

Tree Protection in Chapel Hill & Updating the Tree Protection Ordinance

February 22, 2010





Introduction

- History of initiative
- Recent activity
- Context for the proposed ordinance
- Highlights of the proposed ordinance
- Examples
- Questions and Comments



History

- Planning Board petitioned Council for changes in 2007 with a vision of “no net loss of trees”
- Initial changes to the ordinance were made in June 2007
- 2007 a consultant was retained to work on substantial changes to the ordinance
- 2008 work begins
- As national standards are evaluated and language develops, a new direction emerges
- Public meetings were organized for input



Recent Activity

- The Planning Board's Role
 - Schedule recommendation (endorsed by Council in September 2009)
 - January 5, 2010 update
 - February recommendation
- Public Meetings
 - October 26, 2009
 - January 19, 2010
- Reference Materials
 - www.townofchapelhill.org/trees
 - Emails from public and meeting notes
 - Videos, draft documents, presentations



Process

- Public meetings were broadly advertised
 - Press releases
 - Email invitations
 - Town's website
 - Town's publications
- Staff summarized comments and responses after each meeting
- Planning Board attended meetings, reviewed feedback
- Changes were included in evolving language
- Emails & comments were posted to the website
- Public Hearing for additional input



Process

- Jenny Gulick, Davey Resource Group
 - Certified Arborist/Municipal Specialist
 - Consulting Urban Forester
- Project history
- Why involve a consultant?
- Experience



Process

- What I saw and heard
- What I did:
 - Reviewed existing ordinance
 - Considered community goals and priorities
 - Compared with other tree ordinances
 - Guided Town staff to practical and customized revisions



Tree Ordinance Revisions

- **Goals**
 - Update current standards
 - Establish tree canopy protection measures to maximize urban forest benefits
 - Accommodate development and balance community goals

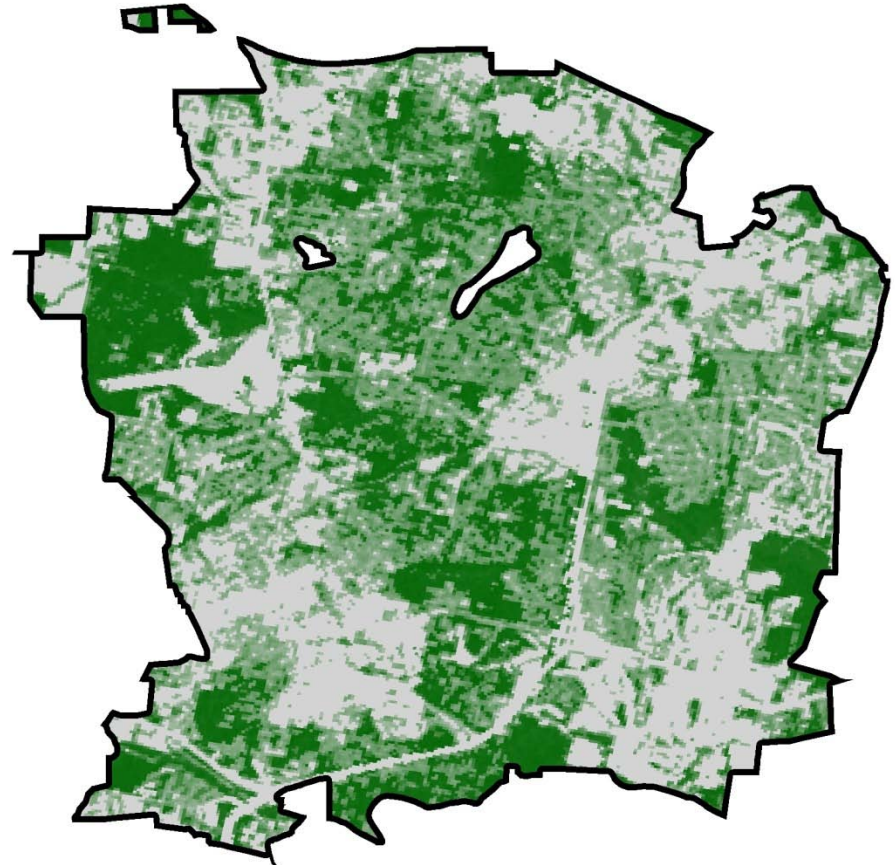


National Canopy Recommendations

- Average tree cover counting all zones - 40%
 - Suburban residential zones - 50%
 - Urban residential zones - 25%
 - Central business districts - 15%
- *Source American Forests*

Chapel Hill Canopy Cover

- Existing canopy cover
- Protecting an asset
- Benchmarks



Source: National Land Cover Database 2001 satellite imagery; i-Tree Vue



Chapel Hill Canopy Cover Goals

- Based on lot size; ranging from 20% to 60%
- Goals are recommended or required and can be adjusted on a case-by-case basis
- How were the recommendations developed?
 - National, regional, and local standards were researched
 - Existing canopy coverage in Chapel Hill was considered

What other communities are doing

City/County/State	Minimum tree cover requirement
Athens, GA	20% to 60%
Atlanta, GA	10% to 45%
Beaufort County, SC	10% to 70%
Chapel Hill, NC	20% to 60%
Collier County, FL	10% to 50%



Proposed Canopy Coverage

Lot size	Minimum canopy coverage for single family or two family uses	Proposed status for single family or two family uses	Minimum canopy coverage for all other uses	Proposed status for all other uses
< 10,000 SF	20%	Recommended	20%	Required
10,000 - 20,000 SF	30%	Recommended	30%	Required
20,000 – 40,000 SF	40%	Required	40%	Required
40,000 – 80,000 SF	50%	Required	50%	Required
> 80,000 SF	60%	Required	50%	Required

[shaded boxes identify areas where standards differ]

Proposed Ordinance Implementation

- Site specific flexibility
- Single and two-family lot examples
- Non-residential examples
- Illustration of replacement tree standards:



1" tree
Residential
requirement



2.5" tree
Non-residential
requirement



8-10" tree (~10 years)



Flexibility for Single and Two-Family Properties

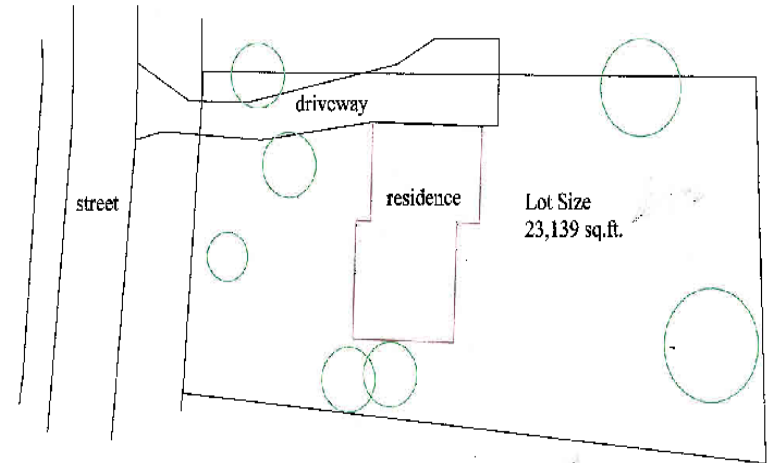
- For lots less than 20,000 SF regulations apply only to the removal of trees > 36”
- For lots more than 20,000 SF regulations apply only to the removal of trees > 36” or if resulting tree canopy falls below required standards
- Exemptions provided for solar access and other listed conditions (5.7.3.b)



Flexibility for Other Properties

- Relief from standards can be requested to achieve other goals of the Town's Comprehensive Plan
- Underlying zoning included as a basis for requesting this relief
- As with other elements of the Land Use Management Ordinance, standards are implemented proportionally to project scope.

Single-family Residential Lot – Removal of pine trees



AFTER REMOVING PINES, REMAINING CANOPY = 12%

LOT SIZE:	23,139 SQ. FT.
CANOPY COVERAGE BEFORE:	16,892 SQ. FT., 73%
CANOPY COVERAGE AFTER:	2,695 SQ. FT., 12%
CANOPY COVERAGE REQUIRED:	9,256 SQ. FT., 40%

CANOPY DEFICIT:	6,561 SQ. FT., 28%
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MITIGATION PLANTINGS REQUIRED:	13 TREES (2trees/1000 sq. ft. deficit)
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PAYMENT IN LIEU

Insufficient planting space available	\$2600 (\$200/tree)
After-the-fact OR without replanting	\$5,200 plus permit fees
After-the-fact AND without replanting	\$10,400 plus permit fees

Single-family Residential Lot with Home Construction



LOT SIZE:

CANOPY COVERAGE BEFORE:

CANOPY COVERAGE AFTER:

CANOPY COVERAGE REQUIRED:

CANOPY DEFICIT:

MITIGATION

PLANTINGS REQUIRED:

PAYMENT IN LIEU

Insufficient planting space available

After-the-fact OR without replanting

After-the-fact AND without replanting

33,622 SQ. FT.

25,570 SQ. FT., 82%

4,652 SQ. FT., 14%

13,449 SQ. FT., 40%

8,797 SQ. FT., 26%

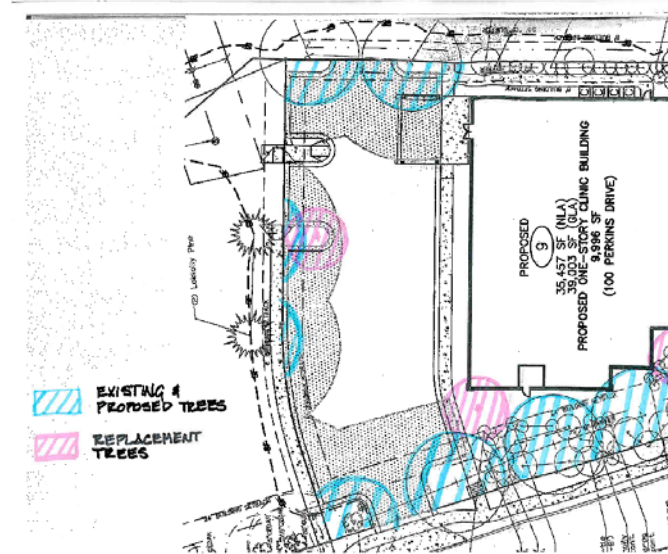
17 TREES (2trees/1000 sq. ft. deficit)

\$3,400 (\$200/tree)

\$6,800 plus permit fees

\$13,600 plus permit fees

Nonresidential Lot



LOT SIZE:

35,457 SQ. FT.

CANOPY COVERAGE BEFORE:

23,857 SQ. FT., 67%

CANOPY COVERAGE AFTER:

5,100 SQ. FT., 14%

CANOPY COVERAGE REQUIRED:

~~23,857 SQ. FT., 67%~~ 14,182 SQ. FT., 40%

ADDITIONAL CANOPY PROPOSED (at maturity)

5,400 SQ. FT., 15%

TOTAL CANOPY AFTER CONSTRUCTION

10,500 SQ. FT., 30%

CANOPY DEFICIT:

~~13,357 SQ. FT., 37%~~ 3,545 SQ. FT., 10%

MITIGATION PLANTINGS REQUIRED:

7 26-TREES (2trees/1000 sq. ft. deficit)

MITIGATION PLANTINGS TO BE PLANTED ON SITE

5 TREES

PAYMENT IN LIEU (Subject to exemption by Planning Board and/or Town Council)

Insufficient planting space available (\$1000 per tree)

\$2,000 ~~\$26,000~~

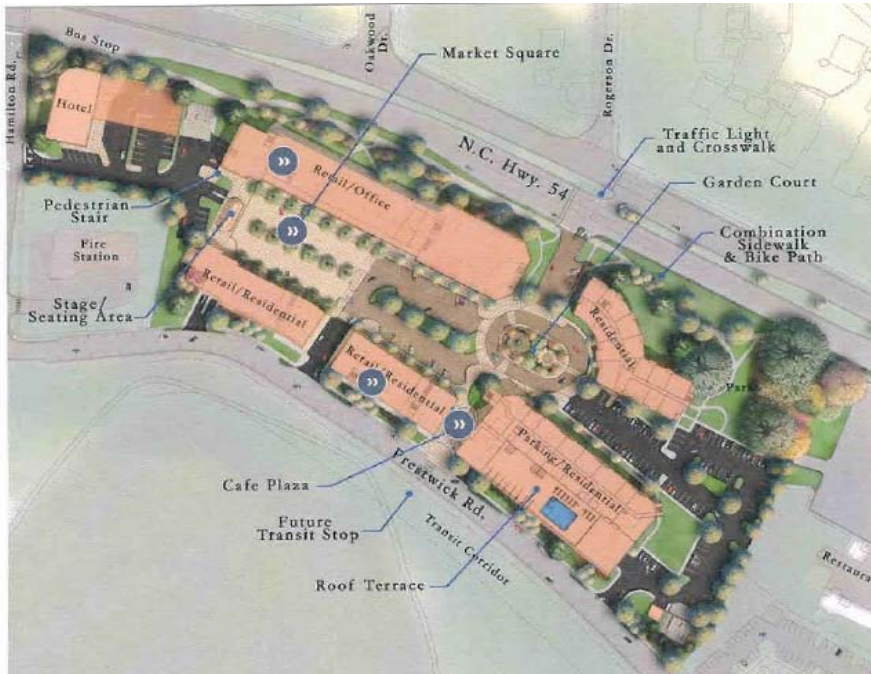
After-the-fact OR without replanting

\$4,000 ~~\$52,000~~ plus permit fees

After-the-fact AND without replanting

\$8,000 ~~\$104,000~~ plus permit fees

Multi-use Higher Density East 54 Development



Size of lot (10.04 acres)	437,342 SF
Percent canopy required	50%
Area with required canopy	218,671 SF
Area with retained canopy	<u>- 22,930 SF</u>
Canopy deficiency	195,741 SF
Divided by 500 (2 trees/1000 SF)	
Required # replacement trees	391 Trees
# replacement trees proposed	<u>357 Trees</u>
Replacement tree deficit	34 Trees
@ \$1,000/tree =	\$34,000 mitigation payment

Plan from www.east54.com



Key Issues (pending final ordinance provisions)

- Balancing Tree Ordinance goals with development review improvement
- Balancing Tree Ordinance goals with other goals of the Town's comprehensive plan
- Balancing expansion of Town regulations with the associated costs to more property owners
- Balancing enforcement of regulations with other Town service goals



Next Steps

- Solicit additional technical input
- Incorporate changes into draft ordinance
- Develop materials for Design Manual
- Develop detailed fiscal impacts and implementation strategy
- Return to the Planning Board
- Return to the Council by May 2010



QUESTIONS & COMMENTS