

3. Tree Protection

Introduction

In conjunction with the Master Open Space Plan Additional Element which establishes the criteria that preserves a minimum of 1,320 acres of land in Chatham Park as Open Space, and the Master Landscaping Plan Additional Element, which establishes tree planting standards, this Element establishes standards for the preservation and planting of trees within Chatham Park. The goal of this Element is to preserve and maintain existing tree coverage, where practical, and restore tree canopy by planting trees in appropriate circumstances. There are several planned land uses and natural features within Chatham Park that naturally lend themselves to tree preservation. Highway buffers, stream buffers, floodplains, and other environmentally sensitive areas may serve as tree preservation areas. Lower density residential development areas, Open Space, and certain parks are also well suited to accommodate the preservation of existing trees.

Other areas within Chatham Park will rely more upon a combination of tree preservation and tree planting to meet the desired tree coverage goals of this Element. The provision for tree planting within more intensely developed areas of Chatham Park (e.g., Activity Centers) is intended to provide trees that are a part of the built environment and that may be enjoyed by future generations.

Many existing downtowns, urban centers, and higher density areas include trees that are woven into the fabric of the streetscapes, public areas, and parks. Historic photographs document how these areas were developed over time and often reveal that the mature trees we enjoy today, were not preserved from the onset, but rather planned and planted during or subsequent to development.

Section 1. Tree Coverage

A. Purpose and Intent

The purpose of this Element, in conjunction with the Master Open Space Plan Additional Element and the Master Landscaping Plan Additional Element, is the preservation and maintenance of existing tree coverage and restoration of tree canopy by planting trees on development sites in Chatham Park. Existing tree coverage and planted areas that meet the requirements of this Element shall be referred to as “Tree Coverage Areas” or “TCA”. Through this Element Chatham Park seeks to:

- Preserve and enhance the visual character of the development;
- Protect wildlife habitat and sensitive ecosystems;
- Improve surface drainage and minimize flooding;
- Prevent excessive soil erosion;
- Reduce the impacts of air pollution;
- Reduce noise, heat, and glare;
- Provide a healthy living environment;

- Enhance property values;
- Facilitate water and energy conservation;
- Not prohibit or unduly inhibit development of private property; and
- Make Chatham Park an attractive place to live, work, and play.

Applicability

This Element, together with applicable provisions of other Additional Elements, are the applicable development standards for tree protection, tree coverage, and tree maintenance in Chatham Park. This Element shall apply to all areas in Chatham Park except for Village Centers and Section 7.1 as the foregoing may be configured at the applicable time, except that:

- Agricultural lands are exempt from the requirements of this Element until such time as the land is used for a non-agricultural purpose;
- Land under forestry management programs prepared by a registered forester in accordance with Chapter 89B of the North Carolina General Statutes are exempt from the requirements of this Element until such time as the land is used for a non-exempt purpose; and
- Development sites less than 2 acres in size are exempt from the requirements of this Element.

Required Amount of Tree Coverage Area

Tree Coverage Areas shall be provided in accordance to Table 1.A: Tree Coverage Standards:

Table 1.A: Tree Coverage Standards				
Existing Tree Coverage ^[1]	Minimum Percentage of Tree Coverage Area			
	Residential		Non-Residential & Mixed-Use	
	Minimum Required ^[2]	Minimum Preserved	Minimum Required ^[2]	Minimum Preserved
92% up to 100%	21%	11%	9%	4%
84% up to 92%	23%	13%	10%	5%
76% up to 84%	25%	15%	11%	6%
68% up to 76%	27%	17%	12%	7%
60% up to 68%	29%	19%	13%	8%
52% up to 60%	31%	21%	14%	9%
44% up to 52%	33%	23%	15%	10%
38% up to 44%	35%	25%	16%	11%
30% up to 38%	37%	27%	17%	12%
22% up to 30%	39%	29%	18%	13%
14% up to 22%	41%	31%	19%	14%
6% up to 14%	43%	33%	20%	15%
0% up to 6%	N/A	N/A	N/A	N/A

% = percent
NOTES:
 [1] Existing Tree Coverage Area is the percentage of land subject to a development plan or TCPA, as applicable (excluding proposed street right-of-ways, existing and proposed utility easements, and natural water surface areas) that is covered by existing tree canopy before development or land disturbing activity.
 [2] Combination of tree preservation and tree restoration.

At the election of the owner, this Element shall be applied to an area covered by a development plan or to a larger area identified prior to or with submission of the first development plan for land within the larger area. The larger area of application shall be referred to as the "Tree Coverage Planning Area" ("TCPA"), and shall apply to each development plan dealing with land within the TCPA. If a TCPA is established, the standards of this Element shall apply to the TCPA as a whole rather than to individual sites within the TCPA. A map depicting the land included in a TCPA shall be recorded in the office of the Register of Deeds for Chatham County when the first development plan for land in that TCPA is approved. This map is not required to show specific TCA areas.

TCA for each development plan or TCPA, as applicable, shall be provided in accordance with the standards in this Element. Portions of a TCPA that are exempt from the TCA requirements of this Element shall be excluded in calculating the required TCA for that TCPA. Each development plan shall identify any TCA that is located on the land subject to that development plan. If a development plan is for land within a TCPA, in addition to any TCA that is identified for the land subject to that development plan, the amount of TCA that has been provided on previously approved development plans for land in the TCPA shall be summarized.

Site plans and subdivision plans for subdivisions with average Lot sizes of 10,000 square feet or less shall include clearing and grading information for the property or applicable phase of the property. Property for which there is an approved site plan and property for which there is an approved subdivision plan for average Lot size of 10,000 square feet or less may be cleared and graded in whole or in part to accommodate construction of improvements on that property. Lots in property for which there is an approved subdivision plan for average Lot size greater than 10,000 square feet may be cleared and graded to prepare building pads for dwellings and to prepare other areas for improvements to be constructed on the Lots, and as may be necessary to prevent or correct drainage issues, deal with steeper slopes, or borrow or stockpile material.

Notwithstanding anything to the contrary in this Element, and subject to an approved development plan where required, clearing and grading may be done on any property in Chatham Park for construction and installation of public and private streets, driveways, alleyways, greenways, erosion control measures, stormwater control structures and facilities, stormwater drainage facilities, TCA restoration areas, public and private utilities.

Incentives for Special Status Tree Preservation

When Special Status Trees are preserved in order to satisfy the TCA requirements of this Element, in determining the Minimum Percentage of Tree Coverage Area in Table 1.A, a multiplier shall be applied to Special Status Trees in accordance with Table 1.B: *Special Status Tree Preservation Incentives* with the multiplier calculated based on the DBHs (Diameter at Breast Height) shown in Table 1.B:

Table 1.B: Special Status Tree Preservation Incentives	
DBH	Multiplier
12"	1.5
18"	2.0
24"	3.0
30"	4.0

The multipliers provided in Table 1.B will be applied to the area within the root zone of each individual tree that meets the sizes in Table 1.B. For example, a 16" caliper tree has a root zone area of 804 square feet which would count as 1,206 square feet of TCA using a 1.5 multiplier.

B. Priority Retention Areas

When meeting the Tree Coverage Area (TCA) standards outlined in *Section 1, Standards for Tree Coverage*, priority areas for retention of existing tree coverage shall include the following, listed in priority order. The TCA provided may include a combination of the priority areas below. TCA shall be provided (to the extent practical) with the inclusion of areas within the first priority area, then the subsequent priority areas until the minimum percentage is met.

1. Areas located within riparian buffers, wetland areas, or within the 100-year flood plain;
2. Areas located adjacent to riparian buffers, wetland areas, land within the 100-year flood plain, and land needed for required perimeter buffers; and
3. Existing Special Status Trees and their associated root zones.

C. Preserved Tree Coverage Area Calculation

Areas indicated as preserved TCA on a development plan shall meet the following requirements to satisfy the TCA standards of Table 1.A.

1. Clusters of Trees
 - a. The TCA of a cluster of trees shall be determined by the exterior of the boundary of the total root protection zone for all of the trees in the cluster;
 - b. At least 60% of the TCA included within any clustered tree preservation area shall be comprised of trees with at least a two (2) inch DBH as determined by the *Tree Coverage Inventory Field Report*; and
 - c. At least 75% of the root protection zone for a cluster of trees (or portion of a cluster) shall be located on the subject site for it to be considered a protective cluster and to count as preserved TCA.
2. Individual Trees
 - a. The TCA for an individual tree shall be determined by the tree's root protection zone;
 - b. At least 75% of the root protection zone for an individual tree shall be located on the subject site in order for that tree to count as preserved TCA; and
 - c. An individual tree can be counted toward TCA credit provided that its diameter is eight inches DBH or greater.

D. Restored Tree Coverage Area Calculation

The ability to preserve existing trees is often limited by land characteristics, the proposed use of the land, and site conditions. The more intense the land use, the less likely that existing trees can be preserved while still meeting site design parameters that address accessibility, parking, grading, desired and required maximum and minimum slopes, and other development standards.

Tree restoration that meets the applicable standards of this Element and the requirements below may be used to satisfy the TCA requirements of this Element when there is not a sufficient number of existing trees or retaining existing trees is not a viable option due to land use intensity or other site constraints:

- There is one (1) applicable tree for each 1250 square feet of the TCA area;
- Canopy trees and evergreen trees shall be a minimum of 2" DBH at time of restoration in order to receive credit towards meeting the TCA requirement; and
- A minimum of 50% of the restoration trees shall be hardwood canopy species native to the piedmont region of North Carolina. The remainder of the restoration trees shall be a mix of canopy and understory hardwoods and non-hardwood species, as long as no more than 30% of this remainder consists of pines.

E. Qualification of TCA

To qualify as TCA (whether preserved or restored) an area must satisfy all of the following:

- The applicable trees are native to the piedmont region of North Carolina;
- The applicable trees are not less than 2" DBH (with respect to planted trees, at the time of planting);
- To the extent reasonably practicable, TCA on a property should be located to avoid the creation of small, isolated pockets of TCA; and
- In order to qualify for TCA, streetscapes and perimeter buffers must be at least twenty feet (20') in width and must meet the applicable TCA standards.

F. Tree Coverage Inventory Field Report

A Tree Coverage Inventory Field Report shall be completed prior to establishing a TCA. The report shall be prepared by a certified arborist, registered landscape architect, or a registered forester. A Tree Coverage Inventory Field Report shall include:

- An aerial photograph showing existing trees on the subject property;
- A map showing existing limits of tree coverage to determine the percentage of TCA required on the development plan;
- A written description of the general vegetative characteristics present within the proposed TCA including, but not limited to, tree species varieties and sizes, forest canopy and understory characteristics, predominant natural communities, and areas devoid of tree coverage within the proposed TCA; and
- Photographs representative of the size, species, location of trees and other vegetation within the proposed TCA.

G. Restriction as to TCA Use

Once approved as part of a development plan and/or designated as such on a recorded plat, TCA shall remain undisturbed except as provided below:

- a. Removal of diseased trees posing a threat to adjacent trees or property, structures, traffic, utilities, or public safety;
- b. Removal of underbrush and invasive/exotic plants of the Southeast as identified by North Carolina State University Cooperative Extension;
- c. Removal of dead or naturally fallen trees;
- d. In case of emergencies due to acts of nature such as ice storms, windstorms, or other such events, the requirements of this Element may be waived by the Town or other governing jurisdiction so that this Element will in no way hamper efforts to restore essential services for the public good;
- e. Planting of trees and other vegetation;
- f. Construction and maintenance of greenways;
- g. Passive recreational uses not involving the clearing of existing trees;
- h. Installation and maintenance of public and private streets;
- i. Installation and maintenance of public and private utilities; and
- j. Disturbance as may be necessary for surveying, environmental investigation, and soil investigation;
- k. Select thinning of trees as long as TCA requirements are met after the thinning process; and
- l. Activities permitted under the Master Plan, including other Additional Elements, any Development Agreement approved by the Town, or otherwise allowed by law.

With respect to any of the foregoing activities, permanent easements and temporary construction easements may be granted or reserved by recorded document or plat, and, with respect to public and private streets, street rights of way may be dedicated or conveyed to the applicable governmental entity or property owners association. The area of any TCA disturbed under the foregoing subparagraphs h and i, except for any areas taken by eminent domain or the threat thereof, shall be replaced by additional TCA in accordance with the provisions of this Element.

H. TCA and Open Space

- TCA also can be used as qualifying Open Space in Chatham Park.
- Open Space that meets the requirements of this Element may constitute TCA.
- Open Space owned or to be owned by a property owners association may be applied to satisfy part or all of the TCA requirements of this Element for property for which there is an approved development plan.

Section 2. Protection of Tree Coverage Areas

Tree Coverage Areas, both existing and planted, shall be protected during construction activity. A tree protection fence or a fence that combines tree protection signage as part of a silt fence or other soil erosion control fence or device shall be shown on the applicable development plan with a standard detail of the proposed fence(s) and device(s) and shall be implemented on the Lot during construction of improvements.

Section 3. Definitions

Tree Coverage Area (TCA): Any area designated as tree coverage area in Chatham Park in accordance with this Element.

Root Zone: The area around a tree based on one (1) foot of horizontal distance from the trunk of the tree per one (1) inch of diameter of the tree at breast height (DBH).

Special Status Tree: A trees that is designated as important by local, state, or federal governmental entities. Designations may be for size, species, age, or other unique characteristics (for example, heritage, legacy, or specimen tree).