

## ROCKVILLE FOREST CONSERVATION MANUAL

Adopted by Resolution 13-09 on October 12, 2009

### **Section 1. Introduction.**

This Manual implements the provisions of Chapter 10.5 of the Rockville City Code and Natural Resources Article, §§5-103 and 5-1601--5-1613, Annotated Code of Maryland by providing for an Urban Forest Conservation Program within the City of Rockville, and by setting forth standards of performance as described in Natural Resources Article, §5-1603--§5-1609, Annotated Code of Maryland.

This Manual incorporates by reference the provisions of the 1997 State Forest Conservation Technical Manual, Third Edition, including all tables, figures, appendices, and amendments thereto, except as otherwise modified by Chapter 10.5 or this Manual, and to the extent that said provisions are not inconsistent with the provisions of Chapter 10.5 or irrelevant to the City's Urban Forest Conservation Program. Because State law and Regulations are concerned with large forested areas, few of which exist within the City, whereas the City's program is concerned with preserving its Urban Forests, which include certain individual trees, there are several provisions in the State law and Regulations that are irrelevant to the City's Urban Forest Conservation Program and are eliminated from this Manual. Conversely, City law and this Manual contain certain requirements that exceed, are more stringent than, or are different than State requirements.

Dated: 2009

## **Section 2. Definitions.**

(a) The following words, terms and phrases when used in this Manual, or in Chapter 10.5 shall have the following meanings ascribed to them:

"Approving authority" means the City Forester or such other City employee or employees designated by the City Manager to approve documents and plans submitted pursuant to Chapter 10.5 of the Rockville City Code.

"Certified Arborist" means an individual who has been certified as an arborist by the International Society of Arboriculture.

"Chapter 10.5" means Chapter 10.5 of the Rockville City Code entitled "Forest and Tree Preservation."

"Chapter 25" means Chapter 25 of the Rockville City Code, entitled "Zoning and Planning."

"Condition rating" means an assessment of a tree's structural integrity and state of health in accordance with the latest edition of the Council of Tree and Landscape Appraisers Guide for Plant Appraisal.

"DBH" means diameter at breast height (4.5 feet from the ground). DBH for trees that branch near or below 4.5 feet and for multi-stemmed or leaning trees shall be measured according to the latest edition of the Council of Tree and Landscape Appraisers Guide for Plant Appraisal.

"Developed Area" includes impervious area, areas being maintained such as park open space, golf courses, lawn areas, playgrounds, picnic areas and other areas of the site that have been improved with pavilions, sheds, courts, foot paths, etc.

“Environmental Guidelines” means those guidelines adopted by Mayor and Council Resolution No. 11-99, as may hereafter be amended or modified, requiring identification of natural resources and the implementation of buffers and other strategies and techniques to preserve and protect the environment and to mitigate the adverse impact of development on the environment.

"Forest" means

(1) a contiguous biological community dominated by trees and other woody plants covering a land area of five thousand (5,000) square feet or greater.

(2) "Forest" includes:

a. Areas that have at least one hundred (100) live trees per acre with at least fifty (50) percent of those trees having a two-inch or greater diameter at four and one-half (4.5) feet above the ground and larger; and

b. Areas that have been cut but not cleared.

(3) "Forest" does not include orchards.

“Forest Conservation Worksheet” means a worksheet used for calculating reforestation and afforestation requirements.

“Limits of disturbance” means the area within which all construction, grading, excavating, and clearing will occur.

“Natural Resources Inventory (NRI)” means a complete analysis of existing natural features, forest, and tree cover on site, as further defined and described in the Environmental Guidelines.

“Parking lot tree” means any tree planted within the landscaped islands and corner areas within a parking lot.

“Qualified Preparer” means an individual qualified to prepare a Forest Stand Delineation and a Forest Conservation Plan, including a licensed Maryland forester, a Maryland licensed landscape architect, and any individual who otherwise meets the standards for a qualified professional as specified in COMAR 08.19.06.01.

“Street tree” means any tree planted in the public right-of-way.

"Tract area" means the total area of a tract, including both forested and non-forested areas, to the nearest 100 square feet. Since the City's Urban Forest Conservation Program applies to the entire tract in question and does not exclude the 100-year flood plain, the term "tract area" as herein defined shall be substituted for the term "net tract" area as the latter term is used in the State Forest Conservation Manual.

“Tree lawn” means the planting area between the back of the curb and the edge of the sidewalk.

(b) Those terms not defined in this section shall have the meanings given to them in Section 10.5-5 of Chapter 10.5.

(c) Any term not defined by either this section or Chapter 10.5 shall have the meaning given to it by the State Forest Conservation Technical Manual or State law or regulations, where appropriate.

### **Section 3. Application.**

(a) The purpose of the City's Urban Forest Conservation Program is to require consideration of forest conservation issues and the preparation of a Forest Conservation Plan at

the earliest stages of development. Since development may be initiated in Rockville with a variety of permits and approvals, any person filing an application for any of the following permits or approvals shall submit a Forest Stand Delineation and/or Forest Conservation Plan as required by Chapter 10.5 and this Manual:

(1) Covered permits

- a. Sediment Control Permits.

(2) Covered approvals:

- a. subdivision approval (preliminary and final, but not including ownership plats) (Article 21 of Chapter 25).
- b. project plan or site plan (Article 7 of Chapter 25).
- c. Amendment to a planned development.

(b) Exceptions.

(1) Prior plan approval. Forest conservation issues are not required to be repeated at each stage of a development, unless the development or other circumstances change that require reconsideration. Therefore, a Forest Stand Delineation and a Forest Conservation Plan are not required to be submitted in connection with any permit or approval where a Final Forest Conservation Plan has been approved within the preceding five years in connection with the same development activity on the same tract. However, the City Forester may require submission of an updated Forest Stand Delineation (FSD) and/or updated Forest Conservation Plan (FCP) when deemed necessary due to significant alteration in the environment of the site since the approval of the original FSD or Conservation Plan or due to changes to applicable law, regulations, standards or site layout.

(2) Site Plan or Site Plan Amendment. A Forest Stand Delineation, Forest Conservation Plan, and Forestry Permit are required where a Site Plan or Site Plan amendment is sought prior to a Sediment Control Permit. However, where the activity for which the Site Plan is sought will not also require a Sediment Control Permit, and no significant trees will be impacted, then no Forest Conservation Plan or Forestry Permit is required.

(3) Single Dwelling Unit Homeowners. It is the policy of the Mayor and Council that owners of single dwelling units, whether attached, detached, or semi-detached, be relieved of the requirements to prepare and submit a Forest Stand Delineation and a Forest Conservation Plan when making improvements to their homes or property. However, this policy does not allow homeowners to remove significant areas of forest or to remove trees to facilitate the future sale and/or subdivision of their property without complying with the requirements of Chapter 10.5. Therefore, the homeowners' exemption only applies to single dwelling residential lots recorded by plat or deed and improved with a single dwelling unit, where there is no subdivision pending or anticipated and where no more than 20,000 square feet of forest is to be disturbed. The City has a program of providing single dwelling unit homeowners with information concerning techniques for tree preservation that the homeowner will be encouraged to employ.

(4) Certain subdivision applications. Where an application for subdivision of a tract is filed for the purpose of facilitating the financing or transfer of the property and where no additional development will occur, no Forest Stand Delineation or Forest Conservation Plan is required, provided that, if required by the City Forester, the property owner executes and records among the Land Records a Declaration of Intent and/or such other documents, acceptable in

form and content to the City Forester and the City Attorney setting forth the obligation for compliance with this Chapter in connection with future development of the tract.

#### **Section 4. Measurements.**

All measurements and calculations made pursuant to Chapter 10.5 and this Manual shall be to the nearest 100 square feet, and not to the nearest 1/10 acre as provided in the State Manual.

Measurements made with respect to the individual tree replacement shall be rounded to the nearest whole number.

#### **Section 5. Qualified Preparer**

(a) The Forest Stand Delineation and Forest Conservation Plan (Preliminary and Final) shall be prepared by, and bear the stamp/certification and signature of a Qualified Preparer. The Qualified Preparer must insure that he/she has prepared and/or reviewed any Forest Stand Delineation and Forest Conservation Plan submitted with the preparer's stamp/certification and must further insure that no FSD or Conservation Plan is submitted without the preparer's personal signature. No stamp or other facsimile signature may be used.

(b) Exceptions. Where an FSD and FCP/Tree Save Plan are required for tree protection and replacement on a single-family residential property, the FSD and FCP/Tree Save Plan may be prepared and signed by a Certified Arborist.

#### **Section 6. Forest Stand Delineation**

(a) Submission Required. A Forest Stand Delineation shall be submitted as part of the application for any covered approval or covered permit, and may be included as part of any required NRI.

(1) All Natural Resources Inventory/Forest Stand Delineation plans are subject to a 30-day review period as stated in Chapter 10.5. The review period does not start until a complete application package has been accepted by the City Forester.

(2) Each subsequent review of a revised Natural Resources Inventory/Forest Stand Delineation plan is subject to a new 30-day review period.

(b) Delineation area. The area covered by the delineation shall be the entire tract area plus up to 100 feet of any adjacent lot.

(c) Minimum Requirements. Every Forest Stand Delineation shall contain the following information required by Chapter 10.5, section 10.5-12:

(1) A completed application form supplied by the City and signed by the applicant, the property owner, and the Qualified Preparer; and

(2) A site vicinity map showing the location of the site in relation to other properties within approximately one (1) square mile or more, including forested and sensitive areas adjacent to the site; and

(3) An environmental features map, also known as a Forest Stand Delineation Map, prepared at the same scale as the proposed development plan and show all of the following environmental features:

a. One hundred (100)-year nontidal floodplains in watersheds four hundred (400) acres or larger, or for Class III streams; and

b. Intermittent streams and perennial streams, including buffers required by the Environmental Guidelines; and

c. Steep slopes of twenty-five (25) percent or more; and

- d. Critical habitat areas; and
- e. Nontidal or tidal wetlands, including buffers required by the Environmental Guidelines; and
- f. Topographic contours and intervals; and
- g. Hydric soils, erodible soils on slopes of fifteen (15) percent or more, and soils with structural limitations as classified by USDA soil surveys; and
- h. Survey location of all significant trees and their corresponding Critical Root Zone (CRZ) as calculated by the following formula:
  - (i) For trees within a forest: One (1) inch of DBH equals one foot of critical root zone radius.
  - (ii) For trees outside of forests: One (1) inch of DBH equals one and a half (1.5) feet of critical root zone radius; and
- i. A significant tree summary sheet identifying the species, DBH, and condition rating of all significant trees within the delineation area numbered so that the trees correspond to the locations shown on the map; and
- j. Identification of critical root zones extending from significant trees located on adjacent property, including the location, size, condition rating and species of such trees; and
- k. A statement noting the presence or absence of rare, threatened or endangered species; and

1. A statement noting the presence or absence of cultural and/or historic resources.

(d) Simplified Forest Stand Delineation.

(1) A Simplified Forest Stand Delineation may be used if:

a. Forest does not currently exist on the site or existing forest will not be cut, cleared, or graded for the proposed development; and

b. All forest on the site will be protected under a long-term protective agreement as described in section 10.5-26; and

c. It can satisfactorily be demonstrated to the City Forester that no development activity will occur within the critical root zone of any significant tree.

(2) In addition to the minimum requirements set forth in subsection (c) above, the Forest Stand Delineation Map shall include:

a. Field-verified forest boundaries delineating:

(i). The maximum aerial extent of the canopy; and

(ii) The area and size in acres of contiguous forest up to one hundred (100) feet from the property boundaries and the area and size in acres of contiguous forest in acres if forest extends off-site; and

(iii) Proposed limits of disturbance; and

(iv) Proposed areas of long-term protection; and

b. Dominant species type of the forest.

(e) Intermediate Forest Stand Delineation.

(1) An intermediate Forest Stand Delineation may be used if:

a. The forest retention on a tract will be greater or equal to the break-even point as calculated in the forest conservation worksheet; and

b. Priority retention areas will not be disturbed prior to, during or after development; and

c. In addition to the minimum requirements set forth in subsection (c) above the Forest Stand Delineation Map shall include:

(i) Calculations demonstrating that the proposed development meets the condition of forest retention and protection in an amount equal to or greater than the break-even point; and

(ii) A statement that a walk-through survey of forested areas by a Qualified Preparer confirms that the proposed limits of disturbance do not contain any priority forests or priority retention areas; and

(iii) Composition of the forest and significant trees using dominant species, forest association, or other description; and

d. Total acreage of forest proposed for disturbance; and

e. A statement of past and present management practices; and

f. A statement of the potential of forested areas adjacent to proposed limits of disturbance to recover, or recommendations for management after disturbance.

(f) Full Forest Stand Delineation.

(1) A Full Forest Stand Delineation shall be used if a development does not fall within the category for which an Intermediate or Simplified Forest Stand Delineation is applicable

In addition to the minimum requirements set forth in subsection (c) above

(2) In addition to the minimum requirements set forth in subsection (c) above

a. The Forest Stand Delineation Map shall include:

(i) Location, description, and size of forest stands with forest boundaries extending off-site; and

(ii) Sampling locations used for the analysis and, if a plot method is used, the centers of the plots marked in the field; and

(iii) Field-verified locations of any priority retention areas; and

(iv) Field-verified locations of any priority planting areas located outside of existing forest areas.

b. A forest stand summary analysis of existing forest stands and environmental features shall be submitted including

(i) A general narrative site description including soils, topography, and hydrology; and

(ii) A description of the forest stand composition including species, structure, condition, function, and specific data; and

(iii) A detailed description of the sampling technique used which shall ensure a minimum of sixty-seven (67) percent level of confidence, or such other technique designed to insure quality sampling as may be approved by the City Forester; and

(iv) A written evaluation of suitable areas for retention or disturbance.

(g) The City Forester may accept submissions substantially consistent with the purposes of Chapter 10.5 and the Natural Resources Article, Sections 5-1601 through 1613 of the Annotated Code of Maryland.

### **Section 7. Forest Conservation Plan**

(a) Submission required. A Forest Conservation Plan shall be submitted in connection with an application for a covered approval or covered permit. A Forest Conservation Plan shall be submitted after a Forest Stand Delineation has been prepared and approved for the tract. All Forest Conservation Plans are subject to a 45-day review period as stated in Chapter 10.5. The review period does not start until a complete application package has been accepted by the City Forester. Each subsequent review of a revised Forest Conservation Plan is subject to a new 45-day review period.

A Forest Conservation Plan is not required for the following:

(1) A tract under 40,000 square feet that is certified not to contain a forest or any individual significant trees within the Forest Stand Delineation area.

(2) A tract over 40,000 square feet consisting of a single residential lot that is recorded by deed or plat and that is certified not to contain a forest or any individual significant trees within the Forest Stand Delineation area. This exception applies only to tracts that are single recorded lots both before and after the covered approval or covered permit is issued. This exception does not apply where the subdivision process creates a single recorded lot through the assemblage of parcels or divides a single recorded lot into two or more lots.

(a) Preliminary Forest Conservation Plan.

(1) A Preliminary Forest Conservation Plan shall be submitted in connection with all covered permits and approvals. The Preliminary Forest Conservation Plan must be approved prior to approval of any Site Plan, Project Plan or amendment to a planned development, and before submission of the Final Forest Conservation Plan.

(2) A Preliminary Forest Conservation Plan shall contain the following information:

- a. The approved Forest Stand Delineation for the site drawn to scale; and
- b. The applicable zone; and
- c. Pertinent reforestation and afforestation threshold levels as determined by Article III of Chapter 10.5; and

d. A table listing the proposed values of the following areas to the nearest one hundred (100) square feet and in acres:

(i) Tract area,

(ii) Area in one hundred (100)-year nontidal floodplain, distinguishing between wooded and non-wooded floodplain,

(iii) Areas of existing forest cover,

(iv) Areas of proposed forest and tree retention,

(v) Areas of proposed forest clearing,

(vi) Areas of proposed reforestation and afforestation,

(vii) Proposed significant tree removal

e. A graphic delineation of

(i) Proposed forest and significant tree retention areas,

(ii) Proposed afforestation and reforestation areas,

(iii) Proposed limits of disturbance.

f. Written justification for the following:

(i) The proposed disturbance of priority retention areas, including the reasons why the priority retention areas cannot be retained and how disturbed priority retention areas will be replaced through afforestation and reforestation under Chapter 10.5.

(ii) Proposed on-site afforestation or reforestation planting areas that are not priority afforestation or reforestation areas under Chapter 10.5, section 10.5-23.

g. Such other information that the City Forester determines is necessary to implement Chapter 10.5.

(c) Final Forest Conservation Plan.

(1) A Final Forest Conservation Plan must be submitted and approved prior to the issuance of a Forestry Permit. The City Forester may require an “as-built” Final Forest Conservation Plan upon completion of the project to document changes approved in the field during construction.

(2) A Final Conservation Plan may be submitted for a portion of the area covered by the Preliminary Conservation Plan, provided that any such Final Plan must include forested areas in their entirety and the boundaries of said Final Plan may not divide any forested area existing on the tract.

(3) A Final Conservation Plan shall contain the following information:

a. All that information required for a Preliminary Conservation Plan.

- b. A graphic delineation of the actual limits of disturbance and soil stockpile areas.
- c. A critical root zone analysis.

d. Locations and types of protective devices and measures to be used during construction activities to protect significant trees and forests designated for retention and conservation, including

- (i) Protective devices and measures which shall be installed prior to clearing, grading, or construction; and

- (ii) Protective measures required if the critical root zone in a retention area is disturbed by clearing, grading, or construction, including root pruning, crown reduction, watering, and other arboriculture methods; and

- (iii) Details and specifications required to implement the proposed protection measures. All protective measures shall comply with the standards and specifications established by the City Forester.

e. A construction sequence that describes:

- (i) Clearing, grading or installation of sediment and erosion control measures;

and

- (ii) Installation and removal of protective devices; and

- (iii) Inspections; and

- (iv) Other activities that may be required to implement the proposed protection measures.

f. The following statements:

(i). A statement that no equipment, vehicles, machinery, dumping, storage, other construction activities, burial, fire, or other disposal of construction materials shall be located inside forest retention areas, or significant tree protection areas, unless authorized by the City Forester by an amended Final Forest Conservation Plan; and

(ii) A statement that all protective devices shall be:

A. Visible; and

B. Well-anchored; and

C. Field located and inspected prior to clearing, grading, or construction commences; and

D. In place and maintained as needed until construction is completed, final inspection, and an occupancy permit is issued, unless waived by the City Forester.

**Section 8. Retention, Reforestation, Afforestation and Minimum Tree Cover.**

(a) General Requirements. The City's Forest Conservation Program requires all Forest Conservation plans to provide for tree replacement, forest preservation, reforestation and minimum tree cover. All trees planted to meet these requirements, including any afforestation required, must conform to the latest version of the *American Standards for Nursery Stock* approved by the American National Standards Institute, Inc.

(b) Afforestation is not required for covered activities conducted:

(1) on a tract with an area of less than 40,000 square feet; and

(2) on a single residential lot of any size recorded by deed or plat; provided that the covered activity does not result in the cutting, clearing, or grading of more than 20,000 square feet of forest. This exception applies only to tracts that are single recorded lots both

before and after the covered approval is issued. This exception does not apply where the subdivision process creates a single recorded lot through the assemblage of parcels or divides a single recorded lot into two or more lots.

(c) Afforestation and minimum tree cover requirements are not required for Linear Projects as defined by the latest version of the State Forest Conservation Technical Manual, provided that the covered activity does not result in the forest clearing in excess of twenty thousand (20,000) square feet.

(d) Tree replacement of all significant trees removed is as follows:

Size of Significant Tree Removed	Minimum 2-1/2" Caliper Tree Replacement
12 - 18" d.b.h.	1 tree
greater than 18 - 24" d.b.h.	2 trees
greater than 24" - d.b.h.	3 trees

The calculation shall be based on the tract area as defined in Chapter 10.5 of the Rockville City Code and not on net tract area as referenced in the State Forest Conservation Manual.

Replacement of a specimen or champion tree shall be at twice the above rate. The tree replacement requirement is in addition to any reforestation or afforestation requirement.

(e) Reforestation and Afforestation

(1) The procedures for calculating reforestation and afforestation requirements are the same as those set forth in Chapter 3 of the State Forest Conservation Manual, except that (1) the reforestation rate is three times (instead of twice) the forested area

removed, and (2) the conservation thresholds and afforestation levels are set according to the various zones within the City (instead of according to specific land uses) as follows:

Applicable Zones	Conservation Threshold	Afforestation Level
R-400, R-200	30%	20%
R-90, R-75, R-60, R-150	25%	15%
R-40, RMD10, RMD15, RMD25	15%	15%
I-L, I-H, MXT MXC, MXNC, MXB, MXE, MXCD, MXTD	15%	15%

(2) For planned developments the thresholds and levels are those applicable to the designated equivalent zone for each planned development, set forth in Sections 25.14.07 through 25.14.34 of Chapter 25 (Zoning) of the Code.

(3) For linear projects within a stream valley buffer where there is no reforestation requirement, all forest cleared within the stream valley buffer shall be replaced on a one to one (1:1) basis in the location of the clearing where possible. Forest removed for the purpose of establishing a road, path, utility easement or other permanent structure does not require one to one replacement.

(f) Credit.

(1) Individual Landscape Trees: Credit against reforestation and afforestation requirements may be given for individual landscape trees, including street trees, planted as part of a landscape plan at the rate of one 2 ½ inch caliper shade tree or one 7-8' high

large evergreen tree per 400 square feet of required reforestation and afforestation and at the rate of one 2 ½ inch caliper ornamental tree or one 7-8' high small to medium evergreen tree per 200 square feet of required reforestation and afforestation, subject to the following:

- a. Trees must be planted within a minimum 7-foot wide tree lawn within the site.
- b. No credit will be given for parking lot trees.
- c. No credit will be given for trees planted on single-family residential lots.
- d. Shade trees must be spaced a minimum of 20 feet apart. Evergreen and Ornamental trees must be spaced at least 15 feet apart.

(2) Individual Trees: Credit against reforestation and afforestation requirements may be given for individual trees 2" (two inch) caliper and greater retained on site, subject to the following:

- a. The tree's condition rating is 60% or higher.
- b. Credit is based on the total area of the CRZ times twenty-five percent (25%) when at least 75% of the CRZ is undisturbed.
- c. Credit shall be a minimum of 400 square feet for shade and large evergreen trees and 200 minimum square feet for small to medium evergreen trees and ornamental trees.
- d. Each shade tree must be spaced at least 20 feet apart.

Evergreen and Ornamental trees must be spaced at least 15 feet apart.

(g) Reforestation and Afforestation Priorities

The reforestation and afforestation priorities set forth in the State Conservation Manual are modified as specified in Section 10.5-22 of Chapter 10.5.

(h) Contributions.

(1) Contribution to the City Conservation Fund and Park Maintenance Fund in lieu of reforestation, afforestation or significant tree replacement may be made only with the approval of the City Forester, per Chapter 10.5 and shall be in an amount as follows:

a. Afforestation and Reforestation Replacement:

(i) One Dollar and twenty-five cents (\$1.25) per square foot of required reforestation and afforestation paid to the City Conservation Fund, and

(ii) Three Dollars and seventy-five cents (\$3.75) per square foot of required reforestation and afforestation paid to the City Park Maintenance Fund.

b. Significant Replacement Trees:

(i) \$500.00 (five hundred dollars) per 2 ½-inch caliper tree for each significant tree replacement paid to the City Conservation Fund, and

(ii) \$1,000.00 (one thousand dollars) per 2-½ -inch caliper tree for each significant tree replacement paid to the City Park Maintenance Fund.

c. Prior Contributions.

(i) Contributions made to the City Conservation Fund pursuant to a Forest Conservation plan approved by the City Forester prior to November 13, 2006, shall be in an amount equal to 40 cents per square foot of required reforestation and afforestation.

(ii) Contributions made to the City Conservation fund pursuant to a Forest Conservation Plan approved by the City Forester between November 13, 2006 and

September 24, 2007, shall be in an amount equal to \$2.00 per square foot of required reforestation and afforestation.

d. If the calculations result in a reforestation requirement of less than 400 square feet, reforestation is not required.

(i) Minimum Tree Cover. The Minimum Tree Cover requirement shall be met on site for all applicable projects.

(1) The Minimum Tree Cover requirement is based on a percentage of the tract area as follows:

Applicable Zones	Minimum Tree Cover Threshold
R-400, R-200	20%
MXTD, MXCD, MXNC,	10%
All other zones	15%

(2) Credit.

a. Trees that are counting toward reforestation, afforestation, and significant replacement credit may also count toward the Minimum Tree Cover requirement based on the credit outlined in Section 8.(f) of this Manual.

b. In addition, any other trees planted on site or retained that meet the requirements of Section 8(f) of this Manual may be counted toward the Minimum Tree Cover requirement.

c. Credit for forest retained on site shall be based on the square footage of the retention area.

(j) The City Forester may approve the implementation of retention, reforestation, and afforestation requirements in stages tied to development activity on a tract provided that:

(1) Retention, reforestation and afforestation are implemented in accordance with all terms and conditions set by the City Forester and on a schedule approved by the City Forester. Retention, reforestation, and afforestation shall be implemented in stages that track the development schedule and shall not be deferred until after development is completed; and

(2) If required by the City Forester, a Declaration of Intent and/or appropriate agreements and other documents setting forth the obligation for retention, reforestation, and afforestation, in connection with future development of the tract and acceptable in form and content to the City Forester and the City Attorney shall be executed and recorded among the Land Records; and

(3) Such other conditions as the City Forester determines is necessary to ensure that the afforestation requirements are fully implemented and to otherwise further the goals of Chapter 10.5 and this Manual.

(k) When an application for subdivision combines a developed lot with an undeveloped lot, afforestation requirements will be based only on the area of the undeveloped lot, provided that:

(1) New development activity will occur only on the undeveloped lot; and

(2) No forest exists on either lot; and

(3) The area of the undeveloped lot does not exceed 25% of the total tract area;

and

(4) No additional development activity will occur on the developed lot; and

(5) If required by the City Forester, a Declaration of Intent and/or appropriate agreements and other documents setting forth the obligation for afforestation in connection with future development of the tract and acceptable in form and content to the City Forester and the City Attorney shall be executed and recorded among the Land Records; and

(6) Such other conditions as the City Forester determines is necessary to ensure that the afforestation requirements are fully implemented and to otherwise further the goals of Chapter 10.5 and this Manual.

(1) When development activity occurs on a portion of an existing developed tract, afforestation requirements may be based on the limits of disturbance, rather than the tract area, provided that:

(1) The total developed area on the tract is 75% of the tract area or greater; and

(2) The proposed limits of disturbance are no more than 25% of the tract area; and

(3) If required by the City Forester a Declaration of Intent and/or appropriate agreements and other documents setting forth the obligation for afforestation and minimum tree cover in connection with future development of the tract and acceptable in form and content to the City Forester and the City Attorney shall be executed and recorded among the Land Records; and

(4) Such other conditions as the City Forester determines is necessary to ensure that the afforestation requirements are fully implemented and to otherwise further the goals of Chapter 10.5 and this Manual.

## APPENDICES

APPENDIX A: SAMPLE DETAILS AND SPECIFICATIONS AS SHOWN IN THE  
STATE FOREST CONSERVATION MANUAL EXCEPT AS PROVIDED HEREIN:

A-1 SHADE TREE PLANTING DETAIL

A-2 EVERGREEN TREE PLANTING DETAIL

A-3 ROOT PRUNING DETAIL

A-4 RAISED SIDEWALK DETAIL

A-5 DEER RUB PROTECTION DETAIL

APPENDIX B: SPECIES RESTRICTION LIST