use when the site or application does not qualify for a Simplified or Intermediate FSD. The Detailed FSD must include a plan, using the standard line types and symbols, sampling data, and supporting text for the entire site. **Additional information may be required by the Planning Director or designee.**

Submittal Requirements

1. Site Vicinity Map (Place on plan and include copy with Forest Stand Analysis report)

- Location of the project site and surrounding area within one square mile
- Major roads and intersections
- North arrow
- Boundaries of property
- Minimum scale of 1"=2,000'

2. Environmental Features Map

- Property boundaries (tax maps, plats or surveyed boundaries of all lot(s) and/or parcel(s) included for the entire property
- Locations of all existing structures and easements
- Topographic contours (maximum interval = 2 feet)
- North arrow
- Existing regulated woodlands and trees on the property and extending off the property 100 feet
- Regulated streams and required buffers
- Limit of 100-year floodplain and source stated
- Nontidal or tidal wetlands and required buffers (If present must also include a wetland report)
- Location of existing Critical Habitat Areas for rare, threatened, and endangered species
- Locations of cultural features and historic sites
- Location of soils mapping units within each soil series shown on the plan to scale, using standard soils boundary symbol per EPS standards
- Table stating the soils mapping unit name and description, k-factor, hydric rating, hydrologic soil group, and drainage class
- Location of steep slopes (15% and greater)
- Standard FSD Notes
- Title, date, revisions and scale
- Legend containing all features shown on the plan (Standard symbols used)
- Qualified professional certification with name, address, phone number, email, stamp (if applicable), signature, and date of plan certification on each sheet
- Locations of Forest Interior Dwelling Species (FIDS) habitat
- Field sample point locations in adequate numbers and locations to delineate separate stands
- Forest stand boundaries and stand acreages to the nearest one-hundredth of an acre
- Forest stand summary table including all required information
- Locations of specimen, champion and historic trees and their critical root zones.
- Table of specimen, champion and historic trees stating field flag number, common name, scientific name, size (in dbh), condition, and condition comments (with note regarding whether the trees were field located or surveyed)

3. Forest Stand Analysis Report

___ Cover sheet (Must include Title, Date and Certification by Qualified Professional)

Narrative to include the following:

- ___ Brief introduction describing location of the site, total acreage (to the nearest one-hundredth of an acre), zoning, current condition of the property (Partially developed? Undeveloped?)
- ___ A statement indicating the sampling methodology and equipment used for data collection
- ___ A statement of the total woodland to the nearest one-hundredth of an acre
- ___ A statement of the existing condition of each stand including a description of composition, structure, and condition, as well as retention potential and comments on stand history
- ___ Description of other environmental or cultural features which may impact decisions on forest retention
- ___ A statement regarding the presence or absence of rare, threatened, or endangered species including the source of this information (SSPRA layer or Letter from Maryland Natural Heritage Program)
- ___ A statement regarding the presence or absence of specimen, champion and historic trees including condition comments that may affect retention potential
- ___ A statement regarding the soils (including the mapping unit name and description, k-factor, hydric rating, hydrologic soil group, and drainage class)
- ___ Field sampling data sheets
- ___ Forest analysis worksheets
- ___ Forest stand summary sheets

Supporting information to be provided:

- ___ Site Vicinity Map
- ___ A dated custom soil resource report for an area of interest (AOI) established for the subject site and generated from the USDA NRCS WSS
- ___ Information obtained regarding the presence or absence of rare, threatened, or endangered species including the source of this information (SSPRA layer or Letter from Maryland Natural Heritage Program)
- ___ *If a wetland study is not required*, color photocopies of the NWI map, the MDDNR Wetland Guidance Map, and the soil survey (otherwise, these materials should be included with the wetland study)
- ___ Letter from Maryland Natural Heritage Program

4. Additional Documents to be included with the application

- ___ 2 copies of completed checklist

NRI-17.Forest Sample Plot Field Data Sheet (Blank)

Forest Sample Plot Field Data Sheet																
Property: _____					Prepared by: _____											
Stand #: _____			Plot#: _____			Plot Size: _____			Date: _____							
Basal Area in sf/acre:		Size Class of Trees within sample plot														
Tree Species	# of Trees			# of Trees			# of Trees			# of Trees			# of Trees			Total
	2-5.9" dbh			6-9.9" dbh			10-17.9" dbh			18-29.9" dbh			> 30" dbh			
Crown Position	DOM	COD	OTH	DOM	COD	OTH	DOM	COD	OTH	DOM	COD	OTH	DOM	COD	OTH	
Total Number of Trees per Size Class																
Number of standing dead trees 6" dbh or greater																
1/100 Ac. Samples:																
List of Common Understory Species 3'-20'					% Canopy Coverage						% Invasive Cover					
					C	N	E	S	W	Total	C	N	E	S	W	Total
List of Herbaceous Species 0'-3'					% Understory Cover 3'-20'						% Herbaceous/ Woody Cover 0'-3'					
					C	N	E	S	W	Total	C	N	E	S	W	Total
List of Invasive Species											Plot Successional Stage:					
Comments:																
Total number of tree species > 6": _____																
sheet _____ of _____																

NRI-18.Forest Sample Plot Field Data Sheet (Example Property)

Forest Sample Plot Field Data Sheet																	
Property: <u>Example Property</u>					Prepared by: <u>Reel E. Qualified</u>												
Stand #: <u>A</u>			Plot#: <u>1</u>			Plot Size: <u>1/10 Ac</u>			Date: <u>8/30/2010</u>								
Basal Area in sf/acre: 55		Size Class of Trees within sample plot															
Tree Species	# of Trees			# of Trees			# of Trees			# of Trees			# of Trees			Total	
	2-5.9" dbh			6-9.9" dbh			10-17.9" dbh			18-29.9" dbh			> 30" dbh				
Crown Position	DOM	COD	OTH	DOM	COD	OTH	DOM	COD	OTH	DOM	COD	OTH	DOM	COD	OTH		
Chestnut oak							2						2			4	
Scarlet oak								1					1			2	
Black oak								2						1		3	
Persimmon			1			2										3	
Red Maple		1						1								2	
Total Number of Trees per Size Class	2			2			6			4						14	
Number of standing dead trees 6" dbh or greater							1			1						2	
1/100 Ac. Samples:																	
List of Common Understory Species 3'-20'				% Canopy Coverage						% Invasive Cover							
Sassafras, eastern redbud, mountain laurel				C	N	E	S	W	Total	C	N	E	S	W	Total		
				45	25	50	40	35	39	10	10	10	10	50	18		
List of Herbaceous Species 0'-3'				% Understory Cover 3'-20'						% Herbaceous/ Woody Cover 0'-3'							
seal, wild ginger, aster,				C	N	E	S	W	Total	C	N	E	S	W	Total		
				50	40	40	50	50	46	75	50	80	75	50	66		
List of Invasive Species										Plot Successional Stage:							
Multiflora Rose, Honeysuckle										Late-Succession Upland Oak-Hickory Assoc.							
Comments: Many invasives in western part of stand																	
Total number of tree species >6": 4																	
sheet of _____																	

NRI-19.Forest Sample Plot Field Data Sheet Preparation Guidelines

Forest Sample Plot Field Data Sheet Preparation Guidelines

Property : List the name of the project site where the field sampling is being done

Prepared by: Name of the Qualified Professional completing the field sampling

Stand#: List the stand designation that the individual plot is located in

Plot # List the plot number of the individual sample plot

Plot Size: List the size of sample plot (i.e. 1/10th acre)

Date: List the date that the field sampling took place

LOCATE PLOT CENTER AND FLAG OR STAKE LOCATION

Basal Area in square feet per acre: Data can be taken with a prism, or angle gauge. To determine the basal area using a prism, total the number of "in" trees and multiply by the prism factor for each plot sampled. The angle gauge is used in a similar method. (refer to text)

Size class of trees within sample plot:

For all five points included for the data sample plot (Center, North, South, East and West) record the following information:

Tree species: List all tree species observed from each directional point.

For each of the tree species listed, show the number in each size class and what crown position they are in.

Crown Position:

Dominant species: Trees which are the largest or tallest. They extend above surrounding individuals and capture sunlight from above and around the crown.

Co-dominant species: Trees that extend their crowns into the canopy and receive direct sunlight from above but limited sunlight from the sides. One or more sides of a co-dominant tree are crowded by the crowns of dominant trees.

Other: All other trees observed which do not meet the definition of dominant or co dominant trees. (Smaller –but qualifying trees)

Total: For each Tree Species listed, total all columns left to right for all sizes and crown position

Total Number of Trees per Size Class: Total all rows for each size class

Number of standing dead trees 6"dbh or greater: List all standing dead trees 6 dbh or larger under the corresponding size class column

List of Common Understory Species 3'-20': List all of the common understory species observed from each directional point

List of Herbaceous Species 0'-3": List the herbaceous species observed from each directional point

List of Invasive Species: List all of the invasive species observed from each directional point and for all layers. (Overstory (O), Understory (U), and Herbaceous (H).

% Canopy Coverage: Record the percentage of canopy cover for each directional point. Canopy coverage may be obtained using a visual estimate for each plot. (See Crown density scale- Appendix A-1) Average the five directional points and enter the total.

% Understory Cover 3'-20': Record the percentage of understory cover for each directional point. Average the five directional points and enter the total.

% Invasive Cover: Record the percentage of invasive cover for all layers including overstory, understory and herbaceous layers. Enter the average of all layers.

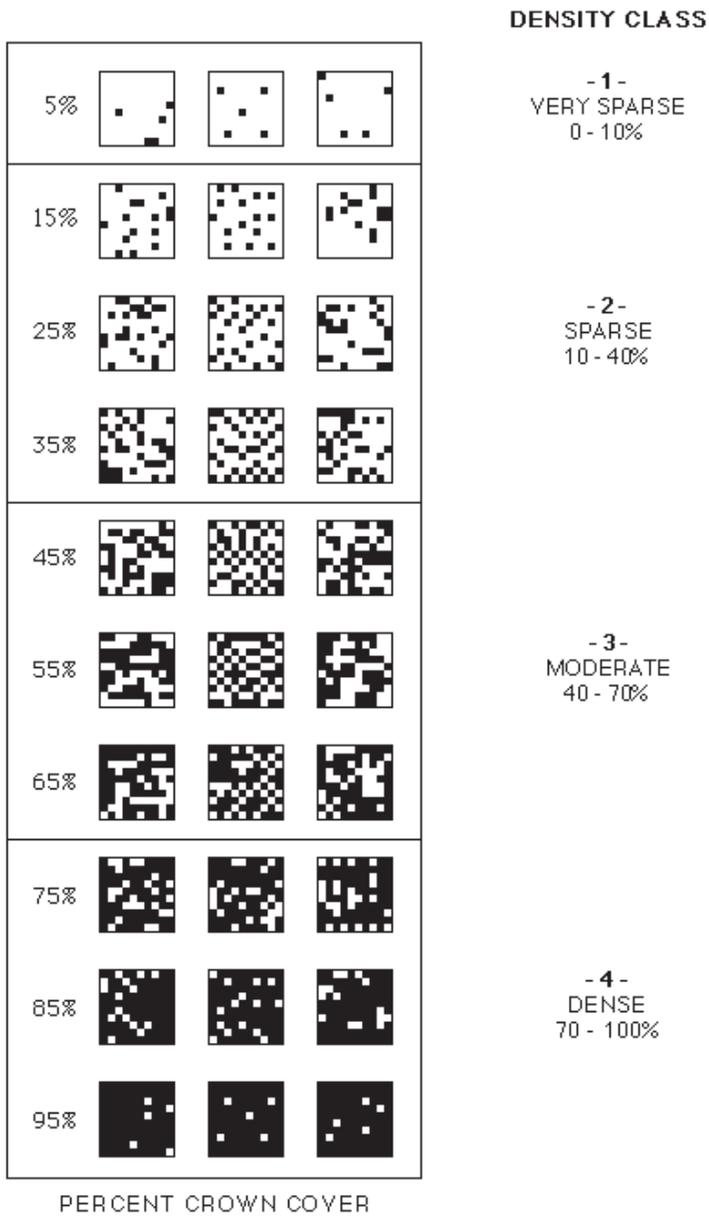
% Herbaceous/Woody Cover 0'-3': Record the percentage of herbaceous and woody cover for each directional point. Average the five directional points and enter the total.

Plot Successional Stage: Forests are characterized as early, mid or late successional, with characteristic growth rates and species composition. Additional information which may be helpful in assessment is available soil moisture, often described as xeric, mesic, or hydric. Species composition descriptions, such as upland, may reflect these soil conditions. Note the forest association.

Comments: This may include other noteworthy information such as evidence of past management practices, cultural or historical features, specimen trees, wildlife notes or rare, threatened and endangered plant species.

Total number of tree species > 6": Record the total number of tree species observed on the plot greater than 6"dbh

NRI-20.Crown Density Scale



Crown density scale used for estimating crown cover. (Rows of squares with black and white patterns represent three different arrangements of vegetated cover for a given percentage.)

Adapted from [Paine, 1981](#)

NRI-21.Forest Stand Summary Sheet

Forest Stand Summary Sheet		
Property: _____		
Location: _____ (Town, County ADC Map #, and Grid Coordinates)		
Prepared By: _____ Date: _____		
Stand Variable	Stand # _____	Stand # _____
1. Dominant species/ Co-dominant species		
2. Forest Association		
3. Successional stage		
4. Basal Area in s.f. per acre		
5. Size class of dominant species		
6. Percent of canopy coverage		
7. Number of tree species per acre		
8. Common understory species		
9. Percent of understory cover 3' to 20' tall		
10. Number of understory species 3' to 20' tall		
11. Common herbaceous species		
12. Percent of herbaceous & woody plant cover 0' to 3' tall		
13. List of major invasive plant species and percent of cover		
14. Number of standing dead trees 6" dbh or greater		
15. Comments		
Sheet ___ of ___		August 2010

NRI-22.Forest Stand Summary Sheet Preparation Guidelines

Forest Stand Summary Sheet Preparation Guidelines

The Forest Stand Summary Sheet is prepared using the combined data from the individual sample plots taken in the field. Data is summarized for each stand existing on the subject property.

Property: Enter the name of the project site where the field sampling was done

Location: List the town, ADC Map number and grid coordinates

Prepared by: Name of the Qualified Professional who completed the field sampling.

Date: Enter the date that the field sampling took place.

Stand #: Enter the stand designation and acreage (if there are more than two forest stands on the property, additional sheets must be used).

1. Dominant species/Co-dominant species: List the dominant and co dominant species for each stand.
2. Forest Association: Based on the dominant and co-dominant species, enter the forest association type.
3. Successional stage: Enter the successional stage of the stand based on the average of all individual plots.
4. Basal area in square feet per acre: To get an average for the stand, add the basal areas for all of the individual sample plots and divide this total by the number of sample plots in the stand.
5. Size class of dominant species: To enter the average size class, add the size class totals for all of the individual sample plots and divide this total by the number of sample plots in the stand.
6. Percent of canopy coverage: This is the average percent of canopy coverage for all sample points in the stand. Add the totals for all individual plot data sheets and divide by the number of sample plots in the stand.
7. Number of tree species per acre: To determine the number of species per acre, count all of the *different* species listed in the first column of the individual data sheets. Next, take the area of the forest stand in acreage and divide by the number of different species.
8. Common understory species: List the 3 or 4 most common species that occur in the 3' to 20' layer.
9. Percent of understory cover 3' to 20' tall: This is the average percent of understory cover for all sample plots in the stand. Add the totals for all individual sample plots and divide this total by the number of sample plots in the stand.
10. Number of understory species 3' to 20' tall: Count the number of *different* species in the understory layer.
11. Common herbaceous species: List the 3 or 4 most common species that occur in the 3' to 20' layer.
12. Percent of herbaceous & woody plant cover 0' to 3' tall: This is the average percent of herbaceous and woody cover for all sample plots in the stand. Add the totals for all individual sample plots and divide this total by the number of sample plots in the stand.
13. List of major invasive plant species and percent of cover: List the major invasive plant species and amount of area coverage. For example:

O-Norway Maple	20 % (of the overstory layer)
U-Multiflora Rose	60% (of the understory layer)

H-Japanese Honeysuckle 40 % (of the herbaceous layer)

14. Number of standing dead trees 6" dbh or greater per acre: Divide the average for all plots sampled by plot size. For example, if the average for all plots is 2 and the plot size is 0.1 acre, the number per acre is 20.
15. Comments: This is a summary of comments included on the individual plot data sheets.

NRI-23.Forest Analysis Worksheet

Forest Analysis Worksheet

The following parameters are measured and evaluated at each sample plot as shown on the forest sample plot field data sheet. Each parameter is given a value and upon completion of the sampling, the preparer will total the numbers for each sample plot to give an accurate analysis of each stand. This worksheet must be included in the FSD report for each stand and the Summary Table (below) must be shown on the plan.

Part A: Composition and Structure		Part B: Condition	
1. Percent canopy closure		1. Invasive species coverage (%)	
70-100%	3	Herbaceous	
40-69%	2	<1	3
10-39%	1	1-5	2
0-9%	0	>5	1
		Understory	
2. Number of shrubs under 20" tall		<1	3
15 or more	3	1-5	2
10-14	2	>5	1
5- 9	1	Canopy	
0-4	0	<1	3
		1-5	2
3. #. of tree species 5" DBH and greater		>5	1
6 or more	3	2. Percent of damage from insect & disease or storm damage	
4-5	2	0-10	3
2-3	1	11-20	2
0-1	0	21-30	1
		31+	0
4. Size class of dominant trees		3. Percent of downed dead woody material present	
Greater than 20"	3	15-50%	3
6-19.9"	2	5-14%	2
3-5.9"	1	51-100%	1
Less than 3"	0	0-4%	0
5.Percent herbaceous and shrub cover under 3"		4. Average number of standing dead trees/tenth acre plot	
75-100%	3	0-1	3
25-74%	2	2	2
5-24%	1	3-5	1
0-4%	0	5 or more	0
6. Stocking level (BA)		5. Other features	
<50	3	At the discretion of the preparer, additional points may be assigned; provide description in the narrative	
50-120	2		2
>120	1		1
7. Other features			
At the discretion of the preparer, additional points may be assigned; provide description in the narrative			
	1		
Composition and Structure TOTAL		Condition TOTAL	

Part C: Location

1. Location of regulated features (Refer to Part ___ of the Technical Manual and Corresponding County Code, Subtitle ___, Division __)

Priority 1 20
 Priority 2 15
 Priority 3 10

Location rating: _____

Part D: Stand Function

Place an "X" in the corresponding box that describes the existing stand functions or add functions that are specific to the stand.

Stand	water quality protection	visual screening	wildlife habitat	energy conservation	personal woodlot	other function
A						
B						
C						
D						
etc.						

Summary Table - Forest Analysis and Priorities
 (this table is to be provided on the FSD or NRI – refer to the
 Technical Manual text for how to determine the final priorities)

	Part A	Part B	Part C				
Stand	Structure (Out of 20)	Condition (Out of 20)	Location (Out of 20)	Total (out of 60)		Priority for Preservation (H, M or L)	Priority for Restoration (H, M or L)
A							
B							
C							
D							
etc.							

NRI-24.Suggested Format for Forest Stand Delineation Report

Suggested Format For Forest Stand Delineation Report

Forest Stand Delineation Report

for

Name of Project

Prepared for:

Name of Developer or Owner

Address

Phone Number

Prepared by:

Name of Consultant or Preparer

Address

Phone Number

Fax Number

Email address

Certification

Certification statement by qualified professional

Signature_____ Date_____

I. SITE LOCATION AND CONDITIONS

Description of the property including the area (in acreage), location and relationship to the nearest major road, zoning, current use, and adjoining uses.

State the area (in acreage) of qualifying forest that exists on the property.

Description of any structural remains or existing constructed features on-site, and any cultural features of historic significance on or adjacent to the property. A statement regarding the presence of any historic sites, and/or scenic or historic roads should also be included.

II. EQUIPMENT USED

Description of the equipment used to determine the findings reported on the data sheets and a description of how the placement of sample points was determined. (Usually a topographic map provides orientation)

III. METHODOLOGY

Description of the prescribed methodology cited in the current Maryland Department of Natural Resources, State Forest Conservation Technical Manual for Preliminary and Field Developed Forest Stand Delineations. A description of the sampling methods used and how the number of plots were determined and evaluated. A statement on how the Forest Structure Analysis was calculated from data tallied at each of the sample point locations.

IV. GEOLOGY/SOILS

Description of position of site in relationship to slopes. (I.e. Upland position with southerly facing slopes). Description of soil types and source. (Prince George’s County Soils Survey). Include information on the presence /absence of Marlboro clay. Reference the soils table. (Included at the end of report).

V. STAND DESCRIPTIONS

Descriptions for each forest stand delineated on the site. Each description should include the number of sample points that were taken in the field study of the site, and the details for the stand including the species types and sizes, the average diameter of specimen trees and the average diameter of trees for the entire stand. It should also include a statement of the forest structure determination (Excellent, Good, Poor, etc). The presence of steep and/or severe slopes should also be noted.

VI. RARE, THREATENED & ENDANGERED SPECIES

A statement should be included to indicate the presence or absence of rare, threatened or endangered species. Reference should be made to the letter sent to the Maryland Department of Natural Resources requesting the Environmental Review of the property. A copy of the response letter should be included with the report.

VII. WETLANDS

State that all wetlands and streams are shown and labeled on the plan, or that there are no wetlands present. If wetlands are present, a formal wetland delineation in accordance with the current *Corps of Engineers' Wetland Delineation Manual* must be performed and submitted for review with the FSD or NRI. Reference should be made that a Wetland Delineation/Evaluation report has been submitted.

VIII. SUMMARY

Summary of information provided. (As described above, data was collected for the purpose of determining the value of the forest cover (Summary Table) existing on the property. Stand A received a "Good" rating on the Forest Structure Analysis sheet. Describe how priorities were assigned to existing forest stands. (Forest stands are prioritized for retention based on the summary and analysis of stand characteristics and at least one other objective such as timber management, aesthetics or recreation. Include a description of what elements were present that resulted in the priority rating) Refer to Section 4.2.4c for characteristics used to assign stand priorities.

SAMPLE TABLES

Table 1. Sample Soils Table					
Map Unit Symbol	Map Unit Name	K-Factor (Whole Soil)	Hydric Rating	Hydrologic Soil Group	Drainage Class
AaB	Adelphia silt loam, 2 to 5 percent slopes	0.37	Unknown Hydric	C	Moderately well drained
AcA	Adelphia-Aquasco complex, 0 to 2 percent slopes	0.37	Not Hydric	C	Moderately well drained
AdA	Adelphia-Holmdel complex, 0 to 2 percent slopes	0.37	Partially Hydric	C	Moderately well drained
AdB	Adelphia-Holmdel complex, 2 to 5 percent slopes	0.37	Partially Hydric	C	Moderately well drained

Taken from: USDA, NRCS, Web Soil Survey (WSS) available online at <http://websoilsurvey.nrcs.usda.gov>

Table 2. Sample Specimen, Champion and Historic Tree Table					
NO.	COMMON NAME	SCIENTIFIC NAME	DBH (INCHES)	CONDITION RATING	CONDITION COMMENTS
1	Red Maple	<i>Acer rubrum</i>	38	Good	
2	Red Maple	<i>Acer rubrum</i>	40	Poor	Storm damage
3	Yellow Poplar	<i>Liriodendron tulipifera</i>	40	Poor	Lightning strike
4	White Oak	<i>Quercus alba</i>	31	Fair	Some breakage
5	Yellow Poplar	<i>Liriodendron tulipifera</i>	31	Good	
6	Yellow Poplar	<i>Liriodendron tulipifera</i>	31	Good	
7	White Oak	<i>Quercus alba</i>	32	Good	
8	Yellow Poplar	<i>Liriodendron tulipifera</i>	31	Fair	Powdery mildew; atypical form
9	White Oak	<i>Quercus alba</i>	31	Good	
10	Chestnut Oak	<i>Quercus prinus</i>	32	Fair	Some breakage

NOTE: ALL SPECIMEN, CHAMPION AND HISTORIC TREES WERE FIELD LOCATED

NRI-25.Additional Information Needed for FSD Report

Additional Information Needed for FSD report

Site Map- provide 8 ½” x 11” vicinity map (taken from Prince George’s County ADC Map, or similar)
(Scale: 1”=2,000’) with outline of property shown and labeled.

Soils Map- provide 8 ½” x 11” dated custom soil resource report for an area of interest (AOI) established
for the subject site and generated from the USDA NRCS WSS

State Wildlife and Heritage Service letter- provide copy of environmental review letter received from
The Maryland Department of Natural Resources-Wildlife and Heritage Service.

Forest Sample Point Data Sheets- include **ALL** sample point data sheets

Forest Analysis Worksheets-include for **ALL** sample points

Forest Stand Summary Sheets- include for **ALL** forest stands

IF A SEPARATE WETLAND DELINEATION REPORT IS NOT PROVIDED, then the following
information **MUST BE INCLUDED** with the FSD report:

National Wetland Inventory Map- provide 8 ½” x 11” NWI map (Quad) in color
(Scale: 1”=2,000’) with outline of property shown and labeled.

Wetlands of Special State Concern Map- provide 8 ½” x 11” Maryland Department of
Natural Resources Nontidal Wetland Guidance Map in color

Appendix C

Preservation, Restoration
and Enhancement of
Regulated Environmental
Features (REF)

REF-1.TBD

Section to be determined soon.

Appendix D

Tree Canopy Coverage (TCC)

TCC-1.Calculating Tree Canopy Coverage Requirements

Calculating Tree Canopy Coverage Requirements

The following scenarios address the majority of applications and methods for meeting the tree canopy coverage requirement. Because each site is unique, the notes to be provided and where they are to be provided are flexible and should be adjusted to fit the situation of the site.

Scenario A: Sufficient woodland conservation is being provided so that the tree canopy coverage requirement is also met

If a site proposes to meet the tree coverage requirement using woodland conservation, the following note must be provided below the woodland conservation worksheet on the tree conservation plan. The example is a for a 2.55-acre site zoned R-R.

Note: The tree coverage requirement on this site has been met using woodland conservation on-site as follows:

Tree canopy coverage required: 0.38 acres or 16,553 SF (2.55 acres x 15%. This is the percentage of minimum canopy coverage required as shown in Table 1. Tree Canopy Requirements by Zone)

Tree canopy coverage provided using woodland conservation: 0.91 acres (*this will be shown on the worksheet above this note*)

Scenario B: Sufficient woodland conservation has not been provided on-site to meet the tree canopy coverage requirement

If a site proposes to meet the tree coverage requirement using a portion of woodland conservation and some landscaping that is not being credited toward meeting the woodland conservation requirements, the following note must be provided below the woodland conservation worksheet. The example is a 2.55-acre site zoned R-R.

Note: The tree canopy coverage requirement on this site has been met using woodland conservation and landscaping [*or just landscaping*] as follows:

Tree canopy coverage required: 0.38 acres or 16,553 SF (2.55 acres x 15%)

Tree canopy coverage provided using woodland conservation: 0.23 acres or 10,019 (*this will be shown on the worksheet above this note*)

Tree canopy coverage provided using landscaping: 0.15 acres (6,534 square feet)

Total tree canopy coverage provided: 0.38 acres or 16,553 SF

Scenario C: Site is exempt from the woodland conservation requirements

If a site is exempt from the woodland conservation requirements, then the provision of the tree canopy coverage requirement must be documented on the plans available through the use of the tree canopy coverage worksheet or notes on the plans as appropriate.

Scenario D For sites that are in the stage of the review process where only a TCP1 is required (CSP, CDP, preliminary plan), then a note on the plans must be provided that states the amount of the requirement and how it will be met because a tree conservation plan is not required. The example is the same 2.55-acre site used above. The following note would be placed on the TCP1:

Note: The tree canopy coverage requirement on this site will be shown on a landscape plan to be submitted with the first permit (*this timing mechanism assumes there will be no SDP or DSP prior to permit*). AND, the appropriate notes with regard to conceptually how the tree canopy coverage requirement might be met such as those below.

Tree canopy coverage required: 0.38 acres or 16,553 SF (2.55 acres x 15%)

Tree canopy coverage provided using woodland conservation: 0 acres

Tree canopy coverage to be provided using landscaping: 0.38 acres or 16,553 SF

Scenario E: For sites that are in the stage of the review process where a TCP2 would have been required (DSP or SDP) if the site was not exempt from the WCO, then a landscape plan must be provided with the tree canopy coverage worksheet included. The note below shall be placed on the DSP or SDP.

Note: The tree canopy coverage calculations are shown on the landscape plan.

TCC-2.Tree Canopy Coverage Worksheet

Project Name:		Plan #	
Site Calculations:			
Total Acres(gross tract)	% of required TC	TC in Acres	TC in S.F.
		0	0
Category	Credit per Tree Based on Size at Planting (in square feet)	Number of Trees	Total Credit
Deciduous - columnar tree (50' or less height)	1-1 1/2" = 40		0
	2-2 1/2" = 50		0
	3-3 1/2" = 75		0
Deciduous - small ornamental tree (20' or less height with equal spread)	1-1 1/2" = 75		0
	2-2 1/2" = 100		0
	3-3 1/2" = 125		0
Deciduous - medium shade tree (25-50' height with equal spread or greater; and over 50' height with less spread than height)	1-1 1/2" = 125		0
	2-2 1/2" = 150		0
	3-3 1/2" = 175		0
Deciduous - large shade tree (50' and greater ht. with spread equal to or greater than ht.; and trees 75' or greater ht.)	1-1 1/2" = 150		0
	2-2 1/2" = 200		0
	3-3 1/2" = 250		0
Evergreen - columnar tree (less than 30' height with spread less than 15')	6-8' = 40		0
	8-10' = 50		0
	10-12' = 75		0
Evergreen - small tree (30-40' height with spread of 15-20')	6-8' = 75		0
	8-10' = 100		0
	10-12' = 125		0
Evergreen - medium tree (40-50' height with spread of 20-30')	6-8' = 125		0
	8-10' = 150		0
	10-12' = 175		0
Evergreen - large tree (50' height or greater with spread of over 30')	6-8' = 150		0
	8-10' = 200		0
	10-12' = 250		0
TOTAL NUMBER OF TREES		0	
A. TOTAL SQUARE FOOTAGE IN PLANTED TREES =			0
B. TOTAL SQUARE FOOTAGE OF EXISTING TREES=			
C. TOTAL TREE CANOPY COVERAGE PROVIDED =			0
D. TOTAL SQUARE FOOTAGE REQUIRED =			0
(manually enter information/figures in these areas) NOTE: C. should equal or exceed D.			

Appendix E

Chesapeake Bay
Critical Area (CBCA)

CBCA-1.TBD

Section to be determined soon.



The Maryland-National Capital Park and Planning Commission

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